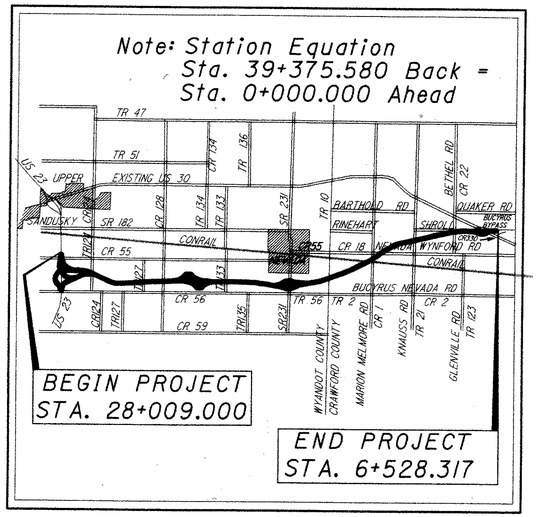


LOCATION MAP

LATITUDE: N 40°48'24" LONGITUDE: W 83°07'30"

SCALE IN KILOMETERS

0 1 2 4 8

PORTION TO BE IMPROVED

STATE & FEDERAL ROUTES

OTHER ROADS

FOR DESIGN DESIGNATION SEE SHEET NO. 2

DESIGN EXCEPTIONS

NONE REQUIRED

SHEETS NOT USED:

172, 181, 186, 203, 208, 212, 216, 220, 224, 234, 249, 253, 275, 284, 756, 809-821, 841-874, 925-941, 963, 969-971, 983, 984, 985, 993, 994, 1052, 1060,1135, 1145, 1149, 1209, 1210, 1214, 1216, 1219, 1225-1231, 1274-1291, 1295-1297, 1300-1303, 1314, 1315, 1337-1343, 1347, 1437-1444, 1543-1546, 1552, 1553, 1560, 1561, 1568-1571, 1589-1668, 1732-1745, 1880-1893

SHEETS ALSO NOT USED: 957, 958

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

PLAN PREPARED BY:

BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

Balke Engineers Project No. 9245

ENGINEERS SEAL
FOR STRUCTURES OVER 6.1M:

STATE OF OHIO
MICHAEL R. STURDEVANT
No. E-49864
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Michael R. Sturdevant
DATE: 12-5-00

ENGINEERS SEAL
FOR ENTIRE PLAN EXCEPT STRUCTURES OVER 6.1M:

STATE OF OHIO
ASVIN MANDADI
No. E-64068
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Asvin Mandadi
DATE: 12-5-00

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

WYA/CRA-30-28.009/0.000

PITT, CRANE AND ANTRIM TOWNSHIPS
WYANDOT COUNTY

TOD AND HOLMES TOWNSHIPS
CRAWFORD COUNTY

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STANDARD CONSTRUCTION DRAWINGS

BP-2.1	7-28-00	GR-3.1M	10-21-97	1-1.1M	9-6-95	GSD-1-96M	11-21-97	HL-60.12M	03-31-95	TC-41.20M	07-01-94
BP-2.2	7-28-00	GR-4.1M	11-30-94	MH-1.1M	10-21-97	ICD-1-82M	3-20-95	HL-60.21M	03-31-95	TC-41.40M	03-31-94
BP-2.3	4-29-99	GR-4.2M	10-21-97	MH-1.2M	9-6-95	PSID-1-95M	9-18-95	HL-60.31M	03-31-95	TC-41.50M	07-01-94
BP-4.1	7-28-00	GR-4.3M	10-21-97	MH-3.1M	9-6-95	SICD-1-96M	2-12-97			TC-42.10M	03-31-94
BP-5.1	7-28-00	GR-4.4M	11-30-94	DM-1.1M	10-21-97	HL-10.11M	05-01-95	MT-35.10M	01-30-95	TC-42.20M	03-31-94
BP-6.1	7-28-00	GR-5.1M	4-21-95	DM-1.2M	10-21-97	HL-10.12M	05-01-95	MT-35.11M	01-30-95	TC-51.11M	09-30-94
BP-7.1	7-28-00	GR-5.2M	11-30-94	DM-4.1M	6-30-95	HL-10.31M	03-31-95	MT-95.40M	04-25-94	TC-51.12M	03-31-94
BP-8.1	7-28-00	GR-5.3M	11-30-94	DM-4.2M	6-30-95	HL-20.11M	03-31-95	MT-95.70M	01-30-95	TC-52.10M	07-29-94
BP-9.1	7-28-00	GR-6.1M	1-3-96	DM-4.3	4-29-99	HL-20.21M	08-31-94	MT-97.10M	04-25-94	TC-52.20M	07-29-94
F-1.1	7-28-00	GR-6.2M	1-3-96	DM-4.4	4-29-99	HL-20.22M	03-31-95	MT-97.11M	01-30-95	TC-61.10M	03-31-94
F-2.1	7-28-00	RM-1.1	4-29-99	LA-1.1	7-28-00	HL-20.23M	03-31-95	MT-98.13M	06-24-93	TC-65.10M	11-01-95
F-3.1	7-28-00	RM-4.2M	10-21-97	LA-1.2	7-28-00	HL-30.11M	03-31-95	MT-98.19M	03-01-96	TC-65.11M	11-01-95
F-3.2	7-28-00	RM-4.3M	10-21-97			HL-30.21M	05-01-95	MT-101.60M	04-25-94	TC-65.12M	11-01-95
F-3.3	7-28-00	RM-4.5M	10-21-97	AS-1-81M	3-20-95	HL-30.22M	03-31-95	MT-105.10M	04-25-94	TC-72.20M	09-01-93
F-3.4	7-28-00	CB-1.1M	7-12-95	BR-1M	1-6-99	HL-30.31M	05-01-95	MT-105.11M	04-25-94	TC-83.10M	11-24-93
GR-1.1M	10-21-97	CB-2.1M	7-12-95	BS-1-9M	12-15-94	HL-30.33M	08-31-94	TC-7.65M	02-01-94		
GR-1.2M	1-3-96	CB-3.1M	7-12-95	CPA-5-94M	10-25-94	HL-40.10M	03-31-95	TC-12.30M	02-01-94		
GR-1.3M	11-30-94	CB-3.2M	7-12-95	CPP-2-94M	12-19-94	HL-50.11M	03-31-95	TC-18.26M	02-01-94		
GR-2.1M	10-21-97	HW-2.1M	7-12-95	CS-1-93M	6-30-95	HL-50.21M	08-31-94	TC-22.20M	02-01-94		
GR-2.4M	10-21-97	HW-2.2M	7-12-95	EXJ-4-87M	2-18-97	HL-60.11M	05-01-95	TC-41.10M	03-31-94		

SUPPLEMENTAL SPECIFICATIONS	
806	9-9-97
816	4-21-97
830	10-21-98
842	1-6-99
846	9-9-97
848	6-30-98
863	9-9-97
865	1-6-98
877	4-13-99
884	9-14-99
894	10-12-99
899	10-21-98
910	4-21-97
954	9-9-97

SPECIAL PROVISIONS

MSE WALL 9-10-99

metric units

PROJECT DESCRIPTION

CONSTRUCTION OF A NEW 17.9 KM EXPRESSWAY FROM US-23 TO CONNECT INTO THE BUCYRUS BYPASS.
THE NEW CONSTRUCTION INCLUDES TWO REST AREAS AND INTERCHANGES WITH EXISTING US-23 AND SR-231 AND COMPLETION (ADD TWO RAMPS) OF AN INTERCHANGE WITH EXISTING US-30.
CONSTRUCTION OF STRUCTURES: NEW US-30 OVER: US-23, BROKEN SWORD CRK., CR-1, CSX, CR-18 AND CR-330

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE REVISED CODE OF OHIO.

1997 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (I) OF THE REVISED CODE OF OHIO, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

APPROVED Thomas O'Donnell
DATE 12/8/00 DISTRICT DEPUTY DIRECTOR

APPROVED Gordon Proctor Jr.
DATE 2-21-01 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. NON-FEDERAL

PID NO. 10289

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT CSX

WYA/CRA-30-28.009-0.000

1 / 2116

DESIGN DESIGNATION

ROADWAY	PROP. U.S. 30	EXIST. U.S. 30	EXIST. U.S. 23	T.R. 55	C.R. 56	T.R. 124	T.R. 127	C.R. 128	T.R. 133	S.R. 231	T.R. 10	C.R. 1	C.R. 18	T.R. 21	T.R. 111	C.R. 22
CURRENT ADT (2000)	6870	2970	18650	1400	1040	250	39	240	50	850	180	610	1400	80	62	1530
DESIGN YEAR ADT (2020)	10310	4260	28000	1950	1570	380	25	360	80	1290	270	920	1950	120	54	2120
DESIGN HOURLY VOLUME (2020)	825	341	2240	195	157	38	4	36	8	129	27	92	195	12	6	212
DIRECTIONAL DISTRIBUTION	52%	52%	52%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
TRUCKS (24 HOUR B & C)	28%	28%	28%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
DESIGN SPEED	113 Km/h	88 Km/h	88 Km/h	90 Km/h	90 Km/h	90 Km/h	90 Km/h	90 Km/h	90 Km/h	90 Km/h	90 Km/h	90 Km/h	90 Km/h	90 Km/h	90 Km/h	90 Km/h
LEGAL SPEED	65 mph	55 mph	55 mph	55 mph	55 mph	55 mph	55 mph	55 mph	55 mph	55 mph	55 mph	55 mph	55 mph	55 mph	55 mph	55 mph
DESIGN FUNCTIONAL CLASSIFICATION	Expressway	Arterial	Principal Arterial	Local Road	Local Road	Local Road	Local Road	Local Road	Local Road	Major Collector	Local Road	Local Road	Local Road	Local Road	Local Road	Local Road

HORIZONTAL SCALE IN METERS (0, 80, 160)

CALCULATED REA CHECKED REA

C.R. 60

BEGIN WORK U.S.R. 23 STA. 12+240.000

(BY OTHERS) STRUCTURE NO. WYA-30-12429 Sta. 12+433.727 US 23 Sta. 1+000.000 CR- 56

℄ CR-56 (BY OTHERS)

Extend 600mm x 950mm ECP

0+500

12+000

12+500

N 1° 42' 15" W

0+900

℄ CR-60 (BY OTHERS)

N 1° 15' 55" E

N 89° 19' 51" E

1+500

PITT TOWNSHIP

CRANE TOWNSHIP

ST Sta. 28+226.822 B Bk. (4.8m Rt.)

TS Sta. 28+226.822 B Ah.

CS Sta. 28+144.822 B

PC Sta. 28+027.321 B

SC Sta. 28+308.822 B

N 32° 21' 31" W

STRUCTURE NO. WYA-30-28682

28+500 B

℄ RAMP B

℄ Survey U.S. 23

13+000

N 1° 42' 15" W

13+500

STRUCTURE NO. WYA-30-28566

Sta. 13+338.454 US-23

Sta. 28+746.387 RAMP B

Sta. 28+668.006 US-30 EB

Sta. 28+736.027 Ramp B

Sta. 13+309.864 US 23

Sta. 8+692.711 US 30 EB

℄ Construction TR-55

SC Sta. 28+495.978 EB

28+500 EB

BEGIN WORK T.R. 55 STA. 0+871.801

TS Sta. 28+350.978 EB

PT Sta. 28+311.440 EB

Sta. 28+351.386 US-30 EB

Sta. 0+965.013 TR-55

Sta. 13+644.854 US-23

Sta. 1+000.000 TR-55

PC Sta. 28+009.255 EB

S 3° 14' 46" W

BEGIN PROJECT U.S.R. 30 STA. 28+009.000 S.L.D. 28.009

END WORK U.S.R. 23 STA. 14+370.084

14+000

N 1° 42' 15" W

14+500

Extend Exist. Twin 1800mm (72") RCP

Extend 600mm x 950mm ECP

PCC Sta. 28+731.006 A

PC Sta. 28+558.024 A

℄ RAMP A 29+000 A

3000mm RCP

CS Sta. 29+086.030 A

ST Sta. 29+156.030 A

N 39° 27' 58" E

Sta. 29+208.147 US-30EB

Sta. 0+011.503 ℄ Det.

1050mm

29+500 A

POT Sta. 29+518.695 A

N 80° 39' 35" E

TS Sta. 29+633.092 US-30 EB

2400mm RCP

SC Sta. 29+753.092 US-30 EB

Match Line Sta. 29+800 ℄ Ramp A See Sheet No. 3

TWIN 1500mm CMP

℄ US-30 EB

29+000 EB

CS Sta. 28+985.423 B

PC Sta. 29+067.423 B

DETENTION BASIN

N 26° 52' 02" E

CS Sta. 29+373.695 U.S. 30 EB

29+500

ST Sta. 29+518.695 US-30 EB

29+500 B

S 70° 11' 12" E

℄ U.S. 30 WB

28+500 WB

SC Sta. 28+532.833 WB

TS Sta. 28+412.833 WB

1800mm RCP

Sta. 28+696.558 US 30 WB

Sta. 1+074.592 TR-55

29+000 WB

CS Sta. 28+987.495 WB

ST Sta. 29+107.495 WB

S 61° 42' 11" E

Sta. 29+193.960 US-30 WB Bk.

PC Sta. 29+193.960 16.2m Rt Ar.

℄ Construction, US-30

TWIN 1500mm CMP

Sta. 29+300.000 US-30

Sta. 0+320.000 ℄ Det. Basin

℄ Detention Basin

℄ Construction U.S. 30

29+500

N 89° 28' 48" E

END WORK T.R. 55 STA. 1+176.506

Match Line Sta. 29+800 ℄ US-30 See Sheet No. 3

℄ U.S. 30 EASTBOUND

P.I. = Sta. 28+160.442
Δ = 4° 56' 48.65" (RT)
R = 3,500.000 m
T = 151.187 m
L = 302.186 m
E = 3.264 m
e_{max} = 0.019

℄ US-30 EASTBOUND

P.I. = Sta. 29+138.153
Δ = 102° 35' 11.11" (LT)
R = 571.200 m
Ls = 145.000 m
θs = 7° 16' 20.32"
LT = 96.748 m
ST = 48.408 m
Lc = 877.717 m
Ts = 787.175 m
Es = 344.681 m
e_{max} = 0.08

℄ US-30 WESTBOUND

P.I. = Sta. 28+788.931
Δ = 58° 47' 45.18" (LT)
R = 560.000 m
Ls = 120.000 m
θs = 6° 08' 19.80"
LT = 80.048 m
ST = 40.044 m
Lc = 454.662 m
Ts = 376.098 m
Es = 83.998 m
e_{max} = 0.08

℄ US-30 EASTBOUND

P.I. = Sta. 29+825.675
Δ = 26° 35' 42.18" (RT)
R = 560.000 m
Ls = 120.000 m
θs = 6° 08' 19.80"
LT = 80.048 m
ST = 40.044 m
Lc = 139.936 m
Ts = 192.583 m
Es = 16.528 m
e_{max} = 0.08

℄ RAMP A

P.I. = Sta. 28+644.654
Δ = 7° 55' 44.05" (RT)
R = 1,250.000 m
T = 86.629 m
L = 172.982 m
E = 2.998 m
e_{max} = 0.033

℄ RAMP A

P.I. = Sta. 28+958.499
Δ = 73° 16' 04.82" (RT)
R = 305.000 m
Ls2 = 70.000 m
θs2 = 6° 34' 29.73"
LT2 = 46.699 m
ST2 = 23.363 m
Lc = 355.024 m
Tsl = 227.493 m
Ts2 = 261.577 m
Es = 75.497 m
e_{max} = 0.08

℄ US-30

P.I. = Sta. 30+333.210
Δ = 30° 00' 42.19" (LT)
R = 4,250.000 m
T = 1,139.250 m
L = 2,226.164 m
E = 150.044 m
e_{max} = Normal Crown

▲ EXISTING GAS (AND/OR) OIL WELL (APPROXIMATE LOCATION), SEE GENERAL NOTES, SHEET NO. 24

℄ RAMP B

P.I. = Sta. 28+110.253
Δ = 29° 46' 31.00" (LT)
R = 305.000 m
Ls2 = 82.000 m
θs2 = 7° 42' 07.40"
LT2 = 54.719 m
ST2 = 27.380 m
Lc = 117.501 m
Tsl = 82.932 m
Ts2 = 120.455 m
Es = 11.074 m
e_{max} = 0.08

℄ RAMP B

P.I. = Sta. 29+169.181
Δ = 142° 30' 24.91" (RT)
R = 305.000 m
Ls = 82.000 m
θs = 7° 42' 07.40"
LT = 54.719 m
ST = 27.380 m
Lc = 676.601 m
Ts = 942.359 m
Es = 646.882 m
e_{max} = 0.08

℄ RAMP B

P.I. = Sta. 29+213.330
Δ = 7° 10' 10.43" (RT)
R = 1,250.000 m
T = 78.310 m
L = 156.416 m
E = 2.451 m
e_{max} = 0.035
PC Sta. 29+135.020
PT Sta. 29+291.436

SCHEMATIC PLAN & DESIGN DESIGNATION STA. 28+009 TO STA. 29+800

WYA/CRA-30-28.009/0.000

TR-55

TR-55

CRANE TOWNSHIP

TR-124

N 0° 28' 23" E

℄ T.R. 124 (BY OTHERS)

(BY OTHERS)

STRUCTURE NO. WYA-30-30006

SENSITIVE AREA (CULTURAL RESOURCE)

℄ U.S. 30
P.I. = Sta. 30+333.210
Δ = 30° 00' 42.19" (LT)
R = 4,250.000 m
T = 1,139.250 m
L = 2,226.164 m
E = 150.044 m
e_{max} = Normal Crown

See Sheet No. 2
Match Line Sta. 29+800 ℄ U.S. 30

675mm

Ex. Field Dr.

30+500

℄ Construction U.S. 30

31+000

Branch of Rock Run

Sta. 30+196.079

PT Sta. 31+420.124

Service Road No. 1

N 88° 17' 07" E

31+500

Match Line Sta. 31+900.000 See Sheet No. 4

300mm

Sta. 30+011.027 US-30
Sta. 1+000.000 TR-124

750mm RCP or
1050mm CMP

1950mm RCP or
2250mm CMP

Exist. Field Drive

1350mm RCP or
1650mm CMP

SENSITIVE AREA (CULTURAL RESOURCE)

CR-56

℄ Construction U.S. 30 EB
P.I. = Sta. 29+825.675
D = 26° 35' 42.18" (RT)
R = 560.000 m
Ls = 120.000 m
θs = 6° 08' 19.80"
LT = 80.048 m
ST = 40.044 m
Lc = 139.936 m
Ts = 192.583 m
Es = 16.528 m
e_{max} = 0.08

See Sheet No. 2
Match Line Sta. 29+800 ℄ Ramp A

CS Sta. 29+893.028
U.S. 30 EB

ST Sta. 30+013.028 US-30 EB, 16.2m Rt. =
Sta. 30+013.028 ℄ US-30

N 0° 25' 19" W

TR-124

0+500

C.R. 56

N 0° 39' 08" E

CONSTRUCTION PROTECTIVE FENCING

N

HORIZONTAL SCALE IN METERS
0 80 160

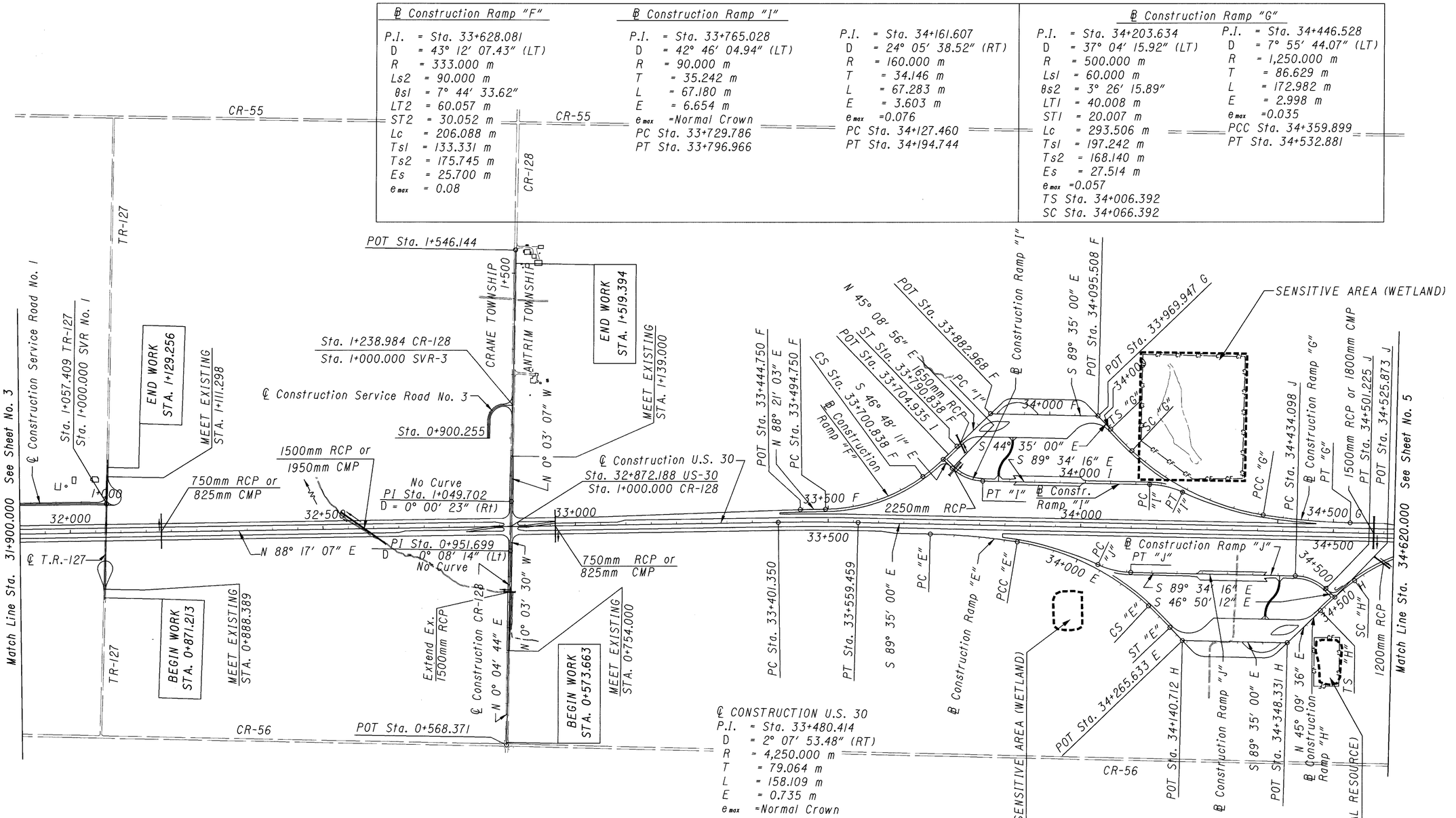
CALCULATED

CHECKED

SCHEMATIC PLAN
STA. 29+800 TO STA. 31+900

WYA/CRA-30-28.009/0.000

3
2116

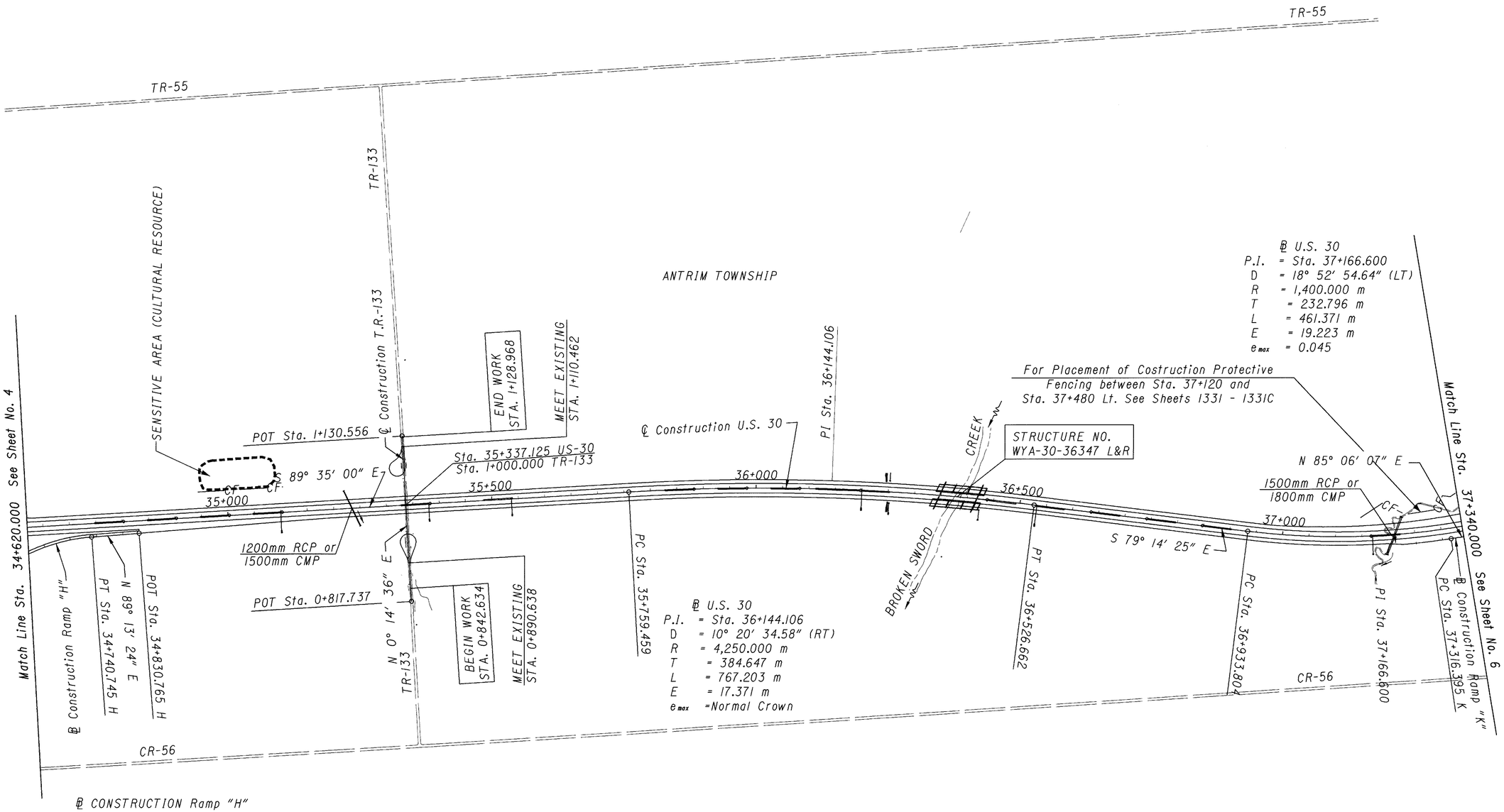


CALCULATED REA
CHECKED REA

0 80 160
HORIZONTAL SCALE IN METERS

SCHEMATIC PLAN
STA. 31+900 TO STA. 34+620

WYA/CRA-30-28.009/0.000



℄ U.S. 30
P.I. = Sta. 37+166.600
D = 18° 52' 54.64" (LT)
R = 1,400.000 m
T = 232.796 m
L = 461.371 m
E = 19.223 m
e_{max} = 0.045

℄ U.S. 30
P.I. = Sta. 36+144.106
D = 10° 20' 34.58" (RT)
R = 4,250.000 m
T = 384.647 m
L = 767.203 m
E = 17.371 m
e_{max} =Normal Crown

℄ CONSTRUCTION Ramp "H"
P.I. = Sta. 34+618.333
D = 44° 03' 47.71" (RT)
R = 333.000 m
Lsl = 90.000 m
θsl = 7° 44' 33.62"
LTl = 60.057 m
STl = 30.052 m
Lc = 211.093 m
Tsl = 178.681 m
Ts2 = 136.211 m
Es = 26.781 m
e_{max} =0.08

——CF——CF—— CONSTRUCTION PROTECTIVE FENCING

0 80 160
HORIZONTAL SCALE IN METERS

CALCULATED REA
CHECKED REA

SCHEMATIC PLAN
STA. 34+620 TO STA. 37+340

WYA/CRA-30-28.009/0.000

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2116

℄ Construction Ramp "L"

P.I.	= Sta. 37+489.544
D	= 18° 01′ 55.16″ (LT)
R	= 330.000 m
Ls2	= 80.000 m
θs2	= 6° 56′ 41.79″
LT2	= 53.374 m
ST2	= 26.704 m
Lc	= 63.857 m
Tsl	= 54.970 m
Ts2	= 89.861 m
Es	= 4.547 m
e_{max}	=0.08

P.I.	= Sta. 37+672.111
D	= 26° 41′ 45.16″ (RT)
R	= 230.000 m
Lsl	= 80.000 m
Ls2	= 60.000 m
θsl	= 9° 57′ 52.14″
θs2	= 7° 28′ 24.11″
LTl	= 53.418 m
LT2	= 40.036 m
STl	= 26.744 m
ST2	= 20.032 m
Lc	= 37.164 m
Tsl	= 93.680 m
Ts2	= 85.838 m
Es	= 7.318 m
e_{max}	=0.08

℄ Construction Ramp "M"

P.I.	= Sta. 38+153.724
D	= 7° 55′ 44.09″ (LT)
R	= 1,250.000 m
Lsl	= 60.000 m
θsl	= 1° 22′ 30.36″
LTl	= 40.001 m
STl	= 20.001 m
Lc	= 142.982 m
Tsl	= 115.767 m
Ts2	= 87.499 m
Es	= 3.059 m
e_{max}	=0.035

℄ Construction U.S. 30

P.I.	= Sta. 39+027.489
D	= 9° 24′ 23.99″ (LT)
R	= 4,250.000 m
T	= 349.662 m
L	= 697.753 m
E	= 14.360 m
e_{max}	=Normal Crown

℄ Construction U.S. 30

P.I.	= Sta. 0+457.247
D	= 12° 16′ 53.02″ (LT)
R	= 4,250.000 m
T	= 457.247 m
L	= 910.991 m
E	= 24.526 m
e_{max}	=Normal Crown

℄Construction Ramp "N"

P.I.	= Sta. 37+878.804
D	= 24° 57′ 15.52″ (LT)
R	= 230.000 m
Lsl	= 60.000 m
Ls2	= 80.000 m
θsl	= 7° 28′ 24.11″
θs2	= 9° 57′ 52.14″
LTl	= 40.036 m
LT2	= 53.418 m
STl	= 20.032 m
ST2	= 26.744 m
Lc	= 30.173 m
Tsl	= 82.221 m
Ts2	= 89.909 m
Es	= 6.493 m
e_{max}	=0.08

P.I.	= Sta. 38+053.247
D	= 16° 56′ 46.86″ (RT)
R	= 330.000 m
Lsl	= 80.000 m
θsl	= 6° 56′ 41.79″
LTl	= 53.374 m
STl	= 26.704 m
Lc	= 57.604 m
Tsl	= 86.491 m
Ts2	= 51.932 m
Es	= 4.061 m
e_{max}	=0.08

℄ Construction Ramp "K"

P.I.	= Sta. 37+392.756
D	= 4° 18′ 57.78″ (RT)
R	= 2,000.000 m
Ls2	= 60.000 m
θs2	= 0° 51′ 33.97″
LT2	= 40.000 m
ST2	= 20.000 m
Lc	= 120.659 m
Tsl	= 76.361 m
Ts2	= 104.371 m
Es	= 1.457 m
e_{max}	=0.023

P.I.	= Sta. 37+613.324
D	= 1° 29′ 00.59″ (LT)
R	= 3,500.000 m
T	= 45.313 m
L	= 90.622 m
E	= 0.293 m
e_{max}	= Normal Crown

—CF—CF— CONSTRUCTION PROTECTIVE FENCING

SCHEMATIC PLAN
STA. 37+340 TO STA. 0+300

CALCULATED REA
CHECKED REA

HORIZONTAL SCALE IN METERS
0 80 160

WYA / CRA -30-28.009 / 0.000

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2116

T.R-10

TOD TOWNSHIP

CR-18

NEVADA WYNFORD ROAD

CR-1

MARION MELMORE ROAD

POT Sta. 0+680.000

Exist 5' x 4' BOX

BEGIN WORK
STA. 0+703.412

POT Sta. 1+106.794

Sta. 2+270.667 US-30
Sta.1+000.000 CR-18

STRUCTURE NO.
CRA-30-02230 L&R

℄ Survey CR-18

℄ Service Access No. 17
Sta. 9+229.359

Sta. 1+814.655 US-30
Sta.1+000.000 CR-1

STRUCTURE NO.
CRA-30-01792 L:&R

CSX RR

N 60° 11' 23.06" E

1+500

2+000

2+500

3+000

1+000

℄ Construction U.S. 30
P.I. = Sta. 0+457.247
Δ = 12° 16' 53.02" (LT)
R = 4,250.000 m
T = 457.247 m
L = 910.991 m
E = 24.526 m
e_{max} =Normal Crown

Match Line Sta. 0+300.000 See Sheet No. 6

1650mm RCP or
1950mm CMP

℄ Construction U.S. 30

Sta. 1+521.930 US-30
Sta.333+561.916 RR

STRUCTURE NO.
CRA-30-01474 L&R

N 0° 15' 04.46" E
℄ Survey CR-1

POT Sta. 0+819.720

1050mm RCP or
1350mm CMP

END WORK
STA. 1+113.317

POT Sta. 1+240.000

S 89° 35' 20.29" E

CR-18

Match Line Sta. 3+020.000 See Sheet No. 8

℄ Construction U.S. 30
P.I. = Sta. 2+804.412
Δ = 16° 58' 52.82" (RT)
R = 4,250.000 m
T = 634.459 m
L = 1,259.616 m
E = 47.097 m
e_{max} =Normal Crown

CALCULATED REA
CHECKED REA

0 80 160
HORIZONTAL
SCALE IN METERS

SCHEMATIC PLAN
STA. 0+300 TO STA. 3+020

WYA/CRA-30-28.009/0.000

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2116

TODD TOWNSHIP

HOLMES TOWNSHIP

KNAUSS ROAD TR-21

N 0° 11' 45 E

POT Sta. 1+433.276

END WORK STA. 1+363.364

SHROLL ROAD TR-111

Sta. 1+199.166 TR-21
Sta. 10+000.000 SVR-17

MEET EXISTING STA. 1+190.000

N 0° 19' 14" E

N 0° 19' 45" E

PI Sta. 1+096.867
Δ = 0° 07' 34" Lt
No Curve

Sta. 3+577.275 US-30
Sta. 1+000.000 TR-21

℄ Construction Service Access No. 17

9+500

Match Line Sta. 3+020.000 See Sheet No. 7

4+000

2400mm X 1200mm BOX CULVERT

1050mm RCP or
1350mm CMP

PT Sta. 3+429.566

PI Sta. 0+896.867
Δ = 0° 07' 34"
No Curve

℄ Construction U.S. 30

N 0° 26' 48" E
℄ Construction TR-21

MEET EXISTING STA. 0+850.000

BEGIN WORK STA. 0+562.806

TR-21

CR-18

POT Sta. 0+566.764

NEVADA WYNFORD ROAD CR-18

℄ Construction U.S. 30
P.I. = Sta. 2+804.412
Δ = 16° 58' 52.82" (RT)
R = 4,250.000 m
T = 634.459 m
L = 1,259.616 m
E = 47.097 m
e_{max} =Normal Crown

SENSITIVE AREA (CULTURAL RESOURCE)

4+500

1200mm RCP or
1500mm CMP

PC Sta. 4+577.646

℄ Construction U.S. 30
P.I. = Sta. 5+345.696
Δ = 12° 31' 22.98" (RT)
R = 7,000.000 m
T = 768.050 m
L = 1,529.979 m
E = 42.010 m
e_{max} =Normal Crown

10+000

1200mm RCP or
1350mm CMP

STRUCTURE NO.
CRA-30-05244
(BY OTHERS)

Sta. 5+248.766 US-30
Sta. 1+000.000 CR-22

600mm RCP or
675mm CMP

5+000

CR-22

Existing USR 30

Exist. 12"

1+500

N 0° 10' 46" W

BETHEL ROAD
(BY OTHERS)

℄ Construction Ramp "P"
PI Sta. 1+100.079
Δ = 0° 09' 44" Rt

5+500

Sta. 5+680.000 "P"

N 85° 00' 02" E

Match Line Sta. 5+740.000 See Sheet No. 9

1+500

675mm RCP or
825mm CMP

℄ Service Access No. 20
(BY OTHERS)

Sta. 0+617.000 CR-22
Sta.0+801.828 Service
Access No. 20

(BY OTHERS)
℄ CR-22
N 0° 20' 30" W

0+500

BETHEL ROAD

CR-22

CR-18

CONSTRUCTION PROTECTIVE FENCING

CALCULATED REA
CHECKED REA

0 50 100
HORIZONTAL
SCALE IN METERS

SCHEMATIC PLAN
STA. 3+020 TO STA. 5+740

WYA/CRA-30-28.009/0.000

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2116

℄ Construction Ramp "P"
P.I. = Sta. 5+999.907
Δ = 44° 27′ 34.44″ (LT)
R = 120.000 m
Ls1 = 80.000 m
Ls2 = 60.000 m
θs1 = 19° 05′ 54.94″
θs2 = 14° 19′ 26.20″
LT1 = 53.647 m
LT2 = 40.132 m
ST1 = 26.952 m
ST2 = 20.120 m
Lc = 23.116 m
Ts1 = 88.421 m
Ts2 = 80.871 m
Es = 11.511 m
e_{max} =0.08
TS Sta. 5+911.486
SC Sta. 5+991.486

HOLMES TOWNSHIP

STRUCTURE NO. CRA-30-06276 L&R

Sta 6+107.625 US-30
Sta 1+000.000 CR-330

END PROJECT U.S.R. 30 STA. 6+528.317 S.L.D. 06.528

STRUCTURE NO. CRA-30-06698 L&R

END WORK U.S.R. 30 STA. 7+179.963

Sta. 7+308.284

POT Sta. 8+148.284

℄ Construction U.S. 30
N 89° 41′ 39″ E

℄ Survey CR-330

℄ Construction Ramp "P"

See Sheet No. 8

Match Line Sta. 5+740.000

SENSITIVE AREA (WETLAND)

US-30

0+500

CS Sta. 6+014.601 P
ST Sta. 6+074.601 P
N 40° 32′ 27″ E
Sta. 6+108.580 "P"
Sta 0+695.632 CR-330
675mm RCP or
825mm CMP
PT Sta. 6+107.625

TS "P" Sta. 6+000 P

6+000

6+500

7+000

7+500

8+000

SHROLL ROAD

TR-111

S 65° 56′ 57″ E

N 43° 50′ 22″ E

ST Sta. 6+449.017 O

CS Sta. 6+389.017 O

675mm RCP or
825mm CMP

SC Sta. 6+331.384 O

SRS Sta. 6+251.384 O

℄ Construction Ramp "O"

CS Sta. 6+161.384 O

PCC Sta. 6+089.167 O

PC Sta. 5+901.325 O

Electric Transmission Lines

℄ Service Access No. 20 (BY OTHERS)

Sta. 1+097.018 CR-330
Sta. 6+479.100 "O"

POT Sta. 1+678.724

Ramp E

1+000

1+500

RUN

℄ Construction U.S. 30
P.I. = Sta. 5+345.696
Δ = 12° 31′ 22.98″ (RT)
R = 7,000.000 m
T = 768.050 m
L = 1,529.979 m
E = 42.010 m
e_{max} =Normal Crown

℄ Construction Ramp "O"

P.I. = Sta. 5+995.420
Δ = 8° 36′ 35.21″ (RT)
R = 1,250.000 m
T = 94.095 m
L = 187.836 m
E = 3.537 m
e_{max} =0.035

P.I. = Sta. 6+151.335
Δ = 20° 21′ 09.33″ (RT)
R = 330.000 m
Ls2 = 90.000 m
θs2 = 7° 48′ 47.02″
LT2 = 60.059 m
ST2 = 30.053 m
Lc = 72.223 m
Ts1 = 62.174 m
Ts2 = 101.452 m
Es = 5.806 m
e_{max} =0.08

P.I. = Sta. 6+366.099
Δ = 73° 07′ 42.52″ (LT)
R = 100.000 m
Ls1 = 80.000 m
Ls2 = 60.000 m
θs1 = 22° 55′ 05.92″
θs2 = 17° 11′ 19.44″
LT1 = 53.787 m
LT2 = 40.190 m
ST1 = 27.080 m
ST2 = 20.173 m
Lc = 57.633 m
Ts1 = 114.716 m
Ts2 = 106.397 m
Es = 27.089 m
e_{max} =0.08

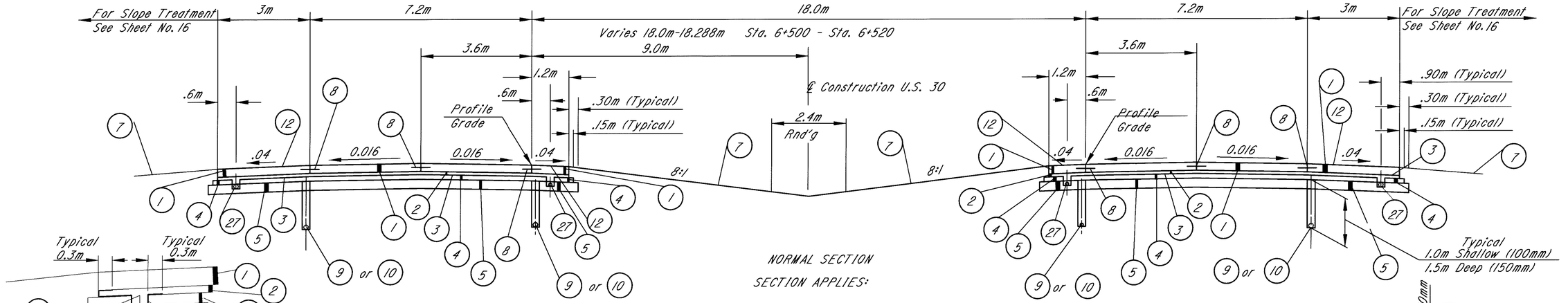
N

0 80 160
HORIZONTAL SCALE IN METERS

CALCULATED REA
CHECKED REA

SCHEMATIC PLAN
STA. 5+740 TO STA. 7+308.284

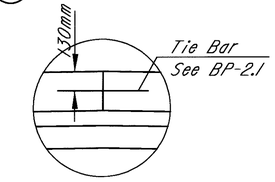
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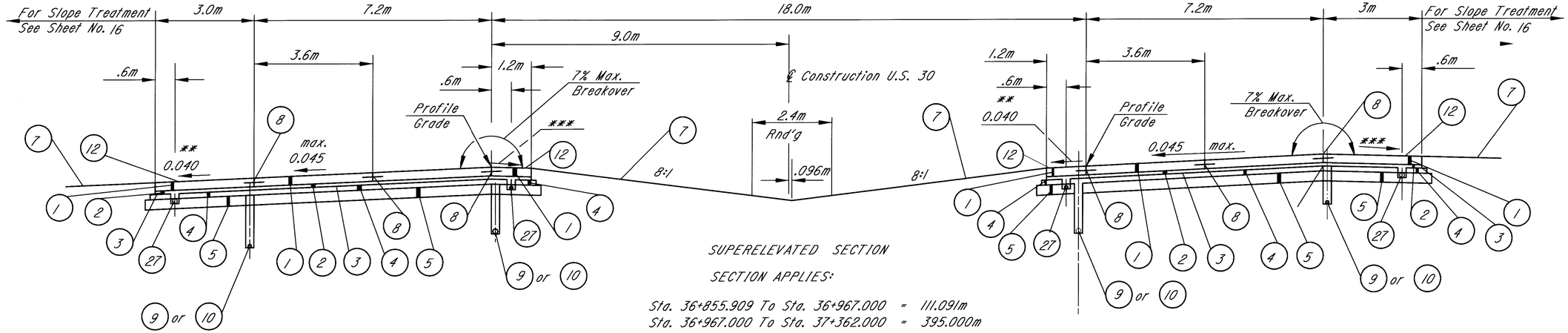
100mm SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP

Sta. 30+042.028 To Sta. 36+855.909 = 6,813.881m
Sta. 37+473.091 To Sta. 39+375.274 = 1,902.183m
STATION EQUATION Sta. 39+375.274 Back = Sta. 0+000.000 Ahead
Sta. 0+000.000 To Sta. 6+528.317 = 6,528.317m
DEDUCT FOR STRUCTURES
Sta. 36+346.902 To Sta. 36+418.190 [Broken Sword] = -71.288m

DEDUCT FOR STRUCTURES CONT.
Sta. 37+750.000 To Sta. 37+793.734 [SR 231] = -43.734m
Sta. 1+474.194 To Sta. 1+539.226 [R.R.] = -65.032m
Sta. 1+792.780 To Sta. 1+836.720 [CR-1] = -43.940m
Sta. 2+229.892 To Sta. 2+309.629 [CR-18] = -79.737m
Sta. 6+296.162 To Sta. 6+403.637 [Ex. US 30] = -107.475m
TOTAL = 14,833.175m



TYPICAL LONGITUDINAL JOINT



Asphalt Concrete Surface Course, Type 1H

SUPERELEVATED SECTION
SECTION APPLIES:

Sta. 36+855.909 To Sta. 36+967.000 = 111.091m
Sta. 36+967.000 To Sta. 37+362.000 = 395.000m
Sta. 37+362.000 To Sta. 37+473.091 = 111.091m
Transition
TOTAL = 617.182m
Transition

** or Rate of Superelevation Whichever is Greater

*** Varies 0.040 to 0.025

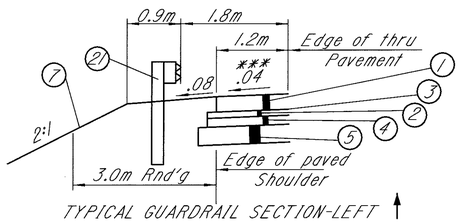
LEGEND

No.	ITEM	DESCRIPTION	No.	ITEM	DESCRIPTION	No.	ITEM	DESCRIPTION
1	884	260mm Portland Cement Concrete Pavement (7 Year Warranty)	14	448	57mm Asphalt concrete intermediate course, Type 2, PG64-28	28	618	Rumble Strips, Type 2
2	307	100mm Non-Stabilized Drainage Base Type '1A' or Item 855 100mm Asphalt Treated Free Draining Base	15	302	150 mm Bituminous aggregate base, PG64-22	29	448	76mm Asphalt concrete intermediate course, Type 2, PG64-28
			16	407	Tack coat	30	407	Tack coat for intermediate course
3	408	Bituminous prime coat	17	304	200 mm Aggregate base	31	407	Tack coat, 702.13
4	304	150mm Aggregate base	18	302	100mm Bituminous aggregate base, PG64-22			
5	206	300mm Lime-Soil stabilized subgrade, Slurry method	19	446	51mm Asphalt concrete surface course, Type 1H			
6	304	250mm Aggregate base	20	302	125mm Bituminous aggregate base, PG64-22			
7	659	Seeding and mulching	21	606	Guardrail, Type 5			
8		Standard longitudinal joint	22	830	Curb, Type 6			
9	605	100mm Shallow pipe underdrain	23	608	100mm Concrete walk			
10	605	150mm Deep pipe underdrain	24	830	Curb, Type 7	W		32mm Asphalt Concrete
11	203	Subgrade compaction	25	605	Aggregate Drain	X		76mm Asphalt Concrete
12	618	Rumble strips, Type 3	26	611	Reinforced Concrete Approach Slab (T= As Shown in Plans)	Y		229mm Reinforced Concrete Pavement
13	446	32mm Asphalt concrete surface course, Type 1H	27	605	100MM Shallow pipe underdrain with fabric wrap	Z		152mm Subbase

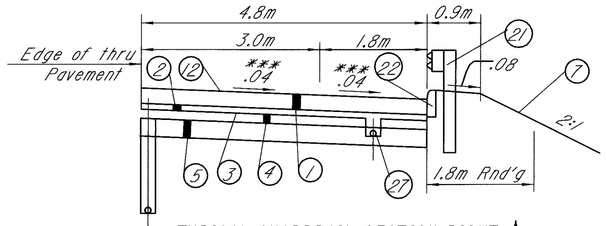
CALCULATED AEA
CHECKED AEA

MAINLINE TYPICAL SECTIONS

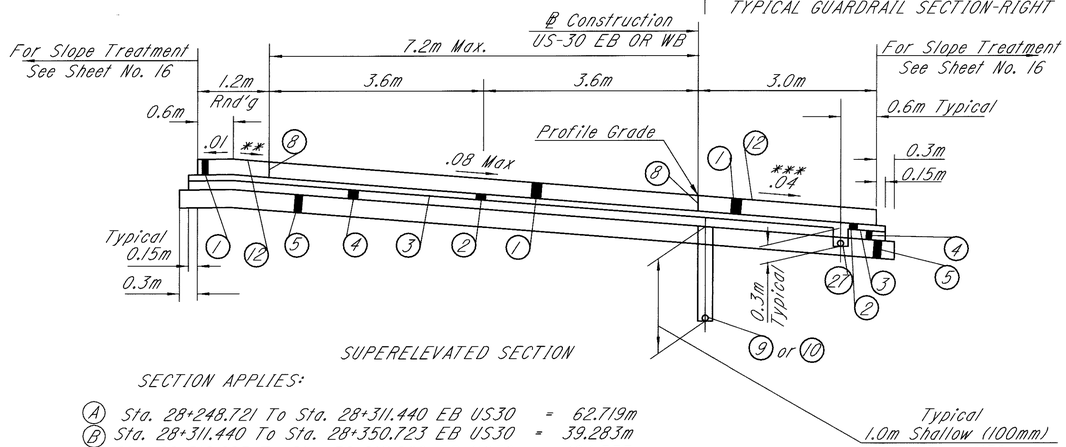
WYA/CRA-30-28.009/0.00



TYPICAL GUARDRAIL SECTION-LEFT



TYPICAL GUARDRAIL SECTION-RIGHT



SUPERELEVATED SECTION

SECTION APPLIES:

Ⓐ Sta. 28+248.721 To Sta. 28+311.440 EB US30 = 62.719m
Ⓑ Sta. 28+311.440 To Sta. 28+350.723 EB US30 = 39.283m
Sta. 29+518.695 To Sta. 30+013.028 EB US30 = 494.333m
Ⓒ Sta. 28+412.833 To Sta. 29+107.495 WB US30 = 694.662m (Opposite Hand)
1290.997 TOTAL

NOTES:

↑ Relative To direction of travel

** Same as superelevation rate

*** Or superelevation rate, whichever is greater

For Typical Slope and Shoulder Treatment See Shf. No. 16

For Pavement Legend See Sheet No. 10

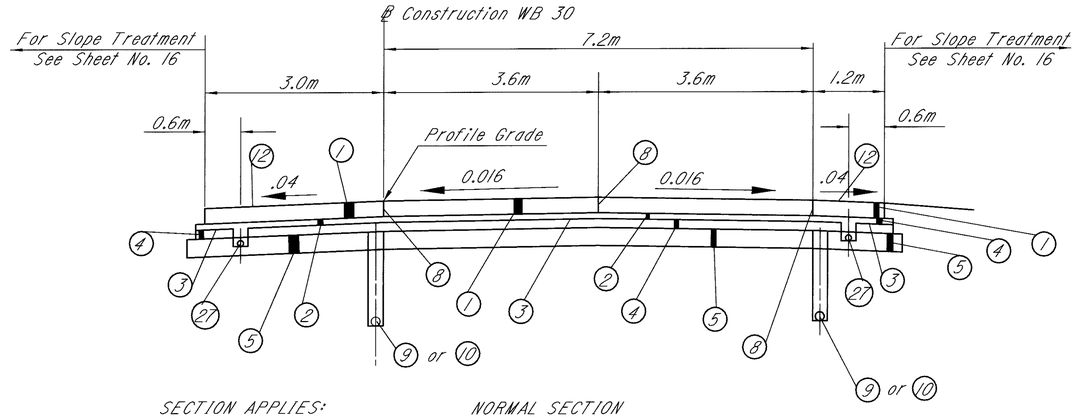
Ⓐ Pavement width is 4.8m between Sta. 28+248.721 and Sta. 28+311.440 EB US30

Ⓑ Transition width from 4.8m to 7.2m between Sta. 28+311.440 and Sta. 28+350.978 EB US30

Ⓒ Transition width from 4.8m to 7.2m between Sta. 28+412.833 and Sta. 28+592.833 WB US30

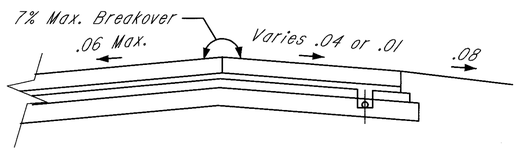
Ⓓ There is pavement widening (Ramp A) between Sta. 29+443.334 and Sta. 29+968.695 EB US30

Ⓔ Continue superelevation transition on median lane from 0.000 to 0.016 (Normal crown) between Sta. 30+013.029 and Sta. 30+042.028 US30

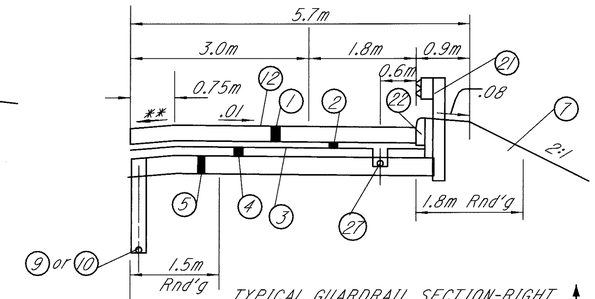


SECTION APPLIES: NORMAL SECTION

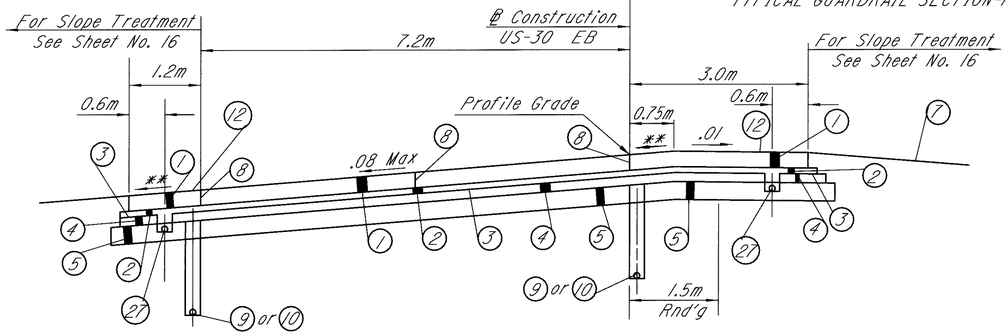
Sta. 29+107.495 To Sta. 29+193.960 WB US30 = 86.465m TOTAL



TYPICAL MAX. BREAKOVER SECTION



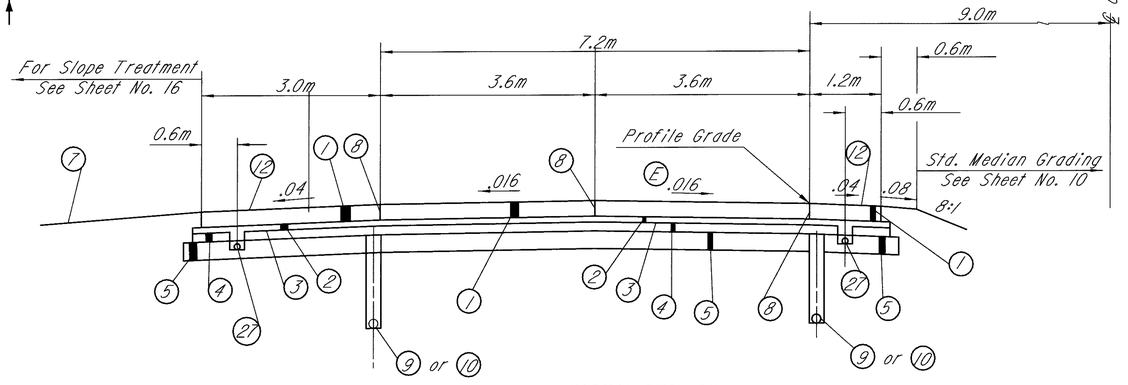
TYPICAL GUARDRAIL SECTION-RIGHT



SUPERELEVATED SECTION

SECTION APPLIES:

Ⓓ Sta. 28+350.723 To Sta. 29+518.695 EB US30 = 1167.972m
Sta. 28+566.034 To Sta. 28+801.546 EB US30 = -235.512m Deduct for structure
932.460m TOTAL



NORMAL SECTION

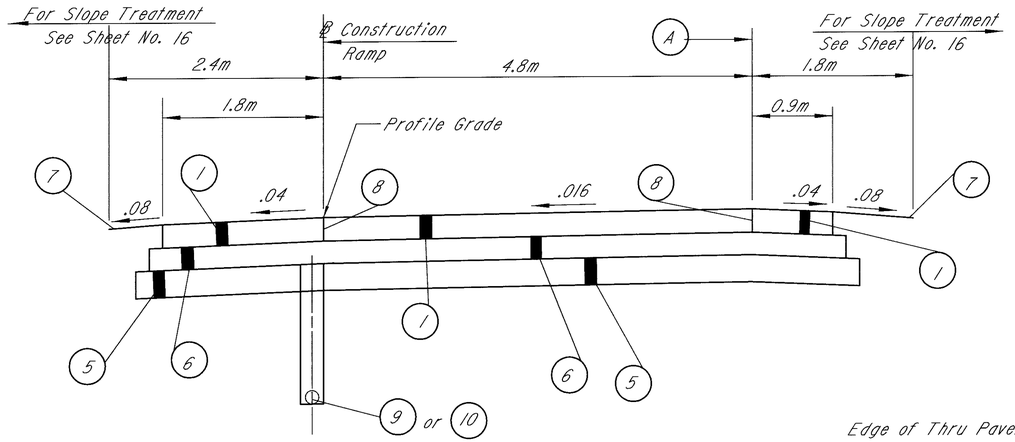
SECTION APPLIES:

Sta. 29+193.960 To Sta. 30+042.028 US-30 = 848.068m
Ⓔ Sta. 30+013.028 To Sta. 30+042.028 US-30 = 29.000m (Opposite Hand)
877.068m TOTAL

TYPICAL SECTIONS DIRECTIONAL ROADWAY

WYA/CRA-30-28.009/0.00

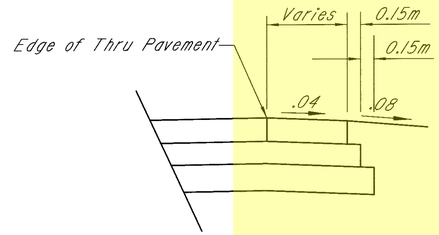
11
2116



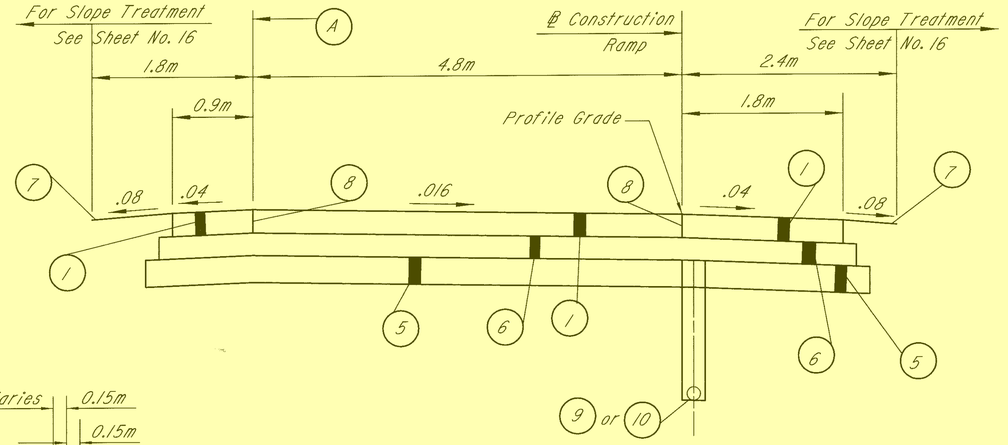
NORMAL RAMP SECTION

SECTION APPLIES:

	Sta. 34+006.392 - Sta. 34+023.234 (Ramp G)	=	16.842m
	Sta. 33+772.838 - Sta. 33+804.144 (Ramp F)	=	31.306m
(A)	Sta. 34+149.107 - Sta. 34+239.408 (Ramp J)	=	90.301m
(A)	Sta. 34+374.200 - Sta. 34+521.073 (Ramp J)	=	146.873m
	Sta. 37+743.595 - Sta. 37+787.381 (Ramp L)	=	43.786m
	Sta. 37+781.967 - Sta. 38+037.957 (Ramp M)	=	255.990m
	Sta. 5+68680.000 - Sta. 5+927.486 (Ramp P)	=	247.486m
		TOTAL =	832.584m



Typical Pavement
Edge Step-out

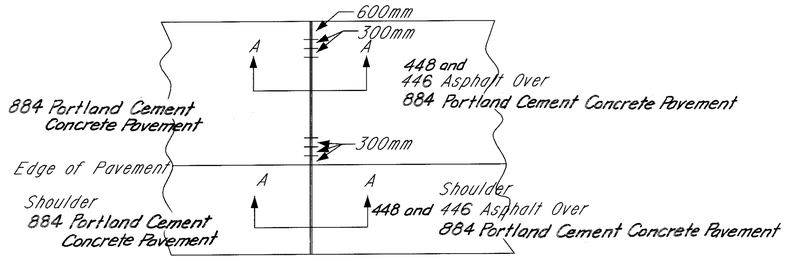


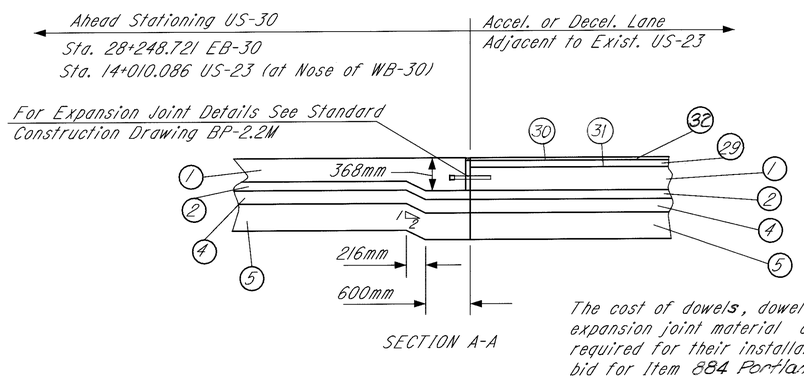
NORMAL RAMP SECTION

SECTION APPLIES:

	Sta. 29+142.030 - Sta. 29+518.695 (Ramp A)	=	376.665m
(A)	Sta. 29+051.023 - Sta. 29+127.620 (Ramp B)	=	76.597m
(A)	Sta. 33+709.735 - Sta. 33+861.322 (Ramp I)	=	151.587m
(A)	Sta. 33+996.133 - Sta. 34+110.511 (Ramp I)	=	114.378m
	Sta. 34+212.796 - Sta. 34+229.638 (Ramp E)	=	16.842m
	Sta. 34+427.160 - Sta. 34+457.652 (Ramp H)	=	30.492m
	Sta. 37+497.053 - Sta. 37+762.813 (Ramp K)	=	265.760m
	Sta. 37+757.895 - Sta. 37+796.583 (Ramp N)	=	83.623m
		TOTAL =	1071.009m

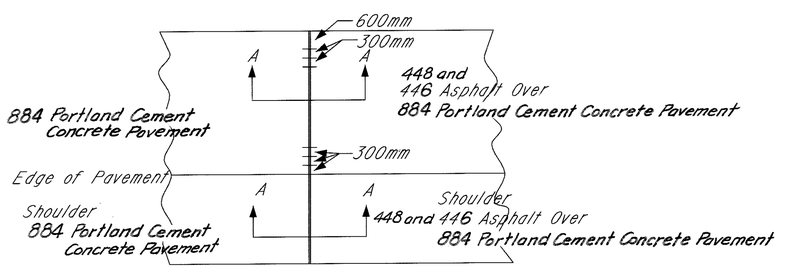
(A) Baseline of Construction for Ramp Stations Indicated

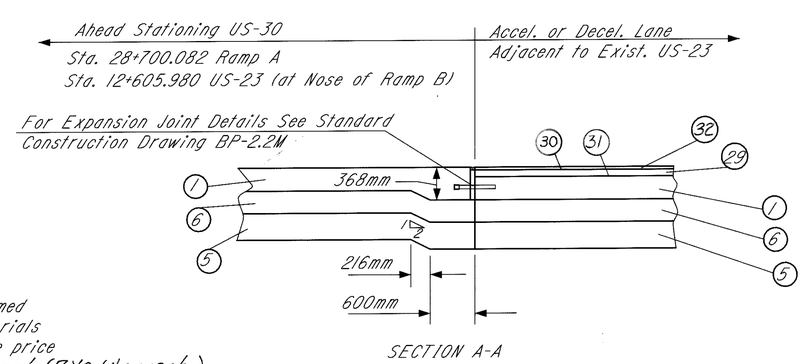




SECTION A-A

The cost of dowels, dowel holes, joint sealer, preformed expansion joint material and all labor and other materials required for their installation shall be included in the price bid for Item 884 Portland Cement Concrete Pavement (7 Yr. Warranty)



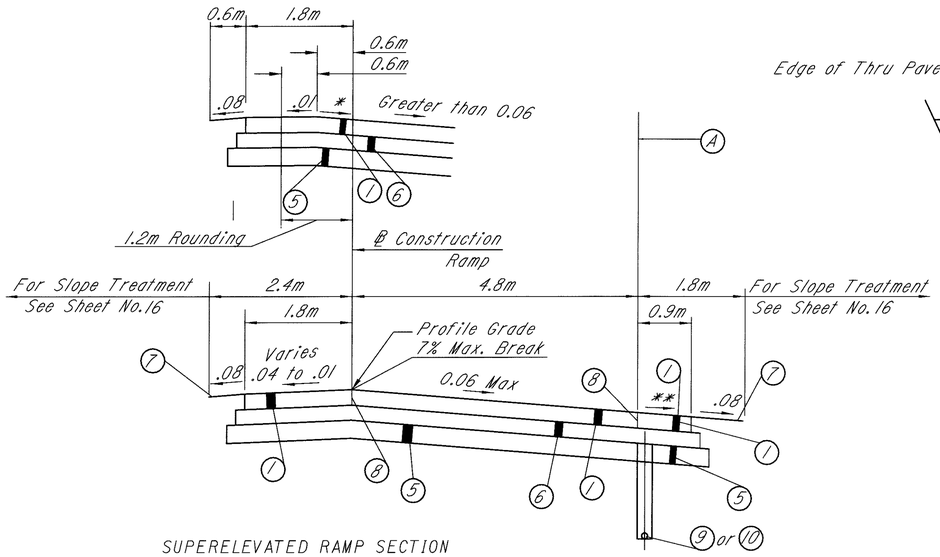


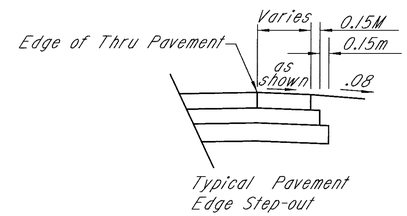
SECTION A-A

For Pavement Legend See Sheet No. 10

NORMAL RAMP TYPICAL SECTIONS

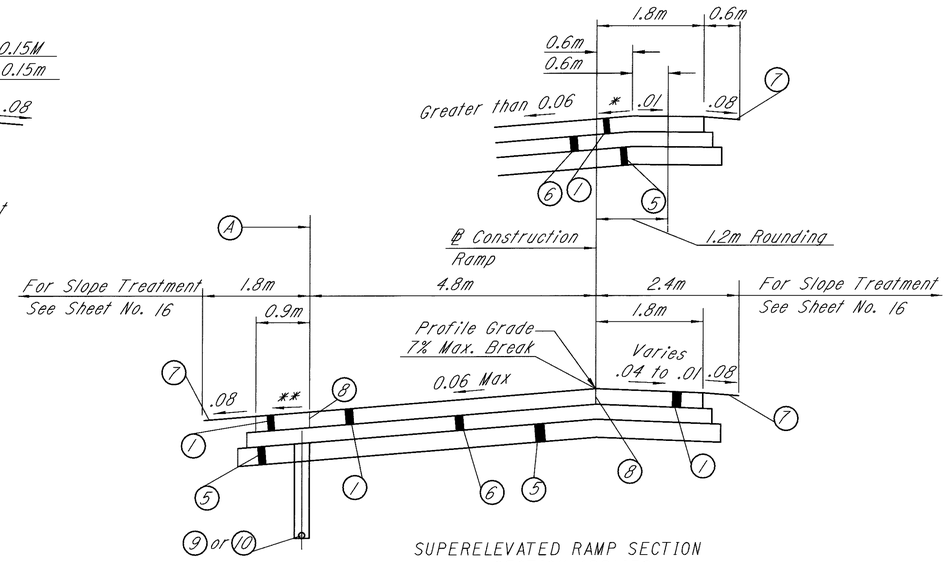
WYA/CRA-30-28.009/0.00





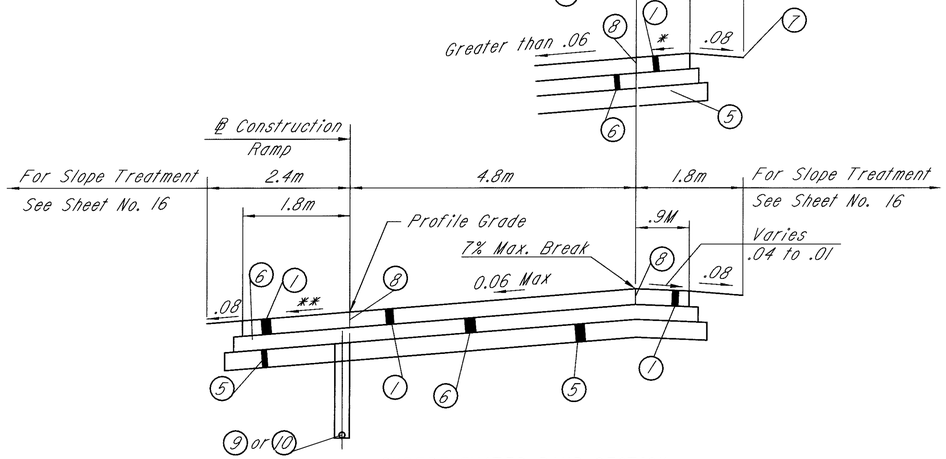
SUPERELEVATED RAMP SECTION
SECTION APPLIES:

(A)	Sta. 37+578.430 - Sta. 37+743.595 (Ramp L)	= 165.165m	
(A)	Sta. 28+226.822 - Sta. 29+051.023 (Ramp B)	= 824.201m	
	Sta. 28+682.212 - Sta. 28+809.224 (Ramp B)	= -127.012m	Deduct for Structure
	Sta. 29+127.620 - Sta. 29+165.020 (Ramp B)	= 37.400m	
	TOTAL	899.754m	



SUPERELEVATED RAMP SECTION
SECTION APPLIES:

(A)	Sta. 34+110.511 - Sta. 34+158.857 (Ramp I	= 48.346m	
	Sta. 37+796.583 - Sta. 37+966.756 (Ramp N)	= 170.173m	
	Sta. 6+251.384 - Sta. 6+475.092 (Ramp O)	= 223.708m	
	TOTAL	442.227m	



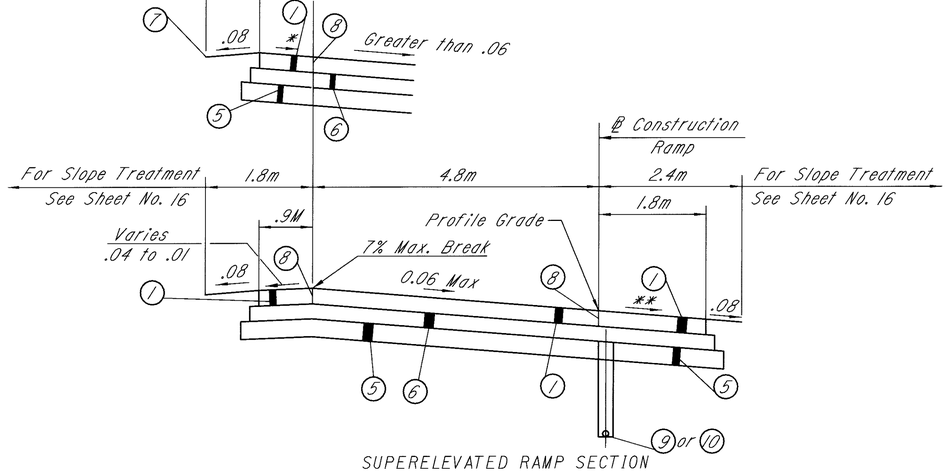
SUPERELEVATED RAMP SECTION
SECTION APPLIES:

Sta. 28+027.321 - Sta. 28+226.882 (Ramp B)	= 199.501m	
Sta. 34+023.234 - Sta. 34+389.899 (Ramp G)	= 366.665m	
Sta. 33+494.250 - Sta. 33+772.838 (Ramp F)	= 278.088m	
(A) Sta. 34+076.759 - Sta. 34+149.107 (Ramp J)	= 72.348m	
Sta. 37+434.573 - Sta. 37+578.430 (Ramp L)	= 143.857m	
Sta. 38+037.957 - Sta. 38+097957 (Ramp M)	= 60.000m	
Sta. 5+927.486 - Sta. 6+104.223 (Ramp P)	= 176.737m	
TOTAL	1297.196m	

NOTES:
* Same As Superelevated Rate
** .04 Or Superelevated Rate , Whichever Is Greater

(A) Baseline of Construction for the Ramp Indicated

For Pavement Legend See Sheet No. 10

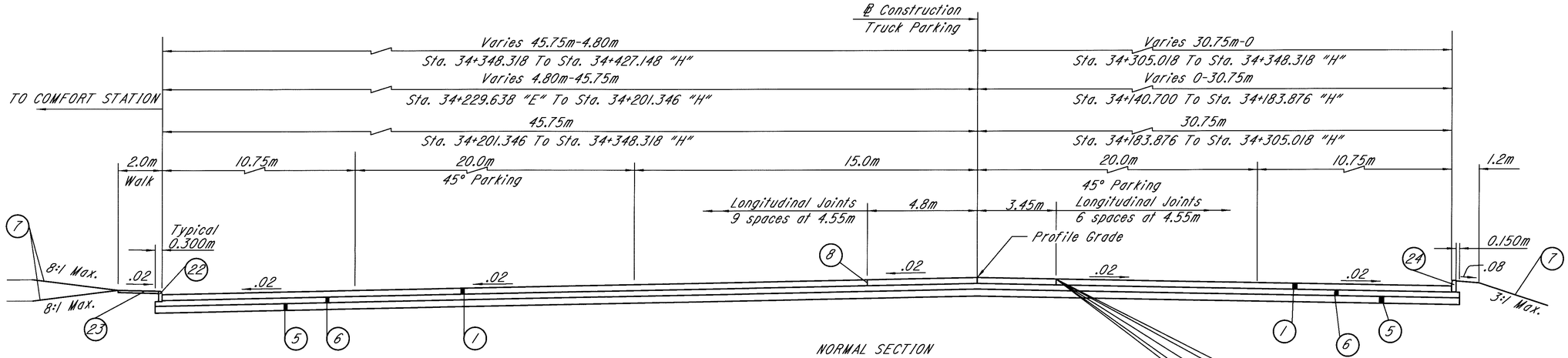


SUPERELEVATED RAMP SECTION
SECTION APPLIES:

Sta. 33+494.750 - Sta. 33+772.838 (Ramp F)	= 278.088m	
Sta. 28+701.006 - Sta. 29+142.030 (Ramp A)	= 441.024m	
Sta. 33+845.734 - Sta. 34+212.796 (Ramp E)	= 367.062m	
Sta. 34+457.652 - Sta. 34+740.745 (Ramp H	= 283.093m	
Sta. 37+437.053 - Sta. 37+497.053 (Ramp K)	= 60.000m	
Sta. 37+966.756 - Sta. 38+104.360 (Ramp N)	= 137.604m	
Sta. 6+059.161 - Sta. 6+251.384 (Ramp O)	= 192.223m	
TOTAL	1759.094m	

RAMP TYPICAL SECTIONS

WYA/CRA-30-28.009/0.00



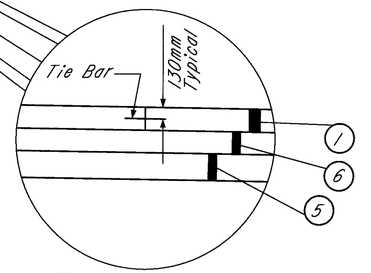
NORMAL SECTION

EASTBOUND TRUCK PARKING

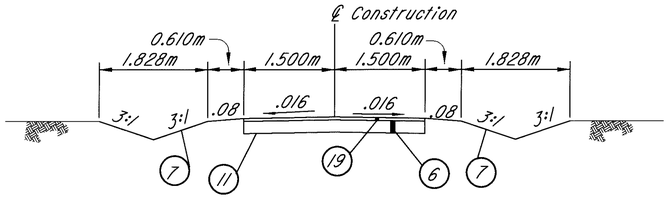
Sta. 34+229.638 To Sta. 34+265.633 (Ramp E) = 35.995m
Sta. 34+140.712 To Sta. 34+427.160 (Ramp H) = 286.448m
TOTAL = 322.443m

WESTBOUND TRUCK PARKING

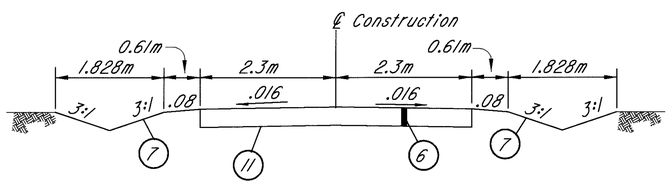
Sta. 33+804.144 To Sta. 34+095.508 (Ramp F) = 291.364m (Opposite Hand)
Sta. 33+969.947 To Sta. 34+006.392 (Ramp G) = 36.445m (Opposite Hand)
TOTAL = 327.809m



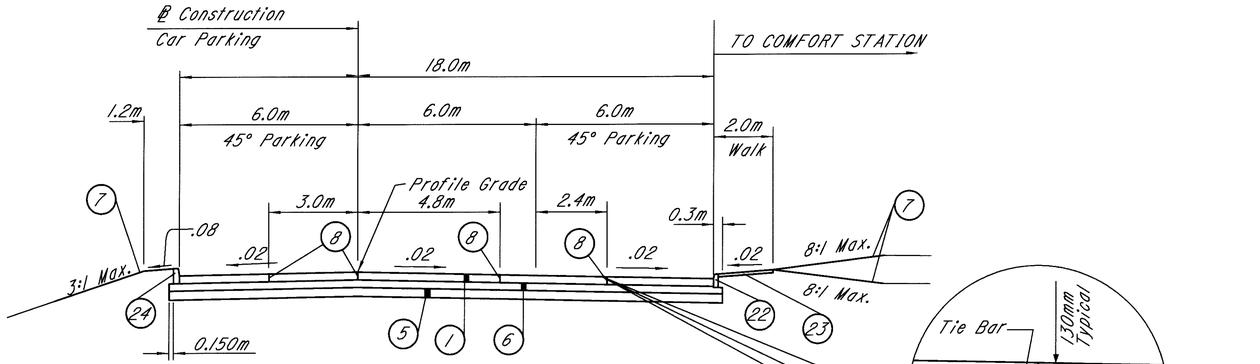
Typical Tie Bar Placement
In All Longitudinal and
Transverse Joints



Svc. Rd. No. 6 = Sta. 0+914.197 - Sta. 0+981.967 = 67.770m
Svc. Rd. No. 12 = Sta. 0+841.860 - Sta. 0+982.106 = 140.246m
TOTAL = 208.016m



Svc. Rd. No. 1 = Sta. 0+196.917 - Sta. 0+983.204 = 786.287m
Svc. Rd. No. 3 = Sta. 0+900.255 - Sta. 0+982.968 = 82.713m
Svc. Rd. No. 6 = Sta. 0+450.965 - Sta. 0+914.197 = 463.232m
Svc. Acc. No. 14 = Sta. 1+114.909 - Sta. 1+016.116 = 98.793m
Svc. Acc. No. 17 = Sta. 9+229.359 - Sta. 9+981.400 = 752.041m
TOTAL = 2183.066m



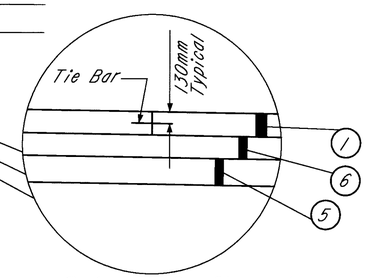
NORMAL SECTION

EASTBOUND CAR PARKING

Sta. 34+239.408 To Sta. 34+374.200 (Ramp J) = 132.936m

WESTBOUND CAR PARKING

Sta. 33+861.322 To Sta. 33+996.133 (Ramp I) = 134.881m (Opposite Hand)

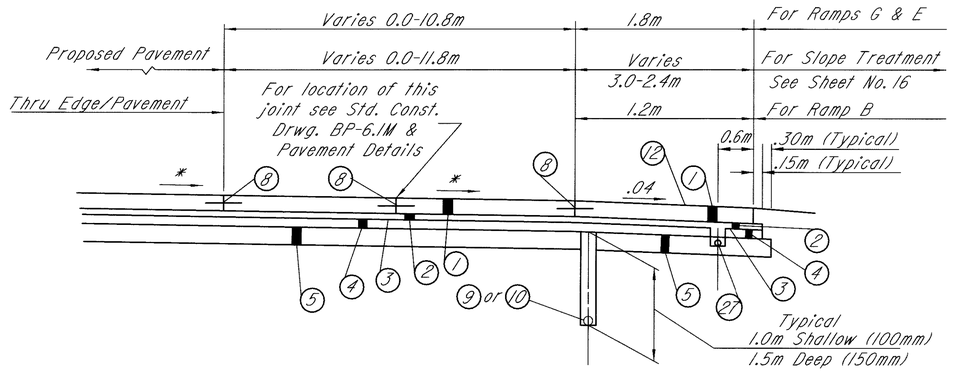


Typical Tie Bar Placement
In Longitudinal Joints

For Pavement Legend See Sheet No. 10

EASTBOUND AND WESTBOUND REST AREA TYPICAL SECTIONS
AND SERVICE ACCESS TYPICAL SECTIONS

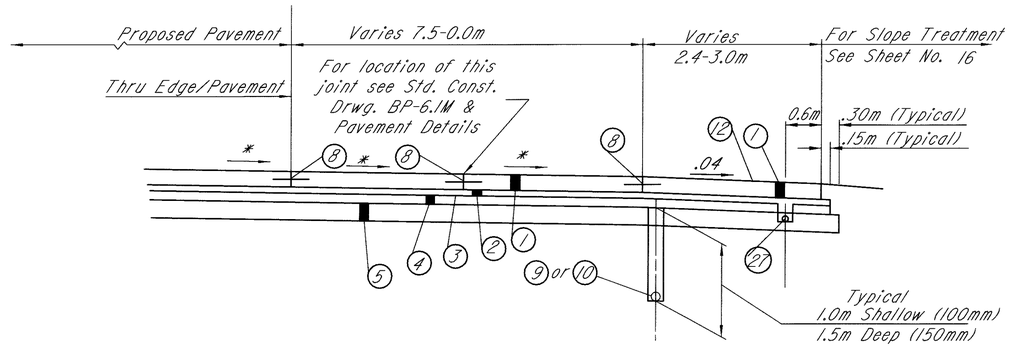
WYA/CRA-30-28.009/0.00



TYPICAL DECELERATION LANE

SECTION APPLIES:

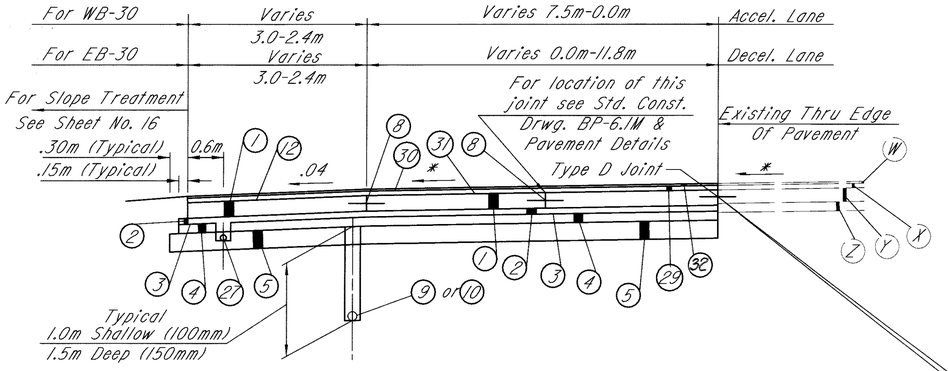
Sta. 29+165.021 "WB-30" - Sta. 29+193.960 (U.S.30)	= 126.415m	
Sta. 29+291.436 - Sta. 29+404.457 (U.S. 30)	= 113.021m	
Sta 33+605.970 - Sta. 33+845.970 (U.S. 30)	= 240.000m	
Sta. 33+965.879 - Sta. 34+076.772 (Ramp E)	= 110.893m	(Opposite Hand)
Sta 34+158.860 - Sta. 34+269.761 (Ramp G)	= 110.901m	
Sta. 34+389.662 - Sta. 34+629.662 (U.S.30)	= 240.000m	(Opposite Hand)
Sta 37+196.071 - Sta. 37+436.071	= 240.000m	
Sta. 38+097.721 - Sta. 38+337.721	= 240.000m	(Opposite Hand)
Sta 5+819.921 - Sta. 6+059.885	= 240.000m	
TOTAL	= 1661.230m	



TYPICAL ACCELERATION LANE

SECTION APPLIES:

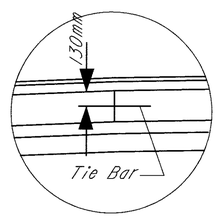
Sta. 29+518.695 - Sta. 29+968.695 (U.S. 30)	= 450.000m
Sta. 34+740.745 - Sta. 35+190.745	= 450.000m
Sta. 38+104.361 - Sta. 38+554.361	= 450.000m
Sta. 33+044.750 - Sta. 33+494.750	= 450.000m (Opposite Hand)
Sta. 36+984.573 - Sta. 37+434.573	= 450.000m (Opposite Hand)
Sta. 5+230.000 - Sta. 5+680.000	= 450.000m (Opposite Hand)
TOTAL	= 2700.000m



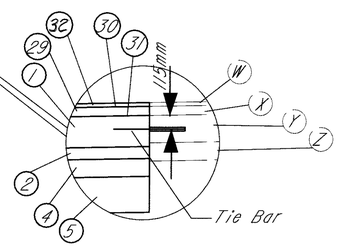
TYPICAL DIRECTIONAL ROADWAY
PAVEMENT WIDENING AT US-23

SECTION APPLIES:

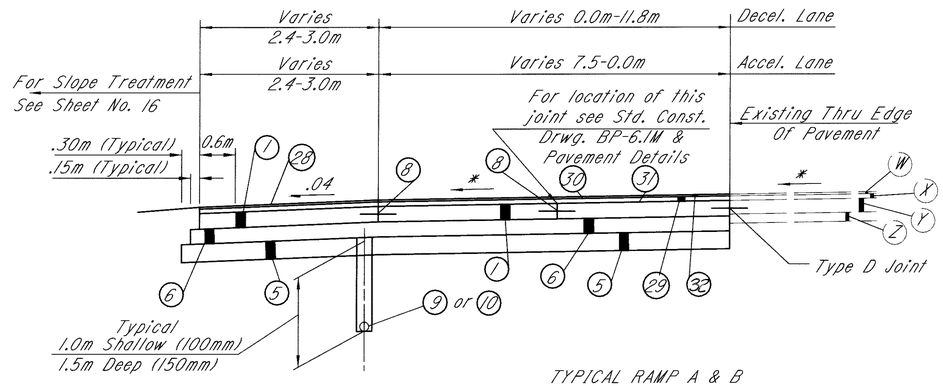
Sta 13+920.086 - Sta. 14+370.086 (U.S. 23)	= 240.000m (Opposite Hand)
Sta. 13+747.561 - Sta. 14+017.168 (U.S.23)	= 269.607m
TOTAL	= 590.893m



LONGITUDINAL JOINT DETAIL



Type D joint, See Standard Construction Drawing BP-2.1m



TYPICAL RAMP A & B
PAVEMENT WIDENING AT US-23

SECTION APPLIES:

Sta. 12+259.876 - Sta. 12+695.977 (U.S. 23)	= 436.101m
Sta. 12+366.972 - Sta. 12+606.668 (U.S. 23)	= 450.000m (Opposite Hand)
TOTAL	= 886.101m

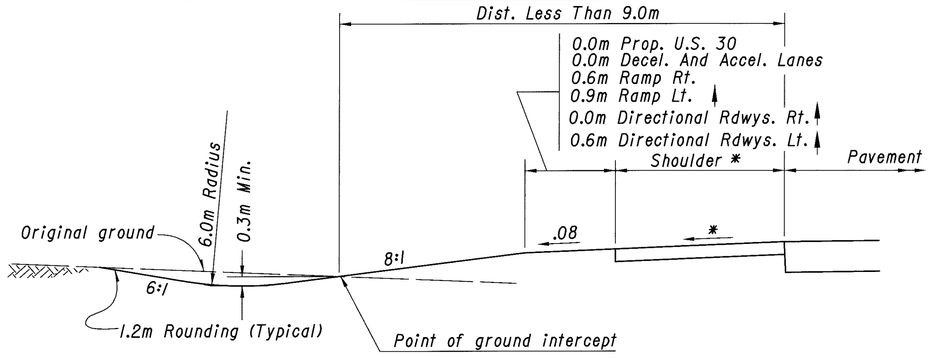
* .016 or Superelevation Rate
See Superelevation Table

For Pavement Legend See Sheet No. 10

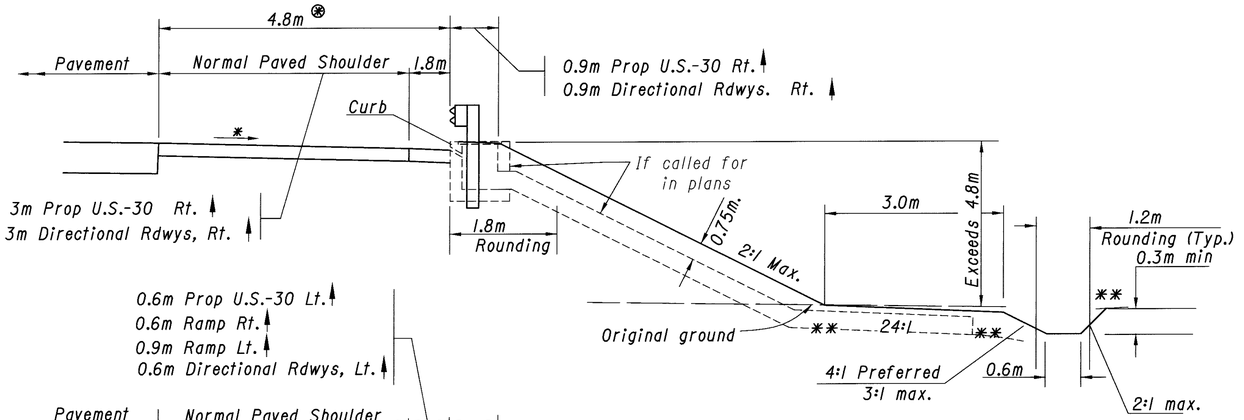
TYPICAL PAVEMENT WIDENING SECTIONS

WYA/CRA-30-28.009/0.00

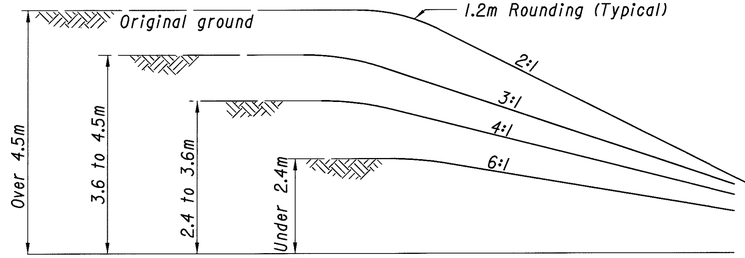
15
2116

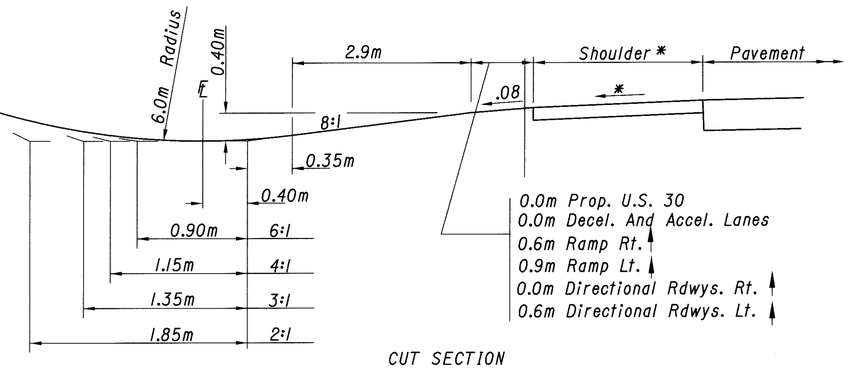


SHALLOW CUT OR LOW FILL SECTION

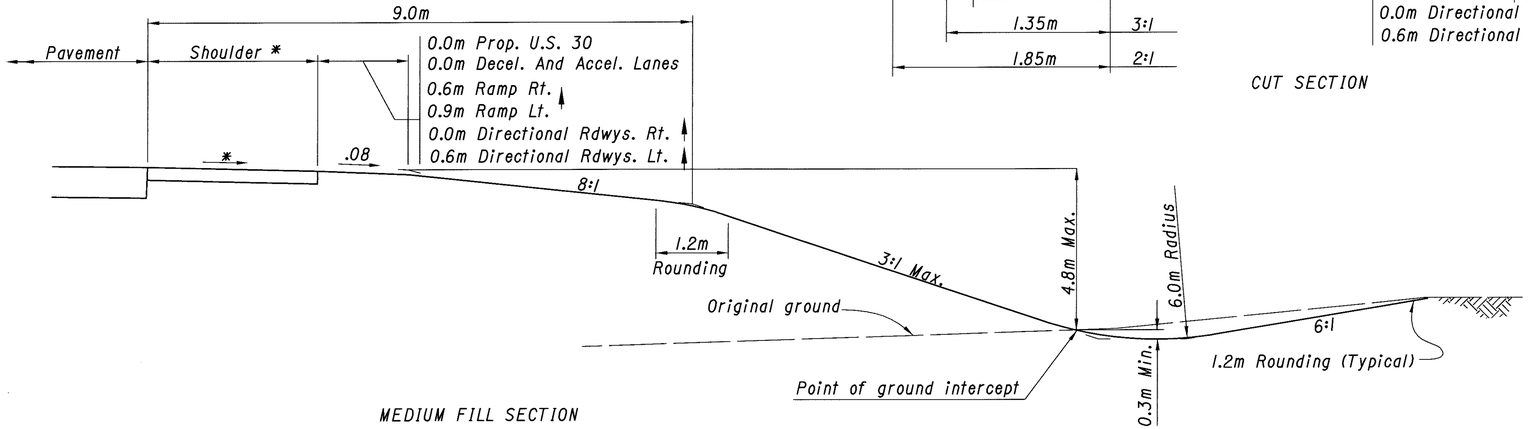


FILL SECTION





CUT SECTION



MEDIUM FILL SECTION

Notes:

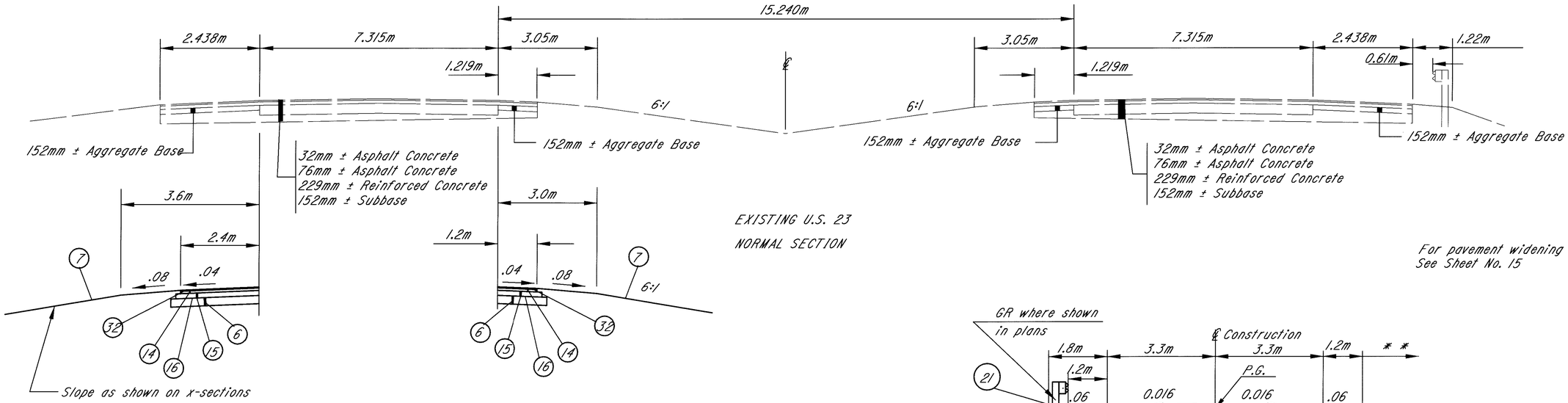
- * For Treated Shoulder Slope and Width, See Sheets No. II
- ⊛ Transition From 4.8m to 3.0m (Normal) in 45m When Guardrail is Required
- ** 1.2m Rounding
- ▲ Relative To Direction of Travel

CALCULATED REA
CHECKED REA

TYPICAL SECTIONS

WYA/CRA-30-28.009/0.00

16
2116



EXISTING U.S. 23
NORMAL SECTION

TYPICAL SHOULDER REPLACEMENT

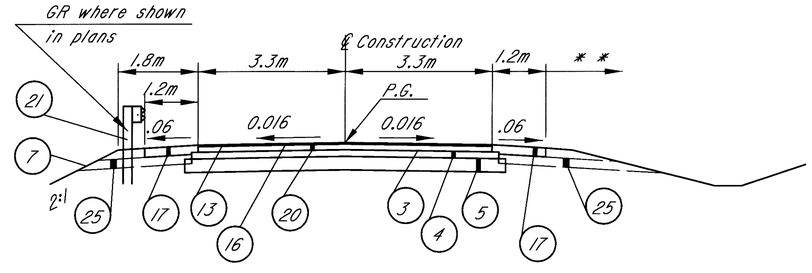
Section Applies:

Sta. 13+620.881 - Sta. 13+660.000 = 39.119m
Sta. 13+629.324 - Sta. 13+655.122 = 25.798m (OH)
TOTAL 64.917m

Section Applies:

Sta. 13+546.983 - Sta. 13+672.062 = 125.079m (OH)
Sta. 13+625.851 - Sta. 13+732.871 = 107.020m
TOTAL 132,099m

(OH) = Opposite Hand

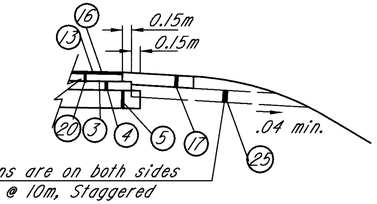


Section Applies:

Proposed CR-128

* Sta. 0+754.000 Sta. 0+838.000 = 84.000m
Sta. 0+838.000 - Sta. 0+983.787 = 145.787m
Sta. 1+016.209 - Sta. 1+074.203 = 57.994m
*Sta. 1+074.203 - Sta. 1+139.000 = 64.797m
TOTAL 352.578m

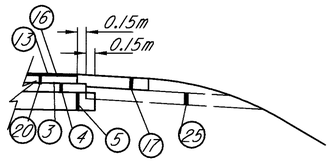
For pavement widening section
See Sheet No. 15



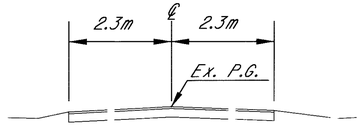
Aggregate Drains are on both sides of Pavement @ 10m, Staggered

Aggregate Drains apply to the following Roads:
TR-55, TR-127, TR-133, TR-10, AND TR-21

TYPICAL AGGREGATE DRAIN



TYPICAL PAVEMENT
EDGE EXTENSIONS



Existing CR-128

For Pavement Legend See Sheet No. 10

* Transition from existing width and cross slope to proposed Section.

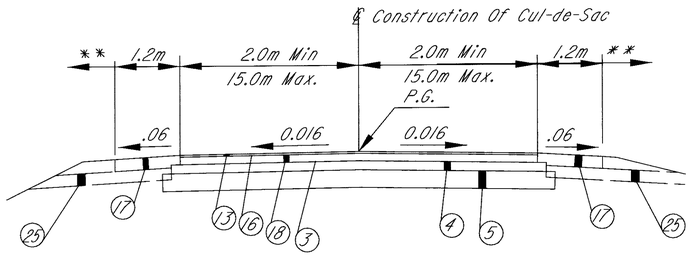
** For Shoulder and Slope Treatment See Sheet No. 19

CALCULATED LEH
CHECKED AEA

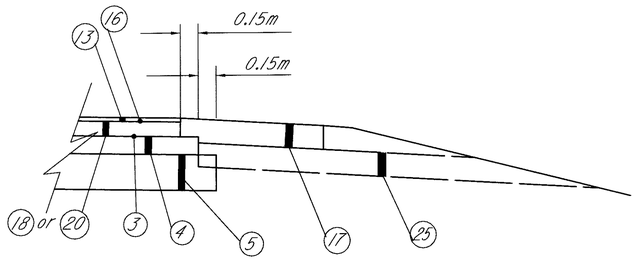
SIDE ROAD TYPICAL SECTIONS

WYA/CRA-30-28.009/0.000

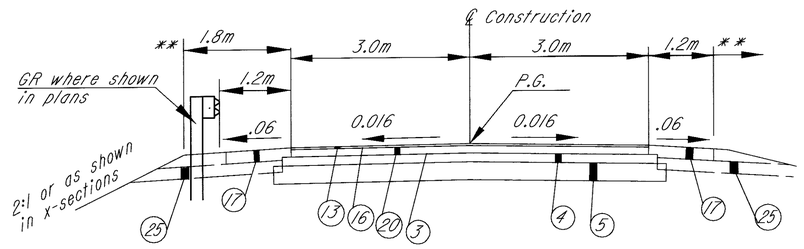
17
2116



Proposed Cul-de-Sac
TR-55,
TR-127 and TR-133



TYPICAL PAVEMENT
EDGE EXTENSIONS



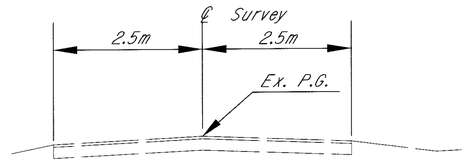
Proposed TR-10

Proposed TR-21
Knauss Road

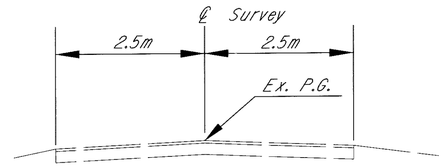
Section Applies:

*Sta. 0+848.500 - Sta. 0+924.000	=	75.500m
Sta. 0+924.000 - Sta. 0+983.005	=	59.005m
*Sta. 1+016.955 - Sta. 1+057.000	=	40.045m
Sta. 1+057.000 - Sta. 1+118.000	=	61.000m
TOTAL		235.550m

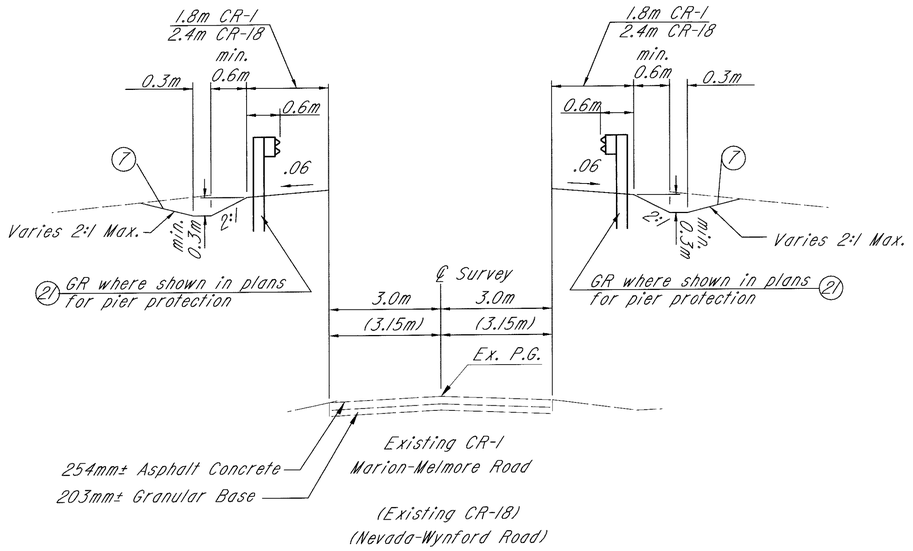
*Sta. 0+844.000 - Sta. 0+899.000	=	49.000m
Sta. 0+899.000 - Sta. 0+983.364	=	84.364m
Sta. 1+016.636 - Sta. 1+148.000	=	131.364m
*Sta. 1+148.000 - Sta. 1+190.000	=	42.000m
TOTAL		306.728m

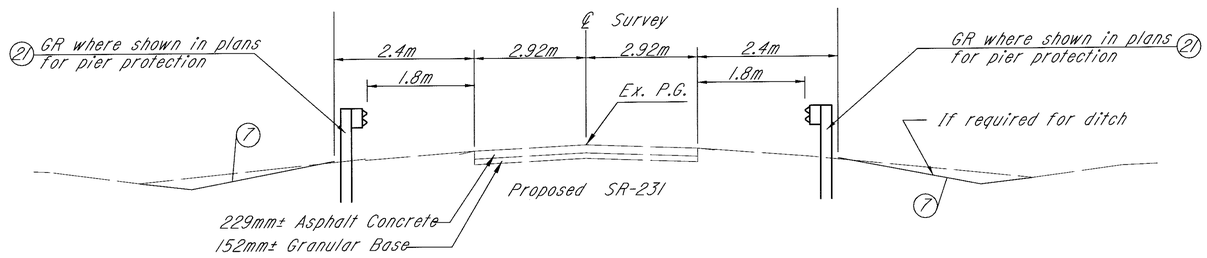


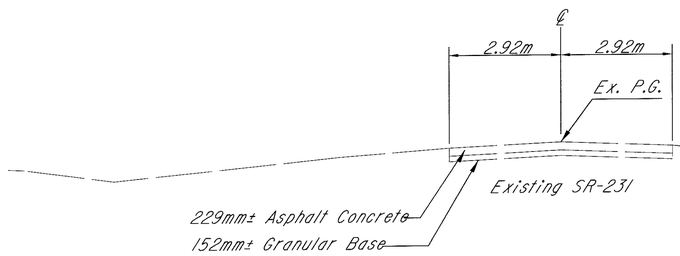
Existing TR-10



Existing TR-21
Knauss Road







For Pavement Legend See Sheet No. 10

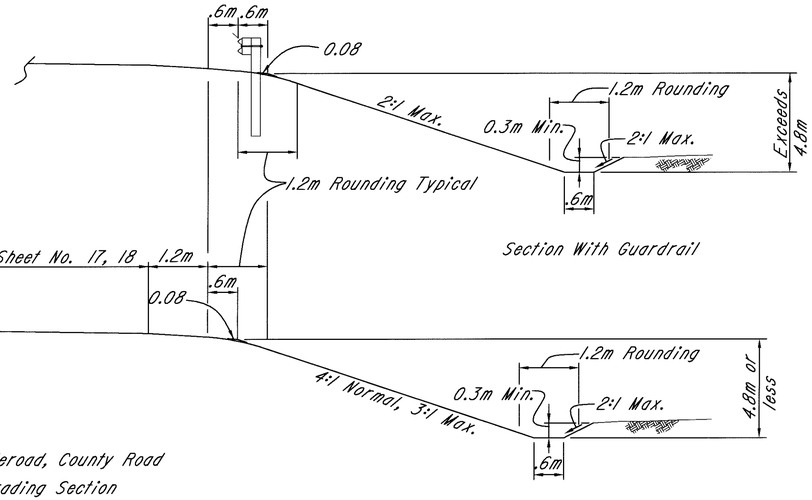
* Transition from existing width and cross slope to proposed section.

** For shoulder and slope treatment see sheet no. 19

CALCULATED REA
CHECKED REA

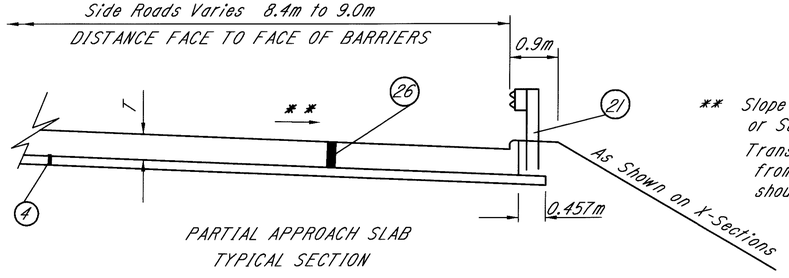
SIDE ROAD TYPICAL SECTIONS

WYA/CRA-30-28.009/0.00



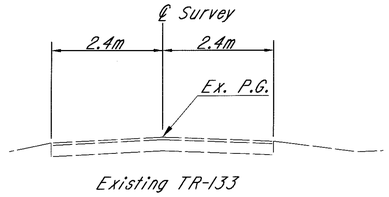
Standard Crossroad, Sideroad, County Road And Service Road Grading Section

Proposed US-30 = 13.8m
Proposed US-30 over Grass Run
W.B. = 15.6m
E.B. = Varies14.765m to 15.239m &
Varies 16.809m to 17.289m
Ramp B = 9.0m
E.B. US-30 = 13.8m
Side Roads Varies 8.4m to 9.0m

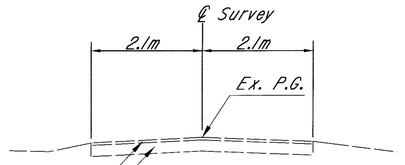


PARTIAL APPROACH SLAB
TYPICAL SECTION

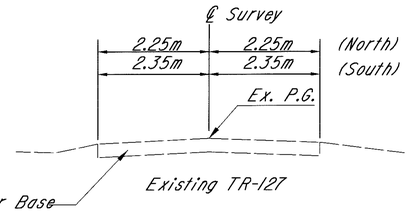
** Slope Varies See Typical Sections or Superelevation Tables
Transition slope of paved shoulder from approach slab x-slope to required shoulder slope in 6 meters



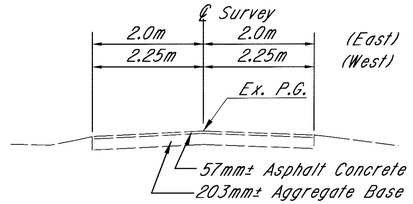
Existing TR-133



51mm± Asphalt Concrete
381mm± Aggregate Base
Existing TR-111

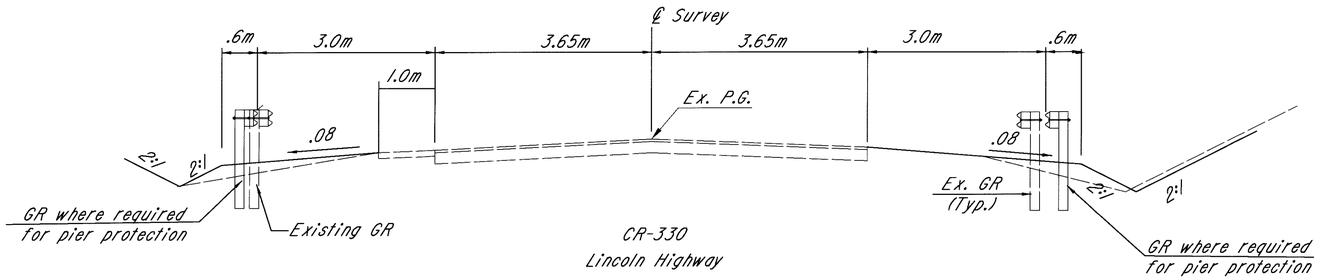


229mm± Granular Base
Existing TR-127

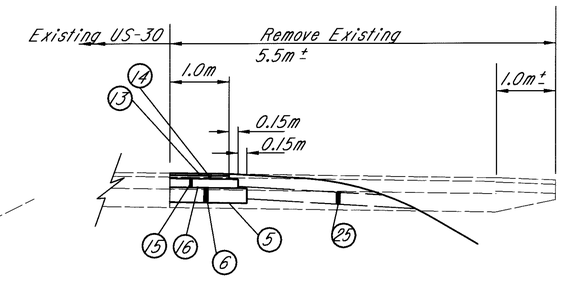


57mm± Asphalt Concrete
203mm± Aggregate Base
Existing TR-55

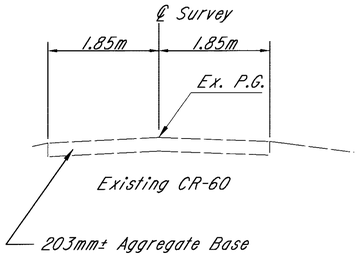
BRIDGE NO.	REAR APPROACH SLAB BEGIN	REAR APPROACH SLAB END	FORWARD APPROACH SLAB BEGIN	FORWARD APPROACH SLAB END	APPROACH SLAB "T" m
WYA-30-28682	Sta. 28+673.062	Sta. 28+682.212	Sta. 28+809.224	Sta. 28+818.374	0.430
WYA-30-28566	Sta. 28+559.306	Sta. 28+568.456	Sta. 28+801.546	Sta. 28+810.696	0.430
WYA-30-26347	Sta. 36+337.752	Sta. 36+346.902	Sta. 36+418.190	Sta. 36+427.340	0.430
WYA-30-37750	Sta. 37+740.850	Sta. 37+750.000	Sta. 37+793.734	Sta. 37+802.884	0.430
CRA-30-01448	Sta. 1+465.044	Sta. 1+474.194	Sta. 1+539.266	Sta. 1+548.416	0.430
CRA-30-01792	Sta. 1+783.630	Sta. 1+792.780	Sta. 1+836.720	Sta. 1+845.870	0.430
CRA-30-02230	Sta. 2+220.742	Sta. 2+229.892	Sta. 2+309.629	Sta. 2+318.779	0.430
CRA-30-06276	Sta. 6+287.012	Sta. 6+296.162	Sta. 6+403.637	Sta. 6+412.787	0.380
CRA-30-06698	Sta. 6+688.771	Sta. 6+697.921	Sta. 6+728.070	Sta. 737.220	0.430
WYA-30-12429	Sta. 0+948.100	Sta. 0+954.200	Sta. 1+045.800	Sta. 1+051.900	0.330
WYA-30-30006	Sta. 0+952.085	Sta. 0+959.685	Sta. 1+040.315	Sta. 1+047.915	0.380
CRA-30-05244	Sta. 0+955.098	Sta. 0+961.198	Sta. 1+038.802	Sta. 1+044.902	0.330



CR-330
Lincoln Highway



EXISTING ROADWAY REMOVAL
AND SHOULDER REPLACEMENT
EXISTING US-30



Existing CR-60
203mm± Aggregate Base

For Pavement Legend See Sheet No. 10

CALCULATED REA
CHECKED REA

APPROACH SLAB AND SIDE ROAD TYPICAL SECTIONS

WYA/CRA-30-28.009/0.000

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2116

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

CABLE TV: CONTINENTAL CABLE
114 NORTH SANDUSKY STREET
UPPER SANDUSKY, OHIO 43351
(419) 294-2334

ELECTRIC: OHIO POWER COMPANY
P.O. BOX 944
FINDLAY, OHIO 45839
(419) 562-5015

NORTH CENTRAL ELECTRIC
P.O. BOX 475
ATTICA, OHIO

GAS: COLUMBIA GAS TRANSMISSION CORP.
3151 OLD LINCOLN ROAD
WOOSTER, OHIO 44691
(330) 287-6634

COLUMBIA GAS OF OHIO
1800 NORTH BROAD STREET
FINDLAY, OHIO

TELEPHONE: OHIO BELL TELEPHONE COMPANY
425 JEFFERSON STREET
TOLEDO, OHIO
(800) 572-4000

UNITED TELEPHONE
25 SOUTH MULBERRY STREET
MANSFIELD, OHIO 44904
(800) 624-0790

GTE
550 LEADER STREET
MARION, OHIO 43302
(614) 383-0537

SPRINT
OSP ENGINEERING
175 ASHLAND ROAD
MANSFIELD, OHIO 44904

PROTECTION: OHIO UTILITIES PROTECTION SERVICE
100 FEDERAL PLAZA EAST, LOWER LEVEL
YOUNGSTOWN, OHIO 44503
(800) 362-2764

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

COORDINATION OF PROJECTS :

THIS PROJECT MAY OVERLAP OTHER ODOT CONSTRUCTION PROJECTS UNDER CONSTRUCTION AT THE SAME TIME. IT IS ESSENTIAL THAT EACH CONTRACTOR CONDUCT HIS WORK AND COOPERATE WITH THE OTHER CONTRACTOR IN SUCH A MANNER AS TO NOT HINDER THE PROGRESSOR COMPLETION OF THE WORK PERFORMED BY THE OTHER CONTRACTOR.

SPECIFICALLY, THE EMBANKMENT, ROADWAY, DRAINAGE AND STRUCTURES FOR C.R. 56, T.R. 124 AND C.R. 22 AS WELL AS THE ROADWAY FOR C.R.60, PORTIONS OF T.R. 111 AND SERVICE ACCESS 20 WILL BE UNDER CONSTRUCTION AT THE SAME TIME AS THIS PROJECT. THE CONTRACTORS SHALL COORDINATE WITH EACH OTHER IN REGARDS TO PROPERTY ACCESS, MAINTENANCE OF TRAFFIC, COMPLETION OF WORK, ETC... AS DIRECTED BY THE ENGINEER.

IN ADDITION, THE MOTORIST SEVICES BUILDINGS, POTABLE WATER TREATMENT SYSTEM, WASTE WATER TREATMENT SYSTEM AND LANDSCAPING OF THE REST AREAS SHALL BE SOLD UNDER SEPARATE CONTRACT AND CONSTRUCTED IN CONJUNCTION WITH THIS PROJECT. THE CONTRACTORS SHALL COORDINATE WITH EACH OTHER IN REGARDS TO ACCESS, DELIVERY OF MATERIALS, COMPLETION OF WORK, ETC... AS DIRECTED BY THE ENGINEER.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY, TO INCLUDE FENCE REMOVAL WITHIN THE CONSTRUCTION LIMITS, HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

SPECIAL REQUIREMENTS FOR PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS

INFORMATION HAS BEEN PROVIDED IN THE SCHEMATIC PLAN SHEETS 2-9 SHOWING THE ENVIRONMENTALLY SENSITIVE AREAS WITHIN THE PROJECT LIMITS AS WELL AS OUTSIDE THE LA RIGHT-OF-WAY
THE CONTRACTOR SHALL AS A FIRST ORDER OF WORK PLACE PROTECTIVE FENCING ALONG THE LAR/W BORDERING THE ENVIRONMENTALLY SENSITIVE AREAS AS WELL AS ALONG CONSTRUCTION LIMITS, AS SHOWN ON PLANS, PRIOR TO ANY OTHER WORK. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR PERFORM ANY ACTIVITY WITHIN THE CONFINES OF THE PROTECTIVE FENCE AND IN THE AREAS SHOWN ON THE PLANS AS ENVIRONMENTALLY SENSITIVE.

ITEM SPECIAL, 607 FENCE, MISC.: CONSTRUCTION PROTECTIVE FENCING 2500 METER

MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 1977. THE FOLLOWING QUANTITY FOR MONUMENTS HAS BEEN CARRIED TO THE GENERAL SUMMARY.

604, MONUMENT ASSEMBLY 82 EACH

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

STREAM CHANNEL EXCAVATION

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS SUCH AS, FOUNDATION PIER OR ABUTMENT EXCAVATION, CHANNEL CLEANOUT, EXCAVATION FOR ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

ITEM 870, SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS. SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS:

870	SOIL ANALYSIS TEST	48 EACH
870	PLACING TOPSOIL	64119 CU. METER
870	COMMERICAL FERTILIZER	289000 KILOGRAM
870	WATER	23500 CU. METER
870	MOWING	481670 SQ. METER

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR ITEM 870, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.

ITEM 877 - TEMPORARY SEDIMENT BASINS AND DAMS, AS PER PLAN

THIS ITEM OF WORK SHALL INCLUDE A SUFFICIENT AMOUNT OF SAFETY FENCE TO PROTECT THE PERIMETER OF ANY SEDIMENT BASINS WITHIN THE PROJECT. THIS SHALL INCLUDE ALL LABOR,TOOLS, AND MATERIALS TO INSTALL AND REMOVE THE SAFETY FENCE. THE COST OF THE FENCE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 877, TEMPORARY BENCHES, DAMS AND SEDIMENT BASINS, AS PER PLAN.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE PLACED BY THE CONTRACTOR WITH THE ENGINEER'S CONCURRENCE FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

877, TEMPORARY SEEDING AND MULCHING	385350 SQ. METER
877, TEMPORARY SLOPE DRAINS	1560 METER
877, TEMPORARY SEDIMENT BASINS AND DAMS, AS PER PLAN	16360 CU. METER
877, TEMPORARY PERIMETER FILTER FABRIC FENCE	20100 METER
877, TEMPORARY DITCH CHECK FILTER FABRIC FENCE	800 METER
877, TEMPORARY INLET PROTECTION FILTER FABRIC FENCE	700 METER
877, TEMPORARY DIKES	3900 CU. METER
877, TEMPORARY DITCH PROTECTION	33250 SQ. METER
601, ROCK CHANNEL PROTECTION, TYPE C (WITH FILTER)	4050 CU. METER
601, ROCK CHANNEL PROTECTION, TYPE C (WITHOUT FILTER)	7200 CU. METER
870, COMMERCIAL FERTILIZER	90550 KILOGRAM
870, REPAIR SEEDING AND MULCHING	96300 SQ. METER
870, WATER	3850 CU. METER

EROSION CONTROL

ITEMS 601, 660, 670 AND 839 ARE PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS AND TURF OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE 660 OR 670. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THESE ITEMS SHALL MEET THE REQUIREMENT OF 108.04.

EXISTING TOPOGRAPHY

ALTHOUGH SHOWN IN THESE PLANS, EXISTING TREES, BUILDINGS AND OTHER STRUCTURES WILL BE REMOVED BY OTHERS UNDER SEPARATE CONTRACT. TREES WILL BE CUT BETWEEN 0.2 METERS AND 0.3 METERS ABOVE THE EXISTING GROUND LEAVING THE STUMP INTACT. THE CUT TREES MAY OR MAY NOT BE REMOVED FROM THE SITE BY THE OTHER CONTRACT. ALL REMAINING TREES AND DEBRIS SHALL BE REMOVED WITHIN THE RIGHTS-OF-WAY IN ACCORDANCE WITH ITEM 201 CLEARING AND GRUBBING. BUILDINGS SHALL NOT BE REMOVED OR ENTERED BY THE CONTRACTOR UNLESS DIRECTED BY THE ENGINEER. IT IS ANTICIPATED THAT THE BUILDINGS WILL BE REMOVED BY 5-01-01.

CALCULATED JGB CHECKED REA

GENERAL NOTES

WYA/CRA-30-28.009/0.000

STORM WATER POLLUTION PREVENTION PLAN

THE CONDITIONS OF THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT (SEE PROPOSAL) SHALL BE MET DURING ALL STAGES OF CONSTRUCTION. THE LOCATION AND TIMING OF ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE FIELD ADJUSTED TO PREVENT SIGNIFICANT IMPACTS ON RECEIVING WATERS. IMPLEMENTATION OF THIS STORM WATER POLLUTION PREVENTION PLAN SHALL CONTINUE THROUGHOUT THE DURATION OF THE PROJECT OR UNTIL SUCH TIME THAT THE UPSLOPE DISTURBED AREAS ARE STABILIZED.

INSTALLATION OF SEDIMENT BASINS/DAMS, PERIMETER FILTER FABRIC FENCE, AND DITCH CHECKS SHALL BE CONCURRENT WITH CLEARING AND GRUBBING AND/OR GRADING OPERATIONS.

ALL REASONABLE ATTEMPTS SHOULD BE MADE TO MINIMIZE THE TOTAL AREA OF DISTURBED LAND.

AREAS TO REMAIN DORMANT FOR MORE THAN 45 DAYS SHOULD BE IMMEDIATELY STABILIZED WITH TEMPORARY SEEDING AND MULCHING, EROSION CONTROL MATTING OR OTHER APPROPRIATE EROSION CONTROL MEASURES.

ADDITIONAL QUANTITIES OF TEMPORARY SOIL EROSION AND SEDIMENT CONTROL ITEMS ARE GIVEN IN THE GENERAL NOTES.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES SHALL BE MADE BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. THE STUB SHALL MEET THE REQUIREMENTS OF 707 AND HAVE A MINIMUM LENGTH OF 0.6 METER AND A MINIMUM WALL THICKNESS OF 1.63 MM.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THE FIELD WELDED JOINT, IF USED, SHALL BE THOROUGHLY CLEANED AND REGALVANIZED OR OTHERWISE SUITABLY REPAIRED. WELDING SHALL MEET THE REQUIREMENTS OF 513.17.

A MASONRY COLLAR, AS PER STANDARD DRAWING DM-1.1M. WILL BE REQUIRED TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS PROVIDED FOR THE LONGITUDINAL DRAINAGE.

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 603 OR 522.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

FARM DRAINS

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE RIGHT-OF-WAY LIMITS BY ITEM 603 CONDUIT, TYPE B OR C, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT, AS INDICATED WITHIN THE PLANS.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY USING A MINIMUM OF 6 METERS OF 603 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE 300 MM ABOVE THE FLOWLINE ELEVATION OF THE DITCH.

FOLLOWING ARE THE KNOWN LOCATIONS OF PROPOSED FARM DRAIN OUTLETS INTO ROADWAY DITCHES:

STA. 28+608.835 US-30 EB	37.9m RT.	150mm CONDUIT
STA. 36+701.065 US-30	27.9m RT.	100mm CONDUIT
STA. 36+810.461 US-30	27.8m LT.	100mm CONDUIT
STA. 0+040.000 US-30	27.5m RT.	100mm CONDUIT
STA. 0+040.000 US-30	31.6m LT.	100mm CONDUIT
STA. 4+400.000 US-30	37.0m LT.	100mm CONDUIT
STA. 0+870.214 CR-128	14.0m RT.	375mm CONDUIT
STA. 0+870.214 CR-128	14.0m RT.	150mm CONDUIT
STA. 33+819.722 RAMP E	8.1m RT.	100mm CONDUIT
STA. 37+681.053 RAMP K	14.0m RT.	100mm CONDUIT
STA. 37+682.063 RAMP L	20.0m LT.	150mm CONDUIT
STA. 37+688.029 RAMP L	19.8m LT.	375mm CONDUIT
STA. 38+041.519 RAMP N	24.0m RT.	100mm CONDUIT

LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 603, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1M, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEM.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

603	200MM CONDUIT, TYPE E	500 METER
603	150MM CONDUIT, TYPE E	1500 METER
603	100MM CONDUIT, TYPE F	100 METER
603	150MM CONDUIT, TYPE F	1000 METER
603	200MM CONDUIT, TYPE F	200 METER
603	250MM CONDUIT, TYPE F	600 METER
603	375MM CONDUIT, TYPE F	100 METER
601	ROCK CHANNEL PROTECTION TYPE C WITH FILTER	200 CU. METER

SPRING DRAINS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR DRAINING ANY SPRINGS SHOWN IN THE PLAN OR ENCOUNTERED DURING CONSTRUCTION. THE FOLLOWING TYPES OF PIPES MAY BE USED: 707.33, 707.41, 707.42 or 707.45 PERFORATED PER 707.31.

SPRING DRAINS SHALL BE CONSTRUCTED AS SHOWN ON STANDARD CONSTRUCTION DRAWING DM-1.1M AND PAID FOR AT THE CONTRACT PRICE FOR:

605	150 mm UNCLASSIFIED PIPE UNDERDRAIN, FOR SPRINGS	300 METER
605	AGGREGATE DRAIN, FOR SPRINGS	100 METER

TREATED SEPTIC CONNECTIONS

TREATED SEPTIC FLOW MAY BE DISCHARGED INTO THE HIGHWAY DRAINAGE SYSTEM PROVIDED THE OWNER HAS ACQUIRED AN OFFICIAL PERMIT FROM THE OHIO DEPARTMENT OF TRANSPORTATION OR WYANDOT COUNTY OR CRAWFORD COUNTY.

IN EACH CASE WHERE A PERMIT HAS BEEN ISSUED FOR MAKING A TREATED SEPTIC CONNECTION INTO A HIGHWAY DRAINAGE CONDUIT, AN INSPECTION WELL SHALL BE PROVIDED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING DM-3.1M.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER IN MAKING THE ABOVE CONNECTIONS:

603, 150MM CONDUIT, TYPE C	200 METER
604, INSPECTION WELL	4 EACH

ITEM 603, CONDUIT BORED AND JACKED

WHERE IT IS SPECIFIED THAT A CONDUIT BE INSTALLED BY THE METHOD OF BORING AND JACKING, NO TRENCH EXCAVATION SHALL BE CLOSER THAN 9 METERS TO THE EDGE OF PAVEMENT. TRENCHES SHALL BE ADEQUATELY SUPPORTED AND THE SPECIFICATION REQUIREMENTS FOR CLASS B BEDDING SHALL BE DISREGARDED. IF A CASING PIPE IS USED IN THE BORING AND JACKING OPERATION, THE VOID BETWEEN IT AND THE INTERIOR CARRIER PIPE SHALL BE COMPLETELY FILLED WITH ITEM 613, SAND, GROUT OR OTHER MATERIAL APPROVED BY THE ENGINEER.

ITEM 605, AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT 10 METER INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 5 METERS FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT 5 METER INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

CALCULATED JGB CHECKED REA

GENERAL NOTES

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CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES AND THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL, IN ALL CASES, BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2M AND THE SPECIFICATIONS.

CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, CONTRACTION JOINTS SHALL BE PROVIDED IN THE NEW CONCRETE SO AS TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2M. IF NECESSARY, ADDITIONAL JOINTS SHALL BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND CONSTRUCTING THE FULL PAVEMENT WIDTH IN STAGES, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LONGITUDINAL JOINTS SHALL BE LAPPED AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1M.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

616, WATER	41850 CU. METER
616, CALCIUM CHLORIDE	1050 METRIC TONS

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

MEDIAN AND/OR CURBING ON APPROACH SLABS

THE SHAPE OF THE MEDIAN AND/OR CURBING ON APPROACH SLABS SHALL BE TRANSITIONED, FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE, WITHIN THE LIMITS OF THE APPROACH SLAB.

ITEM 407, TACK COAT; ITEM 407 TACK COAT, 702.13 & ITEM 407, TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.34 LITERS PER SQUARE METER OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

ADDITIONAL SOIL INFORMATION

THE SOIL PROFILE AND/OR STRUCTURE FOUNDATION INVESTIGATION SHEETS CONTAIN ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN. ADDITIONAL SUBSURFACE INVESTIGATIONS MAY HAVE BEEN MADE TO STUDY SOME ASPECT OF THE PROJECT. MORE INFORMATION, IF ANY, MAY BE OBTAINED IN DISTRICT ONE, THE OFFICE OF MATERIALS MANAGEMENT OR THE OFFICE OF STRUCTURAL ENGINEERING.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 75 MILLIMETERS BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (7.5 METERS OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

ITEM SPECIAL, DRILLED WATER WELL ABANDONED

THE EXISTING CONCRETE OR STONE SLAB WELL COVER AND PUMPING EQUIPMENT SHALL BE REMOVED AND DISPOSED. THE CASING SHALL BE CUT OFF AT LEAST 500 MILLIMETERS BELOW THE PROPOSED FINISHED GRADE OUTSIDE PROPOSED PAVEMENT AREAS OR AT LEAST 500 MILLIMETERS BELOW THE PROPOSED SUBGRADE ELEVATION INSIDE PROPOSED PAVEMENT AREAS. THE WELL SHALL BE FILLED FROM BOTTOM TO TOP WITH BENTONITE SLURRY PELLETS OR CONCRETE MEETING ASTM C 150 TYPE I PORTLAND CEMENT WITH NO AIR ENTRAINMENT, AND THEN CAPPED IN ACCORDANCE WITH THE DETAIL SHOWN ON SHEET NO. 143.

THE CONTRACTOR SHALL FILE WELL LOG AND ABANDONMENT FORMS WITH THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) AS REQUIRED BY THE OHIO REVISED CODE. ANY ADDITIONAL MATERIALS REQUIRED BY ODNR SHALL BE CONSIDERED INCIDENTAL. ODNR'S ADDRESS IS AS FOLLOWS:

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER
1939 FOUNTAIN SQUARE, BUILDING E
COLUMBUS, OHIO 43224
TELEPHONE (614) 265-6739

A COUNTY ISSUED PLUGGING PERMIT MAY ALSO BE REQUIRED.

THE CONTRACT PRICE PER EACH FOR ITEM SPECIAL, DRILLED WATER WELL ABANDONED, SHALL INCLUDE PAYMENT FOR ALL LABOR, TOOLS, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

LOCATION OF GUARDRAIL

THE LOCATION OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606 - ANCHOR ASSEMBLY, TYPE B-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE SRT-350, GUARDRAIL END TERMINAL AS MANUFACTURED BY SYRO INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 11.43 m, INCLUSIVE OF THREE 3.81 m LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SS425M	SLOTTED RAIL TERMINAL SRT-350 POST LAYOUT AND ERECTION DETAILS (12.5, 9 POST)	6/21/97	3/6/98

2) THE FLEAT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917).

THE LENGTH OF THE FLEAT-350 IS CONSIDERED TO BE 11.43 m, INCLUSIVE OF THREE 3.81 m LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
FLT-M	FLARED ENERGY ABSORBING TERMINAL (FLEAT-350) ASSEMBLY	4/16/98	7/31/98

GRADING SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING GR-4.3M.

ITEM 606 - ANCHOR ASSY, TYPE B-98 (CONTINUED)

THE FACE OF THE TYPE B-98 IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19: APPROXIMATELY 915 mm W x 305 mm H FOR THE SRT-350 AND 350 mm W X 500 mm H FOR THE FLEAT.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE B-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING REFLECTIVE SHEETING AND ALL RELATED HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE ET-2000 (1997) MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330- 545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 15.24 m, INCLUSIVE OF TWO 7.62 m LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SS265M	ET-2000 (1997) PLAN, ELEVATION & SECTIONS	6/20/97	3/6/98

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 15.24 m, INCLUSIVE OF FOUR 3.81 m LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	2/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 450 mm X 450 mm.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

CALCULATED JGB
CHECKED REA

GENERAL NOTES

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ITEM 606 - IMPACT ATTENUATOR, TYPE 1-98 (BIDIRECTIONAL)]
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING IMPACT ATTENUATORS:

1) THE C-A-T MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373). THE LENGTH OF THE C-A-T SYSTEM IS CONSIDERED TO BE 9525 mm LONG. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SS245M	CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS FOR USE AS A LONGITUDINAL MEDIAN BARRIER TERMINAL OR CRASH CUSHION ATTENUATOR	4/10/97	3/6/98
SS224M	C-A-T TRANSITION TO MEDIAN BARRIER GUARDRAIL PLAN, ELEVATION & SECTIONS	4/26/96	3/6/98
SS226M	C-A-T TRANSITION TO VERTICAL WALL OR PIER PLAN, ELEVATION & SECTIONS	4/26/96	3/6/98

2) THE BRAKEMASTER MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750). THE LENGTH OF THE BRAKEMASTER SYSTEM IS CONSIDERED TO BE 9957 mm LONG. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
92-00-02	BRAKEMASTER GENERAL ASSEMBLY (BIDIRECTIONAL SYSTEM)	3/10/97	3/6/98
92-00-82	BRAKEMASTER (BIDIRECTIONAL) WITH FOUNDATION TUBES	2/9/98	3/6/98
920202 4-0000	ANCHOR ASSEMBLY, FOUNDATION TUBE, 6½FT., BRS	6/12/97	3/6/98

THE FACE OF THE TYPE 1-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 915 mm W X 305 mm H. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 1-98 (BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM SPECIAL-MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLANS DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 100 MM BY 100 MM SQUARE OR 115 MM DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 60.3 MM O.D., AND CONFORM TO AASHTO M 181.

HARDWARE (PLATES, SCREWS, BOLTS, ETC.) SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.12. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT, SINGLE OR DOUBLE.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 202, REMOVAL, MISC., MAILBOX REMOVED FOR REUSE	10 EACH
SPL 690, MAILBOX SUPPORT SYSTEM, SINGLE	8 EACH
SPL 690, MAILBOX SUPPORT SYSTEM, DOUBLE	1 EACH

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES SHALL BE MADE IN ACCORDANCE WITH ITEM 607.

STREAM RECONSTRUCTION

THE CONTRACTOR SHALL NOT PERFORM ANY WORK BEYOND THE CONSTRUCTION LIMITS AS SHOWN ON THE PLANS.

RECONSTRUCTED STREAM CHANNELS SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS, HOWEVER, SOME STREAM CHANNEL BOUNDARY AND PROFILE IRREGULARITIES ARE ACCEPTABLE AND MAY BE REQUIRED BY THE ENGINEER TO BEST ACCOMMODATE SPECIFIC SITE CONDITIONS OR TO ACHIEVE DESIRED STREAM HABITAT RESULTS (FOR EXAMPLE, SUCH AS THE PLACEMENT OF POOL OR RIFFLE SECTIONS). THESE ACTIVITIES WILL NOT BE CAUSE FOR A CHANGE ORDER OR EXTRA WORK CLAIM.

SPECIAL REQUIREMENTS FOR PROTECTION OF ENDANGERED SPECIES HABITAT - INDIANA BAT

INFORMATION WILL BE PROVIDED TO THE CONTRACTOR IN THE FORM OF A MAP AND FIELD MARKING THAT IDENTIFIES SPECIFIC DEAD TREES, SNAGS AND SUBSTANTIAL LIVE TREES OR TREE CLUSTERS WITH EXFOLIATING BARK (SUCH AS LARGE SHAGBARK HICKORY AND SYCAMORE) WITHIN THE PROJECT LIMITS THAT ARE POTENTIAL SUMMER ROOST TREES FOR THE INDIANA BAT, A FEDERAL ENDANGERED SPECIES. THESE TREES HAVE SPECIAL REQUIREMENTS FOR TIMING OF REMOVAL AND PROTECTION DURING ROOSTING SEASON.

ALL POTENTIAL ROOST TREES SHALL BE CUT AND REMOVED FROM THE PROJECT AREA BEFORE APRIL 15. IF THE ROOST TREES CANNOT BE REMOVED BY APRIL 15, THEN THEY SHALL REMAIN PROTECTED AND UNDISTURBED FOR A PERIOD BETWEEN APRIL 15 AND SEPTEMBER 15, PER THE REQUIREMENTS BELOW, AND SUBSEQUENTLY REMOVED AFTER SEPTEMBER 15.

IF THE TREES DESCRIBED ABOVE ARE NOT REMOVED PRIOR TO THE NEXT BAT ROOSTING SEASON (APRIL 15), THEY SHALL BE PROTECTED BY INSTALLING WORK LIMIT FENCING AROUND EACH TREE OR TREE GROUP AT A RADIUS OF NOT LESS THAN 15 METERS FROM THE NEAREST POINT OF EACH ROOST TREE TRUNK. IF SUCH PROTECTION IS REQUIRED DUE TO THE TIMING OF CONSTRUCTION, IT SHALL NOT BE CAUSE FOR TIME DELAY OR EXTRA COMPENSATION CLAIMS BY THE CONTRACTOR, AND THE WORK SHALL BE PERFORMED PER BID FOR ITEM 201, CLEARING AND GRUBBING.

ITEM 206, TEST ROLLING

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

LIME SOIL STABILIZED SUBGRADE

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY PER THE REQUIREMENTS OF ITEM 206.

206, TEST ROLLING
572944 SQ.M X (1 HOUR/2500 SQ.M) = 230 HOURS

206, LIME
572944 SQ.M X 0.3 M X (2000 KG/SQ.M)
X 6% X (0.001 M.TON/KG) = 20626 M.TON

206, WATER
20626 M.TON X (0.21 CU.M/M.TON) +
572944 SQ.M X (0.02 CU.M/SQ.M) = 15791 CU.M

ITEM 670, DITCH EROSION PROTECTION

WHEN 668 EXCELSIOR MATTING IS USED IN DITCHES OR CHANNELS, THE MATTING SHALL BE COVERED ON BOTH TOP AND BOTTOM WITH NETTING HAVING A MAXIMUM 75MM BY 25MM (3 INCH BY 1 INCH) WEAVE.

IN ADDITION, 673 TYPE B MATERIAL MAY BE USED FOR 670 DITCH EROSION PROTECTION.

ITEM SPECIAL-MISC.: ROOT WADS

THE CONTRACTOR SHALL PROVIDE A TOTAL OF 25 TREES WITH ROOT WADS THAT HAVE A MAXIMUM WIDTH OF 10 FEET. THE TREE TRUNKS SHALL BE CUT TO A MAXIMUM LENGTH OF 15 FEET. THE TREES SHALL BE BURIED ON THE BACK SLOPE OF THE STREAM BETWEEN STA. 37+301 AND STA. 37+353 ℄ US-30 LT. AS SHOWN ON SHEET NO. 133A. THE TREE TRUNKS SHALL BE CUT OFF AT THE RIGHT-OF-WAY FENCE. ALL COSTS ASSOCIATED WITH THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM SPECIAL-MISC.: ROOT WADS.

ITEM 651, TOPSOIL STOCKPILED

THE MATERIAL FOR THIS ITEM SHALL BE OBTAINED FROM AREAS WITHIN THE PROPOSED RIGHT-OF-WAY, AS TABULATED ELSEWHERE IN THESE PLANS, AND STOCKPILED FOR PLACEMENT UNDER ITEM 652.

PROVISION OF THIS 651 ITEM SHALL NOT BE CONSTRUED AS A WAIVER OF THE PROVISIONS OF 201.04. SOD AND INCIDENTAL TOPSOIL REMOVED ELSEWHERE ON THIS PROJECT FOR SALVAGE, FOR USE AS DESCRIBED IN 203.04(E), SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE VARIOUS 203 ITEMS.

PARTNERING AGREEMENT

The Contractor Is Invited to enter Into a cooperative partnership agreement with the Department on this project . The objective of this agreement Is the timely completion of the work and a quality product that will be a source of pride to both the Department and the Contractor. This Partnering Agreement will not affect the terms and conditions of the contract. It Is a document which Is solely Intended to establish an environment of cooperation between the parties. The cost of the partnering workshop(s) will be agreed to and shared equally between the Department and the Contractor. The Contractor will pay all costs directly and the Department will reimburse its share to the Contractor by change order. The Contractor Is not entitled to any mark ups on the Invoiced cost.

CALCULATED JGB CHECKED REA

GENERAL NOTES

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ITEM SPECIAL - PLUGGING AND VENTING OIL AND/OR GAS WELLS

ALL OIL AND GAS WELLS LOCATED WITHIN THE LIMITS OF THE RIGHT OF WAY AND ENCOUNTERED DURING CONSTRUCTION OPERATIONS SHALL BE PLUGGED AND/OR VENTED BY THE CONTRACTOR BEFORE ANY OTHER CONSTRUCTION IS STARTED IN THE VICINITY OF THE WELLS. ALL WORK CONNECTED WITH PLUGGING AND/OR VENTING OF THE WELLS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE OF OHIO, DEPARTMENT OF NATURAL RESOURCES, DIVISION OF OIL AND GAS. ALL WORK MUST BE PERFORMED UNDER THE SUPERVISION OF A REPRESENTATIVE OF THE DIVISION OF OIL AND GAS OR DIVISION OF MINES AND RECLAMATION (IN COAL-BEARING AREAS) WHO MUST BE CONTACTED AT LEAST 2 WORKING DAYS IN ADVANCE OF THE DATE ON WHICH WORK IS EXPECTED TO BEGIN. PLUGGING SHALL BE ACCOMPLISHED WITH TYPE I PORTLAND CEMENT MEETING THE REQUIREMENTS OF ASTM C 150 WITH NO AIR ENTRAINMENT OR API STANDARDS FOR PORTLAND CEMENT.

THE CONTRACTOR SHALL FILE WELL LOG AND ABANDONMENT FORMS WITH THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) AS REQUIRED BY THE OHIO REVISED CODE. ANY ADDITIONAL MATERIALS REQUIRED BY ODNR SHALL BE CONSIDERED INCIDENTAL. ODNR'S ADDRESS IS AS FOLLOWS:

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS
1939 FOUNTAIN SQUARE - BUILDING A
COLUMBUS, OHIO 43224
TELEPHONE (614) 265-6912

A COUNTY ISSUED PLUGGING PERMIT MAY ALSO BE REQUIRED.

ALL OIL AND GAS WELLS LOCATED WITHIN THE RIGHT OF WAY, WHETHER PREVIOUSLY PLUGGED TO THE SATISFACTION OF THE DEPARTMENT OF NATURAL RESOURCES OR TO BE PLUGGED AS PART OF THIS PROJECT, SHALL BE VENTED.

PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM SPECIAL, PLUGGING AND VENTING GAS AND OIL WELL, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, TOOLS AND EQUIPMENT, AND ALL INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

THE APPROXIMATE LOCATIONS OF GAS AND/OR OIL WELLS ARE SHOWN ON SHEET NO. 2. THIS INFORMATION IS BASED ON ODNR PERMITS AND MAY NOT INCLUDE ALL GAS AND/OR OIL WELLS IN THE AREA. THE LOCATIONS SHOWN ON SHEET 2 SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO STARTING ANY WORK IN THIS AREA.

THE FOLLOWING QUANTITY FOR THIS ITEM HAS BEEN CARRIED TO THE GENERAL SUMMARY, TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL, 15 EACH, PLUGGING AND VENTING OIL AND/OR GAS WELLS.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PRIVATE USE AIRPORT OR HELIPORT. THE CONTRACTOR IS ADVISED THAT NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 31m. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, THE CONTRACTOR IS ADVISED THAT COORDINATION WITH THE AIRPORT OWNER WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. FOR PRIVATE USE AIRPORTS OR HELIPORTS, THE CONTRACTOR WILL BE REQUIRED TO COORDINATE WITH THE AIRPORT OWNER. THE CONTRACTOR IS ADVISED THAT NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL COORDINATION IS MET AND DOCUMENTATION HAS BEEN FURNISHED TO THE PROJECT ENGINEER. IF COORDINATION IS NOT OBTAINED, THEN THE PROJECT ENGINEER WILL HAVE THE AUTHORITY TO PROVIDE RESTRICTIONS AS REQUIRED.

(WYANDOT MEMORIAL HOSPITAL HELIPORT
WYANDOT MEMORIAL HOSPITAL
885 NORTH SANDUSKY AVENUE
UPPER SANDUSKY, OHIO 43351
(419) - 294-4991

ANCHOR ASSEMBLIES AND IMPACT ATTENUATORS

REGARDLESS OF THE DESCRIPTION IN THE PLANS, ALL E ANCHOR ASSEMBLIES, ALL B ANCHOR ASSEMBLIES AND ALL IMPACT ATTENUATORS, TYPE I, SHALL BE E-98 ANCHOR ASSEMBLIES, B-98 ANCHOR ASSEMBLIES AND IMPACT ATTENUATORS, TYPE I-98, RESPECTIVELY.

BENCH MARKS

FOR BENCH MARK LOCATIONS, SEE SHEET 96.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH LEAN GROUT, ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.
BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 300 MILLIMETERS.
THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF METERS (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.
IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACKFILLED IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT MAY BE REMOVED.

THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER METER FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

ITEM SPECIAL - PRESSURE RELIEF JOINT, TYPE A

SEE STANDARD DRAWING BP-2.3 FOR DETAILS.

CALCULATED JGB CHECKED REA

GENERAL NOTES

WYA / CRA-30-28.009 / 0.000

NOTE - CR56 Embankment, Roadway and Structure WYA-23-12429 Constructed by others.

R-76A-60 — ROAD CLOSED 0.4 MILES AHEAD LOCAL TRAFFIC ONLY

Type III Barricades, (3m) w/ Type "B" Warning Lights

C.R. 60

Advance warning signs for closure as per Std. Drwg. MT-101.60M

Type III Barricades, and Gate w/ Type "B" Warning Lights

R-75-48 — ROAD CLOSED

Gates and Barricades as per Std. Drwg. MT-101.60M

END CONSTRUCTION OC-8-60

℄ C.R. 56

Match Line A (See Inset)

152m* Work Area

28+500 B

℄ RAMP B

℄ Construction T.R. 55

Type III Barricades, and Gate w/ Type "B" Warning Lights

ROAD CLOSED R-75-48

For Exit Ramp Closure see Std. Drwg. MT-98.19M

Work Area 1674m*

OW-128-36 ROAD CONSTRUCTION AHEAD

13+000

28+500 EB

14+000

14+500

0+900

C.R. 60

℄ C.R. 60

152m* Work Area

℄ Survey U.S.R. 23

℄ RAMP A 29+000 A

℄ U.S.R. 30 EB 29+000 EB

13+500

28+500 WB

Gates and Barricades as per Std. Drwg. MT-101.60M

℄ U.S.R. 30 WB 29+000 B

29+000 WB

ROAD CLOSED R-75-48

Type III Barricades, and Gate w/ Type "B" Warning Lights

Work Area 152m*

END CONSTRUCTION OC-8-60

For Exit Ramp Closure see Std. Drwg. MT-98.19M

C.R. 56

ROAD CLOSED R-75-48

Type III Barricades, and Gate w/ Type "B" Warning Lights

Advance warning signs for closure as per Std. Drwg. MT-101.60M

T.R. 55

ROAD CLOSED 0.6 MILES AHEAD LOCAL TRAFFIC ONLY R-76A-60

Type III Barricades, (3m) w/ Type "B" Warning Lights

OW-128-36 ROAD CONSTRUCTION AHEAD

29+500 A

29+500

29+500

℄ Construction U.S.R. 30

T.R. 124

T.R. 124

Match Line Sta. 29+800.000 ℄ U.S.R. 30 EB
See Sheet No. 26

Match Line Sta. 29+800.000 ℄ U.S.R. 30
See Sheet No. 26

Construction Area (Road Closure)

* For additional maintenance of traffic details, See Std. Drwg. MT-102.10M.

N

0 80 160
HORIZONTAL SCALE IN METERS

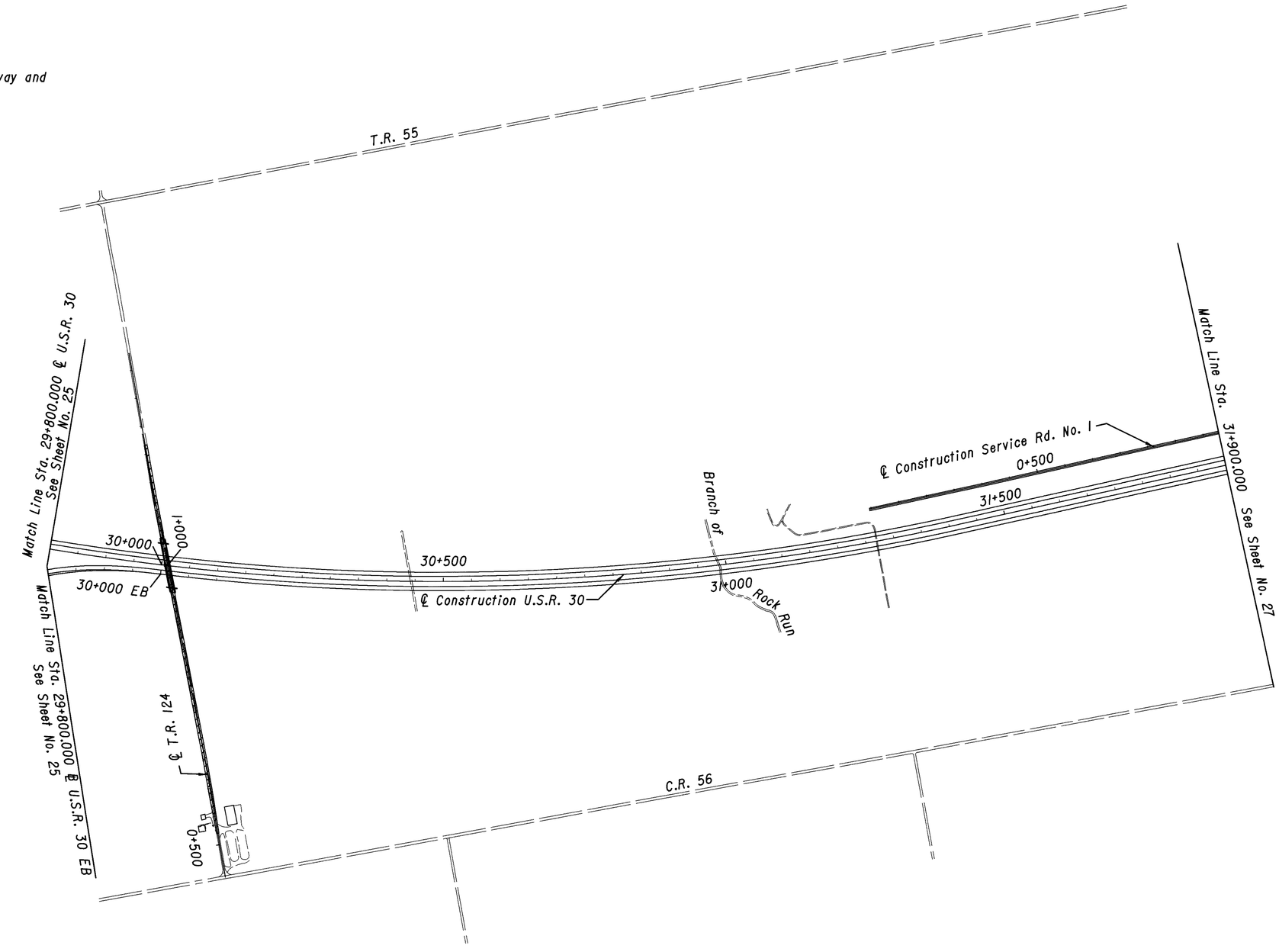
CALCULATED AM
CHECKED JAG

MAINTENANCE OF TRAFFIC SCHEMATIC PLAN
US-23 INTERCHANGE

WYA/CRA-30-28.009/0.000

25
2116

NOTE - TRI24 Embankment, Roadway and Structure WYA-30-30006 Constructed by others.

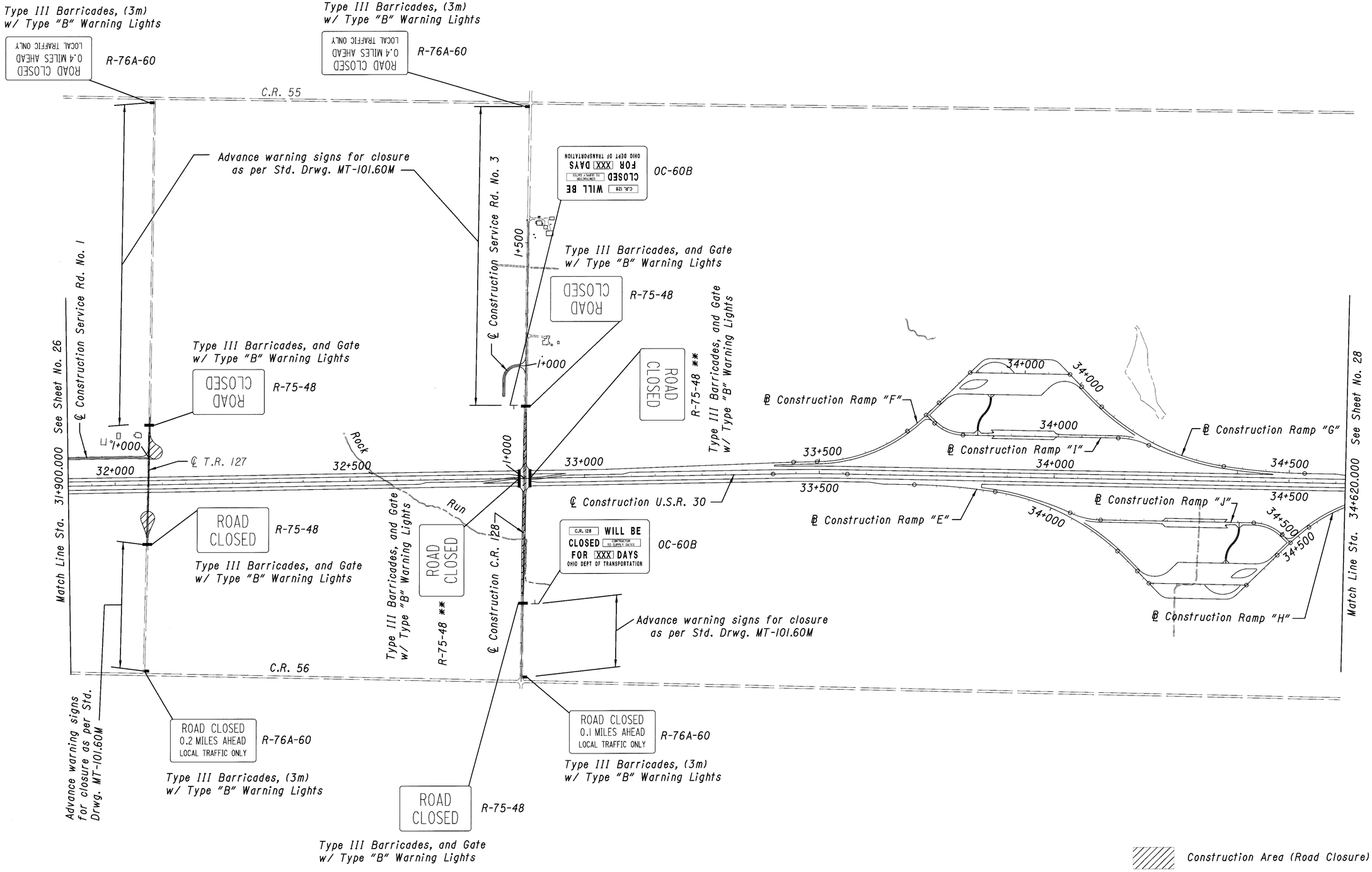


HORIZONTAL SCALE IN METERS
0 80 160

CALCULATED AM
CHECKED JAG

MAINTENANCE OF TRAFFIC SCHEMATIC PLAN STA. 29+800 TO STA. 31+900

WYA/CRA-30-28.009/0.000



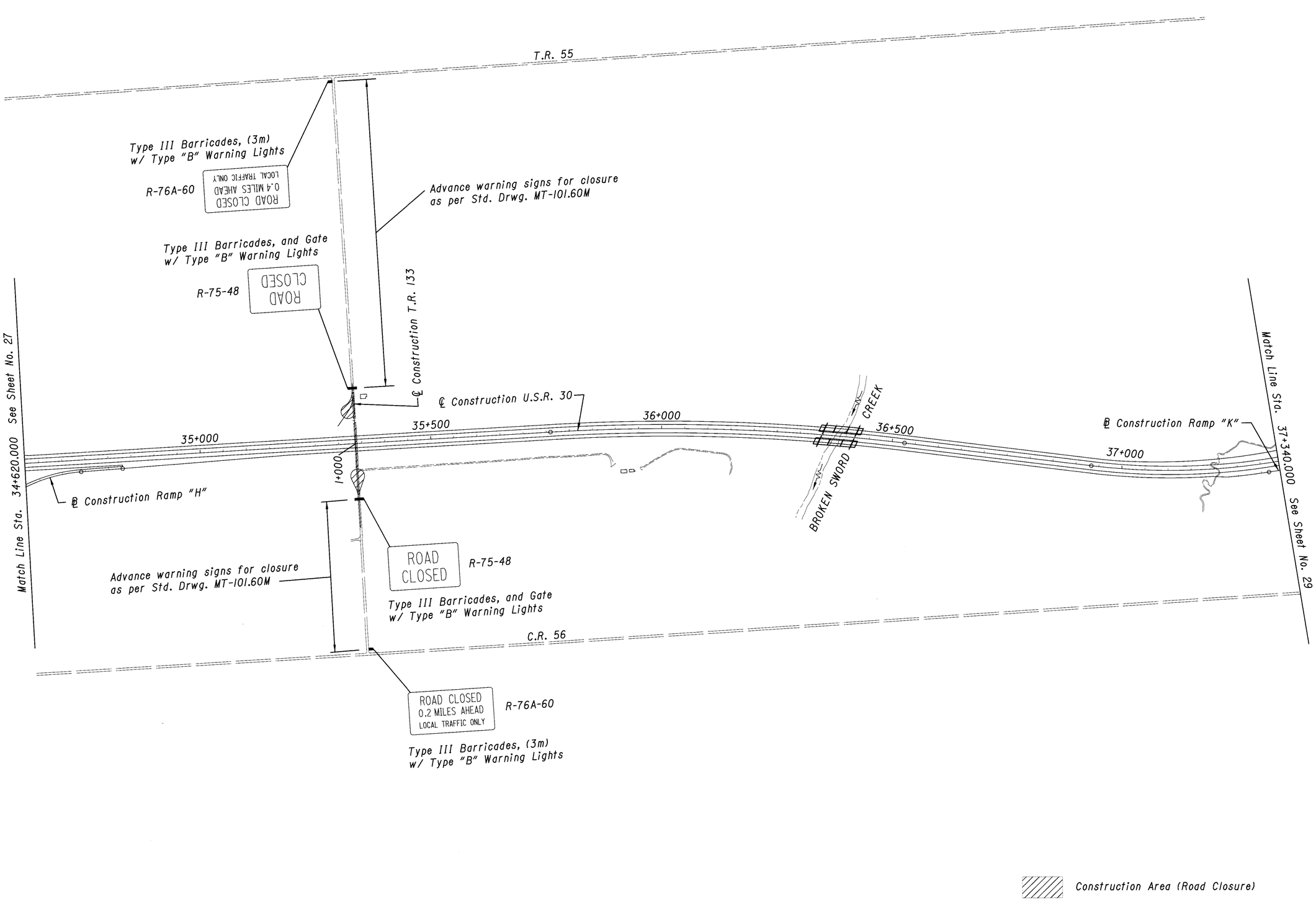
HORIZONTAL SCALE IN METERS
0 80 160

CALCULATED AM
CHECKED JAG

MAINTENANCE OF TRAFFIC SCHEMATIC PLAN
STA. 31+900 TO STA. 34+620

WYA/CRA-30-28.009/0.000

27
2116



HORIZONTAL SCALE IN METERS
0 80 160

CALCULATED AM
CHECKED JAG

MAINTENANCE OF TRAFFIC SCHEMATIC PLAN STA. 34+620 TO STA. 37+340

WYA/CRA-30-28.009/0.000

28
2116

T.R. 55

OW-128-36

ROAD CONSTRUCTION AHEAD

℄ Construction S.R. 231

OC-4-60 Type III Barricade

152m*

Work Area

ROAD CONSTRUCTION TRAFFIC MAINTAINED

END CONSTRUCTION

OC-8-60

1+000

℄ Construction Service Rd. No. 6

℄ Construction Ramp "L"

0+500

Gates and Barricades as per Std. Drwg. MT-101.60M

℄ Construction Ramp "M"

37+500

38+000

38+500

39+000

Match Line Sta. 37+340.000 See Sheet No. 28

℄ Construction Ramp "K"

℄ Construction Ramp "N"

Gates and Barricades as per Std. Drwg. MT-101.60M

℄ Construction Service Rd. No. 12

ROAD CONSTRUCTION AHEAD

OW-128-36

152m*

C.R. 56

0+500

Work Area

ROAD CONSTRUCTION TRAFFIC MAINTAINED

OC-4-60 Type III Barricade

OC-8-60 END CONSTRUCTION

ROAD CONSTRUCTION AHEAD

OW-128-36

C.R. 18

R-76A-60 ROAD CLOSED 0.6 MILES AHEAD LOCAL TRAFFIC ONLY

Type III Barricades, (3m) w/ Type "B" Warning Lights

Type III Barricades, and Gate w/ Type "B" Warning Lights

R-75-48 ROAD CLOSED

Advance warning signs for closure as per Std. Drwg. MT-101.60M

1+400

R-75-48 **

Type III Barricades, and Gate w/ Type "B" Warning Lights

OC-60B T.R. 10 WILL BE CLOSED FOR XXX DAYS CONSTRUCTION TO SUPPLY DATES OHIO DEPT OF TRANSPORTATION

1+000

0+000

Match Line Sta. 0+300.000 See Sheet No. 30

ROAD CLOSED R-75-48

Type III Barricades, and Gate w/ Type "B" Warning Lights

R-75-48 **

T.R. 10 WILL BE CLOSED FOR XXX DAYS CONSTRUCTION TO SUPPLY DATES OHIO DEPT OF TRANSPORTATION

OC-60B

1+000

℄ Construction T.R. 10

0+600

℄ Construction Service Access No. 14

Advance warning signs for closure as per Std. Drwg. MT-101.60M

ROAD CLOSED 0.3 MILES AHEAD LOCAL TRAFFIC ONLY R-76A-60

Type III Barricades, (3m) w/ Type "B" Warning Lights

Construction Area (Road Closure)

* For additional maintenance of traffic details see Std. Drwg. MT-102.10M.

** Signs to remain in place until Proposed U.S.R. 30 is completed and open to traffic.

N

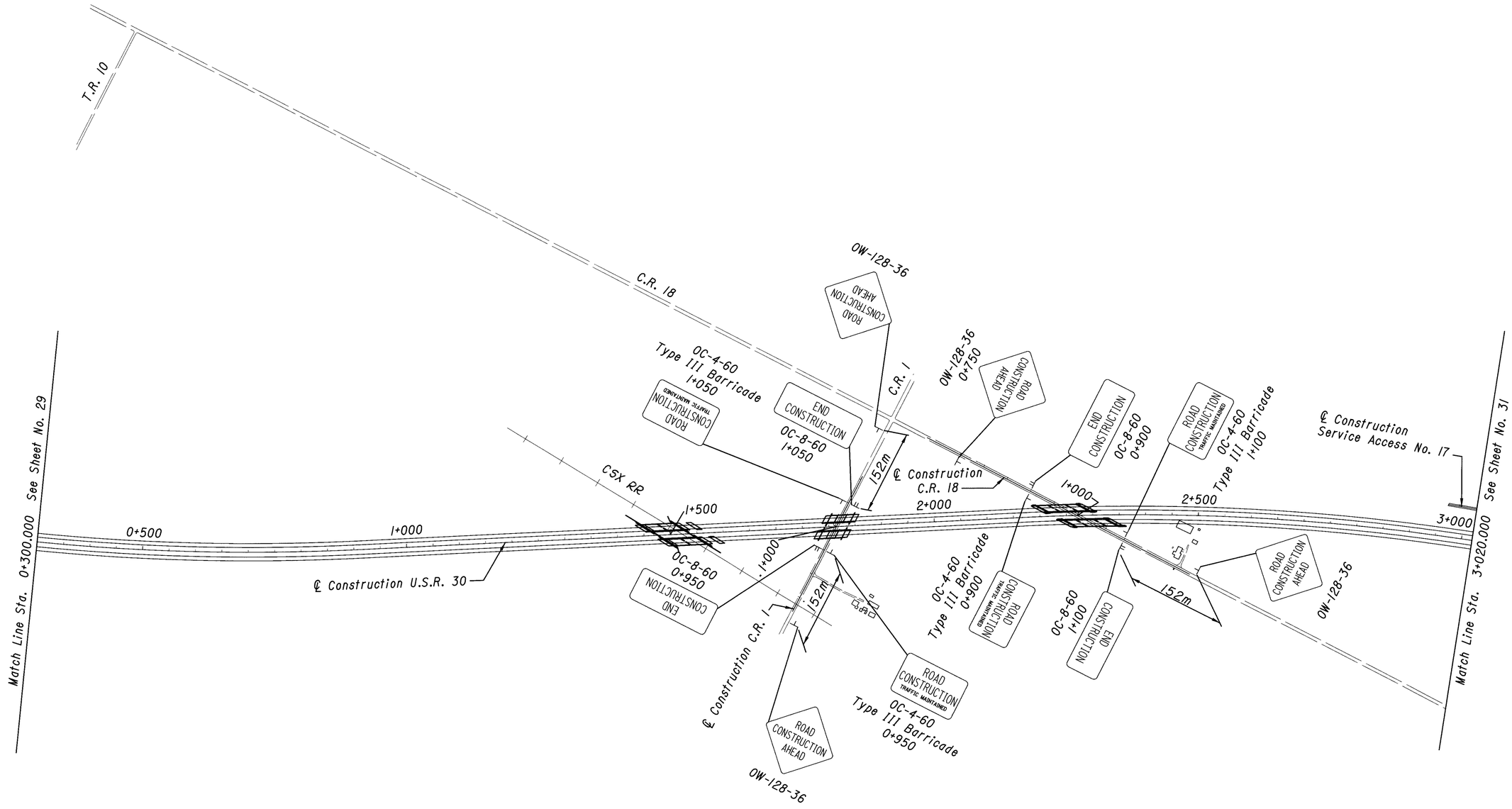
0 80 160 HORIZONTAL SCALE IN METERS

CALCULATED AM CHECKED JAG

MAINTENANCE OF TRAFFIC SCHEMATIC PLAN STA. 37+340 TO STA. 0+300

WYA/CRA-30-28.009/0.000

29
2116



All Type III Barricades per Std. Drwg. MT-101.60M

For C.R. 18 Maintenance of Traffic Plan see Sheet No. 41

0 80 160 HORIZONTAL SCALE IN METERS

CALCULATED AM | CHECKED JAG

MAINTENANCE OF TRAFFIC SCHEMATIC PLAN STA. 0+300 TO STA. 3+020

WYA / CRA-30-28.009 / 0.000

30
2116

Type III Barricades, (3m)
w/ Type "B" Warning Lights

R-76A-60

ROAD CLOSED
0.1 MILES AHEAD
LOCAL TRAFFIC ONLY

Type III Barricades, and Gate
w/ Type "B" Warning Lights

R-75-48

ROAD CLOSED

OC-60B

T.R. 21 WILL BE CLOSED FOR [XXX] DAYS
CONSTRUCTION TO START/END DATES
OHIO DEPT OF TRANSPORTATION

Advance warning signs for closure
as per Std. Drwg. MT-101.60M

10+000

℄ Construction Service Access No. 17

9+500

3+500

Match Line Sta. 3+020.000 See Sheet No. 30

4+000

℄ Construction U.S.R. 30

4+500

1+000

℄ Construction T.R. 21

ROAD CLOSED

R-75-48 **

Type III Barricades, and Gate
w/ Type "B" Warning Lights

T.R. 21 WILL BE CLOSED FOR [XXX] DAYS
CONSTRUCTION TO START/END DATES
OHIO DEPT OF TRANSPORTATION

OC-60B

ROAD CLOSED

R-75-48

Type III Barricades, and Gate
w/ Type "B" Warning Lights

Advance warning signs for closure
as per Std. Drwg. MT-101.60M

ROAD CLOSED
0.2 MILES AHEAD
LOCAL TRAFFIC ONLY

R-76A-60

Type III Barricades, (3m)
w/ Type "B" Warning Lights

C.R. 18

10+000

℄ Construction
T.R. III

5+000

1+000

Existing
U.S.R. 30

1+500

ROAD CONSTRUCTION AHEAD

OW-128-36

OC-8-60

END CONSTRUCTION

152m *

Work Ared

C.R. 330

EAST

M-26-21

℄ Construction
C.R. 330

℄ Construction Ramp "P"

5+500

See Sheet No. 32 Match Line Sta. 0+360.000 C.R. 330

1+500

℄ Construction
Service Access No. 20

1+000

Match Line Sta. 5+740.000 See Sheet No. 32

0+500

℄ Construction
C.R. 22

NOTE - CR22 Embankment, Roadway and
Structure CRA-30-05244
Constructed by others.

Construction Area (Road Closure)

** Signs to remain in place until
Proposed U.S.R. 30 is completed
and open to traffic.

* For additional Maintenance of Traffic
Details see Std. Drwg. MT-102.10M.

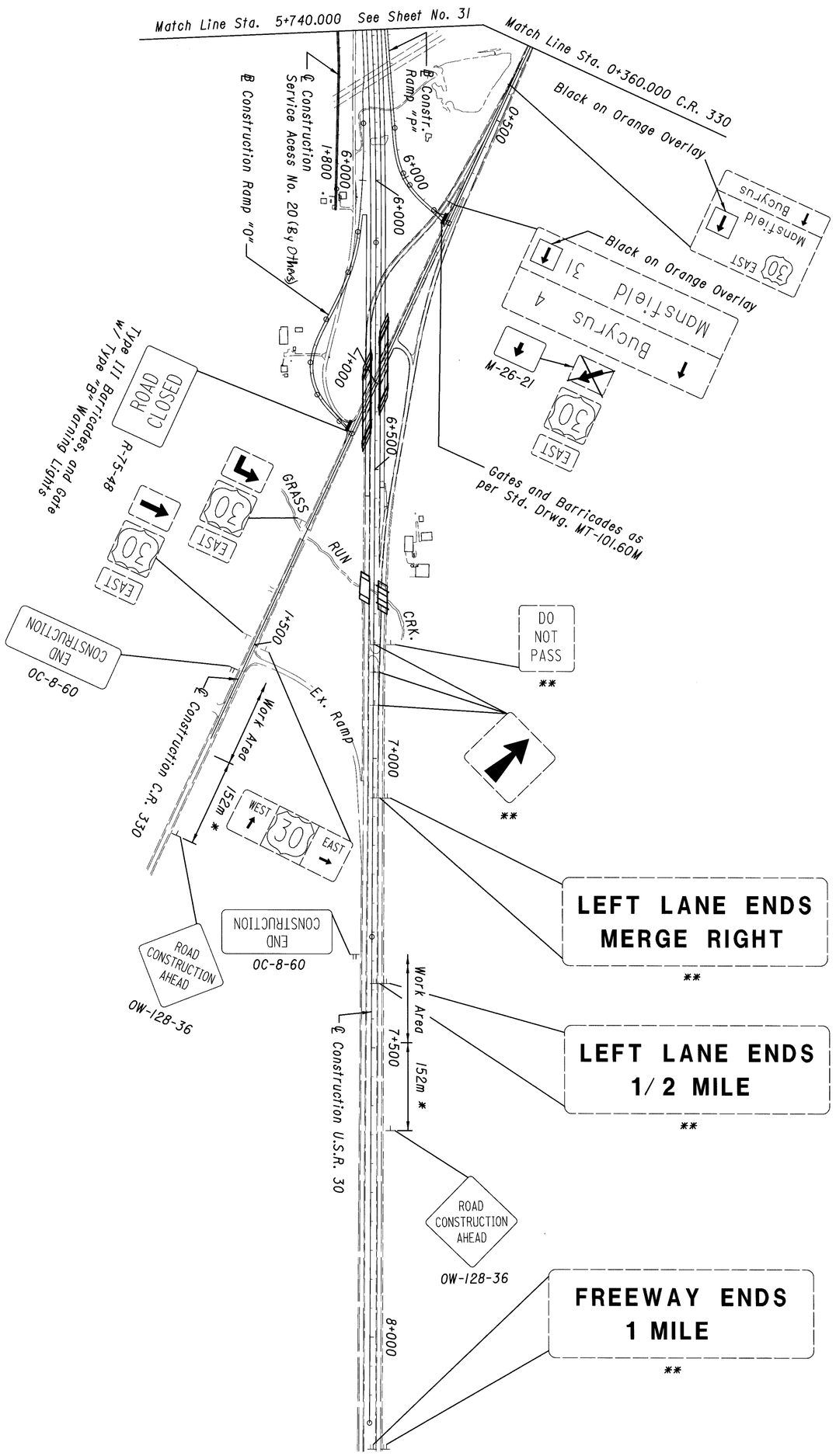
HORIZONTAL
SCALE IN METERS
0 80 160

CALCULATED AM
CHECKED JAG

MAINTENANCE OF TRAFFIC SCHEMATIC PLAN
STA. 3+020 TO STA. 5+740

WYA/CRA-30-28.009/0.000

31
2116



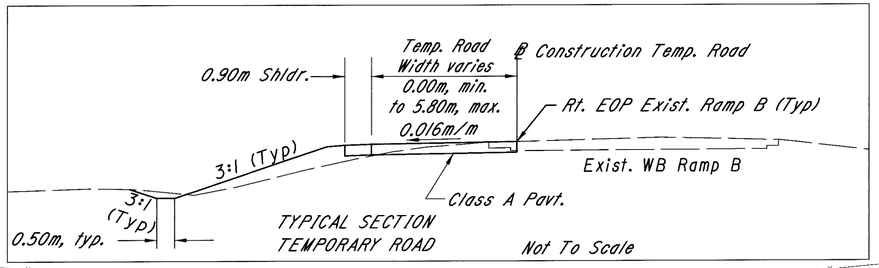
* For additional Maintenance of Traffic Details see Std. Drwg. MT-102.10M.

** These Signs shall be covered during Use by Traffic of the Temporary Crossover. Cost to be included in Item 614 - Maintaining Traffic

32 / 2116	WYA/CRA-30-28.009/0.000	MAINTENANCE OF TRAFFIC SCHEMATIC PLAN STA. 5+740 TO STA. 8+194	CALCULATED AM / CHECKED JAG	0 80 160 HORIZONTAL SCALE IN METERS	N

For Cross Sections See Sheet No. 48-56
For Quantities See Sheet No. 37,38

CURVE 1
P.I. = Sta. 6+218.829
Δ = 8° 56′ 50″ (LT)
R = 1,164.253m
T = 91.089m
L = 181.807m
E = 3.558m
e max. = Normal Crown



Sta. 6+129.002
Temp. Rd. Pavm't. Width = 0.00m
Sta. 6+380.000
Temp. Rd. Pavm't. Width = 5.80m
Sta. 6+440.000
Temp. Rd. Pavm't. Width = 5.80m
Sta. 6+691.000
Temp. Rd. Pavm't. Width = 0.00m

℄ Temp. Rd. Stations	Bearings
6+378.815 to 6+388.126	S 80° 42′ 48″ E
6+388.126 to 6+409.950	S 81° 04′ 49″ E
6+409.950 to 6+427.800	S 80° 06′ 33″ E
6+427.800 to 6+448.415	S 80° 35′ 30″ E
6+448.415 to 6+468.239	S 80° 45′ 48″ E
6+468.239 to 6+488.223	S 80° 30′ 56″ E
6+488.223 to 6+506.864	S 80° 04′ 51″ E
6+506.864 to 6+520.134	S 79° 41′ 09″ E
6+520.134 to 6+537.759	S 80° 53′ 06″ E
6+537.759 to 6+553.876	S 82° 12′ 30″ E
6+533.876 to 6+569.633	S 84° 07′ 55″ E
6+569.633 to 6+583.177	S 83° 45′ 22″ E
6+583.177 to 6+598.890	S 84° 48′ 15″ E
6+598.890 to 6+614.699	S 85° 43′ 49″ E
6+614.699 to 6+630.624	S 85° 56′ 18″ E
6+630.624 to 6+645.074	S 87° 15′ 04″ E
6+645.074 to 6+665.823	S 87° 35′ 19″ E
6+665.823 to 6+681.829	S 88° 23′ 33″ E
6+681.829 to 6+701.150	S 88° 02′ 00″ E

HORIZONTAL SCALE IN METERS
0 10 20

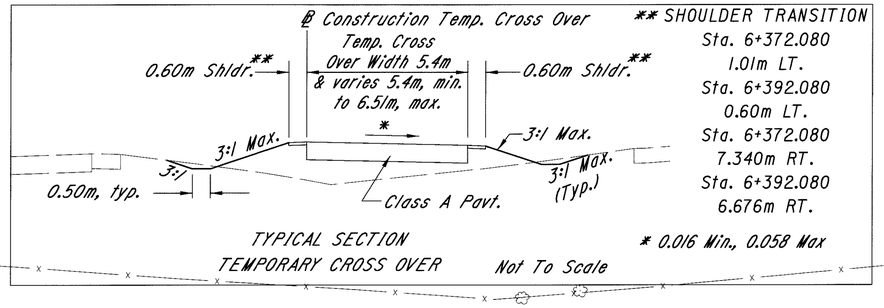
CALCULATED AM
CHECKED REA

PLAN TEMPORARY ROAD
STA. 6+117.991 TO STA. 6+701.150

WYA/CRA-30-28.009/0.000

33
2116

For Cross Sections See Sheet No. 57-70
For MOT Superelevation Tables See Sheet No.36
For Quantities See Sheet No. 37,38

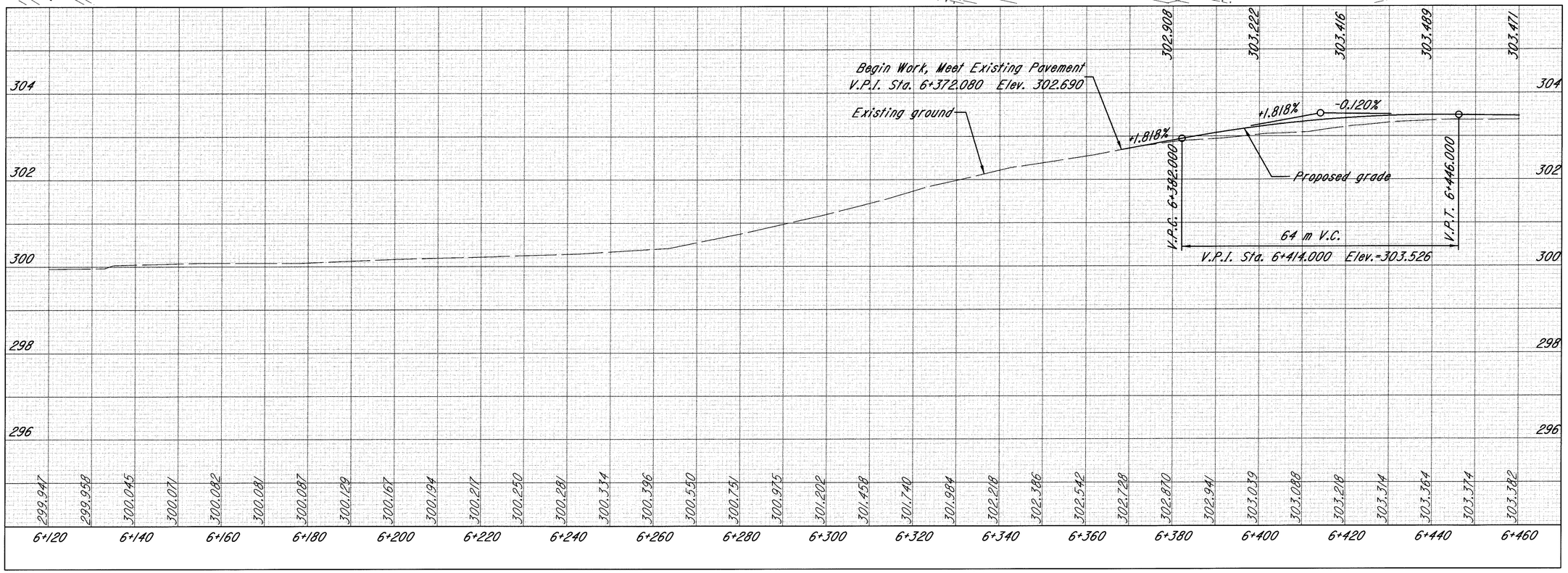


** SHOULDER TRANSITION
Sta. 6+372.080
1.01m LT.
Sta. 6+392.080
0.60m LT.
Sta. 6+372.080
7.340m RT.
Sta. 6+392.080
6.676m RT.

* 0.016 Min., 0.058 Max

TYPICAL SECTION
TEMPORARY CROSS OVER Not To Scale

Curve 1
P.I. = Sta. 6+447.652
Δ = 12° 16' 18" (RT)
R = 500.000m
T = 53.751m
L = 107.090m
E = 2.881m
$e_{max.}$ = 0.0212 m/m



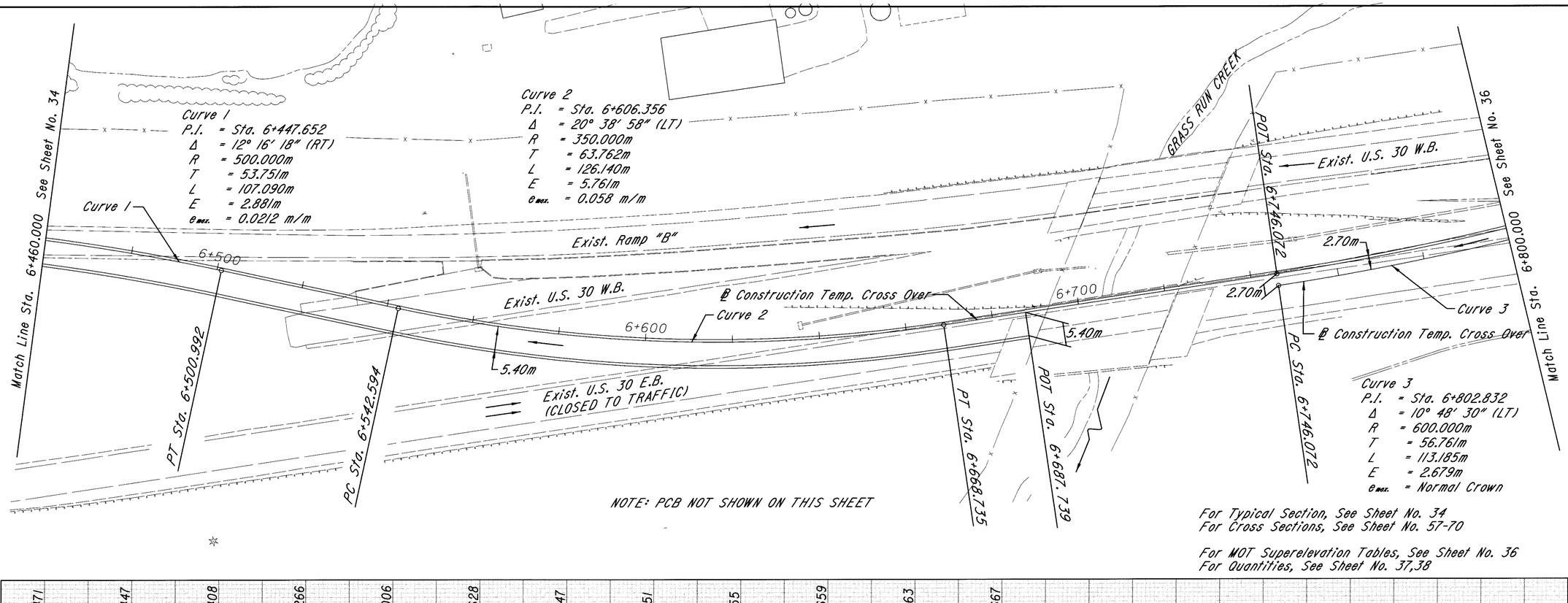
HORIZONTAL SCALE IN METERS
0 0 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE TEMPORARY CROSS OVER
STA. 6+372.080 TO STA. 6+460.000

WYA/CRA-30-28.009/0.000

34
2116



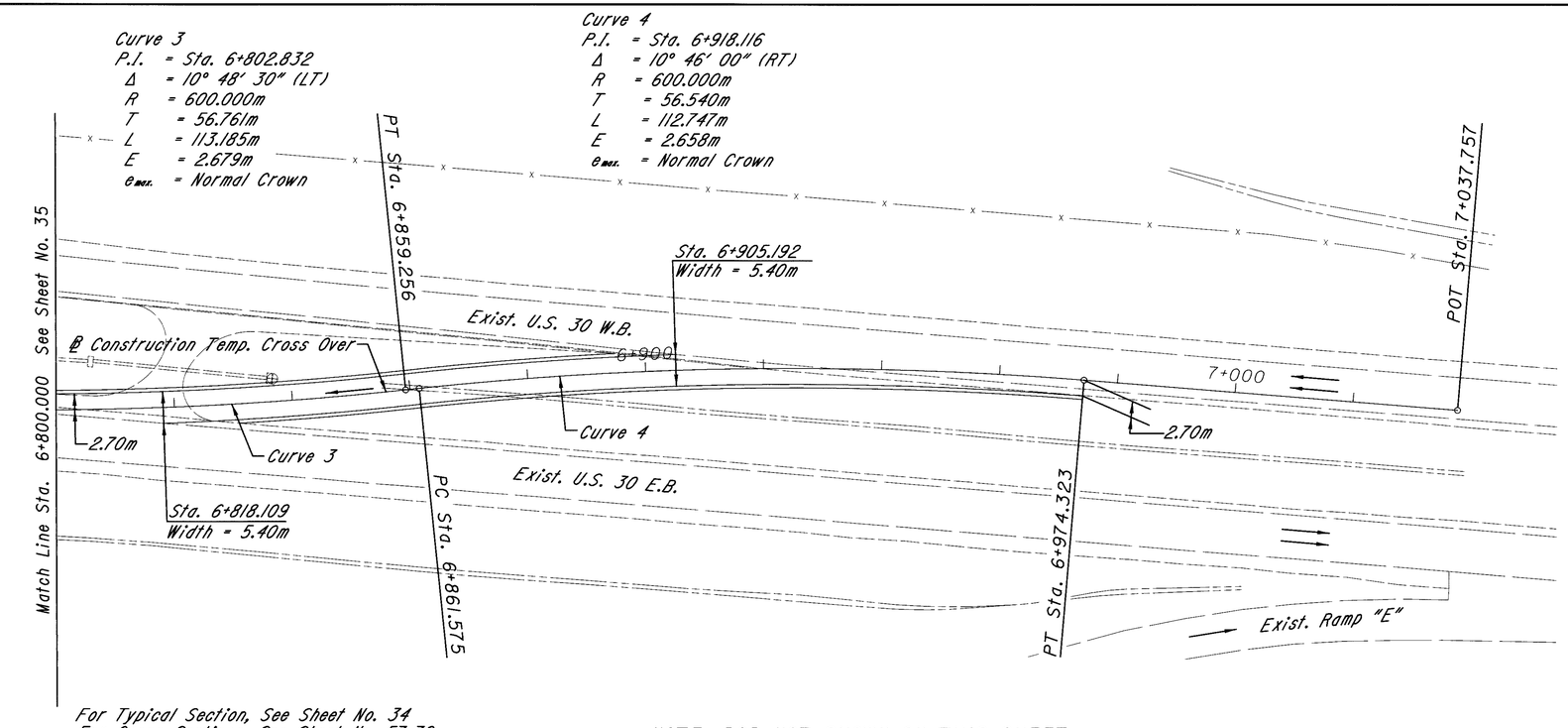
HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE TEMPORARY CROSS OVER STA. 6+460.000 TO STA. 6+800.000

WYA / CRA-30-28.009 / 0.000

35
2116

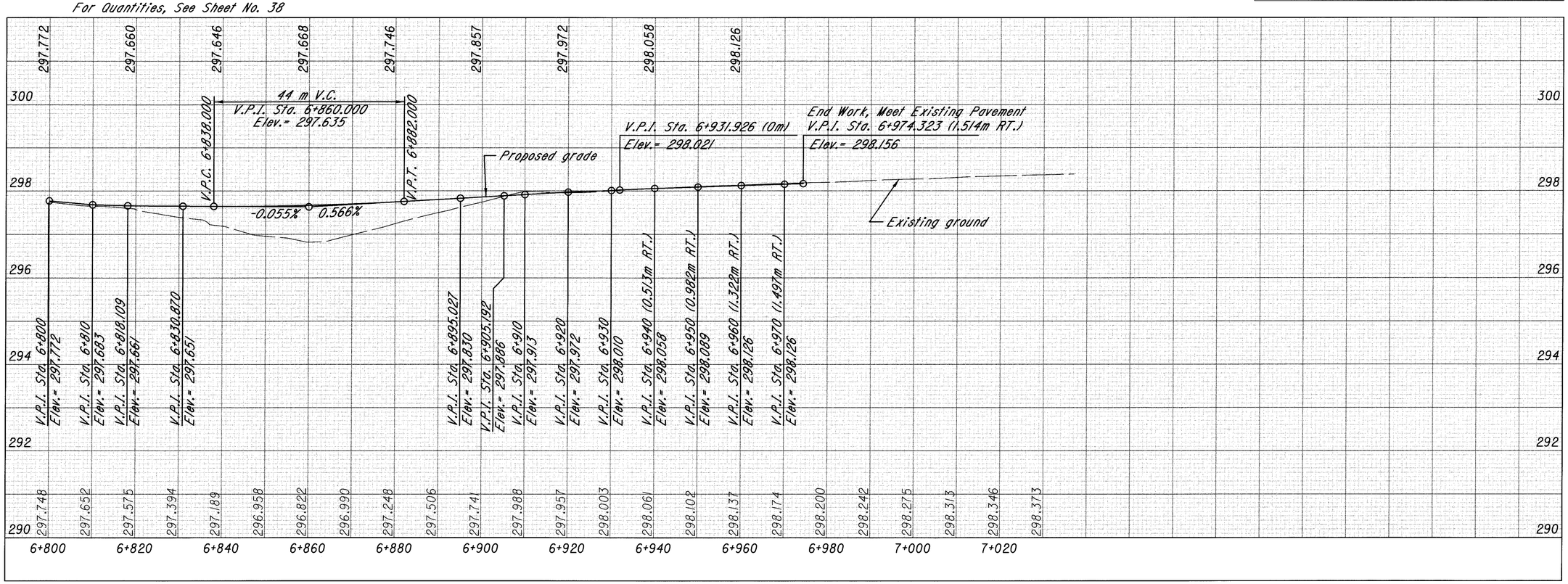


For Typical Section, See Sheet No. 34
For Cross Sections, See Sheet No. 57-70
For Quantities, See Sheet No. 38

NOTE: PCB NOT SHOWN ON THIS SHEET

MOT SUPERELEVATION TABLE

℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION
6+372.080	302.764	0.0160	6.511	302.868
6+380.000	302.908	0.0048	6.338	302.939
6+383.402	302.969	0.0000	6.264	302.969
6+390.000	303.080	-0.0093	6.121	303.023
6+398.430	303.202	-0.0212	5.937	303.076
6+400.000	303.222	-0.0212	5.903	303.097
6+410.000	303.335	-0.0212	5.685	303.214
6+420.000	303.416	-0.0212	5.467	303.300
6+423.080	303.436	-0.0212	5.400	303.322
6+440.000	303.489	-0.0171	5.400	303.396
6+460.000	303.471	-0.0123	5.400	303.404
6+480.000	303.447	-0.0076	5.400	303.406
6+496.463	303.421	-0.0036	5.400	303.402
6+500.000	303.408	-0.0028	5.400	303.393
6+511.491	303.341	0.0000	5.400	303.341
6+520.000	303.266	0.0112	5.400	303.327
6+530.000	303.151	0.0244	5.400	303.283
6+540.000	303.006	0.0376	5.400	303.209
6+550.000	302.832	0.0508	5.400	303.106
6+555.491	302.724	0.0580	5.400	303.037
6+560.000	302.628	0.0521	5.400	302.909
6+570.000	302.395	0.0391	5.400	302.606
6+580.000	302.147	0.0260	5.400	302.288
6+587.700	301.956	0.0160	5.400	302.042



N

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE TEMPORARY CROSS OVER
STA. 6+800.000 TO STA. 7+037.757

WYA/CRA-30-28.009/0.000

36
2116

GENERAL REQUIREMENTS

IT IS THE INTENTION TO PERFORM THE REQUIRED WORK WITH THE LEAST INCONVENIENCE TO AND THE MAXIMUM SAFETY OF THE CONTRACTOR AND THE TRAVELING PUBLIC. THE REQUIREMENTS FOR MAINTAINING TRAFFIC AS INDICATED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (REFERRED TO AS "OHIO MANUAL"), CURRENT EDITION, AND PERTINENT ITEMS OF THE OHIO DEPARTMENT OF TRANSPORTATION (DDOT) SPECIFICATIONS AND PROPOSAL SHALL APPLY IN ADDITION TO THE FOLLOWING NOTES.

THE WORK LIMITS SHOWN ON THE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TRAFFIC CONTROL DEVICES REQUIRED BY THE "OHIO MANUAL" SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THE WORK LIMITS.

SHOULD ANY PAVED AREAS NOT DESIGNED FOR MAINTAINING TRAFFIC BECOME DAMAGED OR DESTROYED DUE TO THE CONTRACTOR'S NEGLIGENCE OR FAILURE TO PROVIDE ADEQUATE SIGNS, BARRICADES, FLAGGERS OR OTHER TRAFFIC CONTROL DEVICES, THE RESTORATION OF THE PAVED AREAS SHALL BE AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.

SHOULD IT BE NECESSARY FOR THE CONTRACTOR TO CREATE HAUL ROADS FOR EQUIPMENT THAT CROSS EXISTING LOCAL ROADS AT-GRADE, HE SHALL FURNISH FLAGGERS AT EACH SUCH CROSSING TO ASSURE THE SAFETY OF THE TRAVELING PUBLIC. THE FLAGGERS SHALL BE PRESENT DURING SUCH TIME THAT THE HAUL ROAD IS BEING USED. SEE THIS SHEET FOR DETAIL OF TYPICAL EQUIPMENT CROSSING. NO EQUIPMENT SHALL BE PERMITTED TO CROSS OPEN LANES ON USR 23 OR USR 30.

THE CONTRACTOR SHOULD BE AWARE THAT THE FOLLOWING CONDITIONS APPLY THROUGHOUT THE PROJECT FOR THE DURATION OF THE PROJECT.

1) NO TWO ADJACENT ROADS SHALL BE CLOSED AT THE SAME TIME.

2) ROADS TO RECEIVE CUL-DE-SACS SHALL NOT BE CLOSED UNTIL ALL WORK IS COMPLETED ON ADJACENT ROADS.

3) THE DISTRICT CONSTRUCTION ENGINEER SHOULD BE CONSULTED WITH REGARDS TO MAXIMUM DURATIONS FOR CLOSURE OF COUNTY OR TOWNSHIP ROADS.

4) ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC BETWEEN NOVEMBER 15 AND APRIL 30. NOVEMBER 30 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH 108.07 FOR EACH CALENDAR DAY THAT ALL LANES ARE NOT OPEN AND AVAILABLE TO TRAFFIC.

WHEN CONSTRUCTING ENTRANCES FOR SERVICE ROADS, THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF THE "TRENCH FOR WIDENING" NOTE WITHIN THESE PLANS AND STANDARD DRAWING MT-97.10M. TRAFFIC TO LOCAL DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION OF THE SERVICE ROADS.

TRAFFIC MAINTENANCE

THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES IN ACCORDANCE WITH THE REQUIREMENTS OF SPEC. 614, THE MAINTENANCE OF TRAFFIC NOTES, THE MT STANDARD DRAWINGS AND DETAILS SHOWN IN THESE PLANS. TRAFFIC ON U.S.R.23, S.R.231,C.R.1,C.R.18. AND C.R.330 SHALL BE MAINTAINED IN AT LEAST ONE LANE IN EACH DIRECTION AT ALL TIMES. T.R.55 SHALL NOT BE CLOSED TO TRAFFIC UNTIL C.R.56 AND T.R.124 ARE CONSTRUCTED (BY OTHERS) AND OPEN TO TRAFFIC.
A MINIMUM OF ONE LANE SHALL REMAIN OPEN TO TRAFFIC ON EACH SIDE OF U.S.R.23 AT ALL TIMES. ALL SIGNS, DRUMS AND OTHER DEVICES REQUIRED TO MAINTAIN TRAFFIC AS SHOWN BY THESE PLANS SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DESIGNATE TO THE ENGINEER, A PERSON RESPONSIBLE FOR THE MAINTENANCE OF TRAFFIC CONTROL DURING NON-WORK HOURS WHO SHALL BE AVAILABLE WITHIN THIRTY (30) MINUTES AT ANY TIME AFTER NOTIFICATION.

THE CONTRACTOR SHALL ALLOW AND PROVIDE ACCESS TO PRIVATE RESIDENCES, PRIVATE, AND COMMERCIAL PROPERTIES AND FIELD DRIVES.

PAYMENT FOR PROVIDING WATCHMAN, FURNISHING, ERECTING, MAINTAINING AND REMOVING SIGNS, BARRICADES, CONES, MARKERS, ALL PORTABLE CONCRETE BARRIER AND APPLICABLE END TREATMENTS, ALL TEMPORARY PAVEMENT MARKINGS, TEMPORARY RAISED PAVEMENT MARKERS, ETC... SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC AS PER PLAN. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, MAINTAIN, AND REMOVE ALL ADDITIONAL SIGNS OR TRAFFIC CONTROL DEVICES DEEMED NECESSARY BY THE ENGINEER WITH ALL ASSOCIATED COSTS INCLUDED IN THE LUMP SUM PRICE BID ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN.

CSX RAIL CORPORATION

RAILROAD TRAFFIC SHALL NOT BE DELAYED AT ANY TIME DURING CONSTRUCTION OF THE PROPOSED PIERS AND ABUTMENTS FOR THE BRIDGE OVER RAILROAD TRACKS. A RAILROAD FLAGMAN WILL BE PRESENT DURING ALL CONSTRUCTION ACTIVITIES PERFORMED ON OR OVER RAILROAD RIGHT-OF-WAY. COORDINATION WITH THE RAILROAD TRAFFIC DEPARTMENT WILL BE REQUIRED DURING BRIDGE BEAM ERECTION.

EXISTING US-30 AND CR-330

MAINTAIN (1) ONE LANE OF TRAFFIC IN EACH DIRECTION DURING CONSTRUCTION OF RAMPS, NEW BRIDGES AND REMOVAL OF EXISTING RAMP OVER US 30- CR 330.
LANES WILL BE CLOSED FOR A MAXIMUM OF 15 MINUTES EVERY HOUR.

UNDER NO CIRCUMSTANCES SHALL TRAFFIC BE STOPPED FOR MORE THAN 15 MINUTES, FOR REMOVAL OF THE EXISTING STRUCTURE AND ERECTION OF BRIDGE BEAMS FOR PROPOSED STRUCTURE. EASTBOUND TRAFFIC WILL USE EXISTING RAMP E TO ENTER EXISTING US-30 EASTBOUND.

NOTICE OF CLOSURE SIGNS

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD OR RAMP CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS. ALL COSTS ASSOCIATED WITH SUPPLYING, ERECTING, MAINTAINING AND REMOVING THESE SIGNS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN.



OC-60B

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND THE EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH, WHICH IS OPEN AT ANY ONE TIME, SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

PROVIDING TEMPORARY ACCESS TO PRIVATE PROPERTIES

ITEM 410, TRAFFIC COMPACTED SURFACE, AS PER PLAN, SHALL MEET THE MATERIAL REQUIREMENTS AS SPECIFIED IN 304.02.

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR MAINTENANCE OF TRAFFIC.

ITEM 614 BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC 150 C.M.

ITEM 410 TRAFFIC COMPACTED SURFACE, AS PER PLAN 500 C.M.

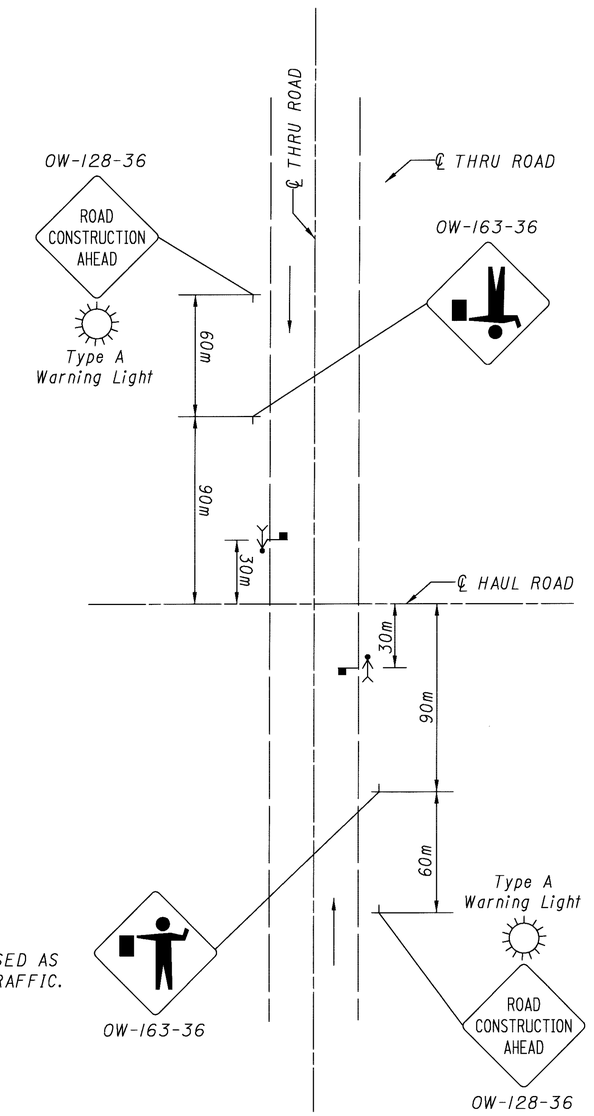
QUANTITIES CARRIED TO SHEET NO. 38

TRAFFIC CROSSOVER REMOVAL

FOLLOWING COMPLETION OF PHASE 3 CONSTRUCTION OPERATIONS AT U.S.R.30 AND C.R.330 INTERCHANGE, THE TEMPORARY TRAFFIC CROSSOVERS SHALL BE REMOVED AS PER 615.03 IN PHASE 4 & 5. A SAW CUT SHALL BE MADE AT THE OUTSIDE EDGE OF THE MEDIAN SHOULDER BEFORE REMOVAL OF THE TEMPORARY PAVEMENT.

CROSSOVER DRAINAGE

PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST SEND IN TO THE DISTRICT OFFICE A DRAINAGE LAYOUT FOR ALL TEMPORARY TRAFFIC CROSSOVERS FOR APPROVAL.



Flagger Operation Detail for Crossing of Constr. Equipment

See Restrictions Under General Requirements Note On This Sheet

FLAGGER OPERATION DETAIL

NOT TO SCALE

CALCULATED AM | CHECKED REA

NOTES AND DETAILS OF TRAFFIC MAINTENANCE

WYA/CRA-30-28.009/0.000

ALTERNATE METHODS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR MAINTENANCE OF TRAFFIC PROVIDED THE INTENT OF THESE PROVISIONS ARE FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THERE FROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE DIRECTOR OF TRANSPORTATION.

PAVEMENT MARKING

PRIOR TO PLACEMENT OF ANY TEMPORARY PAVEMENT MARKINGS, THE CONTRACTOR SHALL COMPLETELY OBLITERATE, AS PER 641.10, ALL EXISTING PAVEMENT MARKINGS THAT WOULD CREATE CONFUSION OR CONFLICT WITH THE TEMPORARY PAVEMENT MARKINGS. PAYMENT FOR THIS COMPLETE REMOVAL SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614 MAINTAINING TRAFFIC AS PER PLAN.

MOVEMENT OF DRUMS

THE ROW OF DRUMS ALONG A CLOSED LANE SHALL BE MOVED OUT OF THE OPEN LANE INTO THE NEW PAVEMENT AS SOON AS PAVING OPERATIONS PERMIT.

PORTABLE CONCRETE BARRIER 813mm

THIS STANDARD TYPE OF PCB. SHALL BE FURNISHED AND INSTALLED AS PER STD. DWG. RM-4.2M. ALL BARRIERS SHALL USE CONNECTING PIN AND ROD CONNECTOR METHOD OF CONNECTING THE SECTIONS TOGETHER. NO TONGUE AND GROOVE CONNECTIONS SHALL BE PERMITTED.

ALL PCB. SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE PROJECT AND FURNISHING, INSTALLING, MAINTAINING AND SUBSEQUENTLY REMOVING ALL PCB SHALL BE INCLUDED IN THE LUMP SUM PRICE BID ITEM 614 MAINTAINING TRAFFIC AS PER PLAN. ALL PCB. SHALL BE IN GOOD SHAPE, FREE OF CRACKS, SPALLING OR ANY OTHER DAMAGE OR DETERIORATION. PCB. SHALL BE USED AT LOCATIONS SHOWN ON SHEET(S) 40&41 AND STD. DWGS. AND AT ANY OTHER LOCATIONS REQUIRED BY DROPOFF IN WORK ZONES SHEET INCLUDED IN THESE PLANS.

PERMANENT PROTECTION MUST BE PROVIDED FOR HAZARDS ALONG ALL ROADS OPEN TO TRAFFIC BEFORE PCB CAN BE REMOVED.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

616, WATER = 24600 CUBIC METER

616, CALCIUM CHLORIDE = 615 METRIC TON

ITEM SPECIAL - REPLACEMENT SIGN, REPLACEMENT DRUM

FLAT SHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLAN, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER AND PAID FOR UNDER ' ITEM SPECIAL - REPLACEMENT SIGN '. PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE PRICE BID PER SQUARE METER FOR ITEM SPECIAL - REPLACEMENT SIGN ', AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED SIGNS, HARDWARE, SUPPORTS, ETC. REPLACEMENT SIGNS SHALL BE NEW, BUT OTHER MATERIALS SHALL BE USED SUBJECT TO APPROVAL OF THE ENGINEER.

SPECIAL REPLACEMENT SIGN = 25 SQUARE METERS

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER AND PAID FOR UNDER ' ITEM SPECIAL - REPLACEMENT DRUM '. PAYMENT FOR THE NEW DRUMS SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUMS AND PROVIDING AND MAINTAINING NEW DRUMS IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUMS.

SPECIAL REPLACEMENT DRUM = 200 EACH

SHOULDER MAINTENANCE

TRAFFIC CONTROL OPERATIONS REQUIRE THE PARTIAL UTILIZATION OF THE SHOULDERS FOR TRAFFIC LANES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT THE SHOULDERS ARE MAINTAINED IN ACCEPTABLE CONDITION FOR THEIR SAFE USE AS A TRAFFIC LANE. A QUANTITY OF 225 CUBIC METERS OF ITEM 301 BITUMINOUS AGGREGATE BASE, PG64-22 AND A QUANITY OF 150 CUBIC METERS OF ITEM 203 EXCAVATION IS INCLUDED IN THE GENERAL SUMMARY TO RECONSTRUCT THE EXISTING SHOULDERS FOR A WIDTH OF 1 METER PRIOR TO THE UTILIZATION OF THE SHOULDER FOR MAINTENANCE OF TRAFFIC PURPOSES IN THE AREAS OF PCB WORK ZONE PROTECTION. USE OF THESE QUANTITIES IS TO BE AS DIRECTED BY THE ENGINEER. AN ADDITIONAL QUANTITY OF 200 CUBIC METERS OF ITEM 301 HAS BEEN INCLUDED FOR ANY REQUIRED REPAIRS, TO BE USED AS DIRECTED BY THE ENGINEER.

301 BITUMINOUS AGGREGATE BASE, PG64-22 = 425 CUBIC METERS

203 EXCAVATION NOT INCLUDING = 150 CUBIC METERS EMBANKMENT CONSTRUCTION

PORTABLE CONCRETE BARRIER END TREATMENT

THE CONTRACTOR SHALL PROTECT THE ENDS OF ANY PORTABLE CONCRETE BARRIER WITH EITHER A TAPERED END SECTION OR A TEMPORARY IMPACT ATTENUATOR AS SHOWN ON SHEET 39 AND AS SPECIFIED IN THE STANDARD DRAWINGS.

SHOULD THE CONTRACTOR ELECT TO USE TEMPORARY IMPACT ATTENUATORS, THIS WORK SHALL CONSIST OF FURNISHING QUADGUARD TEMPORARY IMPACT ATTENUATORS, MODEL QZ2406Y. THIS SHALL INCLUDE ALL RELATED HARDWARE AS REQUIRED BY THE MANUFACTURER TO CONSTRUCT A COMPLETE AND FUNCTIONAL QUADGUARD TEMPORARY IMPACT ATTENUATOR SYSTEM. THE ATTENUATORS SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AND AT THE LOCATIONS SHOWN IN THE PLANS. THE IMPACT ATTENUATOR SHALL BE MANUFACTURED BY THE ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, ILLINOIS 60601: TELEPHONE (312) 467-6750

FOR ANY TEMPORARY INSTALLATION, THE NOSE COVER SHALL MEET THE REQUIREMENTS OF STANDARD DRAWING MT - 95.81. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTION, REPAIRING AND OTHERWISE RESTORING THE IMPACT ATTENUATOR IN ACCORDANCE WITH THE MANUFACTURERS MAINTENANCE INSTRUCTIONS WHILE IT IS IN USE ON THE PROJECT. SUCH REPAIRS SHALL BE PERFORMED WITHIN 12 HOURS OF THE INCIDENT WHICH CAUSED DAMAGE TO THE PROJECT. IN ACCORDANCE TO ANY EXTRA UNITS SUPPLIED FOR THIS PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL NECESSARY MATERIALS, LABOR, AND EQUIPMENT REQUIRED TO PERFORM THE ABOVE DESCRIBED RESTORATION OF THE ATTENUATOR.

PAYMENT OF THE ABOVE WORK SHALL INCLUDE FURNISHING, INSTALLING, MAINTAINING, REMOVING AND RE-ERECTING, REMOVAL FROM THE PROJECT UPON COMPLETION, RESTORATION AFTER EACH VEHICLE IMPACT OF THE TEMPORARY IMPACT ATTENUATOR, INCLUDING ALL LABOR, TOOLS, EQUIPMENT AND MISCELLANEOUS HARDWARE AND MATERIALS NECESSARY TO COMPLETE THESE ITEMS OF WORK.

PAYMENT FOR ALL ABOVE WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC AS PER PLAN.

ITEM 625 - TEMPORARY LIGHTING

THIS ITEM SHALL CONSIST OF THE CONTRACTOR MAINTAINING EXISTING LIGHTING OR PROVIDING TEMPORARY LIGHTING FOR THE TEMPORARY CROSSOVERS. EXISTING LIGHTING ON ALL ROADWAYS AND RAMPS SHALL BE MAINTAINED. SHOULD THE CONTRACTOR REQUIRE THE REMOVAL OF LIGHTING FROM AN EXISTING ROADWAY, THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR ADEQUATE LIGHTING OF THAT PORTION OF THE EXISTING ROADWAY AFFECTED BY THE REMOVAL OF THE EXISTING LIGHTING.

TEMPORARY LIGHTING PROVIDING AN AVERAGE INTENSITY OF 1.0 FOOT CANDLES SHALL BE INSTALLED BEFORE OPENING THE TEMPORARY CROSSOVERS TO TRAFFIC.

ON PERMANENT ROADWAYS OPENED TO TRAFFIC, EITHER PERMANENT NEW LIGHTING SHALL BE INSTALLED BEFORE OPENING, OR TEMPORARY LIGHTING PROVIDING AN AVERAGE

ITEM - 625 TEMPORARY LIGHTING CONTD...

INITIAL INTENSITY OF 1.0 FOOT CANDLES SHALL BE INSTALLED BEFORE OPENING.

THE CONTRACTOR SHALL SUBMIT 4 SETS OF HIS PROPOSED DETAILED TEMPORARY LIGHTING PLANS TO THE ENGINEER FOR REVIEW AND APPROVAL. THESE PLANS SHALL SHOW LOCATIONS OF POLES, LENGTH OF BRACKET ARMS, TYPE AND SIZE OF LUMINAIRES AND LAMPS, MOUNTING HEIGHT, POWER SOURCE AND OTHER PERTINENT INFORMATION.

WOOD POLES WITH OVERHEAD WIRING MAY BE USED. ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED BY THE CONTRACTOR AND THE TEMPORARY LIGHTING INSTALLATIONS SHALL BE REMOVED AND DISPOSED OF WHEN NO LONGER NEEDED.

RECONDITIONED OR APPROVED USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING. TEMPORARY OVERHEAD CONSTRUCTION SHALL BE NOT LESS THAN GRADE A FOR STRENGTH REQUIREMENT AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. MOUNTING HEIGHT FOR TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 8m AND A MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 6m.

ODOT SHALL PAY FOR ELECTRICAL ENERGY AND MAINTENANCE FOR UNDISTURBED LIGHTING ON EXISTING ROADWAYS AND FOR PERMANENT LIGHTING PLACED IN OPERATION. THE CONTRACTOR SHALL FURNISH ALL ELECTRICAL ENERGY, MATERIALS, LABOR AND EQUIPMENT NECESSARY TO INSTALL, OPERATE, MAINTAIN AND REMOVE THE TEMPORARY LIGHTING.

THE LUMP SUM PRICE BID FOR ITEM 625 - TEMPORARY LIGHTING SHALL INCLUDE PAYMENT FOR ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARRY TO INSTALL AND REMOVE THE TEMPORARY CROSSOVER LIGHTING AS SPECIFIED.

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
203	150	CUBIC METER	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
301	425	CUBIC METER	BITUMINOUS AGGREGATE BASE PG64-22
614	150	CUBIC METER	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC
410	500	CUBIC METER	TRAFFIC COMPACTED SURFACE, AS PER PLAN
616	24600	CUBIC METER	WATER
616	615	METRIC TON	CALCIUM CHLORIDE
SPECIAL	25	SQUARE METER	REPLACEMENT SIGN
SPECIAL	200	EACH	REPLACEMENT DRUM
614	80	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR
614	8	EACH	WORK ZONE SPEED LIMIT SIGN
614	8	EACH	DOUBLE FINES IN WORK ZONES SIGN

CALCULATED AM | CHECKED REA

MAINTENANCE OF TRAFFIC NOTES AND DETAILS

WYA / CRA-30-28.009 / 0.000

ITEM 614-LAW ENFORCEMENT OFFICER (WITH PATROL CAR)

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER (AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

* FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

* DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH:

OHIO STATE HIGHWAY PATROL
2284 MARION
UPPER SANDUSKY
MARION, OHIO
TELEPHONE: (419) 294-1845

LAW ENFORCEMENT OFFICERS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614-LAW ENFORCEMENT OFFICER (WITH PATROL CAR). THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY. THE HOURS PAID SHALL INCLUDE MINIMUM SHOW -UP REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ITEM 614, LAW ENFORCEMENT OFFICER = 80 HOURS
WITH PATROL CAR

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, HE MAY DO SO AT HIS OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC.

ITEM 614, WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND SUBSEQUENTLY REMOVE WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS (R-10-48) (55 MPH) WITHIN THE WORK LIMITS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SPEED LIMIT OR MINIMUM SPEED SIGNS WITHIN THE REDUCED SPEED ZONE. THESE SIGNS SHALL BE RESTORED DURING SUSPENSION OR TERMINATION OF THE REDUCED SPEED LIMIT. THE EXPENSE OF COVERING OR REMOVAL AND RESTORATION OF EXISTING SPEED LIMIT OR MINIMUM SPEED SIGNS SHALL BE INCLUDED IN THE PAY ITEM FOR THE WORK ZONE SPEED LIMIT SIGNS.

THE WORK ZONE SPEED LIMIT SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN 4 HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN 4 HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL ERECT A WORK ZONE SPEED LIMIT SIGN IN ADVANCE OF ANY LANE RESTRICTION EXPECTED TO LAST AT LEAST 30 DAYS, OR AS DIRECTED BY THE ENGINEER. THE SIGN SHALL BE MOUNTED ON BOTH SIDES OF DIVIDED HIGHWAYS, 150 METERS IN ADVANCE OF THE LANE REDUCTION TAPER. THE SIGN SHALL BE MOUNTED ON THE RIGHT SIDE, 75 METERS IN ADVANCE OF THE LANE REDUCTION TAPER ON UNDIVIDED HIGHWAYS. THE SIGN SHALL BE REPEATED, ON THE SIDE NEAREST TRAFFIC, EVERY 1600 METERS FOR 55 MPH ZONES AND EVERY 800 METERS FOR 45 MPH ZONES. THESE SIGNS SHALL ALSO BE ERECTED IMMEDIATELY AFTER EACH OPEN ENTRANCE RAMP WITHIN THE ZONE. A SIGN TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE. THIS SIGN SHALL BE AN R-8A.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED BUT GOOD CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS AND ALL REQUIREMENTS OF CMS 614.03. WORK ZONE SPEED LIMIT SIGNS SHALL BE MOUNTED ON TWO (2) ITEM 630 GROUND MOUNTED SUPPORTS, NO. 4 POSTS.

WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGNS AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION WITHIN THE PROJECT DUE TO CHANGES IN THE SPEED ZONE DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVING THE SIGNS AND SUPPORTS.

614, WORK ZONE SPEED LIMIT SIGN = 8 EACH

DOUBLE FINES IN WORK ZONES SIGN

R-180-48 SIGNS SHALL BE FURNISHED, ERECTED AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED IN SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS SHALL BE COVERED OR REMOVED WHEN THE CONSTRUCTION ZONE IS DISCONTINUED FOR 30 DAYS OR MORE.

THE SIGNS SHALL BE DUAL MOUNTED. THE FIRST SIGN SHALL BE PLACED BETWEEN THE "ROAD CONSTRUCTION AHEAD" (OW-128) SIGN AND THE NEXT SIGN IN THE SEQUENCE. SIGNS SHALL BE ERECTED ON EACH ENTRANCE RAMP AND EVERY THREE KILOMETERS THROUGH THE CONSTRUCTION WORK LIMITS.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED BUT GOOD CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF 730.19 AND U.S. DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION FOR TYPE III-C SHEETING, FP-85.

DOUBLE FINES IN WORK ZONES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614, DOUBLE FINES IN WORK ZONES SIGN = 8 EACH

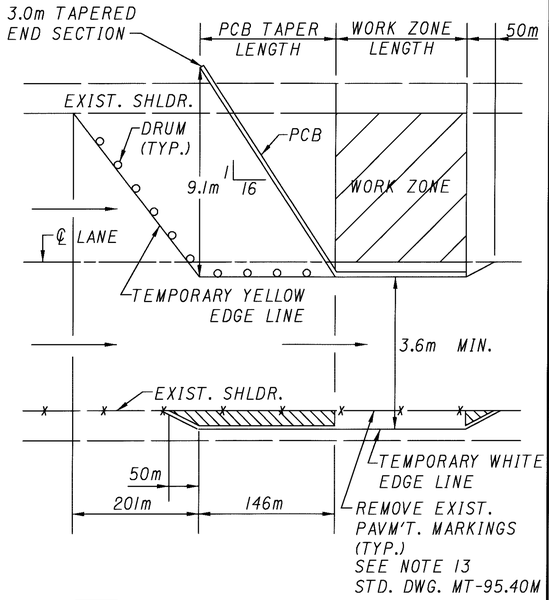
CONSTRUCTION OF TEMPORARY EMBANKMENTS SHALL BE IN ACCORDANCE WITH EMBANKMENT CONSOLIDATION RECOMMENDATIONS SHOWN IN GENERAL NOTES SHEET NO. 24

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
614	80	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR
614	8	EACH	WORK ZONE SPEED LIMIT SIGN
614	8	EACH	DOUBLE FINES IN WORK ZONES SIGN

QUANTITIES CARRIED TO SHEET NO. 38

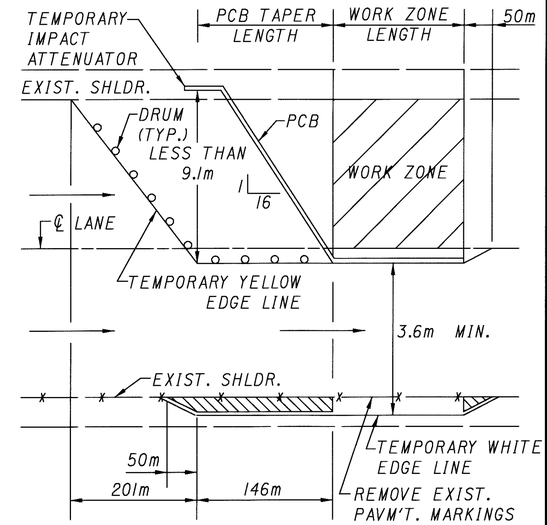
PCB WORK ZONE PROTECTION WITH TAPERED END SECTION



- RECONSTRUCTED SHOULDER (100mm ITEM 301)

LEFT LANE CLOSURE SHOWN. SAME DETAILS APPLY TO RIGHT LANE CLOSURE. FOR ADDITIONAL DETAILS SEE STD. DWG. MT-95.40M

PCB WORK ZONE PROTECTION WITH TEMPORARY IMPACT ATTENUATOR



- RECONSTRUCTED SHOULDER (100mm ITEM 301)

LEFT LANE CLOSURE SHOWN. SAME DETAILS APPLY TO RIGHT LANE CLOSURE. FOR ADDITIONAL DETAILS SEE STD. DWG. MT-95.40M

CALCULATED AM | CHECKED REA

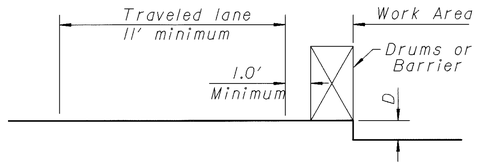
MAINTENANCE OF TRAFFIC NOTES AND DETAILS

WYA / CRA-30-28.009 / 0.000

DESIGN FILE : $$$$$$$$DESIGNFILESPECIFICATION$$$$$$$$$$
USERNAME : $$$$INSTRUCTIONS$$$$
DATE : $$$$DATE$$$$$
TIME : $$$$TIME$$$$$

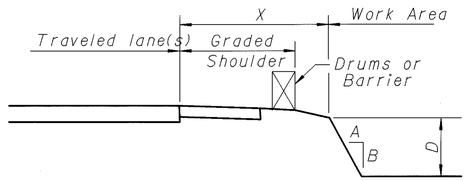
WORK AREA PROTECTION ADJACENT TO TRAVELED LANES

D (m)	TREATMENT
≤0.125	Maintain lanes utilizing drums as shown below.
>0.125	Lane closure utilizing portable concrete barrier as shown below.



WORK AREA PROTECTION BEYOND TREATED SHOULDER

USE FOR: Uncurbed Facilities

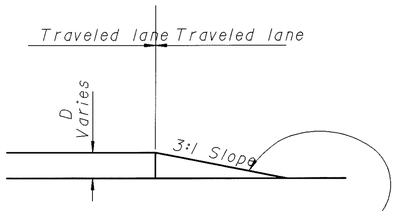


X (m)	D (m)	A/B	Treatment Required
0-9	Any	3:1 or Flatter	None
1.2-3.6	<0.3	Steeper than 3:1	Drums
1.2-3.6	<0.3	Steeper than 3:1	Barrier
>3.6-9	<0.6	Steeper than 3:1	Drums
>3.6-9	<0.6	Steeper than 3:1	Barrier
>9	Any	Any	None

OPTIONAL WEDGE TREATMENT

(MILLING OR RESURFACING)

1. This treatment may be used between traveled lanes.
2. OW-171 and OWP-171 signs required.



Firm and unyielding material to be removed prior to placing the abutting pavement course, unless otherwise permitted to remain by the plans or specifications. All cost associated wtih the supplying, placing and removing this material shall be included in the price bid Item 614 Maintaining Traffic, as per plan.

DROPOFFS IN WORK ZONE NOTES

1. IT IS INTENDED THAT THIS SHEET BE USED FOR TREATMENT OF DROPOFFS THAT DEVELOP DURING CONSTRUCTION OPERATIONS, AND THAT ARE NOT OTHERWISE PROVIDED FOR IN THE CONSTRUCTION PLANS ALL LABOR, EQUIPMENT OR MATERIALS TO IMPLEMENT THE DROPOFF TREATMENTS SPECIFIED HEREON SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN.

2. WHILE THE NEED FOR CERTAIN ADVISORY SIGNING IS NOTED HEREON, IT IS NOT INTENDED THAT THIS BE INDICATIVE OF ALL SIGNING THAT MAY BE REQUIRED TO ADVISE OR WARN MOTORISTS, AND ALL REQUIREMENTS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) MUST BE FULFILLED.

3. WHERE CONCRETE BARRIER IS SPECIFIED, IT SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING RM-4.2M AND ITEM 622.

4. WHEN DRUMS ARE SPECIFIED FOR A DROPOFF CONDITION, A MINIMUM NUMBER OF FOUR DRUMS SHALL BE USED. SPACING SHALL BE AS INDICATED IN THE PLANS OR AS SPECIFIED IN THE OMUTCD.

5. PORTABLE CONCRETE BARRIER SHALL BE PLACED ON THE SAME LEVEL AS THE TRAFFIC SURFACE AND SHALL NOT ENCROACH ON LANE WIDTH(S) DESIGNATED AS THE MINIMUM REQUIRED FOR TRAFFIC USE. WHERE DRUMS ARE USED AND THEIR PRESENCE WOULD REDUCE TRAVELED LANE WIDTHS TO LESS THAN 3 m, DRUMS MAY BE PLACED ON THE OPPOSITE LEVEL FROM THAT OF TRAFFIC PROVIDED THE DROPOFF DEPTH DOES NOT EXCEED 125 mm AND APPROVAL IS GRANTED BY THE PROJECT ENGINEER.

6. FOR LOCATIONS, SUCH AS LANE SHIFTS, LANE CLOSURES, ECT., WHERE TRAFFIC IS REQUIRED TO NEGOTIATE ANY DIFFERENCE IN ELEVATION BETWEEN PAVEMENTS, A 3:1 SLOPE TREATMENT SIMILAR TO THE OPTIONAL WEDGE TREATMENT SHALL BE PROVIDED.

PAVEMENT RECONSTRUCTION AND WIDENING WORK:

A. LENGTHS GREATER THAN 18 m - PROTECT AS SHOWN ON THIS SHEET.

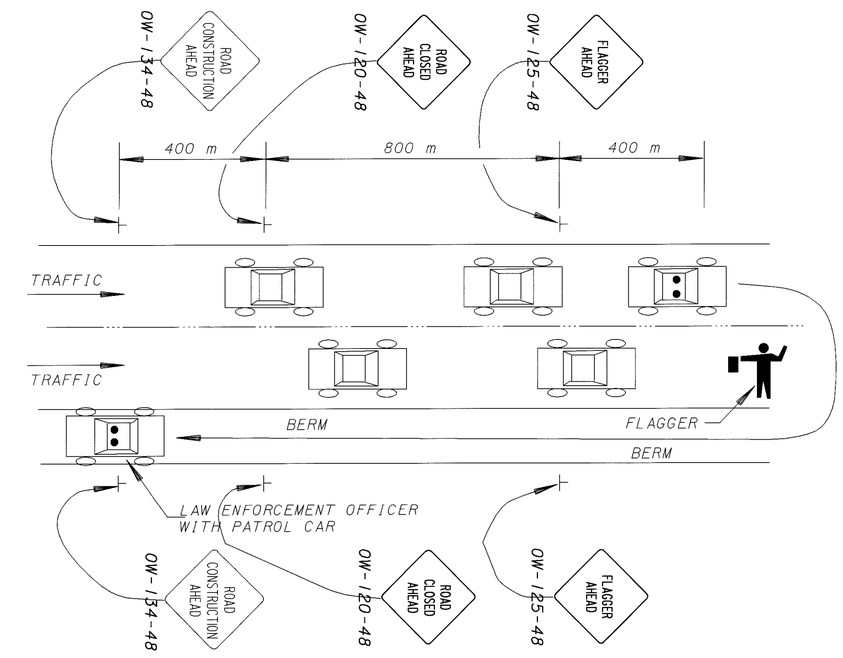
B. LENGTHS OF 18 m OR LESS - DRUMS MAY BE USED AS A SEPARATOR ADJACENT TO THE TRAVELED LANE.

LANE CLOSURE AND TRAFFIC STOPPAGE FOR PLACEMENT OF BRIDGE BEAMS

PLACEMENT OF GIRDERS & BEAMS FOR STR. NO.WYA-30-28566 & WYA-30-28682 OVER U.S.R. 23 LANES SHALL BE ACCOMPLISHED IN SUCH A MANNER THAT COMPLETE TRAFFIC STOPPAGE PAGE ON ALL LANES OF ANY DIRECTIONAL ROADWAY IS NOT MORE THAN TEN (10) MINUTES IN ANY ONE (1) CONSECUTIVE THIRTY (30) MINUTE OR LONGER PERIOD TO ALLOW THE TRAFFIC BACKUP TO CLEAR. LANE CLOSURES AND TRAFFIC STOPPAGE FOR THE PURPOSE OF SETTING BEAMS WILL NOT BE PERMITTED BETWEEN DUSK AND DAWN, BETWEEN 3:00 P.M. ON FRIDAY AND 6:00 A.M. MONDAY OR ANY LEGALLY ESTABLISHED HOLIDAYS. ONE (1) LAW ENFORCEMENT OFFICER WITH PATROL CAR SHALL BE USED TO PACE MOTORIST TO A STOP. AFTER TRAFFIC HAS BEEN STOPPED A FLAGGER SHALL REMAIN IN THE ROADWAY TO BLOCK TRAFFIC AND THE LAW ENFORCEMENT OFFICIER WITH PATROL CAR SHALL TRAVEL ALONG THE SHOULDER EVEN WITH THE BACKUP OF THE STOPPED VEHICLES. WHEN THE ENGINEER DEEMS APPROPRIATE THE CONTRACTOR SHALL ERECT AND MAINTAIN "ROADWORK AHEAD", "ROAD CLOSED AHEAD" AND "STOP AHEAD" SIGNS. THE LAW ENFORCEMENT OFFICIER WITH THE PATROL CAR, SIGNS AND FLAGGERS SHALL BE LOCATED IN ACCORDANCE WITH THE DETAIL ON THIS SHEET.

TRAFFIC CONTROL DEVICES SHALL BE SET UP PRIOR TO THE START OF CONSTRUCTION AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH SPECIAL CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS THEY ARE NEEDED AND SHALL BE IMMEDIATELY REMOVED THEREAFTER. WHERE OPERATIONS ARE PERFORMED IN STAGES, THERE SHALL BE IN PLACE ONLY THOSE DEVICES THAT APPLY TO THE CONDITIONS PRESENT DURING THE STAGE IN PROGRESS. ALL SIGNS WITH MESSAGES WHICH DO NOT APPLY DURING A CERTAIN PERIOD SHALL BE COVERED OR SET ASIDE, OUT OF VIEW OF TRAFFIC.

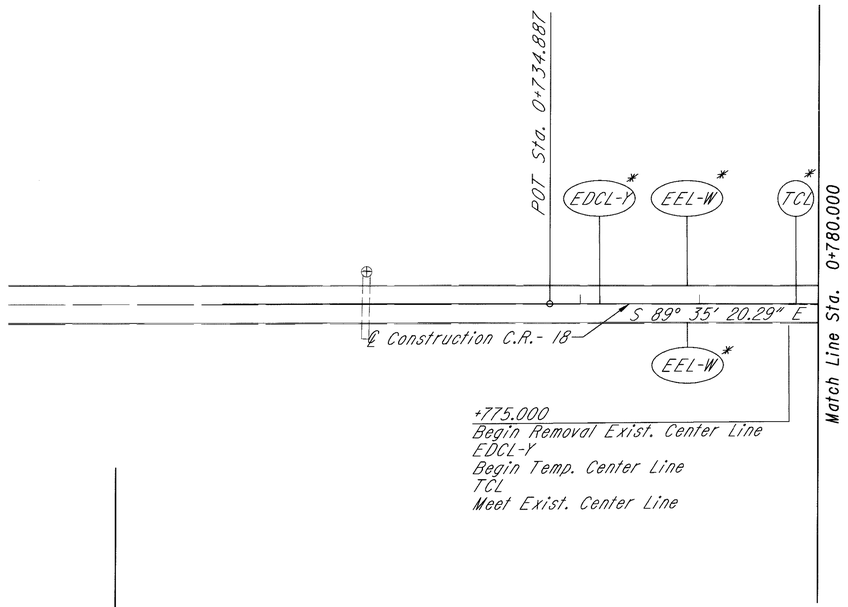
THE CONTRACTOR SHALL SUPPLY ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THE PRECEEDING REQUIREMENTS. ALL COST ASSOCIATED WITH THIS WORK EXCEPT L.E.O. WITH PATROL CAR SHALL BE INCLUDED IN THE PRICE BID ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN.



CALCULATED | CHECKED

MAINTENANCE OF TRAFFIC DETAILS

WYA/CRA-30-28.009\0.000

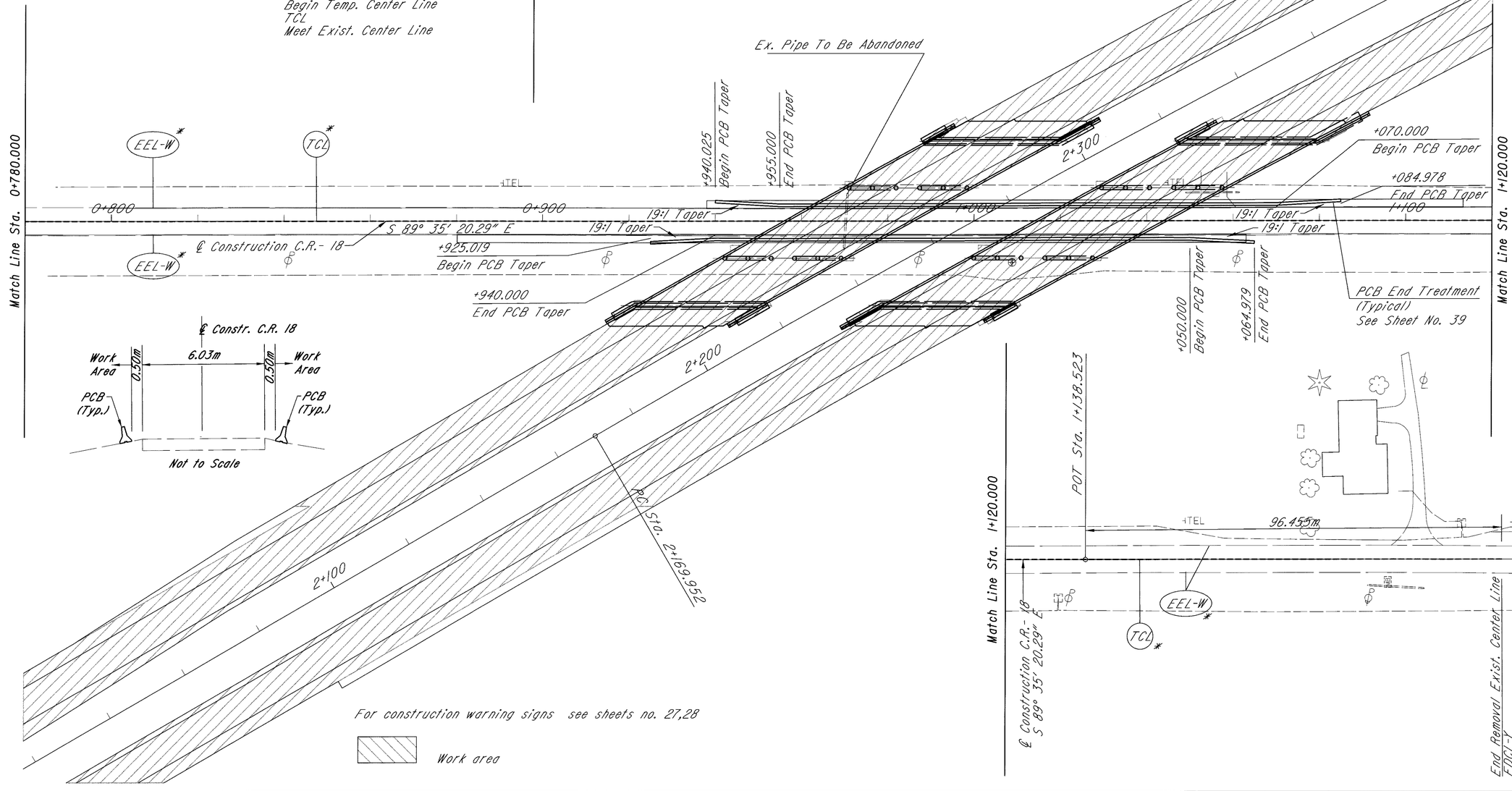


Legend

EEL-W	Existing Edge Line White
TCL	Temporary Center Line (Double Solid Yellow)
EDCL-Y	Existing Dashed Center Line Single Yellow

* Cost should be included in Item 614,
Maintaining Traffic, As per plan
All Costs for PCB shall also be included in Item 614,
Maintaining Traffic, As per plan

NOTE:
CR 18 Shown, but same details
apply to all roads passing
under Proposed USR 30.



For construction warning signs see sheets no. 27,28

Work area

HORIZONTAL
SCALE IN METERS
0 10 20

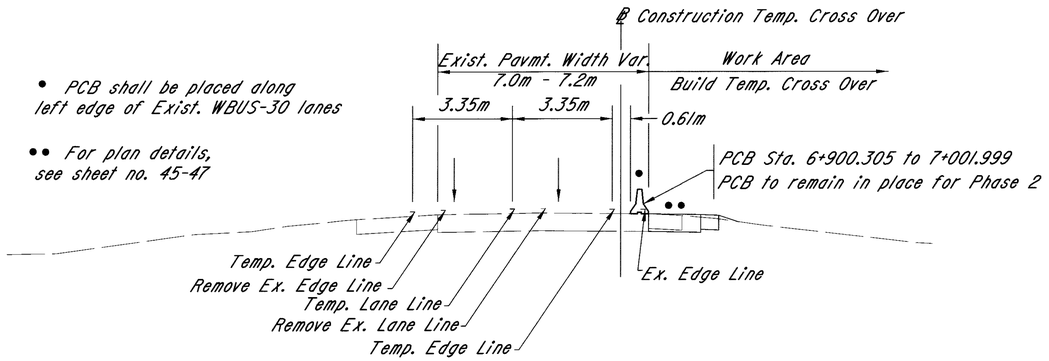
CALCULATED AM
CHECKED REA

MAINTENANCE OF TRAFFIC PLAN
AT USR 30 STRUCTURES OVER ROADWAYS

WYA/CRA-30-28.009/0.000

41
2116

PHASE 1 CONSTRUCTION
TEMPORARY CROSS OVER

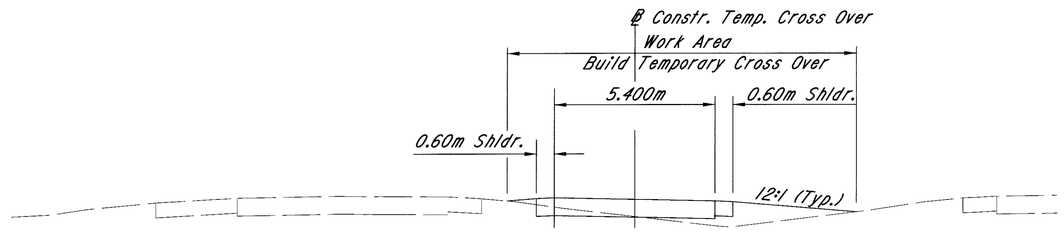


• PCB shall be placed along left edge of Exist. WBUS-30 lanes

•• For plan details, see sheet no. 45-47

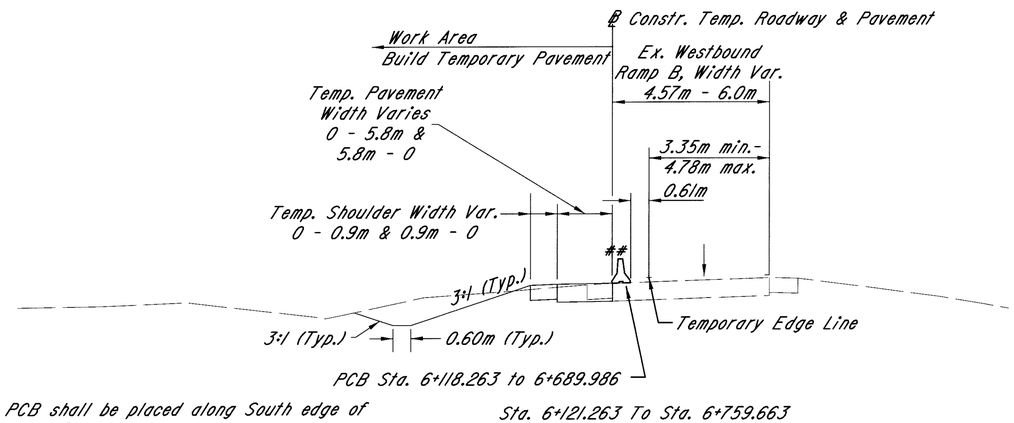
EXISTING WESTBOUND US30

Sta. 6+897.000 To Sta. 7+028.961



Sta. 6+542.594 To Sta. 6+609.000

Sta. 6+819.000 To Sta. 6+897.000

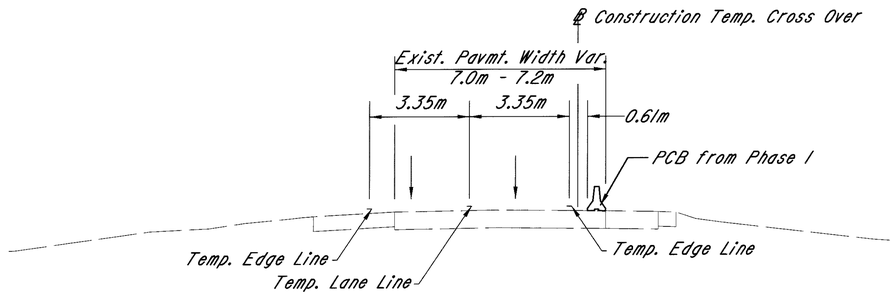


TEMPORARY ROAD ALONG RAMP B

Sta. 6+121.263 To Sta. 6+759.663

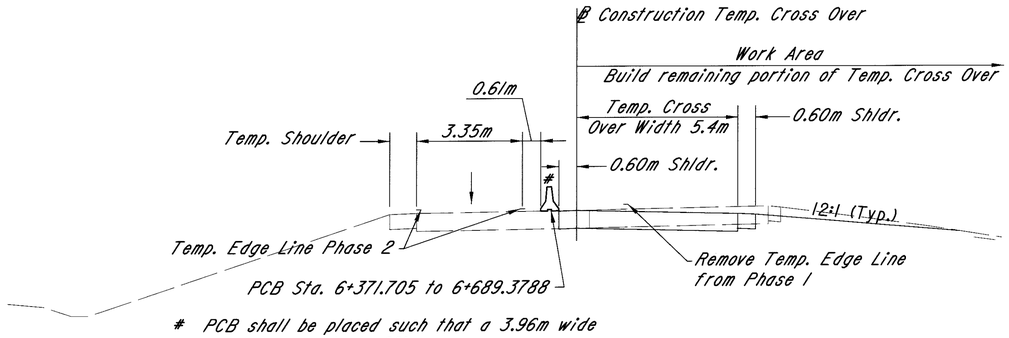
** PCB shall be placed along South edge of Temporary Pavement.

PHASE 2 CONSTRUCTION
TEMPORARY CROSS OVER



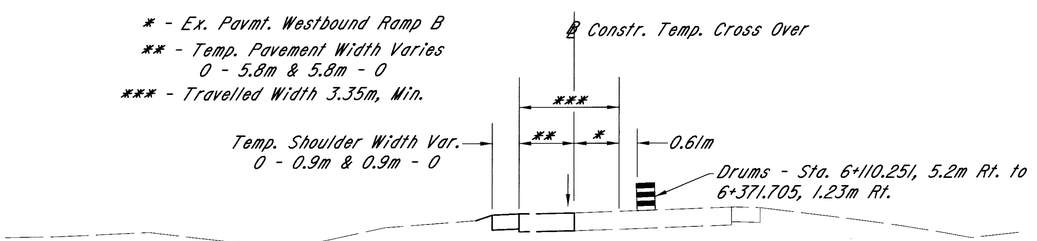
EXISTING WESTBOUND US30

Sta. 6+753.898 To Sta. 7+028.961



PCB shall be placed such that a 3.96m wide pavement is open to traffic.

Sta. 6+371.705 To Sta. 6+753.898



Note : Keep Exit to Ramp C open using drums to direct traffic flow

Sta. 6+121.263 To Sta. 6+371.705

HORIZONTAL SCALE IN METERS

0 2 4

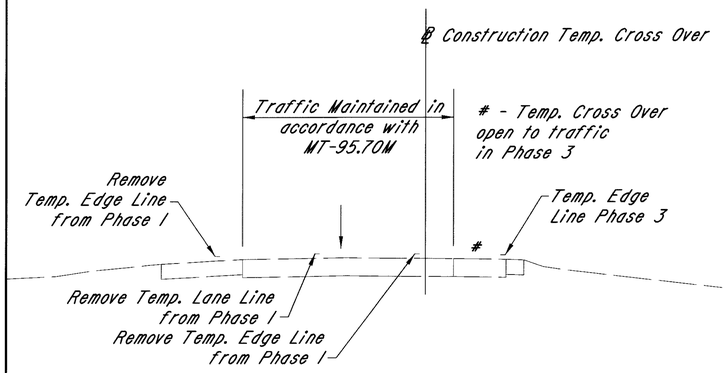
CALCULATED AM

CHECKED REA

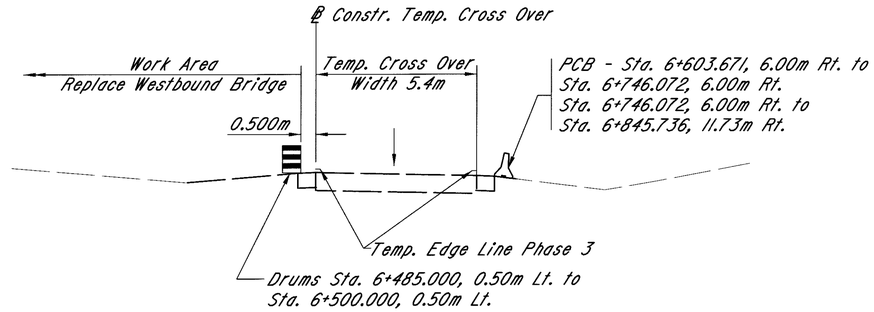
TYPICAL SECTIONS MAINTENANCE OF TRAFFIC SEQUENCE
CONSTRUCTION OF WB US-30 BRIDGE OVER GRASS RUN
TEMPORARY CROSS OVER - PHASE 1 & PHASE 2

WYA/CRA-30-28.009/0.000

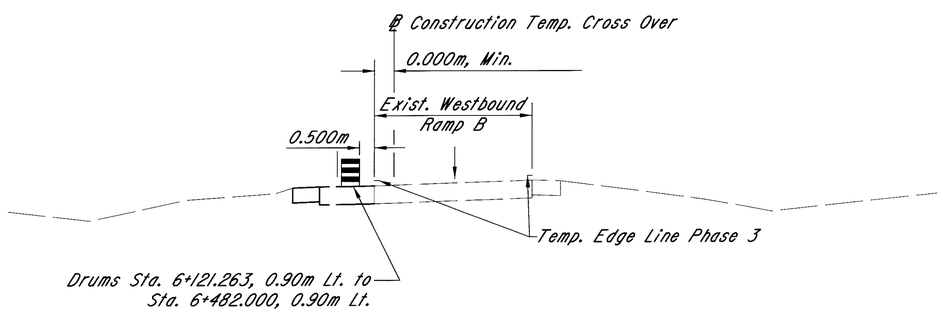
PHASE 3 CONSTRUCTION
EXIST. WBUS-30 BRIDGE REPLACEMENT



Exist. WBUS30
Sta. 6+890.000 Ahead - Traffic Maintained in accordance with MT-95.70M



Sta. 6+482.000 To Sta. 6+890.000

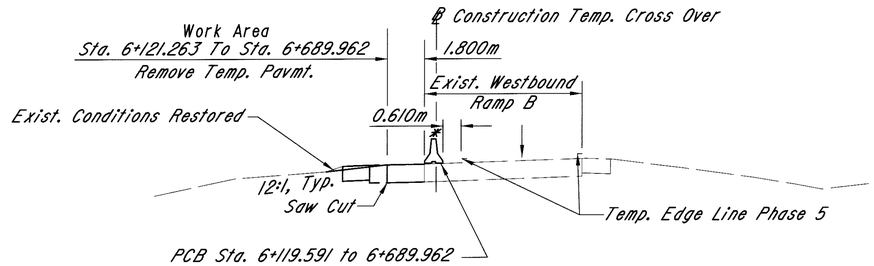


Sta. 6+121.263 To Sta. 6+482.000

PHASE 4 CONSTRUCTION
TEMPORARY ROAD REMOVAL

NOTE :- USE THE SAME SETUP AS PHASE 2 FOR REMOVAL OF TEMPORARY CROSS OVER PAVEMENT DURING PHASE 4

PHASE 5 CONSTRUCTION
TEMPORARY ROAD REMOVAL



* PCB shall be placed along the South edge of Temp. Pavm't.

Sta. 6+121.263 To Sta. 6+689.962

HORIZONTAL SCALE IN METERS
0 2 4

CALCULATED AM
CHECKED REA

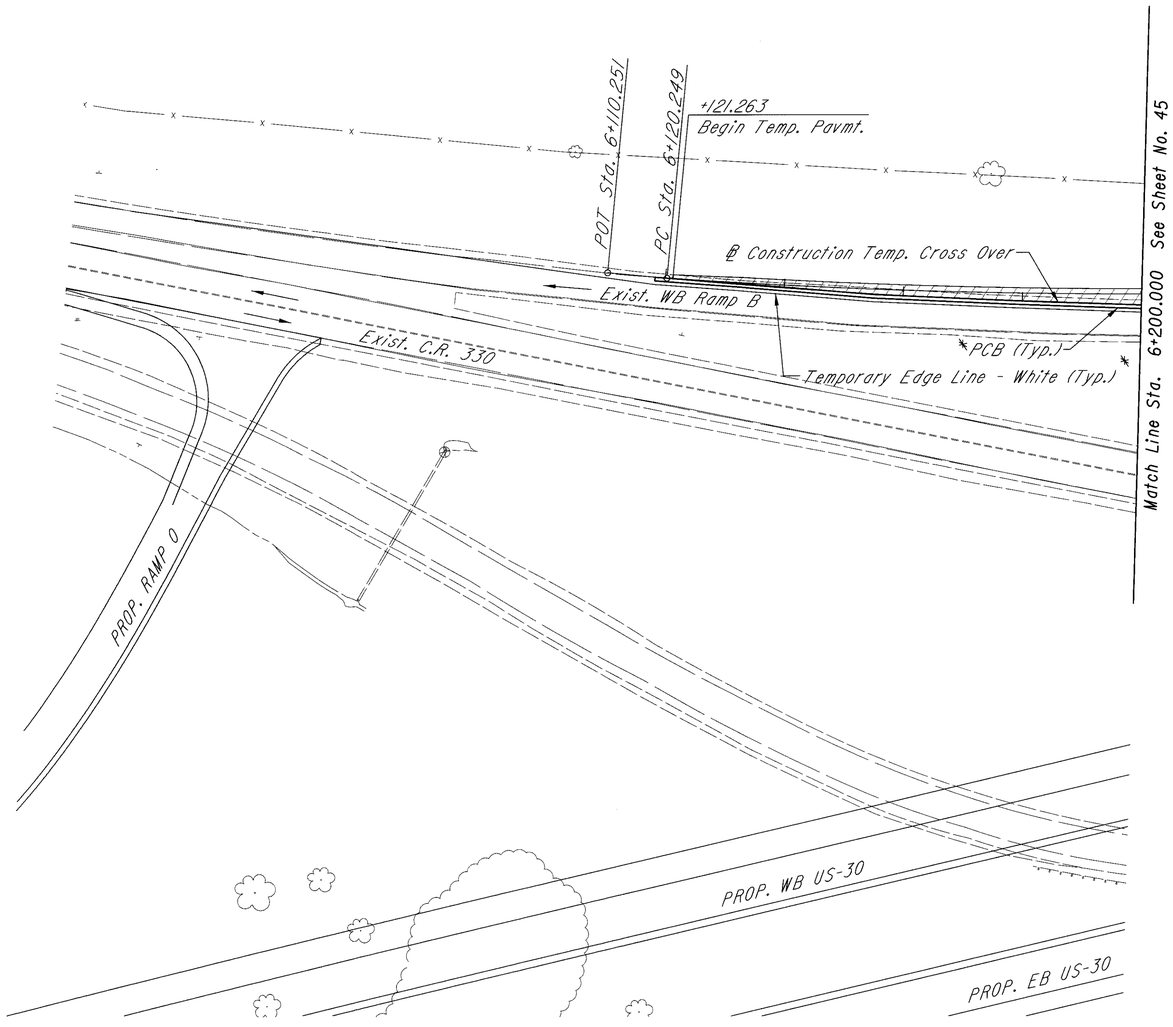
TYPICAL SECTIONS MAINTENANCE OF TRAFFIC SEQUENCE
TEMPORARY CROSS OVER - PHASE 3, 4 & 5

WYA/CRA-30-28.009/0.000

Work area

For Typical Sections of Maintenance of Traffic Sequence See Sheet No. 42,43

* Cost included in Item 614, Maintaining Traffic, As per plan



N

0 10 20
HORIZONTAL
SCALE IN METERS

CALCULATED AM
CHECKED REA

MAINTENANCE OF TRAFFIC PLAN TEMPORARY ROAD AND TEMPORARY CROSS OVER STA.6+110.251 TO STA. 6+200.000

WYA/CRA-30-28.009/0.000

44
2116

Work area

For Typical Sections of Maintenance of Traffic Sequence See Sheet No. 42,43

* Cost included in Item 614, Maintaining Traffic, As per plan

Match Line Sta. 6+200.000 See Sheet No. 44

Match Line Sta. 6+540.000 See Sheet No. 46

Exist. WB Ramp B

Exist. Ramp C

Exist. C.R.330

PROP WB US-30

PROP EB US-30

Temporary Pavement

6+300

6+400

6+500

*PCB

*PCB (Typ.)

℄ Construction Temp Cross Over

Temporary Edge Line - White (Typ.)*

PT Sta. 6+301.563

PC Sta. 6+398.992

PT Sta. 6+500.992

Exist. T.R.111

PROP. RAMP P

TEL

TEL

0 10 20

HORIZONTAL SCALE IN METERS

CALCULATED AM

CHECKED REA

MAINTENANCE OF TRAFFIC PLAN TEMPORARY PAVEMENT AND TEMPORARY CROSS OVER STA.6+200.000 TO STA.6+540.000

WYA/CRA-30-28.009/0.000

45
2116

Work area

For Typical Sections of Maintenance of Traffic Sequence See Sheet No. 42,43

* Cost included in Item 614, Maintaining Traffic, As per plan

Temporary Road Pavement

PCB flared @ 19:1

Barrier End Treatment (Typ.)*

Temporary Edge Line - White (Typ.)*

PCB (Typ.)*

Temporary Edge Line - White (Typ.)*

Exist. WB Ramp B

*Temporary Edge Line - Yellow (Typ.)

@ Construction Temp. Cross Over

@ Construction Temp. Cross Over

POT Sta. 6+746.072

6+600

6+700

6+800

PC Sta. 6+742.594

Exist. EB US-30

PT Sta. 6+868.735

GRASS RUN

PC Sta. 6+746.072

PCB (Typ.)*

PC Sta. 6+861.575

PT Sta. 6+859.256

Match Line Sta. 6+540.000 See Sheet No. 45

Match Line Sta. 6+880.000 See Sheet No. 47

HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED AM

CHECKED REA

MAINTENANCE OF TRAFFIC PLAN TEMPORARY ROAD AND TEMPORARY CROSS OVER STA. 6+540.000 TO STA. 6+880.000

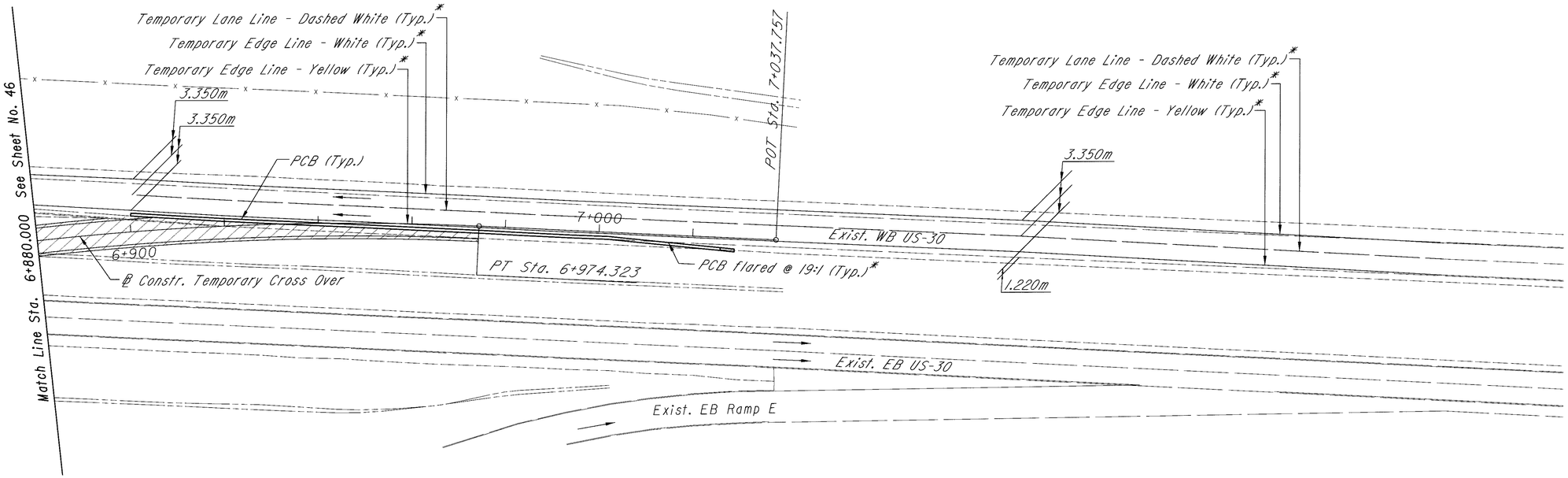
WYA/CRA-30-28.009/0.000

46
2116

Work area

For Typical Sections of Maintenance of Traffic Sequence See Sheet No. 42,43

* Cost included in Item 614, Maintaining Traffic, As per plan



HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED AM

CHECKED AM

MAINTENANCE OF TRAFFIC PLAN TEMPORARY ROAD AND TEMPORARY CROSS OVER STA. 6+880.000 TO STA. 7+037.757

WYA/CRA-30-28.009/0.000

47
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED KEA

30 20 10 0 10 20 30

302
300
298

C = 0.69 SQ m
F = 0.06 SQ m

3:1 (Typ)

Exist. WB Ramp B

300.071
6+180.000
300.071

Exist. CR330

C F
13 Cu m 1 Cu m
* *

C = 0.57 SQ m
F = 0.03 SQ m

Exist. WB Ramp B

300.083
6+160.000
300.083

Exist. CR330

C F
10 Cu m 1 Cu m
* *

C = 0.40 SQ m
F = 0.02 SQ m

Exist. WB Ramp B

299.958
6+140.000
299.958

Exist. CR330

C F
4 Cu m 0 Cu m
* *

C = 0.23 SQ m
F = 0.01 SQ m

Exist. WB Ramp B

299.946
6+129.000
299.946

Exist. CR330

C F
0 Cu m 0 Cu m
* *

* For Information Only

℄

TEMPORARY ROAD CROSS SECTIONS
STA 6+129.000 TO STA 6+180.000

WYA / CRA-30-28.009 / 0.000

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA

30 20 10 0 10 20 30

302
300
298

C = 1.09 SQ m
F = 0.19 SQ m

Exist. WB Ramp B
300.252
6+240.000
300.252

C F
20 Cu m 3 Cu m
* *

C = 0.91 SQ m
F = 0.13 SQ m

3:1(Typ)

Exist. WB Ramp B
300.199
6+220.000
300.199

Exist. CR330

C F
17 Cu m 2 Cu m
* *

C = 0.79 SQ m
F = 0.06 SQ m

Exist. WB Ramp B
300.132
6+200.000
300.132

Exist. CR330

C F
15 Cu m 1 Cu m
* *

* For Information Only

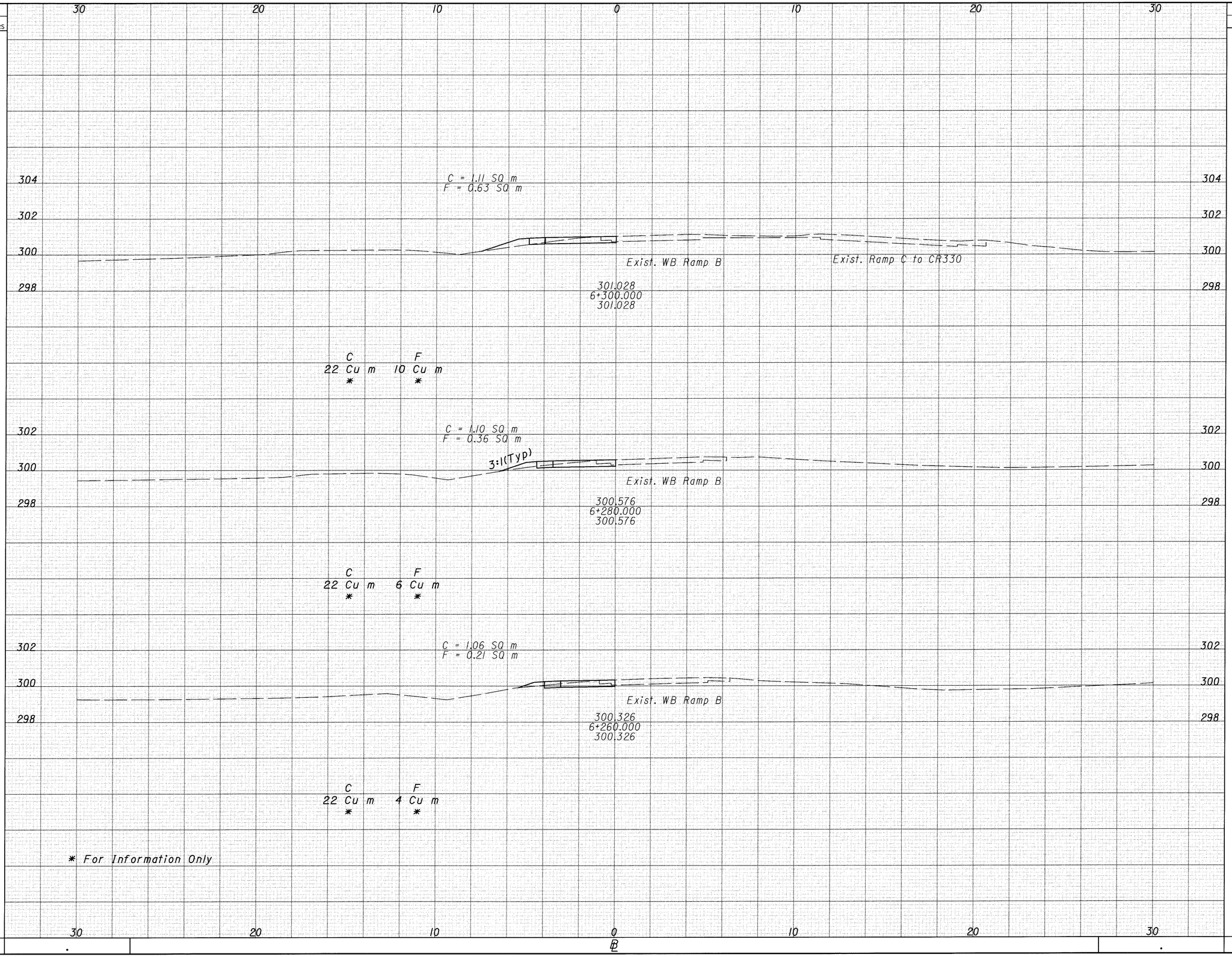
℄ B

TEMPORARY ROAD CROSS SECTIONS
STA 6+200.000 TO STA 6+240.000

WYA/CRA-30-28.009/0.000

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL

CALCULATED AM | CHECKED REA



TEMPORARY ROAD CROSS SECTIONS STA 6+260.000 TO STA 6+300.000

WYA / CRA-30-28.009 / 0.000

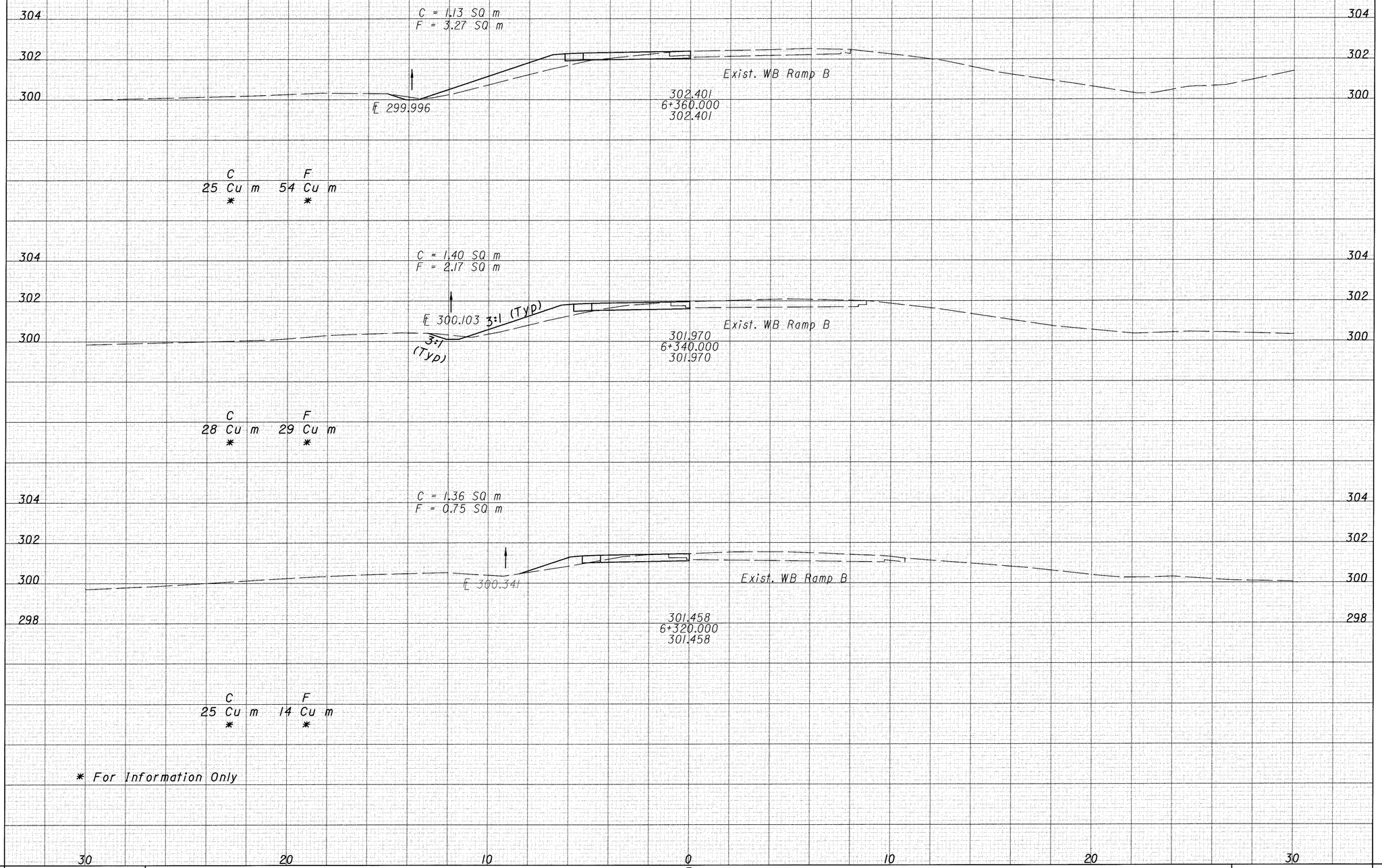
SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA

Earthwork calculations for Temporary Road from Sta 6+360.000 ahead continued on Cross Sections for Temporary Cross Over



TEMPORARY ROAD CROSS SECTIONS STA 6+320.000 TO STA 6+360.000

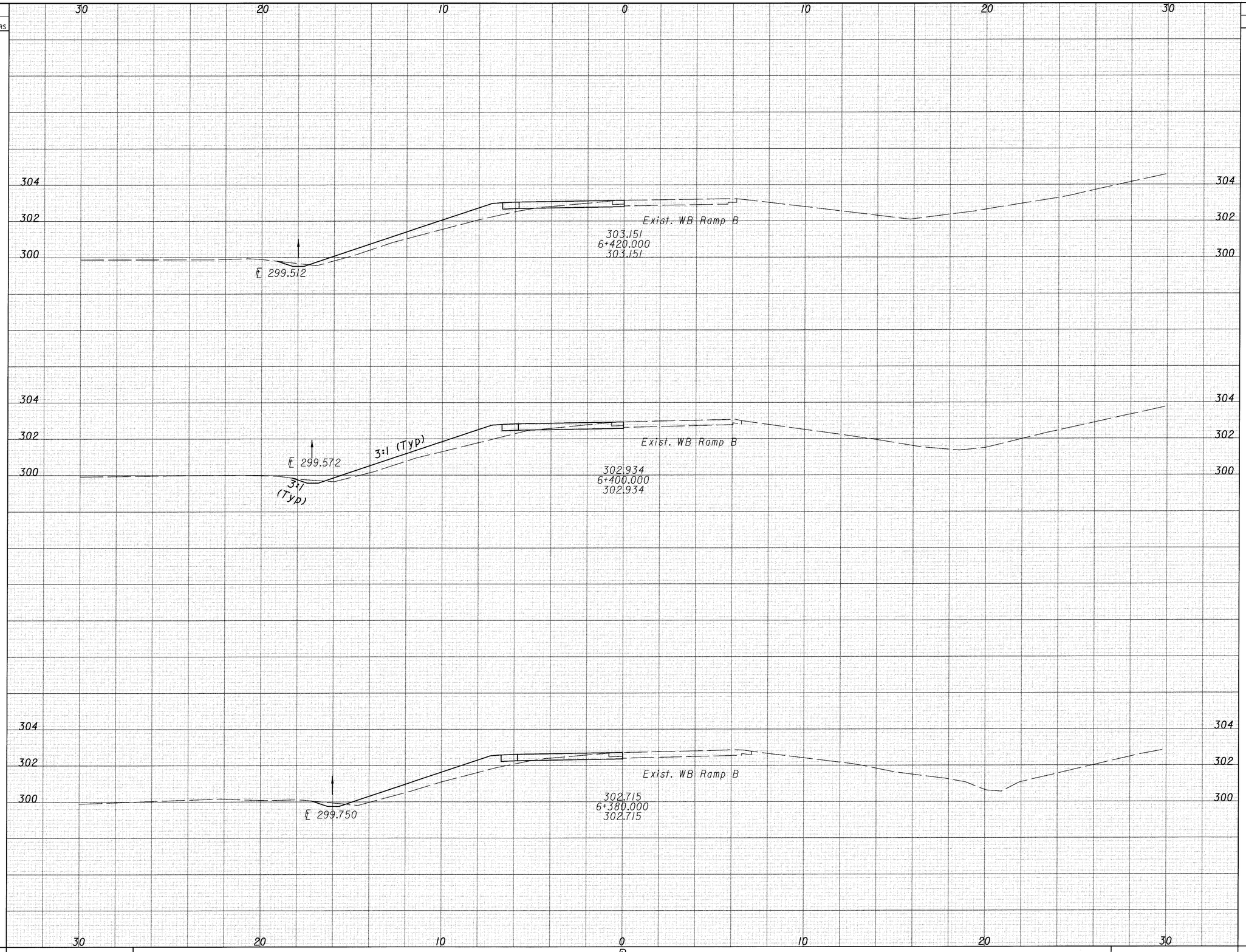
WYA/CRA-30-28.009/0.000

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA



TEMPORARY ROAD CROSS SECTIONS STA 6+380.000 TO STA 6+420.000

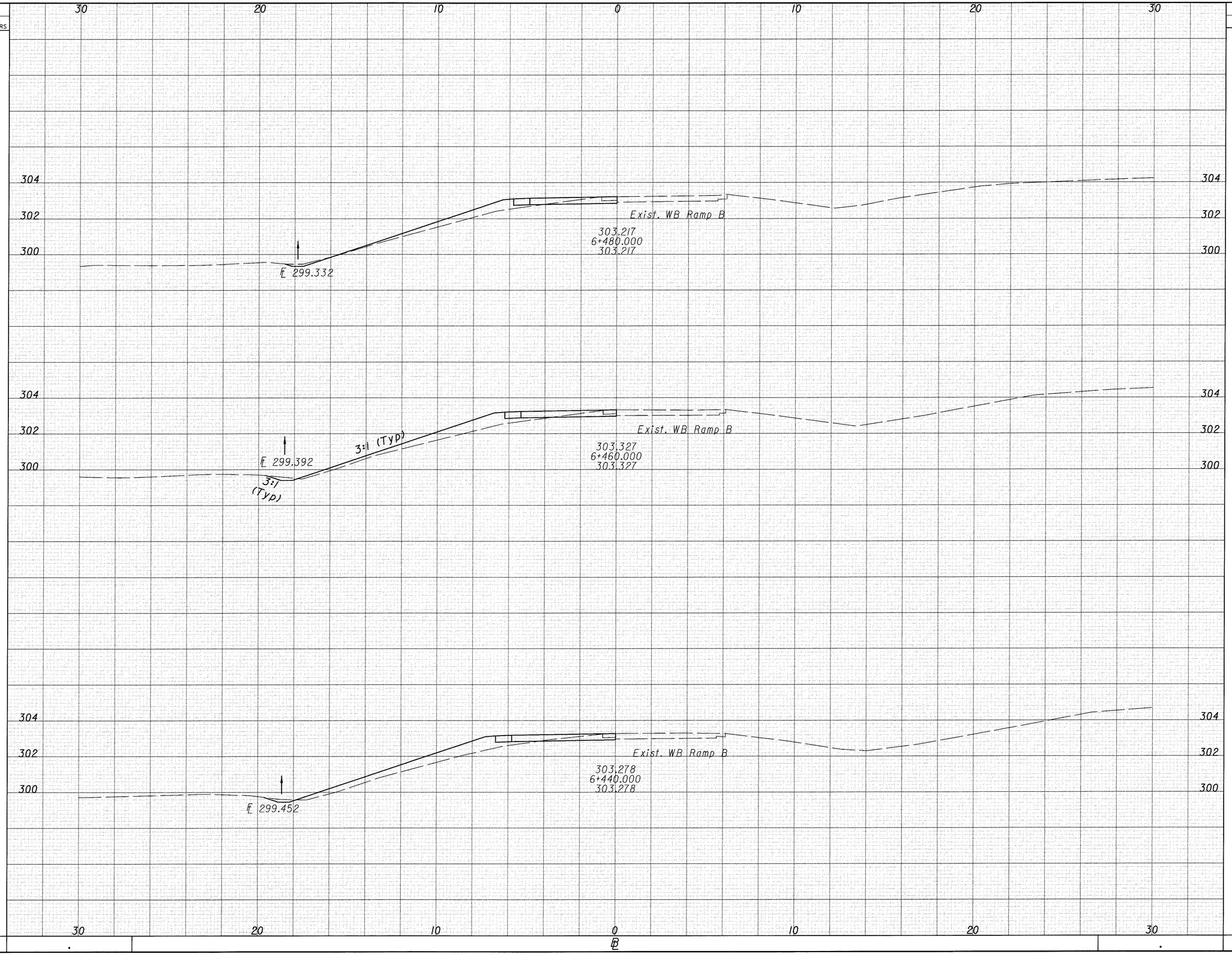
WYA / CRA-30-28.009 / 0.000

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA



TEMPORARY ROAD CROSS SECTIONS STA 6+440.000 TO STA 6+480.000

WYA/CRA-30-28.009/0.000

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA

30 20 10 0 10 20 30

302
300

Exist. WB Ramp B
302.320
6+560.000
302.320

Exist. WB US-30 Pavement

304
302
300

Exist. WB Ramp B
302.689
6+540.000
302.689

Exist. WB US-30 Pavement

304
302
300

3: (Typ)

Exist. WB Ramp B
302.912
6+520.000
302.912

304
302
300

Exist. WB Ramp B
303.116
6+500.000
303.116

℄ 299.272

30 20 10 0 10 20 30

℄

TEMPORARY ROAD CROSS SECTIONS STA 6+500.000 TO STA 6+560.000

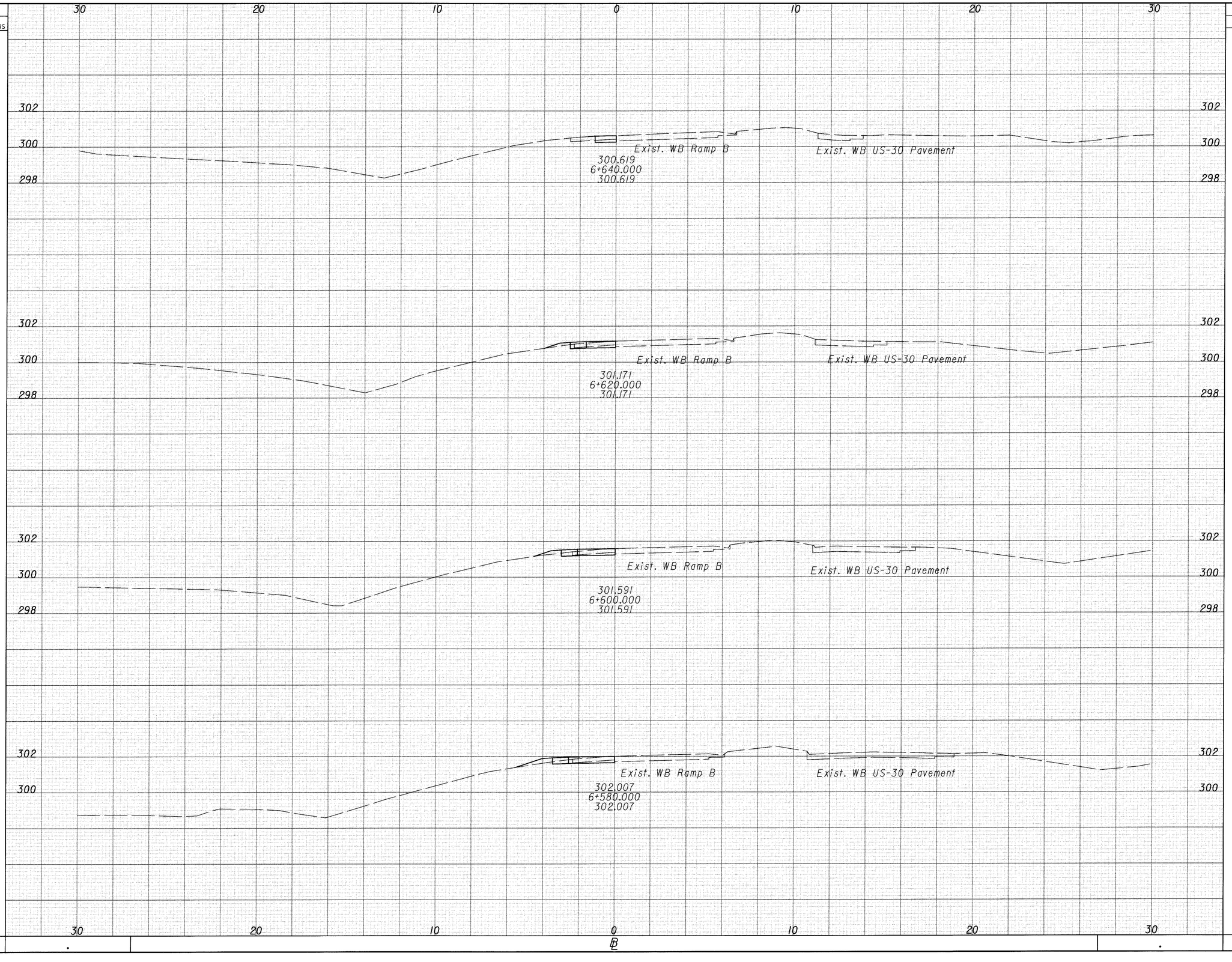
WYA/CRA-30-28.009/0.000

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA



TEMPORARY ROAD CROSS SECTIONS STA 6+580.000 TO STA 6+640.000

WYA/CRA-30-28.009/0.000

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED: AM

CHECKED: REA

30 20 10 0 10 20 30

300
298
296

Exist. WB Ramp B
299.393
6+691.000
299.393

300
298

Exist. WB Ramp B
299.682
6+680.000
299.682

300
298

Exist. WB Ramp B
300.082
6+660.000
300.082

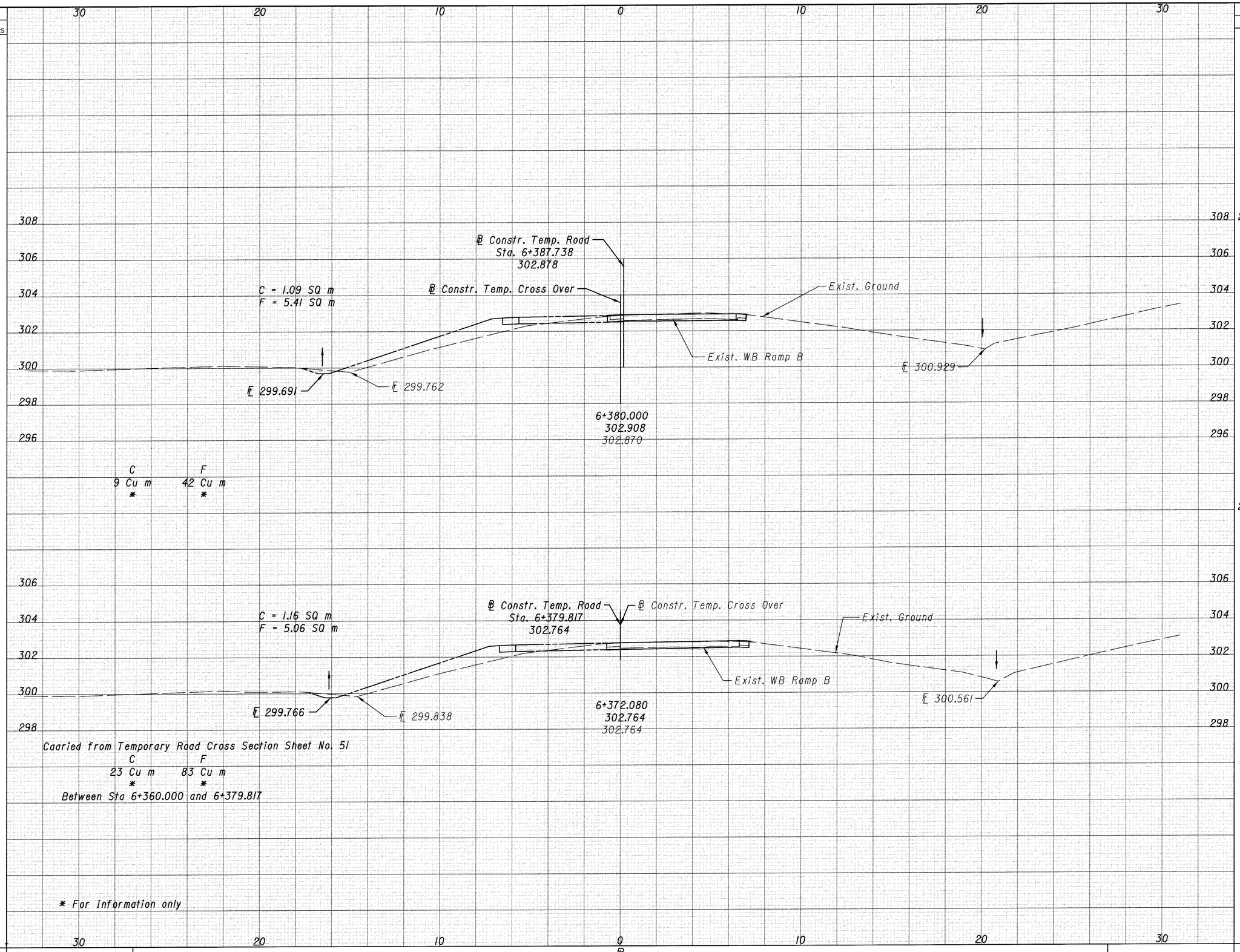
30 20 10 0 10 20 30

℄

TEMPORARY ROAD CROSS SECTIONS STA 6+660.000 TO STA 6+691.000

WYA/CRA-30-28.009/0.000

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.85	0.01		
2.80	0.01		
		22	0
		0	0

CALCULATED AM

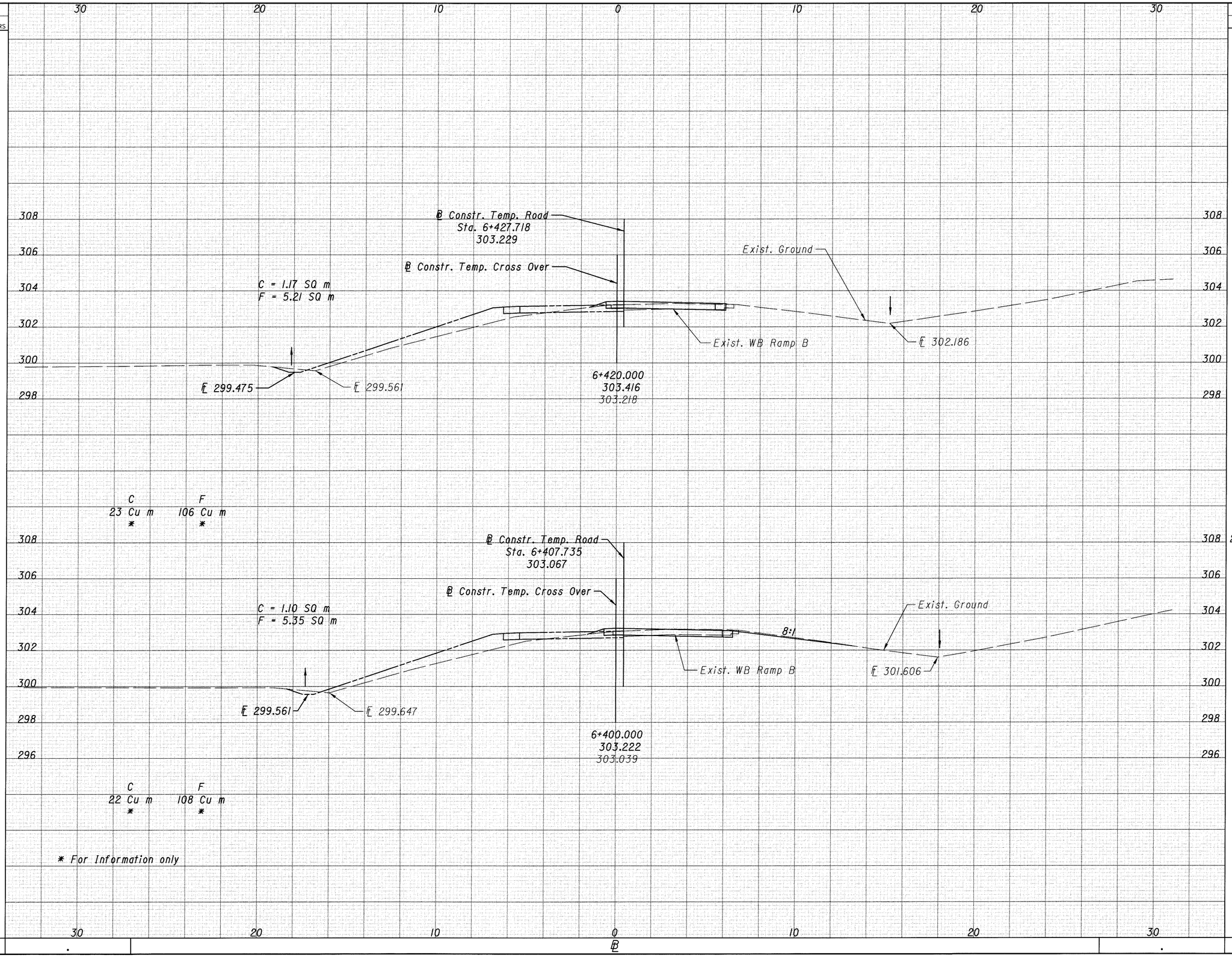
CHECKED REA

TEMPORARY CROSS OVER CROSS SECTIONS STA 6+372.080 TO STA 6+380.000

WYA / CRA-30-28.009 / 0.000

57
2116

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.77	0.09		
		45	2
2.69	0.10		
		55	1

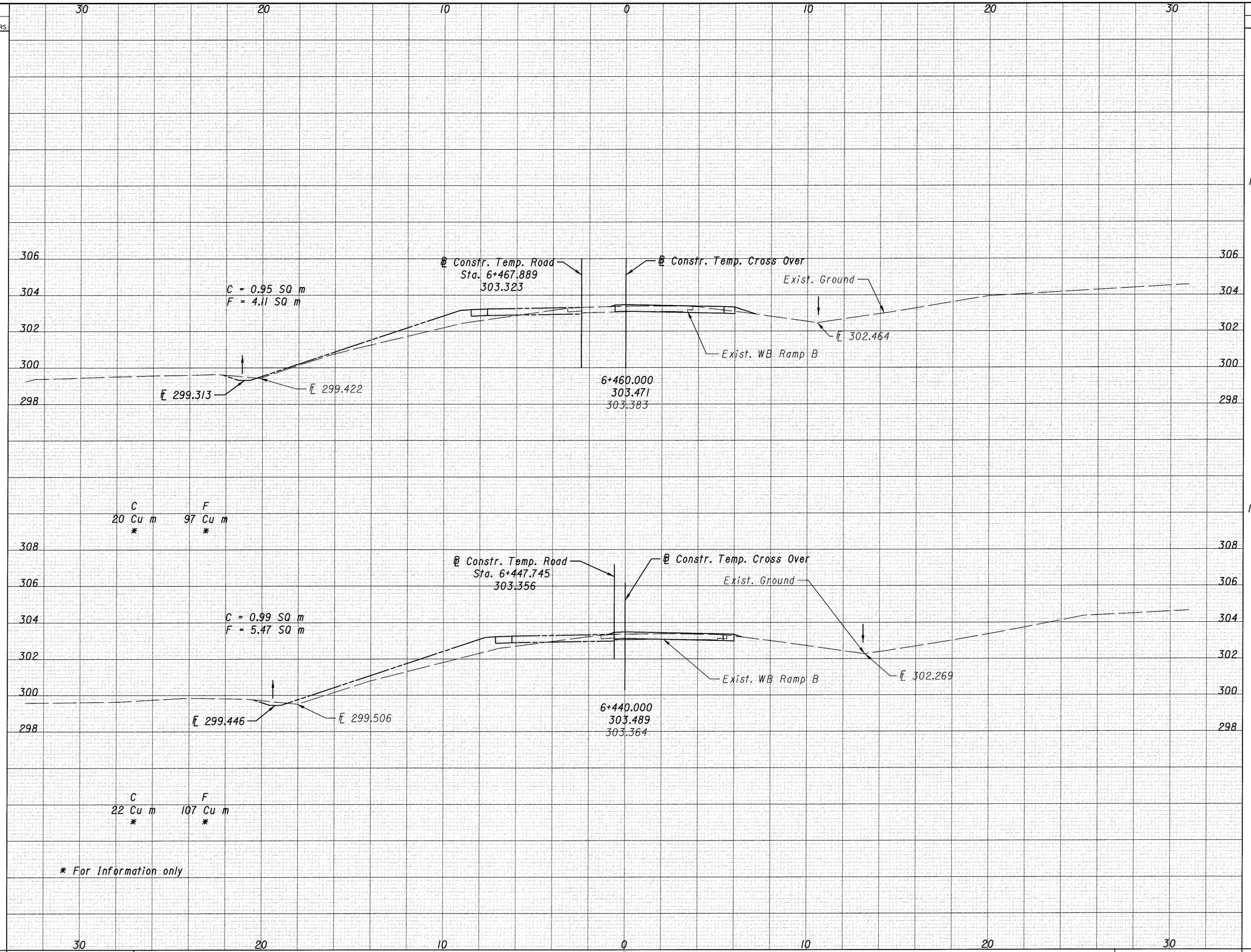
CALCULATED AM

CHECKED REA

TEMPORARY CROSS OVER CROSS SECTIONS STA 6+400.000 TO STA 6+420.000

WYA/CRA-30-28.009/0.000

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.90	0.15		
		39	2
1.96	0.04		
		37	1

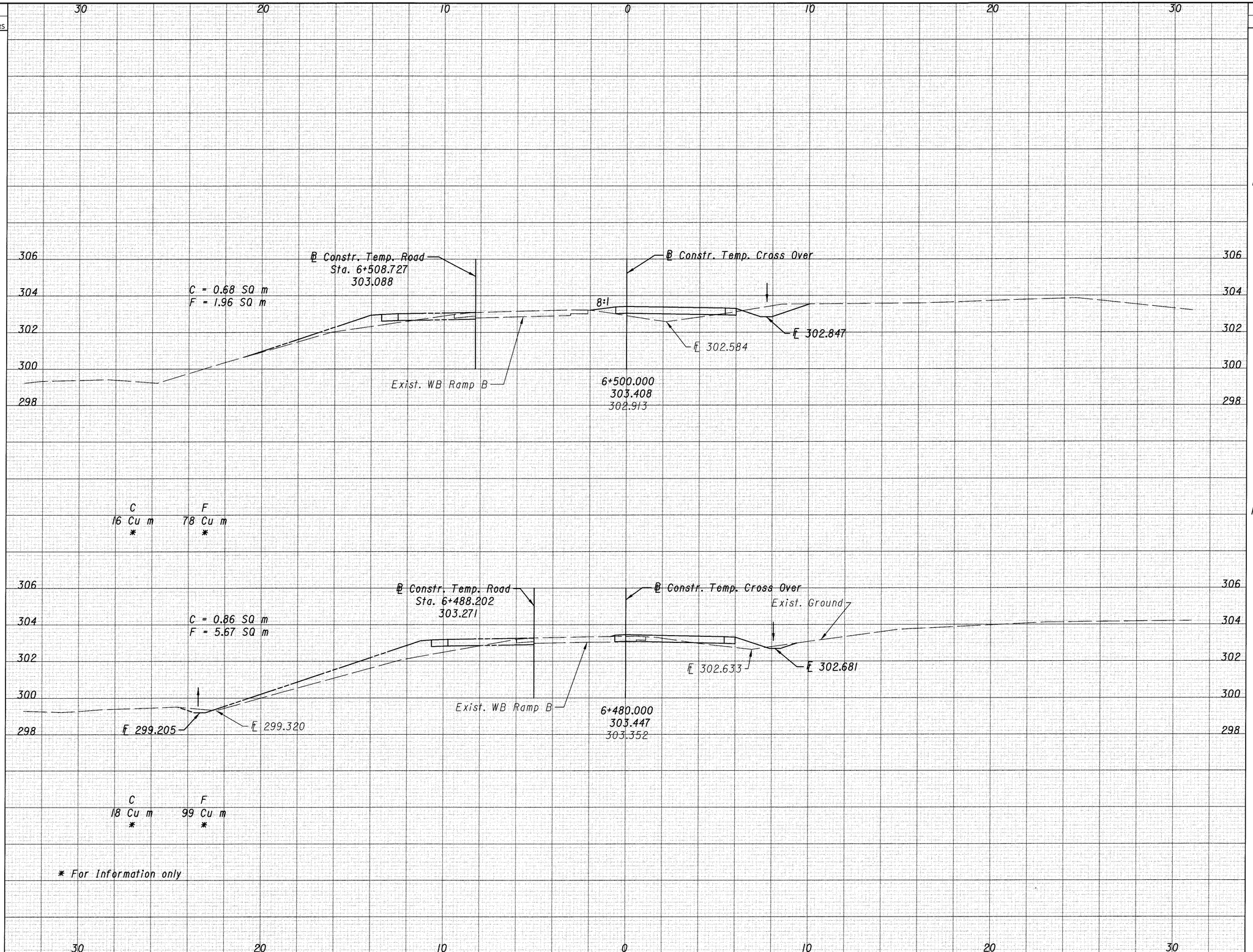
CALCULATED AM

CHECKED REA

TEMPORARY CROSS OVER CROSS SECTIONS STA 6+440.000 TO STA 6+460.000

WYA/CRA-30-28.009/0.000

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
		1.35	1.52		
		1.05	0.84	24	24
				30	10



CALCULATED AM

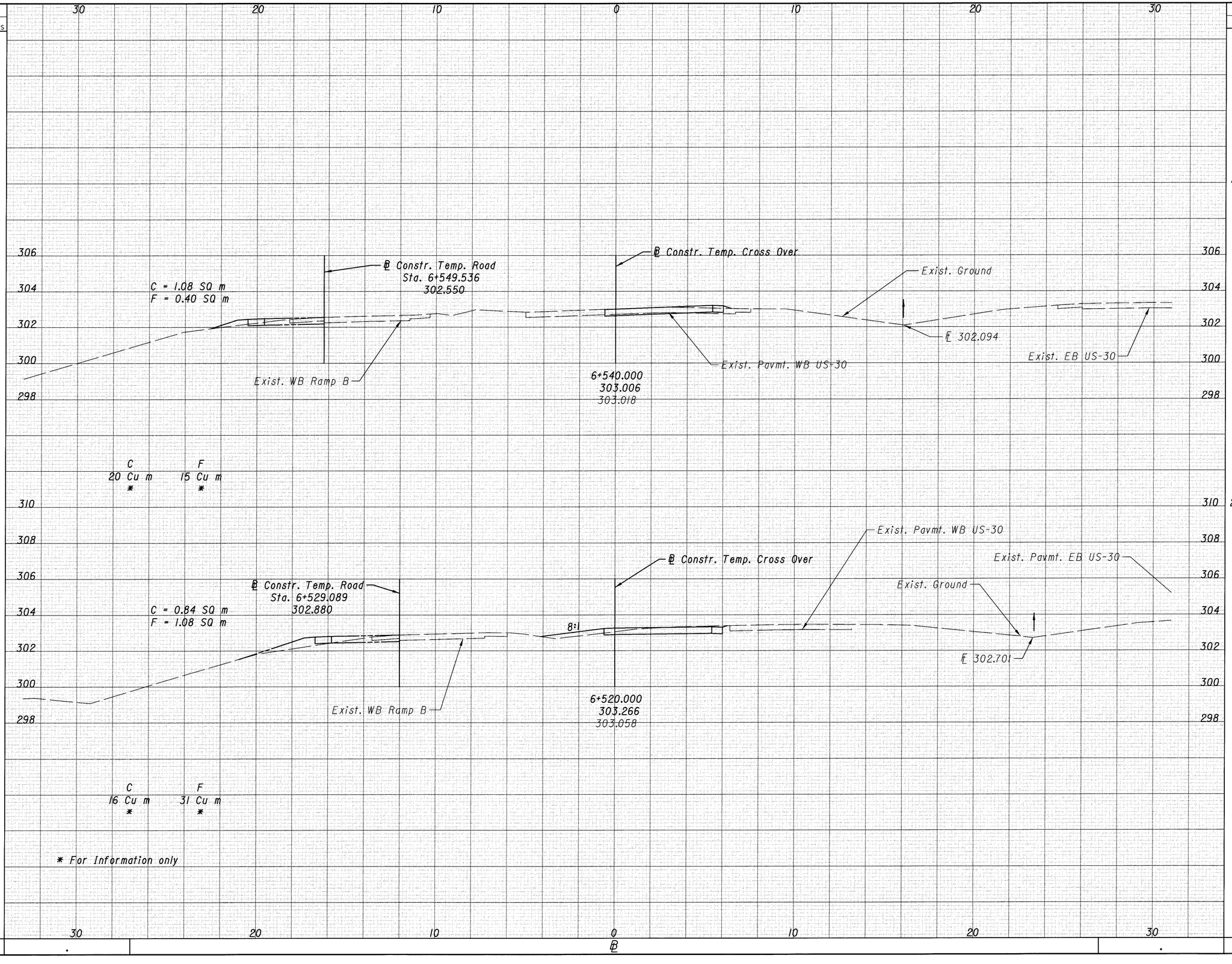
CHECKED REA

TEMPORARY CROSS OVER CROSS SECTIONS STA 6+480.000 TO STA 6+500.000

WYA/CRA-30-28.009/0.000

60
2116

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.17	0.03		
2.18	0.75	44	8
		35	23

CALCULATED AM

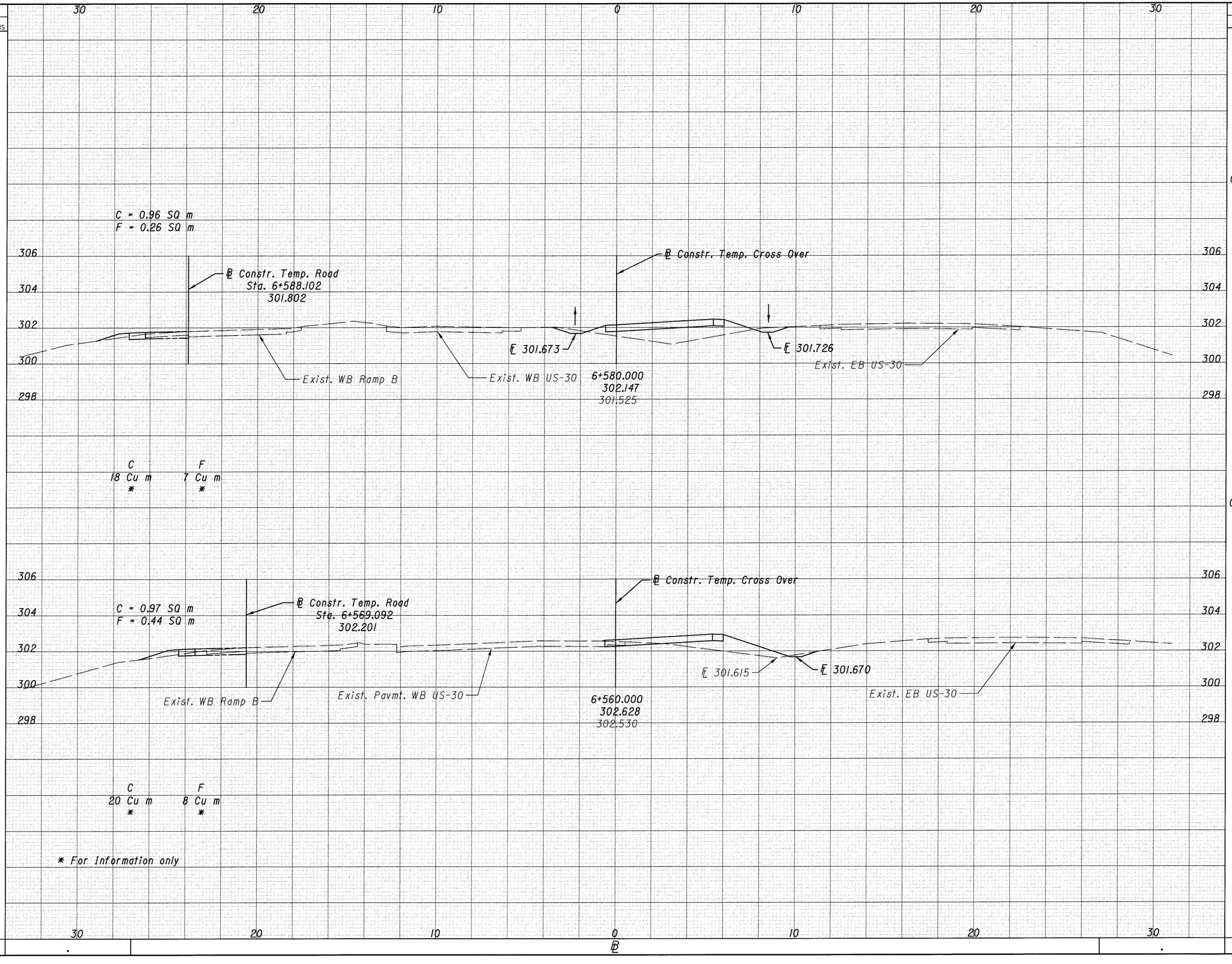
CHECKED REA

TEMPORARY CROSS OVER CROSS SECTIONS STA 6+520.000 TO STA 6+540.000

WYA / CRA-30-28.009 / 0.000

61
2116

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.60	4.94		
0.69	2.94	13	79
		29	30

CALCULATED AM

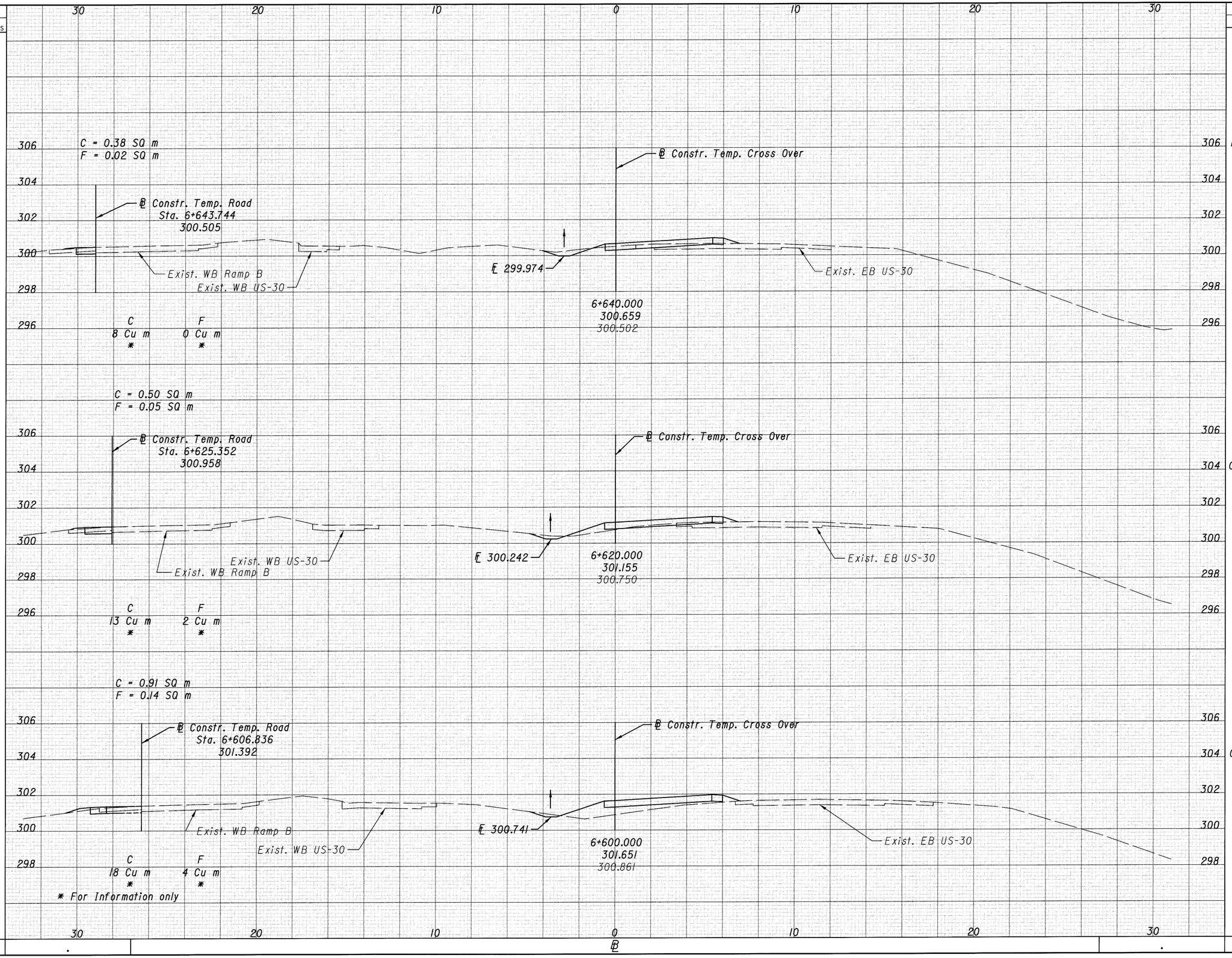
CHECKED REA

TEMPORARY CROSS OVER CROSS SECTIONS STA 6+560.000 TO STA 6+580.000

WYA / CRA-30-28.009 / 0.000

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.45	0.19		
0.66	0.75		
0.18	2.97		
		21	9
		8	37
		8	79



CALCULATED AM

CHECKED REA

TEMPORARY CROSS OVER CROSS SECTIONS STA 6+600.000 TO STA 6+640.000

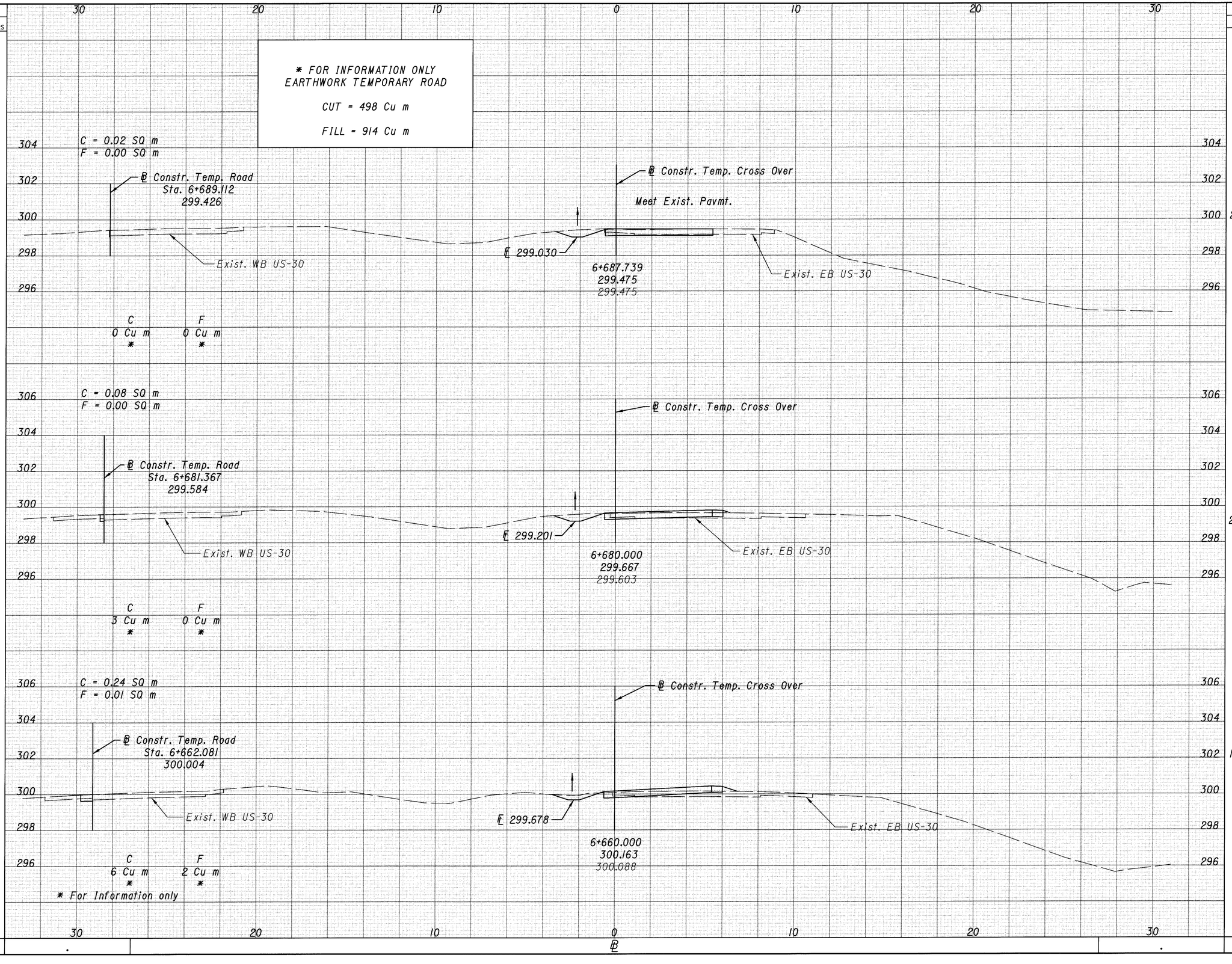
WYA / CRA-30-28.009 / 0.000

SEEDING	
END WIDTH	SQ. METERS

* FOR INFORMATION ONLY
EARTHWORK TEMPORARY ROAD

CUT = 498 Cu m

FILL = 914 Cu m



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.78	0.00		
		20	0
2.43	0.03		
		42	2
1.76	0.12		
		32	3

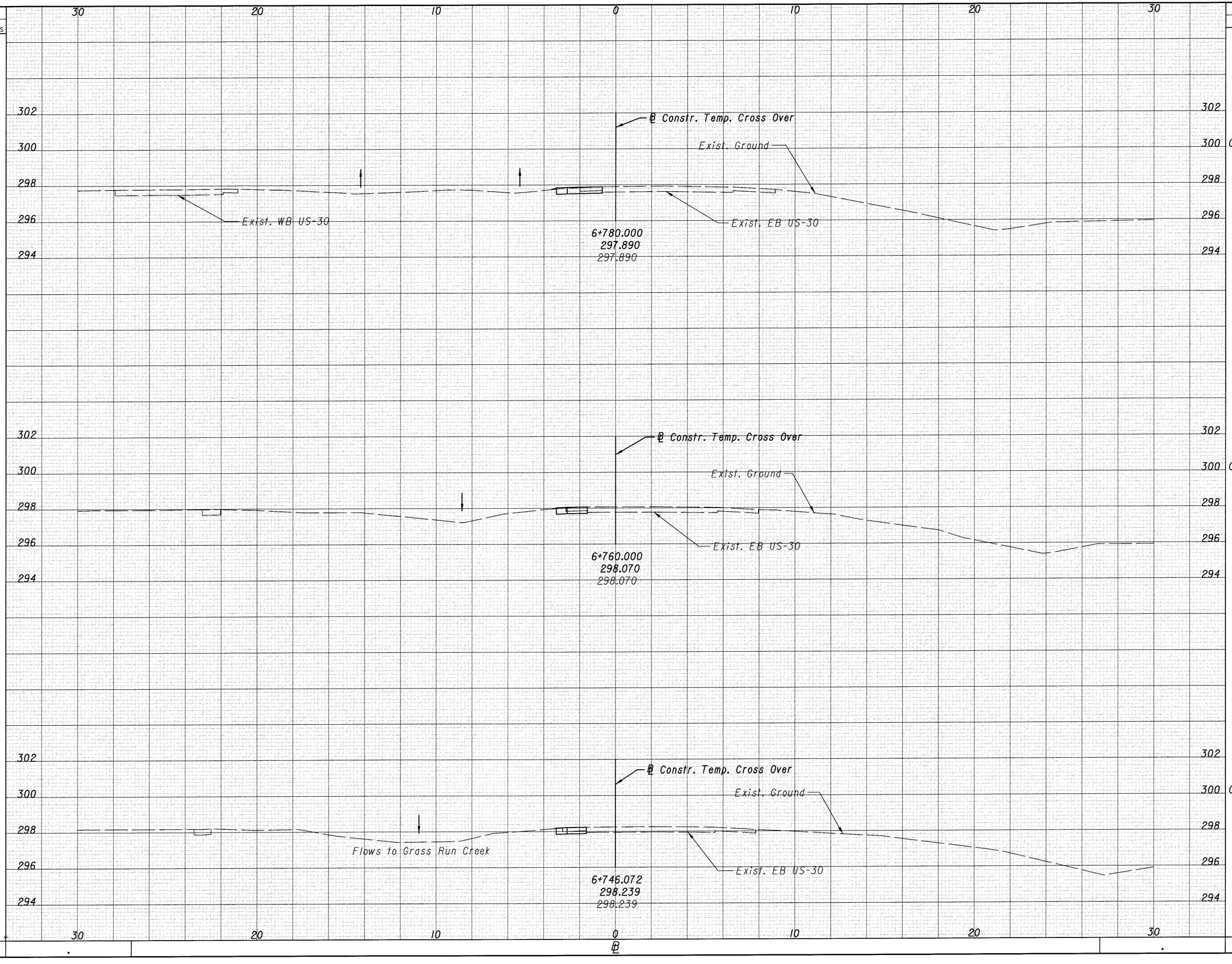
CALCULATED AM

CHECKED REA

TEMPORARY CROSS OVER CROSS SECTIONS STA 6+660.000 TO STA 6+687.739

WYA / CRA-30-28.009 / 0.000

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.83	0.01		
		14	0
0.58	0.00		
		8	0
0.57	0.00		
		98	0

CALCULATED AM

CHECKED REA

TEMPORARY CROSS OVER CROSS SECTIONS
STA 6+746.072 TO STA 6+780.000

WYA / CRA-30-28.009 / 0.000

SEEDING	
END WIDTH	SQ. METERS

END AREA	
CUT	FILL
1.66	0.04
1.17	0.04

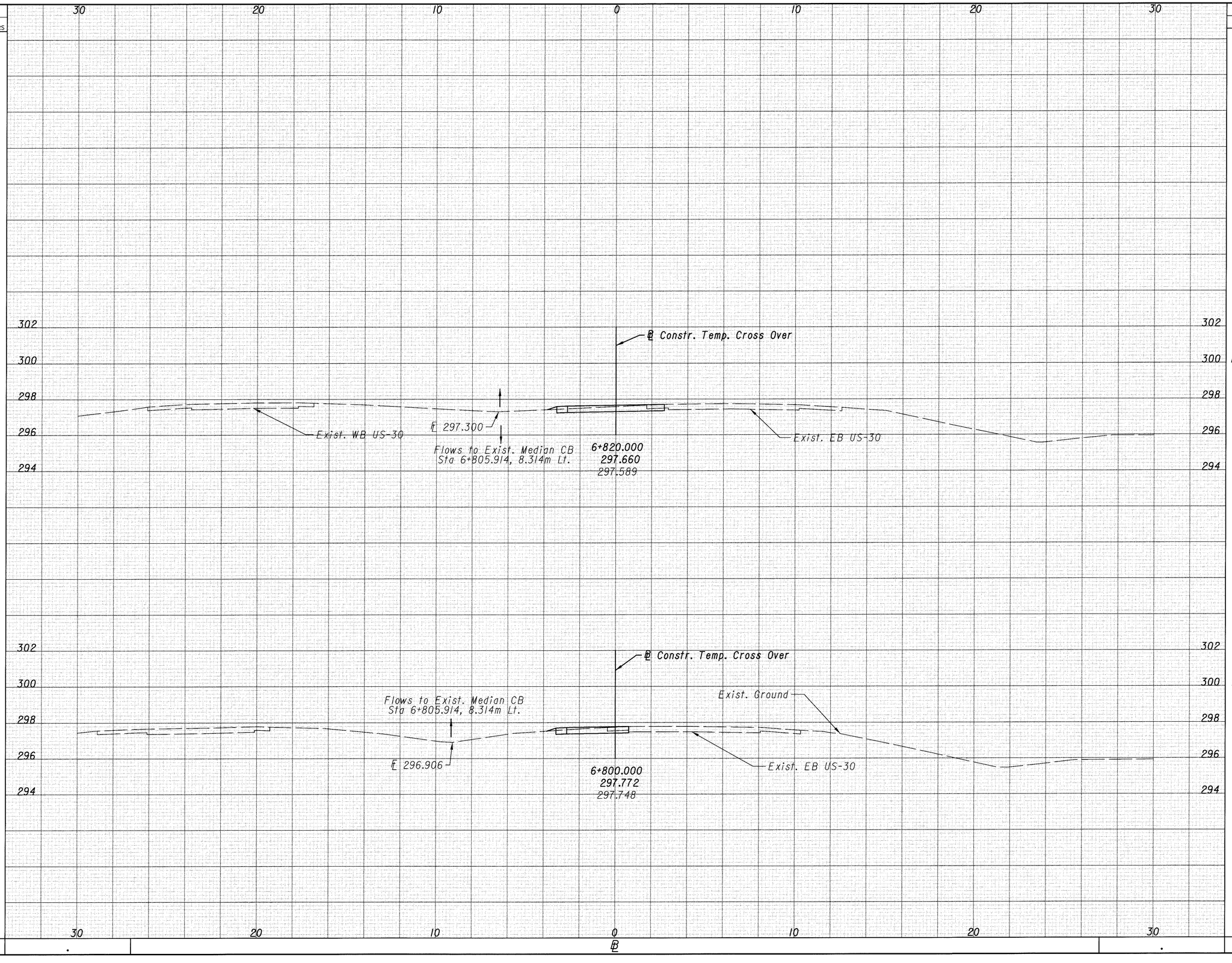
VOLUME	
CUT	FILL
28	1
20	1

CALCULATED AM

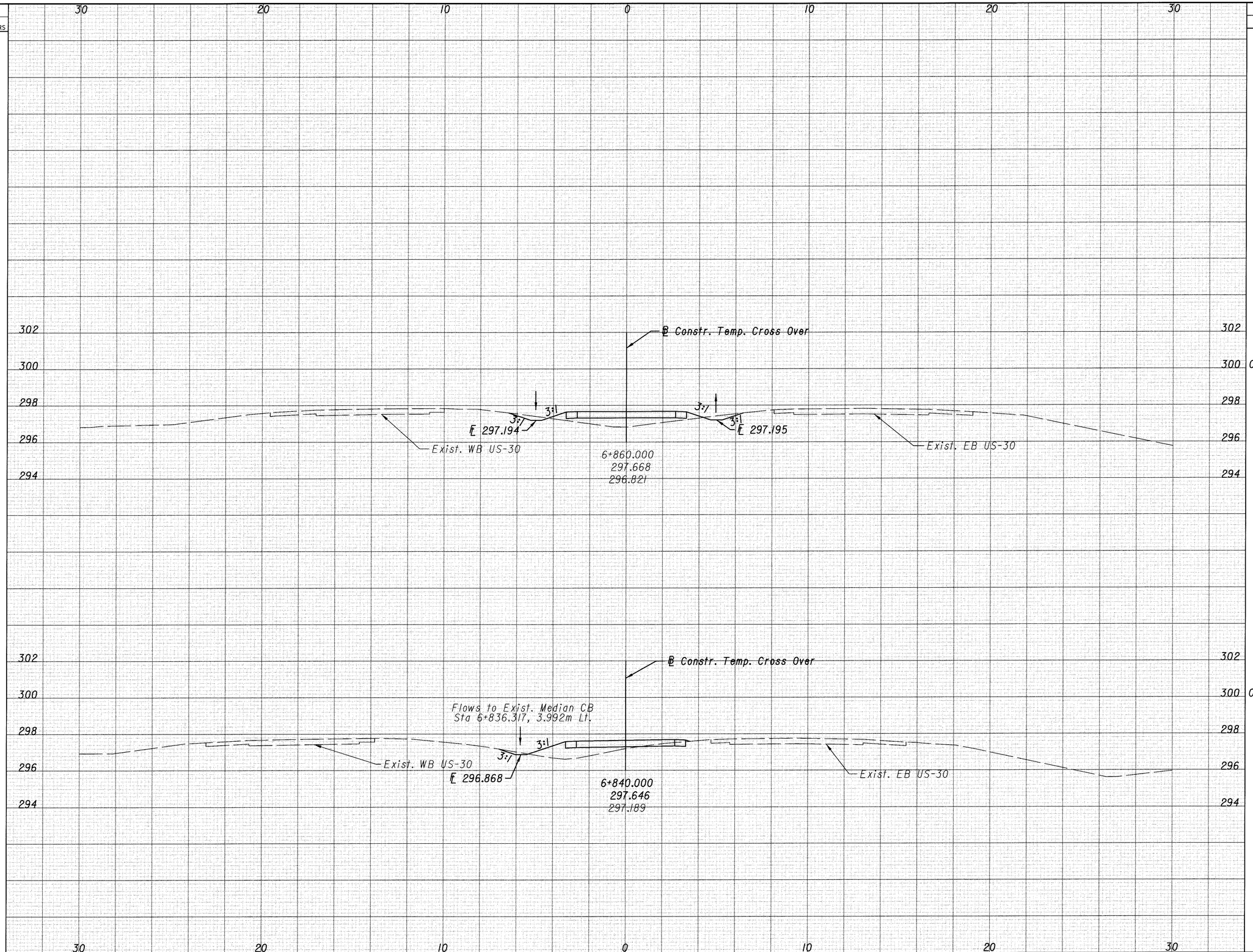
CHECKED REA

TEMPORARY CROSS OVER CROSS SECTIONS STA 6+800.000 TO STA 6+820.000

WYA / CRA-30-28.009 / 0.000



SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.63	2.54		
		11	49
0.46	2.36		
		21	24

CALCULATED AM

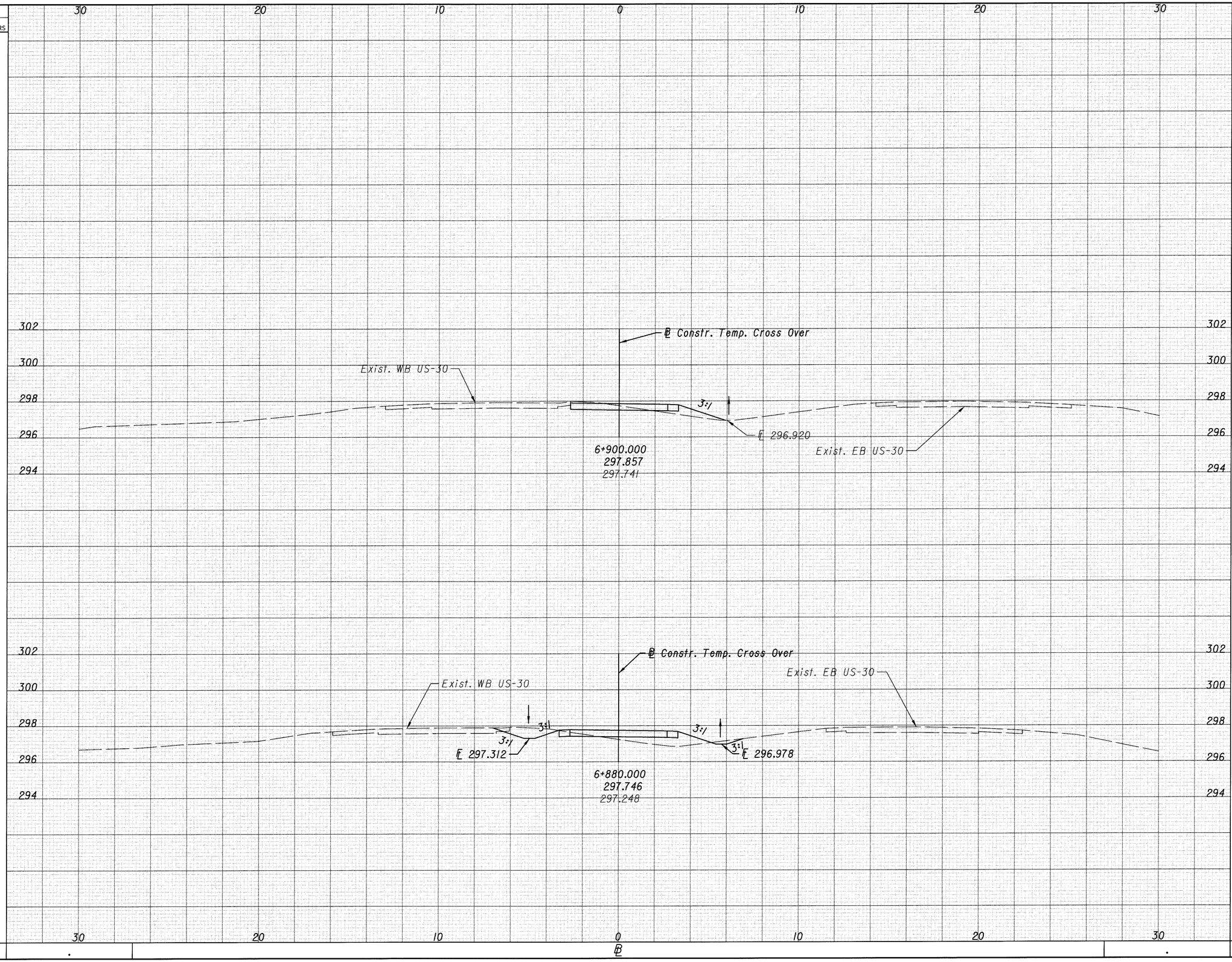
CHECKED REA

TEMPORARY CROSS OVER CROSS SECTIONS STA 6+840.000 TO STA 6+860.000

WYA/CRA-30-28.009/0.000

67
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
		1.13	0.89		
				29	29
		1.79	2.00		
				24	45



CALCULATED AM

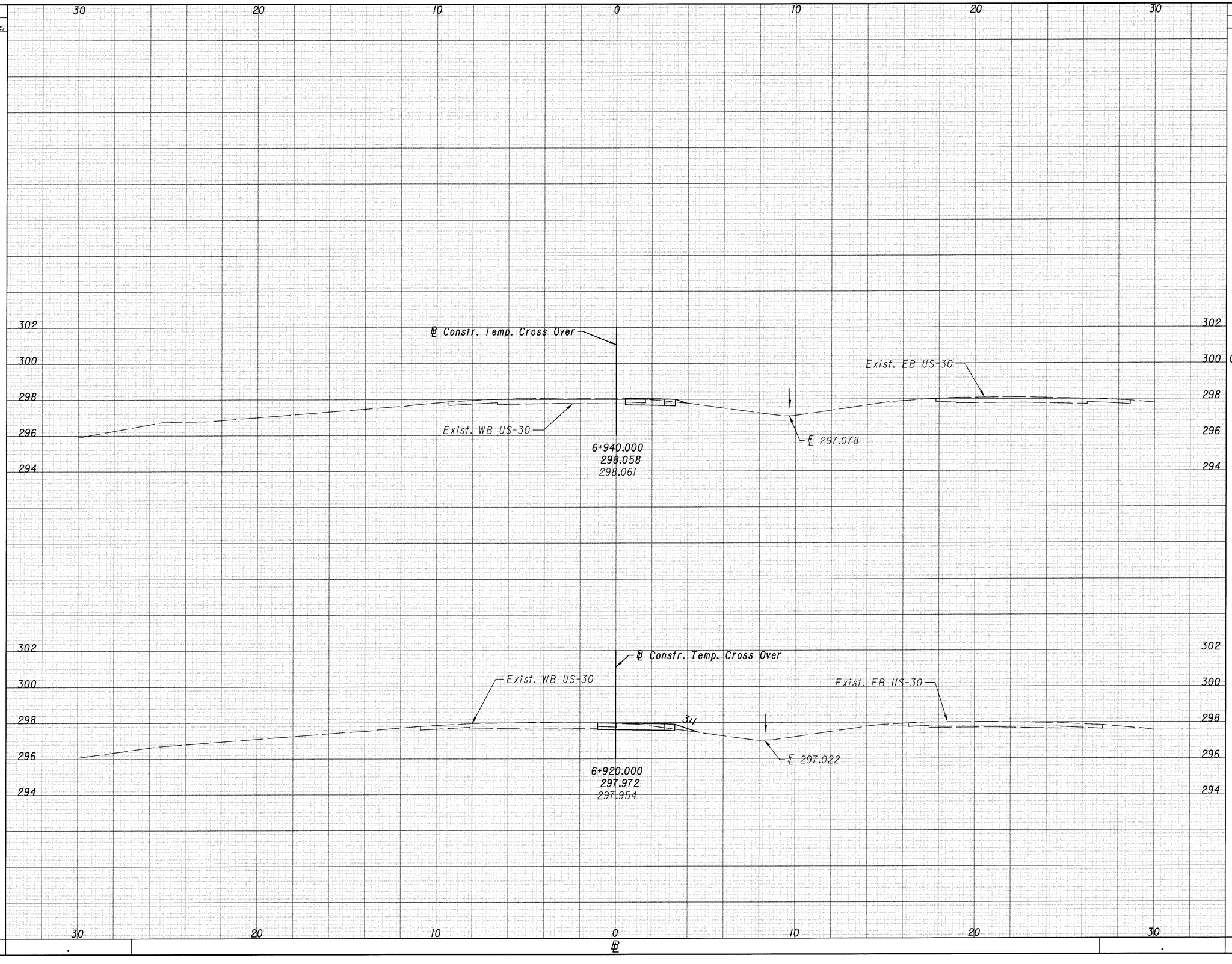
CHECKED REA

TEMPORARY CROSS OVER CROSS SECTIONS
STA 6+880.000 TO STA 6+900.000

WYA / CRA-30-28.009 / 0.000

68
2116

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.82	0.05		
		20	2
1.16	0.18		
		23	11

CALCULATED AM

CHECKED REA

TEMPORARY CROSS OVER CROSS SECTIONS STA 6+920.000 TO STA 6+940.000

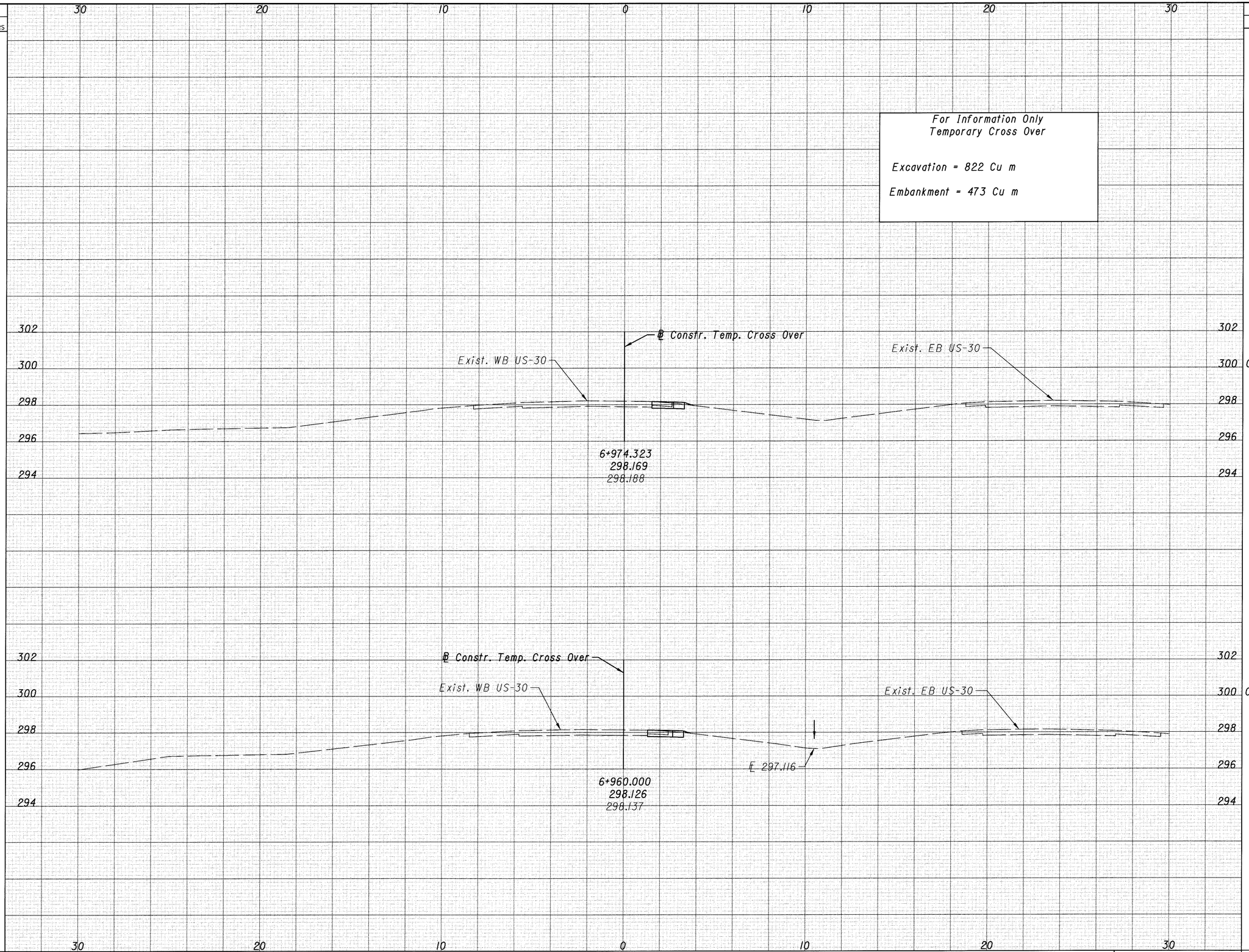
WYA / CRA-30-28.009 / 0.000

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.55	0.03	8	0
0.62	0.02	14	1

CALCULATED AM

CHECKED REA



TEMPORARY CROSS OVER CROSS SECTIONS STA 6+960.000 TO STA 6+974.323

WYA / CRA-30-28.009 / 0.000

70
2116

SHEET NUMBER																					ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
20-24	38		83		84	85		86	87	88	89		94		140		157	1331A	1588	1970						
																									ROADWAY	
LUMP																					201	11000	LUMP		CLEARING AND GRUBBING	
					LUMP																202	11000	LUMP		STRUCTURE REMOVED	
			495																		202	22900	495	SQ METER	APPROACH SLAB REMOVED	
			665																		202	23000	665	SQ METER	PAVEMENT REMOVED	
					44																202	32000	44	METER	CURB REMOVED	
					97	193															202	35100	290	METER	PIPE REMOVED, 600 MM AND UNDER	
					37																202	35200	37	METER	PIPE REMOVED, OVER 600 MM	
					1162.050	49.530															202	38000	1211.580	METER	GUARDRAIL REMOVED	
					22.860																202	38300	22.860	METER	GUARDRAIL REMOVED, BARRIER DESIGN	
					1	2															202	58100	3	EACH	CATCH BASIN REMOVED	
					1																202	58500	1	EACH	CATCH BASIN ABANDONED	
						1															202	62700	1	EACH	SEPTIC TANK REMOVED	
15																					SPECIAL	20264000	15	EACH	PLUGGING AND VENTING OIL AND/OR GAS WELLS	24
						2															SPECIAL	20266000	2	EACH	DRILLED WATER WELL ABANDONED	24
					37	22															SPECIAL	20270000	59	METER	FILL AND PLUG EXISTING CONDUIT	24
																				1530	202	75000	1530	METER	FENCE REMOVED	
10																					202	98100	10	EACH	REMOVAL MISC.: MAILBOX REMOVED FOR REUSE	
													865462								203	12000	865462	CU METER	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	
													4991883								203	20000	4991883	CU METER	EMBANKMENT	
			11625																		203	50000	11625	SQ METER	SUBGRADE COMPACTION	
			554994																		206	10100	554994	SQ METER	LIME-SOIL STABILIZED SUBGRADE - SLURRY METHOD	
20626																					206	10300	20626	METRIC TON	LIME	
15791																					206	10400	15791	CU METER	WATER	
230																					206	20000	230	HOUR	TEST ROLLING	
82																					604	38500	82	EACH	MONUMENT ASSEMBLY	
					16032.480	4783.455															606	13000	20815.935	METER	GUARDRAIL, TYPE 5	
					411.480																606	15500	411.480	METER	GUARDRAIL, BARRIER DESIGN, TYPE 5	
					20																606	20000	20	EACH	FLARED END SECTION	
					29	7															606	22000	36	EACH	ANCHOR ASSEMBLY, TYPE B-98	
					13	4															606	22010	17	EACH	ANCHOR ASSEMBLY, TYPE E-98	
					32	9															606	26500	41	EACH	ANCHOR ASSEMBLY, TYPE T	
					46	4															606	35000	50	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
					20																606	60010	20	EACH	IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	
																				40741	607	15000	40741	METER	FENCE, TYPE 47	
																				3017	607	15100	3017	METER	FENCE, TYPE 47RA	
																				105	607	20000	105	METER	FENCE, TYPE CL	
																				2	607	50900	2	EACH	GATE, TYPE CL	
																				136	607	98000	136	METER	FENCE, MISC.: WOOD FENCE	
2500																					SPECIAL	60798000	2500	METER	FENCE, MISC.: CONSTRUCTION PROTECTIVE FENCING	20
																				1	607	98100	1	EACH	FENCE, MISC.: WOOD GATE	

CALCULATED JGB
CHECKED REA

GENERAL SUMMARY

WYA/CRA-30-28.009/0.000

SHEET NUMBER																					ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
20-24	38		83		84	85		86	87	88	89		94		140		157	1331A	1588	1970						
41850																					616	10000	41850	CU METER	WATER	
1050																					616	20000	1050	METRIC TON	CALCIUM CHLORIDE	
					100																622	24000	100	METER	CONCRETE BARRIER, TYPE D	
																				121	625	32000	121	EACH	GROUND ROD	
8																					SPECIAL	69050100	8	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	23
1																					SPECIAL	69050200	1	EACH	MAILBOX SUPPORT SYSTEM, DOUBLE	23
					9143	603															830	26000	9746	METER	CURB, TYPE 6	
						2073															830	28000	2073	METER	CURB, TYPE 7	
																									EROSION CONTROL	
								12685		196											601	11000	12881	SQ METER	RIPRAP USING 150 MM REINFORCED CONCRETE SLAB	
								266		49										812	601	32100	1127	CU METER	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	
4250								322		33											601	32200	4605	CU METER	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
7200																	352				601	34200	7552	CU METER	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER	
									1083												660	20000	1083	SQ METER	SODDING REINFORCED	
									90333		21279				120						670	40000	111732	SQ METER	DITCH EROSION PROTECTION	
LUMP																					SPECIAL	69098400	LUMP		MISC.: ROOT WADS	23
									2829		603										839	10000	3432	SQ METER	SEEDING AND EROSION CONTROL WITH REVEGETATION MAT	
48																					870	00100	48	EACH	SOIL ANALYSIS TEST	
64119																					870	00200	64119	CU METER	PLACING TOPSOIL	
													1926685								870	10000	1926685	SQ METER	SEEDING AND MULCHING	
96300																					870	14000	96300	SQ METER	REPAIR SEEDING AND MULCHING	
379550																					870	20000	379550	KILOGRAM	COMMERCIAL FERTILIZER	
27350																					870	35000	27350	CU METER	WATER	
481670																					870	40000	481670	SQ METER	MOWING	
385350																	385337				877	10000	770687	SQ METER	TEMPORARY SEEDING AND MULCHING	
20100																	36035				877	30100	56135	METER	TEMPORARY PERIMETER FILTER FABRIC FENCE	
800																	1350				877	30200	2150	METER	TEMPORARY DITCH CHECK FILTER FABRIC FENCE	
700																	1350				877	30300	2050	METER	TEMPORARY INLET PROTECTION FILTER FABRIC FENCE	
1560																	1186				877	40000	2746	METER	TEMPORARY SLOPE DRAINS	
16360																	14663				877	50001	31023	CU METER	TEMPORARY SEDIMENT BASINS AND DAMS, AS PER PLAN	20
3900																	1700				877	55000	5600	CU METER	TEMPORARY DIKES	
33250																					877	55500	33250	SQ METER	TEMPORARY DITCH PROTECTION	
																	11433				877	60000	11433	CU METER	SEDIMENT REMOVAL	
																									DRAINAGE	
								150.5		38.3											602	20000	188.8	CU METER	CONCRETE MASONRY	
															681.5						603	00100	681.5	METER	100 MM CONDUIT, TYPE B	
								115.5		59.0											603	00400	174.5	METER	100 MM CONDUIT, TYPE E	
100.0										17.0					15.0						603	00406	132.0	METER	100 MM CONDUIT, TYPE F	

CALCULATED JGB
CHECKED REA

GENERAL SUMMARY

WYA/CRA-30-28.009/0.000

SHEET NUMBER																					ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
20-24	38		83		84	85		86	87	88	89		94		140		157	1331A	1588	1970						
															383.0						603	00900	383.0	METER	150 MM CONDUIT, TYPE B	
								91.5		379.0											603	00900	470.5	METER	150 MM CONDUIT, TYPE B, 707.44	
200.0																					603	01100	200.0	METER	150 MM CONDUIT, TYPE C	
								1639.0		627.0											603	01100	2266.0	METER	150 MM CONDUIT, TYPE C, 707.44	
1500.0										136.0											603	01400	1636.0	METER	150 MM CONDUIT, TYPE E	
1000.0															5704.0						603	01500	6704.0	METER	150 MM CONDUIT, TYPE F	
500.0																					603	02500	500.0	METER	200 MM CONDUIT, TYPE E	
200.0																					603	02600	200.0	METER	200 MM CONDUIT, TYPE F	
600.0																					603	03700	600.0	METER	250 MM CONDUIT, TYPE F	
										1.5											603	04200	1.5	METER	300 MM CONDUIT, TYPE A, 706.08 E.S.	
										74.5											603	04400	74.5	METER	300 MM CONDUIT, TYPE B	
								135.0		422.5											603	04600	557.5	METER	300 MM CONDUIT, TYPE C	
										193.0											603	04900	193.0	METER	300 MM CONDUIT, TYPE D, 706.02	
										49.0											603	05100	49.0	METER	300 MM CONDUIT, TYPE E	
								711.5													603	05200	711.5	METER	300 MM CONDUIT, TYPE F	
										25.5											603	05700	25.5	METER	375 MM CONDUIT, TYPE A, 706.02, OR 375 MM 707.01, OR 707.09 (13 MM CORR.), OR 707.21	
										23.0											603	05700	23.0	METER	375 MM CONDUIT, TYPE A, 706.02, OR 450 MM 707.01, OR 707.09 (13 MM CORR.), OR 707.21	
								2022.0		177.5											603	05900	2199.5	METER	375 MM CONDUIT, TYPE B	
								2269.0		429.0											603	06100	2698.0	METER	375 MM CONDUIT, TYPE C	
										127.5											603	06600	127.5	METER	375 MM CONDUIT, TYPE E	
100.0								271.0													603	06700	371.0	METER	375 MM CONDUIT, TYPE F	
								34.5		31.5											603	07400	66.0	METER	450 MM CONDUIT, TYPE B	
								1186.5		145.5											603	07600	1332.0	METER	450 MM CONDUIT, TYPE C	
										39.0											603	08700	39.0	METER	525 MM CONDUIT, TYPE A, 706.02 OR 600 MM, 707.01 (2.01 MM), OR 707.09 (13 MM CORR.), OR 707.21	
								156.0		31.5											603	08900	187.5	METER	525 MM CONDUIT, TYPE B	
								689.0		85.5											603	09100	774.5	METER	525 MM CONDUIT, TYPE C	
								54.5													603	10200	54.5	METER	600 MM CONDUIT, TYPE A, 706.02, OR 825 MM, 707.01 (2.01 MM), OR 707.09 (13 MM CORR.), OR 707.21	
								73.0		9.0											603	10400	82.0	METER	600 MM CONDUIT, TYPE B	
								174.0		142.5											603	10600	316.5	METER	600 MM CONDUIT, TYPE C	
								120.0													603	11100	120.0	METER	600 MM CONDUIT, TYPE E, 706.02, OR 825 MM 707.01	
										27.0											603	11700	27.0	METER	675 MM CONDUIT, TYPE A, 706.02, OR 825 MM, 707.01 (2.01 MM), OR 707.09 (13 MM CORR.), OR 707.21	
										57.0											603	11700	57.0	METER	675 MM CONDUIT, TYPE A, 706.02, OR 825 MM, 707.01, OR 707.09 (13 MM CORR.), OR 707.21	
										41.5											603	13200	41.5	METER	750 MM CONDUIT, TYPE A, 706.02 100 D-LOAD, OR 900 MM, OR 707.09 (13 MM CORR.), OR 707.21	
								131.5													603	13200	131.5	METER	750 MM CONDUIT, TYPE A, 706.02, OR 825 MM 707.01, OR 707.09 (13 MM CORR.), OR 707.21	
								58.5													603	13200	58.5	METER	750 MM CONDUIT, TYPE A, 706.02 OR 1050 MM, OR 707.09 (13 MM CORR.), OR 707.21	
								22.5													603	13900	22.5	METER	750 MM CONDUIT, TYPE D, 706.02 OR 900 MM 707.01	
										28.0											603	14700	28.0	METER	825 MM CONDUIT, TYPE A, 706.02, OR 1050 MM, OR 707.09 (13 MM CORR.), OR 707.21	
										12.0											603	16900	12.0	METER	900 MM CONDUIT, TYPE D, 706.02, OR 1200 MM 707.01	
								77.0													603	19200	77.0	METER	1050 MM CONDUIT, TYPE A, 706.02, 130 D-LOAD OR 1050 MM 707.01, OR 707.09 (13 MM CORR.), OR 707.21	
								62.0													603	19200	62.0	METER	1050 MM CONDUIT, TYPE A, 706.02, OR 1350 MM, 707.01, OR 707.09 (25 MM CORR.), OR 707.22	
								71.0													603	19200	71.0	METER	1050 MM CONDUIT, TYPE A, 706.02, 62.5 D-LOAD, OR 1350 MM, 707.01, OR 707.09 (25 MM CORR.), OR 707.22	
								73.0		37.0											603	20700	110.0	METER	1200 MM CONDUIT, TYPE A, 706.02 OR 1500 MM 707.02, OR 707.09 (25 MM CORR.), OR 707.22	
										27.0											603	20700	27.0	METER	1200 MM CONDUIT, TYPE A, 706.02	
								62.5													603	20700	62.5	METER	1200 MM CONDUIT, TYPE A, 706.02 OR 1350 MM, 707.01 (2.01 MM), OR 707.09 (25 MM CORR.), OR 707.22	
								153.0													603	20700	153.0	METER	1200 MM CONDUIT, TYPE A, 706.02 100 D-LOAD, OR 1500 MM, 707.02, OR 707.09 (25 MM CORR.), OR 707.22	
								72.0													603	22200	72.0	METER	1350 MM CONDUIT, TYPE A, 706.02, 75 D-LOAD OR 1650 MM 707.02, OR 707.09 (25 MM CORR.), OR 707.22	

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SHEET NUMBER																				ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
20-24	38		83		84	85		86	87	88	89		94		140		157	1331A	1588	1970						
										22.5										603	23600	22.5	METER	1500 MM CONDUIT, TYPE A, 706.02	
									109.0											603	23600	109.0	METER	1500 MM CONDUIT, TYPE A, 706.02 OR 1950 MM 707.02, OR 707.09 (25 MM CORR.), OR 707.22	
									144.0											603	23600	144.0	METER	1500 MM CONDUIT, TYPE A, 707.02 (2.01 MM), OR 707.09 (25 MM CORR.), OR 707.22	
									156.0											603	23600	156.0	METER	1500 MM CONDUIT, TYPE A, 707.02 (2.77 MM), OR 707.09 (25 MM CORR.), OR 707.22	
									64.0											603	23600	64.0	METER	1500 MM CONDUIT, TYPE A, 706.02 OR 1650 MM 707.02, OR 707.09 (25 MM CORR.), OR 707.22	
											39.0									603	25000	39.0	METER	1650 MM CONDUIT, TYPE A, 706.02	
									72.5											603	25000	72.5	METER	1650 MM CONDUIT, TYPE A, 706.02 100 D-LOAD, OR 1950 MM, 707.02, OR 707.09 (25 MM CORR.), OR 707.22	
									56.5											603	26000	56.5	METER	1800 MM CONDUIT, TYPE A, 706.02	
									73.0											603	27000	73.0	METER	1950 MM CONDUIT, TYPE A, 706.02 OR 2250 MM 707.02, OR 707.09 (25 MM CORR.), OR 707.22	
									135.0											603	28000	135.0	METER	2100 MM CONDUIT, TYPE A, 706.02	
											33.5									603	29000	33.5	METER	2250 MM CONDUIT, TYPE A, 706.02	
									50.0											603	30000	50.0	METER	2400 MM CONDUIT, TYPE A, 706.02	
									76.5											603	30000	76.5	METER	2400 MM CONDUIT, TYPE A, 707.02 (2.01 MM)	
									62.5											603	34000	62.5	METER	3000 MM CONDUIT, TYPE A, 706.02, 100 D-LOAD	
											26.0									603	52406	26.0	METER	550 MM X 865 MM CONDUIT, TYPE D, 706.04, HE-II	
											24.5									603	52506	24.5	METER	610 MM X 960 MM CONDUIT, TYPE D, 706.04, HE-II	
									54.0											603	95000	54.0	METER	3000 MM X 1500 MM CONDUIT, TYPE A, 706.05	
									50.0											603	96600	50.0	METER	CONDUIT, BORED OR JACKED: TYPE B, 375 MM	
									39		14									604	00400	53	EACH	CATCH BASIN, NO. 3	
									66											604	01200	66	EACH	CATCH BASIN, NO. 4	
									2		2									604	01600	4	EACH	CATCH BASIN, NO. 5	
									6		3									604	04500	9	EACH	CATCH BASIN, NO. 2-2B	
											16									604	11700	16	EACH	INLET, MEDIAN, 3.0M	
											2									604	12500	2	EACH	INLET, MEDIAN, 4.2M	
											4									604	31500	4	EACH	MANHOLE, NO. 3 (STORM SEWER)	
									19		13									604	31500	32	EACH	MANHOLE, NO. 3 (SANITARY SEWER)	
															432					604	36600	432	EACH	PRECAST REINFORCED CONCRETE OUTLET	
4																				604	37000	4	EACH	INSPECTION WELL	
															59040.0					605	05100	59040.0	METER	100 MM SHALLOW PIPE UNDERDRAIN	
															63472.0					605	05110	63472.0	METER	100 MM SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 712.09 TYPE A	
															2823.0					605	05200	2823.0	METER	100 MM UNCLASSIFIED PIPE UNDERDRAIN	
															1012.0					605	11100	1012.0	METER	150 MM SHALLOW PIPE UNDERDRAIN, 707.31	
															8043.0					605	12200	8043.0	METER	150 MM DEEP PIPE UNDERDRAIN	
															1182.0					605	12200	1182.0	METER	150 MM DEEP PIPE UNDERDRAIN, 707.31	
															3928.5					605	13300	3928.5	METER	150 MM UNCLASSIFIED PIPE UNDERDRAIN	
															921.0					605	13300	921.0	METER	150 MM UNCLASSIFIED PIPE UNDERDRAIN, 707.31	
			388.0																	605	13400	388.0	METER	150 MM UNCLASSIFIED PIPE UNDERDRAIN, 707.01 TYPE III OR 707.21 TYPE III	
300.0																				605	13402	300.0	METER	150 MM UNCLASSIFIED PIPE UNDERDRAIN FOR SPRINGS	
															747					605	31100	747	METER	AGGREGATE DRAIN	
100																				605	32200	100	METER	AGGREGATE DRAIN FOR SPRINGS	

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SHEET NUMBER																					ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
20-24	38		83		84	85		86	87	88	89		94		140		157	1331A	1588	1970						
																									PAVEMENT	
			1442																		302	46000	1442	CU METER	BITUMINOUS AGGREGATE BASE, PG64-22	
			95122																		304	20000	95122	CU METER	AGGREGATE BASE	
			428672																		307	10100	428672	SQ METER	100 MM NON-STABILIZED DRAINAGE BASE, TYPE 'IA'	
																									OR ITEM 855 100 MM ASPHALT TREATED FREE DRAINING BASE	
			4252																		407	10000	4252	LITER	TACK COAT	
			2941																		407	13900	2941	LITER	TACK COAT, 702.13	
			2941																		407	14000	2941	LITER	TACK COAT FOR INTERMEDIATE COURSE	
			812657																		408	10000	812657	LITER	BITUMINOUS PRIME COAT	
			310																		446	50000	310	CU METER	ASPHALT CONCRETE SURFACE COURSE, TYPE IH	
			717																		448	46040	717	CU METER	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28	
			404																		448	47020	404	CU METER	ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22	
			359																		SPECIAL	45130000	359	METER	PRESSURE RELIEF JOINT, TYPE A	24
			1301																		452	09990	1301	SQ METER	150 MM PLAIN CONCRETE PAVEMENT	
			2282																		608	10000	2282	SQ METER	100 MM CONCRETE WALK	
			505																		611	25000	505	SQ METER	REINFORCED CONCRETE APPROACH SLAB (T=380 MM)	
			3529																		611	30000	3529	SQ METER	REINFORCED CONCRETE APPROACH SLAB (T=430 MM)	
			1.06																		618	40600	1.06	KILOMETER	RUMBLE STRIPS, TYPE 2 (ASPHALT)	
			66.33																		618	40800	66.33	KILOMETER	RUMBLE STRIPS, TYPE 3	
			521318																		884	10110	521318	SQ METER	260 MM PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY)	
																									LIGHTING	
																									FOR LIGHTING GENERAL SUMMARY	1563
																									TRAFFIC CONTROL	
																									FOR TRAFFIC CONTROL GENERAL SUMMARY	1457

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SHEET NUMBER																						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
20-24	38		83		84	85		86	87	88	89		94		140		157	1331A	1588	1970							
																										LANDSCAPING	
													32215						9785			651	10000	42000	CU METER	TOPSOIL STOCKPILED	
													32215						9785			652	10000	42000	CU METER	PLACING STOCKPILED TOPSOIL	
																			61078			870	10001	61078	SQ METER	SEEDING AND MULCHING, AS PER PLAN	1587
																		14				661	20080	14	EACH	DECIDUOUS SHRUB, 90 CM HEIGHT, GRAY DOGWOOD (CORNUS RACEMOSA)	
																										BALLED & BURLAPPED (300MM MIN. BALL)	
																		12				661	20080	14	EACH	DECIDUOUS SHRUB, 90 CM HEIGHT, ARROW WOOD (VIBURNUM DENTATUM)	
																										BALLED & BURLAPPED (300MM MIN. BALL)	
																		12				661	20080	14	EACH	DECIDUOUS SHRUB, 90 CM HEIGHT, ELDERBERRY (SAMBUCUS CANADENSIS)	
																										BALLED & BURLAPPED (300MM MIN. BALL)	
																		12				661	20080	14	EACH	DECIDUOUS SHRUB, 90 CM HEIGHT, BURNING BUSH (EUONYMUS ATROPUPUREUS)	
																										BALLED & BURLAPPED (300MM MIN. BALL)	
																			114			661	30060	114	EACH	EVERGREEN SHRUB, 60 CM HEIGHT, KALLAYS CHINESE JUNIPER	
																										(JUNIPERUS CHINENSIS 'KALLAYS COMPACTA') B AND B	
																			14			661	40080	14	EACH	DECIDUOUS TREE, 50 MM CALIPER, JAPANESE TREE LILAC	
																										(SYRINGA RETICULATA 'IVORY SILK') B AND B	
																		50				661	40080	50	EACH	DECIDUOUS TREE, 50 MM CALIPER, AMERICAN ELM (ULMUS AMERICANA)	
																										BALLED & BURLAPPED (600MM MIN. BALL)	
																		60				661	40080	60	EACH	DECIDUOUS TREE, 50 MM CALIPER, RED MAPLE (ACER RUBRUM)	
																										BALLED & BURLAPPED (600MM MIN. BALL)	
																		35				661	40080	35	EACH	DECIDUOUS TREE, 50 MM CALIPER, GREEN ASH (FRAXINUS PENNSYLVANICA)	
																										BALLED & BURLAPPED (600MM MIN. BALL)	
																			53			661	40100	53	EACH	DECIDUOUS TREE, 60 MM CALIPER, AUTUMN APPLAUSE ASH	
																										(FRAXINUS AMERICANA 'AUTUMN APPLAUSE') B AND B	
																			52			661	40100	52	EACH	DECIDUOUS TREE, 60 MM CALIPER, CIMMZOM ASH	
																										(FRAXINUS PENNSYLVANICA 'CIMMZOM' P.P. 8077) B AND B	
																			15			661	40100	15	EACH	DECIDUOUS TREE, 60 MM CALIPER, SWEET GUM (LIQUIDAMBOR STYRACIFLUA) B AND B	
																			13			661	40100	13	EACH	DECIDUOUS TREE, 60 MM CALIPER, OCTOBER GLORY RED MAPLE	
																										(ACER RUBRUM 'OCTOBER GLORY') B AND B	
																			30			661	40100	30	EACH	DECIDUOUS TREE, 60 MM CALIPER, PRAIRIE FIRE CRAB (MALUS 'PRAIRIE FIRE') B AND B	
																			31			661	40100	31	EACH	DECIDUOUS TREE, 60 MM CALIPER, DONALD WYMAN CRAB	
																										(MALUS 'DONALD WYMAN') B AND B	
																			22			661	40120	22	EACH	DECIDUOUS TREE, 72 MM CALIPER, RED OAK (QUERCUS RUBRA) B AND B	
																			149			661	50160	149	EACH	EVERGREEN TREE, 2.5 METER HEIGHT, AUSTRIAN PINE (PINUS NIGRA) B AND B	
																			81			661	50160	81	EACH	EVERGREEN TREE, 2.5 METER HEIGHT, NORWAY SPRUCE (PICEA ABIES) B AND B	
																			51			661	50160	51	EACH	EVERGREEN TREE, 2.5 METER HEIGHT, WHITE PINE (PINUS STROBUS) B AND B	
																			548			661	99900	548	EACH	PLANTING, MISC.: SOLID RED GERANIUMS, 100 MM POTS	
																		344				870	10100	344	SQ METER	SEEDING AND MULCHING FOR WILDLIFE	

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SHEET NUMBER																						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
20-24	38		83		84	85		86	87	88	89		94		140		157	1331A	1588	1970							
																										STRUCTURES UNDER 6 METERS	
								711														503	21100	711	CU METER	UNCLASSIFIED EXCAVATION	
								393														512	33000	393	SQ METER	TYPE 2 WATERPROOFING	
								4														516	13600	4	SQ METER	25 MM PREFORMED EXPANSION JOINT FILLER	
								10														518	21200	10	CU METER	POROUS BACKFILL WITH FILTER FABRIC	
									481		12											613	41200	493	CU METER	LOW STRENGTH MORTAR BACKFILL	
									15													842	46000	15	CU METER	CLASS C CONCRETE RET WALL/WINGWALL, ABOVE FOOTING	
									37													842	46500	37	CU METER	CLASS C CONCRETE, FOOTING	
																										STRUCTURES OVER 6 METERS	
																										FOR STR. NO. WYA-30-28566 US-30 EB over US-23 QUANTITIES	1671
																										FOR STR. NO. WYA-30-28682 RAMP B over US-30 & US-23 QUANTITIES	1709
																										FOR STR. NO. WYA-30-36347 over BROKEN SWORD CREEK QUANTITIES	1748
																										FOR STR. NO. WYA-30-37750 over SR-231 QUANTITIES	1773
																										FOR STR. NO. CRA-30-01474 over CSX RAILROAD QUANTITIES	1791
																										FOR STR. NO. CRA-30-01792 over CR-1 QUANTITIES	1823
																										FOR STR. NO. CRA-30-02230 over CR-18 QUANTITIES	1842
																										FOR STR. NO. CRA-30-06296 over CR-330 QUANTITIES	1896
																										FOR STR. NO. CRA-30-06698 over GRASS RUN QUANTITIES	1935

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SHEET NUMBER																						ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
20-24	38		83		84	85		86	87	88	89		94		140		157	1331A	1588	1970							
																										MAINTENANCE OF TRAFFIC	
	150																					203	12000	150	CU METER	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	
	425																					301	46000	425	CU METER	BITUMINOUS AGGREGATE BASE, PG64-22	
	500																					410	24001	500	METRIC TON	TRAFFIC COMPACTED SURFACE, AS PER PLAN	37
	80																					614	11100	80	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	
	8																					614	12470	8	EACH	WORK ZONE SPEED LIMIT SIGN	
	8																					614	12480	8	EACH	DOUBLED FINES IN WORK ZONE SIGN	
	25																					SPECIAL	61412500	25	SQ METER	REPLACEMENT SIGN	38
	200																					SPECIAL	61412600	200	EACH	REPLACEMENT DRUM	38
	150																					614	13000	150	CU METER	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	
	24600																					616	10000	24600	CU METER	WATER	
	615																					616	20000	615	METRIC TON	CALCIUM CHLORIDE	

SH. NO.	STATION	202 APPROACH SLAB REMOVED (SQ M)	202 PAVEMENT REMOVED (SQ M)	203 SUBGRADE COMPACTION (SQ M)	206 300 MM LIME-SOIL STABILIZED SUBGRADE - SLURRY METHOD (SQ M)	302 100 MM BITUMINOUS AGGREGATE BASE, PG64-22 (CU M)	302 125 MM BITUMINOUS AGGREGATE BASE, PG64-22 (CU M)	302 150 MM BITUMINOUS AGGREGATE BASE, PG64-22 (CU M)	304 150 MM AGGREGATE BASE (CU M)	304 200 MM AGGREGATE BASE (CU M)	304 250 MM AGGREGATE BASE (CU M)	307 100 MM NON-STAB. DRAINAGE BASE, TYPE 'IA' OR 855 100 MM ASPH. TREATED FREE DRAINING BASE (SQ M)	407 TACK COAT (0.34 LITERS/SQ METER) (LITER)	407 TACK COAT, 702.13 (0.34 LITERS/SQ METER) (LITER)	407 TACK COAT FOR INTERMEDIATE COURSE (0.34 LITERS/SQ METER) (LITER)	408 BITUMINOUS PRIME COAT (1.81 LITERS/SQ METER) (LITER)	446 32 MM ASPHALT CONCRETE SURFACE COURSE, TYPE IH (CU M)	448 32 MM ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22 (CU M)	448 51 MM ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22 (CU M)	448 57 MM ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28 (CU M)	448 76 MM ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28 (CU M)	451 PRESSURE RELIEF JOINT, TYPE A (METER)	452 150 MM PLAIN CONCRETE PAVEMENT (SQ M)	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN 707.01 TYPE III OR 707.21 TYPE III (METER)	608 100 MM CONCRETE WALK (SQ M)	611 REINFORCED CONCRETE APPROACH SLAB (T=380 MM) (SQ M)	611 REINFORCED CONCRETE APPROACH SLAB (T=430 MM) (SQ M)	618 RUMBLE STRIPS, TYPE 2 (ASPHALT) (METER)	618 RUMBLE STRIPS, TYPE 3 (METER)	884 260 MM PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY) (SQ M)
	USR 30 EASTBOUND																														
158	STA. 28+009 TO STA. 28+340				3081.03				453.45			2965.77		729.22	729.22	5471.61	68.63				163.00						239.38	182.78	2965.77
159	STA. 28+340 TO STA. 28+680				2698.57				422.19			2659.49				4849.04							14.0		7.2			130.56		409.03	2659.49
163	STA. 28+680 TO STA. 29+020				2875.66				446.56			2808.01				5143.68							13.4		11.6			130.03		430.74	2808.01
165	STA. 29+020 TO STA. 29+360				4364.06				643.31			4213.43				7762.63														675.71	4213.43
169	STA. 29+360 TO STA. 29+700				5471.49				807.13			5290.49				9739.43														679.41	5290.49
171	STA. 29+700 TO STA. 30+042.028				4254.38				624.03			4066.08				7530.02														628.00	4066.08
	USR 30 WESTBOUND																														
174	STA. 28+412.833 TO STA. 28+640				2984.03				439.66			2878.08				5305.17														353.54	2878.08
175	STA. 28+640 TO STA. 28+980				4309.12				633.56			4138.36				7644.96														684.37	4138.36
179	STA. 28+980 TO STA. 29+193.960				3002.59				446.21			2946.88				5384.27														428.78	2946.88
	USR 30																														
183	STA. 29+193.960 TO STA. 29+520				4671.49				695.58			4602.96				8393.37														650.73	4602.96
185	STA. 29+520 TO STA. 29+860				4231.24				621.90			4060.74				7504.24														677.98	4060.74
188	STA. 29+860 TO STA. 30+200				6317.83				923.98			6001.94				11149.39														1053.04	6001.94
190	STA. 30+200 TO STA. 30+540				8454.70				1237.48			8044.88				14932.24														1360.03	8044.88
193	STA. 30+540 TO STA. 30+880				8160.00				1193.40			7752.00				14400.36														1360.00	7752.00
194	STA. 30+880 TO STA. 31+220				8160.00				1193.40			7752.00				14400.36														1360.00	7752.00
197	STA. 31+220 TO STA. 31+560				8159.99				1193.40			7752.01				14400.37														1360.00	7752.01
198	STA. 31+560 TO STA. 31+900				8573.28				1260.52			8233.70				15210.32														1360.00	8233.70
201	STA. 31+900 TO STA. 32+240				8159.90				1193.39			7751.99				14400.26														1360.00	7751.99
202	STA. 32+240 TO STA. 32+580				8400.42				1229.35			7990.72				14834.10														1360.00	7990.72
205	STA. 32+580 TO STA. 32+920				10067.09				1481.75			9689.45				17879.84														1051.25	9689.45
207	STA. 32+920 TO STA. 33+260				9231.62				1354.14			8823.53				16339.92														1219.19	8823.53
210	STA. 33+260 TO STA. 33+600				9722.61				1428.53			9324.43				17237.54														1360.02	9324.43
211	STA. 33+600 TO STA. 33+940				8192.17				1201.45			7827.14				14497.45														1360.45	7827.14
214	STA. 33+940 TO STA. 34+280				8160.01				1193.40			7752.00				14400.39														1360.00	7752.00
215	STA. 34+280 TO STA. 34+620				8187.51				1200.74			7822.45				14488.97														1360.30	7822.45
218	STA. 34+620 TO STA. 34+960				9670.60				1419.75			9272.85				17131.61														1360.64	9272.85
219	STA. 34+960 TO STA. 35+300				8585.02				1257.14			8176.91				15169.49														1360.02	8176.91
222	STA. 35+300 TO STA. 35+640				8450.92				1236.88			8040.87				14924.99														1360.00	8040.87
223	STA. 35+640 TO STA. 35+980				8159.79				1193.37			7752.00				14399.95														1360.00	7752.00
226	STA. 35+980 TO STA. 36+320				8375.30				1228.93			8010.90				14829.11														1360.00	8010.90
228	STA. 36+320 TO STA. 36+660				6424.75				1021.66			6143.86				11373.48							51.6		58.0			505.08		999.04	6143.86
232	STA. 36+660 TO STA. 37+000				8160.05				1193.40			7752.00				14400.39														1360.00	7752.00
233	STA. 37+000 TO STA. 37+340				9494.57				1394.13			9093.85				16822.53														1360.16	9093.85
236	STA. 37+340 TO STA. 37+680				9044.54				1330.92			8701.30				16059.80														1360.39	8701.30
237	STA. 37+680 TO STA. 38+020				7218.38				1139.16			6948.63				12791.30							53.6		59.2			505.08		1111.10	6948.63
241	STA. 38+020 TO STA. 38+360				9890.05				1457.38			9542.11				17585.76														1360.40	9542.11
243	STA. 38+360 TO STA. 38+700				9269.04				1373.28			9041.29				16570.87														1360.43	9041.29
247	STA. 38+700 TO STA. 39+040				9160.70				1353.36			8883.89				16330.49														1360.00	8883.89
248	STA. 39+040 TO STA. 39+375.580				9411.48				1382.89			9027.02				16686.82														1107.03	9027.02
	SUB-TOTALS CARRIED TO SHEET NO. 83				281205.98				41500.76			269536.01		729.22	729.22	498376.52	68.63				163.00		132.6		136.0			1270.75	239.38	42264.56	269536.01

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PAVEMENT SUB-SUMMARY

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SH. NO.	STATION	202 APPROACH SLAB REMOVED (SQ M)	202 PAVEMENT REMOVED (SQ M)	203 SUBGRADE COMPACTION (SQ M)	206 300 MM LIME-SOIL STABILIZED SUBGRADE - SLURRY METHOD (SQ M)	302 100 MM BITUMINOUS AGGREGATE BASE, P664-22 (CU M)	302 125 MM BITUMINOUS AGGREGATE BASE, P664-22 (CU M)	302 150 MM BITUMINOUS AGGREGATE BASE, P664-22 (CU M)	304 150 MM AGGREGATE BASE (CU M)	304 200 MM AGGREGATE BASE (CU M)	304 250 MM AGGREGATE BASE (CU M)	307 100 MM NON-STAB. DRAINAGE BASE, TYPE 'IA' OR 855 100 MM ASPH. TREATED FREE DRAINING BASE (SQ M)	407 TACK COAT (0.34 LITERS/SQ METER) (LITER)	407 TACK COAT, 702.13 (0.34 LITERS/SQ METER) (LITER)	TACK COAT FOR INTERMEDIATE COURSE (0.34 LITERS/SQ METER) (LITER)	408 BITUMINOUS PRIME COAT (1.81 LITERS/SQ METER) (LITER)	446 32 MM ASPHALT CONCRETE SURFACE COURSE, TYPE IH (CU M)	448 32 MM ASPHALT CONCRETE SURFACE COURSE, TYPE I, P664-22 (CU M)	448 51 MM ASPHALT CONCRETE SURFACE COURSE, TYPE I, P664-22 (CU M)	448 57 MM ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, P664-28 (CU M)	448 76 MM ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, P664-28 (CU M)	451 PRESSURE RELIEF JOINT, TYPE A (METER)	452 150 MM PLAIN CONCRETE PAVEMENT (SQ M)	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN 707.01 TYPE III OR 707.21 TYPE III (METER)	608 100 MM CONCRETE WALK (SQ M)	611 REINFORCED CONCRETE APPROACH SLAB (T=380 MM) (SQ M)	611 REINFORCED CONCRETE APPROACH SLAB (T=430 MM) (SQ M)	618 RUMBLE STRIPS, TYPE 2 (ASPHALT) (METER)	618 RUMBLE STRIPS, TYPE 3 (METER)	884 260 MM PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY) (SQ M)
	USR 30																														
251	STA. 0+000 TO STA. 0+340				9502.51				1396.11			9112.25				16846.36														1126.50	9112.25
252	STA. 0+340 TO STA. 0+680				8536.58				1254.93			8195.82				15142.82														1360.00	8195.82
255	STA. 0+680 TO STA. 1+020				9180.02				1361.70			8976.00				16431.20														1360.00	8976.00
257	STA. 1+020 TO STA. 1+360				9180.06				1361.70			8975.98				16431.24														1360.00	8975.98
261	STA. 1+360 TO STA. 1+700				6928.96				1106.85			6774.93				12402.02									53.6		58.0			1026.51	6774.93
263	STA. 1+700 TO STA. 2+040				7451.50				1178.84			7212.19				13270.77									53.6		58.0			1111.21	7212.19
266	STA. 2+040 TO STA. 2+380				6480.01				1037.97		17.51	6305.49				11570.89									52.4		58.0			971.55	6305.49
268	STA. 2+380 TO STA. 2+720				9180.00				1361.70			8976.00				16431.18														1360.00	8976.00
272	STA. 2+720 TO STA. 3+060				9180.00				1361.70			8976.00				16431.18														1360.00	8976.00
274	STA. 3+060 TO STA. 3+400				8567.62				1257.78			8202.83				15177.27														1310.53	8202.83
277	STA. 3+400 TO STA. 3+740				10456.11				1540.34			10081.81				18586.82														1015.74	10081.81
279	STA. 3+740 TO STA. 4+080				8650.74				1270.68			8291.78				15332.91														1295.87	8291.78
282	STA. 4+080 TO STA. 4+420				9174.15				1360.23			8962.29				16413.47														1360.00	8962.29
283	STA. 4+420 TO STA. 4+760				8182.11				1196.94			7777.09				14443.08														1360.00	7777.09
286	STA. 4+760 TO STA. 5+100				8450.71				1236.88			8040.90				14925.04														1360.00	8040.90
287	STA. 5+100 TO STA. 5+440				8503.04				1244.85			8095.01				15021.24														1360.11	8095.01
290	STA. 5+440 TO STA. 5+780				10318.25				1525.65			10023.70				18409.46														1360.12	10023.70
292	STA. 5+780 TO STA. 6+120				8576.88				1266.12			8304.70				15277.84														1362.55	8304.70
296	STA. 6+120 TO STA. 6+460	109.42			5489.73				726.48		269.74	4257.81				7818.24									38.2		45.3		504.99		843.92	5314.25
298	STA. 6+460 TO STA. 6+800	385.73	19.54		2167.59						527.32														13.4		14.0			578.62	314.00	2050.96
299	STA. 6+800 TO STA. 6+900 (NO PAVT)																														
	USR 23																														
753	STA. 12+245.977 TO STA. 12+440				1279.89			23.61			351.08		53.52	409.30	409.30		43.40			8.68	91.49									223.48		1203.84
754	STA. 12+440 TO STA. 12+780				2548.67			19.68			660.69		44.61	506.11	506.11		51.68			7.21	113.13									139.46		2464.84
757	STA. 12+780 TO STA. 13+120 (NO PAVT)																														
758	STA. 13+120 TO STA. 13+460 (NO PAVT)																														
760	STA. 13+460 TO STA. 13+800		645.26					74.00			128.33		167.72				15.14			26.98												
763	STA. 13+800 TO STA. 14+140				2425.60				357.88			2350.65		448.96	448.96	4318.43	42.26				100.36									129.95	89.91	2350.65
764	STA. 14+140 TO STA. 14+370.084				1274.17				188.78			1242.83		422.56	422.56	2277.89	39.77				94.45									230.13		1242.83
	CR 128																														
822	STA. 0+570.850 TO STA. 0+900				957.55		108.74		137.06	70.09			295.78			1653.90		27.84														
823	STA. 0+900 TO STA. 1+240				1471.17		168.56		211.47	98.37			458.47			2551.73		43.15														
824	STA. 1+240 TO STA. 1+534.000 (NO PAVT)																														
	SUB-TOTALS CARRIED TO SHEET NO. 83	495.15	664.80		174113.62		277.30	117.29	24942.64	168.46	1954.67	159136.06	1020.10	1786.93	1786.93	297164.98	192.25	70.99		42.87	399.43		211.2		233.3			504.99	2093.85	723.02	24068.52	165912.14

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SH. NO.	STATION	202 APPROACH SLAB REMOVED (SQ M)	202 PAVEMENT REMOVED (SQ M)	203 SUBGRADE COMPACTION (SQ M)	206 300 MM LIME-SOIL STABILIZED SUBGRADE - SLURRY METHOD (SQ M)	302 100 MM BITUMINOUS AGGREGATE BASE, P664-22 (CU M)	302 125 MM BITUMINOUS AGGREGATE BASE, P664-22 (CU M)	302 150 MM BITUMINOUS AGGREGATE BASE, P664-22 (CU M)	304 150 MM AGGREGATE BASE (CU M)	304 200 MM AGGREGATE BASE (CU M)	304 250 MM AGGREGATE BASE (CU M)	307 100 MM NOR-STAB. DRAINAGE BASE, TYPE 1A OR 855 100 MM ASPH. TREATED FREE DRAINING BASE (SQ M)	407 TACK COAT (0.34 LITERS/SQ METER) (LITER)	407 TACK COAT, 702.13 (0.34 LITERS/SQ METER) (LITER)	407 TACK COAT FOR INTERMEDIATE COURSE (0.34 LITERS/SQ METER) (LITER)	408 BITUMINOUS PRIME COAT (1.81 LITERS/SQ METER) (LITER)	446 32 MM ASPHALT CONCRETE SURFACE COURSE, TYPE 1H (CU M)	448 32 MM ASPHALT CONCRETE SURFACE COURSE, TYPE 1, P664-22 (CU M)	448 51 MM ASPHALT CONCRETE SURFACE COURSE, TYPE 1, P664-22 (CU M)	448 57 MM ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, P664-28 (CU M)	448 76 MM ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, P664-28 (CU M)		451 PRESSURE RELIEF JOINT, TYPE A (METER)	452 150 MM PLAIN CONCRETE PAVEMENT (SQ M)	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN 707.01 TYPE 111 OR 707.21 TYPE 111 (METER)	608 100 MM CONCRETE WALK (SQ M)		611 REINFORCED CONCRETE APPROACH SLAB (T=380 MM) (SQ M)	611 REINFORCED CONCRETE APPROACH SLAB (T=430 MM) (SQ M)	618 RUMBLE STRIPS, TYPE 2 (ASPHALT) (METER)	618 RUMBLE STRIPS, TYPE 3 (METER)	884 260 MM PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY) (SQ M)
	SR 231																																	
827	STA. 0+660 TO STA. 1+000 (NO PAVT)																																	
828	STA. 1+000 TO STA. 1+340									12.47																								
	TR 10																																	
831	STA. 0+554.500 TO STA. 0+880				153.01		16.76		21.53	15.12			45.60			259.83		4.29																
832	STA. 0+880 TO STA. 1+220				1341.60		152.69		192.23	96.31			415.30			2319.55		39.09																
833	STA. 1+220 TO STA. 1+419.000 (NO PAVT)																																	
	TR 21																																	
836	STA. 0+573.000 TO STA. 0+900				297.55		33.44		42.38	40.85			90.97			511.42		8.56																
837	STA. 0+900 TO STA. 1+240				1735.65		197.92		248.92	79.86			538.33			3003.62		50.67																
838	STA. 1+240 TO STA. 1+370.000 (NO PAVT)																																	
	TR 55																																	
956	STA. 0+859.954 TO STA. 1+176.506				2107.61	202.82			310.18	64.22			689.59			3742.88		64.90																
	TR 127																																	
961	STA. 0+888.389 TO STA. 1+111.298				2044.66	196.24			300.52	61.42			667.22			3626.29		62.80																
	TR 133																																	
962	STA. 0+846.308 TO STA. 1+110.462				2055.18	197.41			302.64	74.35			671.18			3651.87		63.17																
	RAMP A																																	
985	STA. 28+558.024 TO STA. 28+840				2430.41						591.77			425.28	425.28		40.03				95.06									93.30		2303.73
986	STA. 28+840 TO STA. 29+180				2768.55						666.50																						2563.48
988	STA. 29+180 TO STA. 29+518.695				2702.76						653.11																						2521.97
	RAMP B																																	
992	STA. 28+027.321 TO STA. 28+240				1895.06						458.97																						1776.71
995	STA. 28+240 TO STA. 28+490				2041.81						491.55																						1890.57
997	STA. 28+490 TO STA. 28+780				1520.93				13.07		366.15																7.5		9.5			81.70		1408.28
1001	STA. 28+780 TO STA. 29+070				2047.84				13.30		493.00																7.5		8.8			83.14		1895.76
1003	STA. 29+070 TO STA. 29+291.436				1531.79						371.07																						1436.77
SUB-TOTALS CARRIED TO SHEET NO. 83					26674.41	596.47	400.81		1444.77	444.60	4092.12		3118.19	425.28	425.28	17115.46	40.03	293.48			95.06		15.0		18.3				164.84	93.30		15797.27

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SH. NO.	STATION	202 APPROACH SLAB REMOVED	202 PAVEMENT REMOVED	203 SUBGRADE COMPACTION	206 300 MM LIME-SOIL STABILIZED SUBGRADE - SLURRY METHOD	302 100 MM BITUMINOUS AGGREGATE BASE, PG64-22	302 125 MM BITUMINOUS AGGREGATE BASE, PG64-22	302 150 MM BITUMINOUS AGGREGATE BASE, PG64-22	304 150 MM AGGREGATE BASE	304 200 MM AGGREGATE BASE	304 250 MM AGGREGATE BASE	307 100 MM NON-STAB. DRAINAGE BASE, TYPE 1A OR 855 100 MM ASPH. TREATED FREE DRAINING BASE	407 TACK COAT (0.34 LITERS/SQ METER)	407 TACK COAT, 702.13 (0.34 LITERS/SQ METER)	407 TACK COAT FOR INTERMEDIATE COURSE (0.34 LITERS/SQ METER)	408 BITUMINOUS PRIME COAT (1.81 LITERS/SQ METER)	446 32 MM ASPHALT CONCRETE SURFACE COURSE, TYPE 1H	448 32 MM ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22	448 51 MM ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22	448 57 MM ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28	448 76 MM ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28		451 PRESSURE RELIEF JOINT, TYPE A	452 150 MM PLAIN CONCRETE PAVEMENT	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN 707.01 TYPE III OR 707.21 TYPE III	608 100 MM CONCRETE WALK		611 REINFORCED CONCRETE APPROACH SLAB (T=380 MM)	611 REINFORCED CONCRETE APPROACH SLAB (T=430 MM)	618 RUMBLE STRIPS, TYPE 2 (ASPHALT)	618 RUMBLE STRIPS, TYPE 3	884 260 MM PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY)
		SQ M	SQ M	SQ M	SQ M	CU M	CU M	CU M	CU M	CU M	CU M	SQ M	LITER	LITER	LITER	LITER	CU M	CU M	CU M	CU M	CU M		METER	SQ M	METER	SQ M		SQ M	SQ M	METER	METER	SQ M
	RAMP E																															
1050	STA. 33+702.752 TO STA. 33+980				2133.62						517.94																					2009.93
1051	STA. 33+980 TO STA. 34+265.632				2386.83						579.28																					2228.23
	RAMP F																															
1054	STA. 33+494.750 TO STA. 33+800				2444.94						590.11																					2275.91
1055	STA. 33+800 TO STA. 34+095.508				13326.48						3397.18													72.64		342.56						13054.61
	RAMP G																															
1058	STA. 33+969.947 TO STA. 34+260				2440.89						592.04																					2279.70
1059	STA. 34+260 TO STA. 34+532.881				2095.55						508.99																					1974.51
	RAMP H																															
1062	STA. 34+140.712 TO STA. 34+440				13315.22						3393.74													116.27		332.76						13046.52
1063	STA. 34+440 TO STA. 34+740.745				2432.19						587.30																					2790.46
	RAMP I																															
1066	STA. 33+704.935 TO STA. 33+960				3095.60						761.90													449.15		206.14						2937.99
1067	STA. 33+960 TO STA. 34+194.744				2195.91						534.47															59.73						2063.58
	RAMP J																															
1070	STA. 34+040.879 TO STA. 34+280				2277.56						333.06															68.64						2142.58
1071	STA. 34+280 TO STA. 34+525.873				2973.92						439.10													438.85		197.22						2821.86
	RAMP K																															
1133	STA. 37+316.395 TO STA. 37+540				1713.37						415.58																					1613.28
1134	STA. 37+540 TO STA. 37+765.516				1998.48						481.82																					1856.02
	RAMP L																															
1137	STA. 37+434.573 TO STA. 37+620				1470.18						354.87																					1368.80
1138	STA. 37+620 TO STA. 37+789.991				1585.57						382.75																					1476.33
	RAMP M																															
1141	STA. 37+778.750 TO STA. 38+100				2771.94						668.17																					2573.27
1143	STA. 38+100 TO STA. 38+240.939				1017.61						249.13																					975.41
	RAMP N																															
1147	STA. 37+754.766 TO STA. 37+900				1380.00						333.34																					1286.65
1148	STA. 37+900 TO STA. 38+194.361				1621.83						391.37																					1509.19
	RAMP O																															
1174	STA. 5+901.325 TO STA. 6+180				2128.25					80.87	517.05																					2008.12
1176	STA. 6+180 TO STA. 6+479.100				2595.29					105.24	626.27																					2414.81
	RAMP P																															
1180	STA. 5+589.663 TO STA. 5+840				1193.56						289.73																					1124.10
1182	STA. 5+840 TO STA. 6+108.580				2405.12			50.36			674.75		114.14				9.40			16.75													2240.59
	SUB-TOTALS CARRIED TO SHEET NO. 83				72999.91			50.36		186.11	17619.94		114.14				9.40			16.75				1076.91		1207.05						70072.45

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SH. NO.	STATION	202 APPROACH SLAB REMOVED SQ M	202 PAVEMENT REMOVED SQ M	203 SUBGRADE COMPACTION SQ M	206 300 MM LIME-SOIL STABILIZED SUBGRADE - SLURRY METHOD SQ M	302 100 MM BITUMINOUS AGGREGATE BASE, PG64-22 CU M	302 125 MM BITUMINOUS AGGREGATE BASE, PG64-22 CU M	302 150 MM BITUMINOUS AGGREGATE BASE, PG64-22 CU M	304 150 MM AGGREGATE BASE CU M	304 200 MM AGGREGATE BASE CU M	304 250 MM AGGREGATE BASE CU M	307 100 MM NON-STAB. DRAINAGE BASE, TYPE 'IA' OR 855 100 MM ASPH. TREATED FREE DRAINING BASE SQ M	407 TACK COAT (0.34 LITERS/SQ METER) LITER	407 TACK COAT, 702.13 (0.34 LITERS/SQ METER) LITER	407 TACK COAT FOR INTERMEDIATE COURSE (0.34 LITERS/SQ METER) LITER	408 BITUMINOUS PRIME COAT (1.81 LITERS/SQ METER) LITER	446 32 MM ASPHALT CONCRETE SURFACE COURSE, TYPE 1H CU M	448 32 MM ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22 CU M	448 51 MM ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22 CU M	448 57 MM ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28 CU M	448 76 MM ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28 CU M	451 PRESSURE RELIEF JOINT, TYPE A METER	452 150 MM PLAIN CONCRETE PAVEMENT SQ M	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN 707.01 TYPE III OR 707.21 TYPE III METER	608 100 MM CONCRETE WALK SQ M	611 REINFORCED CONCRETE APPROACH SLAB (T=380 MM) SQ M	611 REINFORCED CONCRETE APPROACH SLAB (T=430 MM) SQ M	618 RUMBLE STRIPS, TYPE 2 (ASPHALT) METER	618 RUMBLE STRIPS, TYPE 3 METER	884 260 MM PORTLAND CEMENT CONCRETE PAVEMENT (7 YEAR WARRANTY) SQ M
	SERVICE ROAD NO. 1																															
1206	STA. 0+180.000 TO STA. 0+520.000			1478.28							221.74																					
1207	STA. 0+520.000 TO STA. 0+860.000			1554.50							388.62																					
1208	STA. 0+860.000 TO STA. 1+049.000			721.71							180.43																					
	SERVICE ROAD NO. 3																															
1211	STA. 0+900.255 TO STA. 1+000.000			549.09							82.36																					
	SERVICE ROAD NO. 6																															
1212	STA. 0+450.965 TO STA. 0+660.000			955.27							143.29																					
1213	STA. 0+660.000 TO STA. 1+000.000			1498.90						20.75	374.72										10.79				224.58							
	SERVICE ROAD NO. 12																															
1217	STA. 0+841.860 TO STA. 1+000.000			562.32						34.03	140.58										28.68											
	SERVICE ACCESS NO. 14																															
1218	STA. 1+000.000 TO STA. 1+124.750			669.67						105.42	167.42																					
	SERVICE ACCESS NO. 17																															
1221	STA. 9+229.359 TO STA. 9+480.000			1145.43							286.36																					
1222	STA. 9+480.000 TO STA. 9+740.000			1188.19							297.05																					
1223	STA. 9+740.000 TO STA. 10.000.000			1301.54							325.38																					
	EASTBOUND REST AREA																															
1450	Walks excluding those parallel to parking areas																										537.49					
	WESTBOUND REST AREA																															
1449	Walks excluding those parallel to parking areas																										537.61					
	SUB-TOTALS (THIS SHEET)			11624.90						160.20	2607.95								39.47					224.58		1075.10					
79	SUB-TOTALS				281205.98				41500.76			269536.01		729.22	729.22	498376.52	68.63			163.00		132.6		136.0				1270.75	239.38	42264.56	269536.01
80	SUB-TOTALS	495.15	664.80		174113.62		277.30	117.29	24942.64	168.46	1954.67	159136.06	1020.10	1786.93	1786.93	297164.98	192.25	70.99		42.87	399.43	211.2		233.3			504.99	2093.85	723.02	24068.52	165912.14
81	SUB-TOTALS				26674.41	596.47	400.81		1444.77	444.60	4092.12		3118.19	425.28	425.28	17115.46	40.03	293.48			95.06	15.0		18.3				164.84	93.30		15797.27
82	SUB-TOTALS				72999.91			50.36		186.11	17619.94		114.14				9.40			16.75			1076.91		1207.05					70072.45
																	310.31														
	TOTALS	495.15	664.80	11624.90	554993.92	596.47	678.11	167.65	67888.17	959.37	26274.68	428672.07	4252.43	2941.43	2941.43	812656.96	310.31	364.47	39.47	59.62	657.49	358.8	1301.49	387.6	2282.15	504.99	3529.44	1055.70	66333.08	521317.87
	COMBINED TOTALS	495.15	664.80	11624.90	554993.92	1442.23			95122.22			428672.07	4252.43	2941.43	2941.43	812656.96	310.31	403.94		717.11		358.8	1301.49	387.6	2282.15	504.99	3529.44	1.06 Km	66.33 Km	521317.87
	TOTALS CARRIED TO GENERAL SUMMARY	495	665	11625	554994	1442			95122			428672	4252	2941	2941	812657	310	404		717		359	1301	388.0	2282	505	3529	1.06 Km	66.33 Km	521318

CALCULATED JAG
CHECKED REA

PAVEMENT SUB-SUMMARY

WYA/CRA-30-28.009/0.000

ITEM	DESCRIPTION	UNIT	SHEET NUMBER 161	167		177			191	195	199							230		239	245			259	264	270		280		288	294	300	755	761	765	990	TOTALS TO GENERAL SUMMARY
202	STRUCTURE REMOVED																															LUMP				LUMP
202	CURB REMOVED	METER																													44					44
202	PIPE REMOVED, 600 MM AND UNDER	METER																								12.2				29.1	55.2					97
202	PIPE REMOVED, OVER 600 MM	METER																															37.0			37
202	GUARDRAIL REMOVED	METER																													765.810		106.680	289.560		1162.050
202	GUARDRAIL REMOVED, BARRIER DESIGN	METER																													22.860					22.860
202	CATCH BASIN REMOVED	EACH																													1					1
202	CATCH BASIN ABANDONED	EACH																															1			1
202	SEPTIC TANK REMOVED	EACH																																		
SPECIAL	DRILLED WATER WELL ABANDONED	EACH																																		
202	UNDERGROUND STORAGE TANK REMOVED	EACH																																		
SPECIAL	FILL AND PLUG EXISTING CONDUIT	METER																								12.6							24.0			37
606	GUARDRAIL, TYPE 5	METER	144.780	1146.810		1062.990			22.860	22.860	304.800							415.290		605.790	2019.300			1855.470	1165.860	2339.340		902.970		22.860	1697.355	813.435		175.260	167.640	1146.810	16032.480
606	GUARDRAIL, BARRIER DESIGN, TYPE 5	METER							22.860									45.720		45.720					91.440	45.720				22.860		91.440		45.720			411.48
606	FLARED END SECTION	EACH							2									2		2					4	2				2		4		2			20
606	ANCHOR ASSEMBLY, TYPE B-98	EACH	1			2				1	2							2		2	2			1	1	2		2			2	2		2	3	2	29
606	ANCHOR ASSEMBLY, TYPE E-98	EACH	1																						4	4						4					13
606	ANCHOR ASSEMBLY, TYPE T	EACH		2		2			2	1	2							2		2	2			1	1	2		2		2	3			2	2	2	32
606	BRIDGE TERMINAL ASSEMBLY, TYPE 1	EACH	2	2														6		6				2	10	6					1	9		2			46
606	IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	EACH							2									2		2					4	2				2		4		2			20
622	CONCRETE BARRIER, TYPE D	METER																															99.5			100
830	CURB, TYPE 6	METER	126	376		761					227							213		404	1037			1795	623	1888		828			671	194					9143
830	CURB, TYPE 7	METER																																		

CALCULATED JAG
CHECKED REA

ROADWAY SUB-SUMMARY

WYA/CRA-30-28.009/0.000

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| ITEM | DESCRIPTION | UNIT | SHEET NUMBER | | |

ITEM	DESCRIPTION	UNIT	SHEET NUMBER																																TOTALS TO GENERAL SUMMARY
			162	168	173	178	182	187	192	196	200	204	209	213	217	221	225	231	235	240	246	250	254	260	265	271	276	281	285	289	295	301		762	766	991	
503	UNCLASSIFIED EXCAVATION	CU M																										711.0								711
512	TYPE 2 WATERPROOFING	SQ M																										392.7								393
516	25 MM PREFORMED EXPANSION JOINT FILLER	SQ M																										4.1								4
518	POROUS BACKFILL WITH FILTER FABRIC	CU M																										9.5								10
601	RIPRAP USING 150 MM REINFORCED CONCRETE SLAB	SQ M		81.1	6788.7	2584.8		2492.4	9.4	38.1	75.9	119.4	10.1		24.5	33.7			21.9		33.5			36.0	9.0		15.0	62.2	13.5	91.3				63.8	80.3	12685
601	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	CU M						39.1		58.6	22.5	61.8				57.8			18.5		7.9															266
601	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CU M	4.5							4.5	9.0	6.8	8.4		3.2	4.5	7.3	9.0	208.9	4.5		6.8	4.0	16.5	11.8		2.9	3.5	6.2							322
602	CONCRETE MASONRY	CU M	0.61	6.62	10.02	5.51		6.45	2.10	7.54	4.54	6.98	1.79		3.98	3.55	0.44	1.33	10.65	0.95	3.66	1.06	0.56	5.80	3.75	2.30	3.24	8.32	4.00	18.28	0.39	0.73		0.49	6.22	18.62	150.48
603	100 MM CONDUIT, TYPE E	METER																	38.0				64.1						13.3							115.5
603	100 MM CONDUIT, TYPE F	METER																																		
603	150 MM CONDUIT, TYPE B, 707.44	METER													91.3																					91.5
603	150 MM CONDUIT, TYPE C, 707.44	METER													88.2	500.0	700.6	350.1																		1639.0
603	150 MM CONDUIT, TYPE E	METER																																		
603	300 MM CONDUIT, TYPE A, 706.08 E.S.	METER																																		
603	300 MM CONDUIT, TYPE B	METER																																		
603	300 MM CONDUIT, TYPE C	METER											57.1					25.0										39.5			13.0					135.0
603	300 MM CONDUIT, TYPE D, 706.02	METER																																		
603	300 MM CONDUIT, TYPE E	METER																																		
603	300 MM CONDUIT, TYPE F	METER	20.8	66.8		21.4		20.9			35.3							53.6		68.9		37.1	39.9		100.7	70.6	32.5	34.4	35.2		16.7	56.6				711.5
603	375 MM CONDUIT, TYPE A, 706.02, OR 375 MM 707.01, OR *	METER																																		
603	375 MM CONDUIT, TYPE A, 706.02, OR 450 MM 707.01, OR *	METER																																		
603	375 MM CONDUIT, TYPE B	METER	46.3		22.1			52.5	96.6	36.8	121.2	141.9	70.9	23.3	75.8		96.4		33.8	74.8	48.2	147.4	73.7	42.0	105.7	89.1	54.2	95.3	154.6	155.4	73.8	21.2		26.5		42.2	2022.0
603	375 MM CONDUIT, TYPE C	METER			73.3			410.3	45.9		76.6	122.5	62.2		71.1	100.0	57.8					142.3	58.0		93.4	76.0			121.2	130.7	65.8			30.1		531.8	2269.0
603	375 MM CONDUIT, TYPE E	METER																																		
603	375 MM CONDUIT, TYPE F	METER			26.2															15.7	37.7	13.3		47.4	20.3	49.5	22.2				18.2	20.3				271.0
603	450 MM CONDUIT, TYPE B	METER																				34.8														34.8
603	450 MM CONDUIT, TYPE C	METER												340.0		100.0	100.0	326.0	106.0			137.7			71.6									5.0			1186.4
603	450 MM CONDUIT, TYPE D, 706.02	METER																																		
603	525 MM CONDUIT, TYPE A, 706.02 OR 600 MM, 707.01 (2.01 MM), OR *	METER																																		
603	525 MM CONDUIT, TYPE B	METER														47.2		66.6							42.0											156.0
603	525 MM CONDUIT, TYPE C	METER											100.0	200.0		210.5		106.0							72.1											689.0
603	525 MM CONDUIT, TYPE D, 706.02	METER																																		
603	525 MM CONDUIT, TYPE E	METER																																		
603	600 MM CONDUIT, TYPE A, 706.02, OR 825 MM, 707.01 (2.01 MM), OR *	METER																											54.3							54.5
603	600 MM CONDUIT, TYPE B	METER											31.8															40.7								72.7
603	600 MM CONDUIT, TYPE C	METER											106.0															68.1								174.1
603	600 MM CONDUIT, TYPE E, 706.02, OR 825 MM 707.01	METER																								120.0										120.0
603	675 MM CONDUIT, TYPE A, 706.02, OR 825 MM, 707.01 (2.01 MM), OR *	METER																																		
603	675 MM CONDUIT, TYPE A, 706.02, OR 825 MM, 707.01, OR *	METER																																		
603	675 MM CONDUIT, TYPE E	METER																																		
603	750 MM CONDUIT, TYPE A, 706.02 100 D-LOAD, OR 900 MM, OR *	METER																																		
603	750 MM CONDUIT, TYPE A, 706.02, OR 825 MM 707.01, OR *	METER										67.9	63.3																							131.5
603	750 MM CONDUIT, TYPE A, 706.02 OR 1050 MM, OR *	METER							58.2																											58.5
603	750 MM CONDUIT, TYPE D, 706.02 62.5 D-LOAD, OR 900 MM 707.01	METER																																		
603	750 MM CONDUIT, TYPE D, 706.02 OR 900 MM 707.01	METER																								22.4										22.5
603	825 MM CONDUIT, TYPE A, 706.02, OR *	METER																																		
603	825 MM CONDUIT, TYPE A, 706.02, OR 1050 MM, OR *	METER																																		
603	900 MM CONDUIT, TYPE D, 706.02 OR 1200 MM 707.01	METER																																		
603	1050 MM CONDUIT, TYPE A, 706.02, 130 D-LOAD OR 1050 MM 707.01, OR *	METER			77.0																															77.0
603	1050 MM CONDUIT, TYPE A, 706.02, OR 1350 MM, 707.01, OR **	METER																								61.8										62.0
603	1050 MM CONDUIT, TYPE A, 706.02, 87.5 D-LOAD OR 1500 MM 707.02, OR **	METER																																		
603	1050 MM CONDUIT, TYPE A, 706.02 62.5 D-LOAD, OR 1350 MM, 707.01, OR **	METER																							70.9											71.0
603	1200 MM CONDUIT, TYPE A, 706.02 OR 1500 MM 707.02, OR **	METER														72.8																				73.0
603	1200 MM CONDUIT, TYPE A, 706.02	METER																																		
603	1200 MM CONDUIT, TYPE A, 706.02 OR 1350 MM, 707.01 (2.01 MM), OR **	METER																											62.4							62.5
603	1200 MM CONDUIT, TYPE A, 706.02 100 D-LOAD, OR 1500 MM, 707.02, OR **	METER																			76.9								75.7							153.0
603	1350 MM CONDUIT, TYPE A, 706.02, 75 D-LOAD OR 1650 MM 707.02, OR **	METER									71.6																									72.0
603	1500 MM CONDUIT, TYPE A, 706.02	METER																																		
	* 707.09 (13 MM CORR.), OR 707.21																																			
	** 707.09 (25 MM CORR.), OR 707.22																																			

CALCULATED AM
CHECKED REA

DRAINAGE SUB-SUMMARY

WYA / CRA-30-28.009 / 0.000

ITEM	DESCRIPTION	UNIT	SHEET NUMBER 162	168	173	178	182	187	192	196	200	204	209	213	217	221	225	231	235	240	246	250	254	260	265	271	276	281	285	289	295	301		762	766	991	TOTALS TO GENERAL SUMMARY
603	1500 MM CONDUIT, TYPE A, 706.02 OR 1950 MM 707.02, OR **	METER										108.7																									109.0
603	1500 MM CONDUIT, TYPE A, 707.02 (2.01 MM), OR **	METER						143.8																													144.0
603	1500 MM CONDUIT, TYPE A, 707.02 (2.77 MM), OR **	METER		155.6																																	156.0
603	1500 MM CONDUIT, TYPE A, 706.02 OR 1950 MM 707.02 (2.01 MM), OR **	METER																																			
603	1500 MM CONDUIT, TYPE A, 706.02 OR 1650 MM 707.02, OR **	METER													63.9																						64.0
603	1500 MM CONDUIT, TYPE A, 706.02, 130 D-LOAD OR 2250 MM, 707.02 (2.77 MM), OR **	METER																																			
603	1650 MM CONDUIT, TYPE A, 706.02	METER																																			
603	1650 MM CONDUIT, TYPE A, 706.02 100 D-LOAD, OR 1950 MM, 707.02, OR **	METER																						72.1													72.5
603	1800 MM CONDUIT, TYPE A, 706.02	METER				42.7																												13.8		56.5
603	1950 MM CONDUIT, TYPE A, 706.02 OR 2250 MM 707.02, OR **	METER								72.9																											73.0
603	2100 MM CONDUIT, TYPE A, 706.02	METER																											134.6								135.0
603	2250 MM CONDUIT, TYPE A, 706.02	METER																																			
603	2400 MM CONDUIT, TYPE A, 706.02	METER			49.6																																50.0
603	2400 MM CONDUIT, TYPE A, 707.02 (2.01 MM)	METER																	76.3																		76.5
603	3000 MM CONDUIT, TYPE A, 706.02, 100 D-LOAD	METER																																	62.1		62.5
603	490 MM X 770 MM CONDUIT, TYPE D, 706.04, HE-II	METER																																			
603	550 MM X 865 MM CONDUIT, TYPE D, 706.04, HE-II	METER																																			
603	610 MM X 960 MM CONDUIT, TYPE D, 706.04, HE-II	METER																																			
603	3000 MM X 1500 MM CONDUIT, TYPE A, 706.05	METER																									53.7										54.0
603	CONDUIT, BORED OR JACKED: TYPE B, 375 MM	METER																																49.6			50.0
604	CATCH BASIN, NO. 3	EACH	3	2		1		1			2							3		4		2	2		5	4	2	2	2		1	3					39
604	CATCH BASIN, NO. 4	EACH							2	1	2	2	4	6	1	4	3	7	3	2	2	4	1	2	3	2	2	3	2	3	1	2		2			66
604	CATCH BASIN, NO. 5	EACH												1																				1			2
604	CATCH BASIN, NO. 2-2B	EACH	1		1								1															1						2			6
604	INLET, MEDIAN, 3.0M	EACH																																			
604	INLET, MEDIAN, 4.2M	EACH																																			
604	MANHOLE, NO. 3 (STORM SEWER)	EACH																																			
604	MANHOLE, NO. 3 (SANITARY SEWER)	EACH													2	5	7	5																			19
613	LOW STRENGTH MORTAR BACKFILL	CU M																											481.1								481
660	SODDING REINFORCED	SQ M	64.3			40.1		49.3			83.5							82.0		119.4	58.9	92.0	114.5		66.7	66.7	67.2	73.0	75.4		29.8			5044.4	81.7	1821.7	1083
670	DITCH EROSION PROTECTION	SQ M	3756.7	5432.7	491.0	1687.1	123.9	3258.2	2535.8	3199.1	6115.6	2447.6	5072.2	2341.8	1402.5	3385.0	1454.1	6511.1	1005.0	2087.3	6679.5	2327.4	1533.6	4988.2	1715.7	4785.3	1818.6	3716.6	1535.5	453.4	691.4	833.6					90333
839	SEEDING AND EROSION CONTROL WITH REVEGETATION MAT	SQ M	7.2	34.2		119.1		6.3	32.9	59.5	172.0	258.3	11.0		178.6			758.9	304.2	168.0	25.9	29.2	5.4	10.1	43.8	30.9	30.0	86.5	30.7	108.3	10.8	25.2		4.0		277.6	2829
842	CLASS C CONCRETE, RET WALL/WINGWALL, ABOVE FOOTING	CU M																										14.7									15
842	CLASS C CONCRETE, FOOTING	CU M																										36.9									37

** 707.09 (25 MM CORR.), OR 707.22

CALCULATED AM CHECKED REA

DRAINAGE SUB-SUMMARY

WYA/CRA-30-28.009/0.000

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ITEM	DESCRIPTION	UNIT	SHEET NUMBER																																TOTALS TO GENERAL SUMMARY
				1000	1006	1053	1057	1061	1065	1069	1073	1136	1140	1146	1150	1179	1185				826	830	835	840		960	964		1215	1220	1224							
503	UNCLASSIFIED EXCAVATION	CU M																																	
512	TYPE 2 WATERPROOFING	SQ M																																	
516	25 MM PREFORMED EXPANSION JOINT FILLER	SQ M																																	
518	POROUS BACKFILL WITH FILTER FABRIC	CU M																																	
601	RIPRAP USING 150 MM REINFORCED CONCRETE SLAB	SQ M					28.5		19.1			6.0				6.3	5.4				30.0	51.0	19.5						18.1	12.0							195.9
601	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	CU M							14.9												13.5	20.3														49
601	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CU M					1.2					4.5										8.3	5.3						3.8	9.4						33
602	CONCRETE MASONRY	CU M					13.66		3.61	0.61	0.44	1.66				1.18	1.18				3.70	4.69	1.00					1.36	2.52	2.70							38.3
603	100 MM CONDUIT, TYPE E	METER				29.2						12.9			16.7																					58.8
603	100 MM CONDUIT, TYPE F	METER																								17.0										17.0
603	150 MM CONDUIT, TYPE B, 707.44	METER					7.4	100.0		9.6	262.0																									379.0
603	150 MM CONDUIT, TYPE C, 707.44	METER					143.6	219.7	263.4																											627.0
603	150 MM CONDUIT, TYPE E	METER		13.0																	29.4							93.2								136.0
603	300 MM CONDUIT, TYPE A, 706.08 E.S.	METER																					1.3													1.5
603	300 MM CONDUIT, TYPE B	METER							21.0	35.6	17.9																									74.5
603	300 MM CONDUIT, TYPE C	METER					228.8		86.2	67.1	40.3																									422.5
603	300 MM CONDUIT, TYPE D, 706.02	METER							23.7													11.8					99.0	38.3	19.8						193.0
603	300 MM CONDUIT, TYPE E	METER																																		49.0
603	300 MM CONDUIT, TYPE F	METER																																		
603	375 MM CONDUIT, TYPE A, 706.02, OR 375 MM 707.01, OR *	METER																					25.1													25.5
603	375 MM CONDUIT, TYPE A, 706.02, OR 450 MM 707.01, OR *	METER																					22.7													23.0
603	375 MM CONDUIT, TYPE B	METER					64.1		36.3	30.7	32.1											9.6							4.6							177.5
603	375 MM CONDUIT, TYPE C	METER					76.3		209.6	35.6	48.7											35.4							23.3							429.0
603	375 MM CONDUIT, TYPE E	METER											86.4								41.0															127.5
603	375 MM CONDUIT, TYPE F	METER																																		
603	450 MM CONDUIT, TYPE B	METER					31.5																													31.5
603	450 MM CONDUIT, TYPE C	METER					69.4		75.9																											145.5
603	450 MM CONDUIT, TYPE D, 706.02	METER																																		
603	525 MM CONDUIT, TYPE A, 706.02 OR 600 MM, 707.01 (2.01 MM), OR *	METER																				38.6													39.0
603	525 MM CONDUIT, TYPE B	METER							31.2																											31.5
603	525 MM CONDUIT, TYPE C	METER							85.3																											85.5
603	525 MM CONDUIT, TYPE D, 706.02	METER																																		
603	525 MM CONDUIT, TYPE E	METER																																		
603	600 MM CONDUIT, TYPE A, 706.02, OR 825 MM, 707.01 (2.01 MM), OR *	METER																																		
603	600 MM CONDUIT, TYPE B	METER																						9.0												9.0
603	600 MM CONDUIT, TYPE C	METER							24.0															118.3												142.5
603	600 MM CONDUIT, TYPE E, 706.02, OR 825 MM 707.01	METER																																		
603	675 MM CONDUIT, TYPE A, 706.02, OR 825 MM, 707.01 (2.01 MM), OR *	METER																				26.9													27.0
603	675 MM CONDUIT, TYPE A, 706.02, OR 825 MM, 707.01, OR *	METER														29.3	27.7																			57.0
603	675 MM CONDUIT, TYPE E	METER																																		
603	750 MM CONDUIT, TYPE A, 706.02 100 D-LOAD, OR 900 MM, OR *	METER																																		
603	750 MM CONDUIT, TYPE A, 706.02, OR 825 MM 707.01, OR *	METER																																		
603	750 MM CONDUIT, TYPE A, 706.02 OR 1050 MM, OR *	METER																																		
603	750 MM CONDUIT, TYPE D, 706.02 62.5 D-LOAD, OR 900 MM 707.01	METER																																		
603	750 MM CONDUIT, TYPE D, 706.02 OR 900 MM 707.01	METER																																		
603	825 MM CONDUIT, TYPE A, 706.02, OR *	METER																																		
603	825 MM CONDUIT, TYPE A, 706.02, OR 1050 MM, OR *	METER										27.6																								28.0
603	900 MM CONDUIT, TYPE D, 706.02 OR 1200 MM 707.01	METER																						11.7												12.0
603	1050 MM CONDUIT, TYPE A, 706.02, 130 D-LOAD OR 1050 MM 707.01, OR *	METER																																		
603	1050 MM CONDUIT, TYPE A, 706.02, OR 1350 MM, 707.01, OR **	METER																																		
603	1050 MM CONDUIT, TYPE A, 706.02, 87.5 D-LOAD OR 1500 MM 707.02, OR **	METER																																		
603	1050 MM CONDUIT, TYPE A, 706.02 62.5 D-LOAD, OR 1350 MM, 707.01, OR **	METER																																		
603	1200 MM CONDUIT, TYPE A, 706.02 OR 1500 MM 707.02, OR **	METER							36.6																											37.0
603	1200 MM CONDUIT, TYPE A, 706.02	METER																				26.9													27.0
603	1200 MM CONDUIT, TYPE A, 706.02 OR 1350 MM, 707.01 (2.01 MM), OR **	METER																																		
603	1200 MM CONDUIT, TYPE A, 706.02 100 D-LOAD, OR 1500 MM, 707.02, OR **	METER																																		
603	1350 MM CONDUIT, TYPE A, 706.02, 75 D-LOAD OR 1650 MM 707.02, OR **	METER																																		
603	1500 MM CONDUIT, TYPE A, 706.02	METER																			22.4															22.5
	* 707.09 (13 MM CORR.), OR 707.21																																			
	** 707.09 (25 MM CORR.), OR 707.22																																			

CALCULATED AM CHECKED REA

DRAINAGE SUB-SUMMARY

WYA/CRA-30-28.009/0.000

ITEM	DESCRIPTION	UNIT	SHEET NUMBER																																					TOTALS TO GENERAL SUMMARY
				1000	1006	1053	1057	1061	1065	1069	1073	1136	1140	1146	1150	1179	1185				826	830	835	840			964		1215	1220	1224									
603	1500 MM CONDUIT, TYPE A, 706.02 OR 1950 MM 707.02, OR **	METER																																					
603	1500 MM CONDUIT, TYPE A, 707.02 (2.01 MM), OR **	METER																																					
603	1500 MM CONDUIT, TYPE A, 707.02 (2.77 MM), OR **	METER																																					
603	1500 MM CONDUIT, TYPE A, 706.02 OR 1950 MM 707.02 (2.01 MM), OR **	METER																																					
603	1500 MM CONDUIT, TYPE A, 706.02 OR 1650 MM 707.02, OR **	METER																																					
603	1500 MM CONDUIT, TYPE A, 706.02, 130 D-LOAD OR 2250 MM, 707.02 (2.77 MM), OR **	METER																																					
603	1650 MM CONDUIT, TYPE A, 706.02	METER					38.8																																39.0
603	1650 MM CONDUIT, TYPE A, 706.02 100 D-LOAD, OR 1950 MM, 707.02, OR **	METER																																					
603	1800 MM CONDUIT, TYPE A, 706.02	METER																																					
603	1950 MM CONDUIT, TYPE A, 706.02 OR 2250 MM 707.02, OR **	METER																																					
603	2100 MM CONDUIT, TYPE A, 706.02	METER																																					
603	2250 MM CONDUIT, TYPE A, 706.02	METER					33.5																																33.5
603	2400 MM CONDUIT, TYPE A, 706.02	METER																																					
603	2400 MM CONDUIT, TYPE A, 707.02 (2.01 MM)	METER																																					
603	3000 MM CONDUIT, TYPE A, 706.02, 100 D-LOAD	METER																																					
603	490 MM X 770 MM CONDUIT, TYPE D, 706.04, HE-II	METER																																					
603	550 MM X 865 MM CONDUIT, TYPE D, 706.04, HE-II	METER																												25.6									26.0
603	610 MM X 960 MM CONDUIT, TYPE A, 706.04, HE-II	METER																																					
603	610 MM X 960 MM CONDUIT, TYPE D, 706.04, HE-II	METER																													24.1								24.5
603	3000 MM X 1500 MM CONDUIT, TYPE A, 706.05	METER																																					
603	CONDUIT, BORED OR JACKED: TYPE B, 375 MM	METER																																					
604	CATCH BASIN, NO. 3	EACH					3		5	4	2																													14
604	CATCH BASIN, NO. 4	EACH																																					
604	CATCH BASIN, NO. 5	EACH								1	1																													2
604	CATCH BASIN, NO. 2-2B	EACH							1	1	1																													3
604	INLET, MEDIAN, 3.0M	EACH					10		6																															16
604	INLET, MEDIAN, 4.2M	EACH							2																															2
604	MANHOLE, NO. 3 (STORM SEWER)	EACH					2		2																															4
604	MANHOLE, NO. 3 (SANITARY SEWER)	EACH					3	3	4	1	2																													13
613	LOW STRENGTH MORTAR BACKFILL	CU M																			11.6																			12
660	SODDING REINFORCED	SQ M																																					
670	DITCH EROSION PROTECTION	SQ M		1172.2	164.2	869.1	302.8	521.4	1324.1			2016.2	2238.2	2053.9	1548.3	1820.0	1167.0				1005.3	592.5	110.4	2306.4			935.9		356.9	90.5	683.7									21279.0
839	SEEDING AND EROSION CONTROL WITH REVEGETATION MAT	SQ M					65.4		112.4	62.8	11.7	206.3				139.9	4.5																							603.0
842	CLASS C CONCRETE, RET WALL/WINGWALL, ABOVE FOOTING	CU M																																					
842	CLASS C CONCRETE, FOOTING	CU M																																					

** 707.09 (25 MM CORR.), OR 707.22

CALCULATED AM
CHECKED REA

DRAINAGE SUB-SUMMARY

WYA/CRA-30-28.009/0.000

STATION TO STATION	ITEM 203 Excavation Not Incl. Embankment Construction c.m.	ITEM 203 Embankment c.m.	ITEM 651 Topsoil Stockpiled c.m.	ITEM 652 Placing Stockpiled Soil c.m.	Seeding s.m.	DEDUCTIONS Item 601 s.m.	Item 660 Reinforced Sodding s.m.	Item 670 Erosion Protection s.m.	Item 839 Seeding and Erosion Control with Revegetation Mat s.m.	ITEM 870 Seeding and Mulching s.m.
US-30 EB										
28+256.074 - 28+340.000	817	1561			2147	9	15	2234		0
28+340.000 - 28+680.000	3030	22717			7324		49	1529	7	5739
28+680.000 - 29+020.000	1291	112500			17678			493	4	17181
29+020.000 - 29+360.000	1195	170206			24829	81		802	4	23942
29+360.000 - 29+700.000	3603	72703			19734	871		495		18368
29+700.000 - 30+020.000	1446	15362			11287	2025				9262
US-30 WB										
28+531.779 - 28+640.000	3169	1742			2768	2561				207
28+640.000 - 28+980.000	4195	46956			19929	24	40	1859	119	17887
28+980.000 - 29+200.000	1028	61650			11042					11042
US-30 MAINLINE										
29+180.000 US-30 WB - 29+520.000 US-30	4592	146948			26934	7643		3733	27	15531
29+520.000 - 29+860.000	7060	34515			18664		49	1674	6	16935
29+860.000 - 30+200.000	5532	11182			15480			1082		14398
30+200.000 - 30+540.000	8093	16464			18634	9		1254	33	17338
30+540.000 - 30+880.000	7535	16254			18846			1216		17630
30+880.000 - 31+220.000	15044	26589			24915	125		1783	60	22947
31+220.000 - 31+560.000	8013	40527			25065	9		3475		21581
31+560.000 - 31+900.000	7887	74675			27103	115	84	2444	172	24288
31+900.000 - 32+240.000	3117	57030			24775	9		148	18	24600
32+240.000 - 32+580.000	10471	25298			20518	96		2099	240	18083
32+580.000 - 32+920.000	31590	18651			20246	118		1269		18859
32+920.000 - 33+260.000	20130	24151			19277	20		3303	11	15943
33+260.000 - 33+600.000	49225	9090			17765			1578		16187
33+600.000 - 33+940.000	42509	8743			20302			164	7	20131
33+940.000 - 34+280.000	54525	12602			25769				56	25713
34+280.000 - 34+620.000	16245	39147			22564	46		1360	185	20973
34+620.000 - 34+960.000	44399	10261			19783			1112		18671
34+960.000 - 35+300.000	6800	42412			21357	120		1833		19404
35+300.000 - 35+640.000	6390	18677			19374	14		188		19172
35+640.000 - 35+980.000	45391	7569			23326			1167		22159
35+980.000 - 36+320.000	39401	34522			21832	9	82	2274	354	19113
36+320.000 - 36+660.000	7906	36988			23052	9		3339	405	19299
36+660.000 - 37+000.000	45430	7387			21498					21498
37+000.000 - 37+340.000	13012	29178			16952	281		704	511	15456
37+340.000 - 37+680.000	3238	74914			8392	56		1110	9	7217
37+680.000 - 38+020.000	0	108135			11334			1291	63	9980
38+020.000 - 38+360.000	2069	195396			27228		59	2388	11	24770
38+360.000 - 38+700.000	2502	146601			26172	44		4100	15	22013
38+700.000 - 39+040.000	3915	91076			24950		92	1848	22	22988
39+040.000 - 0+020.000	2637	47591			20511	13			7	20491
0+020.000 - 0+340.000	5570	13594			14429					14429
0+340.000 - 0+680.000	5053	71479			24836	8	109	1437	11	23271
0+680.000 - 1+020.000	6100	145444			27824	48		2993	10	24773
1+020.000 - 1+360.000	8482	158758			30466			2047		28419
1+360.000 - 1+700.000	1245	166950			22129	20		1179	5	20925
1+700.000 - 2+040.000	146	89604			17200	13	67	2	38	17080
2+040.000 - 2+380.000	182	103820			15022		67	2306	26	12623
2+380.000 - 2+720.000	2043	213403			29417			1646	5	27766
2+720.000 - 3+060.000	1383	175409			26981			905	4	26072
3+060.000 - 3+400.000	3523	55508			23154	51	67	1568	26	21442
3+400.000 - 3+740.000	10438	17215			19334	62		3119	76	16077
3+740.000 - 4+080.000	2495	70413			23170	7	73	300	11	22779
4+080.000 - 4+420.000	1418	105668			23140	20	75	1339	31	21675
4+420.000 - 4+760.000	1246	55320			21178	6				21172
TOTALS CARRIED TO SHEET NO. 91	583756	3360555	0	0	1067636					975499

CALCULATED AM CHECKED REA

EARTHWORK AND SEEDING & MULCHING SUB-SUMMARY

WYA/CRA-30-28.009/0.000

STATION TO STATION	ITEM 203 Excavation Not Incl. Embankment Construction c.m.	ITEM 203 Embankment c.m.	ITEM 651 Topsoil Stockpiled c.m.	ITEM 652 Placing Stockpiled Soil c.m.	Seeding s.m.	DEDUCTIONS Item 601 s.m.	DEDUCTIONS Item 660 Reinforced Sodding s.m.	DEDUCTIONS Item 670 Erosion Protection s.m.	DEDUCTIONS Item 839 Seeding and Erosion Control with Revegetation Mat s.m.	ITEM 870 Seeding and Mulching s.m.
SUB - TOTAL FROM SHEET NO. 90	583756	3360555	0	0	1067636					975499
US-30 MAINLINE CONTINUED										
4+760.000 - 5+100.000	2426	27633			18498	40		319	40	18099
5+100.000 - 5+440.000	13179	23822			19150	51		43	69	18987
5+440.000 - 5+780.000	1094	128514			22846	30		1019	11	21786
5+780.000 - 6+120.000	1382	167281			21310			2		21308
6+120.000 - 6+460.000	2652	50543			9910			3	20	9887
6+460.000 - 6+737.786	5214	2801			4248			2	5	4241
RAMP A										
28+713.948 - 28+840.000	2003	1784			3936					3936
28+840.000 - 29+180.000	1832	79552			21330	58		2977	278	18017
29+180.000 - 29+439.973	769	65004			13406	10		602		12794
RAMP B										
28+070.234 - 28+239.837	2144	490928			5353					5353
28+239.837 - 28+490.000	5861	32933			16096			571		15525
28+490.000 - 28+780.000	1907	106414			18628			603		18025
28+780.000 - 29+070.000	626	139734			20018			118		19900
29+070.000 - 29+160.829	149	26588			3919			2		3917
RAMP E										
33+859.401 - 33+980.000	237	2199	350	350	2821					2821
33+980.000 - 34+265.632	11331	4146	1172	1172	11872			397		11475
RAMP F										
33+539.183 - 33+800.000	20736	2025	1572	1572	11856	31		303	65	11457
33+800.000 - 34+095.508	9819	14323	7441	7441	13056					13056
RAMP G										
33+969.947 - 34+260.000	25832	57	2690	2690	12203					12203
34+260.000 - 34+380.572	8735	700	705	705	3645			521		3124
RAMP H										
34+140.712 - 34+440.000	35225	2173	11890	11890	13940			948	118	12874
34+440.000 - 34+700.922	401	16183	93	93	11594	24		430		11140
RAMP I										
33+720.000 - 33+960.000	4251	8612	1457	1457	15580					15580
33+960.000 - 34+134.496	6719	1402	1546	1546	9978					9978
RAMP J										
34+080.878 - 34+280.000	7289	440	1470	1470	9906					9906
34+280.000 - 34+500.566	10094	9000	1829	1829	15200					15200
RAMP K										
37+502.065 - 37+540.000	740	1264			1220	9		807		404
37+540.000 - 37+747.733	1637	9150			8109			1210		6899
RAMP L										
37+500.591 - 37+620.000	1781	14088			5923			2375		3548
37+620.000 - 37764.934	2835	10710			10562			222		10340
RAMP M										
37+797.948 - 38+040.717	1070	22264			10119			2059		8060
RAMP N										
37+780.484 - 37+900.000	3656	4128			8076			327		7749
37+900.000 - 38+041.519	2081	16017			7548			1225		6323
TOTALS CARRIED TO SHEET NO. 92	779463	4842967	32215	32215	1449492					133941

CALCULATED AM
CHECKED REA

EARTHWORK AND SEEDING & MULCHING SUB-SUMMARY

WYA/CRA-30-28.009/0.000

STATION TO STATION	ITEM 203 Excavation Not Incl. Embankment Construction c.m.	ITEM 203 Embankment c.m.	ITEM 651 Topsoil Stockpiled c.m.	ITEM 652 Placing Stockpiled Soil c.m.	Seeding s.m.	DEDUCTIONS Item 601 s.m.	DEDUCTIONS Item 660 Reinforced Sodding s.m.	DEDUCTIONS Item 670 Erosion Protection s.m.	DEDUCTIONS Item 839 Seeding and Erosion Control with Revegetation Mat s.m.	ITEM 870 Seeding and Mulching s.m.
SUB - TOTAL FROM SHEET NO. 91	779463	4842967	32215	32215	1449492					1339411
RAMP O										
6+059.068 - 6+180.000	456	27236			4683			880	135	3668
6+180.000 - 6+475.087	2899	34707			16064	6		945	5	15108
RAMP P										
5+769.125 - 5+840.000	205	10816			2493			742		1751
5+840.000 - 6+080.000	452	23771			9187	5		429	5	8748
TR-55										
0+871.836 - 1+176.506	1283	283			2726			374		2352
US-23										
12+259.876 - 12+440.000	1600	1218			6469					6469
12+440.000 - 12+780.000	4705	1207			10335	23	309			10003
12+780.000 - 13+120.000	0	43			146			2348	4	0
13+120.000 - 13+460.000	738	995			4574			1784		2790
13+460.000 - 13+800.000	1128	2222			9012			648		8364
13+800.000 - 14+140.000	6123	3969			11348					11348
14+140.000 - 14+370.084	2297	5382			6987	64		82		6841
TR-127										
0+888.389 - 1+111.294	1748	211			2169			93		2076
CR-128										
0+754.000 - 0+900.000	1708	614			4101	48		436		3617
0+900.000 - 1+139.000	2384	965			3534			666		2868
TR-133										
0+840.000 - 1+110.462	1586	246			3282			843		2439
SR-231										
0+700.000 - 1+000.000	1369	2785			4560	53		36		4471
1+000.000 - 1+300.000	1393	1959			5002	63		124		4815
TR-10										
0+848.500 - 0+880.000	59	8			306	2		80		224
0+880.000 - 1+118.000	442	161			1868	29		110		1729
CR-18										
0+700.000 - 1+140.000	1208	6325			8787			1160		7627
TR-21										
0+760.000 - 0+900.000	3469	227			5123			2365		2758
0+900.000 - 1+220.000	1993	816			4913					4913
TOTALS CARRIED TO SHEET NO. 93	818708	4969133	32215	32215	1577161					1454390

CALCULATED AM CHECKED REA

EARTHWORK AND SEEDING & MULCHING SUB-SUMMARY

WYA./CRA-30-28.009/0.000

STATION TO STATION	ITEM 203 Excavation Not Incl. Embankment Construction c.m.	ITEM 203 Embankment c.m.	ITEM 651 Topsoil Stockpiled c.m.	ITEM 652 Placing Stockpiled Soil c.m.	Seeding s.m.	DEDUCTIONS Item 601 s.m.	DEDUCTIONS Item 660 Reinforced Sodding s.m.	DEDUCTIONS Item 670 Erosion Protection s.m.	DEDUCTIONS Item 839 Seeding and Erosion Control with Revegetation Mat s.m.	ITEM 870 Seeding and Mulching s.m.
SUB - TOTAL FROM SHEET NO. 92	818708	4969133	32215	32215	1577161					1454390
CR-330										
0+320.000 - 1+119.654	4554	3206			16248			634		15614
SERVICE RD. NO. 1										
0+196.669 - 0+983.228	10544	4647			7581					7581
SERVICE RD. NO. 3										
0+900.255 - 0+998.208	503	661			853					853
SERVICE RD. NO. 6										
0+450.965 - 0+960.000	3932	2841			6450					6450
SERVICE ACCESS NO. 14										
1+001.527 - 1+124.750	1255	683			2139					2139
SERVICE ACCESS NO. 17										
9+242.470 - 9+965.460	5268	3967			10746					10746
DRIVE STA. 0+936.168 RT. SVC. RD. NO. 6										
0+010.000 - 0+051.644	173	142			291					291
DRIVE STA. 1+118.518 LT. SVC. ACC. NO. 14										
0+012.765 - 0+125.000	405	509			1398					1398
DRIVE STA. 0+841.860 SVC. RD. NO. 12										
0+000.000 - 0+050.000	159	183			439					439
DETENTION BASIN										
0+053.000 - 0+286.000	14095	5240			41740					41740
CHANNEL - STA. 12+466.246 LT. US-23										
0+840.000 - 0+968.704	64	0			2228					2228
TOTALS CARRIED TO SHEET NO. 94	859660	4991212	32215	32215	1667274					1543869

CALCULATED AM CHECKED REA

EARTHWORK AND SEEDING & MULCHING SUB-SUMMARY

WYA/CRA-30-28.009/0.000

STATION TO STATION	ITEM 203 Excavation Not Incl. Embankment Construction c.m.	ITEM 203 Embankment c.m.	ITEM 651 Topsoil Stockpiled c.m.	ITEM 652 Placing Stockpiled Soil c.m.	Seeding s.m.	DEDUCTIONS Item 601 s.m.	Item 660 Reinforced Sodding s.m.	Item 670 Erosion Protection s.m.	Item 839 Seeding and Erosion Control with Revegetation Mat s.m.	ITEM 870 Seeding and Mulching s.m.
SUB - TOTAL FROM SHEET NO. 93	859660	4991212	32215	32215	1667274					1543869
CHANNEL - STA. 29+019.966 LT. RAMP A										
1+440.000 - 1+540.000	1140	0			3392	0	0	0	0	3392
CHANNEL - STA. 29+300.000 LT. US-30										
0+760.000 - 0+940.000	1226	0			7596	0	0	0	0	7596
CHANNEL - STA. 29+392.850 LT. US-30EB										
0+760.000 - 0+960.000	387	0			2739	0	0	0	0	2739
CHANNEL - STA. 29+680.000 LT. US-30EB										
0+780.000 - 0.960.000	1501	0			4021	0	0	0	0	4021
CHANNEL - STA. 30+350.000 LT. US-30										
0+908.015 - 0+968.000	107	0			727	0	0	0	0	727
CHANNEL - STA. 30+987.632 LT. US-30										
0+950.657 - 1+058.562	294	93			2438	0	0	0	0	2438
CHANNEL - STA. 32+180.000 LT. US-30										
0+925.000 - 0+960.000	11	0			298	0	0	0	0	298
CHANNEL - STA. 33+800.000 LT.& RT. RAMP F										
0+921.500 - 1+040.000	355	120			1289	0	0	0	0	1289
CHANNEL - STA. 34+580.000 LT.& RT. US-30										
1+040.000 - 1+181.000	73	0			1341	0	0	0	0	1341
CHANNEL - STA. 35+234.691 RT. US-30										
1+040.000 - 1+096.000	72	0			934	0	0	0	0	934
CHANNEL - STA. 4+280.000 RT. US-30										
1+040.000 - 1+067.501	13	0			244	0	0	0	0	244
CHANNEL - STA. 4+894.713 RT. US-30										
1+040.000 - 1+045.000	0	0			45	0	0	0	0	45
CHANNEL - STA. 34+039.661 LT. RAMP E										
1+020.000 - 1+040.000	8	0			152	0	0	0	0	152
CHANNEL - STA. 1+420.000 - STA. 1+472.279 LT. US-30										
1+420.000 - 1+480.000	244	0			928	0	0	0	0	928
TR-55, TR-127, TR-133										
SEE SHEET NOS. 957, 961, 962	98	98			325	0	0	0	0	325
SERVICE DRIVES EB & WB REST AREAS										
SEE SHEET NO. 1233	226	332			0	0	0	0	0	0
EXIST. RAMP A										
SEE SHEET NOS. 292	28	28			95	0	0	0	0	95
SUBTOTAL	865462	4991883	32215	32215	✳✳1693838					✳✳1570433
					✳ 356252					✳ 356252
GRAND TOTAL	865462	4991883	32215	32215	2050090					1926685
Quantities Carried to General Summary	865462	4991883	32215	32215						1926685

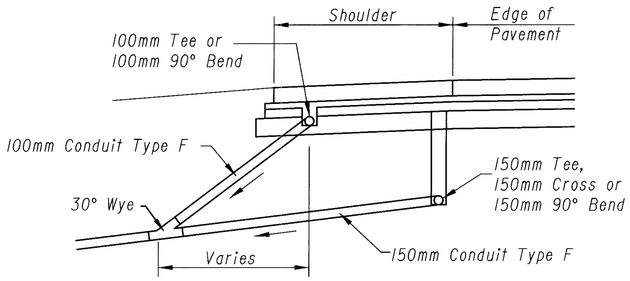
✳ Seeding areas between construction limits plus 3 meters and right-or-way.

✳✳ Seeding areas shown in cross sections are calculated from construction limits to construction limits plus 3 meters on each side.

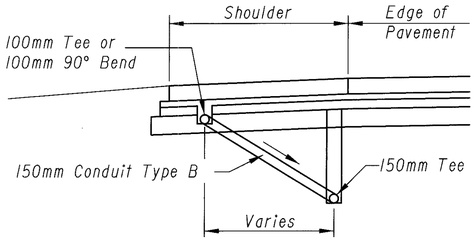
CALCULATED AM CHECKED REA

EARTHWORK AND SEEDING & MULCHING SUB-SUMMARY

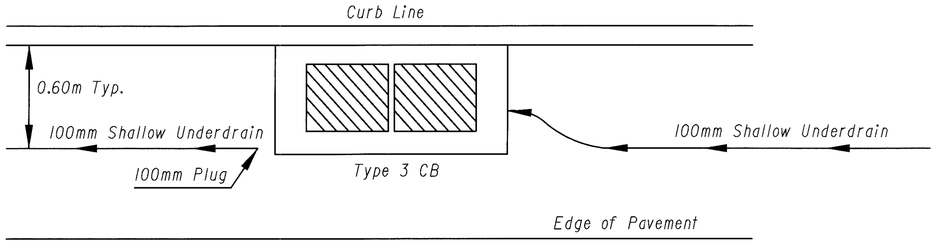
WYA/CRA-30-28.009/0.000



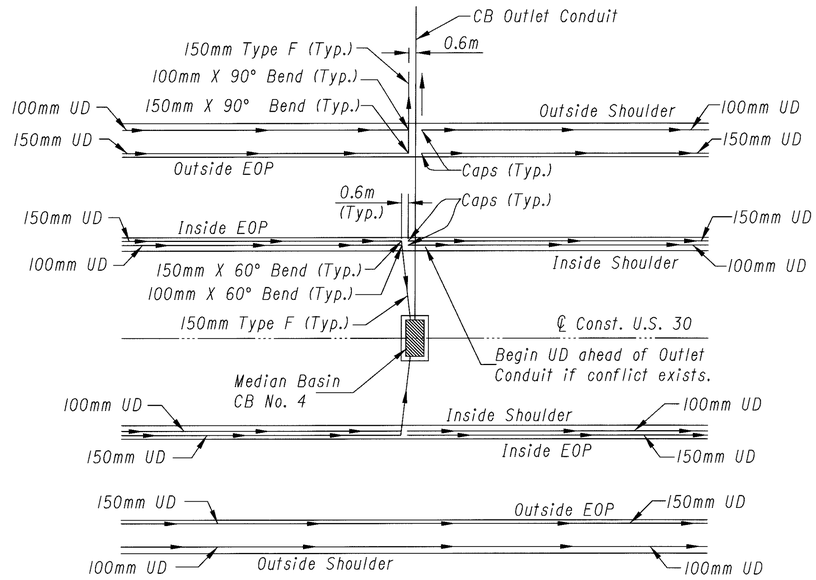
UNDERDRAIN CONNECTION TYPE 1



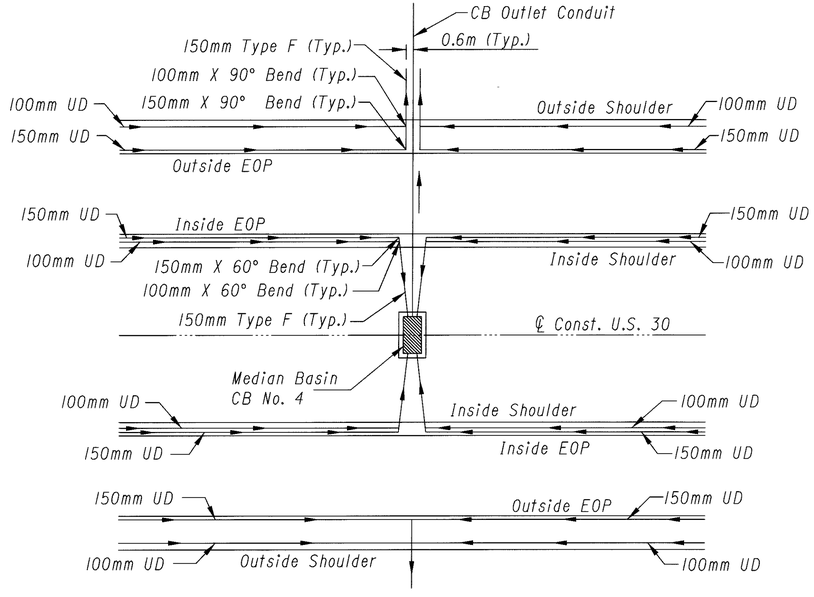
UNDERDRAIN CONNECTION TYPE 2



UNDERDRAIN CONNECTION INTO TYPE 3 CB



TYPICAL UNDERDRAIN OUTLET DETAILS (CONTINUOUS GRADES)



TYPICAL UNDERDRAIN OUTLET DETAIL (SAGS)

MISCELLANEOUS DRAINAGE DETAILS

CALCULATED AM CHECKED REA

WYA/CRA-30-28.009/0.00

95
2116

BENCH MARKS

TEMPORARY BENCH MARK	STATION	OFFSET (METERS)	ELEVATION (METERS)	DESCRIPTION
D-D-1	36+360.687 USR-30	114.897 RT	268.432	SPIKE, 0.457m HACKBERRY
NNN-1	5+460.803 USR-30	13.866 RT	297.562	SPIKE, 0.305m ASH
SSS	6+412.437 USR-30	7.071 RT	305.943	CUT SQUARE, BOTTOM OF WALL AT NE CORNER OF U.S. 30 BRIDGE
RRR	6+837.301 USR-30	0.059 LT	296.675	CUT SQUARE, CATCH BASIN
GPS 4-1	0+976.381 SR-231	6.635 RT	282.386	CUT SQUARE, CATCH BASIN
GPS 4-2	1+440.067 SR-231	6.834 RT	282.525	CUT SQUARE, CATCH BASIN
LL	0+508.720 TR-10 *	5.777 LT	291.385	SPIKE, POWER POLE
M-M-1	0+896.999 TR-10	65.413 RT	291.602	CUT SQUARE, NORTHWEST CORNER OF CONCRETE GARAGE APRON
M-M	0+983.478 TR-10	6.547 RT	290.282	SPIKE, POWER POLE
N-N-1	1+333.911 TR-10	38.024 LT	289.271	CUT SQUARE, NORTHEAST CORNER (SOUTH) BARN APRON
N-N	1+377.013 TR-10	6.168 RT	288.400	SPIKE, POWER POLE
VV-1	0+704.121 CR-18	5.438 LT	294.213	CUT SQUARE, TOP OF CONCRETE BOX CULVERT
WW-1	1+008.858 CR-18	9.576 RT	294.815	SPIKE, PROPERTY LINE POST
XX	1+283.614 CR-18 *	6.401 RT	295.799	CUT SQUARE, CONCRETE PIPE
YY-1	1+800.560 CR-18 *	6.368 LT	294.916	CUT SQUARE, TOP (INLET) 0.305m CAST IRON PIPE
ZZ-1	2+120.193 CR-18 *	9.376 LT	291.744	CUT SQUARE, TOP, NORTHWEST CORNER OF CATCH BASIN
AAA-1	0+752.503 TR-21	5.246 LT	293.471	CUT SQUARE, TOP (INLET) 0.965m x 1.540m CONCRETE PIPE
BBB1	1+312.427 TR-21	3.246 LT	295.109	CUT SQUARE, TOP (INLET) 0.914m CAST IRON PIPE
UUU	0+268.766 CR-330 *	13.550 LT	298.965	SPIKE, 0.914m EVERGREEN
TTT	0+728.083 CR-330	18.510 RT	299.698	CUT SQUARE, TOP OF 0.381m CONCRETE PIPE INLET
PPP-1	1+281.345 CR-330	7.501 LT	297.151	CUT SQUARE, NORTHWEST ABUTMENT AT BRIDGE
QQQ	1+405.610 CR-330	17.806 RT	296.505	SPIKE, R/W POST
B-B-1	0+772.908 TR-133 *	6.803 RT	273.399	SPIKE, 0.610m MAPLE
B-B-2	1+273.543 TR-133 *	13.638 RT	276.093	SPIKE, VERTICAL 0.762m STUMP
UU	0+849.705 CR-1	16.534 LT	294.553	SPIKE, TELEGRAPH POLE #778-95, NORTH OF RR TRACKS, FIRST POLE WEST OF MARION-MELMORE RD.
000	5+952.976 RAMP 0	8.671 RT	300.854	SPIKE, 0.203m ELM
PPP	6+394.298 RAMP 0	26.367 LT	299.004	SPIKE, R/W POST

* BENCH MARK LOCATION BASED ON A TANGENT EXTENSION OF THE ALIGNMENT SHOWN ON THE PLANS

605 AGGREGATE DRAIN SUB SUMMARY

Station to Station	Number of Drains	Drain Length Meter	605 Agg Drain Meter
CR 128			
0+760 - 0+970	43	3.5	150.5
1+030 - 1+130	21	3.5	73.5
TR 10			
0+870 - 0+965	20	3.5	70.0
1+030 - 1+110	16	3.5	56.0
TR 21			
0+850 - 0+965	24	3.5	84.0
1+030 - 1+180	31	3.5	108.5
TR 55			
0+872 - 0+922	11	3.0	33.0
1+127 - 1+172	10	3.0	30.0
TR 127			
0+898 - 0+939	10	3.0	30.0
1+065 - 1+105	9	4.0	36.0
TR 133			
0+895 - 0+940	10	3.5	35.0
1+060 - 1+105	10	4.0	40.0
TOTAL			746.5*

* TO UNDERDRAIN SUBSUMMARY, SHEET NO. 140

CALCULATED RH CHECKED REA

BENCH MARKS AND AGGREGATE DRAIN TABLE

WYA/CRA-30-28.009/0.000

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

REF NO.	STATION	SIDE	603					604	605										670									FOR INFORMATION ONLY																											
			100 MM CONDUIT, TYPE B	100 MM CONDUIT, TYPE F	150 MM CONDUIT, TYPE B	150 MM CONDUIT, TYPE F		PRECAST REINFORCED CONCRETE OUTLET	100 MM SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 712.09 TYPE A	100 MM SHALLOW PIPE UNDERDRAIN	100 MM UNCLASSIFIED PIPE UNDERDRAIN	150 MM DEEP PIPE UNDERDRAIN	150 MM UNCLASSIFIED PIPE UNDERDRAIN	AGGREGATE DRAIN	150 MM SHALLOW PIPE UNDERDRAIN, 707.31	150 MM DEEP PIPE UNDERDRAIN, 707.31	150 MM UNCLASSIFIED PIPE UNDERDRAIN, 707.31		DITCH EROSION PROTECTION									100 MM PLUG	150 MM PLUG	100 MM X 100 MM TEE	100 MM X 150 MM TEE	150 MM X 150 MM TEE	100 MM X 100 MM CROSS	100 MM X 150 MM CROSS	150 MM X 150 MM CROSS	100 MM X 150 MM WYE	150 MM X 150 MM WYE	100 MM X 100 MM 22.5° BEND	100 MM X 150 MM 45° BEND	150 MM X 150 MM 45° BEND	100 MM X 150 MM 60° BEND	100 MM X 100 MM 90° BEND	100 MM X 150 MM 90° BEND	150 MM X 150 MM 90° BEND	UNDERDRAIN CONNECTION 1	UNDERDRAIN CONNECTION 2
			METER	METER	METER	METER		EACH	METER	METER	METER	METER	METER	METER	METER	METER	METER		SQ M									EACH																											
	USR 30 EB SHT. 158-159																																																					
U1	28+011.00 TO 28+020.00	LT/RT			4.0	11.0		1			9.0																	1		1																								
U2	28+024.50 TO 28+199.86	LT/RT			4.0	11.0		1		150.0	25.4																			1																						1		
U3	28+200.00 TO 28+349.22	RT				15.2		1		149.2																		1		1																								
U4	28+350.72 TO 28+534.963	LT	7.2			11.3		1		182.8																		1																							1			1	
U5	27+979.74 TO 28+125.00	LT/RT				6.5		1	145.4																																										1			
U6	28+125.00 TO 28+275.00	RT				6.2		1	149.9																					1																								
U7	28+275.00 TO 28+424.79	RT				6.6		1	149.9																					1																								
U8	28+327.57 TO 28+530.933	LT							201.8																			1																										
U9	28+424.79 TO 28+568.082	RT				6.6		1	143.0																			1		1																								
	TOTALS CARRIED TO SHEET NO. 140		7.2		8.0	74.4		8	790.0	482.0	34.4																	TOTALS	5		6																	1	2			1		

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | |

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | | 670 | | | | | | | | | | FOR INFORMATION ONLY | | | | | | | | | |

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

REF NO.	STATION	SIDE	603 100 MM CONDUIT, TYPE B METER	603 100 MM CONDUIT, TYPE F METER	603 150 MM CONDUIT, TYPE B METER	603 150 MM CONDUIT, TYPE F METER	604 PRECAST REINFORCED CONCRETE OUTLET EACH	605 100 MM SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 712.09 TYPE A METER	605 100 MM SHALLOW PIPE UNDERDRAIN METER	605 100 MM UNCLASSIFIED PIPE UNDERDRAIN METER	605 150 MM DEEP PIPE UNDERDRAIN METER	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN METER	605 AGGREGATE DRAIN METER	605 150 MM SHALLOW PIPE UNDERDRAIN, 707.31 METER	605 150 MM DEEP PIPE UNDERDRAIN, 707.31 METER	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN, 707.31 METER	670 DITCH EROSION PROTECTION SQ M
U1	29+096.36 TO 29+395.51	LT				56.7	2		299.2								3.0
U2	29+096.36 TO 29+373.92	RT	7.2		3.6	24.4	1		277.3								1.5
U3	29+096.36 TO 29+395.31	LT						299.0									
U4	29+045.00 TO 29+164.48	RT				6.8	1	119.7									
	TOTALS CARRIED TO SHEET NO. 140		7.2		3.6	87.9	4	418.7	576.5								4.5

FOR INFORMATION ONLY

REF NO.	100 MM PLUG EACH	150 MM PLUG EACH	100 MM X 100 MM TEE EACH	100 MM X 150 MM TEE EACH	150 MM X 150 MM TEE EACH	100 MM X 100 MM CROSS EACH	100 MM X 150 MM CROSS EACH	150 MM X 150 MM CROSS EACH	100 MM X 150 MM WYE EACH	150 MM X 150 MM WYE EACH	100 MM X 100 MM 22.5° BEND EACH	100 MM X 150 MM 45° BEND EACH	150 MM X 150 MM 45° BEND EACH	100 MM X 150 MM 60° BEND EACH	100 MM X 100 MM 90° BEND EACH	100 MM X 150 MM 90° BEND EACH	150 MM X 150 MM 90° BEND EACH	UNDERDRAIN CONNECTION 1 EACH	UNDERDRAIN CONNECTION 2 EACH
U1				1			1											2	
U2				1											1			1	
U3																			
U4		1														1			
	TOTALS	1		2		1									1	1		3	

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

REF NO.	STATION	SIDE	603					604	605									670									FOR INFORMATION ONLY																				
			100 MM CONDUIT, TYPE B	100 MM CONDUIT, TYPE F	150 MM CONDUIT, TYPE B	150 MM CONDUIT, TYPE F		PRECAST REINFORCED CONCRETE OUTLET	100 MM SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 712.09 TYPE A	100 MM SHALLOW PIPE UNDERDRAIN	100 MM UNCLASSIFIED PIPE UNDERDRAIN	150 MM DEEP PIPE UNDERDRAIN	150 MM UNCLASSIFIED PIPE UNDERDRAIN	AGGREGATE DRAIN	150 MM SHALLOW PIPE UNDERDRAIN, 707.31	150 MM DEEP PIPE UNDERDRAIN, 707.31	150 MM UNCLASSIFIED PIPE UNDERDRAIN, 707.31	DITCH EROSION PROTECTION									100 MM PLUG	150 MM PLUG	100 MM X 100 MM TEE	100 MM X 150 MM TEE	150 MM X 150 MM TEE	100 MM X 100 MM CROSS	100 MM X 150 MM CROSS	150 MM X 150 MM CROSS	100 MM X 150 MM WYE	150 MM X 150 MM WYE	100 MM X 100 MM 22.5° BEND	100 MM X 150 MM 45° BEND	150 MM X 150 MM 45° BEND	100 MM X 150 MM 60° BEND	100 MM X 100 MM 90° BEND	100 MM X 150 MM 90° BEND	150 MM X 150 MM 90° BEND	UNDERDRAIN CONNECTION 1	UNDERDRAIN CONNECTION 2
			METER	METER	METER	METER		EACH	METER	METER	METER	METER	METER	METER	METER	METER	METER	SQ M									EACH																				
	US 23 SHT. 753- 757																																													
U1	12+430.62 TO 12+470.28	LT			3.7	9.4		1			39.7																1		1																	
U2	12+397.00 TO 12+446.00	RT	2.9			10.2		1		49.0																	1		1																	
U3	12+475.21 TO 12+791.33	LT	5.7			13.7				236.5	75.1																1	1						1											
	TOTALS CARRIED TO SHEET NO. 140		8.6		3.7	33.3		2		285.5	114.8																TOTALS	3		1	2				1										

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

REF NO.	STATION	SIDE	603 100 MM CONDUIT, TYPE B METER	603 100 MM CONDUIT, TYPE F METER	603 150 MM CONDUIT, TYPE B METER	603 150 MM CONDUIT, TYPE F METER	604 PRECAST REINFORCED CONCRETE OUTLET EACH	605 100 MM SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 712.09 TYPE A METER	605 100 MM SHALLOW PIPE UNDERDRAIN METER	605 100 MM UNCLASSIFIED PIPE UNDERDRAIN METER	605 150 MM DEEP PIPE UNDERDRAIN METER	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN METER	605 AGGREGATE DRAIN METER	605 150 MM SHALLOW PIPE UNDERDRAIN, 707.31 METER	605 150 MM DEEP PIPE UNDERDRAIN, 707.31 METER	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN, 707.31 METER	670 DITCH EROSION PROTECTION SQ M	FOR INFORMATION ONLY 100 MM PLUG EACH	150 MM PLUG EACH	100 MM X 100 MM TEE EACH	100 MM X 150 MM TEE EACH	150 MM X 150 MM TEE EACH	100 MM X 100 MM CROSS EACH	100 MM X 150 MM CROSS EACH	150 MM X 150 MM CROSS EACH	100 MM X 150 MM WYE EACH	150 MM X 150 MM WYE EACH	100 MM X 100 MM 22.5° BEND EACH	100 MM X 150 MM 45° BEND EACH	150 MM X 150 MM 45° BEND EACH	100 MM X 150 MM 60° BEND EACH	100 MM X 100 MM 90° BEND EACH	100 MM X 150 MM 90° BEND EACH	150 MM X 150 MM 90° BEND EACH	UNDERDRAIN CONNECTION 1 EACH	UNDERDRAIN CONNECTION 2 EACH
	US 23 SHT. 763- 764																																					
U1	13+990.16 TO 14+160.40	RT							0.4	169.9																												
U2	14+160.40 TO 14+370.08	RT				11.0	1		209.7										1		1															1	
U3	13+990.21 TO 14+082.93	RT						92.7																														
U4	14+082.93 TO 14+160.40	RT				6.4	1	77.5														1															
U5	14+160.40 TO 14+232.90	RT						72.5																														
U6	14+232.90 TO 14+370.13	RT				6.4	1	137.3														1															
	TOTALS CARRIED TO SHEET NO. 140					23.8	3	380.0	210.1	169.9																												
	TOTALS																		1		3														1		

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | | | FOR INFORMATION ONLY | | | | | | | | | |

UNDERDRAIN SUB-SUMMARY

CALCULATED EF | CHECKED REA

WYA/CRA-30-28.009/0.000

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | | | | | FOR INFORMATION ONLY | | | | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | | 605 | | | | | | | | | | 670 | | | | | | | | | |

UNDERDRAIN SUB-SUMMARY

CALCULATED EF CHECKED REA

WYA / CRA-30-28.009 / 0.000

REF NO.	STATION	SIDE	603				604	605								670	FOR INFORMATION ONLY																									
			100 MM CONDUIT, TYPE B	100 MM CONDUIT, TYPE F	150 MM CONDUIT, TYPE B	150 MM CONDUIT, TYPE F	PRECAST REINFORCED CONCRETE OUTLET	100 MM SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 712.09 TYPE A	100 MM SHALLOW PIPE UNDERDRAIN	100 MM UNCLASSIFIED PIPE UNDERDRAIN	150 MM DEEP PIPE UNDERDRAIN	150 MM UNCLASSIFIED PIPE UNDERDRAIN	AGGREGATE DRAIN	150 MM SHALLOW PIPE UNDERDRAIN, 707.31	150 MM DEEP PIPE UNDERDRAIN, 707.31	150 MM UNCLASSIFIED PIPE UNDERDRAIN, 707.31	DITCH EROSION PROTECTION	100 MM PLUG	150 MM PLUG	100 MM X 100 MM TEE	100 MM X 150 MM TEE	150 MM X 150 MM TEE	100 MM X 100 MM CROSS	100 MM X 150 MM CROSS	150 MM X 150 MM CROSS	100 MM X 150 MM WYE	150 MM X 150 MM WYE	100 MM X 100 MM 22.5° BEND	100 MM X 150 MM 45° BEND	150 MM X 150 MM 45° BEND	100 MM X 150 MM 60° BEND	100 MM X 100 MM 90° BEND	100 MM X 150 MM 90° BEND	150 MM X 150 MM 90° BEND	UNDERDRAIN CONNECTION 1	UNDERDRAIN CONNECTION 2
			METER	METER	METER	METER	EACH	METER	METER	METER	METER	METER	METER	METER	METER	METER	SQ M	EACH																							
	USR 30 WYA. SHT. 201- 205																																							
U1	32+124.00 TO 32+298.00	LT				11.5	1		173.5																								1						
U2	32+124.00 TO 32+300.00	LT				12.7			166.5	7.1								1							1													
U3	32+124.00 TO 32+300.00	RT				9.0			175.5											1																		
U4	32+124.00 TO 32+320.00	RT				11.5	1		195.5									1		1																		
U5	32+302.00 TO 32+424.00	LT				11.5	1		122.0									1		1																	1	
U6	32+302.00 TO 32+565.50	LT				8.3			243.0	20.5								2				1															
U7	32+300.00 TO 32+543.00	RT	7.2						243.0																									1				
U8	32+320.00 TO 32+543.00	RT				13.3	1		223.0											1																	1	
U9	32+424.00 TO 32+545.00	LT	7.2						121.0																									1				
U10	32+566.00 TO 32+604.00	LT							24.0	14.0								1																				
U11	32+575.50 TO 32+611.00	LT							24.5	11.0								1																				
U12	32+547.00 TO 32+590.00	RT	7.2						43.0									1		1																		
U13	32+547.00 TO 32+590.00	RT				13.3	1		43.0									1			1																	
U14	32+124.00 TO 32+273.99	LT				6.6	1	150.0													1																	
U15	32+124.00 TO 32+273.99	LT				6.6	1	150.0													1																	
U16	32+124.00 TO 32+273.99	RT				6.6	1	150.0													1																	
U17	32+124.00 TO 32+273.99	RT				6.6	1	150.0													1																	
U18	32+273.99 TO 32+424.00	LT						150.0																														
U19	32+273.99 TO 32+424.00	LT				6.6	1	150.0													1																	
U20	32+273.99 TO 32+424.00	RT				6.6	1	150.0													1																	
U21	32+273.99 TO 32+424.00	RT				6.6	1	150.0													1																	
U22	32+424.00 TO 32+533.12	LT				6.6	1	109.1																												1		
U23	32+424.00 TO 32+544.89	LT				9.2		116.3																											1			
U24	32+424.00 TO 32+544.58	RT				10.0		115.1																											1			
U25	32+424.00 TO 32+602.00	RT						178.0																														
U26	32+564.80 TO 32+604.00	LT						39.2										1																				
U27	32+575.10 TO 32+604.00	LT						28.9										1																				
U28	32+546.80 TO 32+590.00	RT	0.6					43.2										1																				1
	TOTALS																	TOTALS	11		1	12		1		1					2	2	2		2	1
	TOTALS CARRIED TO SHEET NO. 140		22.2			163.1	13	1829.8	1797.5	52.6																												

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | | 670 | | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | | | 670 | | | | | | | | | | | FOR INFORMATION ONLY | | | | | | | | | | |

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | | 670 | | | | | | | | | |

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | | 670 | | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | FOR INFORMATION ONLY | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | | 670 | | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | |

UNDERDRAIN SUB-SUMMARY

CALCULATED EF | CHECKED REA

WYA/CRA-30-28.009/0.000

REF NO.	STATION	SIDE	603 100 MM CONDUIT, TYPE B (METER)	603 100 MM CONDUIT, TYPE F (METER)	603 150 MM CONDUIT, TYPE B (METER)	603 150 MM CONDUIT, TYPE F (METER)	604 PRECAST REINFORCED CONCRETE OUTLET (EACH)	605 100 MM SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 712.09 TYPE A (METER)	605 100 MM SHALLOW PIPE UNDERDRAIN (METER)	605 100 MM UNCLASSIFIED PIPE UNDERDRAIN (METER)	605 150 MM DEEP PIPE UNDERDRAIN (METER)	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN (METER)	605 AGGREGATE DRAIN (METER)	605 150 MM SHALLOW PIPE UNDERDRAIN, 707.31 (METER)	605 150 MM DEEP PIPE UNDERDRAIN, 707.31 (METER)	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN, 707.31 (METER)	670 DITCH EROSION PROTECTION (SQ M)	FOR INFORMATION ONLY (EACH) 100 MM PLUG	150 MM PLUG	100 MM X 100 MM TEE	100 MM X 150 MM TEE	150 MM X 150 MM TEE	100 MM X 100 MM CROSS	100 MM X 150 MM CROSS	150 MM X 150 MM CROSS	100 MM X 150 MM WYE	150 MM X 150 MM WYE	100 MM X 100 MM 22.5° BEND	100 MM X 150 MM 45° BEND	150 MM X 150 MM 45° BEND	100 MM X 150 MM 60° BEND	100 MM X 100 MM 90° BEND	100 MM X 150 MM 90° BEND	150 MM X 150 MM 90° BEND	UNDERDRAIN CONNECTION 1	UNDERDRAIN CONNECTION 2
	USR 30 CRA SHT. 251- 255																																			
U1	0+022.00 TO 0+082.00	LT			12.1	6.3				59.8								1				2										1	
U2	0+019.40 TO 0+082.00	LT & RT								35.1						27.9		1														1	
U3	0+019.40 TO 0+082.00	RT				6.9				35.2						27.7		1				1										1	
U4	0+008.00 TO 0+082.00	RT			7.2					74.3								1				1											
U5	0+082.00 TO 0+380.00	LT			2.4	11.2	1		247.1	49.8											2										1	
U6	0+082.00 TO 0+409.00	LT							276.9	50.0														1								
U7	0+082.00 TO 0+400.00					9.0			268.6	50.1											1											
U8	0+082.00 TO 0+380.00	RT				11.2	1		249.0	50.2											1										1	
U9	NOT USED																															
U10	NOT USED																															
U11	NOT USED																															
U12	NOT USED																															
U13	0+380.00 TO 0+530.00	LT				11.2	1		149.4												1										1	
U14	0+409.00 TO 0+740.00	LT				21.7			330.3												1						1					
U15	0+400.00 TO 0+749.00	RT				12.7			349.7															1								
U16	0+380.00 TO 0+530.00	RT				17.0	1		150.6												1											
U17	0+530 TO 0+680.00	LT				19.6	1		149.4								1.5				1										1	
U18	0+530.00 TO 0+680.00	RT				19.5	1		150.6												1										1	
U19	0+054.00 TO 0+082.00	LT						27.4																								
U20	0+54.35 TO 0+082.00	RT			2.4	6.6	1	27.8													2											
U21	0+082.00 TO 0+232.28	RT				6.6	1	149.6													1											
U22	0+082.00 TO 0+232.28	LT				6.6	1	150.6													1											
U23	0+082.00 TO 0+232.28	RT				6.6	1	150.6													1											
U24	0+082.00 TO 0+232.28	RT				6.6	1	150.9													1											
U25	0+232.28 TO 0+530.00	LT						147.1																								
U26	0+232.28 TO 0+380.00	LT				6.6	1	147.4													1											
U27	0+232.28 TO 0+380.00	RT				6.6	1	148.0													1											
U28	0+232.28 TO 0+380.00							148.4																								
U29	0+380.00 TO 0+530.00	LT						149.3																								
U30	0+380.00 TO 0+530.00	LT				6.6	1	149.7													1											
U31	0+380.00 TO 0+530.00	RT				6.6	1														1											
U32	0+380.00 TO 0+530.00	RT						150.7																								
U33	0+530.00 TO 0+680.00	LT						147.5																								
U34	0+530.00 TO 0+680.00	LT				6.6	1	149.7													1											
U35	0+530.00 TO 0+680.00	RT				6.6	1	150.3													1											
U36	0+530.00 TO 0+680.00	RT						146.0																							1	
U37	0+054.374 TO 0+082.00	LT						27.8																								
U38	0+054.374 TO 0+082.00	RT						27.7																								
	TOTALS																	4		21		4		2			1				8	
	TOTALS CARRIED TO SHEET NO. 140				24.1	218.9	17	2346.5	2321.6	404.5						55.6	1.5															

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | | 670 | | | | | | | | | | FOR INFORMATION ONLY | | | | | | | | | |

UNDERDRAIN SUB-SUMMARY

CALCULATED EF CHECKED REA

WYA/CRA-30-28.009/0.000

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | | 670 | | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | |

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | | 670 | | | | | | | | | | FOR INFORMATION ONLY | | | | | | | | | |

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | | 670 | | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | | 670 | | | | | | | | | | FOR INFORMATION ONLY | | | | | | | | | |

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

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2116

REF NO.	STATION	SIDE	603					604	605									670	FOR INFORMATION ONLY																											
			100 MM CONDUIT, TYPE B	100 MM CONDUIT, TYPE F	150 MM CONDUIT, TYPE B	150 MM CONDUIT, TYPE F		PRECAST REINFORCED CONCRETE OUTLET	100 MM SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 712.09 TYPE A	100 MM SHALLOW PIPE UNDERDRAIN	100 MM UNCLASSIFIED PIPE UNDERDRAIN	150 MM DEEP PIPE UNDERDRAIN	150 MM UNCLASSIFIED PIPE UNDERDRAIN	AGGREGATE DRAIN	150 MM SHALLOW PIPE UNDERDRAIN, 707.31	150 MM DEEP PIPE UNDERDRAIN, 707.31	150 MM UNCLASSIFIED PIPE UNDERDRAIN, 707.31	DITCH EROSION PROTECTION	100 MM PLUG	150 MM PLUG	100 MM X 100 MM TEE	100 MM X 150 MM TEE	150 MM X 150 MM TEE	100 MM X 100 MM CROSS	100 MM X 150 MM CROSS	150 MM X 150 MM CROSS	100 MM X 150 MM WYE	150 MM X 150 MM WYE	100 MM X 100 MM 22.5° BEND	100 MM X 150 MM 45° BEND	150 MM X 150 MM 45° BEND	100 MM X 150 MM 60° BEND	100 MM X 100 MM 90° BEND	100 MM X 150 MM 90° BEND	150 MM X 150 MM 90° BEND	UNDERDRAIN CONNECTION 1	UNDERDRAIN CONNECTION 2
			METER	METER	METER	METER		EACH	METER	METER	METER	METER	METER	METER	METER	METER	METER	SQ M	EACH																									
	USR 30 CRA. SHT. 290- 296																																										
U1	5+460.00 TO 5+640.00	LT				11.4		1		180.6											1																					
U2	5+460.00 TO 5+640.00	LT								180.4												1																				
U3	5+460.00 TO 5+640.00	LT	12.0							180.2											1																					
U4	5+460.00 TO 5+638.50	RT								178.3									1																							
U5	5+460.00 TO 5+638.50	RT				11.4		1		178.1								1.5	1																							
U6	5+640.00 TO 5+770.00	LT				21.2		1		130.5								1.5																						1	
U7	5+640.00 TO 5+770.00	LT	7.2							130.3															1														1	
U8	5+640.00 TO 5+770.00	LT				9.0				130.2												1																	1	
U9	5+641.50 TO 5+770.00	RT				12.7				120.8	7.5								1		1					1												1	
U10	5+641.50 TO 5+770.00	RT				17.8		1		128.2								1.5						1										1					
U11	5+770.00 TO 5+819.92	RT				22.2		1		209.6								1.5				1			1													1	
U12	5+770.00 TO 5+900.00	RT	7.2							129.8												1																	
U13	5+770.00 TO 5+900.00	LT	7.2							130.2												1																	
U14	5+770.00 TO 5+900.00	LT			11.8					130.3															1													1	
U15	5+770.00 TO 5+958.35	LT				23.2		1		189.6								1.5				1																	
U16	5+900.00 TO 6+140.00	RT				22.1		1		240.0								1.5							1													
U17	5+900.00 TO 6+295.00	RT				19.1		1		410.5								1.5				1																	
U18	5+900.00 TO 6+256.00	RT	10.8			12.7				355.7															1		1											1	
U19	5+900.00 TO 6+238.00	LT	14.4							356.3												1														1			
U20	5+900.00 TO 6+237.98	LT				10.3		1		338.5																													1	
U21	NOT USED																																							
U22	5+850.00 TO 5+900.00	RT	3.6			22.2		1	39.9		10.0							1.5																				1		1	
U23	5+498.00 TO 5+640.00	LT				6.6		1		142.5																															
U24	5+498.08 TO 5+640.00	LT				6.6		1		142.1																															
U25	5+498.08 TO 5+648.40	RT				6.6		1		150.1																															
U26	5+494.23 TO 5+641.50	RT								147.1																															
U27	5+640.00 TO 5+680.00	LT								40.2									1																						
U28	5+640.00 TO 5+770.00	LT				6.6		1		130.2												1																		
U29	5+648.40 TO 5+770.00	RT				6.6		1		121.5												1																		
U30	5+641.50 TO 5+770.00	RT								128.1																															
U31	5+770.00 TO 5+900.00	LT								130.4																															
U32	5+770.00 TO 5+900.00	LT								130.2												1																		
U33	5+770.00 TO 5+900.00	RT								129.8												1																		
U34	5+770.00 TO 5+900.00	RT								129.6																															
U35	5+900.00 TO 6+225.48	LT								326.3																															
U36	5+900.00 TO 6+256.60	LT				19.3		1		356.9																														1	
U37	5+900.00 TO 6+295.00	RT			0.6	6.6		1		394.8																														1	1
U38	6+059.89 TO 6+180.00	RT								120.0																															
	TOTALS		4		8	7		1	5		2			1		3	2		9																					
	TOTALS CARRIED TO SHEET NO. 140		62.4		12.4	274.2		17	2759.7	4028.1	17.5							12.0																						

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | | 670 | | | | | | | | | FOR INFORMATION ONLY | | | | | | | | | |

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

REF NO.	STATION	SIDE	603 100 MM CONDUIT, TYPE B (METER)	603 100 MM CONDUIT, TYPE F (METER)	603 150 MM CONDUIT, TYPE B (METER)	603 150 MM CONDUIT, TYPE F (METER)	604 PRECAST REINFORCED CONCRETE OUTLET (EACH)	605 100 MM SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 712.09 TYPE A (METER)	605 100 MM SHALLOW PIPE UNDERDRAIN (METER)	605 100 MM UNCLASSIFIED PIPE UNDERDRAIN (METER)	605 150 MM DEEP PIPE UNDERDRAIN (METER)	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN (METER)	605 AGGREGATE DRAIN (METER)	605 150 MM SHALLOW PIPE UNDERDRAIN, 707.31 (METER)	605 150 MM DEEP PIPE UNDERDRAIN, 707.31 (METER)	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN, 707.31 (METER)	670 DITCH EROSION PROTECTION (SQ M)
	RAMP A SHT. 985- 989																
U1	28+554.97 TO 28+707.56	RT							148.9	3.1							
U2	28+707.56 TO 28+860.00	RT				6.2	1			152.4							
U3	28+860.00 TO 29+082.02	RT				10.8	1		222.0								1.5
U4	29+082.02 TO 29+380.00	RT				47.6	2		298.0								3.0
U5	29+380.00 TO 29+538.69 US-30 EB	RT				14.9	1		158.7								1.5
	TOTALS CARRIED TO SHEET NO. 140					79.5	5		827.6	155.5							6.0
	TOTALS																

FOR INFORMATION ONLY (EACH)

REF NO.	100 MM PLUG	150 MM PLUG	100 MM X 100 MM TEE	100 MM X 150 MM TEE	150 MM X 150 MM TEE	100 MM X 100 MM CROSS	100 MM X 150 MM CROSS	150 MM X 150 MM CROSS	100 MM X 150 MM WYE	150 MM X 150 MM WYE	100 MM X 100 MM 22.5° BEND	100 MM X 150 MM 45° BEND	150 MM X 150 MM 45° BEND	100 MM X 150 MM 60° BEND	100 MM X 100 MM 90° BEND	100 MM X 150 MM 90° BEND	150 MM X 150 MM 90° BEND	UNDERDRAIN CONNECTION 1	UNDERDRAIN CONNECTION 2
U1	1		1																
U2																1			
U3	1		1																
U4			2																
U5			1															1	
TOTALS	2		5													1		1	

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

131
2116

REF NO.	STATION	SIDE	603 100 MM CONDUIT, TYPE B (METER)	603 100 MM CONDUIT, TYPE F (METER)	603 150 MM CONDUIT, TYPE B (METER)	603 150 MM CONDUIT, TYPE F (METER)	604 PRECAST REINFORCED CONCRETE OUTLET (EACH)	605 100 MM SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 712.09 TYPE A (METER)	605 100 MM SHALLOW PIPE UNDERDRAIN (METER)	605 100 MM UNCLASSIFIED PIPE UNDERDRAIN (METER)	605 150 MM DEEP PIPE UNDERDRAIN (METER)	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN (METER)	605 AGGREGATE DRAIN (METER)	605 150 MM SHALLOW PIPE UNDERDRAIN, 707.31 (METER)	605 150 MM DEEP PIPE UNDERDRAIN, 707.31 (METER)	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN, 707.31 (METER)	670 DITCH EROSION PROTECTION (SQ M)
	RAMP B (BACK) SHT. 992																
U1	28+118.14 TO 28+226.82	BL								108.7							
TOTALS CARRIED TO SHEET NO. 140										108.7							
TOTALS																	

FOR INFORMATION ONLY (EACH)	
100 MM PLUG	
150 MM PLUG	
100 MM X 100 MM TEE	
100 MM X 150 MM TEE	
150 MM X 150 MM TEE	
100 MM X 100 MM CROSS	
100 MM X 150 MM CROSS	
150 MM X 150 MM CROSS	
100 MM X 150 MM WYE	
150 MM X 150 MM WYE	
100 MM X 100 MM 22.5° BEND	
100 MM X 150 MM 45° BEND	
150 MM X 150 MM 45° BEND	
100 MM X 150 MM 60° BEND	
100 MM X 100 MM 90° BEND	
100 MM X 150 MM 90° BEND	
150 MM X 150 MM 90° BEND	
UNDERDRAIN CONNECTION 1	
UNDERDRAIN CONNECTION 2	
	1
TOTALS	1

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

WYA/CRA-30-28.009/0.000

REF NO.	STATION	SIDE	603 100 MM CONDUIT, TYPE B (METER)	603 100 MM CONDUIT, TYPE F (METER)	603 150 MM CONDUIT, TYPE B (METER)	603 150 MM CONDUIT, TYPE F (METER)	604 PRECAST REINFORCED CONCRETE OUTLET (EACH)	605 100 MM SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 712.09 TYPE A (METER)	605 100 MM SHALLOW PIPE UNDERDRAIN (METER)	605 100 MM UNCLASSIFIED PIPE UNDERDRAIN (METER)	605 150 MM DEEP PIPE UNDERDRAIN (METER)	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN (METER)	605 AGGREGATE DRAIN (METER)	605 150 MM SHALLOW PIPE UNDERDRAIN, 707.31 (METER)	605 150 MM DEEP PIPE UNDERDRAIN, 707.31 (METER)	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN, 707.31 (METER)	670 DITCH EROSION PROTECTION (SQ M)
	RAMP B (AHEAD) SHT. 995- 997																
U1	28+226.82 TO 28+335.76	RT				10.8	1		108.9								
U2	28+335.76 TO 28+485.76	RT				10.2	1		150.0								
U3	28+485.76 TO 28+670.00	RT				24.2	1		184.2								1.5
	TOTALS CARRIED TO SHEET NO. 140					45.2	3		443.1								1.5
	TOTALS																

FOR INFORMATION ONLY (EACH)	100 MM PLUG	150 MM PLUG	100 MM X 100 MM TEE	100 MM X 150 MM TEE	150 MM X 150 MM TEE	100 MM X 100 MM CROSS	100 MM X 150 MM CROSS	150 MM X 150 MM CROSS	100 MM X 150 MM WYE	150 MM X 150 MM WYE	100 MM X 100 MM 22.5° BEND	100 MM X 150 MM 45° BEND	150 MM X 150 MM 45° BEND	100 MM X 150 MM 60° BEND	100 MM X 100 MM 90° BEND	100 MM X 150 MM 90° BEND	150 MM X 150 MM 90° BEND	UNDERDRAIN CONNECTION 1	UNDERDRAIN CONNECTION 2
																	1		
				1															
	1			1															
TOTALS	1			2													1		

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

REF NO.	STATION	SIDE	603 100 MM CONDUIT, TYPE B (METER)	603 100 MM CONDUIT, TYPE F (METER)	603 150 MM CONDUIT, TYPE B (METER)	603 150 MM CONDUIT, TYPE F (METER)	604 PRECAST REINFORCED CONCRETE OUTLET (EACH)	605 100 MM SHALLOW PIPE UNDERDRAIN WITH FABRIC WRAP, 712.09 TYPE A (METER)	605 100 MM SHALLOW PIPE UNDERDRAIN (METER)	605 100 MM UNCLASSIFIED PIPE UNDERDRAIN (METER)	605 150 MM DEEP PIPE UNDERDRAIN (METER)	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN (METER)	605 AGGREGATE DRAIN (METER)	605 150 MM SHALLOW PIPE UNDERDRAIN, 707.31 (METER)	605 150 MM DEEP PIPE UNDERDRAIN, 707.31 (METER)	605 150 MM UNCLASSIFIED PIPE UNDERDRAIN, 707.31 (METER)	670 DITCH EROSION PROTECTION (SQ M)	FOR INFORMATION ONLY (EACH): 100 MM PLUG	150 MM PLUG	100 MM X 100 MM TEE	100 MM X 150 MM TEE	150 MM X 150 MM TEE	100 MM X 100 MM CROSS	100 MM X 150 MM CROSS	150 MM X 150 MM CROSS	100 MM X 150 MM WYE	150 MM X 150 MM WYE	100 MM X 100 MM 22.5° BEND	100 MM X 150 MM 45° BEND	150 MM X 150 MM 45° BEND	100 MM X 150 MM 60° BEND	100 MM X 100 MM 90° BEND	100 MM X 150 MM 90° BEND	150 MM X 150 MM 90° BEND	UNDERDRAIN CONNECTION 1	UNDERDRAIN CONNECTION 2
	RAMP B (AHEAD) SHT. 1001- 1003, 183																																		
U1	28+821.00 TO 29+035.76	RT				28.7	1		214.8									1			1														
U2	29+035.77 TO 29+154.96	LT/RT	6.5			25.4	1		119.2								1.5						1											1	
U3	29+154.96 TO 29+373.89	LT							218.9																										
U4	29+154.96 TO 29+373.90	LT/RT							218.9																										
	TOTALS		6.5			54.1	2		771.8								1.5	TOTALS 1			1			1										1	
	TOTALS CARRIED TO SHEET NO. 140		6.5			54.1	2		771.8								1.5																		

WYA/CRA-30-28.009/0.000

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | | 670 | | | FOR INFORMATION ONLY | | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | | 605 | | | | | | | | | | 670 | | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | |

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | |

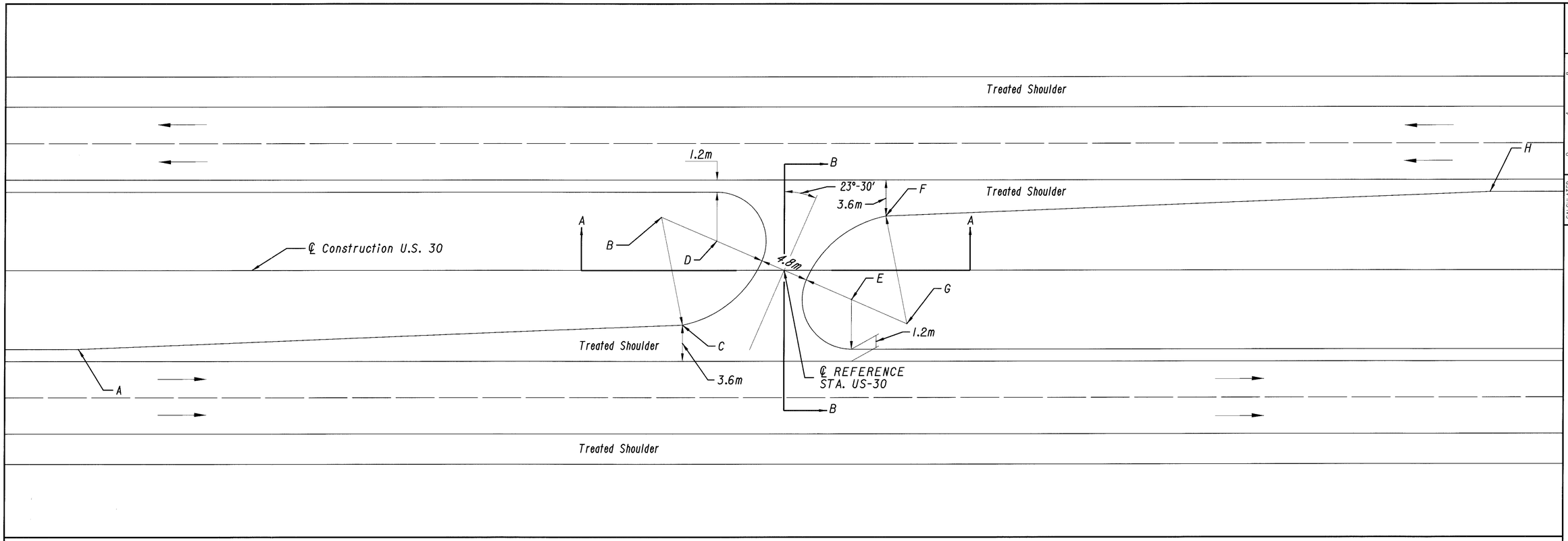
| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | 670 | | | | | | | | FOR INFORMATION ONLY | | | | | | | | |

UNDERDRAIN SUB-SUMMARY

CALCULATED EF
CHECKED REA

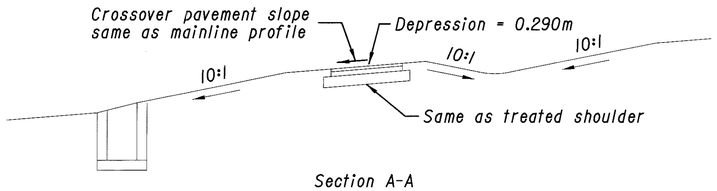
WYA/CRA-30-28.009/0.000

| REF NO. | STATION | SIDE | 603 | | | | | 604 | 605 | | | | | | | | | | 670 | | | | | | | | | | FOR INFORMATION ONLY | | | | | | | | | |

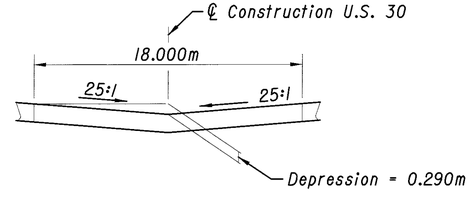


PROPOSED U-TURN LOCATION
STA. U.S. 30

REFERENCE STA. U.S. 30	BEGIN TAPER POINT A RIGHT	RADIUS 10.9m POINT B (OFFSET)	END TAPER POINT C RIGHT	RADIUS 4.9m POINT D (OFFSET)	RADIUS 4.9m POINT E (OFFSET)	BEGIN TAPER POINT F LEFT	RADIUS 10.9m POINT G (OFFSET)	END TAPER POINT H LEFT
30+350.000	30+280.003	30+337.781 (5.271m Lt.)	30+340.003	30+343.298 (2.900m Lt.)	30+356.697 (2.900m Rt.)	30+360.092	30+362.193 (5.296m Rt.)	30+420.092
32+560.000	32+489.915	32+547.798 (5.293m Lt.)	32+549.915	32+553.301 (2.900m Lt.)	32+566.699 (2.900m Rt.)	32+570.085	32+572.201 (5.292m Rt.)	32+630.085
35+550.000	35+479.915	35+537.798 (5.293m Lt.)	35+539.915	35+543.301 (2.900m Lt.)	35+556.699 (2.900m Rt.)	35+560.084	35+562.202 (2.900m Rt.)	35+620.084
36+520.000	36+449.865	36+507.811 (5.305m Lt.)	36+509.865	36+513.303 (2.900m Lt.)	36+526.701 (2.900m Rt.)	36+530.047	36+532.207 (5.284m Rt.)	36+590.047
38+860.000	38+789.963	38+847.785 (5.280m Lt.)	38+849.963	38+853.298 (2.900m Lt.)	38+866.697 (2.900m Rt.)	38+870.134	38+872.189 (5.305m Rt.)	38+930.134
2+006.000	1+935.916	1+993.984 (5.293m Lt.)	1+995.916	1+999.301 (2.900m Lt.)	2+012.699 (2.900m Rt.)	2+016.084	2+018.202 (5.292m Rt.)	2+076.084
4+930.000	4+859.885	4+917.806 (5.300m Lt.)	4+919.885	4+923.302 (2.900m Lt.)	4+936.701 (2.900m Rt.)	4+940.055	4+942.209 (5.290m Rt.)	5+000.055



Section A-A



Section B-B

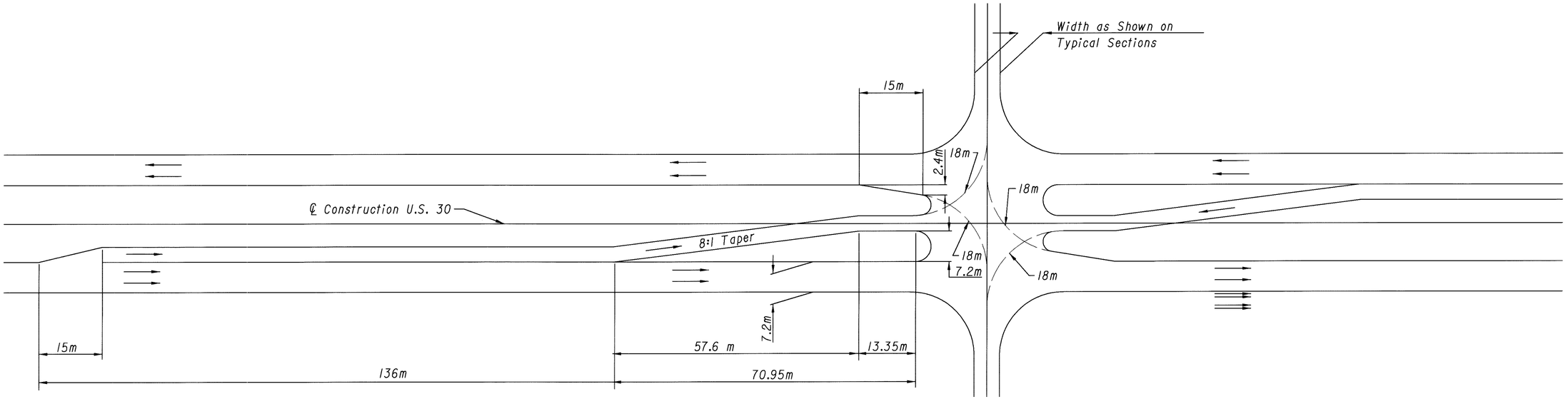
HORIZONTAL SCALE IN METERS
0 4 8

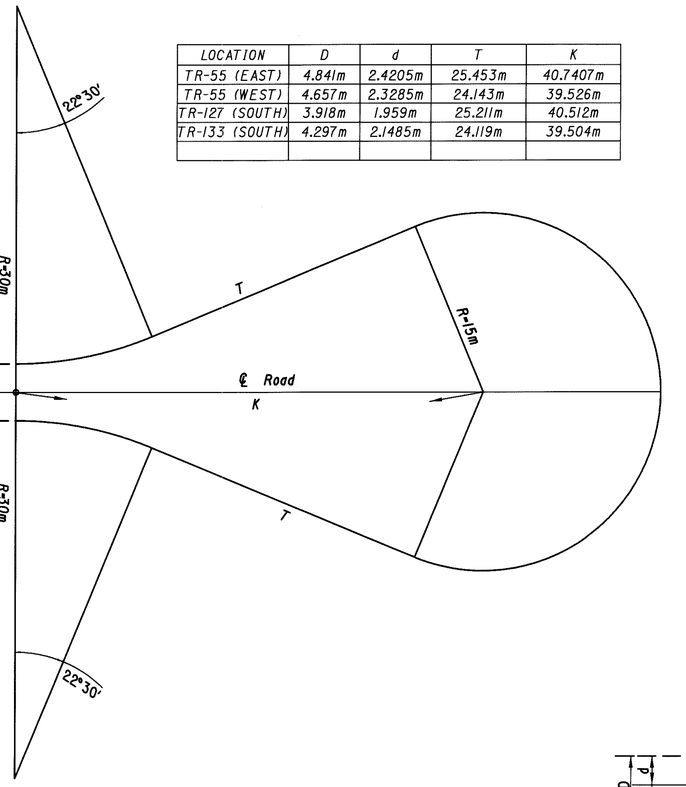
CALCULATED JGB
CHECKED REA

TYPICAL CROSSOVER DESIGN AND DATA

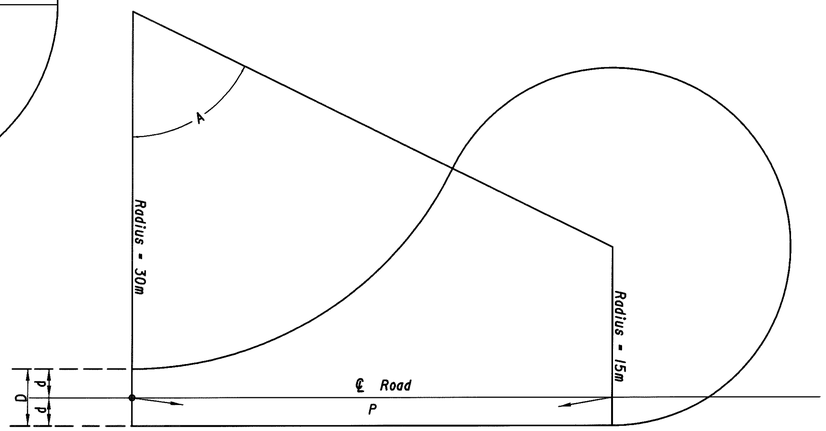
WYA/CRA-30-28.009/0.000

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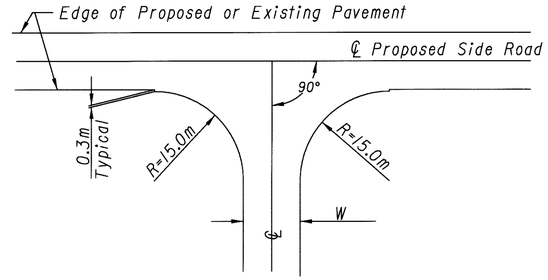




LOCATION	D	d	T	K
TR-55 (EAST)	4.841m	2.4205m	25.453m	40.7407m
TR-55 (WEST)	4.657m	2.3285m	24.143m	39.526m
TR-127 (SOUTH)	3.918m	1.959m	25.211m	40.512m
TR-133 (SOUTH)	4.297m	2.1485m	24.119m	39.504m



LOCATION	D	d	P	A
TR-127 (NORTH)	3.283m	1.6415m	41.279m	66°18'20.04"
TR-133 (NORTH)	4.365m	2.1825m	40.719m	64°40'35.29"



Service Roads 1, 3, 11	W= 4.6m
Service Roads 6, 12	W= 3.0m
Service Access 14, 17	W= 4.6m
Service Access 20	W= 6.0m

TYPICAL INTERSECTION FOR
SERVICE ROADS AND SERVICE ACCESS

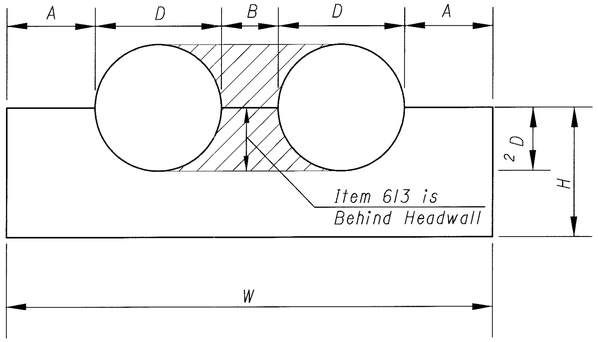
HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED AEA

MISCELLANEOUS DETAILS
TYPICAL CUL-DE-SAC, ACCESS RD. & LEFT TURN LANE DETAIL

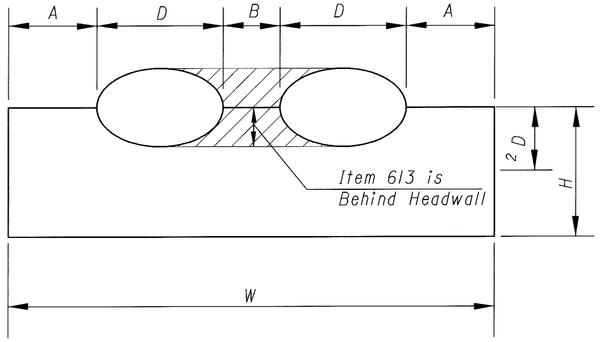
WYA/CRA-30-28.009/0.00

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HEADWALL FOR TWIN CIRCULAR PIPES

D mm	A mm	B mm	W mm	H mm	T mm	CONC. m^3
600	300	300	2100	1075	300	0.68
1500	825	900	5550	1675	400	3.25
1800	1050	900	6600	1825	450	4.52
1950	1163	900	7126	1900	500	5.42
2100	1275	900	7650	1975	550	6.42
2250	1388	900	8176	2050	550	7.12

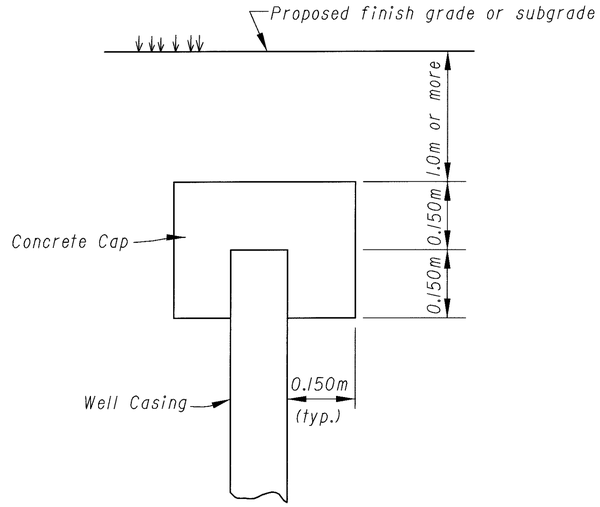


HEADWALL FOR TWIN ELLIPTICAL PIPES

D Span mm	D Rise mm	A mm	B mm	W mm	H mm	T mm	CONC. m^3
850	550	175	300	2350	1050	300	0.74
950	600	213	300	2626	1075	300	0.85

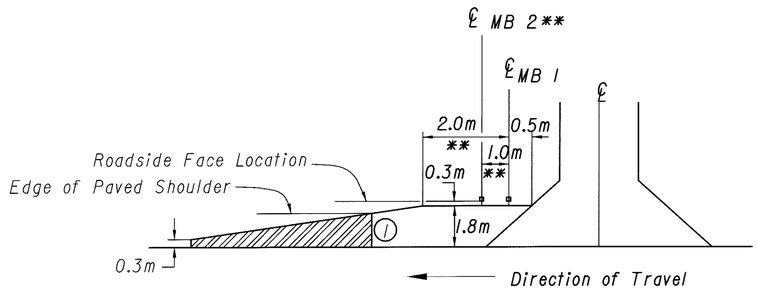
For Dimensions and Details not Shown
See Std. Drawing HW-2.1M AND HW2.2M

Item 613 Low Strength Morter Backfill (When Specified)

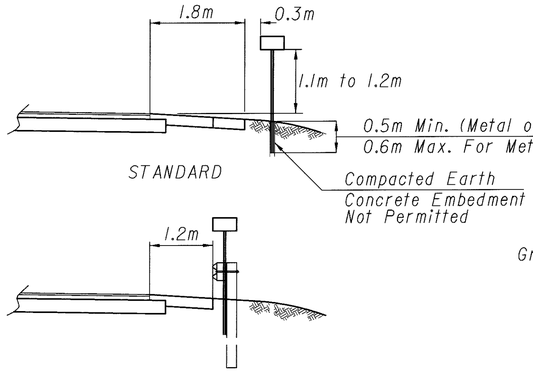


Note: The contractor may weld a cap on the casing or other approved method in lieu of using the concrete cap as shown.

WATER WELL CAP DETAIL



DRIVE WITH MAIL BOX APPROACH

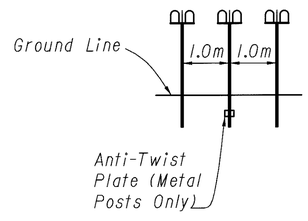


MAIL BOX TURNOUT DETAILS

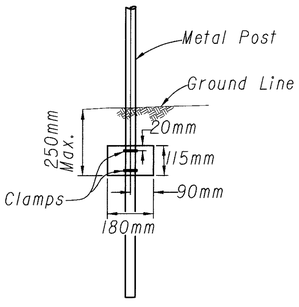
(1) End Mail Box Turnout at edge of paved shoulder or 0.3m whichever is greater

** Add 1.0m for each additional Mail Box

See Std. Dwg BP-4.1M for additional details not shown



GROUPED MAILBOX INSTALLATION



ANTI-TWIST PLATE

MISCELLANEOUS DETAILS - TWIN HEADWALLS

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MATCH LINE
Sta. 0+600.000

℄ CONSTR. CR-56

MATCH LINE
Sta. 0+600.000

℄ CONSTR. CR-56

℄ CONSTR. CR-60

℄ CONSTR. RAMP B

℄ ROW US-23

MATCH LINE STA. 13+500

MATCH LINE STA. 28+800

℄ CONSTR. RAMP A

℄ CONSTR.
EBUS-30

℄ CONSTR. WBUS-30

℄ CONSTR.
DETENTION BASIN

MATCH LINE
STA. 29+300

MATCH LINE
STA. 29+300

HORIZONTAL
SCALE IN METERS

0 40 80

CALCULATED AM

CHECKED REA

CROSS SECTION LAYOUT
US-23, EBUS-30, WBUS-30, RAMP A, RAMP B, US-30

WYA/CRA-30-28.009/0.000

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N

0 40 80
HORIZONTAL
SCALE IN METERS

CALCULATED AM
CHECKED REA

CROSS SECTION LAYOUT
US-23, EBUS-30, WBUS-30

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MATCH LINE STA. 29+300

℄ CONSTR. US-30

℄ CONSTR. EBUS-30

℄ CONSTR. TR-124

℄ CONSTR. RAMP A

MATCH LINE STA. 29+300

29+300

29+400

29+500

29+500

29+600

30+500

1+300

1+200

1+100

1+000

0+900

0+800

0+700

0+600

0+500

009+1

N

0 40 80

HORIZONTAL SCALE IN METERS

CALCULATED AM

CHECKED REA

CROSS SECTION LAYOUT EBUS-30, RAMP A, US-30

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℄ CONSTR. RAMP F
℄ CONSTR. RAMP G
℄ CONSTR. RAMP I
℄ CONSTR. US-30
℄ CONSTR. RAMP J
℄ CONSTR. RAMP E
℄ CONSTR. RAMP H

33+600
33+700
33+800
33+900
34+000
34+100
34+200
34+300
34+400
34+500
34+600
34+700

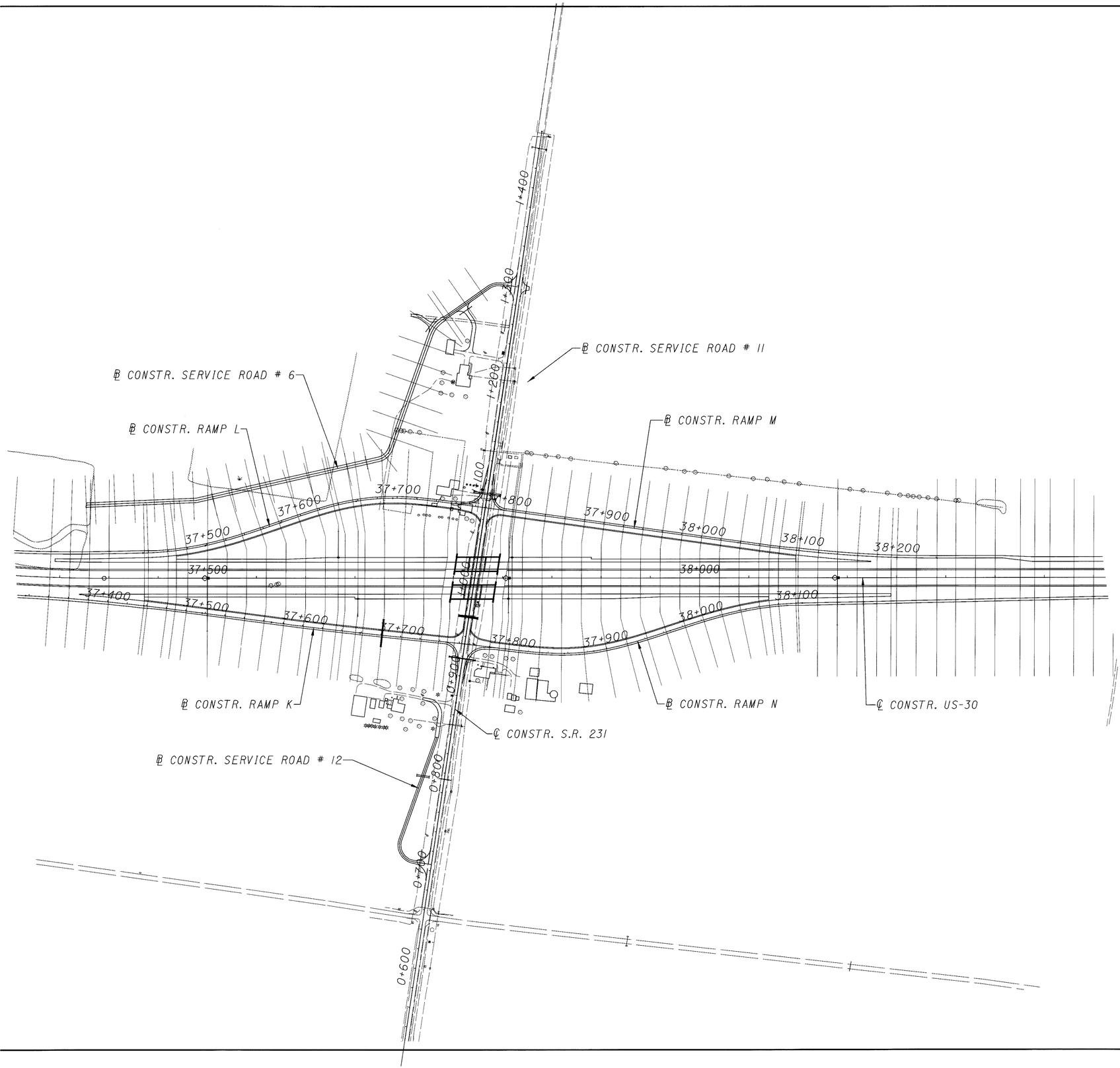
HORIZONTAL SCALE IN METERS
0 40 80

CALCULATED AM
CHECKED REA

CROSS SECTION LAYOUT
US-30, RAMP E, RAMP F, RAMP G, RAMP H, RAMP I, RAMP J

WYA/CRA-30-28.009/0.000

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N

0 40 80

HORIZONTAL
SCALE IN METERS

CALCULATED | CHECKED

CROSS SECTION LAYOUT
US-30, RAMP K, RAMP L, RAMP M, RAMP N, SERVICE ROAD # 6

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℄ CONSTR. CR-22

℄ CONSTR. SERVICE ACCESS # 20

℄ CONSTR. RAMP P

℄ CONSTR. US-30

℄ CONSTR. CR-330

℄ CONSTR. RAMP O

1+300
1+200
1+100
1+000
0+900
0+800
0+700
0+600
0+500
5+500
5+700
5+800
5+900
6+000
6+100
6+200
6+300
6+400
6+500

N

0 40 80
HORIZONTAL SCALE IN METERS

CALCULATED AW
CHECKED REA

CROSS SECTION LAYOUT
US-30, RAMP O, RAMP P, CR-330

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PROJECT DATA

Total area (Right-of-Way)	283 Ha
Area to Undergo Excavation, Filling or Grading	253 Ha
Runoff Coefficient for Pre-Construction Site	0.3-0.7
Runoff Coefficient for Post-Construction Site	0.5
Soil Data	See Soil Profile
Immediate Receiving Water	Broken Sword Creek
Subsequent Receiving Water	Sandusky River

LEGEND

- Pavement Inlets (Curb Inlet Protection 6m Ea.)
- Catch Basin (Inlet Filter Barrier 12m Ea.)
- Filter Fabric Ditch Check
- Rock Check Dam
- FF — Filter Fabric Fence
- Sediment Basin

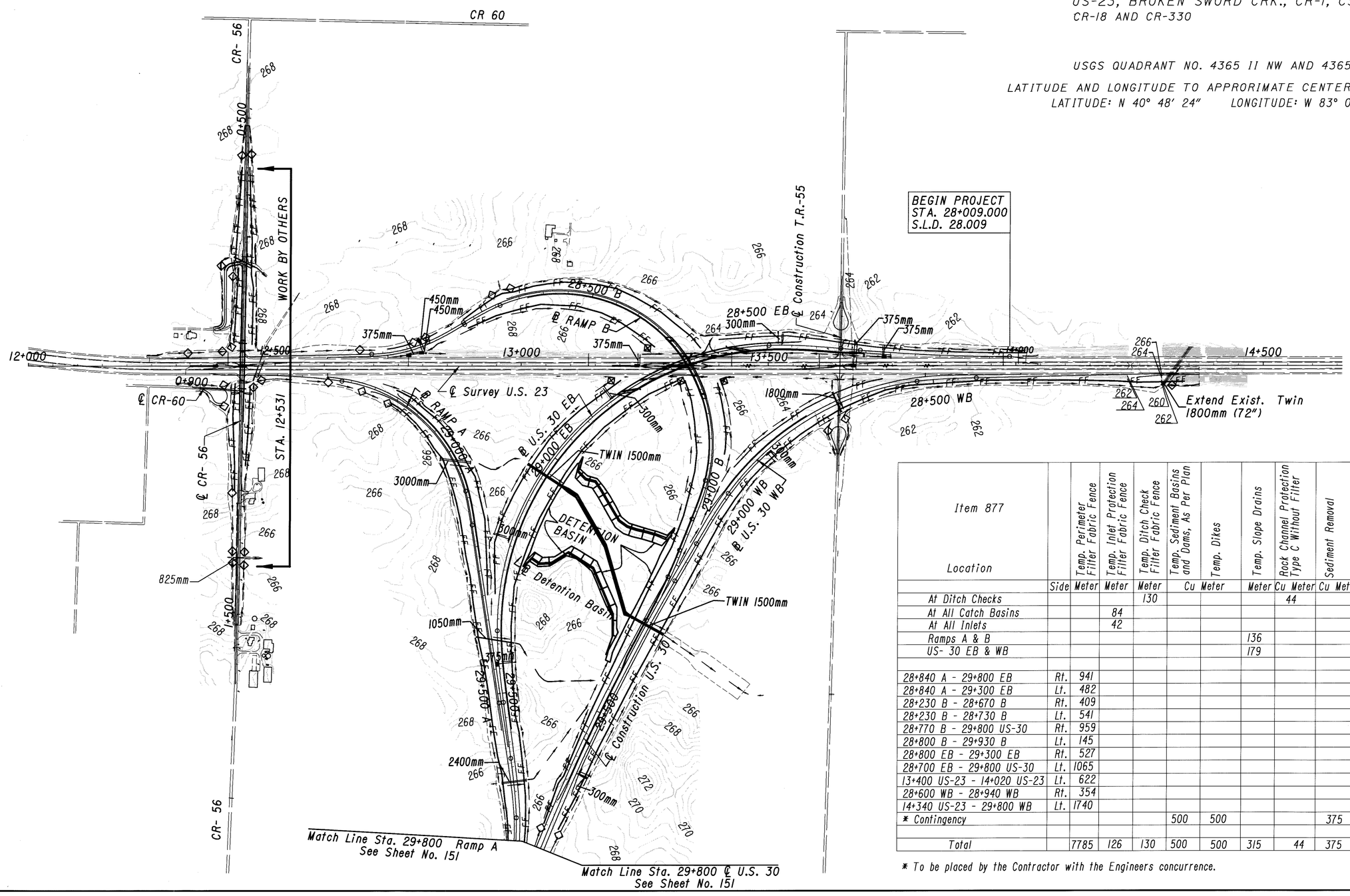
PROJECT DESCRIPTION

CONSTRUCTION OF A NEW 17.9 KM EXPRESSWAY FROM US-23 TO CONNECT INTO THE BUCYRUS BYPASS. THE NEW CONSTRUCTION INCLUDES TWO REST AREAS AND INTERCHANGES WITH EXISTING US-23 AND SR-231 AND COMPLETION (ADD TWO RAMPS) OF AN INTERCHANGE WITH EXISTING US-30.

CONSTRUCTION OF STRUCTURES: NEW US-30 OVER: US-23, BROKEN SWORD CRK., CR-1, CSX, CR-18 AND CR-330

USGS QUADRANT NO. 4365 II NW AND 4365 II NE

LATITUDE AND LONGITUDE TO APPRORIMATE CENTER OF PROJECT
LATITUDE: N 40° 48′ 24″ LONGITUDE: W 83° 07′ 30″



Item 877 / Location	Side	Temp. Perimeter Filter Fabric Fence Meter	Temp. Inlet Protection Filter Fabric Fence Meter	Temp. Ditch Check Filter Fabric Fence Meter	Temp. Sediment Basins and Dams, As Per Plan Cu Meter	Temp. Dikes Cu Meter	Temp. Slope Drains Meter	Rock Channel Protection Type C Without Filter Cu Meter	Sediment Removal Cu Meter
At Ditch Checks				130				44	
At All Catch Basins			84						
At All Inlets			42						
Ramps A & B							136		
US- 30 EB & WB							179		
28+840 A - 29+800 EB	Rt.	941							
28+840 A - 29+300 EB	Lt.	482							
28+230 B - 28+670 B	Rt.	409							
28+230 B - 28+730 B	Lt.	541							
28+770 B - 29+800 US-30	Rt.	959							
28+800 B - 29+930 B	Lt.	145							
28+800 EB - 29+300 EB	Rt.	527							
28+700 EB - 29+800 US-30	Lt.	1065							
13+400 US-23 - 14+020 US-23	Lt.	622							
28+600 WB - 28+940 WB	Rt.	354							
14+340 US-23 - 29+800 WB	Lt.	1740							
* Contingency					500	500			375
Total		7785	126	130	500	500	315	44	375

* To be placed by the Contractor with the Engineers concurrence.

HORIZONTAL SCALE IN METERS 0 80 160

CALCULATED JGB CHECKED REA

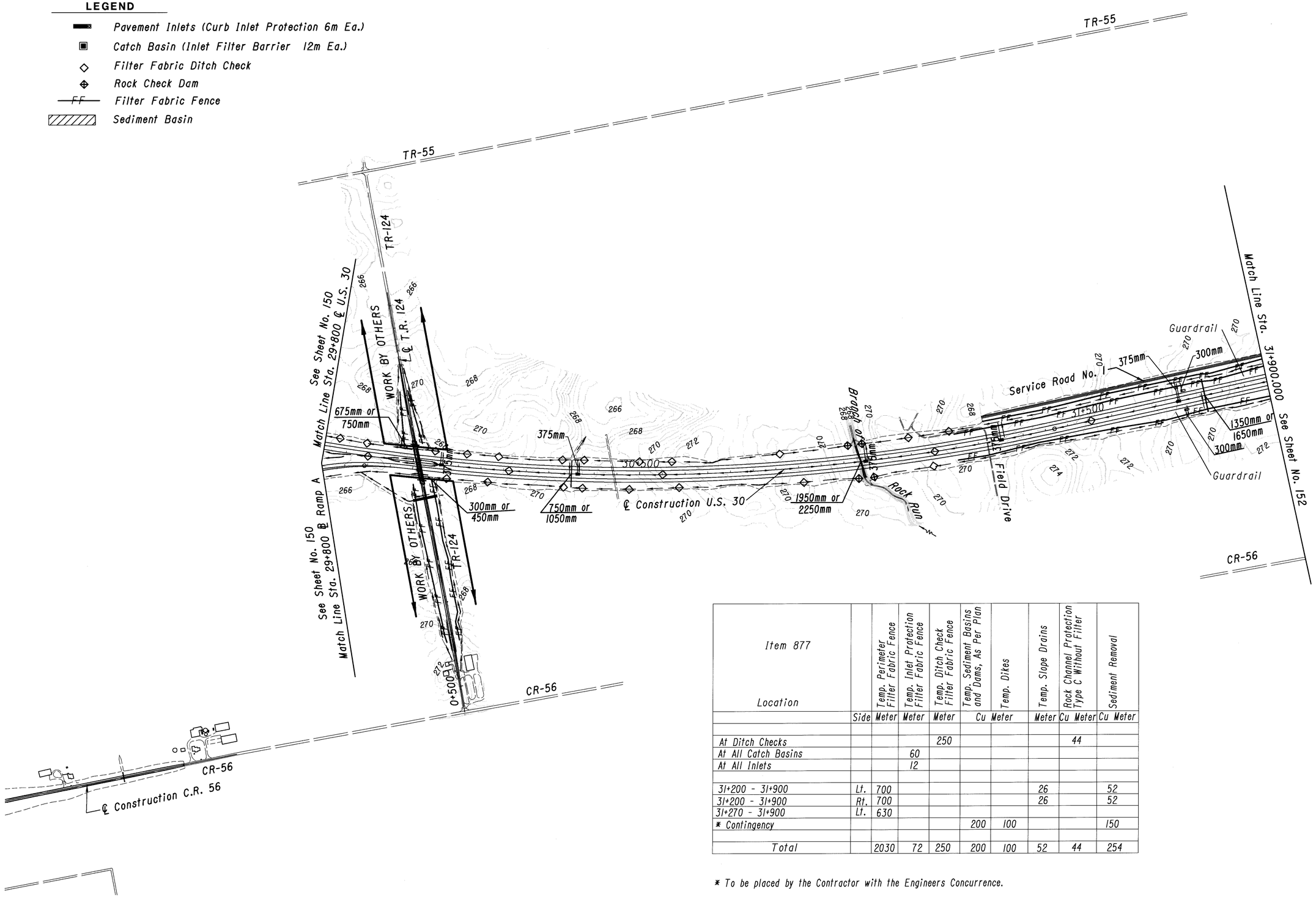
STORM WATER POLLUTION PREVENTION PLAN
STA. 28+009 TO STA. 29+800

WYA/CRA-30-28.009/0.000

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LEGEND

- Pavement Inlets (Curb Inlet Protection 6m Ea.)
- Catch Basin (Inlet Filter Barrier 12m Ea.)
- Filter Fabric Ditch Check
- Rock Check Dam
- FF — Filter Fabric Fence
- Sediment Basin



Item 877 Location	Side	Temp. Perimeter Filter Fabric Fence Meter	Temp. Inlet Protection Filter Fabric Fence Meter	Temp. Ditch Check Filter Fabric Fence Meter	Temp. Sediment Basins and Dams, As Per Plan Cu Meter	Temp. Dikes Cu Meter	Temp. Slope Drains Meter	Rock Channel Protection Type C Without Filter Cu Meter	Sediment Removal Cu Meter
At Ditch Checks				250				44	
At All Catch Basins			60						
At All Inlets			12						
31+200 - 31+900	Lt.	700					26		52
31+200 - 31+900	Rt.	700					26		52
31+270 - 31+900	Lt.	630							
* Contingency					200	100			150
Total		2030	72	250	200	100	52	44	254

* To be placed by the Contractor with the Engineers Concurrence.

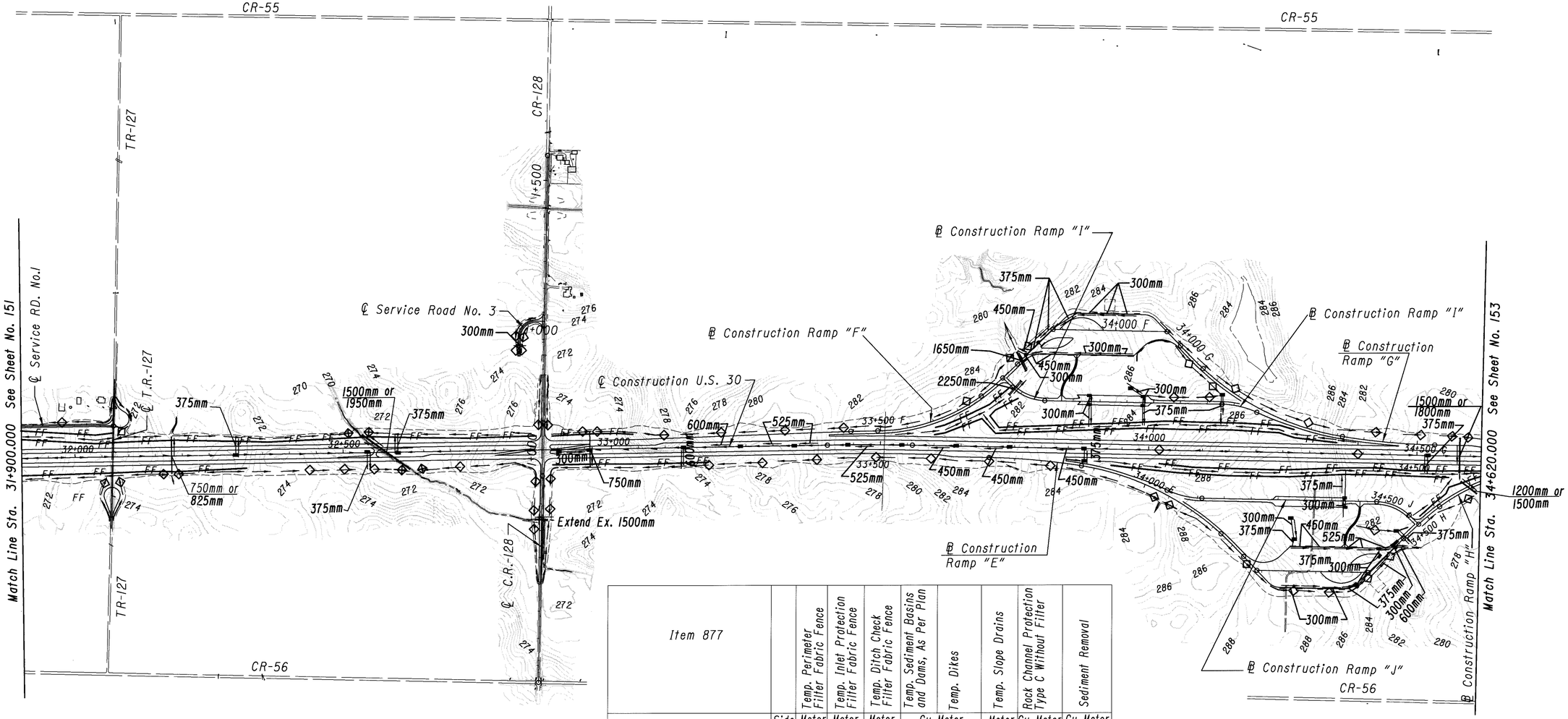
HORIZONTAL SCALE IN METERS
0 80 160

CALCULATED JGB
CHECKED REA

STORM WATER POLLUTION PREVENTION PLAN
STA. 29+800 TO STA. 31+900

WYA/CRA-30-28.009/0.000

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LEGEND

- Pavement Inlets (Curb Inlet Protection 6m Ea.)
- Catch Basin (Inlet Filter Barrier 12m Ea.)
- Filter Fabric Ditch Check
- Rock Check Dam
- FF — Filter Fabric Fence
- Sediment Basin

Item 877		Temp. Perimeter Filter Fabric Fence	Temp. Inlet Protection Filter Fabric Fence	Temp. Ditch Check Filter Fabric Fence	Temp. Sediment Basins and Dams, As Per Plan	Temp. Dikes	Temp. Slope Drains	Rock Channel Protection Type C Without Filter	Sediment Removal
	Side	Meter	Meter	Meter	Cu Meter		Meter	Cu Meter	Cu Meter
At Ditch Checks				290				44	
At All Catch Basins			240						
At All Inlets			192						
31+900 - 32+070	Lt.	171							
31+900 - 32+860	Lt.	961							
31+900 - 32+320	Rt.	66							
32+890 - 33+040	Lt.	150							
32+900 - 33+180	Rt.	290							
33+600 - 34+350	Lt.	769							
34+020 - 34+620	Rt.	601							
33+930 - 34+560	Rt.	631							
33+600 F - 33+755 I	Rt.	158							
34+750I - 34+270 G	Rt.	641							
34+490 H - 34+620	Rt.	180							
31+900 - 34620							43		212
* Contingency					470	200			350
Total		4618	432	290	470	200	43	44	562

* To be placed By The Contractor with the Engineers Concurrence.

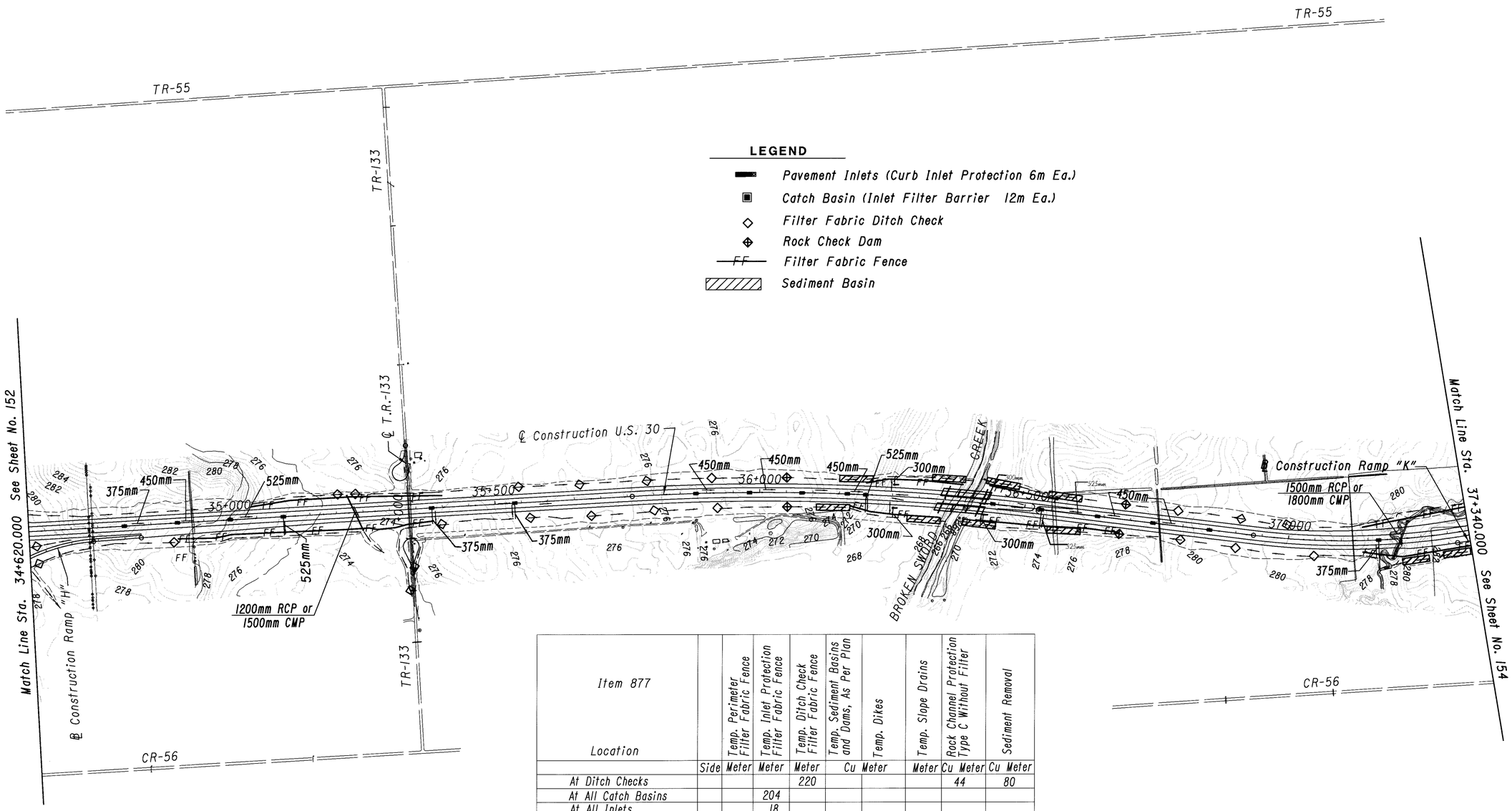
HORIZONTAL SCALE IN METERS
0 80 160

CALCULATED JGB
CHECKED REA

STORM WATER POLLUTION PREVENTION PLAN
STA. 31+900 TO STA. 34+620

WYA/CRA-30-28.009/0.000

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Item 877 Location		Temp. Perimeter Filter Fabric Fence	Temp. Inlet Protection Filter Fabric Fence	Temp. Ditch Check Filter Fabric Fence	Temp. Sediment Basins and Dams, As Per Plan	Temp. Dikes	Temp. Slope Drains	Rock Channel Protection Type C Without Filter	Sediment Removal
	Side	Meter	Meter	Meter	Cu Meter		Meter	Cu Meter	Cu Meter
At Ditch Checks				220				44	80
At All Catch Basins			204						
At All Inlets			18						
34+620 - 37+340							54		
34+900 - 35+380	Rt.	482							
35+040 - 35+400	Lt.	361							
36+170 - 36+340	Rt.	170							
36+200 - 36+380	Lt.	182							
36+430 - 36+560	Lt.	131							
36+410 - 36+680	Rt.	269							
37+140 - 37+340	Lt.	196							
37+140 - 37+340	Rt.	205							
36+180 & 36+350	Lt.				2866				2150
36+140 & 36+310	Rt.				1949				1460
36+450 & 36+573	Lt.				1286				960
36+416 & 36+578	Rt.				1848				1390
37+236 7 37+313	Rt.				2352				1764
* Contingency						200			
Total		2438	222	220	10301	200	54	44	7724

* To be placed by The Contractor with the Engineers concurrence.

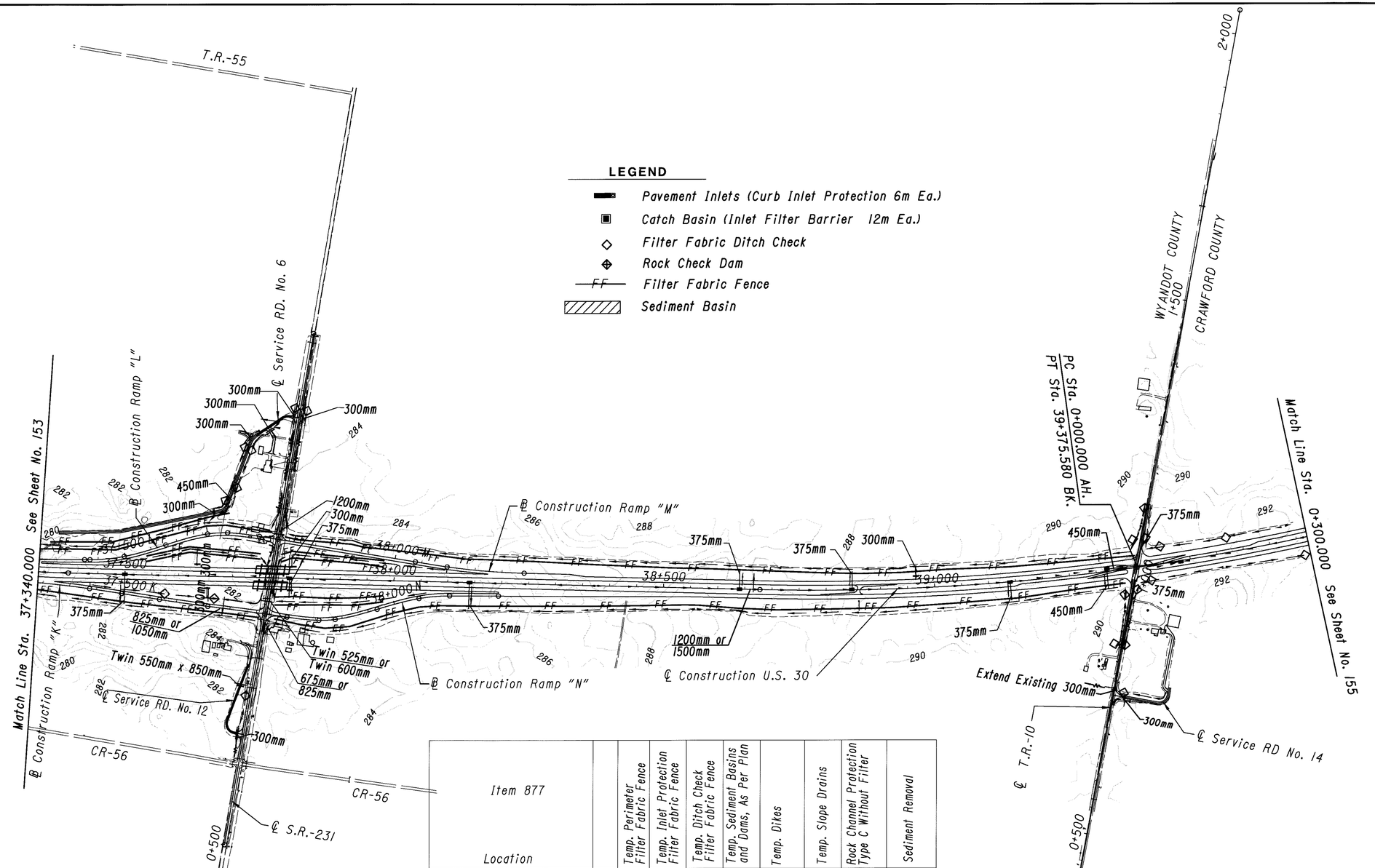
HORIZONTAL SCALE IN METERS
0 80 160

CALCULATED JGB
CHECKED REA

STORM WATER POLLUTION PREVENTION PLAN
STA. 34+620 TO STA. 37+340

WYA/CRA-30-28.009/0.000

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Item 877 Location		Temp. Perimeter Filter Fabric Fence	Temp. Inlet Protection Filter Fabric Fence	Temp. Ditch Check Filter Fabric Fence	Temp. Sediment Basins and Dams, As Per Plan	Temp. Dikes	Temp. Slope Drains	Rock Channel Protection Type C Without Filter	Sediment Removal
	Side	Meter	Meter	Meter	Cu Meter		Meter	Cu Meter	Cu Meter
At Ditch Checks				200				44	88
At All Catch Basins			96						
At All Inlets			30						
37+340 -37+770							159		
37+340 -37+770	Lt.	436							
37+340 - 37+746	Rt.	414							
37+365 - 37+690	Lt.	336							
37+540 - 37+750	Lt.	213							
37+540 - 37+750	Lt.	213							
37+796 M - 37+374	Lt.	1576							
37+790 - 37+980	Lt.	192							
37+790 - 37+980	Lt.	192							
37+780 - 37+980	Rt.	200							
37+780 - 37+980	Rt.	200							
37+780N - 39+350	Rt.	1503							
* Contingency					336	200			252
Total		5475	126	200	336	200	159	44	340

* To be placed by the Contractor with the Engineers concurrence. Engineer

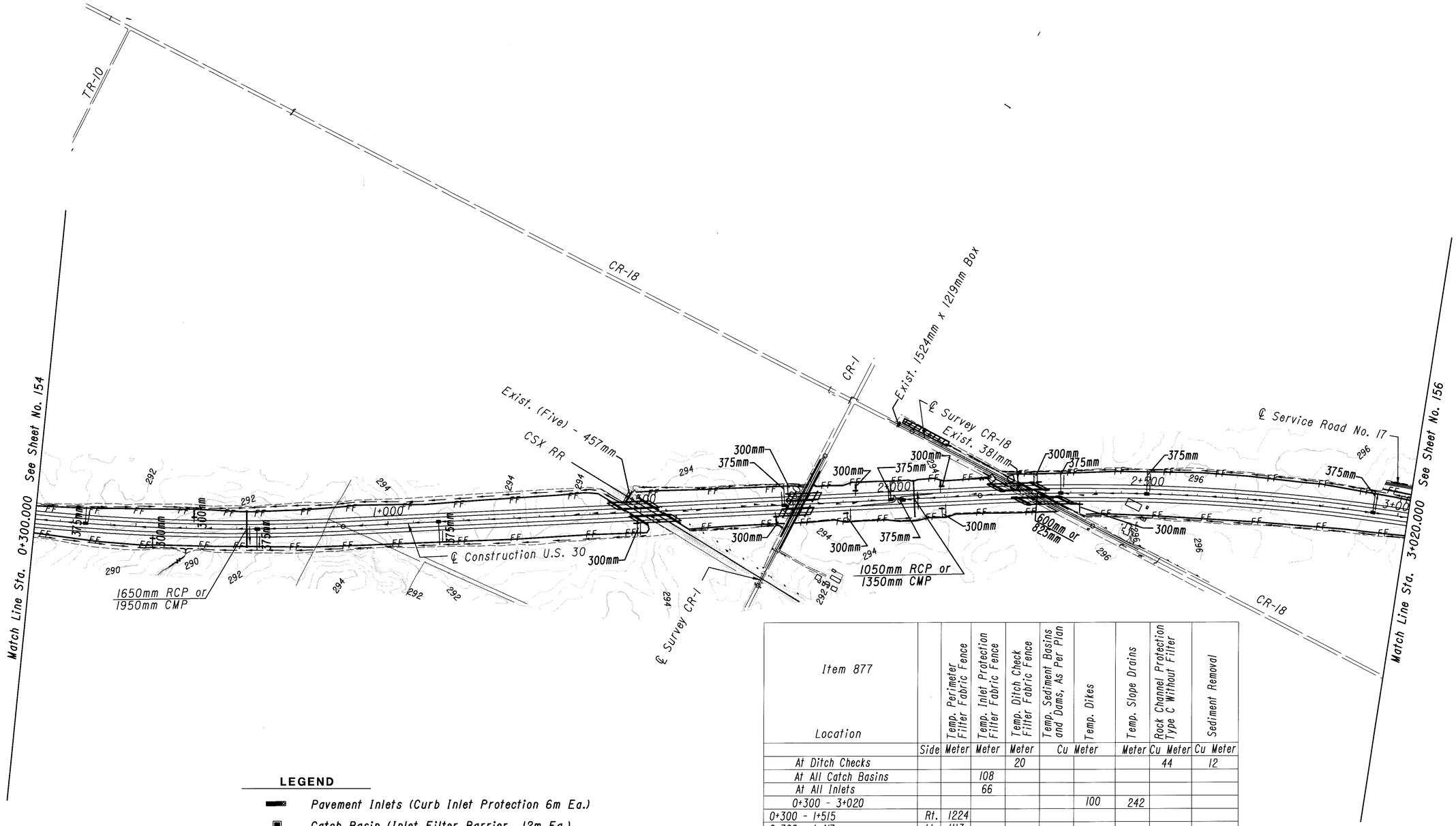
HORIZONTAL SCALE IN METERS
0 80 160

CALCULATED JGB
CHECKED REA

STORM WATER POLLUTION PREVENTION PLAN
STA. 37+340 TO STA. 0+300

WYA/CRA-30-28.009/0.000

154
2116



LEGEND

- Pavement Inlets (Curb Inlet Protection 6m Ea.)
- Catch Basin (Inlet Filter Barrier 12m Ea.)
- Filter Fabric Ditch Check
- Rock Check Dam
- FF — Filter Fabric Fence
- Sediment Basin

Item 877 / Location	Side	Temp. Perimeter Filter Fabric Fence Meter	Temp. Inlet Protection Filter Fabric Fence Meter	Temp. Ditch Check Filter Fabric Fence Meter	Temp. Sediment Basins and Dams, As Per Plan Cu Meter	Temp. Dikes Cu Meter	Temp. Slope Drains Meter	Rock Channel Protection Type C Without Filter Cu Meter	Sediment Removal Cu Meter
At Ditch Checks				20				44	12
At All Catch Basins			108						
At All Inlets			66						
0+300 - 3+020						100	242		
0+300 - 1+515	Rt.	1224							
0+300 - 1+417	Lt.	1113							
1+593 - 1+782	Rt.	189							
1+493 - 1+823	Lt.	330							
1+803 - 2+318	Rt.	516							
1+844 - 2+187	Lt.	347							
2+380 - 3+020	Rt.	633							
2+225 - 3+020	Lt.	803							
2+964 - 3+020	Lt.	57							
CR-1		340							
CR-18					1260				945
*Contingency				20					
Total		5552	174	40	1260	100	242	44	957

* To be placed by the Contractor with the Engineers concurrence.

HORIZONTAL SCALE IN METERS
0 80 160

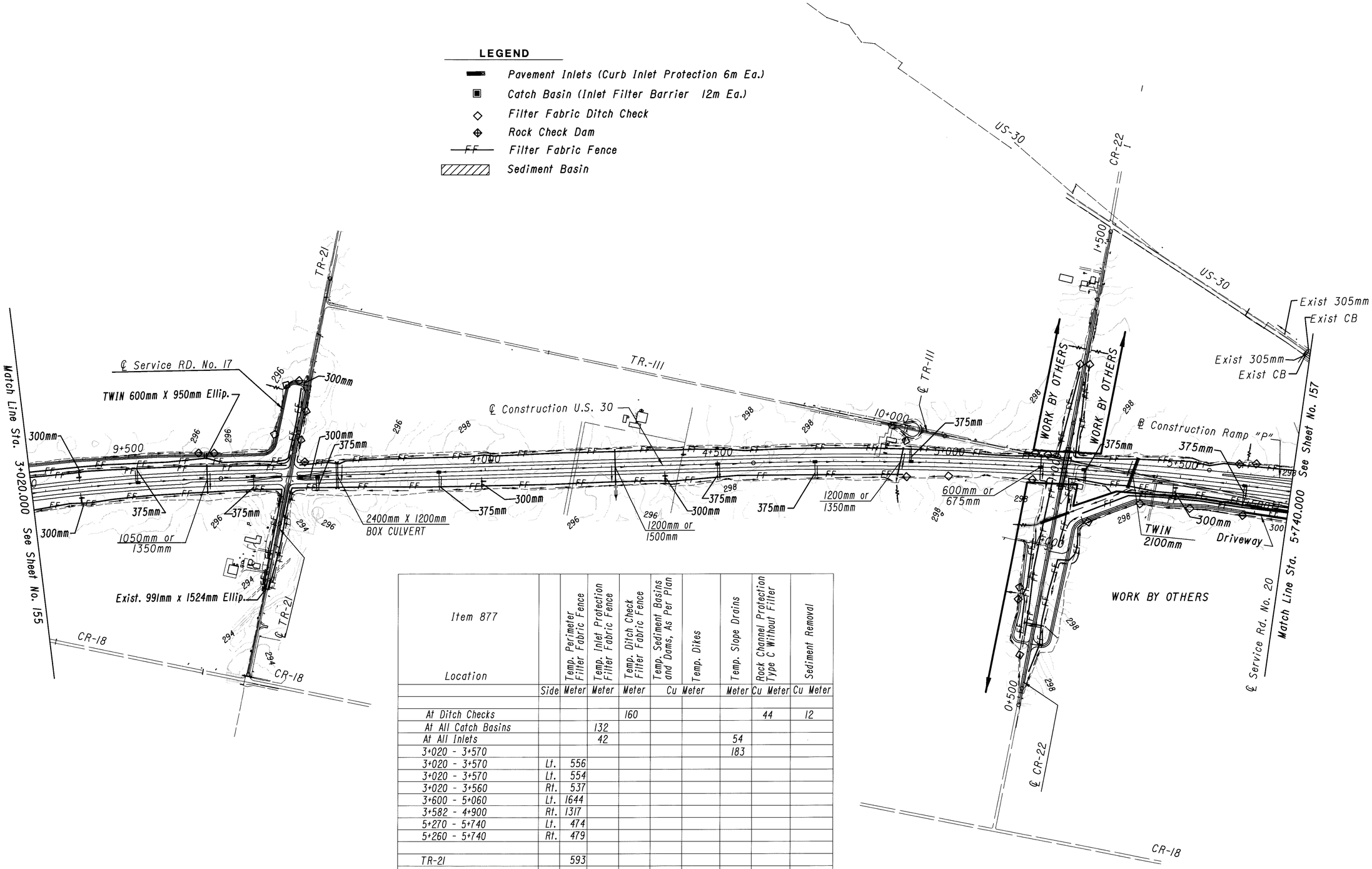
CALCULATED JGB
CHECKED REA

STORM WATER POLLUTION PREVENTION PLAN
STA. 0+300 TO STA. 3+020

WYA/CRA-30-28.009/0.000

LEGEND

- Pavement Inlets (Curb Inlet Protection 6m Ea.)
- Catch Basin (Inlet Filter Barrier 12m Ea.)
- Filter Fabric Ditch Check
- Rock Check Dam
- FF — Filter Fabric Fence
- Sediment Basin



Item 877 Location		Temp. Perimeter Filter Fence	Temp. Inlet Protection Filter Fabric Fence	Temp. Ditch Check Filter Fabric Fence	Temp. Sediment Basins and Dams, As Per Plan	Temp. Dikes	Temp. Slope Drains	Rock Channel Protection Type C Without Filter	Sediment Removal
	Side	Meter	Meter	Meter	Cu Meter		Meter	Cu Meter	Cu Meter
At Ditch Checks				160				44	12
At All Catch Basins			132						
At All Inlets			42				54		
3+020 - 3+570							183		
3+020 - 3+570	Lt.	556							
3+020 - 3+570	Lt.	554							
3+020 - 3+560	Rt.	537							
3+600 - 5+060	Lt.	1644							
3+582 - 4+900	Rt.	1317							
5+270 - 5+740	Lt.	474							
5+260 - 5+740	Rt.	479							
TR-21		593							
* Contingency					840	200			630
Total		6154	174	160	840	200	237	44	642

* To be placed by the Contractor with the Engineers concurrence.

HORIZONTAL SCALE IN METERS
0 80 160

CALCULATED JGB
CHECKED REA

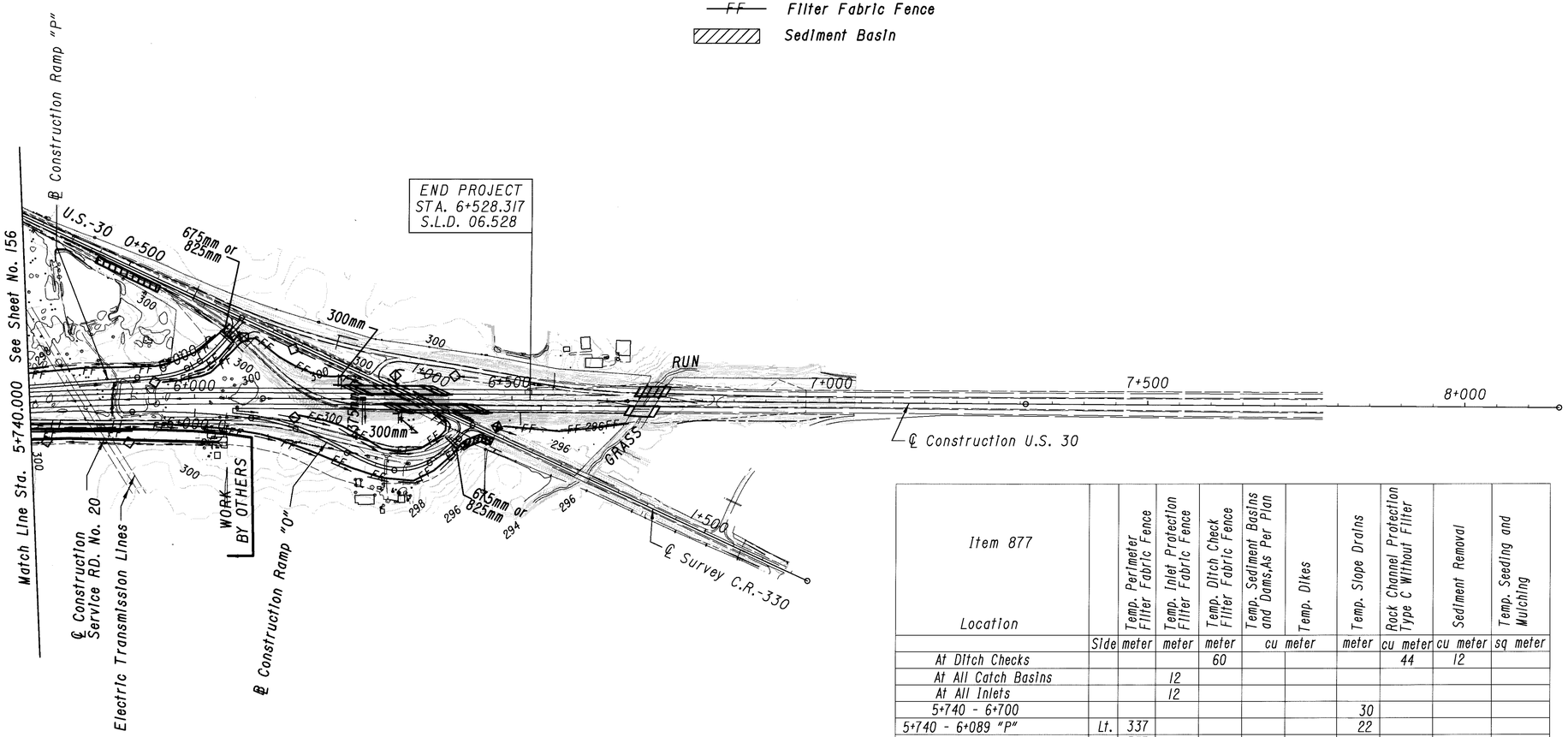
STORM WATER POLLUTION PREVENTION PLAN
STA. 3+020 TO STA. 5+740

WYA/CRA-30-28.009/0.000

156
2116

LEGEND

- Pavement Inlets (Curb Inlet Protection 6m Ea.)
- Catch Basin (Inlet Filter Barrier 12m Ea.)
- Filter Fabric Ditch Check
- Rock Check Dam
- FF — Filter Fabric Fence
- Sediment Basin



Item 877 Location		Temp. Perimeter Filter Fabric Fence	Temp. Inlet Protection Filter Fabric Fence	Temp. Ditch Check Filter Fabric Fence	Temp. Sediment Basins and Dams,As Per Plan	Temp. Dikes	Temp. Slope Drains	Rock Channel Protection Type C Without Filter	Sediment Removal	Temp. Seeding and Mulching
	Side	meter	meter	meter	cu meter		meter	cu meter	cu meter	sq meter
At Ditch Checks				60				44	12	
At All Catch Basins			12							
At All Inlets			12							
5+740 - 6+700							30			
5+740 - 6+089 "P"	Lt.	337					22			
5+950 - 6+265	Lt.	357								
6+000 "P" - 6+089 "P"	Rt.	94								
6+164 - 6+377	Rt.	289								
5+740 - 6+442 "O"	Rt.	710					32			
6+488 - 6+683	Rt.	196								
0+500 Exist. US-30	Rt.				420				315	
6+467 "O"	Rt.				336				252	
* Contingency						200				
Sub-Total (This Sheet)		1983	24	60	756	200	84	44	579	
28+009 - 29+800		7785	126	130	500	500	315	44	375	
29+800 - 31+900		2030	72	250	200	100	52	44	254	
31+900 - 34+620		4618	432	290	470	200	43	44	562	
34+620 - 37+340		2438	222	220	10301	200	54	44	7724	
37+340 - 0+300		5475	126	200	336	200	159	44	340	
0+300 - 3+020		5552	174	40	1260	100	242	44	957	
3+020 - 5+740		6154	174	160	840	200	237	44	642	
TOTAL		36035	1350	1350	14663	1700	1186	352	11433	①385337

* To be placed by the Contractor with the Engineers concurrence.

659 Seeding and Mulching = 1926685 sq meters
① 877 Temp. Seeding and Mulching
1926685 x 0.20 = 385337sq meters

Quantities carried to General Summary

HORIZONTAL SCALE IN METERS
0 80 160

CALCULATED JGB
CHECKED REA

STORM WATER POLLUTION PREVENTION PLAN
STA. 5+740 TO STA. 7+308.284

WYA/CRA-30-28.009/0.000

157
2116

LA-R/W
Woven Wire
Constr. Limits
28+400
℄ Construction W.B. U.S. 30
28+500
Ex. LA-R/W
SC Sta. 28+532.833
Asph./Conc.
660 Reinforced Sodding
Area Planimetered 15.2 sq. m
604, No. 4 CB
See Sheet No. 795
28+304.230 Begin Curb, Type 6
See Sheet No. 159
13+700
13+747.560 (14.711m LT)
13+800
13+900
TS Sta. 28+412.833
13+987.172 (14.644m LT)
N 1° 42' 15.01" W
℄ Survey U.S. 23
603 150mm x 4.0m-B
605 100mm x 9.0m
605 100mm x 25.4m
3.834m
CB
U1
U2
U5
U6
U7
D1
D2
D3
D4
D5
D6
DH
RI
605 100m x 150.0m
603 100mm x 15.2m-F
4.800m
28+100
28+200
28+300
603 150mm x 11.0m-F
603 150mm x 6.2m-F
605 100mm x 145.4m
℄ Construction E.B. U.S. 30
603 150mm x 11.0m-F
PC Sta. 28+009.255
605 100mm x 149.9m
605 100mm x 149.9m
Plug
603 150mm x 6.6m-F
605 100mm x 149.2m
PT Sta.28+311.440
604, No. 2-2B CB
See Sheet No. 302
604, No. 3 CB See
Sheet No. 303, 1363
375mm
Guardrail, Type 5
28+304.230 Begin GR
Type E Anchor Assem.
MSE Wall
604, No. 3 CB
See sheet no.
1363, 304
28+329.639
End GR
Br. Term.
Assem., Type 1
28+329.000
End Curb, Type 6
S 3° 14' 46" W
Match Line Sta. 28+340.000
28+248.721
100mm
150mm
Abandon
670 DEP
179.683m X 6.0m = 1078.1 sq m
670 DEP
154.1m X 7.0m = 1114.0 sq m
670 DEP
6.9m X 6.0m = 41.6 sq m
670 DEP 154.633m X
6.0m = 927.8 sq m
670 DEP R/W
BEGIN PROJECT
STA. 28+009.000
S.L.D. 28.009

E.B. U.S. 30
P.I. = Sta. 28+160.442
Δ = 4° 56' 48.65" (RT)
R = 3,500.000 m
T = 151.187 m
L = 302.186 m
E = 3.264 m
e_{max} =0.019m

* As Per Plan
For quantities, see sheet No. 161, 162
For underdrain quantities, see sheet No. 97
For U.S. 23, see sheet no. 760, 763
For W.B. U.S. 30, see sheet no. 174

262.175 262.161 262.159 262.170 262.192 262.226 262.268 262.353 262.437 262.522 262.606 262.691 262.775 262.860 262.946 263.002 263.073 263.160 263.262 263.379 263.512 263.660 263.824 264.002 264.197 264.406 264.631

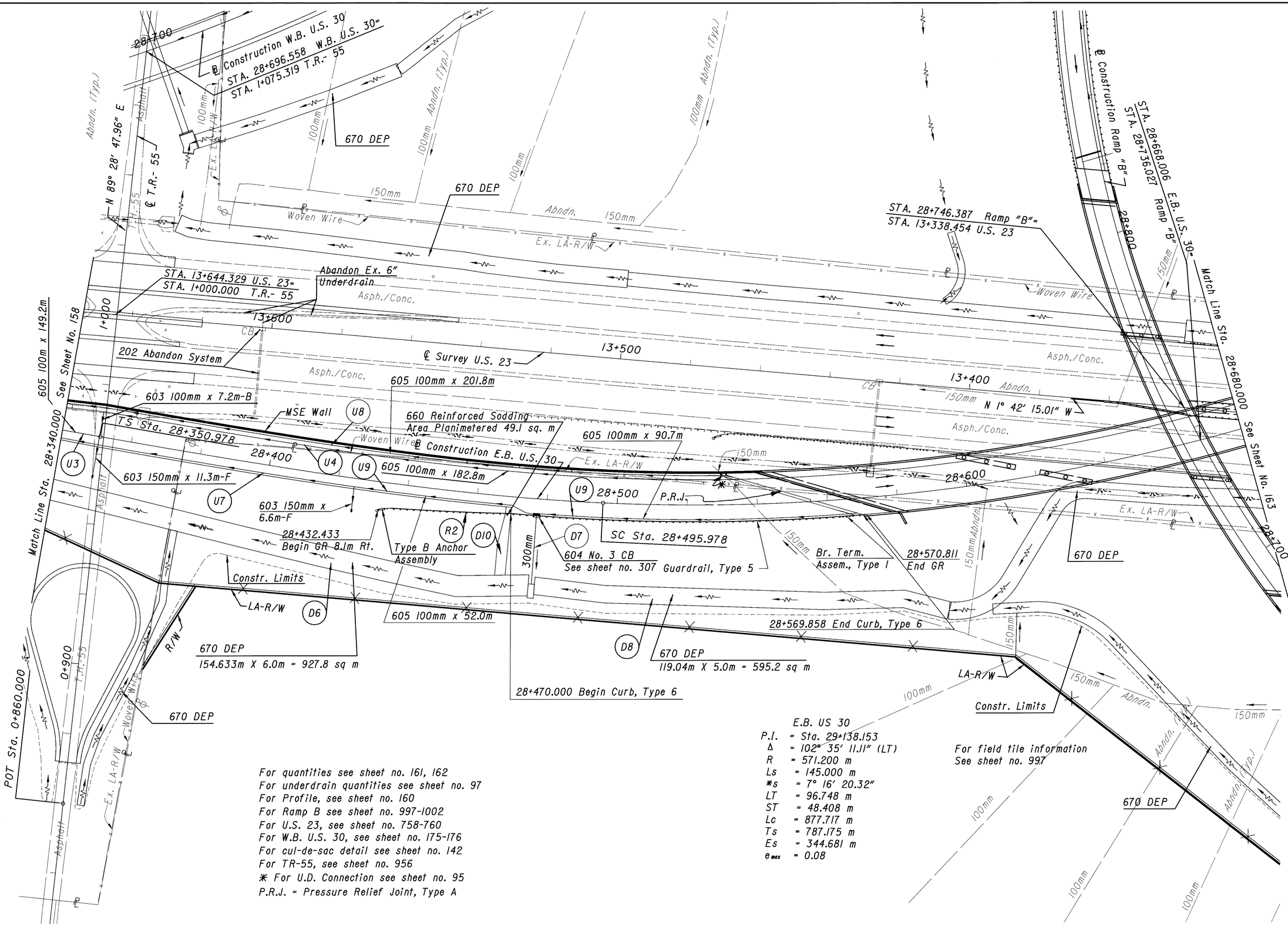
72m V.C.
V.P.I. Sta. 28+015.617
Elev. = 262.081
V.P.T. Sta. 28+051.617
168m V.C.
V.P.I. Sta. 28+300.000 Elev. = 263.282
V.P.C. Sta. 28+216.000
+011, 4.0m Lt. (150mm Tee)
Connect to Ex. U.D.
+011, ℄ (150mm Tee)
℄ 100mm (Uncl.) U.D. = 260.239
Outlet 11.0m Rt. = 260.206
+020, ℄ (Plug)
℄ 100mm (Uncl.) U.D. = 260.266
+024.500, ℄ (150mm 90° Bend)
℄100mm (Uncl.) U.D. = 260.203
Outlet 11.0m Rt. = 260.170
-0.4402%
+0.4224%
+0.4224%
+3.0000%
Profile Grade
+033.183, 4.0m Lt. (150mm Tee), Connect to Ex. U.D.
+033.183, ℄ (150mm Tee)
℄ 150mm (Uncl.) U.D. = 260.230
+050, ℄
℄100mm U.D. = 260.682
Existing Ground Line
100mm Shallow
+200, ℄ (150mm Tee)
℄ 100mm U.D. = 261.316
Outlet 15.2m Rt. = 261.033
375mm
Inv. 261.64
100mm Shallow
268
266
264
262
260
261.892 261.888 261.891 261.903 261.917 261.939 261.972 262.011 262.039 262.041 262.036 262.028 262.020 262.006 261.959 261.896 261.939 261.834 261.780 261.714 261.607 261.483 261.333 261.188 261.171 261.228 261.474 261.797 261.975 262.200 262.583 262.794 262.813 263.032 263.226
28+000 28+020 28+040 28+060 28+080 28+100 28+120 28+140 28+160 28+180 28+200 28+220 28+240 28+260 28+280 28+300 28+320 28+340

N
HORIZONTAL
SCALE IN METERS
0 10 20
CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - U.S.R. 30 EASTBOUND
STA. 28+009 TO STA. 28+340

WYA/CRA-30-28.009/0.000

158
2116



For quantities see sheet no. 161, 162
For underdrain quantities see sheet no. 97
For Profile, see sheet no. 160
For Ramp B see sheet no. 997-1002
For U.S. 23, see sheet no. 758-760
For W.B. U.S. 30, see sheet no. 175-176
For cul-de-sac detail see sheet no. 142
For TR-55, see sheet no. 956
✳ For U.D. Connection see sheet no. 95
P.R.J. = Pressure Relief Joint, Type A

E.B. US 30

P.I.	= Sta. 29+138.153
Δ	= 102° 35' 11.11" (LT)
R	= 571.200 m
Ls	= 145.000 m
✳s	= 7° 16' 20.32"
LT	= 96.748 m
ST	= 48.408 m
Lc	= 877.717 m
Ts	= 787.175 m
Es	= 344.681 m
e_{max}	= 0.08

For field tile information
See sheet no. 997

HORIZONTAL SCALE IN METERS
0 0 20

CALCULATED JGB
CHECKED REA

PLAN - U.S.R. 30 EASTBOUND
STA. 28+340 TO STA. 28+680

WYA/CRA-30-28.009/0.000

159
2116

CALCULATED JGB CHECKED REA

PROFILE - U.S.R. 30 EASTBOUND
STA. 28+340 TO STA. 28+680

WYA/CRA-30-28.009/0.000

264.631 264.871 265.127 265.397 265.684 265.982 266.282 266.582 266.882 267.182 267.482 267.782 268.082 268.382 268.682 268.982 269.282 269.582 269.882 270.182 270.482 270.782 271.082 271.382 271.682 271.982 272.281 272.573 272.860 273.140 273.414 273.683 273.945 274.201 274.451

282 280 278 276 274 272 270 268 266 264 262

℄ Ramp B

BRIDGE NO. WYA-30-28682
TYPE: Curved steel plate girder w/ composite conc. deck, T-Type piers, spill-thru & wall abutments
SPANS: 39 700, 45 600, 39 700 c/c brg.
ROADWAY WIDTH: 9000 toe/toe parapets
LIVE LOADING: MSI8 case II & the alternate military loading
SKEW ANGLE: 30°00'00" L.F. to reference chord
WEARING SURFACE: Monolithic concrete
APPROACH SLAB: AS-1-81M (9150)
ALIGNMENT: 305m radius curve (Rt.)
SUPERELEVATION: 0.0800

168m V.C.
V.P.I. Sta. 28+300.000
Elev. = 263.282

V.P.T. Sta. 28+384.000

Proposed grade

+3.0000%

+349.223, ℄ Rt.(Plug)
℄ 100mm U.D. = 263.304

+350.723, 7.2m Lt. (150mm 90° Bend)
℄ 100mm U.D. = 263.324
Outlet 11.3m Rt. = 263.268

100mm Shallow

100mm Shallow

+518, 7.2m Lt. (Plug)
℄ 100mm U.D. = 267.702

Existing ground

V.P.C. Sta. 28+592.600

888m V.C.
V.P.I. Sta. 29+036.600 Elev. = 285.380

5.200 Min. Vertical Clearance

For Plan, see sheet no. 159

263.226 263.318 262.621 262.913 262.816 262.789 262.805 262.849 262.906 262.976 263.044 263.159 263.312 263.441 263.450 263.635 263.694 263.761 263.913 263.780 263.729 263.756 263.900 264.081 264.299 263.822 263.187 262.678 263.498 264.169 264.711 264.909 265.013 265.034 264.771

28+340 28+360 28+380 28+400 28+420 28+440 28+460 28+480 28+500 28+520 28+540 28+560 28+580 28+600 28+620 28+640 28+660 28+680

REF NO.	SHEET NO.	STATION	SIDE	202										SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE 1		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30 EASTBOUND																															
R1	158	28+304.230 TO 28+329.639	LT														9.525						1		1		25						
R2	159	28+432.433 TO 28+570.811	RT														135.255					1			1		101						
TOTALS CARRIED TO SUB-SUMMARY																	144.780					1	1		2		126						

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	602 CONCRETE MASONRY (CU M)	603 300 MM CONDUIT, TYPE F (METER)	603 375 MM CONDUIT, TYPE B (METER)	604 CATCH BASIN NO. 2-2B (EACH)	604 CATCH BASIN NO. 3 (EACH)	660 SODDING REINFORCED (SQ M)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY (EACH): 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
D1	158	27+976.42 TO 28+156.22	RT								1078.1				
D2	158	28+156.22 TO 28+315.92	RT								1114.0				
D3	158	28+263.19	LT & RT		0.22		21.2	1							
D4	158	28+321.983 TO 28+326.73	LT & RT	4.5	0.22		25.1		2						
D5	158	28+315.92 TO 28+322.83	RT								41.6				
D6	158	28+324.84 TO 28+476.51	RT								927.8				
D7	159	28+477.28	RT		0.17	20.8			1			7.2	2		
D8	159	28+478.25 TO 28+590.94	RT								595.2				
D9		NOT USED													
D10	159	28+469.25	RT							49.1					
D11	158	28+303.48	LT							15.2					
													TOTALS 2		
TOTALS CARRIED TO SUB-SUMMARY				4.5	0.61	20.8	46.3	1	3	64.3	3756.7	7.2			

CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

E.B. U.S. 30
P.I. = Sta. 29+138.153
Δ = 102° 35' 11.11" (LT)
R = 571.200 m
Ls = 145.000 m
*s = 7° 16' 20.32"
LT = 96.748 m
ST = 48.408 m
Lc = 877.717 m
Ts = 787.175 m
Es = 344.681 m
e max = 0.08

150mm Abndn.
100mm Abndn.
150mm Abndn.
100mm
150mm
670 DEP
STA. 28+692.711 E.B. U.S. 30=
STA. 13+309.864 U.S. 23
See Sheet No. 159
Match Line Sta. 28+680.000
Woven Wire
28+700
28+783.352
Begin GR
Br. Term.
Assem., Type I
603 150mm x 27.1m-F
℄ Construction E.B. U.S. 30
605 100mm x 147.9m
U3
U1
RI
Guardrail, Type 5
605 100mm x 278.8m
603 150mm x 30.0m-F
U5
U2
29+000
605 100mm x 279.1m
Match Line Sta. 29+020.000
See Sheet No. 165
28+800
P.R.J.
605 100mm x 148.1m
28+900
U6
605 100mm x 208.4m
Asph./Conc.
Ex. LA-R/W
Woven Wire
28+820.883
Begin GR
Br. Term.
Assem., Type I
604 No. 3 CB
See sheet no. 309
300mm
U4
Guardrail, Type 5
605 100mm x 147.7m
603 150mm x
31.1m-F
R2
D4
D1
D3
D2
670 DEP
143.350m X 2.0m = 286.7 sq m
670 DEP
31.100m X 2.0m = 62.2 sq m
670 DEP
70.250m X 2.0m = 141.5 sq m
28+821.518 Begin Curb, Type 6
670 DEP
604 No.4 CB
See sheet no. 785
375mm
N 1° 42' 15.01" W
13+200
℄ Survey U.S. 23
670 DEP
670 DEP
Ex. LA-R/W
℄ Construction Ramp "B"
28+600
100mm Abndn.
CB
13+100

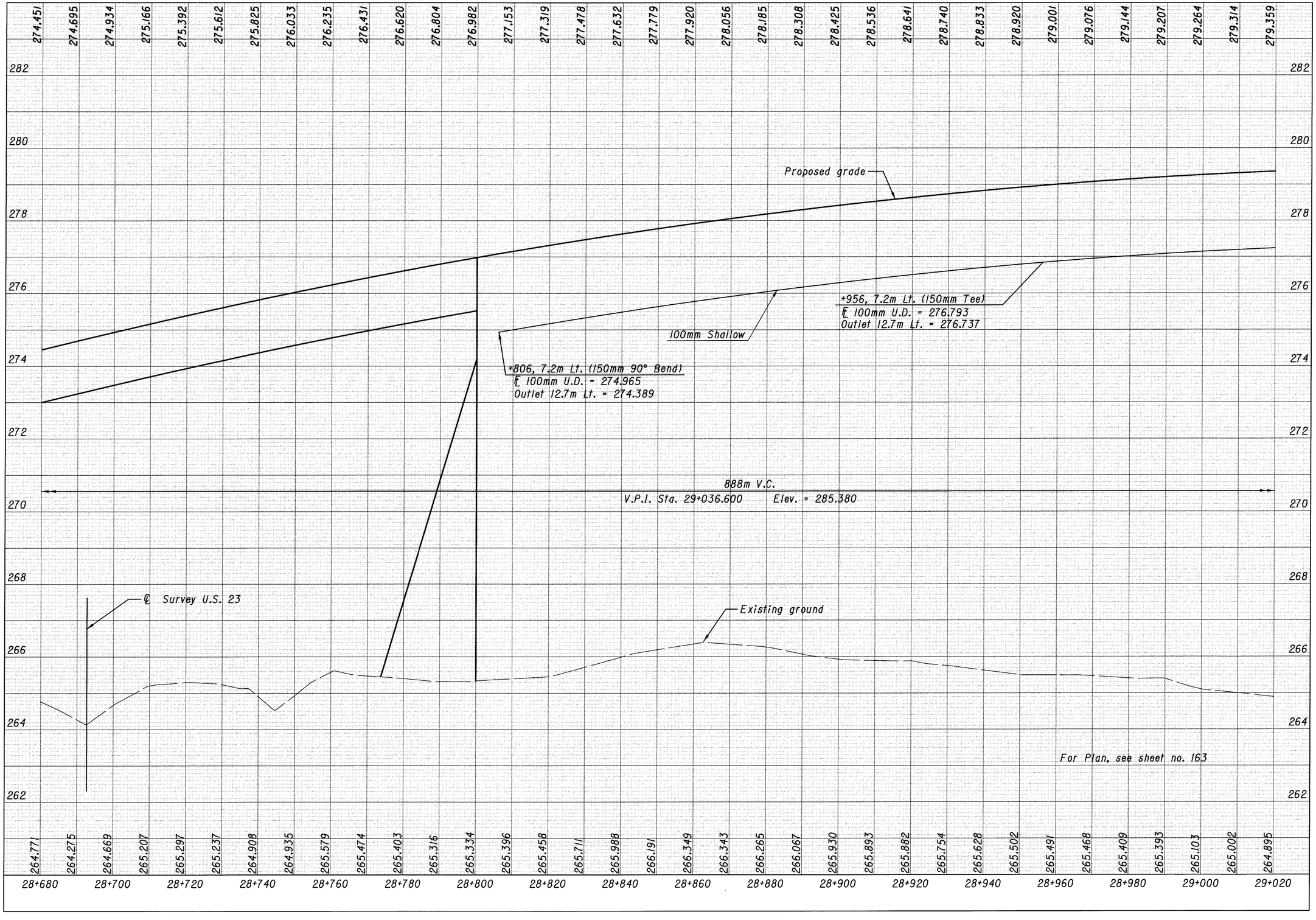
For quantities see sheet no. 167, 168
For underdrain quantities see sheet no. 98
For Profile, see sheet no. 164
For Ramp B see sheet no. 997
For U.S. 23 see sheet no. 757, 758
P.R.J. = Pressure Relief Joint, Type A

HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED JGB
CHECKED REA

PLAN - U.S.R. 30 EASTBOUND
STA. 28+680 TO STA. 29+020

WYA/CRA-30-28.009/0.000

163
2116



CALCULATED JGB
CHECKED REA

PROFILE - U.S.R. 30 EASTBOUND
STA. 28+680 TO STA. 29+020

WYA/CRA-30-28.009/0.000

670 DEP
7.0 x 305.414 = 2137.9 sq meter.

DII

250mm

℄

Abndn. 300mm

D5

See Sheet No. 163

U2

29+040.000 ℄ E.B. U.S. 30

U5

RI

603 375mm
x 13.6m-B

E.B. U.S. 30
P.I. = Sta. 29+138.153
Δ = 102° 35' 11.11" (LT)
R = 571.200 m
Ls = 145.000 m
*s = 7° 16' 20.32"
LT = 96.748 m
ST = 48.408 m
Lc = 877.717 m
Ts = 787.175 m
Es = 344.681 m
e max = 0.08 m

603 300mm x 314.3m-C

29+194.210
End Curb, Type 6

Guardrail, Type 5

603 150mm x 29.0m-F

670 DEP
110.0m X 2.0m = 220.1 sq m

DI2

Match Line Sta. 29+360.000

605 100mm x 139.4m

U8

U7

Match Line Sta. 29+020.000

29+100

605 100mm x 194.7m

29+200

605 100mm x 197.4m

29+300

U9

See Sheet No. 169

Twin 1500mm
See sheet no. 1305

U6

R2

℄ Construction E.B. U.S. 30

Guardrail, Type 5

605 100mm x 141.7m

603 150mm x 6.7m-F

D4

29+194.210
End GR

U6

605 100mm x 50.4m

Type T
Anchor Assembly

D6

670 DEP
114.00m X 2.0m = 228.0 sq m

604 No. 3 CB
See sheet no. 318

300mm

DI0

D9

670 DEP 2.0m x
121.20m = 242.4 sq. m

29+300

670 DEP
36.767m X 3.0m = 110.3 sq m

D8

839 Seeding & Erosion Control W/
Matting 2m X 1.8m = 3.6 sq m

603 375mm x 111.6m-C

29+156.030
ST Sta.

LA-R/W

670 DEP

29+200

670 DEP
143.35m X 2.0m = 286.7 sq m

603 375mm x 11.7m-B

29+086.030
CS Sta.

Constr. Limits

LA-R/W

℄ Construction Ramp "A"

670 DEP

29+100

300mm Abndn

For quantities see sheet no. 167, 168
For underdrain quantities see sheet no. 98
For Profile, see sheet no. 166
For Ramp A see sheet no. 986-989

N

0 10 20
HORIZONTAL
SCALE IN METERS

CALCULATED JGB
CHECKED REA

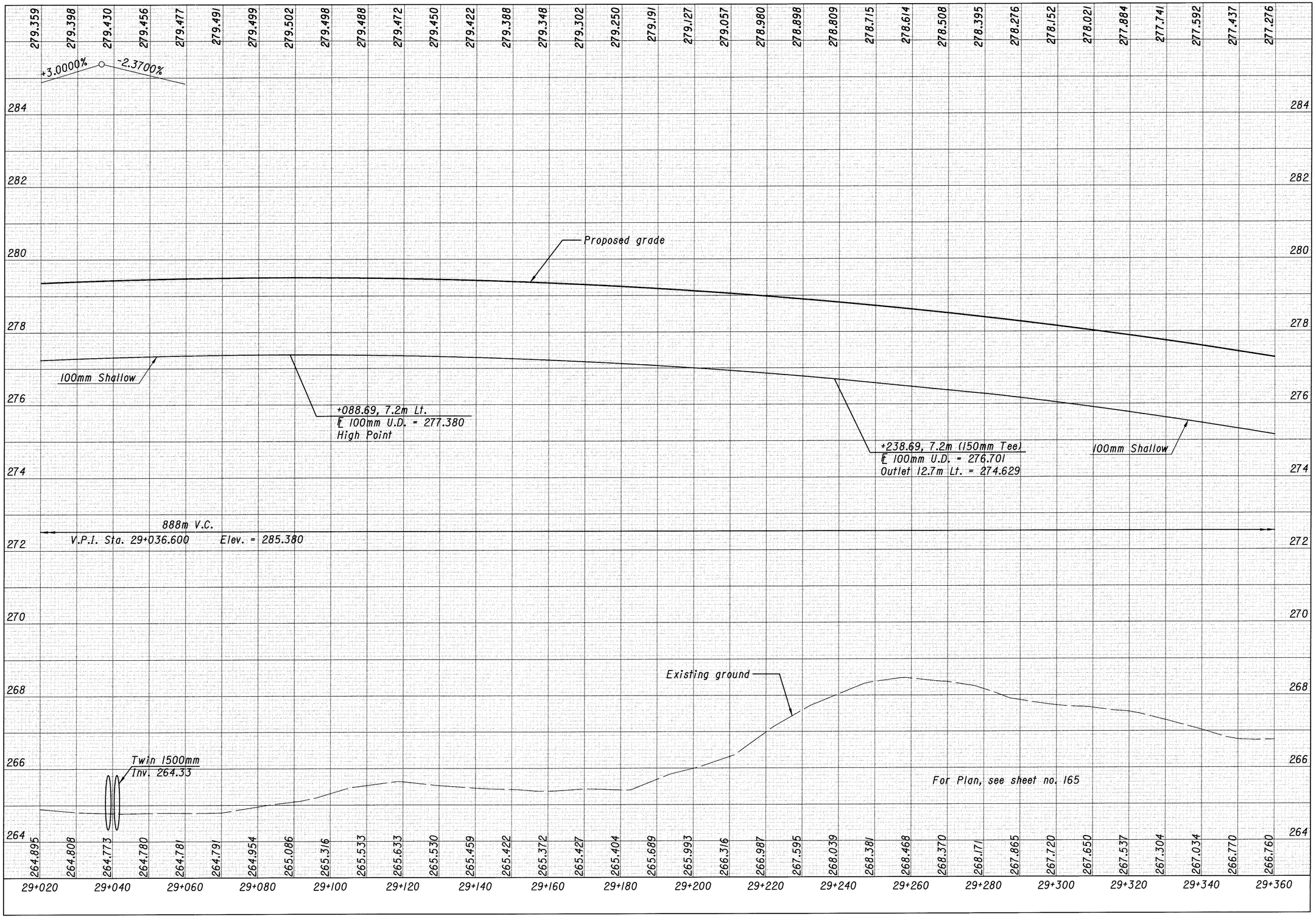
PLAN - U.S.R. 30 EASTBOUND
STA. 29+020 TO STA. 29+360

WYA/CRA-30-28.009/0.000

165
2116

CALCULATED JGB
CHECKED REA

PROFILE - U.S.R. 30 EASTBOUND
STA. 29+020 TO STA. 29+360



WYA/CRA-30-28.009/0.000

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE 1		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30 EASTBOUND																															
R1	163	28+783.352 TO 29+573.940	LT														775.335							1	1							
R2	163	28+820.883 TO 29+194.210	RT														371.475							1	1		376					
TOTALS CARRIED TO SUB-SUMMARY																	1146.810							2	2		376					

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

167
2116

REF NO.	SHEET NO.	STATION	SIDE	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 300 MM CONDUIT, TYPE F (METER)	603 1500 MM CONDUIT, TYPE A, 707.02 (2.77MM), OR 707.09 (25MM CORR.), OR 707.22 (METER)	604 CATCH BASIN NO. 3 (EACH)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY (EACH) 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
D1	163	28+832.80	RT		0.17	31.9		1		3.6	2		
D2	163	28+802.38 TO 28+831.69	RT						62.2				
D3	163	28+833.39 TO 28+900.00	RT						141.5				
D4	163	28+900.000 TO 29+034.44	RT						286.7				
D5	165	29+040.00	LT & RT	81.1	6.28		155.6		2003.6	27.0			
D6	165	29+045.61 TO 29+080.00	RT						110.3				
D7		NOT USED											
D8	165	29+080.00 TO 29+186.64	RT						228.0				
D9	165	29+188.33 TO 29+300.00	RT						242.4				
D10	165	29+187.63	RT		0.17	34.9		1		3.6	2		
D11	165	29+040.00	LT						2137.9				
D12	165	29+280.00 TO 29+396.97	LT						220.1				
											TOTALS 4		
TOTALS CARRIED TO SUB-SUMMARY				81.1	6.62	66.8	155.6	2	5432.7	34.2			

CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

E.B. U.S. 30
P.I. = Sta. 29+138.153
Δ = 102° 35′ 11.11″ (LT)
R = 571.200 m
Ls = 145.000 m
*s = 7° 16′ 20.32″
LT = 96.748 m
ST = 48.408 m
Lc = 877.717 m
Ts = 787.175 m
Es = 344.681 m
e max = 0.08m

601 RIPRAP

601 RIPRAP

603 375mm x 253.6m-C
See Ramp A

℄ Construction U.S.R. 30

Section 3
Section 2

375mm Abndn.

670 DEP
110.050m X 2.0m = 220.1 sq m

670 DEP
99.7m X 2.0m = 199.4 sq m

603 375mm
x 20.0m-B

603, 2400mm

603 150mm x 5.5m-F

See Sheet No. 165

See Sheet No. 171

100mm Abndn.

D12 D11 D3 D2 D1 R1

605 100mm x 197.4m

603 150mm x
22.7m-F

603 150mm x 22.5m-F

375mm
+443.589

604 No.2-2B CB
See sheet no. 325

ST Sta. 29+518.695

Guardrail,
Type 5

603 150mm x
15.6m-F

Type T Anchor
Assembly

29+573.940 EB
End GR

605 100mm x
150.2m

+608.695

7.2m

29+680.000 ℄ E.B. U.S. 30
See sheet no. 1311

U7 U1 U3 U4

605 100mm x 96.9m

U9 U8

29+400

605 100mm x 59.0m

7.0m

29+500

N 80° 39′ 34.86″ E

29+600

U6 D8 U7 29+

29+700.000

29+360.000

Match Line Sta.

603 150mm x
5.1m-F

U2

℄ Construction EB US 30

605 100mm x 149.9m

29+500

29+400

℄ Construction E.B. U.S. 30
603 375mm x 36.6m-C
Constr. Limits

48:1 Taper

D7

603 150mm x
23.2m-F

℄ Construction Ramp "A"

603 150mm x 6.2m-F

Guardrail,
Type 5

*R1

1.8m Shoulder Taper 2.4m

U5

POT Sta. 29+518.695

603 150mm x
14.9m-F

605 100mm x
149.6m

29+573.927 EB
End GR

7.5m

D6 D5

Match Line Sta.

603 150mm x 11.0m-F

605 100mm x 203.7m

29+392.000 ℄ EB U.S. 30
See sheet no. 1308

603, 1050mm RCP or
1050mm CMP

Constr. Limits

Type T Anchor
Assembly

LA-R/W

Pick up Point
El. 264.300

LA-R/W

670 DEP

670 DEP

670 DEP

670 DEP
20.10m X 3.0m = 60.3 sq m

670 DEP
56.825m X 4.0m = 227.3 sq m

E.B. US 30
P.I. = Sta. 29+825.675
Δ = 26° 35′ 42.18″ (RT)
R = 560.000 m
Ls = 120.000 m
*s = 6° 08′ 19.80″
LT = 80.048 m
ST = 40.044 m
Lc = 139.936 m
Ts = 192.583 m
Es = 16.528 m
e max = 0.08

Permanent
Easement

Section 3
Section 2

100mm Abndn.

(U_) For quantities see adjacent sheet no. 165

(D_) For quantities see adjacent sheet no. 165

For quantities see sheet no. 173

For underdrain quantities see sheet no. 99

For Ramp A see sheet no. 988-989

For Profile, see sheet no. 170

For U.S.R. 30, see sheet no. 185

(R1) For Quantities see Sheet No. 163

*(R1) For Quantities see Sheet No. 985

N

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

PLAN - U.S.R. 30 EASTBOUND
STA. 29+360 TO STA. 29+700

WYA/CRA-30-28.009/0.000

169
2116

277.276 277.109 276.936 276.757 276.571 276.380 276.183 275.979 275.770 275.554 275.333 275.105 274.872 274.635 274.398 274.161 273.924 273.687 273.450 273.213 272.976 272.739 272.502 272.265 272.028 271.791 271.554 271.317 271.080 270.843 270.606 270.369 270.132 269.895 269.658

280
278
276
274
272
270
268
266
264
262
260

+438.500, 7.2m Lt. (90°Bend)
℄ 100mm U.D. = 273.929
Outlet 12.7m Lt. = 273.874

+441.500, 7.2m Lt. (Plug)
℄ 100mm U.D. = 273.897

For Continuation of Ramp "A"
See Sheet No. 989

Proposed grade

100mm Shallow

V.P.T. Sta. 29+480.600

-2.3700%

+538.69, 7.2m Lt. (150mm Tee)
℄ 100mm U.D. = 271.922
Outlet 12.7m Lt. = 271.866

+538.69, 9.0m Rt. (150mm Tee)
℄ 100mm U.D. = 271.860
Outlet 15.5m Rt. = 271.804

+688.69, 7.2m Lt. (90°Bend)
℄ 100mm U.D. = 268.570
Outlet 12.7m Lt. = 268.515

100mm Shallow

888m V.C.
V.P.I. Sta. 29+036.600 Elev. = 285.380

Existing ground

+688.69, 5.8m Rt. (150mm Tee)
℄ 100mm U.D. = 268.145
Outlet 16.8m Rt. = 268.035

1050mm
Inv. 265.81

2400mm
Inv. 264.91

For Plan, see sheet no. 169

266.760 266.679 266.506 266.415 266.529 266.768 267.093 267.262 267.285 267.080 266.903 266.756 266.797 266.958 267.201 267.492 267.726 267.846 267.650 267.591 267.633 267.794 268.020 268.187 268.180 267.616 266.945 266.444 266.070 265.762 265.382 265.414 265.264 265.148 265.168

29+360 29+380 29+400 29+420 29+440 29+460 29+480 29+500 29+520 29+540 29+560 29+580 29+600 29+620 29+640 29+660 29+680 29+700

CALCULATED JGB
CHECKED REA

PROFILE - U.S.R. 30 EASTBOUND
STA. 29+360 TO STA. 29+700

WYA / CRA-30-28.009 / 0.000

E.B. U.S. 30
P.I. = Sta. 29+825.675
Δ = 26° 35′ 42.18″ (RT)
R = 560.000 m
Ls = 120.000 m
*s = 6° 08′ 19.80″
LT = 80.048 m
ST = 40.044 m
Lc = 139.936 m
Ts = 192.583 m
Es = 16.528 m
e max = -0.08

SC Sta. 29+753.092

March Line Sta. 29+700.000

See Sheet No. 169

29+700

29+800

29+900

U7 U8 U9 U10 U11 U12

D7 D9

605 100mm x 147.0m

605 100mm x 203.7m

605 100mm x 56.7m

CS Sta. 29+893.028

℄ Construction E.B. U.S. 30

℄ Construction U.S.R. 30

605 100mm x 145.9m

605 100mm x 53.0m

605 100mm x 65.7m

605 100mm x 53.0m

603 150mm x 6.5m-F

603 150mm x 9.8m-F

603 150mm x 11.0m-F

375mm Abndn.

LA-R/W

Constr. Limits

601 RIPRAP
115.671 X 7.0 = 809.7 sq m

601 RIPRAP
80.01 X 10.0 = 800.1 sq m

601 RIPRAP
126.889 X 9.0 = 1142.0 sq m

603 288.7m x 300mm Conduit
By others

Permanent Easement

Work By Others

Construction T.R.- 1247

100mm Abndn.

675mm

STA. 30+011.027 U.S. 30-
STA. 1+000.000 T.R.- 124

670 DEP

30+000

48:1 Taper
29+968.695

End Sta.

ST Sta. 30+013.028

300mm

Pick up point
El. 264.760

N 0° 25′ 18.62″ W

ST Sta. 30+013.028 EB US 30
16.2m Rt.-
POC Sta. 30+013.028 US 30

For Continuation
See Sheet No. 188

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - U.S.R. 30 EASTBOUND
STA. 29+700 TO STA. 30+042.028

WYA/CRA-30-28.009/0.000

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2116

269.658 269.421 269.184 268.952 268.734 268.530 268.340 268.164 268.001 267.852 267.716 267.595 267.487 267.393 267.312 267.246 267.193 267.154 267.129 267.117 267.119 267.135 267.165 267.208 267.265 267.333 267.401 267.469 267.537 267.605 267.673 267.741 267.810 267.878 267.946

272
270
268
266
264

222m V.C.
V.P.I. Sta. 29+832.029 Elev. = 266.529

V.P.C. Sta. 29+721.029

V.P.T. Sta. 29+943.029

-2.3700%

+0.6814%

V.P.I. Sta. 30+042.028 Elev. = 267.960

Proposed grade

100mm Shallow

Existing ground

100mm Unclassified

100mm Shallow

For Continuation
See Sheet No. 188

+894, 1.6m Rt. (150mm Cross)
℄ 100mm U.D. = 265.750

+960, 0.18m Rt. (150mm Tee)
℄ 100mm U.D. = 265.857
Outlet 11.2m Rt. = 265.820

+013.028, 7.2m Lt. (100mm Tee)
+013.028, ℄ (100mm Tee)
℄ 100mm U.D. = 266.218

265.168 265.191 265.374 265.401 265.393 265.423 265.436 265.554 265.609 265.602 265.783 265.953 266.014 266.089 266.186 265.794 265.777 265.836 265.785 265.730 265.840 265.958 265.914 265.920 266.082 266.379 266.153 266.100 266.178 266.125 266.109 266.027 266.479 266.653 266.742

29+700 29+720 29+740 29+760 29+780 29+800 29+820 29+840 29+860 29+880 29+900 29+920 29+940 29+960 29+980 30+000 30+020 30+040

For quantities see sheet no. 173
For underdrain quantities see sheet no. 99
For U.S. 30 plan and profile see sheet no. 185,188

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

CALCULATED AM CHECKED REA

REF NO.	SHEET NO.	STATION	SIDE	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 375 MM CONDUIT, TYPE F (METER)	603 375 MM CONDUIT, TYPE B (METER)	603 1050 MM CONDUIT, TYPE A, 706.02, 130 D-LOAD OR 1050 MM 707.01, OR 707.09 (113MM CORR.), OR 707.21 (METER)	603 2400 MM CONDUIT, TYPE A 706.02 (METER)	604 CATCH BASIN NO. 2-2B (EACH)	670 DITCH EROSION PROTECTION (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: MASONRY COLLAR (EACH)
D1	169	29+392.85	LT & RT	1232.1	1.66			77.0						
D2	169	29+440.00	LT		0.22	26.2	12.8			1	4.0		2	1
D3	169	29+460.00 TO 29+560.00	LT								199.4			
D4		NOT USED												
D5	169	29+600.00 TO 29+620.00	RT								60.3			
D6	169	29+620.00 TO 29+677.13	RT								227.3			
D7	169	29+683.35 TO 29+765.64	RT	800.1										
D8	169	29+680.00	LT & RT	3946.8	8.14				49.6					
D9	171	29+677.13 TO 29+884.92	RT	809.7										
												TOTALS	2	1
TOTALS CARRIED TO SUB-SUMMARY				6788.7	10.02	26.2	12.8	77.0	49.6	1	491.0			

W.B. U.S. 30

P.I. = Sta. 28+788.931
Δ = 58° 47′ 45.18″ (LT)
R = 560.000 m
Ls = 120.000 m
*s = 6° 08′ 19.80″
LT = 80.048 m
ST = 40.044 m
Lc = 454.662 m
Ts = 376.098 m
Es = 83.998 m
e max = 0.08m

(U_) For quantities see sheet no. 763
For quantities see sheet no. 177, 178
For underdrain quantities see sheet no. 100
For US-23 see sheet no. 760, 763

For continuation see sheet no. 763

U4 U1 Constr. Limits

601 Riprap
4.0m X 640.275m = 2561.1 sq m

LA-R/W

℄ Woven Wire

603 150mm x 10.3m-F

48:1 Taper

605 100mm x 32.3m

603 150mm x 7.7m-B

605 100mm x 169.9m

U6

T.S. Sta. 28+412.833

605 100mm x 157.1m

U1

D1

℄ Woven Wire

605 100mm x 115.0m

℄ Construction W.B. U.S. 30

100mm 100mm 100mm

Plug

Plug 603 150mm x 10.1-m-F

℄ Ex. LA-R/W

28+500

605 100mm x 10.0m

LA-R/W

Plug

100mm Adapt.

Constr. Limits

605 100mm x 145.7m

SC Sta. 28+532.833

U2 U7

28+600

605 100mm x 146.4m

Match Line Sta. 28+640.000 See Sheet No. 175

CB 14+000 CB

13+900

Asph/Conc.

℄ Survey U.S. 23

13+800

13+700

PC Sta. 28+009.255

28+000

28+100

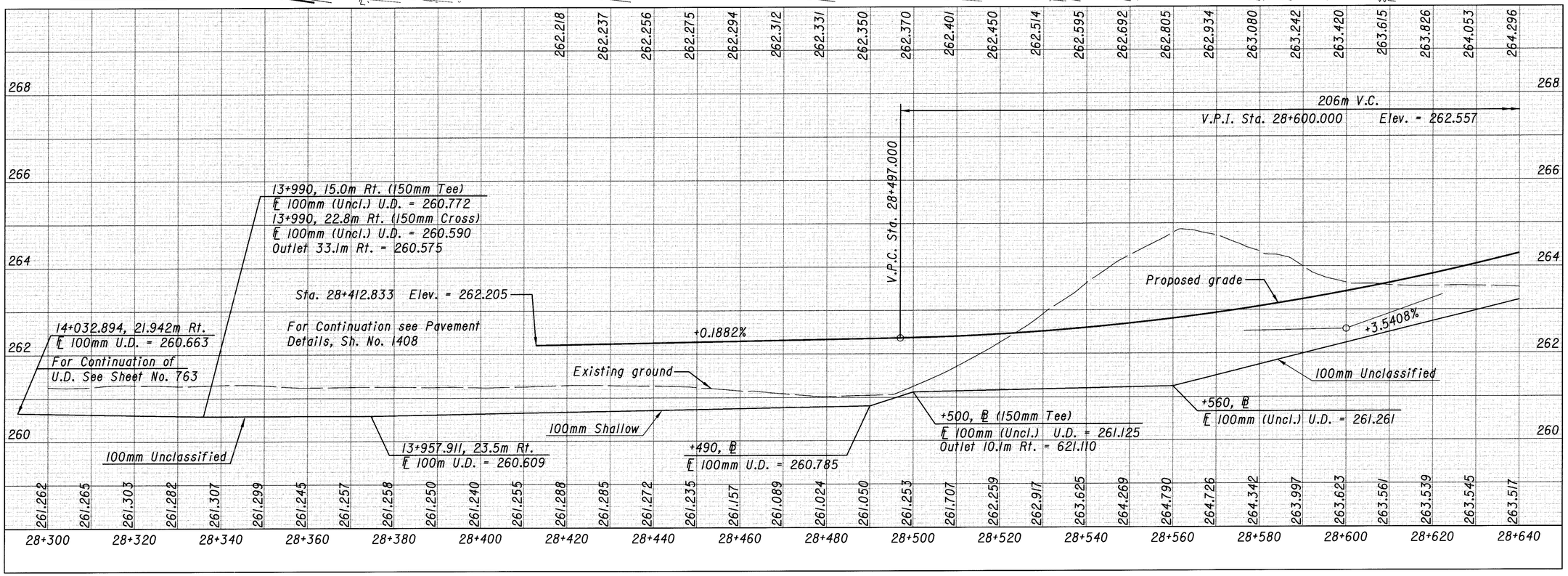
℄ Construction E.B. U.S. 30

28+200

Ex. LA-R/W

℄ Woven Wire LA-R/W

Constr. Limits



N

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30 WESTBOUND
STA. 28+412.833 TO STA. 28+640

WYA/CRA-30-28.009/0.000

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2116

W.B. U.S. 30
P.I. = Sta. 28+788.931
Δ = 58° 47' 45.18" (LT)
R = 560.000 m
Ls = 120.000 m
*s = 6° 08' 19.80"
LT = 80.048 m
ST = 40.044 m
Lc = 454.662 m
Ts = 376.098 m
Es = 83.998 m
e max = 0.08m

POT Sta. 1+215.507
Ex. R/W
1+200
Asphalt
Ex. R/W
Ex. LA-R/W
℄ Construction T.R.-55
N 89° 28' 47.96" E
R/W
R/W
Outlet in Proposed Ditch
El. 261.614
670 DEP
640.275m X 4.0m = 2561.1 sq m
LA-R/W
Constr. Limits
See Sheet No. 174
Match Line Sta. 28+640.000
U7
D1
100mm
Woven Wire
1+100
LA
670 DEP
132.225m X 4.0m = 528.9 sq m
Outlet in Proposed Ditch
El. 263.274
660 Reinforced Sodding
Area Planimetered 40.1 sq. m
670 DEP
57.4m X 3.0m = 172.2 sq m
LA-R/W
28+865.587
Begin Curb, Type 6
670 DEP
95.950m X 2.0m = 191.9 sq m
Match Line Sta. 28+980.000
See Sheet No. 179
D6
D5
Constr. Limits
Guardrail, Type 5
605 100mm x 150.0m
U10
603 150mm x 9.4m-F
U2
D2
1800 RCP See sheet no. 1304
605 100mm x 149.3m
605 100mm x 150.0m
28+700
100mm
U3
D3
U8
603 150mm x 10.8m-F
100mm
U9
605 100mm x 76.9m
28+865.587
Begin GR
D11
D4
300mm
604 No. 3 CB
See sheet no. 342
U4
U9
603 150mm x 22.3m-F
R2
28+900
28+800
Type T Anchor Assembly
605 100mm x 71.2m
605 100mm x 149.3m
U5
D7
605 100mm x 150.0m
Ex. LA-R/W
STA. 14+000.000 T.R.-55=
STA 13+644.329 U.S. 23
100mm Abndn.
Asphalt
Woven Wire
STA. 28+697.056 W.B. U.S. 30=
STA. 1+075.522 T.R.-55
℄ Construction W.B. U.S. 30
Type T Anchor Assembly
28+766.254 WB
Begin GR
R1
100mm
Guardrail, Type 5
100mm
D10
D9
670 DEP
84.3m X 2.0m = 168.6 sq m
D8
670 DEP
61.225m X 4.0m = 244.9 sq m
670 DEP
126.867m X 3.0m = 380.6 sq m
Asph./Conc.
Ex. LA-R/W
1+000
Asph./Conc.
Ex. LA-R/W
100mm
Abndn. (Typ.)
150mm
Abndn.
670 DEP
T.S. Sta. 28+351.932 E.B. U.S. 30=
STA. 0+964.966 T.R.-55
13+600
℄ Survey U.S. 23
N 1° 42' 15.01" W
100mm
Woven Wire
Abndn. (Typ.)
839 Seeding & Erosion Control, W/ Matting 42.850m X 2.0m = 85.7 sq m
℄ Construction Ramp "B"
28+900
670 DEP
℄ Construction E.B. U.S. 30-30
28+400
Ex. LA-R/W
Asph./Conc.
Asph./Conc.
150mm
100mm

For quantities see sheet no. 177, 178
For underdrain quantities see sheet no. 100
For Profile, see sheet no. 176
For Ramp B plan and profile see sheet no. 1001-1002
For U.S. 23, see sheet no. 760
For cul-de-sac detail see sheet no. 142
For E.B. U.S. 30, see sheet no. 159-160
For T.R.-55, see sheet no. 956

HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED AM
CHECKED REA

PLAN - U.S.R. 30 WESTBOUND STA. 28+640 TO STA. 28+980

WYA / CRA-30-28.009 / 0.000

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2116

CALCULATED AM
CHECKED REA

PROFILE - U.S.R. 30 WESTBOUND
STA. 28+640 TO STA. 28+980

WYA/CRA-30-28.009/0.000

264.296 264.556 264.832 265.124 265.433 265.757 266.099 266.452 266.806 267.160 267.511 267.856 268.194 268.525 268.849 269.166 269.476 269.779 270.076 270.366 270.648 270.924 271.193 271.455 271.711 271.959 272.200 272.435 272.663 272.884 273.098 273.305 273.505 273.699 273.885

276 274 272 270 268 266 264 262 260 258 256

206m V.C.
V.P.I. Sta. 28+600.000
Elev. = 262.557

V.P.T. Sta. 28+703.000

+3.5408%

Proposed grade

+946.360, ℄ Rt. (150mm Tee)
℄ 100mm U.D. = 271.686
Outlet 7.6m Lt. = 271.630

+796.360, ℄ Rt. (150mm Tee)
℄ 100mm U.D. = 267.820
Outlet 10.8m Lt. = 267.764

100mm Shallow

100mm Unclassified

V.P.C. Sta. 28+731.232

Existing ground

603, 1800mm
Inv. 261.708

860m V.C.
V.P.I. Sta. 29+161.232 Elev. = 282.429

+646.360, 0.0m Rt. (150mm Tee)
℄ 100mm (Uncl.) U.D. = 263.416
Outlet 9.4m Lt. = 263.416

For Plan, see sheet no. 175

28+640 28+660 28+680 28+700 28+720 28+740 28+760 28+780 28+800 28+820 28+840 28+860 28+880 28+900 28+920 28+940 28+960 28+980

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE 1		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30 WESTBOUND																															
R1	175	28+766.254 TO 29+039.094	RT														266.700					1		1									
R2	175	28+865.587 TO 29+675.325 USR 30	LT														796.290					1		1			761						

ESTIMATED DRAINAGE QUANTITIES

CALCULATED AM CHECKED REA

WYA/CRA-30-28.009/0.000

REF NO.	SHEET NO.	STATION	SIDE	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 300 MM CONDUIT, TYPE F (METER)	603 1800 MM CONDUIT, TYPE A, 706.02 (METER)	604 CATCH BASIN NO. 2-2B (EACH)	604 CATCH BASIN NO. 3 (EACH)	604 CATCH BASIN NO. 4 (EACH)	660 SODDING REINFORCED (SQ M)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: MASONRY COLLAR (EACH)
D1	174	14+292.86 US-23 TO 28+697.92	LT & RT	2561.1												
D2	175	28+700.00	LT & RT	23.7	5.34		42.7						28.0			
D3	175	28+702.08 TO 28+840.00	LT									528.9				
D4	175	28+873.90	LT		0.17	21.4			1				5.4	2		
D5	175	28+880.00 TO 28+940.02	LT									172.2				
D6	175	28+940.02 TO 29+040.00	LT									191.9				
D7	175	28+960.00 TO 29+00.00	LT										85.7			
D8	175	28+880 TO 28+960.00	RT									168.6				
D9	175	28+760.00 TO 28+880.00	RT									380.6				
D10	175	28+702.06 TO 28+760.00	RT									244.9				
D11	175	28+865.43	LT								40.1					
														TOTALS	2	
TOTALS CARRIED TO SUB-SUMMARY				2584.8	5.51	21.4	42.7		1		40.1	1687.1	119.1			

W.B. U.S. 30

P.I. = Sta. 28+788.931
Δ = 58° 47′ 45.18″ (LT)
R = 560.000 m
Ls = 120.000 m
*s = 6° 08′ 19.80″
LT = 80.048 m
ST = 40.044 m
Lc = 454.662 m
Ts = 376.098 m
Es = 83.998 m
e max = 0.08m

(U_) For quantities see adjacent sheet no. 175

(D_) For quantities see adjacent sheet no. 175

For quantities see sheet no. 182
For underdrain quantities see sheet no. 101
For Profile, see sheet no. 180
For Ramp B plan and profile see sheet no. 1001-1004
* For U.D. Connection see sheet no. 95

(R1) For Quantities see Sheet No. 175

(R2) For Quantities see Sheet No. 175

Match Line Sta. 28+980.000 See Sheet No. 175

670 DEP
95.950m X 2.0m = 191.9 sq m

LA-R/W

Constr. Limits

D6

100mm

605 100mm x 149.3m

CS Sta. 28+987.495

U10

U5

605 100mm x 150.0m

R2

603 150mm x 26.4m-F

℄ Construction W.B. U.S. 30

ST Sta. 29+107.495

U1

29+000

29+100

S 61° 42′ 11.17″ E

Guardrail, Type 5

29+039.094 WB
End GR 14.0m Rt.

603 100mm x 7.2m-B

Abndn. 250mm

Type B Anchor Assembly

603 150mm x 6.8m-F

U4

U2

100mm

29+200

670 DEP 61.93m x 2.0m = 123.9 sq. m

R1

D7

D1

℄ Construction Ramp "B"

605 100mm x 119.7m

PC Sta. 29+135.020

Abndn.

100mm

ST Sta. 29+067.423

839 Seeding & Erosion Control, w/ Matting 42.850m X 2.0m = 85.7 sq m

CS Sta. 28+985.423

670 DEP

150mm Abndn.

POT Sta. 29+193.960 End U.S. 30 W.B.

U3

605 100mm x 299.0m

605 100mm x 299.2m

605 100mm x 277.3m

℄ Construction U.S.R. 30

Begin U.S. 30
PC Sta. 29+193.960

LA-R/W

Pick up point
El. 262.644

Permanent Easement

Constr. Limits

450mm

Constr. Limits

Permanent Easement

670 DEP

Abndn.

Constr. Limits

603 375mm x 16.9m-B

603 375mm x 47.2m-C

PT Sta. 29+291.436
End Ramp "B"

Guardrail, Type 5

D1

29+300

29+500

For Continuation See Sheet No. 183

603 Twin 1500mm C,M,P,
See sheet no. 1316

603 150mm x 314.3m-C

670 DEP

Abndn.

300mm

250mm

100mm

100mm Abndn.

CALCULATED AM
CHECKED REA

HORIZONTAL SCALE IN METERS
0 10 20

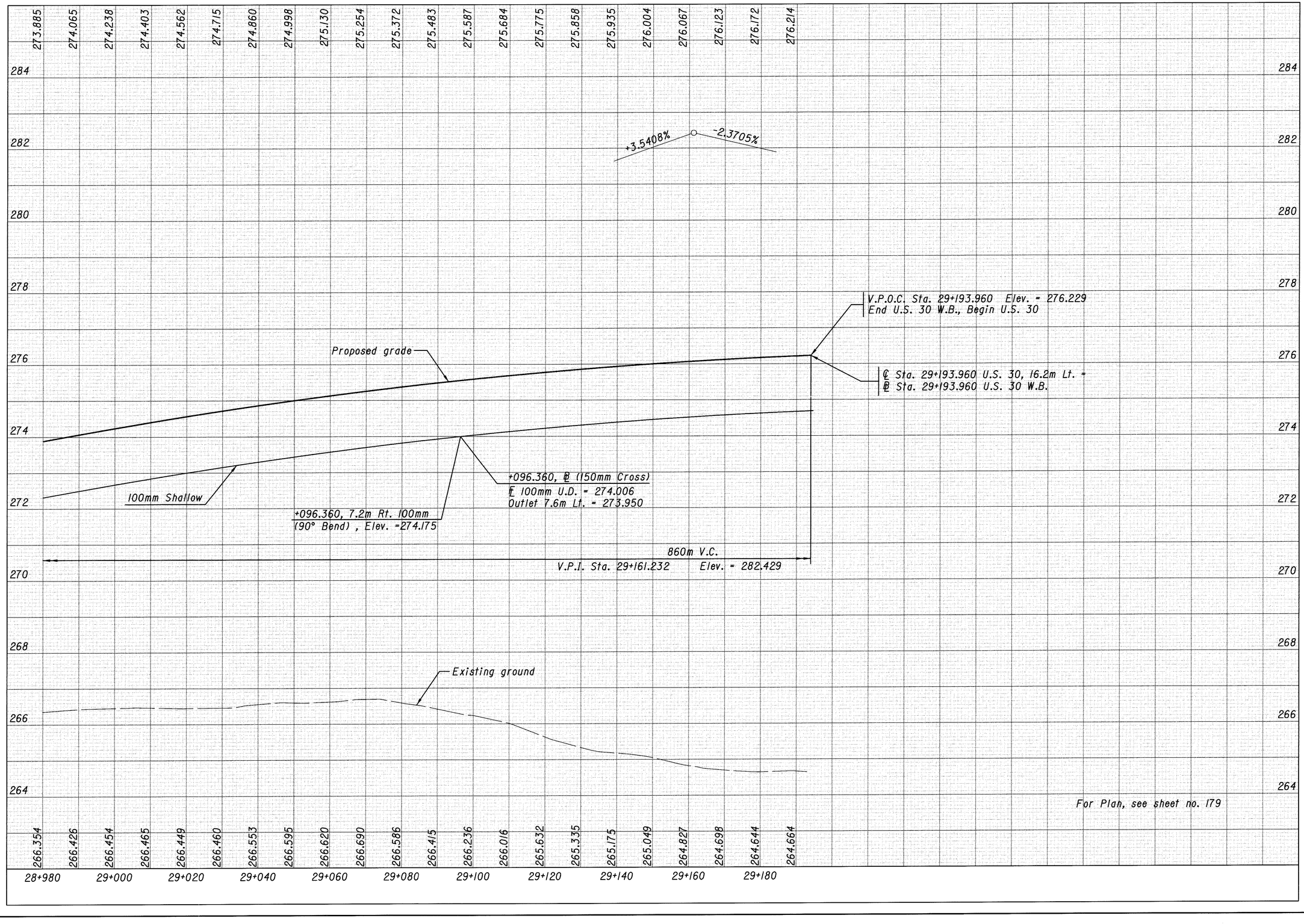
PLAN - U.S.R. 30 WESTBOUND
STA. 28+980 TO STA. 29+193.960

WYA/CRA-30-28.009/0.000

179
2116

CALCULATED AM
CHECKED REA

PROFILE - U.S.R. 30 WESTBOUND
STA. 28+980 TO STA. 29+193.960



WYA / CRA-30-28.009 / 0.000

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

CALCULATED AM | CHECKED REA

REF NO.	SHEET NO.	STATION	SIDE	670 DITCH EROSION PROTECTION	FOR INFORMATION ONLY			
				SQ M	300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND		MASONRY COLLAR
					EACH			
DI	179	29+000.00 TO 29+060.00	RT	123.9				

U.S. 30
P.I. = Sta. 30+333.210
D = 30° 00' 42.19 (LT)
R = 4,250.000 m
T = 1,139.250 m
L = 2,226.164 m
E = 150.044 m
e_{max} = Normal Crown

Permanent Easement
Permanent Easement
250mm
Pick up point El. 262.644
603 375mm X 120.1m-C
670 DEP
5.0 m X 317.540 m = 1587.7 sq m
LA-R/W
Constr. Limits
Constr. Limits
D2
Twin 1500mm CMP
See sheet no. 1316
D1
Abndn.
603 150mm x 30.2m-F
D4
603 150mm x 24.7m-F
U7
U1
605 100mm x 158.0m
U9
605 100mm x 149.7m
605 100mm x 299.0m
U3
603 375mm X 47.2m-C
603 375mm X 16.9m-B
R2
+374.689
+404.457
605 100mm x 38.1m
℄ Construction U.S. 30 WB
605 100mm x 299.2m
U1
U2
605 100mm x 277.3m
1.2m
1.2m
Abndn. 250mm
603 375mm X 32.5m-B
605 100mm x 180.5m
250mm
Abndn.
29+200
℄ Construction Ramp B
29+500
29+400
29+500
29+200
605 100mm x 218.9m
℄ Construction U.S.R. 30
U3
R1
603 150mm x 24.4m-F
603 150mm x 3.6m-B
U8
605 100mm x 60.8m
U2
603 150mm x 25.4m-F
U10
605 100mm x 150.1m
U4
PT Sta. 29+291.436
End Ramp "B"
605 100mm x 218.9m
For Continuation See Sheet No. 179
S 61° 42' 11.13 E
POT Sta. 29+193.960 WB
End U.S. 30 W.B.
PC Sta. 29+193.960
Begin U.S.R. 30
Match Line Sta. 29+520.000 See Sheet No. 185
D3
601 Riprap
603 375mm X 253.6m-C
601 Riprap
15.0 m X 163.326 m = 2449.9 sq m
601 Riprap
100mm Abndn.

RAMP B
P.I. = Sta. 29+213.330
Δ = 7° 10' 10.43 (RT)
R = 1,250.000 m
T = 78.310 m
L = 156.416 m
E = 2.451 m
e_{max} = 0.035
RUNOFF = 37m

603 375mm X 314.3m-C
670 DEP
Abndn. 100mm
Abndn.
100mm
250mm

✳ For U.D. Connection see sheet no. 95

(U_) For quantities see sheet no. 179, 1003
For quantities see sheet no. 187
For underdrain quantities see sheet no. 104
For Ramp B, see sheet no. 1003-1004
For profile see sheet no. 184
For WB U.S. 30 see sheet no. 179-180

(R1) For Quantities see Sheet No. 1001

(R2) For Quantities see Sheet No. 175

N

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN - U.S.R. 30
STA. 29+193.960 TO STA. 29+520

WYA/CRA-30-28.009/0.000

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2116

CALCULATED AM
CHECKED REA

PROFILE - U.S.R. 30
STA. 29+193.960 TO STA. 29+520

276.250 276.278 276.300 276.314 276.322 276.323 276.317 276.304 276.285 276.258 276.225 276.184 276.137 276.083 276.022 275.954 275.880 275.798 275.710 275.615 275.512 275.403 275.287 275.165 275.035 274.898 274.755 274.605 274.448 274.284 274.113 273.935 273.750

282
280
278
276
274
272
270
268
266
264
262

V.P.O.C. Sta. 29+193.960 Elev. = 276.229
End U.S. 30 W.B., Begin U.S. 30

℄ Sta. 29+193.960 US-30, 16.2m Lt. (Ahead)=
℄ Sta. 29+193.960 US-30 WB (Back)

29+291.436
℄ 100mm = 274.652
For Continuation see
sheet no. 1004

Proposed grade

+396.360, 16.2m Lt. (150mm Tee)
℄ 100mm U.D. = 274.006
Outlet 23.4m Lt. = 273.950

100mm Shallow

+246.360, 16.3m & 9.1m Lt.
℄ 100mm U.D. = 274.776
High Point

100mm Shallow

29+374, 9m Lt.
℄ (100mm x 150mm Tee) = 274.220

29+374, 5.4m Lt.
℄ (100mm x 150mm Tee) = 274.162
Outlet (0.5m Lt.) = 274.113

100mm Shallow

860m V.C.
V.P.I. Sta. 29+161.232 Elev. = 282.429

For Plan, see sheet no. 183

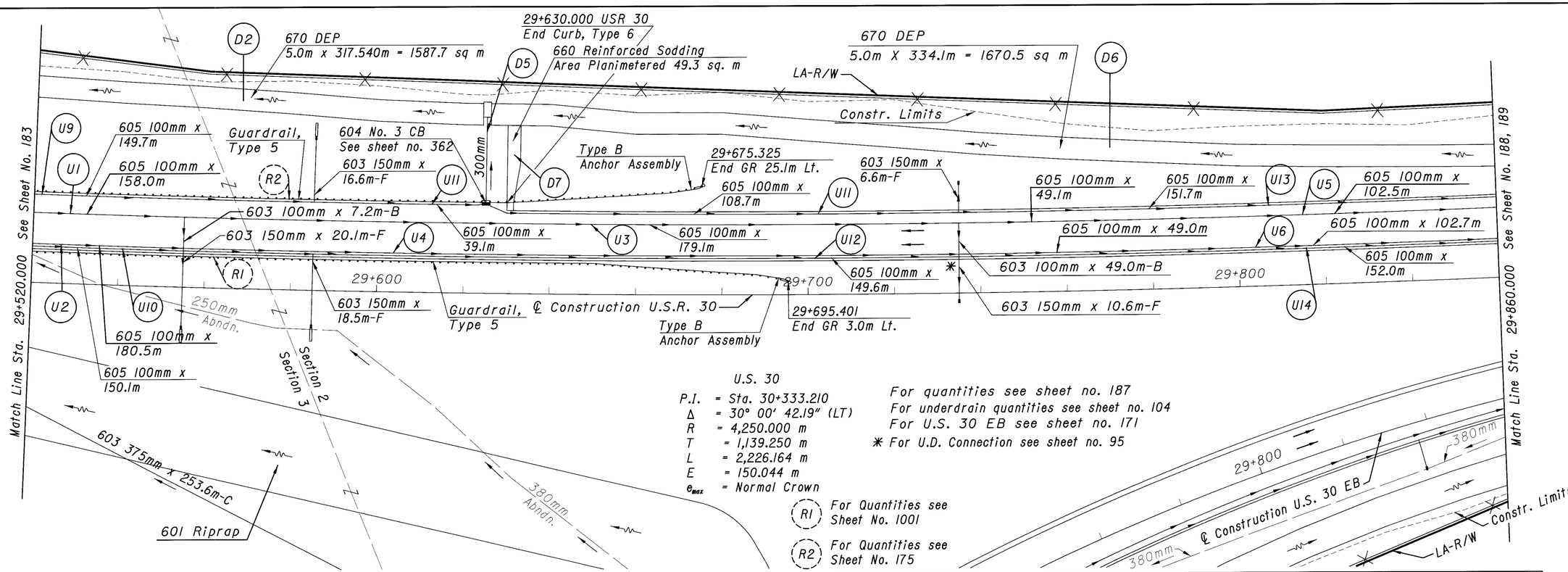
Existing ground

Twin 1500mm
Inv. 261.697

264.565 264.558 264.602 264.641 264.742 264.956 265.099 265.167 265.114 265.002 264.911 264.932 264.954 264.855 264.571 264.459 264.330 264.256 264.416 264.388 264.369 264.366 264.409 264.445 264.495 264.573 264.632 264.735 264.812 264.768 264.738 264.783 264.693

29+180 29+200 29+220 29+240 29+260 29+280 29+300 29+320 29+340 29+360 29+380 29+400 29+420 29+440 29+460 29+480 29+500 29+520

WYA/CRA-30-28.009/0.000



PLAN AND PROFILE - U.S.R. 30
STA. 29+520 TO STA. 29+860

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

WYA/CRA-30-28.009/0.000

185
2116

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

CALCULATED AM CHECKED REA

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE B W/FILTER (CU M)	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 375 MM CONDUIT, TYPE B (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 300 MM CONDUIT, TYPE F (METER)	603 1500 MM CONDUIT, TYPE A, 707.02 (2.0MM), OR 707.09 (25MM CORR.), OR 707.22 (METER)	604 CATCH BASIN NO. 3 (EACH)	660 SODDING REINFORCED (SQ M)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY (EACH) 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
D1	183	29+300.00	LT & RT	39.1	42.5	6.28				143.8							
D2	183	29+303.31 TO 29+624.22	LT										1587.7				
D3	183	29+340.00 TO 29+501.95	RT		2449.9												
D4	183	29+299.14 TO 29+679.54 EBUS-30	LT & RT				52.5	410.3									
D5	185	29+625.10	LT			0.17			20.9		1			6.3	2		
D6	185	29+686.04 TO 29+963.38	LT										1670.5				
D7	185	29+679.45	LT									49.3					
TOTALS															2		
TOTALS CARRIED TO SUB-SUMMARY				39.1	2492.4	6.45	52.5	410.3	20.9	143.8	1	49.3	3258.2	6.3			

Work By Others

670 DEP
16.025m X 4.0 m = 64.1 sq m

670 DEP
334.1m X 5.0m = 1670.5 sq m

605 100mm x 102.5m

LA-R/W

Constr. Limits

D6

603 100mm x 2.4m-B

603 150mm x 7.2m-B

605 150mm x 152.1m

U1

U6

U5

603 150mm x 10.2m-F

U2

Impact Attenuator

30+003.030 Begin GR Type T Anchor Assem.

605 150mm x 152.4m

D2

29+900

605 100mm x 102.7m

670 DEP
20.0m X 2.0m = 40.0 sq m

R1

30+000

Guardrail, Type 5

D3

29+982.079
Begin Impact Att./GR

29+900

U11

U12

380mm

603 100mm x 7.2m-B

Abndn. 380mm

Guardrail, Barrier Design, Type 5

CS Sta. 29+893.028

603 288.7m x 300mm Conduit By others

LA-R/W

Constr. Limits

Pick up point
El. 264.760

ST Sta. 30+013.028
End EB U.S. 30

* For U.D. Connection see sheet no. 95

℄ Construction T.R. -124
N 00° 25' 18.64" W

Ex. R/W

Abndn.

100mm

Gravel

D1

Constr. Limits

LA-R/W

Sta. 30+011.027 U.S. 30 =
Sta. 1+000.000 TR-124

604 No. 4 CB
See sheet no. 370

375mm

R2

Impact Attenuator

30+039.622
End GR/Impact Att.

30+018.570 End GR
Type T Anchor Assem.

U3

605 100mm x 20.1m

605 150mm x 27.0m

605 150mm x 27.0m

U4

603 100mm x 7.2m-B

603 150mm x 10.7m-F

Constr. Limits

LA-R/W

Pick up point
El. 264.890

D_ For quantities see previous sheet no. 185

U_ For quantities see previous sheet no. 185

US 30
P.I. = Sta. 30+333.210
Δ = 30° 00' 42.19" (LT)
R = 4,250.000 m
T = 1,139.250 m
L = 2,226.164 m
E = 150.044 m
e_{max} = Normal Crown

D4

D5

603 150mm x 10.8m-F

605 100mm x 7.5m

U5

603 150mm x 12.8m-F

605 100mm x 302.3m

℄ Construction U.S.R. 30
30+100

U6

U7

U8

670 DEP
3.0m X 99.4m = 298.2sq m

670 DEP
4.0m x 160.0m = 639.8 sq. m

D6

605 100mm x 378.1m

605 100mm x 303.6m

670 DEP
2.0m x 50.0m = 100.0 sq. m

605 100mm x 382.5m

603 100mm x 7.2m-B

603 150mm x 10.7m-F

603 145.7m x 100mm Conduit By Others

100mm

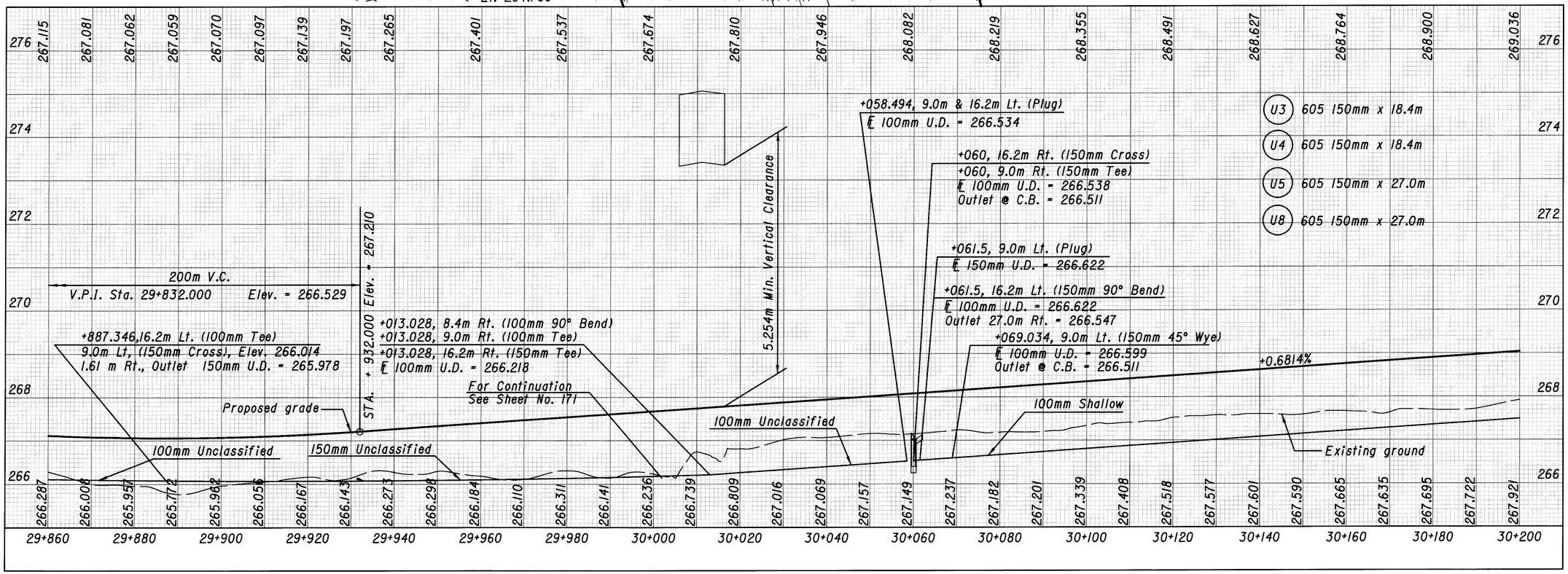
150mm

Abndn.

Match Line Sta. 29+860.000 See Sheet No. 185

Match Line Sta. 30+200.000 See Sheet No. 190

For Additional underdrains see sheet no. 189
For quantities see sheet no. 191, 192
For underdrain quantities see sheet no. 105
For EB U.S. 30 see sheet no. 171



HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 29+860 TO STA. 30+200

WYA/CRA-30-28.009/0.000

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2116

Work By Others

US 30
P.I. = Sta. 30+333.210
Δ = 30° 00′ 42.19″ (LT)
R = 4,250.000 m
T = 1,139.250 m
L = 2,226.164 m
E = 150.044 m
e_{max} = Normal Crown

Match Line Sta. 29+860.000 See Sheet No. 185

Match Line Sta. 30+200.000 See Sheet No. 190

Constr. Limits
LA-R/W
℄ Construction T.R. -124
N 0° 25′ 18.64″ W
Ex. R/W
Ditch
603 100mm x 2.4m-B
605 100mm x 151.7m
603 150mm x 7.2m-B
605 100mm x 152.0m
U14
U13
603 150mm x 10.2m-F
29+900
605 100mm x 152.3m
U15
605 100mm x 152.0m
380mm
29+900
℄ Construction EB U.S. 30
30+000
603 100mm x 7.2m-B
CS Sta. 29+893.028
LA-R/W
ST Sta. 30+013.028
End EB U.S. 30
30+011.027 U.S. 30 = STA. 1+000.000 TR-124
604 No. 4 CB
See sheet no. 370
375mm
605 100mm x 28.5m
605 100mm x 27.0m
U16
603 100mm x 7.2m-B
603 150mm x 10.8m-F
U17
605 100mm x 110.5m
603 150mm x 12.8m-F
U18
605 100mm x 82.3m
605 100mm x 111.2m
U19
605 100mm x 111.5m
U20
603 150mm x 10.7m-F
℄ Construction U.S.R. 30
30+100
603 150mm x 6.6m-F
605 100mm x 149.3m
U21
605 100mm x 149.7m
603 150mm x 6.6m-F
U22
U23
605 100mm x 150.3m
603 150mm x 6.6m-F
U24
605 100mm x 150.7m
Constr. Limits
LA-R/W
100mm
150mm

(U_) For quantities see previous sheet no. 185
For quantities see sheet no. 191, 192
For underdrain quantities see sheet no. 105
For additional underdrains see sheet no. 188
✱ For U.D. Connection see sheet no. 95

276 274 272 270 268 266

200m V.C.
V.P.I. Sta. 29+832.000 Elev. = 266.529

STA. + 932.000 Elev. = 267.210

+887.346, 16.2m Lt. (100mm Tee)
9.0m Lt, (150mm Cross), Elev. 266.014
1.61 m Rt., Outlet 150mm U.D. = 265.978

+013.028, 8.4m Rt. (100mm 90° Bend)
+013.028, 9.0m Rt. (100mm Tee)
+013.028, 16.2m Rt. (150mm Tee)
℄ 100mm U.D. = 266.218

+058.494, 9.0m & 16.2m Lt. (Plug)
℄ 100mm U.D. = 266.534

+060, 16.2m Rt. (150mm Cross)
+060, 9.0m Rt. (150mm Tee)
℄ 100mm U.D. = 266.538
Outlet @ C.B. = 266.511

+061.5, 9.0m Lt. (Plug)
℄ 100mm U.D. = 266.622

+061.5, 16.2m Lt. (150mm 90° Bend)
℄ 150mm U.D. = 266.622
Outlet 27.0m Rt. = 266.547

+069.034, 9.0m Lt. (150mm 45° Wye)
℄ 100mm U.D. = 266.599
Outlet @ C.B. = 266.511

+0.6814%

For Continuation See Sheet No. 171

Proposed grade
100mm Unclassified
150mm Unclassified
100mm Unclassified
100mm Shallow
Existing ground

267.115 267.081 267.062 267.059 267.070 267.097 267.139 267.197 267.265 267.401 267.537 267.674 267.810 267.946 268.082 268.219 268.355 268.491 268.627 268.764 268.900 269.036

266.287 266.008 265.957 265.774 265.962 266.056 266.167 266.143 266.273 266.298 266.184 266.110 266.311 266.141 266.236 266.739 266.809 267.016 267.069 267.157 267.149 267.237 267.182 267.201 267.339 267.408 267.518 267.577 267.601 267.590 267.665 267.635 267.695 267.722 267.921

29+860 29+880 29+900 29+920 29+940 29+960 29+980 30+000 30+020 30+040 30+060 30+080 30+100 30+120 30+140 30+160 30+180 30+200

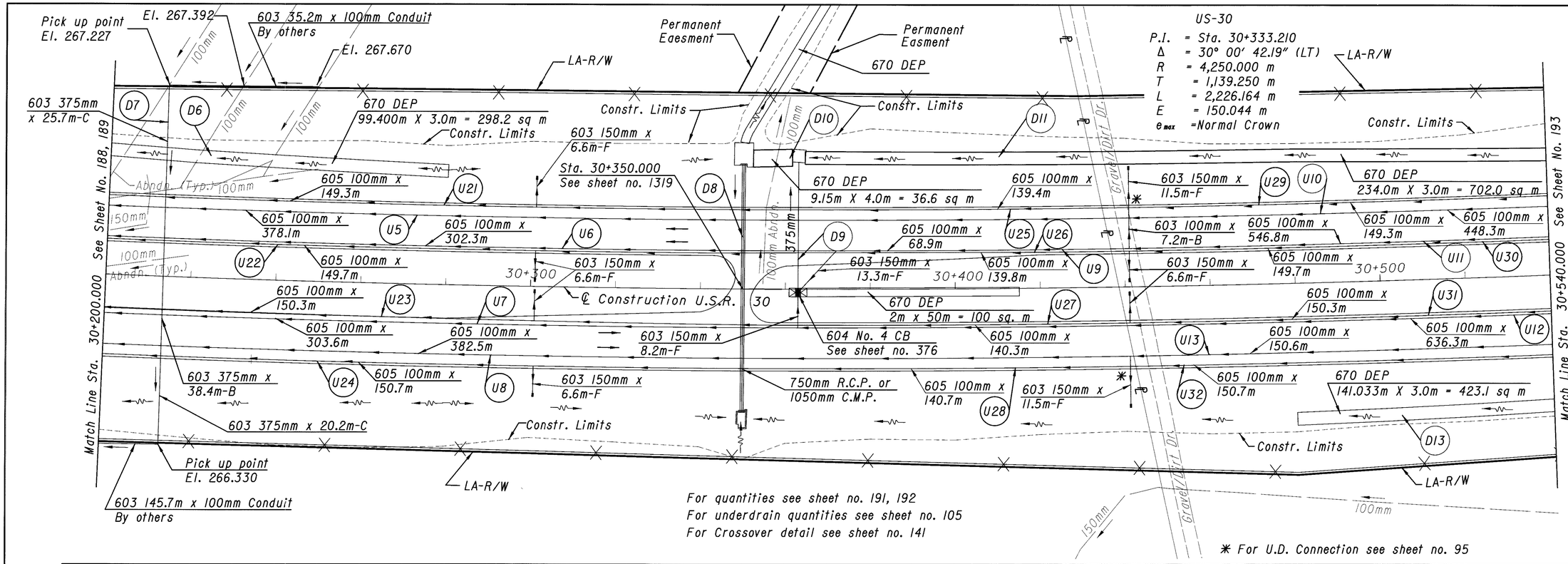
HORIZONTAL SCALE IN METERS
0 10 20

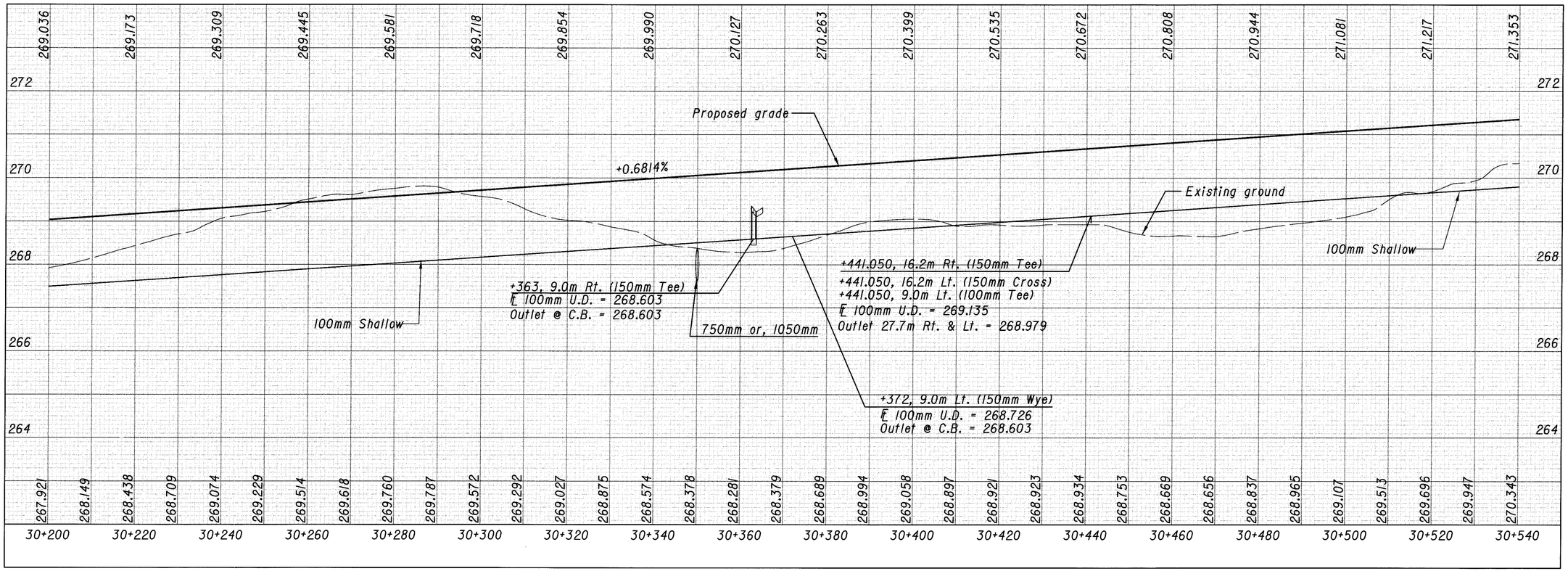
CALCULATED AM
CHECKED REA

ADDITIONAL UNDERDRAIN PLAN - U.S.R. 30
STA. 29+860 TO STA. 30+200

WYA/CRA-30-28.009/0.000

189
2116





HORIZONTAL SCALE IN METERS

CALCULATED AM CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 30+200 TO STA. 30+540

WYA/CRA-30-28.009/0.000

190
2116

REF NO.	SHEET NO.	STATION	SIDE	202										SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE 1		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30																															
R1	188	29+982.079 TO 30+018.570	RT														11.430		11.430	1				1								1	
R2	188	30+003.030 TO 30+039.622	LT														11.430		11.430	1				1								1	
TOTALS CARRIED TO SUB-SUMMARY																	22.860		22.860	2				2								2	

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

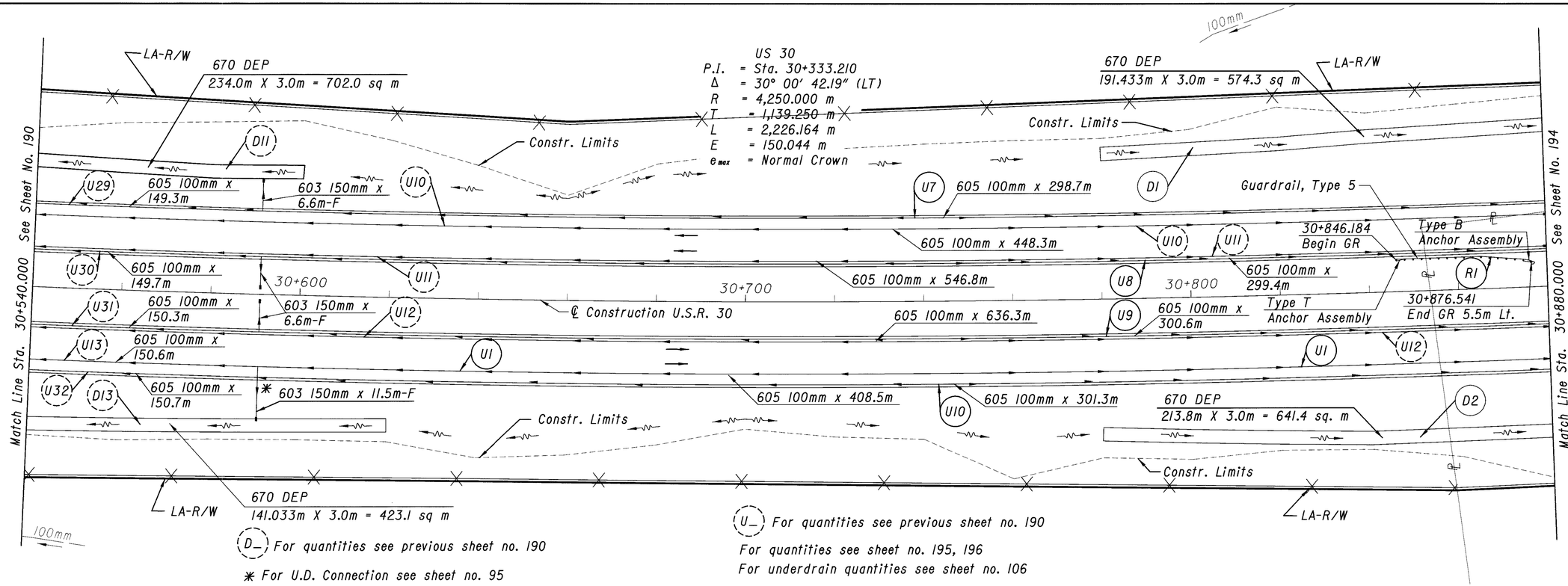
WYA/CRA-30-28.009/0.000

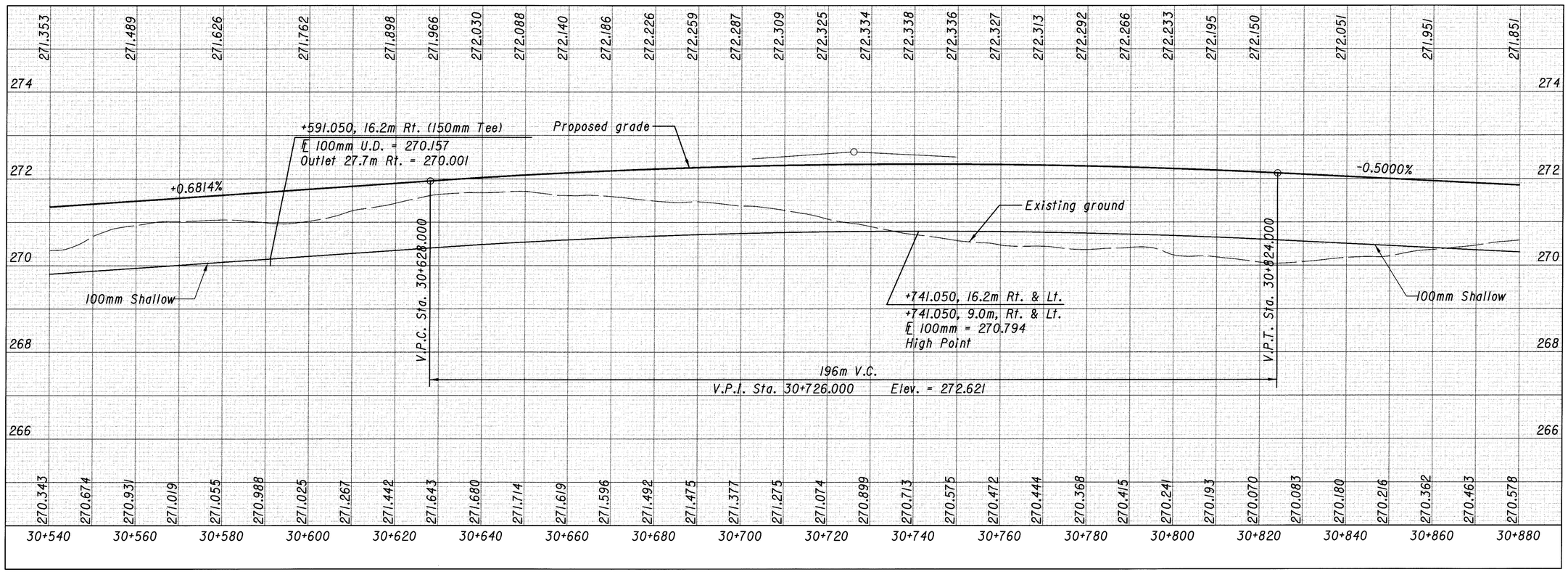
REF NO.	SHEET NO.	STATION	SIDE	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 375 MM CONDUIT, TYPE B (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 750 MM CONDUIT, TYPE A, 706.02 OR 1050 MM, OR 707.09 13MM CORR., OR 707.21 (METER)	604 CATCH BASIN NO. 4 (EACH)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY (EACH) 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
D1	188	29+962.22 TO 29+978.35	LT							64.1				
D2	188	29+960.00 TO 29+980.00	LT							40.0				
D3	188	29+960.00 TO 29+980.00	RT							40.0				
D4	188	30+018.95 TO 30+180.00	LT							639.8				
D5	188	30+060.00	CL		0.22	27.6			1	100.0				
D6	188	30+180.00 TO 30+280.00	LT							298.2				
D7	190	30+213.50	LT & RT			38.4	45.9							
D8	190	30+350.00	LT & RT	9.4	1.66			58.2		92.0	23.9			
D9	190	30+363.00	CL		0.22	30.6			1	100.0	9.0			
D10	190	30+352.27 TO 30+361.00	LT							36.6				
D11	190	30+364.61 TO 30+600.13	LT							702.0				
D12		NOT USED												
D13	190	30+480.00 TO 30+620.00	RT							423.1				
TOTALS														
TOTALS CARRIED TO SUB-SUMMARY				9.4	2.10	96.6	45.9	58.2	2	2535.8	32.9			

CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000





HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AIM
CHECKED R.E.A.

PLAN AND PROFILE - U.S.R. 30
STA. 30+540 TO STA. 30+880

WYA/CRA-30-28.009/0.000

US 30
P.I. = Sta. 30+333.210
Δ = 30° 00' 42.19" (LT)
R = 4,250.000 m
T = 1,139.250 m
L = 2,226.164 m
E = 150.044 m
e_{max} = Normal Crown

LA-R/W
Constr. Limits
670 DEP
191.433m x 3.0m = 574.3 sq. m
603 150mm x 11.5m-F
605 100mm x 104.5m
605 100mm x 299.4m
605 100mm x 298.7m
See Sheet No. 193
605 100mm x 448.3m
605 100mm x 104.6m
605 100mm x 98.4m
Sta. 30+987.632 U.S. 30
See sheet no. 1320
30+900
605 100mm x 300.6m
605 100mm x 301.3m
Match Line Sta. 30+880.000
603 150mm x 6.6m-F
605 100mm x 107.2m
670 DEP
2m x 50m = 100 sq. m
605 100mm x 636.3m
605 100mm x 408.5m
605 100mm x 107.4m
603 1950mm or, 2250mm
670 DEP
213.8m X 3.0m = 641.4 sq m
839 Seeding & Erosion Control, W/ Matting 11.9m X 5.0m = 59.5 sq m
Creek
Branch of Rocky Run
603 150mm x 9.0m-F
603 150mm x 12.7m-F
375mm
604 No.4 CB
See sheet no. 386
31+000
603 150mm x 9.0m-F
603 150mm x 7.2m-B
603 150mm x 6.6m-F
Abndn. 100mm
Plug
100mm
Permanent Easement
670 DEP
61.867m X 3.0m = 185.6 sq m
Wooded
Dirt Dr.
670 DEP
258.917m X 6.0m = 1553.5 sq m
Constr. Limits
603 150mm x 6.6m-F
605 100mm x 152.1m
100mm
605 100mm x 227.1m
605 100mm x 151.3m
605 100mm x 216.5m
605 100mm x 141.1m
605 100mm x 160.3m
31+200
31+100
℄ Construction U.S.R. 30
605 100mm x 150.1m
603 150mm x 6.6m-F
605 100mm x 152.5m
605 100mm x 226.5m
605 100mm x 226.9m
605 100mm x 150.5m
603 150mm x 6.6m-F
605 100mm x 152.9m
100mm Abndn.
Constr. Limits
LA-R/W
Match Line Sta. 31+220.000
See Sheet No. 197

For quantities see sheet no. 195, 196
For underdrain quantities see sheet no. 106
✱ For U.D. Connection see sheet no. 95
(U_) For quantities see previous sheet no. 190

+996, 16.2m Lt. (150mm Tee)
℄ 100mm U.D. = 269.802
Outlet 12.5m Lt. = 268.242
+007.000, 9.0m Lt. (150mm Wye)
℄ 100mm U.D. = 269.808
Outlet @ C.B. = 269.802
+891.050, 16.2m Lt. (150mm tee)
℄ 100mm U.D. = 270.251
Outlet 27.7m Lt. = 270.095
+989.590, 9.0m Lt. (150mm Wye)
℄ 100mm U.D. = 269.807
Outlet @ C.B. = 269.802
Proposed grade
-0.5000%
+0.5000%
100mm Shallow
100mm Shallow
Existing ground
V.P.C. Sta. 30+964.000
V.P.I. Sta. 30+998.000
V.P.T. Sta. 31+032.000
+998, 9.0m Rt. (150mm Cross)
+998, 16.2m Rt. (150mm Tee)
℄ 100mm U.D. = 269.802
Outlet @ C.B. = 269.802
1950mm or, 2250mm
68m V.C.
Elev. = 271.261

271.85 271.751 271.651 271.551 271.451 271.403 271.369 271.350 271.346 271.356 271.381 271.421 271.471 271.571 271.671 271.771 271.871 271.971 272.071 272.171 272.271 272.371
270.578 270.795 270.678 270.385 269.986 269.574 269.251 269.032 268.843 268.846 268.459 266.401 269.265 269.294 269.547 269.679 269.821 269.974 270.161 270.334 270.380 270.362 270.342 270.337 270.423 270.508 270.604 270.617 270.433 270.187 269.876 269.667 269.522 269.403 269.343
30+880 30+900 30+920 30+940 30+960 30+980 31+000 31+020 31+040 31+060 31+080 31+100 31+120 31+140 31+160 31+180 31+200 31+220

HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 30+880 TO STA. 31+220

WYA/CRA-30-28.009/0.000

194
2116

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE 1		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30																															
RI	193	30+846.184 TO 30+876.541	LT														22.860					1		1									
TOTALS CARRIED TO SUB-SUMMARY																	22.860					1		1								

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

195
2116

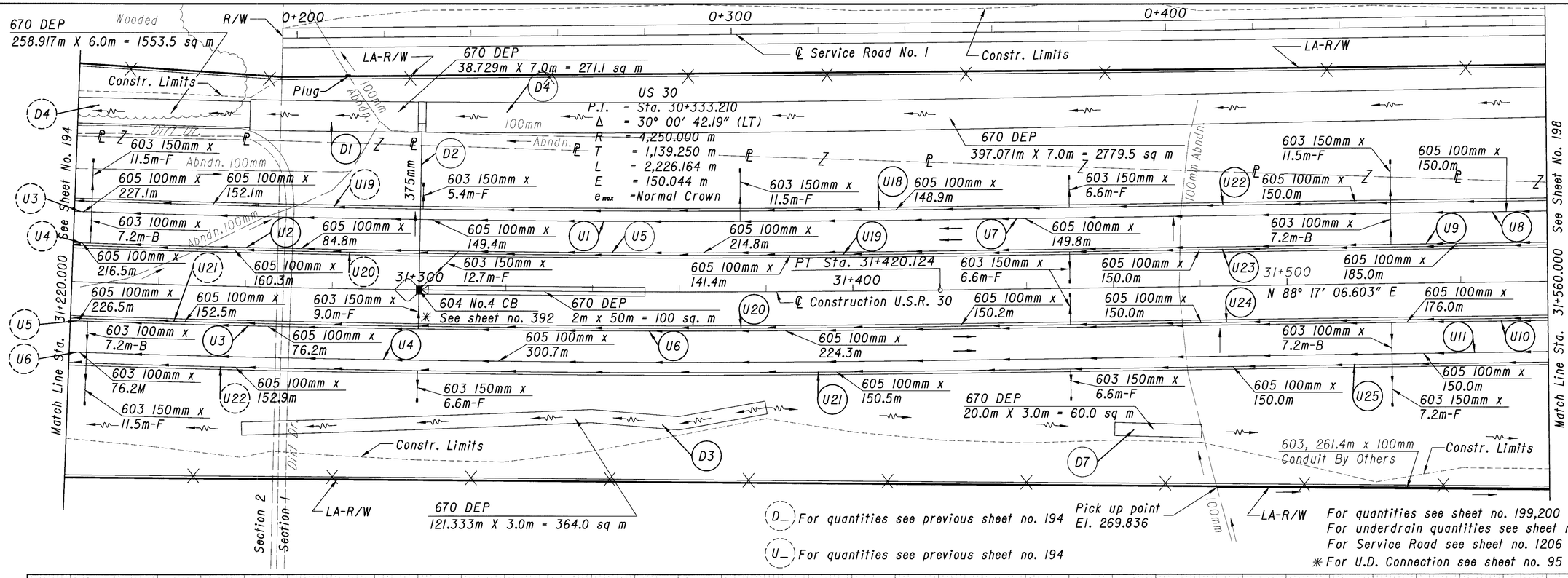
REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	601 ROCK CHANNEL PROTECTION TYPE B W/ FILTER (CU M)	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 375 MM CONDUIT, TYPE B (METER)	603 1950 MM CONDUIT, TYPE A, 706.02 OR 2250 MM 707.02, OR 707.09 (25MM CORR.), OR 707.22 (METER)	604 CATCH BASIN NO. 4 (EACH)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY (EACH) 300 MM X 300 MM 22.5° BEND	FOR INFORMATION ONLY (EACH) 375 MM X 375 MM 22.5° BEND	FOR INFORMATION ONLY (EACH) MASONRY COLLAR
D1	193	30+780.00 TO 30+972.96	LT								574.3				
D2	193	30+780.00 TO 30+991.85	RT								641.4				
D3	194	30+984.90 TO 30+996.88	LT									59.5			
D4	194	30+998.69 TO 31+260.00	LT								1553.5				
D5	194	30+987.632	LT & RT		58.6	38.1	7.32		72.9		44.3				
D6	194	30+999.01 TO 31+060.00	RT								185.6				
D7	194	30+998.00	CL	4.5			0.22	36.8		1	200.0				
TOTALS CARRIED TO SUB-SUMMARY				4.5	58.6	38.1	7.54	36.8	72.9	1	3199.1	59.5	TOTALS		

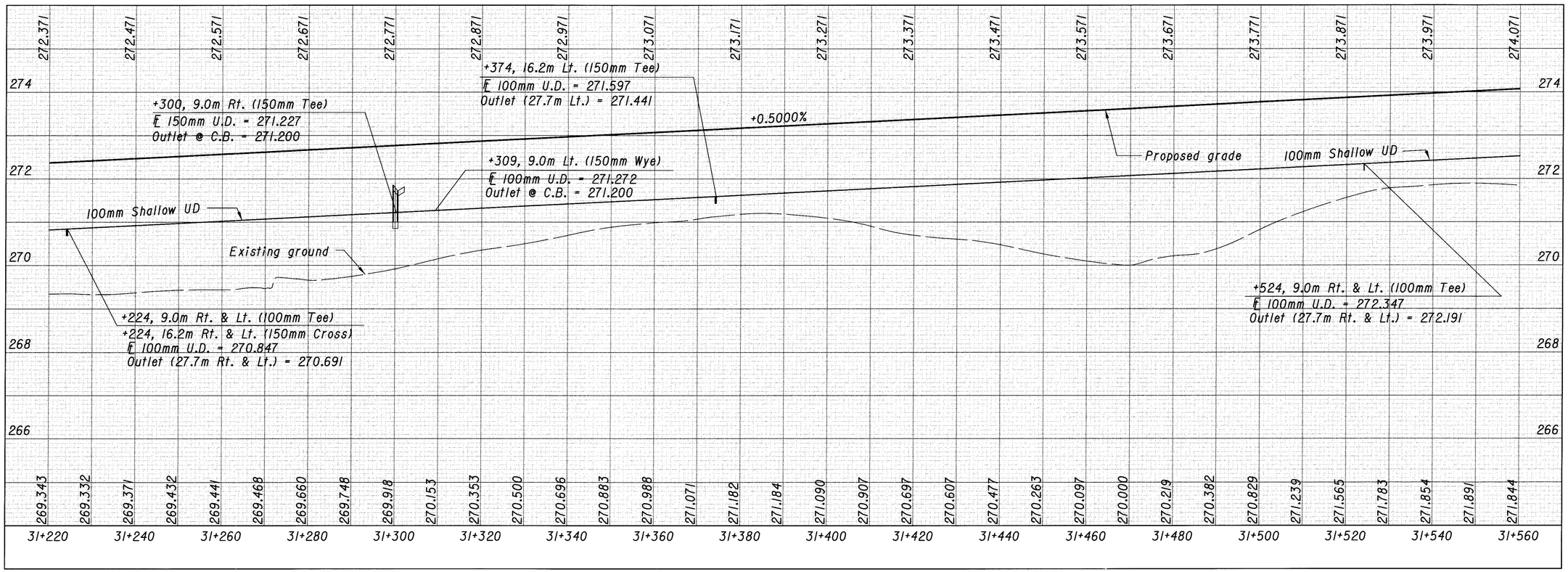
CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

196
2116





HORIZONTAL SCALE IN METERS

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 31+220 TO STA. 31+560

WYA/CRA-30-28.009/0.000

197
2116

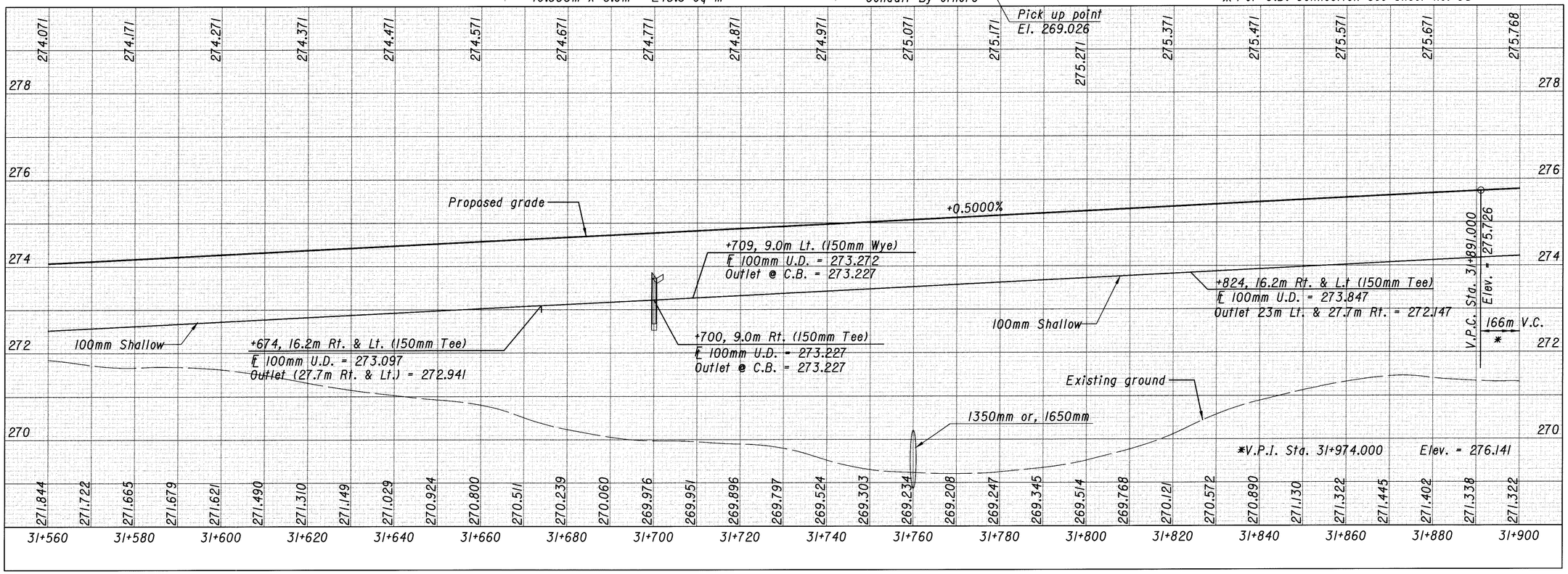
0+500 0+600 0+700 0+800

LA-R/W
Constr. Limits
℄ Service Road No. 1
31+706.175 Begin Curb, Type 6
DI2
660 Reinforced Sodding Area Planimetered 44.7 sq. m
603 375mm x 47.3m-C
Constr. Limits
LA-R/W
DI9
31+830.000 End Curb, Type 6
670 DEP 279.433m X 3.0m = 838.3 sq m
31+875.294 End GR 25.1m Lt. Type B Anchor Assembly
U34
605 100mm x 300.8m

See Sheet No. 197
605 100mm x 150.0m
U22 U8
603 150mm x 6.6m-F
670 DEP 397.071m X 7.0m = 2779.5 sq m
D4
605 100mm x 74.0m
603 150mm x 11.5m-F
670 DEP 14.700m X 7.0m = 73.5 sq m
D8 D11
D21 DI3
100mm Abndn.
300mm
315mm
670 DEP 45.310m x 11.0m = 498.4 sq m
Type T Anchor Assembly
DI4 DI6
R2
U30
605 100mm x 111.0m
603 150mm x 17.1m-F
Guardrail, Type 5
605 100mm x 185.0m
605 100mm x 150.0m
U26
605 100mm x 37.2m
31+706.175 Begin GR
U30
604 No. 3 CB See sheeet no. 399
603 375mm x 42.0m-B
605 100mm x 150.0m
U13 U14
U15
605 100mm x 415.0m
605 100mm x 300.0m
U23 U9
31+600
603 150mm x 6.6m-F
U27
605 100mm x 74.0m
Abndn. 100mm
31+700
603 150mm x 12.7m-F
100mm
Sta.31+760.00 U.S. 30 See sheet no. 1321
31+800
U31
603 150mm x 6.6m-F
U35
605 100mm x 300.0m
31+9
℄ Construction U.S.R. 30
U24 U10
605 100mm x N 88° 17′ 07″ E 74.0m
603 150mm x 6.6m-F
603 150mm x 9.0m-F
603 1350mm or, 1650mm
U32
605 100mm x 150.0m
U16
605 100mm x 300.0m
605 100mm x 150.0m
605 100mm x 176.0m
U28
603 150mm x 11.5m-F
604 No.4 CB See sheet no. 399
U12
670 DEP 2m x 50m = 100 sq m
605 100mm x 150.0m
605 100mm x 150.0m
605 100mm x 111.0m
605 100mm x 300.0m
605 100mm x 424.0m
U36 U17
U25 UII
603 150mm x 6.6m-F
605 100mm x 74.0m
U33
605 100mm x 38.7m Type B Anchor Assembly
D9
604 No. 3 CB See sheet no. 399
603 375mm x 29.3m-C
U33
Guardrail, Type 5
RI
Type T Anchor Assembly
31+812.870 End GR
603 150mm x 11.5m-F
U37
605 100mm x 300.0m
605 100mm x 150.0m
U29
31+664.515 Begin GR 25.1m Rt.
D20
670 DEP 120.35m X 6.0m = 722.1 sq m
Constr. Limits
Constr. Limits
670 DEP 10.567m X 6.0m = 63.4 sq m
DI0 D22 DI5
DI8
31+812.870 End Curb, Type 6
LA-R/W
839 Seeding & Erosion Control 20.025m x 4.0m = 80.1 sq m
839 Seeding & Erosion Control 14.06m x 5.0m = 70.3 sq. m
DI7
LA-R/W
603, 261.4m x 100mm Conduit By Others
31+710.000 Begin Curb, Type 6
660 Reinforced Sodding Area Planimetered 38.8 sq. m
670 DEP 40.883m X 6.0m = 245.3 sq m
Pick up point El. 268.781
300mm
603 26.8m x 100mm Conduit By others
Pick up point El. 269.026

605 100mm x 150.0m
Match Line Sta. 31+560.000
605 100mm x 150.0m
Match Line Sta. 31+900.000 See Sheet No. 201

For quantities see sheet no. 199, 200
For underdrain quantities see sheet no. 107
For Service Road see sheet no. 1206-1207
✱ For U.D. Connection see sheet no. 95



HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 31+560 TO STA. 31+900

WYA/CRA-30-28.009/0.000

198
2116

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE 1		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH			METER	METER		METER		EACH	
		USR 30																															
R1	198	31+664.515 TO 31+812.870	RT														140.970					1		1			103						
R2	198	31+706.175 TO 31+875.294	LT														163.830					1		1			124						
TOTALS CARRIED TO SUB-SUMMARY																	304.800					2		2			227						

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

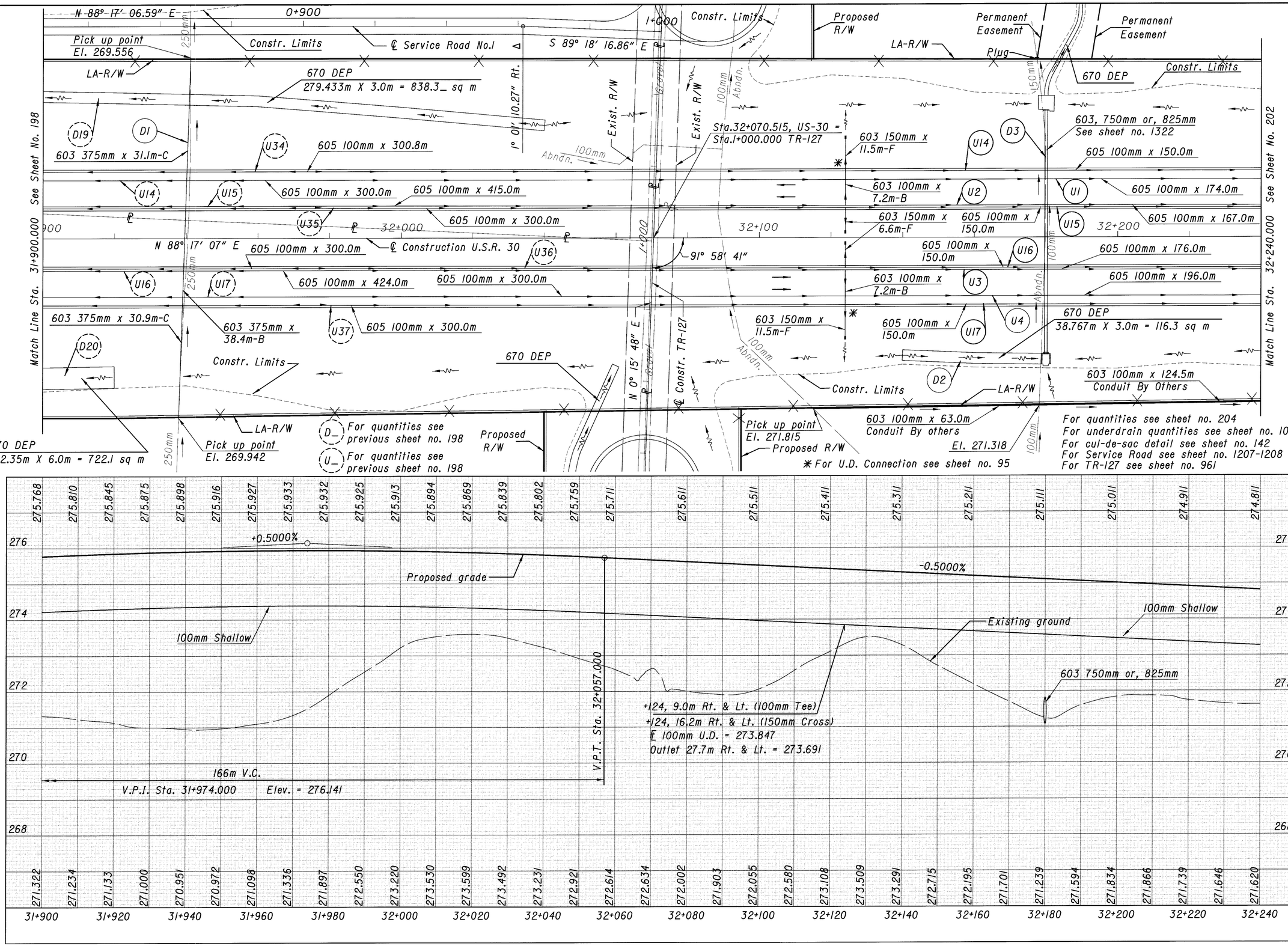
WYA/CRA-30-28.009/0.000

ESTIMATED DRAINAGE QUANTITIES

CALCULATED: AM
CHECKED: REA

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	601 ROCK CHANNEL PROTECTION TYPE B W/ FILTER (CU M)	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 300 MM CONDUIT, TYPE F (METER)		603 375 MM CONDUIT, TYPE B (METER)	603 375 MM CONDUIT, TYPE C (METER)		603 1350 MM CONDUIT, TYPE A, 706.02, 75 D-LOAD OR 1650 MM 707.02, OR 707.09 (125MM CORR.), OR 707.22 (METER)		604 CATCH BASIN NO. 3 (EACH)	604 CATCH BASIN NO. 4 (EACH)		660 SODDING REINFORCED (SQ M)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: MASONRY COLLAR (EACH)
D1	197	31+260.00 TO 31+299.09	LT																271.1				
D2	197	31+300.00	CL	4.5			0.22			38.2						1			100.0				
D3	197	31+260.00 TO 31+380.00	RT																364.0				
D4	197	31+300.91 TO 31+699.10	LT																2779.5				
D5		NOT USED																					
D6		NOT USED																					
D7	197	31+460.00 TO 31+480.00	RT																60.0				
D8	198	31+700.00	CL	4.5			0.22			41.0						1			100.0				
D9	198	31+700.00 TO 31+710.35	RT																63.4				
D10	198	31+709.25	RT															38.8					
D11	198	31+705.39	LT															44.7					
D12	198	31+700.90 TO 31+711.40	LT																73.5				
D13	198	31+713.20 TO 31+758.50	LT																498.4				
D14	198	31+744.73	LT & RT							42.0	76.6												
D15	198	31+713.20 TO 31+754.08	RT																245.3				
D16	198	31+760.00	LT & RT		22.50	75.90	3.76						71.6										
D17	198	31+765.96 TO 31+780.00	RT																	70.3			
D18	198	31+780.00 TO 31+800.00	RT																	80.1			
D19	198	31+761.50 TO 32+040.00	LT																838.3				
D20	198	31+800.00 TO 31+919.98	RT																722.1				
D21	198	31+712.30	LT				0.17	18.3							1					14.4			2
D22	198	31+712.30	RT				0.17	17.0							1					7.2			2
																						TOTALS	4
TOTALS CARRIED TO SUB-SUMMARY				9.0	22.5	75.9	4.54	35.3		121.2	76.6		71.6		2	2		83.5	6115.6	172.0			

WYA/CRA-30-28.009/0.000



HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED AM

CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 31+900 TO STA. 32+240

WYA/CRA-30-28.009/0.000

201
2116

603 375mm x 32.6m-C

Pick up point
El. 269.668

LA-R/W

670 DEP
65.967m X 3.0m = 197.9 sq m

Plug

Pick up point
El. 269.244

603 100mm x 27.3m
Conduit By Others

El. 269.919

603 100mm x
46.8m Conduit
By Others

670 DEP
64.175m X 4.0m = 256.7 sq m

605 100mm x
150.0m

See Sheet No. 201

605 100mm x
150.0m

605 100mm x
150.0m

605 100mm x
150.0m

Match Line Sta. 32+240.000

605 100mm x
150.0m

603 100mm x 124.5m
Conduit By others

603 375mm x 27.9m-C

Pick up point
El. 271.026

670 DEP
20.0m X 7.0m = 140.0 sq m

LA-R/W

839 Seeding & Erosion Control W/
Matting 60.0m X 4.0m = 240 sq m

670 DEP
20.0m X 6.0m = 120.0 sq m

For quantities see sheet no. 204
For underdrain quantities see sheet no. 108
For Crossover detail. see sheet no. 141
✳ For U.D. Connection see sheet no. 95

670 DEP
144.116m X 6.0m = 864.7 sq m

LA-R/W

670 DEP
76.650m X 6.0m = 459.9 sq m

Match Line Sta. 32+580.000

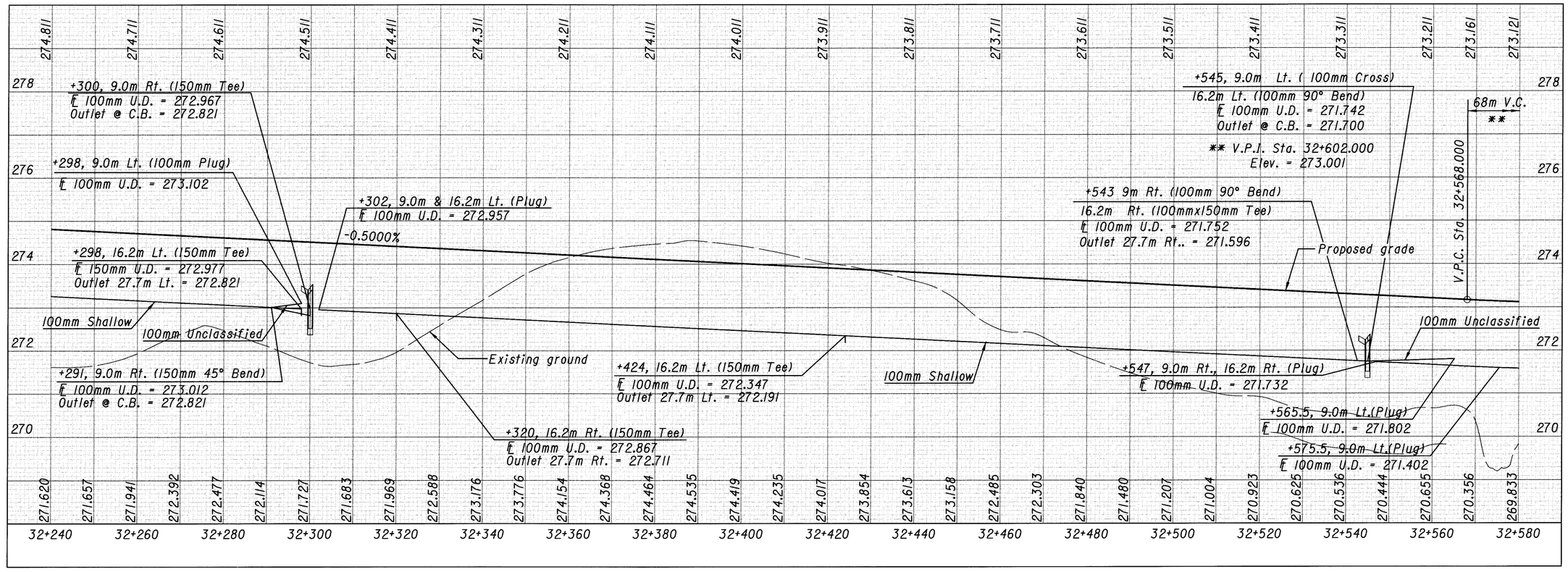
605 100mm x
39.2m

605 100mm x
35.3m

605 100mm x
43.2m

See Sheet No. 205

Ⓐ 603 150mm x 9.2m-F
Ⓑ 603 150mm x 10.0m-F



PLAN AND PROFILE - U.S.R. 30
STA. 32+240 TO STA. 32+580

HORIZONTAL
SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

WYA/CRA-30-28.009/0.000

202
2116

ESTIMATED DRAINAGE QUANTITIES

CALCULATED AM | CHECKED REA

WYA/CRA-30-28.009/0.000

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	601 ROCK CHANNEL PROTECTION TYPE B W/ FILTER (CU M)	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 375 MM CONDUIT, TYPE B (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 750 MM CONDUIT, TYPE A, 706.02, OR 825 MM 707.01, OR 707.09 (13MM CORR.), OR 707.21 (METER)	603 1500 MM CONDUIT, TYPE A, 706.02 OR 1950 MM 707.02, OR 707.09 (25MM CORR.), OR 707.22 (METER)	604 CATCH BASIN NO. 4 (EACH)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: MASONRY COLLAR (EACH)
D1	201	31+939.56	LT & RT					38.4	62.0								
D2	201	32+140.00 TO 32+178.73	RT										116.3				
D3	201	32+180.00	LT & RT			8.5	1.18			67.9			32.0	18.3			
D4	202	32+284.70	LT & RT					41.3	60.5								
D5	202	32+280.00 TO 32+300.0	RT										60.1				
D6	202	32+300.00	CL	2.7			0.22	31.9				1	100.0				
D7	202	32+300.00 TO 32+320.00	RT										140.0				
D8	202	32+320.00 TO 32+340.00	RT										120.0				
D9	202	32+340.00 TO 32+400.00	RT											240.0			
D10	202	32+400.00 TO 32+544.10	RT										864.7				
D11	202	32+460.00 TO 32+524.97	LT										197.9				
D12	202	32+545.00	CL	4.1			0.22	30.3				1	100.0				
D13	202	32+581.455	LT & RT		61.8	110.9	5.36				108.7						
D14	202	32+537.15 TO 32+601.10	LT										256.7				
D15	202	32+545.90 TO 32+622.17	RT										459.9				

Wooded
Wooded
Wooded
** By others
** 603 46.8m x 100mm Conduit El. 270.934
** 603 46.9m x 100mm Conduit El. 272.367
** 603 23.4m x 100mm Conduit El. 271.369
** 603 31.5m x 100mm Conduit El. 272.500
** 603 21.0m x 100mm Conduit El. 272.706
** 603 46.1m x 100mm Conduit El. 273.898
** 603 30.1m x 100mm Conduit El. 275.146
670 DEP 64.175m x 4.0m = 256.7 sq m
670 DEP 197.133m X 3.0m = 591.4 sq m
LA-R/W
Constr. Limits
Existing R/W
Asphalt
℄ Construction C.R.-1280
POT Sta. 1+049.702
N 0° 03' 06.55" W
1+100
Pick up point El. 273.586
603 100mm x 45.8m Conduit By Others
Sta. 32+872.188 US 30 = Sta. 1+000.000 CR-128
605 100mm x 14.0m
605 100mm x 332.2m
See Sheet No. 202
603 150mm x 13.3m-F
Sta.32+580.000 U.S. 30
1500mm or 1950mm
See sheet no. 1323
375mm
100mm Abndn.
150mm Abndn.
Abndn. (Typ.)
605 100mm x 150.2m
605 150mm x 15.0m
604 No.2-2B CB
See sheet no. 1370
605 150mm x 53.0m
605 150mm x 64.5m
605 150mm x 149.0m
See Sheet No. 207
605 100mm x 11.0m
603 150mm x 13.0m-F
604 No.4 CB
See sheet no. 416
670 DEP
2m x 50m = 100 sq m
605 150mm x 141.0m
605 150mm x 250.8m
605 100mm x 141.6m
605 100mm x 148.0m
603 150mm x 6.6m-F
605 100mm x 151.0m
605 150mm x 98.1m
605 100mm x 98.1m
605 150mm x 15.0m
32+600
32+700
32+800
32+900
℄ Construction U.S.R. 30
N 88° 17' 07" E
603 150mm x 8.6m-F
605 100mm x 150.4m
603 150mm x 7.2m-B
605 150mm x 150.4m
605 150mm 245.0m
605 100mm 98.5m
605 150mm x 98.5m
603 150mm x 3.6m-F
603 150mm x 15.2m
605 100mm x 24.5m
605 100mm x 43.2m
Match Line Sta. 32+580.000
605 100mm x 150.0m
603 150mm x 6.6m-F
605 100mm x 151.0m
603 150mm x 15.0m
605 150mm x 53.0m
605 150mm x 64.4m
605 100mm x 143.8m
Match Line Sta. 32+920.000
605 100mm x 43.2m
670 DEP 2m x 50m = 100 sq. m
605 100mm x 178.0m
Constr. Limits
Plug
Pick up point El. 269.865
603 150mm x 11.7m Conduit By Others
670 DEP 84.367m X 3.0m = 253.1 sq m
603 150mm x 14.3m-F
POT Sta. 0+951.699
N 0° 03' 30.47" W
LA-R/W
75mm
670 DEP 76.650m X 6.0m = 459.9 sq m
603 75mm x 55.1m Conduit By Others
Pick up point El. 270.188
Outlet in Creek
Outlet in Creek
ROCK
ROCK RUN
RUN
CREEK
Wooded
150mm
Permanent Easement
Plug
150mm Abndn.
670 DEP
Constr. Limits
Section 1
Section 6
Existing R/W
Asphalt
0+900
1+000
380mm Abndn.
670 DEP 84.88m X 5.0m = 424.4 sq m

LEGEND
(A) 603 100mm x 7.2m-B
(B) 603 150mm x 13.3m-F
(C) 605 100mm x 43.0m
(D) 605 100mm x 43.0m
(E) 603 100mm x 9.6m-B
(F) 603 150mm x 6.6m-F
(G) 603 100mm x 7.8m-B

LEGEND
(H) 603 150mm x 18.0m-B
(I) 603 150mm x 3.0m-F
(J) 603 150mm x 7.2m-F

For quantities see sheet no. 209
For underdrain quantities see sheet no. 109
For Profile, see sheet no. 206
For CR-128, see sheet no. 823
For Left Turn Lane Detail, see sheet no. 142
✱ For U.D. Connection see sheet no. 95
(D_) For quantities see previous sheet no. 202
(U_) For quantities see previous sheet no. 202

N
0 10 20
HORIZONTAL SCALE IN METERS
CALCULATED AM
CHECKED REA

PLAN - U.S.R. 30
STA. 32+580 TO STA. 32+920

WYA/CRA-30-28.009/0.000

205
2116

CALCULATED AM
CHECKED R.E.A.

PROFILE - U.S.R. 30
STA. 32+580 TO STA. 32+920

WYA/CRA-30-28.009/0.000

273.121 273.096 273.086 273.090 273.109 273.143 273.191 273.291 273.391 273.491 273.591 273.691 273.791 273.891 273.991 274.091 274.191 274.244 274.305 274.374 274.449 274.532 274.623 274.821

282 280 278 276 274 272 270 268 266 264 262

68m V.C.
V.P.I. Sta. 32+602.000
Elev. = 273.001

V.P.T. Sta. 32+636.000

+590, 9.0m Lt.
℄ 100mm U.D. = 271.552
9.0m Rt. (100mm Tee)
16.2m Rt. (150mm Tee)
℄ 100mm U.D. = 271.552
Outlet 29.5m Rt. = 271.296

+600, 9.0m Lt.
℄ 100mm U.D. = 271.542

Proposed grade

100mm Unclassified

-0.5000%

+0.5000%

+611, 9.0m Lt. (150mm Wye)
℄ 150mm U.D. = 271.047
Outlet @ C.B. = 270.978

Existing ground

+648.100, 9.0m Rt.
℄ 150mm U.D. = 271.187

+710, 5.4m Rt.
℄ 150mm U.D. = 271.4394

150mm Deep

+610, 9.0m Rt. (150mm Tee)
16.2m Rt. (150mm 90° Bend)
℄ 150mm U.D. = 271.046

+604, 16.2m Lt. (150mm Cross)
℄ 150mm U.D. = 271.042
Outlet (29.5m Lt.) = 270.786

+602, 9.0m Rt. (150mm Tee)
℄ 150mm U.D. = 269.995
Outlet @ C.B. = 269.895

68m V.C.
V.P.I. Sta. 32+874.000
Elev. = 274.361

V.P.C. Sta. 32+840.000

V.P.T. Sta. 32+908.000

+1.0000%

+903 16.2m Rt. (150mm Tee)
℄ 150mm (Uncl.) U.D. = 273.127
Outlet 30.5m Rt. = 271.421

+855 16.2m Lt. (150mm Plug)
℄ 150mm U.D. =272.230

+850 7.7m Lt. (150mm Plug)
℄150mm U.D. =272.179

+850 1.8m Lt. (150mm Plug)
℄150mm U.D. =271.060
+855 16.2m Rt. (150mm Plug)
℄150mm U.D. = 272.230

150mm Unclassified

+888, 16.2 Rt./Lt. (150mm Plug)
+888, 6.652m & 1.891m Rt. (150mm Plug)
150mm (Uncl.) U.D. =273.819

+903 16.2m Lt. (150mm Cross)
+903 1.72m Rt. (150mm Cross)
+903 9.0m Rt. (150mm Tee)
℄ 150mm (Uncl.) U.D. = 273.127
Outlet @ C.B. = 273.110

Sta. 32+903, 4.803m Rt.
604, No. 2-2B CB
℄ Grate = 272.232
Inv. 300mm = 272.875

For Plan, see sheet no. 205

269.833 271.173 270.609 270.628 270.718 270.780 270.855 270.961 271.070 271.219 271.446 271.738 272.023 272.276 272.565 272.934 273.408 274.098 274.820 275.531 276.023 276.289 276.391 276.512 276.504 276.383 276.149 275.702 275.546 274.341 275.490 274.896 274.466 273.588 272.944

32+580 32+600 32+620 32+640 32+660 32+680 32+700 32+720 32+740 32+760 32+780 32+800 32+820 32+840 32+860 32+880 32+900 32+920

603 100mm x 45.8m Conduit By Others
El. 272.579
El. 271.927
Pick up point
El. 271.066
El. 271.934
603 100mm x 44.0m Conduit By Others
LA-R/W
Pick up point
El. 272.211
Constr. Limits
670 DEP 38.767m x 3.0m = 116.3 sq. m
603 375mm x 31.1-C
603 150mm x 13.8m-F
605 150mm x 37.8m
605 100mm x 150.2m
603 150mm x 6.6m-F
2.4m
3.0m
605 100mm x 149.2m
605 150mm x 219.4m
605 100mm x 150.1m
670 DEP 459.725m X 4.0m = 1838.9 sq m
Constr. Limits
See Sheet No. 205
605 150mm x 53.0m
605 150mm x 64.5m
603 150mm x 10.0m-F
605 150mm x 86.1m
670 DEP 2m x 50m = 100 sq m
605 150mm x 138.3m
603 150mm x 9.1m-B
605 150mm x 62.7m
605 100mm x 149.6m
670 DEP 2m x 50m = 100 sq m
605 150mm x 79.8m
670 DEP 2m x 50m = 100 sq. m
605 150mm x 193.3m
See Sheet No. 210
605 100mm x 150.0m
33+000
N 88° 17' 07" E
33+100
33+200
600mm
525mm
300mm
604 No.4 CB
See sheet no. 1324
603 375mm x 38.4m-B
605 100mm x 143.8m
605 100mm x 149.0m
℄ Construction U.S.R. 30
Wooded
603 150mm x 9.0m-F
605 150mm x 61.2m
603 150mm x 6.6m-F
605 150mm x 193.3m
32+920.000
605 150mm x 64.4m
605 150mm x 53.0m
Match Line Sta. 32+920.000
603 150mm x 10.4m-F
605 150mm x 138.2m
605 150mm x 138.2m
605 150mm x 138.2m
605 100mm x 149.1m
603 150mm x 7.2m-B
604 No.4 CB
See sheet no. 1370
604 No.4 CB
See sheet no. 1371
605 150mm x 61.2m
605 150mm x 193.3m
605 100mm x 150.0m
Wooded
603 150mm x 13.8m-F
605 150mm x 38.3m
605 100mm x 150.0m
603 150mm x 6.6m-F
670 DEP 79.02m X 5.0m = 395.1 sq m
Abndn.
605 100mm x 149.1m
603 150mm x 14.0m-F
605 150mm x 61.2m
605 150mm x 6.6m-F
605 150mm x 193.3m
605 100mm x 150.0m
600mm
Match Line Sta. 33+260.000
605 100mm x 150.0m
670 DEP
84.88m X 5.0m = 424.4 sq m
603, 750mm or 825mm
See Sheet No. 1324
603 375mm x 31.1m-C
670 DEP 93.075m x 4.0m = 372.3 sq, m
380mm
Plug
670 DEP 145.175m x 4.0m = 580.7 sq, m
Constr. Limits
LA-R/W
603 100mm x 28.9m Conduit By Others
Pick up point
El. 270.865
El. 271.145
603 103.6m x 375mm Conduit By others
Pick up point
El. 272.039
Wooded
El. 270.807

For quantities see sheet no. 209
For underdrain quantities see sheet no. 109
For storm sewer details see sheet no. 1370-1371
For left turn lane details see sheet no. 142
✳ For U.D. Connection see sheet no. 95

+956, 16.2m Lt. (150mm Tee)
℄ 150mm (Uncl.) U.D. = 273.297
Outlet (30.5m Rt.) = 272.761
+956, 16.2m Rt.. (150mm Tee)
+967, 9m Rt.. (150mm Wye)
℄ 150mm U.D. = 273.377
Outlet @ CB = 273.200
Existing ground
Proposed grade
+134, 9.0m Lt. (150mm Tee)
+134, 18.1m Lt. (150mm 90° Bend)
℄ 150mm U.D. = 275.396
Outlet @ C.B. = 275.396
+1.0000%
+192.605, 19.3m Lt.
℄ 150mm U.D. = 275.493
150mm Deep
150mm Unclassified
+044.265, 5.4m Lt.
℄ 150mm U.D. = 274.019
150mm Deep
150mm Unclassified
+994.254 16.2m Rt. & Lt.
℄ 150mm U.D. = 273.519
+196.716, 9.0m Rt. & Lt.
+196.716, 16.0m Rt.
℄ 150mm U.D. = 275.500
+135.500, 9.0m Rt. (150mm 90° Bend)
+135.500, 16.2m Rt. (150mm Tee)
℄ 150mm (Uncl.) U.D. = 275.107
Outlet 30.2m Rt. = 275.407
+994.254 9.0m Rt.
℄ 150mm U.D. = 273.461
+132.500, 9.0m Rt. & Lt.(150mm Plug)
+132.500, 16.0m Rt. & Lt.(150mm Plug)
+132.500, 18.0m Lt.(150mm Plug)
℄ 150mm U.D. = 274.892
+967, 5.426m Lt.. (150mm Wye)
℄ 150mm U.D. = 273.361
Outlet @ CB = 273.200
603, 57m x 300mm Conduit
Type C @ 0.9%, Inv. 272.362
603, 750mm or 825mm

274.821 275.021 275.221 275.421 275.621 275.821 276.021 276.221 276.421 276.621 276.821 277.021 277.221 277.421 277.621 277.821 278.021 278.221
272.944 272.592 272.379 272.300 272.264 272.280 272.269 272.342 272.486 272.866 273.240 273.637 274.270 275.228 276.300 277.092 277.656 277.381 276.898 276.408 275.957 275.611 275.766 276.107 276.615 277.156 277.718 278.639 279.405 279.745 279.491 279.062 278.543 278.191 277.925
32+920 32+940 32+960 32+980 33+000 33+020 33+040 33+060 33+080 33+100 33+120 33+140 33+160 33+180 33+200 33+220 33+240 33+260

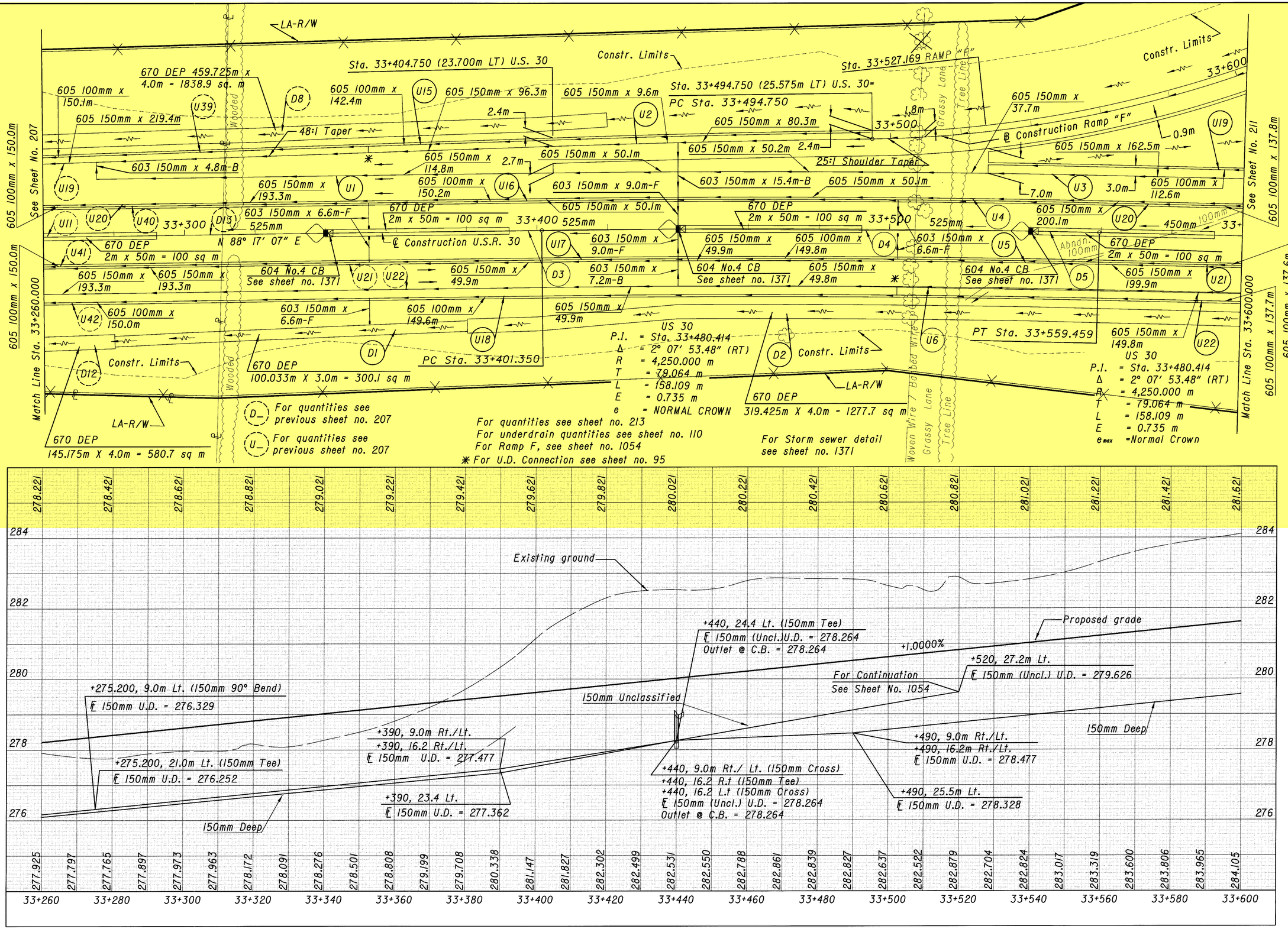
HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 32+920 TO STA. 33+260

WYA/CRA-30-28.009/0.000

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| REF NO. | SHEET NO. | STATION | SIDE | 601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M) | 601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (CU M) | | 602 CONCRETE MASONRY (CU M) | 603 375 MM CONDUIT, TYPE B (METER) | 603 600 MM CONDUIT, TYPE B (METER) | 603 300 MM CONDUIT, TYPE C (METER) | 603 375 MM CONDUIT, TYPE C (METER) | 603 600 MM CONDUIT, TYPE C (METER) | 603 525 MM CONDUIT, TYPE C (METER) | 603 750 MM CONDUIT, TYPE A, 706.02, OR 825 MM 707.01, OR 707.09 (13MM CORR.), OR 707.21 (METER) | 604 CATCH BASIN NO. 2-2B (EACH) | | 604 CATCH BASIN NO. 4 (EACH) | | 670 DITCH EROSION PROTECTION (SQ M) | 839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M) | | |



N

0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 33+260 TO STA. 33+600

WYA/CRA-30-28.009/0.000

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2116

For Storm Sewer Detail see sheet no. 1372
For quantities see sheet no. 213
For underdrain quantities see sheet no. 110
For Ramp E, see sheet no. 1050
For Ramp F, see sheet no. 1054
* For U.D. Connection see sheet no. 95

℄ Construction Ramp "F"
603 150mm x 6.6m-F
605 100mm x 112.6m
605 150mm x 162.5m
605 100mm x 144.6m
605 150mm x 54.3m
603 150mm x 6.6m-F
605 100mm x 95.4m
605 150mm x 86.0m
603 150mm x 7.2m-B
605 150mm x 117.1m
605 100mm x 117.1m
605 100mm x 137.8m
See Sheet No. 210
605 150mm x 200.1m
605 100mm x 144.6m
605 150mm x 49.8m
605 150mm x 49.7m
603 150mm x 7.2m-B
605 150mm x 54.2m
605 100mm x 95.4m
604 No.4 CB See sheet no. 1372
603 150mm x 9.0m-F
670 DEP 2m x 50m = 100 sq. m
See Sheet No. 214
605 150mm x 117.1m
605 100mm x 117.1m
605 150mm x 108.7m
450mm
670 DEP 2m x 50m = 100 sq. m
33+700
604 No.4 CB See sheet no. 1372
℄ Construction U.S.R. 30 33+800
S 89° 35' 00" E
605 150mm x 7.5m
603 150mm x 12.7m-F 33+900
603 150mm x 8.1m-F
605 100mm x 144.6m
605 150mm x 50.2m
603 150mm x 9.0m-F
603 150mm x 6.6m-F
605 150mm x 84.5m
670 DEP 2m x 32m = 64 sq. m
605 150mm x 5.6m
3.0m
605 150mm x 149.8m
605 150mm x 199.9m
605 150mm x 50.3m
603 150mm x 11.4m-B
605 150mm x 53.7m
605 150mm x 53.8m
605 150mm x 84.5m
604 No.5 CB See sheet No. 44
603 150mm x 10.0m-F
0.9m
7.0m
+845.97
375mm
Match Line Sta. 33+600.000
Match Line Sta. 33+940.000
605 100mm x 137.6m
605 150mm x 112.4m
605 150mm x 70.0m
605 150mm x 68.1m
+605.97
+635.97
605 150mm x 50.0m
33+800
670 DEP 2m x 50m = 100 sq. m
33+900
605 100mm x 137.7m
Sta. 33+702.752 (19.800 RT) U.S.30 = PC Sta. 33+702.752 Ramp E
Constr. Limits
Outlet in Ditch El. 282.876
Sta. 33+845.631 RAMP "E"
605 100mm x 38.7m
℄ Construction Ramp "E"
603 100mm x 29.2m-E
Pick up point El. 283.212
603 100mm x 13.4m
Conduit By Others
Pick up point El. 283.220
PCC Sta. 33+875.734
670 DEP 319.425m X 4.0m = 1277.7 sq. m
LA-R/W
LA-R/W
Constr. Limits

+880, 9.0m Lt. (Cross)
+880, 16.2m Lt. (150mm Tee)
℄ 150mm U.D.= 282.377
Outlet @ CB = 282.350
+878.5, 9.0m &16.2m Rt.
℄ 150mm U.D.(150mm Plug)= 82.362
Proposed grade
Existing ground
+1.0000%
+881.5, 9.0m & 16.2m Rt.
℄ 150mm U.D.(150mm Plug)= 282.542
150mm Deep
150mm Unclassified
150mm Unclassified
+740, 9.0m Rt./Lt. (150mm Cross)
+740, 16.2m Lt. (150mm Tee)
+740, 16.2m Rt. (150mm Cross)
+740, 20.4m Lt. (150mm 90° Bend)
℄ 150mm (Uncl.) U.D. = 281.369
Outlet @ C.B. = 281.350
+794, 9.0m Rt./Lt.
+794, 16.2m Rt./Lt.
℄ 150mm U.D. = 281.517
+887, 16.2m Rt. (Wye)
℄ 150mm U.D.= 282.447
Outlet @ CB Rt.= 282.420
+889, 9.0m Rt. (Wye)
℄ 150mm U.D.= 282.467
Outlet @ CB, ℄ =282.350
+690, 9.0m Rt. & Lt.
+690, 16.2m Rt. & Lt.
℄ 150mm U.D. = 280.477
150mm Deep

281.621 281.821 282.021 282.221 282.421 282.621 282.821 283.021 283.221 283.421 283.621 283.821 284.021 284.221 284.421 284.621 284.821 285.021
286 284 282 280 278
284.105 284.243 284.344 284.387 284.356 284.241 284.094 283.954 283.846 283.618 283.352 283.322 283.101 283.147 283.300 283.724 284.137 284.518 284.342 283.947 283.692 283.385 283.416 283.488 283.511 283.515 283.592 283.747 284.008 284.054 284.049 284.078 284.029 283.908 283.789
33+600 33+620 33+640 33+660 33+680 33+700 33+720 33+740 33+760 33+780 33+800 33+820 33+840 33+860 33+880 33+900 33+920 33+940

N
0 10 20
HORIZONTAL SCALE IN METERS
CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 33+600 TO STA. 33+940

WYA/CRA-30-28.009/0.000

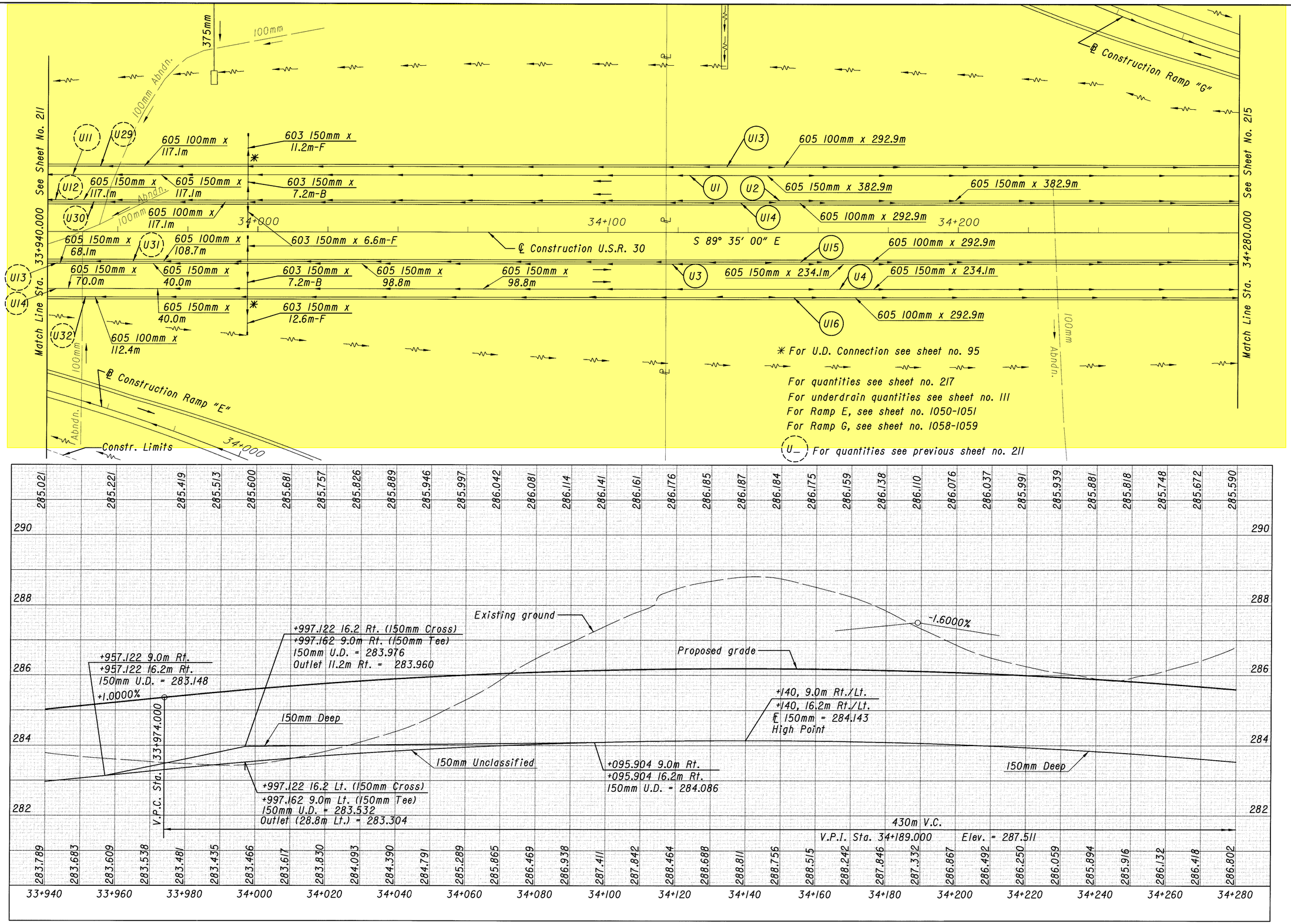
211
2116

ESTIMATED DRAINAGE QUANTITIES

CALCULATED AM
CHECKED REA

WYA/CRA-30-28.009/0.000

REF NO.	SHEET NO.	STATION	SIDE	603 375 MM CONDUIT, TYPE B	603 450 MM CONDUIT, TYPE C	603 525 MM CONDUIT, TYPE C	604 CATCH BASIN NO. 4	604 CATCH BASIN NO. 5	670 DITCH EROSION PROTECTION	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND	FOR INFORMATION ONLY: MASONRY COLLAR
				METER	METER	METER	EACH	EACH	SQ M	EACH		
D1	210	33+280.01 TO 33+379.99	RT						300.1			
D2	210	33+379.99 TO 33+700.00	RT						1277.7			
D3	210	33+340.00 TO 33+440.00	CL			100.0	1		100.0			
D4	210	33+440.00 TO 33+540.00	CL			100.0	1		100.0			
D5	210	33+540.00 TO 33+640.00	CL		100.0		1		100.0			
D6	211	33+640.00 TO 33+740.00	CL		100.0		1		100.0			
D7	211	33+740.00 TO 33+880.00	CL		140.0		1		100.0			
D8	211	33+880.00	CL	23.3			1	1	264.0			
TOTALS CARRIED TO SUB-SUMMARY				23.3	340.0	200.0	6	1	2341.8	TOTALS		



HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 33+940 TO STA. 34+280

WYA/CRA-30-28.009/0.000

214
2116

603 150mm x 120.5m-C
34+300
℄ Construction Ramp "G"
S3
S1
PCC Sta. 34+359.899
Sta. 34+390.001 RAMP "G"
603 150mm x 88.2m-C
1.8m
0.9m
100mm
34+400
7.0m
LA-R/W
El. 278.627
Constr. Limits
Pick up point
El. 277.971
603 71.6m x 100mm Conduit
By others
El. 278.321
670 DEP
57.833m X 6.0m = 347.0 sq m
670 DEP
48.125m X 4.0m = 192.5 sq m
603 375mm x 29.5m-C
D11
D12
605 100mm x
137.0m
603 375mm x 43.4m-B
34+500
Abndn. 100mm
Sta. 34+532.881 (19.800m LT) U.S. 30=
PT Sta. 34+532.881
D10
+600.31
U24
2.4m
Abndn. 100mm
605 100mm x 292.9m
605 100mm x 292.9m
See Sheet No. 214
U13
603 150mm x
6.6m-F
U1
605 100mm x
90.0m
U17
605 150mm x
382.9m
3.0m
605 150mm x
382.9m
603 150mm x
8.1m-F
S2
+389.662
605 150mm x
140.0m Abndn.
605 150mm x
140.0m
604 No.4 CB
See sheet no. 454
605 150mm x
70.0m
605 150mm x
70.0m
U9
605 150mm x
90.0m
U10
U14
34+300
U2
U18
605 100mm x
90.0m
603 150mm x
7.2m-B
34+400
U6
S 89° 35' 00" E
U21
605 100mm x
140.0m
34+500
603 150mm x
9.0m-F
D9
605 150mm x
90.0m
34+600
U25
U15
603 150mm x
6.6m-F
U3
U19
605 100mm x
90.0m
℄ Construction U.S.R. 30
U7
U22
605 100mm x
131.6m
670 DEP
2m x 50m = 100 sq m
D7
Sta. 34+580.000
See sheet no. 1327
1500mm RCP or
1650mm CMP
U26
605 150mm x
234.1m
605 150mm x
234.1m
605 150mm x
50.0m
605 150mm x
50.0m
605 150mm x
50.0m
605 150mm x 50.0m
U8
605 150mm x
81.0m
603 150mm x
12.7m-F
375mm
605 150mm x
79.0m
605 150mm x
71.5m
605 150mm x
90.0m
U11
100mm Abndn.
200mm
605 150mm x 88.5m
603 150mm x
11.0m-F
603 150mm x
7.2m-B
603 150mm x
91.3m-B
U23
605 100mm x
138.5m
670 DEP
39.1m X 4.0m = 156.4 sq m
D5
D6
603 150mm x
14.1m-F
D8
U27
605 100mm x
121.5m
605 150mm x
90.0m
U12
605 100mm x 292.9m
605 100mm x 292.9m
Match Line Sta. 34+280.000
603 150mm x
6.6m-F
U4
U20
605 100mm x
90.0m
U16
SECTION 6
SECTION 5
Match Line Sta. 34+620.000
See Sheet No. 218
605 100mm x 150.0m
605 100mm x 158.4m
670 DEP
16.9m X 3.0m = 50.7 sq m
D13
670 DEP
74.833m X 3.0m = 223.5 sq m
839 Seeding & Erosion Control
2.986m x 7.0m = 20.9 sq. m
D1
D2
D3
D4
670 DEP
67.0m X 4.0m = 268.0 sq m
839 Seeding & Erosion Control
40.133m X 3.0m = 120.4 sq m
S2
S3
670 DEP
14.33m X 3.0m = 43.0 sq m
670 DEP
4.033m X 3.0m = 12.1 sq m
375mm
Bitl. Dr.
603 375mm x 41.6m-C
670 DEP
Angle point
El. 277.283
603, 375mm-C
200mm
℄ Construction Ramp "H"
34+600
1500mm RCP or
1800mm CMP See
sheet no. 1328
✳For U.D. Connection see sheet no. 95
(S_) For quantities see sheet no. 1059, 1071
For Sanitary Sewer see sheet no. 1378-1399
For quantities see sheet no. 217
For underdrain quantities see sheet no. 111
For Ramp G, see sheet no. 1059
For Ramp H, see sheet no. 1063

285.590 285.502 285.408 285.307 285.201 285.089 284.971 284.846 284.716 284.580 284.437 284.289 284.134 283.815 283.495 283.175 282.855 282.535 282.215 281.895 281.737 281.594 281.466 281.354 281.256 281.174 281.107 281.055

+380, 9.0m Rt. (150mm Tee)
+380, 16.2m Rt. (150mm Cross)
℄ 150mm (Uncl.) U.D. = 282.837
Outlet 26.0m Rt.= 282.637
+430, 9.0m Rt.
+430, 16.2m Rt.
℄ 150mm U.D. = 281.611
+520, 16.2m Lt. (150mm Tee)
+520, 19.9m Lt. (150mm Tee)
℄ 100mm U.D. = 280.171
Outlet 33.8m Lt. = 278.715
+520, 9.0m Lt. (150mm Tee)
℄ 100mnm U.D. = 280.171
Outlet @ C.B. = 280.000
72m V.C.
V.P.I. Sta. 34+580.000 Elev. = 281.255
+565, 16.2m Rt. & Lt.
+565, 9.0m Rt. & Lt.
℄ 100mm (Uncl.) U.D. = 279.945
+590, 16.2m Rt. & Lt.
+590, 9.0m Rt. & Lt.
℄ 100mm U.D. = 279.212
Proposed grade
-1.6000%
V.P.C. Sta. 34+544.0000
V.P.T. Sta. 34+616.000
V.P.T. Sta. 34+404.000
+330, 9.0m Rt.
+330, 16.2m Rt.
℄ 150mm U.D. = 283.045
+380, 9.0m Lt. (150mm Tee)
+380, 16.2m Lt. (150mm Cross)
℄ 150mm U.D. = 282.393
Outlet 29.6m Lt. = 281.751
+511, 9.0m Rt. (150mm Wye)
℄ 100mm U.D. = 280.315
Outlet @ C.B. = 280.000
+520, 9.0m Rt.
℄ 100mnm U.D. = 280.171
-0.5000%
Existing ground
430m V.C.
V.P.I. Sta. 34+189.000 Elev. = 287.511
1500mm or, 1800mm
286 284 282 280 278
286.802 287.247 287.514 287.546 287.073 286.244 284.873 283.655 282.572 281.840 281.461 281.265 281.162 281.052 280.916 280.693 280.395 279.965 279.646 279.499 279.391 279.251 279.158 279.125 278.849 278.749 278.564 278.546 278.575 278.668 278.813 278.984 279.155 279.259 279.270
34+280 34+300 34+320 34+340 34+360 34+380 34+400 34+420 34+440 34+460 34+480 34+500 34+520 34+540 34+560 34+580 34+600 34+620

HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 34+280 TO STA. 34+620

WYA/CRA-30-28.009/0.000

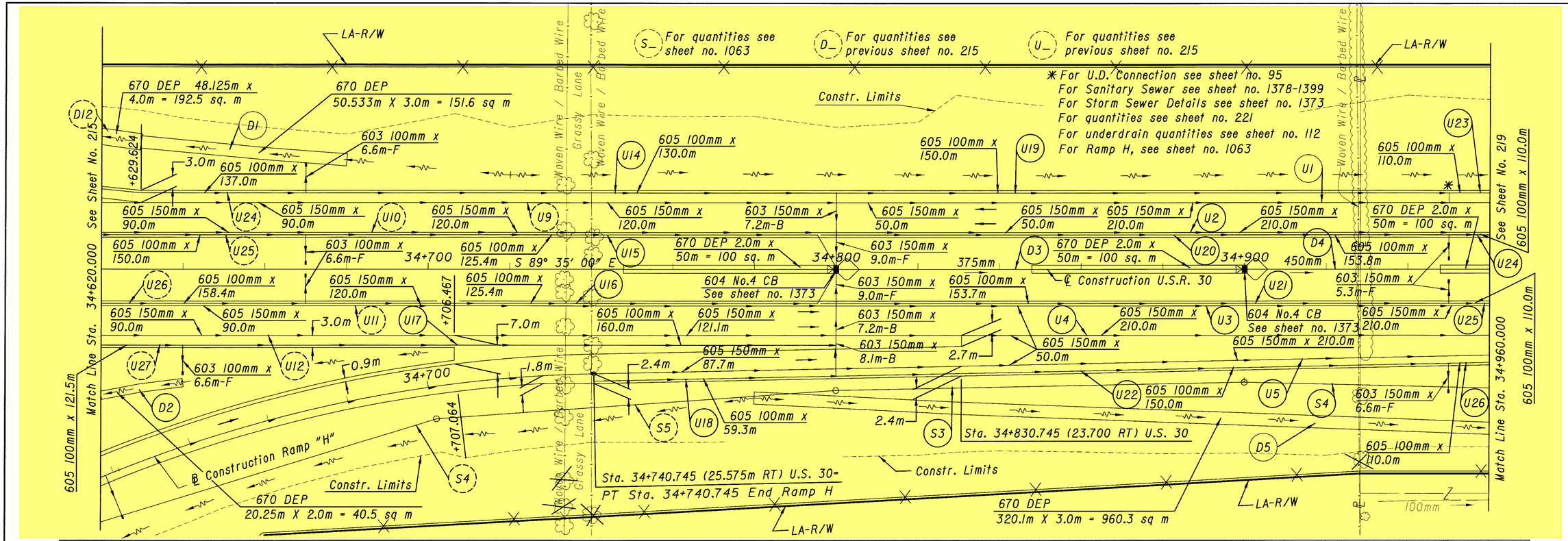
215
2116

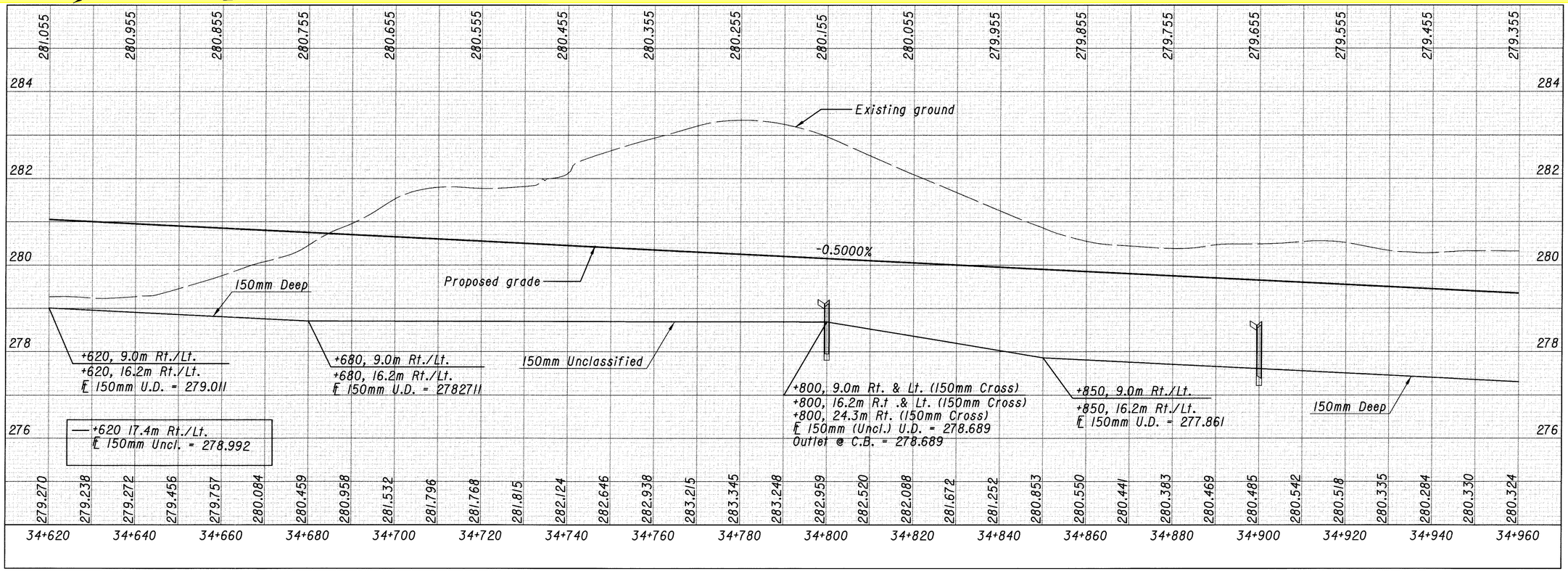
REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)		601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)		603 375 MM CONDUIT, TYPE B (METER)	603 150 MM CONDUIT, TYPE C, 707.44 (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 150 MM CONDUIT, TYPE B, 707.44 (METER)	603 1500 MM CONDUIT, TYPE A, 706.02 OR 1650 MM 707.02, OR 707.09 (125MM CORR.), OR 707.22 (METER)			604 CATCH BASIN NO. 4 (EACH)	604 MANHOLE NO. 3 (SANITARY SEWER) (EACH)		670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY (EACH) 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
D1	215	34+346.18 TO 34+353.01	RT																	20.9			
D2	215	34+353.01 TO 34+367.19	RT																43.0				
D3	215	34+368.99 TO 34+373.01	RT																12.1				
D4	215	34+373.01 TO 34+440.00	RT																268.0				
D5	215	34+440.00 TO 34+480.00	RT																	120.4			
D6	215	34+480.00 TO 34+519.10	RT																156.4				
D7	215	34+520.00	CL	3.2			0.22		32.4							1			100.0				
D8	215	34+520.90 TO 34+577.01	RT																224.5				
D9	215	34+553.73	LT & RT						43.4		71.1												
D10	215	34+580.00	LT & RT			24.5	3.76						63.9						8.3	37.3			
D11	215	34+520.22 TO 34+578.01	LT																347.0				
D12	215	34+581.82 TO 34+629.66	LT																192.5				
D13	215	634+582.85 TO 34+599.66	RT																50.7				
S1	215	34+321.523 G TO 34+410.179 G	LT							88.2							1						
S2	215	34+410.516	LT & RT									91.3					1						
TOTALS CARRIED TO SUB-SUMMARY				3.2		24.5	3.98		75.8	88.2	71.1	91.3	63.9			1	2		1402.5	178.6			
																						TOTALS	

CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000



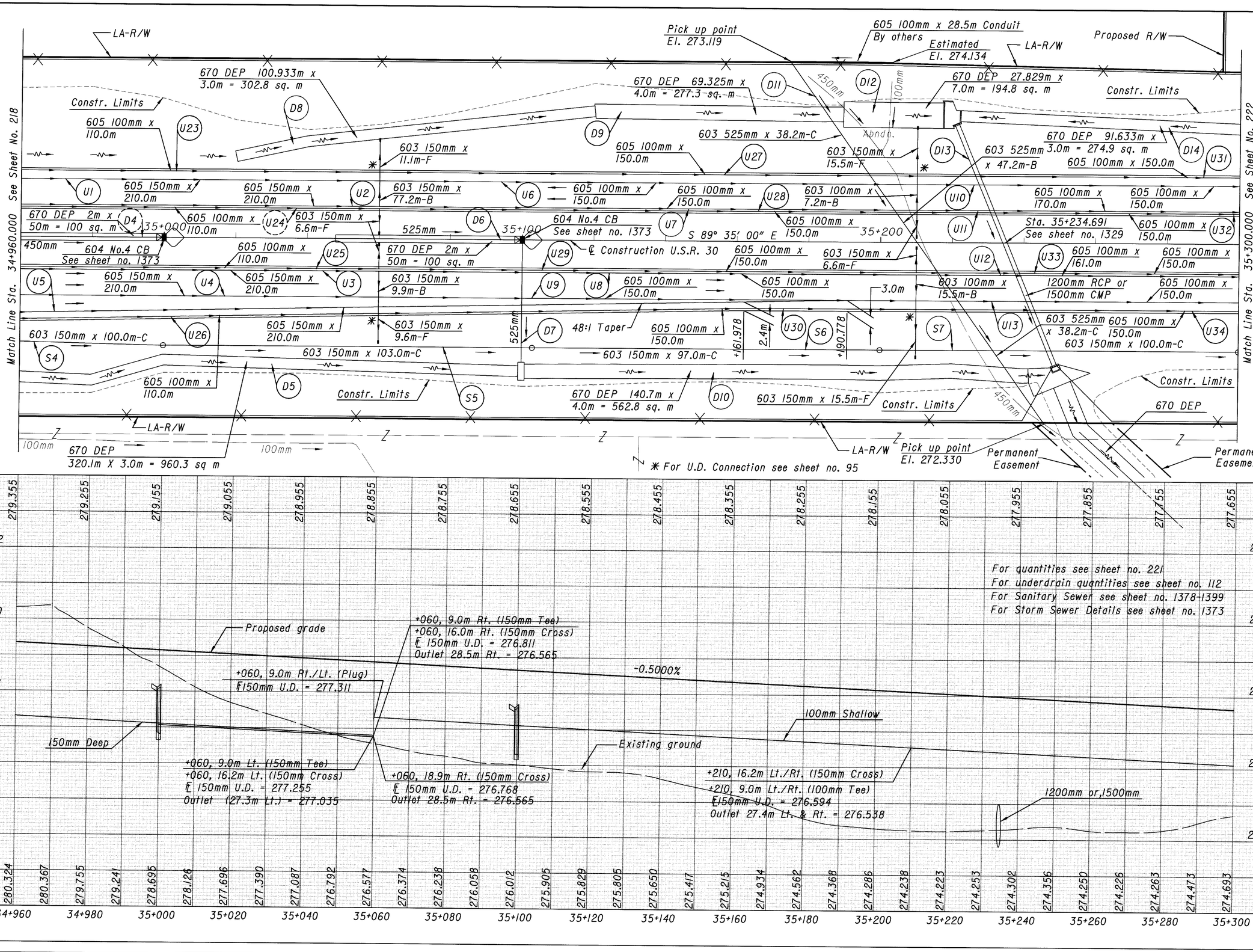


HORIZONTAL SCALE IN METERS

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 34+620 TO STA. 34+960

WYA/CRA-30-28.009/0.000



HORIZONTAL SCALE IN METERS

CALCULATED AM CHECKED REA

PLAN AND PROFILE - U.S.R. 30 STA. 34+960 TO STA. 35+300

WYA/CRA-30-28.009/0.000

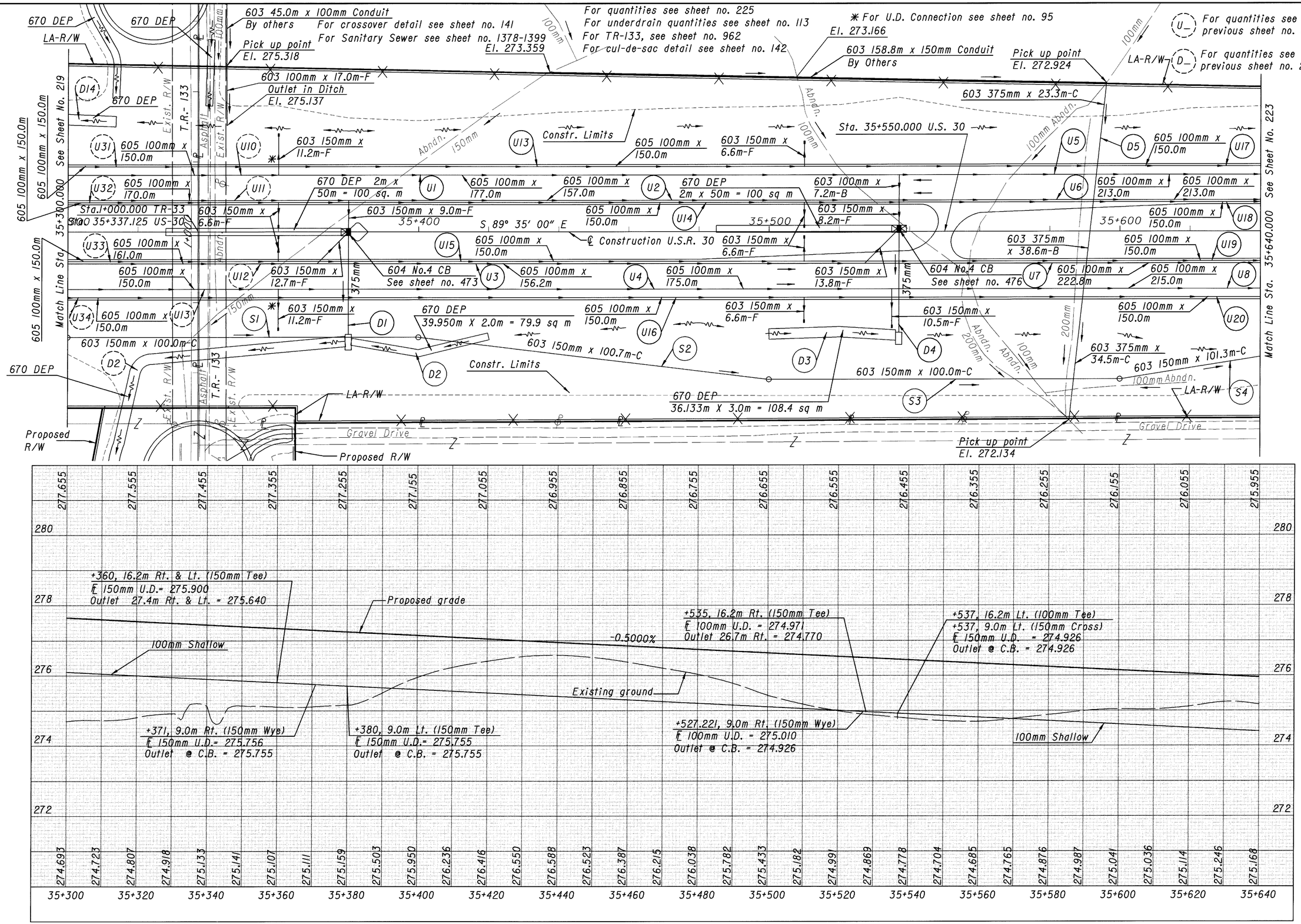
REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	601 ROCK CHANNEL PROTECTION TYPE B W/ FILTER (CU M)	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 525 MM CONDUIT, TYPE B (METER)	603 150 MM CONDUIT, TYPE C, 707.44 (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 450 MM CONDUIT, TYPE C (METER)	603 525 MM CONDUIT, TYPE C (METER)	603 1200 MM CONDUIT, TYPE A, 706.02 OR 1500 MM 707.02, OR 707.09 1250MM CORR.), OR 707.22 (METER)	604 CATCH BASIN NO. 4 (EACH)	604 MANHOLE, NO. 3 (SANITARY SEWER) (EACH)	670 DITCH EROSION PROTECTION (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: MASONRY COLLAR (EACH)
D1	218	34+629.63 TO 34+680.00	LT													151.6			
D2	218	34+620.00 TO 34+640.00	RT													40.5			
D3	218	34+800.00 TO 34+900.00	CL							100.0				1		100.0			
D4	218	34+900.00 TO 35+000.00	CL								100.0			1		100.0			
D5	218	34+780.00 TO 35+099.10	RT													960.3			
D6	219	35+000.00 TO 35+100.00	CL									100.0		1		100.0			
D7	219	35+100.00	CL	4.5			0.33					34.1		1		100.0			
D8	219	35+020.00 TO 35+120.00	LT													302.8			
D9	219	35+120.00 TO 35+189.33	LT													277.3			
D10	219	35+100.90 TO 35+241.54	RT													562.8			
D11	219	35+210.21	LT & RT					47.2				76.4							
D12	219	35+189.33 TO 35+217.17	LT													194.8			
D13	219	35+234.691	LT & RT		57.8	33.7	3.22						72.8			220.0			
D14	219	35+222.07 TO 35+313.64	LT													274.9			
S1		NOT USED																	
S2		NOT USED																	
S3	218	34+800.00 TO 34+900.00	RT						100.0						1				
S4	218	34+900.00 TO 35+000.00	RT						100.0						1				
S5	219	35+000.00 TO 35+103.00	RT						103.0						1				
S6	219	35+103.00 TO 35+200.00	RT						97.0						1				
S7	219	35+200.00 TO 35+300.00	RT						100.0						1				
																TOTALS			
TOTALS CARRIED TO SUB-SUMMARY				4.5	57.8	33.7	3.55	47.2	500.0	100.0	100.0	210.5	72.8	4	5	3385.0			

CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

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HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED: AM

CHECKED: REA

PLAN AND PROFILE - U.S.R. 30
STA. 35+300 TO STA. 35+640

WYA/CRA-30-28.009/0.000

US 30
P.I. = Sta. 36+144.106
Δ = 10° 20' 34.58" (RT)
R = 4,250.000 m
T = 384.647 m
L = 767.203 m
E = 17.371 m
e_{max} = Normal Crown

LA-R/W
Constr. Limits
670 DEP
241.45m X 4.0m = 965.8 sq m
605 100mm x 150.0m
603 150mm x 6.6m-F
605 100mm x 150.2m
605 100mm x 150.3m
605 150mm x 50.2m
603 150mm x 6.6m-F
605 100mm x 150.7m
605 100mm x 213.0m
605 100mm x 213.0m
605 150mm x 130.5m
603 150mm x 130.3m
603 150mm x 5.6m-F
603 150mm x 9.0m-F
603 150mm x 7.2m-B
605 150mm x 190.4m
605 150mm x 190.7m
603 150mm x 6.3m-F
605 100mm x 150.1m
603 100mm x 150.0m
604 No.4 CB
See sheet no. 1374
605 150mm x 50.1m
603 150mm x 6.6m-F
605 100mm x 149.9m
603 150mm x 6.8m-F
603 150mm x 9.0m-F
605 100mm x 149.4m
670 DEP 2.0m x 50m = 100 sq. m
605 100mm x 211.2m
605 100mm x 211.5m
605 150mm x 129.7m
605 150mm x 129.5m
670 DEP 2.0m x 50m = 100 sq. m
603 150mm x 7.2m-B
605 150mm x 49.9W
605 150mm x 49.9m
605 150mm x 189.3m
605 150mm x 189.6m
605 100mm x 149.8m
603 150mm x 6.6m-F
605 100mm x 149.0m
603 150mm x 6.6m-F
603 150mm x 101.3m-C
603 150mm x 99.8m-C
603 150mm x 99.4m-C
603 150mm x 99.4m-C
603 150mm x 6.6m-F
605 100mm x 150.0m
605 100mm x 149.4m
Gravel Drive
Gravel Drive
914mm
762mm
Wooded
Existing Easement
Match Line Sta. 35+640.000
Match Line Sta. 35+980.000
605 100mm x 150.0m
605 100mm x 150.0m
605 100mm x 149.7m
605 100mm x 150.3m
See Sheet No. 222
See Sheet No. 226
604 No. 4 CB
See sheet no. 1374
35+700
35+800
35+900
450mm
N 89° 35' 00" W
℄ Construction U.S.R. 30
PC Sta. 35+759.459
U5 U6 U7 U8 U9 U10 U11 U12 U17 U18 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32
D6 D7
S4 S5 S6 S7

For quantities see sheet no. 225
For underdrain quantities see sheet no. 113
For Sanitary Sewer see sheet no. 1378-1399
For Storm Sewer Detail see sheet no. 1374
✱ For U.D. Connection see sheet no. 95

Proposed grade
Existing ground
-0.5000%
100mm Shallow
150mm Unclassified
150mm Deep
+750, 9.0 Rt.& Lt.
+750, 16.2 Rt.& Lt.
℄ 150mm U.D. = 273.861
+880, 16.2m Rt.& Lt. (150mm Tee)
+880, 9.0 m Rt.& Lt. (150mm Cross)
℄ 150mm (Uncl.) U.D. = 273.000
Outlet @ C.B. = 273.000
+930, 9.0m Rt.& Lt.
+930, 16.2m Rt.& Lt.
℄ 150mm U.D. = 273.361

278 276 274 272 270

275.955 275.855 275.755 275.655 275.555 275.455 275.355 275.255 275.155 275.055 274.955 274.855 274.755 274.655 274.555 274.455 274.355 274.255

275.168 275.066 275.066 275.089 275.003 274.935 275.000 275.077 275.075 275.166 275.445 275.730 276.249 276.663 276.688 276.321 276.004 276.173 275.802 275.626 275.721 275.865 275.836 275.890 275.976 276.116 276.127 276.107 276.117 276.247 276.429 276.519 276.735 277.007 277.058

35+640 35+660 35+680 35+700 35+720 35+740 35+760 35+780 35+800 35+820 35+840 35+860 35+880 35+900 35+920 35+940 35+960 35+980

HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 35+640 TO STA. 35+980

WYA/CRA-30-28.009/0.000

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2116

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	602 CONCRETE MASONRY (CU M)	603 CONDUIT, TYPE B 375 MM (METER)	603 CONDUIT, TYPE C, 707.44 150 MM (METER)	603 CONDUIT, TYPE C 375 MM (METER)	603 CONDUIT, TYPE C 450 MM (METER)	604 CATCH BASIN NO. 4 (EACH)	604 MANHOLE, NO. 3 (SANITARY SEWER) (EACH)	601 DITCH EROSION PROTECTION (CU M)	FOR INFORMATION ONLY (EACH): 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
D1	222	35+380.00	CL	4.1	0.22	29.1				1		100.0			
D2	222	35+380.90 TO 35+420.00	RT									79.9			
D3	222	35+500.00 TO 35+536.10	RT									108.4			
D4	222	35+537.00	CL	3.2	0.22	28.7				1		100.0			
D5	222	35+591.41	LT & RT			38.6		57.8							
D6	223	35+740.00 TO 35+980.00	RT									965.8			
D7	223	35+880.00 TO 35+980.00	CL						100.0	1		100.0			
S1	222	35+300.00 TO 35+400.00	RT				100.0				1				
S2	222	35+400.00 TO 35+500.00	RT				100.7				1				
S3	222	35+500.00 TO 35+600.00	RT				100.0				1				
S4	222	35+600.00 TO 35+700.00	RT				101.3				1				
S5	223	35+700.00 TO 35+800.00	RT				99.8				1				
S6	223	35+800.00 TO 35+900.00	RT				99.4				1				
S7	223	35+900.00 TO 36+000.00	RT				99.4				1				
												TOTALS			
TOTALS CARRIED TO SUB-SUMMARY				7.3	0.44	96.4	700.6	57.8	100.0	3	7	1454.1			

CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

US 30
P.I. = Sta. 36+144.106
D = 10° 20' 34.58" (RT)
R = 4,250.000 m
T = 384.647 m
L = 767.203 m
E = 17.371 m
e_{max} Normal Crown

U_ For quantities see previous sheet no. 223

S_ For quantities see previous sheet no. 223

670 DEP 5.0m x 40.3m = 201.5 sq. m

LA-R/W

670 DEP 6.0m x 181.2m = 1087.3 sq. m

839 Seeding & Erosion Control 3.0 m X 81.0 m = 243.1 sq m

660 Reinforced Sodding Area Planimetered 37.0 sq. m

670 DEP 4.0m x 119.2m = 476.7 sq. m

D1 Constr. Limits D3 D5 D7 D10 D11

Section 5 Section 4

603 150mm x 6.6m-F

605 150mm x 81.0m

603 150mm x 7.2m-B

604 No. 3 CB See sheet no. 493

300mm

A D R2 Guardrail, Type 5 U1

U10 605 150mm x 190.4m

605 150mm x 190.7m U9

670 DEP 2m x 50m = 100 sq. m

605 150mm x 80.6m

603 100mm x 10.2m-B D27

605 150mm x 29.7m

605 100mm x 100.5m U2

Flared End Section B

605 100mm x 103.1m

℄ Construction U.S.R. 30

D2 36+000 450mm 450mm 36+100 D26

604 No.4 CB See sheet no. 1374

604 No.4 CB See sheet no. 1374

603 150mm x 6.6m-F

604 No.4 CB See sheet no. 1374

603 150mm x 8.4m-F

450mm 36+200

603 150mm x 9.0m-F

670 DEP 2m x 50m = 100 sq. m

Guardrail, Barrier Design, 36+300 Type 5 R3

Guardrail, Type 5

670 DEP 2m x 27.3m = 54.6 sq. m

605 150mm x 77.8m

603 150mm x 12.7m-F

36+250.000 Begin Curb, Type 6

Match Line Sta. 35+980.000 See Sheet No. 223

Match Line Sta. 36+320.000 See Sheet No. 228

605 150mm x 189.3m

605 150mm x 189.6m U11 U12

605 150mm x 77.7m

603 150mm x 8.4m-F

603 150mm x 7.2m-B

525mm

604 No.4 CB See sheet no. 1374 U4 U3

605 100mm x 128.8m

605 100mm x 124.7m

603 150mm x 99.4m-C

603 100mm x 8.0m-B

603 150mm x 13.8m-F

Guardrail, Type 5

603 150mm x 11.0m-F

D28 C R1 D9

604 No. 3 CB See sheet no. 493

Impact Attenuator

603 150mm x 81.8m-C

S1 S7 603 150mm x 99.4m-C

Constr. Limits

S2 Wooded Wooded

D4 Constr. Limits

300mm

D12 670 DEP 4.0m x 92.3m = 369.3 sq. m D13

Wooded Dirt Drive LA-R/W Dirt Drive

603 150mm x 59.4m-C

603 150mm x 106.5m-C

839 Seeding & Erosion Control 3.0 m X 34.967 m = 104.9 sq m

670 DEP 5.0m x 6.94m = 34.7 sq. m

LA-R/W

S3 D8 D6 660 Reinforced Sodding Area Planimetered 45.0 sq. m S4

Wooded

Section 5 Section 4

* For U.D. Connection see sheet no. 95
For Additional Underdrains see sheet no. 227

For quantities see sheet no. 230, 231
For underdrain quantities see sheet no. 114
For Sanitary Sewer see sheet no. 1378-1399
For Storm Sewer Detail see sheet no. 1374

274.255 274.155 274.055 273.955 273.855 273.755 273.655 273.555 273.459 273.429 273.414 273.415 273.430 273.461 273.507 273.568 273.642 273.792 273.942 274.092 274.242 274.392

276 Sta. 35+980, ℄ 604, No. 4 CB

Sta. 36+080, ℄ 604, No. 4 CB

Existing ground

Proposed grade

Sta. 36+165, ℄ 604, No. 4 CB

Sta. 36+200, ℄ 604, No. 4 CB

+202, 16.2m Rt. (150mm 90° bend)
℄ 150mm U.D. = 271.975
Outlet (27.2m Rt.) = 271.900

-0.5000%

+0.7500%

274

+209, 9.0m Rt. (150mm Wye)
℄150mm U.D. = 272.017
Outlet @ C.B. = 271.053

100mm Shallow

272

150mm Deep

+120, 9.0m Rt. & Lt.
+120, 16.2m Rt. & Lt.
℄ 150mm U.D. = 235.511

150mm Unclassified

V.P.C. Sta. 36+132.000

+198, 9.0m Rt. (150mm 90° bend)
+198, 16.2m Rt. (150mm Tee)
℄ 150mm (Uncl.) U.D. = 271.121
Outlet 30.0m Rt. = 271.053

V.P.T. Sta. 36+214.000

+230, 9.0m & 16.2m Lt.
℄ 100mm U.D. = 272.173

+200, 9.0m Lt. (150mm Cross)
+200, 16.2m Lt. (150mm Tee)
℄ 150mm (Uncl.) U.D. = 271.111
Outlet @ C.B. = 271.053

270

82m V.C.
V.P.I. Sta. 36+173.000 Elev. = 273.290

268

LEGEND

A 36+246.776
Begin GR
Type T Anchor Assembly

B 36+268.191
Begin Impact Att./GR

C 36+204.420
Begin GR 25.1m Rt.
Type B Anchor Assembly

D 36+246.190
Begin Curb, Type 6

277.058 277.059 277.056 277.063 276.905 276.801 276.793 276.810 276.555 276.437 276.419 276.465 276.015 275.532 275.060 274.640 274.235 273.831 273.208 272.771 272.197 271.694 271.269 270.890 270.401 269.902 269.361 268.903 268.499 268.207 268.141 268.168 268.219 268.308 268.257

35+980 36+000 36+020 36+040 36+060 36+080 36+100 36+120 36+140 36+160 36+180 36+200 36+220 36+240 36+260 36+280 36+300 36+320

N

0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED AM CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 35+980 TO STA. 36+320

WYA/CRA-30-28.009/0.000

226
2116

US 30
P.I. = Sta. 36+144.106
D = 10° 20′ 34.58″ (RT)
R = 4,250.000 m
T = 384.647 m
L = 767.203 m
E = 17.371 m
e_{max} Normal Crown

LA-R/W
Constr. Limits
Section 5 ℄ Section 4
Match Line Sta. 35+980.000 See Sheet No. 223
Match Line Sta. 36+320.000 See Sheet No. 228
℄ Construction U.S.R. 30
Wooded
Dirt Drive

605 100mm x 150.7m (U29)
605 100mm x 150.3m (U30)
604 No.4 CB See sheet no. 1374
605 100mm x 149.7m (U31)
604 No.4 CB See sheet no. 1374
605 100mm x 149.4m
603 150mm x 99.4m-C (U32)
603 150mm x 99.4m-C
605 100mm x 55.6m
603 150mm x 6.6m-F
605 100mm x 55.1m (U16)
603 150mm x 81.8m-C
603 150mm x 6.6m-F
603 100mm x 10.2m-B (U13)
604 No.4 CB See sheet no. 1374
605 100mm x 55.4m (U14)
605 100mm x 55.2m (U15)
603 150mm x 8.4m-F
603 100mm x 8.0m-B (U16)
603 150mm x 6.6m-F
605 100mm x 35.9m (U17)
605 100mm x 35.4m (U18)
605 100mm x 43.3m (U19)
603 150mm x 7.2m-B
605 100mm x 32.9m (U20)
603 150mm x 13.8m-F
603 150mm x 59.4m-C
603 150mm x 6.6m-F (U21)
605 100mm x 45.7m (U22)
603 150mm x 11.0m-F
604 No. 3 CB See sheet no. 493 (U23)
605 100mm x 92.4m
603 150mm x 7.2m-B
603 150mm x 8.4m-F
603 150mm x 9.0m-F
604 No.4 CB See sheet no. 1374
605 100mm x 140.1m (U24)
605 100mm x 51.8m (U25)
605 100mm x 125.4m
604 No. 3 CB See sheet no. 493
605 100mm x 76.2m (U26)
603 150mm x 106.5m-C
300mm
525mm
450mm
36+000
36+100
36+200
36+300

✳ For U.D. Connection see sheet no. 95

For quantities see sheet no. 230, 231
For underdrain quantities see sheet no. 114
For Sanitary Sewer see sheet no. 1378-1399
For Storm Sewer Detail see sheet no. 1374

(U_) For quantities see previous sheet no. 223

274.255 274.155 274.055 273.955 273.855 273.755 273.655 273.555 273.459 273.429 273.414 273.415 273.430 273.461 273.507 273.568 273.642 273.792 273.942 274.092 274.242 274.392

Sta. 35+980, ℄ 604, No. 4 CB
Sta. 36+080, ℄ 604, No. 4 CB
Sta. 36+165, ℄ 604, No. 4 CB
Sta. 36+200, ℄ 604, No. 4 CB
Existing ground
Proposed grade
-0.5000%
+0.7500%
150mm Deep
150mm Unclassified
+120, 9.0m Rt. & Lt.
+120, 16.2m Rt. & Lt.
℄ 150mm U.D. = 235.511
+198, 9.0m Rt. (150mm 90° bend)
+198, 16.2m Rt. (150mm Tee)
℄ 150mm (Uncl.) U.D. = 271.121
Outlet 30.0m Rt. = 271.053
+202, 16.2m Rt. (150mm 90° bend)
℄ 150mm U.D. = 271.975
Outlet (27.2m Rt.) = 271.900
+209, Rt. 9.0m (150mm Wye)
℄ 150mm U.D. = 272.017
Outlet @ C.B. = 271.053
+230, 9.0m & 16.2m Lt.
℄ 100mm U.D. = 272.173
100mm Shallow
+200, 9.0m Lt. (150mm Cross)
+200, 16.2m Lt. (150mm Tee)
℄ 150mm (Uncl.) U.D. = 271.111
Outlet @ C.B. = 271.053
V.P.C. Sta. 36+132.000
V.P.I. Sta. 36+173.000
V.P.T. Sta. 36+214.000
82m V.C.
Elev. = 273.290

276 274 272 270 268

277.058 277.059 277.056 277.063 276.906 276.801 276.793 276.810 276.555 276.437 276.419 276.465 276.015 275.532 275.060 274.640 274.235 273.831 273.208 272.771 272.197 271.694 271.269 270.890 270.401 269.902 269.361 268.903 268.499 268.207 268.141 268.168 268.279 268.308 268.257

35+980 36+000 36+020 36+040 36+060 36+080 36+100 36+120 36+140 36+160 36+180 36+200 36+220 36+240 36+260 36+280 36+300 36+320

HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED AM
CHECKED REA

ADDITIONAL UNDERDRAIN PLAN - U.S.R. 30
STA. 35+980 TO STA. 36+320

WYA/CRA-30-28.009/0.000

227
1829

U27 605 100mm x 96.4m
U28 605 100mm x 92.2m
U29 605 100mm x 99.4m

100mm
36+345.589
End Curb, Type 6
670 DEP
119.2m X 4.0m = 476.7 sq m
LA-R/W
Guardrail, Type 5
Flared End Section
670 DEP
20.133m X 3.0m = 60.4 sq m
839 Seeding & Erosion Control W/ Matting 53.2m X 3.0m = 159.6 sq m
670 DEP
43.825m X 4.0m = 175.3 sq m
Guardrail, Barrier Design, Type 5
670 DEP
545.650m X 4.0m = 2182.6 sq m
LA-R/W
Guardrail, Type 5 See Sheet No. 226, 227
DII
Guardrail, Type 5
DI6
DI9
36+480.229
End GR 25.1m Lt.
D20
Constr. Limits
D23
36+355.170 End GR
Br. Term. Assem., Type I
Wooded
Limits
CREEK
Limits
Wooded
36+425.142 Begin GR
603 150mm x 7.3m-F
R6
U27
Type B Anchor Assembly
Sta. 36+519.982 U.S. 30
603 150mm x 11.8m-F
Tree Line
Woven Wire / Barbed Wire
Tree Line
605 100mm x 148.0m
U31
D24
R2
U23
U2
U1
P.R.J.
P.R.J.
Br. Term. Assem., Type I
605 100mm x 7.0m
605 100mm x 96.3m
U5
670 DEP 2m x 50m = 100 sq. m
U6
605 100mm x 92.2m
605 100mm x 315.0m
U10
U9
605 100mm x 315.0m
U24
Guardrail, Type 5
36+420.282 Begin GR
300mm
604 No.4 CB See sht no. 1375
U28
R5
U29
36+500
A
603 150mm x 9.8m-F
U32
605 100mm x 148.0m
525mm
36+600
D22
604 No.4 CB See sheet no. 1375
U25
R3
36+344.670 End GR
36+400
DI7
603 150mm x 9.0m-F
℄ Construction U.S.R. 30
603 150mm x 11.6m-F
670 DEP 2m x 50m = 100 sq. m
S 79° 14' 25" E
605 100mm x 140.4m
U33
450mm
U3
P.R.J.
Br. Term. Assem., Type I
P.R.J.
605 100mm x 14.0m
605 100mm x 88.8m
U7
605 100mm x 106.6m
U8
604 No.4 CB See sheet no. 1375
605 150mm x 217.0m
605 100mm x 306.8m
U11
670 DEP 2m x 50m = 100 sq. m
U4
Match Line Sta. 36+320.000 See Sheet No. 229
36+339.480 End GR
Guardrail, Type 5
36+329.795 End Curb, Type 6
Coast.
SWORD
Coast.
36+410.246 Begin GR
603 150mm x 17.6m-F
604 No. 3 CB See sheet no. 496 Type T Anchor Assembly
300mm
Abndn.
R4
36+454.558 End GR
U30
PT Sta. 36+526.662
605 100mm x 108.6m Impact Attenuator
525mm
603 150mm x 11.8m-F
U12
605 100mm x 147.0m
U34
Match Line Sta. 36+660.000 See Sheet No. 232
R1
U26
D22
D25
100mm
Abndn.
DI3
DI4
DI5
DI8
Guardrail, Type 5
D21
Constr. Limits
603 150mm x 106.5m-C
603 150mm x 3.0m-C Outlet in Creek
For H.W. see sheet no. 1399
839 Seeding & Erosion Control W/ Matting 44.733m X 3.0m = 134.2 sq m
LA-R/W
670 DEP
70.625m X 4.0m = 282.5 sq m
LA-R/W
670 DEP
211.633m X 3.0m = 634.9 sq m
S4
S5
603 62.7m x 200mm Conduit By Others
200mm
36+454.558 End Curb, Type 6
Pick up point El. 267.690
670 DEP
92.3m X 4.0m = 369.3 sq m
36+419.925 Begin Curb, Type 6
Wooded
Grassy Lane
Wooded
Wooded
BROKEN
SWORD
Wooded
Wooded
Wooded
Tree Line
Woven Wire / Barbed Wire
Tree Line
Woven Wire / Barbed Wire

US 30
P.I. = Sta. 36+144.106
D = 10° 20' 34.58" (RT)
R = 4,250.000 m
T = 384.647 m
L = 767.203 m
E = 17.371 m
e_{max} =Normal Crown

(A) 36+496.822
End GR/Impact Att.

✳ For U.D. Connection see sheet no. 95
For quantities see sheet no. 230, 231
For underdrain quantities see sheet no. 114
For Profile, see sheet no. 229
For Crossover detail. see sheet no. 141
For Sanitary sewer see sheet no. 1378-1399
For Storm sewer detail see sheet no. 1375
P.R.J. = Pressure Relief Joint, Type A

HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED AM
CHECKED REA

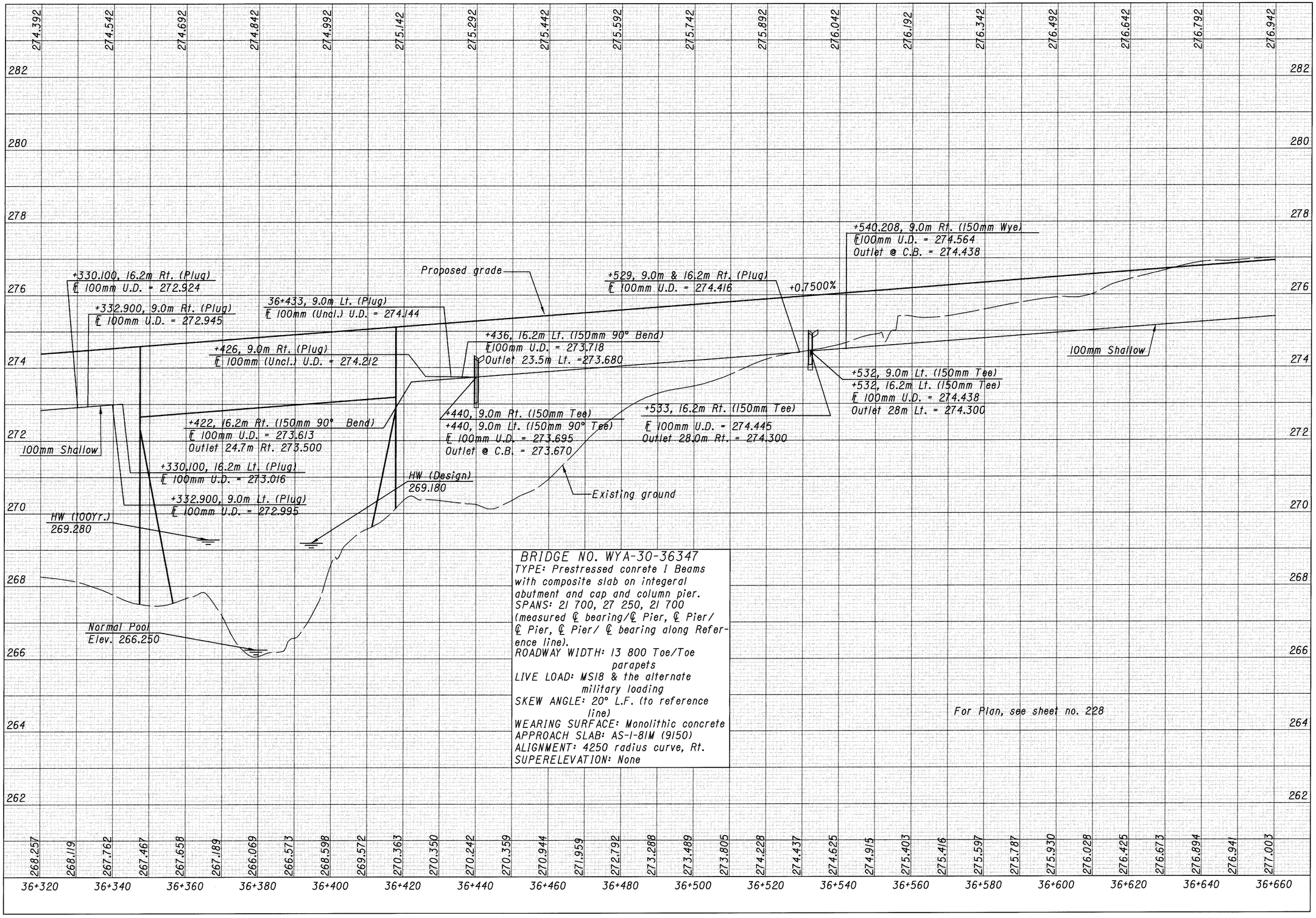
PLAN - U.S.R. 30
STA. 36+320 TO STA. 36+660

WYA/CRA-30-28.009/0.000

228
2116

CALCULATED AM
CHECKED REA

PROFILE - U.S.R. 30
STA. 36+320 TO STA. 36+660



BRIDGE NO. WYA-30-36347
TYPE: Prestressed conrete I Beams with composite slab on integeral abutment and cap and column pier.
SPANS: 21 700, 27 250, 21 700 (measured ℄ bearing/℄ Pier, ℄ Pier/ ℄ Pier, ℄ Pier/ ℄ bearing along Reference line).
ROADWAY WIDTH: 13 800 Toe/Toe parapets
LIVE LOAD: MS18 & the alternate military loading
SKEW ANGLE: 20° L.F. (to reference line)
WEARING SURFACE: Monolithic concrete
APPROACH SLAB: AS-1-81M (9150)
ALIGNMENT: 4250 radius curve, Rt.
SUPERELEVATION: None

For Plan, see sheet no. 228

WYA/CRA-30-28.009/0.000

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	EACH	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30																														
R1	226	36+204.420 TO 36+339.480	RT														131.445					1			1		79					
R2	226	36+246.190 TO 36+355.170	LT														104.775							1	1		100					
R3	226	36+268.191 TO 36+344.670	RT														43.815		22.860	1					1							1
R4	228	36+410.246 TO 36+454.558	RT														40.005							1	1		34					
R5	228	36+420.282 TO 36+496.822	LT														43.815		22.860	1					1							1
R6	228	36+425.142 TO 36+480.229	LT														51.435					1			1							
TOTALS CARRIED TO SUB-SUMMARY																	415.290		45.720	2		2		2	6		213					2

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

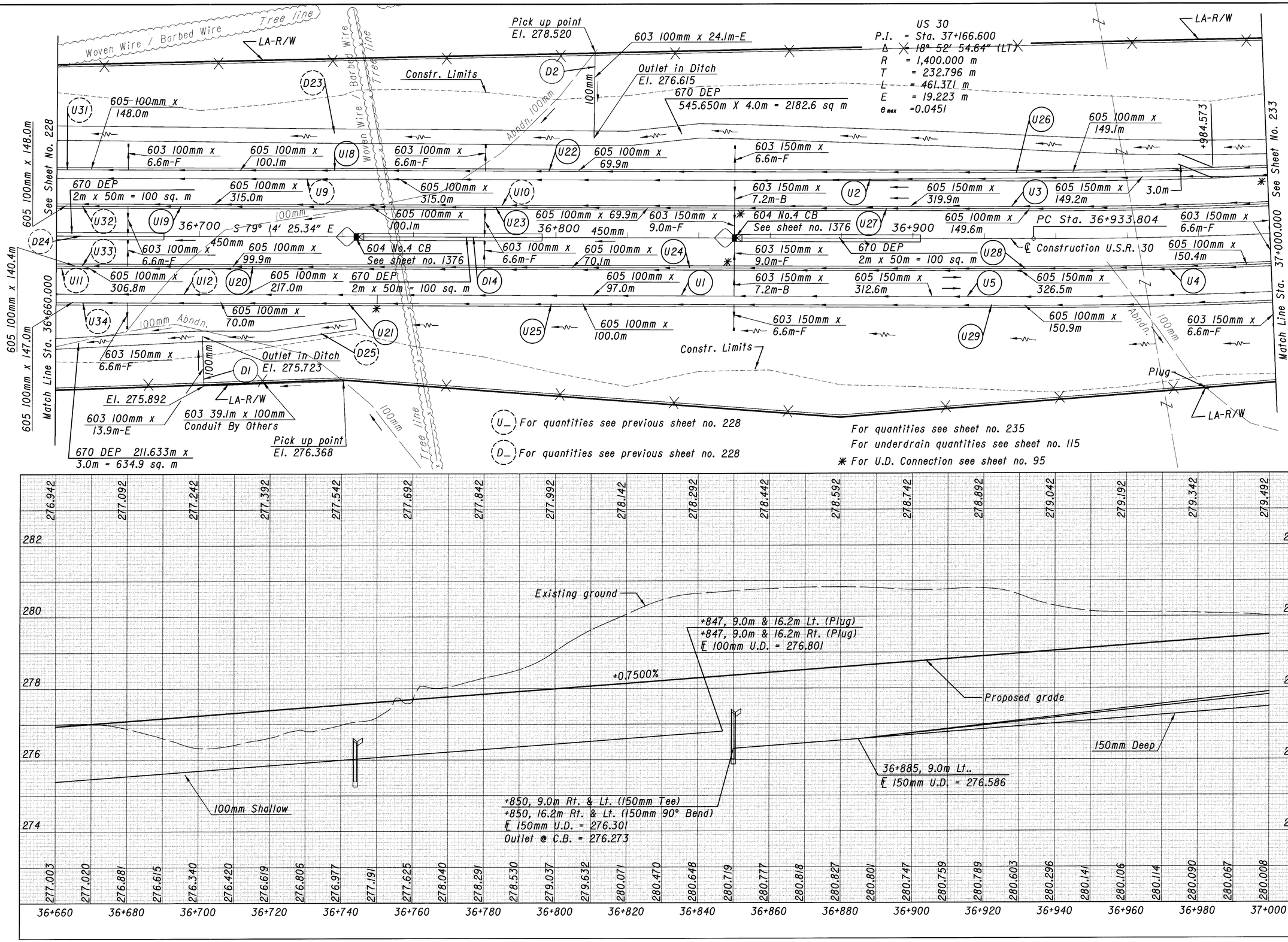
ESTIMATED DRAINAGE QUANTITIES

CALCULATED AM
CHECKED REA

WYA/CRA-30-28.009/0.000

231
2116

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)			602 CONCRETE MASONRY (CU M)		603 525 MM CONDUIT, TYPE B (METER)	603 150 MM CONDUIT, TYPE C, 707.44 (METER)	603 300 MM CONDUIT, TYPE C (METER)	603 525 MM CONDUIT, TYPE C (METER)	603 450 MM CONDUIT, TYPE C (METER)	603 300 MM CONDUIT, TYPE F (METER)		604 CATCH BASIN NO. 3 (EACH)	604 CATCH BASIN NO. 4 (EACH)		604 MANHOLE, NO. 3 (SANITARY SEWER) (EACH)	660 SODDING REINFORCED (SQ M)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY (EACH) 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
D1	226	35+980.00 TO 36+020.00	LT																		201.5				
D2	226	35+980.00 TO 36+080.00	CL										100.0				1				100.0				
D3	226	36+020.00 TO 36+200.00	LT																		1087.3				
D4	226	36+165.00 TO 36+199.09	RT																			104.9			
D5	226	36+200.00 TO 36+280.00	LT																			243.1			
D6	226	36+200.91 TO 36+251.19	RT																		251.3				
D7	226	36+245.42	LT																	37.0					
D8	226	36+249.26	RT																	45.0					
D9	226	36+252.10	RT				0.17							19.2		1						6.3	2		
D10	226	36+252.10	LT				0.17							15.7		1							2		
D11	226	36+280.00 TO 36+398.00	LT																		476.7				
D12	226	36+253.01 TO 36+260.00	RT																		34.7				
D13	226	36+260.00 TO 36+353.10	RT																		369.3				
D14	228	36+377.32 TO 36+422.44	RT																			134.2			
D15	228	36+423.33	RT				0.17							18.7		1						3.6			
D16	228	36+418.20 TO 36+460.00	LT																		175.3				
D17	228	36+415.00 TO 36+440.00	CL								25.0						1				100.0				
D18	228	36+424.25 TO 36+460.00	RT																			107.2			
D19	228	36+460.00 TO 36+480.00	LT																		60.4				
D20	228	36+480.00 TO 36+532.00	LT																			159.6			
D21	228	36+460.00 TO 36+531.10	RT																		282.5				
D22	228	36+532.00 TO 36+638.00	CL	4.5			0.33		34.1			106.0					1				100.0				
D23	228	36+532.00 TO 37+080.00	LT																		2182.6				
D24	228	36+638.00 TO 36+744.00	CL										106.0				1				100.0				
D25	228	36+532.90 TO 36+744.00	RT																		634.9				
D26	226	36+080.00 TO 36+165.00	CL										85.0				1				100.0				
D27	226	36+165.00 TO 36+200.00	CL										35.0				1				154.6				
D28	226	36+200.00	CL	4.5			0.32		32.5								1				100.0				
S1	226	36+000.00 TO 36+100.00	RT							99.4									1						
S2	226	36+100.00 TO 36+180.00	RT							81.8									1						
S3	226	36+180.00 TO 36+240.00	RT							59.4									1						
S4	226	36+240.00 TO 36+347.59	RT							106.5									1						
S5	228	36+347.59 TO 36+350.62	RT				0.17			3.0									1						
																							TOTALS	4	
TOTALS CARRIED TO SUB-SUMMARY				9.0			1.33		66.6	350.1	25.0	106.0	326.0	53.6		3	7		5	82.0	6511.1	758.9			



HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED AM

CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 36+660 TO STA. 37+000

WYA/CRA-30-28.009/0.000

US 30
P.I. = Sta. 37+166.600
Δ = 18° 52' 54.64" (LT)
R = 1,400.000 m
T = 232.796 m
L = 461.371 m
E = 19.223 m
e_{max} =0.045I

Match Line Sta. 37+000.000 See Sheet No. 232

Match Line Sta. 37+340.000 See Sheet No. 236

ROOT WADS, AS PER PLAN

670 DEP
545.650m X 4.0m = 2182.6 sq m

670 DEP
2.0m X 92.150m = 184.3 sq m

670 DEP 6.0m x
3m x 94.167m = 282.5 sq. m

601 RCP 2.5m x
230.02m x 0.5m = 115.0 cu. m

LA R/W

Constr. Limits

LA-R/W

Wooded

Wayne Fire / Barbed Wire

Intermittent Flow

Creek

Guardrail, Type 5

Type T Anchor Assembly

48:1 Taper

+013.346

2.4m

603 150mm x 11.2m-F

603 100mm x 3.7m-B

605 100mm x 157.7m

605 150mm x 157.9m

605 100mm x 173.9m

605 150mm x 326.5m

605 100mm x 180.4m

605 150mm x 312.6m

605 100mm x 162.1m

605 100mm x 147.6m

605 100mm x 119.1m

603 100mm x 263.3m

605 100mm x 119.5m

605 100mm x 134.3m

605 100mm x 157.8m

603 150mm x 6.6m-F

603 100mm x 6.2m-B

603 150mm x 2.1m-F

605 100mm x 157.2m

605 100mm x 129.4m

605 100mm x 130.4m

37+100

37+146.128
Begin GR

37+200

37+300

Sta.37+212.175
See sheet no. 1331

670 DEP
2m x 50m = 100 sq m

603 150mm x 10.5-F

℄ Construction U.S.R. 30

604 No.4 CB
See sheet no. 510A

603 150mm x 13.4m-F

605 100mm x 47.3m

605 100mm x 131.6m

603 100mm x 7.2m-B

605 100mm x 271.1m

605 100mm x 142.1m

605 100mm x 73.4m

605 100mm x 141.1m

603 100mm x 3.6m-B

603 150mm x 12.3m-F

605 100mm x 126.9m

605 150mm x 6.6m-F

605 100mm x 152.5m

603 150mm x 11.2m-F

670 DEP 2.0m x
10.1m = 20.2 sq. m

Permanent Easement

670 DEP 3.0m x
18.233m = 54.7 sq. m

839 Seeding & Erosion Con.

839 Seeding & Erosion Control W/ Matting 4.0m X 76.050m = 304.2 sq m

670 DEP
5.0m X 32.660m = 163.3 sq m

For Ramp "K" see sheet no. 1133

Constr. Limits

Plug

100mm Abndn.

375mm

3.0m

+196.526

+226.526

2.4m

Drainage Ditch

For Quantities see Sheet No. 1137

✱For U.D. Connection see sheet no. 95
For quantities see sheet no. 235
For underdrain quantities see sheet no. 115

U1 U2 U3 U4 U5 U6 U7 U8 U9 U10 U11 U12 U13 U14 U15 U16 U30 U31 U32 U33 U34 U35 U36 U37 U38 U39 U40 U41 U42

D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D23

R1

279.492 279.642 279.720 279.805 279.899 280.000 280.110 280.228 280.354 280.484 280.744 281.004 281.264 281.524 281.784 282.044 282.304 282.564 282.824 283.084 283.344 283.604

68m V.C.
V.P.I. Sta. 37+056.000 Elev. = 279.912
V.P.C. Sta. 37+022.000
V.P.T. Sta. 37+090.000

+0.7500%
+1.2999 %

Proposed grade
Existing ground

+180, 9.0m Rt. (45° Bend)
℄ 100mm = 279.980
Outlet @ C.B. = 279.811

+160, 16.2m Rt. (150mm Tee)
℄ 150mm = 279.544

+160, 16.2m Lt. (150mm 90° Bend)
℄ 100mm U.D. = 279.390

+160, 19.255m Lt. (Plug)
℄ 150mm = 278.752

+160, 19.855 Lt. (150mm Cross)
℄ 100mm U.D. = 279.225
Outlet (33.1m Lt.) = 278.480

150mm Deep

2400mm

100mm Shallow

+227, 16.2m Rt. (100mm 90° Bend)
℄ 100mm U.D. = 280.915

+227, 9.0m Rt. (100mm Tee)
℄ 100mm U.D. = 279.586

+300, 19.8m Rt. (150mm Cross)
℄ 100mm (Uncl.) U.D. = 281.860

+300, 32.1m Rt.
Outlet ℄ 150mm = 281.560

For Continuation See Sheet No. 1133

284 282 280 278 276

280.008 279.896 279.806 279.709 279.529 279.595 279.782 280.042 280.334 280.566 280.850 281.171 280.795 280.519 280.200 279.564 278.898 279.008 278.928 278.644 277.461 277.354 278.208 278.536 279.295 279.836 280.548 280.930 280.929 280.896 280.705 280.530 280.294 280.040 279.868

37+000 37+020 37+040 37+060 37+080 37+100 37+120 37+140 37+160 37+180 37+200 37+220 37+240 37+260 37+280 37+300 37+320 37+340

PC Sta. 37+316.395 RAMP "K"
Sta. 37+316.395 (19.800m RT) U.S. 30-

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 37+000 TO STA. 37+340

WYA/CRA-30-28.009/0.000

233
2116

ESTIMATED DRAINAGE QUANTITIES

CALCULATED AM
CHECKED REA

WYA/CRA-30-28.009/0.000

235
2116

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	601 ROCK CHANNEL PROTECTION TYPE B W/ FILTER (CU M)	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 375 MM CONDUIT, TYPE B (METER)	603 450 MM CONDUIT, TYPE C (METER)	603 100 MM CONDUIT, TYPE E (METER)	603 2400 MM CONDUIT, TYPE A, 707.02 (2.01MM) (METER)	604 CATCH BASIN NO. 4 (EACH)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY (EACH) 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
D1	232	36+701.06	RT							13.9							
D2	232	36+810.46	LT							24.1							
D3		NOT USED															
D4	233	37+160.00 TO 37+169.12	RT										20.2				
D5	233	37+140.00 TO 37+226.09	LT										184.3				
D6	233	37+212.175	LT & RT	92.1	18.5	21.9	10.43				76.3						
D7	233	37+170.00	RT										54.7				
D8	233	37+196.53 TO 37+226.53	RT										163.3				
D9	233	37+226.53 TO 37+300.00	RT											304.2			
D10		NOT USED															
D11	233	37+300.43 TO 37+366.91											282.5				
D12	233	37+300.43 TO 37+366.91		115.0													
D13	233	37+170.00	RT	1.8			0.22	33.8				1	100.0				
D14	232	36+744.00 TO 36+850.00	CL						106.0			2	200.0				

LA-R/W
Constr. Limits
D1
D12
D2
D11
U- For quantities see previous sheet no. 233
D- For quantities see previous sheet no. 233
870 DEP 8.0 x 20.287 = 162.3 sq. m
670 DEP 3.0m x 41.2m = 123.7 sq. m
℄ Construction Ramp "L"
SRS Sta. 37+578.430
37+625.801 Begin Curb, Type 6
670 DEP 2.0m x 12.3m = 24.6 sq. m
D9
670 DEP 2.0m x 5.2m = 10.4 sq. m
660 Reinforced Sodding Area Planimentered 72.1 sq. m
D6
D3
D12
D10
D11
670 DEP 3.0m x 133.6m = 400.8 sq. m
604 No. 3 CB See sheet no. 526
605 100mm x 109.8m
60l, RCP, Type C w/filter
40.89 sq m x 0.5m = 20.5 cu m
See Sheet No. 233
Match Line Sta. 37+340.000
See Sheet No. 233
450mm
Abndn.
Sta. 37+344.622 (23.70lm LT) U.S. 30
Sta. 37+434.573 (25.575m LT) U.S. 30
PC Sta. 37+434.573 RAMP "L"
605 100mm x 123.0m
Wooded
2.4m
2.7m
U38
Indian Wire Rope Mfg. Co.
CS Sta. 37+498.430
R1
37+500
25:1 Shoulder Taper
603 150mm x 8.2m-F
1.8m
2.4m
0.9m
P.I. = Sta. 37+166.600
Δ = 18° 52' 54.64" (LT)
R = 1,400.000 m
T = 232.796 m
L = 461.371 m
E = 19.223 m
e max = 0.045l
US 30
603 150mm x 11.8m-F
U24
37+625.801 Begin GR Type T Anchor Assembly
Abndn.
300mm
U24
R2
Guardrail, Type 5
U14
605 100mm x 157.2m
605 100mm x 157.8m
603 150mm x 9.5m-B
U20
605 100mm x 150.0m
U9
Wooded
U15
605 100mm x 263.3m
603 100mm x 7.2m-B
U2
605 100mm x 60.0m
U1
3.0m
450mm
U5
605 100mm x 150.0m
605 100mm x 90.0m
605 100mm x 42.0m
605 100mm x 151.8m
U8
605 100mm x 153.7m
U9
605 100mm x 129.4m
U39
PT Sta. 37+395.175
37+400
N 81° 52' 40" E
+468.41
604 No.4 CB See sheet no. 523
37+500
9.0m-F
U21
603 150mm x 7.2m-F
37+600
U25
605 100mm x 151.9m
37+673.078 Begin Impact Att./GR
Match Line Sta. 37+680.000 See Sheet No. 237
605 100mm x 130.4m
U40
℄ Construction U.S.R. 30
605 100mm x 150.0m
+436.526
603 150mm x 12.7m-F
670 DEP 2m x 50m = 100 sq. m
U22
603 100mm x 7.2m-B
U10
U26
605 100mm x 149.4m
R3
Impact Attenuator
U11
605 150mm x 141.1m
U16
605 100mm x 271.1m
603 150mm x 6.6m-F
U4
3.0m
605 100mm x 88.5m
U6
605 100mm x 81.0m
U7
605 100mm x 60.0m
605 100mm x 149.5m
605 100mm x 147.5m
U11
U28
7.0m
37+400
3.0m
2.4m
0.9m
D5
603 150mm x 8.5m-F
605 100mm x 150.0m
U23
603 150mm x 11.8m-F
U27
Guardrail, Type 5
Type B Anchor Assembly
R1
D4
604 No. 3 CB See sheet no. 526
300mm
D13
D15
605 100mm x 126.9m
U41
CS Sta. 37+437.053
25:1 Shoulder Taper
ST Sta. 37+497.053
37+500
375mm
℄ Construction Ramp "K"
37+604.590 Begin GR 25.1m Rt.
670 DEP 3.0m x 12.2m = 36.5 sq. m
37+600
D14
37+650.000 Begin Curb, Type 6
670 DEP 3.0m x 24.533m = 73.6 sq. m
605 100mm x 83.8m
825mm or, 1050mm See sheet no. 1154
℄
Constr. Limits
PC Sta. 37+568.011
670 DEP
660 Reinforced Sodding Area Planimentered 47.3 sq. m
LA-R/W

283.604 283.864 284.124 284.384 284.644 284.904 285.163 285.423 285.683 285.943 286.203 286.463 286.723 286.983 287.243 287.503 287.763 288.023

288
286
284
282
280

+497, 9.0m & 16.2m Rt. (Plug)
℄ 100mm U.D. = 284.100
Proposed grade
+1.2999%
+509, 9.0m Rt. (150mm Wye)
℄ 100mm U.D. = 284.256
Outlet @ C.B. = 284.001
100mm Shallow
+440, 9.0m Lt. (150mm Tee)
℄ 100mm U.D. = 283.360
For Continuation See Sheet No. 1137
+501.500, 16.2m Rt. (150mm 90° Bend)
℄ 100mm U.D. = 284.159
Outlet (24.7m Rt.) = 284.134
+590, 9.0m Rt. & Lt. (100mm Tee)
+590, 16.2m Rt. & Lt. (150mm Cross)
℄ 100mm U.D. = 285.709
Outlet (28m Rt. & Lt.) = 285.250
+440, 16.2m Lt. (Cross)
℄ 100mm U.D. = 283.302
Outlet (31.1m Lt.) = 282.802
+500, 9.0m Lt. (150mm Tee)
℄ 100mm U.D. =284.130
Outlet @ C.B. = 284.001
100mm Shallow
+440, 25.7m Lt. (150mm Cross)
℄ 100mm U.D. = 282.903
Outlet 31.1m Lt. = 282.802
Existing ground

279.868 279.895 280.063 280.299 280.435 280.617 280.657 280.523 280.254 280.148 280.266 280.289 280.349 280.303 280.336 280.403 280.543 280.603 280.676 280.747 280.735 280.392 280.597 280.686 281.166 281.524 281.544 281.551 281.556 281.598 281.746 281.894 282.051 282.181 282.273

37+340 37+360 37+380 37+400 37+420 37+440 37+460 37+480 37+500 37+520 37+540 37+560 37+580 37+600 37+620 37+640 37+660 37+680

* For U.D. Connection see sheet no. 95
For quantities see sheet no. 239, 240
For underdrain quantities see sheet no. 116
For Ramp K, see sheet no. 1133-1134
For Ramp L, see sheet no. 1137

N

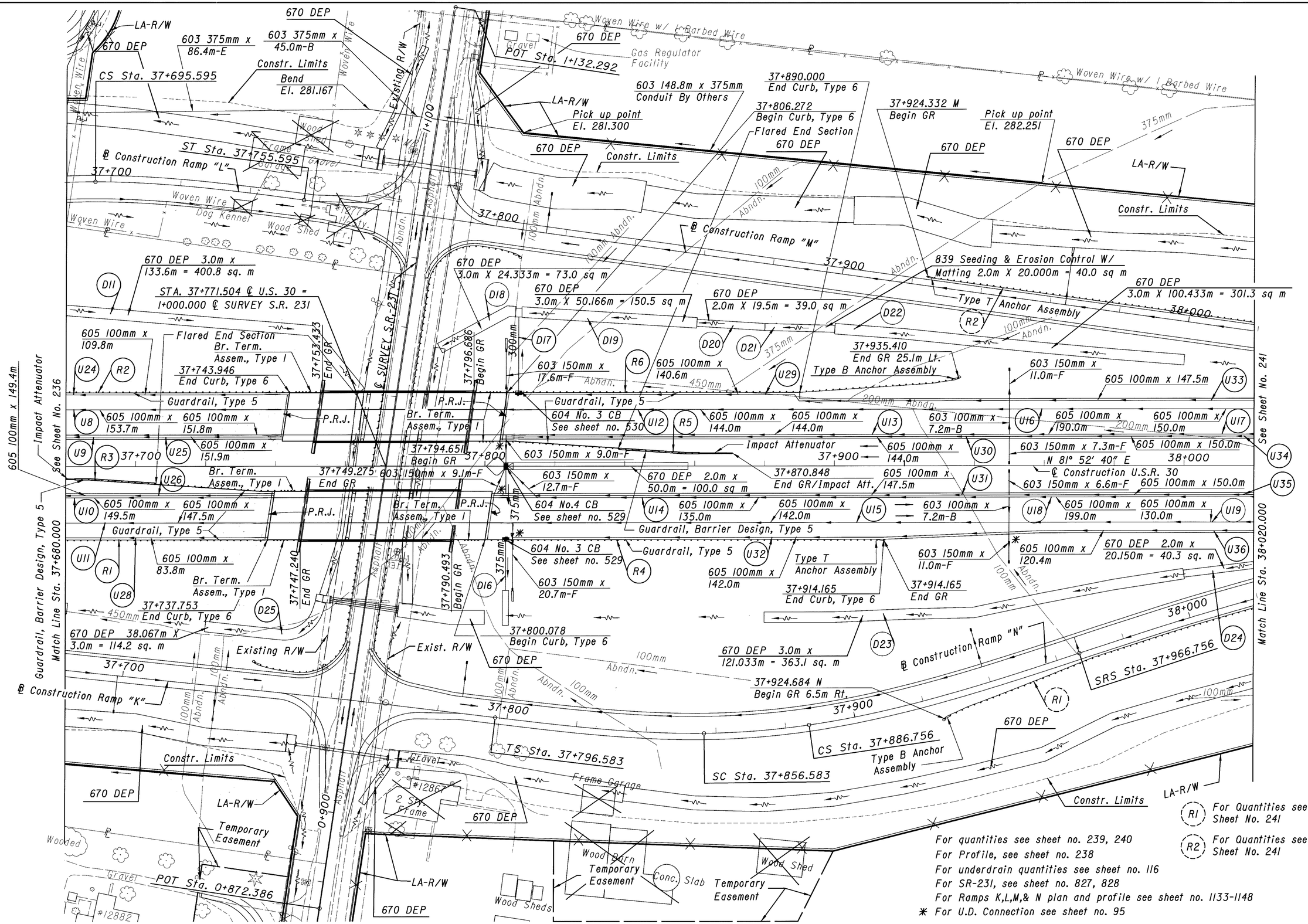
HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 37+340 TO STA. 37+680

WYA/CRA-30-28.009/0.000

236
2116



N

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AW
CHECKED REA

PLAN - U.S.R. 30
STA. 37+680 TO STA. 38+020

WYA/CRA-30-28.009/0.000

237
2116

CALCULATED AM
CHECKED REA

PROFILE - U.S.R. 30
STA. 37+680 TO STA. 38+020

WYA / CRA-30-28.009 / 0.000

BRIDGE NO. WYA-30-37750
TYPE: Continuous concrete slab on capped pile abutments and cap & column piers.
SPANS: 13 500, 16 350, 13 500 (Measured c/c Brg.)
ROADWAY WIDTH: 13 800 toe to toe parapets
LIVE LOADING: MS18 & the alternate military loading
SKEW ANGLE: 8°00'00" L.F.
WEARING SURFACE: Monolithic Concrete
APPROACH SLABS: AS-1-81M (9150)
ALIGNMENT: Tangent
SUPERELEVATION: None

+743.707, 16.2m Lt. (100mm Plug)
℄ 100mm U.D. = 287.307

+739.460, 9.0m Rt. (100mm Plug)
℄ 100mm U.D. = 287.252

+737.514, 16.2m Rt. (100mm Plug)
℄ 100mm U.D. = 287.227

100mm Shallow

+741.760, 9.0m Lt. (100mm Plug)
℄ 100mm U.D. = 287.282

Proposed grade

4.994 Min. Vertical Clearance

+806, 9.0m Lt. (150mm 90° Bend)
℄ 100mm U.D. = 288.160
Outlet @ C.B. = 288.022

+1.2999%

+815, 9.0m Rt. (150mm Wye)
℄ 100mm U.D. = 288.234
Outlet @ C.B. = 288.022

+808, 16.2m Rt. (150mm 90° Bend)
℄ 100mm U.D. = 288.143
Outlet 27.2m Rt. = 288.088

100mm Shallow

+950, 9.0m Rt. & Lt. (100mm Tee)
+950, 16.2m Rt. & Lt. (150mm Cross)
℄ 100mm U.D. = 289.989
Outlet 27.2m Rt. & Lt. = 289.934

Existing ground

For Plan, see sheet no. 237

288.023	288.283	288.543	288.803	289.063	289.323	289.583	289.843	290.103	290.363	290.623	290.883	291.143	291.403	291.663	291.923	292.183	292.443			
282.273	282.334	282.506	282.748	282.969	283.095	283.116	283.077	283.028	283.333	282.425	282.669	282.785	282.825	282.921	283.088	283.239	283.361	283.484	283.571	283.625	283.657	283.662	283.633	283.623	283.672	283.680	283.805	284.008	284.203	284.306	284.314	284.278	284.085	284.069
37+680	37+700	37+720	37+740	37+760	37+780	37+800	37+820	37+840	37+860	37+880	37+900	37+920	37+940	37+960	37+980	38+000	38+020			

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30																														
R1	236	37+604.590 TO 37+747.240	RT														139.065					1			1		88						
R2	236	37+625.801 TO 37+753.433	LT														123.825							1	1		118						
R3	236	37+673.078 TO 37+749.275	RT														43.815		22.860	1					1							1	
R4	237	37+790.493 TO 37+914.165	RT														120.015							1	1		114						
R5	237	37+794.651 TO 37+870.848	LT														43.815		22.860	1					1							1	
R6	237	37+796.686 TO 37+935.410	LT														135.255					1			1		84						
TOTALS CARRIED TO SUB-SUMMARY																	605.790		45.720	2		2		2	6		404					2	

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

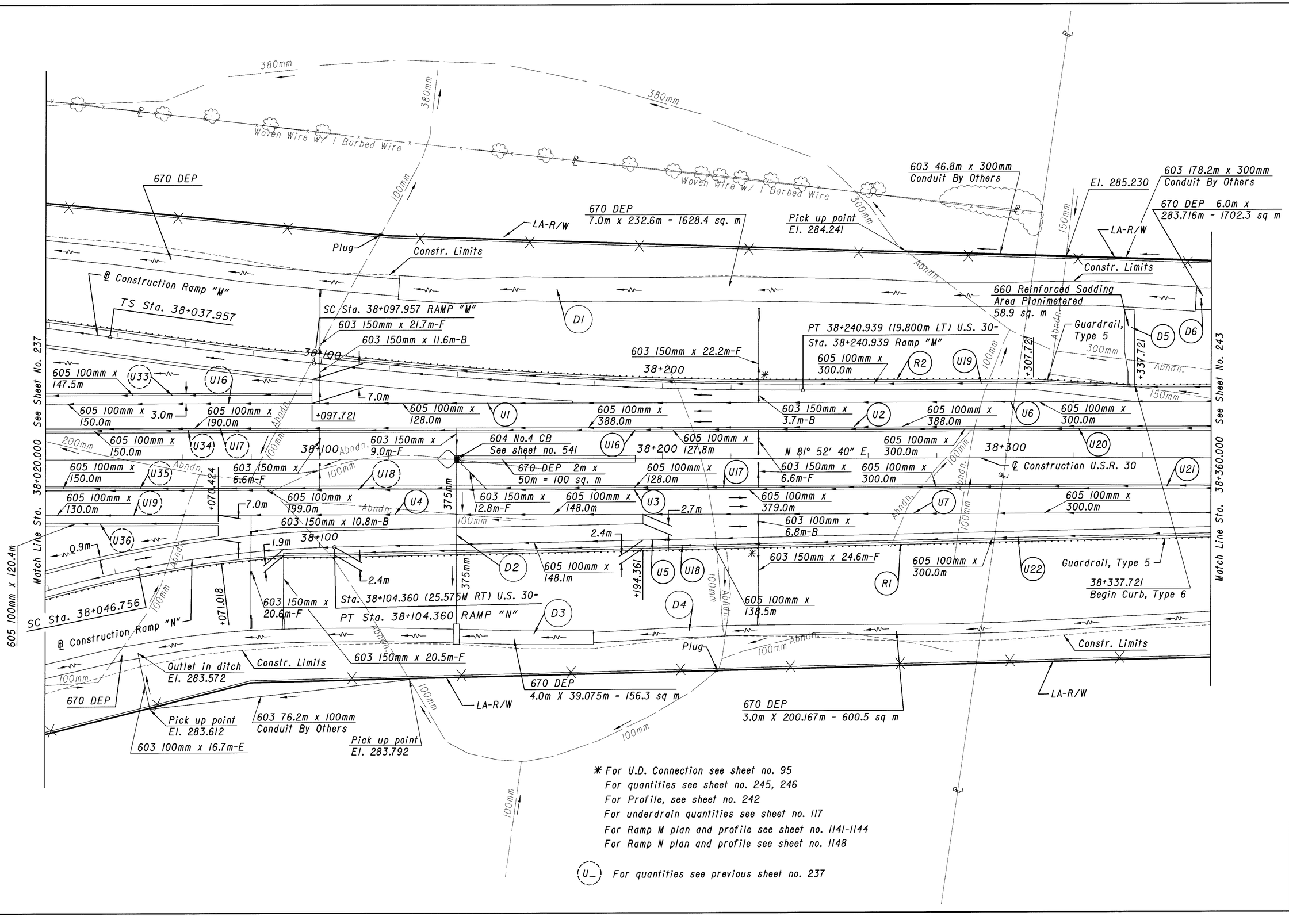
WYA/CRA-30-28.009/0.000

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	602 CONCRETE MASONRY (CU M)	603 375 MM CONDUIT, TYPE B (METER)	603 300 MM CONDUIT, TYPE F (METER)	603 375 MM CONDUIT, TYPE F (METER)	604 CATCH BASIN NO. 3 (EACH)	604 CATCH BASIN NO. 4 (EACH)	660 SODDING REINFORCED (SQ M)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY (EACH) 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
D1	236	37+353.81 TO 37+366.86	LT	20.5												
D2	236	37+379.98 TO 37+400.00	LT									162.3				
D3	236	37+625.51	LT								72.1					
D4	236	37+649.25	RT								47.3					
D5	236	37+500.00	CL	4.5	0.22	53.9				1		100.0				
D6	236	37+580.00 TO 37+620.00	LT									123.7				
D7		NOT USED														
D8		NOT USED														
D9	236	37+620.00 TO 37+632.29	LT									24.6				
D10	236	37+634.06 TO 37+639.25	LT									10.4				
D11	236	37+639.25 TO 37+764.20	LT									400.8				
D12	236	37+633.10	LT		0.17		27.4		1				3.6	2		
D13	236	37+653.10	RT		0.17		18.6		1				5.4	2		
D14	236	37+640.00 TO 37+652.12	RT									36.5				
D15	236	37+653.92 TO 37+678.45	RT									73.6				
D16	237	37+806.00	CL & RT		0.22	20.9		15.7	1	1		100.0	18.0		2	
D17	237	37+809.57	LT		0.17		22.9		1				4.5	2		
D18	237	37+787.02 TO 37+808.67	LT									73.0				
D19	237	37+810.47 TO 37+860.53	LT									150.5				
D20	237	37+860.53 TO 37+880.00	LT									39.0				
D21	237	37+880.00 TO 37+900.00	LT										40.0			
D22	237	37+900.00 TO 38+000.00	LT									301.3				
D23	237	37+880.00 TO 38+000.00	RT									363.1				
D24	237	38+000.00 TO 38+020.00	RT									40.3				
D25	237	37+720.00 TO 37+752.87	RT									114.2				
														TOTALS	6	2
TOTALS CARRIED TO SUB-SUMMARY				25.0	0.95	74.8	68.9	15.7	4	2	119.4	2113.3	71.5			

CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000



✳ For U.D. Connection see sheet no. 95
For quantities see sheet no. 245, 246
For Profile, see sheet no. 242
For underdrain quantities see sheet no. 117
For Ramp M plan and profile see sheet no. 1141-1144
For Ramp N plan and profile see sheet no. 1148

(U_) For quantities see previous sheet no. 237

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

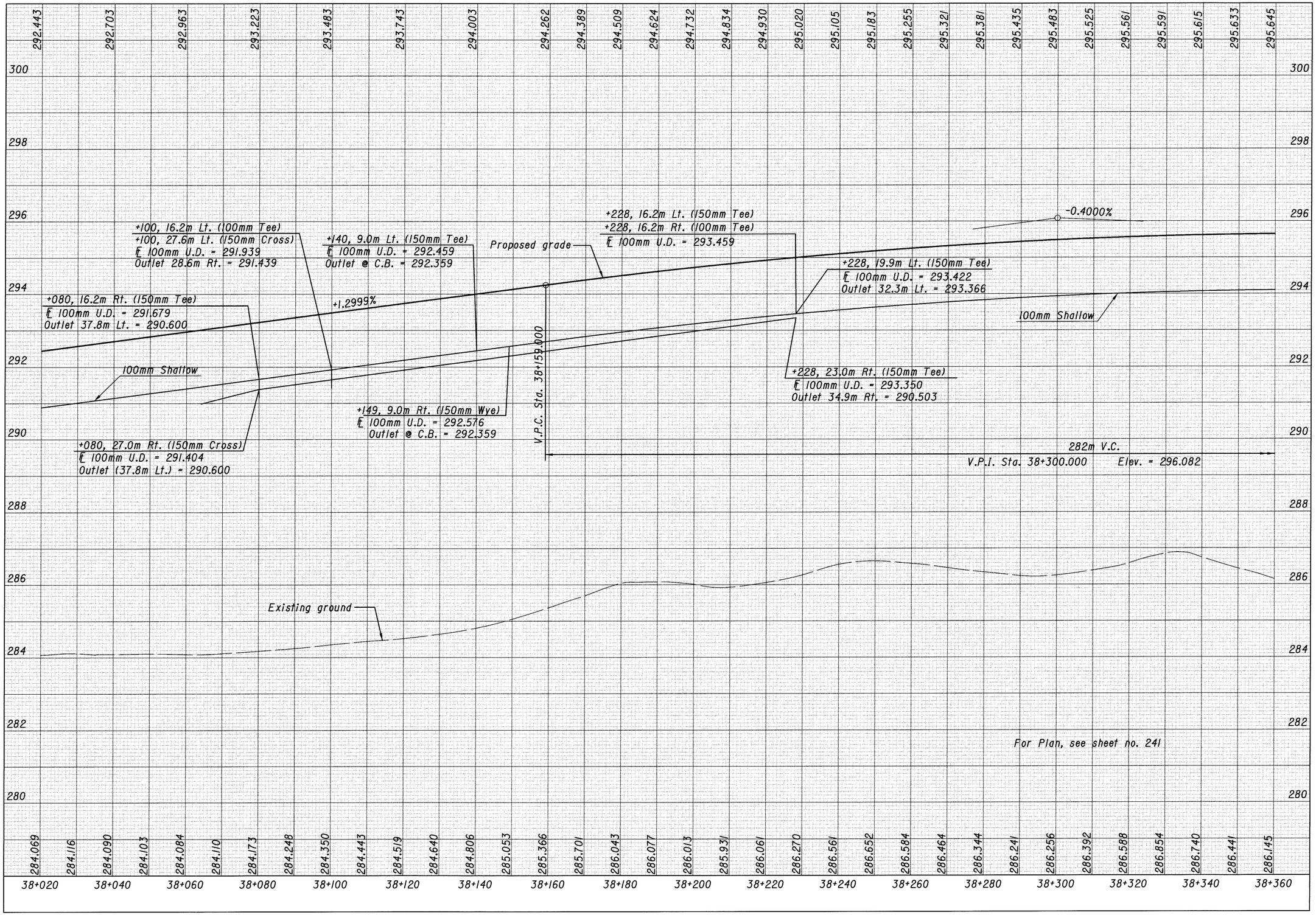
PLAN - U.S.R. 30
STA. 38+020 TO STA. 38+360

WYA/CRA-30-28.009/0.000

241
2116

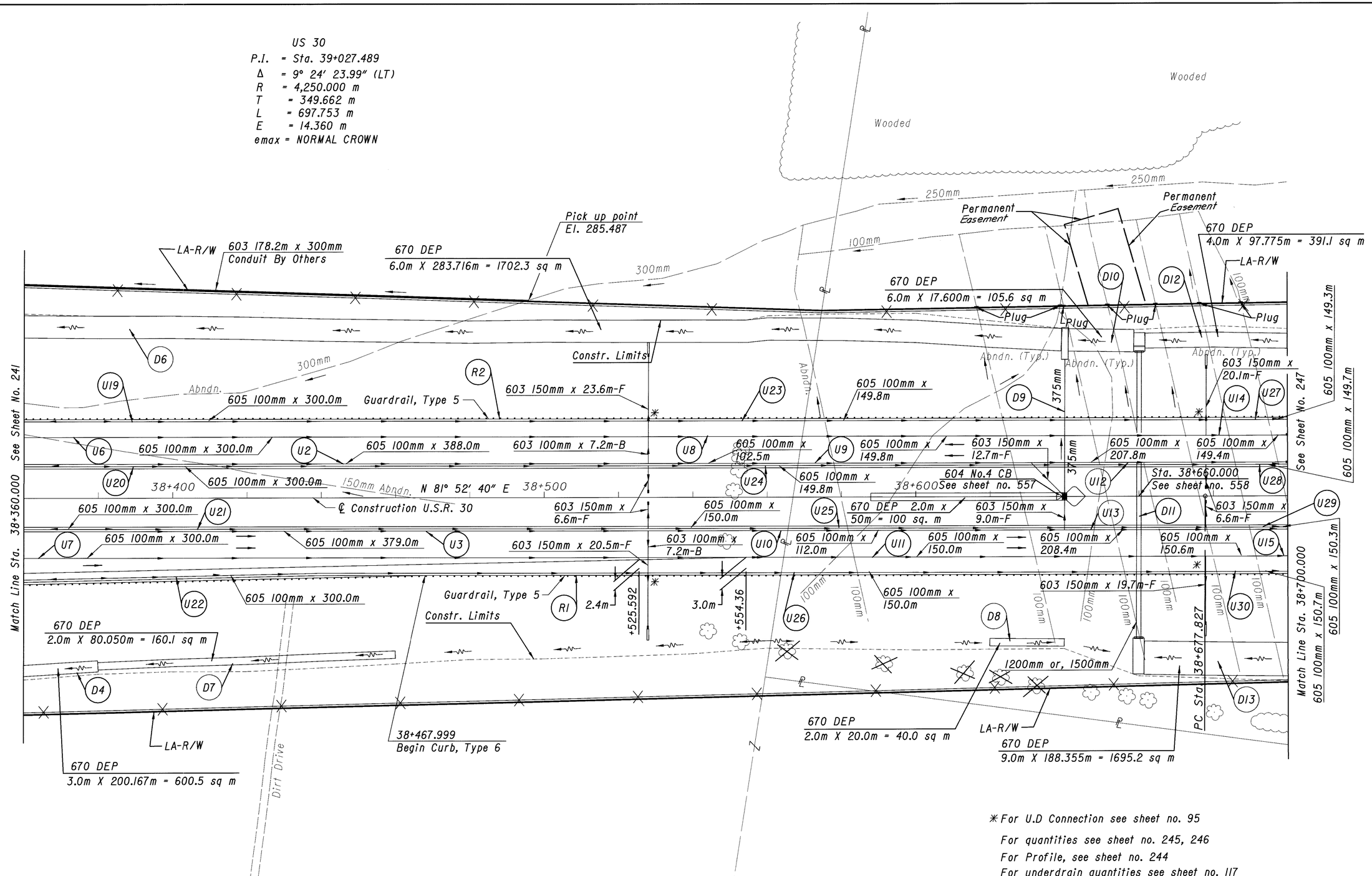
CALCULATED AM
CHECKED REA

PROFILE - U.S.R. 30
STA. 38+020 TO STA. 38+360



WYA/CRA-30-28.009/0.000

US 30
P.I. = Sta. 39+027.489
Δ = 9° 24′ 23.99″ (LT)
R = 4,250.000 m
T = 349.662 m
L = 697.753 m
E = 14.360 m
emax = NORMAL CROWN



✳ For U.D Connection see sheet no. 95

For quantities see sheet no. 245, 246

For Profile, see sheet no. 244

For underdrain quantities see sheet no. 117

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AW
CHECKED REA

PLAN - U.S.R. 30
STA. 38+360 TO STA. 38+700

WYA/CRA-30-28.009/0.000

243
2116

CALCULATED AM
CHECKED REA

PROFILE - U.S.R. 30
STA. 38+360 TO STA. 38+700

295.645 295.650 295.650 295.644 295.632 295.613 295.589 295.559 295.522 295.442 295.362 295.282 295.202 295.122 295.042 294.962 294.882 294.802 294.722 294.642 294.562 294.482

302 300 298 296 294 292 290 288 286 284 282

Proposed grade

-0.4000%

100mm Shallow

+378, 9.0m Lt. & Rt.
+378, 16.2m Lt. & Rt.
℄ 100mm = 295.651
High Point

282m V.C.
V.P.I. Sta. 38+300.000 Elev. = 296.082
V.P.T. Sta. 38+441.000

+528, 9.0m Lt. & Rt. (100mm Tee)
+528, 16.2m Lt. & Rt. (150mm Cross)
℄ 100mm U.D. = 293.626
Outlet 26.3m Lt. & Rt. = 292.170

100mm Shallow

+631, 9.0m Lt. (150mm Wye)
℄ 100 mm U.D. = 293.214
Outlet @ C.B. = 292.878

+640, 9.0m Rt. (150mm Tee)
℄ 100mm U.D. = 293.178
Outlet @ C.B. = 292.878

+678, 16.2m Lt. & Rt. (150mm Tee)
℄ 100mm U.D. = 293.026
Outlet 26.3m Lt. & R.t = 291.570

Existing ground

1200mm or, 1500mm

For Plan, see sheet no. 243

286.145 285.893 285.889 285.942 285.974 286.055 286.158 286.262 286.368 286.440 286.516 286.697 286.976 287.351 287.816 288.051 288.270 288.525 288.673 288.844 288.804 288.726 288.520 288.382 288.296 288.318 288.321 288.287 288.182 288.078 288.010 288.039 288.112 288.236 288.286

38+360 38+380 38+400 38+420 38+440 38+460 38+480 38+500 38+520 38+540 38+560 38+580 38+600 38+620 38+640 38+660 38+680 38+700

WYA / CRA-30-28.009 / 0.000

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30																															
R1	241	37+924.684 N TO 38+873.078	RT														941.070					1		1			406						
R2	241	37+924.332 M TO 39+015.486	LT														1078.230					1		1			631						
TOTALS CARRIED TO SUB-SUMMARY																	2019.300					2		2			1037						

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE B W/ FILTER (CU M)		601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 375 MM CONDUIT, TYPE B (METER)						603 375 MM CONDUIT, TYPE F (METER)	603 1200 MM CONDUIT, TYPE A, 706.02 100 D-LOAD, OR 1500 MM, 707.02, OR 707.09 (25MM CORR.), OR 707.22 (METER)			604 CATCH BASIN NO. 4 (EACH)		660 SODDING REINFORCED (SQ M)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)																FOR INFORMATION ONLY (EACH) 300 MM X 300 MM 22.5° BEND		375 MM X 375 MM 22.5° BEND		MASONRY COLLAR	
D1	241	38+123.04 TO 38+355.51	LT																		1628.4																					
D2	241	38+140.00	CL				0.22	27.2						20.8				1			100.0	10.6																			2		1	
D3	241	38+140.93 TO 38+180.00	RT																		156.3																					
D4	241	38+180.00 TO 38+380.00	RT																		600.5																					
D5	241	38+336.72	LT																	58.9																					
D6	241	38+355.51 TO 38+639.10	LT																		1702.3																					
D7	243	38+380.00 TO 38+460.00	RT																		160.1																					
D8	243	38+620.00 TO 38+640.00	RT																		40.0																					
D9	243	38+640.00	CL				0.22	21.0						16.9				1			100.0	15.3																			2		1	
D10	243	38+640.90 TO 38+658.50	LT																		105.6																					
D11	243	38+660.00	LT & RT	7.9		33.5	3.22								76.9																											
D12	243	38+661.50 TO 38+760.00	LT																		391.1																					
D13	243	38+661.50 TO 38+848.00	RT																		1695.2																					

LA-R/W
Pick up point El. 286.818
670 DEP 4.0m X 97.775m = 391.1 sq m
603 375mm x 32.6m-C
Plug
D_ For quantities see previous sheet no. 243
Constr. Limits
Abndn. (Typ.)
100mm
660 Reinforced Sodding Area Planimetered 46.7 sq. m
Pick up point El. 287.239
603 375mm x 40.7m-C
D8
P.I. = Sta. 39+027.489
Δ = 9° 24' 23.99" (LT)
R = 4,250.000 m
T = 349.662 m
L = 697.753 m
E = 14.360 m
e max =Normal Crown
U.S.-30
38+970.000 End Curb, Type 6
39+015.486 End GR 25.1m Lt.
D6
D7
603 150mm x 12.4m-F
Type B Anchor Assembly
605 100mm x 157.3m
U19
605 100mm x 137.2m
U15
Sta. 38+860.000
D1
375mm
300mm
DI2
U27
605 100mm x 149.3m
DII
R2
603 150mm x 18.3m-F
603 375mm x 43.7m-B
U14
605 100mm x 149.4m
U12
605 100mm x 207.8m
U1
603 150mm x 11.6m-F
U2
605 100mm x 299.6m
604 No. 3 CB See sheet no. 565
605 100mm x 149.4m
U5
U28
605 100mm x 149.7m
38+800
38+900
605 100mm x 149.7m
U16
39+000
605 100mm x 161.7m
U20
U29
605 100mm x 150.3m
670 DEP 2.0m x 50m = 100 sq. m
603 150mm x 6.6m-F
38+873.078 End Curb, Type 6
℄ Construction U.S.R. 30
605 100mm x 150.3m
U17
603 150mm x 6.6m-F
605 100mm x 153.9m
U21
U13
605 100mm x 208.4m
605 100mm x 150.6m
U15
603 150mm x 9.8m-F
U18
604 No.4 CB See sheet no. 562
U3
605 100mm x 283.6m
U4
605 100mm x 150.6m
U6
605 100mm x 150.6m
U30
605 100mm x 150.7m
603 375mm x 29.7m-C
603 150mm x 17.9m-F
RI
604 No. 3 CB See sheet no. 563
38+873.078 End GR
Type T Anchor Assembly
605 100mm x 117.5m
U18
603 150mm x 12.4m-F
605 100mm x 150.7m
U22
670 DEP 9.0m X 188.355m = 1695.2 sq m
DI3
D2
605 100mm x 31.4m
D3
D5
670 DEP 7.0m X 201.928m = 1413.5 sq m
El. 287.567
El. 287.430
El. 288.302 high point
Constr. Limits
LA-R/W
RI For Quantities see Sheet No. 241
R2 For Quantities see Sheet No. 241
Pick up point El. 287.300
670 DEP 8.0m x 11.325m = 90.6 sq. m
El. 287.320
839, Seeding & Eros. Control w/Mat 9.222m x 1.8m = 16.6 sq m
D4
670 DEP 8.0m x 39.513m = 316.1 sq. m
660 Reinforced Sodding Area Planimetered 45.3 sq. m
603 324.0m x 100mm Conduit By others
U_ For quantities see previous sheet no. 243
Tree Line
Match Line Sta. 38+700.000 See Sheet No. 243
Match Line Sta. 39+040.000 See Sheet No. 248

294.482 294.402 294.322 294.242 294.162 294.082 294.002 293.922 293.842 293.762 293.682 293.602 293.522 293.442 293.362 293.282 293.202 293.122

296 294 292 290 288

+839.796, 9.0m Lt. (150mm Wye)
℄ 100mm U.D. = 292.414
Outlet @ C.B. = 292.346
-0.4000%
Proposed grade
100mm Shallow
+828, 16.2m Lt. & Rt. (150mm Tee)
℄ 100mm U.D. = 292.426
Outlet 28.4m Lt. & Rt. = 290.970
+848, 9.0m Rt. (150mm Tee)
℄ 100mm U.D. = 292.346
Outlet @ C.B. = 292.346
+978, 16.2m Rt. & Lt. (150mm Tee)
℄ 100mm U.D. = 291.826
Outlet 28.6m Rt. & Lt. = 291.370
Existing ground

For quantities see sheet no. 250
For underdrain quantities see sheet no. 118
For Crossover detail. see sheet no. 141
*For U.D. Connection see sheet no. 95

288.286 288.271 288.371 288.467 288.353 288.272 288.216 288.263 288.345 288.398 288.457 288.450 288.222 288.322 288.491 288.583 288.679 288.851 288.809 288.638 288.557 288.510 288.551 288.601 288.608 288.625 288.668 288.732 288.824 289.048 289.251 289.259 289.240 289.161 288.974

38+700 38+720 38+740 38+760 38+780 38+800 38+820 38+840 38+860 38+880 38+900 38+920 38+940 38+960 38+980 39+000 39+020 39+040

N
HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 38+700 TO STA. 39+040

WYA/CRA-30-28.009/0.000

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2116

Pick up point
El. 287.792
LA-R/W
603 195.0m x 100mm Conduit
By others
603 375mm x 40.7m-C
Plug
Constr. Limits
Abndn. (Typ.)
100mm
250mm
D8
U19
605 100mm x 157.3m
603 150mm x 15.0m-F
U23
U2
U15
605 100mm x 149.4m
605 100mm x 299.6m
605 100mm x 237.8m
U7
605 100mm x 139.7m
U8
U20
605 100mm x 161.7m
604 No.4 CB
See sheet no. 568
39+100
603 150mm x 9.0m-F
605 100mm x 149.0m
39+200
605 100mm x 139.7m
U24
U21
605 100mm x 153.9m
670 DEP
2m x 50m = 100 sq m
℄ Construction U.S.R. 30
U3
605 100mm x 283.6m
U16
605 100mm x 150.6m
603 150mm x 12.7m-F
U10
U9
U25
605 100mm x 149.6m
605 100mm x 219.0m
U22
605 100mm x 150.7m
603 375mm x 49.8m-B
603 150mm x 15.0m-F
375mm
+146.939
+161.94
U26
605 100mm x 152.6m
670 DEP
7.0 m X 201.928 m = 1413.5 sq m
D9
Constr. Limits
Pick up point
El. 287.581
Plug
603 375mm x 39.3m-C
D5
603 324.0m x 100mm Conduit
By Others
LA-R/W
Match Line Sta. 39+040.000 See Sheet No. 247
U.S.-30
P.I. = Sta. 39+027.489
Δ = 9° 24′ 23.99″ (LT)
R = 4,250.000 m
T = 349.662 m
L = 697.753 m
E = 14.360 m
e max =Normal Crown
✳ For U.D. Connection see sheet no. 95
For quantities see sheet no. 250
For TR-10, see sheet no. 832
For underdrain quantities see sheet no. 118
For Left Turn Lane detail. see sheet no. 142
Pick up point
El. 288.835
603 150mm x 6.6m-F
605 100mm x 151.3m
U27
605 100mm x 149.4m
603 150mm x 4.8m-F
+340.54
+355.752
+366.689
PT Sta. 39+375.580 U.S. 30=
PC Sta. 0+000.000 U.S. 30
Sta. 39+375.580 U.S. 30=
Sta. 1+000.000 T.R. -10
603 150mm x 11.3m-F
605 100mm x 39.9m
604 No.4 CB
See sheet no. 1377
U13
605 100mm x 35.1m
U28
605 100mm x 26.1m
450mm
39+300
WYA COUNTY LINE
U14
U29
+355.327
Abndn. (Typ.)
603 150mm x 9.7m-F
605 100mm x 31.2m
603 150mm x 10.8m-F
603 150mm x 11.3m-F
Match Line Sta. 39+375.580 = 0+000.000 See Sheet No. 251
+973.113
Sta. 0+968.682
℄ TR-10
375mm Conduit
See sheet no. 904
150mm
605 100mm x 150.6m
603 150mm x 6.6m-F
+282.704
D10
U30
+340.328
+346.132
Section 3
Section 2
Ex. R/W
N 0° 49′ 59.08″ E
+959.669
Asphalt
Gravel
CRAWFORD COUNTY LINE
U28 605 100mm x 151.0m
U29 605 100mm x 151.6m
Plug
Constr. Limits
LA-R/W

293.122 293.042 292.962 292.882 292.802 292.722 292.642 292.562 292.482 292.402 292.322 292.242 292.162 292.082 292.002 291.922 291.842 291.780

298
296
294
292
290

-0.4000%
Proposed grade
Existing ground
+131, 9.0m Rt. (150mm Wye)
℄ 100mm U.D. = 291.214
Outlet @ C.B. = 291.079
+140, 9.0m Lt. (150mm Tee)
℄ 100mm U.D. = 291.178
Outlet @ C.B. = 291.079
+128, 16.2m Rt. & Lt. (150mm Tee)
℄ 100mm U.D. = 291.226
Outlet 31.2m Rt. & Lt. = 289.870
100mm Shallow
+329 0.4m Lt. (150mm Wye)
℄ 100mm U.D. = 290.384
Outlet @ C.B. = 290.342
+320, 9.0m Lt. (150mm Tee)
℄ 100mm U.D. = 290.378
Outlet @ C.B. = 290.378
+311, 1.8m Rt. (150mm Wye)
℄ 100mm U.D. = 290.378
Outlet @ C.B. = 290.342
V.P.I. Sta. 39+375.580
+366.689, 16.2m Lt. (150mm 90° Bend)
℄ 100mm U.D. = 290.246
Outlet 27.5m Lt. = 290.120
+355, 6.7m & 1.8m Lt. (100mm Plug)
℄ 100mm (Uncl.) U.D. = 290.507
+346.170, 16.2m Rt. (90° Bend)
℄ 100mm U.D. = 290.33
Outlet 27.5m Rt. = 290.170
100mm Unclassified
100mm Shallow

288.974 288.803 288.741 288.615 288.795 288.904 288.978 289.287 289.505 289.719 289.743 289.689 289.550 289.670 289.701 289.645 289.638 289.600 289.514 289.523 289.523 289.552 289.527 289.467 289.384 289.474 289.631 289.894 290.047 289.996 289.821 289.892 289.887 289.928 290.376

39+040 39+060 39+080 39+100 39+120 39+140 39+160 39+180 39+200 39+220 39+240 39+260 39+280 39+300 39+320 39+340 39+360

N
0 10 20
HORIZONTAL SCALE IN METERS
CALCULATED AM
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 39+040 TO STA. 39+375.580

WYA/CRA-30-28.009/0.000

248
2116

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	602 CONCRETE MASONRY (CU M)	603 375 MM CONDUIT, TYPE B (METER)	603 450 MM CONDUIT, TYPE B (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 450 MM CONDUIT, TYPE C (METER)	603 300 MM CONDUIT, TYPE F (METER)	603 375 MM CONDUIT, TYPE F (METER)	604 CATCH BASIN NO. 3 (EACH)	604 CATCH BASIN NO. 4 (EACH)	660 SODDING REINFORCED (SQ M)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: MASONRY COLLAR (EACH)
D1	247	38+848.00	CL		0.22	20.2					13.3		1		107.2			2	1
D2	247	38+860.00	RT		0.17					18.2		1				16.6	2		
D3	247	38+874.54	RT											45.3					
D4	247	38+860.90 TO 38+900.00	RT												316.1				
D5	247	38+900.00 TO 39+100.00	RT												1413.5				
D6	247	38+966.60	LT		0.17					18.9		1				5.4	2		
D7	247	38+970.75	LT											46.7					
D8	248	39+031.21 TO 39+114.00	LT & RT			49.8		80.0											
D9	248	39+140.00	CL	6.8	0.22	33.7							1		100.0				
D10	248	39+320.00 TO 0+082.00	CL		0.28		34.8		137.7				2		300.0	7.2			
D11	247	38+775.60 TO 38+804.59	LT & RT			43.7		62.3											
D12	247	38+848.00 TO 38+859.12	RT												90.6				
TOTALS																	4	2	1
TOTALS CARRIED TO SUB-SUMMARY				6.8	1.06	147.4	34.8	142.3	137.7	37.1	13.3	2	4	92.0	2327.4	29.2			

CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA / CRA-30-28.009 / 0.000

250
2116

U.S. 30
P.I. = Sta. 0+457.247
Δ = 12° 16' 53.02" (LT)
R = 4,250.000 m
T = 457.247 m
L = 910.991 m
E = 24.526 m
e_{max} = Normal Crown

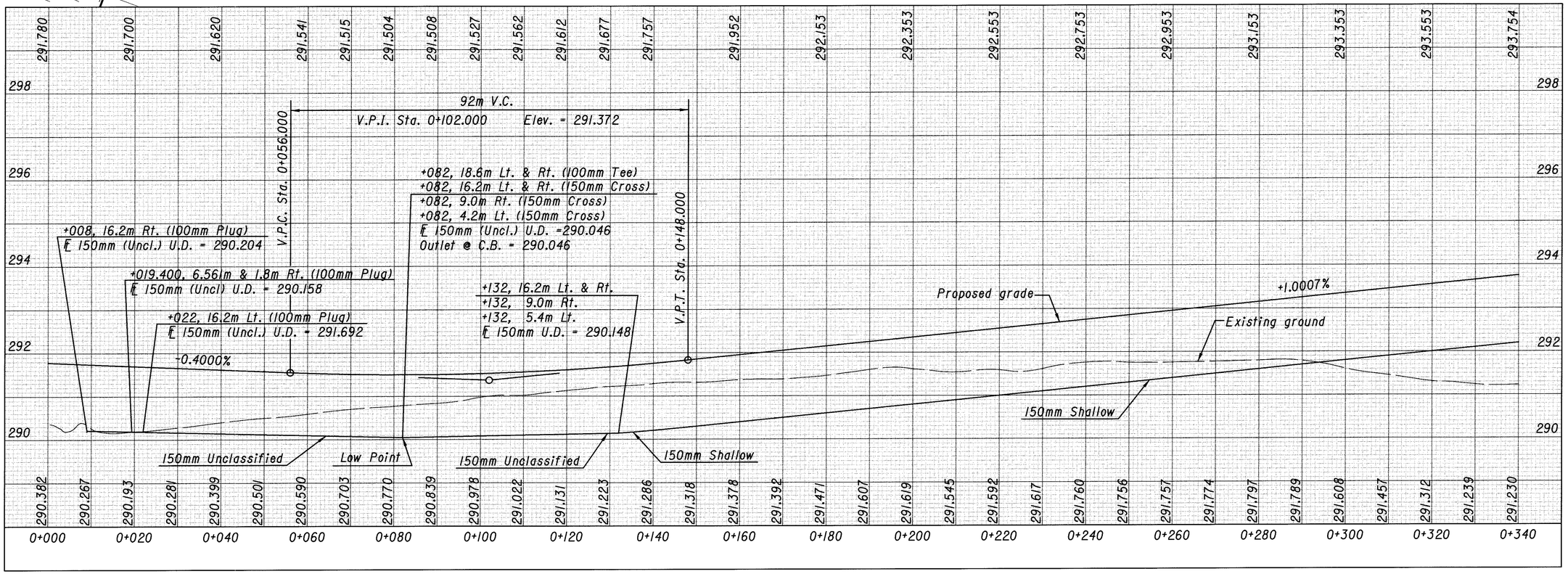
For quantities see sheet no. 254
For TR-10, see sheet no. 832
For underdrain quantities see sheet no. 119
For Left Turn Lane detail, see sheet no. 142
* For U.D. Connection see sheet No. 95

(U_) For quantities see previous sheet no. 248

℄ Construction
℄ Ex. R/W
Ex. R/W-R-10
N 0° 52' 40.35" E
Sta. 0+000.000 U.S. 30 -
Sta. 1+000.000 T.R. 10
PT Sta. 39+375.580 WYA.
PC Sta. 0+000.000 CRA.
Asphalt
+038.884
+029.295
+019.843
+034.885
+092.461
+018.49
+034.648
+008.223
+213.248
+228.248
0+100
0+200
0+300
7.2m
10.8m
Abndn.
100mm
150mm
450mm
Constr. Limits
601 Riprap
Pick up point El. 290.069
Outlet in ditch El. 290.008
Outlet in ditch El. 290.247
Pick up point El. 290.319
604 No.4 CB See sht. 1377
670 DEP 2.0m X 50.0m = 100.0 sq m
℄ Construction U.S.R. 30
El. 290.879
El. 290.385
El. 290.057
603 72.9m x 100mm Conduit By others
Plug
LA-R/W
Constr. Limits
Match Line Sta. 0+340.000 See Sheet No. 252
605 100mm x 151.0m
605 100mm x 151.6m See Sheet No. 248 Match Line Sta. 39+375.580 - Match Line Sta. 0+000.000

D1 D2 D3 U1 U2 U3 U4 U5 U6 U7 U8 U19 U20 U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U37 U38

605 100mm x 149.4m
603 16.6m x 100mm-E
605 100mm x 27.4m
603 150mm x 2.4m-B
603 150mm x 6.6m-F
605 100mm x 59.8m
603 150mm x 12.0m-B
603 150mm x 6.3m-F
605 100mm x 49.8m
605 100mm x 149.6m
605 100mm x 27.9m
605 100mm x 50.0m
605 100mm x 35.1m
670 DEP * 2.0m X 50.0m = 100.0 sq m
603 150mm x 6.9m-F
605 100mm x 50.1m
605 100mm x 150.9m
605 100mm x 62.9m
603 150mm x 7.2m-B
605 100mm x 50.2m
603 150mm x 2.4m-B
605 150mm x 74.3m
603 100mm x 47.5m-E
605 100mm x 27.7m
603 150mm x 6.6m-F
LA-R/W
605 100mm x 150.6m
603 150mm x 6.6m-F
605 100mm x 147.1m
605 100mm x 276.9m
605 100mm x 247.1m
605 100mm x 147.4m
605 100mm x 268.6m
605 100mm x 148.0m
605 100mm x 248.9m
603 150mm x 6.6m-F
605 100mm x 148.4m
LA-R/W



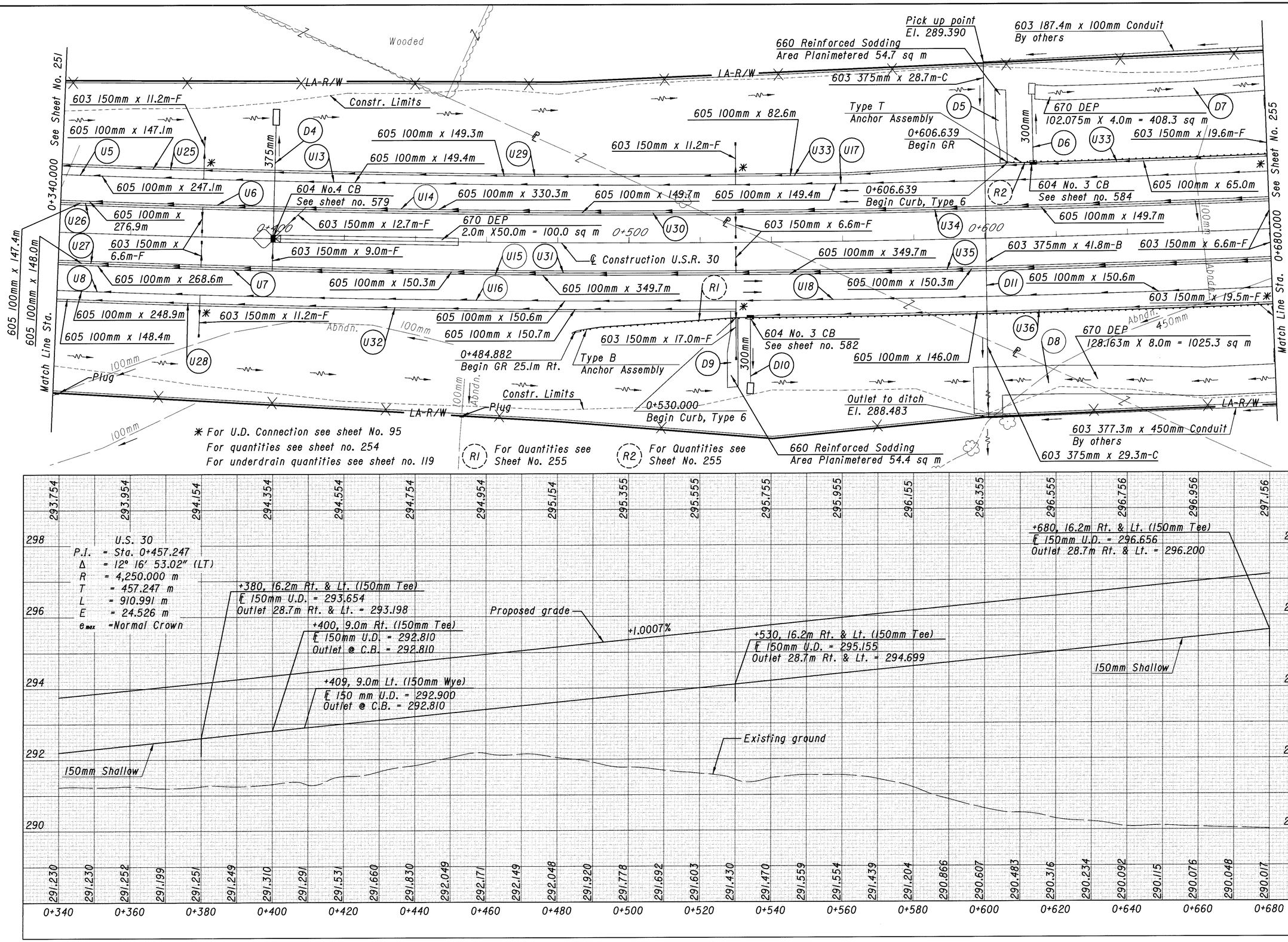
HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 0+000 TO STA. 0+340

WYA/CRA-30-28.009/0.000

251
2116



HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 0+340 TO STA. 0+680

WYA/CRA-30-28.009/0.000

252
2116

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER		602 CONCRETE MASONRY		603 100 MM CONDUIT, TYPE E	603 300 MM CONDUIT, TYPE F	603 375 MM CONDUIT, TYPE B	603 375 MM CONDUIT, TYPE C		604 CATCH BASIN NO. 3	604 CATCH BASIN NO. 4		660 SODDING REINFORCED		670 DITCH EROSION PROTECTION		839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND	FOR INFORMATION ONLY:	FOR INFORMATION ONLY: MASONRY COLLAR
				CU M		CU M		METER	METER	METER	METER		EACH	EACH		SQ M		SQ M		SQ M	EACH			
D1		NOT USED																						
D2	251	0+040.00 TO 0+054.14	LT					16.6																
D3	251	0+040.00 TO 0+085.57	RT					47.5																
D4	252	0+400.00	LT	4.0		0.22				31.9				1				100.0						
D5	252	0+605.00	LT													54.7								
D6	252	0+614.00	LT			0.17			20.3				1							5.4	2			
D7	252	0+614.00 TO 0+718.00	LT															408.3						
D8	252	0+596.00 TO 0+718.00	RT															1025.3						
D9	252	0+529.00	RT													54.4								
D10	252	0+534.00	RT			0.17			19.6				1			5.4					2			
D11	252	0+600.00	LT & RT							41.8	58.0													
TOTALS CARRIED TO SUB-SUMMARY				4.0		0.56		64.1	39.9	73.7	58.0		2	1		114.5		1533.6		5.4	TOTALS 4			

CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

254
2116

U.S. 30
P.I. = Sta. 0+457.247
Δ = 12° 16′ 53.02″ (LT)
R = 4,250.000 m
T = 457.247 m
L = 910.991 m
E = 24.526 m
e_{max} =Normal Crown

670 DEP
102.075m X 4.0m = 408.3 sq m

LA-R/W

D7

0+720.000
38.413m

603 187.4m x 100mm Conduit
By others

Pick up Point
El. 291.376

El. 290.999

100mm

Abndn.

Woven Wire/Barbed Wire

Tree Line

℄

670 DEP
360.200m X 5.0m = 1801.0 sq m

LA-R/W

See Sheet No. 252

605 100mm x 330.3m

605 100mm x 349.7m

Match Line Sta. 0+680.000

D1

0+720.000
See sheet no. 587
Skew = 0°

603, 1650mm or
1950mm

Constr. Limits

U15

D5

670 DEP
196.15m X 6.0m = 1176.9 sq m

U19

603 150mm x 20.2m-F

605 100mm x 149.6m

Guardrail, Type 5

U6

P.T. Sta. 0+910.991

670 DEP
80.143m X 7.0m = 561.0 sq m

D6

U23

603 150mm x 22.3m-F

605 100mm x 150.0m

D7

605 100mm x 149.3m

605 100mm x 149.7m

U1

603 150mm x 9.0m-F

605 100mm x 149.4m

605 100mm x 368.6m

R2

605 100mm x 150.0m

U7

U14

0+700

U16

0+800

604 No.4 CB
See sheet no. 588

605 100mm x 149.7m

603 150mm x 6.6m-F

U3

U20

0+900

605 100mm x 149.8m

N 60° 11′ 23.06″ E

U24

1+000

U25

U15

U17

670 DEP
2.0m x 50.0m = 100.0 sq m

℄ Construction U.S.R. 30

U4

605 100mm x 150.2m

605 100mm x 351.3m

603 150mm x 6.6m-F

450mm

U2

605 100mm x 150.3m

603 150mm x 12.7m-F

605 100mm x 150.6m

U22

U21

605 100mm x 150.3m

605 100mm x 150.0m

Match Line Sta. 0+720.000

D2

375mm

D3

D8

U18

605 100mm x 150.7m

603 150mm x 21.8m-F

U5

R1

Guardrail, Type 5

605 100mm x 150.4m

603 150mm x 25.1m-F

U26

U8

605 100mm x 150.0m

D4

Constr. Limits

D8

Wooded

Woven Wire/Barbed Wire

Match Line Sta. 1+020.000

605 100mm x 150.0m

670 DEP
128.163m X 8.0m = 1025.3 sq m

LA-R/W

670 DEP
17.3m X 4.0m = 69.2 sq m

Sta. 0+720.000
39.152m Rt.

670 DEP
100.125m X 4.0m = 400.5 sq m

603 377.3m x 450mm Conduit
By others

Pick up point
El. 289.564

670 DEP
259.867m X 3.0m = 779.6 sq m

Wooded

LA-R/W

Wooded

(D_) For quantities see previous sheet no. 252

(U_) For quantities see previous sheet no. 252

For quantities see sheet no. 259,260
For underdrain quantities see sheet no. 120
For Profile, see sheet no. 256
✳ For U.D. Connection see sheet No. 95

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

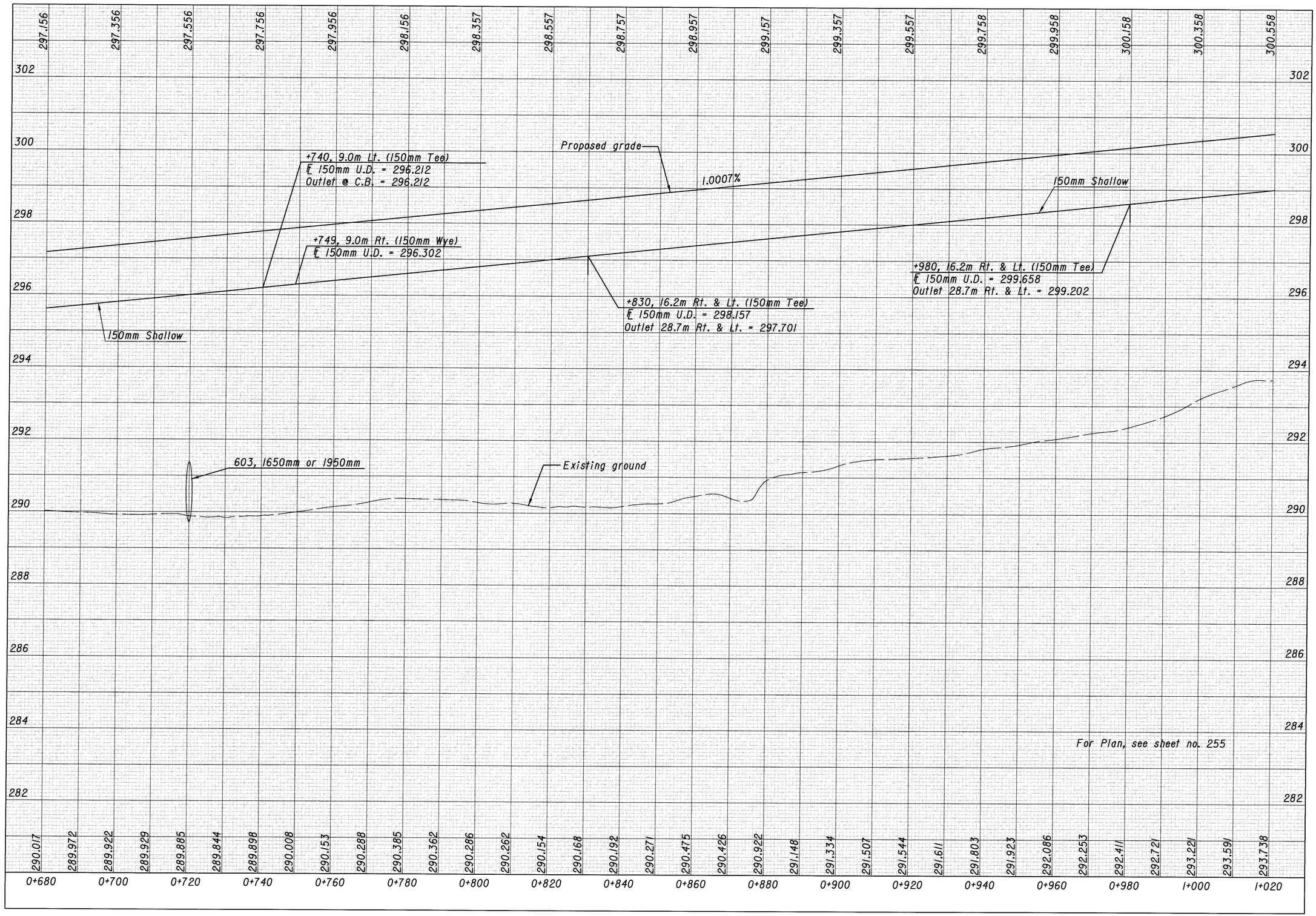
PLAN - U.S.R. 30
STA. 0+680 TO STA. 1+020

WYA/CRA-30-28.009/0.000

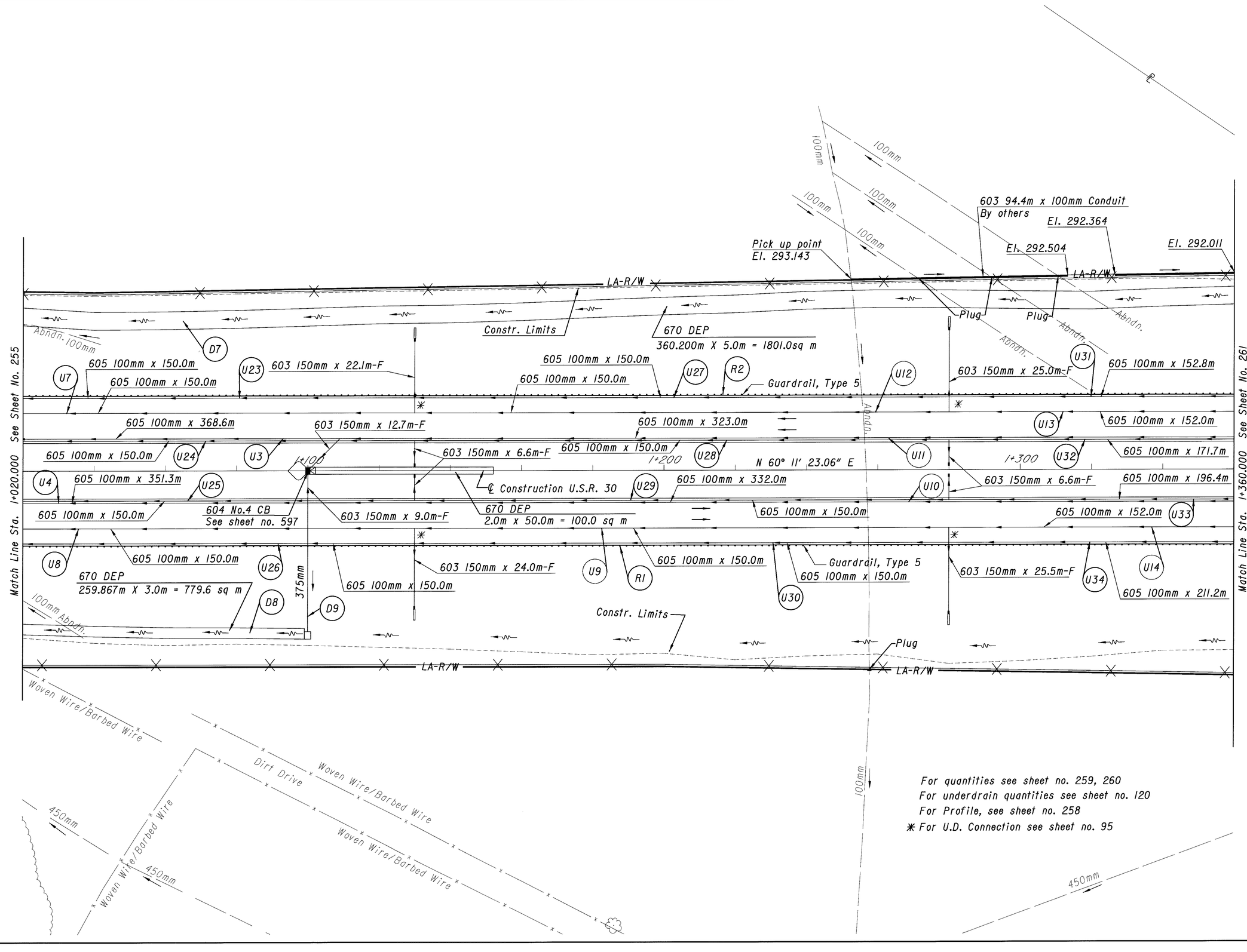
255
2116

CALCULATED JGB
CHECKED REA

PROFILE - U.S.R. 30
STA. 0+680 TO STA. 1+020



WYA/CRA-30-28.009/0.000



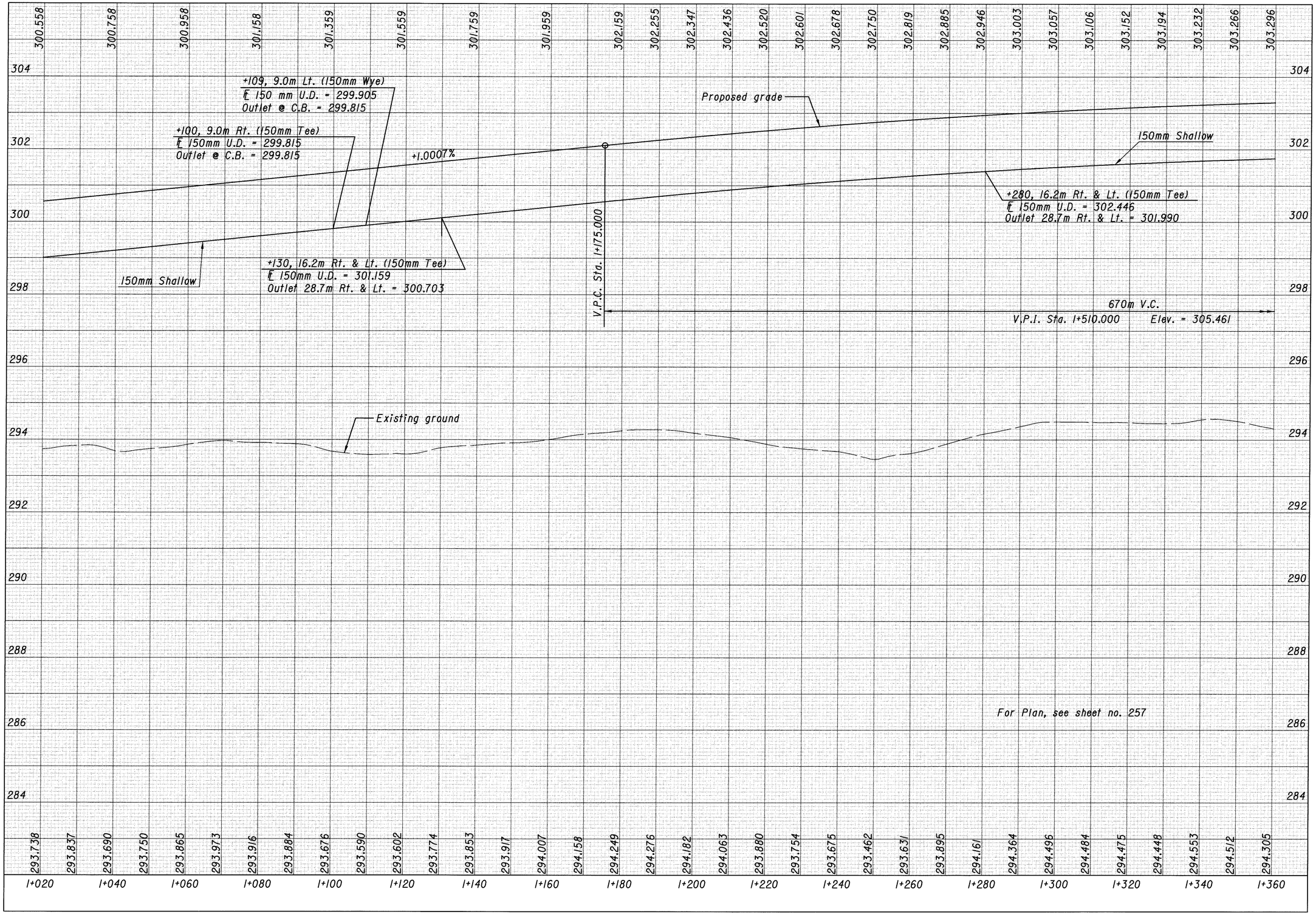
HORIZONTAL
SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

PLAN - U.S.R. 30
STA. 1+020 TO STA. 1+360

WYA/CRA-30-28.009/0.000

257
2116



CALCULATED JGB
CHECKED REA

PROFILE - U.S.R. 30
STA. 1+020 TO STA. 1+360

WYA / CRA-30-28.009 / 0.000

ESTIMATED ROADWAY QUANTITIES

CALCULATED JAG
CHECKED REA

WYA/CRA-30-28.009/0.000

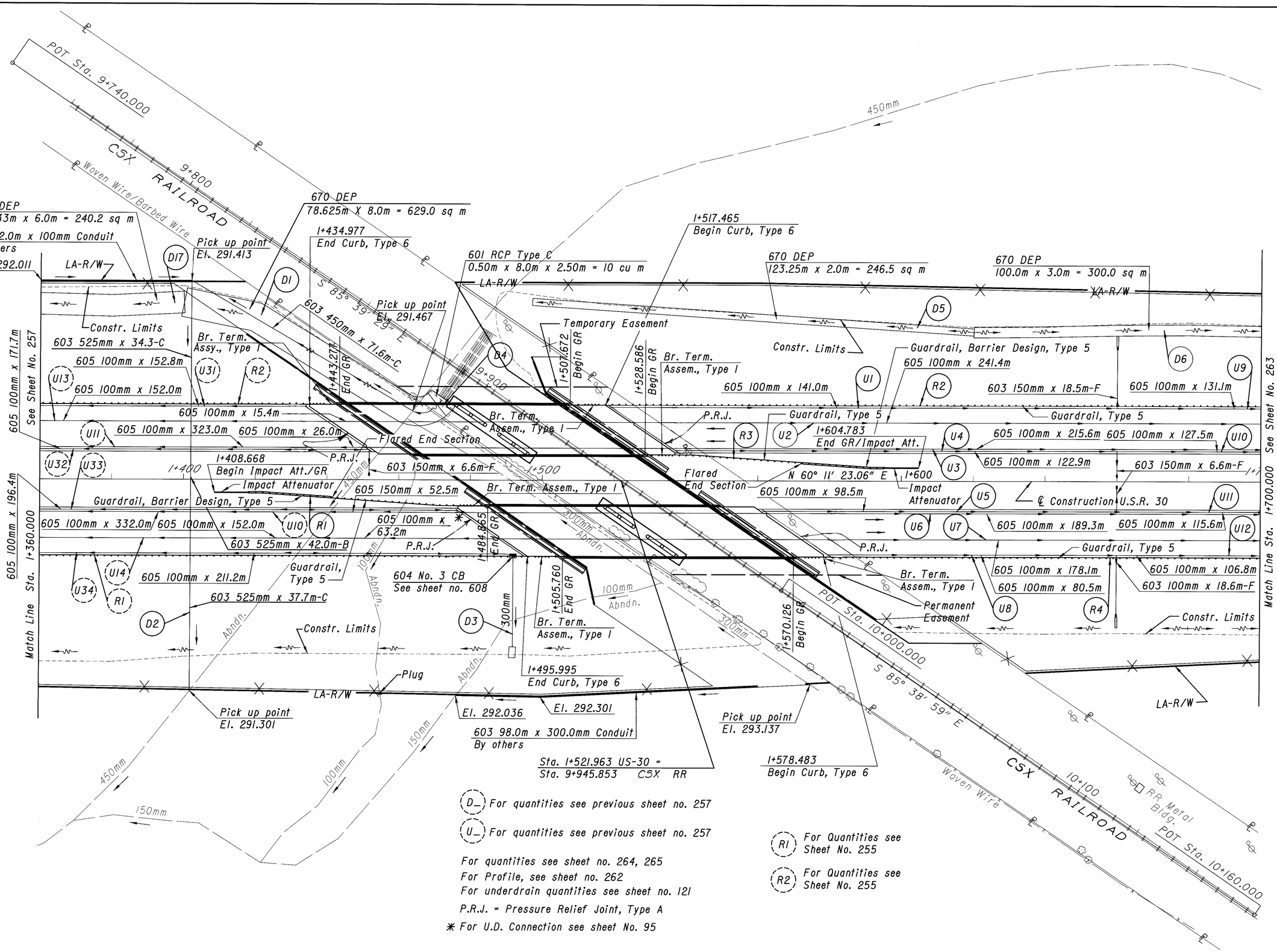
REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30																															
R1	255	0+484.882 TO 1+505.760	RT														1022.985					1			1		968						
R2	255	0+606.639 TO 1+443.277	LT														832.485							1	1		827						
		TOTALS CARRIED TO SUB-SUMMARY															1855.470					1		1	2		1795						

ESTIMATED DRAINAGE QUANTITIES

CALCULATED: AM
CHECKED: REA

WYA/CRA-30-28.009/0.000

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	601 RIPRAP USING 150 MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 375 MM CONDUIT, TYPE F (METER)	603 375 MM CONDUIT, TYPE B (METER)	603 1650 MM CONDUIT, TYPE A, 706.02 100 D-LOAD, OR 1950 MM, 707.02, OR 707.09 125MM CORR.), OR 707.22 (METER)	604 CATCH BASIN, NO. 4 (EACH)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY (EACH) 300 MM X 300 MM 22.5° BEND	FOR INFORMATION ONLY (EACH) 375 MM X 375 MM 22.5° BEND	FOR INFORMATION ONLY (EACH) MASONRY COLLAR
D1	255	0+720.00	LT & RT	16.5	36.0	5.36			72.1						
D2	255	0+740.00	LT & RT			0.22	21.6	21.0		1	100.0	6.3		2	1
D3	255	0+721.00 TO 0+739.11	RT								69.2				
D4	255	0+741.00 TO 0+741.00	RT								400.5				
D5	255	0+722.09 TO 0+920.07	LT								1176.9				
D6	255	0+920.07 TO 1+000.15	LT								561.0				
D7	255 & 257	1+179.89 TO 1+360.00	LT								1801.0				
D8	255 & 257	0+840.00 TO 1+099.10	RT								779.6				
D9	257	1+100.00	LT & RT			0.22	25.8	21.0		1	100.0	3.8		2	1
TOTALS														4	2
TOTALS CARRIED TO SUB-SUMMARY				16.5	36.0	5.80	47.4	42.0	72.1	2	4988.2	10.1			



N

0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED JGB
CHECKED REA

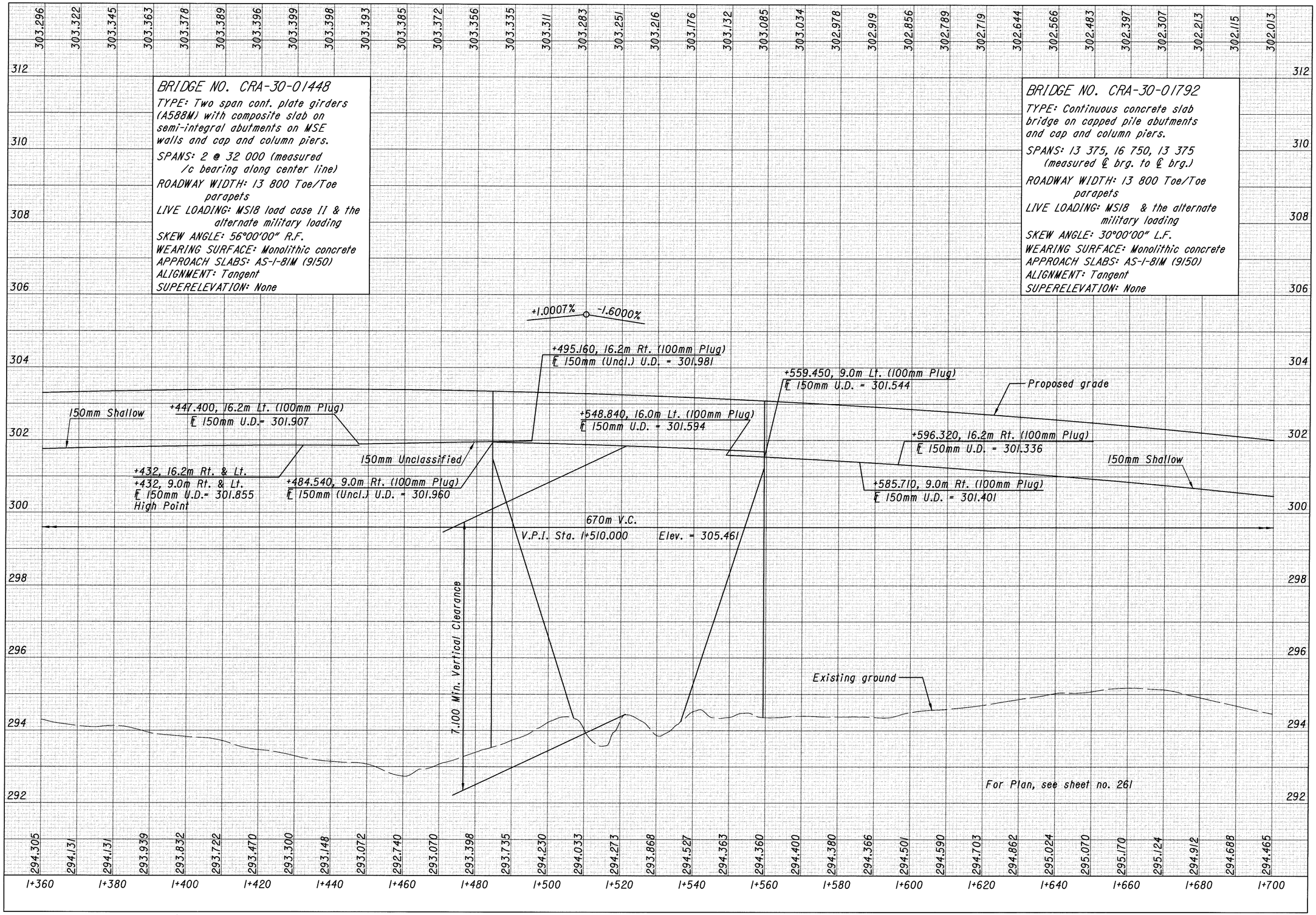
PLAN - U.S.R. 30
STA. 1+360 TO STA. 1+700

WYA/CRA-30-28.009/0.000

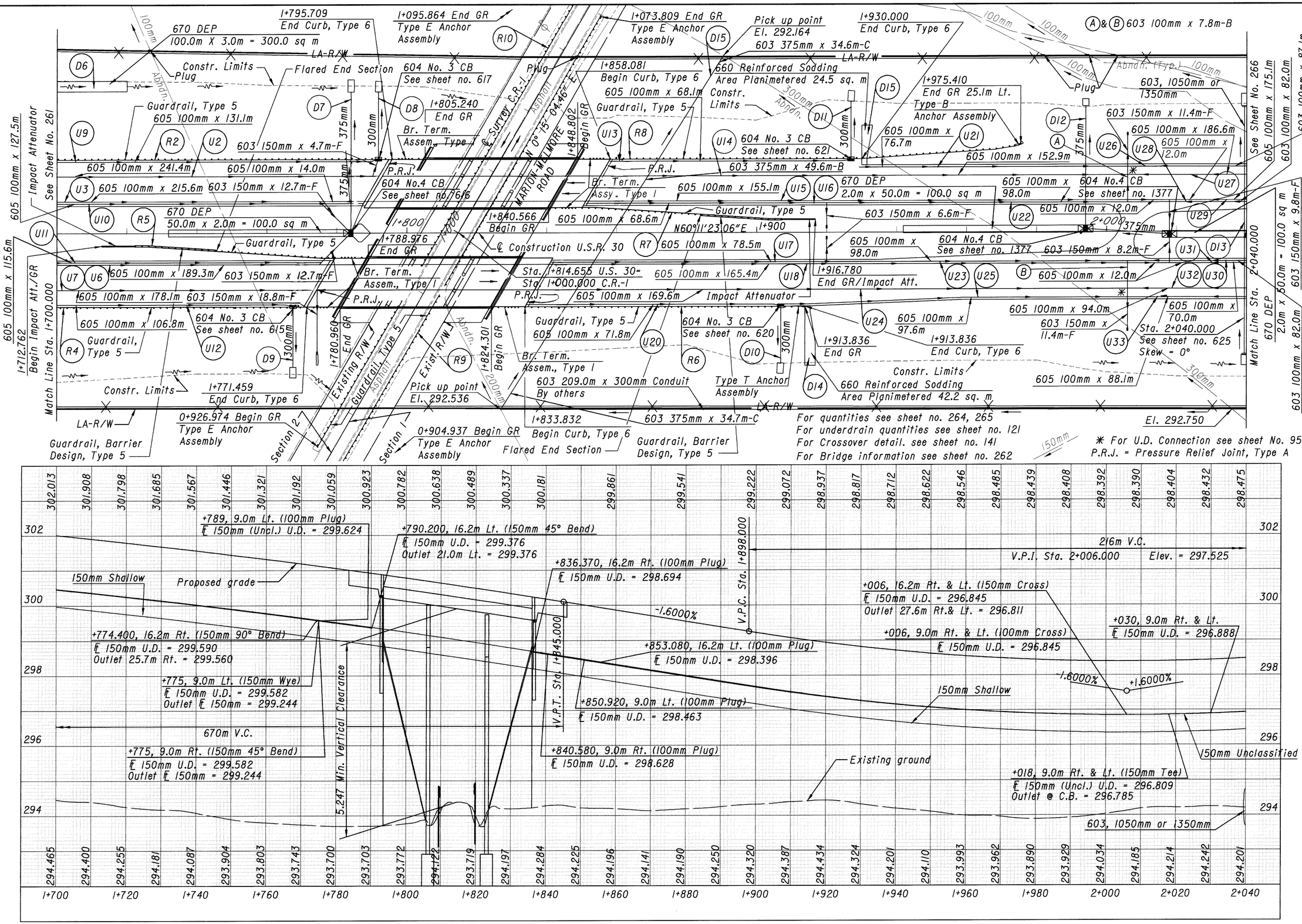
261
2116

CALCULATED JGB
CHECKED REA

PROFILE - U.S.R. 30
STA. 1+360 TO STA. 1+700



WYA/CRA-30-28.009/0.000


1+795.709
End Curb, Type 6
670 DEP
100.0m X 3.0m = 300.0 sq m
LA-R/W
Constr. Limits
Plug
Flared End Section
1+095.864 End GR
Type E Anchor
Assembly
1+073.809 End GR
Type E Anchor
Assembly
Pick up point
El. 292.164
603 375mm x 34.6m-C
660 Reinforced Sodding
Area Planimetered 24.5 sq. m
1+930.000
End Curb, Type 6
A & B 603 100mm x 7.8m-B
604 No. 3 CB
See sheet no. 617
1+858.081
Begin Curb, Type 6
605 100mm x 68.1m
Guardrail, Type 5
1+805.240
End GR
Br. Term.
Assem., Type I
℄ Survey C.R.-1
N 0° 15' 04.46" E
1+848.802
Begin GR
MARION MILLMORE ROAD
1+975.410
End GR 25.1m Lt.
Type B
Anchor Assembly
603, 1050mm or 1350mm
See Sheet No. 266
605 100mm x 175.1m
603 100mm x 82.0m
603 100mm x 87.1m
605 100mm x 127.5m
Impact Attenuator
See Sheet No. 261
605 100mm x 241.4m
605/100mm x 14.0m
603 150mm x 4.7m-F
603 150mm x 11.4m-F
605 100mm x 186.6m
605 100mm x 76.7m
605 100mm x 152.9m
605 100mm x 12.0m
605 100mm x 215.6m
603 150mm x 12.7m-F
P.R.J.
604 No.4 CB
See sheet no. 646
Br. Term.
Assy. Type I
605 100mm x 155.1m
603 375mm x 49.6m-B
670 DEP
2.0m x 50.0m = 100.0 sq m
605 100mm x
98.0m
604 No.4 CB
See sheet no. 1377
605 100mm x 12.0m
1+840.566
Begin GR
605 100mm x 68.6m
Guardrail, Type 5
N60° 11' 23.06" E
603 150mm x 6.6m-F
670 DEP
50.0m x 2.0m = 100.0 sq m
Guardrail, Type 5
1+788.976
End GR
℄ Construction U.S.R. 30
605 100mm x 78.5m
605 100mm x
98.0m
604 No.4 CB
See sheet no. 1377
603 150mm x 8.2m-F
605 100mm x 189.3m
603 150mm x 12.7m-F
Br. Term.
Assem., Type I
Sta. 1+814.655 U.S. 30-
Sta. 1+000.000 C.R.-1
605 100mm x 165.4m
1+916.780
End GR/Impact Att.
605 100mm x 12.0m
605 100mm x 178.1m
603 150mm x 18.8m-F
P.R.J.
605 100mm x 169.6m
Impact Attenuator
605 100mm x 94.0m
605 100mm x
70.0m
Sta. 2+040.000
See sheet no. 625
Skew = 0°
605 100mm x 106.8m
604 No. 3 CB
See sheet no. 615
Guardrail,
Type 5
1+780.960
End GR
Existing R/W
Guardrail, Type 5
Asphalt
Abndn.
Exist. R/W
1+824.301
Begin GR
Guardrail, Type 5
605 100mm x 71.8m
604 No. 3 CB
See sheet no. 620
1+913.836
End GR
1+913.836
End Curb, Type 6
603 150mm x
11.4m-F
Br. Term.
Assem., Type I
603 209.0m x 300mm Conduit
By others
Type T Anchor
Assembly
Constr. Limits
605 100mm x 88.1m
1+771.459
End Curb, Type 6
Pick up point
El. 292.536
660 Reinforced Sodding
Area Planimetered 42.2 sq. m
LA-R/W
1+712.762
Begin Impact Att./GR
Match Line Sta. 1+700.000
Match Line Sta. 2+040.000
670 DEP
2.0m x 50.0m = 100.0 sq m
603 150mm x 9.8m-F
603 100mm x 82.0m
0+926.974 Begin GR
Type E Anchor
Assembly
0+904.937 Begin GR
Type E Anchor
Assembly
1+833.832
Begin Curb, Type 6
603 375mm x 34.7m-C
El. 292.750
Guardrail, Barrier
Design, Type 5
Flared End Section
Guardrail, Barrier
Design, Type 5
Section 2
Section 1
For quantities see sheet no. 264, 265
For underdrain quantities see sheet no. 121
For Crossover detail. see sheet no. 141
For Bridge information see sheet no. 262
* For U.D. Connection see sheet No. 95
P.R.J. = Pressure Relief Joint, Type A
HORIZONTAL
SCALE IN METERS
CALCULATED JGB
CHECKED REA
PLAN AND PROFILE - U.S.R. 30
STA. 1+700 TO STA. 2+040
WYA/CRA-30-28.009/0.000
263
2116

+789, 9.0m Lt. (100mm Plug)
℄ 150mm (Uncl.) U.D. = 299.624
+790.200, 16.2m Lt. (150mm 45° Bend)
℄ 150mm U.D. = 299.376
Outlet 21.0m Lt. = 299.376
+836.370, 16.2m Rt. (100mm Plug)
℄ 150mm U.D. = 298.694
216m V.C.
V.P.I. Sta. 2+006.000
Elev. = 297.525
V.P.C. Sta. 1+898.000
150mm Shallow
Proposed grade
-1.6000%
+006, 16.2m Rt. & Lt. (150mm Cross)
℄ 150mm U.D. = 296.845
Outlet 27.6m Rt.& Lt. = 296.811
+774.400, 16.2m Rt. (150mm 90° Bend)
℄ 150mm U.D. = 299.590
Outlet 25.7m Rt. = 299.560
+006, 9.0m Rt. & Lt. (100mm Cross)
℄ 150mm U.D. = 296.845
+030, 9.0m Rt. & Lt.
℄ 150mm U.D. = 296.888
+853.080, 16.2m Lt. (100mm Plug)
℄ 150mm U.D. = 298.396
-1.6000%
+1.6000%
+775, 9.0m Lt. (150mm Wye)
℄ 150mm U.D. = 299.582
Outlet ℄ 150mm = 299.244
V.P.T. Sta. 1+845.000
+850.920, 9.0m Lt. (100mm Plug)
℄ 150mm U.D. = 298.463
150mm Shallow
670m V.C.
+775, 9.0m Rt. (150mm 45° Bend)
℄ 150mm U.D. = 299.582
Outlet ℄ 150mm = 299.244
5.247 Min. Vertical Clearance
+840.580, 9.0m Rt. (100mm Plug)
℄ 150mm U.D. = 298.628
Existing ground
150mm Unclassified
+018, 9.0m Rt. & Lt. (150mm Tee)
℄ 150mm (Uncl.) U.D. = 296.809
Outlet @ C.B. = 296.785
603, 1050mm or 1350mm
302.013
301.908
301.798
301.685
301.567
301.446
301.321
301.192
301.059
300.923
300.782
300.638
300.489
300.337
300.181
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294.110
293.993
293.962
293.890
293.929
294.034
294.185
294.214
294.242
294.201
1+700
1+720
1+740
1+760
1+780
1+800
1+820
1+840
1+860
1+880
1+900
1+920
1+940
1+960
1+980
2+000
2+020
2+040

ESTIMATED ROADWAY QUANTITIES

CALCULATED JAG
CHECKED REA

WYA/CRA-30-28.009/0.000

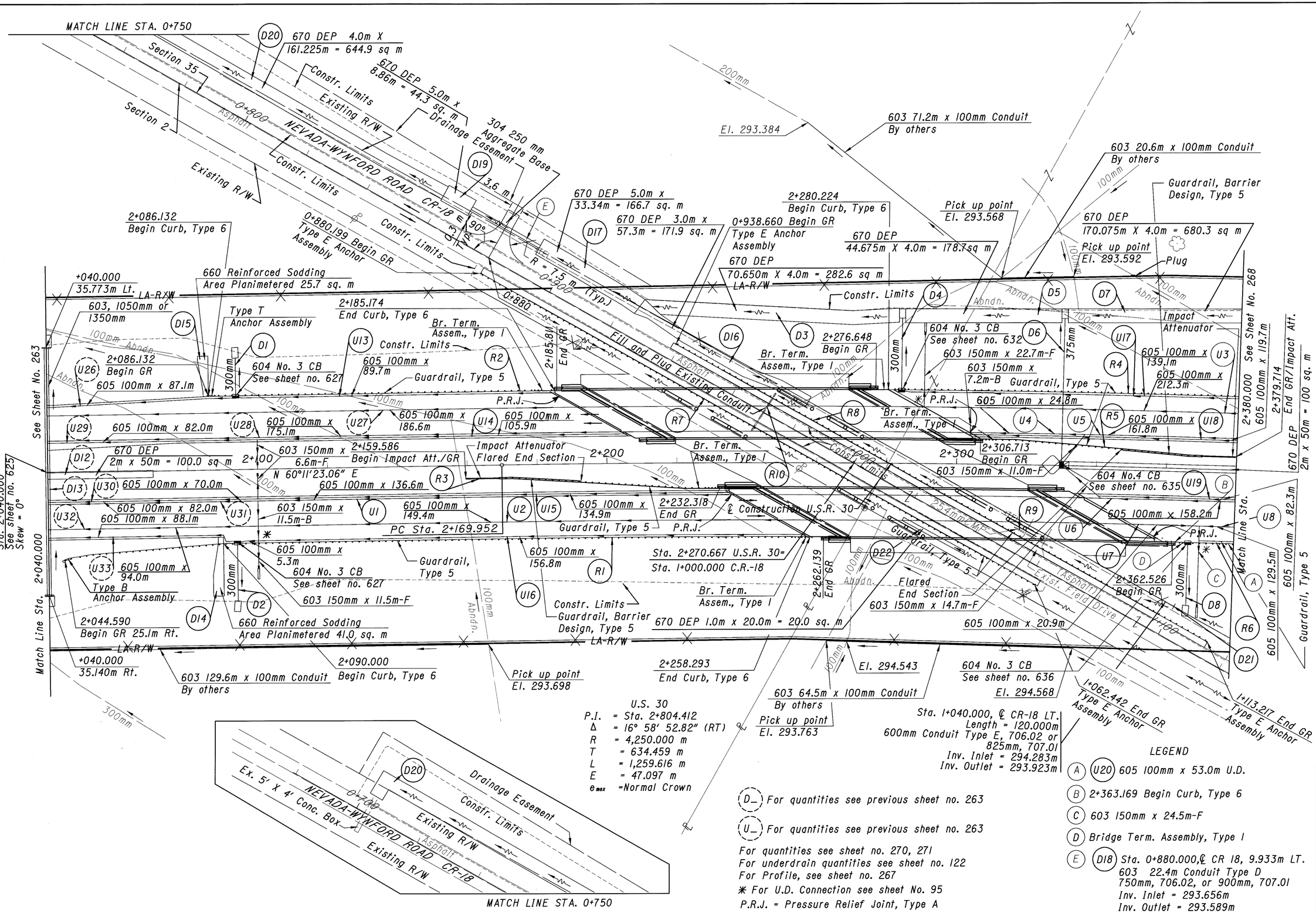
REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606								830		622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30																														
R1	261	1+408.668 TO 1+484.865	RT														43.815		22.860	1					1						1	
R2	261	1+507.672 TO 1+805.240	LT														297.180								2		278					
R3	261	1+528.586 TO 1+604.783	LT														43.815		22.860	1					1						1	
R4	261	1+570.126 TO 1+780.960	RT														209.550								2		193					
R5	263	1+712.762 TO 1+788.976	RT														43.815		22.860	1					1						1	
R6	263	1+824.301 TO 1+913.836	RT														85.725							1	1		80					
R7	263	1+840.566 TO 1+916.780	LT														43.815		22.860	1					1						1	
R8	263	1+848.802 TO 1+975.410	LT														123.825					1			1		72					
R9	263	0+904.937 CR 1 TO 1+073.809 CR 1	RT														137.160						2									
R10	263	0+926.974 CR 1 TO 1+095.864 CR 1	LT														137.160						2									
TOTALS CARRIED TO SUB-SUMMARY																	1165.860		91.440	4		1	4	1	10		623				4	

ESTIMATED DRAINAGE QUANTITIES

CALCULATED AM
CHECKED REA

WYA/CRA-30-28.009/0.000

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	601 RIPRAP USING 150 MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 300 MM CONDUIT, TYPE F (METER)	603 375 MM CONDUIT, TYPE F (METER)	603 375 MM CONDUIT, TYPE B (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 450 MM CONDUIT, TYPE C (METER)	603 525 MM CONDUIT, TYPE B (METER)	603 525 MM CONDUIT, TYPE C (METER)	603 1050 MM CONDUIT, TYPE A, 706.02 62.5 D-LOAD, OR 1350 MM, 707.01, OR 707.09 (25MM CORR.), OR 707.22 (METER)	604 CATCH BASIN, NO. 3 (EACH)	604 CATCH BASIN, NO. 4 (EACH)	660 SODDING REINFORCED (SQ M)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY (EACH): 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
D1	261	1+400.00 TO 1+473.00	LT								71.6							629.0					
D2	261	1+402.03	LT & RT									42.0	72.1										
D3	261	1+492.00	RT			0.17	27.5								1				5.4		2		
D4	261	1+472.30 TO 1+475.58	LT	10.0																			
D5	261	1+497.07 TO 1+620.07	LT															246.5					
D6	261	1+620.07 TO 1+720.00	LT															300.0					
D7	263	1+784.00	LT & RT			0.22		20.3	21.0							1		100.0	6.3			2	1
D8	263	1+791.80	LT			0.17	20.7								1				5.4		2		
D9	263	1+767.50	RT			0.17	18.7								1				5.4		2		
D10	263	1+906.90	RT			0.17	16.9								1				5.4		2		
D11	263	1+926.90	LT			0.17	16.9								1				5.4		2		
D12	263	1+994.00 TO 2+018.00	LT & RT	1.8		0.22			35.1	24.1						2		200.0					
D13	263	2+040.00	LT & RT		9.0	2.46								70.9					10.5				
D14	263	1+916.00	RT														42.2						
D15	263	1+932.50	LT														24.5						
D16	263	1+858.70	LT & RT						49.6	69.3													
D17	261	1+360.000 TO 1+400.000	LT															240.2					
																				TOTALS			
TOTALS CARRIED TO SUB-SUMMARY				11.8	9.0	3.75	100.7	20.3	105.7	93.4	71.6	42.0	72.1	70.9	5	3	66.7	1715.7	43.8				



HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED JGB

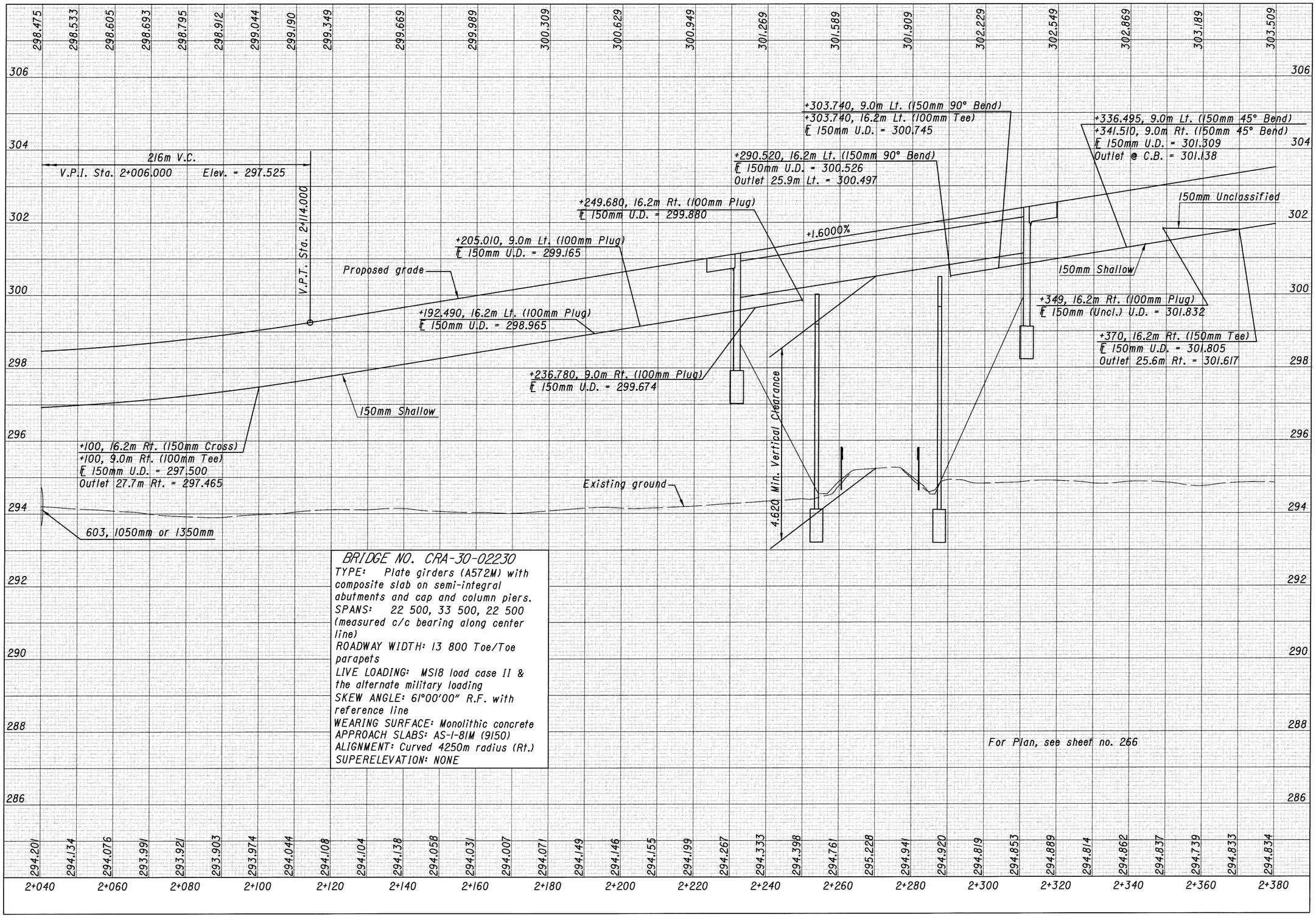
CHECKED REA

PLAN - U.S.R. 30
STA. 2+040 TO STA. 2+380

WYA/CRA-30-28.009/0.000

266
2116

PROFILE - U.S.R. 30
STA. 2+040 TO STA. 2+380

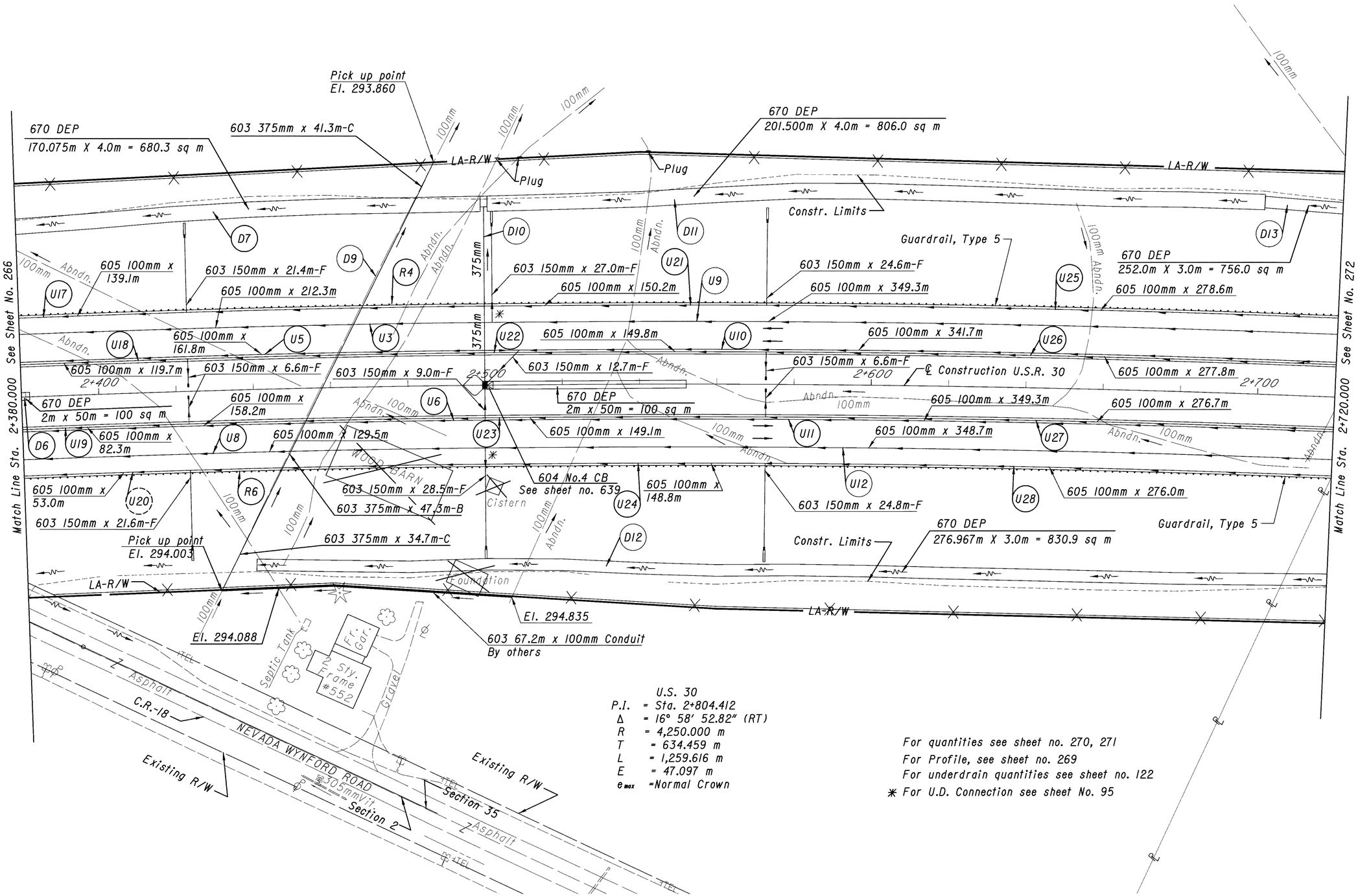


BRIDGE NO. CRA-30-02230

TYPE: Plate girders (A572M) with composite slab on semi-integral abutments and cap and column piers.
SPANS: 22 500, 33 500, 22 500 (measured c/c bearing along center line)
ROADWAY WIDTH: 13 800 Toe/Toe parapets
LIVE LOADING: MS18 load case II & the alternate military loading
SKEW ANGLE: 61°00'00" R.F. with reference line
WEARING SURFACE: Monolithic concrete
APPROACH SLABS: AS-1-81M (9150)
ALIGNMENT: Curved 4250m radius (Rt.)
SUPERELEVATION: NONE

For Plan, see sheet no. 266

WYA/CRA-30-28.009/0.000



HORIZONTAL SCALE IN METERS

0 10 20

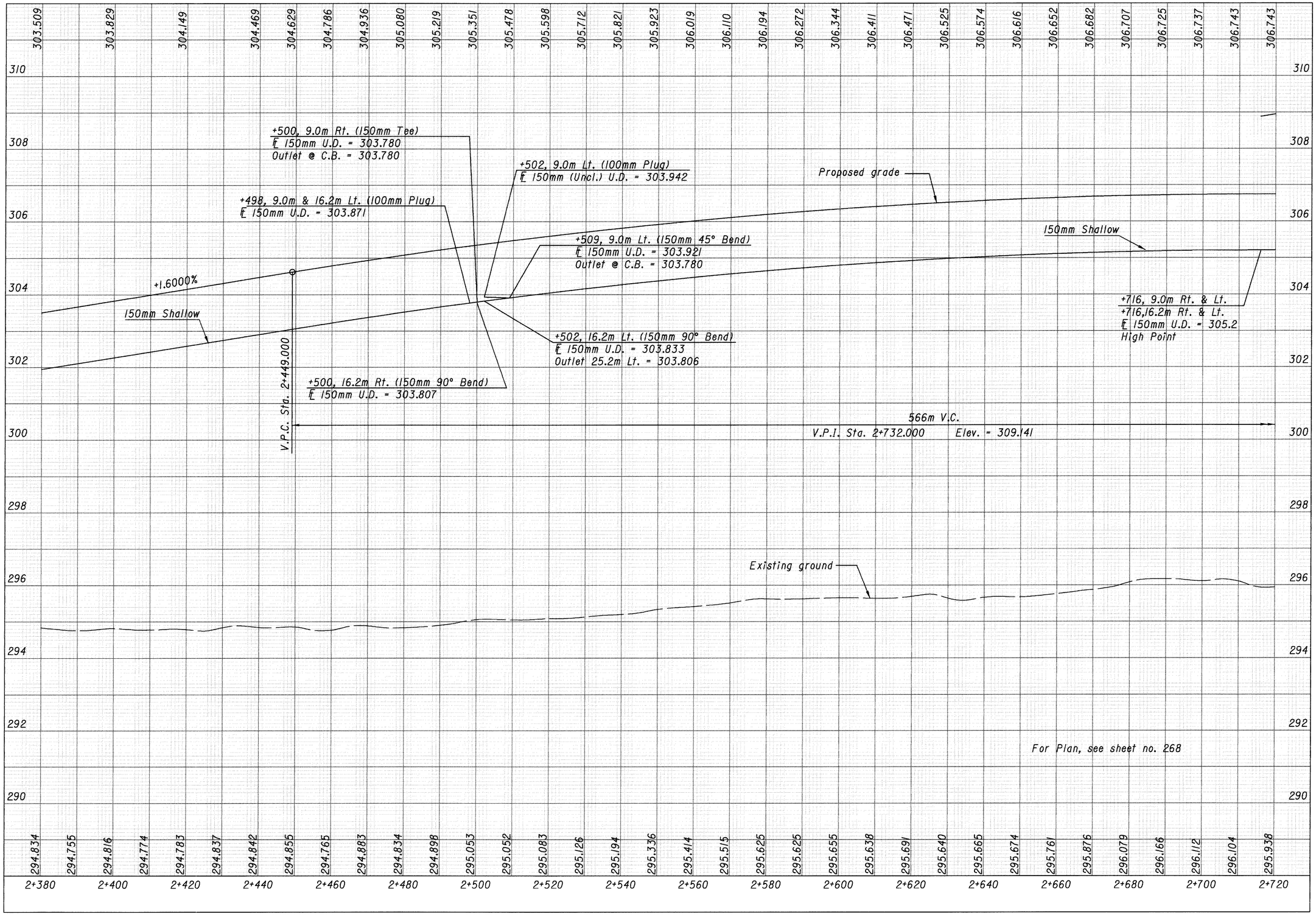
CALCULATED JGB

CHECKED REA

PLAN - U.S.R. 30
STA. 2+380 TO STA. 2+720

WYA/CRA-30-28.009/0.000

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2116



CALCULATED JGB
CHECKED REA

PROFILE - U.S.R. 30
STA. 2+380 TO STA. 2+720

WYA/CRA-30-28.009/0.000

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2116

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE 1		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30																														
R1	266	2+044.590 TO 2+262.139	RT														211.455					1			1		168					
R2	266	2+086.132 TO 2+185.811	LT														97.155							1	1		99					
R3	266	2+159.586 TO 2+232.318	RT														40.005		22.860	1					1							1
R4	266	2+276.648 TO 3+174.862	LT														897.255					1			1		854					
R5	266	2+306.713 TO 2+379.714	LT														40.005		22.860	1					1							1
R6	266	2+362.526 TO 3+134.052	RT														763.905							1	1		767					
R7	266	0+880.199 CR 18 TO 1+062.442 CR 18	RT														148.590						2									
R8	266	0+938.660 CR 18 TO 1+113.217 CR 18	LT														140.970						2									
R9	266	1+049.117 TO 1+061.333	LT		12.2																											
R10	266	0+969.888 CR 18 TO 0+970.653 CR 18	RT-LT													12.6																
TOTALS CARRIED TO SUB-SUMMARY					12.2											12.6	2339.340		45.720	2		2	4	2	6		1888					2	

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

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2116

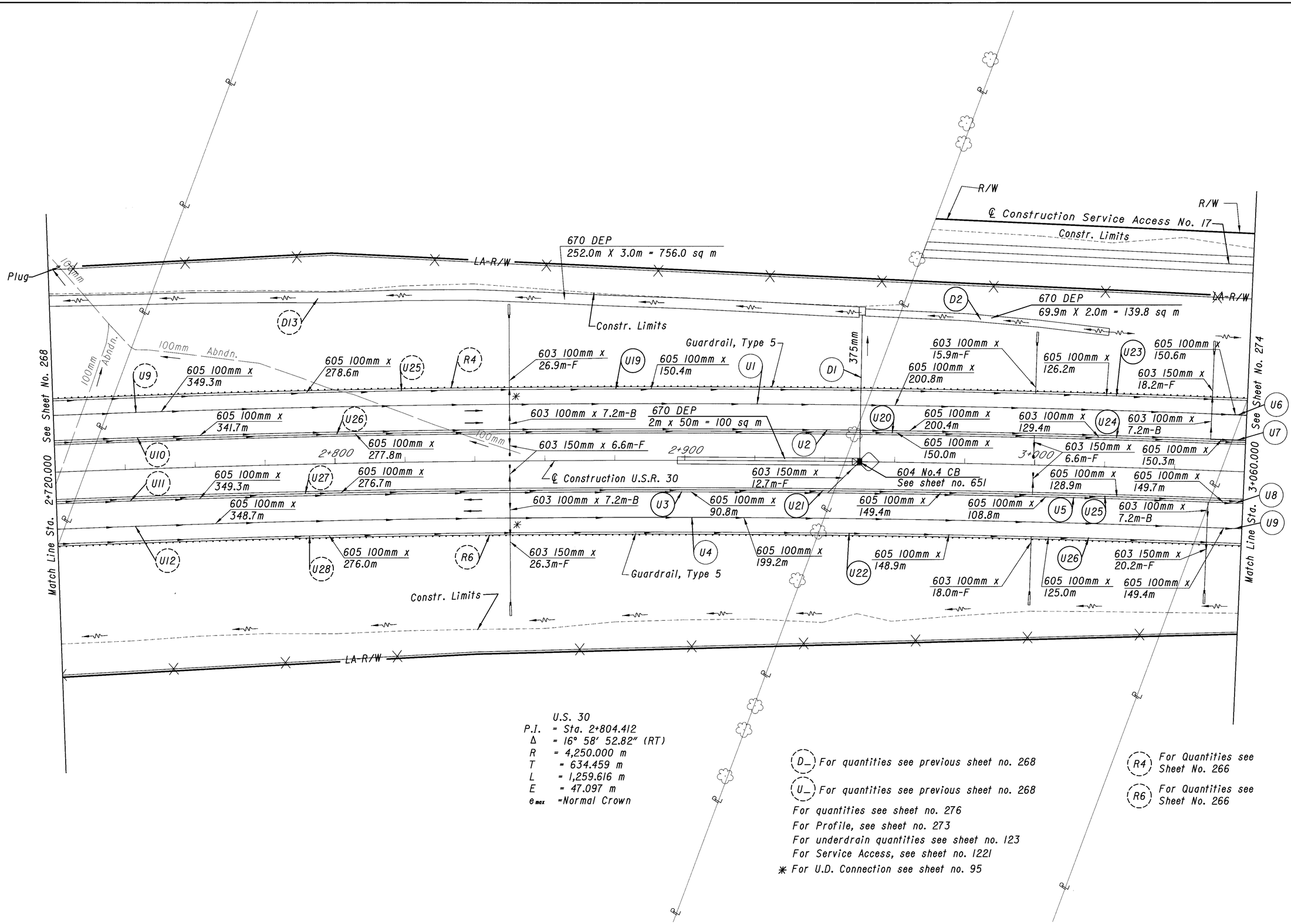
ESTIMATED DRAINAGE QUANTITIES

CALCULATED AM | CHECKED REA

WYA/CRA-30-28.009/0.000

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2116

REF NO.	SHEET NO.	STATION	SIDE	602 CONCRETE MASONRY (CU M)	603 375 MM CONDUIT, TYPE B (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 750 MM CONDUIT, TYPE D, 706.02 OR 900 MM 707.01 (METER)	603 600 MM CONDUIT, TYPE E, 706.02, OR 825MM 707.01 (METER)	603 300 MM CONDUIT, TYPE F (METER)	603 375 MM CONDUIT, TYPE F (METER)	604 CATCH BASIN, NO. 3 (EACH)	604 CATCH BASIN, NO. 4 (EACH)	660 SODDING REINFORCED (SQ M)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: MASONRY COLLAR (EACH)
D1	266	2+094.00	LT	0.17					11.7		1				5.4	2		
D2	266	2+094.00	RT	0.17					17.1		1				5.4	2		
D3	266	2+211.08 TO 2+283.13	LT											282.6				
D4	266	2+284.00	LT	0.17					22.0		1				4.7	2		
D5	266	2+284.88 TO 2+329.11	LT											178.7				
D6	266	2+330.00	LT	0.22	20.8					22.4		1		100.0	5.0		2	1
D7	268	2+330.89 TO 2+499.11	LT											680.3				
D8	268	2+366.838	RT	0.17					19.8		1			1.5	5.4	2		
D9	268	2+430.68 TO 2+487.33	LT & RT		47.3	76.0												
D10	268	2+500.00	LT & RT	0.22	21.0					27.1		1		101.5	5.0		2	1
D11	268	2+500.89 TO 2+700.00	LT											806.0				
D12	268	2+440.00 TO 2+720.00	RT											830.9				
D13	268	2+700.00 TO 2+949.11	LT											756.0				
D14	268	2+089.00	RT										41.0					
D15	268	2+085.44	LT										25.7					
		C.R. 18 STATIONS																
D16	266	0+924.54 TO 0+980.00	LT											171.9				
D17	266	0+891.22 TO 0+924.54	LT											166.7				
D18	266	0+880.04	LT				22.4											
D19	266	0+860.00 TO 0+868.86	LT											44.3				
D20	266	0+702.22 TO 0+860.00	LT											644.9				
D21	266	0+980.00 TO 1+100.00	LT	1.18				120.0										
D22	266	1+020.00 TO 1+040.00	RT											20.0				
																TOTALS	8	4		2
TOTALS CARRIED TO SUB-SUMMARY				2.30	89.1	76.0	22.4	120.0	70.6	49.5	4	2	66.7	4785.3	30.9					



U.S. 30
P.I. = Sta. 2+804.412
Δ = 16° 58′ 52.82″ (RT)
R = 4,250.000 m
T = 634.459 m
L = 1,259.616 m
E = 47.097 m
e_{max} =Normal Crown

(D_) For quantities see previous sheet no. 268

(U_) For quantities see previous sheet no. 268

For quantities see sheet no. 276
For Profile, see sheet no. 273
For underdrain quantities see sheet no. 123
For Service Access, see sheet no. 1221

✱ For U.D. Connection see sheet no. 95

(R4) For Quantities see Sheet No. 266

(R6) For Quantities see Sheet No. 266

N

0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED JGB
CHECKED REA

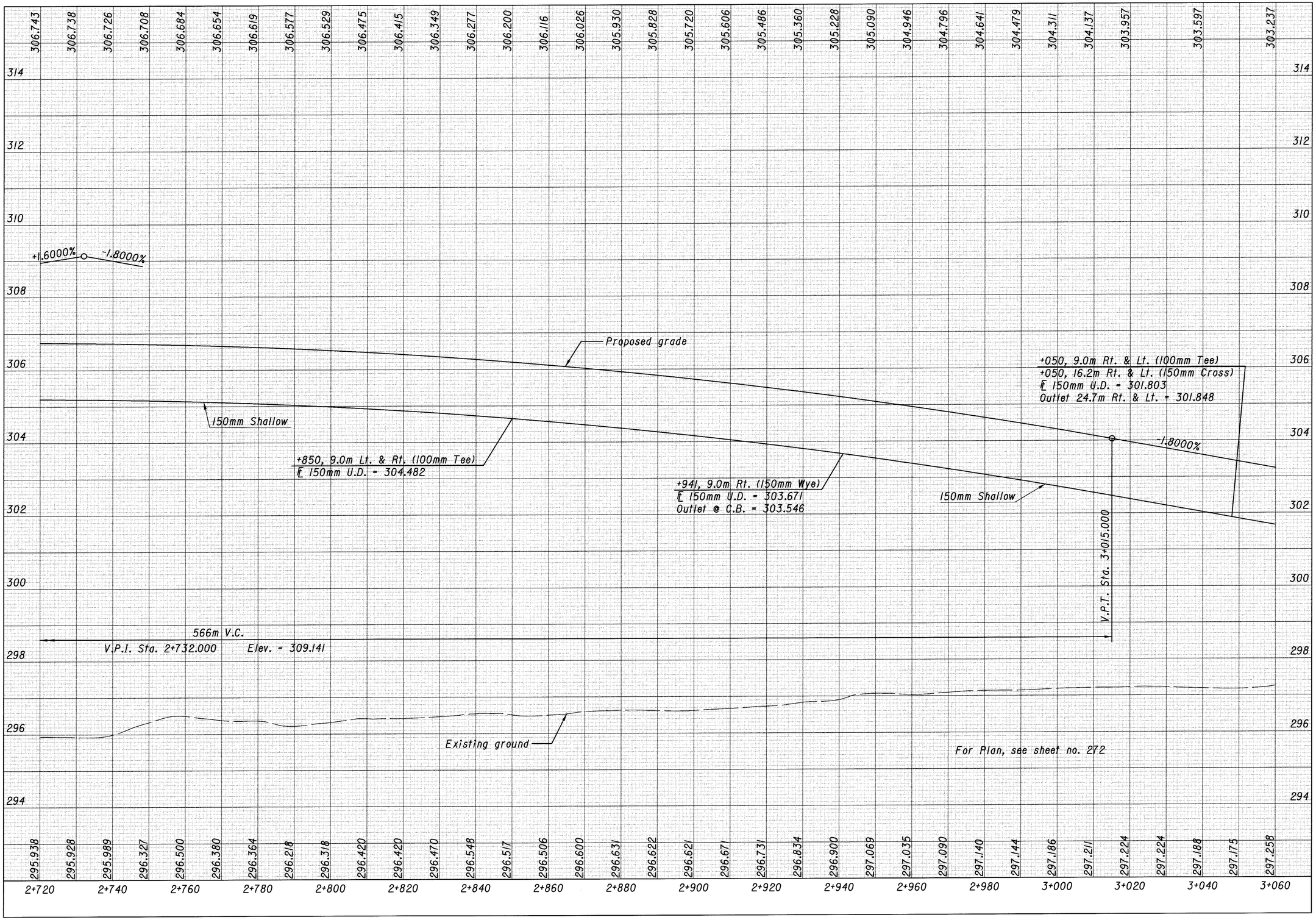
PLAN - U.S.R. 30
STA. 2+720 TO STA. 3+060

WYA/CRA-30-28.009/0.000

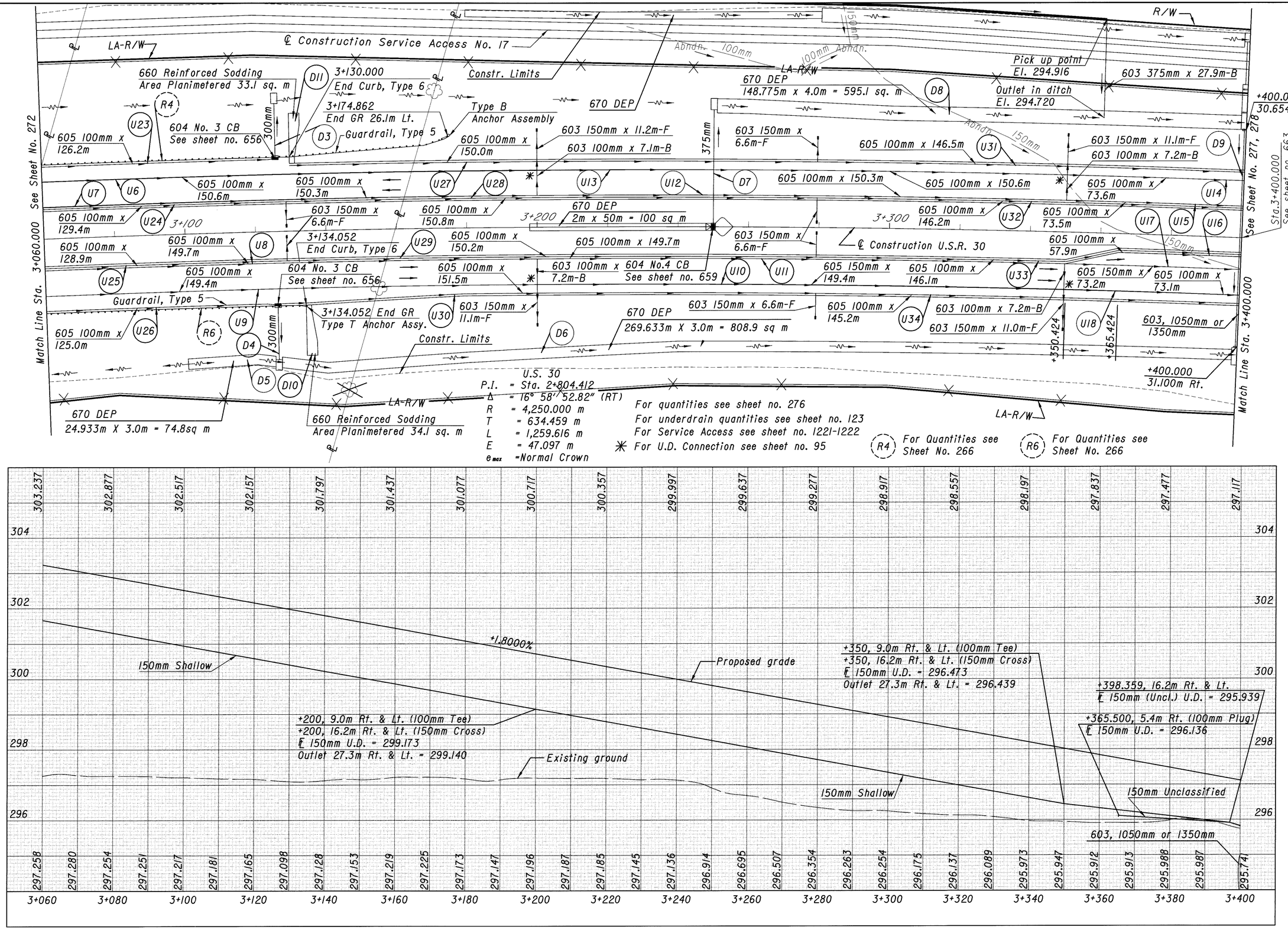
272
2116

CALCULATED JGB
CHECKED REA

PROFILE - U.S.R. 30
STA. 2+720 TO STA. 3+060



WYA/CRA-30-28.009/0.000



HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED JGB

CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 3+060 TO STA. 3+400

WYA/CRA-30-28.009/0.000

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2116

ESTIMATED DRAINAGE QUANTITIES

CALCULATED AM
CHECKED REA

WYA/CRA-30-28.009/0.000

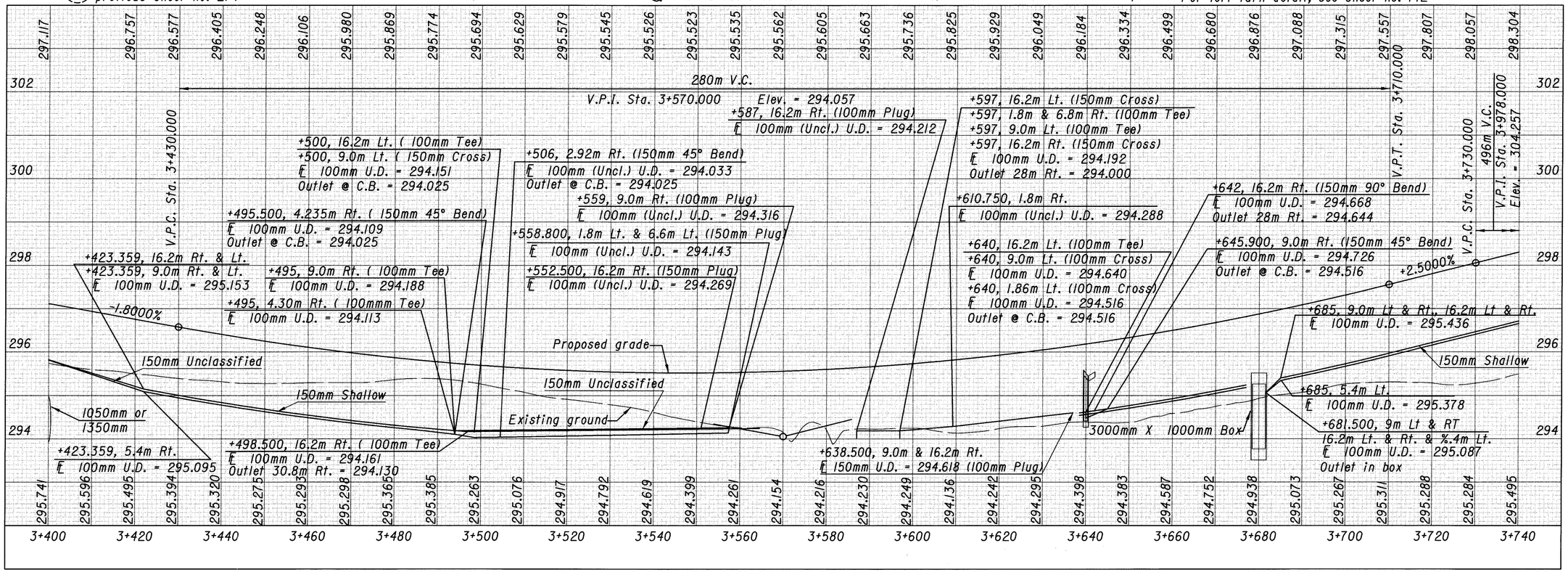
REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	601 RIPRAP USING 150 MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 300 MM CONDUIT, TYPE F (METER)	603 375 MM CONDUIT, TYPE F (METER)	603 375 MM CONDUIT, TYPE B (METER)	603 1050 MM CONDUIT, TYPE A, 706.02, OR 1350 MM, 707.01, OR 707.09 (25MM CORR.), OR 707.22 (METER)	604 CATCH BASIN, NO. 3 (EACH)	604 CATCH BASIN, NO. 4 (EACH)	660 SODDING REINFORCED (SQ M)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: MASONRY COLLAR (EACH)
D1	272	2+950.00	LT & RT			0.22		22.2	21.0			1		100.0	4.2		2	1
D2	272	2+950.89 TO 3+020.00	LT											139.8				
D3	274	3+126.00	LT			0.17	16.2				1				5.4	2		
D4	274	3+126.00	RT			0.17	16.3				1				5.4	2		
D5	274	3+100.00 TO 3+125.00	RT											74.8				
D6	274	3+126.89 TO 3+398.48	RT											808.9				
D7	274	3+250.00	LT	2.9		0.22			33.2			1		100.0				
D8	274	3+250.89 TO 3+398.51	LT											595.1				
D9	274	3+400.00	LT & RT		15.0	2.46				61.8					15.0			
D10	274	3+136.00	RT										34.1					
D11	274	3+131.50	LT										33.1					
																TOTALS 4	2	1
TOTALS CARRIED TO SUB-SUMMARY				2.9	15.0	3.24	32.5	22.2	54.2	61.8	2	2	67.2	1818.6	30.0			

1- 605 100mm x 43.0m
2- 605 100mm x 37.0m
3- 605 100mm x 43.0m
4- 605 100mm x 37.0m
5- 605 100mm x 37.2m
6- 605 100mm x 29.5m
7- 605 100mm x 13.8m
8- 605 100mm x 41.7m
9- 605 100mm x 51.5m
10- 605 100mm x 31.1m
11- 605 100mm x 35.0m

A- 603 100mm x 34.8m-B
B- 603 100mm x 7.2m-B
C- 603 100mm x 7.1m-B
D- 603 100mm x 11.8m-F
E- 603 100mm x 8.3m-F
F- 603 100mm x 11.8m-F
G- 603 100mm x 5.0m-F

LA-R/W
605 150mm x 56.0m
Sta. 3+577.275 U.S. 30=
Sta. 1+000.000 T.R. -2I
605 150mm x 76.7m
603 100mm x 7.2m-B
+566.092
+027.887
N 0°19'14.06" E
100mm Abndn.
Asphalt
Section 36
Section 31
+400 (KNAUS ROAD) T.-2I
+400.000
30.654m Lt.
605 150mm x 73.6m
605 150mm x 76.7m
603 150mm x 6.8m-F
U6
U14
U15
See Sheet No. 274
3+400.000
605 150mm x 73.5m
670 DEP
2m x 50m = 100 sq m
U1
604 No.4 CB
See sheet no. 665
+544.023
+558.879
Sta. 3+400.000
Skew = 0°
See sht. no. 663
U16
N 77° 10' 15.88" E
3+500
605 150mm x 59.2m
603 150mm x 7.9m-F
U7
U8
605 150mm x 71.7m
603 150mm x 7.9m-F
PT Sta. 3+429.569
605 150mm x 53.1m
603 100mm x 4.7m-B
U9
150mm
U17
605 150mm x 73.1m
605 150mm x 71.6m
+486.2
D2
605 150mm x 64.0m
+543.8
+558.826
U18
603 150mm x 14.6m-F
605 150mm x 54.0m
U10
+552.732
605 150mm x 57.9m
605 150mm x 73.2m
Match Line Sta.
D9
603, 1050mm or 1350mm
605 150mm x 75.1m
375mm
+963.806
Abndn.
+400.000
31.100m Rt.
D1
Constr. Limits
670 DEP
97.417m X 6.0m = 584.5 sq m
150mm
D3
670 DEP
75.850m X 6.0m = 455.1 sq m
U.S. 30
PI = Sta. 2+804.412
Δ = 16° 58' 53" (RT)
R = 4,250.000 m
T = 634.459 m
L = 1,259.616 m
E = 47.097 m
e = -Normal Crown
℄ Construction T.R.-2I
Existing R/W
℄
Asphalt
250mm
254.38m CMP
+972.222
+587.231
D4
Constr. Limits
LA-R/W
For Additional Underdrains see sheet no. 278
(D_) For quantities see previous sheet no. 274
(U_) For quantities see previous sheet no. 274

603 96.5m x 100mm Conduit By others
603 600mm x 33.0m-C
450mm
+680.000
26.632m LT.
670 DEP
57.025m X 4.0m = 228.1 sq m
LA-R/W
Pick up point
El. 293.031
Constr. Limits
670 DEP
36.975m X 8.0m = 295.8 sq m
+036.303
D8
100mm
Abndn.
603, 3000mm x 1500mm Box Culvert
D9
U.D in this area See this sheet.
U11
U20
U21
605 150mm x 105.5m
+603.062
250mm
Abndn.
+595.718
+610.75
+668.349
U19
670 DEP
2m x 50m = 100 sq m
605 150mm x 105.5m
U12
U13
3+600
3+700
U22
U23
603 600mm x 40.7m-B
See Sheet No. 279
605 150mm x 62.5m
605 150mm x 62.5m
Match Line Sta.
3+740.000
℄ Construction U.S.R. 30
U18
U17
300mm
604 No.4 CB
See sht. no. 1377
+680.000
See sheet no. 1332
Skew = 0°
U24
+595.317
+610.527
U14
604 No. 2-2B CB
See sht. no. 1377
U15
375mm
D5
D6
D7
605 150mm x 105.5m
U25
670 DEP
117.050m X 4.0m = 468.2 sq m
+587.231
+680.000
27.096m RT.
D10
D4
D17
603 600mm x 35.1m-C
670 DEP
36.129m X 7.0m = 252.9 sq m
LA-R/W
Constr. Limits
Pick up point
El. 292.724
670 DEP
104.325m X 8.0m = 834.6 sq m
For quantities see sheet no. 280, 281
For underdrain quantities see sheet no. 124
For TR-2I, see sheet no. 837
For left turn detail, see sheet no. 142
El. 295.018
603 113.6m x 100mm Conduit By Others

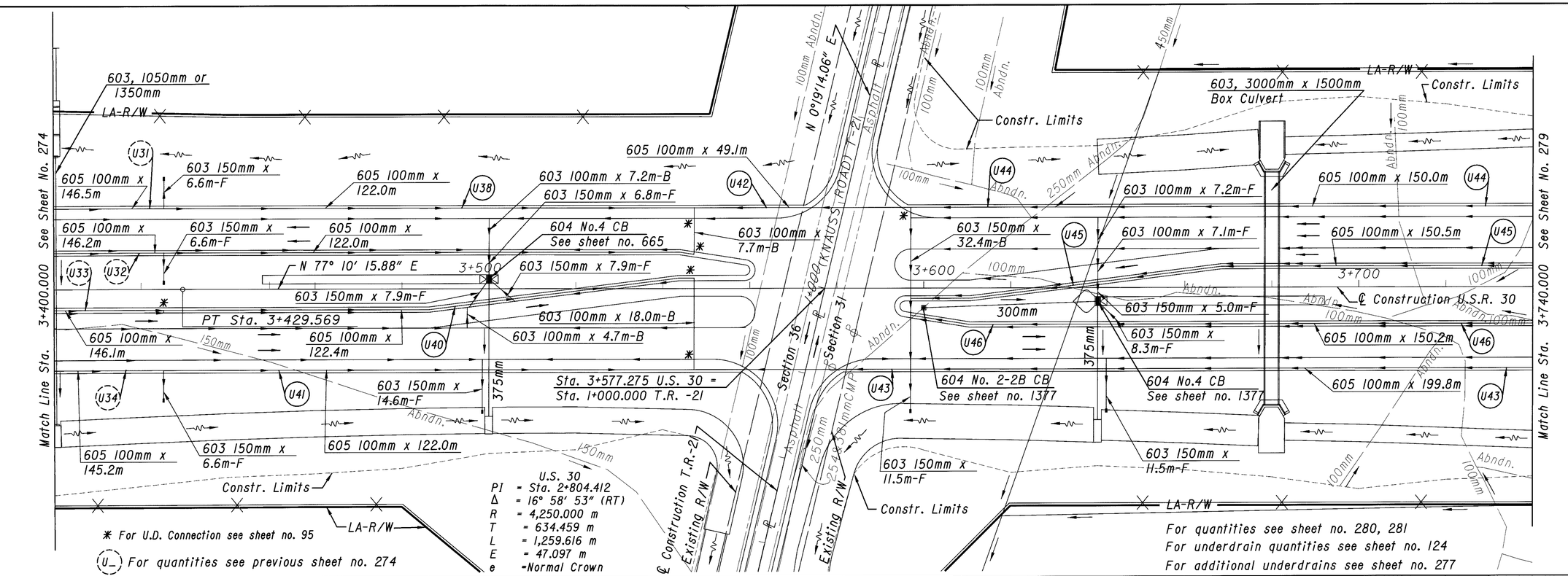


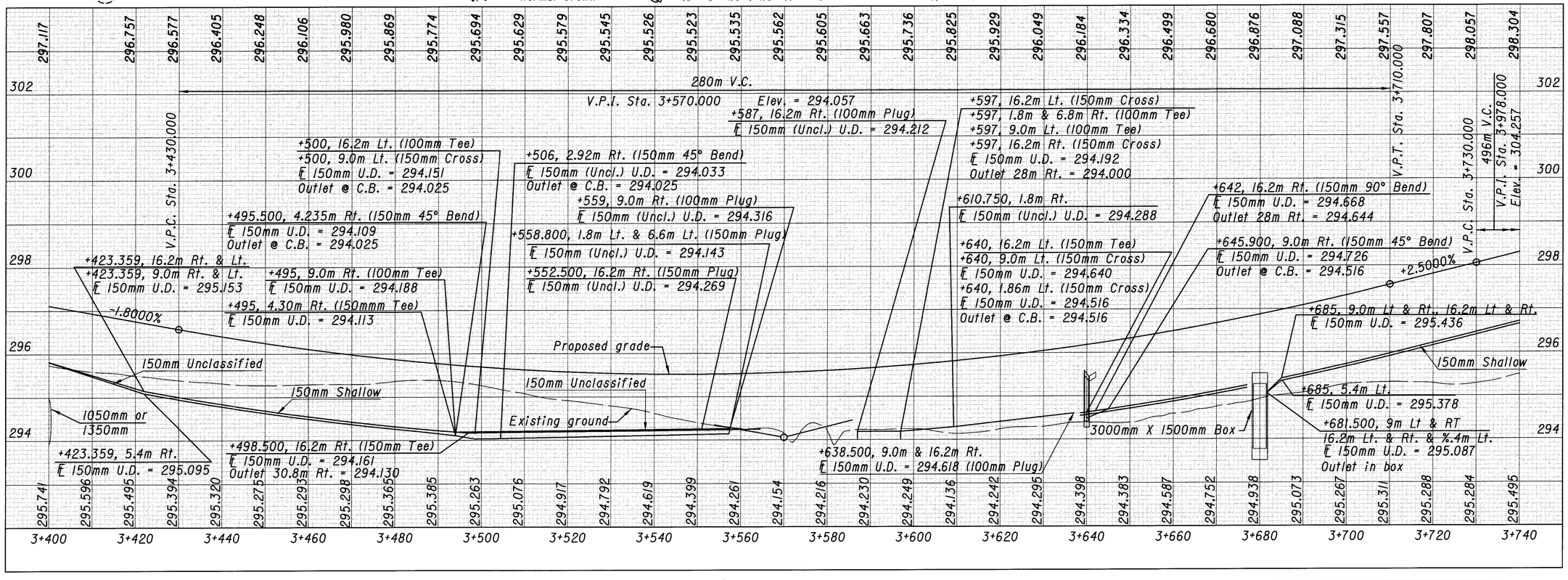
HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 3+400 TO STA. 3+740

WYA/CRA-30-28.009/0.000

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2116





HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

ADDITIONAL UNDERDRAIN PLAN - U.S.R. 30
STA. 3+400 TO STA. 3+740

WYA/CRA-30-28.009/0.000

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2116

El. 294.898 | 100mm | LA-R/W | 603 132.8m x 100mm Conduit By others | Pick up point El. 296.732 | Pick up point El. 297.234 | 603 56.1m x 100mm Conduit By others | LA-R/W | El. 296.692

660 Reinforced Sodding Area Planimetered 33.8 sq m

4+006.020 Begin Curb, Type 6

Type T Anchor Assembly

4+006.020 Begin GR

Constr. Limits

603 150mm x 11.8m-F

603 150mm x 7.2m-B

603 150mm x 9.0m-F

603 150mm x 12.7m-F

670 DEP 2m x 50m = 100 sq m

N 77° 10' 15.88" E

℄ Construction U.S.R. 30

604 No.4 CB See sheet no. 673

604 No. 3 CB See sheet no. 676

604 No. 3 CB See sheet no. 677

Guardrail, Type 5

3+944.562 Begin GR 25.1m Rt.

3+990.000 Begin Curb, Type 6

Type B Anchor Assembly

660 Reinforced Sodding Area Planimetered 39.2 sq m

670 DEP 117.050m X 4.0m = 468.2 sq m

670 DEP 74.350m X 3.0m = 297.4 sq m

Plug

Pick up point El. 295.168

603 34.4m x 100mm Conduit By others

Pick up point El.295.833

603 22.4m x 100mm Conduit By others

El. 295.690

For quantities see sheet no. 280, 281

For underdrain quantities see sheet no. 124, 125

✳ For U.D. Connection see sheet no. 95

See Sheet No. 277, 278

See Sheet No. 282

Match Line Sta. 3+740.000

Match Line Sta. 4+080.000

605 150mm x 150.5m

605 150mm x 62.5m

605 150mm x 150.2m

603 100mm x 250.0m

+789.126

+804.127

300mm

375mm

Abndn.

U21 U22 U23 U24 U25 U26 U27 U28 U29 U30 U31 U32 U33 U34 U35 U36 U37 U43 U44 U45 U46 U48 U49 U50 U51 U52 U53 U54 U55 U56 U57 U58 U59 U60 U61

DI0 DI1 DI2 DI3 DI4 DI5 DI6 R1 R2

605 100mm x 150.0m

603 150mm x 6.6m-F

605 150mm x 105.5m

603 100mm x 7.2m-B

605 150mm x 110.0m

605 100mm x 153.0m

605 150mm x 42.1m

605 100mm x 153.4m

605 150mm x 43.0m

605 100mm x 161.4m

605 100mm x 155.0m

605 150mm x 108.5m

605 100mm x 199.5m

603 150mm x 11.8m-F

605 100mm x 110.7m

605 150mm x 150.0m

605 150mm x 110.0m

605 150mm x 141.6m

605 100mm x 88.0m

605 150mm x 148.0m

605 150mm x 148.0m

605 100mm x 57.2m

603 100mm x 7.2m-B

605 100mm x 37.5m

603 150mm x 16.9m-F

605 100mm x 250.0m

605 150mm x 250.0m

603 150mm x 6.6m-F

603 150mm x 18.8m-F

605 100mm x 250.0m

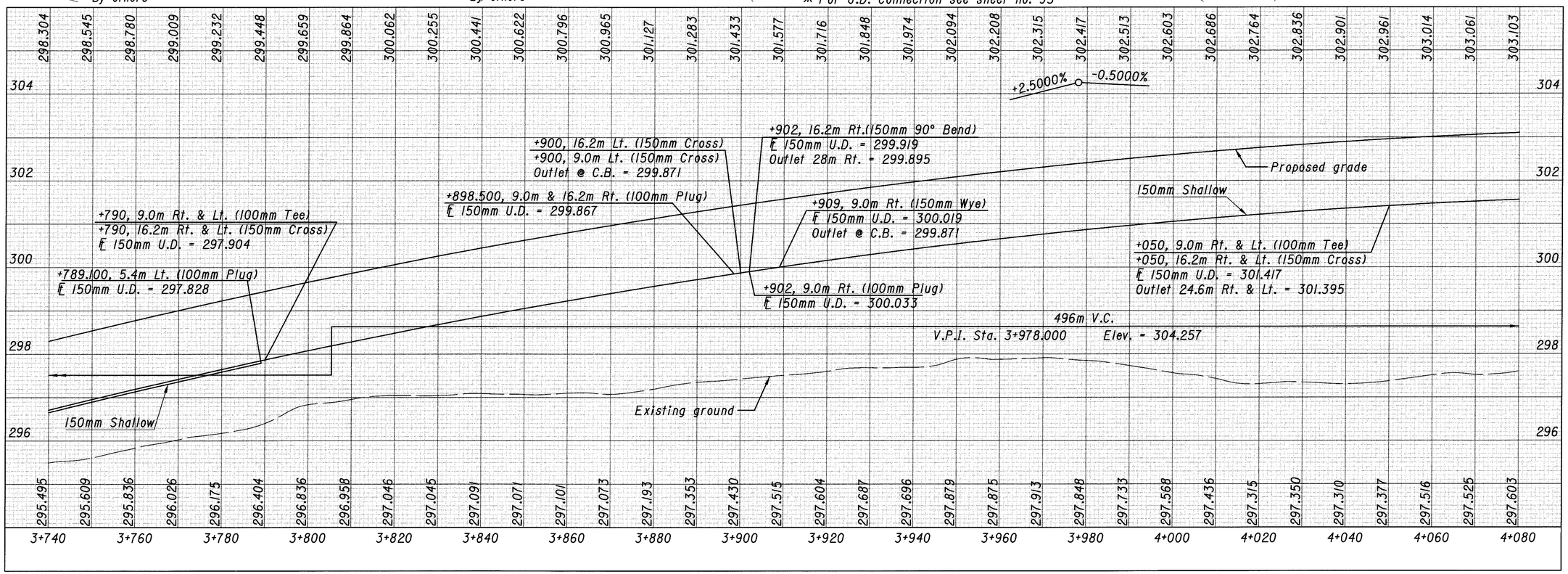
605 150mm x 250.0m

605 150mm x 250.0m

605 150mm x 250.0m

605 150mm x 250.0m

605 150mm x 250.0m



N

0 10 20 HORIZONTAL SCALE IN METERS

CALCULATED JGB

CHECKED REA

PLAN AND PROFILE - U.S.R. 30 STA. 3+740 TO STA. 4+080

WYA/CRA-30-28.009/0.000

279
2116

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30																															
R1	279	3+944.562 TO 4+393.750	RT														441.960					1		1			404						
R2	279	4+006.020 TO 4+475.449	LT														461.010					1		1			424						
TOTALS CARRIED TO SUB-SUMMARY																	902.970					2		2			828						

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

280
2116

ESTIMATED DRAINAGE QUANTITIES

CALCULATED AM
CHECKED REA

WYA/CRA-30-28.009/0.000

281
2116

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	601 RIPRAP USING 150 MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	503 UNCLASSIFIED EXCAVATION (CU M)	842 CLASS C CONCRETE, RETAINING WALL OR WINGWALL, ABOVE FOOTING (CU M)	603 300 MM CONDUIT, TYPE F (METER)	842 CLASS C CONCRETE, FOOTING (CU M)	603 375 MM CONDUIT, TYPE B (METER)	603 600 MM CONDUIT, TYPE B (METER)	603 600 MM CONDUIT, TYPE C (METER)	603 300 MM CONDUIT, TYPE C (METER)	512 TYPE 2 WATERPROOFING (SQ M)	516 25MM PREFORMED EXPANSION JOINT FILLER (CU M)	603 3000 MM X 1500 MM CONDUIT, TYPE A, 706.05 (METER)	604 CATCH BASIN, NO. 2-2B (EACH)	604 CATCH BASIN, NO. 3 (EACH)	604 CATCH BASIN, NO. 4 (EACH)	518 POROUS BACKFILL WITH FILTER FABRIC (CU M)	660 SODDING REINFORCED (SQ M)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	375 MM X 375 MM 22.5° BEND (EACH)	MASONRY COLLAR (EACH)
D1	277	3+401.63 TO 3+499.10	RT																					584.5				
D2	277	3+500.00	LT & RT			0.22					31.5										1			100.0	7.2			
D3	277	3+500.90 (RT) TO 0+940.00 TR-21 (LT)	RT																					455.1				
D4	277	0+920.00 TR-21 (RT) TO 3+639.10	RT																					834.6				
D5	277	3+640.00	RT			0.22					27.2			39.5				1			1			100.0	9.3			
D6	277	3+640.90 TO 3+677.00	RT																					252.9				
D7	277	3+680.00	LT & RT		62.2	7.32	711.0	14.7		36.9					392.7	4.1	53.7					9.5			59.2				
D8	277	3+640.00 TO 3+740.00	LT																					295.8				
D9	277	3+683.00 TO 3+740.00	LT																					228.1				
D10	277	3+683.00 TO 3+800.00	RT																					468.2				
D11	279	3+683.00 TO 3+899.10	RT																					297.4				
D12	279	3+900.00	LT & RT	3.5		0.22					36.6										1			100.0				
D13	279	3+992.10	RT			0.17			18.2											1					5.4		2		
D14	279	4+011.80	LT			0.17			16.2											1					5.4		2		
D15	279	3+990.00	RT																				39.2					
D16	279	4+004.00	LT																				33.8					
D17	277	3+636.51	LT & RT									40.7	68.1															
																										TOTALS	4	
TOTALS CARRIED TO SUB-SUMMARY				3.5	62.2	8.32	711.0	14.68	34.4	36.91	95.3	40.7	68.1	39.5	392.7	4.1	53.7	1	2	3	9.5	73.0	3716.6	86.5				

603 48.7m x 100mm Conduit By others
Pick up point El. 296.714
LA-R/W
Constr. Limits
100mm Abndn.
Match Line Sta. 4+080.000 See Sheet No. 279
U37
605 150mm x 250.0m
U58
605 100mm x 250.0m
U36
U59
605 100mm x 250.0m
605 150mm x 250.0m
4+100
605 150mm x 250.0m
U60
U35
605 100mm x 250.0m
U34
605 150mm x 250.0m
U61
605 100mm x 250.0m
Constr. Limits
LA-R/W
U_ For quantities see previous sheet no. 279
603 1.9m x 100mm Conduit By Others
D1
670 DEP 178.533m X 3.0m = 535.6 sq m
603 375mm x 31.2m-C
D13
D2
603 375mm x 42.1m-B
603 375mm x 44.7m-B
4+200
N 77° 10' 15.88" E
℄ Construction U.S.R. 30
+280.000
See sheet no. 684
Skew 0°
R1
603 375mm x 29.4m-C
603 375mm x 31.2m-C
Pick up point El. 294.752
El. 295.147
R1 For Quantities see Sheet No. 279
Woven Wire
Grassy Lane
Pick up point El. 295.070
Pick up point El. 295.065
603 39.9m x 100mm Conduit By others
Pick up point El. 294.678
Permanent Easement
603, 1200mm or 1500mm
Pick up point El. 296.001
R2 For Quantities see Sheet No. 279
603 150mm x 18.3m-F
R2
U1
605 150mm x 200.0m
605 100mm x 126.9m
U13
603 100mm x 7.2m-B
605 150mm x 200.0m
4+393.750 End Curb, Type 6
U2
605 100mm x 140.0m
U14
4+300
4+400
603 150mm x 6.6m-F
U3
605 100mm x 191.0m
U15
605 100mm x 140.0m
603 100mm x 7.2m-B
605 100mm x 198.5m
U4
Type T Anchor Assembly
4+393.750 End GR
603 150mm x 21.0m-F
605 100mm x 87.2m
U16
670 DEP 104.100m X 3.0m = 312.3 sq m
604 No. 3 CB See sheet no. 687
D12
U17
605 100mm x 51.0m
660 Reinforced Sodding Area Planimetered 39.8 sq. m
D6
D5
D7
+280.000 38.056m RT.
Plug
Constr. Limits
Permanent Easement
Constr. Limits
For quantities see sheet no. 285
For underdrain quantities see sheet no. 126
✳ For U.D. Connection see sheet no. 95
670 DEP 110.633m x 3.0m = 331.9 sq. m
Pick up point El. 296.347
603 48.7m x 100mm Conduit By Others
Plug Constr. Limits
D4
603 100mm x 13.3m-E
Outlet in ditch El. 296.309
Match Line Sta. 4+420.000 See Sheet No. 283
Abndn.
Woven Wire

150mm Shallow
+144, 9.0m Rt. & Lt.
+144, 16.2m Rt. & Lt.
High Point
V.P.I. Sta. 4+226.000
496m V.C.
V.P.I. Sta. 3+978.000 Elev. = 304.257
-0.5000%
Proposed grade
+300, 9.0m Rt. & Lt. (100mm Tee)
+300, 16.2m Rt. & Lt. (150mm Cross)
℄ 150mm U.D. = 301.103
Outlet 24.6m Rt. & Lt. = 301.078
150mm Shallow
Existing ground
603, 1200mm or 1500mm

303.103 303.138 303.167 303.190 303.208 303.219 303.224 303.223 303.216 303.202 303.183 303.158 303.127 303.090 303.046 302.947 302.847 302.747 302.647 302.547 302.447 302.347 302.247 302.147 302.047
304 302 300 298 296 294
297.603 297.631 297.680 297.552 297.526 297.396 297.200 297.061 296.995 296.910 296.793 296.662 296.390 296.358 296.318 296.246 296.244 296.147 296.119 296.474 296.560 296.452 296.598 296.765 296.979 297.053 296.919 297.040 296.951 296.837 296.849 297.003 297.128 297.231 297.655
4+080 4+100 4+120 4+140 4+160 4+180 4+200 4+220 4+240 4+260 4+280 4+300 4+320 4+340 4+360 4+380 4+400 4+420

N
HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 4+080 TO STA. 4+420

WYA/CRA-30-28.009/0.000

282
2116

603 48.7m x 100mm Conduit
By others

El. 296.460

Pick up point
El. 296.483

4+430.000
End Curb, Type 6

LA-R/W

U.S. 30
P.I. = Sta. 5+345.696
Δ = 12° 31' 22.98" (RT)
R = 7,000.000 m
T = 768.050 m
L = 1,529.979 m
E = 42.010 m
e_{max} = Normal Crown

Pick up point
El. 297.538

603 156.3m x 100mm Conduit
By others

D10

100mm Overflow Wire

Abndn.

660 Reinforced sodding
Area Planimetered 35.6 sq. m

Constr. Limits

D11

Type B Anchor Assembly

4+475.449
End GR 25.1m Lt.

604 No. 3 CB
See sheet no. 688

605 100mm x 126.9m
See Sheet No. 282

605 100mm x 140.0m

300mm

605 100mm x 7.2m-B

U18

605 100mm x 159.1m

603 150mm x
6.6m-F

605 100mm x
151.4m

U22

603 150mm x 11.8m-F

603 100mm x 7.2m-B

605 150mm x
150.3m

603 150mm x
6.6m-F

U26

605 100mm x 149.2m

See Sheet No. 286

605 100mm x 149.0m

R2

U13

U2

605 150mm x
200.0m

U1

605 150mm x
200.0m

603 150mm x 9.0m-F

605 150mm x 150.2m

605 150mm x 150.1m

U5

604 No.4 CB
See sheet no. 696

U9

605 150mm x
150.2m

U10

U14

603 150mm x
6.6m-F

603 150mm x
12.7m-F

4+500

U20

U19

605 100mm x 149.1m

U6

603 150mm x 6.6m-F

4+600

605 100mm x
151.2m

U23

4+700

U27

U15

670 DEP
2m x 50m = 100 sq m

605 100mm x
149.0m

S 77° 10' 15.88" W
℄ Construction U.S.R. 30

603 150mm x
6.3m-F

605 100mm x
150.8m

U24

670 DEP
2m x 50m = 100 sq. m

603 150mm x
6.6m-F

U28

605 100mm x 140.0m

Match Line Sta. 4+420.000

U3

605 150mm x
191.0m

605 150mm x
198.5m

U4

375mm

604 No.4 CB
See sheet no. 690

U7

U8

605 150mm x
151.3m

605 150mm x
158.9m

603 100mm x 7.2m-B

U11

605 150mm x
149.8m

605 150mm x
149.7m

U12

U17

603 150mm x
6.6m-F

603 100mm x
51.0m

603 150mm x
11.8m-F

D8

Constr. Limits

605 100mm x
149.0m

U21

603 150mm x
7.4m-F

605 100mm x
150.6m

U25

603 150mm x 11.8m-F

D9

375mm

603 150mm x
6.6m-F

U29

PC Sta. 4+577.646

Abndn. 100mm

Abndn. 100mm

Abndn. 100mm

603 36.4m x 100mm Conduit
By others

200mm

100mm

Abndn.

Constr. Limits

605 100mm x 148.4m

Abndn.

Match Line Sta. 4+760.000

605 100mm x 148.6m

670 DEP
110.633m X 3.0m = 331.9 sq m

Plug

Plug

LA-R/W

LA-R/W

Pick up point
El. 296.519

603 79.4m x 100mm Conduit
By others

R2 For Quantities see Sheet No. 279

100mm

200mm

El. 296.309

Pick up point
El. 296.309

100mm

For quantities see sheet no. 285
For underdrain quantities see sheet no. 126

+500, 16.2m Lt. (100mm Tee)
+500, 9.0m Lt. (150mm Cross)
℄ 150mm U.D. = 300.103
Outlet @ C.B. = 300.076

+650, 16.2m Rt. & Lt. (100mm Cross)
+650, 9.0m Rt. & Lt. (150mm Tee)
℄ 150mm U.D. = 299.353
Outlet 28.0m Rt. & Lt. = 299.318

-0.5000%

Proposed grade

+498.5, 16.2m Rt. (150mm Tee)
℄ 150mm U.D. = 300.111
Outlet 28.0m Rt. = 300.076

+491, 9.0m Rt. (150mm Wye)
℄ 150mm U.D. = 300.148
Outlet @ C.B. = 300.076

150mm Shallow

Existing ground

302.047 301.947 301.847 301.747 301.647 301.547 301.447 301.347 301.247 301.147 301.047 300.947 300.847 300.747 300.647 300.547 300.447 300.347

304 302 300 298 296

297.655 297.713 297.557 297.506 297.470 297.483 297.593 297.774 297.959 298.056 298.191 298.198 298.256 298.446 298.660 298.596 298.372 298.171 297.977 297.942 298.008 297.936 297.956 297.936 297.864 297.825 297.747 297.591 297.568 297.529 297.496 297.502 297.391 297.344 297.473

4+420 4+440 4+460 4+480 4+500 4+520 4+540 4+560 4+580 4+600 4+620 4+640 4+660 4+680 4+700 4+720 4+740 4+760

N

HORIZONTAL
SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 4+420 TO STA. 4+760

WYA/CRA-30-28.009/0.000

283
2116

ESTIMATED DRAINAGE QUANTITIES

CALCULATED AM | CHECKED REA

WYA/CRA-30-28.009/0.000

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	601 RIPRAP USING 150 MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 100 MM CONDUIT, TYPE E (METER)	603 300 MM CONDUIT, TYPE F (METER)	603 375 MM CONDUIT, TYPE B (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 1200 MM CONDUIT, TYPE A, 706.02 100 D-LOAD, OR 1500 MM, 707.02, OR 707.09 1250MM CORR.), OR 707.22 (METER)	604 CATCH BASIN, NO. 3 (EACH)	604 CATCH BASIN, NO. 4 (EACH)	660 SODDING REINFORCED (SQ M)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: MASONRY COLLAR (EACH)
D1	282	4+100.00 TO 4+278.50	LT												535.6				
D2	282	4+262.40	LT & RT						42.1	58.8									
D3	282	4+280.00	LT & RT		13.5	3.22					75.7				155.7	21.0			
D4	282	4+400.00	LT				13.3												
D5	282	4+387.90	RT			0.17		18.2				1				4.3	2		
D6	282	4+283.00 TO 4+387.00	RT												312.3				
D7	282	4+388.78 TO 4+499.10	RT												331.9				
D8	283	4+500.00	LT & RT	3.2		0.22			33.9				1		100.0				
D9	283	4+710.00	LT & RT	3.0		0.22			33.9				1		100.0				
D10	283	4+427.60	LT			0.17		17.0				1				5.4	2		
D11	283	4+431.50	LT											35.6					
D12	282	4+395.31	RT											39.8					
D13	282	4+222.20	LT & RT						44.7	62.4									
																	TOTALS	4	
		TOTALS CARRIED TO SUB-SUMMARY		6.2	13.5	4.00	13.3	35.2	154.6	121.2	75.7	2	2	75.4	1535.5	30.7			

603 156.3m x 100mm Conduit By others
100mm
El. 296.602
LA-R/W
Constr. Limits
Pick up point El. 296.305
Gravel
Brk. & Frame #107 Tri-Level Catch
Gravel
Car. Conc.
Play House
670 DEP
Cul-de-sac
670 DEP
Proposed R/W
Remove Exist. Roadway
SHROLL ROAD TR-III
Woven Wire
Existing R/W
203mmCMP
Sta. 1+140.000 TR-III - Sta. 5+100.000 US-30 38.41 Lt.
Item 203 Excavation
- 482.39 s.m. x 0.30 m - 144.7 c.m.
Item 203 Embankment - 144.7 c.m.
Abndn.
603 150mm x 603 375mm x 30.8m-C 11.8m-F
603 150mm x 11.8m-F
603 150mm x 6.6m-F
603 150mm x 11.9m-F
670 DEP 2m x 50m - 100 sq. m
603 150mm x 10.2m-F
604 No.4 CB See sheet no. 701
+894.713 See sheet no. 1335 Skew - 11°
603 100mm x 7.2m-B
603 375mm x 45.6m-B
603 375mm x 32.0m-C
603, 1200mm or 1350mm
U.S. 30 Plug
P.I. - Sta. 5+345.696
Δ - 12° 31' 22.98" (RT)
R - 7,000.000 m
T - 768.050 m
L - 1,529.979 m
E - 42.010 m
e_{max} -Normal Crown
Match Line Sta. 4+760.000 See Sheet No. 283
Match Line Sta. 5+100.000 See Sheet No. 287
U9 605 150mm x 150.3m
605 150mm x 150.2m
605 150mm x 149.8m
605 150mm x 149.7m
U10
U11
U12
U26
U1
U2
U27
U28
U3
U4
U29
D1
D2
D3
605 100mm x 149.2m
603 100mm x 7.2m-B
605 150mm x 116.8m
605 150mm x 116.8m
605 100mm x 149.0m
605 100mm x 148.6m
605 100mm x 148.4m
605 150mm x 117.8m
605 150mm x 117.7m
603 150mm x 11.3m-F
603 150mm x 6.6m-F
603 100mm x 7.2m-B
U5 605 100mm x 152.4m
U6 605 150mm x 279.5m
U7
U8 605 150mm x 277.6m
605 150mm x 277.4m
U18
U19
U20
U21
U22
U23
U24
U25
603 150mm x 6.6m-F
605 100mm x 155.6m
605 100mm x 155.4m
605 100mm x 155.1m
605 100mm x 155.0m
605 150mm x 280.2m
605 100mm x 152.1m
605 100mm x 151.7m
605 100mm x 151.4m
Construction U.S.R. 30
4+800
4+900
5+000
Constr. Limits
LA-R/W
603 79.4m x 100mm Conduit By others
El. 296.089
Pick up point El. 295.808
For quantities see sheet no. 288, 289
For underdrain quantities see sheet no. 127
For Crossover details see sheet no. 141
U_ For quantities see previous sheet no. 283
WORK BY OTHERS
Item 203 Excavation not including Embankment Construction, to be backfilled with Item 203 Embankment.
Quantities carried to Sheet No. 94

Proposed grade
+916.500, 16.2m Lt. (150mm Tee)
℄ 150mm U.D. - 298.021
Outlet 28.0m Lt. - 297.986
+909, 9.0m Lt. (150mm 45° Wye)
℄ 150mm U.D. - 297.518
+918, 9.0m Rt. (150mm Cross)
+918, 16.2m Rt. (100mm Tee)
℄ 150mm U.D. - 298.013
-0.5000%
+800, 9.0m Rt. & Lt. (150mm Tee)
+800, 16.2m Rt. & Lt. (150mm Cross)
℄ 150mm U.D. - 298.603
Outlet 28.0m Rt. & Lt. - 298.347
603, 1200mm or 1350mm
Existing ground
150mm Shallow

300.347 300.247 300.147 300.047 299.947 299.847 299.747 299.647 299.547 299.447 299.347 299.247 299.147 299.047 298.947 298.847 298.747 298.647
302 300 298 296 294
297.473 297.559 297.603 297.716 297.869 297.893 297.766 297.710 297.293 297.262 297.170 296.873 296.607 296.634 296.777 296.997 297.080 297.093 297.160 297.296 297.417 297.512 297.635 297.803 297.856 297.857 297.860 297.910 297.991 298.027 298.162 298.345 298.292 298.226 298.250
4+760 4+780 4+800 4+820 4+840 4+860 4+880 4+900 4+920 4+940 4+960 4+980 5+000 5+020 5+040 5+060 5+080 5+100

N
HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 4+760 TO STA. 5+100

WYA/CRA-30-28.009/0.000

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Item 203 Excavation not including Embankment Construction, to be backfilled with Item 203 Embankment. Quantities carried to Sheet No. 94

670 DEP
21.7m X 2.0m = 43.4 sq m

Existing R/W
LA-R/W
SHROLL ROAD T.R.III
Asphalt
Ex. R/W
Constr. Limits
Remove Exist. Roadway
+197.553
26.806m LT
+229.992
603 100mm x 7.2m-B
603 150mm x 10.2m-F
N 0° 20' 29.94" W
℄ Construction C.R.-22
+258.777
Match Line Sta. 5+100.000
605 100mm x 155.6m
See Sheet No. 286

U22 605 150mm x 280.2m
U6 605 150mm x 279.5m
603 150mm x 6.6m-F
U5 605 100mm x 155.4m
U23 605 100mm x 155.1m
U24 605 150mm x 277.4m
U8 605 150mm x 277.6m
U7 605 100mm x 155.0m
U25 Abndn.
600mm or 675mm
See sheet no. 709
Skew = 0°
+197.553
27.497m RT
Plug
Constr. Limits
U.S. 30
LA-R/W
100mm
P.I. = Sta. 5+345.696
Δ = 12° 31' 22.98" (RT)
R = 7,000,000 m
T = 768.050 m
L = 1,529.979 m
E = 42.010 m
e max =0.08

670 DEP
2m x 50m = 100 sq m
℄ Construction U.S.R. 30
604 No.4 CB
See sheet no. 709
5+200
D4 U10 3.0m
U27 A R1 C B
2.4m E 152.1m Asphalt
604 No.4 CB See sheet no. 713
F G
Grass
R2 U11 D
U28 U12 375mm
D5
605 100mm x 151.6m
Asphalt
Asphalt Apron
Split Rail Fence
U29
Asphalt
Grass
Sta. 5+248.766 U.S. 30-
Sta. 1+000.000 C.R.-22
603 150mm x 10.3m-F
603 100mm x 7.2m-B
SECTION 31
SECTION 32
Existing R/W
Buried Propane tank
TANK
Work By Others
* For U.D. Connection see sheet no. 95

Sta. 5+293.230, 10.36m Lt. -
Sta. 5+320.819, 7.135m Lt.
Item 203 Excavation
= 111.24 s.m. x 0.30 m = 33.4 c.m.
Item 203 Embankment = 33.4 c.m.

603 77.4m x 100mm Conduit
By others
El. 296.228
Constr. Limits
LA-R/W
Pick up point
El. 296.081
TWIN 2100mm
Abndn. 100mm
Abndn. 450mm
605 150mm x 163.5m
605 150mm x 10.0m
603 375mm x 36.2m-C
U26 605 100mm x 152.4m
U17 603 150mm x 6.6m-F
U30 605 100mm x 150.7m
Abndn. 150mm
603 100mm x 8.5m-B
603 150mm x 9.0m-F
605 150mm x 168.2m
48:1 Taper
Remove Exist. Roadway
670 DEP
5+300
2m x 50m = 100 sq m
603 375mm x 52.4m-B
605 150mm x 57.3m
U16
Existing R/W
U15 U31
SHROLL ROAD T.R.III
Asphalt
603 150mm x 12.7m-F
603 150mm x 6.6m-F
605 150mm x 158.8m
605 150mm x 166.1m
U13 U14
605 100mm x 150.1m
U32
Abndn. 100mm
603 150mm x 10.4m-F
603 150mm x 6.6m-F
605 100mm x 141.9m
U33
Abndn. 250mm
+396.861
See sheet no. 1336
Skew = 14.87°
D7
670 DEP
#3385
605 100mm x 151.3m
603 375mm x 31.7m-C
D6
LA-R/W
℄ Service Access No. 20
Constr. Limits
Grass
Permanent Easement
250mm
Pick up point
El. 295.938
Permanent Easement
R/W
Match Line Sta. 5+440.000
605 100mm x 150.4m
See Sheet No. 290

For quantities see sheet no. 288, 289
For underdrain quantities see sheet no. 127

Ⓐ 5+220.362
Begin Impact Att./GR

Ⓑ 5+256.299 End GR
Type T Anchor Assembly

Ⓒ 5+241.408 Begin GR
Type T Anchor Assembly

Ⓓ 5+277.292
End GR/Impact Att.

Ⓔ Guardrail, Barrier Design, Type 5
Ⓕ Flared End Section
Ⓖ Guardrail, Type 5

150m V.C.
V.P.I. Sta. 5+240.000 Elev. = 297.947
Min. Vertical Clear. 5.274m
V.P.C. Sta. 5+165.000
V.P.T. Sta. 5+315.000
-0.5000%
+1.8039%
Existing ground
Proposed grade

+196, 9.0m Rt. & Lt. (100mm 90° Bend)
+196, 16.2m Rt. & Lt. (150mm Tee)
℄ 150mm U.D. = 296.697
Outlet 26.5m Rt. = 296.646
Outlet 26.4m Lt. = 296.666

+199, 9.0m Rt. & Lt. (100mm 90° Bend)
+199, 16.2m Rt. & Lt. (150mm Tee)
℄ 150mm U.D. Rt. & Lt. = 296.697
Outlet 26.5m Rt. = 296.646
Outlet 26.5m Lt. = 296.666

+292, 17.5m Lt. (150mm Tee)
+292, 9.0m Lt. (150mm Cross)
℄ 150mm (Uncl.) U.D. = 297.382
Outlet in CB-297.355

+293.5, 9.0m Rt.
100mm Plug = 297.542

+293.5, 16.2m Rt.
(90° Tee) = 297.404
Outlet 26.6m Rt. = 297.300

+301, 9.0m Rt.
150mm Wye = 297.519

+290.5, 9.0m & 16.2m Rt.
100mm Plug U.D. = 297.360

603, 600mm or 675mm

+287, 17.4m Lt.
℄ 150mm U.D. = 297.292

+297, 17.6m Lt.
℄ 150mm U.D. = 297.434

+402.792, 16.2m Lt. (150mm 90° Bend)
℄ 150mm U.D. = 299.340

150mm Shallow

603, Twin 2100mm

+402.792, 19.8m Lt. (150mm Tee)
℄ 150mm U.D. = 299.282

150mm Shallow

306 304 302 300 298 296

298.647 298.547 298.447 298.347 298.299 298.265 298.245 298.241 298.253 298.280 298.322 298.379 298.452 298.540 298.644 298.763 298.897 299.047 299.212 299.390 299.751 300.112 300.473 300.834 301.194 301.555

298.250 298.270 298.160 298.254 298.224 298.318 298.497 298.679 298.862 298.940 298.928 298.872 298.772 298.798 298.771 298.663 298.417 298.437 298.299 298.175 298.026 298.078 297.963 297.766 297.590 297.569 297.849 297.905 297.796 297.866 297.623 297.469 297.217 297.293 297.616

5+100 5+120 5+140 5+160 5+180 5+200 5+220 5+240 5+260 5+280 5+300 5+320 5+340 5+360 5+380 5+400 5+420 5+440

N

0 10 20 HORIZONTAL SCALE IN METERS

CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 5+100 TO STA. 5+440

WYA/CRA-30-28.009/0.000

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REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30																															
R1	287	5+220.362 TO 5+256.299	RT														11.430		11.430	1				1								1	
R2	287	5+241.408 TO 5+277.292	LT														11.430		11.430	1				1								1	
TOTALS CARRIED TO SUB-SUMMARY																	22.860		22.860	2				2								2	

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA / CRA-30-28.009 / 0.000

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2116

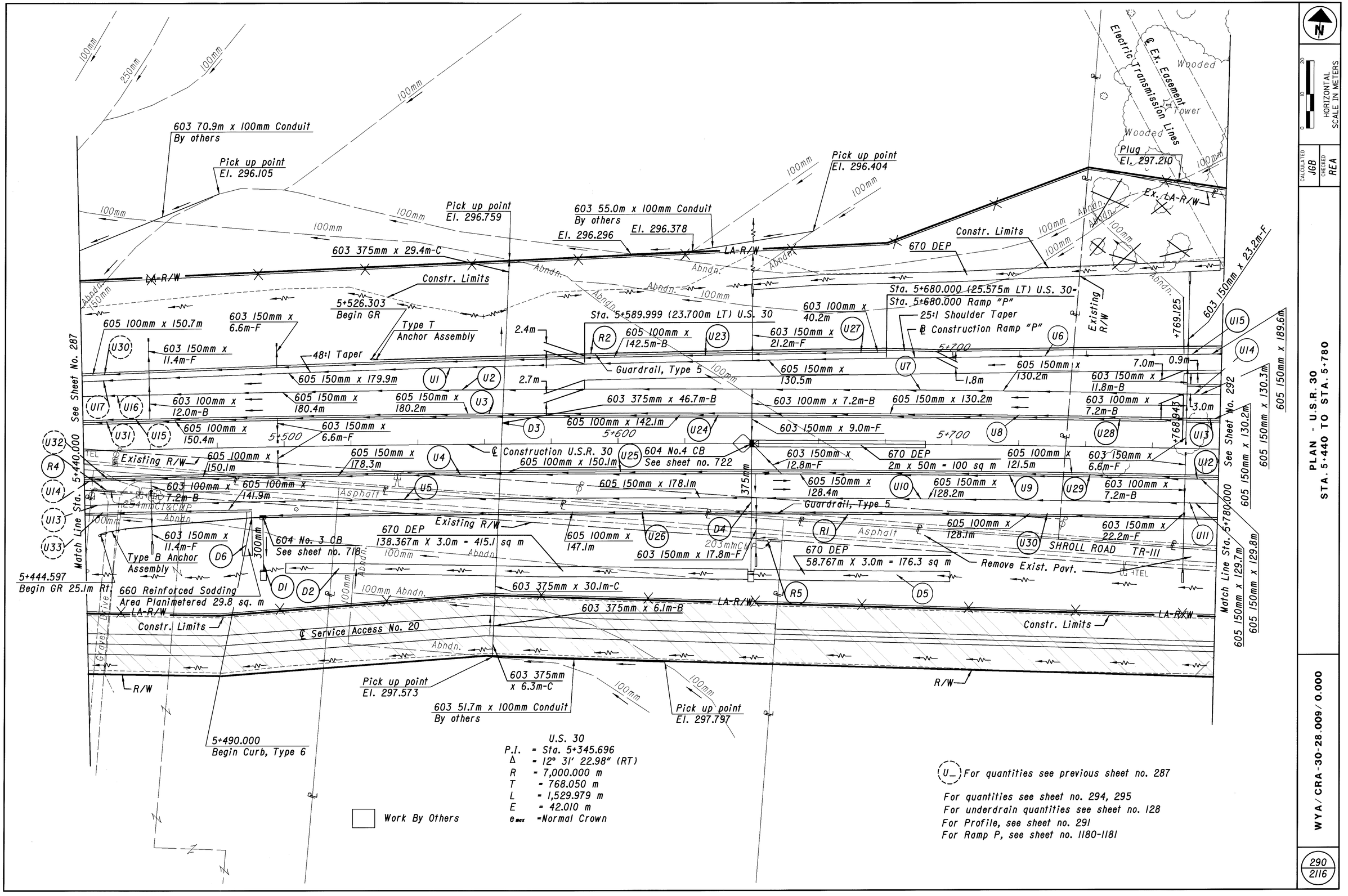
REF NO.	SHEET NO.	STATION	SIDE	601 RIPRAP USING 150 MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 375 MM CONDUIT, TYPE B (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 2100 MM CONDUIT TYPE A, 706.02 (METER)	603 600 MM CONDUIT, TYPE A, 706.02, OR 825 MM, 707.01 (2.0 MM), OR 707.09 (13MM CORR.), OR 707.21 (METER)	603 1200 MM CONDUIT, TYPE A, 706.02 OR 1350 MM, 707.01 (2.0MM), OR 707.09 (25MM CORR.), OR 707.22 (METER)	604 CATCH BASIN NO. 4 (EACH)	613 LOW STRENGTH MORTAR BACKFILL (CU M)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: MASONRY COLLAR (EACH)
D1	286	4+851.748	LT & RT			45.6	62.8											
D2	286	4+894.713	LT & RT	40.0	2.46					62.4			110.0	28.8				
D3	286	4+918.00	LT		0.22	29.8					1		100.0	10.8				
D4	287	5+197.553	LT & RT	6.3	0.92				54.3		1		100.0	12.0				
D5	287	5+292.00	LT & RT		0.22	27.6					1		100.0	7.2				
D6	287	5+376.65	LT & RT			52.4	67.9											
D7	287	5+396.861	LT & RT	45.0	14.46			134.6				481.1		49.5				
D8	287	5+198.45 TO 5+220.00	LT										43.4					
TOTALS CARRIED TO SUB-SUMMARY				91.3	18.28	155.4	130.7	134.6	54.3	62.4	3	481.1	453.4	108.3				
																		TOTALS

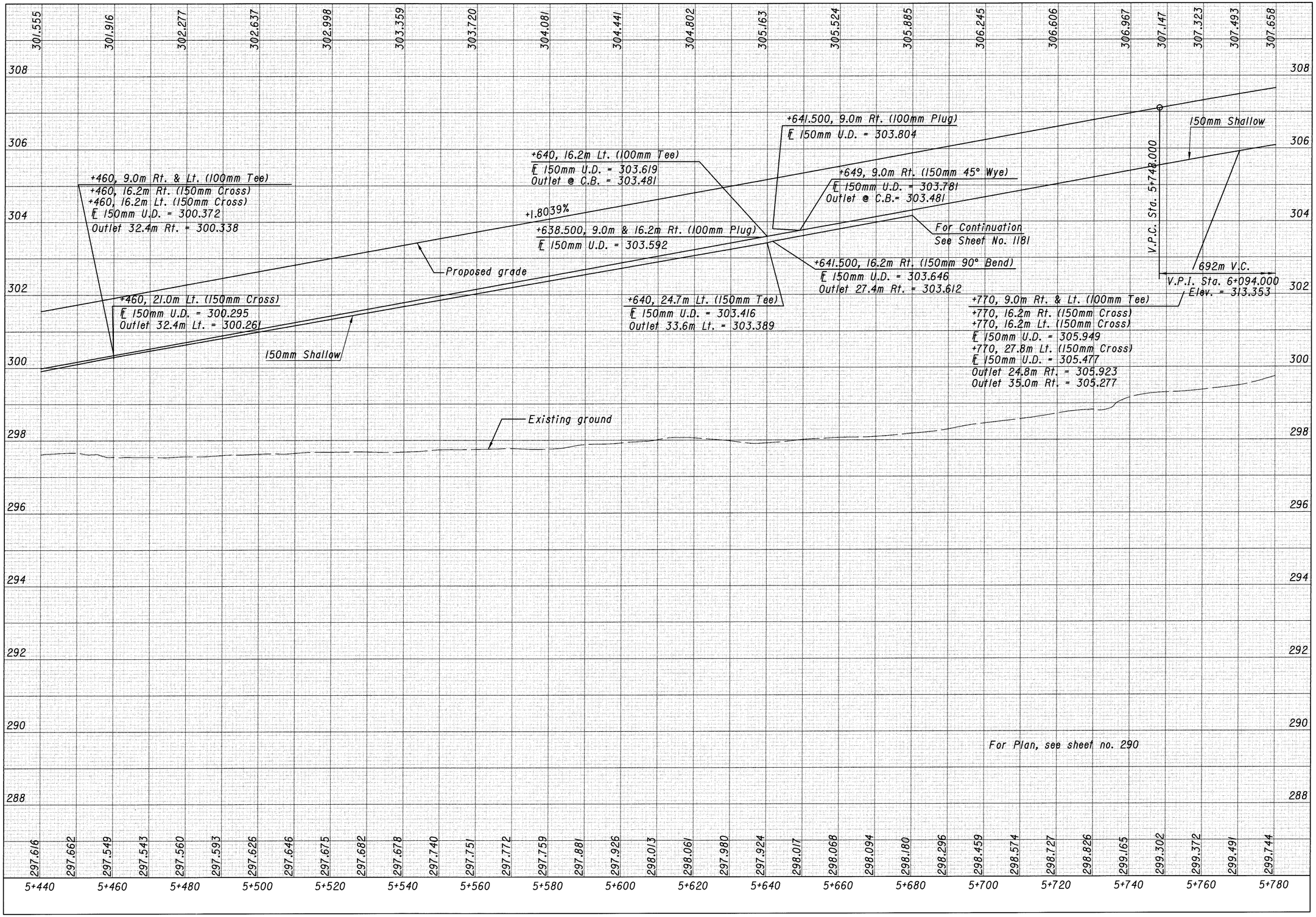
CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

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603 70.9m x 100mm Conduit
By others
Pick up point
El. 296.105
Pick up point
El. 296.759
603 55.0m x 100mm Conduit
By others
El. 296.296
El. 296.378
Pick up point
El. 296.404
603 375mm x 29.4m-C
LA-R/W
Constr. Limits
5+526.303
Begin GR
Type T
Anchor Assembly
605 100mm x 150.7m
603 150mm x
6.6m-F
603 150mm x
11.4m-F
48:1 Taper
605 150mm x 179.9m
Sta. 5+589.999 (23.700m LT) U.S. 30
603 100mm x
40.2m
603 150mm x
21.2m-F
605 100mm x
142.5m-B
Guardrail, Type 5
605 150mm x
130.5m
605 150mm x
130.2m
603 150mm x
11.8m-B
603 100mm x
12.0m-B
605 150mm x
180.4m
605 150mm x
180.2m
603 375mm x 46.7m-B
603 100mm x 7.2m-B
605 150mm x 130.2m
603 100mm x
7.2m-B
605 100mm x
150.4m
603 150mm x
6.6m-F
605 100mm x 142.1m
603 150mm x 9.0m-F
Existing R/W
605 100mm x
150.1m
605 150mm x
178.3m
℄ Construction U.S.R. 30
605 100mm x 150.1m
604 No.4 CB
See sheet no. 722
603 150mm x
12.8m-F
670 DEP
2m x 50m - 100 sq m
605 100mm x
121.5m
603 150mm x
6.6m-F
605 150mm x 178.1m
605 150mm x
128.4m
605 150mm x
128.2m
603 100mm x
7.2m-B
603 100mm x
7.2m-B
Asphalt
1254mmCT&CMP
Guardrail, Type 5
Existing R/W
670 DEP
138.367m X 3.0m = 415.1 sq m
605 100mm x
147.1m
603 150mm x 17.8m-F
670 DEP
58.767m X 3.0m = 176.3 sq m
605 100mm x
128.1m
603 150mm x
22.2m-F
603 150mm x
11.4m-F
604 No. 3 CB
See sheet no. 718
Type B Anchor
Assembly
660 Reinforced Sodding
Area Planimetered 29.8 sq. m
5+444.597
Begin GR 25.1m Rt.
603 375mm x 30.1m-C
603 375mm x 6.1m-B
℄ Service Access No. 20
Constr. Limits
LA-R/W
Remove Exist. Pavt.
SHROLL ROAD TR-III
Pick up point
El. 297.573
603 375mm
x 6.3m-C
603 51.7m x 100mm Conduit
By others
Pick up point
El. 297.797
5+490.000
Begin Curb, Type 6
R/W
Gravel Drive
Match Line Sta. 5+440.000
See Sheet No. 287
Match Line Sta. 5+780.000
See Sheet No. 292
Electric Transmission Lines
℄ Ex. Easement
Wooded
Tower
Plug
El. 297.210
Ex. LA-R/W
Constr. Limits
670 DEP
Sta. 5+680.000 (25.575m LT) U.S. 30-
Sta. 5+680.000 Ramp "P"
25:1 Shoulder Taper
℄ Construction Ramp "P"
5+700
Existing R/W
+769.125
+768.943
603 150mm x 23.2m-F
605 150mm x 189.6m
605 150mm x 130.3m
605 150mm x 130.2m
605 150mm x 129.7m
605 150mm x 129.8m
7.0m
0.9m
3.0m
+TEL
U.S. 30
P.I. = Sta. 5+345.696
Δ = 12° 31' 22.98" (RT)
R = 7,000.000 m
T = 768.050 m
L = 1,529.979 m
E = 42.010 m
emax = Normal Crown
Work By Others
(U_) For quantities see previous sheet no. 287
For quantities see sheet no. 294, 295
For underdrain quantities see sheet no. 128
For Profile, see sheet no. 291
For Ramp P, see sheet no. 1180-1181
HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED JGB
CHECKED REA
PLAN - U.S.R. 30
STA. 5+440 TO STA. 5+780
WYA/CRA-30-28.009/0.000
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CALCULATED JGB
CHECKED REA

PROFILE - U.S.R. 30
STA. 5+440 TO STA. 5+780

WYA/CRA-30-28.009/0.000

Sta. 6+068.837, 96.38m Lt. -
Sta. 6+096.595, 70.59m Lt.
Item 203 Excavation
= 94.63 s.m. x 0.30 m = 28.4 c.m.
Item 203 = 28.4 c.m.

For Continuation See Sheet No. 1182

(Asphalt) Ex. Ramp B

POT Sta. 6+108.580 Ramp "P"-
Sta. 0+695.632 Exist. US-30

Asph./Conc

675mm or 825mm

381mm

Exist. Ramp A (Asphalt)

ST Sta. 6+074.601

Constr. Limits

5+995.421 P
End GR 6.4m Lt.

SC Sta. 5+991.486

CS Sta. 6+014.601

6+072.000 RAMP P
See sheet no. 1182

U.S. 30
P.I. = Sta. 5+345.696
Δ = 12° 31' 22.98" (RT)
R = 7,000.000 m
T = 768.050 m
L = 1,529.979 m
E = 42.010 m
e_{max} =Normal Crown

Pond
Wooded
Stone Ruin
Dirt Dr.
100mm
Woven Wire
Existing LA-R/W
LA-R/W
℄ Ex. LA-R/W
Constr. Limits
Ex. LA-R/W
Woven Wire
670 DEP
Type T
Anchor Assembly
TS Sta. 5+911.486
℄ Construction Ramp "P"
R2
6+000
Guardrail, Type 5
5+895.998
Begin Curb, Type 6
5+900
5+800
605 100mm x 130.4m
603 150mm x 10.3m-F
603 100mm x 7.2m-B
5+895.998
Begin GR
U13
605 150mm x 130.2m
U14
605 150mm x 130.3m
U31
U32
605 100mm x 130.2m
5+800
5+900
603 150mm x 6.6m-F
605 150mm x 129.8m
U33
605 100mm x 129.8m
Wooded
U17
℄ Construction U.S.R. 30
605 100mm x 394.7m
U11
U12
605 150mm x 129.7m
3.0m
2.4m
603 100mm x 3.6m-B
U22
603 100mm x 10.8m-B
Guardrail, Type 5
605 150mm x 394.5m
U18
605 150mm x 355.7m
6+000
R1
U34
+819.921
+849.921
605 150mm x 49.9m
Dirt Dr.
603 150mm x 22.2m-F
U16
Woven Wire
605 150mm x 240.0m
℄ Construction Ramp "O"
Remove Existing Rdwy.
Asphalt
203mmCMP
605 100mm x 129.6m
R6
Existing R/W
LA-R/W
5+819.921
End Curb, Type 6
Sta. 5+901.325 (19.800m RT) U.S. 30-
PC Sta. 5+901.325 Ramp "O"
Constr. Limits
℄ Service Access No. 20
Well
#1393
2 Sty.
Home
S..Pool
Gravel
R/W
Sta. 5+780.000, 33.60m Rt. -
Sta. 5+940.000, 38.85m Rt.
Item 203 Excavation = 54.09 s.m. x 0.30 m = 16.2 c.m.
Item 203 Embankment = 16.2 c.m.
Electric Transmission Lines
℄ Ex. Easement
Conc. Pad
Wood Shed
Temporary Easement
℄ Drive
Match Line Sta. 5+780.000 See Sheet No. 290
Match Line Sta. 6+120.000 See Sheet No. 296
+059.885
7.0m
+059.161
3.0m
605 100mm x 120.0m
U38
0.9m
Existing R/W
6+100
1.8m
Asphalt
Existing TR-111
PCC Sta. 6+089.161
25:1 Shoulder Taper
Woven Wire
670 DEP
Existing R/W
LA-R/W
℄ Drive
Temporary Easement
U35
R3
U20
Guardrail, Type 5
605 100mm x 326.3m
605 150mm x 338.5m
605 150mm x 338.3m
U19
U37
605 100mm x 356.8m
6+100
U36
PT Sta. 6+107.625

Item 203 Excavation not including Embankment Construction, to be backfilled with Item 203 Embankment. Quantities carried to Sheet No. 94

For quantities see sheet no. 294, 295
For underdrain quantities see sheet no. 128
For Profile, see sheet no. 293
For Ramp O, see sheet no. 1174-1175
For Ramp P, see sheet no. 1180-1183

Work By Others

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

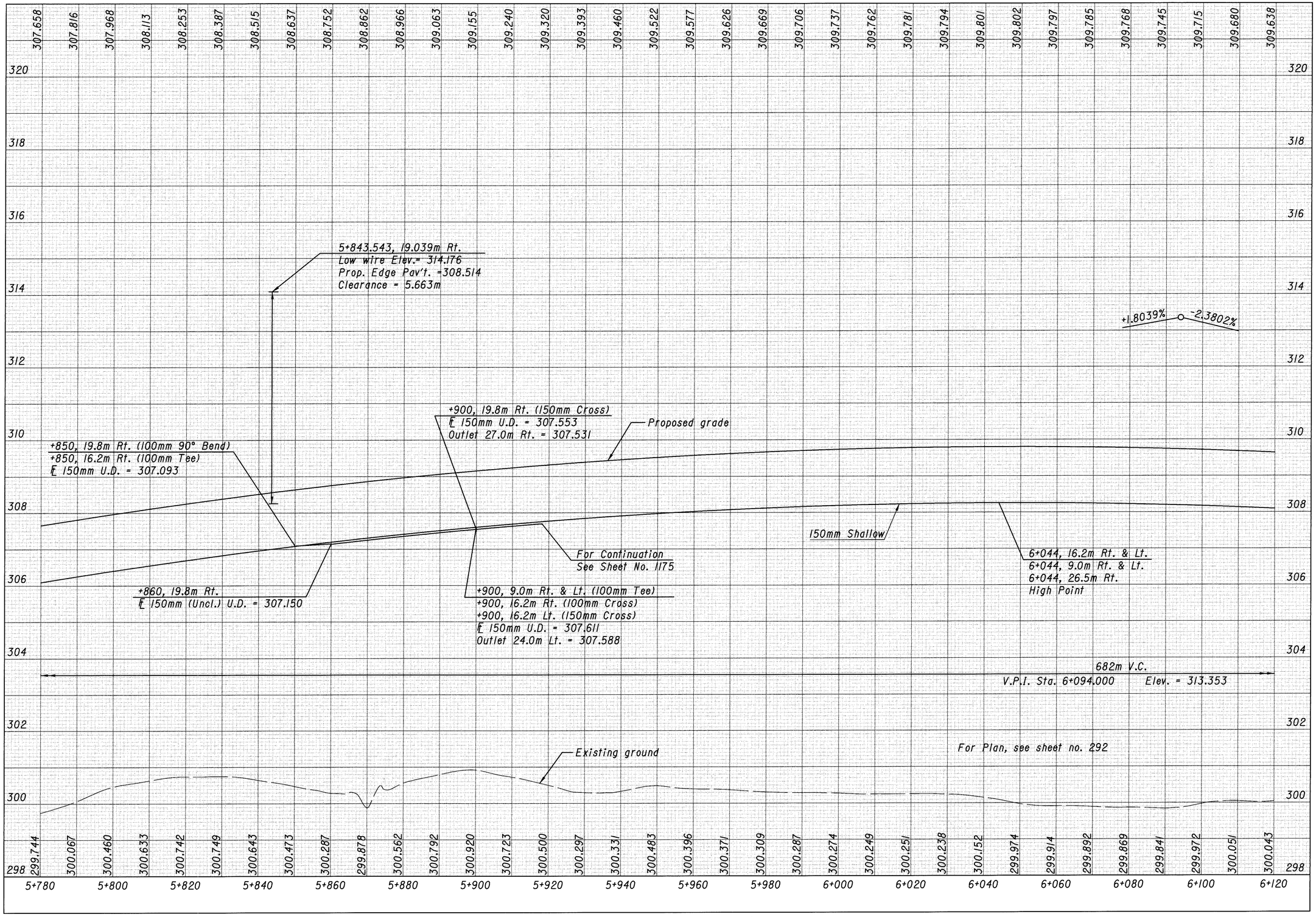
PLAN - U.S.R. 30
STA. 5+780 TO STA. 6+120

WYA/CRA-30-28.009/0.000

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CALCULATED JGB
CHECKED REA

PROFILE - U.S.R. 30
STA. 5+780 TO STA. 6+120



WYA/CRA-30-28.009/0.000

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30																														
R1	290	5+444.597 TO 6+353.698 0	RT														899.160					1		1			329					
R2	290	5+526.303 TO 5+995.421 P	LT														461.010					1		1								
R3	292	5+895.998 TO 6+237.463	LT														337.185							1	1		342					
R4	290	5+442.216 TO 5+454.243	RT		12.1																											
R5	290	5+641.897 TO 5+649.217	RT		7.3																											
R6	292	5+846.722 TO 5+856.477	RT		9.7																											
TOTALS CARRIED TO SUB-SUMMARY					29.1												1697.355					2		3	1		671					

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA / CRA-30-28.009 / 0.000

294
2116

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

CALCULATED AM
CHECKED REA

REF NO.	SHEET NO.	STATION	SIDE	602 CONCRETE MASONRY	603 300 MM CONDUIT, TYPE F	603 375 MM CONDUIT, TYPE B	603 375 MM CONDUIT, TYPE C	603 375 MM CONDUIT, TYPE F	604 CATCH BASIN NO. 3	604 CATCH BASIN NO. 4	660 SODDING REINFORCED	670 DITCH EROSION PROTECTION	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND	FOR INFORMATION ONLY:	FOR INFORMATION ONLY: MASONRY COLLAR
				CU M	METER	METER	METER	METER	EACH	EACH	SQ M	SQ M	SQ M	EACH			
D1	290	5+493.30	RT	0.17	16.7				1				5.4	2			
D2	290	5+500.00 TO 5+639.10	RT									415.1					
D3	290	5+565.08	LT & RT			52.8	65.8										
D4	290	5+640.00	RT	0.22		21.0		18.2		1		100.0	5.4		2		1
D5	290	5+640.91 TO 5+700.00	RT									176.3					
D6	290	5+488.50	RT								29.8						
														TOTALS 2	2		1
TOTALS CARRIED TO SUB-SUMMARY				0.39	16.7	73.8	65.8	18.2	1	1	29.8	691.4	10.8				

(R1) For Quantities see Sheet No. 290

(R3) For Quantities see Sheet No. 292

(U_) For quantities see previous sheet no. 292

For quantities see sheet no. 300, 301

For underdrain quantities see sheet no. 129

For Profile, see sheet no. 297

For Driveway see sheet no. 1174, 1176

For Ramp O, see sheet no. 1174-1177

P.R.J. - Pressure Relief Joint, Type A

Item 203 Excavation not including Embankment Construction, to be backfilled with Item 203 Embankment. Quantities carried to Sheet No. 94

Existing R/W

Woven Wire

Flared End Section

(Asphalt)

38.6mm

0+800

Asph./Conc.

0+938.726
Begin GR

0+876.154
Begin GR

Type E Anchor Assembly

Constr. Limits

6+236.823
End Curb, Type 6

202 Approach Slab Removed
(CAD Area = 56.86 sq m)

Existing Ramp B

202 Approach Slab Removed
(CAD Area = 52.56 sq m)

Flared End Section

Type B
Anchor Assembly

Br. Term.
Assem., Type 1

6+418.978
End GR 25.1m Lt.

605 100mm x
180.6m

605 150mm x
171.6m

Guardrail,
Type 5

670 DEP
1863.1m x 2.0m = 372.2 sq m

Type E Anchor Assembly

Constr. Limits

6+363.046
Begin GR

Sta. 6+349.932 US 30

Sta. 1+000.000 CR 330

Exist. Ramp A Eastbound

(Asphalt)

D7

604 No. 3 CB
See sheet no. 737

300mm

6+237.463
End GR

605 100mm x
326.3m

Br. Term.
Assem., Type 1

D2

R21

R22

R5

U7

R3

U35

U20

605 150mm x
338.5m

605 150mm x
338.3m

U19

603 100mm x
7.2m-B

P.R.J.

604 No.4 CB
See sheet no. 739

Guardrail, Type 5

D3

U3

605 150mm x
122.9m

U2

R6

U8

See Sheet No. 298
605 100mm x 157.8m
605 100mm x 120.3m

Match Line Sta. 6+120.000 See Sheet No. 292

U36

605 100mm x
356.8m

N 89° 41' 38.87" E

6+200

603 150mm x 12.7m-F

R4

U1

6+300

Br. Term.
Assem., Type 1

6+400

Br. Term. Assem., Type 1

6+398.114
Begin GR

℄ Construction U.S.R. 30

PRJ.

605 100mm x
394.7m

U37

R2

670 DEP
2m x 50m = 100 sq m

6+299.706
End GR

Asph./Conc.

1+000

R7

R24

605 150mm x
355.7m

605 150mm x
394.5m

U17

U18

6+228.656
Begin Impact Att./GR

603 150mm x
12.7m-F

605 150mm x
39.0m

(Asphalt)

P.R.J.

Impact Attenuator

Guardrail, Barrier
Design, Type 5

U38

670 DEP

603 150mm x
6.6m-F

Guardrail,
Type 5

R3

U6

R1

375mm

603 100mm x
7.2m-B

603 150mm x
19.1m-F

300mm

6+336.774
End GR

1+056.508
End GR
Type E Anchor Assem.

D2

R23

D3

U9

U4

Match Line Sta. 6+460.000
605 100mm x 100.1m
605 100mm x 120.0m

605 100mm x
142.1m

6+190.000
Begin Curb, Type 6

D1

Half Section Line

Woven Wire

Existing LA-R/W

Asphalt

U16

6+144.590
Begin GR 25.1m Rt.

603 150mm x
22.1m-F

℄ Construction Ramp "O"

SHROLL ROAD Exist. TR-111

6+200

Guardrail, Barrier
Design, Type 5

604 No. 3 CB
See sheet no. 742

D6

Br. Term.
Assem., Type 1

670 DEP
100.0m x 2.0m = 200.0 sq m

Sta. 6+479.100 Ramp "O"=
Sta. 1+097.018

1+100

Asph./Conc.

6+333.133
End Curb, Type 6

Sta. 6+260.000, 16.74 m Lt. -
Sta. 6+322.117, 29.24 m Lt.
Item 203 Excavation
= 126.61 s.m. x 0.30 m = 37.9 c.m.
℄ Item 203 Embankment = 37.9 c.m.

Existing LA-R/W

Remove Exist. Rdwy.

Asphalt

675mm or ℄ 825mm

LA-R/W

670 DEP

Constr. Limits

Existing LA-R/W

305mmCMP

Abndn.

6+300

6+400

Constr. Limits

Temp. Easement

℄ Drive

WORK BY OTHERS

Lawn

Wood Shed

Gravel

Type T
Anchor Assembly

6+353.698 0
End GR

Lawn

Sta. 6+380.000, 16.75 m Lt. -
Sta. 6+416.321, 8.15 m Lt.
Item 203 Excavation
= 129.37 s.m. x 0.30 m = 38.8 c.m.
Item 203 Embankment = 38.8 c.m.

Work By Others

N

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

PLAN - U.S.R. 30
STA. 6+120 TO STA. 6+460

WYA/CRA-30-28.009/0.000

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CALCULATED JGB
CHECKED REA

PROFILE - U.S.R. 30
STA. 6+120 TO STA. 6+460

WYA/CRA-30-28.009/0.000

309.638 309.591 309.537 309.477 309.412 309.340 309.262 309.178 309.088 308.993 308.891 308.783 308.668 308.548 308.422 308.290 308.152 308.007 307.857 307.701 307.538 307.370 307.195 307.015 306.828 306.635 306.437 306.232 306.021 305.804 305.581 305.352 305.117 304.884 * 304.660

316 314 312 310 308 306 304 302 300 298 296

Eastbound P.G. = Westbound P.G.
unless marked as follows:

* = Profile Grade, Westbound Pavement
** = Profile Grade, Eastbound Pavement

304.880 * 304.649 **

Profile Data for Median Edge, Eastbound Pavement
V.P.C. Sta. 6+448.000
V.P.I. Sta. 6+482.000 Elev. = 304.118 68m V.C.
Grade (back) = -2.3802% Grade (ahead) = -1.6900%
V.P.T. Sta. 6+516.000
V.P.I. Sta. 6+541.000 Elev. = 303.121 NO V.C.
Grade (back) = -1.6900% Grade (ahead) = -1.7754%

Proposed grade

+238, 16.2m Lt. (100mm 90° Bend)
+238, 9.0m Lt. (100mm Tee)
℄ 150mm U.D. = 307.148

+295, 9.0m Rt. (100mm 90° Bend)
+295, 16.2m Rt. (100mm Tee)
℄ 150mm U.D. = 306.389

+388.400, 16.2m Lt. (Plug)
℄ 150mm U.D. = 304.721

+404.600, 9.0m Lt. (100mm Plug)
℄ 150mm U.D. = 304.378

+444.900, 9.0m Rt. (100mm Plug)
℄ 150mm U.D. = 303.457

150mm Shallow

Existing ground

+256, 9.0m Rt. (150mm Wye)
+256, 9.0m Lt. (150mm 45° Bend)
℄ 150mm U.D. = 306.929
Outlet @ C.B. =306.538

Proposed grade
Westbound, U.S.-30

150mm Shallow

4.636 Min. Vertical Clearance

V.P.R.C. Sta. 6+440.000

*V.P.I. Sta. 6+474.000
Elev. = 304.308

692m V.C.
V.P.I. Sta. 6+094.000 Elev. = 313.353

68m V.C.
*

BRIDGE NO. CRA-30-06296
TYPE: Three span continuous steel plate girder (A572M) with composite reinforced concrete slab on semi-integral abutment and cap and column pier.
SPANS: 30 000, 46 000, 30 000 (Measured c/c bearings)
ROADWAY WIDTH: 13 800 toe to toe parapets
LIVE LOADING: MS18 (load case II) & the alternate military loading
SKEW ANGLE: 66° RF
WEARING SURFACE: Monolithic concrete
APPROACH SLABE: AS-1-81M (9150)
ALIGNMENT: Tangent
SUPERELEVATION: None

For Plan, see sheet no. 296

300.043 300.263 300.235 300.231 301.742 303.285 304.528 304.989 305.063 305.044 305.055 304.985 305.092 305.175 305.300 305.493 305.772 306.120 305.635 303.453 301.559 300.061 299.960 299.956 299.803 299.317 300.994 303.212 304.941 305.086 305.064 304.952 304.744 304.403 304.173

6+120 6+140 6+160 6+180 6+200 6+220 6+240 6+260 6+280 6+300 6+320 6+340 6+360 6+380 6+400 6+420 6+440 6+460

END PROJECT
STA. 6+528.317
SLD=6.528

Metal Pole Barn
Gravel
Silo
Conc. Slab

Conc. Curb to be Removed
R27
Woven Wire
Existing LA-R/W
202 Pavement Removed (CAD Area = 19.54 sq m)
6+618.857 Begin Impact Att./GR
R25
Constr. Limits
R11
202 Approach Slab Removed (CAD Area = 83.62 sq m)
202 Approach Slab Removed (CAD Area = 83.61 sq m)
Existing LA-R/W
Woven Wire
6+757.732 End GR & GR Rem. Connect to Exist. GR
CREEK
6+740.796 Begin GR
R19
R20
Br. Term. Assem., Type I
Guardrail, Type 5
Impact Attenuator
6+800.000 Match Line Sta. See Sheet No. 299

Existing Ramp B
(Asphalt)
Guardrail, Barrier Design, Type 5 See Sheet No. 296
U7
605 150mm x 171.6m
605 100mm x 180.6m
Conc. Traffic Divider
CB
U2
6+471.165 End GR/Impact Att.
605 150mm x 122.9m
603 100mm x 7.2m-B
603 150mm x 7.1m-F
(Asphalt)
U3
U8
6+500
605 100mm x 157.8m
Meet Existing Pavement
603 150mm x 6.6m-F
6+600
604 No 4 CB See sheet no. 298
R14
D8
300mm
6+700
Flared End Section
6+731.585 Begin GR
R17
R6
U4
Impact Attenuator
605 100mm x 120.3m
U9
N 89°41'38.87" E
℄ Construction U.S.R. 30
Impact Attenuator
R10
6+695.054 End GR
U10
605 150mm x 100.1m
605 150mm x 84.0m
U5
Guardrail, Type 5
603 150mm x 7.2m-B
(Asphalt)
Guardrail, Barrier Design, Type 5
R26
R9
Br. Term. Assem., Type I
R16
(Asphalt)
R18
6+463.003 Begin Curb, Type 6
6+460.000 Match Line Sta.
6+462.363 Begin GR
R7
R8
Br. Term. Assem., Type I
604 No. 3 CB See sheet no. 747
Meet Existing Pavement
6+546.481 End GR & GR Rem. Connect to Exist. GR
Catch Basin to be Removed
Guardrail, Type 5
6+676.734 Begin GR 22.7m Rt.
R12
202 Approach Slab Removed (CAD Area = 124.45 sq m)
Guardrail, Barrier Design, Type 5
605 100mm x 30.5m
U10
603 150mm x 11.4m-F
670 DEP 20.467m x 3.0m = 61.4 sq.m
300mm
6+514.339 End Curb, Type 6
Half Section Line
Woven Wire
6+686.253 End GR
RUN
Woven Wire
R13
R15
Constr. Limits
D4
605 100mm x 41.2m
D5
Constr. Limits
202 Approach Slab Removed (CAD Area = 94.05 sq m)
R22
℄ Existing CR-330
Asph./Conc.
1+119.086 End GR Type E Anchor Assembly
GRASS

For quantities see sheet no. 300, 301
For underdrain quantities see sheet no. 129
For Bridge information see sheet no. 299
* For U.D. Connection see sheet no. 95
P.R.J. = Pressure Relief Joint, Type A

+527.5, 9.0m Lt. (100mm 90° Bend)
+527.5, 16.2m Lt. (100mm Tee)
℄ 150mm U.D. = 301.823
+545, 9.0m Rt. (150mm 90° Bend)
+545, 16.2m Rt. (150mm Tee)
℄ 150mm U.D. = 301.509
Outlet 27.6m Rt. = 301.475
-2.3802%
-1.7560%
150mm Shallow
Proposed grade Westbound U.S.-30
+461, 16.2m Rt. (100mm Plug)
℄ 150mm U.D. = 303.082
V.P.T. Sta. 6+508.000
+565.645, 20.5m Lt.
Outlet @ Exist. C.B. = 301.071
V.P.I. Sta. 6+526.000 Elev. = 303.395
68m V.C.
V.P.I. Sta. 6+474.000
Elev. = 304.308
+560, 16.2m Lt. (150mm 45° Bend)
℄ 150mm U.D. = 301.087

Exist. PGL Elev.
Prop. Profile Grade Elevations
Exit. Profile Grade Elevations

Eastbound P.G. = Westbound P.G. unless marked as follows:
* = Profile Grade, Westbound Pavement
** = Profile Grade, Eastbound Pavement

137.160m V.C.
V.P.I. Sta. 6+768.241 Elev. = 297.501
Existing Westbound Profile
V.P.I. STA. 6+696.535
Elrv. = 299.279
-2.4800 %
V.P.C. Sta. 6+699.661
Proposed Westbound Bridge Replacement
Proposed Profile Grade
V.P.C. STA. 6+745.032
Elev. = 298.029
Exist. Proposed Grade
Sta. 6+680.000 ℄
604, No. 4 CB
Grate- 299.041
Inv. 300mm- 297.326
HWloop 296.170
HWdesign 296.100
-2.4800 %
+0.3000%
Highest Known Water Surface Elev. – Unknown
Ex. 2-2B CB
Ex. 375mm CMP
Inv.- 297.326
Existing ground
NORMAL POOL EL 293.900

Profile Data for Median Edge, Eastbound Pavement

V.P.C. Sta. 6+448.000
V.P.I. Sta. 6+482.000 Elev. = 304.118 68m V.C.
Grade (back) = -2.3802% Grade (ahead) = -1.6900%
V.P.T. Sta. 6+516.000

V.P.I. Sta. 6+541.000 Elev. = 303.121 NO V.C.
Grade (back) = -1.6900% Grade (ahead) = -1.7754%

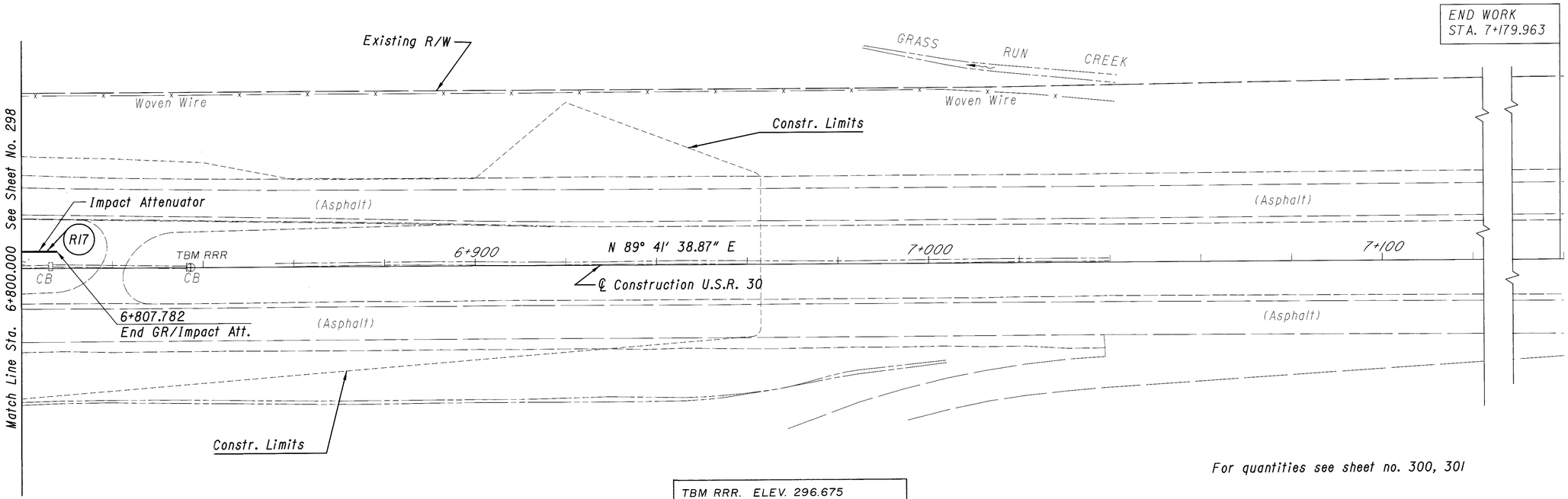
304.660 304.445 304.239 304.042 303.854 303.500 300.185 299.689 299.193 298.956 298.739 298.543 298.366 298.210 298.074 297.959 297.863 297.788 297.734
304.649 304.428 304.217 304.017 303.826 303.646 303.475 303.137
304.173 303.895 303.605 303.422 303.168 302.918 302.676 302.370 302.108 301.835 301.587 301.330 301.098 300.980 300.630 300.480 300.432 300.497 300.588 300.389 299.850 299.214 298.829 298.642 298.422 294.332 295.064 297.979 297.944 297.256 297.312 297.635 297.831 297.302 296.971
6+460 6+480 6+500 6+520 6+540 6+560 6+580 6+600 6+620 6+640 6+660 6+680 6+700 6+720 6+740 6+760 6+780 6+800

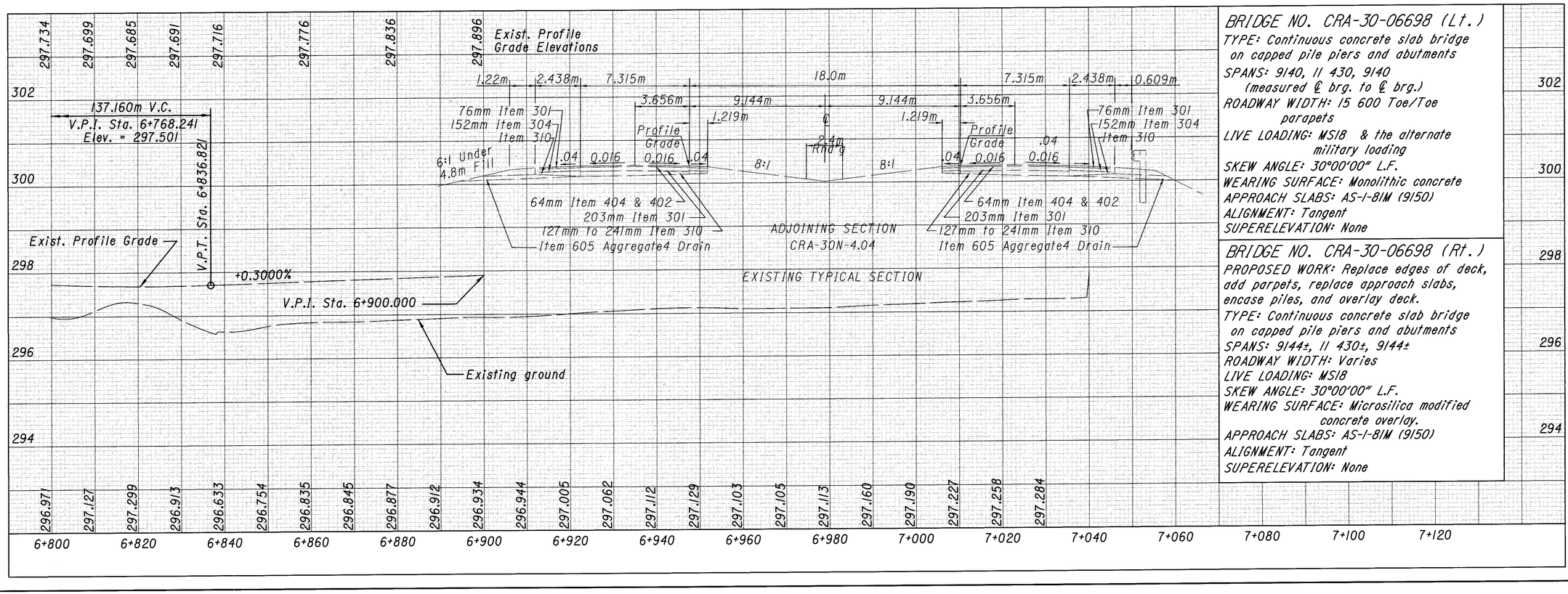
HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - U.S.R. 30
STA. 6+460 TO STA. 6+800

WYA/CRA-30-28.009/0.000

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2116





BRIDGE NO. CRA-30-06698 (Lt.)

TYPE: Continuous concrete slab bridge on capped pile piers and abutments
SPANS: 9140, 11 430, 9140 (measured ℄ brg. to ℄ brg.)
ROADWAY WIDTH: 15 600 Toe/Toe parapets
LIVE LOADING: MS18 & the alternate military loading
SKEW ANGLE: 30°00'00" L.F.
WEARING SURFACE: Monolithic concrete
APPROACH SLABS: AS-1-81M (9150)
ALIGNMENT: Tangent
SUPERELEVATION: None

BRIDGE NO. CRA-30-06698 (Rt.)

PROPOSED WORK: Replace edges of deck, add parpets, replace approach slabs, encase piles, and overlay deck.
TYPE: Continuous concrete slab bridge on capped pile piers and abutments
SPANS: 9144±, 11 430±, 9144±
ROADWAY WIDTH: Varies
LIVE LOADING: MS18
SKEW ANGLE: 30°00'00" L.F.
WEARING SURFACE: Microsilica modified concrete overlay.
APPROACH SLABS: AS-1-81M (9150)
ALIGNMENT: Tangent
SUPERELEVATION: None

N

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - U.S.R. 30 STA. 6+800 TO STA. 6+900

WYA/CRA-30-28.009/0.000

REF NO.	SHEET NO.	STATION	SIDE	202										SPECIAL		606								830		622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 30																														
R1	296	6+144.590 TO 6+336.774	RT														188.595					1			1		143					
R2	296	6+174.970 TO 6+345.470	LT-RT				175.260																									
R3	296	6+228.656 TO 6+299.706	RT														40.005		22.860	1					1							1
R4	296	6+254.692 TO 6+323.176	RT				68.580																									
R5	296	6+363.046 TO 6+418.978	LT														51.435					1			1							
R6	296	6+398.114 TO 6+471.165	LT														40.005		22.860	1					1							1
R7	296	6+431.843 TO 6+546.481	RT				114.300																									
R8	298	6+462.363 TO 6+546.481	RT														81.915								1		51					
R9	298	6+618.857 TO 6+695.054	RT														43.815		22.860	1					1							1
R10	298	6+634.380 TO 6+694.691	LT-RT				60.960																									
R11	298	6+660.821 TO 6+711.534	LT				49.530																									
R12	298	6+676.734 TO 6+686.253	RT														9.525								1							
R13	298	6+680.260 TO 6+685.456	RT				5.715																									
R14	298	6+698.198 TO 6+703.246	LT				5.715																									
R15	298	6+715.066 TO 6+720.763	RT				5.715																									
R16	298	6+725.043 TO 6+730.693	RT				5.715																									
R17	298	6+731.585 TO 6+807.782	LT														43.815		22.860	1					1							1
R18	298	6+733.783 TO 6+791.876	LT-RT				38.100	22.860																								
R19	298	6+740.796 TO 6+757.732	LT														17.145								1							
R20	298	6+742.138 TO 6+757.732	LT				15.240																									
R21	298	0+876.154 TO 1+056.508 Ex USR 30	RT														148.590						2									
R22	298	0+938.726 TO 1+119.086 Ex USR 30	LT														148.590						2									
R23	298	0+960.551 TO 1+070.882 Ex USR 30	RT				110.490																									
R24	298	0+992.502 TO 1+103.515 Ex USR 30	LT				110.490																									
R25	298	6+637.529	RT								1																					
R26	298	6+637.946 TO 6+692.954	RT-LT		55.2																											
R27	298	6+537.550 TO 6+558.325	LT	44																												
TOTALS CARRIED TO SUB-SUMMARY				44	55.2		765.810	22.860			1						813.435		91.440	4		2	4		9		194					4	

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

300
2116

REF NO.	SHEET NO.	STATION	SIDE	602	603	603	603	603	604	604	670	839	FOR INFORMATION ONLY			
				CONCRETE MASONRY	300 MM CONDUIT, TYPE C	300 MM CONDUIT, TYPE F	375 MM CONDUIT, TYPE B	375 MM CONDUIT, TYPE F	CATCH BASIN, NO. 3	CATCH BASIN, NO. 4	DITCH EROSION PROTECTION	SEEDING AND EROSION CONTROL WITH REVEGETATION MAT	300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND		MASONRY COLLAR
				CU M	METER	METER	METER	METER	EACH	EACH	SQ M	SQ M	EACH			
D1	296	6+265.00	LT & RT	0.22			21.2	20.3		1	100.0	9.0		2		1
D2	296	0+900.00 TO 1+066.49 C.R. 330	RT								372.2					
D3	296	1+000.00 TO 1+100.00 C.R. 330	LT								200.0					
D4	298	1+119.65 TO 1+140.00 C.R. 330	LT								61.4					
D5	298	6+514.339	RT	0.17		19.4			1			5.4	2			
D6	296	6+321.61	RT	0.17		18.1			1			5.4	2			
D7	296	6+226.406	LT	0.17		19.1			1			5.4	2			
D8	298	6+680.00 TO 6+692.943	LT & RT		13.0					1	100.0					
													TOTALS	6	2	1
TOTALS CARRIED TO SUB-SUMMARY				0.73	13.0	56.6	21.2	20.3	3	2	833.6	25.2				

CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

301
2116

SEEDING END WIDTH	SEEDING SQ. METERS
24.83	304
22.60	158
21.72	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
6.70	16.46		
*0.00		76	198
5.18	14.42		
		35	100
4.71	13.79		

SEE US-23 CROSS-SECTIONS

6:1 8:1 3:1 4:1 LAR/W

263.457
28+276.028
261.913

℄ 261.144

SEE US-23 CROSS-SECTIONS

Sta. 28+263.191, 8.732m Lt
604, CB 2-2B
Grate = 262.899
Inv 375mm = 261.999

Sta. 28+263.191, 12.468 m Rt
HW 2.1M or 2.2M
Inv. 375mm = 261.120
Total Area = 0.099ha
QIO = .0.024
HG Elev. = 261.420

4.7:1 8:1 3:1 4:1 LAR/W

263.298
28+263.191
261.586

℄ 261.106

603 21.2 m x 375mm Conduit, Type B, @ 4.15%

SEE US-23 CROSS-SECTIONS

Ahead Only

12:1 8:1 3:1 4:1 LAR/W

263.220
28+256.074
261.336

℄ 261.084

* TOPSOIL REMOVAL

30 20 10 0 ℄ 10 20 30

CALCULATED AM

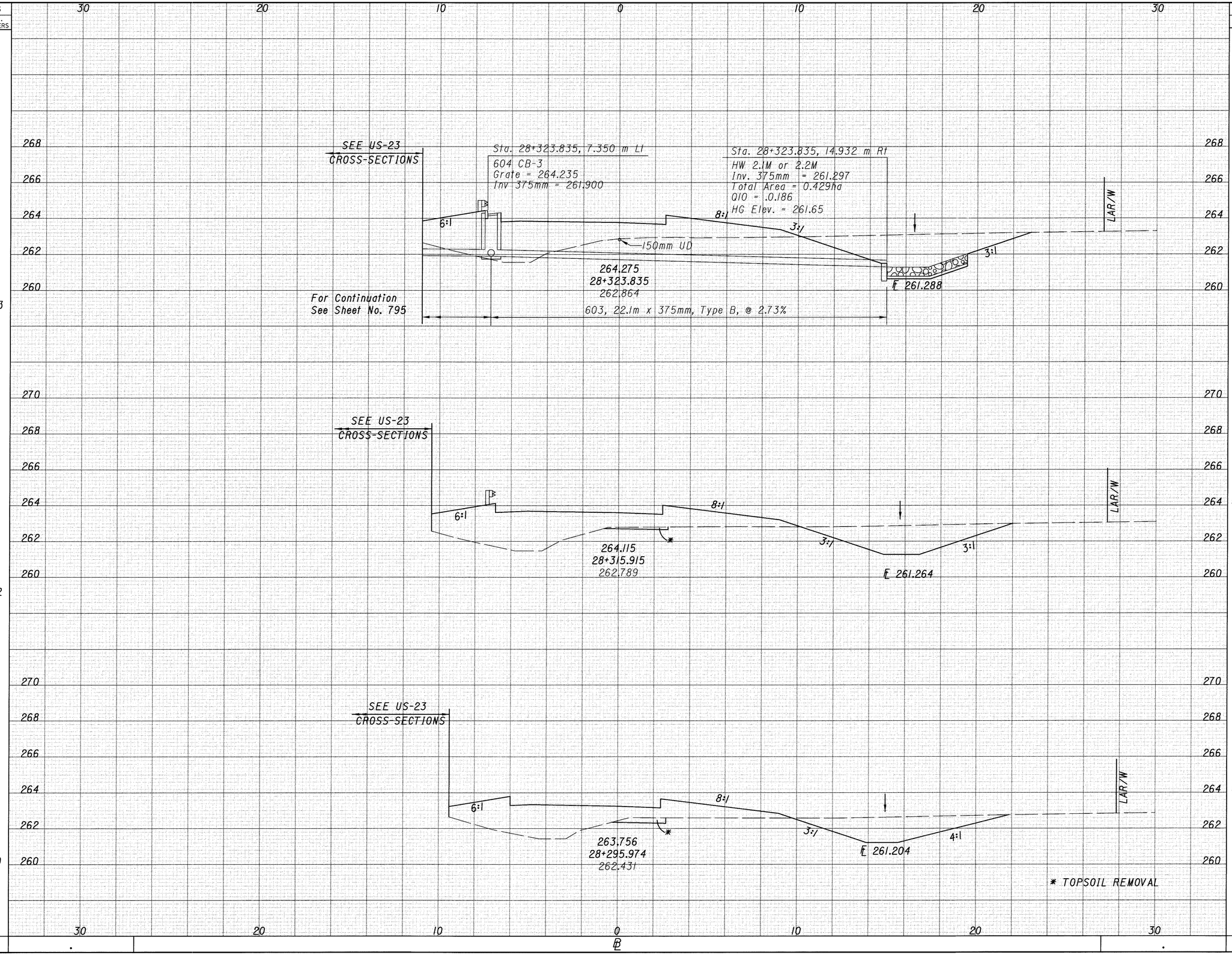
CHECKED REA

US-30EB CROSS SECTIONS STA 28+256.074 TO STA 28+276.028

WYA/CRA-30-28.009/0.000

302
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
32.09	243	16.33	27.06	109	204
		*0.00			
				*2	
29.17	572	11.13	24.53	209	445
		*0.37			
				*11	
28.19	529	9.79	20.12	164	365
		*0.71			
				*7	



CALCULATED AM

CHECKED REA

US-30EB CROSS SECTIONS STA 28+295.974 TO STA 28+323.835

WYA/CRA-30-28.009/0.000

SEEDING END WIDTH	SEEDING SQ. METERS
27.31	
	192
26.45	
	67
28.27	
	82

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20.16	17.00		
*0.21			
		125	125
		*2	
14.70	17.99		
*0.30			
		35	53
		*1	
14.07	24.95		
*0.00			
		41	71
		*0	

CALCULATED AM

CHECKED REA

US-30EB CROSS SECTIONS

STA 28+326.725 TO STA 28+336.153

WYA/CRA-30-28.009/0.000

304
2116

30 20 10 0 10 20 30

266
264
262

SEE US-23 CROSS-SECTIONS

8:1
3:1
3:1
LAR/W
℄ 261.325
264.543
28+336.153
263.158
*

Sta. 28+329.000
Begin 203 Select Granular Embankment, as per plan

SEE US-23 CROSS-SECTIONS

8:1
3:1
3:1
LAR/W
℄ 261.303
264.384
28+329.000
262.994
*

268
266
264
262

SEE US-23 CROSS-SECTIONS

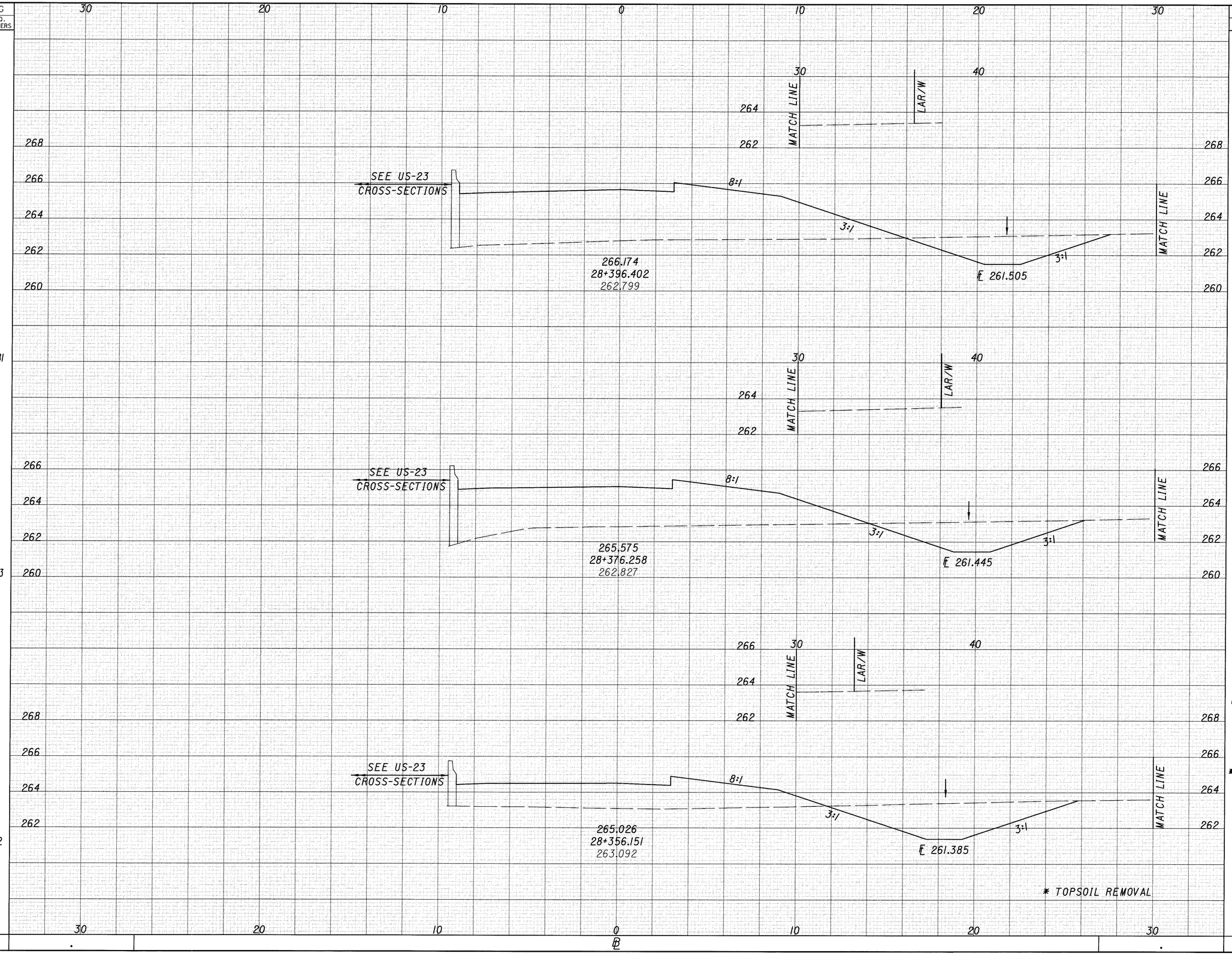
Sta. 28+326.725, 7.529 m LT
604 No. 3 CB
Grate = 264.295
Inv 375mm = 261.977
Inv 150mm = 262.000

3.5:1
8:1
3:1
3:1
LAR/W
℄ 261.296
264.336
28+326.725
262.940
*

* TOPSOIL REMOVAL

℄

SEEDING END WIDTH	SEEDING SQ. METERS
29.58	581
28.15	563
27.85	552



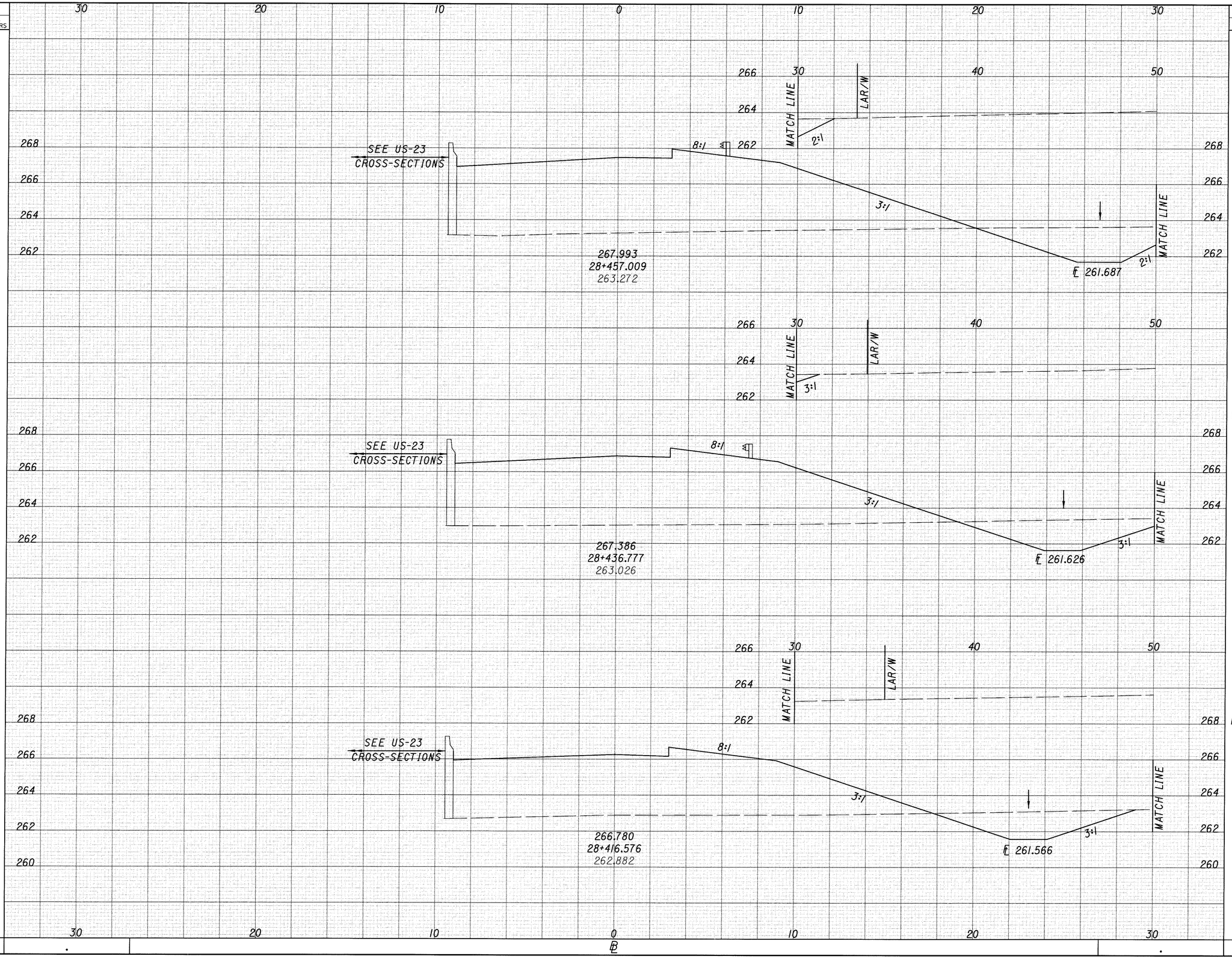
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10.54	59.14		
		224	1047
11.67	44.84		
		279	706
16.10	25.41		
*0.00			
		363	424
		*2	

CALCULATED AM
CHECKED REA

US-30EB CROSS SECTIONS
STA 28+356.151TO STA 28+396.402

WYA/CRA-30-28.009/0.000

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
34.66	691	14.00	94.28	265	1811
33.63	656	12.24	84.73	226	1595
31.27	614	10.12	73.19	208	1335



CALCULATED AM

CHECKED REA

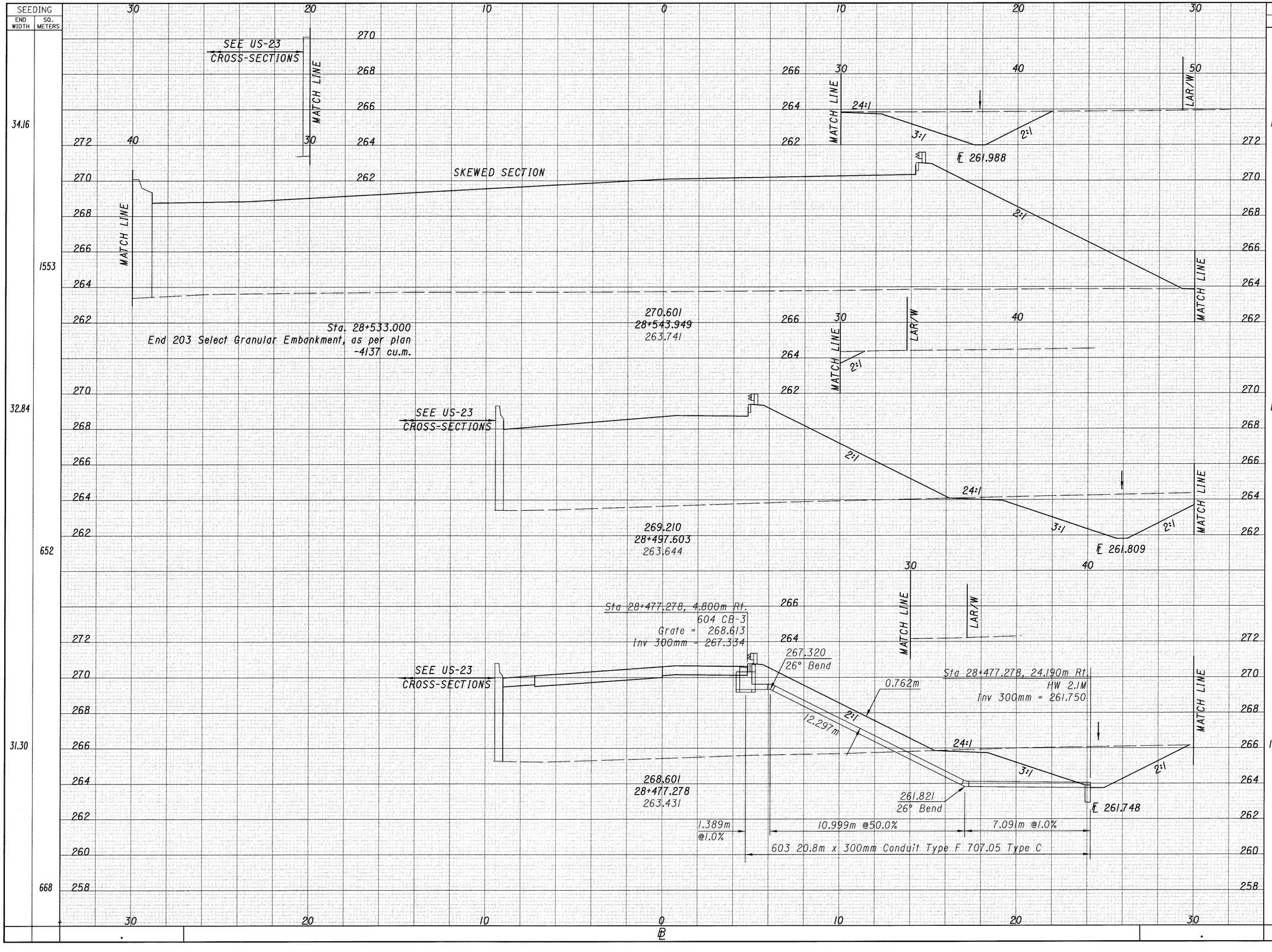
US-30EB CROSS SECTIONS

STA 28+416.576 TO STA 28+457.009

WYA / CRA-30-28.009 / 0.000

306
2116

SEEDING	
END WIDTH	SQ. METERS
34.16	
	1553
32.84	
	652
31.30	
	668



END AREA		VOLUME	
CUT	FILL	CUT	FILL
10.08	294.90		
		622	9167
16.77	100.67		
		322	1949
14.95	91.11		
		293	1879

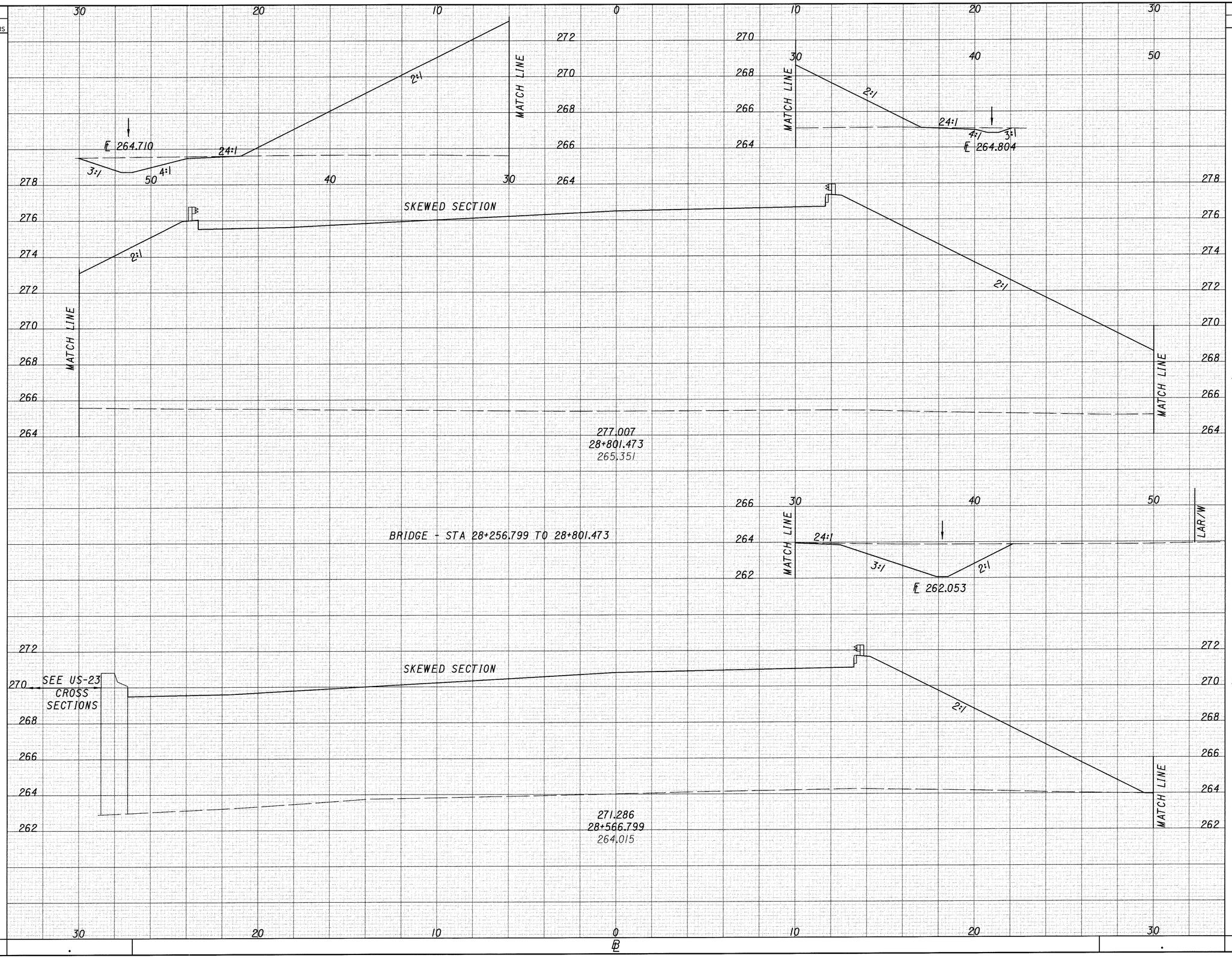
CALCULATED AM
CHECKED REA

US-30EB CROSS SECTIONS
STA 28+477.278 TO STA 28+543.949

WYA/CRA-30-28.009/0.000

307
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
73.61		3.56	638.65		
	0			0	0
35.45		9.60	312.69		
	795			225	6942



CALCULATED AM

CHECKED REA

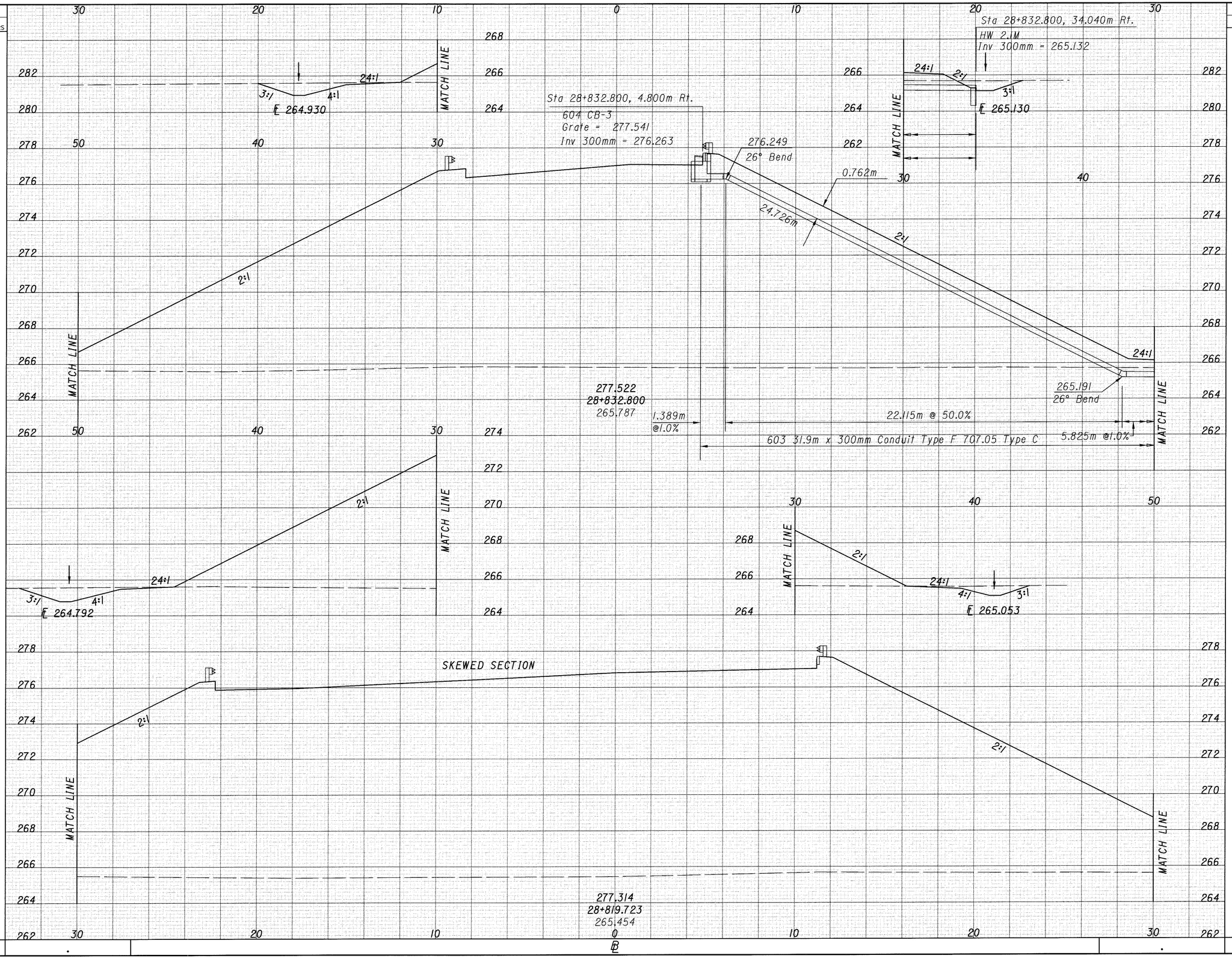
US-30EB CROSS SECTIONS

STA 28+566.799 TO STA 28+801.473

WYA/CRA-30-28.009/0.000

308
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
76.27	993	3.37	438.44	49	7035
75.64	1362	4.13	637.53	70	11645



CALCULATED: AM
CHECKED: REA

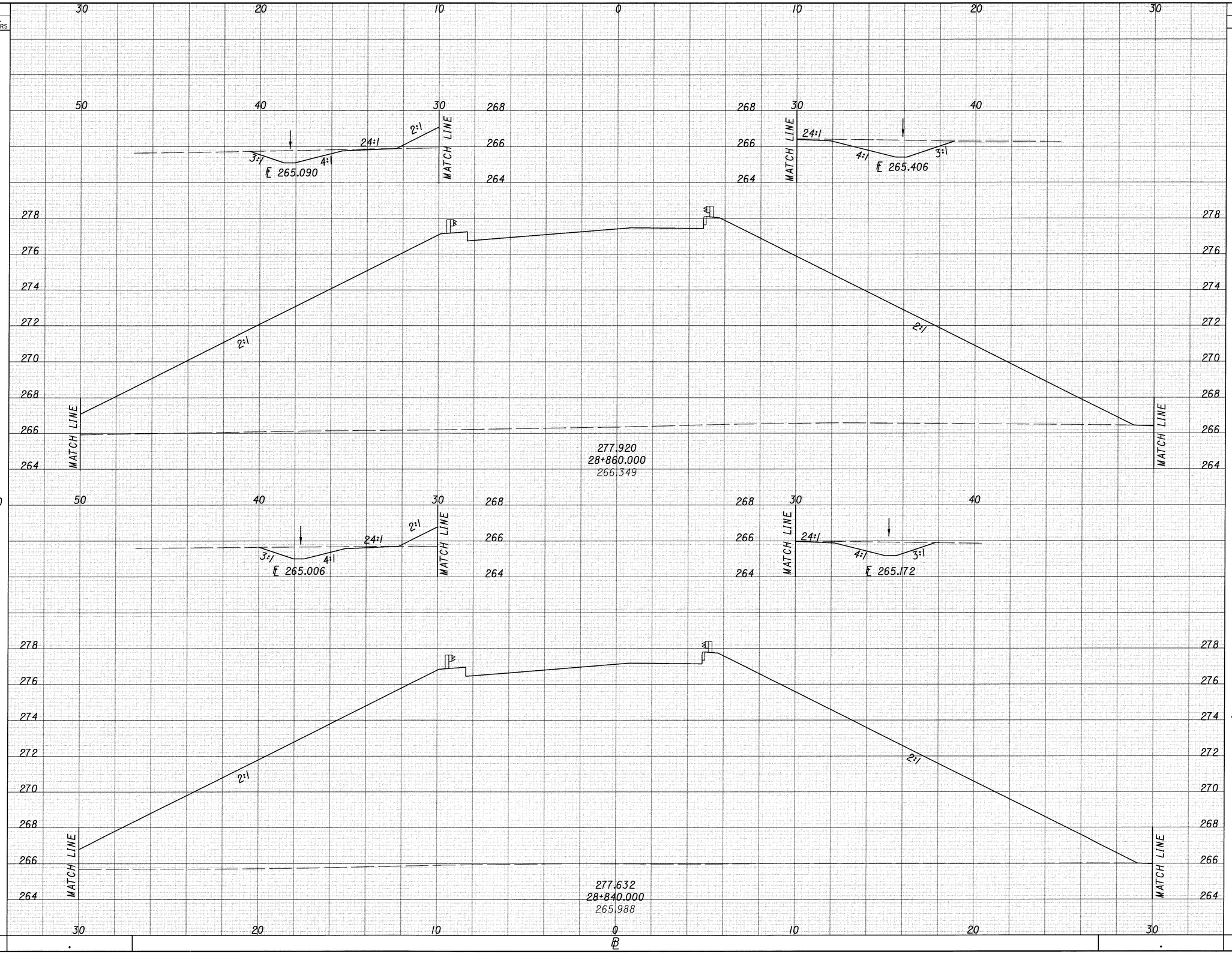
US-30EB CROSS SECTIONS

STA 28+819.723 TO STA 28+832.800

WYA / CRA-30-28.009 / 0.000

309
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
79.40		6.02	424.77			
	1570			107	8565	
77.58		4.66	431.69			
	554			29	3132	



CALCULATED AM

CHECKED REA

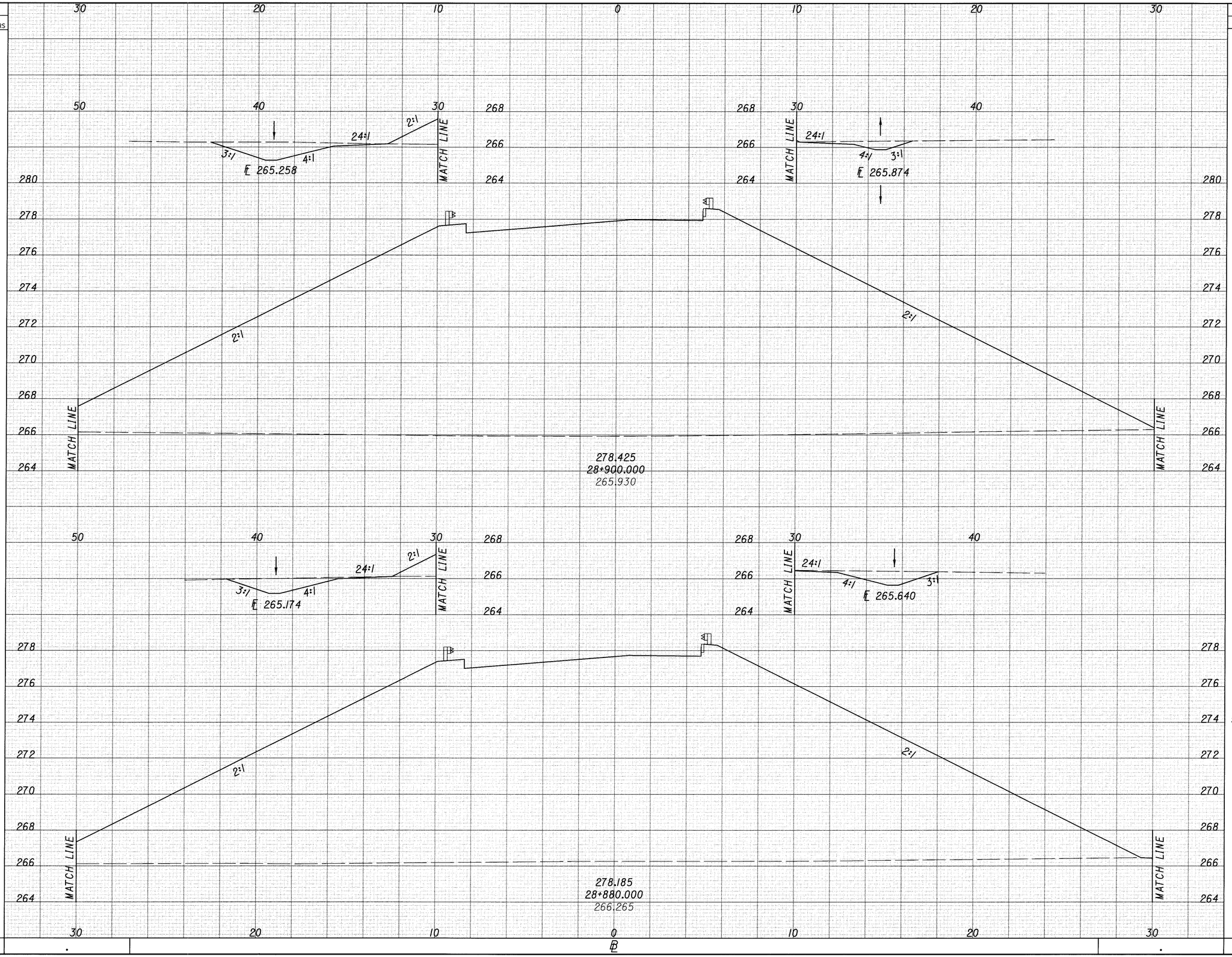
US-30EB CROSS SECTIONS

STA 28+840.000 TO STA 28+860.000

WYA/CRA-30-28.009/0.000

310
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
79.25	1590	5.63	471.10	114	9159
79.74	1591	5.74	444.77	118	8695



CALCULATED AM

CHECKED REA

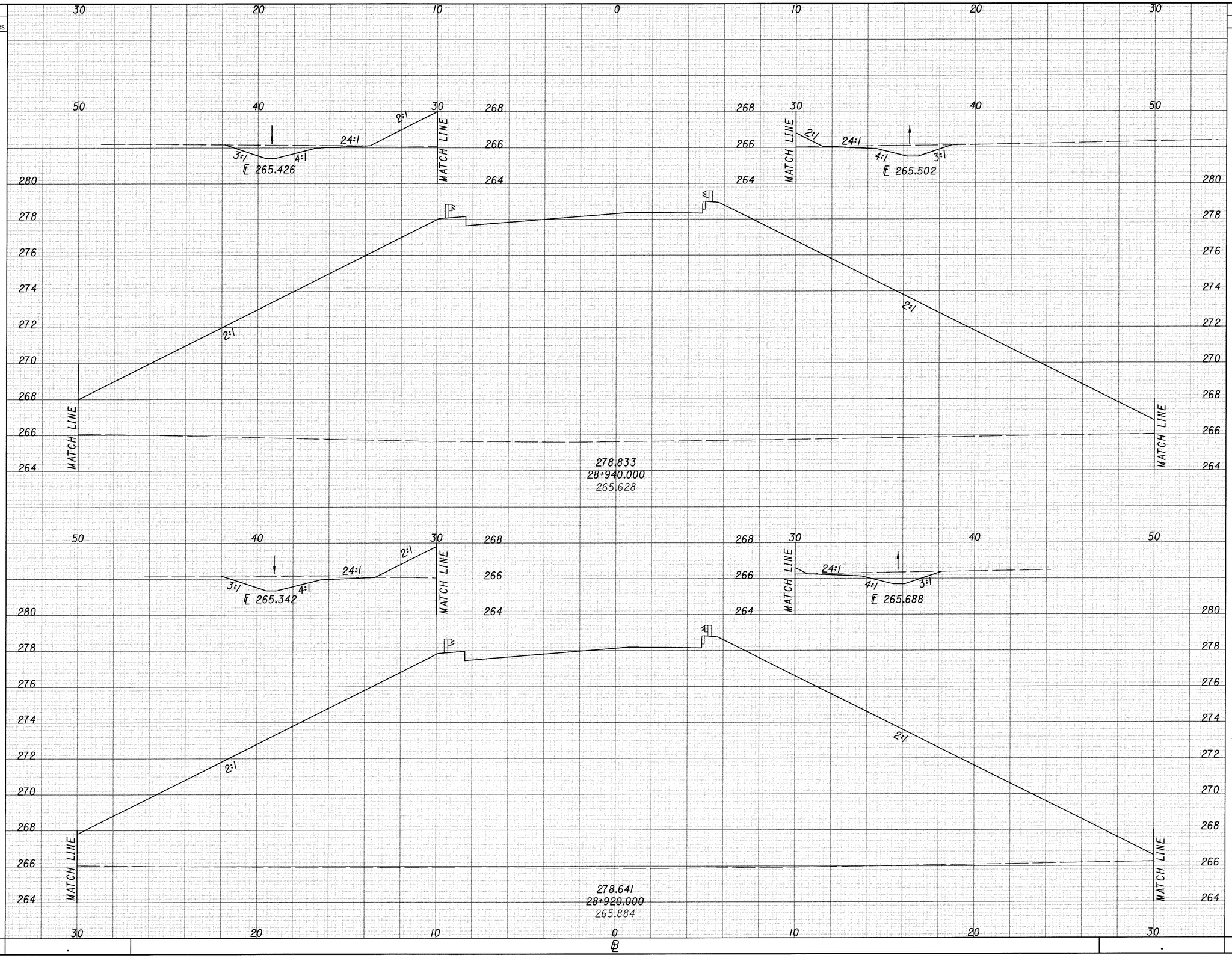
US-30EB CROSS SECTIONS

STA 28+880.000 TO STA 28+900.000

WYA / CRA-30-28.009 / 0.000

311
2116

SEEDING	
END WIDTH	SQ. METERS
80.73	1612
80.49	1597



END AREA		VOLUME	
CUT	FILL	CUT	FILL
4.28	513.07	94	10025
5.08	489.46	107	9606

CALCULATED AM

CHECKED REA

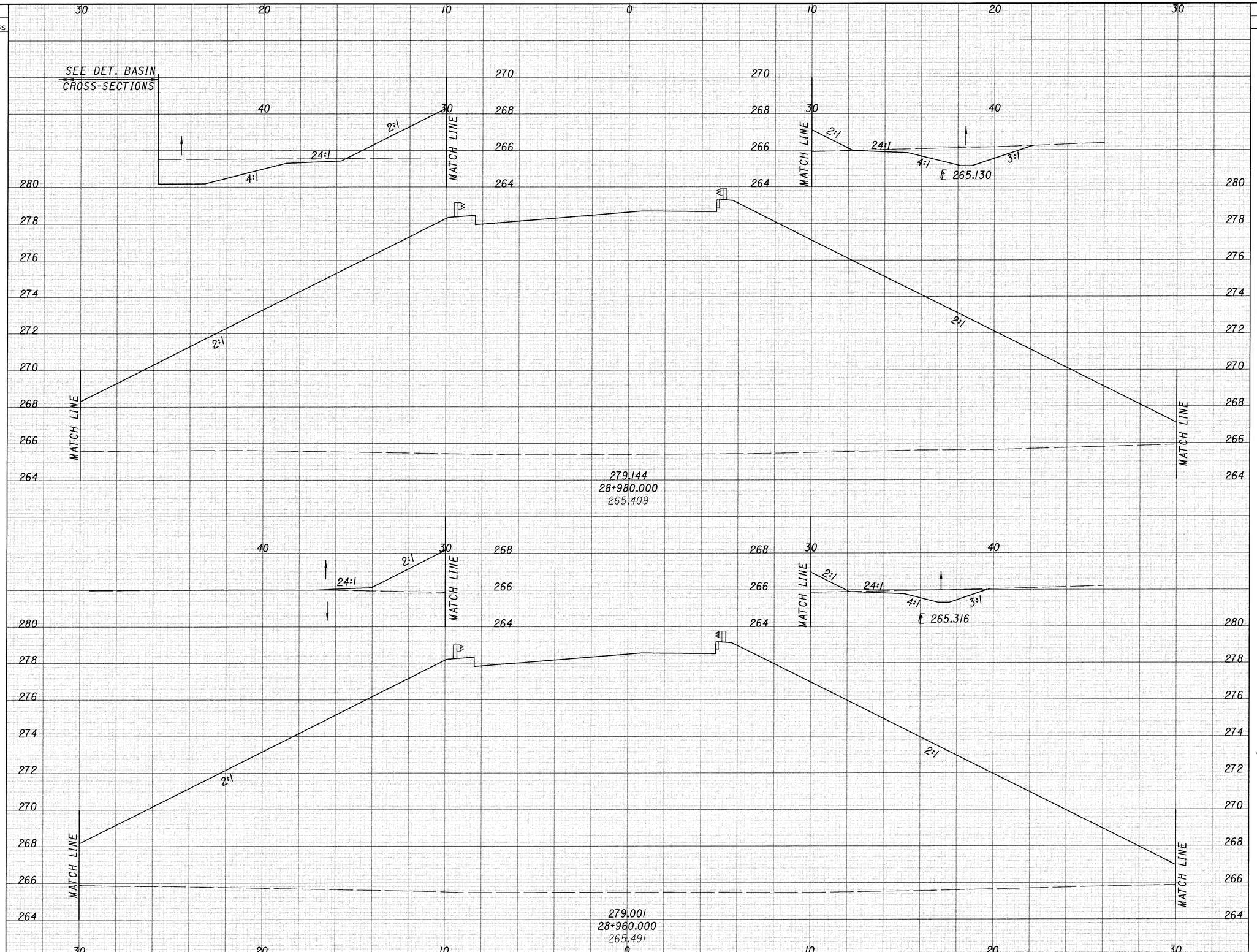
US-30EB CROSS SECTIONS

STA 28+920.000 TO STA 28+940.000

WYA / CRA-30-28.009 / 0.000

312
2116

SEEDING	
END WIDTH	SQ. METERS
87.71	1641
76.35	1571



END AREA		VOLUME	
CUT	FILL	CUT	FILL
11.91	550.92	141	10875
2.19	536.60	65	10497

CALCULATED AM

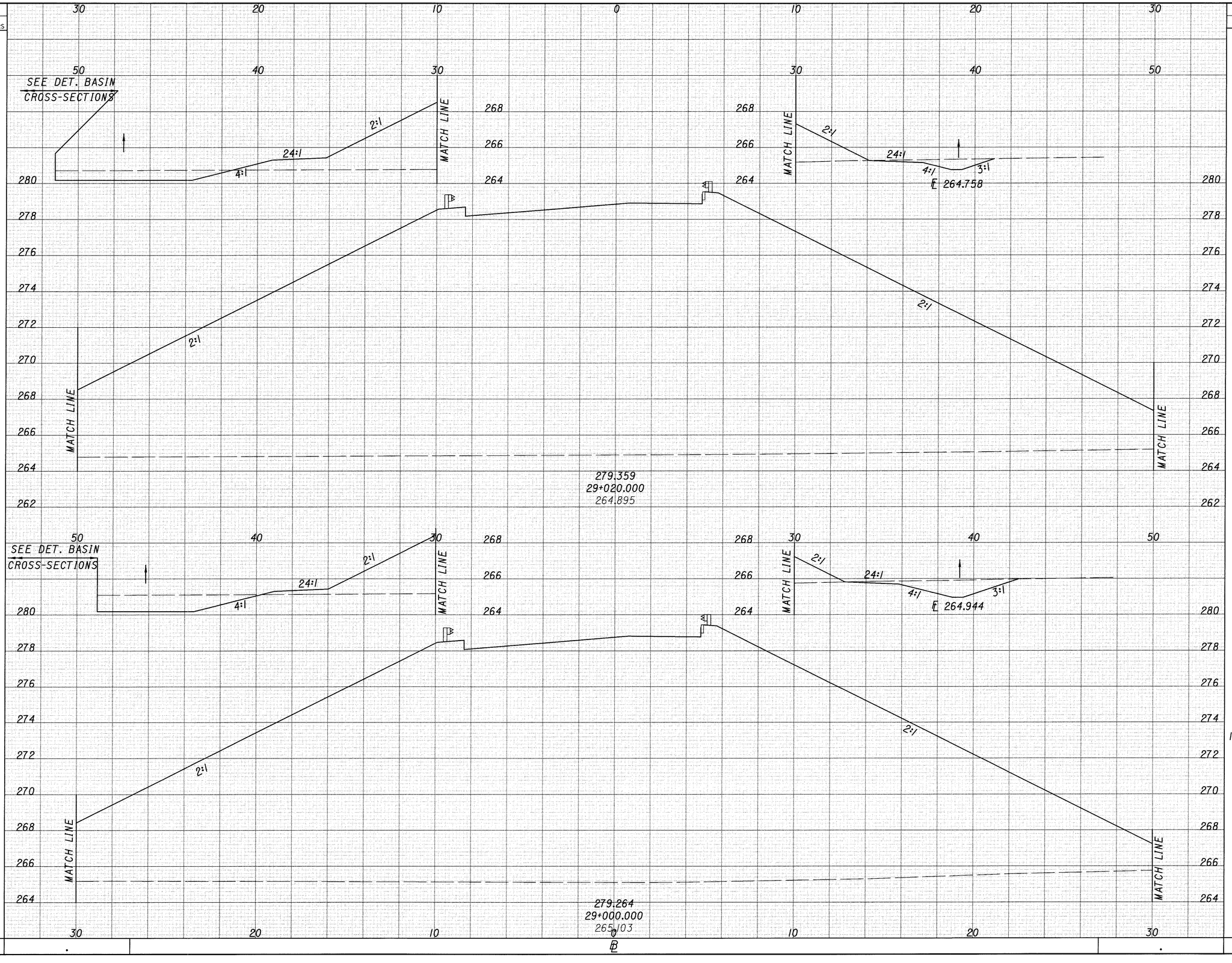
CHECKED REA

US-30EB CROSS SECTIONS
STA 28+960.000 TO STA 28+980.000

WYA / CRA-30-28.009 / 0.000

313
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
90.49	1812	6.50	613.75	172	11947
90.74	1785	10.72	580.96	226	11319



CALCULATED AM

CHECKED REA

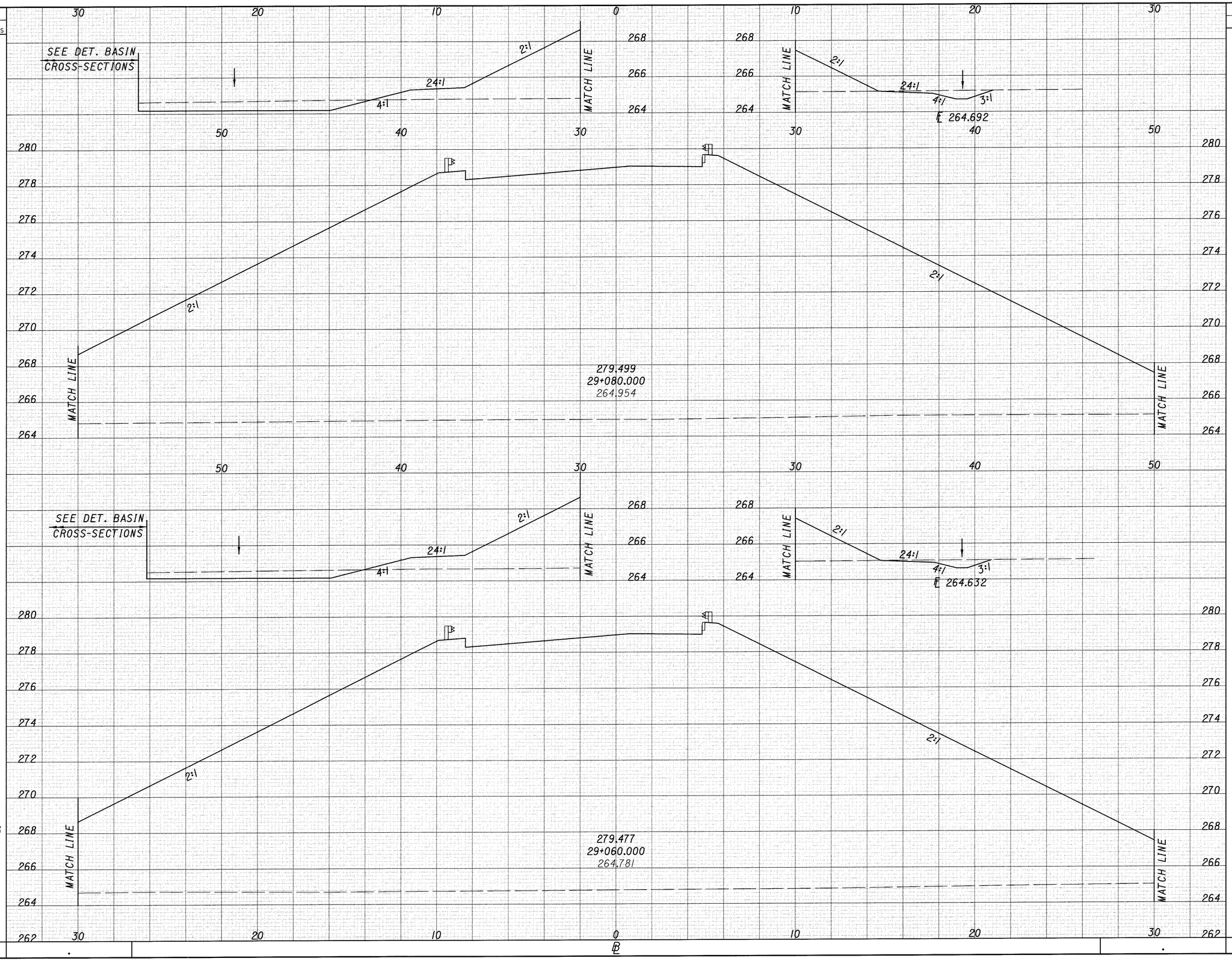
US-30EB CROSS SECTIONS

STA 29+000.000 TO STA 29+020.000

WYA/CRA-30-28.009/0.000

314
2116

SEEDING	
END WIDTH	SQ. METERS
93.74	1869
93.15	3673



END AREA		VOLUME	
CUT	FILL	CUT	FILL
7.25	620.21	127	12512
5.49	630.97	240	24894

CALCULATED AM

CHECKED REA

US-30EB CROSS SECTIONS STA 29+060.000 TO STA 29+080.000

WYA / CRA-30-28.009 / 0.000

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
96.99	1969	3.66	585.89	74	11909
99.90	1936	3.74	605.04	110	12253

CALCULATED AM

CHECKED REA

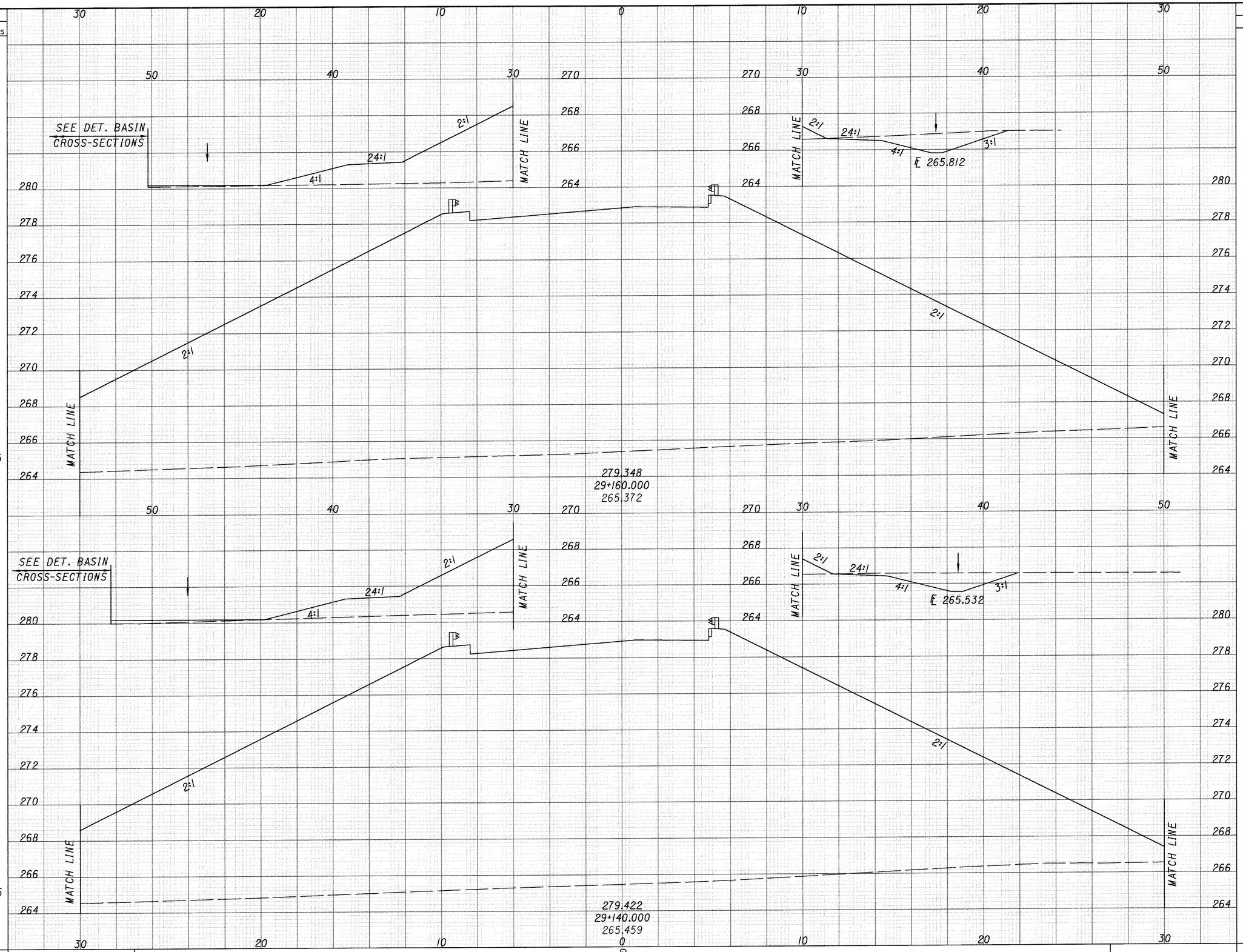
US-30EB CROSS SECTIONS

STA 29+100.000 TO STA 29+120.000

WYA/CRA-30-28.009/0.000

316
2116

SEEDING	
END WIDTH	SQ. METERS
88.97	1805
91.51	1885



END AREA		VOLUME	
CUT	FILL	CUT	FILL
4.71	585.18	93	11690
4.58	583.81	82	11697

CALCULATED AM

CHECKED REA

US-30EB CROSS SECTIONS

STA 29+140.000 TO STA 29+160.000

WYA / CRA-30-28.009 / 0.000

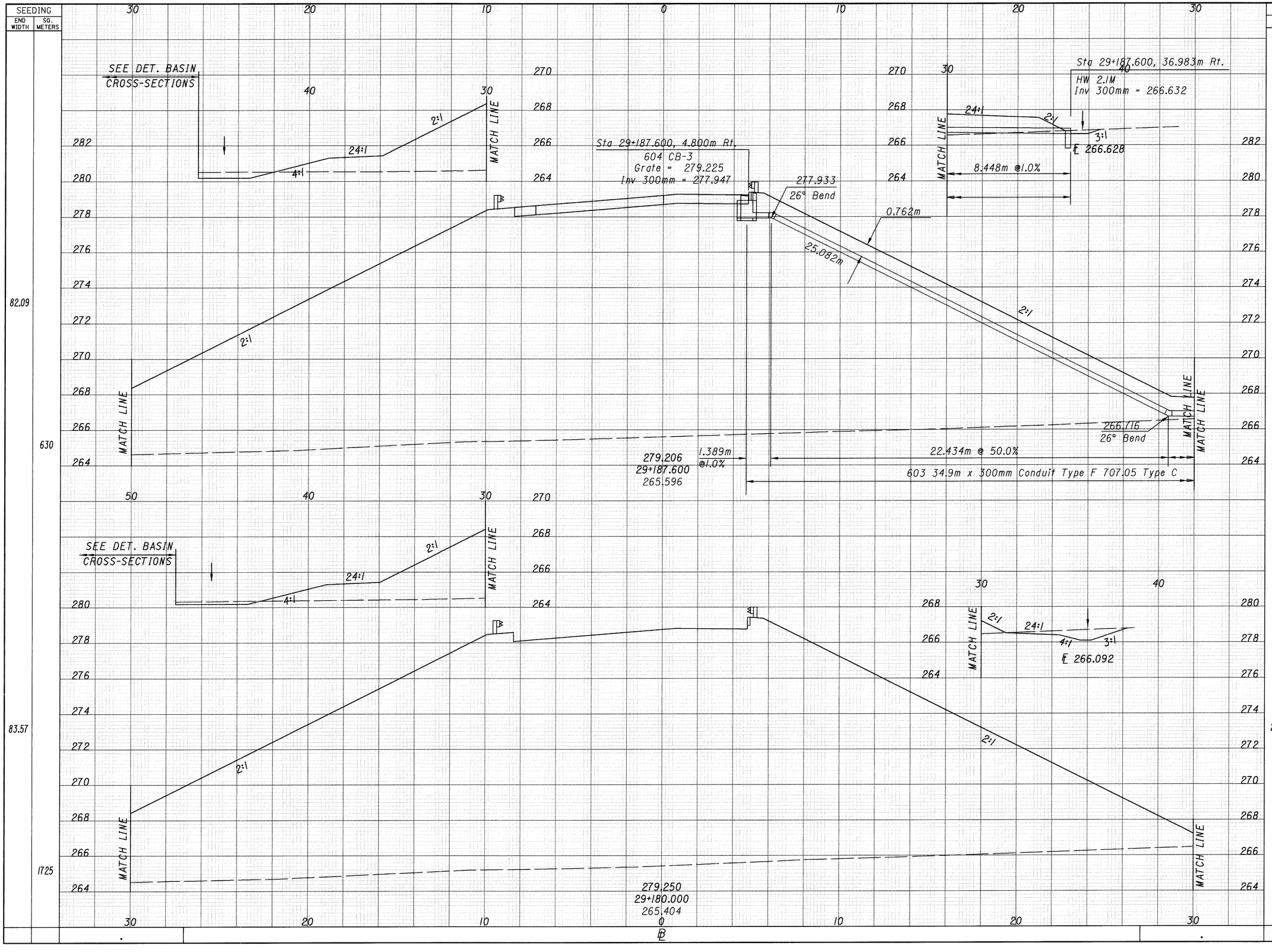
317
2116

SEEDING	
END WIDTH	SQ. METERS
82.09	630
83.57	1725

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.49	569.19	15	4346
2.52	574.54	72	11597

CALCULATED AM

CHECKED REA

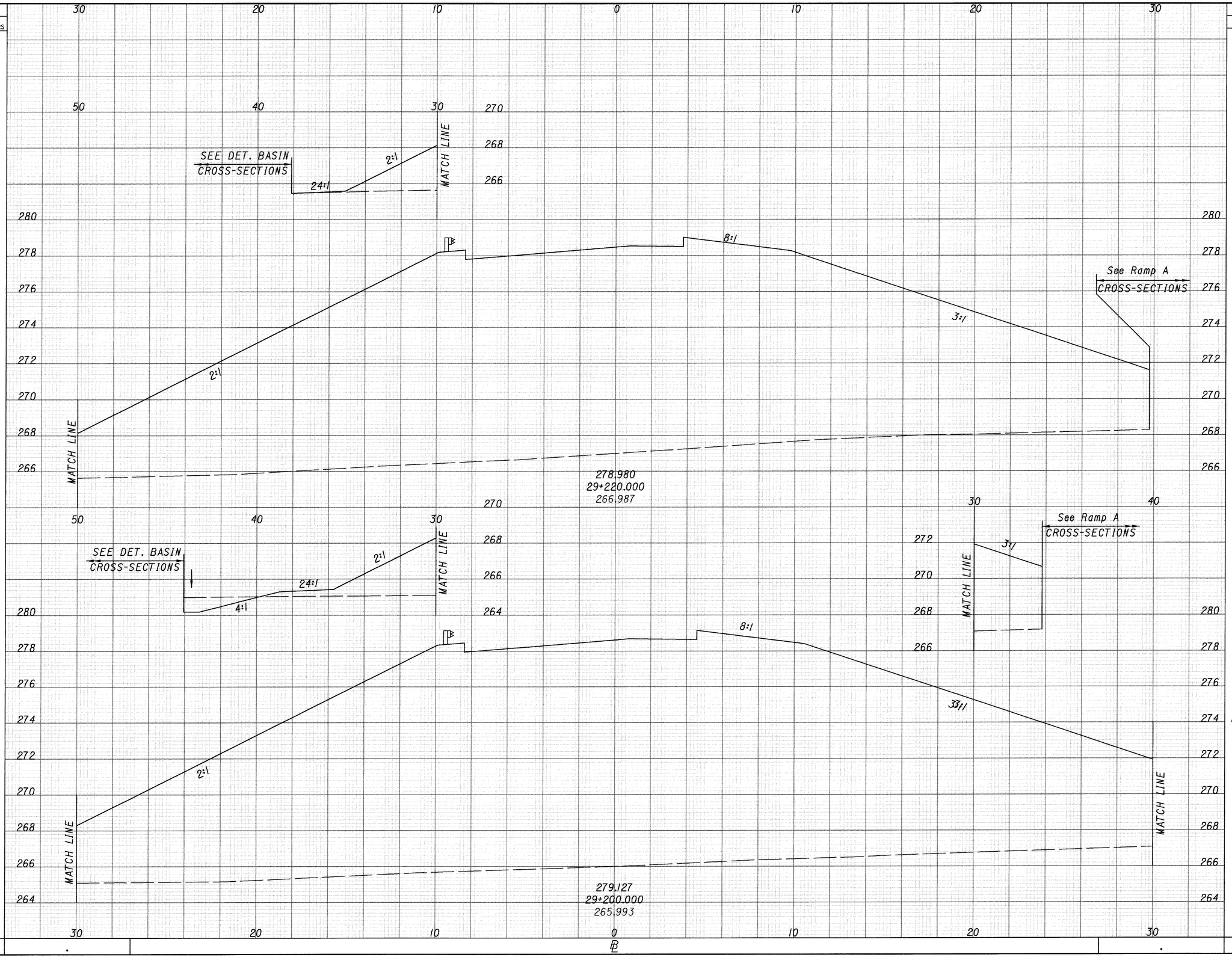


US-30EB CROSS SECTIONS
STA 29+180.000 TO STA 29+187.600

WYA / CRA-30-28.009 / 0.000

318
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
59.83	1304	0.00	512.37	20	11187
70.52	946	2.04	606.32	22	7288



CALCULATED AM

CHECKED REA

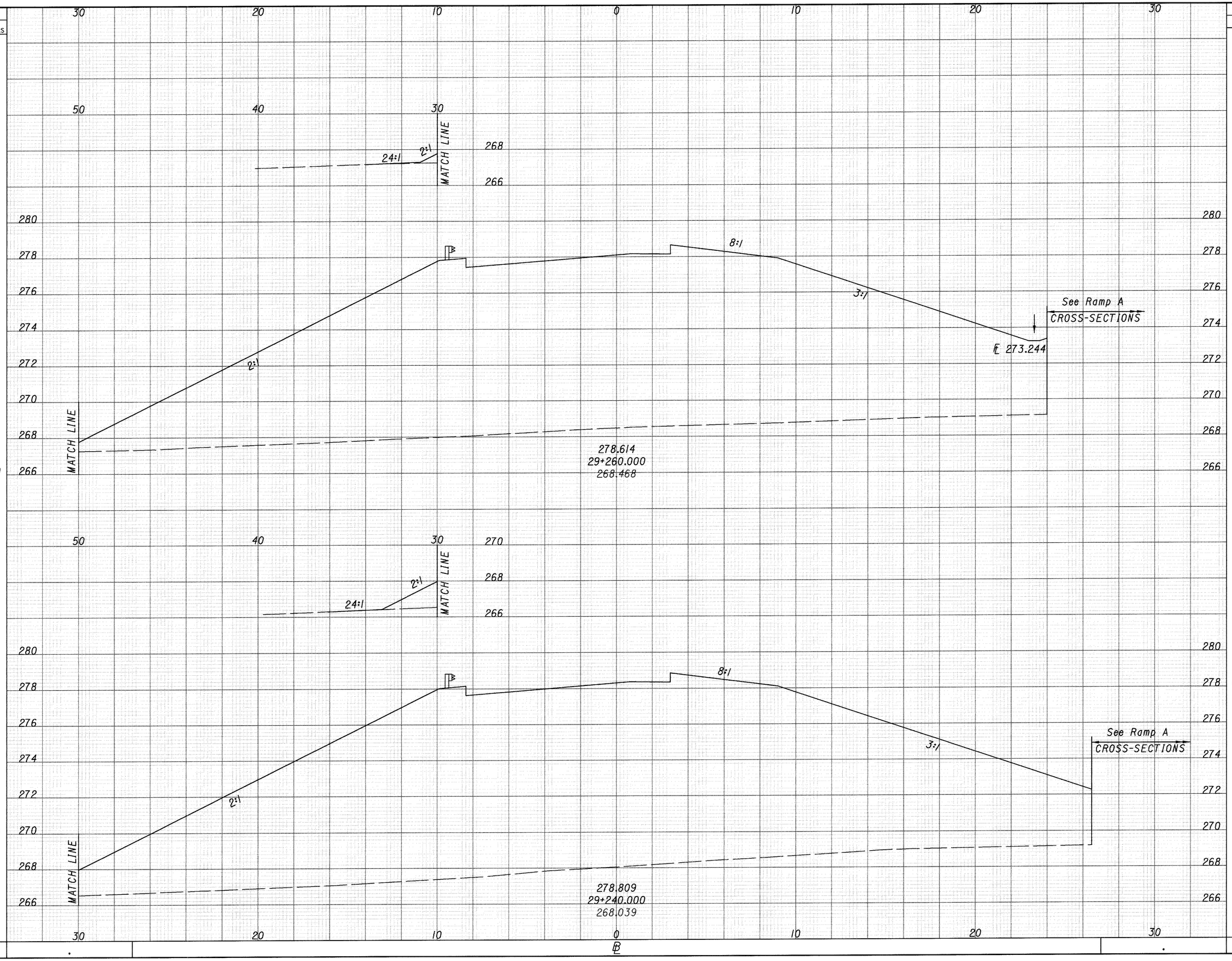
US-30EB CROSS SECTIONS

STA 29+200.000 TO STA 29+220.000

WYA/CRA-30-28.009/0.000

319
2116

SEEDING	
END WIDTH	SQ. METERS
49.98	1049
54.94	1148



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.00	382.84		
		0	8081
0.00	425.21		
		0	9376

CALCULATED AM

CHECKED REA

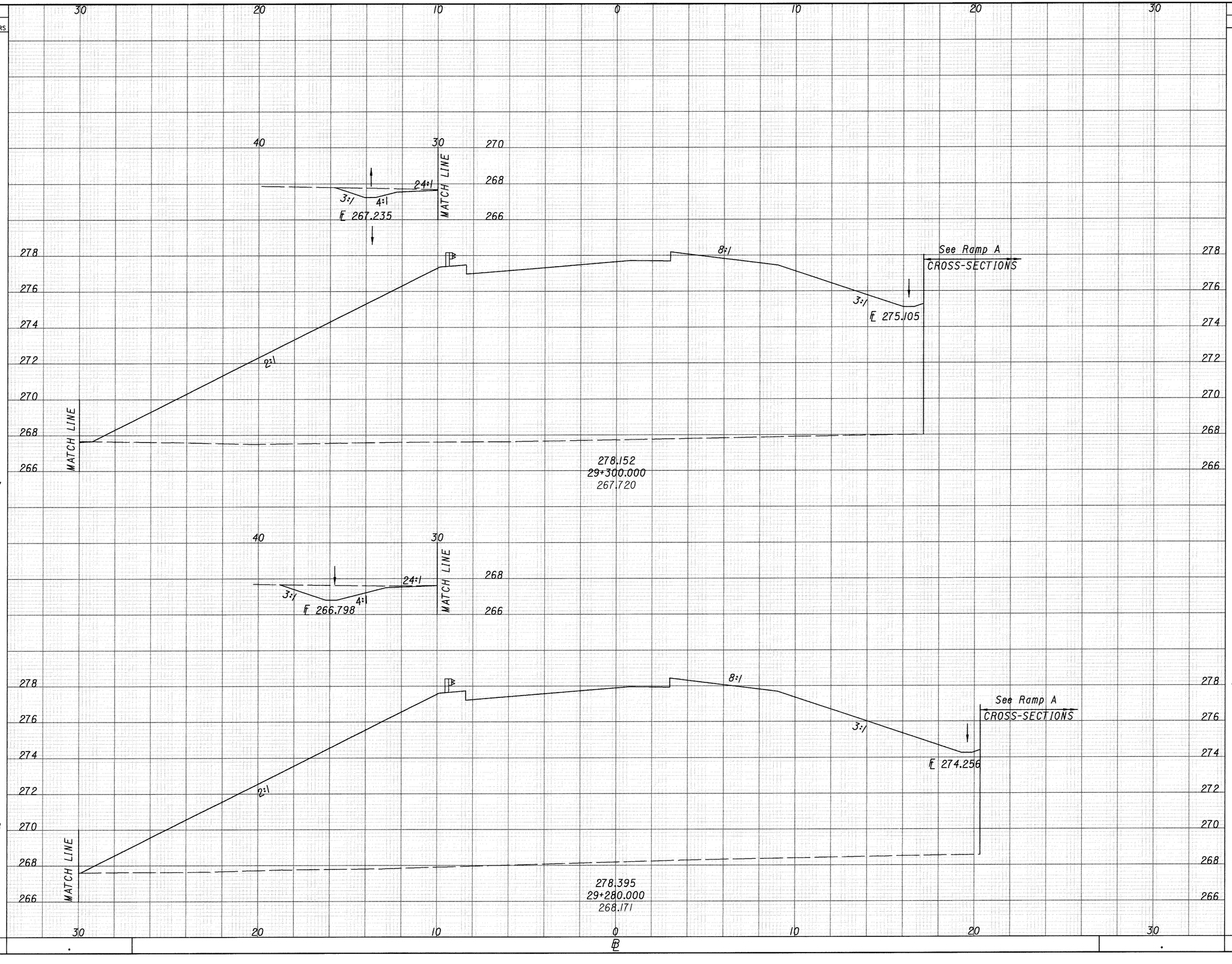
US-30EB CROSS SECTIONS

STA 29+240.000 TO STA 29+260.000

WYA / CRA-30-28.009 / 0.000

320
2116

SEEDING	
END WIDTH	SQ. METERS
47.90	
	1027
54.81	
	1048



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.41	347.09		
		44	7093
2.94	362.17		
		29	7450

CALCULATED AM

CHECKED REA

US-30EB CROSS SECTIONS

STA 29+280.000 TO STA 29+300.000

WYA/CRA-30-28.009/0.000

321
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
46.58	944	5.42	307.00	92	6300
47.86	958	3.75	323.01	52	6701

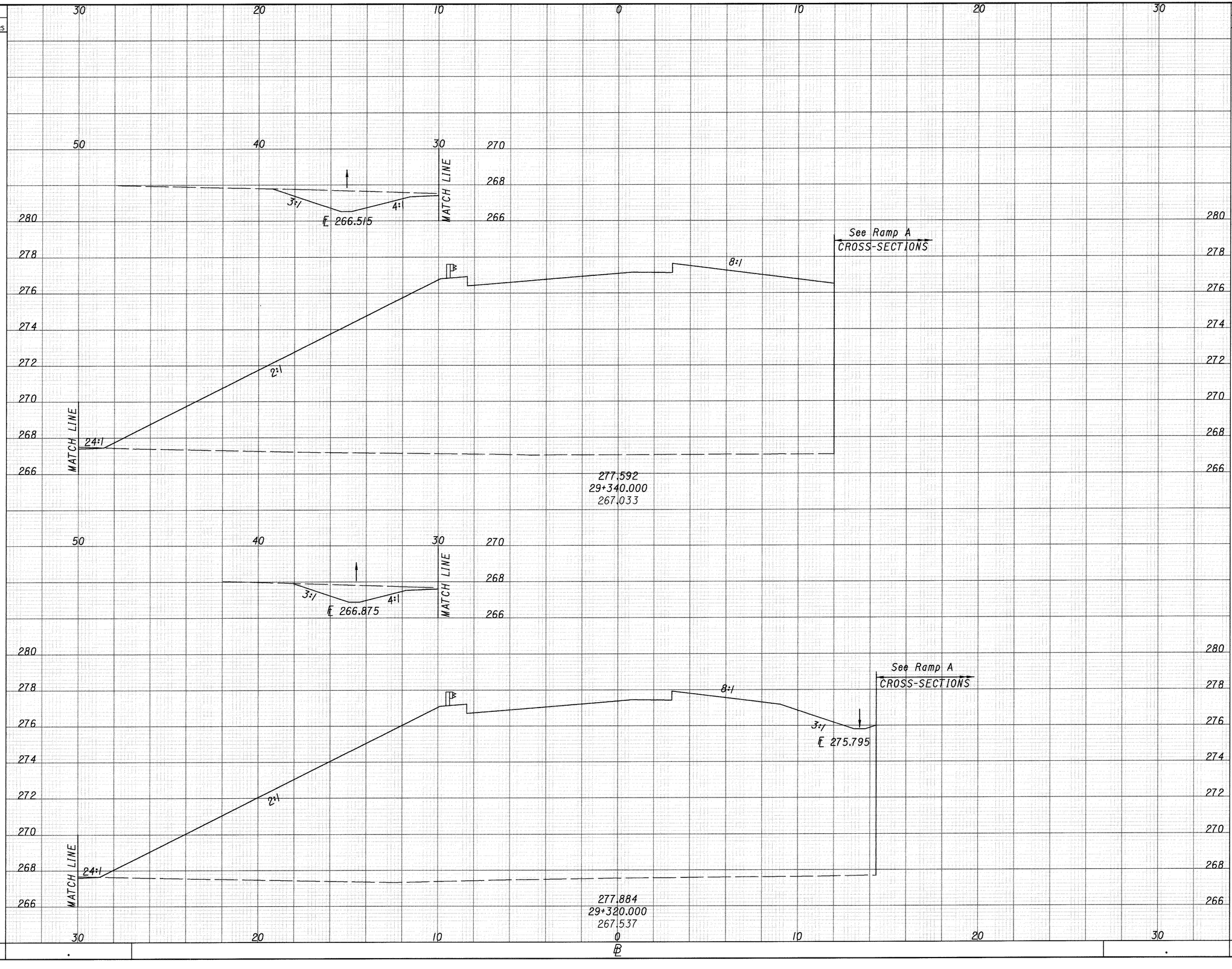
CALCULATED AM

CHECKED REA

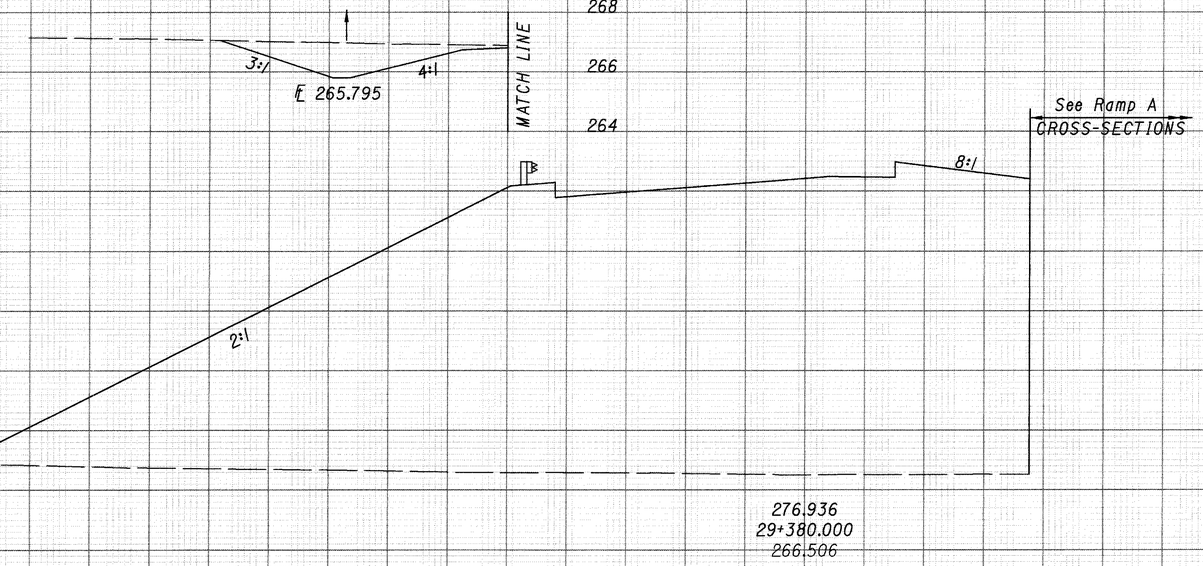
US-30EB CROSS SECTIONS
STA 29+320.000 TO STA 29+340.000

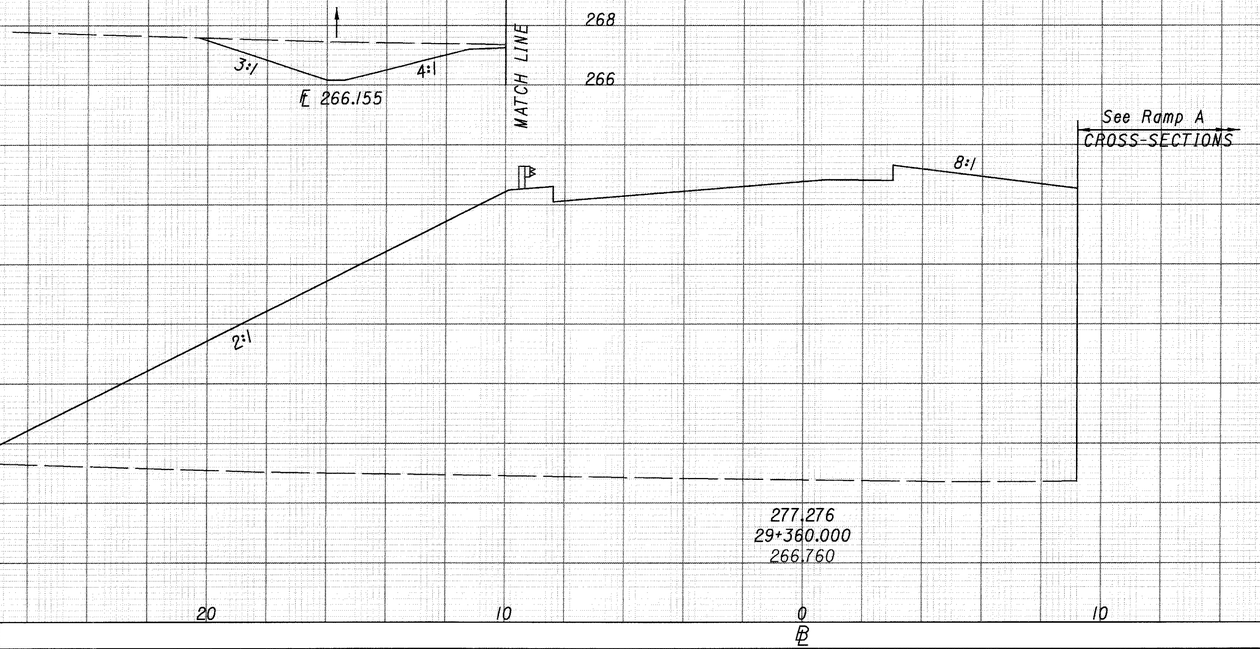
WYA/CRA-30-28.009/0.000

322
2116



SEEDING				END AREA		VOLUME		
END WIDTH	SQ. METERS			CUT	FILL	CUT	FILL	
		30 20 10 0 10 20 30						
		50 40 30						
		268						
		280	266					
		278	264					
		276						
42.55		274						
		272		5.68	259.56			
		270						
		268						
		266						
	874	264				125	5359	
		50 40 30						
		268						
		280	266					
		278						
44.83		276						
		274		6.81	276.29			
		272						
		270						
		268						
	914	266				122	5833	
		264						
		30 20 10 0 10 20 30						





CALCULATED AM

CHECKED REA

US-30EB CROSS SECTIONS

STA 29+360.000 TO STA 29+380.000

WYA/CRA-30-28.009/0.000

323
2116

SEEDING	
END WIDTH	SQ. METERS
35.64	841
48.43	910

30 20 10 0 10 20 30

50 40 30 268

266

3:1 4:1

℄ 265.505

MATCH LINE

278 276 274 272 270 268 266

See Ramp A
CROSS-SECTIONS

8:1

2:1

24:1

MATCH LINE

276.183
29+420.000
267.093

50 40 1050mm 30 268

For plan details, see sheet no. 169

2:1

266

3:1

℄ 265.462

MATCH LINE

264

278 276 274 272 270 268 266 264

See Ramp A
CROSS-SECTIONS

8:1

2:1

24:1

MATCH LINE

276.571
29+400.000
266.529

30 20 10 0 10 20 30

℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.30	215.76	108	4655
9.53	249.72	152	5093

CALCULATED AM

CHECKED REA

US-30EB CROSS SECTIONS
STA 29+400.000 TO STA 29+420.000

WYA / CRA-30-28.009 / 0.000

SEEDING END WIDTH	SEEDING SQ. METERS
59.46	
	222
64.04	
35.00	
	707

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2.05	330.91		
		8	1195
2.16	334.98		
0.98	198.74		
		23	4145

CALCULATED AM

CHECKED REA

US-30EB CROSS SECTIONS
STA 29+440.000 TO STA 29+443.589

WYA/CRA-30-28.009/0.000

325
2116

30 20 10 0 10 20 30

50 40 30 270 30 40 50

268 266 MATCH LINE 3:1 4:1 ℄ 265.588

MATCH LINE 24:1 4:1 3:1 ℄ 267.623 LAR/W

℄ Ramp A

276 274 272 270 268 266

2:1 2:1 MATCH LINE 24:1 MATCH LINE

Sta 29+440, 32.584 Lt.
HW 2.1M
Inv 375mm = 265.581
Total Area =0.126ha
Q10 = 0.023 cms
HGL = 265.81

275.693
29+443.589
267.209

275.593
29+443.492
267.563

40 30 268 266 MATCH LINE 2:1 3:1 ℄ 265.575

Ahead
Back

Sta 29+440, 4.378m Rt.
604 No. 2-2B CB
Grate = 275.545
Inv 375mm = 274.214

See Ramp A CROSS-SECTIONS

278 276 274 272 270 268 266 264

274.072
26° Bend

6:1 6:1

0.762m

Masonry Collar as per DM-1.1M
603 12.8m x 375mm Conduit Type B @1.0%

End width Ahead
From Sta 29+439.973 ℄ Ramp A

End width Back

End area Ahead
From Sta 29+439.973 ℄ Ramp A

End area Back

2:1

603 1.4m x 375mm Conduit Type F 707.05 Type C @1.0%

603 18.9m x 375mm Conduit Type F 707.05 Type C @ 50.0%

24:1 MATCH LINE

265.640
26° Bend

16.864m

275.770
29+440.000
267.285

603 5.9m x 375mm Conduit Type f 707.05 Type C @1.0%

280 278 276 274 272 270 268 266 264

30 20 10 0 10 20 30

℄

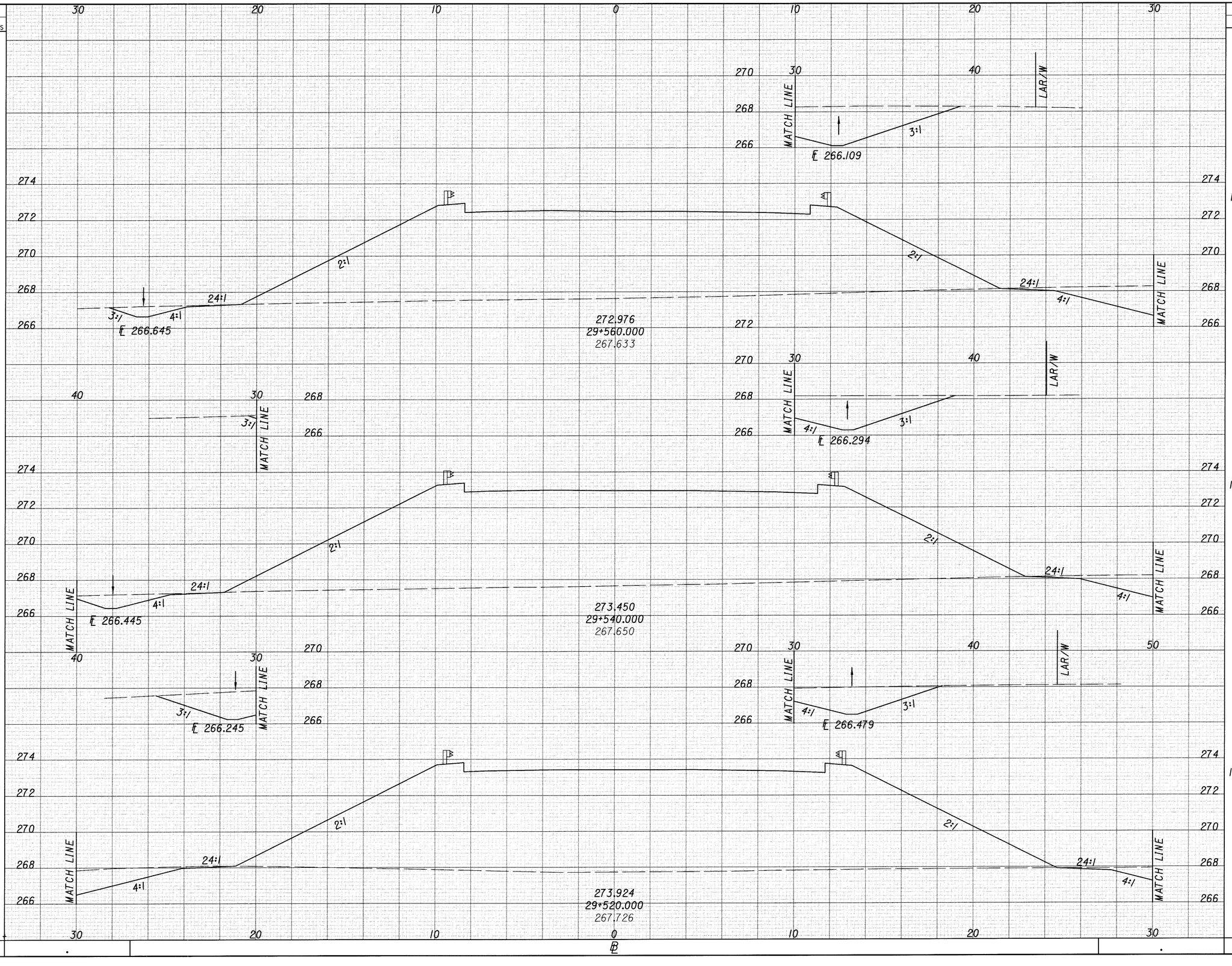
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
64.74	1237	14.91	245.88	187	5417
58.99	1177	3.78	295.82	62	6167
58.68	969	2.41	320.86	37	5348

CALCULATED AM
CHECKED REA

US-30EB CROSS SECTIONS
STA 29+460.000 TO STA 29+500.000

WYA / CRA-30-28.009 / 0.000

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
59.02	1199	19.45	156.71	358	3357
60.91	1266	16.32	178.97	353	3738
65.64	1304	18.93	194.82	338	4407



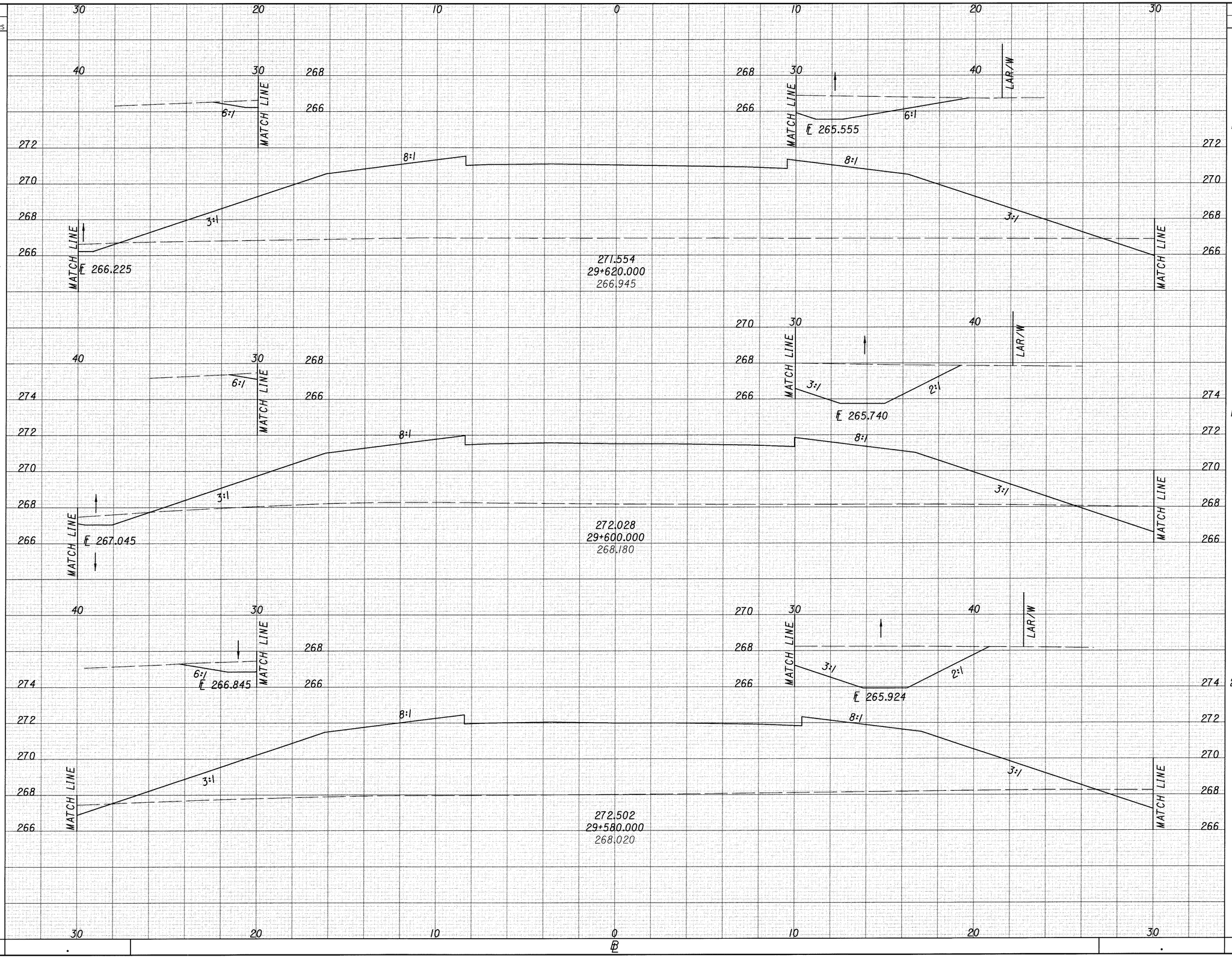
CALCULATED AM

CHECKED REA

US-30EB CROSS SECTIONS STA 29+520.000 TO STA 29+560.000

WYA/CRA-30-28.009/0.000

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
63.42	1255	10.35	171.06	299	3040
62.08	1284	19.50	132.98	408	2994
66.35	1254	21.30	166.39	408	3231



CALCULATED AM
CHECKED REA

US-30EB CROSS SECTIONS

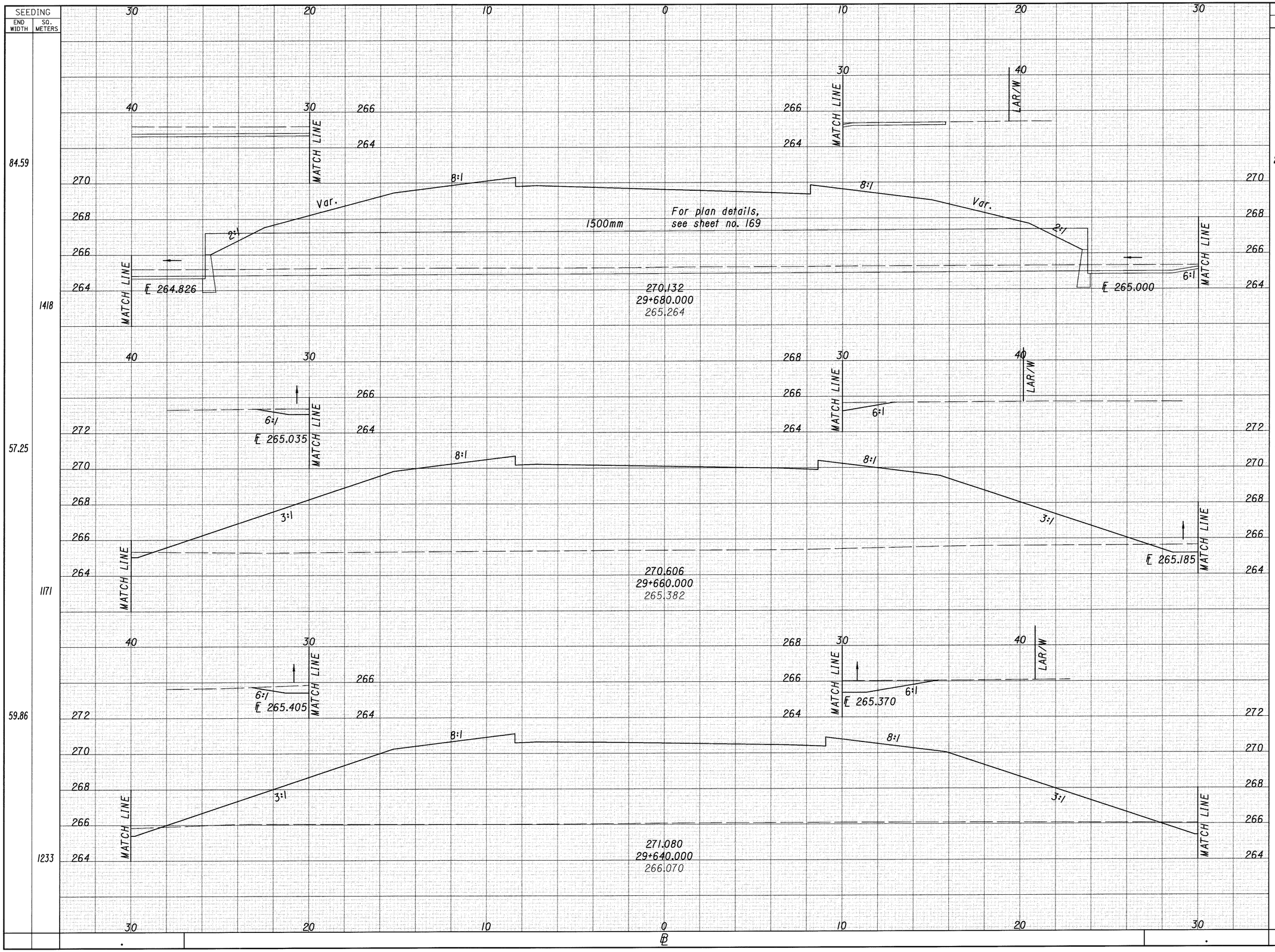
STA 29+580.000 TO STA 29+620.000

WYA / CRA-30-28.009 / 0.000

328
216

SEEDING END WIDTH	SEEDING SQ. METERS
84.59	1418
57.25	1171
59.86	1233

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
23.20	176.91	257	3747
2.50	197.77	68	3869
4.33	189.11	147	3602



US-30EB CROSS SECTIONS STA 29+640.000 TO STA 29+680.000

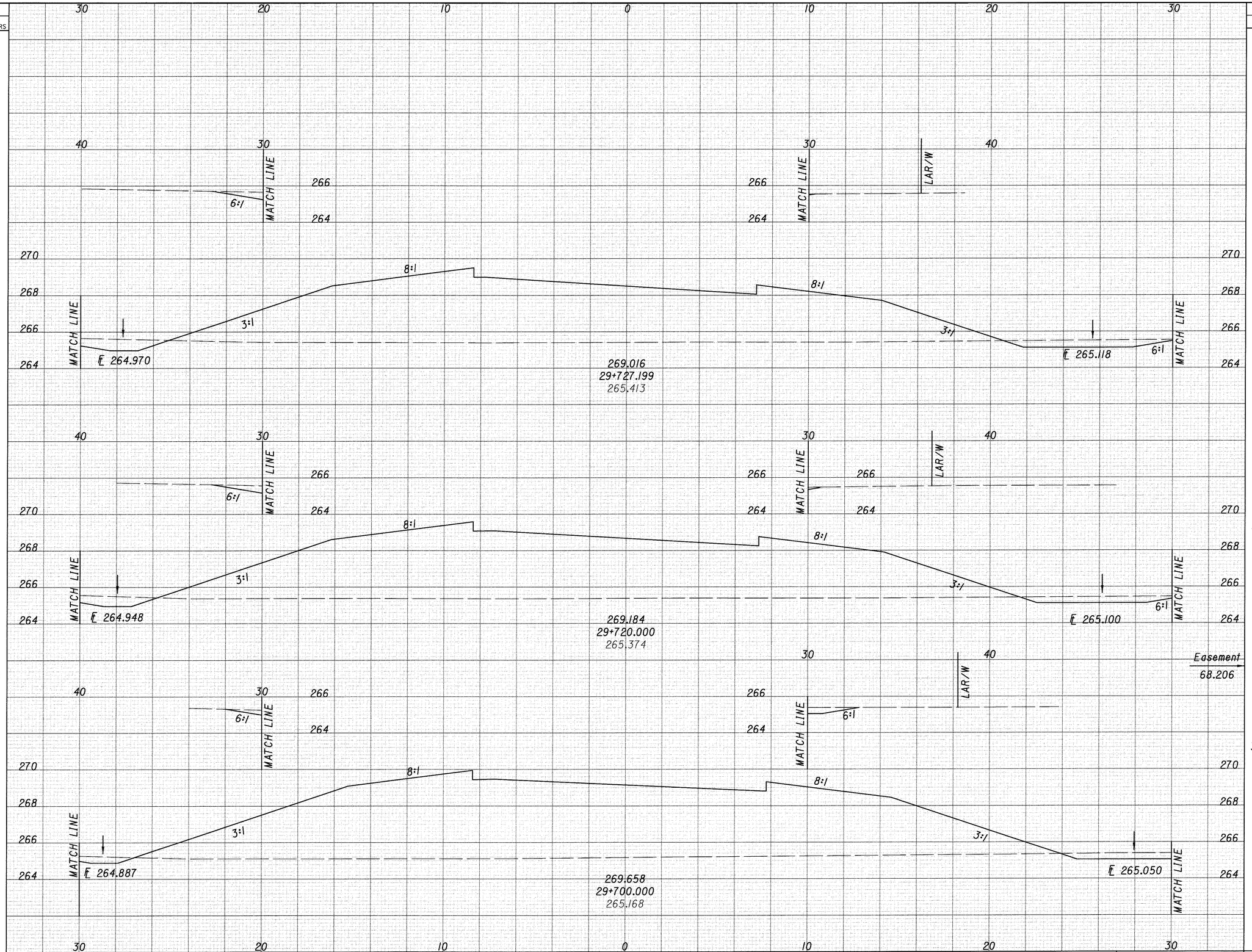
WYA / CRA-30-28.009 / 0.000

CALCULATED AM

CHECKED REA

329
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
55.94	404	5.94	116.18	39	871
56.20	1130	4.96	125.75	85	2829
56.83	1414	3.54	157.14	267	3340



CALCULATED AM

CHECKED REA

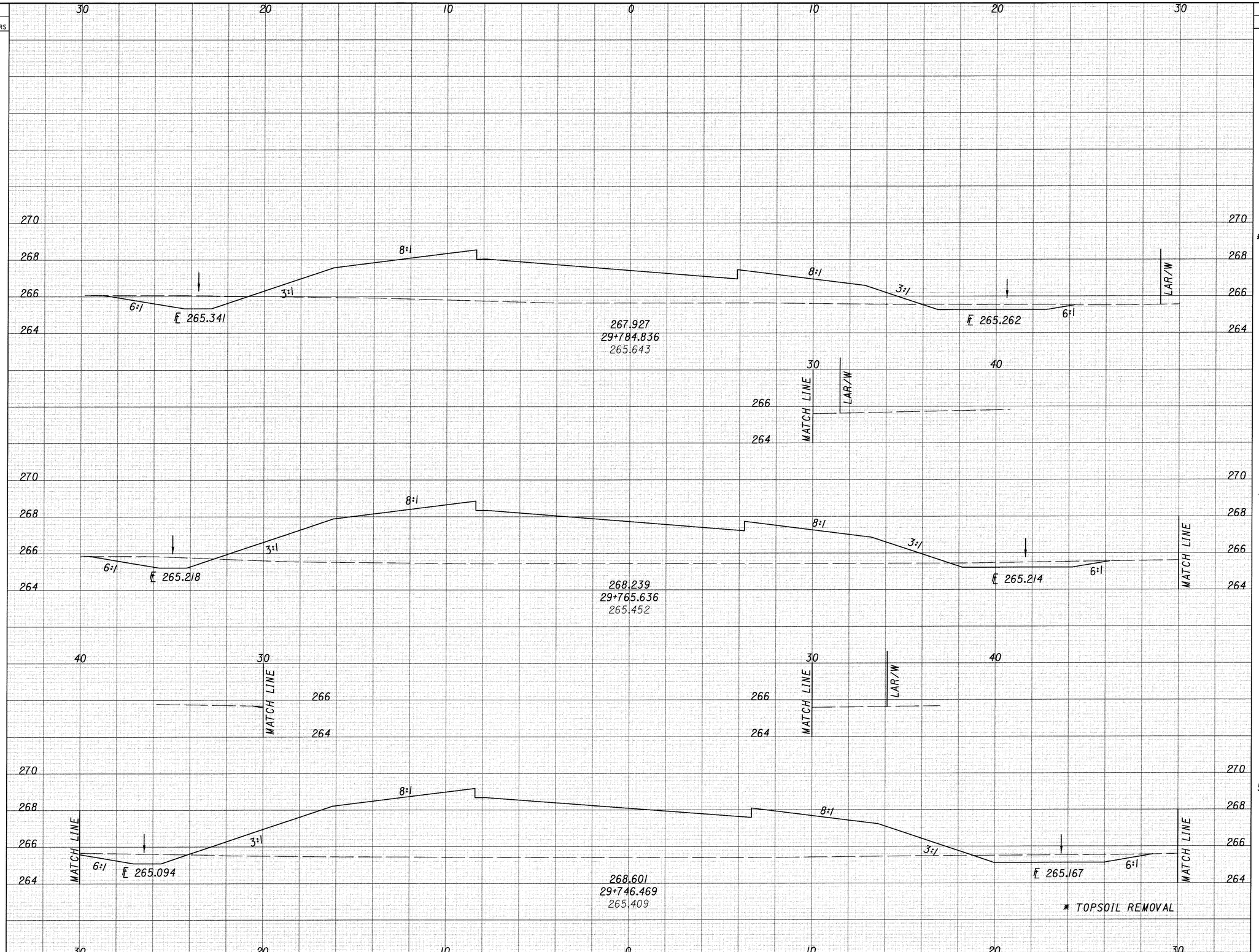
US-30EB CROSS SECTIONS

STA 29+700.000 TO STA 29+727.199

WYA/CRA-30-28.009/0.000

330
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
46.59	918	5.27	57.83	94	1325
48.99	969	*0.00			
52.16	1042	4.53	80.21	93	1697
		5.20	96.86	107	2053



CALCULATED AM

CHECKED REA

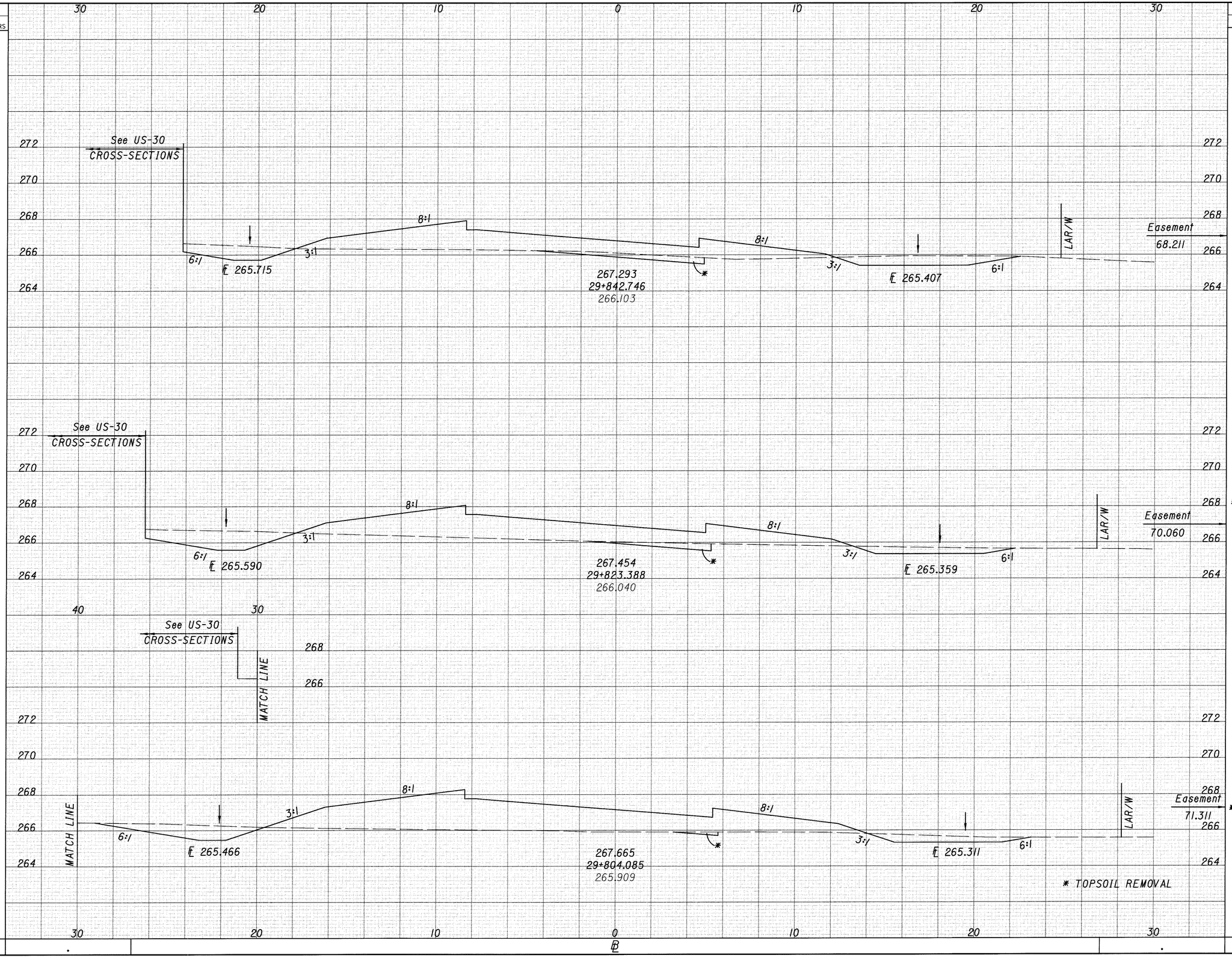
US-30EB CROSS SECTIONS

STA 29+746.469 TO STA 29+784.836

WYA/CRA-30-28.009/0.000

331
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
38.22		7.90	25.49		
		*1.96			
	752			163	528
				*32	
39.49		8.94	29.03		
		*1.36			
	828			156	664
				*16	
46.29		7.24	39.79		
		*0.25			
	894			120	940
				*2	



CALCULATED AM

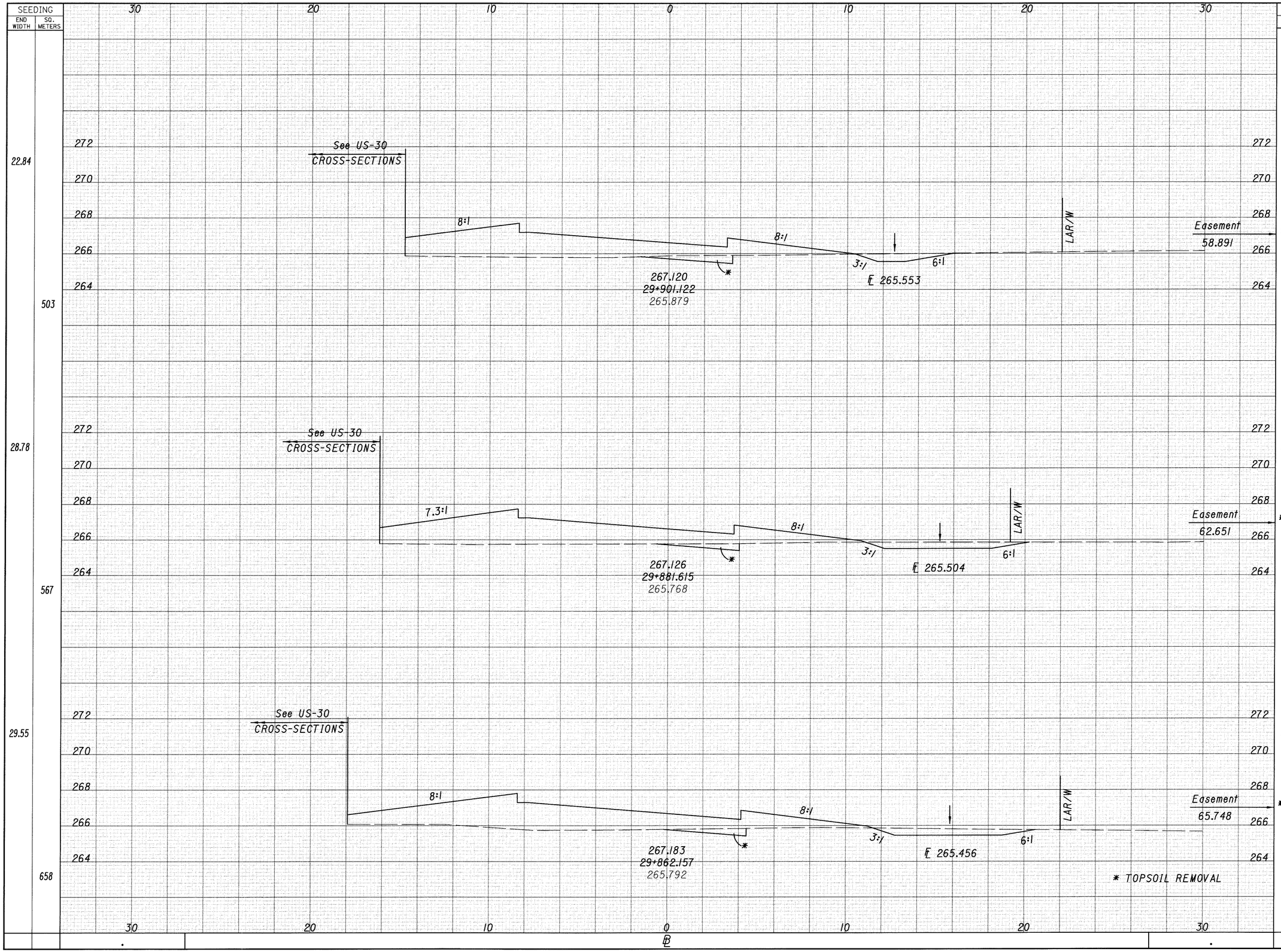
CHECKED REA

US-30EB CROSS SECTIONS

STA 29+804.085 TO STA 29+842.746

WYA/CRA-30-28.009/0.000

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
22.84	503	1.53	24.79	41	515
		*1.27		*21	
28.78	567	2.69	27.97	53	551
		*0.88		*18	
29.55	658	2.71	28.66	103	526
		*0.99		*29	



* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

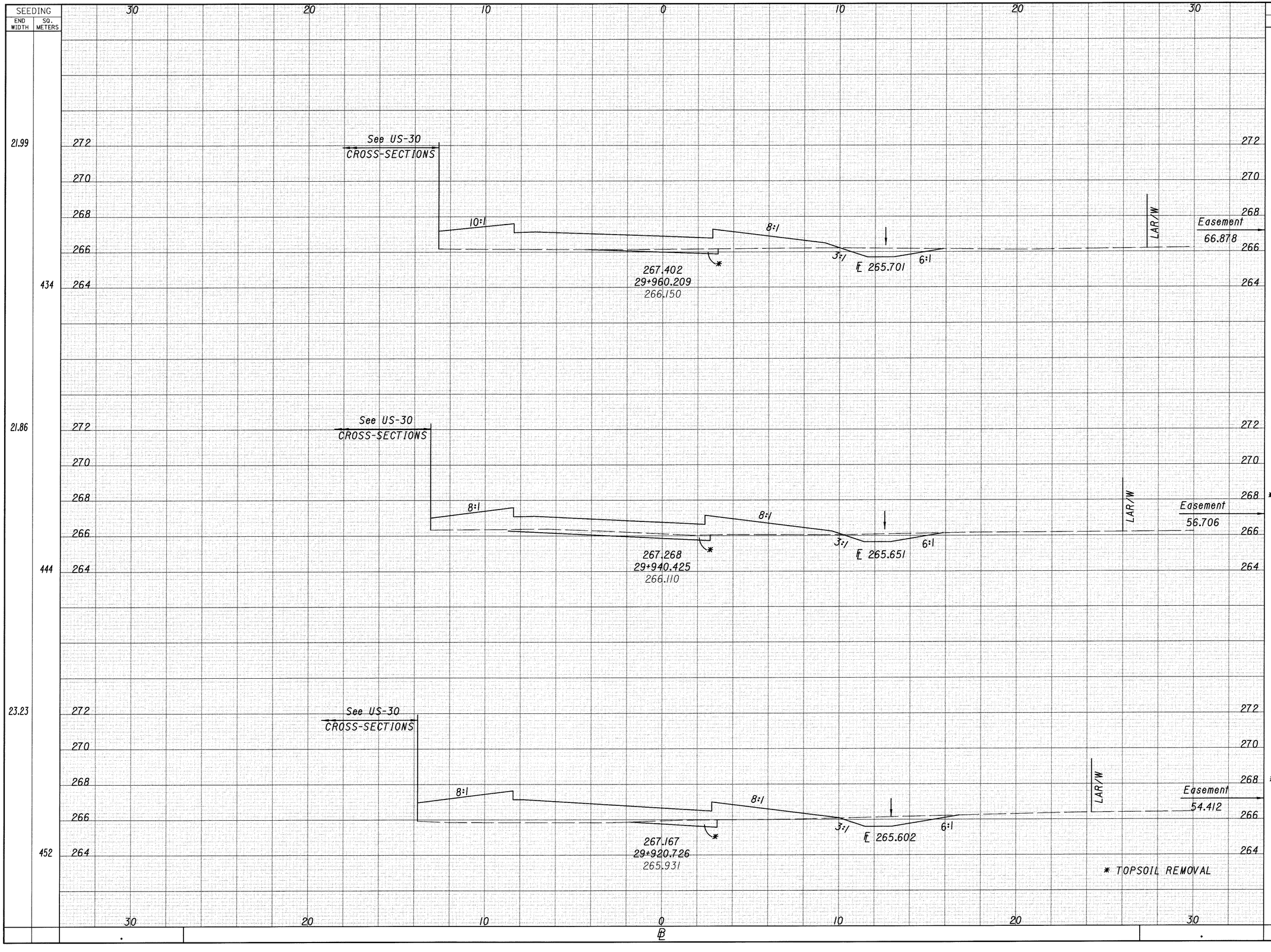
US-30EB CROSS SECTIONS

STA 29+862.157 TO STA 29+901.122

WYA / CRA-30-28.009 / 0.000

333
2116

SEEDING END WIDTH	SEEDING SQ. METERS	STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
21.99		29+960.209	1.82	19.57		
	434		*1.01		33	374
					*36	
21.86		29+940.425	1.55	18.27		
	444		*2.62		37	402
					*37	
23.23		29+920.726	2.21	22.58		
	452		*1.12		37	464
					*23	



CALCULATED AM

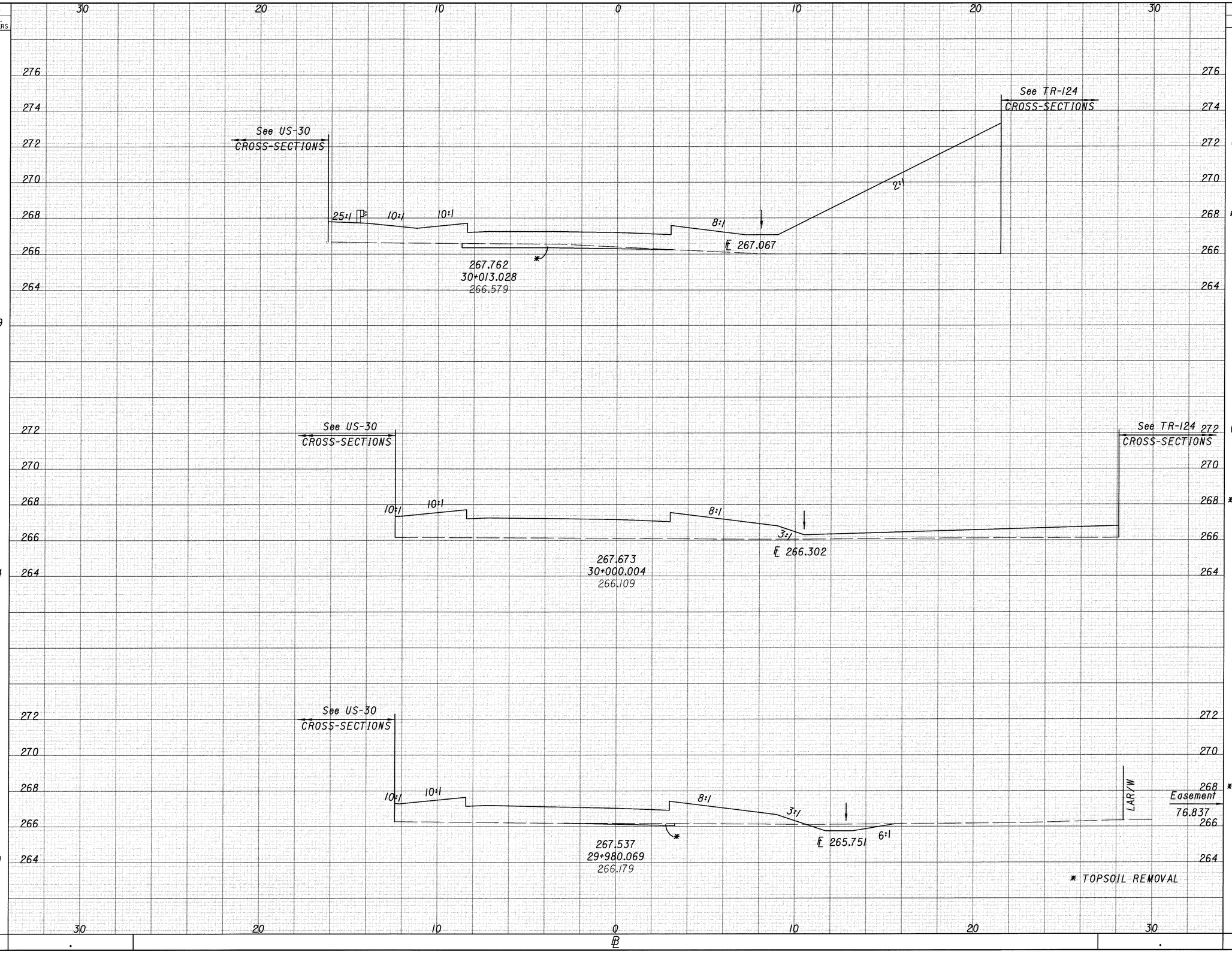
CHECKED REA

US-30EB CROSS SECTIONS STA 29+920.726 TO STA 29+960.209

WYA / CRA-30-28.009 / 0.000

334
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
29.00	379	0.00	76.14	0	705
		*1.85		*12	
29.26	494	0.00	32.09	12	523
		*0.00		*3	
20.27	420	1.21	20.34	30	396
		*0.34		*13	



CALCULATED AM

CHECKED REA

US-30EB CROSS SECTIONS

STA 29+980.069 TO STA 30+013.028

WYA/CRA-30-28.009/0.000

335
216

SEEDING	
END WIDTH	SQ. METERS
28.08	527
25.87	469
22.01	

END AREA	
CUT	FILL
25.05	20.07
*10.73	
29.96	18.05
*8.57	
31.83	14.44
*6.41	

VOLUME	
CUT	FILL
538	373
*189	
605	318
*147	

30 20 10 0 10 20 30

40 30

LAR/W

MATCH LINE

264

262

268

266

264

262

260

MATCH LINE

2:1

3:1

8:1

8:1

℄ 261.287

262.947
28+570.924
264.694

See US-23
CROSS-SECTIONS

40 30

LAR/W

MATCH LINE

264

262

268

266

264

262

260

MATCH LINE

2:1

3:1

8:1

8:1

℄ 261.228

262.706
28+551.376
264.340

See US-23
CROSS-SECTIONS

268

266

264

262

260

LAR/W

2:1

3:1

8:1

8:1

℄ 261.170

262.527
28+531.779
263.049

Ahead only

See US-23
CROSS-SECTIONS

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

CALCULATED AM

CHECKED REA

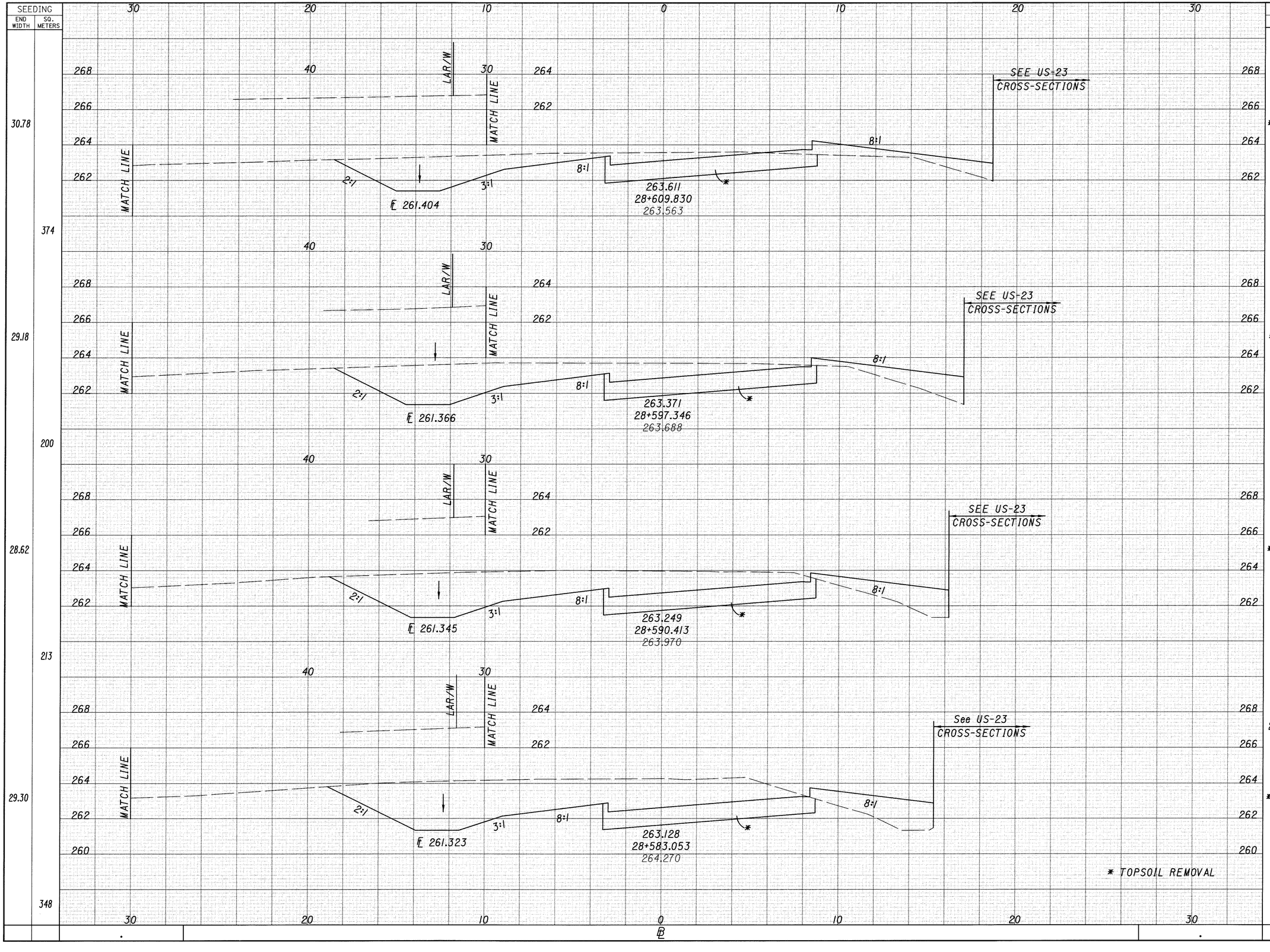
US-30WB CROSS SECTIONS

STA 28+531.779 TO STA 28+570.924

WYA/CRA-30-28.009/0.000

336
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
30.78	374	16.16	16.88	203	216
		*10.98		*140	
29.18	200	16.31	17.65	121	126
		*11.41			
28.62	213	18.61	18.72	*79	
		*11.45		149	142
29.30	348	21.78	19.77	*84	
		*11.36		284	242
				*134	



CALCULATED AM

CHECKED REA

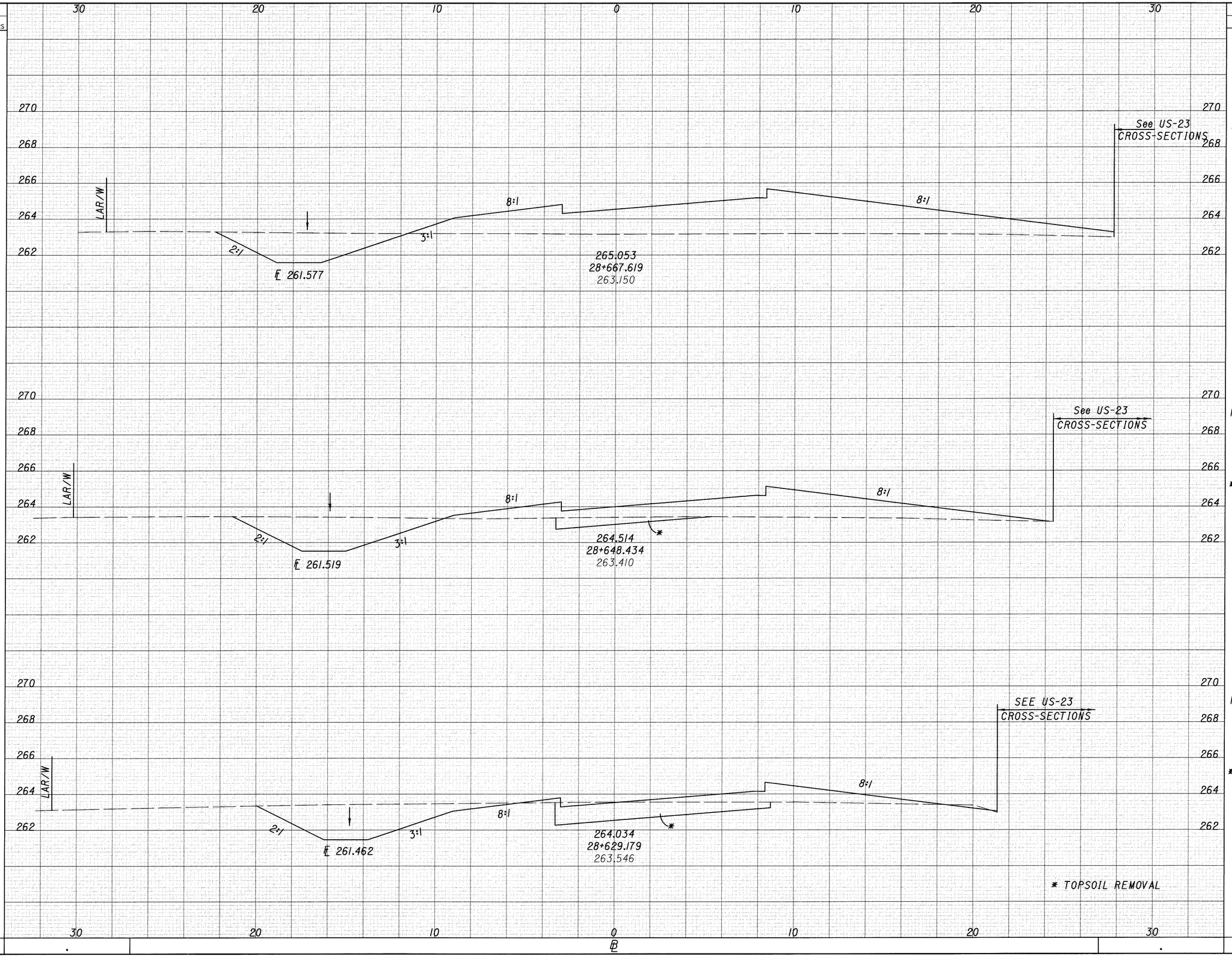
US-30WB CROSS SECTIONS

STA 28+583.053 TO STA 28+609.830

WYA / CRA-30-28.009 / 0.000

337
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
43.89	798	10.87	52.18	235	766
39.28	715	13.60	27.68	277	429
34.94	636	15.12	16.85	303	326



CALCULATED AM

CHECKED REA

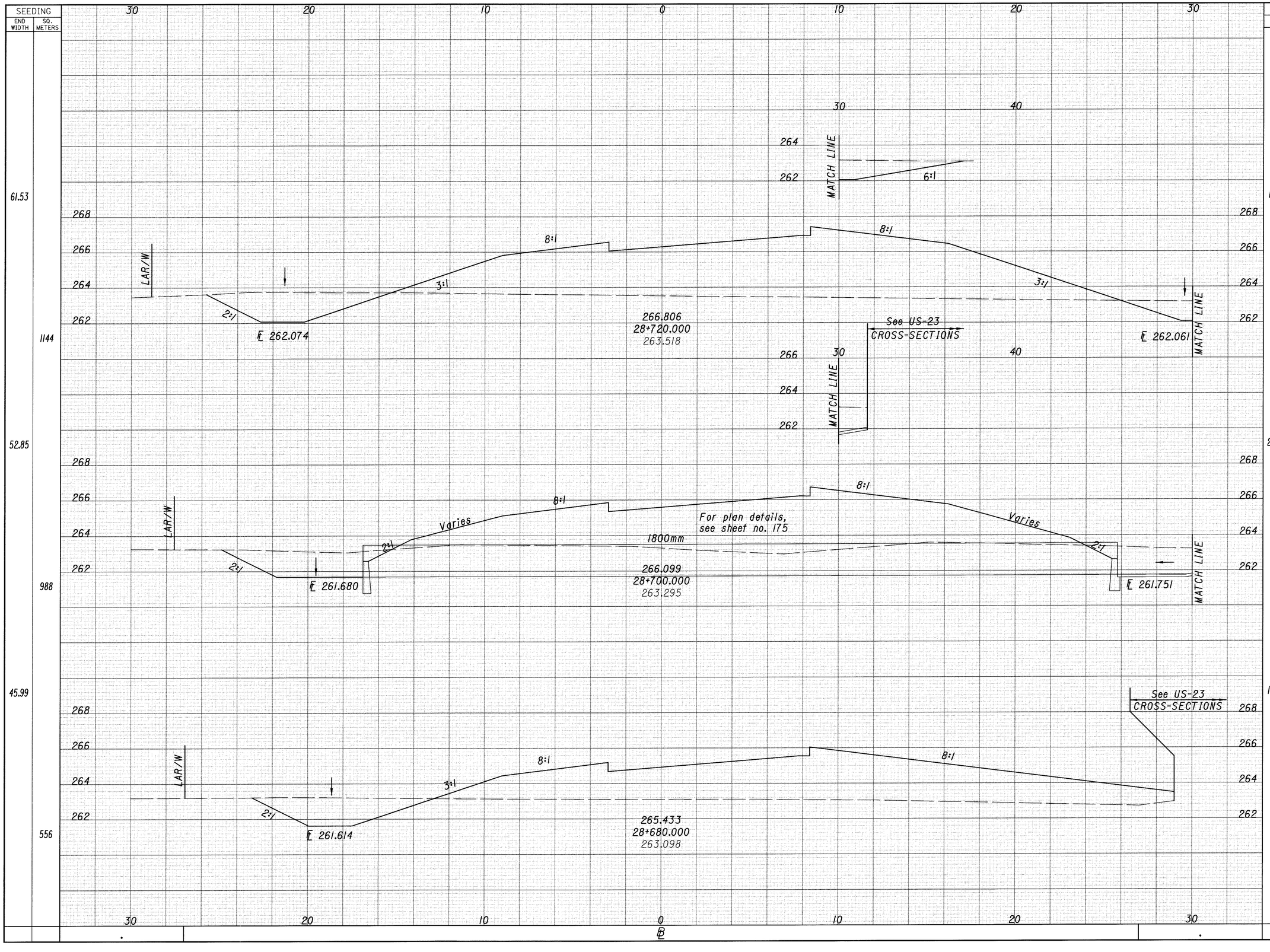
US-30WB CROSS SECTIONS

STA 28+629.179 TO STA 28+667.619

WYA/CRA-30-28.009/0.000

338
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
61.53		17.60	99.22		
	1144			381	1748
52.85		20.50	75.60		
	988			307	1494
45.99		10.20	73.82		
	556			130	780



CALCULATED AM

CHECKED REA

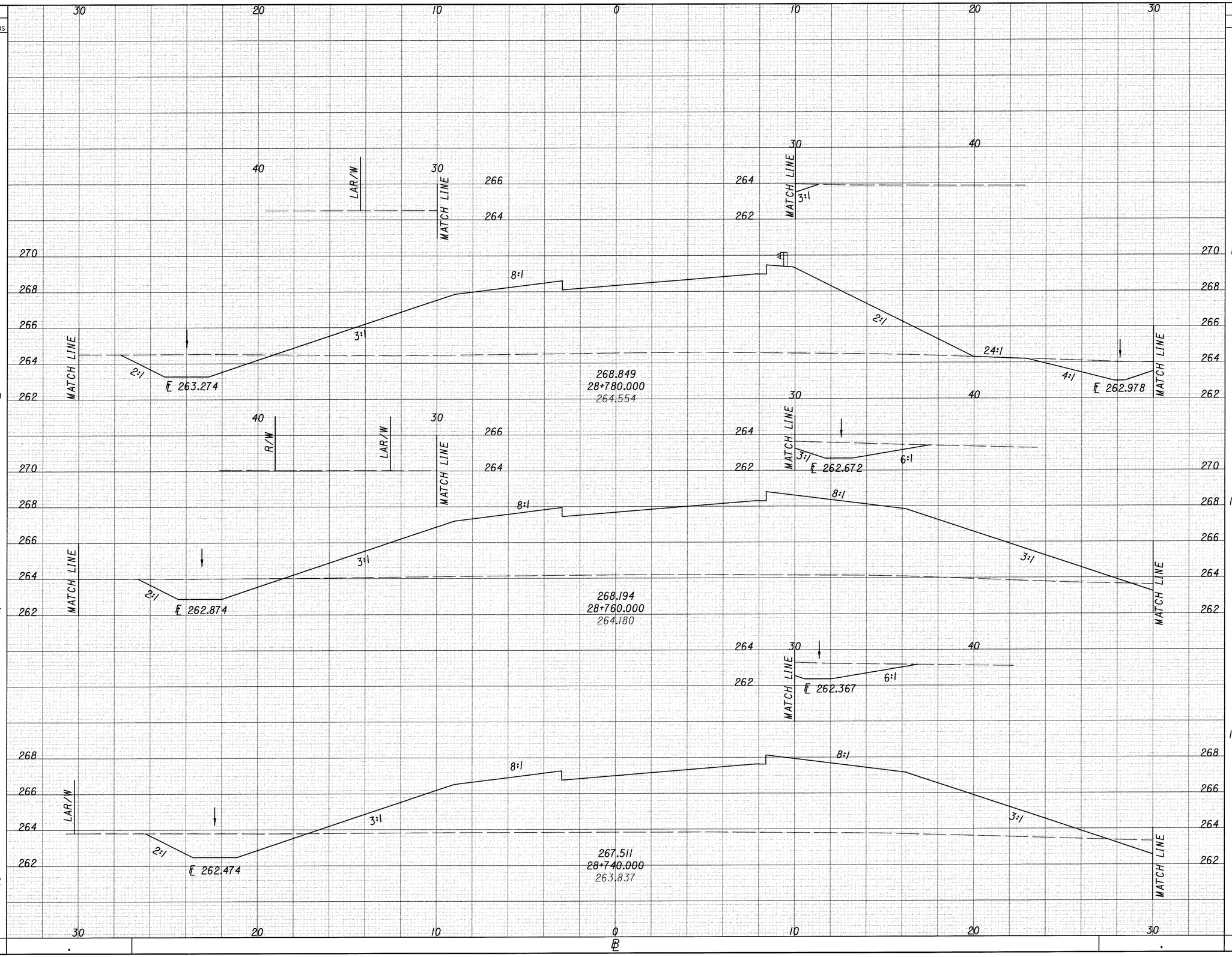
US-30WB CROSS SECTIONS

STA 28+680.000 TO STA 28+720.000

WYA / CRA-30-28.009 / 0.000

339
2116

SEEDING	
END WIDTH	SQ. METERS
58.32	1209
62.63	1243
61.64	1232



END AREA		VOLUME	
CUT	FILL	CUT	FILL
11.58	116.00		
		220	2498
10.38	133.80		
		228	2508
12.39	116.95		
		300	2162

CALCULATED AM

CHECKED REA

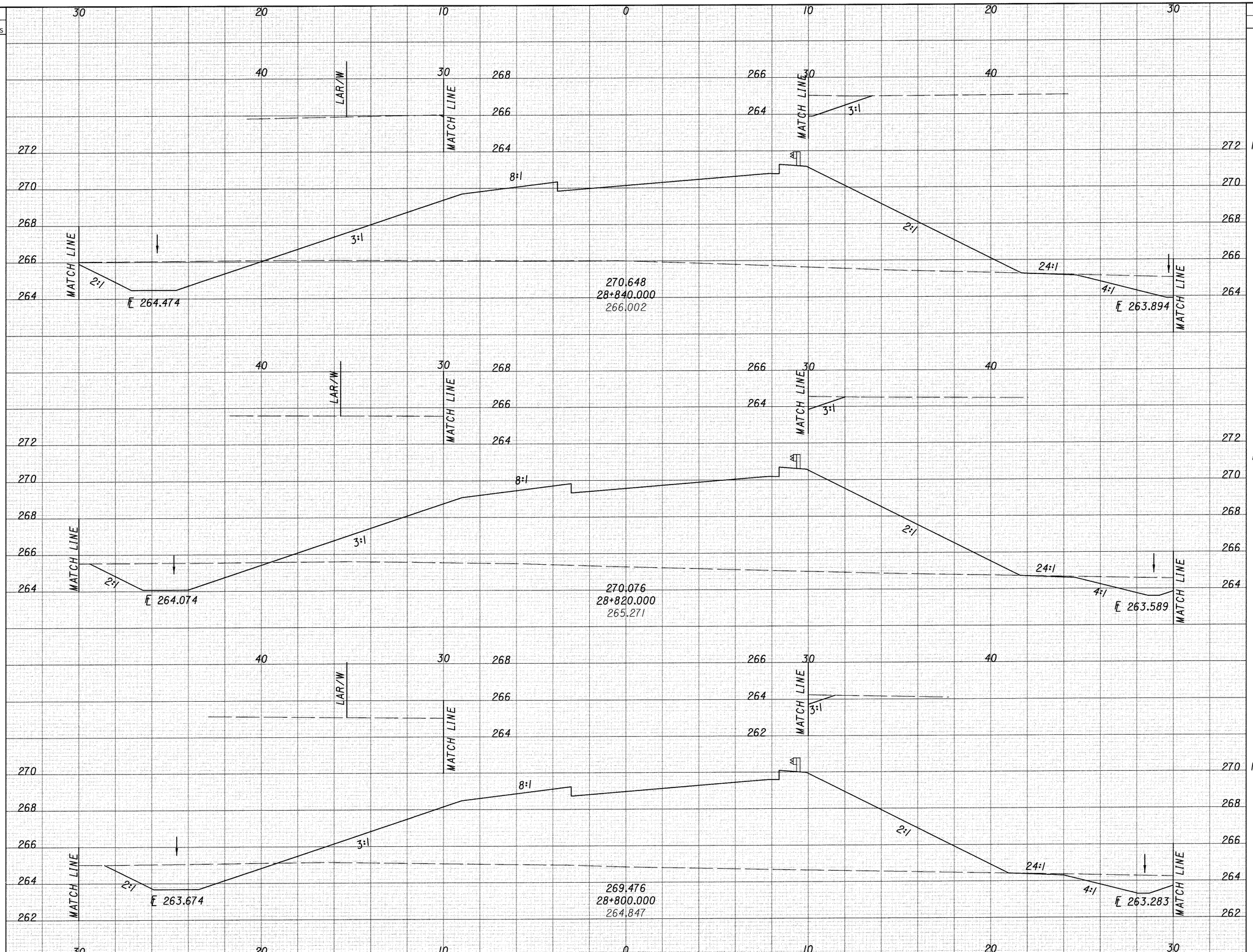
US-30WB CROSS SECTIONS

STA 28+740.000 TO STA 28+780.000

WYA / CRA-30-28.009 / 0.000

340
2116

SEEDING	
END WIDTH	SQ. METERS
62.83	
	1239
61.03	
	1206
59.53	
	1179



END AREA		VOLUME	
CUT	FILL	CUT	FILL
15.54	134.60		
13.18	135.49	287	2701
12.52	127.43	257	2629
		241	2434

CALCULATED AM

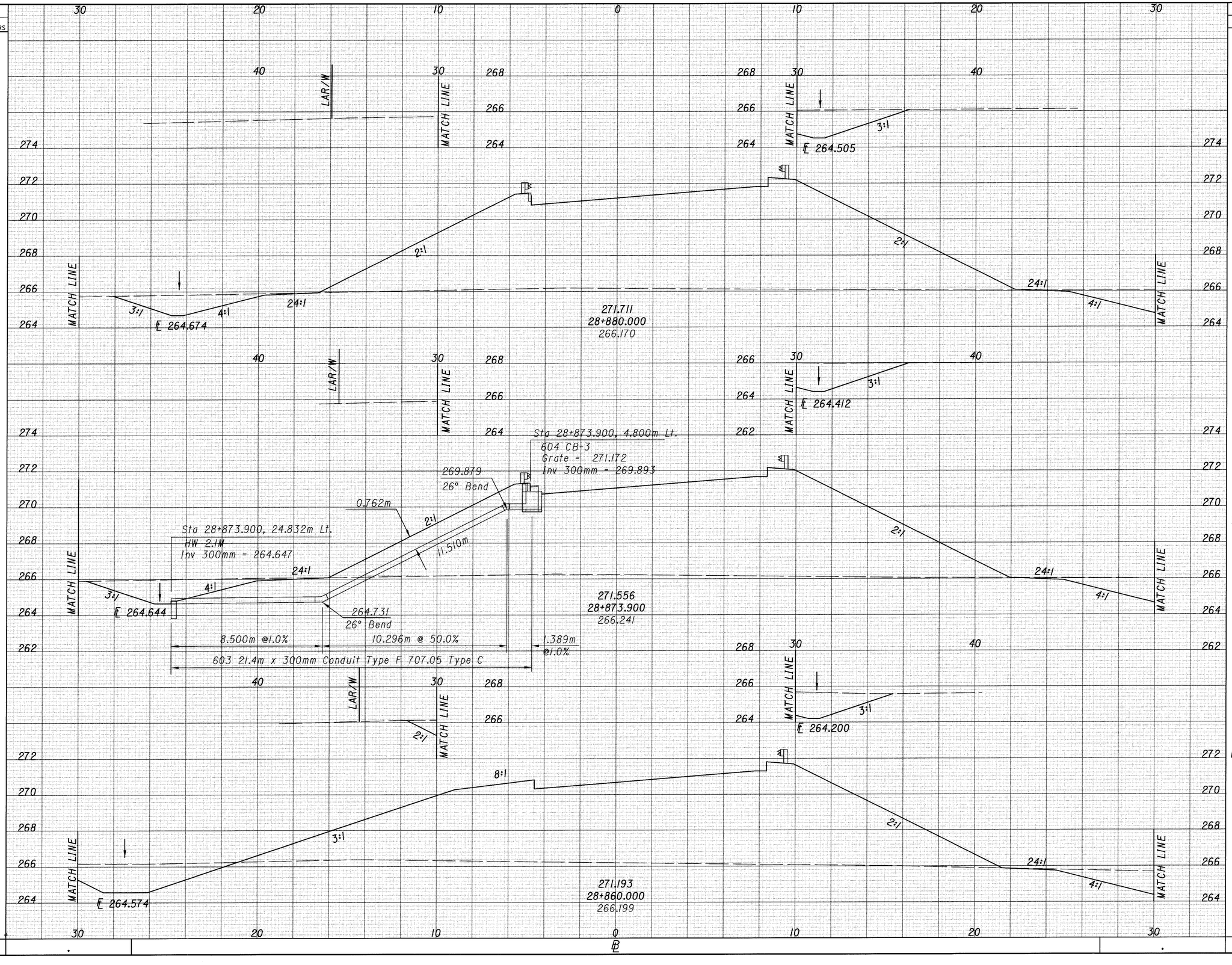
CHECKED REA

US-30WB CROSS SECTIONS
STA 28+800.000 TO STA 28+840.000

WYA/CRA-30-28.009/0.000

341
216

SEEDING	
END WIDTH	SQ. METERS
62.80	
	388
64.31	
	903
65.68	
	1285



END AREA		VOLUME	
CUT	FILL	CUT	FILL
15.04	148.30		
17.29	140.30		
		99	880
		252	1969
18.92	143.04		
		345	2776

CALCULATED AM

CHECKED REA

US-30WB CROSS SECTIONS
28+860.000 TO STA 28+880.000

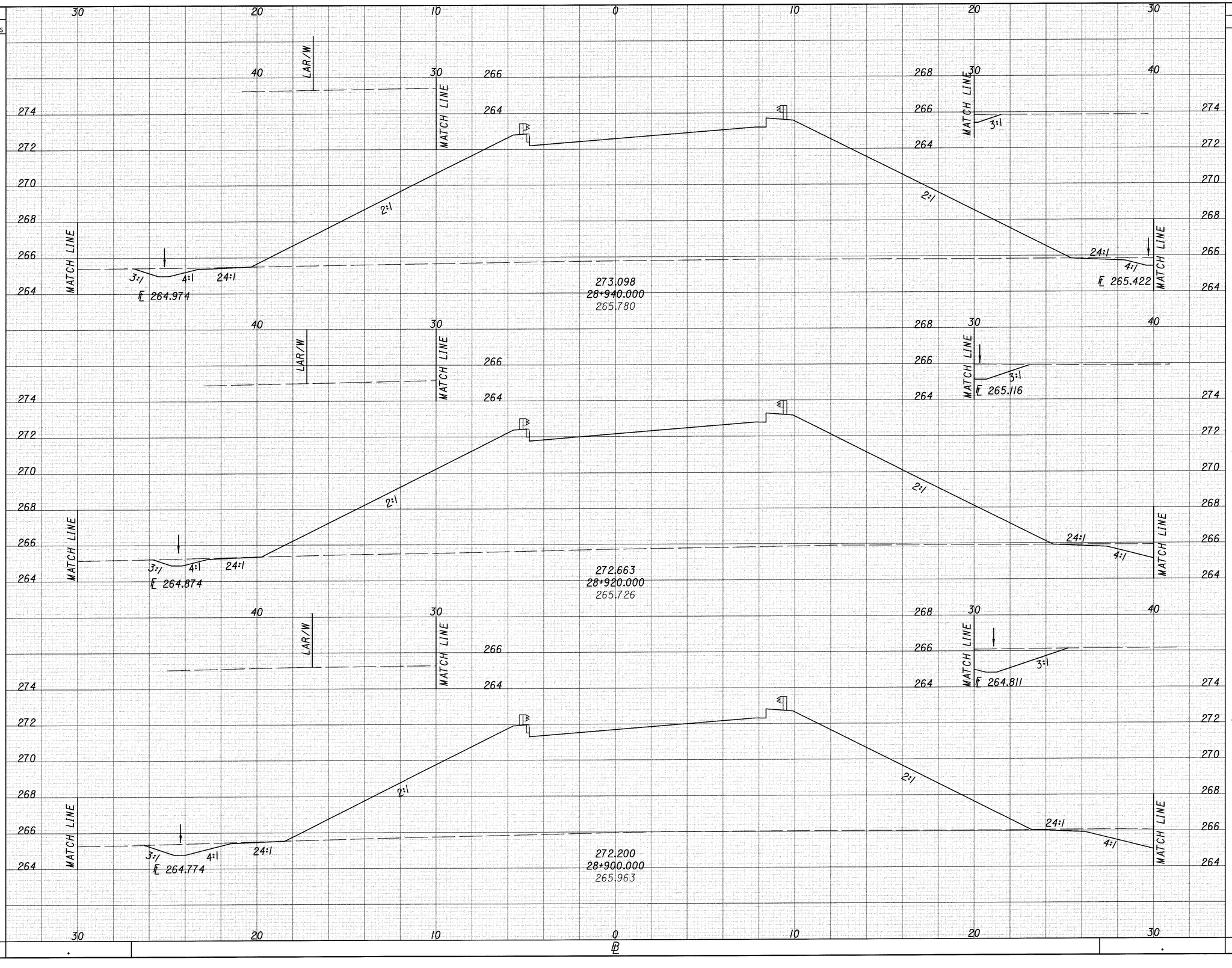
WYA / CRA-30-28.009 / 0.000

342
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
55.69	1120	2.21	220.99	59	4241
56.35	1159	3.68	203.08	122	3783
59.53	1223	8.55	175.22	236	3235

CALCULATED AM

CHECKED REA



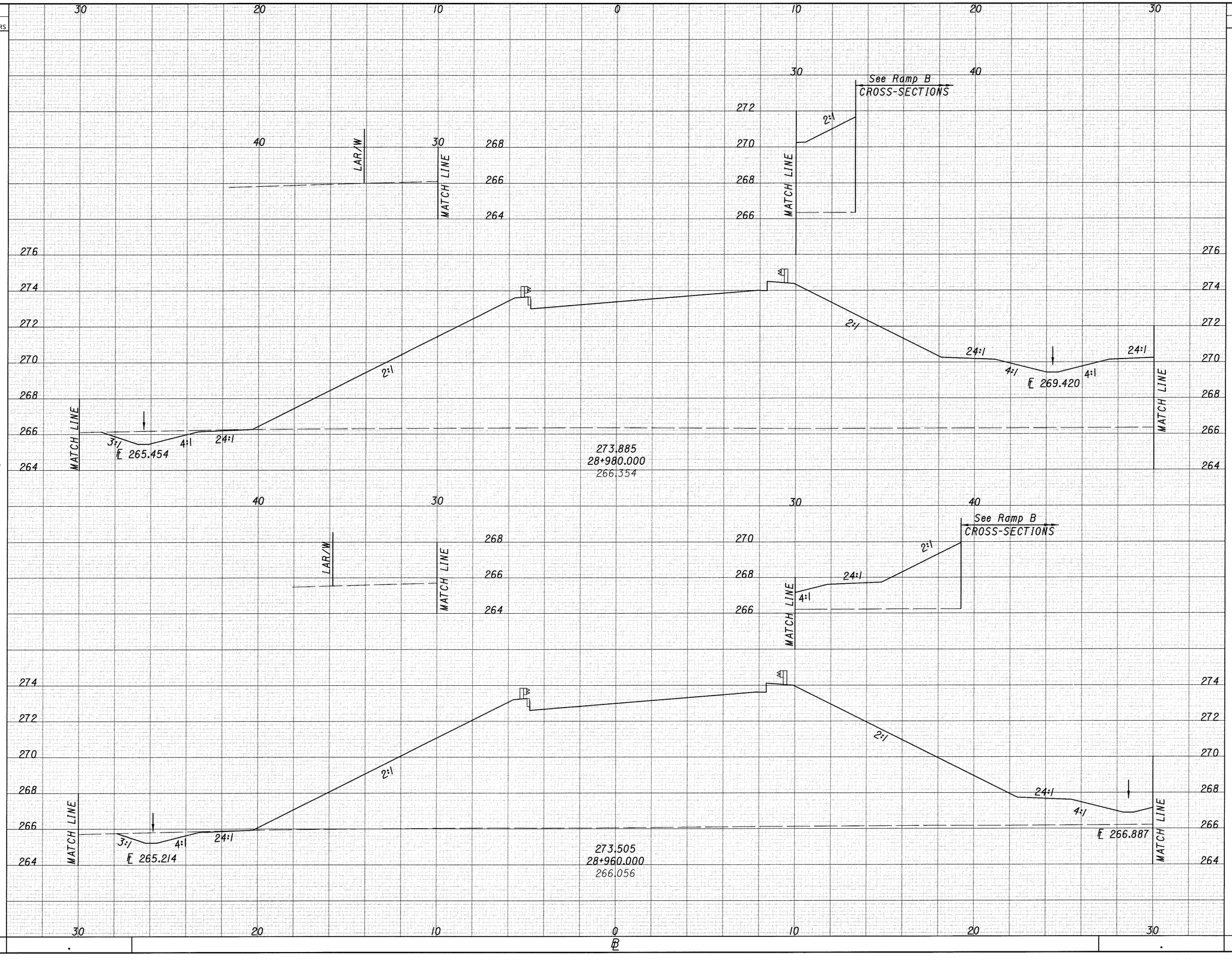
US-30WB CROSS SECTIONS

STA 28+900.000 TO STA 28+940.000

WYA / CRA-30-28.009 / 0.000

343
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
55.84	1172	2.43	273.36	41	5223
61.38	1171	1.66	248.97	39	4700



CALCULATED AM

CHECKED REA

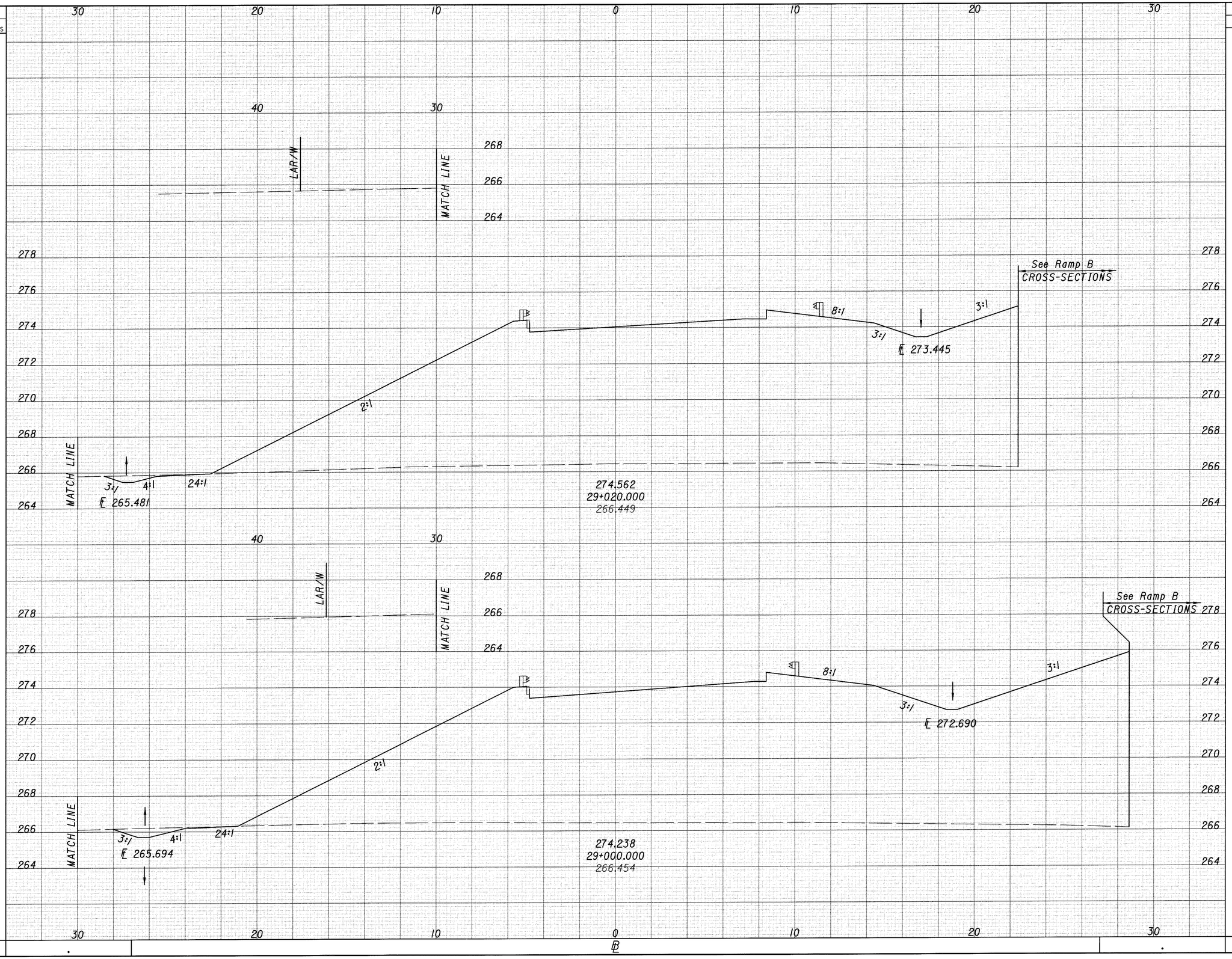
US-30WB CROSS SECTIONS

STA 28+960.000 TO STA 28+980.000

WYA/CRA-30-28.009/0.000

344
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
43.49	930	0.76	287.30	21	6055
49.51	1053	1.32	318.24	38	5916



CALCULATED AM

CHECKED REA

US-30WB CROSS SECTIONS

STA 29+000.000 TO STA 29+020.000

WYA / CRA-30-28.009 / 0.000

345
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
54.31	1082	3.50	271.38	52	5496	
53.88	974	1.67	278.22	24	5655	

CALCULATED AM

CHECKED REA

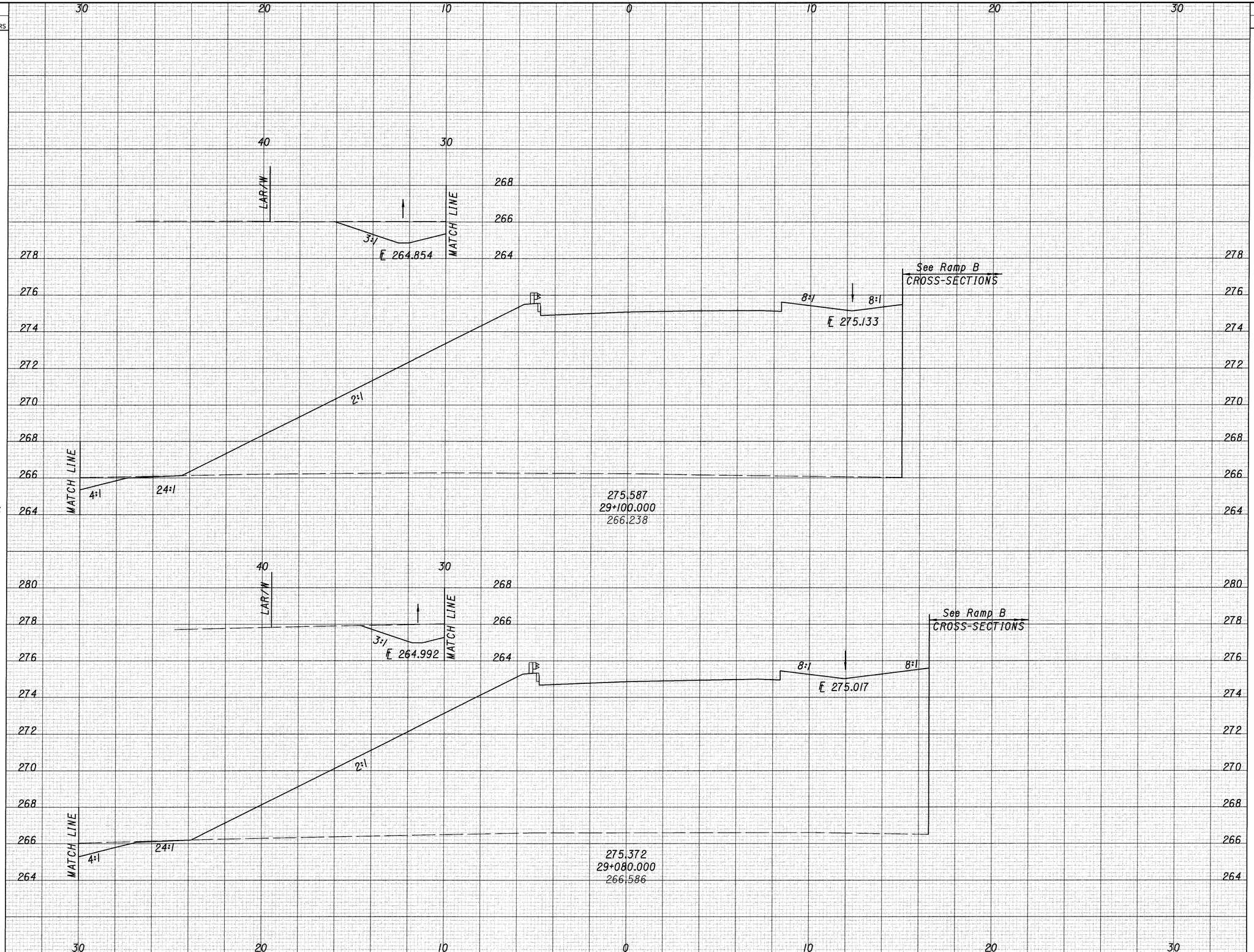
US-30WB CROSS SECTIONS

STA 29+040.000 TO STA 29+060.000

WYA/CRA-30-28.009/0.000

346
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
54.36	1083	5.65	272.15	99	5388
53.91	1082	4.29	266.60	78	5380



CALCULATED AM

CHECKED REA

US-30WB CROSS SECTIONS
STA 29+080.000 TO STA 29+100.000

WYA/CRA-30-28.009/0.000

347
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
53.50	1091	9.12	287.62	182	5708
55.57	1099	9.10	283.20	148	5553

CALCULATED AM | CHECKED REA

US-30WB CROSS SECTIONS

STA 29+120.000 TO STA 29+140.000

WYA/CRA-30-28.009/0.000

348
2116

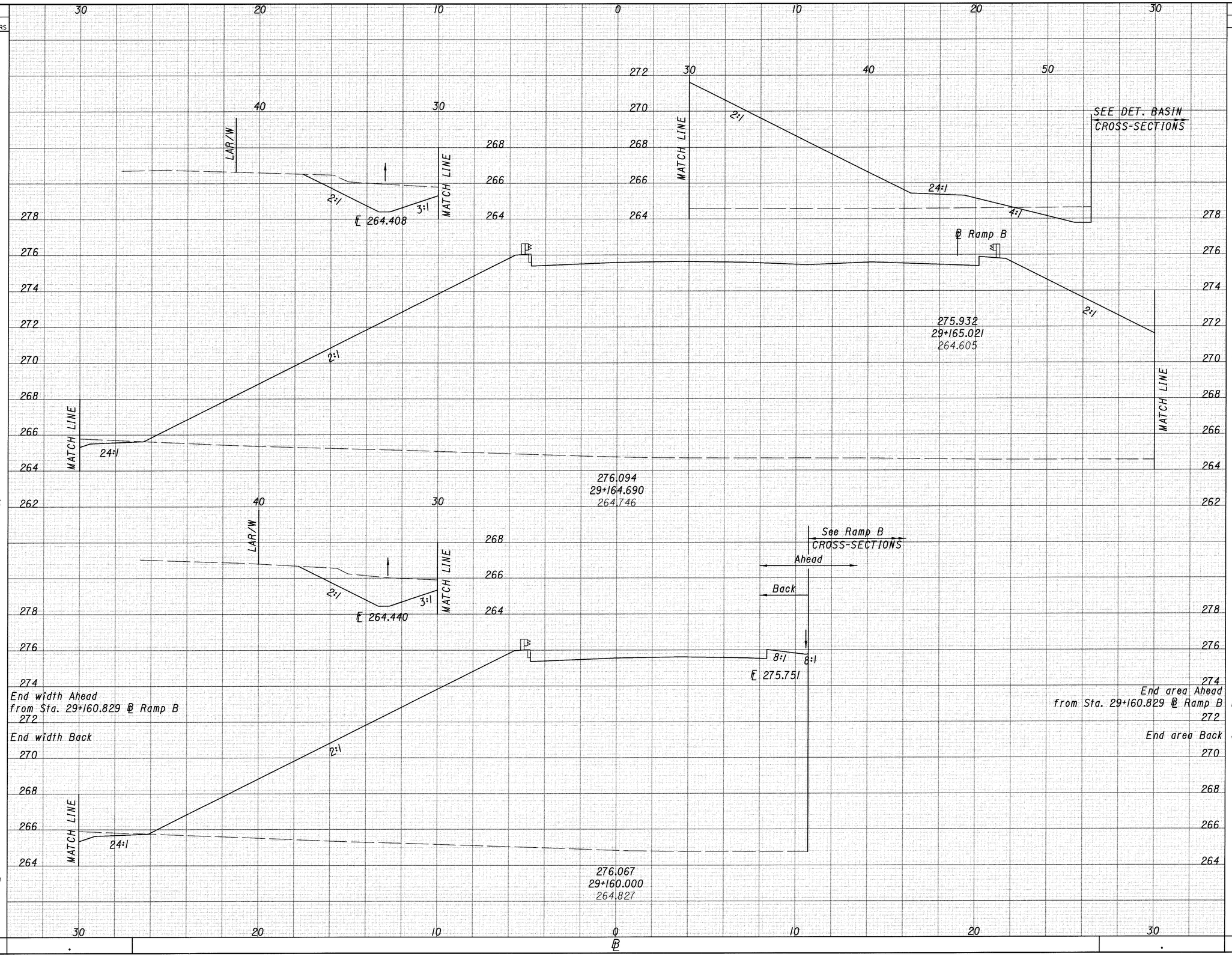
30 20 10 0 10 20 30

LAR/W
MATCH LINE
2:1
℄ 264.578
See Ramp B CROSS-SECTIONS
8:1
8:1
℄ 275.505
MATCH LINE
3:1
24:1
2:1
275.935
29+140.000
265.175
LAR/W
MATCH LINE
3:1
℄ 264.716
See Ramp B CROSS-SECTIONS
8:1
8:1
℄ 275.283
MATCH LINE
4:1
24:1
2:1
275.775
29+120.000
265.632

264 266 268 270 272 274 276 278

℄

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
76.04					
	393			47	2538
91.69					
53.54					
	1070			175	5761
		9.94	539.70		
		10.19	542.61		
		8.39	288.44		



CALCULATED AM

CHECKED REA

US-30WB CROSS SECTIONS

STA 29+160.000 TO STA 29+164.690

WYA / CRA-30-28.009 / 0.000

349
2116

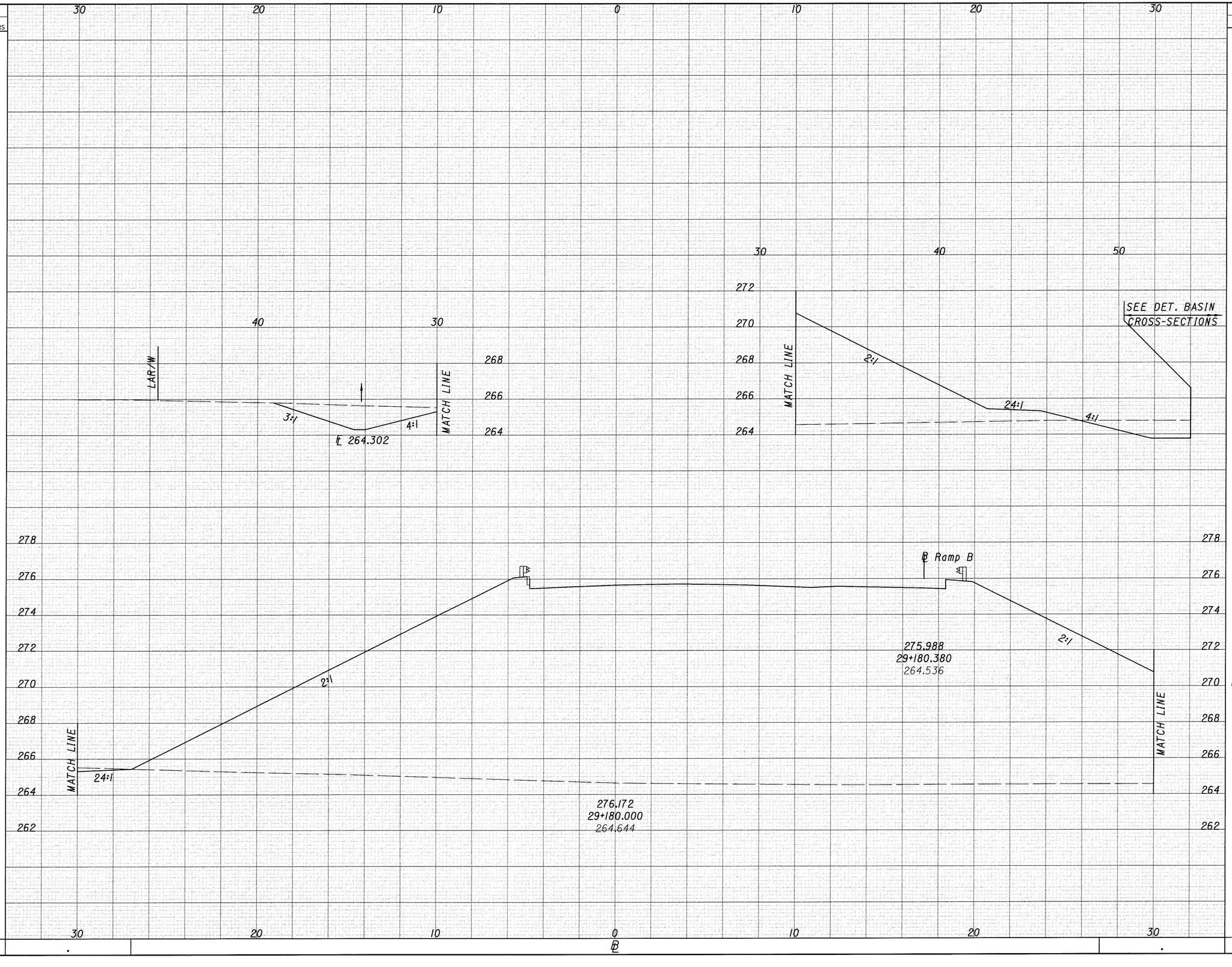
SEEDING	
END WIDTH	SQ. METERS
78.73	1185

END AREA	
CUT	FILL
11.52	528.42

VOLUME	
CUT	FILL
164	8176

CALCULATED AM

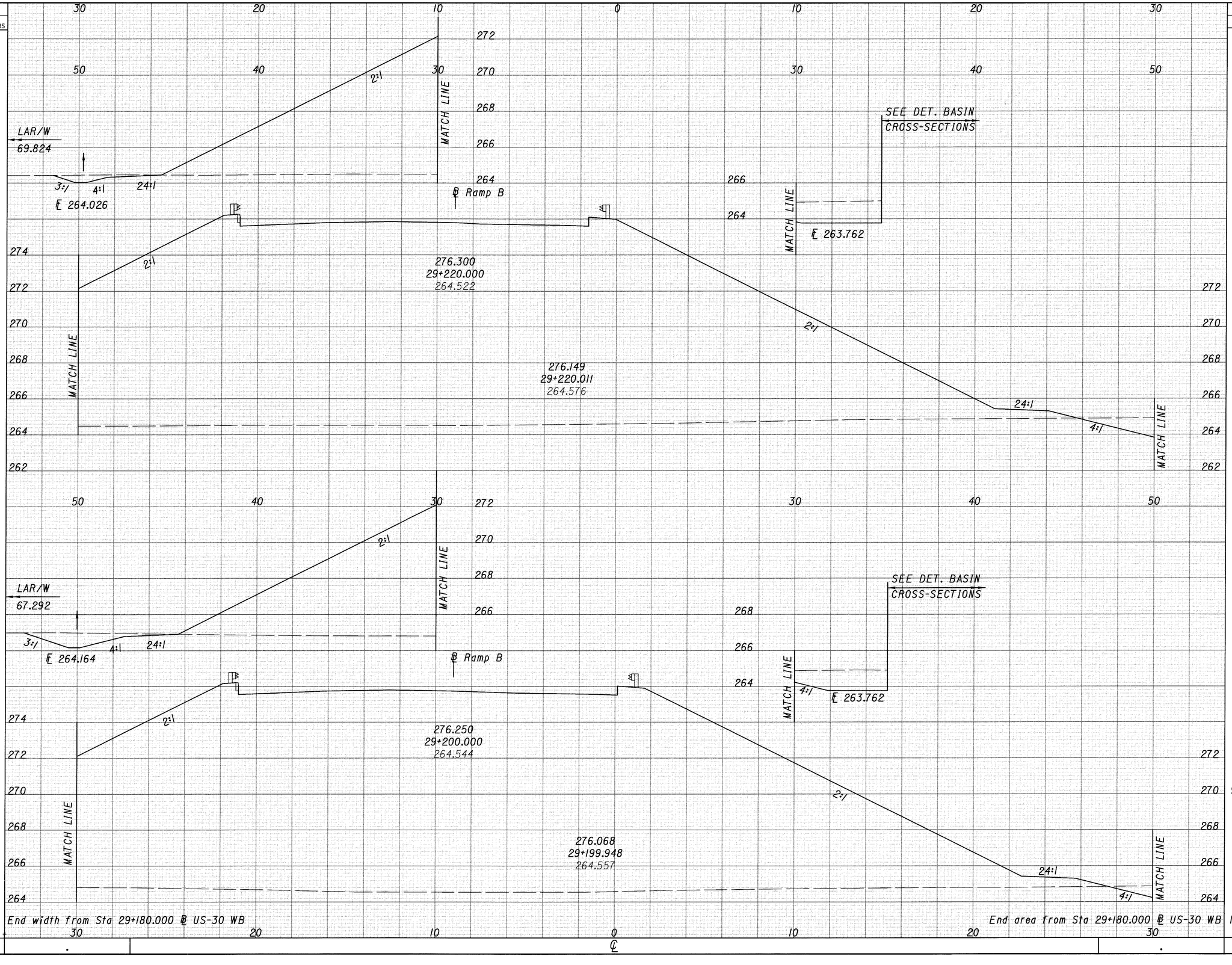
CHECKED REA



US-30WB CROSS SECTIONS
STA 29+180.000

WYA/CRA-30-28.009/0.000

SEEDING END WIDTH	SEEDING SQ. METERS	
76.70		
	1541	
77.42		
	1562	
78.73		End width from Sta 29+180.000 ℄ US-30 WB



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
9.09	510.29		
		184	10274
9.29	517.15		
		208	10456
11.52	528.42		

End area from Sta 29+180.000 ℄ US-30 WB

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 29+199.948 TO STA 29+220.011

WYA/CRA-30-28.009/0.000

351
2116

SEEDING	
END WIDTH	SQ. METERS
80.74	1595
78.77	1555

END AREA	
CUT	FILL
9.77	468.31
7.80	488.70

VOLUME	
CUT	FILL
176	9570
169	9990

CALCULATED AM

CHECKED REA

LAR/W
68.890
3:1
4:1
24:1
℄ 263.811
2:1
MATCH LINE
℄ Ramp B
276.317
29+260.000
265.105
276.241
29+260.033
265.103
SEE DET. BASIN CROSS-SECTIONS
℄ 263.762
LAR/W
69.403
℄ 263.918
276.322
29+240.000
264.868
276.216
29+240.036
264.806
℄

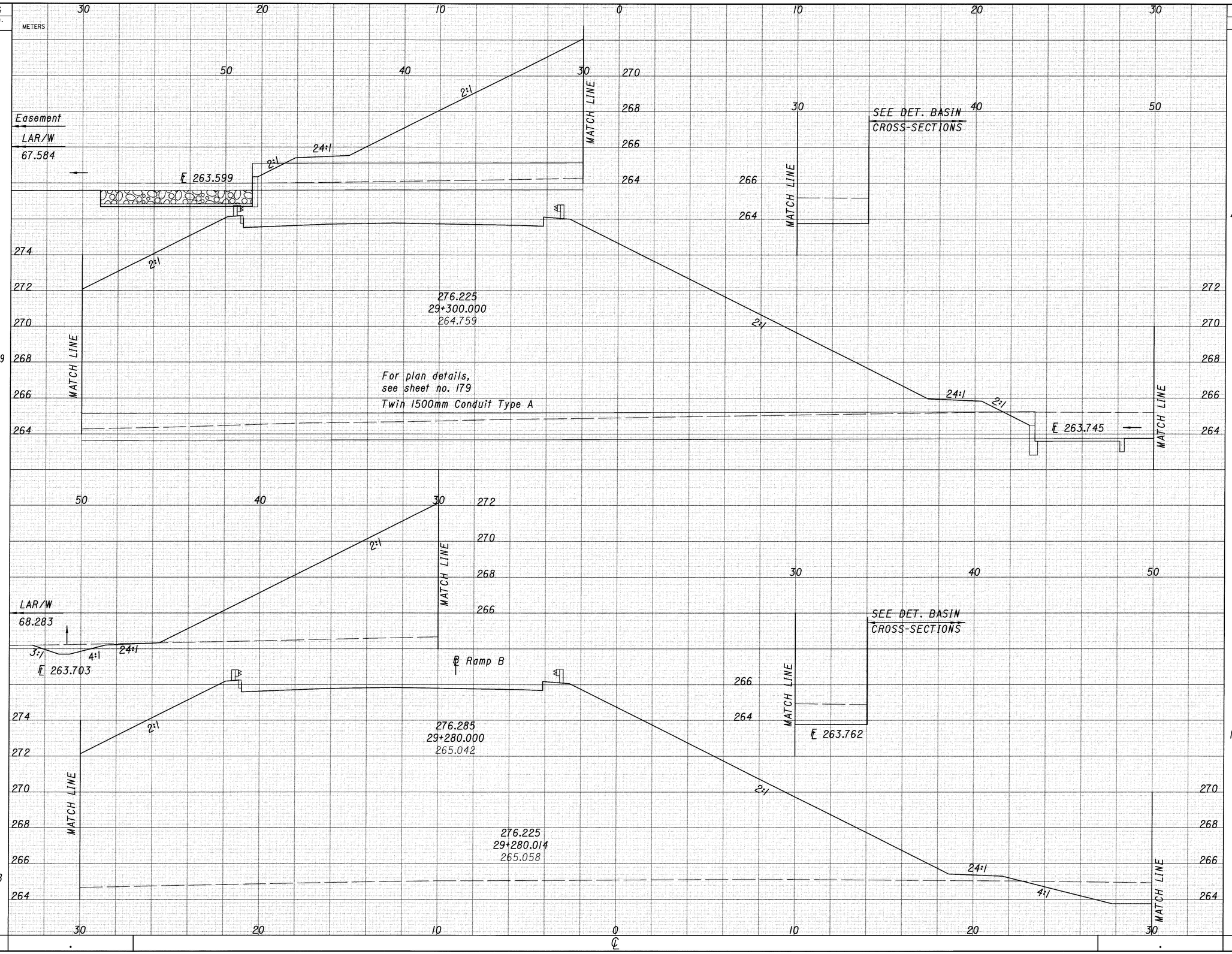
US-30 CROSS SECTIONS

STA 29+240.036 TO STA 29+260.033

WYA / CRA-30-28.009 / 0.000

352
2116

SEEDING END WIDTH	SEEDING SQ.
76.84	
	1569
80.09	
	1608



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
48.43	475.76		
		601	9398
11.67	464.08		
		214	9324

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 29+280.014 TO STA 29+300.000

WYA/CRA-30-28.009/0.000

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
79.57	1591	16.94	476.73	322	9491
79.55	1564	15.27	472.35	637	9481

CALCULATED AM

CHECKED REA

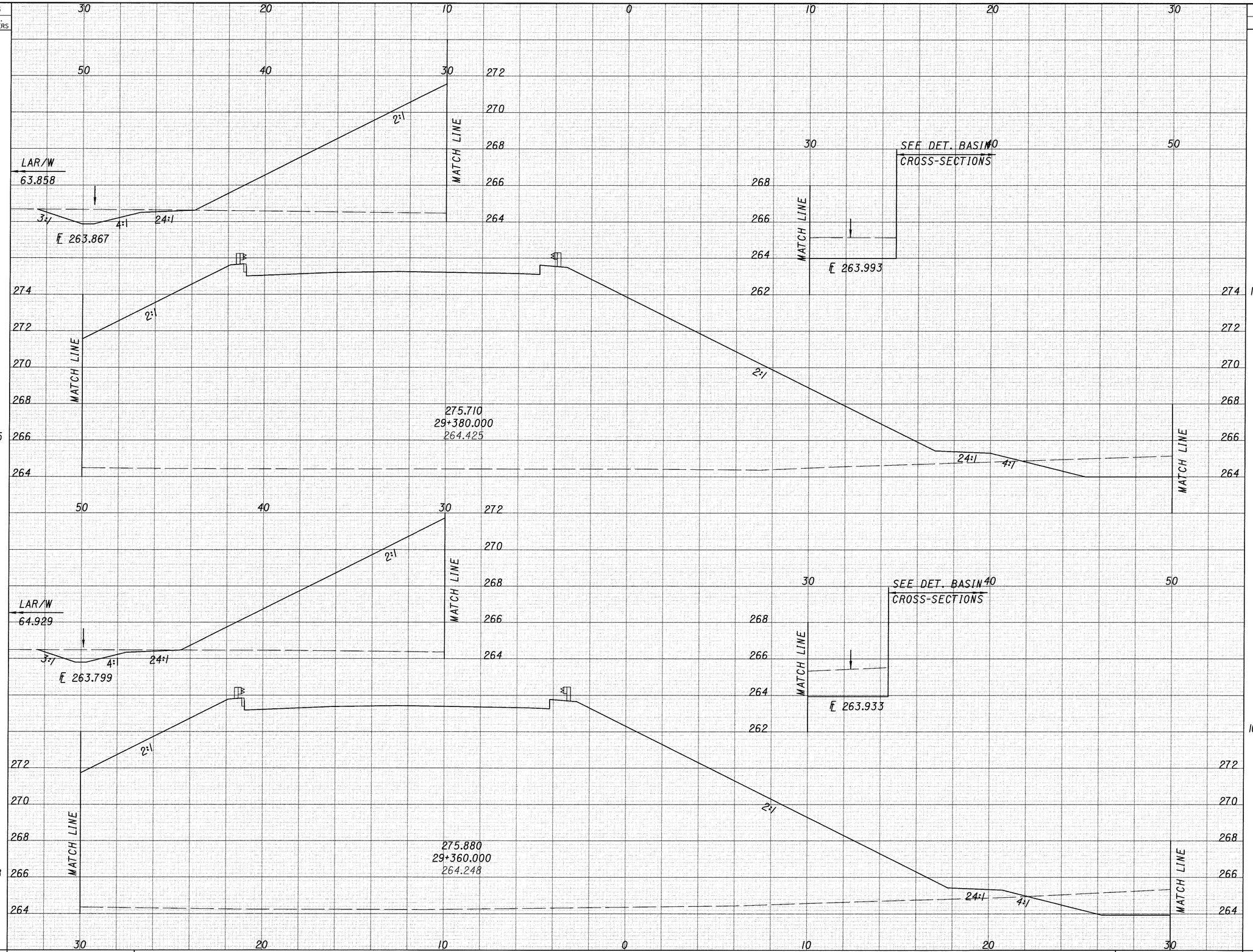
US-30 CROSS SECTIONS

STA 29+320.000 TO STA 29+340.000

WYA / CRA-30-28.009 / 0.000

354
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
81.32	1615	15.29	446.40	316	9140
80.20	1598	16.27	467.64	332	9444



CALCULATED AM

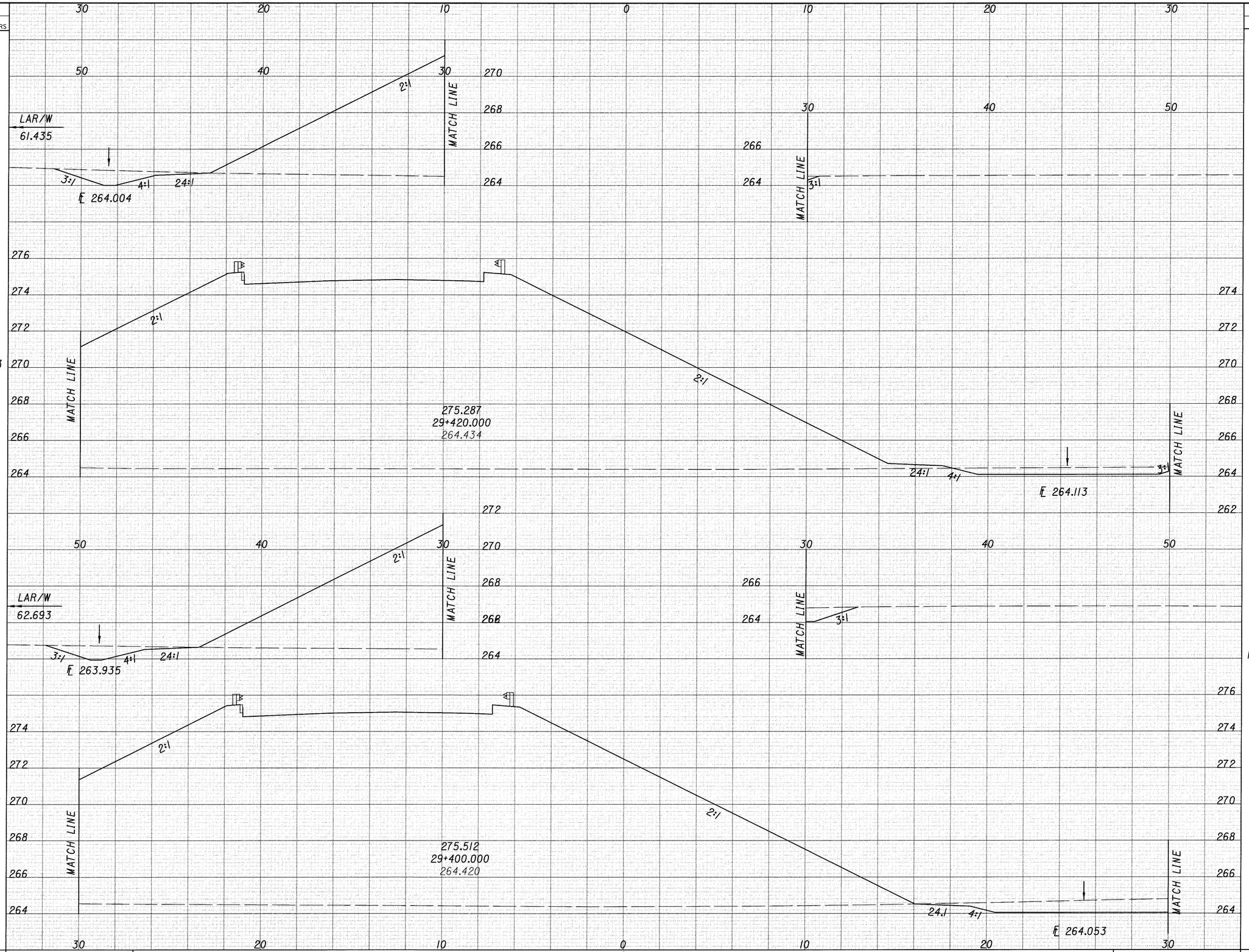
CHECKED REA

US-30 CROSS SECTIONS
STA 29+360.000 TO STA 29+380.000

WYA/CRA-30-28.009/0.000

355
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
81.39	1653	7.32	389.69	184	7983
83.91	1652	11.03	408.57	263	8550



CALCULATED AM

CHECKED REA

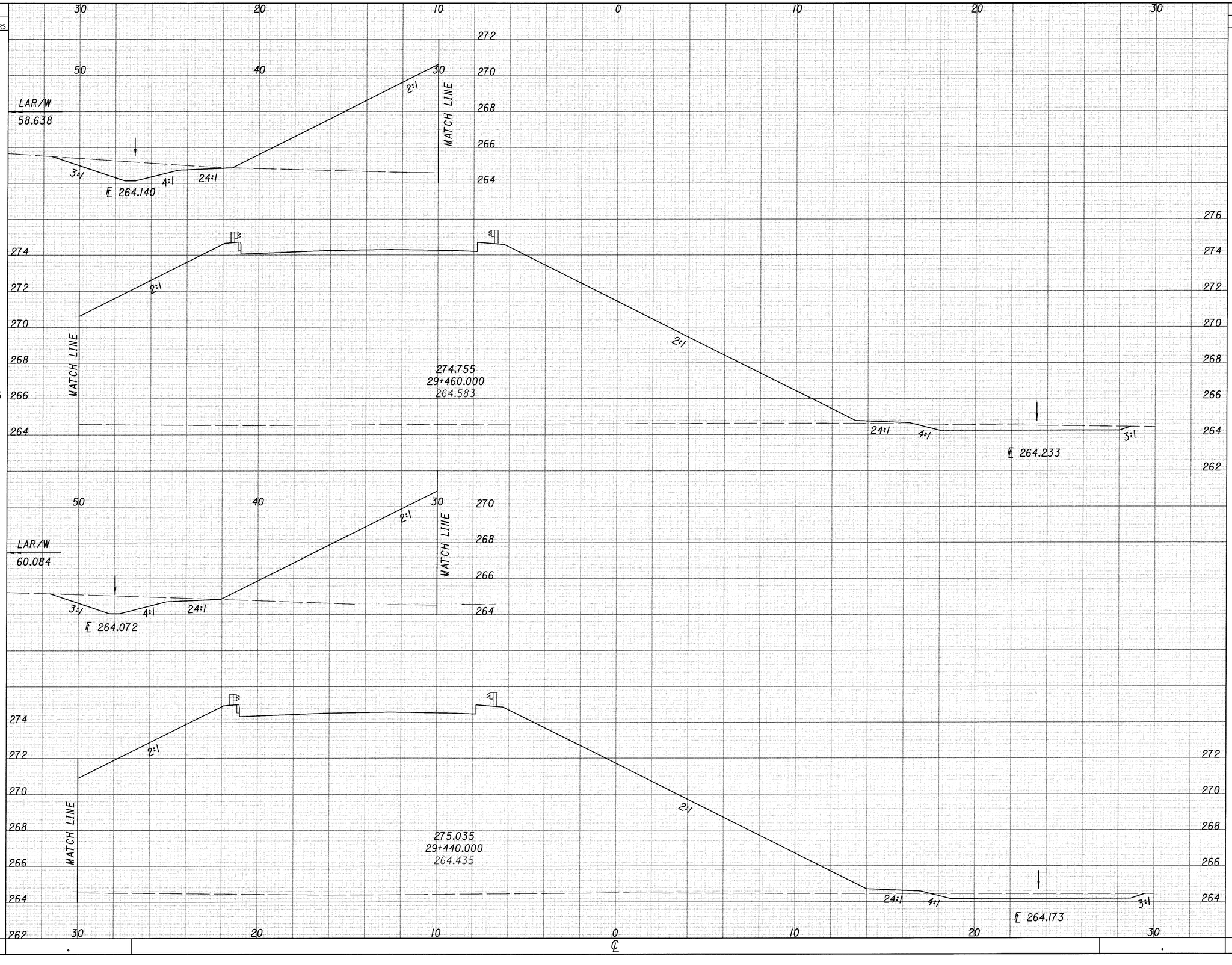
US-30 CROSS SECTIONS

STA 29+400.000 TO STA 29+420.000

WYA / CRA-30-28.009 / 0.000

356
2116

SEEDING	
END WIDTH	SQ. METERS
79.25	
	1595
80.22	
	1616



END AREA		VOLUME	
CUT	FILL	CUT	FILL
7.86	351.06		
		150	7243
7.16	373.28		
		145	7630

CALCULATED AM

CHECKED REA

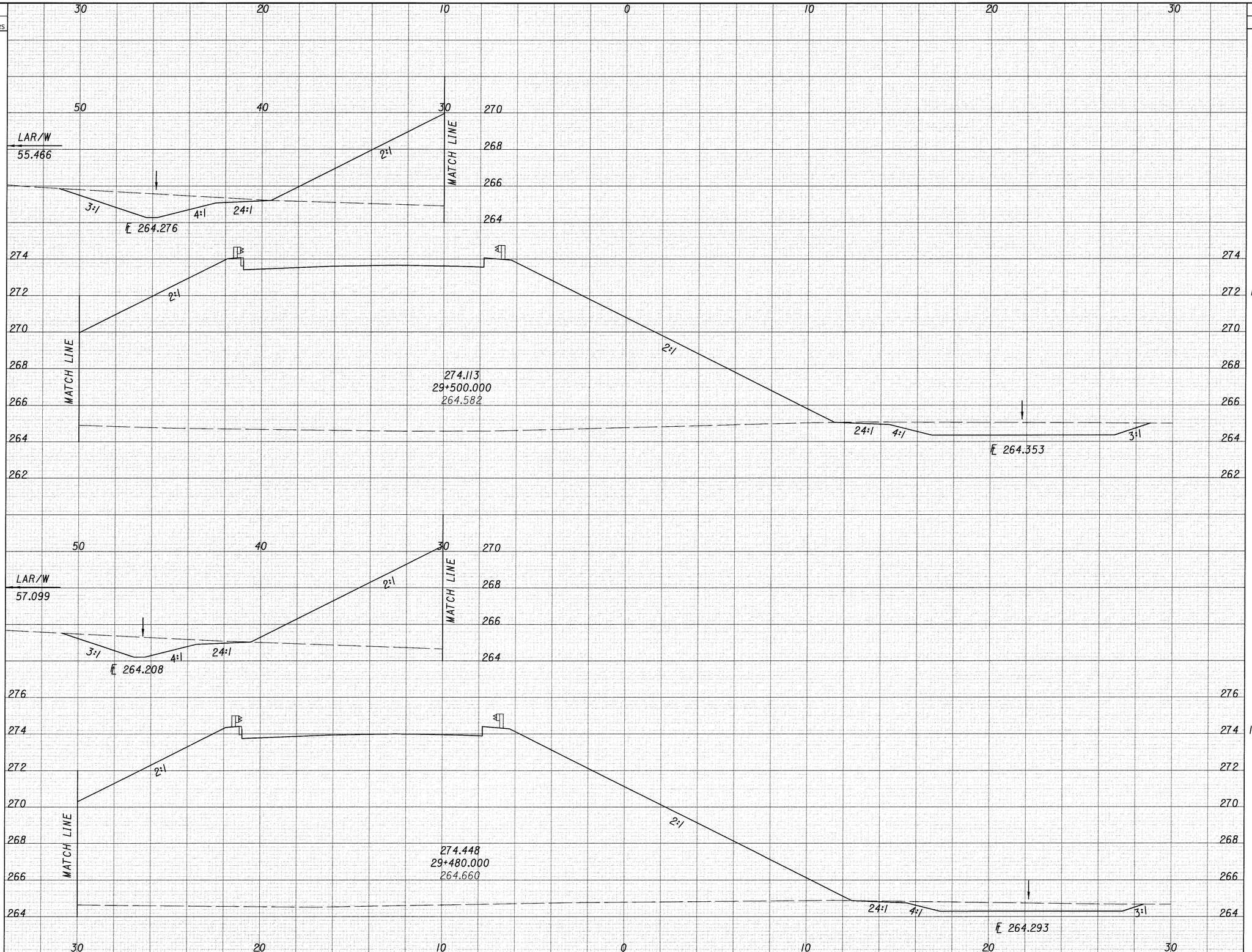
US-30 CROSS SECTIONS

STA 29+440.000 TO STA 29+460.000

WYA / CRA-30-28.009 / 0.000

357
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
79.13	1576	15.83	305.29	263	6331
78.47	1577	10.50	327.76	184	6788



CALCULATED AM

CHECKED REA

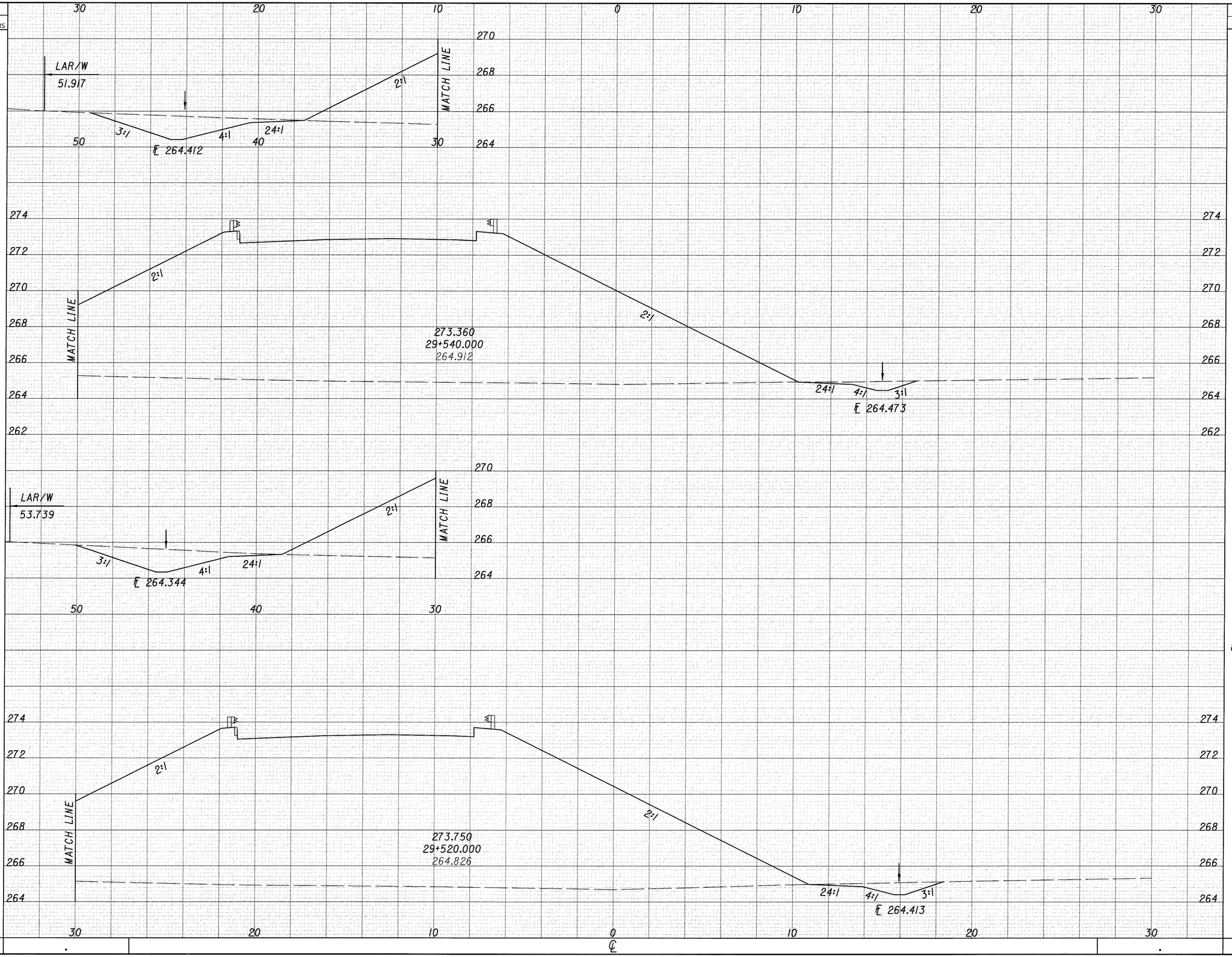
US-30 CROSS SECTIONS

STA 29+480.000 TO STA 29+500.000

WYA/CRA-30-28.009/0.000

358
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
64.81	1324	8.42	256.07	171	5363
67.56	1467	8.64	280.22	245	5855



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 29+520.000 TO STA 29+540.000

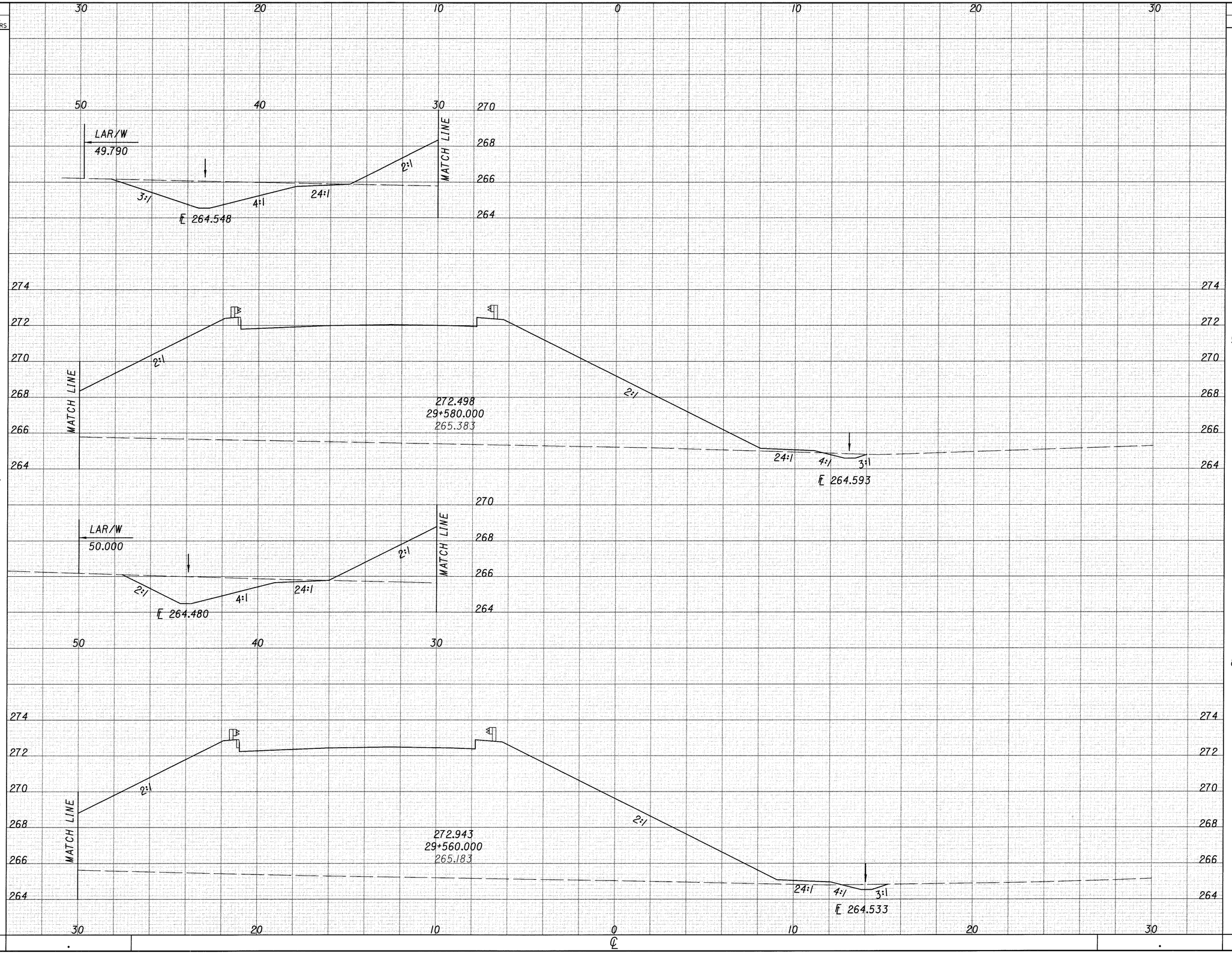
WYA/CRA-30-28.009/0.000

359
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
60.11	1213	9.34	197.28	175	4226
61.15	1260	8.12	225.27	165	4813

CALCULATED AM

CHECKED REA

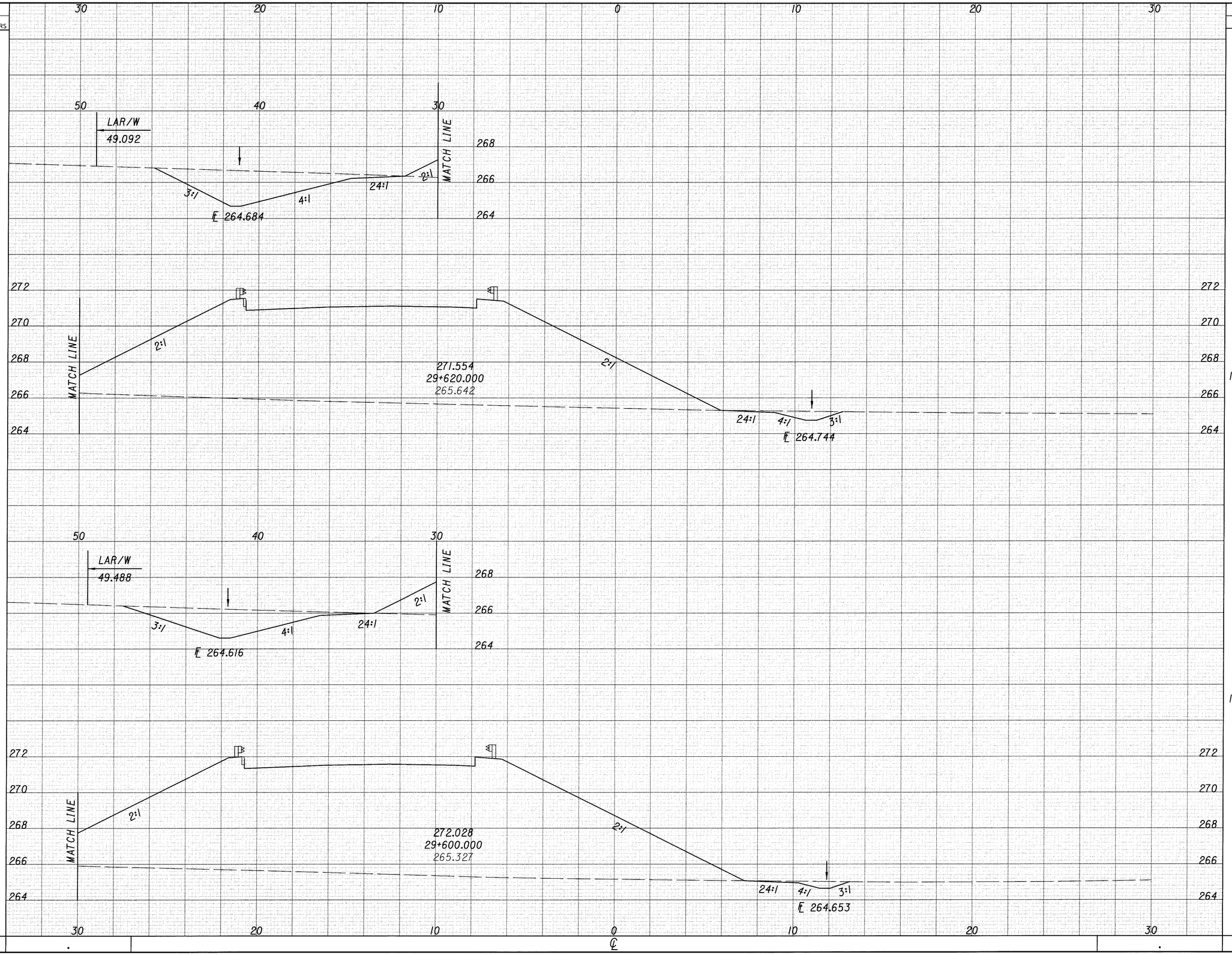


US-30 CROSS SECTIONS
STA 29+560.000 TO STA 29+580.000

WYA/CRA-30-28.009/0.000

360
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
56.64		13.94	144.41		
	1154			250	3191
58.76		11.06	174.73		
	1189			204	3720



CALCULATED AM

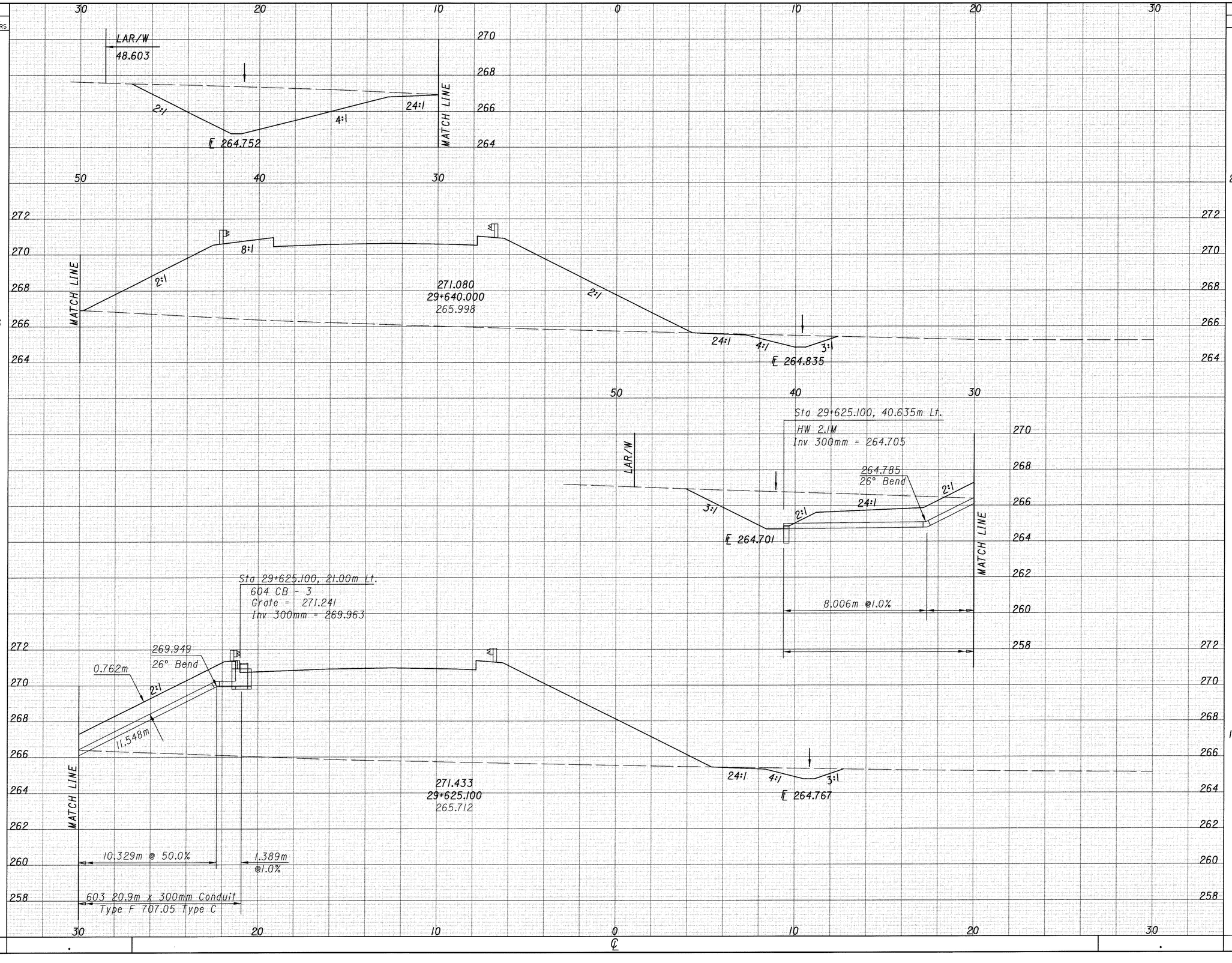
CHECKED REA

US-30 CROSS SECTIONS STA 29+600.000 TO STA 29+620.000

WYA/CRA-30-28.009/0.000

361
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
59.11		23.23	112.77			
	863			297	1870	
56.78		16.69	138.28			
	289			78	721	



CALCULATED AM

CHECKED REA

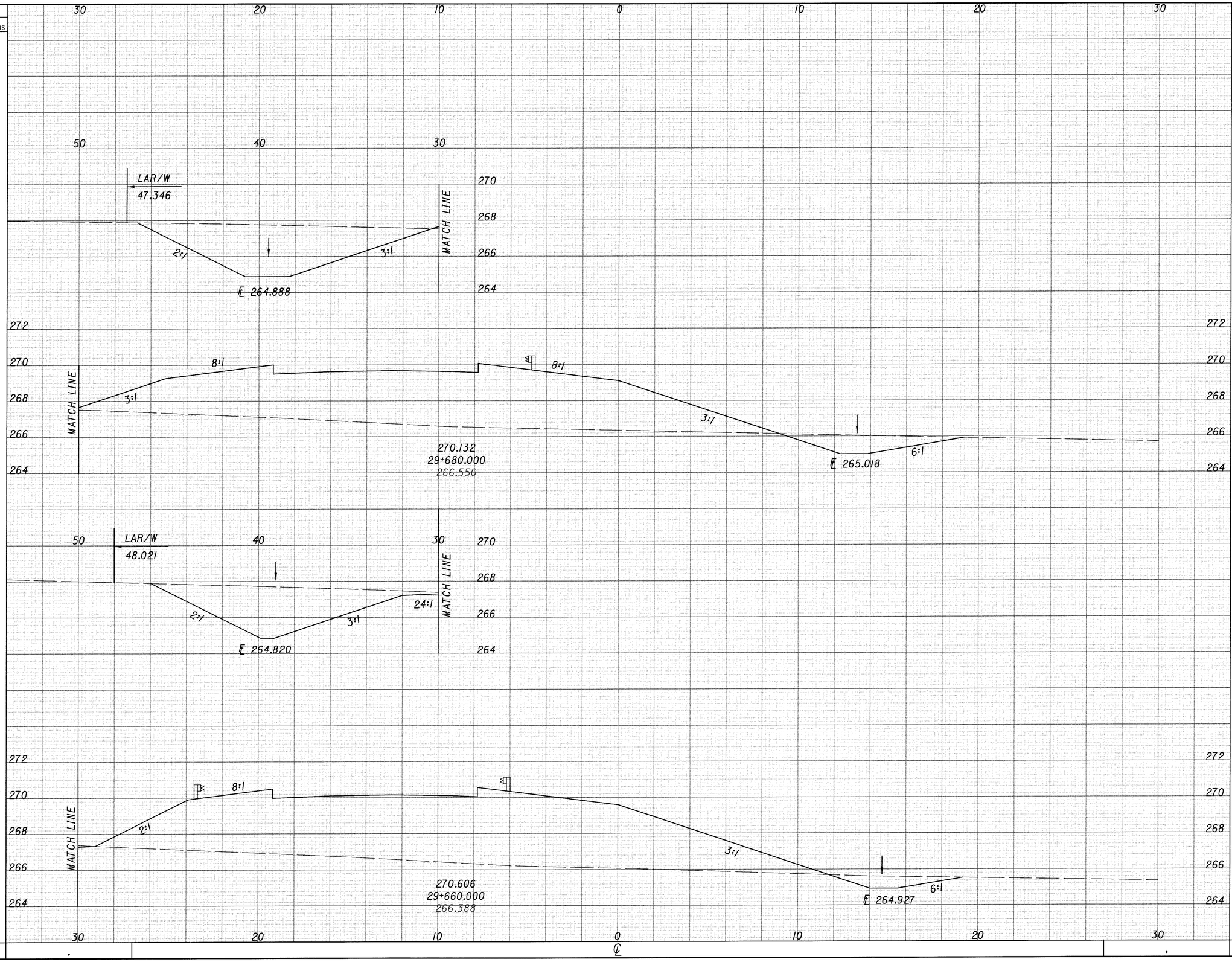
US-30 CROSS SECTIONS

STA 29+625.100 TO STA 29+640.000

WYA/CRA-30-28.009/0.000

362
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
64.91	1291	32.96	88.45	584	2005
64.16	1233	25.40	112.08	486	2249



CALCULATED AM

CHECKED REA

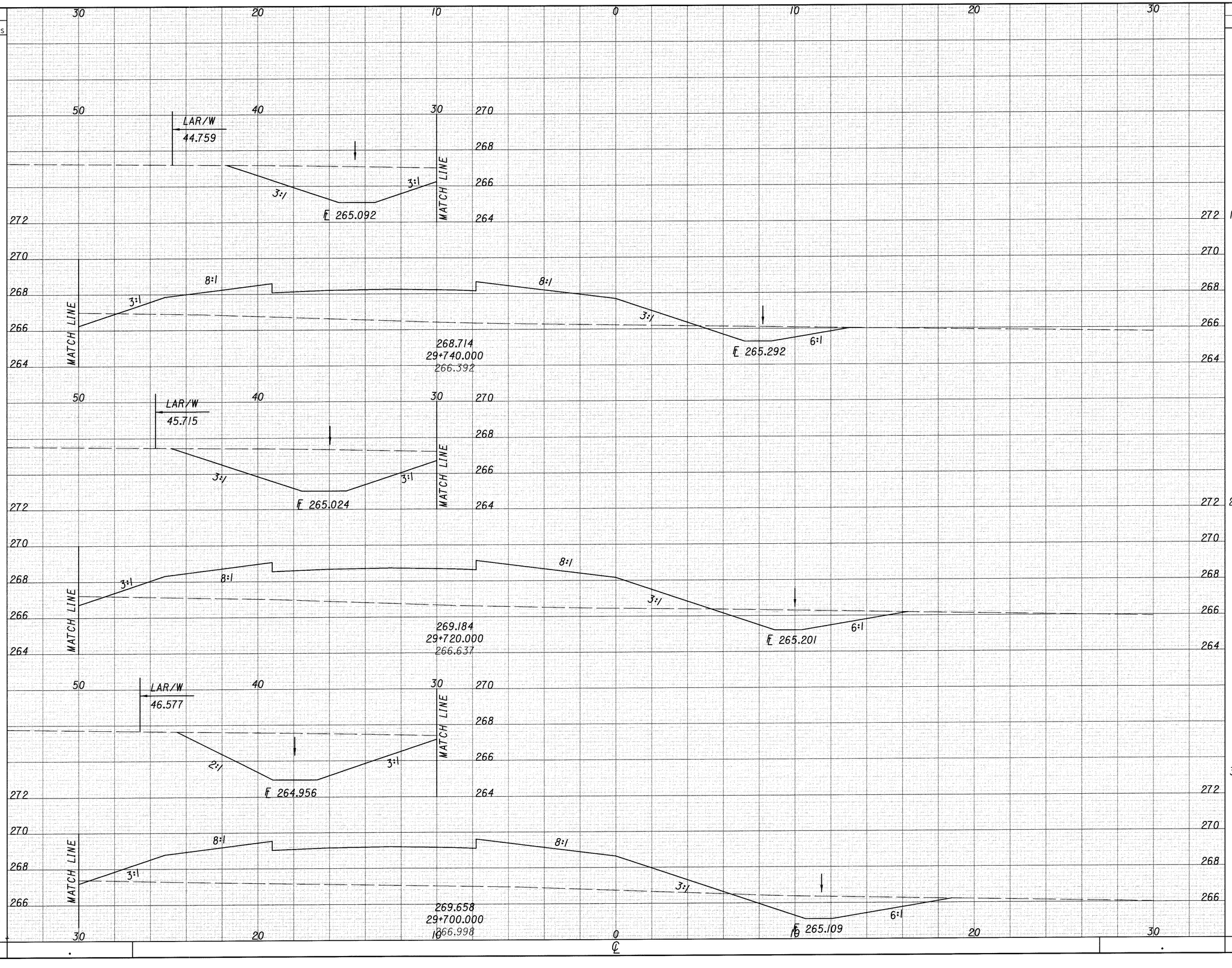
US-30 CROSS SECTIONS

STA 29+660.000 TO STA 29+680.000

WYA/CRA-30-28.009/0.000

363
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
52.70		19.89	45.98		
	1122			487	996
59.48		28.80	53.59		
	1217			600	1150
62.20		31.23	61.42		
	1271			642	1499



CALCULATED AM

CHECKED REA

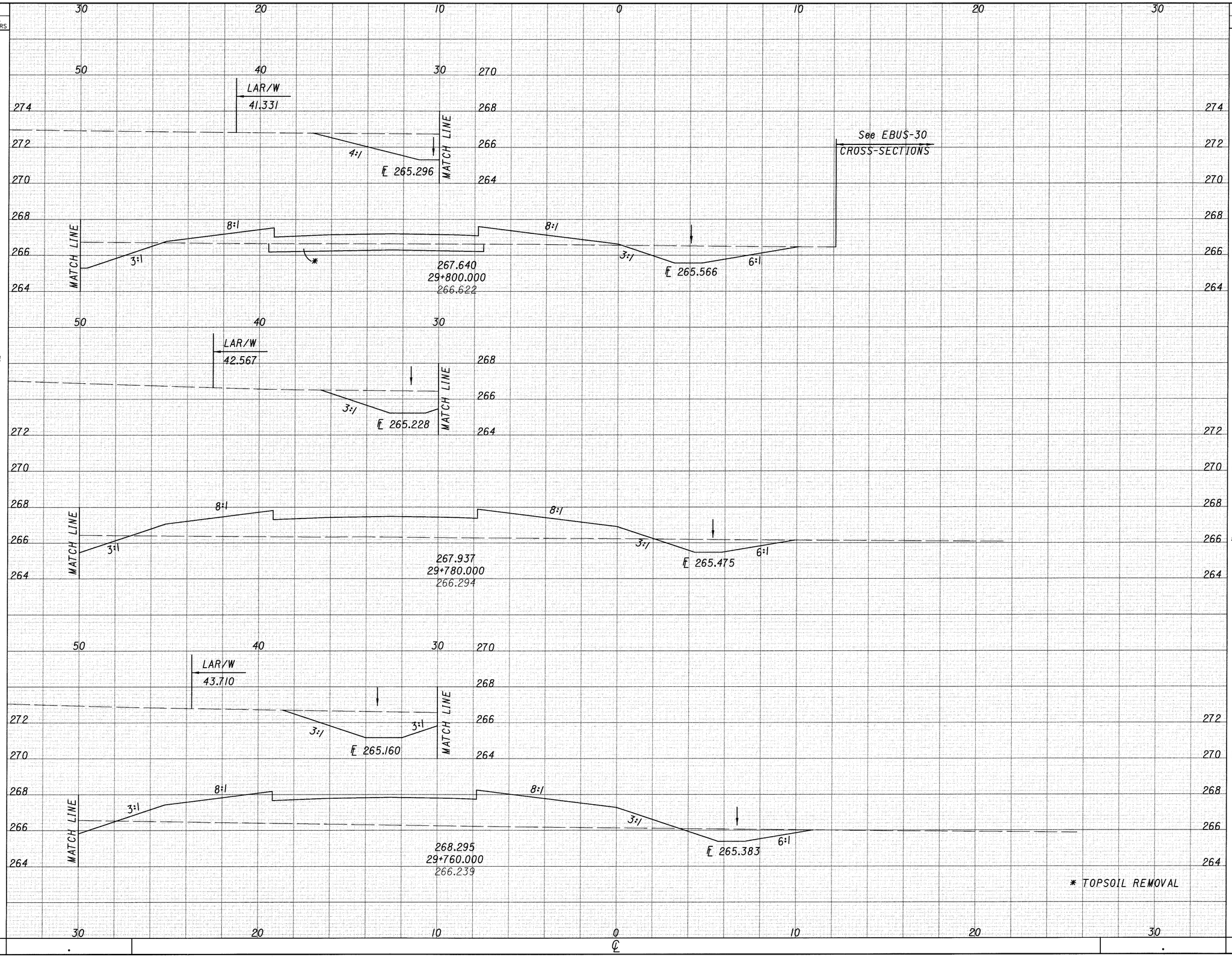
US-30 CROSS SECTIONS

STA 29+700.000 TO STA 29+740.000

WYA / CRA-30-28.009 / 0.000

364
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
44.57		14.78	16.67		
		*4.74		251	453
	884			*47	
43.82		10.32	28.58		
		*0.00			
	909			226	686
47.10		12.27	40.01		
	998			322	860



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 29+760.000 TO STA 29+800.000

WYA / CRA-30-28.009 / 0.000

365
2116

SEEDING END WIDTH	SEEDING SQ. METERS
40.28	
	779
37.59	
	800
42.43	
	870

30 20 10 0 10 20 30

50 40 30

LAR/W 40.462

268 272 266 270 264 268 266 264

6:1

MATCH LINE

See EBUS-30 CROSS-SECTIONS

MATCH LINE

3:1 8:1

℄ 265.501

267.115
29+860.000
266.489

8:1 8:1

℄ 265.840

50 40 30

LAR/W 40.278

268 272 266 270 268 266

4:1

MATCH LINE

See EBUS-30 CROSS-SECTIONS

MATCH LINE

3:1 8:1

℄ 265.433

267.229
29+840.000
267.182

3:1 6:1

℄ 265.749

50 40 30

LAR/W 40.000

268 272 266 270 268 266

4:1

MATCH LINE

See EBUS-30 CROSS-SECTIONS

MATCH LINE

3:1 8:1

℄ 265.365

267.404
29+820.000
267.269

3:1 6:1

℄ 265.657

30 20 10 0 10 20 30

℄

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14.72	13.21		
*9.93			
		448	235
		*203	
30.12	10.33		
*10.33			
		611	207
		*206	
30.94	10.41		
*10.28			
		457	271
		*150	

* TOPSOIL REMOVAL

CALCULATED AM

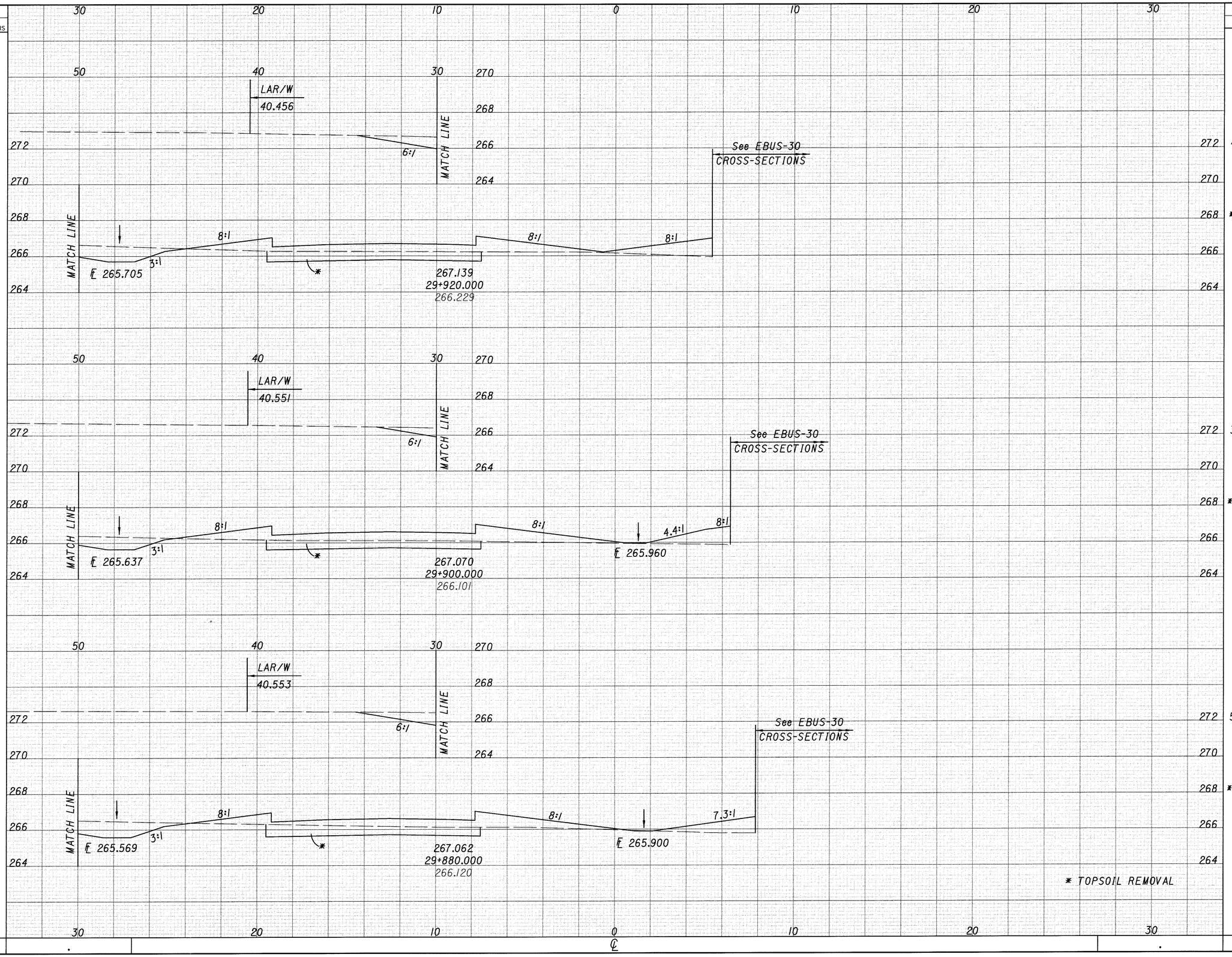
CHECKED REA

US-30 CROSS SECTIONS STA 29+820.000 TO STA 29+860.000

WYA/CRA-30-28.009/0.000

366
2116

SEEDING END WIDTH	SEEDING SQ. METERS
32.82	654
32.59	679
35.28	756



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
4.88	18.05		
*6.10			
		85	368
		*115	
3.57	18.74		
*5.42			
		89	363
		*118	
5.29	17.61		
*6.36			
		200	308
		*163	

CALCULATED AM

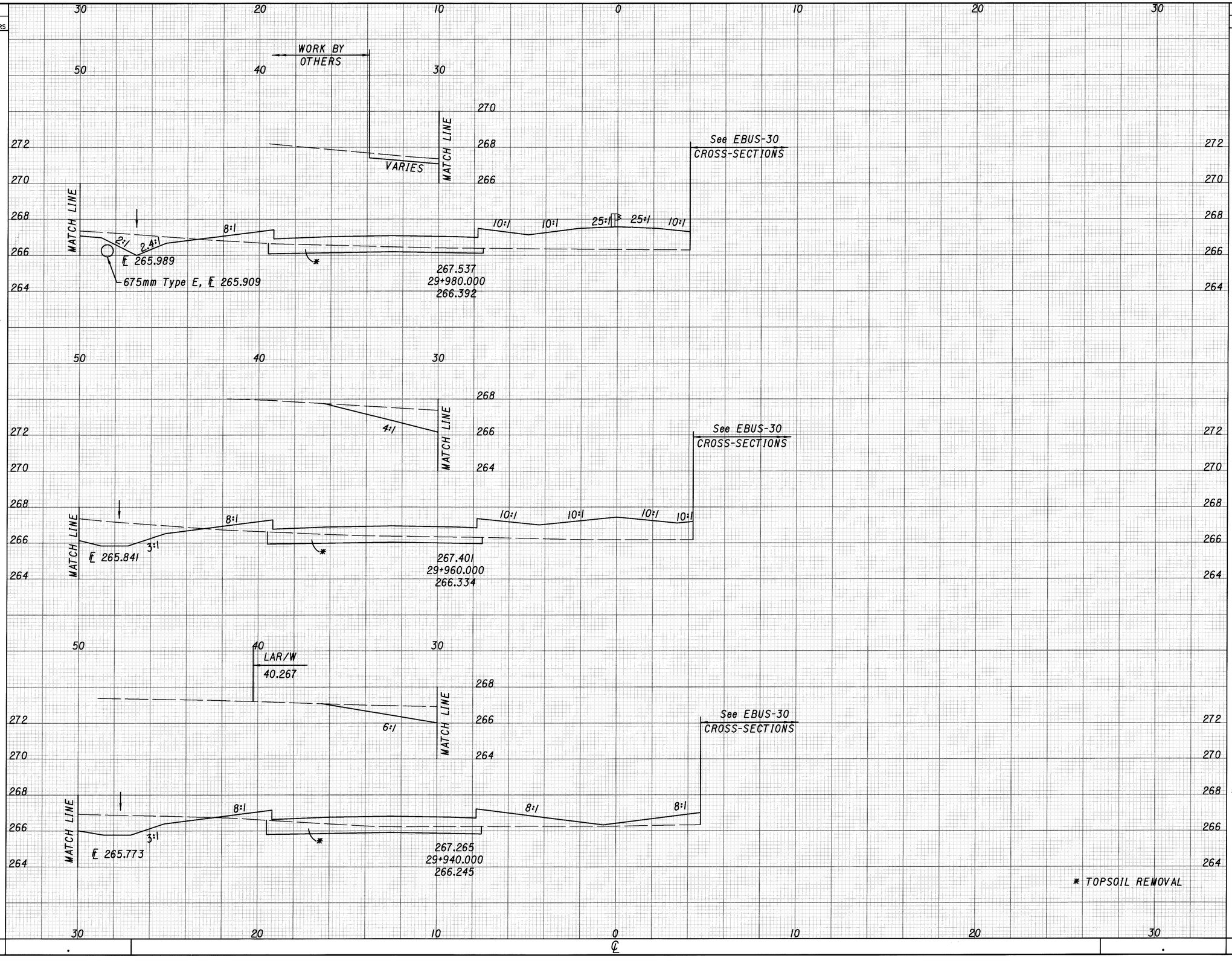
CHECKED REA

US-30 CROSS SECTIONS STA 29+880.000 TO STA 29+920.000

WYA/CRA-30-28.009/0.000

367
2116

SEEDING END WIDTH	SEEDING SQ. METERS
30.28	653
35.00	693
34.30	671



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
4.43	24.16		
*4.27			
		142	473
		*94	
9.75	23.12		
*5.16			
		178	396
		*108	
8.02	16.46		
*5.61			
		129	345
		*117	

CALCULATED AM

CHECKED REA

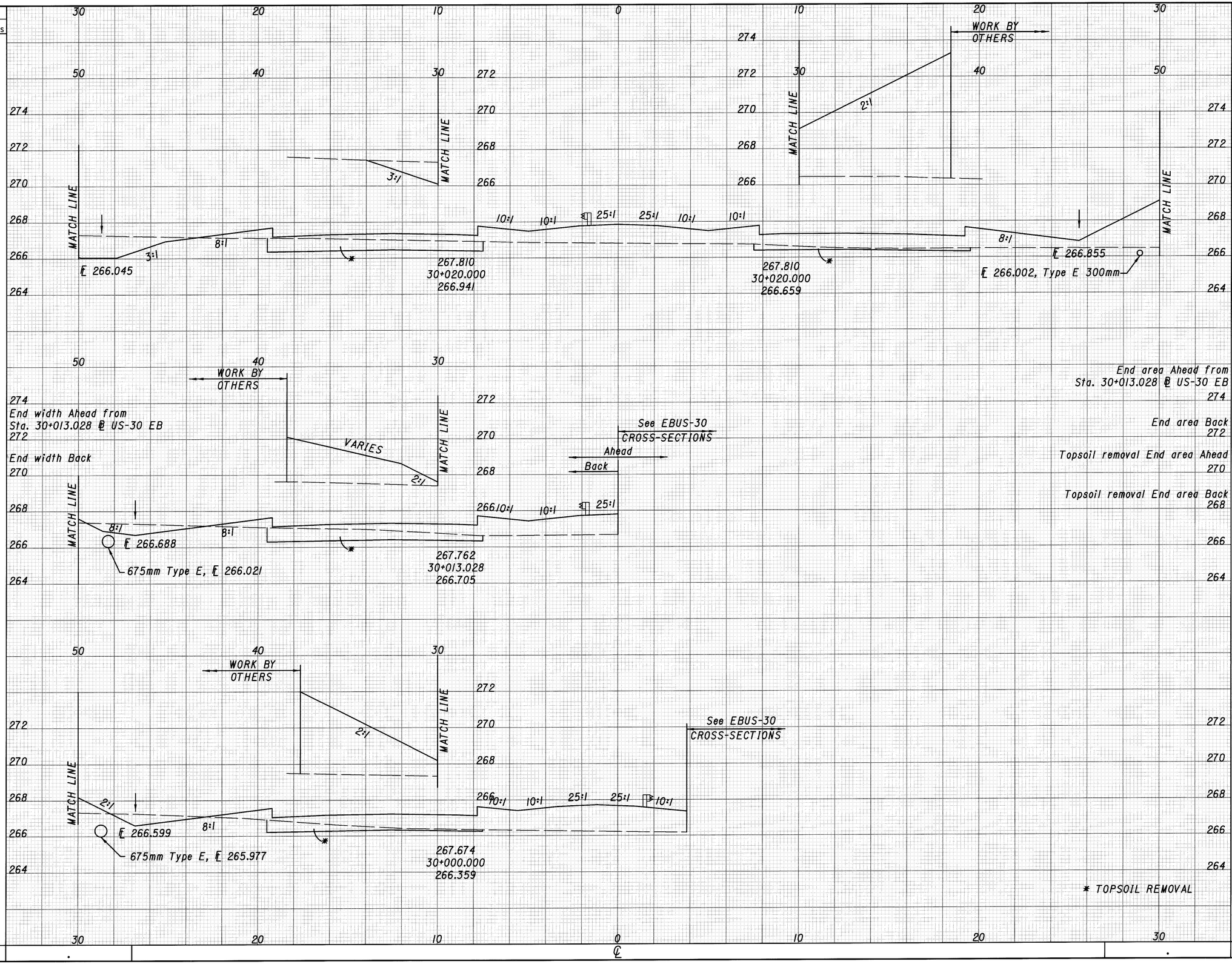
US-30 CROSS SECTIONS

STA 29+940.000 TO STA 29+980.000

WYA / CRA-30-28.009 / 0.000

368
2116

SEEDING END WIDTH	SEEDING SQ. METERS
55.89	
	405
60.29	
31.29	
	455
38.62	
	689



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
7.25	85.96		
*9.36			
		34	675
		*62	
End area Ahead from Sta. 30+013.028 ℄ US-30 EB 2.36	107.64		
End area Back 2.36	31.50		
Topsoil removal End area Ahead *8.43			
Topsoil removal End area Back *6.58			
		27	515
		*64	
1.76	47.51		
*3.26			
		62	717
		*75	

* TOPSOIL REMOVAL

CALCULATED AM | CHECKED REA

CROSS SECTIONS STA 30+000.000 TO STA 30+020.000

WYA / CRA-30-28.009 / 0.000

369
2116

SEEDING	
END WIDTH	SQ. METERS
59.02	
	16
54.74	
	1051
51.92	
	1078

Sta. 30+060 ℄
604, No. 4 CB
Grate = 267.039
Inv. 375mm = 266.400
Inv. 150mm = 266.511

LAR/W 40.075

Sta. 30+060, 27.614m Lt.
HW = 2.1M or 2.2M
Inv.375mm = 266.182
Tot. Area = 0.731
Q10 =0.143cms
HGL Elev. = 266.660

℄ 266.182

268.082
30+060.000
267.385

603, 27.6m x 375mm Conduit Type B @ 0.78%

268.082
30+060.000
266.954

℄ 266.254

℄ 266.180

268.080
30+059.714
267.387

268.080
30+059.714
266.953

℄ 266.251

WORK BY OTHERS

VARIES

℄ 266.113

267.946
30+040.000
267.232

267.946
30+040.000
266.902

℄ 267.031
℄ 266.129, Type E 300mm

* TOPSOIL REMOVAL

END AREA		VOLUME	
CUT	FILL	CUT	FILL
15.31	31.18		
*11.70			
		4	9
*3			
15.44	31.14		
*11.73			
		250	814
*238			
9.91	51.45		
*12.37			
		172	1374
*217			

CALCULATED AM

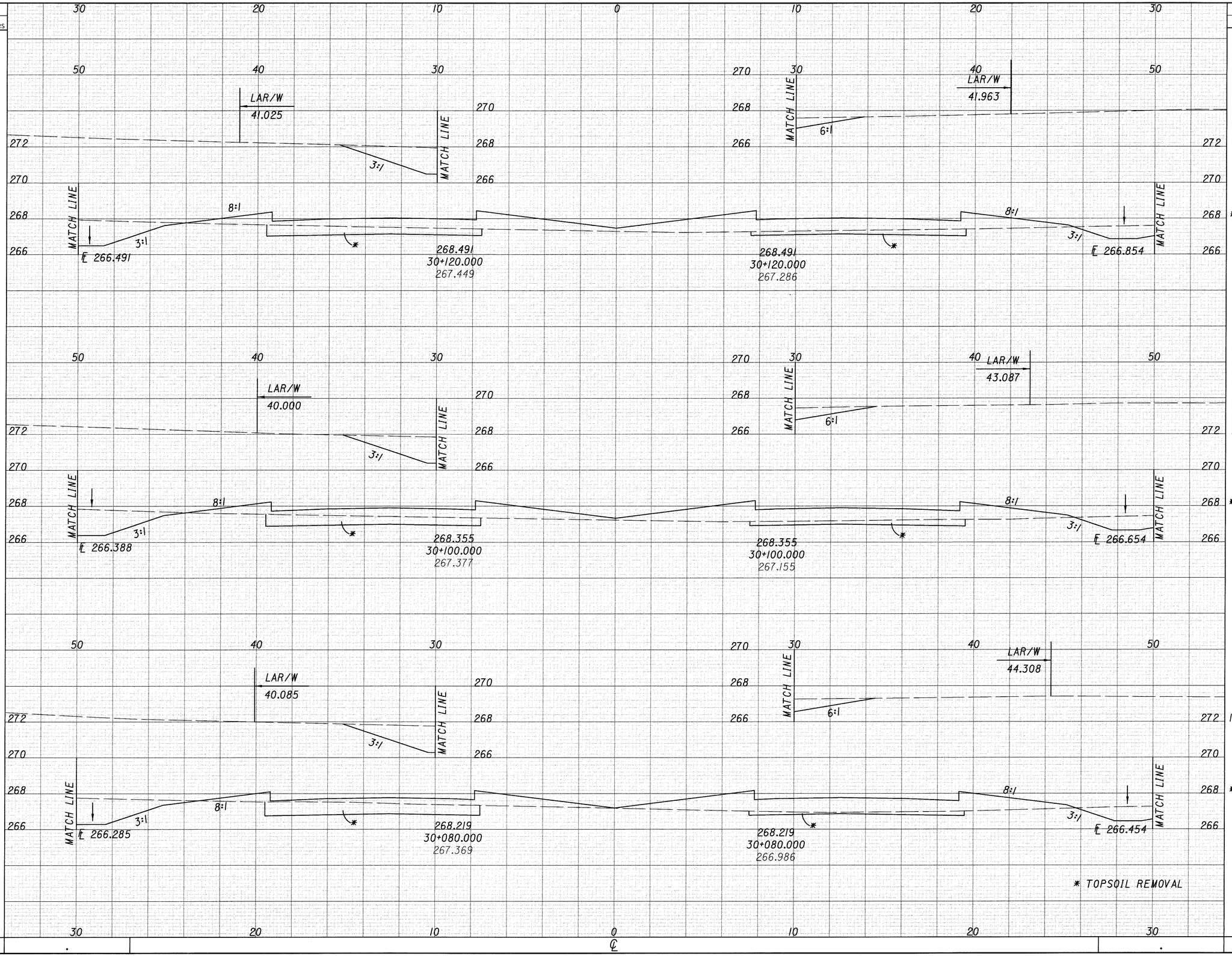
CHECKED REA

US-30 CROSS SECTIONS
STA 30+040.000 TO STA 30+060.000

WYA/CRA-30-28.009/0.000

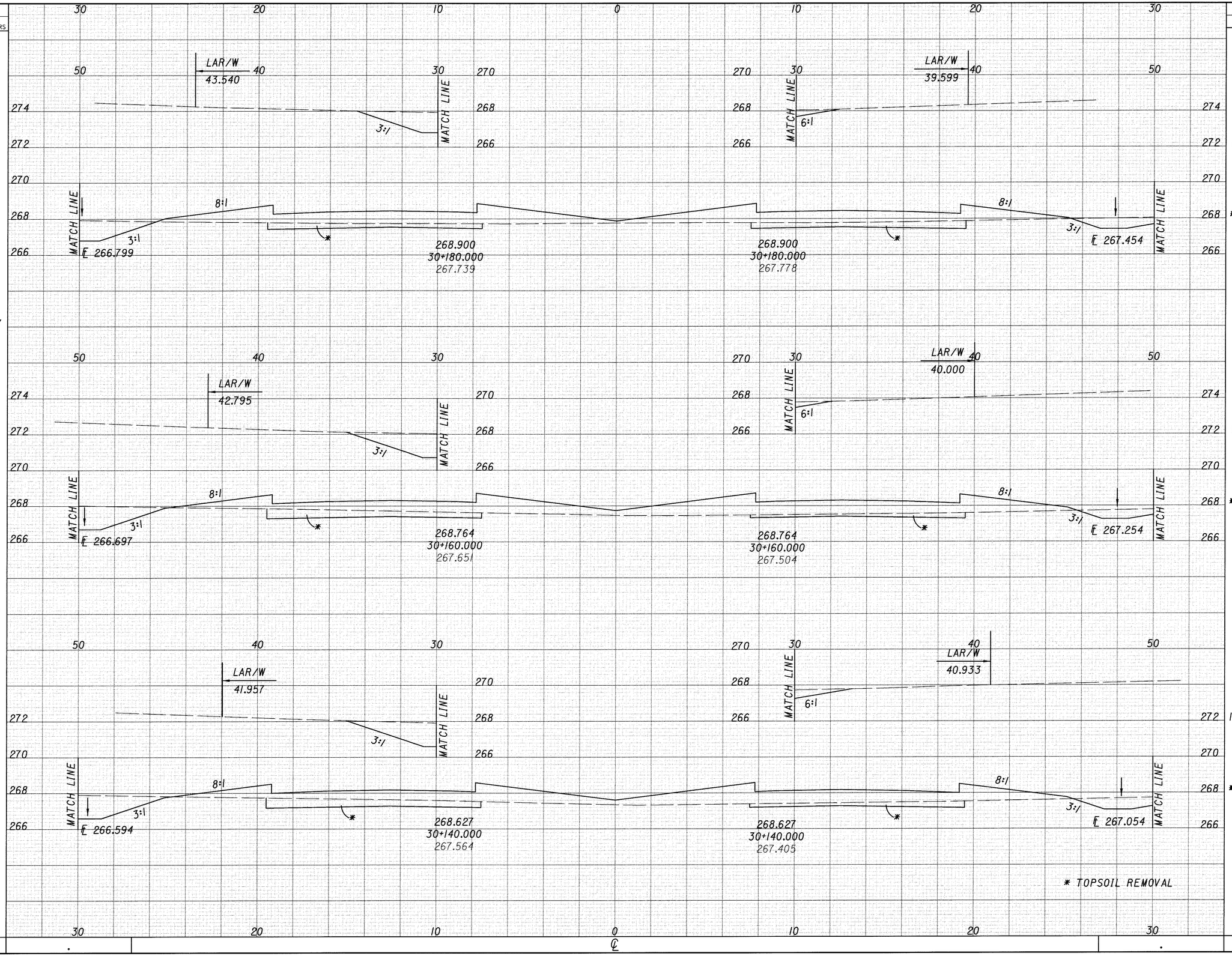
370
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
55.28	1111	12.68	34.75	258	686
		*8.30			
				*172	
55.85	1116	13.16	33.83		
		*8.93			
				268	663
				*185	
55.80	1148	13.62	32.49		
		*9.61			
				289	637
				*213	



US-30 CROSS SECTIONS
STA 30+080.000 TO STA 30+120.000
WYA/CRA-30-28.009/0.000
CALCULATED AM
CHECKED REA
371
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
52.84		8.54	35.34		
	1057	*6.75		184	720
				*135	
52.88		9.89	36.62		
	1071	*6.70		207	725
				*145	
54.21		10.83	35.87		
	1095	*7.77		235	706
				*161	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 30+140.000 TO STA 30+180.000

WYA / CRA-30-28.009 / 0.000

372
2116

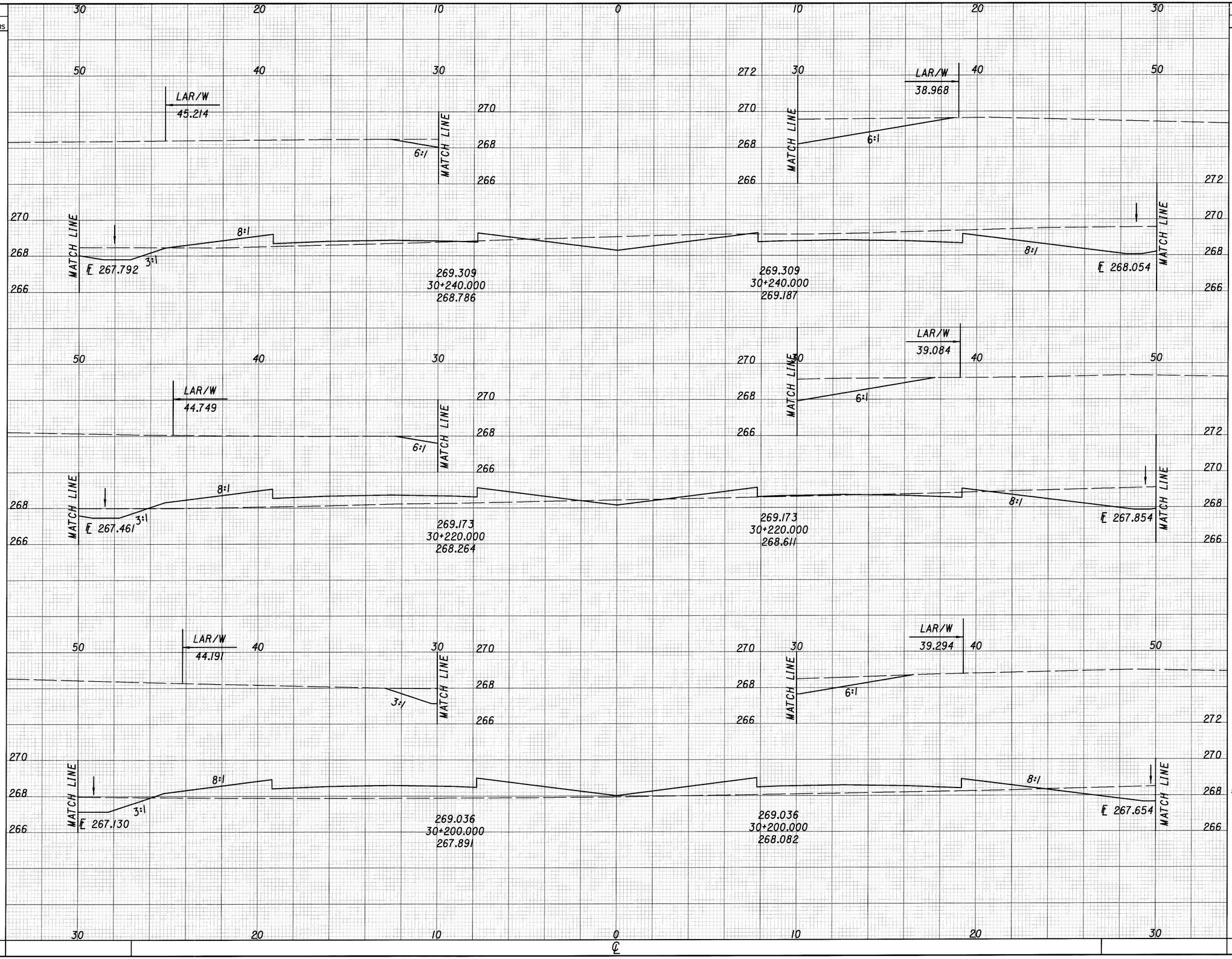
SEEDING	
END WIDTH	SQ. METERS

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED

CHECKED



*9.20

*160

US-30 CROSS SECTIONS
STA 30+200.000 TO STA 30+240.000

WYA/CRA-30-28.009/0.000

373
2.116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
54.66	IIII	38.15	22.05	932	427
		*21.28		*420	
56.48		55.02	20.67		
		*20.67			
	1144			1045	415
				*413	
57.95		49.50	20.79		
		*20.59			
	1150			797	438
				*399	

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 30+260.000 TO STA 30+300.000

WYA / CRA-30-28.009 / 0.000

374
2.116

30 20 10 0 10 20 30

℄

LAR/W 46.049 — 6:1 — MATCH LINE — 272 / 270 / 268

℄ 268.188 — 3:1 — 8:1 — 269.718 — 30+300.000 — 269.429

LAR/W 39.192 — 4:1 — MATCH LINE — 272 / 270 / 268

269.718 — 30+300.000 — 269.767 — 8:1 — 3:1 — ℄ 268.243 — MATCH LINE — 272 / 270 / 268

LAR/W 45.864 — 6:1 — MATCH LINE — 272 / 270 / 268

LAR/W 39.023 — 6:1 — MATCH LINE — 272 / 270 / 268

MATCH LINE — 272 / 270 / 268

℄ 268.454 — 3:1 — 8:1 — 269.581 — 30+280.000 — 269.607

269.581 — 30+280.000 — 269.912 — 8:1 — ℄ 268.454 — MATCH LINE — 272 / 270 / 268 / 266

LAR/W 45.586 — 6:1 — MATCH LINE — 272 / 270 / 268

LAR/W 38.948 — 6:1 — MATCH LINE — 272 / 270 / 268

MATCH LINE — 272 / 270 / 268

℄ 268.123 — 3:1 — 8:1 — 269.445 — 30+260.000 — 269.264

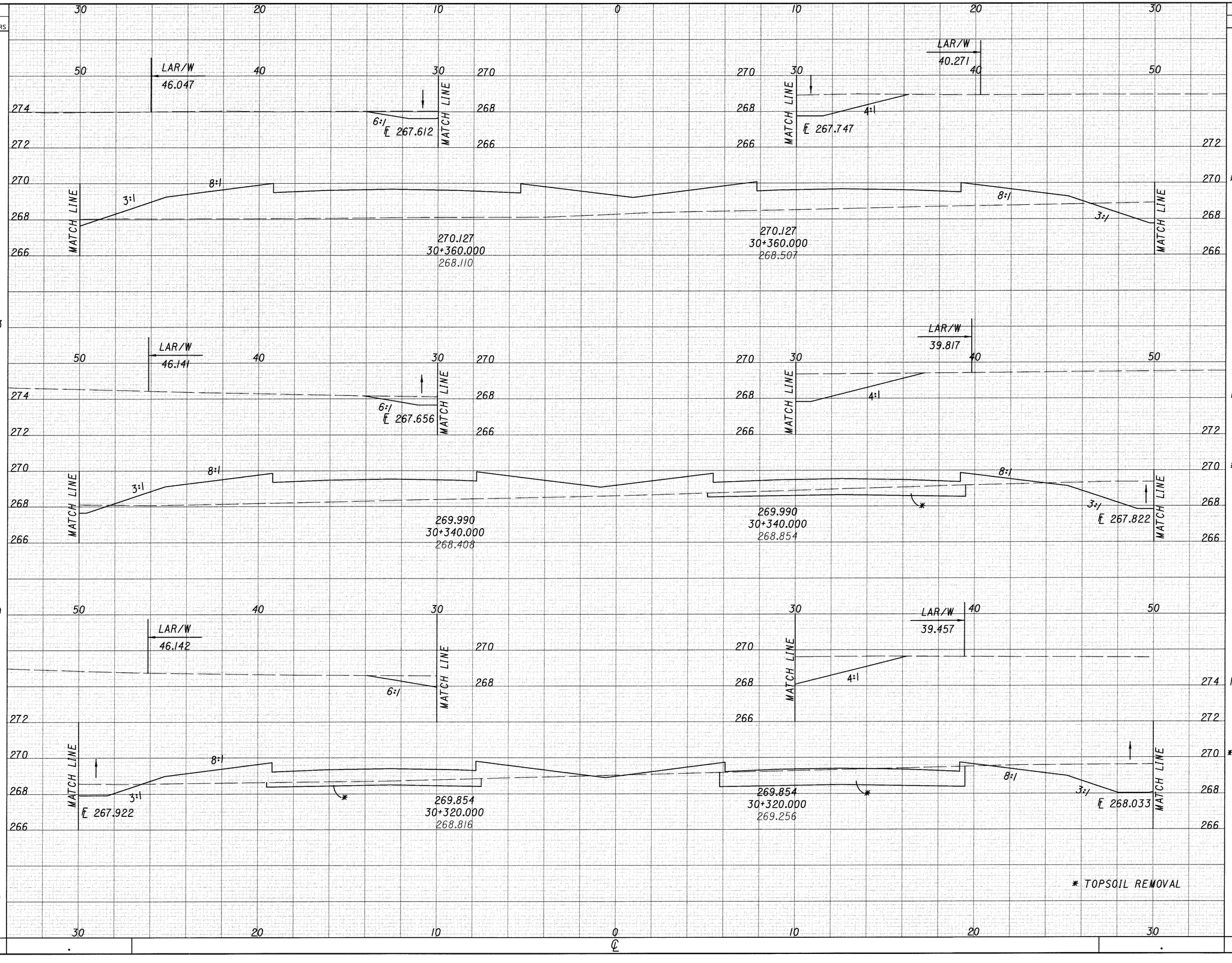
269.445 — 30+260.000 — 269.755 — 8:1 — ℄ 268.254 — MATCH LINE — 272 / 270 / 268

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
53.67		8.30	65.53		
		*0.00			
				210	1136
	1083			*54	
54.67		12.70	48.08		
		*5.41			
				290	789
	1090			*200	
		16.28	30.79		
54.32		*14.62			
				544	528
	1090			*359	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 30+320.000 TO STA 30+360.000

WYA/CRA-30-28.009/0.000

375
2.116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
57.31		10.09	45.70		
	1147	*0.92		209	967
				*9	
57.35		10.83	50.99		
		*0.00			
	948			162	987
54.18		8.22	65.18		
	162			25	196

30 20 10 0 10 20 30

50 40 30 272 270 268 266

LAR/W 45.579

6:1 ℄ 267.970 MATCH LINE

LAR/W 41.466

4:1 ℄ 267.867 MATCH LINE

MATCH LINE 8:1 3:1 270.399 30+400.000 269.078

270.399 30+400.000 268.975 8:1 3:1 MATCH LINE

LAR/W 45.860

6:1 ℄ 267.791 MATCH LINE

LAR/W 40.821

4:1 ℄ 267.807 MATCH LINE

MATCH LINE 8:1 3:1 270.263 30+380.000 268.768

270.263 30+380.000 268.685 8:1 3:1 MATCH LINE

LAR/W 46.020

6:1 ℄ 267.639 MATCH LINE

Sta. 30+363, 29.794m Lt.
HW - 4A or B
Grate = 269.230
Inv. 375 = 267.649
Tot. Area = 0.944
Q10 = 0.128cms
HGL Elev. = 267.980

Sta. 30+363, 0.779m Rt.
604, No. 4 CB
Grate = 269.230
Inv. 375mm = 268.591
Inv. 150mm = 268.603

LAR/W 40.347

4:1 ℄ 267.756 MATCH LINE

MATCH LINE 3:1 270.147 30+363.000 268.170

603, 30.6m x 375mm Conduit Type B @ 3.08%

270.147 30+363.000 268.478 8:1 3:1 MATCH LINE

* TOPSOIL REMOVAL

℄

CALCULATED AM

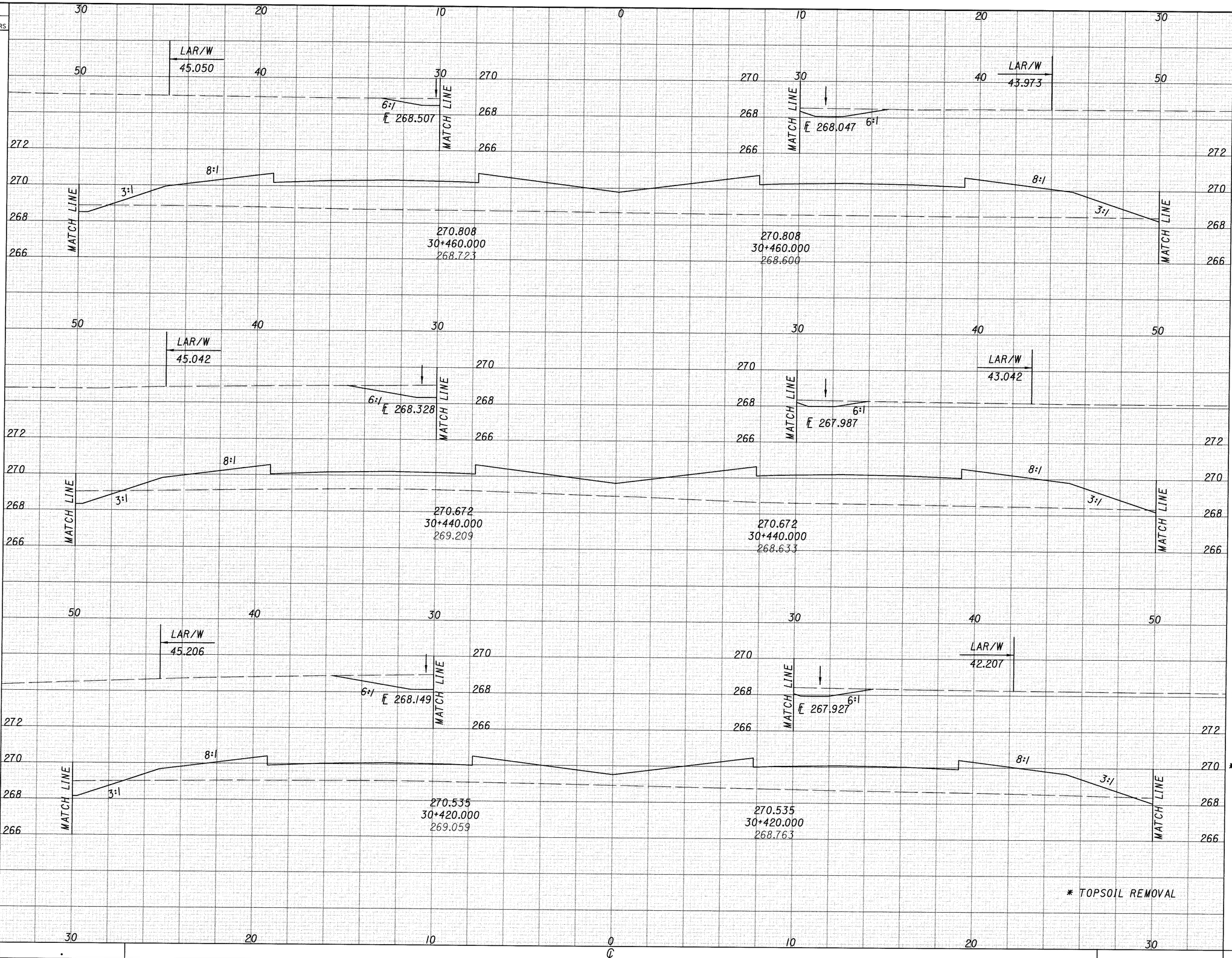
CHECKED REA

US-30 CROSS SECTIONS STA 30+363.000 TO STA 30+400.000

WYA/CRA-30-28.009/0.000

376
2.116

SEEDING END WIDTH	SEEDING SQ. METERS
52.99	1069
53.87	1091
55.23	1125



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2.77	84.97	68	1516
4.05	66.59	97	1259
5.64	59.26	157	1050
*0.00		*9	

* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

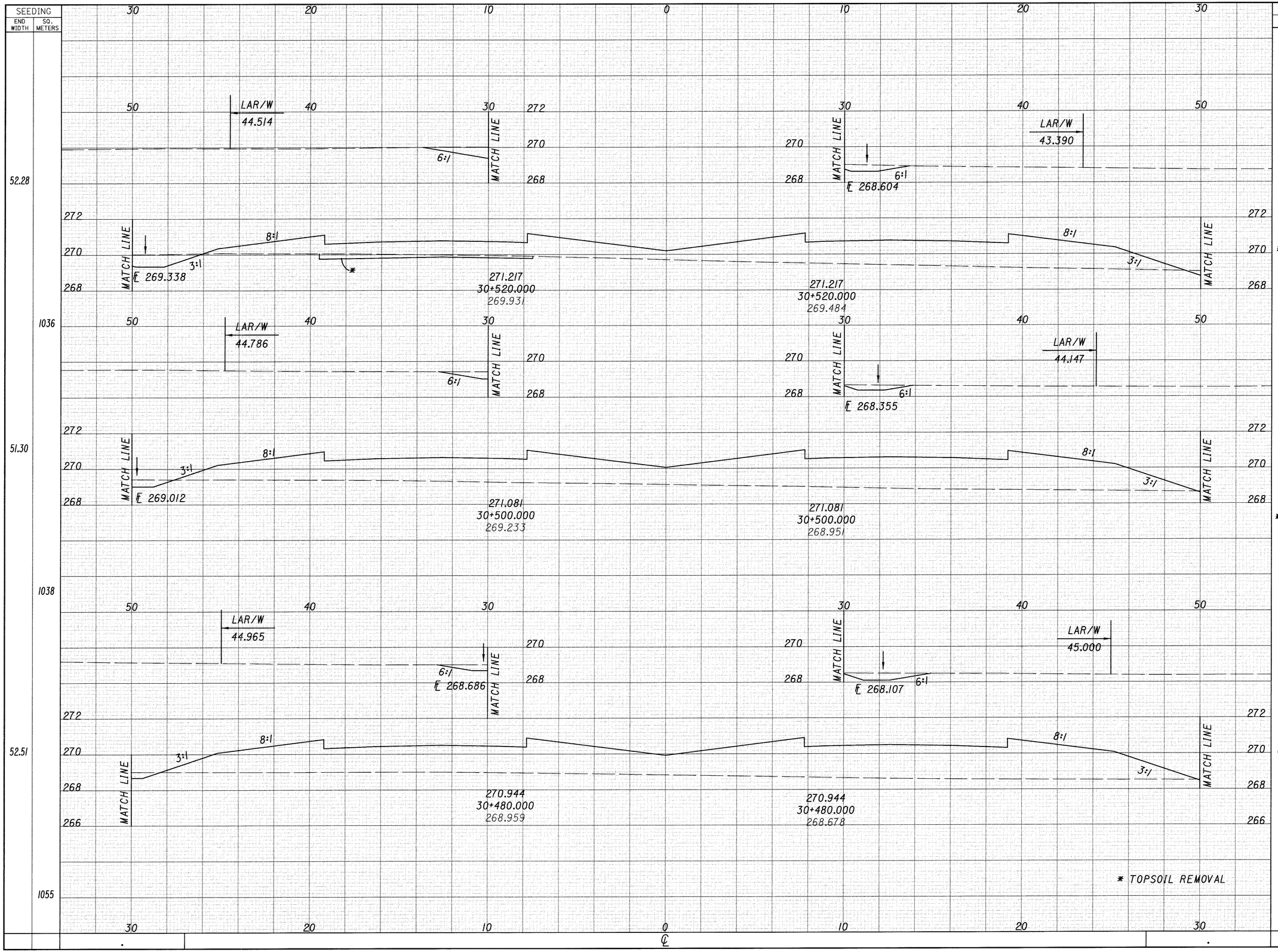
US-30 CROSS SECTIONS

STA 30+420.000 TO STA 30+460.000

WYA / CRA-30-28.009 / 0.000

377
2 116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
52.28		4.24	55.05		
	1036	*2.12		64	1329
51.30		2.12	77.84	*21	
	1038	*0.00		44	1640
52.51		2.29	86.19		
	1055			51	1712



CALCULATED AM

CHECKED REA

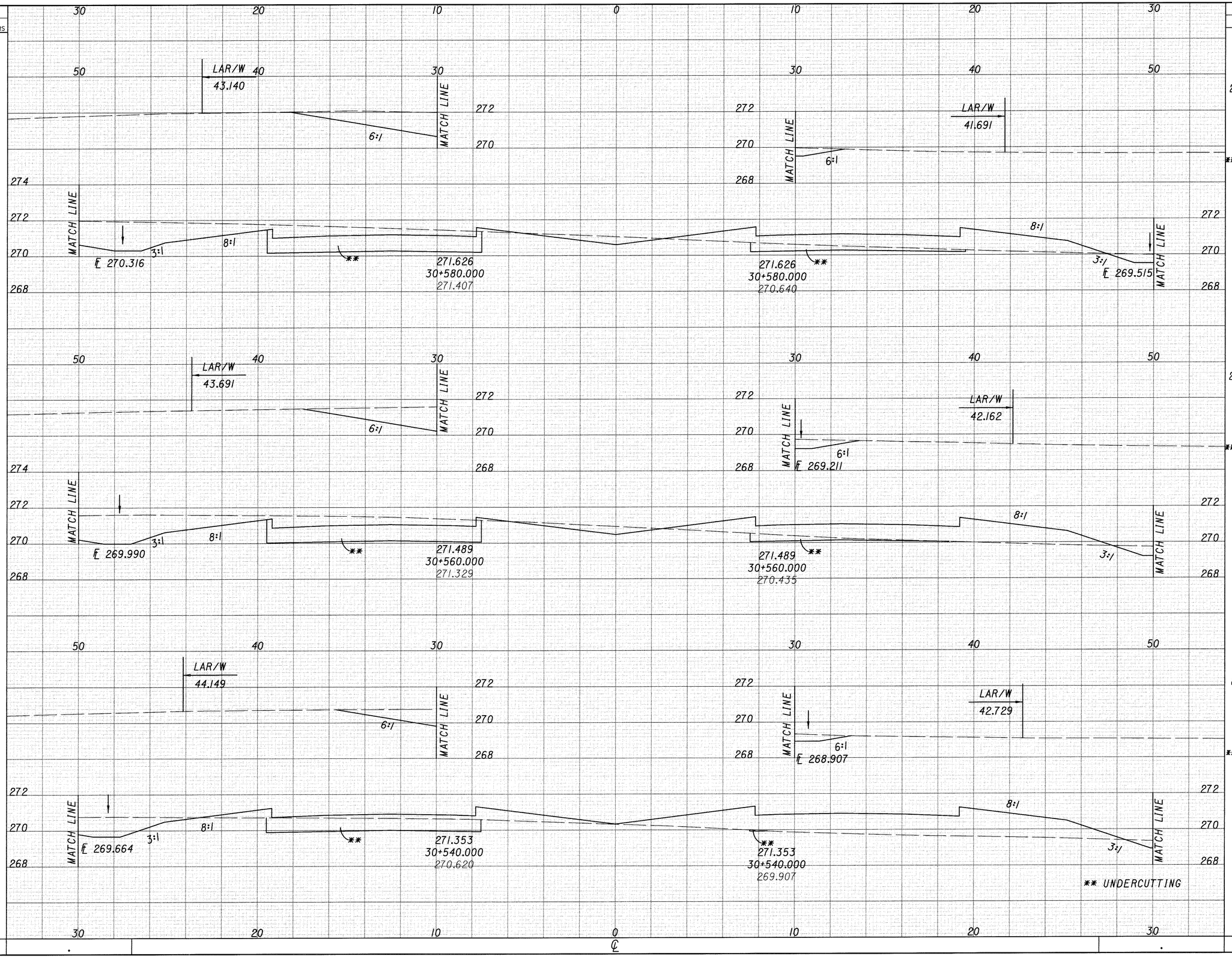
US-30 CROSS SECTIONS

STA 30+480.000 TO STA 30+520.000

WYA / CRA-30-28.009 / 0.000

378
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
56.46	1131	26.23	28.93	516	588
		**13.29		**253	
56.64	1107	25.35	29.91	336	699
		**12.02		**206	
54.07	1064	8.29	40.02	125	951
		**8.59		*107	



CALCULATED AM

CHECKED REA

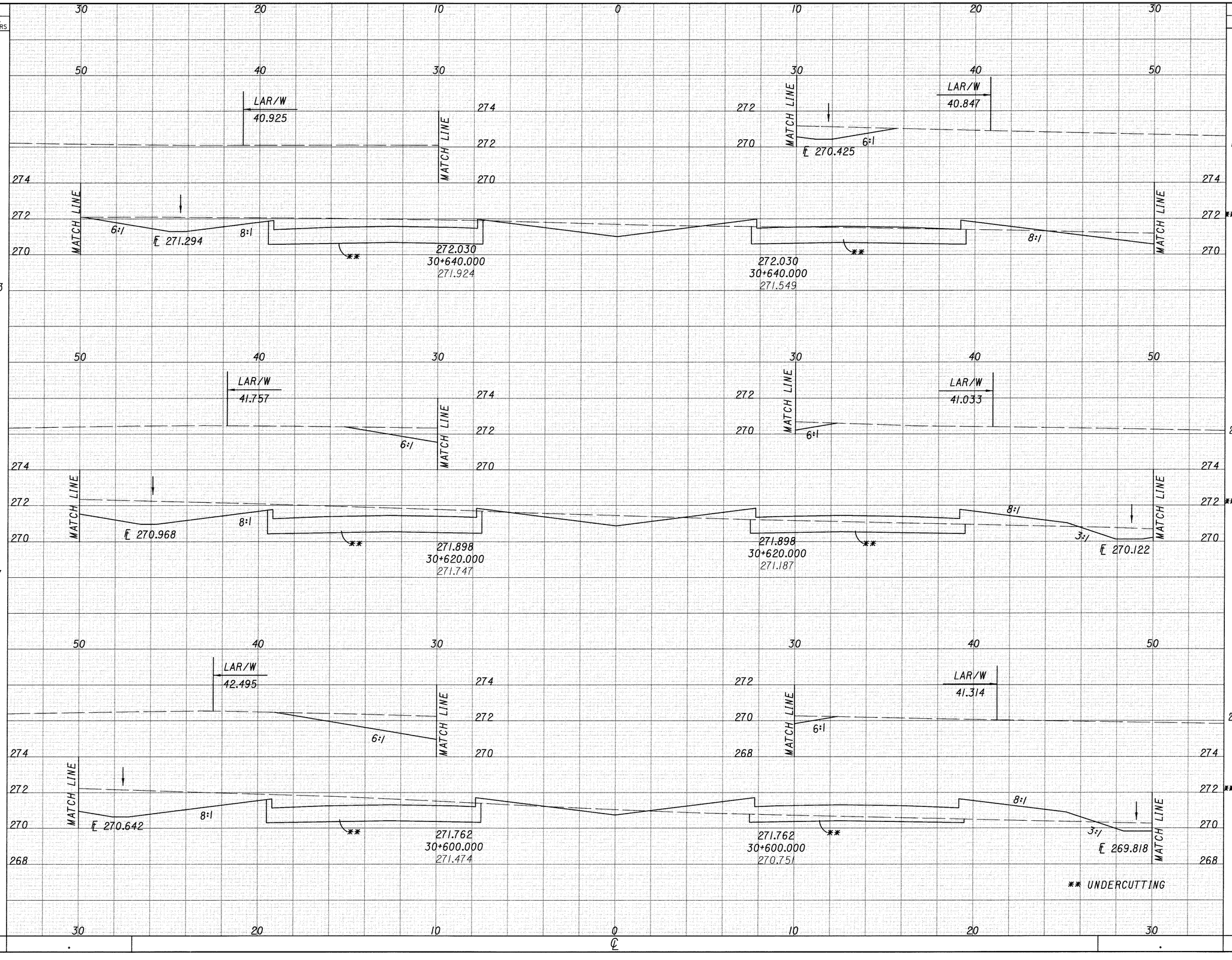
US-30 CROSS SECTIONS

STA 30+540.000 TO STA 30+580.000

WYA / CRA-30-28.009 / 0.000

379
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
50.38	1033	19.78	22.26	433	470
52.93	1097	23.47	24.77	483	536
56.80	1133	24.78	28.84	510	578
		**20.25		**376	
		**17.38		**311	
		**13.67		**270	



CALCULATED AM

CHECKED REA

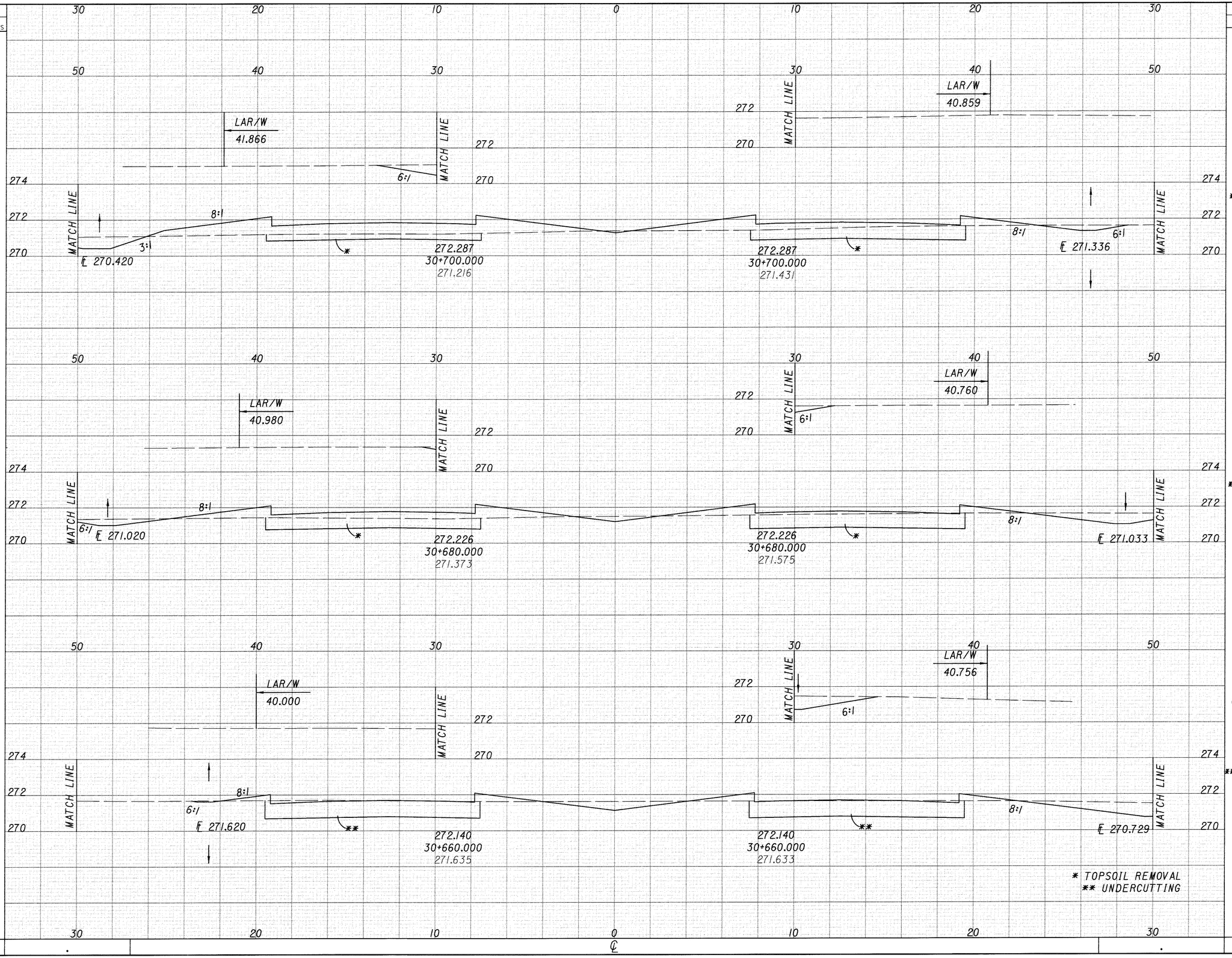
US-30 CROSS SECTIONS

STA 30+600.000 TO STA 30+640.000

WYA / CRA-30-28.009 / 0.000

380
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
46.47	939	3.79	31.28	87	577
		*11.63		*280	
47.48	900	4.94	26.42	137	495
		*16.37		*366	
42.48	929	8.77	23.05	286	453
		**20.19		**404	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

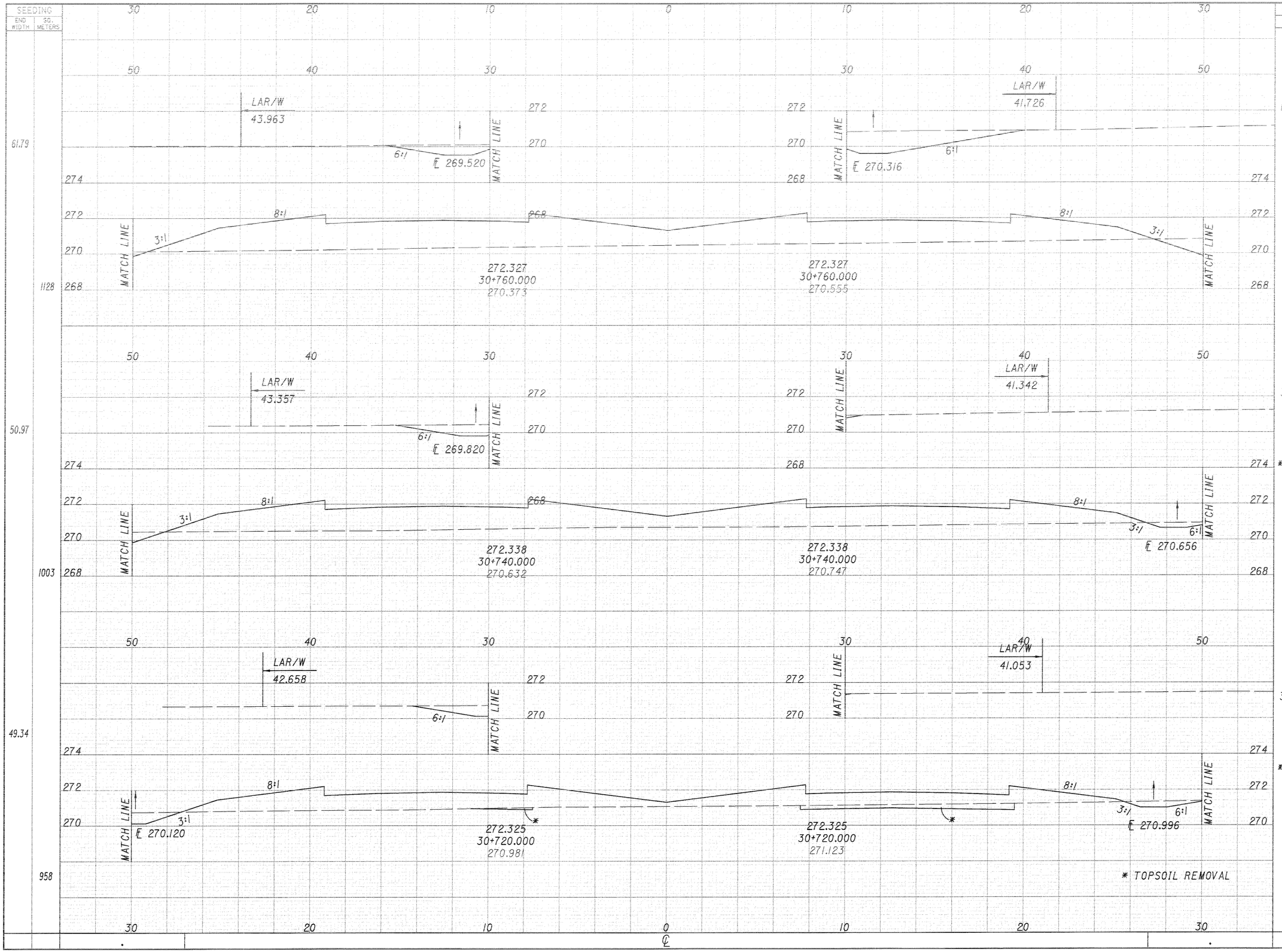
STA 30+660.000 TO STA 30+700.000

WYA/CRA-30-28.009/0.000

381
2.116

SEEDING END WIDTH	SEEDING SQ. METERS
61.79	
	1128
50.97	
	1003
49.34	
	958

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
11.22	70.24		
		147	1280
3.44	57.73		
*0.00			
		71	988
		*31	
3.64	41.05		
*3.10			
		74	723
		*147	

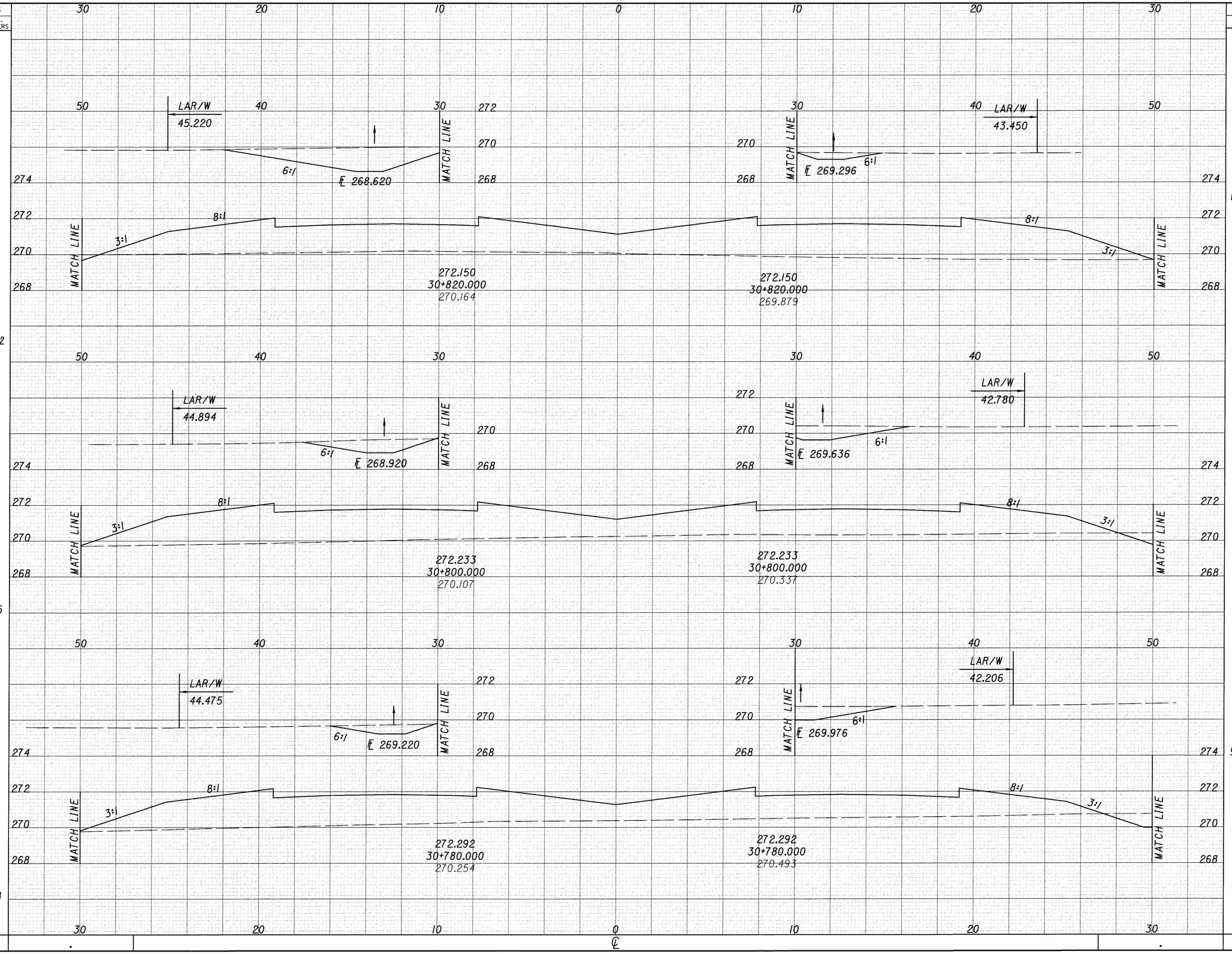


US-30 CROSS SECTIONS
STA 30+720.000 TO STA 30+760.000

WYA/CRA-30-28.009/0.000

382
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
62.74	1222	10.98	88.54	181	1702
59.50		7.12	81.70		
57.03	1165	5.60	75.60	127	1573
	1188			168	1458



CALCULATED AM

CHECKED REA

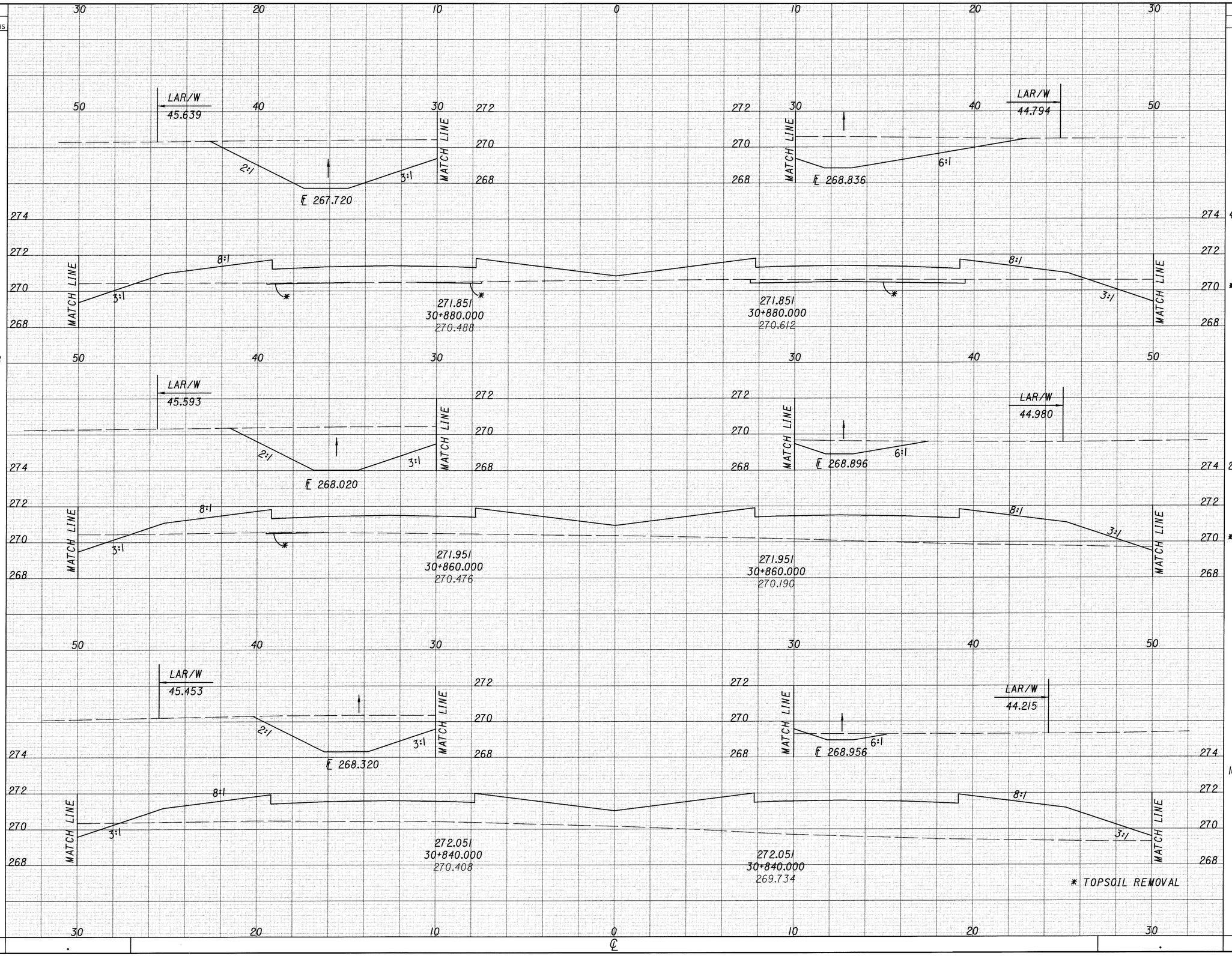
US-30 CROSS SECTIONS

STA 30+780.000 TO STA 30+820.000

WYA/CRA-30-28.009/0.000

383
2/16

SEEDING END WIDTH	SEEDING SQ. METERS	CHAINAGE	LAR/W	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
73.05		30+880.000	45.639	40.22	41.55		
	1388	30+860.000	45.593	*2.24		640	1021
65.77		30+840.000	45.453	*22			
	1277			*0.00		401	1416
61.96			44.794	23.82	60.53		
	1247		44.980	16.28	81.04	273	1696
			44.215				



* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

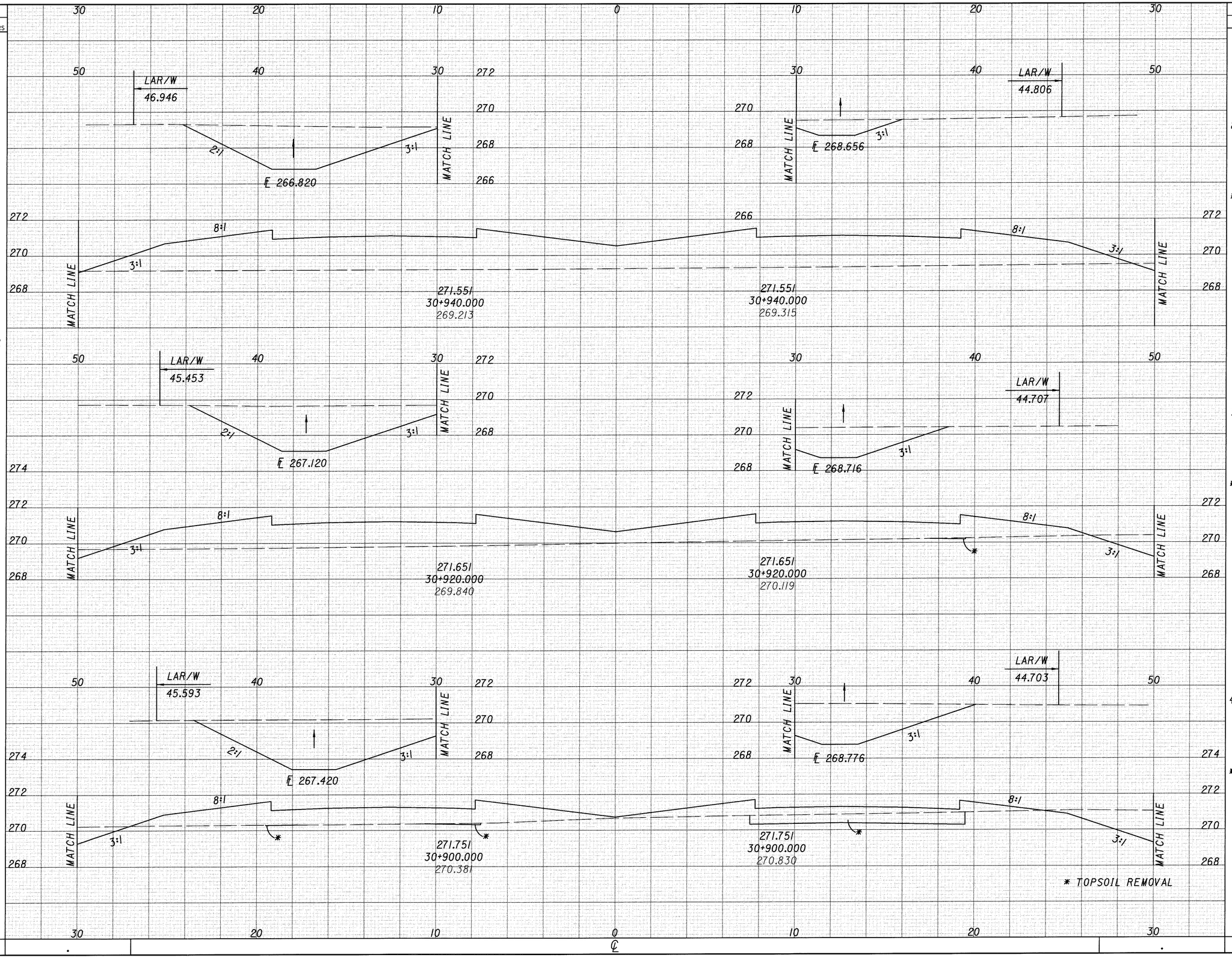
CROSS SECTIONS

STA 30+840.000TO STA 30+880.000

WYA / CRA-30-28.009 / 0.000

384
2116

SEEDING END WIDTH	SEEDING SQ. METERS
67.28	
	1372
69.95	
	1413
71.32	
	1444



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
23.88	93.11		
*0.00		583	1519
34.41	58.76	*0	
*0.00		802	953
45.82	36.53	*66	
*6.59		860	781
		*88	

CALCULATED AM

CHECKED REA

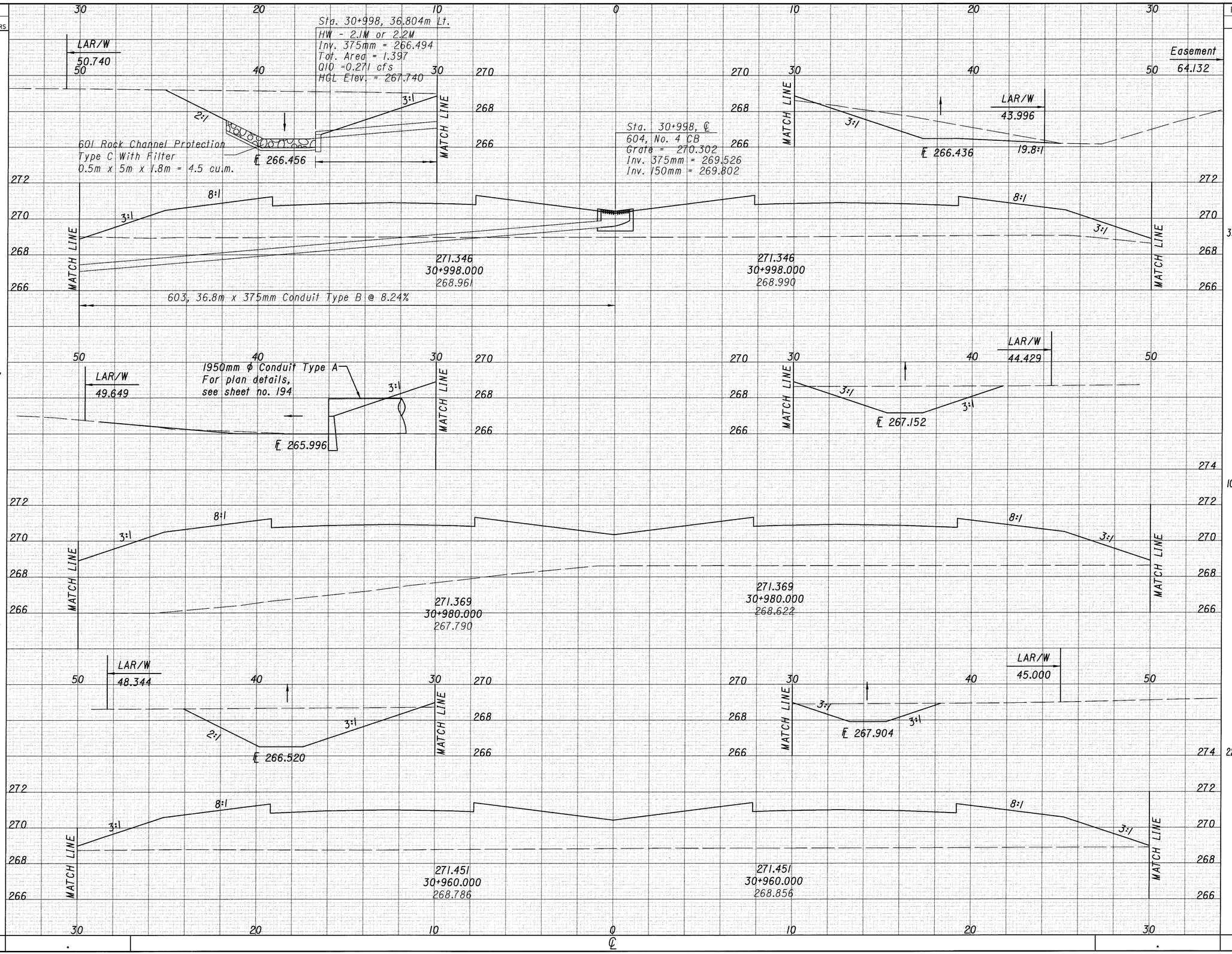
US-30 CROSS SECTIONS

STA 30+900.000 TO STA 30+940.000

WYA/CRA-30-28.009/0.000

385
2.116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
76.93	1357	35.02	99.07	405	2488		
73.86	1436	10.00	177.37	320	2921		
69.79	1371	22.01	114.68	459	2078		

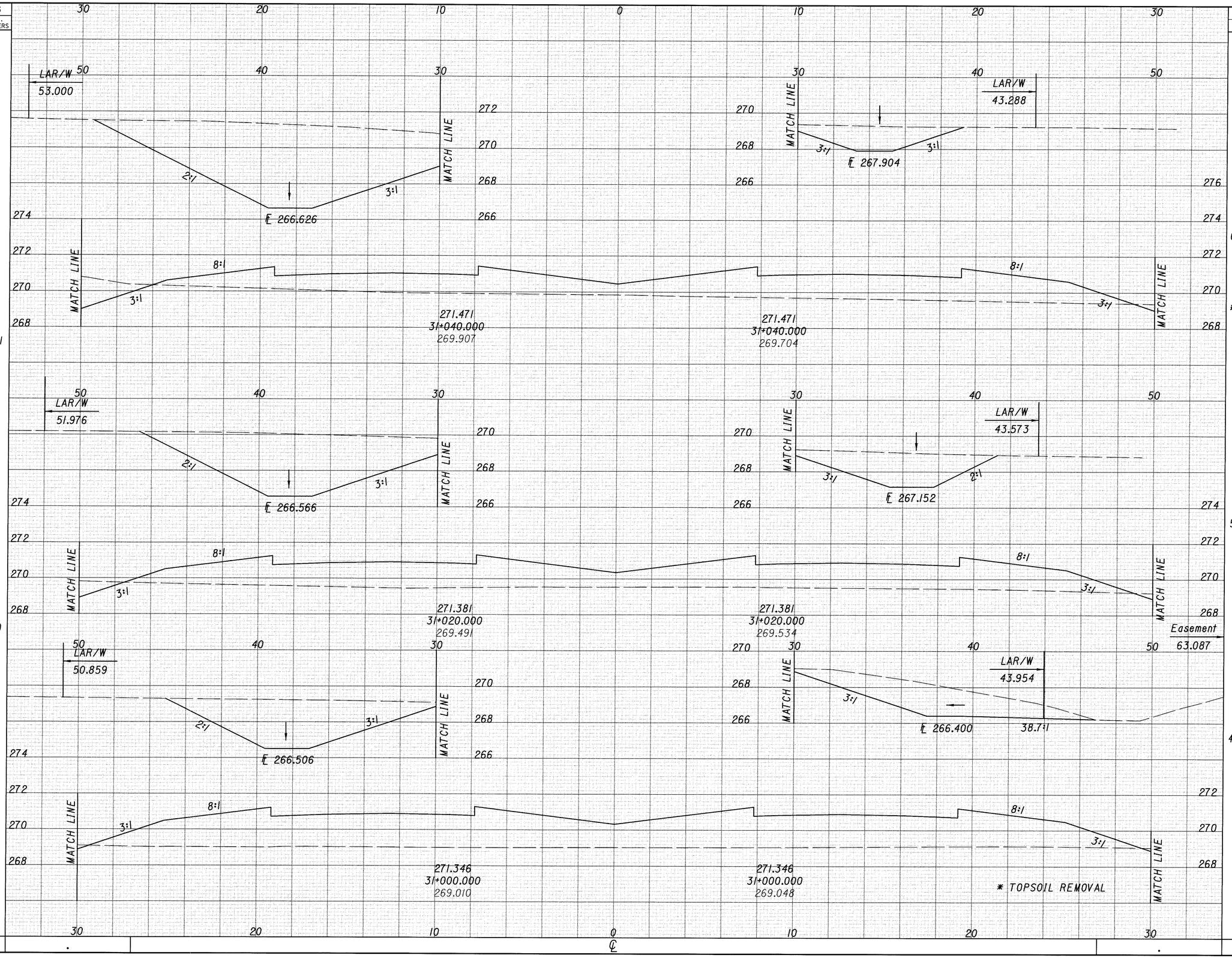


US-30 CROSS SECTIONS
STA 30+960.000 TO STA 30+998.000

WYA/CRA-30-28.009/0.000

386
2116

SEEDING END WIDTH	SEEDING SQ. METERS
76.90	1531
76.24	1550
78.78	156



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
69.52	58.00		
*0.00		1213	1277
51.78	69.69		
		942	1644
42.41	94.69		
		77	194

CALCULATED AM

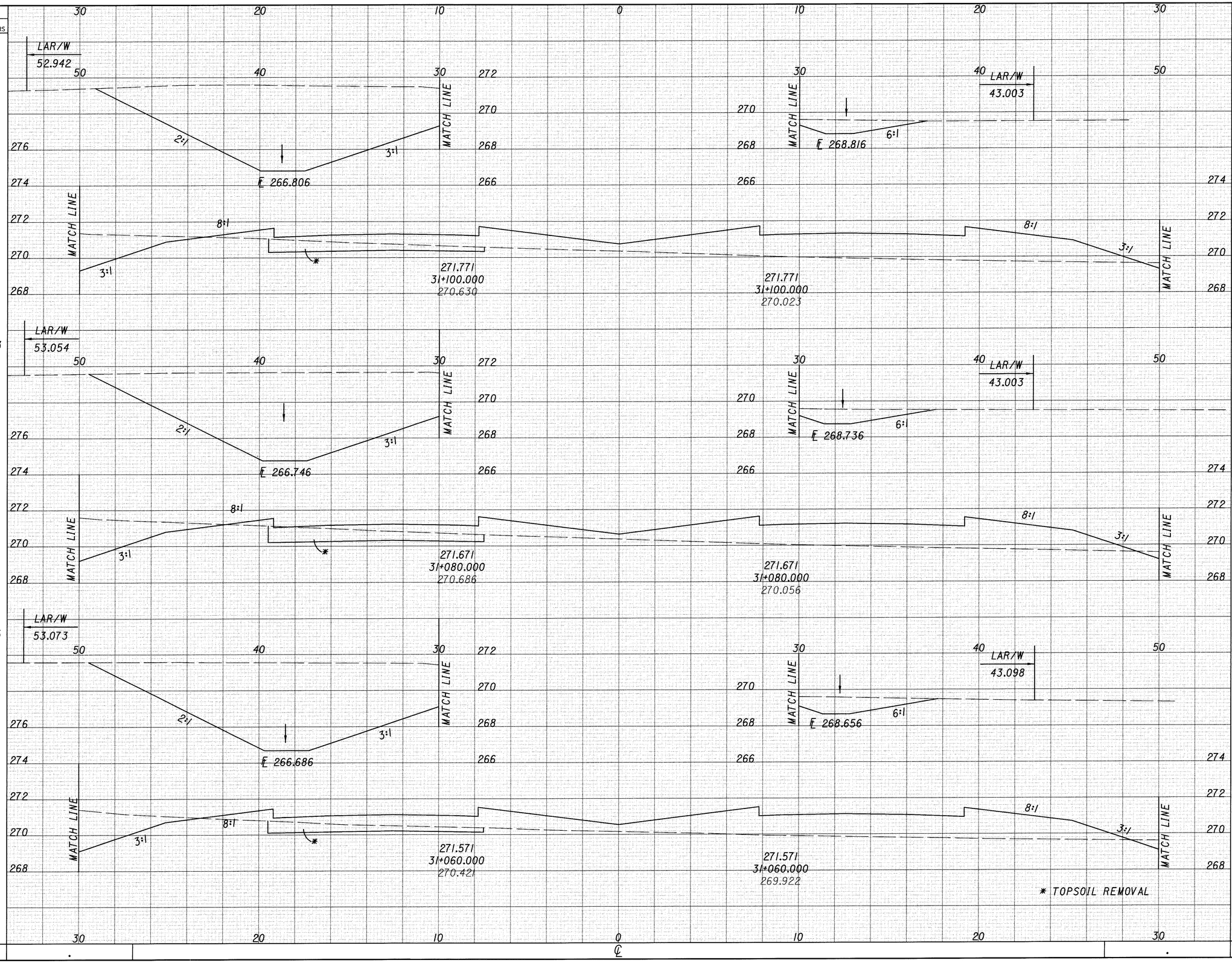
CHECKED REA

US-30 CROSS SECTIONS

STA 31+000.000 TO STA 31+040.000

WYA/CRA-30-28.009/0.000

SEEDING END WIDTH	SEEDING SQ. METERS
73.67	
	1483
74.62	
	1495
74.83	
	1517



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
69.35	51.33		
*5.16			
		1443	975
		*123	
74.92	46.16		
*7.18			
		1483	942
		*117	
73.42	48.02		
*4.53			
		1429	1060
		*45	

CALCULATED AM

CHECKED REA

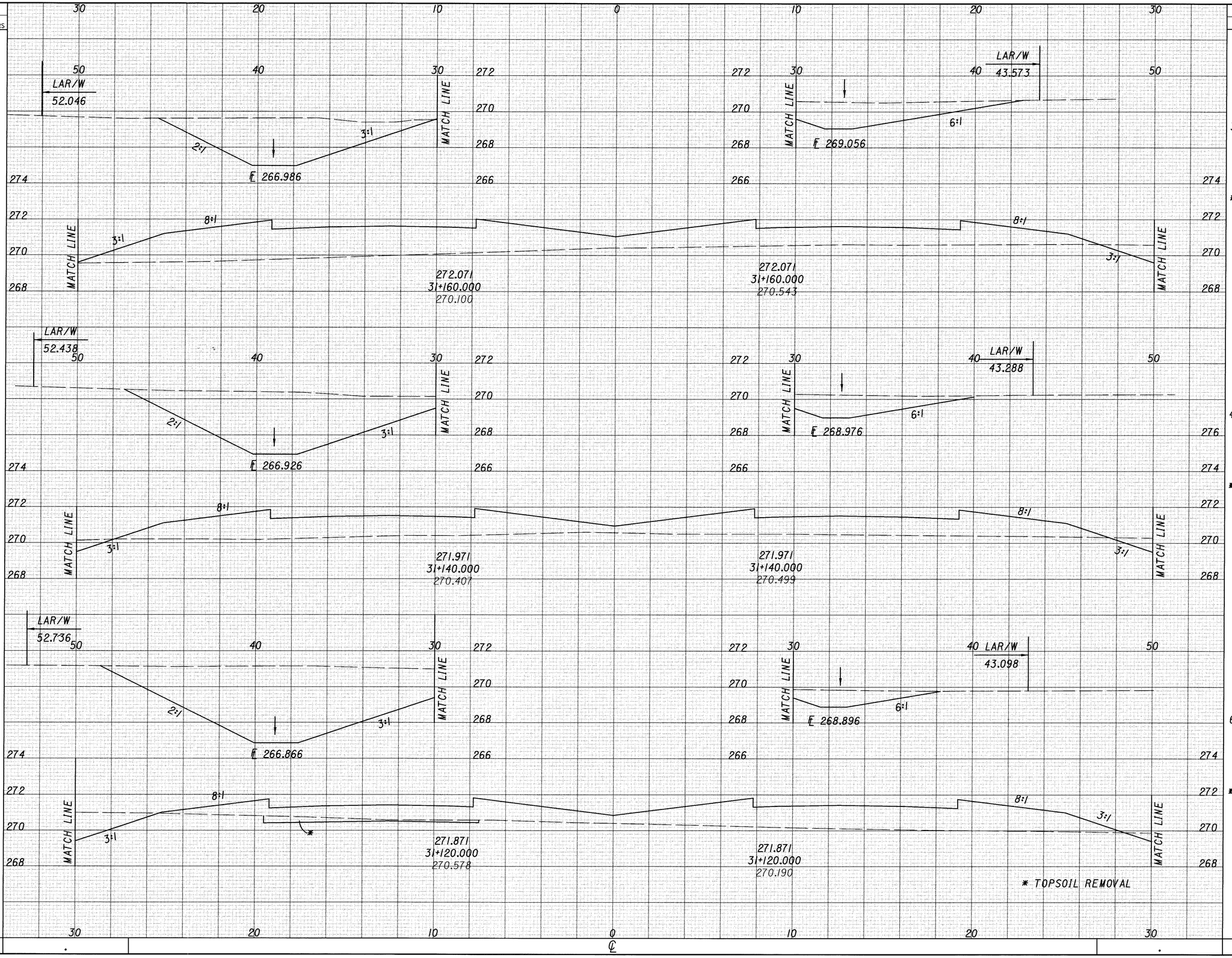
US-30 CROSS SECTIONS

STA 31+060.000 TO STA 31+100.000

WYA / CRA-30-28.009 / 0.000

388
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
75.81	1515	35.46	68.13	814	1216
		*0.00		*0	
75.64	1502	45.89	53.50	1060	1045
		*0.00		*22	
74.53	1482	60.11	51.00	1295	1023
		*2.17		*73	



US-30 CROSS SECTIONS
STA 31+120.000 TO STA 31+160.000

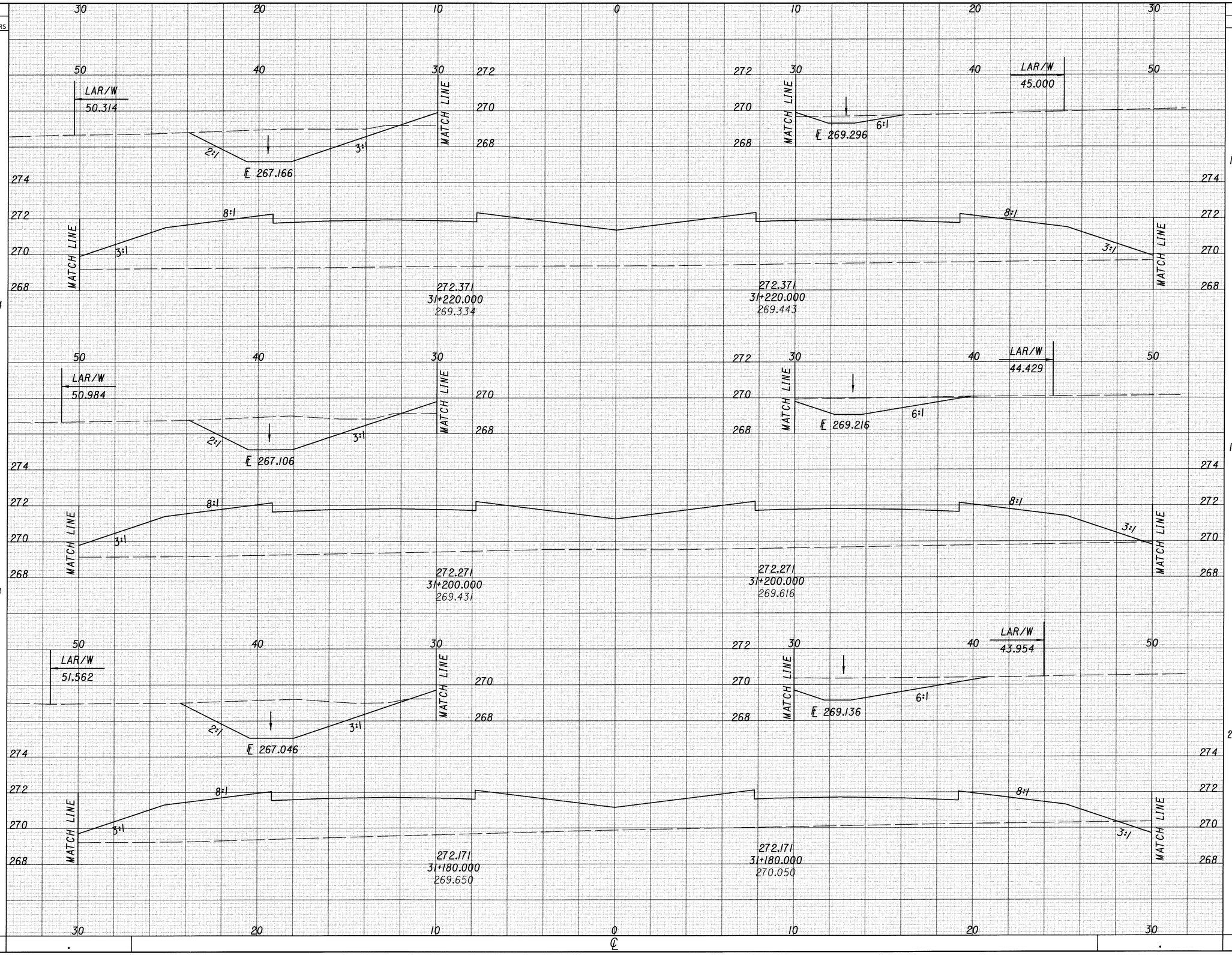
CALCULATED AM

CHECKED REA

WYA/CRA-30-28.009/0.000

389
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
66.53	1374	13.68	136.41	313	2591
70.86	1434	17.66	122.73	416	2215
72.58	1484	23.98	98.73	594	1669



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 31+180.000 TO STA 31+220.000

WYA/CRA-30-28.009/0.000

390
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
74.59		20.31	144.32		
78.72		20.37	144.32		
	518			96	1013
67.04		6.61	140.77		
	1351			216	2792
68.07		15.01	138.47		
	1346			287	2749

SEE SERVICE RD 1 CROSS-SECTIONS

Back
Ahead

End width Ahead

End width Back from Sta 0+196.669 ℄ Service Road # 1

MATCH LINE

LAR/W 48.365

℄ 267.307

272.606
31+267.104
269.406

LAR/W 44.059

℄ 269.609

End area Ahead

End area Back from Sta 0+196.669 ℄ Service Road # 1

LAR/W 48.692

℄ 268.460

LAR/W 44.167

℄ 269.456

272.571
31+260.000
269.414

272.571
31+260.000
269.551

LAR/W 49.550

℄ 267.226

LAR/W 44.536

℄ 269.376

272.471
31+240.000
269.372

272.471
31+240.000
269.468

℄

CALCULATED AM

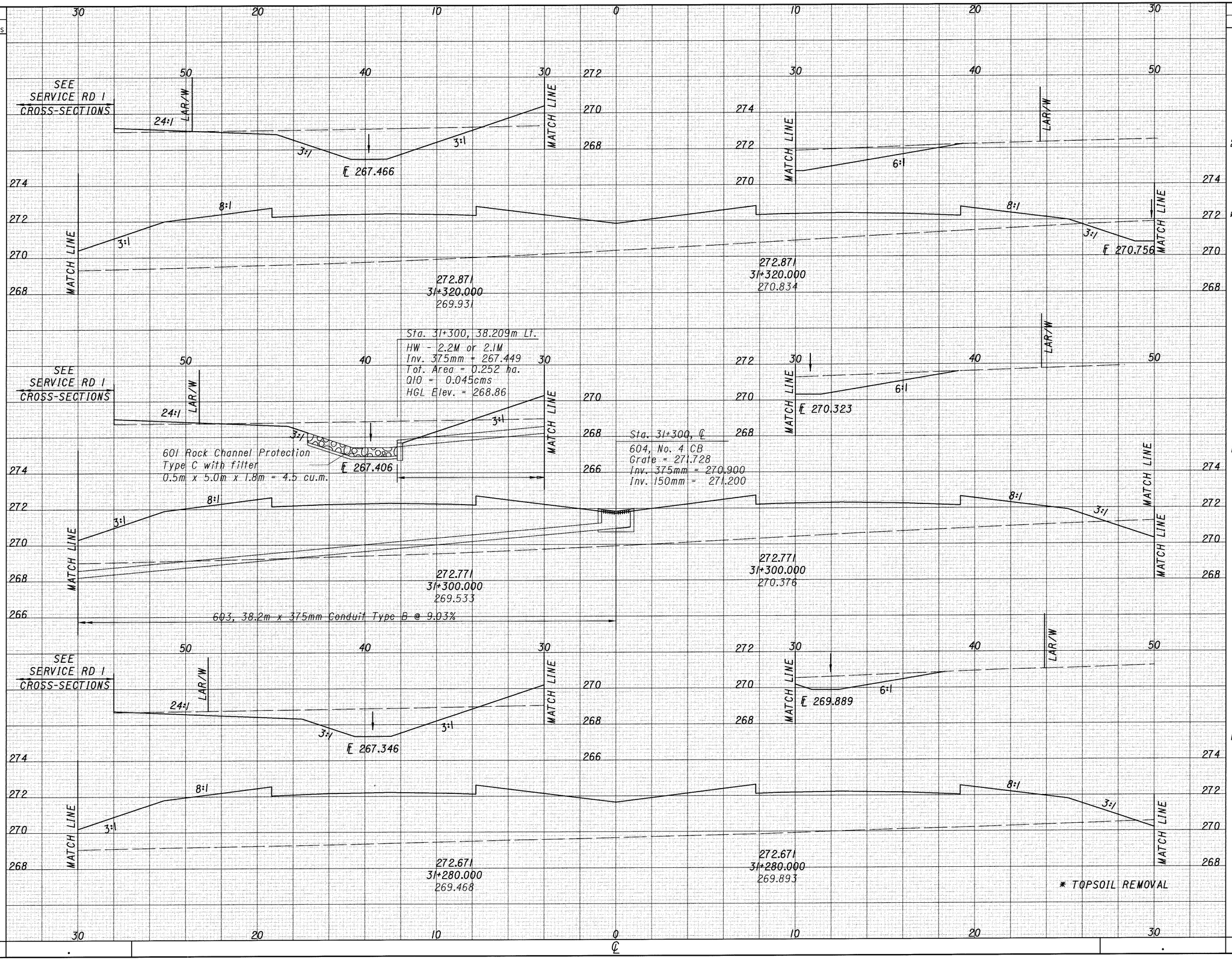
CHECKED REA

US-30 CROSS SECTIONS
STA 31+240.000 TO STA 31+267.104

WYA / CRA-30-28.009 / 0.000

391
2.116

SEEDING END WIDTH	SEEDING SQ. METERS
76.42	
	1561
79.63	
	1551
75.46	
	967



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20.72	107.57		
*0.00			
		403	2343
19.60	126.76		
		360	2630
16.39	136.20		
		237	1809

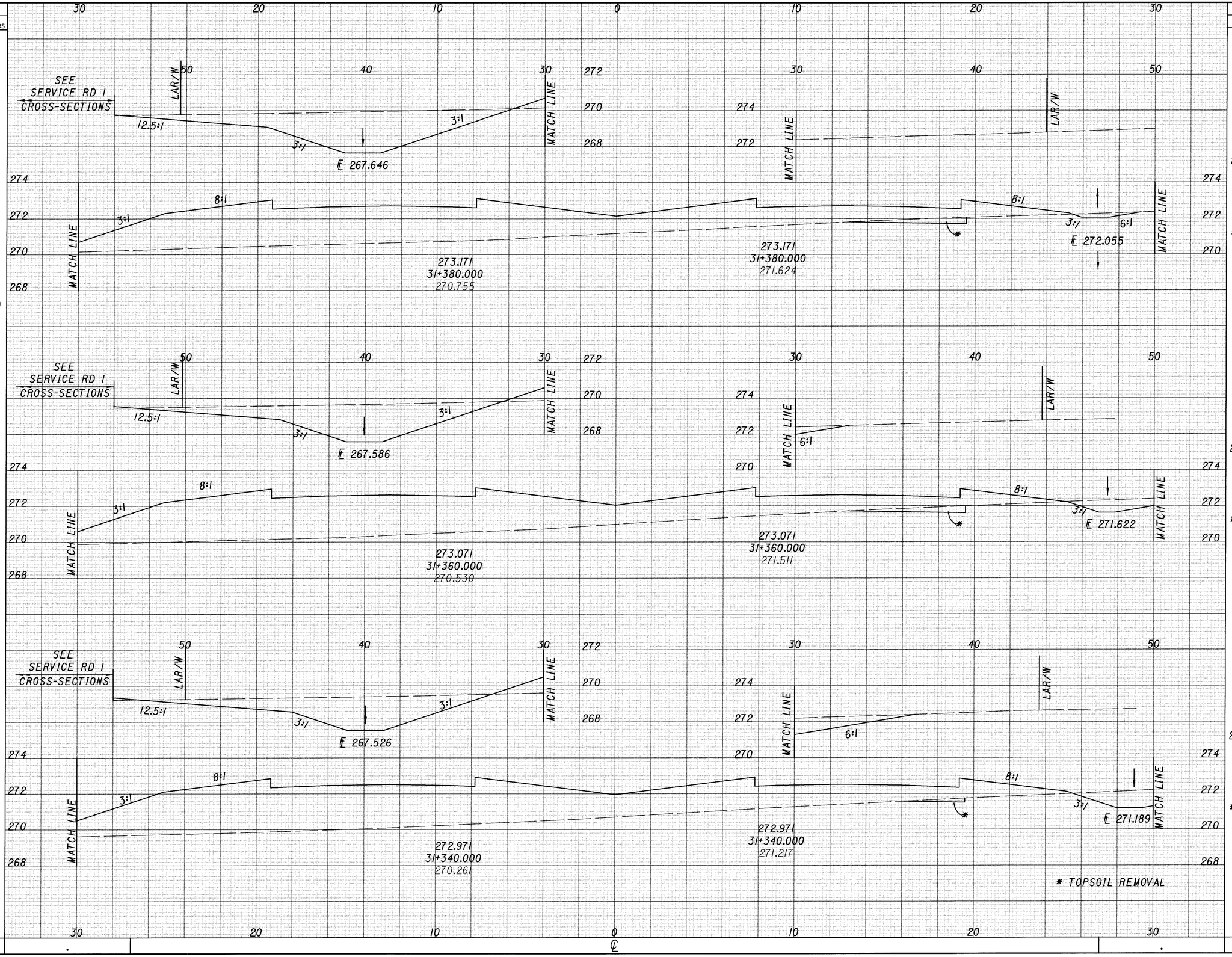
CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS STA 31+280.000 TO STA 31+320.000

WYA / CRA-30-28.009 / 0.000

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
65.71	1359	23.27	78.84	458	1635
		*1.25		*26	
70.18	1439	22.56	84.69	456	1786
		*1.30		*17	
73.68	1501	23.00	93.94	437	2015
		*0.41		*4	



CALCULATED AM

CHECKED REA

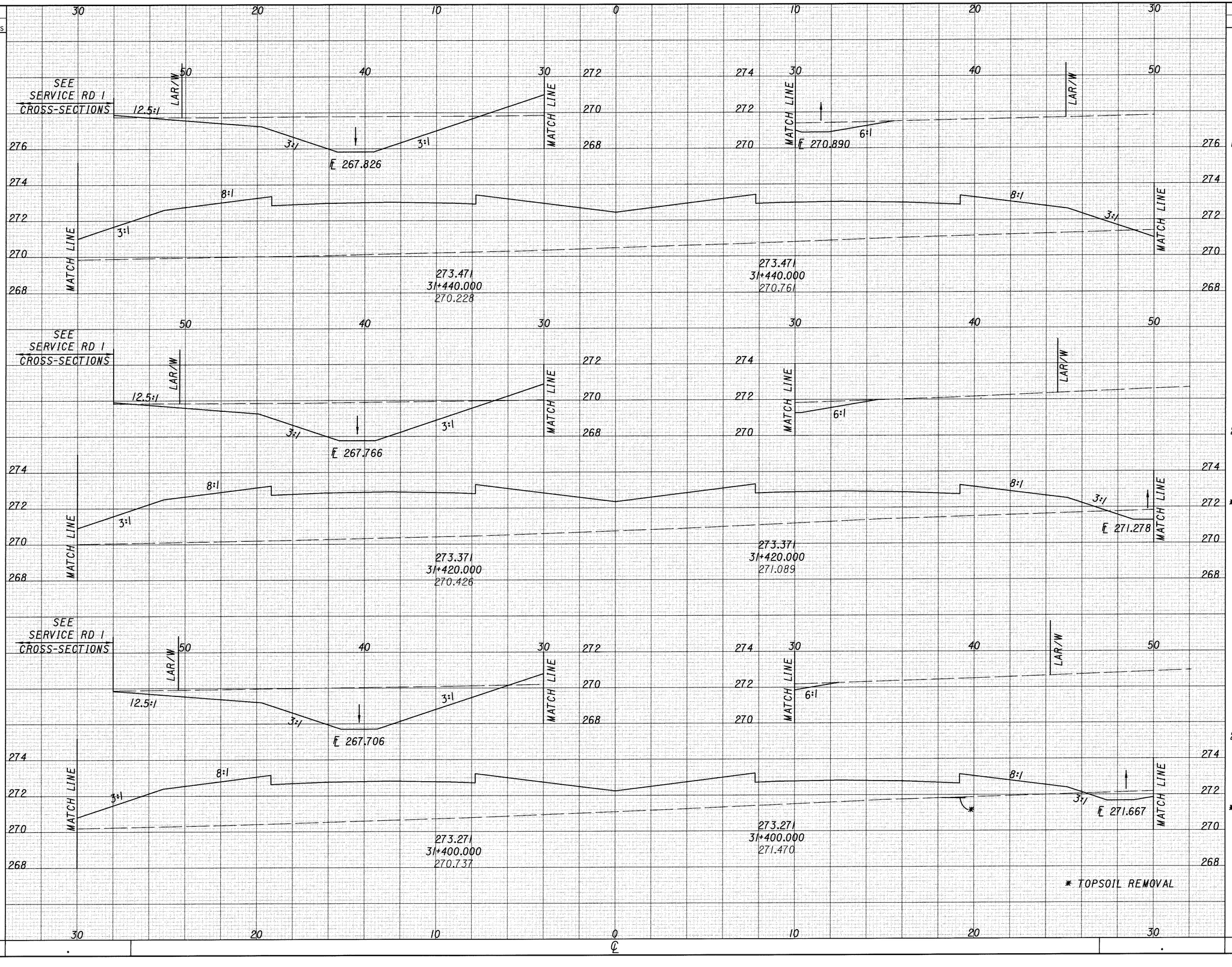
US-30 CROSS SECTIONS

STA 31+340.000 TO STA 31+380.000

WYA / CRA-30-28.009 / 0.000

393
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
71.98		18.84	135.31		
	1436			407	2480
71.60		21.83	112.73		
	1409	*0.00		469	2012
		*0		*0	
69.32		25.10	88.43		
	1350	*0.04		484	1673
				*13	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 31+400.000 TO STA 31+440.000

WYA / CRA-30-28.009 / 0.000

394
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
78.31		20.19	142.50		
	1514			324	3145
73.13		12.22	172.01		
	1446			258	3372
71.42		13.60	165.20		
	1434			324	3005

CALCULATED AM

CHECKED REA

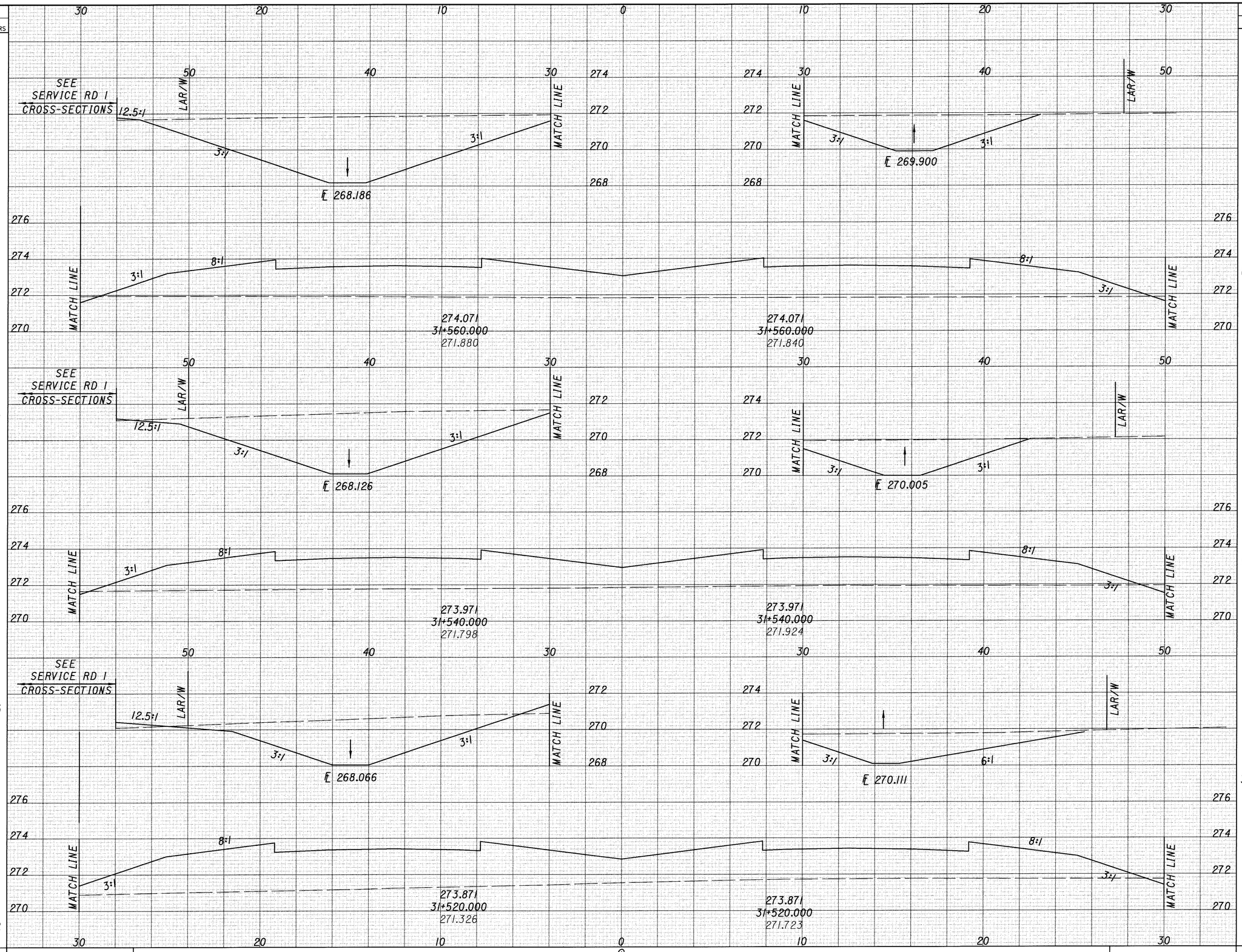
US-30 CROSS SECTIONS

STA 31+460.00 TO STA 31+500.000

WYA / CRA-30-28.009 / 0.000

395
2.116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
81.07	1617	62.32	89.07	1182	1740	
80.59	1645	55.91	84.94	956	1876	
83.87	1622	39.69	102.68	599	2452	



CALCULATED AM

CHECKED REA

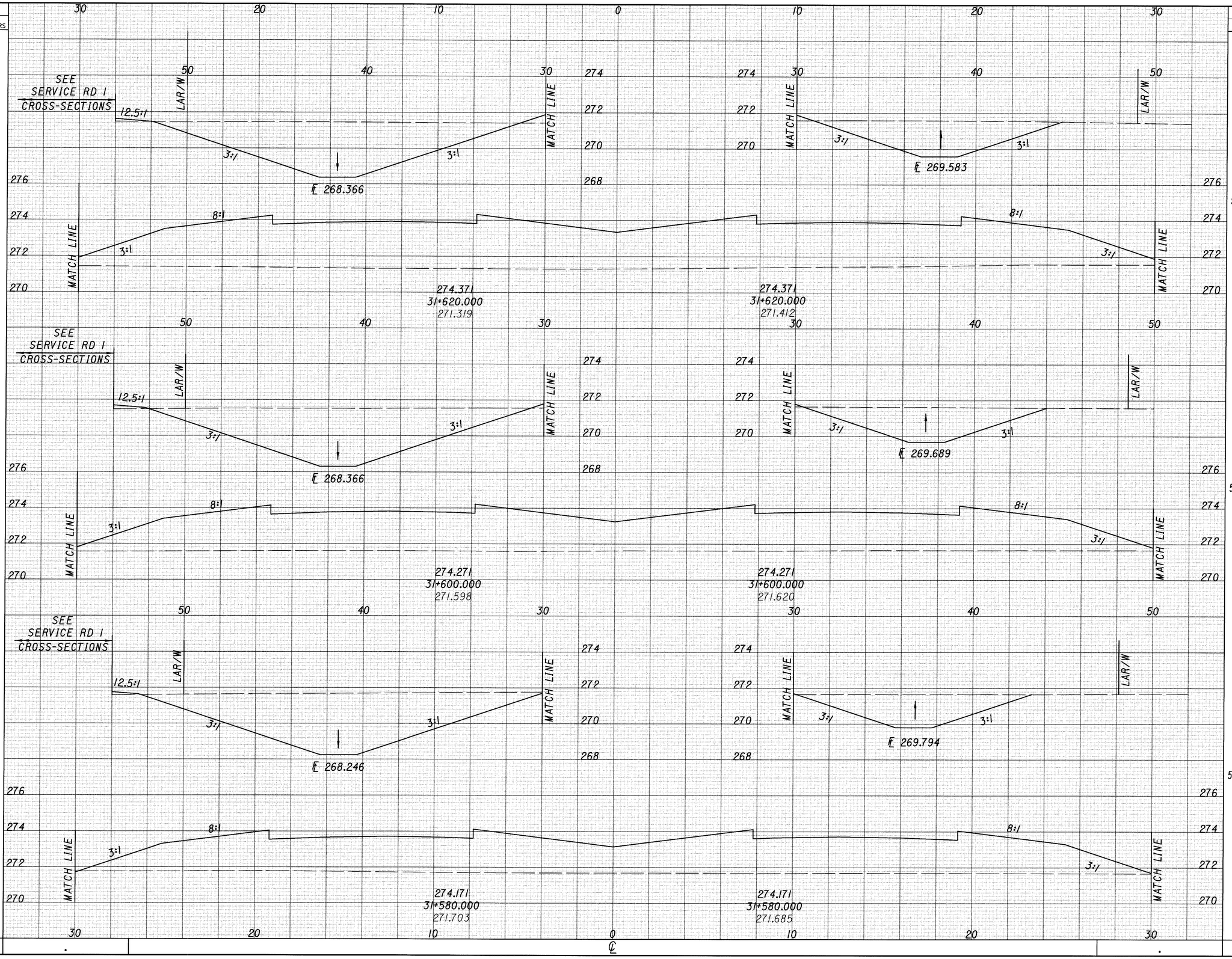
US-30 CROSS SECTIONS

STA 31+520.000 TO STA 31+560.000

WYA / CRA-30-28.009 / 0.000

396
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
82.86		50.65	134.97		
	1651			1033	2514
82.28		52.68	116.45		
	1636			1091	2211
81.32		56.40	104.64		
	1624			1187	1937



CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 31+580.000 TO STA 31+620.000

WYA / CRA-30-28.009 / 0.000

397
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
79.84	1657	17.54	235.02	525	4193	
85.87	1686	34.99	184.28	793	3415	
82.74	1656	44.29	157.22	949	2922	

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 31+640.000 TO STA 31+680.000

WYA / CRA-30-28.009 / 0.000

398
2116

SEE SERVICE RD 1 CROSS-SECTIONS

12.5:1 · LAR/W · 3:1 · 3:1 · MATCH LINE

℄ 268.546

8:1 · 3:1 · MATCH LINE · 3:1 · 6:1 · LAR/W

℄ 269.266

274.671
31+680.000
270.344

274.671
31+680.000
270.211

SEE SERVICE RD 1 CROSS-SECTIONS

12.5:1 · LAR/W · 3:1 · 3:1 · MATCH LINE

℄ 268.486

8:1 · 3:1 · MATCH LINE · 3:1 · 6:1 · LAR/W

℄ 269.372

274.571
31+660.000
270.820

274.571
31+660.000
270.853

SEE SERVICE RD 1 CROSS-SECTIONS

12.5:1 · LAR/W · 3:1 · 3:1 · MATCH LINE

℄ 268.426

8:1 · 3:1 · MATCH LINE · 3:1 · LAR/W

℄ 269.477

274.471
31+640.000
271.040

274.471
31+640.000
271.148

℄

SEEDING	
END WIDTH	SQ. METERS
73.58	568
73.91	
	932
77.59	
	1574

SEE SERVICE RD 1 CROSS-SECTIONS

0.024 m/m

LAR/W

MATCH LINE

℄ 268.666

℄ 269.055

℄ 268.643

℄ 269.096

℄ 268.606

℄ 269.161

Sta 31+712.300, 38.068m Lt.
HW 2.1M
Inv 300mm = 268.647

274.871
31+720.000
269.929

274.871
31+720.000
269.818

Sta 31+712.300, 36.911m Rt.
HW 2.1M
Inv 300mm = 269.099

268.712, 26° BEND
6.496m @1.0%

269.162, 26° BEND
6.238m @1.0%

Sta 31+712.300, 21.0m Lt.
604 CB - 3
Window = 274.640
Inv 300mm = 273.362

Sta 31+712.300, 21.0m Rt.
604 CB - 3
Grate = 274.640
Inv 300mm = 273.362

273.348
26° Bend
0.762m
10.370m

273.348
26° Bend
0.762m
9.361m

274.832
31+712.300
270.029

9.272m @ 50.0%
1.389m @1.0%
603 18.3m x 300mm Conduit
Type F 707.05 Type C

1.389m @1.0%
8.373m @ 50.0%
Type F 707.05 Type C

Sta. 31+700, 40.997m Lt.
HW - 2.2M or 2.1M
Inv. 375mm = 268.655
Tot. Area = 0.678 Ac.
Q10 = 0.133cms
HGL Elev. = 269.880

601 Rock Channel Protection
Type C with filter
0.5m x 5.0m x 1.8m = 4.5 cu.m.

Sta. 31+700, ℄
604, No. 4 CB
Grate = 273.728
Inv. 375mm = 272.673
Inv. 150mm = 273.227

274.771
31+700.000
270.104

274.771
31+700.000
269.970

603, 41.0m x 375mm Conduit Type B @ 9.80%

END AREA		VOLUME	
CUT	FILL	CUT	FILL
8.07	253.94	65	1941
8.84	250.26		
		122	3194
10.94	269.03		
		285	5041

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 31+700.000 TO STA 31+720.000

WYA / CRA-30-28.009 / 0.000

399
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
73.02	1481	2.58	297.85	248	5939
75.11	1491	22.23	296.07	281	5753
73.99	1476	5.82	279.18	139	5331

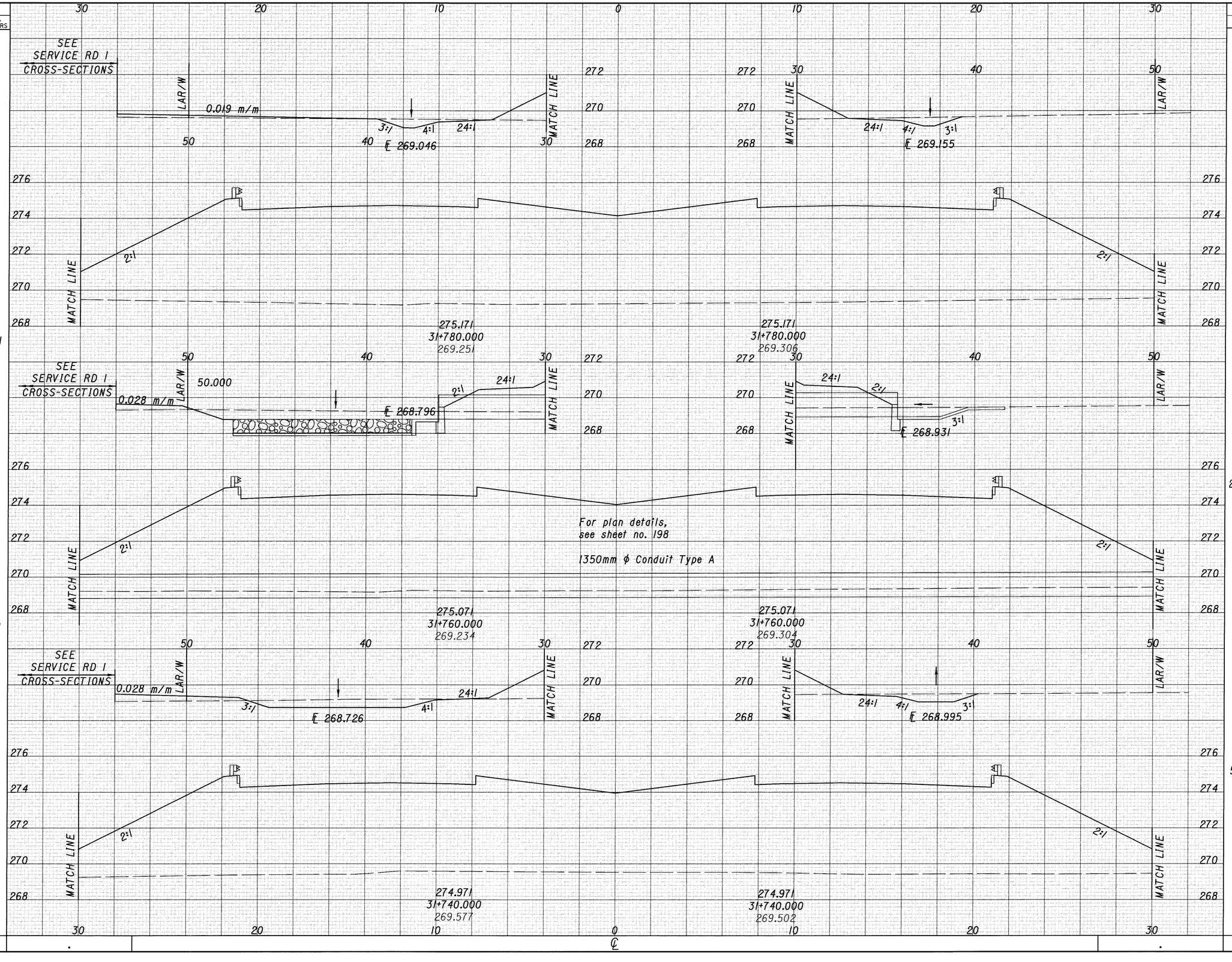
CALCULATED AM

CHECKED REA

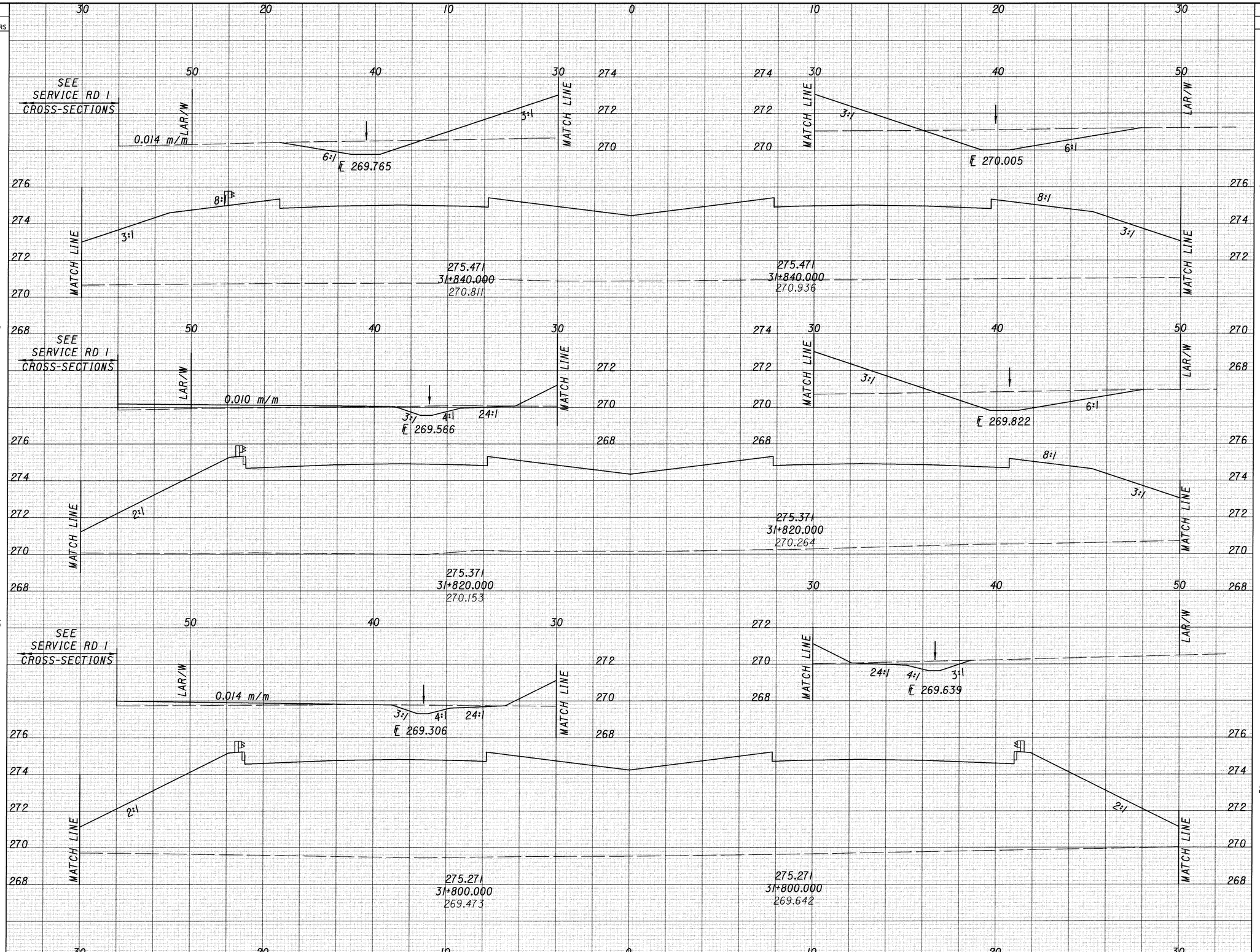
US-30 CROSS SECTIONS

STA 31+740.000 TO STA 31+780.000

WYA/CRA-30-28.009/0.000



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
84.99		10.78	249.11		
	1671			187	5177
82.16		7.91	268.59		
	1545			106	5523
72.33		2.64	283.76		
	1454			52	5816



CALCULATED AM

CHECKED REA

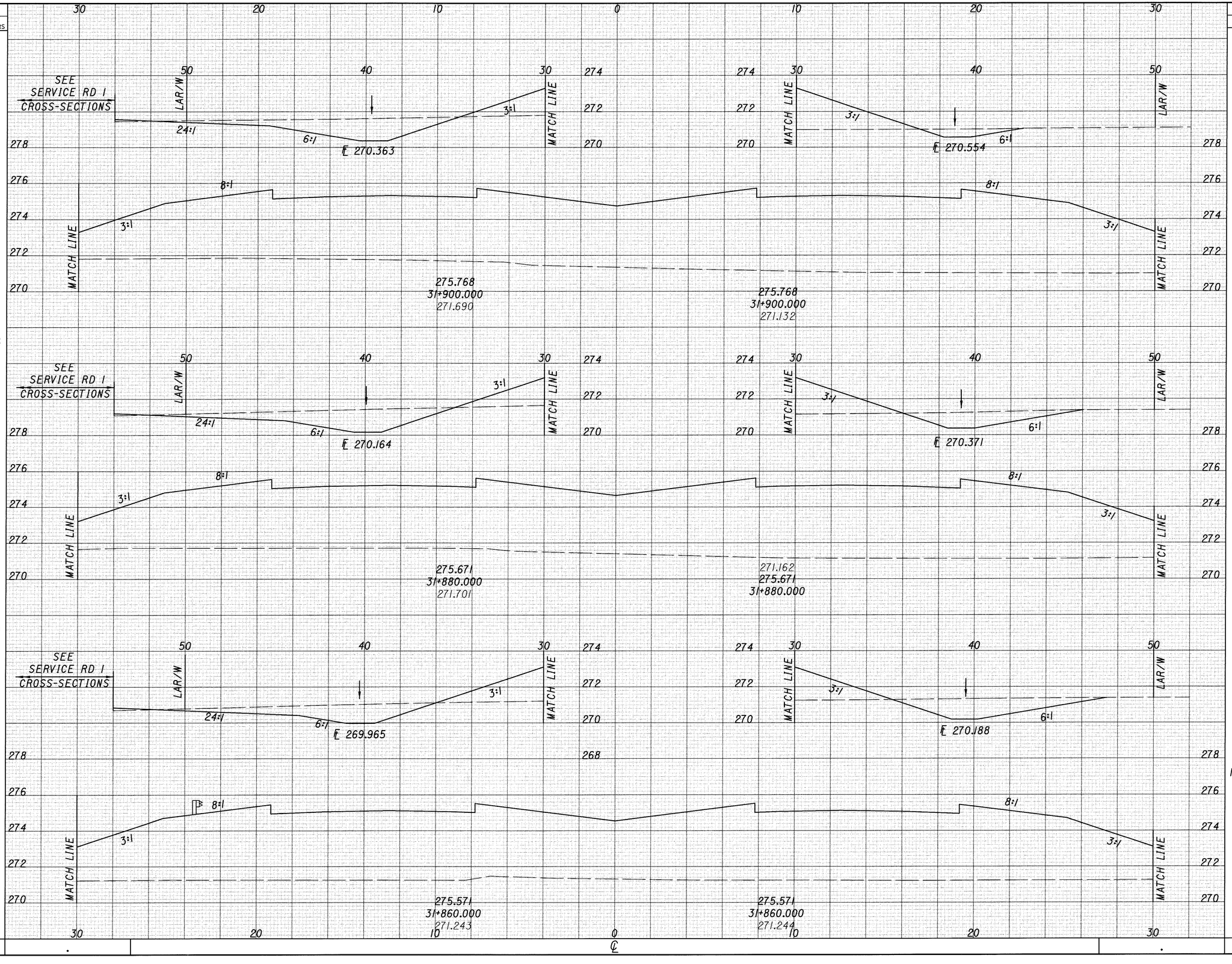
US-30 CROSS SECTIONS

STA 31+800.000 TO STA 31+840.000

WYA / CRA-30-28.009 / 0.000

401
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
79.22	1624	11.07	230.61	260	4528	
83.18	1679	14.91	222.20	303	4485	
84.77	1698	15.40	226.32	262	4754	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 31+860.000 TO STA 31+900.000

WYA / CRA-30-28.009 / 0.000

402
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
80.77	1582	4.29	254.75	62	5217
77.48	1552	1.93	266.91	74	5194
77.76	1570	5.50	252.48	166	4831

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 31+920.000 TO STA 31+960.000

WYA/CRA-30-28.009/0.000

403
2116

SEE SERVICE RD I CROSS-SECTIONS

0.024 m/m

0.028 m/m

24:1

LAR/W

MATCH LINE

℄ 270.960

℄ 270.994

℄ 270.761

℄ 270.866

℄ 270.562

℄ 270.737

3:1

6:1

8:1

275.927
31+960.000
271.126

275.927
31+960.000
271.180

275.898
31+940.000
271.008

275.898
31+940.000
270.976

275.845
31+920.000
271.214

275.845
31+920.000
271.105

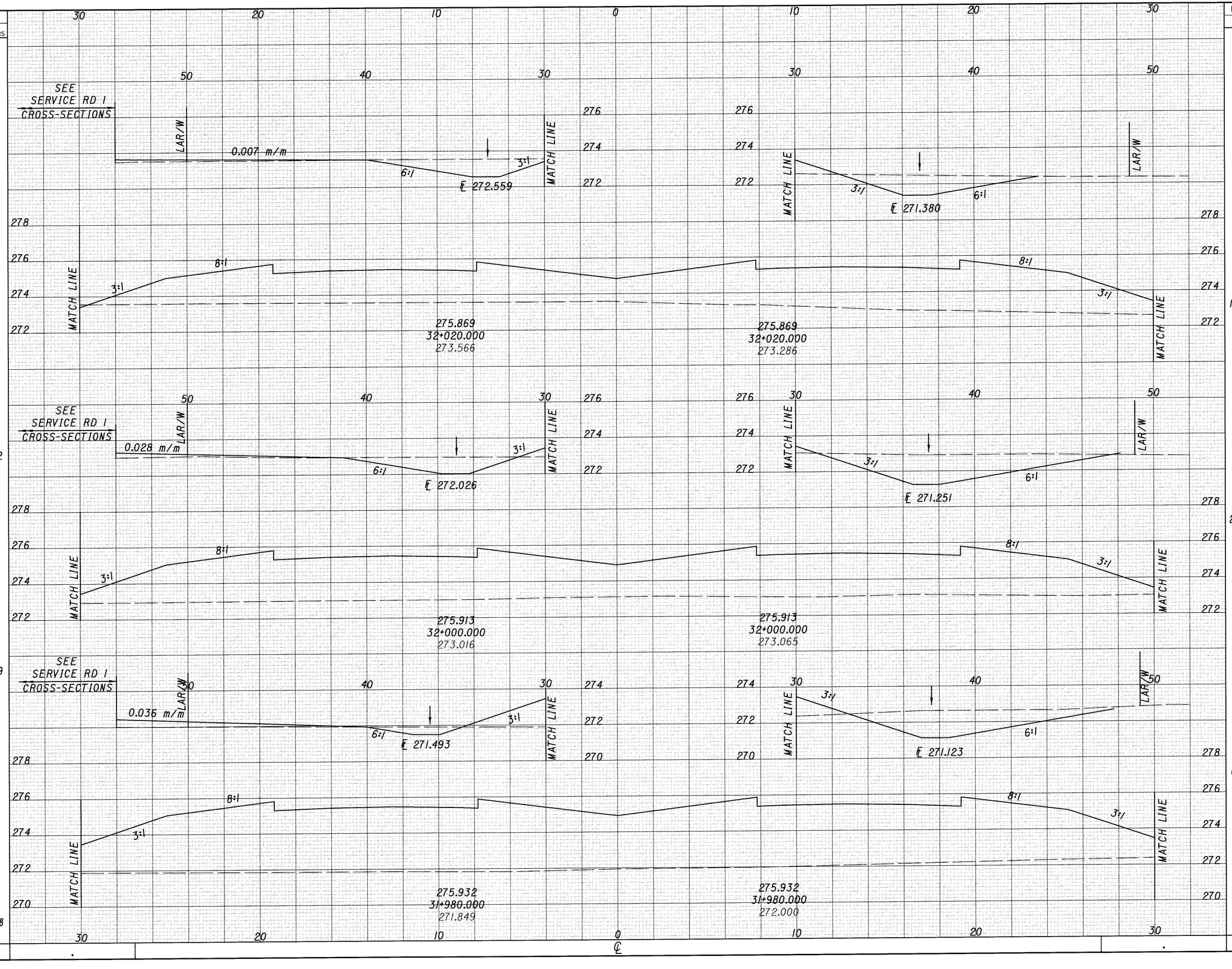
30 20 10 0 10 20 30

50 40 30

274 272 270 278 276

℄

SEEDING	
END WIDTH	SQ. METERS
80.31	1652
84.90	1709
86.00	1668



END AREA		VOLUME	
CUT	FILL	CUT	FILL
12.88	112.19		
		332	2434
20.28	131.20		
		344	3322
14.08	201.00		
		184	4558

CALCULATED AM

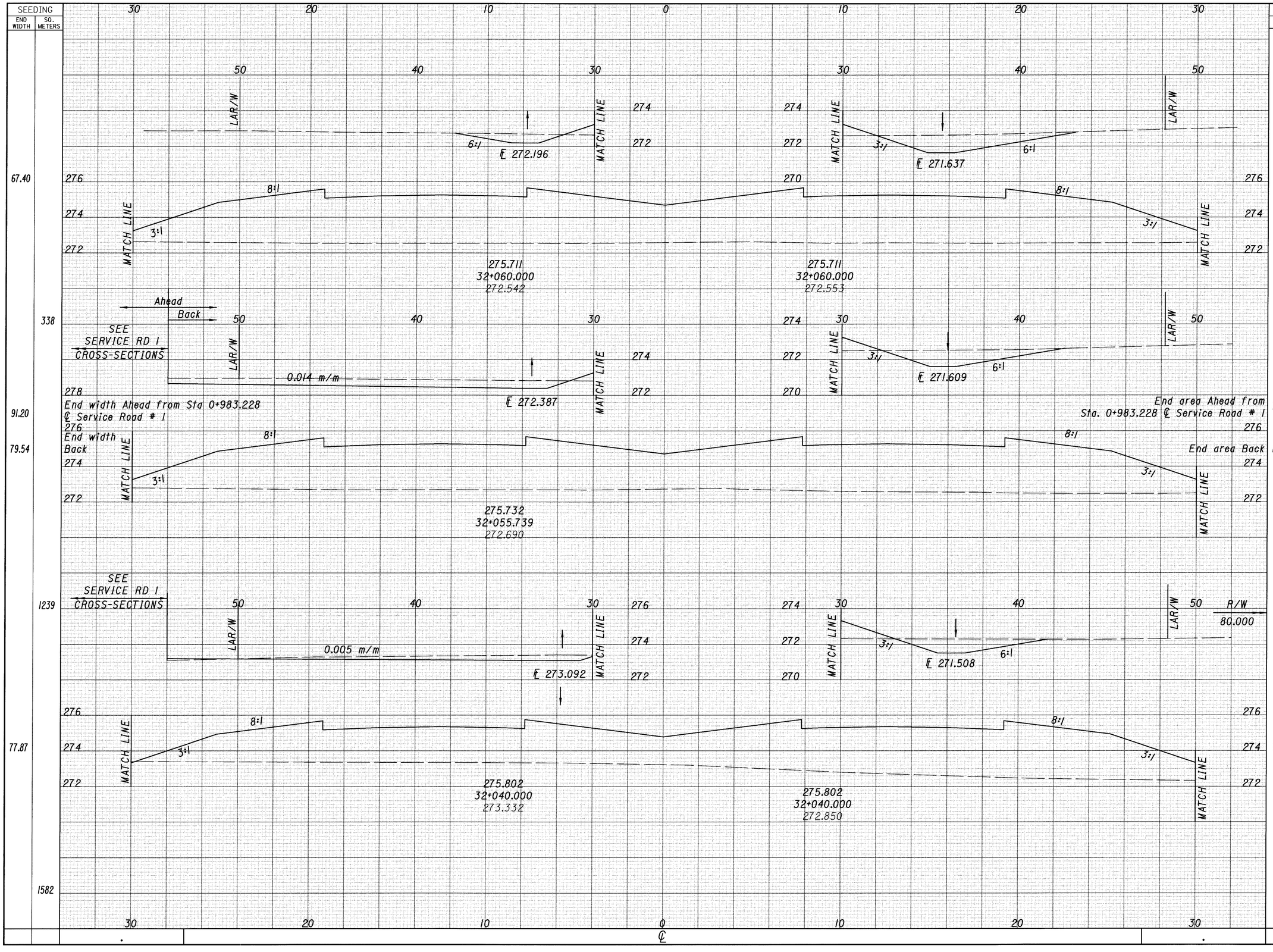
CHECKED REA

US-30 CROSS SECTIONS
STA 31+980.000 TO STA 32+020.000

WYA / CRA-30-28.009 / 0.000

404
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
67.40		8.25	146.52		
	338			58	620
91.20		18.90	144.31		
79.54		13.73	144.31		
	1239			170	2125
77.87		7.90	125.73		
	1582			208	2379



CALCULATED AM

CHECKED REA

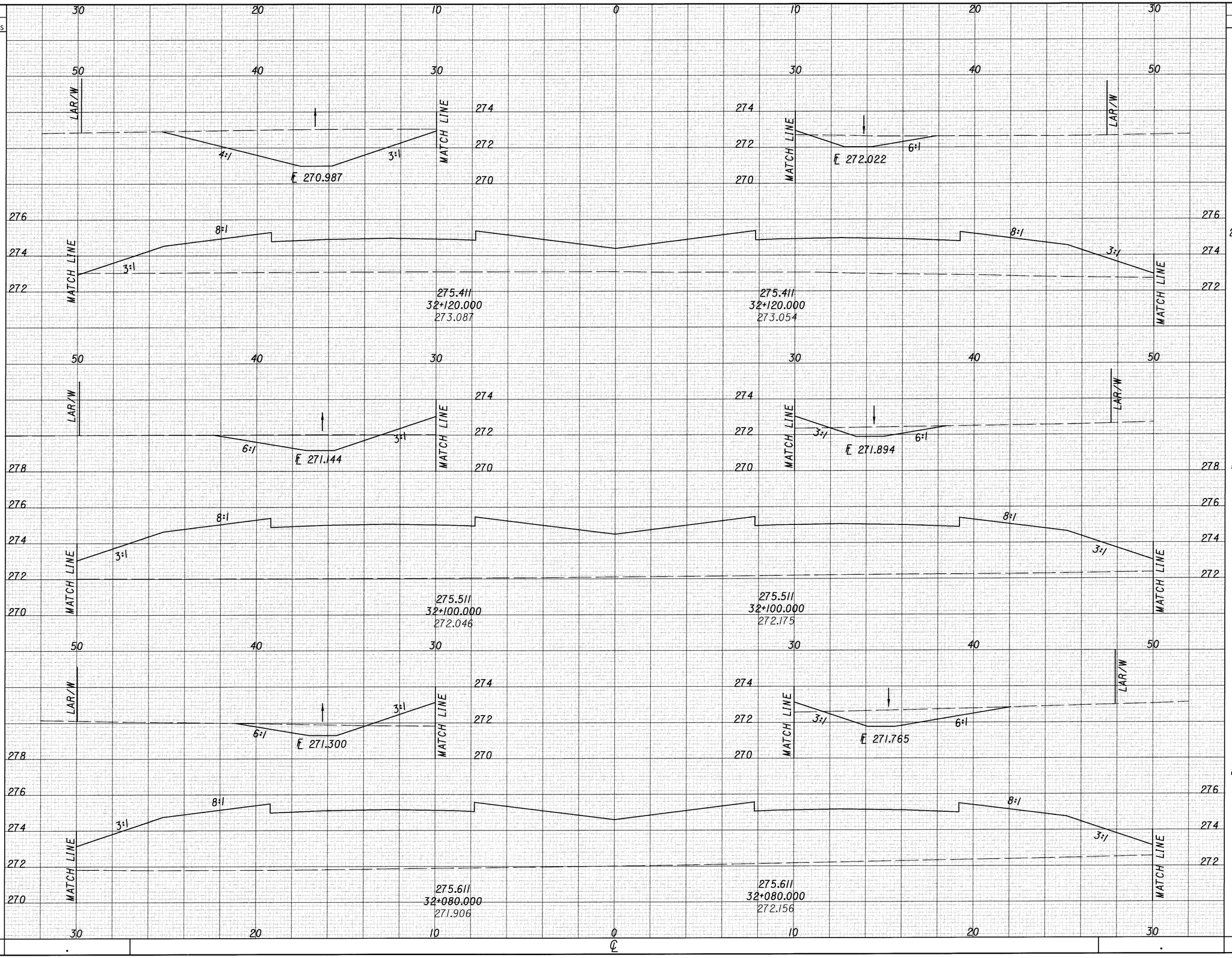
US-30 CROSS SECTIONS

STA 32+040.000 TO STA 32+060.000

WYA / CRA-30-28.009 / 0.000

405
a116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
69.66		20.33	101.38		
	1366			273	2632
66.93		6.93	161.85		
	1365			150	3343
69.60		8.07	172.42		
	1370			163	3189



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

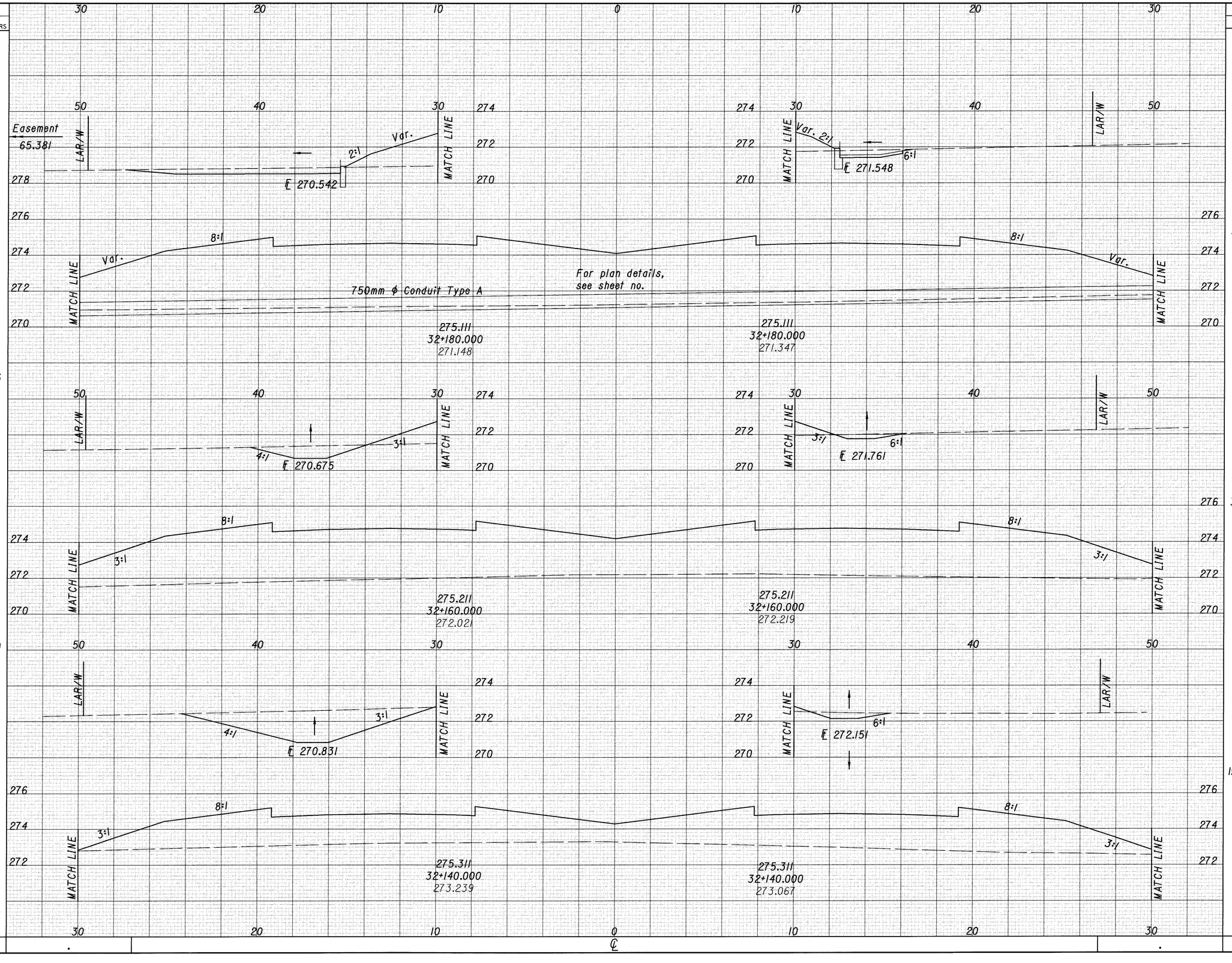
STA 32+080.000 TO STA 32+120.000

WYA/CRA-30-28.009/0.000

406

2 116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
69.42		4.50	192.44		
	1316			81	3458
62.14		3.56	153.33		
	1279			186	2485
65.72		15.06	95.15		
	1354			354	1965



CALCULATED AM

CHECKED REA

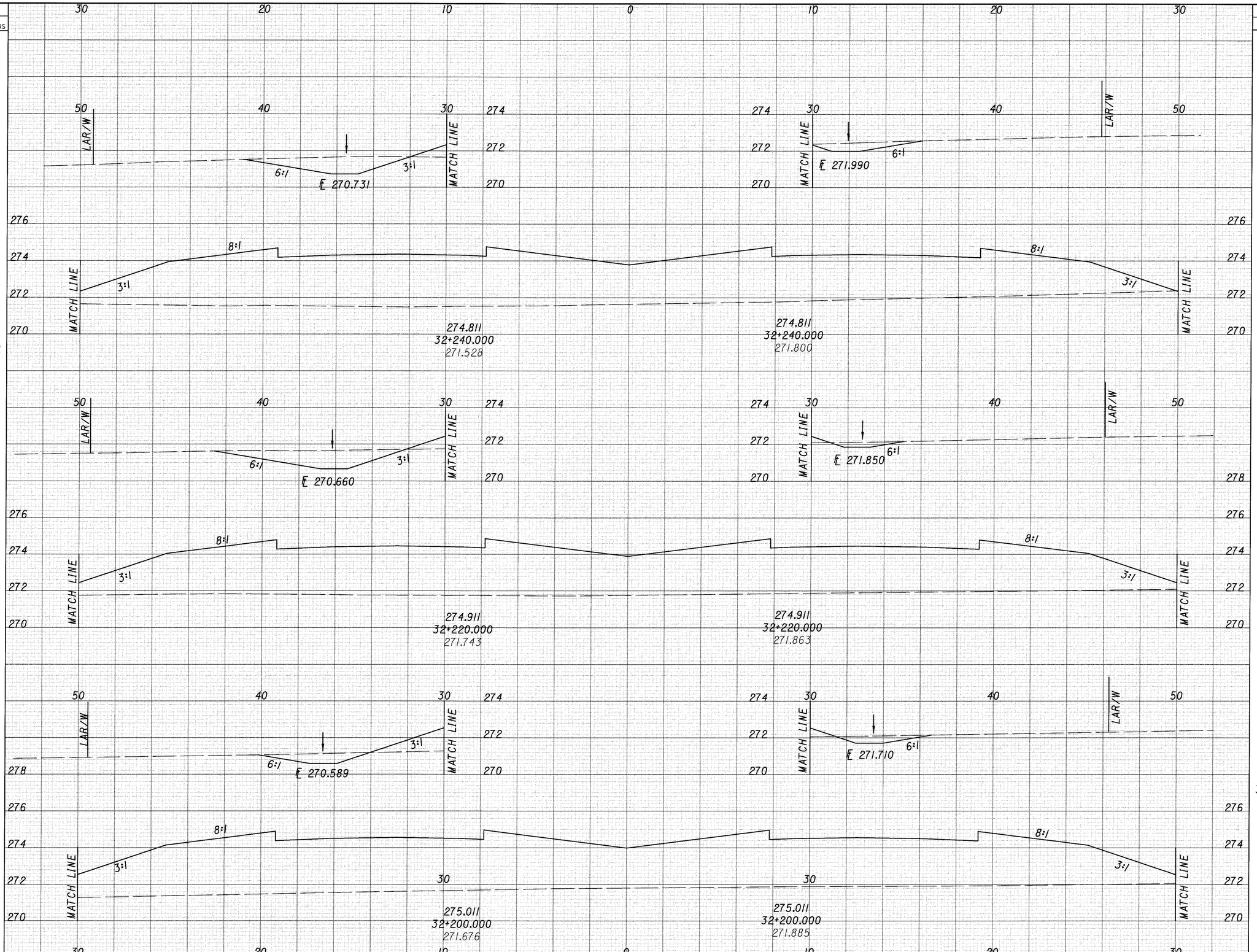
US-30 CROSS SECTIONS

STA 32+140.000 TO STA 32+180.000

WYA/CRA-30-28.009/0.000

407
a116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
						STA 32+240.000
62.82		6.68	140.29			
	1262			134	2818	
63.39		6.75	141.51			
	1256			101	2976	
62.17		3.36	156.08			
	1316			79	3485	



CALCULATED AM

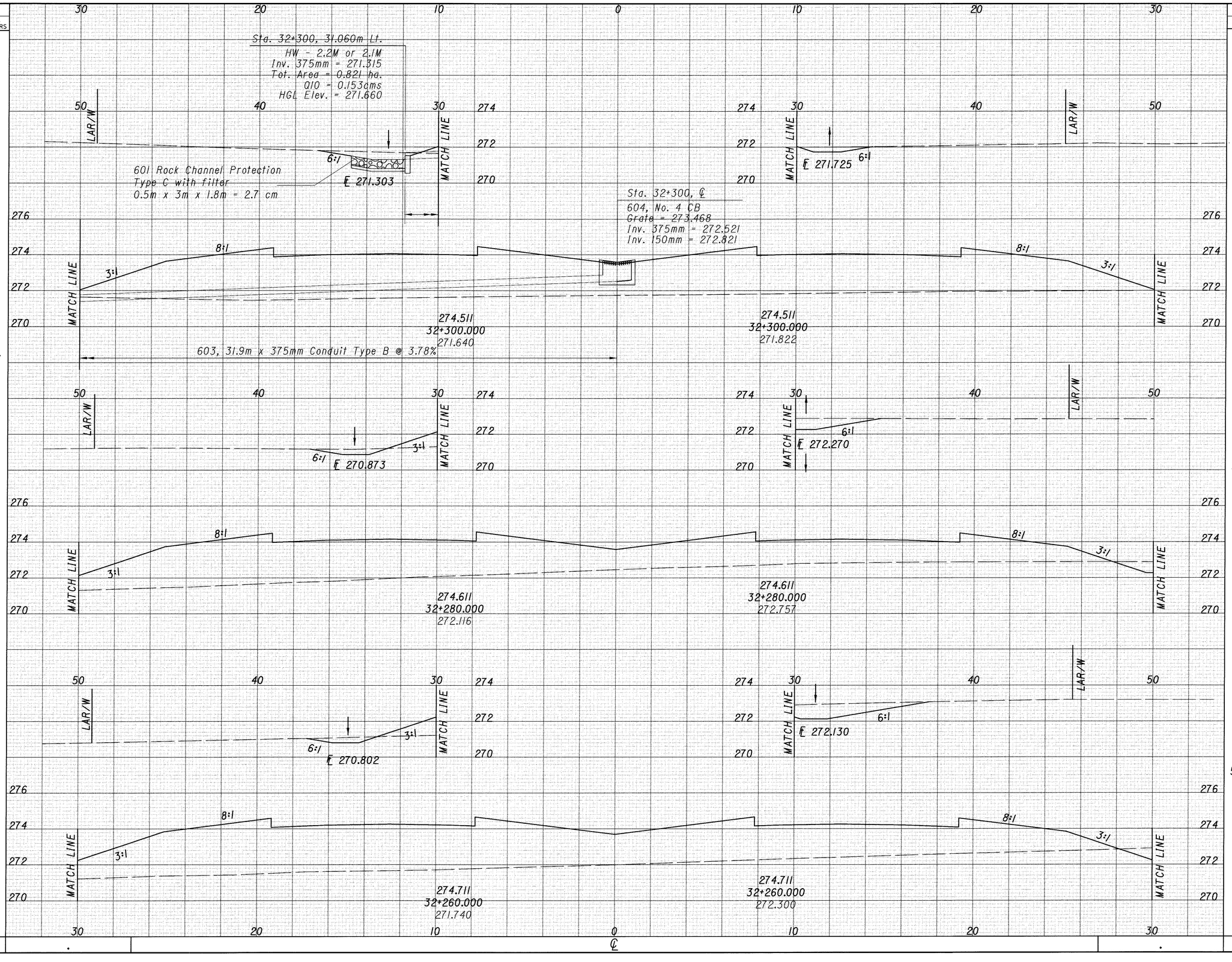
CHECKED REA

US-30 CROSS SECTIONS

WYA / CRA-30-28.009 / 0.000

408
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
58.74	1157	4.21	123.52	77	2191
56.97	1172	3.49	95.57	87	2150
60.24	1231	5.20	119.38	119	2597



CALCULATED AM

CHECKED REA

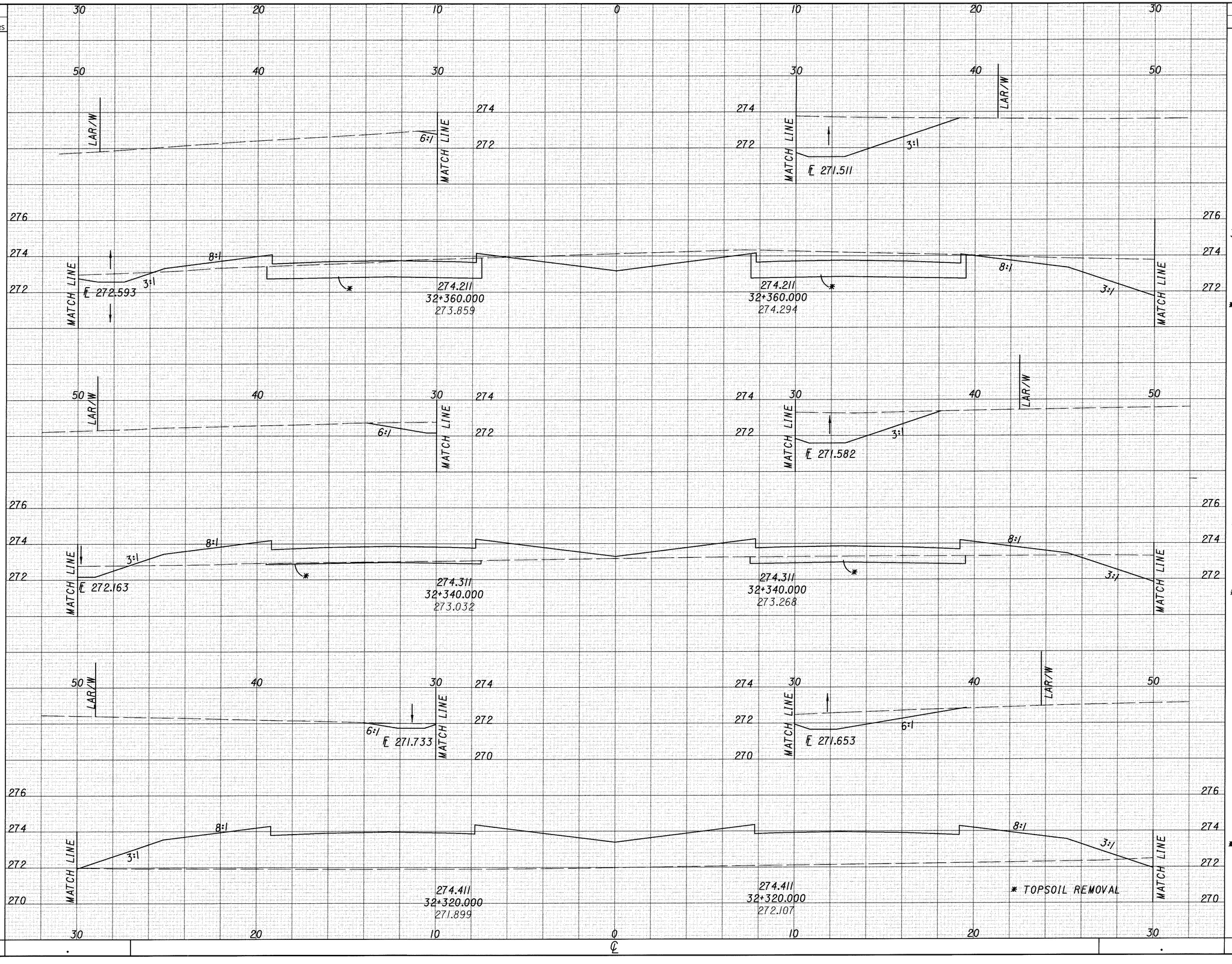
US-30 CROSS SECTIONS

STA 32+260.000 TO STA 32+300.000

WYA/CRA-30-28.009/0.000

409
2116

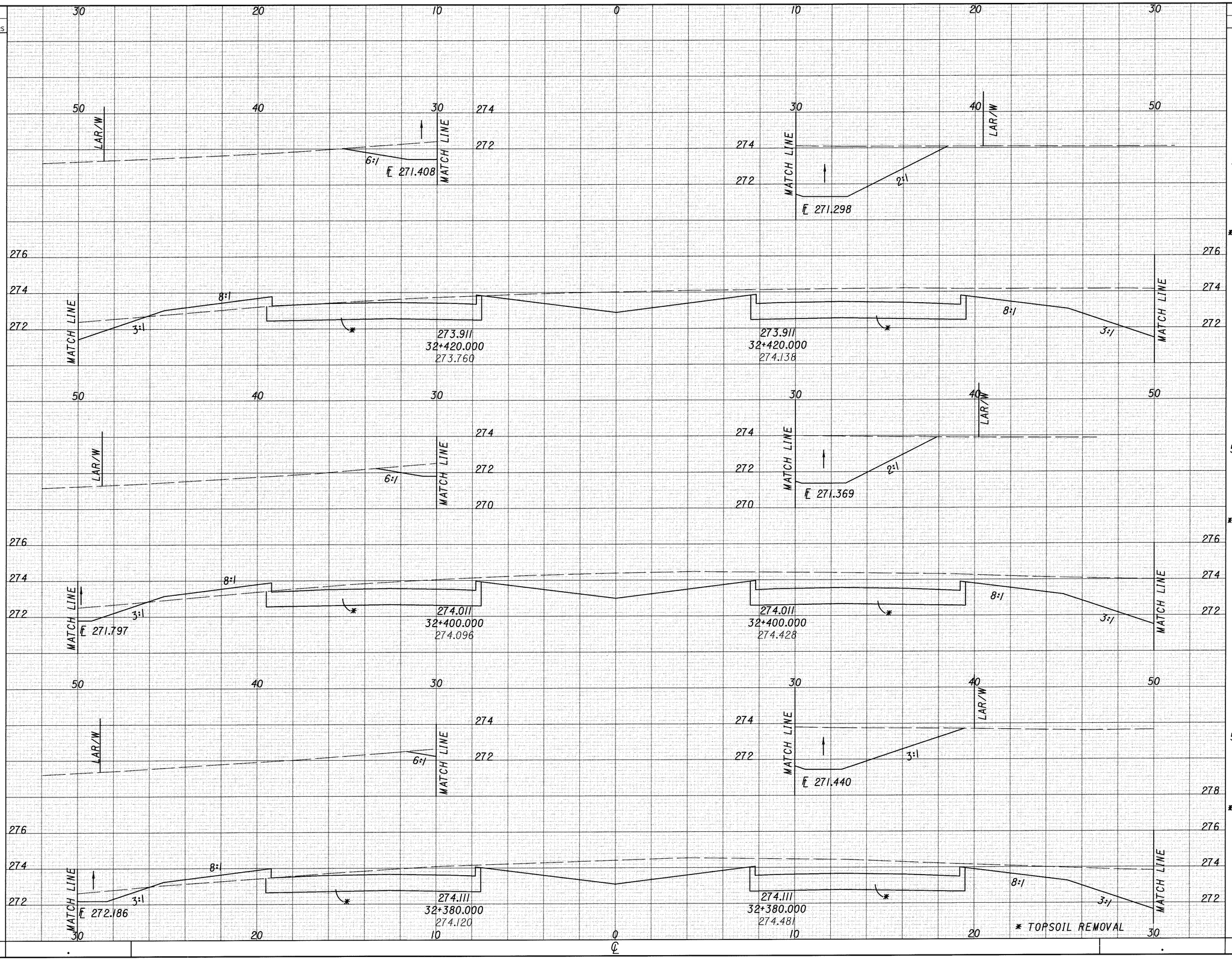
SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
55.91	1139	36.25	23.06	511	613		
58.03	1171	14.81	38.24	211	1368		
59.03	1178	6.31	98.53	105	2221		



US-30 CROSS SECTIONS
STA 32+320.000 TO STA 32+360.000
WYA / CRA-30-28.009 / 0.000

410
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
60.23	1177	55.91	22.98	1144	457
57.47	1143	58.46	22.67	1097	454
56.86	1128	51.23	22.74	875	458
		*20.46		*410	
		*20.54		*411	
		*20.51		*404	



* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

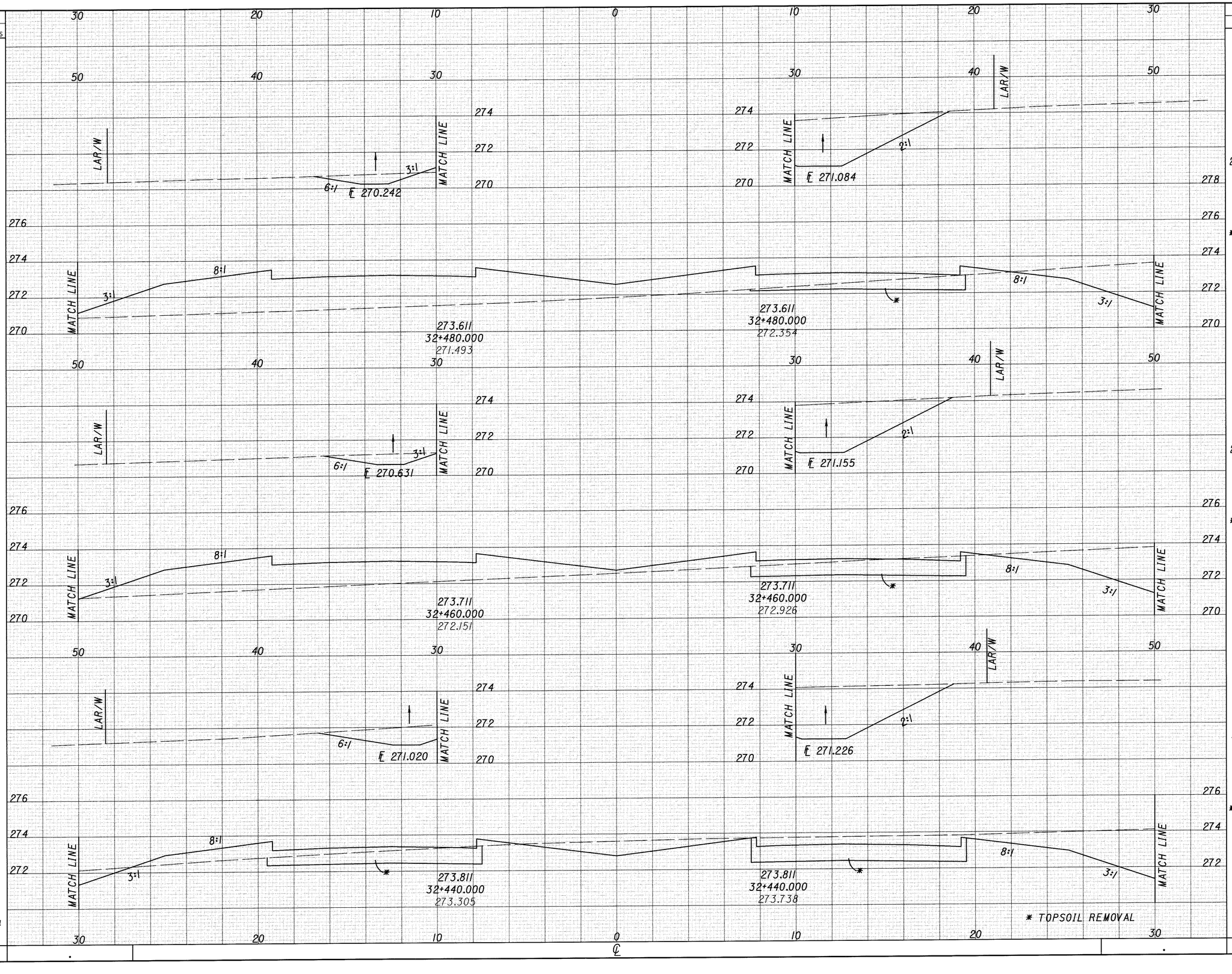
STA 32+380.000 TO STA 32+420.000

WYA/CRA-30-28.009/0.000

411

2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
61.93		25.26	65.87				
		*5.03					
	1274			537	1126		
65.46				*142			
		28.40	46.76				
	1276			747	721		
				*276			
62.15		46.31	25.35				
		*18.36					
	1224			1022	483		
				*388			

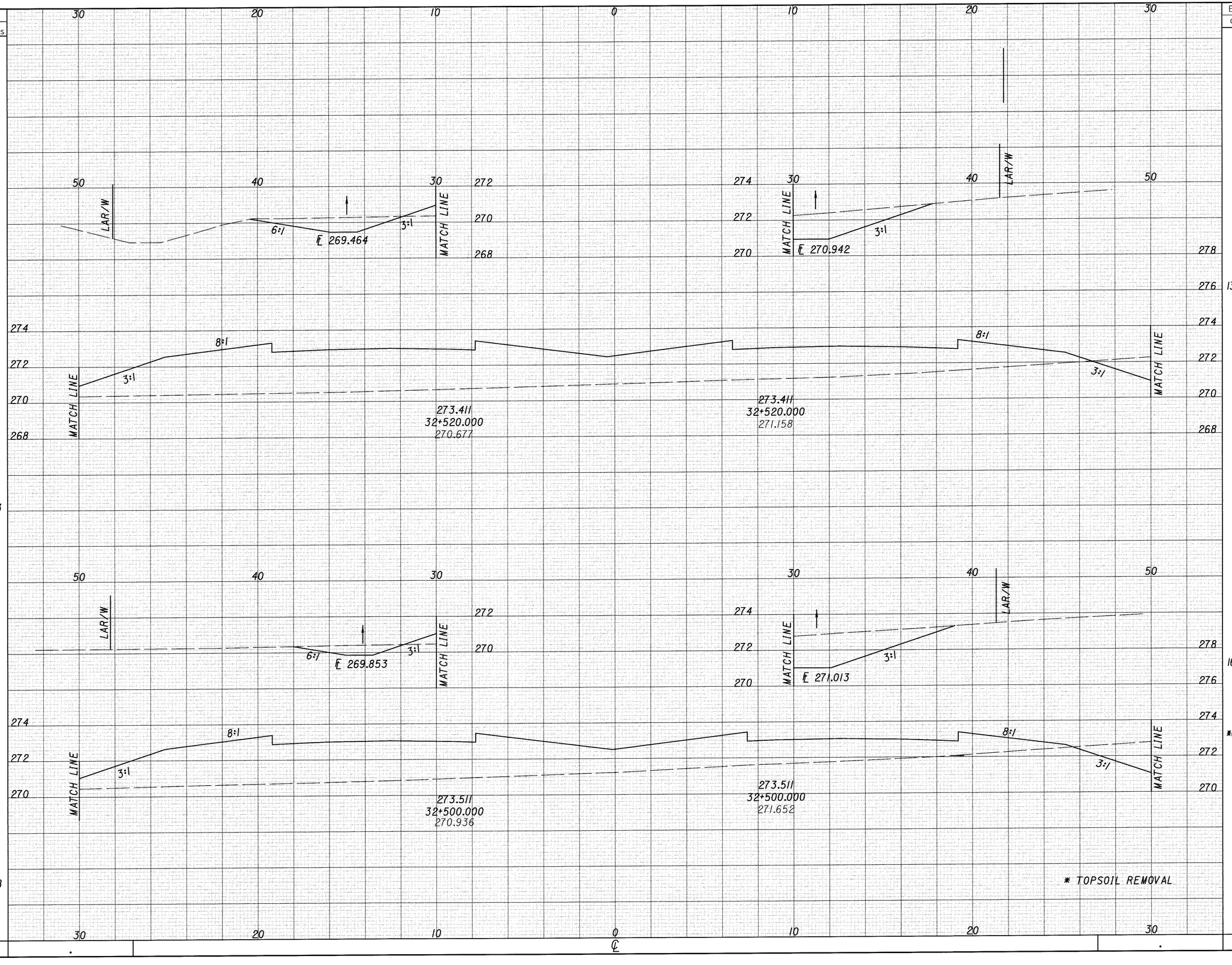


US-30 CROSS SECTIONS
STA 32+440.000 TO STA 32+480.000

WYA / CRA-30-28.009 / 0.000

412
2116

SEEDING	
END WIDTH	SQ. METERS
63.47	
	1263
62.88	
	1248



* TOPSOIL REMOVAL

END AREA		VOLUME	
CUT	FILL	CUT	FILL
13.26	103.36		
		296	1931
16.34	89.69		
*0.00			
		416	1556
		*50	

CALCULATED AM

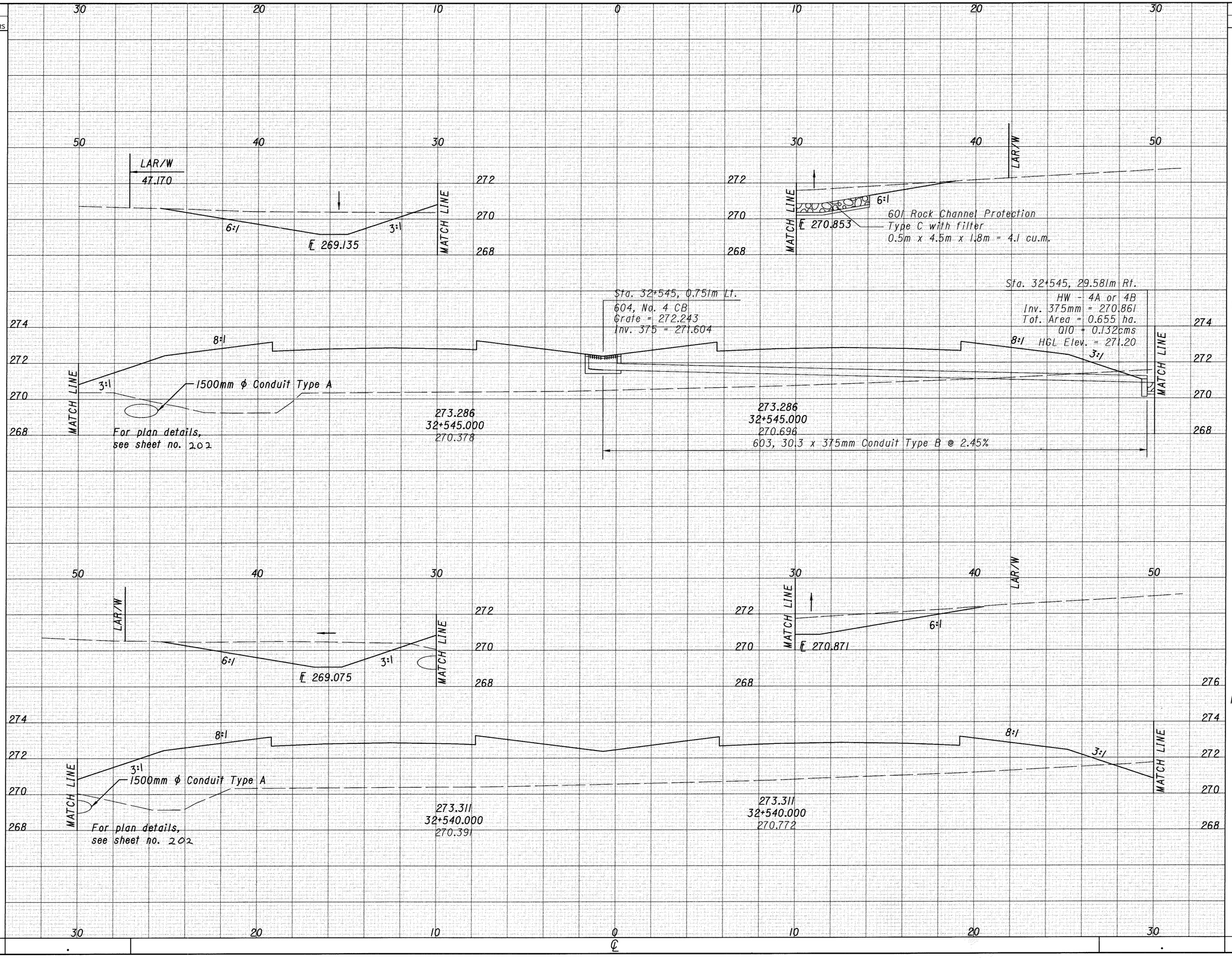
CHECKED REA

US-30 CROSS SECTIONS
STA 32+500.000 TO STA 32+520.000

WYA/CRA-30-28.009/0.000

413
2116

SEEDING	
END WIDTH	SQ. METERS
68.37	
	349
71.06	
	1345



END AREA		VOLUME	
CUT	FILL	CUT	FILL
17.24	124.14		
		87	613
17.52	121.25		
		308	2246

CALCULATED AM

CHECKED REA

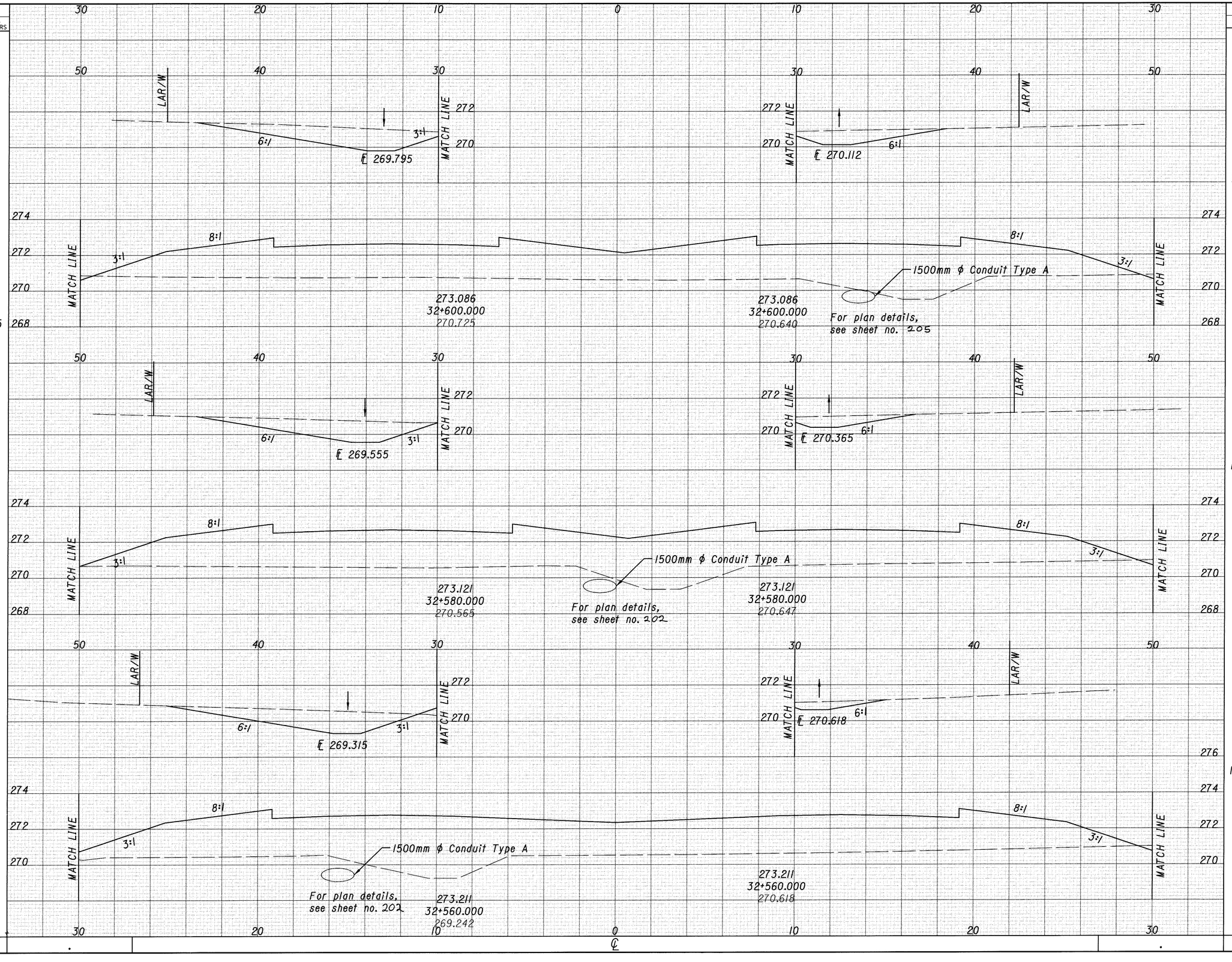
US-30 CROSS SECTIONS

STA 32+540.000 TO STA 32+545.000

WYA/CRA-30-28.009/0.000

414
2.116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
67.11		14.13	106.50			
	1315			259	2175	
64.42		11.72	110.99			
	1151			231	2295	
50.64		11.34	118.50			
	893			214	1820	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 32+560.000 TO STA 32+600.000

WYA/CRA-30-28.009/0.000

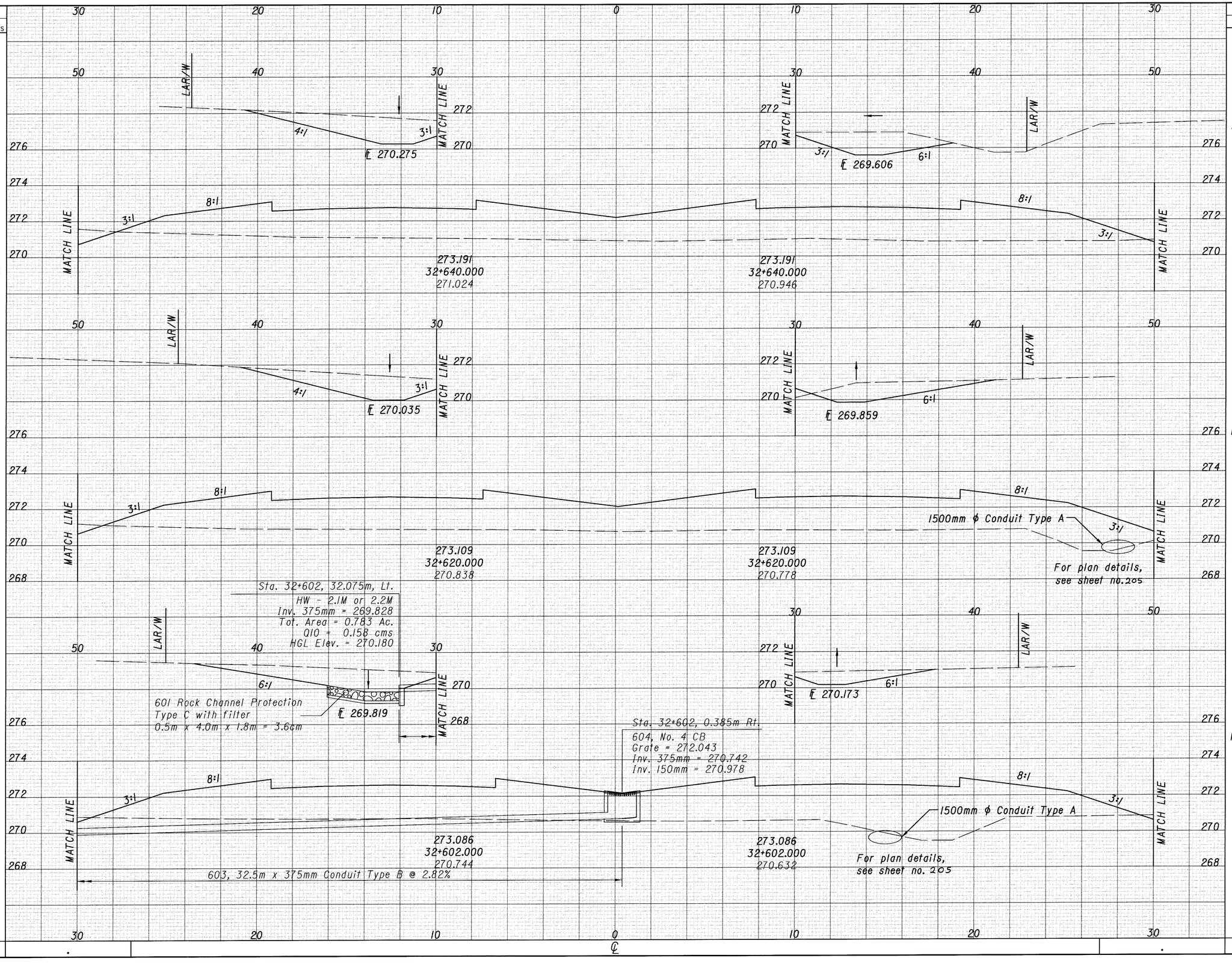
415
2.116

SEEDING	
END WIDTH	SQ. METERS
65.84	1344
68.59	1244
69.62	137

END AREA		VOLUME	
CUT	FILL	CUT	FILL
17.98	89.31	335	1897
15.47	100.40	286	1859
16.29	106.12	30	213

CALCULATED AM

CHECKED REA



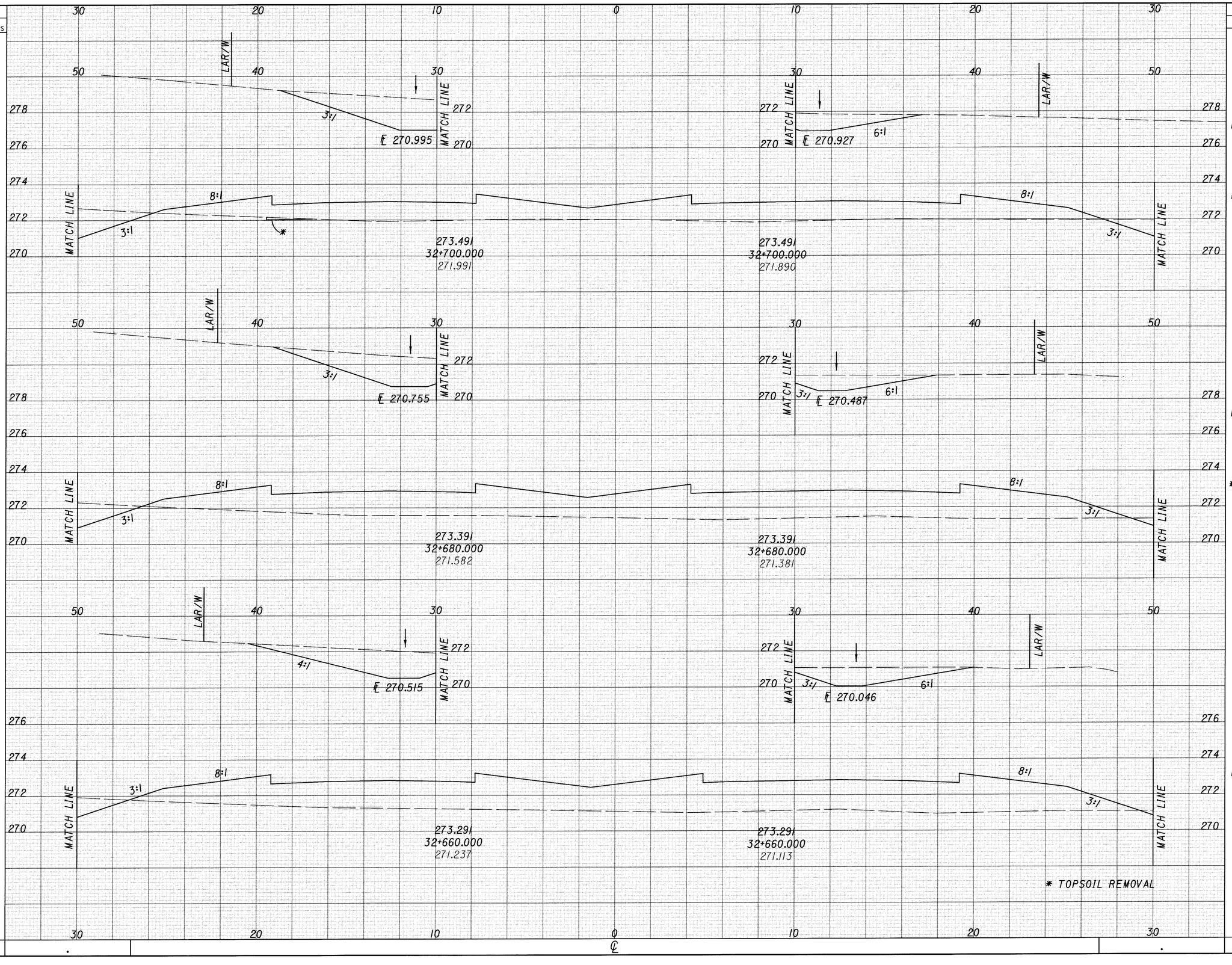
US-30 CROSS SECTIONS

STA 32+602.000 TO STA 32+640.000

WYA/CRA-30-28.009/0.000

STA

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
58.63	1185	18.52	48.53	352	1183
59.86		16.68	69.77	*2	
64.15	1240	*0.00		343	1526
				*0	
	1300	17.61	82.78	356	1721



* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

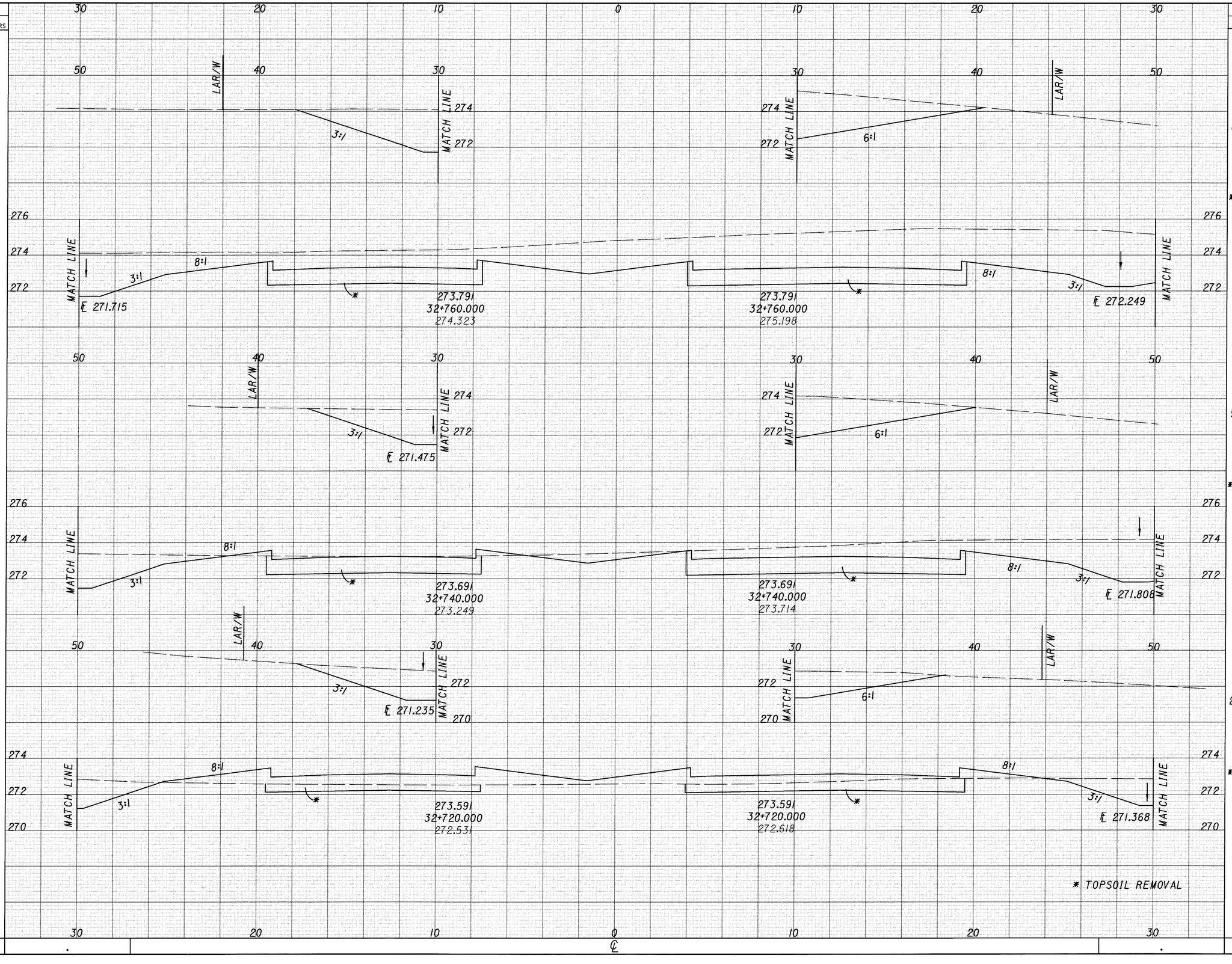
US-30 CROSS SECTIONS

STA 32+660.000 TO STA 32+700.000

WYA / CRA-30-28.009 / 0.000

417
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
61.48		125.14	23.57		
		*23.57			
	1218			1827	478
				*469	
60.33		57.56	24.25		
		*23.37			
	1194			811	579
				*361	
		23.49	33.60		
59.09		*12.72			
				420	821
	1177			*129	



CALCULATED AM

CHECKED REA

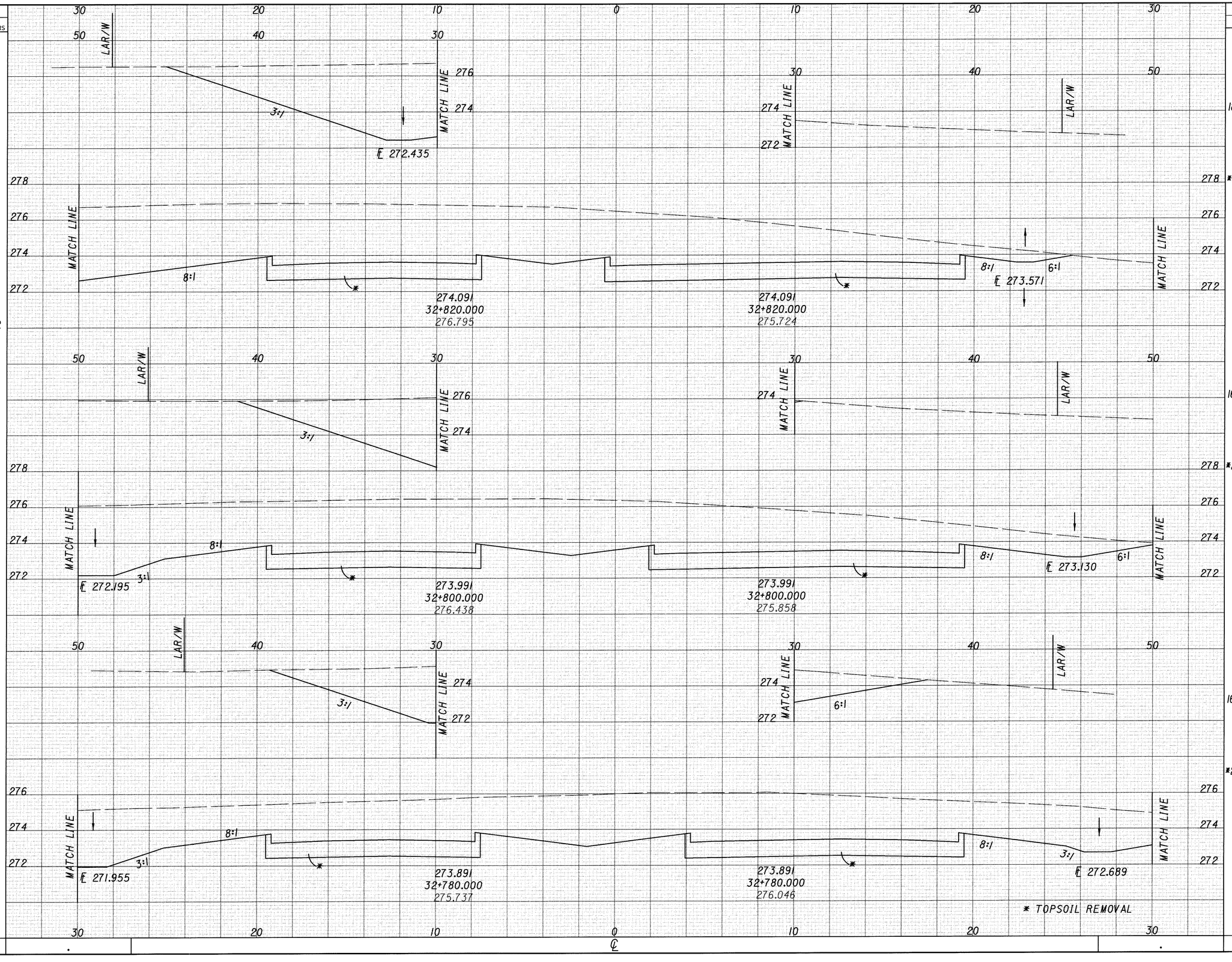
US-30 CROSS SECTIONS

STA 32+720.000 TO STA 32+760.000

WYA/CRA-30-28.009/0.000

418
2114

SEEDING	
END WIDTH	SQ. METERS
48.13	
	1002
52.06	
	1118
59.79	
	1213



END AREA		VOLUME	
CUT	FILL	CUT	FILL
180.78	27.25		
*27.25			
		3477	525
		*525	
166.94	25.23		
*25.23			
		3314	488
		*488	
164.46	23.56		
*23.56			
		2896	471
		*471	

* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 32+780.000 TO STA 32+820.000

WYA / CRA-30-28.009 / 0.000

SEEDING END WIDTH	SEEDING SQ. METERS
56.08	1205
64.42	1153
50.86	990

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
126.40	70.28		
*31.81		2883	1113
*641			
161.91	40.98		
*32.25		3297	691
*604			
167.80	28.16		
*28.16		3486	554
*554			

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 32+840.000 TO STA 32+880.000

WYA/CRA-30-28.009/0.000

420
2,116

30 20 10 0 10 20 30

SEE CR-128 CROSS-SECTIONS

VARIES

MATCH LINE

276
274
272
278

8:1
3:1
6:1

274.449
32+880.000
275.893

274.449
32+880.000
274.202

274.305
32+860.000
276.464

274.305
32+860.000
274.463

274.191
32+840.000
276.708

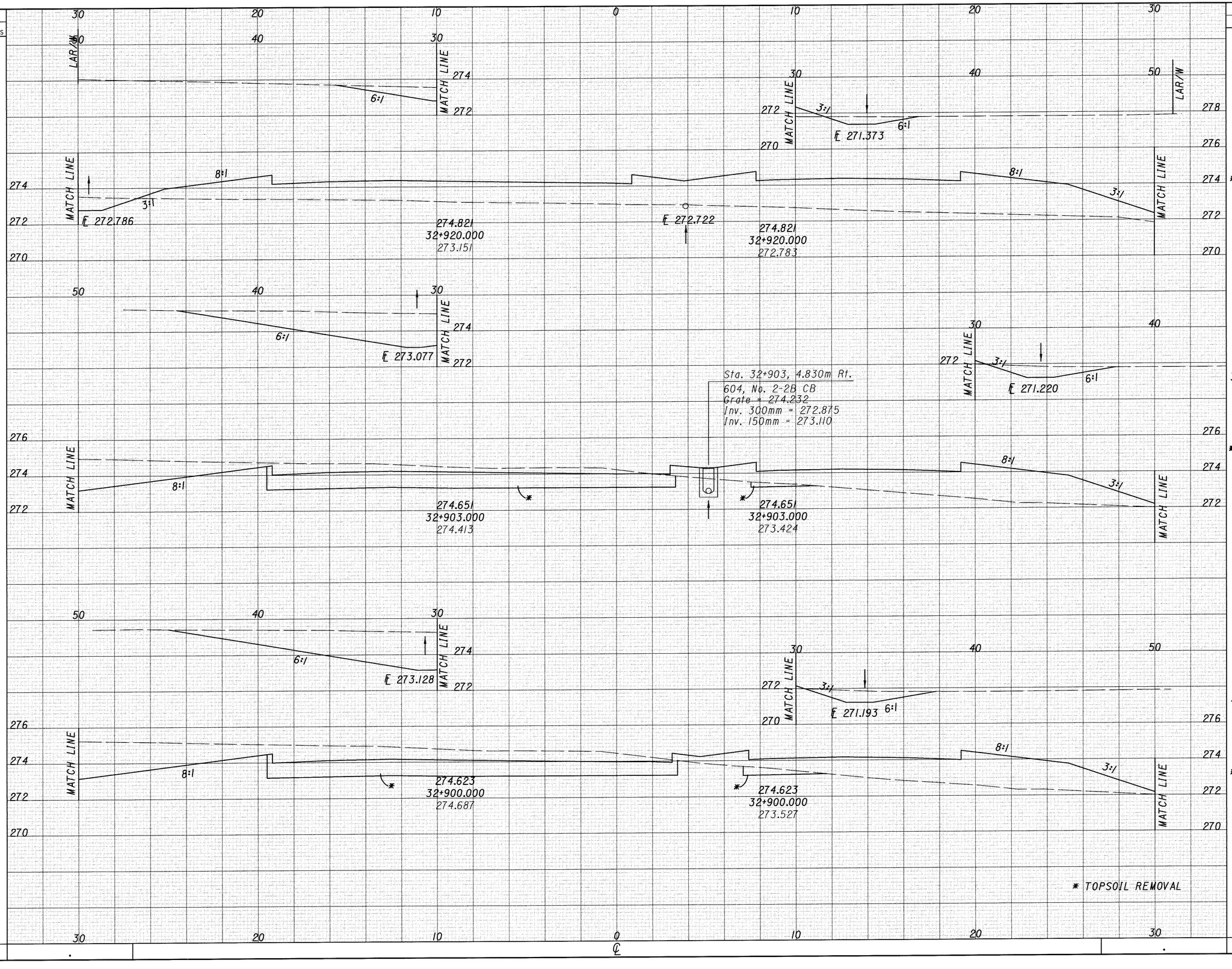
274.191
32+840.000
275.266

℄ 272.951
℄ 272.675
℄ 272.828

* TOPSOIL REMOVAL

℄

SEEDING	
END WIDTH	SQ. METERS
49.21	
	905
57.29	
	172
57.27	
	1134



END AREA		VOLUME	
CUT	FILL	CUT	FILL
5.23	74.22		
*0.00			
		365	1044
		*156	
37.68	48.56		
*18.30			
		131	143
		*56	
49.49	46.84		
*19.12			
		1759	1171
		*509	

* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

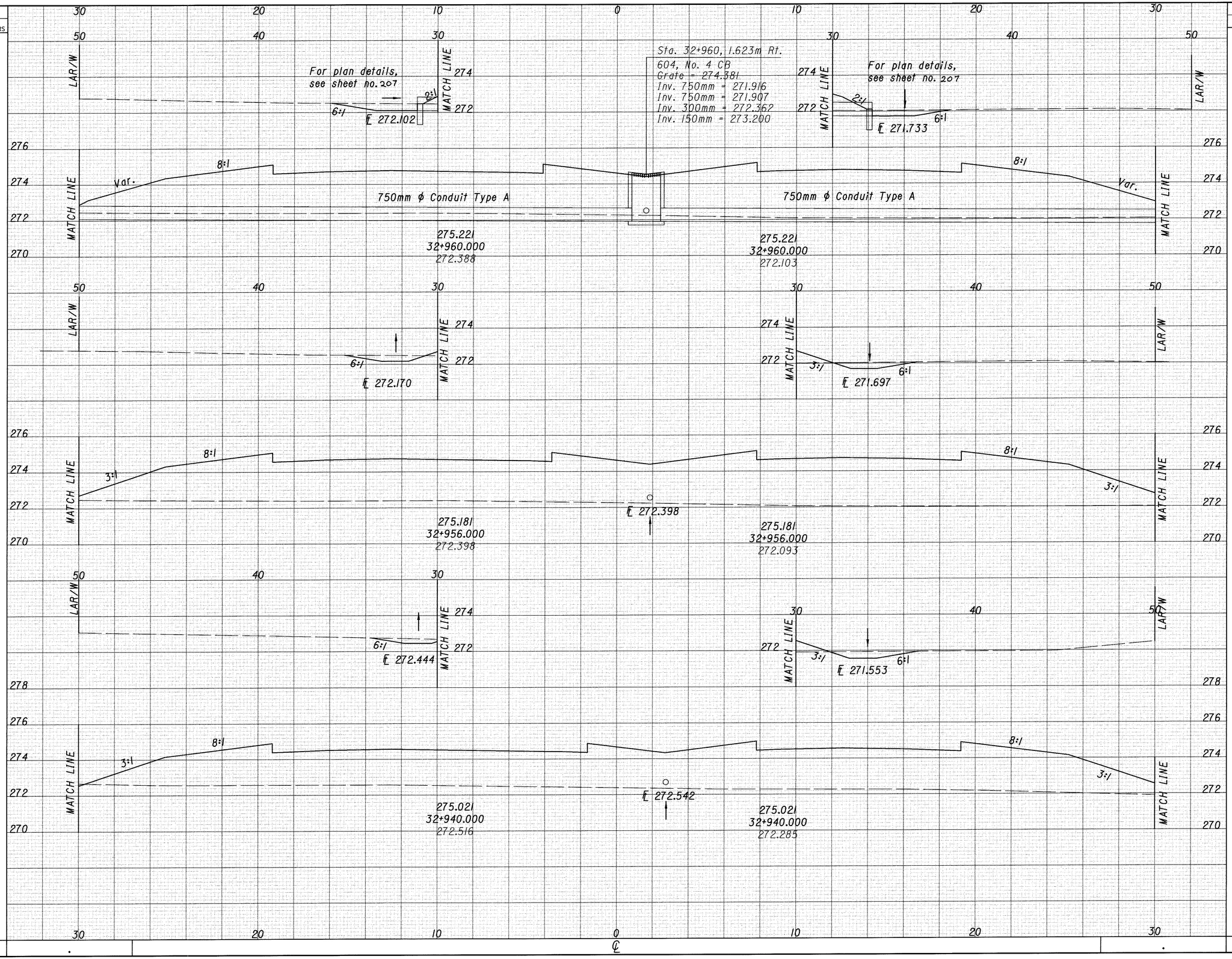
US-30 CROSS SECTIONS

STA 32+900.000 TO STA 32+920.000

WYA / CRA-30-28.009 / 0.000

421
2116

SEEDING	
END WIDTH	SQ. METERS
55.13	
	216
52.66	
	815
49.16	
	984



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.39	136.86		
		9	544
2.03	135.01		
		32	2016
1.92	117.05		
		72	1913

CALCULATED AM

CHECKED REA

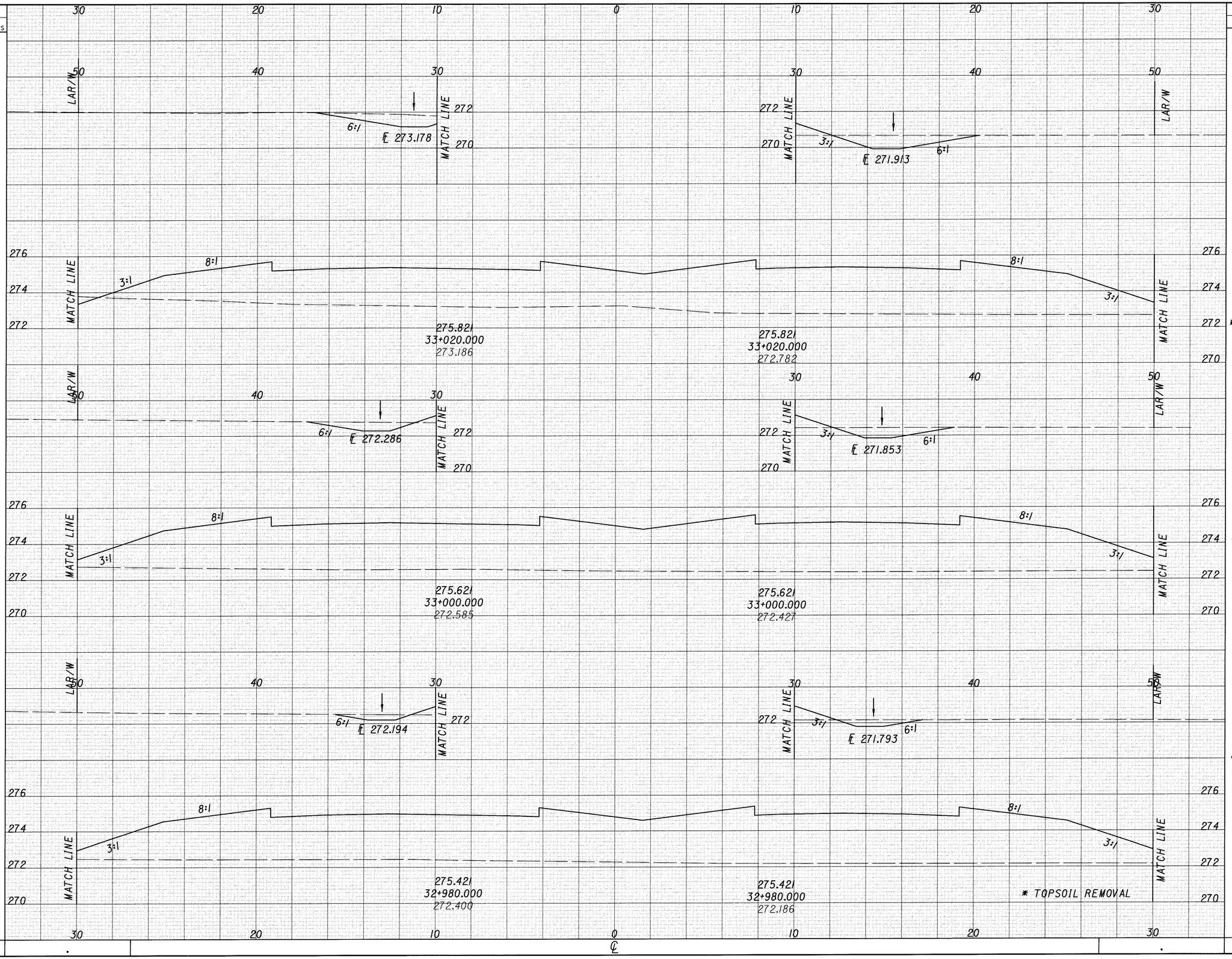
US-30 CROSS SECTIONS

STA 32+940.000 TO STA 32+960.000

WYA / CRA-30-28.009 / 0.000

422
2116

SEEDING	
END WIDTH	SQ. METERS
59.24	
	1172
57.99	
	1122
54.23	
	1094



END AREA		VOLUME	
CUT	FILL	CUT	FILL
6.80	123.33		
*0.00		110	2679
4.22	144.61		
		63	2904
2.03	145.81		
		44	2827

* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

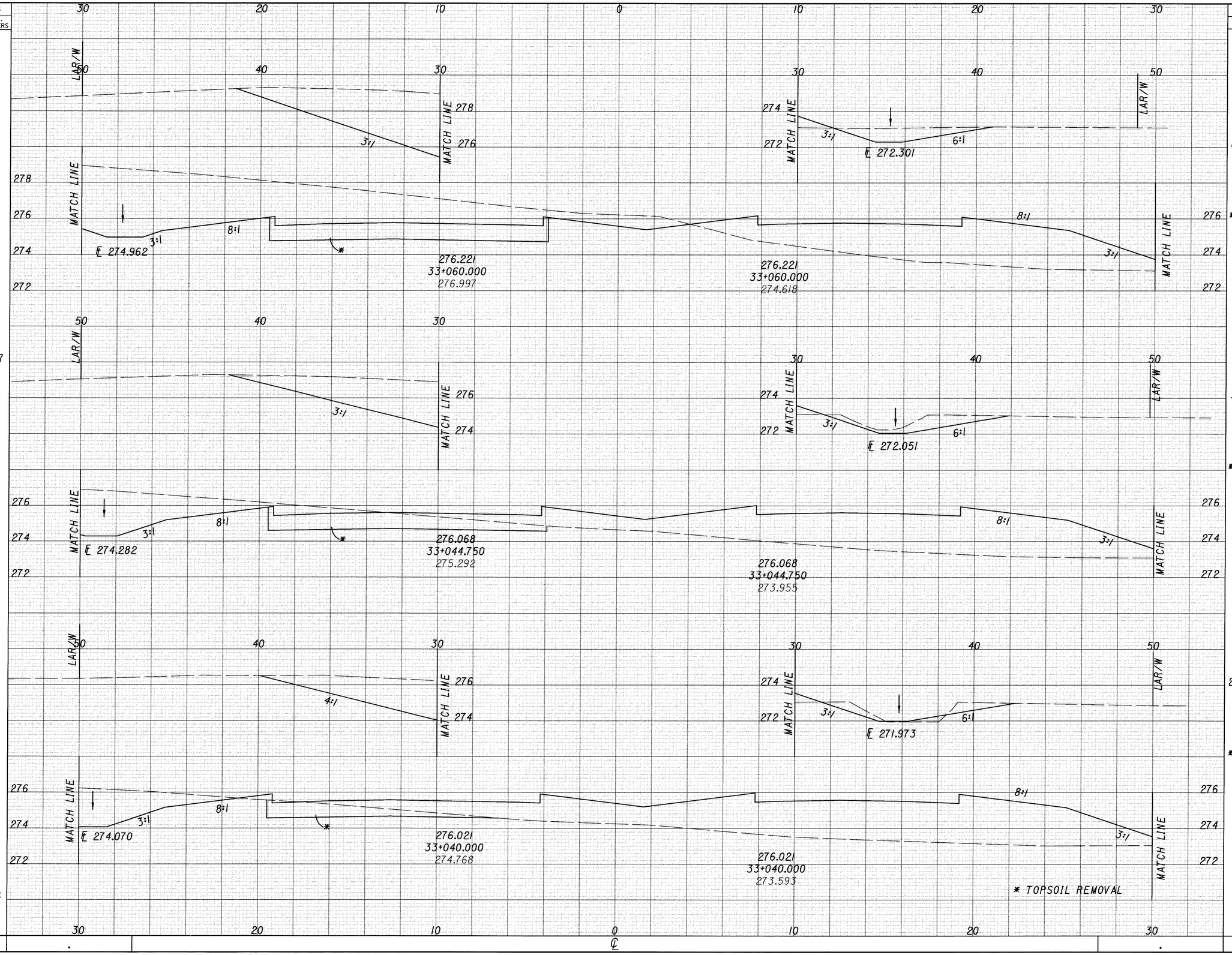
US-30 CROSS SECTIONS

STA 32+980.000 TO STA 33+020.000

WYA / CRA-30-28.009 / 0.000

423
2.116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
65.43		87.23	56.02		
		*13.24			
				946	950
	1007			*185	
		36.81	68.59		
66.70		*10.99			
				144	343
	311			*40	
		23.68	75.81		
64.32		*5.99			
				305	1991
	1236				



CALCULATED AM

CHECKED REA

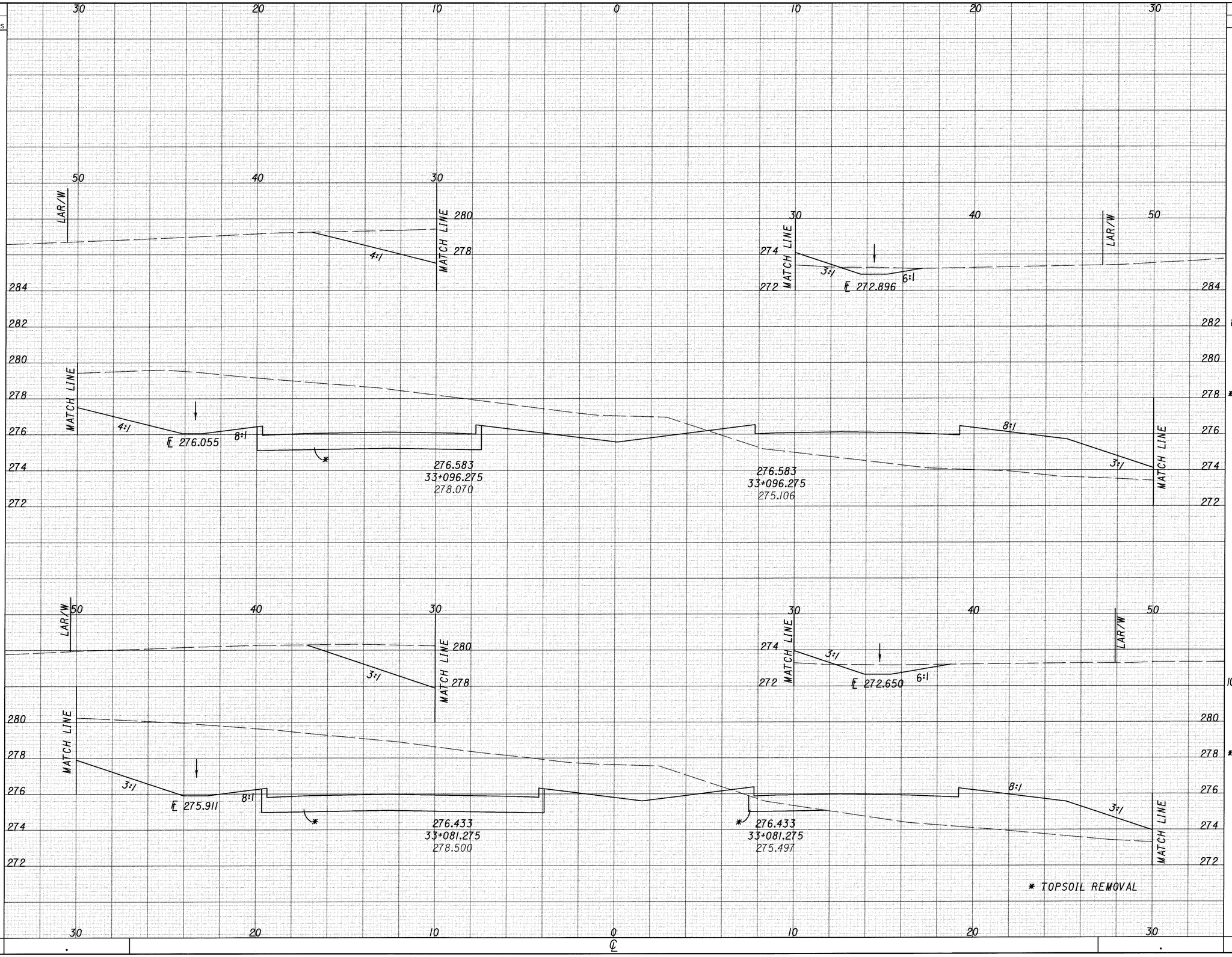
US-30 CROSS SECTIONS

STA 33+040.000 TO STA 33+060.000

WYA/CRA-30-28.009/0.000

424
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
59.33	884	83.61	49.48	1433	719	
		*10.74				
				*193		
58.51	1318	107.52	46.38	2072	1089	
		*15.01				
				*301		



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 33+081.275 TO STA 33+096.275

WYA / CRA-30-28.009 / 0.000

425
2114

SEEDING	
END WIDTH	SQ. METERS
44.99	
	271
45.36	
	678
51.53	
	1315

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.64	62.19		
*7.62			
		22	375
*43			
5.61	62.89		
*6.87			
		176	811
*126			
19.60	53.03		
*11.06			
		1224	1216
*259			

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 33+120.000 TO STA 33+140.000

WYA / CRA-30-28.009 / 0.000

426
211c

30 20 10 0 10 20 30

LAR/W

MATCH LINE

278
276
274
272

℄ 276.475
6:1
8:1
277.021
33+140.000
275.950

℄ 275.114

℄ 273.613
6:1
277.021
33+140.000
274.852
8:1
3:1

Sta. 33+134, 31.729m Rt.
HW = 2.1M or 2.2M
Inv. 600mm = 273.686
Tot. Area = 2.534 Ac.
Q10 = 0.459cfs
HGL Elev. = 274.23

℄ 273.514
6:1
601 Rock Channel Protection
Type C with filter
0.5m x 5.3m x 1.8m = 4.8cm

Sta. 33+134, ℄
604, No. 4 CB
Grate = 275.898
Inv. 600mm = 275.054
Inv. 150mm = 275.396

℄ 276.417
6:1
8:1
276.961
33+134.000
275.765

276.961
33+134.000
274.777
8:1
3:1

603, 31.8m x 600mm Conduit Type B @ 4.3%

℄ 273.285
3:1
6:1

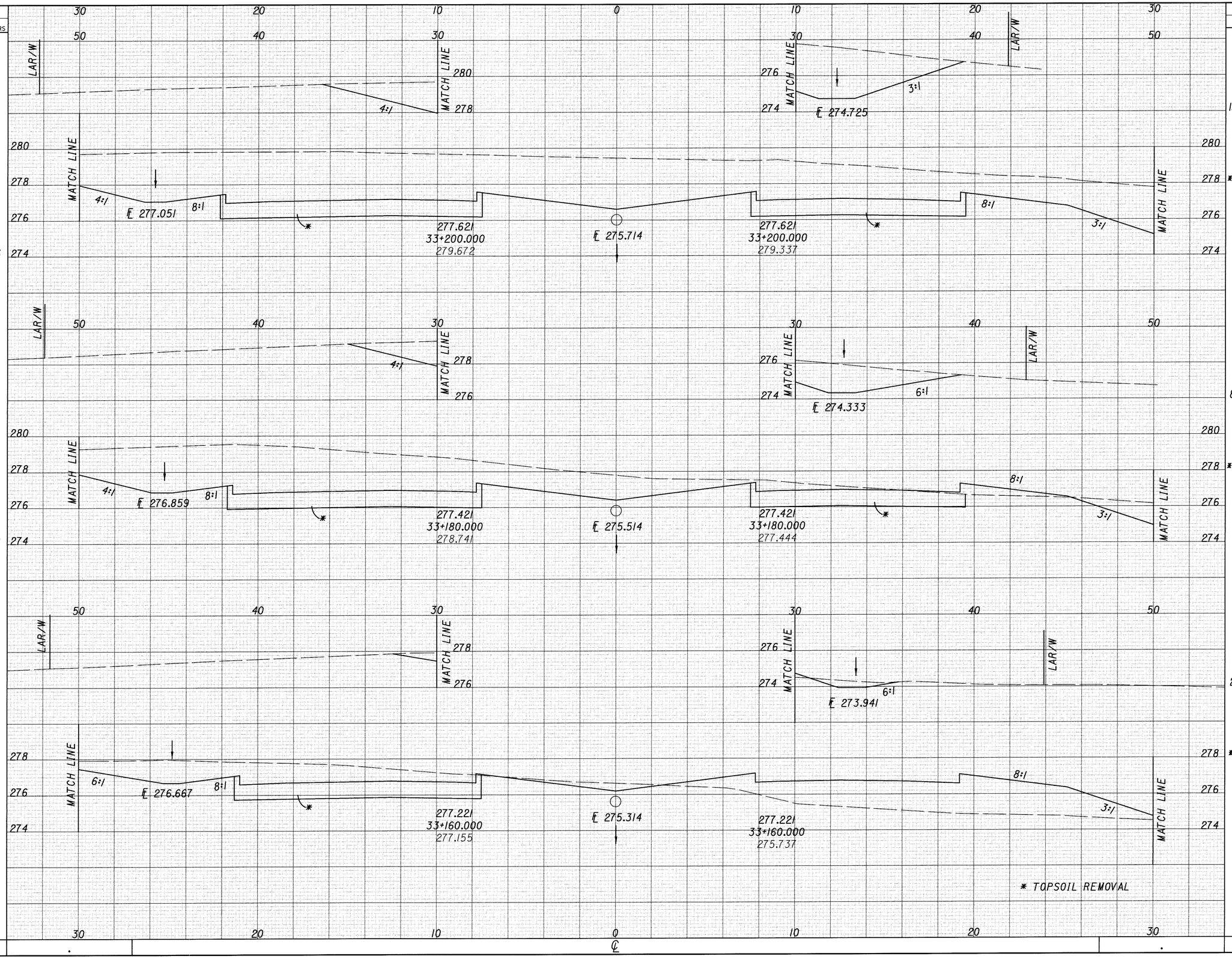
℄ 276.283
6:1
8:1
276.821
33+120.000
276.701

276.821
33+120.000
274.946
8:1
3:1

* TOPSOIL REMOVAL

℄

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
59.95	1183	157.74	22.79	2425	471
		*22.79		*449	
58.36	1102	84.77	24.32	1087	701
		*22.07		*338	
51.83	968	23.91	45.77	256	1080
		*11.76		*194	



CALCULATED AM

CHECKED REA

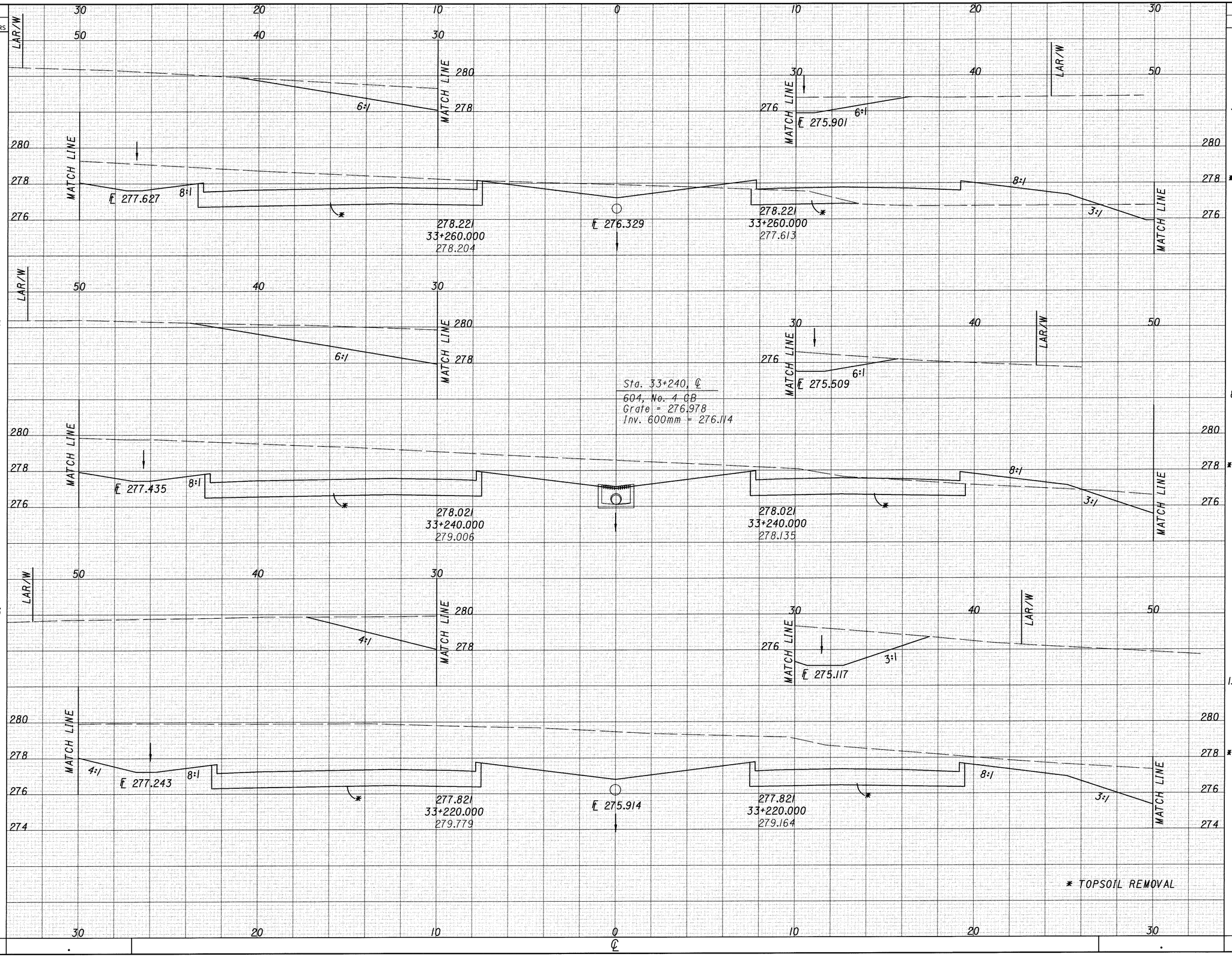
US-30 CROSS SECTIONS

STA 33+160.000 TO STA 33+200.000

WYA/CRA-30-28.009/0.000

427
2116

SEEDING	
END WIDTH	SQ. METERS
59.52	
	1214
61.89	
	1203
58.42	
	1184



END AREA		VOLUME	
CUT	FILL	CUT	FILL
38.10	30.86		
*16.98		1202	570
		*399	
82.14	26.09		
*22.87		2154	492
		*460	
133.21	23.12		
*23.12		2910	459
		*459	

* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 33+220.000 TO STA 33+260.000

WYA / CRA-30-28.009 / 0.000

428
2116

SEEDING	
END WIDTH	SQ. METERS
46.19	1017
55.48	1130
57.56	1171

END AREA		VOLUME	
CUT	FILL	CUT	FILL
10.41	30.43		
*20.51		329	586
		*426	
22.47	28.14		
*22.07		517	561
		*423	
29.18	27.96	673	588
*20.19		*372	

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS STA 33+280.000 TO STA 33+320.000

WYA/CRA-30-28.009/0.000

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		65.76	25.82		
52.00		*25.82			
				830	528
	967			*509	
		17.20	26.99		
44.75		*25.11			
				239	589
	875			*447	
		6.74	31.95		
42.71		*19.59			
				172	624
	889			*401	

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 33+340.000 TO STA 33+380.000

WYA/CRA-30-28.009/0.000

430
2116

LAR/W 55.117

MATCH LINE

6:1

8:1

3:1

℄ 278.779

279.421
33+380.000
279.838

℄ 277.589

279.421
33+380.000
279.710

℄ 278.253

℄ 278.587

279.221
33+360.000
278.926

℄ 277.389

279.221
33+360.000
278.706

℄ 277.861

℄ 278.395

279.021
33+340.000
278.418

279.021
33+340.000
278.105

℄ 277.469

Sta. 33+340, ℄
604, No. 4 CB
Grate = 277.978
Inv. 525mm = 277.189

* TOPSOIL REMOVAL

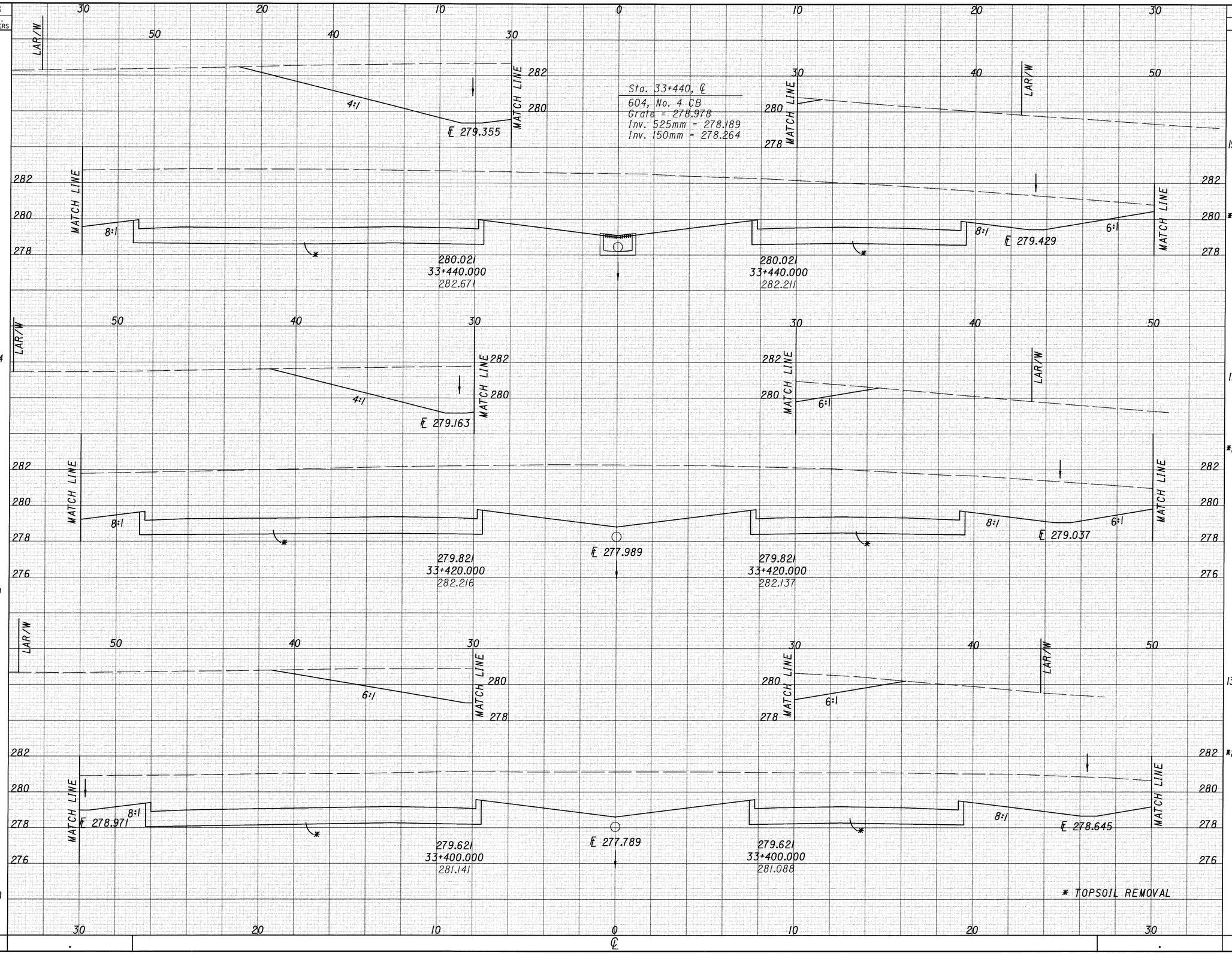
30 20 10 0 10 20 30

50 40 30

280 278 276

℄

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
55.30	1104	193.32	26.75	3725	532
		*26.75			
				*532	
55.13		179.21	26.46		
		*26.46			
	1119			3143	526
				*526	
56.78		135.12	26.16		
		*26.16			
	1088			2009	520
				*520	



CALCULATED AM

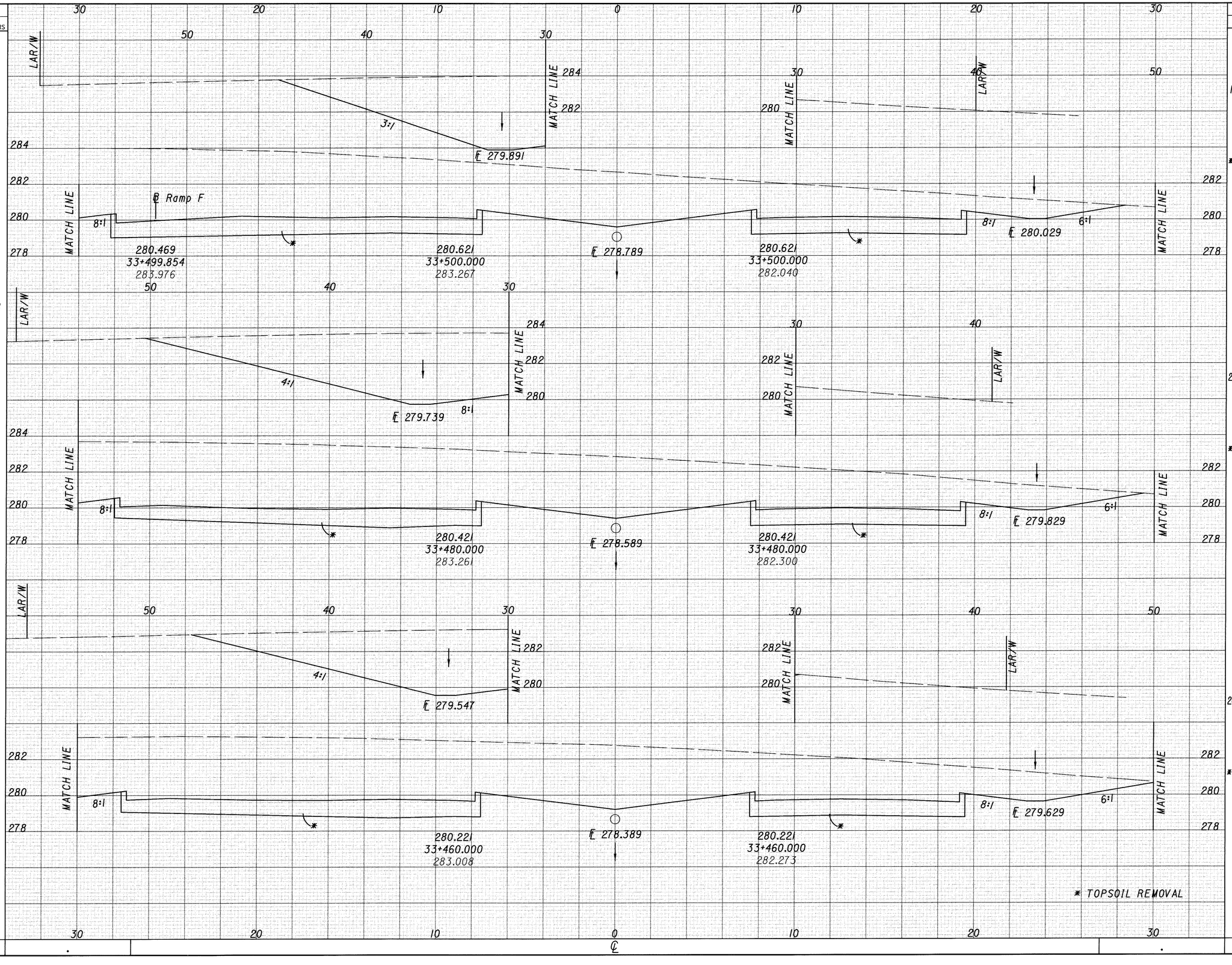
CHECKED REA

US-30 CROSS SECTIONS

STA 33+400.000 TO STA 33+440.000

WYA/CRA-30-28.009/0.000

SEEDING END WIDTH	SEEDING SQ. METERS
50.51	
	1078
57.28	
	1133
56.07	
	1114



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
184.98	28.52		
*28.52			
		3939	555
		*555	
208.92	26.99		
*26.99			
		4110	539
		*539	
202.08	26.86		
*26.86			
		3954	536
		*536	

CALCULATED AM

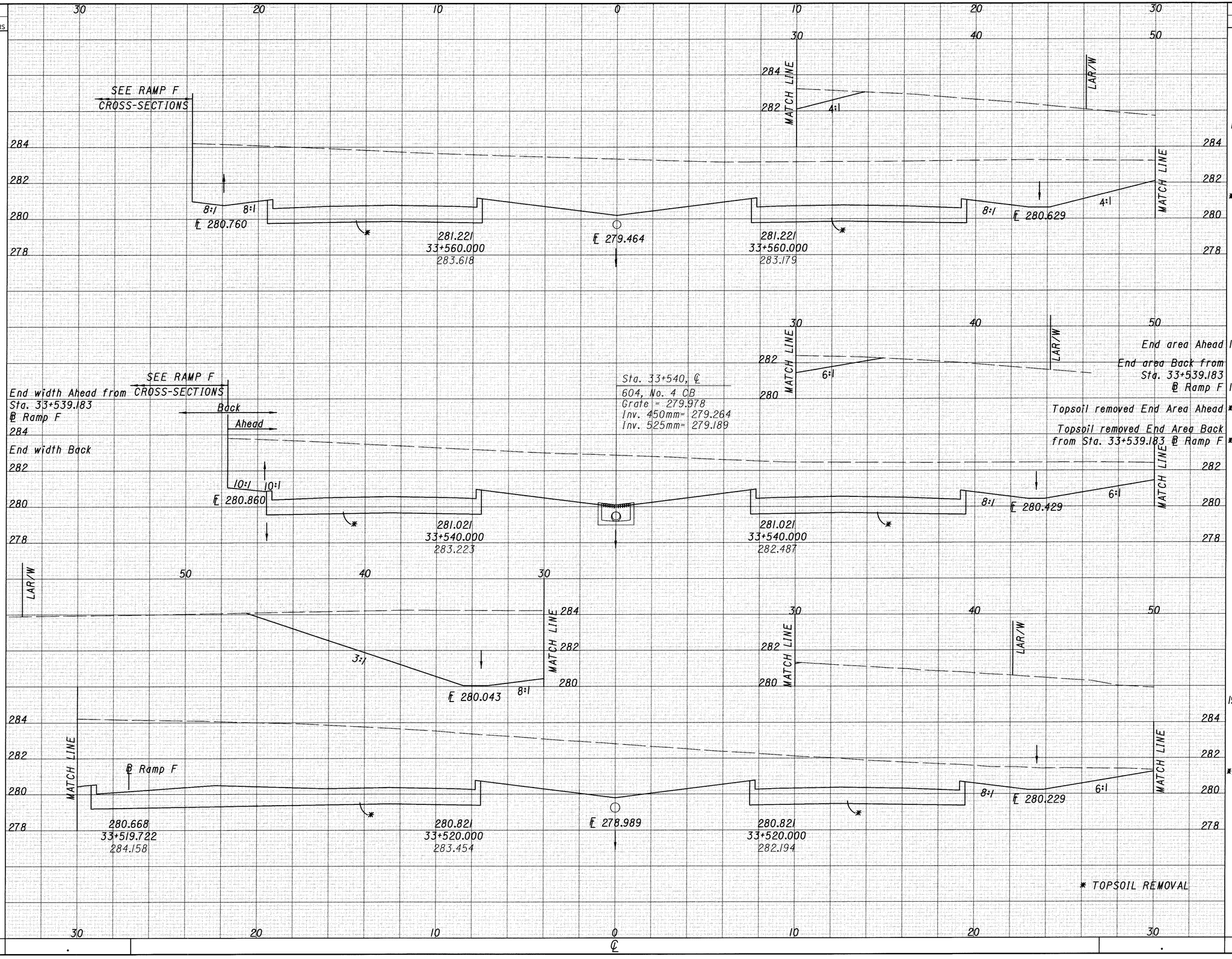
CHECKED REA

US-30 CROSS SECTIONS

STA 33+460.000 TO STA 33+500.000

WYA/CRA-30-28.009/0.000

SEEDING	
END WIDTH	SQ. METERS
39.59	
	806
40.98	
66.4	
	1297
63.30	
	1138



END AREA		VOLUME	
CUT	FILL	CUT	FILL
146.21	20.67		
*20.67		2670	413
		*413	
120.76	20.67		
199.75	27.88		
*20.67			
*27.88			
		3922	580
		*580	
192.45	30.09		
*30.09			
		3774	586
		*586	

CALCULATED AM

CHECKED REA

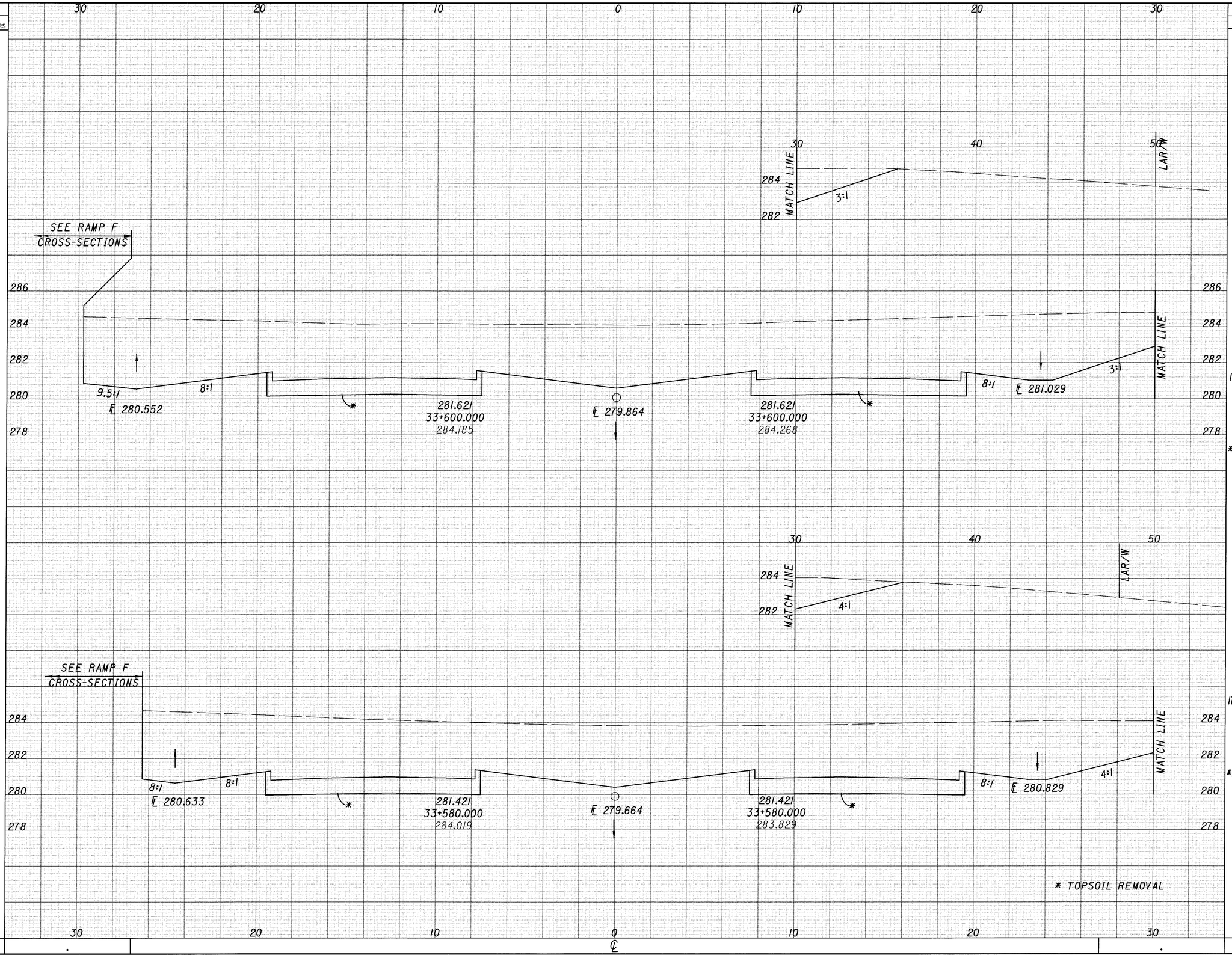
US-30 CROSS SECTIONS

STA 33+520.000 TO STA 33+560.000

WYA/CRA-30-28.009/0.000

433
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
47.89		197.58	20.67		
		*20.67			
	961			3771	413
				*413	
48.20		179.53	20.67		
		*20.67			
				3257	413
	878			*413	



CALCULATED AM

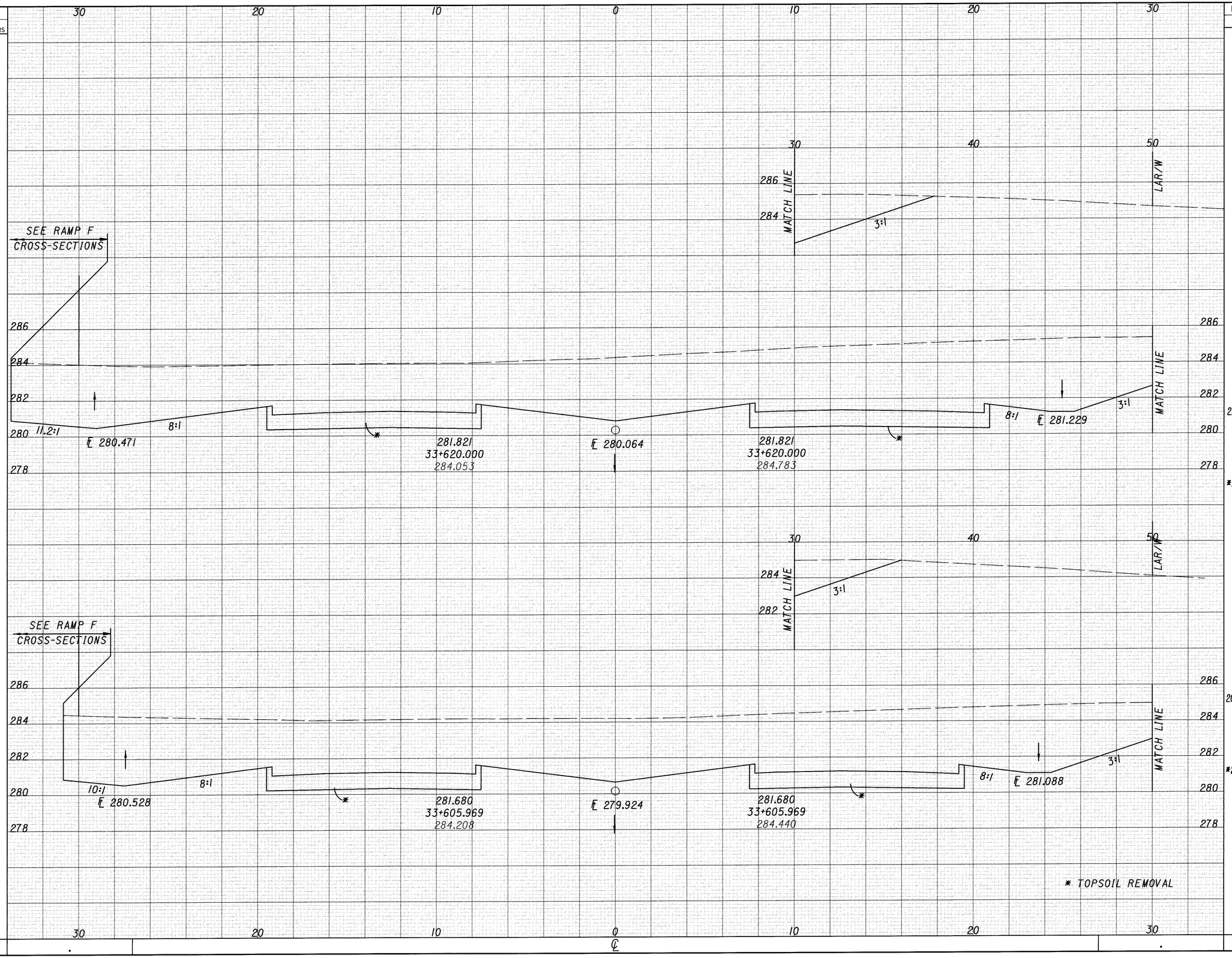
CHECKED REA

US-30 CROSS SECTIONS

STA 33+580.000 TO STA 33+600.000

WYA/CRA-30-28.009/0.000

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
52.90	718	216.78	21.80	2943	298
		*21.80		*298	
49.41	290	202.76	20.67	1195	123
		*20.67		*123	



CALCULATED AM

CHECKED REA

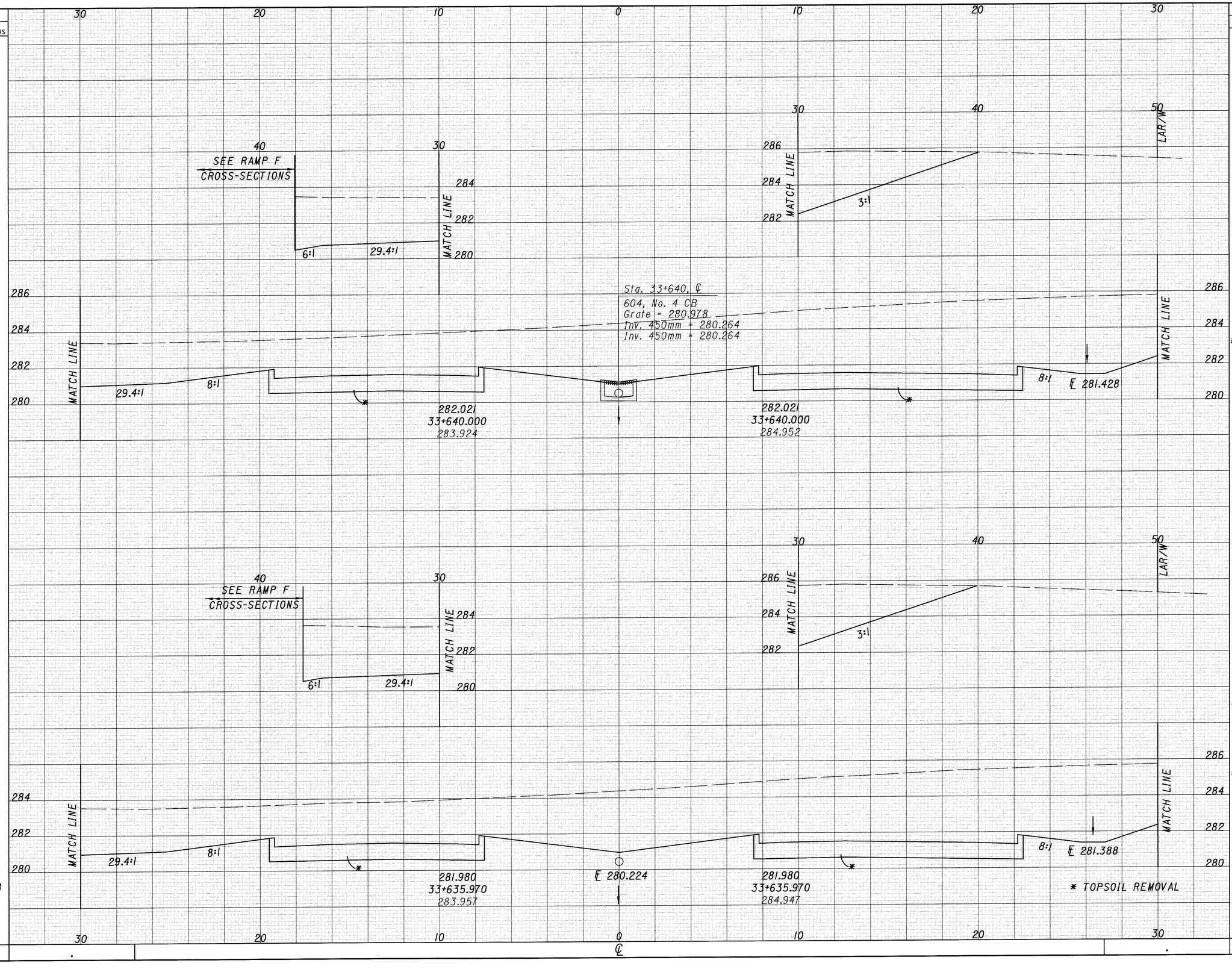
US-30 CROSS SECTIONS

STA 33+605.969 TO STA 33+620.000

WYA/CRA-30-28.009/0.000

435
2116

SEEDING	
END WIDTH	SQ. METERS
57.71	231
57.03	878



END AREA		VOLUME	
CUT	FILL	CUT	FILL
219.11	23.08		
*23.08		890	93
		*93	
222.69	23.07		
*23.07		3509	358
		*358	

CALCULATED AM

CHECKED REA

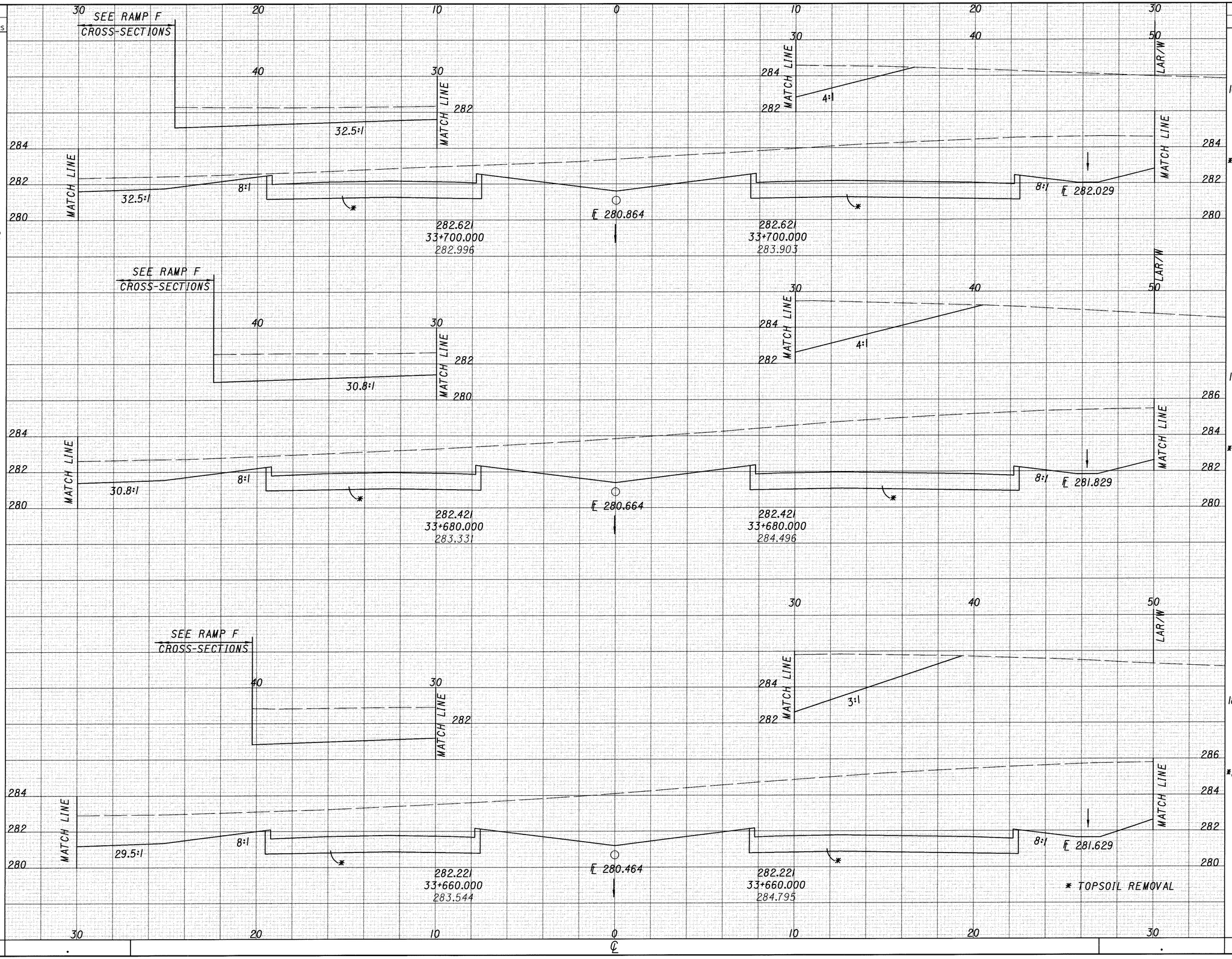
US-30 CROSS SECTIONS

STA 33+635.970 TO STA 33+640.000

WYA/CRA-30-28.009/0.000

436
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
60.74		103.45	23.08		
	1232	*23.08		2620	462
				*462	
62.47		158.51	23.08		
	1218	*23.08		3463	462
				*462	
		187.77	23.08		
59.35					
	1171	*23.08		4069	462
				*462	



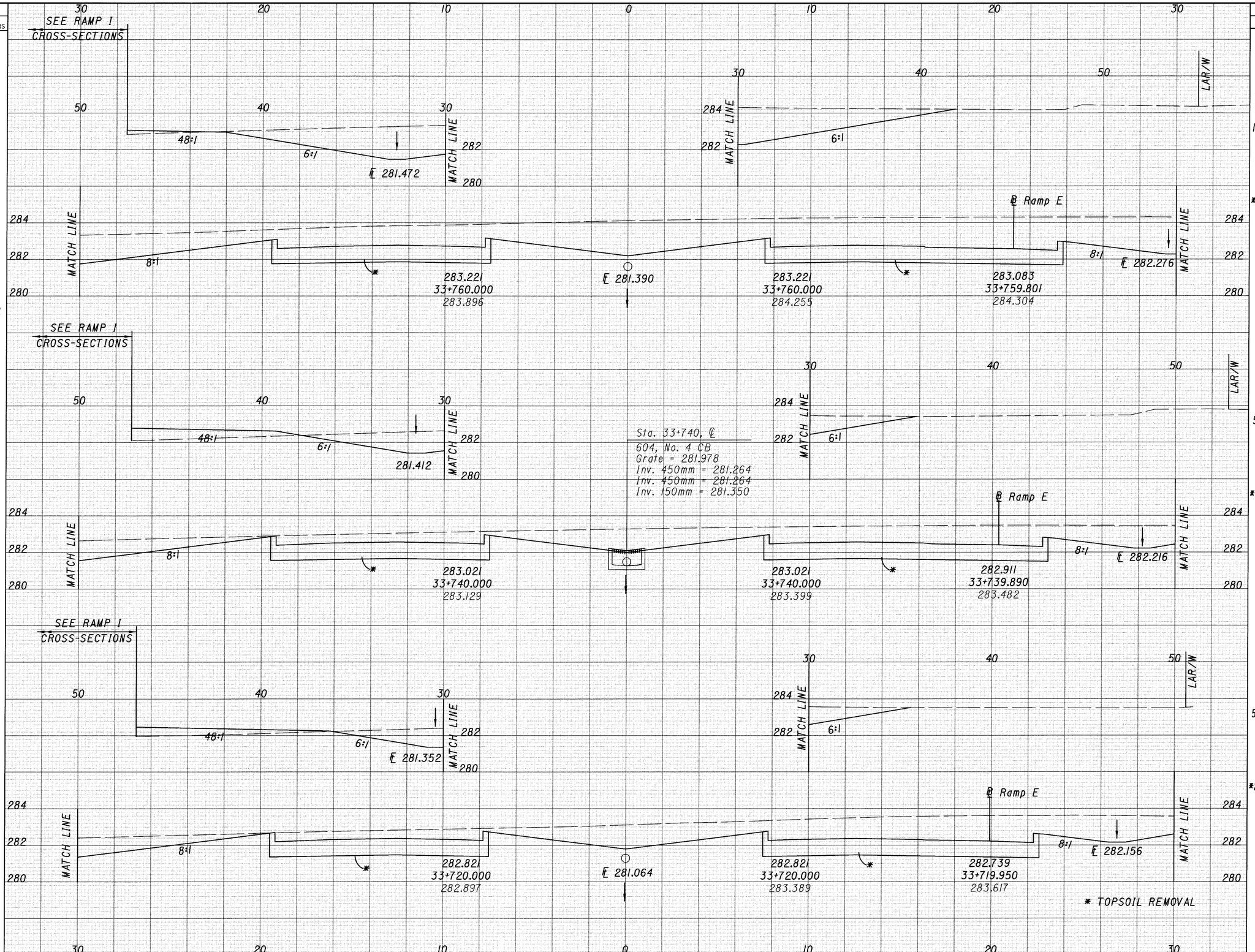
CALCULATED: AM
CHECKED: REA

US-30 CROSS SECTIONS
STA 33+660.000 TO STA 33+700.000

WYA / CRA-30-28.009 / 0.000

437
2716

SEEDING	
END WIDTH	SQ. METERS
66.97	
	1282
61.27	
	1224
61.10	
	1218



END AREA		VOLUME	
CUT	FILL	CUT	FILL
109.86	24.20		
*23.70			
		1665	514
		*470	
56.59	27.24		
*23.25			
		1162	533
		*463	
59.62	26.09		
*23.04			
		1631	492
		*461	

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 33+720.000 TO STA 33+760.000

WYA/CRA-30-28.009/0.000

438
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
59.13		32.46	28.21		
		**26.81			
				877	543
	1241			**524	
		55.21	26.05		
64.96		**25.54			
				1834	506
	1363			**501	
		128.19	24.52		
71.30		*24.52			
				2381	487
	1383			*482	

SEE RAMP I CROSS-SECTIONS

℄ 281.652 — MATCH LINE 284 / 282 — 24:1 — 6:1

℄ 282.876 — MATCH LINE 284 / 282 — 8:1 — 6:1 — LAR/W

MATCH LINE 284 / 282 / 280 — 8:1 — ** — 283.821 — 33+820.000 — 283.453

℄ 281.768

283.821 — 33+820.000 — 283.389 — ** — ℄ Ramp E — 8:1 — 283.601 — 33+819.722 — 283.438 — MATCH LINE 284 / 282 / 280

SEE RAMP I CROSS-SECTIONS

℄ 281.592 — MATCH LINE 284 / 282 — 24:1 — 6:1

℄ 282.676 — MATCH LINE 284 / 282 — 6:1 — LAR/W

MATCH LINE 284 / 282 / 280 — 8:1 — * — 283.621 — 33+800.000 — 283.463

℄ 281.642

283.621 — 33+800.000 — 283.787 — * — ℄ Ramp E — 8:1 — 283.428 — 33+799.725 — 283.920 — MATCH LINE 284 / 282 / 280

SEE RAMP I CROSS-SECTIONS

℄ 281.532 — MATCH LINE 284 / 282 — 24:1 — 6:1

℄ 282.476 — MATCH LINE 284 / 282 — 6:1 — LAR/W

MATCH LINE 284 / 282 / 280 — 8:1 — * — 283.421 — 33+780.000 — 284.048

℄ 281.516

283.421 — 33+780.000 — 284.454 — * — ℄ Ramp E — 8:1 — 283.255 — 33+779.753 — 284.676 — MATCH LINE 284 / 282 / 280

* TOPSOIL REMOVAL
** UNDERCUTTING

30 20 10 0 10 20 30 — ℄

CALCULATED AM — CHECKED REA

US-30 CROSS SECTIONS

STA 33+780.000 TO STA 33+820.000

WYA / CRA-30-28.009 / 0.000

439
2116

SEEDING END WIDTH	SEEDING SQ. METERS	
48.22		End width Ahead
61.72		End width Back from Sta. 33+859.401 ℄ Ramp E
	900	
66.64		
	398	
66.79		
	1259	

SEE RAMP I CROSS-SECTIONS

℄ 281.772

℄ 281.730

℄ 281.932

℄ 281.712

℄ 281.894

℄ 282.020

℄ 283.136

℄ 283.076

℄ 283.824

SEE RAMP E CROSS-SECTIONS

Back

Ahead

MATCH LINE

LAR/W

8:1

6:1

284.221
33+860.000
283.723

284.221
33+860.000
283.499

284.080
33+845.970
283.666

284.080
33+845.970
283.408

284.021
33+840.000
283.684

284.021
33+840.000
283.402

℄ Ramp E

283.825
33+845.734
283.425

283.774
33+839.749
283.398

** UNDERCUTTING

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
47.69	23.91		
48.78	32.66		
**18.02			
**24.74			
		676	457
		**372	
47.53	32.46		
**28.27			
		276	188
		**168	
45.09	30.56		
**27.89			
		776	588
		**547	

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 33+840.000 TO STA 33+860.000

WYA / CRA-30-28.009 / 0.000

440
2116

SEEDING END WIDTH	SEEDING SQ. METERS	STATION
53.03	681	SEE RAMP I CROSS-SECTIONS
51.77	1022	SEE RAMP I CROSS-SECTIONS
53.97	370	SEE RAMP I CROSS-SECTIONS

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
75.40	24.51	972	312
**18.78		**254	
74.12	23.55	503	163
**20.30		**139	
69.68	22.94	1174	469
**19.51		**375	

CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 33+880.000 TO STA 33+900.000
WYA/CRA-30-28.009/0.000

441
2116

30 20 10 0 10 20 30

SEE RAMP I CROSS-SECTIONS

50 40 30

286
284
282

6:1 8:1 281.892 MATCH LINE

8:1 ** 284.621 33+900.000 284.204 MATCH LINE

SEE RAMP E CROSS-SECTIONS

8:1 12.5:1 ℄ 284.200

** 284.621 33+900.000 283.953

Sta. 33+880, Ramp I, 45.743m Rt.
602, HW-2.1M
Inv. 300mm = 281.933

For continuation, see sheet no. 1118

6:1 8:1 ℄ 281.853 MATCH LINE

8:1 ** 284.491 33+886.999 284.215 MATCH LINE

SEE RAMP E CROSS-SECTIONS

6:1 12.5:1

** 284.491

SEE RAMP I CROSS-SECTIONS

6:1 8:1 ℄ 281.832 MATCH LINE

Sta. 33+880
604, No. 4 CB
Grate = 283.378
Inv. 375mm = 282.172
Inv. 450mm = 282.146
Inv. 150mm = 282.350

Sta. 33+880, 23.3m Rt.
604, No. 5 CB
Grate = 283.378
Inv. 375mm = 282.405
Inv. 150mm = 282.420

SEE RAMP E CROSS-SECTIONS

8:1 ** 284.421 33+880.000 284.163 MATCH LINE

6:1 3:1

** 284.421 33+880.000 283.841

603, 23.3m x 375mm Conduit Type B @ 1.0%

** UNDERCUTTING

℄

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
61.46		19.63	60.18		
		*0.00			
				550	1012
				*58	
	1198				
58.30		35.36	40.98		
		**5.75			
				962	699
	1137				
				**214	
55.44		60.81	28.96		
		**15.65			
				1362	535
	1085				
				**344	

SEE RAMP I CROSS-SECTIONS

50 40 30 MATCH LINE 284 282

6:1 8:1 ℄ 282.072

286 284 282 MATCH LINE 8:1

285.221
33+960.000
283.574

285.221
33+960.000
283.680

SEE RAMP E CROSS-SECTIONS

8:1 6:1 ℄ 284.324

SEE RAMP I CROSS-SECTIONS

50 40 30 MATCH LINE 284 282

6:1 8:1 ℄ 282.012

SEE RAMP E CROSS-SECTIONS

286 284 282 MATCH LINE 8:1 **

285.021
33+940.000
283.810

285.021
33+940.000
283.833

8:1 6:1 ℄ 284.384

SEE RAMP I CROSS-SECTIONS

50 40 30 MATCH LINE 284 282

6:1 8:1 ℄ 281.952

8:1 ℄ 284.405 12.5:1

STA. 33+933.149

SEE RAMP E CROSS-SECTIONS

286 284 282 MATCH LINE 8:1 **

284.821
33+920.000
284.161

284.821
33+920.000
283.912

8:1 12.5:1 ℄ 284.350

* TOPSOIL REMOVAL
** UNDERCUTTING

30 20 10 0 ℄ 10 20 30

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 33+920.000 TO STA 33+960.000

WYA/CRA-30-28.009/0.000

442
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
67.92		10.65	86.41		
	868			143	1117
65.63		11.28	85.47		
	456	12.01	79.98	82	579
64.68				316	1402
	1261				

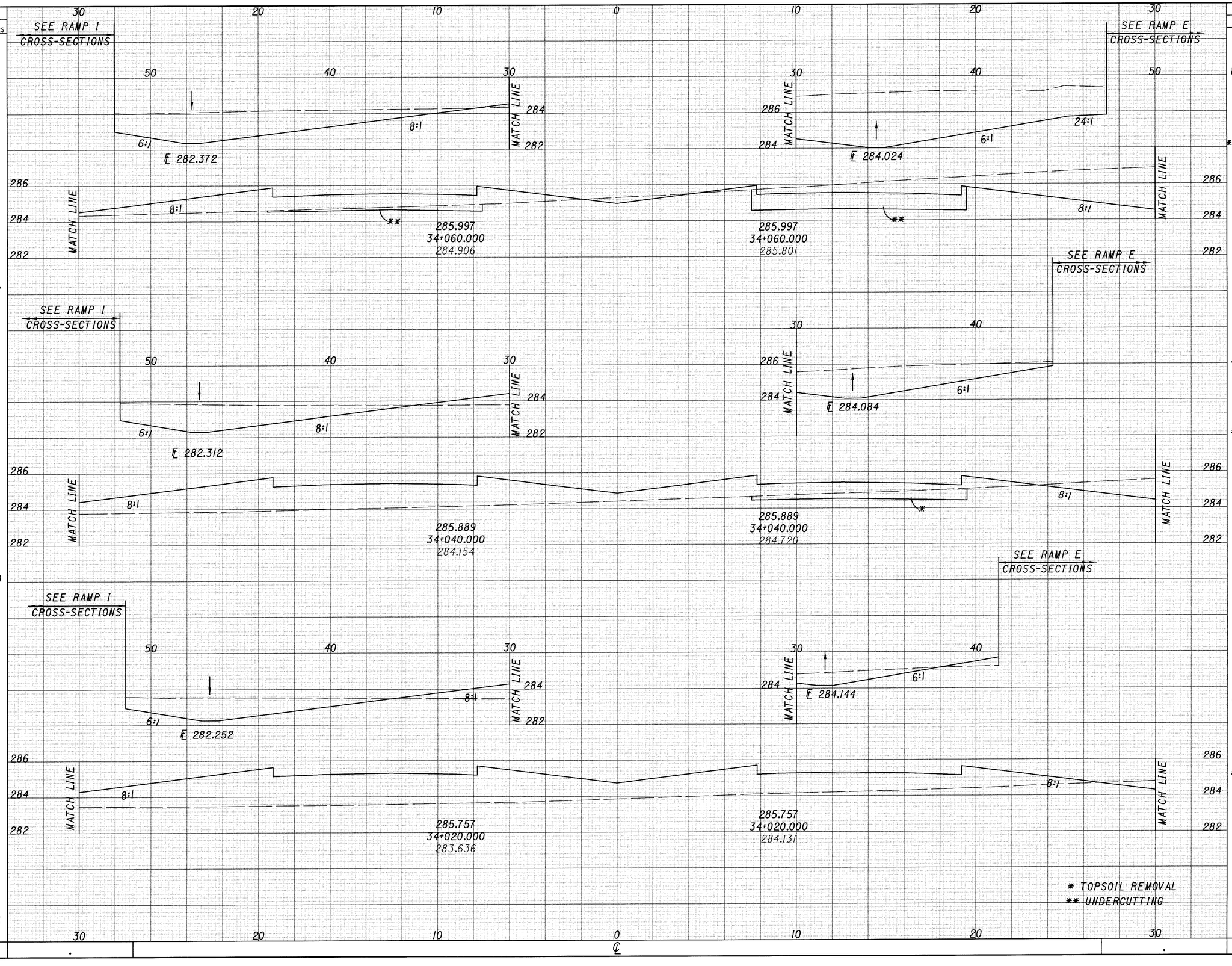
CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 33+980.000 TO STA 34+000.000

WYA/CRA-30-28.009/0.000

443
2116

SEEDING END WIDTH	SEEDING SQ. METERS
77.92	
	1527
74.75	
	1460
71.20	
	1391



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
84.66	31.37		
**12.39			
		1189	869
		*169	
34.22	55.53		
*4.50			
		496	1304
*45			
15.36	74.88		
*0.00			
		260	1613

CALCULATED AM

CHECKED REA

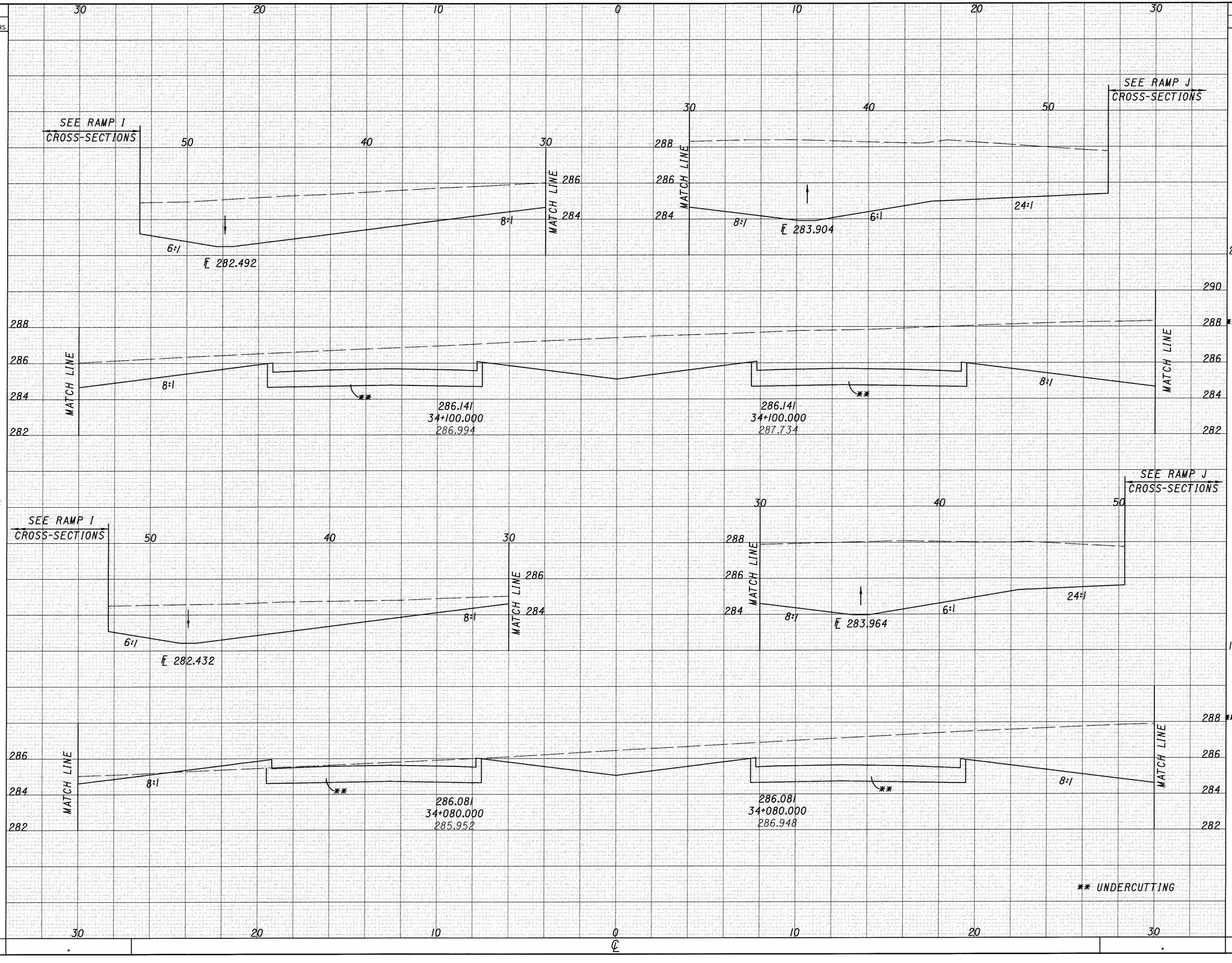
US-30 CROSS SECTIONS

STA 34+020.000 TO STA 34+060.000

WYA / CRA-30-28.009 / 0.000

444
2116

SEEDING	
END WIDTH	SQ. METERS
84.95	
	1664
81.42	
	1593



END AREA		VOLUME	
CUT	FILL	CUT	FILL
237.72	20.67	3968	425
159.07	21.86	2437	532

**20.67	**412
**20.53	**329

CALCULATED AM

CHECKED REA

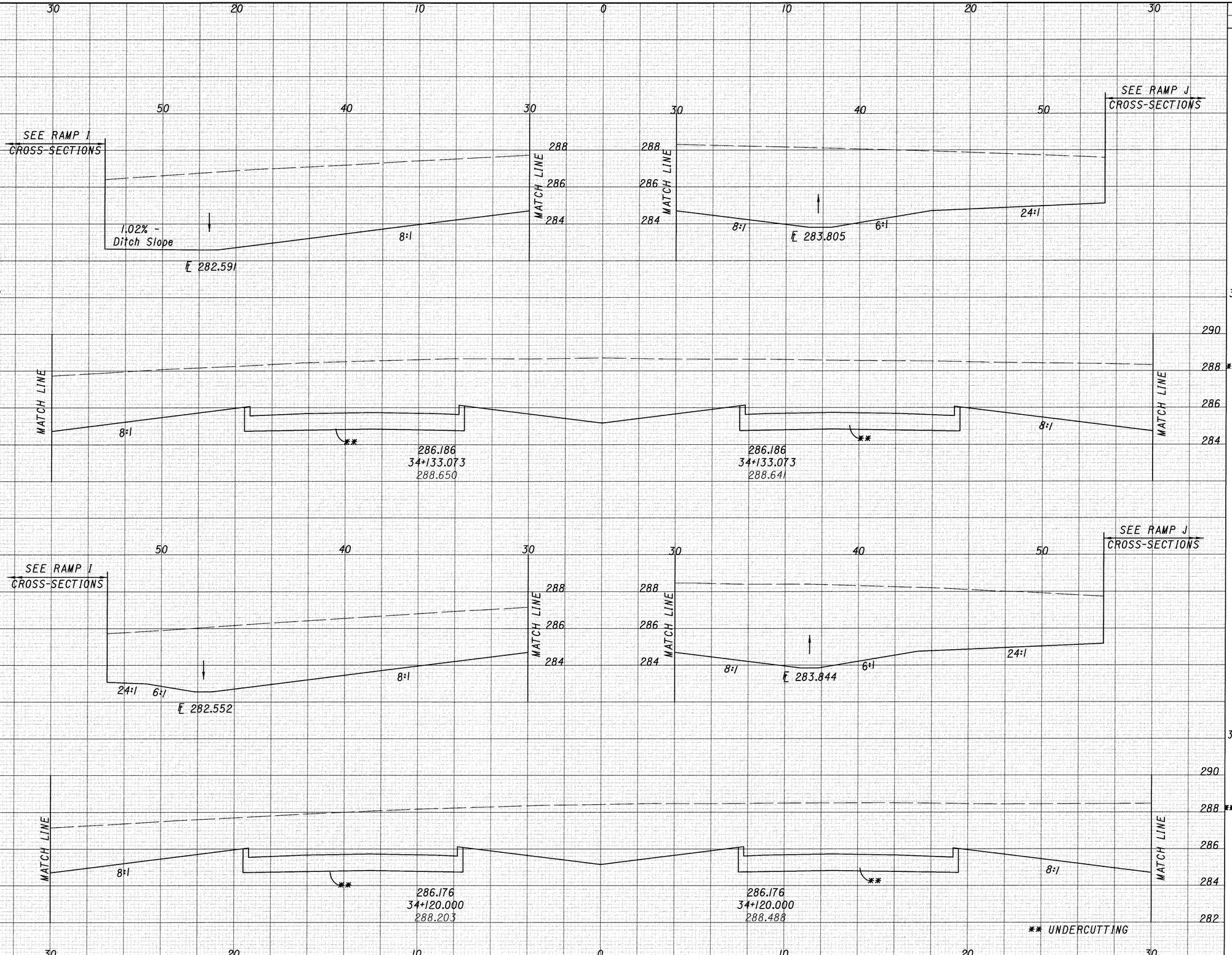
US-30 CROSS SECTIONS

STA 34+080.000 TO STA 34+100.000

WYA / CRA-30-28.009 / 0.000

445
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
84.71	1107	341.26	21.88	4280	278
84.61	1696	313.49	20.67	5512	413



CALCULATED AM

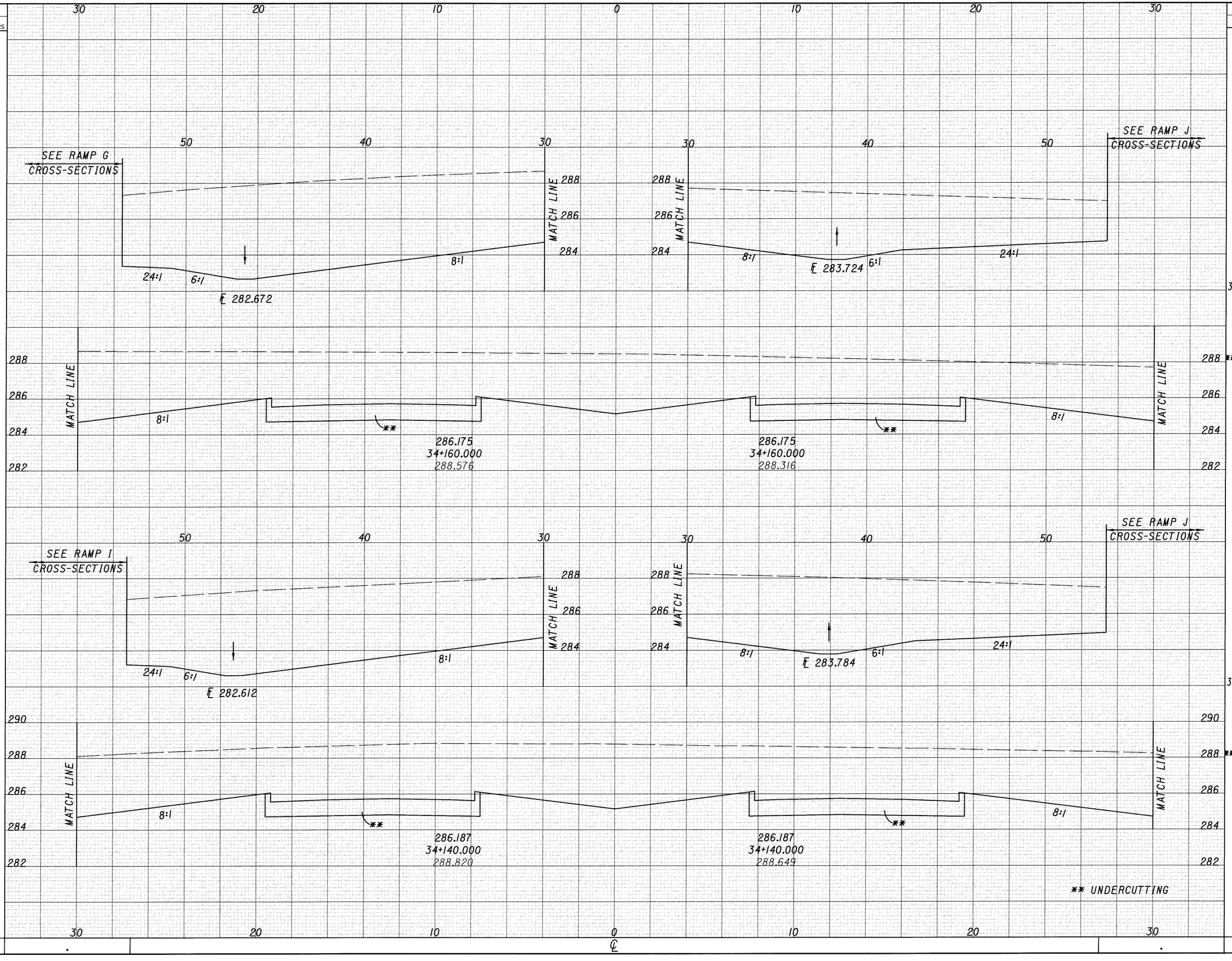
CHECKED REA

US-30 CROSS SECTIONS

STA 34+120.000 TO STA 34+133.073

WYA / CRA-30-28.009 / 0.000

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
85.29	1702	350.20	20.67	7068	413
84.95	588	356.64	20.67	2417	147



CALCULATED AM

CHECKED REA

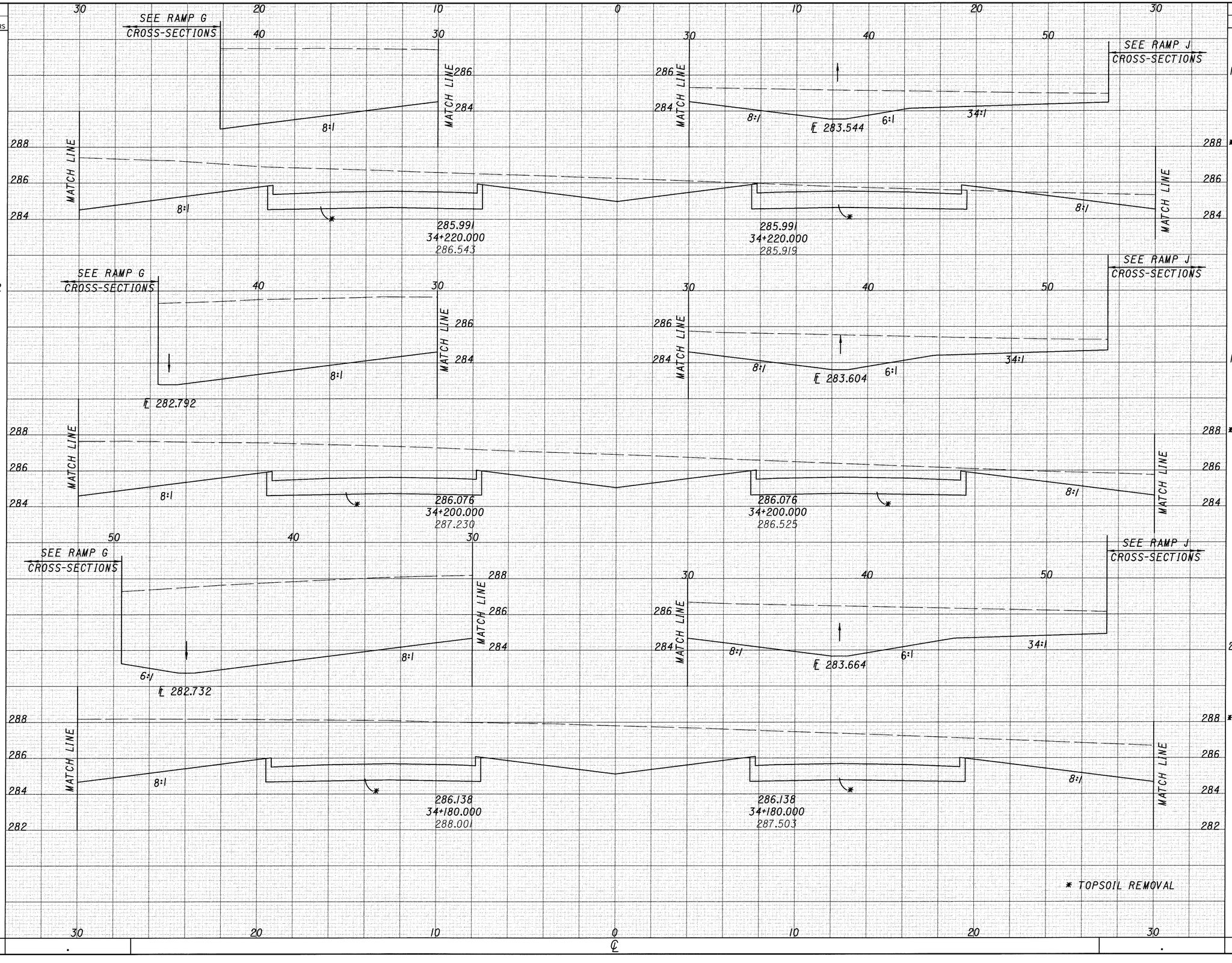
US-30 CROSS SECTIONS

STA 34+140.000 TO STA 34+160.000

WYA / CRA-30-28.009 / 0.000

447
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		123.59	21.03		
75.25		*20.59			
				2969	417
	1522			*413	
		173.31	20.67		
76.99		*20.67			
				4349	413
	1585			*413	
		261.63	20.67		
81.51		*20.67			
				6118	413
	1668			*413	



* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

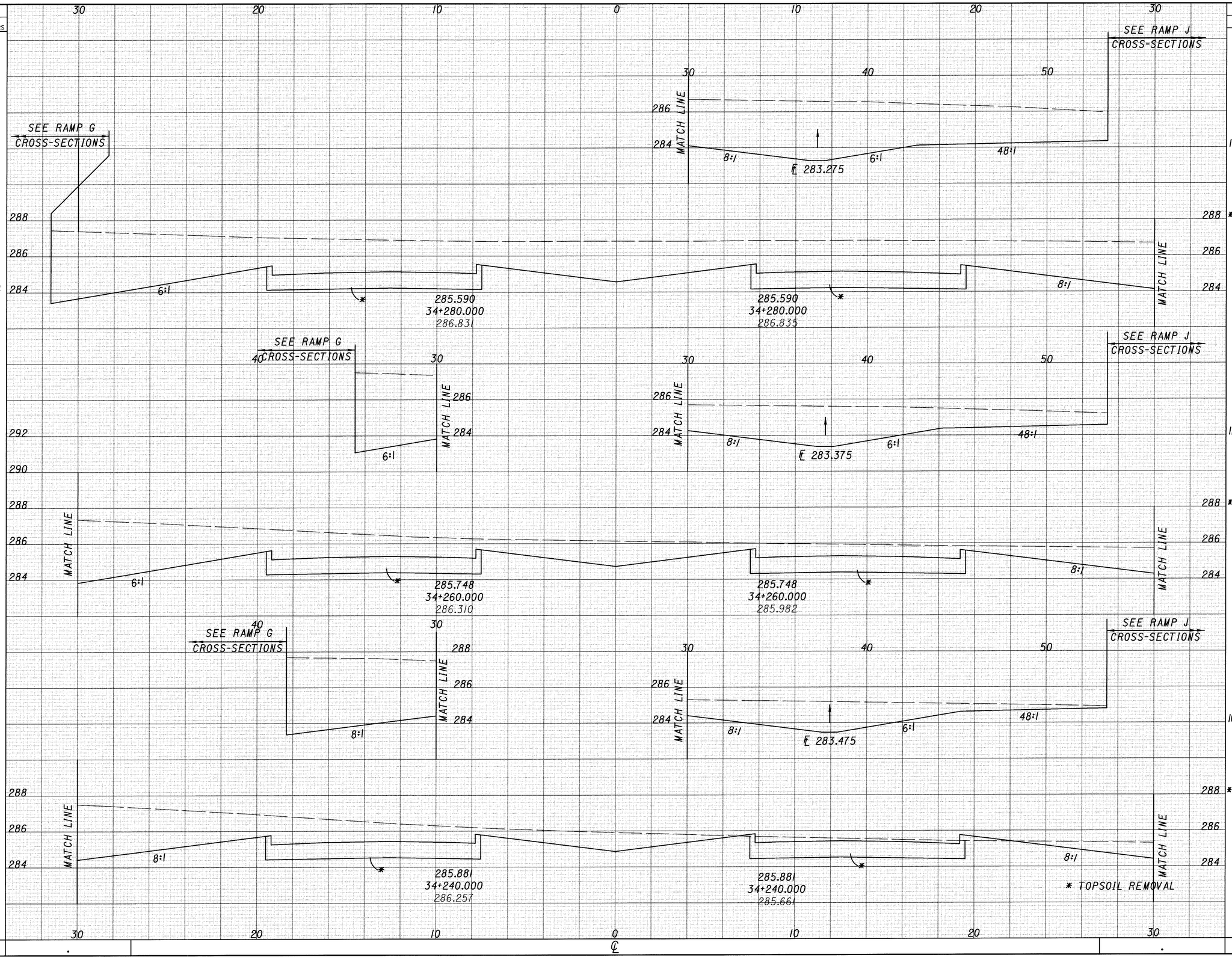
US-30 CROSS SECTIONS

STA 34+180.000 TO STA 34+220.000

WYA / CRA-30-28.009 / 0.000

448
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
64.04	1344	183.27	20.67	3074	413
70.33	1679	124.08	20.67	2282	418
70.82	1461	104.08	21.10	2277	421
		*20.67		*413	
		*20.67		*412	
		*20.54		*411	



* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 34+240.000 TO STA 34+280.000

WYA / CRA-30-28.009 / 0.000

449
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
56.33	1150	66.42	22.03	2907	427
		*19.70			
58.68		224.29	20.67	*404	
	1198	*20.67		4718	413
		*413			
61.15		247.53	20.67		
		*20.67			
	1252			4308	413
		*413			

CALCULATED AM

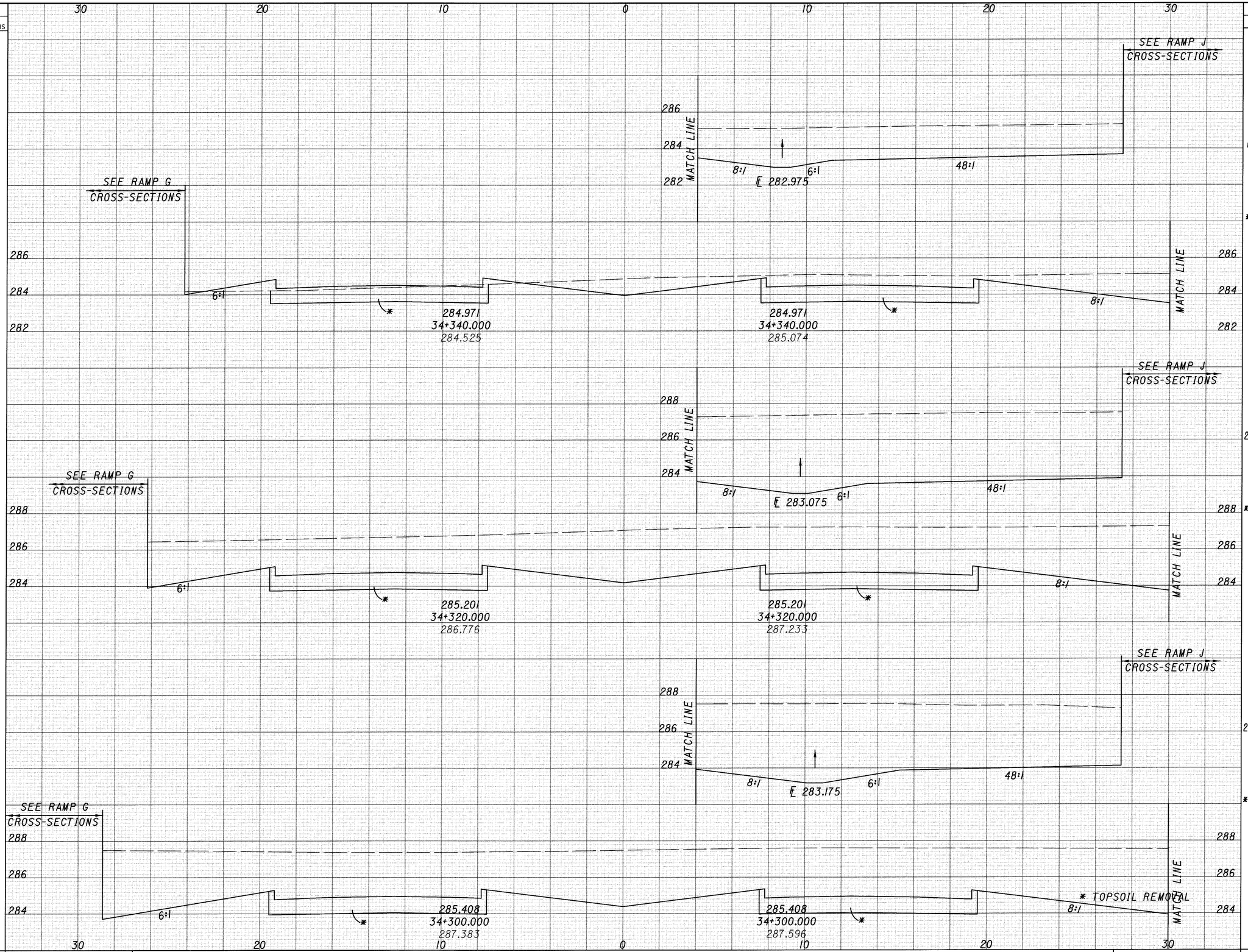
CHECKED REA

US-30 CROSS SECTIONS

STA 34+300.000 TO STA 34+340.000

WYA/CRA-30-28.009/0.000

450
2116



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
72.43		19.08	139.61		
53.01		18.68	105.57		
	636			191	1188
53.58		13.37	93.47		
	435			135	662
54.31		20.25	70.79		
	1106	*0.00		867	928
				*197	

End width Ahead from Sta. 34+380.572 ℄ Ramp G

End width Back

End area Ahead from Sta. 34+380.572 ℄ Ramp G

End area Back

SEE RAMP G CROSS-SECTIONS

SEE RAMP J CROSS-SECTIONS

Back

Ahead

MATCH LINE

℄ 281.821

℄ 282.075

℄ 282.285

℄ 282.086

284.437
34+380.000
281.407

284.437
34+380.000
281.744

284.607
34+368.060
281.874

284.607
34+368.060
282.275

284.716
34+360.000
282.419

284.716
34+360.000
282.883

For continuation, see sheet no.

* TOPSOIL REMOVAL

US-30 CROSS SECTIONS STA 34+360.000 TO STA 34+380.000

WYA/CRA-30-28.009/0.000

CALCULATED AM

CHECKED REA

451
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
73.40	1435	9.90	136.05	266	2773
70.12	722	16.65	141.29	185	1471
69.54	686	19.13	143.37	185	1367

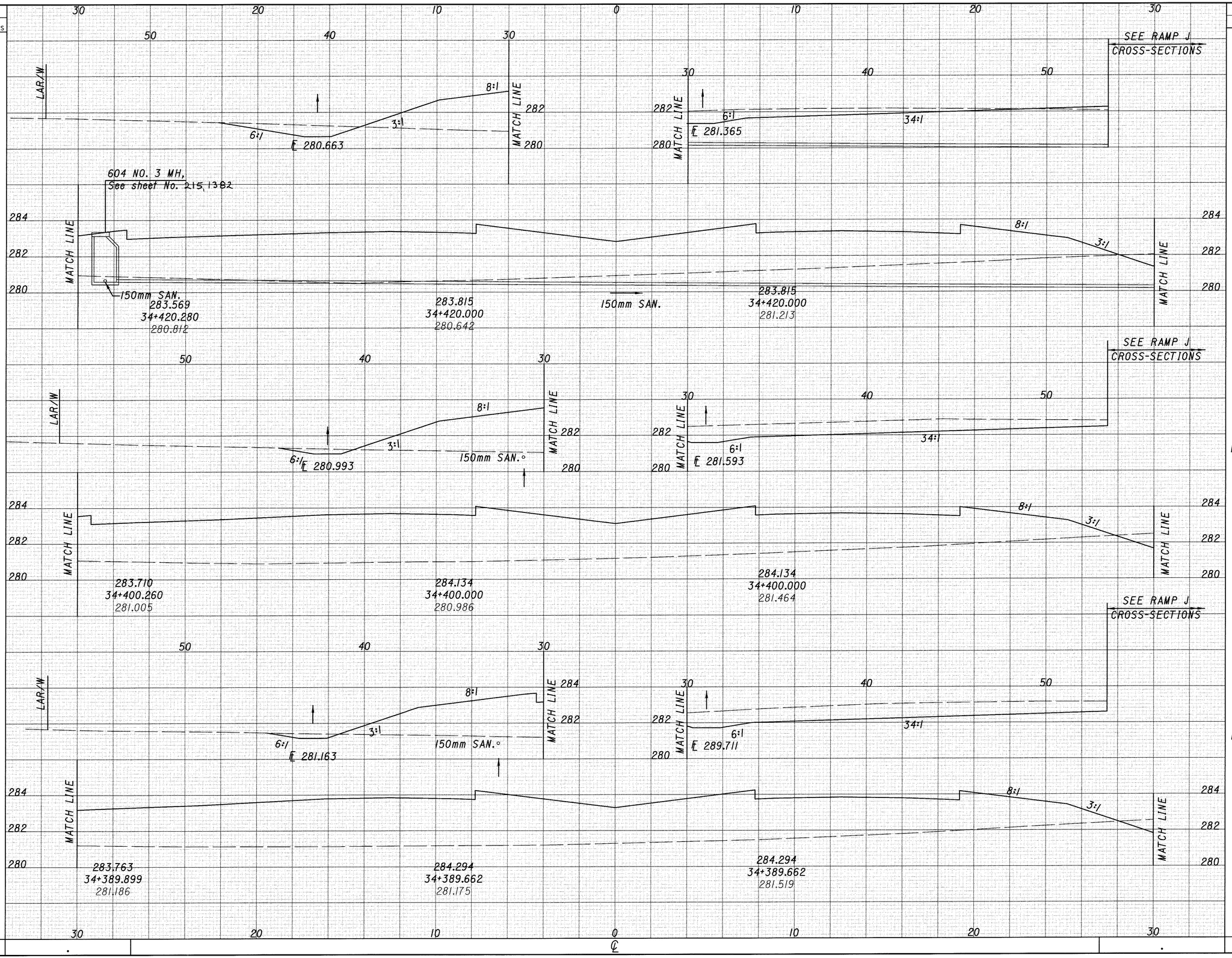
CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS

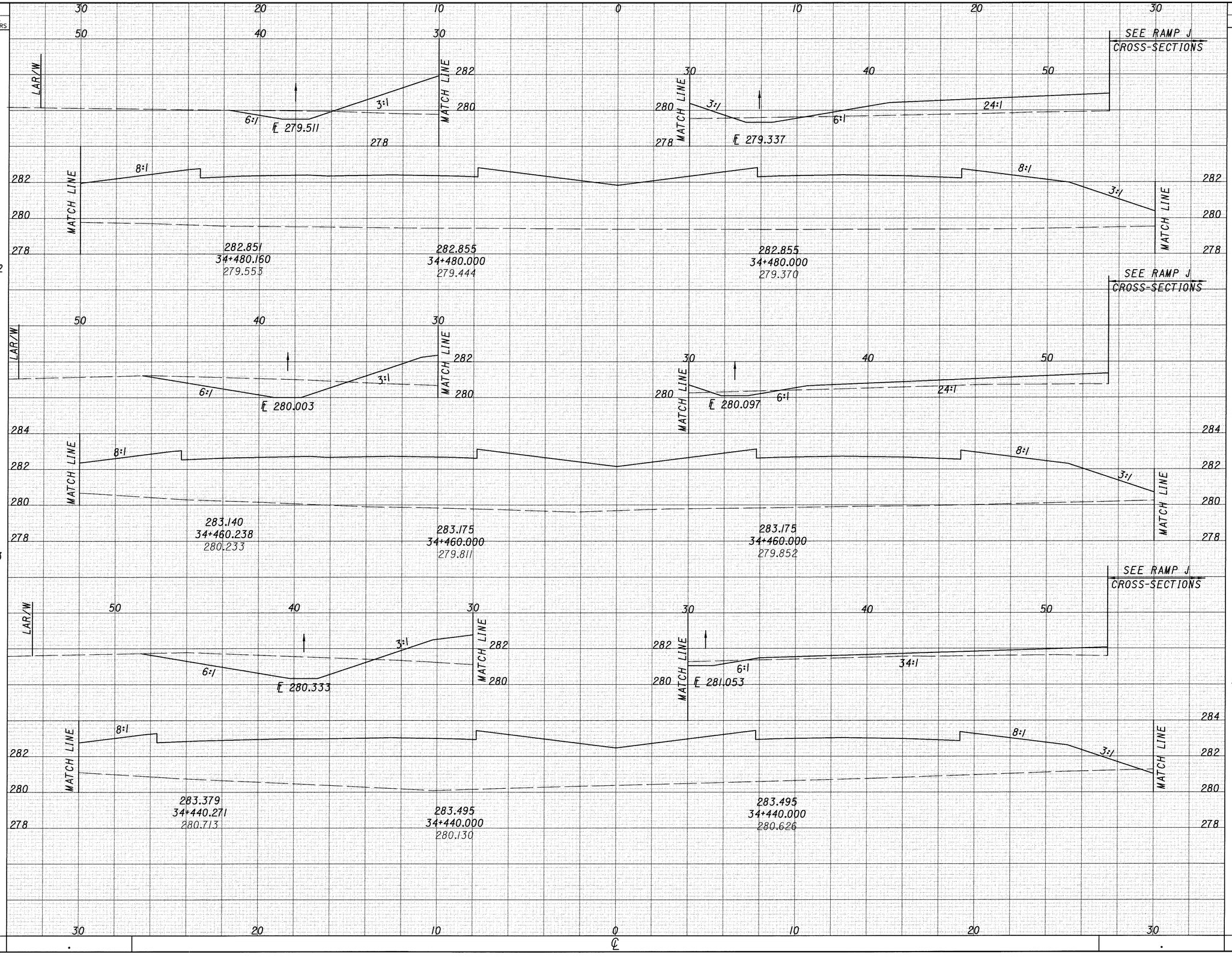
STA 34+389.662 TO STA 34+420.000

WYA / CRA-30-28.009 / 0.000

452
2116



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
72.93	1502	2.38	185.14	97	3499
77.31	1553	7.32	164.72	173	3072
77.99	1514	9.93	142.52	198	2786



CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS

STA 34+440.000 TO STA 34+480.000

WYA / CRA-30-28.009 / 0.000

453
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
72.04		1.61	166.62		
	1465			67	3429
74.41		5.08	176.26		
	1478			73	3547
73.35		2.26	178.47		
	1463			46	3636

CALCULATED AM

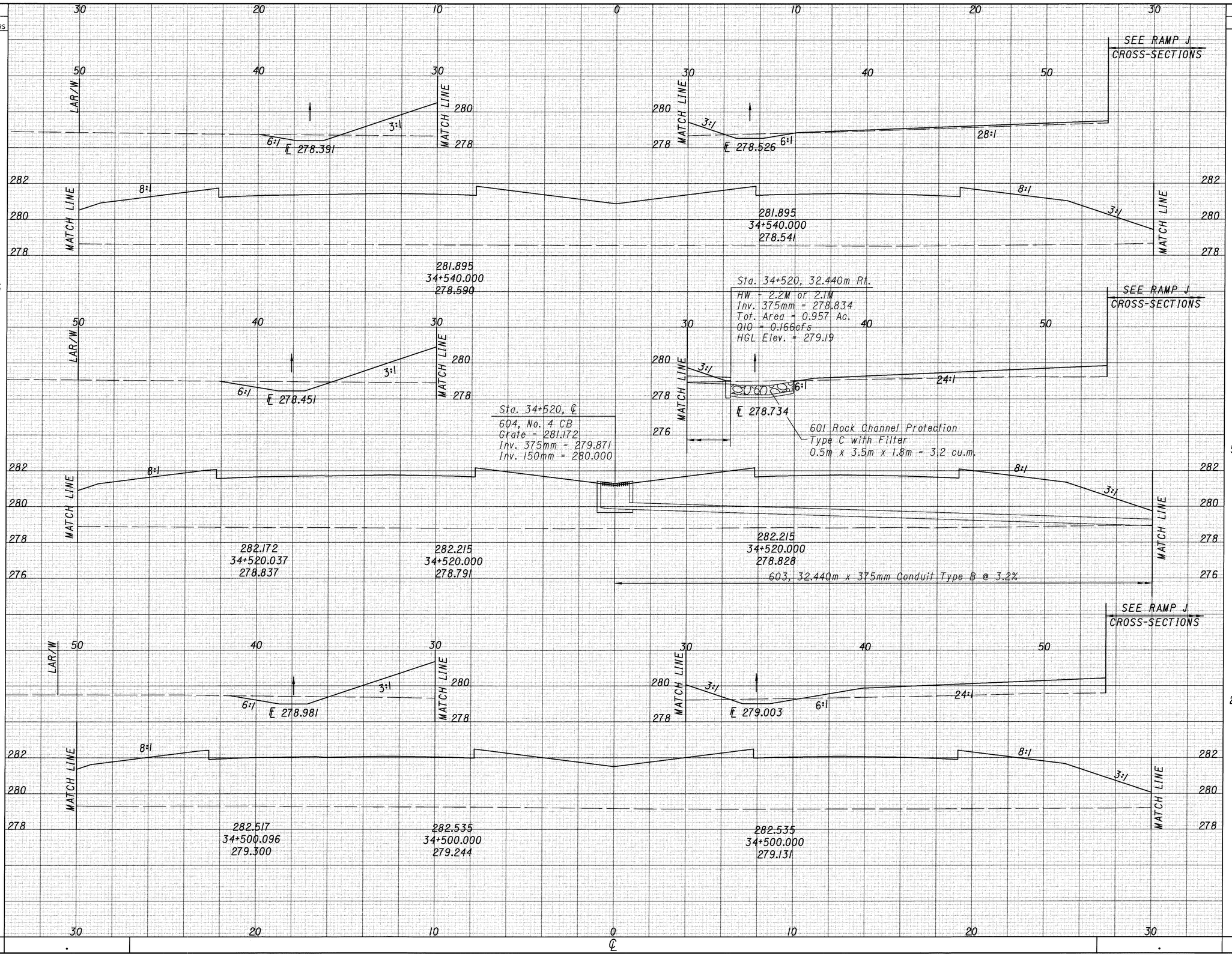
CHECKED REA

US-30 CROSS SECTIONS

STA 34+500.000 TO STA 34+540.000

WYA / CRA-30-28.009 / 0.000

454
2116



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
56.25	1173	5.19	85.81	132	2000
63.03		8.22	117.65		
66.60	1296	2.30	156.19	105	2738
	1386			39	3228

CALCULATED AM

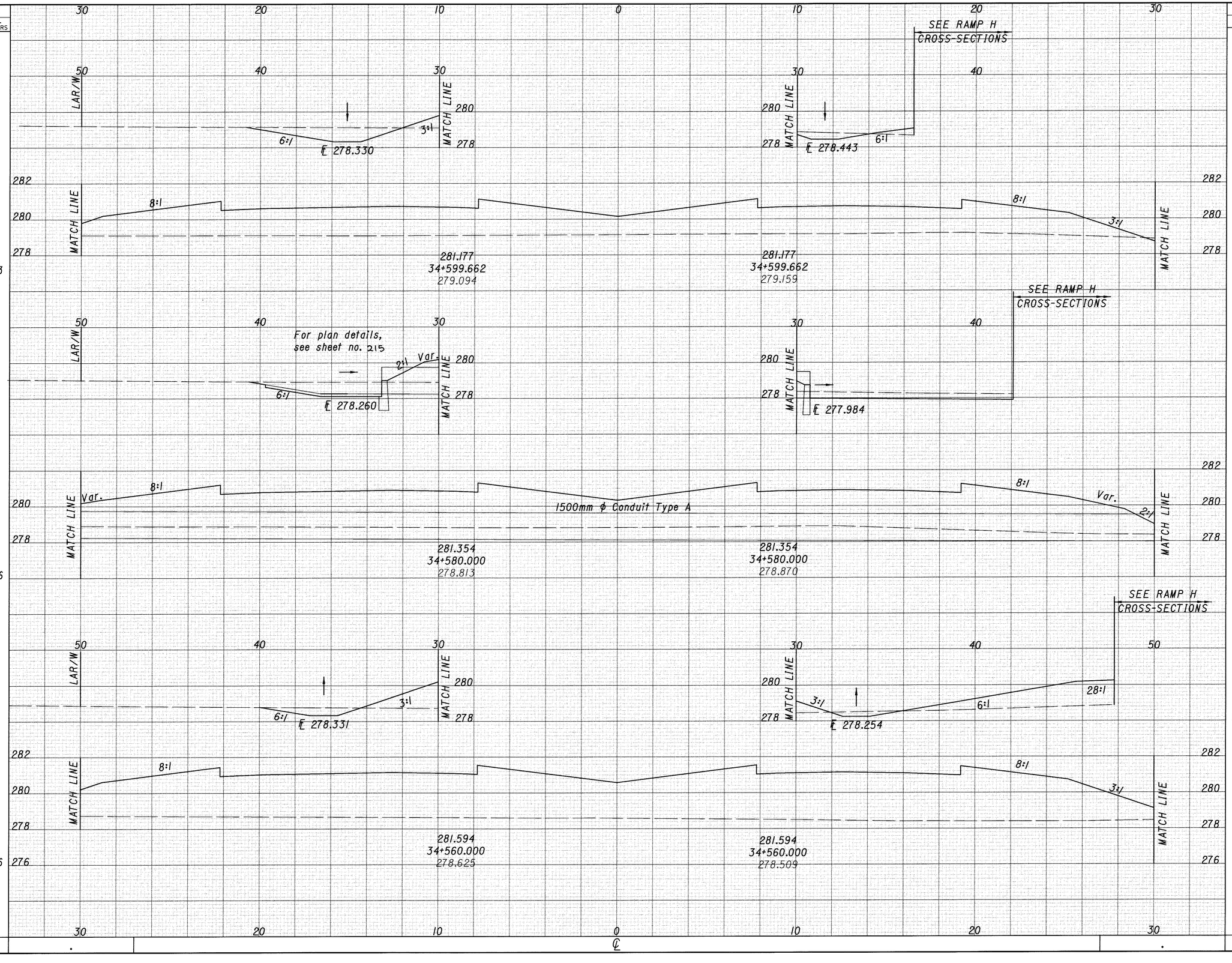
CHECKED REA

US-30 CROSS SECTIONS

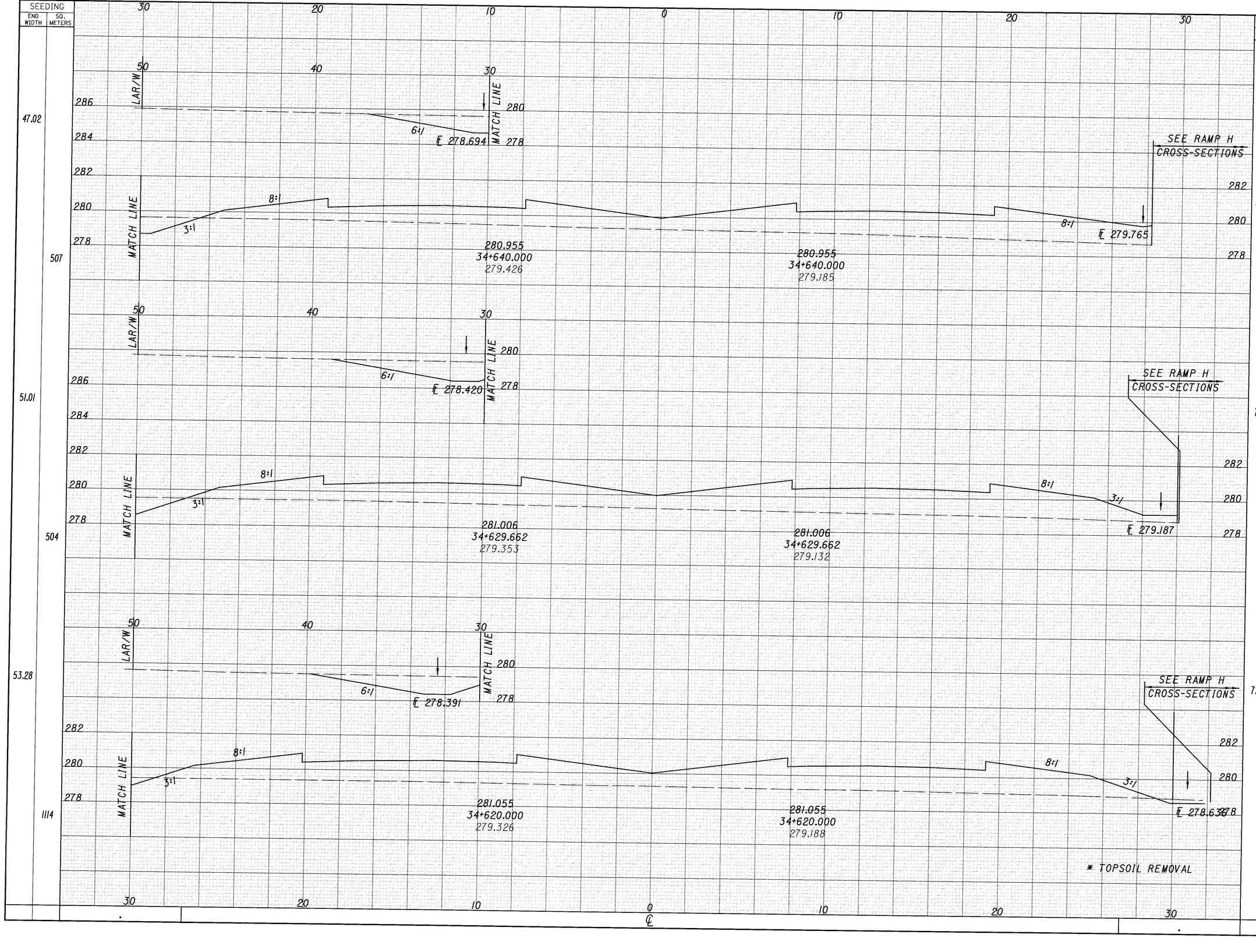
STA 34+560.000 TO STA 34+599.662

WYA / CRA-30-28.009 / 0.000

455
2116



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
47.02	507	5.71	61.11	68	654
51.01		*0.00			
	504	7.37	65.48	70	646
53.28	1114	7.14	68.29	125	1567



* TOPSOIL REMOVAL

CALCULATED AM

CHECKED RCA

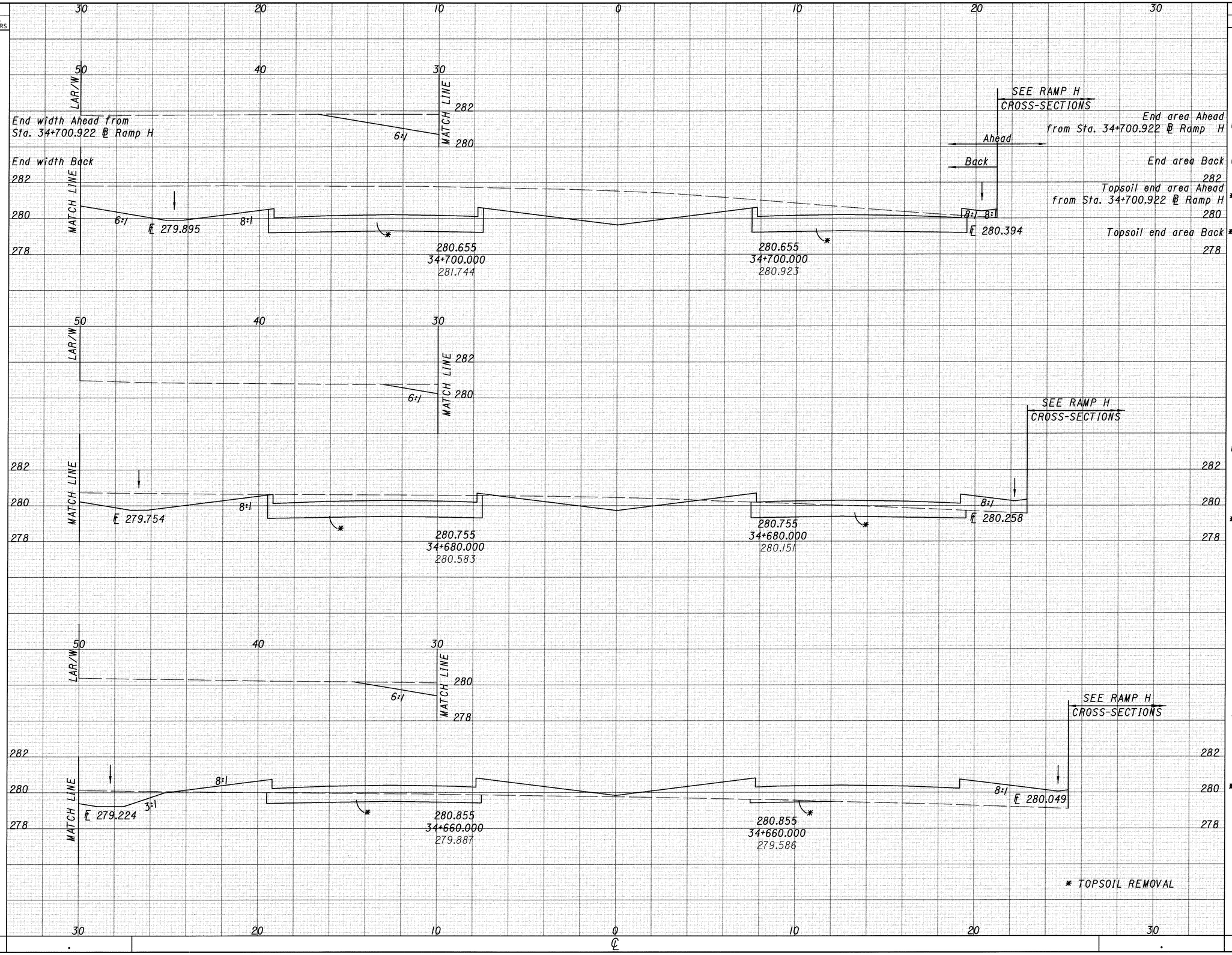
US-30 CROSS SECTIONS

STA 34+620.000 TO STA 34+640.000

WYA / CRA-30-28.009 / 0.000

456
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
59.61		69.45	31.57		
39.68		66.66	21.29		
		*26.31			
		*20.55			
	771			826	453
				*384	
37.41		15.95	23.97		
		*17.81			
	789			208	617
				*240	
41.49		4.88	37.72		
		*6.24			
	885			106	988
				*62	



CALCULATED AM

CHECKED REA

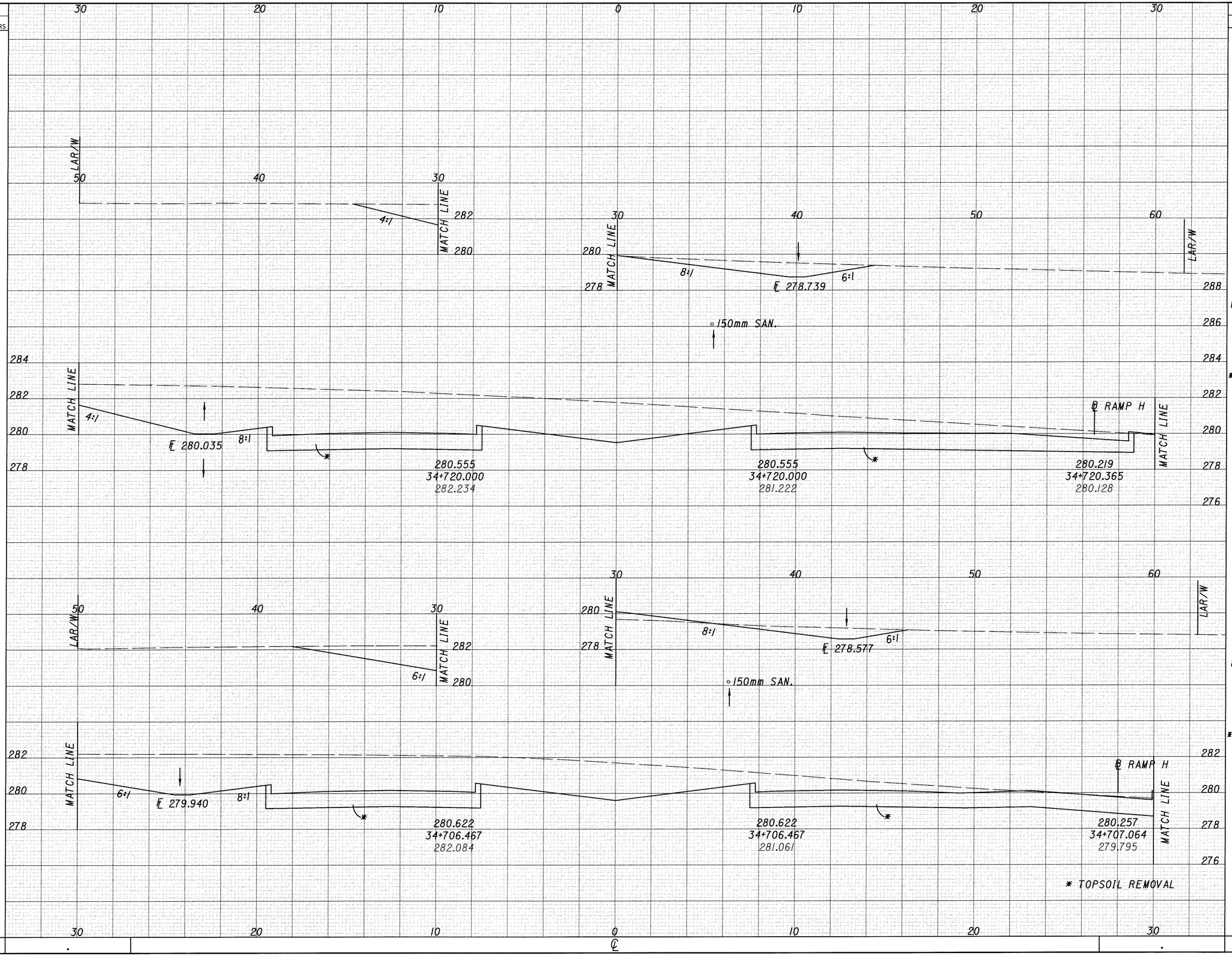
US-30 CROSS SECTIONS

STA 34+660.000 TO STA 34+700.000

WYA / CRA-30-28.009 / 0.000

457
2116

SEEDING	
END WIDTH	SQ. METERS
65.10	840
59.01	384



END AREA		VOLUME	
CUT	FILL	CUT	FILL
101.22	28.36		
*28.28		1271	401
		*393	
86.61	30.90		
*29.73		505	202
		*181	

* TOPSOIL REMOVAL

CALCULATED AM

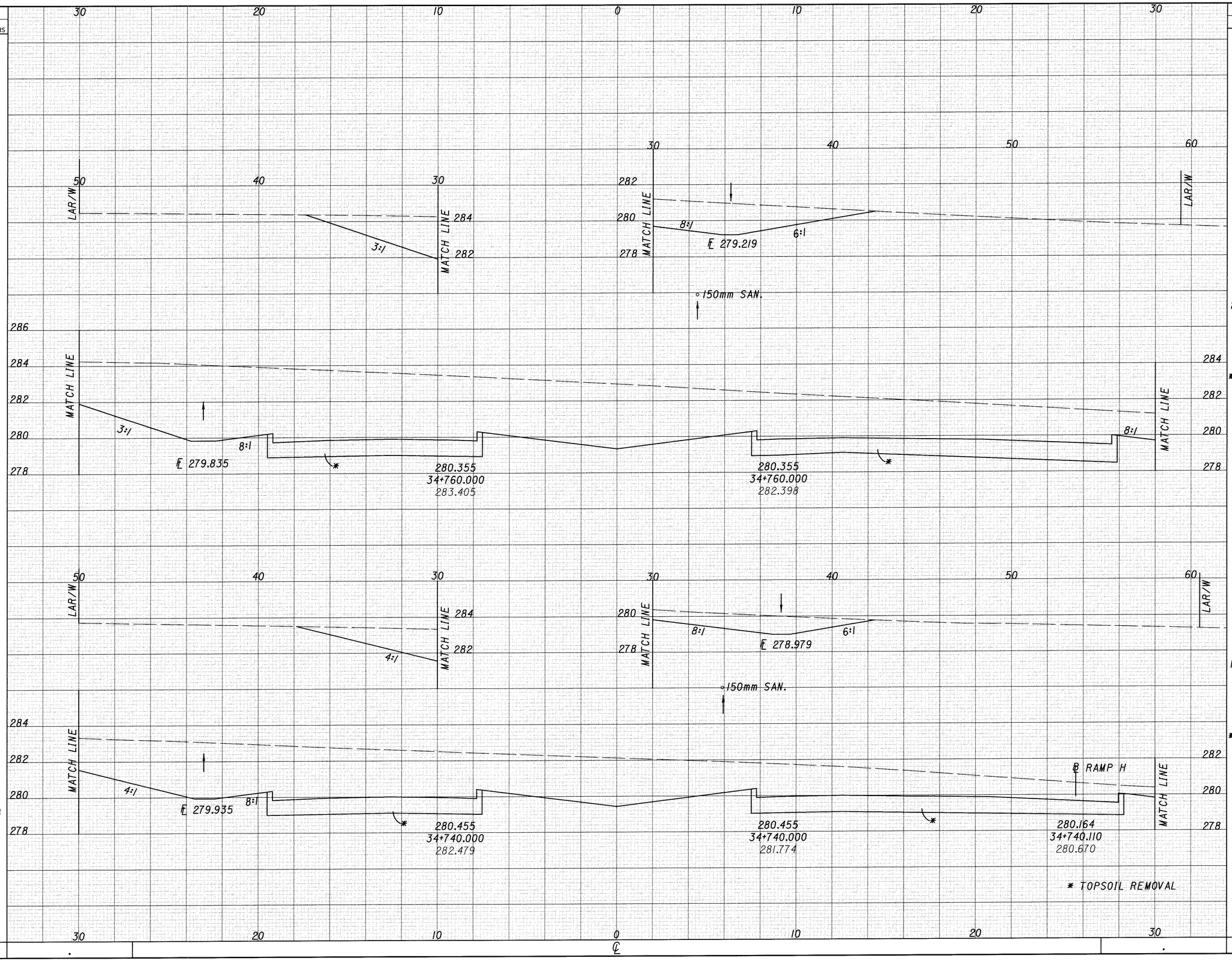
CHECKED REA

US-30 CROSS SECTIONS
STA 34+706.467 TO STA 34+720.000

WYA/CRA-30-28.009/0.000

458
2116

SEEDING	
END WIDTH	SQ. METERS
58.03	1154
57.34	1224



END AREA		VOLUME	
CUT	FILL	CUT	FILL
201.13	28.30		
*28.30		3406	558
		*558	
139.51	27.54		
*27.54		2407	559
		*558	

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 34+740.000 TO STA 34+760.000

WYA / CRA-30-28.009 / 0.000

459
2116

SEEDING	
END WIDTH	SQ. METERS
59.62	1179
58.28	1163

END AREA		VOLUME	
CUT	FILL	CUT	FILL
212.04	26.81		
*26.81		4409	544
		*544	
228.89	27.62		
*27.62		4300	559
		*559	

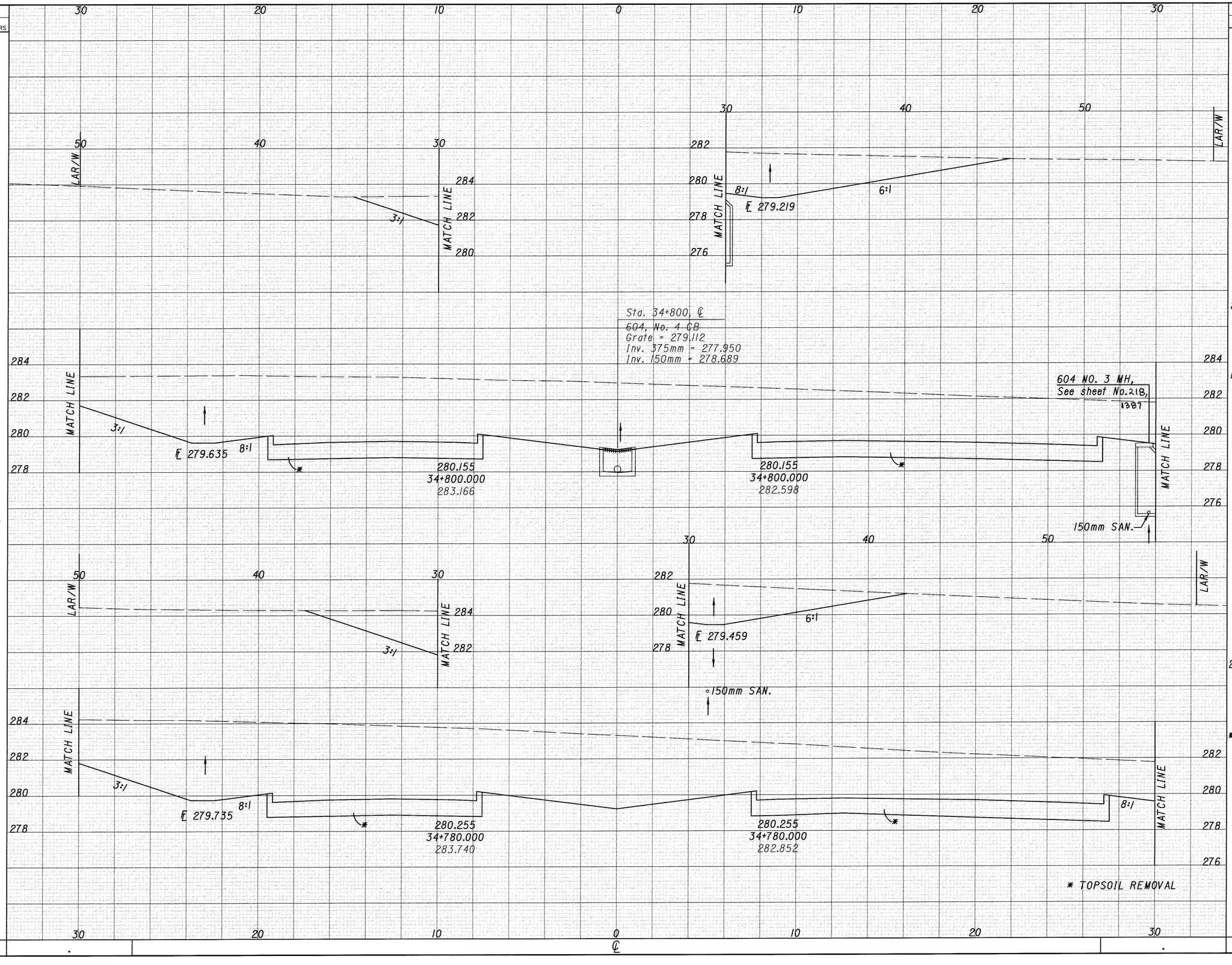
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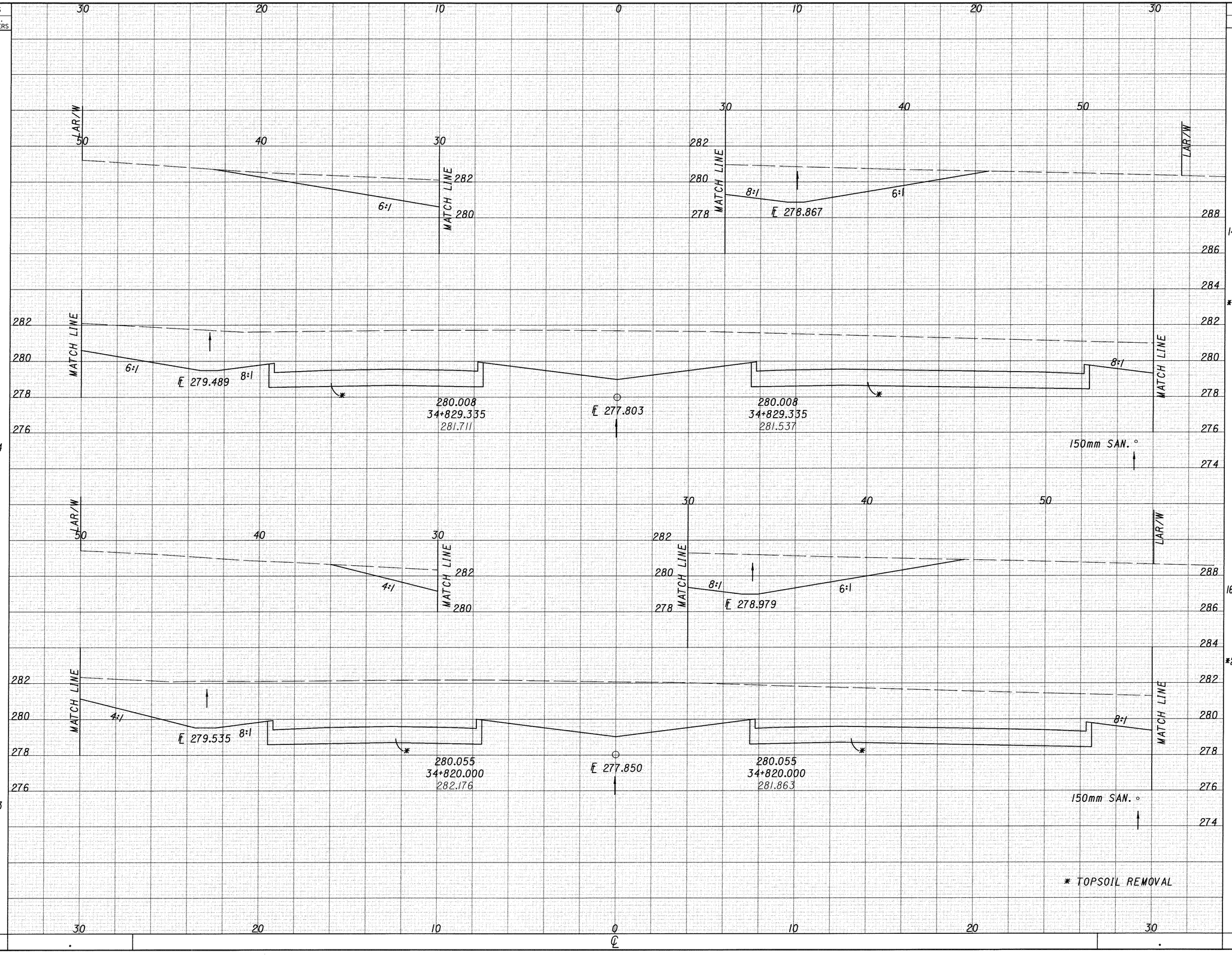
US-30 CROSS SECTIONS
STA 34+780.000 TO STA 34+800.000

WYA / CRA-30-28.009 / 0.000

460
2116



SEEDING	
END WIDTH	SQ. METERS
66.67	594
60.70	1203



END AREA		VOLUME	
CUT	FILL	CUT	FILL
149.36	26.27		
*26.27		1464	246
		*246	
164.32	26.50		
*26.50		3764	533
		*533	

CALCULATED AM

CHECKED REA

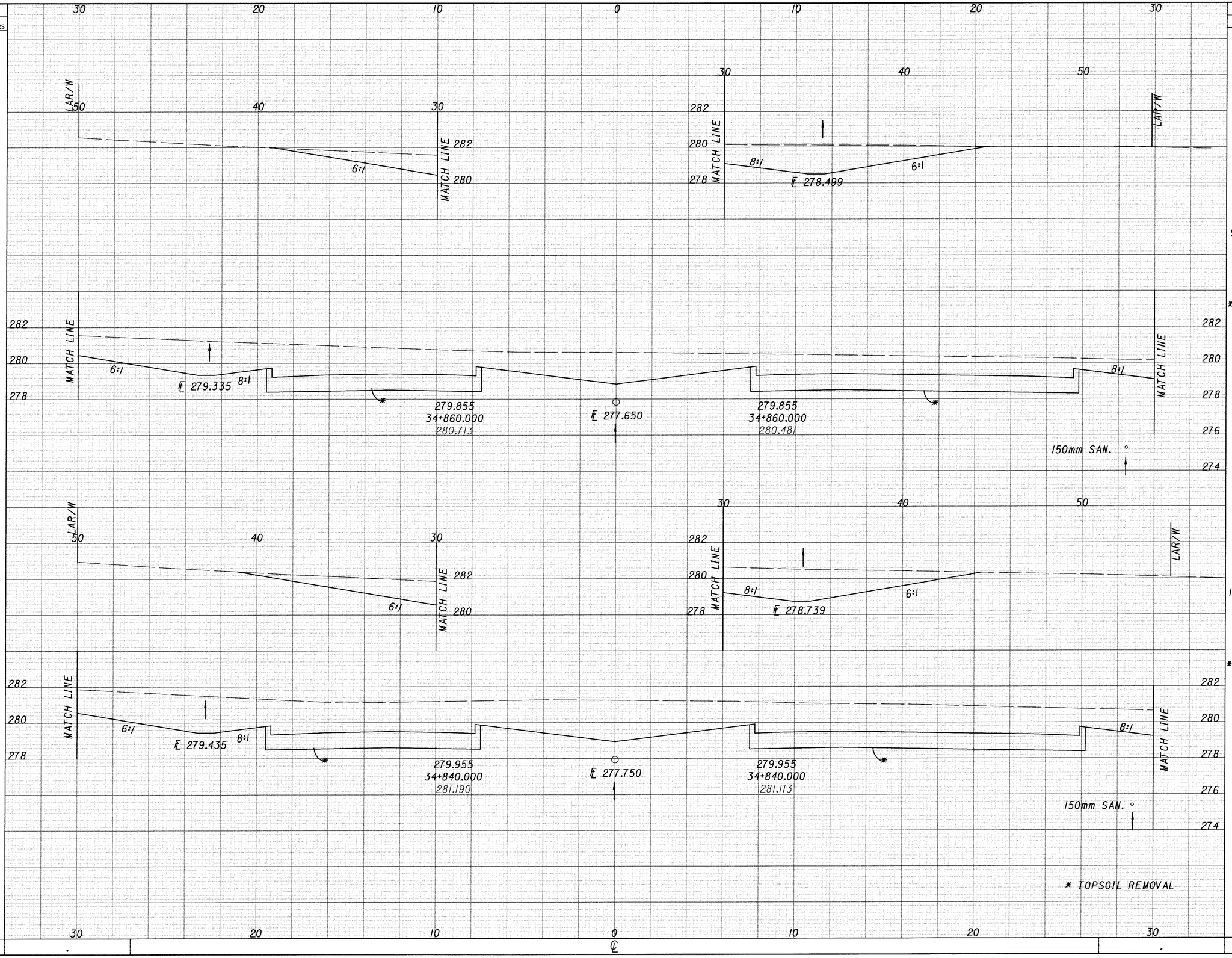
US-30 CROSS SECTIONS

STA 34+820.000 TO STA 34+829.335

WYA/CRA-30-28.009/0.000

461
2116

SEEDING	
END WIDTH	SQ. METERS
63.63	1286
64.98	702



END AREA		VOLUME	
CUT	FILL	CUT	FILL
98.78	25.75		
*25.75		2239	518
		*518	
125.14	26.09		
*26.09		1464	279
		*279	

CALCULATED AM

CHECKED REA

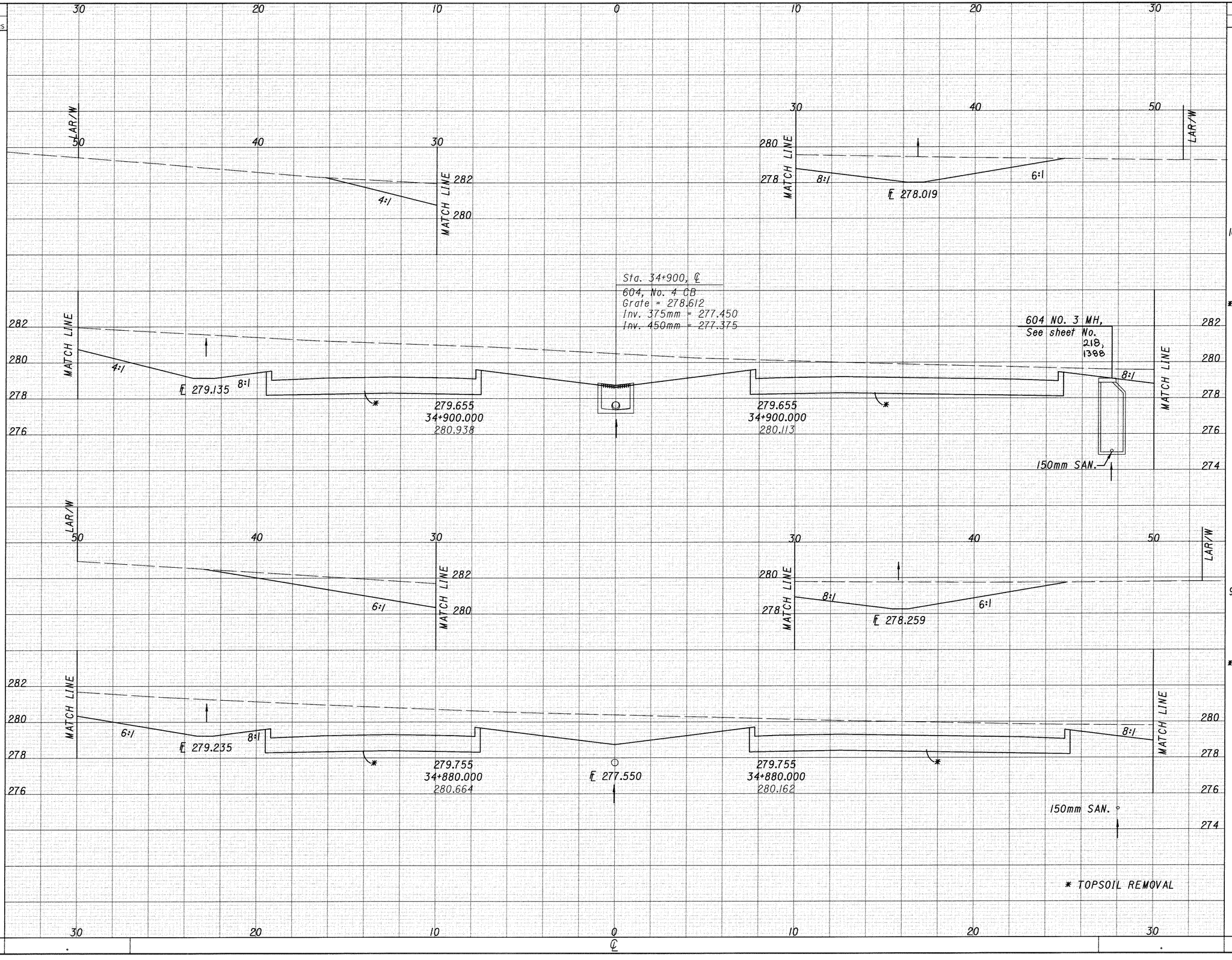
US-30 CROSS SECTIONS

STA 34+840.000 TO STA 34+860.000

WYA/CRA-30-28.009/0.000

462
2116

SEEDING	
END WIDTH	SQ. METERS
62.07	
	1306
68.52	
	1321



END AREA		VOLUME	
CUT	FILL	CUT	FILL
100.43	25.08		
*25.08		1968	505
96.34	25.41		
*25.41		1951	512
		*505	
		*512	

CALCULATED AM

CHECKED REA

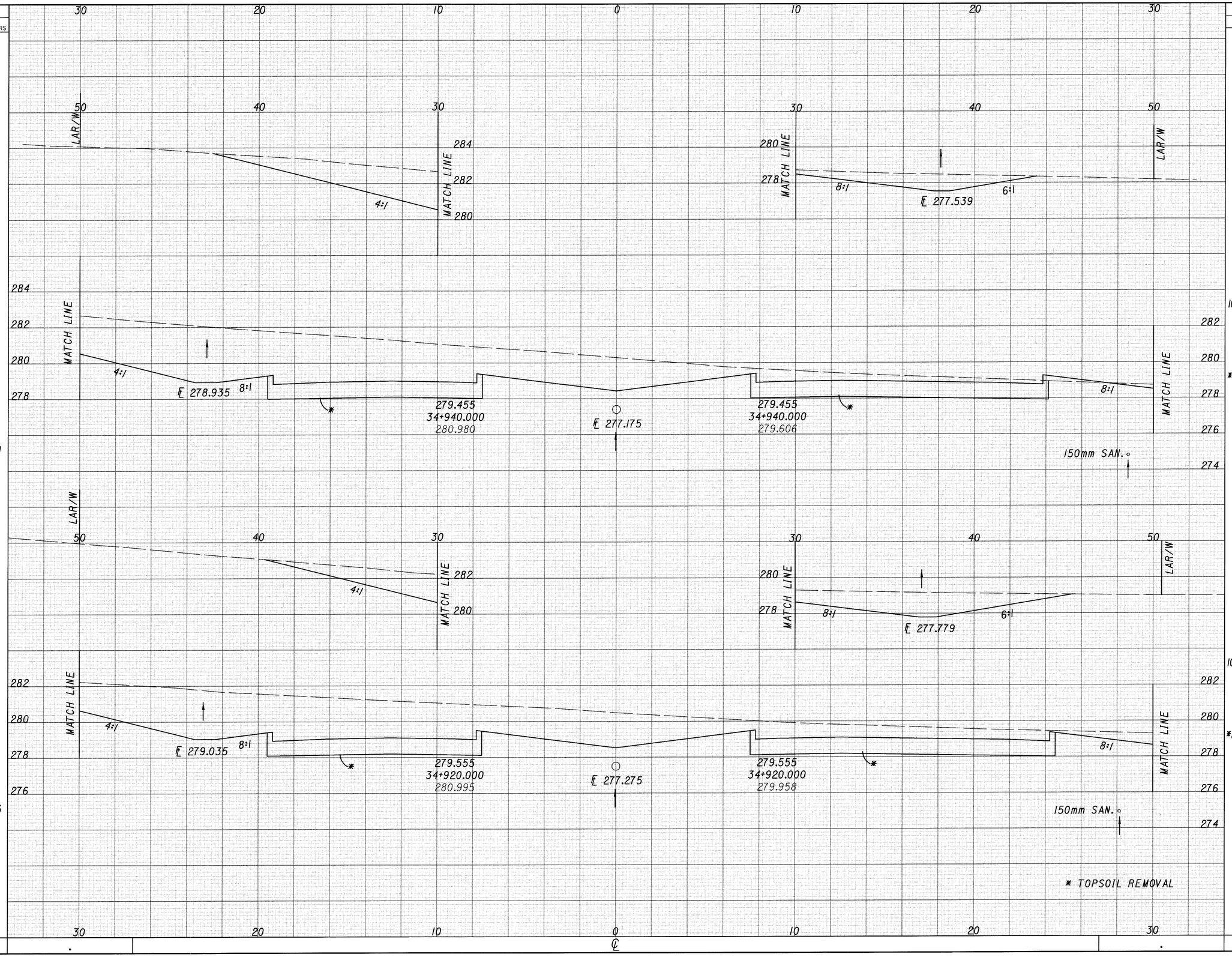
US-30 CROSS SECTIONS

STA 34+880.000 TO STA 34+900.000

WYA / CRA-30-28.009 / 0.000

463
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
67.54	1341	107.07	24.88	2160	496
		*24.31		*491	
66.58	1286	108.95	24.74	2094	498
		*24.74		*498	



CALCULATED AM

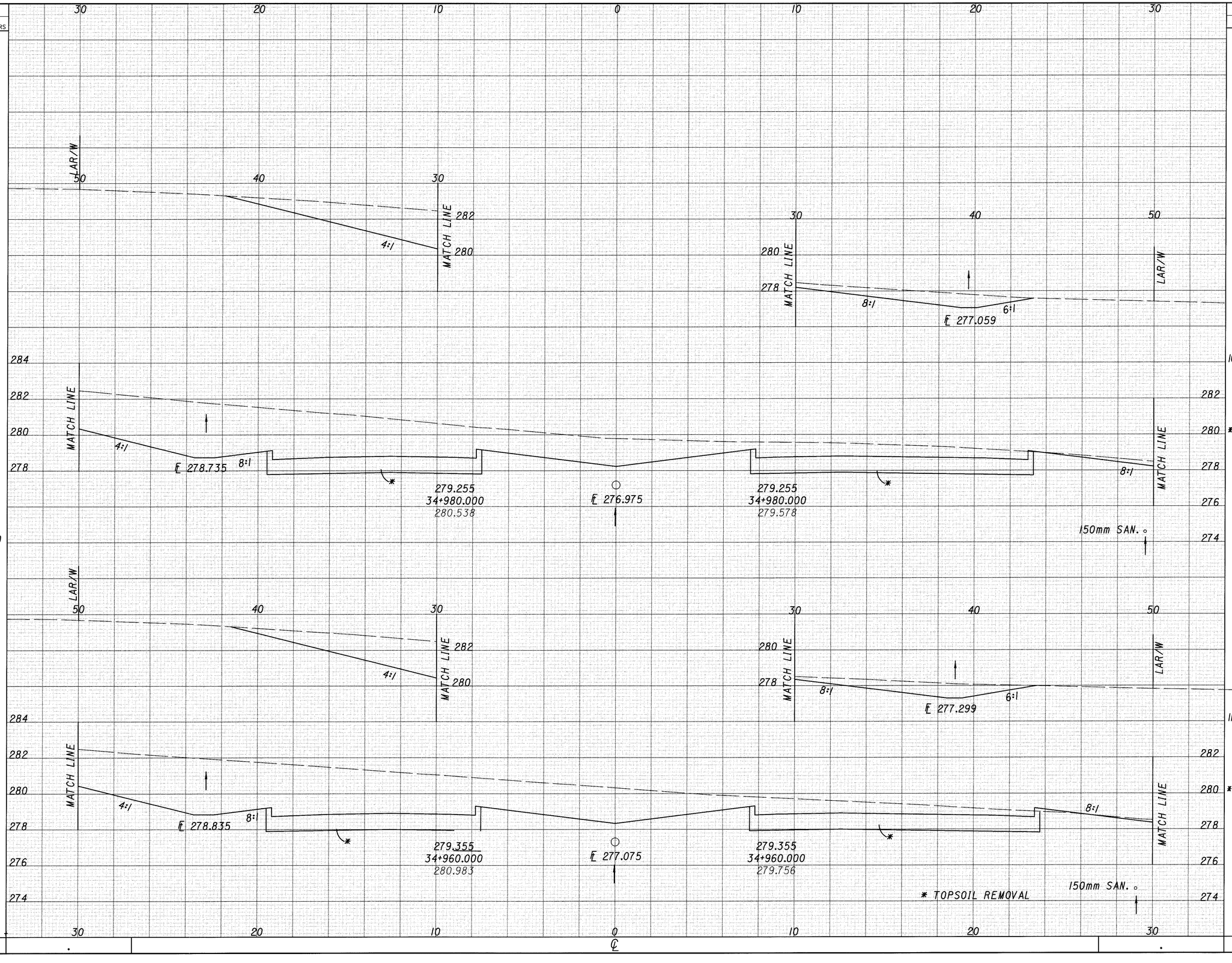
CHECKED REA

US-30 CROSS SECTIONS

STA 34+920.000 TO STA 34+940.000

WYA/CRA-30-28.009/0.000

SEEDING	
END WIDTH	SQ. METERS
67.15	1339
66.76	1343



END AREA		VOLUME	
CUT	FILL	CUT	FILL
104.54	23.73		
*23.71			
		2150	480
*477			
110.43	24.24		
*24.01			
		2175	491
*483			

CALCULATED AM

CHECKED REA

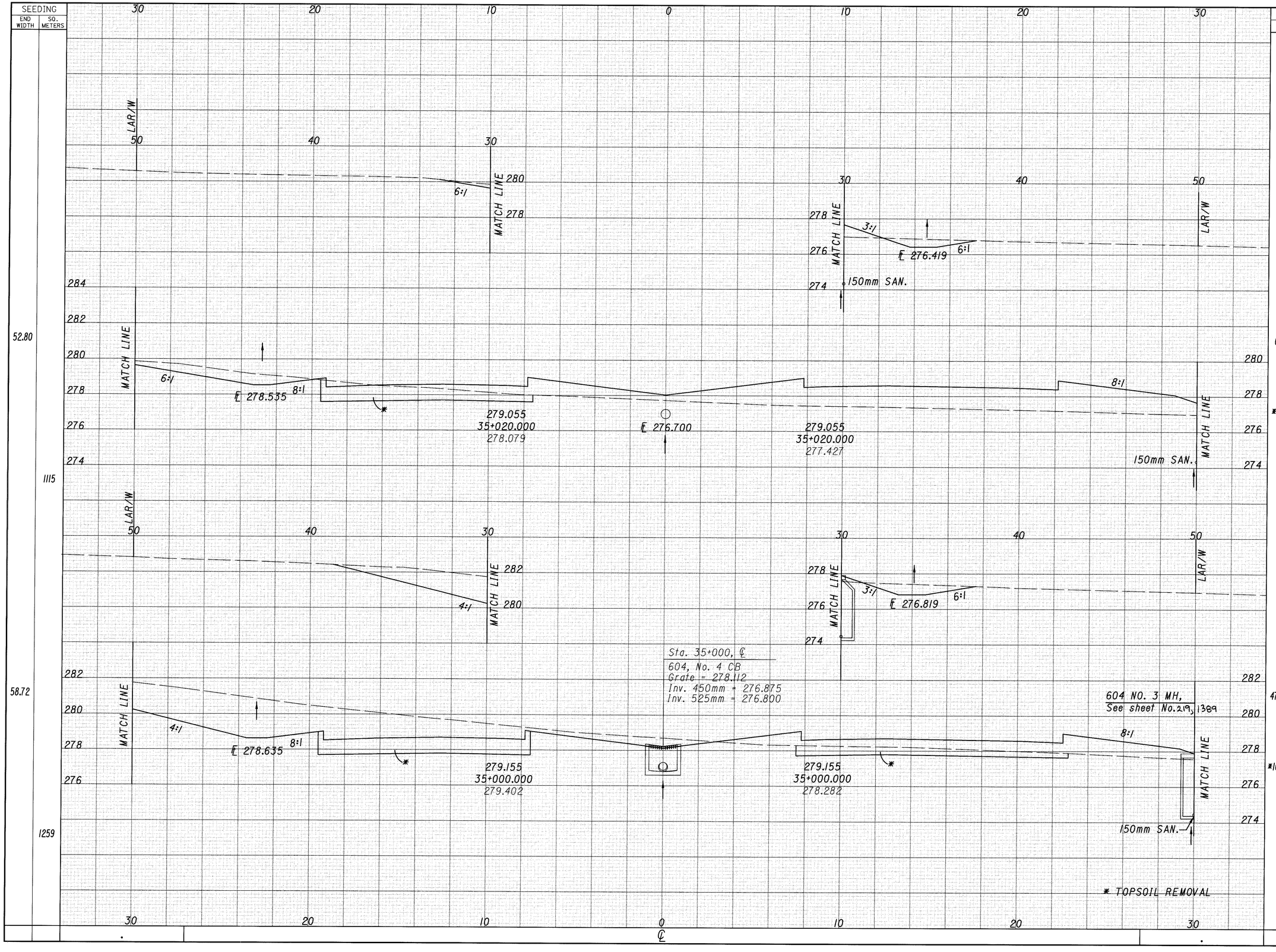
US-30 CROSS SECTIONS

STA 34+960.000 TO STA 34+980.000

WYA / CRA-30-28.009 / 0.000

465
2116

SEEDING	
END WIDTH	SQ. METERS
52.80	
	1115
58.72	
	1259



END AREA		VOLUME		
CUT	FILL	CUT	FILL	
6.79	50.00			
*8.24		547	810	*248
47.89	31.00	1524	547	*403
*16.59				

CALCULATED AM

CHECKED REA

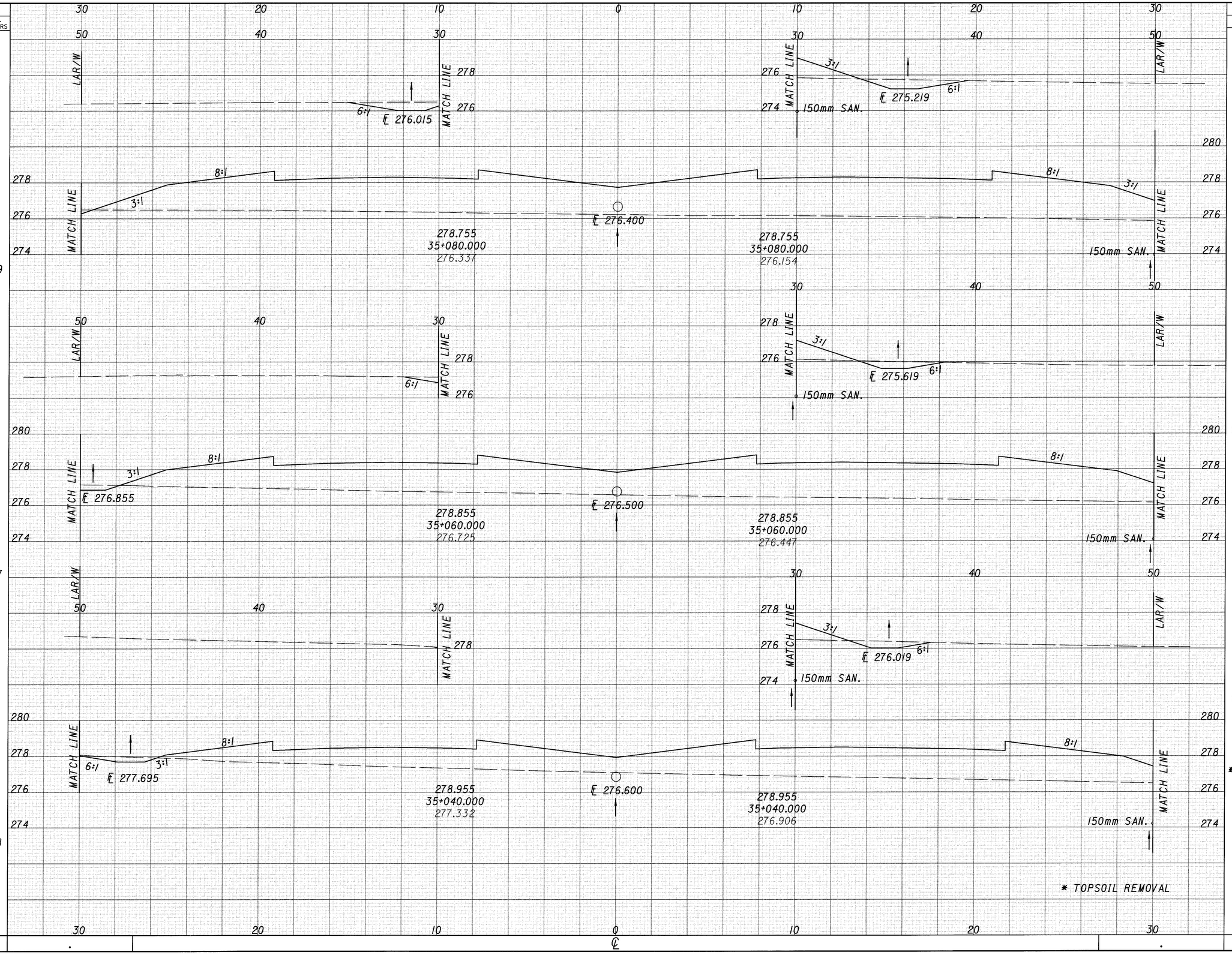
US-30 CROSS SECTIONS

STA 35+000.000 TO STA 35+020.000

WYA / CRA-30-28.009 / 0.000

466
2116

SEEDING END WIDTH	SEEDING SQ. METERS
58.11	1109
52.74	1027
50.01	1028



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3.69	112.87	57	2105
2.02	97.61	40	1701
2.01	72.49	*0.00	
		*82	1225

CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
35+040.000 TO STA 35+080.000

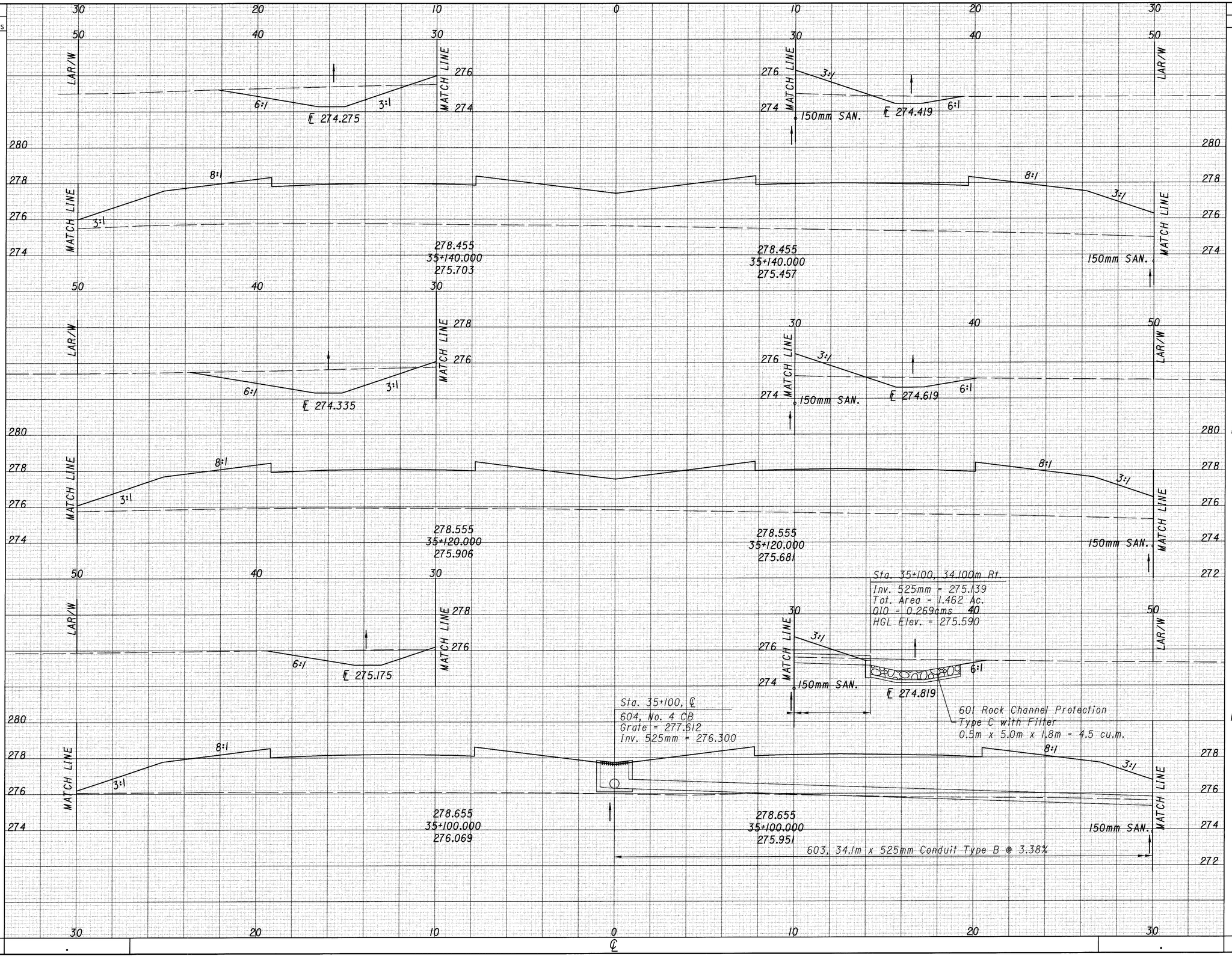
WYA/CRA-30-28.009/0.000

467
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
66.93	1361	7.90	137.62	191	2684
69.21	1352	11.20	130.74	218	2543
66.00	1241	10.61	123.52	143	2364

CALCULATED AM

CHECKED REA

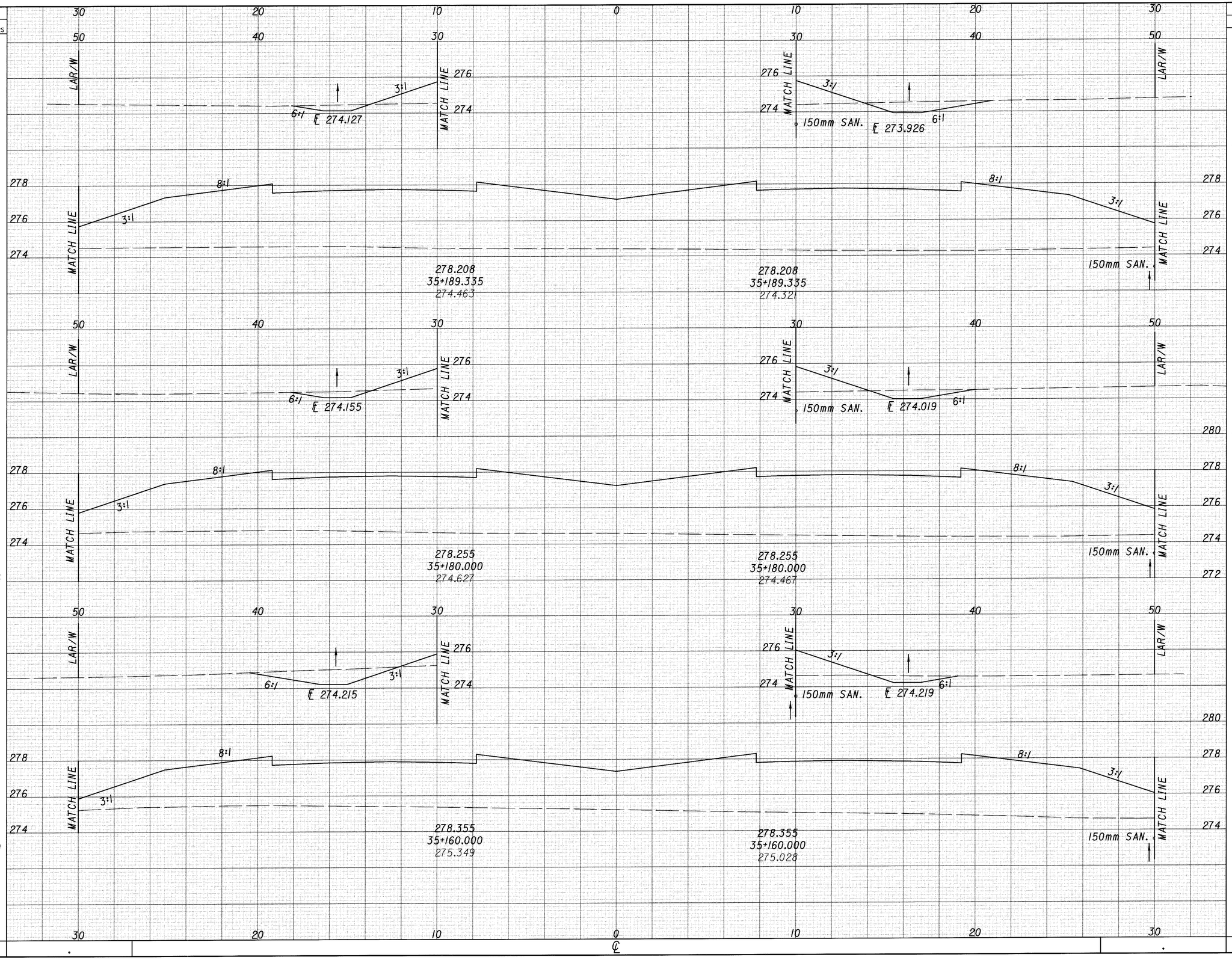


US-30 CROSS SECTIONS
STA 35+100.000 TO STA 35+140.000

WYA/CRA-30-28.009/0.000

468
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
64.56	597	3.55	189.21	29	1741
63.41	1284	2.73	183.77	79	3380
65.04	1320	5.17	154.19	131	2918



CALCULATED AM

CHECKED REA

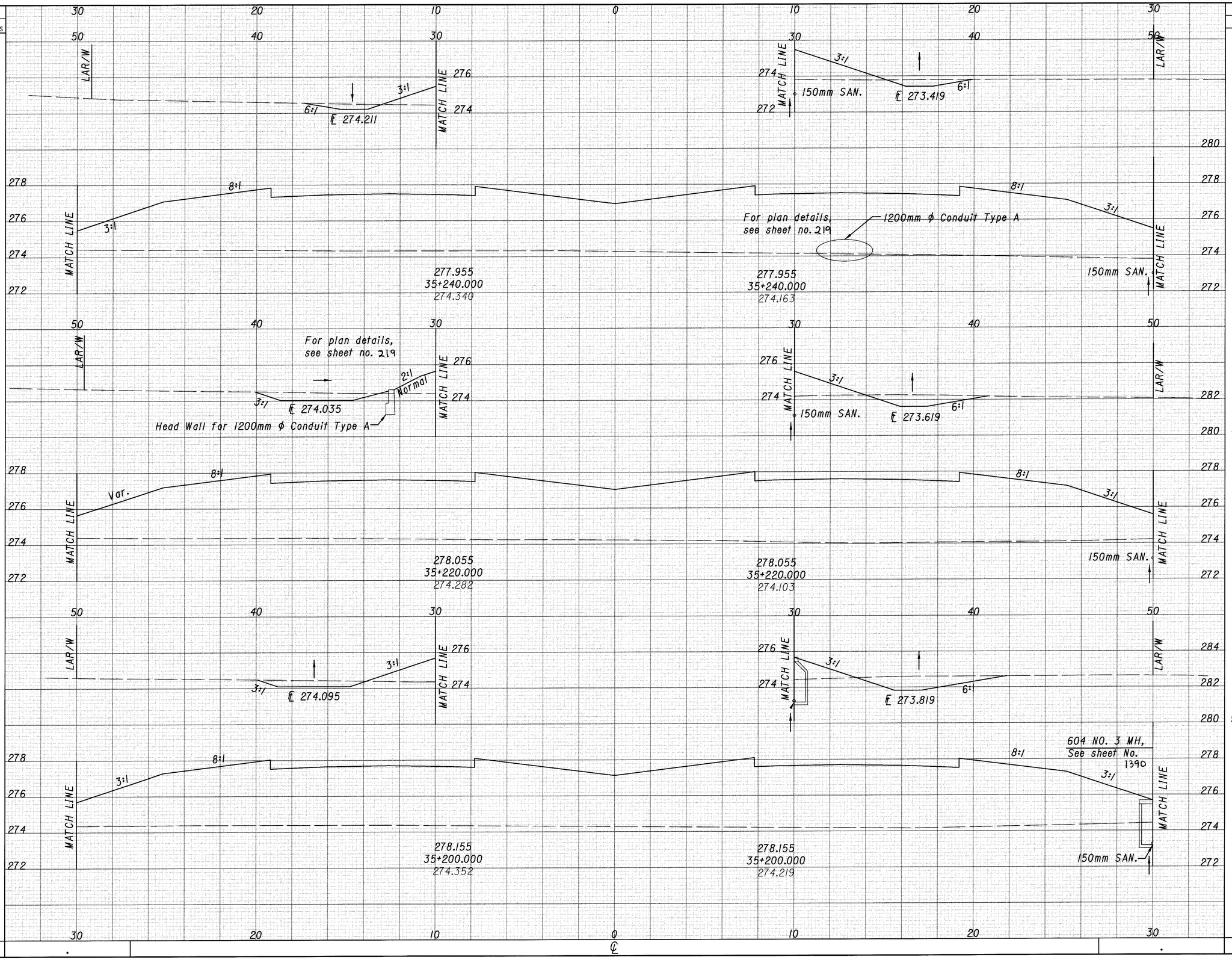
US-30 CROSS SECTIONS

STA 35+160.000 TO STA 35+189.335

WYA / CRA-30-28.009 / 0.000

469
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
62.53	1291	1.97	187.09	70	3781
66.55	1341	4.99	191.05	106	3836
67.57	705	5.56	192.58	49	2036



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 35+200.000 TO STA 35+240.000

WYA/CRA-30-28.009/0.000

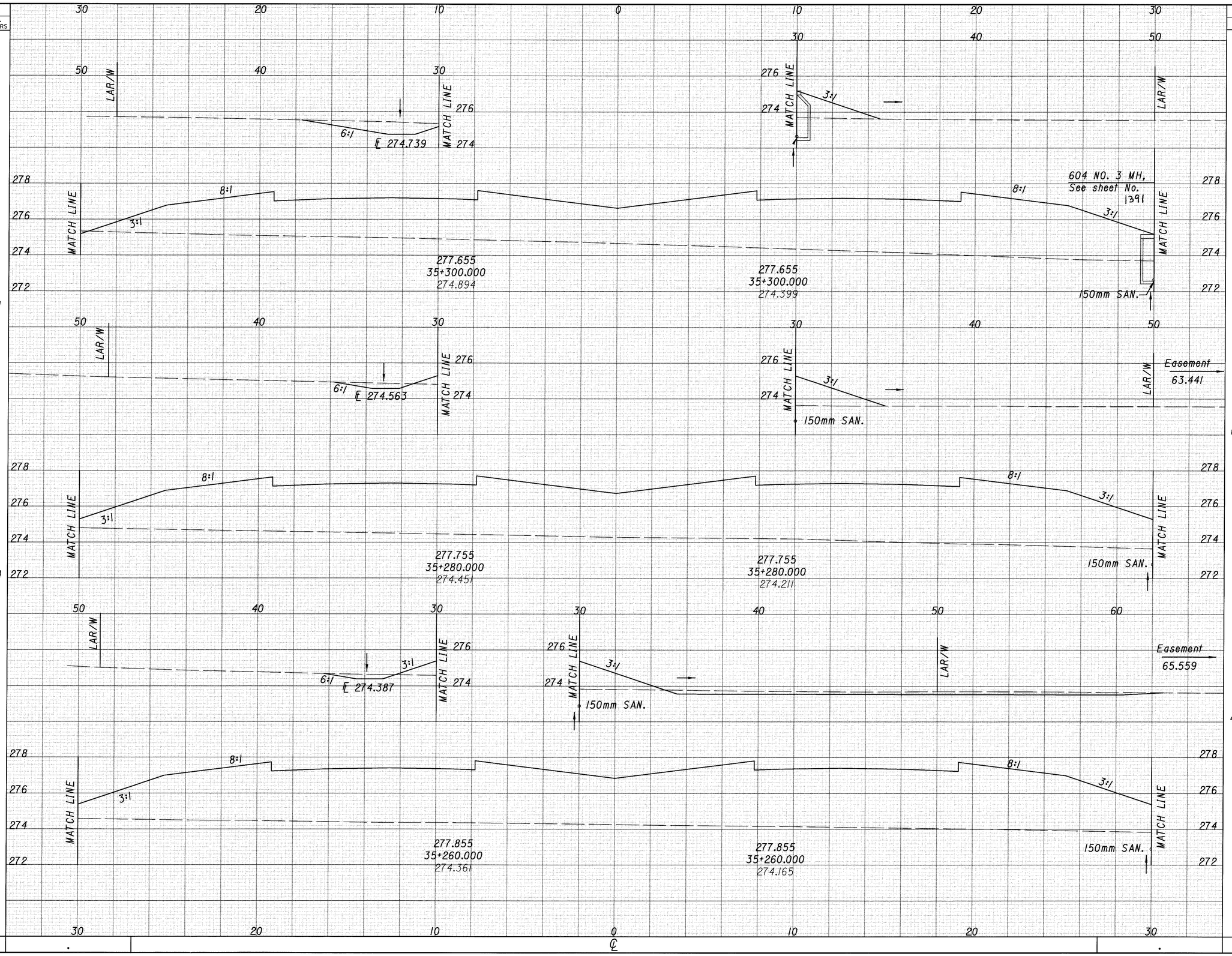
SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
57.47	1131	3.29	143.89	42	3133
55.58	1394	0.90	169.38	58	3476
83.77	1463	4.94	178.22	69	3653

CALCULATED AM | CHECKED REA

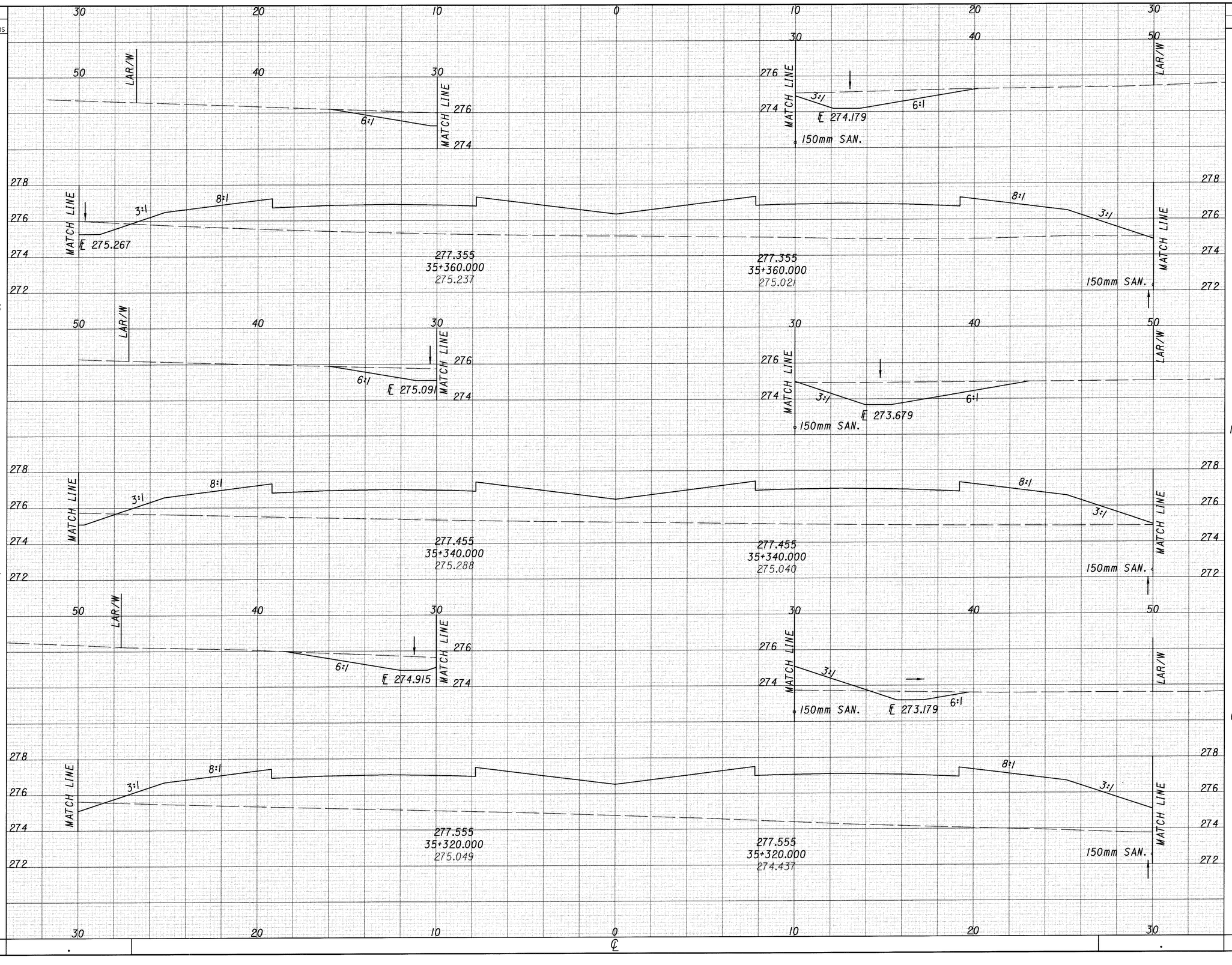
US-30 CROSS SECTIONS
35+260.000 TO STA 35+300.000

WYA/CRA-30-28.009/0.000

471
2.116



SEEDING	
END WIDTH	SQ. METERS
62.30	
	1276
65.31	
	1293
64.01	
	1215



END AREA		VOLUME	
CUT	FILL	CUT	FILL
9.41	86.47		
		215	1789
12.07	92.40		
		181	2228
6.07	130.39		
		94	2743

CALCULATED AM

CHECKED REA

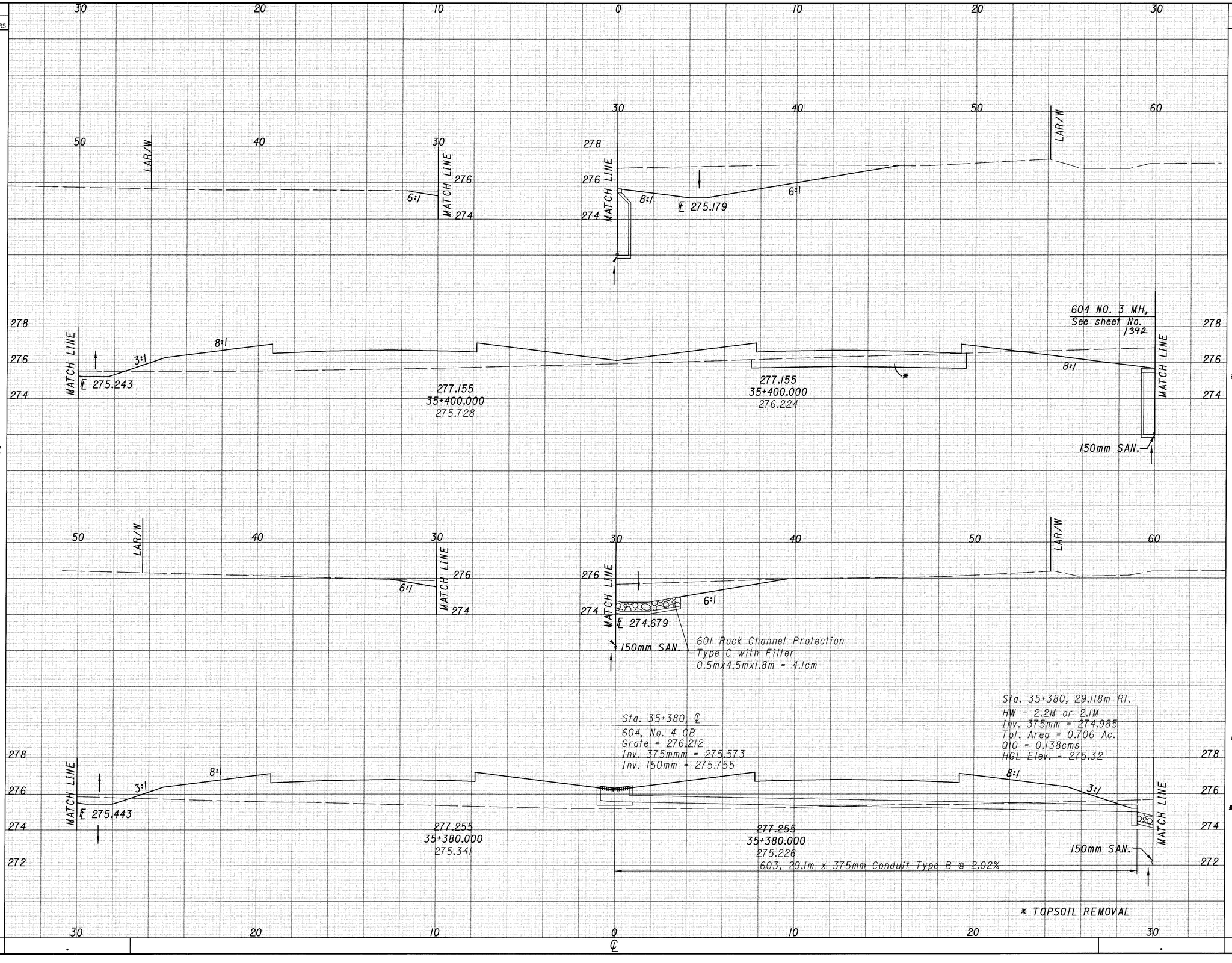
US-30 CROSS SECTIONS

STA 35+320.000 TO STA 35+360.000

WYA/CRA-30-28.009/0.000

472
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
62.73		22.15	39.40		
	1202	*7.25		335	1086
				*73	
57.50		11.37	69.23		
	1198	*0.00		208	1557



CALCULATED AM

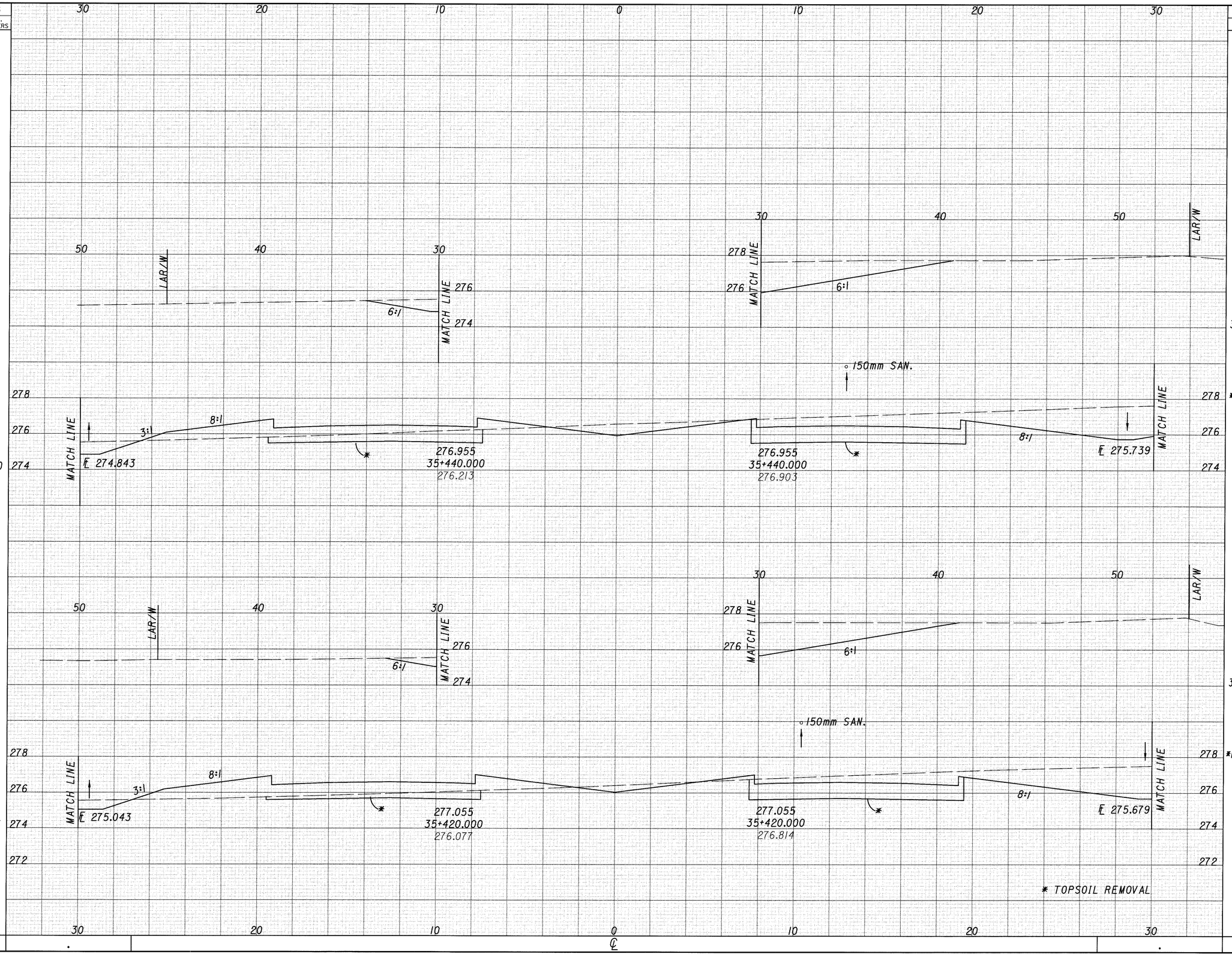
CHECKED REA

US-30 CROSS SECTIONS
STA 35+380.000 TO STA 35+400.000

WYA/CRA-30-28.009/0.000

473
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
60.50	1200	37.05	26.12	683	547
59.55	1223	31.22	28.60	534	680



	*16.10
	*297
	*13.56
	*208

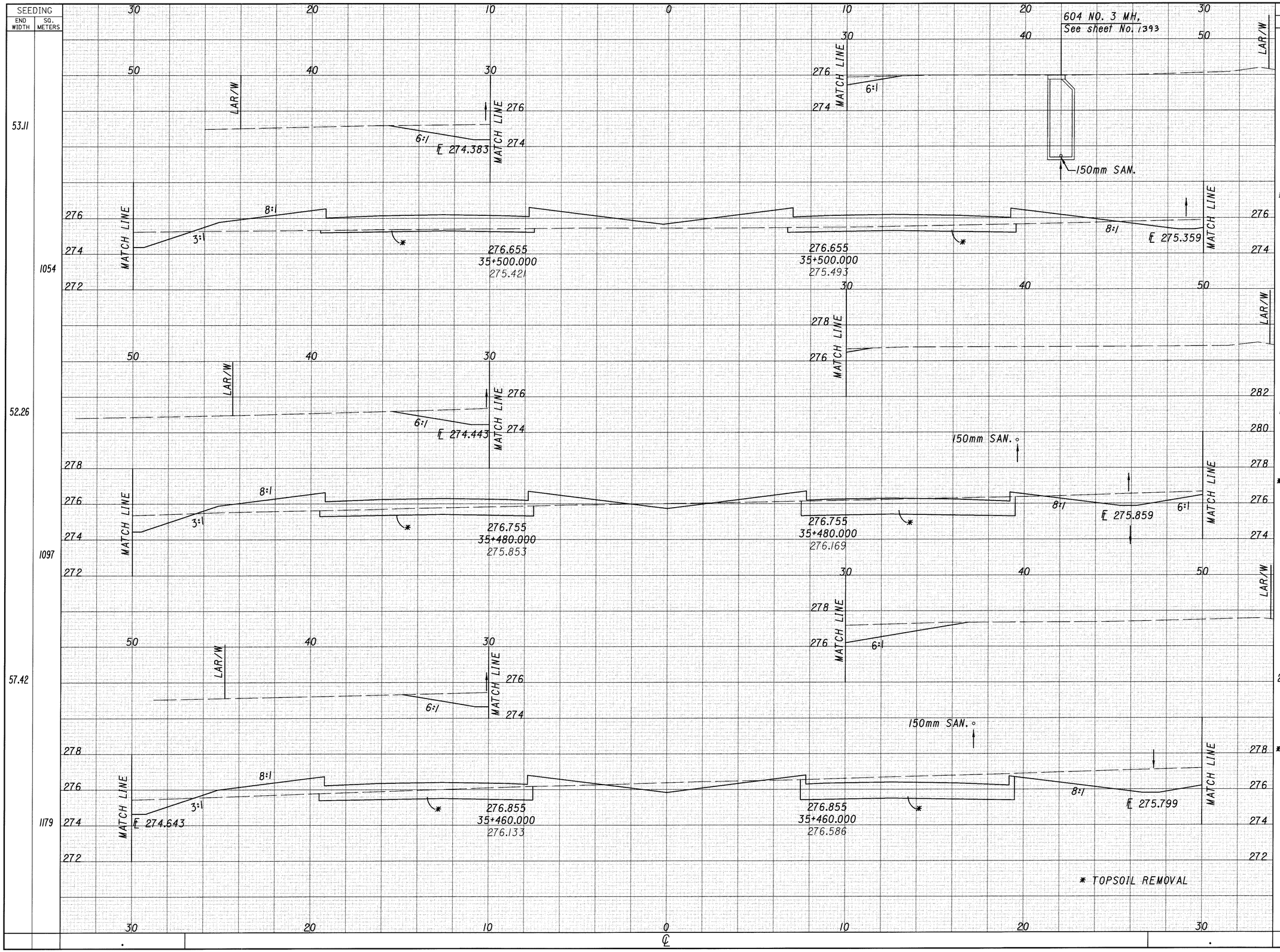
CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 35+420.000 TO STA 35+440.000

WYA/CRA-30-28.009/0.000

474
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
53.11		6.71	38.20		
	1054	*5.42		168	665
52.26		10.07	28.34	*203	
	1097	*14.84		341	544
57.42		24.03	26.08	*314	
	1179	*16.59		611	522
				*327	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 35+460.000 TO STA 35+500.000

WYA/CRA-30-28.009/0.000

475
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
53.60	162	8.19	54.58	29	163
54.40		11.44	53.76		
51.10	897	5.75	50.61	146	887
	1042	*0.00		125	888
				*54	

CALCULATED AM

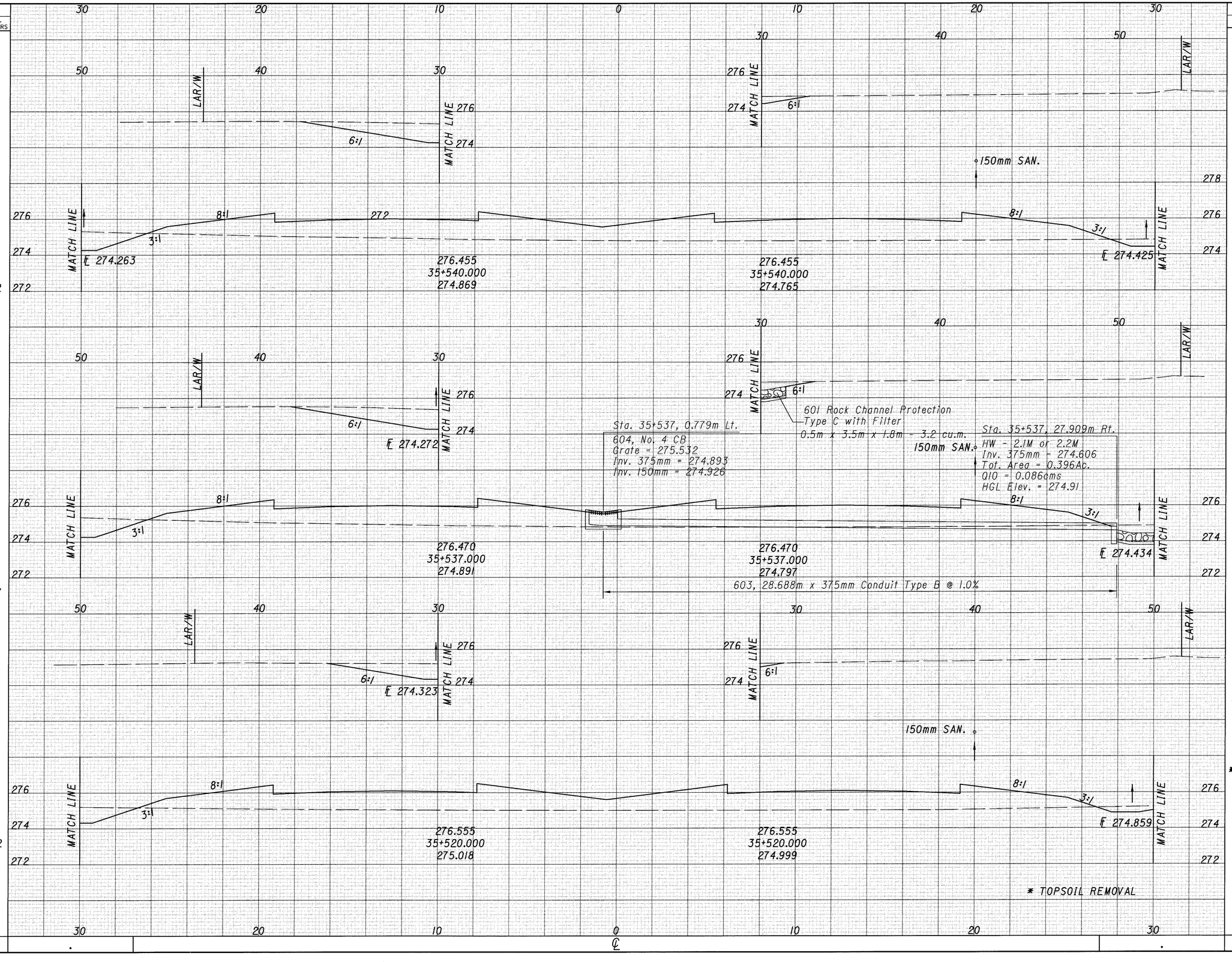
CHECKED REA

US-30 CROSS SECTIONS

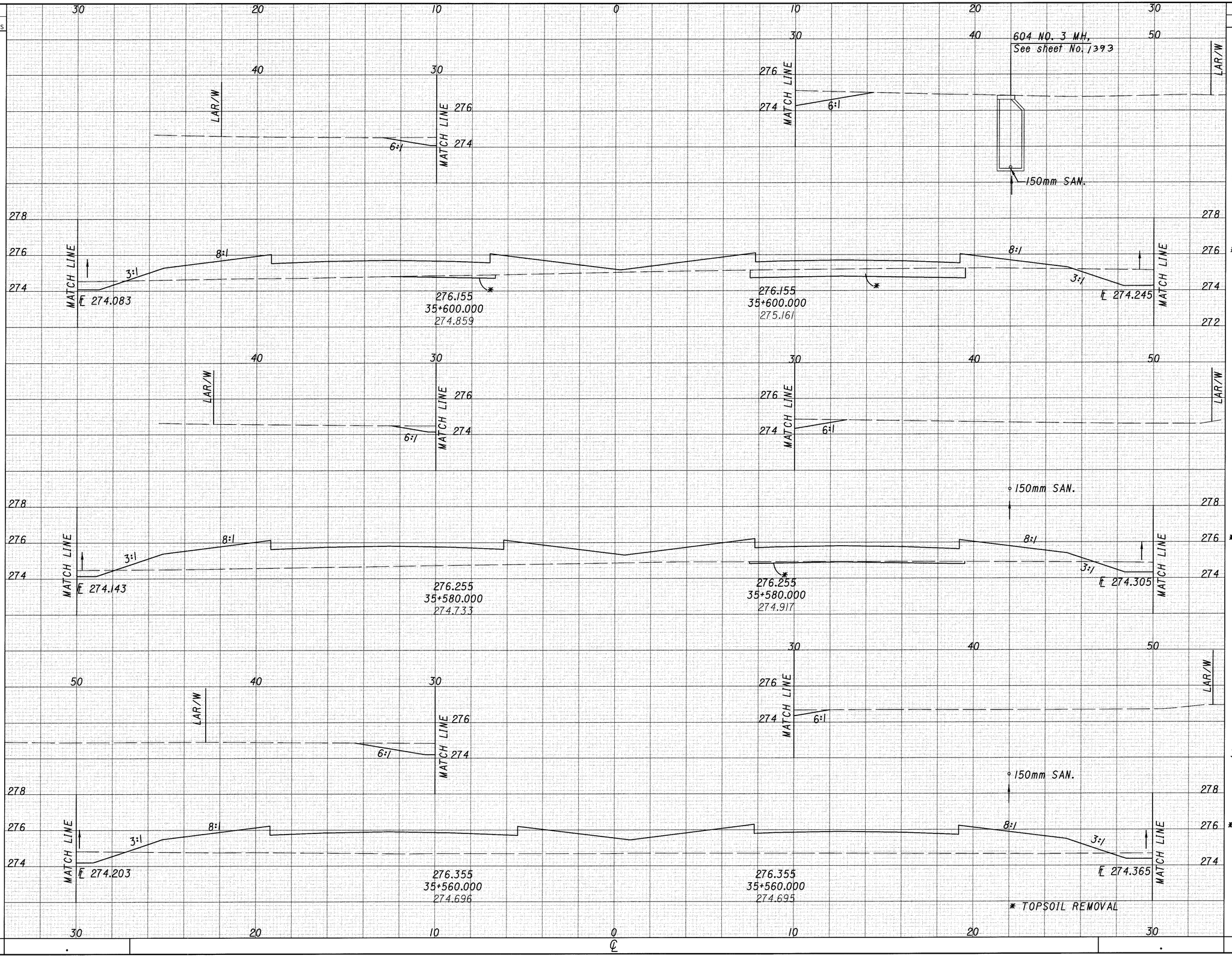
STA 35+520.000 TO STA 35+540.000

WYA / CRA-30-28.009 / 0.000

476
2116



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
51.62		6.25	38.31		
	1001	*5.91		94	873
48.48		3.15	49.02	*67	
	974	*0.79		68	1073
48.87		3.63	58.31	*8	
	1025	*0.00		118	1129



CALCULATED AM
CHECKED REA

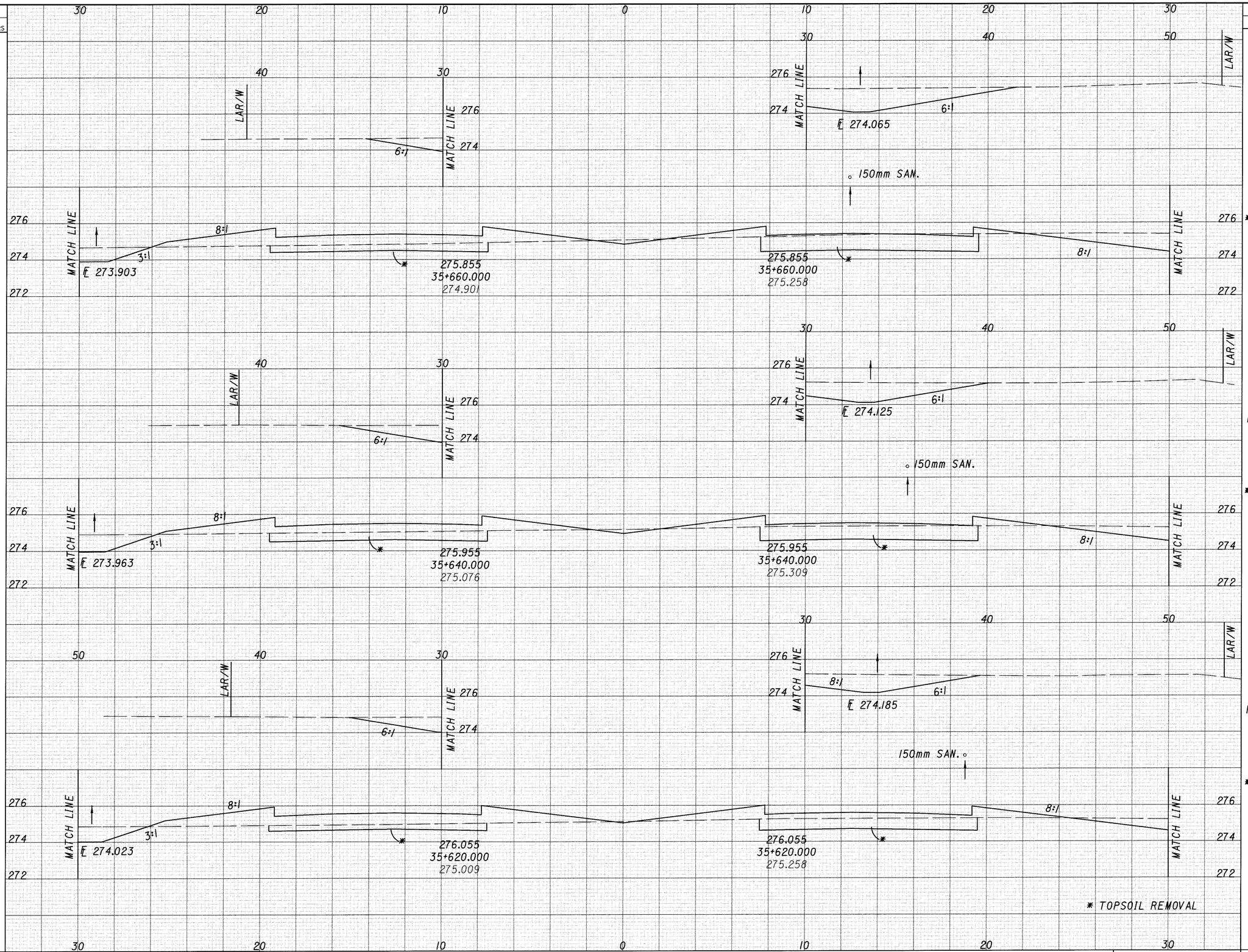
US-30 CROSS SECTIONS

STA 35+560.000 TO STA 35+600.000

WYA / CRA-30-28.009 / 0.000

477
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
61.57	1231	18.10	28.51	334	568
		*14.54		*294	
61.54		15.28	28.32		
		*14.86			
	1218			276	601
		*259			
60.27		12.30	31.79		
		*11.06			
	1119			186	701
		*170			



CALCULATED AM

CHECKED REA

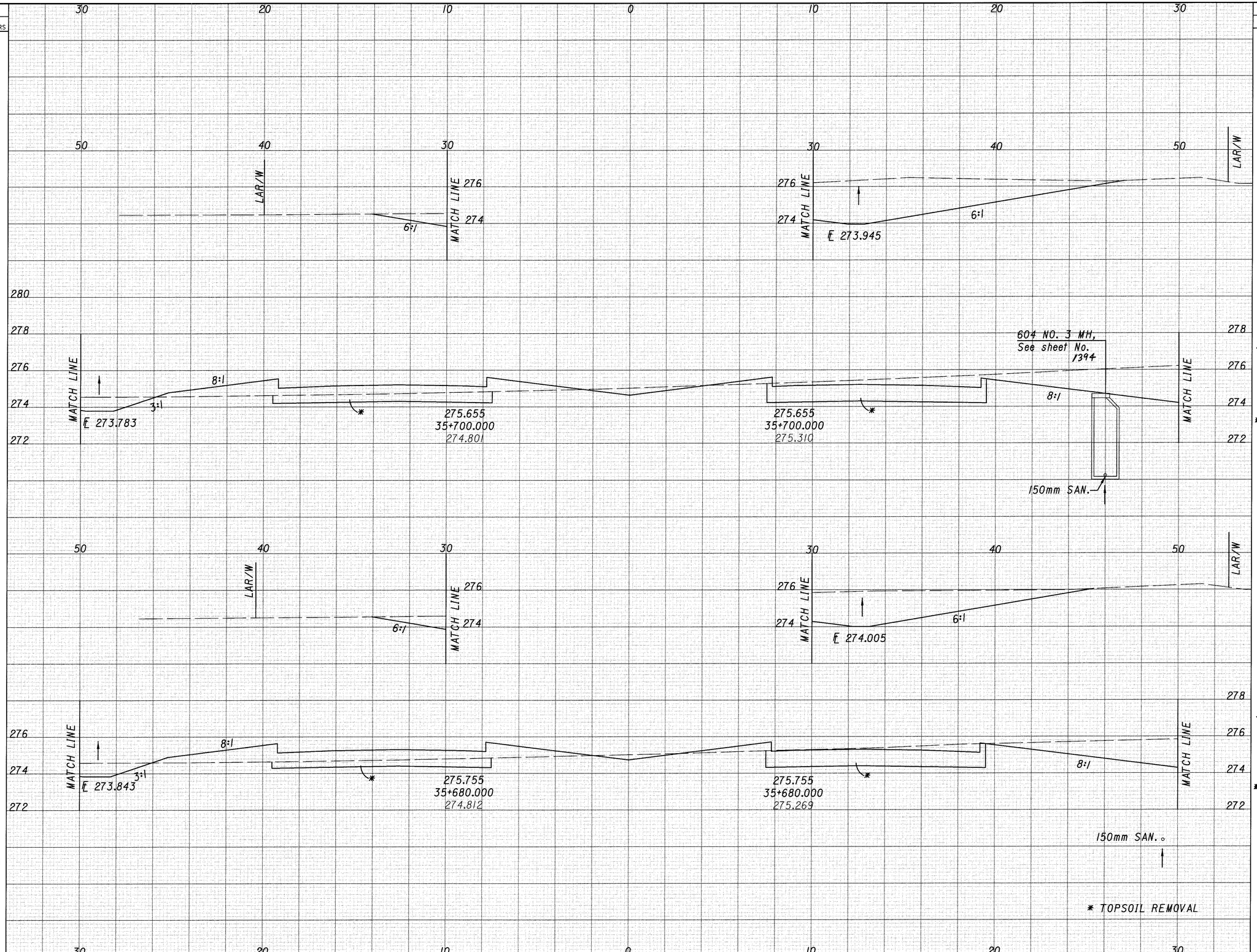
US-30 CROSS SECTIONS

STA 35+620.000 TO STA 35+660.000

WYA/CRA-30-28.009/0.000

478
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
66.92	1321	45.53	26.20	774	539
		*15.79			
65.21	1268	31.82	27.70	499	562
		*14.73			
				*305	
				*293	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 35+680.000 TO STA 35+700.000

WYA / CRA-30-28.009 / 0.000

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
65.68	1319	61.39	20.67	1067	442
		**20.67		*391	
66.20	1331	45.34	23.53	909	497
		*18.41		*342	

30 20 10 0 10 20 30

50 40 30 LAR/W 276 MATCH LINE 274 4:1

30 40 50 LAR/W 276 MATCH LINE 274 6:1 ℄ 273.825

276 274 272 MATCH LINE ℄ 273.663 3:1 8:1 ** 275.455 35+740.000 275.403

275.455 35+740.000 275.575 ** 8:1 MATCH LINE 276 274 272

150mm SAN.

50 40 30 LAR/W 276 MATCH LINE 274 6:1

30 40 50 LAR/W 276 MATCH LINE 274 ℄ 273.885 6:1

276 274 272 MATCH LINE ℄ 273.723 3:1 8:1 * 275.555 35+720.000 274.879

275.555 35+720.000 275.369 * 8:1 MATCH LINE 276 274 272 270

150mm SAN.

* TOPSOIL REMOVAL
** UNDERCUTTING

30 20 10 0 ℄ 10 20 30

CALCULATED AM

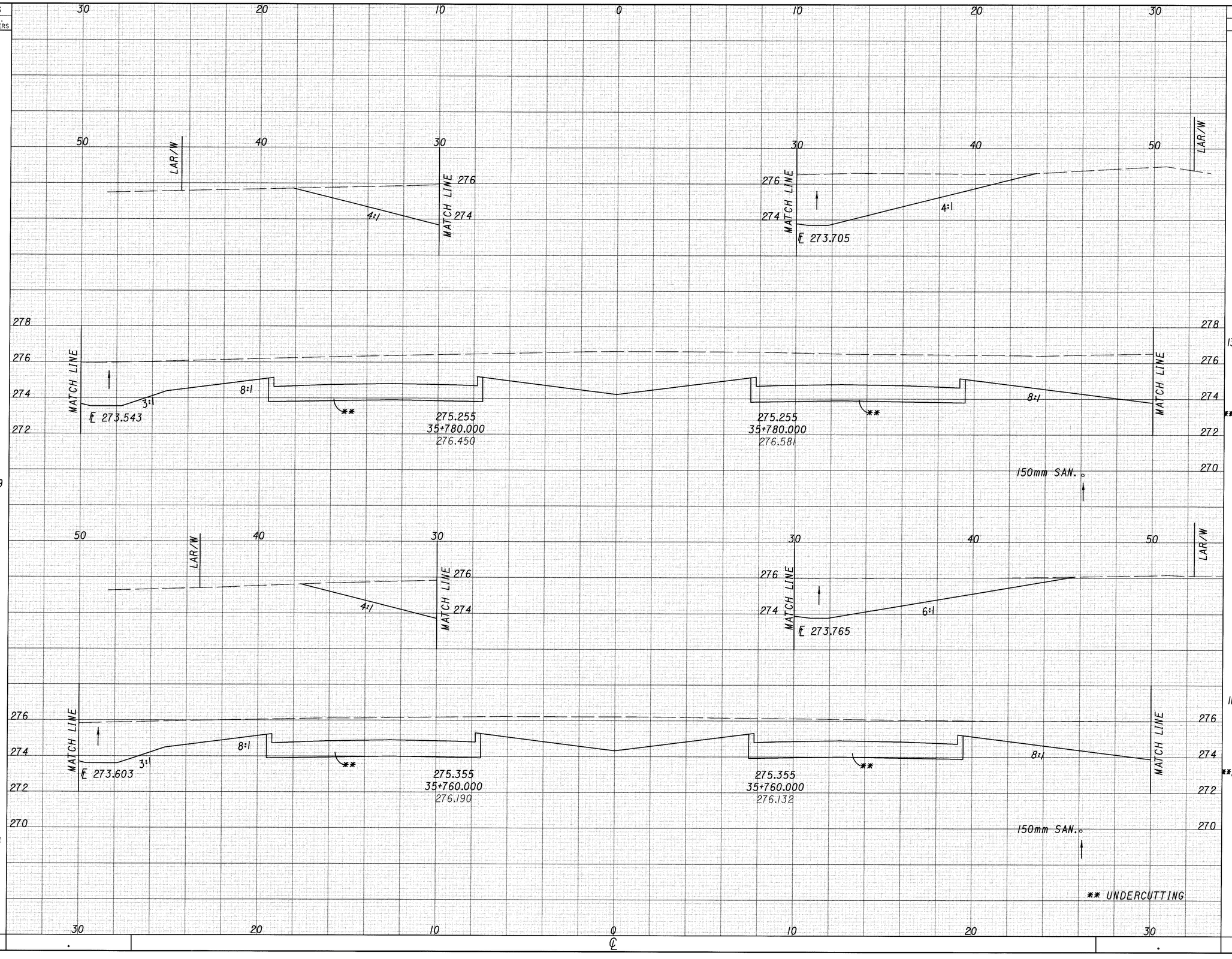
CHECKED REA

US-30 CROSS SECTIONS
STA 35+720.000 TO STA 35+740.000

WYA/CRA-30-28.009/0.000

480
2116

SEEDING	
END WIDTH	SQ. METERS
68.19	
	1379
69.75	
	1354



END AREA		VOLUME	
CUT	FILL	CUT	FILL
139.80	20.67		
**20.67			
		2510	413
		**413	
111.19	20.67		
**20.67			
		1726	413
		**413	

CALCULATED AM

CHECKED REA

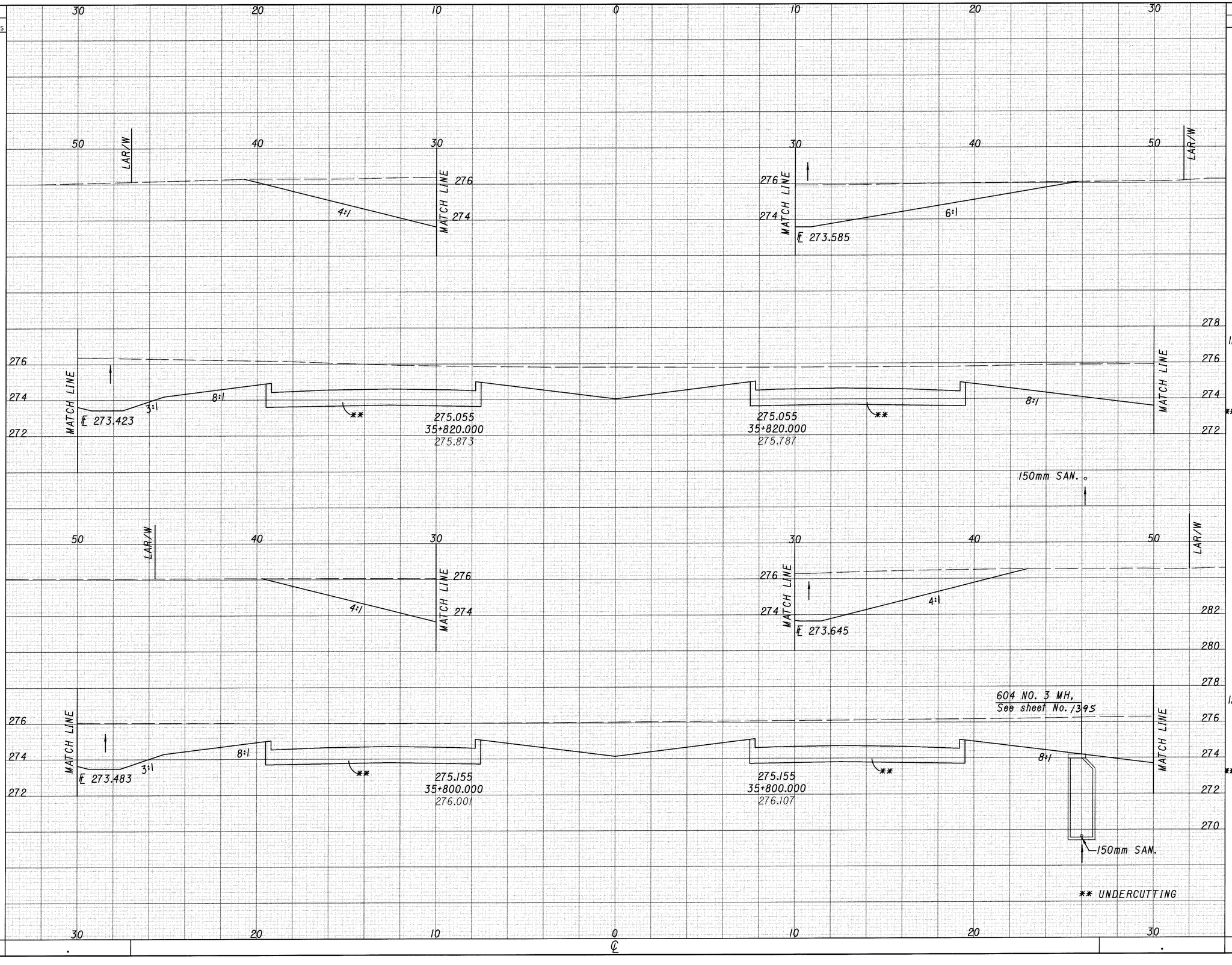
US-30 CROSS SECTIONS

STA 35+760.000 TO STA 35+780.000

WYA / CRA-30-28.009 / 0.000

481
2116

SEEDING	
END WIDTH	SQ. METERS
73.02	
	1423
69.33	
	1375



END AREA		VOLUME	
CUT	FILL	CUT	FILL
126.75	20.67		
**20.67		2537	413
		**413	
126.97	20.67		
**20.67		2668	413
		**413	

CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 35+800.000 TO STA 35+820.000

WYA / CRA-30-28.009 / 0.000

482
2116

SEEDING	
END WIDTH	SQ. METERS
71.26	1423
71.06	1441

END AREA		VOLUME	
CUT	FILL	CUT	FILL
131.50	20.67		
**20.67		2523	413
		**413	
120.75	20.67		
**20.67		2475	413
		**413	

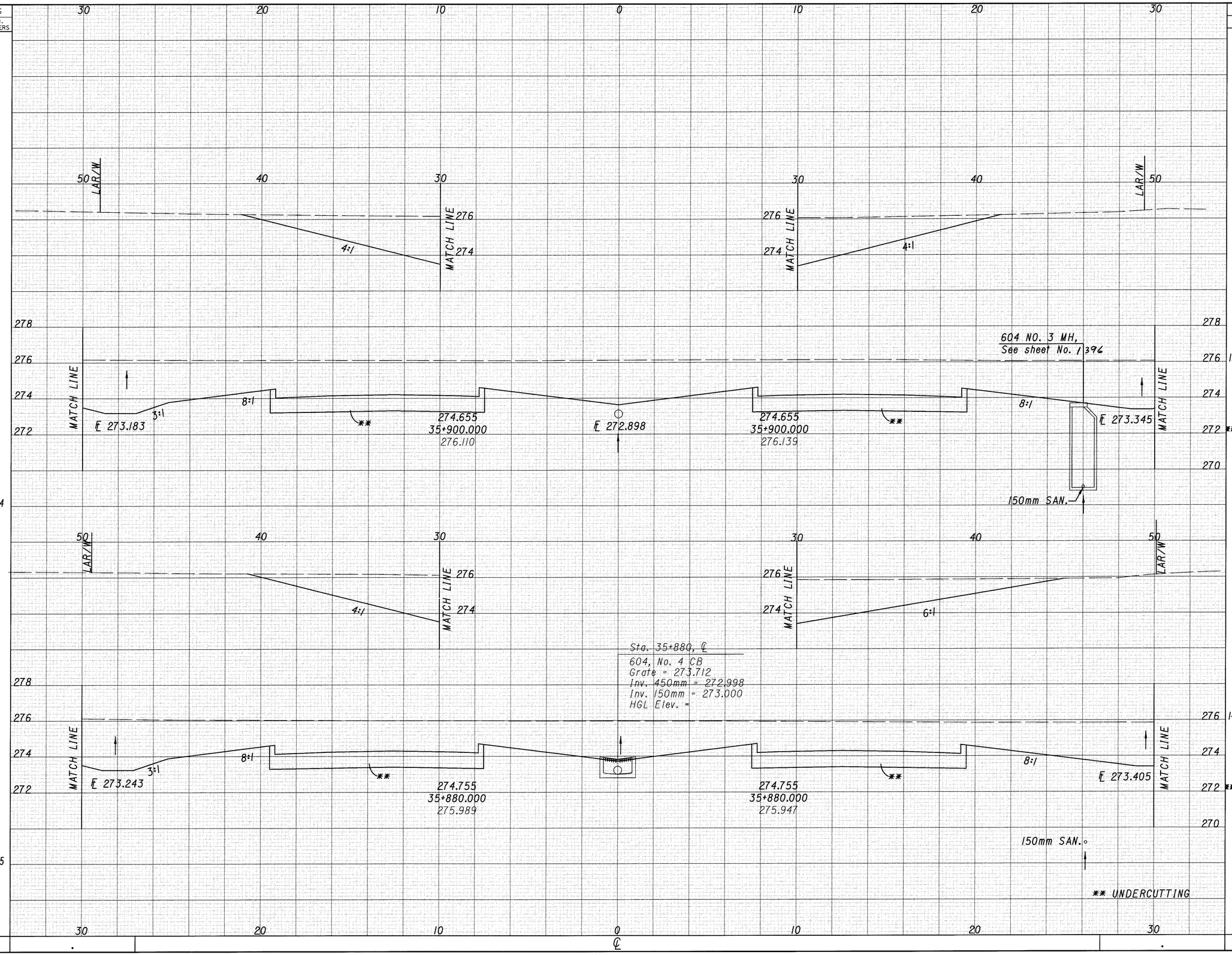
CALCULATED AM | CHECKED REA

US-30 CROSS SECTIONS
STA 35+840.000 TO STA 35+860.000

WYA/CRA-30-28.009/0.000

483
2.116

SEEDING	
END WIDTH	SQ. METERS
69.21	
	1414
72.22	
	1435



END AREA		VOLUME	
CUT	FILL	CUT	FILL
156.63	20.67		
**20.67			
		3007	413
**413			
144.04	20.67		
**20.67			
		2755	413
**413			

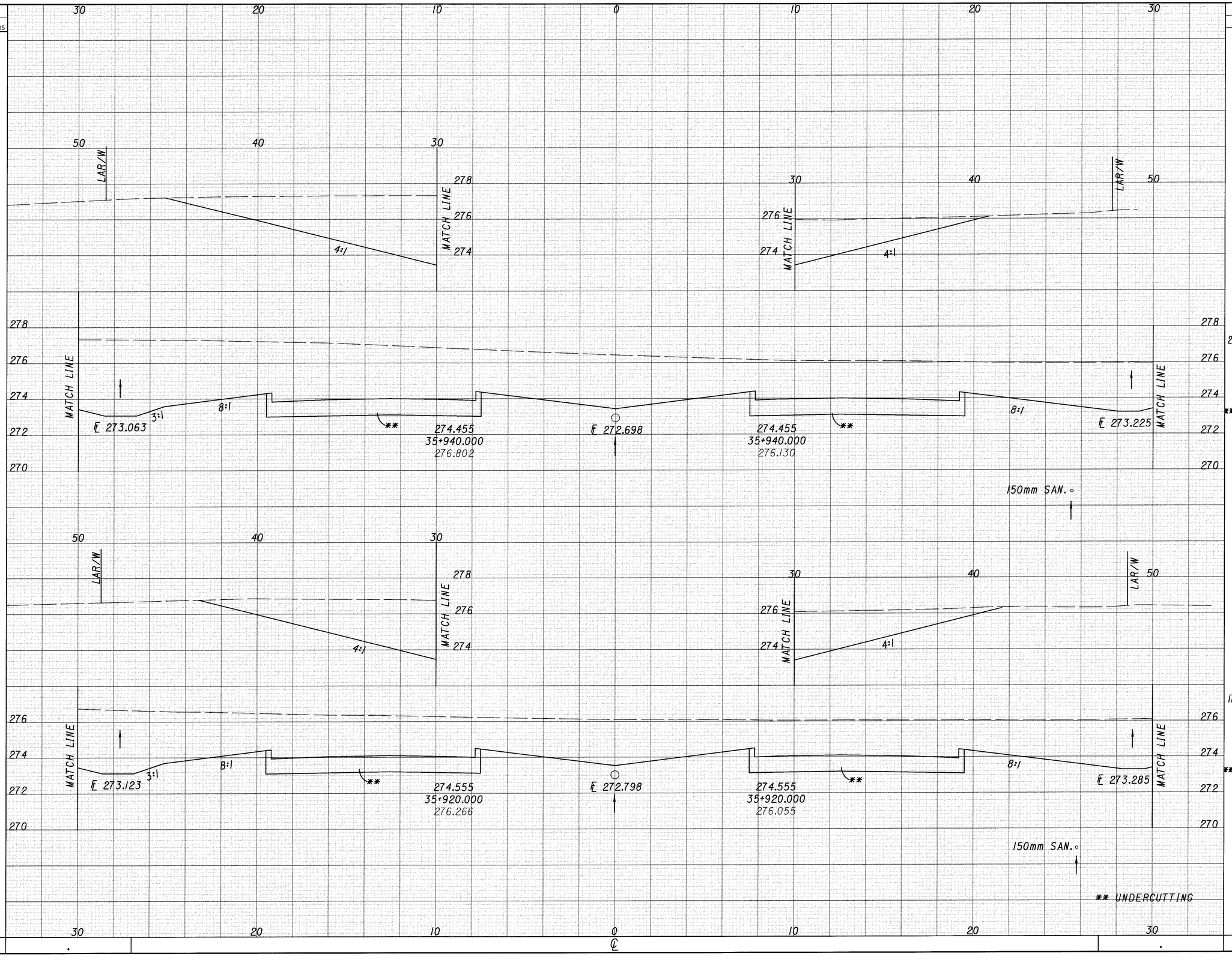
CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 35+880.000 TO STA 35+900.000

WYA / CRA-30-28.009 / 0.000

484
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
72.80	1446	207.18	20.67	3844	413
71.80	1410	177.21	20.67	3338	413



CALCULATED AM

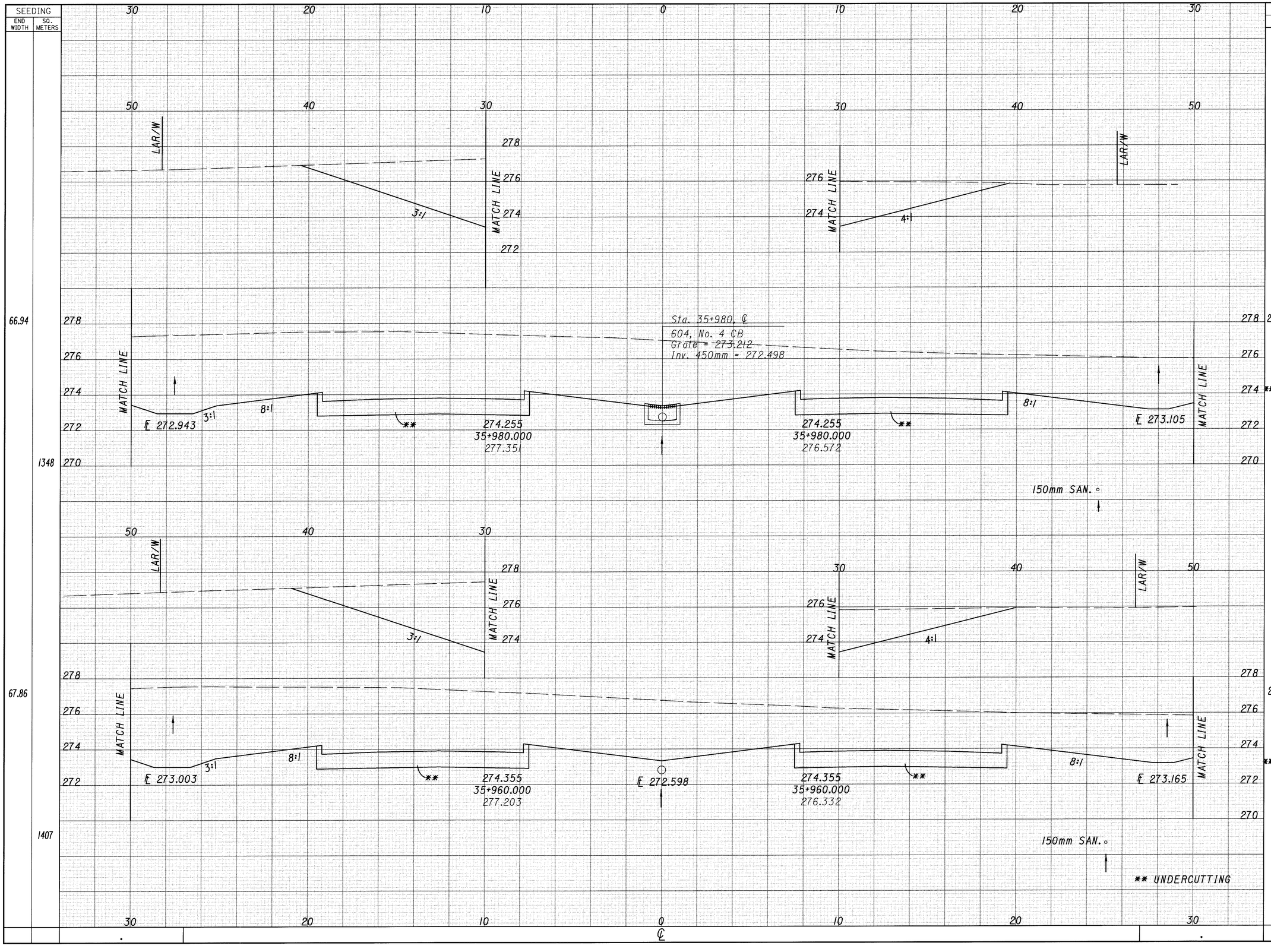
CHECKED REA

US-30 CROSS SECTIONS
STA 35+920.000 TO STA 35+940.000

WYA/CRA-30-28.009/0.000

485
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
66.94	1348	227.87	20.67	4439	413
		**20.67		**413	
67.86	1407	216.01	20.67	4232	413
		**20.67		**413	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 35+960.000 TO STA 35+980.000

WYA / CRA-30-28.009 / 0.000

486
2116

SEEDING	
END WIDTH	SQ. METERS
69.65	
	1409
71.25	
	1382

30 20 10 0 10 20 30

50 40 30 30 40 50

LAR/W — 4:1 — MATCH LINE 276 274 — 3:1 — LAR/W

278 276 274 272 270 268

MATCH LINE — 8:1 — ℄ 272.823 — ** — 274.055 36+020.000 276.788 — ℄ 272.298 — 274.055 36+020.000 277.041 — ** — 8:1 — ℄ 272.985 — MATCH LINE

150mm SAN.

50 40 30 30 40 50

LAR/W — 4:1 — MATCH LINE 278 276 274 — 4:1 — LAR/W

278 276 274 272 270 268

MATCH LINE — 3:1 — 8:1 — ℄ 272.883 — ** — 274.155 36+000.000 277.209 — ℄ 272.398 — 274.155 36+000.000 276.860 — ** — 8:1 — ℄ 273.045 — MATCH LINE

604 NO. 3 MH, See sheet No. 1396

150mm SAN.

** UNDERCUTTING

30 20 10 0 10 20 30

℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
245.75	20.67		
**20.67			
		4907	413
		**413	
244.92	20.67		
**20.67			
		4728	413
		**413	

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 36+000.000 TO STA 36+020.000

WYA/CRA-30-28.009/0.000

487
2116

SEEDING	
END WIDTH	SQ. METERS

SEEDING	
END WIDTH	SQ. METERS
64.67	
	1323
67.63	
	1361

30 20 10 0 10 20 30

50 40 30 30 40 50

LAR/W — MATCH LINE — 276 — 274 — 4:1

LAR/W — MATCH LINE — 276 — 274 — 4:1

604 NO. 3 MH,
See sheet No. 227/397

276 — 274 — 272 — 270

MATCH LINE — 8:1 — ℄ 272.583 — ** — 273.655 36+100.000 275.885 — ℄ 271.898 — 273.655 36+100.000 275.914 — ** — 8:1 — ℄ 272.745 — MATCH LINE

150mm SAN.

LAR/W — MATCH LINE — 276 — 274 — 4:1

LAR/W — MATCH LINE — 276 — 274 — 3:1

Sta. 36+080, ℄
604, No. 4 CB
Grate = 272.710
Inv. 450mm = 271.998

276 — 274 — 272 — 270 — 268

MATCH LINE — 8:1 — ℄ 272.643 — ** — 273.755 36+080.000 276.384 — 273.755 36+080.000 276.454 — ** — 8:1 — 3:1 — ℄ 272.805 — MATCH LINE

150mm SAN.

** UNDERCUTTING

278 — 276 — 274 — 272 — 270 — 268

30 20 10 0 10 20 30

℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
182.53	20.67		
**20.67			
4052	413		
**413			
222.64	20.67		
**20.67			
4501	413		
**413			

CALCULATED AM
CHECKED REA

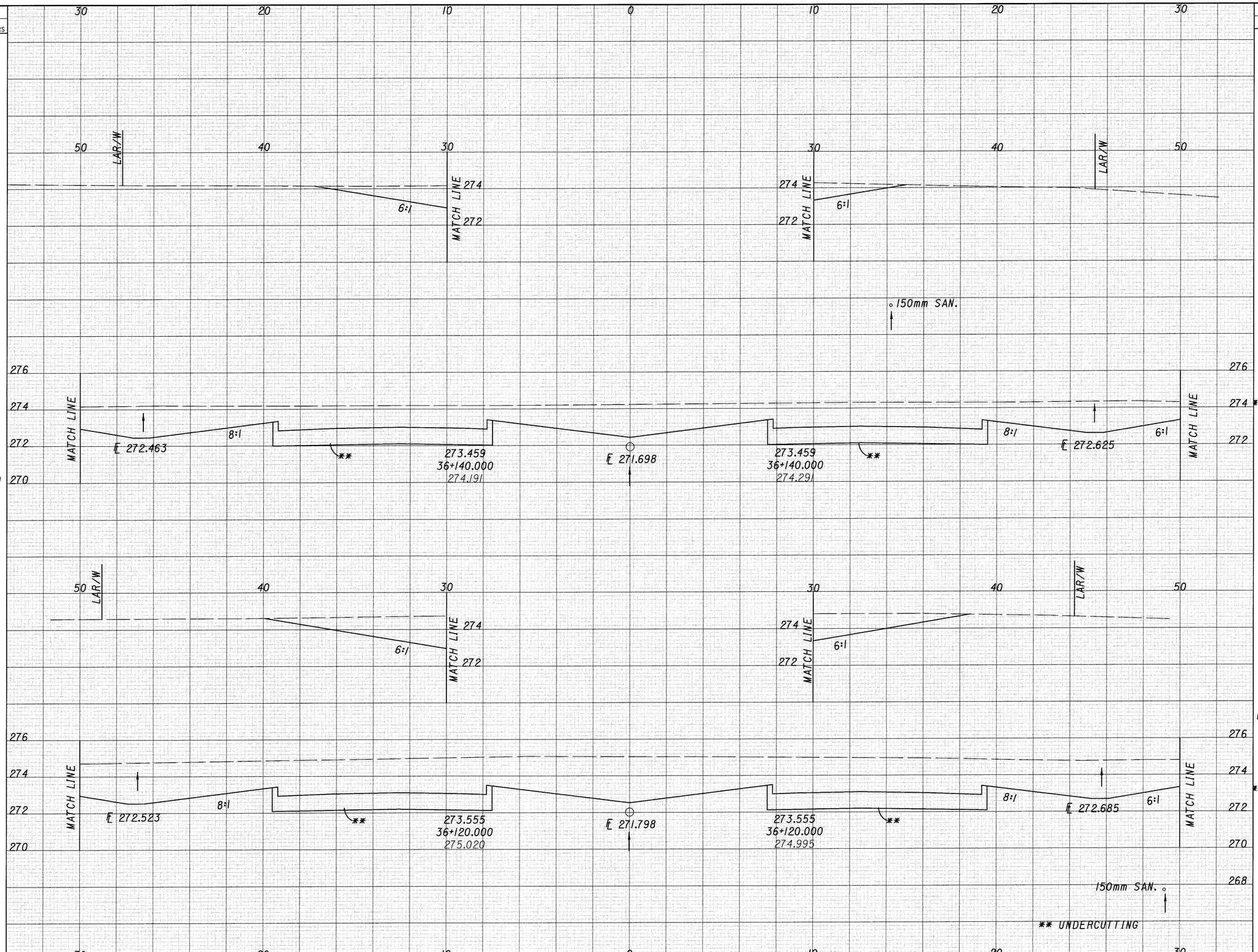
US-30 CROSS SECTIONS

STA 36+080.000 TO STA 36+100.000

WYA / CRA-30-28.009 / 0.000

489
2116

SEEDING	
END WIDTH	SQ. METERS
58.35	
	1230
64.63	
	1293



END AREA		VOLUME	
CUT	FILL	CUT	FILL
87.66	20.67		
**20.67			
		2192	413
			**413
131.50	20.67		
**20.67			
		3140	413
			**413

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 36+120.000 TO STA 36+140.000

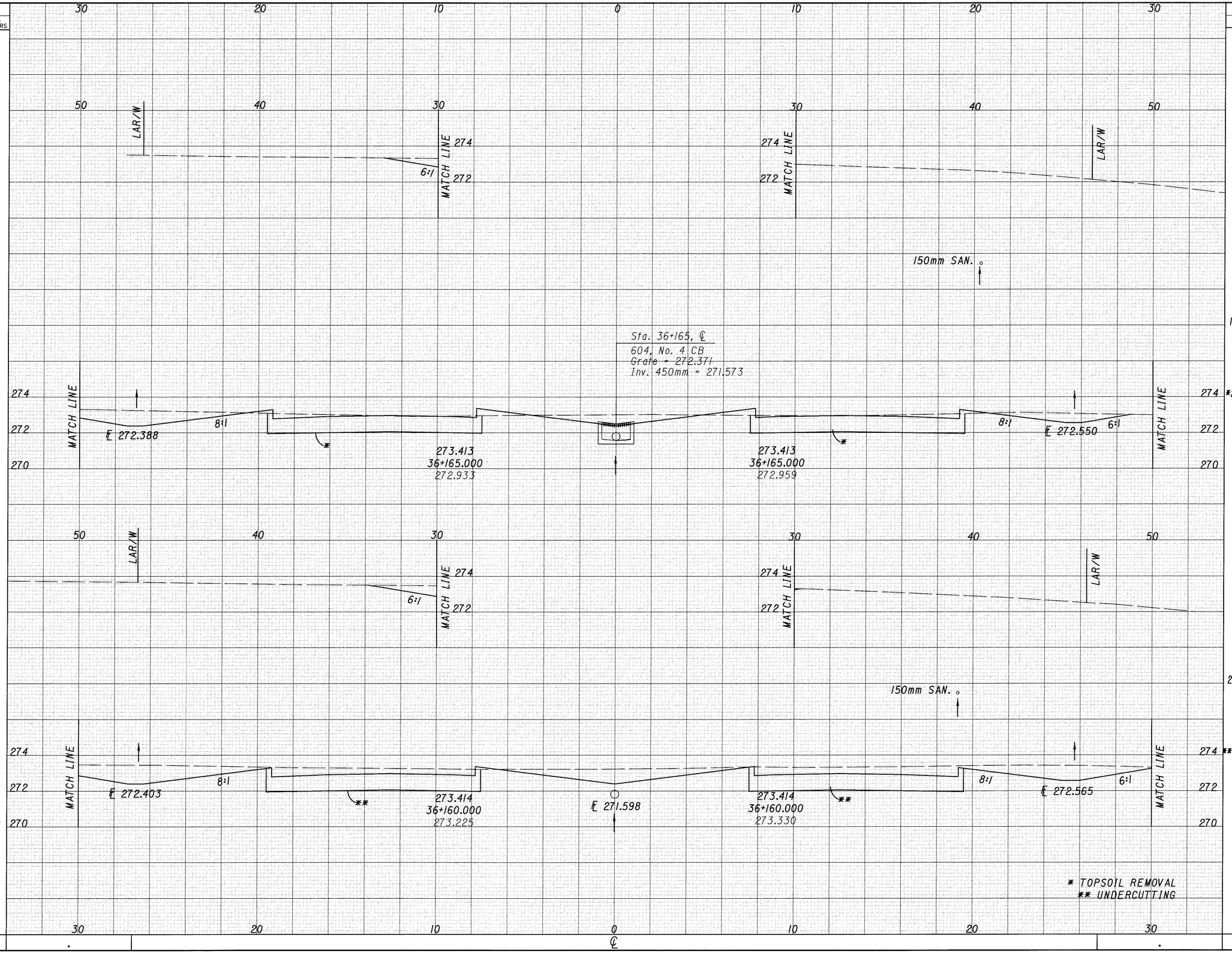
WYA/CRA-30-28.009/0.000

490
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
46.77	241	14.00	21.88	110	107
49.58	1079	29.95	20.73	1176	414

CALCULATED AM

CHECKED REA



US-30 CROSS SECTIONS
STA 36+160.000 TO STA 36+165.000

WYA / CRA-30-28.009 / 0.000

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
65.27	1225	8.90	142.44	179	2240		
		*0.00		*6			
57.27		8.99	81.58				
		*0.61					
	1054			120	1223		
				*45			
48.15		3.03	40.76				
		*3.92					
	712			128	470		
				*182			

30 20 10 0 10 20 30

LAR/W

MATCH LINE

4:1

℄ 270.963

272

270

8:1

3:1

273.642
36+220.000
270.724

273.642
36+220.000
270.171

℄ 268.950

6:1

150mm SAN.

Sta. 36+200, 32.475m Rt.
HW = 2.2M or 2.1M
Inv. 525mm = 270.048
Tot. Area = 2.016 Ac.
Q10 = 0.435
HGL Elev. =270.54

℄ 269.750

60I Rock Channel Protection
Type C with filter
0.5m x 5.0m x 1.8m = 4.5 cu.m.

Sta. 36+200, ℄
604, No. 4 CB
Grate = 272.464
Inv. 150mm = 271.053
Inv. 450mm = 270.810
Inv. 525mm = 270.735

℄ 272.283

273.507
36+200.000
271.747

273.507
36+200.000
271.119

603, 32.475m x 525mm Conduit Type B @ 2.11%

604 NO. 3 MH,
See sheet No. 227, 1398

℄ 272.343

273.430
36+180.000
272.293

℄ 271.246

273.430
36+180.000
271.986

℄ 271.350

150mm SAN.

* TOPSOIL REMOVAL

℄

US-30 CROSS SECTIONS
36+180.000 TO STA 36+220.000

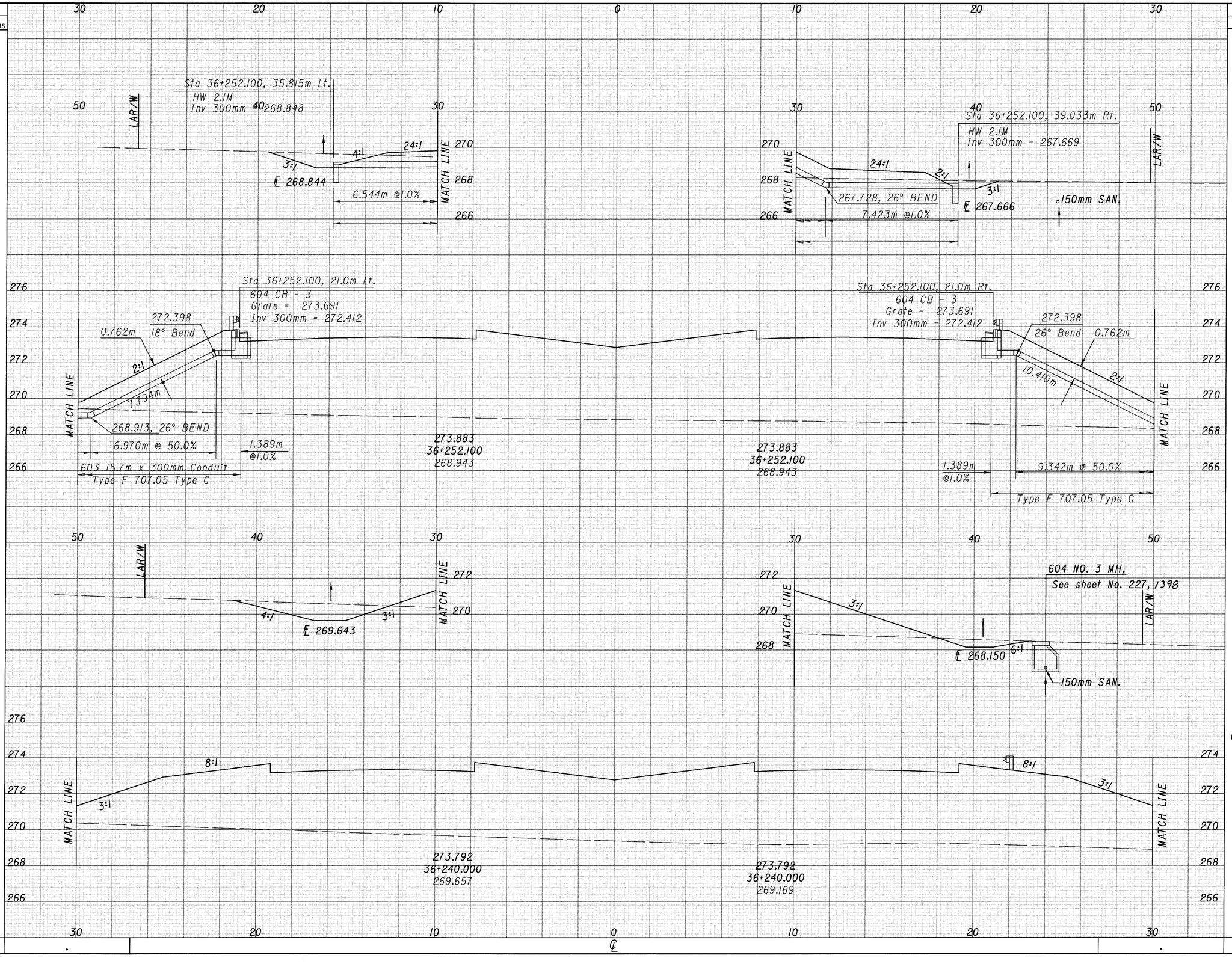
WYA/CRA-30-28.009/0.000

492
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
64.09	816	3.60	250.20	60	2870
70.74	1360	6.24	224.22	151	3667

CALCULATED AM

CHECKED REA

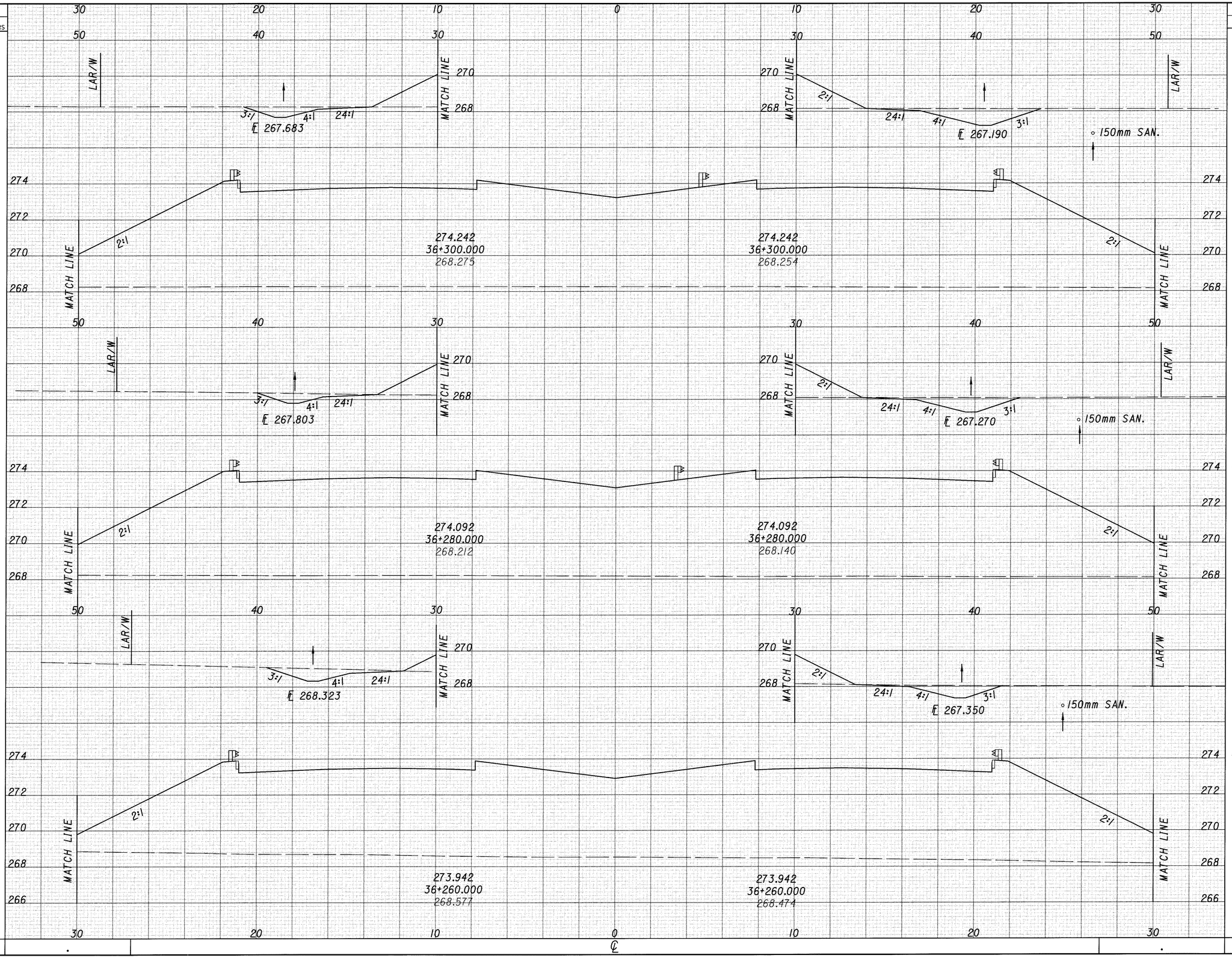


US-30 CROSS SECTIONS
STA 36+240.000 TO STA 36+252.100

WYA / CRA-30-28.009 / 0.000

493
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
68.61		5.48	308.69		
	1351			99	6121
66.44		4.45	303.45		
	1313			91	5740
64.81		4.60	270.53		
	509			32	2057



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 36+260.000 TO STA 36+300.000

WYA/CRA-30-28.009/0.000

494
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
105.00	1915	0.00	0.00	13	1970
278.85		2.69	394.82		
	1598			33	3486
70.51		4.42	367.18		
	1234			96	5990
71.48		6.62	321.86		
	1401			121	6306

BRIDGE - STA 36+346.537 TO 36+418.563

STA. 36+356.514 - ZERO SECTION

Sta. 36+347.600
604 NO. 3 MH,
See sheet No. 228, 1399

℄ 267.225

℄ 266.963

150mm SAN.

274.591
36+346.537
267.556

274.591
36+346.537
267.514

℄ 267.292

℄ 266.992

150mm SAN.

274.522
36+337.387
267.864

274.522
36+337.387
267.845

℄ 267.443

℄ 267.030

150mm SAN.

274.392
36+320.000
268.250

274.392
36+320.000
268.183

℄

CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 36+320.000 TO STA 36+346.537

WYA / CRA-30-28.009 / 0.000

495
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
75.39	163	7.96	279.55	17	623
66.91	1513	6.96	265.49	64	2366
263.71	1454	6.95	251.57	28	1011
98.00	0	0.00	0.00	0	0

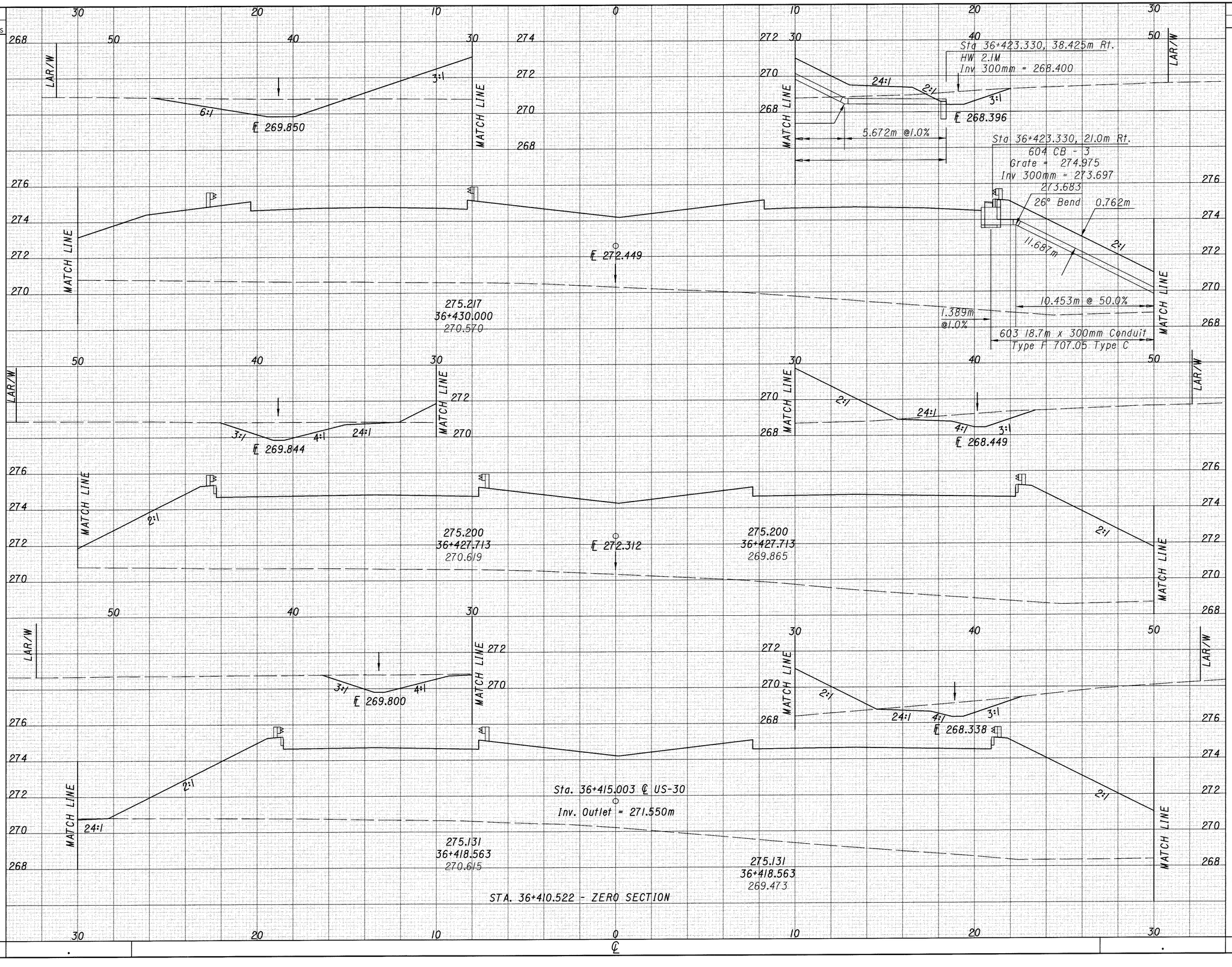
CALCULATED AM

CHECKED REA

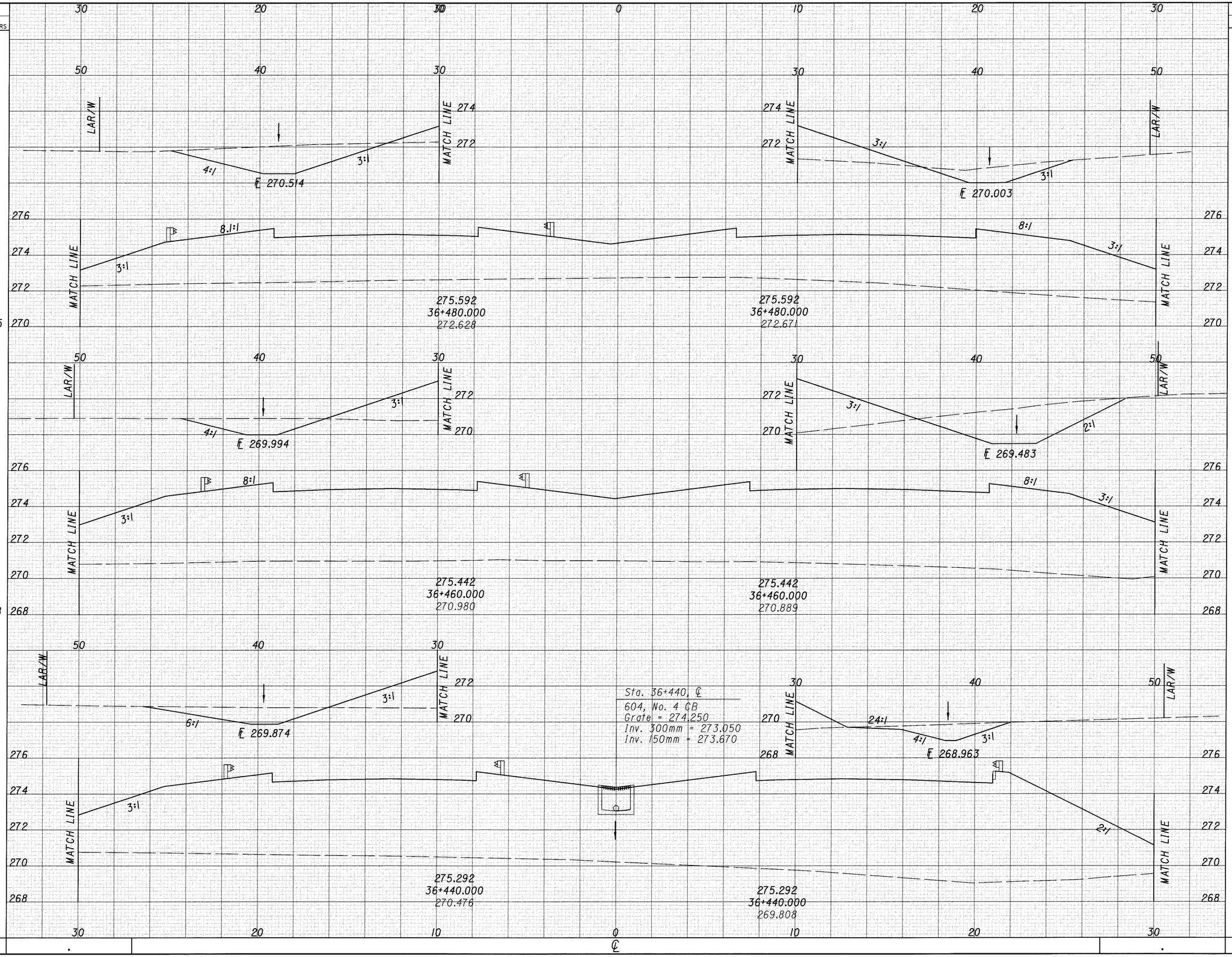
US-30 CROSS SECTIONS
STA 36+418.563 TO STA 36+430.000

WYA / CRA-30-28.009 / 0.000

496
2116



SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
75.93		14.97	157.09			
	1545			335	4118	
78.62		18.54	254.73			
	1528			275	5270	
74.16		9.00	272.26			
	748			85	2759	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 36+440.000 TO STA 36+480.000

WYA / CRA-30-28.009 / 0.000

497
2119

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
58.82		16.56	59.29				
		*1.08					
	646			175	774		
				*6			
48.78		12.57	69.65				
		*0.00					
	1186			292	1751		
69.86		16.61	105.49				
	1458			316	2626		

Sta. 36+532, 34.87lm Rt.
HW = 2.1M or 2.2M
Inv. 525mm = 271.701
Tot. Area = 0.675 Ac.
Q10 = 0.315cms
HGL Elev. = 272.16

Sta. 36+532, 0.792m Rt.
604, No. 4 CB
Grate = 274.963
Inv. 525mm = 274.071
Inv. 150mm = 274.393

℄ 271.355

60l Rock Channel Protection
Type C with filter
0.5m x 5.0m x 1.8m = 4.5 cu.m.

275.982
36+532.000
274.651

275.982
36+532.000
274.319

603, 34.1m x 525mm Conduit Type B @ 6.95%

℄ 273.946

℄ 273.154

℄ 271.043

275.892
36+520.000
274.300

275.892
36+520.000
274.096

℄ 271.834

℄ 270.523

275.742
36+500.000
273.416

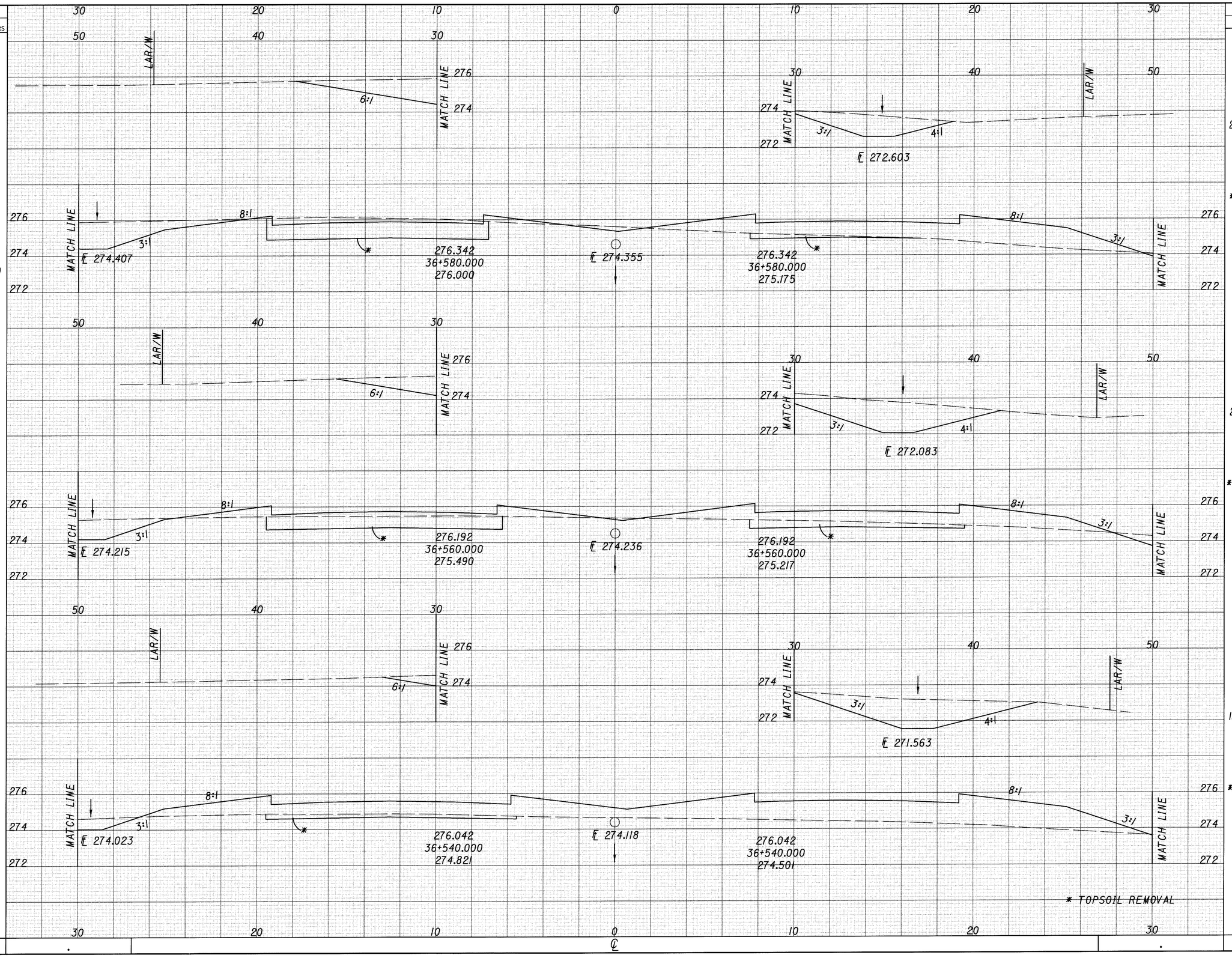
275.742
36+500.000
273.595

* TOPSOIL REMOVAL

US-30 CROSS SECTIONS
STA 36+500.000 TO STA 36+532.000
WYA / CRA-30-28.009 / 0.000

498
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
62.58	1250	23.07	34.89	432	683
		*11.71		*245	
62.38		20.17	33.37		
	1231	*12.82		352	858
60.69		15.04	52.40	*157	
	478	*2.88		126	447
				*16	



CALCULATED AM

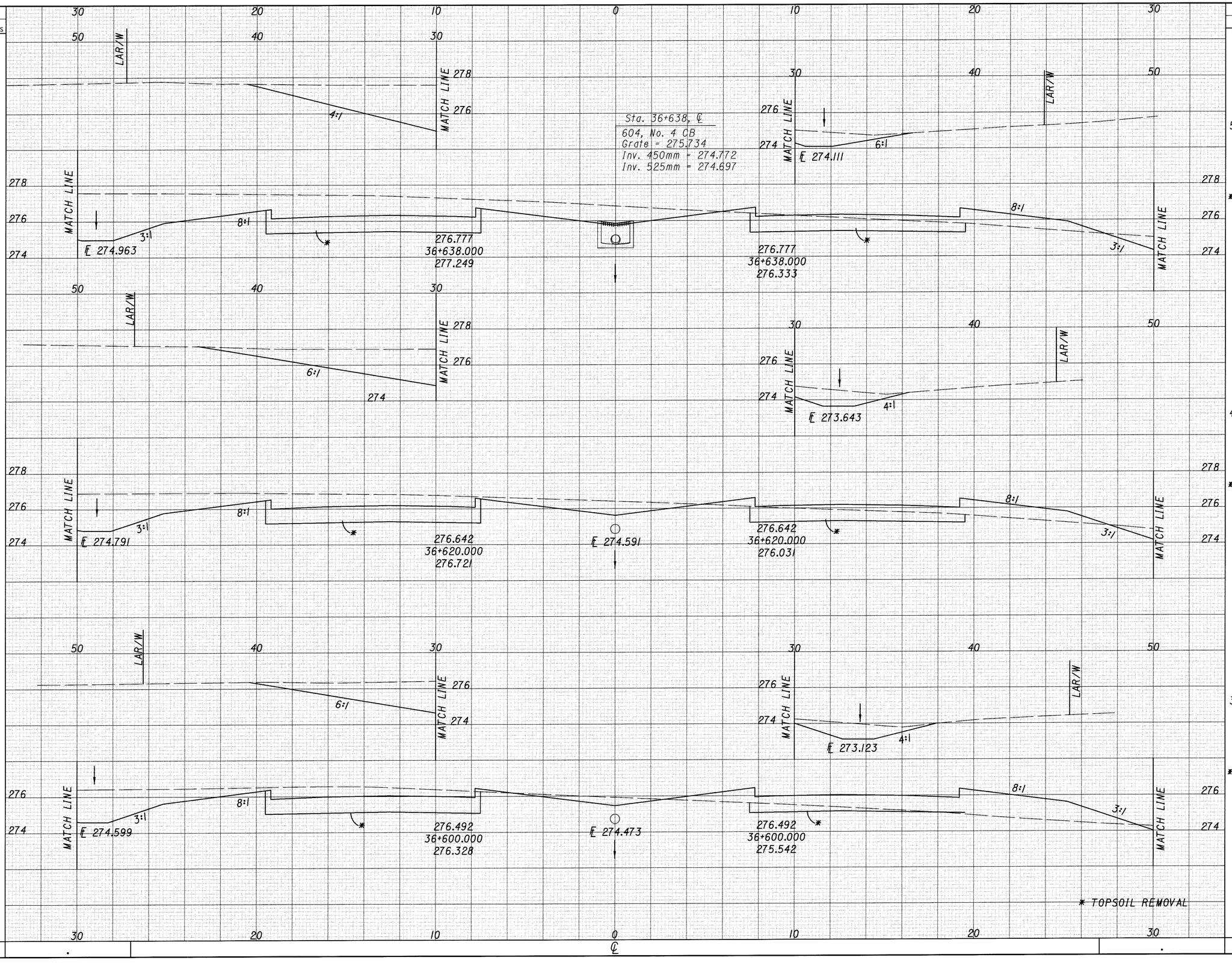
CHECKED REA

US-30 CROSS SECTIONS

STA 36+540.000 TO STA 36+580.000

WYA/CRA-30-28.009/0.000

SEEDING	
END WIDTH	SQ. METERS
	63.27
	1161
	65.72
	1302
	64.52
	1271



END AREA		VOLUME	
CUT	FILL	CUT	FILL
58.95	25.30		
*18.75			
		928	464
		*329	
44.20	26.20		
*17.79			
		755	583
		*307	
31.32	32.06		
*12.89			
		544	670
		*246	

* TOPSOIL REMOVAL

CALCULATED AM

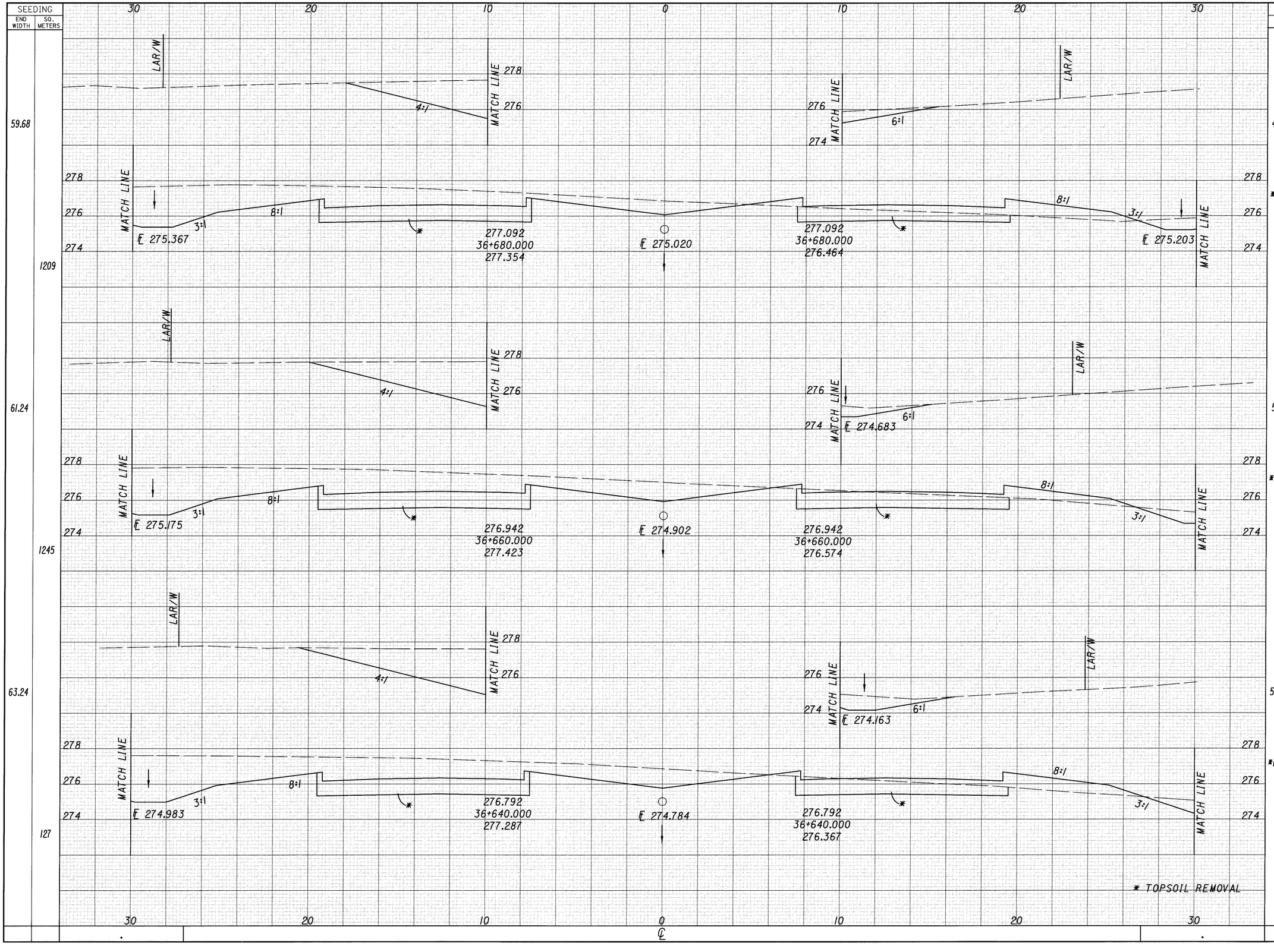
CHECKED REA

US-30 CROSS SECTIONS
STA 36+600.000 TO STA 36+638.000

WYA/CRA-30-28.009/0.000

500
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
59.68	1209	46.25	25.74	1054	496
		*17.47		*372	
61.24	1245	59.10	23.86	1191	491
		*19.70		*386	
63.24	127	59.96	25.25	119	51
		*18.89		*38	



CALCULATED AM

CHECKED REA

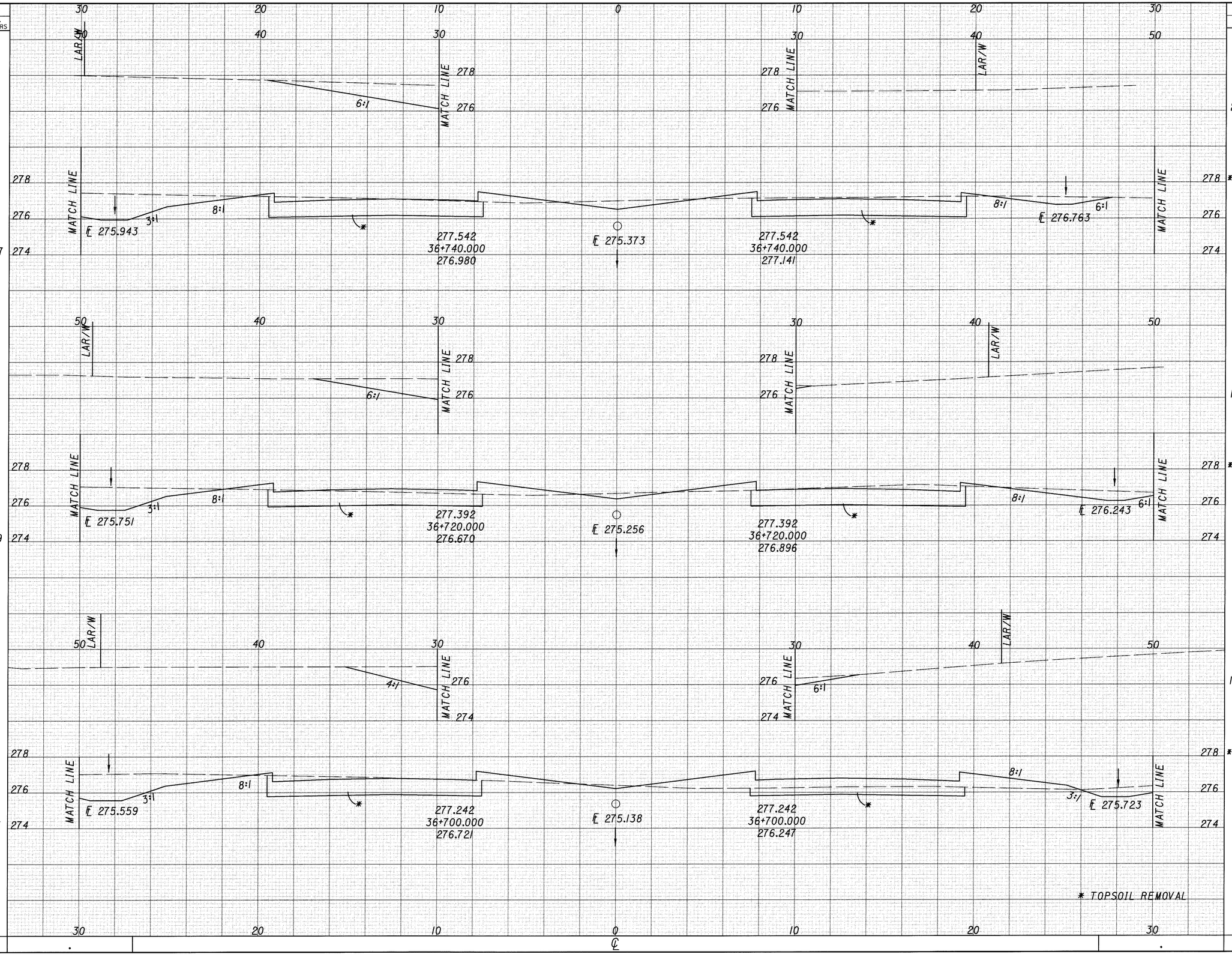
US-30 CROSS SECTIONS

STA 36+640.000 TO STA 36+680.000

WYA/CRA-30-28.009/0.000

501
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
52.49	1057	20.86	22.57	368	468
		*20.23		*396	
53.19		15.96	24.24		
	1079	*19.36		315	524
				*349	
54.67		15.54	28.19		
	1143	*15.50		618	539
				*330	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 36+700.000 TO STA 36+740.000

WYA/CRA-30-28.009/0.000

502

2116

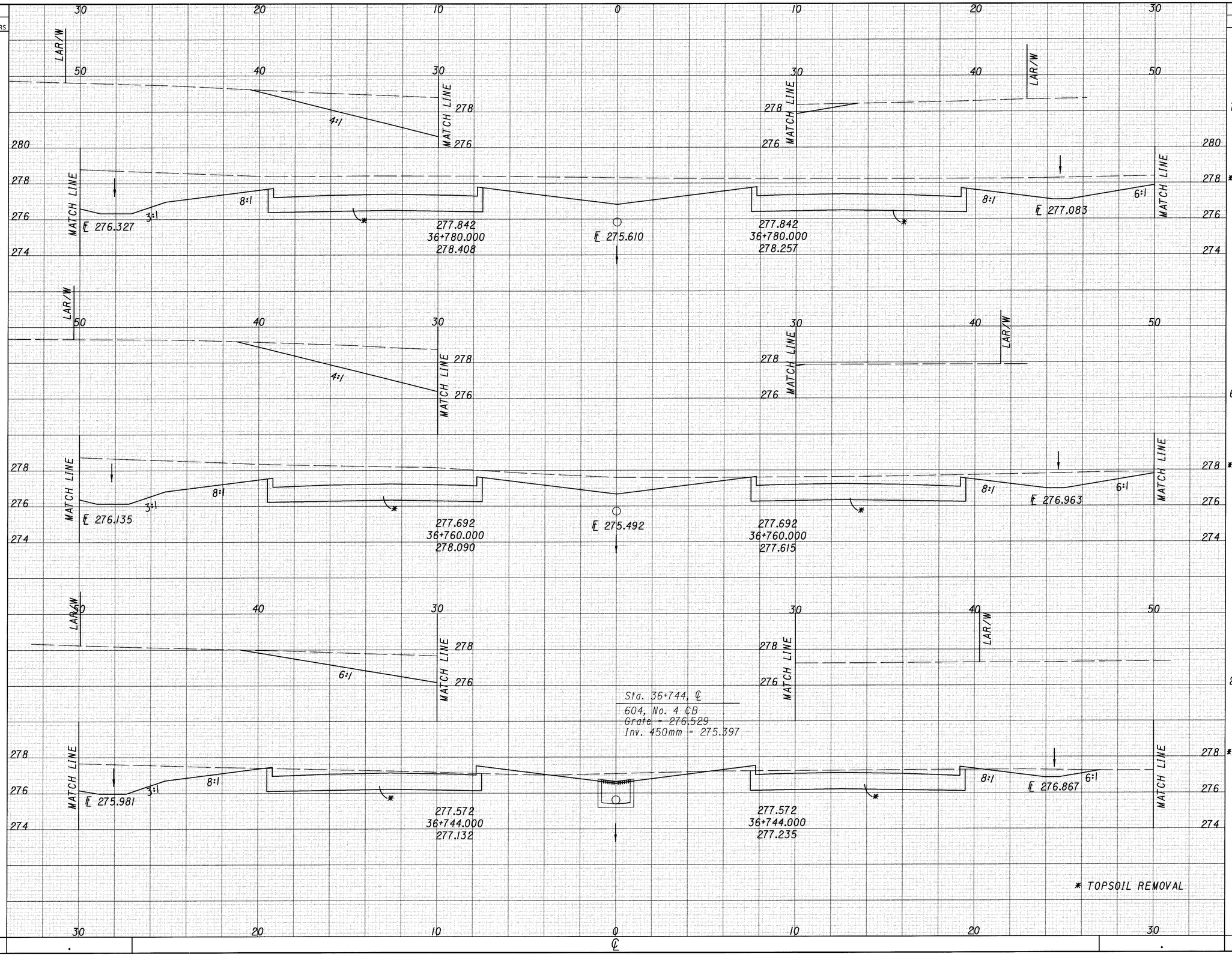
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
60.31	1181	78.82	20.67	1433	413
57.83	890	64.52	20.67	*413	
53.36	212	26.90	21.79	731	340
				*328	
				96	89
				*81	

CALCULATED AM
CHECKED REA

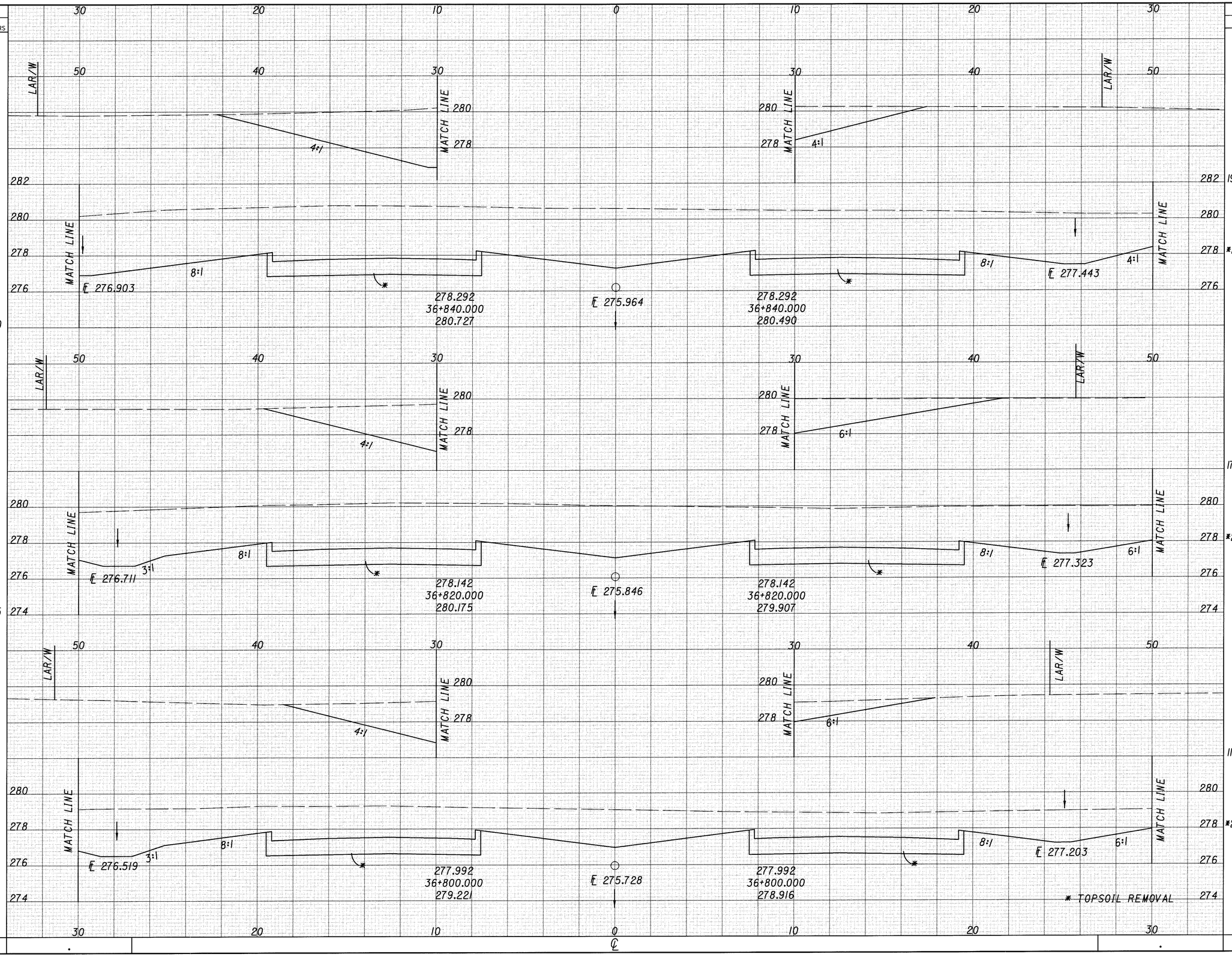
US-30 CROSS SECTIONS
STA 36+744.000 TO STA 36+780.000

WYA/CRA-30-28.009/0.000

503
2116



SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
66.23		196.90	20.67		
		*20.67			
	1340			3679	413
				*413	
67.75		170.96	20.67		
		*20.67			
	1305			2855	413
				*413	
62.78		114.54	20.67		
		*20.67			
	1231			1934	413
				*413	



* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

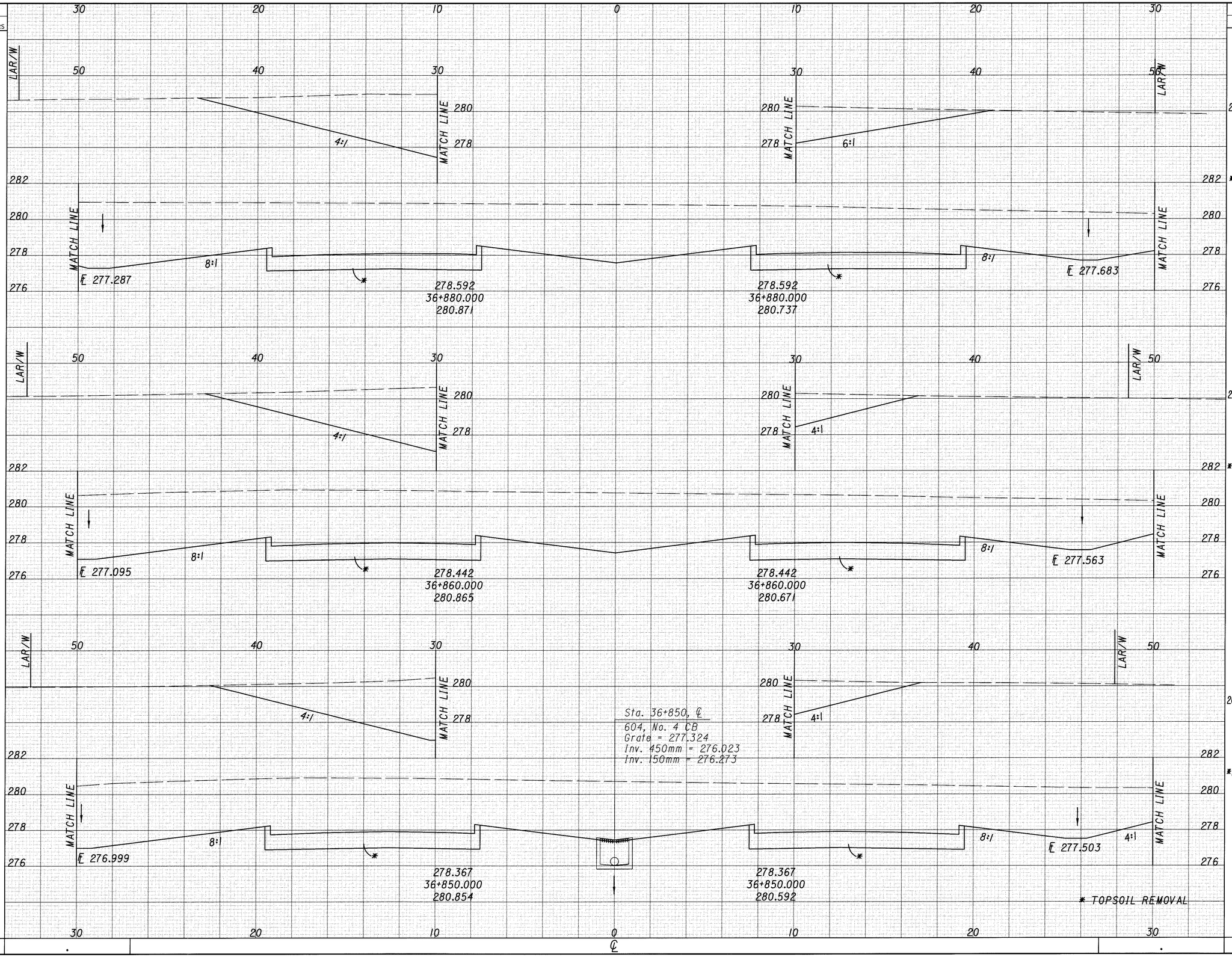
STA 36+800.000 TO STA 36+840.000

WYA/CRA-30-28.009/0.000

504
2116

SEEDING END WIDTH	SEEDING SQ. METERS
70.77	1371
66.32	663
66.21	662

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
200.58	20.17	4008	408
*20.17		*408	
200.24	20.65	2005	207
*20.65		*207	
200.73	20.67	1988	207
*20.67		*207	



CALCULATED AM

CHECKED REA

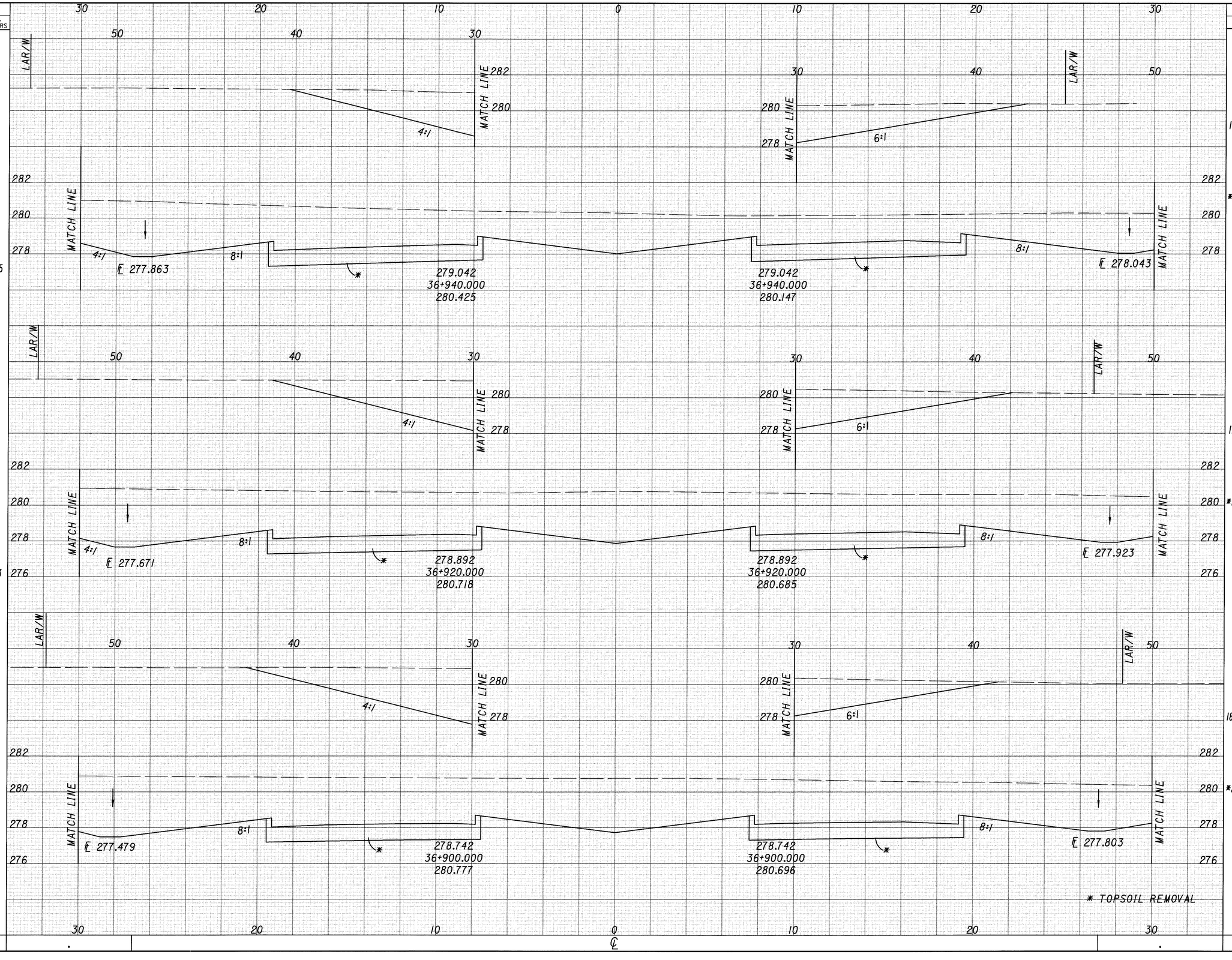
US-30 CROSS SECTIONS

STA 36+850.000 TO STA 36+880.000

WYA/CRA-30-28.009/0.000

505
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
69.66	1395	144.70	20.46	3201	409
		*20.46			
69.82	1403	175.41	20.46	3617	410
		*20.46			
70.49	1413	186.30	20.51	3869	407
		*20.51			
				*409	
				*410	
				*407	



* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

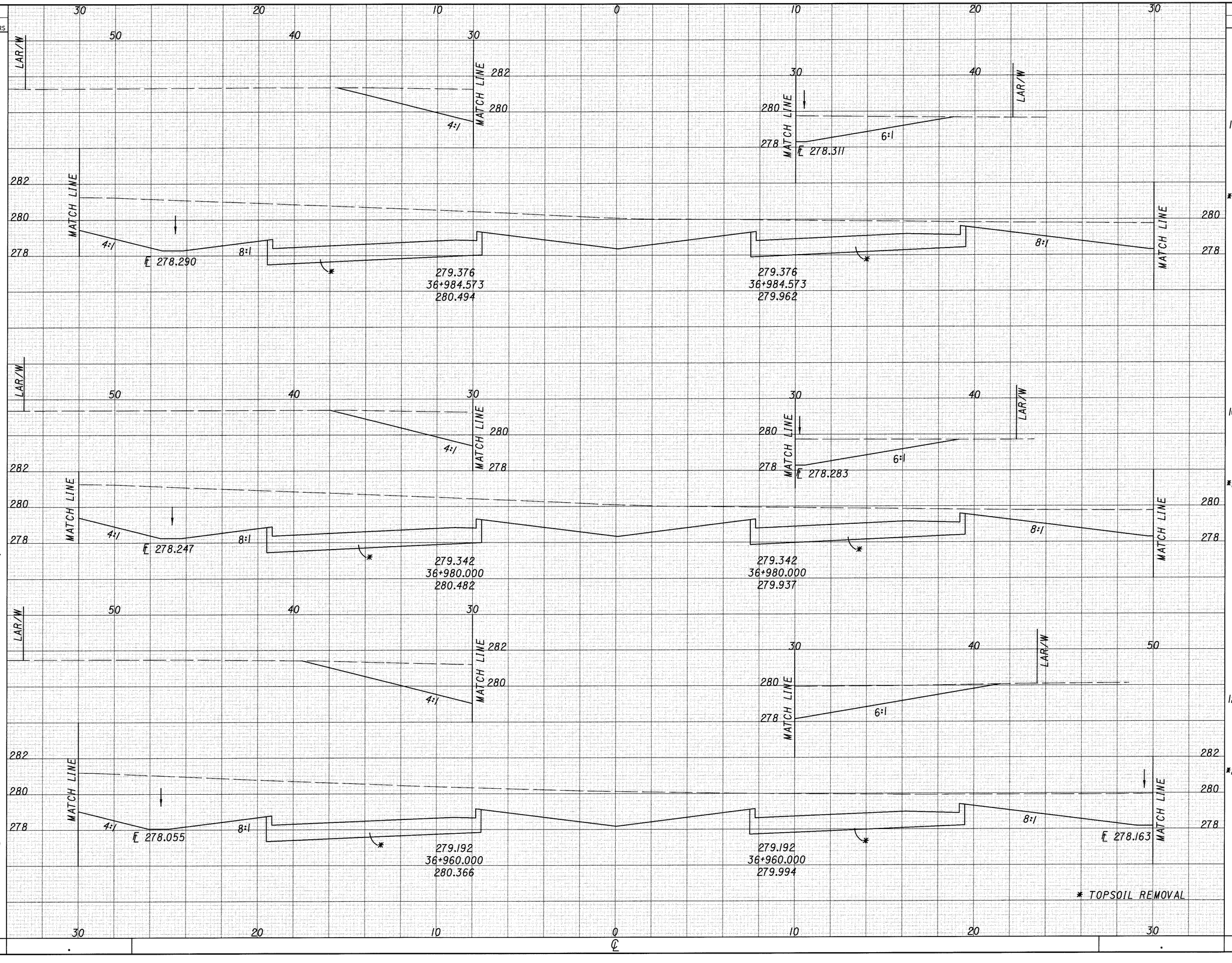
US-30 CROSS SECTIONS

STA 36+900.000 TO STA 36+940.000

WYA / CRA-30-28.009 / 0.000

506
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
62.64	288	103.16	20.52	477	94
		*20.52		*94	
63.35	1307	105.31	20.52	2266	410
		*20.52		*410	
67.36	1370	121.25	20.52	2660	410
		*20.52		*410	



* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

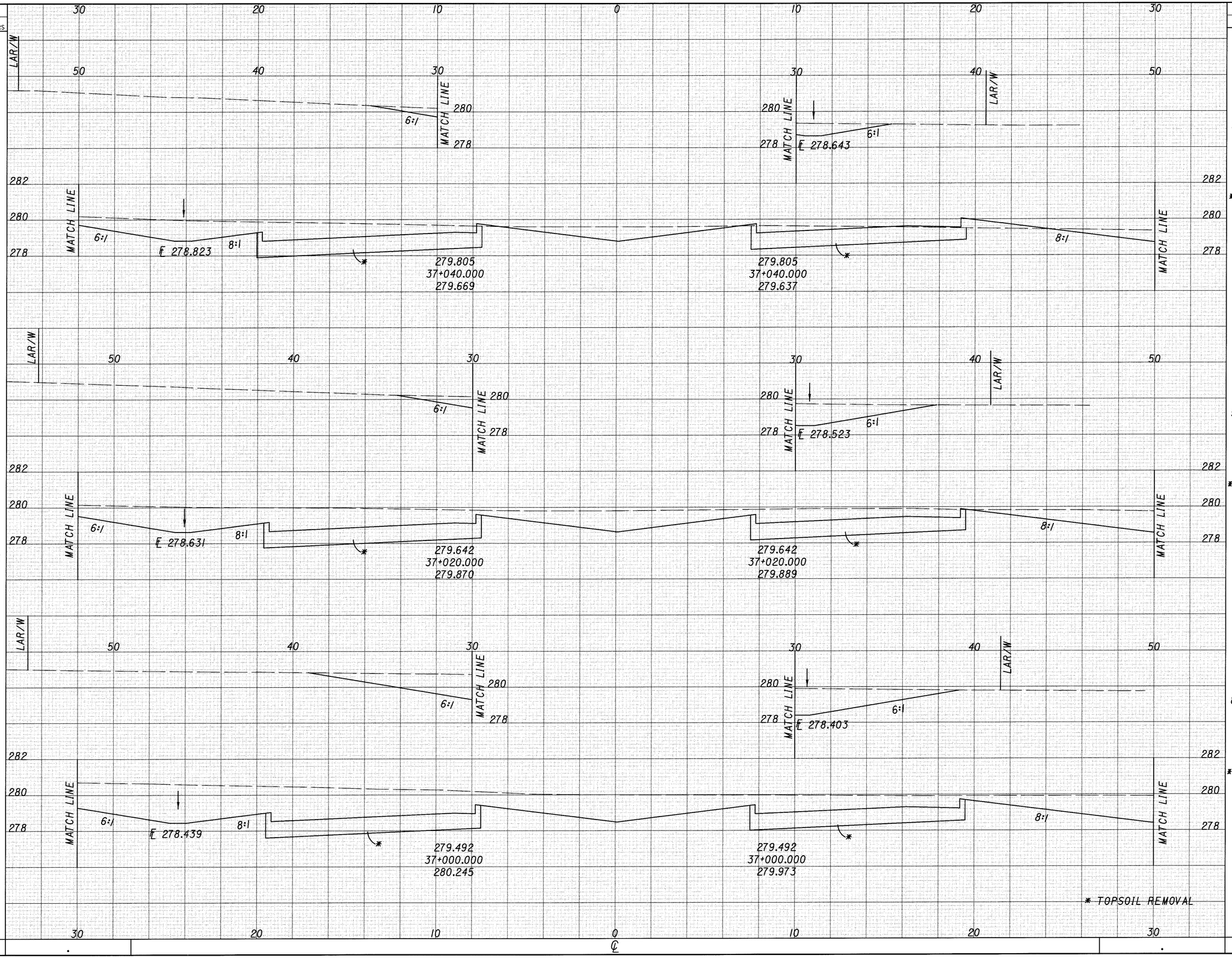
US-30 CROSS SECTIONS

STA 36+960.000 TO STA 36+984.573

WYA / CRA-30-28.009 / 0.000

507
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
53.88	1118	30.21	22.17	857	428
		*20.51		*411	
57.88	1223	55.51	20.58	1431	411
		*20.57		*411	
64.37	980	87.61	20.49	1472	316
		*20.49		*316	



CALCULATED AM

CHECKED REA

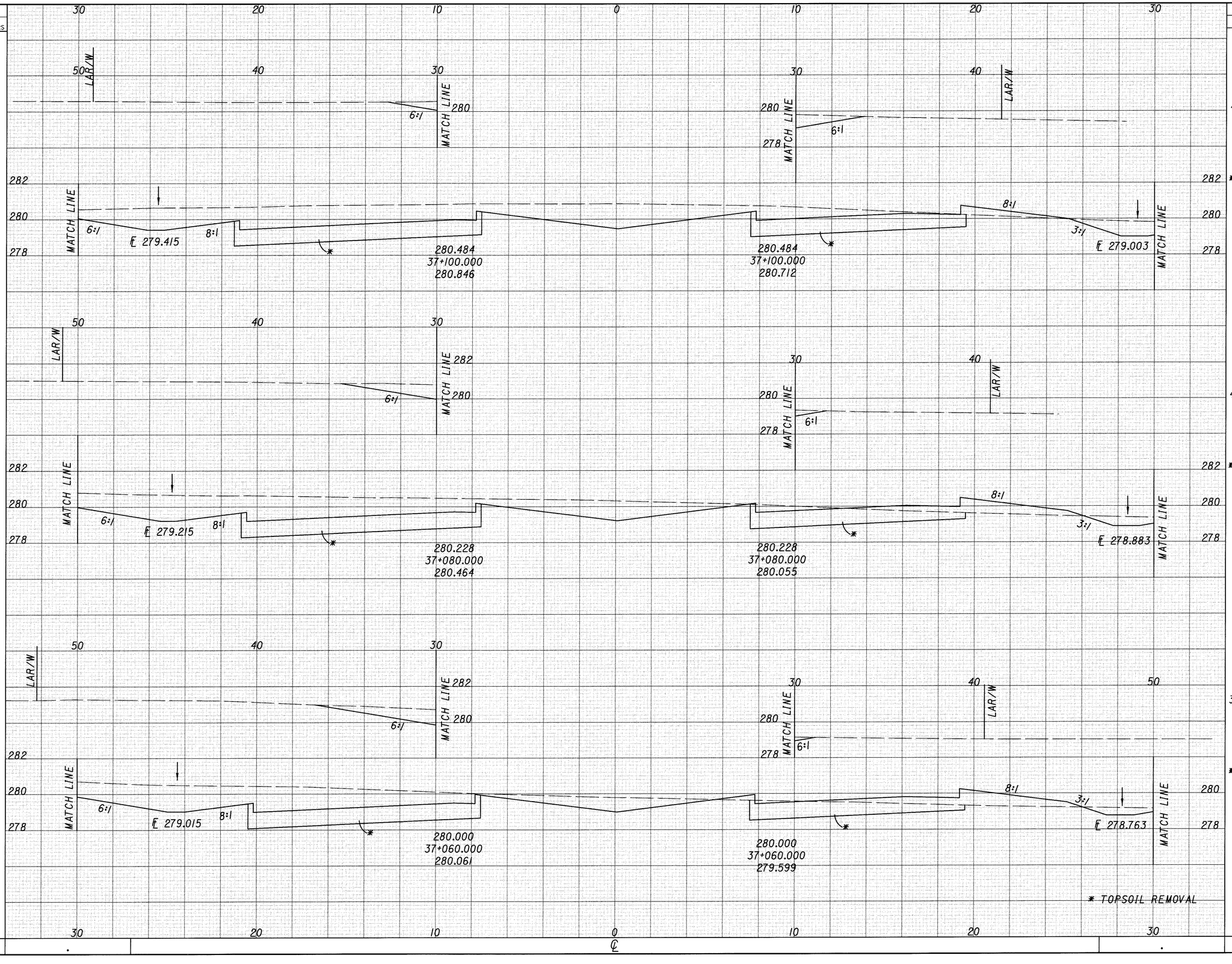
US-30 CROSS SECTIONS

STA 37+000.000 TO STA 37+040.000

WYA/CRA-30-28.009/0.000

508
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
50.16	1011	46.45	23.32	868	481
		*21.78		*419	
50.91	1030	40.30	24.79	756	497
		*20.10		*392	
52.11	1060	35.26	24.95	655	471
		*19.10		*396	



CALCULATED AM

CHECKED REA

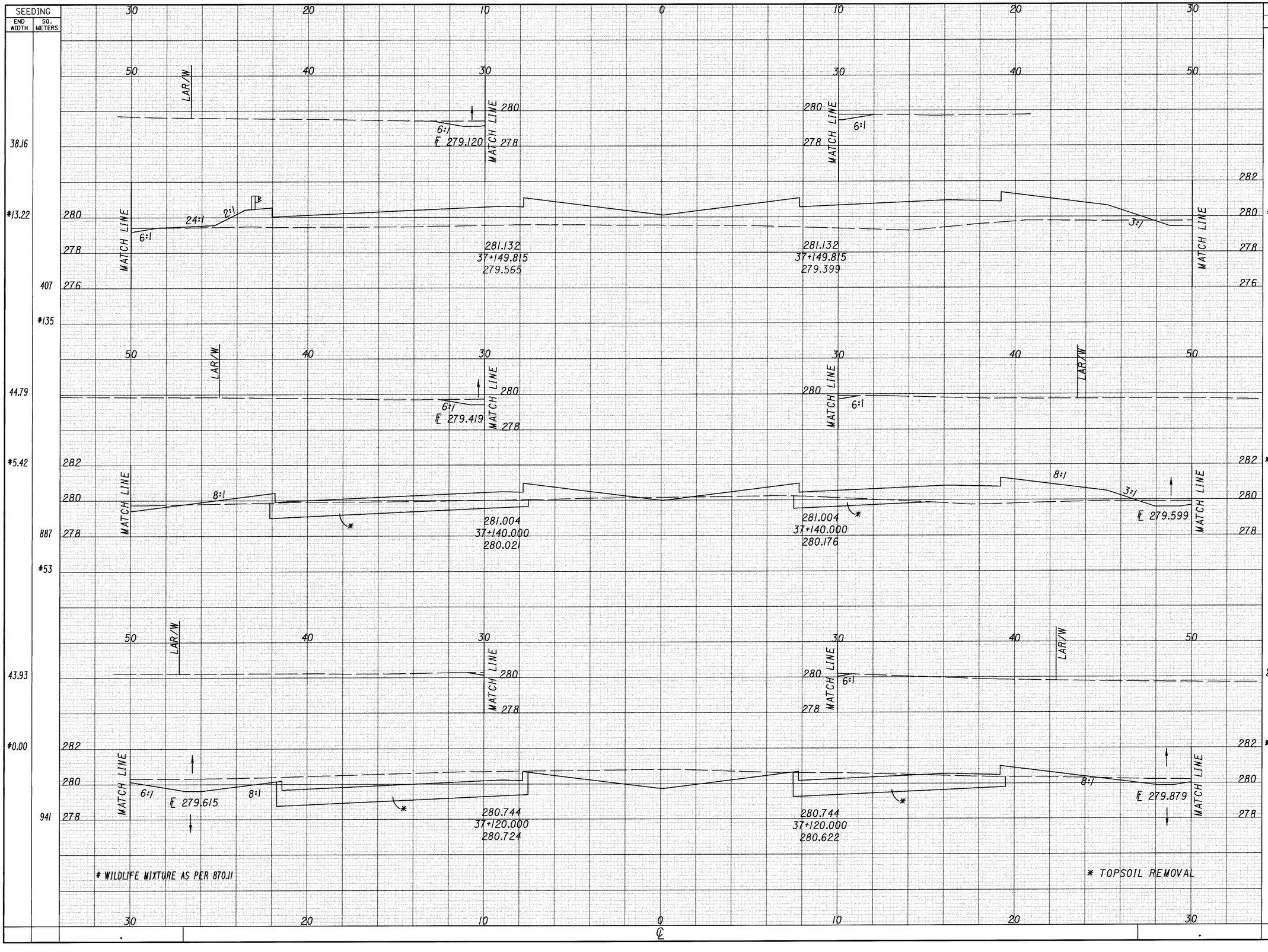
US-30 CROSS SECTIONS

STA 37+060.000 TO STA 37+100.000

WYA / CRA-30-28.009 / 0.000

509
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
38.16		1.66	55.92		
#13.22		#0.00			
	407			19	449
	#135			#59	
44.79		2.17	35.59		
#5.42		#12.00			
	887			275	593
	#53			#342	
43.93		25.35	23.73		
#0.00		#22.17			
	941			718	471
				#435	



CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 37+120.000 TO STA 37+149.815

WYA/CRA-30-28.009/0.000

SEEDING END WIDTH	SEEDING SQ. METERS
58.00	
#21.45	
	624
	#137
66.79	
#15.55	
	535
	#156
40.15	
#14.16	
	399
	#142

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
8.50	156.07		
		97	1301
10.83	104.20		
		59	950
0.90	85.85		
		13	722

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 37+160.000 TO STA 37+180.000

WYA/CRA-30-28.009/0.000

510A
2116

LAR/W

MATCH LINE

Easement 61.925

Easement 64.293

281.524
37+180.000
279.139

281.524
37+180.000
278.837

Sta. 37+170, 33.875m Rt.
HW - 4A
Inv. 375mm = 277.891
Tot. Area = 0.832 Ac.
Q10 = 0.171cms
HGL Elev. = 278.240
277.823

0.0709 m/m

601 Rock Channel Protection
Type C with filter
0.5m x 2.0m x 1.8m = 1.8cm

℄ 278.491

℄ 278.607

Sta. 37+170, 0.097m Rt.
604, No. 4 CB
Grate = 280.351
Inv. 375mm = 279.514
Inv. 150mm = 279.814

281.394
37+170.000
278.825

281.394
37+170.000
279.109

603, 33.8m x 375mm Conduit Type B @ 4.8%

℄ 278.748

℄ 279.111

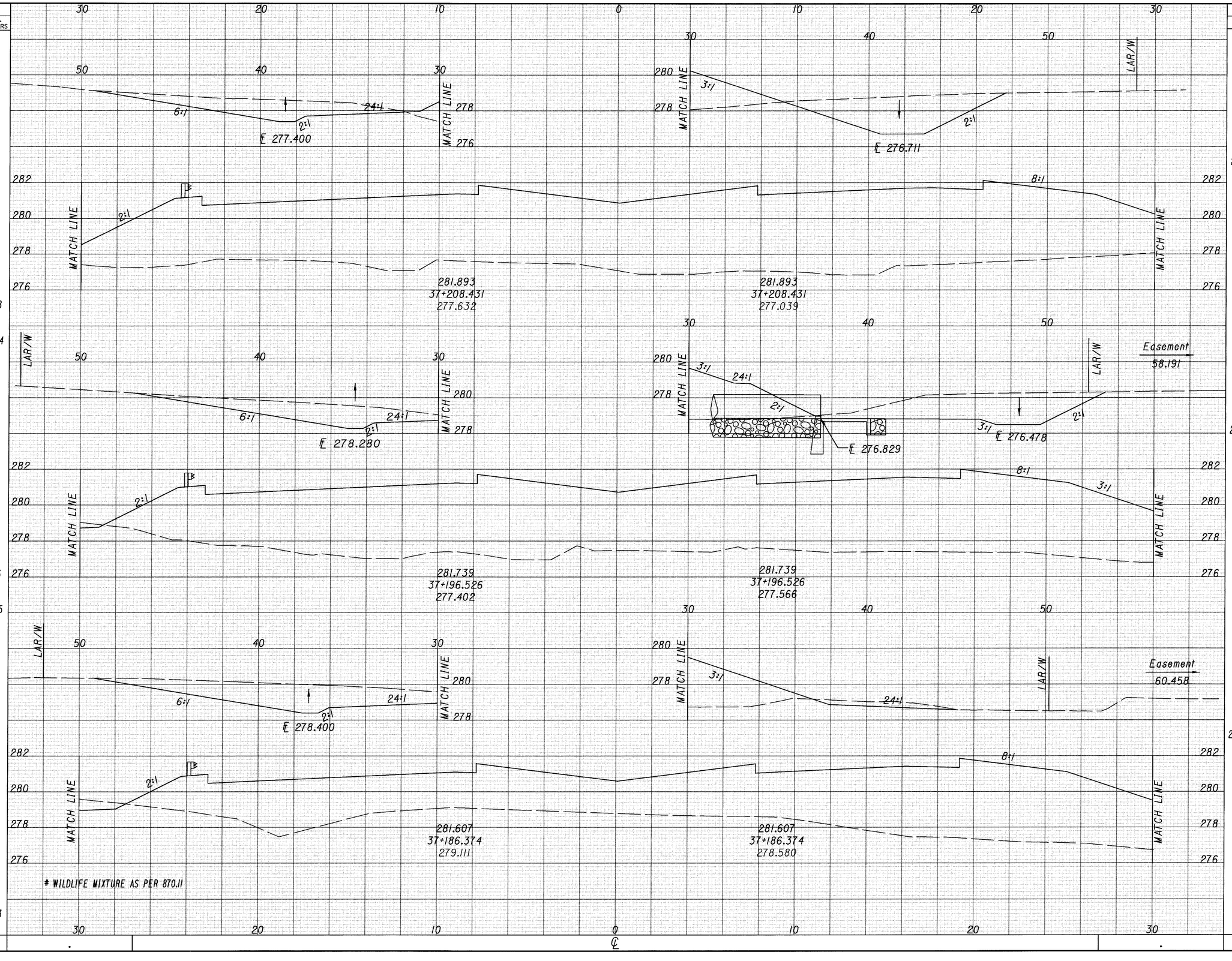
281.264
37+160.000
278.935

281.264
37+160.000
278.855

WILDLIFE MIXTURE AS PER 870.11

℄

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
58.81		26.23	236.28		
#15.67					
	728			330	2734
#284					
63.56		29.28	223.01		
#21.40					
	596			254	1973
#255					
53.86		20.83	165.07		
#22.92					
	356			93	1025
#233					



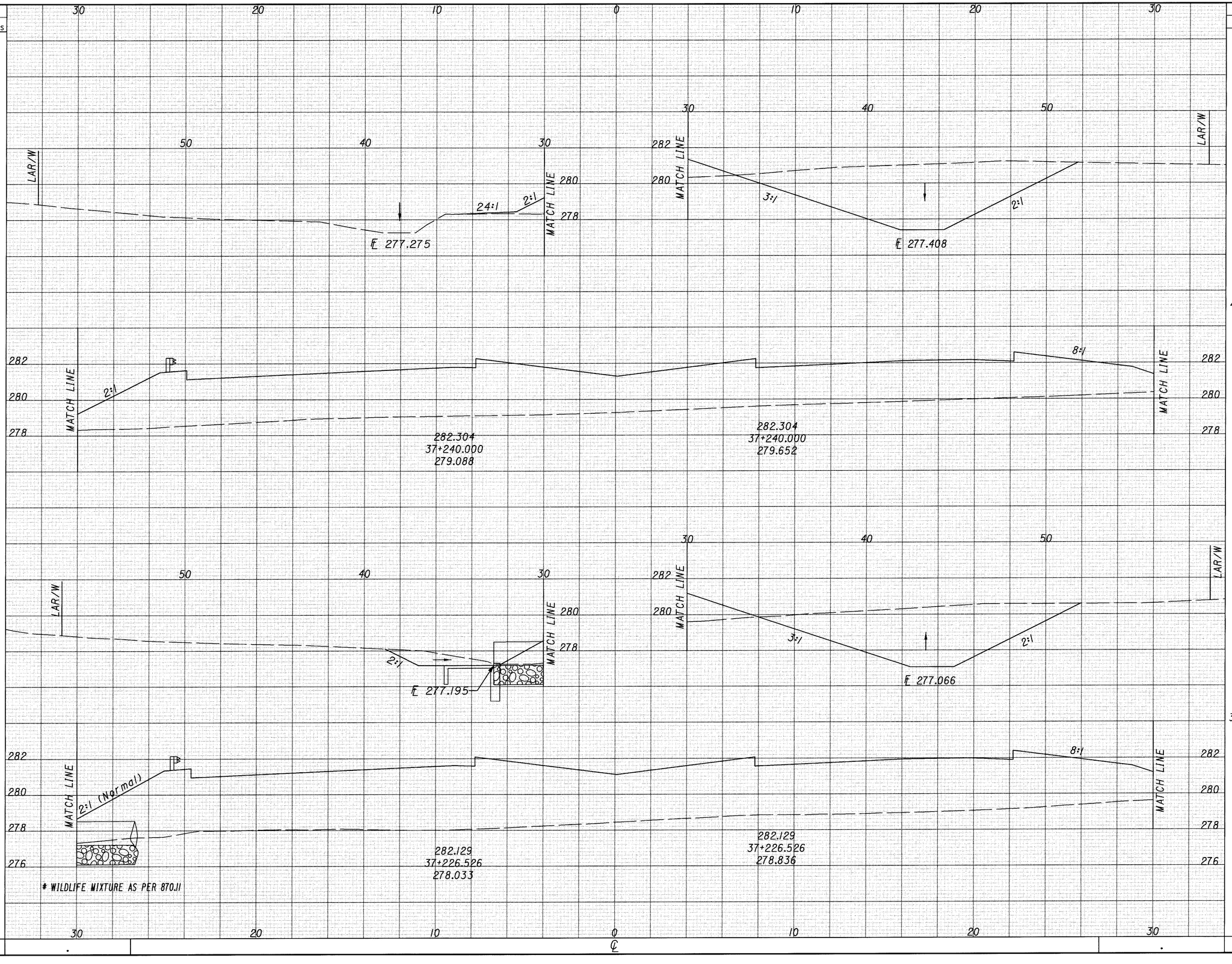
US-30 CROSS SECTIONS
STA 37+186.374 TO STA 37+208.431

CALCULATED AM
CHECKED REA

WYA/CRA-30-28.009/0.000

511
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
61.18		40.04	140.46		
#6.28	835			521	2180
#126					
62.82		37.27	183.20		
#8.08	1101			575	3795
#109					



CALCULATED AM

CHECKED REA

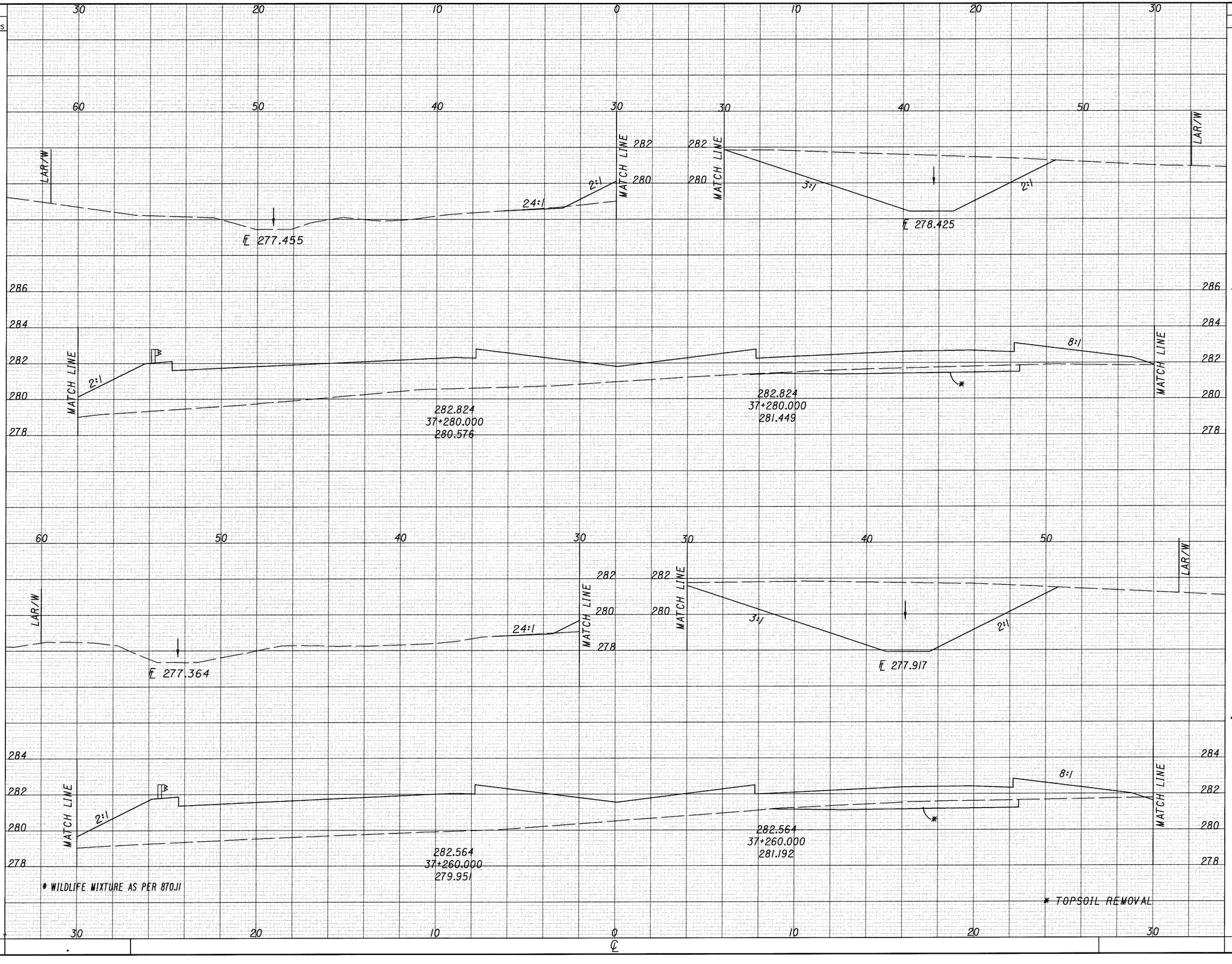
US-30 CROSS SECTIONS

STA 37+226.526 TO STA 37+240.000

WYA/CRA-30-28.009/0.000

512
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
58.30		33.17	82.75		
#6.28					
	1178			793	1660
	#126				
59.52		46.12	83.22		
#6.28					
	1207			862	2237
	#126				



CALCULATED AM

CHECKED REA

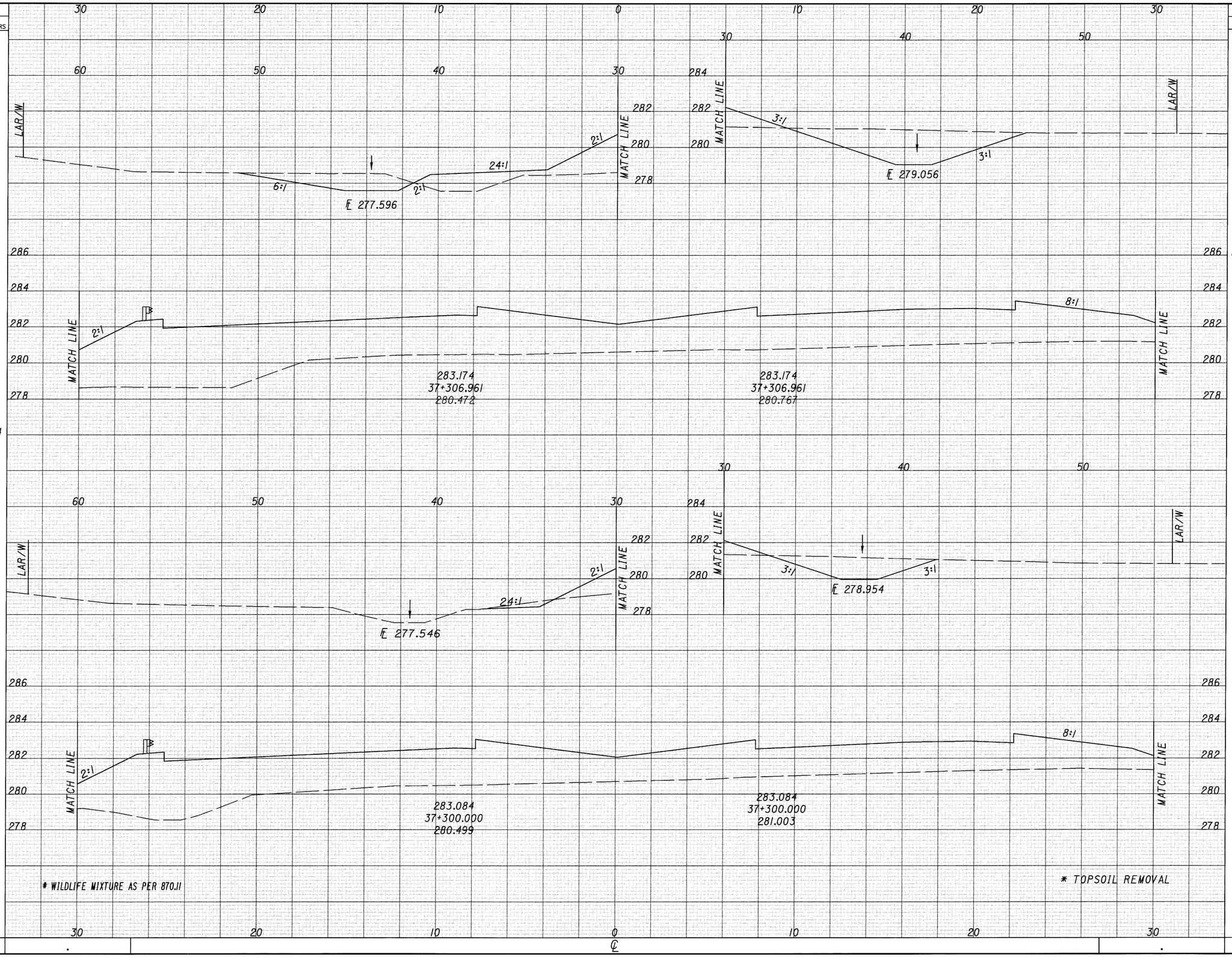
US-30 CROSS SECTIONS

STA 37+260.000 TO STA 37+280.000

WYA/CRA-30-28.009/0.000

513
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
56.69		20.65	144.60		
#25.29	378			99	914
	#234				
51.94		7.66	117.87		
#13.41	1102			408	2006
	#93				



WILDLIFE MIXTURE AS PER 870.11

* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

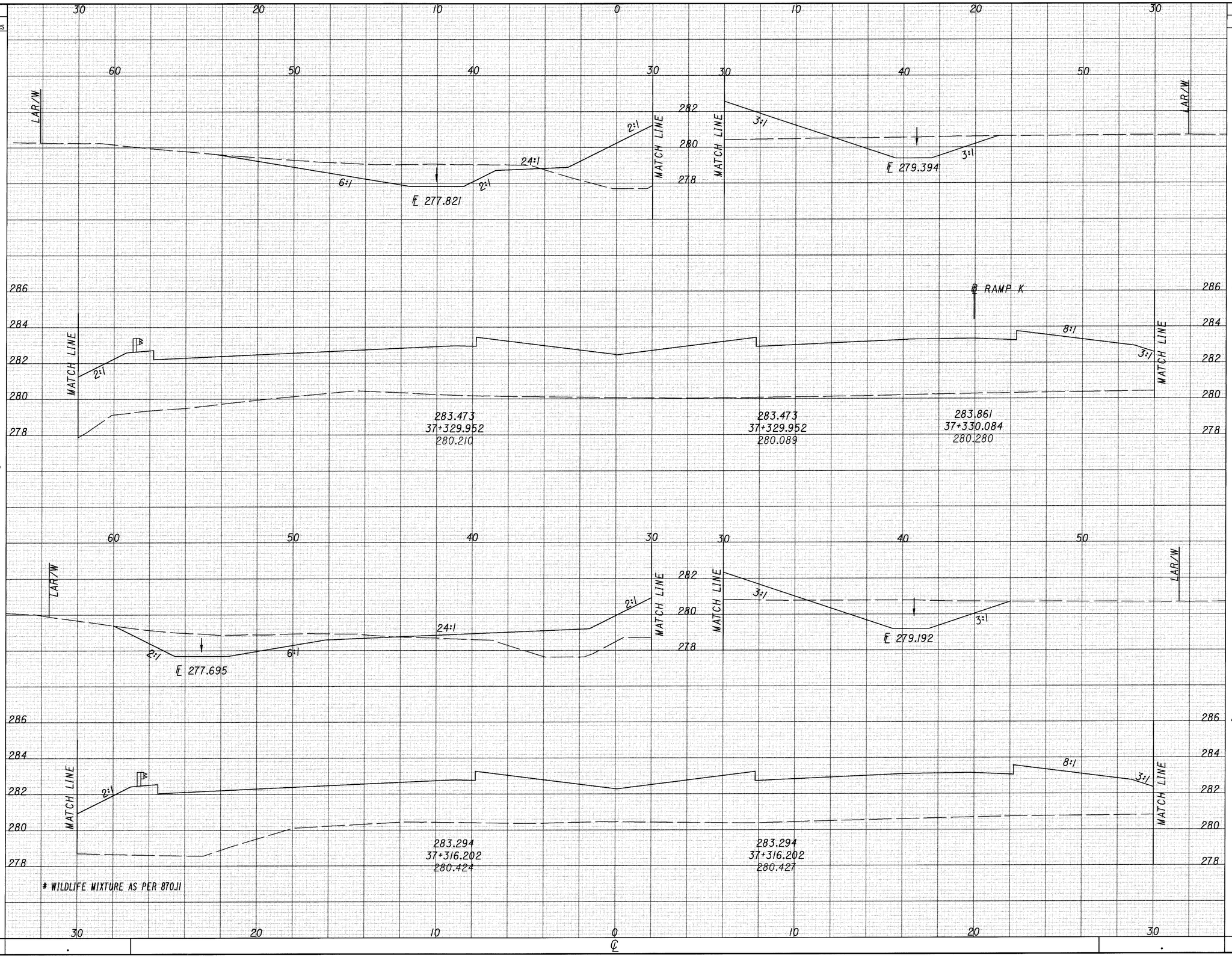
US-30 CROSS SECTIONS

STA 37+300.000 TO STA 37+306.961

WYA/CRA-30-28.009/0.000

514
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
55.30		18.01	187.50		
#25.66	759			270	2439
#258					
55.12		21.31	167.25		
#26.57	517			194	1441
	#365				



CALCULATED AM

CHECKED REA

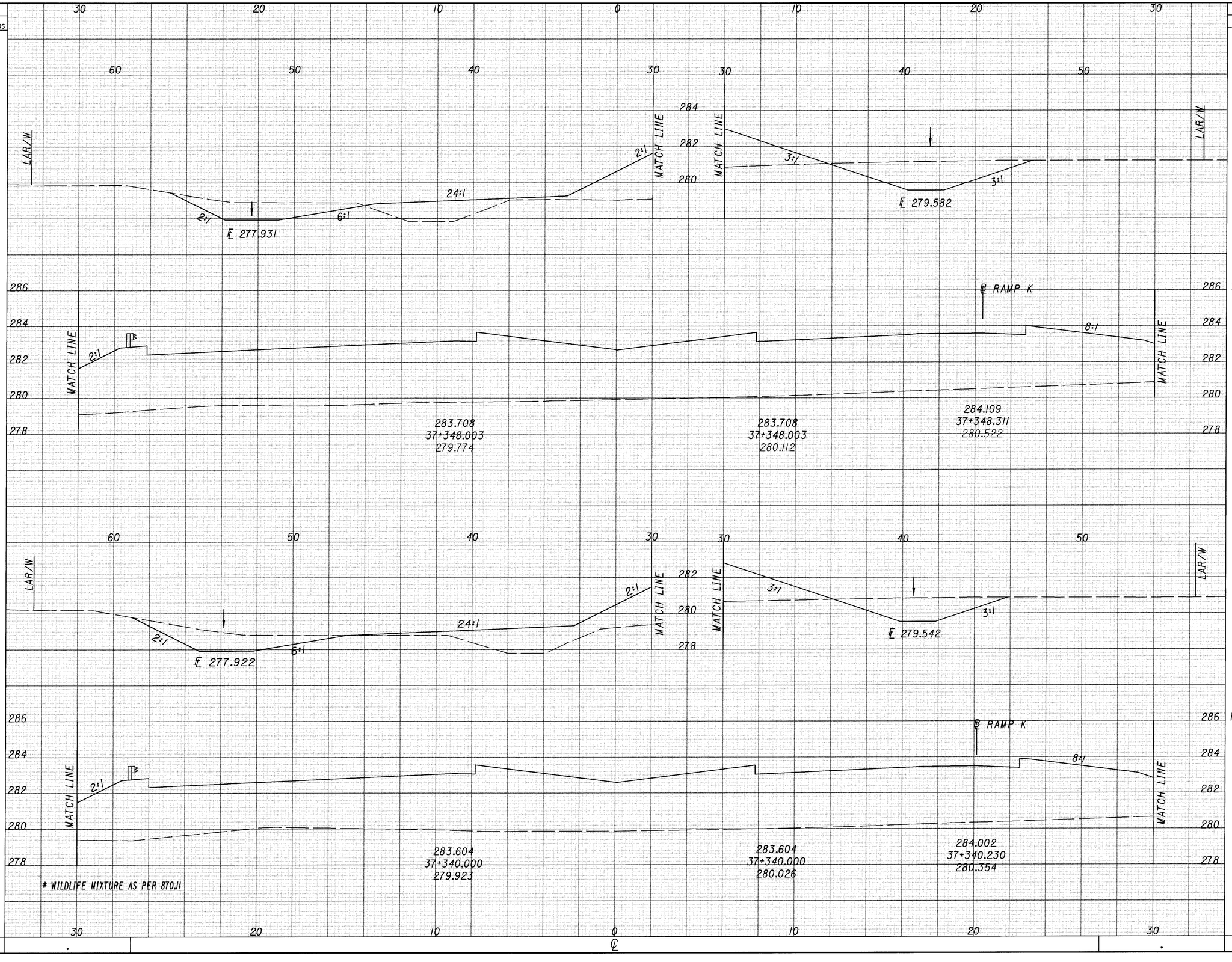
US-30 CROSS SECTIONS

STA 37+316.202 TO STA 37+329.952

WYA/CRA-30-28.009/0.000

514A
2116

SEEDING END WIDTH	SEEDING SQ. METERS
56.31	
#26.92	
	445
#126	
54.89	
#26.91	
	554
#215	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
17.93	208.81		
		133	1630
15.40	198.58		
		168	1940

CALCULATED AM

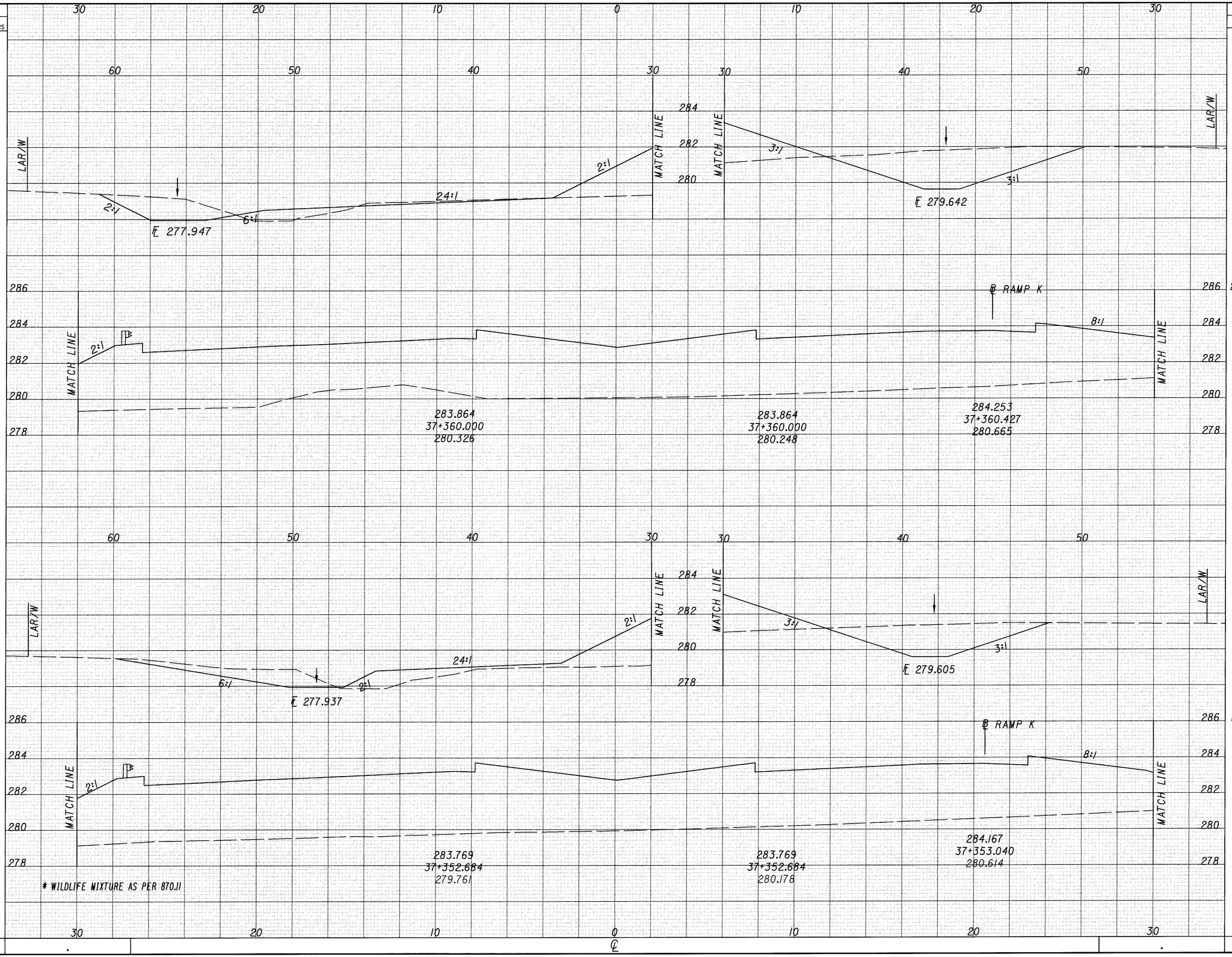
CHECKED REA

US-30 CROSS SECTIONS

STA 37+340.000 TO STA 37+348.003

WYA/CRA-30-28.009/0.000

SEEDING	
END WIDTH	SQ. METERS
59.47	
#17.50	
	427
	#121
57.36	
#28.48	
	266
	#208



END AREA		VOLUME	
CUT	FILL	CUT	FILL
25.03	198.28		
		161	1493
18.91	209.84		
		86	980

CALCULATED AM

CHECKED REA

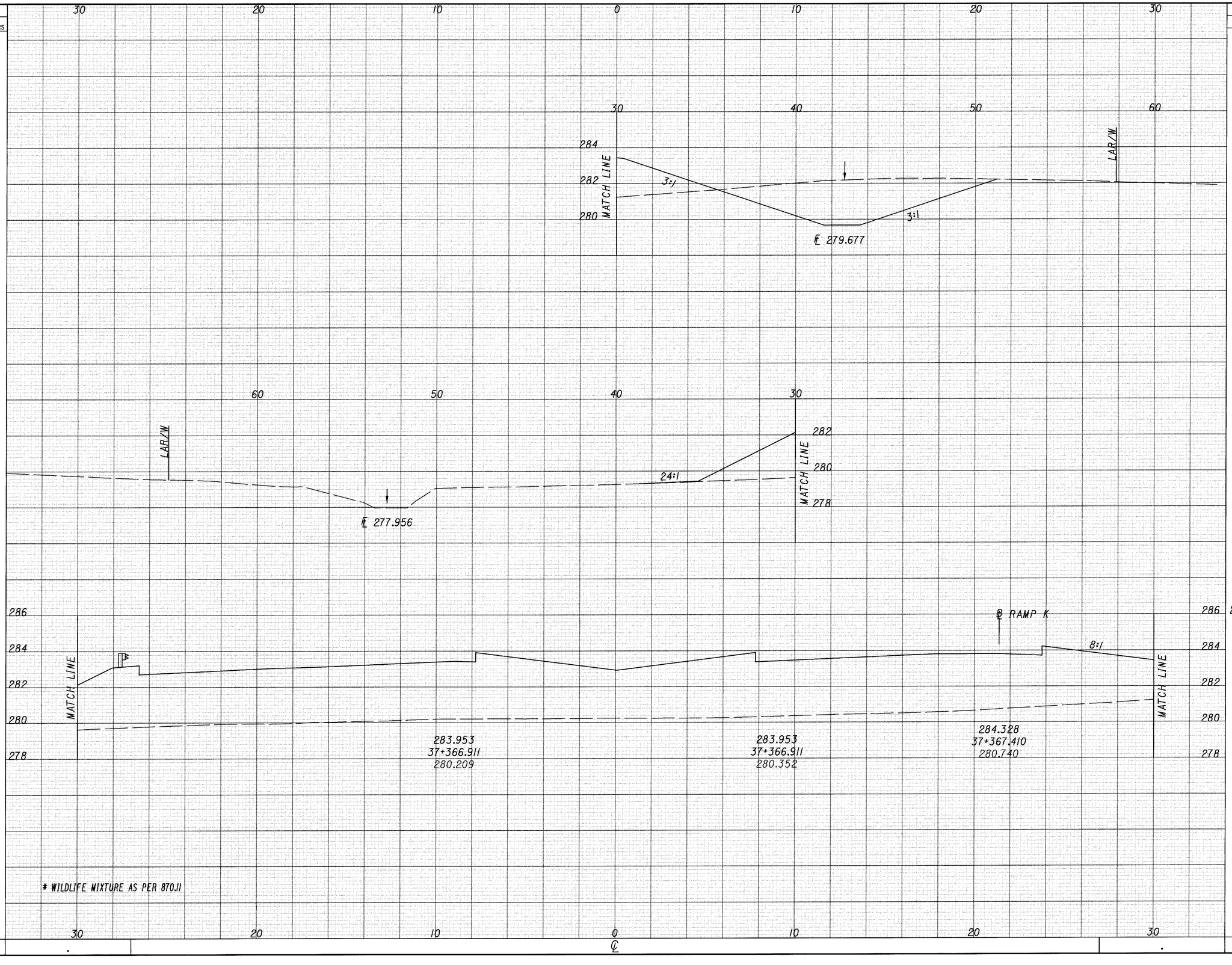
US-30 CROSS SECTIONS

STA 37+352.684 TO STA 37+360.000

WYA/CRA-30-28.009/0.000

515A
2116

SEEDING	
END WIDTH	SQ. METERS
59.89	
#11.99	
	412
	#157



END AREA		VOLUME	
CUT	FILL	CUT	FILL
22.44	199.10		
		164	1373

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 37+366.911

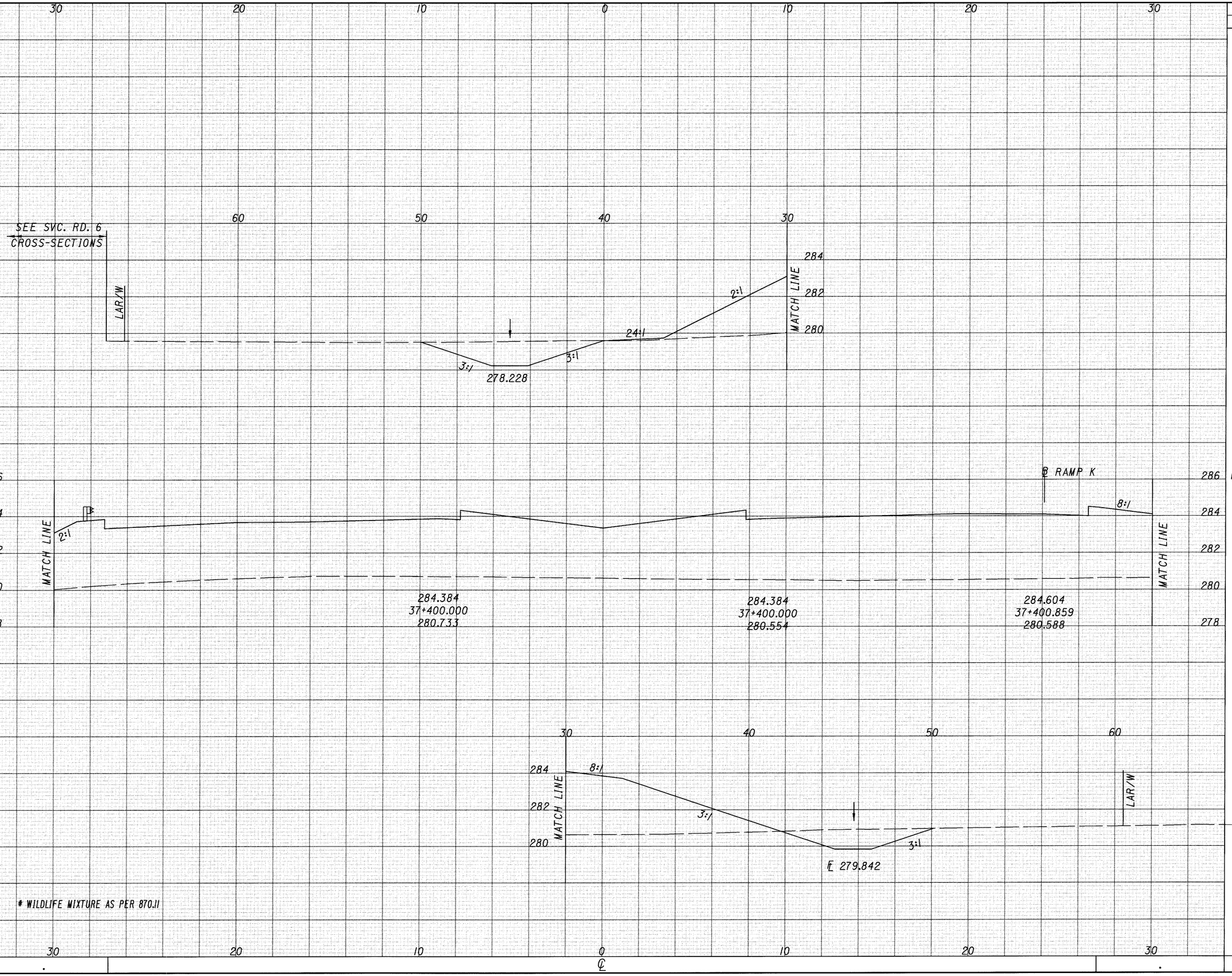
WYA/CRA-30-28.009/0.000

515B
2116

SEEDING	
END WIDTH	SQ. METERS
58.65	
#17.18	
	776
	#344

END AREA		VOLUME	
CUT	FILL	CUT	FILL

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
56.63		286		13.56	228.17	
#0.00		284				
	1153	282				328 4293
		280				
		278				



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 37+400.000

WYA/CRA-30-28.009/0.000

517
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
70.63	2295	14.97	281.04	515	9184

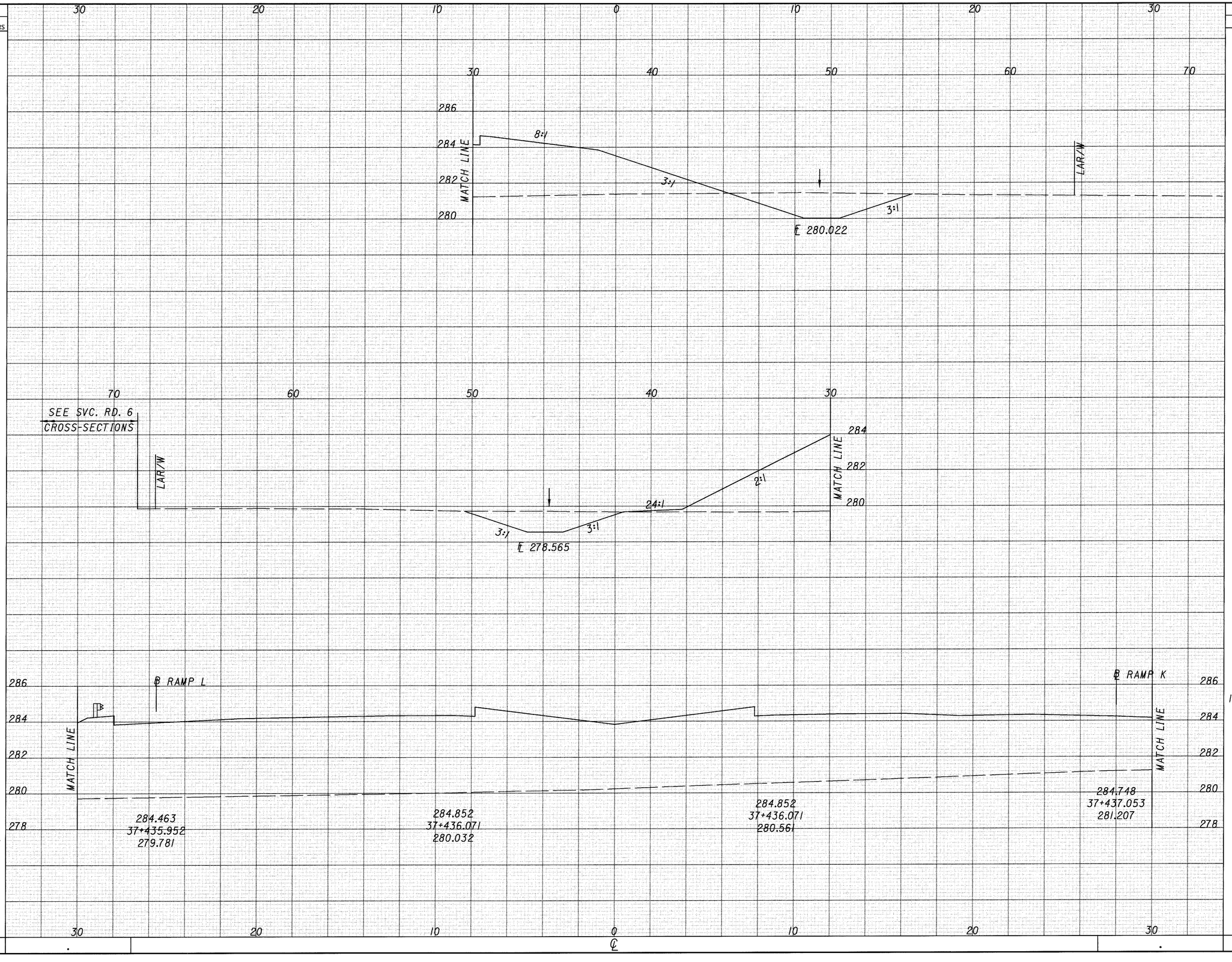
CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 37+436.071

WYA / CRA-30-28.009 / 0.000

518
2116

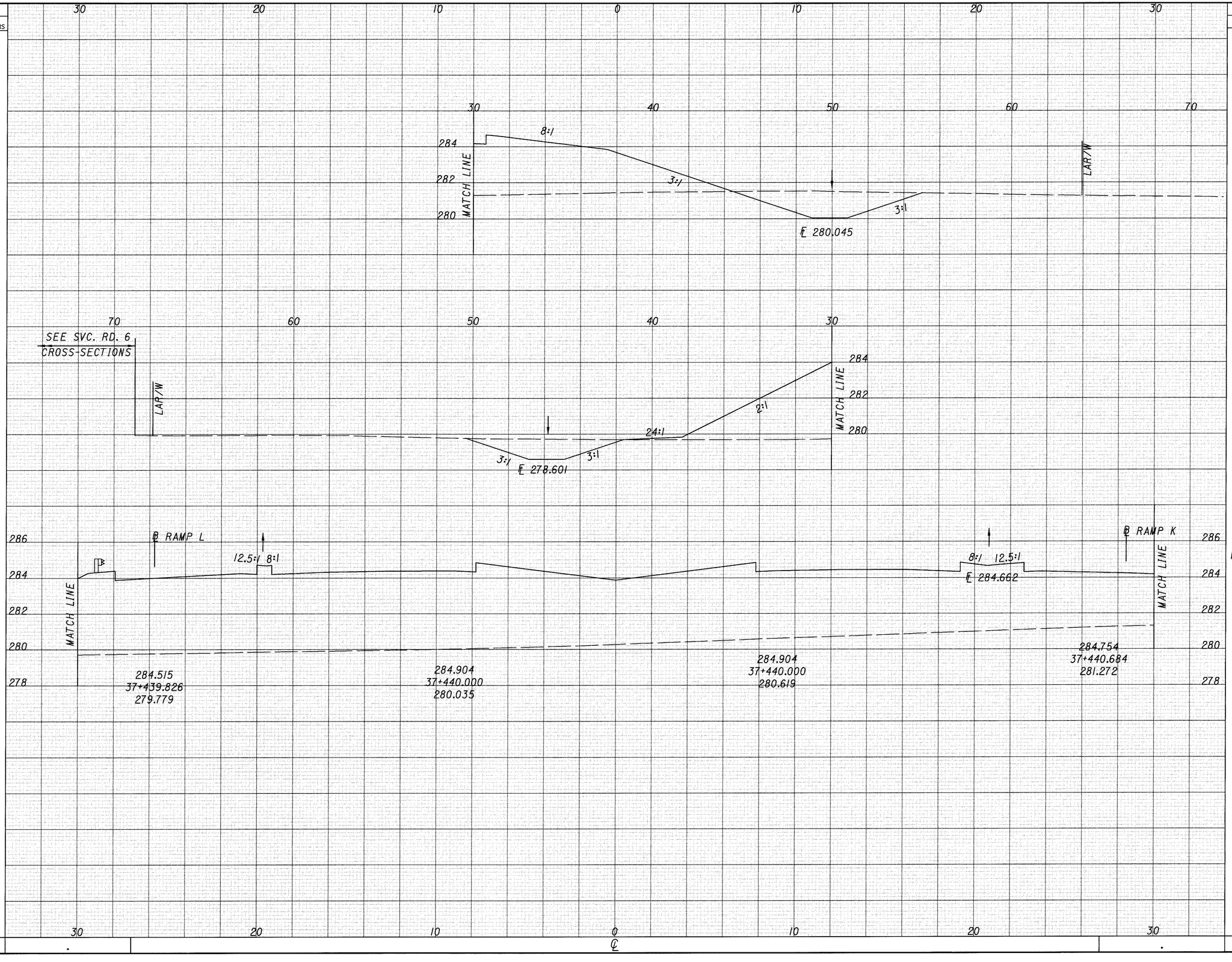


SEEDING	
END WIDTH	SQ. METERS
75.22	287

END AREA		VOLUME	
CUT	FILL	CUT	FILL
15.32	284.62	60	1111

CALCULATED AM

CHECKED REA

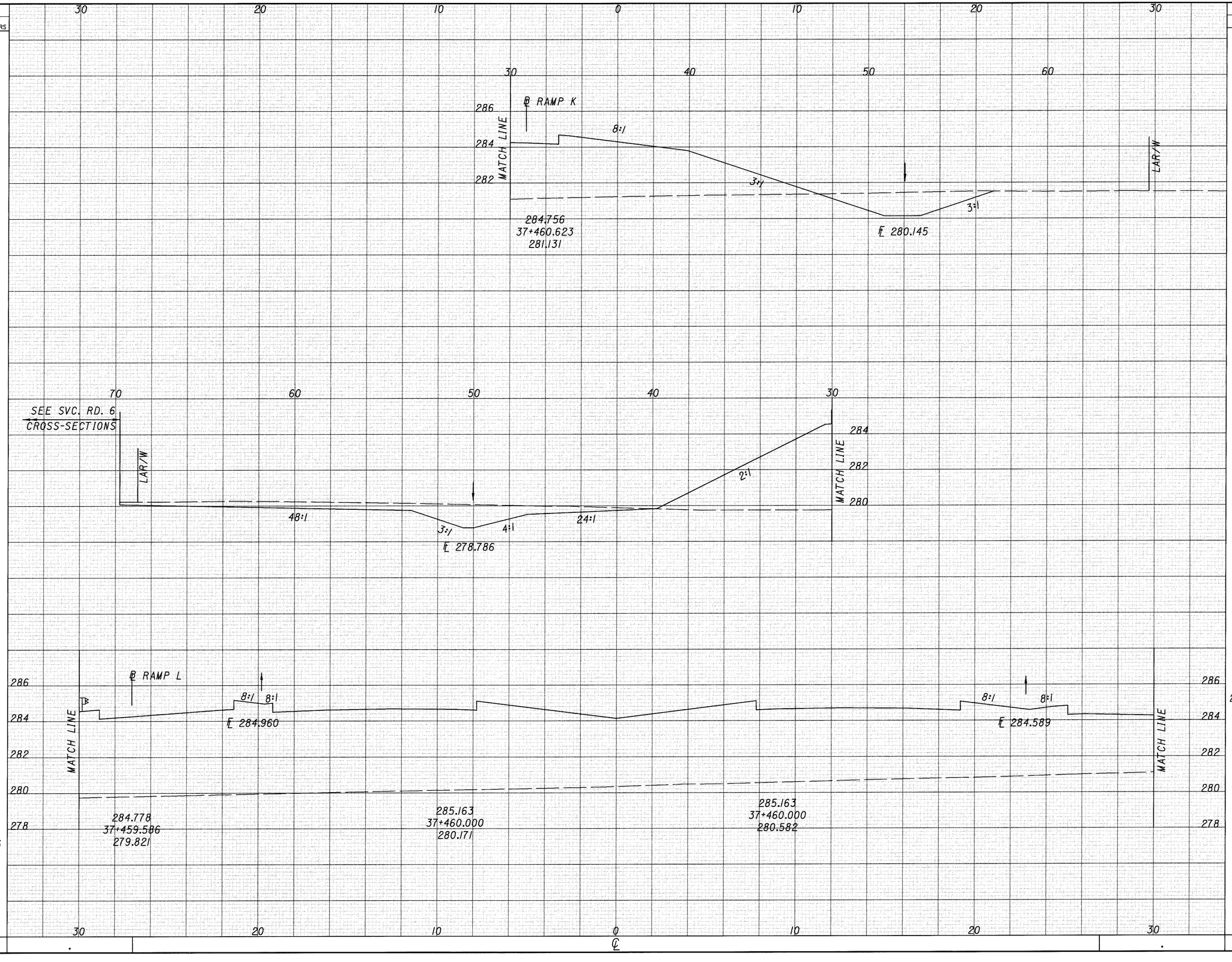


US-30 CROSS SECTIONS
STA 37+440.000

WYA/CRA-30-28.009/0.000

519
2116

SEEDING	
END WIDTH	SQ. METERS
97.39	1726



END AREA		VOLUME	
CUT	FILL	CUT	FILL
20.66	315.08	360	5997

CALCULATED AM

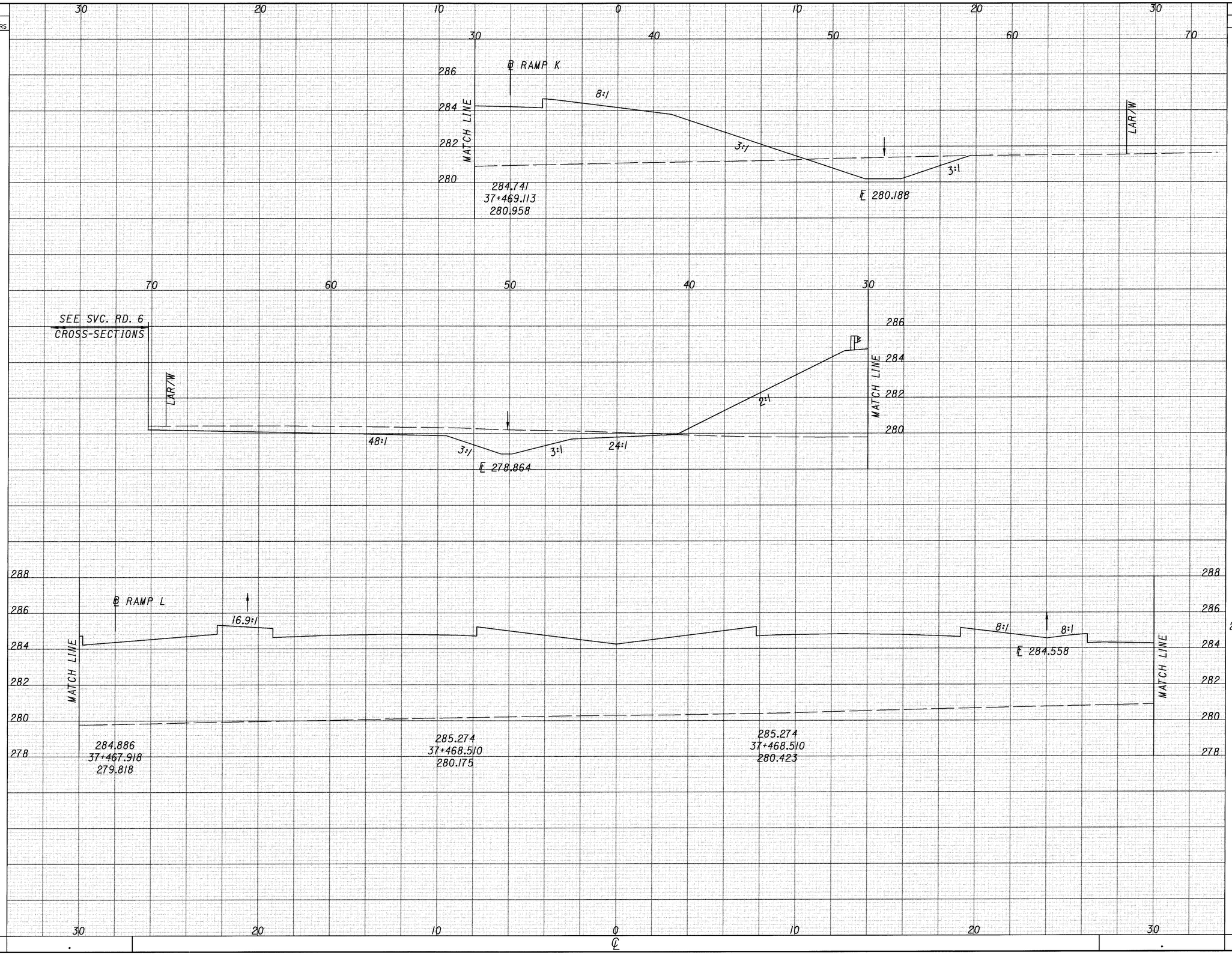
CHECKED REA

US-30 CROSS SECTIONS
STA 37+460.000

WYA/CRA-30-28.009/0.000

520
2116

SEEDING	
END WIDTH	SQ. METERS
100.05	1144



END AREA		VOLUME	
CUT	FILL	CUT	FILL
20.53	337.76	175	2778

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 37+468.510

WYA / CRA-30-28.009 / 0.000

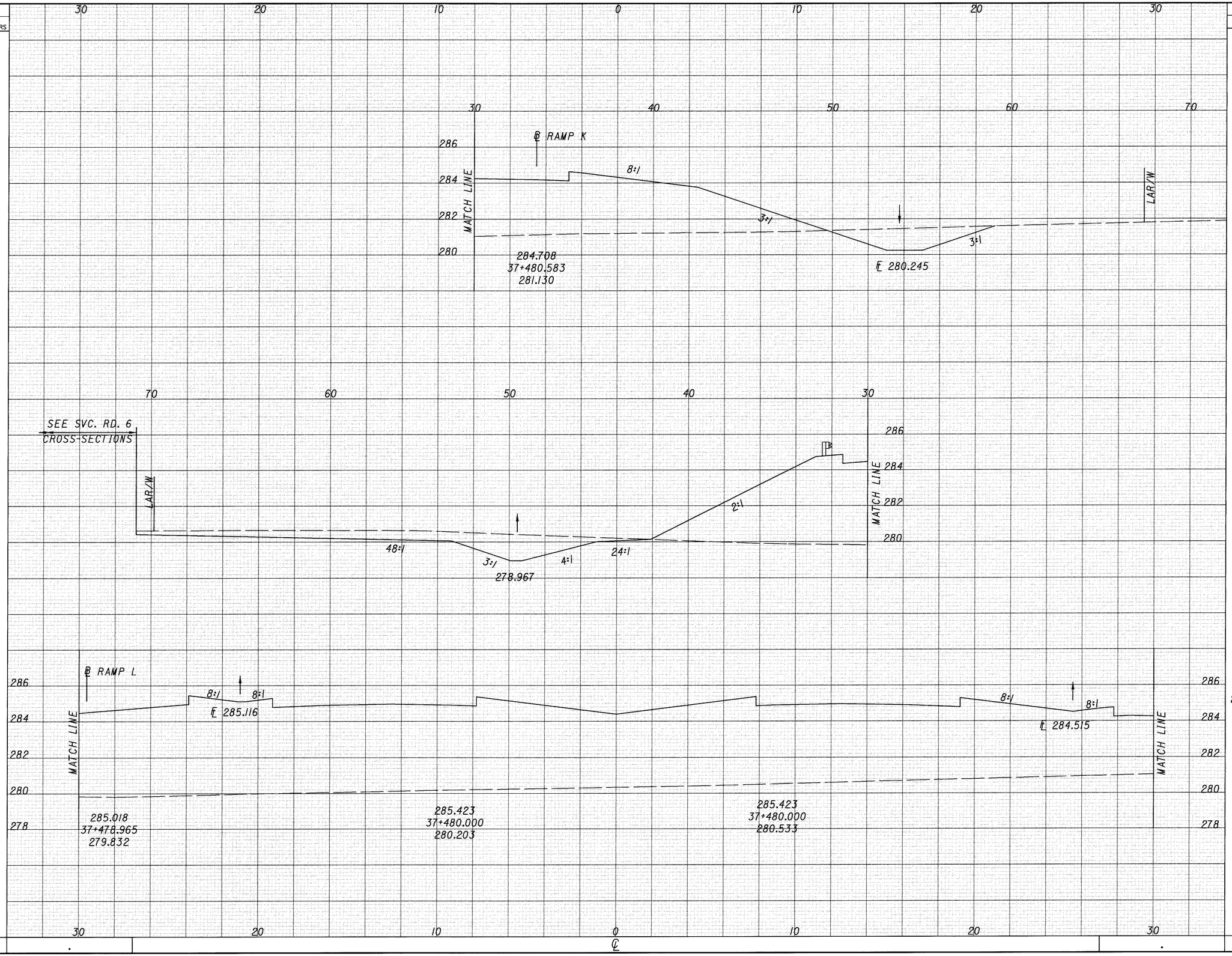
521
2116

SEEDING	
END WIDTH	SQ. METERS
102.14	1162

END AREA		VOLUME	
CUT	FILL	CUT	FILL
21.97	351.30	244	3959

CALCULATED AM

CHECKED REA



US-30 CROSS SECTIONS
STA 37+480.000

WYA/CRA-30-28.009/0.000

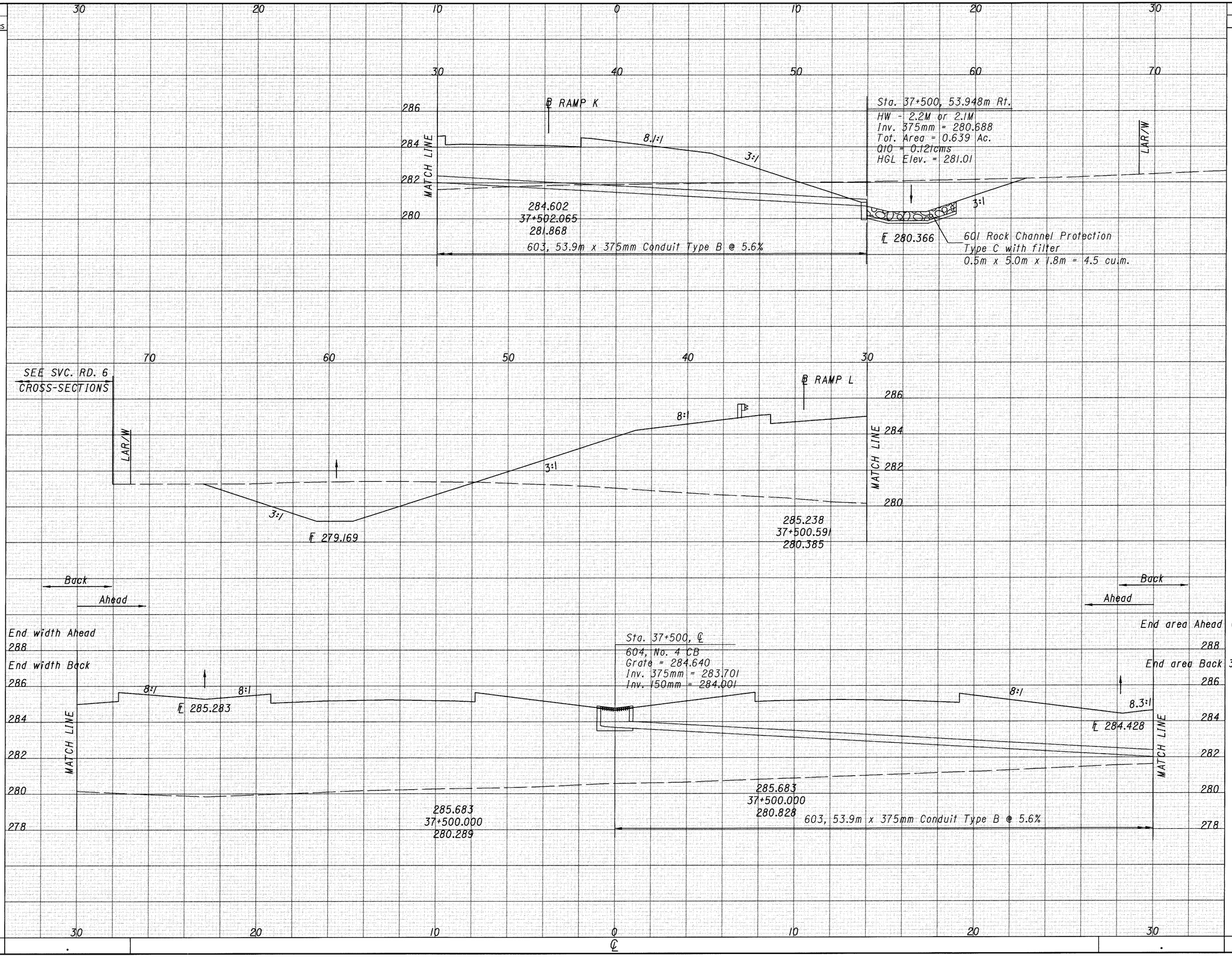
522
2116

SEEDING	
END WIDTH	SQ. METERS
35.12	
102.45	
	2046

END AREA		VOLUME	
CUT	FILL	CUT	FILL
End area Ahead	0.00	272.92	
End area Back	35.09	377.86	
		571	7292

CALCULATED AM

CHECKED REA

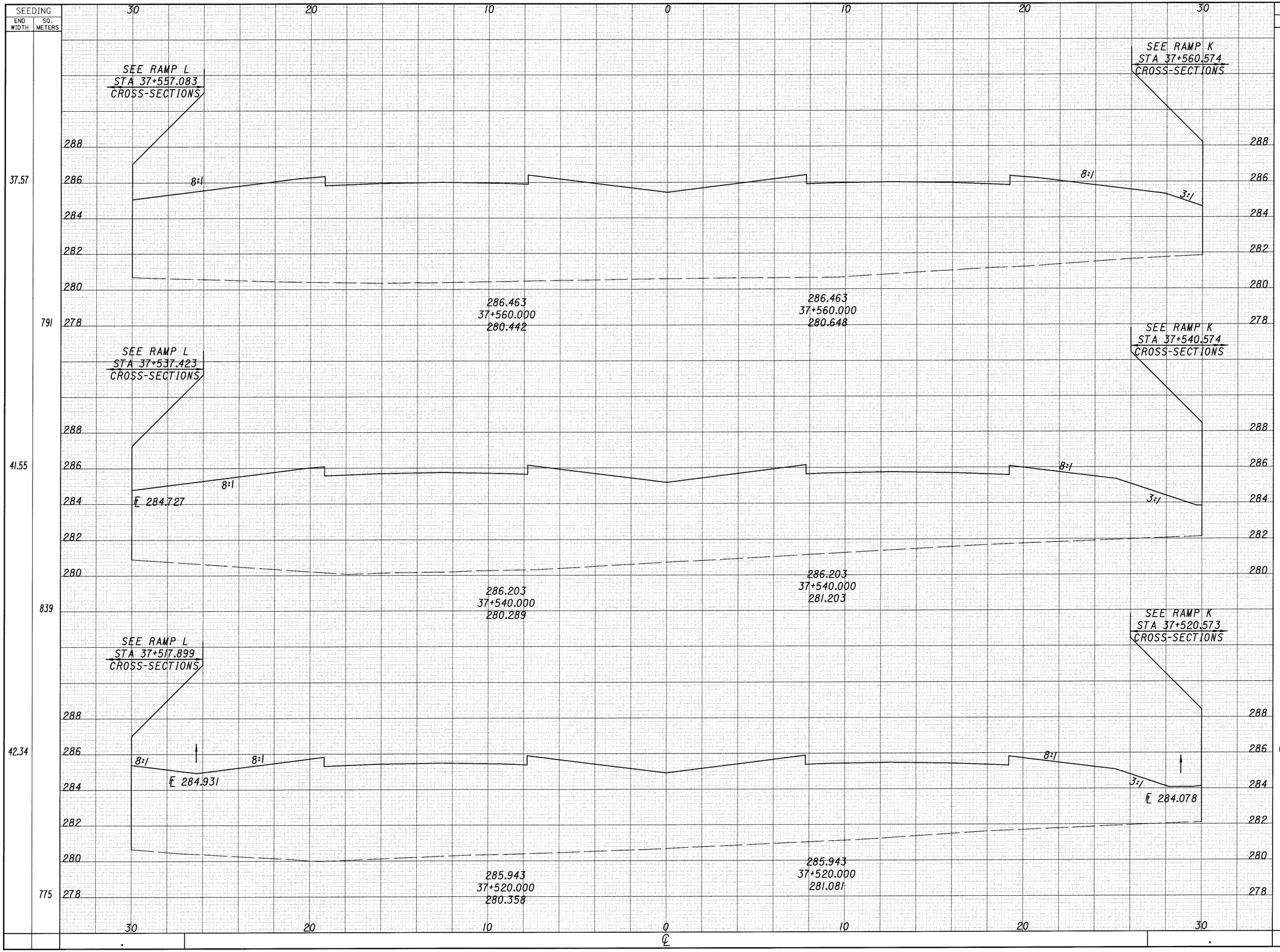


US-30 CROSS SECTIONS
STA 37+500.000

WYA/CRA-30-28.009/0.000

523
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
37.57			304.40		
	791				5798
41.55			275.45		
	839				5415
42.34		0.00	266.08		
	775			0	5390



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 37+520.000 TO STA 37+560.000

WYA/CRA-30-28.009/0.000

524
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
45.57	870		308.28		6114		
41.47	790		303.12		6100		
37.57	751		306.83		6112		

30 20 10 0 10 20 30

SEE RAMP L
STA 37+618.058
CROSS-SECTIONS

SEE RAMP K
STA 37+620.837
CROSS-SECTIONS

290 288 286 284 282 280

8:1 8:1 3:1

287.243
37+620.000
281.493

287.243
37+620.000
281.576

SEE RAMP L
STA 37+597.198
CROSS-SECTIONS

SEE RAMP K
STA 37+600.732
CROSS-SECTIONS

290 288 286 284 282 280

8:1 8:1 3:1

286.983
37+600.000
281.423

286.983
37+600.000
281.414

SEE RAMP L
STA 37+576.955
CROSS-SECTIONS

SEE RAMP K
STA 37+580.633
CROSS-SECTIONS

290 288 286 284 282 280

8:1 8:1

286.723
37+580.000
281.018

286.723
37+580.000
281.063

30 20 10 0 10 20 30

℄

US-30 CROSS SECTIONS
STA 37+580.000 TO STA 37+620.000

WYA / CRA-30-28.009 / 0.000

525
2116

SEEDING	
END WIDTH	SQ. METERS
35.34	469
36.34	1448
41.13	568

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	291.06		3861
	298.34		2071
	301.99		3997

CALCULATED AM

CHECKED REA

30 20 10 0 10 20 30

SEE RAMP L
STA 37+655.000
CROSS-SECTIONS

SEE RAMP K
STA 37+654.000
CROSS-SECTIONS

290 288 286 284 282 280

Sta 37+653.100, 21.0m Rt.
604 CB - 3
Grate = 287.482
Inv 300mm = 286.203

286.189
26° Bend
0.762m
2:1
8.3439

282.458, 26° BEND
7.463m @ 50.0%
1.389m @1.0%
603 18.6m x 300mm Conduit
Type F 707.05 Type C

2:1

287.674
37+653.100
281.985

287.674
37+653.100
281.958

SEE RAMP L
STA 37+693.767
CROSS-SECTIONS

SEE RAMP K
STA 37+640.949
CROSS-SECTIONS

290 288 286 284 282 280

8:1

2:1

287.503
37+640.000
281.764

287.503
37+640.000
281.815

SEE RAMP K
STA 37+634.000
CROSS-SECTIONS

SEE RAMP L
STA 37+653.000
CROSS-SECTIONS

Sta 37+633.100, 21.0m Lt.
604 CB - 3
Grate = 287.222
Inv 300mm = 285.943

285.929
26° Bend
0.762m
2:1
5.470m
283.483,
26° BEND
4.893m
@ 50.0%
1.389m
@1.0%

8:1

287.414
37+633.100
281.652

287.414
37+633.100
281.717

30 20 10 0 10 20 30

℄

US-30 CROSS SECTIONS

STA 37+633.100 TO STA 37+653.100

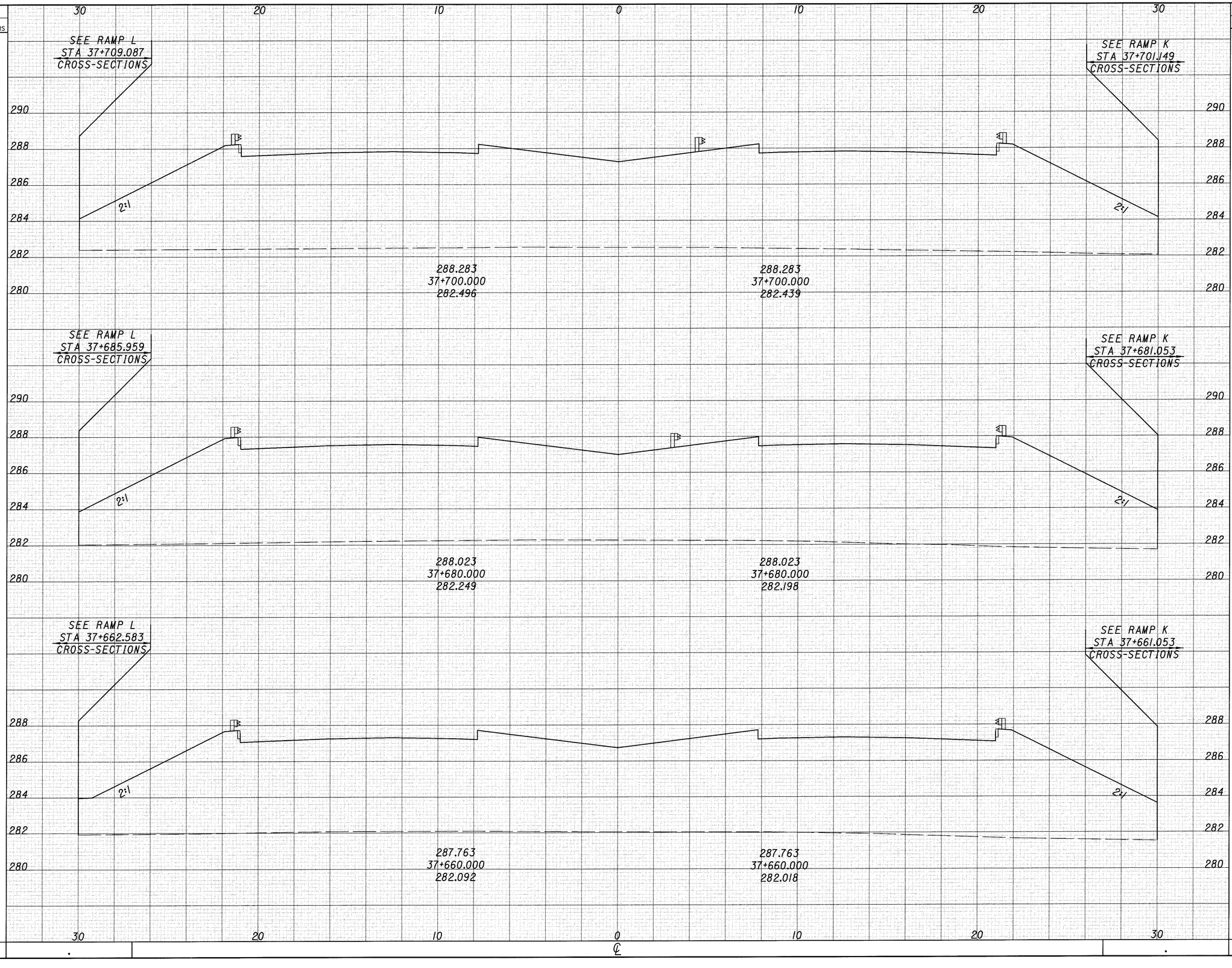
WYA / CRA-30-28.009 / 0.000

526
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
35.34	707		295.28		5924
35.34	707		297.11		5883
35.34	244		291.18		2009

CALCULATED AM

CHECKED REA



US-30 CROSS SECTIONS
STA 37+660.000 TO STA 37+700.000

WYA / CRA-30-28.009 / 0.000

527
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
34.23			309.81			
	311				2782	
33.78			298.29			
	721				6062	
35.34			283.23			
	707				5785	

CALCULATED AM

CHECKED REA

30 20 10 0 10 20 30

SEE RAMP L
STA 37+764.934
CROSS-SECTIONS

BRIDGE - STA 37+750.000 TO 37+793.926

SEE RAMP K
STA 37+747.733
CROSS-SECTIONS

290
288
286
284
282

2:1

288.933
37+750.000
282.991

288.933
37+750.000
282.924

SEE RAMP L
STA 37+755.595
CROSS-SECTIONS

SEE RAMP K
STA 37+738.903
CROSS-SECTIONS

288.814
37+740.850
283.135

288.814
37+740.850
282.929

SEE RAMP L
STA 37+730.906
CROSS-SECTIONS

SEE RAMP K
STA 37+721.149
CROSS-SECTIONS

288.543
37+720.000
282.964

288.543
37+720.000
282.835

30 20 10 0 10 20 30

℄

US-30 CROSS SECTIONS
STA 37+720.000 TO STA 37+750.000

WYA / CRA-30-28.009 / 0.000

528
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
35.75	102		350.89		1030
33.78	312		353.39		3218
34.47	0		349.98		0

30 20 10 0 10 20 30

SEE RAMP M
STA 37+808.000
CROSS-SECTIONS

SEE RAMP N
STA 37+796.061
CROSS-SECTIONS

Sta. 37+806, ℄
604, No. 4 CB
Grate = 288.661
Inv. 375mm = 287.722
Inv. 150mm = 288.022

Sta 37+807.1, 21.000 m Rt
604 CB - 3
Grate = 289.469
Inv 375mm = 287.513

287.487
26° Bend
0.762m
10.552m
2:1
9.438m

603, 20.911m x 375mm Conduit Type B @ 1.0%
603, 2.600m x 375mm Conduit Type F 707.05 Type C @ 1.0%
603, 10.552m x 375mm Conduit Type F 707.05 Type C @ 50.00%

289.661
37+806.000
282.786

289.661
37+806.000
282.889

SEE RAMP M
STA 37+806.755
CROSS-SECTIONS

SEE RAMP N
STA 37+790.040
CROSS-SECTIONS

289.623
37+803.076
282.770

289.623
37+803.076
282.856

SEE RAMP M
STA 37+797.948
CROSS-SECTIONS

SEE RAMP N
STA 37+780.484
CROSS-SECTIONS

289.504
37+793.926
282.743

289.504
37+793.926
282.782

290 288 286 284 282

2:1

30 20 10 0 10 20 30

℄

CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 37+793.926 TO STA 37+806.000

WYA / CRA-30-28.009 / 0.000

529
2116

SEEDING	
END WIDTH	SQ. METERS
35.34	707
35.34	368
35.34	127

30 20 10 0 10 20 30

SEE RAMP M
STA 37+37+840.584
CROSS-SECTIONS

SEE RAMP N
STA 37+831.350
CROSS-SECTIONS

290
288
286
284
282

2:1

290.103
37+840.000
283.045

290.103
37+840.000
283.513

SEE RAMP M
STA 37+820.583
CROSS-SECTIONS

SEE RAMP N
STA 37+810.255
CROSS-SECTIONS

289.843
37+820.000
282.856

289.843
37+820.000
283.144

SEE RAMP N
STA 37+800.000
CROSS-SECTIONS

SEE RAMP M
STA 37+810.000
CROSS-SECTIONS

Sta 37+809.573, 21.0m Lt.
604 CB - 3
Grate = 289.515
Inv 300mm = 288.237

288.223
26° Bend
0.762m
11.565m
10.375m @ 50.0%
1.389m
@1.0%

289.707
37+809.573
282.797

289.707
37+809.573
282.922

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	348.86		6998
	350.97		3668
	352.67		1257

CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 37+809.573 TO STA 37+840.000

WYA / CRA-30-28.009 / 0.000

530
2116

SEEDING	
END WIDTH	SQ. METERS
36.64	
	720
35.34	
	707
35.34	
	707

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	373.22		7305
	357.27		7081
	350.79		6997

CALCULATED AM

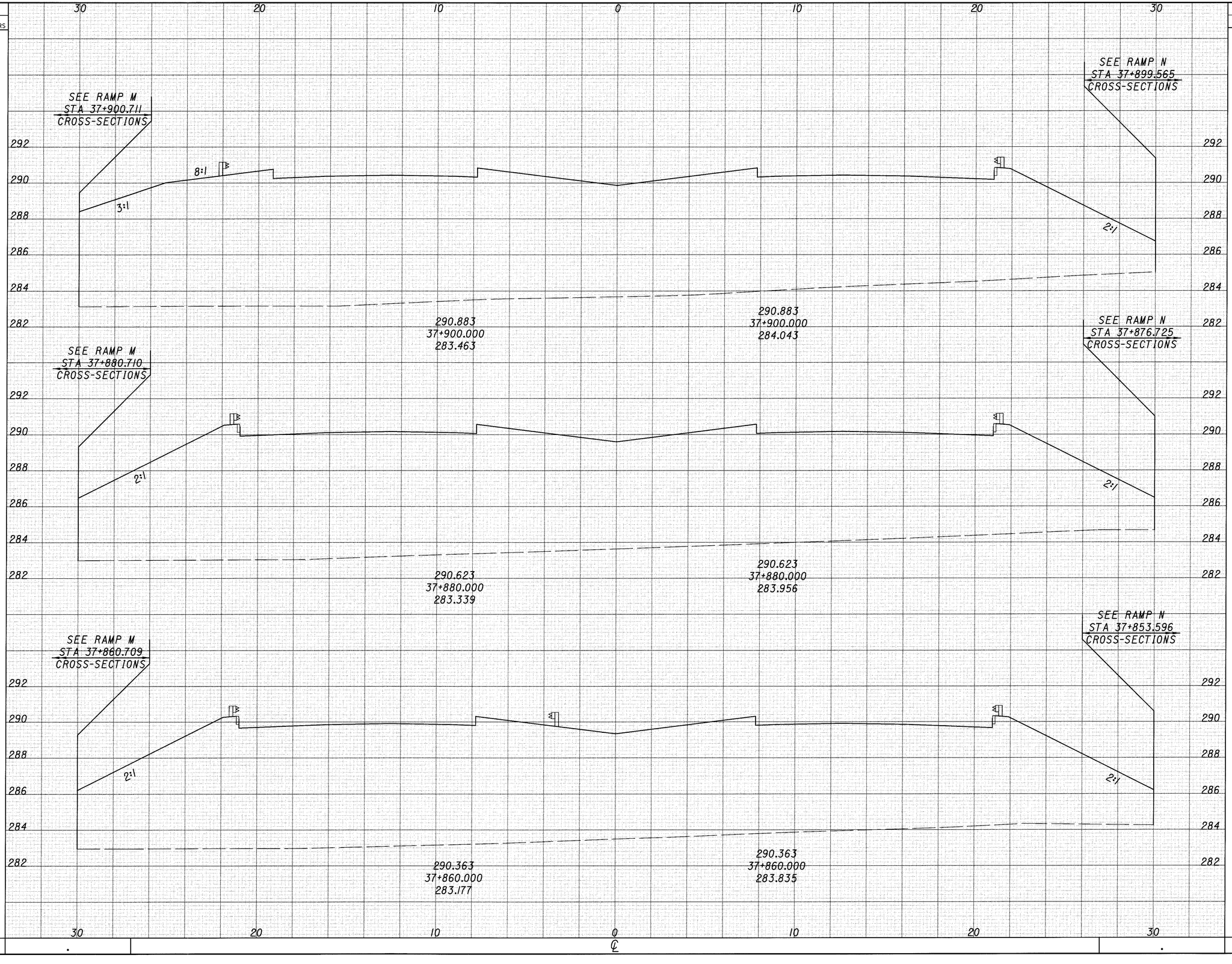
CHECKED REA

US-30 CROSS SECTIONS

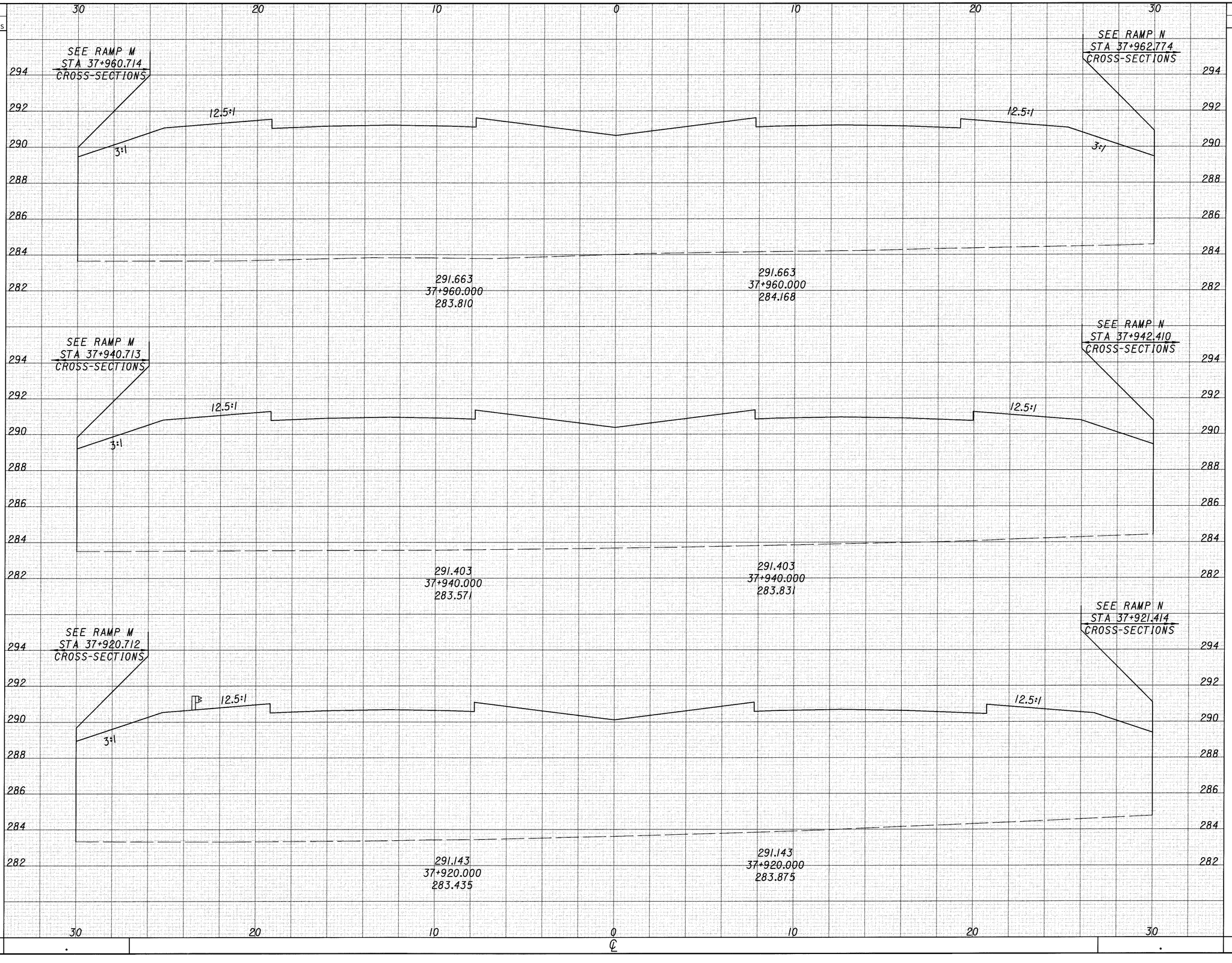
STA 37+860.000 TO STA 37+900.000

WYA / CRA-30-28.009 / 0.000

531
2116



SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
44.89	877		419.38		8390
42.79	846		419.66		8248
41.85	785		405.14		7784



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 37+920.000 TO STA 37+960.000

WYA / CRA-30-28.009 / 0.000

532
2116

SEEDING	
END WIDTH	SQ. METERS
43.91	
	874
43.53	
	872
43.65	
	885

30 20 10 0 10 20 30

SEE RAMP M
STA 38+020.716
CROSS-SECTIONS

SEE RAMP N
STA 38+022.021
CROSS-SECTIONS

294
292
290
288
286
284
282

12.5:1
3:1
℄ 290.902
℄ 290.993
292.443
38+020.000
284.326
292.443
38+020.000
284.245

SEE RAMP M
STA 38+000.716
CROSS-SECTIONS

SEE RAMP N
STA 38+002.443
CROSS-SECTIONS

292.183
38+000.000
284.211
292.183
38+000.000
284.383

SEE RAMP M
STA 37+980.715
CROSS-SECTIONS

SEE RAMP N
STA 37+982.720
CROSS-SECTIONS

291.923
37+980.000
284.064
291.923
37+980.000
284.504

30 20 10 0 10 20 30
℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.00	445.39		
	429.49		8749
	418.46		8480
			8378

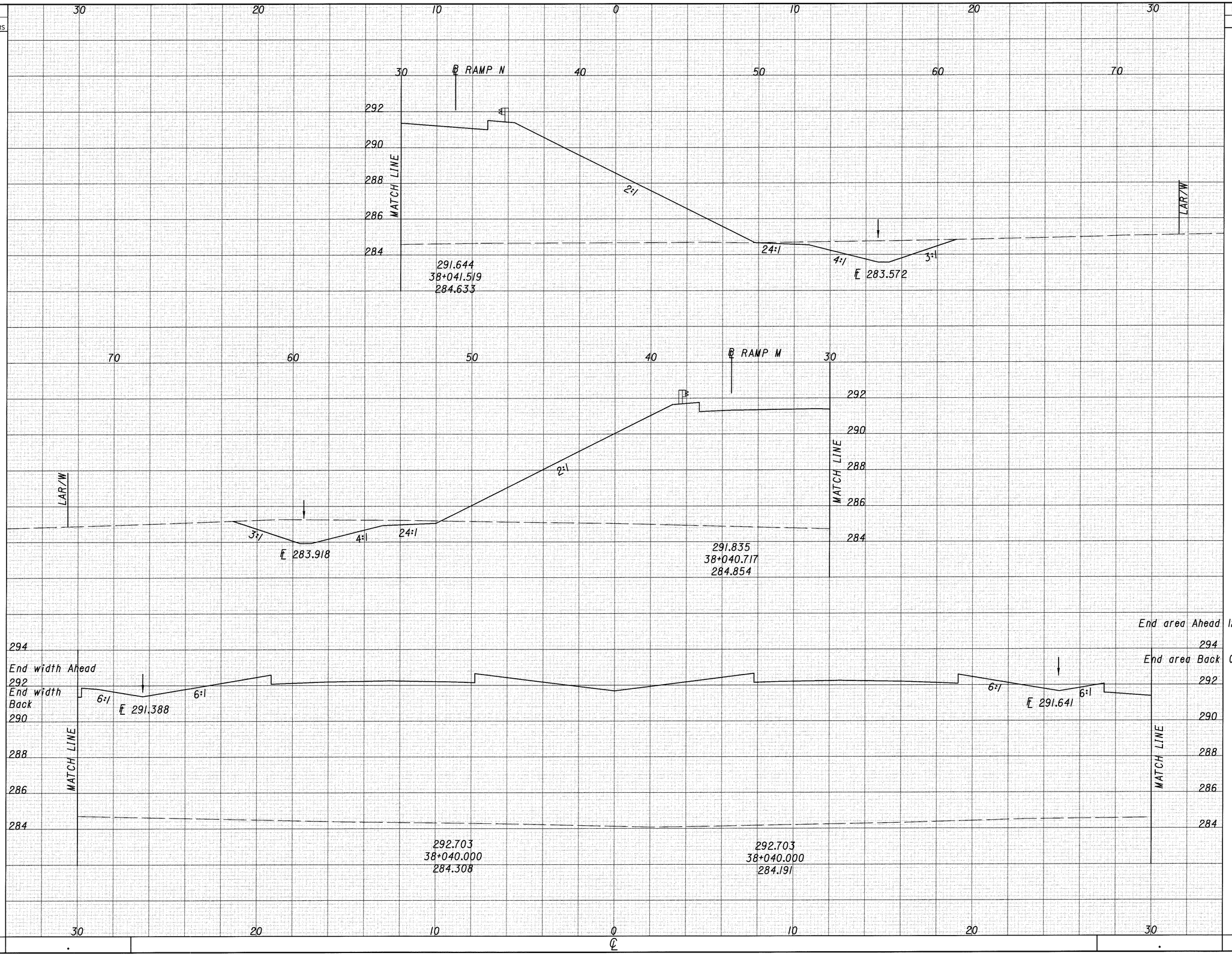
CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 37+980.000 TO STA 38+020.000

WYA / CRA-30-28.009 / 0.000

533
2116

SEEDING	
END WIDTH	SQ. METERS
99.13	
34.72	
	786



END AREA		VOLUME	
CUT	FILL	CUT	FILL
End area Ahead	12.84	645.55	
End area Back	0.00	462.57	
		0	9080

CALCULATED AM

CHECKED AREA

US-30 CROSS SECTIONS
STA 38+040.000

WYA/CRA-30-28.009/0.000

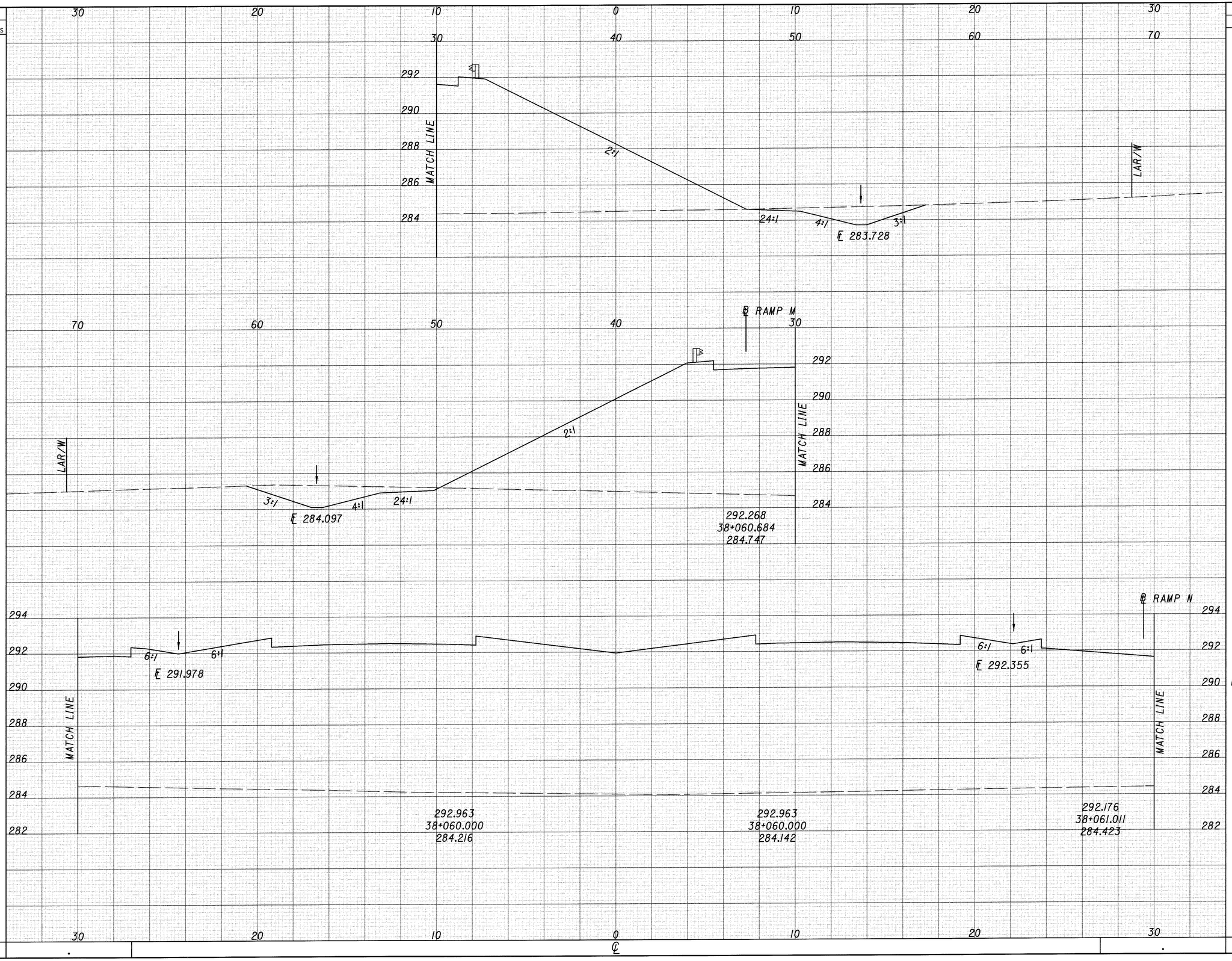
534
2116

SEEDING	
END WIDTH	SQ. METERS
92.58	1917

END AREA		VOLUME	
CUT	FILL	CUT	FILL
10.44	644.74	233	12903

CALCULATED AM

CHECKED REA

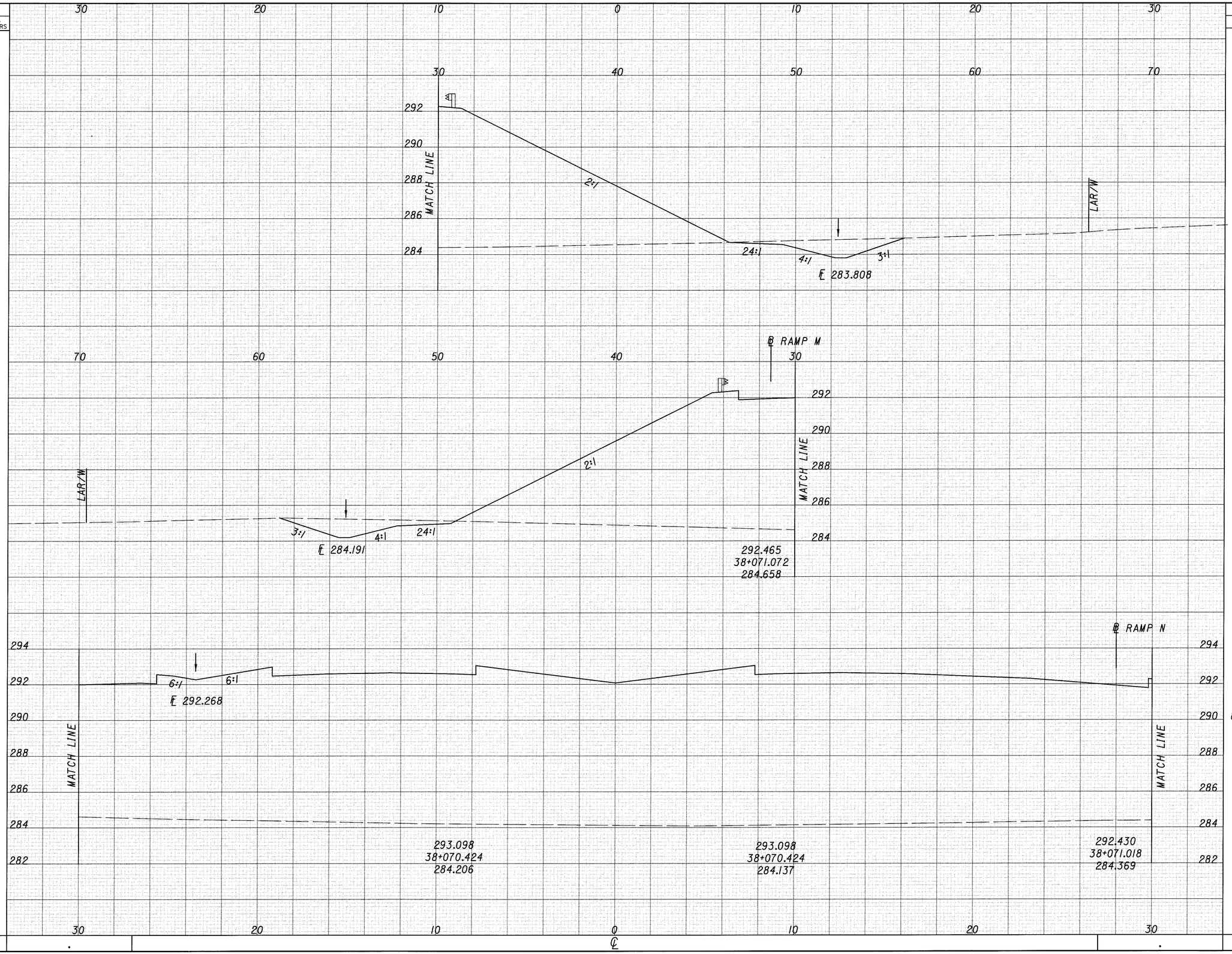


US-30 CROSS SECTIONS STA 38+060.000

WYA / CRA-30-28.009 / 0.000

535
2116

SEEDING	
END WIDTH	SQ. METERS
86.32	932



END AREA		VOLUME	
CUT	FILL	CUT	FILL
8.91	642.90	101	6711

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 38+070.424

WYA/CRA-30-28.009/0.000

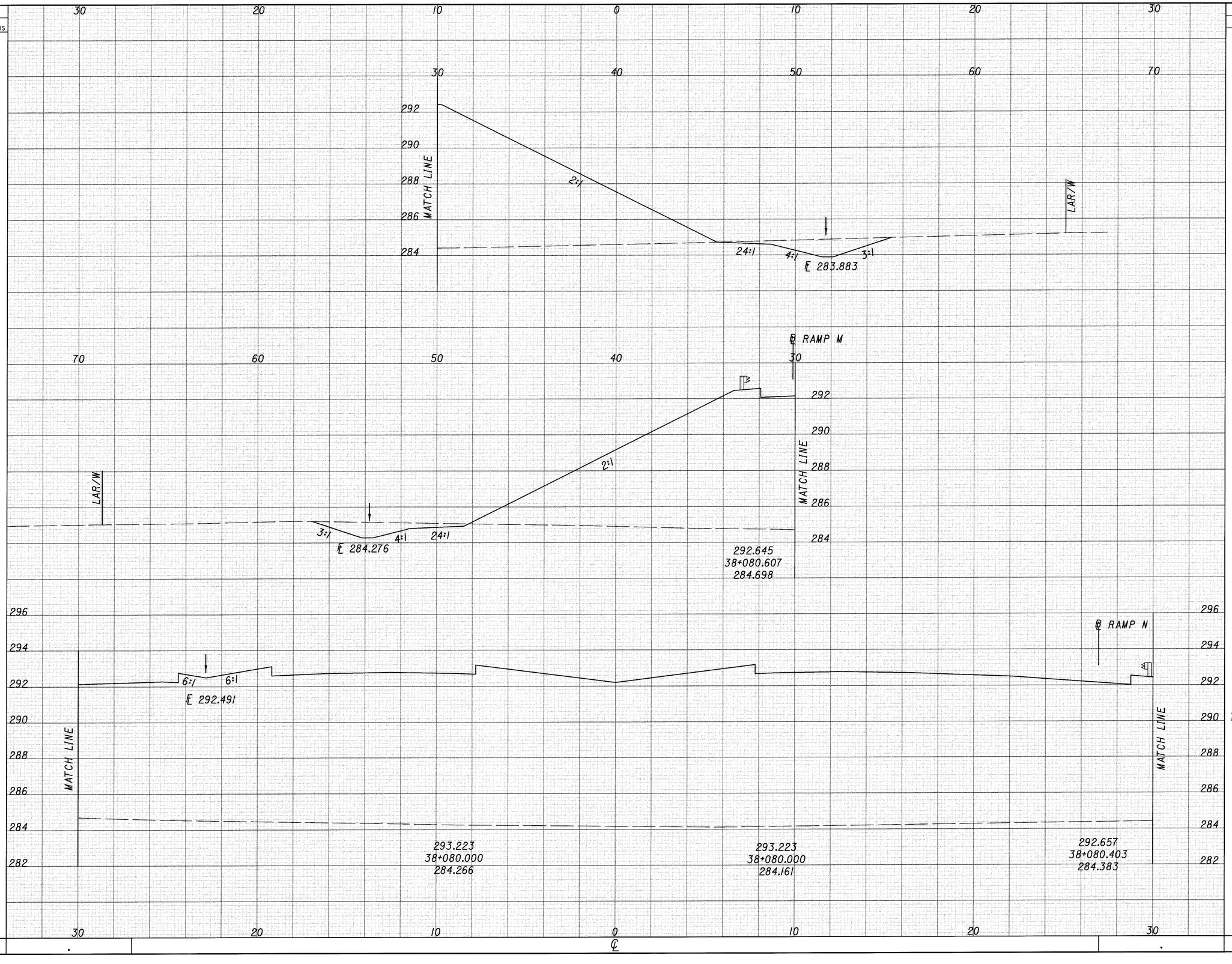
536
2116

SEEDING	
END WIDTH	SQ. METERS
84.66	819

END AREA		VOLUME	
CUT	FILL	CUT	FILL
7.58	638.96		
		79	6138

CALCULATED AM

CHECKED REA

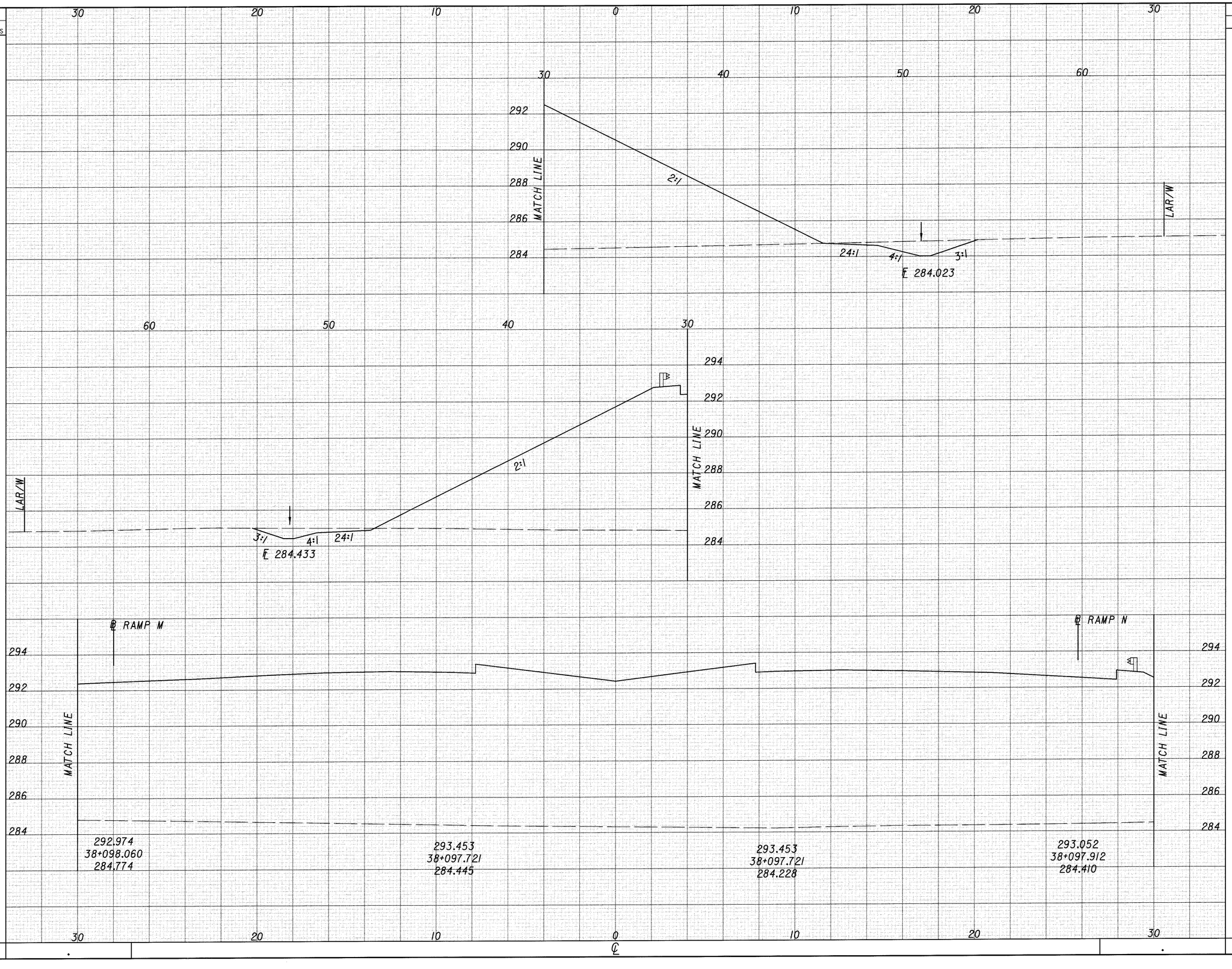


US-30 CROSS SECTIONS
STA 38+080.000

WYA/CRA-30-28.009/0.000

537
2116

SEEDING	
END WIDTH	SQ. METERS
77.40	1436



END AREA		VOLUME	
CUT	FILL	CUT	FILL
4.68	637.99		
		109	11314

CALCULATED AM

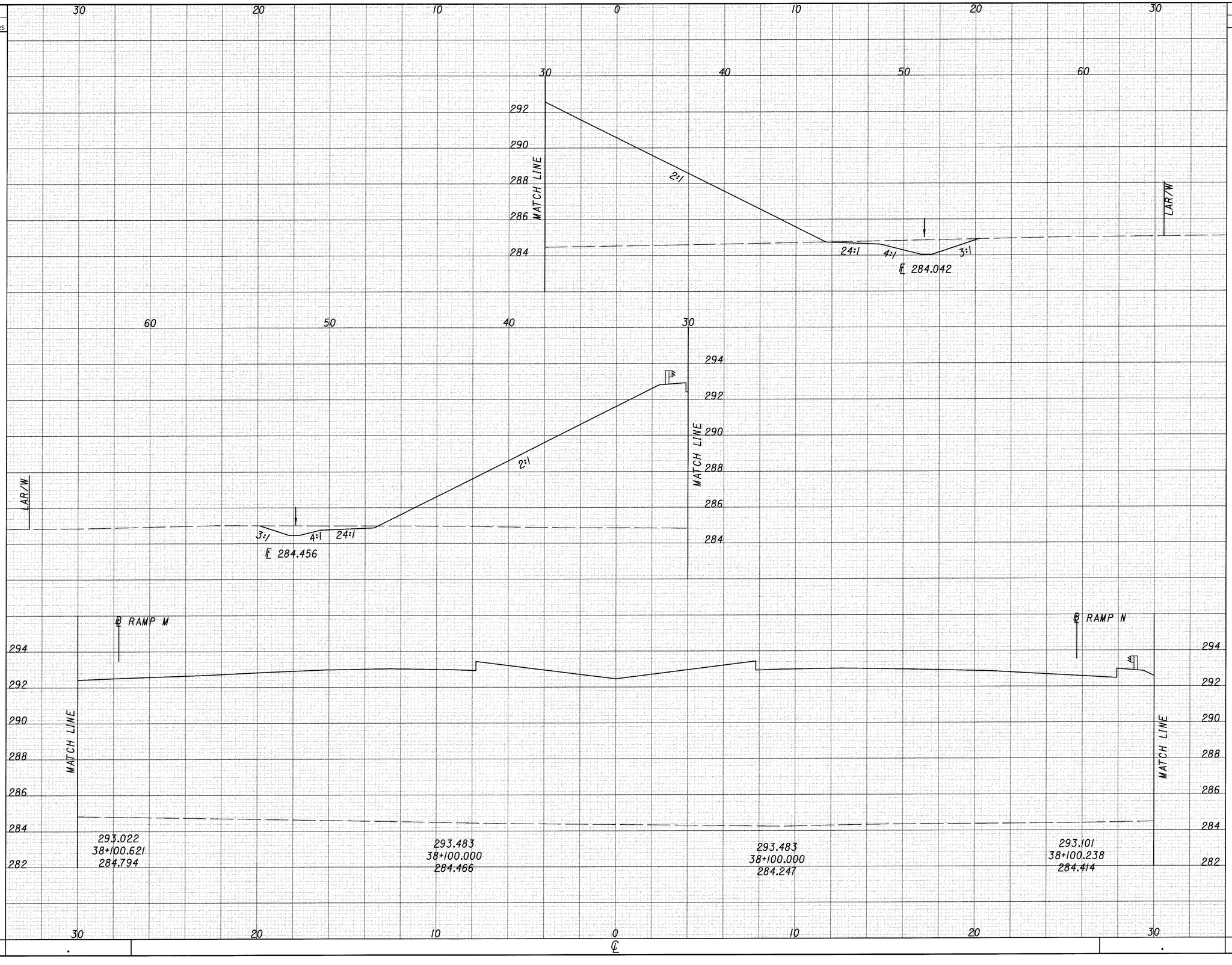
CHECKED REA

US-30 CROSS SECTIONS
STA 38+097.721

WYA / CRA-30-28.009 / 0.000

538
2116

SEEDING	
END WIDTH	SQ. METERS
77.22	176



END AREA		VOLUME	
CUT	FILL	CUT	FILL
4.42	638.39		
		10	1454

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 38+100.000

WYA / CRA-30-28.009 / 0.000

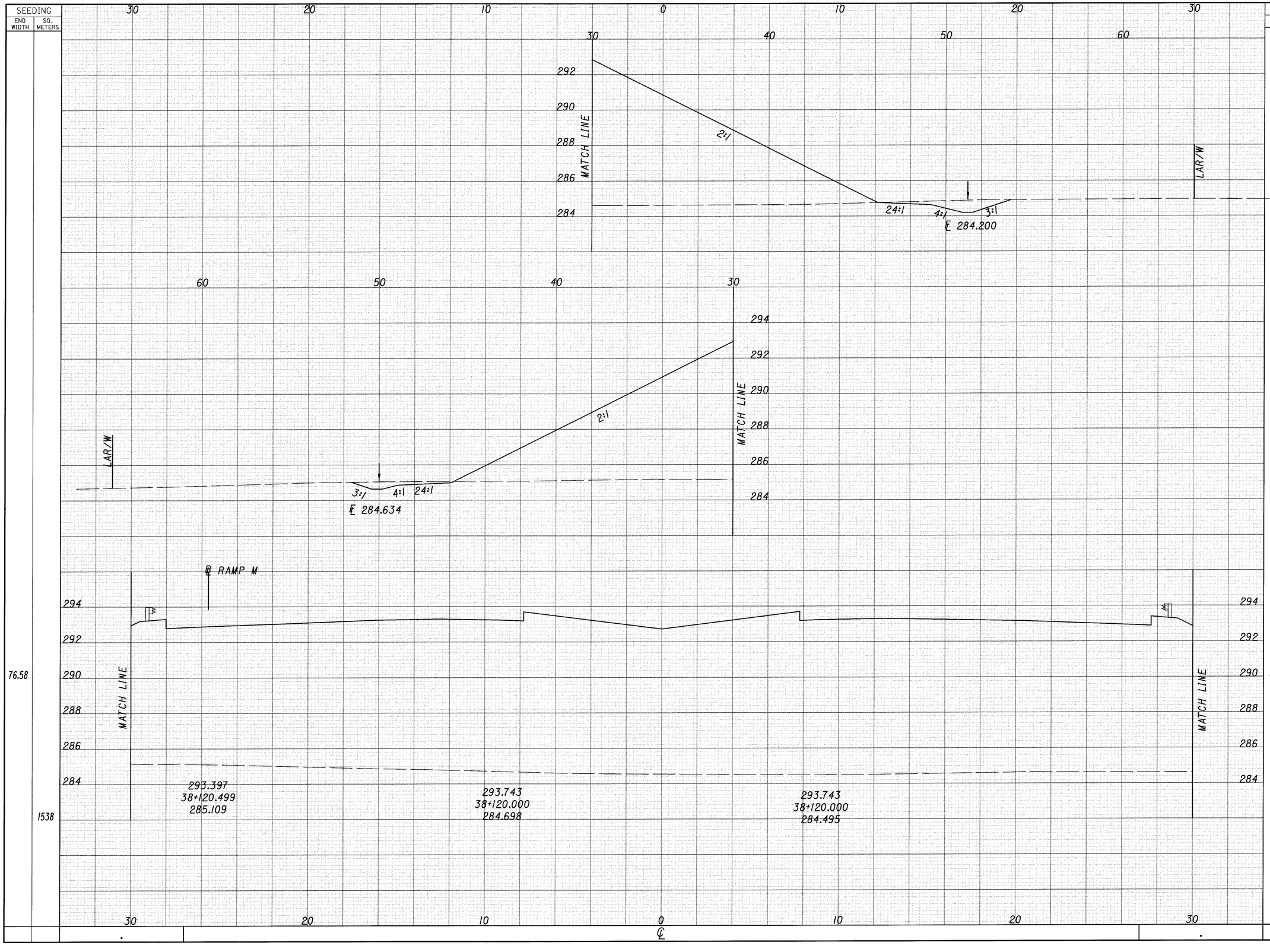
539
2116

SEEDING	
END WIDTH	SQ. METERS
76.58	1538

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.22	631.65	76	12700

CALCULATED AM

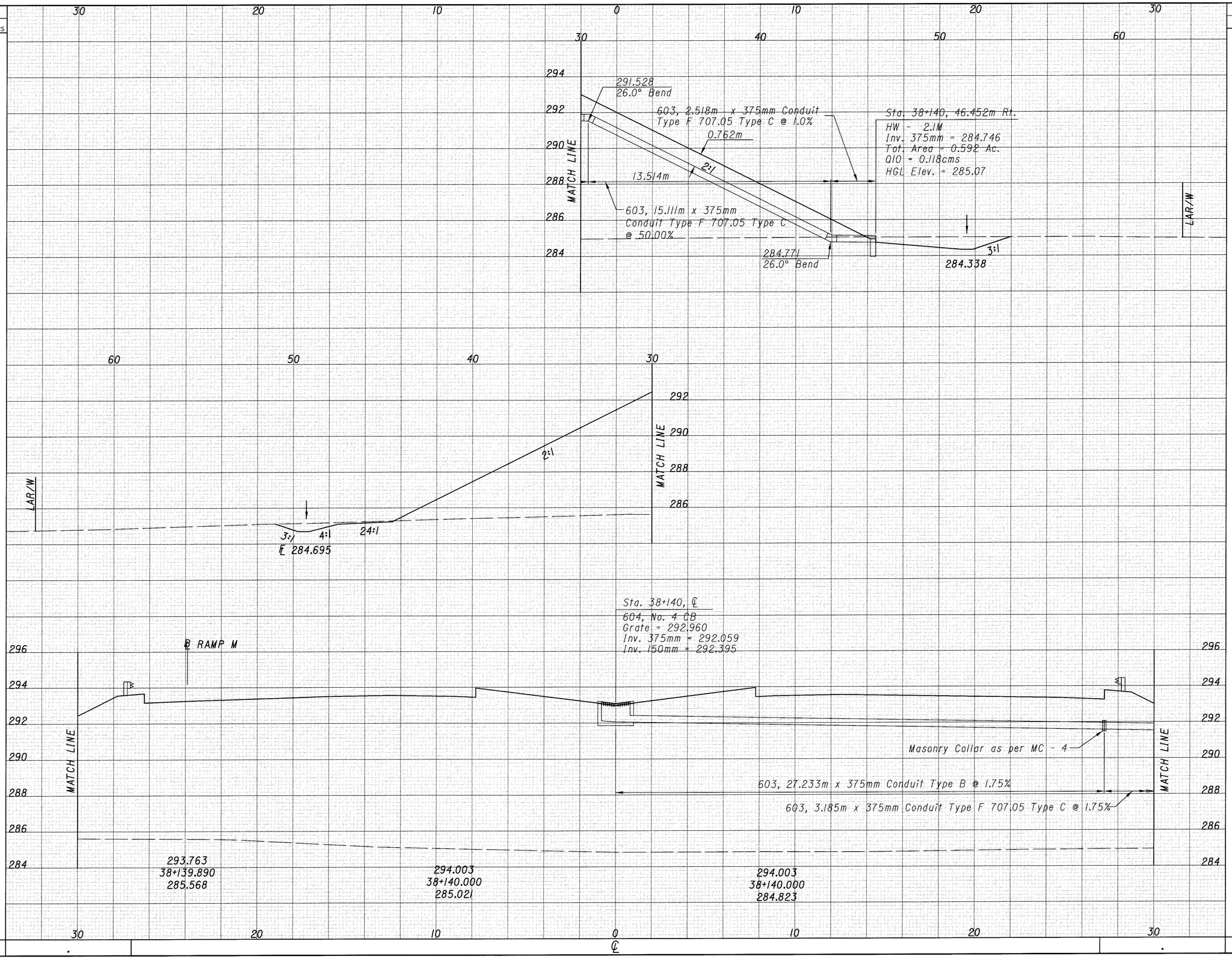
CHECKED REA



US-30 CROSS SECTIONS
STA 38+120.000

WYA / CRA-30-28.009 / 0.000

SEEDING	
END WIDTH	SQ. METERS
78.54	1551



END AREA		VOLUME	
CUT	FILL	CUT	FILL
4.63	613.16	79	12448

CALCULATED AM

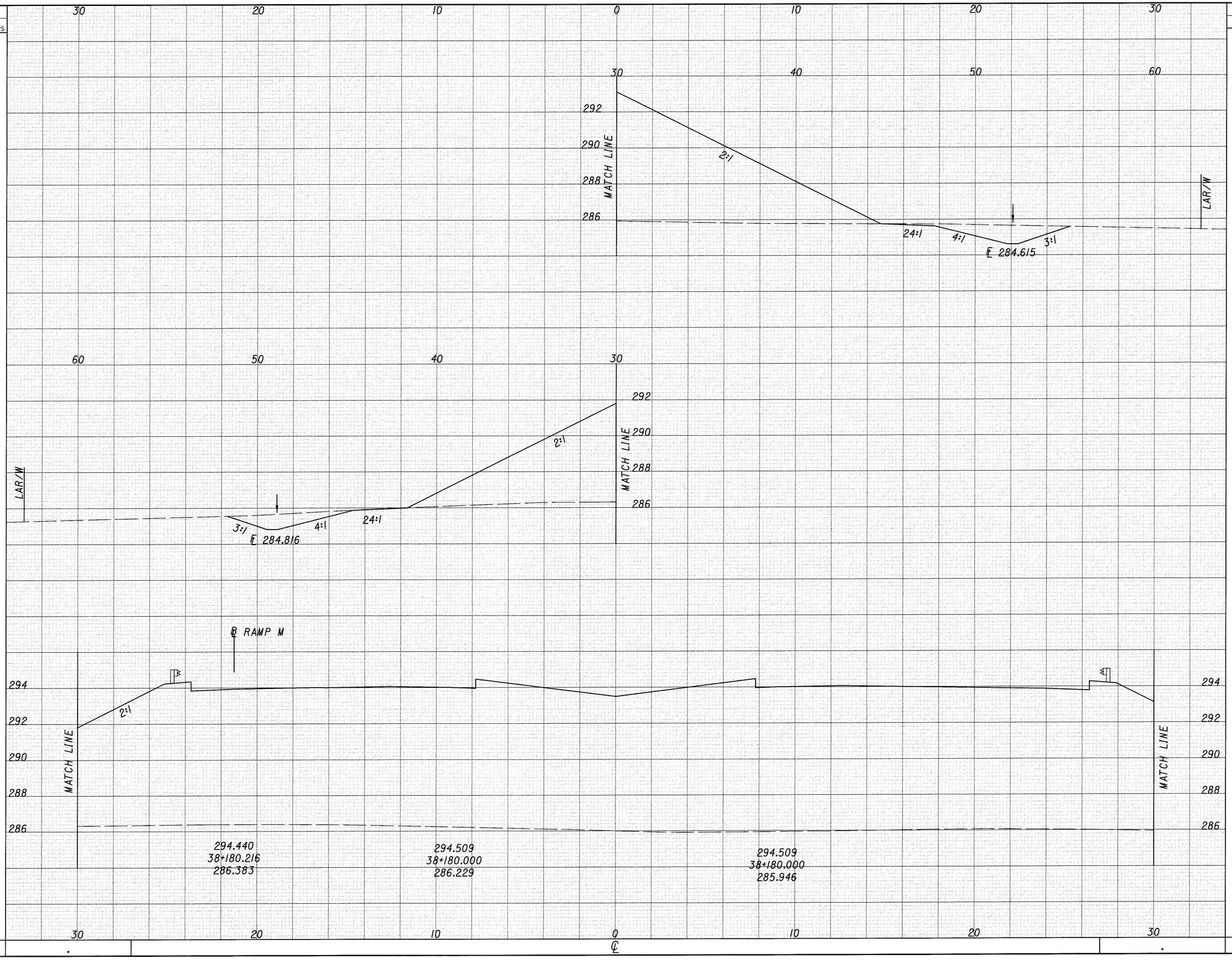
CHECKED REA

US-30 CROSS SECTIONS
STA 38+140.000

WYA/CRA-30-28.009/0.000

SEEDING	
END WIDTH	SQ. METERS

SEEDING	
END WIDTH	SQ. METERS
84.76	1682



END AREA		VOLUME	
CUT	FILL	CUT	FILL
7.80	548.99	152	11265

CALCULATED AM

CHECKED REA

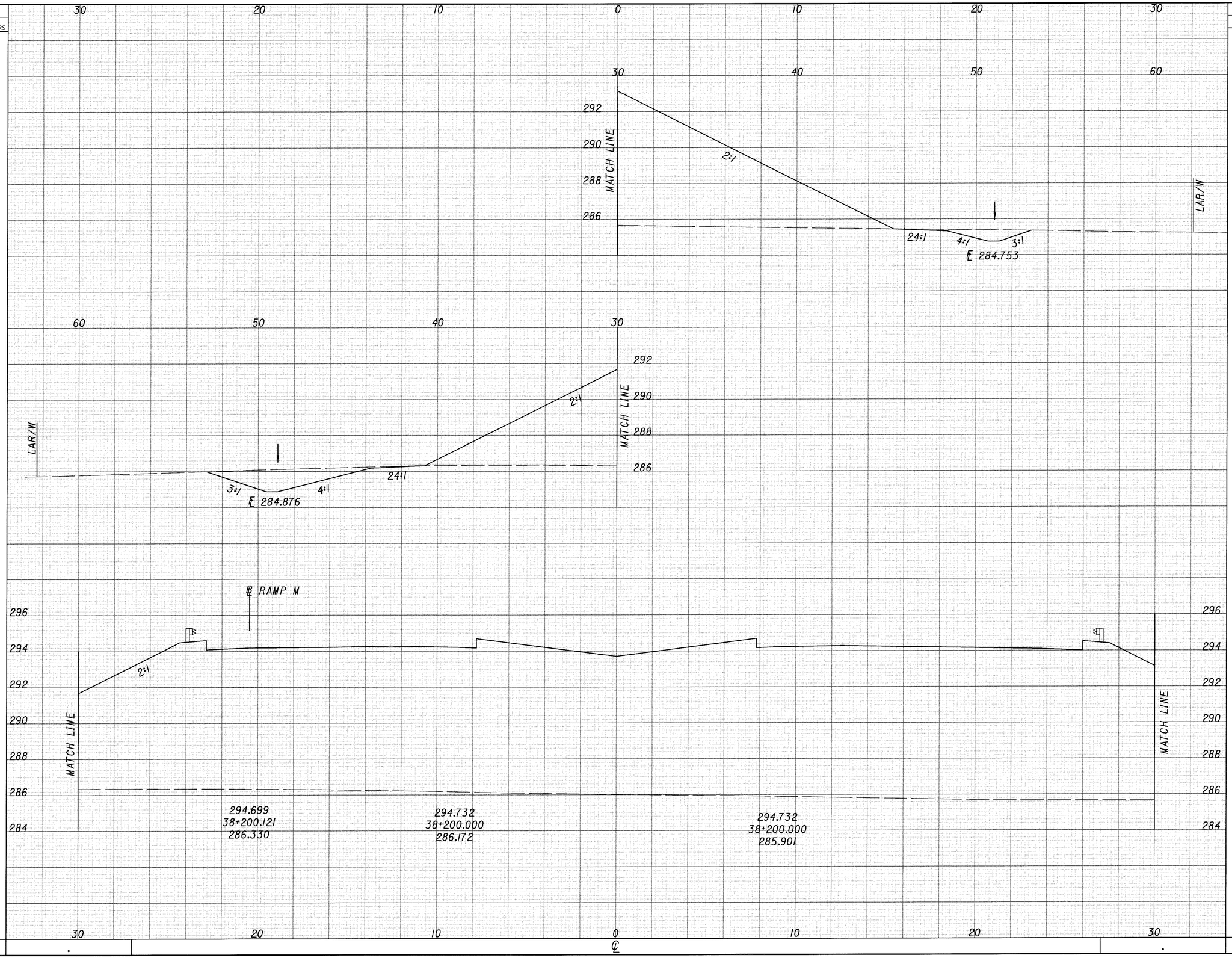
US-30 CROSS SECTIONS
STA 38+180.000

WYA/CRA-30-28.009/0.000

543
2116

SEEDING	
END WIDTH	SQ. METERS

SEEDING	
END WIDTH	SQ. METERS
85.10	480



END AREA		VOLUME	
CUT	FILL	CUT	FILL
8.15	568.96	45	3187

CALCULATED AM

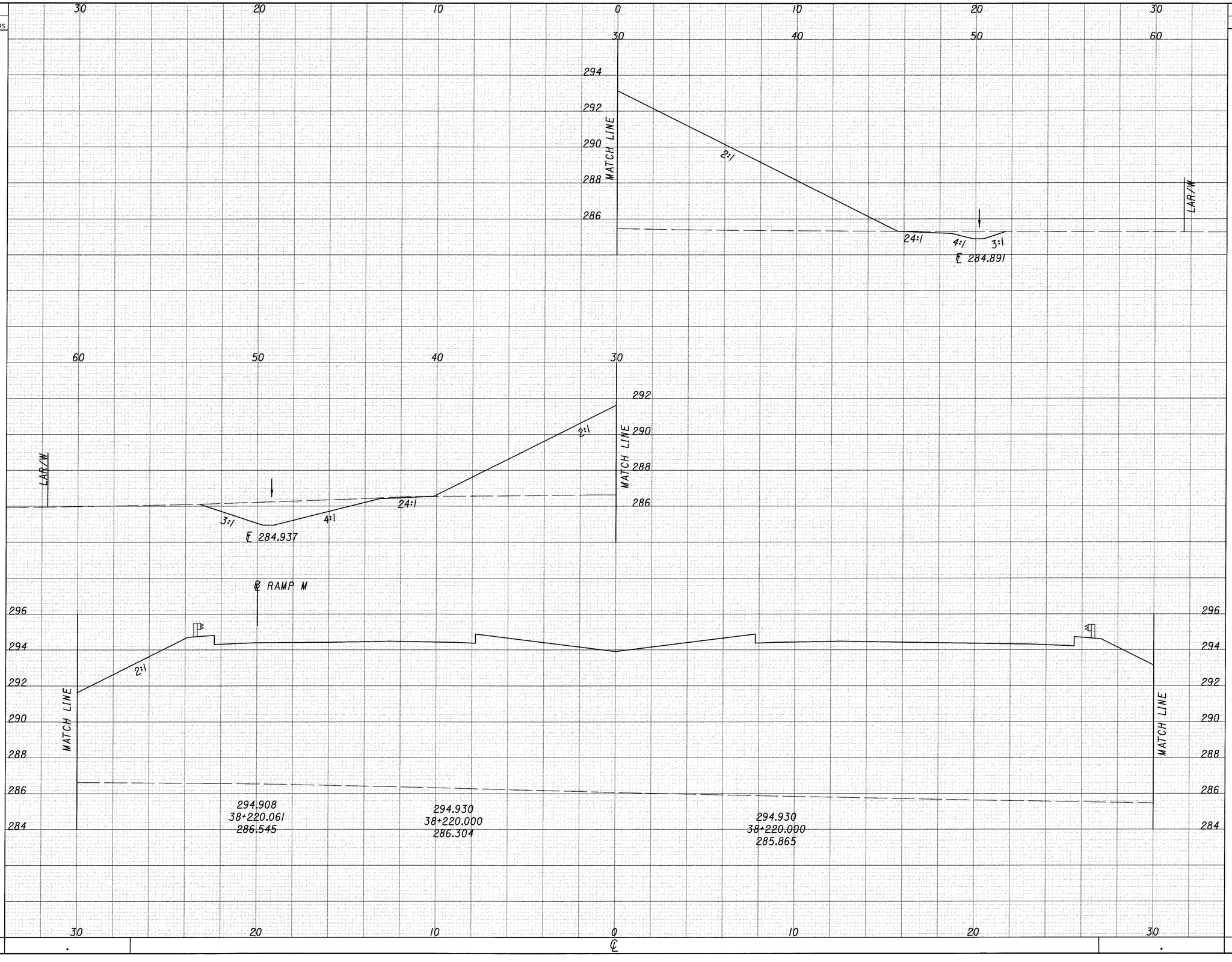
CHECKED REA

US-30 CROSS SECTIONS
STA 38+200.000

WYA / CRA-30-28.009 / 0.000

545
2116

SEEDING	
END WIDTH	SQ. METERS
	84.86
	1700



END AREA		VOLUME	
CUT	FILL	CUT	FILL
8.12	574.39		
		163	11434

CALCULATED AM

CHECKED REA

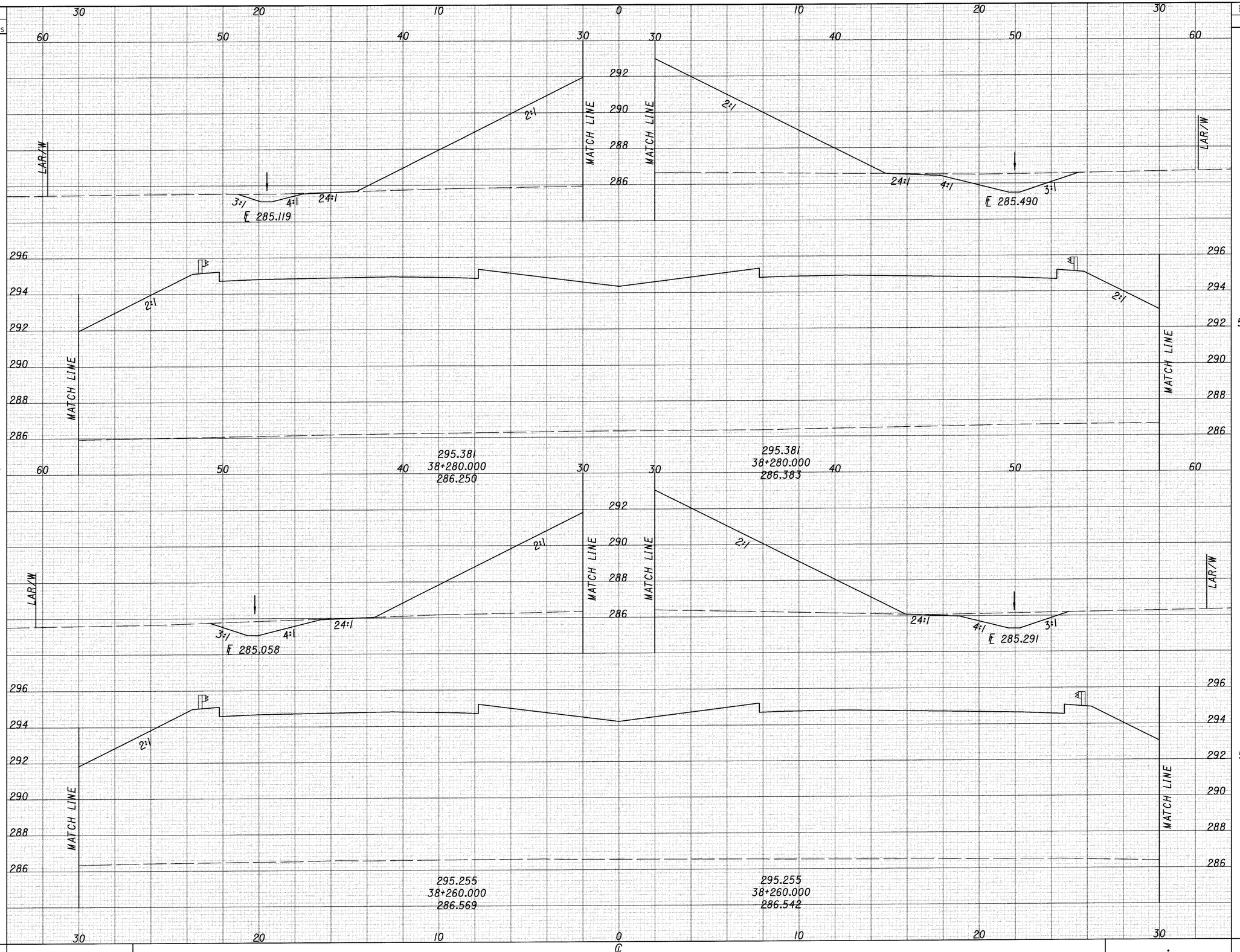
US-30 CROSS SECTIONS
STA 38+220.000

WYA / CRA-30-28.009 / 0.000

546
2116

SEEDING	
END WIDTH	SQ. METERS

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
84.02	1688	5.50	576.59	114	11346
84.75	1615	5.91	558.04	119	10589



CALCULATED AM

CHECKED REA

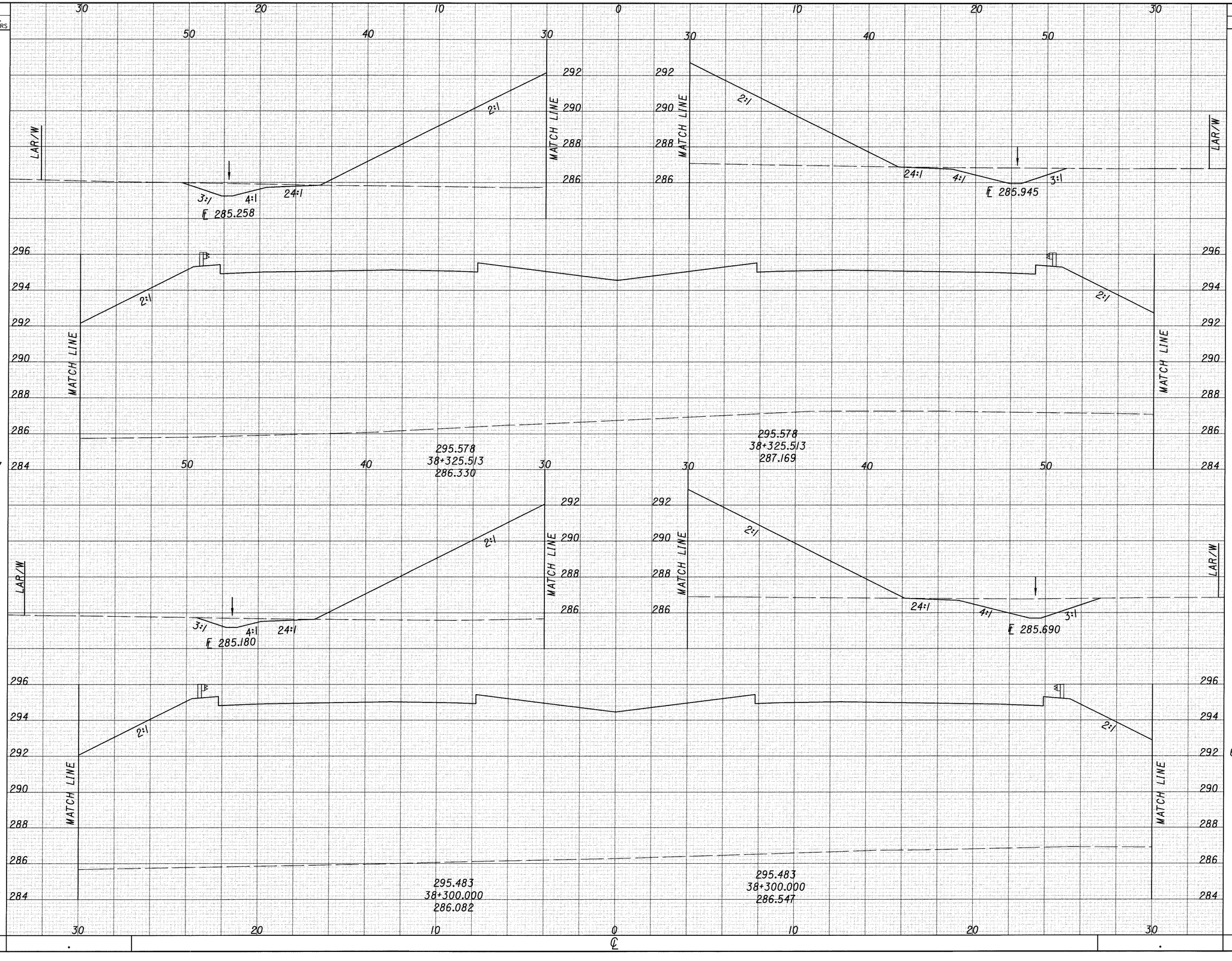
US-30 CROSS SECTIONS

STA 38+260.000 TO STA 38+280.000

WYA / CRA-30-28.009 / 0.000

548
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
83.79		5.57	564.18		
	2147			152	14627
84.47		6.37	582.48		
	1685			119	11591



CALCULATED AM

CHECKED REA

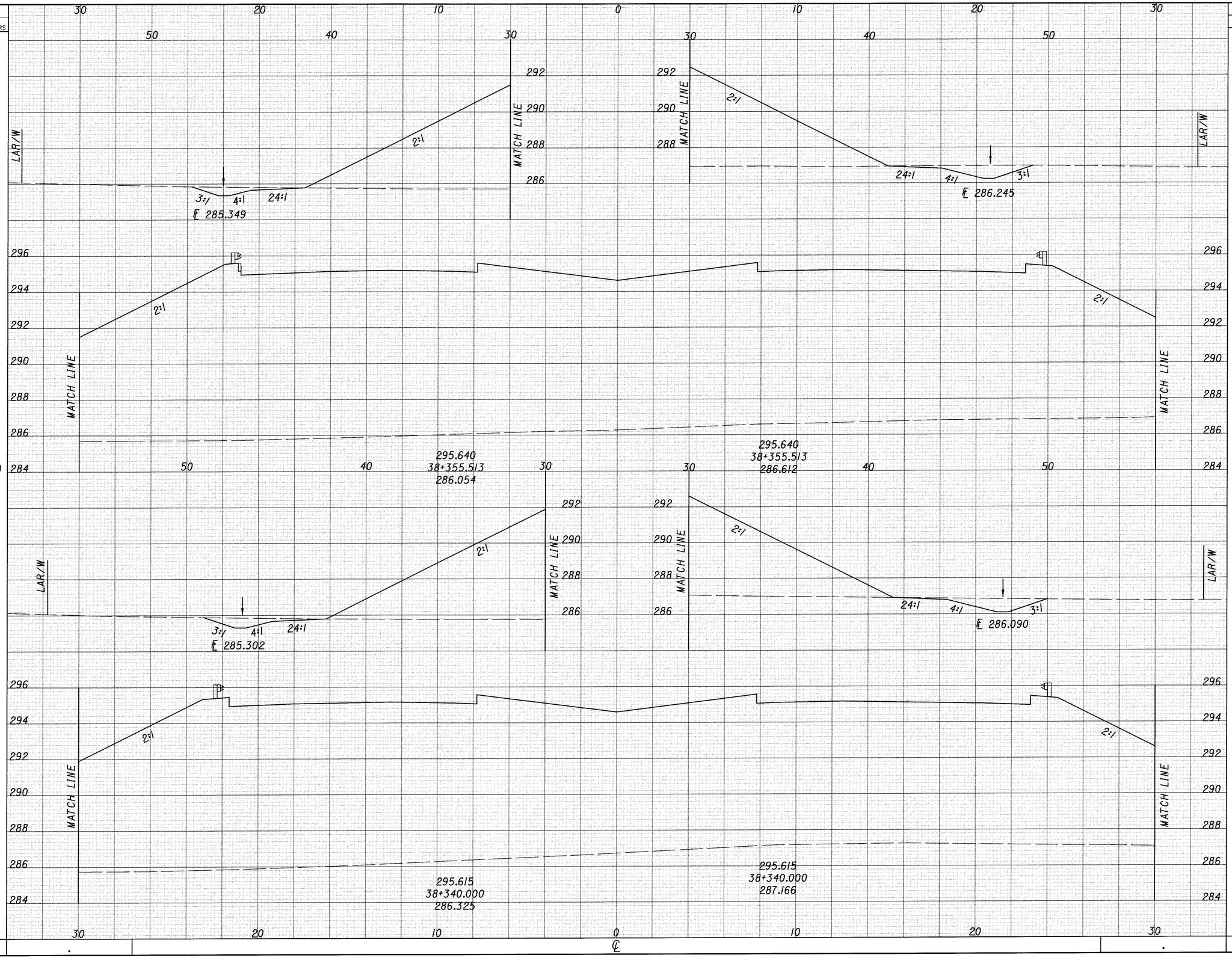
US-30 CROSS SECTIONS

STA 38+300.000 TO STA 38+325.513

WYA / CRA-30-28.009 / 0.000

549
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
80.55	1260	3.68	571.72	61	8780
81.95	1201	4.14	560.26	70	8145



CALCULATED AM

CHECKED REA

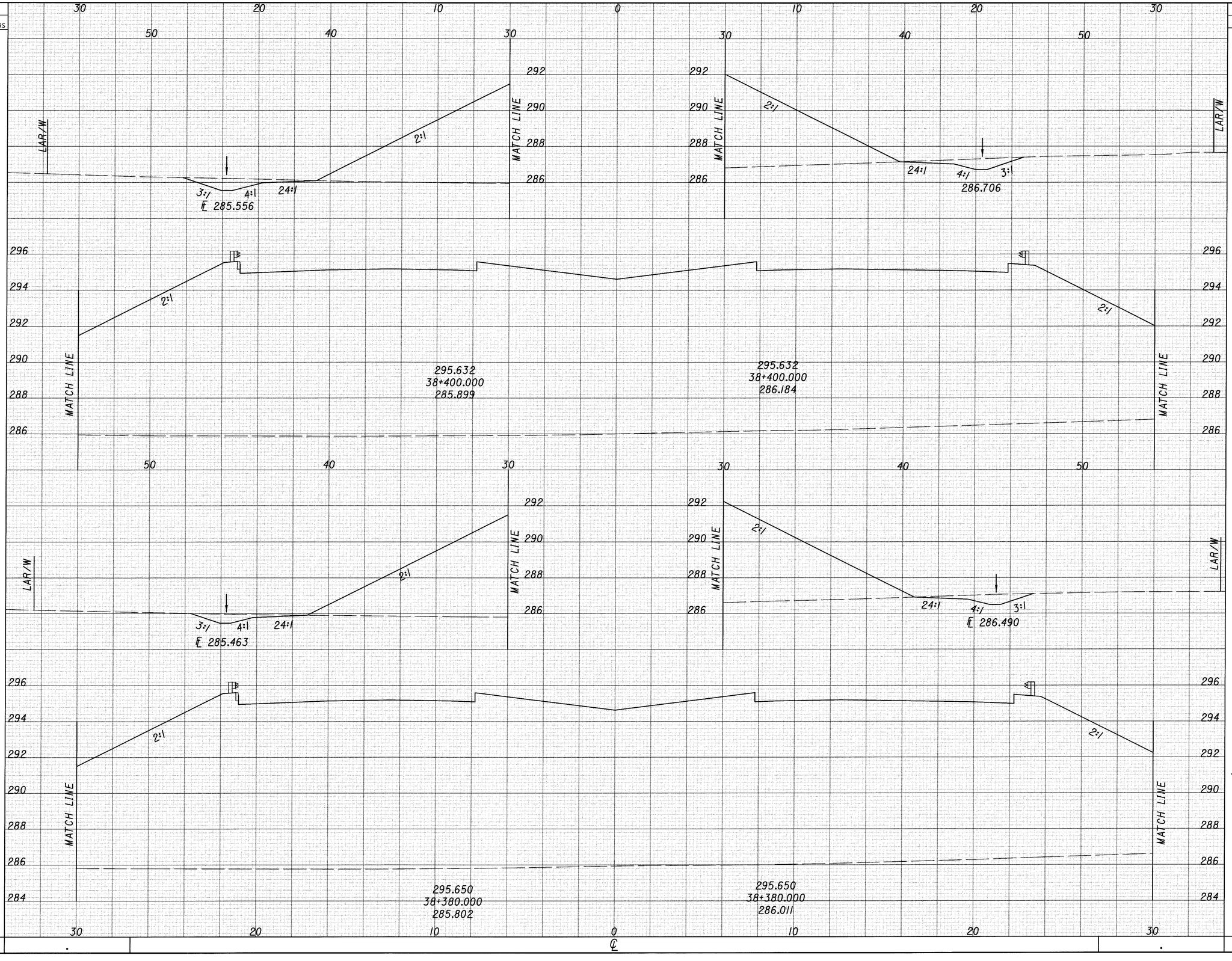
US-30 CROSS SECTIONS

STA 38+340.000 TO STA 38+355.513

WYA / CRA-30-28.009 / 0.000

550
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
79.53	1586	4.01	570.72	71	11583
79.05	1954	3.04	587.56	82	14194



CALCULATED AM

CHECKED REA

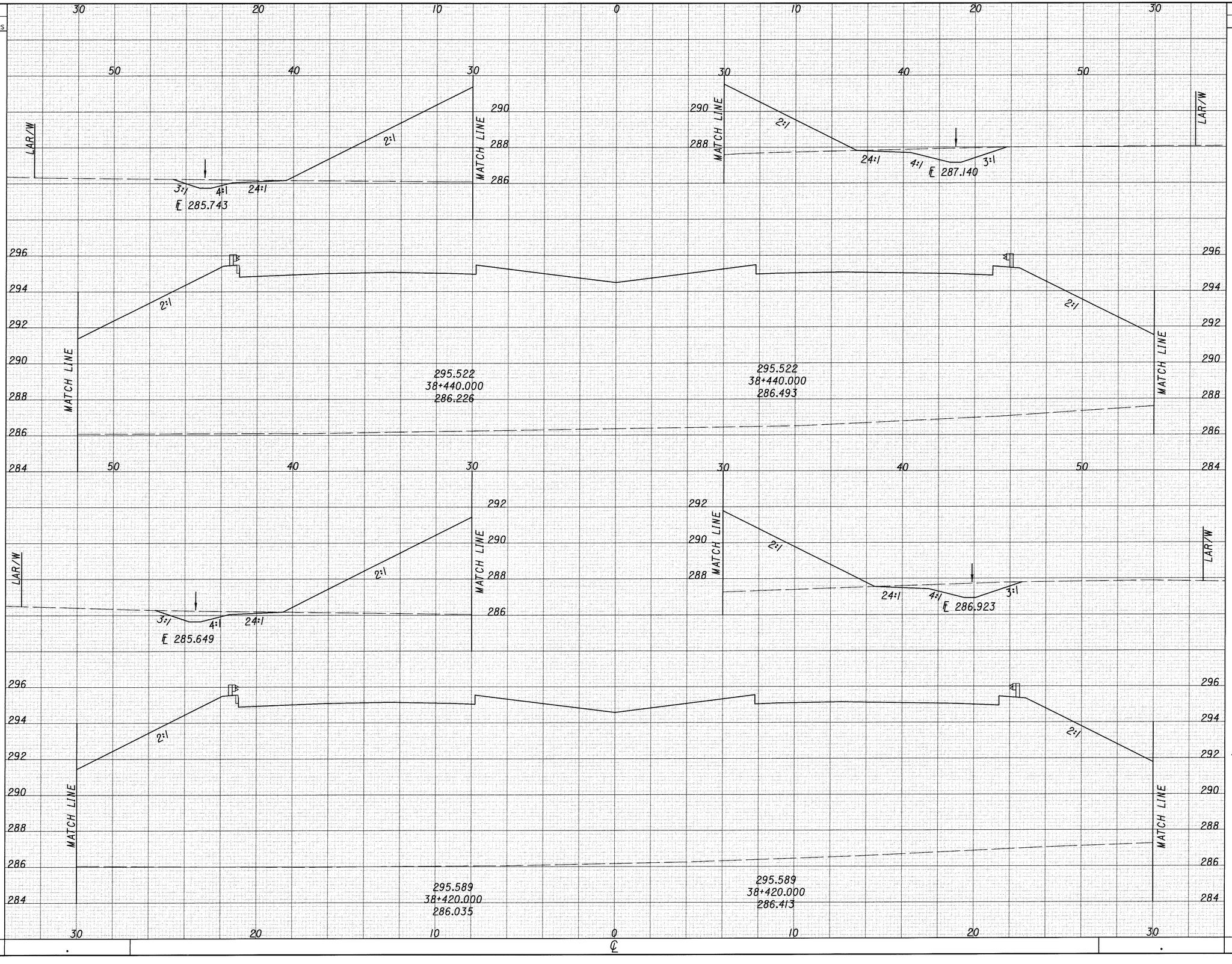
US-30 CROSS SECTIONS

STA 38+380.000 TO STA 38+400.000

WYA/CRA-30-28.009/0.000

551/2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
77.67	1571	4.13	526.66	88	10726
79.41	1589	4.65	545.92	87	11166



CALCULATED AM

CHECKED REA

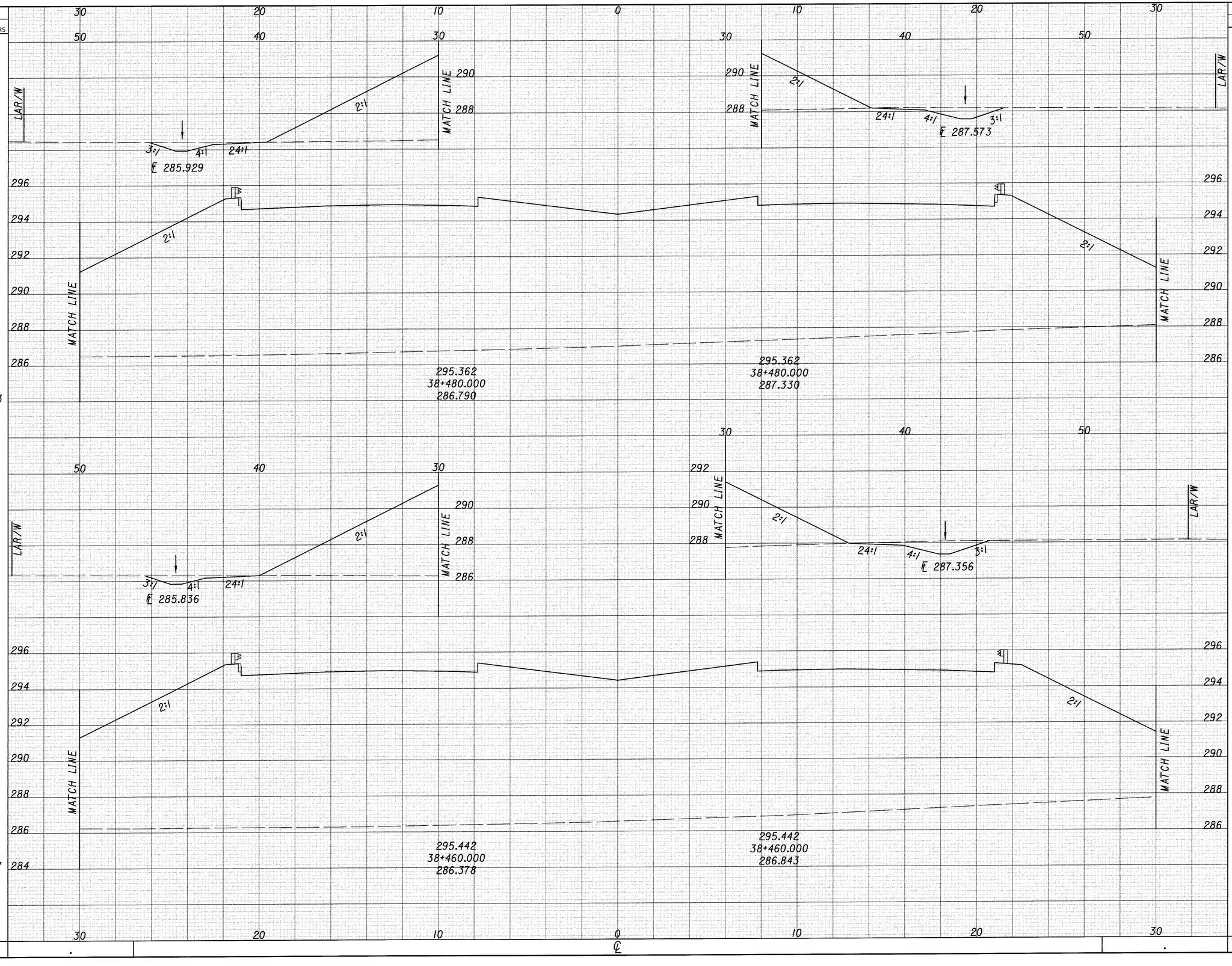
US-30 CROSS SECTIONS

STA 38+420.000 TO STA 38+440.000

WYA / CRA-30-28.009 / 0.000

552
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
74.23	1503	3.12	468.48	68	9717
76.04	1537	3.68	503.24	78	10299



CALCULATED AM

CHECKED REA

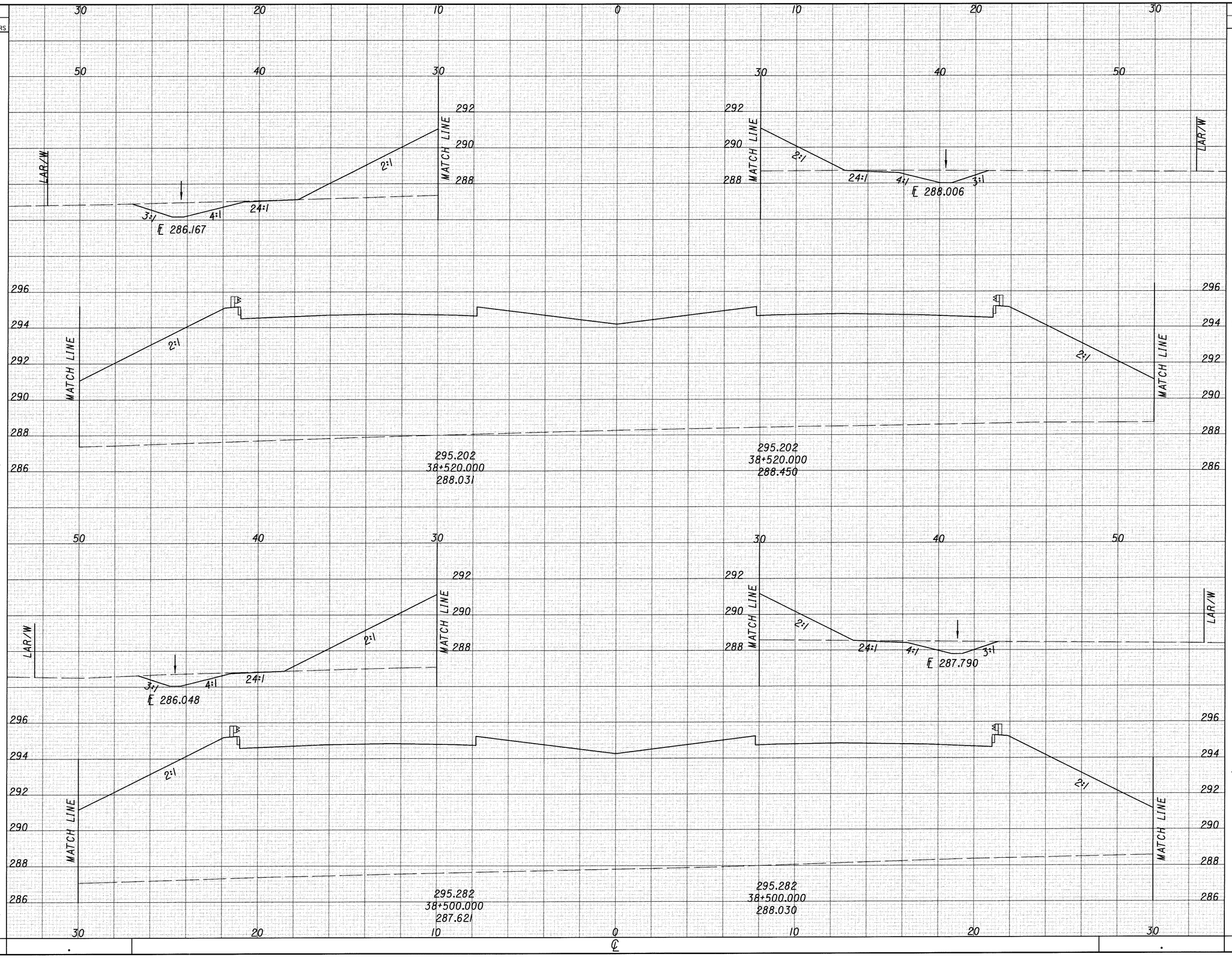
US-30 CROSS SECTIONS

STA 38+460.000 TO STA 38+480.000

WYA / CRA-30-28.009 / 0.000

553
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
74.47	1491	5.24	383.13	95	7959
74.60	1488	4.26	412.81	74	8813



CALCULATED AM

CHECKED REA

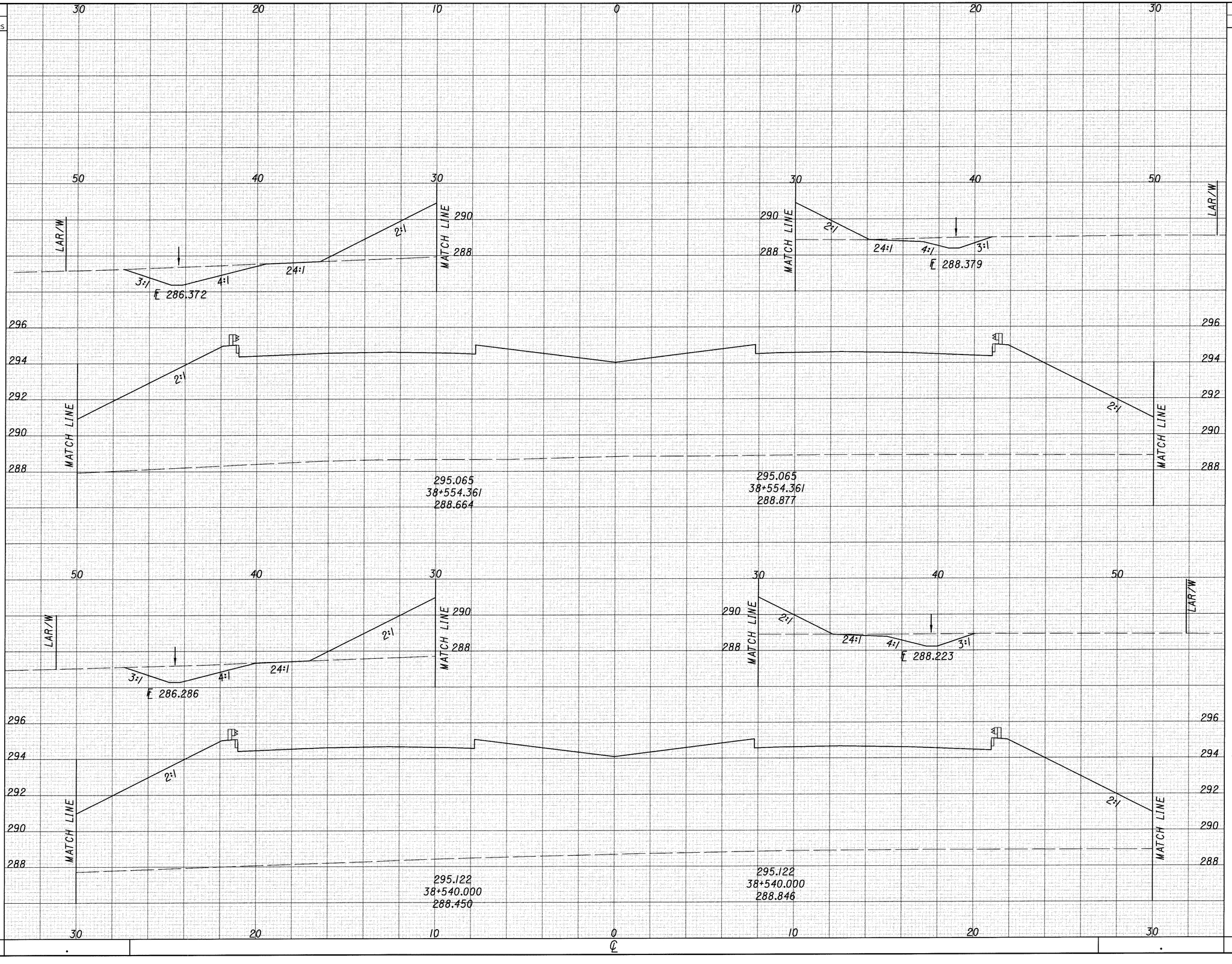
US-30 CROSS SECTIONS

STA 38+500.000 TO STA 38+520.000

WYA / CRA-30-28.009 / 0.000

554
2116

SEEDING	
END WIDTH	SQ. METERS
72.89	1055
74.03	1485



END AREA		VOLUME	
CUT	FILL	CUT	FILL
5.98	338.93	85	4966
5.81	352.63	111	7358

CALCULATED AM

CHECKED REA

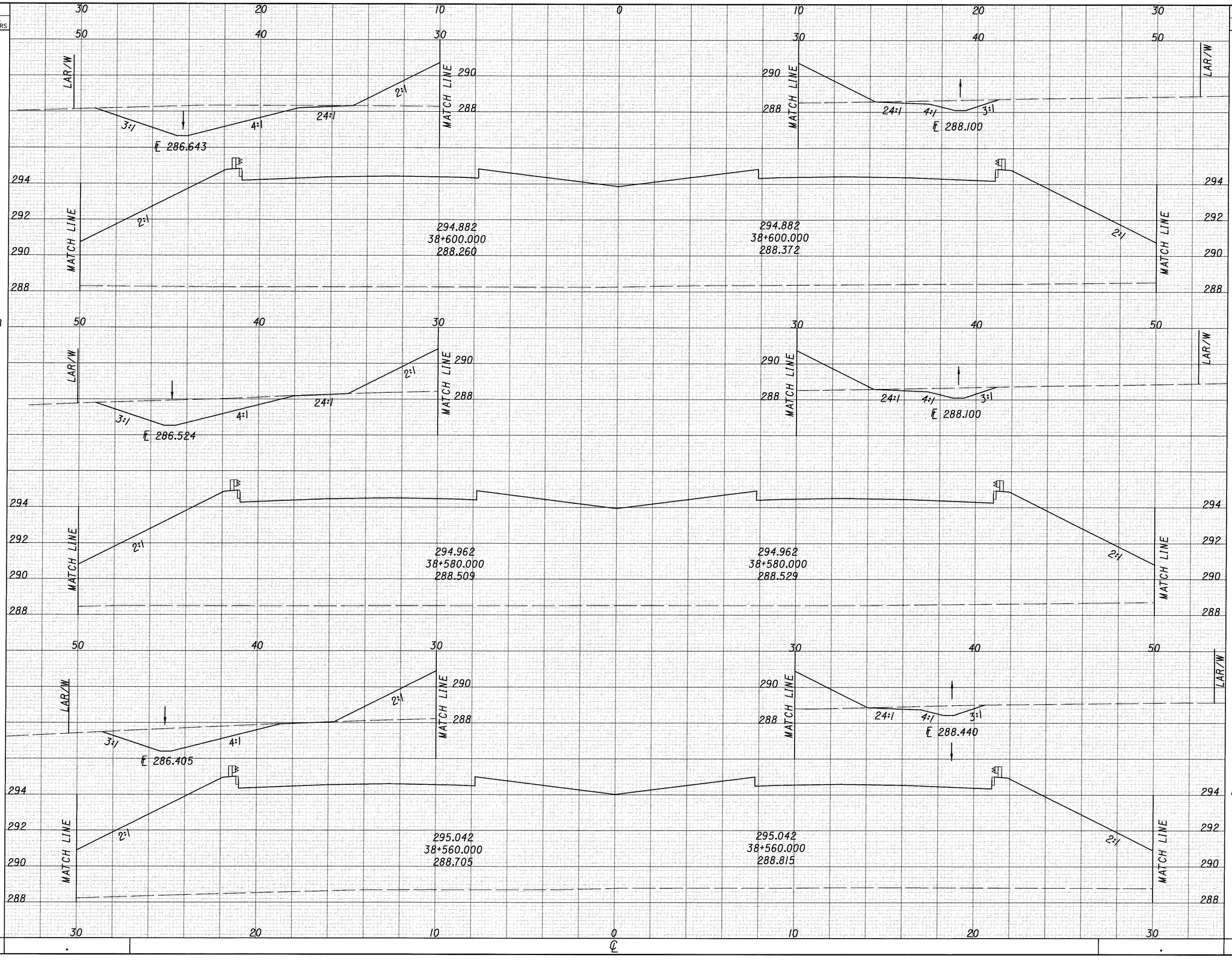
US-30 CROSS SECTIONS

STA 38+540.000 TO STA 38+554.361

WYA/CRA-30-28.009/0.000

555
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
75.17	1498	12.27	345.46	220	6829		
74.64	1485	9.74	337.45	180	6715		
73.87	414	8.25	334.05	40	1897		



US-30 CROSS SECTIONS

STA 38+560.000 TO STA 38+600.000

WYA / CRA-30-28.009 / 0.000

556
2116

SEEDING	
END WIDTH	SQ. METERS
69.52	
	1423
72.79	
	1480

Sta. 38+640, 36.714m Lt.
HW - 2.2M or 2.1M
Inv. 375mm = 287.181
Tot. Area = 0.706 Ac.
Q10 = 0.139cms
HGL Elev. = 287.70

LAR/W
Easement
72.221
3:1
℄ 286.881
6.1%
287.206
26.0° Bend
2.518m
@ 1.0%
603, 16.9m x 375mm
Conduit Type F
707.05 Type C
MATCH LINE
24:1
4:1
3:1
℄ 287.779

292.413
26.0° Bend
0.762m
2:1
Masonry Collar as per MC - 4
603, 21.003m x 375mm Conduit Type B @ 1.0%
2.783m @ 1.0%
Sta. 38+640, ℄
604, No. 4 CB
Grate = 293.679
Inv. 375mm = 292.828
Inv. 150mm = 292.878
294.722
38+640.000
288.130
294.722
38+640.000
288.185
10.413m
11.642m @ 50.00%
603, 16.9m x 375mm
Conduit Type F
707.05 Type C

LAR/W
3:1
4:1
24:1
2:1
℄ 286.762
℄ 287.931
294.802
38+620.000
288.219
294.802
38+620.000
288.341

END AREA		VOLUME	
CUT	FILL	CUT	FILL
6.10	352.13		
		139	7015
7.76	349.41		
		200	6949

CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 38+620.000 TO STA 38+640.000

WYA/CRA-30-28.009/0.000

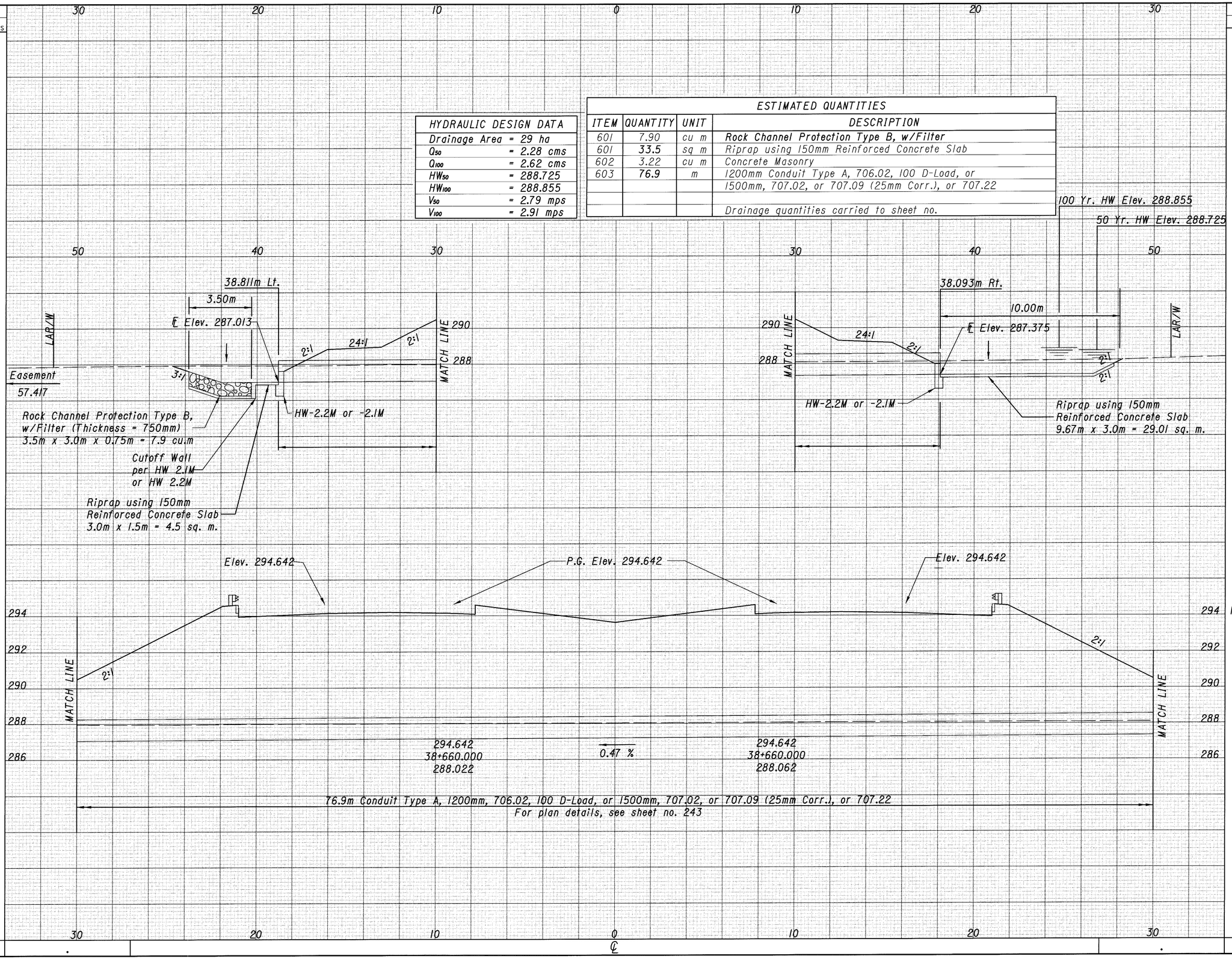
557
2116

SEEDING	
END WIDTH	SQ. METERS
76.40	
	1459

HYDRAULIC DESIGN DATA	
Drainage Area	= 29 ha
Q_{50}	= 2.28 cms
Q_{100}	= 2.62 cms
HW_{50}	= 288.725
HW_{100}	= 288.855
V_{50}	= 2.79 mps
V_{100}	= 2.91 mps

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	7.90	cu m	Rock Channel Protection Type B, w/Filter
601	33.5	sq m	Riprap using 150mm Reinforced Concrete Slab
602	3.22	cu m	Concrete Masonry
603	76.9	m	1200mm Conduit Type A, 706.02, 100 D-Load, or 1500mm, 707.02, or 707.09 (25mm Corr.), or 707.22
			Drainage quantities carried to sheet no.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
16.69	356.45	228	7086

CALCULATED AM

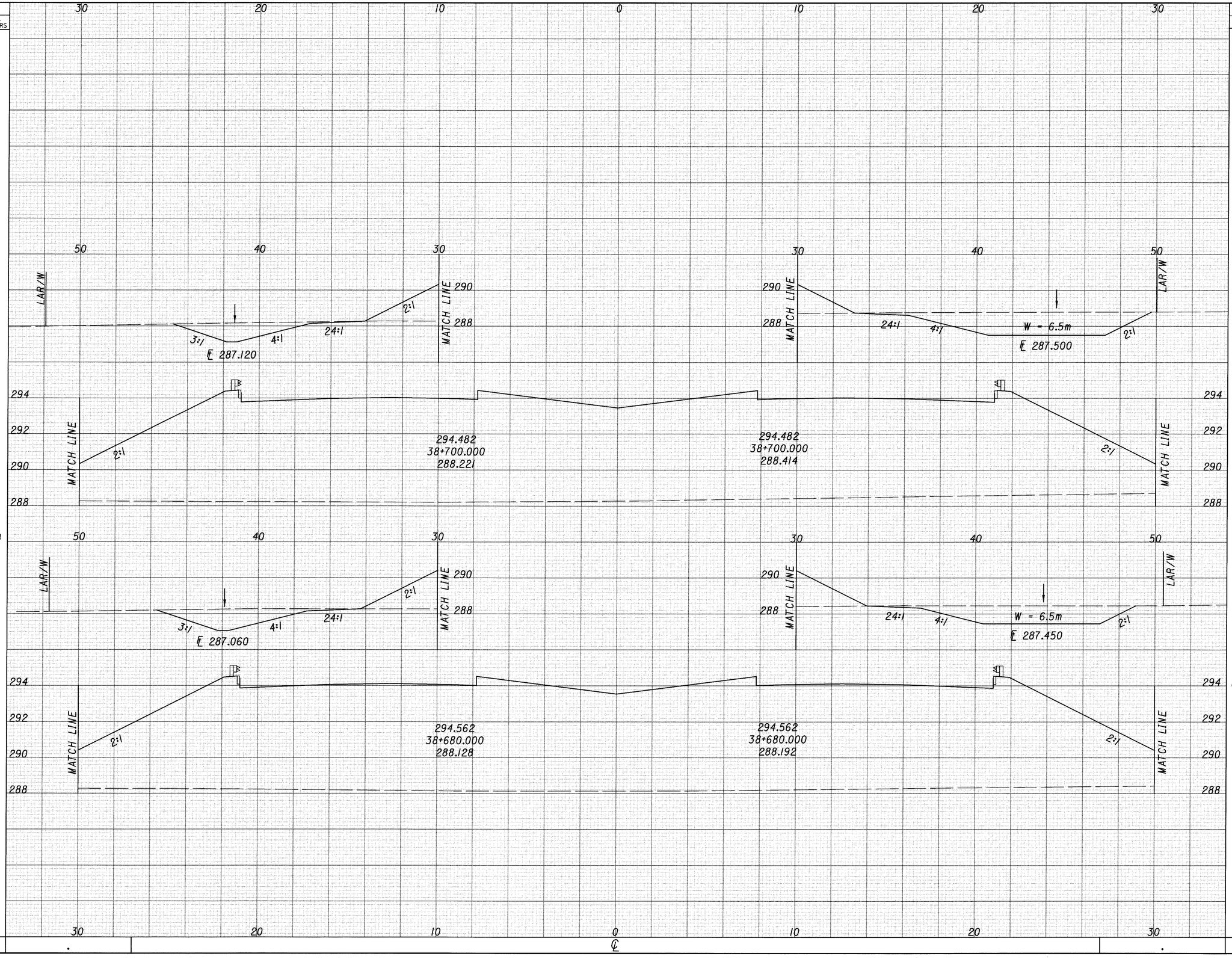
CHECKED REA

US-30 CROSS SECTIONS
STA 38+660.000

WYA/CRA-30-28.009/0.000

558
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
79.68		18.00	315.33		
	1594			336	6459
79.70		15.56	330.56		
	1561			323	6870



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 38+680.000 TO STA 38+700.000

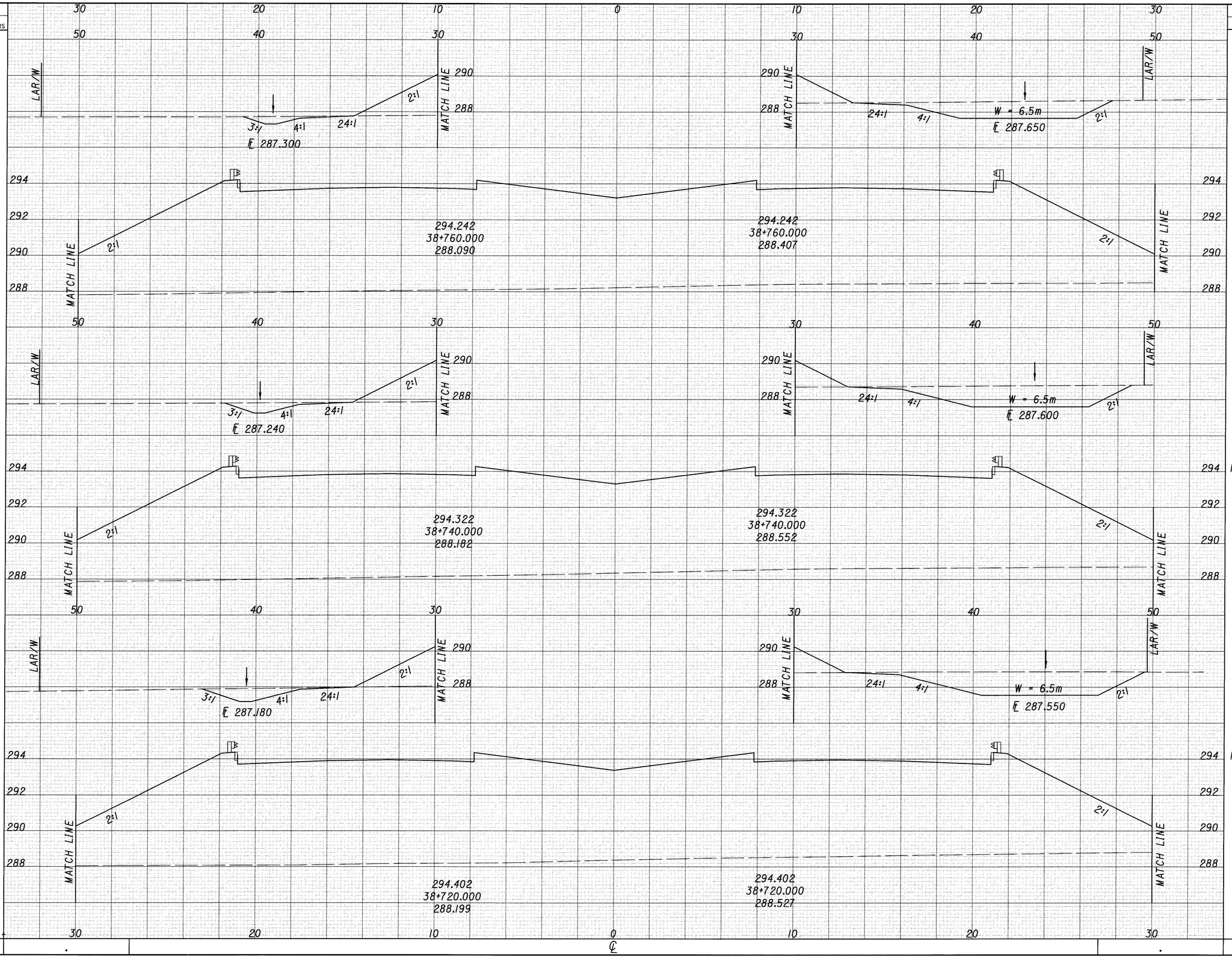
WYA / CRA-30-28.009 / 0.000

559
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
72.58		9.85	311.52		
	1477			231	6203
75.09		13.26	308.74		
	1524			295	6189
77.30		16.19	310.11		
	1570			342	6254

CALCULATED AM

CHECKED REA

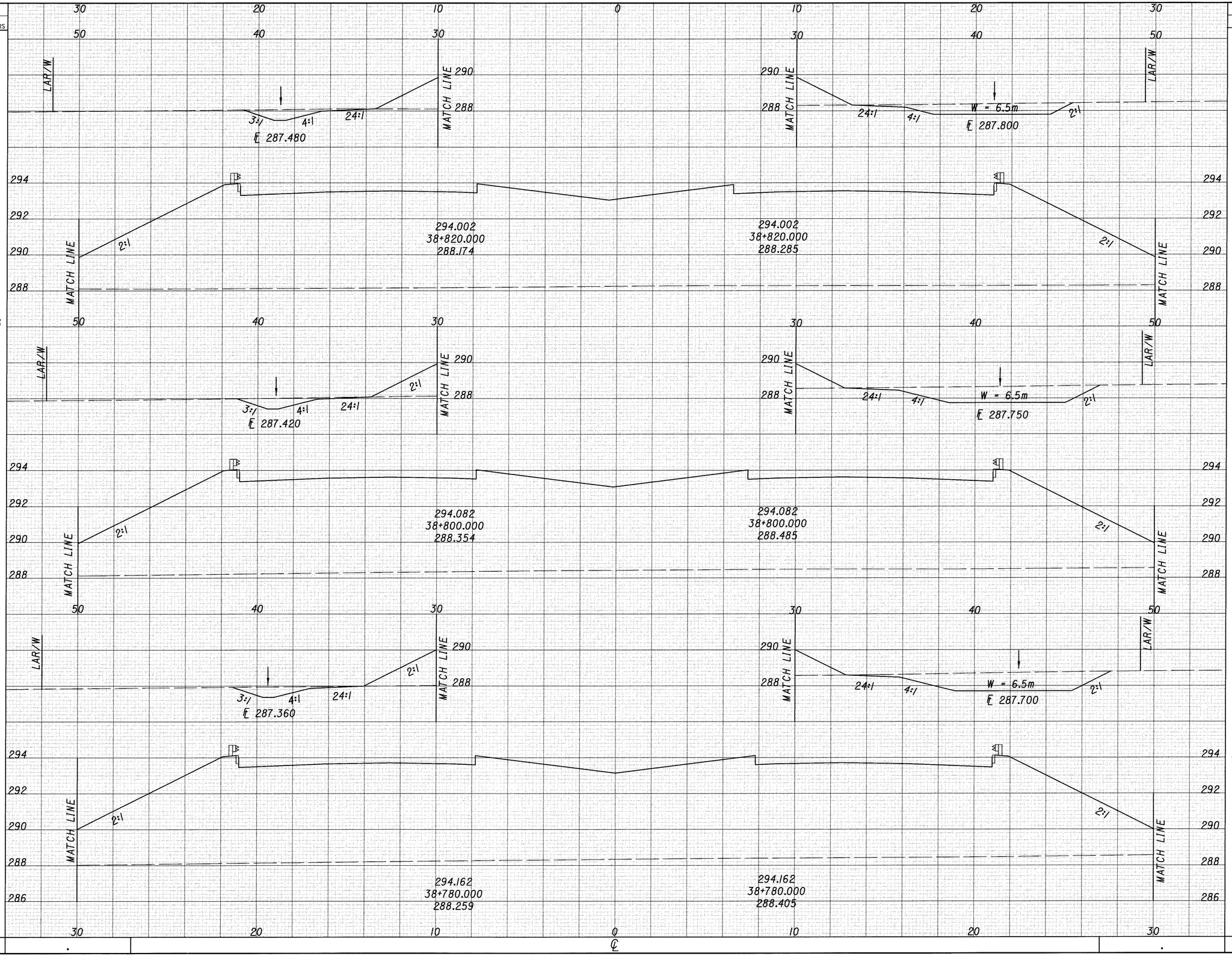


US-30 CROSS SECTIONS
STA 38+760.000 TO 38+720.000

WYA/CRA-30-28.009/0.000

560
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
83.58	1553	6.65	294.61	168	5832
71.73	1450	10.18	288.63	217	5873
73.27	1458	11.47	298.67	213	6102



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

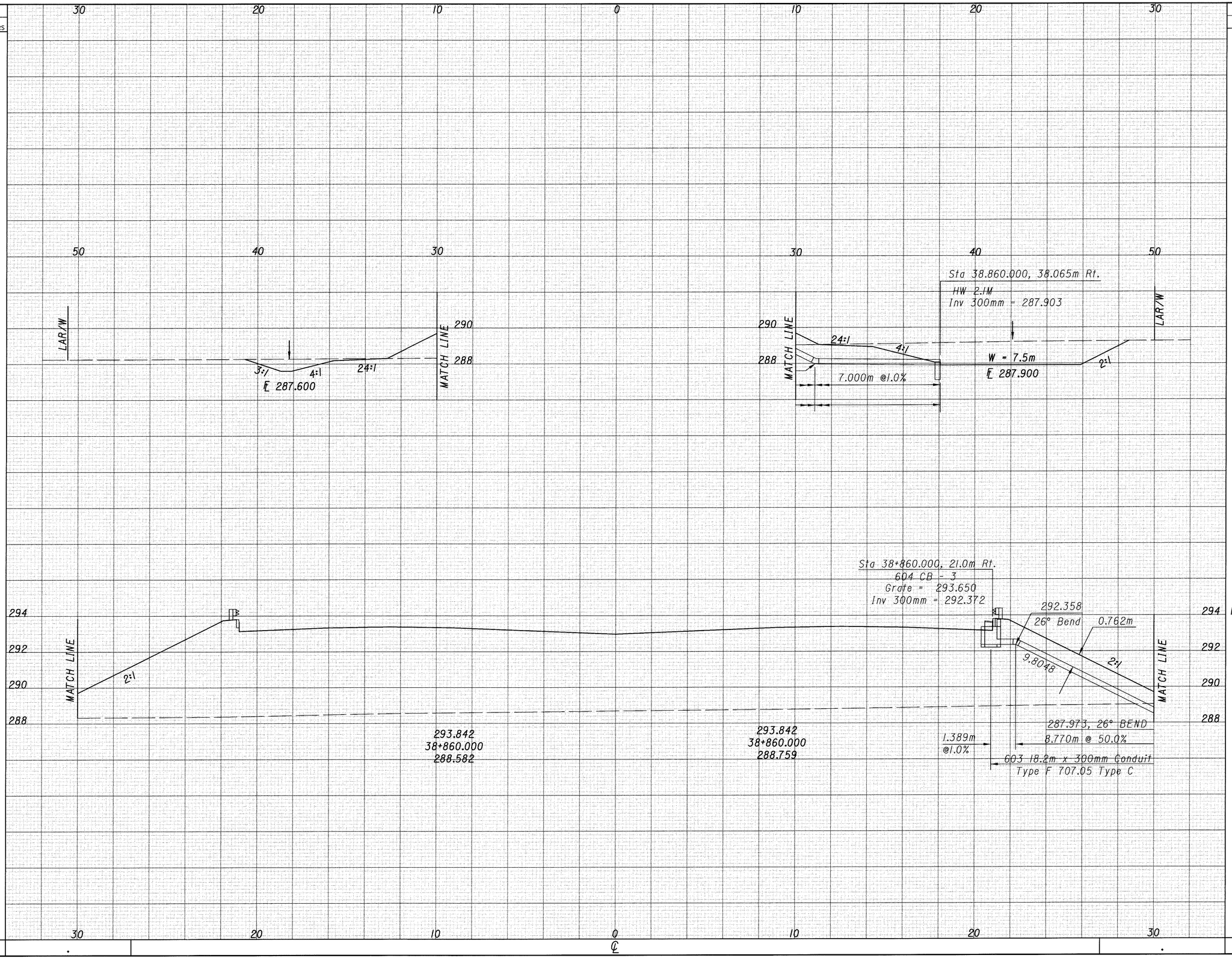
STA 38+780.000 TO STA 38+820.000

WYA / CRA-30-28.009 / 0.000

561
2116

SEEDING	
END WIDTH	SQ. METERS
68.41	
	545

SEEDING	
END WIDTH	SQ. METERS
57.66	756



END AREA		VOLUME	
CUT	FILL	CUT	FILL
12.83	268.55	151	3194

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 38+860.000

WYA / CRA-30-28.009 / 0.000

563
2116

SEEDING END WIDTH	SEEDING SQ. METERS		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
72.64		293.602 38+920.000 288.473 / 293.602 38+920.000 288.747	13.80	250.78		
	1445				256	5104
71.91		293.682 38+900.000 288.577 / 293.682 38+900.000 288.654	11.76	259.63		
	1432				246	5190
71.25		293.762 38+880.000 288.719 / 293.762 38+880.000 288.848	12.88	259.35		
	1289				257	5279

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 38+880.000 TO STA 38+920.000

WYA / CRA-30-28.009 / 0.000

564
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
74.96		9.74	256.25		
	494			64	1699
74.83		9.58	258.50		
	1454			215	5040
70.55		11.90	245.52		
	1432			257	4963

Sta 38+966.600, 39.173m Lt.
HW 2.1M
Inv 300mm = 287.924
0.762m
3:1
6:1
℄ 287.920
287.955, 26° BEND
3.098m @1.0%
MATCH LINE
LAR/W
Sta 38+966.600, 21.0m Lt.
604 CB 3
Grate = 293.224
Inv 300mm = 291.964
291.932
18° Bend
12.575m
11.929m @ 50.0%
3.234m @1.0%
603 18.9m x 300mm Conduit
Type F 707.05 Type C
293.416
38+966.600
288.599
293.416
38+966.600
288.807
8:1
2:1
W = 5m
℄ 288.166
℄ 288.150
293.442
38+960.000
288.566
293.442
38+960.000
288.795
4:1
24:1
℄ 287.840
℄ 288.100
293.522
38+940.000
288.446
293.522
38+940.000
288.802
℄ 287.900

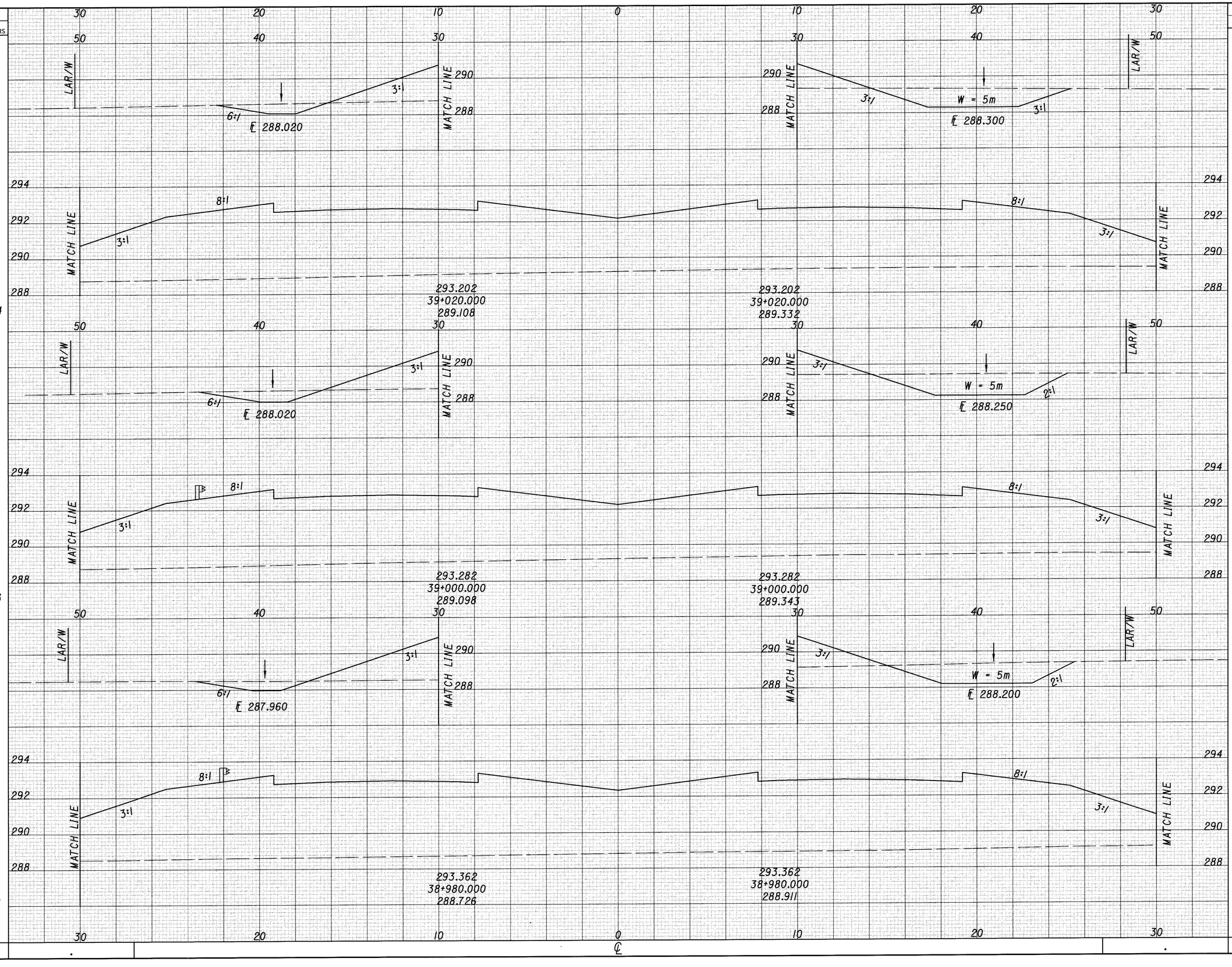
CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 38+940.000 TO STA 38+966.600

WYA/CRA-30-28.009/0.000

565
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
74.04	1494	10.31	207.63	224	4202
75.36	1513	12.08	212.53	228	4546
75.89	1011	10.69	242.08	137	3339



CALCULATED AM

CHECKED REA

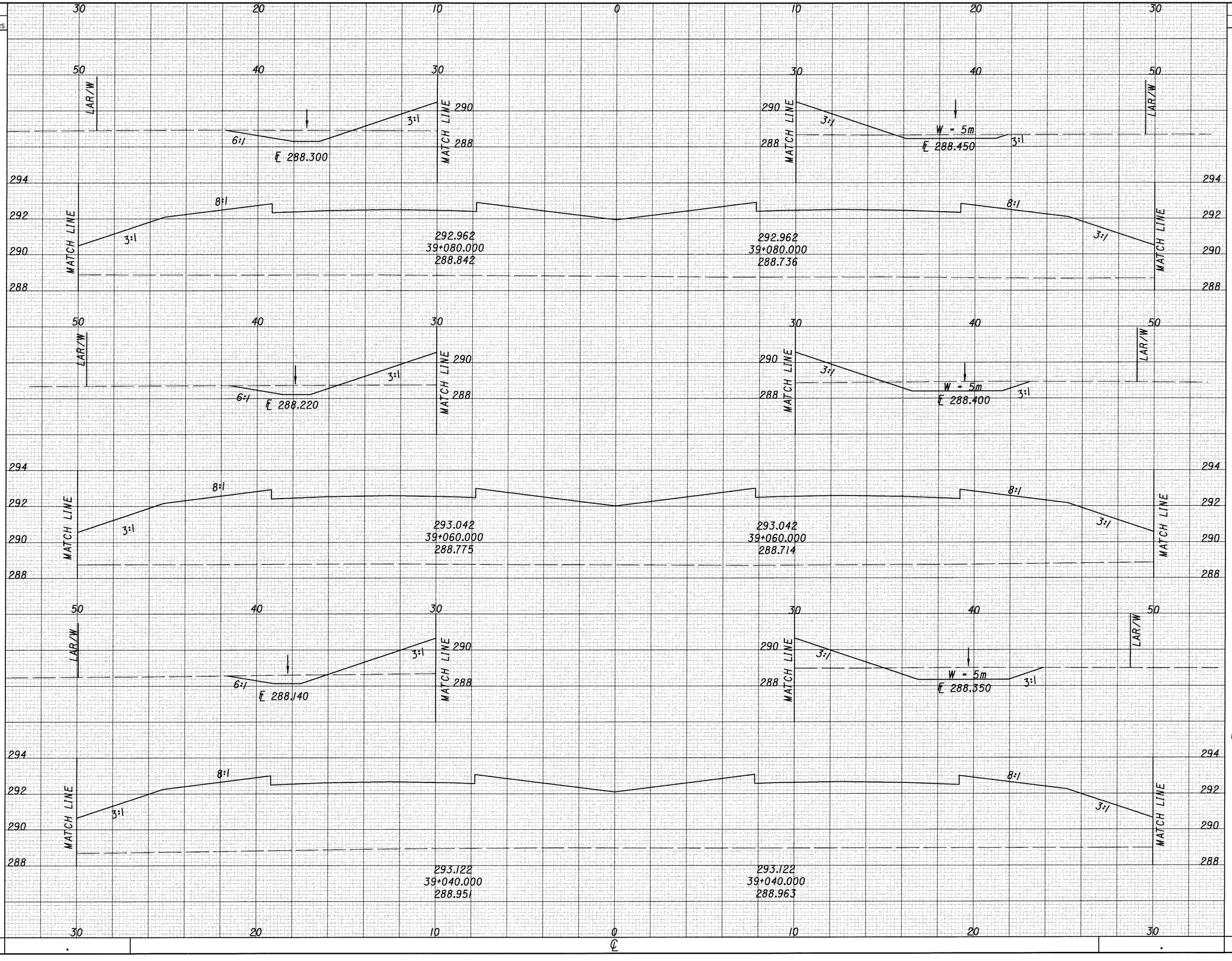
US-30 CROSS SECTIONS

STA 38+980.000 TO STA 39+020.000

WYA / CRA-30-28.009 / 0.000

566
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
69.16	1396	3.83	216.25	91	4391
70.43	1418	5.28	222.86	115	4421
71.41	1454	6.20	219.24	165	4269



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 39+040.000 TO STA 39+080.000

WYA/CRA-30-28.009/0.000

567
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
71.26	1420	14.31	141.27	207	3050
70.75	1385	6.37	163.74	99	3642
67.71	1368	3.55	200.47	74	4167

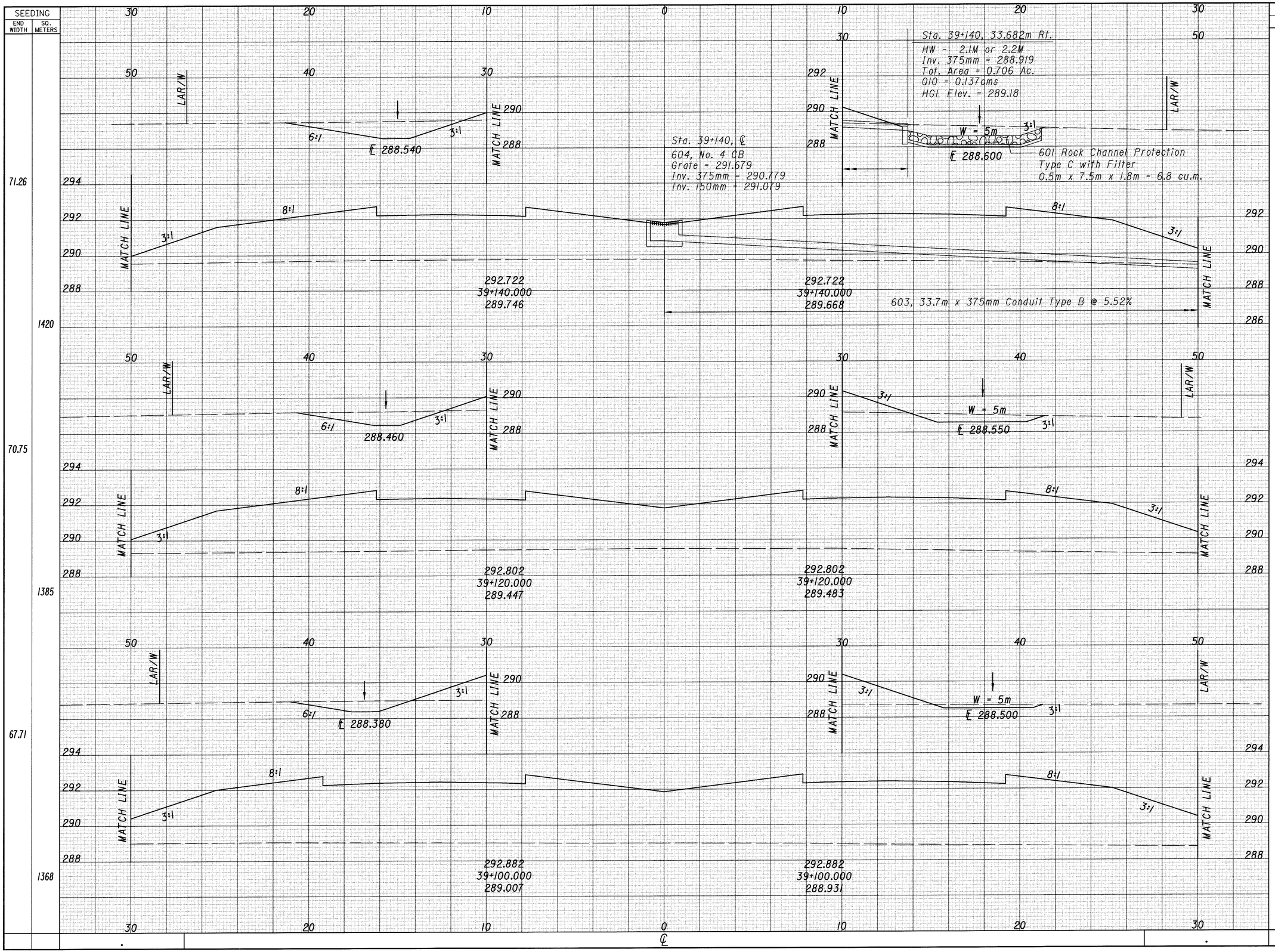
CALCULATED AM

CHECKED REA

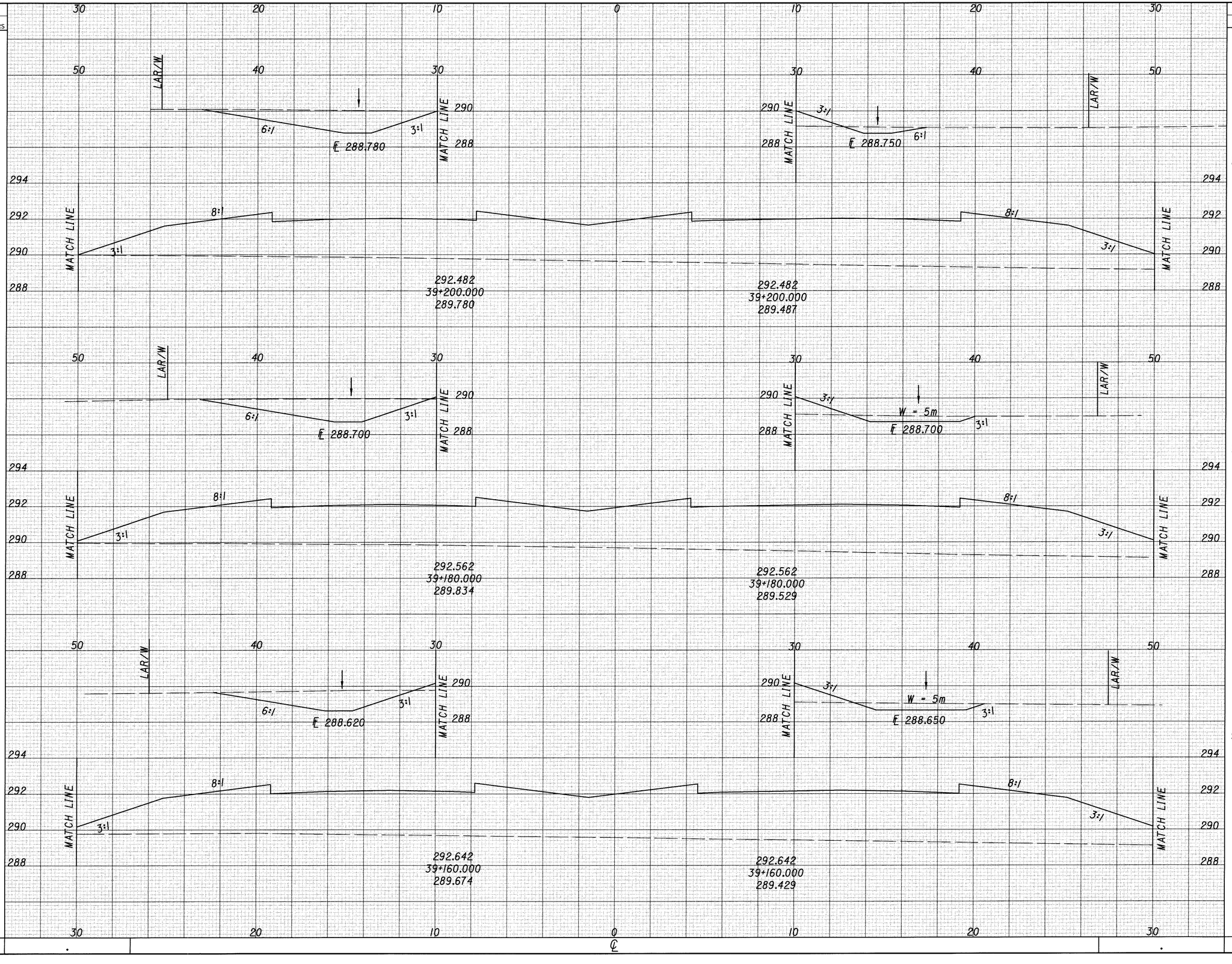
US-30 CROSS SECTIONS STA 39+100.000 TO STA 39+140.000

WYA/CRA-30-28.009/0.000

568
2116



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
62.77	1284	10.25	130.72	213	2653
65.63	1314	11.04	134.58	205	2810
65.74	1370	9.44	146.45	238	2877



CALCULATED AM

CHECKED REA

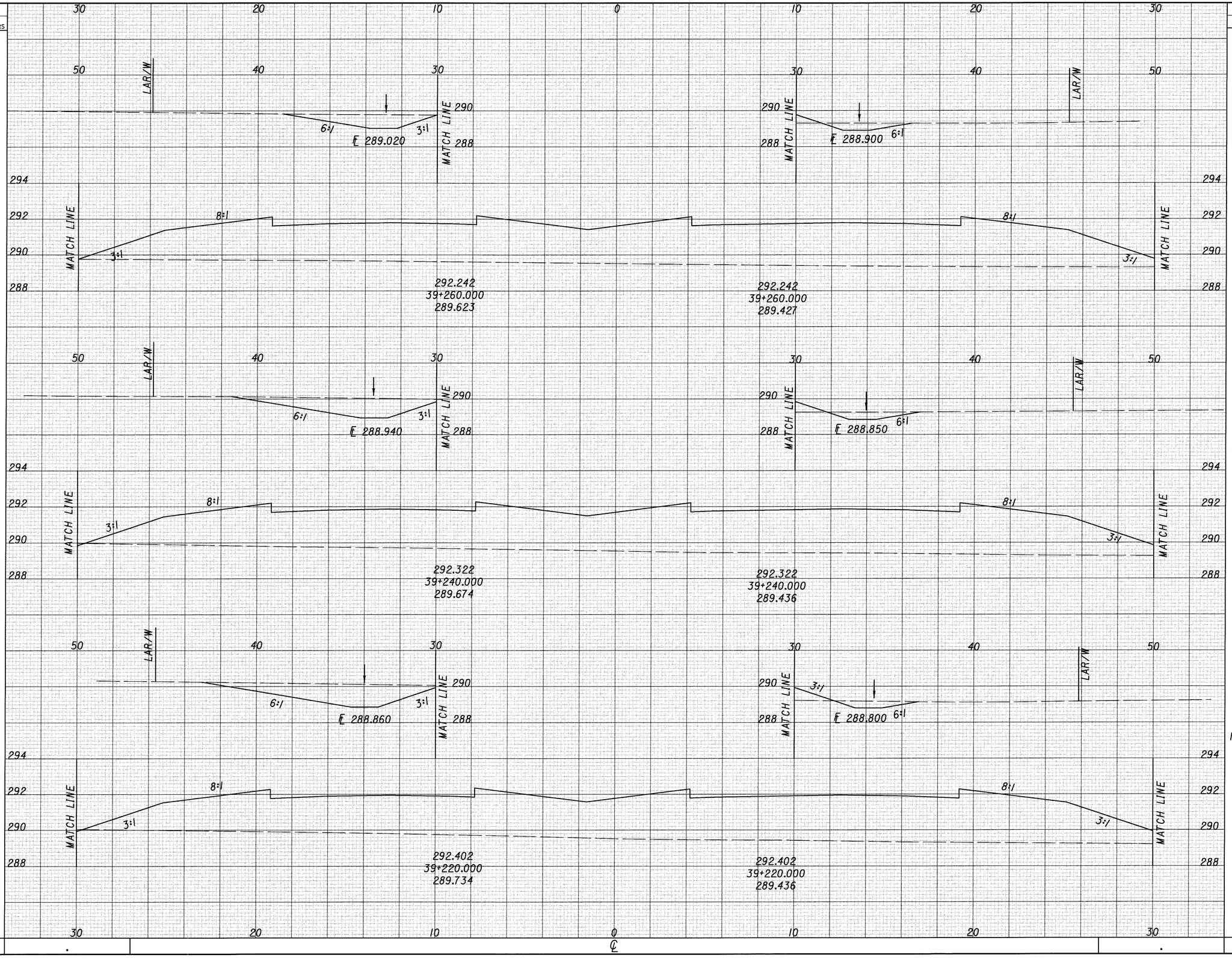
US-30 CROSS SECTIONS

STA 39+160.000 TO STA 39+200.000

WYA/CRA-30-28.009/0.000

569
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
56.93	1177	5.10	120.71	138	2438
60.79	1231	8.68	123.11	192	2499
62.29	1251	10.49	126.82	207	2575



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 39+220.000 TO STA 39+260.000

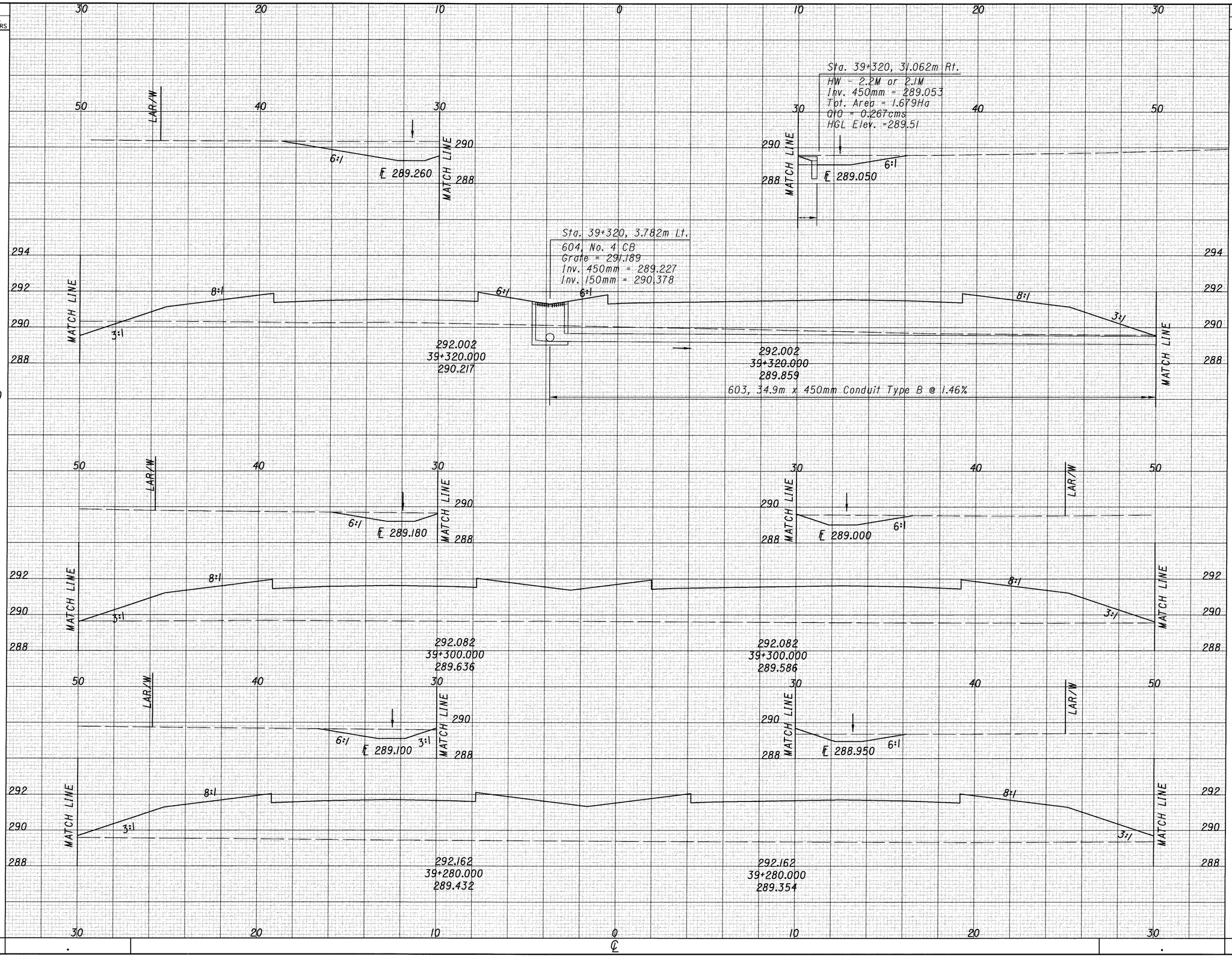
WYA / CRA-30-28.009 / 0.000

570
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
52.25	1040	8.72	77.62	127	1833	
51.76	1061	4.00	105.71	74	2284	
54.36	1113	3.38	122.66	85	2434	

CALCULATED AM

CHECKED REA



US-30 CROSS SECTIONS
39+280.000 TO STA 39+320.000

WYA/CRA-30-28.009/0.000

SEEDING END WIDTH	SEEDING SQ. METERS
30.62	174
21.29	734
52.14	1044

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2.71	80.61		
*4.75		22	541
		*16	
3.80	81.16		
*0.00			
		152	1578
		*0	
11.38	76.62		
		201	1542

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 39+340.000 TO STA 39+366.689

WYA/CRA-30-28.009/0.000

572
2116

30 20 10 0 10 20 30

50 40 30 30 40 50

MATCH LINE 290 288 292 290 288 MATCH LINE

6:1 ℄ 289.447 8:1 3:1 291.816 39+366.689 289.964 ℄ 289.481 291.816 39+366.689 289.873

LAR/W 60 50 40 30 30 40 50

MATCH LINE 290 288 292 290 MATCH LINE

6:1 ℄ 289.420

MATCH LINE 292 290 288 MATCH LINE

8:1 3:1 291.842 39+360.000 289.897 ℄ 289.445 291.842 39+360.000 289.821

LAR/W 50 40 30 30 40

MATCH LINE 290 288 290 288 MATCH LINE

6:1 ℄ 289.340 6:1 ℄ 289.100

MATCH LINE 292 290 288 MATCH LINE

8:1 3:1 8:1 3:1 291.922 39+340.000 290.045 ℄ 289.336 291.922 39+340.000 289.736

* TOPSOIL REMOVAL

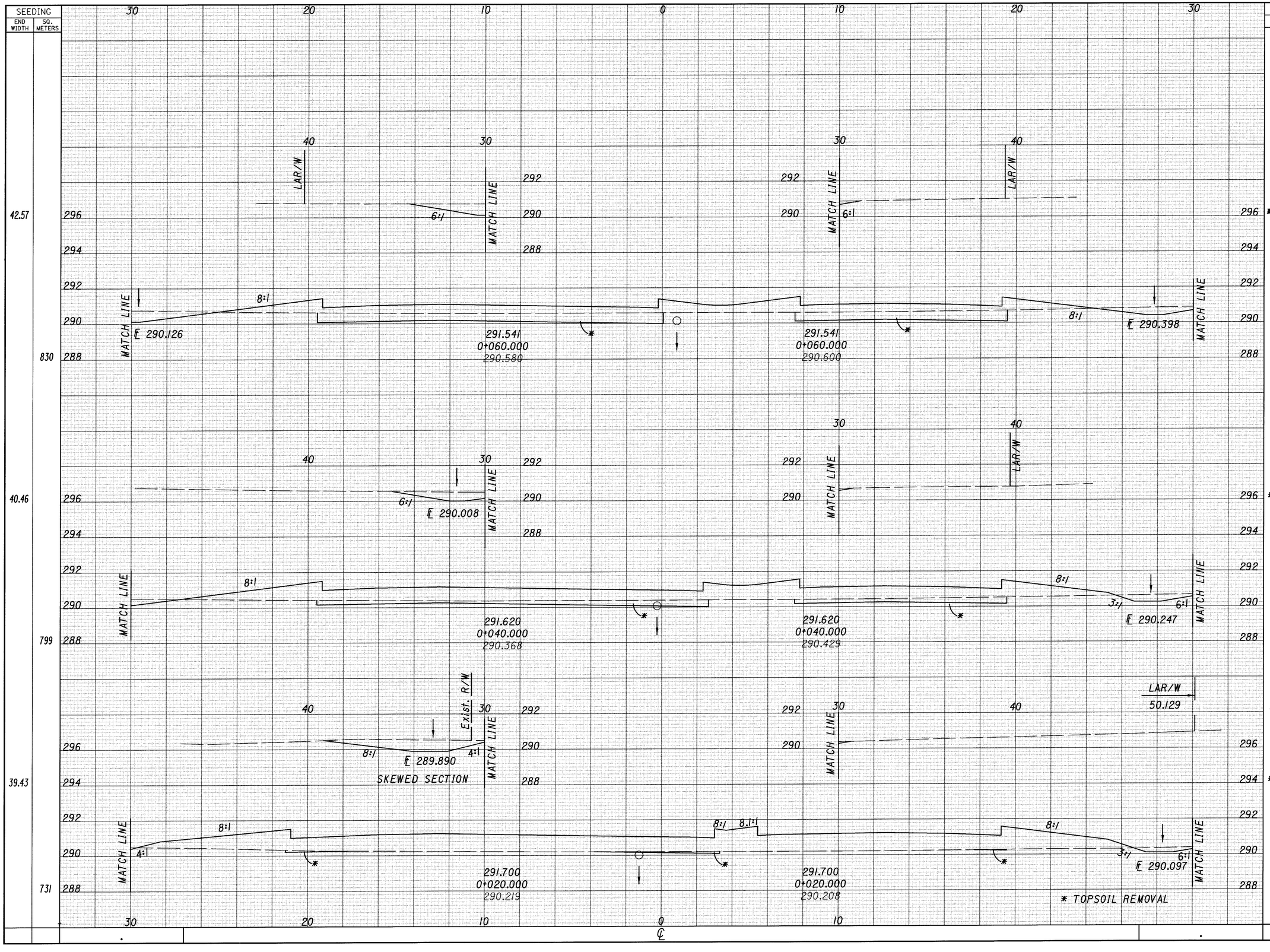
30 20 10 0 10 20 30

℄

SEEDING	
END WIDTH	SQ. METERS
42.57	830
40.46	799
39.43	731

END AREA	
CUT	FILL
4.88	34.86
*15.42	
3.49	40.44
*7.87	
4.59	47.72
*0.61	

VOLUME	
CUT	FILL
84	753
*233	
81	882
*85	
105	1854
*77	



CALCULATED AM

CHECKED REA

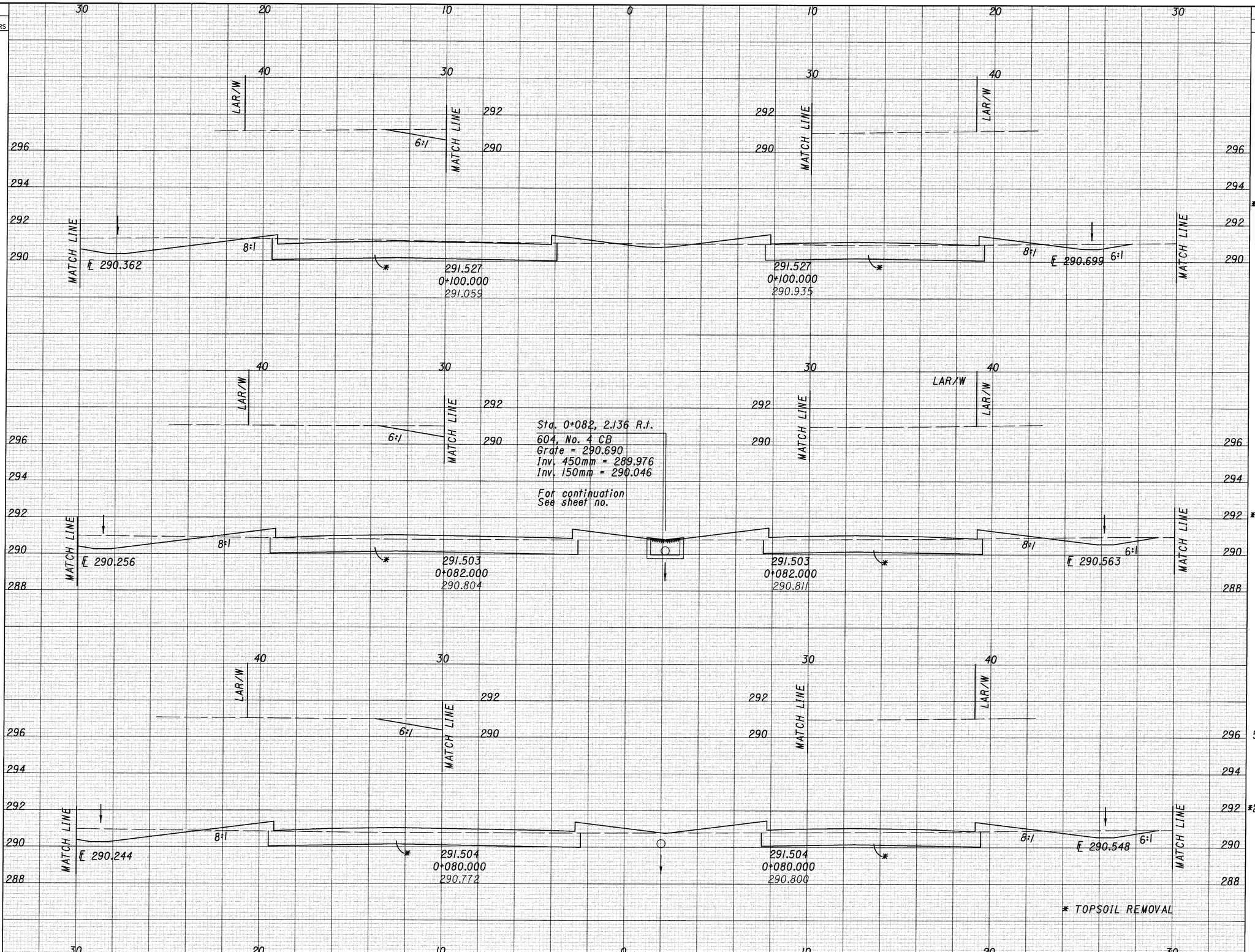
US-30 CROSS SECTIONS

STA 0+020.000 TO STA 0+060.000

WYA/CRA-30-28.009/0.000

573
2116

SEEDING END WIDTH	SEEDING SQ. METERS
41.88	
	760
42.51	
	85
42.49	
	851



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
9.43	26.07		
*22.52			
		136	495
		*394	
5.64	28.91		
*21.23			
		11	58
		*42	
5.54	29.38		
*20.74			
		104	642
		*362	

* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

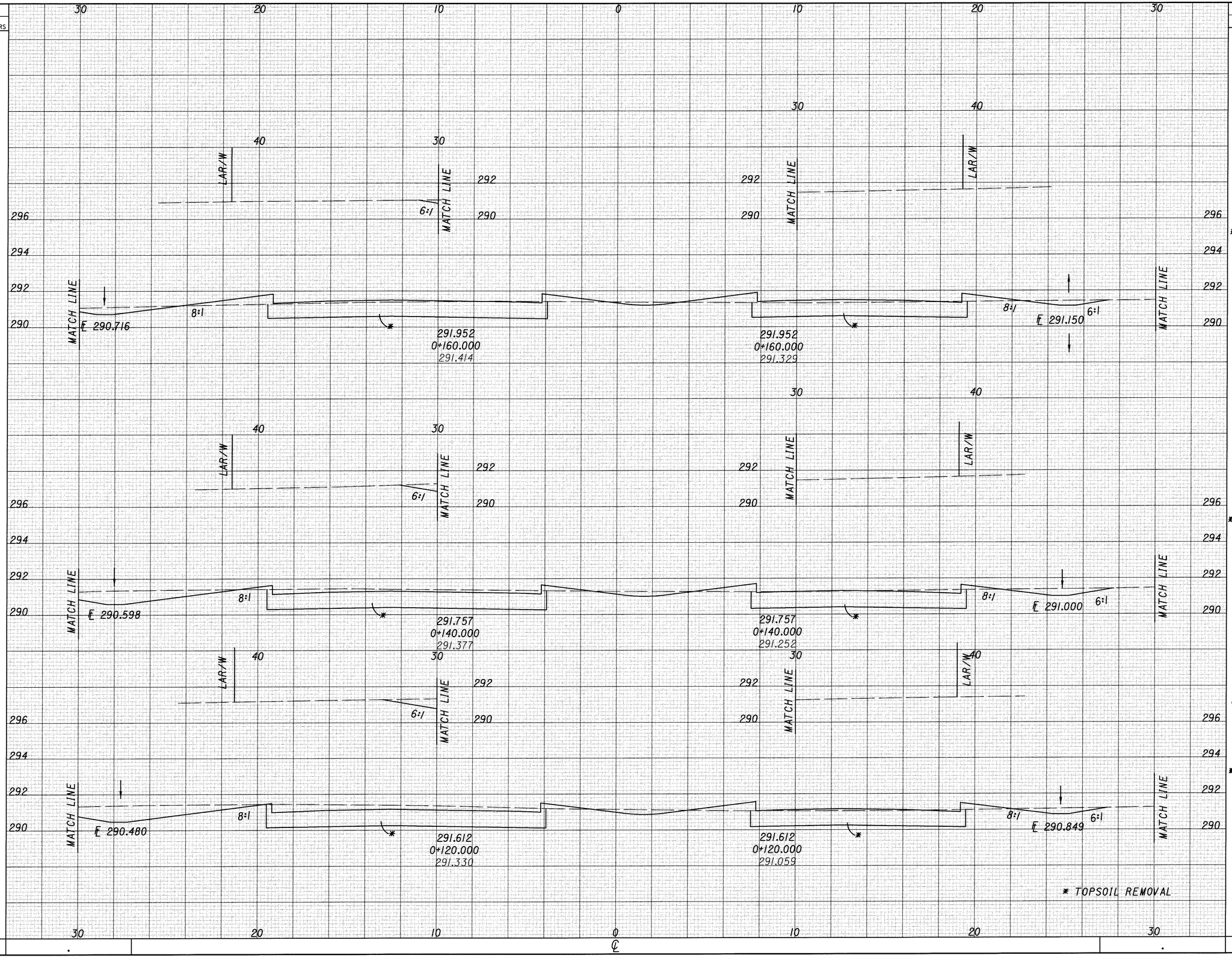
US-30 CROSS SECTIONS

STA 0+080.000 TO STA 0+100.000

WYA / CRA-30-28.009 / 0.000

574
2116

SEEDING END WIDTH	SEEDING SQ. METERS
38.94	797
40.76	822
41.47	834



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3.24	27.24		
*22.10		145	523
		*453	
11.28	25.01		
*23.22		248	502
		*464	
13.47	25.21		
*23.17		229	513
		*457	

CALCULATED AM

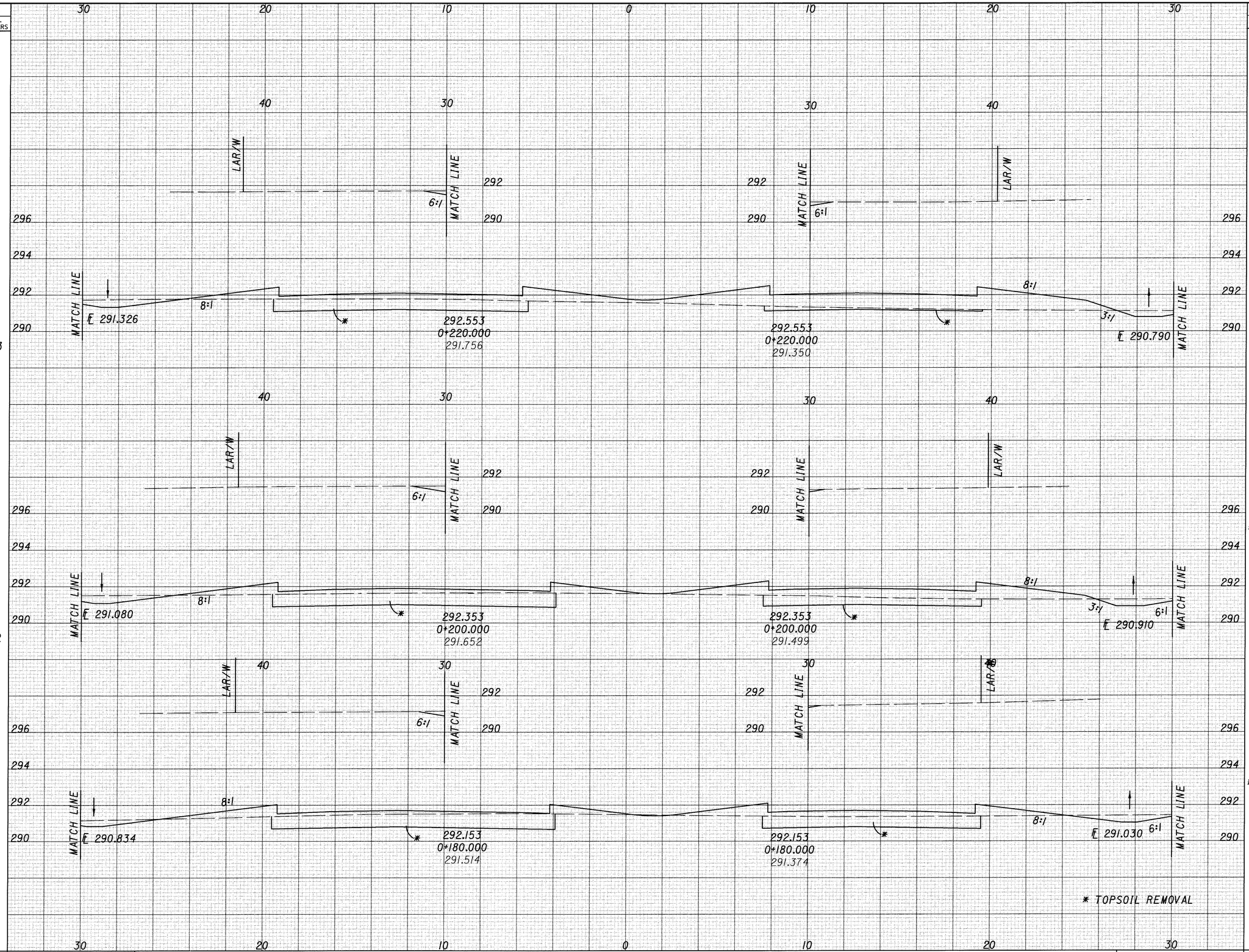
CHECKED REA

US-30 CROSS SECTIONS
STA 0+120.000 TO STA 0+160.000

WYA / CRA-30-28.009 / 0.000

575
2116

SEEDING END WIDTH	SEEDING SQ. METERS
44.82	883
43.46	862
42.75	817



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2.54	35.84		
*10.09		55	677
		*263	
2.97	31.85		
*16.24		57	617
		*352	
2.71	29.80		
*18.97		60	570
		*411	

CALCULATED AM

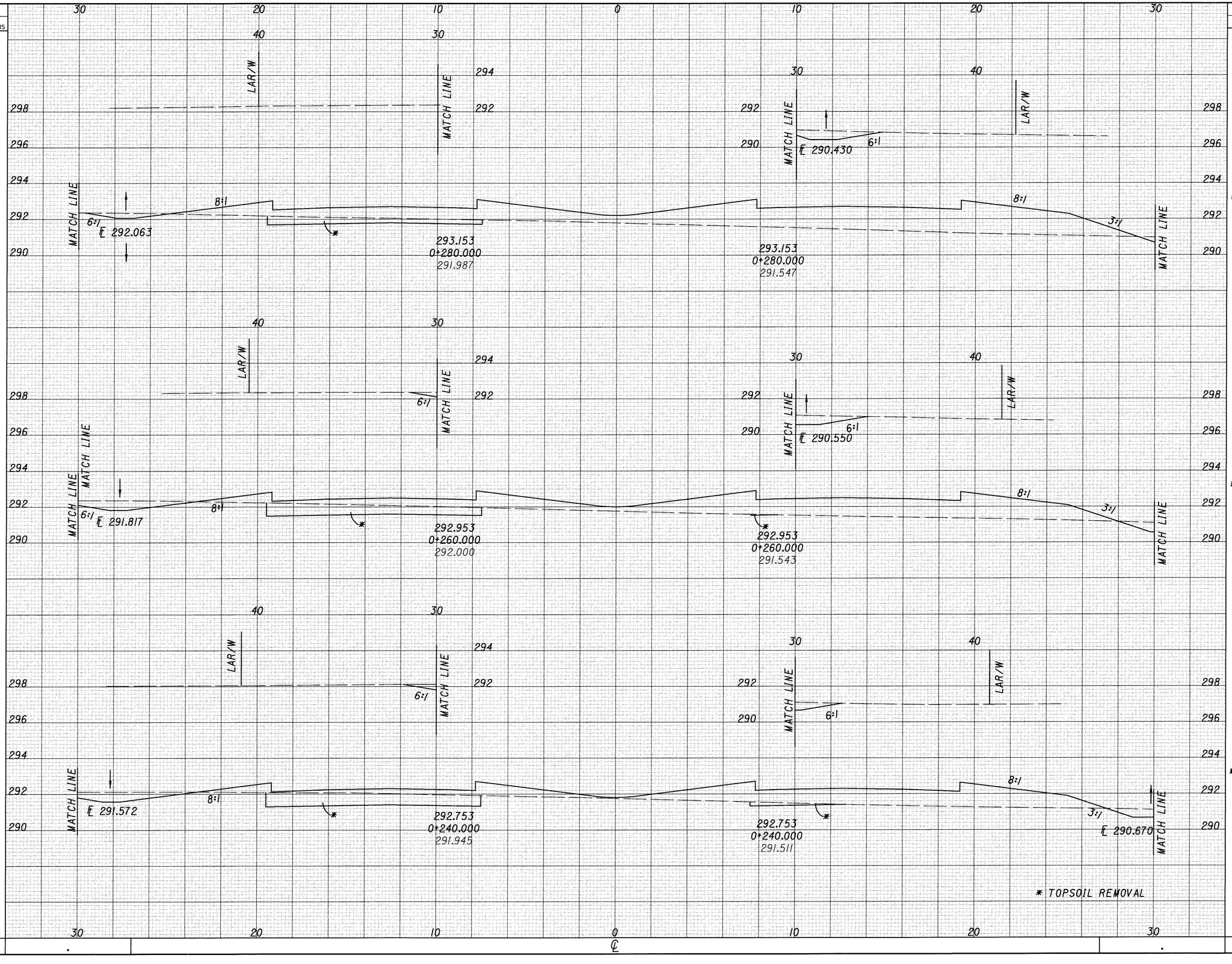
CHECKED REA

US-30 CROSS SECTIONS
STA 0+180.000 TO STA 0+220.000

WYA / CRA-30-28.009 / 0.000

576
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
48.94	992	2.60	49.97	70	902
		*3.77		*104	
50.30	994	4.43	40.21	85	752
		*6.66		*154	
49.10	939	4.07	35.00	66	708
		*8.72		*188	



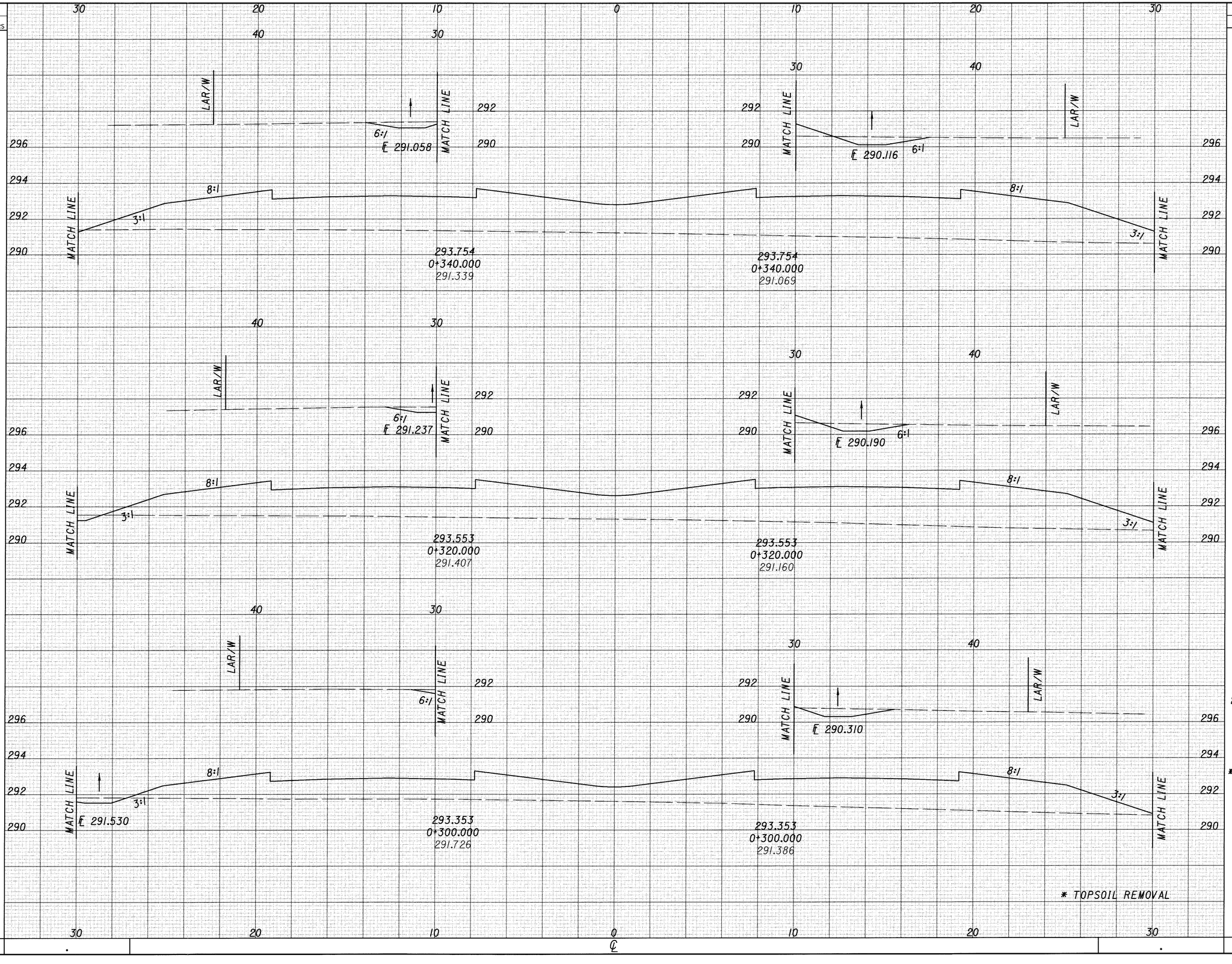
US-30 CROSS SECTIONS
STA 0+240.000 TO STA 0+280.000

WYA/CRA-30-28.009/0.000

CALCULATED AM
CHECKED REA

577
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
56.34	1103	2.43	113.83	46	2111
53.96	1056	2.16	97.25	45	1681
51.62	1006	2.33	70.88	49	1209
		*0.00		*38	



* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

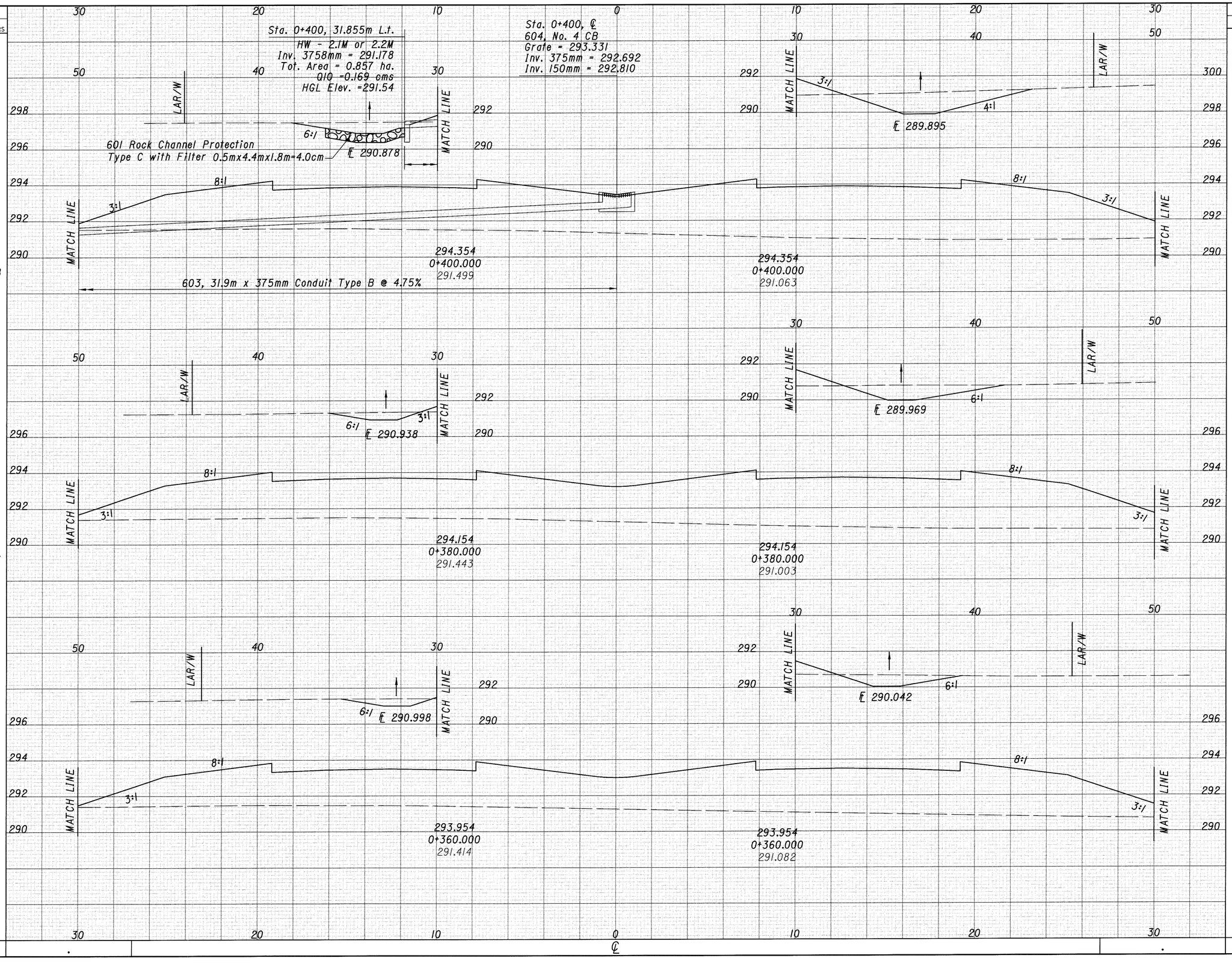
US-30 CROSS SECTIONS

STA 0+300.000 TO STA 0+340.000

WYA / CRA-30-28.009 / 0.000

578
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
67.42	1308	12.14	143.76	179	2804
63.33	1233	5.75	136.67	97	2599
59.94	1163	3.99	123.26	64	2371



CALCULATED AM

CHECKED REA

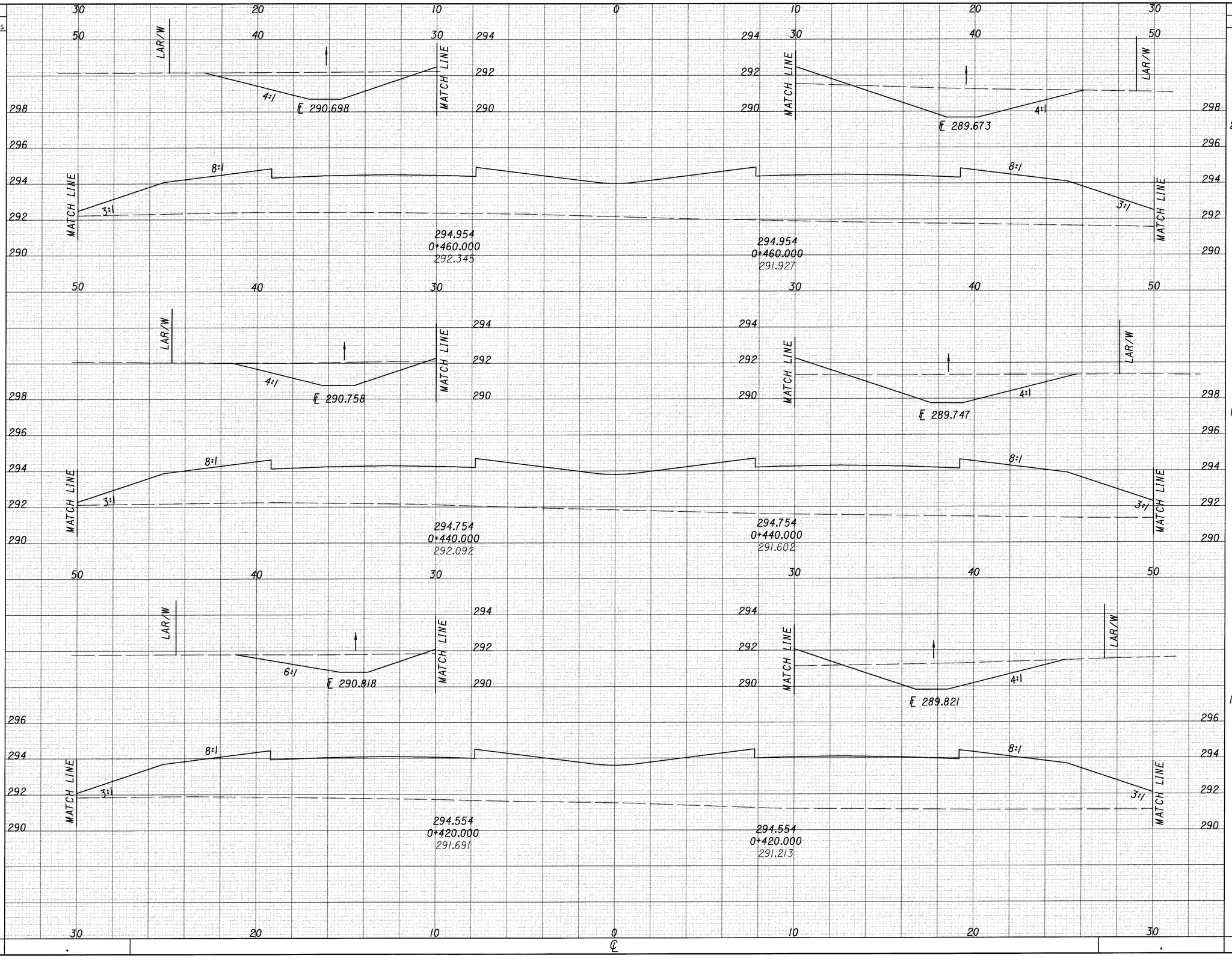
US-30 CROSS SECTIONS

STA 0+360.000 TO STA 0+400.000

WYA/CRA-30-28.009/0.000

579
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
76.49	1509	22.02	131.10	416	2648
74.45		19.62	133.67		
73.20	1476	15.95	142.31	356	2760
	1406			281	2861



CALCULATED AM

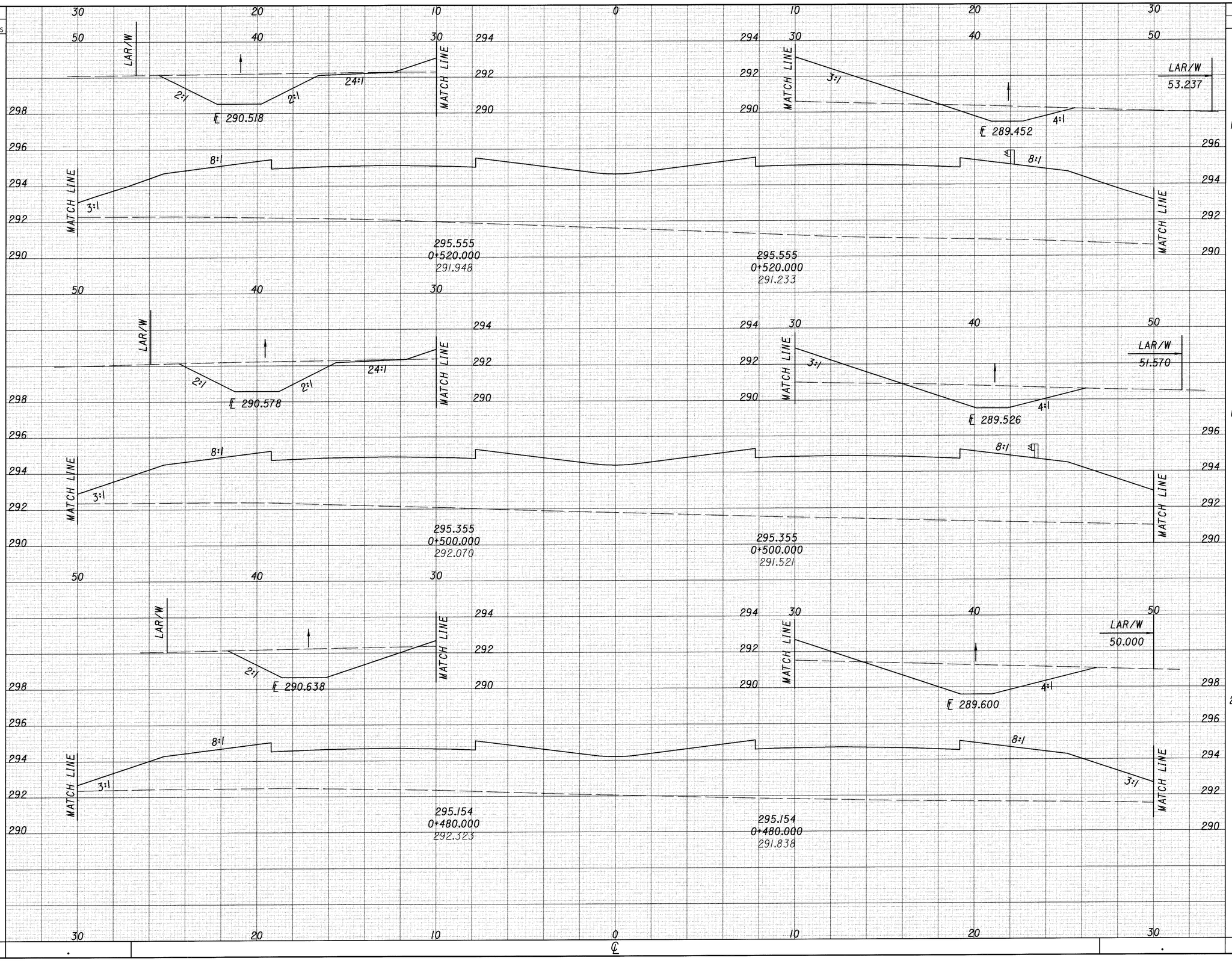
CHECKED REA

US-30 CROSS SECTIONS STA 0+420.000 TO STA 0+460.000

WYA/CRA-30-28.009/0.000

580
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
78.49	1568	13.85	206.77	309	3842
78.28	1544	17.08	177.43	397	3226
76.15	1526	22.57	145.19	446	2763



US-30 CROSS SECTIONS
STA 0+480.000 TO STA 0+520.000

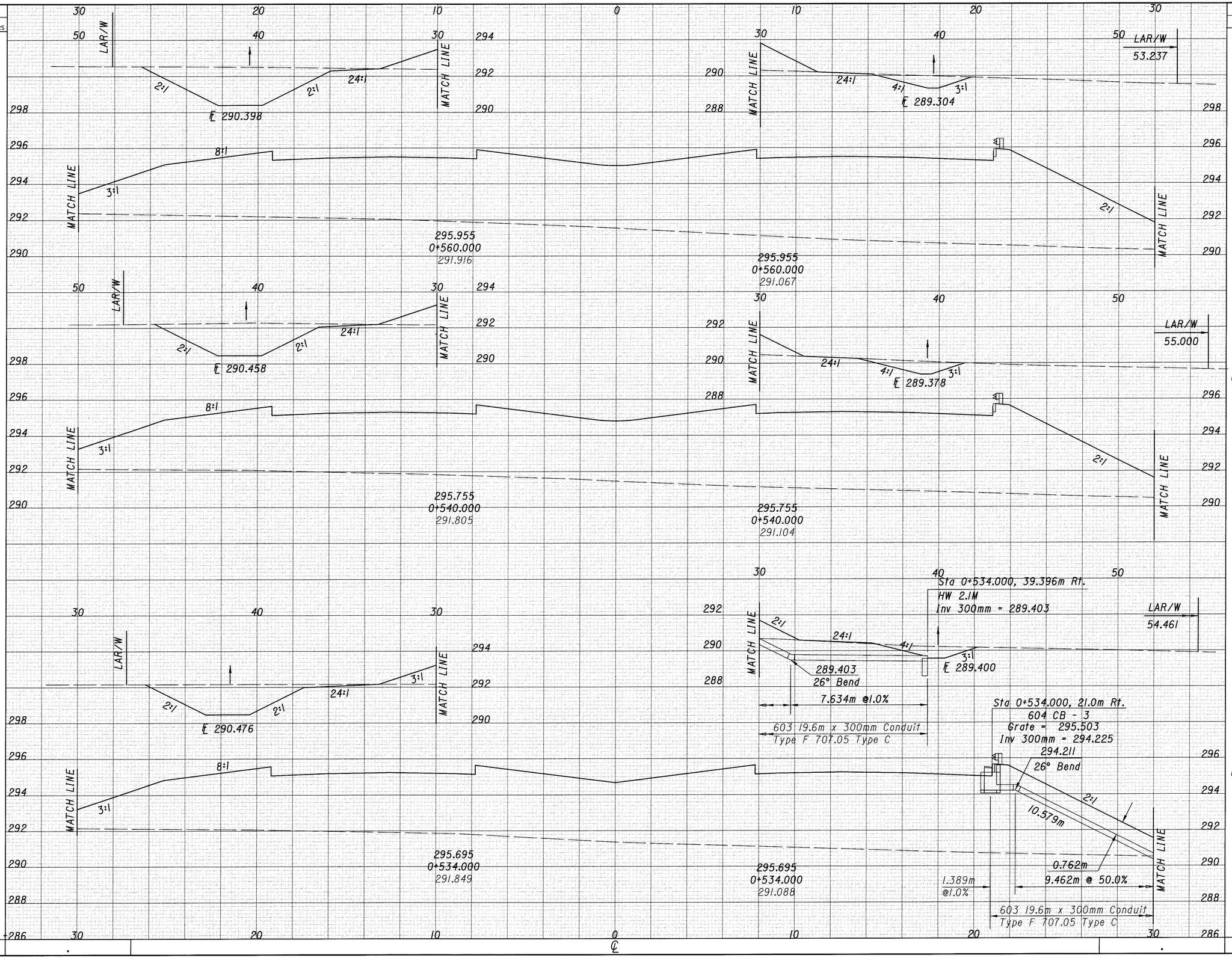
CALCULATED AM

CHECKED REA

WYA/CRA-30-28.009/0.000

581
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
74.43		16.36	224.05		
	1475			298	4362
73.12		13.46	212.16		
	442			77	1265
74.20		12.13	209.51		
	1069			182	2914



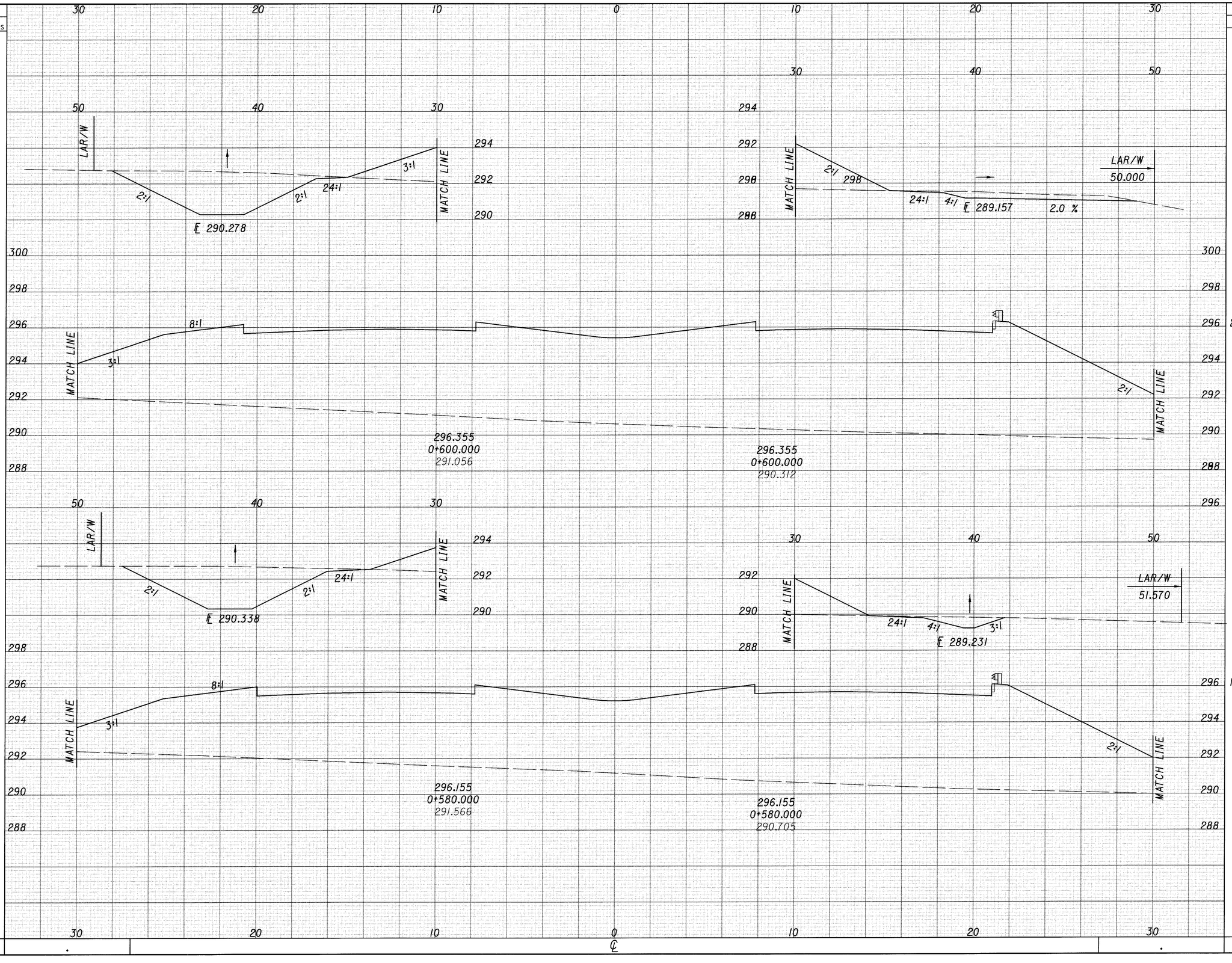
US-30 CROSS SECTIONS
STA 0+534.000 TO STA 0+560.000

CALCULATED AM
CHECKED REA

WYA / CRA-30-28.009 / 0.000

582
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
81.57		20.06	297.86		
	1563			387	5538
74.76		18.67	255.96		
	1492			350	4800



CALCULATED AM

CHECKED REA

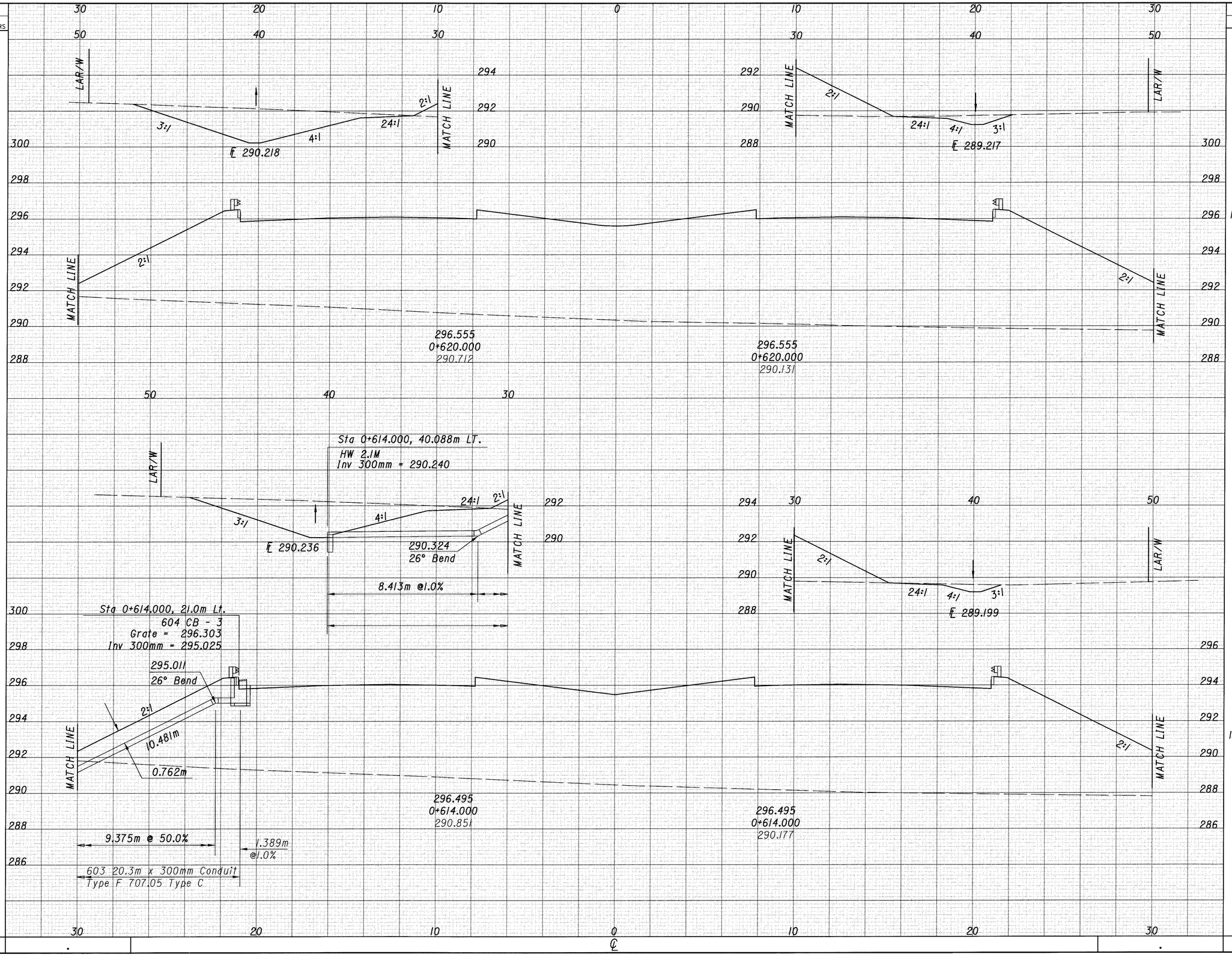
US-30 CROSS SECTIONS

STA 0+580.000 TO STA 0+600.000

WYA / CRA-30-28.009 / 0.000

583
2116

SEEDING	
END WIDTH	SQ. METERS
73.66	
	442
73.63	
	1086



END AREA		VOLUME	
CUT	FILL	CUT	FILL
15.23	312.89		
		95	1849
16.46	303.43		
		256	4209

CALCULATED AM

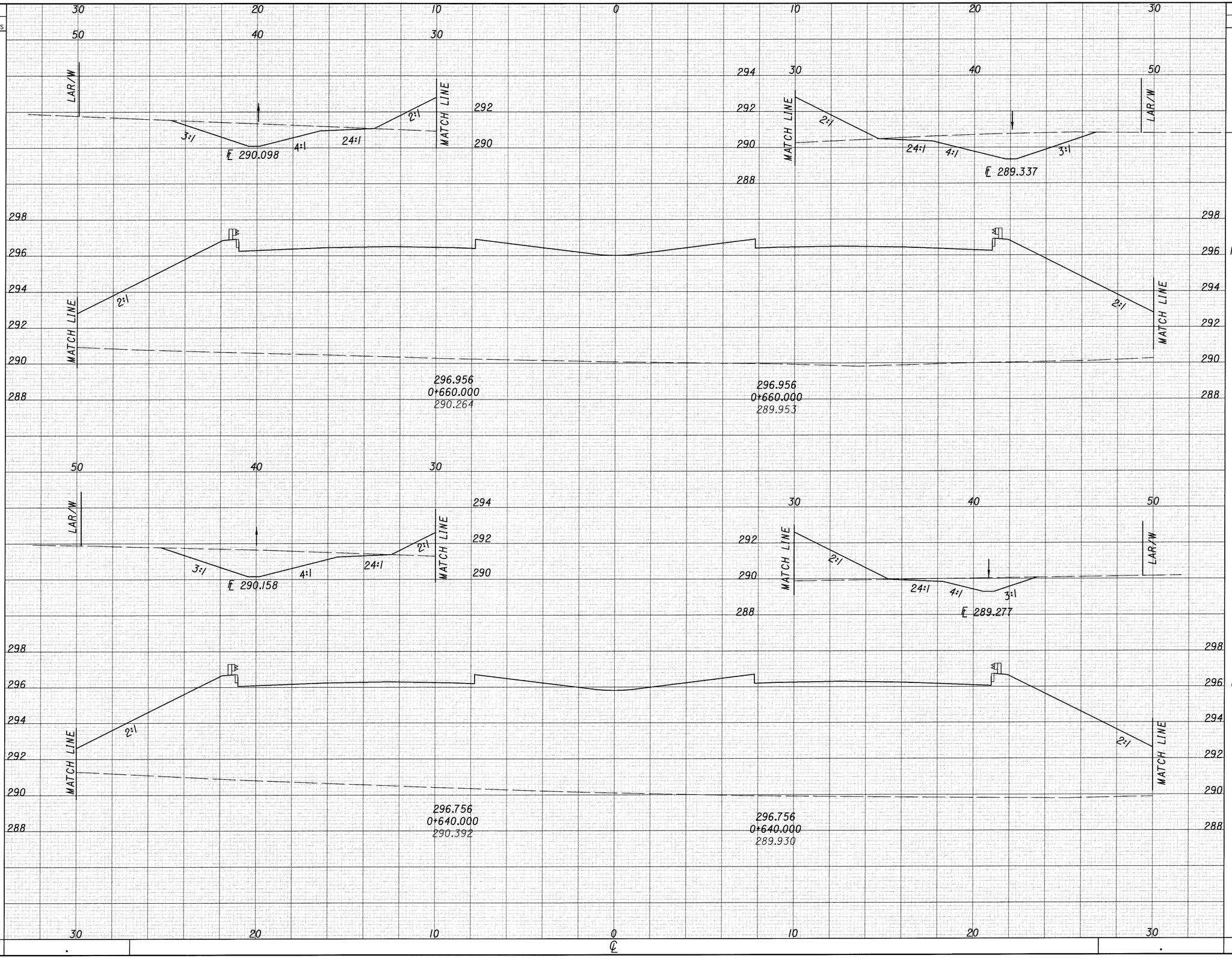
CHECKED REA

US-30 CROSS SECTIONS

STA 0+614.000 TO STA 0+620.000

WYA / CRA-30-28.009 / 0.000

SEEDING	
END WIDTH	SQ. METERS
76.96	
	1506
73.68	
	1473



END AREA		VOLUME	
CUT	FILL	CUT	FILL
14.33	354.81		
11.31	339.75		
		256	6946
		265	6526

CALCULATED AM

CHECKED REA

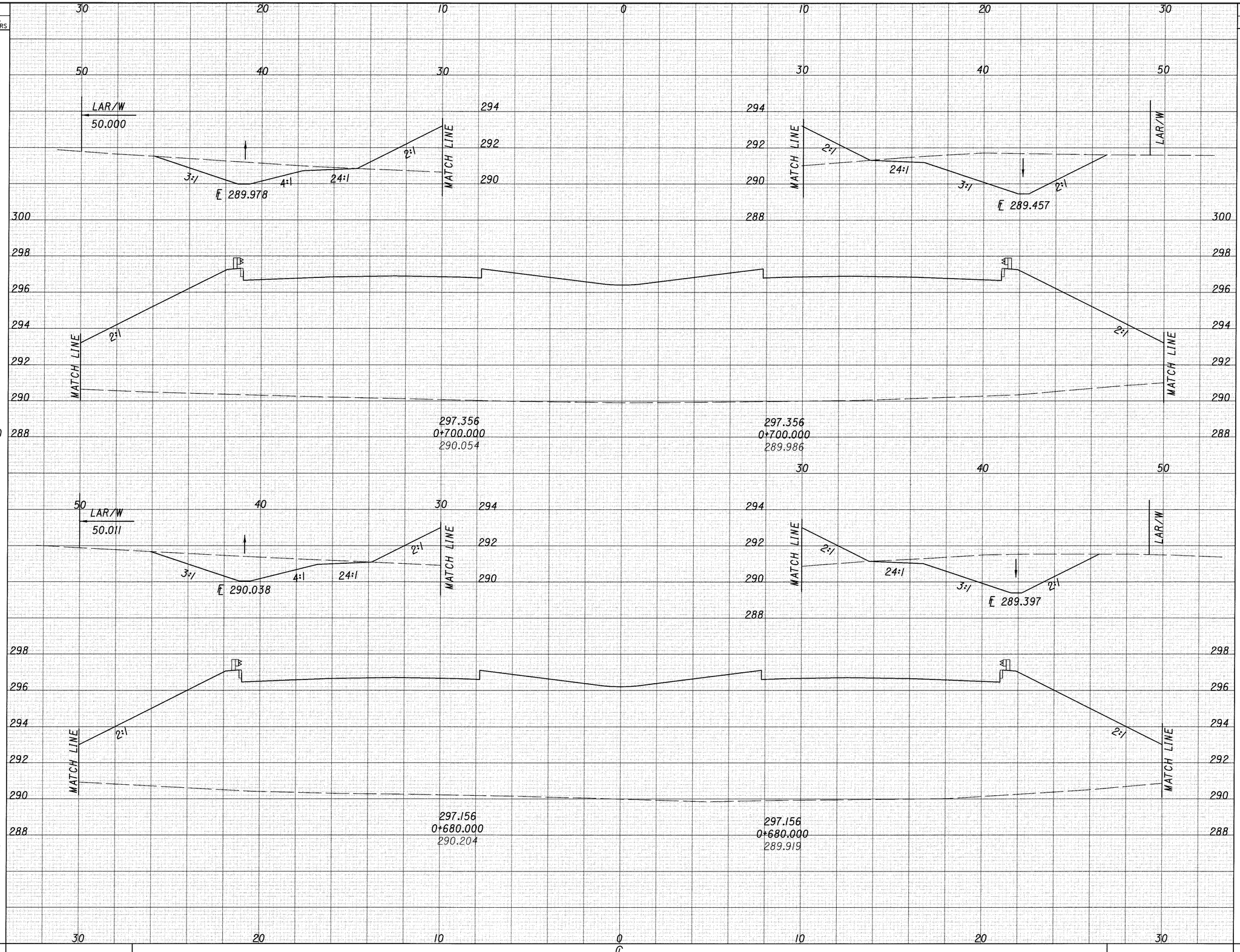
US-30 CROSS SECTIONS

STA 0+640.000 TO STA 0+660.000

WYA/CRA-30-28.009/0.000

585
2116

SEEDING	
END WIDTH	SQ. METERS
78.70	1570
78.32	1553



END AREA		VOLUME	
CUT	FILL	CUT	FILL
19.74	380.33	395	7451
19.79	364.81	341	7196

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 0+680.000 TO STA 0+700.000

WYA / CRA-30-28.009 / 0.000

586
2116

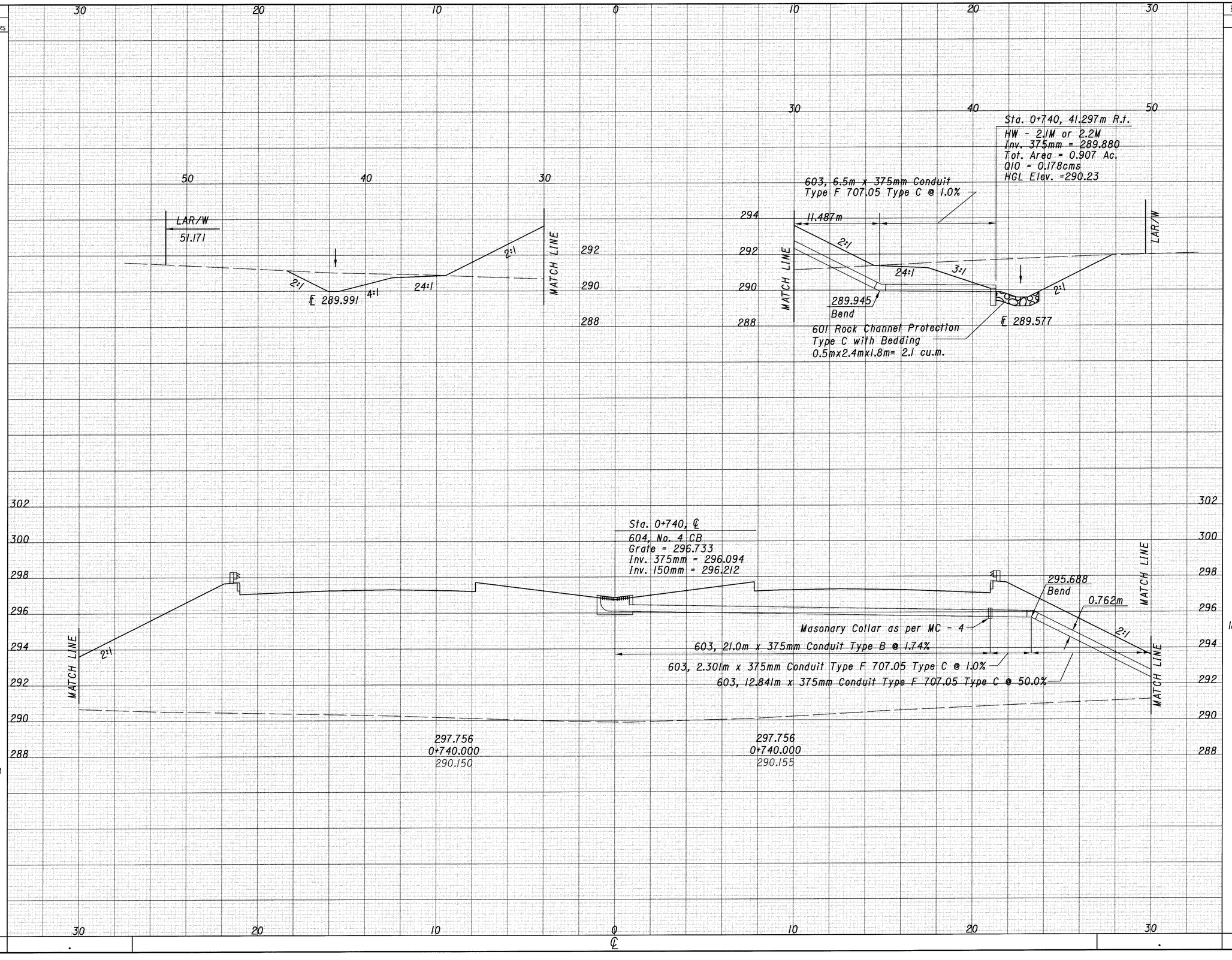
SEEDING	
END WIDTH	SQ. METERS

SEEDING	
END WIDTH	SQ. METERS
78.20	1544

END AREA		VOLUME	
CUT	FILL	CUT	FILL
18.16	397.78	476	7910

CALCULATED AM

CHECKED KEA



US-30 CROSS SECTIONS
STA 0+740.000

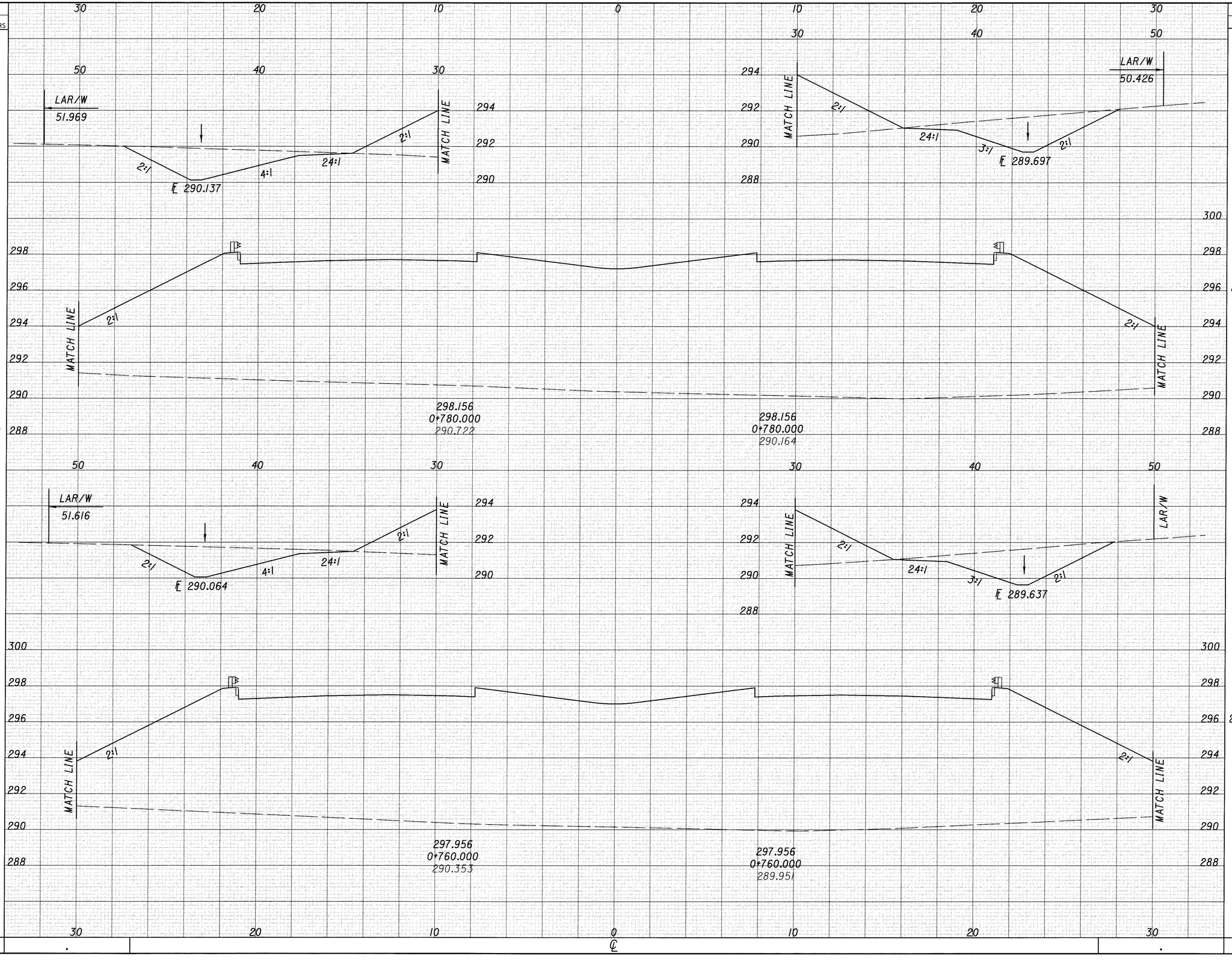
WYA/CRA-30-28.009/0.000

588
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
81.92		20.86	414.68		
	1630			413	8225
81.12		20.47	407.79		
	1593			386	8056

CALCULATED AM

CHECKED REA



US-30 CROSS SECTIONS
STA 0+760.000 TO STA 0+780.000

WYA/CRA-30-28.009/0.000

589
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
85.80	1701	30.42	423.53	547	8454
84.26	1662	24.32	421.90	452	8366

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 0+800.000 TO STA 0+820.000

WYA / CRA-30-28.009 / 0.000

590
2116

SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	AM	REA
83.49	1687	16.32	462.18	385	9020		
85.18	1710	22.18	439.78	526	8633		

LAR/W 52.449

3:1 4:1 24:1 2:1

℄ 290.428

MATCH LINE

298.957
0+860.000
290.660

298.957
0+860.000
290.339

LAR/W 53.093

℄ 289.937

LAR/W 52.468

℄ 290.355

298.757
0+840.000
290.665

298.757
0+840.000
290.252

LAR/W 52.283

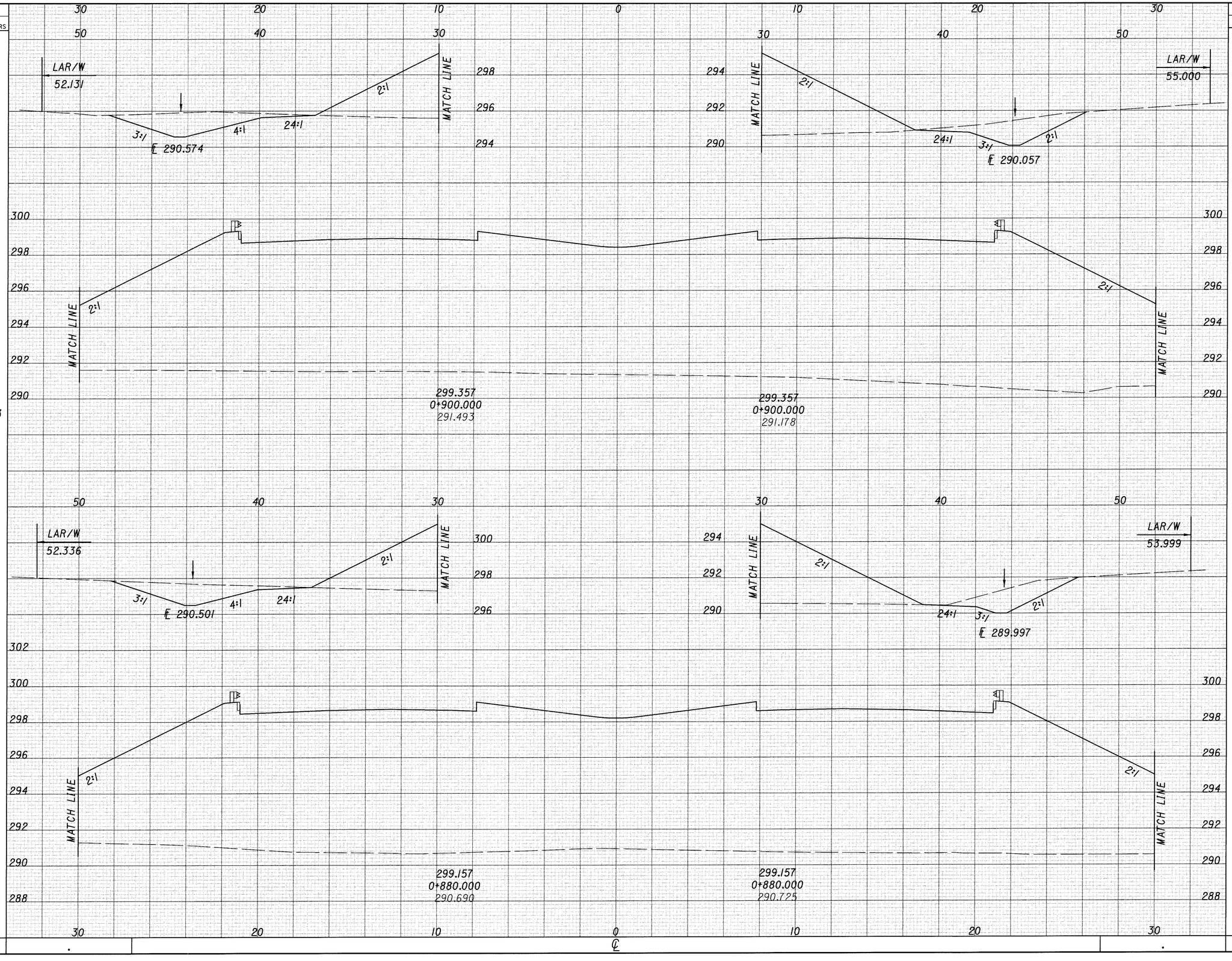
℄ 289.877

US-30 CROSS SECTIONS
STA 0+840.000 TO STA 0+860.000

WYA/CRA-30-28.009/0.000

591
2116

SEEDING	
END WIDTH	SQ. METERS
82.94	1653
82.40	1659



END AREA		VOLUME	
CUT	FILL	CUT	FILL
13.05	464.16		
		242	9417
11.16	477.55		
		275	9397

CALCULATED AM

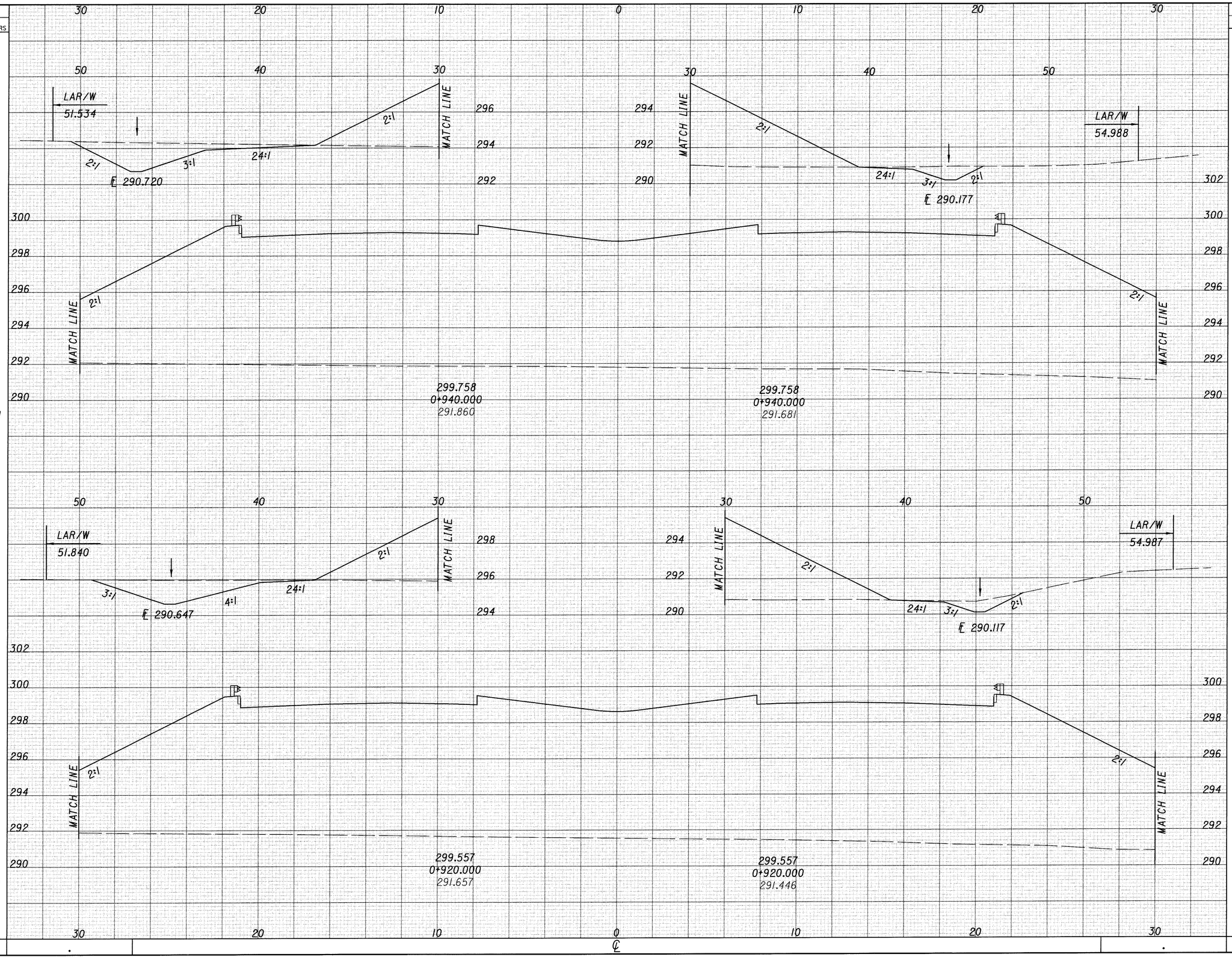
CHECKED REA

US-30 CROSS SECTIONS
STA 0+880.000 TO STA 0+900.000

WYA / CRA-30-28.009 / 0.000

592
2116

SEEDING	
END WIDTH	SQ. METERS
82.97	1651
82.16	1651



END AREA		VOLUME	
CUT	FILL	CUT	FILL
10.19	458.52	190	9170
8.84	458.50	219	9227

CALCULATED AM

CHECKED REA

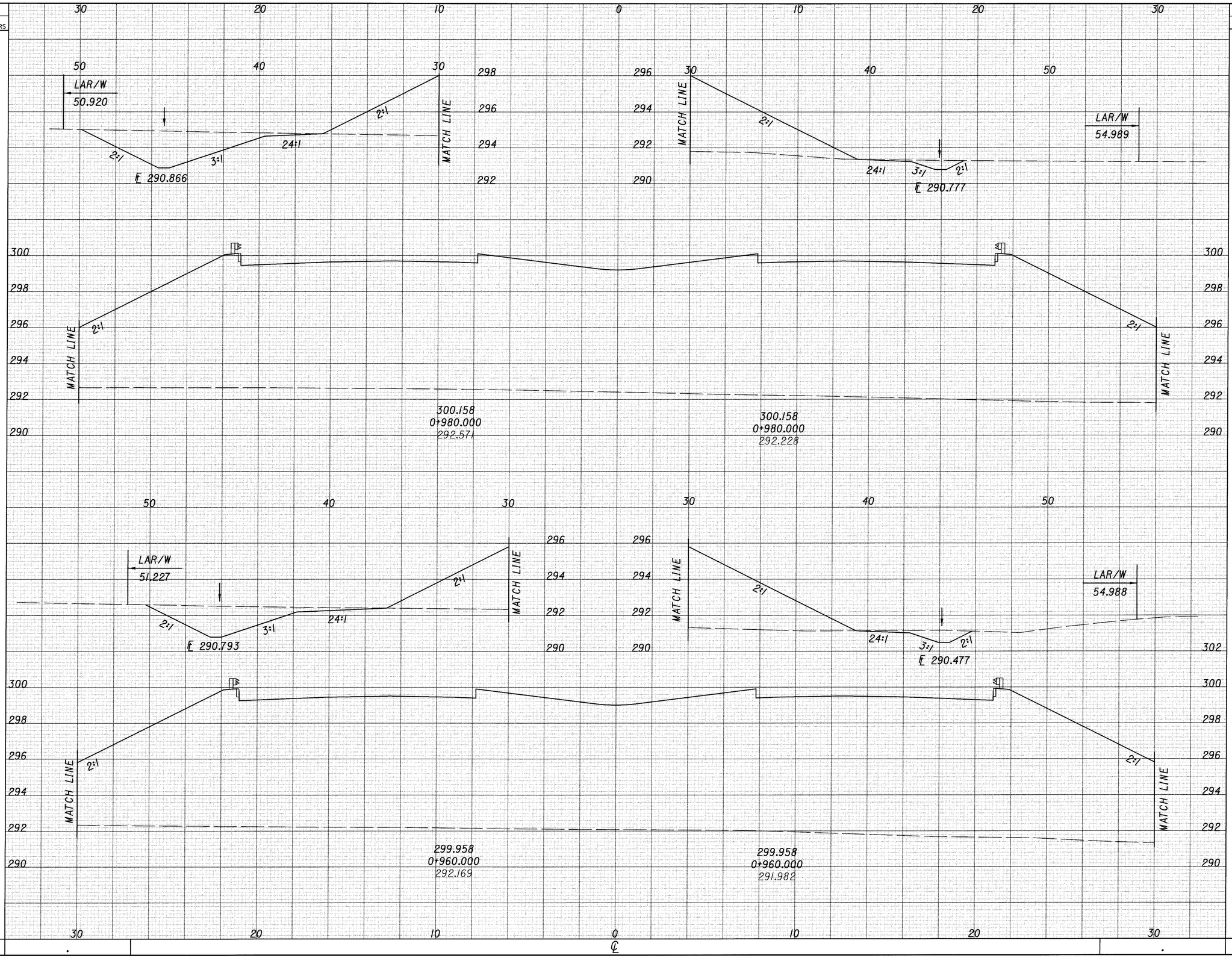
US-30 CROSS SECTIONS

STA 0+920.000 TO STA 0+940.000

WYA / CRA-30-28.009 / 0.000

593
2116

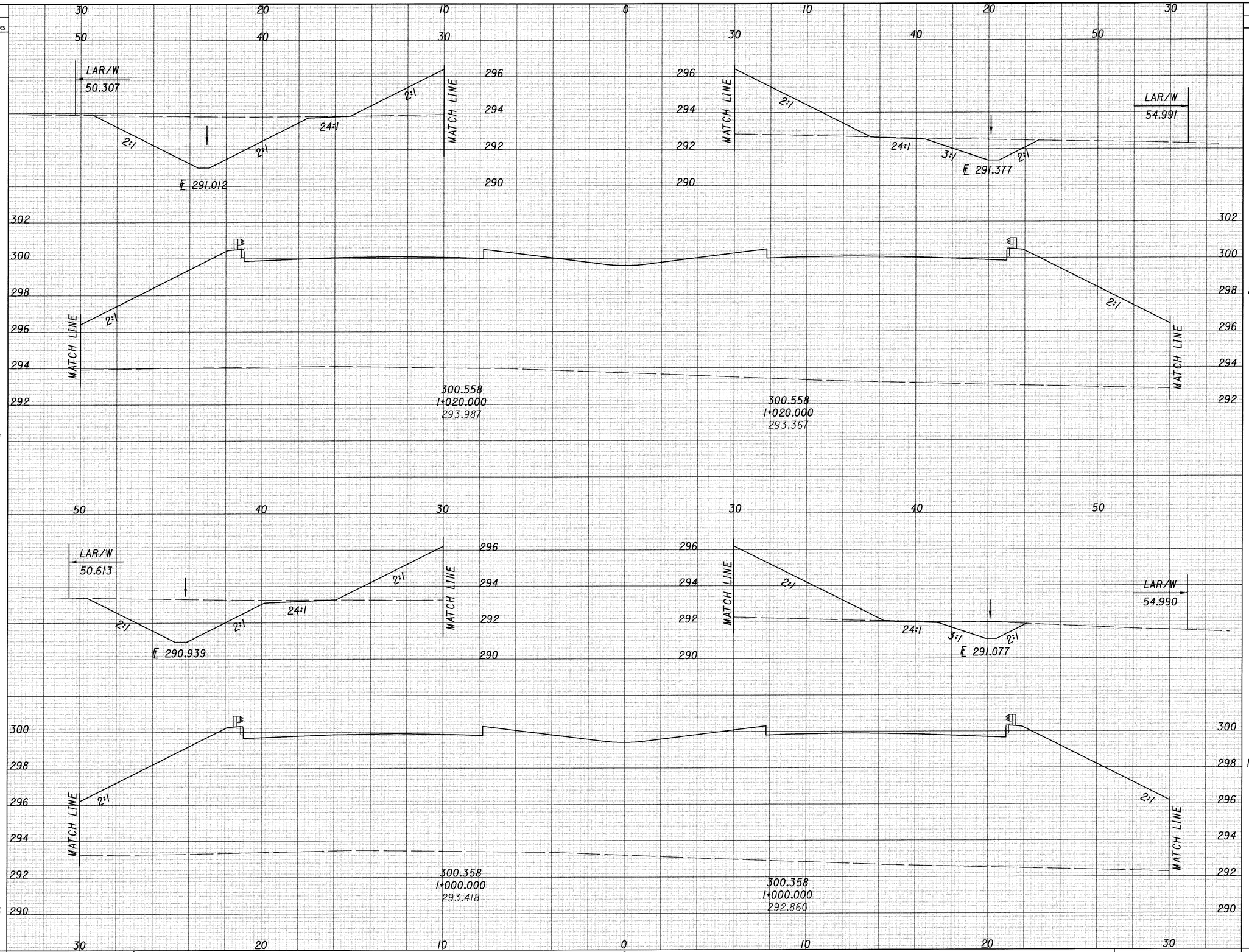
SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
81.06	1631	13.02	440.78	237	8936		
82.02	1650	10.67	452.78	209	9113		



US-30 CROSS SECTIONS
STA 0+960.000 TO STA 0+980.000

WYA/CRA-30-28.009/0.000

SEEDING	
END WIDTH	SQ. METERS
82.95	1651
82.20	1633



END AREA		VOLUME	
CUT	FILL	CUT	FILL
21.69	378.82	372	7857
15.46	406.88	285	8477

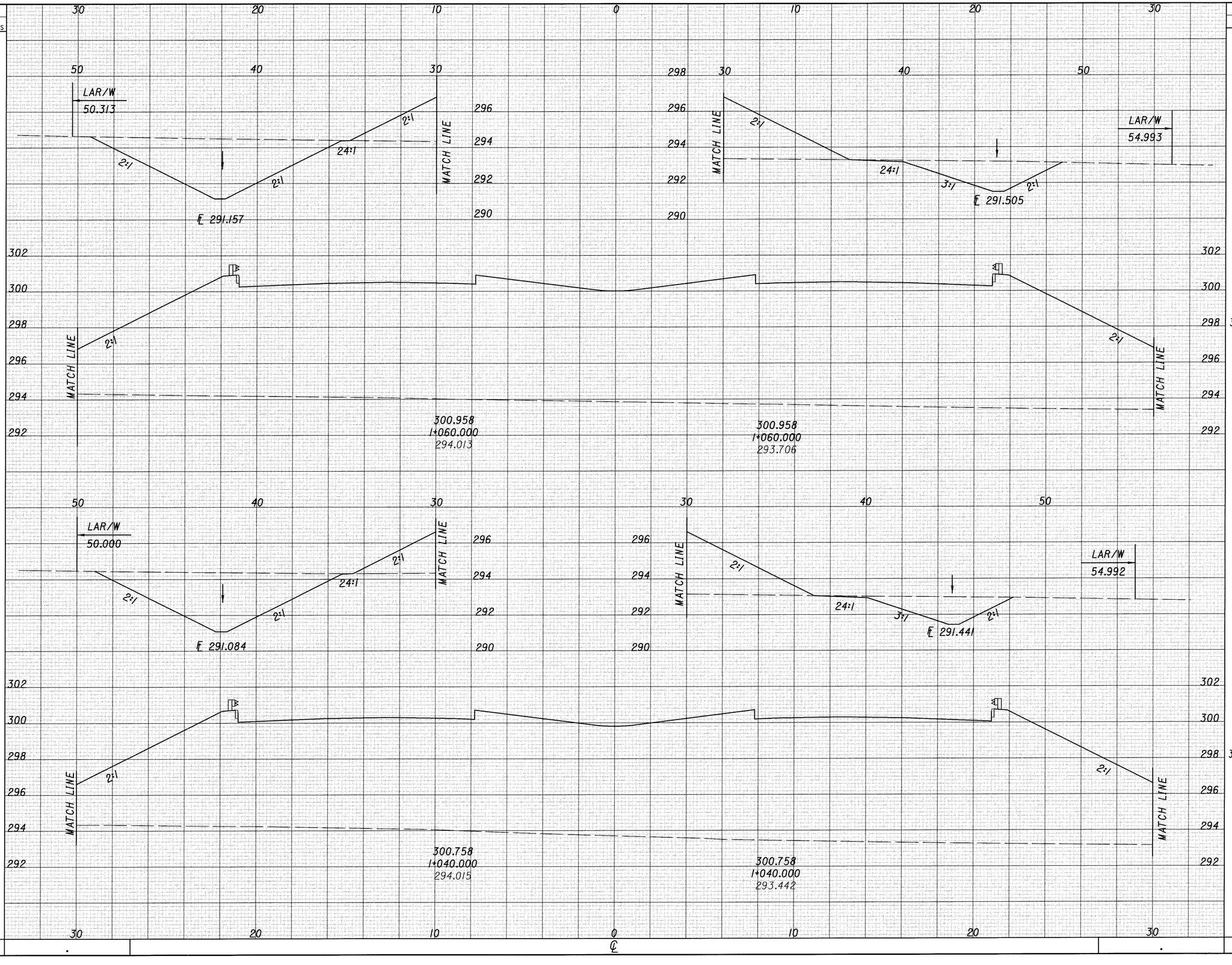
CALCULATED AM
CHECKED REA

us-30 CROSS SECTIONS
STA 1+000.000 TO STA 1+020.000

WYA / CRA-30-28.009 / 0.000

595
2116

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. METERS		CUT	FILL	CUT	FILL
85.55	1700		32.74	386.34	634	7670
84.46	1674		30.69	380.65	524	7595



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 1+040.000 TO STA 1+060.000

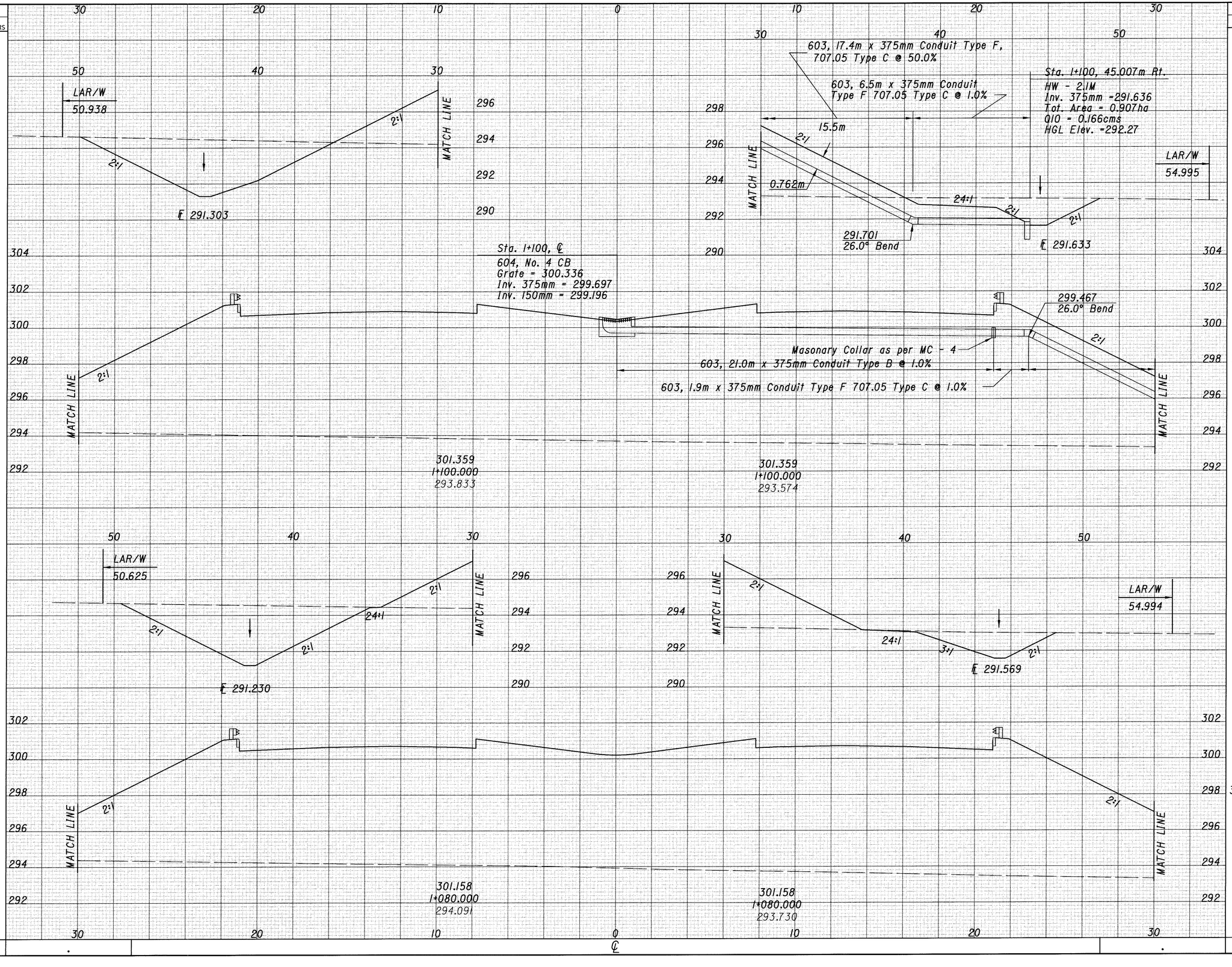
WYA / CRA-30-28.009 / 0.000

596
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
86.28	1718	31.73	425.00	621	8240
85.52	1711	30.34	399.02	631	7854

CALCULATED AM

CHECKED REA

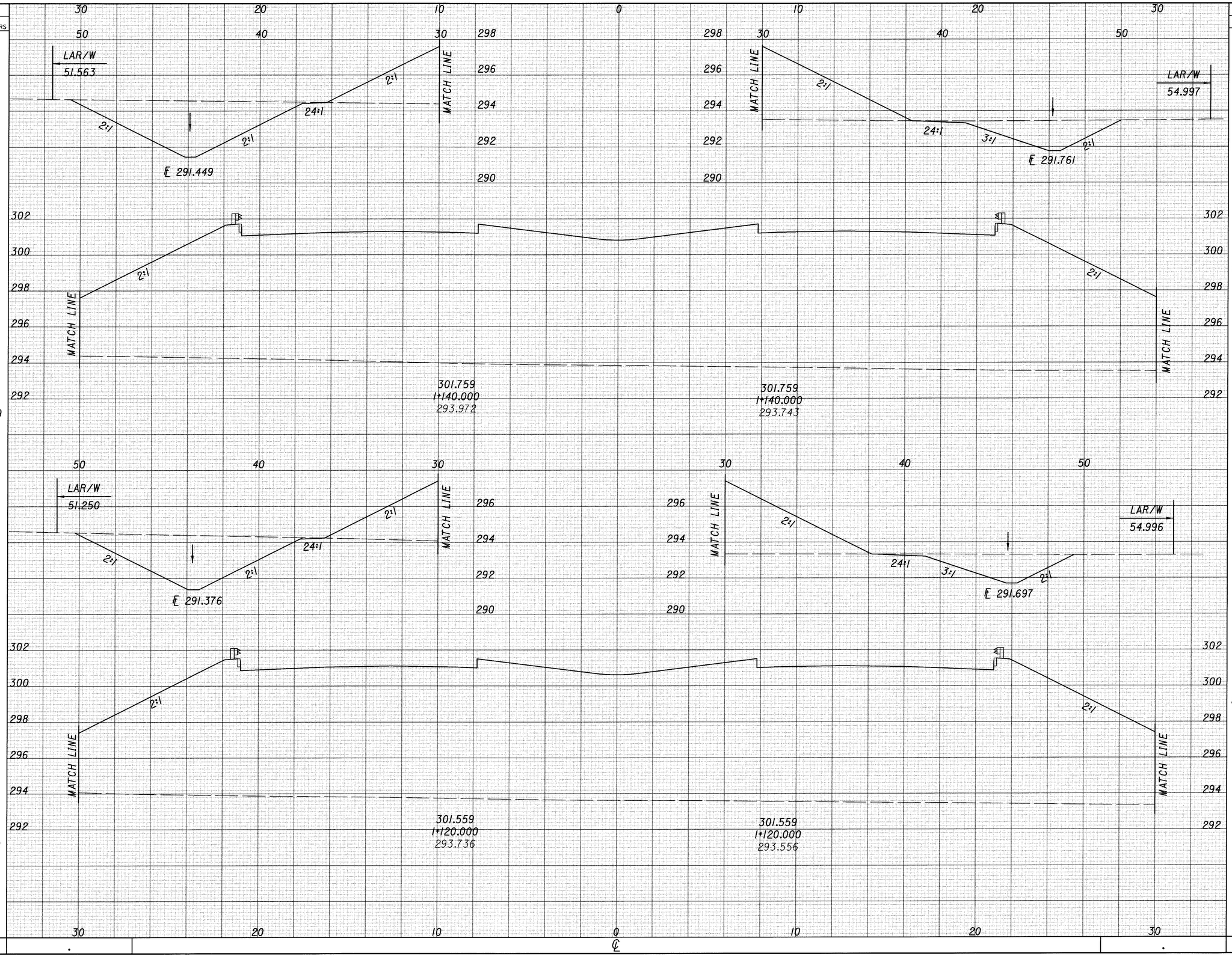


US-30 CROSS SECTIONS
STA 1+080.000 TO STA 1+100.000

WYA/CRA-30-28.009/0.000

597
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
88.15	1759	29.50	441.19	572	8843
87.75	1740	27.67	443.14	594	8681



CALCULATED AM

CHECKED REA

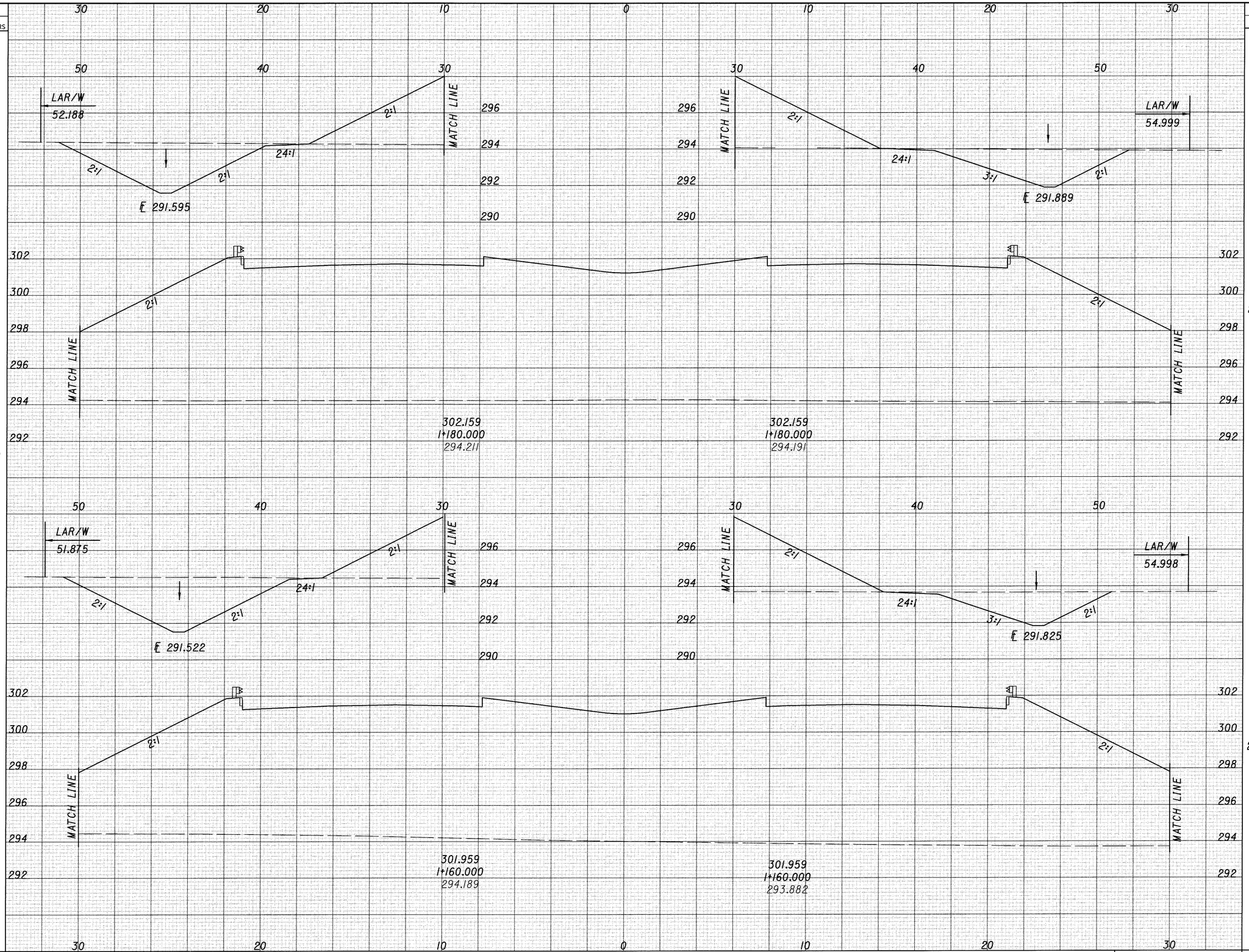
US-30 CROSS SECTIONS

STA 1+120.000 TO STA 1+140.000

WYA / CRA-30-28.009 / 0.000

598
2116

SEEDING	
END WIDTH	SQ. METERS
90.49	1798
89.27	1774



END AREA		VOLUME	
CUT	FILL	CUT	FILL
28.92	449.92	586	8941
29.70	444.22	592	8854

CALCULATED AM

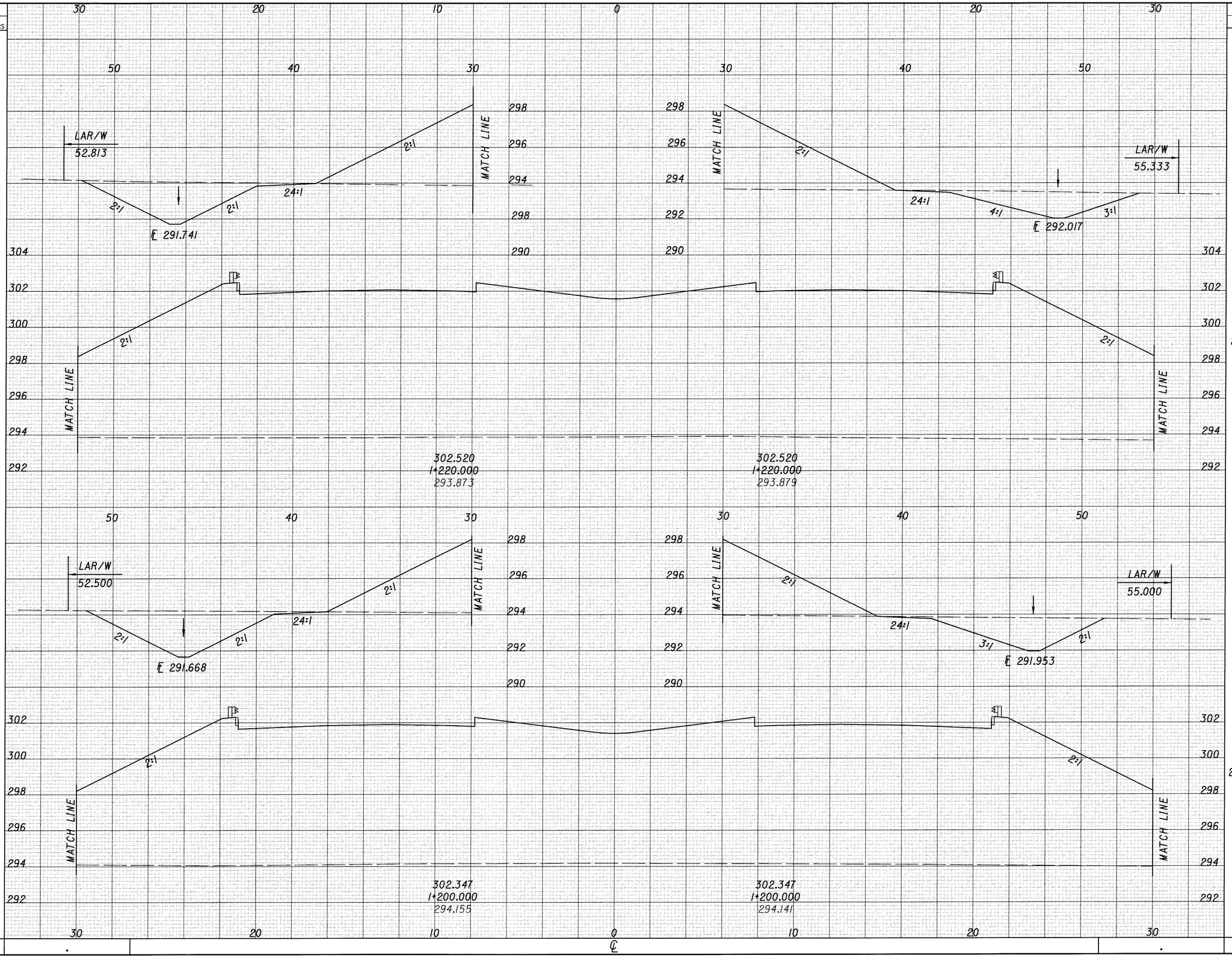
CHECKED REA

US-30 CROSS SECTIONS
STA 1+160.000 TO STA 1+180.000

WYA / CRA-30-28.009 / 0.000

599
2116

SEEDING	
END WIDTH	SQ. METERS
92.36	1827
90.36	1809



END AREA		VOLUME	
CUT	FILL	CUT	FILL
21.52	505.35	460	9764
24.50	471.03	534	9210

CALCULATED AM

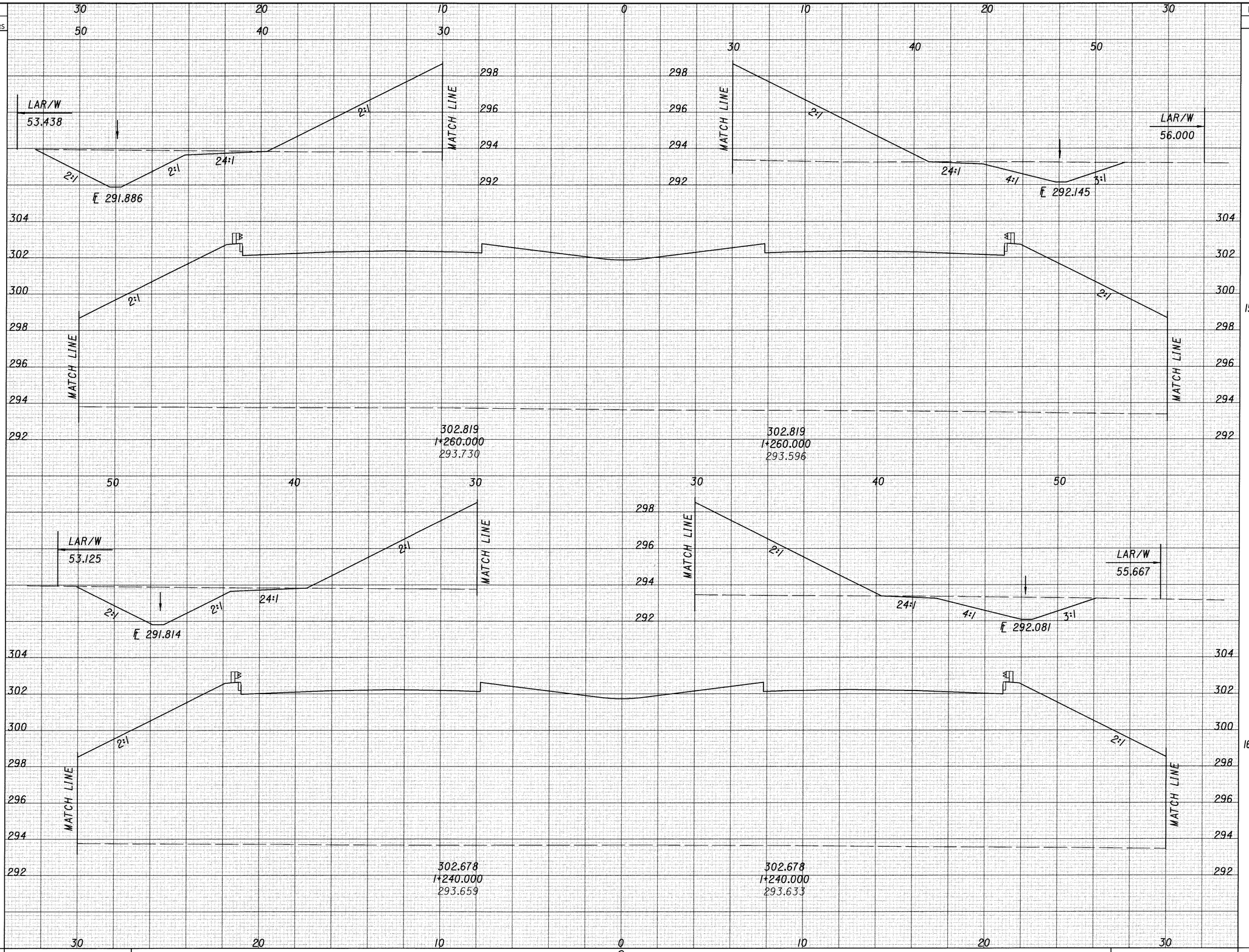
CHECKED REA

US-30 CROSS SECTIONS
STA 1+200.000 TO STA 1+220.000

WYA / CRA-30-28.009 / 0.000

600
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
91.28	1828	15.02	545.43	315	10783		
91.55	1839	16.43	532.89	380	10382		

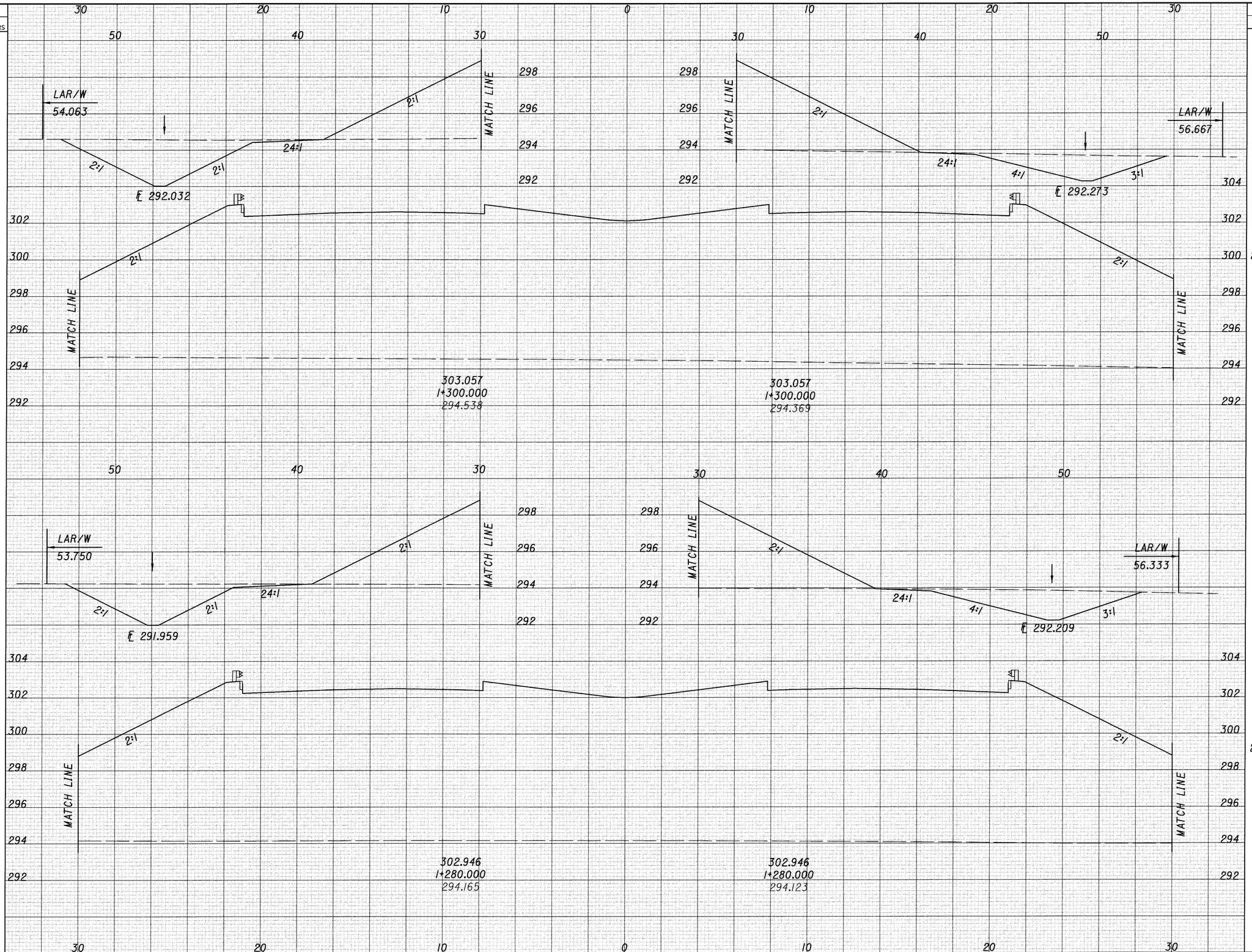


US-30 CROSS SECTIONS
STA 1+240.000 TO STA 1+260.000

WYA/CRA-30-28.009/0.000

601
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
94.17	1887	22.80	503.11	451	10197
94.51	1858	22.31	516.63	373	10621



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 1+280.000 TO STA 1+300.000

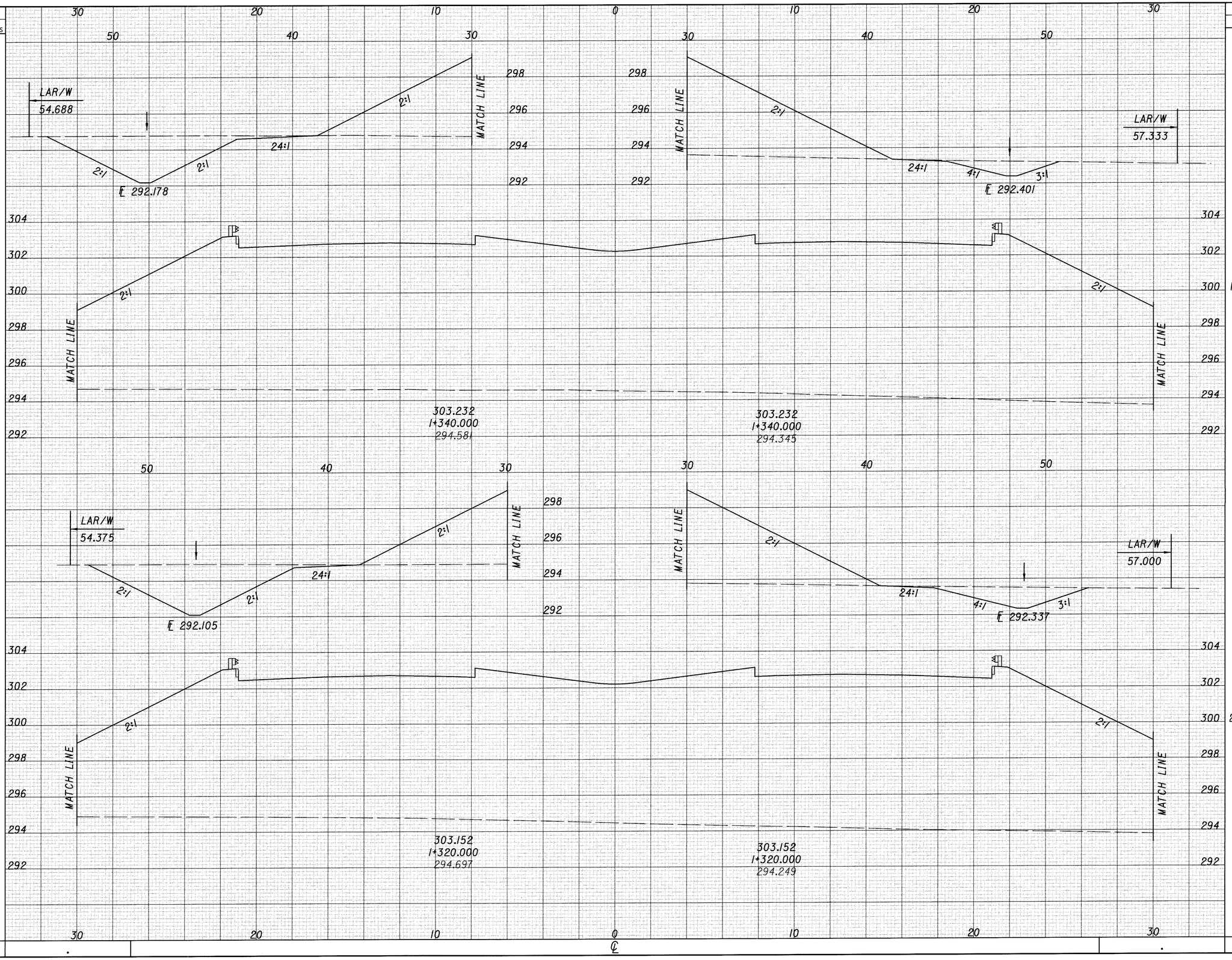
WYA / CRA-30-28.009 / 0.000

602
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
91.52	1848	18.40	522.88	419	10327
93.28	1874	23.47	509.81	463	10129

CALCULATED AM

CHECKED REA



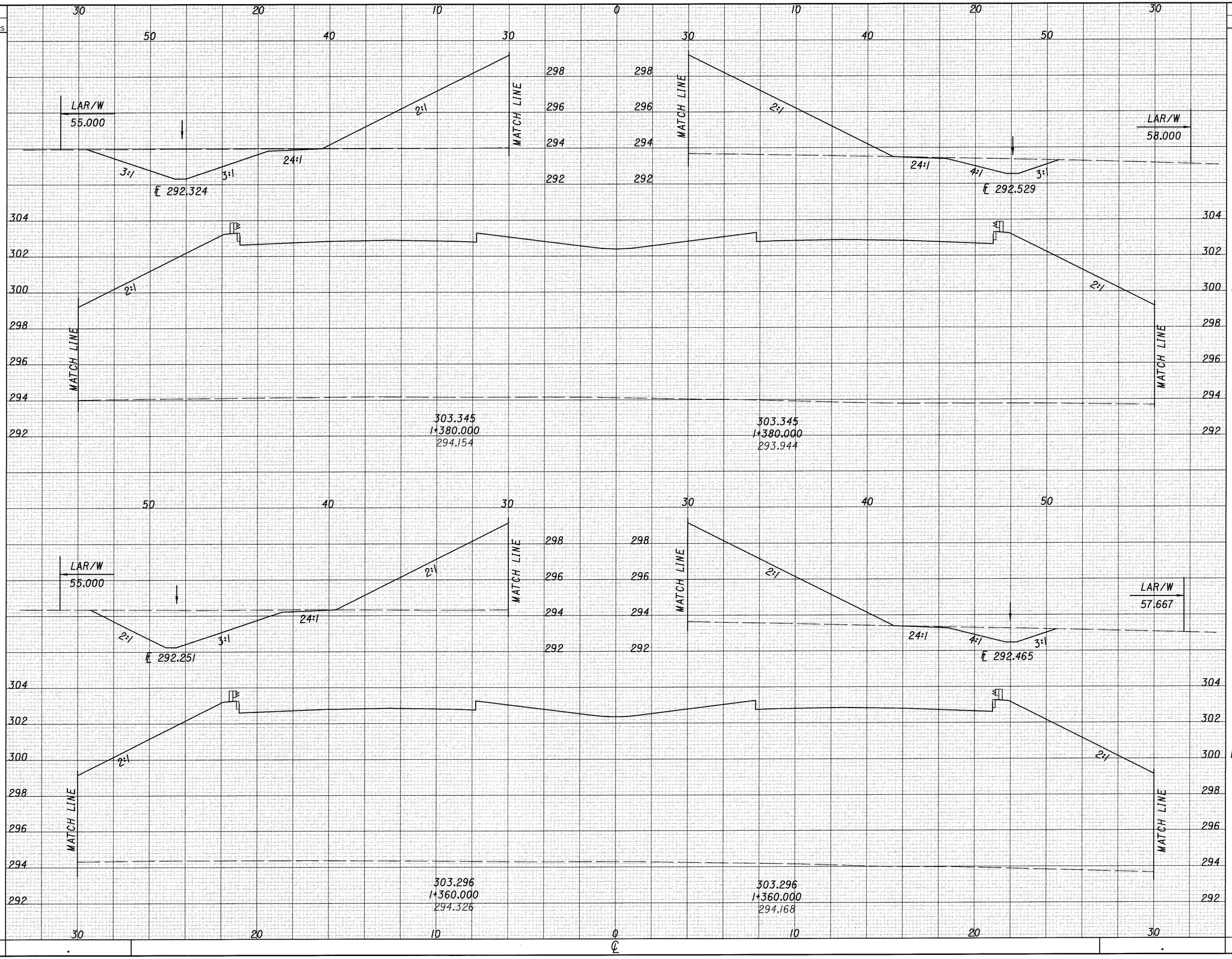
US-30 CROSS SECTIONS

STA 1+320.000 TO STA 1+340.000

WYA/CRA-30-28.009/0.000

603
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
90.79	1814	12.24	561.18	273	11049
90.66	1822	15.06	543.72	335	10666



CALCULATED AM

CHECKED REA

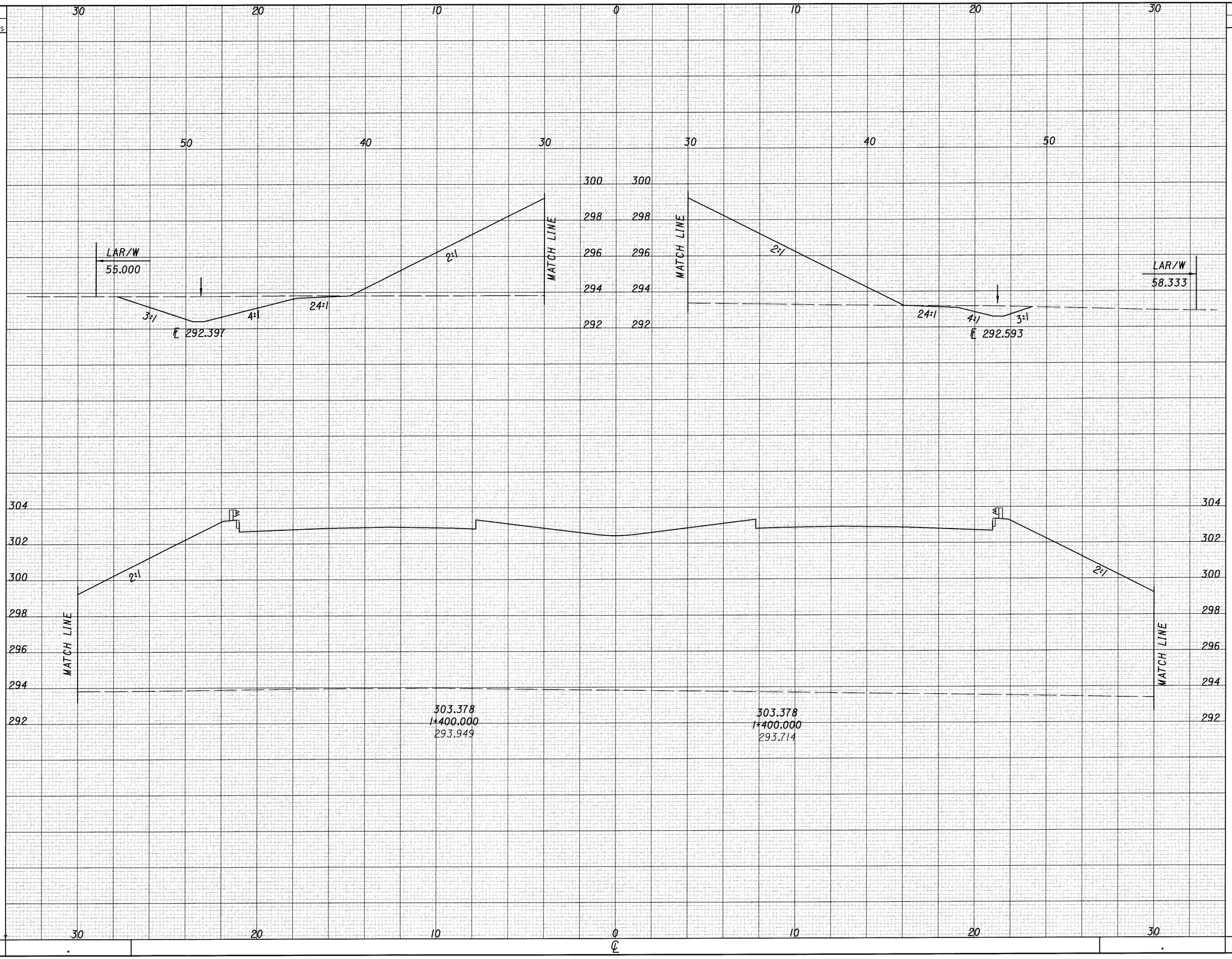
US-30 CROSS SECTIONS

STA 1+360.000 TO STA 1+380.000

WYA / CRA-30-28.009 / 0.000

604
2116

SEEDING	
END WIDTH	SQ. METERS
	89.31
	1801



END AREA		VOLUME	
CUT	FILL	CUT	FILL
9.55	583.83		
		218	11450

CALCULATED AM

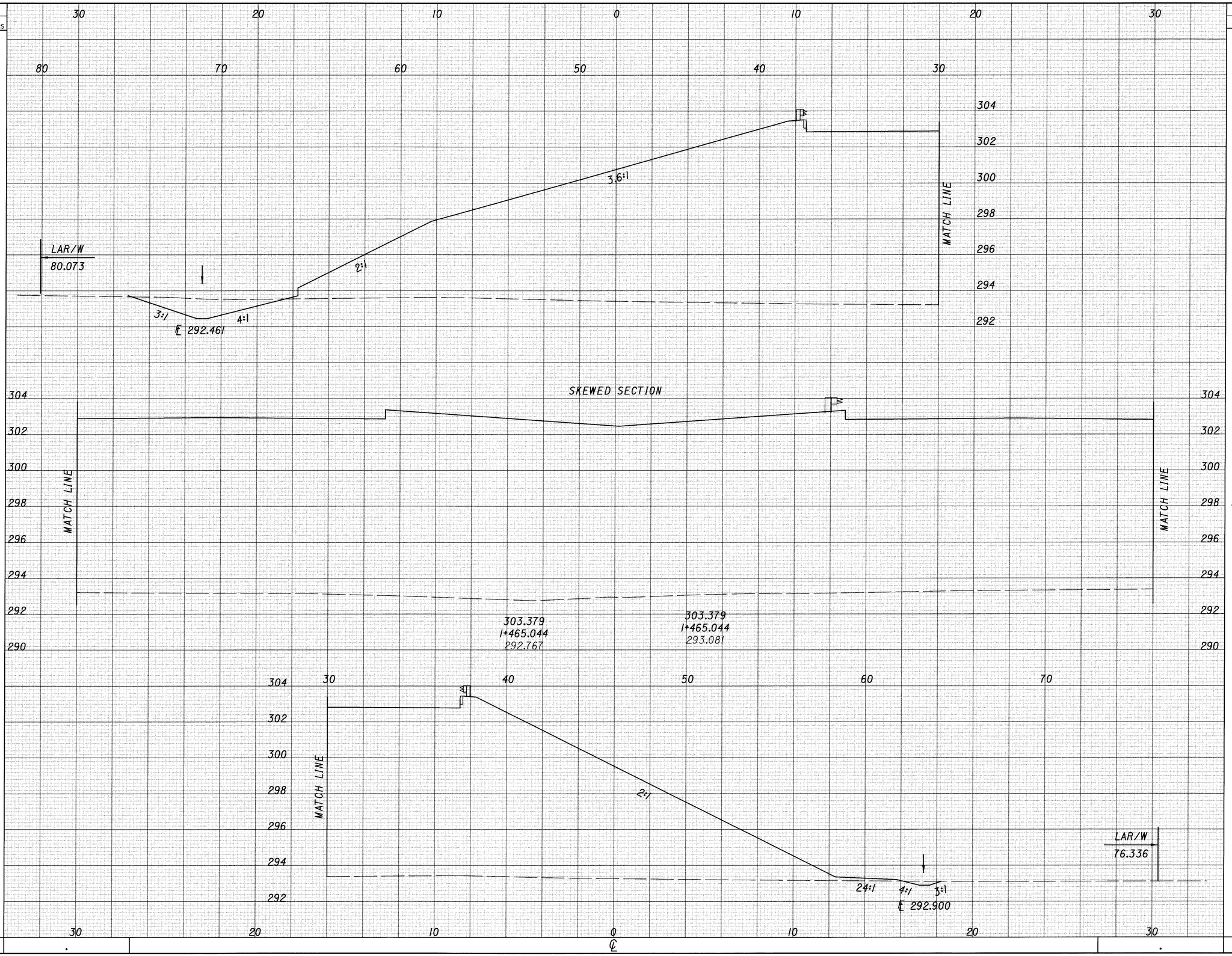
CHECKED REA

US-30 CROSS SECTIONS
STA 1+400.000

WYA / CRA-30-28.009 / 0.000

605
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
95.72	6017	5.26	991.79	482	51242		

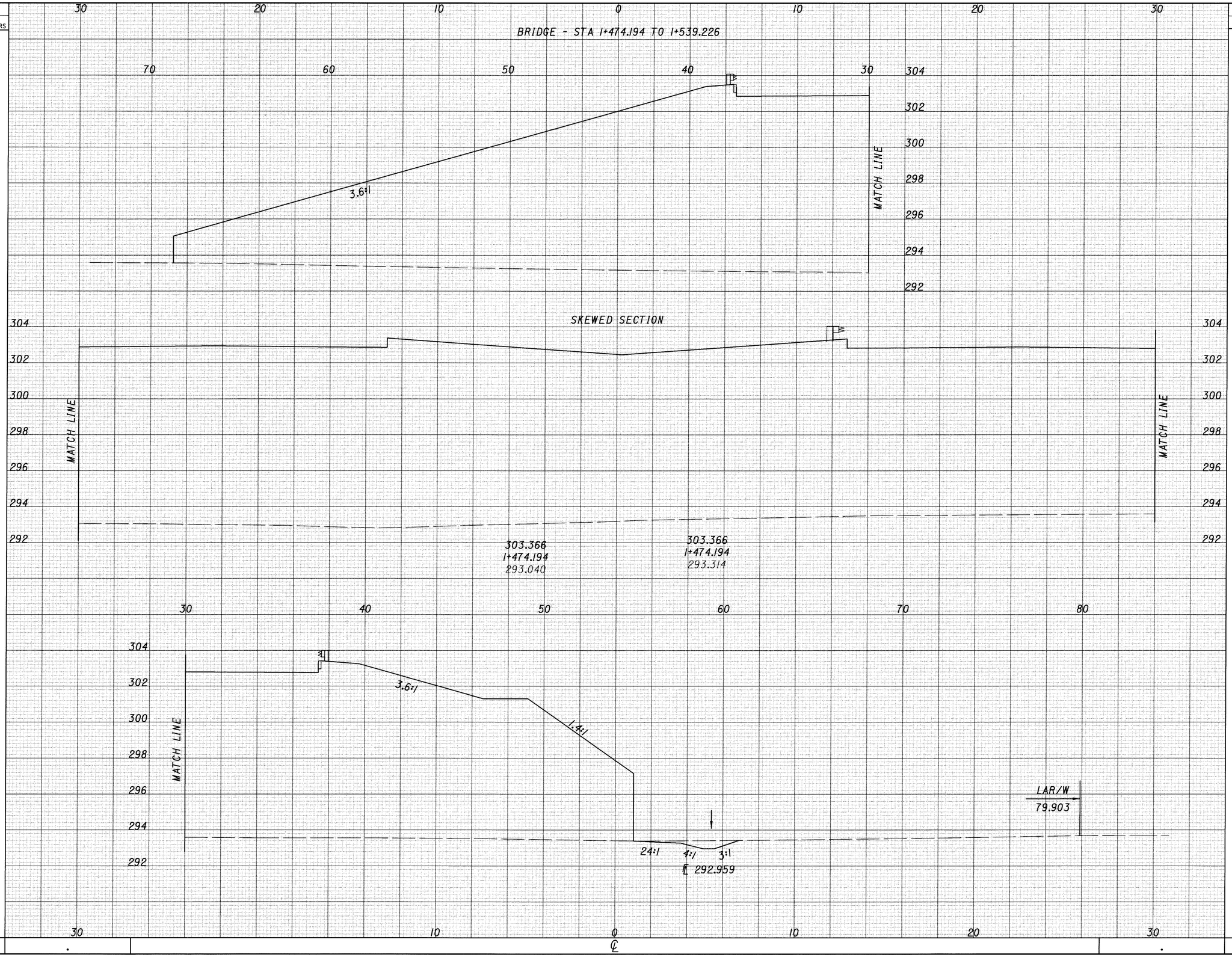


US-30 CROSS SECTIONS
STA 1+465.044

WYA/CRA-30-28.009/0.000

606
2116

SEEDING	
END WIDTH	SQ. METERS
81.63	
811	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.10	1029.67		
		29	9248

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 1+474.194

WYA / CRA-30-28.009 / 0.000

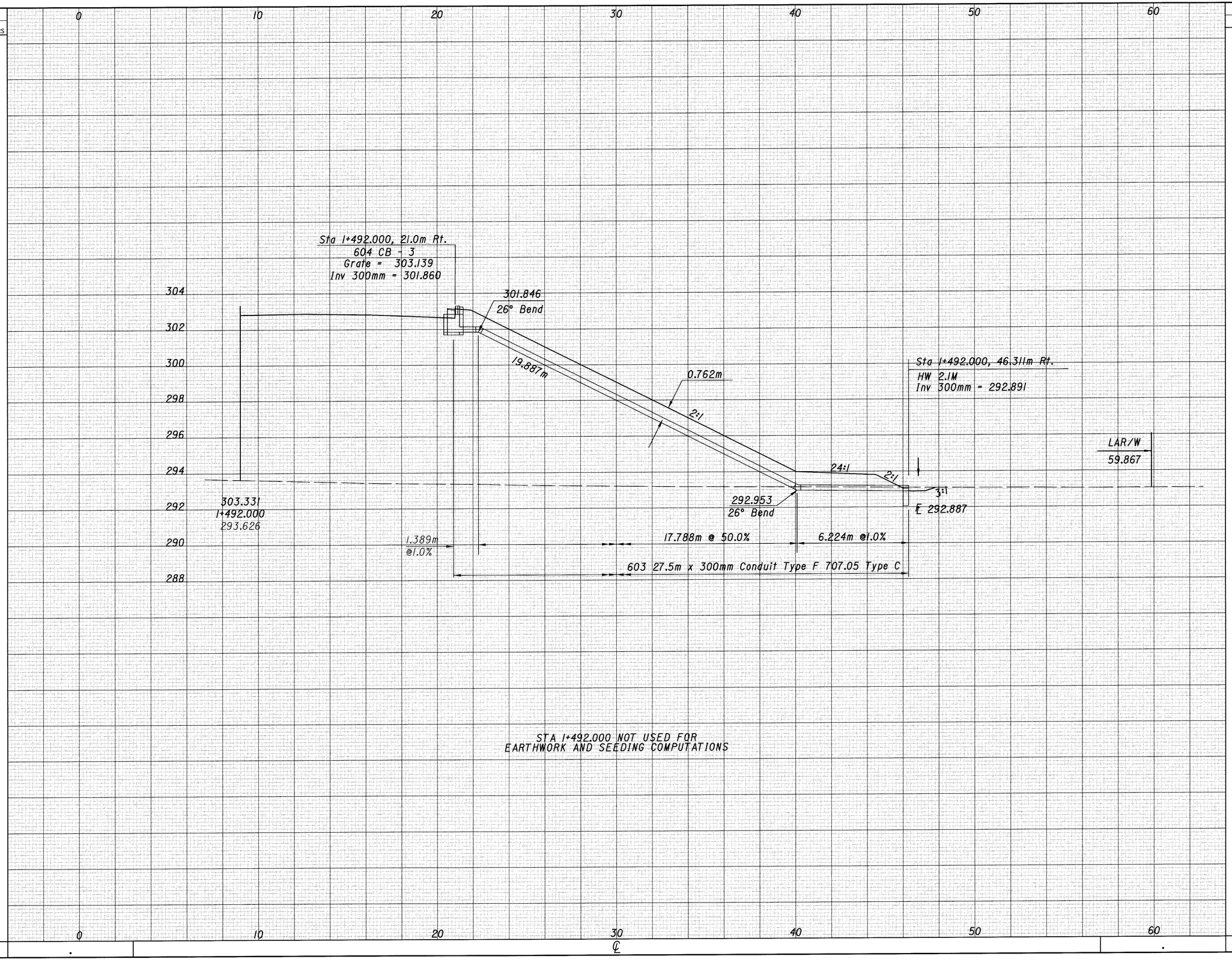
607
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA

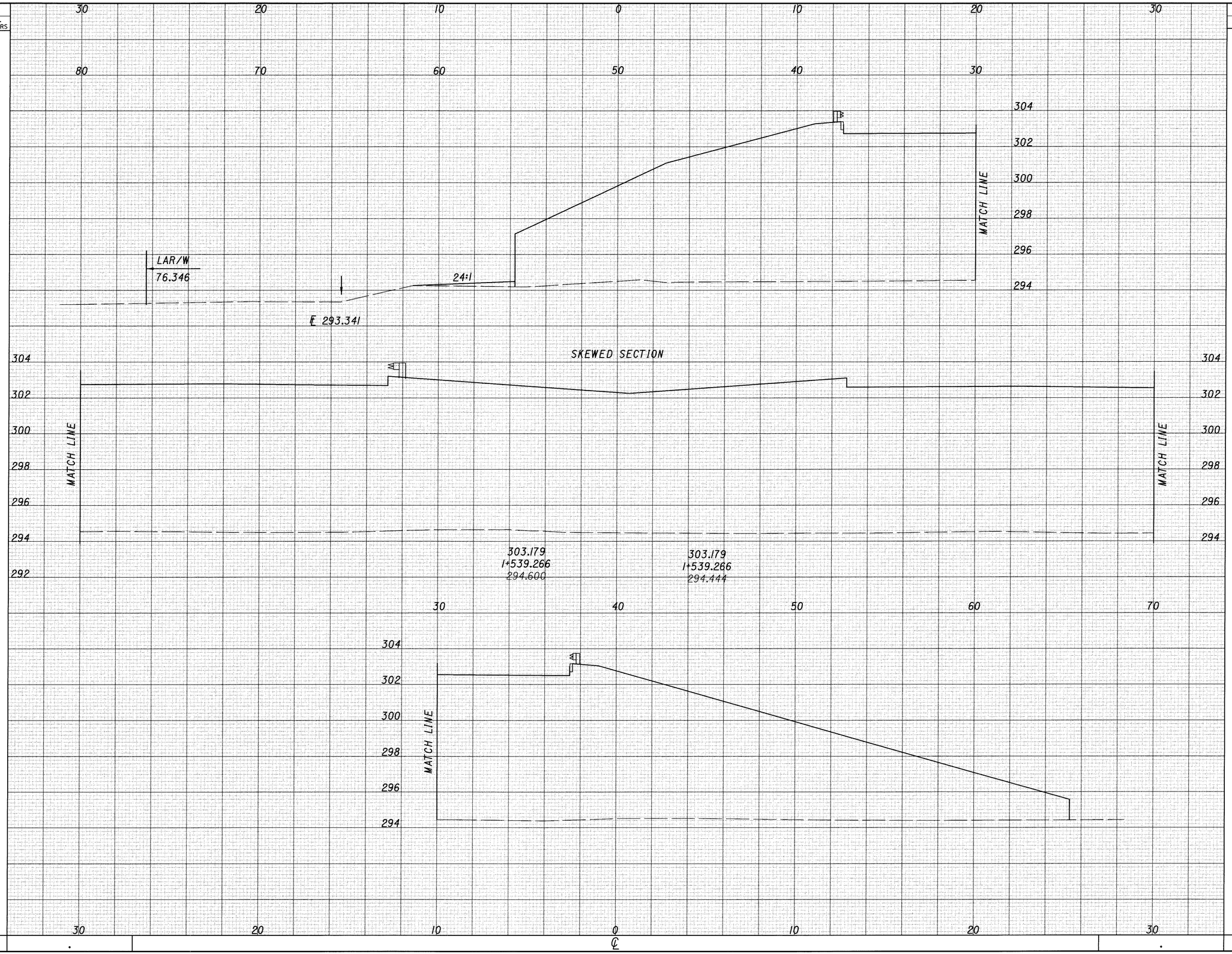


US-30 CROSS SECTIONS
STA 1+492.000

WYA/CRA-30-28.009/0.000

608
2116

SEEDING	
END WIDTH	SQ. METERS
80.74	
0	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.00	853.86		
0	0		

CALCULATED AM

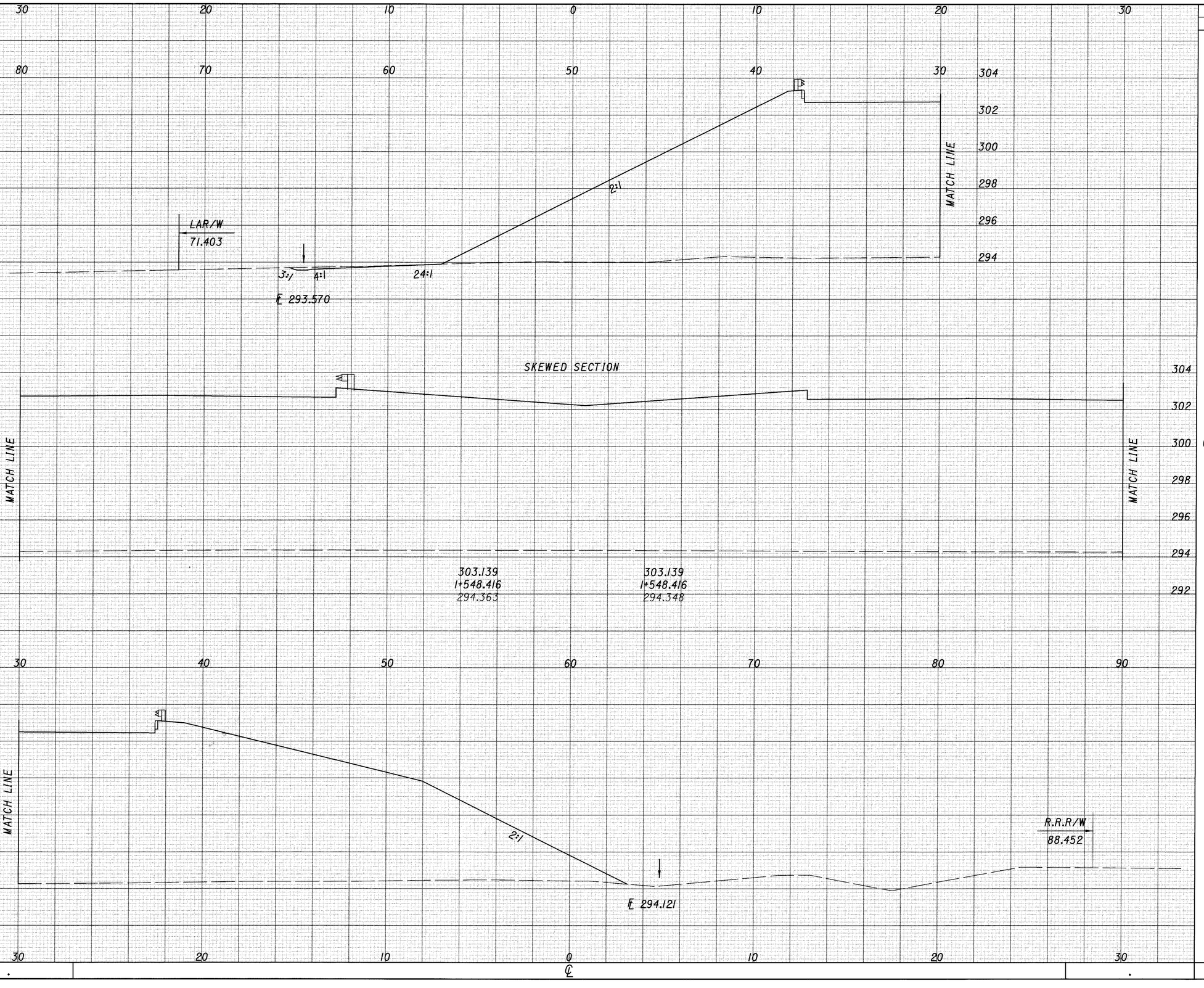
CHECKED REA

US-30 CROSS SECTIONS
STA 1+539.266

WYA / CRA-30-28.009 / 0.000

609
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
83.23	750	0.48	830.73	2	7707		

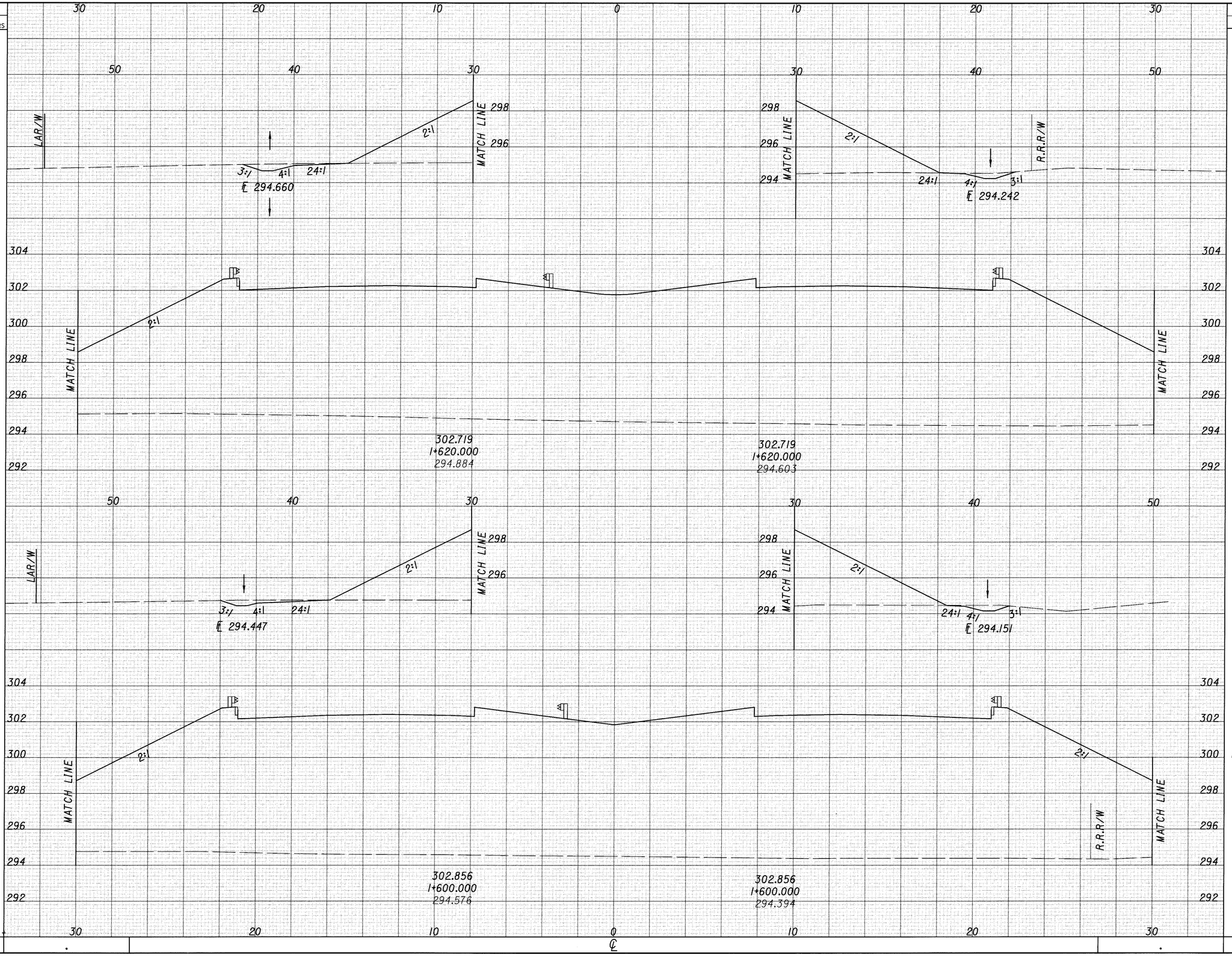


US-30 CROSS SECTIONS
STA 1+548.416

WYA / CRA-30-28.009 / 0.000

610
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
69.13	1391	1.40	447.10	27	9240
69.94	3950	1.34	476.90	47	33726



CALCULATED AM

CHECKED REA

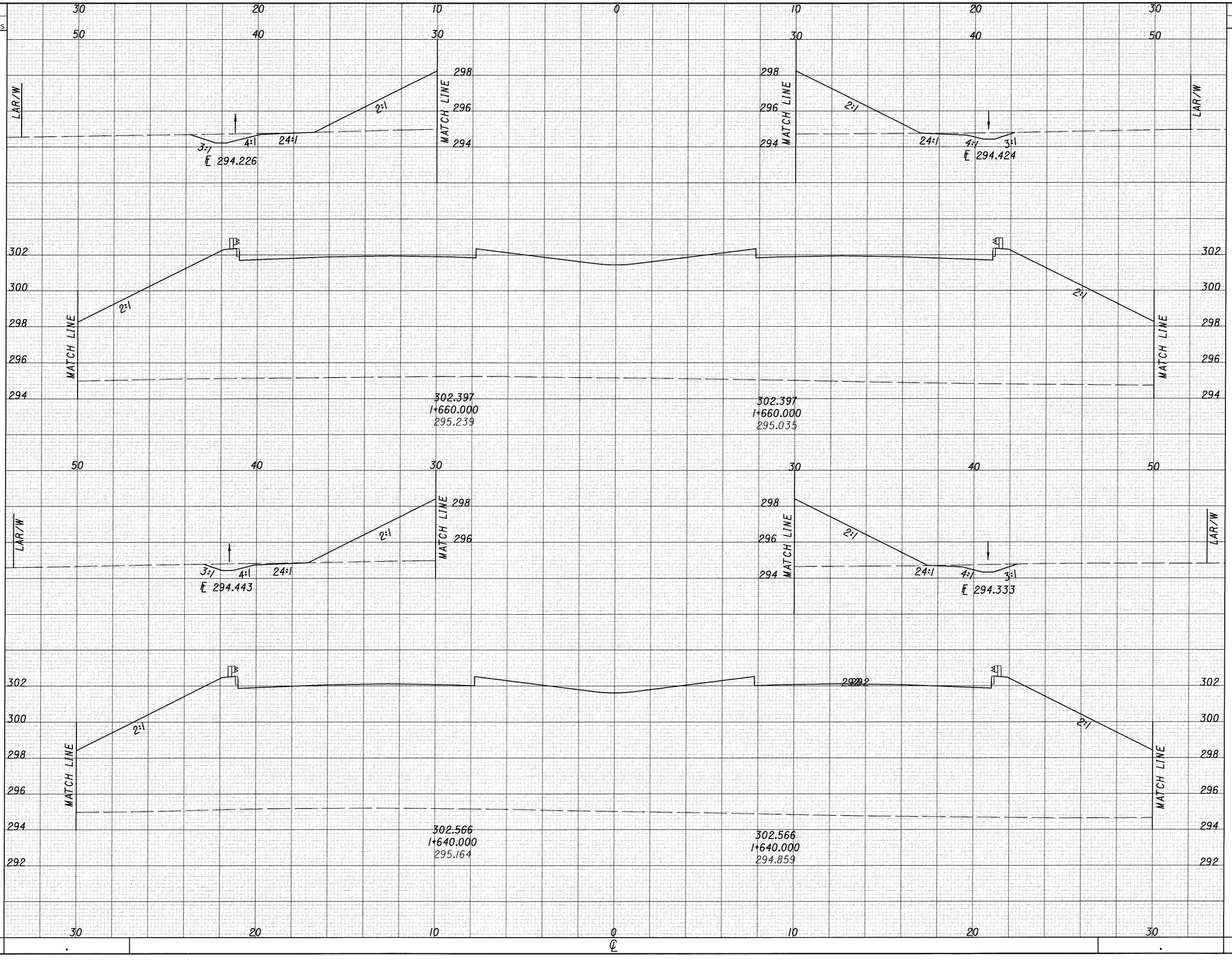
US-30 CROSS SECTIONS

STA 1+600.000 TO STA 1+620.000

WYA/CRA-30-28.009/0.000

611
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
70.02	1394	2.00	406.50	37	8316
69.39	1385	1.70	425.14	31	8722



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 1+640.000 TO STA 1+660.000

WYA/CRA-30-28.009/0.000

612
2116

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. METERS		CUT	FILL	CUT	FILL
		30 20 10 0 10 20 30 / 50 40 30 30 40 50				
70.05	1407	302.013 1+700.000 294.425 / 302.013 1+700.000 294.560	2.42	413.42	52	8159
70.68	1407	302.213 1+680.000 294.842 / 302.213 1+680.000 294.963	2.75	402.47	48	8090

CALCULATED AM

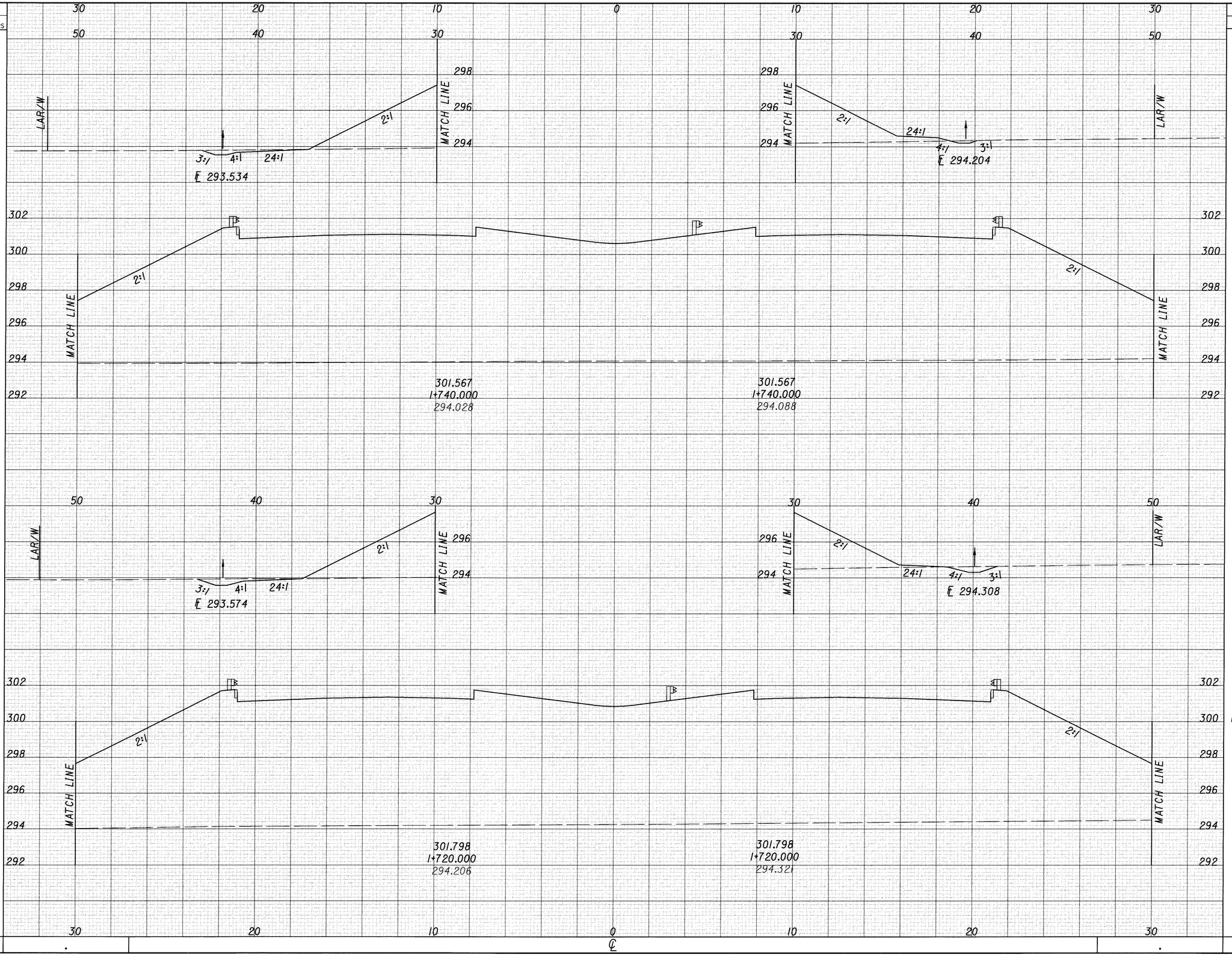
CHECKED REA

US-30 CROSS SECTIONS
STA 1+680.000 TO STA 1+700.000

WYA / CRA-30-28.009 / 0.000

613
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
66.58	1349	0.76	415.71	22	8327
68.37	1384	1.39	417.00	38	8304



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 1+720.000 TO STA 1+740.000

WYA/CRA-30-28.009/0.000

614
2116

SEEDING			END AREA		VOLUME		
END WIDTH	SQ. METERS		CUT	FILL	CUT	FILL	
		30 20 10 0 10 20 30					CALCULATED AM / CHECKED REA
		50 40 30					
		LAR/W 3:1 4:1 24:1 2:1 ℄ 293.509 MATCH LINE 296 294					
		30 40 50 Sta 1+767.500, 38.327m Rt. HW 2.1M Inv 300mm = 294.066 LAR/W 296 294 292 MATCH LINE 2:1 24:1 2:1 3:1 294.113 26° Bend ℄ 294.062 4.773m @1.0% 603 18.7m x 300mm Conduit Type F 707.05 Type C					
		Sta 1+767.500, 21.0m Rt. 604 CB - 3 Grate = 301.033 Inv 300mm = 299.754 299.740 26° Bend 2:1 12.583m 0.762m					
		302 300 298 296 294 292 MATCH LINE 2:1 MATCH LINE 301.225 1+767.500 293.708 301.225 1+767.500 293.837 1.389m @1.0% 11.254m @ 50.0% 603 18.7m x 300mm Conduit Type F 707.05 Type C					
65.05	490		0.47	407.92	4	3070	
		50 40 30 LAR/W 3:1 4:1 24:1 2:1 ℄ 293.494 MATCH LINE 296 294					
		30 40 50 298 296 294 MATCH LINE 2:1 24:1 4:1 3:1 ℄ 294.101 LAR/W					
		302 300 298 296 294 292 MATCH LINE 2:1 MATCH LINE 301.321 1+760.000 293.768 301.321 1+760.000 293.888 2:1					
65.54	1321		0.70	410.81	15	8265	
		30 20 10 0 10 20 30					
		. ℄ .					

US-30 CROSS SECTIONS
STA 1+760.000 TO STA 1+767.500

WYA / CRA-30-28.009 / 0.000

615
2116

SEEDING	
END WIDTH	SQ. METERS
70.25	1094

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.70	408.91	9	6605

CALCULATED AM

CHECKED RCA

603, 5.9m x 375mm Conduit
Type F 707.05 Type C @ 1.00%
Sta. 1+784, 40.190m Lt.
HW - 2.1M
Inv. 375mm = 293.452
Tot. Area = 0.817 ha
Q10 = 0.153 cms
HGL Elev. =293.90

LAR/W
50.896

℄ 293.447

293.512
26° Bend

Sta. 1+784 ℄
604, No. 4 CB
Grate = 299.962
Inv. 375mm = 299.244
Inv. 150mm = 299.394
Inv. 150mm = 299.394

299.013
26.0° Bend
0.762m

Masonary Collar as per MC - 4
603, 21.0m x 375mm Conduit Type B @ 1.0%
603, 2.1m x 375mm Conduit Type F 707.05 Type C @ 1.0%
603, 12.3m x 375mm Conduit Type F 707.05 Type C @ 50.00%
11.1m

301.005
1+784.000
293.702

301.005
1+784.000
293.766

STA 1+784.000 NOT USED FOR
EARTHWORK AND SEEDING COMPUTATIONS

℄ 293.423

℄ 294.041

SKEWED SECTION

301.010
1+783.672
293.692

301.010
1+783.672
293.747

℄

US-30 CROSS SECTIONS
STA 1+783.672 TO STA 1+784.000

WYA/CRA-30-28.009/0.000

616
2116

SEEDING	
END WIDTH	SQ. METERS
76.50	671

BRIDGE - STA 1+792.822 TO STA 1+836.719

LAR/W
MATCH LINE
2:1
3:1
4:1
24:1
℄ 293.404
℄ 294.994

SKEWED SECTION

300.883
1+792.822
293.733

300.883
1+792.822
293.750

Sta 1+791.800, 40.183m Lt.
HW 2.1M
Inv 300mm = 293.428
293.488
26° Bend
℄ 293.425
6.034m @1.0%

Sta 1+791.800, 21.0m Lt.
604 CB -3
Grate = 300.706
Inv 300mm = 299.427
299.413
26° Bend
0.762m
13.248m
11.850m @ 50.0%
1.389m @1.0%
603 20.7m x 300mm Conduit
Type F 707.05 Type C

300.898
1+791.800
293.700

STA 1+91.800 NOT USED FOR
EARTHWORK AND SEEDING COMPUTATIONS

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.26	391.45		
		9	3662

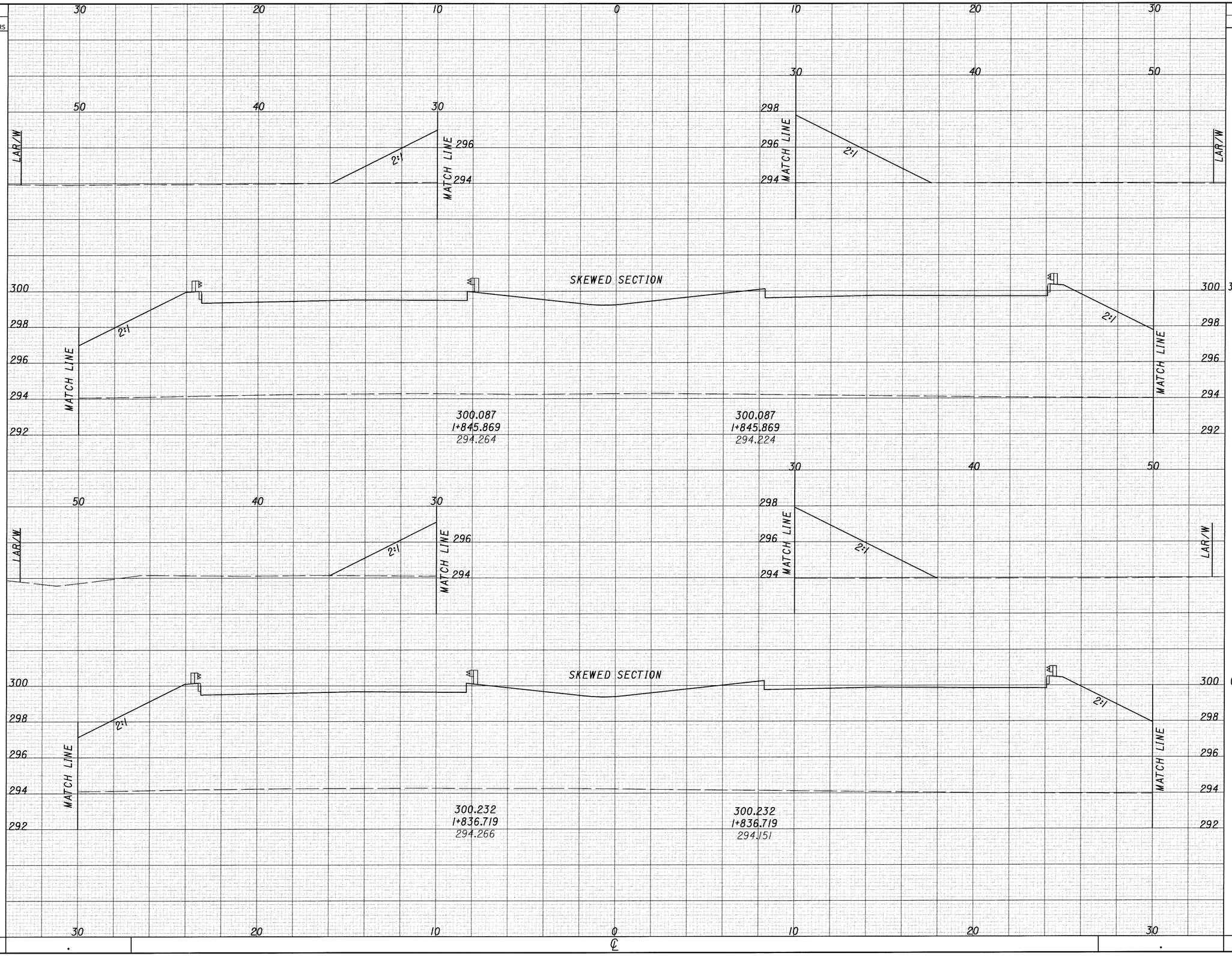
CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 1+791.800 TO STA 1+792.822

WYA/CRA-30-28.009/0.000

617
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
51.64	474	327.81		3053	
52.06	0	0.00	339.46	0	0



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 1+836.719 TO STA 1+845.869

WYA/CRA-30-28.009/0.000

618
2116

SEEDING END WIDTH	SEEDING SQ. METERS
46.88	955
48.62	708

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
267.55		5561	
288.50		4355	

CALCULATED AM

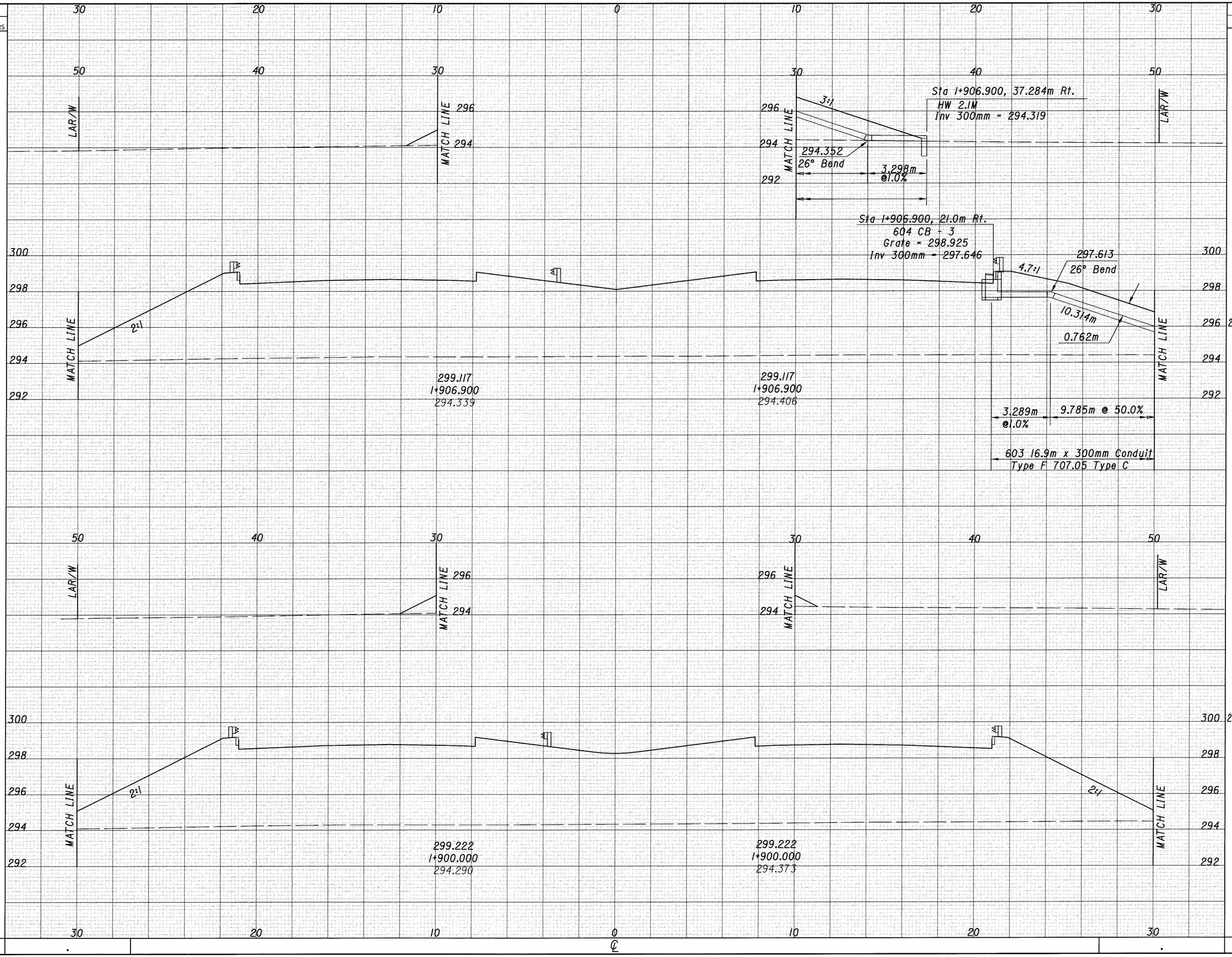
CHECKED REA

US-30 CROSS SECTIONS
STA 1+860.000 TO STA 1+880.000

WYA/CRA-30-28.009/0.000

619
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
50.33	329	246.34		1667	
45.04	919	236.94		5045	



CALCULATED AM

CHECKED REA

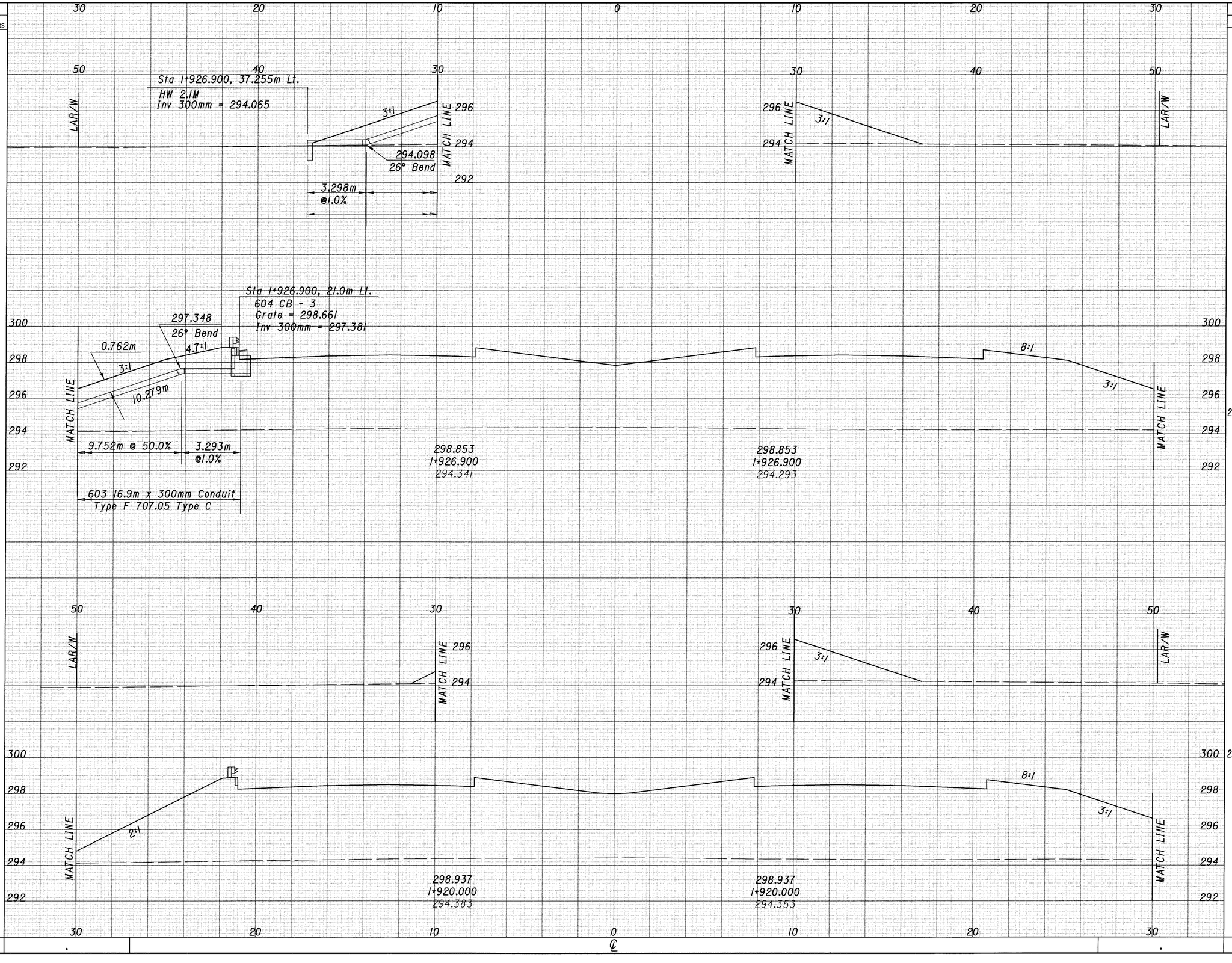
US-30 CROSS SECTIONS

STA 1+900.000 TO STA 1+906.900

WYA / CRA-30-28.009 / 0.000

620
2116

SEEDING	
END WIDTH	SQ. METERS
55.94	
	366
50.08	
	658



END AREA		VOLUME	
CUT	FILL	CUT	FILL
250.36			
235.14			
		1675	
		3154	

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 1+920.000 TO STA 1+926.900

WYA / CRA-30-28.009 / 0.000

621
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
57.01	1142	247.05		4942	
57.18	741	247.11		3258	

CALCULATED AM

CHECKED REA

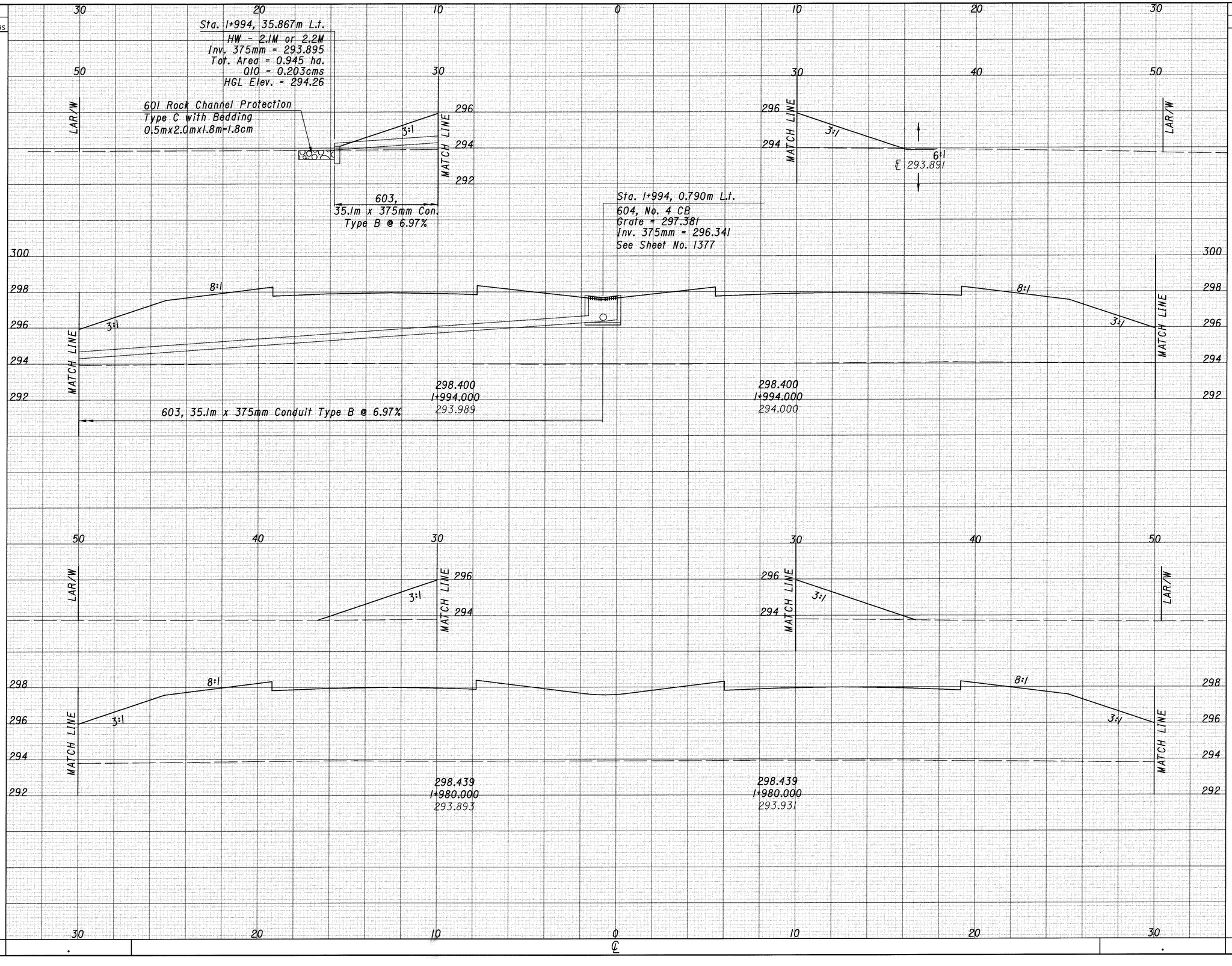
US-30 CROSS SECTIONS

STA 1+940.000 TO STA 1+960.000

WYA/CRA-30-28.009/0.000

622
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
57.83	798	1.07	233.61	7	3348
56.24	1132	0.00	4918	244.72	

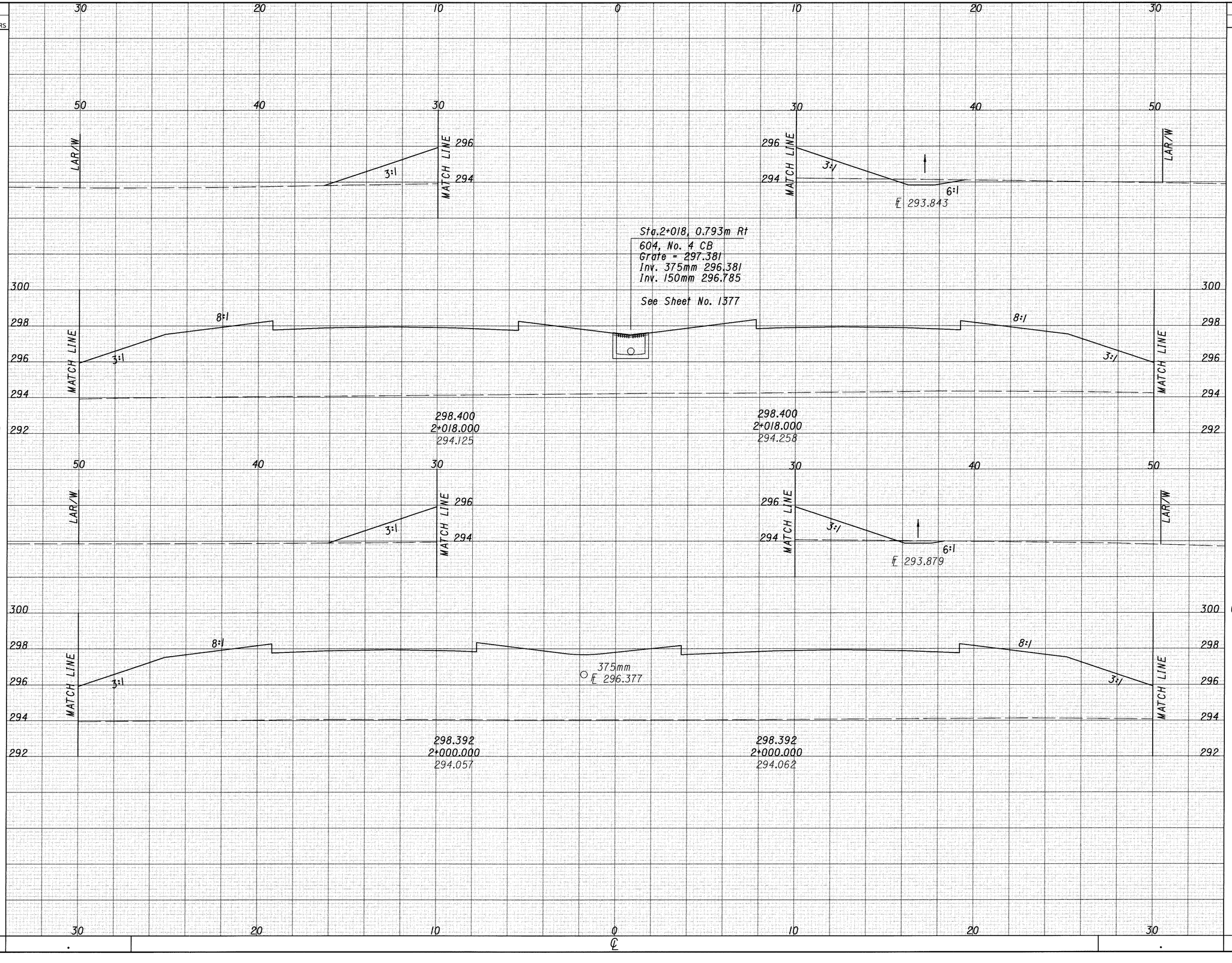


US-30 CROSS SECTIONS
STA 1+980.000 TO STA 1+994.000

WYA / CRA-30-28.009 / 0.000

623
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
58.36	1019	0.86	221.18	10	4049
54.92	338	0.28	228.76	4	1387



US-30 CROSS SECTIONS
STA 2+000.000 TO STA 2+018.000

CALCULATED AM
CHECKED REA

WYA/CRA-30-28.009/0.000

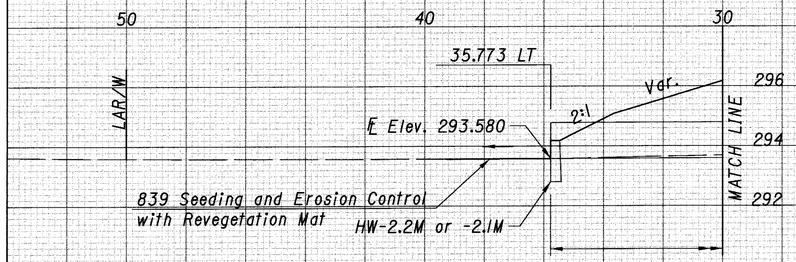
624
2116

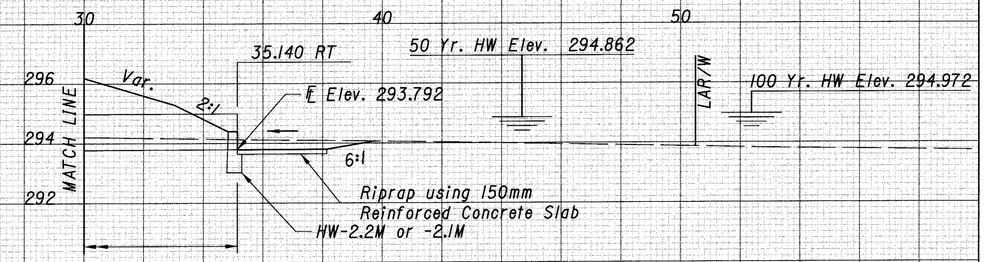
SEEDING	
END WIDTH	SQ. METERS
60.66	1192
58.58	117

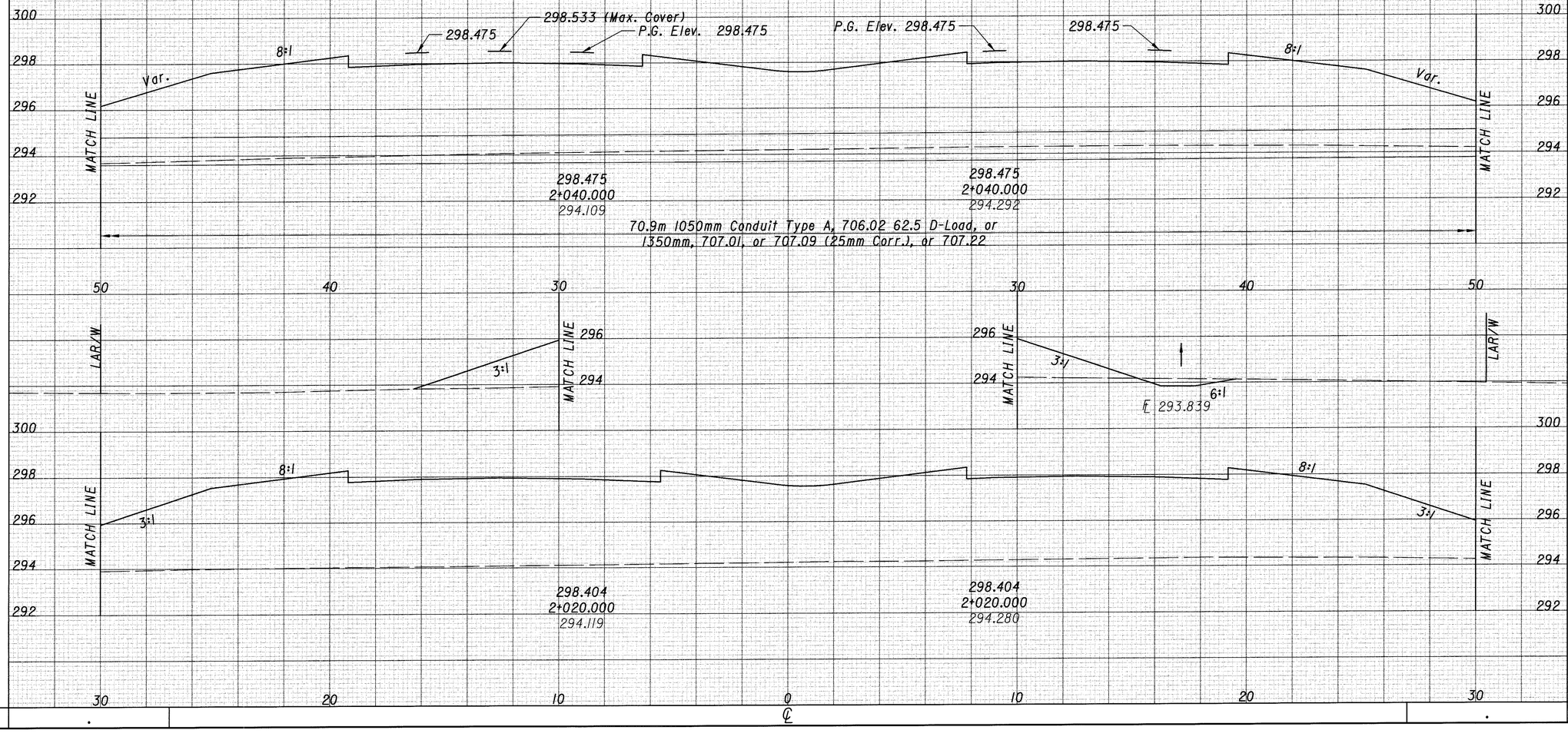
HYDRAULIC DESIGN DATA	
Drainage Area	= 25.22 ha
Q_{50}	= 1.605 cms
Q_{100}	= 1.841 cms
HW_{50}	= 294.862
HW_{100}	= 294.972
V_{50}	= 2.49mps
V_{100}	= 2.63mps

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	9.0	sq m	Riprap using 150mm Reinforced Concrete Slab
602	2.46	cu m	Concrete Masonry
603	70.90	m	1050mm Conduit Type A, 706.02 62.5 D-Load, or
			1350mm, 707.01, or 707.09 (25mm Corr.), or 707.22
839	10.50	sq m	839 Seeding and Erosion Control with Revegetation Mat
			Drainage quantities carried to sheet no.







END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.63	230.54		
		26	4517
0.93	221.19		
		2	442

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 2+020.000 TO STA 2+040.000

WYA/CRA-30-28.009/0.000

625
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
58.00	1155	0.00	267.51	0	5175
57.50	1182	0.00	249.96	16	4805

CALCULATED AM

CHECKED REA

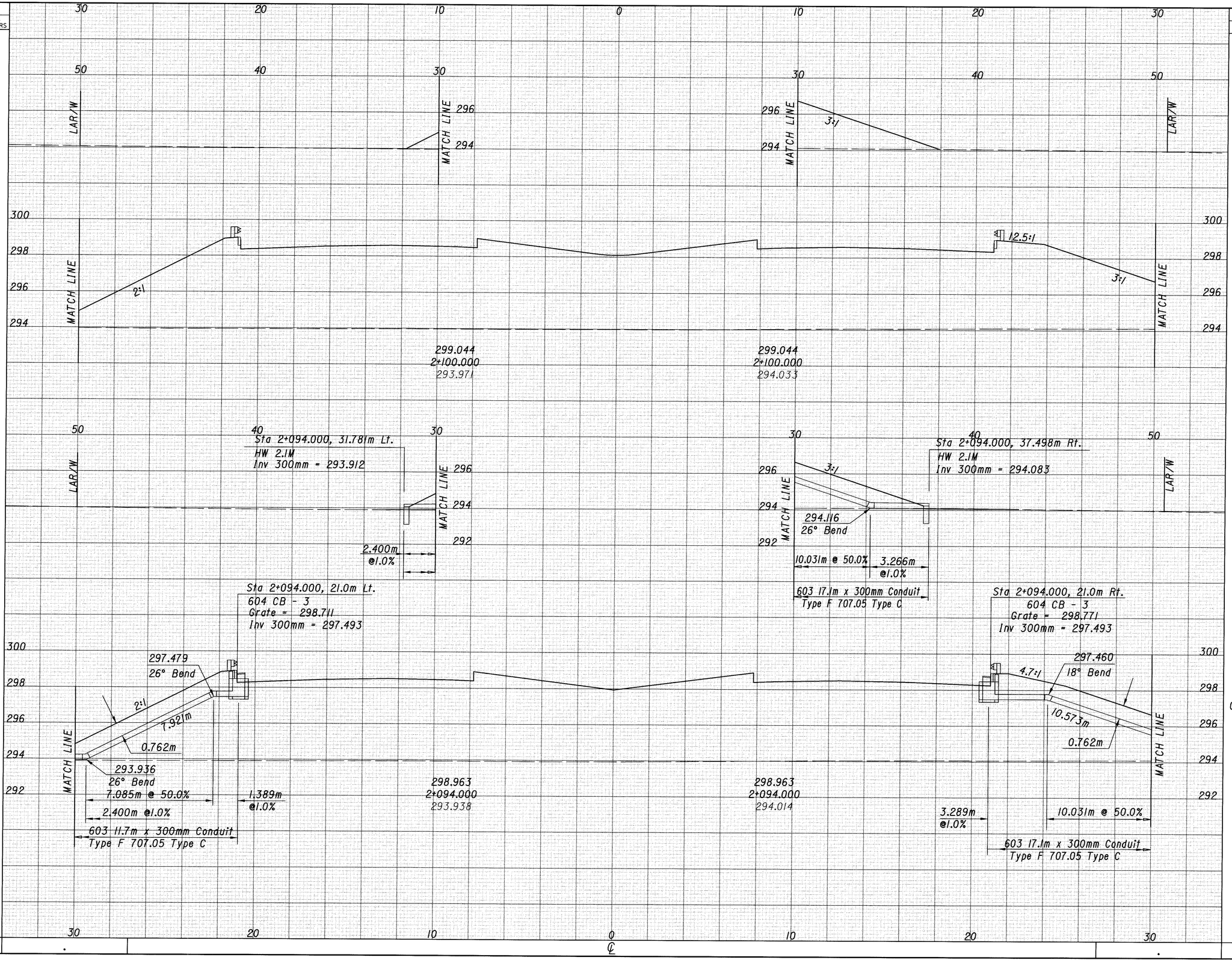
US-30 CROSS SECTIONS

STA 2+060.000 TO STA 2+080.000

WYA / CRA-30-28.009 / 0.000

626
2116

SEEDING	
END WIDTH	SQ. METERS
51.17	
	323
56.57	
	802



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.00	264.03		
		0	1573
0.09	260.29		
		1	3695

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 2+094.000 TO STA 2+100.000

WYA / CRA-30-28.009 / 0.000

627
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
46.39	921	272.24		5285	
45.74	969	256.21		5202	

30 20 10 0 10 20 30

50 40 30 30 40 50

LAR/W — MATCH LINE 296 294 — 296 294 MATCH LINE — LAR/W

300 298 296 294 292

MATCH LINE — 2:1 — 2:1 — MATCH LINE

299.669
2+140.000
294.058

299.669
2+140.000
294.241

299.349
2+120.000
294.077

299.349
2+120.000
294.148

℄

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 2+120.000 TO STA 2+140.000

WYA/CRA-30-28.009/0.000

628
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
48.92	965	315.07		6083	
47.57	940	293.19		5654	

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 2+160.000 TO STA 2+180.000

WYA/CRA-30-28.009/0.000

629
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 2+221.356

30 20 10 0 10 20 30

30 40 50 60 70

302
300
298
296
294

MATCH LINE B

2:1

LAR/W

70 60 50 40 30

300
298
296
294

MATCH LINE A

2:1

LAR/W

302
300
298
296
294
292

MATCH LINE A

SKEWED SECTION

W

MATCH LINE B

65.47

2365

605.60

19038

300.971
2+221.356
294.177

300.971
2+221.356
294.258

30 20 10 0 10 20 30

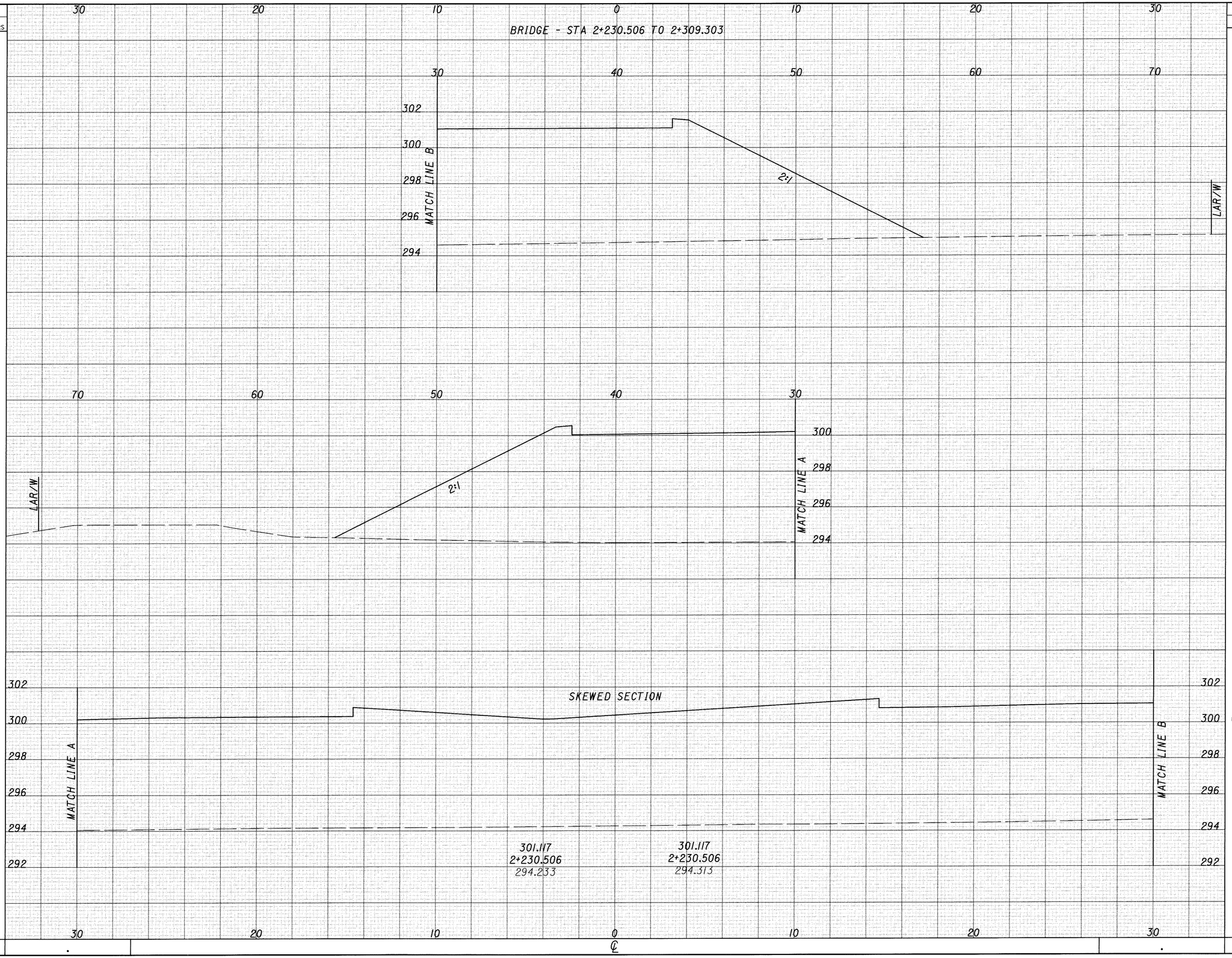
℄

WYA/CRA-30-28.009/0.000

630
2116

SEEDING	
END WIDTH	SQ. METERS
65.64	600

BRIDGE - STA 2+230.506 TO 2+309.303



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.00	5587	615.62	

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS STA 2+230.506

WYA / CRA-30-28.009 / 0.000

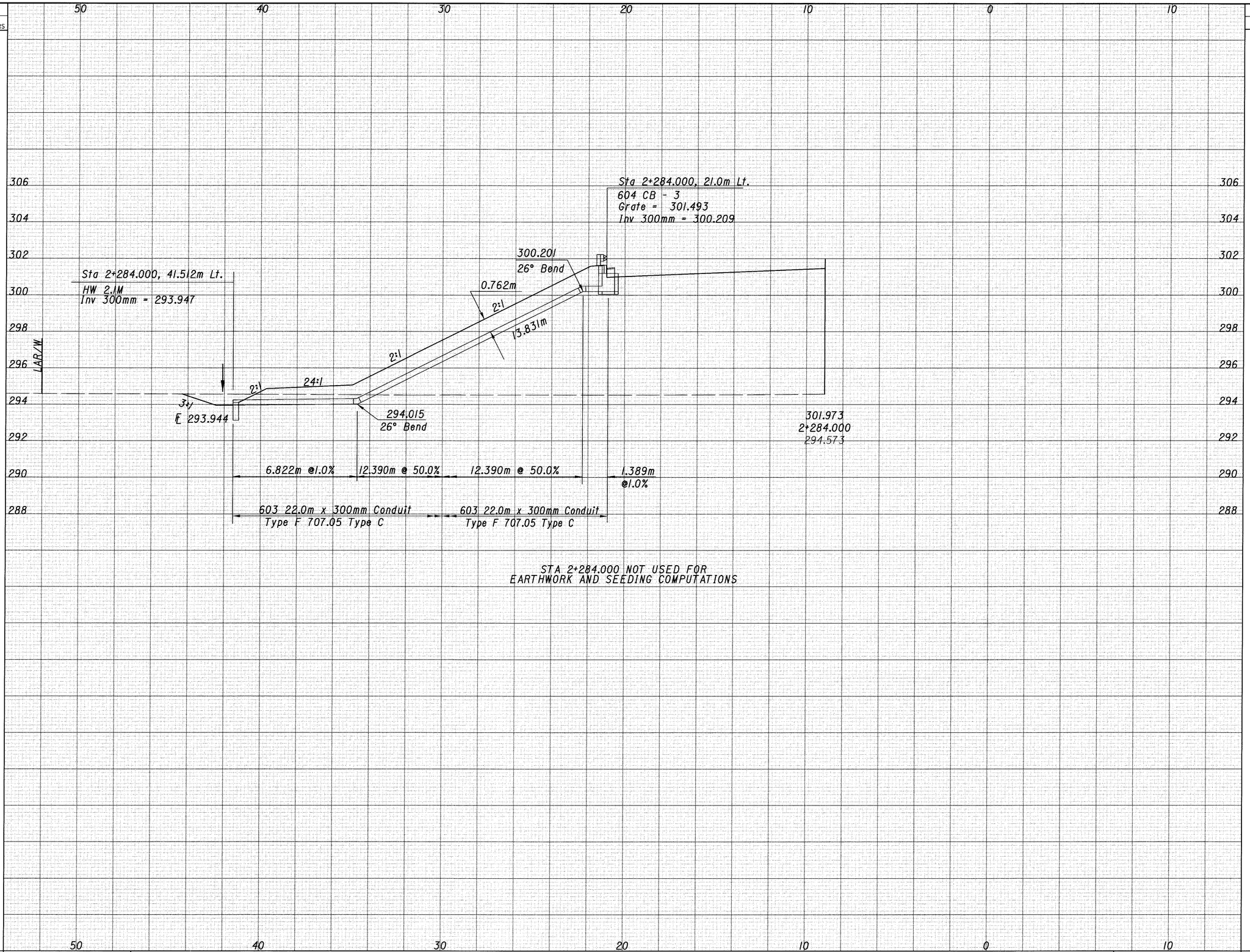
631
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA



US-30 CROSS SECTIONS
STA 2+284.000

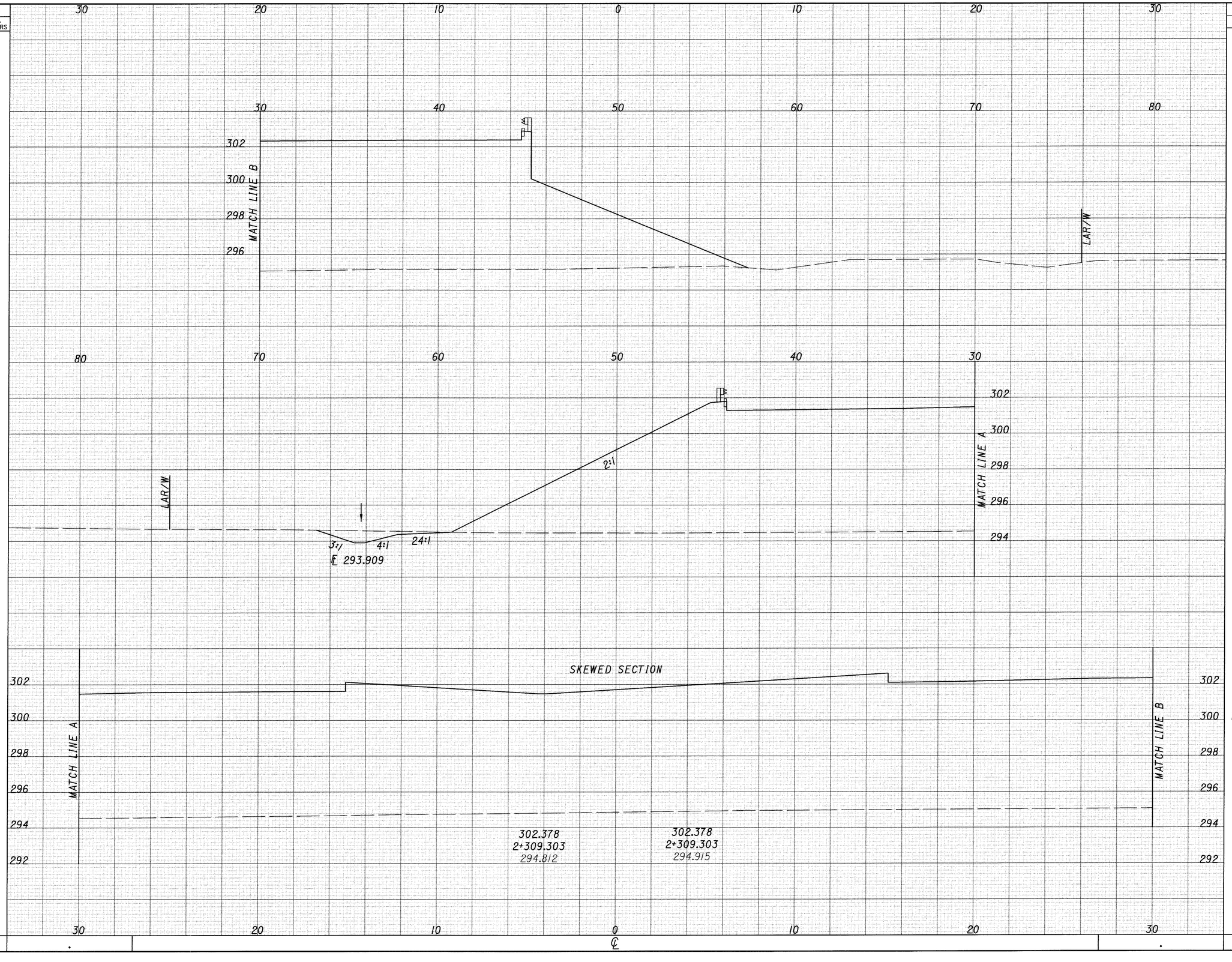
WYA/CRA-30-28.009/0.000

SEEDING	
END WIDTH	SQ. METERS
75.58	0

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.13	697.12	0	0

CALCULATED AM

CHECKED REA



US-30 CROSS SECTIONS
STA 2+309.303

WYA/CRA-30-28.009/0.000

633
2116

SEEDING	
END WIDTH	SQ. METERS
62.94	634

30 20 10 0 10 20 30

30 40 50 60 70 80

302
300
298
296
MATCH LINE B
2:1
LAR/W

80 70 60 50 40 30

LAR/W
2:1
302
300
298
296
294
MATCH LINE A
3:1
4:1
24:1
℄ 293.934

304
302
300
298
296
294
MATCH LINE A
SKEWED SECTION
MATCH LINE B

302.525
2+318.453
294.858

302.525
2+318.453
294.911

30 20 10 0 10 20 30

℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.00	742.06	19	6584

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 2+318.453

WYA/CRA-30-28.009/0.000

634
2116

SEEDING	
END WIDTH	SQ. METERS
66.11	
	2681

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.01	477.72		
		63	25339

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 2+330.000 TO STA 2+360.000

WYA/CRA-30-28.009/0.000

635
2116

30 20 10 0 10 20 30

50 40 30 30 40 50

LAR/W

MATCH LINE

298
296
294
304
302
300
298
296
294

2:1
24:1
3:1
4:1
℄ 294.136

600mm or 825mm

303.189
2+360.000
294.620

303.189
2+360.000
294.897

603, 5.6m x 375mm Conduit
Type F 707.05 Type C @ 1.0%

Sta. 2+330, 42.005m Lt.
HW - 2.1M
Inv. 375mm = 294.066
Tot. Area = 0.403ha
Q10 =0.091cms
HGL Elev. =294.13

0.762m

294.122
26.0° Bend

℄ 294.061

Sta.2+330, 0.168m LT.
604, No. 4 CB
Grate = 301.666
Inv. 375mm = 300.727
Inv. 150mm = 301.138

8:1

300.493
26.0° Bend

12.831m

Masonary Collar as per MC - 4
603, 20.8m x 375mm Conduit Type B @ 1.0%

603, 2.6m x 375mm Conduit Type F 707.05 Type C @ 1.0%

603, 14.2m x 375mm Conduit Type F 707.05 Type C @ 50.0%

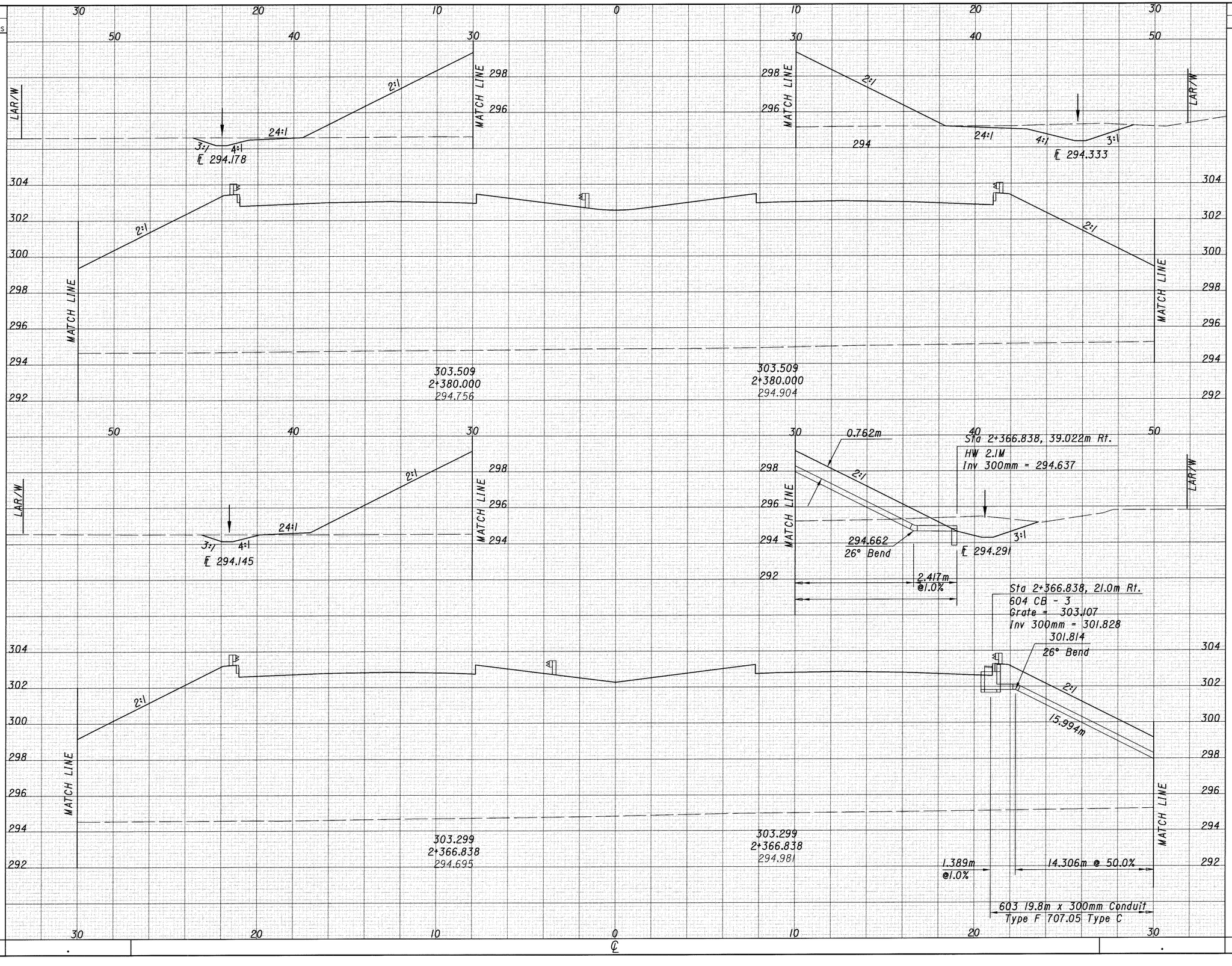
302.709
2+330.000
294.782

302.709
2+330.000
295.009

STA 2+330.000 NOT USED FOR
EARTHWORK AND SEEDING COMPUTATIONS

℄

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
79.55	1008	4.92	500.89	64	6502
73.60	478	4.76	487.15	20	3299



CALCULATED AM

CHECKED REA

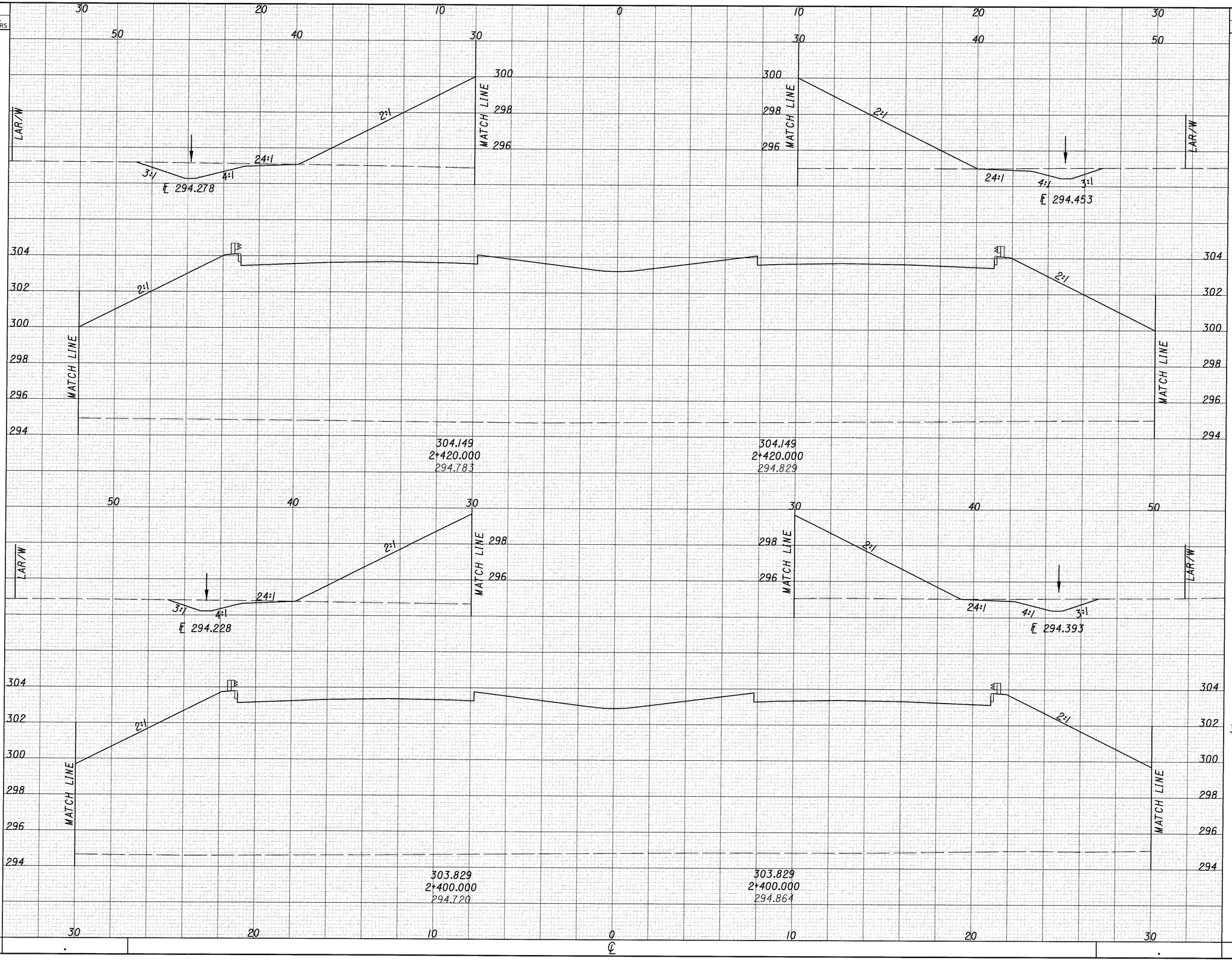
US-30 CROSS SECTIONS

STA 2+366.838 TO STA 2+380.000

WYA/CRA-30-28.009/0.000

636
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
81.42	1605	4.95	549.62	88	10793		
79.11	1587	3.85	529.71	88	10306		

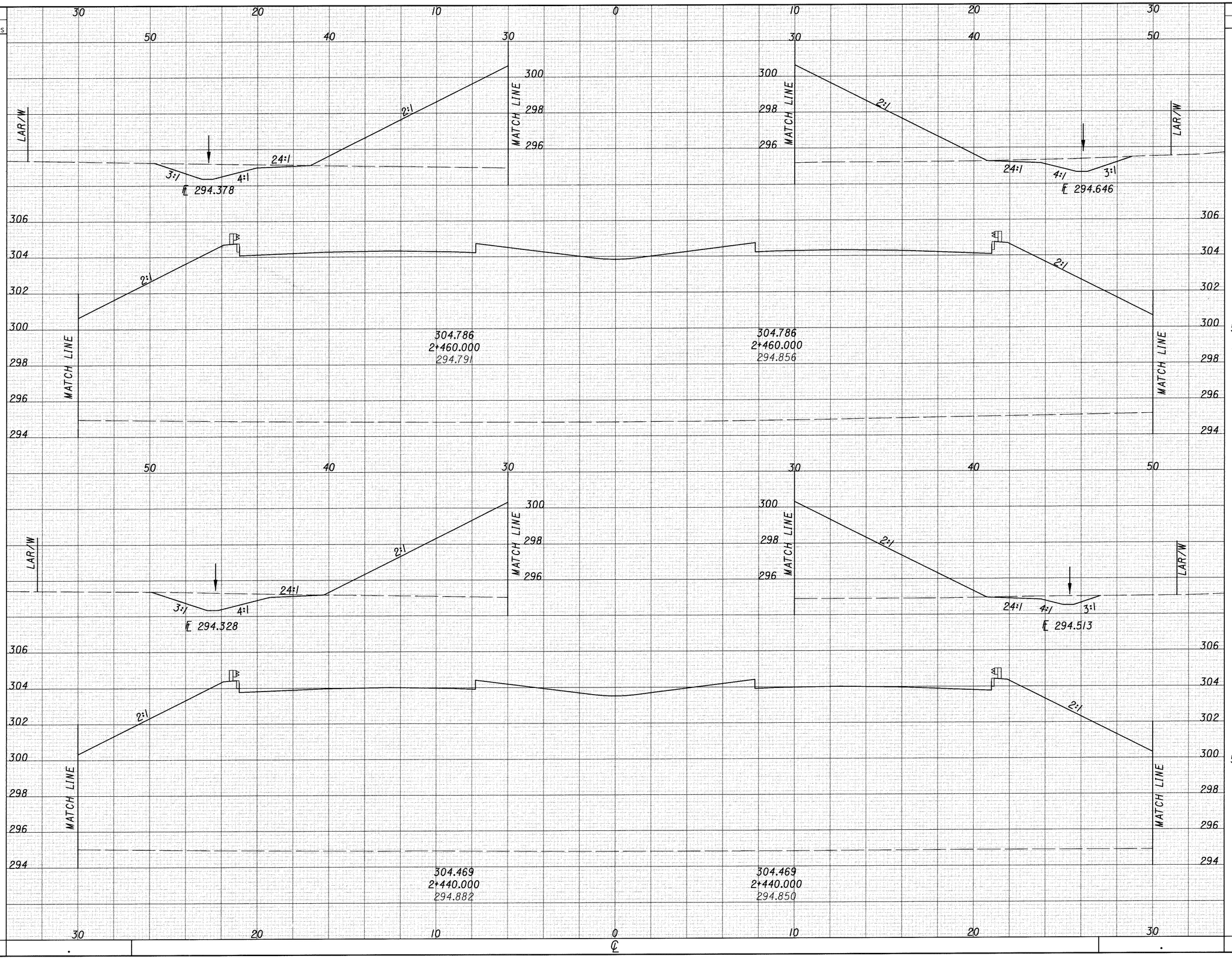


US-30 CROSS SECTIONS
STA 2+400.000 TO STA 2+420.000

WYA/CRA-30-28.009/0.000

637
2116

SEEDING	
END WIDTH	SQ. METERS
84.61	
	1673
82.71	
	1641



END AREA		VOLUME	
CUT	FILL	CUT	FILL
5.62	595.75	110	11688
5.37	573.08	103	11227

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 2+440.000 TO STA 2+460.000

WYA / CRA-30-28.009 / 0.000

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REK
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
81.54		1.89	635.11				
	1653			62	12482		
83.76		4.30	613.13				
	1684			99	12089		

Sta. 2+500, 46.114m Lt.
HW - 2.1M
Inv. 375mm =294.483
Tot. Area = 0.706 ha
Q/0 = 0.152cms
HGL Elev. =294.96

603, 5.2m x375mm Conduit Type F 707.05 Type C @ 1.0%

0.762m

℄ 294.478

294.536
26.0° Bend

303.246
26.0° Bend

17.511m

603, 21.0m x 375mm Conduit Type B @1.0 %

603, 2.387m x 375mm Conduit Type F 707.05 Type C @ 1.0%

603, 19.5m x 375mm Conduit Type F 707.05 Type C @ 50.0%

Sta. 2+500, ℄
604, No. 4 CB
Grate = 304.435
Inv. 375mm = 303.480
Inv. 150mm = 303.780
See Sheet No.

℄ 294.911

305.351
2+500.000
295.004

305.351
2+500.000
295.189

℄ 294.428

℄ 294.778

305.080
2+480.000
294.809

305.080
2+480.000
294.973

MATCH LINE

LAR/W

2:1

24:1

4:1

3:1

306
304
302
300
298
296
294

30 20 10 0 10 20 30
50 40 30 40 50

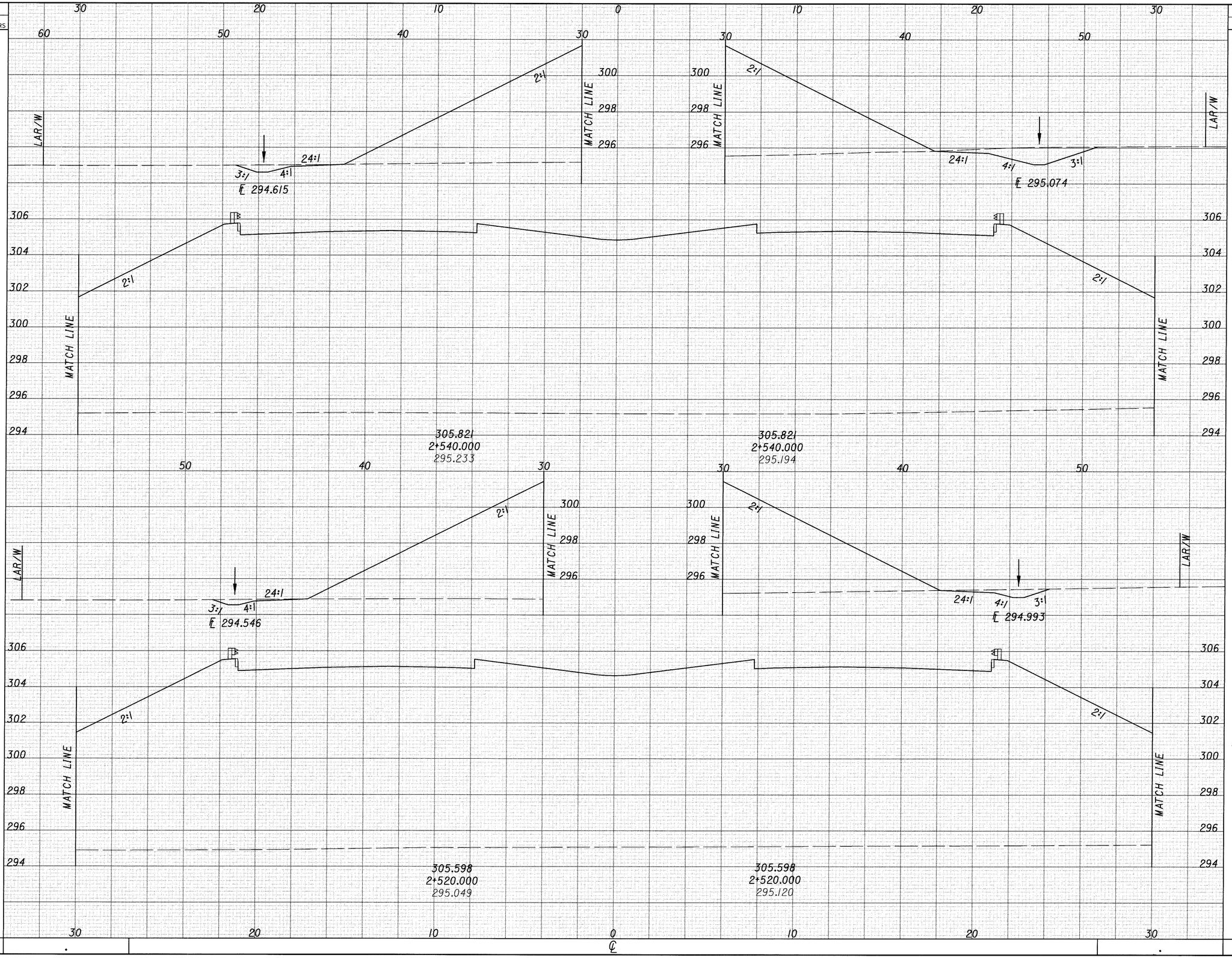
℄

US-30 CROSS SECTIONS
STA 2+480.000 TO STA 2+500.000

WYA / CRA-30-28.009 / 0.000

639
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
86.04	1680	4.86	653.81	67	13085
81.92	1635	1.79	654.72	37	12898



CALCULATED AM

CHECKED REA

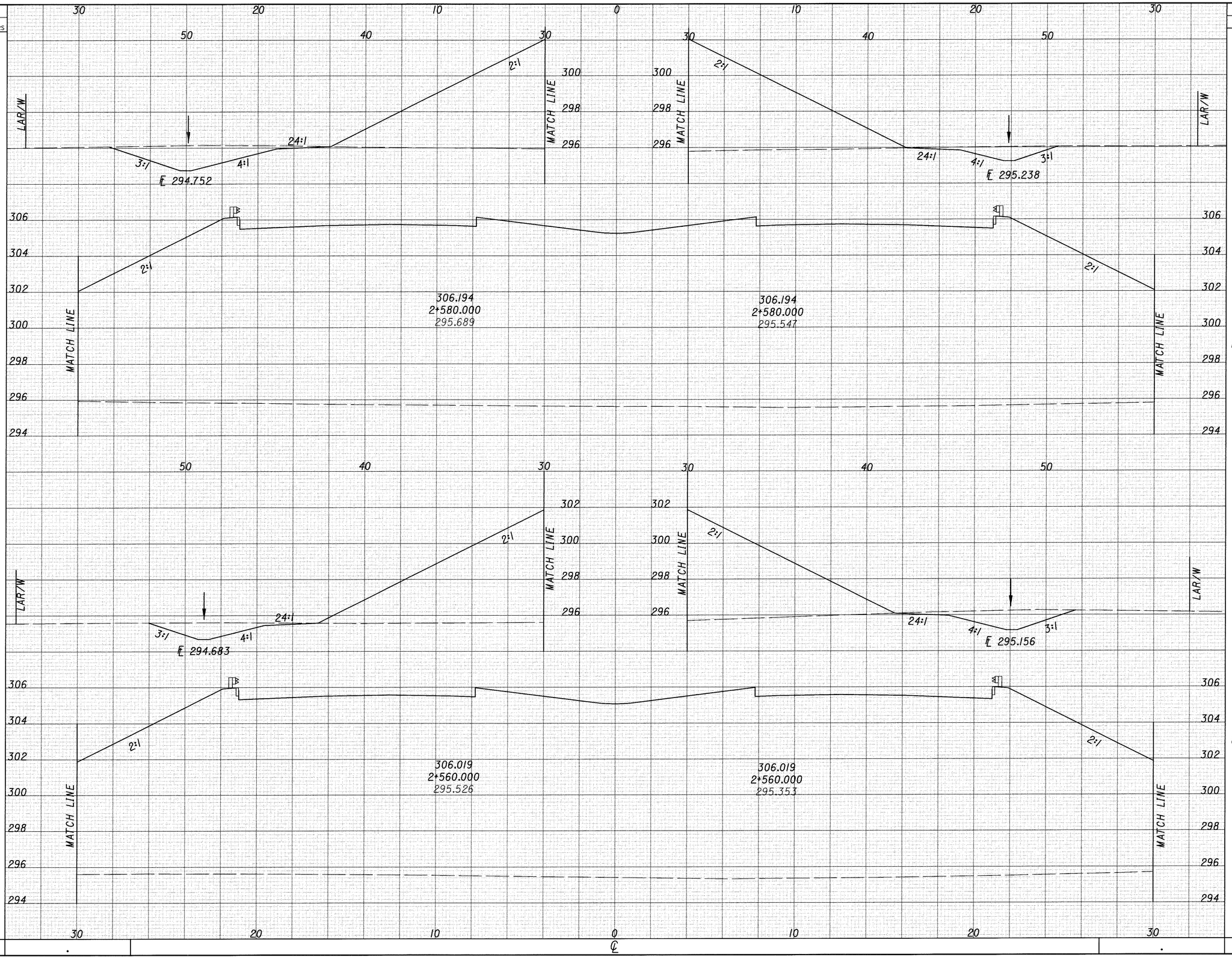
US-30 CROSS SECTIONS

STA 2+520.000 TO STA 2+540.000

WYA/CRA-30-28.009/0.000

640
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
91.70					
	1821	10.47	646.55	190	12945
90.40		8.56	647.98		
	1764			134	13018

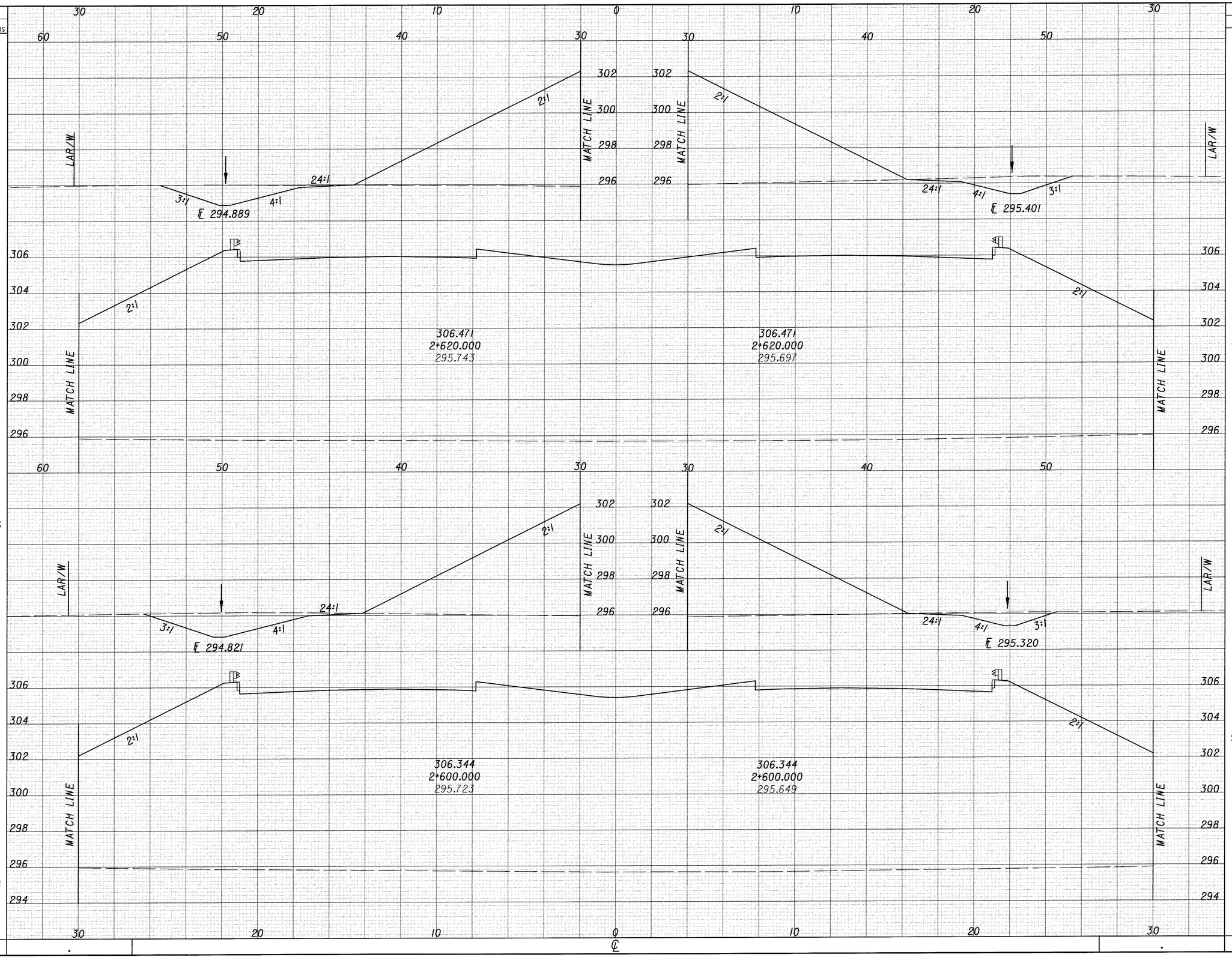


US-30 CROSS SECTIONS
STA 2+560.000 TO STA 2+580.000

WYA / CRA-30-28.009 / 0.000

641
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
91.86		8.96	663.20		
	1836			189	13172
91.73		9.92	654.01		
	1834			204	13006



C.A. CULATED AM

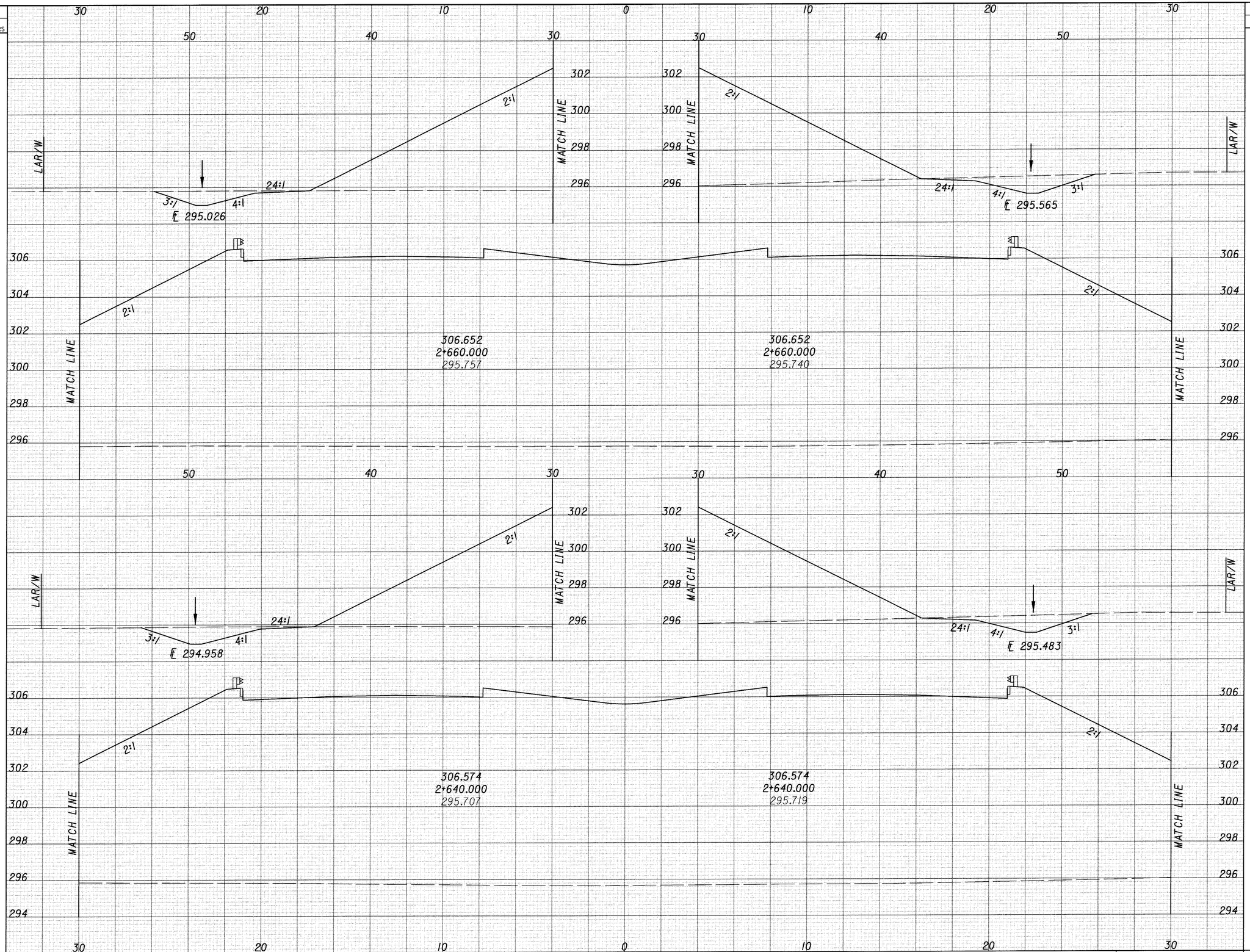
CHECKED REA

US-30 CROSS SECTIONS
STA 2+600.000 TO STA 2+620.000

WYA / CRA-30-28.009 / 0.000

642
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
90.37	1814	6.81	676.70	143	13486
91.01	1829	7.50	671.93	165	13351



CALCULATED AM

CHECKED REA

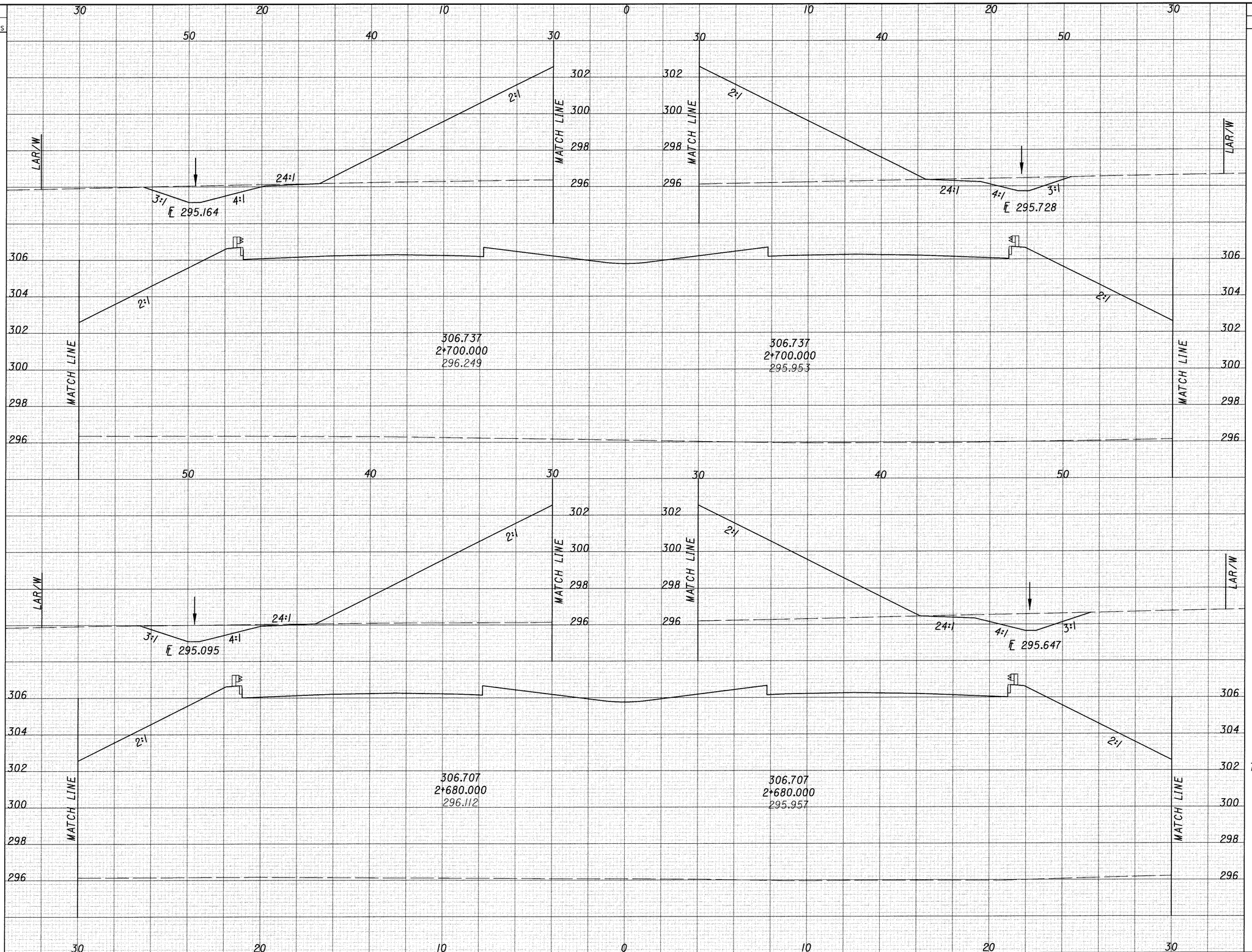
US-30 CROSS SECTIONS

STA 2+640.000 TO STA 2+660.000

WYA / CRA-30-28.009 / 0.000

643
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
89.25		5.94	657.04		
	1801			133	13171
90.81		7.33	660.06		
	1812			141	13368



CALCULATED AM

CHECKED REA

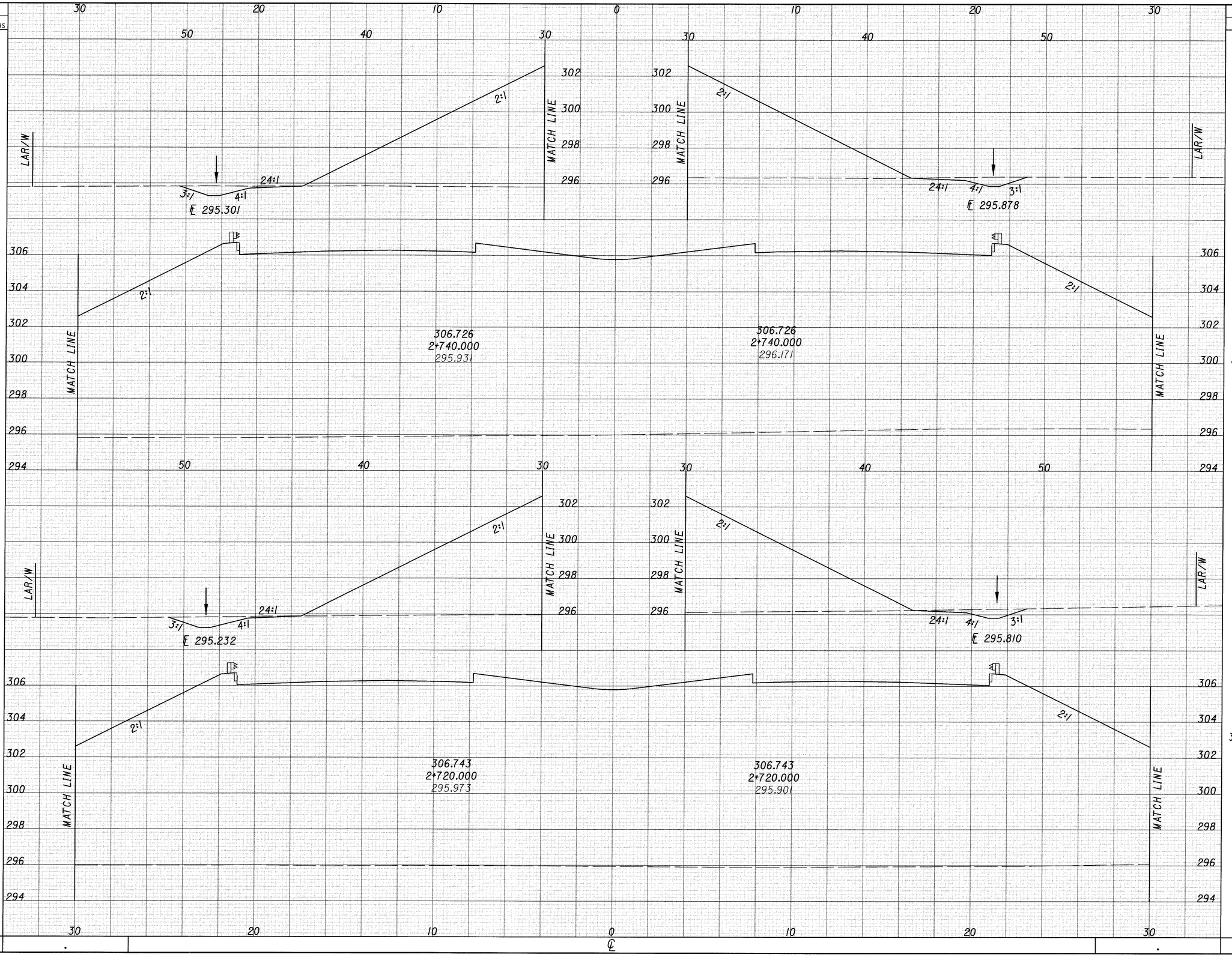
US-30 CROSS SECTIONS

STA 2+680.000 TO STA 2+700.000

WYA/CRA-30-28.009/0.000

644
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
85.05	1708	2.91	665.89	60	13405
85.74	1750	3.10	674.59	90	13316



CALCULATED AM

CHECKED REA

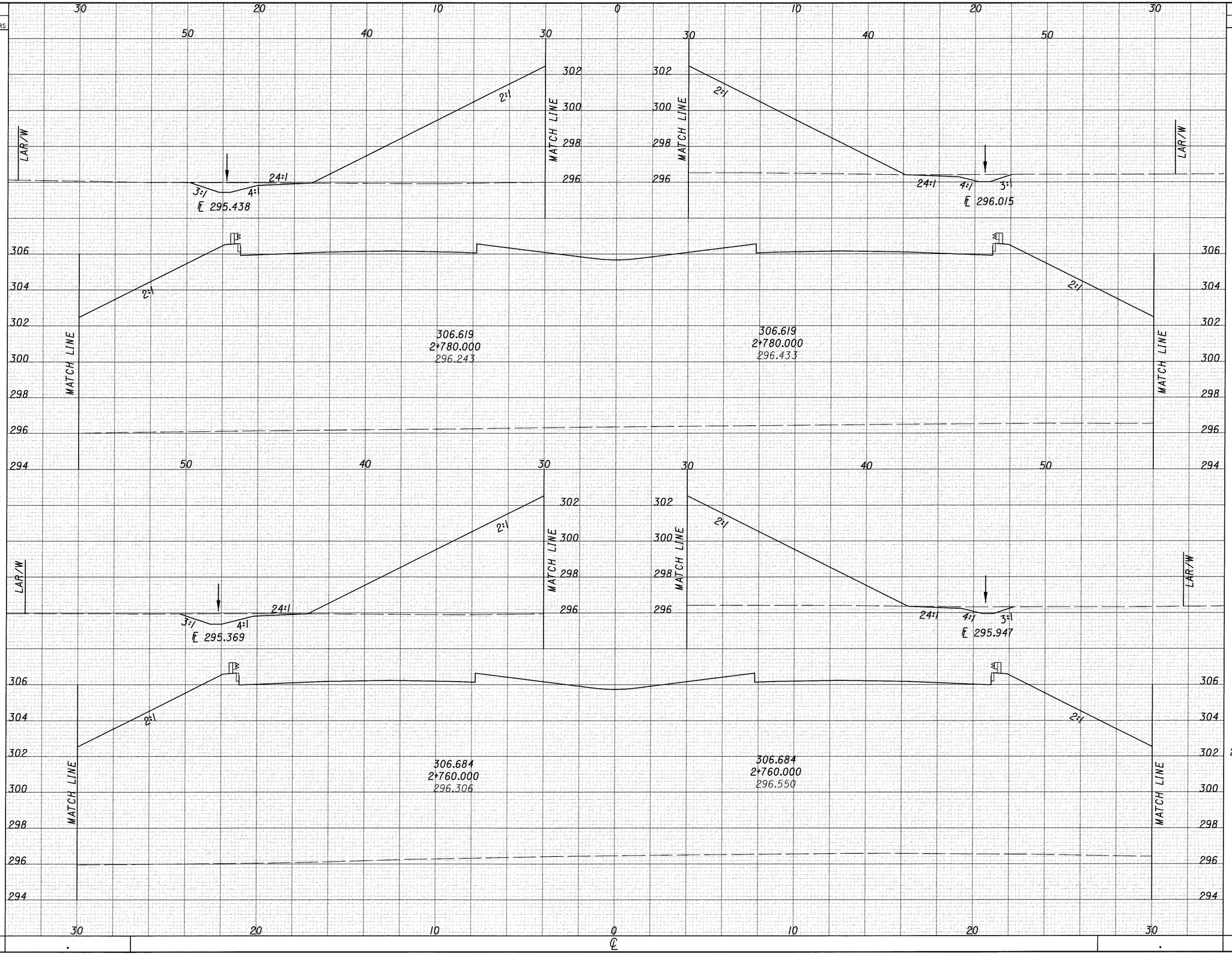
US-30 CROSS SECTIONS

STA 2+720.000 TO STA 2+740.000

WYA/CRA-30-28.009/0.000

645
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
83.40		2.49	637.53		
	1675			51	12804
84.13		2.58	642.92		
	1692			55	13088



CALCULATED AM

CHECKED REA

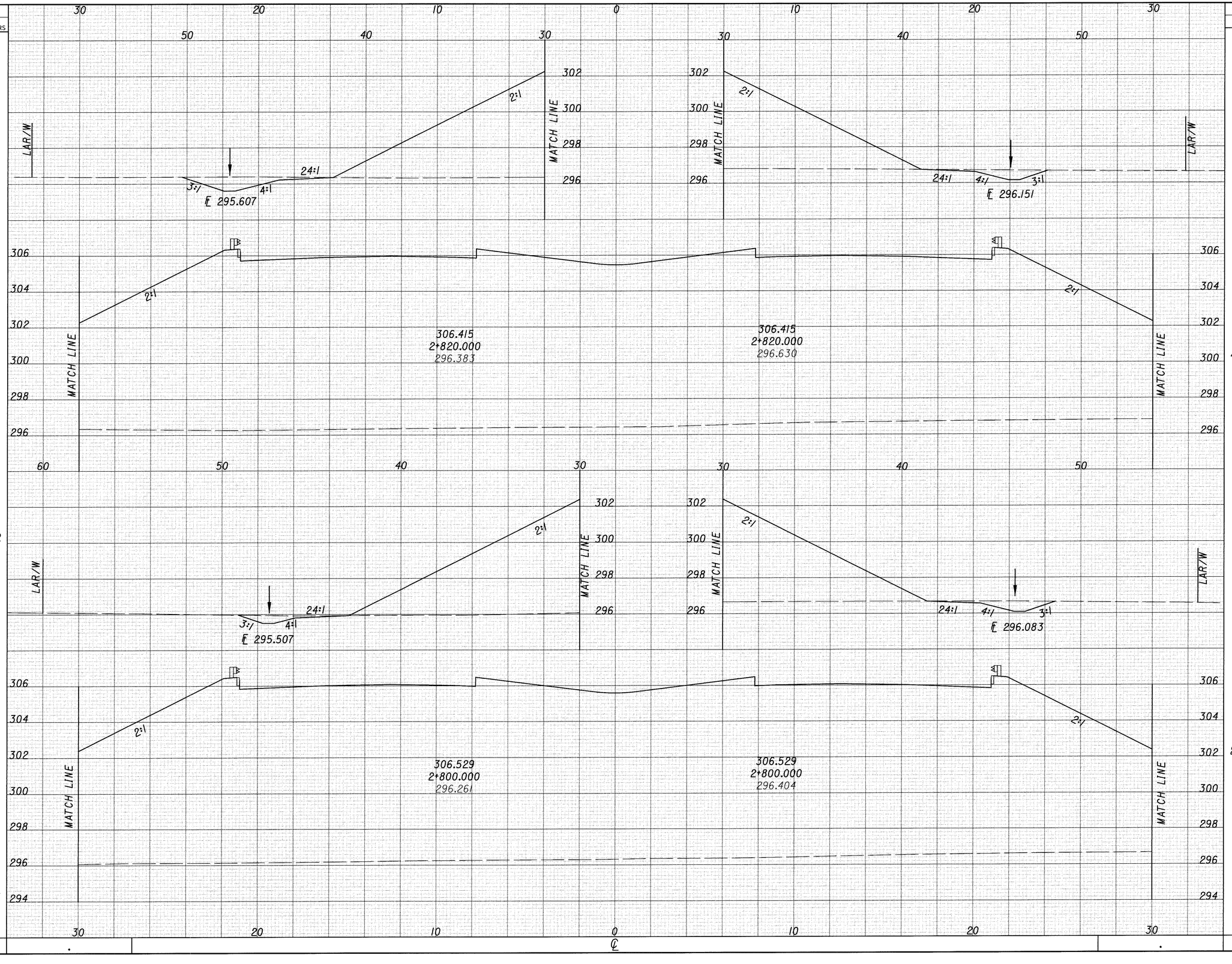
US-30 CROSS SECTIONS

STA 2+760.000 TO STA 2+780.000

WYA/CRA-30-28.009/0.000

646
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	84.08	4.32	601.30		
	1672			71	12275
	83.15	2.74	626.17		
	1665			52	12637



CALCULATED AM

CHECKED REA

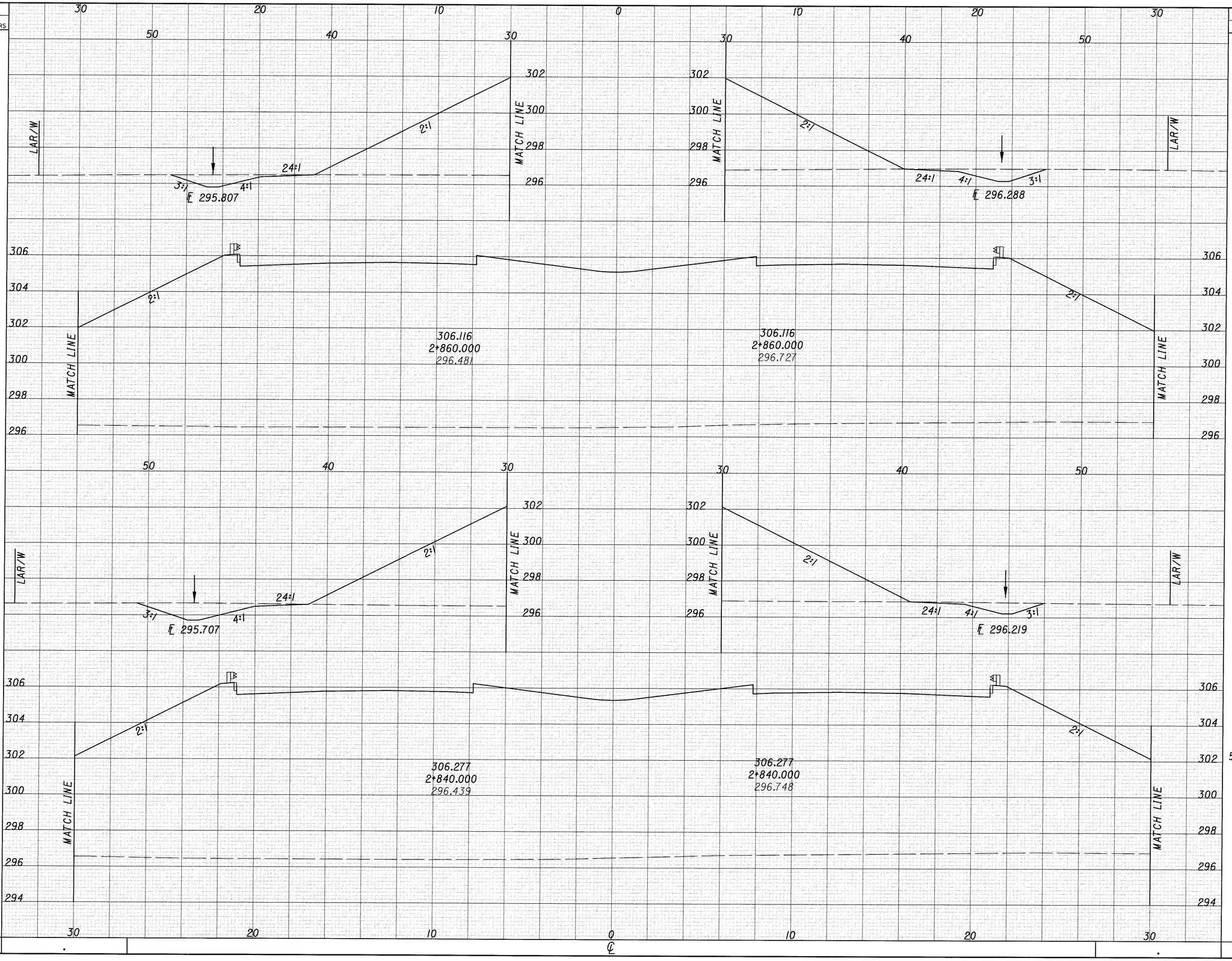
US-30 CROSS SECTIONS

STA 2+800.000 TO STA 2+820.000

WYA / CRA-30-28.009 / 0.000

647
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
82.35		4.49	565.95		
	1668			102	11450
84.41		5.73	579.03		
	1685			101	11803



CALCULATED AM

CHECKED REA

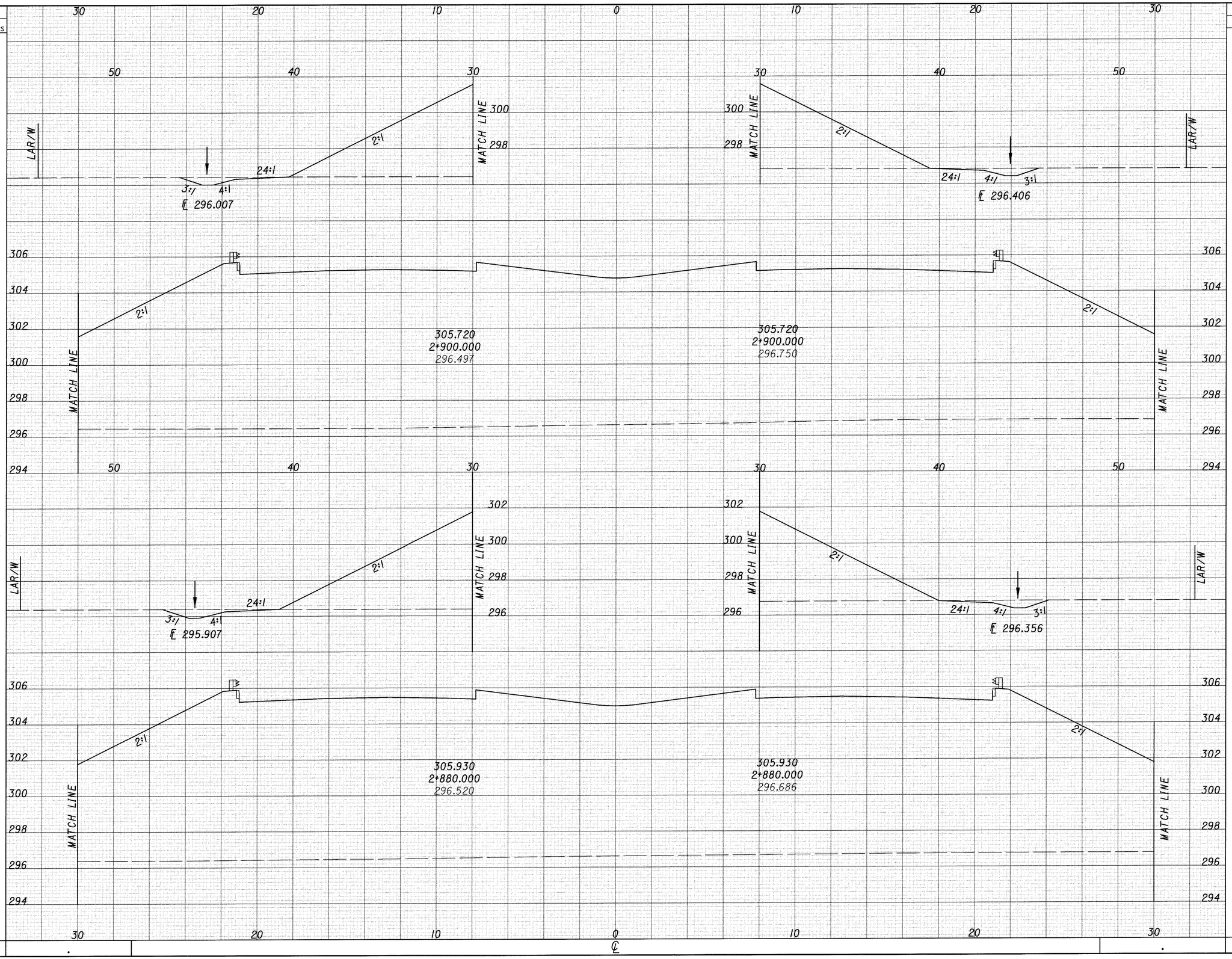
US-30 CROSS SECTIONS

STA 2+840.000 TO STA 2+860.000

WYA/CRA-30-28.009/0.000

648
2116

SEEDING	
END WIDTH	SQ. METERS
76.63	
	1550
78.36	
	1607



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.03	535.16		
		44	10913
2.40	556.12		
		69	11221

CALCULATED AM

CHECKED REA

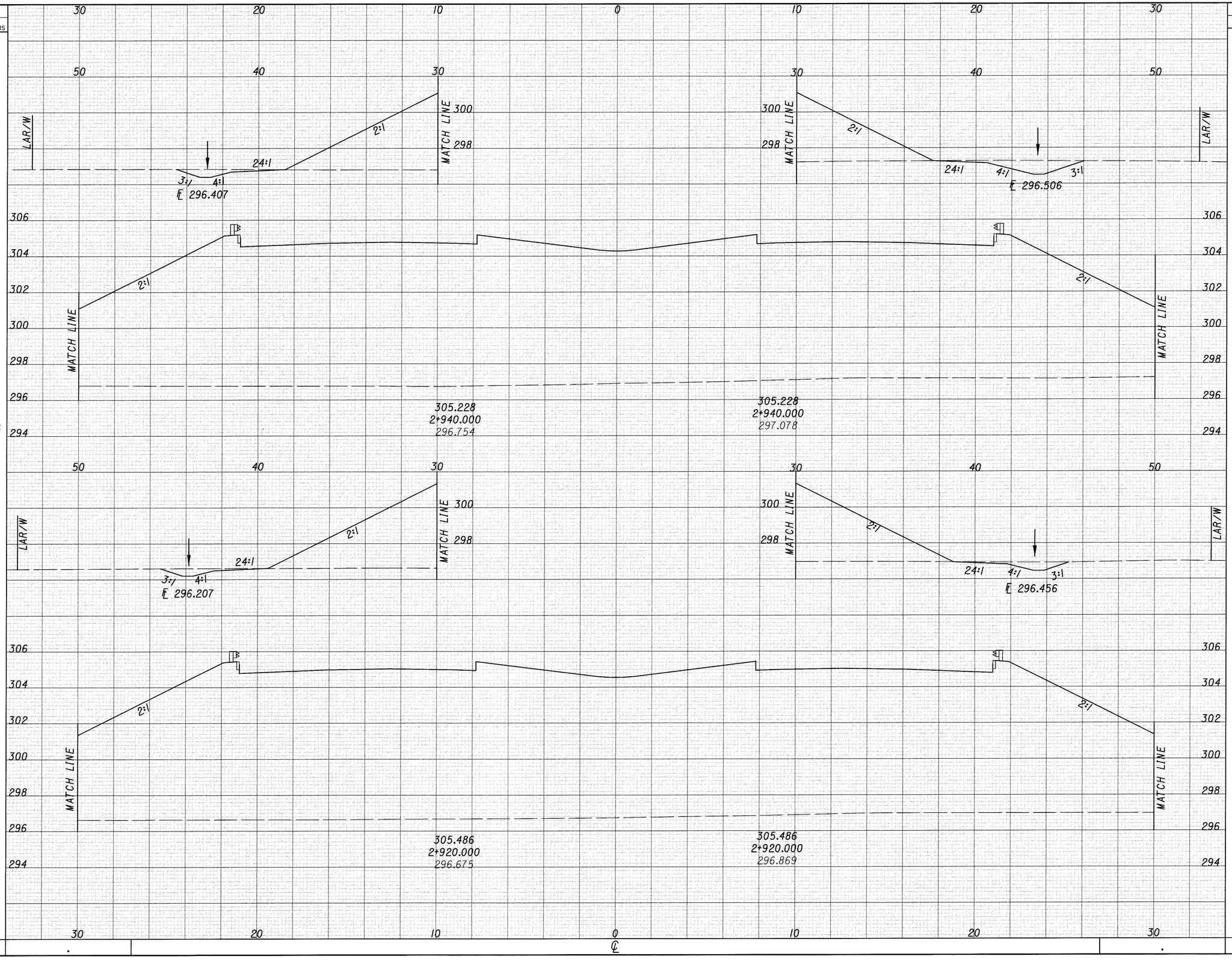
US-30 CROSS SECTIONS

STA 2+880.000 TO STA 2+900.000

WYA / CRA-30-28.009 / 0.000

649
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
75.38	1506	3.79	471.51	59	9767
75.22	1519	2.15	505.19	42	10404



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 2+920.000 TO STA 2+940.000

WYA / CRA-30-28.009 / 0.000

650
2116

SEEDING	
END WIDTH	SQ. METERS
75.25	
	736
71.99	
	737

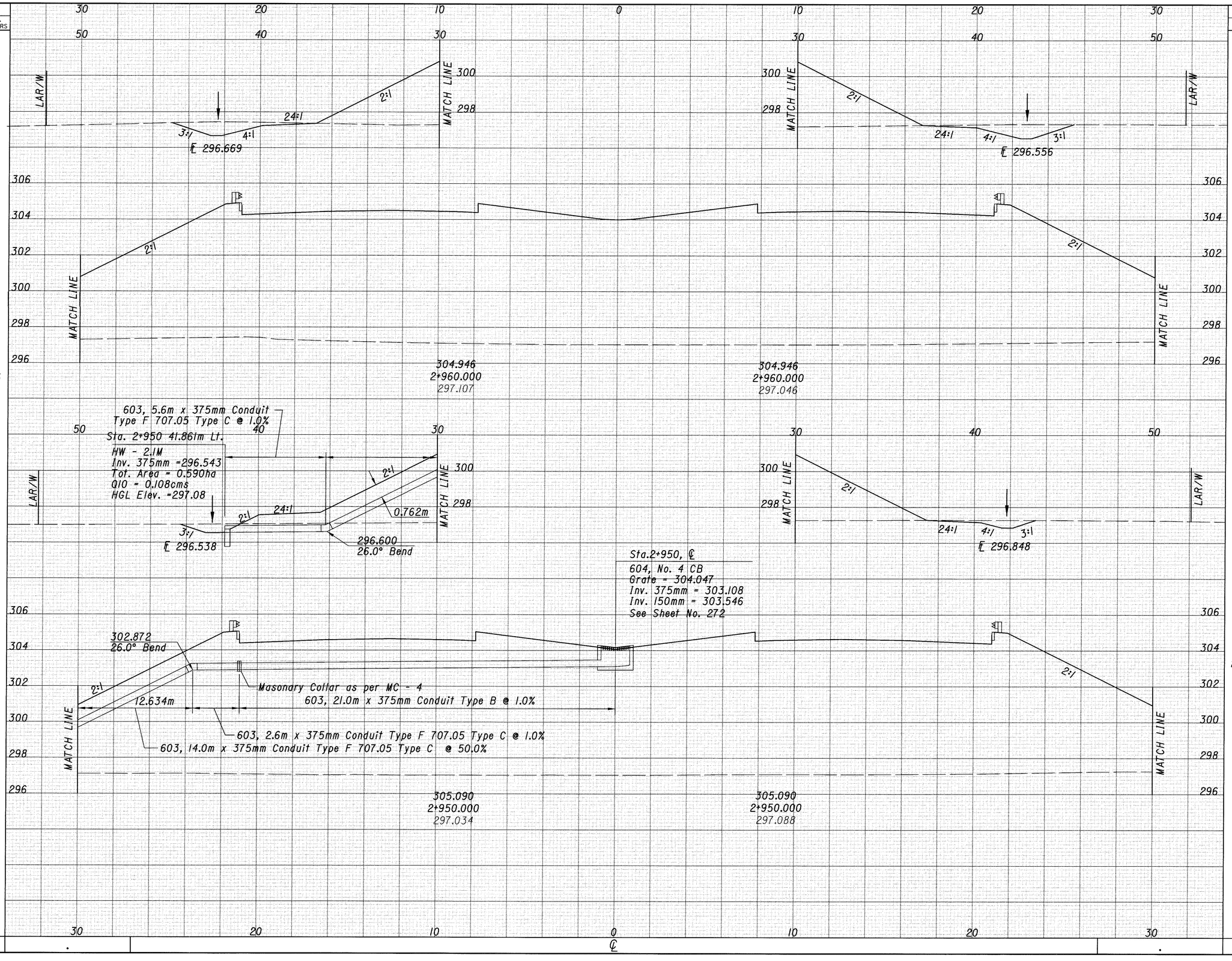
END AREA		VOLUME	
CUT	FILL	CUT	FILL
5.48	433.80		
		38	4428
2.07	451.80		
		29	4617

CALCULATED AM

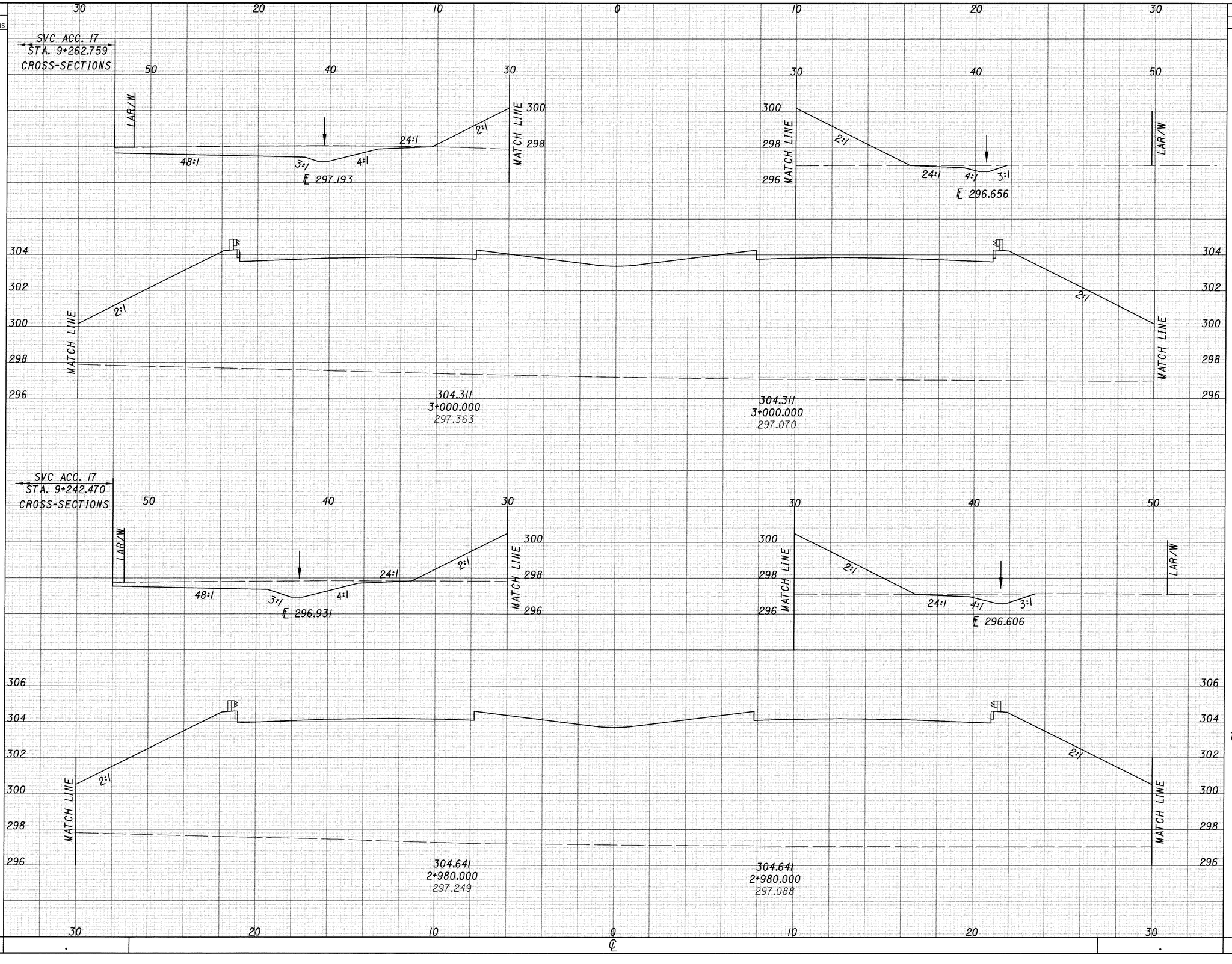
CHECKED REA

US-30 CROSS SECTIONS
STA 2+950.000 TO STA 2+960.000

WYA/CRA-30-28.009/0.000



SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
77.13	1564	8.60	378.34	162	7815
79.23	1545	7.56	403.19	130	8370



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

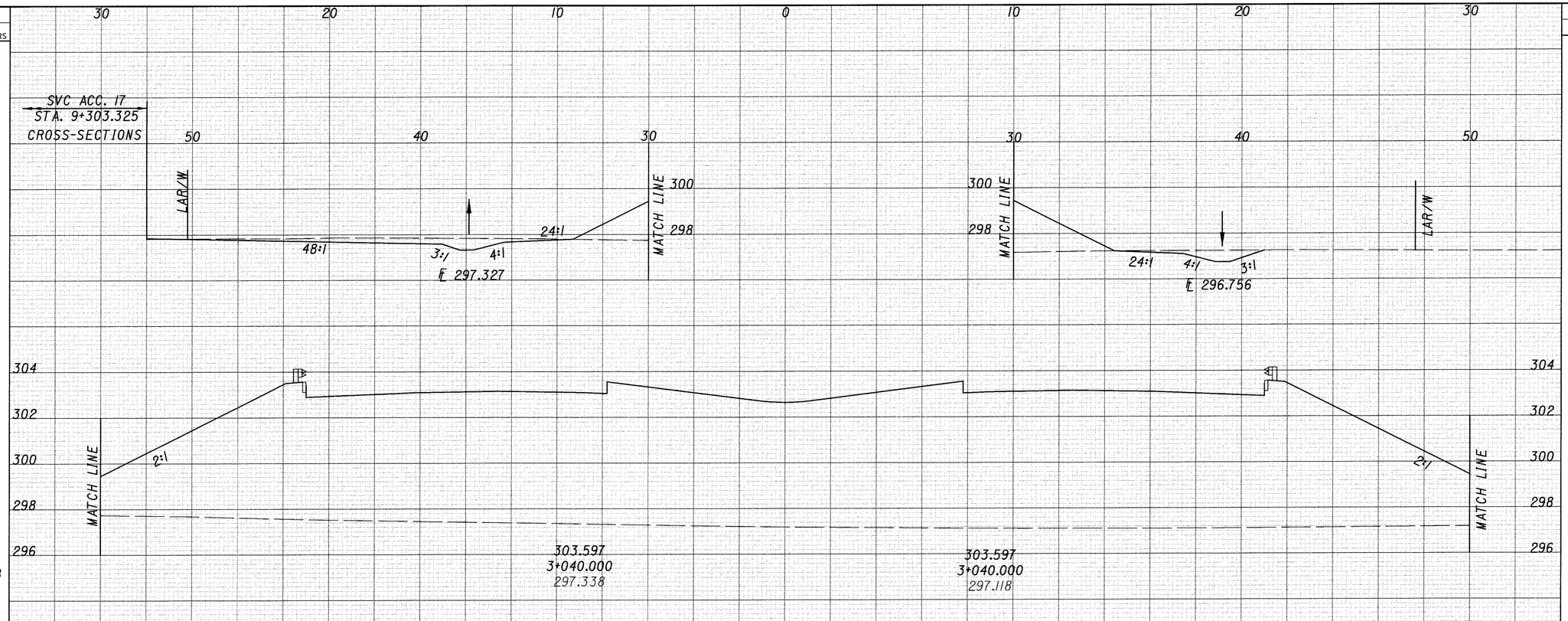
STA 2+980.000 TO STA 3+000.000

WYA/CRA-30-28.009/0.000

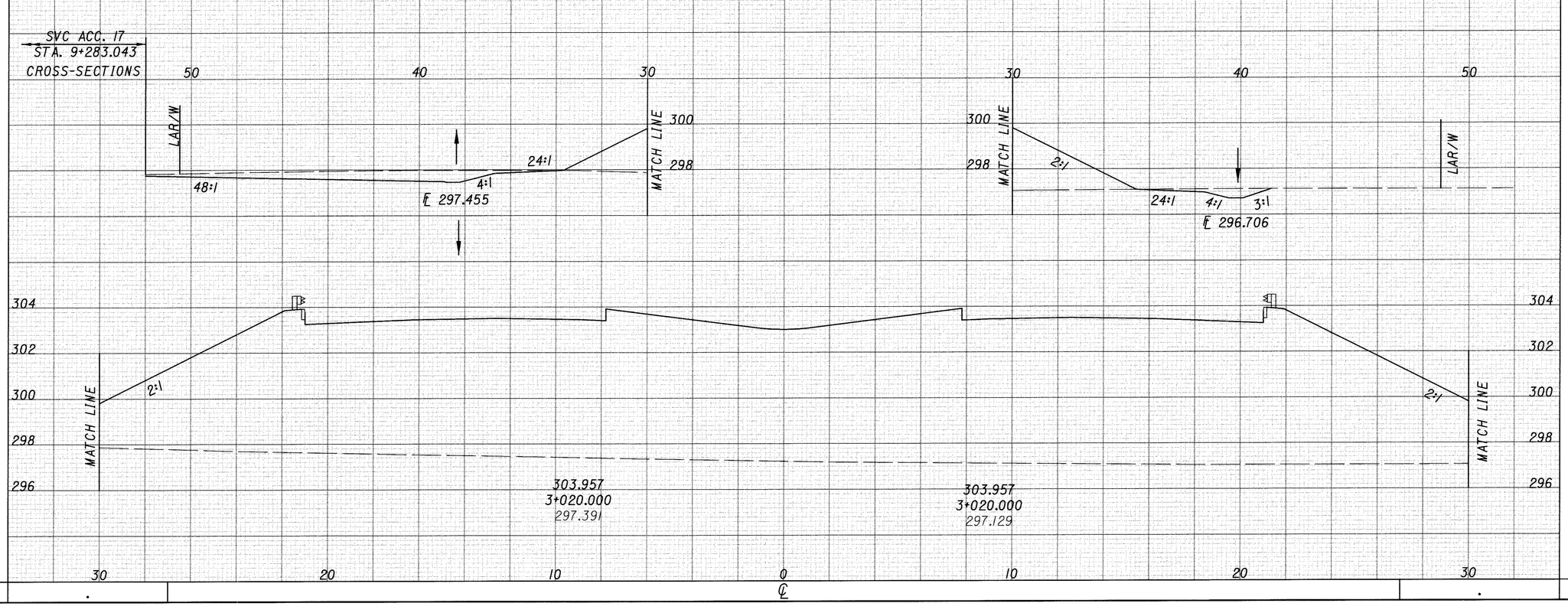
652
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
76.24	1528	4.32	327.95	103	6796		
76.52	1537	5.96	351.69	146	7300		

SVC ACC. 17
STA. 9+303.325
CROSS-SECTIONS



SVC ACC. 17
STA. 9+283.043
CROSS-SECTIONS



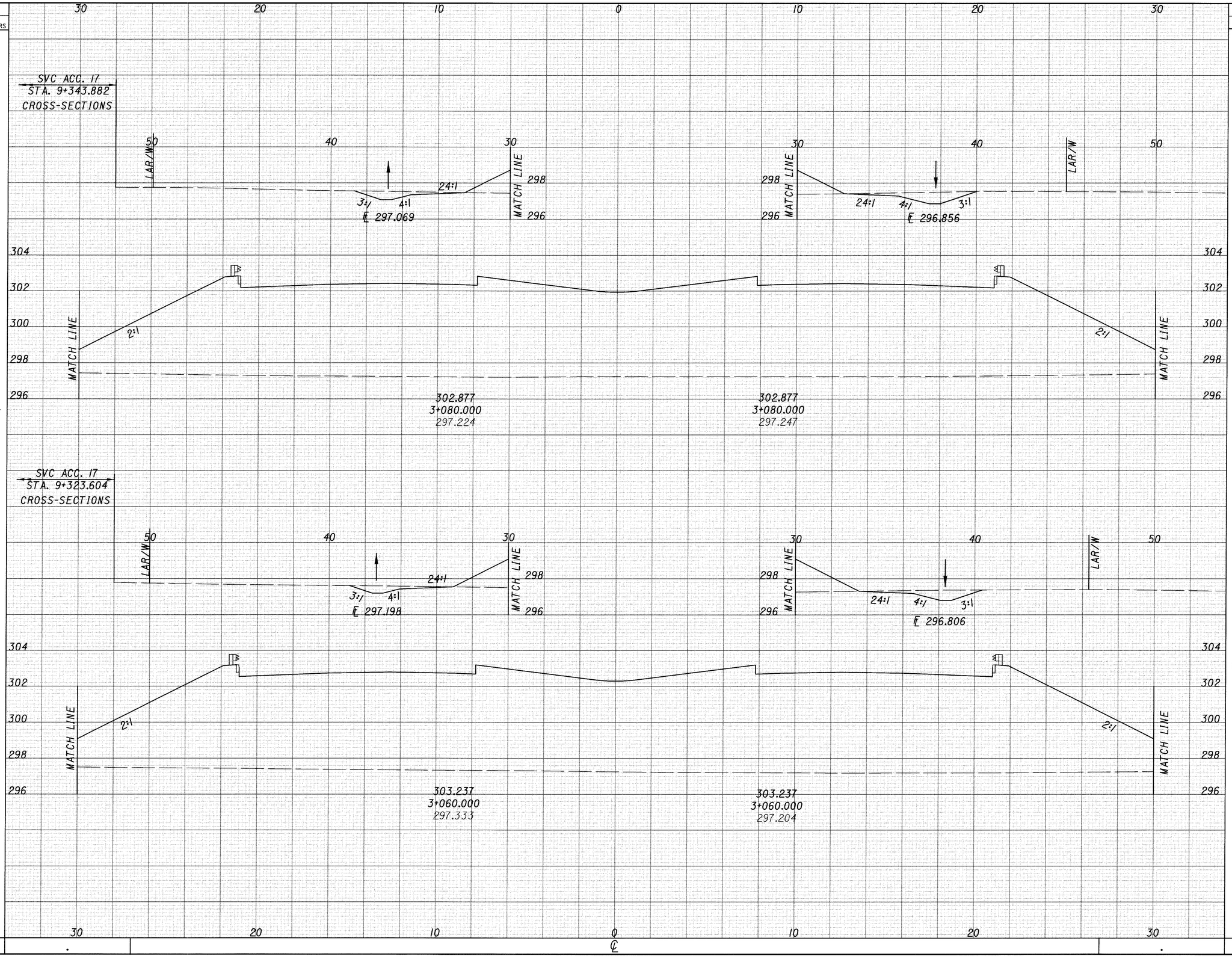
US-30 CROSS SECTIONS
STA 3+020.000 TO STA 3+040.000

WYA / CRA-30-28.009 / 0.000

653
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
62.06	1247	3.23	281.04	59	5847		
62.61	1388	2.62	303.68	69	6316		

SVC ACC. 17
STA. 9+343.882
CROSS-SECTIONS



SVC ACC. 17
STA. 9+323.604
CROSS-SECTIONS

US-30 CROSS SECTIONS
STA 3+060.000 TO STA 3+080.000

WYA / CRA-30-28.009 / 0.000

654
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
58.42		2.35	242.63		
	1185			51	5016
60.08		2.73	258.96		
	1221			60	5400

CALCULATED AM

CHECKED REA

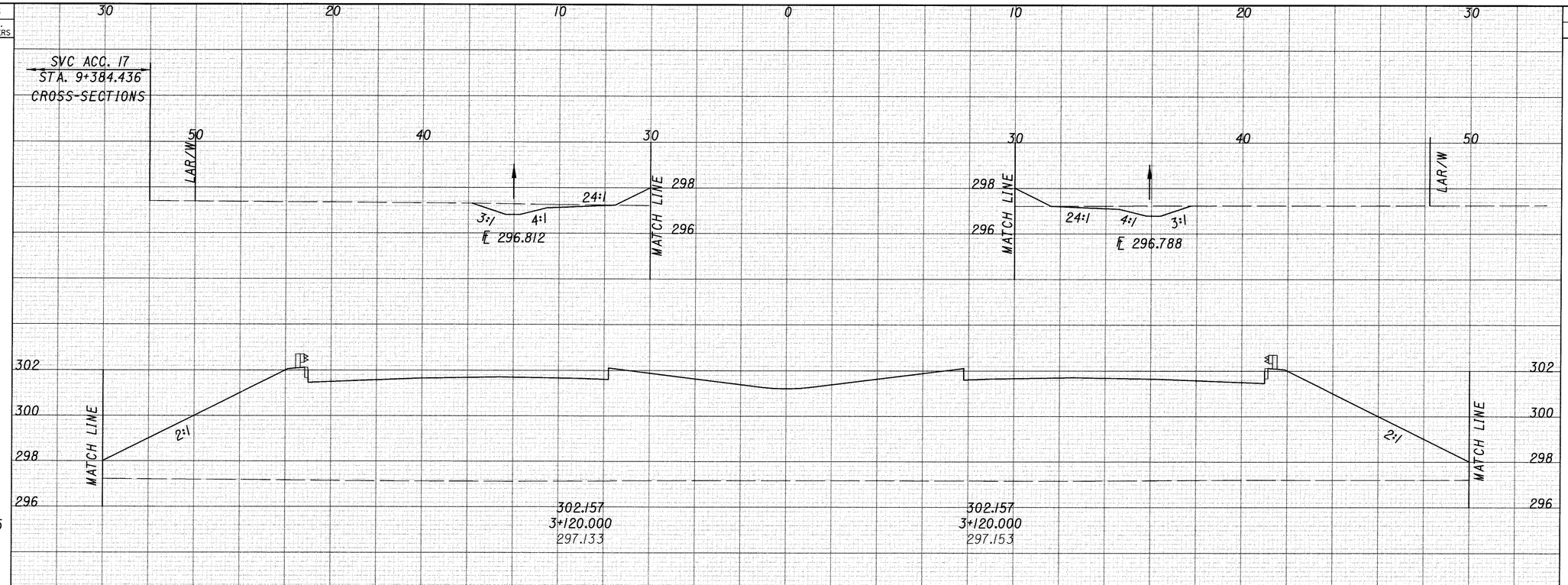
US-30 CROSS SECTIONS

STA 3+100.000 TO STA 3+120.000

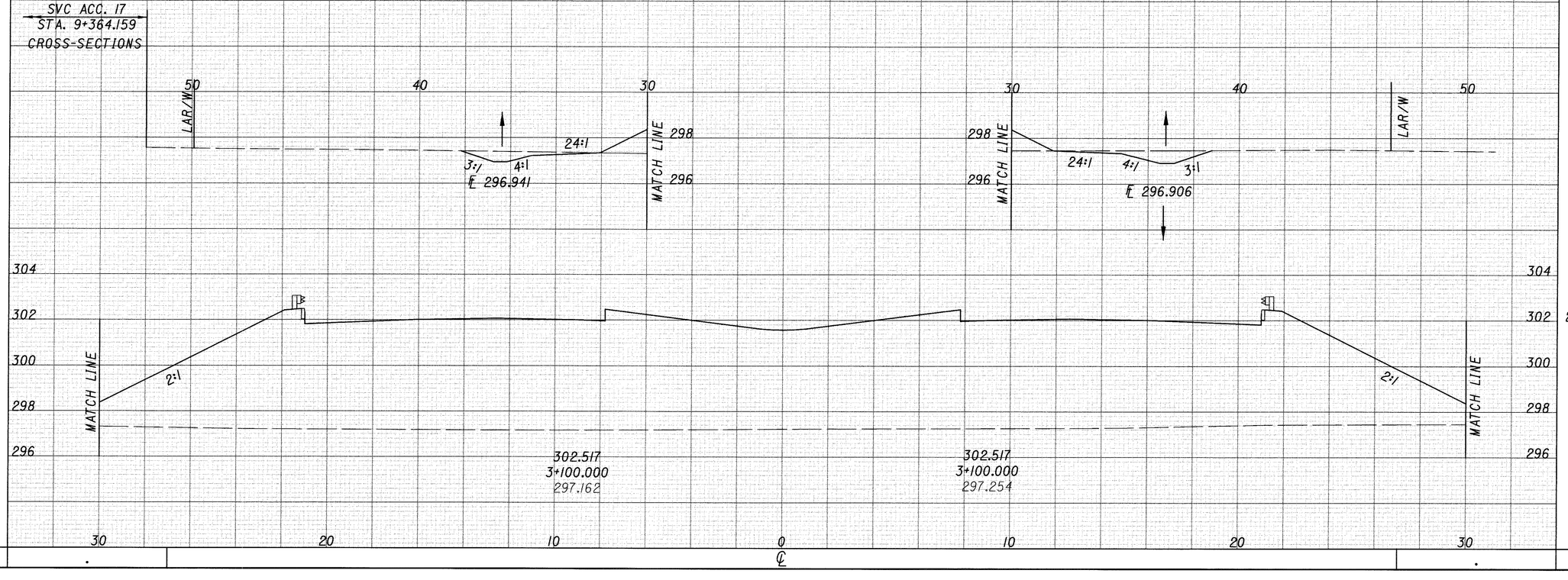
WYA/CRA-30-28.009/0.000

655
2116

SVC ACC. 17
STA. 9+384.436
CROSS-SECTIONS



SVC ACC. 17
STA. 9+364.159
CROSS-SECTIONS



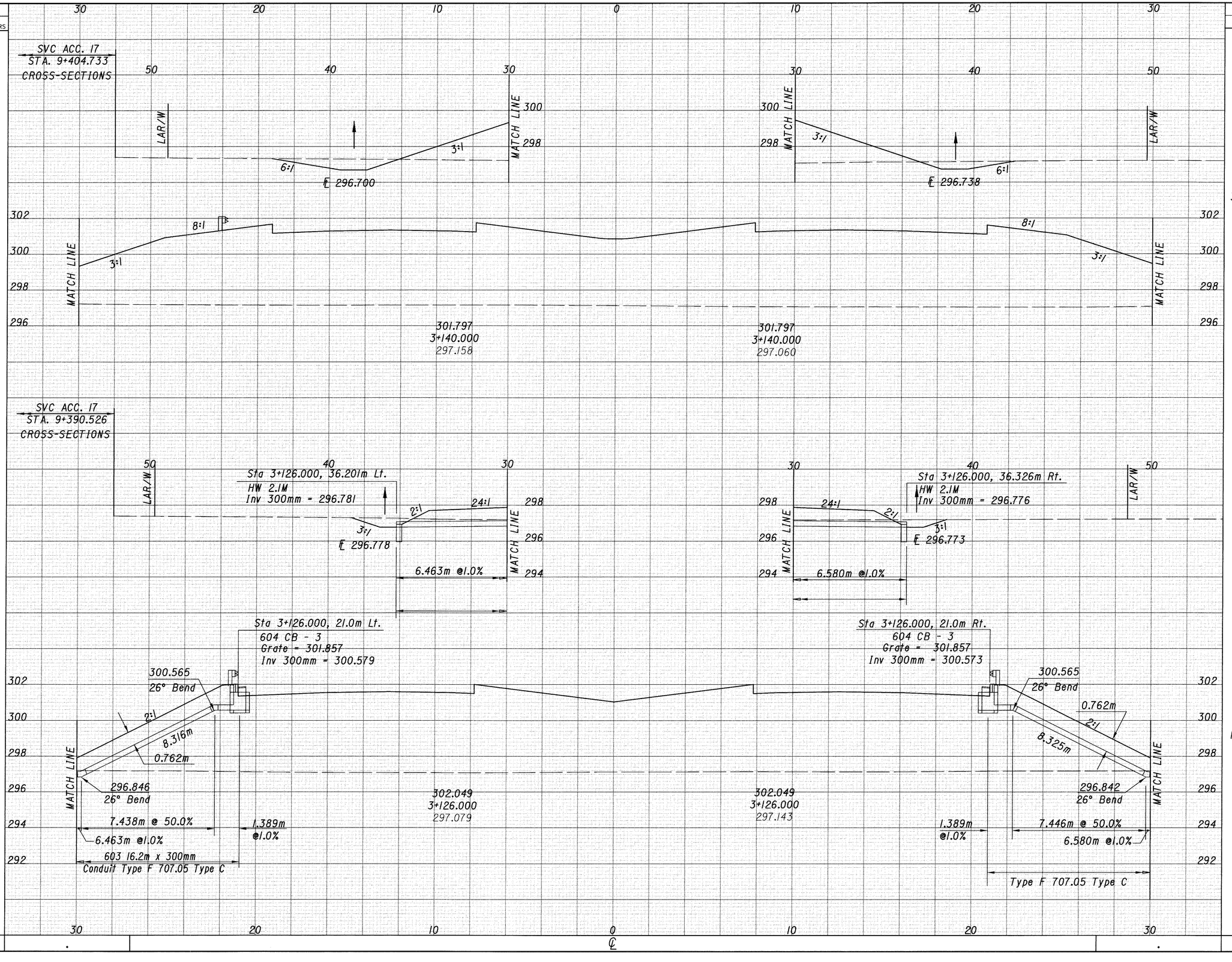
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
69.93	910	3.98	253.48	41	3470
60.07	355	1.91	242.22	13	1455

CALCULATED AM

CHECKED REA

SVC ACC. 17
STA. 9+404.733
CROSS-SECTIONS

SVC ACC. 17
STA. 9+390.526
CROSS-SECTIONS

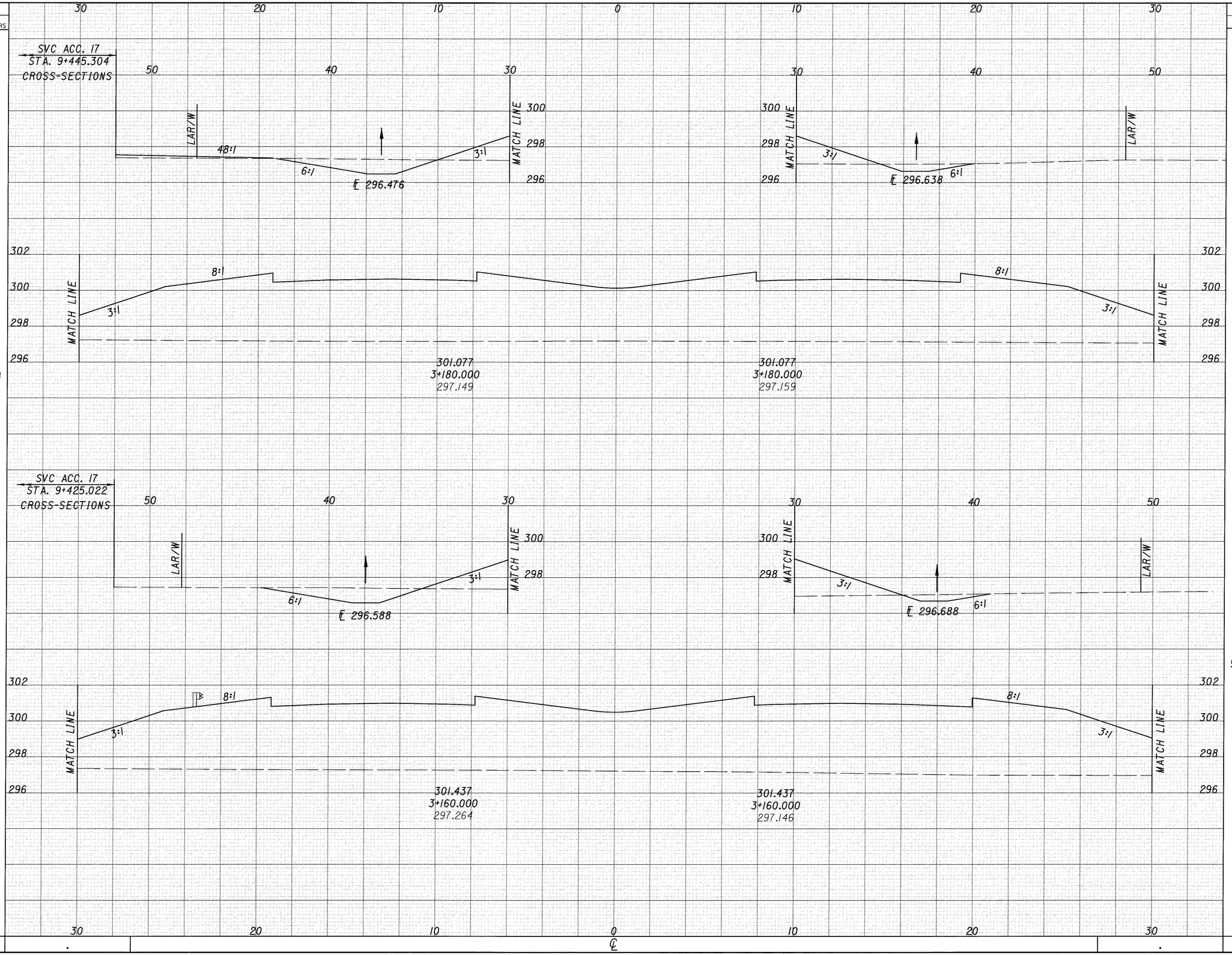


US-30 CROSS SECTIONS
STA 3+126.000 TO STA 3+140.000

WYA / CRA-30-28.009 / 0.000

656
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
74.43	1444	5.66	199.71	111	4227	
70.01	1399	5.48	222.95	95	4764	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS STA 3+160.000 TO STA 3+180.000

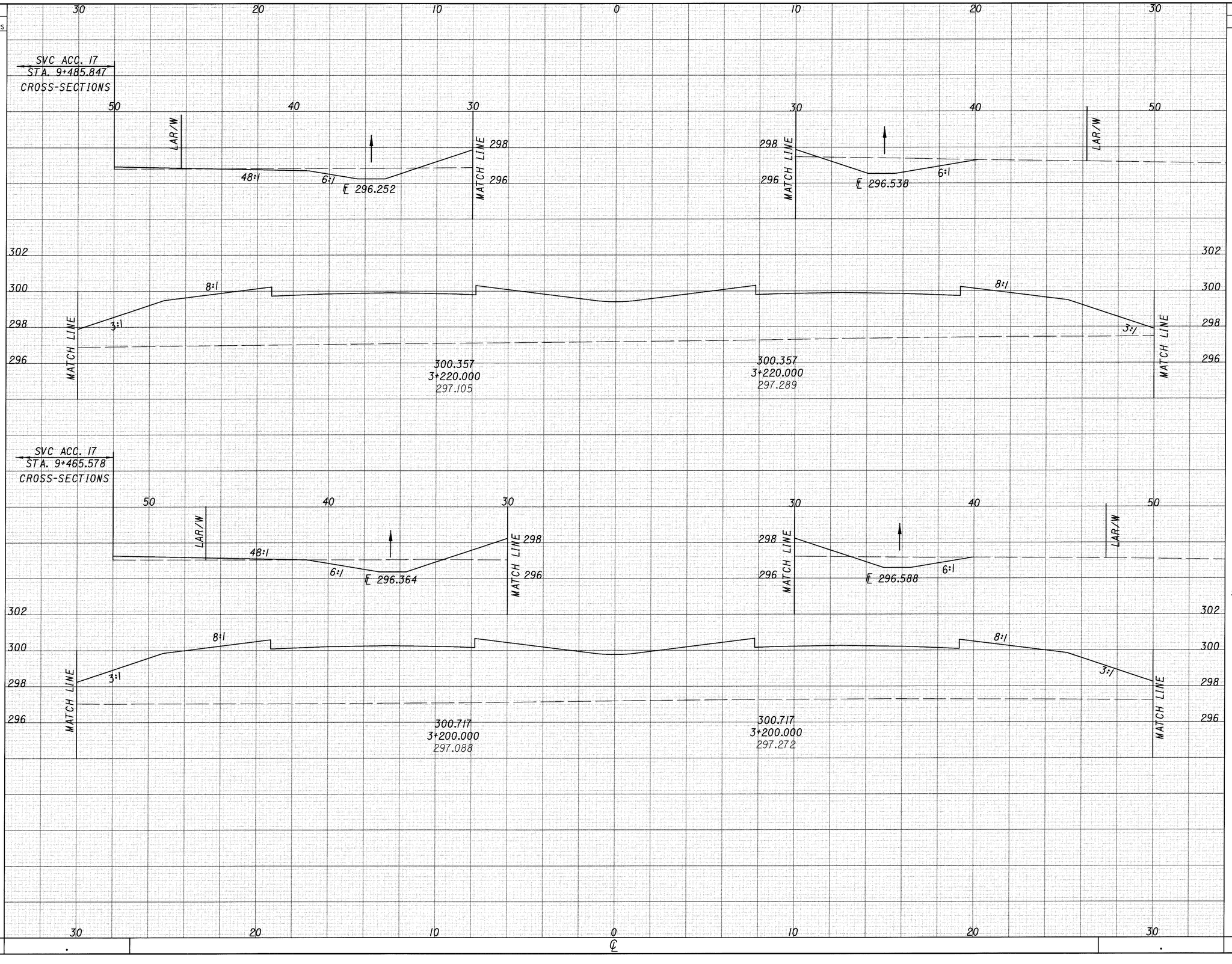
WYA/CRA-30-28.009/0.000

657
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
72.83	1471	7.26	148.56	128	3233
74.32	1487	5.50	174.77	112	3745

CALCULATED AM

CHECKED REA



US-30 CROSS SECTIONS

STA 3+200.000 TO STA 3+220.000

WYA / CRA-30-28.009 / 0.000

658
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
69.61	669	8.23	134.63	75	1333
64.14	1370	6.78	132.04	140	2806

CALCULATED AM
CHECKED REA

SVC ACC. 17
STA. 9+516.242
CROSS-SECTIONS

Sta. 3+250, 33.195m L.t.
HW - 2.1M or 2.2M
Inv. 375mm =296.178
Tot. Area = 0.756 ha
Q10 = 0.158cms
HGL Elev. =296.53

601 Rock Channel Protection
Type C With Bedding
0.5m x 1.8m x 3.5m = 3.2 cu.m.

Sta.3+250, ℄
604, No. 4 CB
Grate = 298.774
Inv. 375mm = 298.060
See Sheet No. 274

603, 33.2m x 375mm Conduit Type B @5.67%

299.817
3+250.000
296.779

299.817
3+250.000
297.001

SVC ACC. 17
STA. 9+506.112
CROSS-SECTIONS

299.997
3+240.000
296.994

299.997
3+240.000
297.244

US-30 CROSS SECTIONS
STA 3+240.000 TO STA 3+250.000

WYA/CRA-30-28.009/0.000

659
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
70.07	1401	6.14	129.93	122	2643
70.05	698	6.08	134.41	72	1345

CALCULATED AM

CHECKED REA

SVC ACC. 17
STA. 9+546.629
CROSS-SECTIONS

30 20 10 0 10 20 30

50 40 30 30 40 50

LAR/W — 48:1 — 6:1 — ℄ 295.916 — MATCH LINE 298 296

298 MATCH LINE — 296 — ℄ 295.829 — 6:1 — LAR/W

300 298 296 294

MATCH LINE — 3:1 — 8:1 — 299.277 3+280.000 296.288

299.277 3+280.000 296.468 — 8:1 — 3:1 — MATCH LINE

SVC ACC. 17
STA. 9+526.372
CROSS-SECTIONS

30 20 10 0 10 20 30

50 40 30 30 40 50

LAR/W — 48:1 — 6:1 — ℄ 296.028 — MATCH LINE 298 296

298 MATCH LINE — 296 — ℄ 296.159 — 6:1 — LAR/W

300 298 296 294

MATCH LINE — 3:1 — 8:1 — 299.637 3+260.000 296.609

299.637 3+260.000 296.795 — 8:1 — 3:1 — MATCH LINE

℄

US-30 CROSS SECTIONS STA 3+260.000 TO STA 3+280.000

WYA / CRA-30-28.009 / 0.000

660
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
72.02	1337	11.67	99.77	193	2145
61.67	1317	7.61	114.70	138	2446

CALCULATED AM

CHECKED REA

SVC ACC. 17
STA. 9+587.161
CROSS-SECTIONS

LAR/W
MATCH LINE
48:1
6:1
℄ 295.446
3:1
℄ 295.169

298.557
3+320.000
296.110

298.557
3+320.000
296.187

SVC ACC. 17
STA. 9+566.885
CROSS-SECTIONS

℄ 295.804
℄ 295.499

298.917
3+300.000
296.187

298.917
3+300.000
296.354

8:1
3:1

30 20 10 0 10 20 30 40 50

294 296 298 300

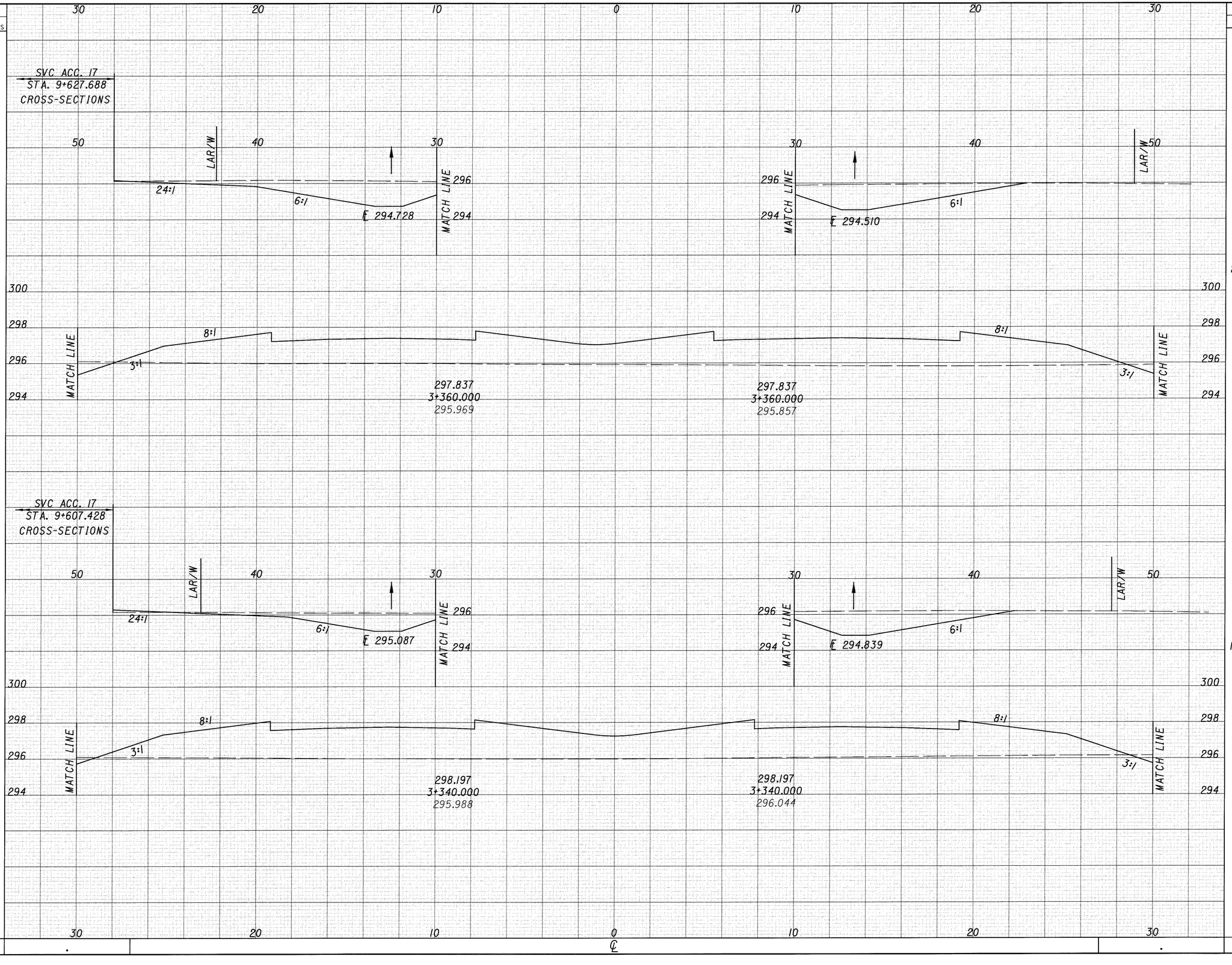
℄

US-30 CROSS SECTIONS
STA 3+300.000 TO STA 3+320.000

WYA / CRA-30-28.009 / 0.000

661
2116

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. METERS		CUT	FILL	CUT	FILL
		SVC ACC. 17 STA. 9+627.688 CROSS-SECTIONS				
71.41			23.21	73.58		
	1444				402	1599
72.99		SVC ACC. 17 STA. 9+607.428 CROSS-SECTIONS	16.99	86.27		
	1450				287	1860



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 3+340.000 TO STA 3+360.000

WYA / CRA-30-28.009 / 0.000

662
2116

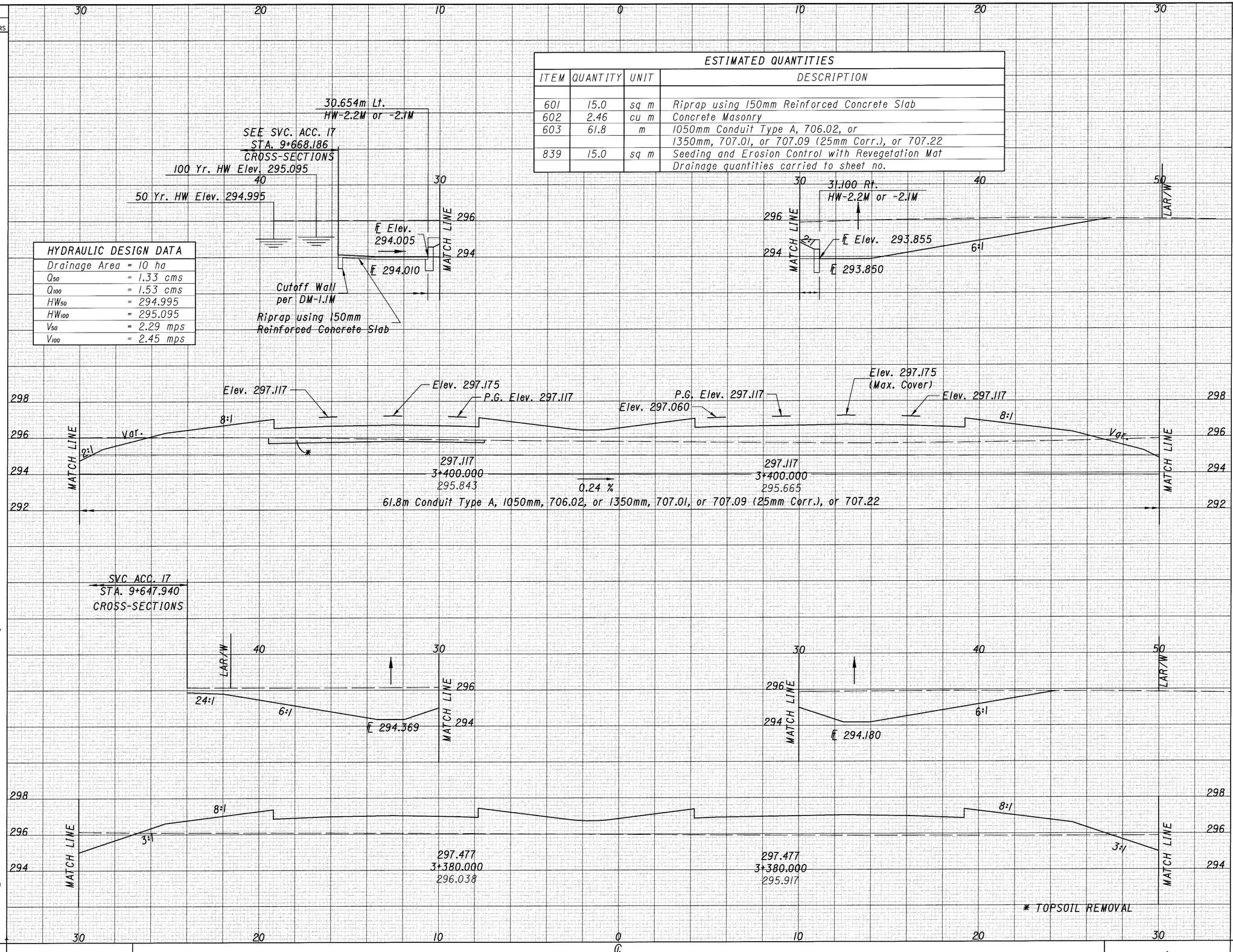
SEEDING	
END WIDTH	SQ. METERS
68.22	
	1357
67.53	
	1389

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	15.0	sq m	Riprap using 150mm Reinforced Concrete Slab
602	2.46	cu m	Concrete Masonry
603	61.8	m	1050mm Conduit Type A, 706.02, or
			1350mm, 707.01, or 707.09 (25mm Corr.), or 707.22
839	15.0	sq m	Seeding and Erosion Control with Revegetation Mat
			Drainage quantities carried to sheet no.

HYDRAULIC DESIGN DATA

Drainage Area	= 10 ha
Q_{50}	= 1.33 cms
Q_{100}	= 1.53 cms
HW_{50}	= 294.995
HW_{100}	= 295.095
V_{50}	= 2.29 mps
V_{100}	= 2.45 mps



* TOPSOIL REMOVAL

END AREA		VOLUME	
CUT	FILL	CUT	FILL
53.89	43.38		
*2.21			
		867	936
*22			
32.77	50.19		
*0.00			
		560	1238

CALCULATED AM

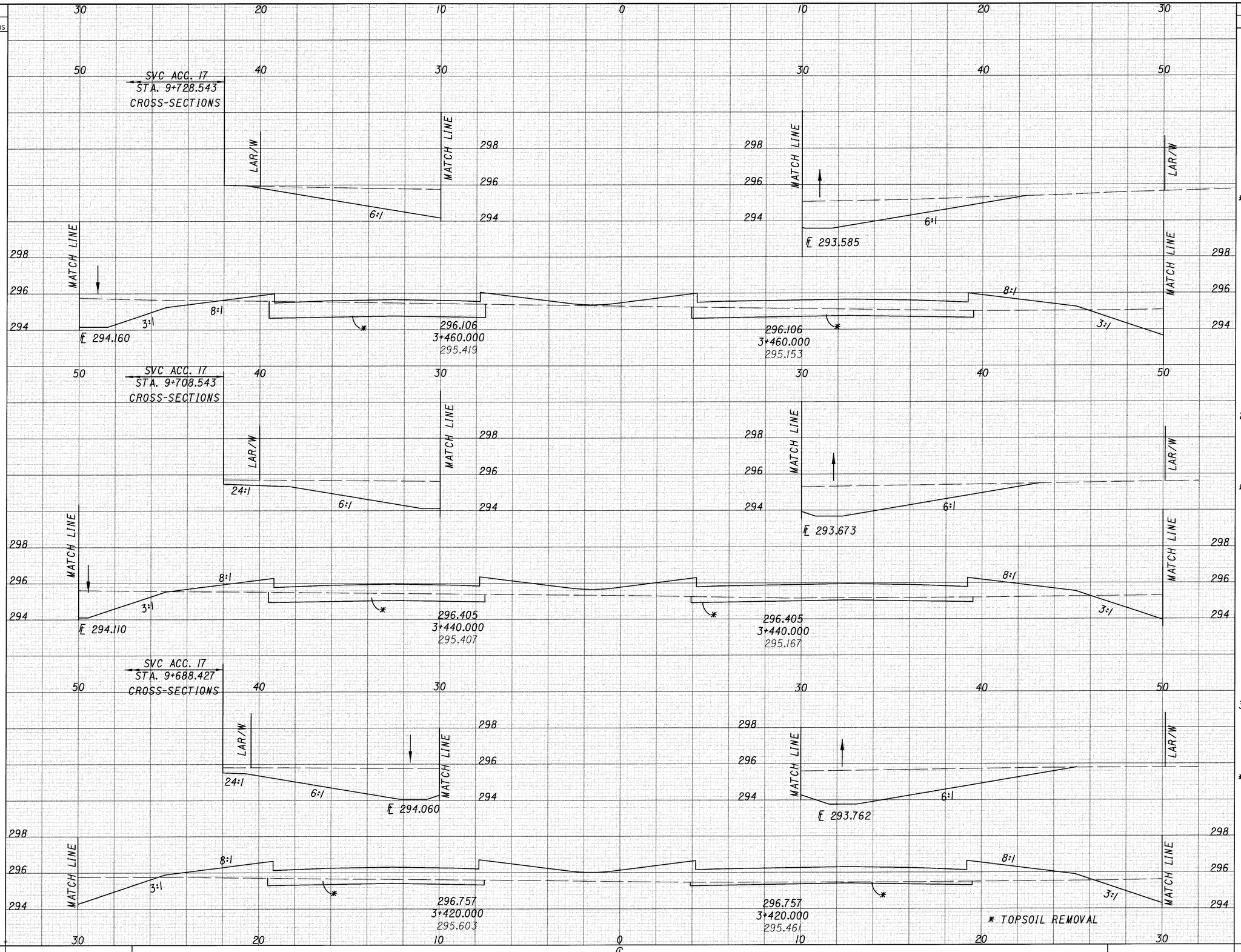
CHECKED REA

US-30 CROSS SECTIONS
STA 3+380.000 TO STA 3+400.000

WYA / CRA-30-28.009 / 0.000

663
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
63.04	1271	28.21	31.11	571	675
		*15.99		*245	
64.10	1305	28.93	36.36	642	759
		*8.53		*139	
66.37	1346	35.26	39.53	892	829
		*5.37		*76	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 3+420.000 TO STA 3+460.000

WYA / CRA-30-28.009 / 0.000

664
2116

SEEDING END WIDTH	SEEDING SQ. METERS
53.99	
	1119
57.87	
	1208
62.93	
	1260

SVC ACC. 17
STA. 9+788.543
CROSS-SECTIONS

SVC ACC. 17
STA. 9+768.543
CROSS-SECTIONS

SVC ACC. 17
STA. 9+748.543
CROSS-SECTIONS

LAR/W
MATCH LINE
℄ 294.310
℄ 294.260
℄ 294.210
℄ 293.320
℄ 293.408
℄ 293.497
6:1
8:1
3:1
295.579
3+520.000
295.038
295.579
3+520.000
294.719
295.694
3+500.000
295.460
295.694
3+500.000
295.032
295.869
3+480.000
295.579
295.869
3+480.000
295.164
66.632

Sta. 3+500, 2.345m L.t.
604, No. 4 CB
Grate = 294.847
Inv. 450mm = 293.877
Inv. 150mm 294.025
See Sheet No. 277

Sta. 3+500, 29.158m R.t.
HW = 2.1M or 2.2M
Inv. 375mm = 293.412
Tot. Area = 0.79Iha
QIO = 0.165cms
HGL Elev. =293.76

603, 31.5m x 375mm Conduit Type B @ 1.48%

* TOPSOIL REMOVAL

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20.66	31.97		
*21.61		589	593
		*446	
38.25	27.36		
*22.95		824	544
		*437	
44.10	27.03		
*20.78		723	581
		*368	

CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 3+480.000 TO STA 3+520.000

WYA/CRA-30-28.009/0.000

665
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
41.51		6.07	48.19		
		*0.74			
	1511			171	1810
				*187	
34.01		2.49	42.29		
		*8.63			
	746			119	787
				*261	
40.62		9.45	36.40		
		*17.46			
	946			301	684
				*391	

30 20 10 0 10 20 30

40 30 30 40

MATCH LINE — 6:1 — 296 — 294 — 292

Sta. 3+600, 4.113m Rt
604, No. 2-2B CB
Grate = 295.414
Inv. 300mm = 294.700

See Sheet No. 1377

MATCH LINE — 6:1 — ℄ 293.337

MATCH LINE — 8:1 — 3:1 — ℄ 294.032

6:1 6:1

295.736
3+600.000
294.295

295.736
3+600.000
294.219

8:1 — 3:1 — MATCH LINE

40 30 30 40

MATCH LINE — 6:1 — 296 — 294 — 292

MATCH LINE — Exist. R/W — 8:1 — ℄ 293.754

MATCH LINE — 8:1 — 3.5:1 — 4:1 — ℄ 294.410

295.535
3+560.000
294.386

295.535
3+560.000
294.254

8:1 — MATCH LINE

50 40 30 30 40 50

SVC ACC. 17
STA. 9+810.508
CROSS-SECTIONS

LAR/W — MATCH LINE — 6:1 — 296 — 294 — 292

MATCH LINE — See T.R. 21 CROSS-SECTIONS — ℄ 293.106

MATCH LINE — 8:1 — 3:1 — ℄ 294.360

295.526
3+540.000
294.749

295.526
3+540.000
294.438

8:1 — MATCH LINE

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 3+540.000 TO STA 3+600.000

WYA / CRA-30-28.009 / 0.000

666
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
59.45	1114	19.67	56.39	352	1167
51.99	1025	15.51	60.28	272	1183
50.49	920	11.65	57.99	177	1062
		*0.00		*7	

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 3+620.000 TO STA 3+660.000

WYA/CRA-30-28.009/0.000

667
2116

30 20 10 0 10 20 30

50 40 30 298 296 294 292

LAR/W

MATCH LINE

6:1

℄ 293.946

3:1 8:1

296.499
3+660.000
294.891

℄ 293.587

4:1

296.499
3+660.000
294.800

Sta. 3+640, 30.310m R.t
HW - 2.1M or 2.2M
Inv. 375mm = 293.514
Tot. Area = 0.829 ha.
Q10 = 0.184 cms
HGL Elev. = 294.250

LAR/W
50.000

Sta. 3+640, 3.134m R.t.
604, No. 4 CB
Grate = 295.456
Inv. 300mm = 294.416
Inv. 375mm = 294.341
Inv. 150mm = 294.516
See Sheet No. 1377

℄ 293.504

℄ 293.946

296.184
3+640.000
294.352

296.184
3+640.000
294.574

603, 27.2m x 375mm Conduit Type B @ 3.04%

℄ 293.421

℄ 294.558

℄ 293.989

295.929
3+620.000
294.216

295.929
3+620.000
294.254

* TOPSOIL REMOVAL

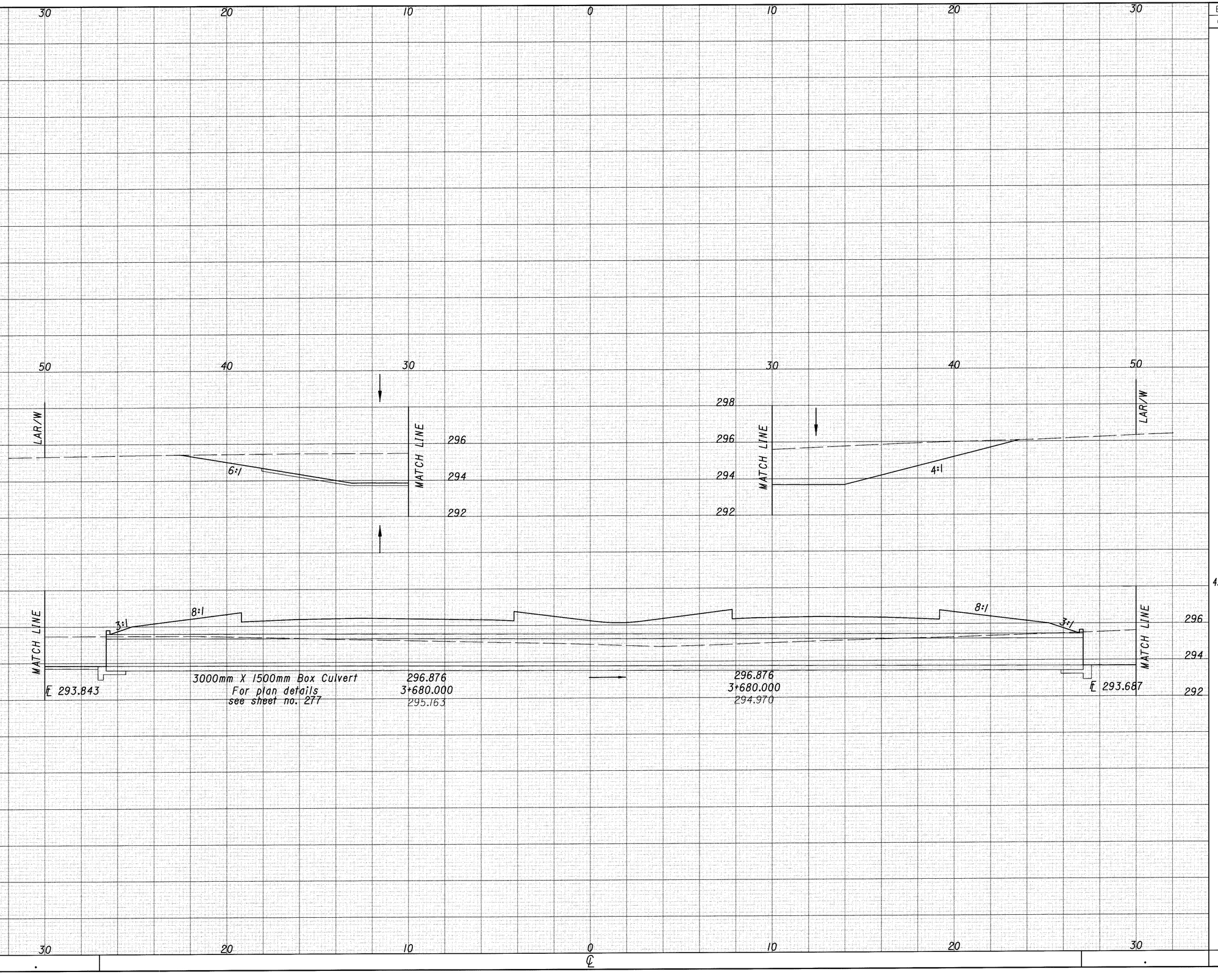
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SEEDING	
END WIDTH	SQ. METERS
73.02	1325

END AREA		VOLUME	
CUT	FILL	CUT	FILL
43.53	62.01	632	1184

CALCULATED AM

CHECKED REA



US-30 CROSS SECTIONS
STA 3+680.000

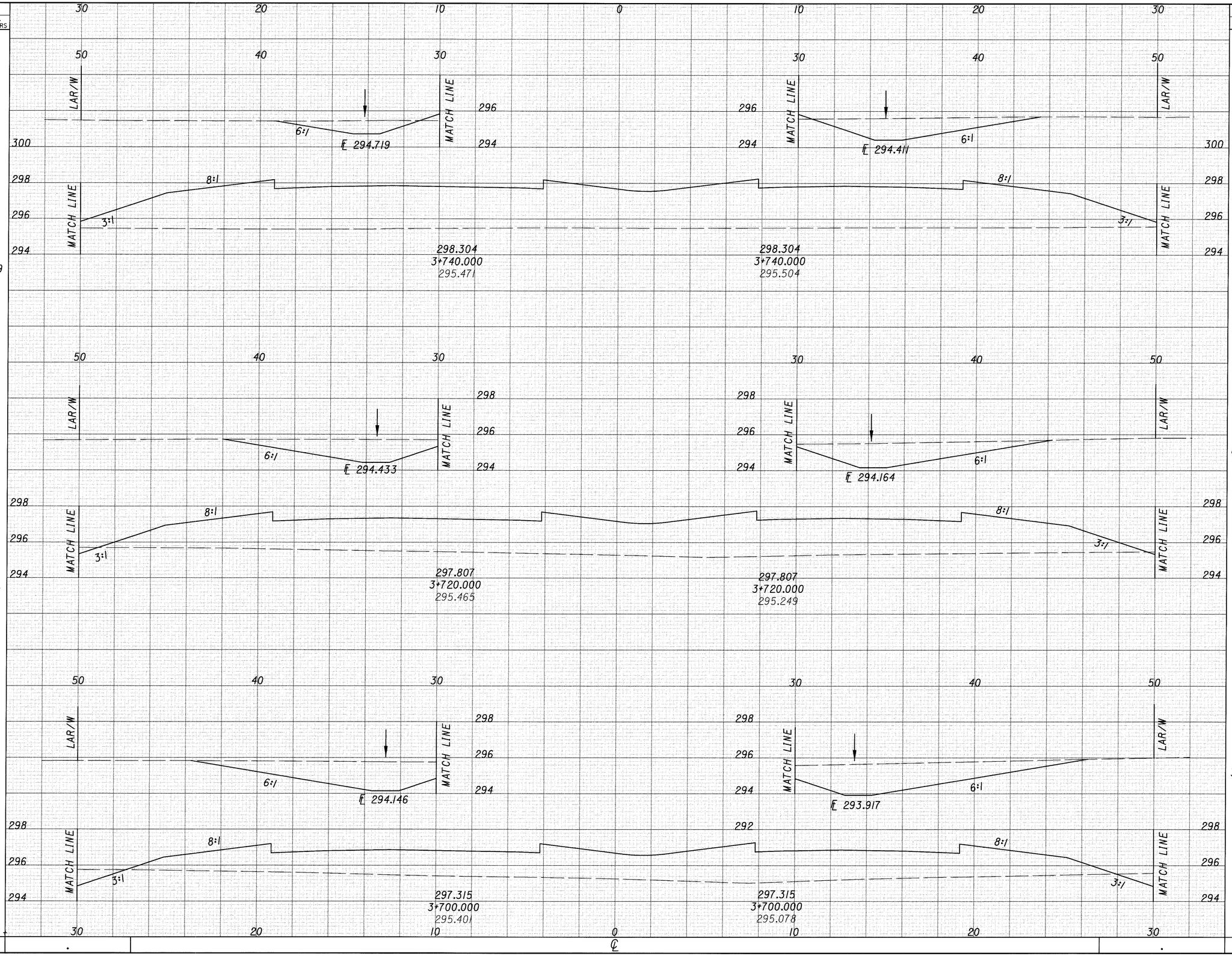
WYA/CRA-30-28.009/0.000

668
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
65.43	1349	12.09	126.87	323	2266
69.47	1427	20.20	99.72	519	1735
73.27	1463	31.69	73.77	752	1358

CALCULATED AM

CHECKED REA

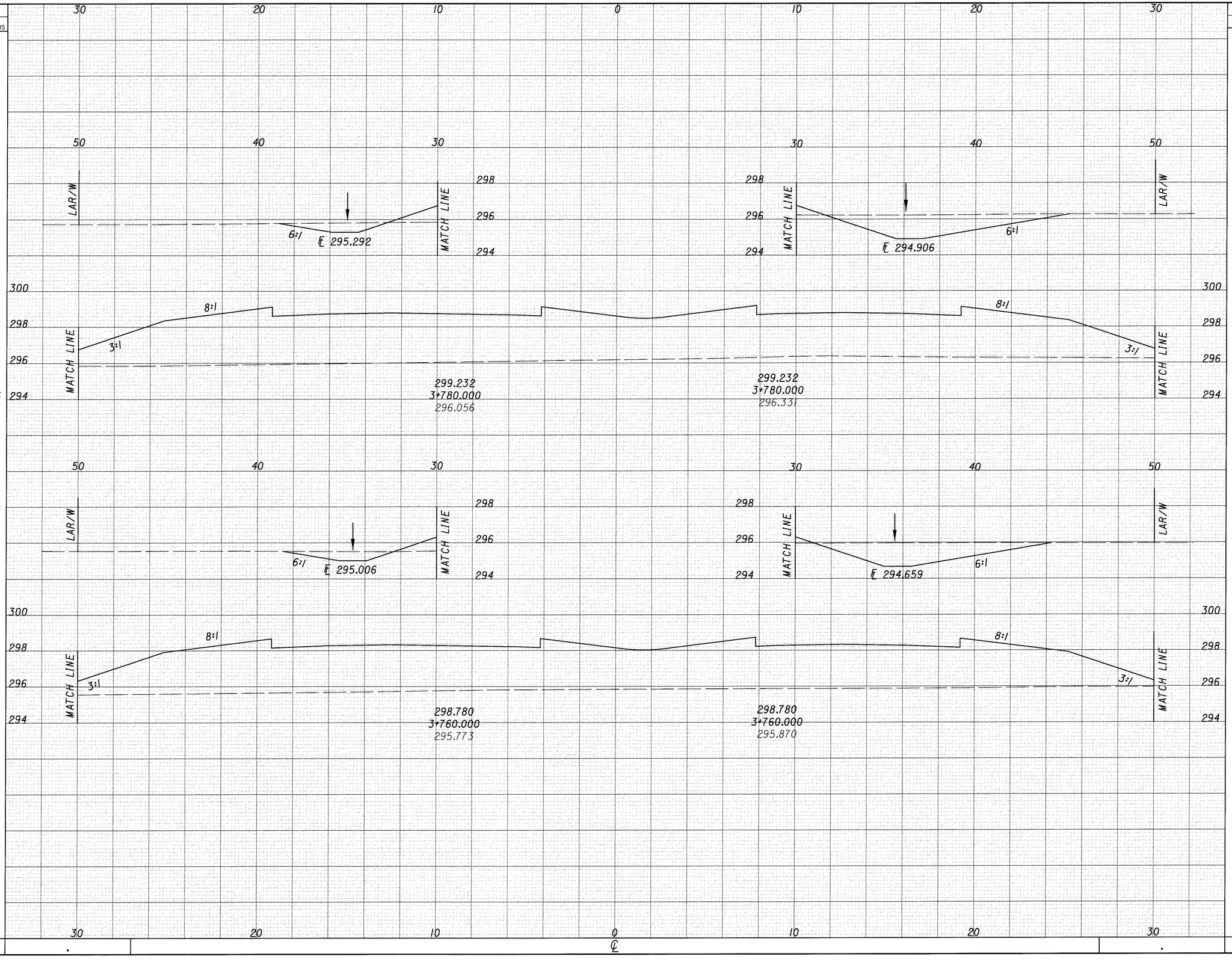


US-30 CROSS SECTIONS STA 3+700.000 TO STA 3+740.000

WYA / CRA-30-28.009 / 0.000

669
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
66.78	1323	11.95	144.84	235	2826
65.50	1309	11.55	137.71	236	2646



CALCULATED AM

CHECKED REA

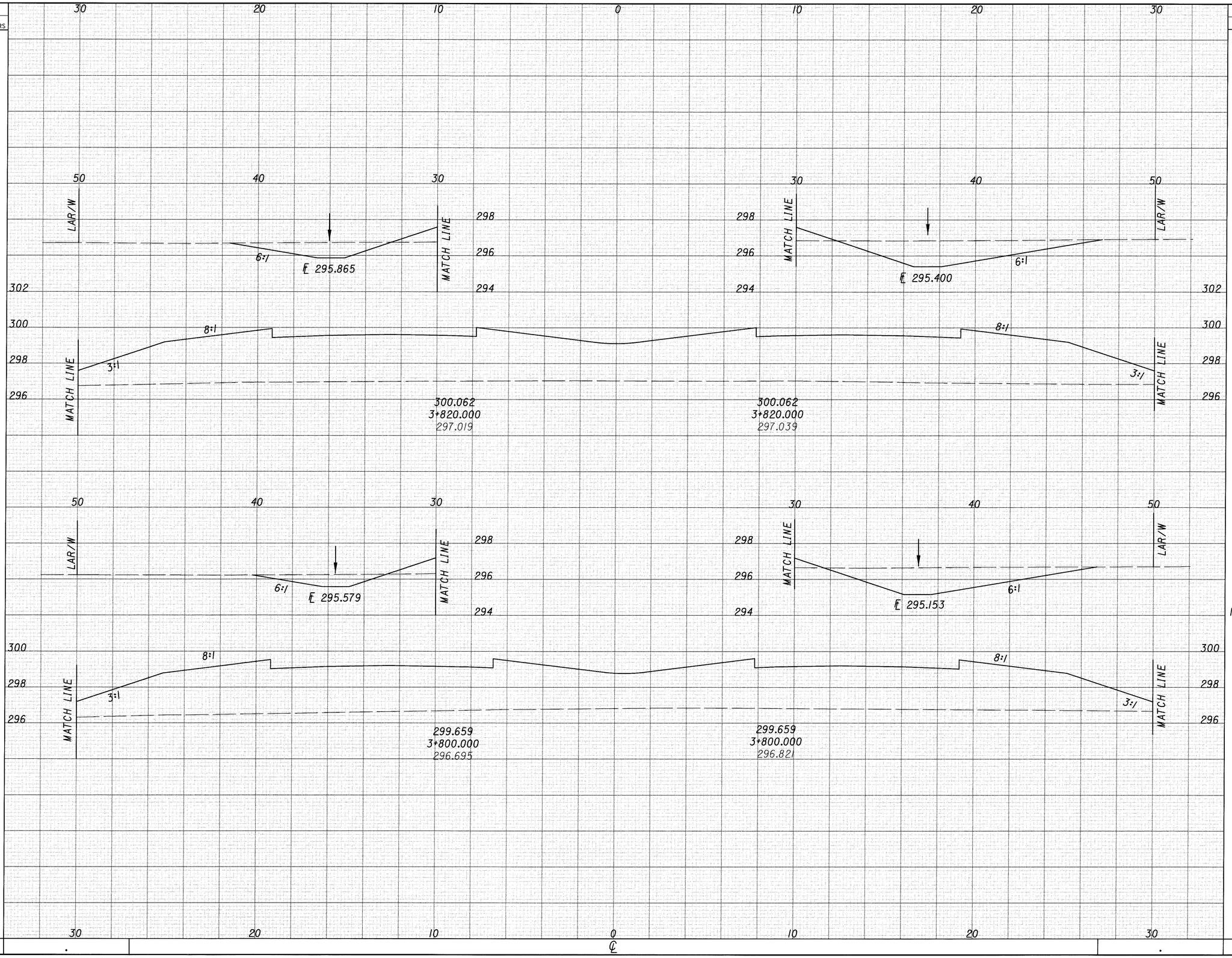
US-30 CROSS SECTIONS

STA 3+760.000 TO STA 3+780.000

WYA / CRA-30-28.009 / 0.000

670
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
75.41	1480	16.12	145.09	317	2827	
72.61	1394	15.59	137.58	275	2824	



CALCULATED AM

CHECKED REA

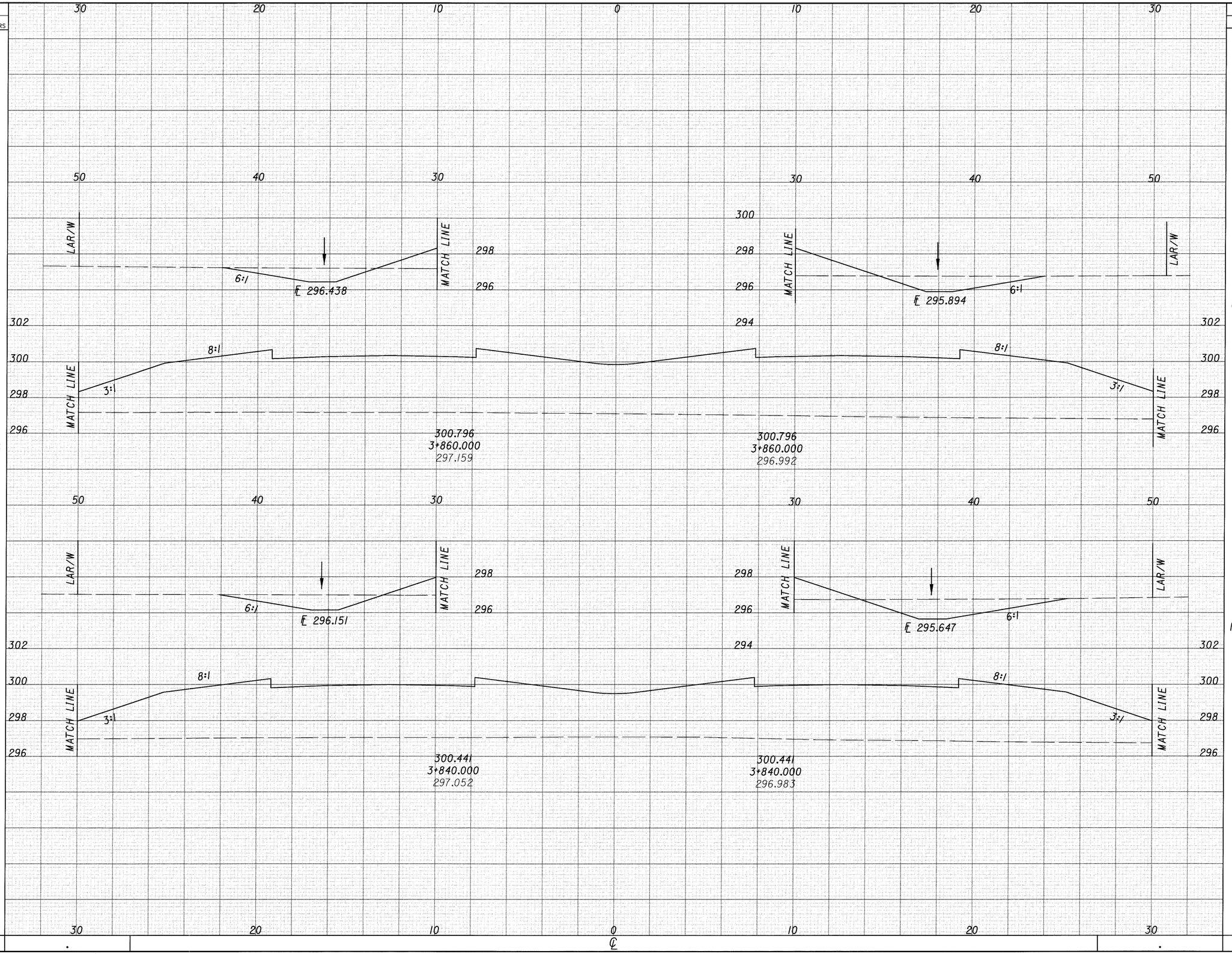
US-30 CROSS SECTIONS

STA 3+800.000 TO STA 3+820.000

WYA / CRA-30-28.009 / 0.000

671
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
72.30	1464	8.43	187.89	200	3565
74.09	1495	11.58	168.62	277	3137



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 3+840.000 TO STA 3+860.000

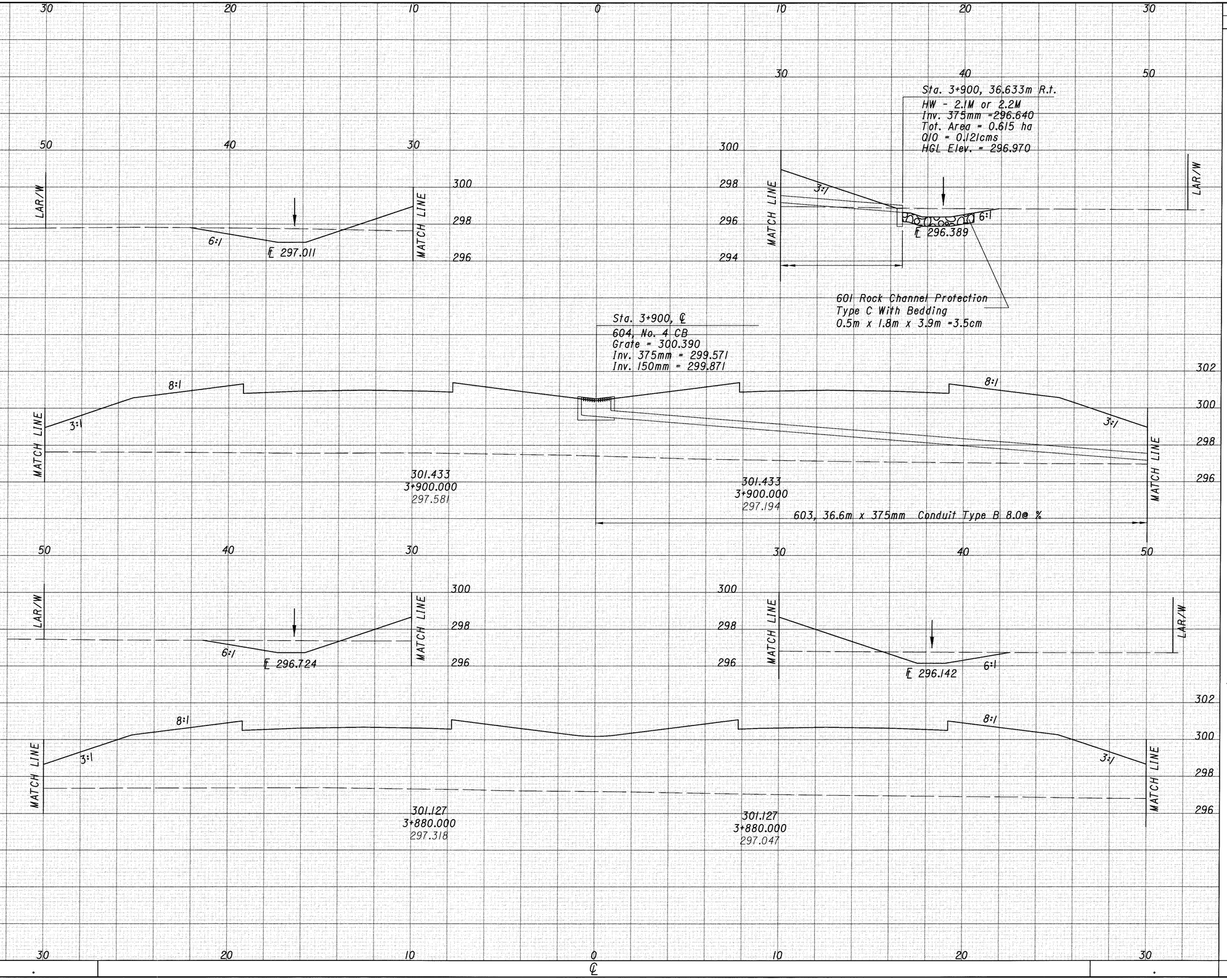
WYA / CRA-30-28.009 / 0.000

672
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
69.76	1397	7.24	210.54	127	4132
69.93	1422	5.50	202.63	139	3905

CALCULATED AM

CHECKED REA

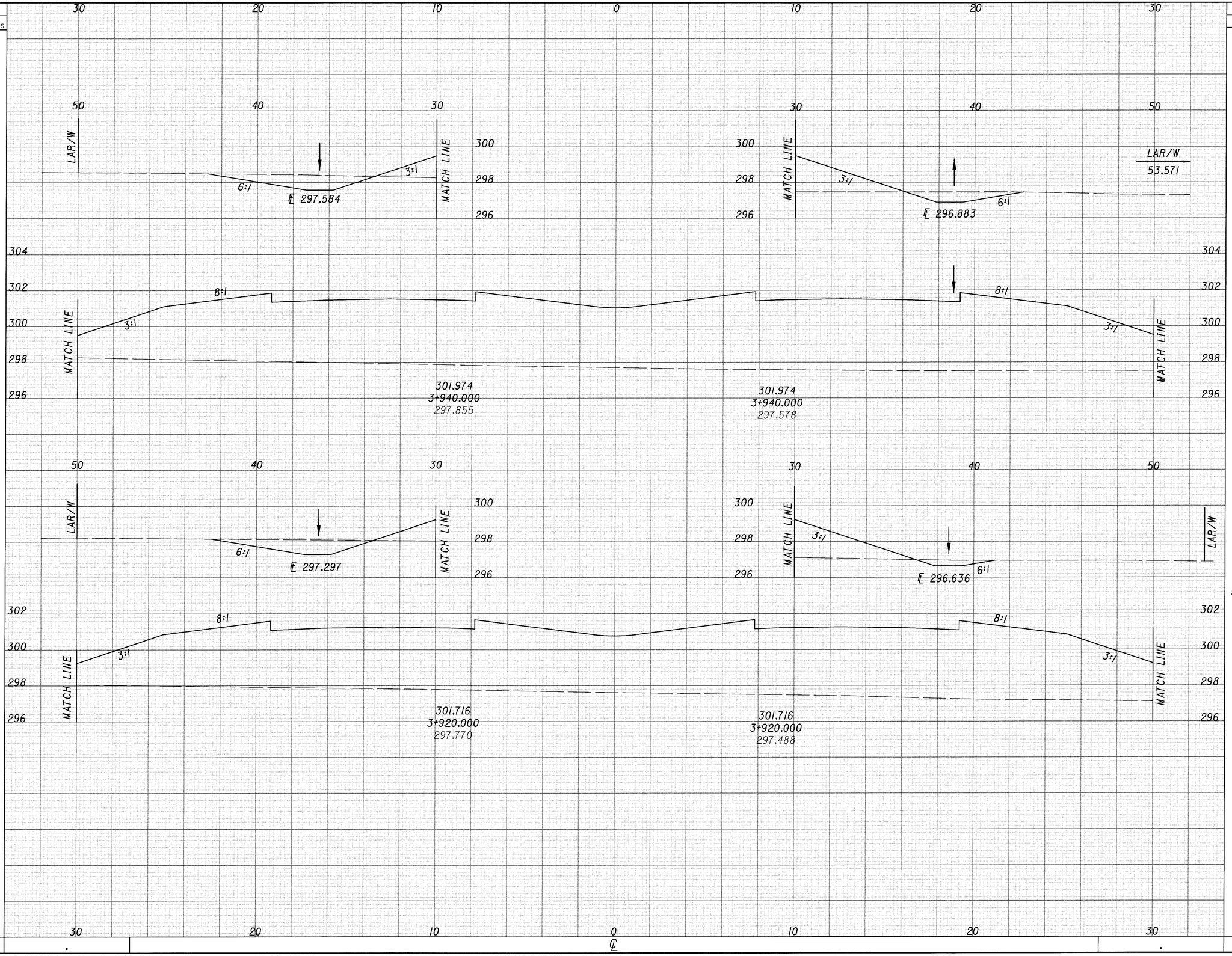


US-30 CROSS SECTIONS
STA 3+880.000 TO STA 3+900.000

WYA / CRA-30-28.009 / 0.000

673
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
71.76	1414	7.05	217.33	123	4303
69.61	1394	5.24	212.93	125	4235



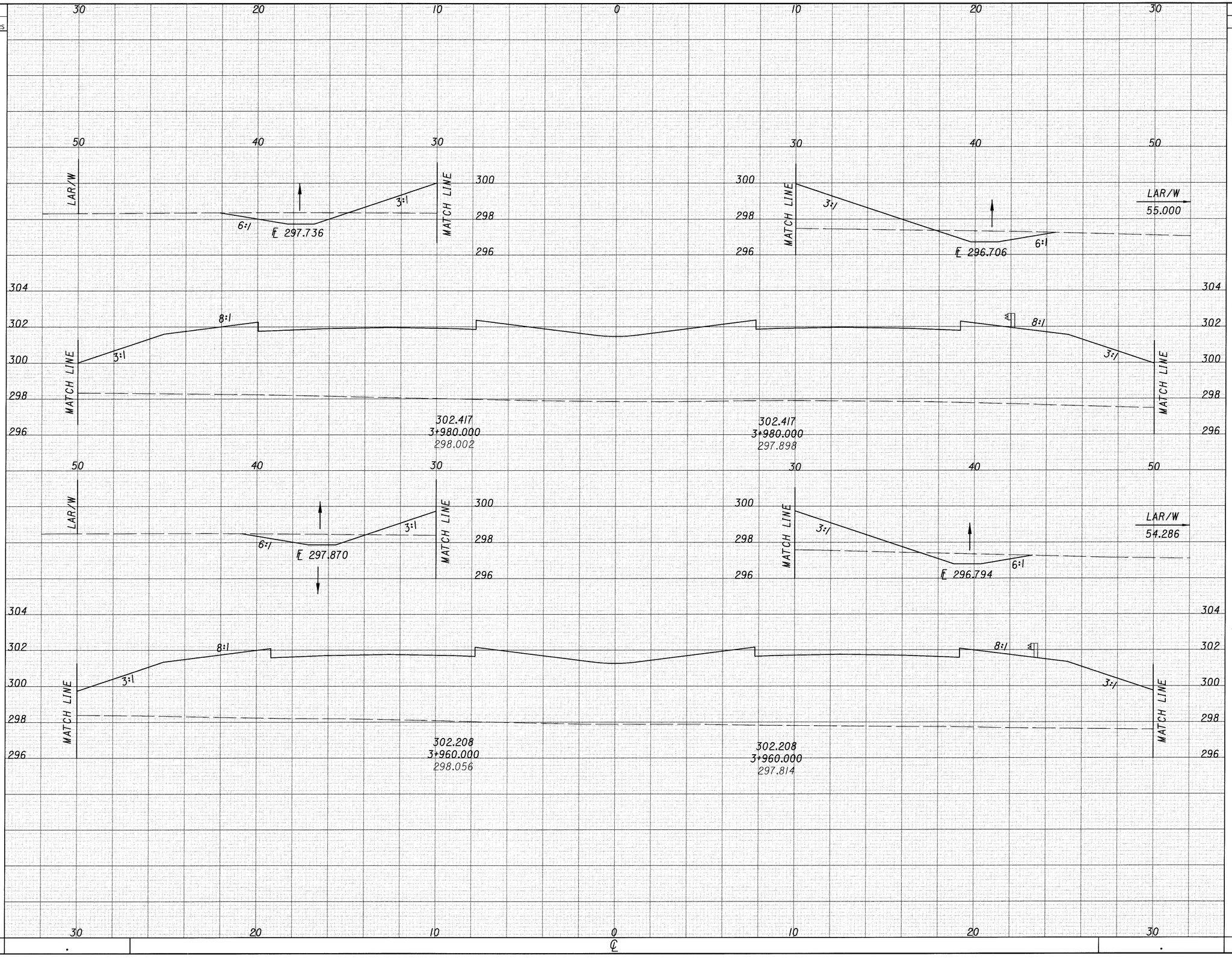
CALCULATED: AM
CHECKED: REA

US-30 CROSS SECTIONS
STA 3+920.000 TO STA 3+940.000

WYA / CRA-30-28.009 / 0.000

674
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
71.89	1418	5.23	239.31	99	4615
69.96	1417	4.66	222.23	117	4396



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 3+960.000 TO STA 3+980.000

WYA/CRA-30-28.009/0.000

675
2116

SEEDING	
END WIDTH	SQ. METERS
64.17	517
66.63	838

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.42	257.88	23	1986
3.30	244.82	52	2929

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 3+992.100 TO STA 4+000.000

WYA / CRA-30-28.009 / 0.000

676
2116

30 20 10 0 10 20 30

LAR/W
3:1
6:1
℄ 297.602
MATCH LINE
302
300
298
296
304
8:1
3:1
MATCH LINE
302.603
4+000.000
297.673

MATCH LINE
300
298
296
24:1
4:1
3:1
℄ 296.617
LAR/W
54.000
304
302
300
298
296
2:1
MATCH LINE
302.603
4+000.000
297.586

LAR/W
3:1
6:1
℄ 297.655
MATCH LINE
302
300
298
296
304
302
300
298
296
3:1
MATCH LINE
302.532
3+992.100
297.784

Sta 3+992.100, 38.116m Rt.
HW 2.1M
Inv 300mm = 296.655
MATCH LINE
2:1
24:1
2:1
3:1
296.727
26° Bend
7.174m @1.0%
LAR/W
54.395

Sta 3+992.100, 21.0m Rt.
604 CB - 3
Grate = 302.340
Inv 300mm = 301.062
301.048
26° Bend
0.762m
2:1
9.662m
MATCH LINE
1.389m
@1.0%
8.642m @ 50.0%
603 18.2m x 300mm Conduit
Type F 707.05 Type C
304
302
300
298
296
302.532
3+992.100
297.730

℄

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
58.20	484	1.18	271.09	10	2200
59.80	731	1.28	265.52	22	3088

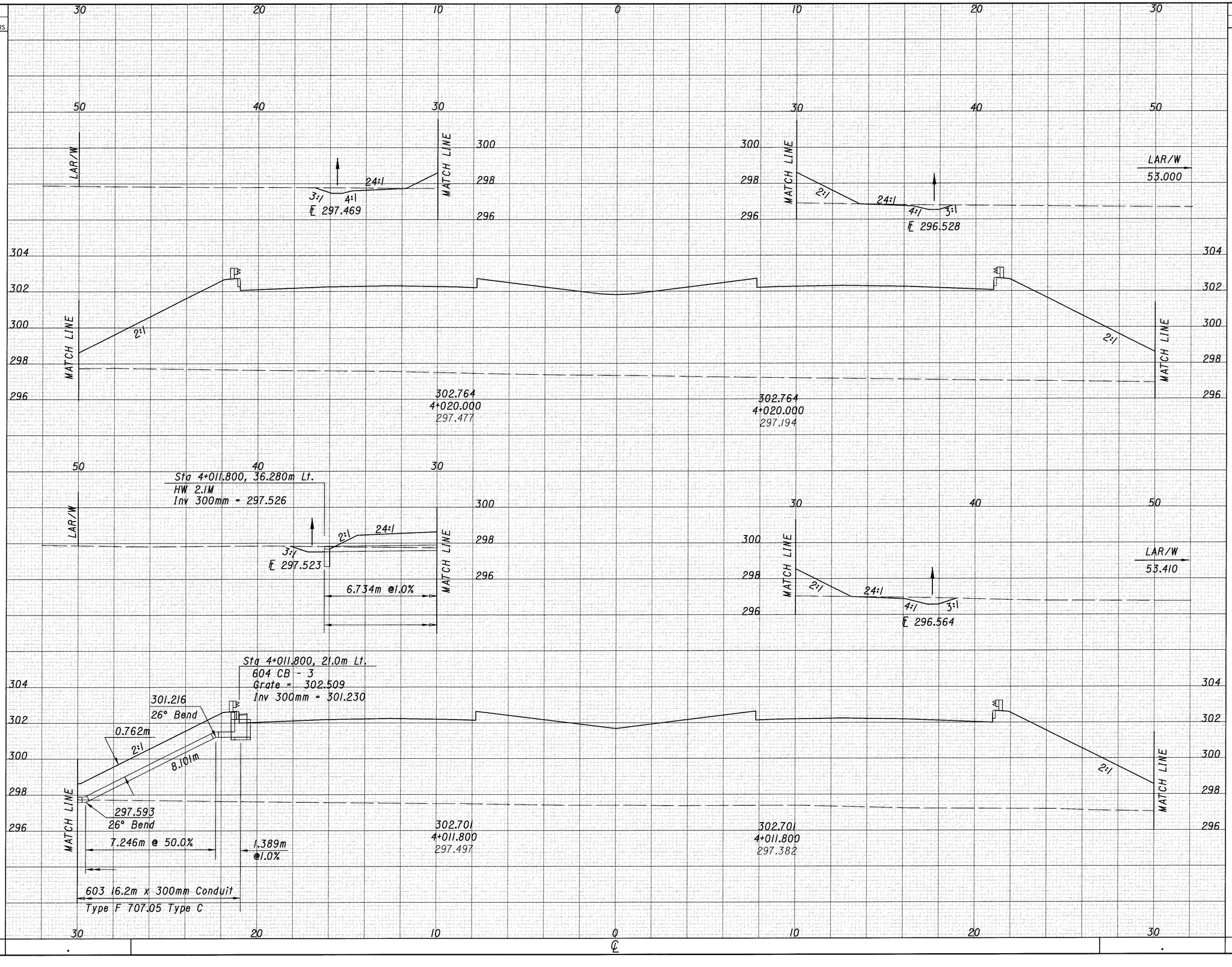
CALCULATED AM

CHECKED REA

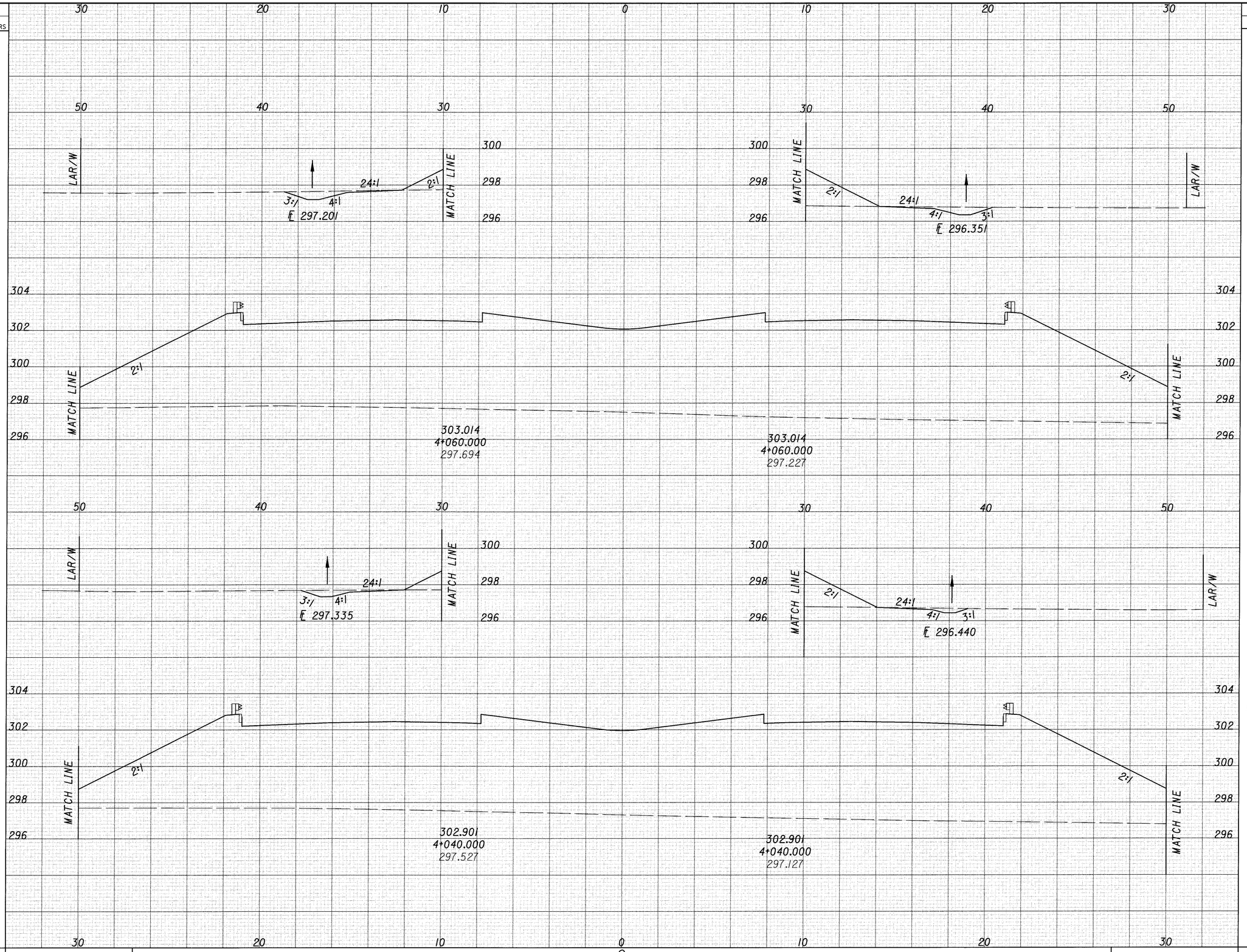
US-30 CROSS SECTIONS
STA 4+011.800 TO STA 4+020.000

WYA / CRA-30-28.009 / 0.000

677
2116



SEEDING	
END WIDTH	SQ. METERS
62.24	1218
59.58	1178



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.13	281.97	34	5641
1.31	282.14	25	5532

CALCULATED AM

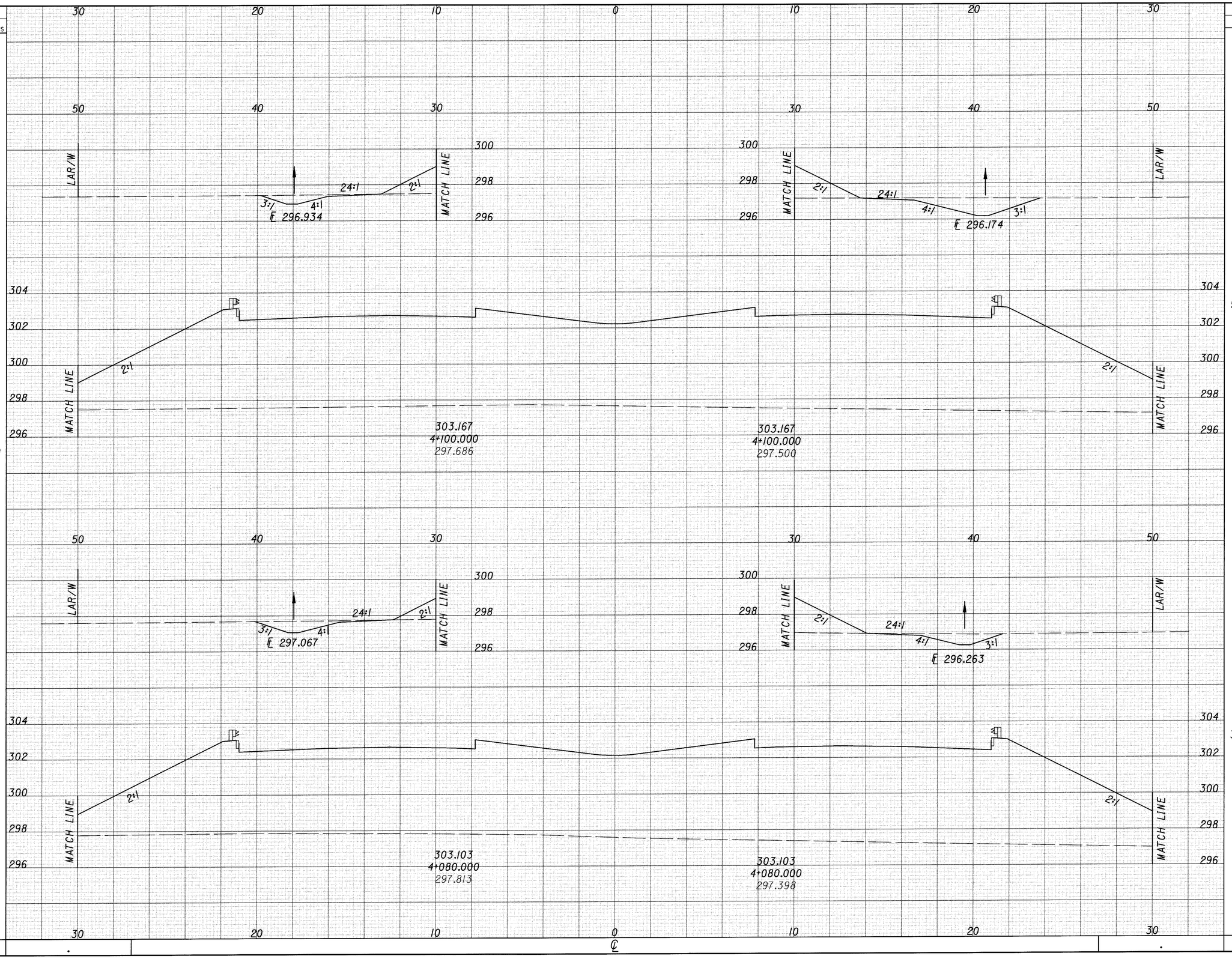
CHECKED REA

US-30 CROSS SECTIONS
STA 4+040.000 TO STA 4+060.000

WYA/CRA-30-28.009/0.000

678
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
67.53	1330	5.48	286.65	92	5674
65.44	1277	3.73	280.73	59	5627



CALCULATED AM

CHECKED REA

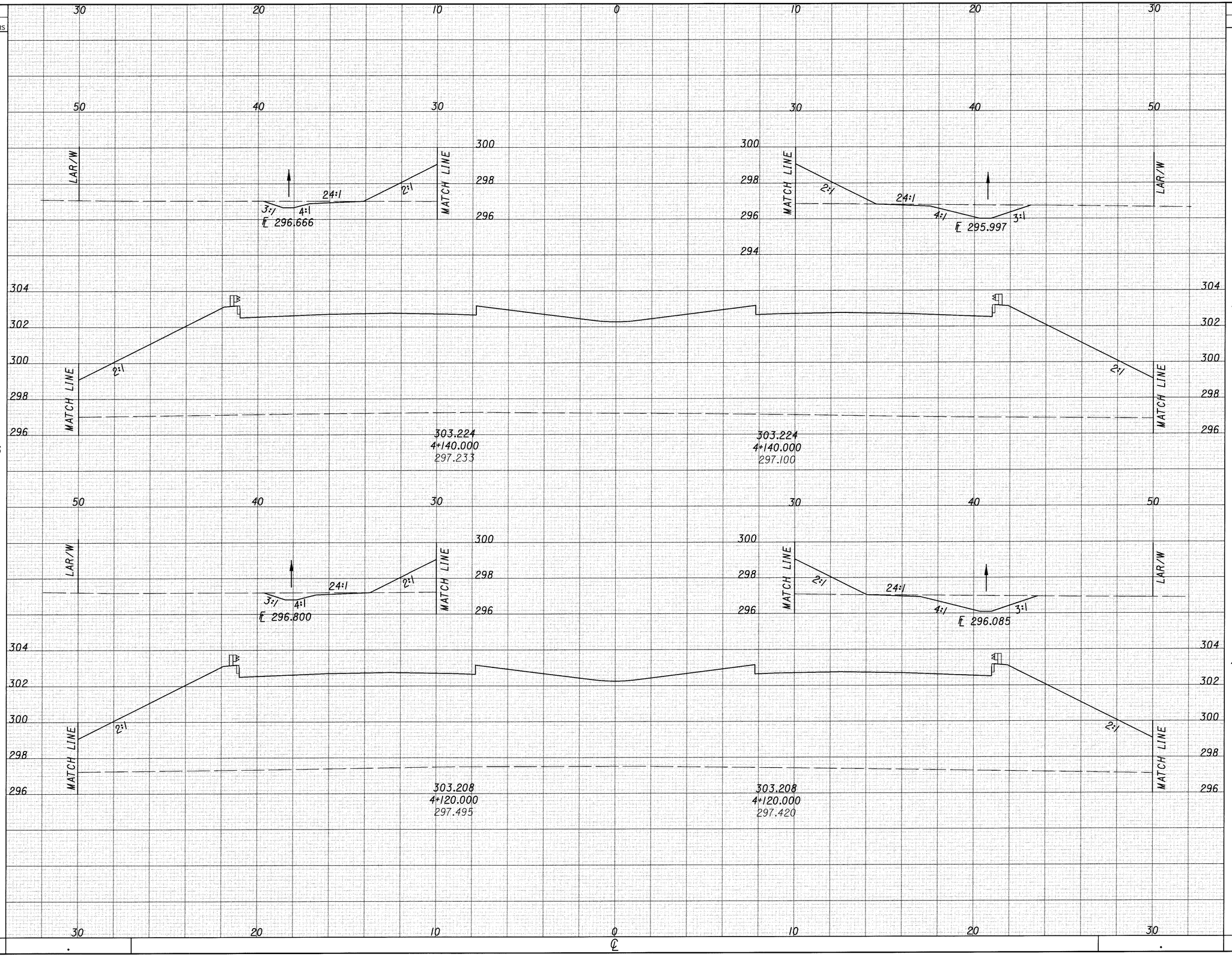
US-30 CROSS SECTIONS

STA 4+080.000 TO STA 4+100.000

WYA / CRA-30-28.009 / 0.000

679
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
66.59	1336	3.46	319.45	79	6195
67.05	1346	4.45	300.09	99	5867



CALCULATED AM

CHECKED REA

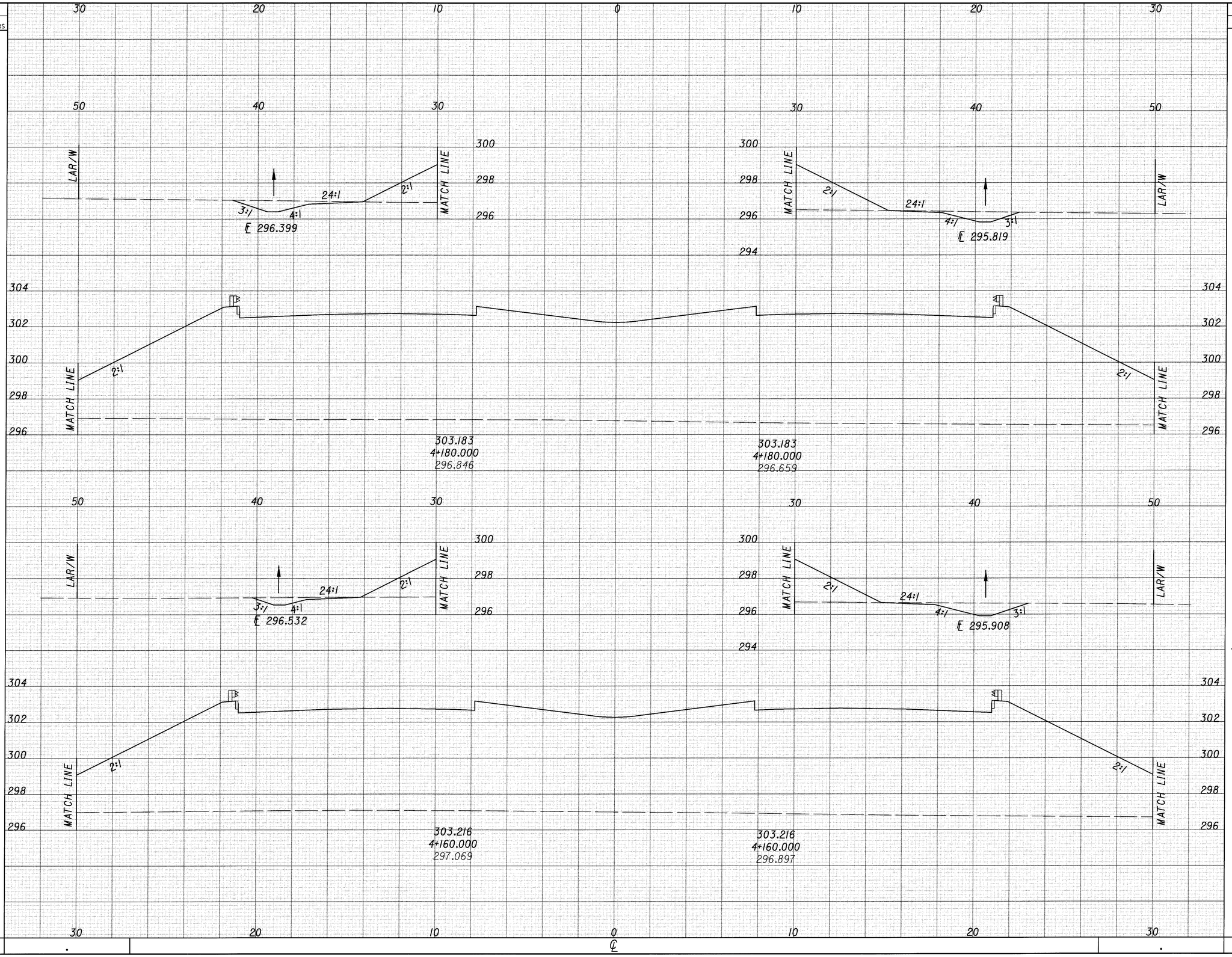
US-30 CROSS SECTIONS

STA 4+120.000 TO STA 4+140.000

WYA / CRA-30-28.009 / 0.000

680
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
67.80	1349	3.53	339.28	69	6680
67.07	1337	3.35	328.69	68	6481



CALCULATED AM

CHECKED REA

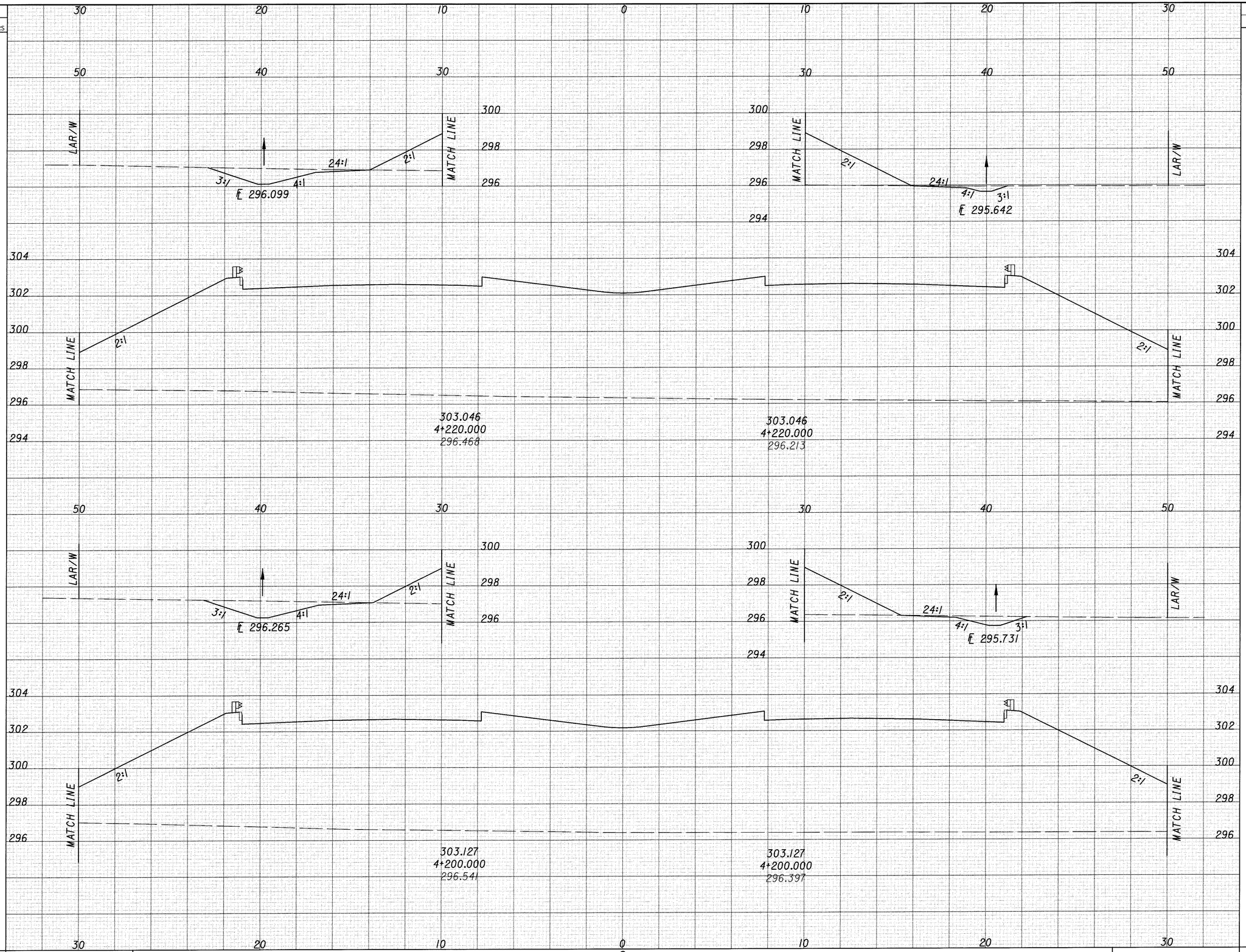
US-30 CROSS SECTIONS

STA 4+160.000 TO STA 4+180.000

WYA / CRA-30-28.009 / 0.000

681
2116

SEEDING	
END WIDTH	SQ. METERS
68.11	
	1377
69.63	
	1374



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.86	354.29		
		90	7023
5.10	348.02		
		86	6873

CALCULATED AM

CHECKED REA

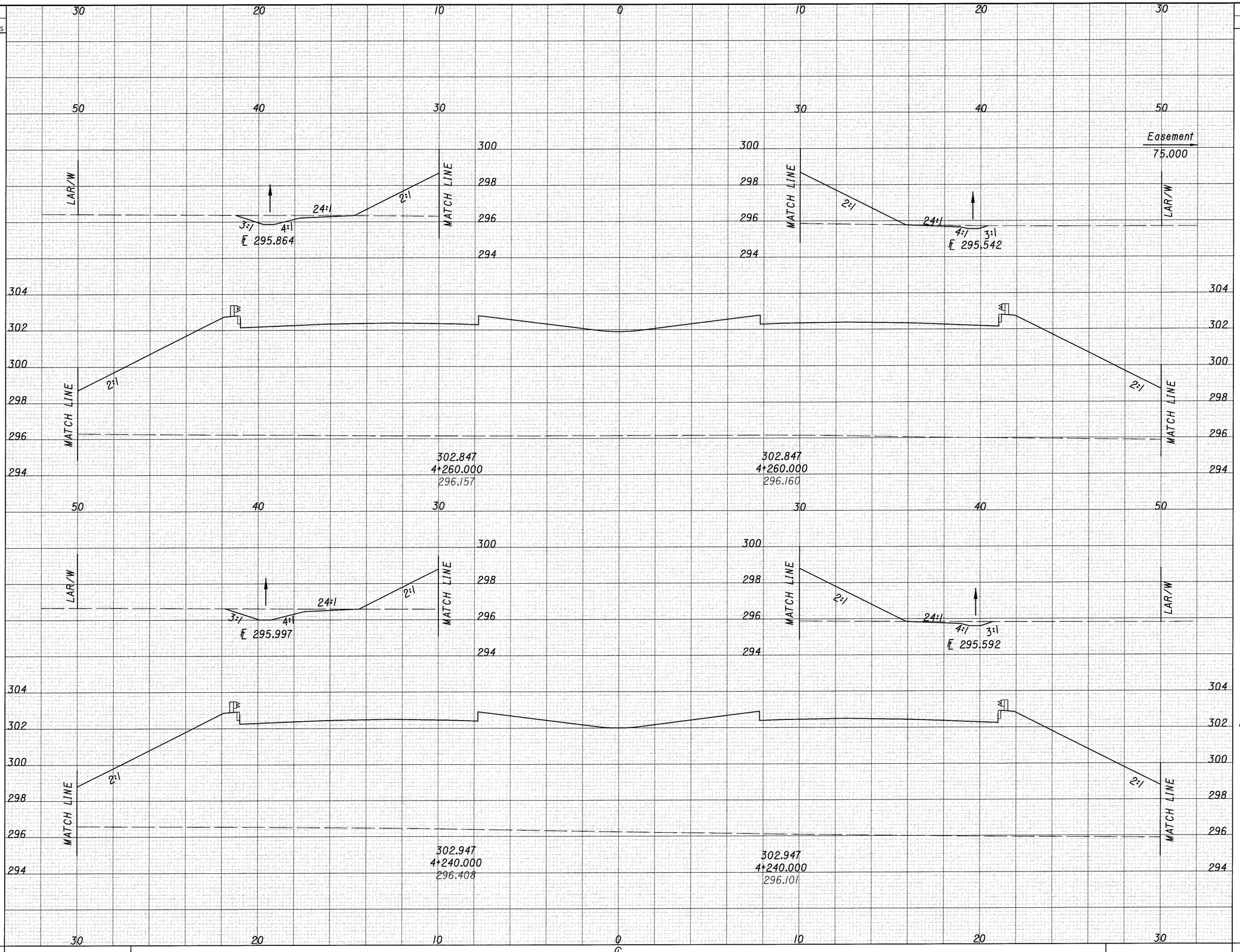
US-30 CROSS SECTIONS

STA 4+200.000 TO STA 4+220.000

WYA / CRA-30-28.009 / 0.000

682
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
65.07	1312	1.66	358.92	40	7163
66.17	1343	2.36	357.41	62	7117



CALCULATED AM

CHECKED REA

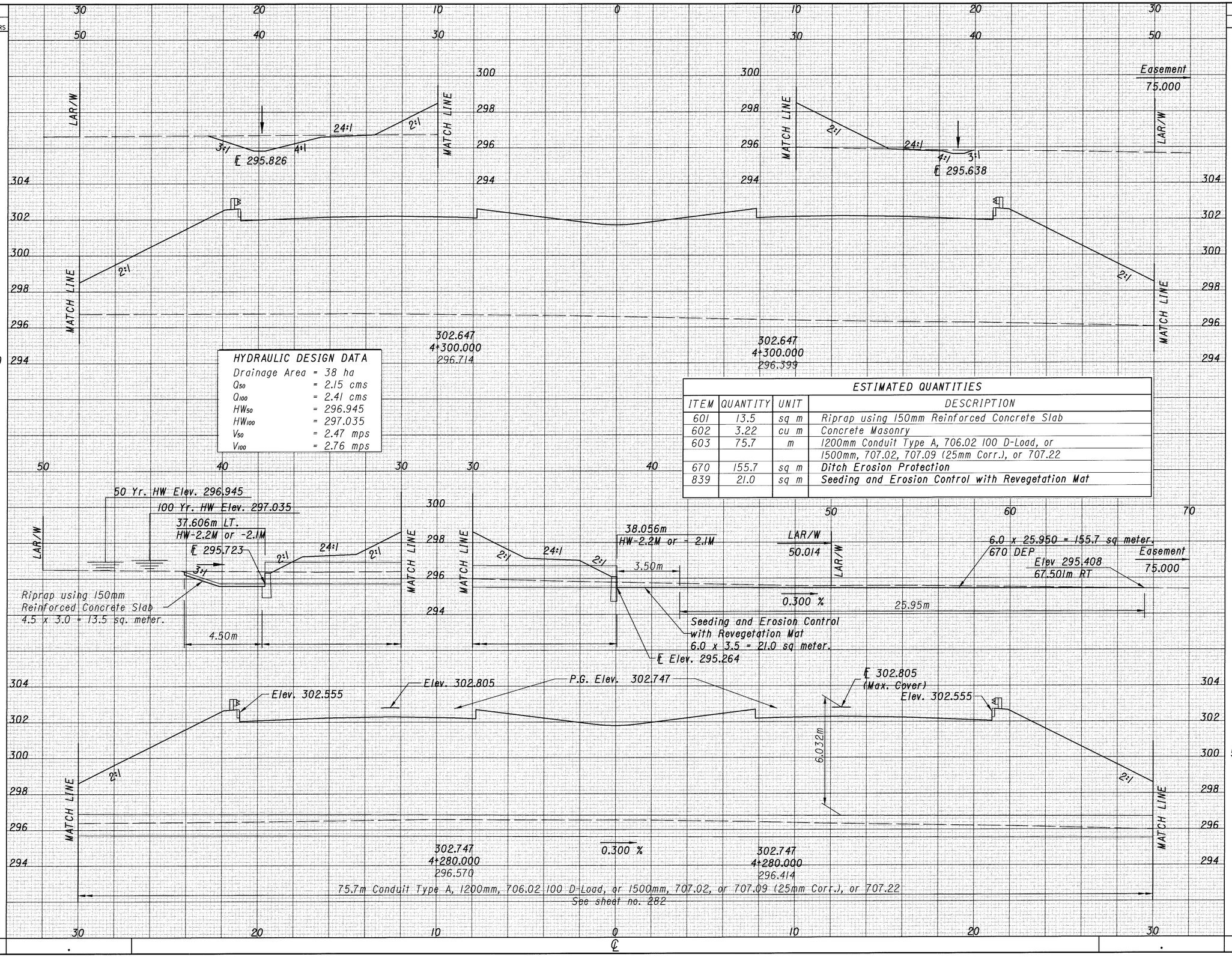
US-30 CROSS SECTIONS

STA 4+240.000 TO STA 4+260.000

WYA / CRA-30-28.009 / 0.000

683
2116

SEEDING	
END WIDTH	SQ. METERS
66.43	
	1590
92.54	
	1576



HYDRAULIC DESIGN DATA	
Drainage Area	= 38 ha
Q_{50}	= 2.15 cms
Q_{100}	= 2.41 cms
HW_{50}	= 296.945
HW_{100}	= 297.035
V_{50}	= 2.47 mps
V_{100}	= 2.76 mps

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	13.5	sq m	Riprap using 150mm Reinforced Concrete Slab
602	3.22	cu m	Concrete Masonry
603	75.7	m	1200mm Conduit Type A, 706.02 100 D-Load, or 1500mm, 707.02, 707.09 (25mm Corr.), or 707.22
670	155.7	sq m	Ditch Erosion Protection
839	21.0	sq m	Seeding and Erosion Control with Revegetation Mat

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.68	319.29		
		90	6543
5.35	334.98		
		70	6939

CALCULATED AM | CHECKED REA

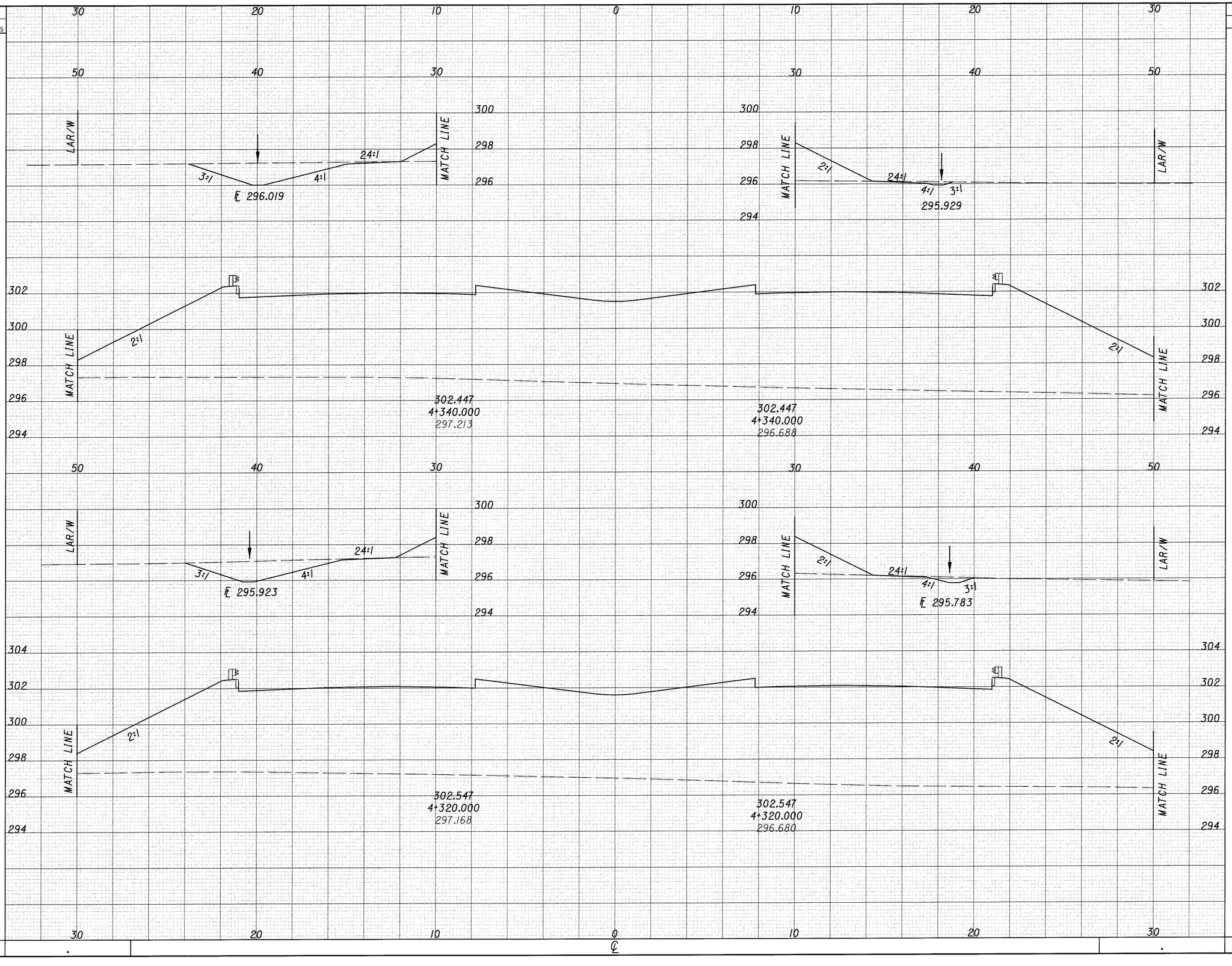
US-30 CROSS SECTIONS

STA 4+280.000 TO STA 4+300.000

WYA / CRA-30-28.009 / 0.000

684
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
66.44	1343	6.56	280.32	127	5665
67.86	1343	6.18	286.14	99	6054



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 4+320.000 TO STA 4+340.000

WYA / CRA-30-28.009 / 0.000

685
2116

SEEDING	
END WIDTH	SQ. METERS
62.42	1265
64.09	1305

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.02	273.08	78	5529
4.81	279.82	114	5601

CALCULATED AM

CHECKED RCA

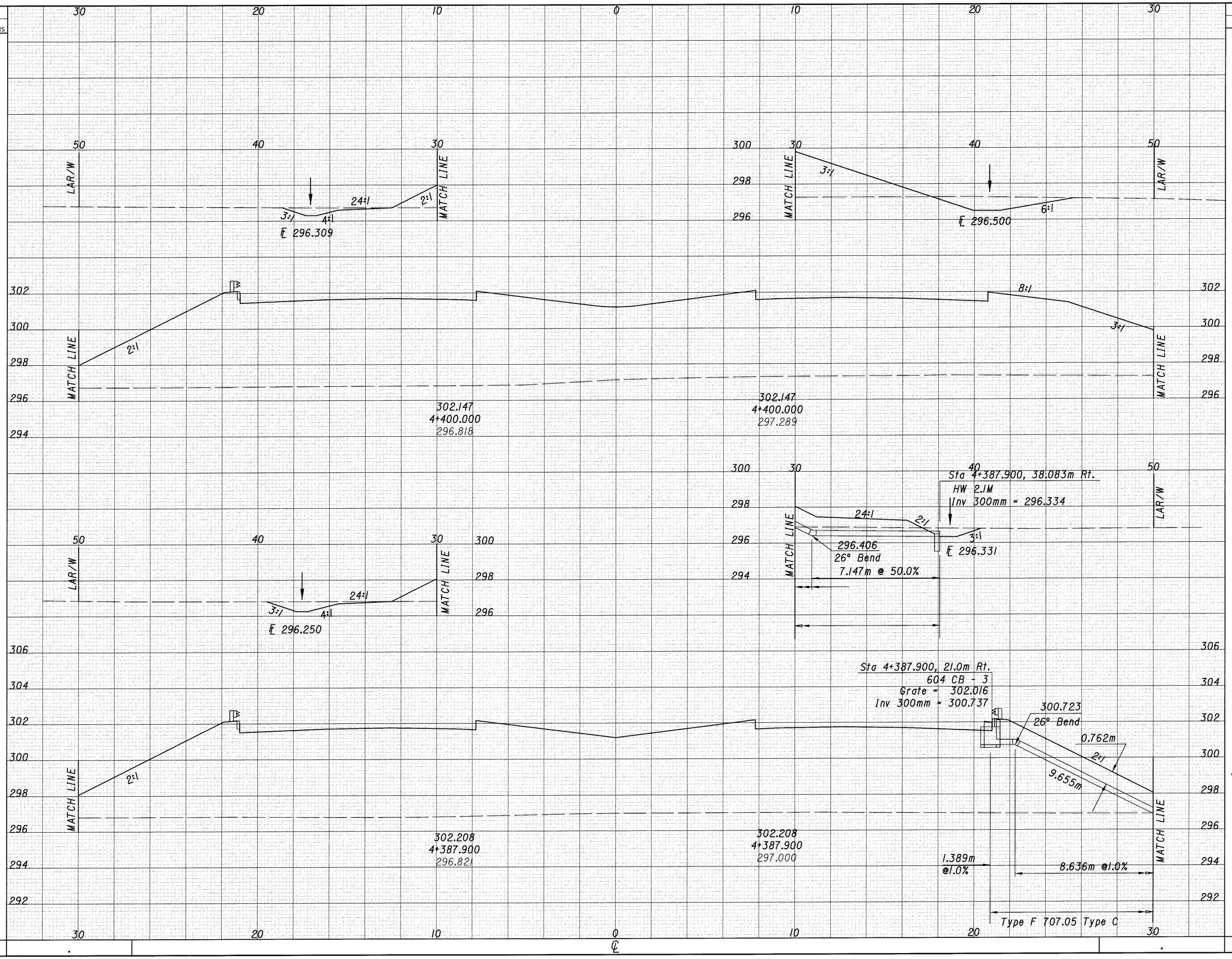
US-30 CROSS SECTIONS

STA 4+360.000 TO STA 4+380.000

WYA / CRA-30-28.009 / 0.000

686
2116

SEEDING	
END WIDTH	SQ. METERS
67.42	
	789
63.07	
	496



END AREA		VOLUME	
CUT	FILL	CUT	FILL
4.66	267.14		
		44	3224
2.54	265.79		
		22	2129

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 4+387.900 TO STA 4+400.000

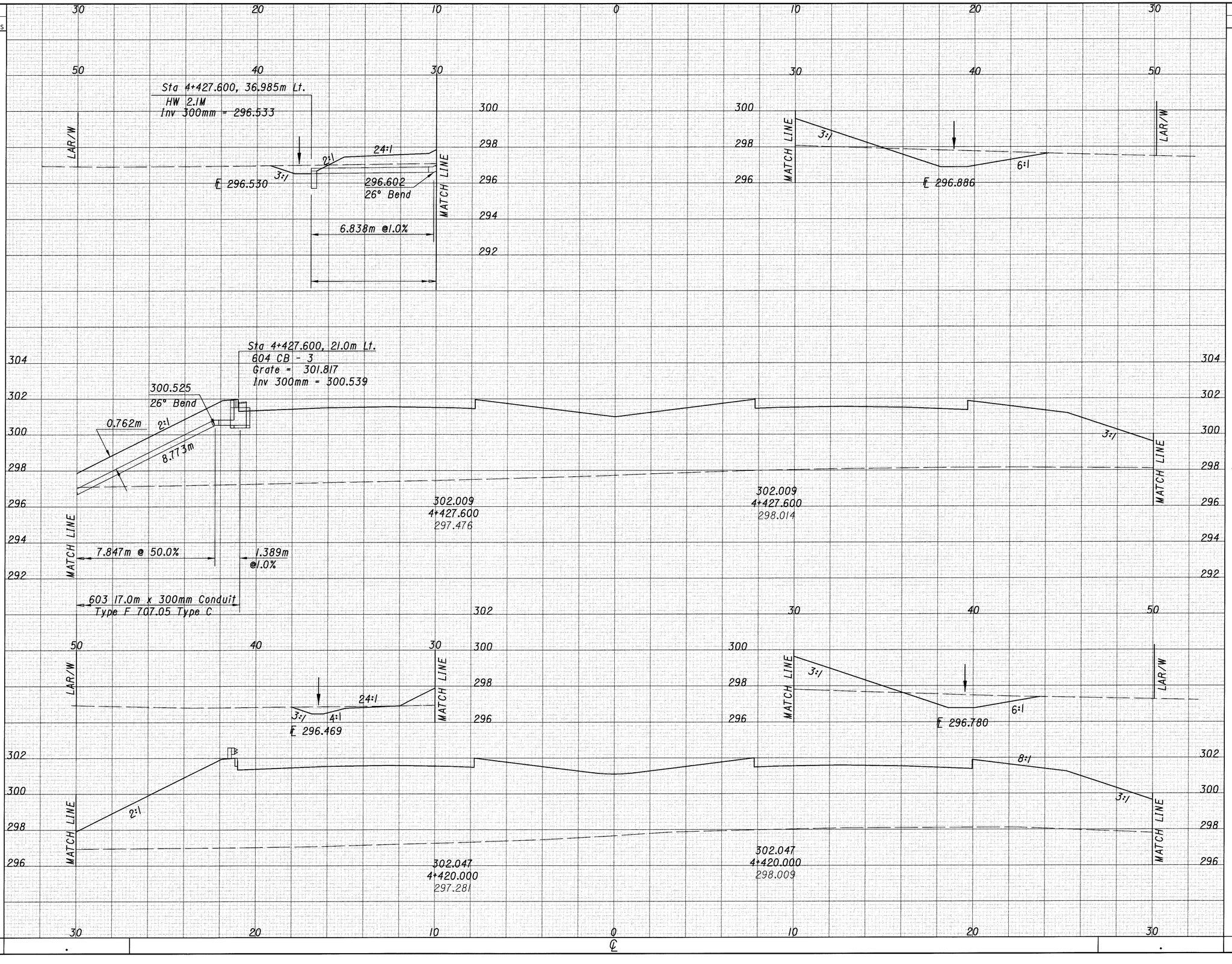
WYA / CRA-30-28.009 / 0.000

687
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
67.54		5.78	214.29		
	505			38	1665
65.44		4.16	223.88		
	1329			88	4910

CALCULATED AM

CHECKED REA

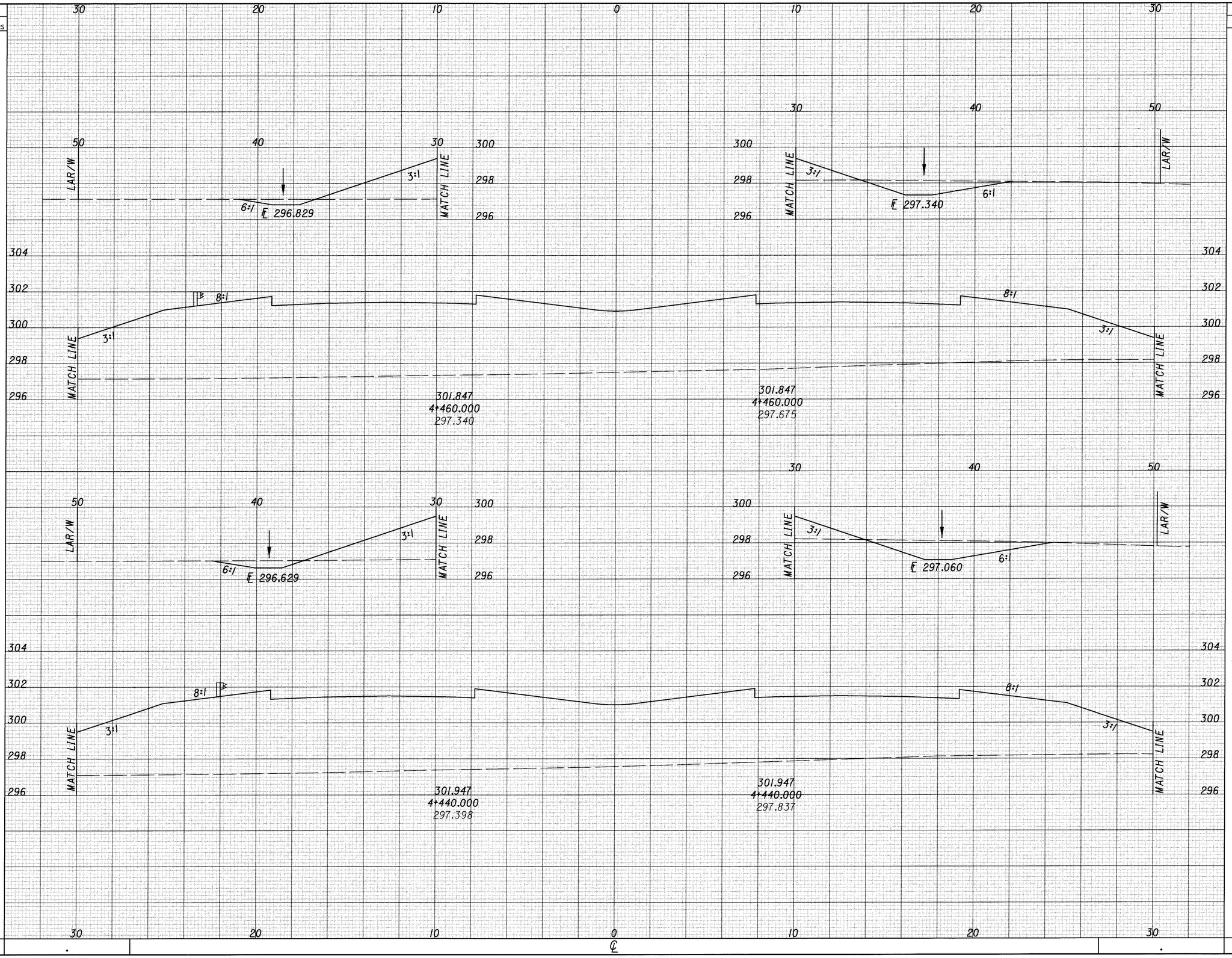


US-30 CROSS SECTIONS
STA 4+420.000 TO STA 4+427.600

WYA/CRA-30-28.009/0.000

688
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
68.91	1420	4.80	223.43	125	4503
73.09	872	7.70	226.82	84	2735



CALCULATED AM

CHECKED REA

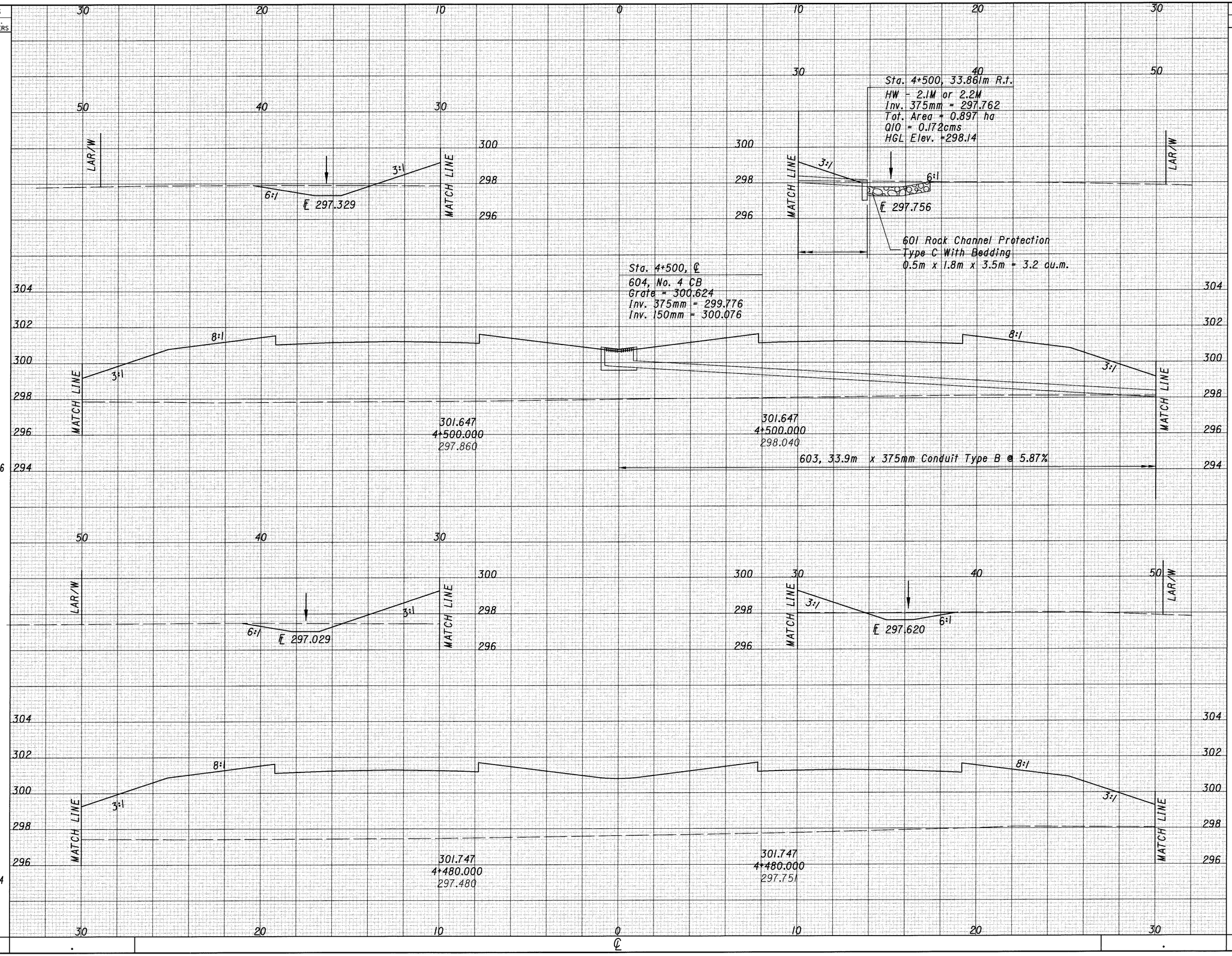
US-30 CROSS SECTIONS

STA 4+440.000 TO STA 4+460.000

WYA/CRA-30-28.009/0.000

689
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
63.14	1286	5.01	182.01	80	3905	
65.50	1344	2.95	208.46	78	4319	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 4+480.000 TO STA 4+500.000

WYA / CRA-30-28.009 / 0.000

690
2116

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. METERS		CUT	FILL	CUT	FILL
		30 20 10 0 10 20 30				
		50 40 30 LAR/W 3:1 6:1 ℄ 297.929 MATCH LINE 300 298 296				
		300 30 MATCH LINE 3:1 6:1 ℄ 297.736 40 50 LAR/W				
59.31		304 302 300 298 8:1 3:1 MATCH LINE 301.447 4+540.000 298.473 301.447 4+540.000 298.178 MATCH LINE 8:1 3:1	2.40	147.86		
	1182	296			43	3098
		50 40 30 LAR/W 3:1 6:1 ℄ 297.629 MATCH LINE 300 298 296				
		300 30 MATCH LINE 3:1 6:1 ℄ 298.036 40 50 LAR/W				
58.89		304 302 300 298 8:1 3:1 MATCH LINE 301.547 4+520.000 298.166 301.547 4+520.000 298.205 MATCH LINE 8:1 3:1	1.86	161.96		
	1220	296			69	3440
		30 20 10 0 10 20 30				
		℄				

CALCULATED AM

CHECKED REA

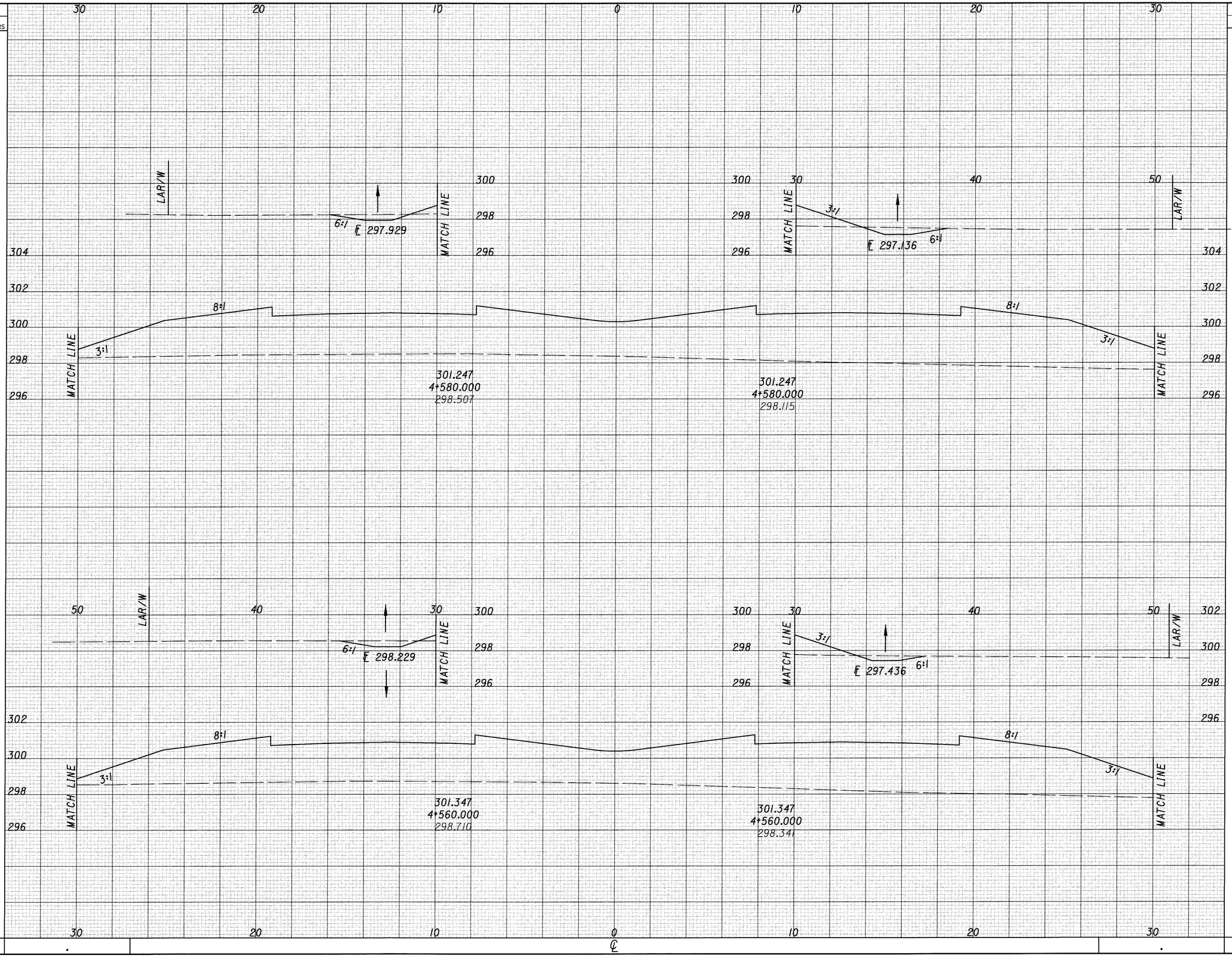
US-30 CROSS SECTIONS

STA 4+520.000 TO STA 4+540.000

WYA / CRA-30-28.009 / 0.000

691
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
59.47	1171	2.17	141.88	38	2765
57.59	1169	1.66	134.65	41	2825



CALCULATED AM

CHECKED REA

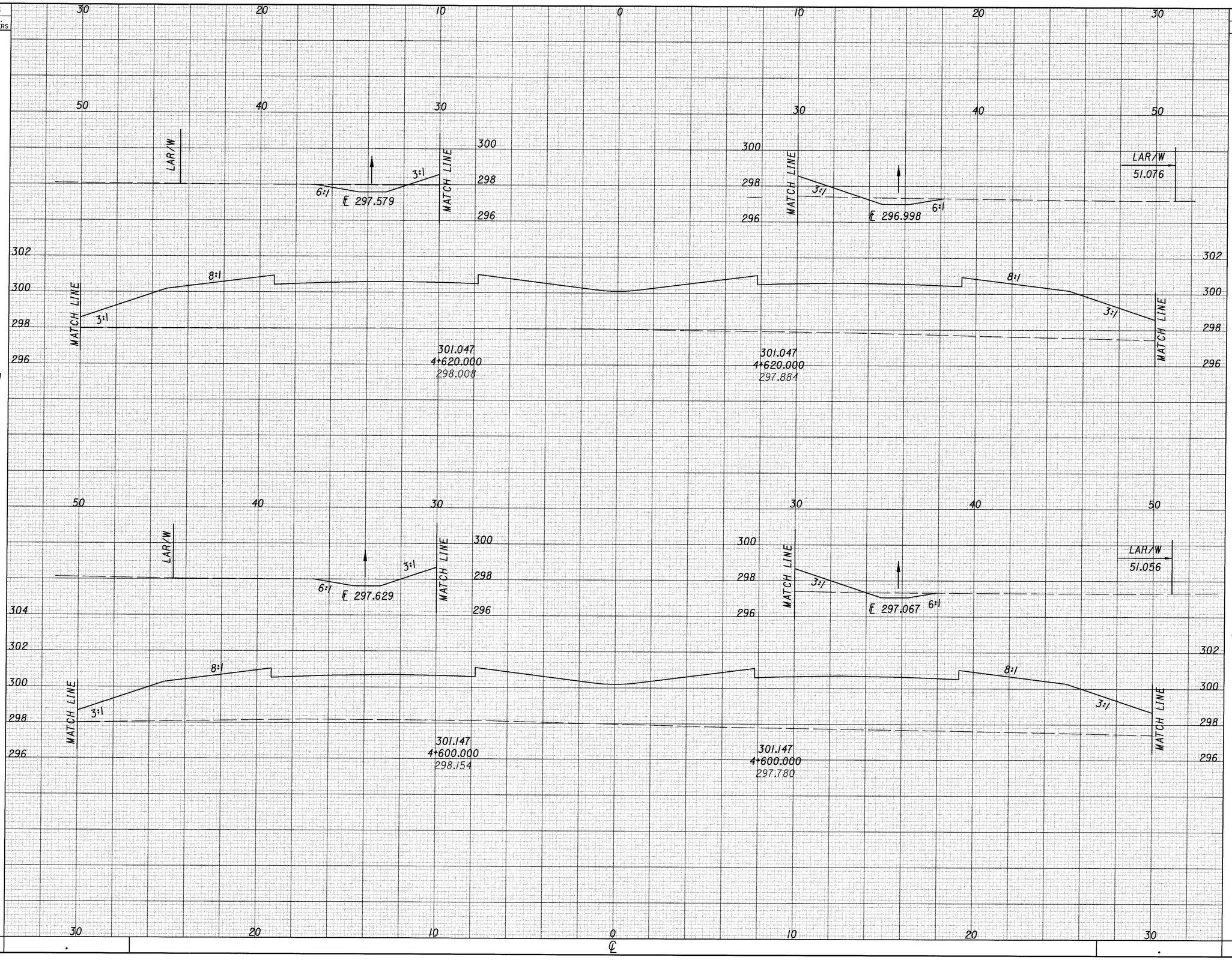
US-30 CROSS SECTIONS

STA 4+560.000 TO STA 4+580.000

WYA / CRA-30-28.009 / 0.000

692
2116

SEEDING	
END WIDTH	SQ. METERS
60.25	1201
59.85	1193



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.37	149.63		
		43	3043
1.92	154.69		
		41	2966

CALCULATED AM

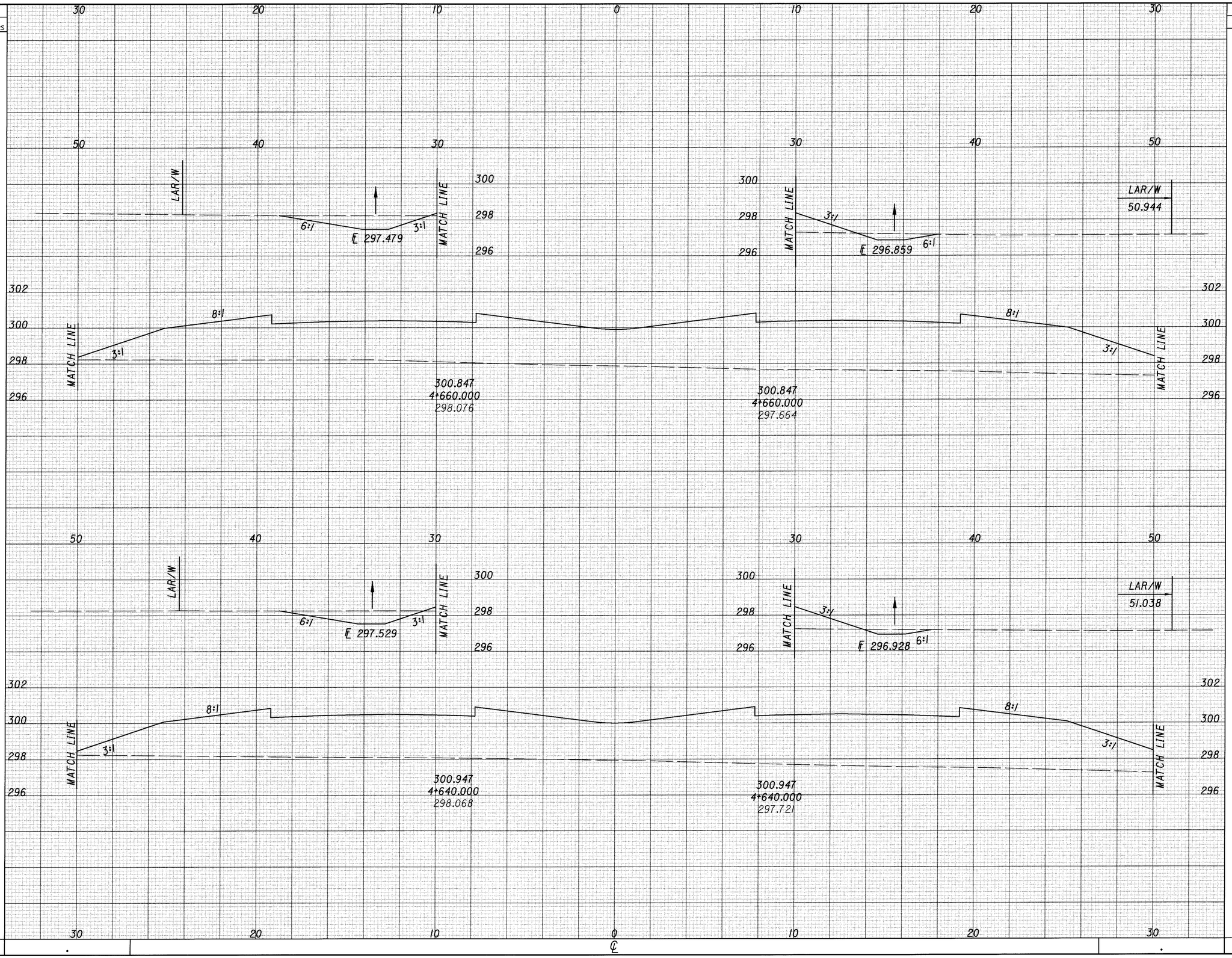
CHECKED REA

US-30 CROSS SECTIONS
STA 4+600.000 TO STA 4+620.000

WYA / CRA-30-28.009 / 0.000

693
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
62.23	1240	4.81	138.10	90	2828
61.75	1220	4.17	144.70	65	2943



CALCULATED AM

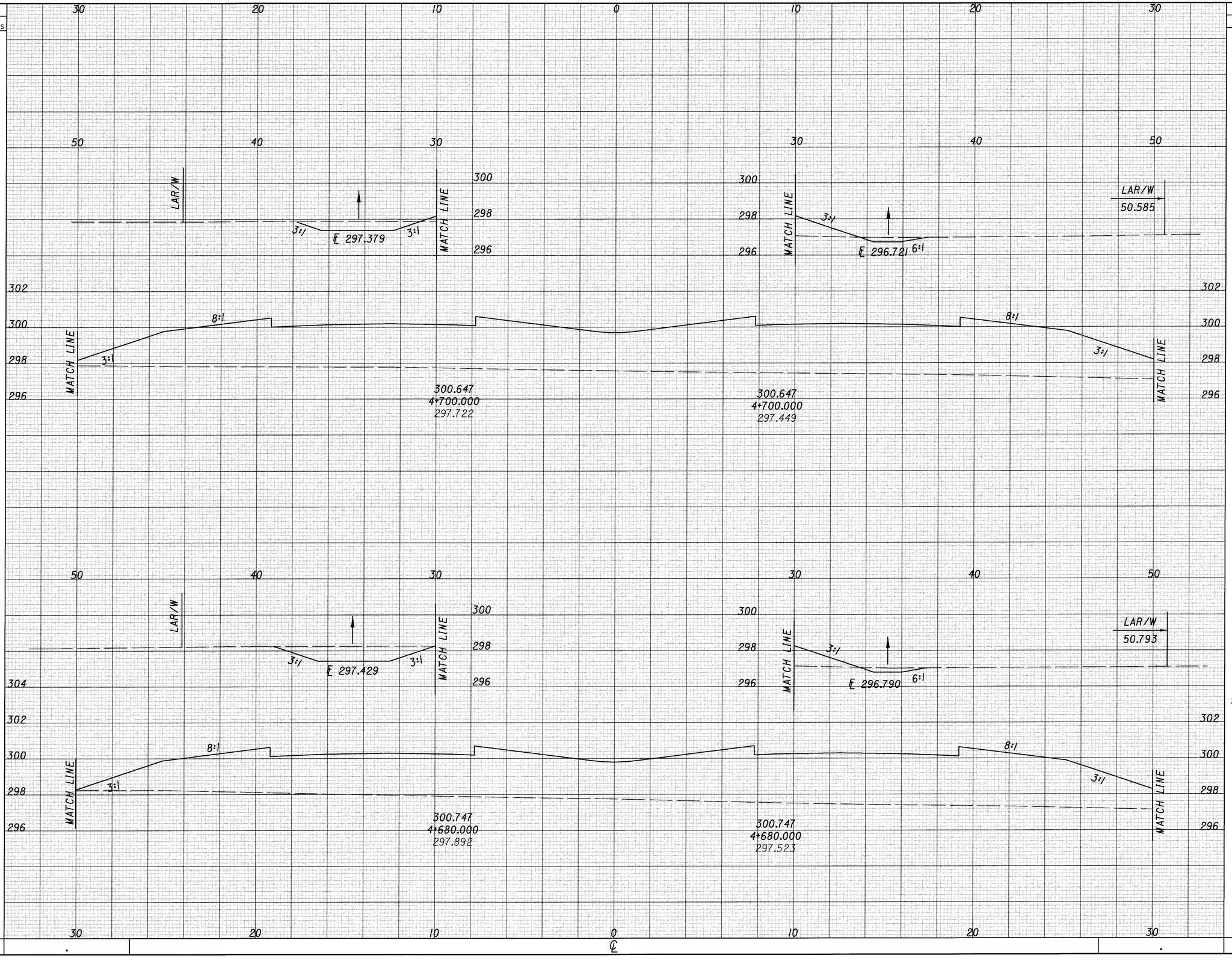
CHECKED REA

US-30 CROSS SECTIONS
STA 4+640.000 TO STA 4+660.000

WYA / CRA-30-28.009 / 0.000

694
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
60.51	1225	3.46	144.46	94	2848
61.95	1242	5.97	140.36	108	2785



CALCULATED AM

CHECKED REA

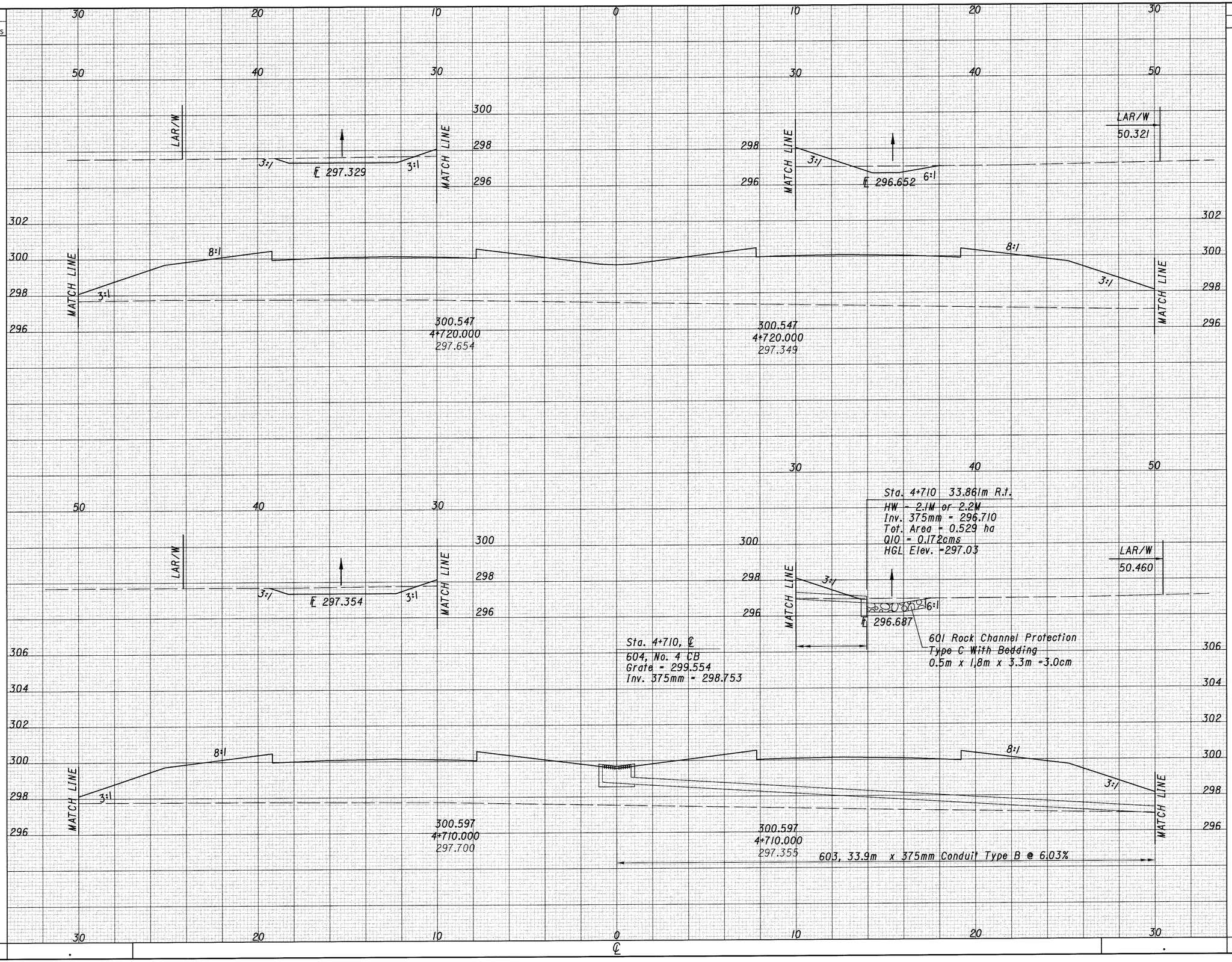
US-30 CROSS SECTIONS

STA 4+680.000 TO STA 4+700.000

WYA/CRA-30-28.009/0.000

695
2116

SEEDING	
END WIDTH	SQ. METERS
62.08	618
61.56	610



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.23	144.30		
		41	1453
5.02	146.27		
		42	1454

CALCULATED AM

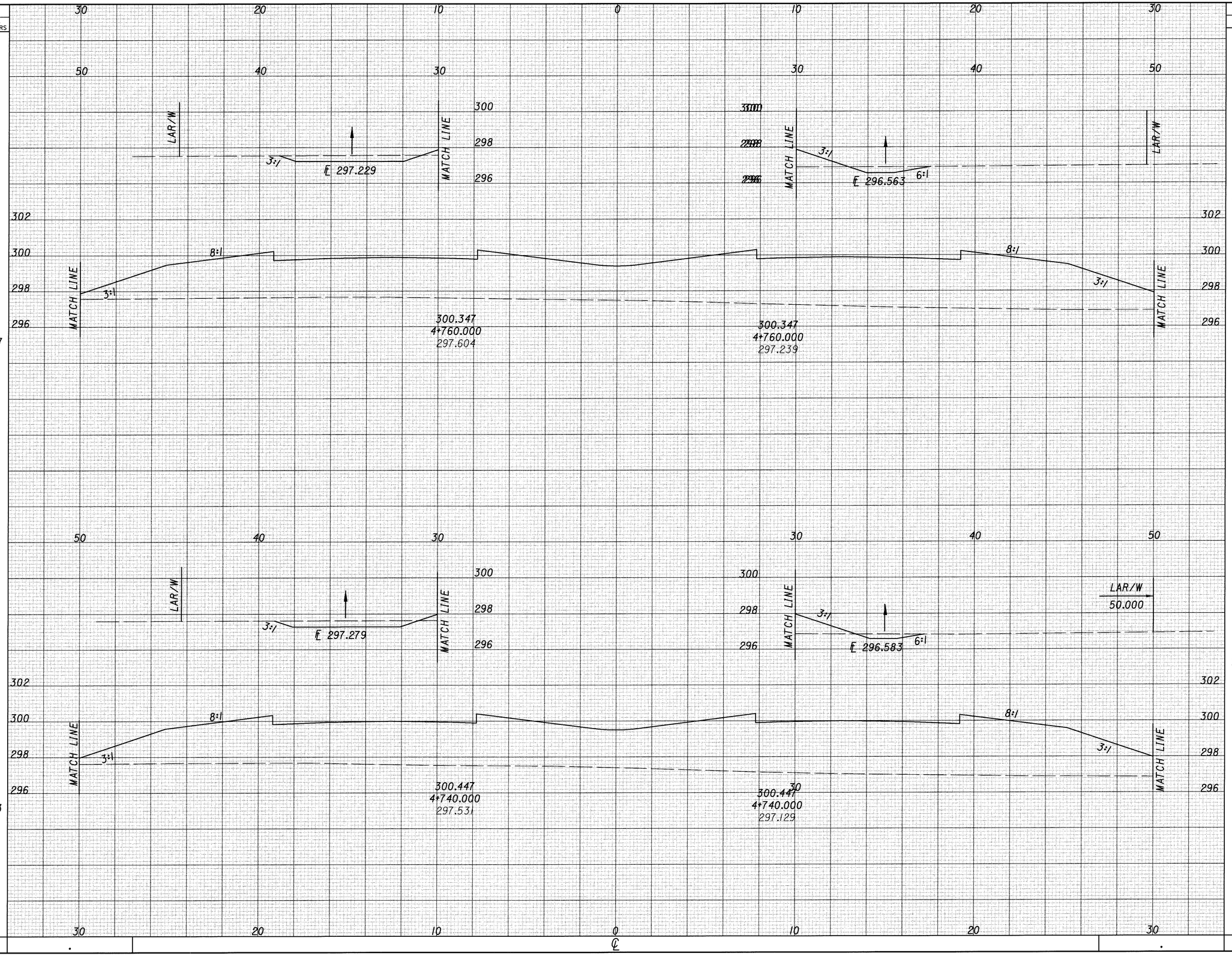
CHECKED REA

US-30 CROSS SECTIONS
STA 4+710.000 TO STA 4+720.000

WYA / CRA-30-28.009 / 0.000

696
2116

SEEDING	
END WIDTH	SQ. METERS
61.41	
	1227
61.26	
	1233



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.31	137.65		
		64	2840
3.12	146.31		
		64	2906

CALCULATED AM

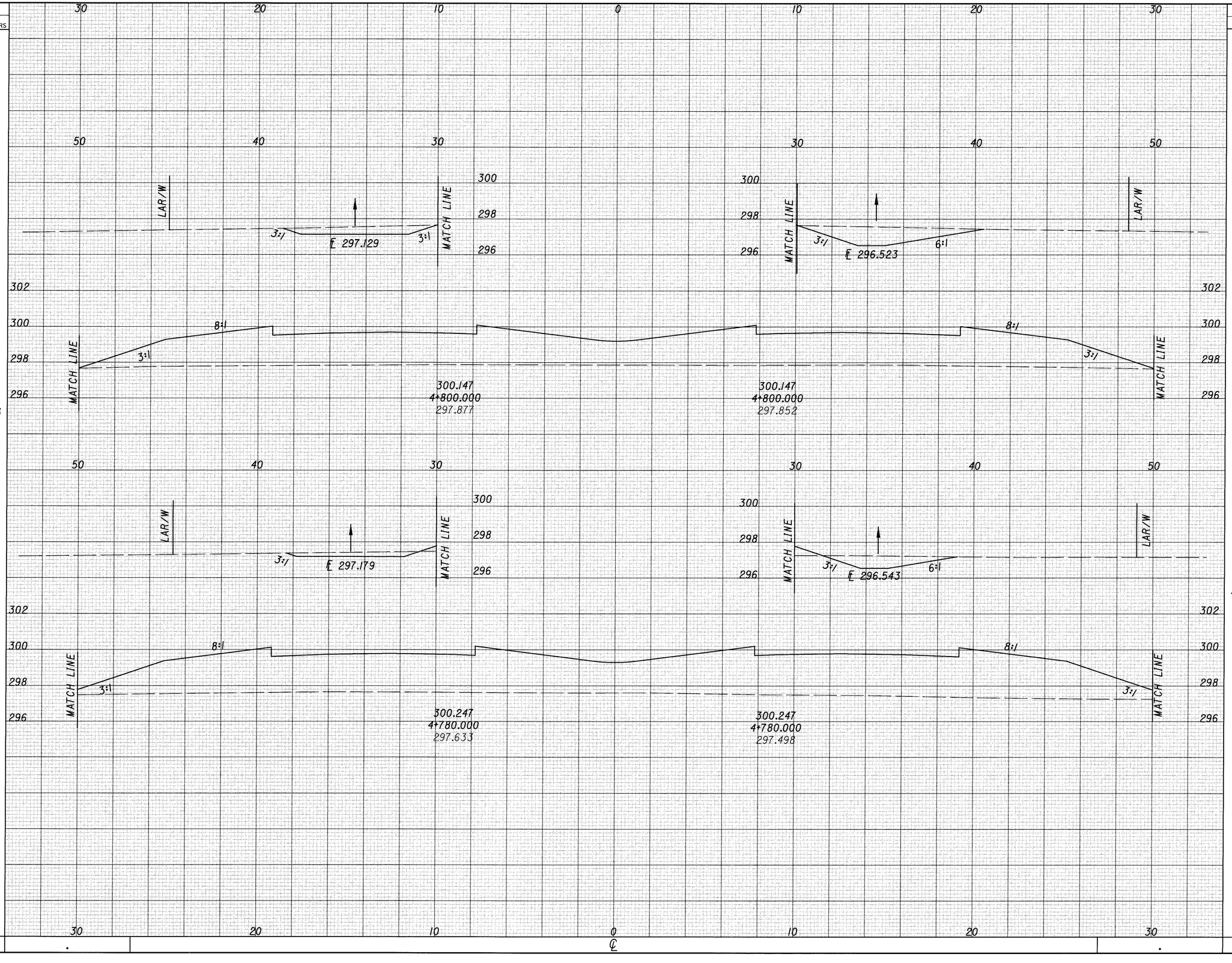
CHECKED REA

US-30 CROSS SECTIONS
STA 4+740.000 TO STA 4+760.000

WYA / CRA-30-28.009 / 0.000

697
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
64.74	1273	9.32	96.71	141	2181
62.60	1240	4.75	121.34	81	2590



CALCULATED AM

CHECKED REA

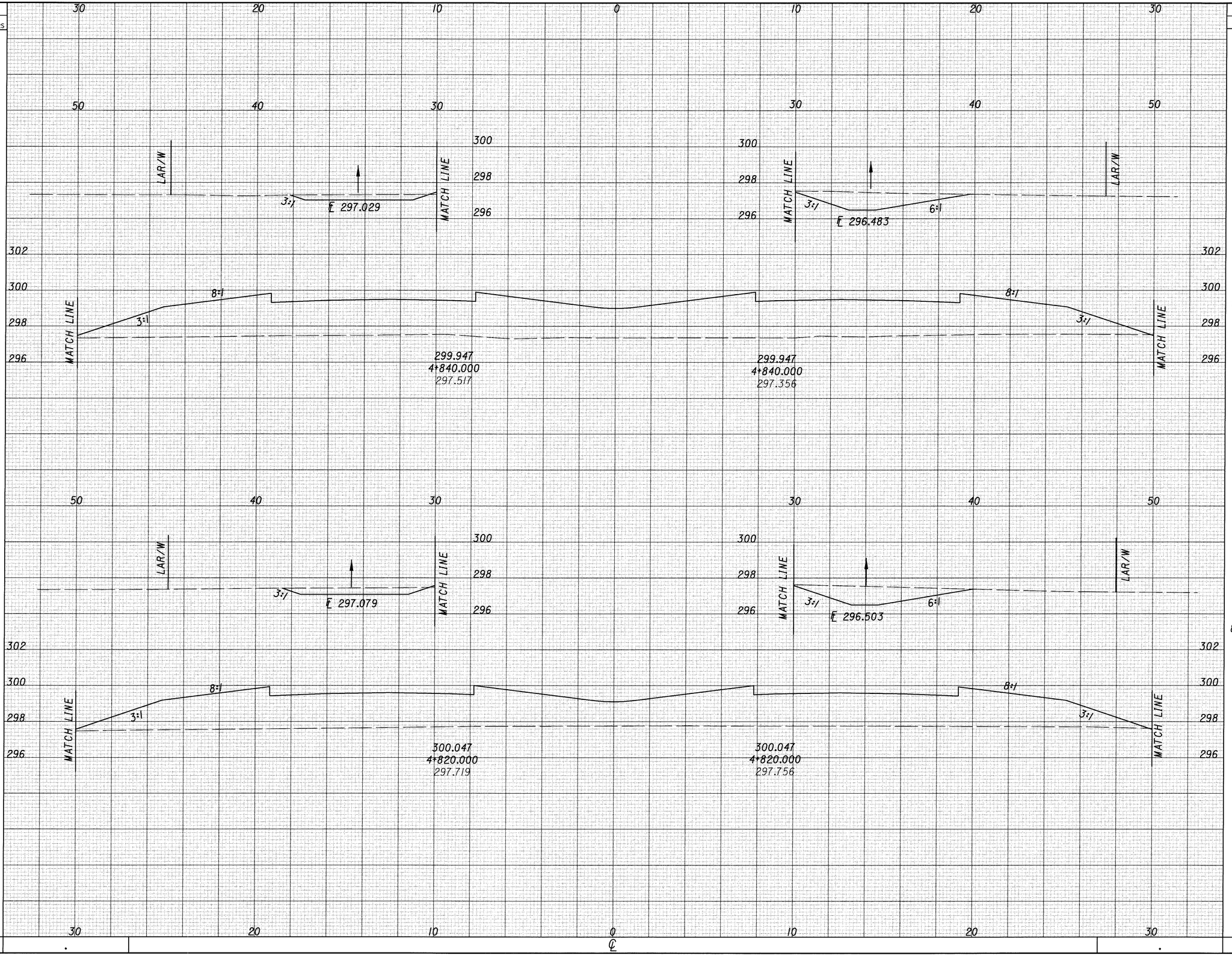
US-30 CROSS SECTIONS

STA 4+780.000 TO STA 4+800.000

WYA/CRA-30-28.009/0.000

698
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
63.32	1274	7.59	107.54	161	2058
64.03	1288	8.54	98.23	179	1949



CALCULATED AM

CHECKED REA

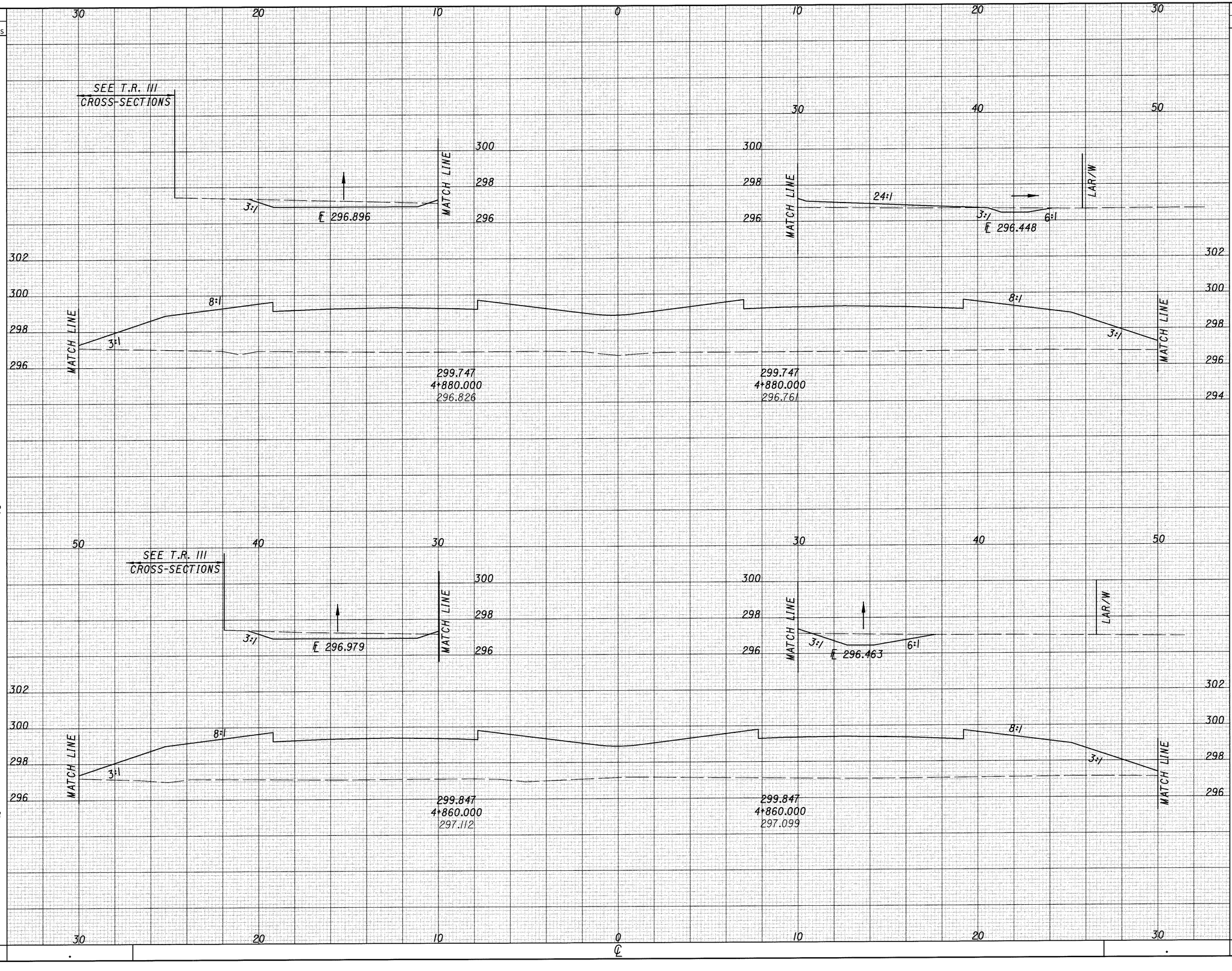
US-30 CROSS SECTIONS

STA 4+820.000 TO STA 4+840.000

WYA/CRA-30-28.009/0.000

699
2116

SEEDING	
END WIDTH	SQ. METERS
68.66	1322
63.52	1268



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.49	134.55	90	2561
5.48	121.57	131	2291

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 4+860.000 TO STA 4+880.000

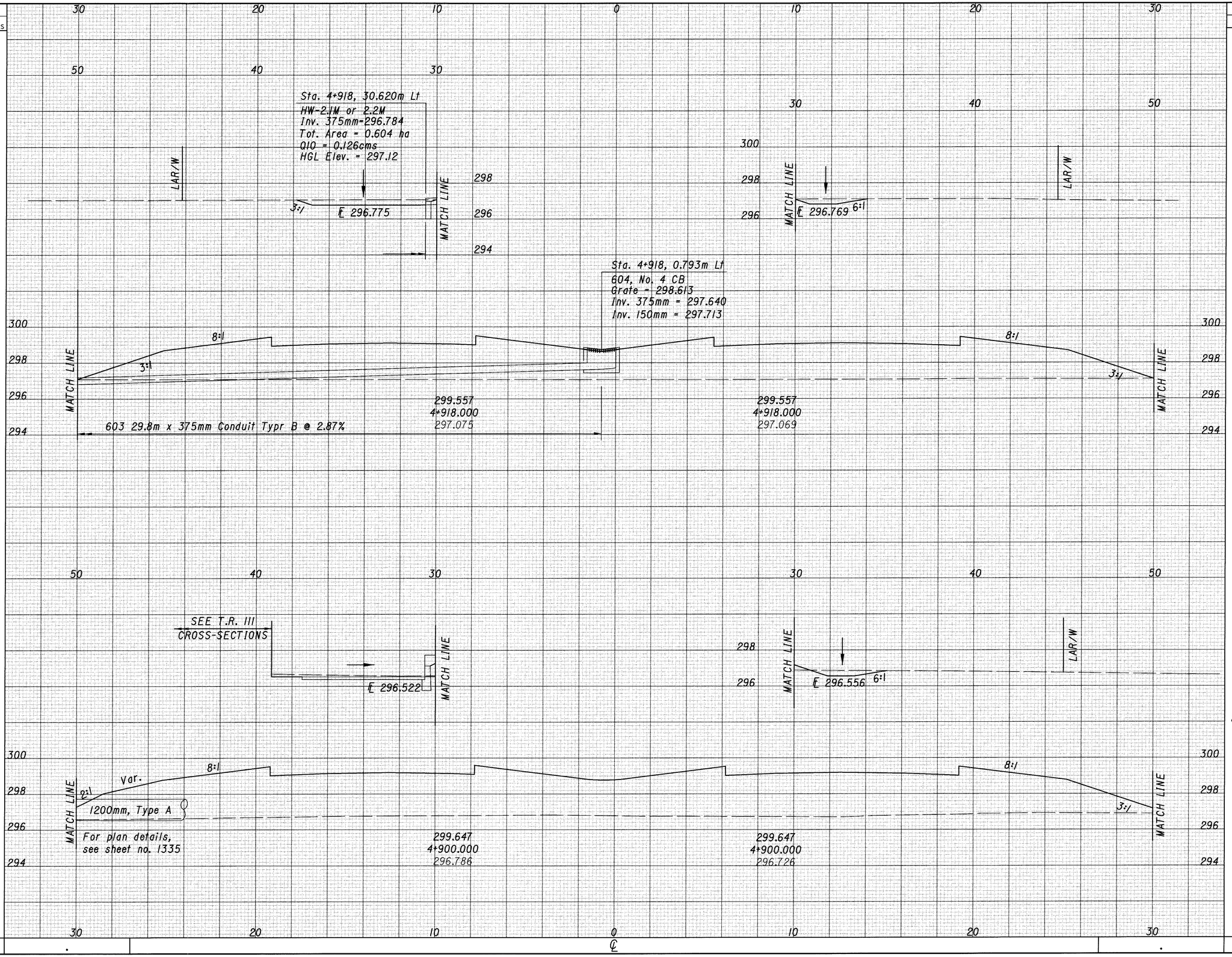
WYA/CRA-30-28.009/0.000

700
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
54.51	1008	2.84	105.88	50	2128
57.50	1262	2.69	130.53	62	2651

CALCULATED AM

CHECKED REA



US-30 CROSS SECTIONS

STA 4+900.000 TO STA 4+918.000

WYA/CRA-30-28.009/0.000

701
2116

SEEDING	
END WIDTH	SQ. METERS
51.16	1051
53.95	108

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.45	92.90		
		53	1975
2.87	104.59		
		6	210

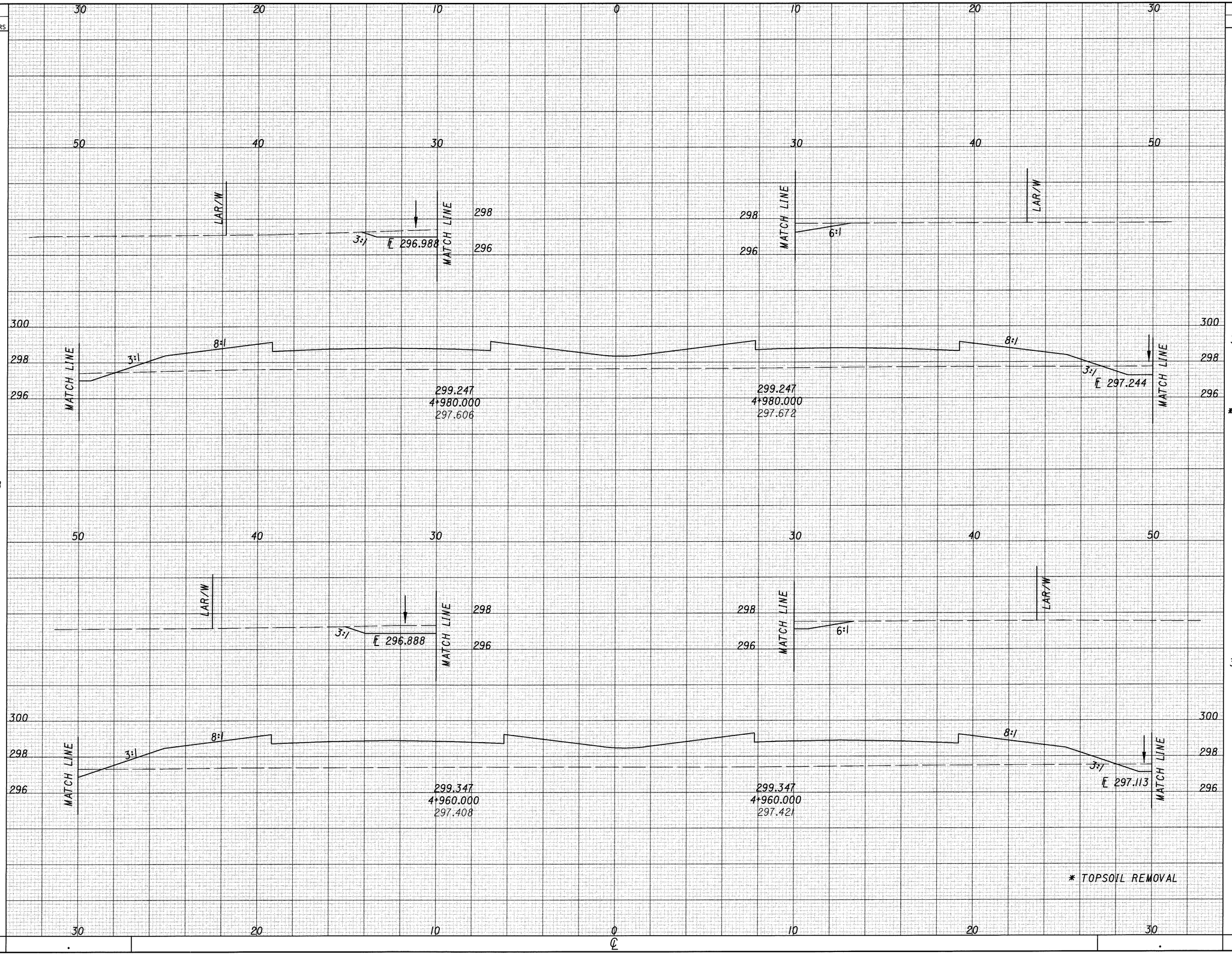
CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 4+920.000 TO STA 4+940.000

WYA / CRA-30-28.009 / 0.000

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
51.21	1028	3.73	55.43	74	1288
51.60	1028	3.62	73.34	61	1662



CALCULATED AM

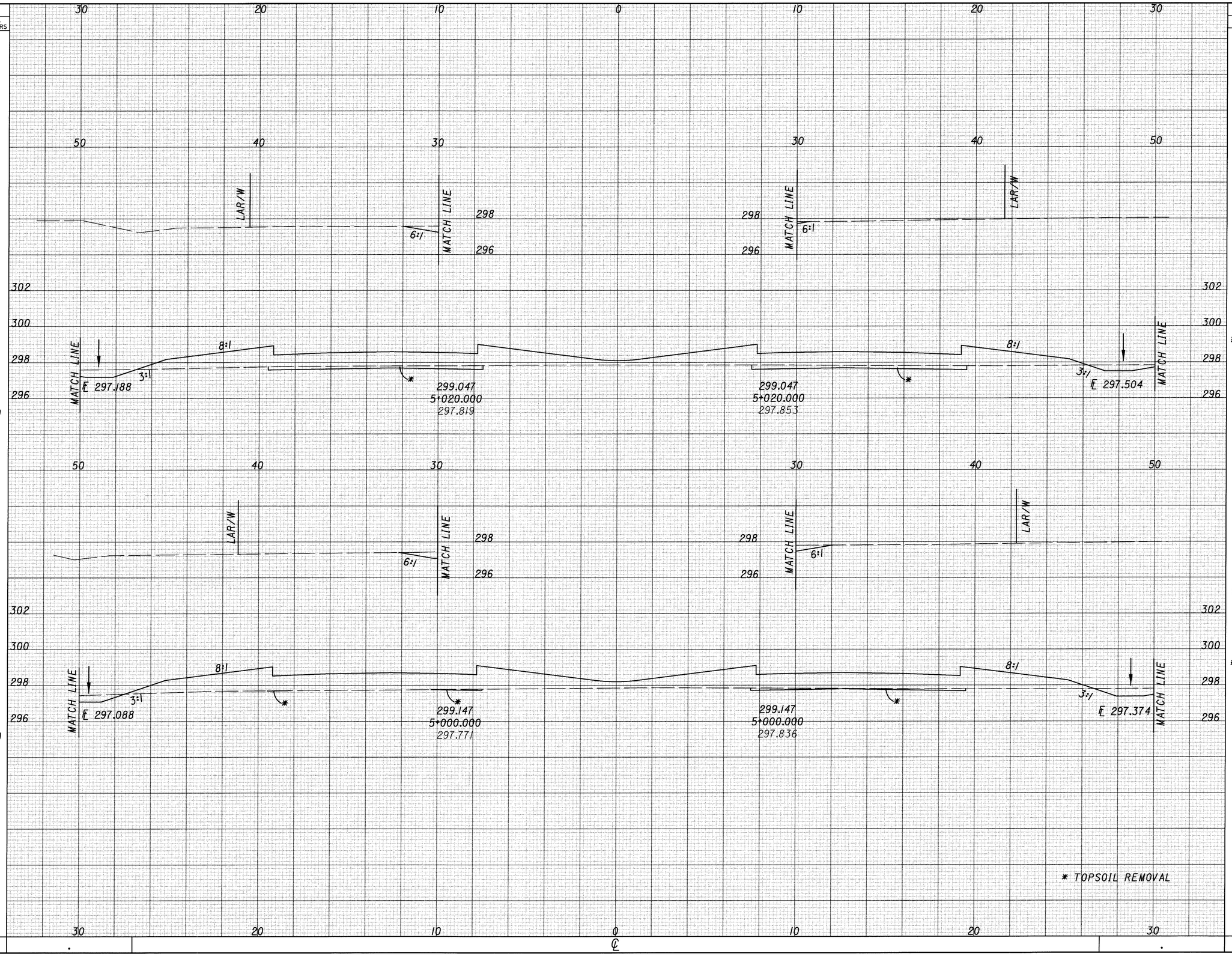
CHECKED REA

US-30 CROSS SECTIONS
STA 4+960.000 TO STA 4+980.000

WYA/CRA-30-28.009/0.000

703
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
47.19	960	2.35	39.76	50	835
		*4.06			
				*51	
48.81	1000	2.62	43.71	64	991
		*1.00			
				*10	



CALCULATED AM

CHECKED REA

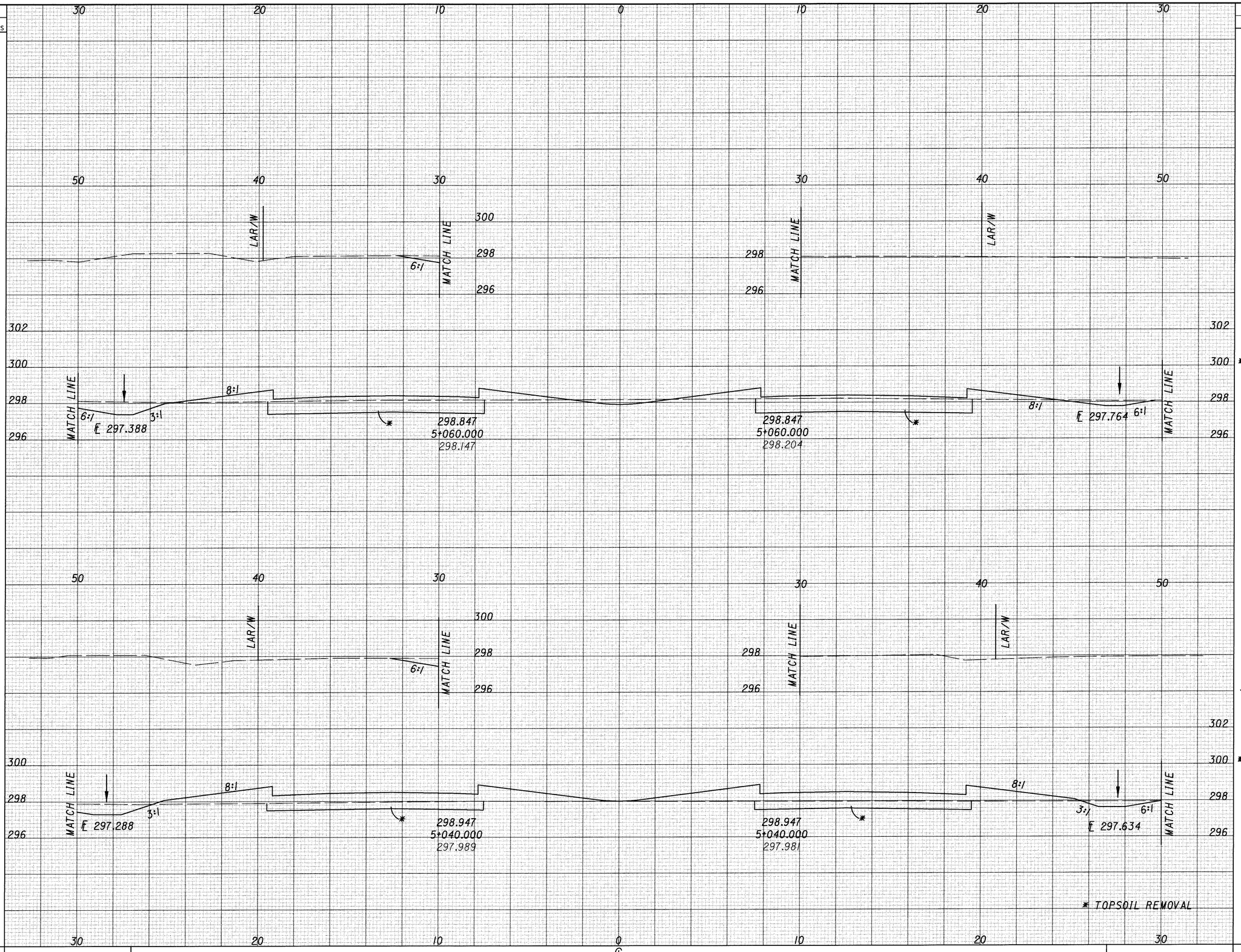
US-30 CROSS SECTIONS

STA 5+000.000 TO STA 5+020.000

WYA/CRA-30-28.009/0.000

704
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
46.60	939	4.75	26.40	82	592
		*17.16		*271	
47.28	945	3.42	32.77	58	725
		*9.98		*140	



CALCULATED AM

CHECKED REA

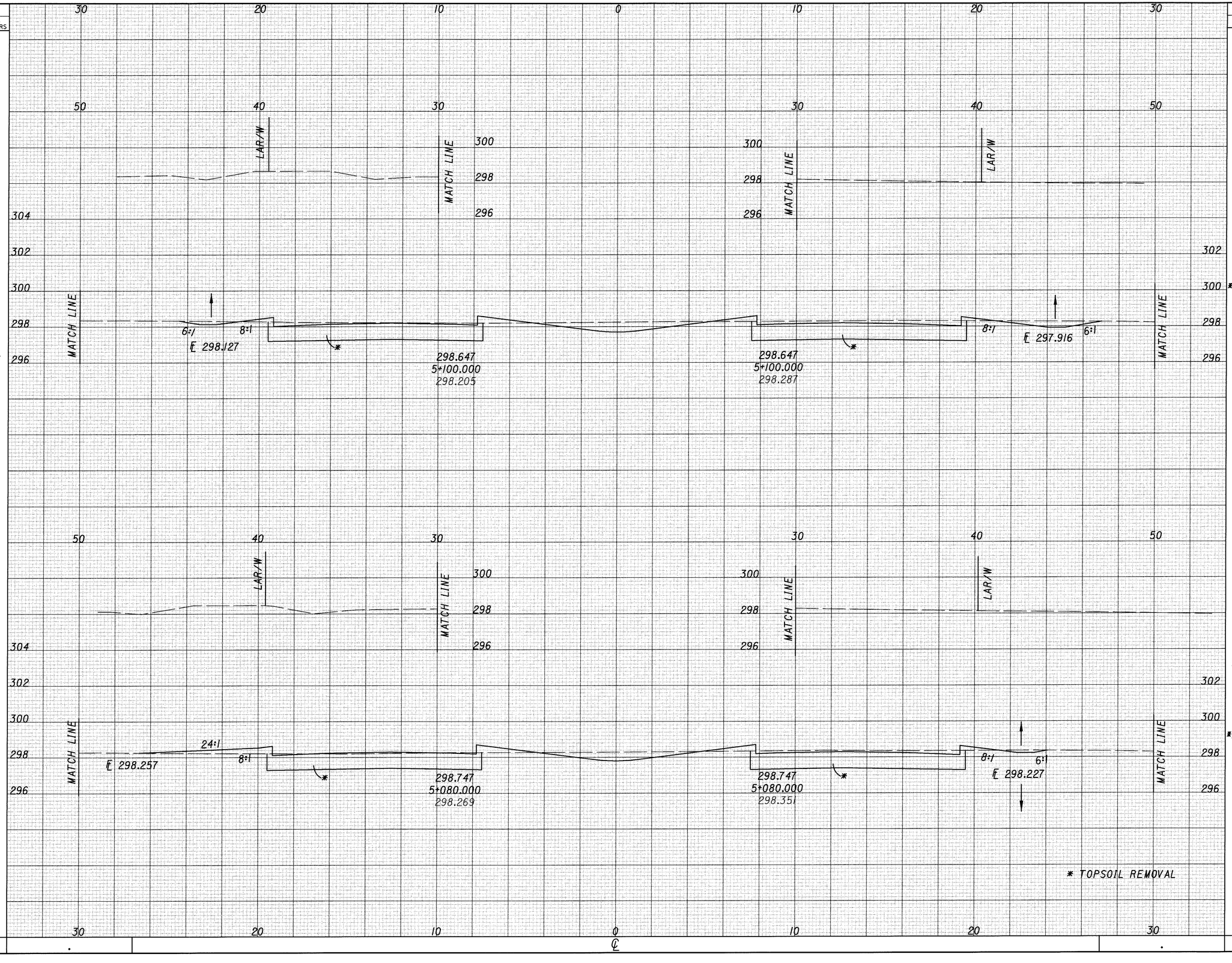
US-30 CROSS SECTIONS

STA 5+040.000 TO STA 5+060.000

WYA / CRA-30-28.009 / 0.000

705
2116

SEEDING	
END WIDTH	SQ. METERS
35.45	
	697
34.21	
	808



END AREA		VOLUME	
CUT	FILL	CUT	FILL
8.84	21.82		
*20.33			
		141	450
		*406	
5.25	23.19		
*20.23			
		100	496
		*374	

CALCULATED AM

CHECKED REA

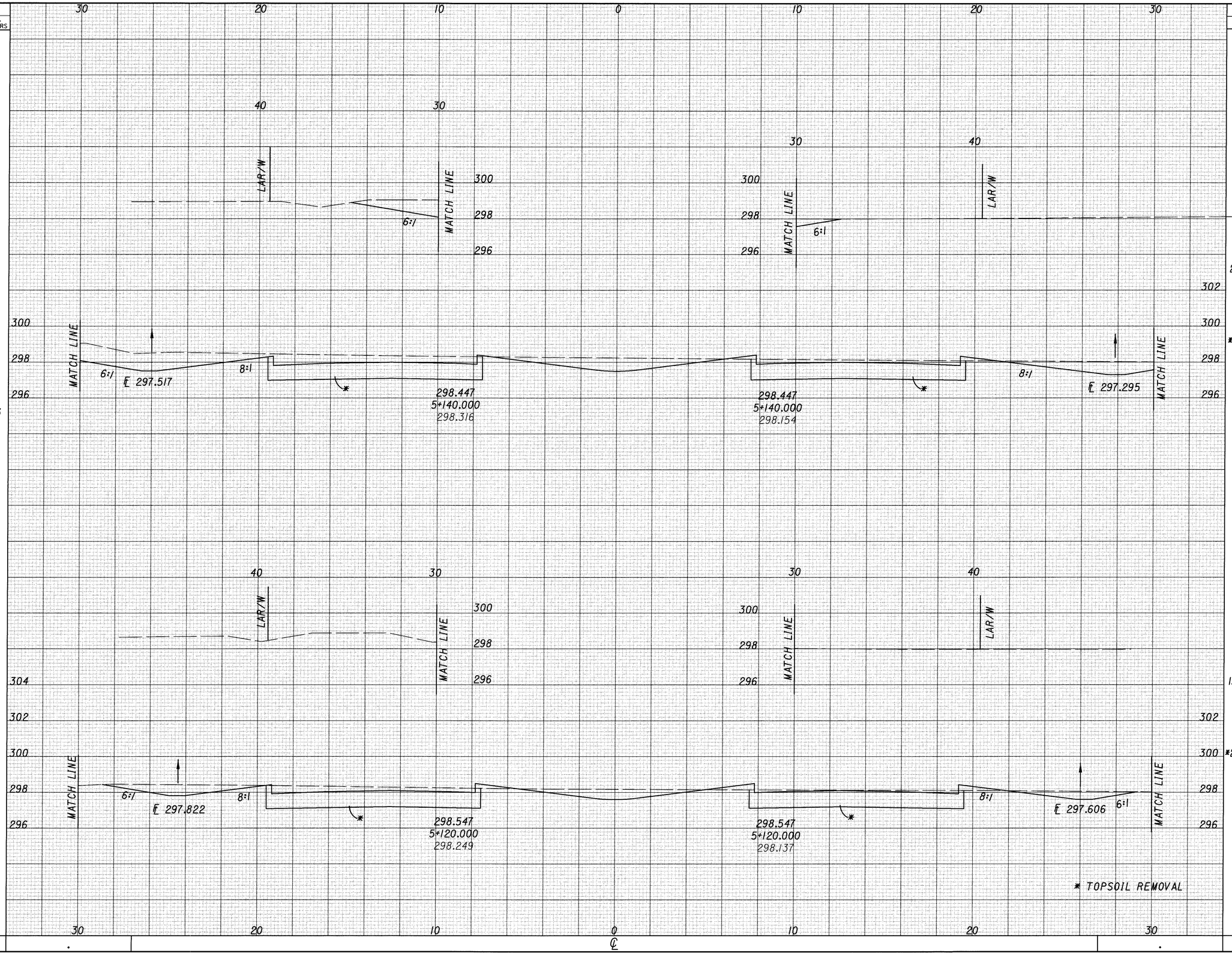
US-30 CROSS SECTIONS

STA 5+080.000 TO STA 5+100.000

WYA / CRA-30-28.009 / 0.000

706
2116

SEEDING	
END WIDTH	SQ. METERS
52.93	953
42.39	778



END AREA		VOLUME	
CUT	FILL	CUT	FILL
28.63	21.01		
*20.51			
		422	427
		*409	
13.52	21.64		
*20.39			
		224	435
		*407	

CALCULATED AM

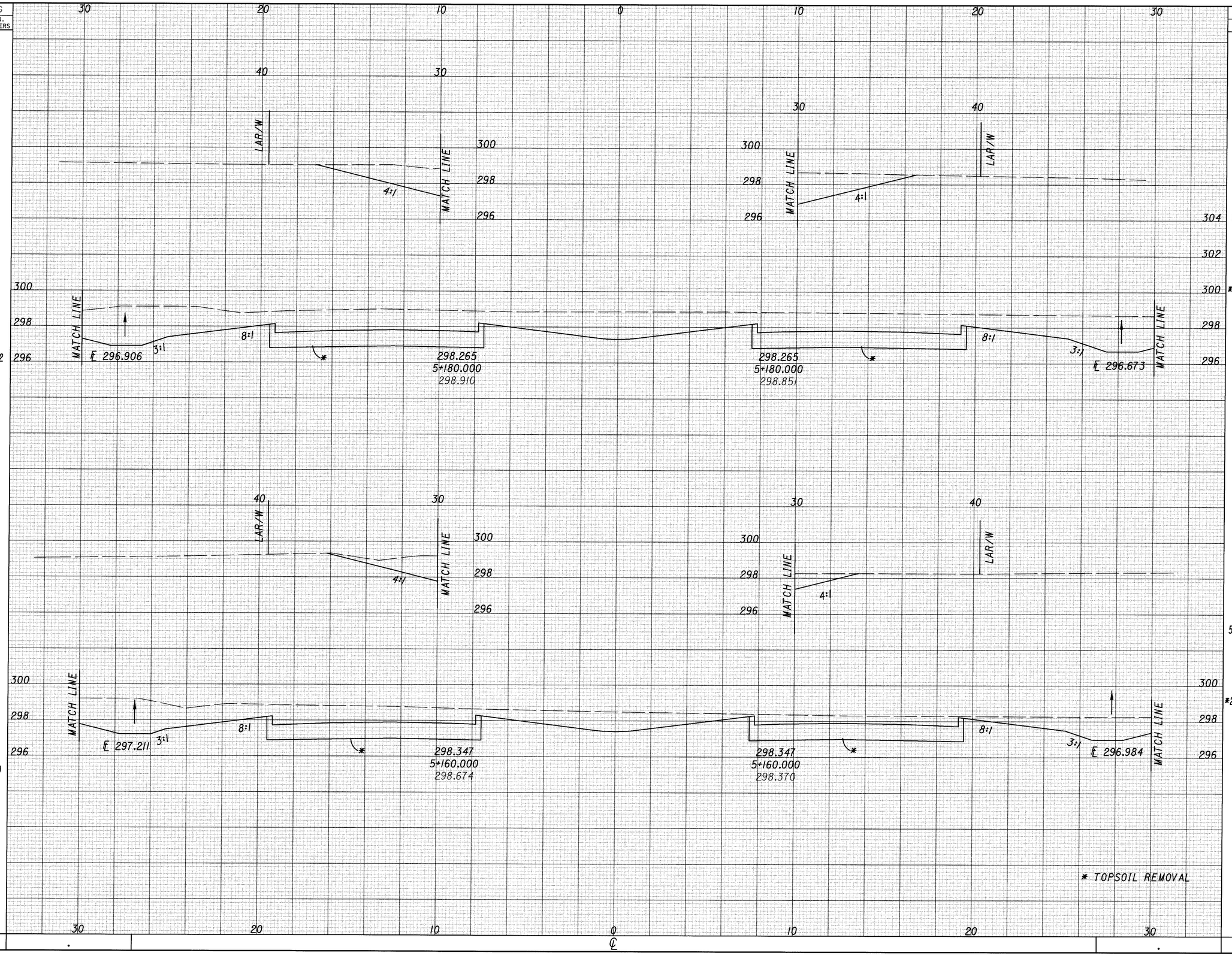
CHECKED REA

US-30 CROSS SECTIONS
STA 5+120.000 TO STA 5+140.000

WYA / CRA-30-28.009 / 0.000

707
2116

SEEDING	
END WIDTH	SQ. METERS
60.10	1162
56.11	1090



END AREA		VOLUME	
CUT	FILL	CUT	FILL
87.17	20.67		
*20.67			
		1429	413
		*413	
55.71	20.67		
*20.67			
		843	417
		*412	

* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 5+160.000 TO STA 5+180.000

WYA / CRA-30-28.009 / 0.000

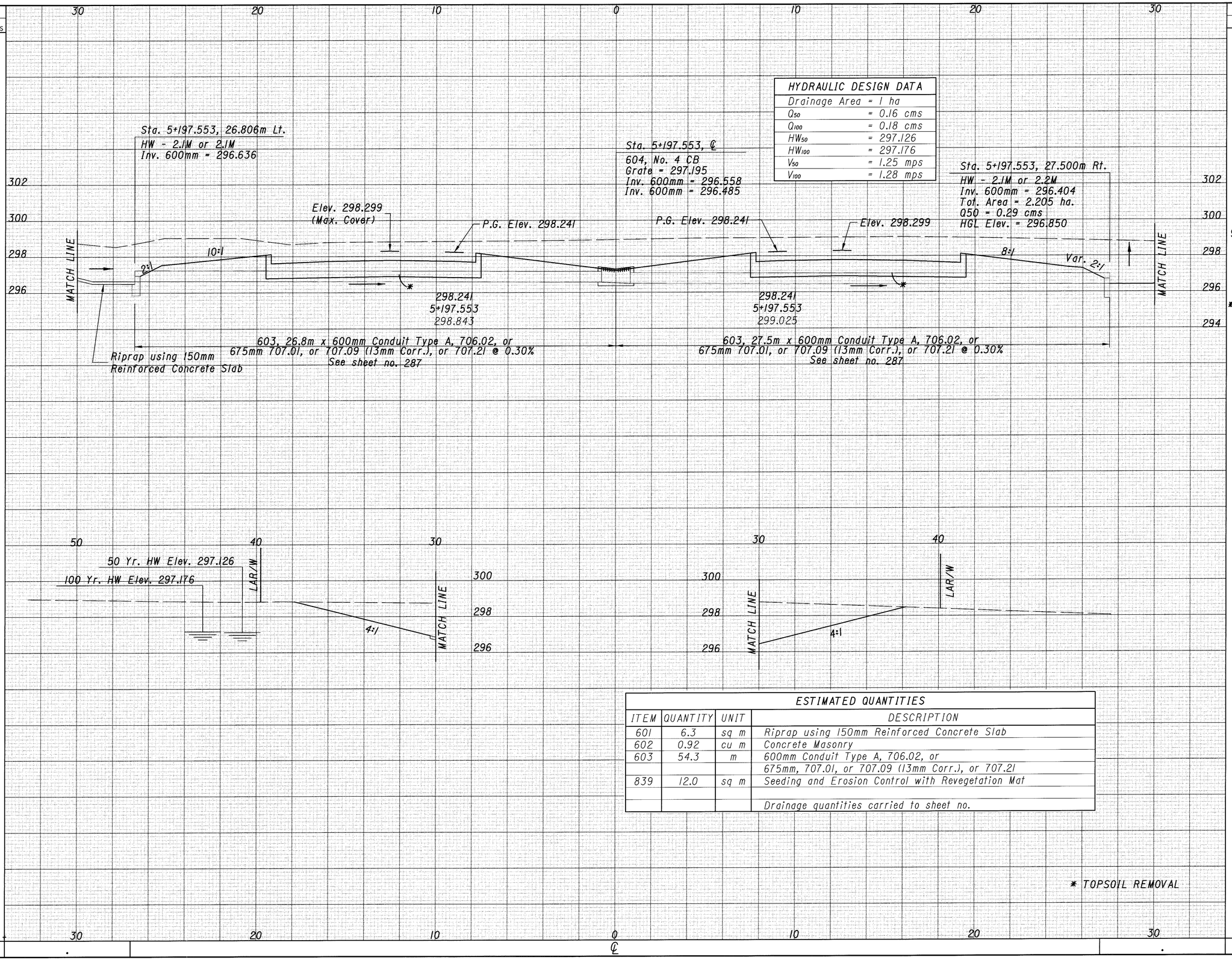
708
2116

SEEDING	
END WIDTH	SQ. METERS
63.77	1087

END AREA		VOLUME	
CUT	FILL	CUT	FILL
99.24	20.67	1636	363
*20.67		*363	

CALCULATED AM

CHECKED REA



ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	6.3	sq m	Riprap using 150mm Reinforced Concrete Slab
602	0.92	cu m	Concrete Masonry
603	54.3	m	600mm Conduit Type A, 706.02, or
			675mm, 707.01, or 707.09 (13mm Corr.), or 707.21
839	12.0	sq m	Seeding and Erosion Control with Revegetation Mat
			Drainage quantities carried to sheet no.

* TOPSOIL REMOVAL

US-30 CROSS SECTIONS STA 5+197.553

WYA/CRA-30-28.009/0.000

709
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
49.71	1118	61.63	20.67	1589	413
		*20.67		*413	
62.06	154	97.28	20.67	240	51
		*20.67		*51	

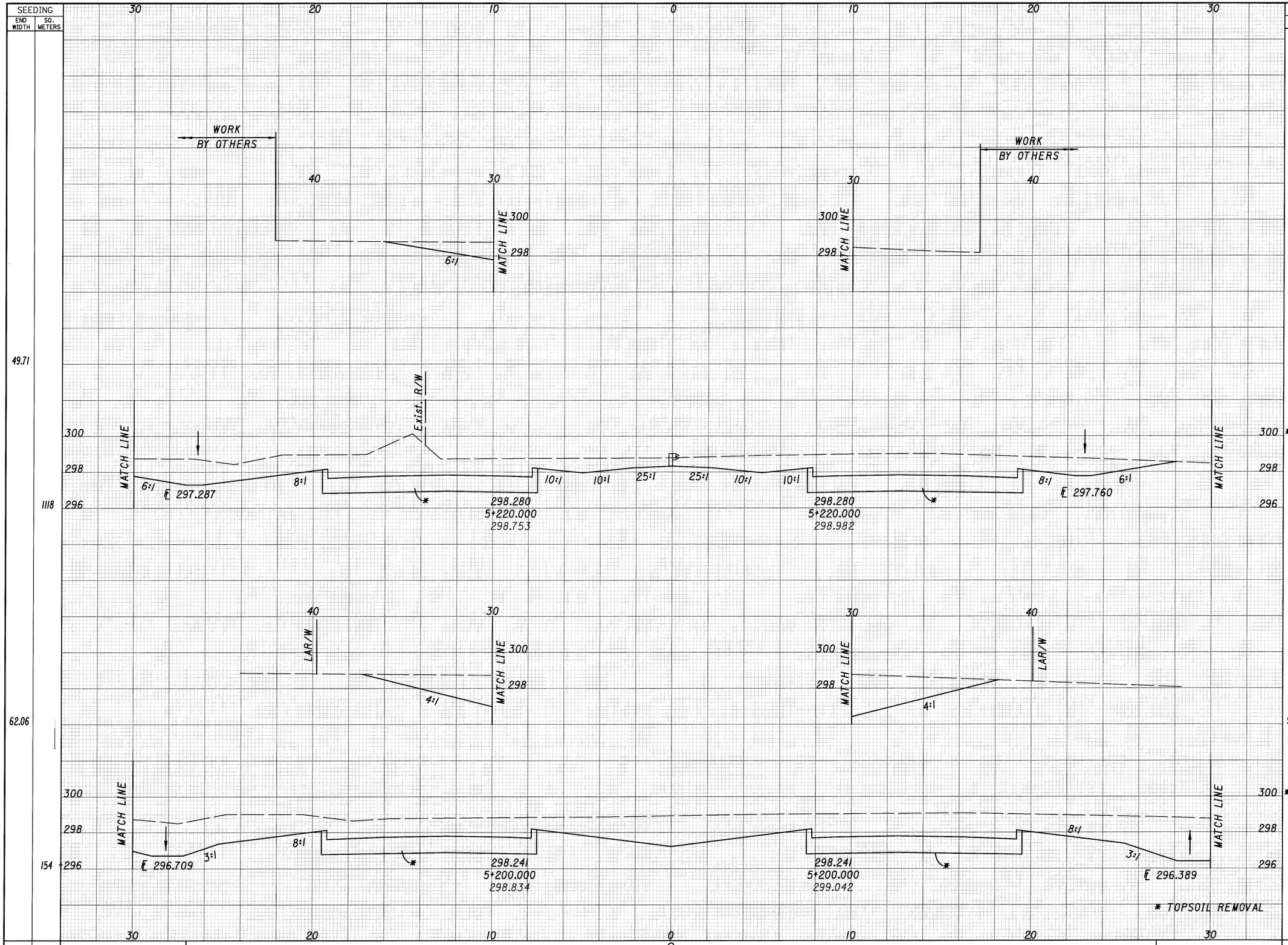
CALCULATED AM

CHECKED REA

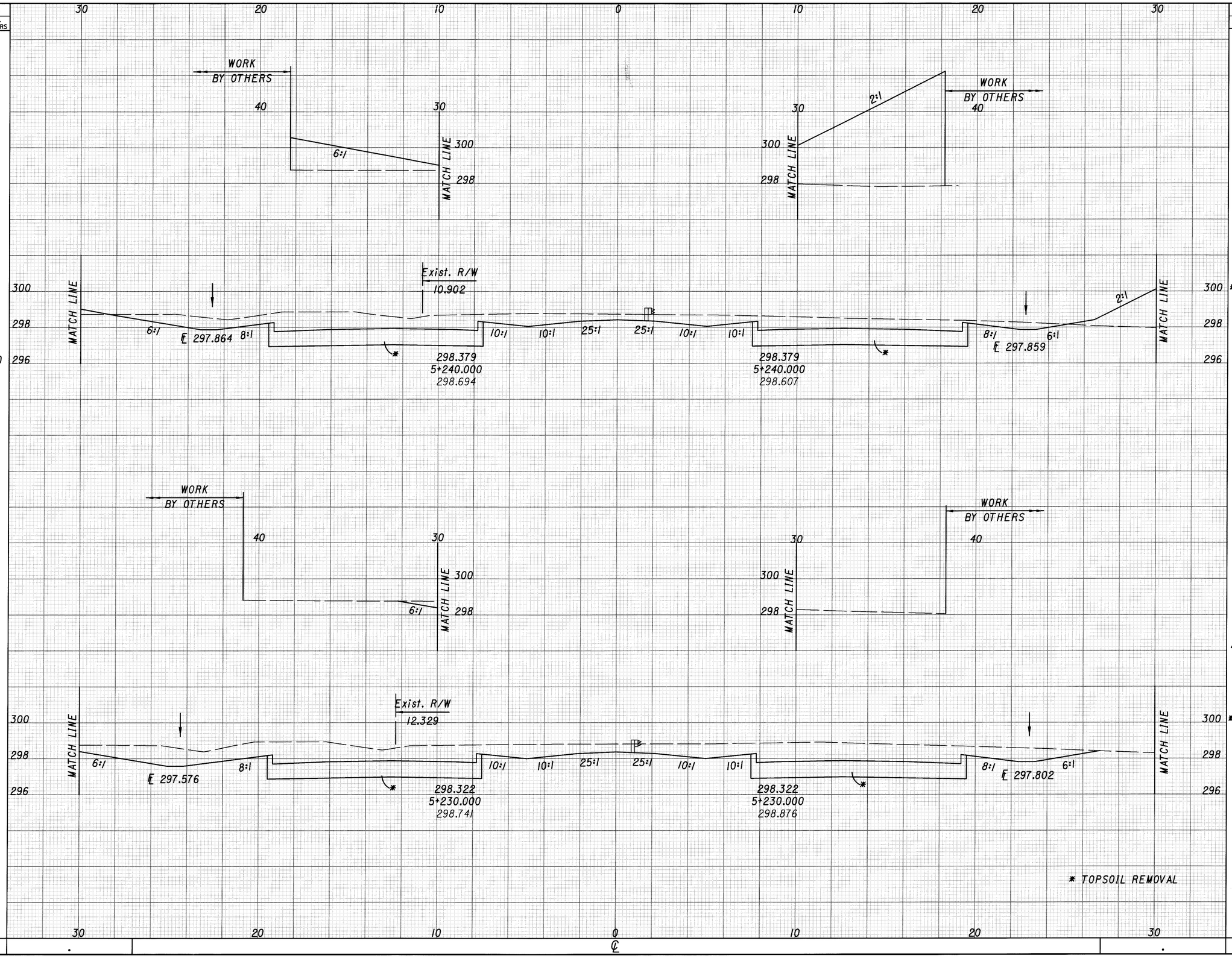
US-30 CROSS SECTIONS
STA 5+200.000 TO STA 5+220.000

WYA/CRA-30-28.009/0.000

710/2116



SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
						CALCULATED AM / CHECKED REA
55.49		31.59	69.50			
	500	*20.67		390	451	
				*207		
44.46		46.33	20.67			
	471	*20.67		540	207	
				*207		

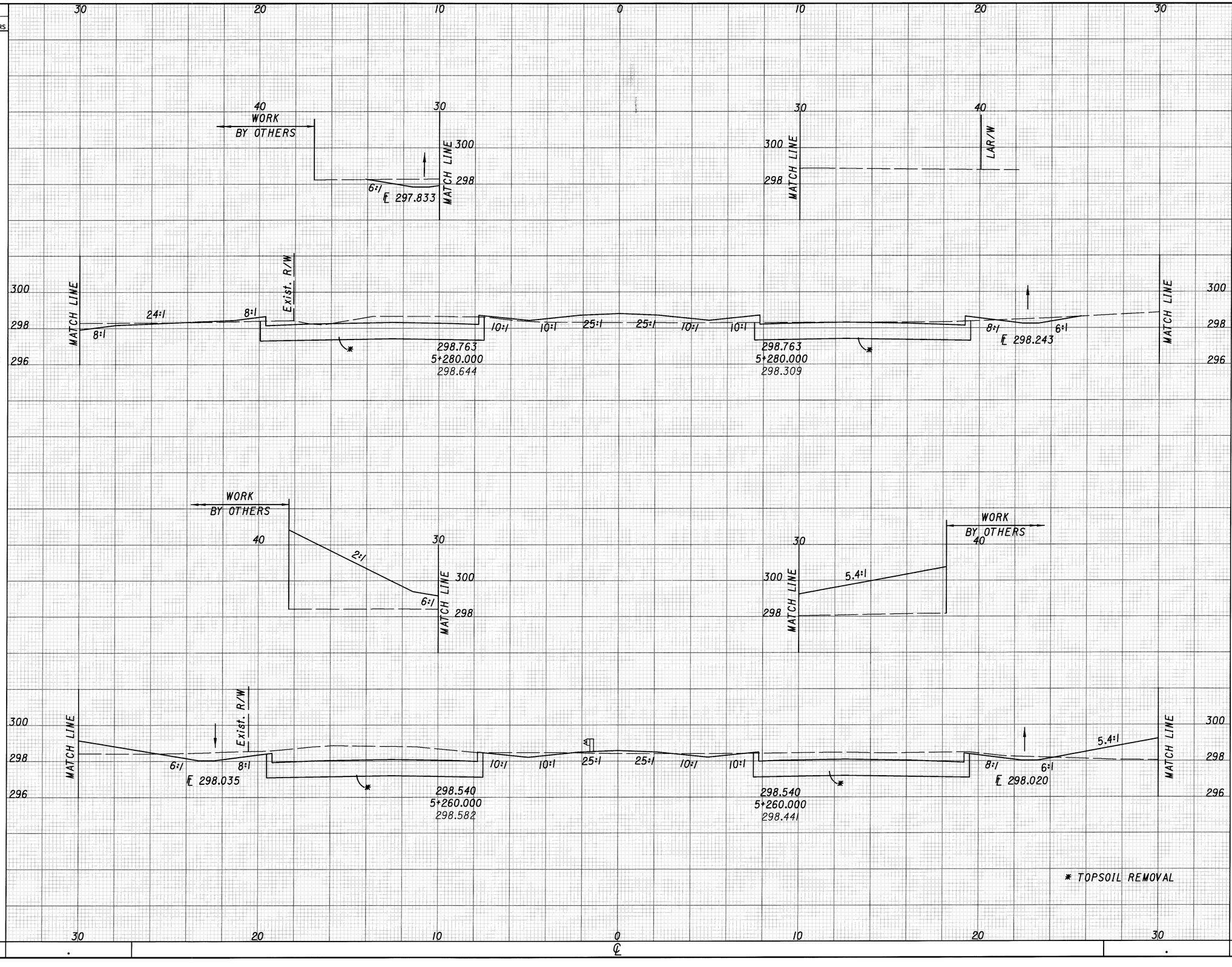


US-30 CROSS SECTIONS STA 5+230.000 TO STA 5+240.000

WYA/CRA-30-28.009/0.000

711
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
43.46	984	7.88	25.71	257	873
		*20.73		*414	
54.98	1105	17.80	61.56	494	1311
		*20.66		*413	



CALCULATED AM

CHECKED REA

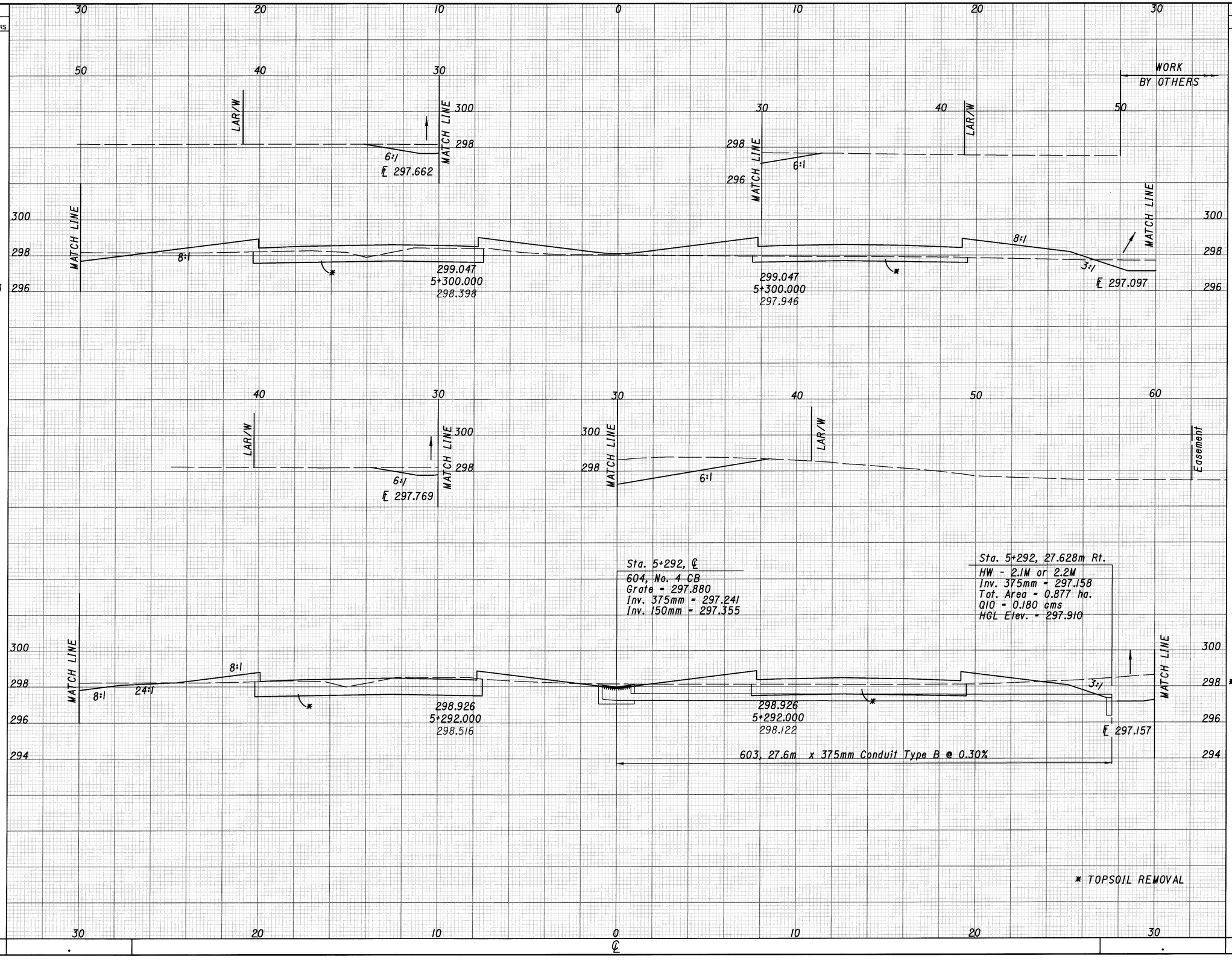
US-30 CROSS SECTIONS

STA 5+260.000 TO STA 5+280.000

WYA / CRA-30-28.009 / 0.000

712
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
51.52		4.78	34.39		
	433	*11.14		79	245
				*112	
56.83		14.87	26.96		
	602	*16.92		137	316
				*226	

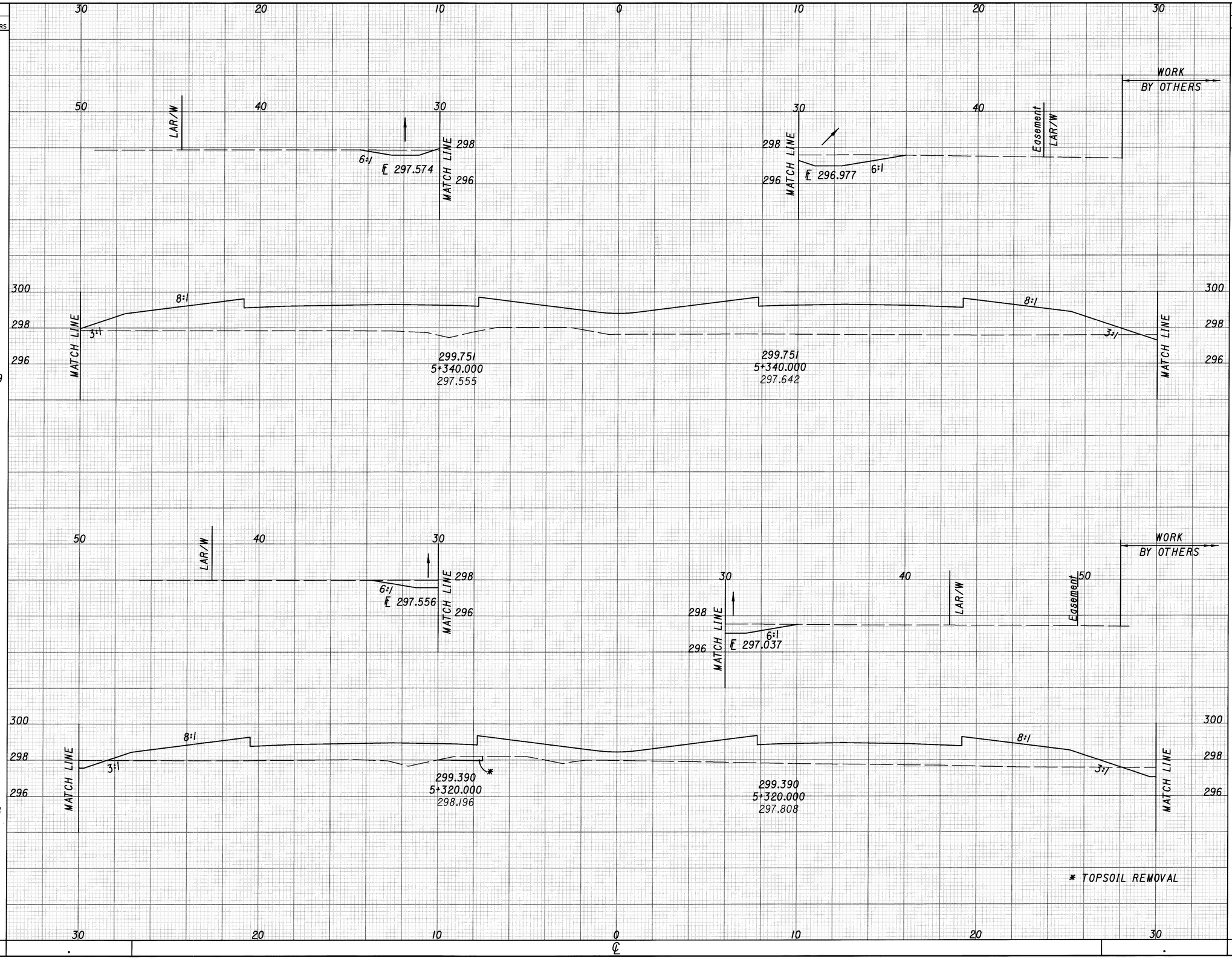


US-30 CROSS SECTIONS
STA 5+292.000 TO STA 5+300.000

WYA/CRA-30-28.009/0.000

713
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
						CALCULATED AM / CHECKED REA
53.63	1049	3.44	81.41	68	1338	
		*0.00		*5		
51.26	1028	3.32	52.37	81	868	
		*0.46		*116		

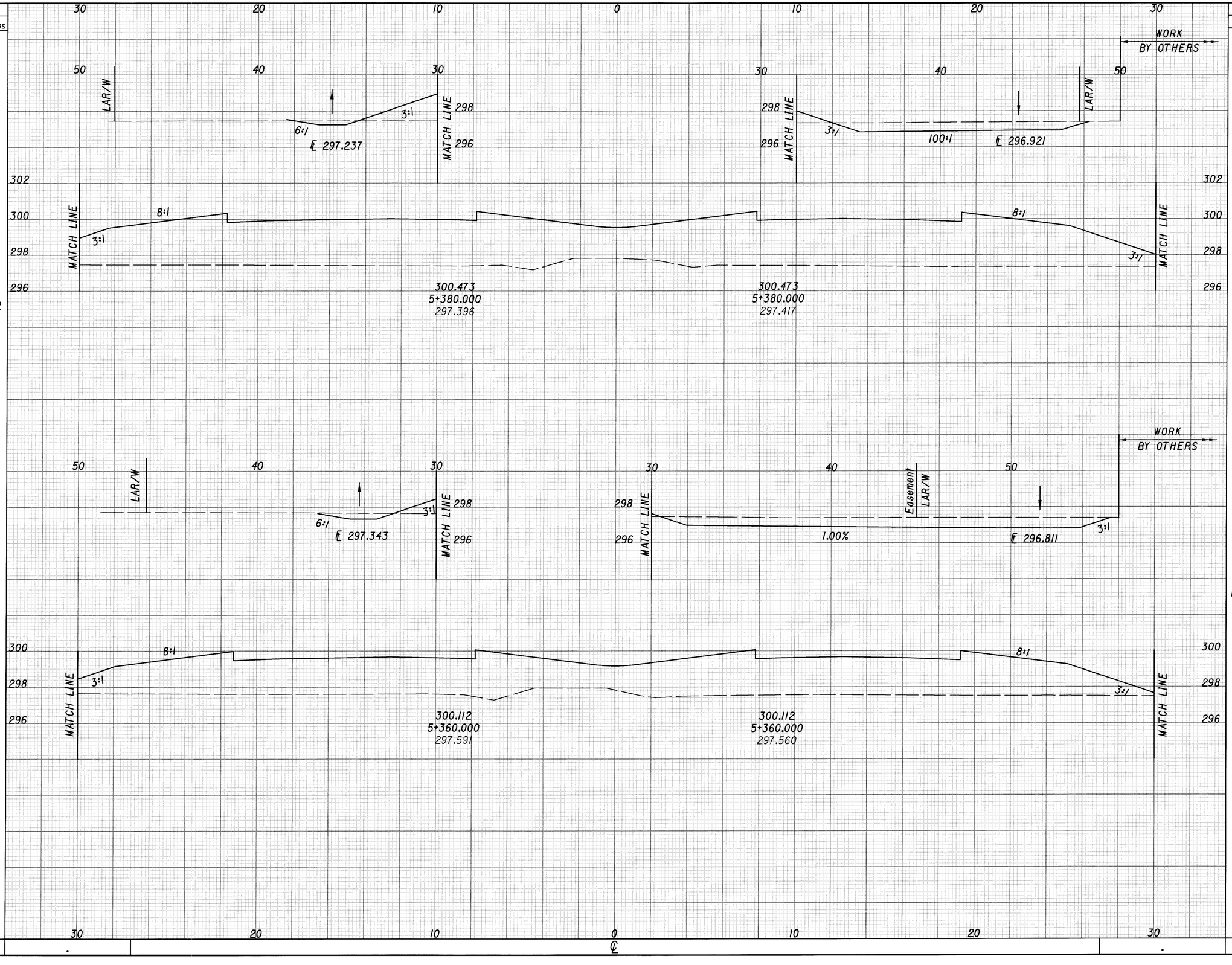


US-30 CROSS SECTIONS
STA 5+320.000 TO STA 5+340.000

WYA / CRA-30-28.009 / 0.000

714
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
66.77	1422	6.79	146.78	204	2588
75.47	1291	13.57	111.98	170	1934



US-30 CROSS SECTIONS
STA 5+360.000 TO STA 5+380.000

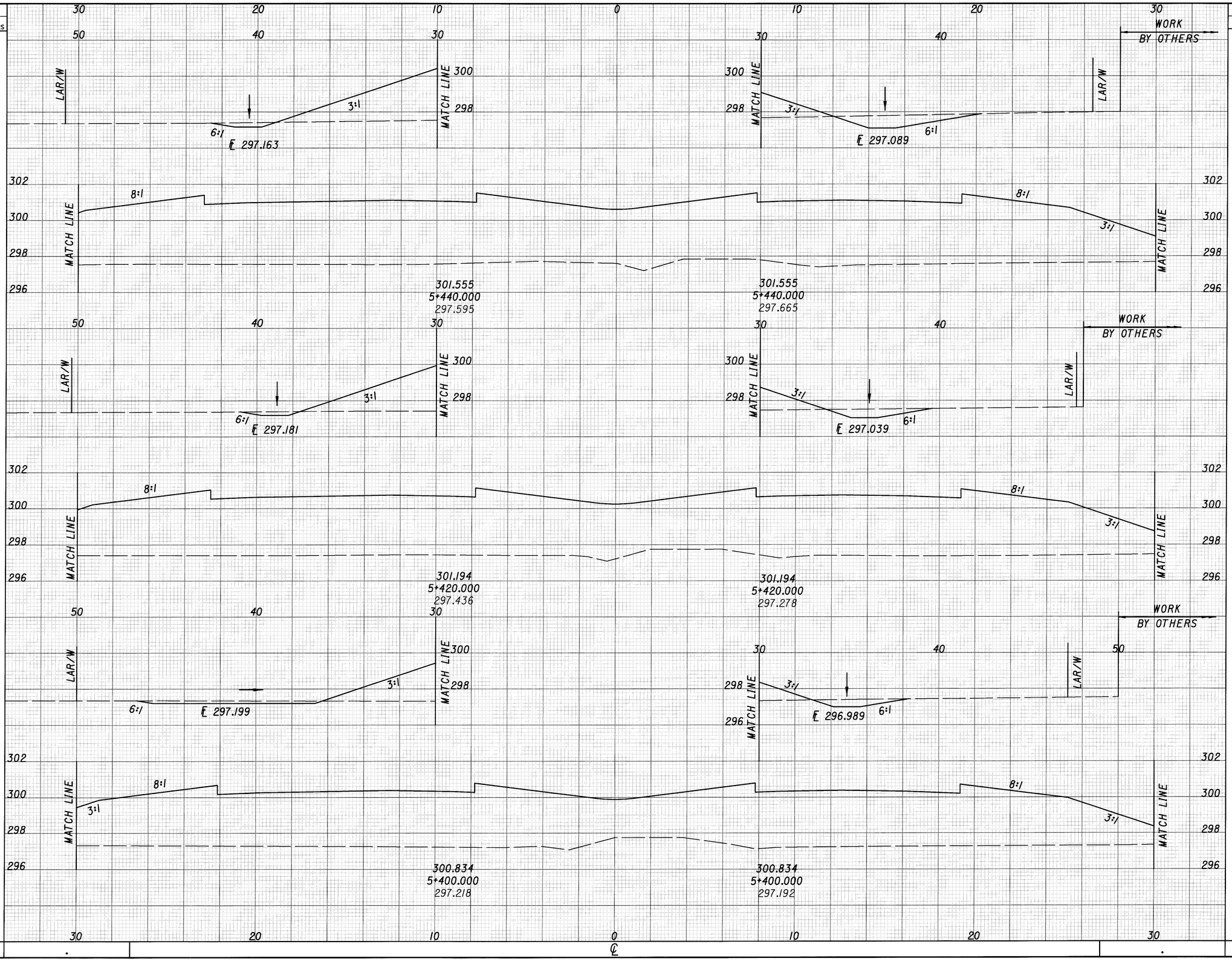
CALCULATED AM

CHECKED REA

WYA/CRA-30-28.009/0.000

715
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
66.76	1291	4.04	214.37	63	4126
62.38	1294	2.28	198.20	51	3781
67.01	1338	2.85	179.94	96	3267



CALCULATED AM

CHECKED REA

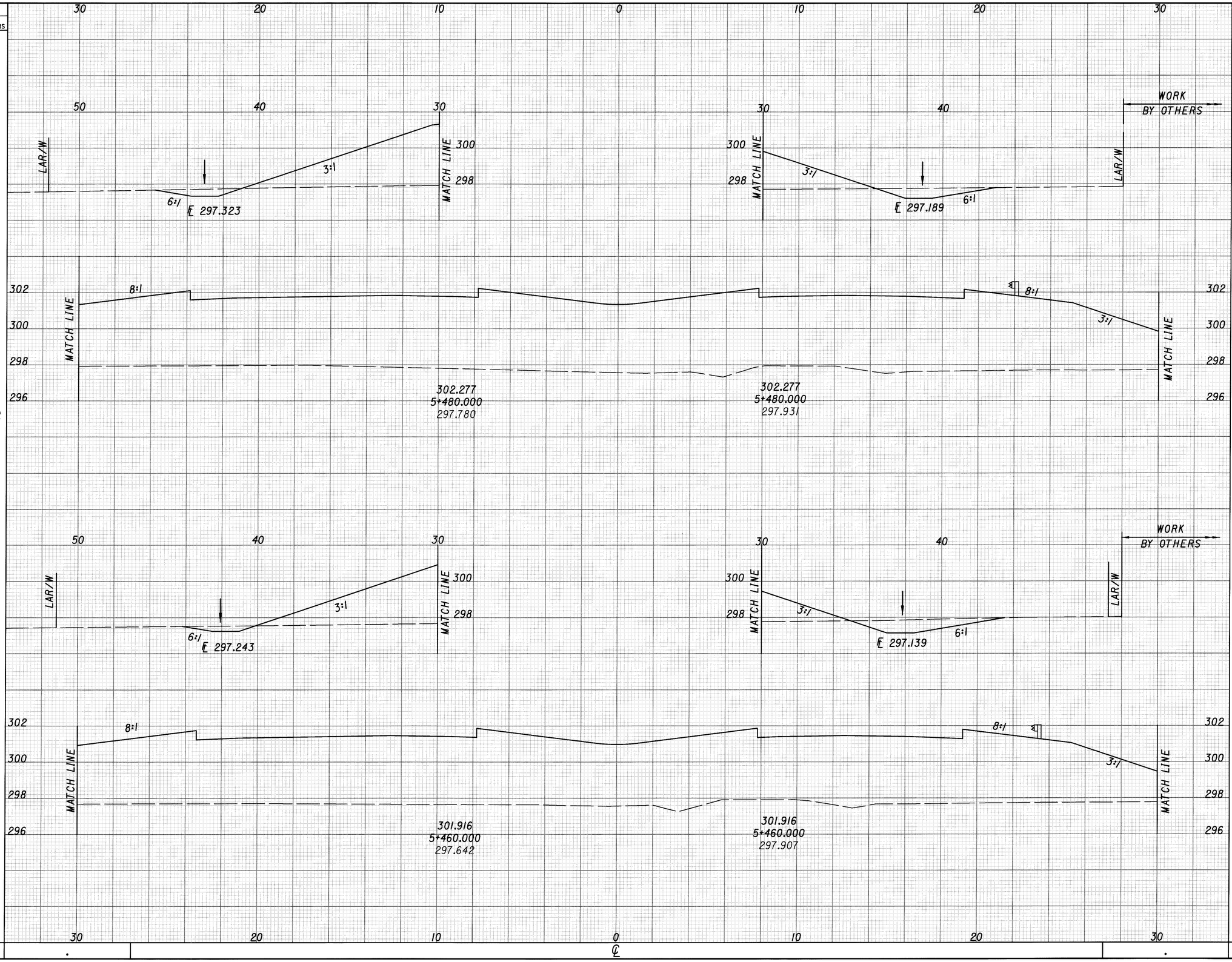
US-30 CROSS SECTIONS

STA 5+400.000 TO STA 5+440.000

WYA/CRA-30-28.009/0.000

716
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
69.91	1392	3.52	257.94	79	4938
69.33	1361	4.42	235.85	85	4502



CALCULATED AM

CHECKED REA

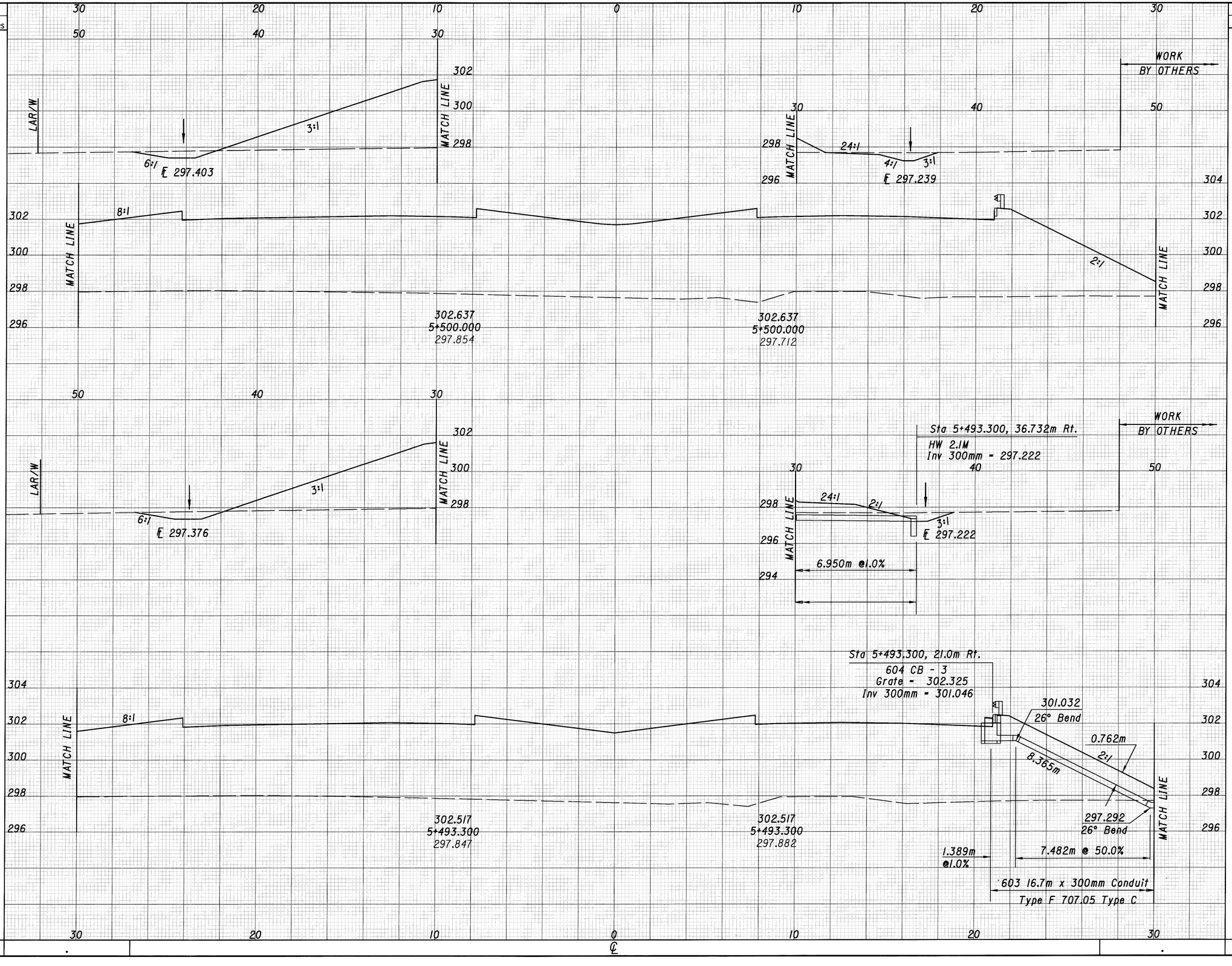
US-30 CROSS SECTIONS

STA 5+460.000 TO STA 5+480.000

WYA / CRA-30-28.009 / 0.000

717
2116

SEEDING	
END WIDTH	SQ. METERS
64.05	432
64.83	896



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.29	268.46		
		15	1774
2.25	261.00		
		38	3451

CALCULATED AM

CHECKED REA

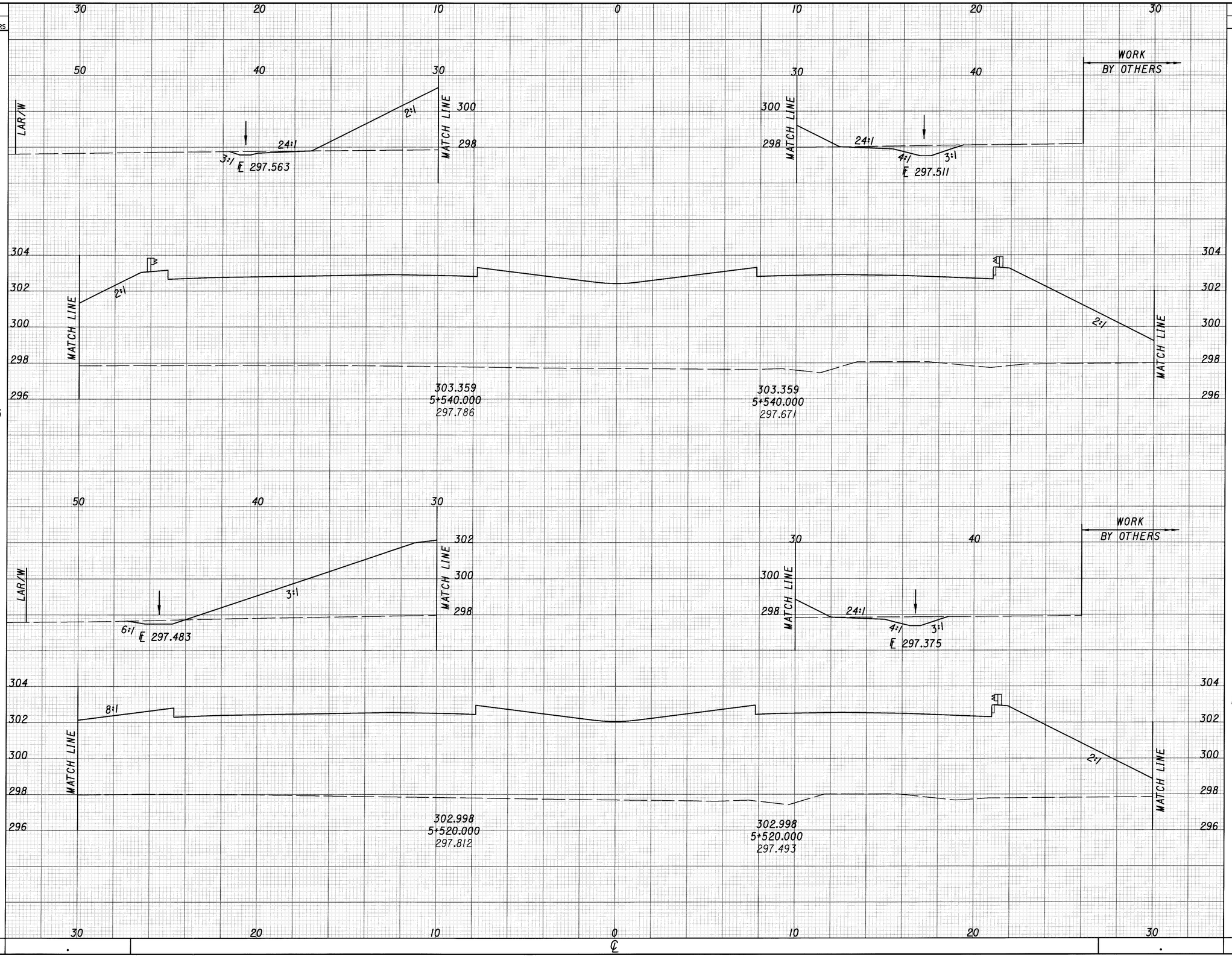
US-30 CROSS SECTIONS

STA 5+493.300 TO STA 5+500.000

WYA / CRA-30-28.009 / 0.000

718
2116

SEEDING	
END WIDTH	SQ. METERS
59.95	
	1245
64.55	
	1286



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.07	297.73		
		39	5935
1.85	295.74		
		41	5642

CALCULATED AM

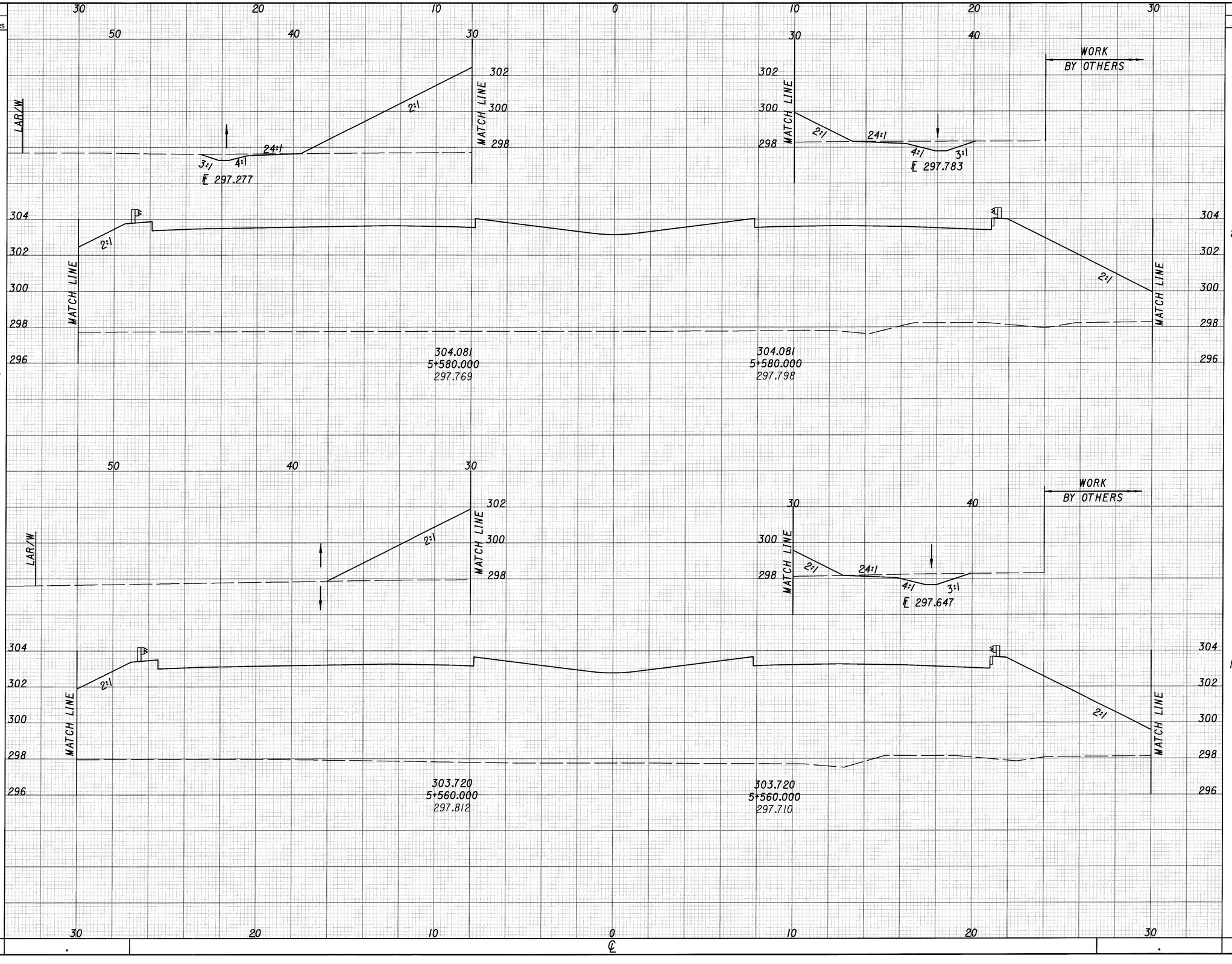
CHECKED REA

US-30 CROSS SECTIONS
STA 5+520.000 TO STA 5+540.000

WYA/CRA-30-28.009/0.000

719
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
63.89		2.30	351.15		
	1203			42	6711
56.43		1.86	319.93		
	1164			39	6177



CALCULATED AM

CHECKED REA

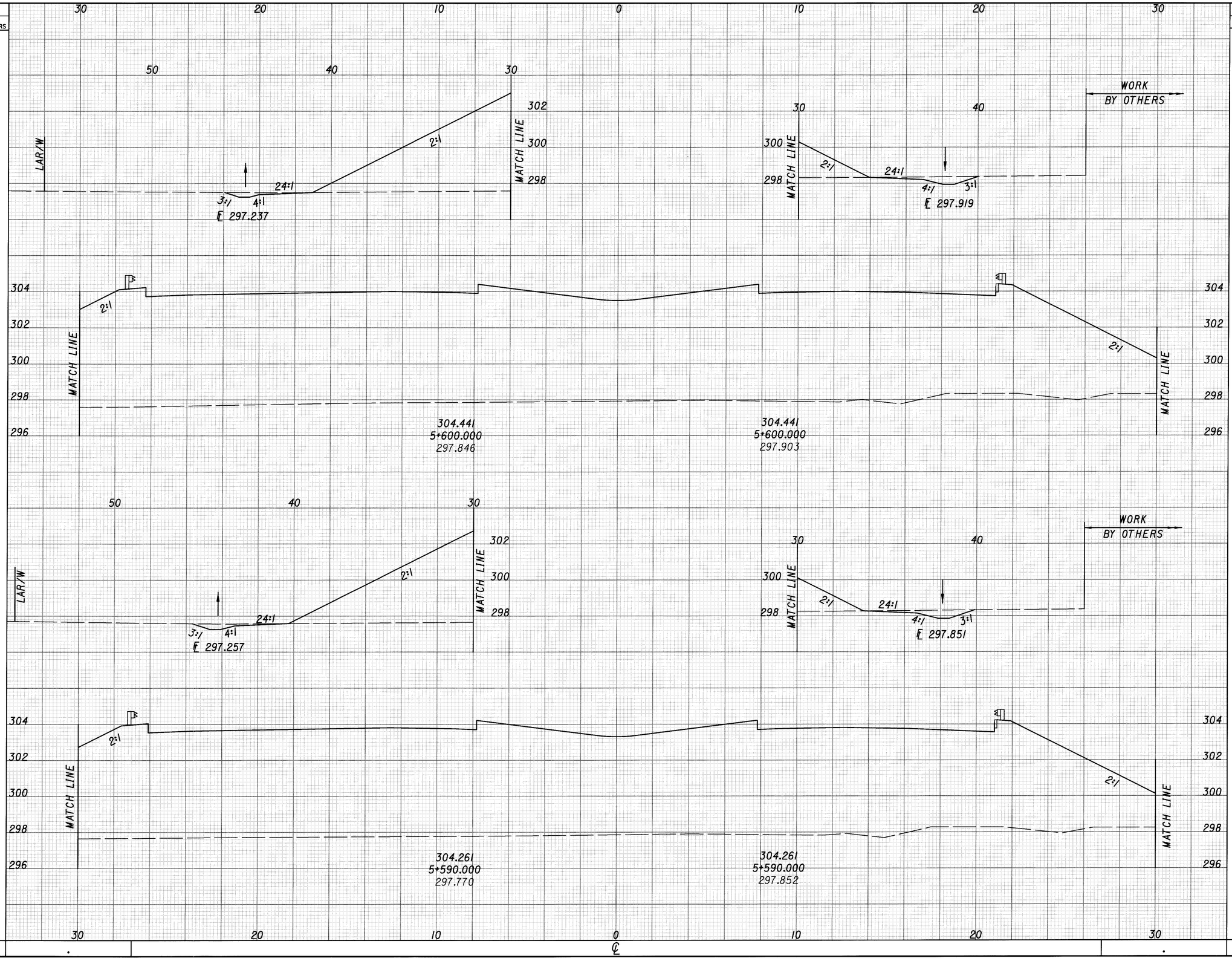
US-30 CROSS SECTIONS

STA 5+560.000 TO STA 5+580.000

WYA/CRA-30-28.009/0.000

720
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
64.11	640	1.63	378.61	17	3720	
63.91	639	1.85	365.29	21	3582	



CALCULATED AM

CHECKED REA

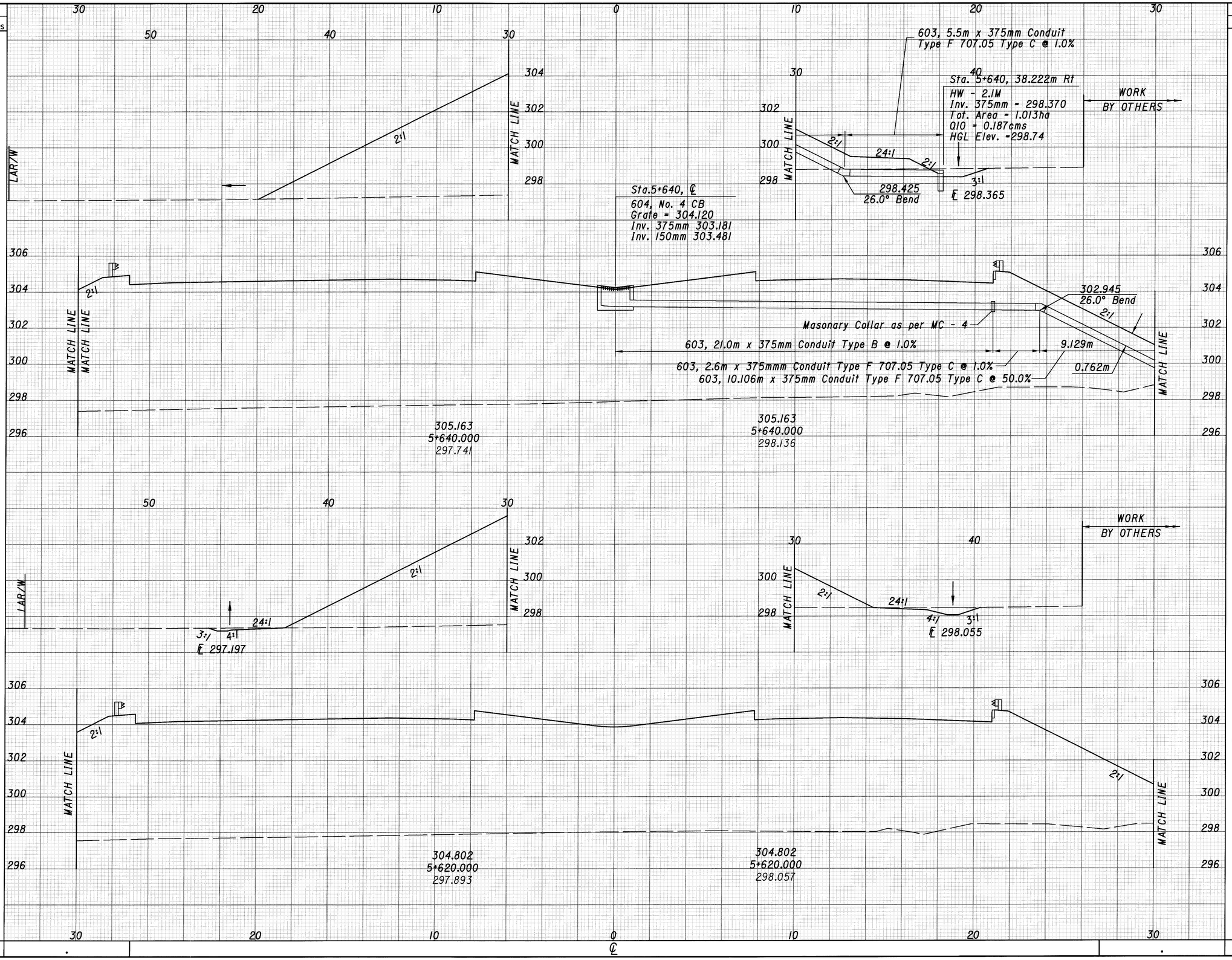
US-30 CROSS SECTIONS

STA 5+590.000 TO STA 5+600.000

WYA/CRA-30-28.009/0.000

721
2116

SEEDING	
END WIDTH	SQ. METERS
61.98	1267
64.72	1288



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.96	438.41	23	8429
1.29	404.52	29	7831

CALCULATED AM

CHECKED REA

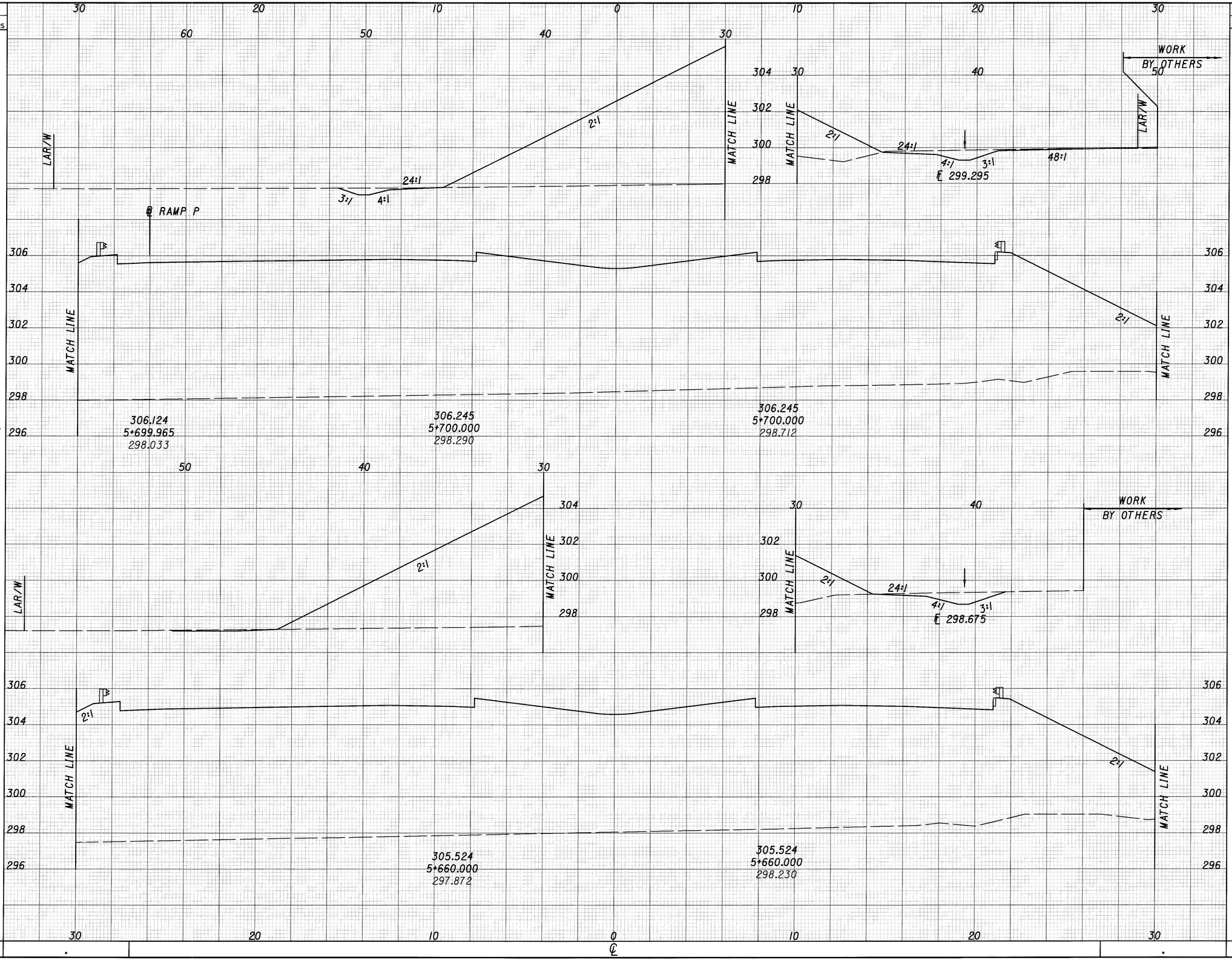
US-30 CROSS SECTIONS

STA 5+620.000 TO STA 5+640.000

WYA/CRA-30-28.009/0.000

722
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
75.50	2903	2.82	481.70	104	18766
69.67	1316	2.37	456.58	33	8950



CALCULATED AM

CHECKED REA

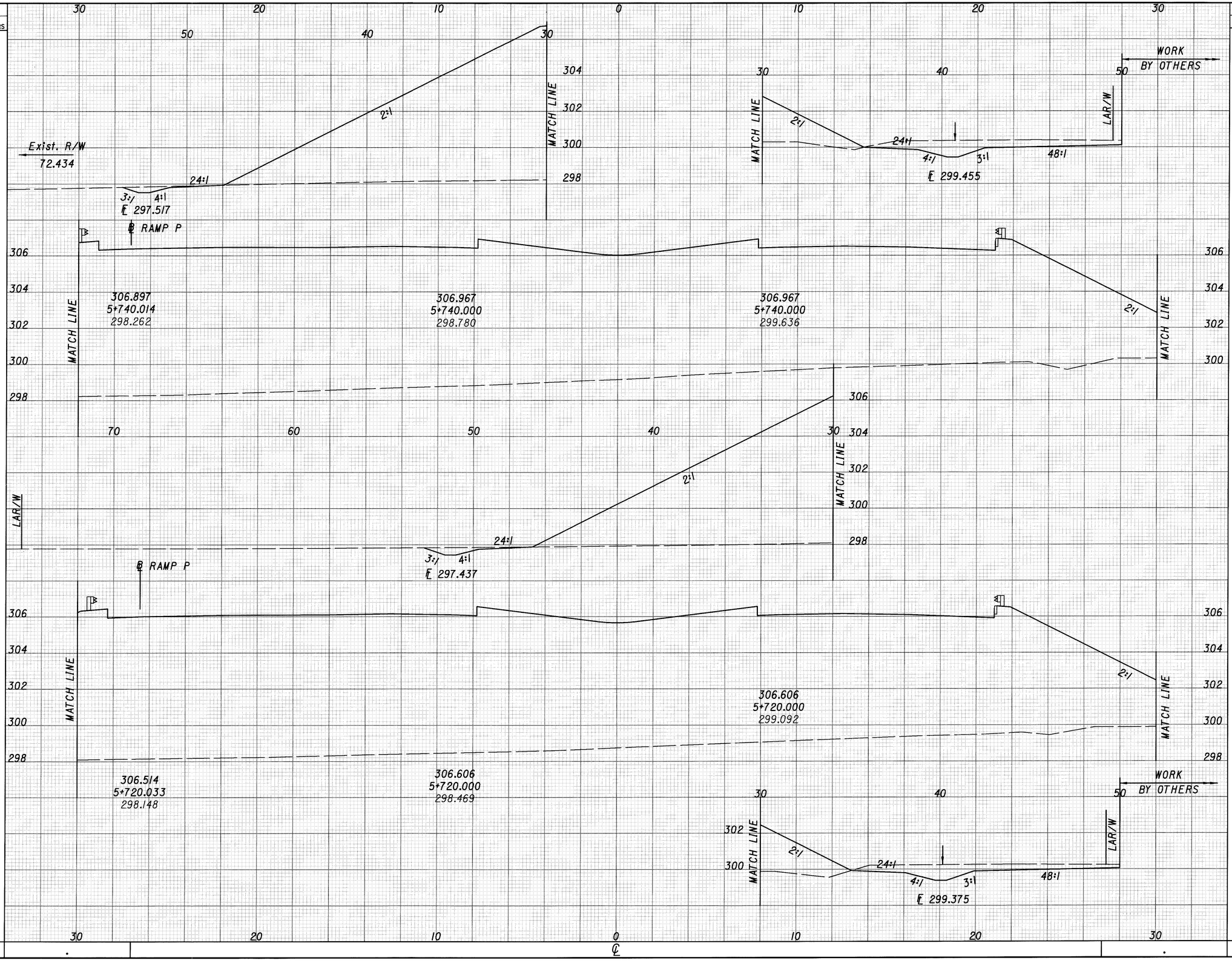
US-30 CROSS SECTIONS

STA 5+660.000 TO STA 5+700.000

WYA/CRA-30-28.009/0.000

723
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
76.65	1531	6.94	505.21	138	10016		
76.41	1519	6.84	496.43	97	9781		

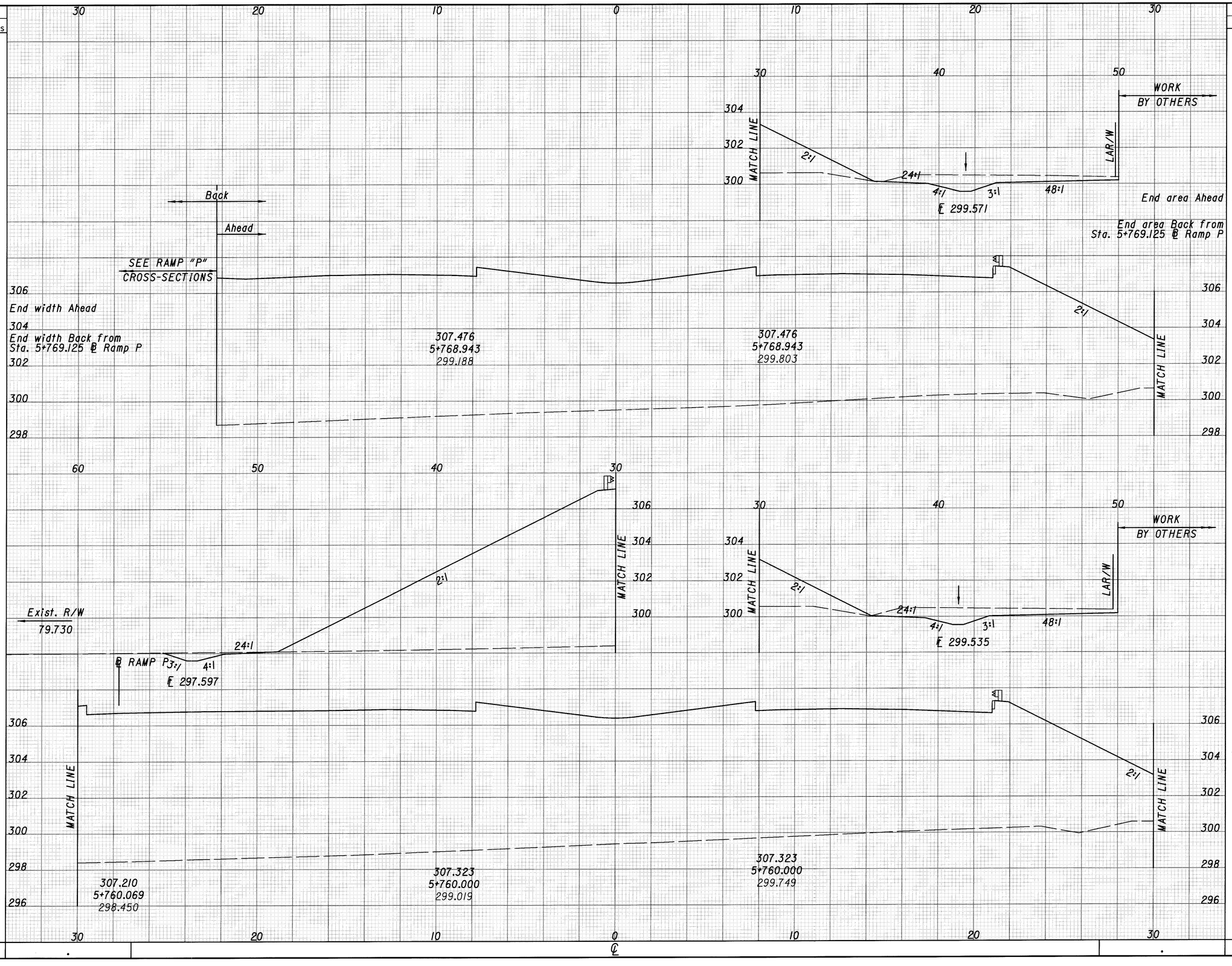


US-30 CROSS SECTIONS
STA 5+720.000 TO STA 5+740.000

WYA / CRA-30-28.009 / 0.000

724
2116

SEEDING END WIDTH	SEEDING SQ. METERS
43.56	
75.43	
	686
77.98	
	1546



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
5.65	375.93		
6.95	528.42		
		64	4704
7.30	523.50		
		142	10287

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 5+760.000 TO STA 5+768.943

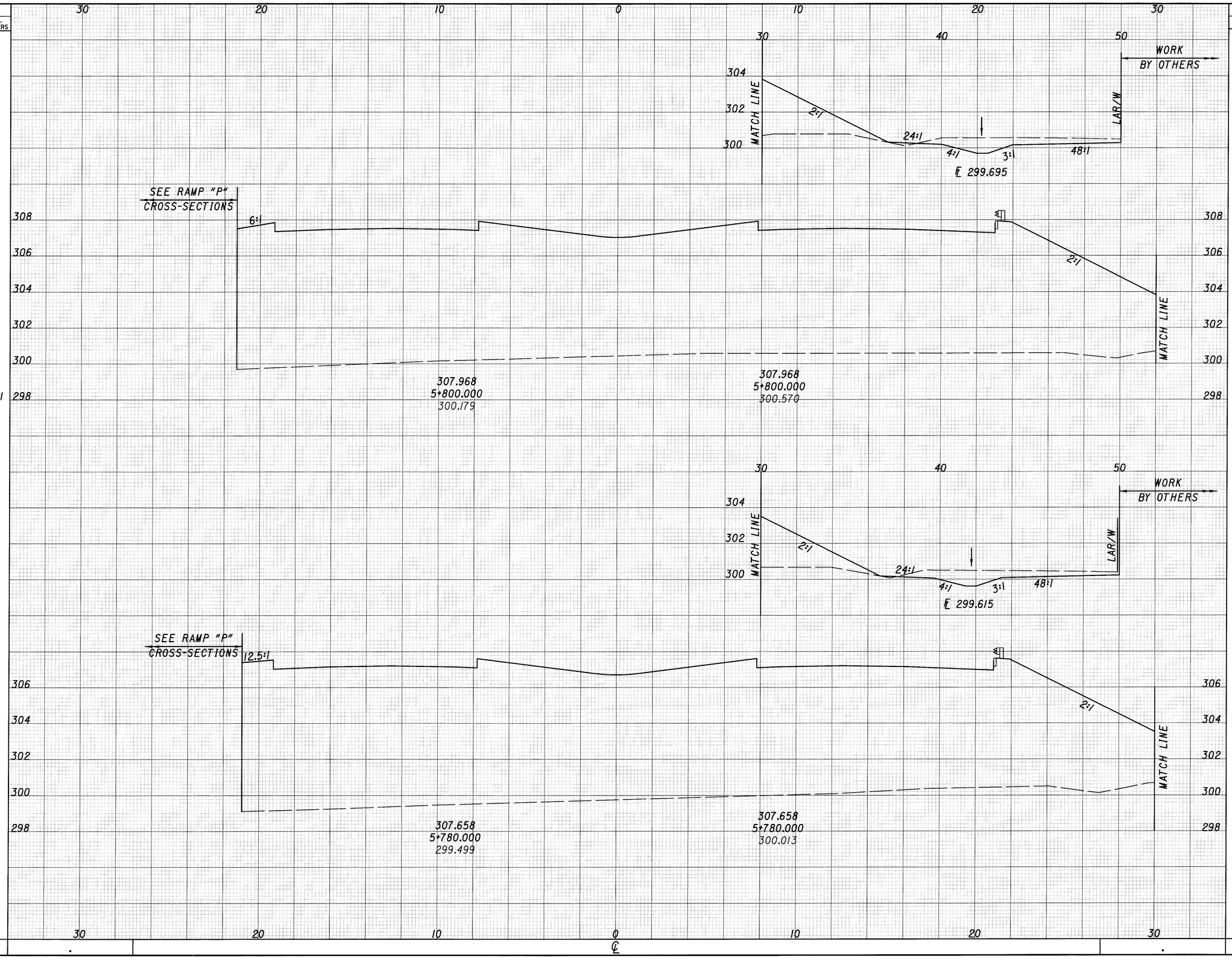
WYA/CRA-30-28.009/0.000

725
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
56.58	1091	4.76	359.91	77	5842
52.48	531	2.95	224.32	48	3318

CALCULATED AM

CHECKED REA

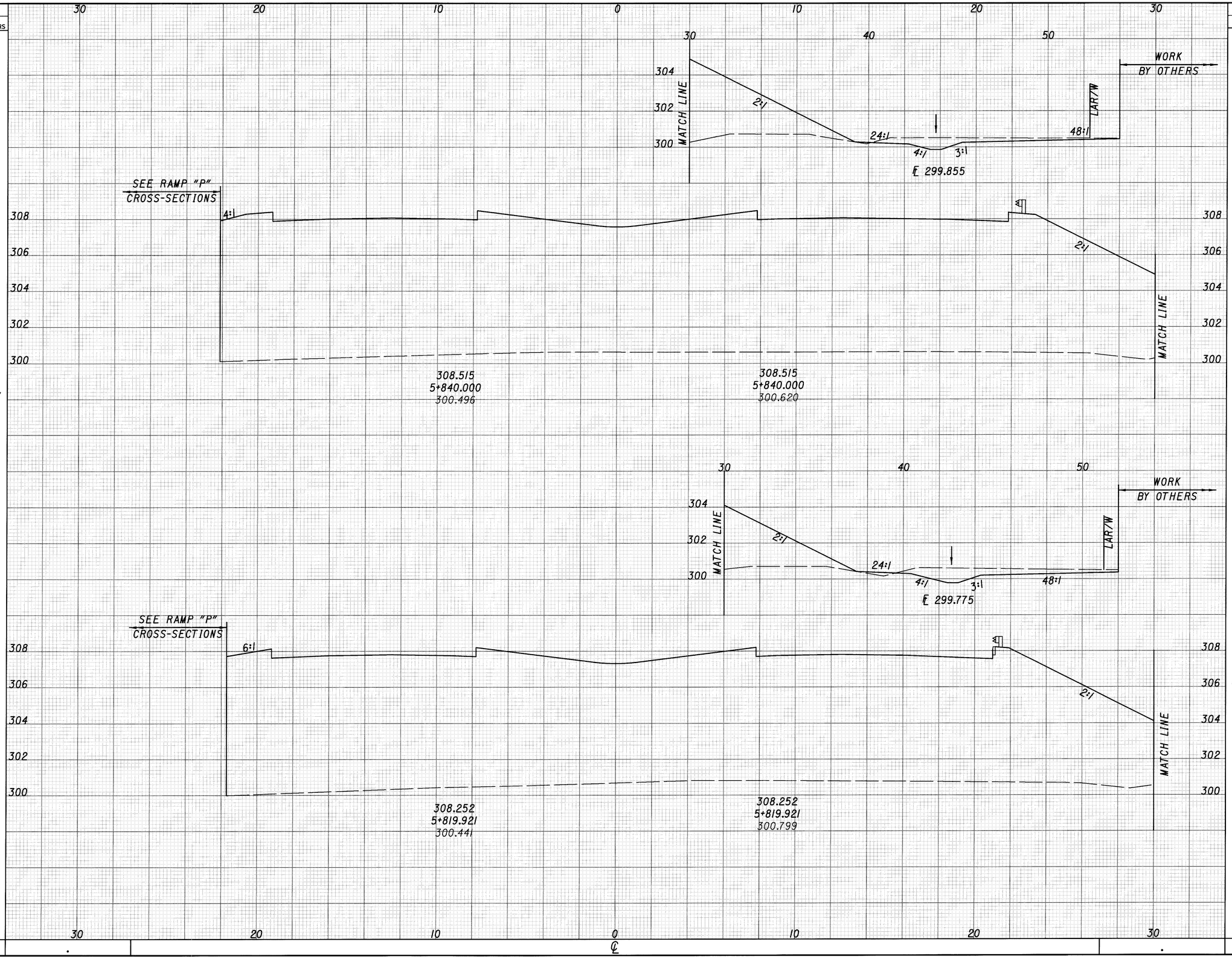


US-30 CROSS SECTIONS STA 5+780.000 TO STA 5+800.000

WYA/CRA-30-28.009/0.000

726
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
61.23	1207	3.34	398.15	79	7702		
58.96	1151	4.52	368.99	92	7260		



US-30 CROSS SECTIONS
STA 5+819.921 TO STA 5+840.000

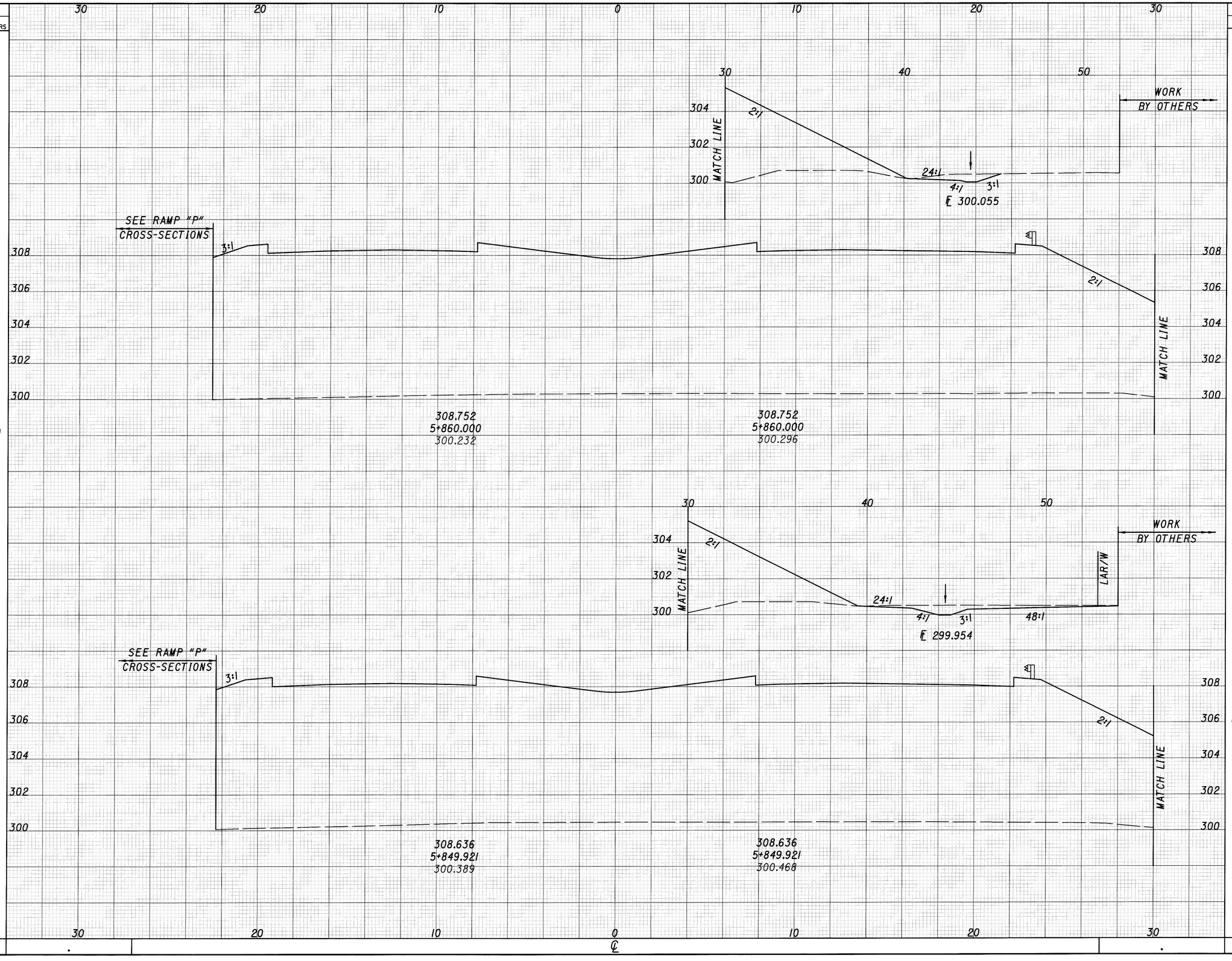
WYA/CRA-30-28.009/0.000

727
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
52.49	570	1.24	433.71	19	4287
60.68	605	2.58	416.93	29	4043

CALCULATED AM

CHECKED REA



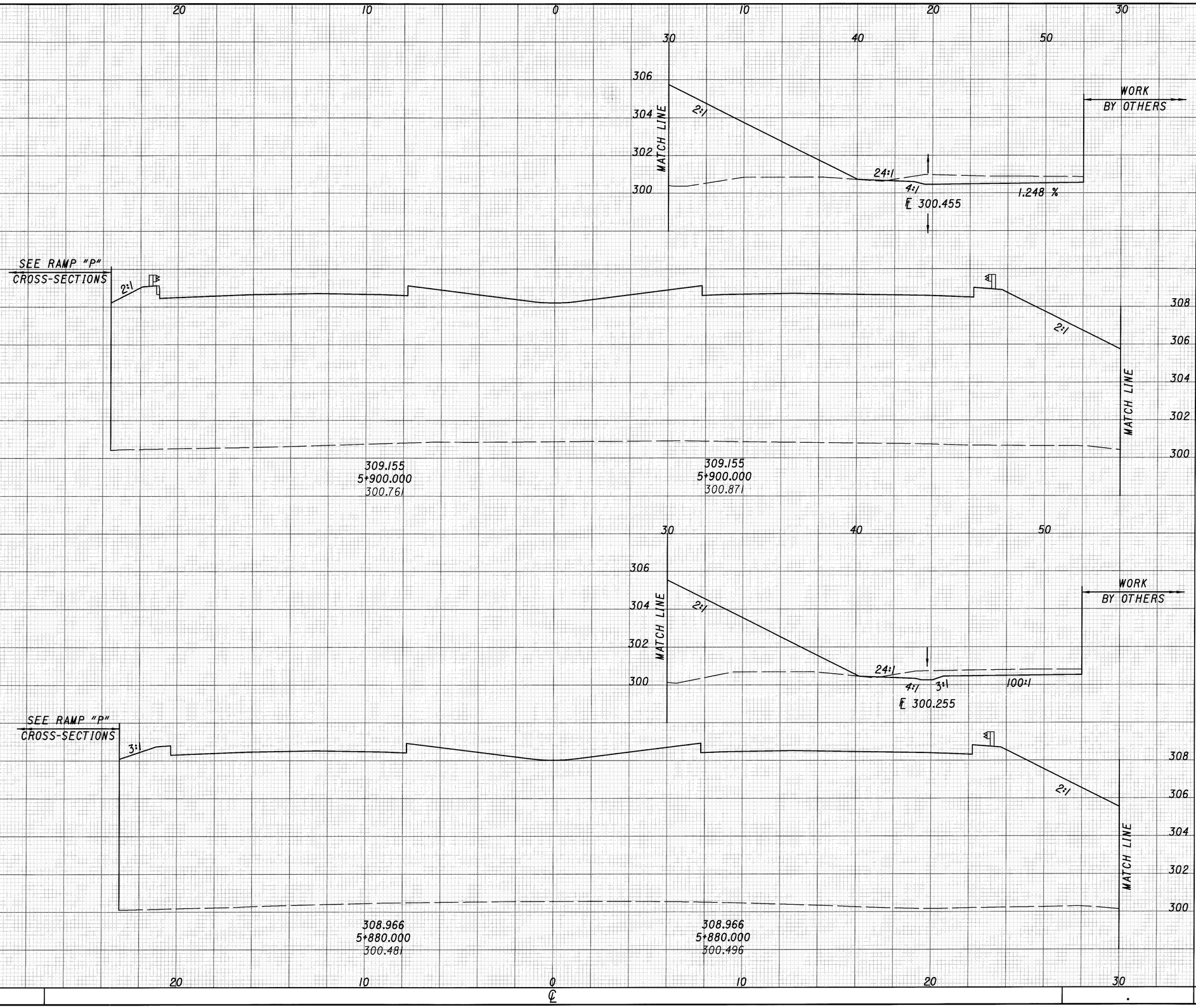
US-30 CROSS SECTIONS

STA 5+849.921 TO STA 5+860.000

WYA/CRA-30-28.009/0.000

728
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
50.20	1086	3.85	439.50	71	8834
58.41	1109	3.24	443.93	45	8776



CALCULATED AM

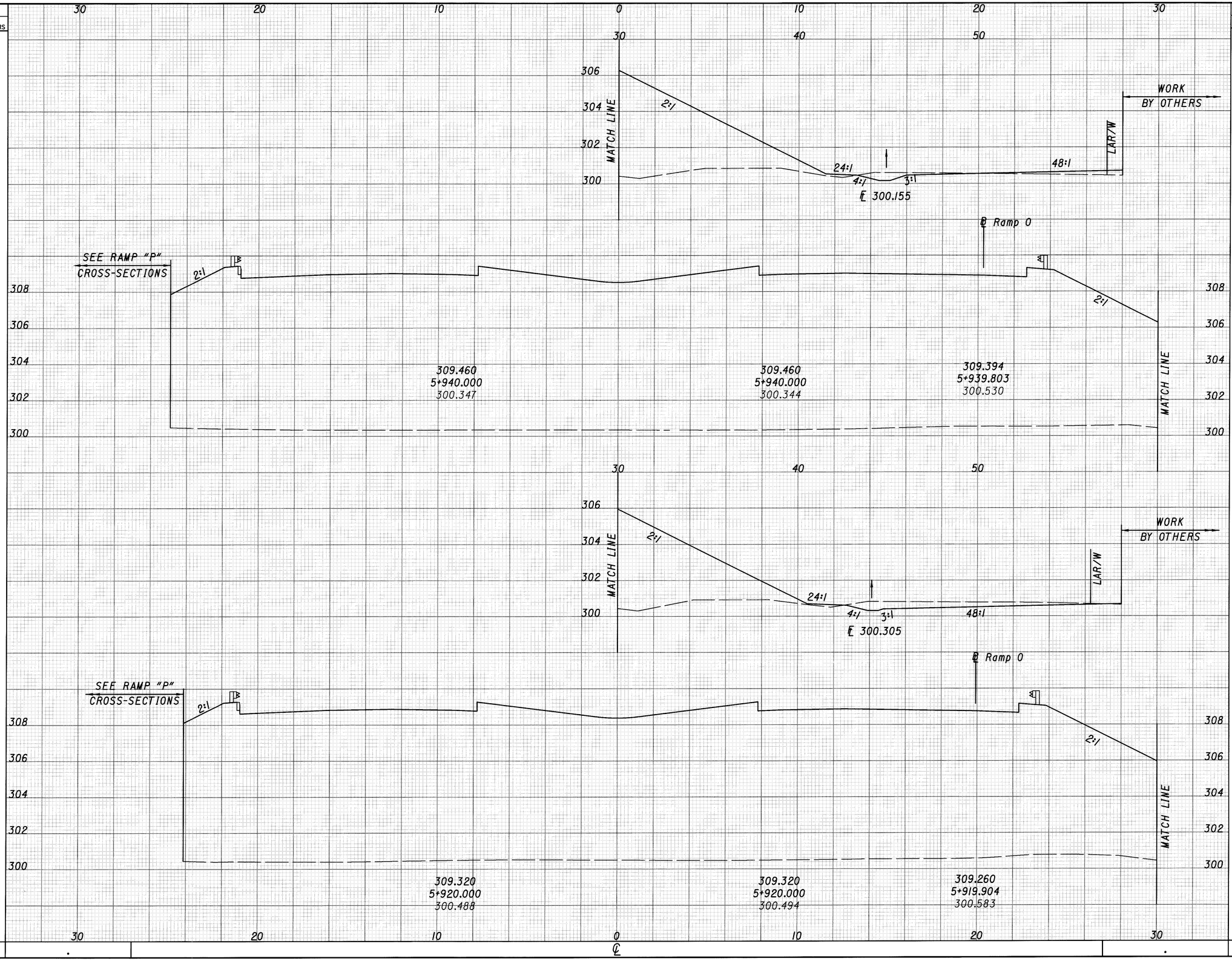
CHECKED REA

US-30 CROSS SECTIONS STA 5+880.000 TO STA 5+900.000

WYA/CRA-30-28.009/0.000

729
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
57.28		1.13	491.96		
	1142			48	9579
56.96		3.69	465.94		
	1072			75	9054



CALCULATED AM

CHECKED REA

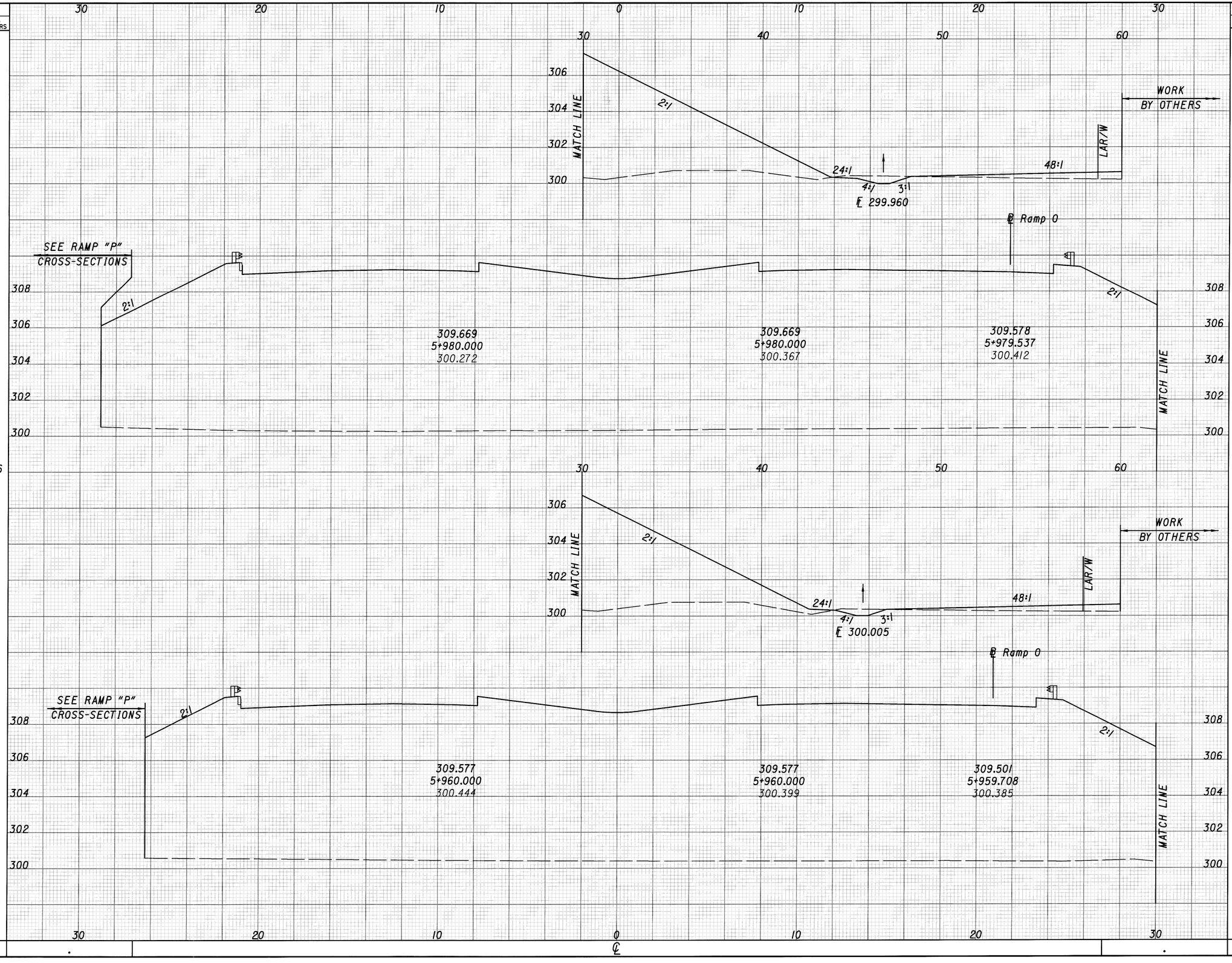
US-30 CROSS SECTIONS

STA 5+920.000 TO STA 5+940.000

WYA/CRA-30-28.009/0.000

730
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
62.28		1.02	551.28				
	1226			17	10674		
60.32		0.67	516.09				
	1176			18	10081		

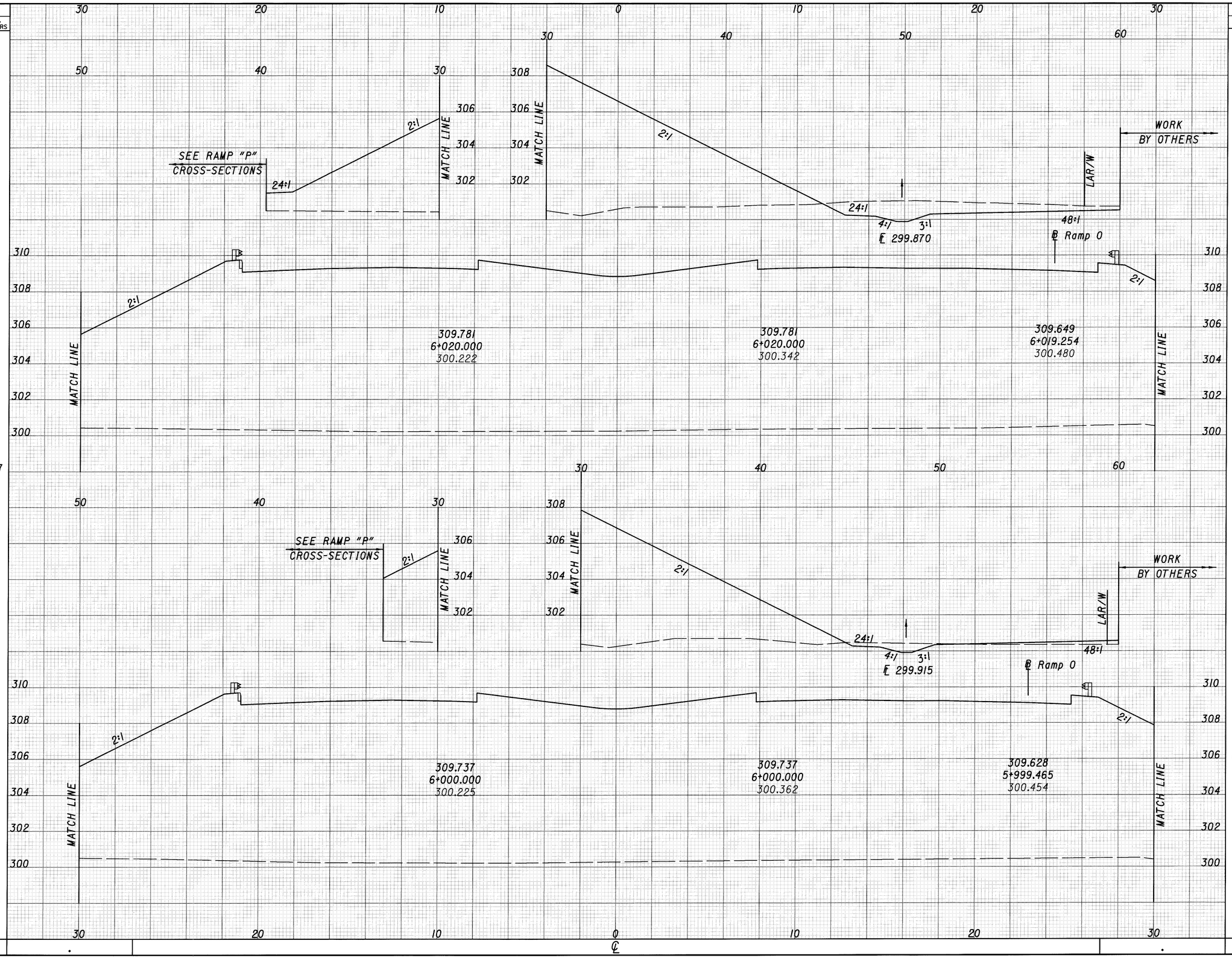


US-30 CROSS SECTIONS
STA 5+960.000 TO STA 5+980.000

WYA/CRA-30-28.009/0.000

731
2116

SEEDING END WIDTH	SEEDING SQ. METERS
73.89	
	1397
65.86	
	1281



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
9.67	609.97		
		112	11932
1.55	583.26		
		26	11345

CALCULATED AM

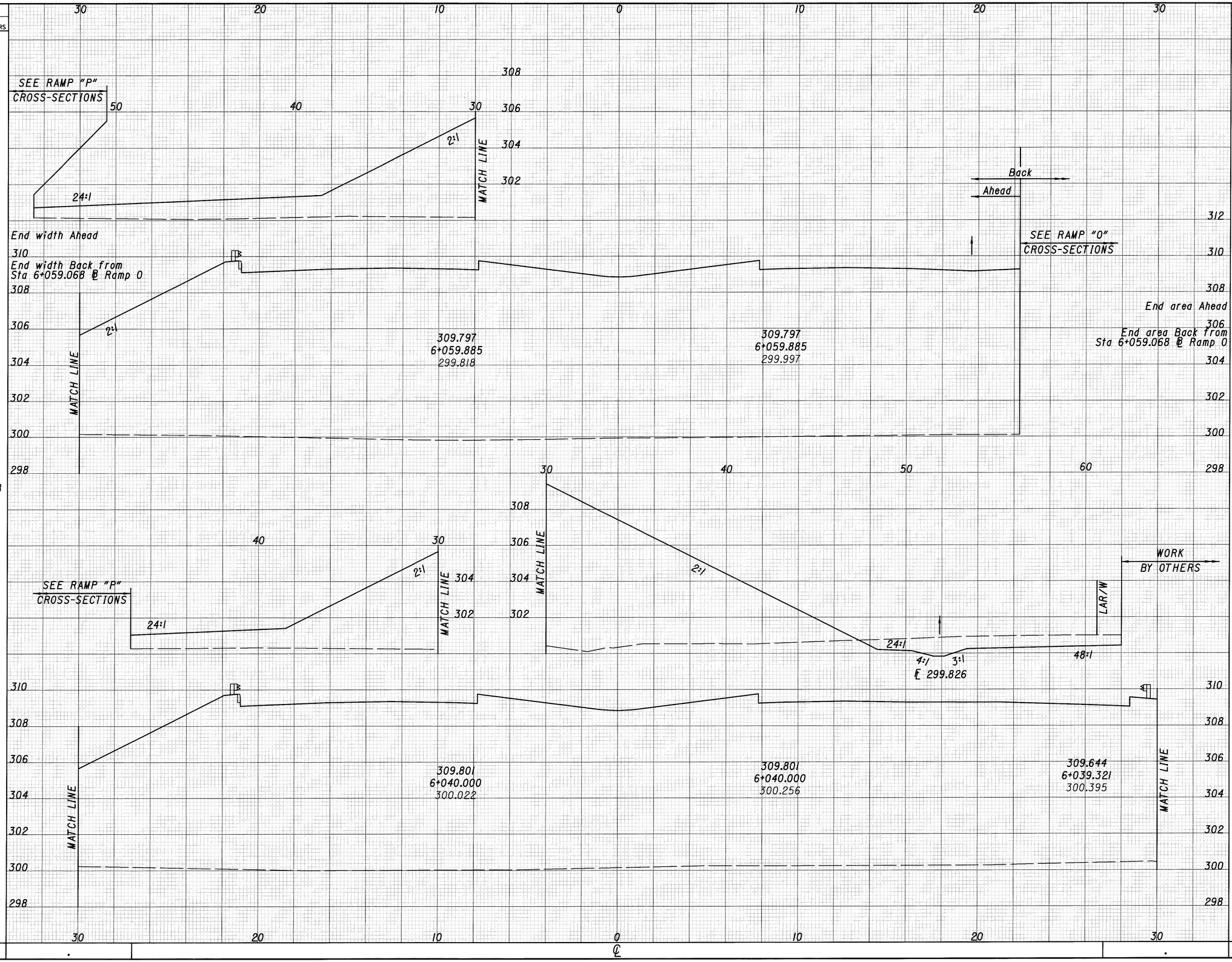
CHECKED REA

US-30 CROSS SECTIONS STA 6+000.000 TO STA 6+020.000

WYA/CRA-30-28.009/0.000

732
2116

SEEDING END WIDTH	SEEDING SQ. METERS
51.12	
85.13	
	1638
79.64	
	1535



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.00	515.01		
1.08	687.18		
		108	13251
9.78	645.63		
		195	12556

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 6+040.000 TO STA 6+059.885

WYA/CRA-30-28.009/0.000

733
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
70.99		0.00	548.37		
	1017			0	8282
60.74		0.00	524.62		
	1125			0	10456

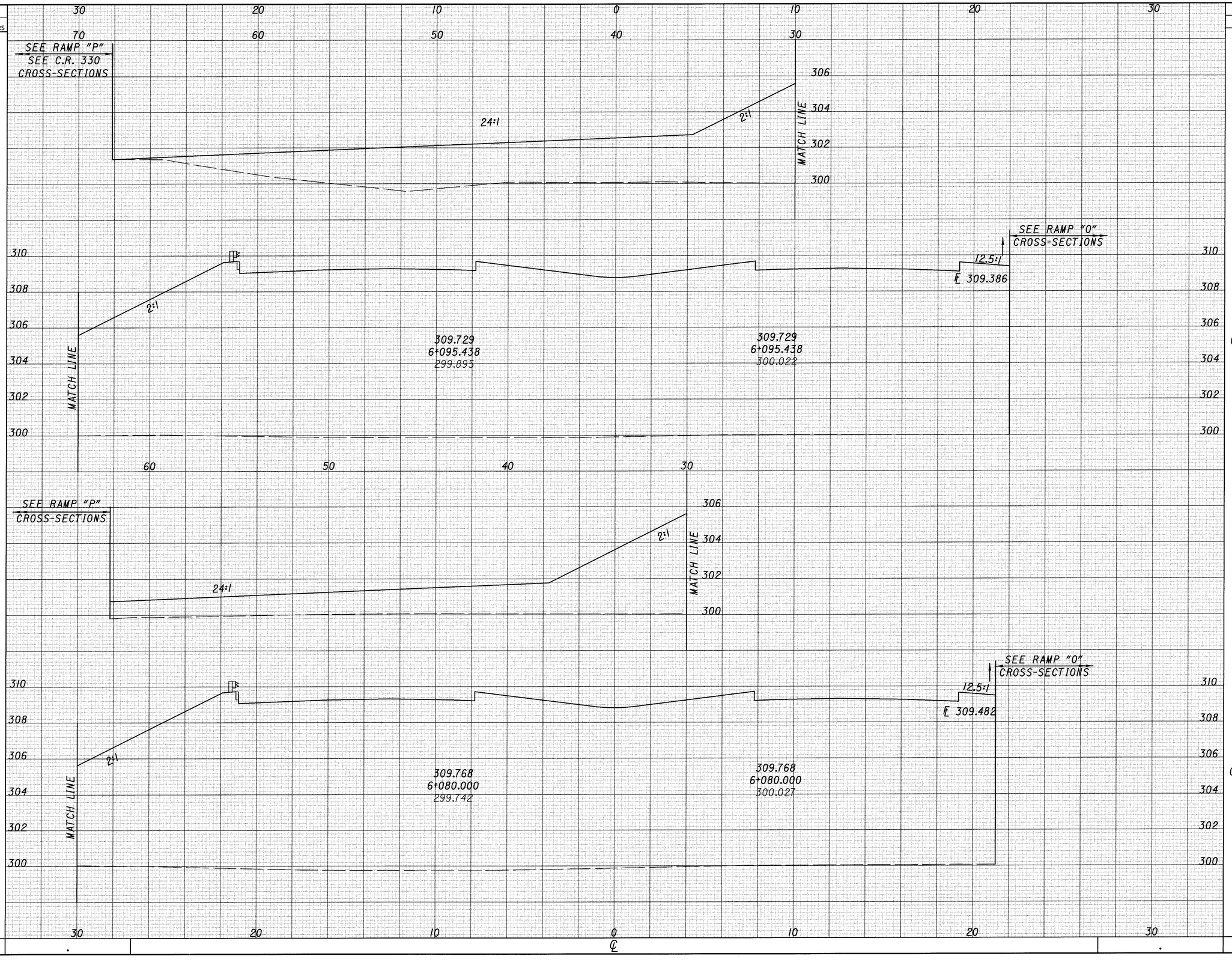
CALCULATED AM

CHECKED REA

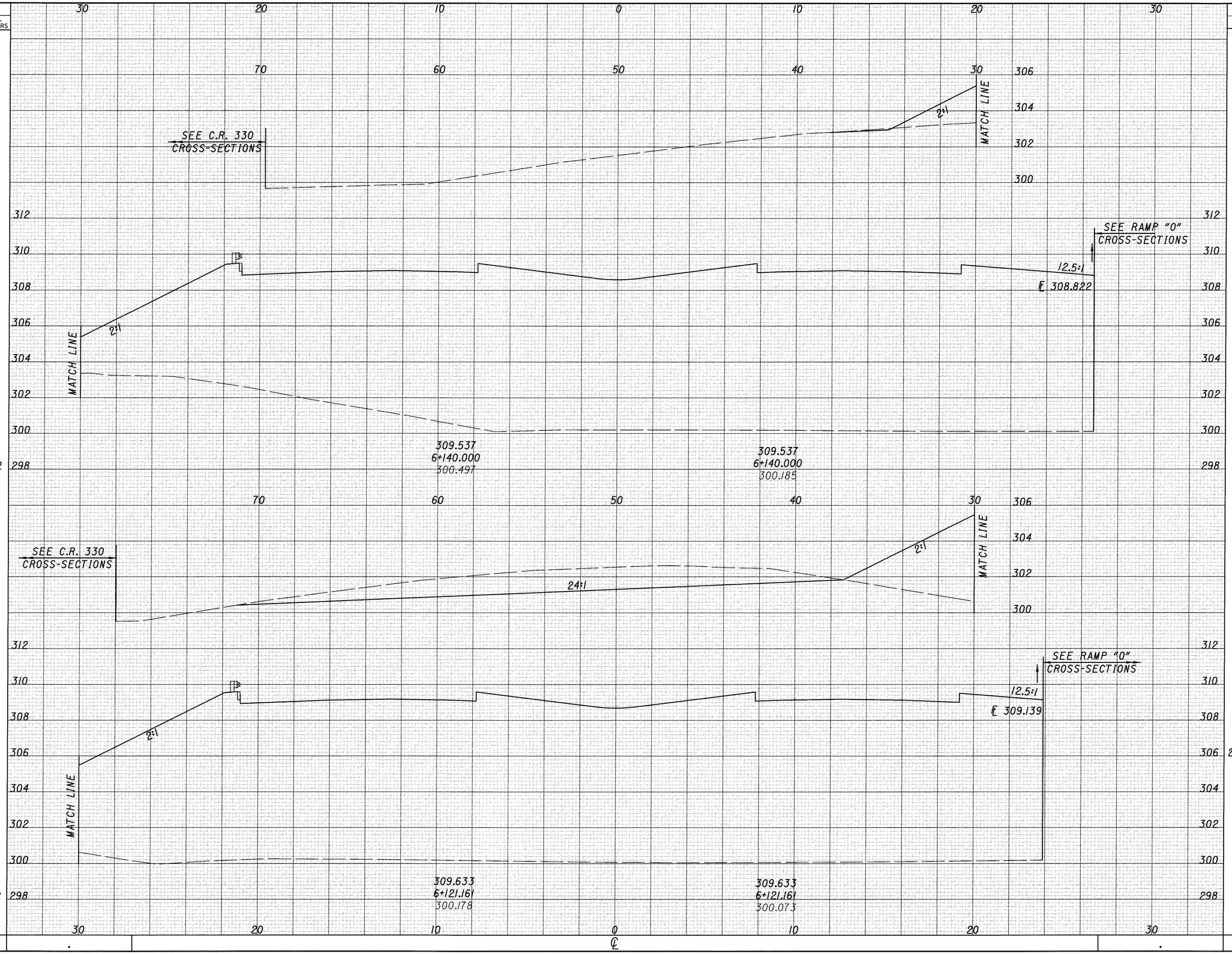
US-30 CROSS SECTIONS
STA 6+080.000 TO STA 6+095.438

WYA/CRA-30-28.009/0.000

734
2116



SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
44.87	1132	0.13	449.48	273	8827	
75.32	1882	28.80	487.66	370	13325	



CALCULATED AM

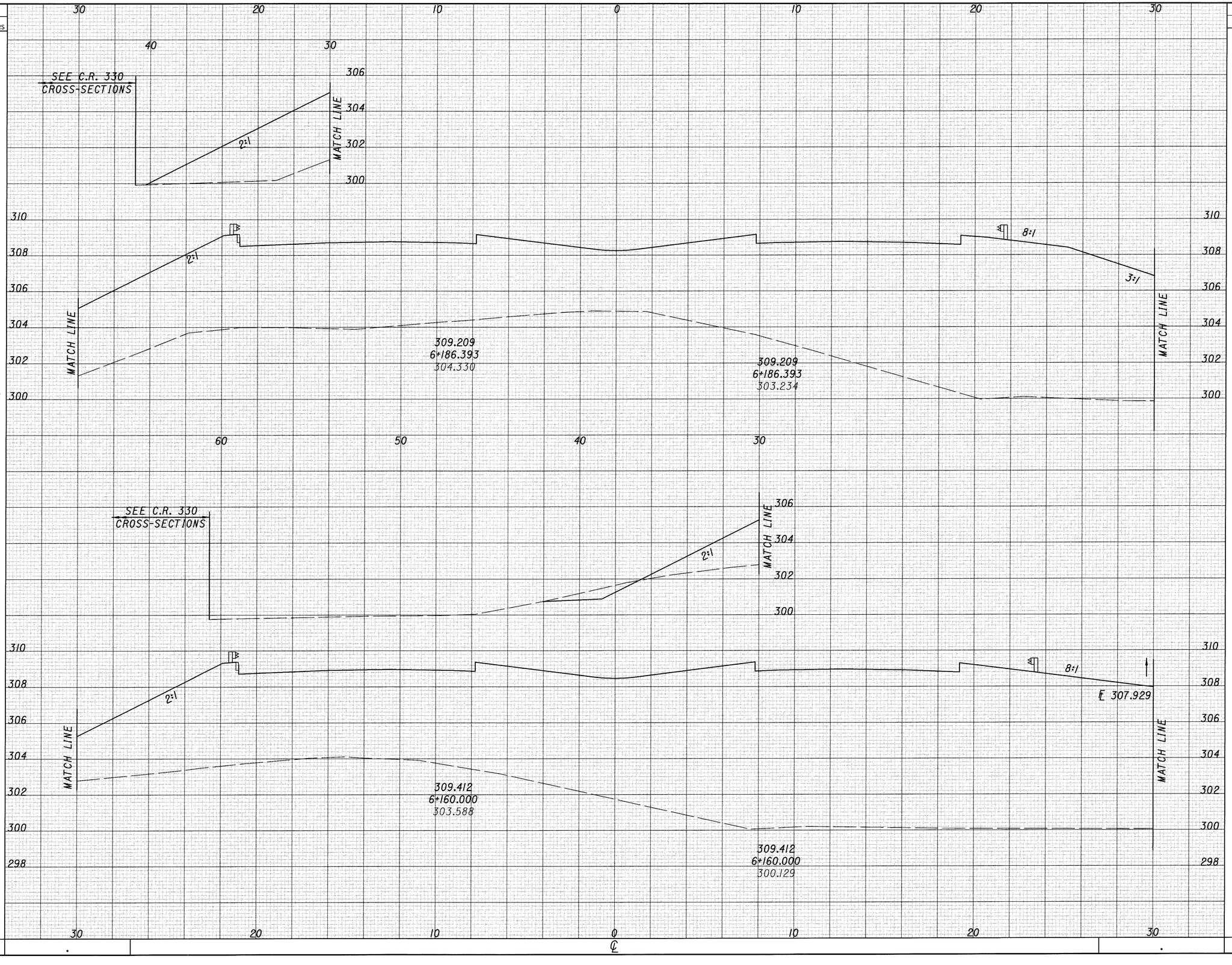
CHECKED REA

US-30 CROSS SECTIONS
STA 6+121.161 TO STA 6+140.000

WYA / CRA-30-28.009 / 0.000

735
2116

SEEDING	
END WIDTH	SQ. METERS
52.75	
	1392
52.72	
	976



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.00	363.37		
		21	10275
1.60	415.26		
		17	8647

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 6+160.000 TO STA 6+186.393

WYA / CRA-30-28.009 / 0.000

736
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
37.27			115.77		
	654			3263	
38.52		0.00	262.12		
	1038			0	7113

Sta 6+226.406, 38.420m Lt.
HW 2.1M
Inv 300mm = 300.462
2:1
300.486
26° Bend
2.417m @1.0%
MATCH LINE

Sta 6+226.406, 21.0m Lt.
604 CB - 3
Grate = 308.630
Inv 300mm = 307.352
0.762m
2:1
15.321m
307.338
26° Bend
MATCH LINE
13.703m @ 50.0%
1.389m @1.0%
603 19.1m x 300mm Conduit
Type F 707.05 Type C

308.822
6+226.406
305.109

SEE RAMP "O" CROSS-SECTIONS
2:1
MATCH LINE

SEE C.R. 330 CROSS-SECTIONS
2:1
309.001
6+209.137
304.691

309.001
6+209.137
305.558
2:1
MATCH LINE

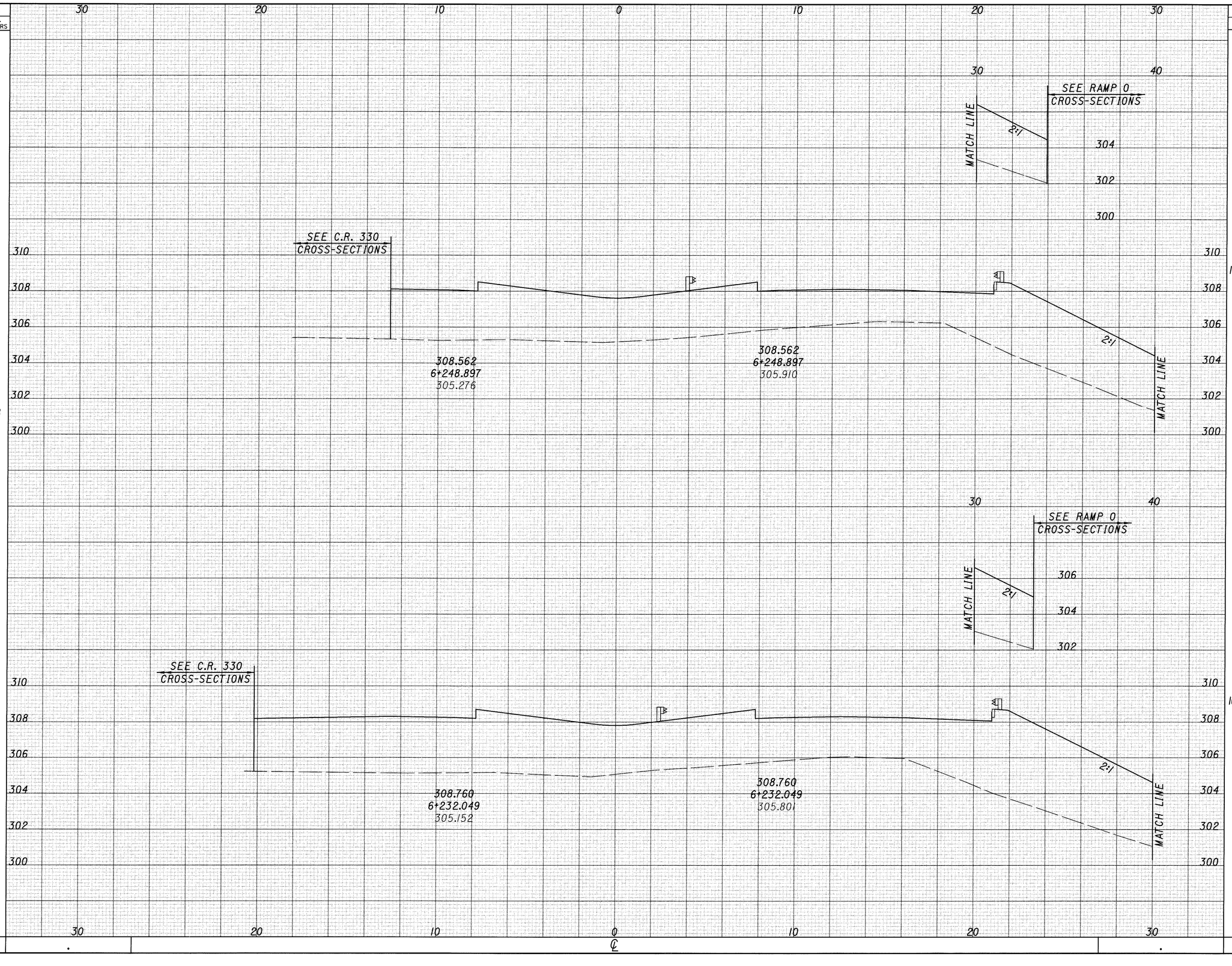
CALCULATED AM
CHECKED REA

US-30 CROSS SECTIONS
STA 6+209.137 TO STA 6+226.406

WYA/CRA-30-28.009/0.000

737
2116

SEEDING	
END WIDTH	SQ. METERS
29.94	498
29.22	188



END AREA		VOLUME	
CUT	FILL	CUT	FILL
123.27		2438	
166.16		795	

CALCULATED AM

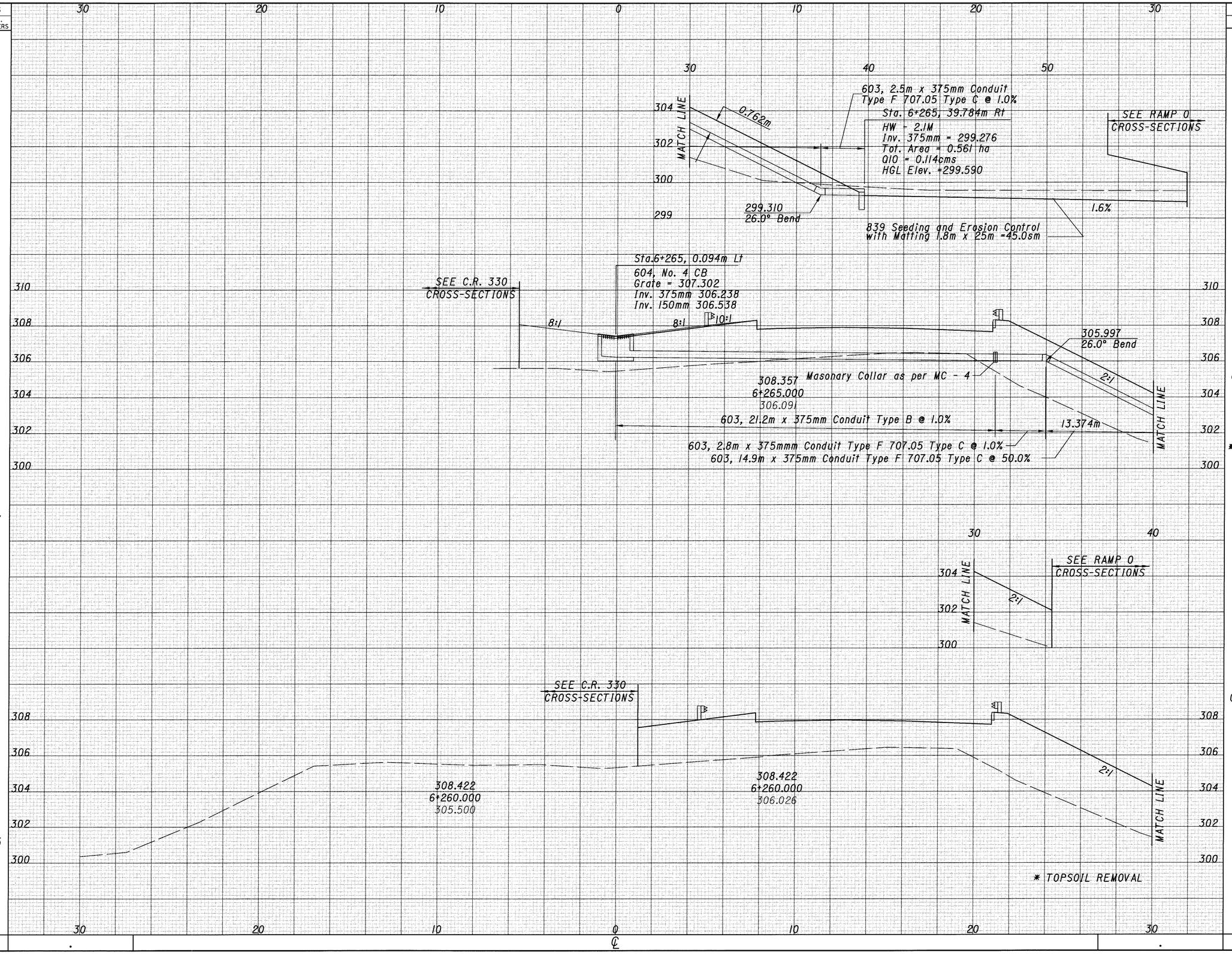
CHECKED REA

US-30 CROSS SECTIONS

STA 6+232.049 TO STA 6+248.897

WYA/CRA-30-28.009/0.000

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
53.53		8.75	91.67		
	187			22	420
21.32		0.00	1108		
	285			76.31	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 6+260.000 TO STA 6+265.000

WYA/CRA-30-28.009/0.000

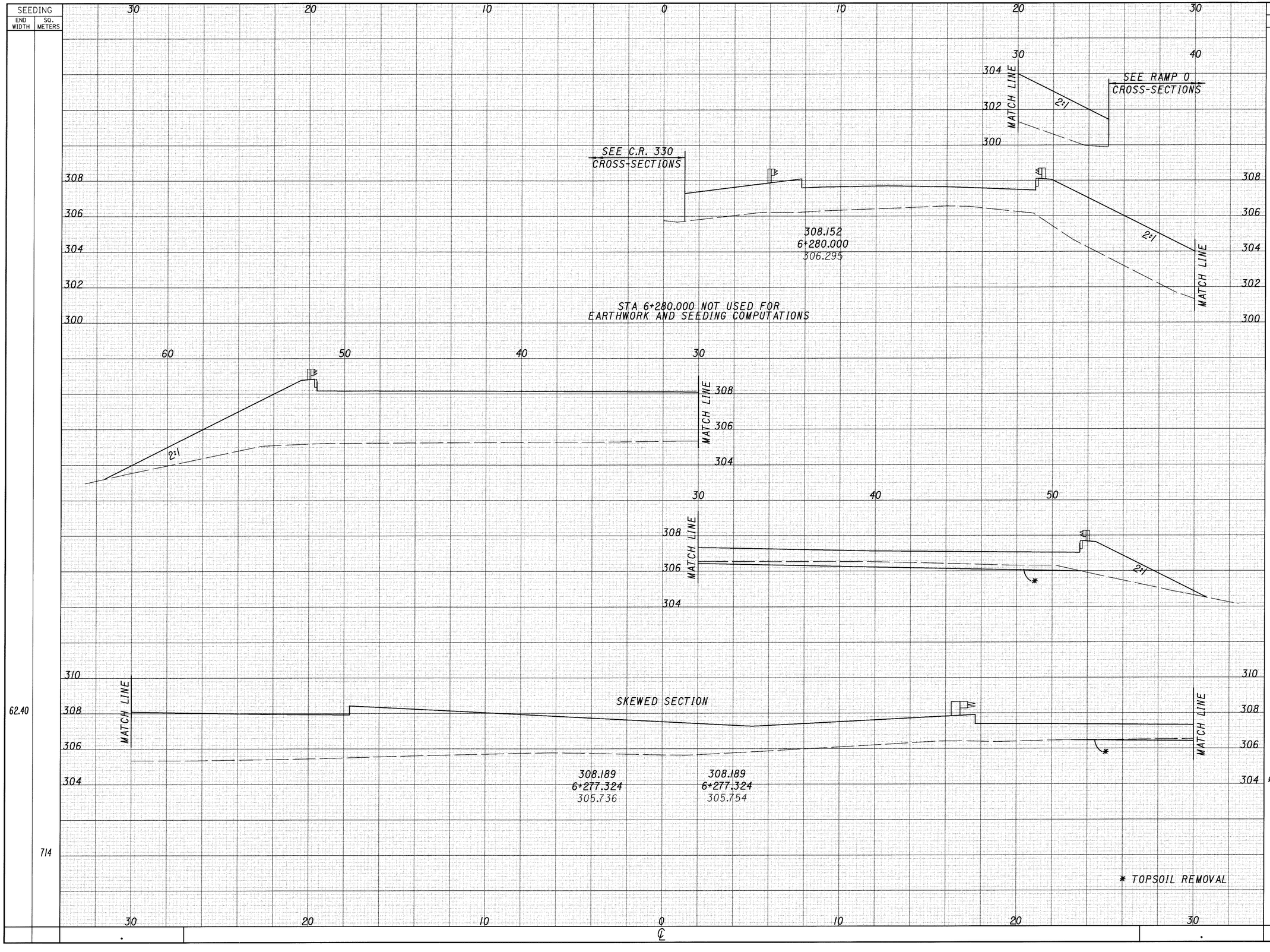
739
2116

SEEDING	
END WIDTH	SQ. METERS
62.40	714

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.00	195.39		
*5.47			
		54	1769
		*34	

CALCULATED AM

CHECKED REA



US-30 CROSS SECTIONS

STA 6+277.324 TO STA 6+280.000

WYA / CRA-30-28.009 / 0.000

740
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
128.837	582			6	3645
					*168

BRIDGE - STA 6+295.983 TO STA 6+403.637

SEE RAMP "0" CROSS-SECTIONS

MATCH LINE

2:1

STA 6+300.000 NOT USED FOR EARTHWORK AND SEEDING COMPUTATIONS

307.857
6+300.000
306.477

MATCH LINE

SEE C.R. 330 CROSS-SECTIONS

MATCH LINE A

MATCH LINE A

2:1

MATCH LINE LEFT

MATCH LINE LEFT

SKEWED SECTION

307.918
6+295.983
306.023

307.918
6+295.983
306.078

MATCH LINE RIGHT

MATCH LINE RIGHT

SEE RAMP "0" CROSS-SECTIONS

2:1

* TOPSOIL REMOVAL

0.62	195.35	
*12.59		

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 6+295.983 TO STA 6+300.000

WYA/CRA-30-28.009/0.000

741
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS
STA 6+321.611 TO STA 6+324.411

WYA / CRA-30-28.009 / 0.000

742
2116

STA 6+321.611 AND STA 6+324.411 NOT USED
FOR EARTHWORK AND SEEDING COMPUTATIONS

307.465
6+324.411
306.475

SEE RAMP "O"
CROSS-SECTIONS

MATCH LINE

2:1

Sta 6+321.611, 37.464m Rt.
HW 2.1M
Inv 300mm = 299.619

℄ 299.479

299.643
26° Bend

3.42 %

2.396m
@1.0%

SEE C.R. 330
CROSS-SECTIONS

Sta 6+321.611, 21.0m Rt.
604 CB - 3
Grate = 307.320
Inv 300mm = 306.041

306.027
26° Bend

0.762m

307.512
6+321.611
306.516

14.276m

1.389m
@1.0%

603 18.1m x 300mm Conduit Type F 707.05 Type C

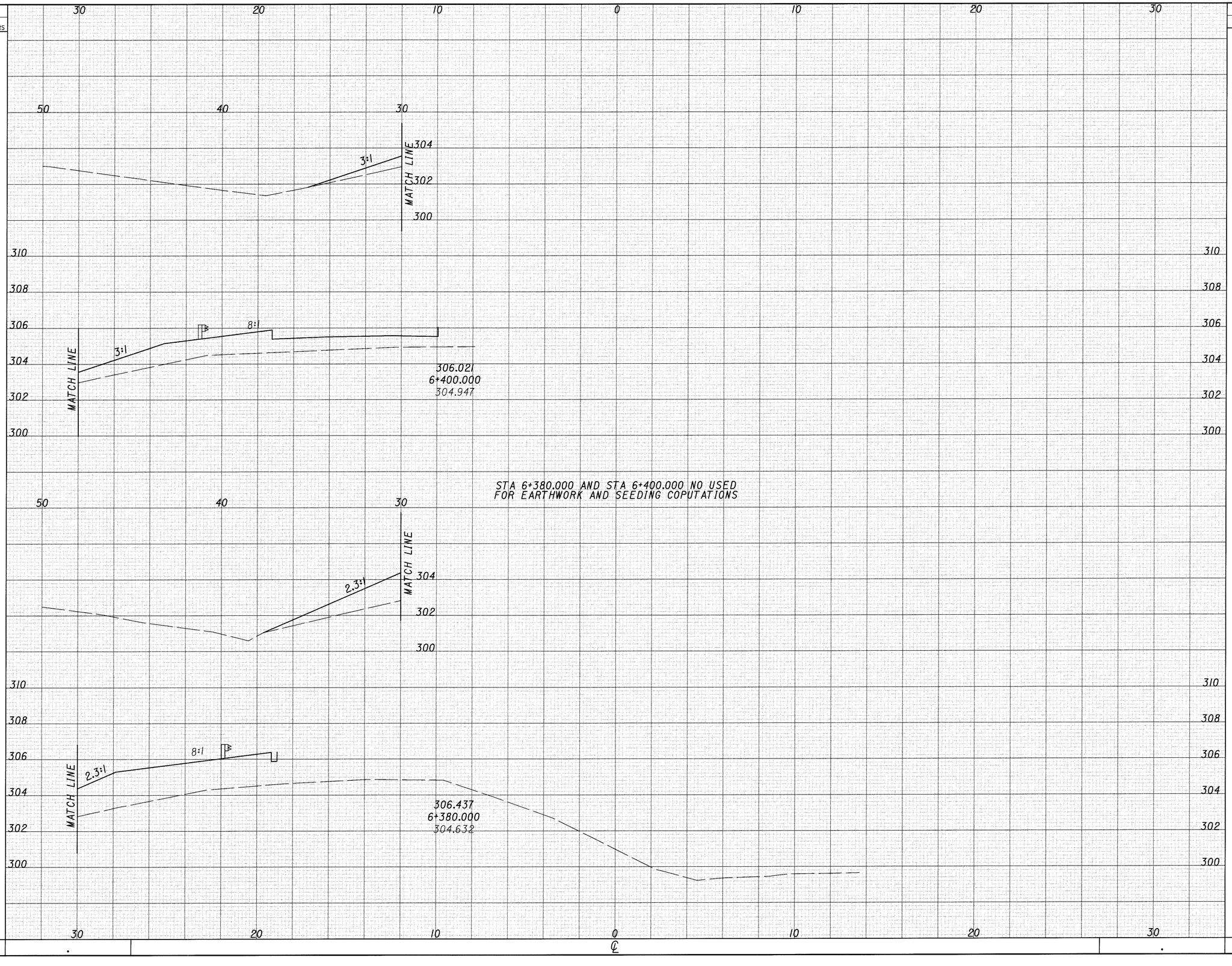
℄

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA



US-30 CROSS SECTIONS

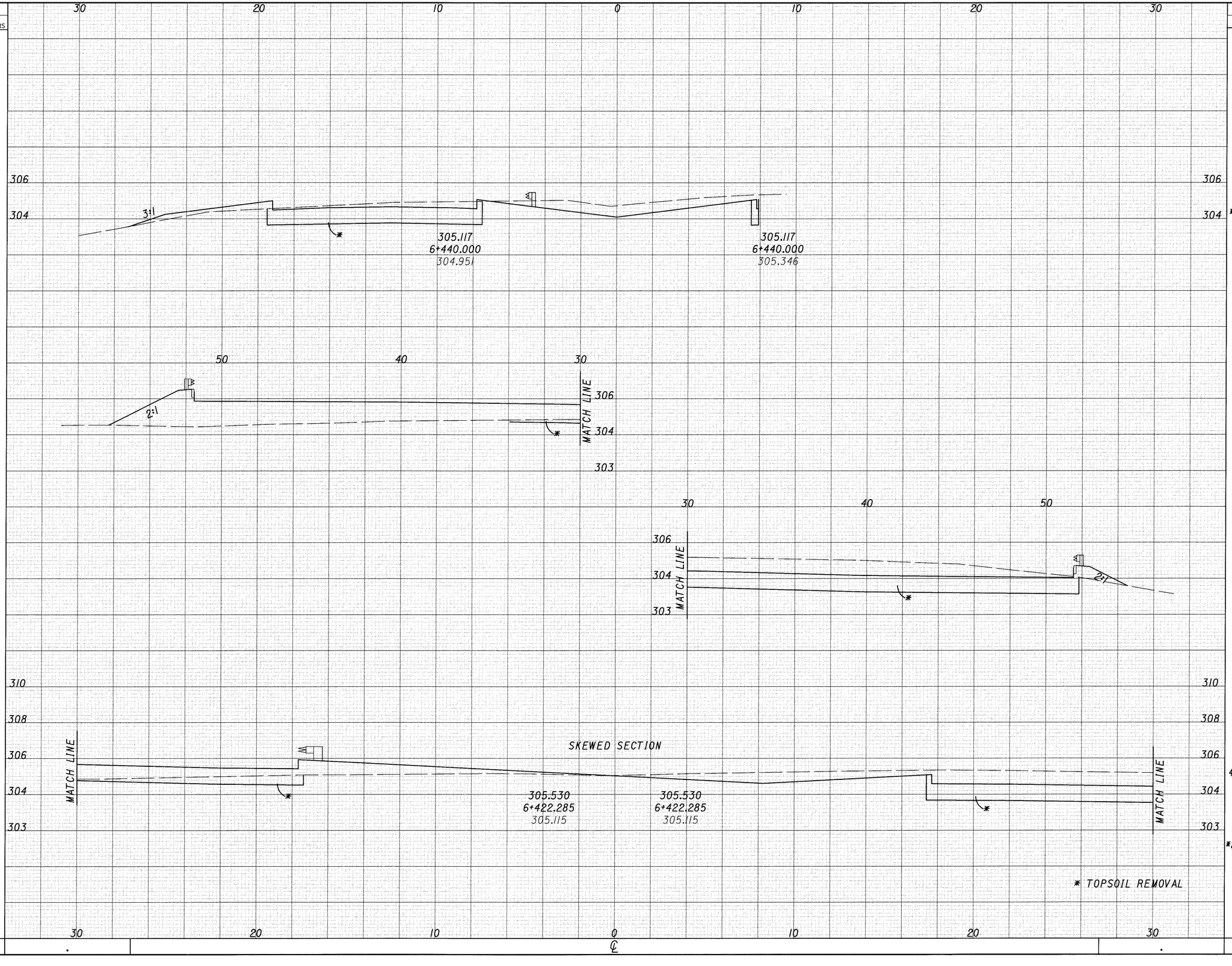
STA 6+380.000 TO STA 6+400.000

WYA / CRA-30-28.009 / 0.000

743
2116

SEEDING	
END WIDTH	SQ. METERS

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
27.90		9.75	12.66		
		*10.70			
	686			472	583
				*293	
49.57		43.50	53.17		
		*22.33			
				636	1341
	1033			*365	



CALCULATED AM

CHECKED REA

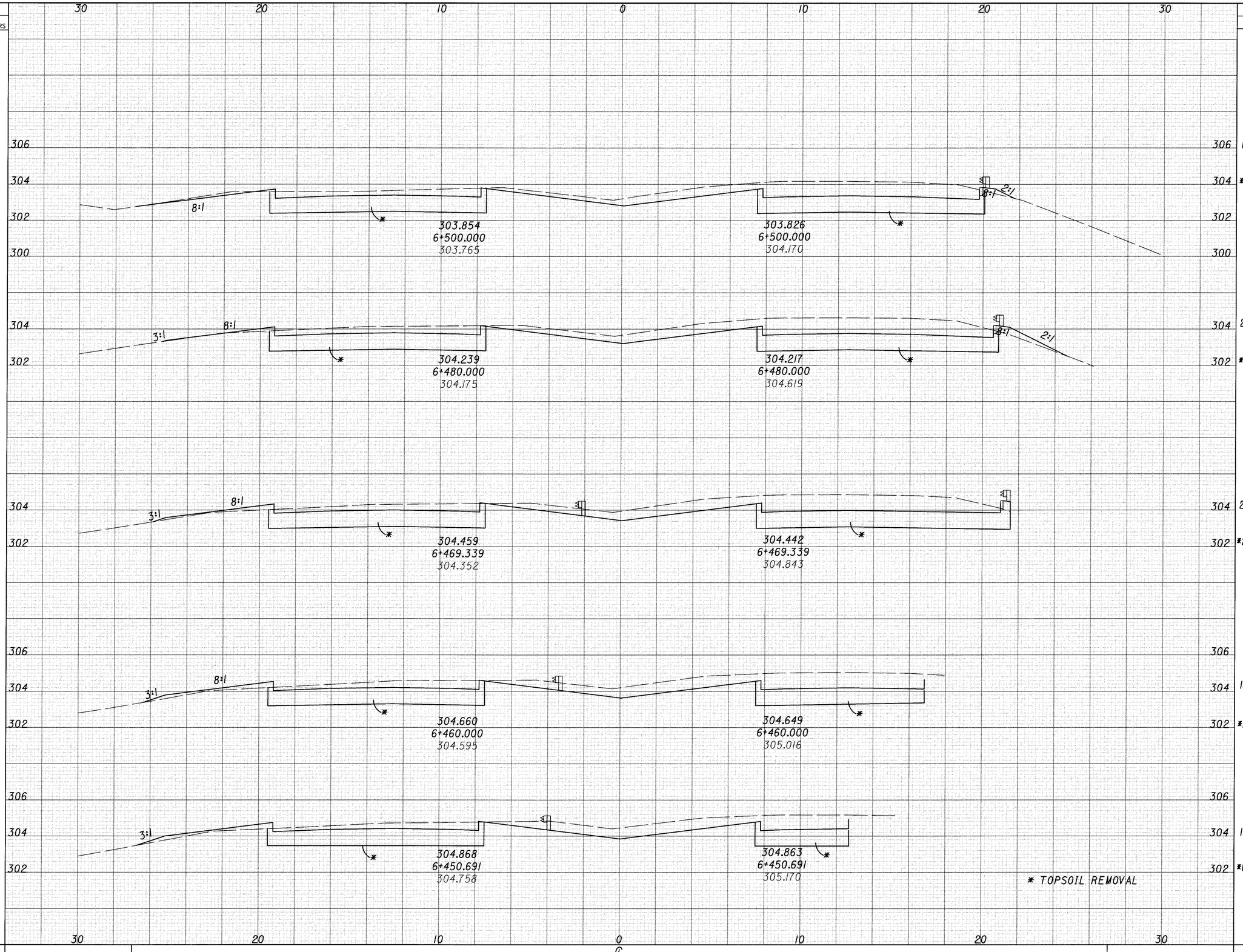
US-30 CROSS SECTIONS

STA 6+422.285 TO STA 6+440.000

WYA/CRA-30-28.009/0.000

745
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
28.39	497	19.83	21.44	421	444
		*21.06		*427	
21.33	252	22.25	25.91	238	245
		*21.75		*233	
25.87	242	22.39	23.02	197	196
		*22.02		*186	
26.01	248	19.74	18.92	163	163
		*17.78		*152	
27.37	295	15.19	16.12	133	154
		*14.89		*137	



CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 6+450.691 TO STA 6+500.000

WYA/CRA-30-28.009/0.000

746
2116

SEEDING	
END WIDTH	SQ. METERS
28.87	289
23.71	521

END AREA	
CUT	FILL
15.34	20.60
*20.15	
15.52	20.84
*20.43	

VOLUME	
CUT	FILL
170	228
*223	
353	423
*415	

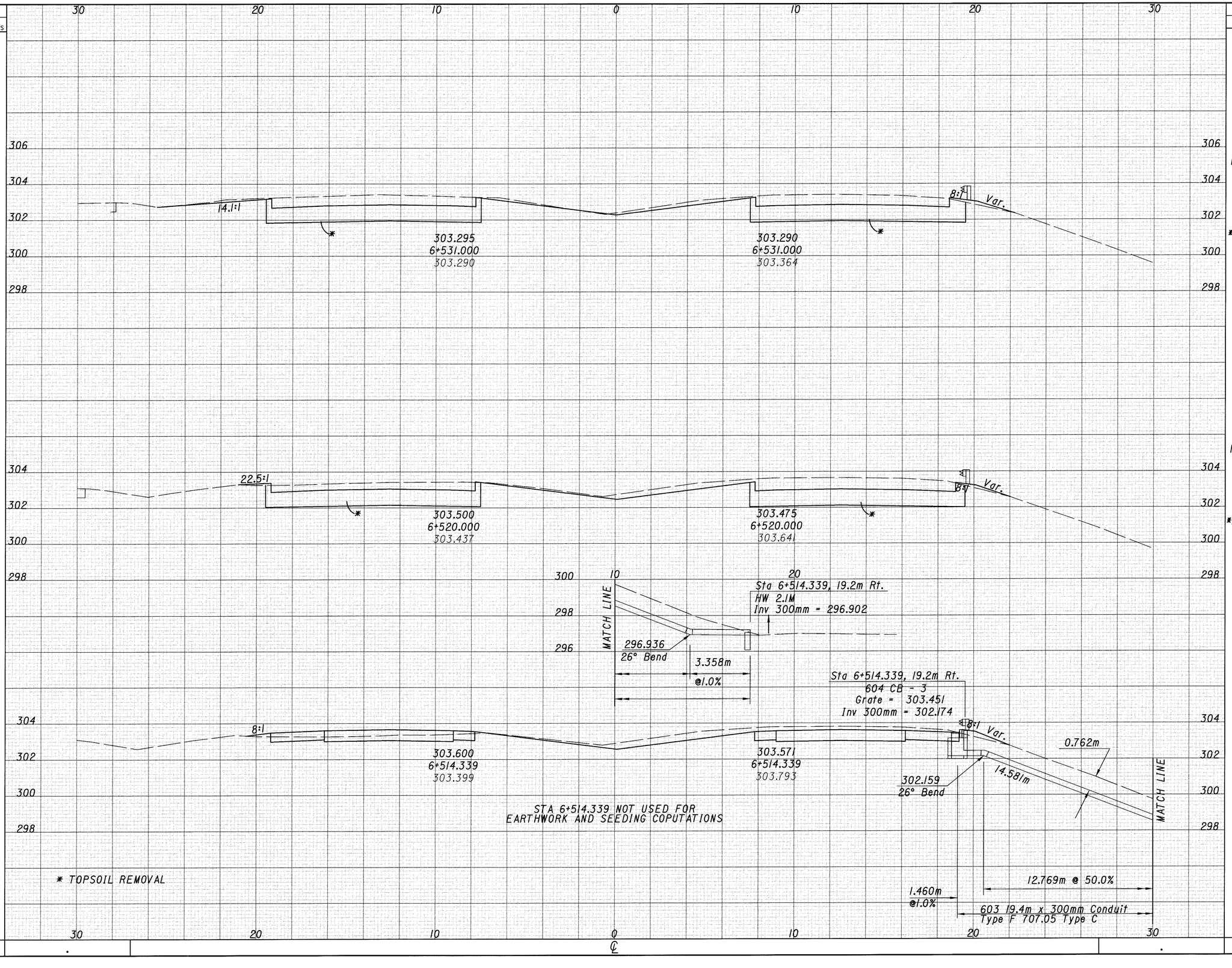
CALCULATED AM

CHECKED REA

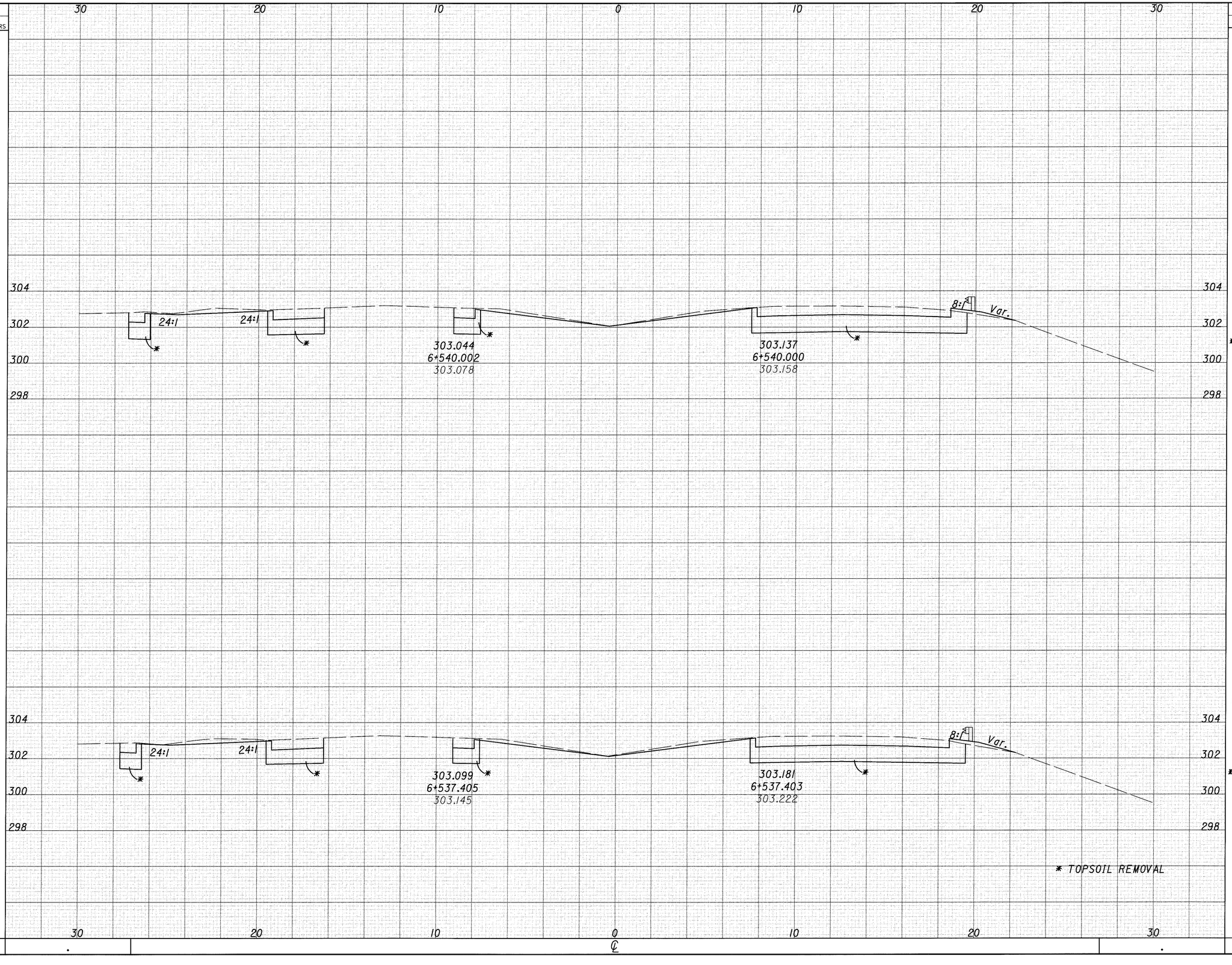
US-30 CROSS SECTIONS
STA 6+514.339 TO STA 6+531.000

WYA/CRA-30-28.009/0.000

747
2116



SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
29.66	78	9.00	15.66	23	46
		*15.23		*45	
30.13	189	8.44	19.97	76	130
		*19.45		*127	



CALCULATED AM

CHECKED REA

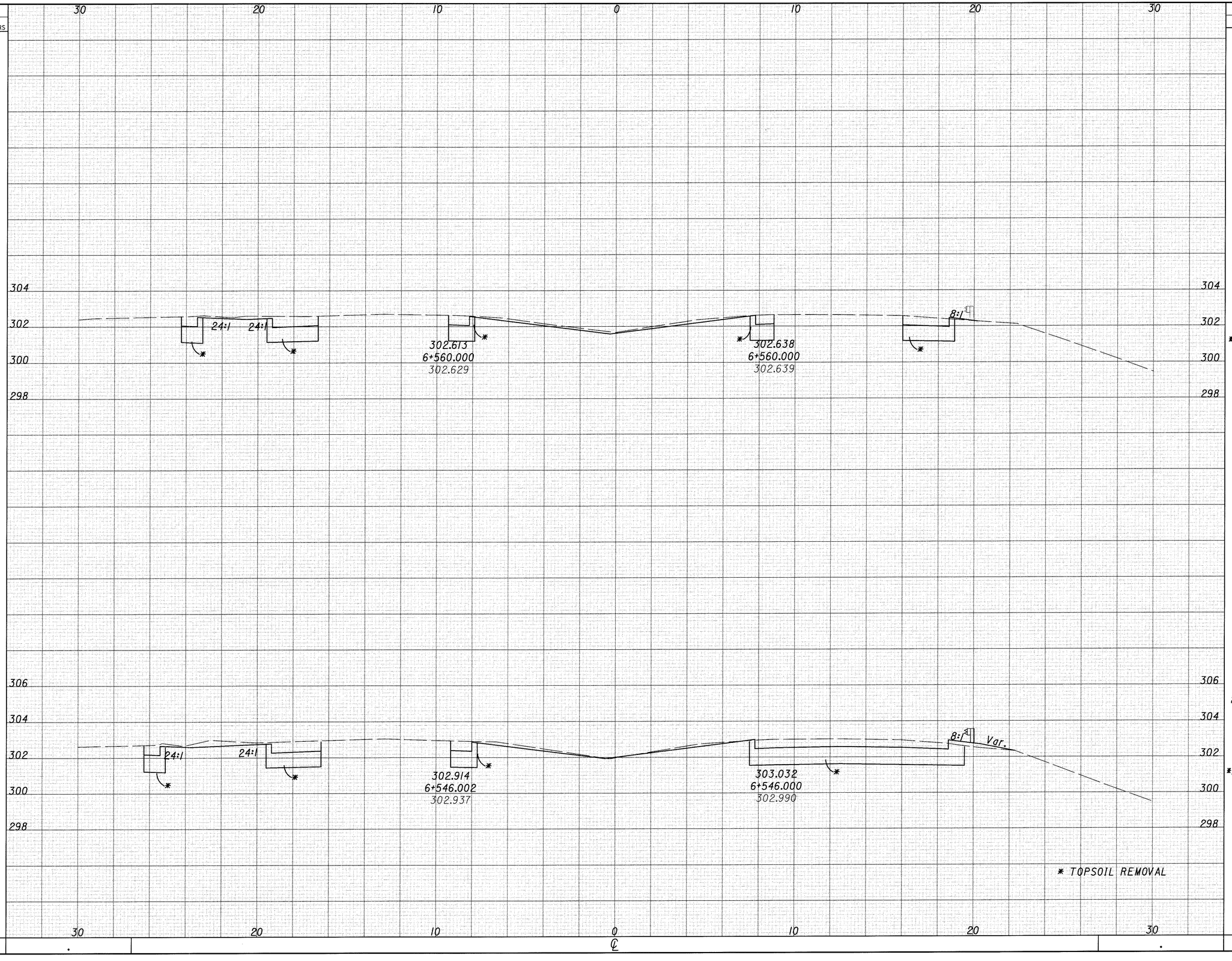
US-30 CROSS SECTIONS

STA 6+537.403 TO STA 6+540.000

WYA/CRA-30-28.009/0.000

748
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
24.89	284	8.31	13.84	77	206
		*13.14		*197	
15.62	136	2.67	15.63	35	94
		*15.05		*91	



CALCULATED AM

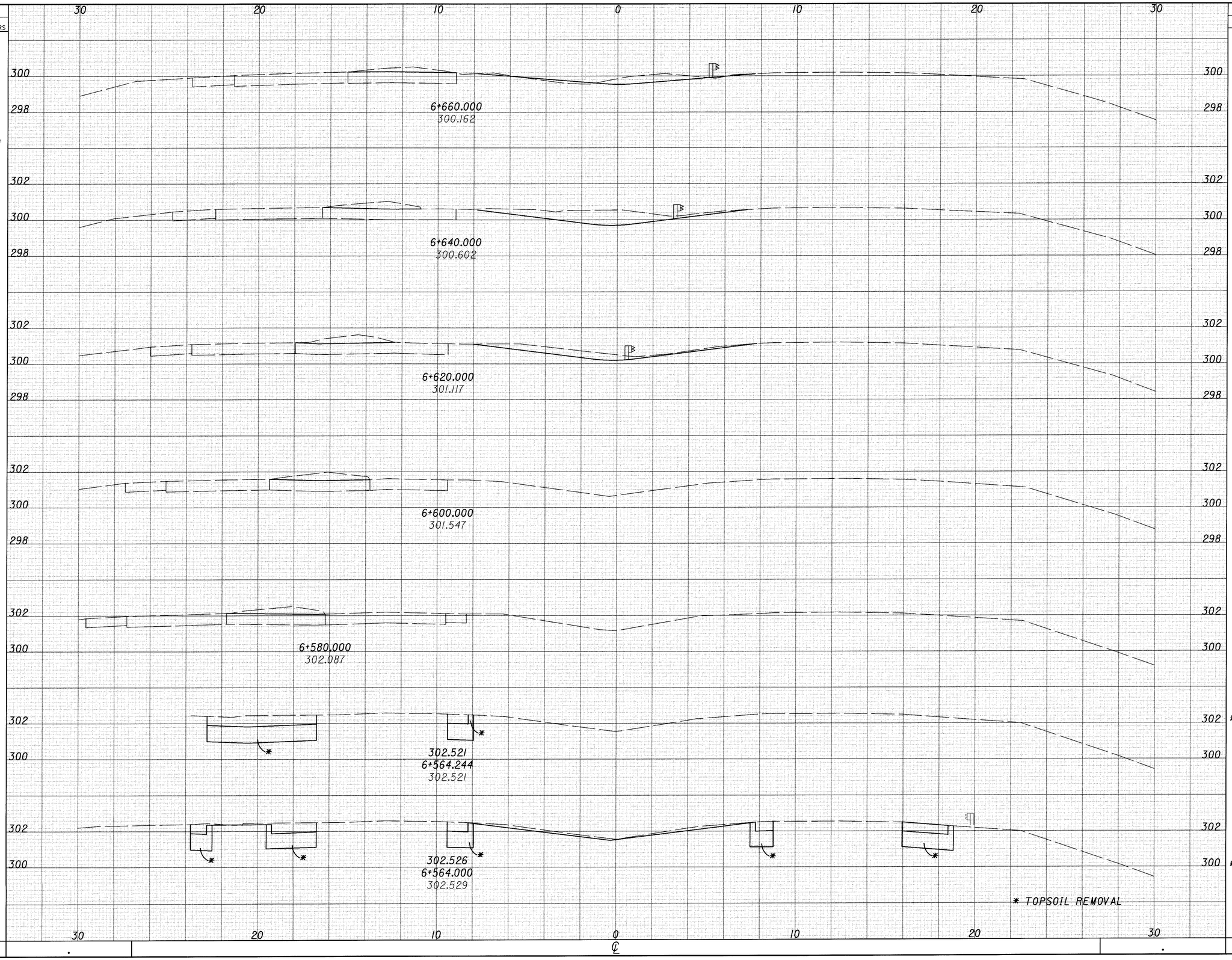
CHECKED REA

US-30 CROSS SECTIONS
STA 6+546.000 TO STA 6+560.000

WYA / CRA-30-28.009 / 0.000

749
2116

SEEDING	
END WIDTH	SQ. METERS
14.00	
	280
13.00	
	270
14.00	
	140
0.00	
	0
0.000	
	3
20.77	
	91



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.00			
		78.0	
5.80			
		89.4	
3.14	0.00		
		31.4	0
0.00	0.00		
		0	0
3.93	5.56		
*5.56			
		1	2
		*2	
4.16	6.95		
*6.94			
		25	42
		*40	

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 6+564.000 TO STA 6+660.000

WYA/CRA-30-28.009/0.000

750
2116

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. METERS		CUT	FILL	CUT	FILL
		6+774.244 297.804				
		6+760.000 297.906				
		SKEWED SECTION 298.339 6+742.272 298.250	34.64 *20.97	21.40	244 *186	236
29.36	0	SKEWED SECTION 298.493 6+733.134 297.494	18.31 *19.53	29.86	0 *0	0
		BRIDGE - STA 6+702.864 TO STA 6+733.134				
29.53	230	SKEWED SECTION 299.124 6+702.864 299.238	33.51 *19.69	24.31	302 *179	207
20.80	508	SKEWED SECTION 299.349 6+693.864 299.427	32.50 *19.49	20.87	503.4 *0	304.5

* TOPSOIL REMOVAL

CALCULATED AM | CHECKED REA

US-30 CROSS SECTIONS
STA 6+693.864 TO STA 6+774.244

WYA / CRA-30-28.009 / 0.000

751
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

30 20 10 0 10 20 30

298
296

6+880.000
297.915

6+860.000
297.802

6+840.000
297.745

6+820.000
297.733

6+804.244
297.714

6+800.000
297.715

6+780.000
297.756

℄

CALCULATED AM

CHECKED REA

US-30 CROSS SECTIONS

STA 6+780.000 TO STA 6+880.000

WYA/CRA-30-28.009/0.000

752
2116

BEGIN WORK
U.S.R. 23
STA. 12+240.000

Sta. 12+245.977, Begin 48:1 Taper

POT Sta. 12+274.470

2.4m

Ex. LA-R/W

Woven Wire

Asph./Conc.

12+200

12+300

12+400

℄ SURVEY U.S. 23

N 1° 42' 15.01" W

Constr. Limits

Existing LA-R/W

Abndn. Woven Wire

48:1 Taper

Frame Garage

2-1/2 Sty. Frame #6489

Grass

Temporary Easement

LA-R/W

℄ Construction C.R.-56 Section 10

Section 3

Asphalt

605, 100mm x 39.7m

U1

88° 57' 54"

Match Line Sta. 12+440.000
See Sheet No. 754

202 Pavement Removed
(CAD Area = 408.27 sq m)

+366.728

+396.728

2.4m

(8.343m RT)

U2

605 100mm x 49.0m

Sta. 12+433.727 U.S. 23 =
Sta. 1+000.000 C.R.-56

Woven Wire

Asphalt

C.R.-60

Ex. R/W

Proposed R/W

Exist. R/W

Work By Others

For underdrain quantities see sheet no. 102

272
270
268
266
264

Existing ground

WORK BY OTHERS
Proposed Grade
Existing Ground

603 24m x 300mm Conduit
Type C @ 0.30%

268.785 268.765 268.738 268.717 268.722 268.726 268.718 268.710 268.784 268.819 268.756 268.749 268.760 268.776 268.785 268.745 268.683 268.640 268.600 268.570 268.473 268.416 268.788 268.904 268.864

12+100 12+120 12+140 12+160 12+180 12+200 12+220 12+240 12+260 12+280 12+300 12+320 12+340 12+360 12+380 12+400 12+420 12+440

N

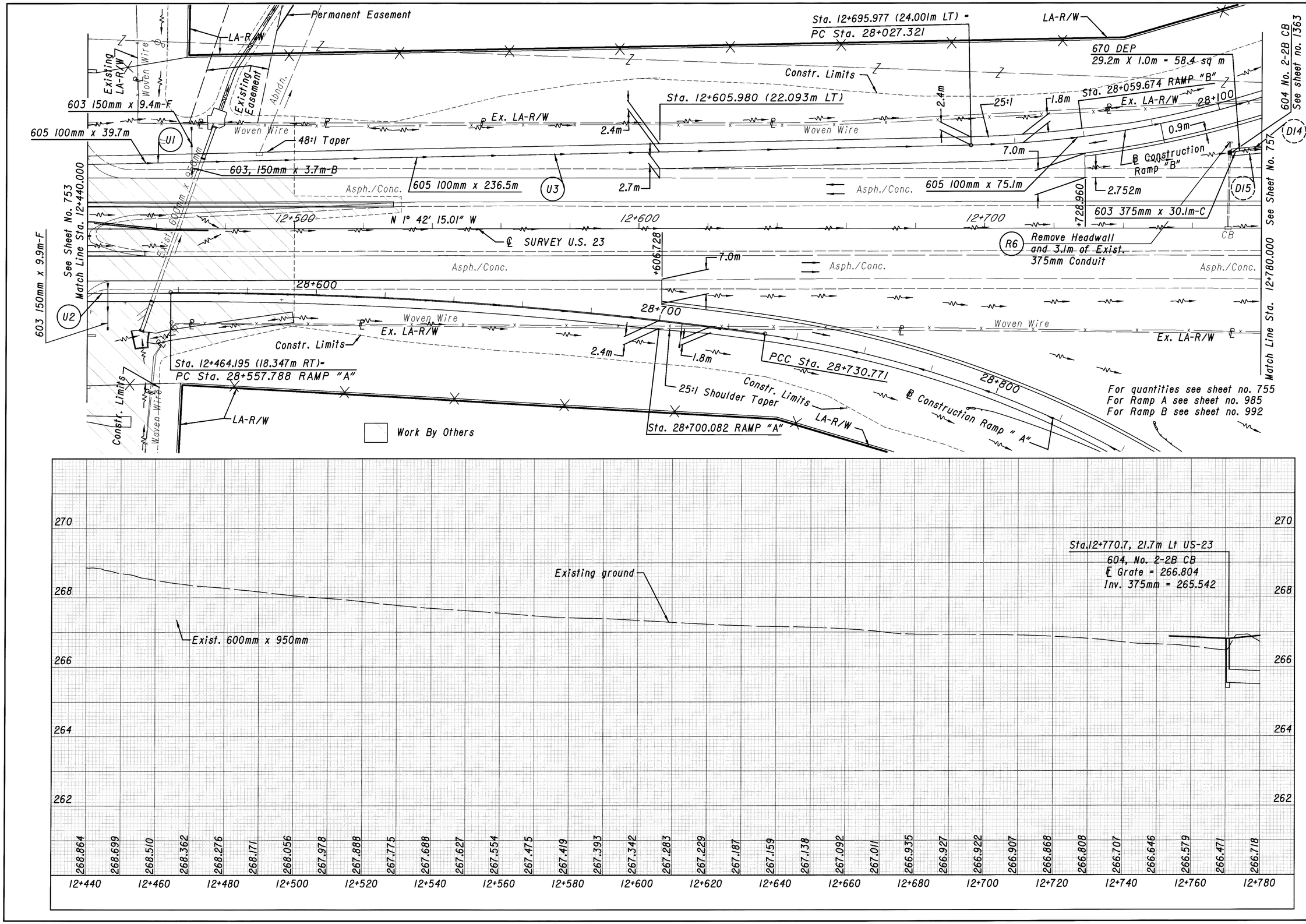
0 10 20
HORIZONTAL
SCALE IN METERS

CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - U.S.R. 23
STA. 12+245.977 TO STA. 12+440

WYA/CRA-30-28.009/0.000

753
2116



N

0 10 20
HORIZONTAL SCALE IN METERS

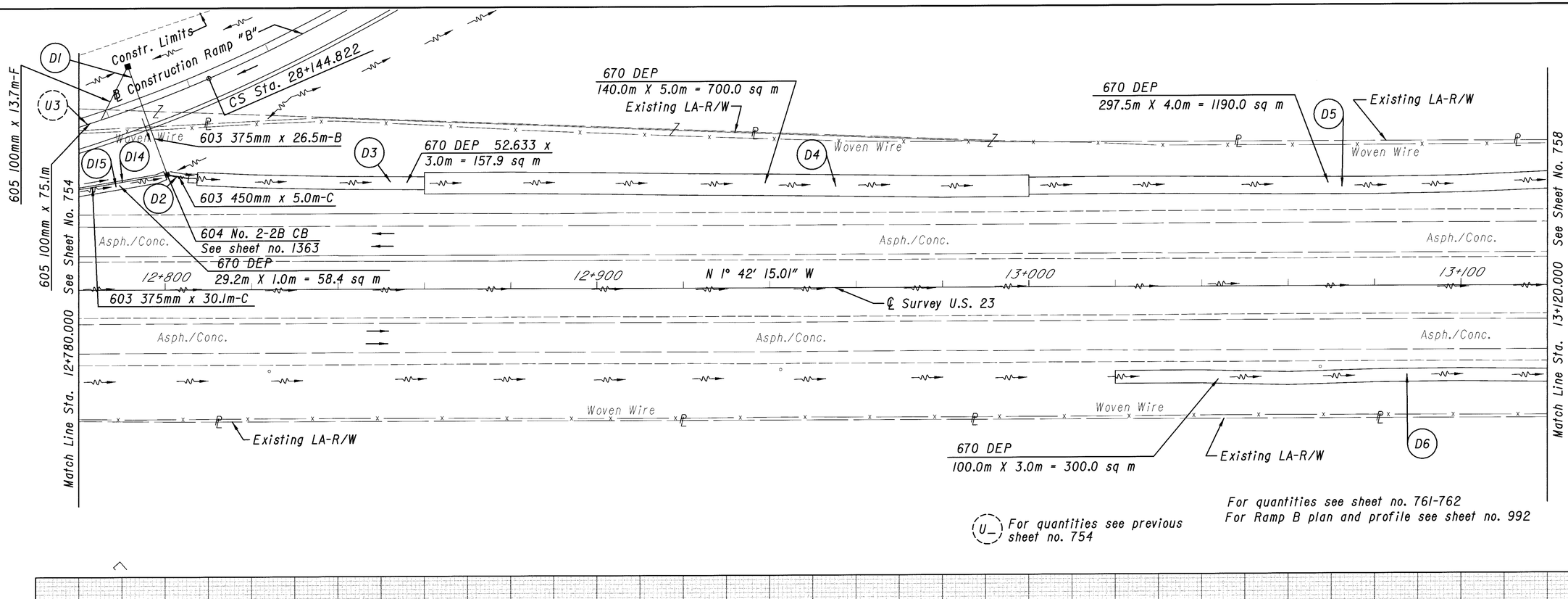
CALCULATED JGB
CHECKED REA

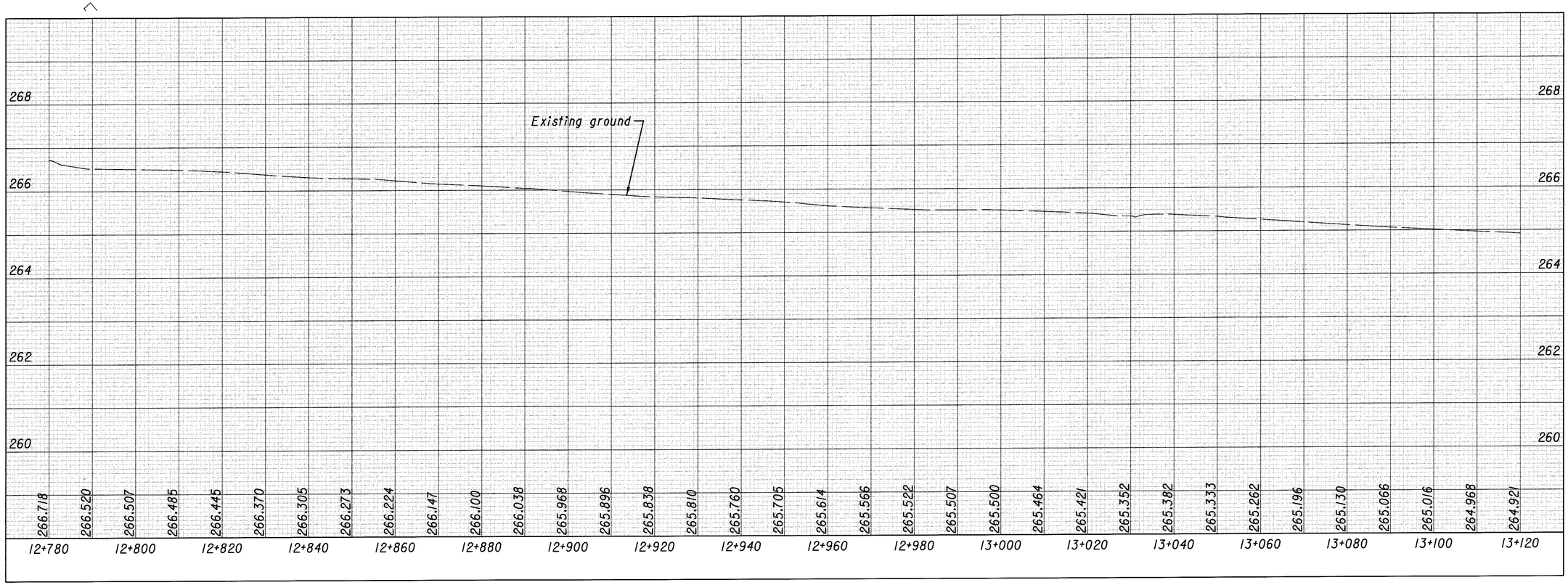
PLAN AND PROFILE - U.S.R. 23
STA. 12+440 TO STA. 12+780

WYA/CRA-30-28.009/0.000

754
2116

| REF NO. | SHEET NO. | STATION | SIDE | 202 | | | | | | | 606 | | | | | | |





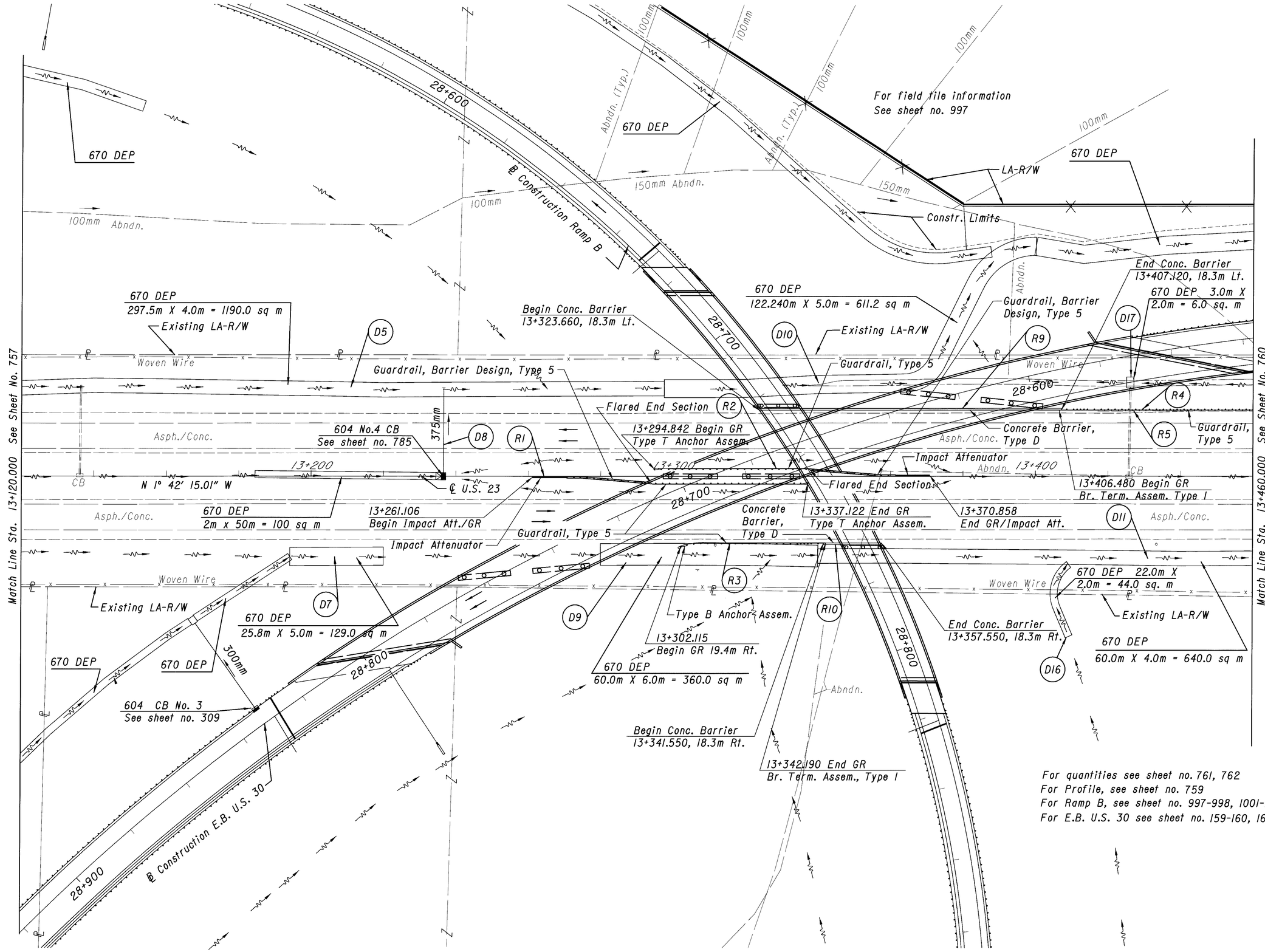
HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - U.S.R. 23
STA. 12+780 TO STA. 13+120

WYA/CRA-30-28.009/0.000

757
2116



HORIZONTAL SCALE IN METERS

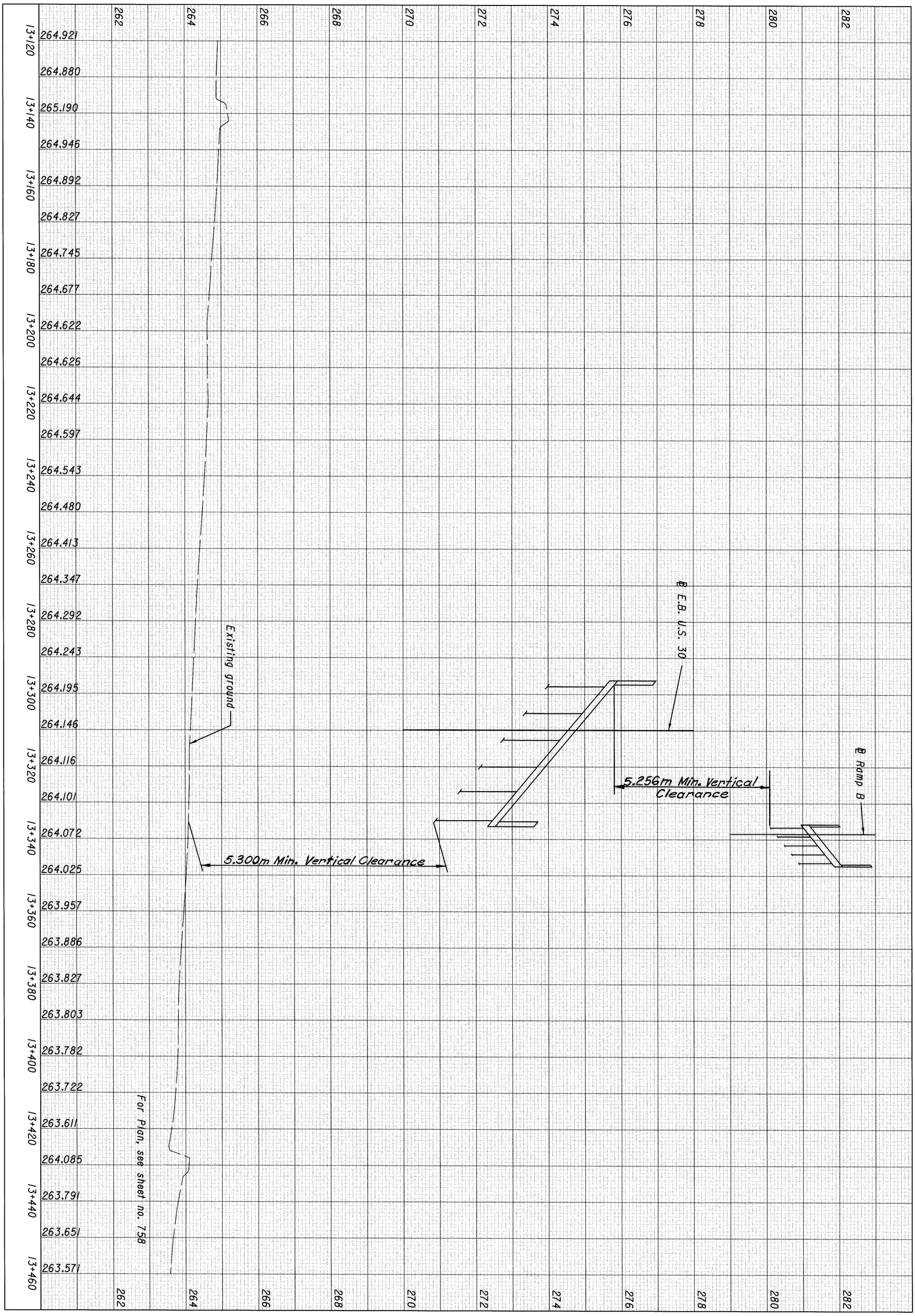
0 10 20

CALCULATED JGB
CHECKED REA

PLAN - U.S.R. 23
STA. 13+120 TO STA. 13+460

WYA/CRA-30-28.009/0.000

758
2116

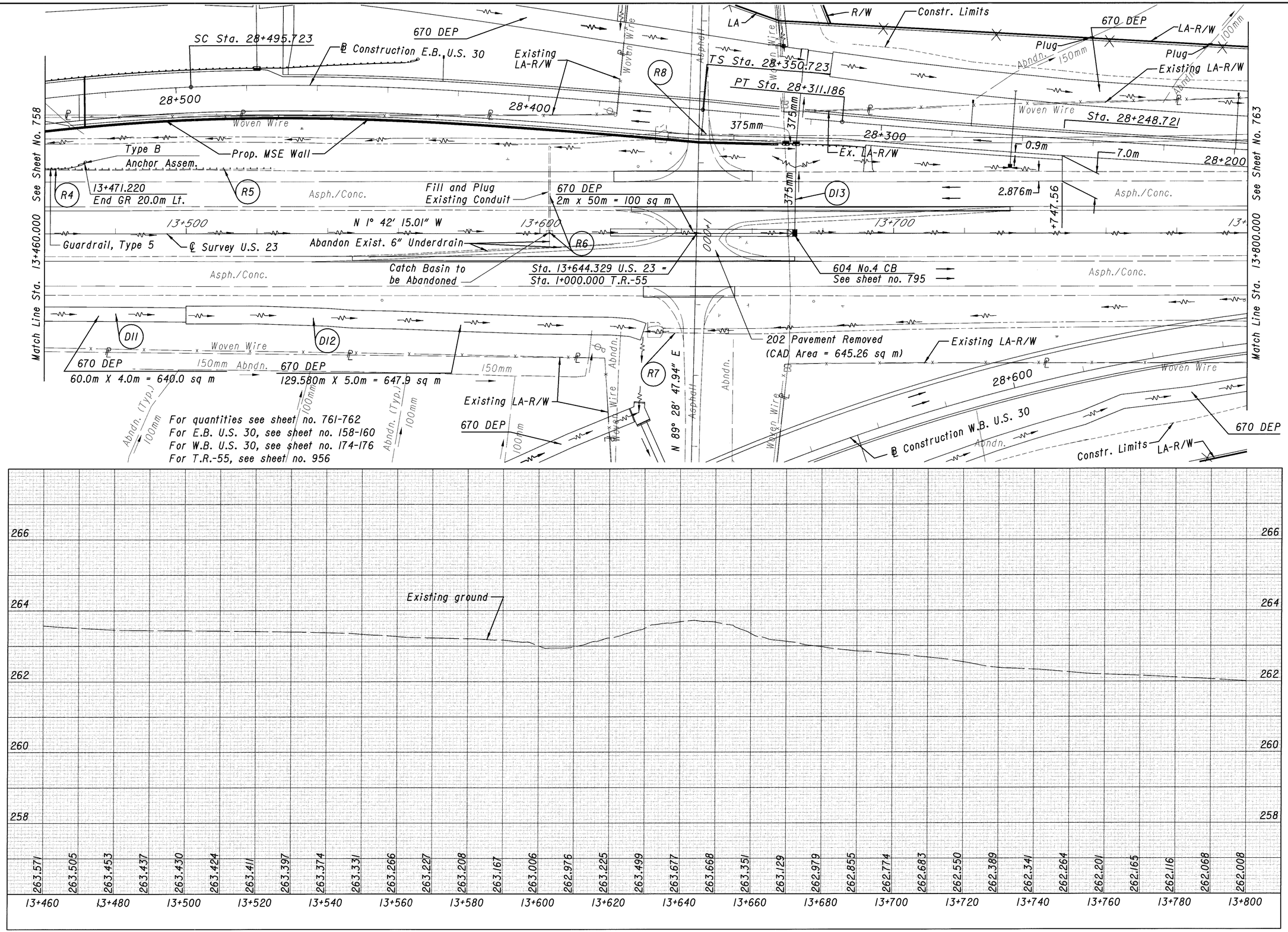


759
2116

WYA/CRA-30-28.009/0.000

PROFILE - U.S.R. 23
STA. 13+120 TO STA. 13+460

CALCULATED JGB
CHECKED REA



HORIZONTAL SCALE IN METERS

CALCULATED JGB CHECKED REA

PLAN AND PROFILE - U.S.R. 23
STA. 13+460 TO STA. 13+800

WYA/CRA-30-28.009/0.000

760
2116

REF NO.	SHEET NO.	STATION	SIDE	202										SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 23																															
R1	758	13+261.106 TO 13+337.122	RT														38.100		22.860	1				1								1	
R2	758	13+294.842 TO 13+370.858	LT														38.100		22.860	1				1								1	
R3	758	13+302.115 TO 13+342.190	RT														36.195					1			1							
R4	758	13+406.480 TO 13+471.220	LT														62.865					1			1							
R5	758	13+417.120 TO 13+524.987	LT				106.680																										
R6	760	13+602.667 TO 13+602.704	LT										1			24.0																
R7	760	13+634.878 TO 13+653.413	RT			18.5																											
R8	760	13+636.186 TO 13+654.727	LT			18.5																											
R9	758	13+323.660 TO 13+407.120	LT																											83.5			
R10	758	13+341.550 TO 13+357.550	RT																											16.0			
TOTALS CARRIED TO SUB-SUMMARY						37.0	106.680						1			24.0	175.260		45.720	2		2		2	2				99.5		2	

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

761
2116

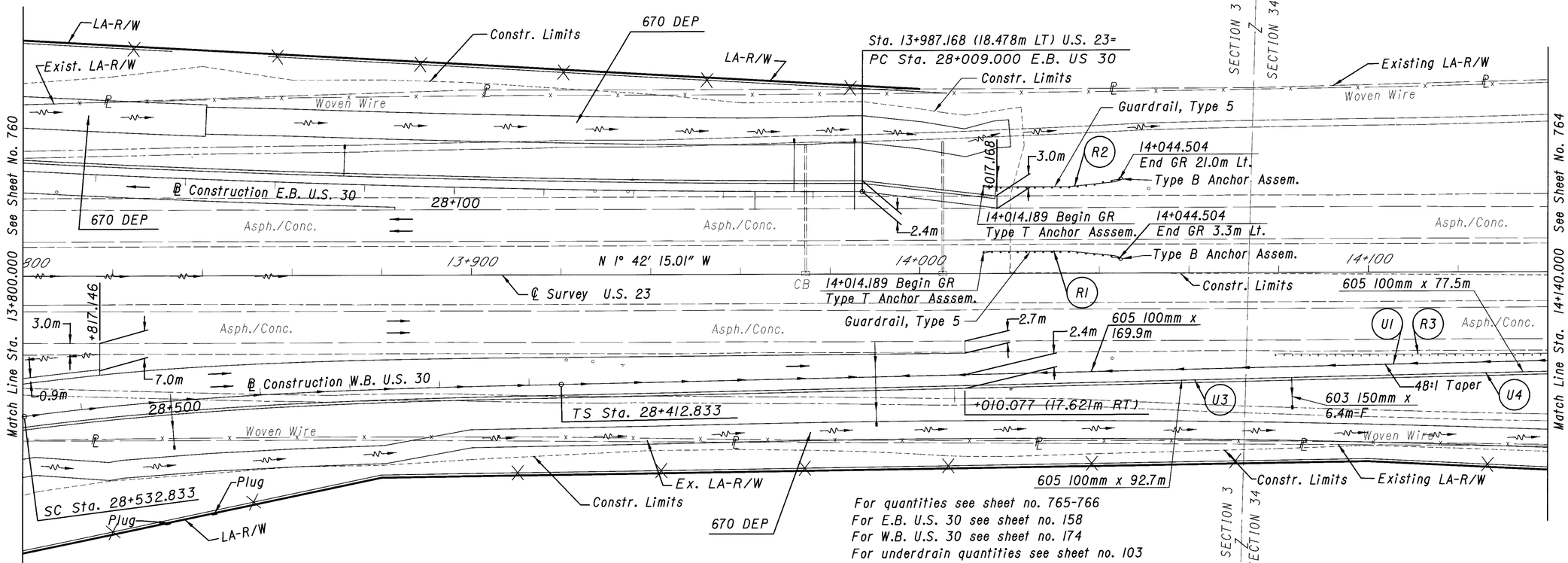
REF NO.	SHEET NO.	STATION	SIDE	602	603	603	603	603	604	604	604	670	839	FOR INFORMATION ONLY			
				CONCRETE MASONRY	375 MM CONDUIT, TYPE B	CONDUIT, BORED OR JACKED: TYPE B, 375 MM	375 MM CONDUIT, TYPE C	450 MM CONDUIT, TYPE C	CATCH BASIN NO. 2-2B	CATCH BASIN NO. 4	CATCH BASIN NO. 5	DITCH EROSION PROTECTION	SEEDING AND EROSION CONTROL WITH REVEGETATION MAT	300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND		MASONRY COLLAR
				CU M	METER	METER	METER	METER	EACH	EACH	EACH	SQ M	SQ M	EACH			
D1	757	28+128.17 RAMP B TO 12+800.47 US-23	LT		26.5						1						
D2	757	12+800.47 TO 12+805.40	LT	0.27				5.0	1				4.0				
D3	757	12+807.40 TO 12+860.00	LT									157.9					
D4	757	12+860.00 TO 13+000.00	LT									700.0					
D5	757	13+000.00 TO 13+297.45	LT									1190.0					
D6	757	13+020.00 TO 13+120.00	RT									300.0					
D7	758	13+194.19 TO 13+220.00	RT									129.0					
D8	758	13+236.00	CL	0.22		24.4				1		100.0					
D9	758	13+280.00 TO 13+340.02	RT									360.0					
D10	758	13+297.45 TO 13+400.00	LT									611.2					
D11	758	13+340.02 TO 13+500.00	RT									640.0					
D12	760	13+500.00 TO 13+629.32	RT									647.9					
D13	760	13+672.06	CL			25.2				1		100.0					
D14	757	12+770.74 TO 12+800.47	LT				30.1		1								
D15	757	12+771.24 TO 12+800.00	LT									58.4					
D16	758	13+409.27	RT									44.0					
D17	758	13+426.08	LT									6.0					
																TOTALS	
TOTALS CARRIED TO SUB-SUMMARY				0.49	26.5	49.6	30.1	5.0	2	2	1	5044.4	4.0				

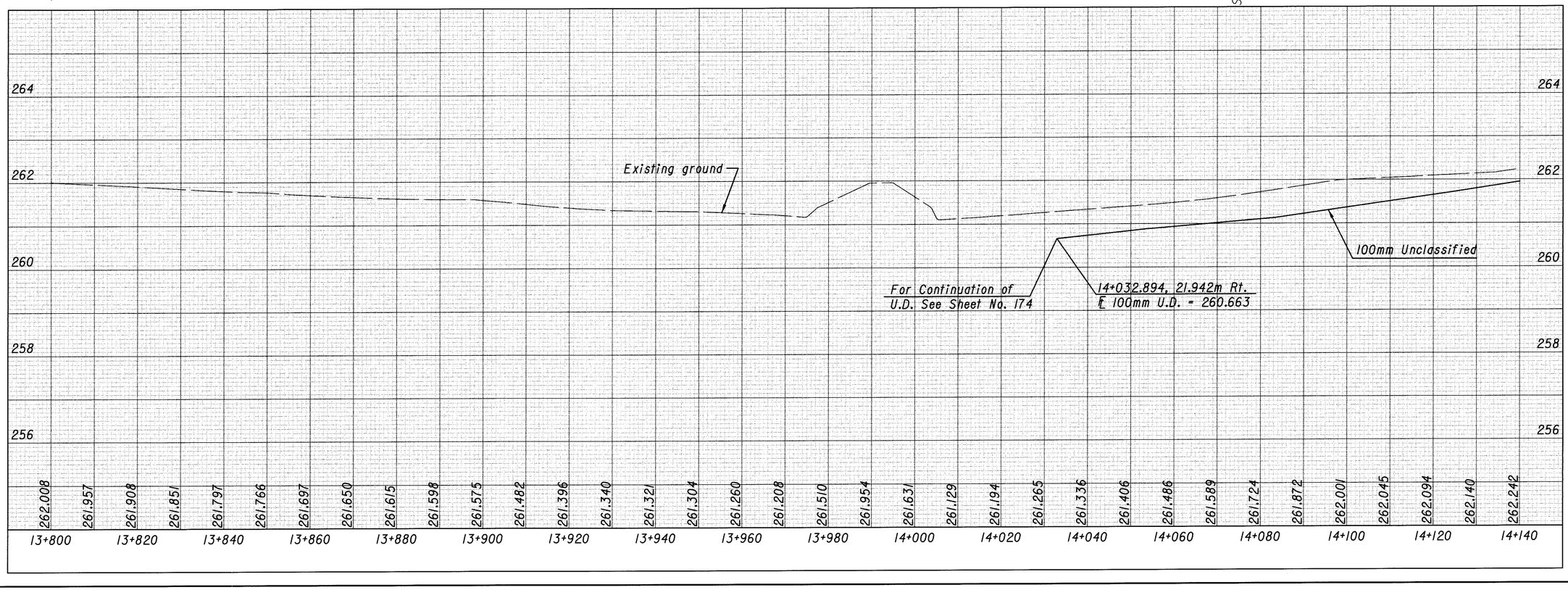
CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

762
2116





N

HORIZONTAL SCALE IN METERS

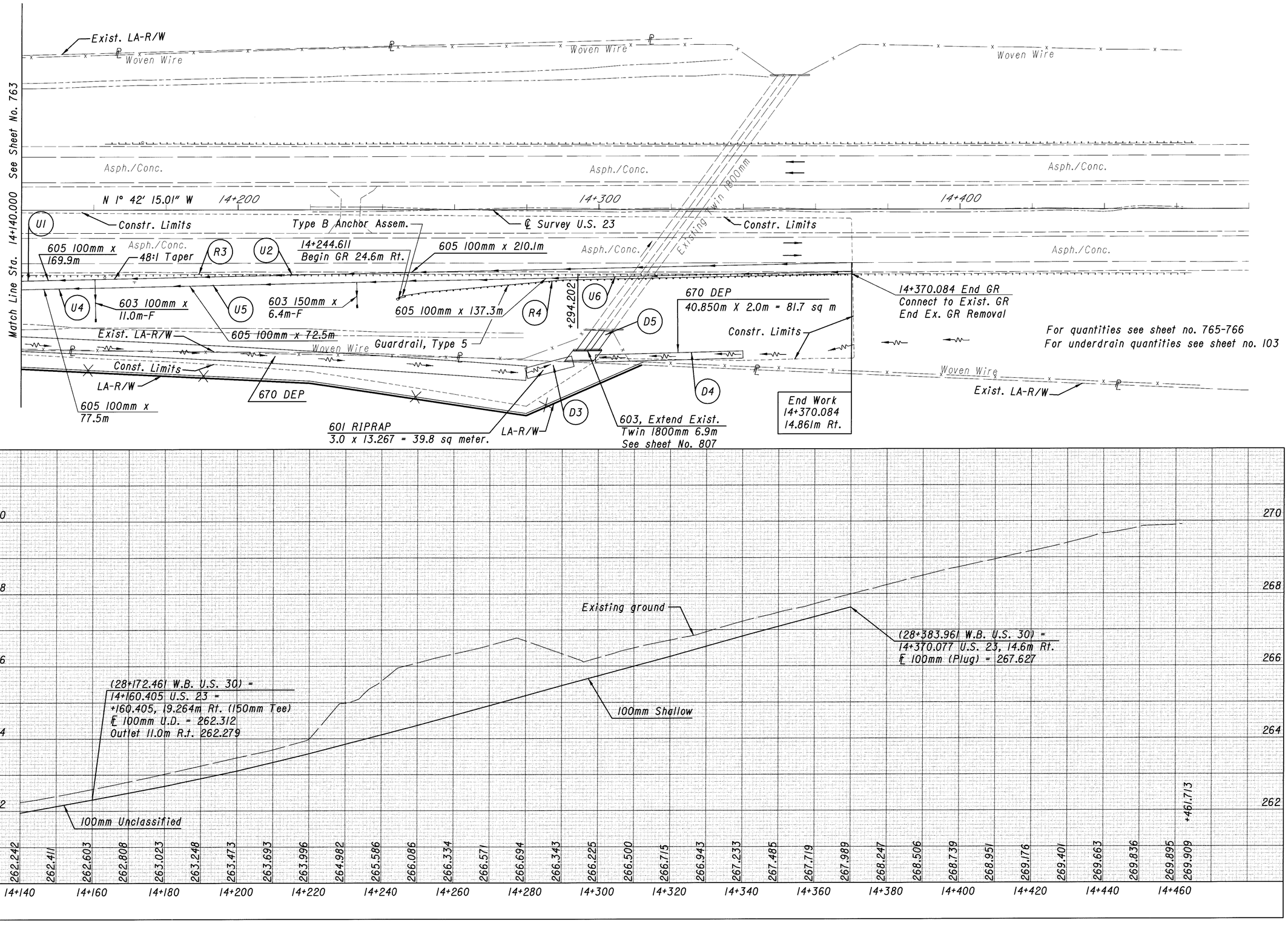
0 10 20

CALCULATED JGB CHECKED REA

PLAN AND PROFILE - U.S.R. 23
STA. 13+800 TO STA. 14+140

WYA / CRA-30-28.009 / 0.000

763
2116



HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - U.S.R. 23
STA. 14+140 TO STA. 14+370.084

WYA/CRA-30-28.009/0.000

764
2116

ESTIMATED ROADWAY QUANTITIES

CALCULATED JAG
CHECKED REA

WYA/CRA-30-28.009/0.000

765
2116

REF NO.	SHEET NO.	STATION	SIDE	202										SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		USR 23																															
R1	763	14+014.189 TO 14+044.504	LT														22.860					1		1									
R2	763	14+014.189 TO 14+044.504	LT														22.860					1		1									
R3	763	14+079.094 TO 14+370.084	RT				289.560																										
R4	764	14+244.611 TO 14+370.084	RT														121.920					1											
TOTALS CARRIED TO SUB-SUMMARY							289.560										167.640					3		2									

REF NO.	SHEET NO.	STATION	SIDE	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 1800 MM CONDUIT, TYPE A 706.02 (METER)	670 DITCH EROSION PROTECTION (SQ M)	FOR INFORMATION ONLY (EACH) 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
D1		NOT USED								
D2		NOT USED								
D3	764	14+280.00 TO 14+292.86	RT	39.8						
D4	764	14+299.15 TO 14+340.00	RT				81.7			
D5	764	14+322.353	RT	24.0	6.22	13.8				
TOTALS CARRIED TO SUB-SUMMARY				63.8	6.22	13.8	81.7	TOTALS		

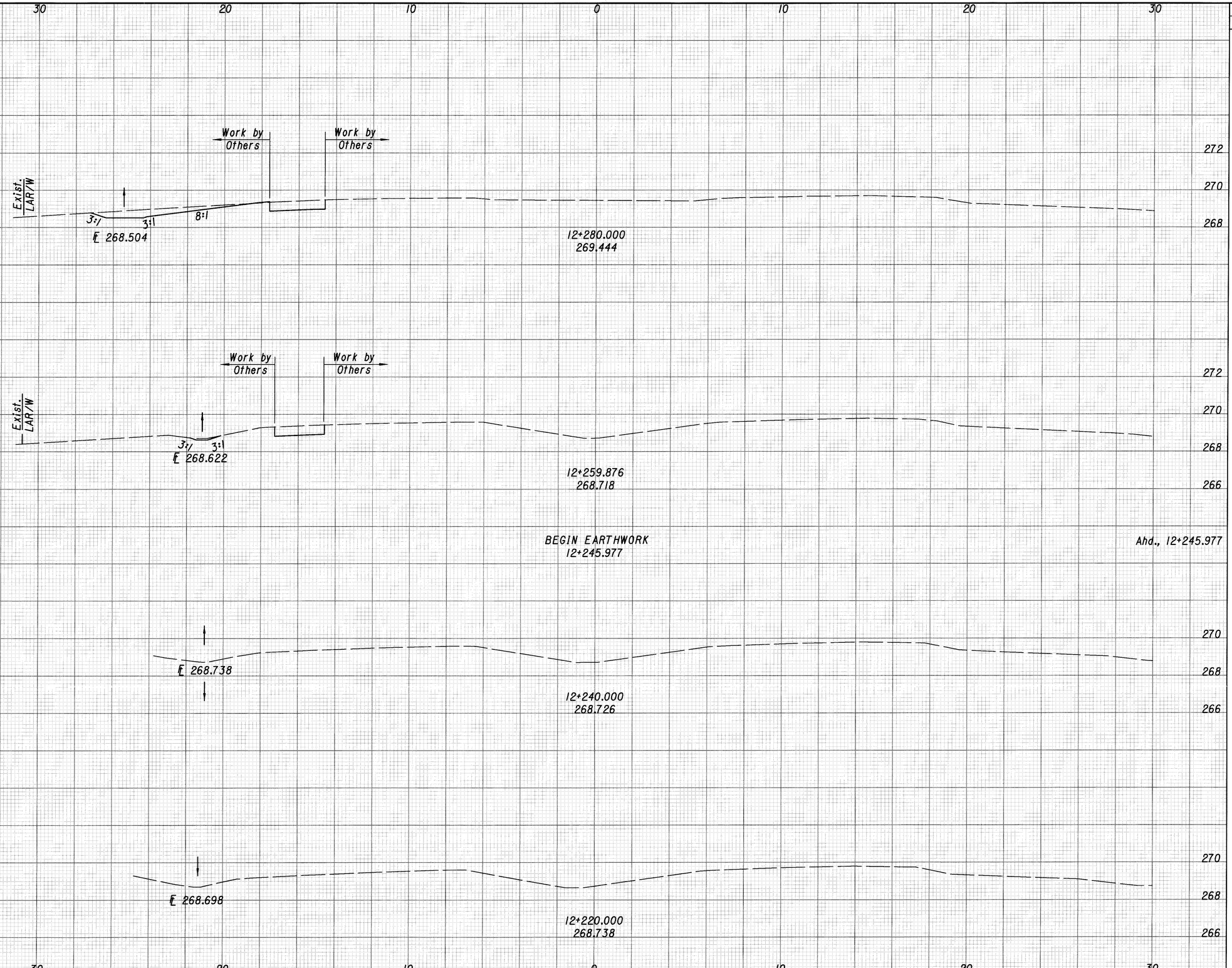
CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

766
2116

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.40	0		
		28	0
1.35	0		
			0
1.22	0		

CALCULATED AM

CHECKED REA

US-23 CROSS SECTIONS
STA 12+220.000 TO STA 12+280.000

WYA / CRA-30-28.009 / 0.000

767
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.98	0	37	0
1.87	0	36	0
1.68	0	31	0

CALCULATED AM

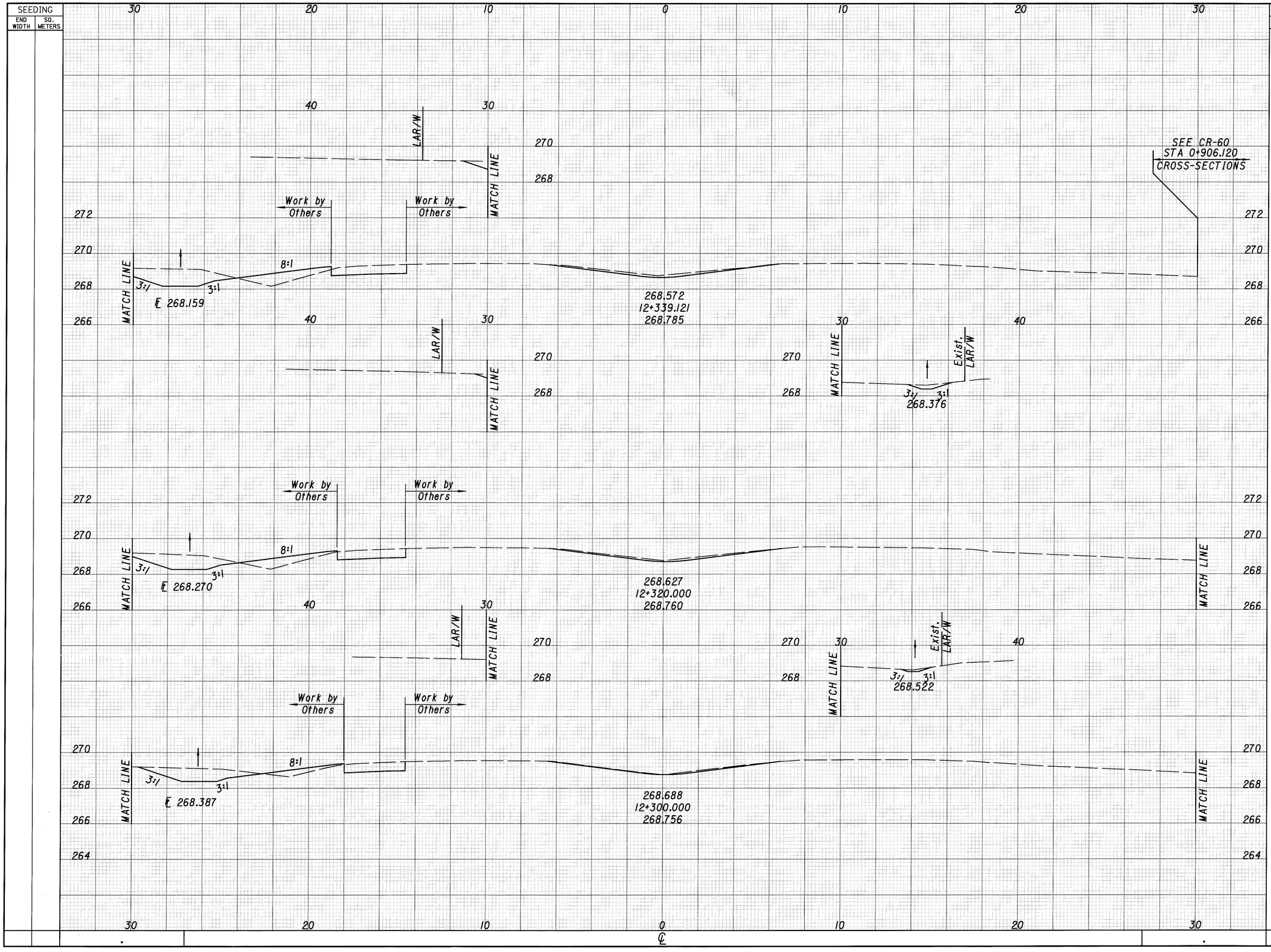
CHECKED REA

US-23 CROSS SECTIONS

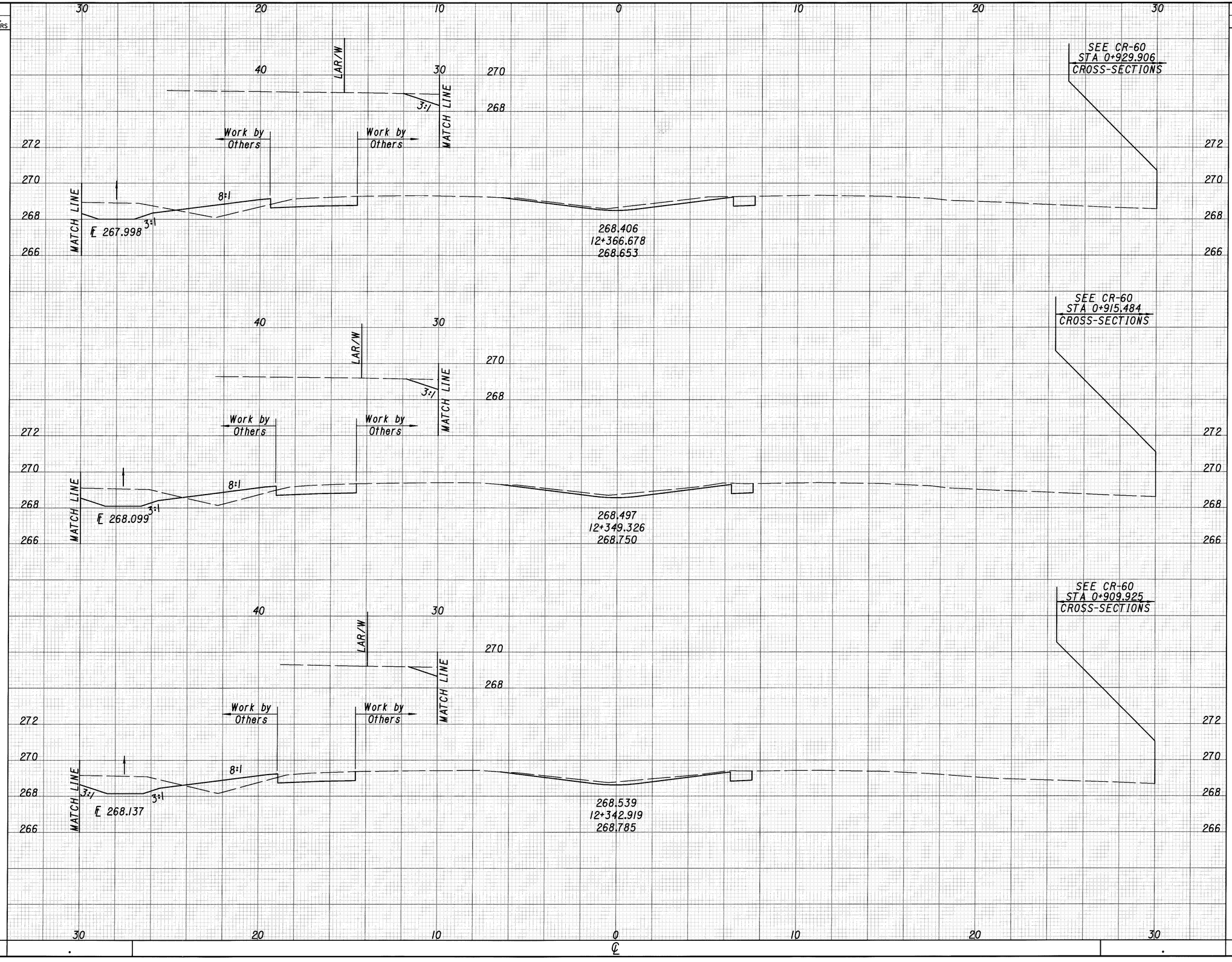
STA 12+300.000 TO STA 12+339.121

WYA/CRA-30-28.009/0.000

768
2116



SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.10	0		
		36	0
2.03	0		
		13	0
2.00	0		
		8	0

CALCULATED AM

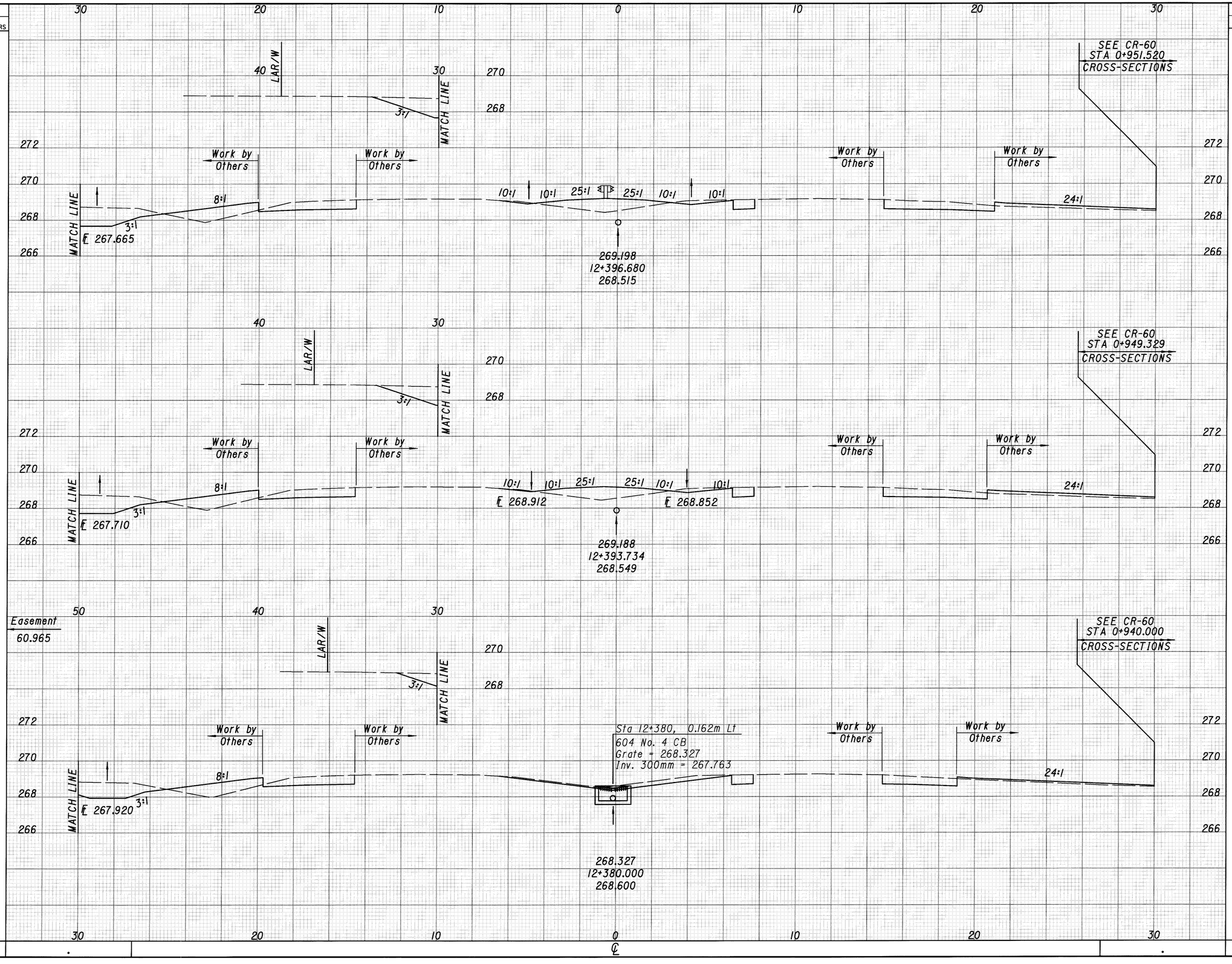
CHECKED REA

US-23 CROSS SECTIONS
STA 12+342.919 TO STA 12+366.678

WYA / CRA-30-28.009 / 0.000

769
2116

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
4.87	0		
		14	0
4.70	0		
		60	0
4.00	0		
		41	0

CALCULATED AM

CHECKED REA

US-23 CROSS SECTIONS

STA 12+380.000 TO STA 12+396.680

WYA / CRA-30-28.009 / 0.000

770
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL
5.02	0		
		46	0
4.82	0		
		22	0
4.87	0		
		16	0

CALCULATED AM

CHECKED REA

SEE C.R.56
CROSS - SECTIONS

MATCH LINE

Work by Others

11.1:1

8:1

3:1

℄ 267.482

10:1 10:1 25:1 25:1 10:1 10:1

268.573
12+413.921
268.573

6:1

8:1

3:1

℄ 267.701

SEE CR-60
STA 0+960.000
CROSS-SECTIONS

24:1

Sta 12+404.637, 22.738m Lt
Exist. Headwall
Inv. 375mm =267.578

Sta 12+404.637,
28.330m Lt
HW-2.2m
Inv. 375mm
=267.544

0.50%

℄ 267.544

Remove Existing HW and one Length of pipe (1.2m)

603 6.8m x 375mm Conduit Type B , 706.01 @ 0.50%

Sta 12+404.637, 0.124m Rt
202 Catch Basin Abandoned
(Connect pipe Through)
Grate = 268.468
Inv. 375mm (Exist.) =267.578
Inv. 300mm = 267.691
Inv. 375mm (Prop.) =267.578
Inv. 150mm (Exist..) =267.741

269.163
12+404.637
268.308

LAR/W

SEE CR-60
STA 0+953.945
CROSS-SECTIONS

℄ 267.614

269.175
12+400.000
268.473

30 20 10 0 10 20 30

270 268 266 272

℄

US-23 CROSS SECTIONS
STA 12+400.000 TO STA 12+413.921

WYA / CRA-30-28.009 / 0.000

771
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL
4.22	0		
		88	0
6.35	0		
		115	0
5.11	0		
		31	0

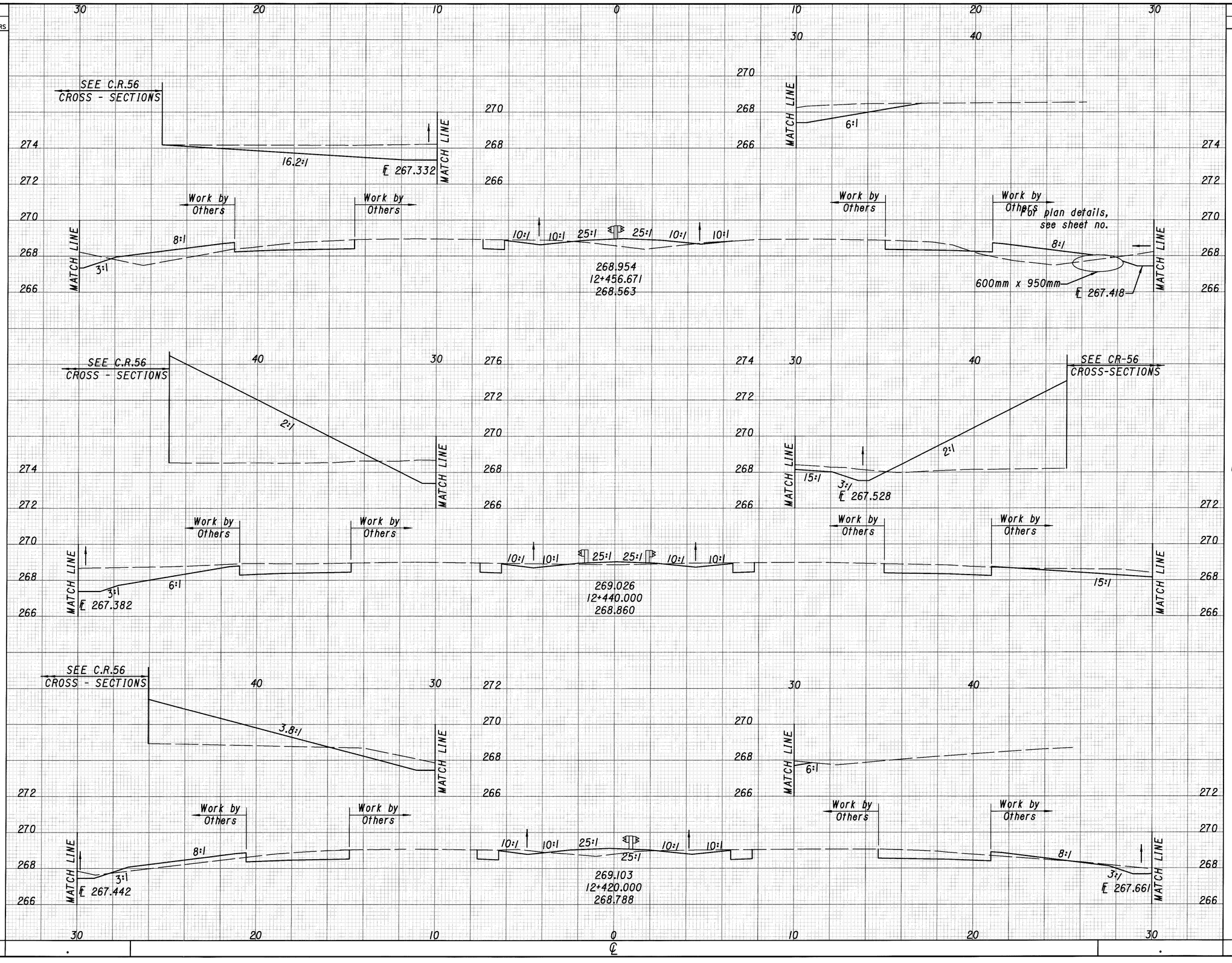
CALCULATED AM

CHECKED REA

US-23 CROSS SECTIONS
STA 12+420.000 TO STA 12+456.671

WYA/CRA-30-28.009/0.000

772/2116



SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL
4.07	0.85		
		69	7
4.28	0		
		15	0
4.21	0		
		14	0

CALCULATED AM

CHECKED REA

US-23 CROSS SECTIONS

STA 12+460.000 TO STA 12+480.000

WYA / CRA-30-28.009 / 0.000

773
2116

30 20 10 0 10 20 30

MATCH LINE — 3:1 — 8:1 — Work by Others — Work by Others — 6:1 — ℄ 267.262 — MATCH LINE

268.383
12+480.000
268.276

MATCH LINE — 6:1 — LAR/W — MATCH LINE

℄ Ramp A — 8:1 — ℄ 267.795 — MATCH LINE

268.698
28+574.525
268.525

MATCH LINE — 6:1 — ℄ 267.312 — MATCH LINE

MATCH LINE — 6:1 — ℄ 267.527

MATCH LINE — 3:1 — 8:1 — Work by Others — Work by Others

10:1 10:1 25:1 25:1 10:1 10:1

268.927
12+463.450
268.451

Exist. 600mm x 950mm
For plan details,
see sheet no.

Begin ℄ Ramp A — 8:1 — MATCH LINE

268.754
28+558.024
268.621

SEE C.R.56
CROSS - SECTIONS

34.4:1 — ℄ 267.322 — MATCH LINE

MATCH LINE — 6:1 — ℄ 267.471

MATCH LINE — 3:1 — 8:1 — Work by Others — Work by Others

10:1 10:1 25:1 25:1 10:1 10:1

268.950
12+460.000
268.510

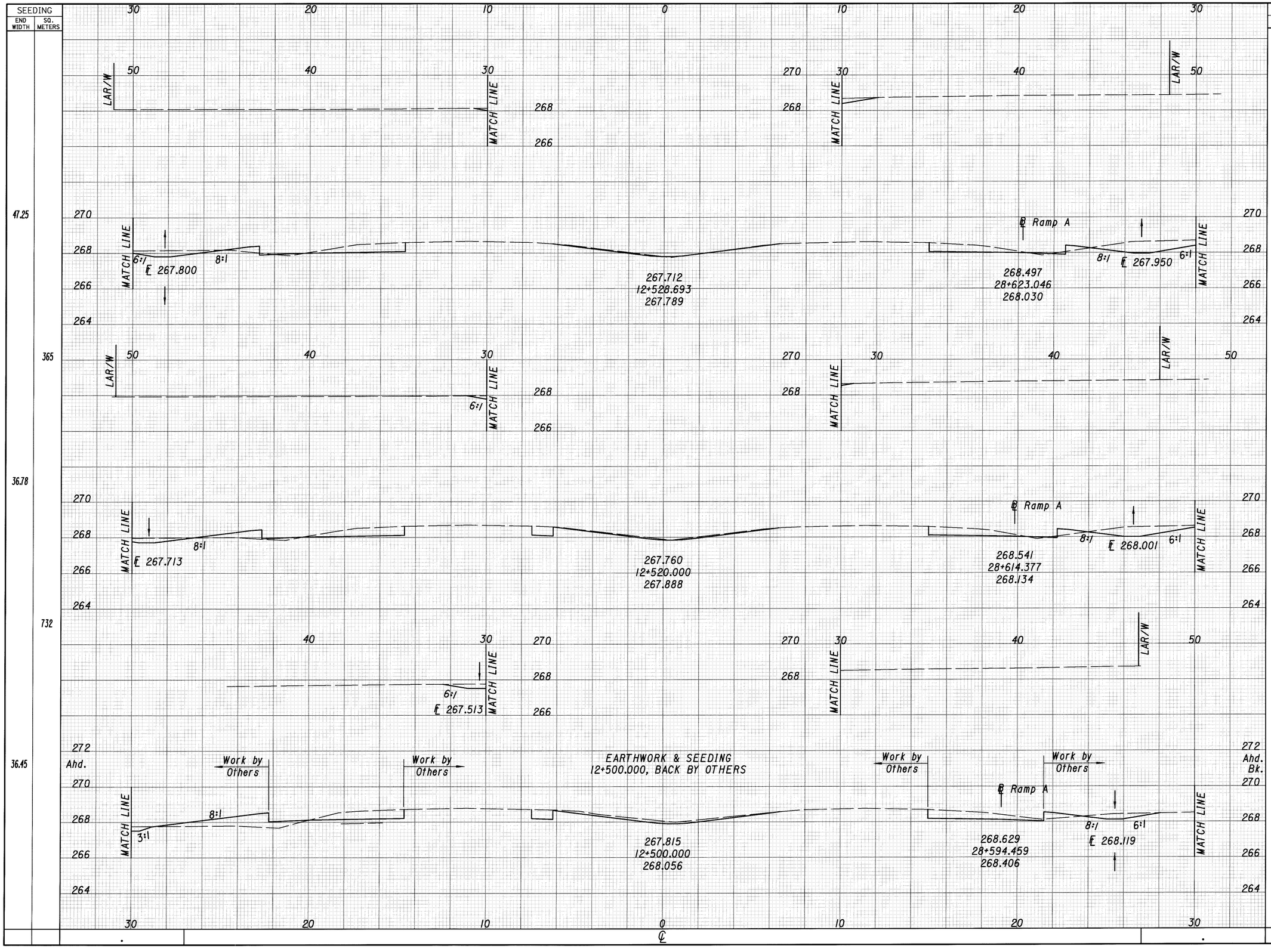
Exist. 600mm x 950mm
For plan details,
see sheet no.

MATCH LINE — 8:1

30 20 10 0 10 20 30

℄

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
47.25	365	8.45	0.79	71	10
36.78	732	7.92	1.51	156	50
36.45		7.64 Ahd. / 4.04 Bk.	3.51 / 0.50	81	14



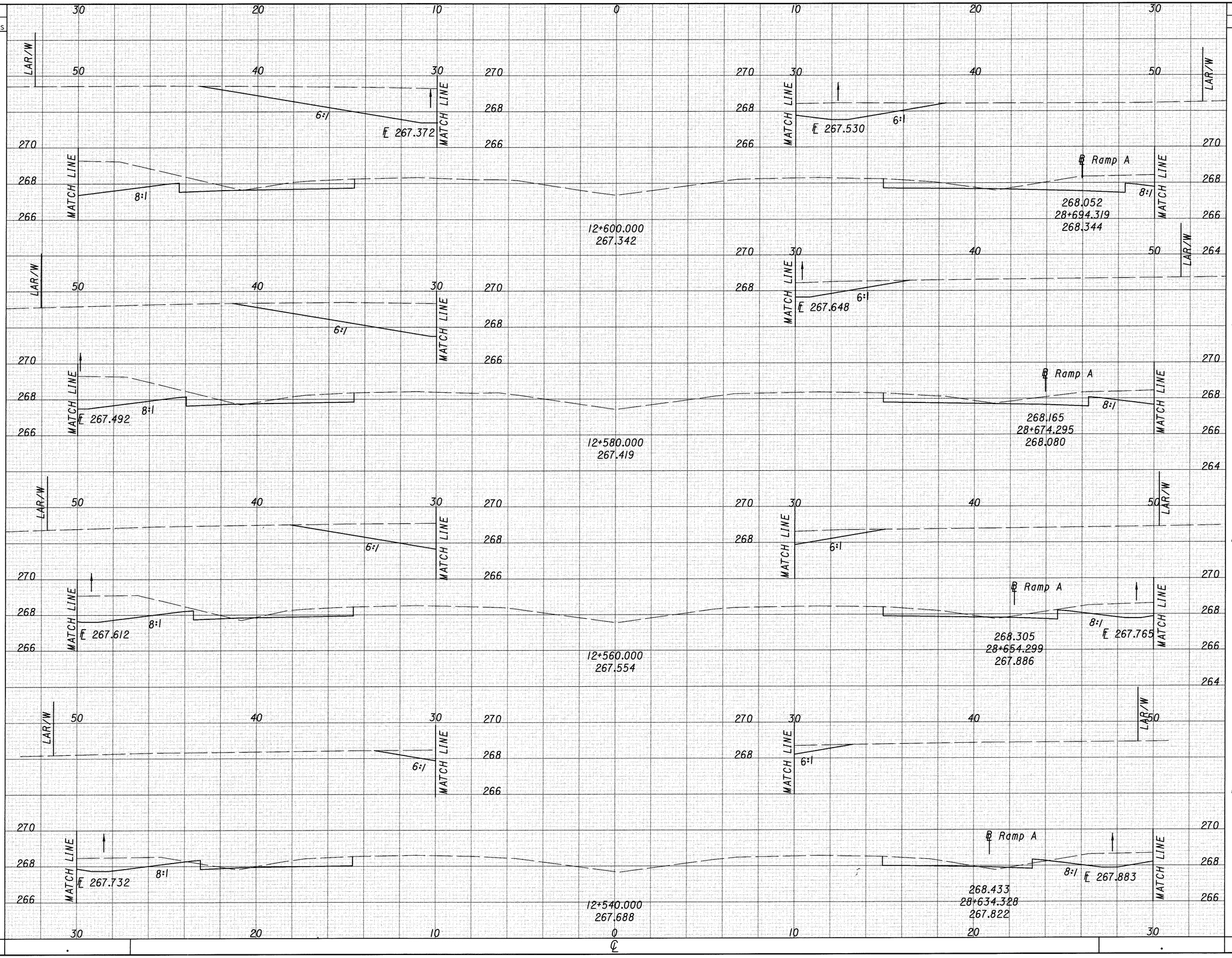
US-23 CROSS SECTIONS
12+500.000 TO STA 12+528.693

WYA/CRA-30-28.009/0.000

CALCULATED AM
CHECKED REA

774
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
37.27		36.18	0.04		
	731			669	1
35.86		30.75	0.01		
	703			535	1
34.45		22.76	0.13		
	722			352	5
37.77		12.45	0.38		
	481			118	7



CALCULATED AM
CHECKED REA

US-23 CROSS SECTIONS

STA 12+540.000 TO STA 12+600.000

WYA / CRA-30-28.009 / 0.000

775
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
25.94		22.74	0.20		
42.29		26.57	8.42		
	377			252	56
14.20		11.23	0.02		
	13			12	0
23.26		24.63	0.00		
	181			182	0

LAR/W
End width Ahead
End width Back
From Sta. 28+713.948
Ramp A
6:1
℄ 267.252
MATCH LINE
8:1
270
268
266
12+620.000
267.229
See Ramp A
CROSS-SECTIONS
Ahead
Back
End areas Ahead
End areas Back
From Sta. 28+713.948
Ramp A
8:1
℄ 267.790
℄ Ramp A
268.035
28+701.003
268.341
12+606.668
267.303
℄ 267.336
12+605.981
267.335
℄ 267.491
30
40
50
20
10
0

CALCULATED AM
CHECKED REA

US-23 CROSS SECTIONS
STA 12+605.981 TO STA 12+620.000

WYA/CRA-30-28.009/0.000

776
2116

SEEDING	
END WIDTH	SQ. METERS
24.82	
	494
24.57	
	497
25.14	
	511

END AREA		VOLUME	
CUT	FILL	CUT	FILL
10.94	0.78		
		233	20
12.31	1.20		
		297	19
17.37	0.68		
		401	9

CALCULATED AM

CHECKED REA

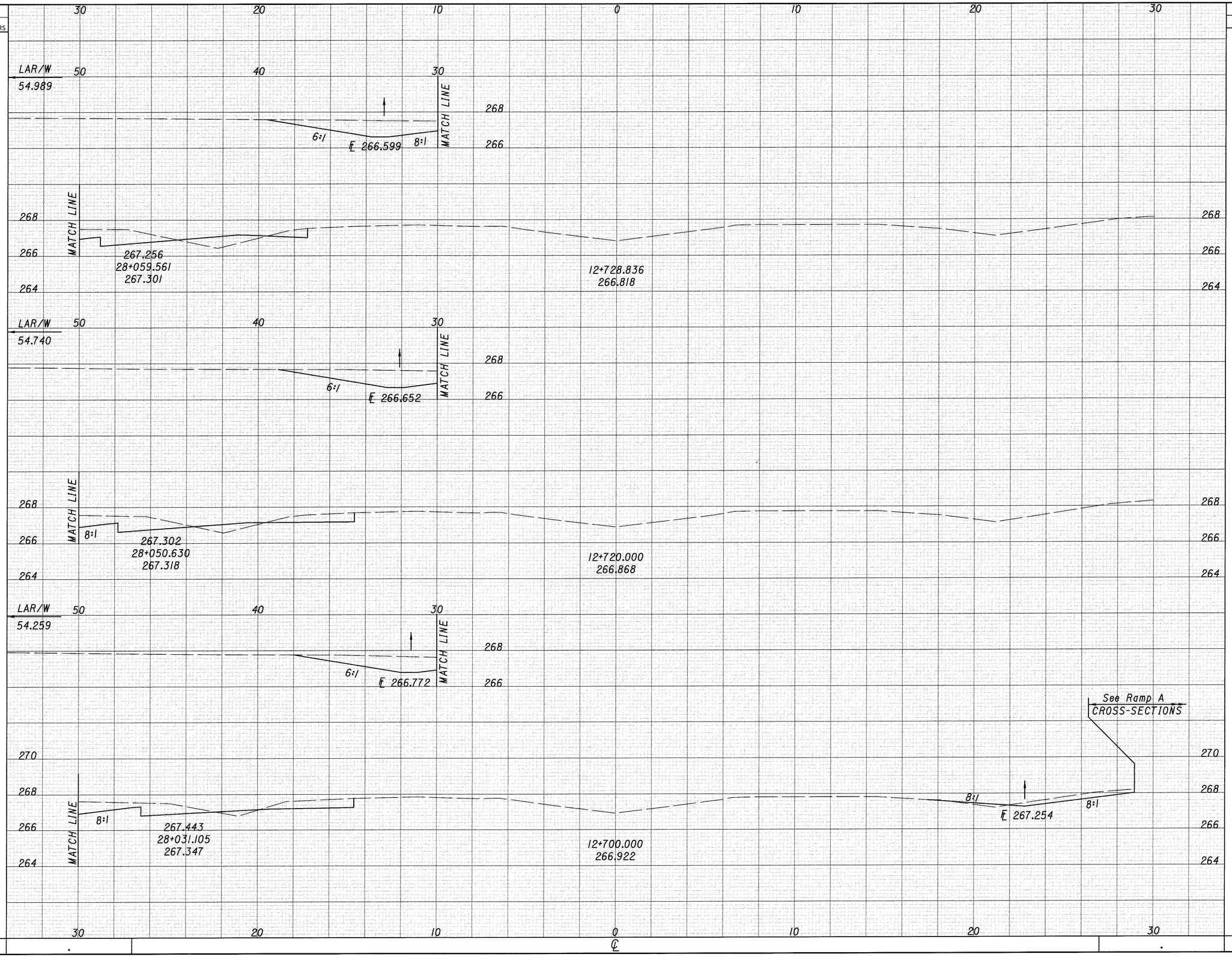
US-23 CROSS SECTIONS

STA 12+640.000 TO STA 12+680.000

WYA / CRA-30-28.009 / 0.000

777
2116

SEEDING	
END WIDTH	SQ. METERS
14.81	133
15.20	431
27.93	528



END AREA		VOLUME	
CUT	FILL	CUT	FILL
9.29	1.74		
		88	12
10.68	0.99		
		222	16
11.49	0.65		
		224	14

CALCULATED AM

CHECKED REA

US-23 CROSS SECTIONS

STA 12+700.000 TO STA 12+728.836

WYA/CRA-30-28.009/0.000

778
2116

SEEDING END WIDTH	SEEDING SQ. METERS
8.42	
	135
5.11	
	103
5.21	
23.09	
	212

30 20 10 0 10 20 30

272 270 268 266 264

See Ramp B CROSS-SECTIONS

8:1 8:1

℄ 266.652

12+780.000
266.718

See Ramp B CROSS-SECTIONS

8:1 8:1

℄ 266.989

12+760.000
266.579

See Ramp B CROSS-SECTIONS

Ahead

Back

End Width Ahead

End Width Back
From Sta. 28+070.234
Ramp B

8:1 8:1

℄ 267.174

12+740.000
266.707

End Area Ahead

End Area Back
From Sta. 28+070.234
Ramp B

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.02	2.66		
0.03	0.62		
		1	33
		5	8
0.46	0.18		
7.81	9.26		
		95	61

CALCULATED AM

CHECKED REA

US-23 CROSS SECTIONS

STA 12+740.000 TO STA 12+780.000

WYA/CRA-30-28.009/0.000

779
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
6.16	146	0.00	1.67	0	43		

30 20 10 0 10 20 30

268
266
264

12+840.000
266.305

268
266
264

12+820.000
266.445

272
270
268
266
264

See Ramp B
CROSS-SECTIONS

8:1

12+800.000
266.507

30 20 10 0 10 20 30

℄

US-23 CROSS SECTIONS
STA 12+800.000 TO STA 12+840.000

WYA / CRA-30-28.009 / 0.000

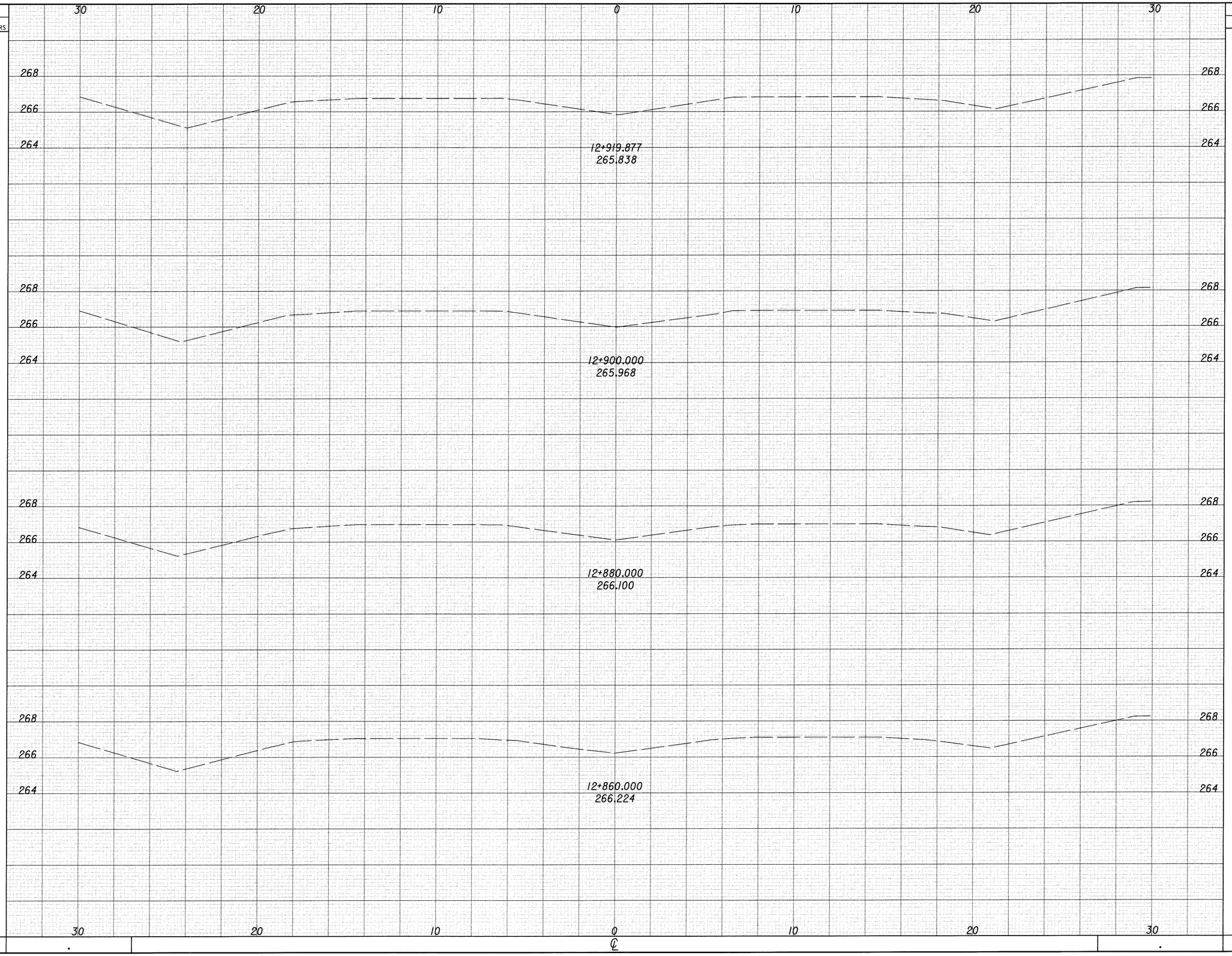
780
2116

SEEDING	
WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA



US-23 CROSS SECTIONS

STA 12+860.000 TO STA 12+919.877

WYA / CRA-30-28.009 / 0.000

781
2116

SEEDING	
WIDTH	SQ. METERS
0.00	

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA

30 20 10 0 10 20 30

268
266
264

13+000.000
265.500

12+980.000
265.522

12+965.637
265.633

12+940.000
265.760

℄

US-23 CROSS SECTIONS
STA 12+940.000 TO STA 13+000.000

WYA/CRA-30-28.009/0.000

782
2116

SEEDING	
WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

30 20 10 0 10 20 30

266
264

13+080.000
265.129

266
264

13+060.000
265.262

268
266
264

13+040.000
265.382

268
266
264

13+020.000
265.421

30 20 10 0 10 20 30

℄

CALCULATED AM

CHECKED REA

US-23 CROSS SECTIONS
STA 13+020.000 TO STA 13+080.000

WYA / CRA-30-28.009 / 0.000

783
2116

SEEDING	
END WIDTH	SQ. METERS

30 20 10 0 10 20 30

266
264
262

13+160.000
264.892

266
264

13+140.000
265.190

266
264

13+120.000
264.921

266
264

13+100.000
265.016

30 20 10 0 10 20 30

℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.00	0		

CALCULATED AM

CHECKED REA

US-23 CROSS SECTIONS

STA 13+100.000 TO STA 13+160.000

WYA/CRA-30-28.009/0.000

784
2116

SEEDING END WIDTH	SEEDING SQ. METERS
10.92	
	91
0.00	
	0
0.00	
	40
4.56	
	56

30 20 10 0 10 20 30

270 268 266 264 262

Sta. 13+236.601, 23.893m Lt
HW-2.1M or 2.2M
Inv 375mm = 263.585
Total Area = 0.293ha
Q10 = .056 cms
HGL = 263.95
0.600m
3:1
Exist. 150mm Underdrain
603 Conduit Bored or Jacked, 375mm, Type B, 24.4m @1.0%

Sta. 13+236.601, ℄
604 No. 4 CB
Grate = 264.468
Inv 375mm = 263.829

13+236.601
264.563

13+220.000
264.644

13+202.025
264.624

13+184.566
264.718

SEE RAMP B CROSS-SECTIONS
24:1
℄ 264.804

℄

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1.00	0.18	8	1
0.00	0.00		
0.00	0.00	0	5
0.01	0.58	0	7

CALCULATED AM
CHECKED REA

US-23 CROSS SECTIONS STA 13+184.566 TO STA 13+236.601

WYA / CRA-30-28.009 / 0.000

785
2116

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. METERS		CUT	FILL	CUT	FILL
13.13		266		5.49		
		264				
		262				
	229					93
13.11		266		5.12		
		264				
		262				
	193					76
13.02		266	0.00	5.14		
		264				
		262				
	343				14	76

30 20 10 0 10 20 30

8:1 10:1 25:1 25:1 10:1 10:1

265.270
13+297.453
264.206

264.292
13+280.000
264.292

265.385
13+265.211
264.378

℄

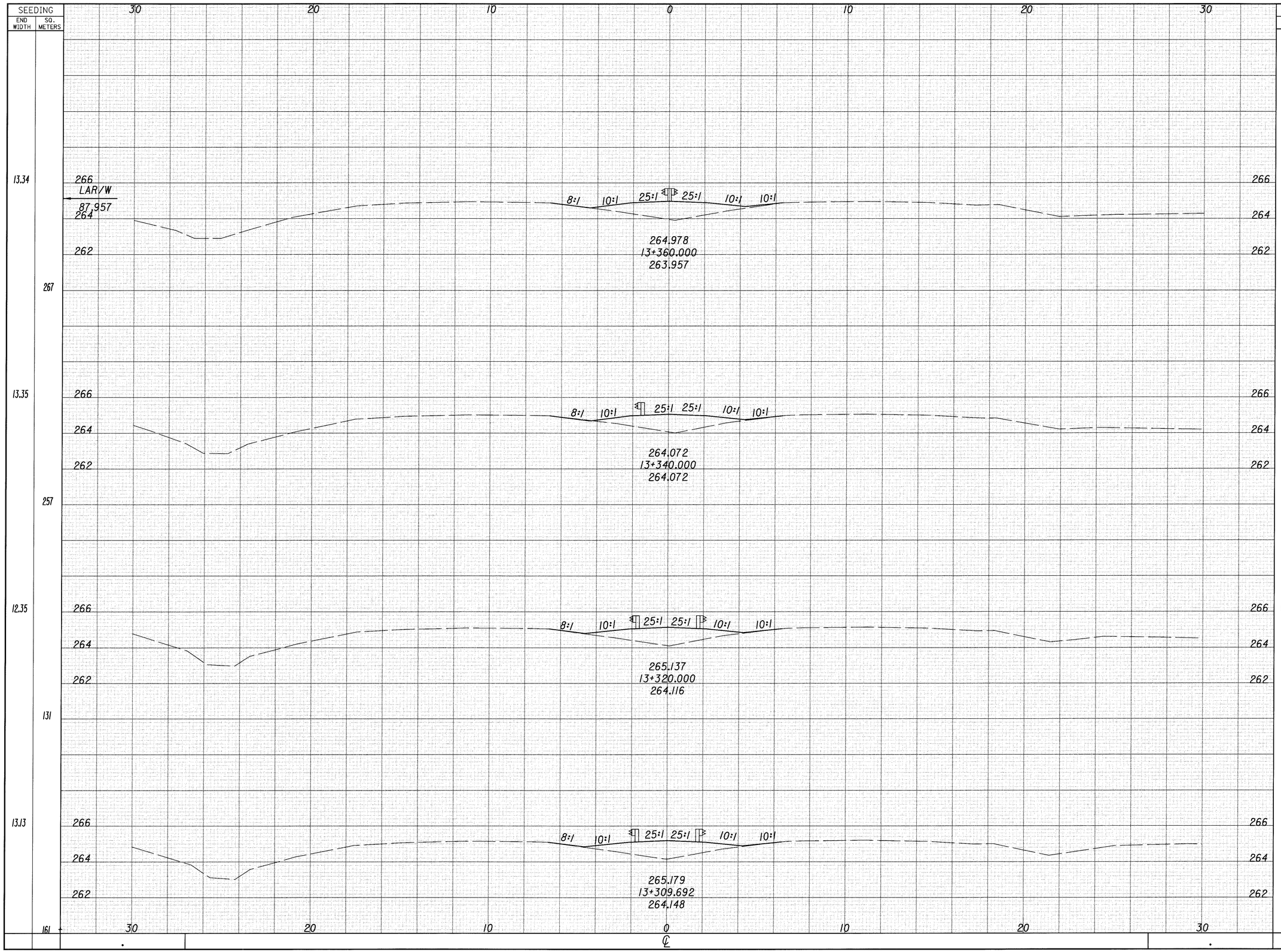
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CHECKED: REA

US-23 CROSS SECTIONS
STA 13+265.211 TO STA 13+297.453

WYA / CRA-30-28.009 / 0.000

786
2116

SEEDING END WIDTH	SEEDING SQ. METERS	STA	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
13.34		13+360.000	0.01	0.00		
	267				0	47
13.35		13+340.000	0.01	4.73		
	257				0	96
12.35		13+320.000	0.00	4.91		
	131					51
13.13		13+309.692		4.96		
	161					64



CALCULATED AM

CHECKED REA

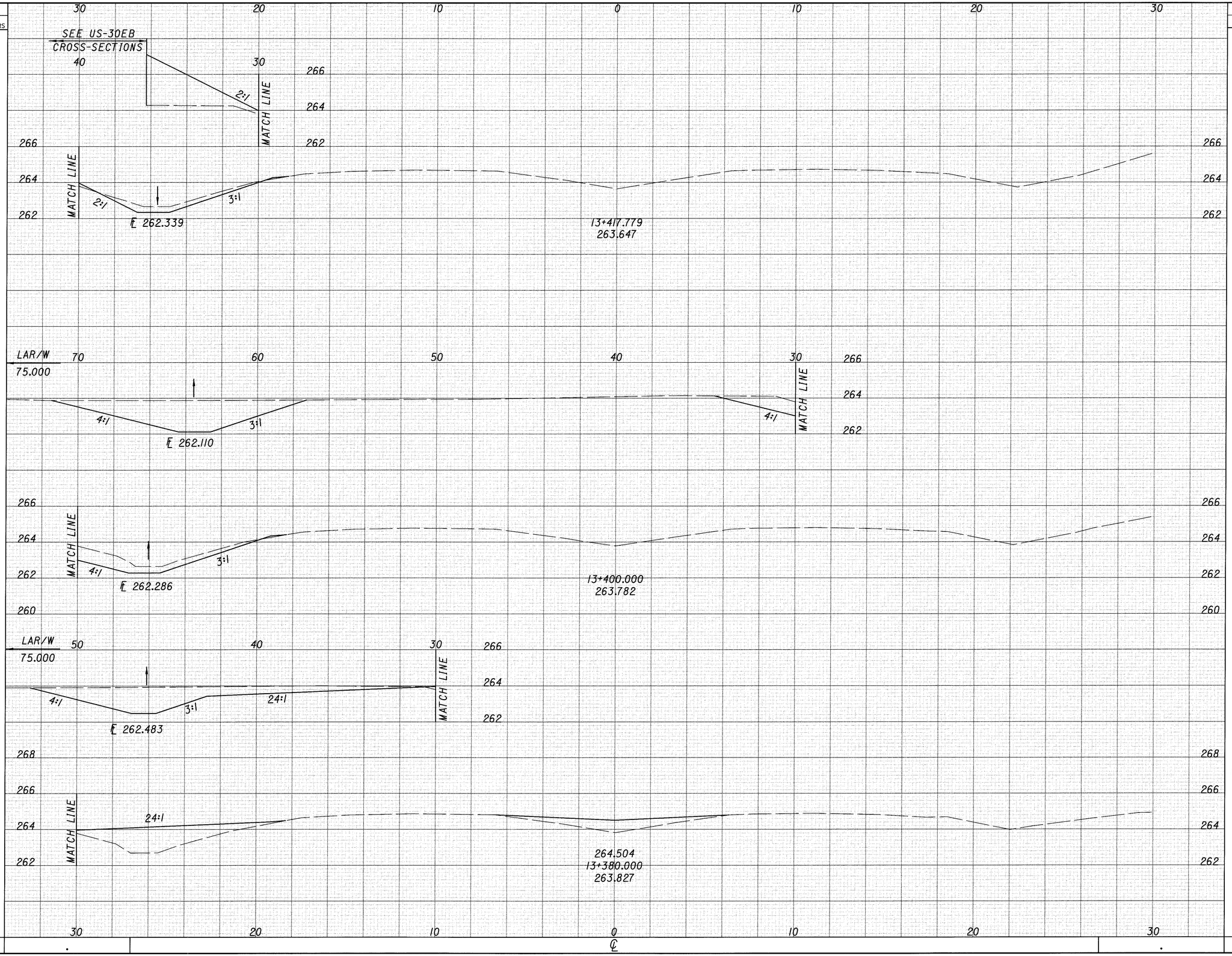
US-23 CROSS SECTIONS

STA 13+309.692 TO STA 13+360.000

WYA/CRA-30-28.009/0.000

787
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
22.24	568	2.07	8.51	202	76
41.65	935	20.61	0.06	330	128
51.83	652	12.41	12.70	124	127



CALCULATED AM

CHECKED REA

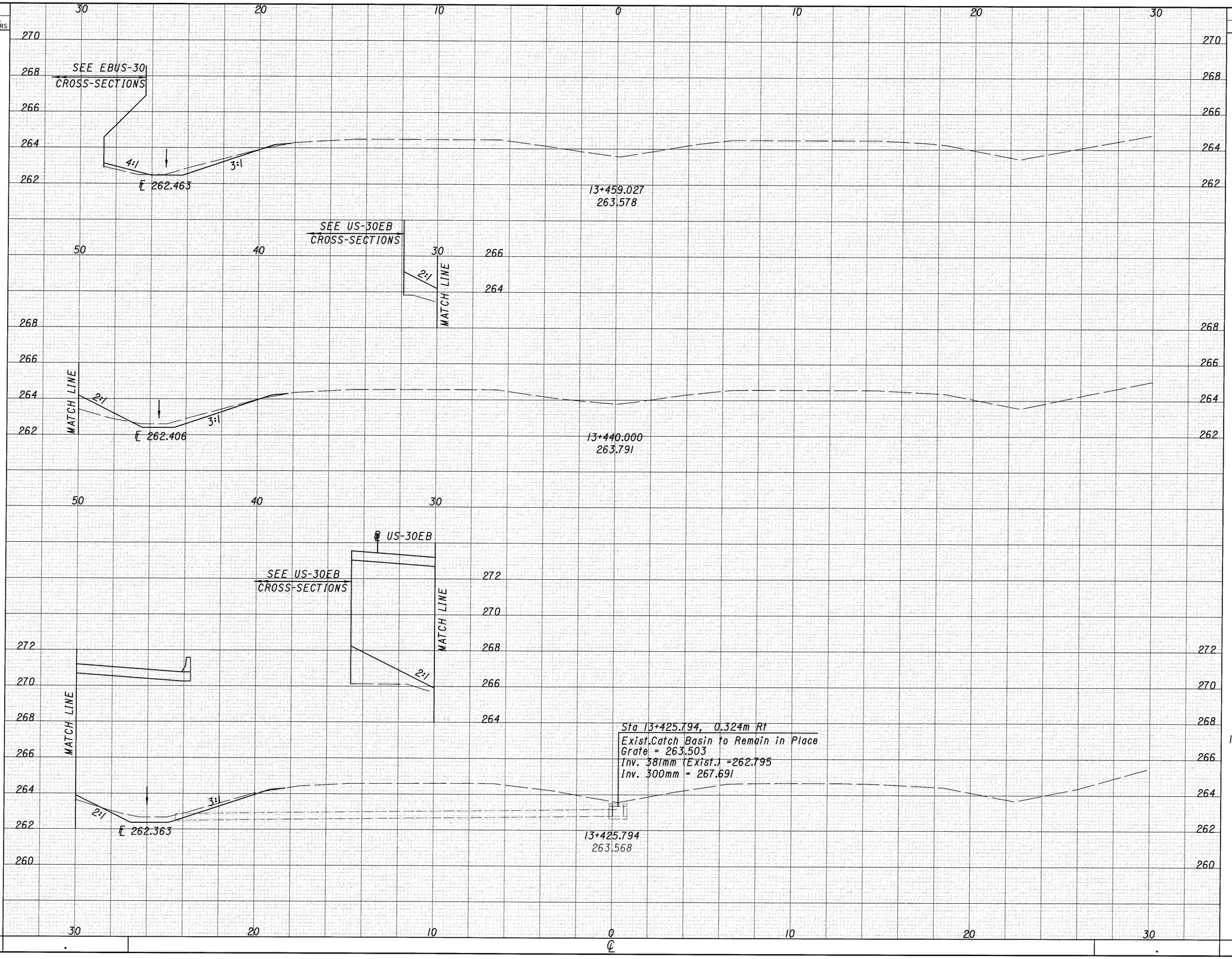
US-23 CROSS SECTIONS

STA 13+380.000 TO STA 13+417.779

WYA / CRA-30-28.009 / 0.000

788
2116

SEEDING	
END WIDTH	SQ. METERS
11.00	255
15.85	238
17.61	160



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.94	0.46	21	35
1.23	3.19	22	59
1.88	5.07	16	54

CALCULATED AM

CHECKED REA

US-23 CROSS SECTIONS

STA 13+425.794 TO STA 13+459.027

WYA/CRA-30-28.009/0.000

789
2116

SEEDING END WIDTH	SEEDING SQ. METERS	STATION	CUT	FILL
29.13	441	13+540.000	0.07	5.53
15.00	259	13+520.000		4.44
10.87	202	13+500.000	0.00	3.45
14.63	322	13+484.141	0.57	2.90

VOLUME CUT	VOLUME FILL
1	100
	79
5	50
19	42

CALCULATED AM

CHECKED REA

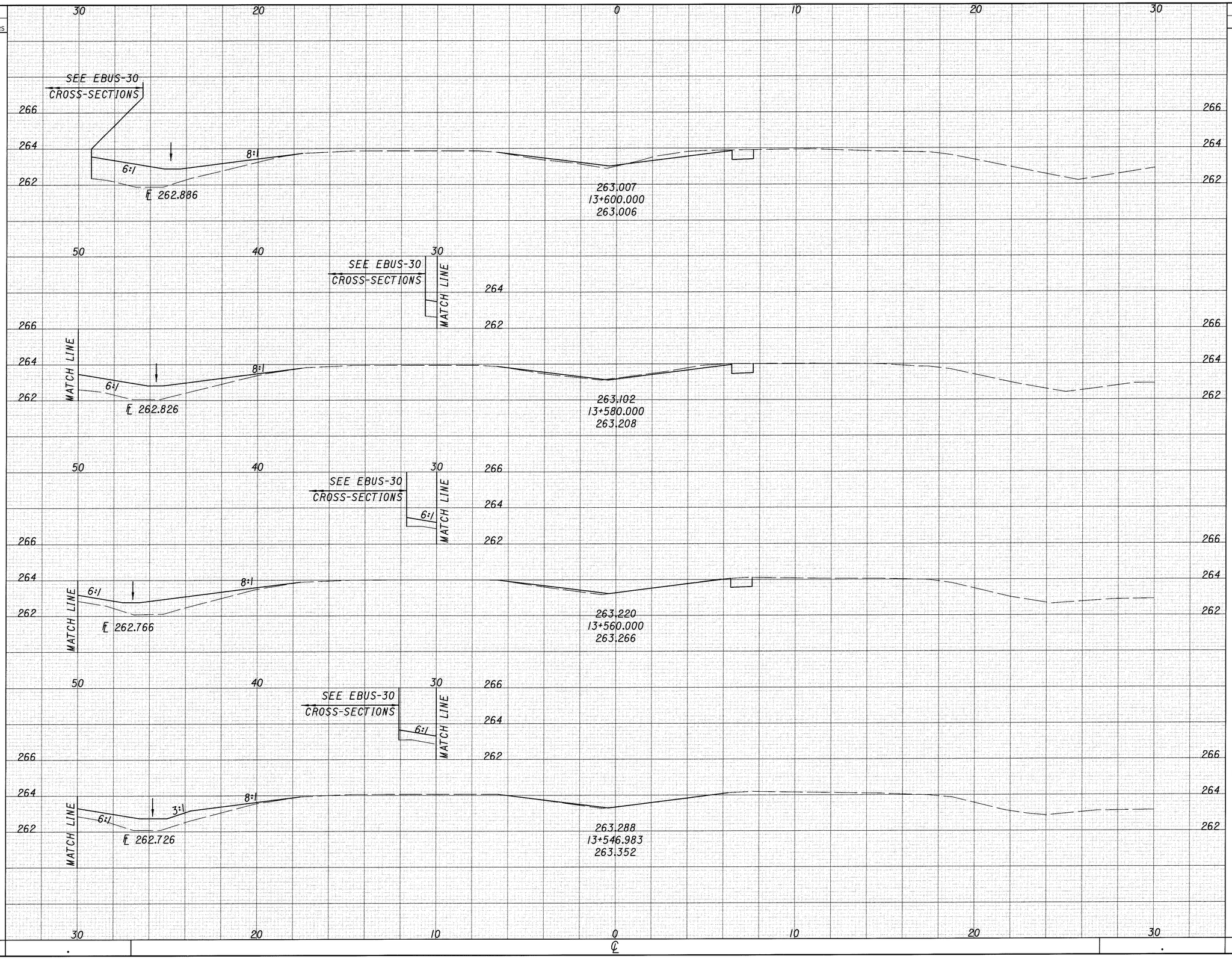
US-23 CROSS SECTIONS

STA 13+484.141 TO STA 13+540.000

WYA / CRA-30-28.009 / 0.000

790
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
26.24		1.64	8.07		
	544			29	150
28.12		1.24	6.97		
	559			20	130
27.79		0.71	5.99		
	370			5	77
28.98		0.03	5.90		
	203			0	40



US-23 CROSS SECTIONS

STA 13+546.983 TO STA 13+600.000

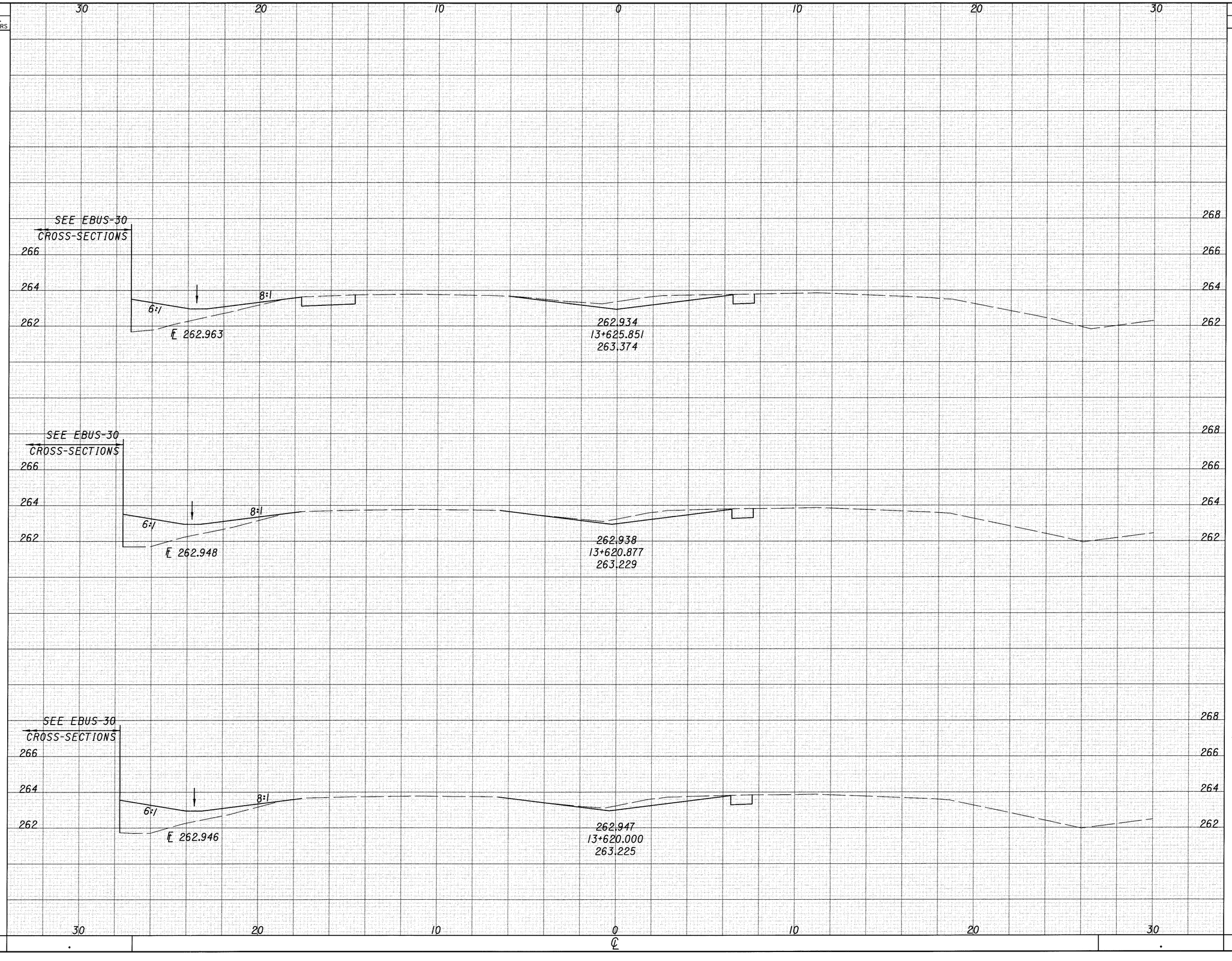
WYA / CRA-30-28.009 / 0.000

CALCULATED AM

CHECKED REA

791
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
24.82		5.10	5.88		
	126			19	31
25.80		2.73	6.72		
	23			2	6
25.93		2.53	6.93		
	522			42	150



CALCULATED AM

CHECKED REA

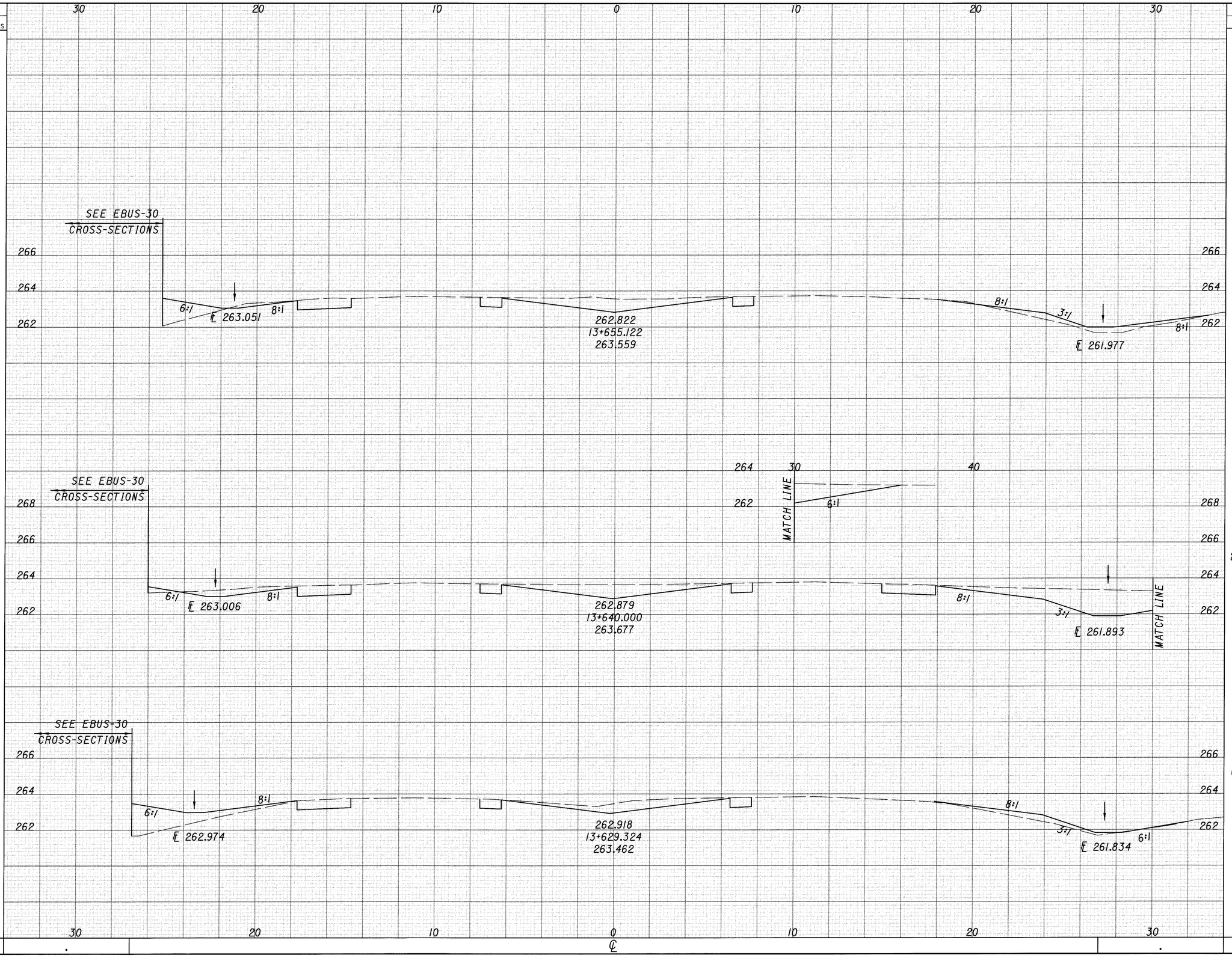
US-23 CROSS SECTIONS

STA 13+620.000 TO STA 13+625.851

WYA/CRA-30-28.009/0.000

792
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
40.20	638	8.31	5.28	242	42
44.15	454	23.66	0.31	160	41
40.96	114	6.30	7.29	20	23



CALCULATED AM

CHECKED REA

US-23 CROSS SECTIONS

STA 13+629.324 TO STA 13+655.122

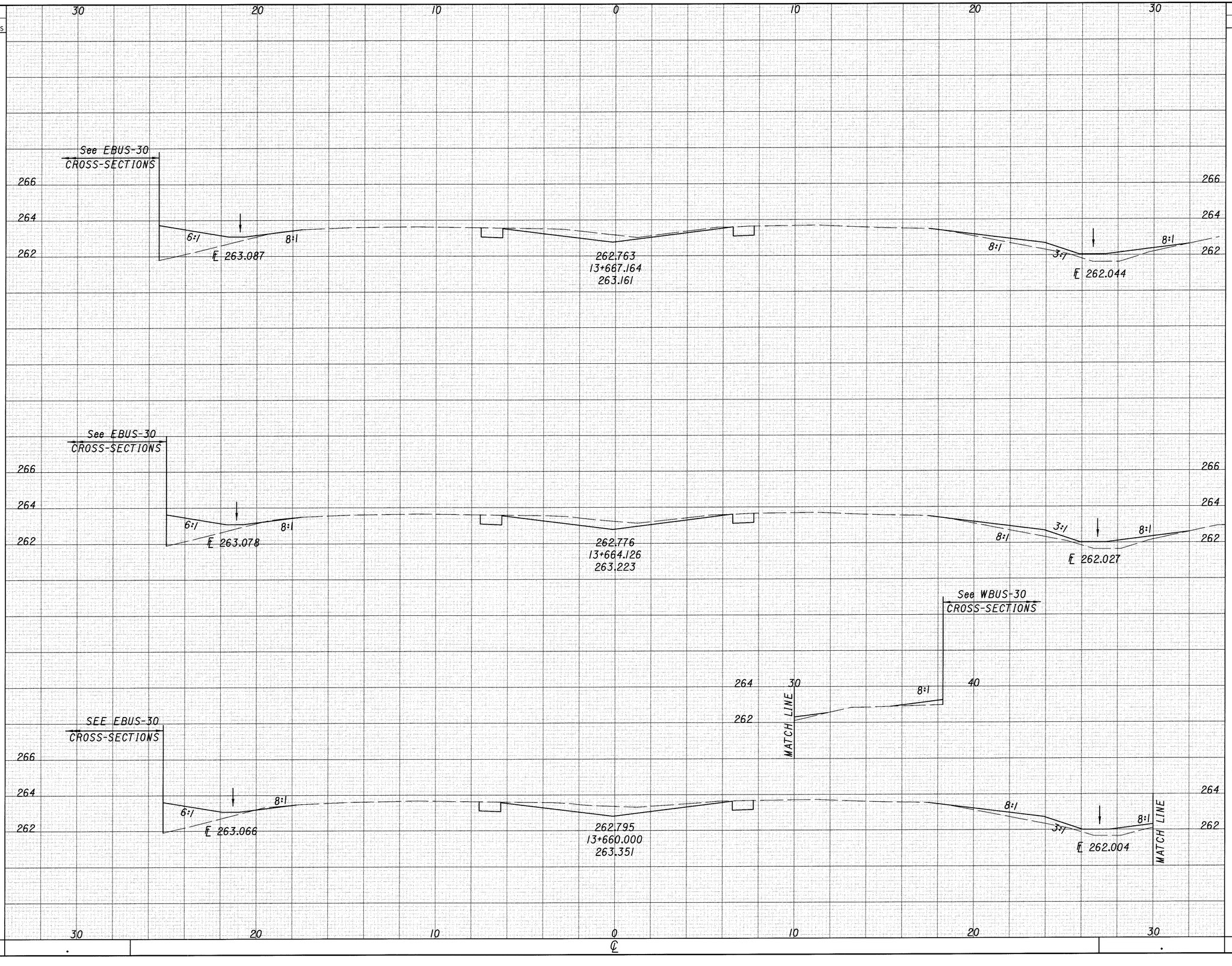
WYA/CRA-30-28.009/0.000

793
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
40.65	120	3.84	8.15	12	23
38.26	161	4.22	6.91	19	29
40.00	196	5.02	7.09	33	30

CALCULATED AM

CHECKED REA



US-23 CROSS SECTIONS

STA 13+660.000 TO STA 13+667.164

WYA / CRA-30-28.009 / 0.000

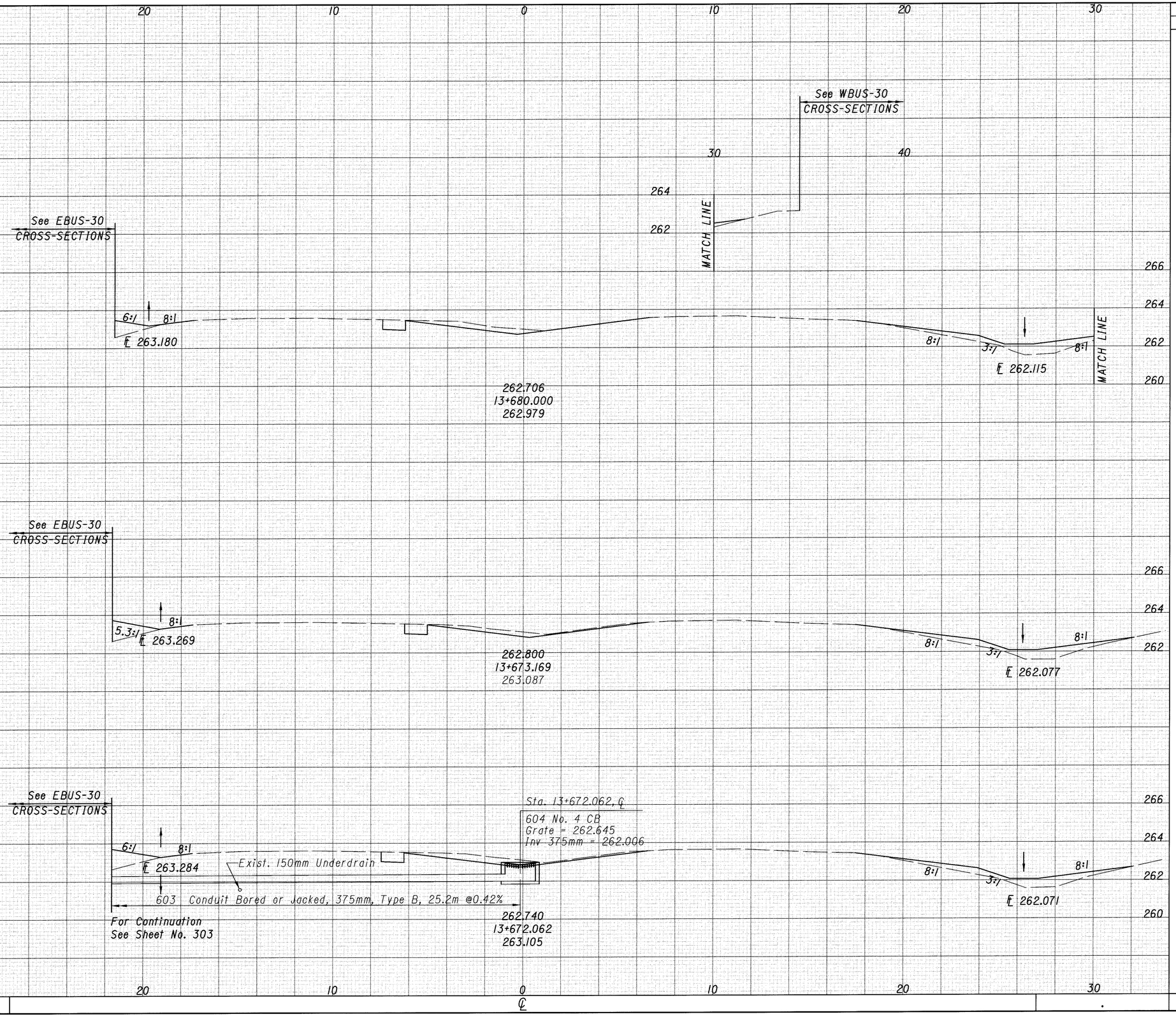
794
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
34.40		2.12	4.50		
	237			14	31
34.93		1.99	4.72		
	39			3	5
36.03		2.91	4.70		
	188			17	31

CALCULATED AM
CHECKED REA

US-23 CROSS SECTIONS
STA 13+672.062 TO STA 13+680.000
WYA/CRA-30-28.009/0.000

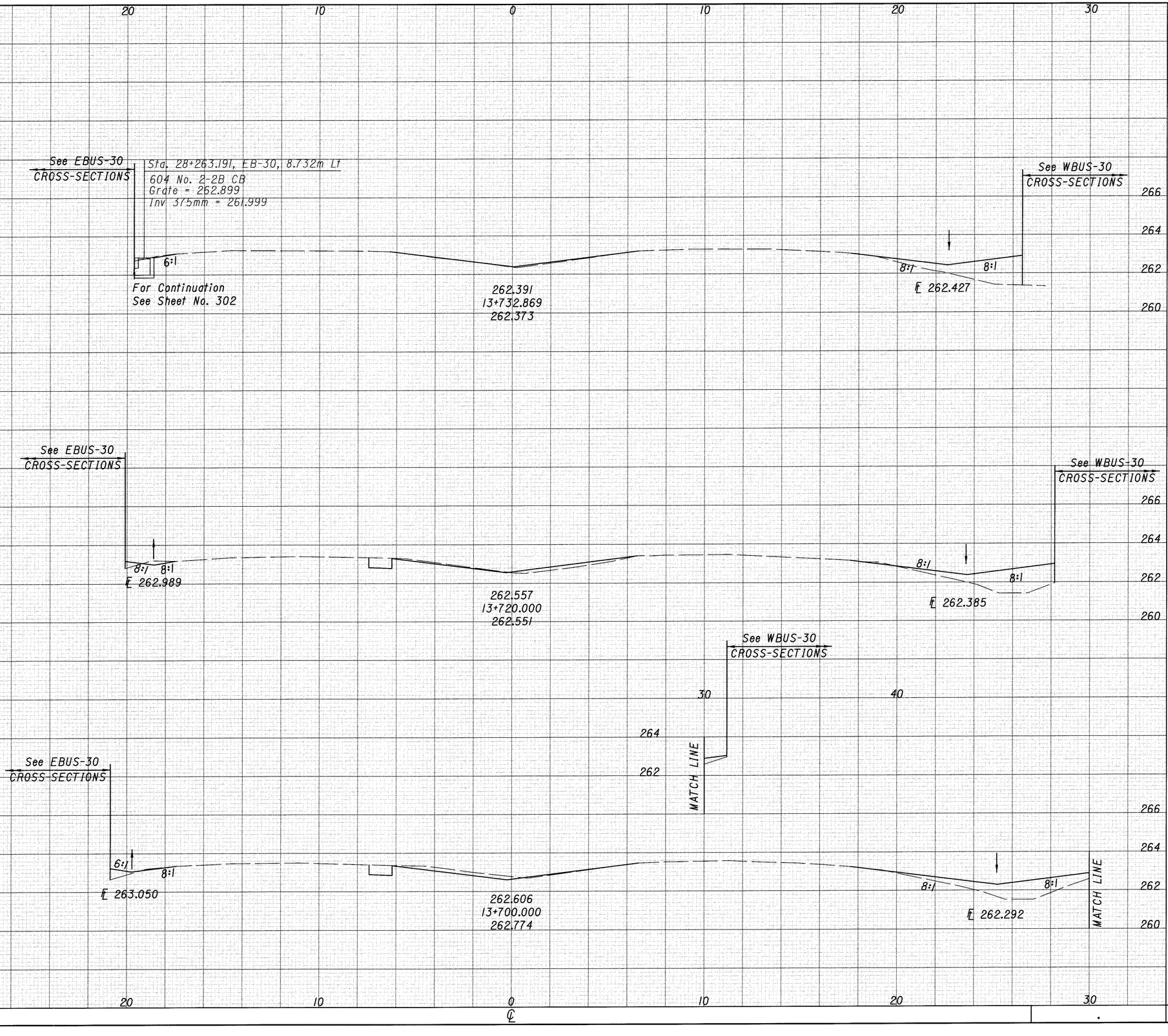
795
2116



SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
26.33	347	0.05	5.46	8	77
27.52	581	1.22	6.56	29	123
30.60	650	1.72	5.75	38	103

CALCULATED AM

CHECKED REA



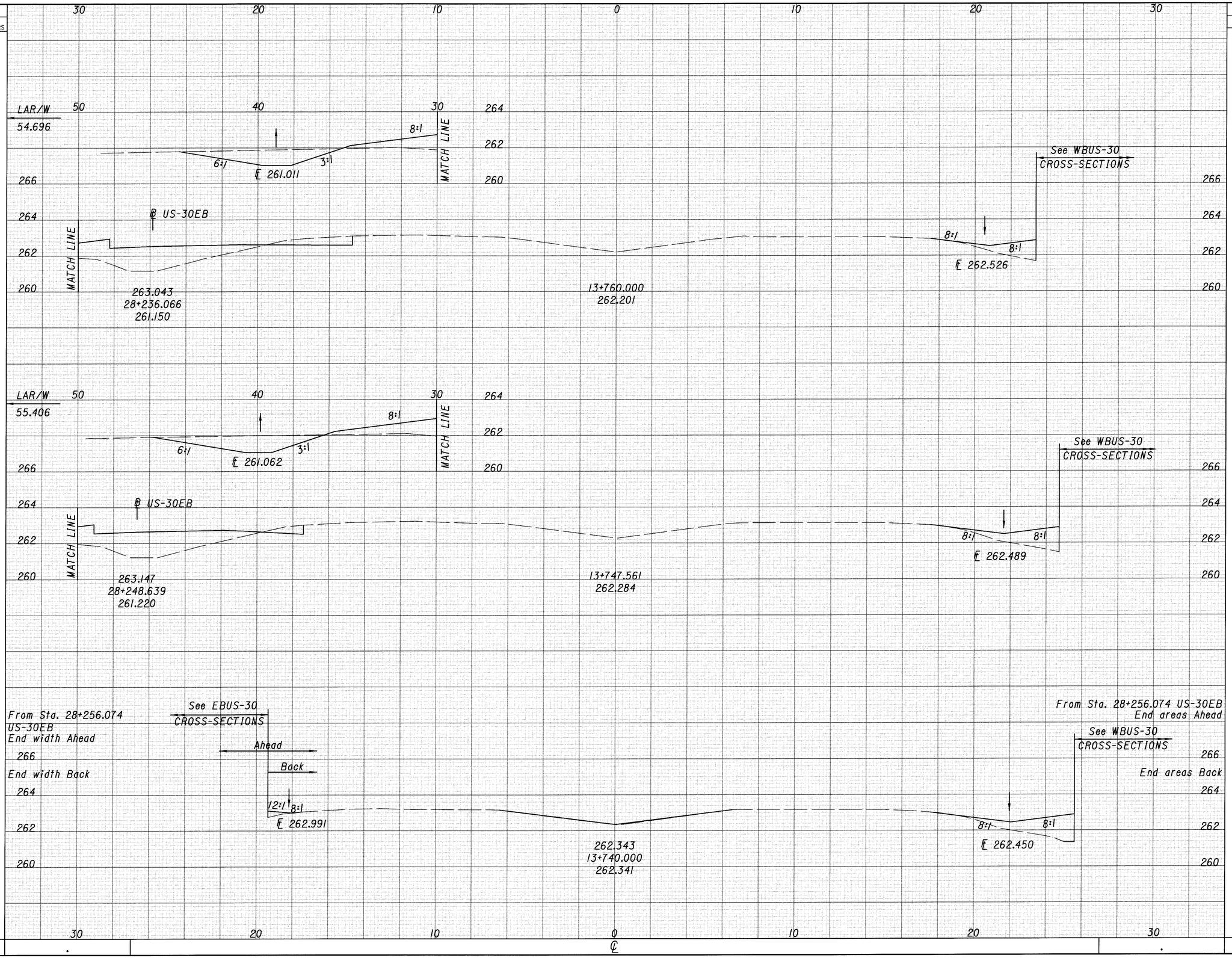
US-23 CROSS SECTIONS

STA 13+700.000 TO STA 13+732+869

WYA/CRA-30-28.009/0.000

796
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
26.12	337	6.23	13.70	75	184
28.08	277	5.81	15.90	40	130
45.08		4.73	18.42		
23.36		0.02	4.63		
	177			0	36



CALCULATED AM

CHECKED REA

US-23 CROSS SECTIONS

STA 13+740.000 TO STA 13+760.000

WYA / CRA-30-28.009 / 0.000

797
2116

SEEDING	
END WIDTH	SQ. METERS
17.50	
	544
45.90	
23.89	
	453
21.38	
	475

END AREA		VOLUME	
CUT	FILL	CUT	FILL
20.38	6.14		
		520	260
40.24	24.14		
8.41	9.70		
		150	209
6.56	11.17		
		128	249

CALCULATED AM

CHECKED REA

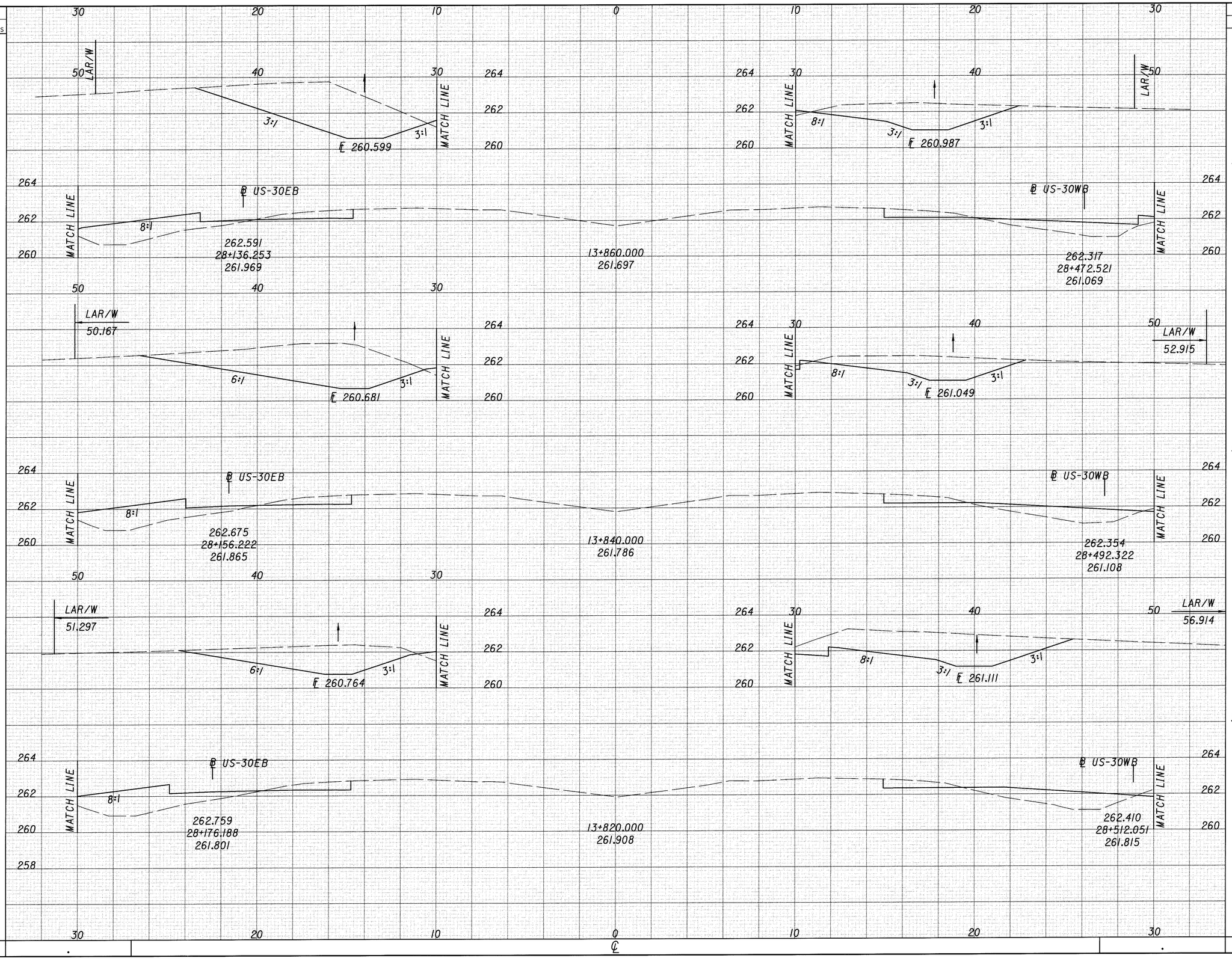
US-23 CROSS SECTIONS

STA 13+780.000 TO STA 13+817.147

WYA/CRA-30-28.009/0.000

798
2116

SEEDING	
END WIDTH	SQ. METERS
43.07	
	872
44.17	
	863
42.18	
	85



END AREA		VOLUME	
CUT	FILL	CUT	FILL
33.95	12.38		
		682	253
34.25	12.94		
		679	276
33.65	14.67		
		77	30

CALCULATED AM

CHECKED REA

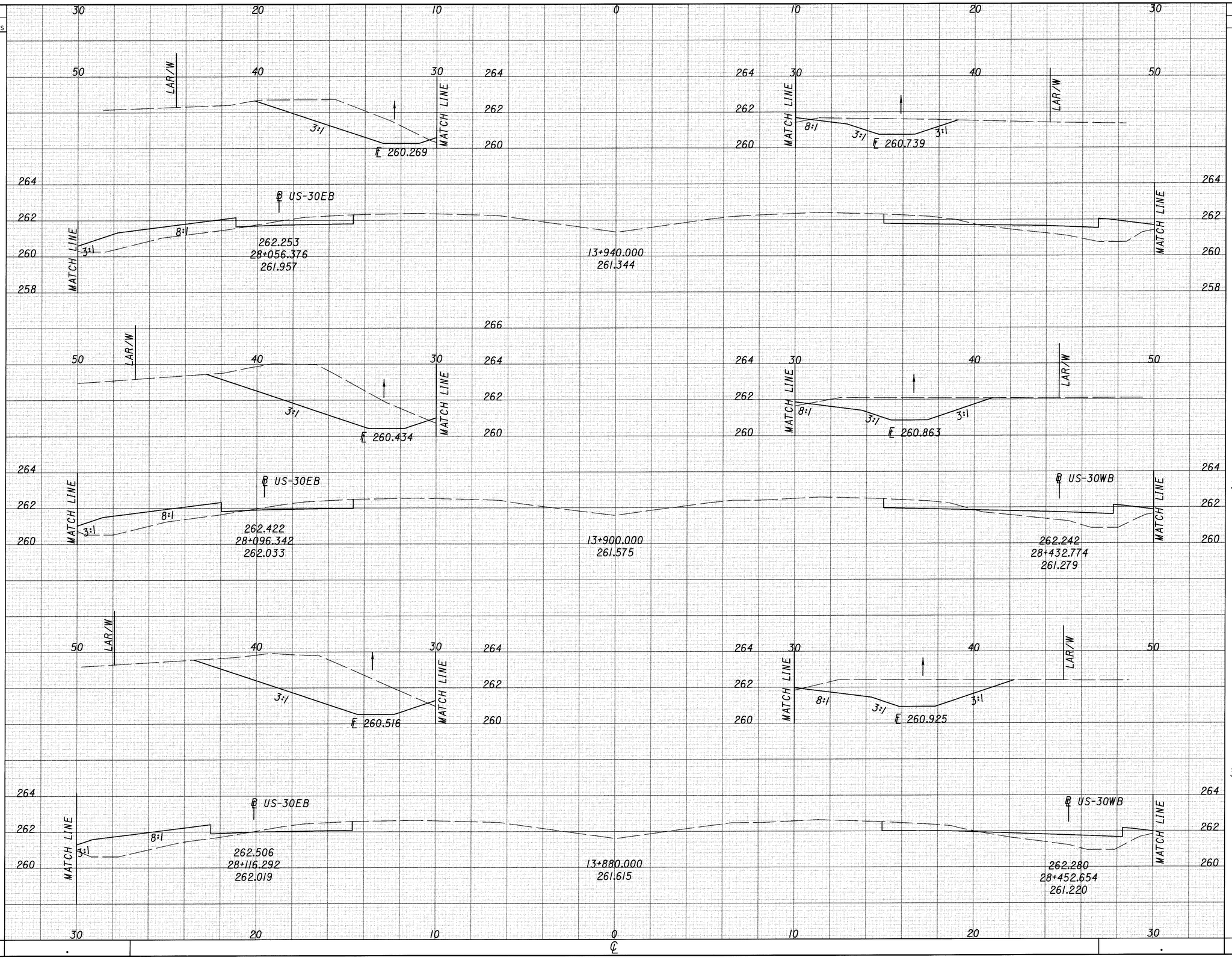
US-23 CROSS SECTIONS

STA 13+820.000 TO STA 13+860.000

WYA / CRA-30-28.009 / 0.000

799
2116

SEEDING	
END WIDTH	SQ. METERS
39.99	1670
43.54	879
44.38	874



END AREA		VOLUME	
CUT	FILL	CUT	FILL
17.67	11.41		
30.03	11.52	954	459
34.20	11.66	642	232
		682	240

CALCULATED AM

CHECKED REA

US-23 CROSS SECTIONS

STA 13+880.000 TO STA 13+940.000

WYA/CRA-30-28.009/0.000

800/2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
39.84	216	15.53	10.19	83	54
39.37	566	14.97	9.45	213	145
38.51	785	14.37	10.50	320	219

CALCULATED AM

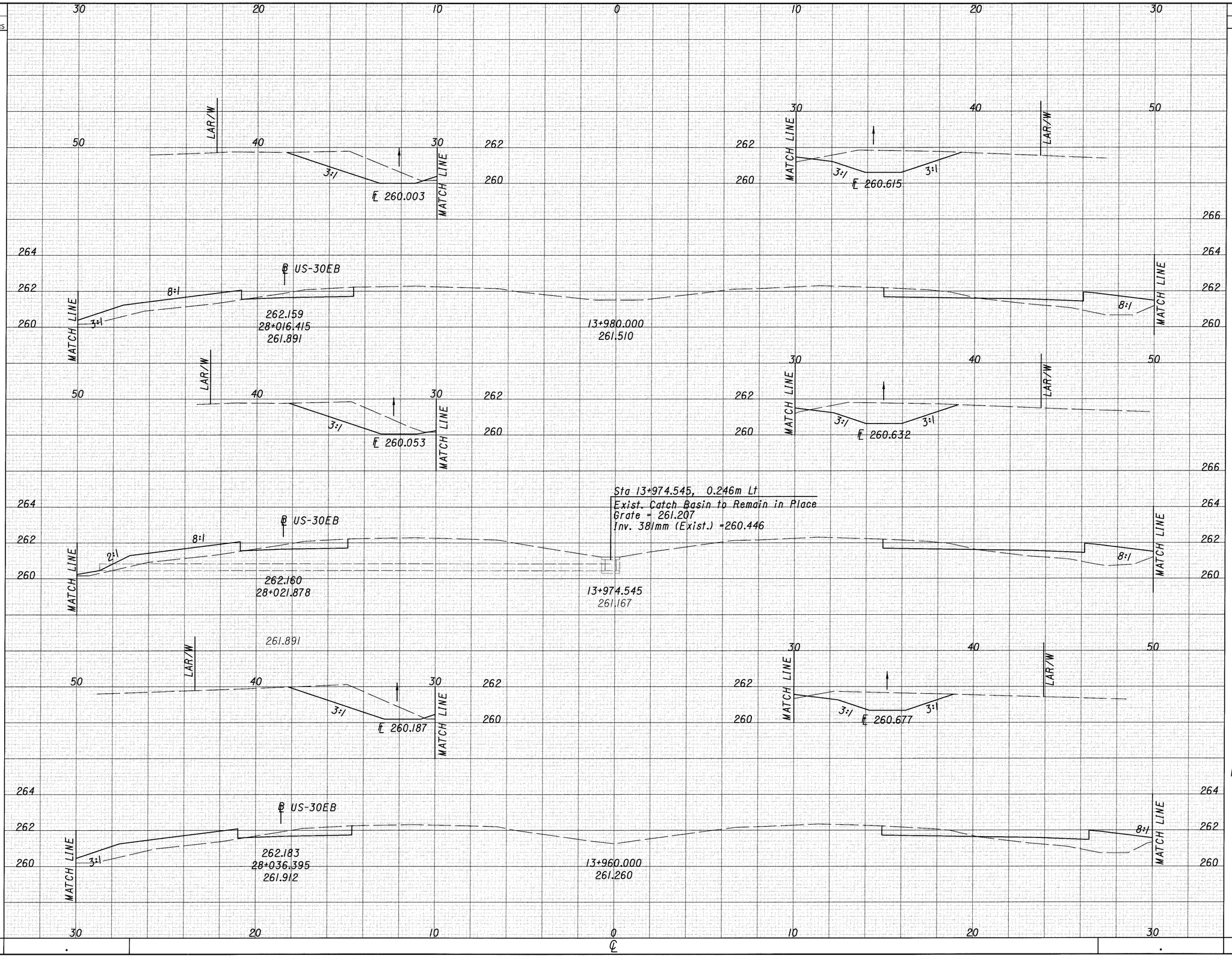
CHECKED REA

US-23 CROSS SECTIONS

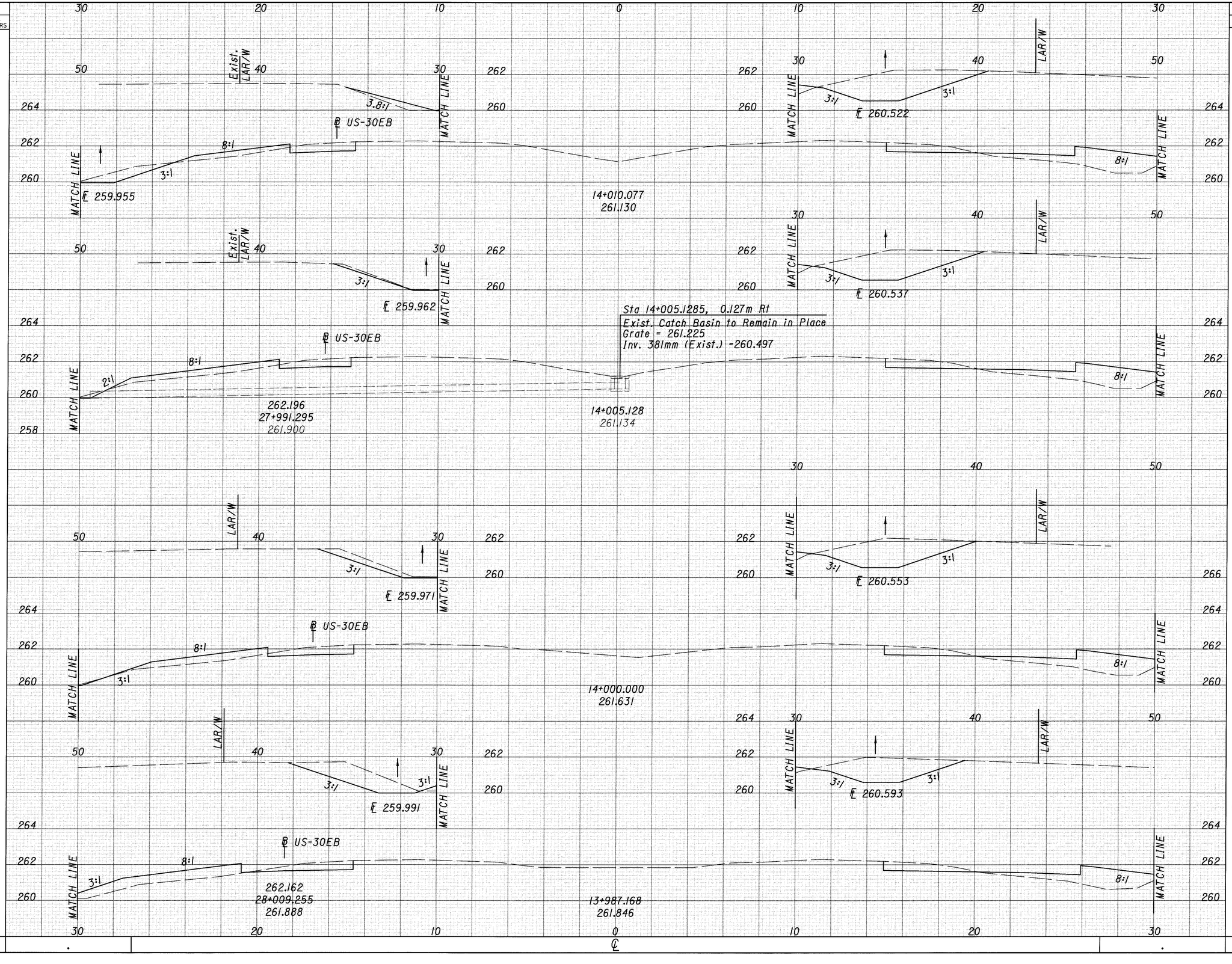
STA 13+960.000 TO STA 13+980.000

WYA/CRA-30-28.009/0.000

801
2116



SEEDING END WIDTH	SEEDING SQ. METERS
41.37	
	204
41.26	
	211
40.97	
	521
40.23	
	287



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14.40	9.00		
		68	45
12.99	9.25		
		68	47
13.68	8.93		
		188	124
15.62	10.36		
		112	74

CALCULATED AM

CHECKED REA

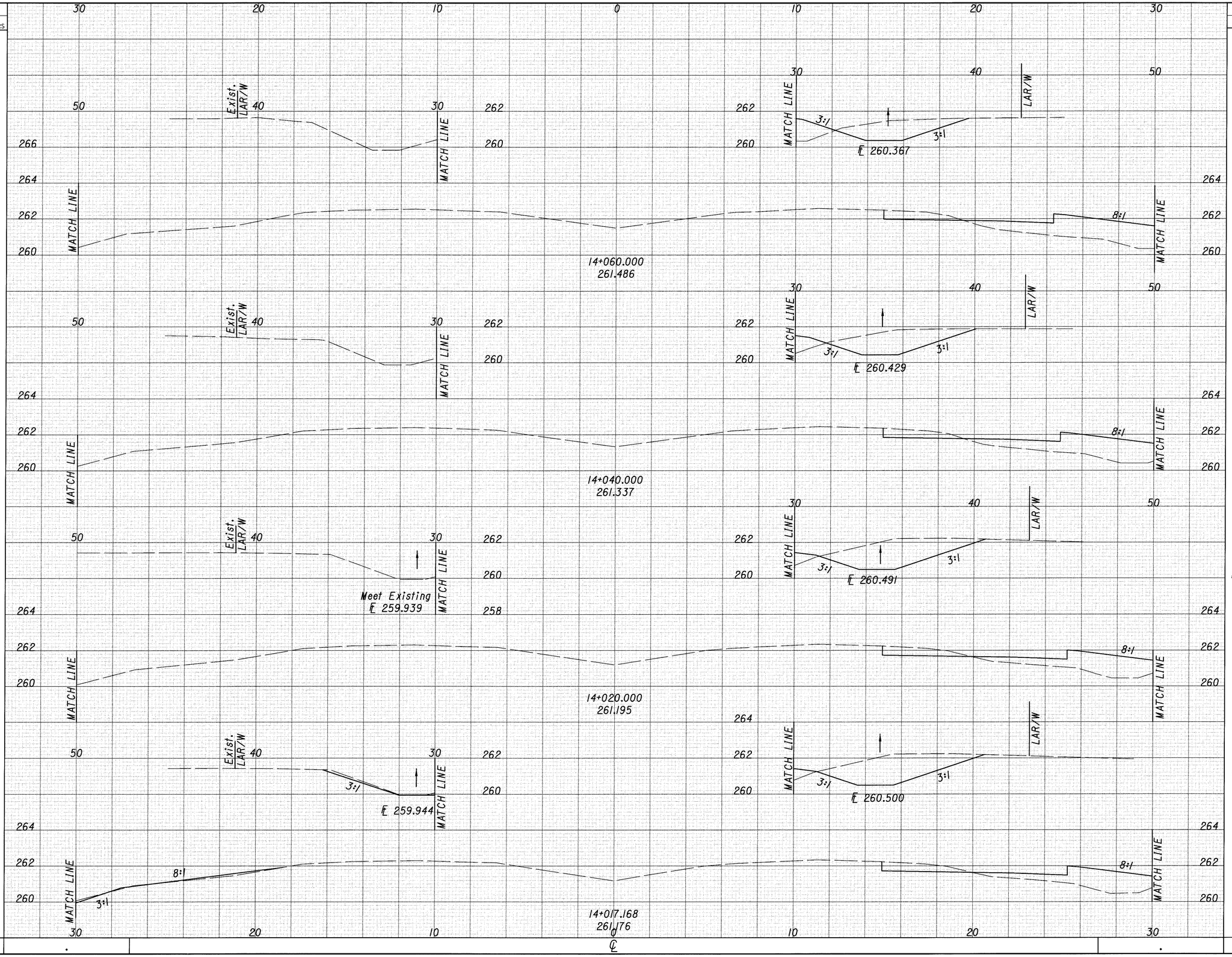
US-23 CROSS SECTIONS

STA 13+987.168 TO STA 14+010.077

WYA / CRA-30-28.009 / 0.000

802
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
19.88	398	6.69	10.82	150	201
19.92	400	8.29	9.27	188	167
20.09	89	10.55	7.40	31	21
42.42	297	11.21	7.35	91	58



CALCULATED AM

CHECKED REA

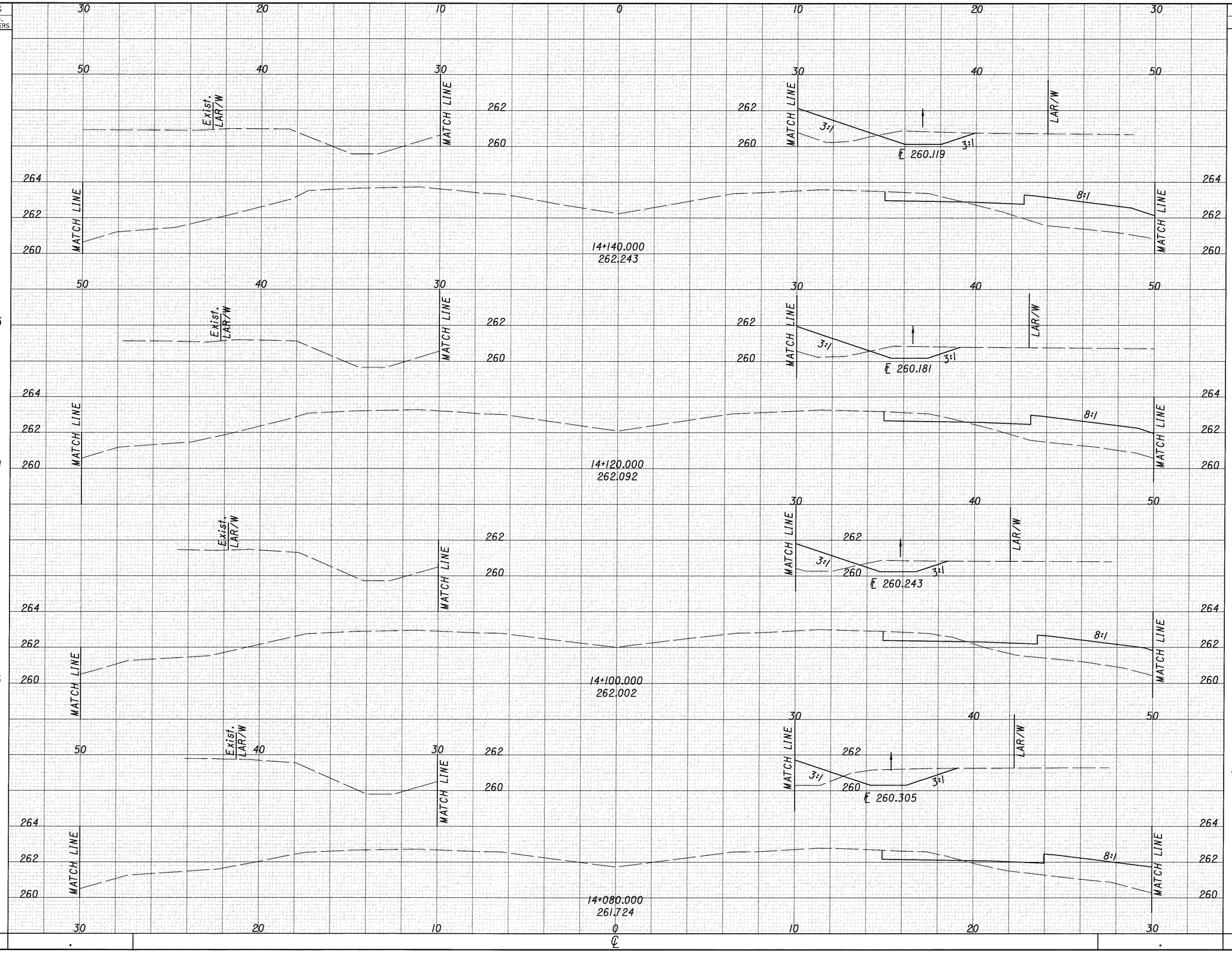
US-23 CROSS SECTIONS

STA 14+017.168 TO STA 14+060.000

WYA/CRA-30-28.009/0.000

803
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
21.41		4.28	16.51		
	415			82	314
20.12		3.93	14.90		
	391			78	281
18.97		3.89	13.15		
	385			93	248
19.52		5.44	11.60		
	394			121	224



CALCULATED AM
CHECKED REA

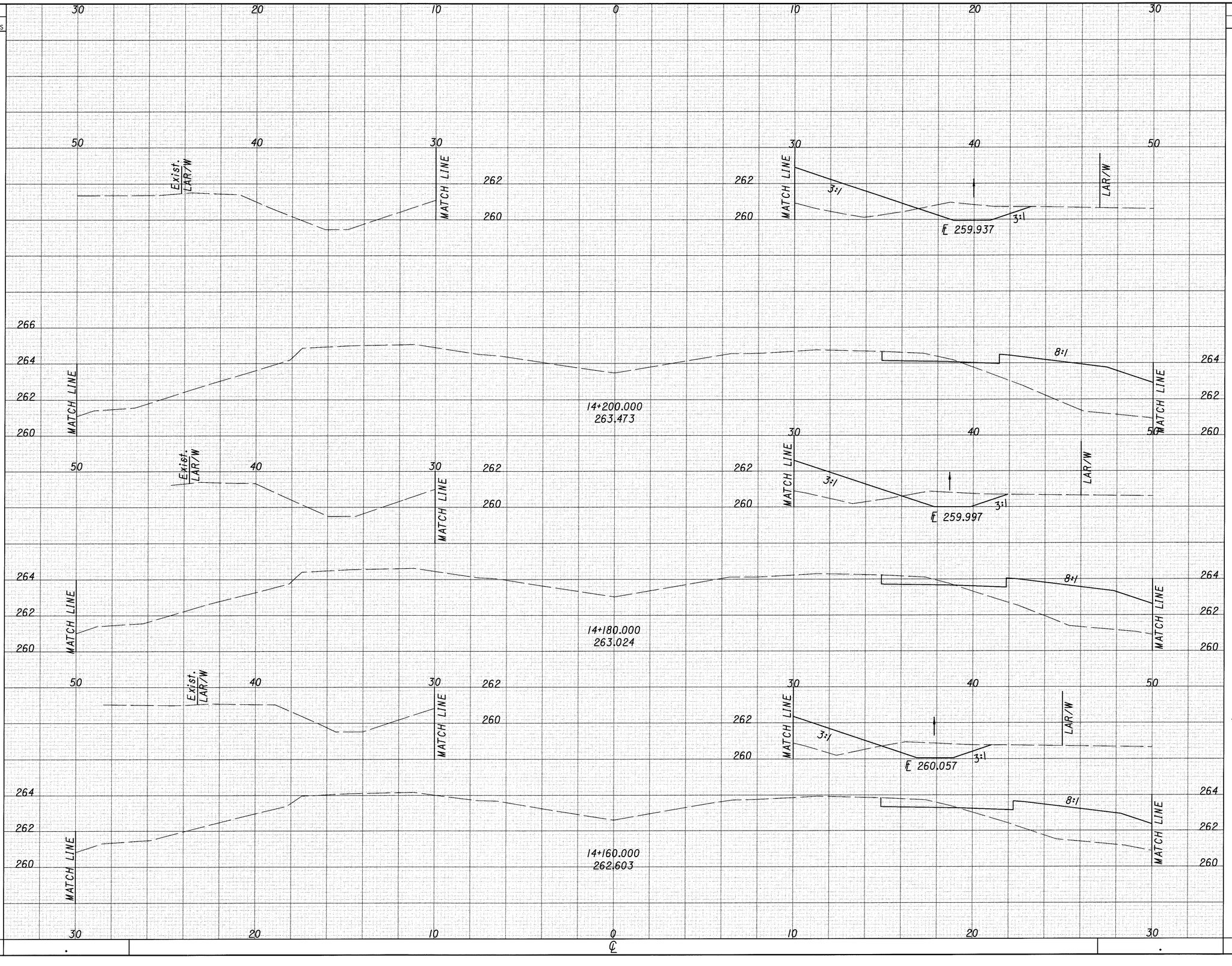
US-23 CROSS SECTIONS

STA 14+080.000 TO STA 14+140.000

WYA/CRA-30-28.009/0.000

804
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
27.30	518	5.27	28.03	100	518
24.46	476	4.69	23.78	96	433
23.10	445	4.93	19.48	92	360



CALCULATED AM

CHECKED REA

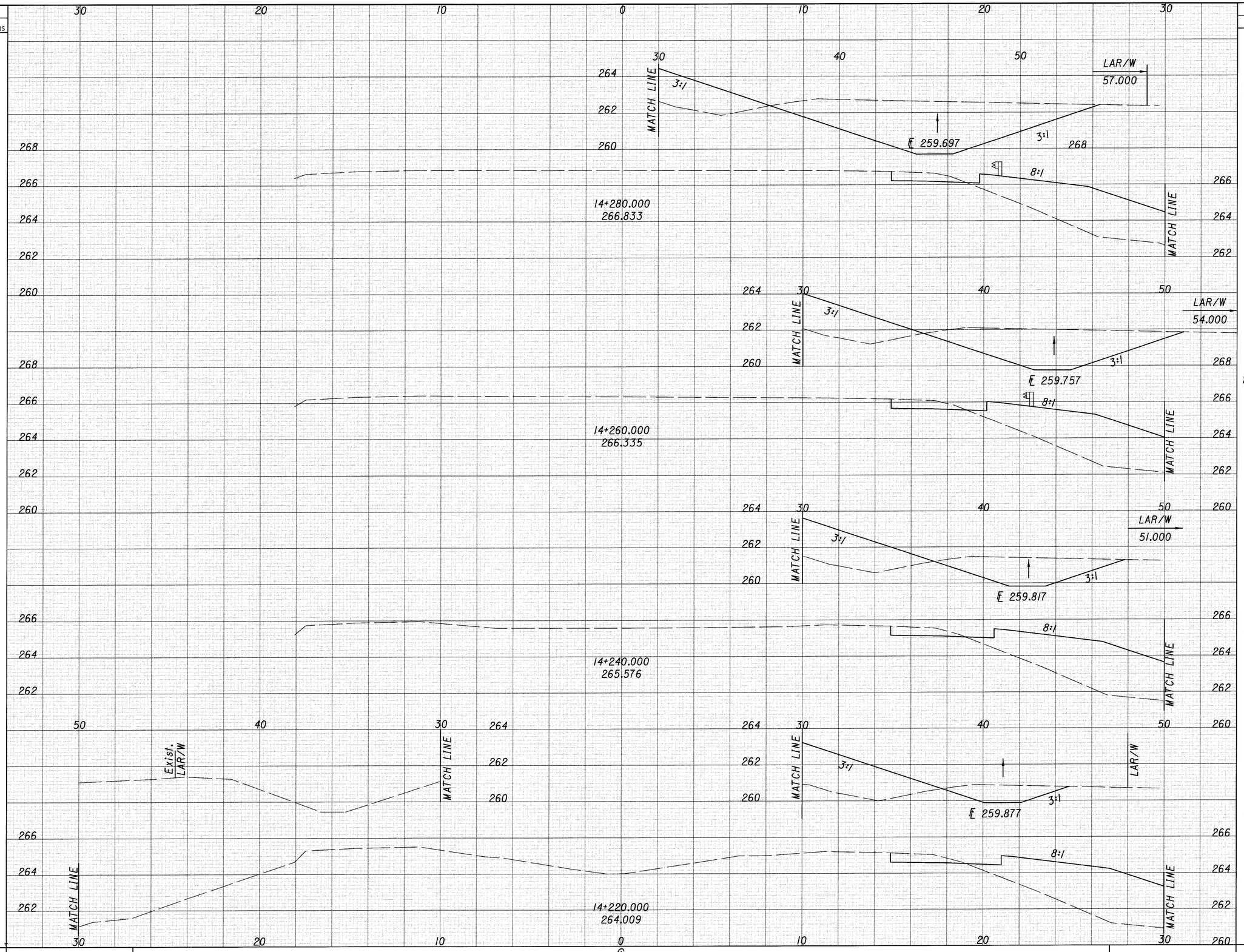
US-23 CROSS SECTIONS

STA 14+160.000 TO STA 14+200.000

WYA/CRA-30-28.009/0.000

805
2116

SEEDING	
END WIDTH	SQ. METERS
40.31	767
36.36	689
32.50	610
28.52	558



END AREA		VOLUME	
CUT	FILL	CUT	FILL
32.18	27.00		
20.69	28.87	529	559
11.79	31.35	325	602
6.01	33.08	178	644
		113	611

CALCULATED AM

CHECKED REA

US-23 CROSS SECTIONS

STA 14+220.000 TO STA 14+280.000

WYA/CRA-30-28.009/0.000

806
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
28.59	573	2.25	5.17	50	118
28.74	577	2.73	6.66	53	318
36.70	1631	3.27	29.33	751	1193

CALCULATED AM

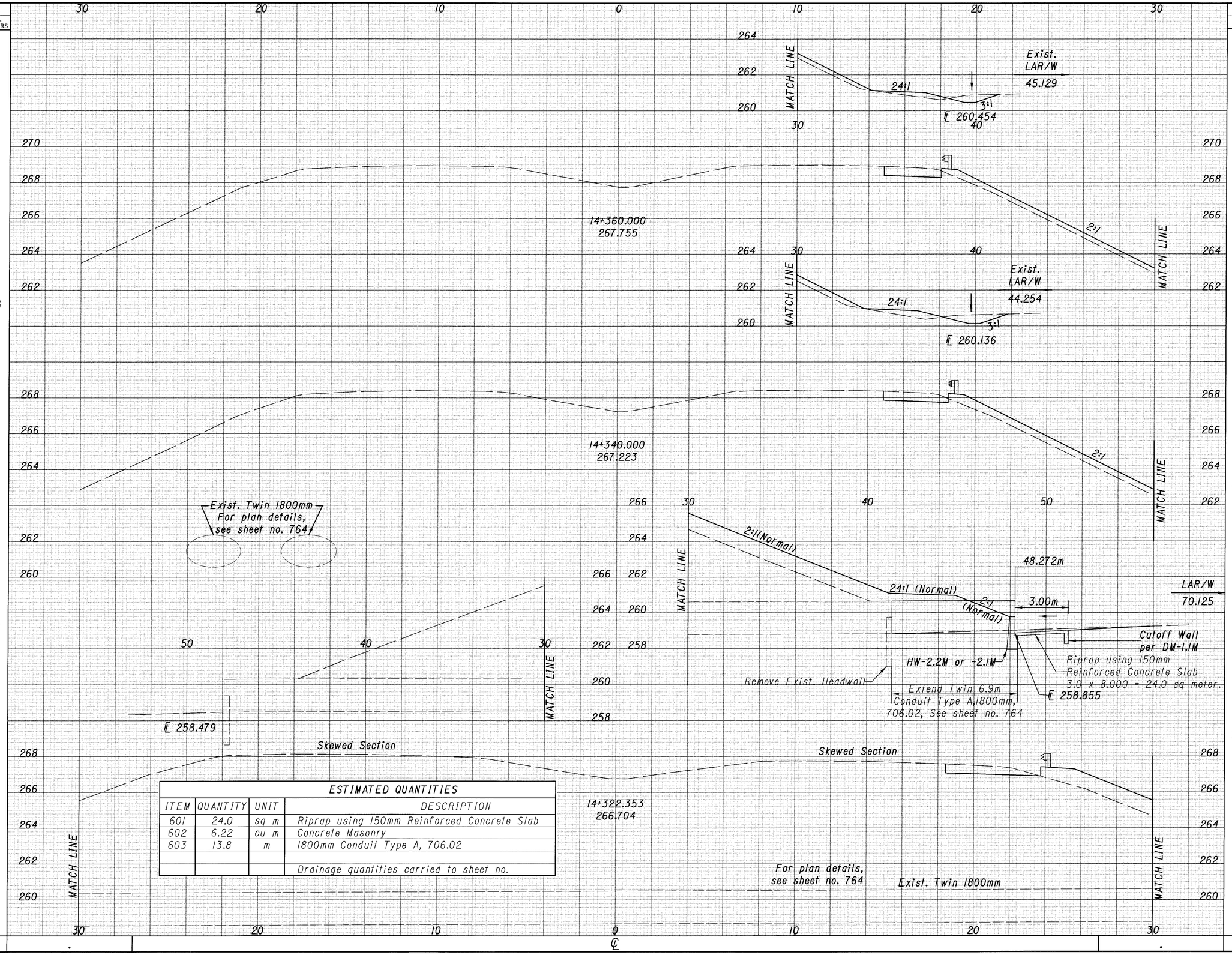
CHECKED REA

US-23 CROSS SECTIONS

STA 14+322.353 TO STA 14+360.000

WYA/CRA-30-28.009/0.000

807
2116



ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	24.0	sq m	Riprap using 150mm Reinforced Concrete Slab
602	6.22	cu m	Concrete Masonry
603	13.8	m	1800mm Conduit Type A, 706.02
			Drainage quantities carried to sheet no.

SEEDING	
END WIDTH	SQ. METERS
0.00	144

30 20 10 0 10 20 30

270
268
266
264
262

MEET EXIST. GUARDRAIL
STA. 14+370.084, 17.86m RT.

14+370.084
267.999

30 20 10 0 10 20 30

℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.00	0.00	11	26

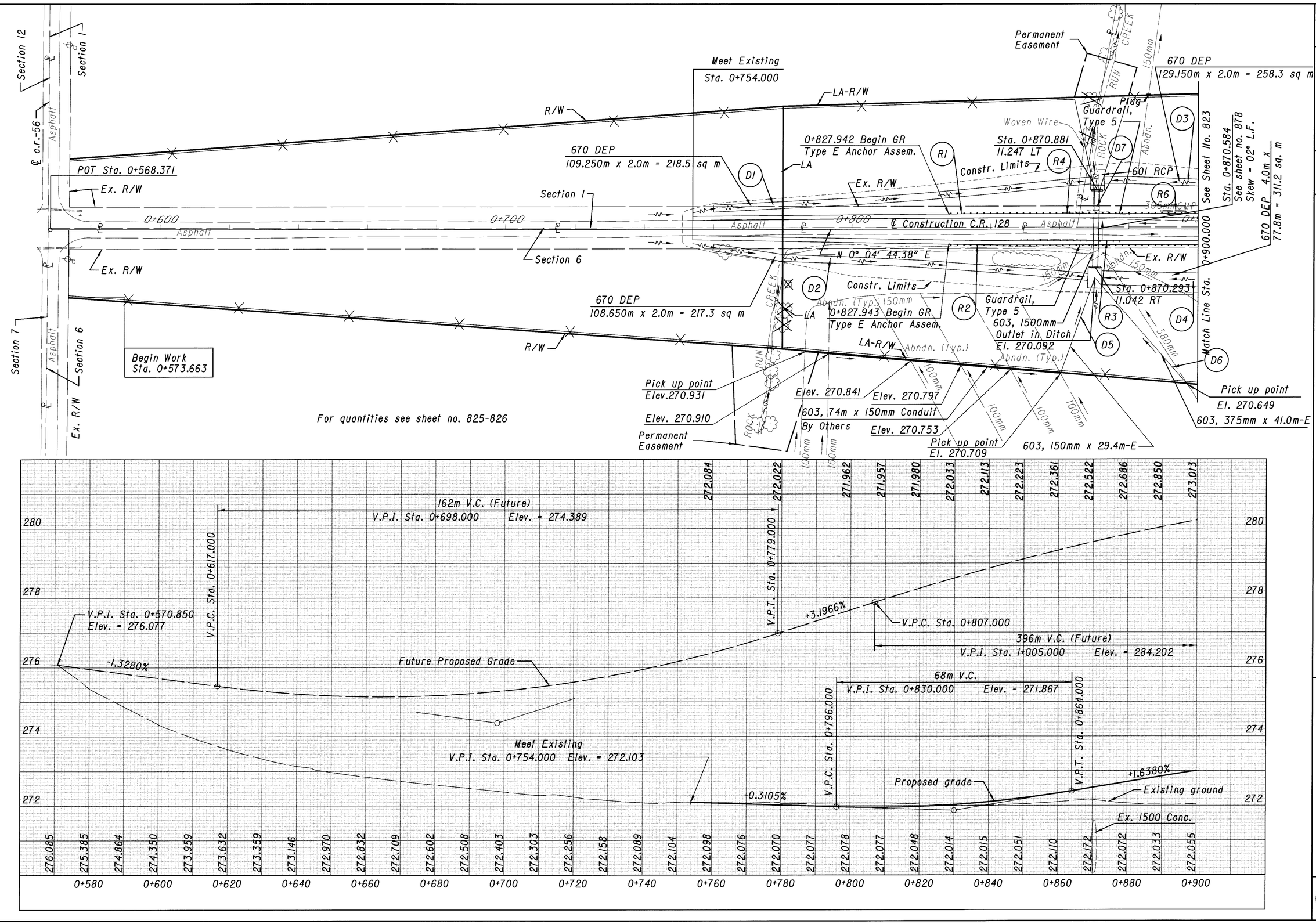
CALCULATED AM

CHECKED REA

US-23 CROSS SECTIONS
STA 14+370.084

WYA / CRA-30-28.009 / 0.000

808
2116



N

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AW
CHECKED REA

PLAN AND PROFILE - C.R. 128
STA. 0+570.850 TO STA. 0+900

WYA/CRA-30-28.009/0.000

822
2116

For Field Tiles See Mainline US-30 Sheets

℄ Construction Service Road 3

N 0° 02′ 55″ E

R/W

Constr. Limits

670 DEP

0+900

Permanent Easement

LA-R/W

LA

Sta. 0+922.000, ℄ Service Rd. #3
300mm Conduit Type D
See sheet no. 1250

Sta. 0+995.705, ℄ Service Rd. #3
300mm Conduit Type D
See sheet no. 1251

90°

Match Line Sta. 0+900.000 See Sheet No. 822

Match Line Sta. 1+240.000 See Sheet No. 824

LA-R/W

Constr. Limits

670 DEP 2.0m x
129.150m = 258.3 sq. m

D3

0+913.058 End GR
Type E Anchor Assem.

R1

POT Sta. 0+951.699

POT Sta. 1+049.702

STA. 1+000.000 C.R. 128 =
STA.32+872.187 U.S. 30

Constr. Limits

℄ Construction C.R. 128

Meet Existing
Sta. 1+139.000

Ex. R/W

Section 1

88° 20′ 37″

N 88° 17′ 06.60″ E

100mm

Asphalt

℄

N 0° 04′ 44.38″ E

N 0° 03′ 30.47″ W

N 0° 03′ 06.55″ W

305mmCPP

1+000

1+100

1+200

Constr. Limits

Asphalt

254mmSteel

R7

Wooded

Section 6

Ex. R/W

Sta. 1+238.983 CR-128 =
Sta. 1+000.000 SR-3

For quantities see sheet no. 825-826
For Service Rd. 3 see sheet no. 1211
For proposed US-30 see sheet no. 205-206

R2

D4

Constr. Limits

670 DEP 4.0m x
77.8m = 311.2 sq. m

0+913.058 End GR
Type E Anchor Assem.

150mm

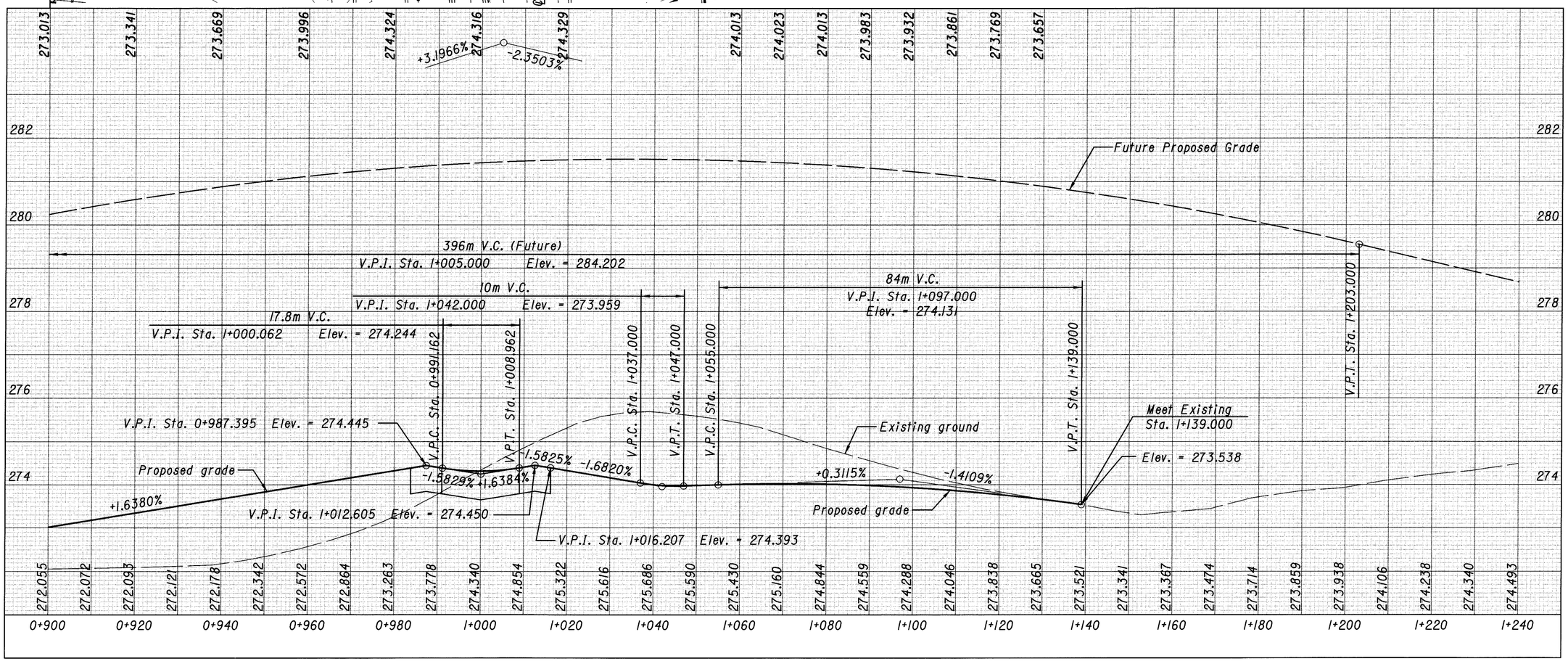
℄ Construction U.S.R. 30

32+900

670 DEP

LA-R/W

R/W



HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED AM

CHECKED REA

PLAN AND PROFILE - C.R. 128
STA. 0+900 TO STA. 1+240

WYA / CRA-30-28.009 / 0.000

823
2116

For quantities see sheet no. 825-826
For Service Rd. No. 3 see sheet no. 1211

Match Line Sta. 1+240.000 See Sheet No. 823

R/W
Constr. Limits
670 DEP
Service Rd. No. 3
Ex. R/W
Constr. Limits Ex. R/W
Disturb Project
Do Not Disturb with This Project
Wooded
Dirt Drive
Dish
#12515 2 Sty. Brick
Fr. Garage
Fr. Shed
W. Well
B.B.
Gravel
305mm
300mm
305mmCI
381mm
457mm Tele. Ped.
Asphalt
1+300
1+400
1+500
N 0° 03' 06.55" W
Section Line
℄ C.R. 128
Section 1
Section 6
153mmVIT
203mmCI
203mmCPP
150mm Abndn.
100mm Abndn.
150mm Abndn. both
ROCK CREEK BRANCH
Temporary Easement
Permanent Easement
End Work Sta. 1+519.394
POT Sta. 1+546.144
Wood Fence
Flower Bed
Grass
Septic Tank
#12382 2 Sty. Fr.
Fr. Gar.
Fr. Barn
Woven Wire
POND

122m V.C. (Future)
V.P.I. Sta. 1+472.000 Elev. = 273.227
V.P.C. Sta. 1+411.000
V.P.T. Sta. 1+533.000
-2.3503%
+0.6504%
Existing ground
Future Proposed Grade
V.P.I. Sta. 1+534.000 Elev. = 273.630

280 278 276 274 272

274.493 274.663 274.661 275.115 275.699 275.979 276.103 275.933 275.440 274.907 274.378 273.857 273.336 272.914 272.543 272.356 272.192 272.089 272.077 272.064 272.063 272.068 272.117 272.167 272.217 272.403 272.661 273.029 273.377 273.656 273.547

1+240 1+260 1+280 1+300 1+320 1+340 1+360 1+380 1+400 1+420 1+440 1+460 1+480 1+500 1+520 1+540

N

0 10 20 HORIZONTAL SCALE IN METERS

CALCULATED AM CHECKED REA

PLAN AND PROFILE - C.R. 128
STA. 1+240 TO STA. 1+534.000

WYA/CRA-30-28.009/0.000

824
2116

REF NO.	SHEET NO.	STATION	SIDE	202										SPECIAL		606								830		622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		CR 128																															
R1	822	0+827.942 TO 0+913.058	LT														53.340						2										
R2	822	0+827.943 TO 0+913.058	RT														53.340						2										
R3	822	0+848.615 TO 0+879.303	RT				30.480																										
R4	822	0+860.837 TO 0+880.272	LT				19.050																										
R5		Not Used																															
R6	822	0+889.190 TO 0+896.436	LT		7.2																												
R7	823	0+931.119 TO 0+935.281	RT		4.2																												
TOTALS CARRIED TO SUB-SUMMARY					11.4		49.530										106.680						4										

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

825
2116

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

CALCULATED AM | CHECKED REA

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE B W/ FILTER (CU M)	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 150 MM CONDUIT, TYPE E (METER)	603 375 MM CONDUIT, TYPE E (METER)	603 1500 MM CONDUIT, TYPE A, 706.02 (METER)	670 DITCH EROSION PROTECTION (SQ M)	FOR INFORMATION ONLY (EACH): 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
D1	822	0+760.00 TO 0+868.95	LT							218.5			
D2	822	0+760.00 TO 0+868.22	RT							217.3			
D3	822	0+872.97 TO 0+975.65	LT							258.3			
D4	822	0+872.22 TO 0+950.00	RT							311.2			
D5	822	0+860.39 TO 0+870.21	RT				29.4						
D6	822	0+870.21 TO 0+897.13	RT					41.0					
D7	822	0+870.50	LT & RT	13.5	30.0	3.70			22.4				
TOTALS													
TOTALS CARRIED TO SUB-SUMMARY				13.5	30.0	3.70	29.4	41.0	22.4	1005.3			

826
2116

Begin Work
Sta. 0+679.962

Twin 550mmX850mm
Conduit Type D

Sta. 0+883.761
See sheet no.885
Skew = 11° R.F.

R/W

Const. Limits
℄ Service Rd. No. 12

PC Sta. 0+951.586

POT Sta. 0+841.860

1.528m

R/W

Fiber Optics Line

Ex. R/W

PT Sta. 0+982.087

300mm

Section 4

LA-R/W

Asphalt

0+700

N 0° 17' 34.25" E

LA

Section Line

LA-R/W

Ex. R/W

Constr. Limits

Gas Main

Section 3

Fiber Optics Line 250mm

1.528m

Constr. Limits

0+800

200mm

℄ Construction S.R.-231

Constr. Limits

+TEL

Gas Main

N 0° 15' 57.76" E

Temporary Easement

Constr. Limits

2 Sty. Frame #12882

Gravel

POT Sta. 0+872.386

Abndn. 100mm

150mm

0+900

Asphalt

N 0° 18' 09.16" E

LA-R/W

0+941.419 Begin GR
Type T Anchor Assem.

675mm or 825mm,
Conduit Type A,

670 DEP
12.750m X 2.0m = 25.5 sq m

For quantities see sheet no. 829-830
For Service Rd. No. 12 see sheet no. 1217
For Ramp K see sheet no. 1134
For Ramp N see sheet no. 1147
For U.S. 30 see sheet no. 237-238

For Field Tiles See:
US-30 Mainline Sheets
Ramp K Sheets
Ramp N Sheets

Wood Shed

Wood Sheds

Temporary Easement

Constr. Limits

Gravel

670 DEP

Constr. Limits

100mm

0+939.121
Begin GR 28.9m Lt.
0+917.703
See sheet no.888
Skew = 0°
LA-R/W

7.9m

℄ Construction Ramp "K"
N 87° 56' 04.02" E

Fiber Optics Line 250mm

670 DEP
59.250m x 2.0m = 118.5 sq m
Type B Anchor Assem.

670 DEP

D10

STA. 0+932.389 S.R.-231=
STA. 37+765.516 RAMP "K"
STA. 37+754.979 RAMP "N"

℄ Construction U.S. 30

D3

Sta. 0+959.962
See sheet no.890
Skew = 0°

R=13.5m

Ex. R/W

Constr. Limits

R1

Guardrail, Type 5

See Sheet No. 828

Match Line Sta. 1+000.000

250mm

Asphalt

R=16.5m

D5

R2

D4

Gas Main

100mm

Ex. R/W

℄ Construction Ramp "N"

N 88° 41' 31.93" E

Twin 525mm or 600mm,
Conduit Type A,

670 DEP
4.0 x 24.850 = 99.4 sq meter.

670 DEP
73.733m x 3.0m = 221.2 sq m

100mm

100mm

100mm

D1

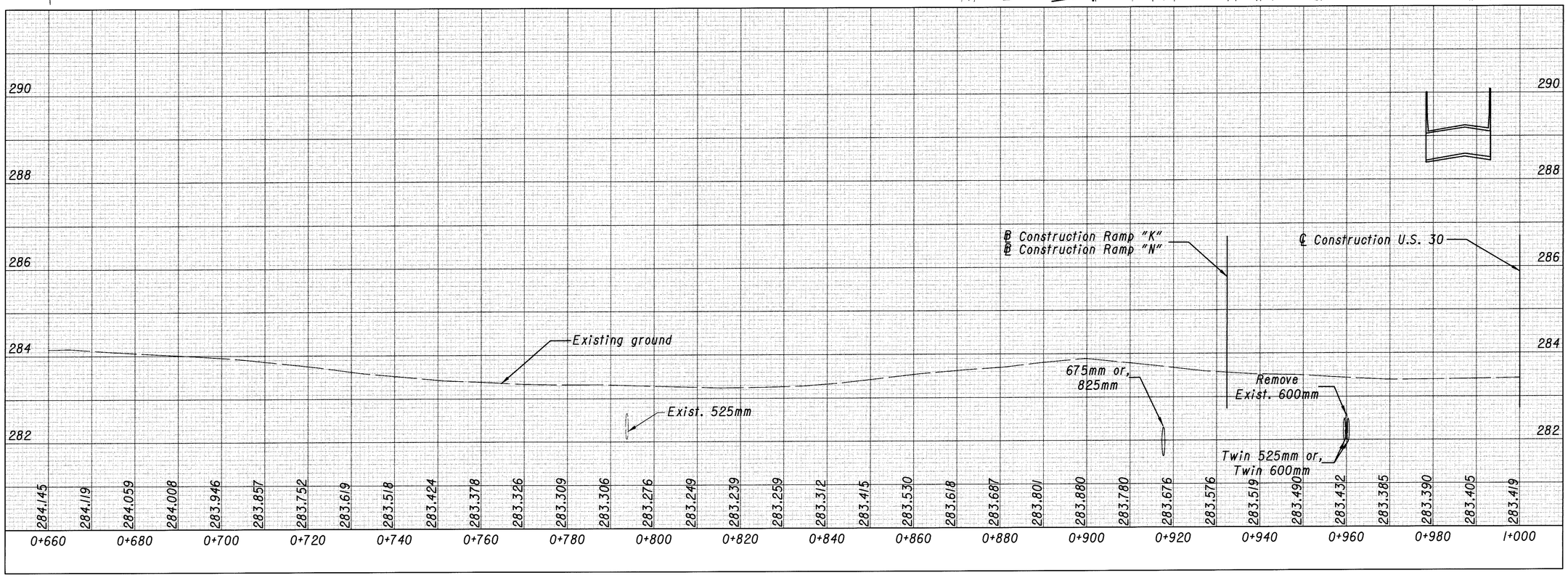
2 Sty. Frame

Gravel

#12882

Constr. Limits

Gravel



N

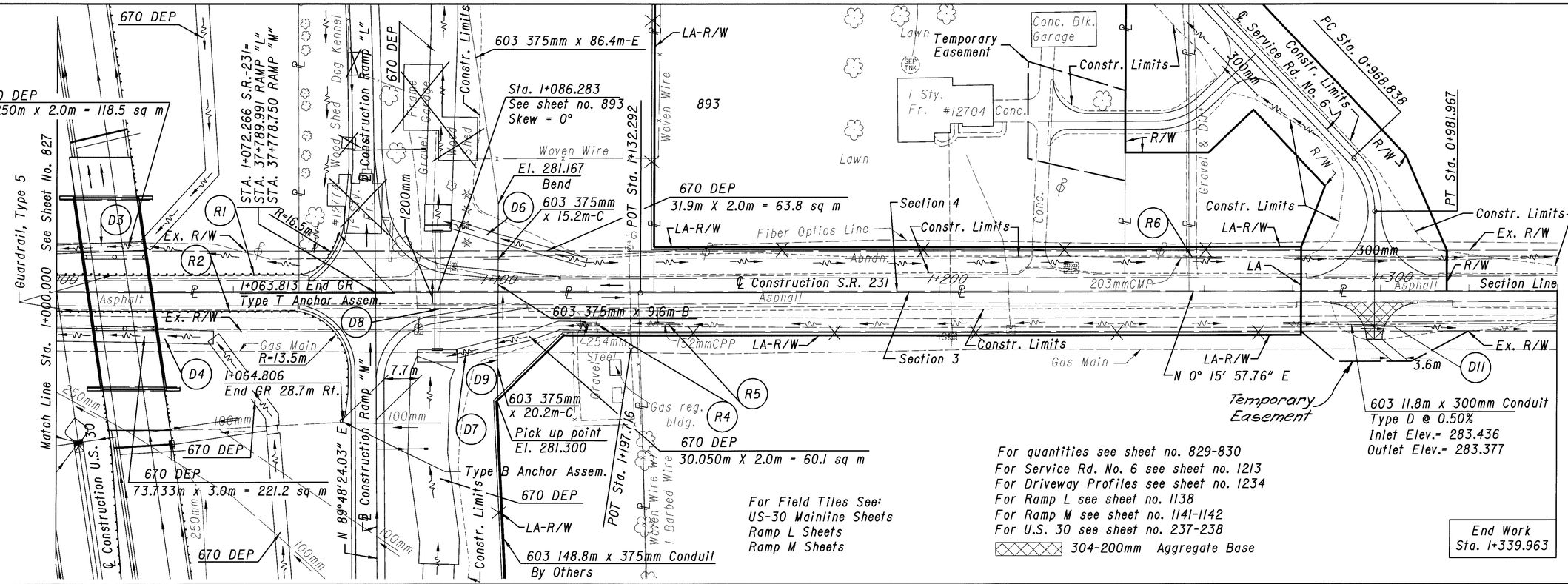
0 10 20
HORIZONTAL
SCALE IN METERS

CALCULATED AW
CHECKED REA

PLAN AND PROFILE - S.R. 231
STA. 0+660 TO STA. 1+000

WYA/CRA-30-28.009/0.000

827
2116



PLAN AND PROFILE - S.R. 231
STA. 1+000 TO STA. 1+340

WYA/CRA-30-28.009/0.000

828
2116

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH			METER	METER		METER		EACH	
		SR 231																															
R1	827	0+939.121 TO 1+063.813	LT														140.970					1		1									
R2	827	0+941.419 TO 1+064.806	RT														140.970					1		1									
R3		Not Used																															
R4	828	1+118.177 TO 1+123.024	RT		4.8																												
R5	828	1+134.050 TO 1+141.372	RT		7.3																												
R6	828	1+251.788 TO 1+263.909	LT		12.1																												
TOTALS CARRIED TO SUB-SUMMARY					24.2												281.940					2		2								

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

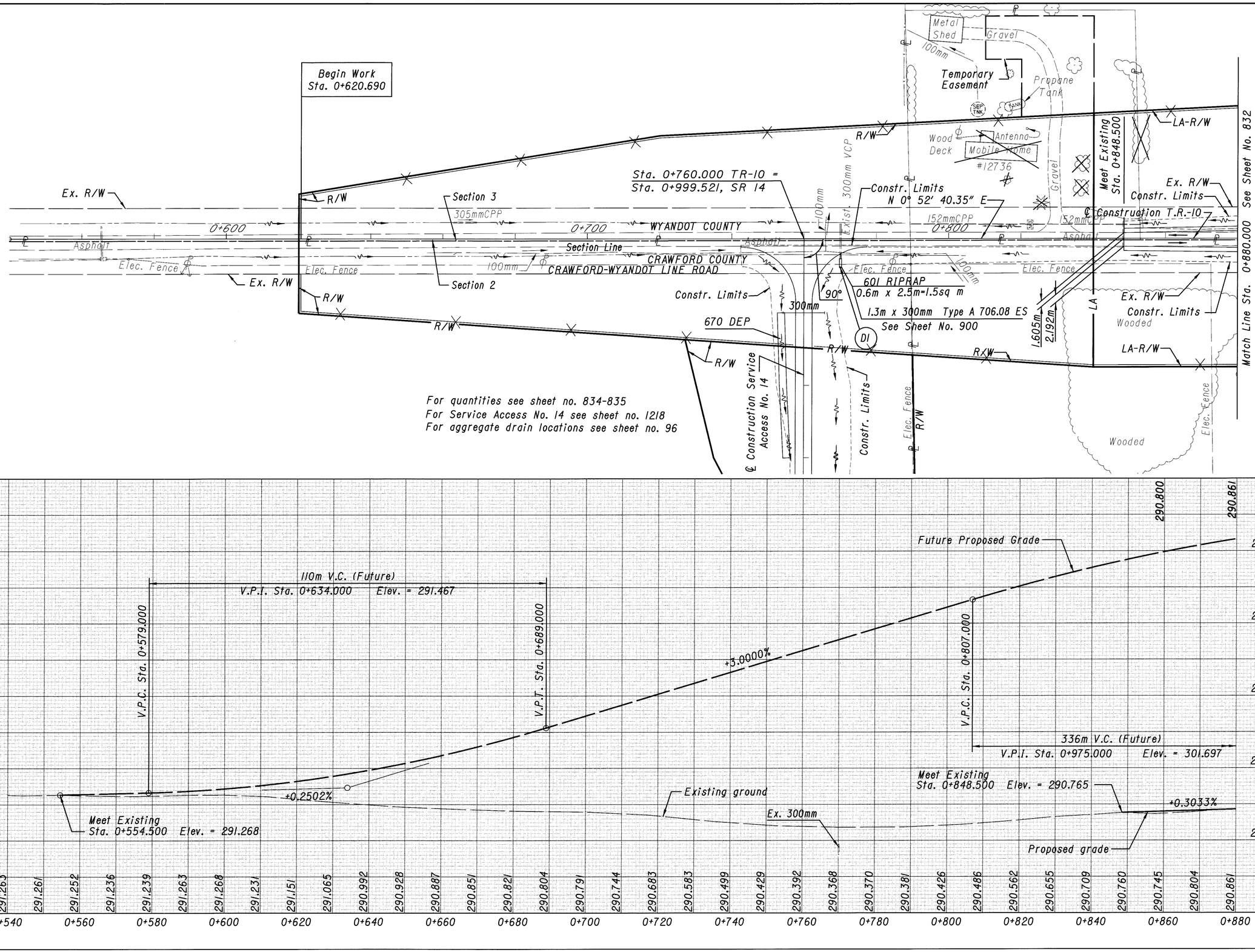
829
2116

ESTIMATED DRAINAGE QUANTITIES

CALCULATED AM
CHECKED REA

WYA / CRA-30-28.009 / 0.000

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	601 RIPRAP USING 150 MM REINFORCED CONCRETE SLAB (SQ M)	601 ROCK CHANNEL PROTECTION TYPE B W/ FILTER (CU M)	602 CONCRETE MASONRY (CU M)	603 675 MM CONDUIT, TYPE A, 706.02, OR 825 MM, 707.01 (2.0) W.N.), OR 707.09 (1.5)MM CORR.), OR 707.21 (METER)	603 300 MM CONDUIT, TYPE D, 706.02 (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 375 MM CONDUIT, TYPE B (METER)	603 1200 MM CONDUIT, TYPE A, 706.02 (METER)	603 525MM CONDUIT, TYPE A, 706.02 OR 600 MM, 707.01 (2.0) W.N), OR 707.09 (1.5)MM CORR.), OR 707.21 (METER)	613 LOW STRENGTH MORTAR BACKFILL (CU M)	670 DITCH EROSION PROTECTION (SQ M)	FOR INFORMATION ONLY 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY MASONRY COLLAR (EACH)
D1	827	0+903.38 TO 0+914.75	RT												25.5			
D2		NOT USED																
D3	827	0+961.00 TO 1+019.96	LT												118.5			
D4	827	0+962.00 TO 1+035.53	RT												221.2			
D5	827	0+959.962	LT & RT	2.0			1.37						38.6	11.6	103.4			
D6	828	1+089.28 to 1+119.62	LT												63.8			
D7	828	1+090.78 to 1+119.96	RT												60.1			
D8	828	1+086.283	LT & RT		36.0	20.3	2.14					26.9						
D9	828	1+100.00	LT & RT							35.4	9.6							
D10	827	0+917.703	LT & RT	6.3	15.0		1.18	26.9										
D11	828	1+298.599	RT						11.8									



N

0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - T.R. 10
STA. 0+554.500 TO STA. 0+880

WYA/CRA-30-28.009/0.000

831
2116

TBM M-M. ELEV. 290.282
SPIKE, POWER POLE
STA. 0+983.478 TR-10, 6.547m RT.

Match Line Sta. 0+880.000 See Sheet No. 831

Match Line Sta. 1+220.000 See Sheet No. 833

LA-R/W

Constr. Limits

100mm

Construction U.S.R. 30

150mm

For Field Tiles See
US-30 Mainline Sheets

Meet Existing
Sta. 1+118.000

R/W

LA

STA. 1+000.000 T.R.-10=
STA. 39+375.274 U.S.-30

D2

Ex. R/W

℄ Construction T.R.-10

0+900

Asphalt

0+990

1+032.674 TR-10
See Sheet no. 905
Skew = 19.62°

670 DEP
55.2m X 2.0m = 110.4 sq m

D4

WYANDOT COUNTY

Section 3

1+100

1+200

Section Line

CRAWFORD-WYANDOT LINE ROAD

203mmCMP

Section 2

CRAWFORD COUNTY

TBM M-M

N 0° 52' 40.35" E

20mmAsphalt

Abandoned Well

R2

R3

R1

Drive to be Removed

Drilled Water Well to be Abandoned

Gravel

603, 375mm

0+968.682 TR-10
See sheet no. 904
Skew = 22.54°

D3

603, 375mm or 450mm

Outlet in Ditch
El. 290.008

603 100mm x 16.6m-E

Pick up point
El. 290.069

#2935
Double Wide
Mobile Home

SEP TNK

For quantities see sheet no. 834-835
For U.S. 30 see sheet no. 248, 251

290.861 290.921 290.956 291.014 291.097 291.206 291.479 291.761 291.705 291.712 291.390 291.254 291.142 291.055 290.993 290.917

+3.0000%

-3.5603%

Future Proposed Grade

336m V.C. (Future)
V.P.I. Sta. 0+975.000 Elev. = 301.697

44m V.C.
V.P.I. Sta. 0+926.000
Elev. = 291.000

18m V.C.
V.P.I. Sta. 0+999.966
Elev. = 291.636

52m V.C.
V.P.I. Sta. 1+060.000
Elev. = 291.059

V.P.C. Sta. 0+904.000

V.P.T. Sta. 0+948.000

V.P.C. Sta. 0+990.966

V.P.T. Sta. 1+008.966

V.P.C. Sta. 1+034.000

V.P.T. Sta. 1+086.000

V.P.T. Sta. 1+143.000

Proposed grade

+1.4091%

-1.6610%

+1.3965%

-1.6335%

+0.3033%

-0.3536%

Existing ground

V.P.I. Sta. 0+986.723 Elev. = 291.856

V.P.I. Sta. 1+013.281 Elev. = 291.822

V.P.I. Sta. 1+118.000 Elev. = 290.854
Meet Existing

603, 375mm

603, 375mm or 450mm

300 298 296 294 292 290

290.861 290.920 291.051 291.062 291.056 290.926 290.783 290.652 290.537 290.440 290.353 290.333 290.338 290.352 290.373 290.405 290.453 290.527 290.635 290.706 290.808 290.857 290.891 290.884 290.845 290.803 290.761 290.663 290.611 290.461 290.312 290.191 290.088 289.997 289.954

0+880 0+900 0+920 0+940 0+960 0+980 1+000 1+020 1+040 1+060 1+080 1+100 1+120 1+140 1+160 1+180 1+200 1+220

N

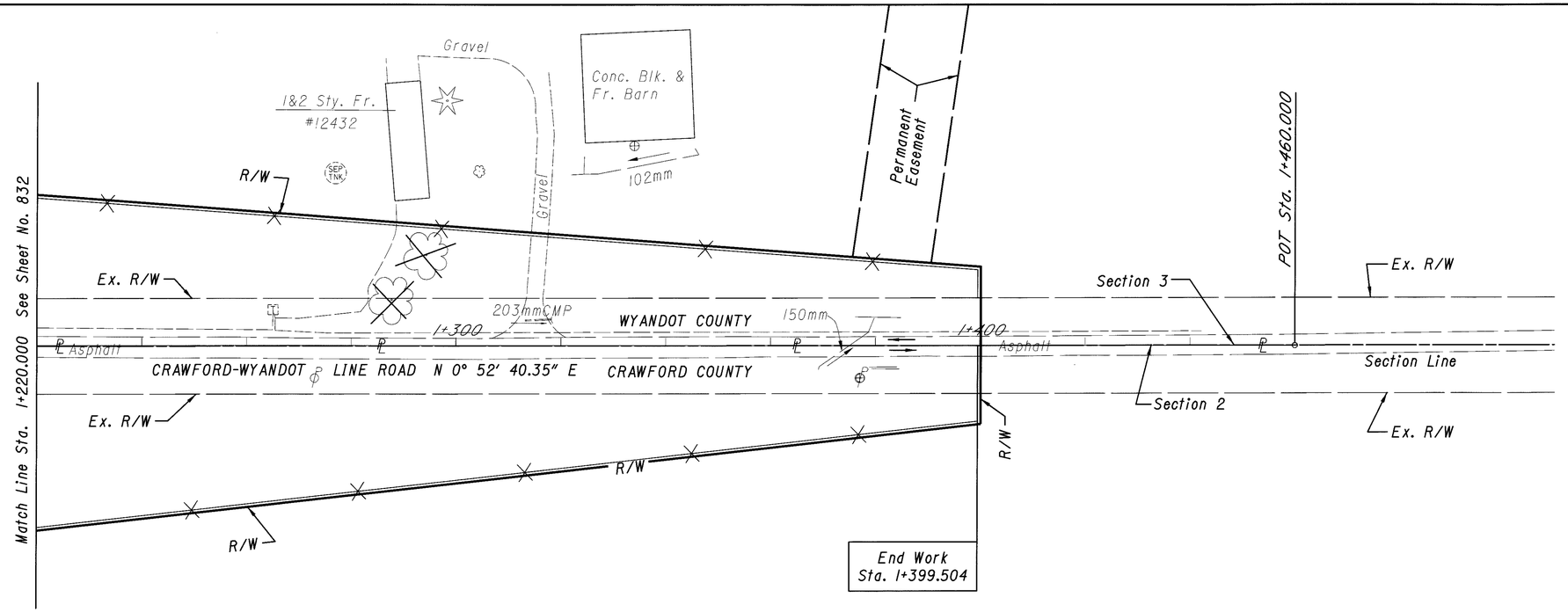
0 20
HORIZONTAL
SCALE IN METERS

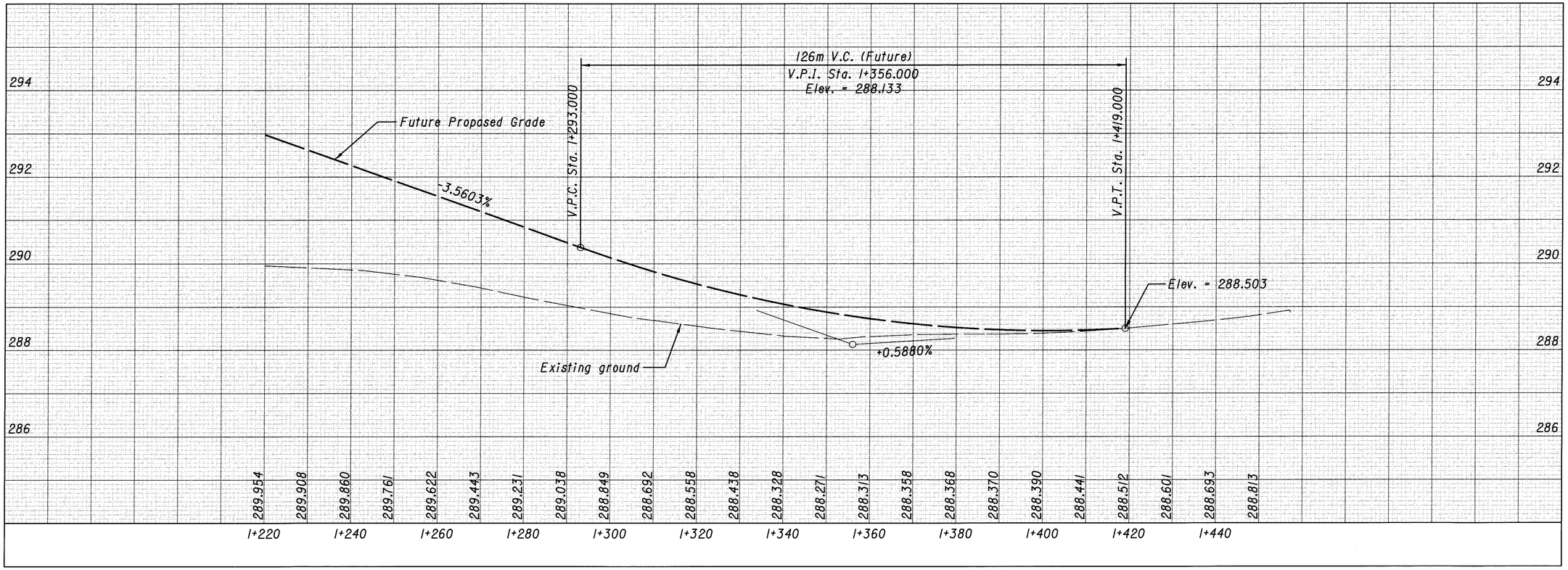
CALCULATED AM
CHECKED REA

PLAN AND PROFILE - T.R. 10
STA. 0+880 TO STA. 1+220

WYA / CRA-30-28.009 / 0.000

832
2116





N

HORIZONTAL
SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - T.R. 10
STA. 1+220 TO STA. 1+419.000

WYA/CRA-30-28.009/0.000

833
2116

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		TR 10																														
R1	832	0+925.702	RT												1																	
R2	832	0+889.492 TO 0+894.491	RT		5.0																											
R3	832	0+939.413 TO 0+944.410	RT		5.0																											
TOTALS CARRIED TO SUB-SUMMARY					10.0										1																	

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

834
2116

ESTIMATED DRAINAGE QUANTITIES

CALCULATED AM | CHECKED REA

WYA/CRA-30-28.009/0.000

REF NO.	SHEET NO.	STATION	SIDE	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	602 CONCRETE MASONRY (CU M)	603 375MM CONDUIT, TYPE A 706.02, OR 375MM 707.01, OR 707.09 (13MM CORR.), OR 707.21 (METER)	603 375MM CONDUIT, TYPE A 706.02, OR 450MM 707.01, OR 707.09 (13MM CORR.), OR 707.21 (METER)	603 300MM CONDUIT, TYPE A 706.08 E.S. (METER)	670 DITCH EROSION PROTECTION (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: MASONRY COLLAR (EACH)
D1	831	0+770.10	RT	1.5					1.3				
D2	832	0+968.68	LT & RT	9.0	3.0	0.44	25.1					2	1
D3	832	1+032.67	LT & RT	9.0	2.3	0.56		22.7					
D4	832	1+026.21 TO 1+080.00	LT							110.4			
											TOTALS	2	1
		TOTALS CARRIED TO SUB-SUMMARY		19.5	5.3	1.00	25.1	22.7	1.3	110.4			

Begin Work
Sta. 0+562.806

Permanent Easement

450mm

Pick up point
El. 291.538

R/W

603 600mm x 57.4m-C

670 DEP
144.880m X 5.0m = 724.4 sq m

Constr. Limits

670 DEP
23.460m X 5.0m = 117.3 sq m

Ex. R/W

Abndn. 950x1500mm

Section 31

KNAUSS ROAD

0+600

0+700

0+800

Asphalt

N 0° 26' 47.82" E

Section Line

Section 36

Woven Wire

Constr. Limits (Seeding)

603 600mm x 9.0m-B

603 600mm x 60.9m-C

670 DEP
100.075m X 8.0m = 800.6 sq m

Constr. Limits

LA

Pick up point
El. 292.352

670 DEP
20.022m X 9.0m = 180.2 sq m

603, 132.0m x 450mm Conduit
By others

Meet Existing
Sta. 0+850.000

670 DEP
20.055m X 11.0m = 220.6 sq m

Match Line Sta. 0+900.000 See Sheet No. 837

Septic Tank to be Removed

Construction T.R.-21

LA-R/W

Ex. R/W

762mm

Wood Sheds

S. Dish

Clothesline Poles

1/2 Sty. Brick

Ant.

Cistern

#3266

#3248

1 Sty. Frame

Gravel

100mm Abndn.

304 Aggregate Base (200mm)
Payment included with Item 603

OD

150mm min.

150mm min.

603, 900mm or 1200mm Type D

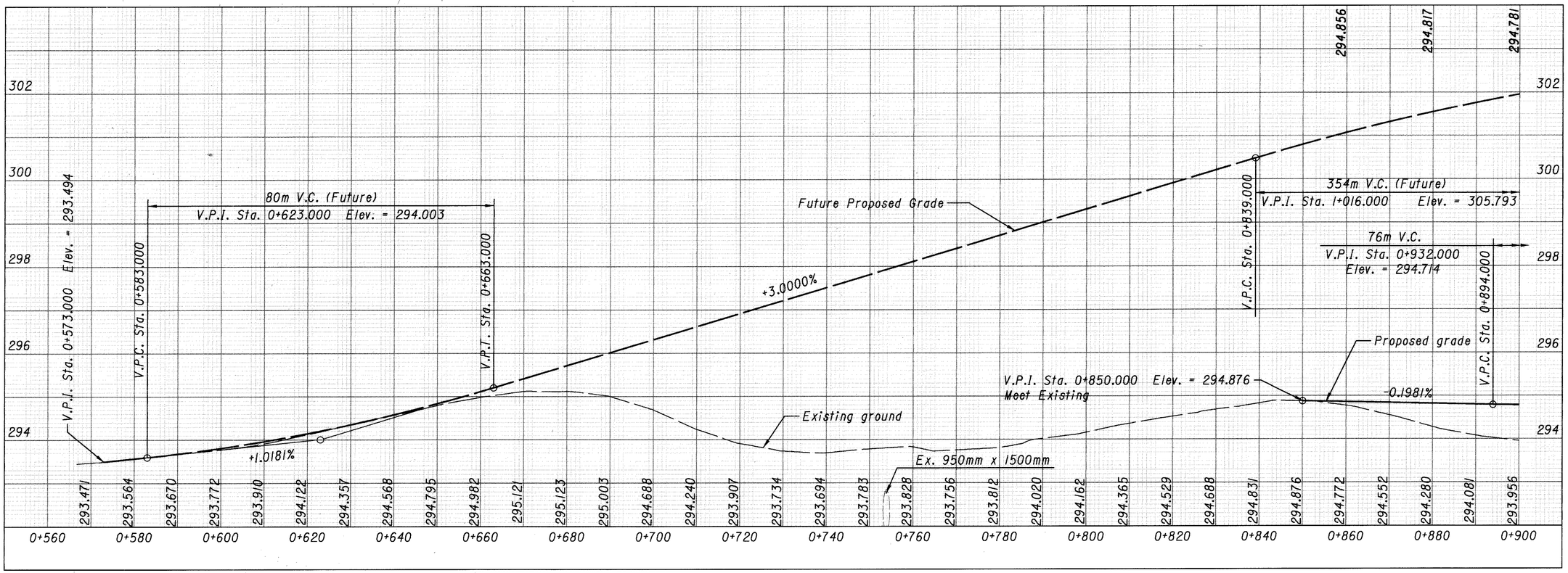
SECTION AA (Not to Scale)

Woven Wire/Barbed Wire

(A) (D8) Sta. 0+789.29 ℄ TR-21, 10.519m Lt
Length = 11.714m
900mmϕConduit, Type D, 706.02, or
1200mmϕConduit, Type D, 707.01
Inv. Inlet = 292.452
Inv. Outlet = 292.399m

304 Aggregate Base (200 mm)

For quantities see sheet no. 839-840



HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - T.R. 21
STA. 0+573.000 TO STA. 0+900

WYA/CRA-30-28.009/0.000

836
2116

PT Sta. 9+828.535
PC Sta. 9+946.546
Constr. Limits
LA-R/W
℄ Construction Service Access No. 17
PT Sta. 9+973.663
R/W
Match Line Sta. 0+900.000 See Sheet No. 836
Match Line Sta. 1+240.000 See Sheet No. 838
Constr. Limits
670 DEP
670 DEP
180.060m X 5.0m = 900.3 sq m
D3
Ex. R/W
N 77° 10' 15.88" E
℄ Construction U.S. 30
STA., 1+000.000 T.R.-21=
STA. 3+577.275 U.S.-30
℄ Construction T.R.-21
POT Sta. 1+096.867
N 0° 11' 45.36" E
Ex. R/W
Section 36
90°
300mm
Asphalt
Section Line
N 0° 19' 14.06" E
KNAUSS ROAD
Constr. Limits
Ex. R/W
Section 31
Meet Existing
Sta. 1+190.000
Sta. 1+199.166 TR-21 =
Sta. 10+000.000 SA No. 17
254mm CMP/381mm CMP
Abndg.
R1
D6
670 DEP
20.254m X 13.0m = 263.3 sq m
Pick up point
El. 292.724
603, 132.0m x 450mm Conduit
By others
525mm
For Field Tiles See
US-30 Mainline Sheets
For quantities see sheet no. 839-840
For Service Access No. 17 see sheet no. 1223
For proposed US-30 see sheet no. 277
For aggregate drain location see sheet no. 96

354m V.C. (Future)
V.P.I. Sta. 1+016.000 Elev. = 305.793
140m V.C. (Future)
V.P.I. Sta. 1+300.000
Elev. = 295.022
Future Proposed Grade
V.P.T. Sta. 1+193.000
V.P.C. Sta. 1+230.000
18m V.C.
V.P.I. Sta. 1+000.110 Elev. = 295.449
V.P.I. Sta. 1+012.939 Elev. = 295.664
V.P.I. Sta. 0+987.061 Elev. = 295.637
76m V.C.
V.P.I. Sta. 0+932.000 Elev. = 294.714
100m V.C.
V.P.I. Sta. 1+076.000 Elev. = 294.743
V.P.T. Sta. 0+970.000
V.P.C. Sta. 0+991.110
℄ Construction U.S. 30
V.P.T. Sta. 1+009.110
V.P.C. Sta. 1+026.000
V.P.T. Sta. 1+126.000
Meet Existing
Sta. 1+190.000 Elev. = 295.938
Proposed grade
Existing ground
+3.0000%
-3.7926%
+1.0486%
-0.1981%
+1.6770
-1.4419%
+1.6770%
-1.4606%

294.781 294.789 294.821 294.877 294.959 295.065 295.196 295.351 295.519 295.519 295.561 295.417 295.293 295.195 295.122 295.073 295.050 295.052 295.079 295.132 295.209 295.414 295.624 295.833

293.956 293.851 293.890 293.917 293.925 293.950 293.984 294.018 294.051 294.163 294.282 294.408 294.508 294.600 294.694 294.791 294.952 295.145 295.338 295.532 295.730 295.814 295.841 295.871 295.829 295.783 295.771 295.810 295.832 295.944 296.054 296.221 296.310 296.314 296.270

304 302 300 298 296 294

0+900 0+920 0+940 0+960 0+980 1+000 1+020 1+040 1+060 1+080 1+100 1+120 1+140 1+160 1+180 1+200 1+220 1+240

N

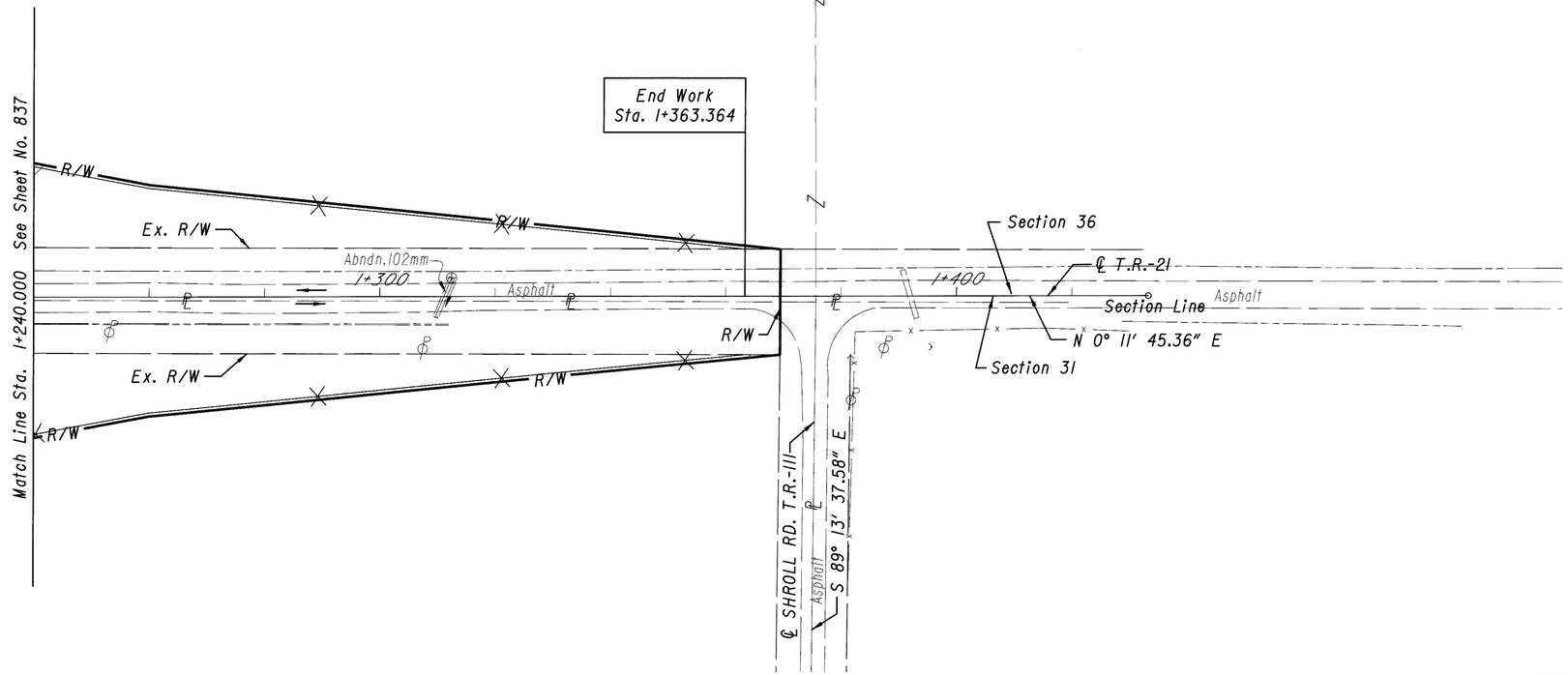
HORIZONTAL SCALE IN METERS
0 10 20

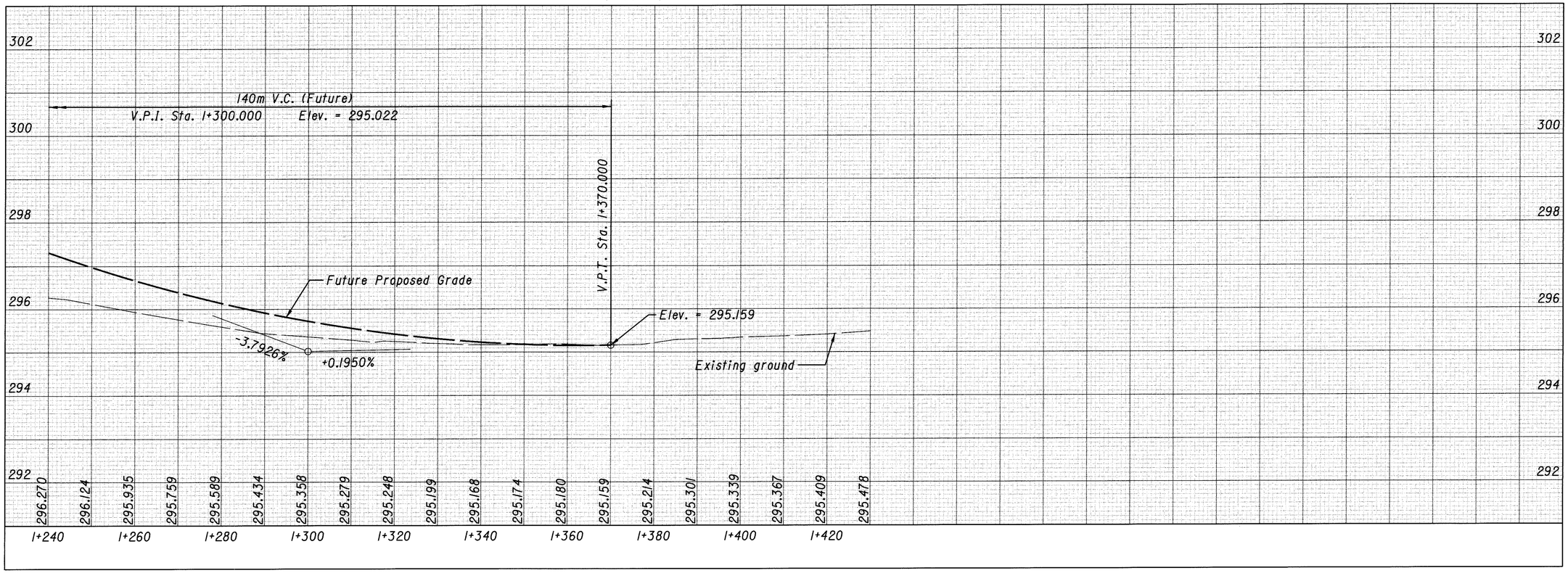
CALCULATED AM
CHECKED REA

PLAN AND PROFILE - T.R. 21
STA. 0+900 TO STA. 1+240

WYA/CRA-30-28.009/0.000

837
2116





HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - T.R. 21
STA. 1+240 TO STA. 1+370.000

WYA/CRA-30-28.009/0.000

838
2116

ESTIMATED ROADWAY QUANTITIES

CALCULATED JAG
CHECKED REA

WYA/CRA-30-28.009/0.000

839
2116

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830		622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE 1		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		TR 21																															
R1	837	0+958.316 TO 0+963.160	RT		4.8																												
R2	836	0+883.607	LT											1																			
TOTALS CARRIED TO SUB-SUMMARY					4.8									1																			

REF NO.	SHEET NO.	STATION	SIDE	603 900 MM CONDUIT TYPE D 706.02, OR 1200 MM 707.01	603 600 MM CONDUIT, TYPE B	603 600 MM CONDUIT, TYPE C	670 DITCH EROSION PROTECTION	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
				METER	METER	METER	SQ M	EACH		
D1	836	0+722.26	LT & RT		9.0	118.3				
D2	836	0+760 TO 0+860	RT				800.6			
D3	836	0+795.14 TO 0+940.00	LT				724.4			
D4	836	0+860 TO 0+880	RT				180.2			
D5	836	0+880 TO 0+900	RT				220.6			
D6	836	0+900 TO 0+920	RT				263.3			
D7	836	0+760.00 TO 0+783.44	LT				117.3			
D8	836	0+789.29	LT	11.7						
										TOTALS
TOTALS CARRIED TO SUB-SUMMARY				11.7	9.0	118.3	2306.4			

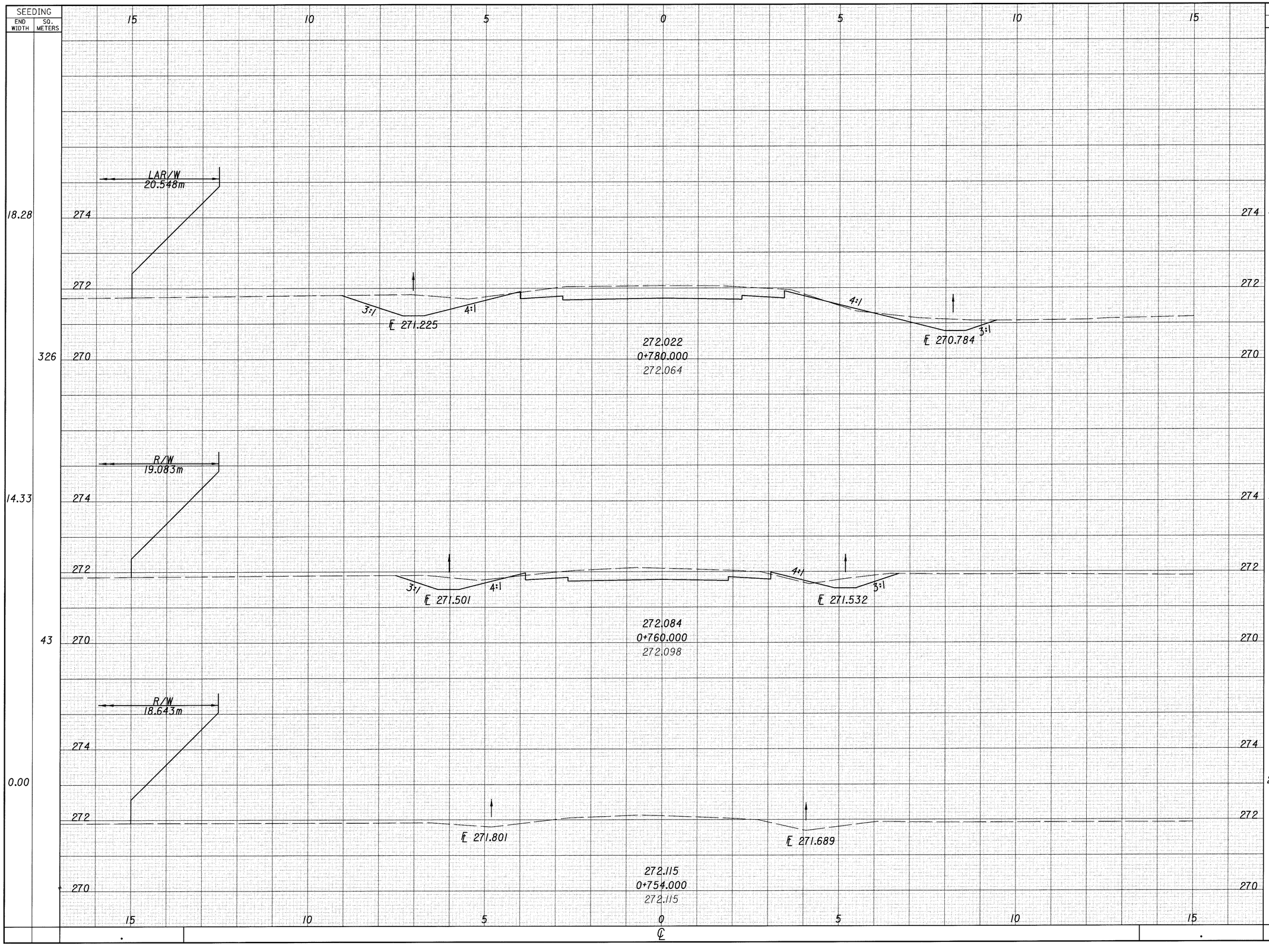
CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

840
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
18.28		4.73	0.04		
	326			79	1
14.33		3.13	0.09		
	43			16	0
0.00		2.08	0.00		



CALCULATED AM

CHECKED REA

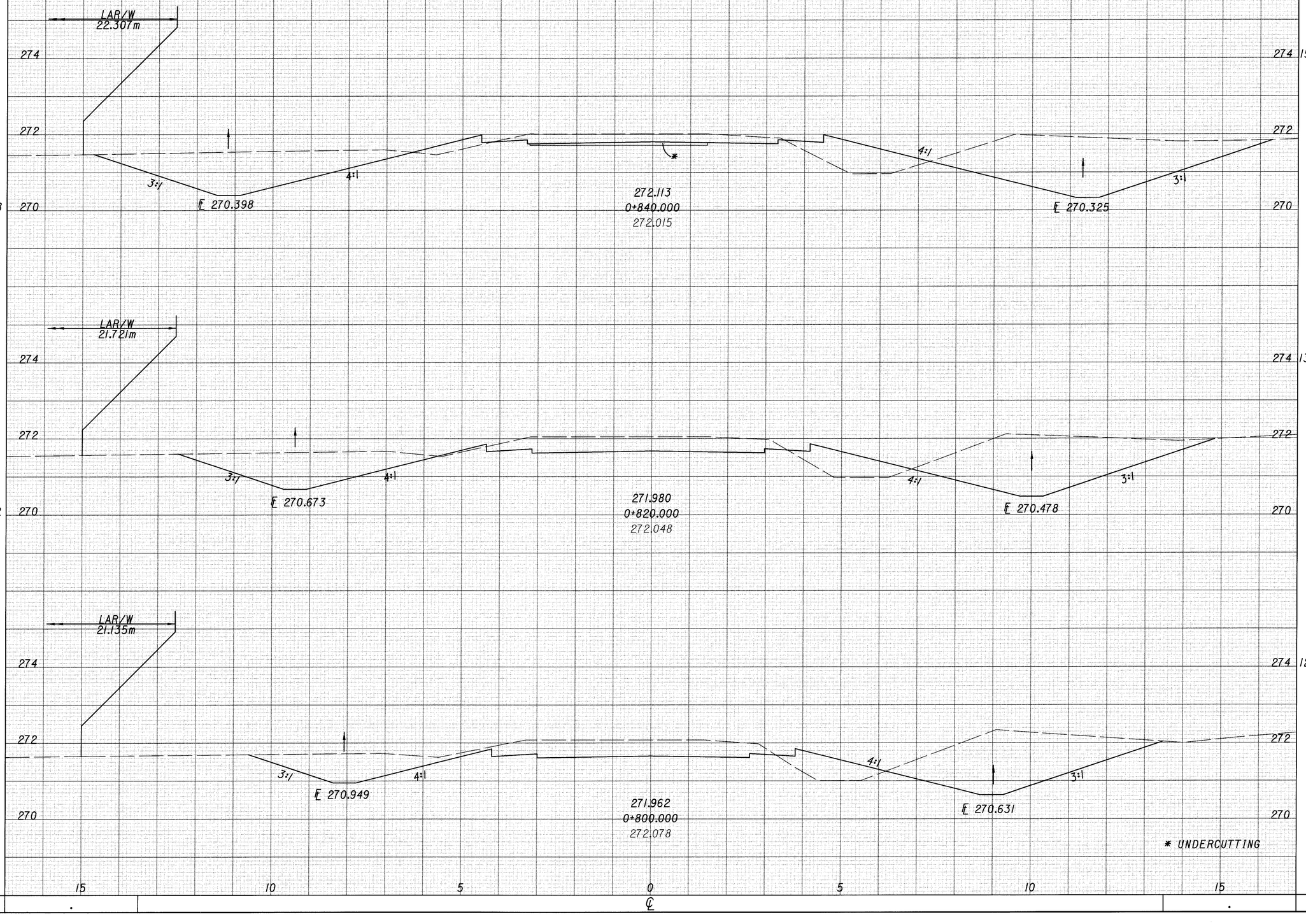
CR-128 CROSS SECTIONS

STA 0+754.000 TO STA 0+780.000

WYA / CRA-30-28.009 / 0.000

875
2116

SEEDING END WIDTH	SEEDING SQ. METERS		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
31.15		274	15.08	2.41		
	588	270			287	38
27.60		274	13.66	1.40		
	522	270			258	25
24.64		274	12.14	1.14		
	429	270			169	12



CALCULATED AM

CHECKED REA

CR-128 CROSS SECTIONS STA 0+800.000 TO STA 0+840.000

WYA/CRA-30-28.009/0.000

876
2116

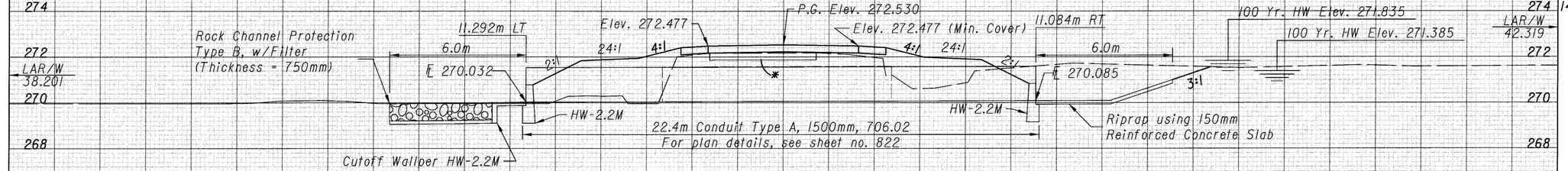
SEEDING	
END WIDTH	SQ. METERS

SEEDING END WIDTH	SEEDING SQ. METERS
40.83	403

HYDRAULIC DESIGN DATA	
Drainage Area	= 110 ha
Q_{10}	= 2.75 cms
Q_{100}	= 4.71 cms
HW_{10}	= 271.385
HW_{100}	= 271.835
V_{10}	= 2.03 mps
V_{100}	= 3.22 mps

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	13.5	cu m	Rock Channel Protection, Type B, w/Filter
601	30.0	sq m	Riprap using 150mm Reinforced Concrete Slab
602	3.70	cu m	Concrete Masonry
603	22.4	m	1500mm Conduit Type A, 706.02



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14.66	16.95	163	118

CALCULATED AM

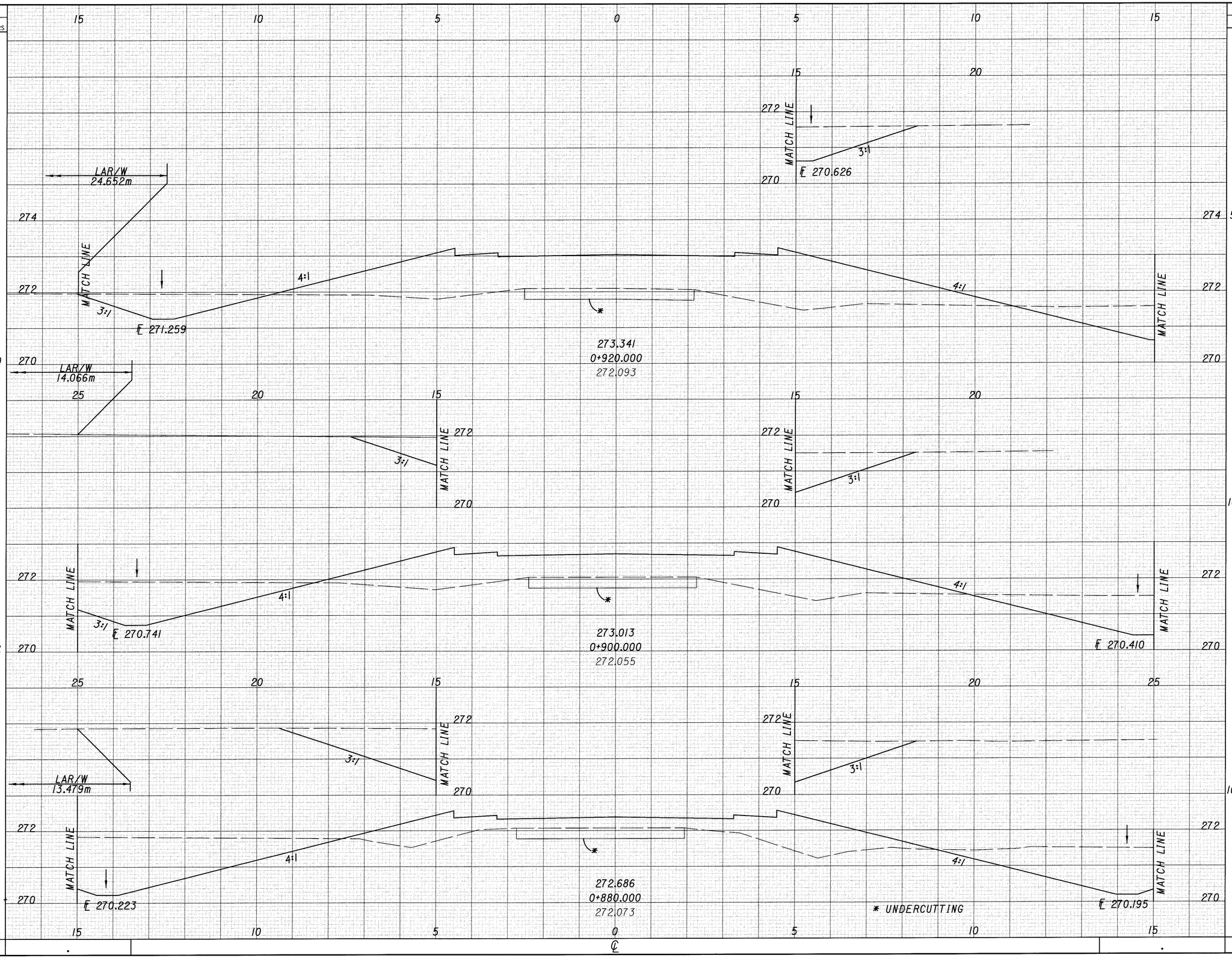
CHECKED REA

CR-128 CROSS SECTIONS
STA 0+870.500

WYA/CRA-30-28.009/0.000

878
2116

SEEDING	
END WIDTH	SQ. METERS
32.93	
	689
36.01	
	742
38.22	
	376



END AREA		VOLUME	
CUT	FILL	CUT	FILL
5.80	19.16		
		166	327
10.77	13.55		
		273	220
16.54	8.45		
		148	121

CALCULATED AM

CHECKED REA

CR-128 CROSS SECTIONS
STA 0+880.000 TO STA 0+920.000

WYA/CRA-30-28.009/0.000

879
2116

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. METERS		CUT	FILL	CUT	FILL
		15 10 5 0 5 10 15				
30.18		Ahead Only LAR/W 20.456m 2:1 4:1 ℄ 272.910 273.984 1+050.000 275.590 4:1 2:1 ℄ 273.215 Ahead Only	57.86	0.00		
		15 20 25 MATCH LINE 3:1 ℄ 270.949			0	0
30.40		Back Only LAR/W 25.531m 4:1 3:1 ℄ 272.035 273.832 0+950.000 272.342 4:1 MATCH LINE Back Only	3.70	22.08		
	309	15 20 MATCH LINE 3:1 ℄ 270.842			42	221
31.35		LAR/W 25.238m 4:1 3:1 ℄ 271.777 273.669 0+940.000 272.178 4:1 MATCH LINE	4.68	22.11		
	643	15 10 5 0 5 10 15 ℄			105	413

CALCULATED AM

CHECKED REA

CR-128 CROSS SECTIONS
STA 0+940.000 TO STA 1+050.000

WYA / CRA-30-28.009 / 0.000

880
2116

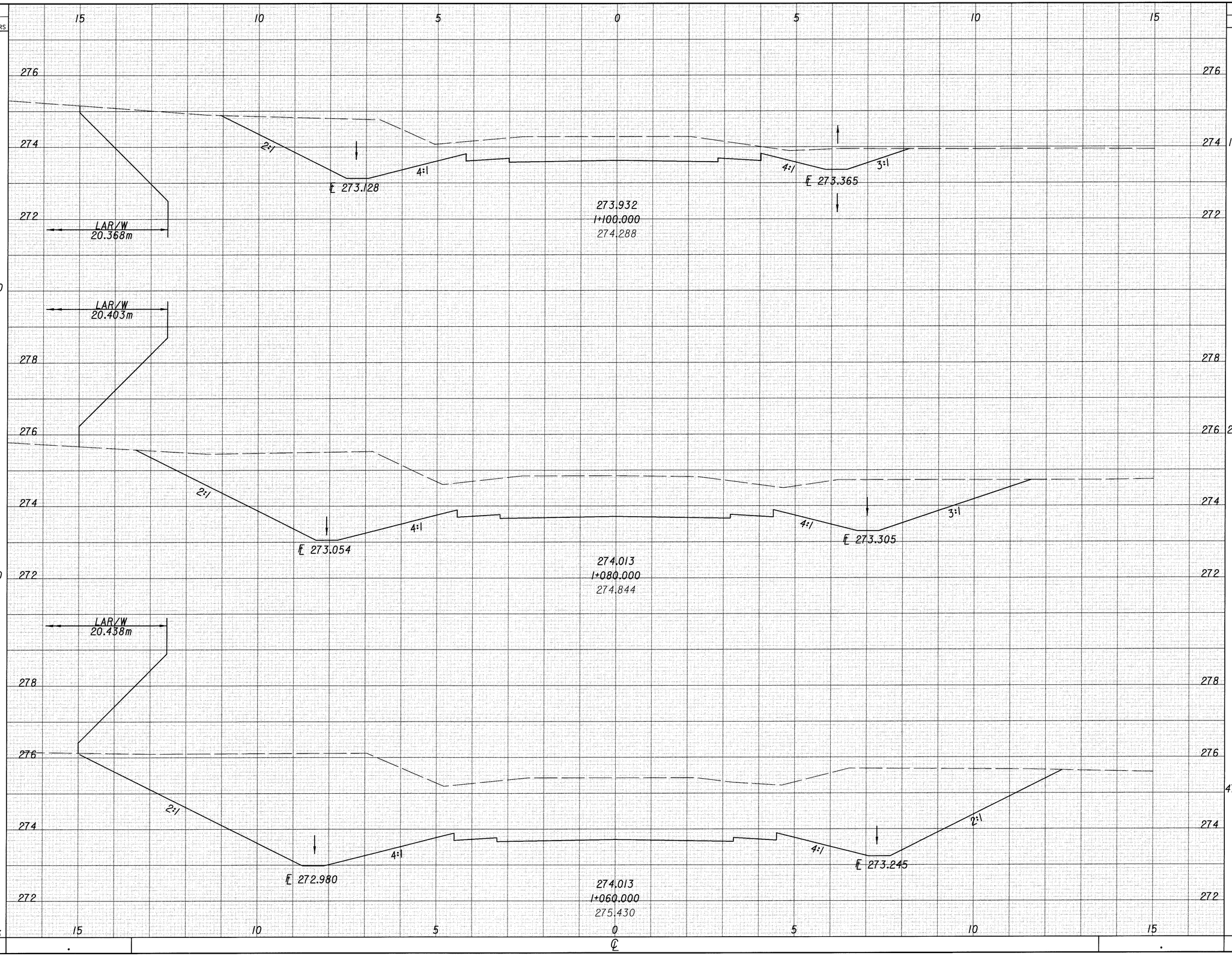
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
19.41	450	13.21	0.00	424	
25.58	540	29.14		770	
28.40	293	47.90		529	

CALCULATED: AM
CHECKED: REA

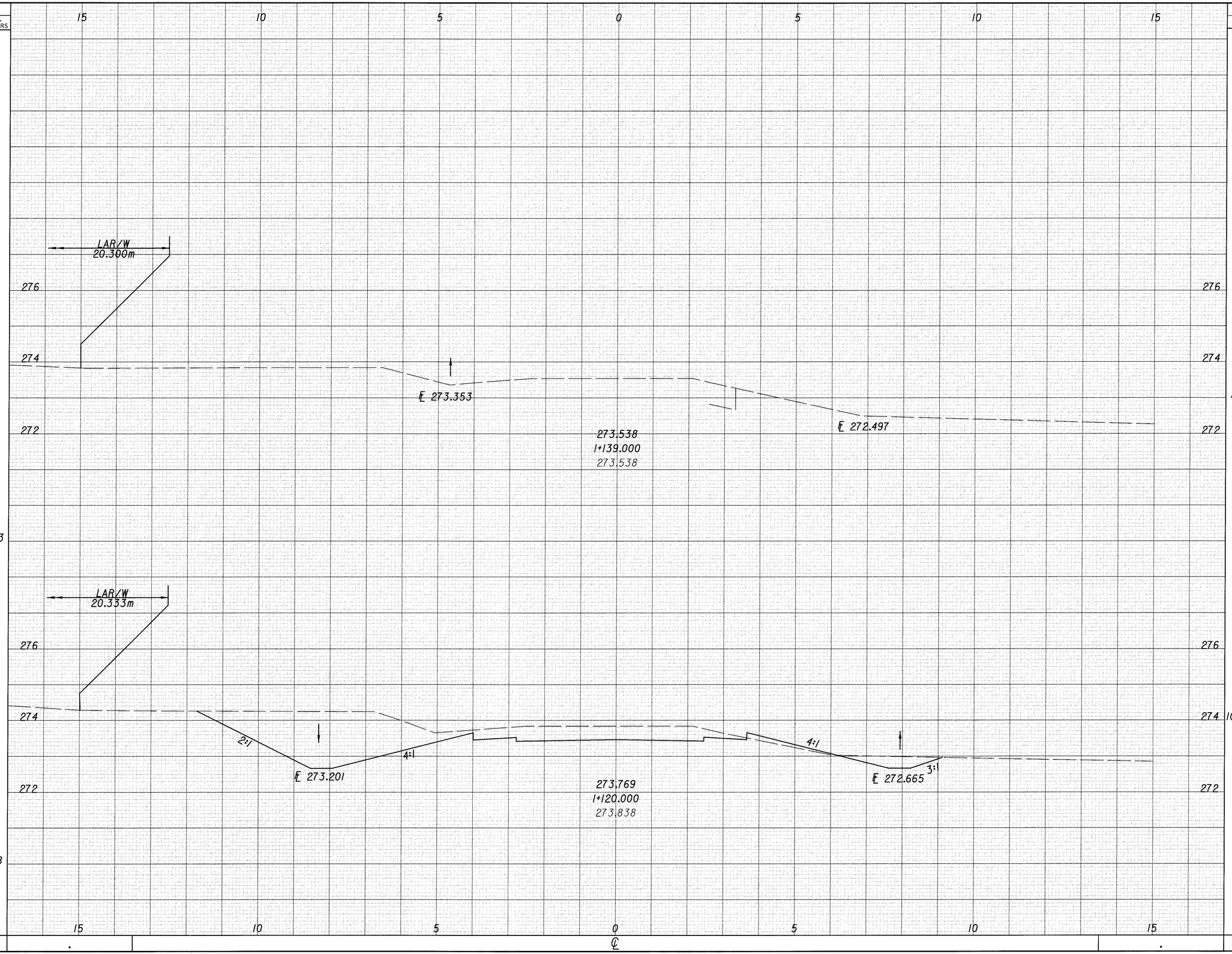
CR-128 CROSS SECTIONS
STA 1+060.000 TO STA 1+100.000

WYA/CRA-30-28.009/0.000

881
2116



SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
0.00		2.17	0.00			
	203			116	2	
21.37		10.07	0.22			
	408			233	2	



CALCULATED AM

CHECKED REA

CR-128 CROSS SECTIONS
STA 1+120.000 TO STA 1+139.000

WYA / CRA-30-28.009 / 0.000

882
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		2.52	5.99		
13.31		*5.99		42	120
	282			*118	
		1.67	6.03		
14.93		*5.78			
	149			28	72
		1.17	1.16	*58	
9.25		*0.00			

30 20 10 0 10 20 30

40 30

R/W

℄ SERVICE RD 12

MATCH LINE

282.460
0+938.461
282.447

284
282
280

LAR/W

3:1 4:1

℄ 282.258

FIBER OPTIC

0+740.000
283.522

TELE

4" GAS

Exist. R/W

4:1 4:1

282.828
0+958.755
282.573

Pavm't.
Svc. Rd. 12

℄ 282.397

0+720.000
283.752

286

300mm CONC. PIPE

℄ 282.536

0+700.000
283.950

* TOPSOIL REMOVAL

CALCULATED AM

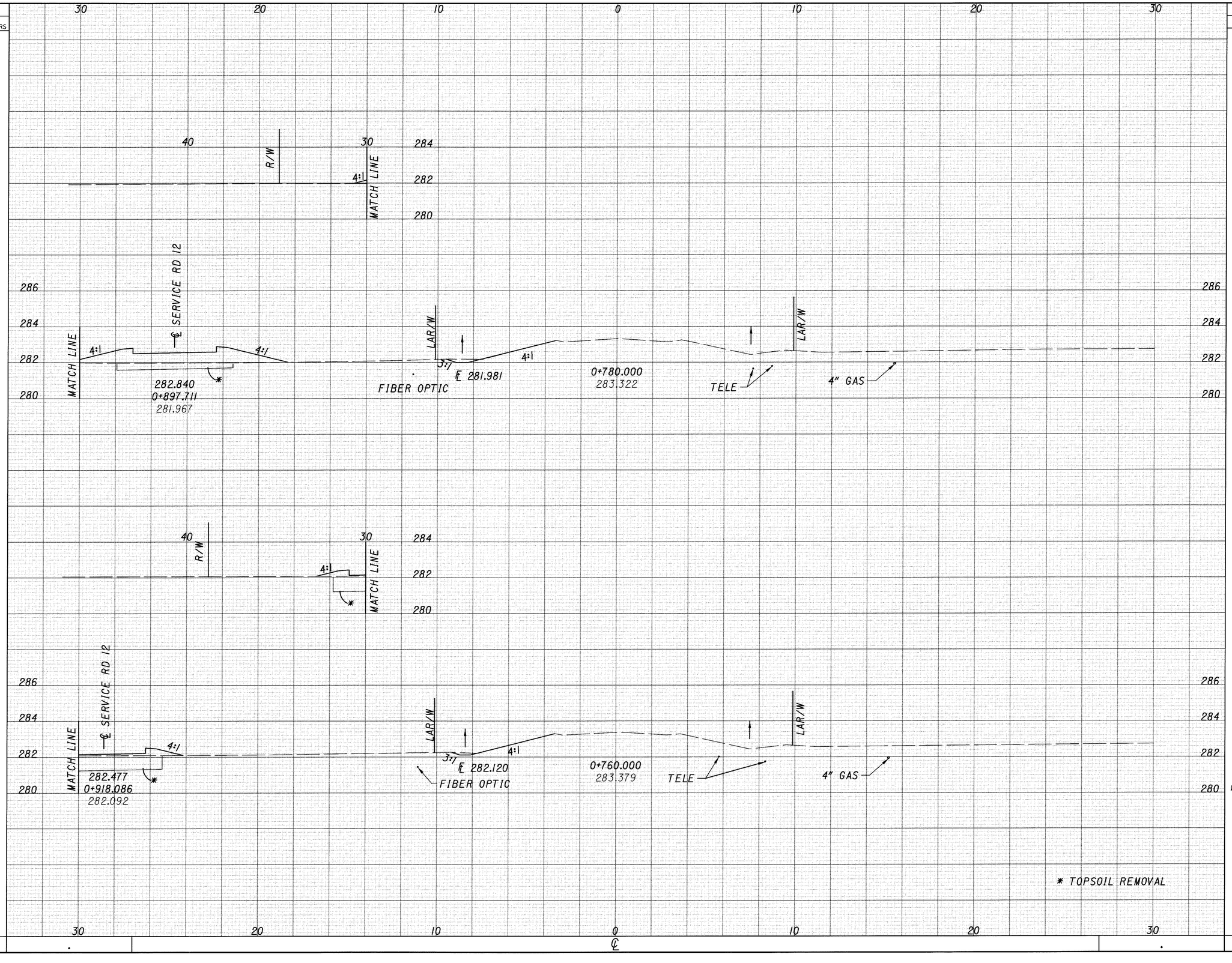
CHECKED REA

SR-231 CROSS SECTIONS
STA 0+680.000 TO STA 0+740.000

WYA/CRA-30-28.009/0.000

883
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
18.97	337	0.26	8.17	4	144
		*1.82		*68	
14.69	280	0.13	6.20	27	122
		*4.99		*110	



CALCULATED AM

CHECKED REA

SR-231 CROSS SECTIONS
STA 0+760.000 TO STA 0+780.000

WYA / CRA-30-28.009 / 0.000

884
2116

SEEDING	
END WIDTH	SQ. METERS
25.05	302

END AREA	
CUT	FILL
2.66	0.37

VOLUME	
CUT	FILL
10.39	
20	127
15	

CALCULATED AM

CHECKED REA

30 20 10 0 10 20 30

40 30 R/W MATCH LINE

284
282
280

286
284
282
280

MATCH LINE

6.240m LT

Elev. 282.936
(Min. Cover)

℄ SERVICE RD 12

P.G. Elev. 282.974

6.511m LT

℄ 281.886

10 Yr. HW Elev. 282.436

100 Yr. HW Elev. 282.596

LAR/W

LAR/W

2:1 24:14:1 4:1 24:1 2:1

℄ 281.876

0.078 %
282.974
0+883.736
281.877

Twin-12.8m Conduit Type D, 550mm x 865mm
706.04, Class HE-II
For plan details, see sheet no. 827

FIBER OPTIC
Rock Channel Protection
Type C, w/Filter
(Thickness = 500mm)

Riprap using 150mm
Reinforced Concrete Slab

℄ 281.893

Riprap using 150mm
Reinforced Concrete Slab

Cutoff Wall
per HW-2.2M

0+793.719
283.306

TELE
℄ 282.243

4" GAS

HYDRAULIC DESIGN DATA	
Drainage Area	= 23 ha
Q_{10}	= 0.84 cms
Q_{100}	= 1.29 cms
HW_{10}	= 282.436
HW_{100}	= 282.596
V_{10}	= 1.25 mps
V_{100}	= 1.90 mps

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	3.8	cu m	Rock Channel Protection Type C, w/Filter
601	18.10	sq m	Riprap using 150mm Reinforced Concrete Slab
602	1.84	cu m	Concrete Masonry
603	25.6	m	550mm X 865mm Conduit Type D, 706.04 Class HE-II

* TOPSOIL REMOVAL

℄

SR-231 CROSS SECTIONS
STA 0+793.719

WYA/CRA-30-28.009/0.000

885
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
8.70		Back Only				
	136	0.00	6.16	0	150	
13.57		0.00	8.85	*60		
	121	*5.04		8	60	
		*0.96		*4		

SEE DRIVEWAY
STA. 0+005.177
CROSS-SECTIONS

30 20 10 0 10 20 30

286 284 282 280

L/AR/W — FIBER OPTIC — 0+840.000 283.327 — TELE — TELE — R/AR/W — 4" GAS

STA 0+840.000 NOT USED FOR
EARTHWORK AND SEEDING COMPUTATIONS

Back Only

R/W — 4:1 — ℄ SERVICE RD 12 — 4:1 — L/AR/W

282.795
0+856.961
282.418

FIBER OPTIC — 0+820.000 283.251 — TELE — TELE — R/AR/W — 4" GAS

R/W — MATCH LINE

℄ SERVICE RD 12

MATCH LINE — 4:1 — 4:1 — L/AR/W

282.973
0+877.336
281.959

FIBER OPTIC — 0+800.000 283.287 — TELE — TELE — R/AR/W — 4" GAS

* TOPSOIL REMOVAL

℄

CALCULATED AM
CHECKED REA

SR-231 CROSS SECTIONS
STA 0+800.000 TO STA 0+840.000

WYA/CRA-30-28.009/0.000

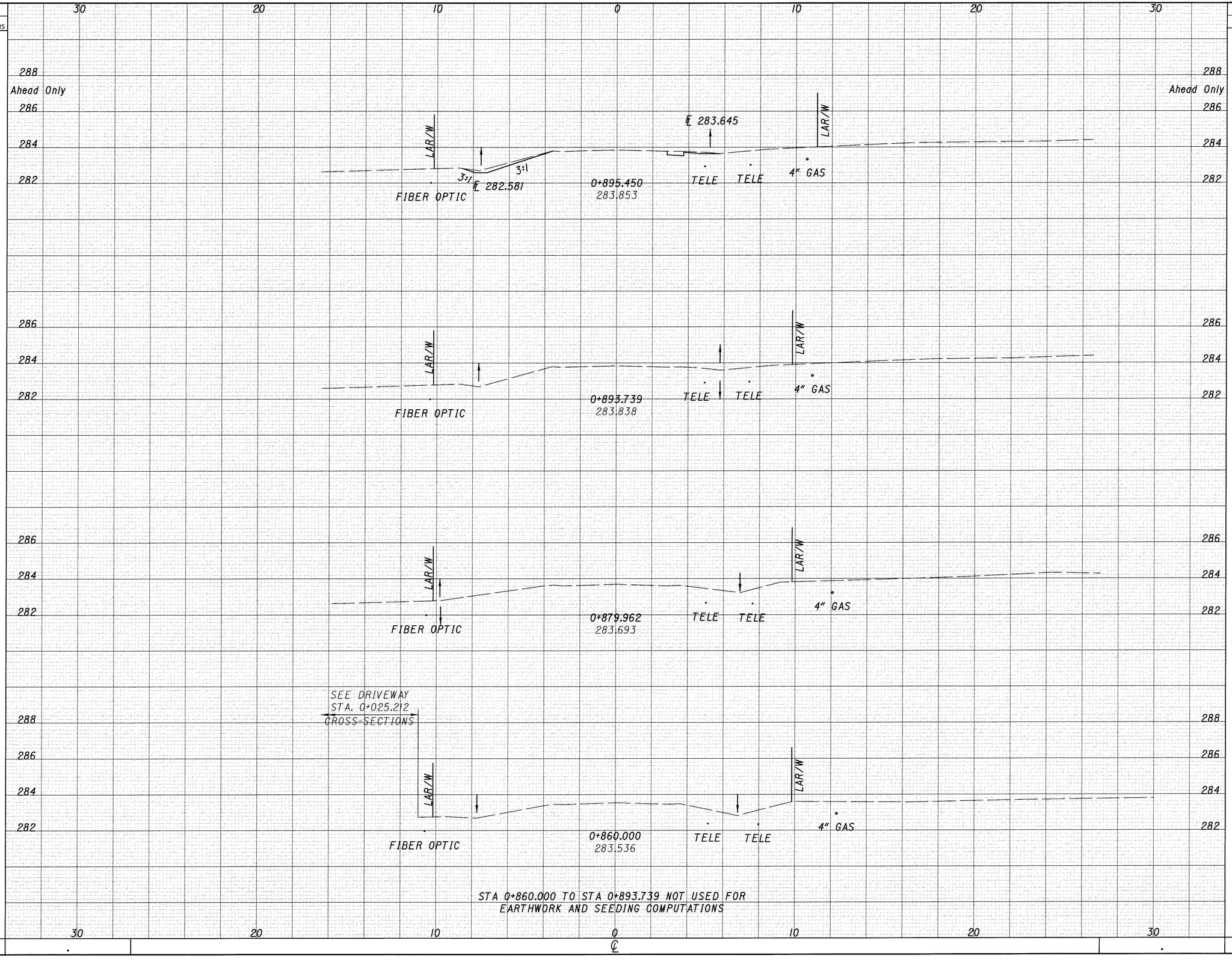
886
2116

SEEDING	
END WIDTH	SQ. METERS
13.57	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.04	0.00		

CALCULATED AM

CHECKED REA



SR-231 CROSS SECTIONS

STA 0+860.000 TO STA 0+895.450

WYA / CRA-30-28.009 / 0.000

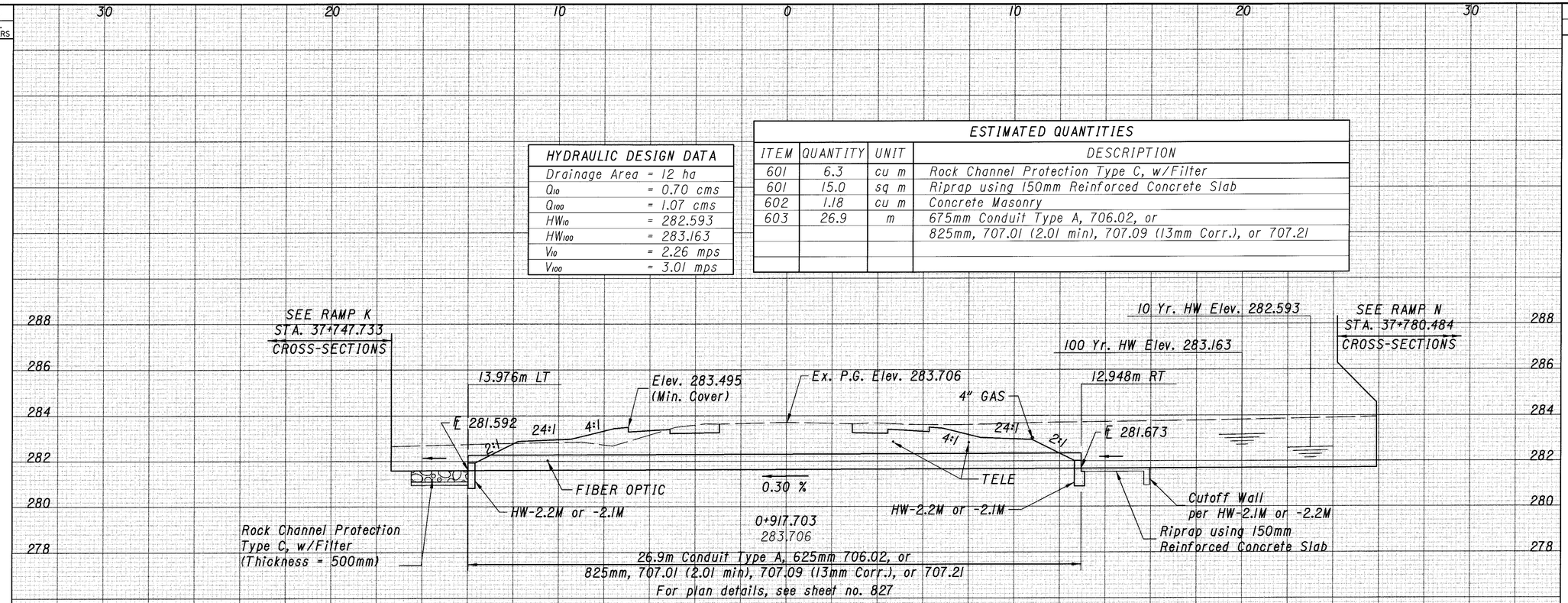
887
2116

SEEDING END WIDTH	SEEDING SQ. METERS
35.80	406
22.76	83
20.15	76

HYDRAULIC DESIGN DATA	
Drainage Area	= 12 ha
Q_{10}	= 0.70 cms
Q_{100}	= 1.07 cms
HW_{10}	= 282.593
HW_{100}	= 283.163
V_{10}	= 2.26 mps
V_{100}	= 3.01 mps

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	6.3	cu m	Rock Channel Protection Type C, w/Filter
601	15.0	sq m	Riprap using 150mm Reinforced Concrete Slab
602	1.18	cu m	Concrete Masonry
603	26.9	m	675mm Conduit Type A, 706.02, or
			825mm, 707.01 (2.01 min), 707.09 (13mm Corr.), or 707.21



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
41.74	1.63		
		330	16
5.90	0.65		
		19	2
4.00	0.23		
		11	1

CALCULATED AM
CHECKED REA

SR-231 CROSS SECTIONS
STA 0+899.962 TO STA 0+917.703

WYA/CRA-30-28.009/0.000

888
2116

SEEDING END WIDTH	SEEDING SQ. METERS
23.68	
	156
0.000	
	133
19.03	
	62

30 20 10 0 10 20 30

290 288 286 284 282

RAMP K
STA. 37+747.733
CROSS-SECTIONS

℄ 282.764

5:1 4:1

FIBER OPTIC

0+947.164
283.505

TELE TELE 4" GAS

RAMP K
STA. 37+747.733
CROSS-SECTIONS

SEE RAMP N
STA. 37+780.484
CROSS-SECTIONS

FIBER OPTIC

0+933.962
283.553

TELE TELE 4" GAS

℄ 283.025

3:1 4:1 4:1 3:1

FIBER OPTIC
℄ 282.385

0+919.962
283.679

TELE TELE 4" GAS

℄

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.84	6.33		
		78	81
10.91	6.00		
		110	54
4.81	1.76		
		53	4

CALCULATED AM
CHECKED REA

SR-231 CROSS SECTIONS
STA 0+919.962 TO STA 0+947.164

WYA/CRA-30-28.009/0.000

889
2116

SEEDING	
END WIDTH	SQ. METERS
32.41	359

END AREA		VOLUME	
CUT	FILL	CUT	FILL
7.32	2.55	52	57

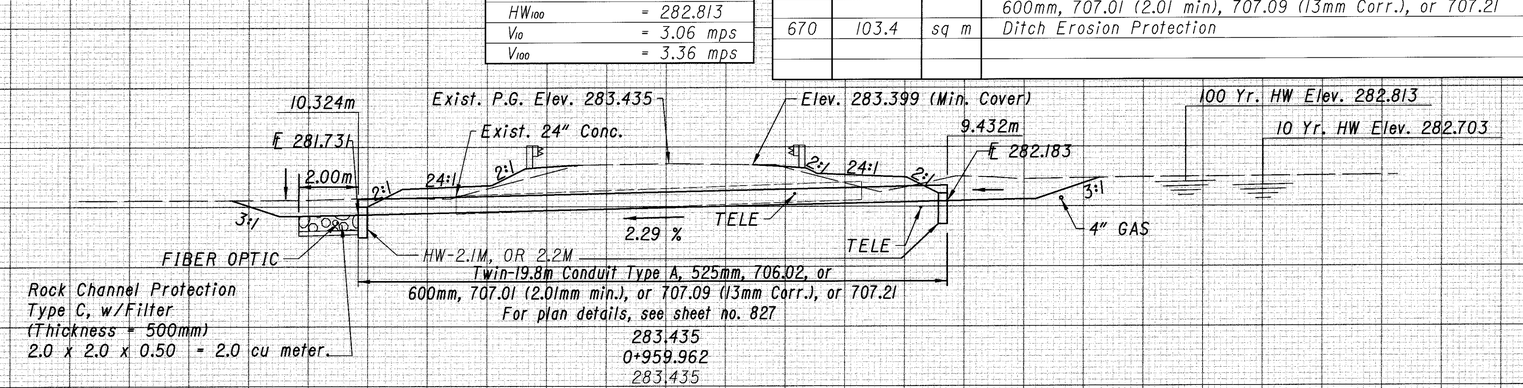
CALCULATED AM

CHECKED REA

HYDRAULIC DESIGN DATA	
Drainage Area	= 3 ha
Q_{10}	= 0.63 cms
Q_{100}	= 0.93 cms
HW_{10}	= 282.703
HW_{100}	= 282.813
V_{10}	= 3.06 mps
V_{100}	= 3.36 mps

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	2.0	cu m	Rock Channel Protection Type C, w/Filter
602	1.37	cu m	Concrete Masonry
603	38.6	m	525mm Conduit Type A, 706.02, or
			600mm, 707.01 (2.01 min), 707.09 (13mm Corr.), or 707.21
670	103.4	sq m	Ditch Erosion Protection



SR-231 CROSS SECTIONS
STA 0+959.962

WYA / CRA-30-28.009 / 0.000

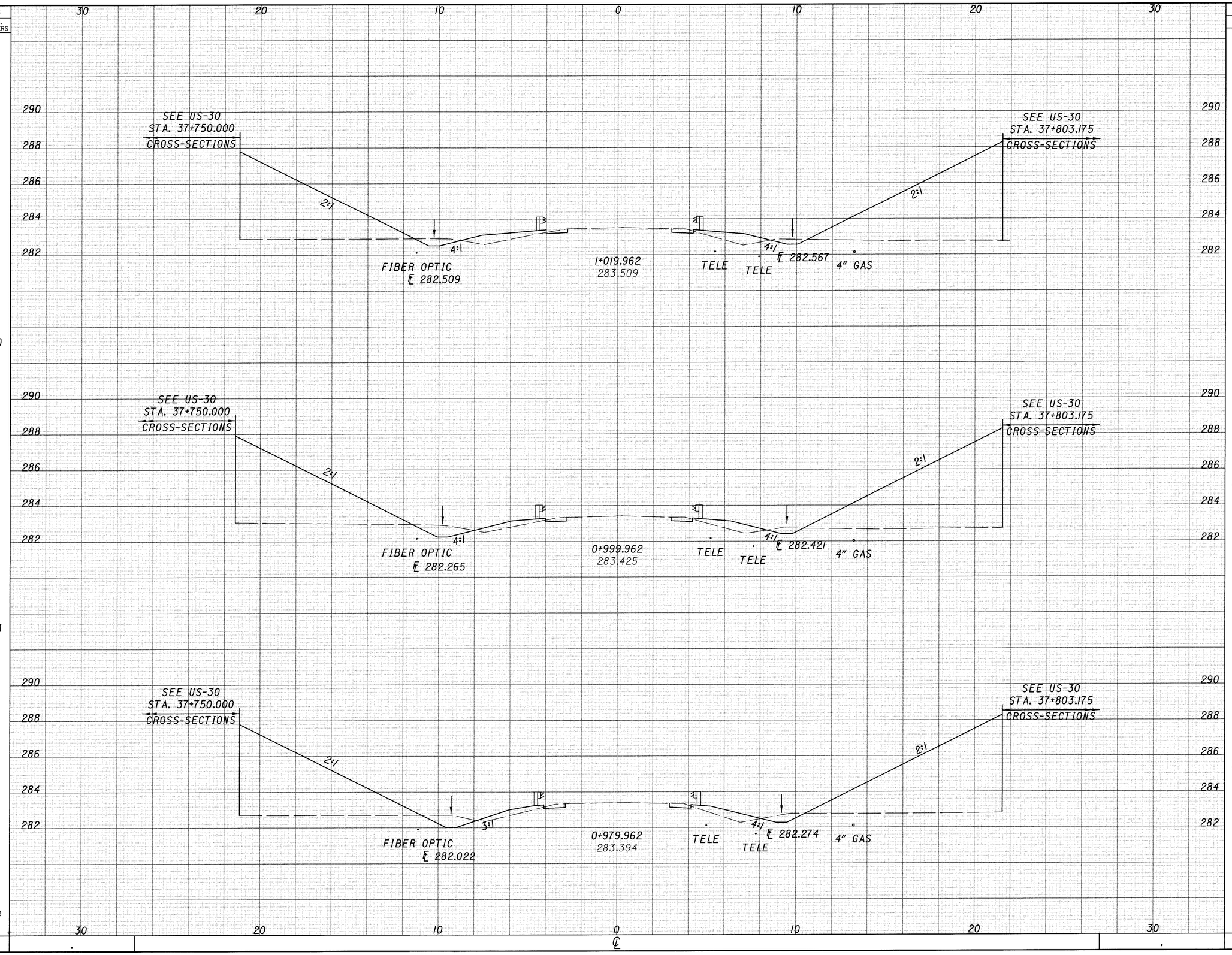
890
2116

SEEDING	
END WIDTH	SQ. METERS
47.12	970
49.26	923
43.03	754

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.87	57.73	45	1154
2.60	57.64	53	1163
2.73	58.66	101	612

CALCULATED AM

CHECKED REA



SR-231 CROSS SECTIONS
STA 0+979.962 TO STA 1+019.962

WYA/CRA-30-28.009/0.000

891
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
23.47	54	1.25	7.12	3	18
22.86	368	1.34	8.09	20	77
26.38	741	1.34	2.23	32	600

CALCULATED AM

CHECKED REA

SR-231 CROSS SECTIONS

STA 1+039.962 TO STA 1+057.277

WYA / CRA-30-28.009 / 0.000

892
2116

30 20 10 0 10 20 30

290
288
286
284
282

SEE RAMP M
STA. 37+797.948
CROSS-SECTIONS

3:1 4:1 48:1

FIBER OPTIC
℄ 283.246

1+057.277
283.886

TELE TELE 4" GAS

SEE RAMP M
STA. 37+797.948
CROSS-SECTIONS

3:1 4:1

FIBER OPTIC
℄ 283.177

1+054.926
283.860

TELE TELE 4" GAS

SEE RAMP M
STA. 37+797.948
CROSS-SECTIONS

3:1 4:1 4:1 48:1

FIBER OPTIC
℄ 282.752

1+039.962
283.680

TELE TELE 4" GAS

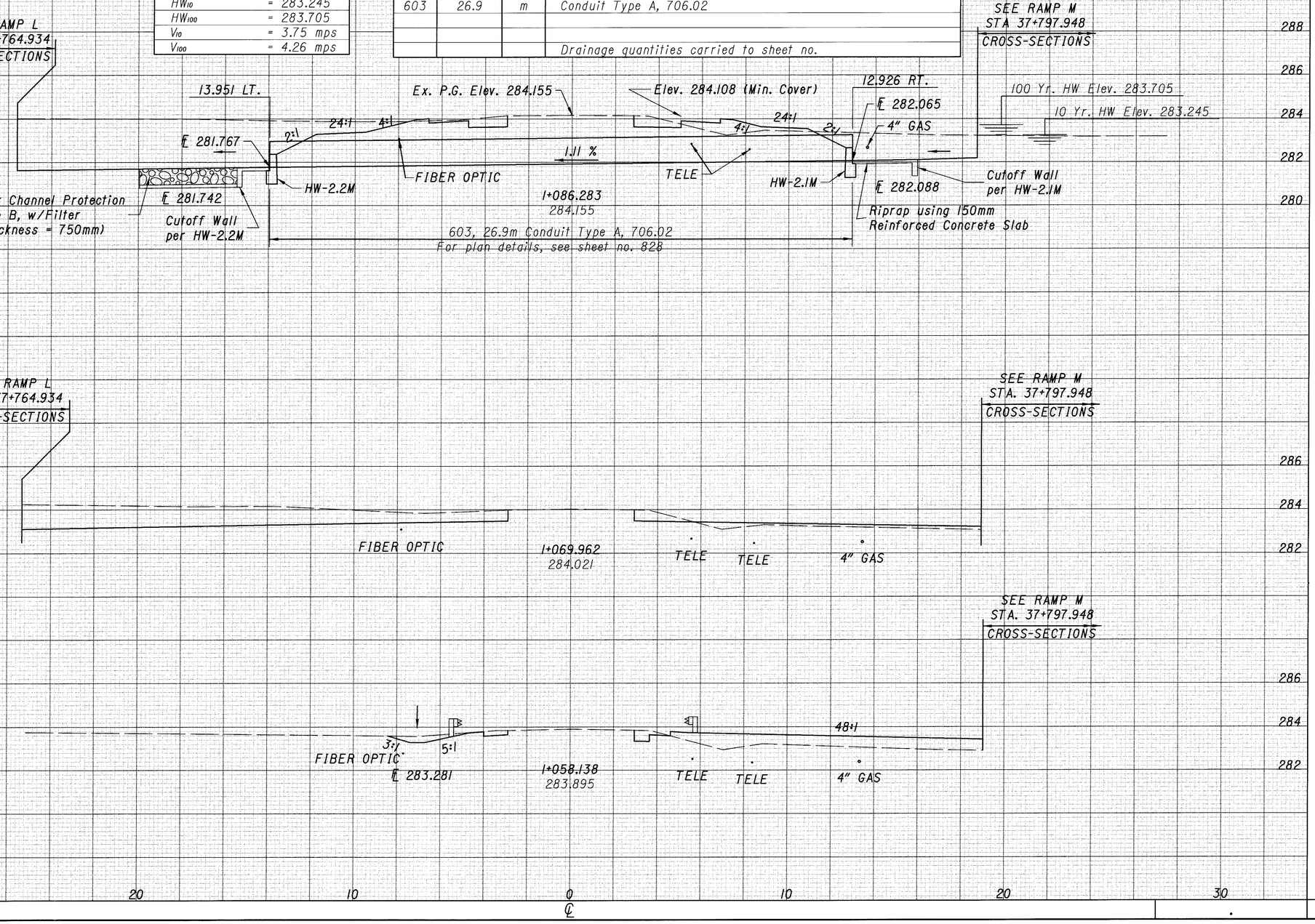
30 20 10 0 10 20 30

℄

SEEDING END WIDTH	SEEDING SQ. METERS
39.21	
	320
0.000	
	136
23.06	
	20

HYDRAULIC DESIGN DATA	
Drainage Area	= 55 ha
Q_{10}	= 2.13 cms
Q_{100}	= 3.26 cms
HW_{10}	= 283.245
HW_{100}	= 283.705
V_{10}	= 3.75 mps
V_{100}	= 4.26 mps

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	20.3	cu m	Rock Channel Protection, Type B, w/Filter
601	36.0	sq m	Riprap using 150mm Reinforced Concrete Slab
602	2.14	cu m	Concrete Masonry
603	26.9	m	Conduit Type A, 706.02
			Drainage quantities carried to sheet no.



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
44.89	1.60	517	27
18.48	1.76		
		119	53
1.64	7.20		
		1	6

CALCULATED AM

CHECKED REA

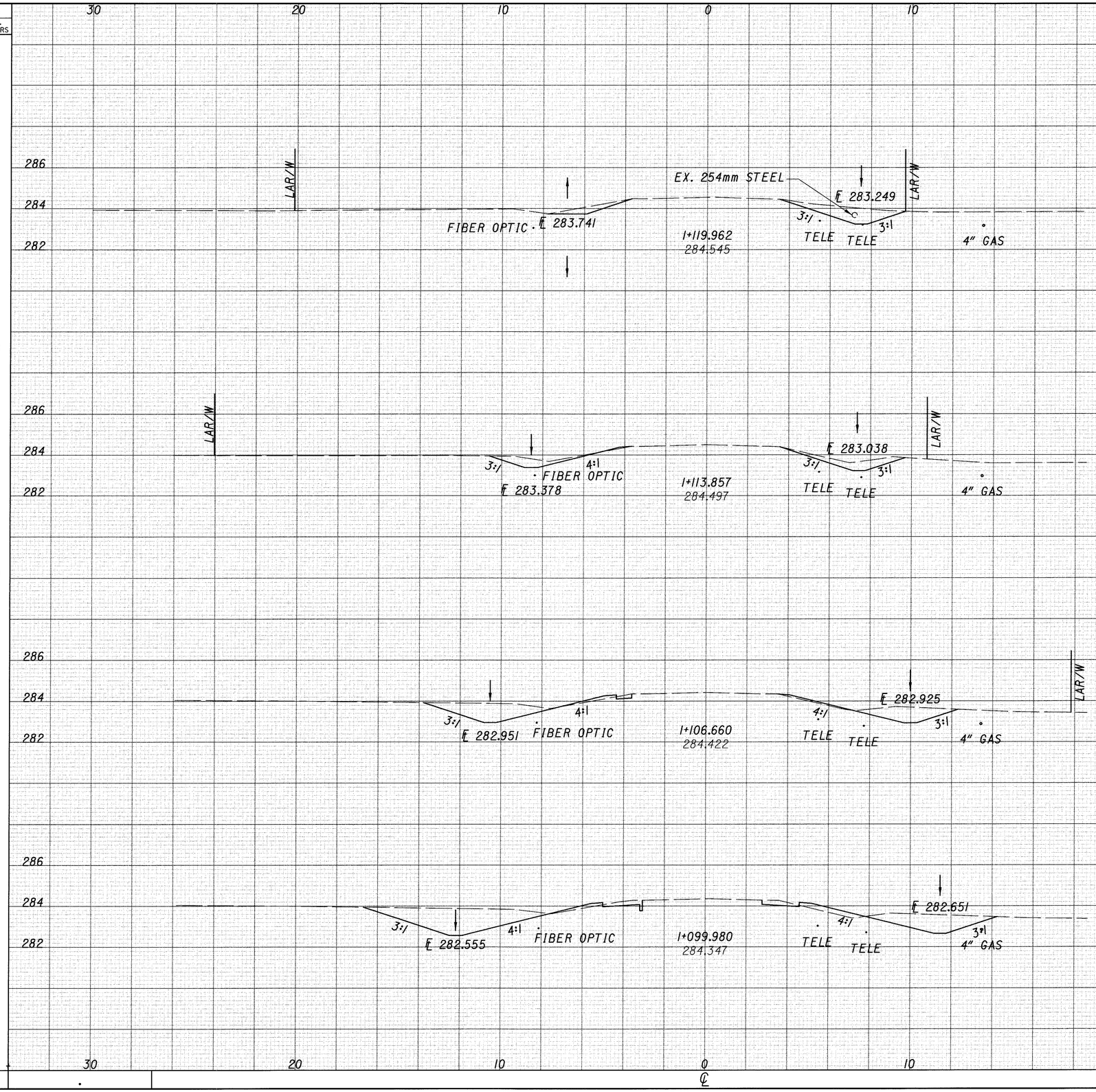
SR-231 CROSS SECTIONS

STA 1+058.138 TO STA 1+086.283

WYA/CRA-30-28.009/0.000

893
2116

SEEDING END WIDTH	SEEDING SQ. METERS	STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
18.04			3.19	0.00		
	118				17	0
20.77			2.53	0.05		
	170				30	2
26.49			5.84	0.46		
	189				58	5
30.08			11.46	0.92		
475					386	17



CALCULATED AM

CHECKED REA

SR-231 CROSS SECTIONS

STA 1+099.980 TO STA 1+119.962

WYA / CRA-30-28.009 / 0.000

894
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
9.35		1.97					
	181			38			
8.77		1.86	0.00				
	204			26	0		

30 20 10 0 10 20 30

290 288 286 284 282 280

LAR/W

℄ 283.620

FIBER OPTIC

1+160.000
284.674

TELE TELE TELE

4" GAS

LAR/W

EX. 152mm CPP

LAR/W

℄ 283.680

FIBER OPTIC

1+140.000
284.721

TELE TELE TELE

4" GAS

30 20 10 0 10 20 30

℄

SR-231 CROSS SECTIONS
STA 1+140.000 TO STA 1+160.000

WYA/CRA-30-28.009/0.000

895
2116

SEEDING	
END WIDTH	SQ. METERS
10.86	190
8.09	171
9.00	183

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.01		20	
0.96		24	
1.49		35	

CALCULATED AM

CHECKED REA

SR-231 CROSS SECTIONS

STA 1+180.000 TO STA 1+220.000

WYA/CRA-30-28.009/0.000

896
2116

30 20 10 0 10 20 30

MATCH LINE

Easement

MATCH LINE

LAR/W

LAR/W

℄ 283.440

FIBER OPTIC

1+220.000
284.324

TELE TELE

4" GAS

LAR/W

LAR/W

℄ 283.500

FIBER OPTIC

1+200.000
284.437

TELE TELE TELE

4" GAS

LAR/W

LAR/W

℄ 283.560

FIBER OPTIC

1+180.000
284.544

TELE TELE TELE

4" GAS

℄

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
8.76	169	0.39		15		
8.19	164	1.10		25		
8.19	191	1.42		24		

CALCULATED AM | CHECKED REA

SR-231 CROSS SECTIONS
STA 1+240.000 TO STA 1+280.000

WYA/CRA-30-28.009/0.000

897
2116

30 20 10 0 10 20 30

288 286 284 282

LAR/W
℄ 283.259
FIBER OPTIC
1+280.000
284.362
TELE TELE
LAR/W
4" GAS

40 30
R/W
MATCH LINE
286 284 282 288

MATCH LINE
LAR/W
℄ 283.319
FIBER OPTIC
EX. 203mm CMP
1+260.000
284.311
TELE TELE
LAR/W
4" GAS

288 286 284 282 290

Easement
LAR/W
℄ 283.380
FIBER OPTIC
1+240.000
284.320
TELE TELE
LAR/W
4" GAS

30 20 10 0 10 20 30

℄

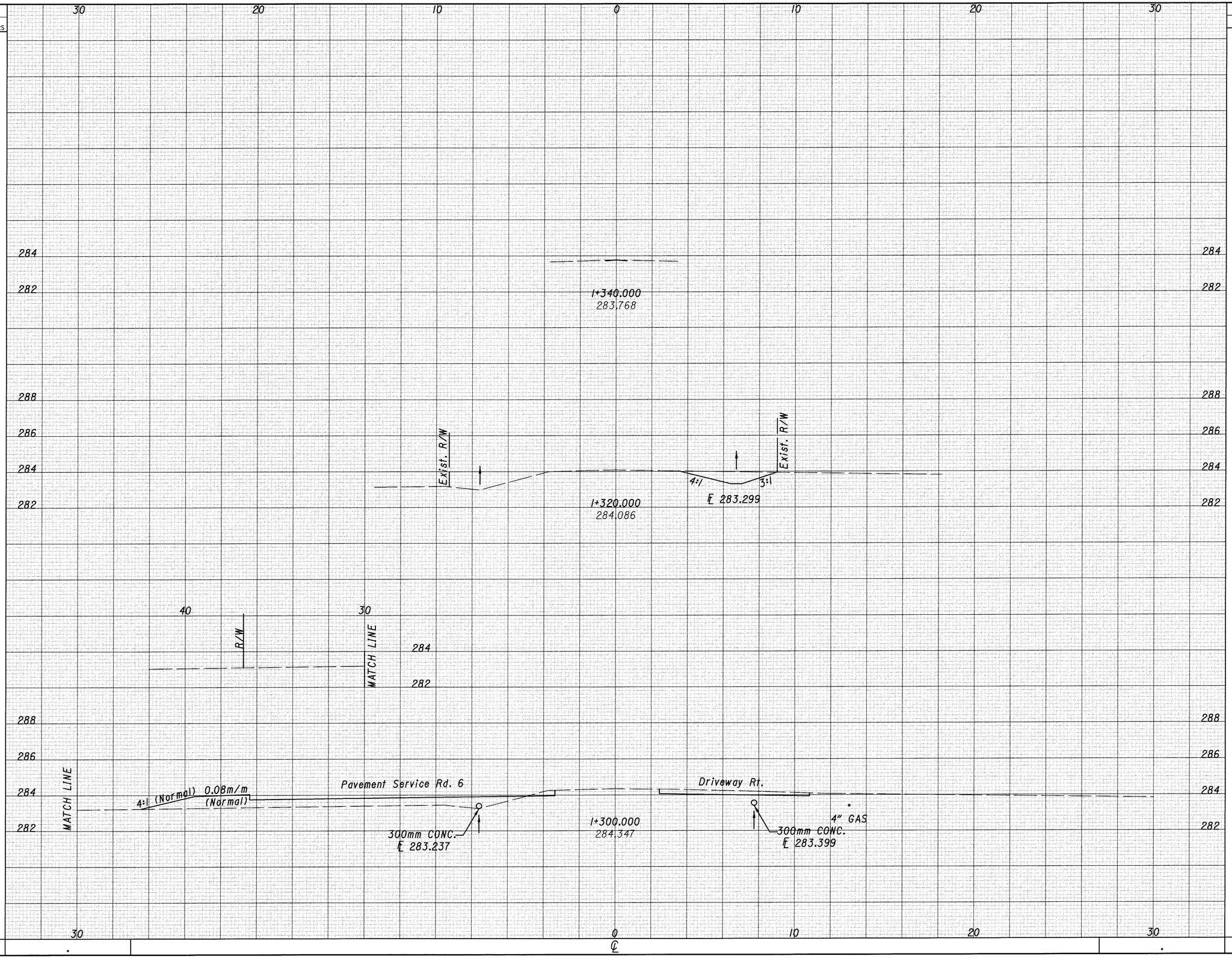
SEEDING	
END WIDTH	SQ. METERS
5.62	
	56
0.00	
	88

END AREA	
CUT	FILL
2.07	
0.00	

VOLUME	
CUT	FILL
	21
	4

CALCULATED AM

CHECKED REA



SR-231 CROSS SECTIONS
STA 1+300.000 TO STA 1+340.000

WYA/CRA-30-28.009/0.000

898
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA

15 10 5 0 5 10 15

294 292 290 288 294 292 290 294 292 290

R/W 30.506

R/W 29.487

R/W 28.461

SEE SVC. ACC. 14 CROSS-SECTIONS

R/W 30.096

R/W 28.737

R/W 27.377

For driveway profile see sheet no. 1235

290.392
0+760.000
290.392

290.499
0+740.000
290.499

290.684
0+720.000
290.684

℄

TR-10 CROSS SECTIONS STA 0+720.000 TO STA 0+760.000

WYA/CRA-30-28.009/0.000

899
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA

15 10 5 0 5 10 15

294 292 290 288 286

R/W 31.525

R/W 31.455

290.360
0+780.000
290.360

R/W 31.020

R/W 30.782

4.284m RT.

5.559m RT.

Elev. 290.320 (Min. Cover)

℄ 289.747

4:1

4:1

Riprap using 150mm Reinforced Concrete Slab

℄ 289.504

8.459m

℄ 289.715

2.50 %

℄ 289.760

1.3m Conduit Type A, 300mm, 706.08 E.S.

290.367
0+770.100
290.367

HYDRAULIC DESIGN DATA	
Drainage Area	= 3 ha
Q_{10}	= 0.37 cms
Q_{100}	= 0.55 cms
HW_{10}	= 294.097
HW_{100}	= 332.267
V_{10}	= 5.07 mps
V_{100}	= 7.54 mps

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	1.50	sq m	Riprap using 150mm Reinforced Concrete Slab
603	1.3	m	300mm Conduit Type A, 706.08 E.S.

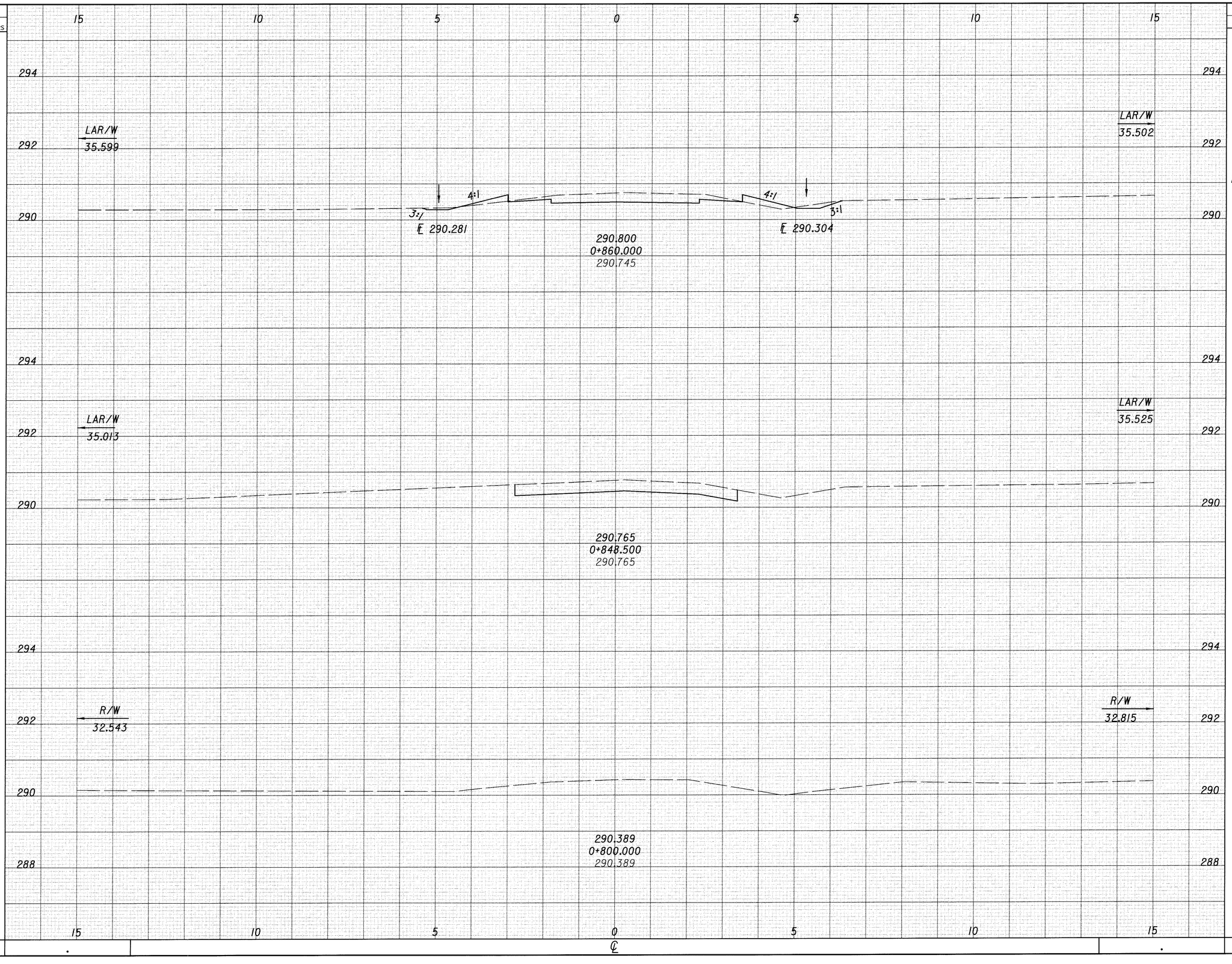
℄

TR-10 CROSS SECTIONS
STA 0+770.100 TO STA 0+780.000

WYA / CRA-30-28.009 / 0.000

900
2116

SEEDING	
END WIDTH	SQ. METERS
11.57	
	67
0.00	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.58	0.32	20	2
1.91	0.00		

CALCULATED AM

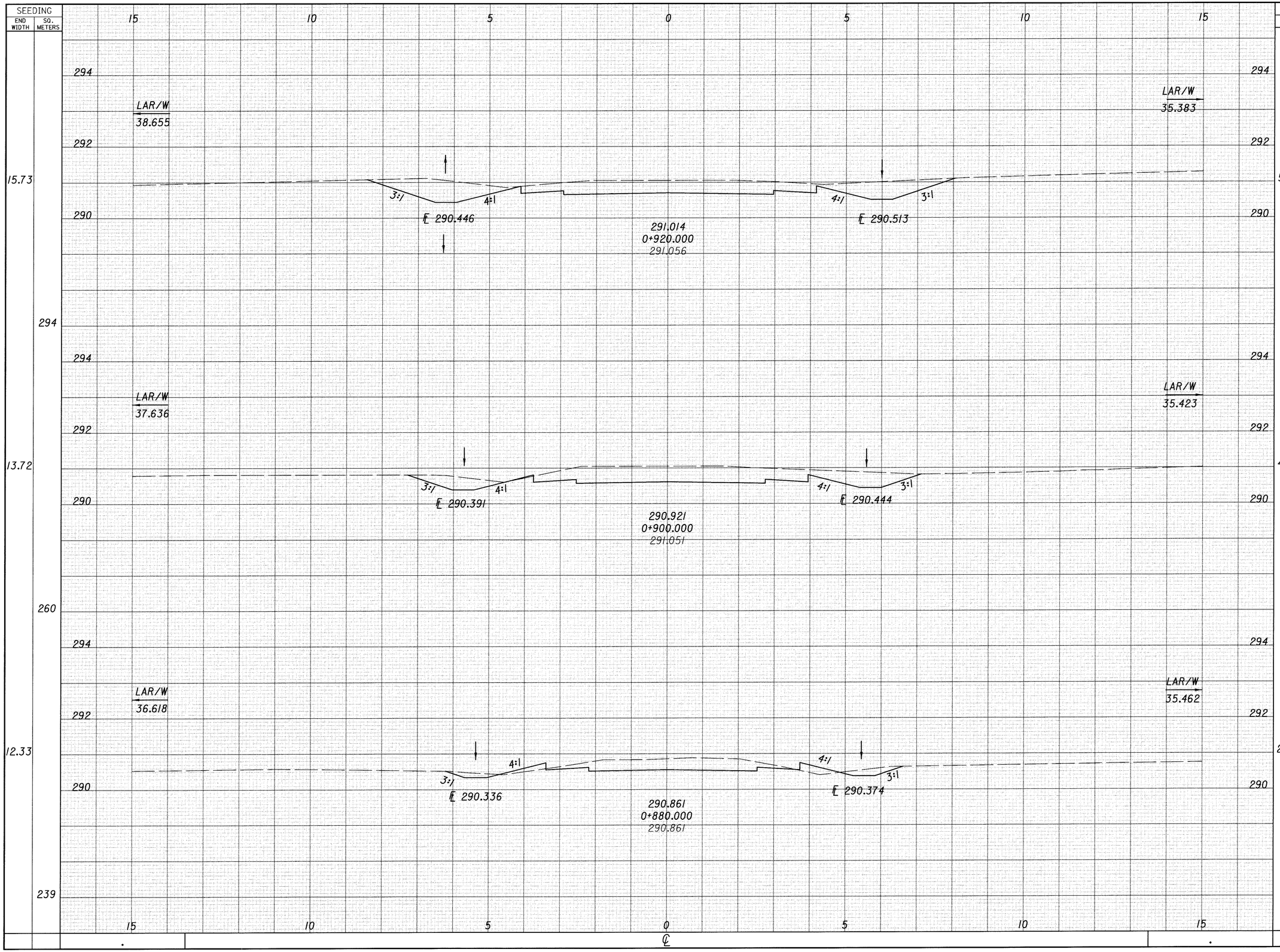
CHECKED REA

TR-10 CROSS SECTIONS

STA 0+800.000 TO STA 0+860.000

WYA / CRA-30-28.009 / 0.000

SEEDING END WIDTH	SEEDING SQ. METERS	STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
15.73	294	0+920.000	5.57	0.00	104	0
13.72	260	0+900.000	4.84	0.01	71	3
12.33	239	0+880.000	2.28	0.30	39	6



CALCULATED AM

CHECKED REA

TR-10 CROSS SECTIONS

STA 0+880.000 TO STA 0+920.000

WYA/CRA-30-28.009/0.000

902
2116

SEEDING	
END WIDTH	SQ. METERS
20.79	
	195
18.14	
	339

15 10 5 0 5 10 15

294
292
290

Exist. R/W

Back Only

4:1 3:1 E 289.576

291.339
0+950.000
290.652

4:1 3:1 E 290.478

LAR/W
35.323

Back Only

Exist. R/W

3:1 4:1 E 289.866

291.206
0+940.000
290.783

4:1 3:1 E 290.583

LAR/W
35.343

* UNDERCUTTING

℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.30	7.62		
		34	53
3.59	3.02		
		92	30

CALCULATED AM

CHECKED REA

TR-10 CROSS SECTIONS
STA 0+940.000 TO STA 0+950.000

WYA / CRA-30-28.009 / 0.000

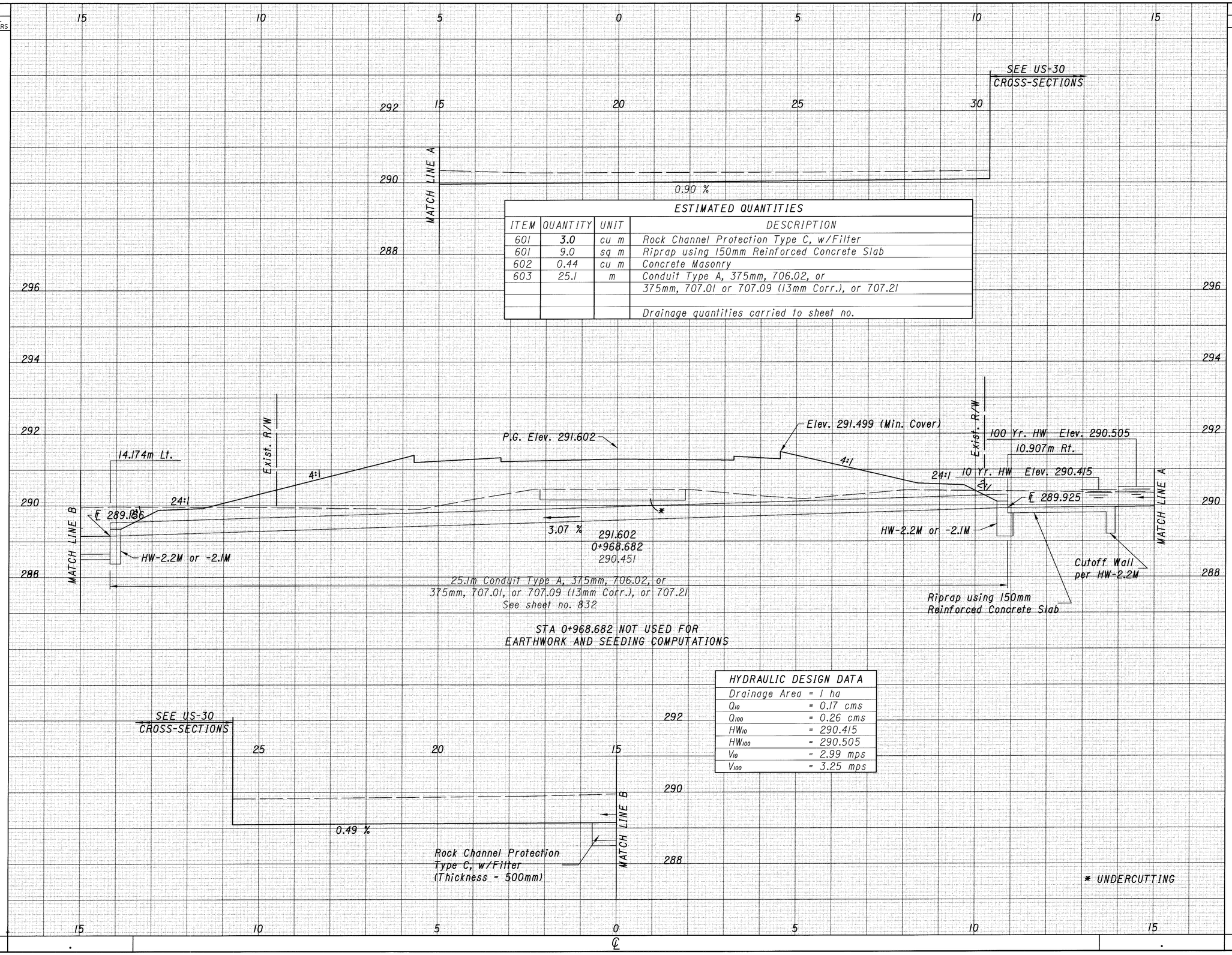
903
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA



ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	3.0	cu m	Rock Channel Protection Type C, w/Filter
601	9.0	sq m	Riprap using 150mm Reinforced Concrete Slab
602	0.44	cu m	Concrete Masonry
603	25.1	m	Conduit Type A, 375mm, 706.02, or
			375mm, 707.01 or 707.09 (13mm Corr.), or 707.21
			Drainage quantities carried to sheet no.

HYDRAULIC DESIGN DATA	
Drainage Area	= 1 ha
Q_{10}	= 0.17 cms
Q_{100}	= 0.26 cms
HW_{10}	= 290.415
HW_{100}	= 290.505
V_{10}	= 2.99 mps
V_{100}	= 3.25 mps

TR-10 CROSS SECTIONS
STA 0+968.682

WYA / CRA-30-28.009 / 0.000

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED AM

CHECKED REA

15 10 5 0 5 10 15

SEE US-30 CROSS-SECTIONS

292 290 288 296 294

MATCH LINE A

0.690 %

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	2.30	cu m	Rock Channel Protection Type C, w/Filter
601	9.0	sq m	Riprap using 150mm Reinforced Concrete Slab
602	0.56	cu m	Concrete Masonry
603	22.7	m	Conduit Type A, 375mm, 706.02, or 450mm, 707.01 or 707.09 (13mm Corr.), or 707.21

12.09m Lt.

Exist. R/W

MATCH LINE B

℄ 289.488

0.616 %

2:1 24:1 4:1

HW-2.2M or -2.1M

Rock Channel Protection Type C, w/Filter (Thickness = 500mm)

P.G. Elev. 291.505

Elev. 291.322 (Min. Cover)

291.505
1+032.674
290.418

22.7m Conduit Type A, 375mm, 706.02, or 450mm 707.01 or 707.09 (13mm Corr.), or 707.21
See sheet no. 832

STA 1+032.674 NOT USED FOR EARTHWORK AND SEEDING COMPUTATIONS

Exist. R/W

100 Yr. HW Elev. 290.368

10 Yr. HW Elev. 290.288
10.619m Rt.

℄ 289.878

4:1 24:1 2:1

HW-2.2M or -2.1M

MATCH LINE A

Cutoff Wall per HW-2.2M

Riprap using 150mm Reinforced Concrete Slab

HYDRAULIC DESIGN DATA	
Drainage Area	= 1 ha
Q_{10}	= 0.12 cms
Q_{100}	= 0.17 cms
HW_{10}	= 289.878
HW_{100}	= 290.288
V_{10}	= 2.16 mps
V_{100}	= 2.38 mps

SEE US-30 CROSS-SECTIONS

0.616 %

* UNDERCUTTING

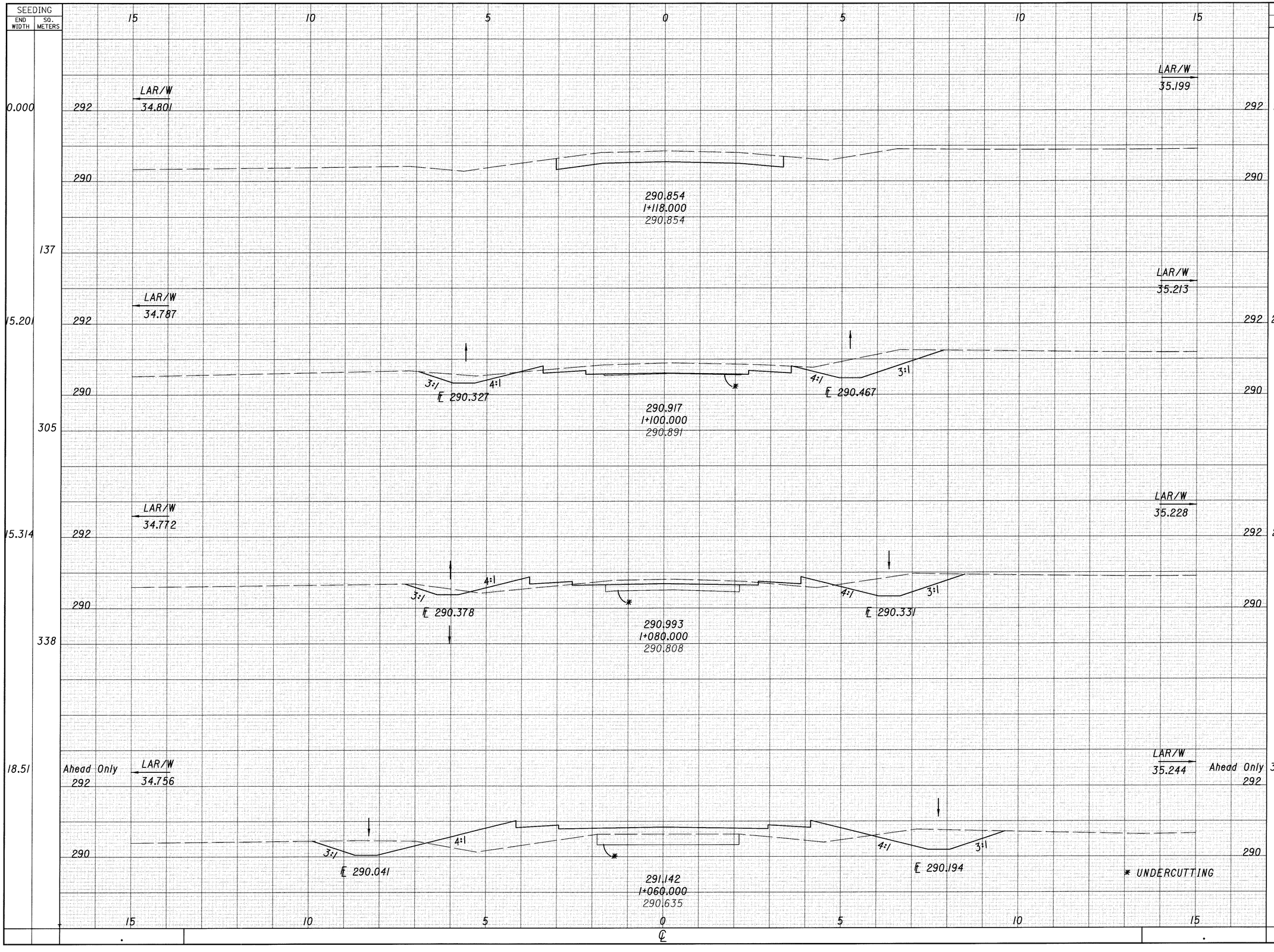
℄

TR-10 CROSS SECTIONS STA 1+032.674

WYA/CRA-30-28.009/0.000

905
2116

SEEDING END WIDTH	SEEDING SQ. METERS	STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.000		1+118.000	1.97	0.00		
	137				40	1
15.201		1+100.000	2.43	0.13		
	305				46	13
15.314		1+080.000	2.19	1.16		
	338				55	60
18.51		1+060.000	3.27	4.83		



CALCULATED AM

CHECKED REA

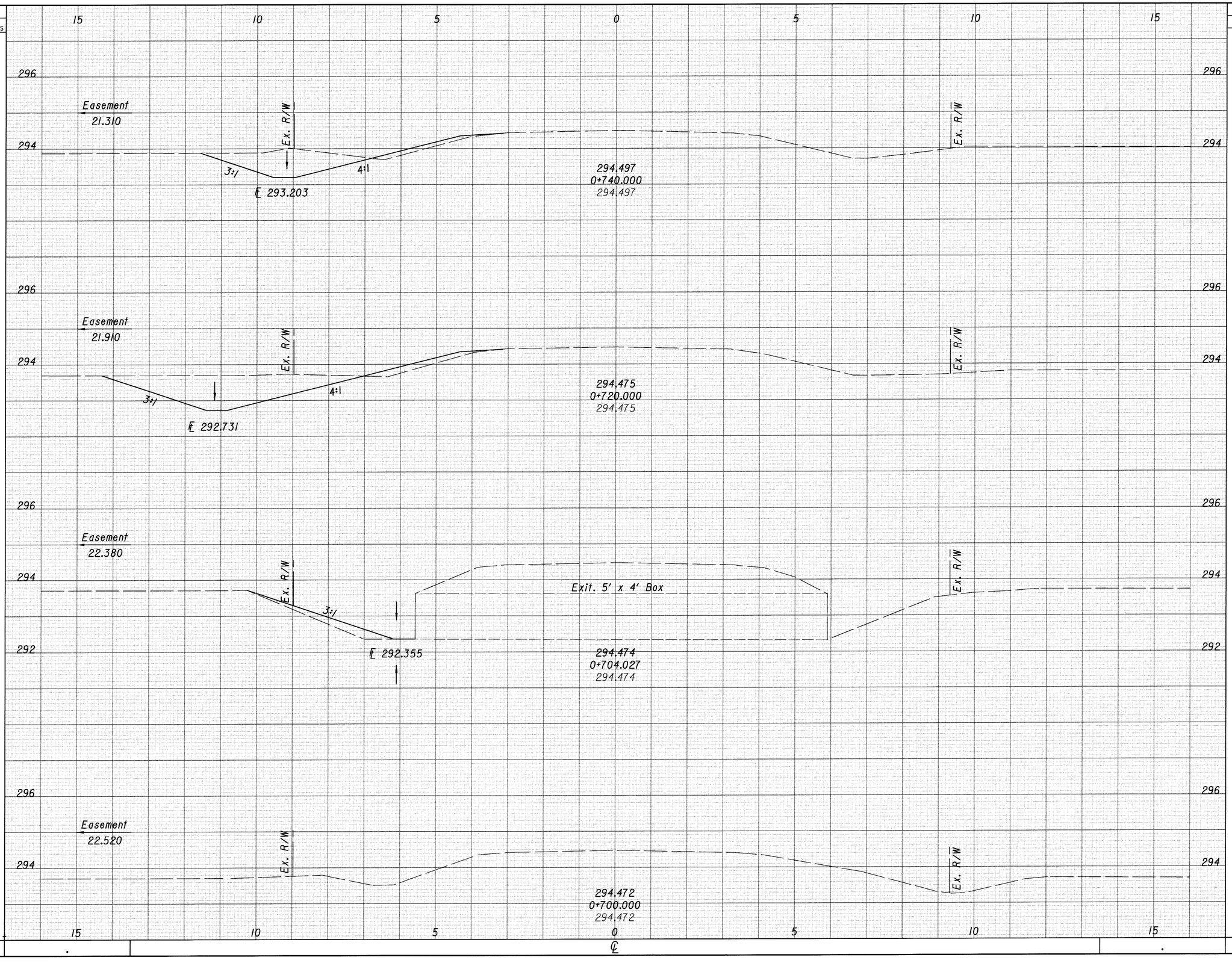
TR-10 CROSS SECTIONS

STA 1+060.000 TO STA 1+118.000

WYA/CRA-30-28.009/0.000

906
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
12.35		2.01	0.31		
	278			59	7
15.49		3.88	0.43		
	187			31	8
7.92		0.00	0.56		
	16			0	1
0.00		0.00	0.00		



CALCULATED

CHECKED

CR-18 CROSS SECTIONS STA 0+700.000 TO STA 0+740.000

WYA / CRA-30-28.009 / 0.000

907
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14.95	299	4.83	0.19	94	5
14.94	298	4.55	0.31	95	5
14.88	283	4.91	0.18	80	5
13.40	257	3.04	0.34	51	7

15 10 5 0 5 10 15

296 294

Easement 18.880 — Ex. R/W — 3:1 — 4:1 — ℄ 293.443

294.839
0+820.000
294.839

Easement 19.480 — Ex. R/W — 3:1 — 4:1 — ℄ 293.383

294.769
0+800.000
294.769

Easement 20.090 — Ex. R/W — 3:1 — 4:1 — ℄ 293.503

294.675
0+780.000
294.675

Easement 20.700 — Ex. R/W — 3:1 — 4:1 — ℄ 293.263

294.554
0+760.000
294.554

℄

CALCULATED

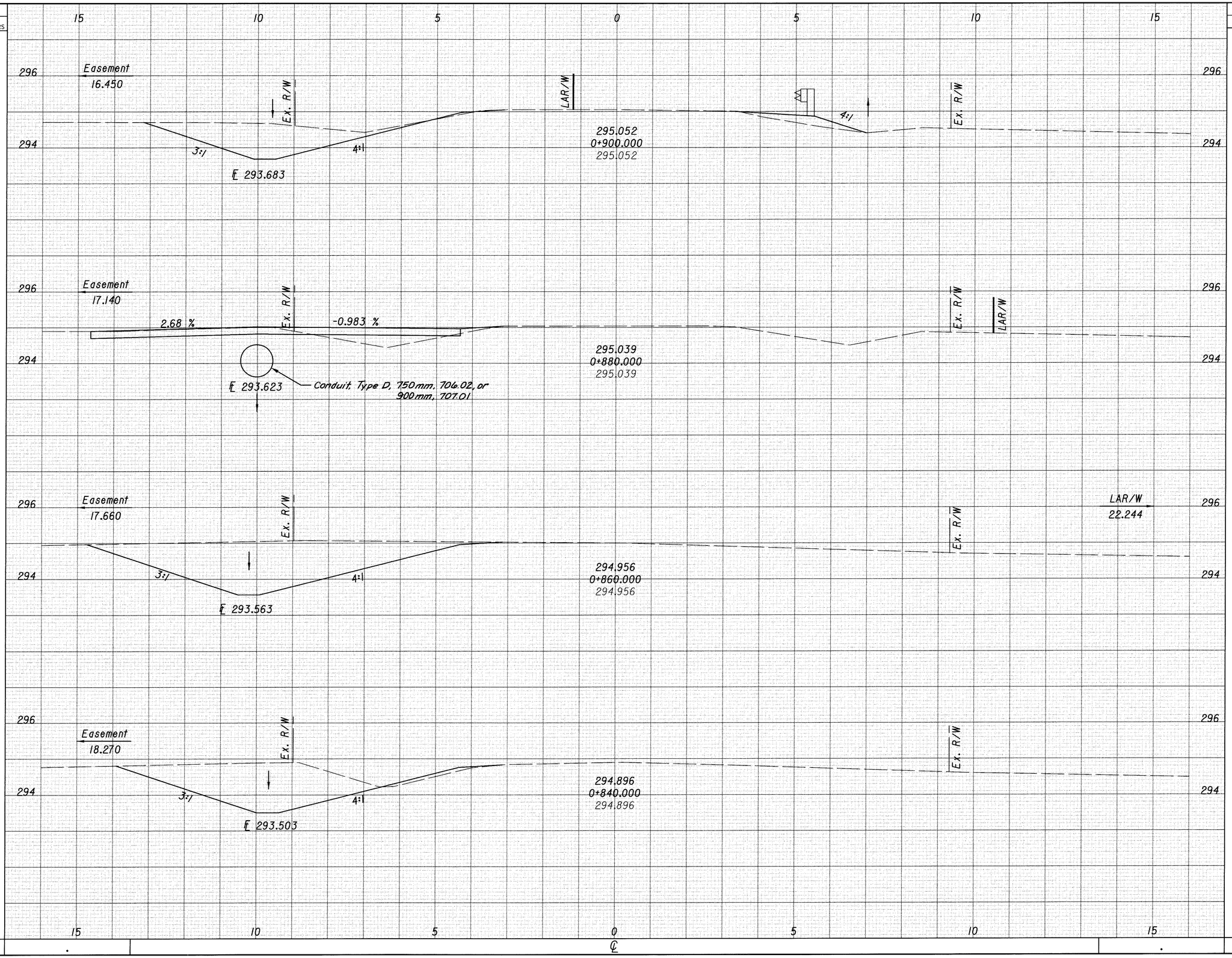
CHECKED

CR-18 CROSS SECTIONS
STA 0+760.000 TO STA 0+820.000

WYA / CRA-30-28.009 / 0.000

908
2116

SEEDING END WIDTH	SEEDING SQ. METERS
21.29	
	369
15.58	
	318
16.18	
	315
15.33	
	303



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3.63	0.53		
		94	8
5.78	0.23		
		143	2
8.50	0.00		
		142	2
5.74	0.20		
		106	4

CALCULATED

CHECKED

CR-18 CROSS SECTIONS STA 0+840.000 TO STA 0+900.000

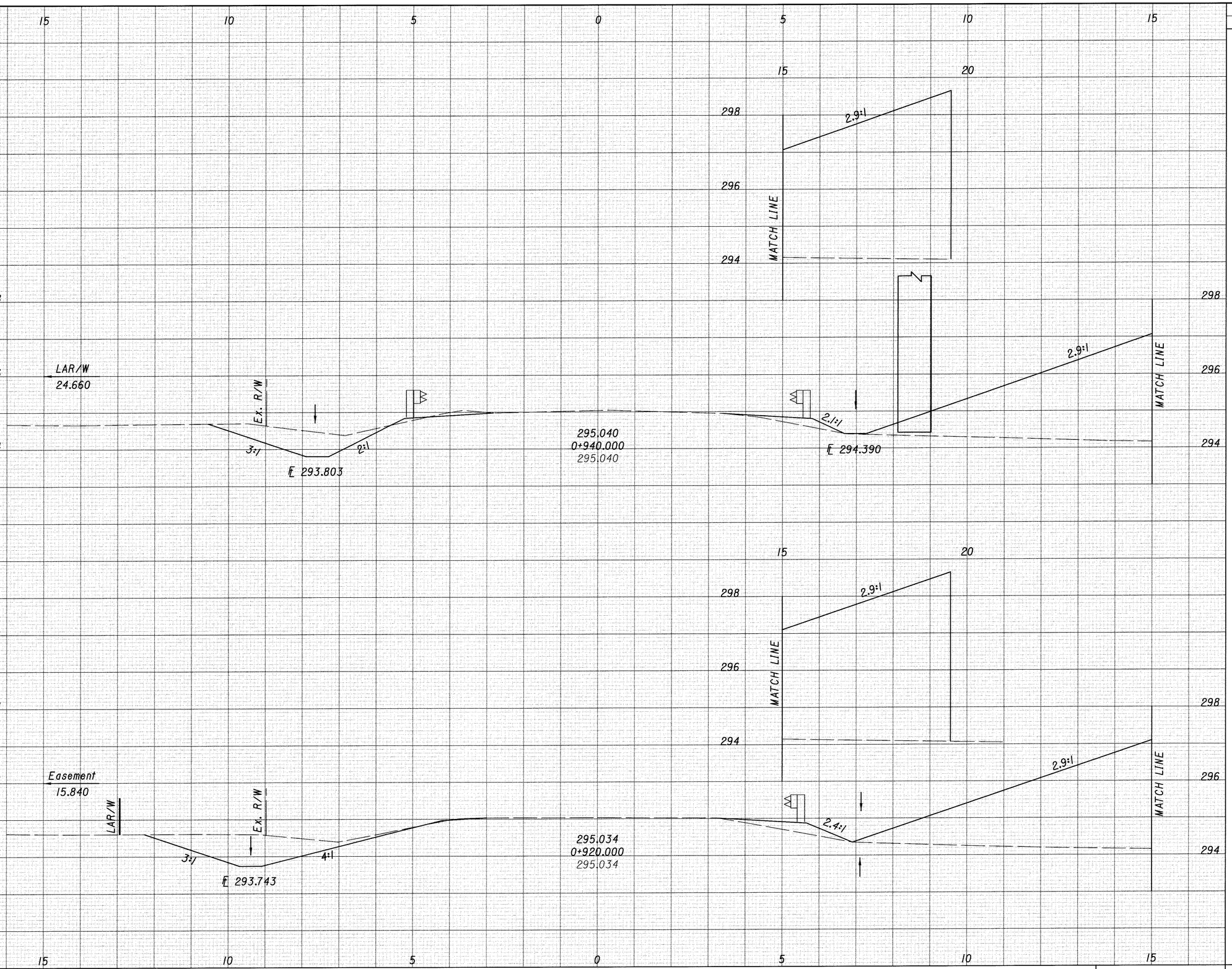
WYA / CRA-30-28.009 / 0.000

909
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
28.97	595	1.97	28.74	41	585
30.52	518	2.77	29.75	64	303

CALCULATED

CHECKED

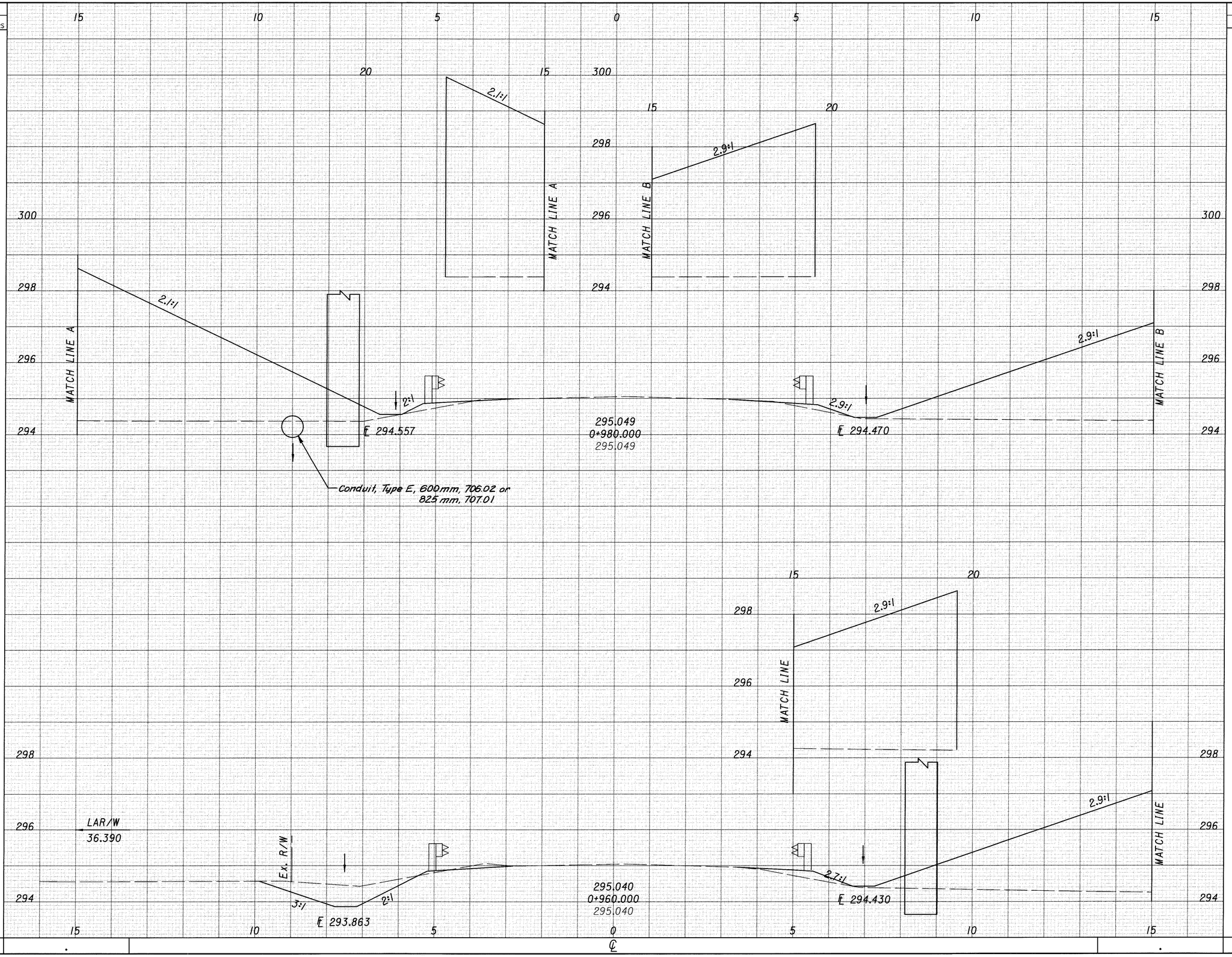


CR-18 CROSS SECTIONS
STA 0+920.000 TO STA 0+940.000

WYA / CRA-30-28.009 / 0.000

910
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
33.37	614	0.04	59.06	17	871	
28.03	570	1.61	28.02	36	568	



CALCULATED

CHECKED

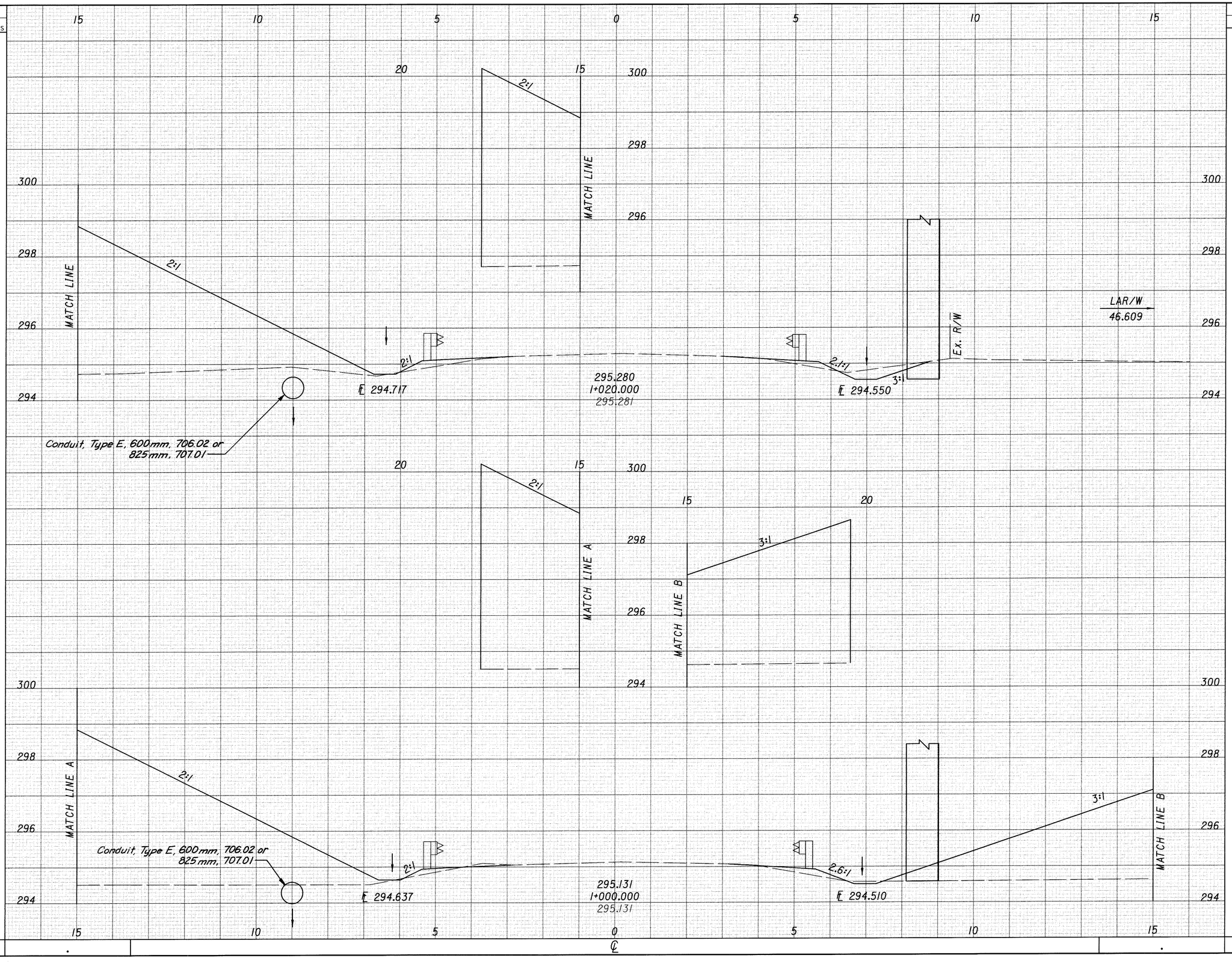
CR-18 CROSS SECTIONS

STA 0+960.000 TO STA 0+980.000

WYA/CRA-30-28.009/0.000

911
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
25.77					
	661			6	870
40.36		0.43	29.96		
	737	0.12	57.06	2	1161



CALCULATED

CHECKED

CR-18 CROSS SECTIONS

STA 1+000.000 TO STA 1+020.000

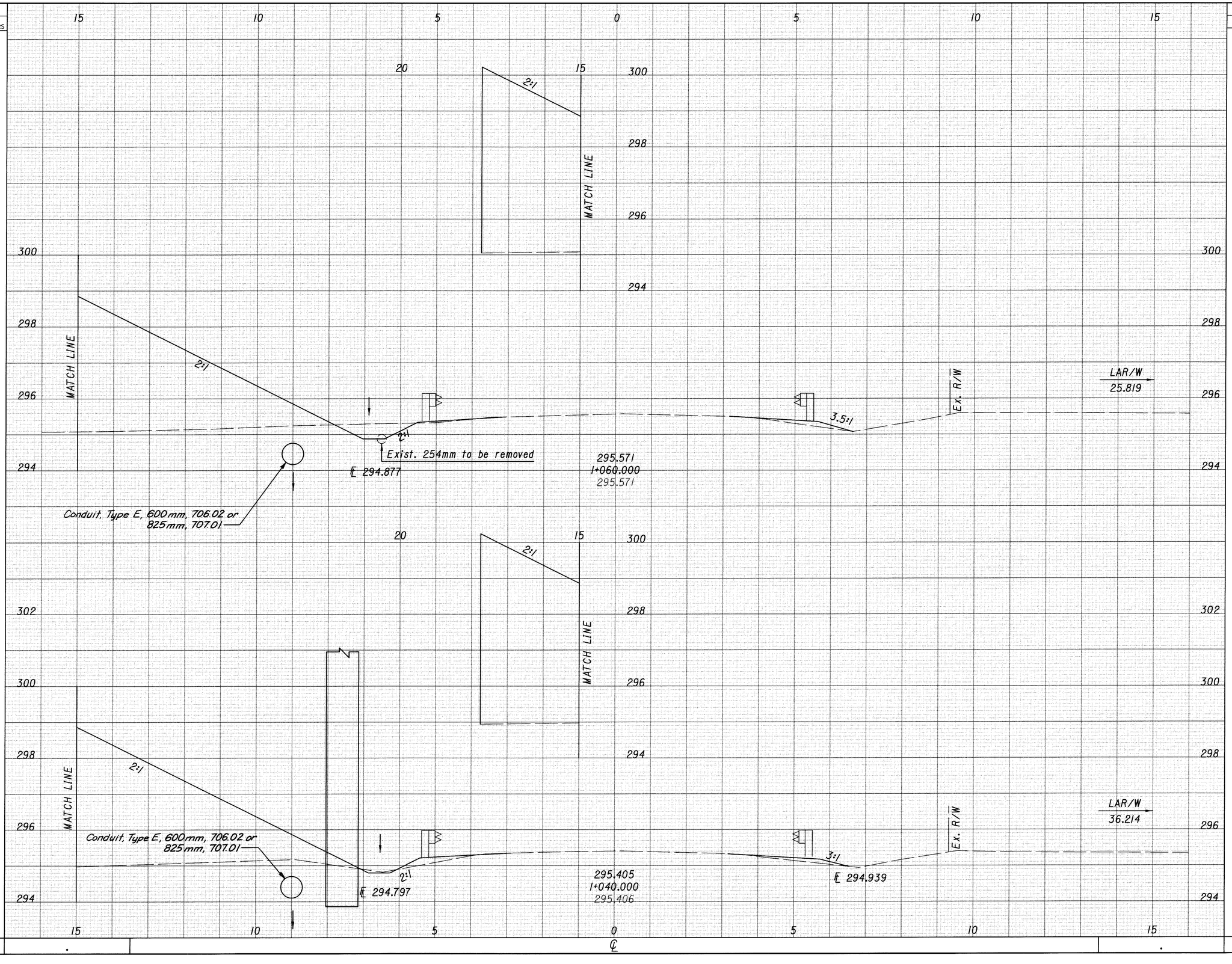
WYA / CRA-30-28.009 / 0.000

912
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
22.57		0.62	26.11		
	452			7	536
22.64		0.05	27.48		
	484			5	574

CALCULATED

CHECKED



CR-18 CROSS SECTIONS

STA 1+040.000 TO STA 1+060.000

WYA/CRA-30-28.009/0.000

913
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.00		0.00	0.00		
	149			33	9
14.95		3.28	0.89		
	280			61	17
13.04		2.86	0.82		
	354			31	262
22.35		0.19	25.39		
	449			8	515

15 10 5 0 5 10 15

296 294 298 300

Ex. R/W

LAR/W

295.872
1+140.000
295.872

295.830
1+120.000
295.830

295.773
1+100.000
295.773

295.639
1+080.000
295.639

3:1 4:1 E 294.343

16.3:1 2:1 2:1 E 294.283

20 15

2:1

MATCH LINE

2:1 2:1 E 294.957

Conduit, Type E, 600mm, 706.02 or 825mm, 707.01

LAR/W 15.424

CALCULATED

CHECKED

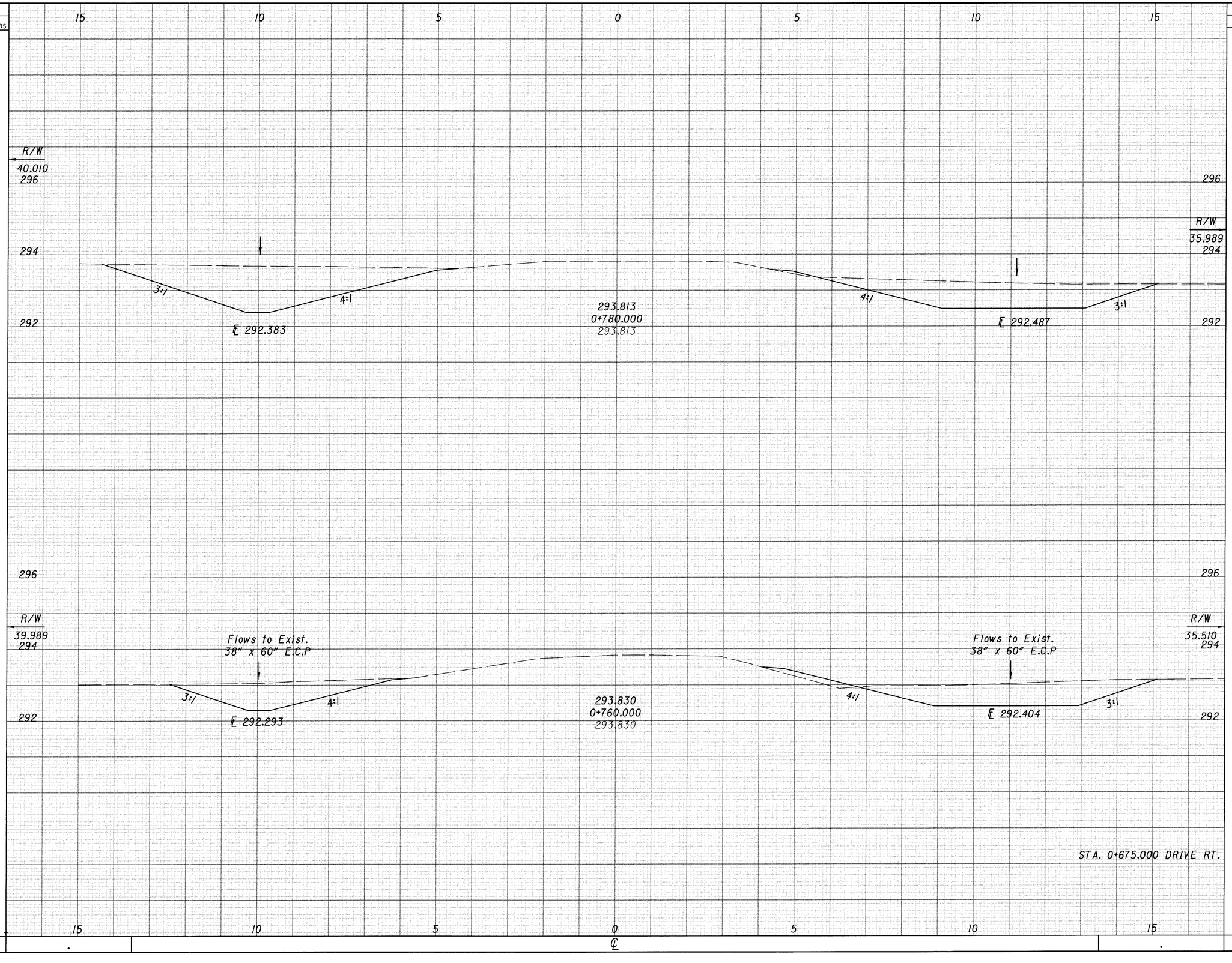
CR-18 CROSS SECTIONS

STA 1+080.000 TO STA 1+140.000

WYA/CRA-30-28.009/0.000

914
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
29.22		11.44	0.05		
	550			180	4
25.82		6.59	0.31		
	0			354	0
				0	0



CALCULATED AM

CHECKED REA

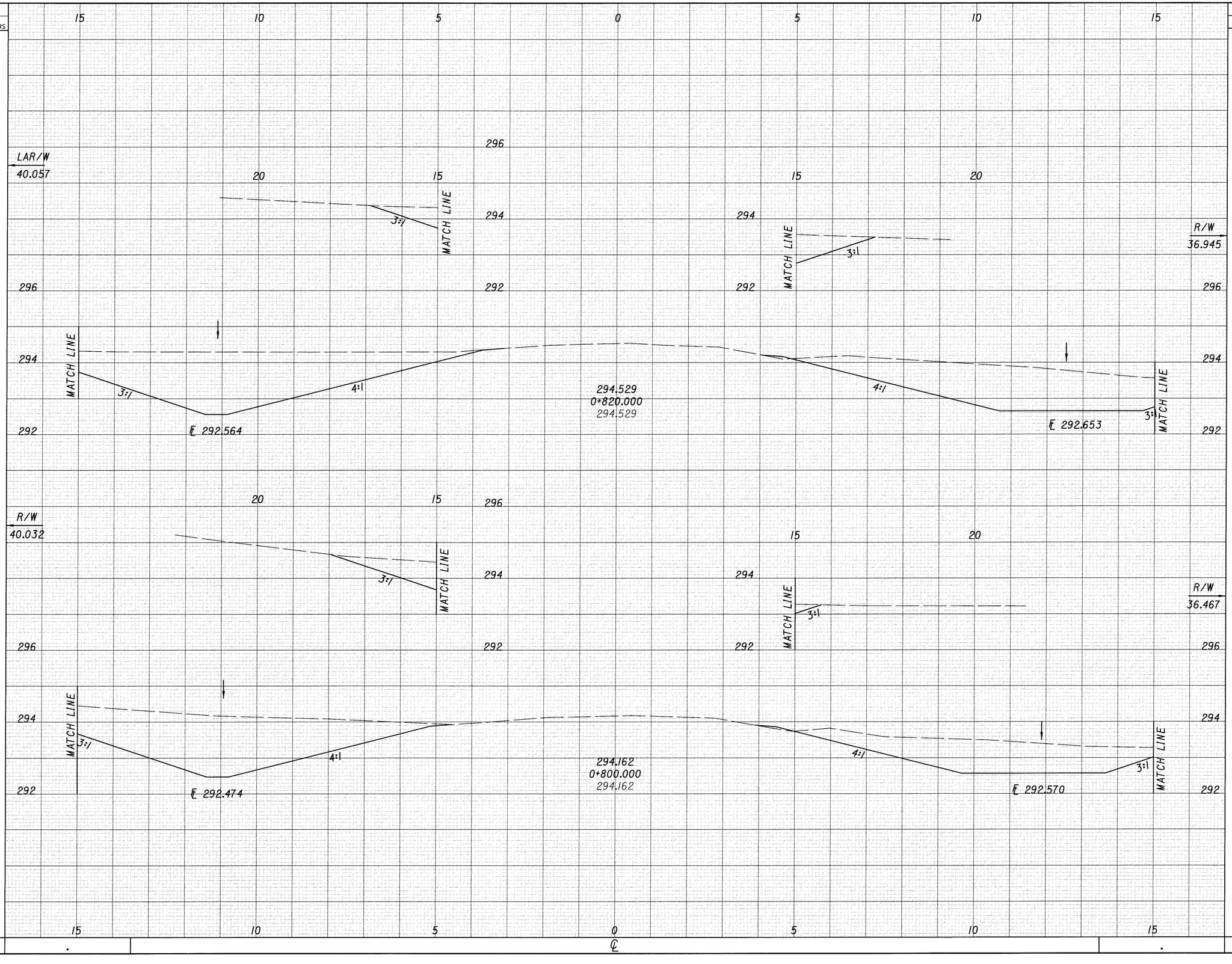
TR-21 CROSS SECTIONS

STA 0+760.000 TO STA 0+780.000

WYA/CRA-30-28.009/0.000

915
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
35.78		21.24	0.03		
	697			393	1
33.93		18.10	0.03		
	631			295	1



CALCULATED AM

CHECKED REA

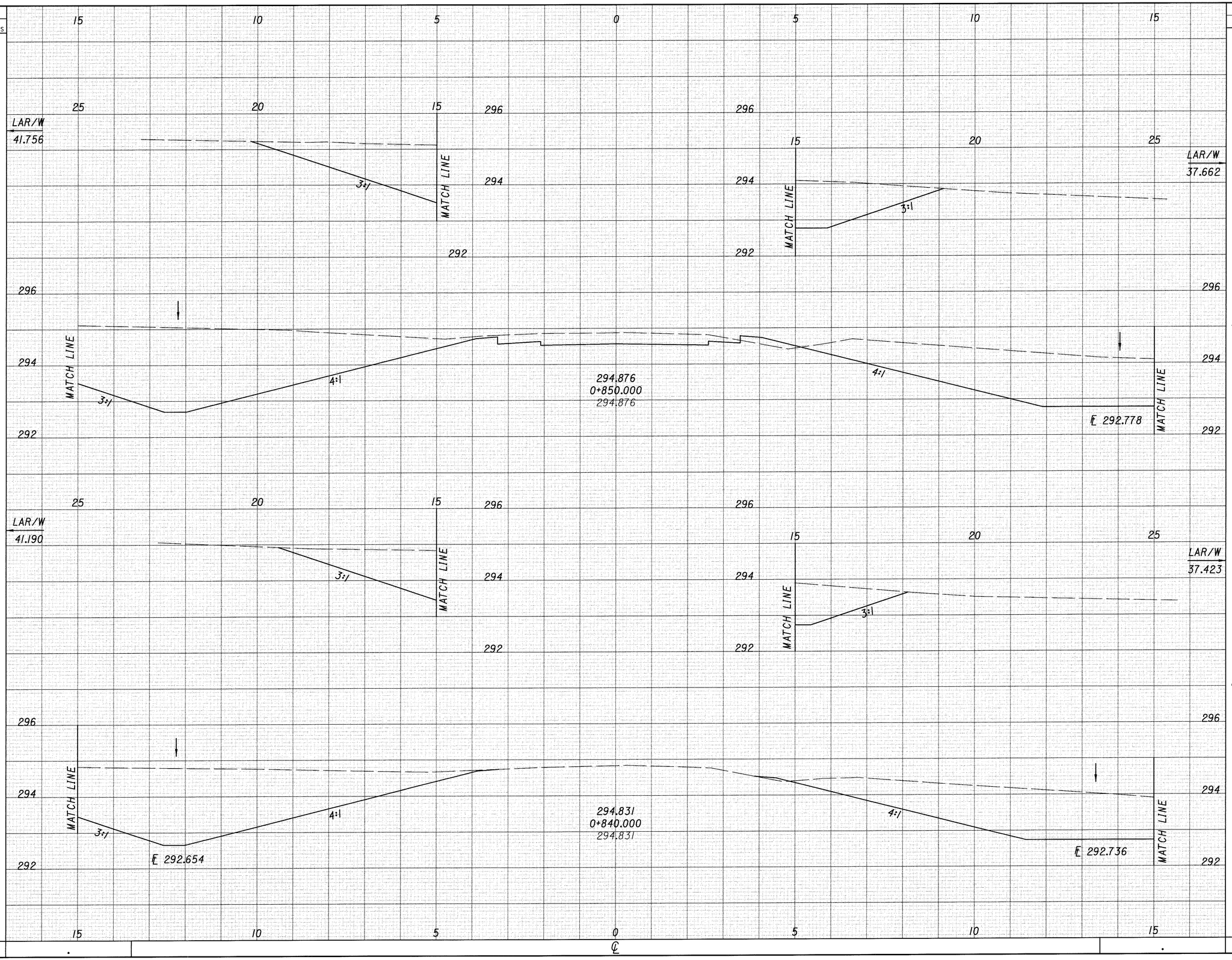
TR-21 CROSS SECTIONS

STA 0+800.000 TO STA 0+820.000

WYA/CRA-30-28.009/0.000

916
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
41.91		35.54	0.24		
	407			322	1
39.52		28.90	0.04		
	753			501	1



℄

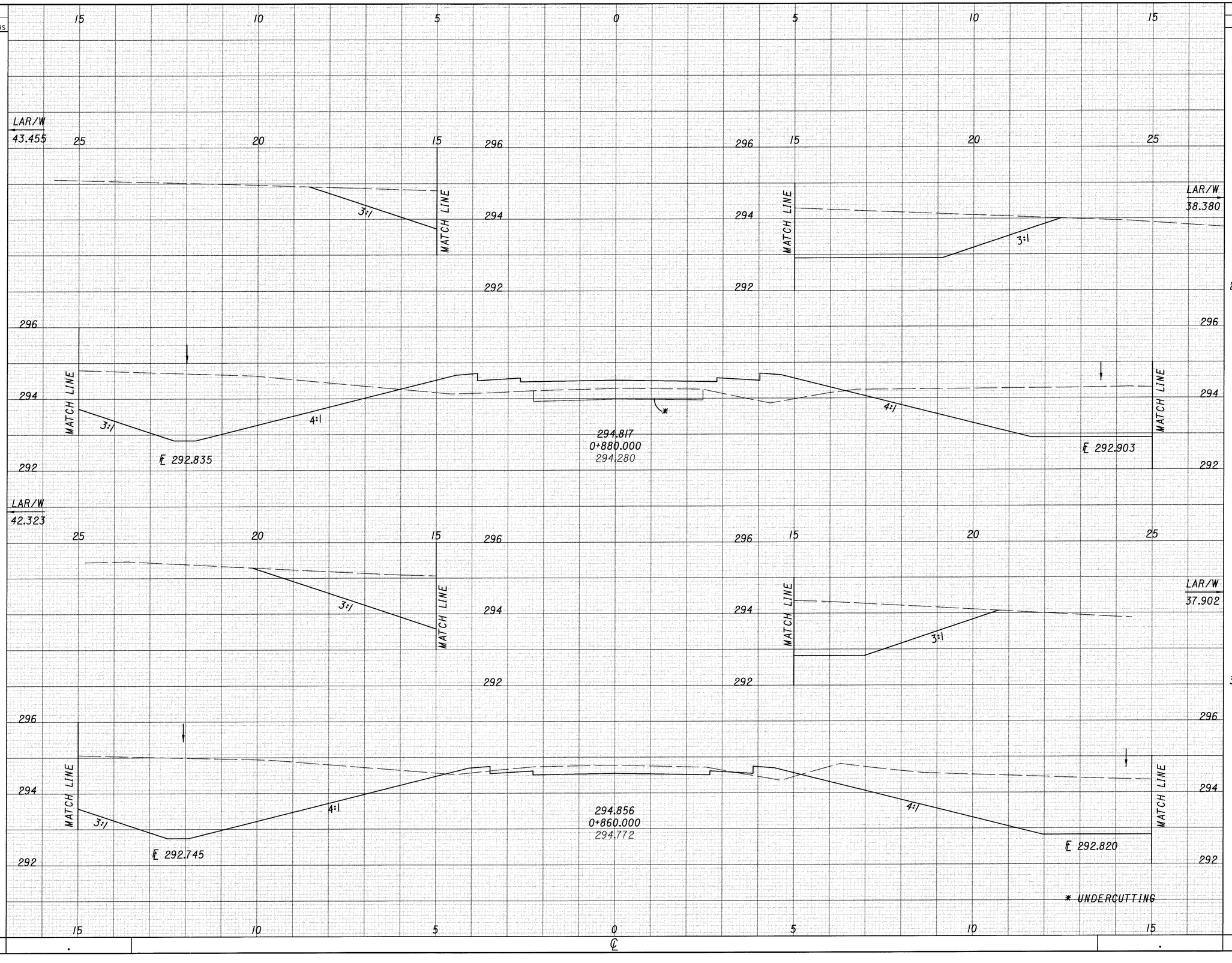
CALCULATED AM
CHECKED REA

TR-21 CROSS SECTIONS
STA 0+840.000 TO STA 0+850.000

WYA / CRA-30-28.009 / 0.000

917
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
42.39		29.75	5.32		
	854			661	58
43.00		36.31	0.44		
	425			359	3



CALCULATED AM

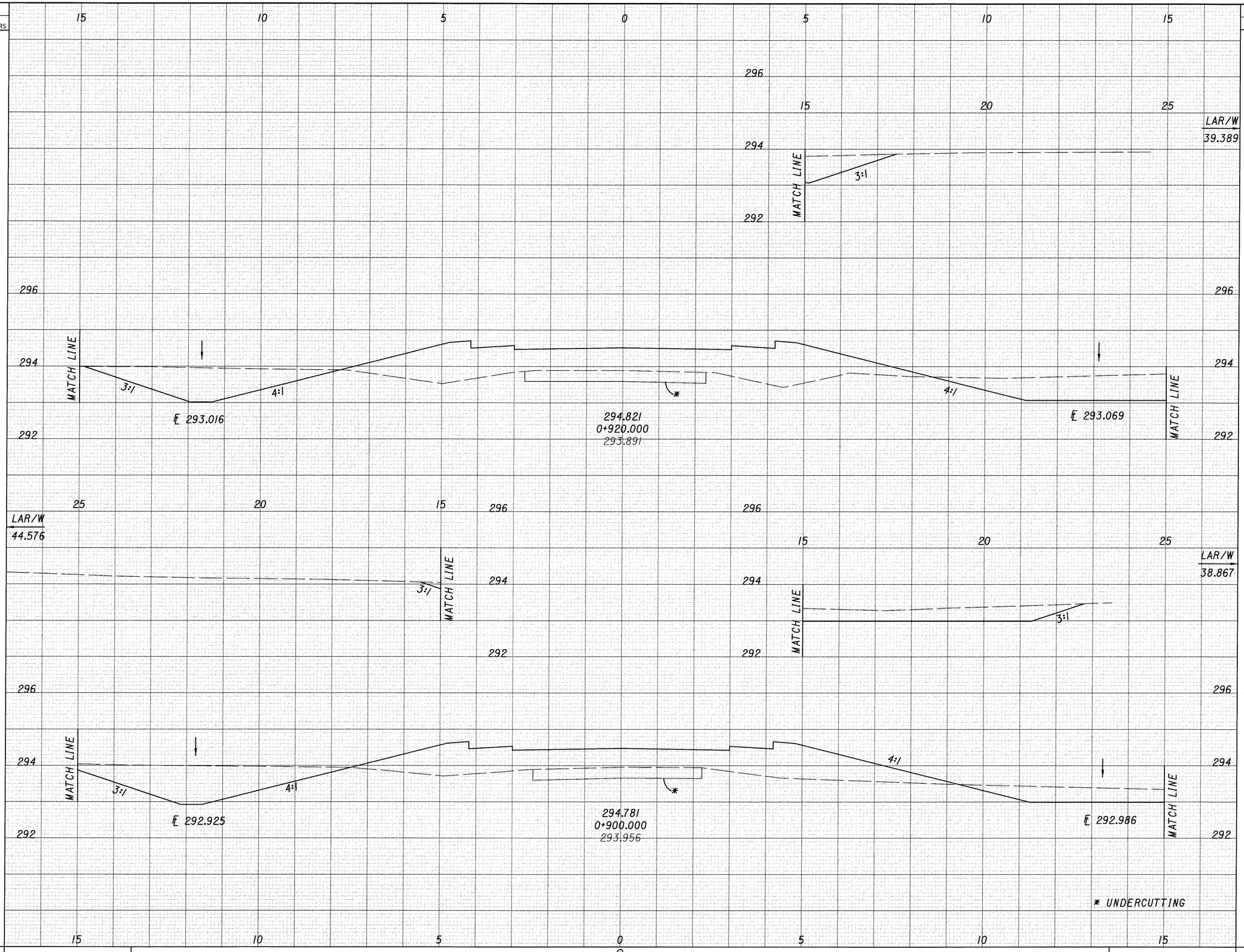
CHECKED REA

TR-21 CROSS SECTIONS

STA 0+860.000 TO STA 0+880.000

WYA / CRA-30-28.009 / 0.000

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
32.43	706	9.50	11.82	200	224
38.21	806	10.48	10.53	402	159



CALCULATED AM

CHECKED REA

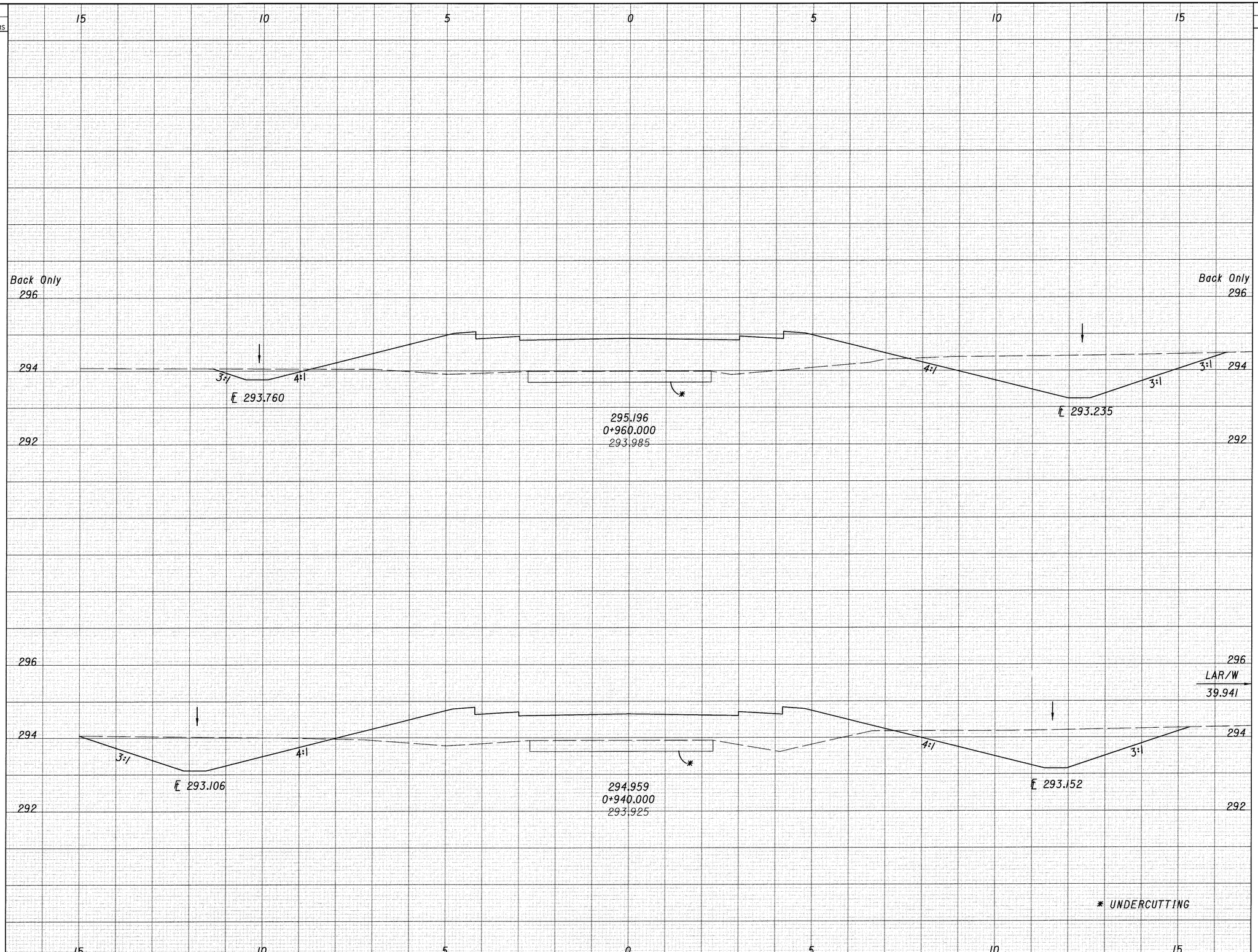
TR-21 CROSS SECTIONS

STA 0+900.000 TO STA 0+920.000

WYA/CRA-30-28.009/0.000

919
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
27.39	581	7.45	13.57	169	252
30.72	632	9.48	11.67	190	235



CALCULATED AM

CHECKED REA

TR-21 CROSS SECTIONS

STA 0+940.000 TO STA 0+960.000

WYA/CRA-30-28.009/0.000

920
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
18.70	356	8.77	0.05	111	16		
16.92	343	2.31	1.55	46	84		
17.37	0	2.27	6.83	0	0		

15 10 5 0 5 10 15

SEE SVC. ACC. 17
STA. 9+844.718
CROSS-SECTIONS

298
296
294

3:1 4:1 E 294.686

295.050
1+080.000
295.338

4:1 3:1 E 294.276

SEE SVC. ACC. 17
STA. 9+824.707
CROSS-SECTIONS

3:1 4:1 E 294.602

295.122
1+060.000
294.952

4:1 3:1 E 294.202

Ahead Only

3:1 4:1 E 294.517

295.293
1+040.000
294.694

4:1 3:1 E 294.127

Ahead Only

* UNDERCUTTING

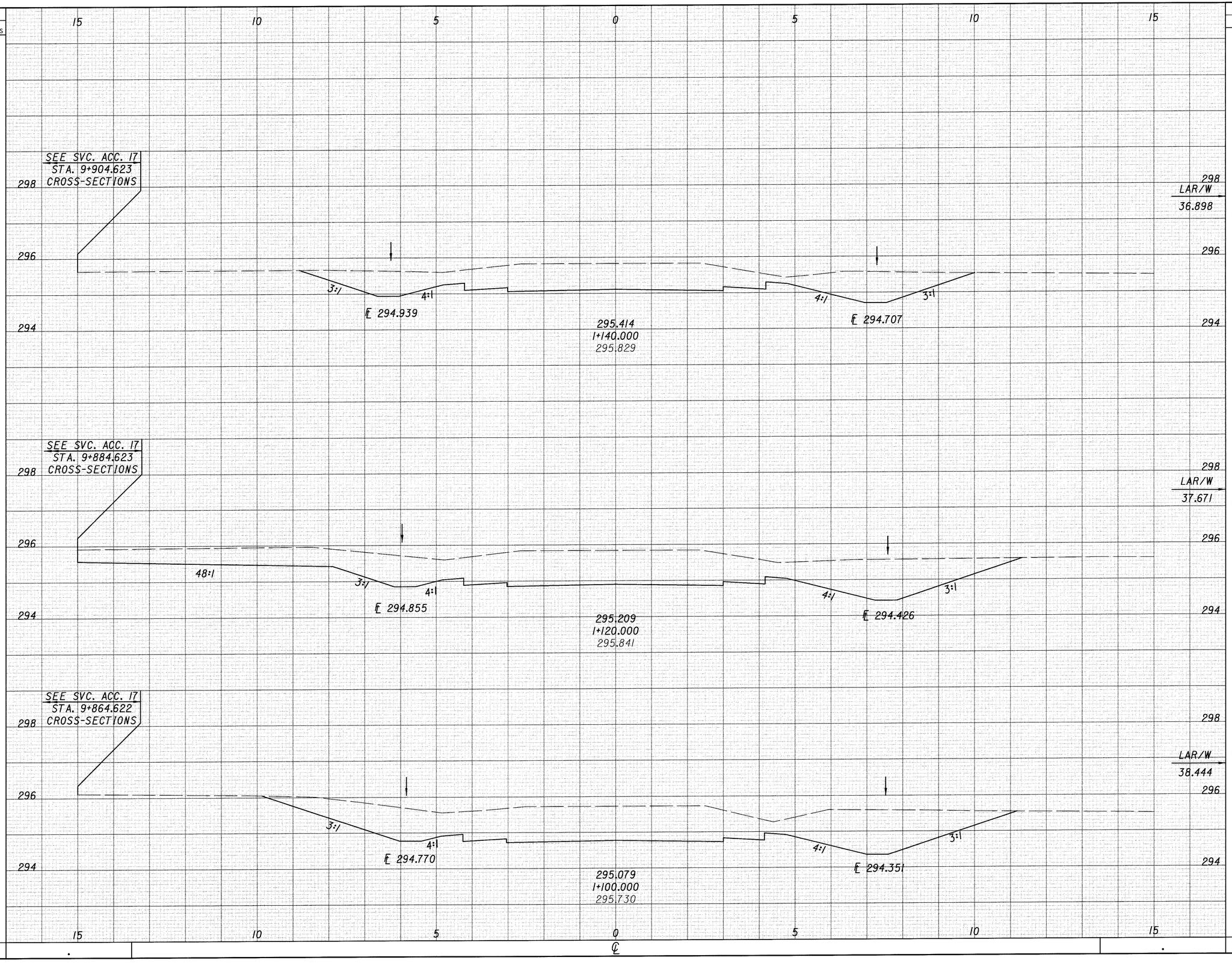
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TR-21 CROSS SECTIONS
STA 1+040.000 TO STA 1+080.000

WYA / CRA-30-28.009 / 0.000

921
2116

SEEDING	
END WIDTH	SQ. METERS
18.33	409
22.61	441
21.54	402



END AREA		VOLUME	
CUT	FILL	CUT	FILL
10.92	0.00	293	0
18.36	0.00	349	0
16.54	0.00	253	1

298 LAR/W 36.898

298 LAR/W 37.671

298 LAR/W 38.444

CALCULATED AM

CHECKED REA

TR-21 CROSS SECTIONS
STA 1+100.000 TO STA 1+140.000

WYA / CRA-30-28.009 / 0.000

922
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
23.17	195	7.18	0.18	54	2
15.85	316	3.63	0.23	89	2
15.77	341	5.24	0.00	162	0

CALCULATED AM

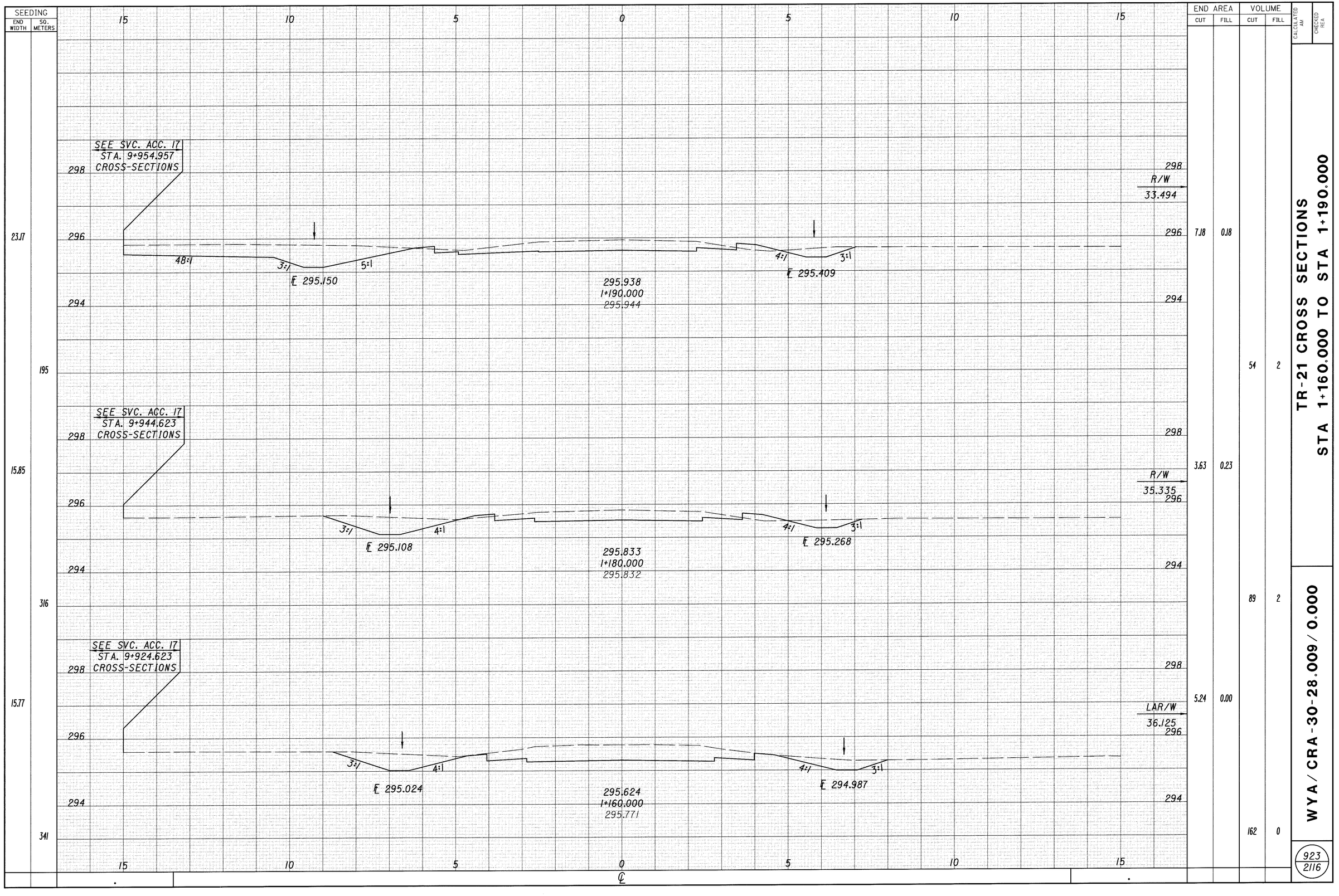
CHECKED REA

TR-21 CROSS SECTIONS

STA 1+160.000 TO STA 1+190.000

WYA/CRA-30-28.009/0.000

923
2116



SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
9.28		1.69	0.00		
	106			44	0
0.00		2.17	0.00		
	84			34	1

15 10 5 0 5 10 15

298 R/W 23.209

298 R/W 24.289

296

℄ 296.078

296.270
1+240.000
296.270

294

298 R/W 27.020

298 R/W 27.971

296

3:1 4:1

℄ 295.547

296.310
1+220.000
296.310

294

SEE SVC. ACC. 17
STA. 9+965.416
CROSS-SECTIONS

298

298 R/W 32.161

Service Access No. 17

296

296.011
1+197.237
296.011

294

15 10 5 0 5 10 15

℄

CALCULATED AM

CHECKED REA

TR-21 CROSS SECTIONS

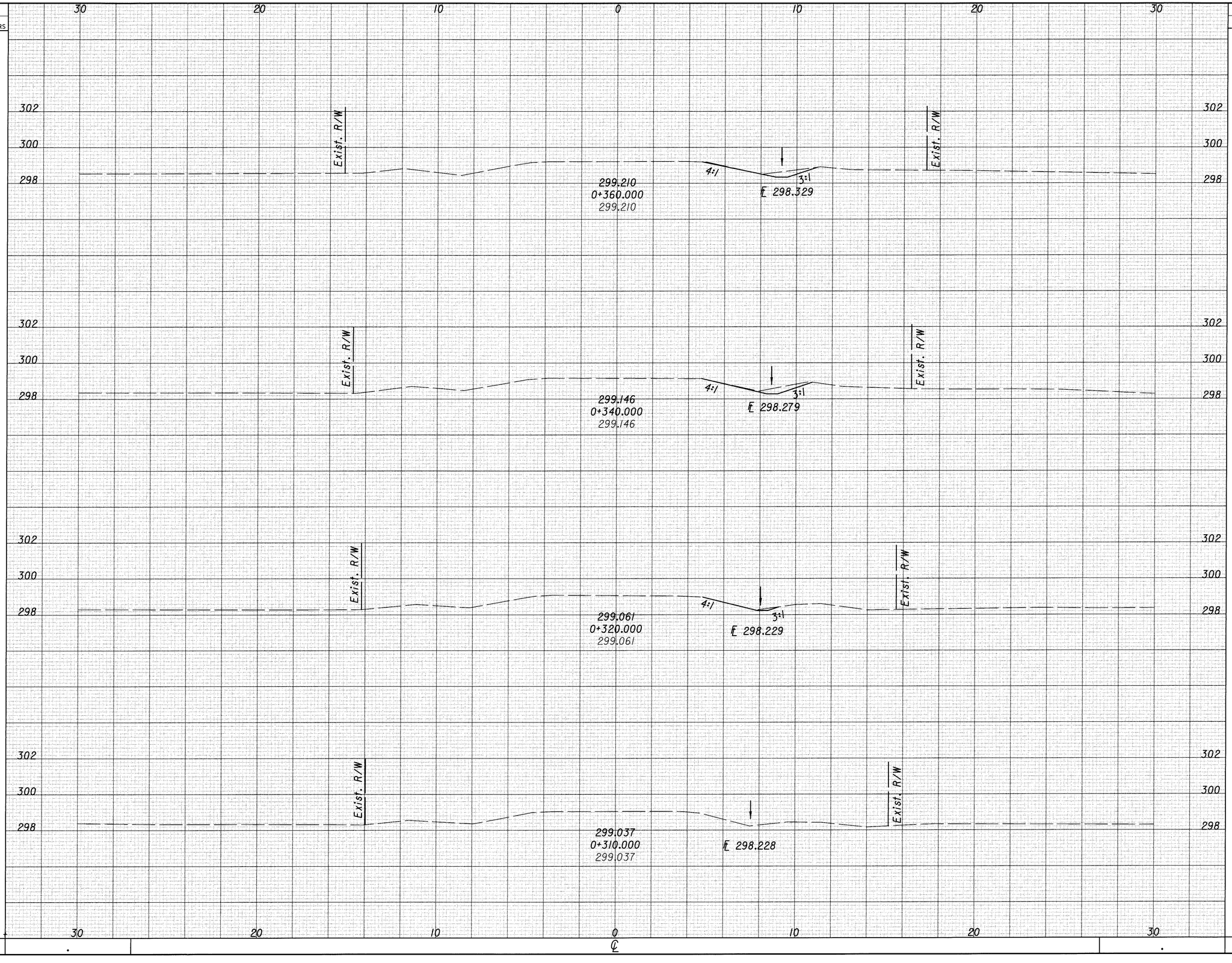
STA 1+197.237 TO STA 1+240.000

WYA / CRA-30-28.009 / 0.000

924
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10.15	202	0.66	0.00	14	
10.03	176	0.71		8	
7.56	0	0.11		0	

CALCULATED AM | CHECKED REA

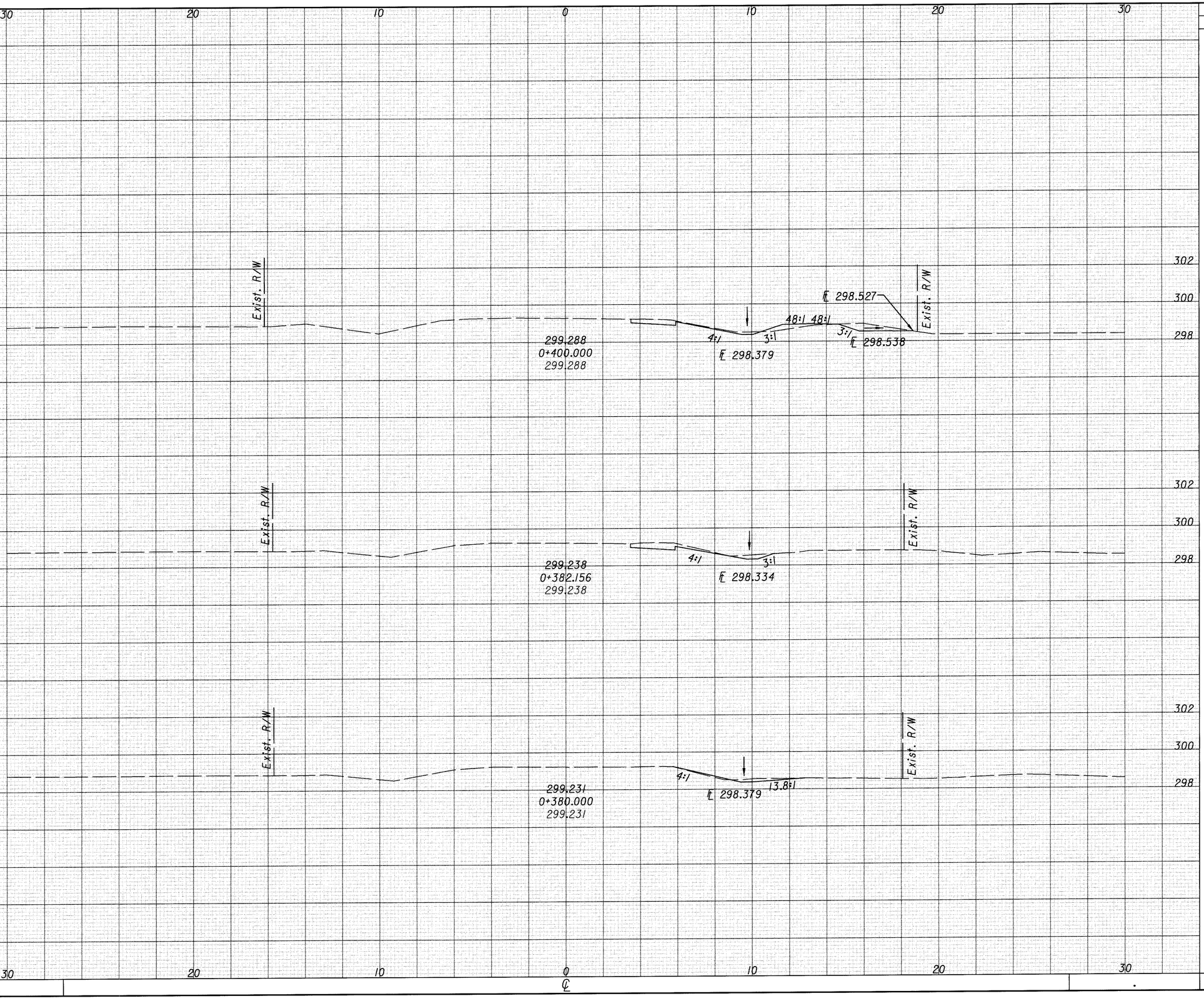


CR-330 CROSS SECTIONS
STA 0+310.000 TO STA 0+360.000

WYA / CRA-30-28.009 / 0.000

942
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
8.34	152	2.23	0.53	36	5
8.72	21	1.79	0.00	2	0
10.38	205	0.37	0.13	10	1



CALCULATED AM

CHECKED REA

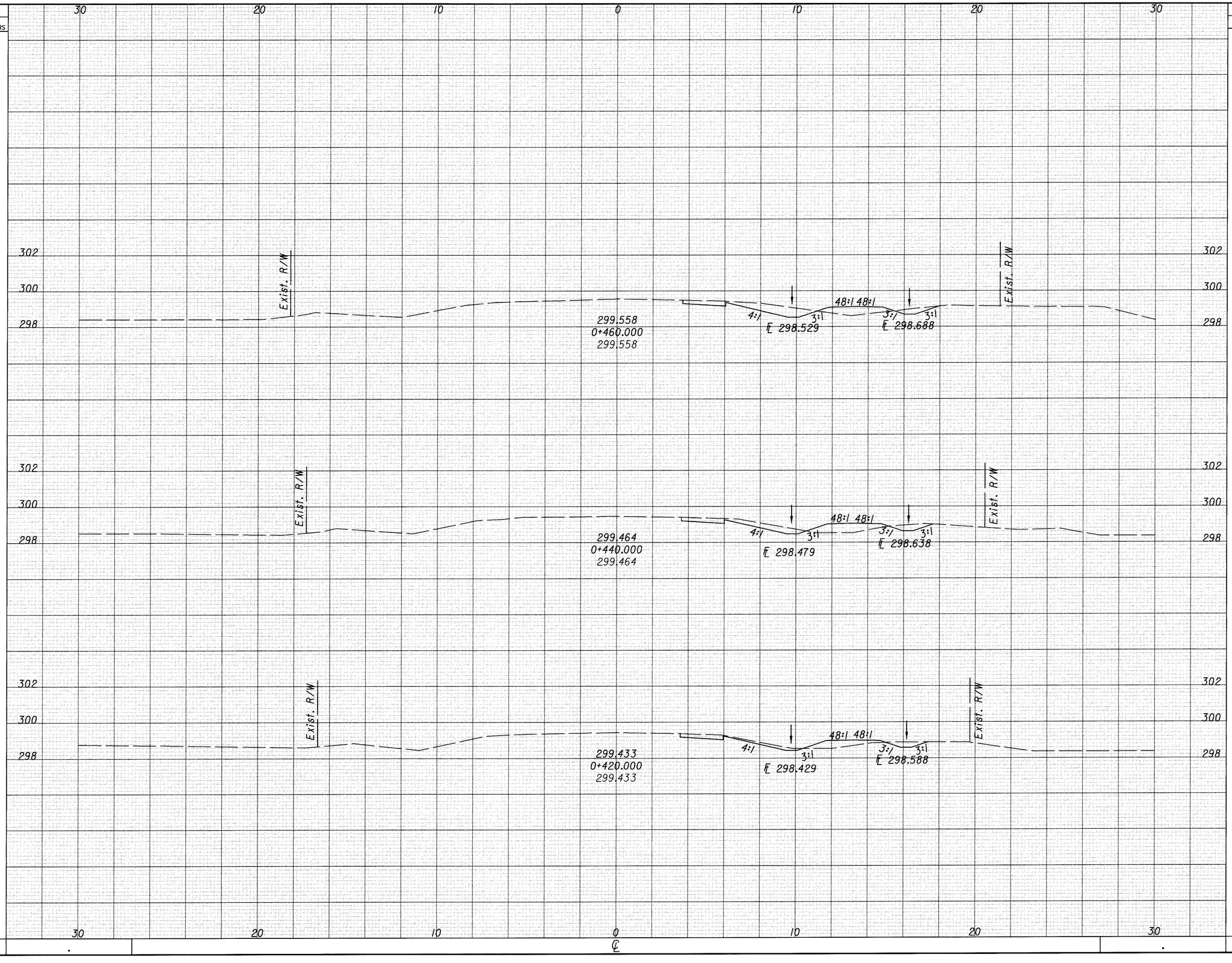
CR-330 CROSS SECTIONS

STA 0+380.000 TO STA 0+400.000

WYA/CRA-30-28.009/0.000

943
2116

SEEDING	
END WIDTH	SQ. METERS
13.13	252
12.10	231
10.99	193



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.28	1.38	59	31
2.65	1.67	45	28
1.89	1.16	41	17

CALCULATED AM

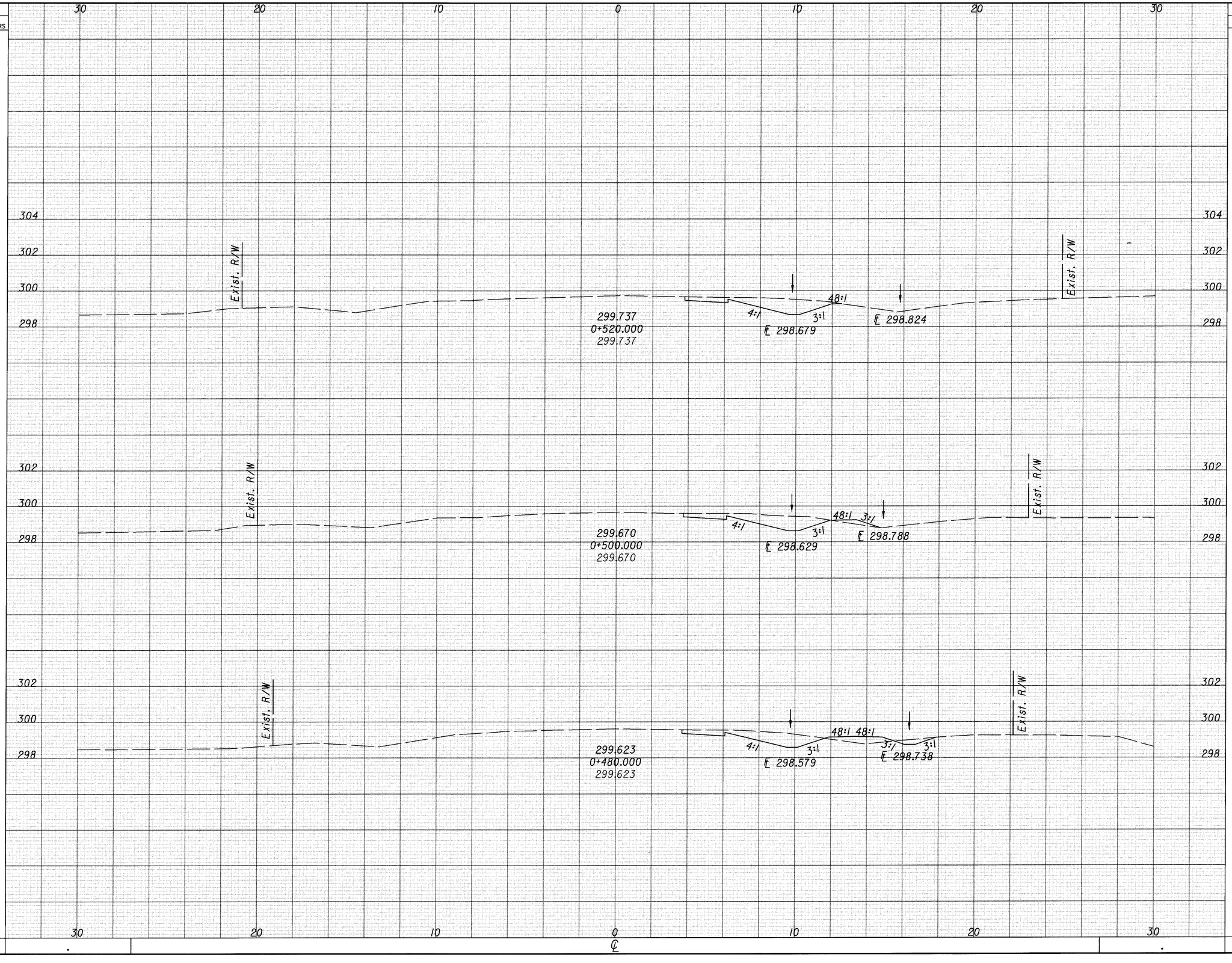
CHECKED REA

CR-330 CROSS SECTIONS
STA 0+420.000 TO STA 0+460.000

WYA/CRA-30-28.009/0.000

944
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
16.49	344	4.12	0	81	3
17.95	331	3.99	0.34	81	13
15.11	282	4.11	0.96	74	23



CALCULATED AM

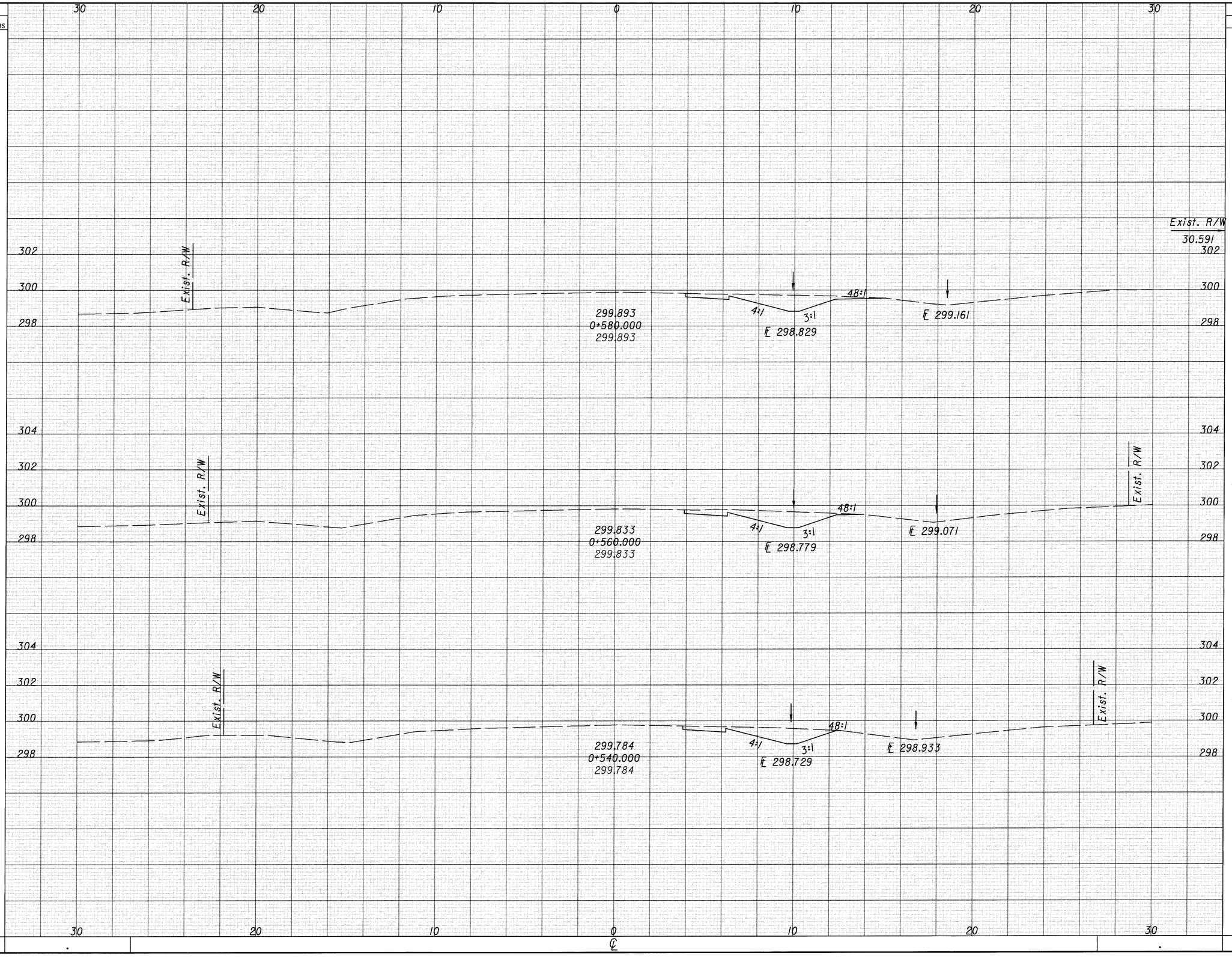
CHECKED REA

CR-330 CROSS SECTIONS
STA 0+480.000 TO STA 0+520.000

WYA/CRA-30-28.009/0.000

945
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
17.07	334	4.51	0	90	0
16.35	328	4.53	0	87	
16.48	330	4.12	0	82	0



CALCULATED AM

CHECKED REA

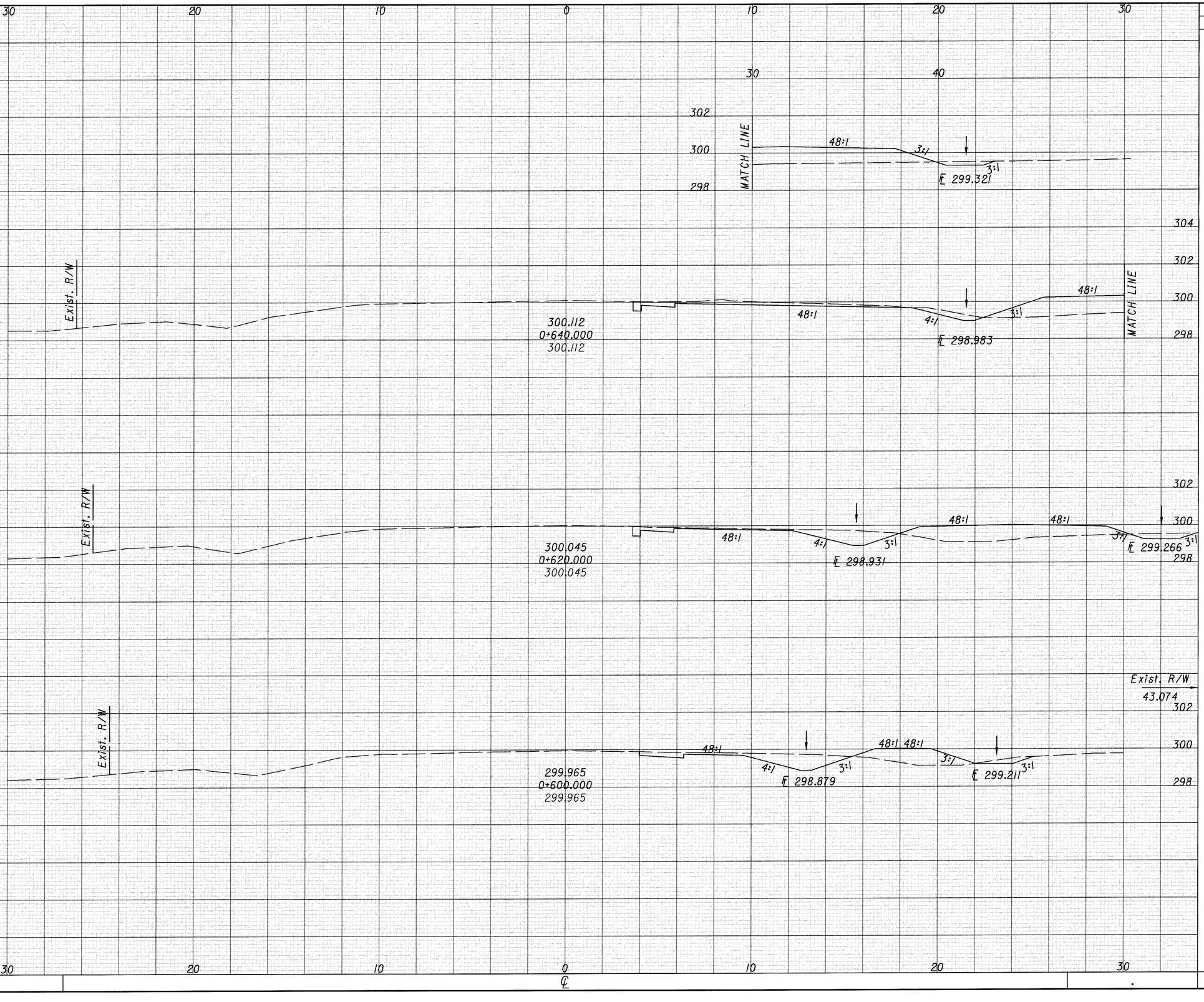
CR-330 CROSS SECTIONS

STA 0+540.000 TO STA 0+580.000

WYA/CRA-30-28.009/0.000

946
2116

SEEDING	
END WIDTH	SQ. METERS
28.39	
	528
24.40	
	454
20.96	
	380



END AREA		VOLUME	
CUT	FILL	CUT	FILL
4.40	13.24		
		93	209
4.93	7.64		
		101	114
5.21	3.72		
		97	37

CALCULATED AM

CHECKED REA

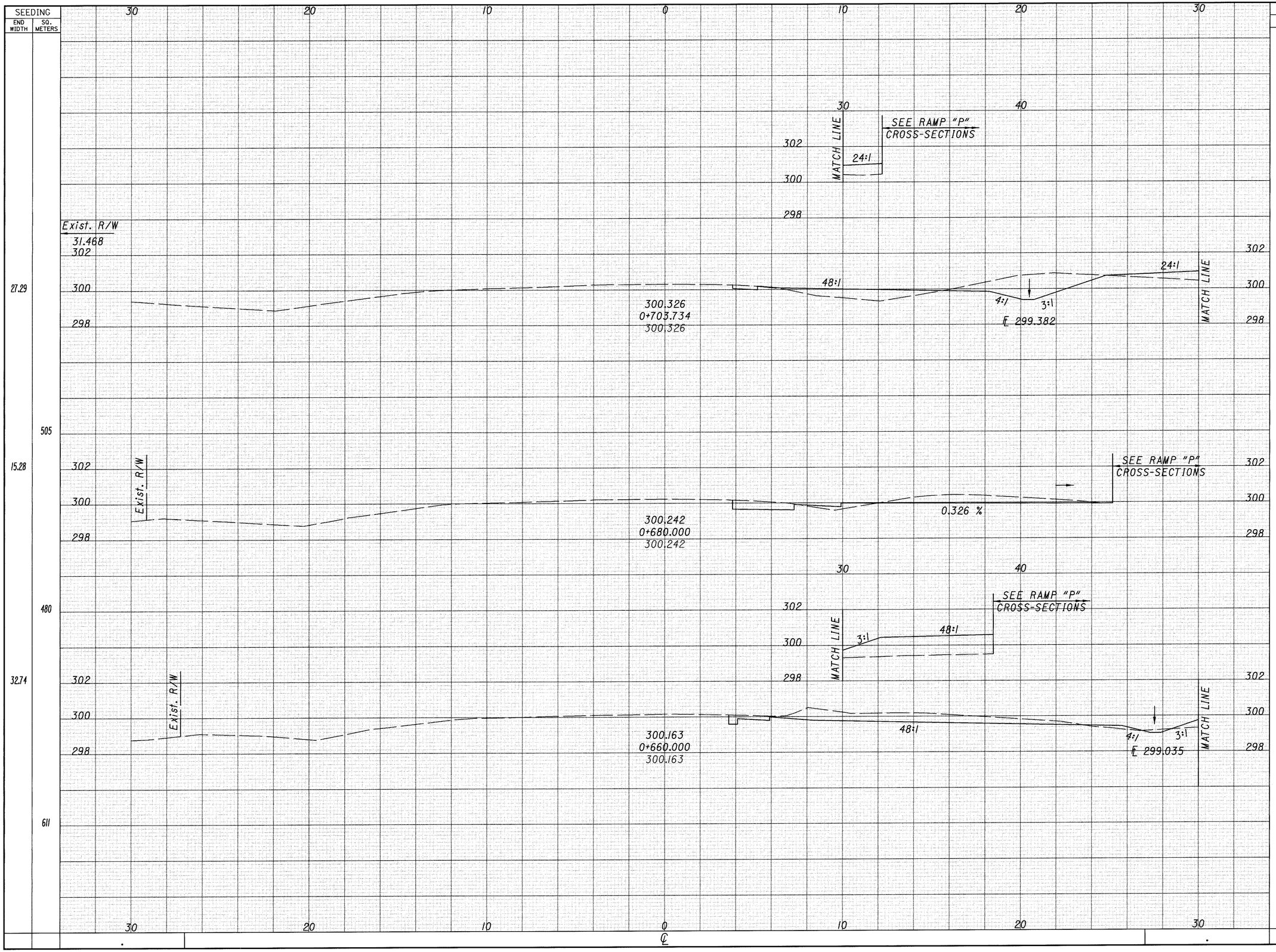
CR-330 CROSS SECTIONS

STA 0+640.000 TO STA 0+600.000

WYA/CRA-30-28.009/0.000

947
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
27.29	505	7.27	5.99	156	75
15.28		5.89	0.34		
32.74	480	8.21	8.99	141	44
	611			126	222



CALCULATED AM

CHECKED RCA

CR-330 CROSS SECTIONS

STA 0+660.000 TO STA 0+703.734

WYA/CRA-30-28.009/0.000

948
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
17.13	524	0.40	5.39	78	148
36.81	677	7.58	9.79	124	145
30.86	473	4.78	4.70	98	87

CALCULATED AM

CHECKED REA

CR-330 CROSS SECTIONS

WYA/CRA-30-28.009/0.000

STA 0+720.000 TO STA 0+759.435

949
2116

30 20 10 0 10 20 30

Exist. R/W
37.840
302
300
298

300.483
0+759.435
300.483

℄ 299.566

4:1 3:1 48:1

SEE U.S. 30 CROSS-SECTIONS

302
300
298

30 40

MATCH LINE

302
300

24:1

SEE U.S. 30 CROSS-SECTIONS

302
Exist. R/W
35.089
300
298

300.468
0+740.000
300.468

℄ 299.500

4:1 3:1 24:1

MATCH LINE

302
300
298

30 40

SEE RAMP "P" CROSS-SECTIONS

MATCH LINE

302
300

17.7:1

302
Exist. R/W
33.061
300
298

300.378
0+720.000
300.378

℄ 299.432

24:1 4:1 3:1 17.7:1

MATCH LINE

302
300
298

30 20 10 0 10 20 30

℄

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
24.21	395	0.14	9.58	4	135
16.86	372	0.27	4.43	8	99
17.04	351	0.50	4.55	9	102

30 20 10 0 10 20 30

304 302 300 298

SEE U.S. 30 CROSS-SECTIONS

48:1 4:1 3:1

300.620
0+821.177
300.620

℄ 299.775

Exist. R/W
43.860

300.594
0+801.961
300.594

℄ 299.710

Exist. R/W
40.751

300.519
0+780.000
300.518

℄ 299.636

℄

CALCULATED AM

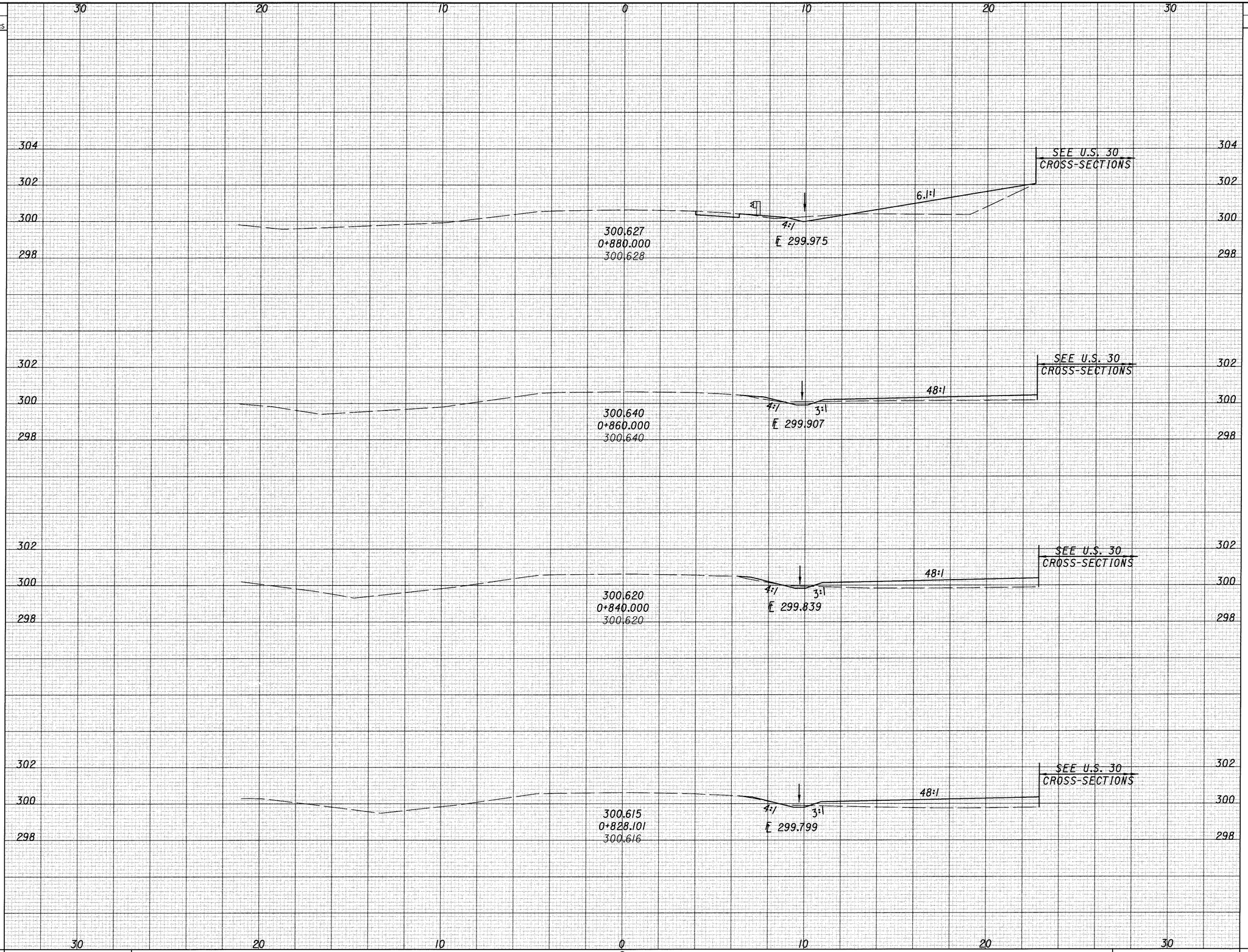
CHECKED REA

CR-330 CROSS SECTIONS
STA 0+780.000 TO STA 0+821.177

WYA/CRA-30-28.009/0.000

950
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
17.73	342	1.38	12.99	16	153
16.46	332	0.24	2.34	4	73
16.70	198	0.12	4.98	1	61
16.66	141	0.11	5.33	1	52



CALCULATED AM

CHECKED REA

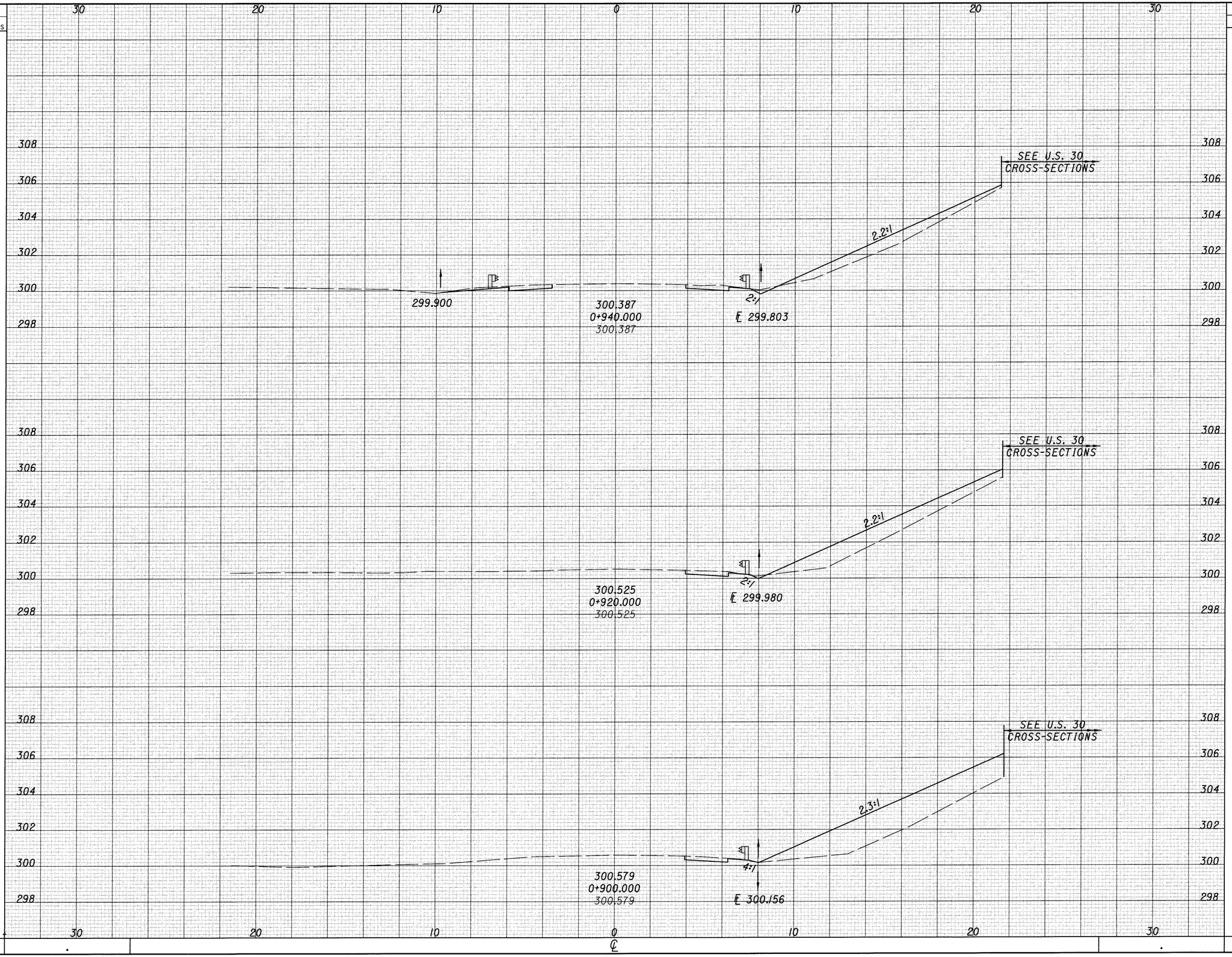
CR-330 CROSS SECTIONS

STA 0+828.101 TO STA 0+880.000

WYA / CRA-30-28.009 / 0.000

951
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
23.64		2.45	5.60		
	403			35	152
16.62		1.06	9.60		
	333			20	278
16.68		0.96	18.17		
	344			23	312



CALCULATED AM

CHECKED REA

CR-330 CROSS SECTIONS

STA 0+900.000 TO STA 0+940.000

WYA / CRA-30-28.009 / 0.000

952
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
25.08		32.47	0.03		
	605			559	142
35.45		23.46	14.19		
	591			319	142
23.69		8.48	0.04		
	473			109	56

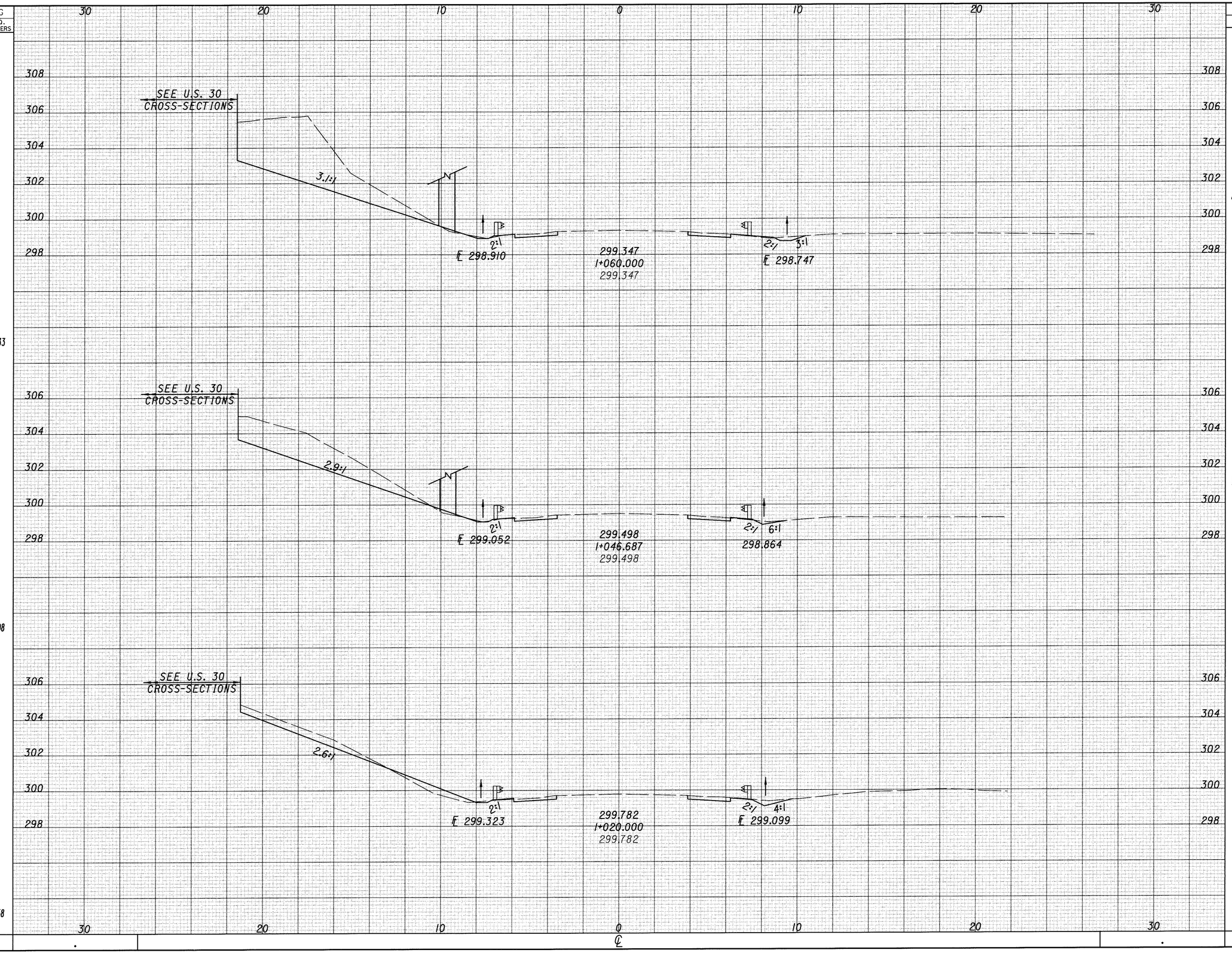
CALCULATED AM | CHECKED REA

CR-330 CROSS SECTIONS
STA 0+960.000 TO STA 1+000.000

WYA/CRA-30-28.009/0.000

953
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
26.03	333	23.24	0.19	247	3	
24.06	598	13.90	0.23	251	19	
20.74	458	4.91	1.19	374	12	



CALCULATED AM

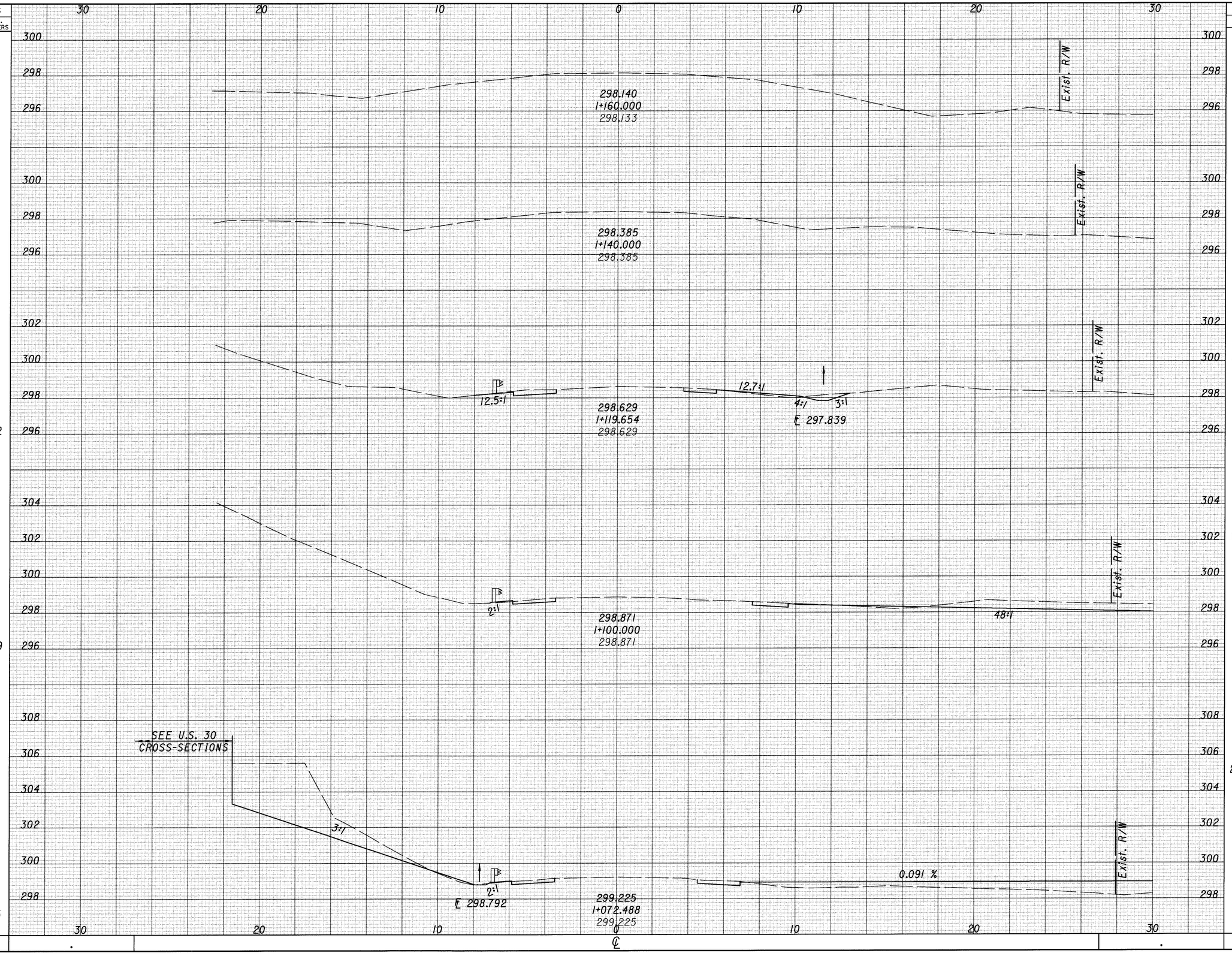
CHECKED REA

CR-330 CROSS SECTIONS
STA 1+020.000 TO STA 1+060.000

WYA / CRA-30-28.009 / 0.000

954
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
16.39	482	2.53	0.29	135	6
32.70	1049	11.23	0.35	440	143
43.56	435	20.73	10.04	275	64



CALCULATED AM

CHECKED REA

CR-330 CROSS SECTIONS

STA 1+072.488 TO STA 1+160.000

WYA/CRA-30-28.009/0.000

955
2116

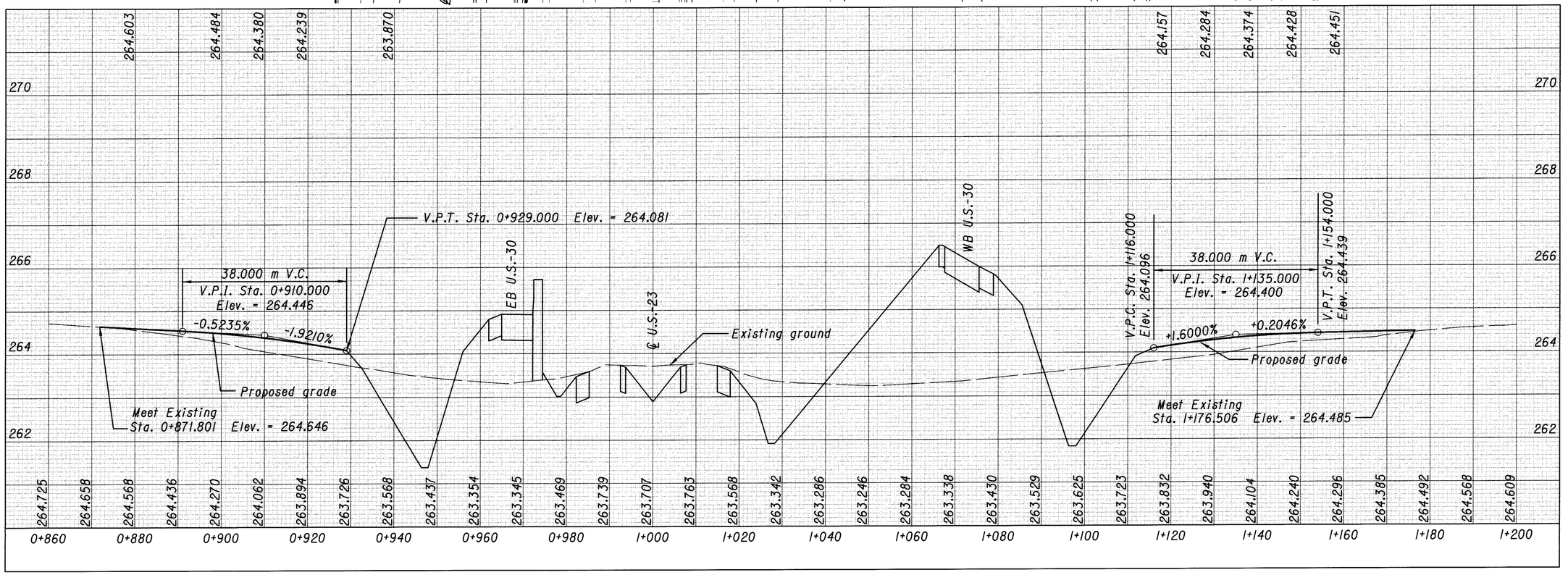
Sta. 0+932.442 - Sta. 0+928.777
Item 203 Excavation = 16.815 s.m. x 0.30 m = 5.0 c.m.
Item 203 Embankment = 5.0 c.m.

670 DEP
2.0 x 49.750 = 95.9 sq m

D1

Ex. LA-R/W
Constr. Limits
Woven Wire
℄ Construction T.R. 55
15m R
0+900
2.42Im
2.42Im
Asphalt
N 89° 25' 24.16" E
D2
Ex. LA-R/W
670 DEP
2.0 x 83.450 = 166.9 sq m
Begin Work
Sta. 0+871.801
For Field Tiles
See US-23 Sheets
LA-R/W
Remove Existing Pavement
℄ Construction U.S. 30 E.B.
STA. 0+965.013 T.R. 55
STA. 28+351.371 US 30 E.B.
28+600
28+400
Asph./Conc.
13+700
N 1° 42' 15.01" W
88° 52' 21"
1+000
℄ U.S. 23
13+600
CB
150mm
100mm
STA. 1+075.319 T.R. 55
STA. 28+696.558 U.S. 30 W.B.
28+700.000, See sheet no. 1304
1800mm RCP, A
670 DEP
℄ Construction U.S. 30 W.B.
Constr. Limits
839 Erosion Control
Remove Existing Pavement
Outlet in Proposed Ditch
El. 261.614
601 RIPRAP
Cutoff Wall
End Work
Sta. 1+176.506
R1
D3
1+100
2.329m
2.328m
Ex. R/W
Outlet in Proposed Ditch
El. 263.274
670 DEP
2.0 x 55.600 = 111.2 sq m
Sta. 1+110.559 - Sta. 1+120.780
Item 203 Excavation = 41.03 s.m. x 0.30 m = 12.3 c.m.
Item 203 Embankment = 12.3 c.m.
Item 203 Excavation not including Embankment Construction, to be backfilled with Item 203 Embankment.
100mm Quantities carried to Sheet No. 94

For quantities see sheet no. 959, 960
For cul-de-sac detail see sheet no. 142
For proposed US-30 EB see sheet no. 158-160
For proposed US-23 see sheet no. 760
For proposed US-30 WB see sheet no. 175-176
For aggregate drain location see sheet no. 96



HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - T.R. 55
STA. 0+859.954 TO STA. 1+176.506

WYA/CRA-30-28.009/0.000

956
2116

REF NO.	SHEET NO.	STATION	SIDE	202										SPECIAL		606								830		622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		TR 55																																
RI	958	1+164.785 TO 1+169.698	RT		4.9																													
TOTALS CARRIED TO SUB-SUMMARY					4.9																													

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

959
2116

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

960
2116

CALCULATED AM
CHECKED REA

REF NO.	SHEET NO.	STATION	SIDE	670 DITCH EROSION PROTECTION SQ M	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND EACH	375 MM X 375 MM 22.5° BEND EACH	MASONRY COLLAR EACH
		TR-III					
D1	956	0+899.709 TO 0+947.030	LT	95.9			
D2	956	0+859.954 TO 0+940.710	RT	166.9			
D3	956	1+107.840 TO 1+160.407	RT	111.2			
D4		NOT USED					

Sta. 0+945.101 - Sta. 0+959.200
Item 203 Excavation = 42.39 s.m. x 0.30 m = 12.7 c.m.
Item 203 Embankment = 12.7 c.m.

670 DEP
46.4 X 2.0 = 92.8 sq. m

DI

Begin Work
Sta. 0+871.213

R/W
Const. Limits
Ex. R/W
℄ T.R.-127
0+900
Gravel
12" CIP
15m R.
LA-R/W
1.959m
1.959m
For Field Tiles See
US-30 Mainline Sheets
Meet Existing
Sta. 0+888.389
100mm
Remove Existing Pavement
℄ Construction U.S. 30
32+100
N 0° 15' 47.52" E
N 88° 01' 19" E
STA. 1+000.000 T.R.-127=
STA. 32+070.515 U.S.R. 30
670 DEP
Remove Existing Pavement
℄ Construction Service Rd. 1
N 88° 17' 07" E
N 89° 18' 17" E
POT Sta. 0+961.596
D =2° 24' 36" Rt
0+983.228, 17.286 m Lt SR-1
1+074.821, 16.641m Lt TR-127
Gravel
Shed
Lawn
Sty. Frame
152mm
203mm
102mm
254mm
Sta. 1+036.215 - Sta. 1+053.823
Item 203 Excavation = 52.82 s.m. x 0.30 m = 15.9 c.m.
Item 203 Embankment = 15.9 c.m.
89° 34' 04"
1+100
1+000
15m R.
Const. Limits
1.641m
1.641m
End Work
Sta. 1+129.256
STA. 1+057.409 T.R.-127=
STA. 1+000.000 Serv. Rd. 1
STA. 1+079.023 TR-127
13.359m Rt
Meet Existing
Sta. 1+111.298

For quantities see sheet no. 964
For aggregate drain location see sheet no. 96
For Service Rd. 1, see sheet no. 1208
For proposed U.S.-30 see sheet no. 201
For cul-de-sac detail see sheet no. 142
Item 203 Excavation not including Embankment Construction, to be backfilled with Item 203 Embankment. Quantities carried to Sheet No. 94

HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - T.R. 127
STA. 0+888.389 TO STA. 1+111.298

WYA/CRA-30-28.009/0.000

961
2116

273.879 273.863 273.828 273.757 273.649 272.802 272.849 272.821 272.939 272.954

282
280
278
276
274
272

30m V.C.
V.P.I. Sta. 0+925.000 Elev. = 273.839
V.P.C. Sta. 0+910.000
V.P.T. Sta. 0+940.000
℄ Construction U.S. 30
Meet Existing
Sta. 0+888.389 Elev. = 273.898
-0.1620% -1.2622%
Proposed grade
Sta. 0+943.901 Elev. = 273.600
Existing ground
Sta. 1+063.200 Elev. = 272.744
Prop. grade at exist. ground
Meet Existing
Sta. 1+111.298 Elev. = 272.953

273.816 273.896 273.874 273.793 273.560 273.470 273.243 273.082 272.947 272.839 272.752 272.659 272.566 272.503 272.452 272.421 272.456 272.566 272.704 272.802 272.849 272.821 272.939 272.954 272.737 272.422 272.155

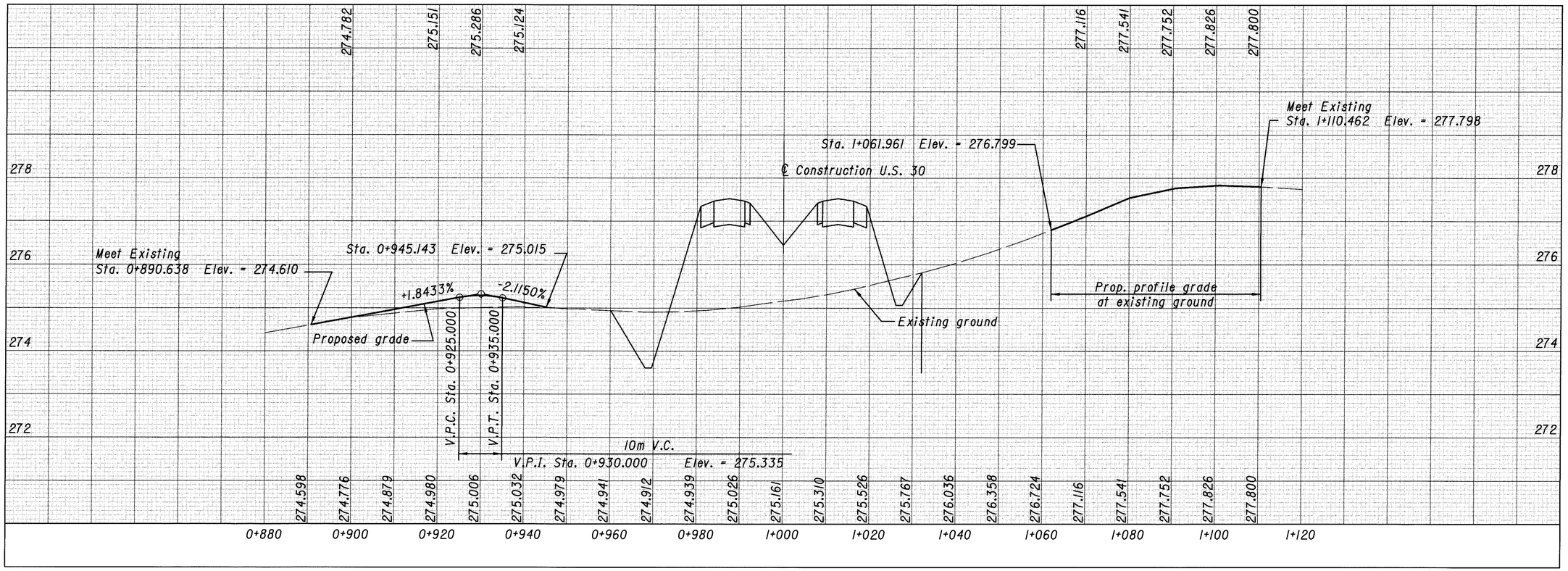
0+880 0+900 0+920 0+940 0+960 0+980 1+000 1+020 1+040 1+060 1+080 1+100 1+120 1+140

Sta. 0+946.343 - Sta. 0+960.071
Item 203 Excavation = 60.17 s.m. x 0.30 m = 18.1 c.m.
Item 203 Embankment = 18.1 c.m.

670 DEP
Permanent Easement
Constr. Limits
LA-R/W
POT Sta. 0+840.000
670 DEP
178.433m x 3.0m = 535.3 sq. m
D2
R/W
Constr. Limits
Ex. R/W
15m R
0+900
Asphalt
150mm
3% C.L.
Ex. R/W
R/W
2.148m
2.148m
D3
Constr. Limits
R/W
670 DEP
62.05m X 2.0m= 124.1 sq m
Meet Existing Pavt.
Sta. 0+890.638
Begin Work
Sta. 0+842.634
For Field Tiles See
US-30 Mainline Sheets
LA-R/W
Remove Exist. Pavement
Constr. Limits
670 DEP
Grave Dr.
STA. 1+000.000 TR-133=
STA. 35+337.125 U.S.R. 30
35+300
89° 49' 37"
1+000
℄ Construction U.S.R. 30
S 89° 35' 00" E
150mm Feild Tile
35+400

670 DEP
Constr. Limits
LA-R/W
Sta. 1+032.052 - Sta. 1+053.550
Item 203 Excavation = 103.19 s.m. x 0.30 m = 30.9 c.m.
Item 203 Embankment = 30.9 c.m.
670 DEP
73.050m X 2.0m = 146.1 sq m
End Work
Sta. 1+128.968
R/W
Constr. Limits
1+069.750, 12.819m Lt
15m R
D4
POT Sta. 1+130.556
Remove Exist. Pavement
℄ Construction T.R. 133
N 0° 14' 36.49" E
1+100
EX. R/W
Asphalt
Ex. R/W
100mm
D6
D5
Constr. Limits
Constr. Limits
LA-R/W
Outlet in Ditch El. 275.137
17.0m x 100mm cond. Type F
1+047.372, 8.209m Rt
Pick up point El. 275.318
670 DEP
18.6m X 2.0m=37.6sq m
45.0m x 100mm conduit
By Others
Pick up point El. 275.797
254mm
152mm
#1266
1/2 Sty.
Frame
4.572m R
Gravel
5.319m
2.181m
2.184m
102mm
100mm
Meet Existing
Sta. 1+110.462
Metal Barn
Gravel

Item 203 Excavation not including Embankment Construction, to be backfilled with Item 203 Embankment. Quantities carried to Sheet No. 94
304 Aggregate Base (200 mm)
For quantities see sheet no. 964
For cul-de-sac detail see sheet no. 142
For U.S. 30 see sheet no. 222
For Drive Profile see sheet no. 1232



N

0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - T.R. 133
STA. 0+846.308 TO STA. 1+110.462

WYA/CRA-30-28.009/0.000

962
2116

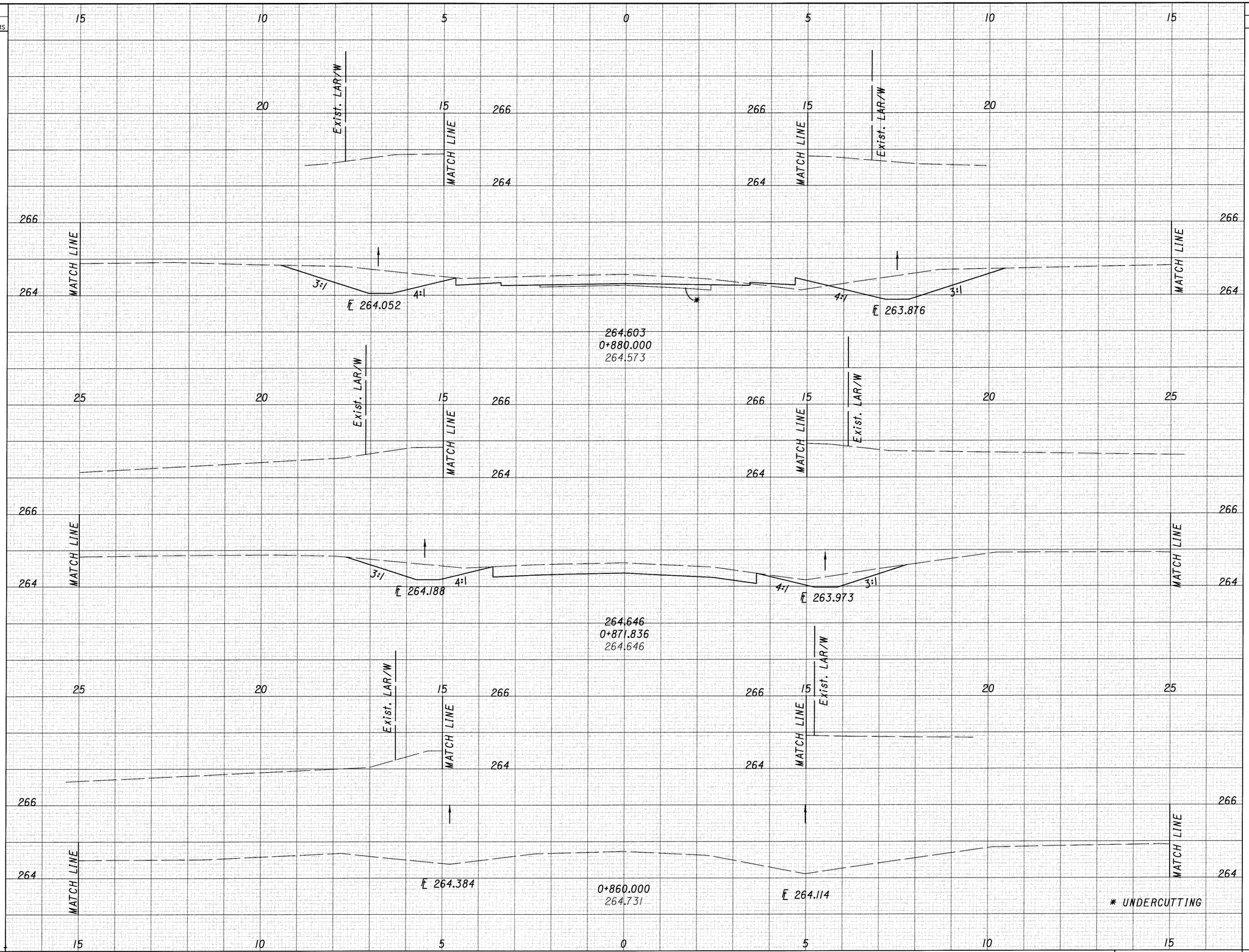
ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

CALCULATED AM
CHECKED REA

REF NO.	SHEET NO.	STATION	SIDE	603 100MM CONDUIT, TYPE F METER	670 DITCH EROSION PROTECTION SQ M	FOR INFORMATION ONLY 300 MM X 300 MM 22.5° BEND EACH	375 MM X 375 MM 22.5° BEND EACH	MASONRY COLLAR EACH
		TR-127						
D1	961	0+920.00 TO 0+964.09	LT		92.8			
		TR-133						
D2	962	0+847.234 TO 0+968.725	LT & RT		535.3			
D3	962	0+860.00 TO 0+920.00	RT		124.1			
D4	962	1+038.226 TO 1+100.00	LT		146.1			
D5	962	1+035.95 TO 1+054.75	RT		37.6			
D6	962	1+030.37 TO 1+047.37	RT	17.0				

SEEDING	
END WIDTH	SQ. METERS
18.58	
	140
15.71	
	0



END AREA		VOLUME	
CUT	FILL	CUT	FILL
5.80	0.51		
		38	2
3.62	0.00		
		0	0

CALCULATED AM

CHECKED REA

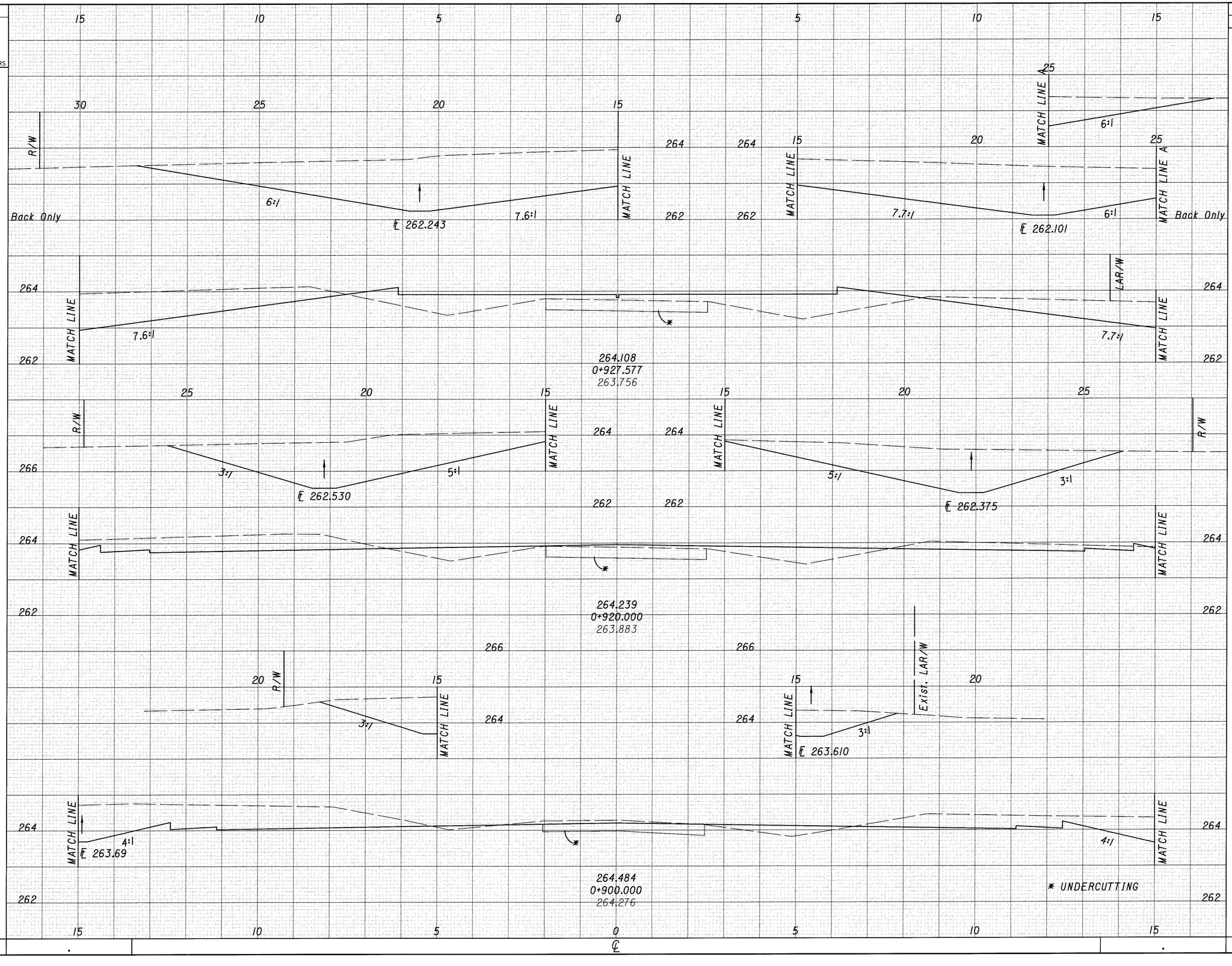
TR-55 CROSS SECTIONS

STA 0+860.000 TO STA 0+880.000

WYA/CRA-30-28.009/0.000

965
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
54.66		33.94	5.52		
	328			209	35
31.87		21.35	3.75		
	510			348	56
19.14		13.48	1.86		
	377			193	24



CALCULATED AM

CHECKED REA

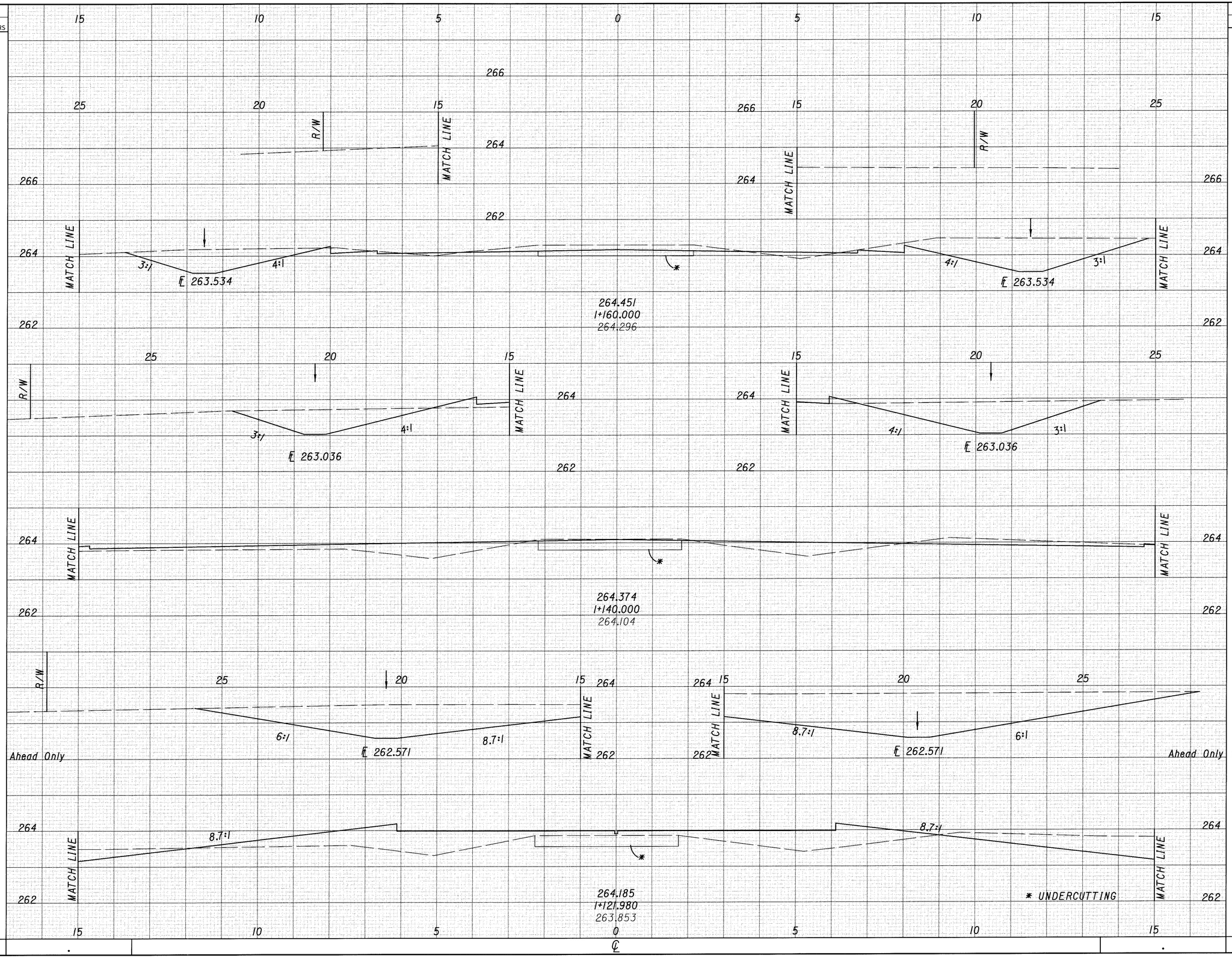
TR-55 CROSS SECTIONS

STA 0+900.000 TO STA 0+927.577

WYA / CRA-30-28.009 / 0.000

966
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20.41		7.88	0.98		
	428			153	55
22.43		7.42	4.51		
	654			248	103
50.16		20.07	6.89		



CALCULATED AM

CHECKED REA

TR-55 CROSS SECTIONS

STA 1+121.980 TO STA 1+160.000

WYA / CRA-30-28.009 / 0.000

967
2116

SEEDING	
END WIDTH	SQ. METERS
14.58	289

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.47	0.00	94	8

CALCULATED AM

CHECKED REA

15 10 5 0 5 10 15

268 266 264

Exist. LAR/W

℄ 264.155

1+180.000
264.503

℄ 264.132

Exist. R/W

3:1 4:1 ℄ 263.927

1+176.506
264.465

℄ 263.927 4:1 3:1

℄

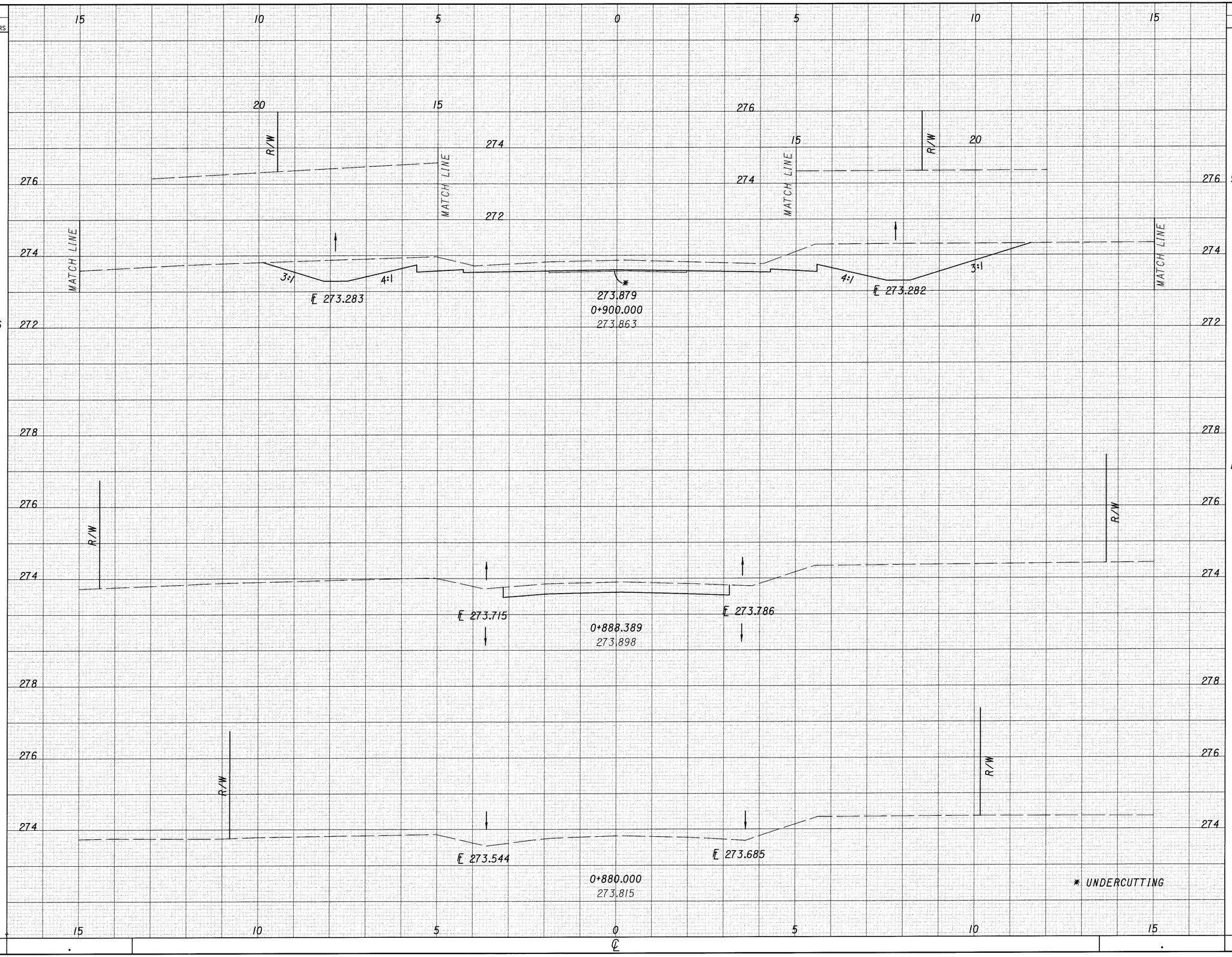
TR-55 CROSS SECTIONS
STA 1+176.506 TO STA 1+180.000

WYA / CRA-30-28.009 / 0.000

968
2116

SEEDING	
END WIDTH	SQ. METERS
18.18	
	106
0	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
9.15	0.14		
		63	1
1.78	0.00		



CALCULATED AM

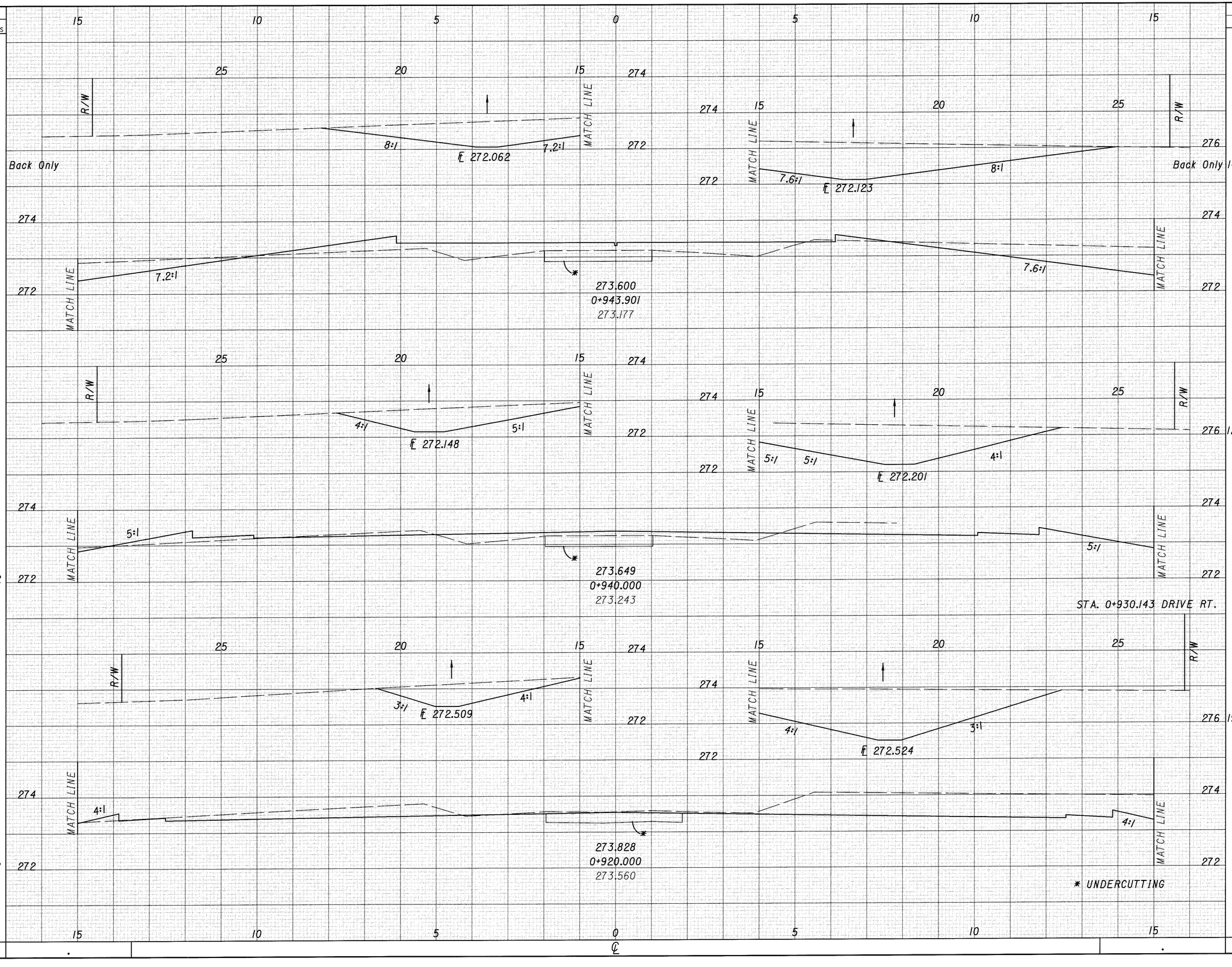
CHECKED REA

TR-127 CROSS SECTIONS

STA 0+880.000 TO STA 0+900.000

WYA / CRA-30-28.009 / 0.000

SEEDING END WIDTH	SEEDING SQ. METERS	
61.98		Back Only
	179	
29.54		
	542	
24.65		
	428	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14.75	3.91		
		54	13
12.83	2.71		
		704	0
		321	38
19.26	1.11		
		284	13

CALCULATED AM

CHECKED REA

TR-127 CROSS SECTIONS
STA 0+920.000 TO STA 0+943.901

WYA/CRA-30-28.009/0.000

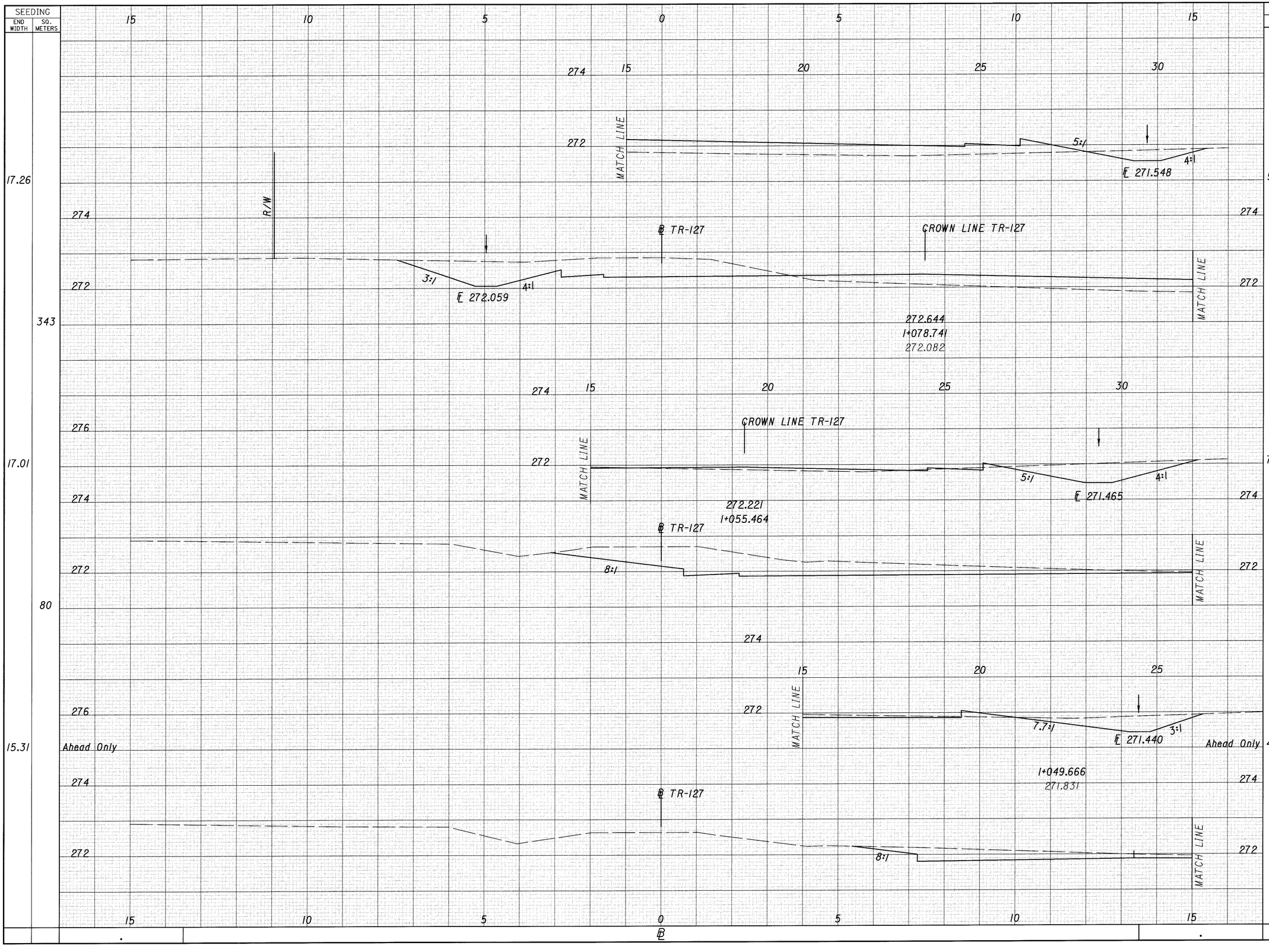
973
2116

SEEDING	
END WIDTH	SQ. METERS
17.26	
	343
17.01	
	80
15.31	Ahead Only

END AREA		VOLUME	
CUT	FILL	CUT	FILL
5.46	6.82		
		133	72
7.85	0.42		
		30	1
4.36	0.13		

CALCULATED AM

CHECKED REA

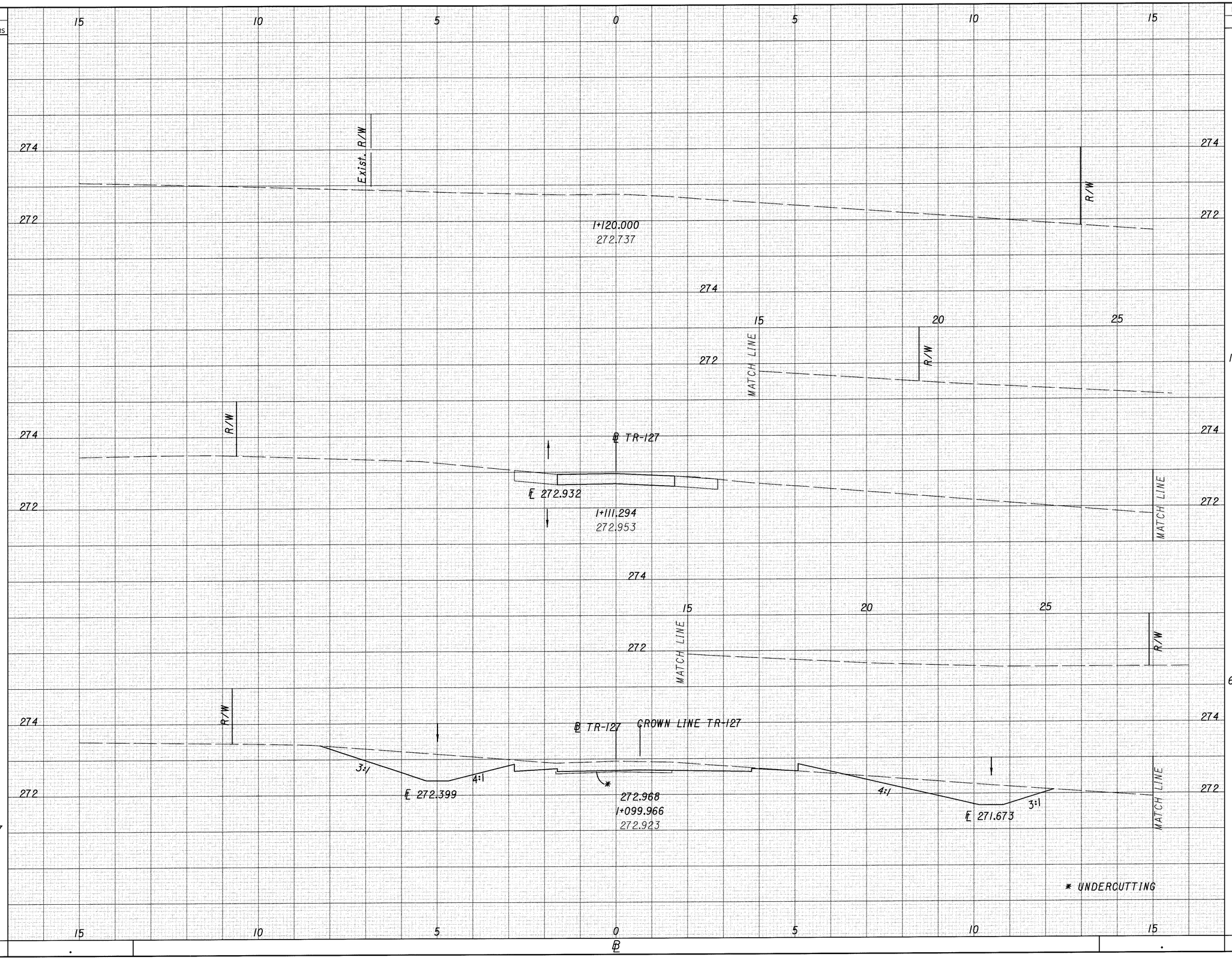


TR-127 CROSS SECTIONS

STA 1+049.666 TO STA 1+078.741

WYA/CRA-30-28.009/0.000

SEEDING	
END WIDTH	SQ. METERS
0	
	115
20.42	
	377



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.62	0.00		
		43	2
6.07	0.31		
		115	71

CALCULATED AM

CHECKED RE4

TR-127 CROSS SECTIONS
STA 1+099.966 TO STA 1+120.000

WYA/CRA-30-28.009/0.000

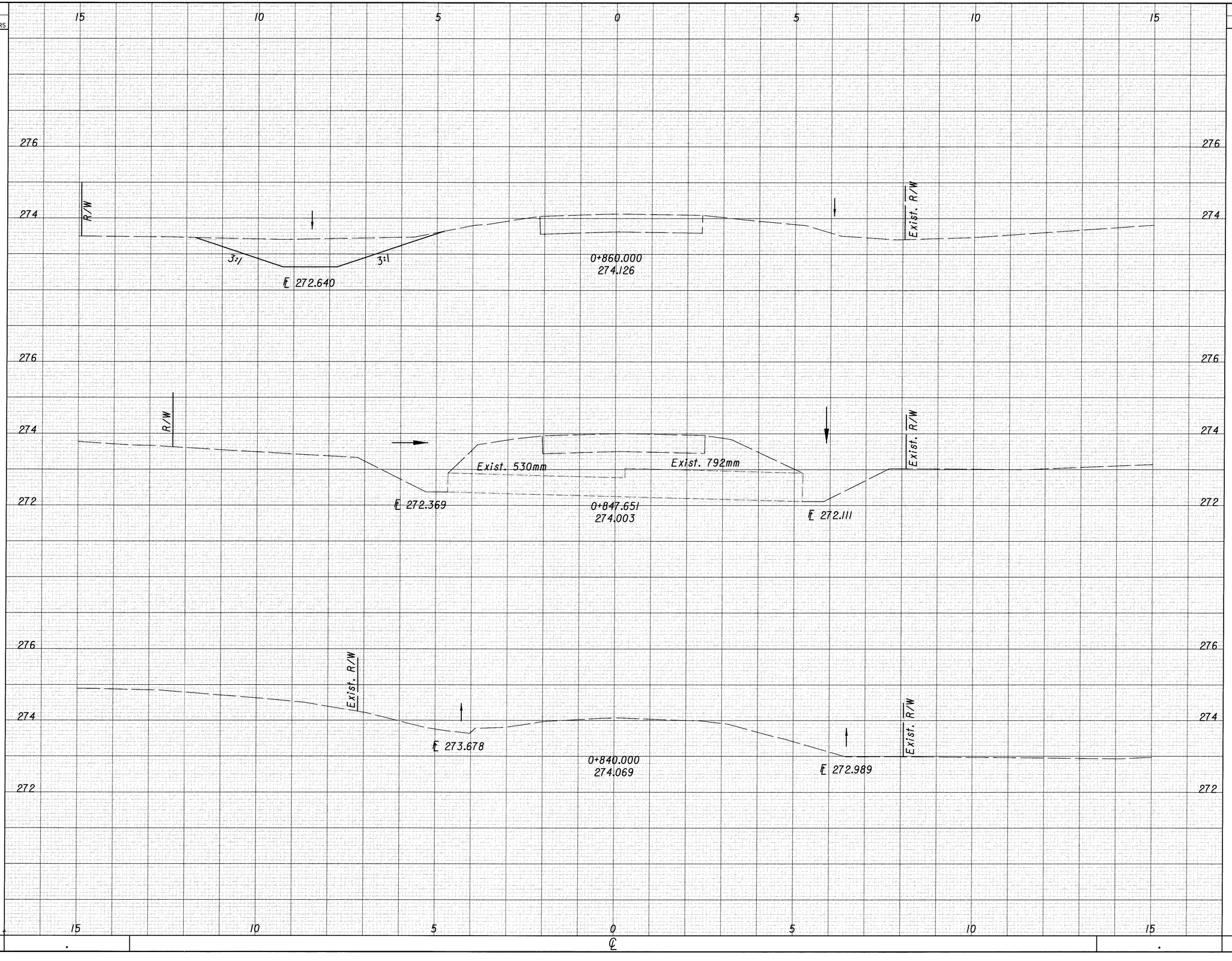
975
2116

SEEDING	
END WIDTH	SQ. METERS
10.25	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.13	0.00		

CALCULATED AM

CHECKED REA



TR-133 CROSS SECTIONS
STA 0+840.000 TO STA 0+860.000

WYA / CRA-30-28.009 / 0.000

SEEDING	
END WIDTH	SQ. METERS
26.3	263
23.22	335

END AREA	
CUT	FILL
11.70	0.42
7.87	0.00

VOLUME	
CUT	FILL
104	2
110	0

CALCULATED AM

CHECKED REA

TR-133 CROSS SECTIONS
STA 0+880.000 TO STA 0+890.638

WYA/CRA-30-28.009/0.000

977
2116

15 10 5 0 5 10 15

25 20 15

R/W

MATCH LINE

274

276

272

6:1

3:1

4:1

℄ 272.750

℄ 274.000

274.610
0+890.638
274.591

℄ 272.700

℄ 273.900

0+880.000
274.404

* UNDERCUTTING

℄

SEEDING	
END WIDTH	SQ. METERS
28.32	572
28.84	258

END AREA		VOLUME	
CUT	FILL	CUT	FILL
19.64	2.27	348	28
15.15	0.52	126	4

CALCULATED AM

CHECKED REA

15 10 5 0 5 10 15

280 278 276 274 272

R/W

MATCH LINE

3:1 4:1

℄ 272.900

℄ 274.500

275.151
0+920.000
274.974

℄ 272.800

274.782
0+900.000
274.769

℄ 274.100

* UNDERCUTTING

TR-133 CROSS SECTIONS
STA 0+900.000 TO STA 0+920.000

WYA / CRA-30-28.009 / 0.000

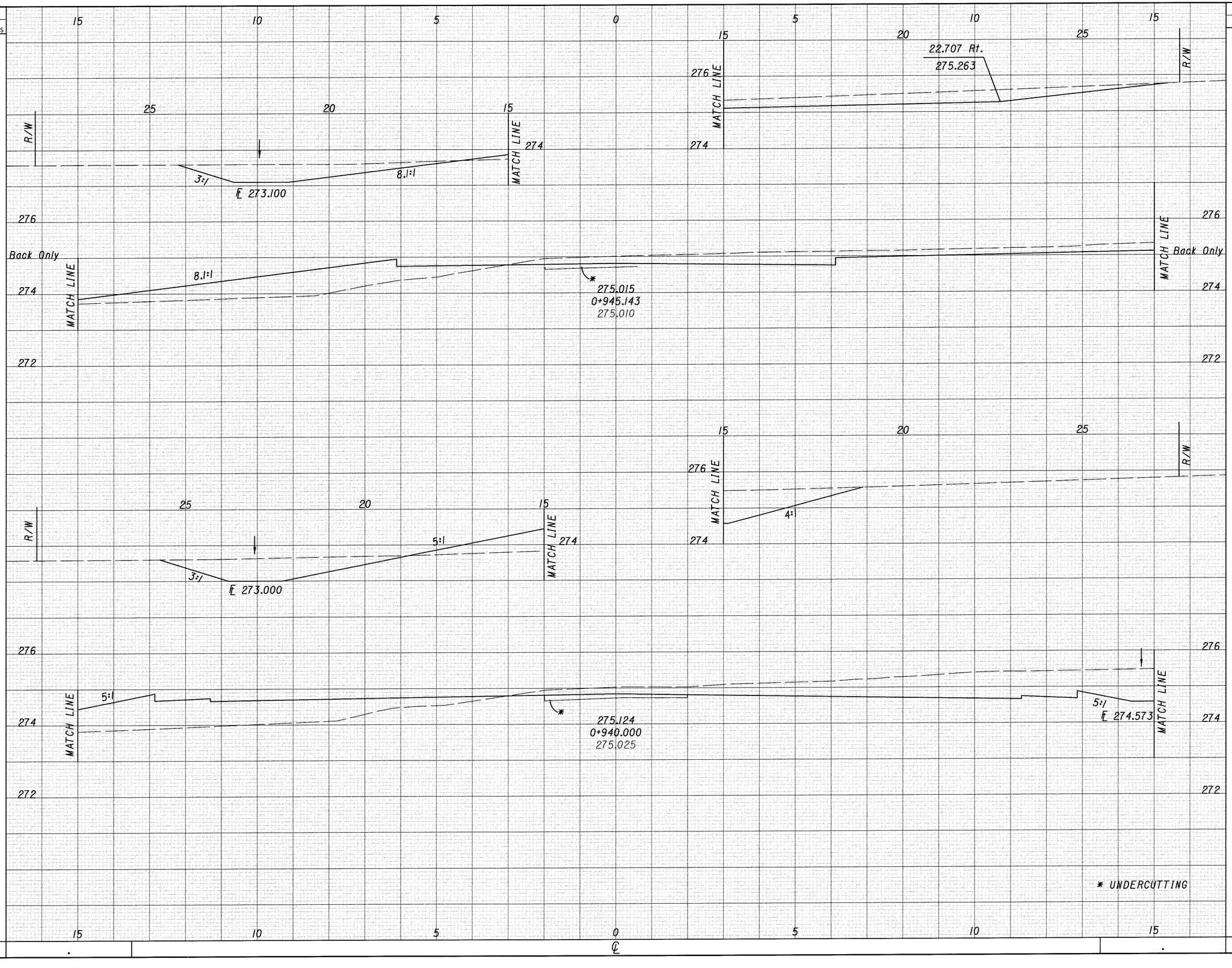
978
2116

SEEDING	
END WIDTH	SQ. METERS
46.55	
	189
26.93	
	553

END AREA		VOLUME	
CUT	FILL	CUT	FILL
9.83	4.94		
		60	33
13.35	8.02		
		330	103

CALCULATED AM

CHECKED REA



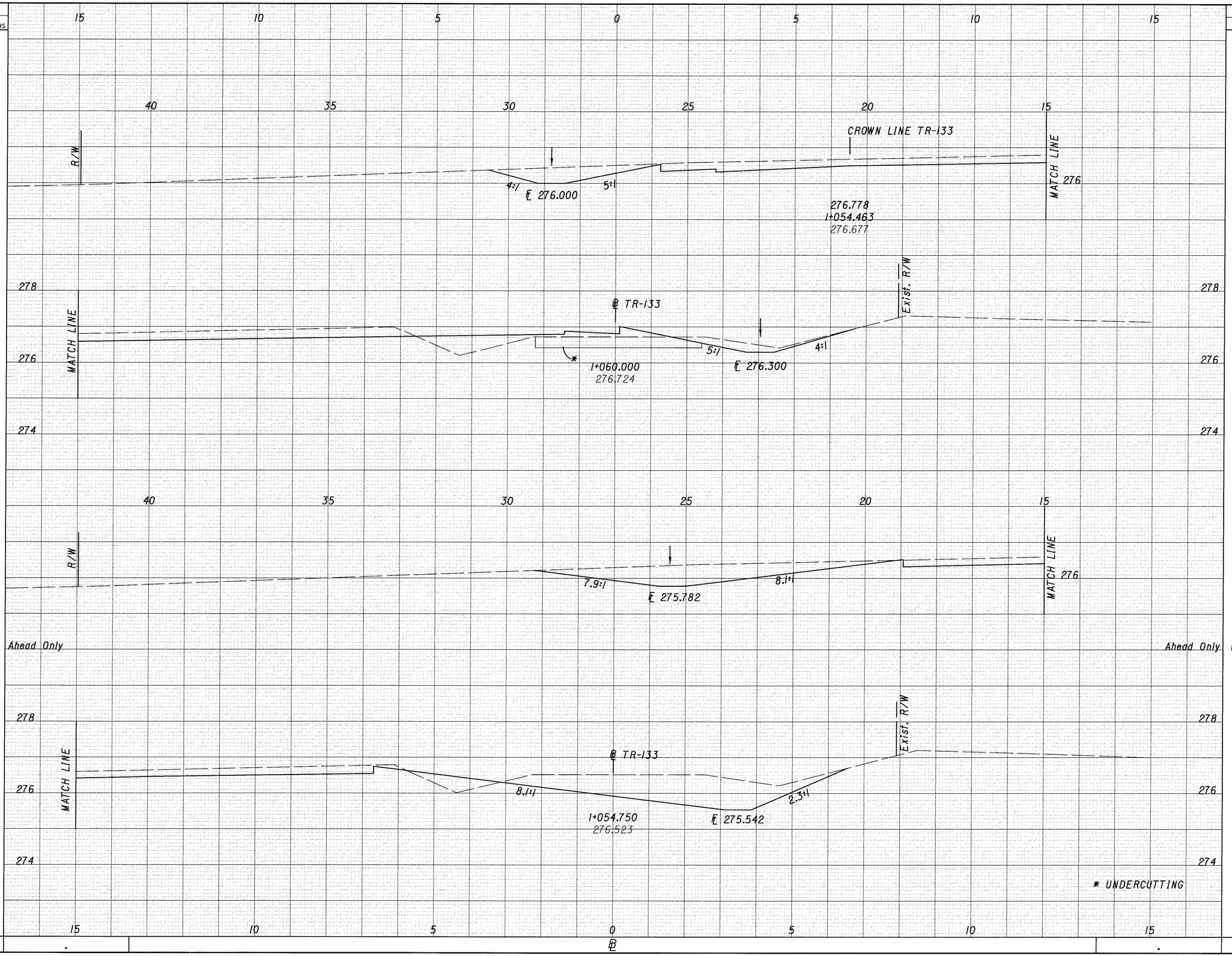
TR-133 CROSS SECTIONS

STA 0+940.000 TO STA 0+945.143

WYA/CRA-30-28.009/0.000

979
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
18.7		7.72	2.61		
	132			51	8
31.49	Ahead Only	11.61	0.59		



CALCULATED AM

CHECKED REA

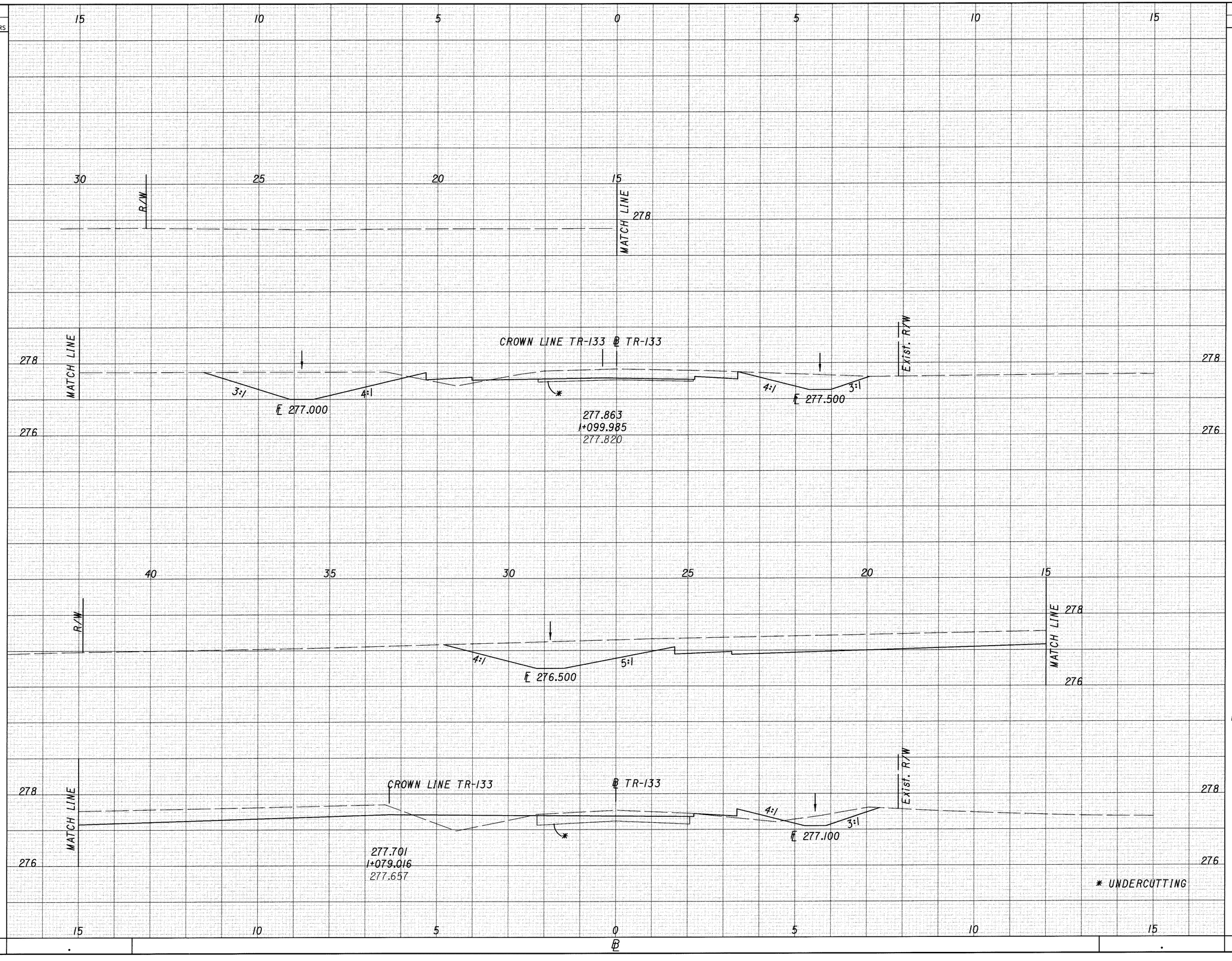
TR-133 CROSS SECTIONS

STA 1+054.750 TO STA 1+060.000

WYA/CRA-30-28.009/0.000

980
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
17.33	352	5.21	0.40	175	21
17.87	366	12.33	1.73	201	43



CALCULATED AM

CHECKED REA

TR-133 CROSS SECTIONS

STA 1+079.016 TO STA 1+099.985

WYA / CRA-30-28.009 / 0.000

981
2116

SEEDING	
END WIDTH	SQ. METERS

℄ Survey U.S. 23

Asph./Conc.

Asph./Conc.

Woven Wire

℄

Ex. LA- R/W

Woven Wire

670 DEP
56.137m X 3.0m = 168.5 sq m

670 DEP
109.450m X 2.0m = 218.9 sq m

D3

D4

D5

U3

R2

28+845.257
Begin GR 11.7m Lt.

3000mm, RCP
See sheet no. 1307

Sta. 29+019.967
Ramp A

605 100mm x 222.0m

29+000

Guardrail, Type 5

℄ Construction Ramp "A"

603 375mm x 58.7m-C

Type B Anchor
Assembly

U2

28+900

R1

670 DEP
31.533m X 3.0m = 94.6 sq m

670 DEP
94.0m X 2.0m = 188.0 sq m

603 150mm x 10.8m-F

Constr. Limits

D7

D8

Pick up point
El. 263.930

Constr. Limits

LA-R/W

D6

LA-R/W

300mm

670 DEP
12.966m X 3.0m = 38.9 sq m

Guardrail, Type 5

29+100

603 150mm x 24.3m-F

670 DEP

Abndn. 300mm

℄ Construction E.B. U.S. 30

29+100

670 DEP

603 375mm x 111.6m-C

603 375mm x 11.7m-B

CS Sta. 29+086.030

D10

605 100mm x 298.0m

ST Sta. 29+156.030

U4

N 79° 27' 58.29" E

D9

670 DEP
130.750m X 2.0m = 261.5 sq m

Match Line Sta. 28+840.000 See Sheet No. 985

Match Line Sta. 29+180.000 See Sheet No. 988

Ramp A

P.I. = Sta. 28+958.499
Δ = 73° 16' 04.82" (RT)
R = 305.000 m
Ls2 = 70.000 m
*s2 = 6° 34' 29.73"
LT2 = 46.699 m
ST2 = 23.363 m
Lc = 355.024 m
Ts1 = 227.493 m
Ts2 = 261.577 m
Es = 75.497 m
e max = 0.08

For profile see sheet no. 987
For quantities see sheet no. 990, 991
For underdrain quantities see sheet no. 130
For E.B. U.S. 30, see sheet no. 165-166
For U.S. 23, see sheet no. 757

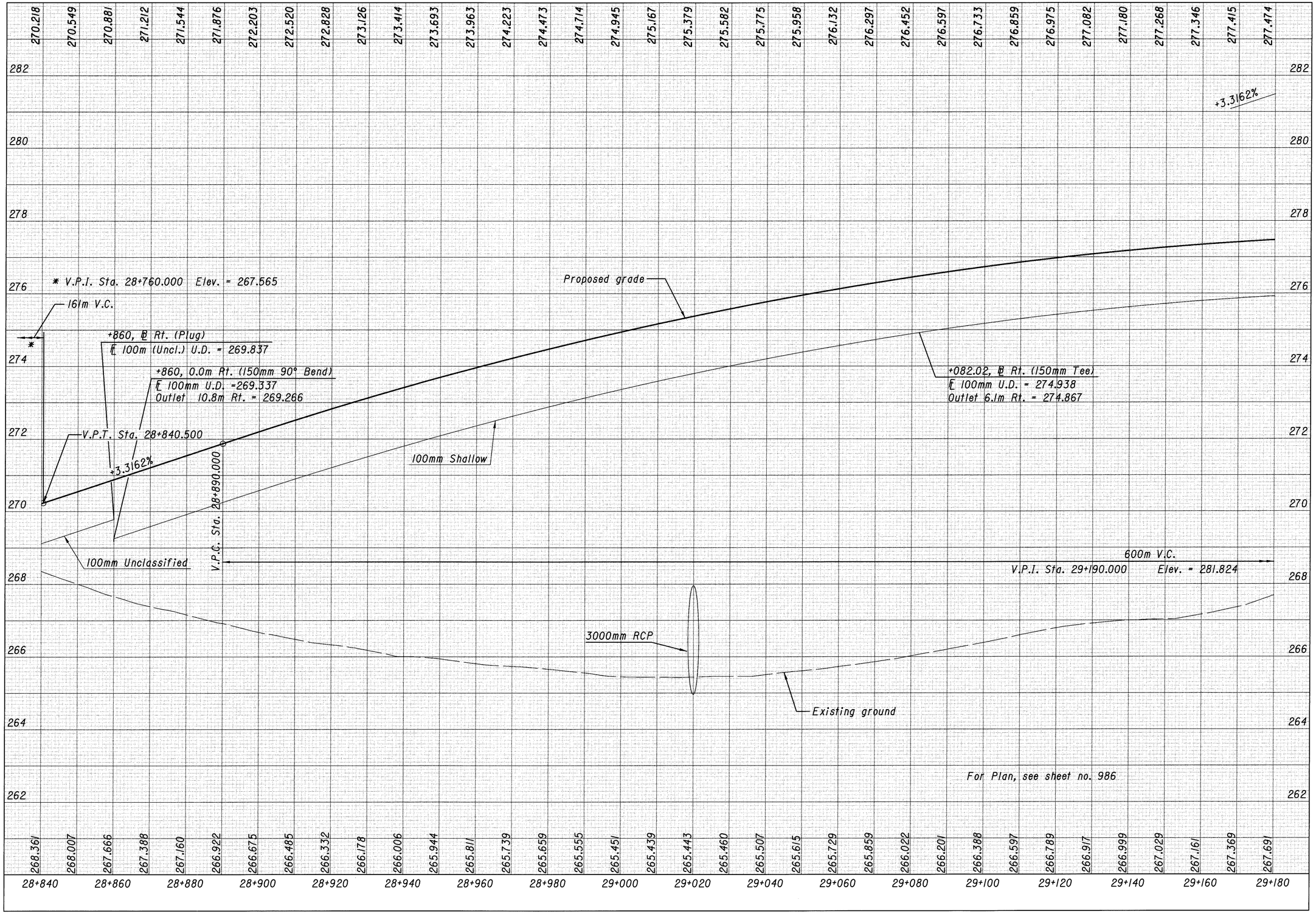
HORIZONTAL
SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

PLAN
STA. 28+840 TO STA. 29+180

WYA/CRA-30-28.009/0.000

986
2116

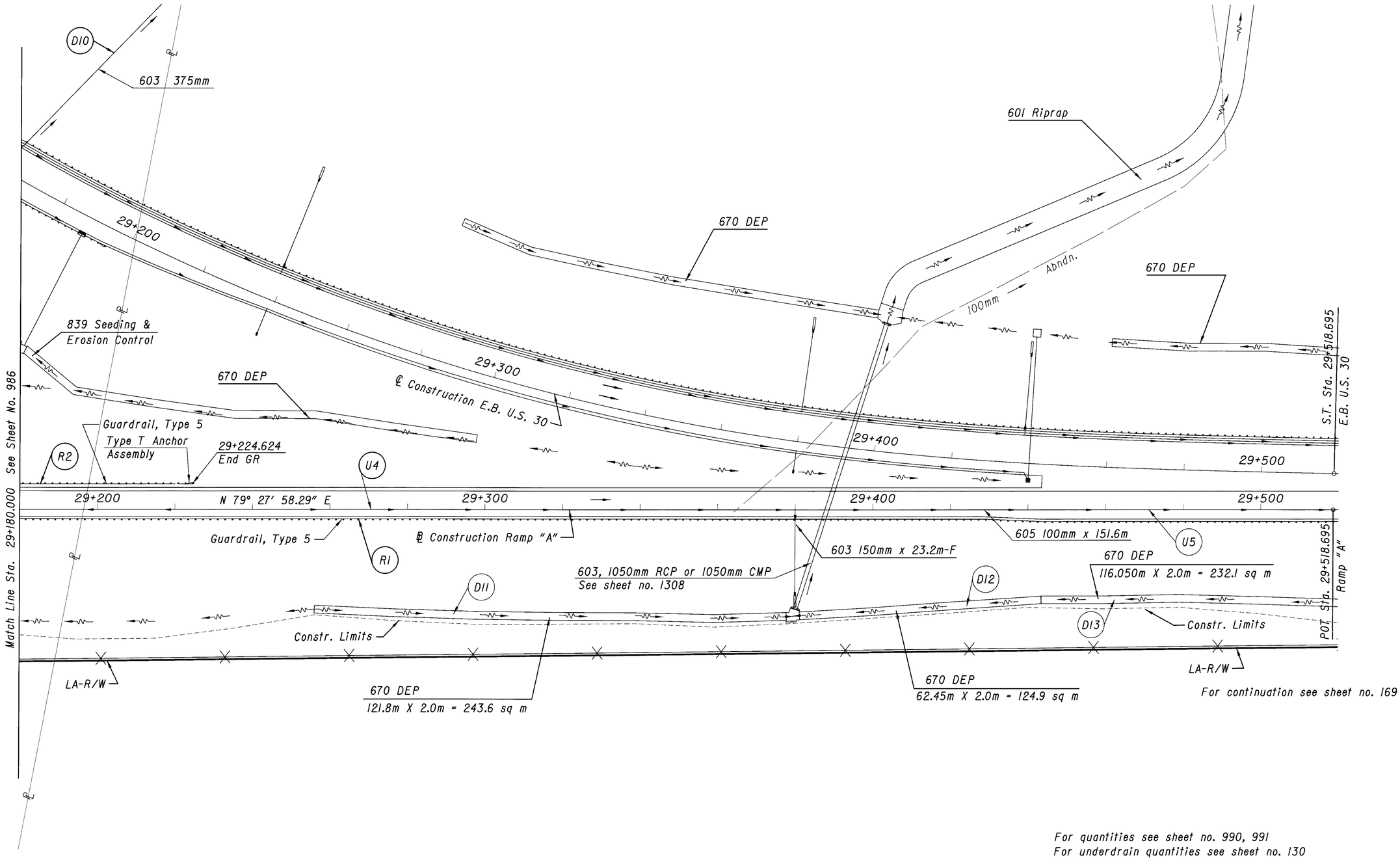


CALCULATED JGB
CHECKED REA

PROFILE - RAMP A
STA. 28+840 TO STA. 29+180

WYA/CRA-30-28.009/0.000

987
2116



For quantities see sheet no. 990, 991
For underdrain quantities see sheet no. 130
For Profile, see sheet no. 989
For E.B. U.S. 30, see sheet no. 165-166, 169-170

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

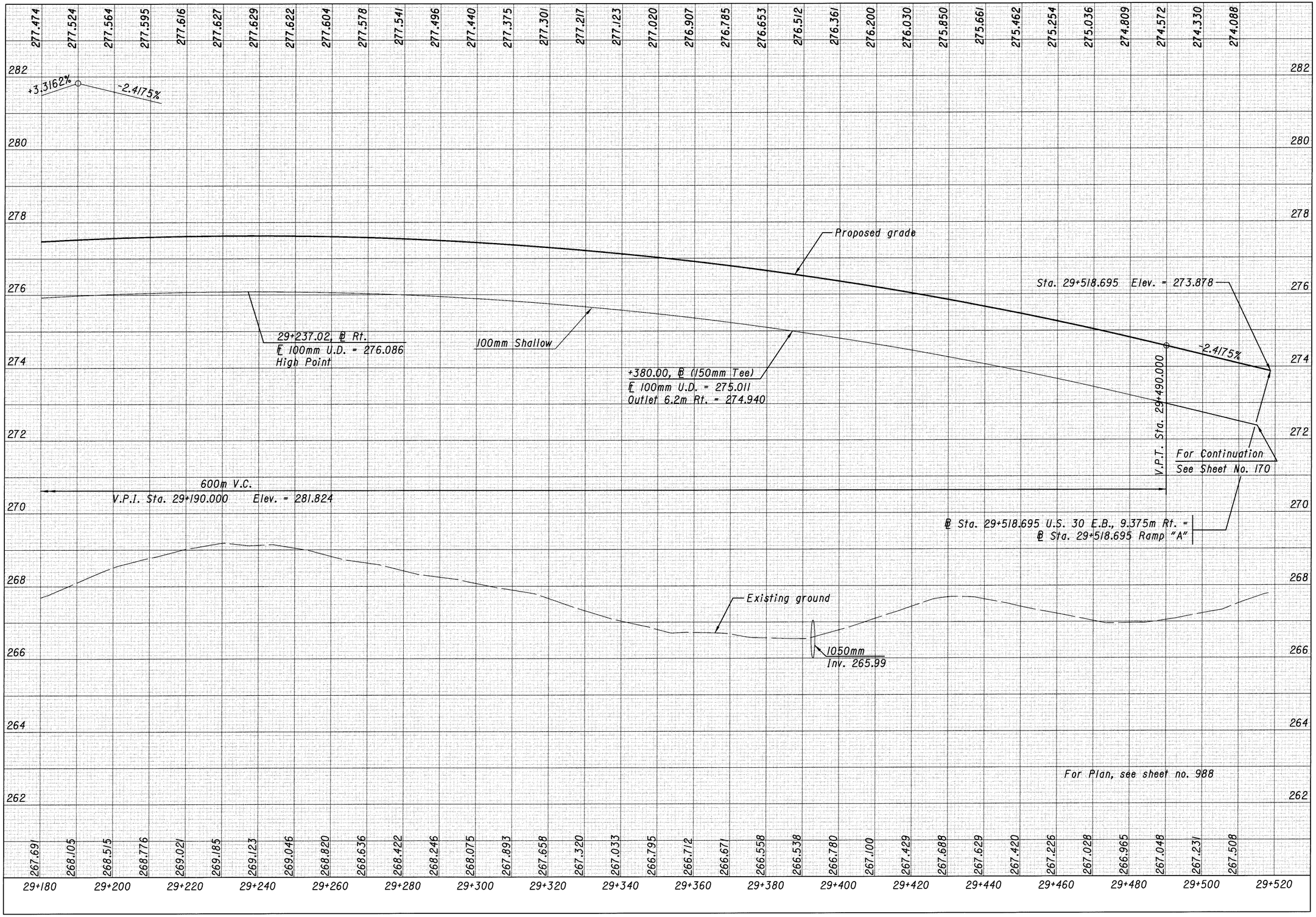
PLAN - RAMP A STA. 29+180 TO STA. 29+518.695

WYA/CRA-30-28.009/0.000

988
2116

CALCULATED JGB
CHECKED REA

PROFILE - RAMP A
STA. 29+180 TO STA. 29+518.695



WYA/CRA-30-28.009/0.000

989
2116

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE 1		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		RAMP A																															
R1	985	28.794.949 TO 29+573.927 EB	RT														769.620					1		1									
R2	986	28+845.257 TO 29+224.624	LT														377.190					1		1									
TOTALS CARRIED TO SUB-SUMMARY																	1146.810					2		2									

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

990
2116

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

CALCULATED AM | CHECKED REA

REF NO.	SHEET NO.	STATION	SIDE	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 375 MM CONDUIT, TYPE B (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 3000 MM CONDUIT, TYPE A 706.02, 100 D-LOAD (METER)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: MASONRY COLLAR (EACH)
D1		NOT USED											
D2	985	12+457.82 US-23 TO 28+594.46 RAMP A	RT						127.1				
D3	986	28+880.00 TO 28+980.00	LT						218.9				
D4	986	28+980.00 TO 29+030.79	LT						168.5				
D5	986	29+019.966	LT & RT	57.5	17.74			62.1		277.6			
D6	986	28+860.00 TO 28+959.98	RT						188.0				
D7	986	28+959.98 TO 28+994.22	RT						94.6				
D8	986	29+005.78 TO 29+020.00	RT						38.9				
D9	986	29+020.00 TO 29+160.00	RT						261.5				
D10	986	29+033.74 RAMP A TO 29+299.14 US-30	LT & RT			42.2	531.8						
D11	988	29+256.08 TO 29+377.82	RT						243.6				
D12	988	29+381.22 TO 29+443.49	RT						124.9				
D13	988	29+443.49 RAMP A TO 29+560.00 EBUS-30	RT						232.1				
											TOTALS		
TOTALS CARRIED TO SUB-SUMMARY				57.5	17.74	42.2	531.8	62.1	1698.1	277.6			

RAMP "B"
P.I. = Sta. 28+110.253
Δ = 29° 46' 31.00" (LT)
R = 305.000 m
Ls2 = 82.000 m
θs2 = 7° 42' 07.40"
LT2 = 54.719 m
ST2 = 27.380 m
Lc = 117.501 m
Tsl = 82.932 m
Ts2 = 120.455 m
Es = 11.074 m
e_{max} =0.08

100mm

(U_) For quantities see adjacent sheet no. 754

For underdrain quantities see sheet no. 131
For U.S. 23, see sheet no. 754, 757
For Ramp A see sheet no. 985

LA-R/W
Constr. Limits
Ex. LA-R/W
Woven Wire
U3
Half Section Line
PC Sta. 28+027.321
28+000
℄ Construction Ramp "B"
12+600
Asph./Conc.
28+100
Constr. Limits
604 No.5 CB
See sheet no. 1025
Plug
CS Sta. 28+144.822
ST Sta. 28+226.822
28+200
605 100mm x 46.8m
U1
605 100mm x 61.9m
For Continuation see Sheet No. 995
670 DEP
Ex. LA-R/W
Woven Wire
12+700
℄ Survey U.S. 23
28+700
PCC Sta. 28+731.006
℄ Construction Ramp "A"
Constr. Limits
LA-R/W
CB
12+800
Asph./Conc.

267.451 267.376 267.306 267.254 267.221 267.207 267.212 267.236 267.278 267.340 267.421 267.520 267.639 267.776 267.932 268.108 268.302 268.515 268.747 268.998

182m V.C.
V.P.I. Sta. 28+134.000 Elev. = 266.674
V.P.C. Sta. 28+043.000
V.P.I. Sta. 28+226.822 Elev. = 269.180
V.P.T. Sta. 28+225.000
+2.7000%
Sta. 28+-027.321 Elev. = 267.471
For Continuation see Pavement Details, Sh. No. 1412
-0.7470%
28+180, ℄
℄ 100mm = 266.564
Proposed grade
100mm Shallow
+2.7000%
Existing ground
100mm Unclassified
℄ Sta. 28+226.822 Ramp B (Bk.), 4.800m Rt. =
℄ Sta. 28+226.822 Ramp B (Ah.)
28+043, ℄
℄ 100mm = 265.810
28+118.139, ℄
℄ (100mm x 150mm Wye) = 265.784
28+126.671, ℄
℄ 100mm = 266.400
28+226.822, ℄ (Bk.)
℄ 100mm (Plug) = 267.636
28+128.171, 9.556m Lt.
Outlet (@ C.B.) = 265.680

272 270 268 266 264

267.784 267.847 267.882 267.904 267.886 267.815 267.759 267.748 267.684 267.626 267.589 267.524 267.435 267.356 267.313 267.321 267.300 267.331 267.442 267.607 267.690 267.808 267.878 267.892 267.884 267.839 267.811 267.793 267.798 267.826 267.793 267.669 267.526 267.363 267.308

27+900 27+920 27+940 27+960 27+980 28+000 28+020 28+040 28+060 28+080 28+100 28+120 28+140 28+160 28+180 28+200 28+220 28+240

HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED AM
CHECKED REA

PLAN AND PROFILE - RAMP B
STA. 28+027.321 TO STA. 28+226.822

WYA/CRA-30-28.009/0.000

992
2116

Ramp B
P.I. = Sta. 28+110.253
Δ = 29° 46′ 31.00″ (LT)
R = 305.000 m
Ls2 = 82.000 m
*s2 = 7° 42′ 07.40″
LT2 = 54.719 m
ST2 = 27.380 m
Lc = 117.501 m
Tsl = 82.932 m
Ts2 = 120.455 m
Es = 11.074 m
e max = 0.08

Ramp "B"
P.I. = Sta. 29+169.181
Δ = 142° 30′ 24.91″ (RT)
R = 305.000 m
Ls = 82.000 m
*s = 7° 42′ 07.40″
LT = 54.719 m
ST = 27.380 m
Lc = 676.601 m
Ts = 942.359 m
Es = 646.882 m
e max = 0.08m

150mm
100mm
100mm Abndn.
Plug
LA-R/W
28+326.479
Begin GR
Type T Anchor Assembly
605 100mm x 150.0m
℄ Construction Ramp "B"
Constr. Limits
Abndn.
28+300
28+400
U1
U2
R1
D1
670 DEP
177.350m X 2.0m = 354.7 sq m
Guardrail, Type 5
603 150mm x 10.2m-F
Type T Anchor Assembly
28+366.841
Begin GR
R2
603 150mm x 10.8m-F
For Continuation see Sheet No. 992
TS Sta. 28+226.822
SC Sta. 28+308.822
Guardrail, Type 5
603 150mm x 24.2m-F
D2
U3
670 DEP
71.50m X 3.0m = 214.5 sq m
Match Line Sta. 28+490.000 See Sheet No. 997

Shed
Wood Shed
Woods
Grass
Gravel
Grass Arbor
203mm
Woven Wire
305mm
254mm
Bush
Conc. Walk
2 Sty. Fr.
152mm

Ex. LA-R/W
Woven Wire
670 DEP
℄ Survey U.S. 23
13+000
Asph./Conc.

100mm Abndn.

For quantities see sheet no. 999-1000
For underdrain quantities see sheet no. 132
For Profile, see sheet no. 996
For U.S. 23 see sheet no. 757

N

0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED AM
CHECKED REA

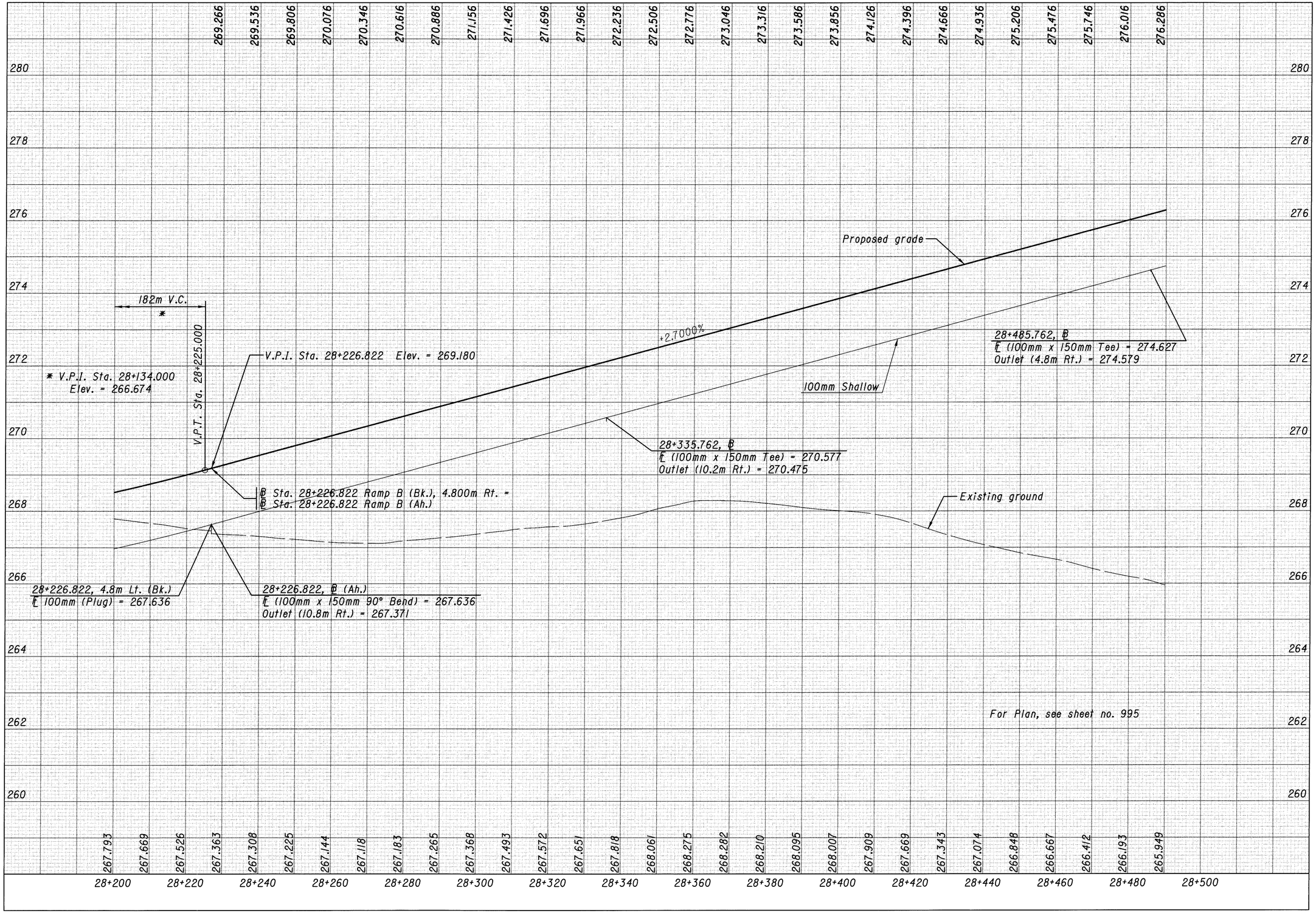
PLAN - RAMP B
STA. 28+226.822 TO STA. 28+490

WYA/CRA-30-28.009/0.000

995
2116

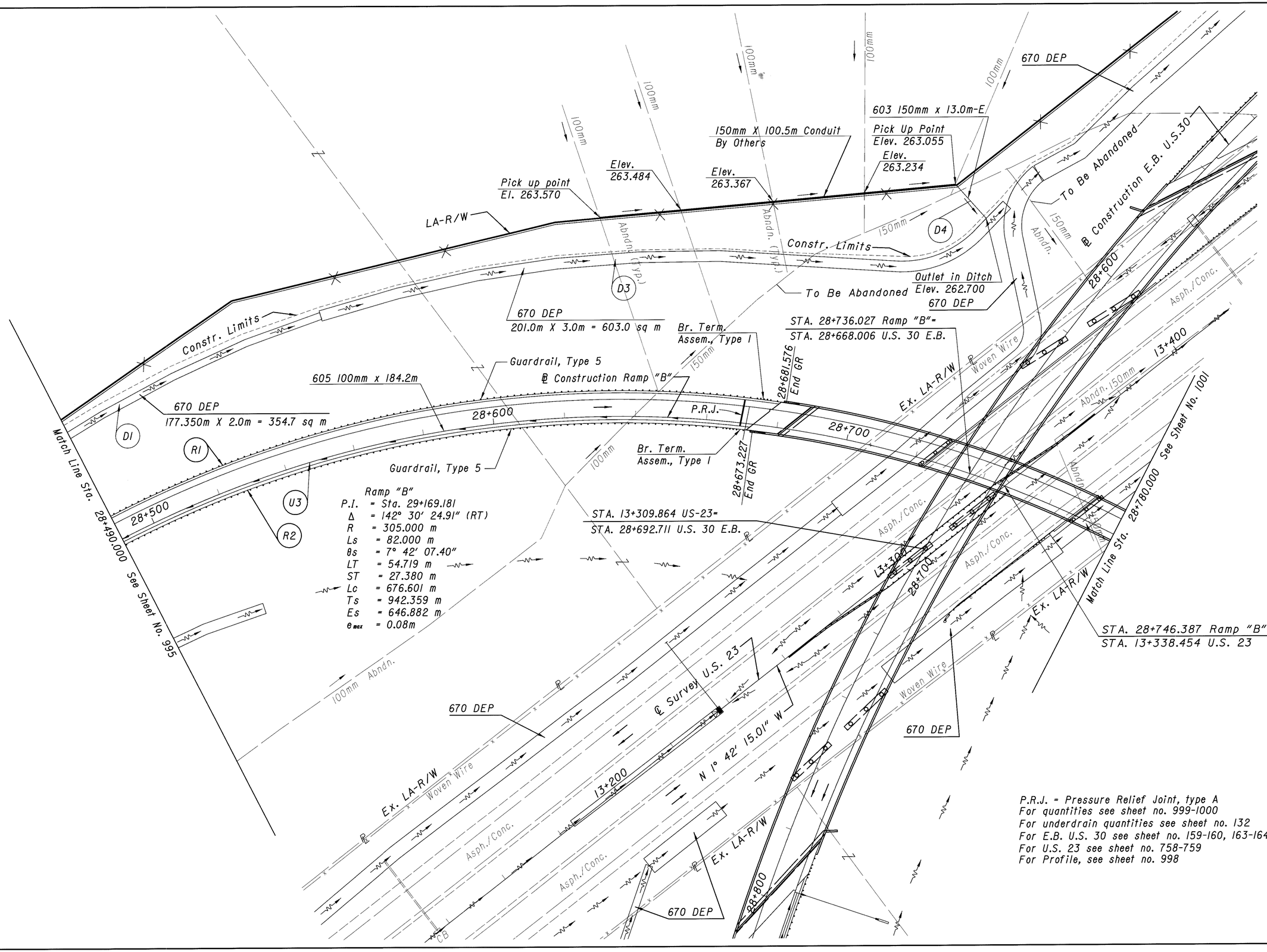
CALCULATED AM
CHECKED REA

PROFILE - RAMP B
STA. 28+226.822 TO STA. 28+490



WYA/CRA-30-28.009/0.000

996
2116



HORIZONTAL SCALE IN METERS

0 10 20

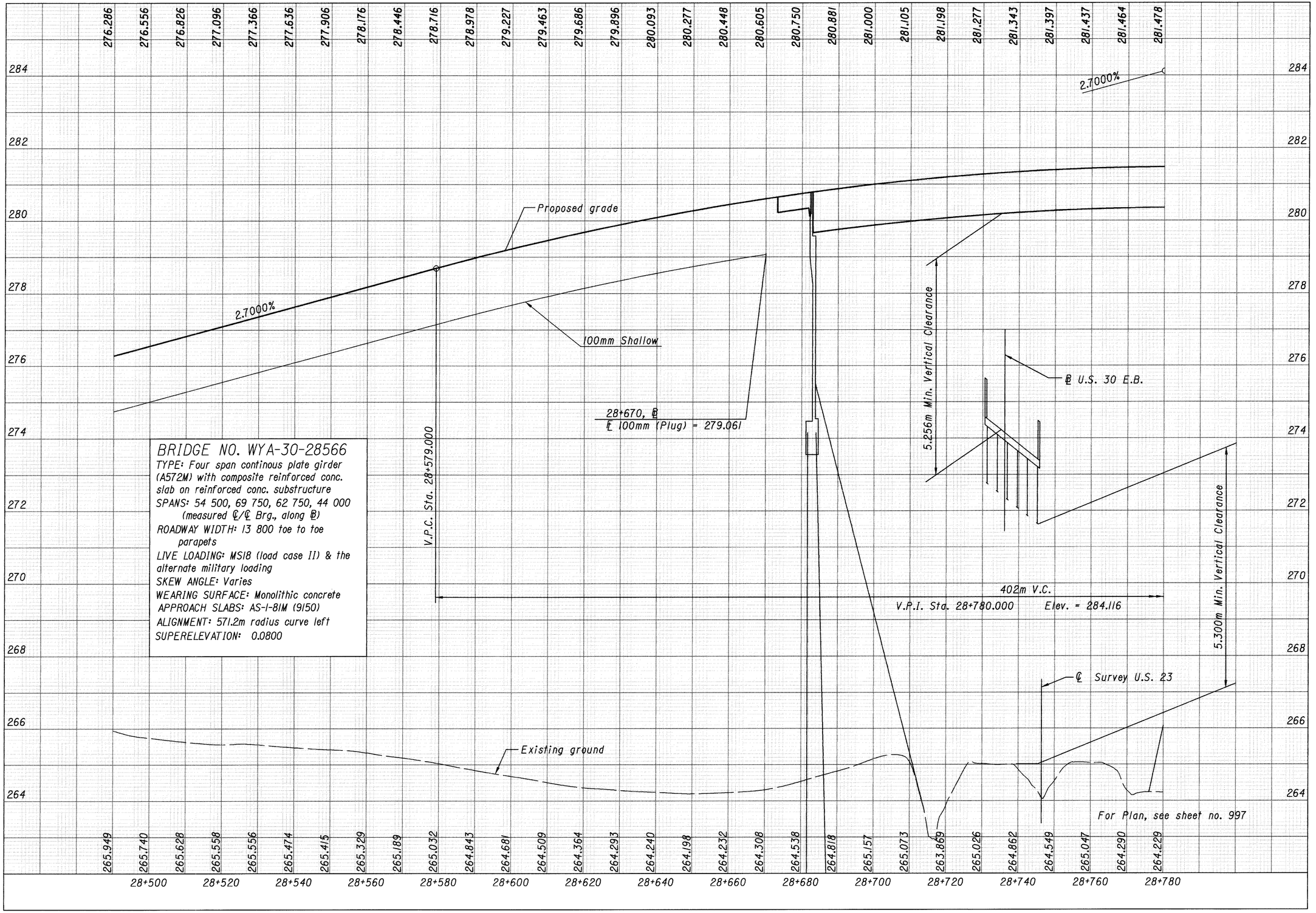
CALCULATED AM

CHECKED REA

PLAN - RAMP B
STA. 28+490 TO STA. 28+780

WYA/CRA-30-28.009/0.000

997
2116



BRIDGE NO. WYA-30-28566

TYPE: Four span continous plate girder (A572M) with composite reinforced conc. slab on reinforced conc. substructure

SPANS: 54 500, 69 750, 62 750, 44 000 (measured ℄/℄ Brg., along ℄)

ROADWAY WIDTH: 13 800 toe to toe parapets

LIVE LOADING: MS18 (load case II) & the alternate military loading

SKEW ANGLE: Varies

WEARING SURFACE: Monolithic concrete

APPROACH SLABS: AS-1-81M (9150)

ALIGNMENT: 571.2m radius curve left

SUPERELEVATION: 0.0800

CALCULATED AM

CHECKED REA

PROFILE - RAMP B
STA. 28+490 TO STA. 28+780

WYA / CRA-30-28.009 / 0.000

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		RAMP B AHEAD																															
R1	995	28+326.479 TO 28+681.576	LT														360.045								1	1							
R2	995	28+366.841 TO 28+673.227	RT														299.085								1	1							
TOTALS CARRIED TO SUB-SUMMARY																	659.130								2	2							

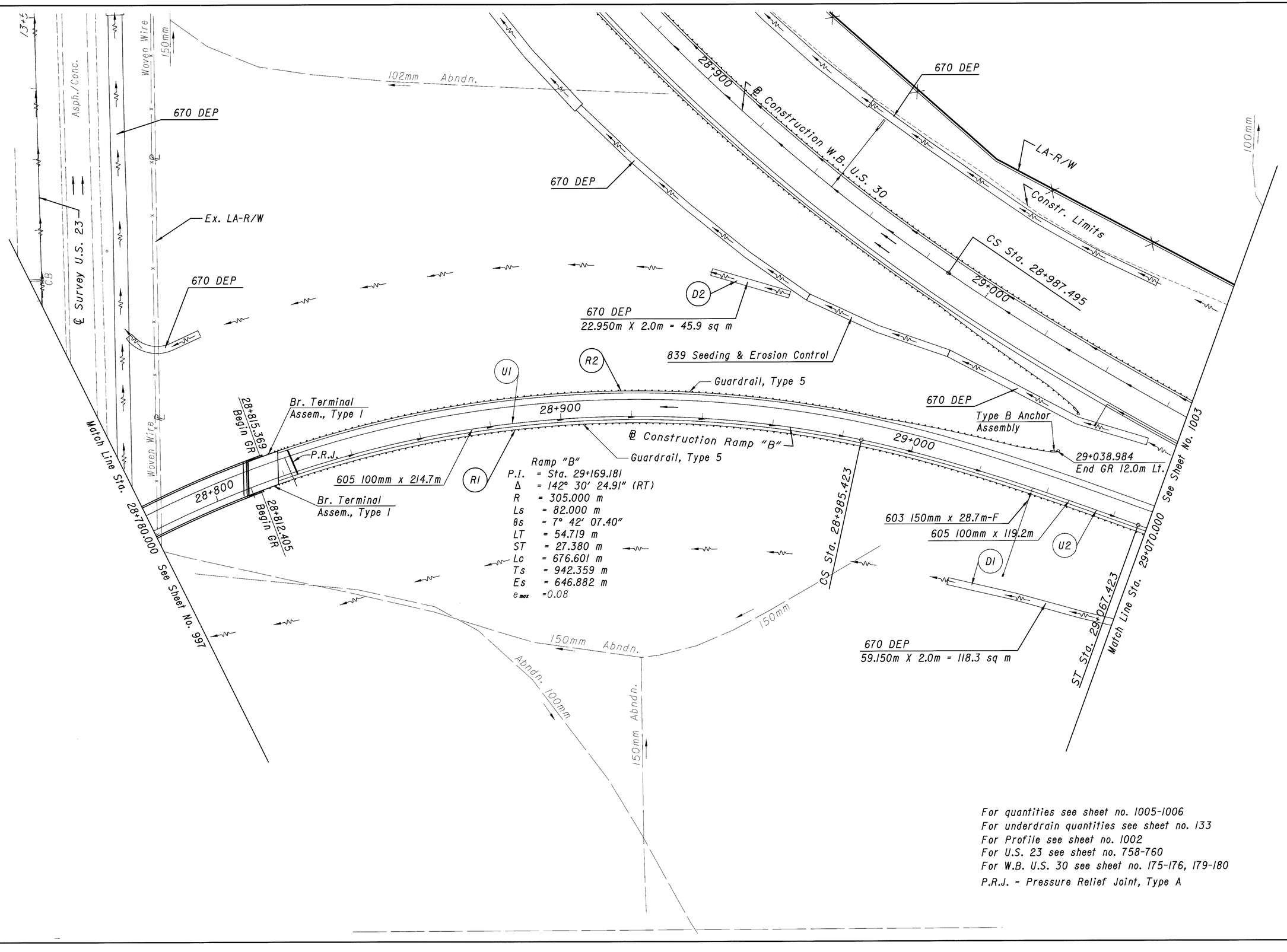
CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA / CRA-30-28.009 / 0.000

999
2116

REF NO.	SHEET NO.	STATION	SIDE	603 150 MM CONDUIT, TYPE E METER	670 DITCH EROSION PROTECTION SQ M	FOR INFORMATION ONLY 300 MM X 300 MM 22.5° BEND EACH	375 MM X 375 MM 22.5° BEND EACH	MASONRY COLLAR EACH
D1	995	28+400.00 TO 28+560.00	LT		354.7			
D2	995	28+440.00 TO 28+520.00	RT		214.5			
D3	997	28+560.00 TO 28+724.22	LT		603.0			
D4	997	28+712.00 0 28+721.00	LT	13.0				



For quantities see sheet no. 1005-1006
For underdrain quantities see sheet no. 133
For Profile see sheet no. 1002
For U.S. 23 see sheet no. 758-760
For W.B. U.S. 30 see sheet no. 175-176, 179-180
P.R.J. = Pressure Relief Joint, Type A

HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED AM
CHECKED REA

PLAN - RAMP B
STA. 28+780 TO STA. 29+070

WYA / CRA-30-28.009 / 0.000

1001
2116

281.478 281.479 281.467 281.442 281.404 281.352 281.288 281.211 281.120 281.017 280.900 280.771 280.628 280.472 280.304 280.122 279.927 279.719 279.498 279.264 279.017 278.762 278.507 278.252 277.997 277.742 277.487 277.233 276.994 276.780

284 282 280 278 276 274 272 270 268 266 264

-2.5495%

124m V.C.

* V.P.I. Sta. 29+110.000
Elev. = 275.703

V.P.I. Sta. 29+048.000

Proposed grade

28+821, ℄
E (100mm Plug) = 279.855

100mm Shallow

-2.5495%

V.P.I. Sta. 28+981.000

402m V.C.

V.P.I. Sta. 28+780.000 Elev. = 284.116

29+035.762, ℄
E (100mm x 150mm Tee) = 276.051
Outlet (4.9m Rt.) = 276.002

For Plan, see sheet no. 1001

Existing ground

264.229 264.228 264.248 264.368 264.644 264.765 264.753 264.793 264.860 264.901 265.032 265.174 265.263 265.254 265.223 265.263 265.693 265.877 265.883 266.027 265.924 265.855 265.604 265.568 265.640 265.677 265.940 266.173 266.424 266.500

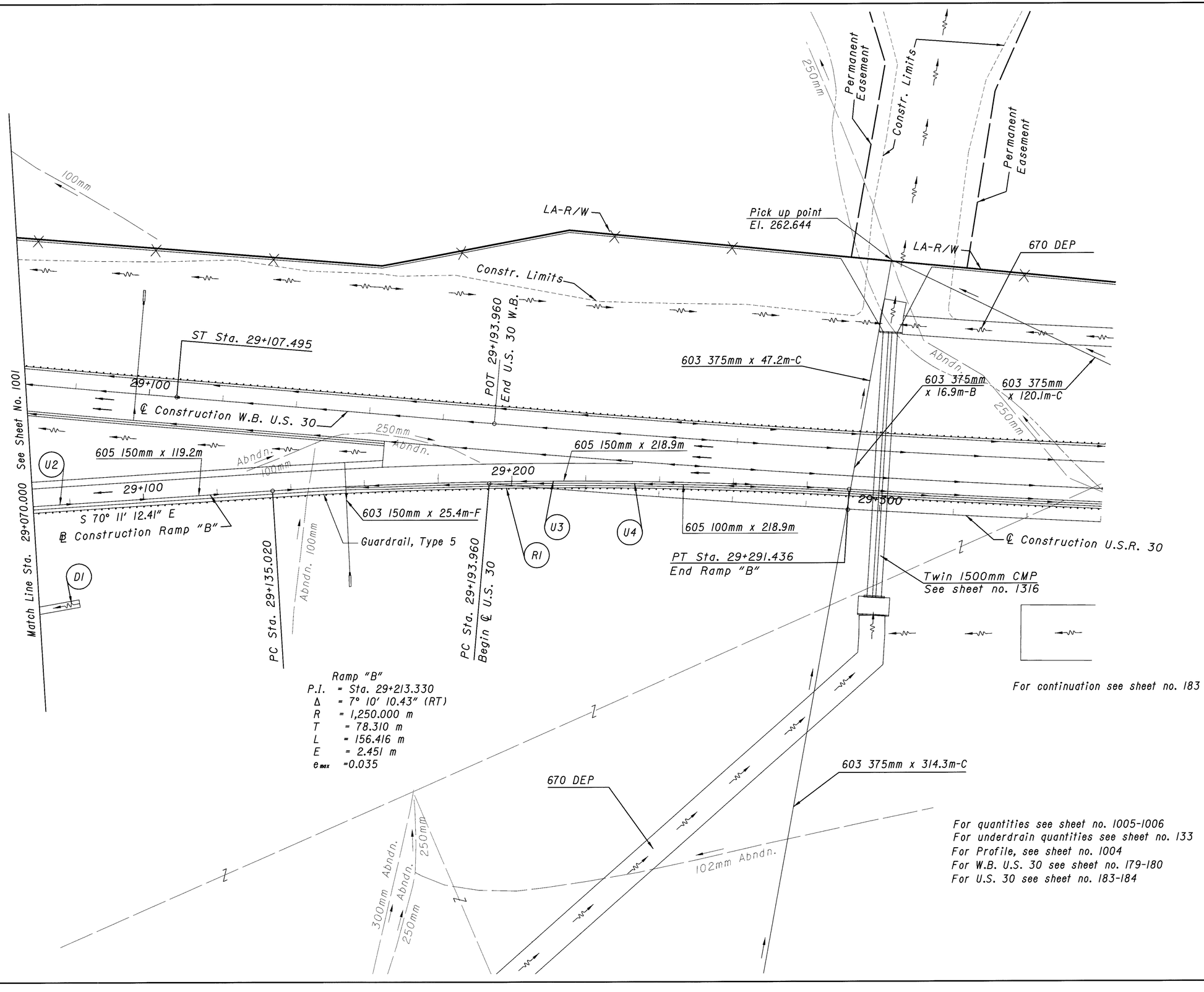
28+780 28+800 28+820 28+840 28+860 28+880 28+900 28+920 28+940 28+960 28+980 29+000 29+020 29+040 29+060 29+080

CALCULATED AM
CHECKED REA

PROFILE - RAMP B
STA. 28+780 TO STA. 29+070

WYA/CRA-30-28.009/0.000

1002
2116



N

0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED AM
CHECKED REA

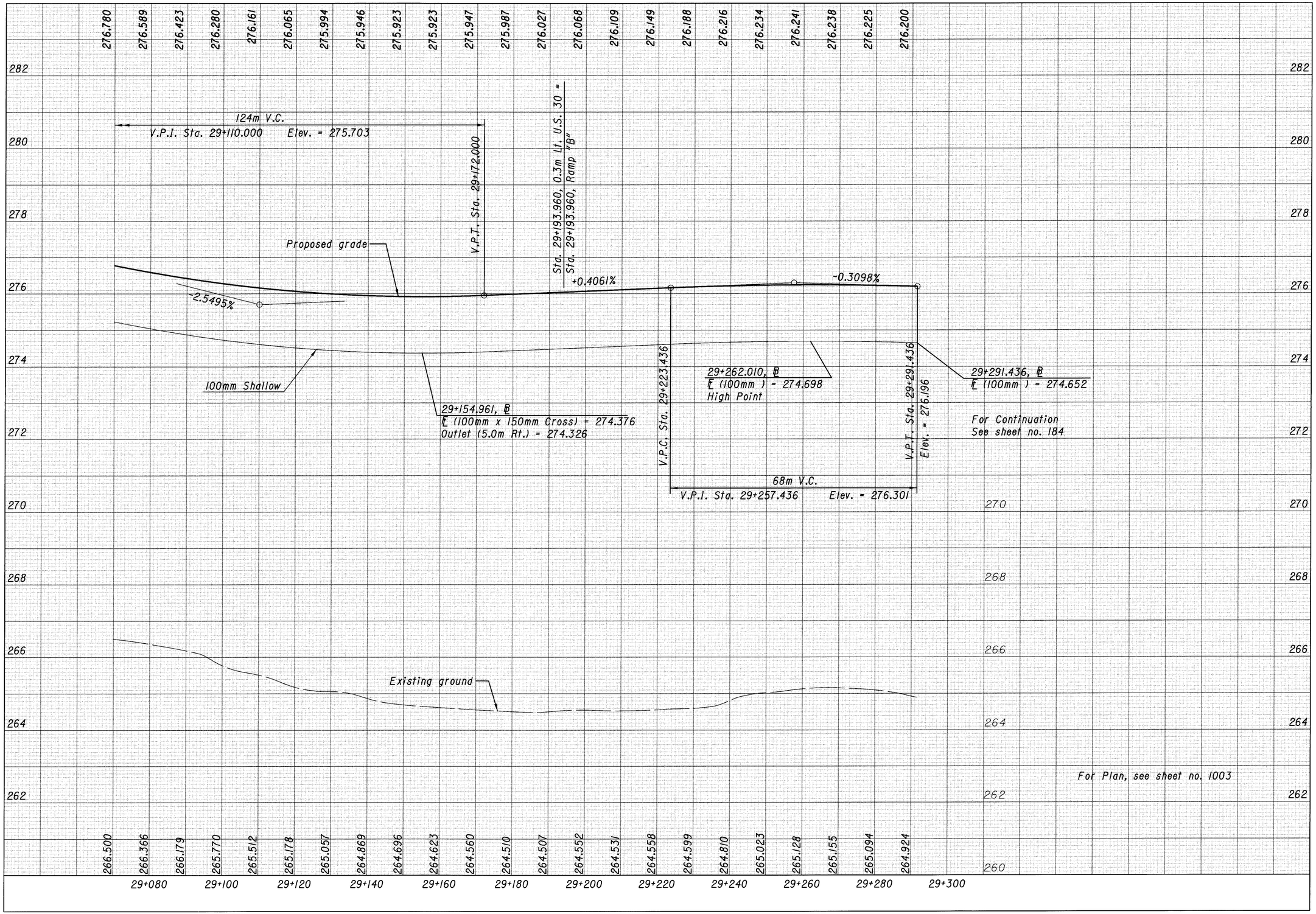
PLAN - RAMP B
STA. 29+070 TO STA. 29+291.436

WYA/CRA-30-28.009/0.000

1003
2116

CALCULATED AM
CHECKED REA

PROFILE - RAMP B
STA. 29+070 TO STA. 29+291.436

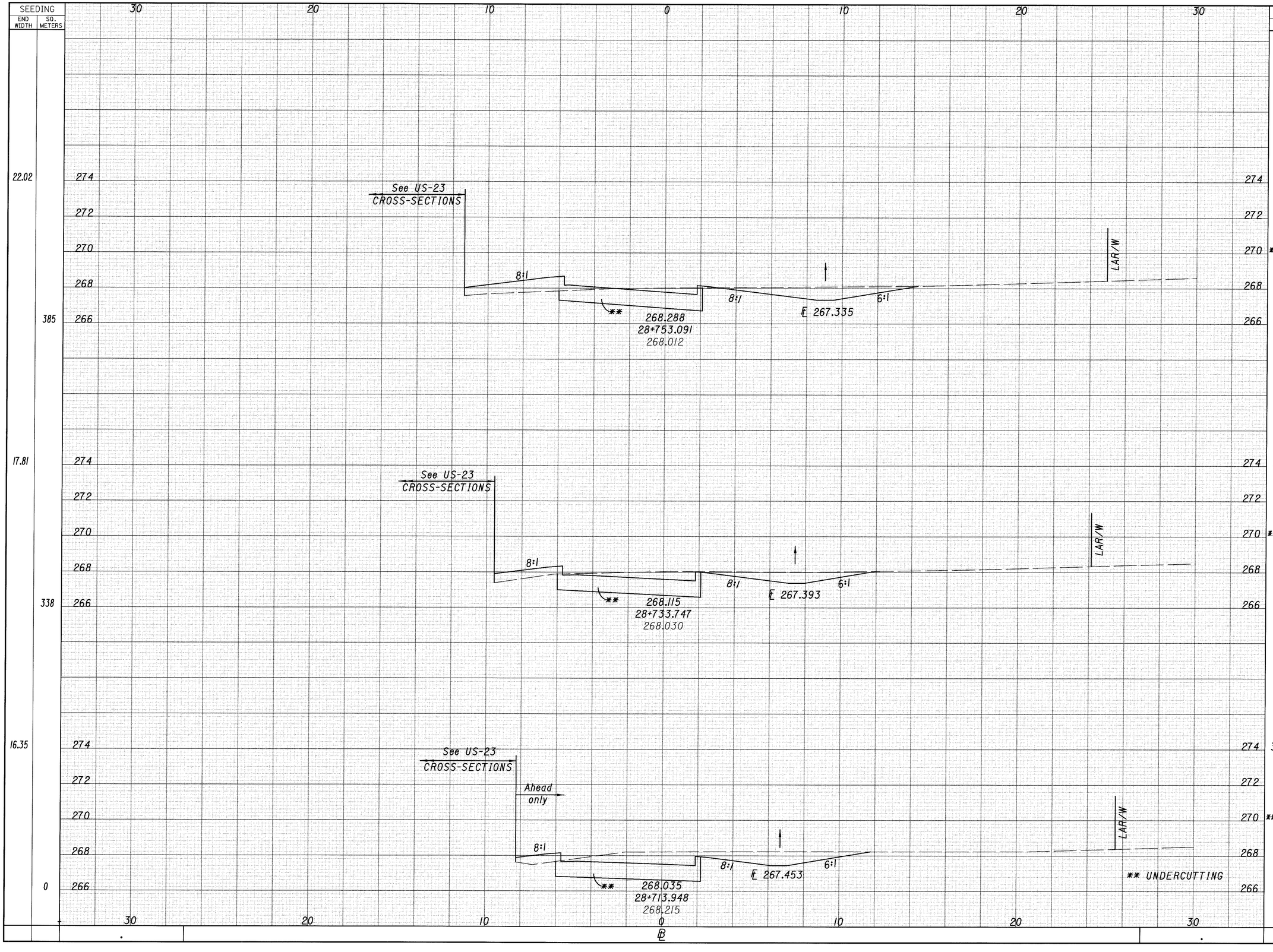


WYA / CRA-30-28.009 / 0.000

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE 1		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE 1-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		RAMP B AHEAD																															
R1	1001	28+812.405 TO 29+695.401 USR 30	RT														878.205					1			1							
R2	1001	28+815.369 TO 29+038.984	LT														222.885					1			1							

REF NO.	SHEET NO.	STATION	SIDE	670 DITCH EROSION PROTECTION SQ M	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND EACH	375 MM X 375 MM 22.5° BEND EACH	MASONRY COLLAR EACH
D1	1001	29+020.70 TO 29+080.94	RT	118.3			
D2	1001	28+940.00 TO 28+960.00	LT	45.9			

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
22.02		4.61	11.02		
		**6.83			
	385			78	196
				**138	
17.81		3.41	9.23		
		**7.43			
	338			72	173
				**143	
16.35		3.83	8.22		
		**7.06			
	0				



CALCULATED AM

CHECKED REA

RAMP A CROSS SECTIONS

STA 28+713.948 TO STA 28+753.091

WYA / CRA-30-28.009 / 0.000

1007
2116

SEEDING	
END WIDTH	SQ. METERS
38.76	
	687
33.65	
	698
39.39	
	591

30 20 10 0 10 20 30

272 270 268 266 274

8:1 3:1 6:1 ℄ 268.084

** 269.349
28+810.410
268.937

8:1 3:1 2:1 ℄ 267.163

LAR/W

See US-23
CROSS-SECTIONS

8:1 ** 268.907
28+791.435
268.528

8:1 3:1 ℄ 267.220 3:1

LAR/W

See US-23
CROSS-SECTIONS

8:1 ** 268.553
28+772.323
268.155

8:1 3:1 ℄ 267.277 6:1

LAR/W

** UNDERCUTTING

℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
18.77	13.82		
**5.52		312	240
		**112	
14.11	11.52		
**6.24		209	230
		**118	
7.77	12.60		
**6.14		119	227
		**125	

CALCULATED AM

CHECKED REA

RAMP A CROSS SECTIONS
STA 28+772.323 TO STA 28+810.410

WYA/CRA-30-28.009/0.000

1008
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
50.87	984	3.11	113.05	90	1875
47.51	907	5.87	74.41	173	1126
43.21	850	11.40	38.14	310	563
41.83	386	19.63	18.20	184	154
				*45	

30 20 10 0 10 20 30

272 270 268 266

8:1 3:1 6:1 2:1 24:1 4:1 3:1 LAR/W

℄ 266.763

271.544
28+880.000
267.160

℄ 266.594

8:1 3:1 6:1 2:1 24:1 4:1 3:1 LAR/W

℄ 267.083

270.881
28+860.000
267.666

℄ 267.014

8:1 3:1 6:1 2:1 24:1 3:1 2:1 LAR/W

℄ 267.403

270.218
28+840.000
268.361

℄ 267.074

8:1 3:1 6:1 2:1 8:1 3:1 2:1 LAR/W

℄ 267.863

* 269.607
28+820.000
268.940

℄ 261.134

* TOPSOIL REMOVAL

℄

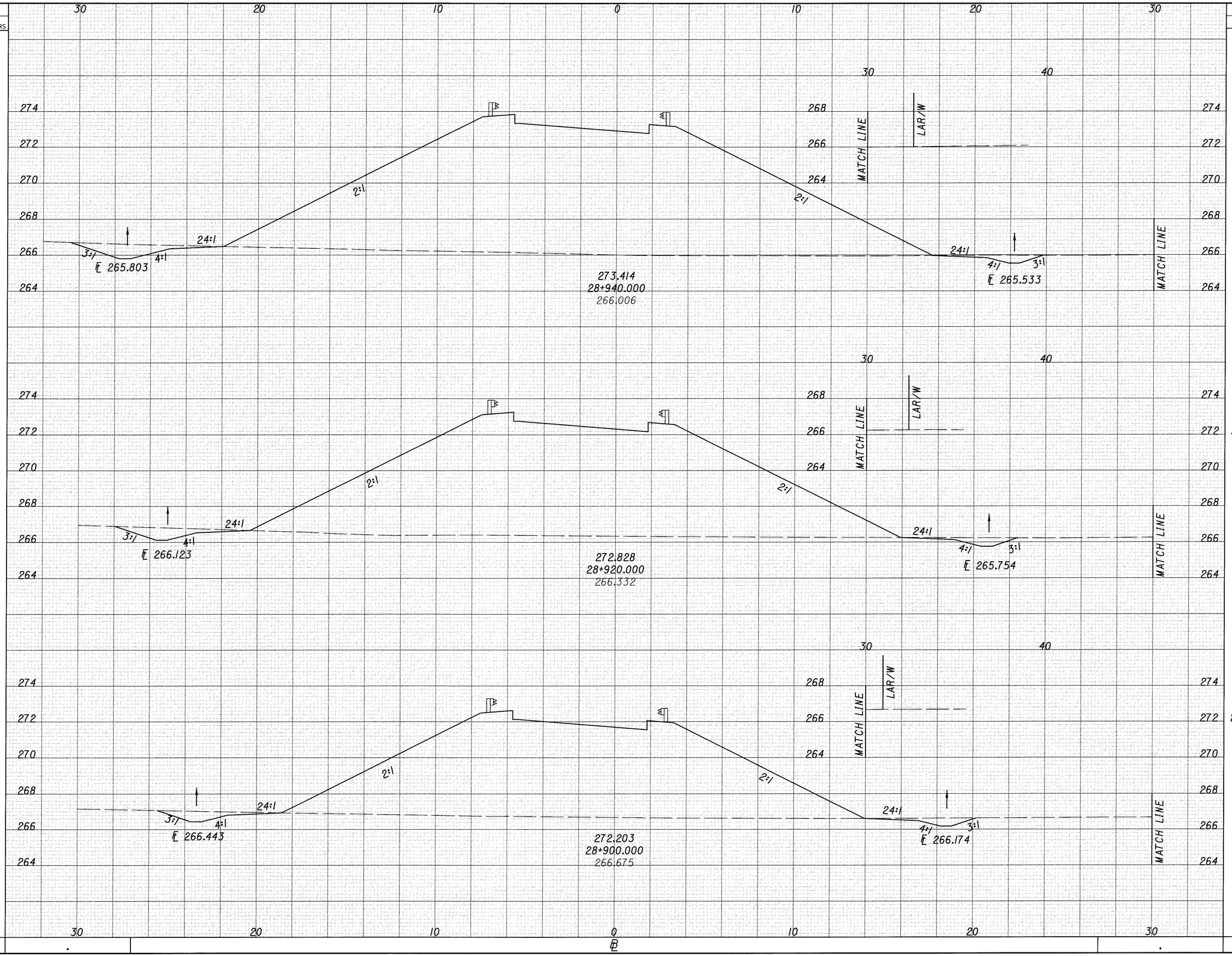
CALCULATED AM
CHECKED REA

RAMP A CROSS SECTIONS
STA 28+820.000 TO STA 28+880.000

WYA / CRA-30-28.009 / 0.000

1009
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
57.86	1113	4.11	183.21	77	3344
53.48	1017	3.55	151.23	65	2685
48.17	990	2.90	117.30	60	2304



CALCULATED AM

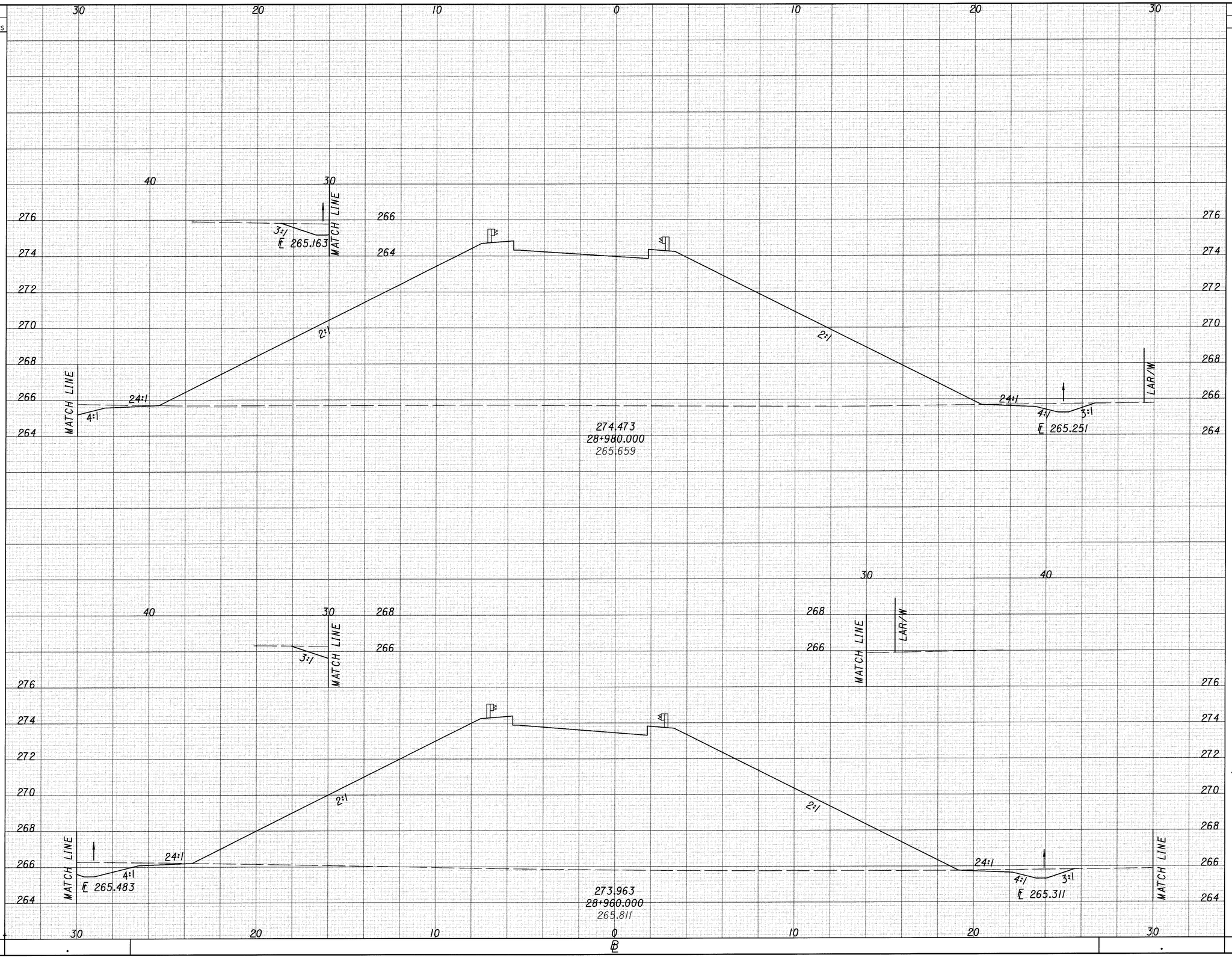
CHECKED REA

RAMP A CROSS SECTIONS STA 28+900.000 TO STA 28+940.000

WYA/CRA-30-28.009/0.000

1010
2116

SEEDING	
END WIDTH	SQ. METERS
63.48	1251
61.64	1195



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.15	247.09	74	4625
4.23	215.36	83	3986

CALCULATED AM

CHECKED REA

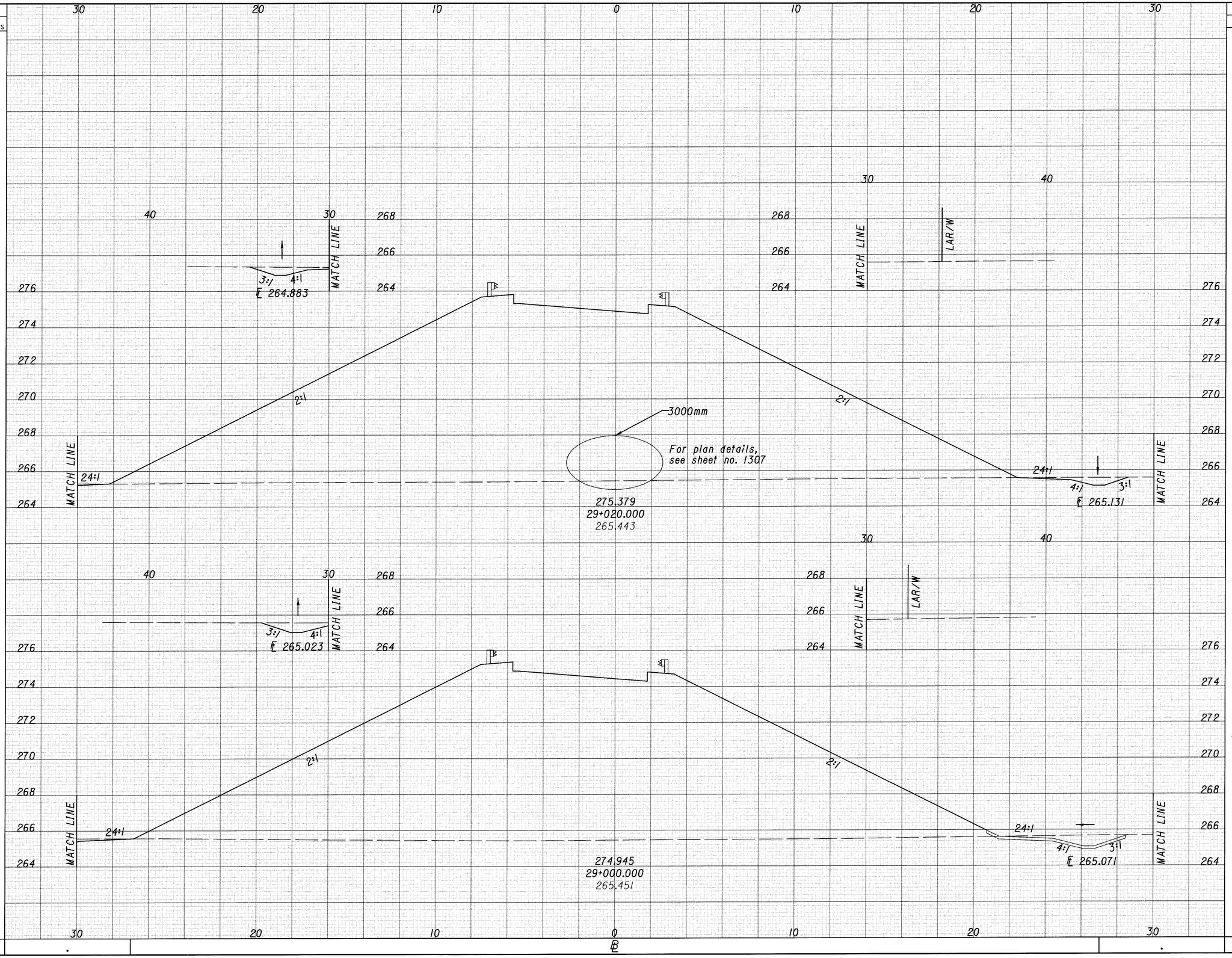
RAMP A CROSS SECTIONS

STA 28+960.000 TO STA 28+980.000

WYA / CRA-30-28.009 / 0.000

1011
2116

SEEDING	
END WIDTH	SQ. METERS
67.35	1334
66.10	1296



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.27	303.36	67	5821
4.40	278.73	76	5258

CALCULATED AM

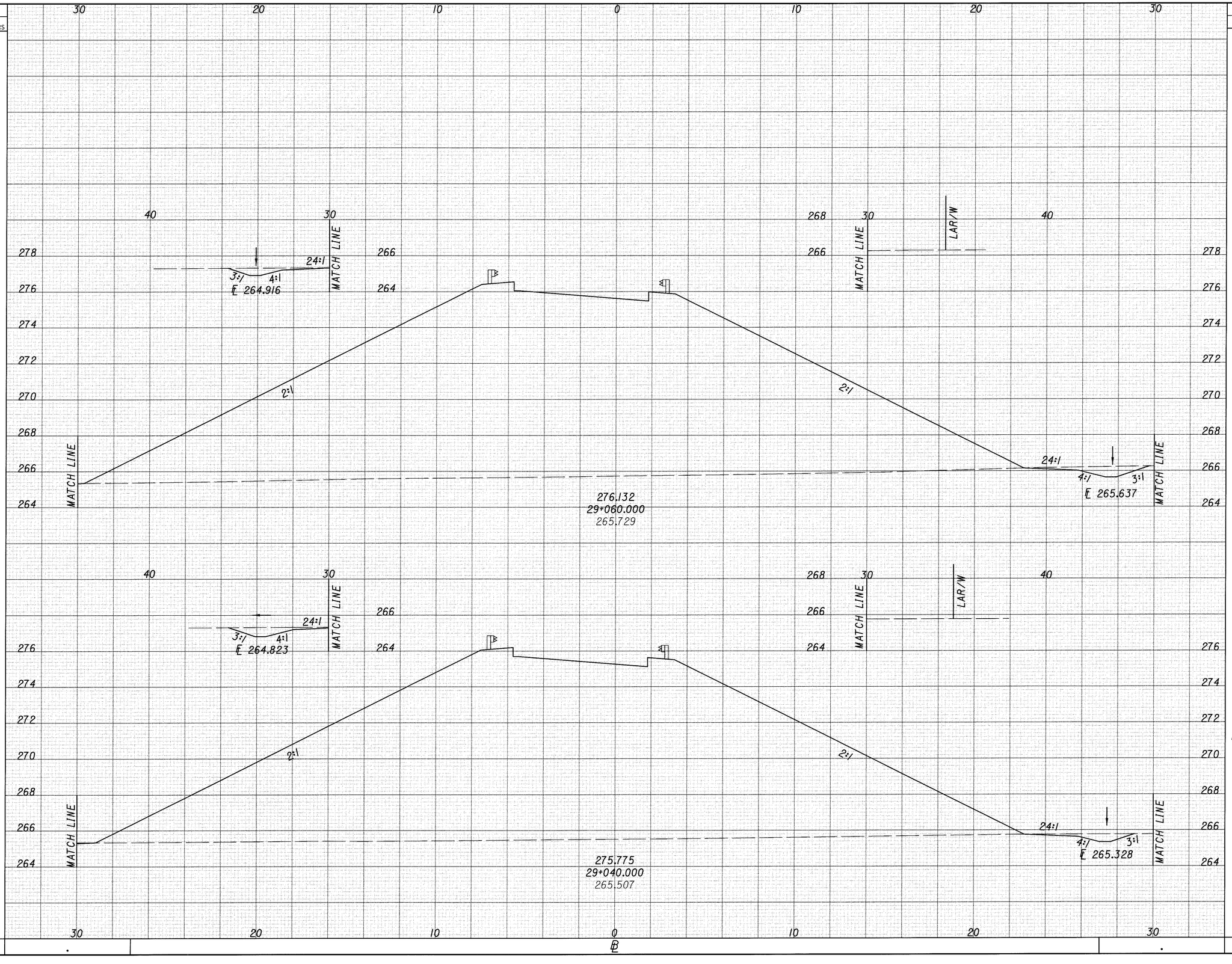
CHECKED REA

RAMP A CROSS SECTIONS
STA 29+000.000 TO STA 29+020.000

WYA / CRA-30-28.009 / 0.000

1012
2116

SEEDING	
END WIDTH	SQ. METERS
70.07	1391
69.03	1364



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.72	328.42	51	6485
2.42	320.06	47	6234

CALCULATED AM

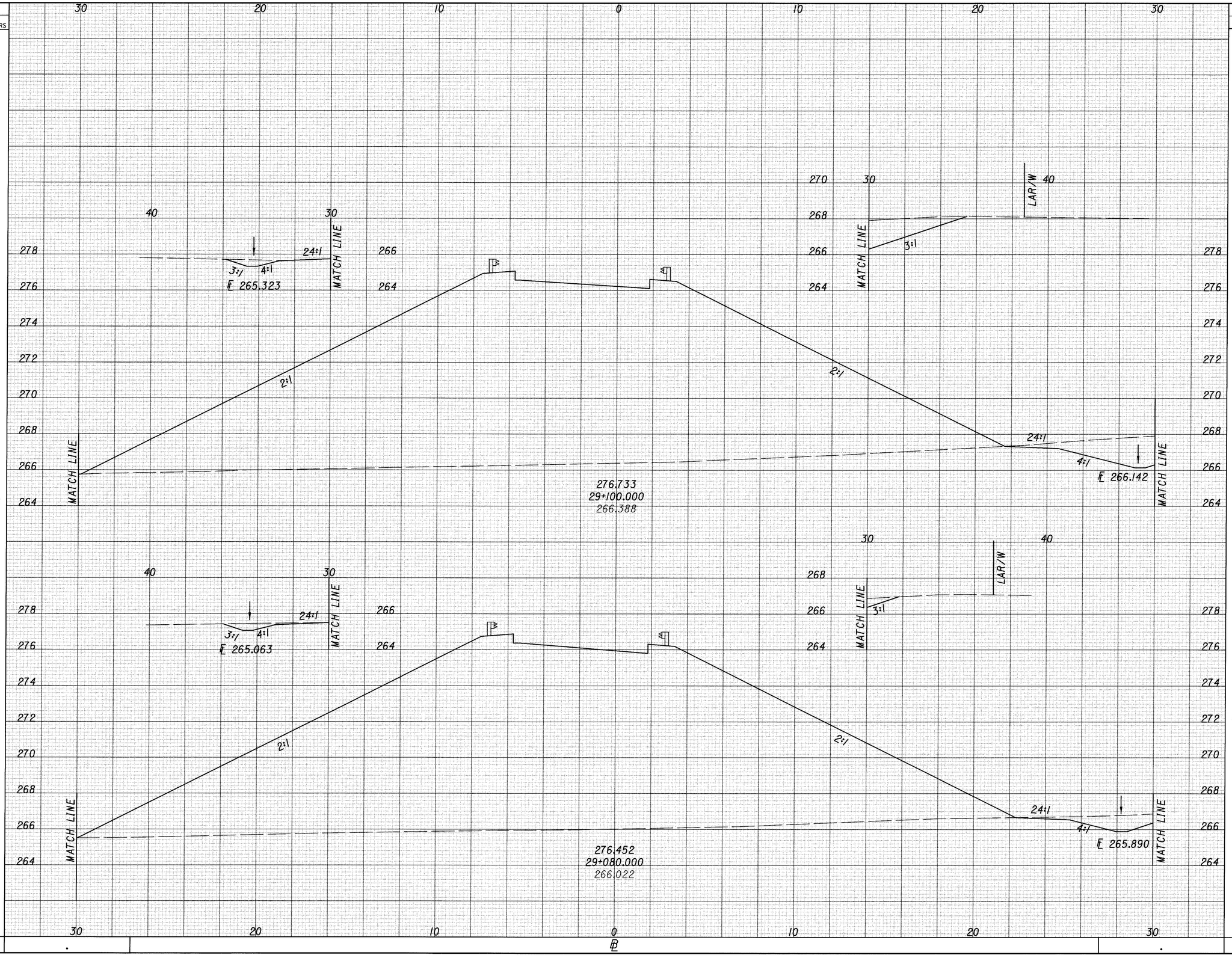
CHECKED REA

RAMP A CROSS SECTIONS
STA 29+040.000 TO STA 29+060.000

WYA/CRA-30-28.009/0.000

1013
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
76.74	1496	11.84	320.91	163	6513
72.86	1429	4.47	330.34	72	6588



CALCULATED AM

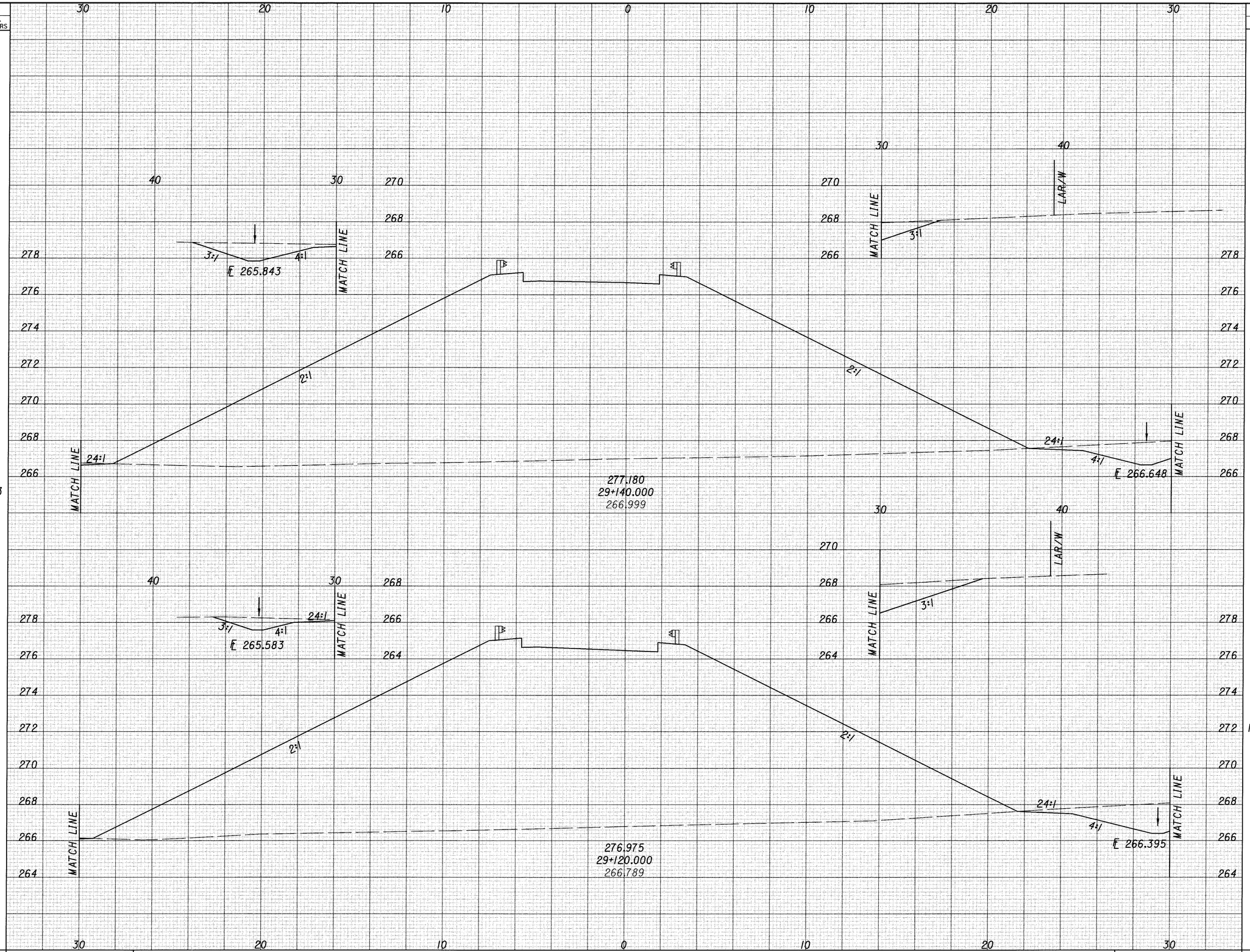
CHECKED REA

RAMP A CROSS SECTIONS
STA 29+080.000 TO STA 29+100.000

WYA/CRA-30-28.009/0.000

1014
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
77.19	1553	10.40	309.30	234	6224
78.13	1549	12.97	313.05	248	6340



CALCULATED AM

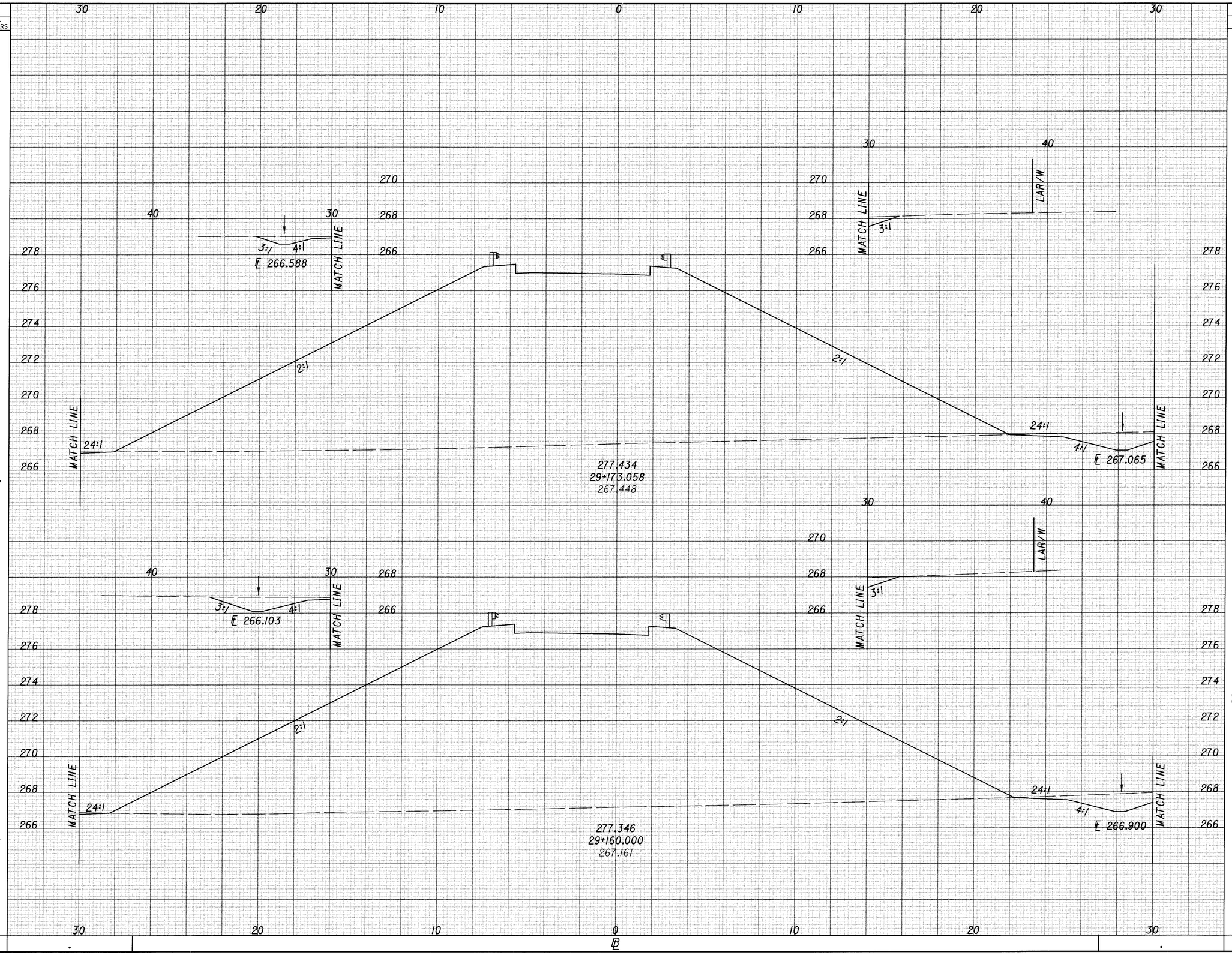
CHECKED REA

RAMP A CROSS SECTIONS
STA 29+120.000 TO STA 29+140.000

WYA/CRA-30-28.009/0.000

1015
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
70.90	947	5.21	299.68	80	3970
74.14	1513	7.00	308.41	174	6177



CALCULATED AM

CHECKED REA

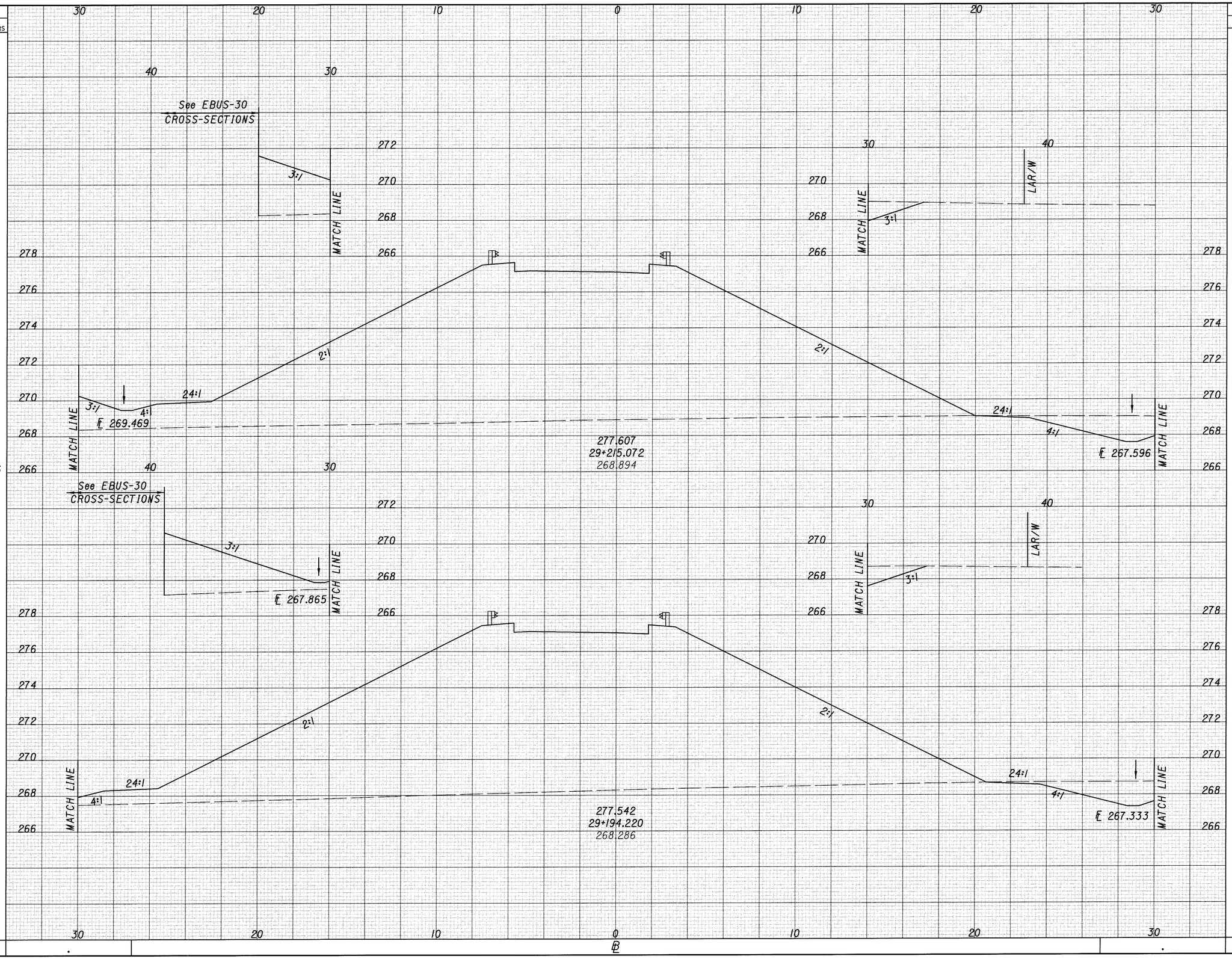
RAMP A CROSS SECTIONS

STA 29+160.000 TO STA 29+173.058

WYA/CRA-30-28.009/0.000

1016
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
68.34					
	1536				
78.97		8.23	258.08		
				166	5669
	1586	7.69	285.61		
				136	6193



RAMP A CROSS SECTIONS
STA 29+194.220 TO STA 29+215.072

WYA/CRA-30-28.009/0.000

CALCULATED AM
CHECKED REA

1017
2116

SEEDING	
END WIDTH	SQ. METERS
54.89	
	1169
59.66	
	1318

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.92	273.94		
		50	5253
3.97	241.01		
		126	5141

CALCULATED AM

CHECKED REA

RAMP A CROSS SECTIONS
STA 29+235.673 TO STA 29+256.076

WYA / CRA-30-28.009 / 0.000

1018
2116

30 20 10 0 10 20 30

278 276 274 272 270 268 266

See EBUS-30 CROSS-SECTIONS

8:1 3:1 2:1 24:1 4:1 3:1

℄ 270.906

277.612
29+256.076
268.924

℄ 268.114

MATCH LINE

LAR/W

30 40

270 268

278 276 274 272 270 268

See EBUS-30 CROSS-SECTIONS

8:1 3:1 2:1 24:1 4:1 3:1

℄ 270.906

277.630
29+235.673
269.131

℄ 267.857

MATCH LINE

LAR/W

30 40

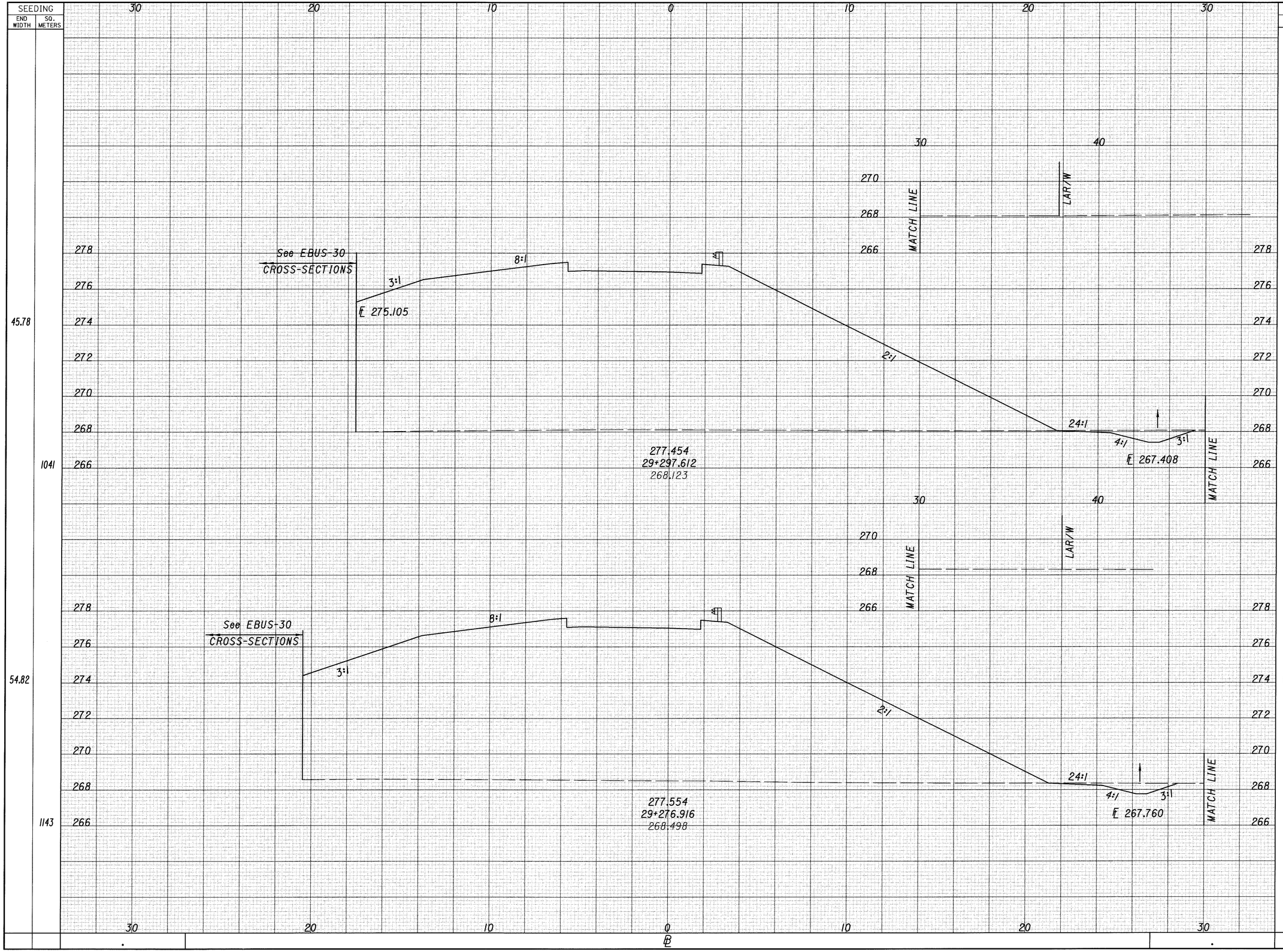
270 268

278 276 274 272 270 268

30 20 10 0 10 20 30

℄

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
45.78	1041	2.13	266.10	40	5582
54.82	1143	1.69	273.34	27	5703



CALCULATED AM

CHECKED REA

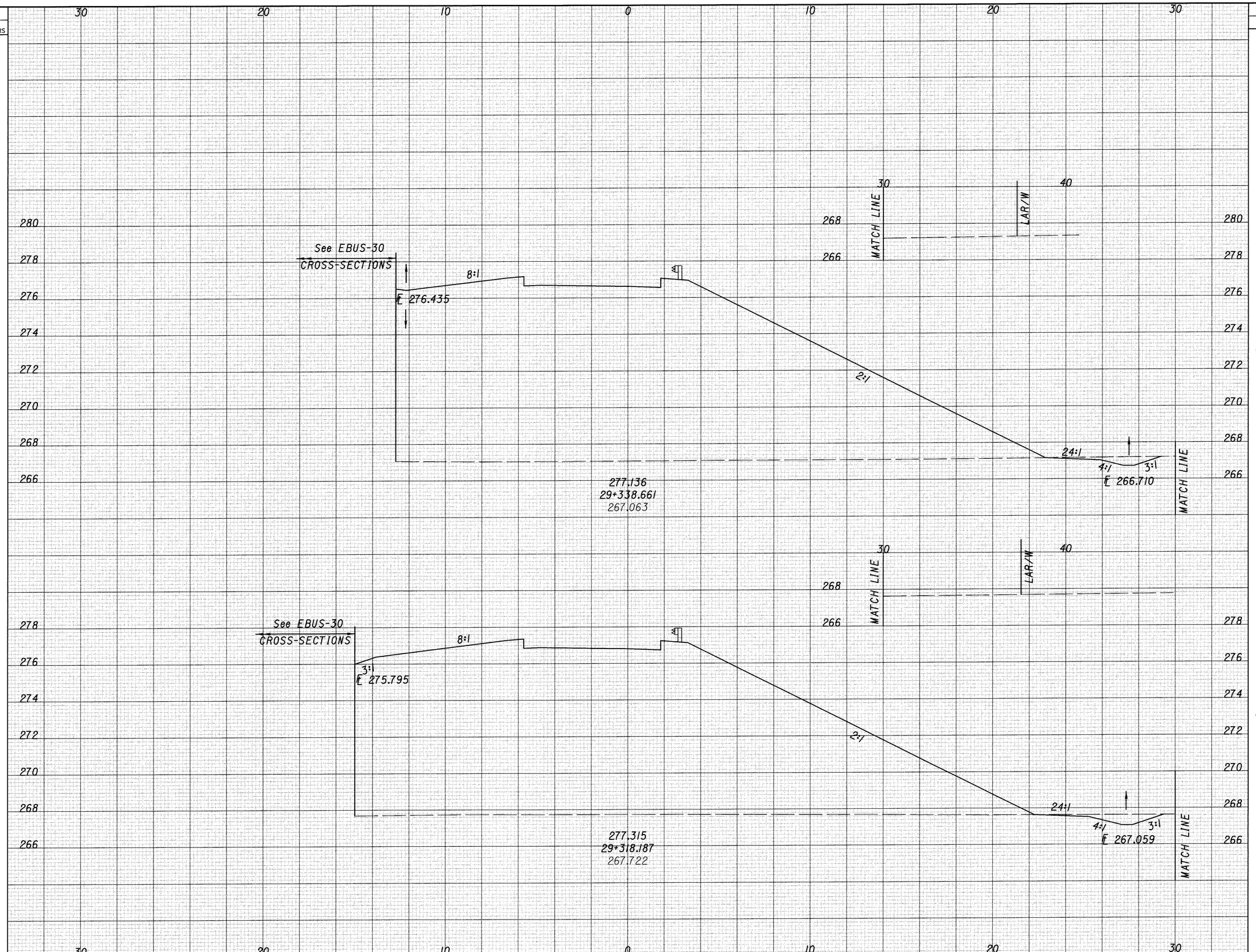
RAMP A CROSS SECTIONS

STA 29+276.916 TO STA 29+297.612

WYA / CRA-30-28.009 / 0.000

1019
2116

SEEDING	
END WIDTH	SQ. METERS
49.87	950
42.93	913



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.25	251.78	29	5193
1.63	255.53	39	5366

CALCULATED AM

CHECKED REA

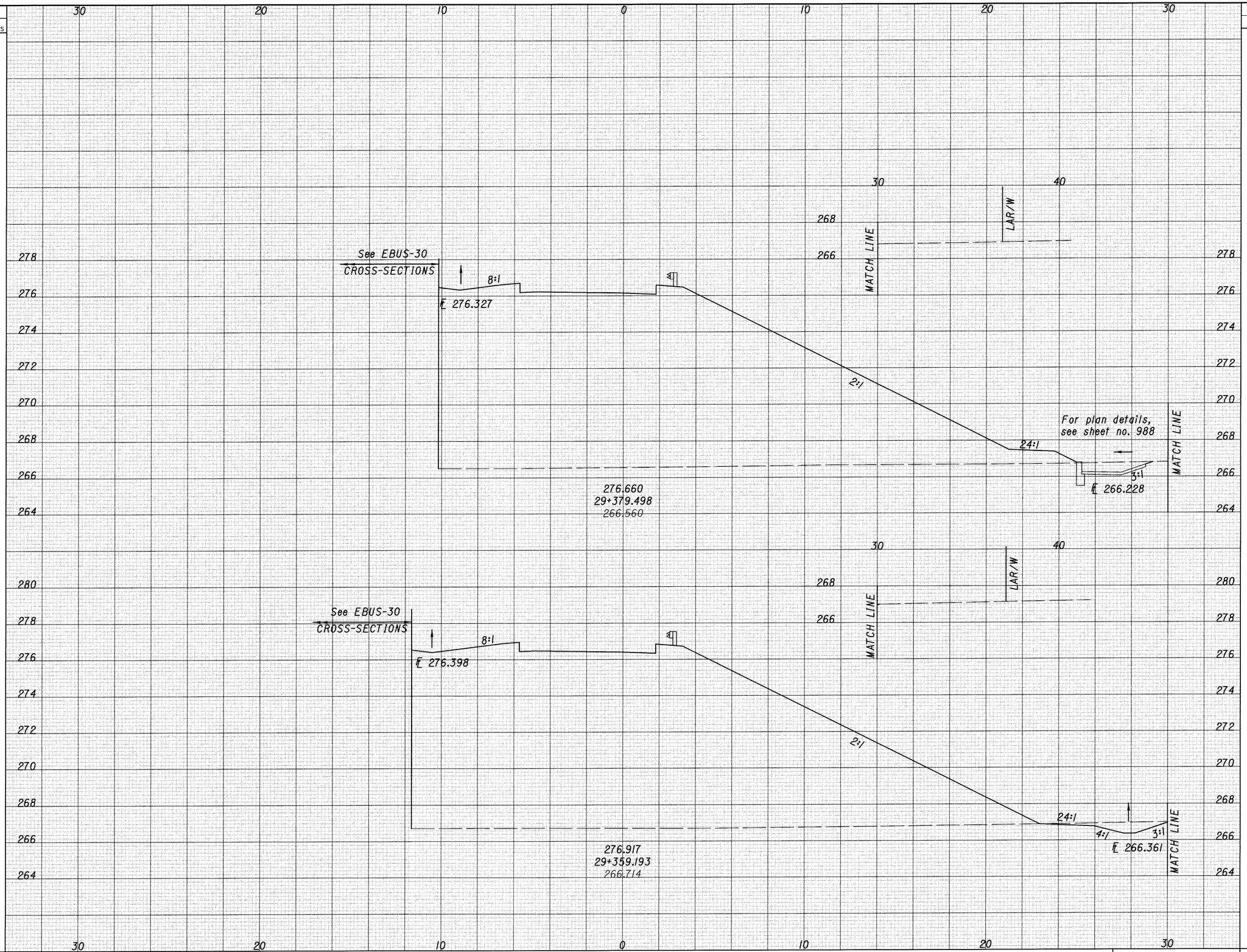
RAMP A CROSS SECTIONS

STA 29+318.187 TO STA 29+338.661

WYA/CRA-30-28.009/0.000

1020
2116

SEEDING	
END WIDTH	SQ. METERS
37.36	
	790
40.44	
	927



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.12	229.13		
		40	4817
1.83	245.29		
		32	5103

CALCULATED AM

CHECKED REA

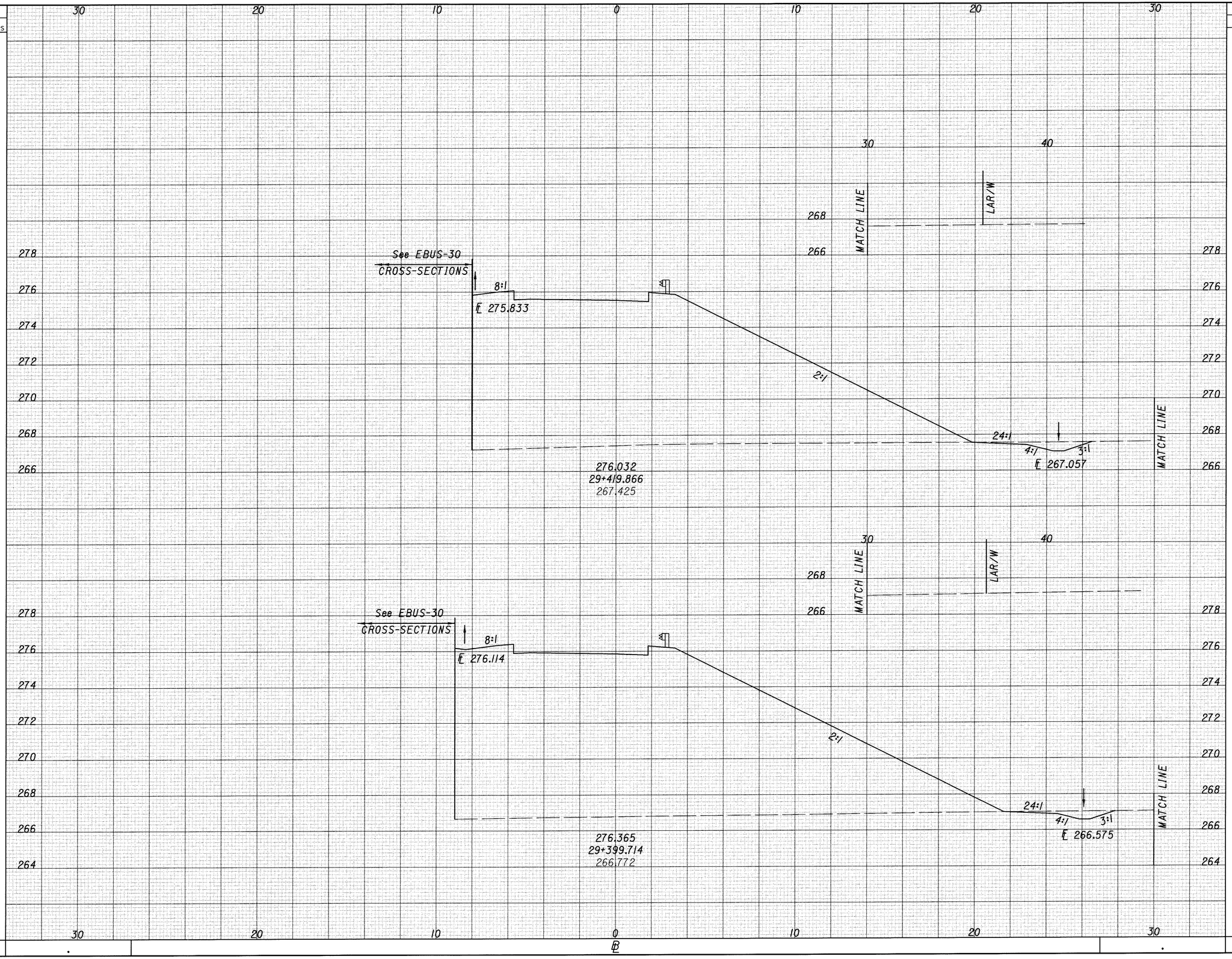
RAMP A CROSS SECTIONS

STA 29+359.193 TO STA 29+379.498

WYA / CRA-30-28.009 / 0.000

1021
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
32.59	682	1.34	162.85	25	3648
35.08	732	1.17	199.19	33	4329



CALCULATED AM

CHECKED REA

RAMP A CROSS SECTIONS

STA 29+399.714 TO STA 29+419.866

WYA/CRA-30-28.009/0.000

1022
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
29.04	620	1.18	136.24	25	3007

CALCULATED AM

CHECKED REA

RAMP A CROSS SECTIONS
STA 29+439.973

WYA / CRA-30-28.009 / 0.000

1023
2116

30 20 10 0 10 20 30

30 40

270 268 266

MATCH LINE

LAR/W

278 276 274 272 270 268 266

See EBUS-30
CROSS-SECTIONS

2:1

24:1

4:1

3:1

℄ 267.538

MATCH LINE

275.662
29+439.973
267.629

30 20 10 0 10 20 30

℄

SEEDING	
END WIDTH	SQ. METERS
24.98	
21.21	
17.88	
	446
	380

20 10 0 10 20 30

LAR/W

6:1 8:1 8:1

℄ 266.451

267.273
28+108.992
267.797

See US-23
CROSS-SECTIONS

LAR/W

6:1 8:1 8:1

℄ 266.509

267.211
28+089.671
267.602

See US-23
CROSS-SECTIONS

LAR/W

6:1 8:1 8:1

℄ 266.567

267.220
28+070.234
267.332

Ahead only

272 270 268 266 274 272 270 268 266 274 272 270 268 266 274 272 270 268 266

END AREA		VOLUME	
CUT	FILL	CUT	FILL
8.82	14.31		
*7.03		155	255
		*125	
7.23	12.06		
*5.86		142	205
		*110	
7.35	9.08		
*5.44			

* TOPSOIL REMOVAL

20 10 0 10 20 30

℄

CALCULATED AM

CHECKED REA

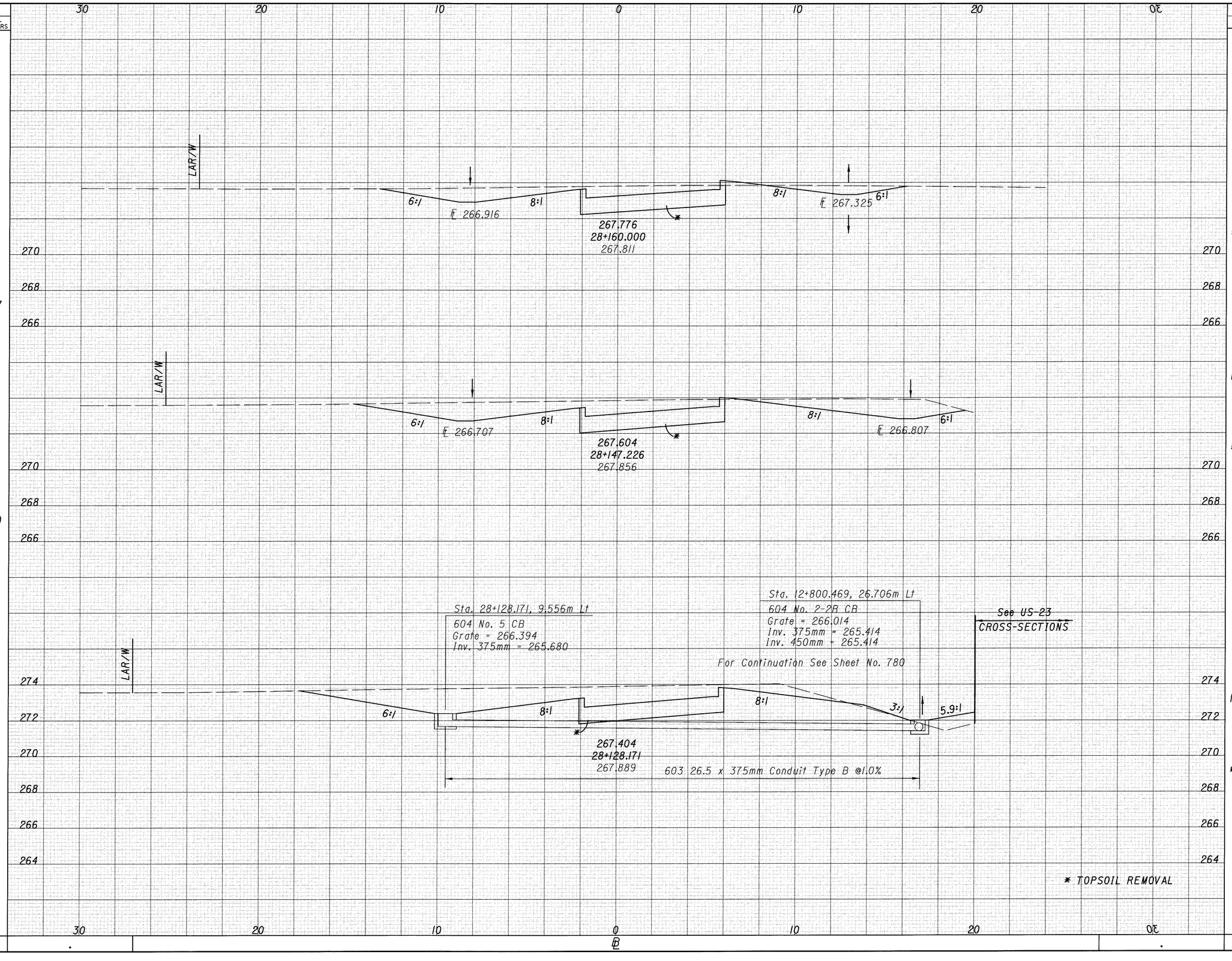
RAMP B CROSS SECTIONS

STA 28+070.234 TO STA 28+108.992

WYA / CRA-30-28.009 / 0.000

1024
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
29.39		7.59	7.5		
		*7.12			
	407			140	94
34.34		14.35	7.25	*91	
		*7.18			
	659			260	157
				*137	
34.86		12.98	9.22		
		*7.21			
	574			209	226
				*137	



CALCULATED AM

CHECKED REA

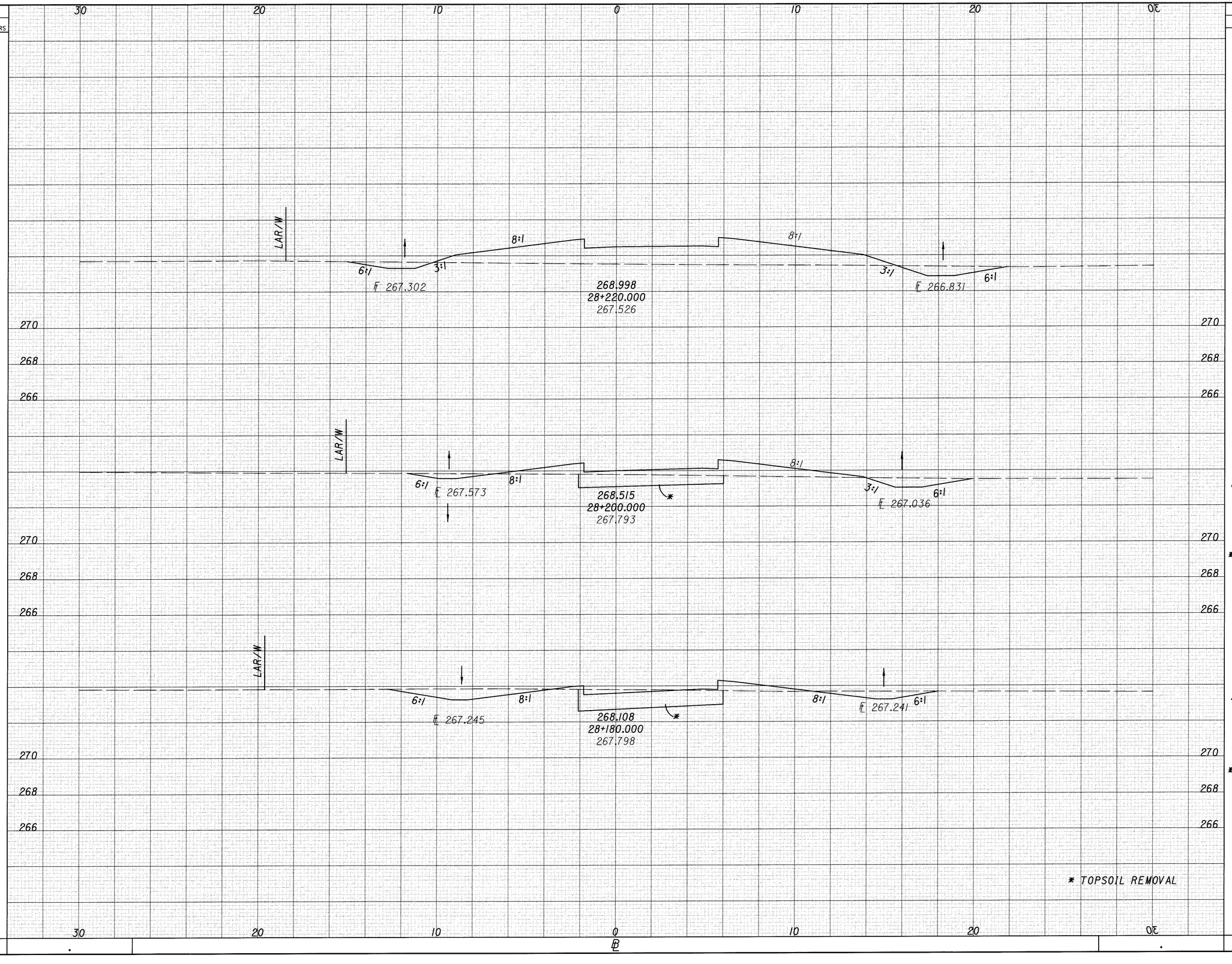
RAMP B CROSS SECTIONS

STA 28+128.171 TO STA 28+160.000

WYA/CRA-30-28.009/0.000

1025
2116

SEEDING	
END WIDTH	SQ. METERS
36.76	679
31.11	713
40.18	696



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.16	23.10		
*0		59	364683
2.75	12.28	*49	
*4.93		74	211
4.68	8.79	*118	
*6.85		123	163
		*140	

CALCULATED AM

CHECKED REA

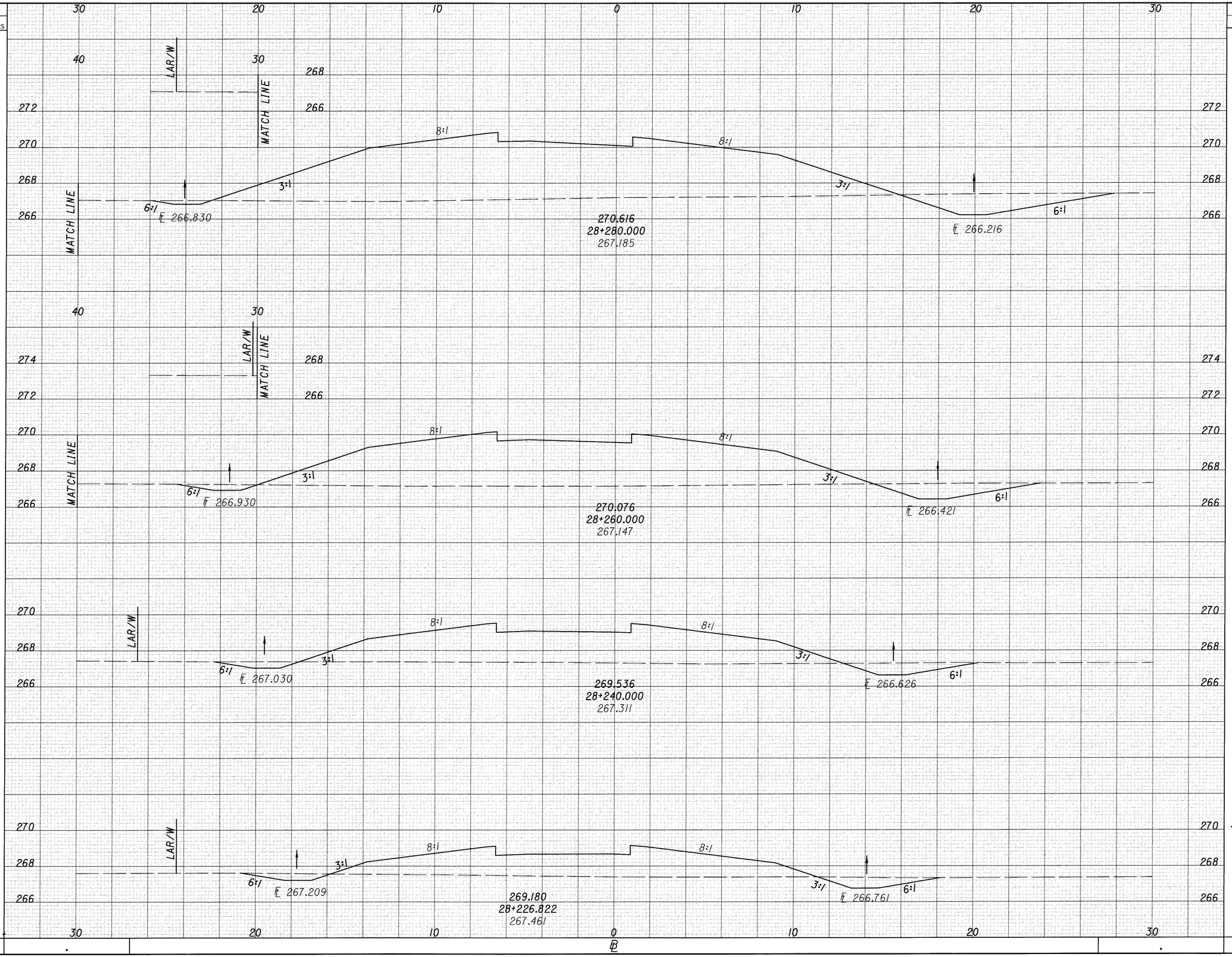
RAMP B CROSS SECTIONS

STA 28+180.000 TO STA 28+220.000

WYA / CRA-30-28.009 / 0.000

1026
2116

SEEDING END WIDTH	SEEDING SQ. METERS
54.81	1037
48.93	919
42.94	540
39.07	259



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
8.32	91.82		
		140	1595
5.67	67.68		
		98	1117
4.14	44.04		
		51	483
3.67	29.26		
		23	12445

CALCULATED AM

CHECKED REA

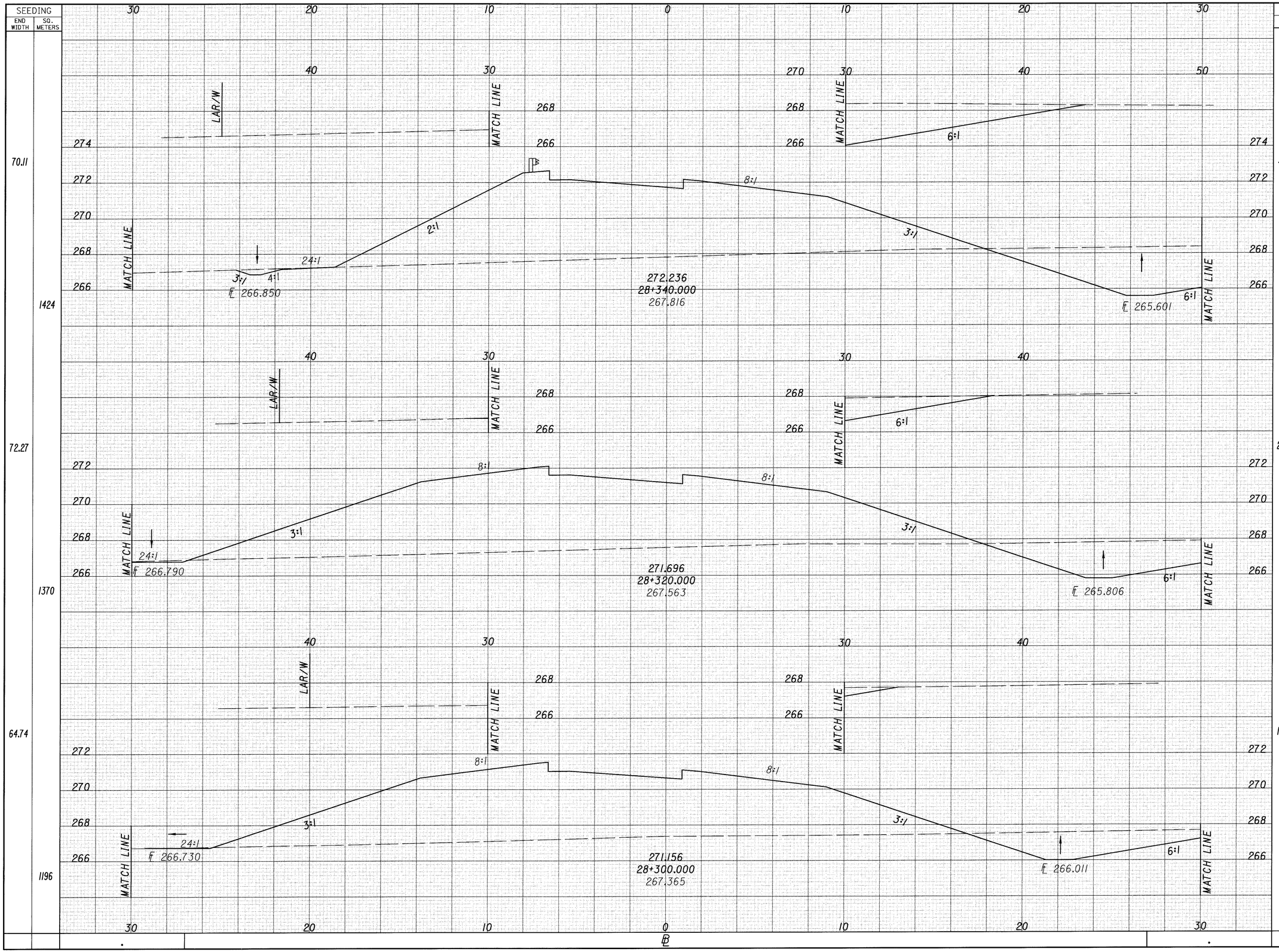
RAMP B CROSS SECTIONS

STA 28+226.822 TO STA 28+280.000

WYA / CRA-30-28.009 / 0.000

1027
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
70.11	1424	38.31	108.70	609	2367
72.27	1370	22.56	127.95	365	2413
64.74	1196	13.94	113.34	223	2052



CALCULATED AM

CHECKED REA

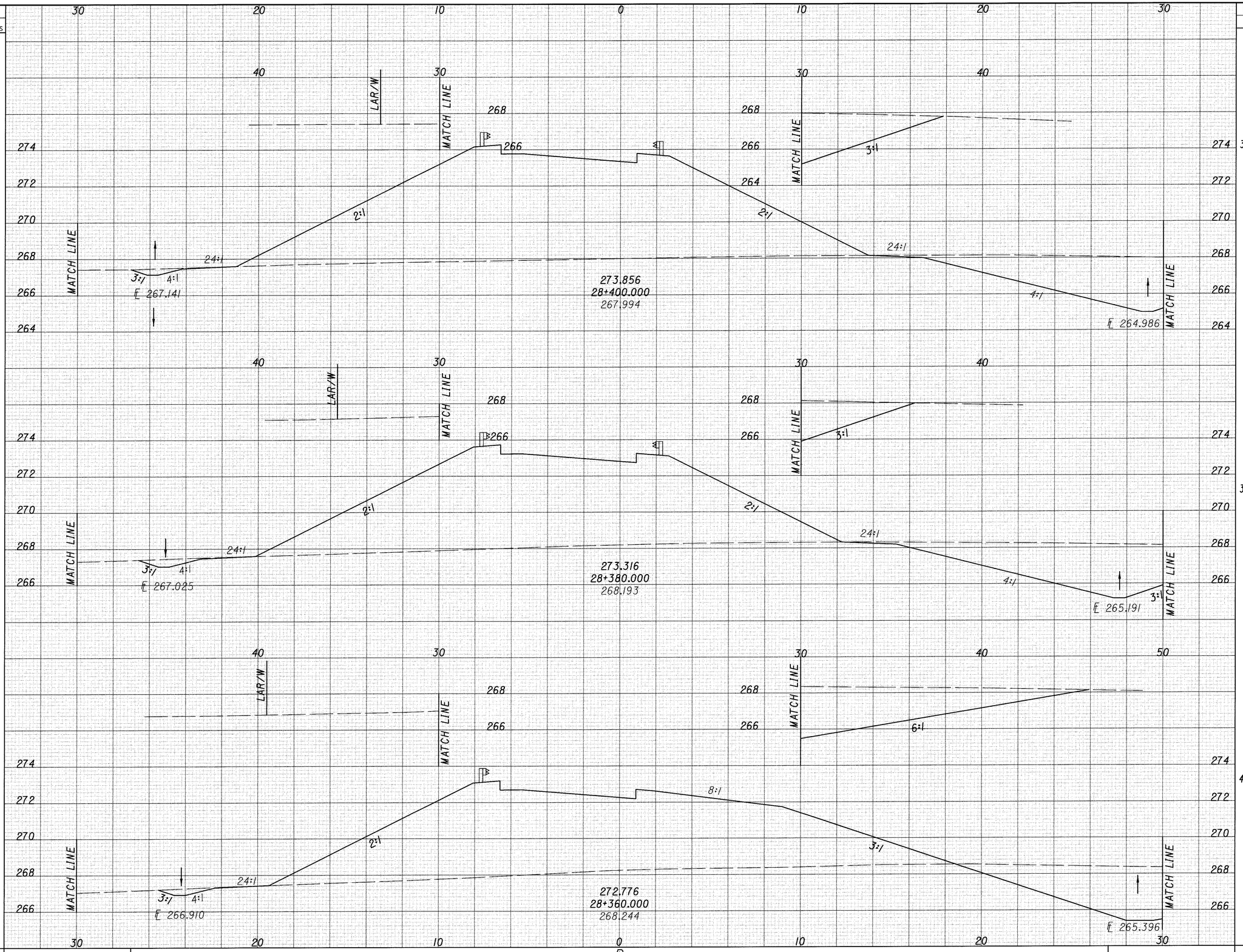
RAMP B CROSS SECTIONS

STA 28+300.000 TO STA 28+340.000

WYA / CRA-30-28.009 / 0.000

1028
2116

SEEDING	
END WIDTH	SQ. METERS
68.65	
	1351
66.46	
	1406
74.15	
	1443



END AREA		VOLUME	
CUT	FILL	CUT	FILL
34.83	133.22		
		691	2444
34.28	111.14		
		783	2284
43.98	117.24		
		823	2259

CALCULATED AM

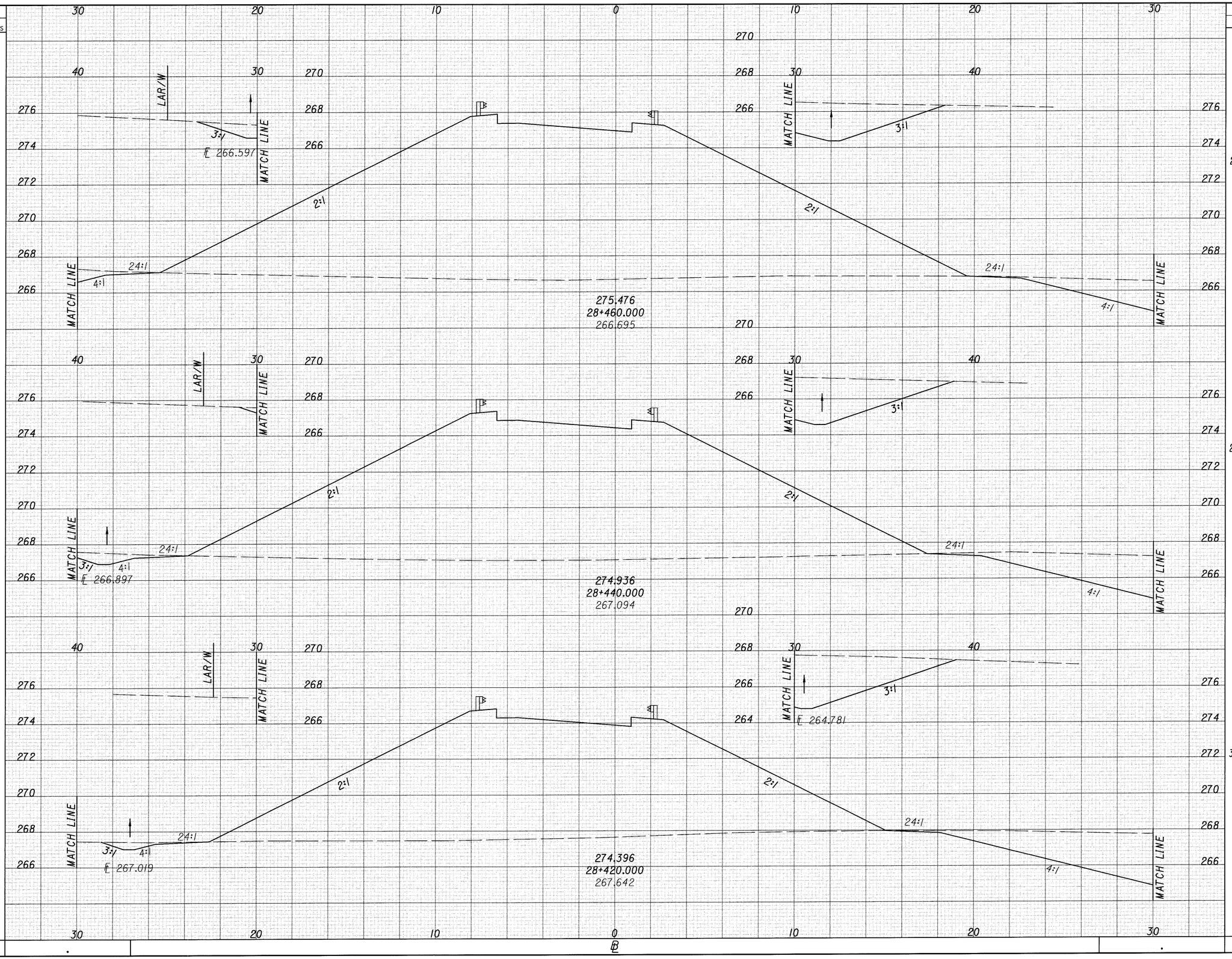
CHECKED REA

RAMP B CROSS SECTIONS
STA 28+360.000 TO STA 28+400.000

WYA/CRA-30-28.009/0.000

1029
2116

SEEDING	
END WIDTH	SQ. METERS
77.18	1519
74.74	1466
71.91	1406



END AREA		VOLUME	
CUT	FILL	CUT	FILL
20.06	242.46	484	4452
28.30	202.71	623	3658
33.97	163.10	688	2963

CALCULATED AM

CHECKED REA

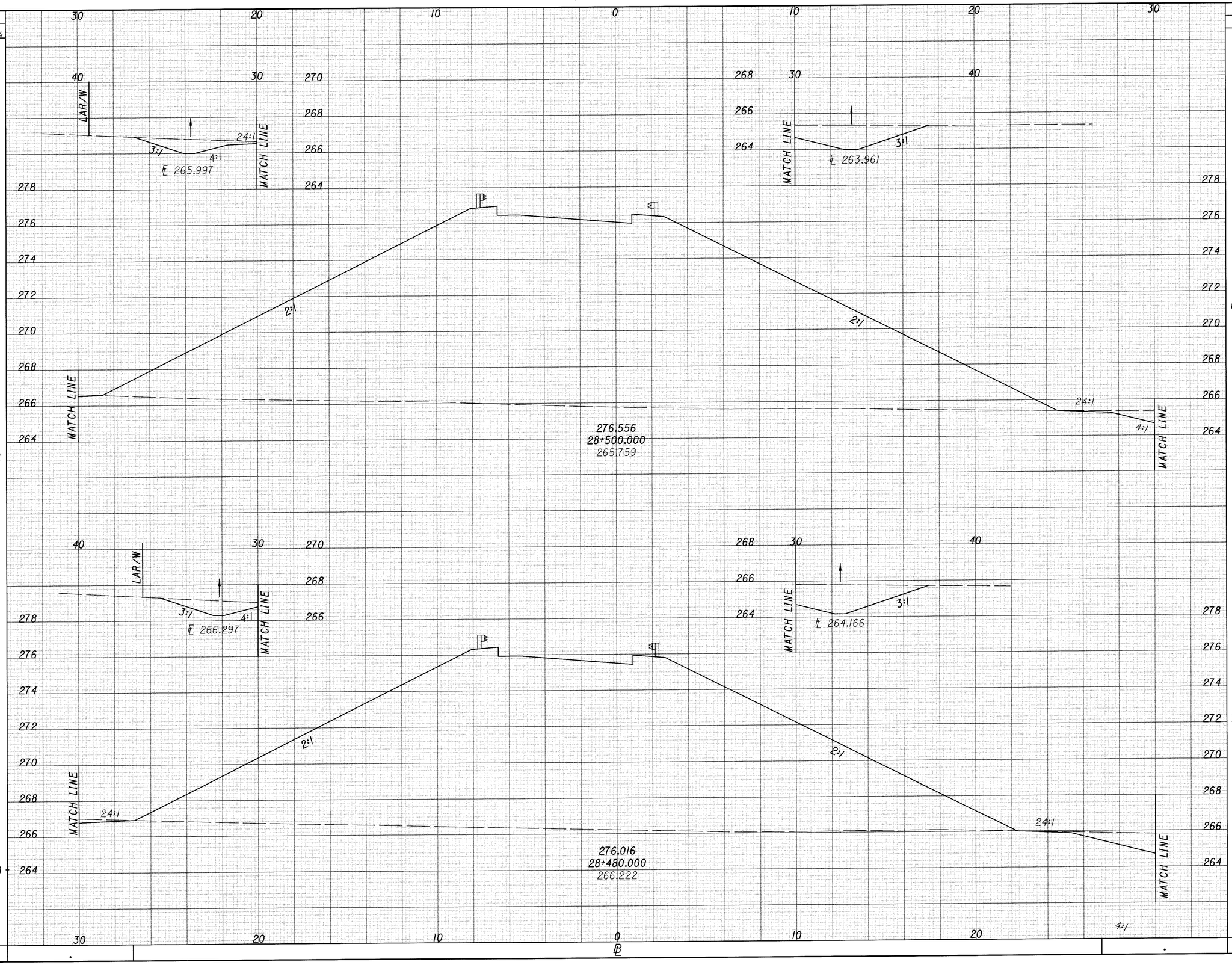
RAMP B CROSS SECTIONS

STA 28+420.000 TO STA 28+460.000

WYA / CRA-30-28.009 / 0.000

1030
2116

SEEDING	
END WIDTH	SQ. METERS
80.50	1592
78.74	1559



END AREA		VOLUME	
CUT	FILL	CUT	FILL
10.37	341.50	239	6321
13.52	290.55	336	5330

CALCULATED AM

CHECKED REA

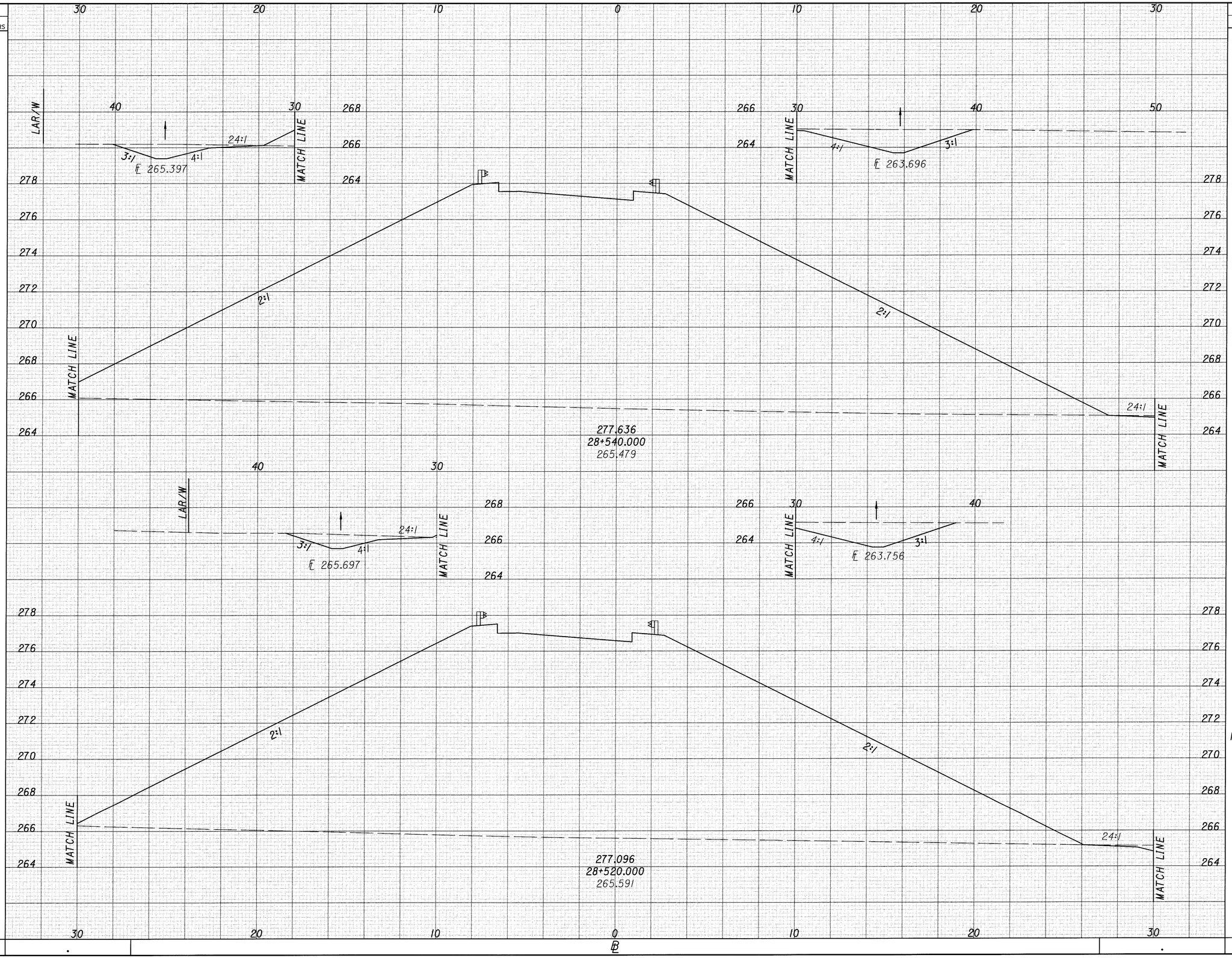
RAMP B CROSS SECTIONS

STA 28+480.000 TO STA 28+500.000

WYA / CRA-30-28.009 / 0.000

1031
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
86.75		9.75	422.05		
	1706			201	8051
83.89		10.35	383.00		
	1644			207	7245

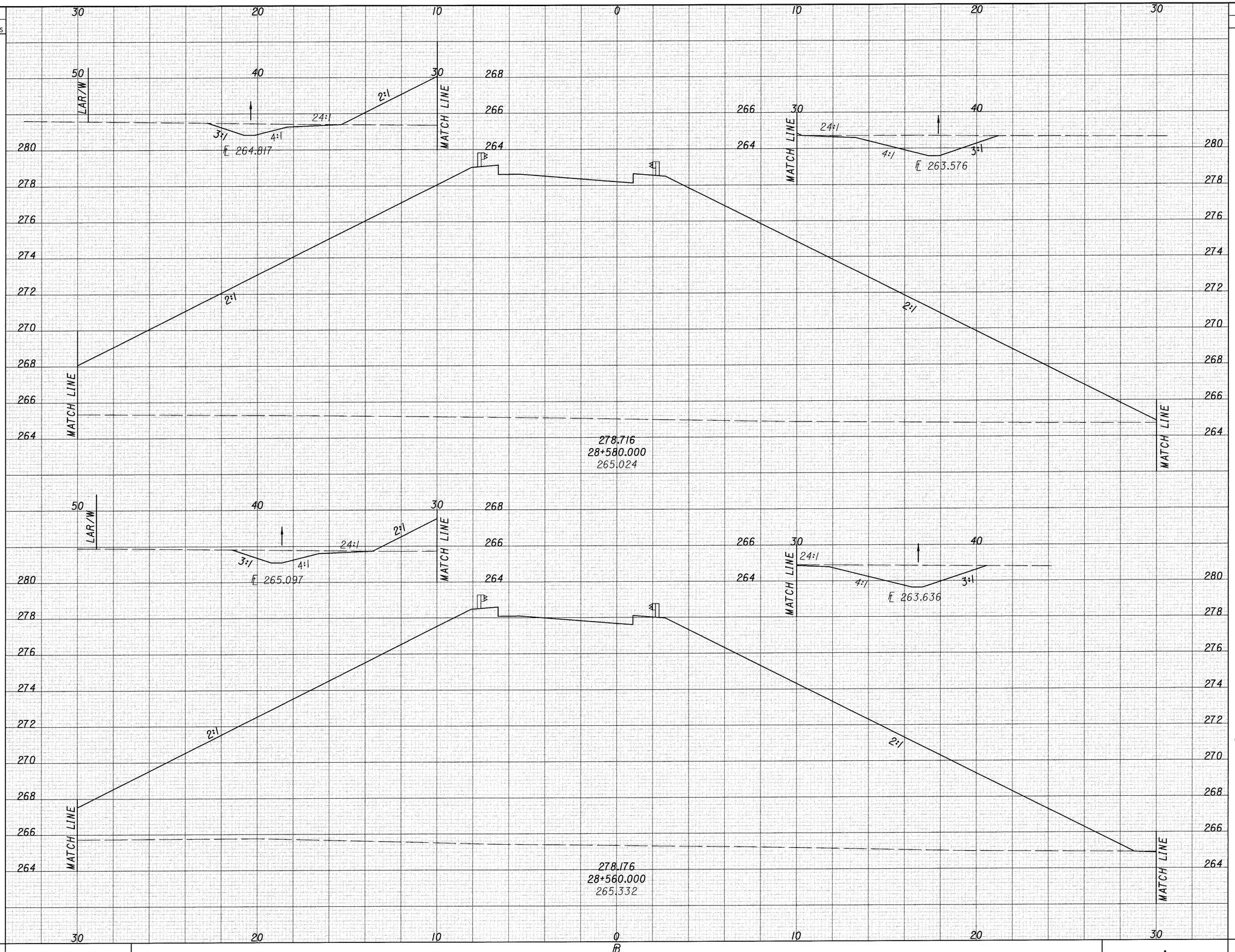


RAMP B CROSS SECTIONS
STA 28+520.000 TO STA 28+540.000

WYA/CRA-30-28.009/0.000

1032
2116

SEEDING	
END WIDTH	SQ. METERS
91.20	
	1802
88.99	
	1757



END AREA		VOLUME	
CUT	FILL	CUT	FILL
7.18	521.24	156	9868
8.37	465.58	181	8876

CALCULATED AM

CHECKED REA

RAMP B CROSS SECTIONS

STA 28+560.000 TO STA 28+580.000

WYA/CRA-30-28.009/0.000

1033
2116

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. METERS		CUT	FILL	CUT	FILL
96.50	1905		6.44	625.08	132	11992
94.00	1852		6.79	574.15	140	10954

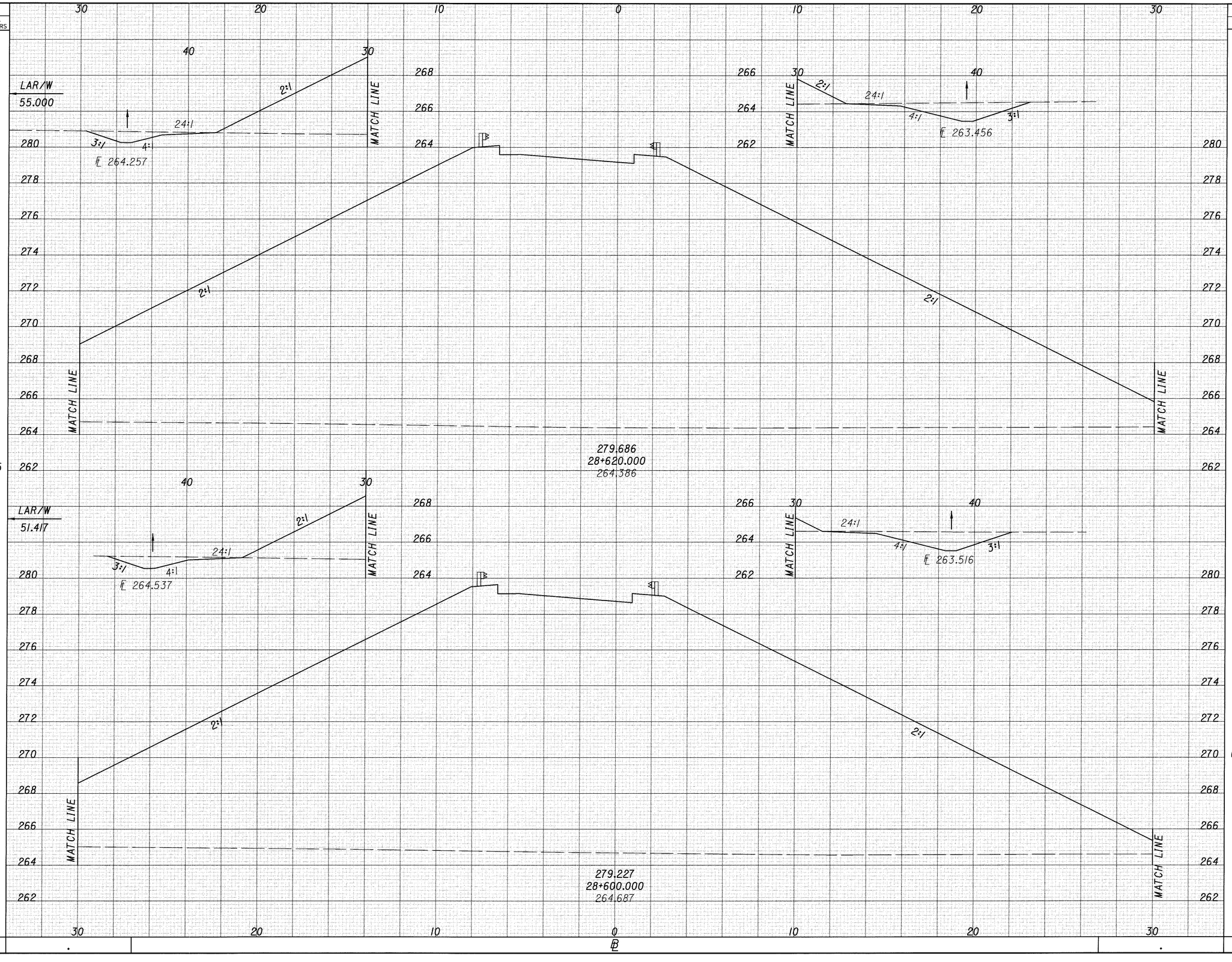
CALCULATED AM

CHECKED REA

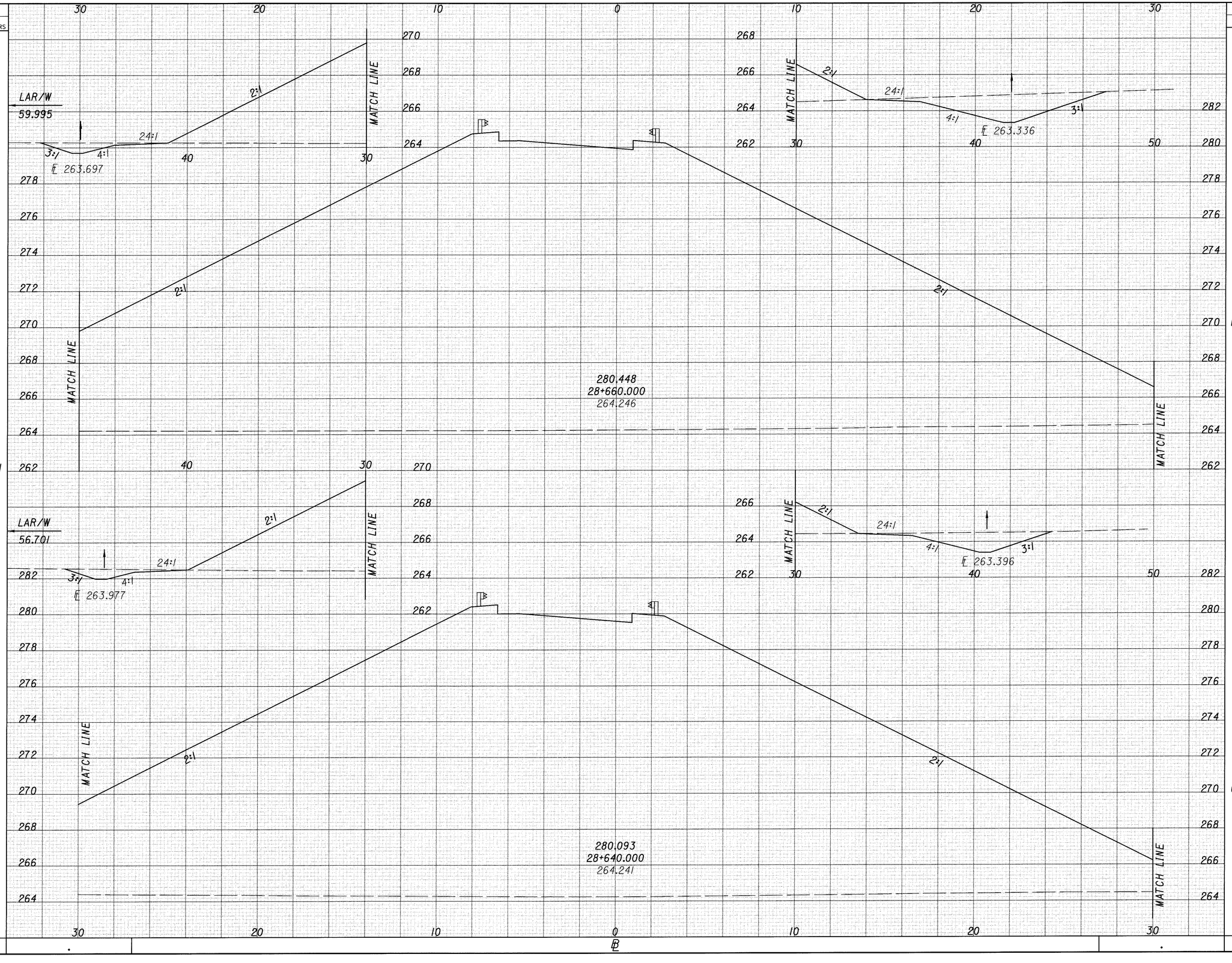
RAMP B CROSS SECTIONS STA 28+600.000 TO STA 28+620.000

WYA/CRA-30-28.009/0.000

1034/2116



SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
103.93		10.96	696.69		
	2031			177	13624
99.15		6.69	665.75		
	1957			131	12908



CALCULATED AM
CHECKED REA

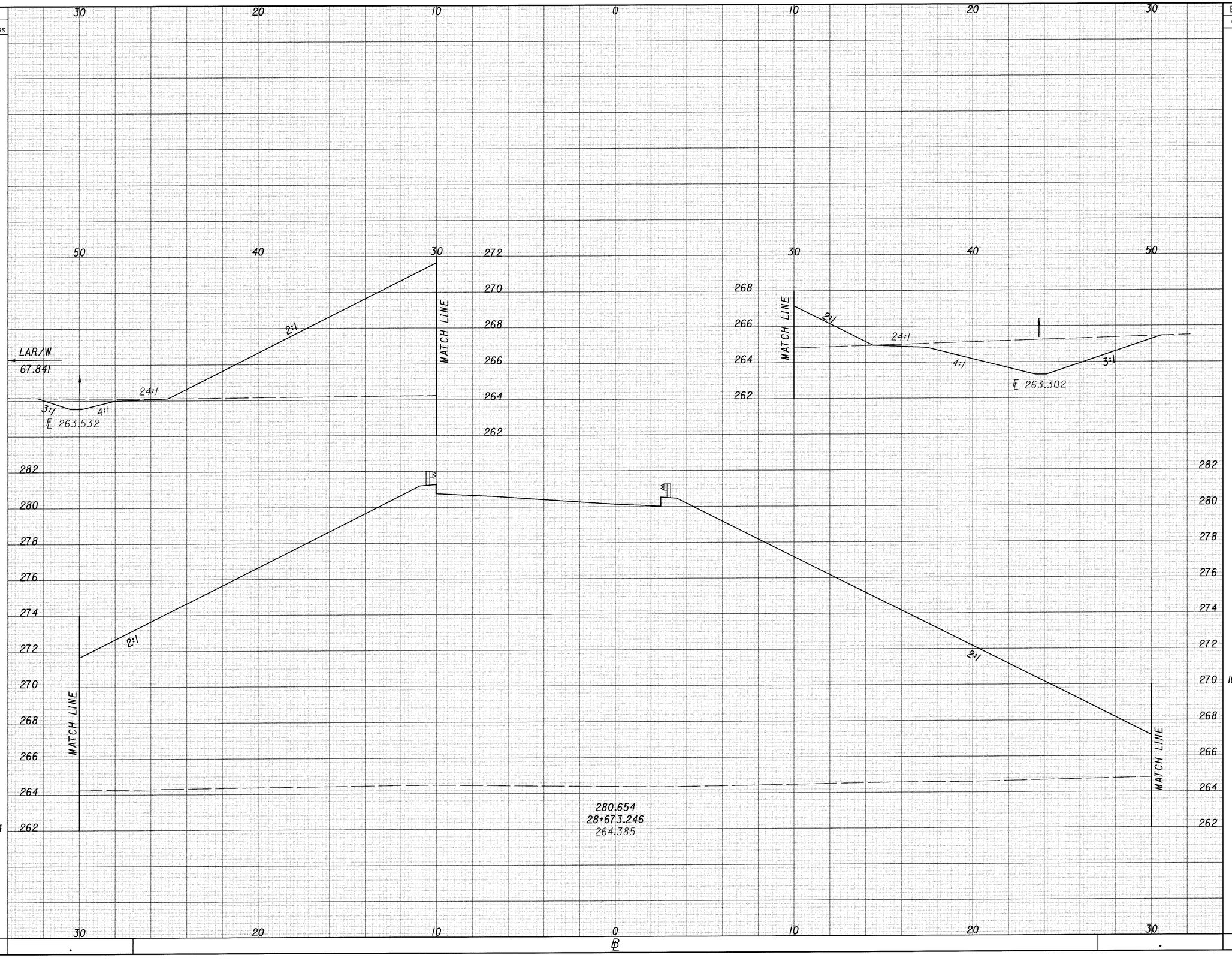
RAMP B CROSS SECTIONS

STA 28+640.000 TO STA 28+660.000

WYA/CRA-30-28.009/0.000

1035
2116

SEEDING	
END WIDTH	SQ. METERS
106.53	1394



END AREA		VOLUME	
CUT	FILL	CUT	FILL
16.07	761.69		
		179	9659

CALCULATED AM

CHECKED REA

RAMP B CROSS SECTIONS
STA 28+673.246

WYA/CRA-30-28.009/0.000

1036
2116

SEEDING	
END WIDTH	SQ. METERS
109.47	988

BRIDGE - STA. 28+682.396 TO 28+809.071

LAR/W 70.296

℄ 263.365

℄ 263.274

280.783
28+682.396
264.618

℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
19.90	750.05	165	6916

CALCULATED AM

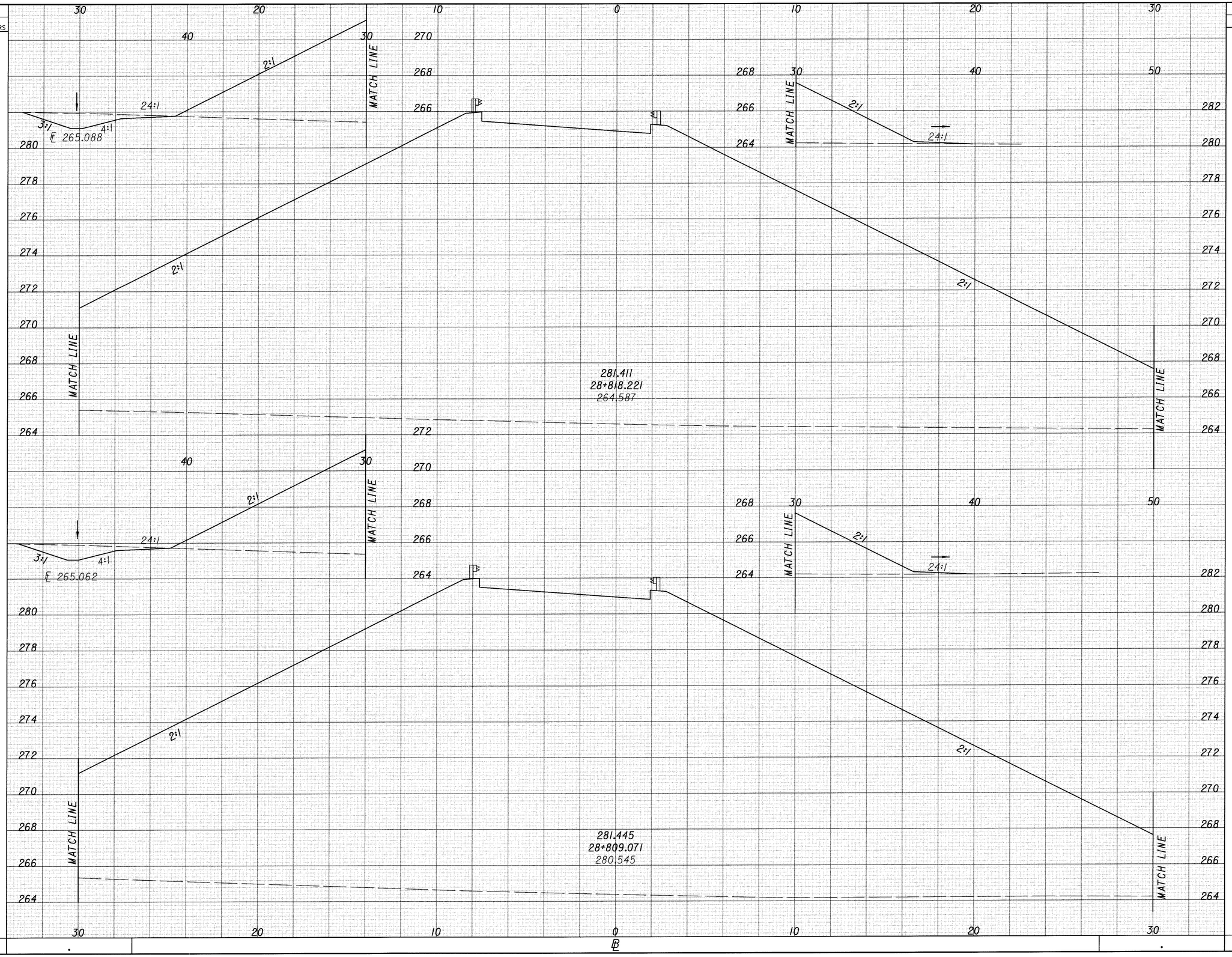
CHECKED REA

RAMP B CROSS SECTIONS
STA 28+682.396

WYA/CRA-30-28.009/0.000

1037
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
94.49		3.16	742.03		
	865			29	6855
94.68		3.16	756.39		
	0			0	0



CALCULATED AM

CHECKED REA

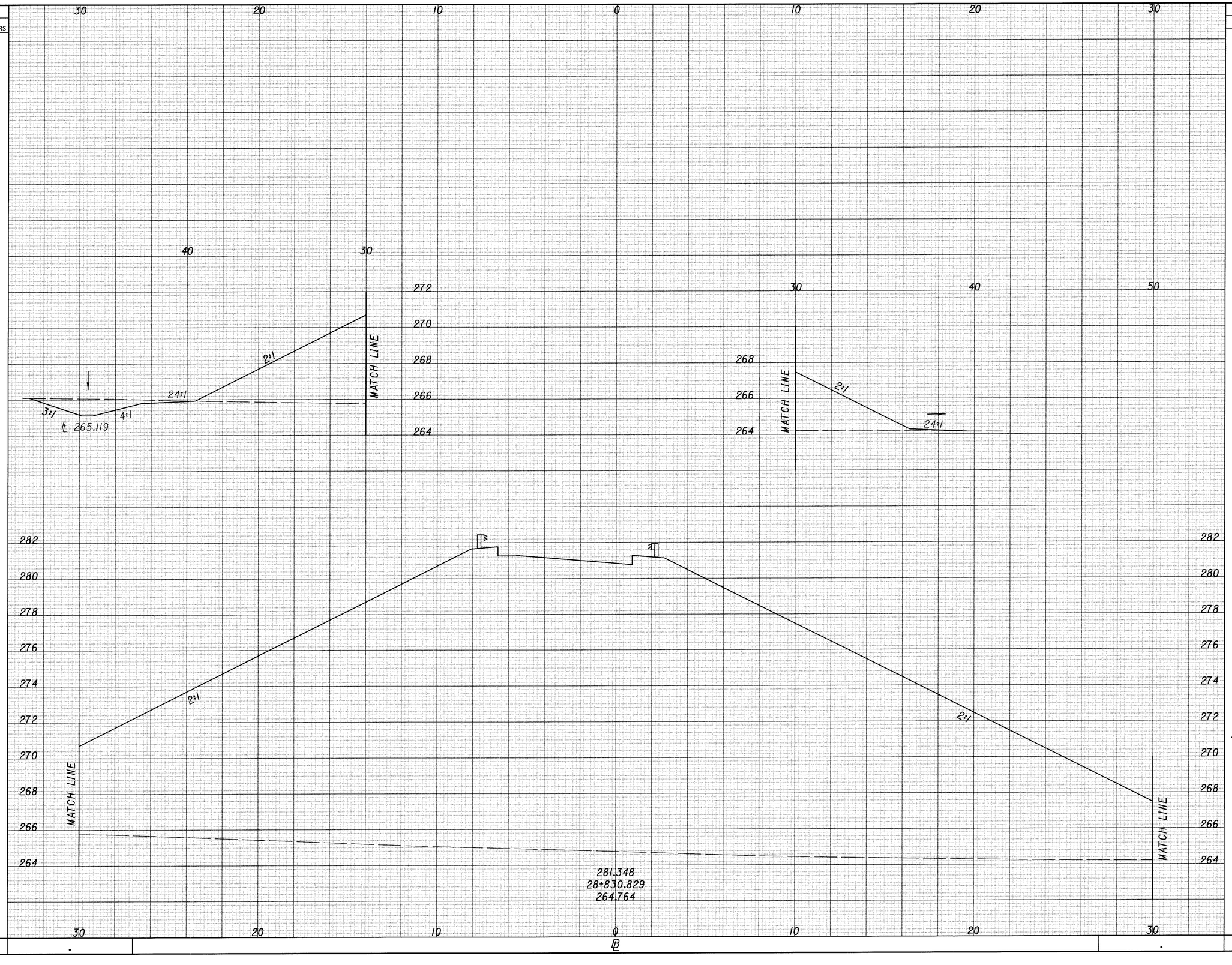
RAMP B CROSS SECTIONS

STA 28+809.071 TO STA 28+818.221

WYA / CRA-30-28.009 / 0.000

1038
2116

SEEDING	
END WIDTH	SQ. METERS
95.78	1199



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.77	717.70	44	9202

CALCULATED AM

CHECKED REA

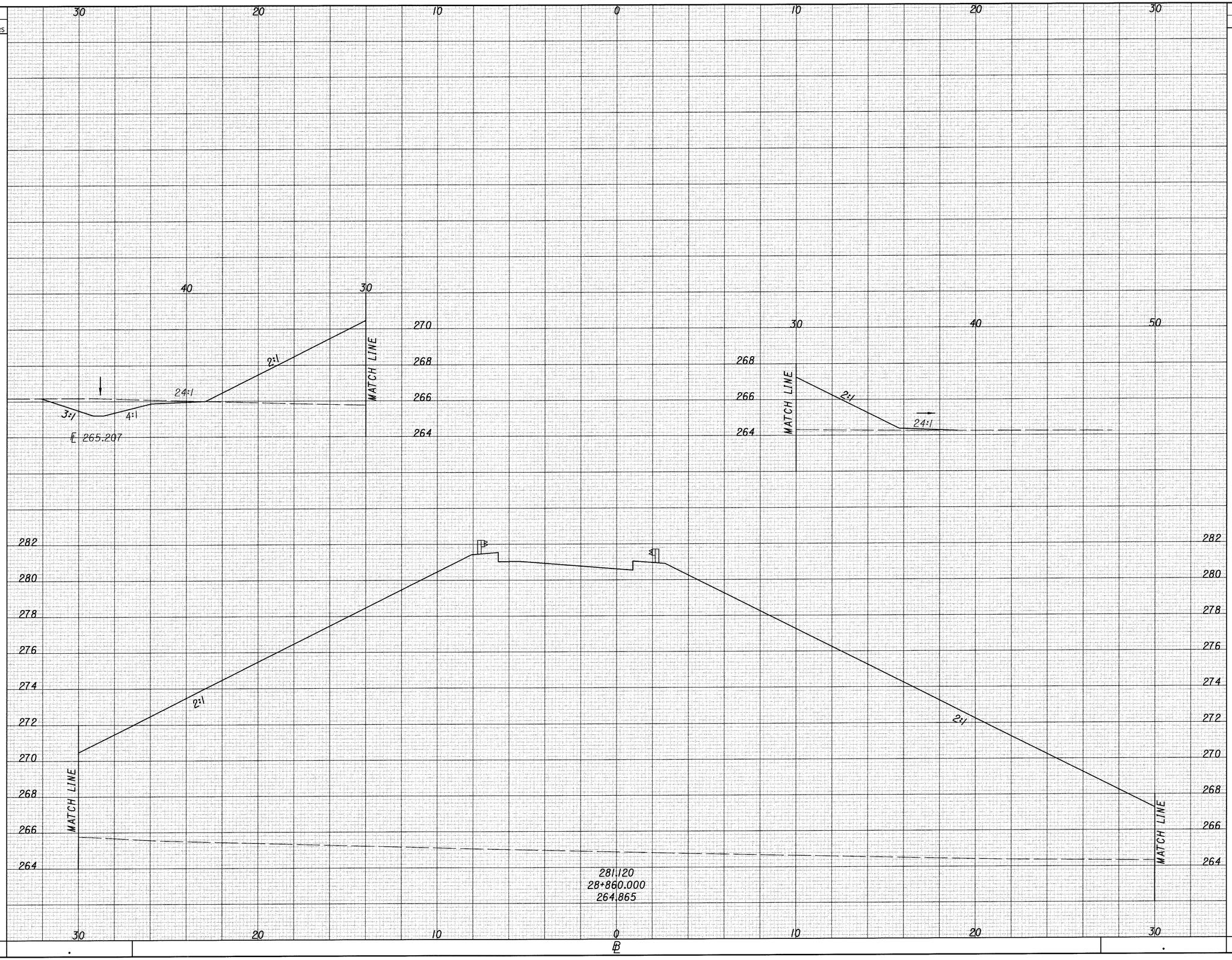
RAMP B CROSS SECTIONS
STA 28+830.829

WYA/CRA-30-28.009/0.000

1039
2116

SEEDING	
END WIDTH	SQ. METERS

SEEDING	
END WIDTH	SQ. METERS
94.31	1901



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.83	695.16	83	14038

CALCULATED AM

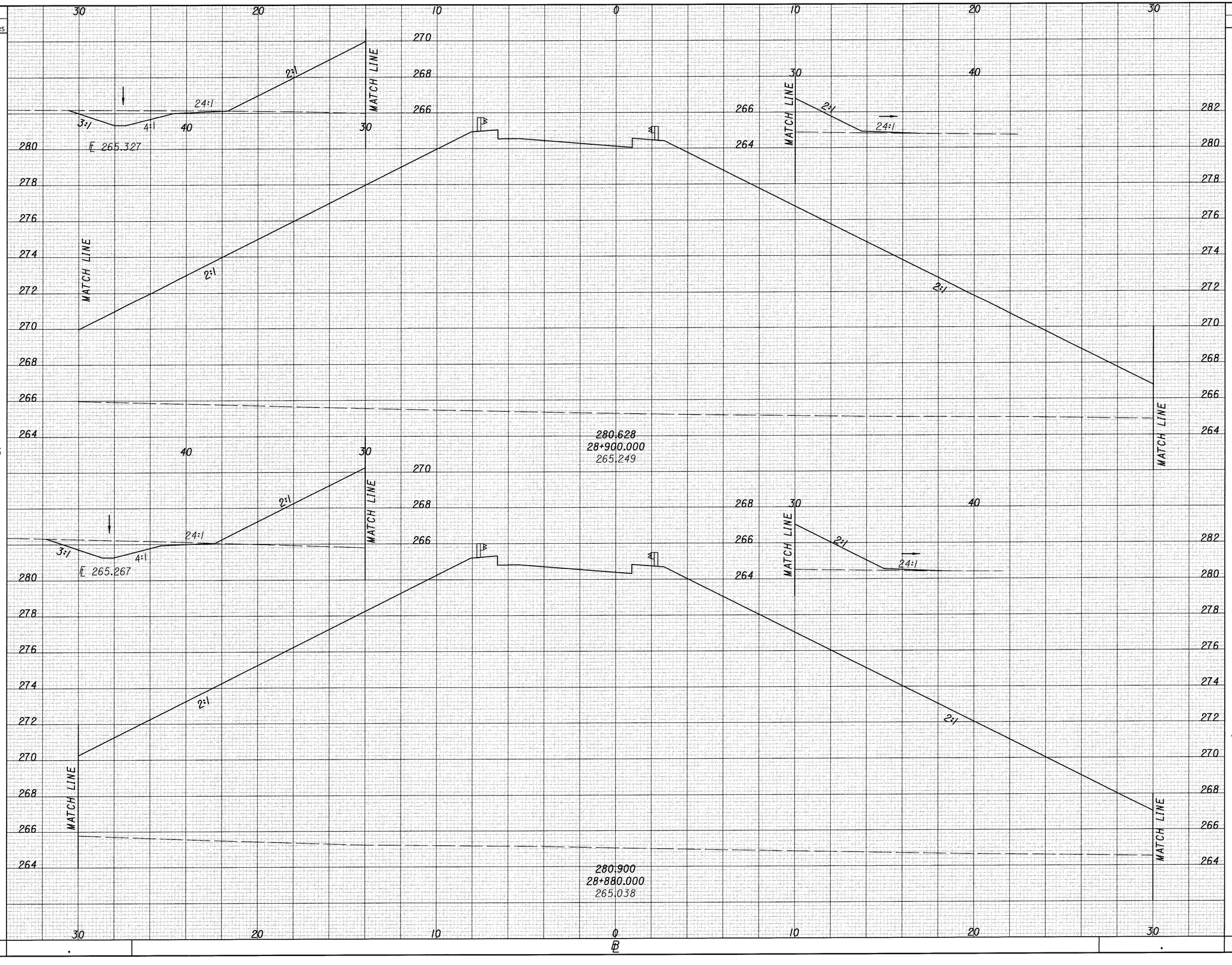
CHECKED REA

RAMP B CROSS SECTIONS
STA 28+860.000

WYA / CRA-30-28.009 / 0.000

1041
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
90.25	1835	3.16	629.63	72	12984
93.20	1875	4.00	668.76	78	13639



CALCULATED AM

CHECKED REA

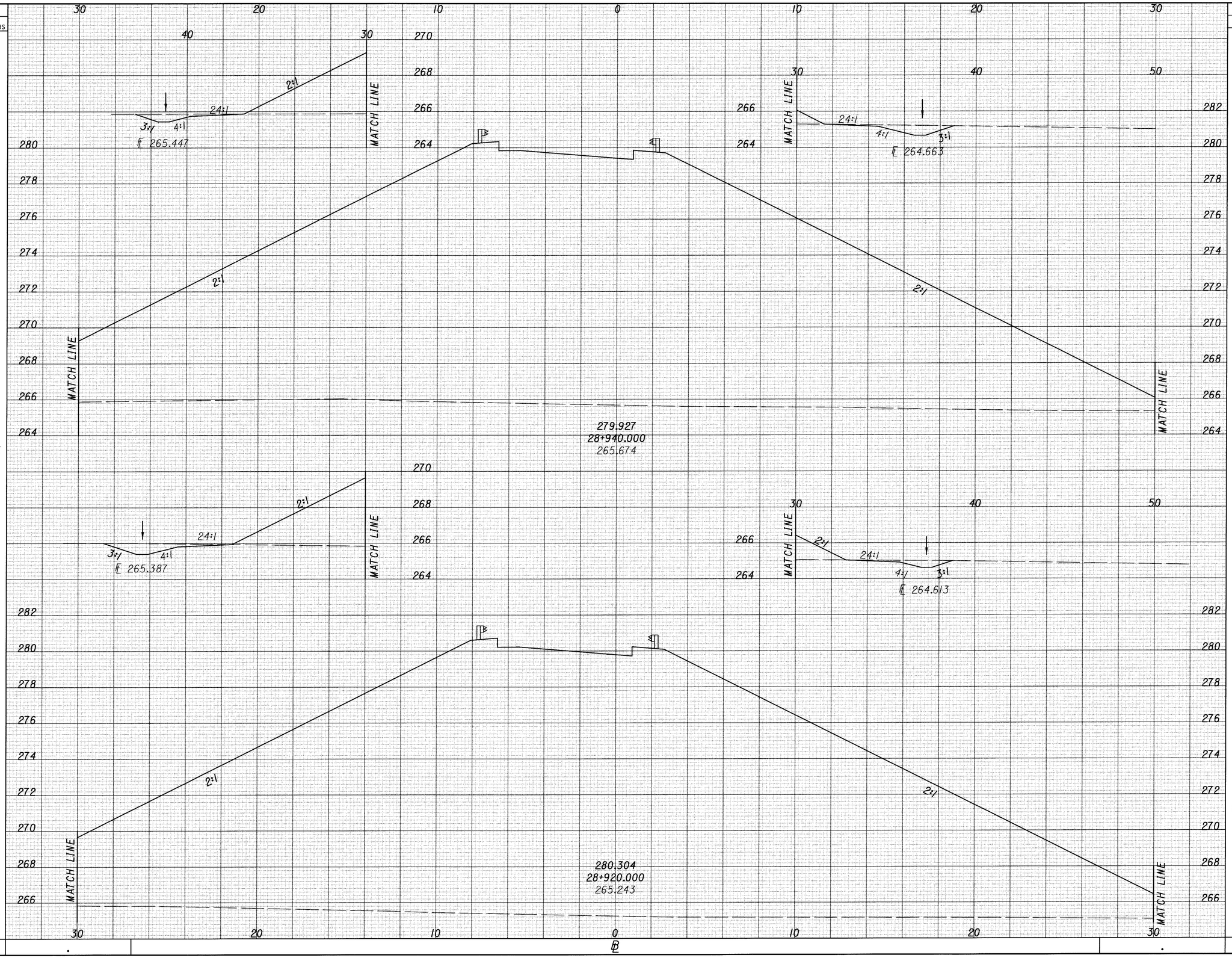
RAMP B CROSS SECTIONS

STA 28+880.000 TO STA 28+900.000

WYA/CRA-30-28.009/0.000

1042
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
88.17	1783	2.62	558.86	54	11640
90.10	1804	2.74	605.17	59	12348



CALCULATED AM

CHECKED REA

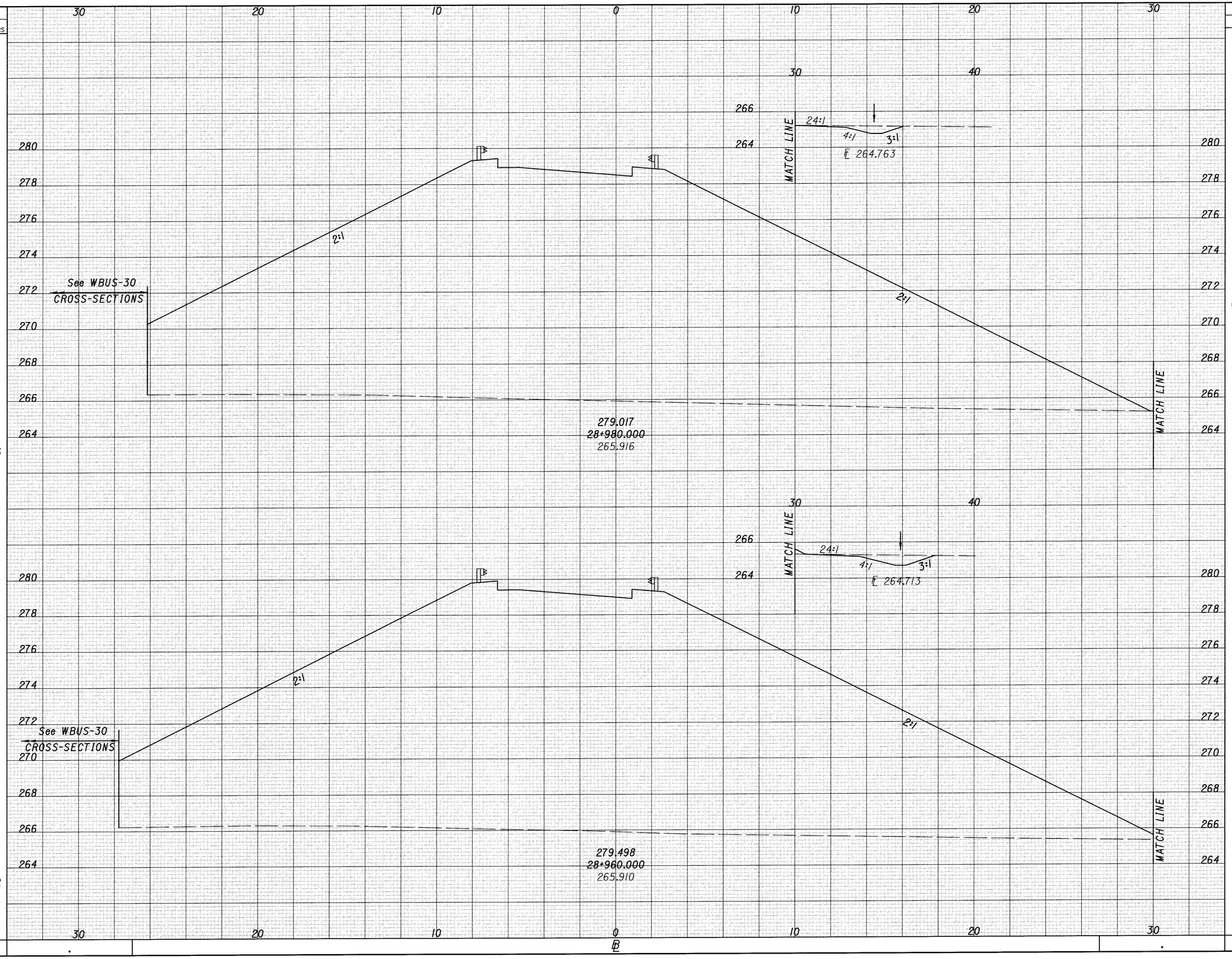
RAMP B CROSS SECTIONS

STA 28+940.000 TO STA 28+920.000

WYA / CRA-30-28.009 / 0.000

1043
2116

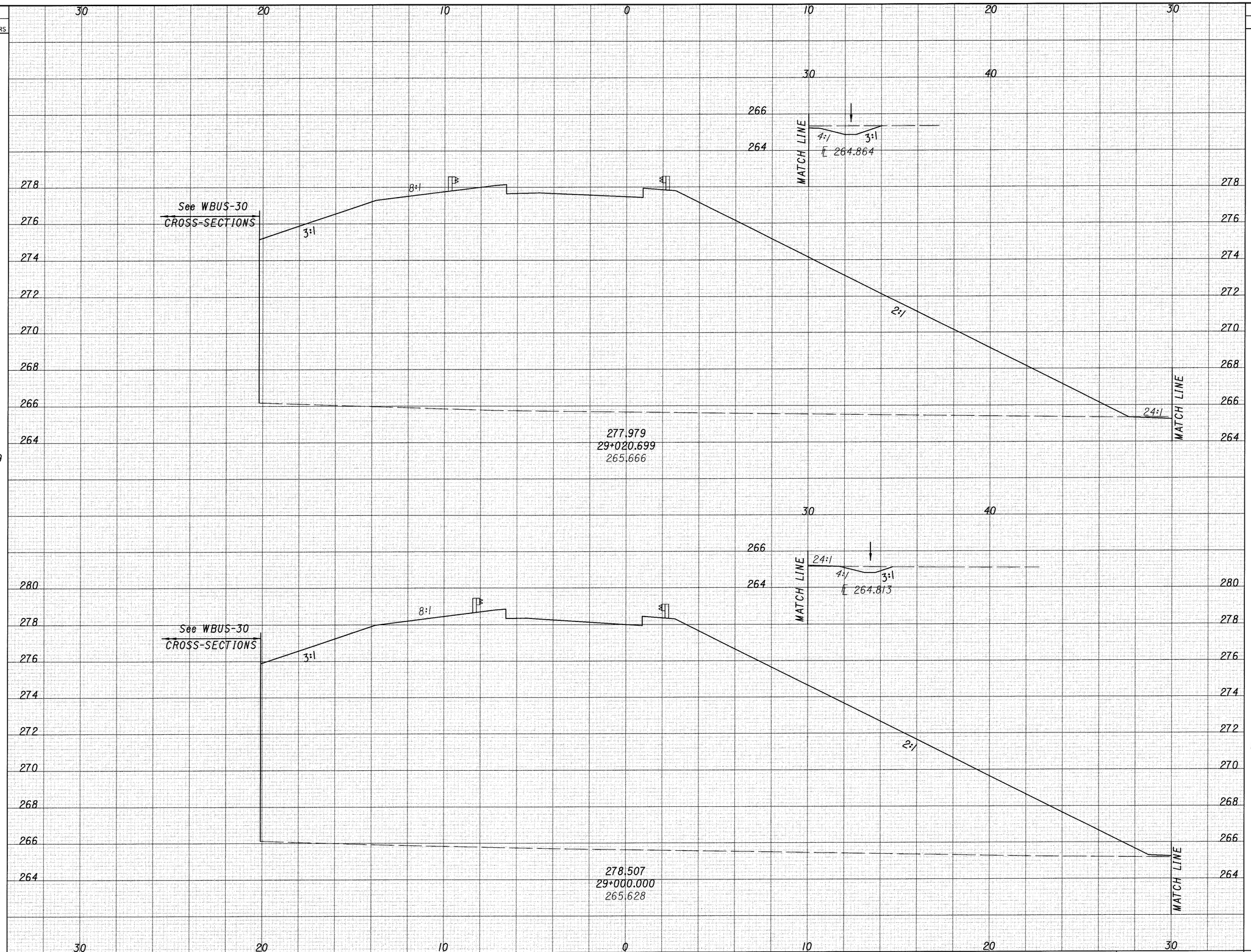
SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
67.49	1386	0.99	468.51	26	9701		
71.08	1592	1.56	501.62	42	10605		



RAMP B CROSS SECTIONS
STA 28+960.000 TO STA 28+980.000
WYA/CRA-30-28.009/0.000

1044
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
62.63	1309	1.23	412.80	19	8858
63.88	1314	0.57	443.13	16	9116



CALCULATED AM

CHECKED REA

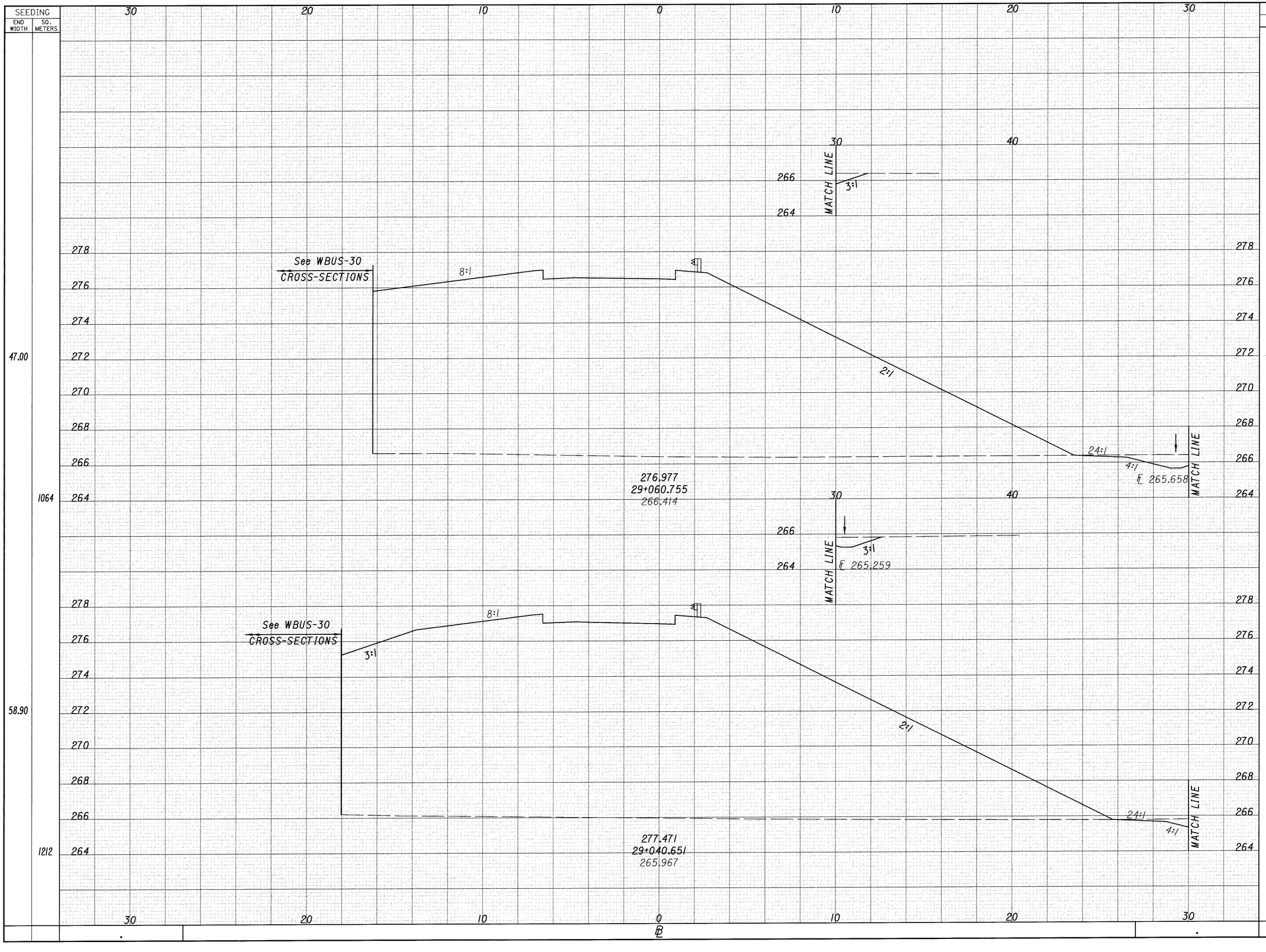
RAMP B CROSS SECTIONS

STA 29+000.000 TO STA 29+020.000

WYA / CRA-30-28.009 / 0.000

1045
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
47.00	1064	2.58	297.02	42	6550		
58.90	1212	1.56	354.57	28	7655		

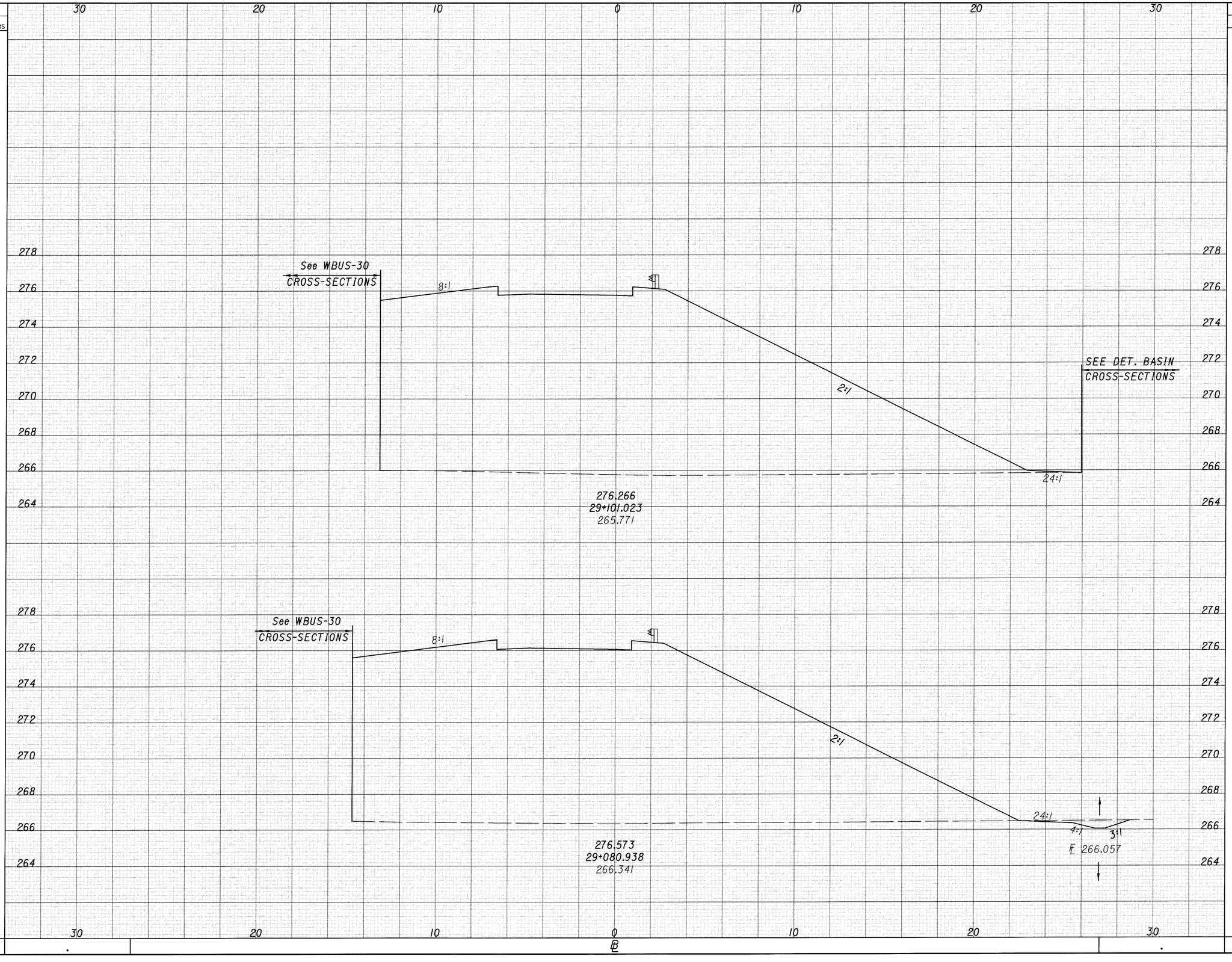


RAMP B CROSS SECTIONS
STA 29+040.651 TO STA 29+060.755

WYA / CRA-30-28.009 / 0.000

1046
2116

SEEDING	
END WIDTH	SQ. METERS
37.05	792
41.84	897



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.00	264.28		
		11	5345
1.14	267.98		
		38	5702

CALCULATED AM

CHECKED REA

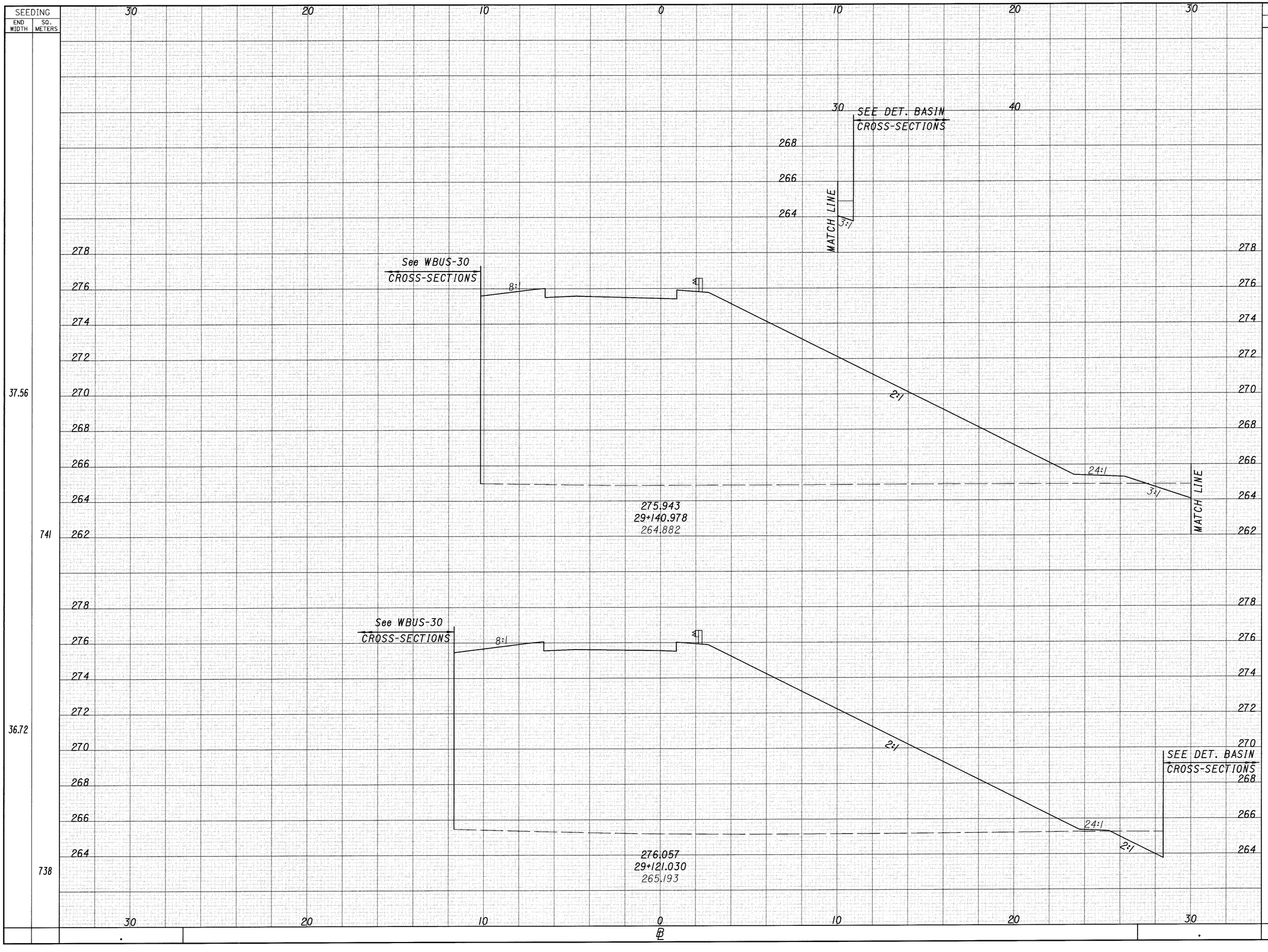
RAMP B CROSS SECTIONS

STA 29+080.938 TO STA 29+101.023

WYA / CRA-30-28.009 / 0.000

1047
2116

SEEDING	
END WIDTH	SQ. METERS
37.56	
	741
36.72	
	738



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.93	256.95		
		41	5190
2.21	263.39		
		22	5279

CALCULATED AM

CHECKED REA

RAMP B CROSS SECTIONS

STA 29+140.978 TO STA 29+121.030

WYA/CRA-30-28.009/0.000

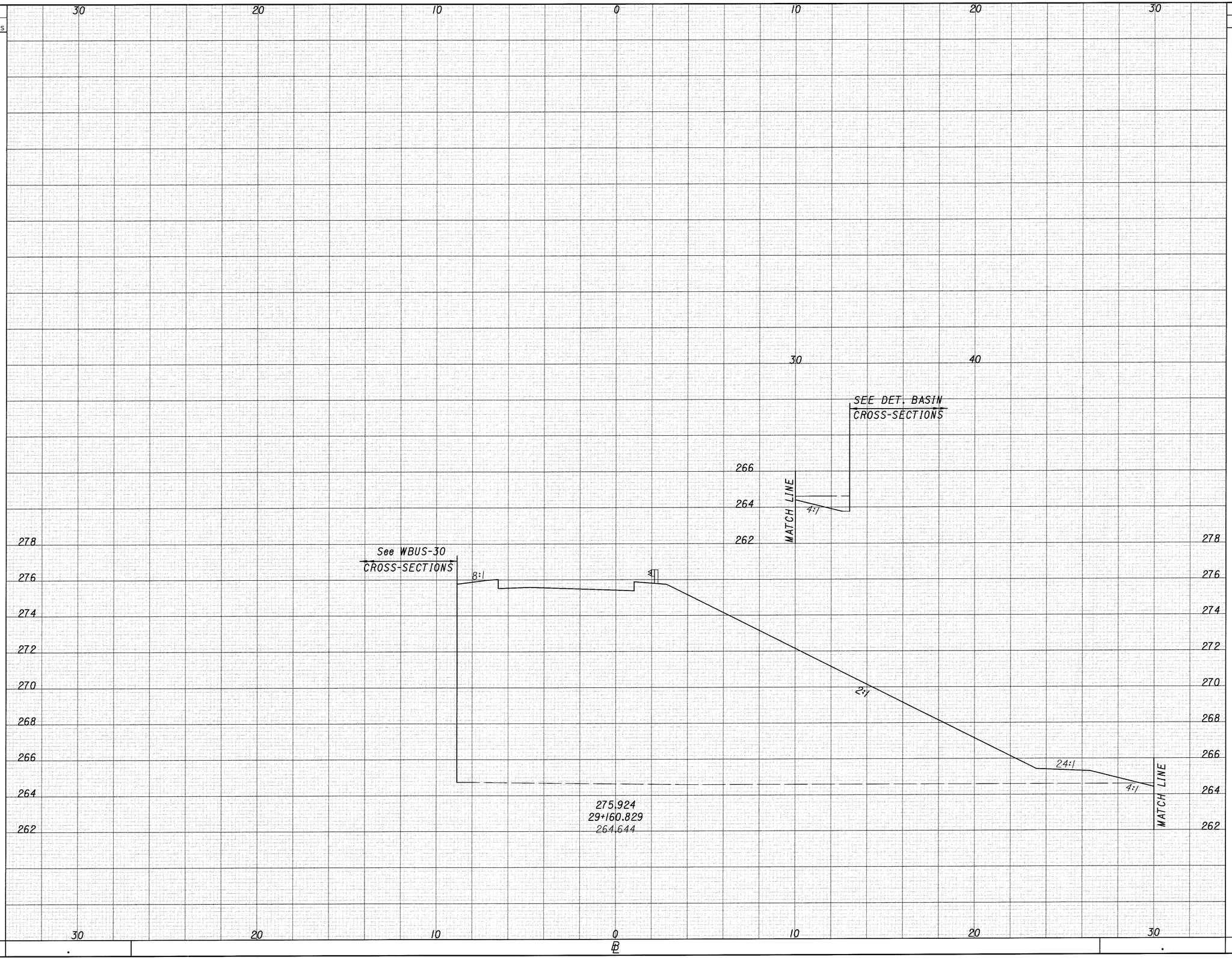
1048
2116

SEEDING	
END WIDTH	SQ. METERS
38.15	751

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1.80	254.17	37	5073

CALCULATED AM

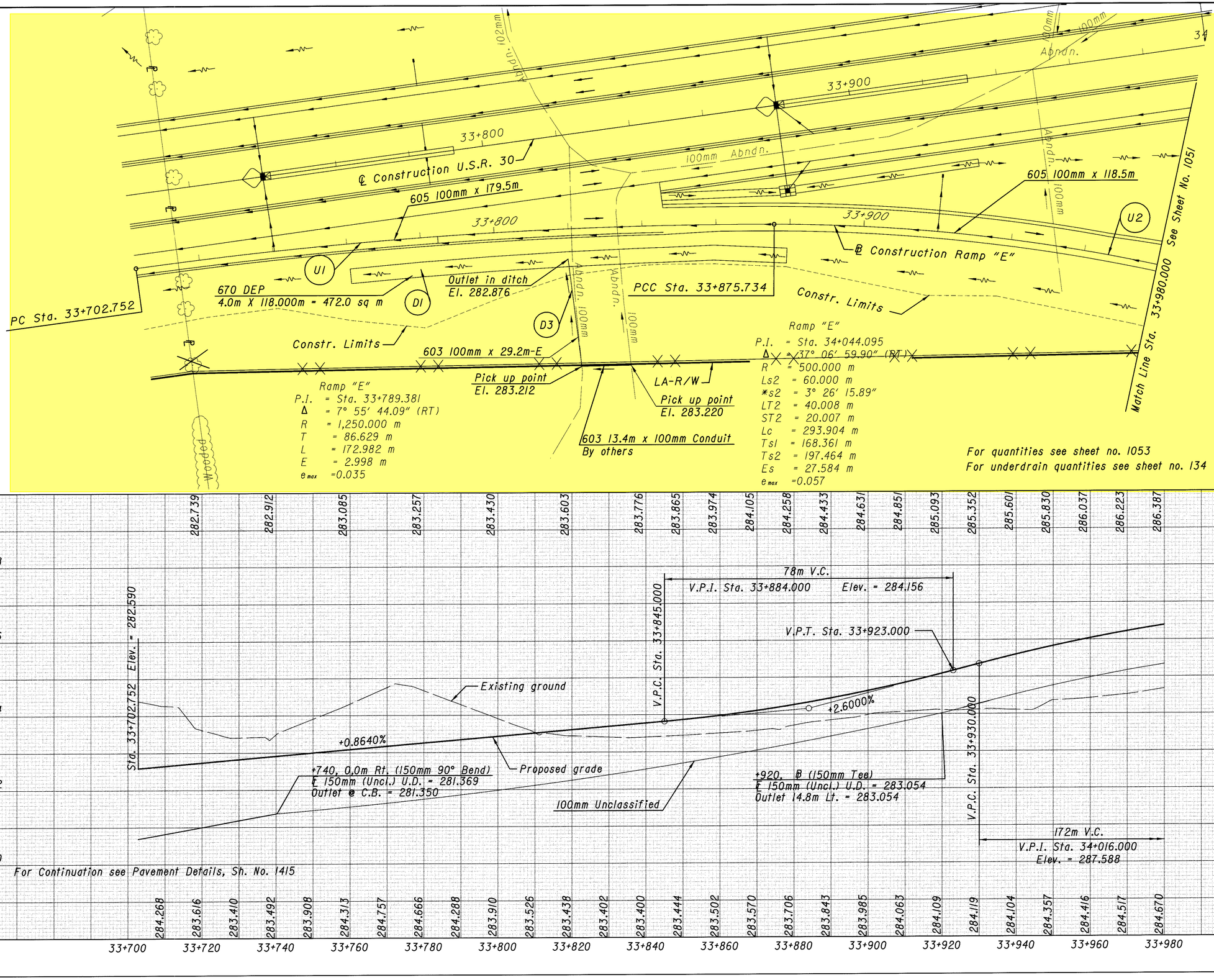
CHECKED REA



RAMP B CROSS SECTIONS
STA 29+160.829

WYA/CRA-30-28.009/0.000

1049
2116



HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - RAMP E
STA. 33+702.752 TO STA. 33+980

WYA/CRA-30-28.009/0.000

1050
2116

Ramp "E"
P.I. = Sta. 34+044.095
Δ = 37° 06′ 59.90" (RT)
R = 500.000 m
Ls2 = 60.000 m
θs2 = 3° 26′ 15.89"
LT2 = 40.008 m
ST2 = 20.007 m
Lc = 293.904 m
Tsl = 168.361 m
Ts2 = 197.464 m
Es = 27.584 m
e_{max} =0.057

℄ Construction U.S.R. 30
℄ Construction Ramp "J"
℄ Construction Ramp "E"
Match Line Sta. 33+980.000 See Sheet No. 1050
Match Line Sta. 34+265.632 See Sheet No. 1062
34+000
34+100
34+200
34+229.474 E
Begin Curb, Type 7
34+229.463 E
Begin Curb, Type 7
S 44° 32′ 15.93" E
U2
R2
D2
RI
DII
Constr. Limits
Constr. Limits
Constr. Limits
670 DEP
4.0m X 99.275m = 397.1 sq m
670 DEP
LA-R/W
Permanent Easement

RI For Quantities see Sheet No. 1062
R2 For Quantities see Sheet No. 1062
DII For Quantities see Sheet No. 1062

For quantities see sheet no. 1053
For underdrain quantities see sheet no. 134
For Ramp "J" see sheet no. 1070

286.387 286.531 286.654 286.755 286.835 286.894 286.932 286.948 286.944 286.918 286.871 286.804 286.714 286.507 286.299 286.091 285.883 285.675 285.467 285.259 285.052

290
288
286
284
282

+052.873, ℄ Rt.
℄ 150mm (Uncl.) U.D. = 285.905
High Point
Proposed grade
Existing ground
+2.6000%
-1.0395%
100mm Unclassified
172m V.C.
V.P.I. Sta. 34+016.000 Elev. = 287.588
V.P.I. Sta. 34+102.000
Sta. 34+265.632 Elev. = 284.993

284.670 284.857 285.088 285.257 285.330 285.355 285.354 285.293 285.297 285.477 285.952 286.441 286.897 287.394 287.993 288.302 288.460 288.482 288.517 288.373 288.119 287.745 287.278 286.898 286.643 286.626 286.879 287.305 287.877

33+980 34+000 34+020 34+040 34+060 34+080 34+100 34+120 34+140 34+160 34+180 34+200 34+220 34+240 34+260 34+280

HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED AM
CHECKED REA

PLAN AND PROFILE - RAMP E
STA. 33+980 TO STA. 34+265.632

WYA/CRA-30-28.009/0.000

1051
2116

ESTIMATED DRAINAGE QUANTITIES

WYA / CRA-30-28.009 / 0.000

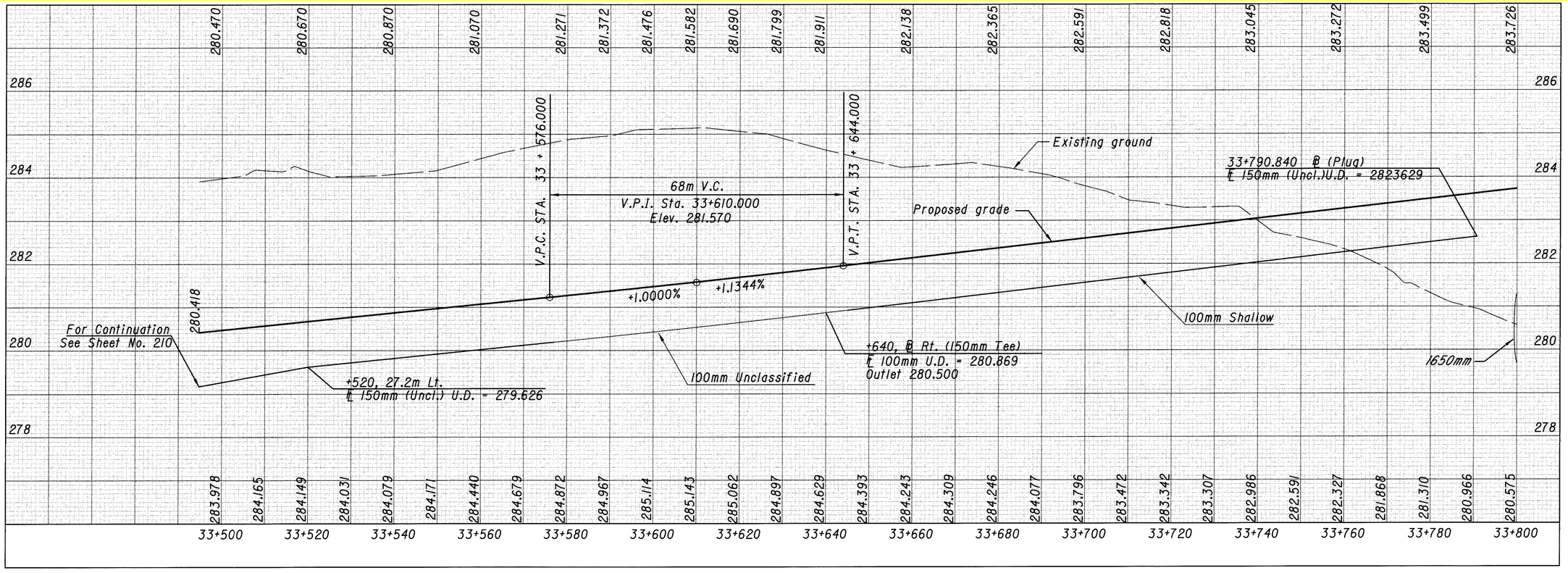
CALCULATED AM
CHECKED REA

REF NO.	SHEET NO.	STATION	SIDE	603	670	FOR INFORMATION ONLY			
				100 MM CONDUIT, TYPE E	DITCH EROSION PROTECTION	300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND		MASONRY COLLAR
				METER	SQ M	EACH			
D1	1050	33+760.42 TO 33+879.23	RT		472.0				
D2	1051	34+140.00 TO 34+240.00	RT		397.1				
D3	1050	33+819.72	RT	29.2					

Ramp "F"
P.I. = Sta. 33+628.081
Δ = 43° 12' 07.43" (LT)
R = 333.000 m
Ls2 = 90.000 m
*s2 = 7° 44' 33.62"
LT2 = 60.057 m
ST2 = 30.052 m
Lc = 206.088 m
Tsl = 133.331 m
Ts2 = 175.745 m
Es = 25.700 m

For quantities see sheet no. 1056-1057
For underdrain quantities see sheet no. 135
For Ramp "I" See sheet no. 1066

PC Sta. 33+494.750
Sta. 33+800.000 "F"
See sheet no. 1326
1650mm Conduit
Match Line Sta. 33+800.000 See Sheet No. 1055
ST Sta. 33+790.838
Sta. 33+753.240 Ramp "F"-
Sta. 33+704.935 Ramp "I"
670 DEP
1.0m X 12.200m = 12.2 sq m
CS Sta. 33+700.838
S46° 48' 11.05"E
605 100mm x 120.0m
605 100mm x 150.8m
603 100mm x 4.8m-B
603 150mm x 5.2m-F
670 DEP
5.0m X 58.120m = 290.6 sq m
Sta. 33+734.686 "I"
See sheet no. 1325
2250mm Conduit
LA-R/W
Constr. Limits
℄ Construction Ramp "F"
℄ Construction U.S.R. 30
℄ Ramp "I"
Woven Wire
Barbed Wire
Grassy Lane
Tree Line
Abndn. 100mm
100mm Abndn.
33+500
33+600
33+700
U1
U2
D1
D2
D3
D4



HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - RAMP F
STA. 33+494.750 TO STA. 33+800

WYA/CRA-30-28.009/0.000

1054
2116

LA-R/W

Wooded

33+843.724
Begin Curb, Type 7

Constr. Limits

603 375mm x 43.7m-C

603 375mm x 32.6m-C

℄ Construction Ramp "F"
N 45° 08' 55.59" E

Match Line Sta. 33+800.000

1650mm
Conduit
603 450mm x 17.0m-C
See sheet no. 1366

Sta. 33+800.000
See sheet no. 1326
Skew = 18° LF

33+804.144
Begin Curb, Type 7

33+803.421
Begin Curb, Type 7

See Sheet No. 1054

603 375mm x 7.9m-B

604 No.3 CB
See sheet no. 1365

604 No.3 CB
See sheet no. 1365

604 No.3 MH
See sheet no. 1364

603 375mm x 9.1m-B

603 450mm x 31.5m-B

Inlet 3.0
See sheet no. 1366

Inlet 3.0
See sheet no. 1366

33+836.822
End Curb, Type 7
Begin Curb, Type 6

Westbound Rest Area
Service Drive

33+905 *
Svc. Drive

604 No.3 MH
See sheet no. 1378

603 150mm x 9.5m-C

603 150mm x 7.4m-B

603 150mm x 59.7m-C

604 No.3 MH
See sheet no. 1378

Inlet 3.0
See sheet no. 1366

603 450mm x 52.4m-C

603 450mm x 41.5m-C

603 450mm x 40.0m-C

603 450mm x 32.4m-C

33+920.373
End Curb, Type 7

Curb, Type 7

604 No.3 MH
See sheet no. 1364

Inlet 3.0
See sheet no. 1364

Inlet 3.0
See sheet no. 1364

Inlet 3.0
See sheet no. 1364

Inlet 3.0
See sheet no. 1364

Inlet 3.0
See sheet no. 1364

33+896.403
Begin Curb, Type 7

Curb, Type 7

33+976.290
End Curb, Type 7

603 300mm x 31.9m-C

603 300mm x 40.0m-C

603 300mm x 40.0m-C

304 250 mm Aggregate Base
For Details see Sh. No. 1445

Constr. Limits

34+034.862
End Curb, Type 6
Begin Curb, Type 7

S 89° 34' 59.92" E
℄ Construction Ramp "F"

POT Sta. 34+095.508

POT Sta. 33+882.968

Abndn.

100mm Abndn.

200mm Abndn.

100mm

34+000

33+900

D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15 D16 D17 D18

R1 R2 R3 R4 R5 R6

S1 S2 S3

For quantities see sheet no. 1056-1057
For underdrain quantities see sheet no. 135
For Westbound Rest Area Layout see Sheet No. 1449.

452 150 mm Plain Concrete Pavement
(* = quantity break)

283.953 284.180 284.406 284.633 284.971 285.135 285.271 285.380 285.461 285.595 285.728 285.862 285.996 286.130 286.167 286.146 286.067 285.930

288
286
284
282
280

Proposed grade

+0.6687%
-2.1361%
285.617

48.000 m V.C.
V.P.I. Sta. 34+064.000
Elev. = 286.290

+1.7826%
+0.6687%
40.000 m V.C.

+1.1344%
+1.7826%

V.P.I. Sta. 33+882.900
Elev. = 284.667

V.P.I. Sta. 33+920.000
Elev. = 285.327

Existing ground

1650mm

STA. + 900.000
Elev. = 284.971

STA. + 940.000
Elev. = 285.461

STA. + 040.000
Elev. = 286.130

STA. + 088.000
Elev. = 285.777

280.575 280.801 281.395 281.610 281.645 281.882 282.099 282.427 282.970 283.284 283.397 283.468 283.503 283.600 283.825 284.023 284.172 284.343 284.650 284.994 285.457 285.882 286.246 286.514 286.807 287.103 287.287 287.394 287.314 287.143

33+800 33+820 33+840 33+860 33+880 33+900 33+920 33+940 33+960 33+980 34+000 34+020 34+040 34+060 34+080 34+100

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - RAMP F
STA. 33+800 TO STA. 34+095.508

WYA/CRA-30-28.009/0.000

1055
2116

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE 1		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		RAMP F																															
R1	1055	33+803.421 TO 33+836.822	RT																										38				
R2	1055	33+804.144 TO 34+006.164 G	BL & LT																										353				
R3	1055	33+836.822 TO 34+034.862	RT																									171					
R4	1055	33+843.724 TO 33+920.373	RT																										183				
R5	1055	33+896.403 TO 33+976.290	BL & LT																										273				
R6	1055	34+034.862 TO 34+006.149 G	RT																										98				
TOTALS CARRIED TO SUB-SUMMARY																												171	945				

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

1056
2116

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 375 MM CONDUIT, TYPE B (METER)	603 450 MM CONDUIT, TYPE B (METER)	603 150MM CONDUIT, TYPE B, 707.44 (METER)	603 300 MM CONDUIT, TYPE C (METER)	603 150MM CONDUIT, TYPE C, 707.44 (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 450 MM CONDUIT, TYPE C (METER)	603 2250 MM CONDUIT, TYPE A, 706.02 (METER)	603 1650 MM CONDUIT, TYPE A, 706.02 (METER)	604 CATCH BASIN NO. 3 (EACH)	604 MANHOLE, NO. 3 (STORM SEWER) (EACH)	604 MANHOLE, NO. 3 (SANITARY SEWER) (EACH)	604 MEDIAN INLET 3.0M (EACH)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY (EACH): 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND		MASONRY COLLAR
D1	1054	33+684.96 TO 33+738.86	RT																	290.6					
D2	1054	33+734.686 RAMP I	LT & RT		16.5	8.76								33.5							38.5				
D3	1054	33+780.86 TO 33+791.80	RT																	12.2					
D4	1054	33+800.00	LT & RT		12.0	4.62									38.8						26.9				
D5	1055	33+808.500	LT	1.2		0.28							17.0				1								
D6	1055	33+805.60 TO 33+808.61	RT							3.0						1									
D7	1055	33+808.61 TO 33+814.00	LT & RT				7.9									1									
D8	1055	33+814.00 TO 33+837.59	LT & RT					31.5											1						
D9	1055	33+846.60 TO 33+814.00	LT & RT				9.1					32.6				1	1								
D10	1055	33+846.60 TO 33+887.77	LT									43.7							1						
D11	1055	33+887.77 TO 33+927.20	LT				47.1												1						
D12	1055	33+927.20 TO 33+959.09	LT							31.9									1						
D13	1055	33+959.09 TO 33+999.09	LT							40.0									1						
D14	1055	33+999.09 TO 34+039.09	LT							40.0									1						
D15	1055	33+999.10 TO 34+031.50	RT							32.4									1						
D16	1055	33+959.10 TO 33+999.10	RT							40.0									1						
D17	1055	33+917.60 TO 33+959.10	RT							41.5									1						
D18	1055	33+837.59 TO 33+917.60	RT										52.4						1						
S1	1055	33+961.06	RT						7.4		9.5							1							
S2	1055	33+961.06 TO 34+020.76	RT								59.7							1							
S3	1055	34+020.76 F TO 34+018.42 I	RT								74.4							1							

Ramp "G"
P.I. = Sta. 34+203.634
Δ = 37° 04' 15.92" (LT)
R = 500.000 m
Lsl = 60.000 m
Osl = 3° 26' 15.89"
LTl = 40.008 m
STl = 20.007 m
Lc = 293.506 m
Tsl = 197.242 m
Ts2 = 168.140 m
Es = 27.514 m
e_{max} =0.057

For quantities see sheet no. 1061
For underdrain quantities see sheet no. 136
For Ramp "I" see sheet no. 1067

R2 For Quantities see Sheet No. 1055
R6 For Quantities see Sheet No. 1055
S3 For Quantities see Sheet No. 1055

Wetland
Wooded
Wooded
Wooded
Wooded

34+006.164 G
End Curb, Type 7

603 150mm x 99.2m-C
Constr. Limits
604 No.3 MH
See sheet no. 1380
604 No.3 MH
See sheet no. 1380
603 150mm x 120.5m-C

Match Line Sta. 34+260.000 See Sheet No. 1059

S 44° 34' 59.92" E
34+000
34+050
34+100

℄ Construction Ramp "G"
℄ Construction Ramp "I"
℄ Construction U.S.R. 30

POT Sta. 33+969.947
TS Sta. 34+006.392
SC Sta. 34+066.392

603 150mm x 100.0m-B
603 150mm x 74.4m-C
604 No.3 MH
See sheet no. 1379
34+006.149 G
End Curb, Type 7

U1 U2 S1 S2 S3 R2 R6

285.475 285.333 285.191 285.061 284.964 284.902 284.867 284.836 284.805 284.773 284.742 284.711 284.679 284.648 284.617 284.585 284.554 284.523 284.491 284.460 284.428 284.397 284.366 284.334 284.303 284.272 284.240 284.209 284.178

288
286
284
282
280

Existing ground
Proposed grade

V.P.C. Sta. 34+002.000
V.P.I. Sta. 34+018.000
V.P.T. Sta. 34+034.000
32m V.C.
Elev. 284.936
285.617
-1.4164%
-0.3136%

287.260 287.381 287.706 287.886 288.018 287.996 287.851 287.639 287.429 287.209 286.528 286.322 285.622 284.969 284.456 284.252 284.219 284.322 284.714 285.204 285.474 285.828 286.154 286.580 286.970 287.278 287.434 287.534 287.631

33+960 33+980 34+000 34+020 34+040 34+060 34+080 34+100 34+120 34+140 34+160 34+180 34+200 34+220 34+240 34+260

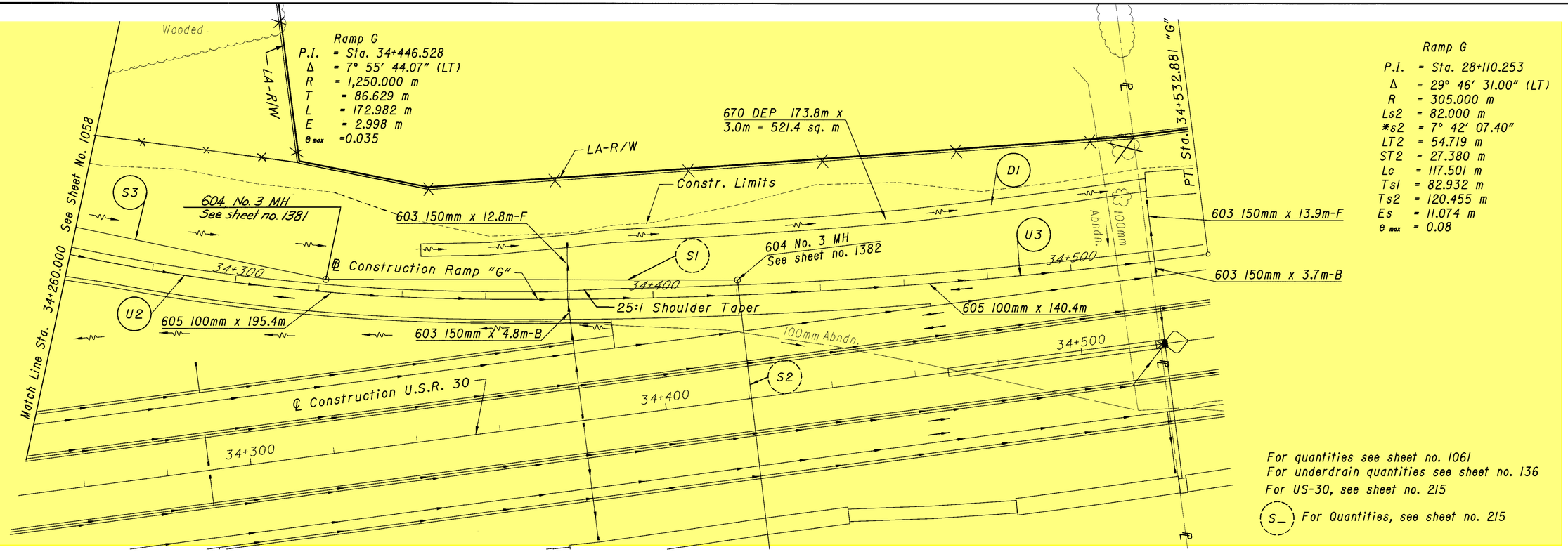
HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - RAMP G
STA. 33+969.947 TO STA. 34+260

WYA/CRA-30-28.009/0.000

1058
2116



HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED AM CHECKED REA

PLAN AND PROFILE - RAMP G
STA. 34+260 TO STA. 34+532.881

WYA/CRA-30-28.009/0.000

1059
2116

REF NO.	SHEET NO.	STATION	SIDE	603 150 MM CONDUIT, TYPE B, 707.44 METER	603 150MM CONDUIT, TYPE C, 707.44 METER	604 MANHOLE, NO. 3 (SANITARY SEWER) EACH	670 DITCH EROSION PROTECTION SQ M	FOR INFORMATION ONLY 300 MM X 300 MM 22.5° BEND EACH	375 MM X 375 MM 22.5° BEND EACH	MASONRY COLLAR EACH
D1	1059	34+344.03 TO 34+520.04	LT				521.4			
S1	1058	34+018.42 I TO 34+100.00 G	LT & RT	100.0		1				
S2	1058	34+100.00 TO 34+200.00	LT		99.2	1				
S3	1058	34+200.00 TO 34+321.52	LT		120.5	1				

604 No.2-2B CB
See sheet no. 1367

D1

603 375mm x 13.1m-C

34+201.358
End Curb, Type 7
Begin Curb, Type 6

R2

Inlet 4.2
See sheet no. 1367

D2

D3

34+325 *
Svc. Drive

603 450mm x 44.5m-C

Inlet 4.2
See sheet no. 1367

603 450mm x 31.4m-C

Dit Drive

R3

Inlet 3.0
See sheet no.
1367

603 525mm x 40.0m-C

D4

100mm Abndn.

34+259.931
Begin Curb, Type 7

34+315.848
Begin Curb, Type 7

R5

D5

604 No.3 CB
See sheet no. 1367

S 89° 34' 59.93" E

34+200

U1

℄ Construction Ramp "H"

604 No.3 CB
See sheet no.
Curb, 1368
Type 7

D6

34+400

D7

603 300mm x 14.5m-B

POT Sta. 34+348.331

34+300

D12

D10

604 No.3 MH
See sheet no. 1367

POT Sta. 34+140.712

A D25 Sta. 34+348.331,
8.504m RT.
Length = 23.687m
300mm Conduit Type D
Inv. Inlet = 282.329m

S2 For quantities see sheet no. 1071

For quantities see sheet no. 1064-1065
For underdrain quantities see sheet no. 137
For Eastbound Rest Area Layout see Sheet No. 1450.

452 150 mm Plain Concrete Pavement
(* = quantity break)

D11

603 300mm x 34.6m-C

Inlet 3.0
See sheet no. 1369

D15

Inlet 3.0
See sheet no. 1369

R4

R1

D16

34+334.896
End Curb, Type 7

Curb,
Type 7

Inlet 3.0
See sheet no.
1369

604 No.3 CB
See sheet no. 1368

603 375mm x 39.7m-C

D17

D18

D19

D22

D20

Constr.
Limits

℄ Construction
Ramp "H"

603 375mm x 101.9m-C

34+427.910
End Curb, Type 7

D14

Wooded

34+387.581
End Curb, Type 7

LA-R/W

Wooded

Constr. Limits

Inlet 3.0
See sheet no. 1369

603 375mm x 27.2m-B

604 No.3 MH
See sheet no. 1369

603 300mm x 3.1m-C

A

304 250 mm Aggregate Base
For Details see Sh. No. 1448

34+394.488
End Curb, Type 6
Begin Curb, Type 7

S2

34+427.895
End Curb, Type 7

R6

Eastbound Rest Area
Service Drive
603 525mm x 45.3m-C

603 300mm x 6.5m-C

603 300mm x 8.5m-C

604 No.3 CB
See sheet no.
1368

Abndn.

100mm

Match Line Sta. 34+440.000 See Sheet No. 1063

375mm

D3 For quantities see sheet no. 1071

D9

603 600mm x 24.0m-C

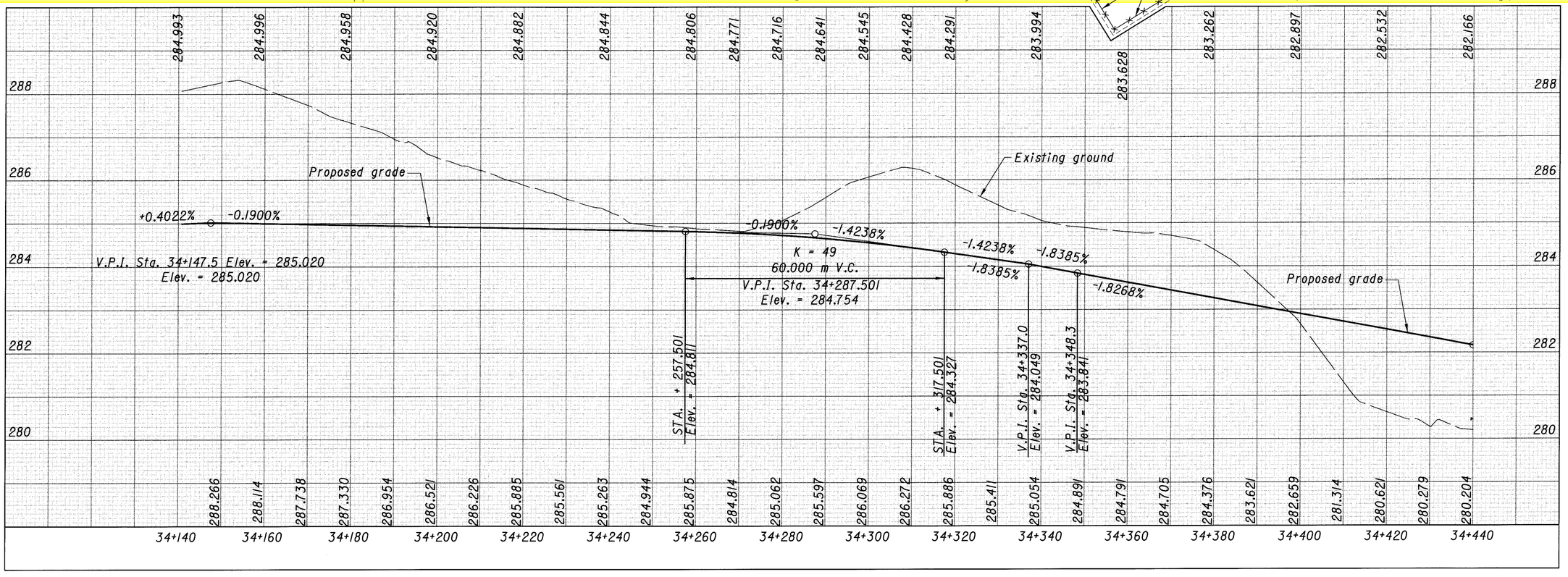
Inlet 3.0
See sheet no. 1367

603 525mm x 31.2m-B

D8

TS Sta. 34+439.652

604 No.3 MH
See sheet no. 1367



HORIZONTAL
SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE - RAMP H
STA. 34+140.712 TO STA. 34+440

WYA/CRA-30-28.009/0.000

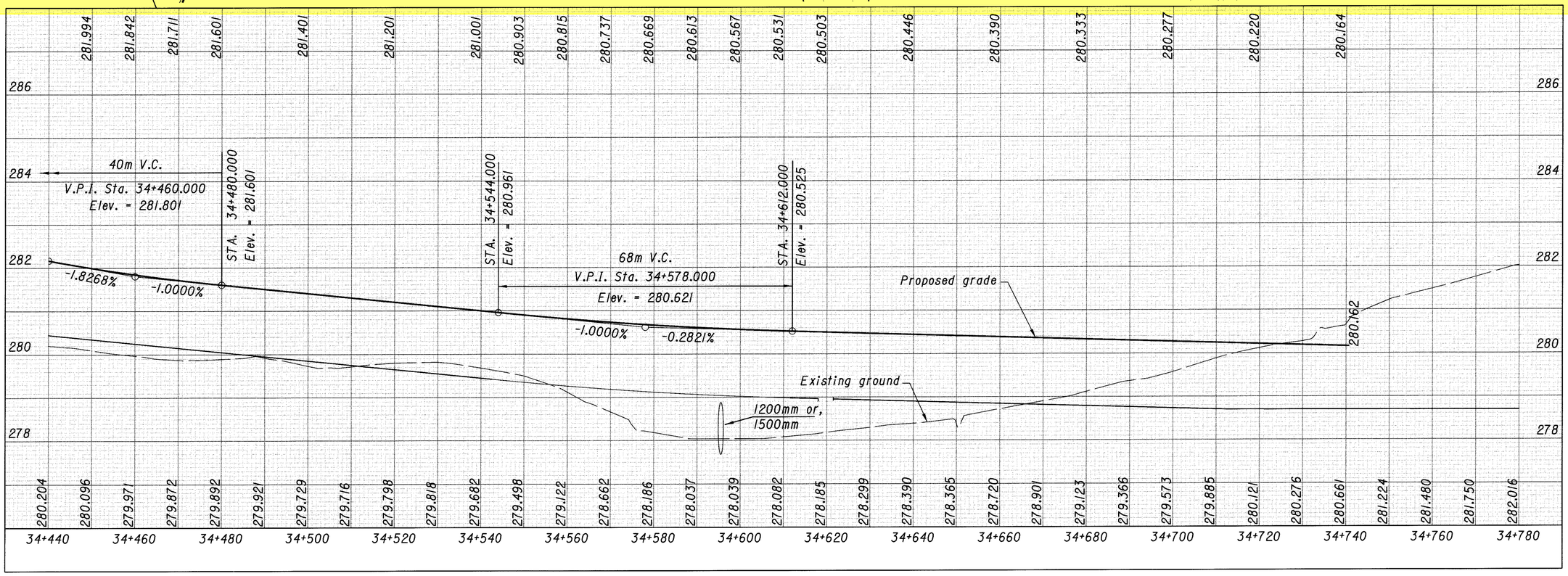
1062
2116

℄ Construction Ramp "J"
Sta. 34+478.378 Ramp "H"
Sta. 34+525.866 Ramp "J"
603 375mm x 41.6m-C
D9
Bend point
El. 277.283
603 375mm x 10.0m-C
603 375mm x 9.1m-B
605 100mm x 178.3m
U2
POT Sta. 34+525.873
PT Sta. 34+501.225
603 150mm x 99.1 m-B (PVC SANITARY, SDR35)
Match Line
Sta. 34+440.000
See Sheet No. 1062
D3
S2
375mm
604 CB No. 5
See sheet no. 1108
Abndn.
100mm
D13
D14
S1
670 DEP
2.0m X 20.100m = 40.2 sq m
603 150mm x 7.3m-C (PVC SANITARY, SDR35)
Constr. Limits
Permanent Easement
Pick up point
El. 276.896
603 375mm x 44.9m-C
WWTP See sheet no. 1646-1649
603 150mm x 3.0m-C
603 150mm x 42.4m-C (PVC SANITARY, SDR35)
D23
S3
S2
D24
603 150mm x 10.7m-F
S4
U3
603 150mm x 112.6m-C (PVC SANITARY, SDR35)
S5
Constr. Limits
LA-R/W
℄ Construction U.S.R. 30
1200mm RCP or 1500mm CMP
See sheet no. 1328
Abndn.
200mm
℄ Construction Ramp "H"
34+500
34+600
34+700
Wooded
Woven Wire / Barbed Wire
Grassy Lane
Woven Wire / Barbed Wire
LA-R/W
Constr. Limits
25:1 Shoulder Taper
603 150mm x 98.1m-C (PVC SANITARY, SDR35)
PT Sta. 34+740.745
SE = 0.048

Ramp "H"
P.I. = Sta. 34+618.333
Δ = 44° 03' 47.71" (RT)
R = 333.000 m
Lsl = 90.000 m
*sl = 7° 44' 33.62"
LTl = 60.057 m
STl = 30.052 m
Lc = 211.093 m
Tsl = 178.681 m
Ts2 = 136.211 m
Es = 26.781 m
e_{max} =0.08

839, Seeding & Erosion Control
1.8m X 22.44mm = 40.4 sq m

For quantities see sheet no. 1064-1065
For underdrain quantities see sheet no. 137
For Sanitary Sewer see sheet no. 1378-1399
452 260 mm Plain Concrete Pavement



HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED AM
CHECKED REA

PLAN AND PROFILE - RAMP H STA. 34+440 TO STA. 34+740.745

WYA/CRA-30-28.009/0.000

1063
2116

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		RAMP H																															
R1	1062	34+229.463 E TO 34+427.910	BL & RT																										349				
R2	1062	34+229.474 E TO 34+201.358	LT																										98				
R3	1062	34+201.358 TO 34+394.488	LT																									166					
R4	1062	34+259.931 TO 34+334.896	BL & RT																										170				
R5	1062	34+315.848 TO 34+387.581	LT																										127				
R6	1062	34+394.488 TO 34+427.895	LT																										38				
		TOTALS CARRIED TO SUB-SUMMARY																										166	782				

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

1064
2116

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

CALCULATED AM CHECKED REA

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE B W/ FILTER (CU M)	601 RIPRAP USING 150MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)		603 300 MM CONDUIT, TYPE B (METER)	603 375 MM CONDUIT, TYPE B (METER)	603 525 MM CONDUIT, TYPE B (METER)	603 150MM CONDUIT, TYPE C, 707.44 (METER)	603 300MM CONDUIT, TYPE C (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 450 MM CONDUIT, TYPE C (METER)	603 525 MM CONDUIT, TYPE C (METER)	603 600 MM CONDUIT, TYPE C (METER)	603 300 MM CONDUIT, TYPE D, 706.02 (METER)	603 1200 MM CONDUIT, TYPE A, 706.02 OR 1500 MM 707.02, OR 707.09 (25MM CORR.), OR 707.22 (METER)	604 CATCH BASIN NO. 2-2B (EACH)	604 CATCH BASIN NO. 3 (EACH)	604 MANHOLE, NO. 3 (STORM SEWER) (EACH)	604 MANHOLE, NO. 3 (SANITARY SEWER) (EACH)	604 MEDIAN INLET 3.0M (EACH)	603 MEDIAN INLET 4.2M (EACH)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: MASONRY COLLAR (EACH)
D1	1062	34+204.95 TO 34.208.00	LT										13.1						1										
D2	1062	34+204.95 TO 34+236.40	LT											31.4											1					
D3	1062	34+236.40 TO 34+280.90	LT											44.5											1					
D4	1062	34+280.90 TO 34+320.90	LT												40.0									1						
D5	1062	34+320.90 TO 34+393.37	LT												45.3									1						
D6	1062	34+384.59 TO 34+393.37	LT					14.5													1									
D7	1062	34+393.37 TO 34.417.22	LT & RT							31.2											1									
D8	1062	34+417.20 TO 34+425.64	LT									8.5									1									
D9	1062	34+417.21	LT & RT					6.5													1									
D10	1062	34+434.14	RT			0.39										24.0						1								
D11	1062	34+240.00 RAMP E TO 34+346.10 RAMP H	RT																								756.3			
D12	1062	34+400.00 TO 34+433.25	RT																									72.0		
D13	1063	34+440.86 TO 34+460.00	RT																								40.2			
D14	1063	34+434.14 TO 34+450.37	RT																									40.4		
D15	1062	34+186.31 TO 34+220.91	RT									34.6													1					
D16	1062	34+220.91 TO 34+260.89	RT									40.0													1					
D17	1062	34+260.89 TO 34+300.58	RT										39.7												1					
D18	1062	34+300.58 TO 34+327.12	RT						27.2																1					
D19	1062	34+325.07 TO 34+327.12	RT									3.1									1									
D20	1062	34+327.12 TO 34+417.22	RT										101.9									1								
D21		NOT USED																												
D22	1062	34+360.00 TO 34+400.00	LT																								120.1			
D23	1063	34+571.35 TO 34+609.82	LT & RT						9.1				54.9																	
D24	1063	34+595.504	LT & RT	14.9	19.1	3.22													36.6								407.5			
D25	1062	34+346.10 TO 34+360.00	RT														23.7													
S1	1063	34+481.99 TO 34+489.47	RT								7.3												1							
S2	1063	34+539.38 TO 34+542.49	RT								3.0																			
S3	1063	34+542.49 TO 34+585.40	RT								42.4												1							
S4	1063	34+585.40 TO 34+700.92	RT								112.6												1							
S5	1063	34+700.92 TO 34+799.90	RT								98.1												1							

℄ Construction Ramp "F"

1650mm RCP
See sheet no. 1326

Sta. 33+704.935 Ramp "I"=
Sta. 33+753.240 Ramp "F"

670 DEP

Abndn. 100mm

2250 R.C.P.
See sheet no. 1325

S 46° 48' 10.99" E

℄ Construction Ramp "I"

PC Sta. 33+729.786

33+800

S 89° 34' 15.93" E

Abndn.

Abndn. 100mm

670 DEP

100mm

PT Sta. 33+796.966

33+859.345
Begin Curb, Type 7

33+861.322
Begin Curb, Type 7

603 300mm x 40.1m-C
See sheet no. 1118

Ramp "I"
P.I. = Sta. 33+765.028
Δ = 42° 46' 04.94" (LT)
R = 90.000 m
T = 35.242 m
L = 67.180 m
E = 6.654 m
e_{max} =

Westbound Rest Area
Service Drive

S1
33+905 *
Svc. Drive

Rest Area
Service Building

S1

33+856.928
End Curb, Type 7
Begin Curb, Type 6

603 300mm x 17.8m-B
See sheet no. 1118

R2

D1

D2

604 No.3 CB
See sheet no. 1118
33+900

604 No.3 CB
See sheet no. 1118

R1

D3

604 No.2-2B CB
See sheet no. 1120

R3

Match Line Sta. 33+960.000 See Sheet No. 1067

452 150 mm Plain Concrete Pavement
(* = quantity break)

For quantities see sheet no. 1068-1069
For Ramp "F" see sheet no. 1054-1055
For Westbound Rest Area Layout
see Sheet No. 1449.

(S1) For quantities see sheet no. 1055

283.405 283.645 283.846 284.046 284.246 284.446 284.646 284.846 285.046 285.246 285.343 285.418 285.468 285.493 285.493 285.468 285.418 285.343

288
286
284
282
280

Proposed grade

+1.0000%

-1.0000%

80.000 m V.C.
V.P.I. Sta. 33+925.000
Elev. = 285.696

+3.3420%

+1.0000%

10m V.C.
V.P.I. Sta. 33+716.000
Elev. = 283.606

Existing ground

2250mm

STA. + 711.000
Elev. = 283.439

STA. + 721.000
Elev. = 283.656

STA. + 885.000
Elev. = 285.296

282.373 281.946 281.455 281.949 282.050 282.081 282.236 282.444 282.691 282.877 283.021 283.157 283.376 283.625 283.908 284.237 284.751 285.184 285.543 285.788 285.882 285.881 285.401 284.991 284.673 284.500

33+700 33+720 33+740 33+760 33+780 33+800 33+820 33+840 33+860 33+880 33+900 33+920 33+940 33+960

N

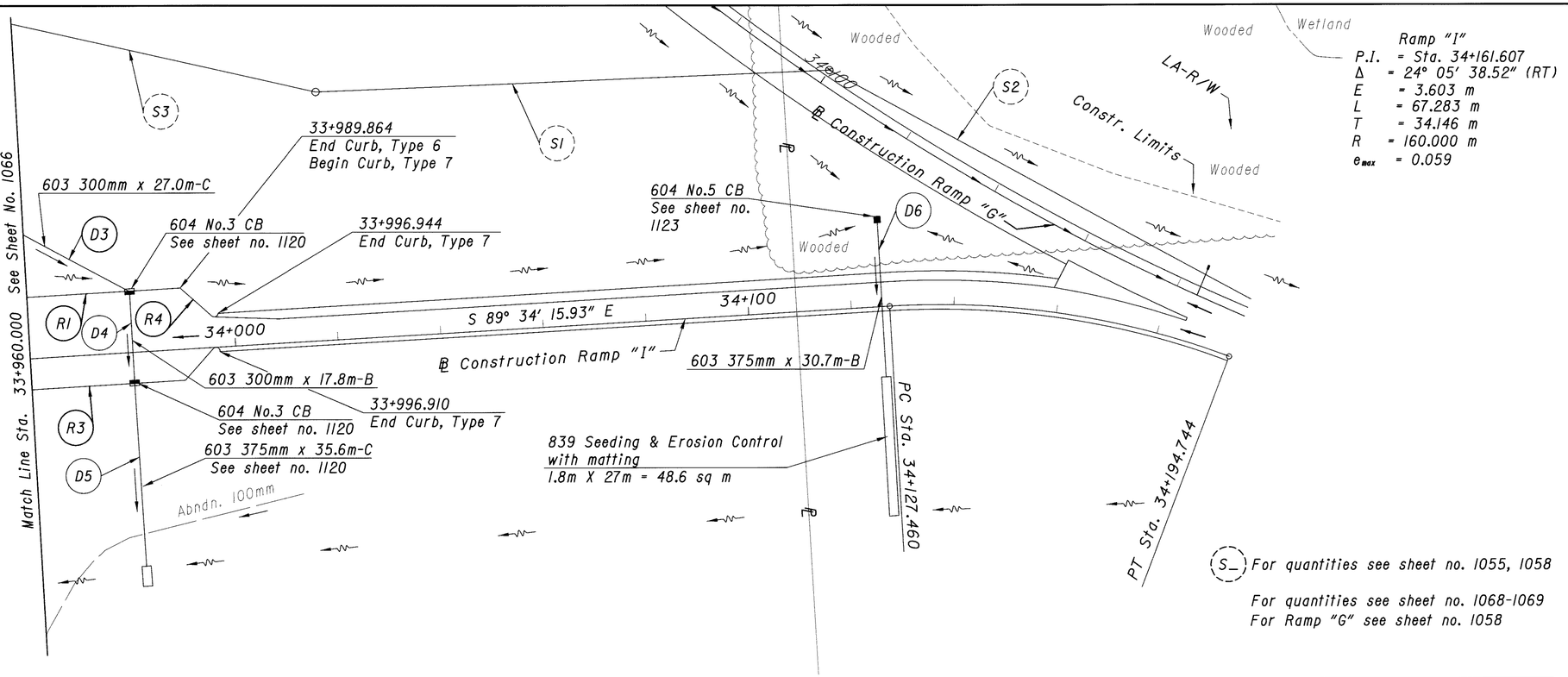
HORIZONTAL
SCALE IN METERS
0 10 20

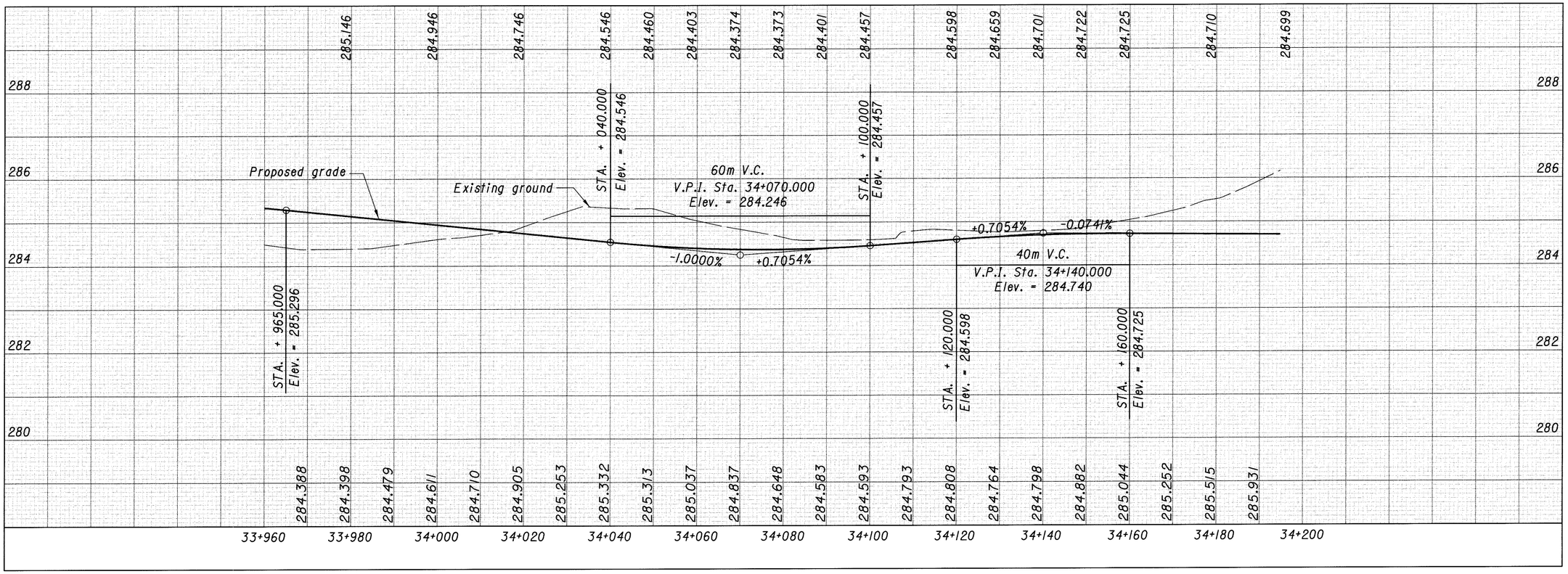
CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - RAMP I
STA. 33+704.935 TO STA. 33+960

WYA/CRA-30-28.009/0.000

1066
2116





HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - RAMP I
STA. 33+960 TO STA. 34+194.744

WYA/CRA-30-28.009/0.000

1067
2116

REF NO.	SHEET NO.	STATION	SIDE	202										SPECIAL		606								830		622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		RAMP I																																
R1	1066	33+856.928 TO 33+989.864	LT																								133						
R2	1066	33+859.345 TO 33+856.928	LT																									11					
R3	1066	33+861.322 TO 33+996.910	RT																									152					
R4	1067	33+989.864 TO 33+996.944	LT																									10					
TOTALS CARRIED TO SUB-SUMMARY																											133	173					

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

1068
2116

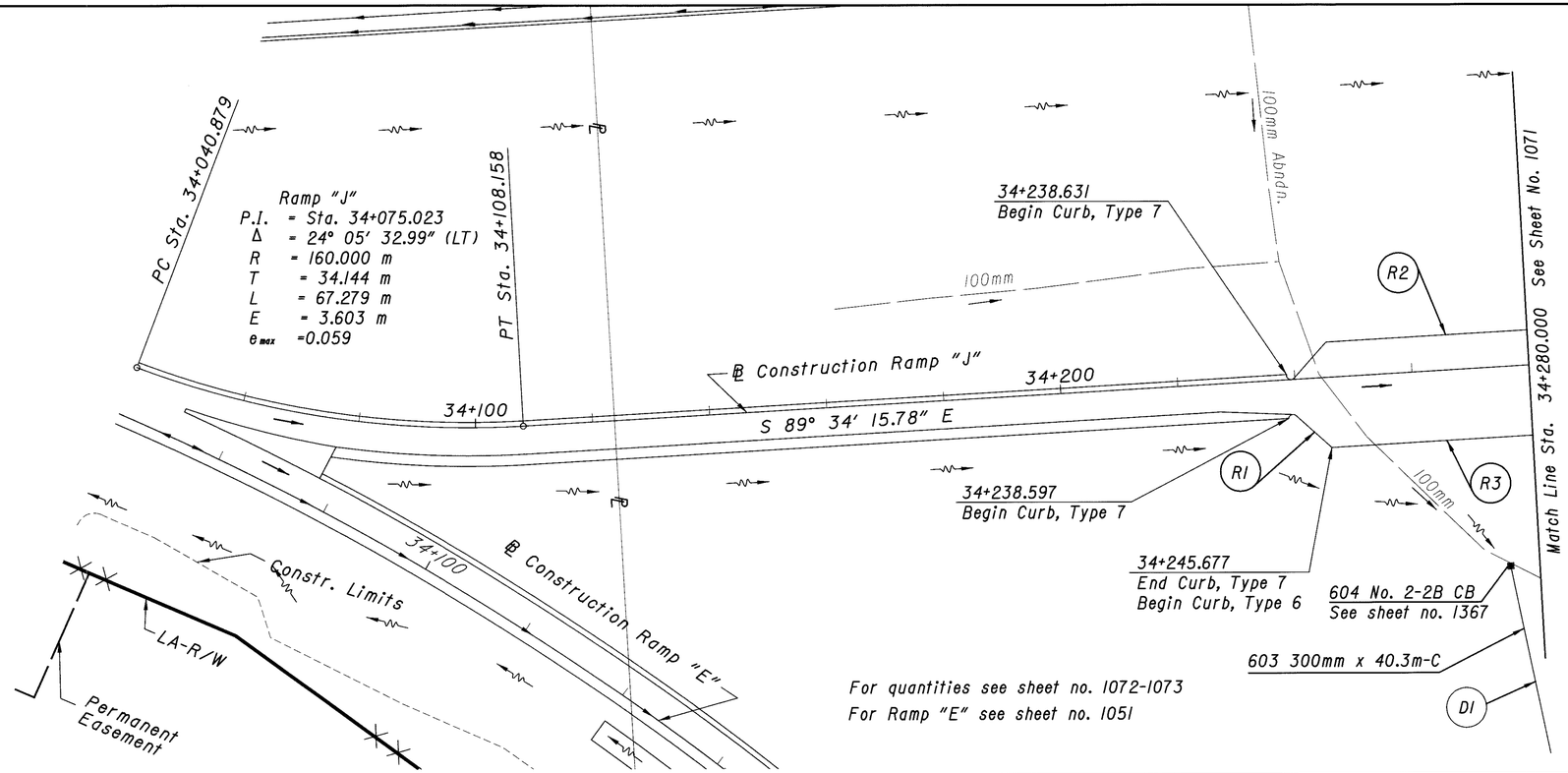
ESTIMATED DRAINAGE QUANTITIES

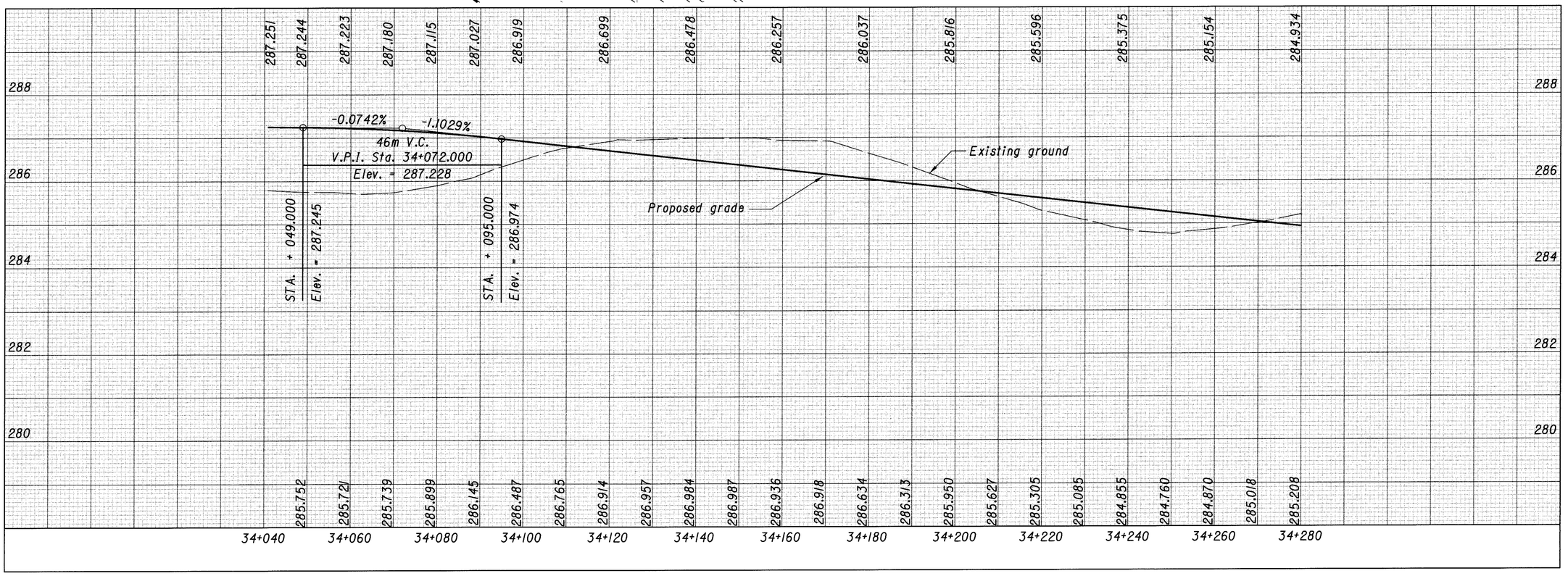
CALCULATED AM
CHECKED REA

WYA/CRA-30-28.009/0.000

1069
2116

REF NO.	SHEET NO.	STATION	SIDE	602 CONCRETE MASONRY (CU M)	603 300 MM CONDUIT, TYPE B (METER)	603 375 MM CONDUIT, TYPE B (METER)	603 150MM CONDUIT, TYPE B, 707.44 (METER)	603 300MM CONDUIT, TYPE C (METER)	603 375 MM CONDUIT, TYPE C (METER)	604 CATCH BASIN NO. 2-2B (EACH)	604 CATCH BASIN NO. 3 (EACH)	604 CATCH BASIN NO. 5 (EACH)	604 MANHOLE, NO. 3 (SANITARY SEWER) (EACH)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: 375 MM X 375 MM 22.5° BEND (EACH)	FOR INFORMATION ONLY: MASONRY COLLAR (EACH)
D1	1066	33+880.00	LT & RT		17.8						1						
D2	1066	33+880.00	RT	0.17				40.1			1			7.2			
D3	1066	33+957.00 TO 33+980.00	LT					27.0		1							
D4	1067	33+980.00	LT & RT		17.8						1						
D5	1067	33+980.00	RT	0.22					35.6		1			7.0			
D6	1067	34+126.00	LT & RT	0.22		30.7						1		48.6			
S1	1066	33+887.207 TO 33+896.79	LT				9.6						1				
TOTALS CARRIED TO SUB-SUMMARY				0.61	35.6	30.7	9.6	67.1	35.6	1	4	1	1	62.8			
TOTALS																	





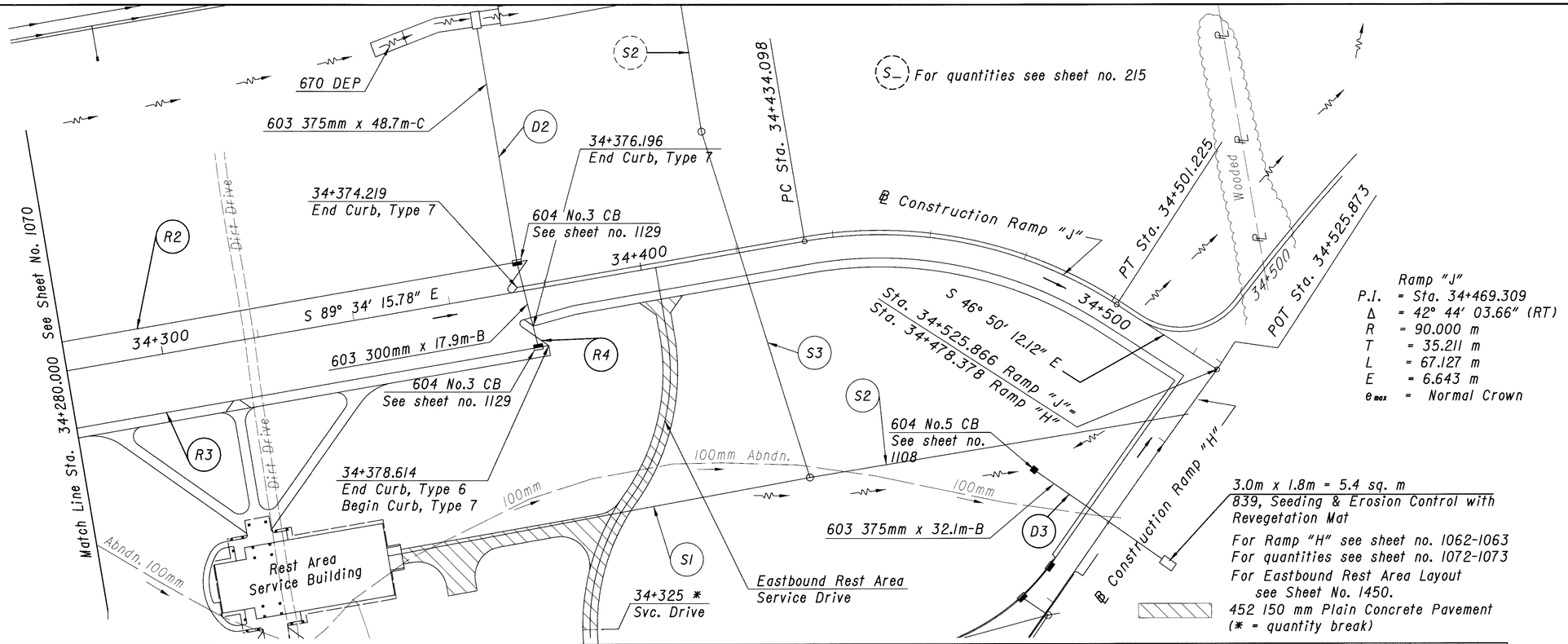
HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - RAMP J
STA. 34+040.879 TO STA. 34+280

WYA/CRA-30-28.009/0.000

1070
2116



HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - RAMP J
STA. 34+280 TO STA. 34+525.873

WYA/CRA-30-28.009/0.000

1071
2116

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		RAMP J																															
R1	1070	34+238.597 TO 34+245.677	RT																										10				
R2	1070	34+238.631 TO 34+374.219	LT																										152				
R3	1070	34+245.677 TO 34+378.614	RT																								133						
R4	1071	34+378.614 TO 34+376.196	RT																										11				
TOTALS CARRIED TO SUB-SUMMARY																											133	173					

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

1072
2116

ESTIMATED DRAINAGE QUANTITIES

CALCULATED: AM
CHECKED: REA

WYA/CRA-30-28.009/0.000

1073
2116

REF NO.	SHEET NO.	STATION	SIDE	602	603	603	603	603	603	604	604	604	604	839	FOR INFORMATION ONLY			
				CONCRETE MASONRY	150 MM CONDUIT, TYPE B, 707.44	300MM CONDUIT, TYPE B	375MM CONDUIT, TYPE B	300 MM CONDUIT, TYPE C	375MM CONDUIT, TYPE C	CATCH BASIN NO. 2-2B	CATCH BASIN NO. 3	CATCH BASIN NO. 5	MANHOLE, NO. 3 (SANITARY SEWER)	SEEDING AND EROSION CONTROL WITH REVEGETATION MAT	300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND		MASONRY COLLAR
				CU M	METER	METER	METER	METER	METER	EACH	EACH	EACH	EACH	SQ M	EACH			
D1	1070	34+275.00 TO 34+281.18	RT					40.3		1								
D2	1071	34+375.52	RT	0.22		17.9			48.7		2			6.3				
D3	1071	34+440.00 RAMP H		0.22			32.1					1		5.4				
S1	1071	34+338.75 TO 34+427.00	RT		88.3													
S2	1071	34+427.00 TO 34+482.00 RAMP H	RT		99.1								1					
S3	1071	34+420.494 J	LT & RT		74.6								1					
																	TOTALS	
TOTALS CARRIED TO SUB-SUMMARY				0.44	262.0	17.9	32.1	40.3	48.7	1	2	1	2	11.7				

SEEDING	
END WIDTH	SQ. METERS
22.19	
	347
13.17	
	264
13.50	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.48	11.68		
*5.28		33	197
		*114	
0.84	8.40		
*6.39		19	170
		*130	
1.09	8.75		
*6.72			

CALCULATED AM

CHECKED REA

SEE US-30 CROSS-SECTIONS

SEE US-30 CROSS-SECTIONS

SEE US-30 CROSS-SECTIONS

Ahead only

MATCH LINE

LAR/W

2.5:1

8:1

6:1

℄ 283.535

284.607
33+898.830
283.959

℄ 283.437

284.245
33+879.225
283.692

℄ 283.273

283.967
33+859.401
283.498

* TOPSOIL REMOVAL

℄

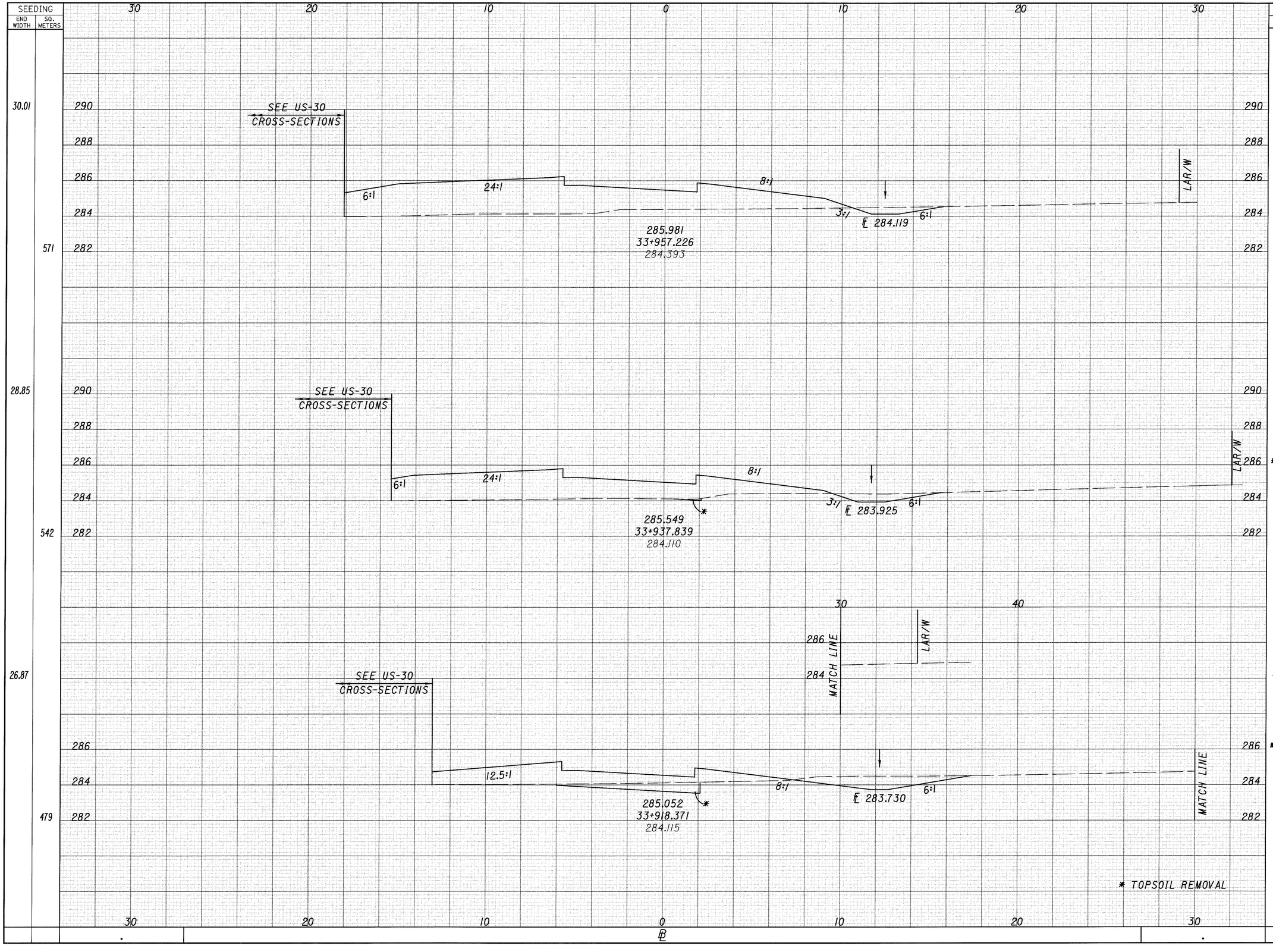
RAMP E CROSS SECTIONS

STA 33+859.401 TO STA 33+898.830

WYA/CRA-30-28.009/0.000

1074
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
30.01		1.25	39.69		
	571	*0		29	646
				*1	
28.85		1.72	26.97		
	542	*0.06		59	420
				*27	
26.87		4.36	16.19		
	479	*2.75		67	272
				*78	



CALCULATED AM

CHECKED REA

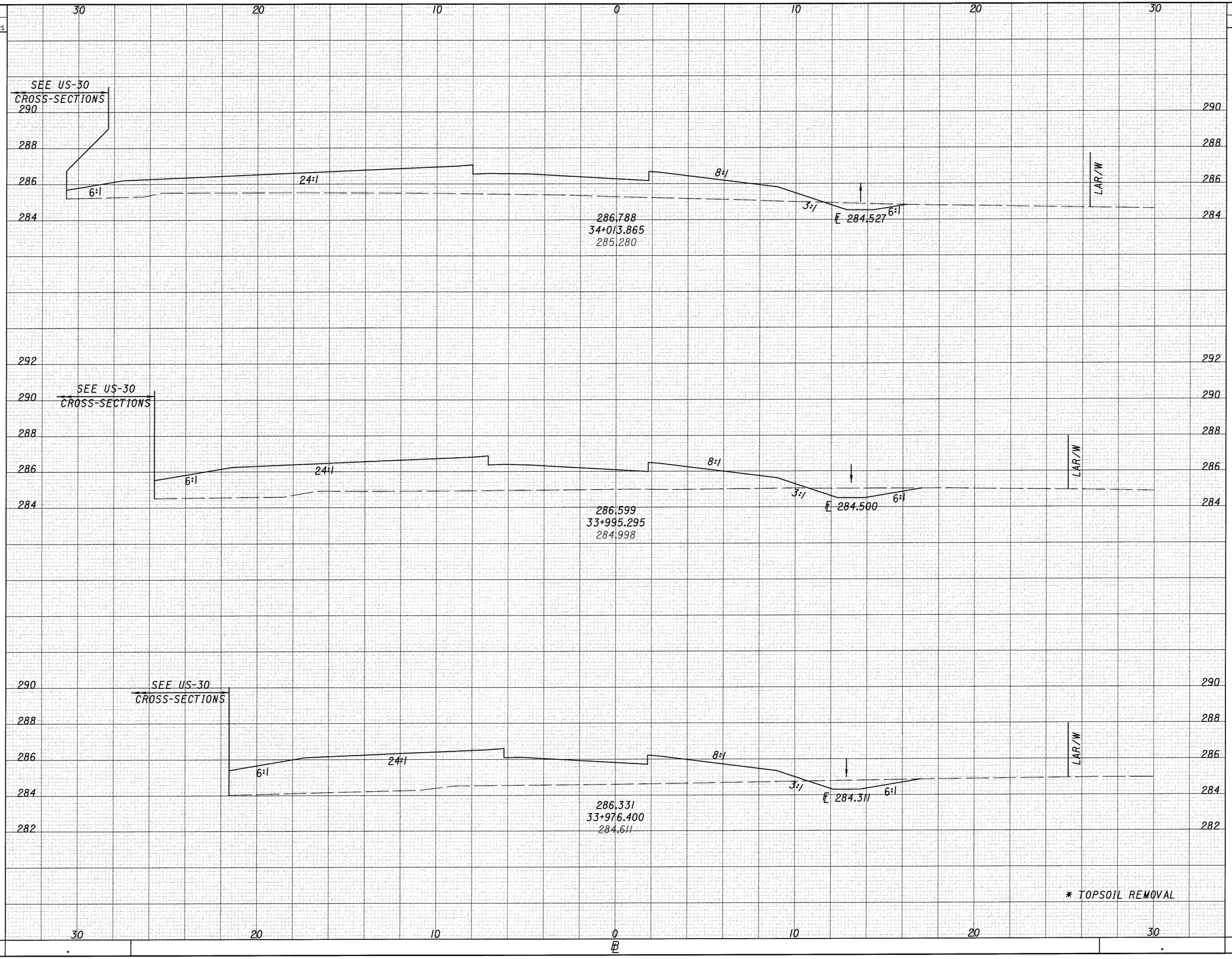
RAMP E CROSS SECTIONS

STA 33+918.371 TO STA 33+957.226

WYA/CRA-30-28.009/0.000

1075
2116

SEEDING END WIDTH	SEEDING SQ. METERS
40.70	
	729
37.78	
	682
34.44	
	618



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1.12	43.20		
*0			
		30	859
2.08	49.32		
		38	923
1.94	48.36		
		31	844

CALCULATED AM

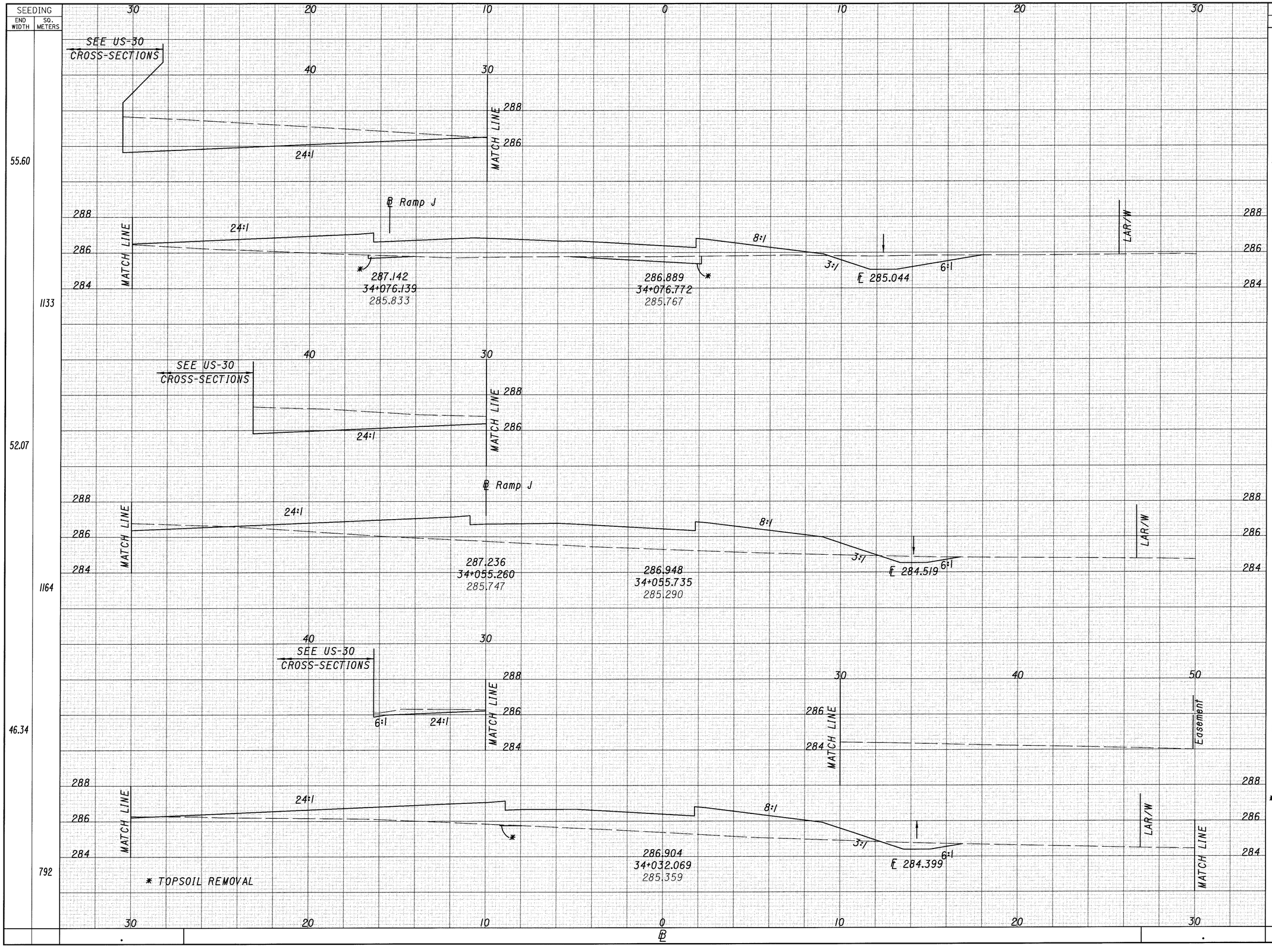
CHECKED REA

RAMP E CROSS SECTIONS
STA 33+976.400 TO STA 34+013.865

WYA/CRA-30-28.009/0.000

1076
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
55.60	1133	24.86	29.04	416	668
52.07	1164	14.73	34.42	202	791
46.34	792	2.36	32.45	32	689



CALCULATED AM

CHECKED REA

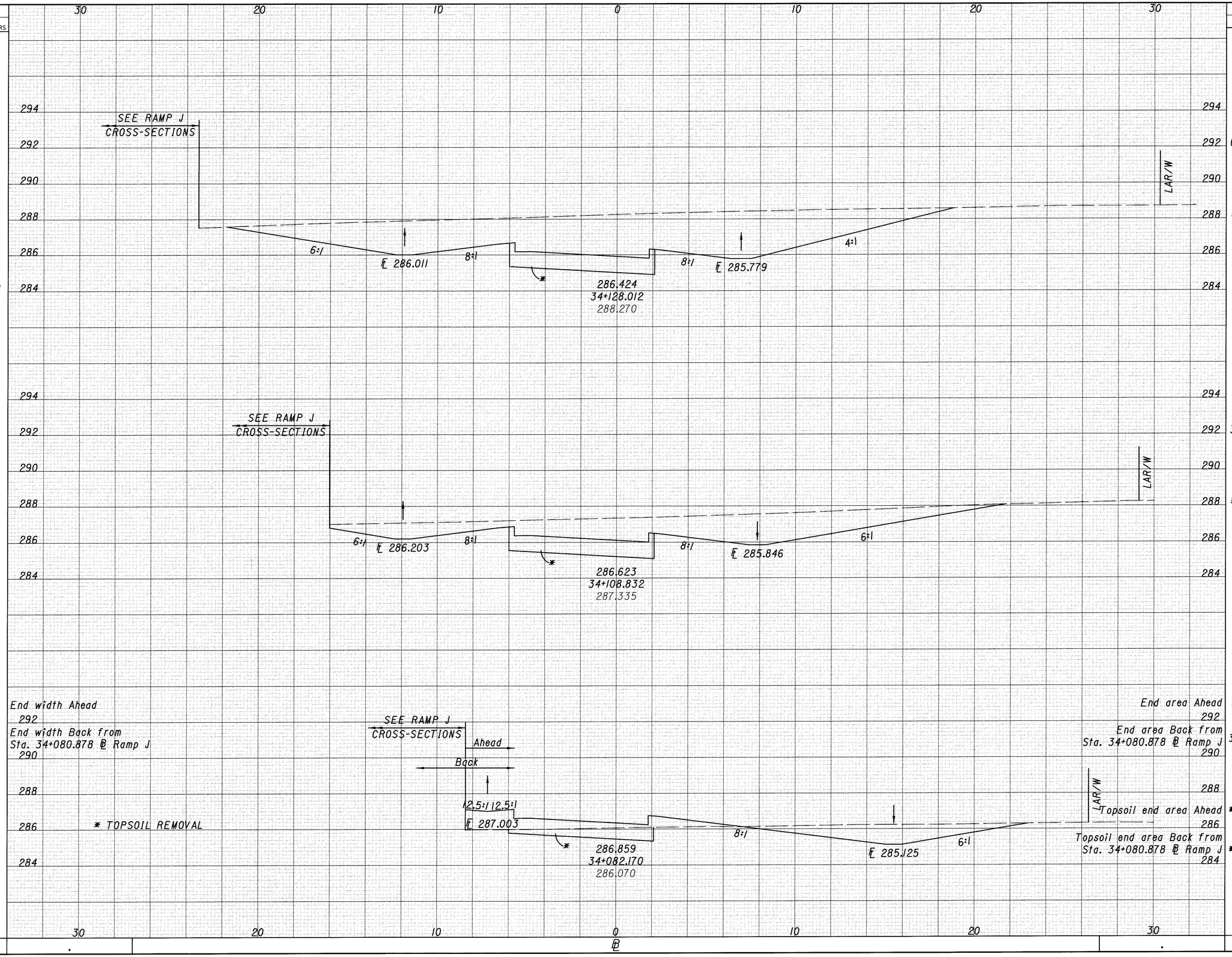
RAMP E CROSS SECTIONS

STA 34+032.069 TO STA 34+076.772

WYA / CRA-30-28.009 / 0.000

1077
2116

SEEDING END WIDTH	SEEDING SQ. METERS
42.04	
	742
35.38	
	849
28.28	
66.21	
	329



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
65.56	7.16		
*7.16			
		962	137
		*137	
34.76	7.16		
*7.16			
		588	246
		*147	
9.37	11.29		
32.33	27.88		
*3.88			
*4.52			
		154	154
		*17	

CALCULATED AM
CHECKED REA

RAMP E CROSS SECTIONS
STA 34+082.170 TO STA 34+128.012

WYA/CRA-30-28.009/0.000

1078
2116

SEEDING END WIDTH	SEEDING SQ. METERS
44.68	738
46.40	850
44.65	911
46.35	839

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
62.63	6.74		
*6.74		1178	110
		*110	
82.74	6.80		
*6.8		1617	130
		*130	
90.47	7.16		
*7.16		1761	143
		*143	
85.50	7.16		
*7.16		1434	136
		*136	

CALCULATED AM

CHECKED REA

RAMP E CROSS SECTIONS

STA 34+146.993 TO STA 34+201.890

WYA/CRA-30-28.009/0.000

1079
2116

30 20 10 0 10 20 30

288 286 284

6:1 8:1 ℄ 285.273 8:1 285.656 34+201.890 287.193 8:1 ℄ 284.980 6:1

30 40 50

286 MATCH LINE LAR/W

288 286 284 282

4:1 8:1 ℄ 285.435 8:1 285.824 34+185.677 287.928 8:1 ℄ 285.142 6:1

MATCH LINE

288 286 284

4:1 8:1 ℄ 285.621 8:1 286.018 34+167.010 288.413 8:1 ℄ 285.329 4:1

LAR/W

SEE RAMP J CROSS-SECTIONS

288 286 284

6:1 8:1 ℄ 285.822 8:1 286.226 34+146.993 288.463 8:1 ℄ 285.529 4:1

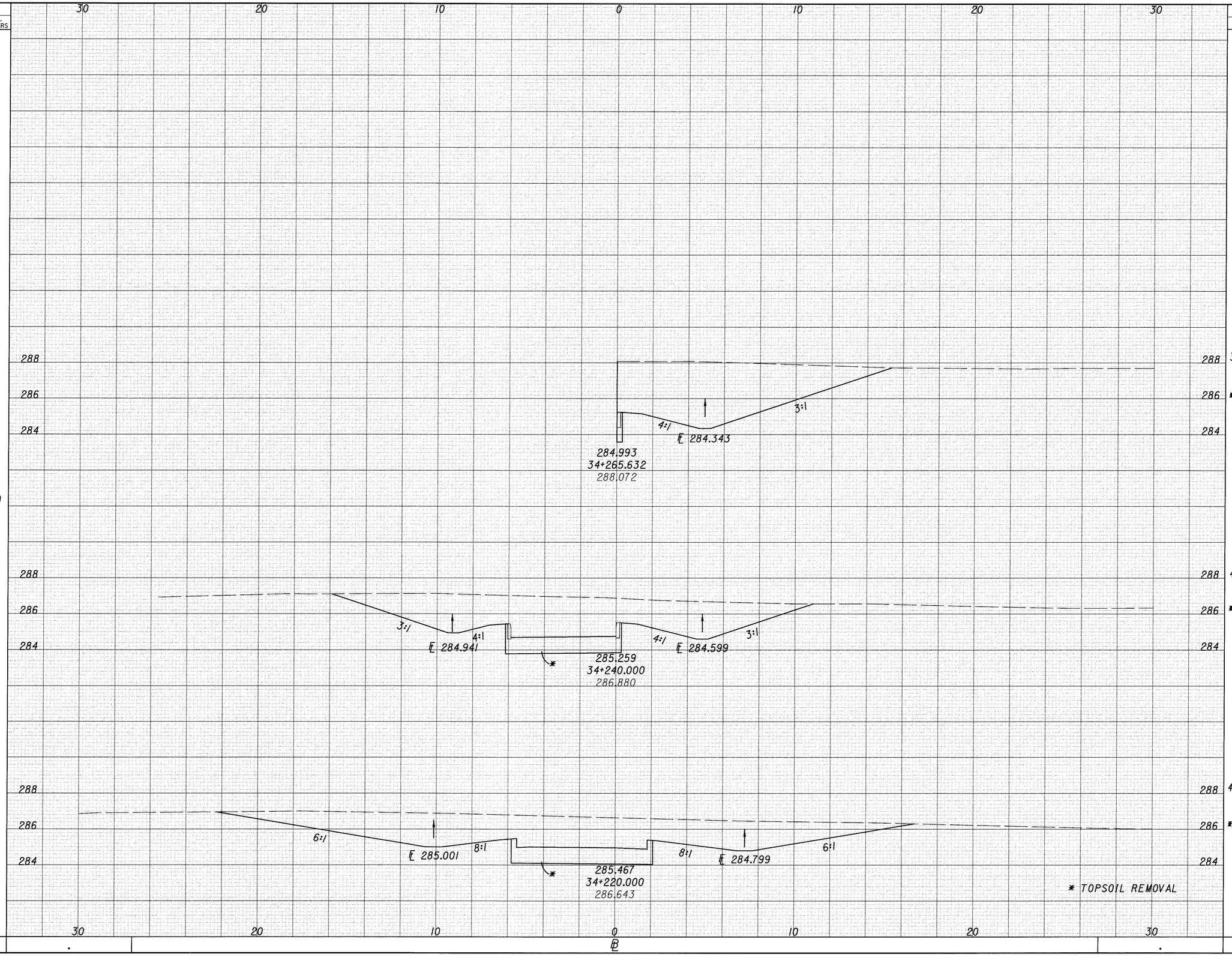
LAR/W

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

SEEDING	
END WIDTH	SQ. METERS
20.00	639
29.87	704
40.48	771



END AREA		VOLUME	
CUT	FILL	CUT	FILL
35.96	0.33		
*0.33		998	80
		*80	
41.92	5.94		
*5.94		909	129
		*129	
48.99	6.92		
*6.92		1011	124
		*124	

* TOPSOIL REMOVAL

CALCULATED AM | CHECKED REA

RAMP E CROSS SECTIONS

STA 34+220.000 TO STA 34+265.632

WYA/CRA-30-28.009/0.000

1080
2116

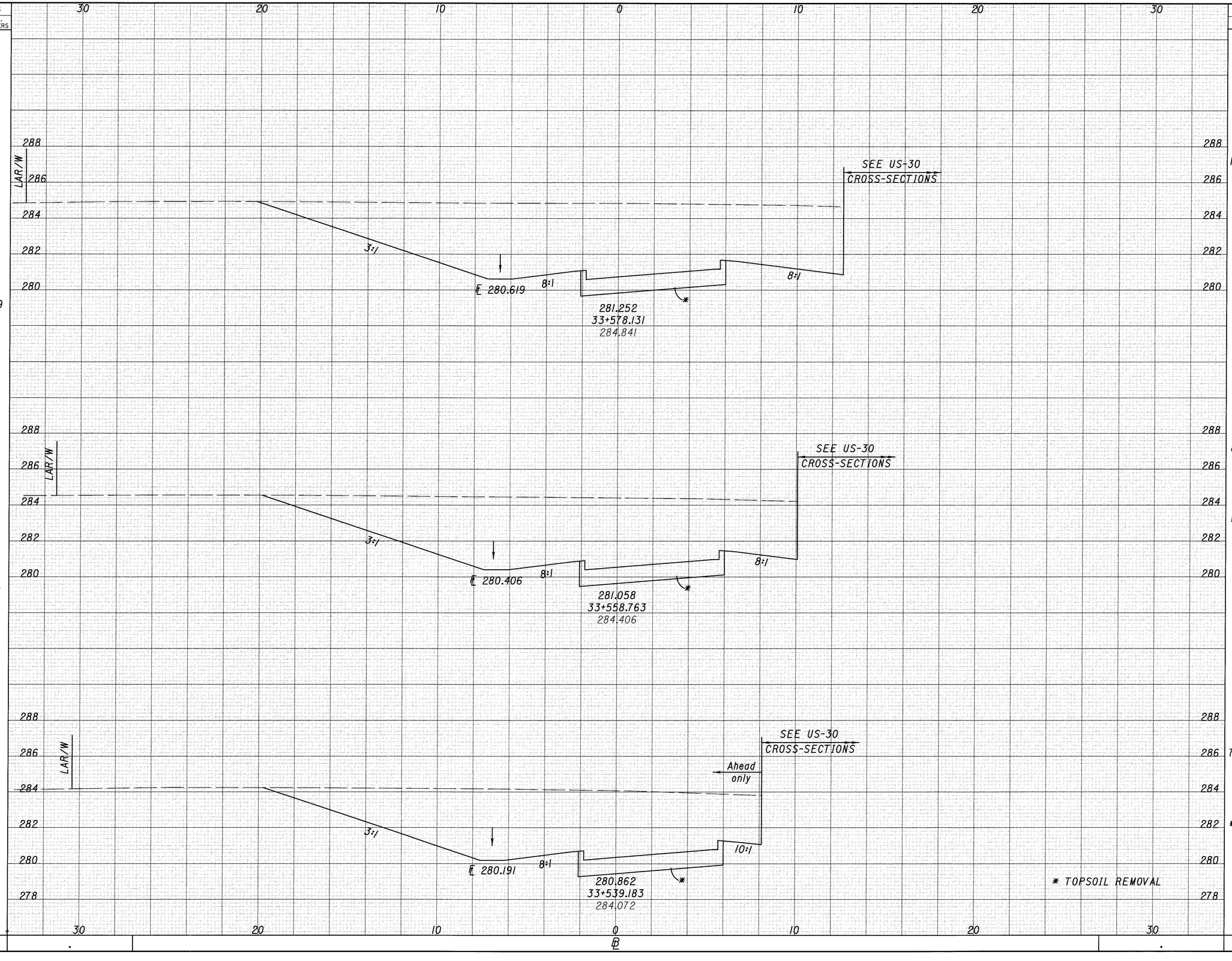
SEEDING	
END WIDTH	SQ. METERS
31.01	569
27.80	521
25.42	

END AREA	
CUT	FILL
102.96	7.21
*7.21	
88.13	7.21
*7.21	
78.99	7.21
*7.21	

VOLUME	
CUT	FILL
1851	140
*140	
1636	141
*141	

CALCULATED AM

CHECKED REA



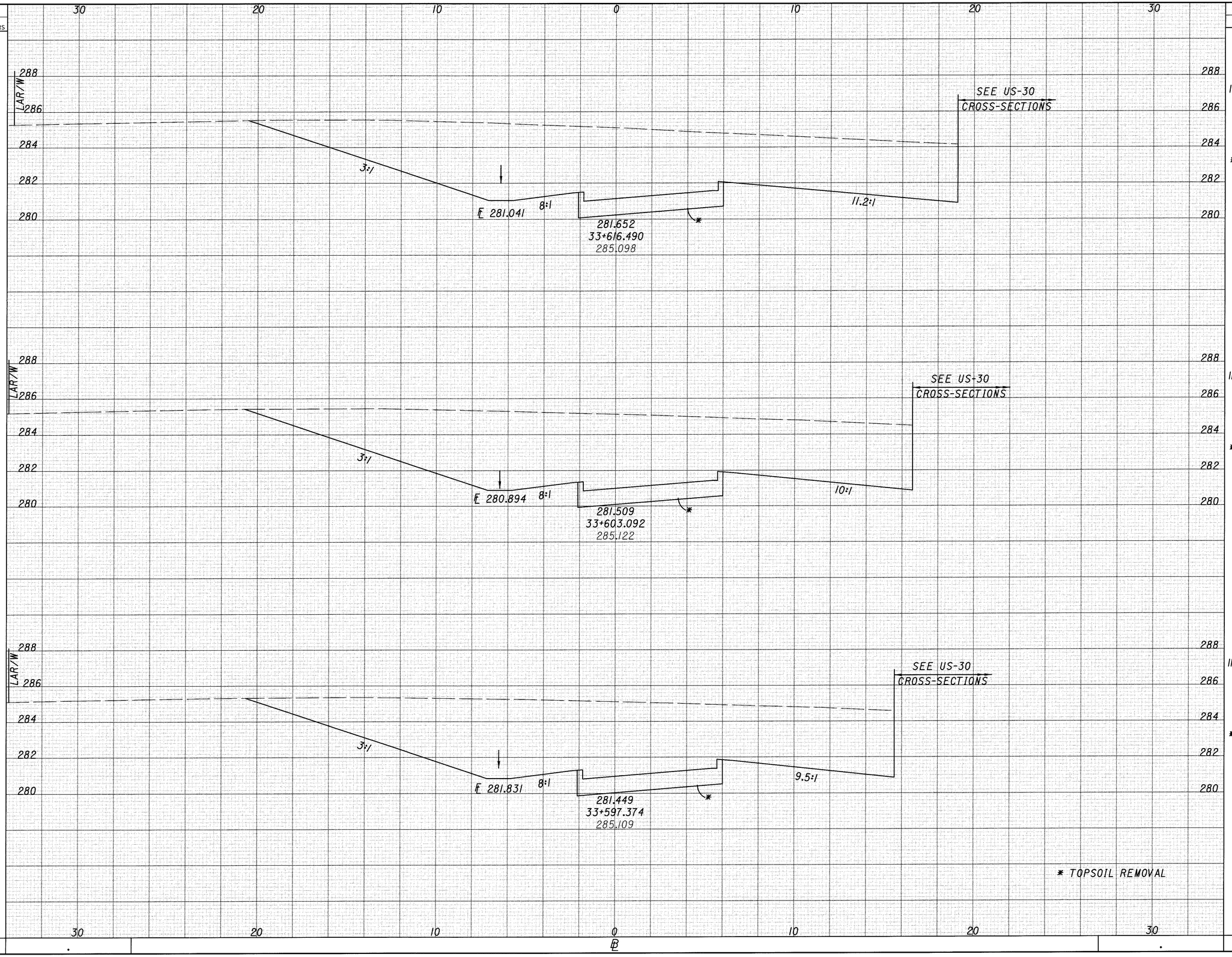
RAMP F CROSS SECTIONS

STA 33+539.183 TO STA 33+578.131

WYA/CRA-30-28.009/0.000

1081
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
38.23	496	119.37	7.21	1594	97
		*7.21		*97	
35.81	202	118.59	7.21	672	41
		*7.21		*41	
34.68	632	116.52	7.21	2112	139
		*7.21		*139	



CALCULATED AM

CHECKED REA

RAMP F CROSS SECTIONS

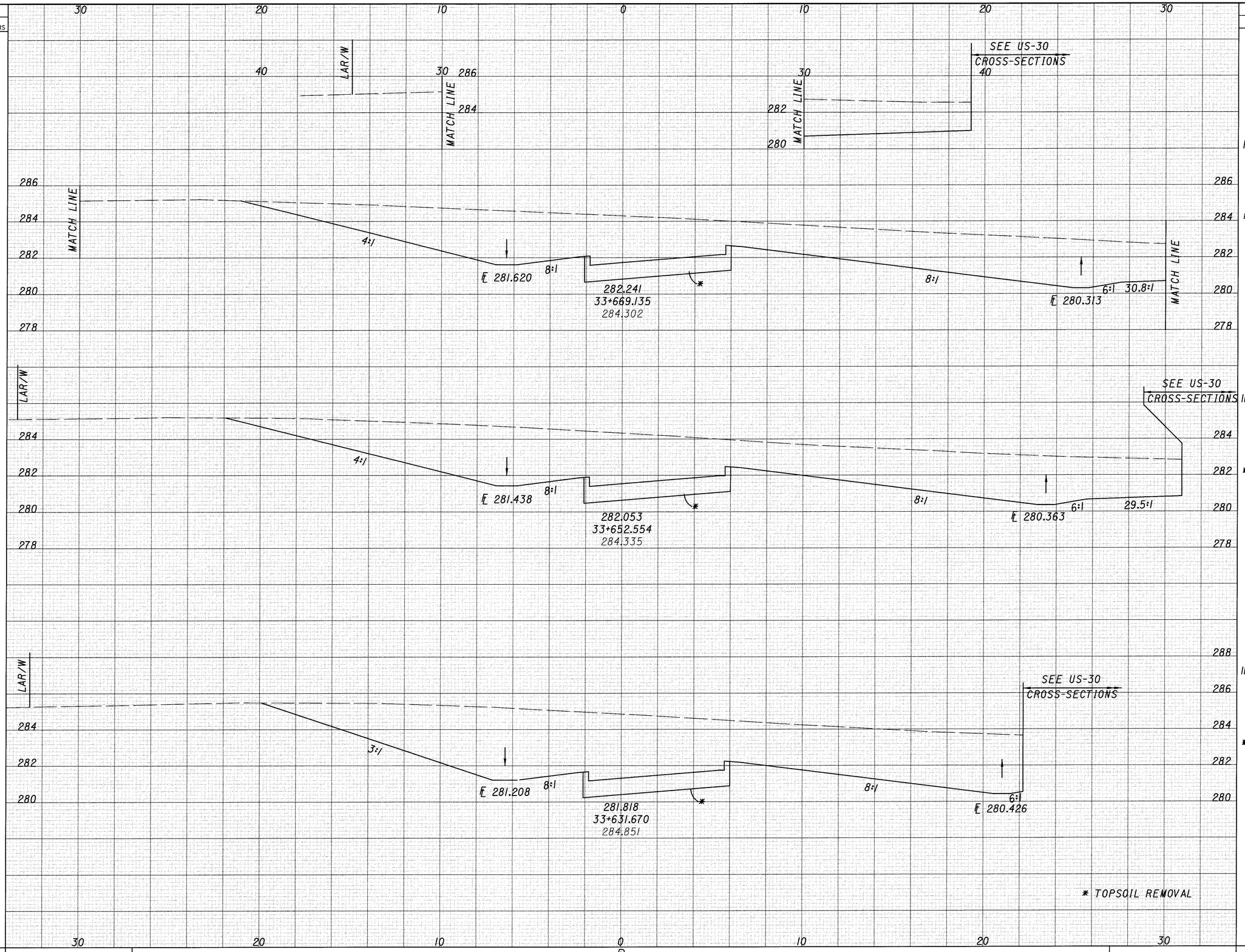
STA 33+597.374 TO STA 33+616.490

WYA/CRA-30-28.009/0.000

1082
2116

SEEDING END WIDTH	SEEDING SQ. METERS
58.06	
	899
50.37	
	941
39.76	
	592

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
119.13	7.21		
*7.21			
		1927	120
		*120	
113.36	7.21		
*7.21			
		2402	151
		*151	
116.67	7.21		
*7.21			
		1792	109
		*109	



CALCULATED AM

CHECKED REA

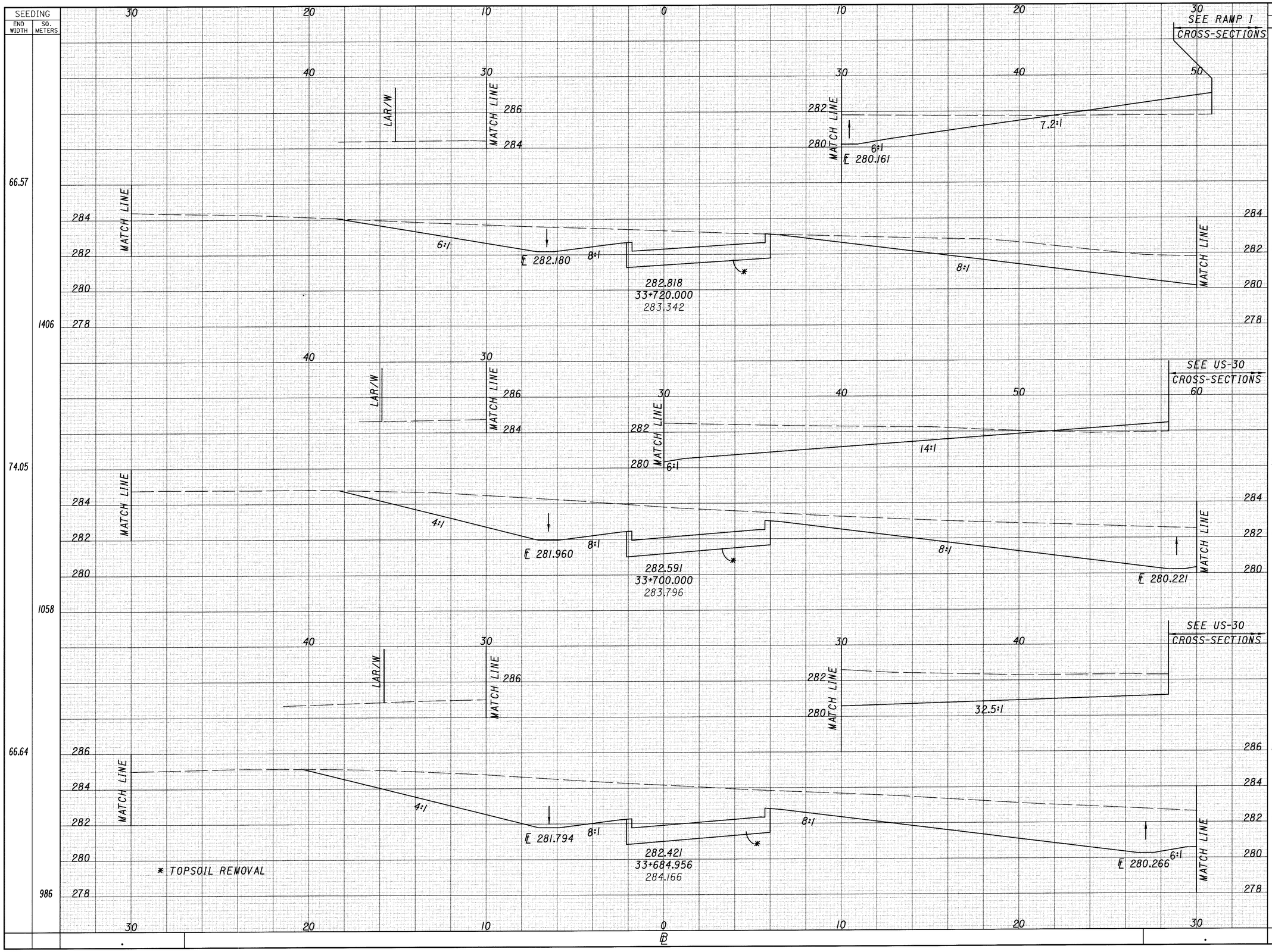
RAMP F CROSS SECTIONS

STA 33+631.670 TO STA 33+669.135

WYA / CRA-30-28.009 / 0.000

1083
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
66.57		53.18	12.61		
	1406	*7.20		1456	218
74.05		92.43	9.22	*144	
	1058	*7.21		1596	124
66.64		119.74	7.21	*108	
	986	*7.21		1890	114
				*114	



CALCULATED AM

CHECKED REA

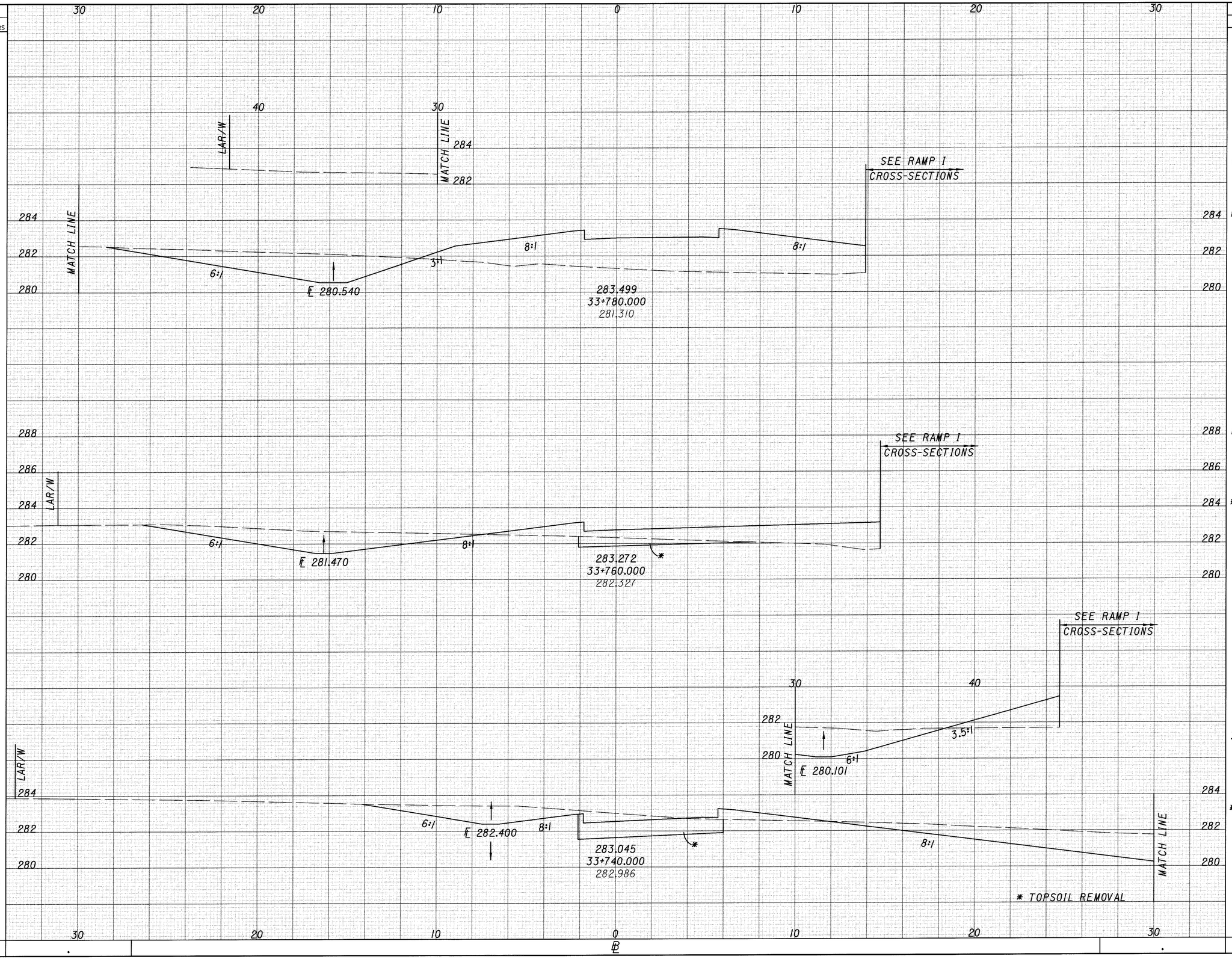
RAMP F CROSS SECTIONS

STA 33+684.956 TO STA 33+720.000

WYA / CRA-30-28.009 / 0.000

1084
2116

SEEDING	
END WIDTH	SQ. METERS
39.63	687
29.08	854
56.29	1229



END AREA		VOLUME	
CUT	FILL	CUT	FILL
14.78	40.60		
*0.00			
		274	596
		*29	
12.59	18.98		
*2.87			
		444	334
		*98	
31.84	14.46		
*6.88			
		850	271
		*141	

CALCULATED AM

CHECKED REA

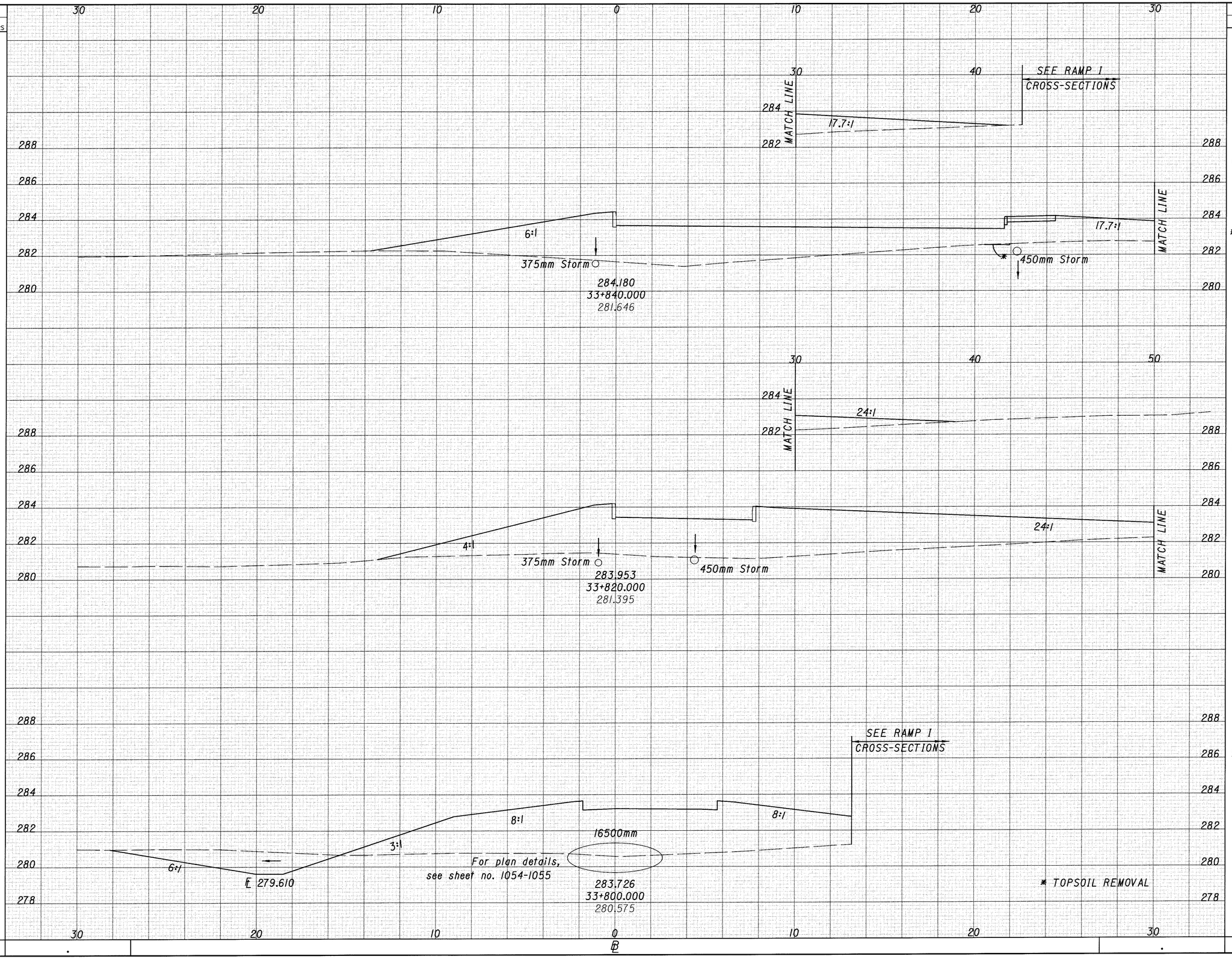
RAMP F CROSS SECTIONS

STA 33+740.000 TO STA 33+780.000

WYA/CRA-30-28.009/0.000

1085
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
36.96	876	0.00	70.16	0	1491
		*0.04		*0	
50.66	894	0.00	78.99	93	1387
		*0			
38.78	784	9.28	59.70	241	1003



CALCULATED AM

CHECKED REA

RAMP F CROSS SECTIONS

STA 33+800.000 TO STA 33+840.000

WYA / CRA-30-28.009 / 0.000

1086
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
15.28			11.08		
	519				888
29.92			66.28		
	669				1364

CALCULATED AM

CHECKED REA

RAMP F CROSS SECTIONS

STA 33+860.000 TO STA 33+882.968

WYA/CRA-30-28.009/0.000

1087
2116

30 20 10 0 10 20 30

284
282
286
284
282
280

6:1
375mm Storm
284.667
33+882.968
283.124

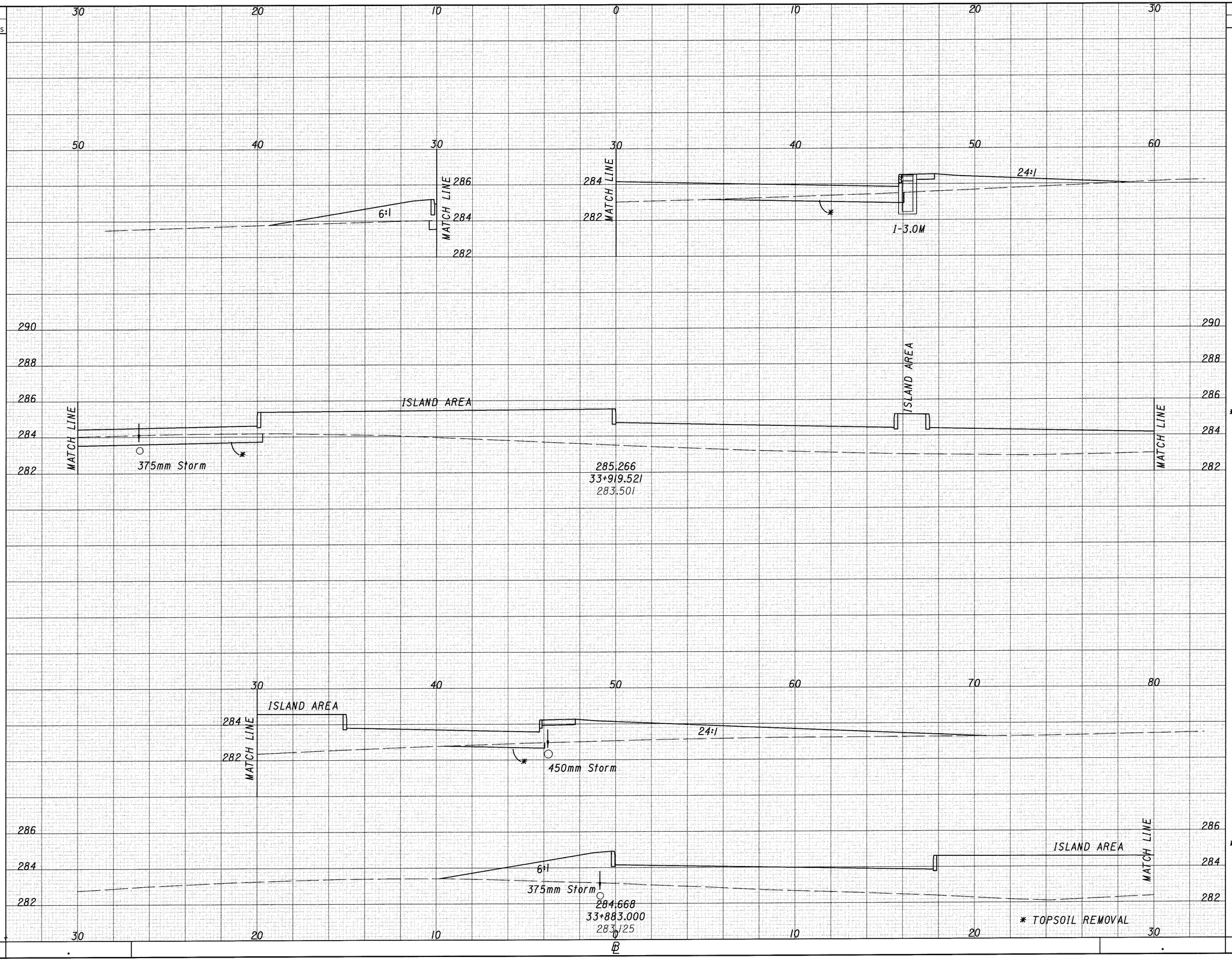
6:1
375mm Storm
284.406
33+860.000
282.099

ISLAND AREA

*0.00

℄

SEEDING	
END WIDTH	SQ. METERS
47.07	1897
55.50	3785
95.71	2



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.00	108.88		
*8.35			
*171			
*0.87			
*0			

CALCULATED AM

CHECKED REA

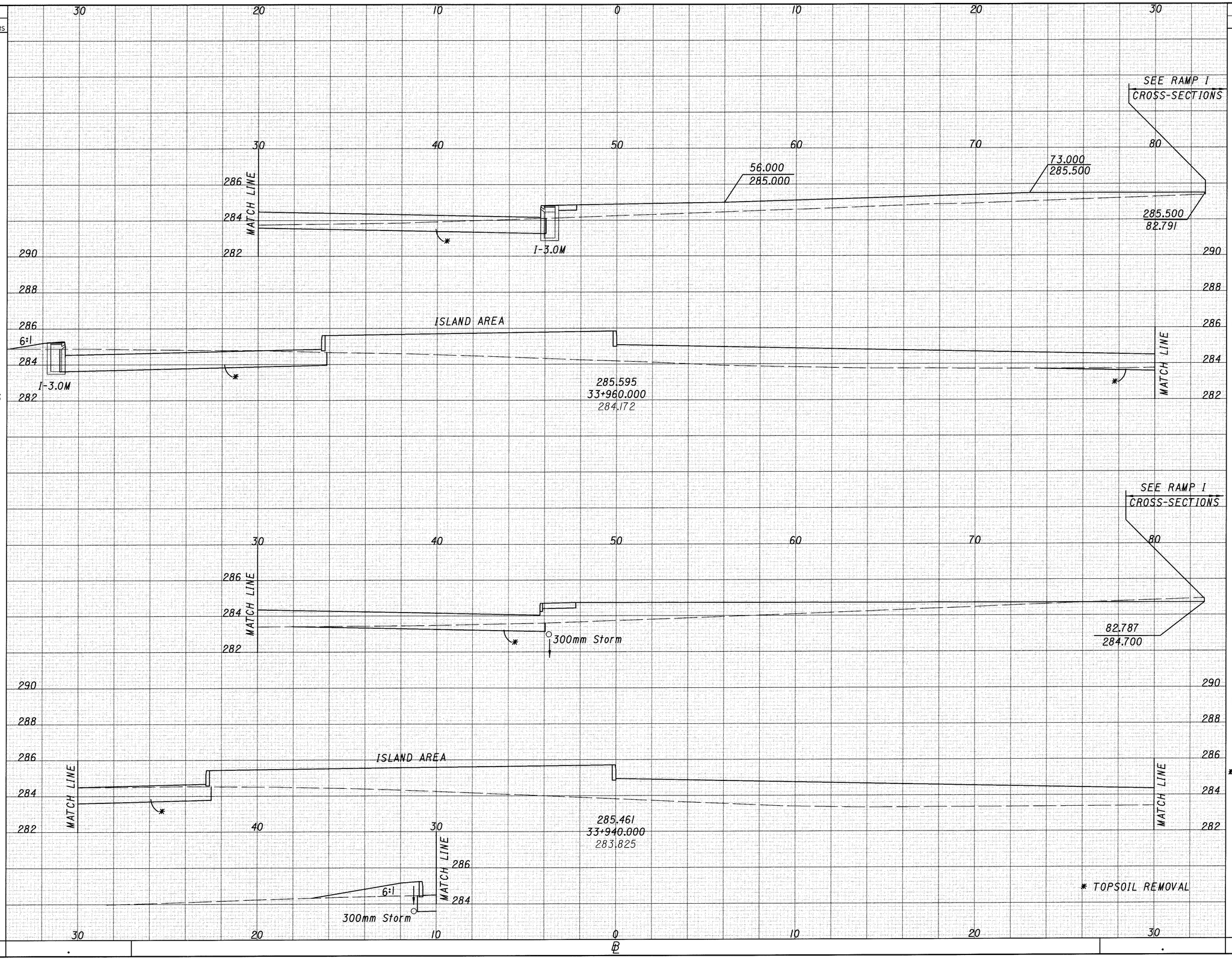
RAMP F CROSS SECTIONS

STA 33+883.000 TO STA 33+919.521

WYA / CRA-30-28.009 / 0.000

1088
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
57.03	1236	2.01	95.49	28	2031
		*21.1			
				*311	
66.59	1137	0.80	107.61	8	2165
		*10.02			
				*184	



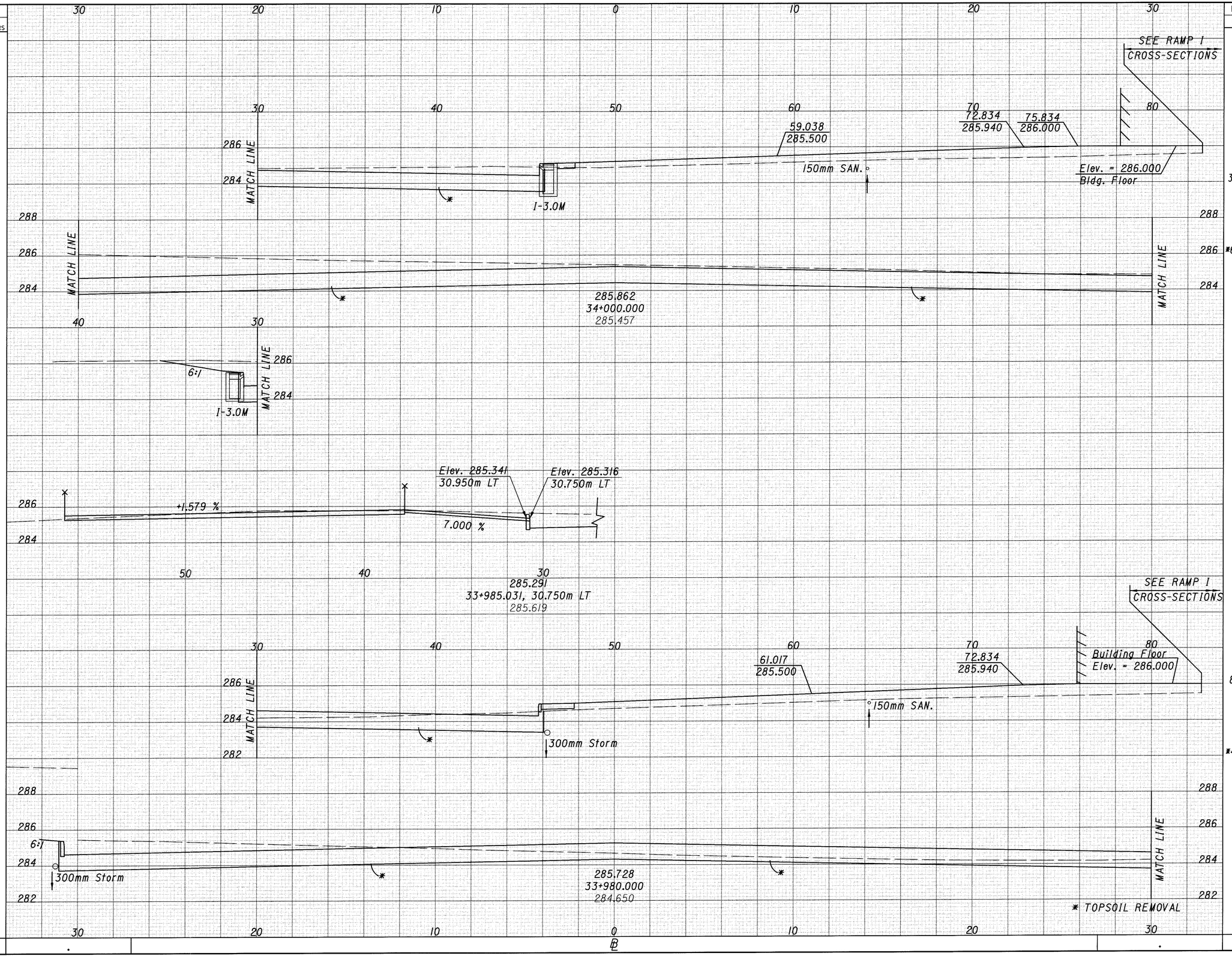
CALCULATED AM
CHECKED REA

RAMP F CROSS SECTIONS
33+940.000 TO STA 33+960.000

WYA/CRA-30-28.009/0.000

1089
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
43.18		30.77	84.69			
	825	*69.55		396	1719	
				*1153		
39.28		8.79	87.16			
	963	*45.71		108	1826	
				*668		



CALCULATED AM

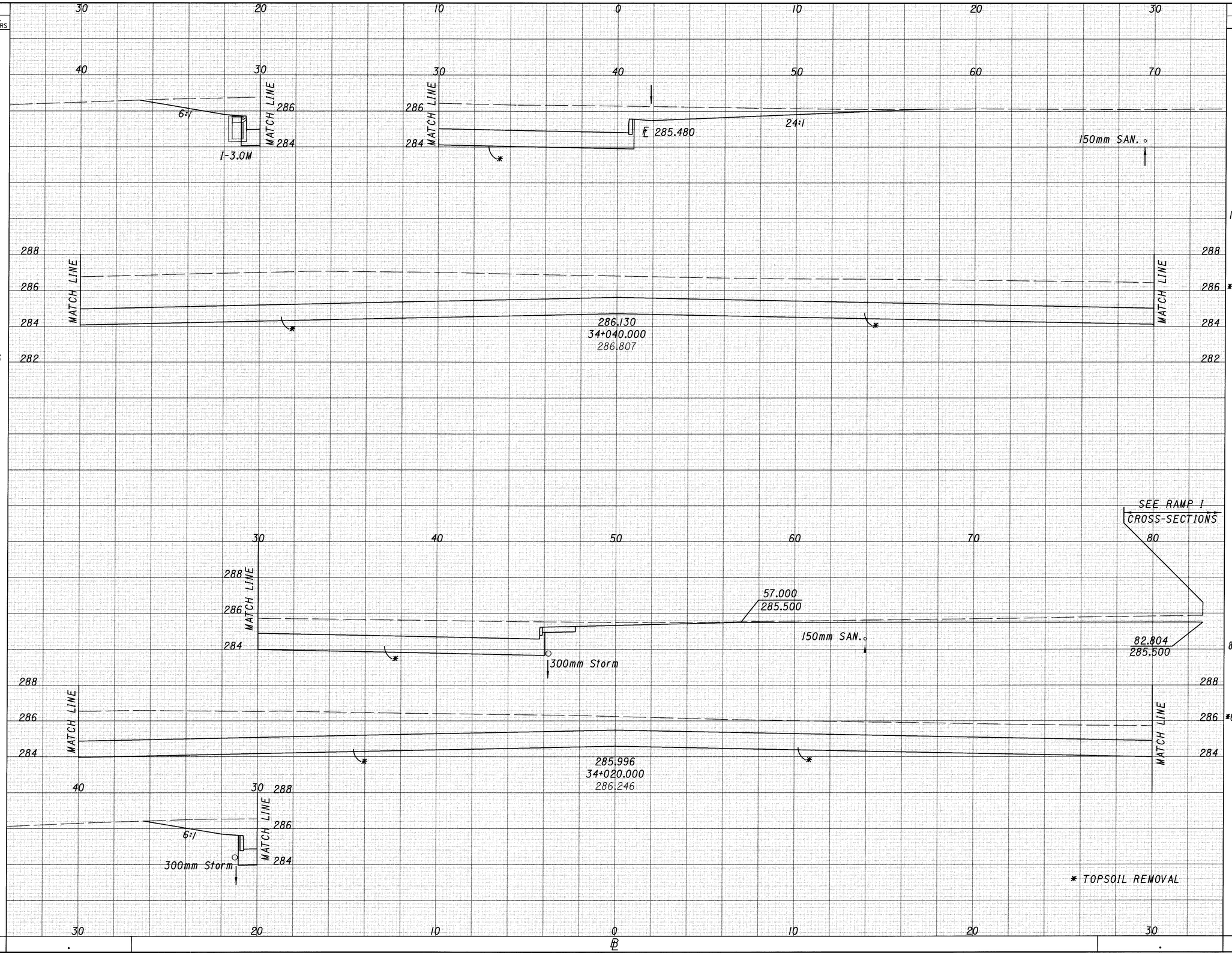
CHECKED REA

RAMP F CROSS SECTIONS STA 33+980.000 TO STA 34+000.000

WYA / CRA-30-28.009 / 0.000

1090
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
29.71		114.89	64.90		
		*64.90			
	743			2016	1345
				*1345	
44.62		86.74	69.55		
		*69.55			
	878			1175	1542
				*1391	



RAMP F CROSS SECTIONS

STA 34+020.000 TO STA 34+040.000

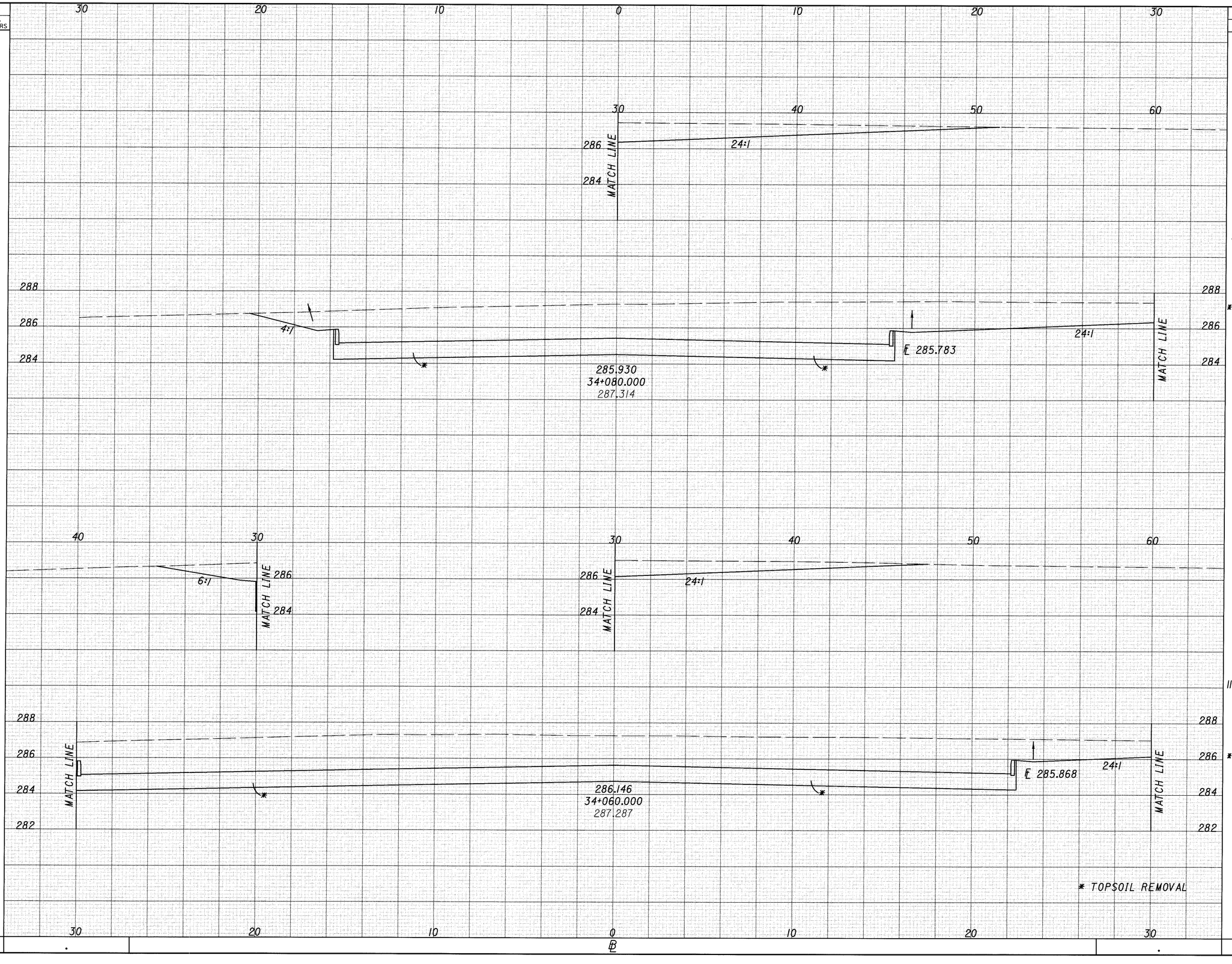
WYA / CRA-30-28.009 / 0.000

CALCULATED AM

CHECKED REA

1091
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
49.00	876	98.16	28.33	2141	757
		*28.33		*757	
38.57	683	115.93	47.40	2308	1123
		*47.4		*1123	



CALCULATED AM

CHECKED REA

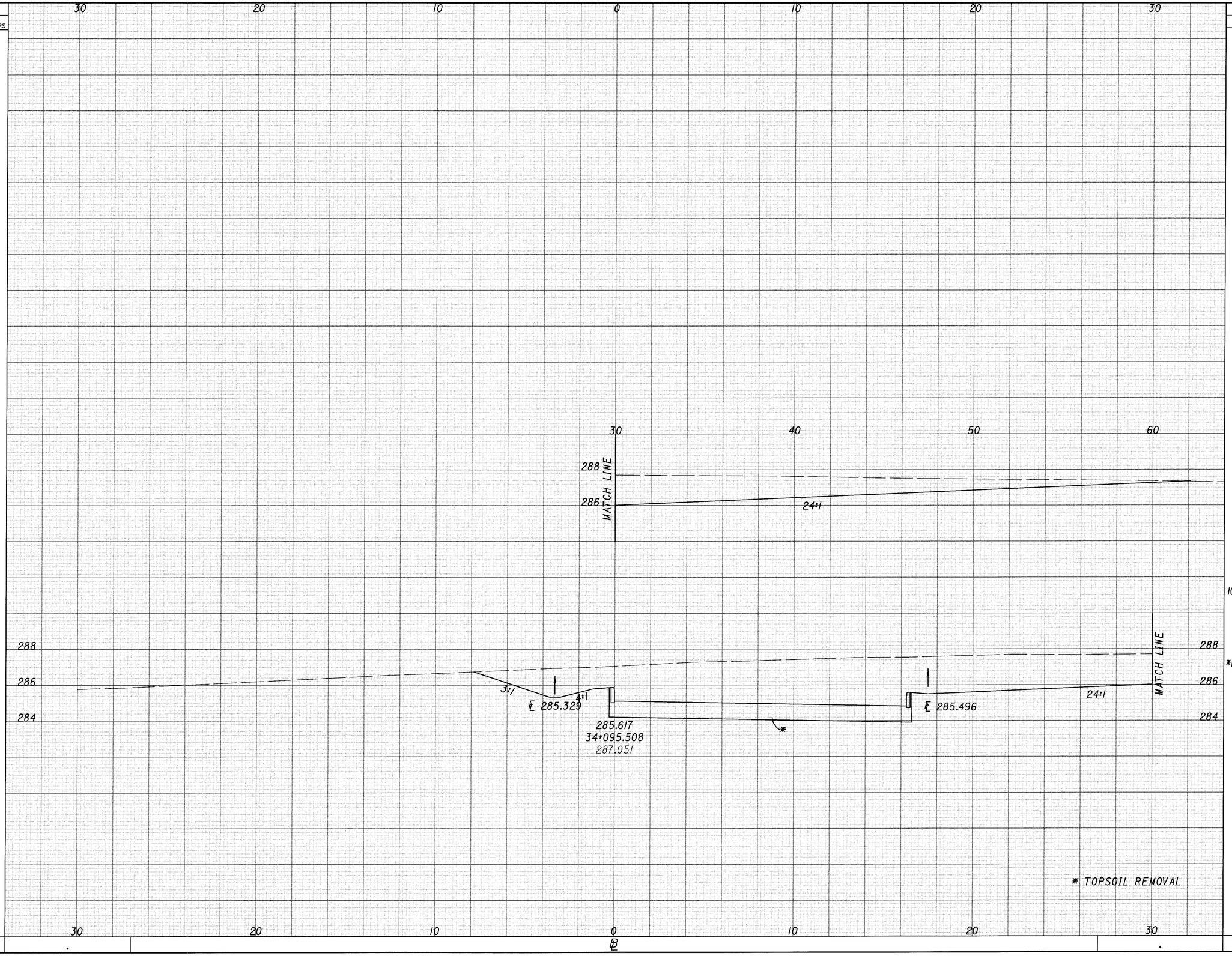
RAMP F CROSS SECTIONS

STA 34+060.000 TO STA 34+080.000

WYA / CRA-30-28.009 / 0.000

1092
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
61.64	858	101.23	15.32	1546	338
		*15.32		*338	



CALCULATED AM
CHECKED REA

RAMP F CROSS SECTIONS
STA 34+095.508

WYA/CRA-30-28.009/0.000

1093
2116

SEEDING END WIDTH	SEEDING SQ. METERS
33.46	
	476
14.16	
	139
13.49	

30 20 10 0 10 20 30

SEE RAMP I CROSS-SECTIONS

288
286
284

3:1 4:1 4:1

℄ 284.680

285.191
34+000.000
287.706

℄ 285.200

SEE RAMP I CROSS-SECTIONS

290
288
286
284

3:1 4:1

℄ 284.950

285.475
33+980.000
287.260

SEE RAMP I CROSS-SECTIONS

290
288
286
284

3:1 4:1

℄ 285.086

285.617
33+969.947
287.051

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
58.35	5.26		
*5.26			
		972	53
		*53	
38.81	0.00		
*0			
		250	2
		*2	
10.89	0.35		
*0.35			

CALCULATED AM

CHECKED REA

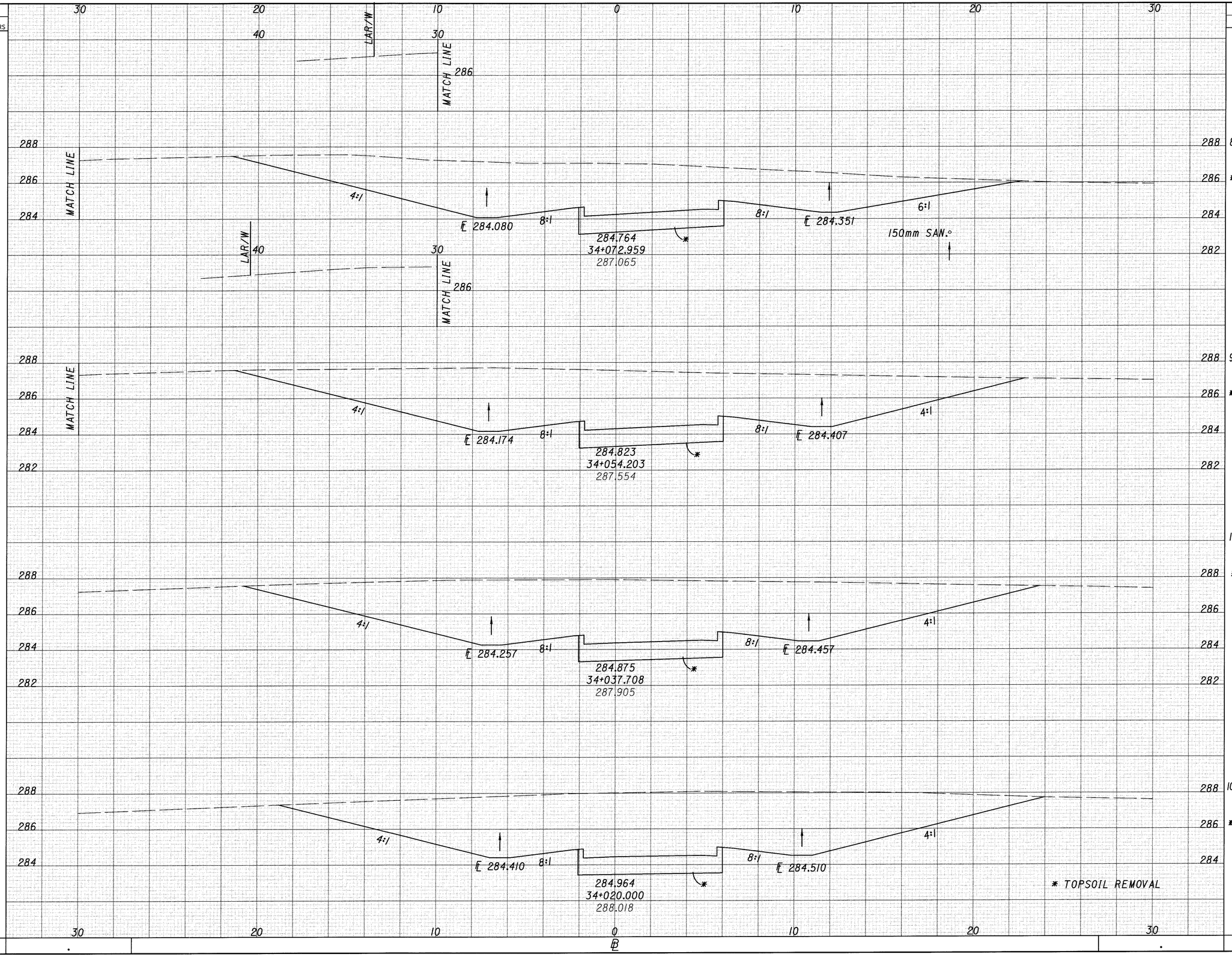
RAMP G CROSS SECTIONS

STA 33+969.947 TO STA 34+000.000

WYA/CRA-30-28.009/0.000

1094
2116

SEEDING	
END WIDTH	SQ. METERS
45.61	
	858
45.88	
	760
46.22	
	803
44.50	
	780



END AREA		VOLUME	
CUT	FILL	CUT	FILL
83.86	7.87		
*7.87			
		1717	147
		*147	
99.26	7.82		
*7.82			
		1710	129
		*129	
108.11	7.80		
*7.8			
		1894	138
		*138	
105.78	7.78		
*7.78			
		1641	130
		*130	

CALCULATED AM

CHECKED REA

RAMP G CROSS SECTIONS
STA 34+020.000 TO STA 34+072.959

WYA / CRA-30-28.009 / 0.000

1095
2116

SEEDING END WIDTH	SEEDING SQ. METERS
62.93	
20.92	
	554
32.15	
	704
42.16	
	868

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
End area Ahead from Sta. 34+134.496 ℄ Ramp I 60.08	16.83		
End area Back 3.39	9.29		
Topsoil end area Ahead from Sta. 34+134.496 ℄ Ramp I *14.56			
Topsoil end area Back *7.57			
		206	183
		*160	
16.36	8.27		
		*148	
55.05	7.87		
		1374	156
		*156	

CALCULATED AM

CHECKED REA

RAMP G CROSS SECTIONS
STA 34+092.737 TO STA 34+132.573
WYA/CRA-30-28.009/0.000

1096
2116

30 20 10 0 10 20 30

℄

End width Ahead from Sta. 34+134.496 ℄ Ramp I

End width Back

LAR/W

MATCH LINE

284

288

286

282

SEE RAMP I CROSS-SECTIONS

Ahead

Back

6:1

8:1

℄ 283.782

150mm SAN.

284.577
34+132.573
284.249

℄ 283.945

℄ 283.887

284.643
34+111.684
284.866

℄ 284.020

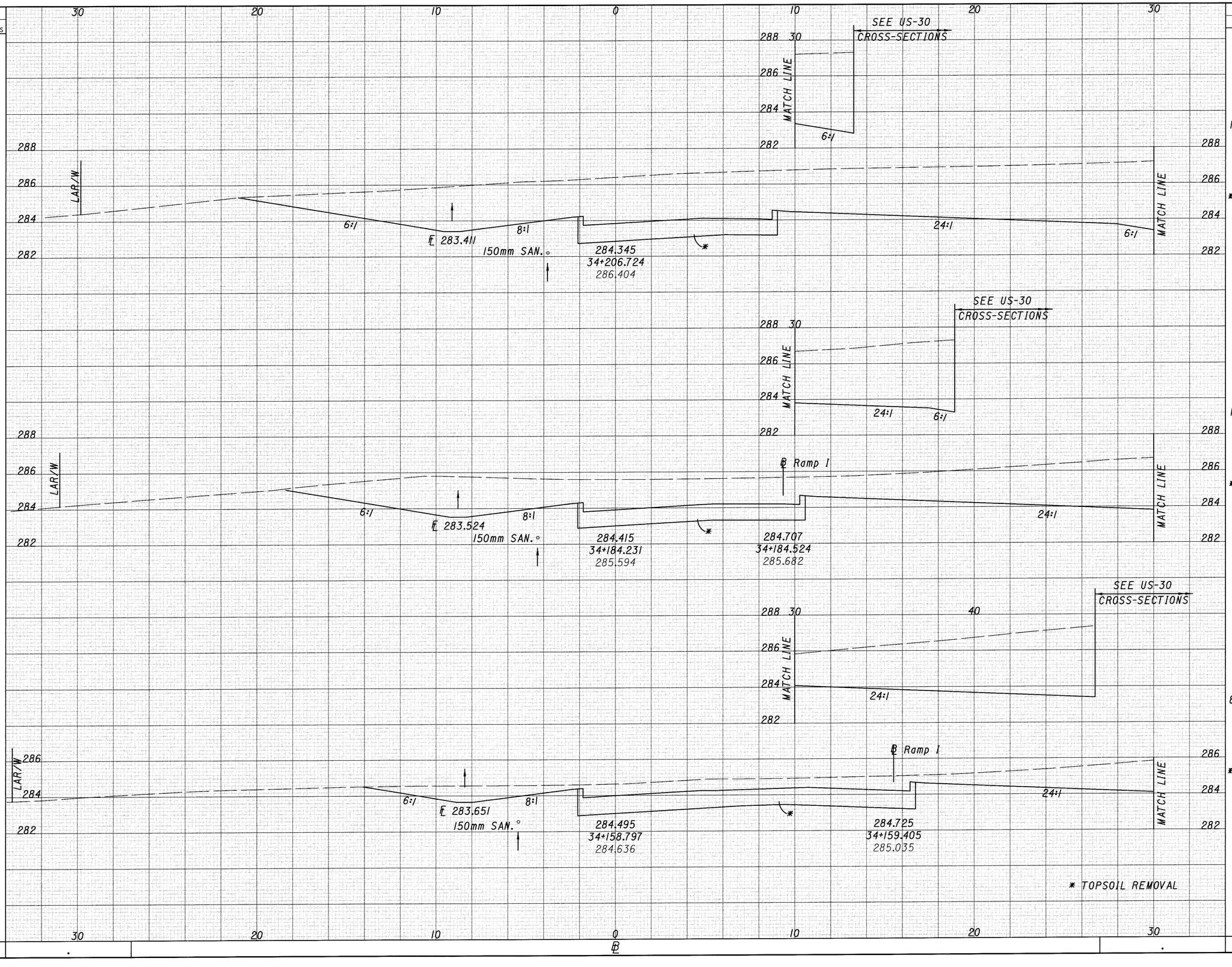
℄ 283.981

284.702
34+092.737
286.142

℄ 284.292

* TOPSOIL REMOVAL

SEEDING	
END WIDTH	SQ. METERS
49.18	
	1117
50.15	
	1245
47.78	
	1452



END AREA		VOLUME	
CUT	FILL	CUT	FILL
135.11	10.98		
*10.98			
		2776	255
		*255	
111.74	11.70		
*11.70			
		2442	385
		*385	
80.25	18.55		
*18.55			
		1840	464
		*434	

CALCULATED AM

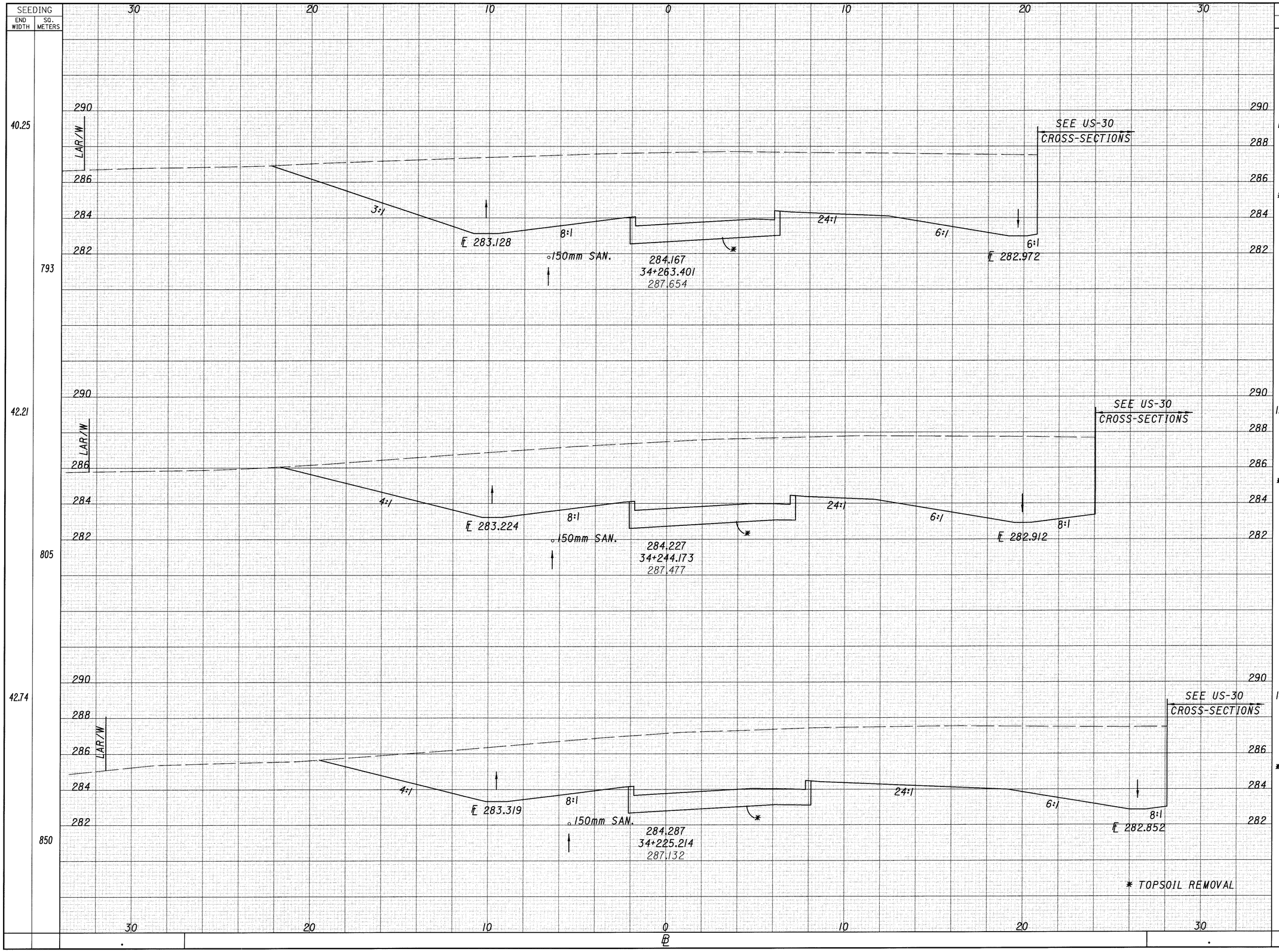
CHECKED REA

RAMP G CROSS SECTIONS
STA 34+158.797 TO STA 34+206.724

WYA / CRA-30-28.009 / 0.000

1097
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
40.25	793	147.14	8.53	2892	172
		*8.53		*172	
42.21	805	153.66	9.34	2842	185
		*9.34		*185	
42.74	850	146.14	10.18	2600	196
		*10.18		*196	



CALCULATED AM

CHECKED REA

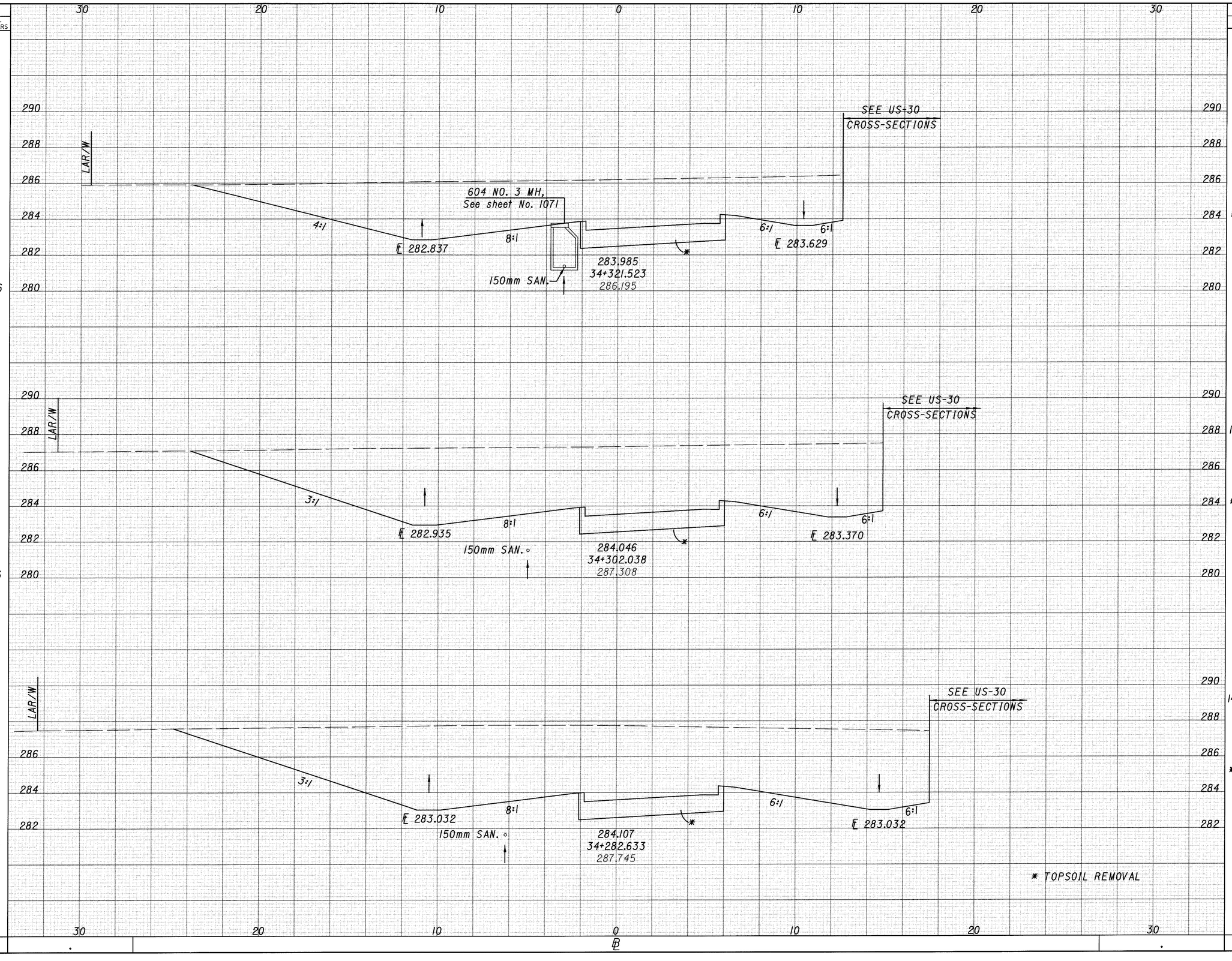
RAMP G CROSS SECTIONS

STA 34+225.214 TO STA 34+263.401

WYA/CRA-30-28.009/0.000

1098
2116

SEEDING END WIDTH	SEEDING SQ. METERS
33.85	
	686
36.61	
	746
40.28	
	774



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
84.16	7.87		
*7.87			
		2047	153
		*153	
125.91	7.87		
*7.87			
		2671	153
		*153	
149.38	7.87		
*7.87			
		2851	158
		*158	

* TOPSOIL REMOVAL

CALCULATED AM

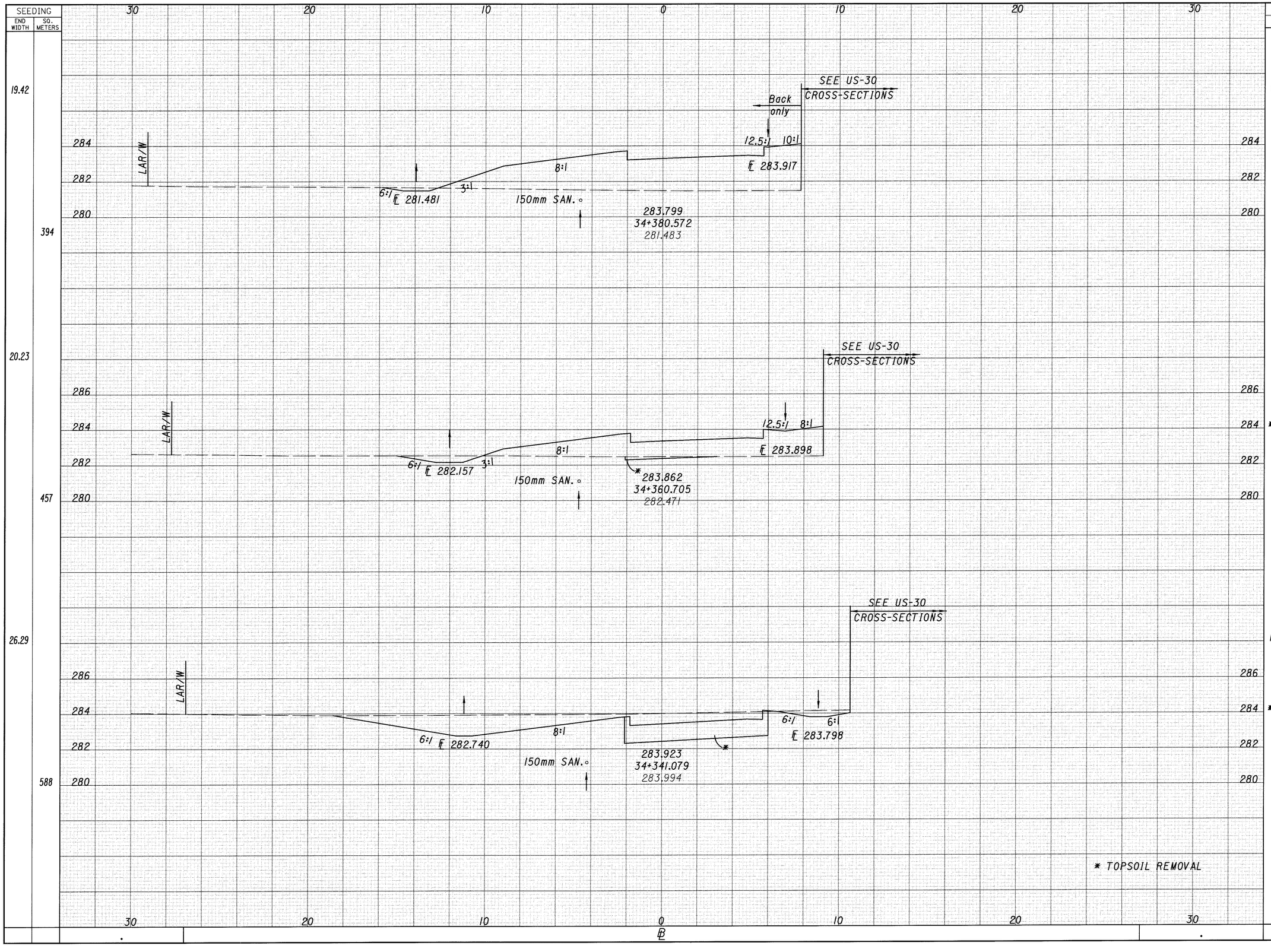
CHECKED REA

RAMP G CROSS SECTIONS STA 34+282.633 TO STA 34+321.523

WYA / CRA-30-28.009 / 0.000

1099
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
19.42	394	0.40	34.04	16	525
		*0		*5	
20.23	457	1.18	18.83	170	262
		*0.47		*82	
26.29	588	16.10	7.87	980	154
		*7.85		*154	



CALCULATED AM

CHECKED REA

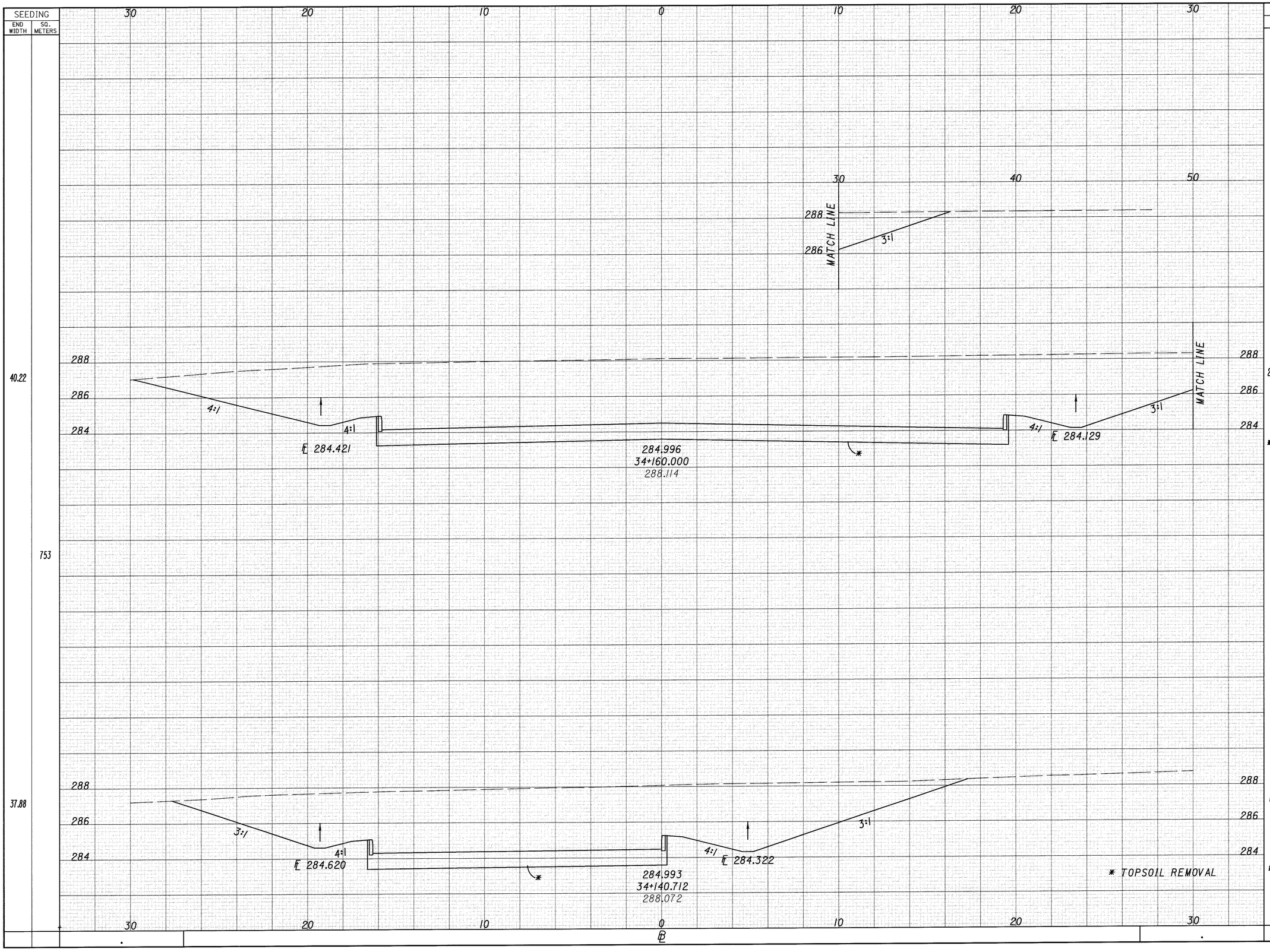
RAMP G CROSS SECTIONS

STA 34+341.079 TO STA 34+380.572

WYA / CRA-30-28.009 / 0.000

1100
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
40.22		204.32	32.23		
		₭32.23			
	753			3124	459
				₭459	
37.88		119.62	15.34		
		₭15.34			



CALCULATED AM

CHECKED REA

RAMP H CROSS SECTIONS

STA 34+140.712 TO STA 34+160.000

WYA / CRA-30-28.009 / 0.000

1101
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
58.14		229.15	68.28		
		*68.28			
	998			4591	1188
				*1188	
41.68		229.96	50.47		
		*50.47			
	819			4343	827
				*827	

SEE RAMP J CROSS SECTIONS

68.000
284.400

55.000
284.000

82.026
284.200

51.000
283.900

℄ 283.900

MATCH LINE 286 284

284.920
34+200.000
286.521

MATCH LINE 288 286 284

MATCH LINE 286 284
4:1 3:1
℄ 283.729
300mm

284.958
34+180.000
287.330

MATCH LINE 288 286 284
10:1 4:1
℄ 284.210

MATCH LINE 286 284
10:1

MATCH LINE 286 284
4:1 3:1
℄ 283.929

* TOPSOIL REMOVAL

℄

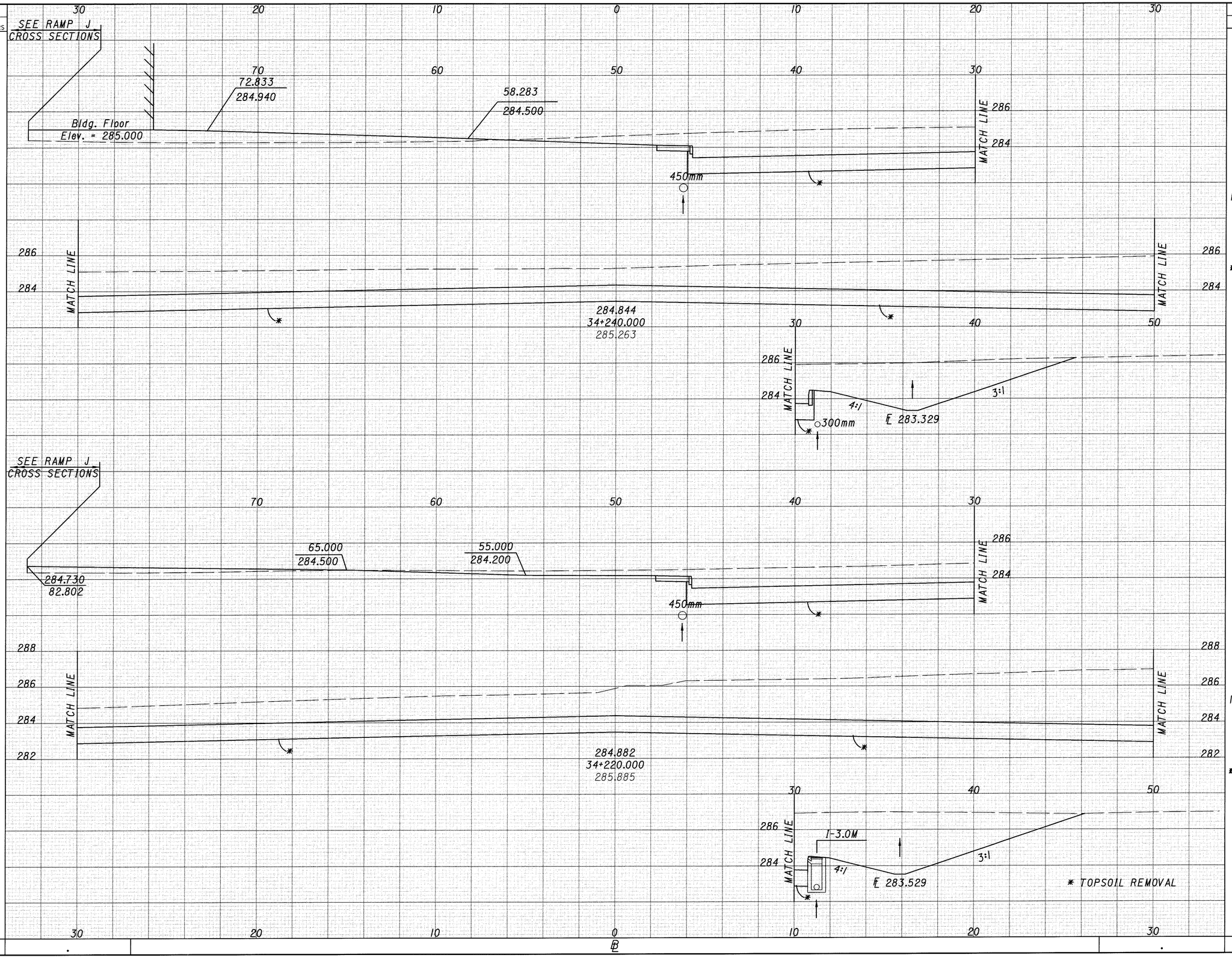
CALCULATED AM
CHECKED REA

RAMP H CROSS SECTIONS
STA 34+180.000 TO STA 34+200.000

WYA/CRA-30-28.009/0.000

1102
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
55.15	1107	134.37	82.48	3010	1559
		*69.54		*1391	
55.51	1137	166.60	73.37	3958	1417
		*69.54		*1378	



CALCULATED AM

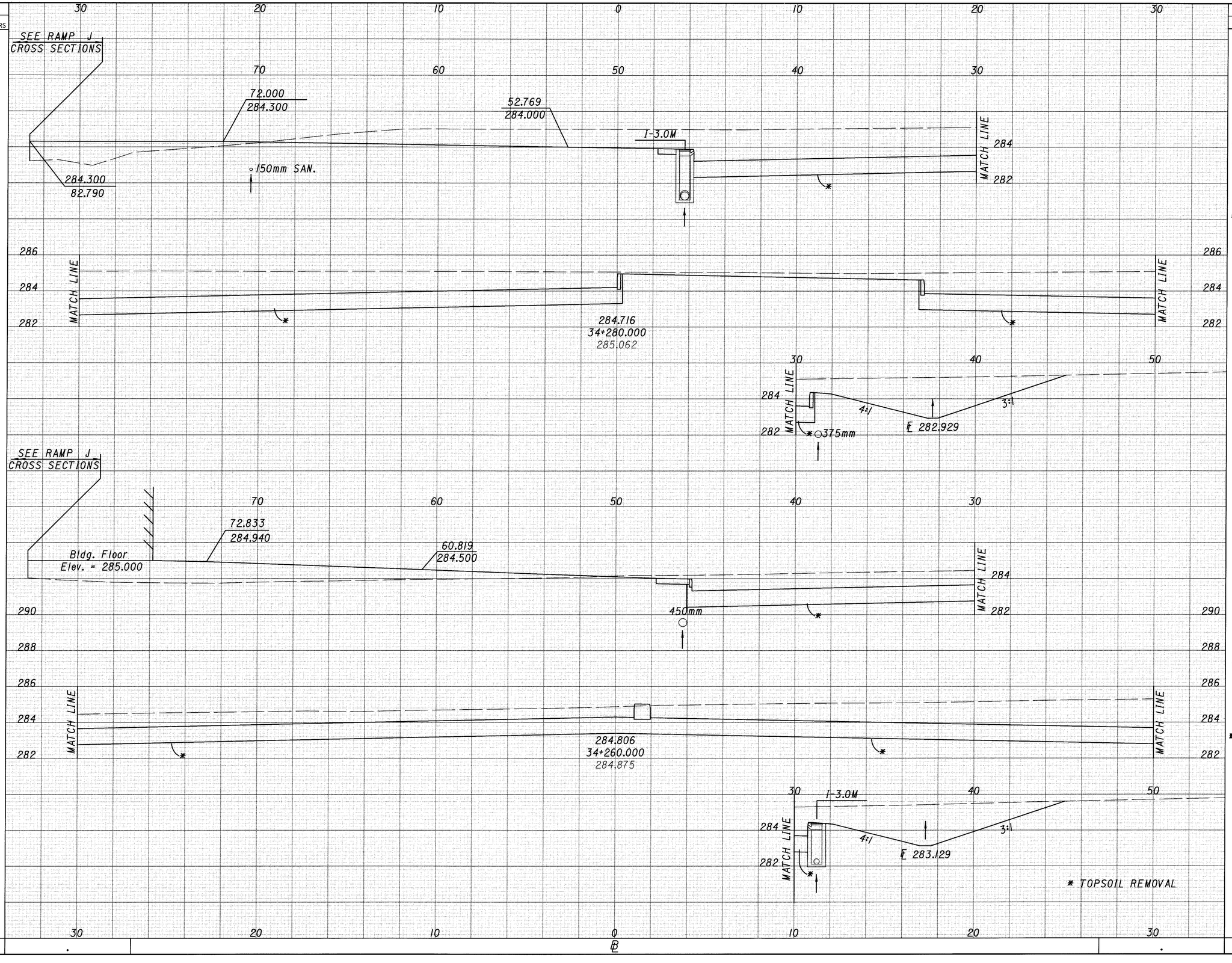
CHECKED REA

RAMP H CROSS SECTIONS STA 34+220.000 TO STA 34+240.000

WYA / CRA-30-28.009 / 0.000

1103
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
71.73		123.49	63.26		
		*54.77			
	1266			2117	1575
				*1242	
54.89	1100	88.17	94.27	2225	1768
		*69.44		*1390	



RAMP H CROSS SECTIONS

STA 34+260.000 TO STA 34+280.000

WYA/CRA-30-28.009/0.000

CALCULATED AM

CHECKED REA

1104
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
60.56		168.97	48.51		
	1061	≠48.51		3441	1003
				≠1003	
45.51		175.14	51.76		
	1172	≠51.76		2986	1150
				≠1065	

SEE EB REST AREA SERVICE ROAD CROSS SECTIONS

30 20 10 0 10 20 30

60 50 40 30

1-3.0M

67.853
283.055

50.414
283.500

MATCH LINE

284
282

286
284
282
280

284.291
34+320.000
285.886

4:1

○375mm

30 40 50

284
282

4:1
3:1

℄ 282.529

SEE EB REST AREA SERVICE ROAD CROSS SECTIONS

50 40 30

284
282

525mm

283.750
51.750

30 40 50

1-3.0M

4:1
3:1

℄ 282.729

286
284
282

284.545
34+300.000
286.069

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

CALCULATED AM

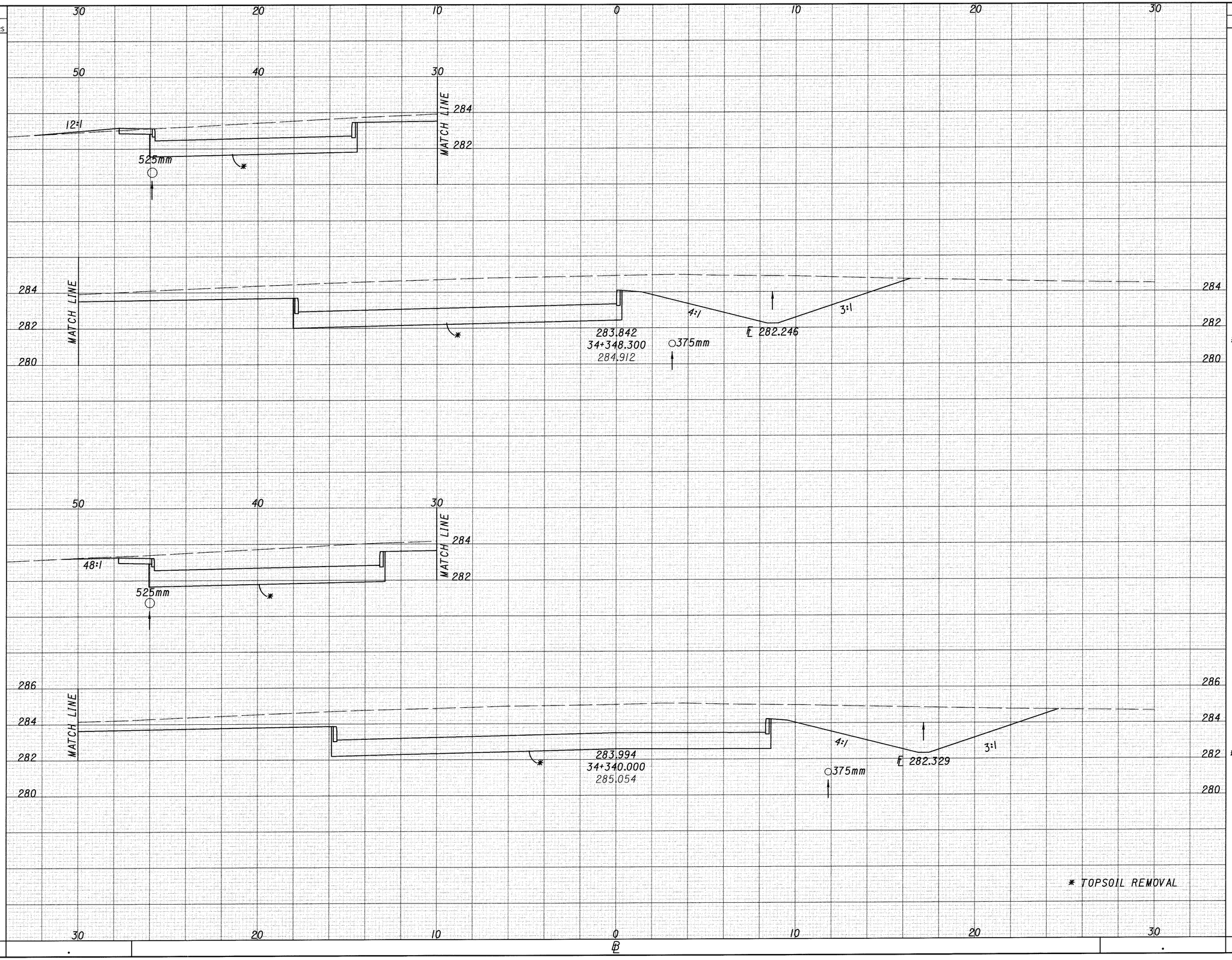
CHECKED REA

RAMP H CROSS SECTIONS
STA 34+300.000 TO STA 34+320.000

WYA/CRA-30-28.009/0.000

1105
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
45.37		72.28	27.49		
		*27.18			
	372			666	256
				*255	
44.37		88.14	34.16		
		*34.16			
	1049			2571	827
				*827	



* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

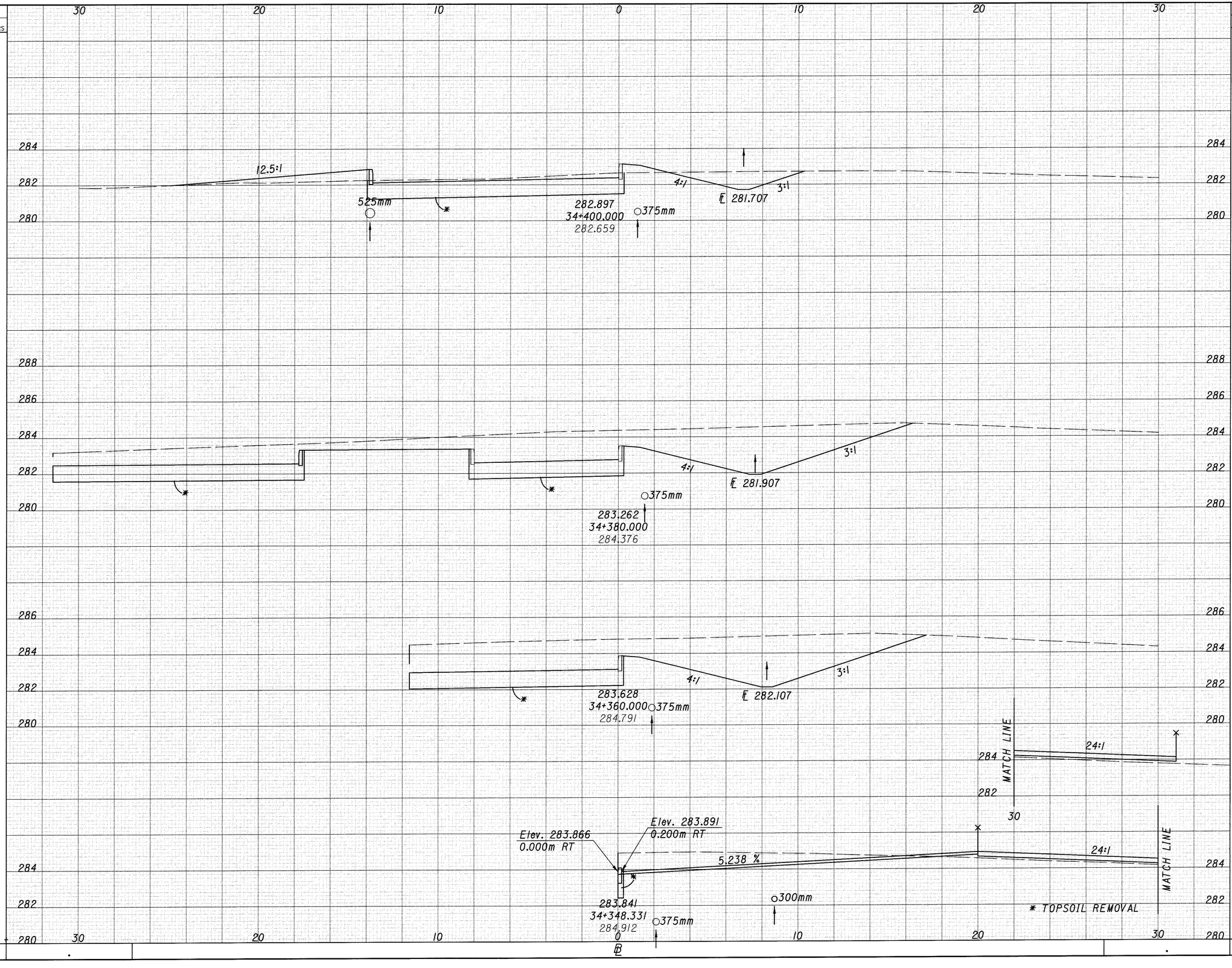
RAMP H CROSS SECTIONS

STA 34+340.000 TO STA 34+348.300

WYA / CRA-30-28.009 / 0.000

1106
2116

SEEDING	
END WIDTH	SQ. METERS
28.55	
	590
30.40	
	522
21.80	
	249
20.96	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
6.28	16.83		
∑12.85			
		621	373
		∑333	
55.77	20.48		
∑20.48			
		1032	313
		∑313	
47.46	10.77		
∑10.77			
25.39	0.33		
∑0.33			
		425	65
		∑65	
		2	0
		∑0	

CALCULATED AM

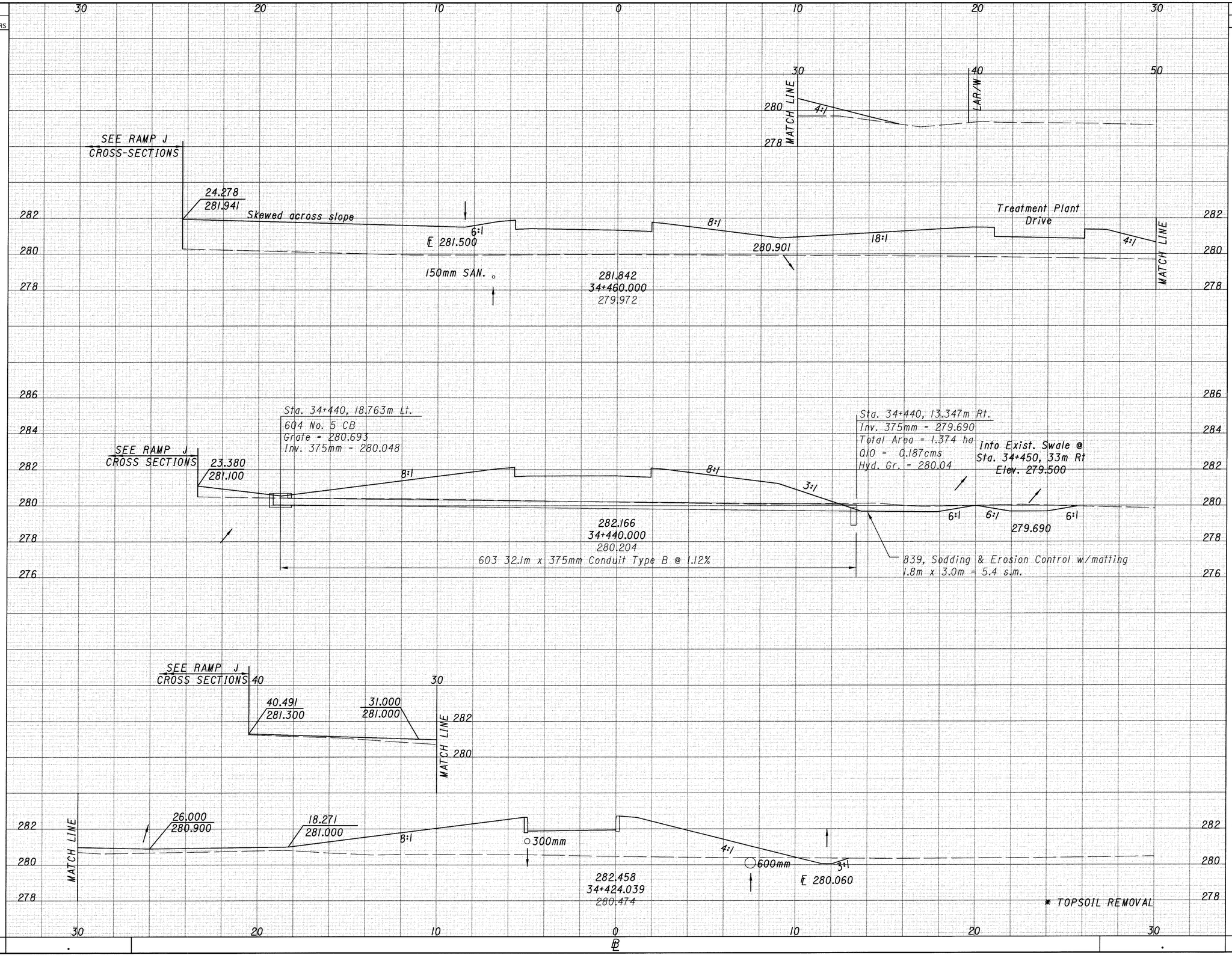
CHECKED REA

RAMP H CROSS SECTIONS
STA 34+348.331 TO STA 34+400.000

WYA / CRA-30-28.009 / 0.000

1107
2116

SEEDING END WIDTH	SEEDING SQ. METERS
50.66	
	959
45.21	
	775
51.95	
	968



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.00	81.43		
		35	1190
3.53	37.60		
		32	613
0.53	39.17		
≠0			
		82	673
		≠154	

CALCULATED AM

CHECKED REA

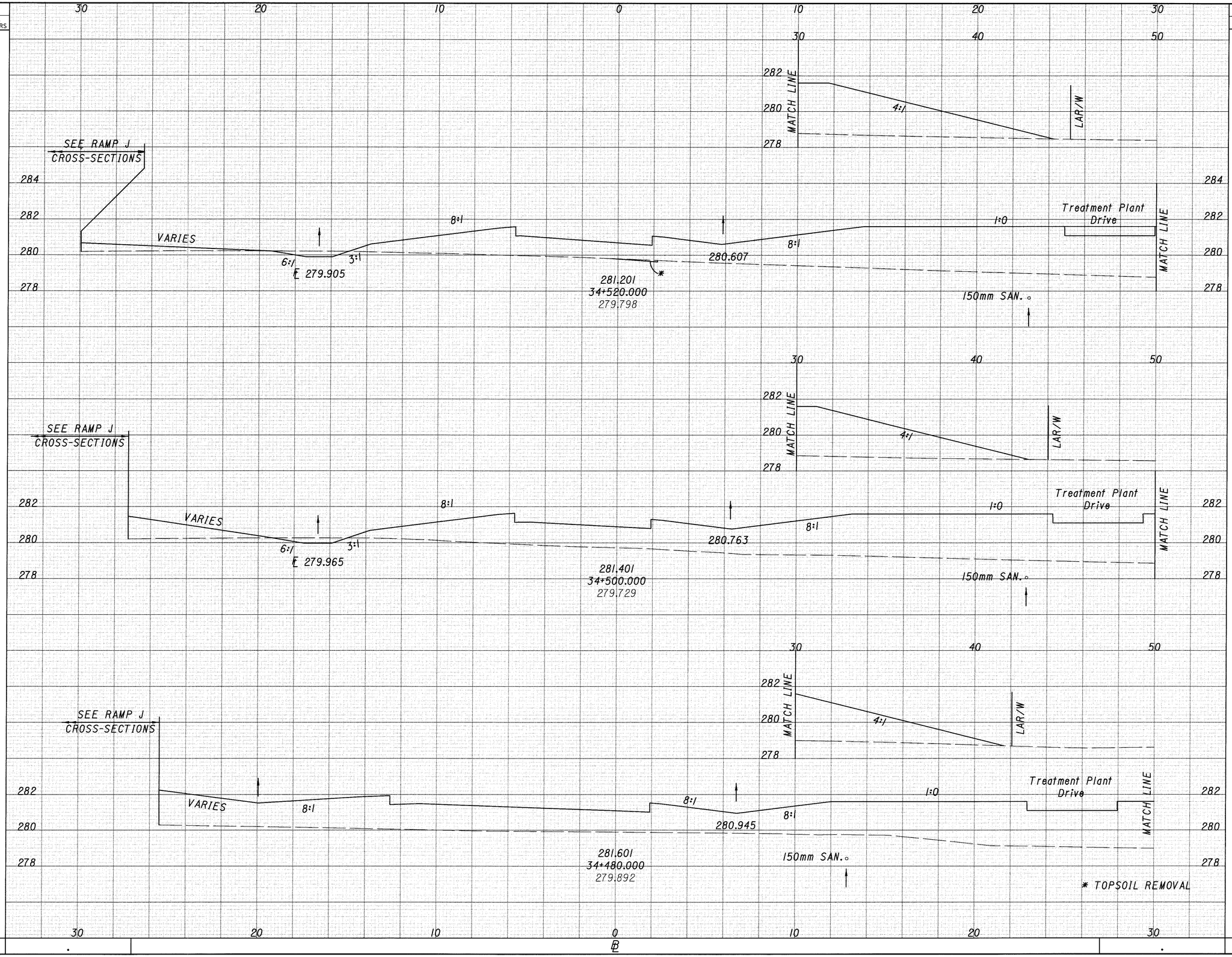
RAMP H CROSS SECTIONS

STA 34+424.039 TO STA 34+460.000

WYA / CRA-30-28.009 / 0.000

1108
2116

SEEDING	
END WIDTH	SQ. METERS
70.27	1316
61.28	1123
51.05	1017



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.91	99.47		
≠0.1		18	2023
		≠1	
0.86	102.79		
≠0		9	2116
0.00	108.78		
		0	1902

CALCULATED AM

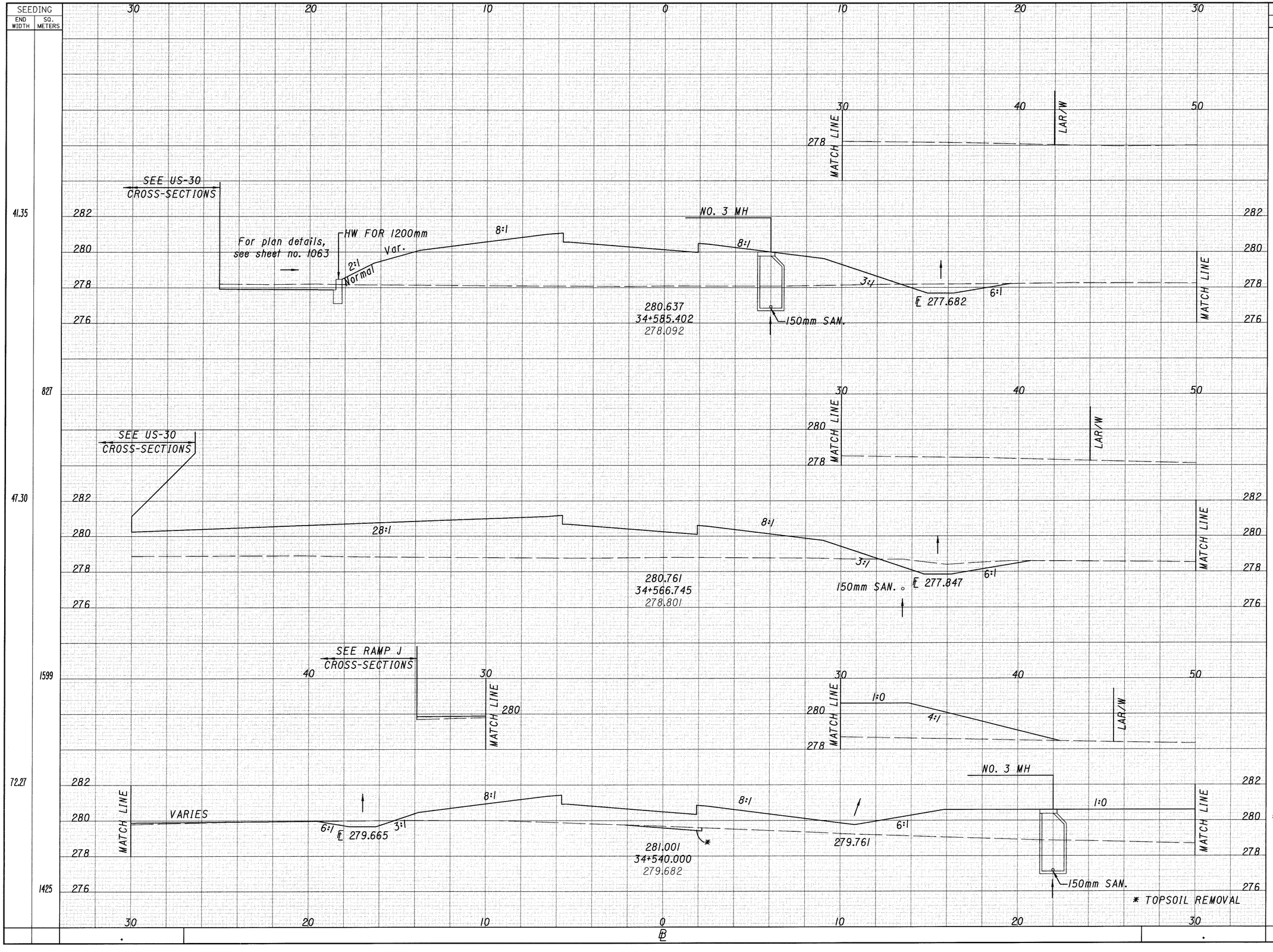
CHECKED REA

RAMP H CROSS SECTIONS STA 34+480.000 TO STA 34+520.000

WYA / CRA-30-28.009 / 0.000

1109
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
41.35		3.91	58.83		
	827			67	1190
47.30		3.30	68.70		
		*0			
	1599			57	1846
				*5	
72.27		0.97	69.34		
		*0.41			
	1425			19	1688
				*5	



CALCULATED AM

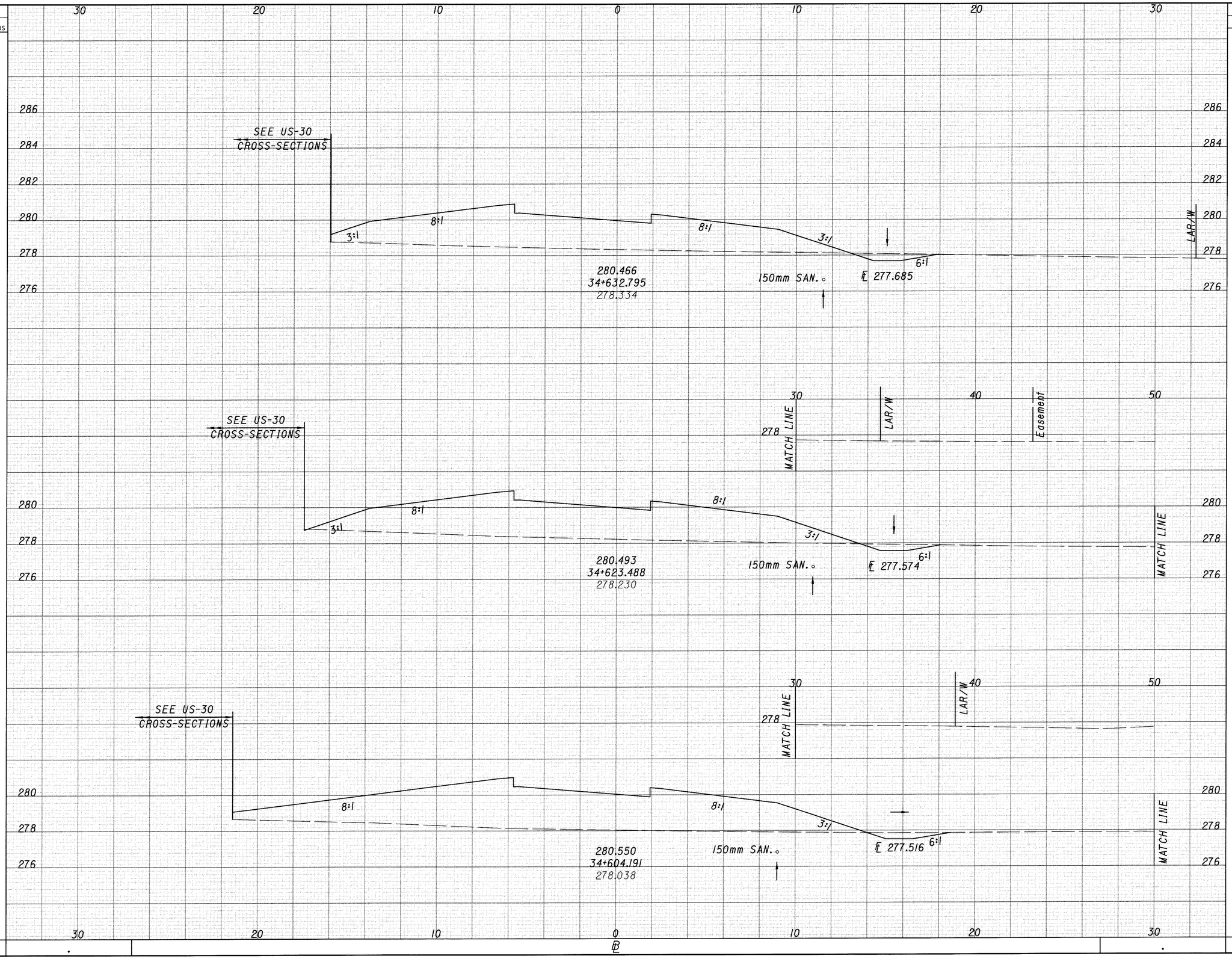
CHECKED REA

RAMP H CROSS SECTIONS STA 34+540.000 TO STA 34+585.402

WYA / CRA-30-28.009 / 0.000

1110
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
30.16	288	1.27	43.82	11	426
31.83	658	1.05	47.72	20	1034
36.32	730	1.07	59.48	47	1111



CALCULATED AM

CHECKED REA

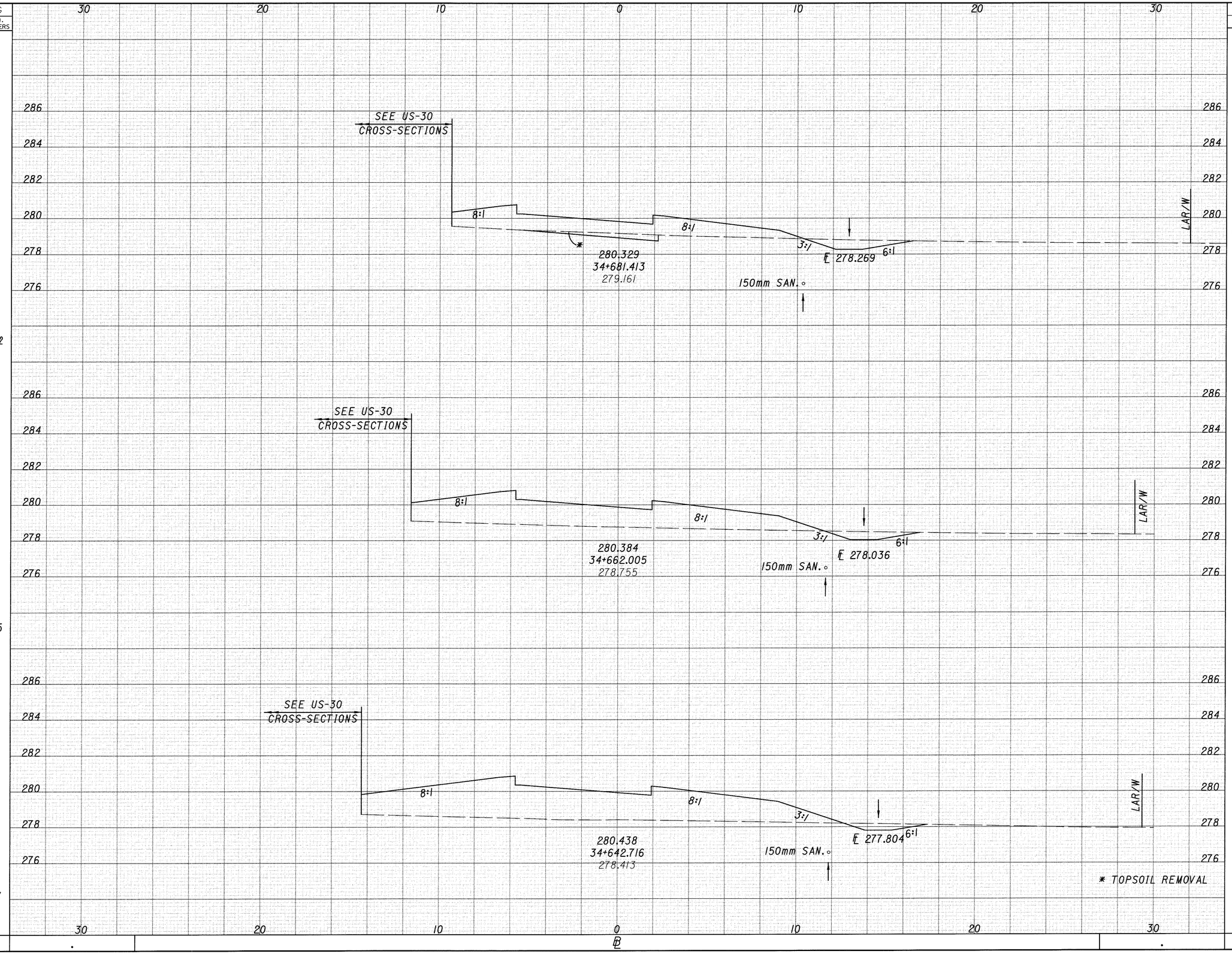
RAMP H CROSS SECTIONS

STA 34+604.191 TO STA 34+632.795

WYA/CRA-30-28.009/0.000

1111
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
21.96		2.01	16.42		
		*1.32			
	452			34	421
				*13	
24.61		1.52	26.94		
		*0			
	505			26	650
27.77		1.14	40.50		
	287			12	418



CALCULATED AM

CHECKED REA

RAMP H CROSS SECTIONS
STA 34+642.716 TO STA 34+681.413

WYA/CRA-30-28.009/0.000

1112
2116

SEEDING	
END WIDTH	SQ. METERS
19.93	409

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.79	10.28		
≠5.76			
		47	260
		≠69	

CALCULATED AM

CHECKED REA

RAMP H CROSS SECTIONS

STA 34+700.922

WYA/CRA-30-28.009/0.000

1113
2116

30 20 10 0 10 20 30

30 40 50

280 MATCH LINE

278

LAR/W

286 284 282 280 278 276

SEE US-30 CROSS-SECTIONS

Back only

8:1

280.274
34+700.922
279.603

NO. 3 MH

8:1

3:1

℄ 278.503

6:1

MATCH LINE

150mm SAN.

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

SEEDING	
END WIDTH	SQ. METERS
105.48	
	408
41.84	
	959
54.04	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.00	124.84		
		35	431
12.58	30.62		
		132	1122
0.60	81.55		

CALCULATED AM

CHECKED REA

RAMP I CROSS SECTIONS

STA 33+720.000 TO STA 33+745.543

WYA/CRA-30-28.009/0.000

1114
2116

30 20 10 0 10 20 30

SEE US-30 CROSS-SECTIONS

30 40 50 60 70

MATCH LINE 282 280

48:1

284 282 280

MATCH LINE

24:1

48:1

MATCH LINE

283.901
33+745.543
282.040

50 40 30

24:1

MATCH LINE 282 280

SEE RAMP F CROSS-SECTIONS

SEE RAMP F CROSS-SECTIONS

284 282 280

6.1:1

VARIES

VARIES

283.846
33+740.000
281.950

65.5:1

SEE RAMP F CROSS-SECTIONS

50 40 30

VARIES

MATCH LINE 282 280

SEE RAMP F CROSS-SECTIONS

284 282 280

MATCH LINE

VARIES

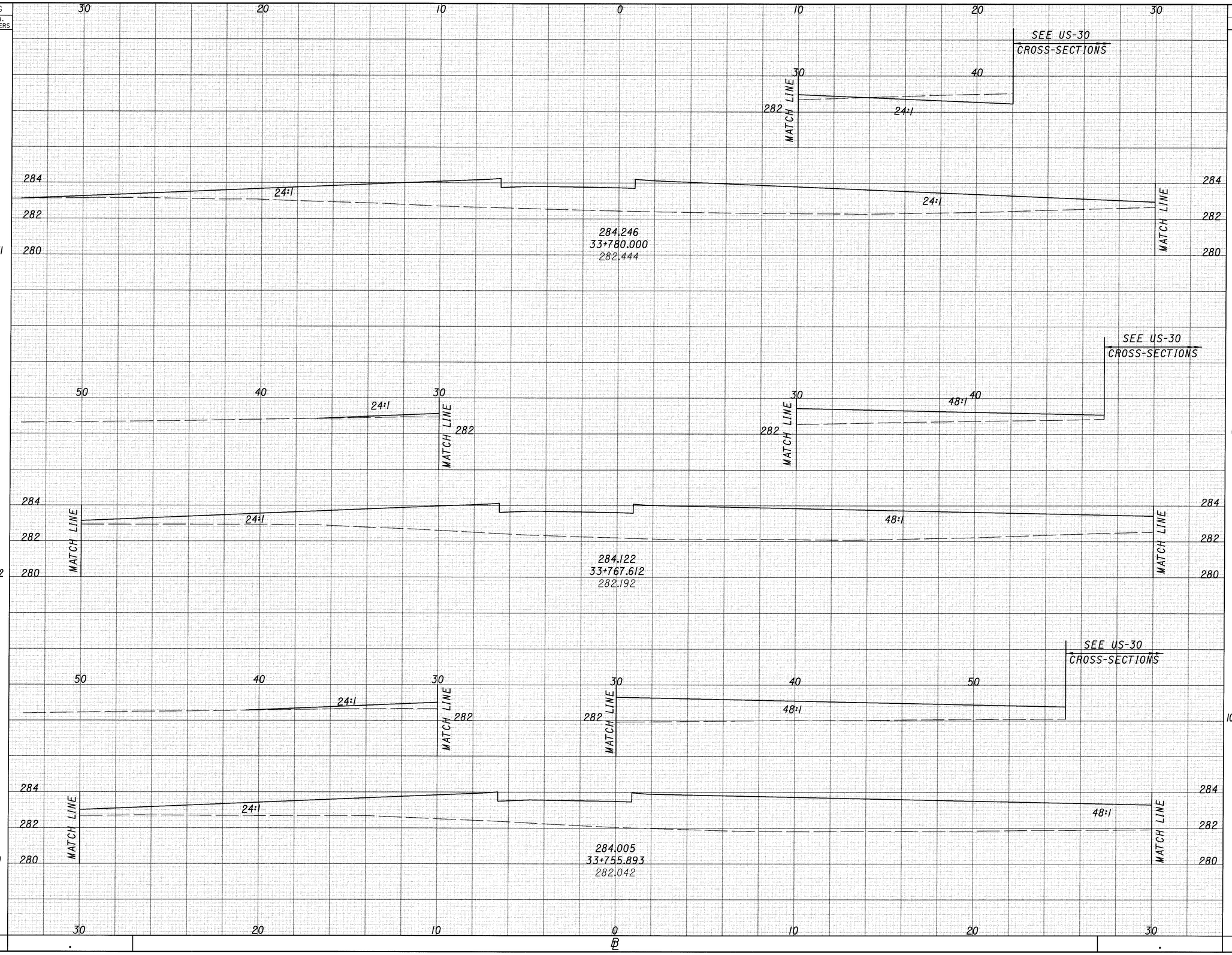
VARIES

283.645
33+720.000
281.946

30 20 10 0 10 20 30

℄

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
72.24		2.41	62.03		
	941			15	898
79.61		0.00	1118		
	1002			82.92	
91.40				107.94	
	1019			1205	



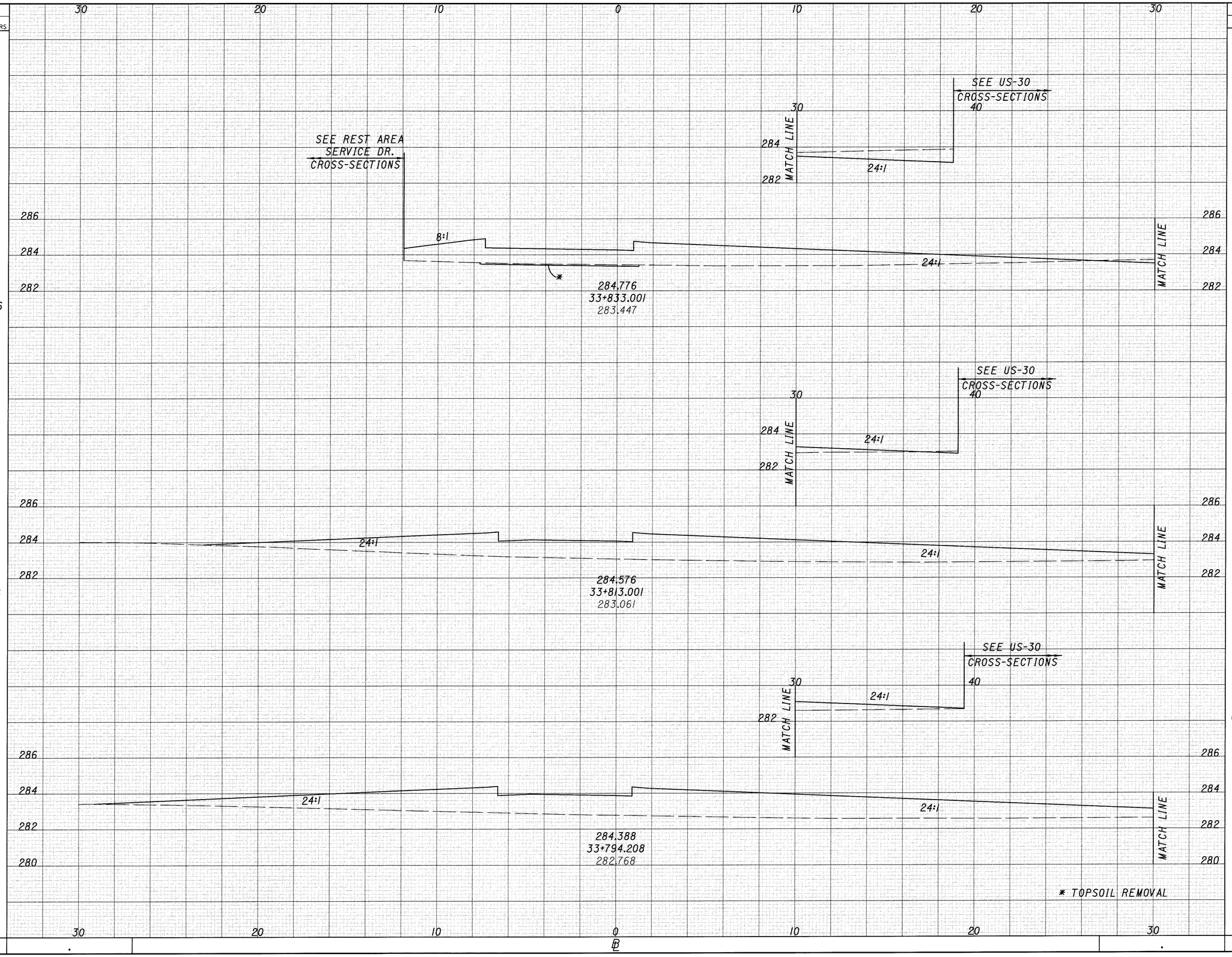
CALCULATED AM
CHECKED REA

RAMP I CROSS SECTIONS
STA 33+755.893 TO STA 33+780.000

WYA / CRA-30-28.009 / 0.000

1115
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
43.67	1026	4.56	30.09	47	780
		*0.6		*6	
58.89	1156	0.12	47.89	1	996
		*0			
64.10	969	0.00	58.10	17	853



CALCULATED AM

CHECKED REA

RAMP I CROSS SECTIONS

STA 33+794.208 TO STA 33+833.001

WYA / CRA-30-28.009 / 0.000

1116
2116

SEEDING	
END WIDTH	SQ. METERS
68.93	
	1402
71.28	
	898
56.69	
	300

END AREA		VOLUME	
CUT	FILL	CUT	FILL
32.18	18.54		
*15.21		536	397
		*188	
21.44	21.11		
*3.55		203	360
		*34	
7.48	30.19		
*1.26		36	180
		*6	

CALCULATED AM

CHECKED REA

RAMP I CROSS SECTIONS
STA 33+838.971 TO STA 33+873.001

WYA / CRA-30-28.009 / 0.000

1117
2116

30 20 10 0 10 20 30

50 40 30

-50.000
284.948

-43.000
285.000

MATCH LINE 284 282

SEE US-30 CROSS-SECTIONS

40 30 284 282 MATCH LINE

24:1 6:1

286 284 282 MATCH LINE

-14.000
285.231

285.176
33+873.001
284.888

24:1

286 284 282 MATCH LINE

40 30 284 282 MATCH LINE

37:1

-38.904
284.703

SEE US-30 CROSS-SECTIONS

40 30 284 282 MATCH LINE

24:1

286 284 282 MATCH LINE

37:1

24:1

-23.000
284.273

284.976
33+853.001
283.994

24:1

286 284 282 MATCH LINE

SEE US-30 CROSS-SECTIONS

40 30 284 282 MATCH LINE

24:1

286 284 282 MATCH LINE

24:1

284.836
33+838.971
283.596

24:1

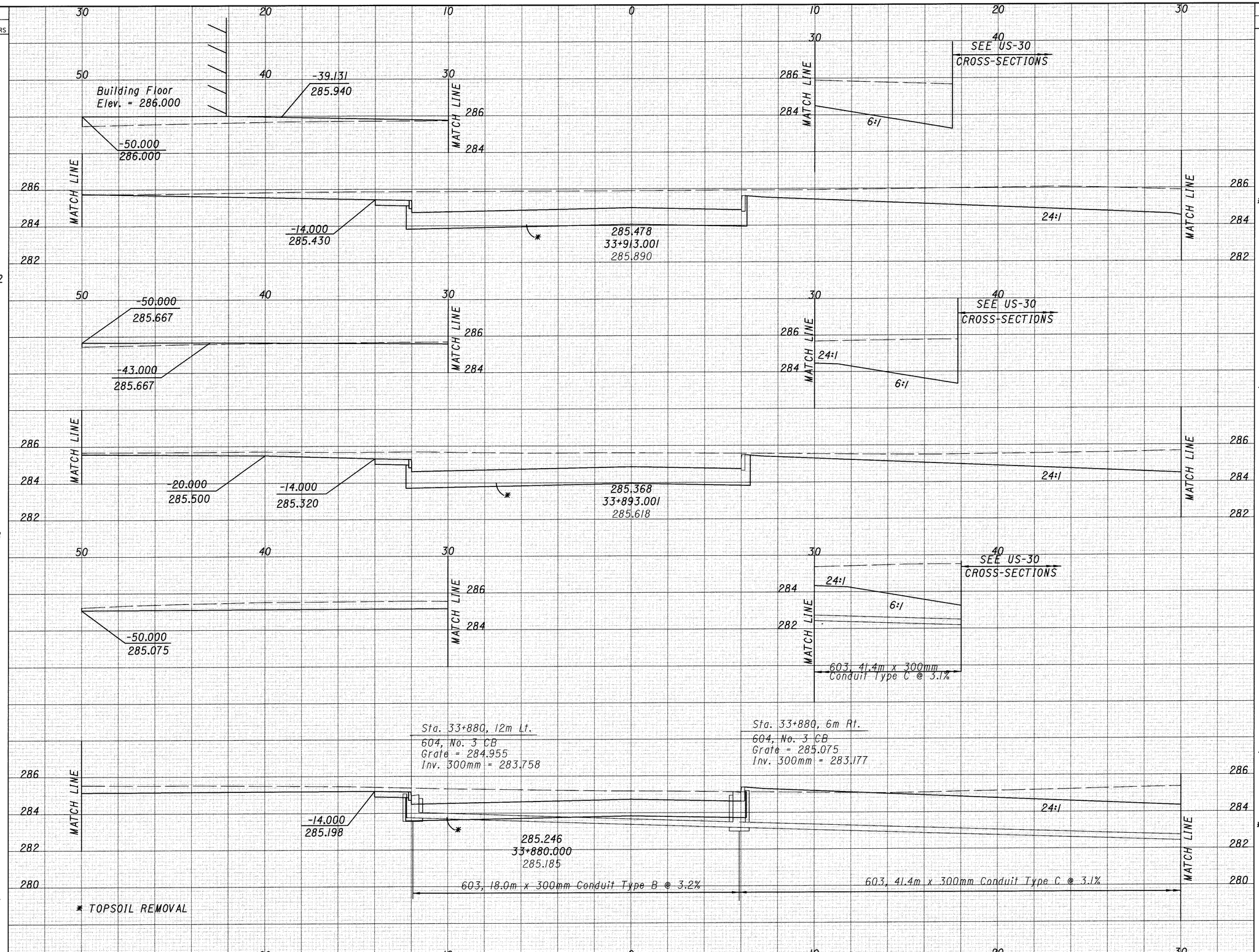
286 284 282 MATCH LINE

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

SEEDING	
END WIDTH	SQ. METERS
69.17	1382
69.03	898
69.11	483



END AREA		VOLUME	
CUT	FILL	CUT	FILL
61.02	20.99		
*15.27			
		1113	379
		*309	
50.32	16.87		
*15.6			
		622	224
		*211	
45.30	17.63		
*16.88			
		271	127
		*112	

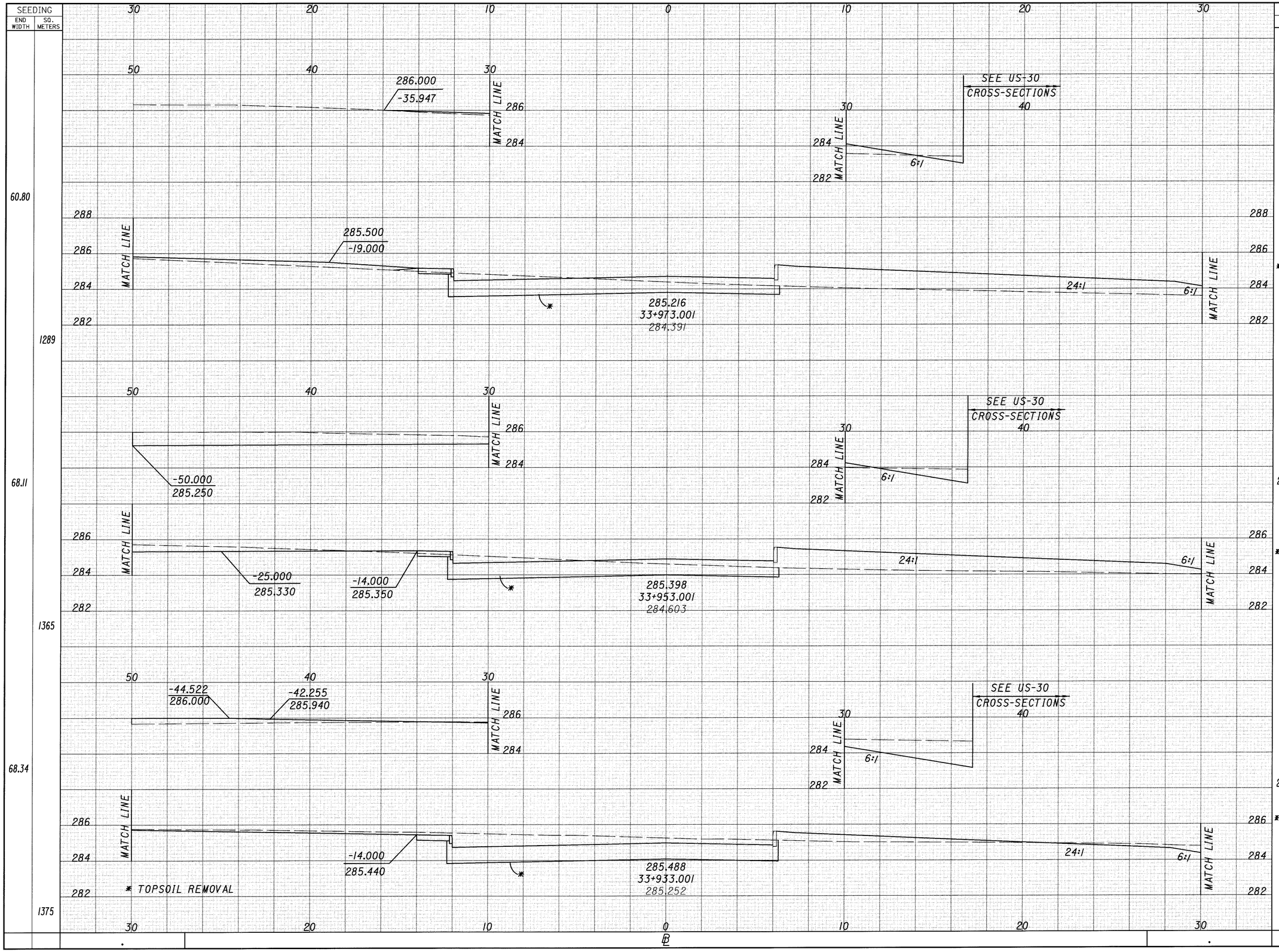
CALCULATED AM | CHECKED REA

RAMP I CROSS SECTIONS
STA 33+880.000 TO STA 33+913.001

WYA / CRA-30-28.009 / 0.000

1118
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
60.80	1289	2.96	42.04	233	770
		*12.99			
				*263	
68.11		20.34	34.92		
	1365	*13.34		408	570
				*286	
68.34		20.49	22.07		
		*15.22		815	431
	1375			*305	



CALCULATED AM

CHECKED REA

RAMP I CROSS SECTIONS

STA 33+933.001 TO STA 33+973.001

WYA/CRA-30-28.009/0.000

1119
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		13.75	11.43		
53.23		*7.03			
				192	465
	997			*171	
		5.41	35.05		
46.48		*10.06			
				145	500
	679			*160	
57.92		16.82	41.81		
		*14.48			
	415			69	293
				*96	

SEE US-30 CROSS-SECTIONS

MATCH LINE

6:1

8:1

34:1

℄ 284.327

284.816
34+013.001
284.749

℄ 284.647

285.016
33+993.001
284.519

Sta. 33+957, 26m Lt.
604, No. 2-2B CB
Grate = 285.000
Inv. 300mm = 284.241

603, 27.0m x 300mm
Conduit Type C @ 2.8%

SEE US 30 CROSS-SECTIONS

603, 35.6m x 375mm
Conduit Type C @ 2.6%

Sta. 33+980, 12m Lt.
604, No. 3 CB
Grate = 284.855
Inv. 300mm = 283.478

Sta. 33+980, 6m Rt.
604, No. 3 CB
Grate = 284.975
Inv. 375mm = 283.036

Grading along storm sewer

285.146
33+980.000
284.398

603, 27.0m x 300mm Conduit Type C @ 2.8%

603, 18.0m x 300mm Conduit Type B @ 2.0%

603, 35.6m x 375mm Conduit TypeC @ 2.6%

* TOPSOIL REMOVAL

℄

CALCULATED AM

CHECKED REA

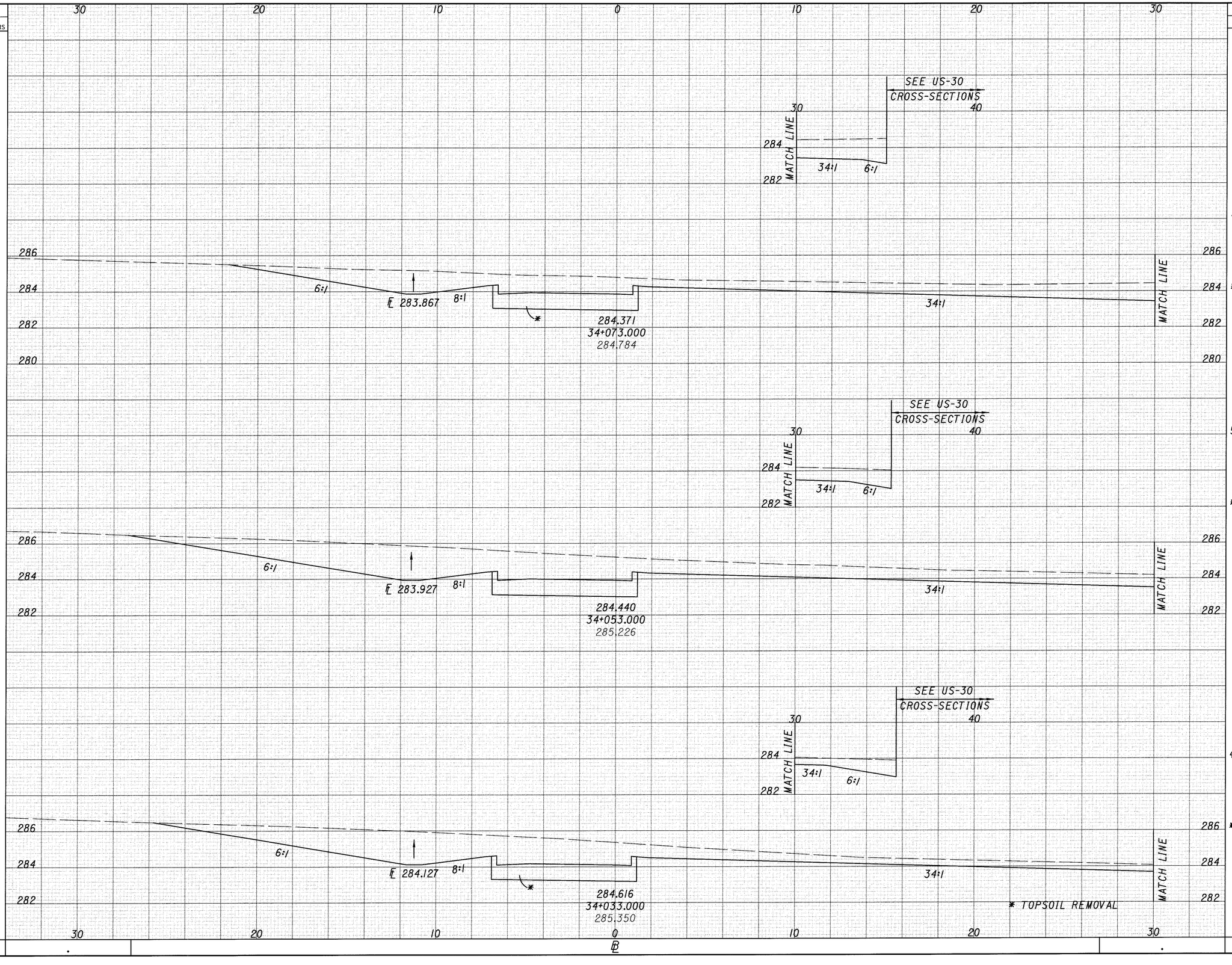
RAMP I CROSS SECTIONS

STA 33+980.000 TO STA 34+013.001

WYA / CRA-30-28.009 / 0.000

1120
2116

SEEDING END WIDTH	SEEDING SQ. METERS
53.76	
	1137
59.92	
	1190
59.04	
	1123



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
42.97	7.05		
*7.05		1022	141
			*141
59.20	7.05		
*7.05		1072	141
		*141	
48.03	7.05		
*7.05		618	185
		*141	

CALCULATED AM

CHECKED REA

RAMP I CROSS SECTIONS

STA 34+033.000 TO STA 34+073.000

WYA/CRA-30-28.009/0.000

1121
2116

SEEDING	
END WIDTH	SQ. METERS
50.16	1012
51.03	1048

END AREA		VOLUME	
CUT	FILL	CUT	FILL
58.76	7.04		
*7.04			
		991	141
		*141	
40.36	7.05		
*7.05			
		833	141
		*141	

CALCULATED AM

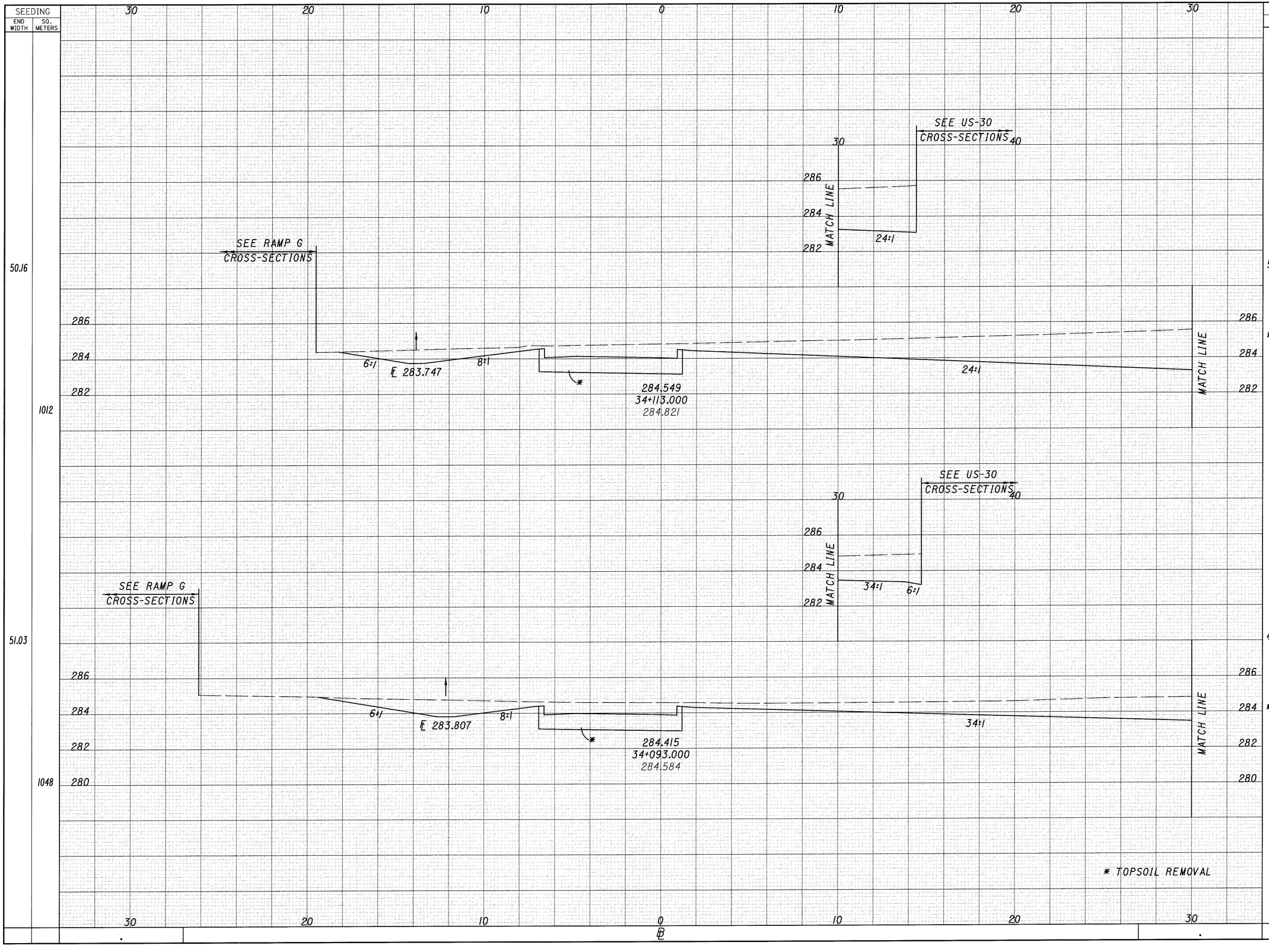
CHECKED REA

RAMP I CROSS SECTIONS

STA 34+093.000 TO STA 34+113.000

WYA/CRA-30-28.009/0.000

1122
2116



SEEDING	
END WIDTH	SQ. METERS
42.01	
	406
54.35	
	683

END AREA		VOLUME	
CUT	FILL	CUT	FILL
59.69	7.54		
*6.99			
		608	69
		*59	
84.57	8.73		
*7.03			
		937	103
		*92	

CALCULATED: AM
CHECKED: REA

RAMP I CROSS SECTIONS

STA 34+126.073 TO STA 34+134.496

WYA / CRA-30-28.009 / 0.000

1123
2116

30 20 10 0 10 20 30

290 288 286 284 282

SEE US-30 CROSS-SECTIONS

286 MATCH LINE 284 282

24:1

SEE RAMP G CROSS-SECTIONS

Back only

8:1

24:1

MATCH LINE

284.680
34+134.496
284.776

*

SEE US-30 CROSS-SECTIONS

286 MATCH LINE 284 282

SEE RAMP G CROSS-SECTIONS

Sta 34+126, 16.954m Lt. I
No. 5 CB
FL Grate= 283.690
INv. 450 mm=282.976

Sta 34+126, 13.702m Rt.
HW = 2.1M
INv. 375mm = 282.853

290 288 286 284 282 280

8.9:1

8:1

1.0% - Ditch Slope

MATCH LINE

284.638
34+126.073
284.781

*

603 30.66m X 375mm Conduit Type B @ 0.64%

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
52.84		60.10	7.05		
		*7.05			
	996			966	146
				*142	
45.17		34.96	7.29		
	1071	*6.95		747	308
				*98	
37.93		22.96	16.59		
		*0.64			

SEE US-30 CROSS-SECTIONS

SEE US-30 CROSS-SECTIONS

SEE US-30 CROSS-SECTIONS

SEE RAMP E CROSS-SECTIONS

SEE RAMP E CROSS-SECTIONS

Ahead only

MATCH LINE

MATCH LINE

MATCH LINE

MATCH LINE

MATCH LINE

MATCH LINE

24:1

24:1

24:1

24:1

8:1

8:1

6:1

6:1

℄ 286.016

℄ 286.545

286.621
34+126.983
286.947

286.846
34+106.666
286.695

287.108
34+080.878
285.915

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

40 30

290 288 286 284

℄

CALCULATED AM

CHECKED REA

RAMP J CROSS SECTIONS

STA 34+080.878 TO STA 34+126.983

WYA/CRA-30-28.009/0.000

1124
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
58.85		49.31	7.05		
		*7.05			
	1211			1286	141
				*141	
62.25		79.29	7.05		
		*7.05			
	1194			1503	141
				*141	
57.20		71.02	7.05		
		*7.05			
	1100			1311	141
				*141	

SEE US-30 CROSS-SECTIONS

40 30 MATCH LINE 286 284

34:1

SEE US-30 CROSS-SECTIONS

40 30 MATCH LINE 286 284

24:1

SEE US-30 CROSS-SECTIONS

40 30 MATCH LINE 286 284

24:1

30 20 10 0 10 20 30

288 286 284 282

MATCH LINE

34:1

285.960
34+186.983
286.420

8:1

℄ 285.416

6:1

24:1

286.180
34+166.983
286.924

8:1

℄ 285.616

6:1

24:1

286.401
34+146.983
286.986

8:1

℄ 285.816

6:1

℄

* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

RAMP J CROSS SECTIONS
STA 34+146.983 TO STA 34+186.983

WYA / CRA-30-28.009 / 0.000

1125
2116

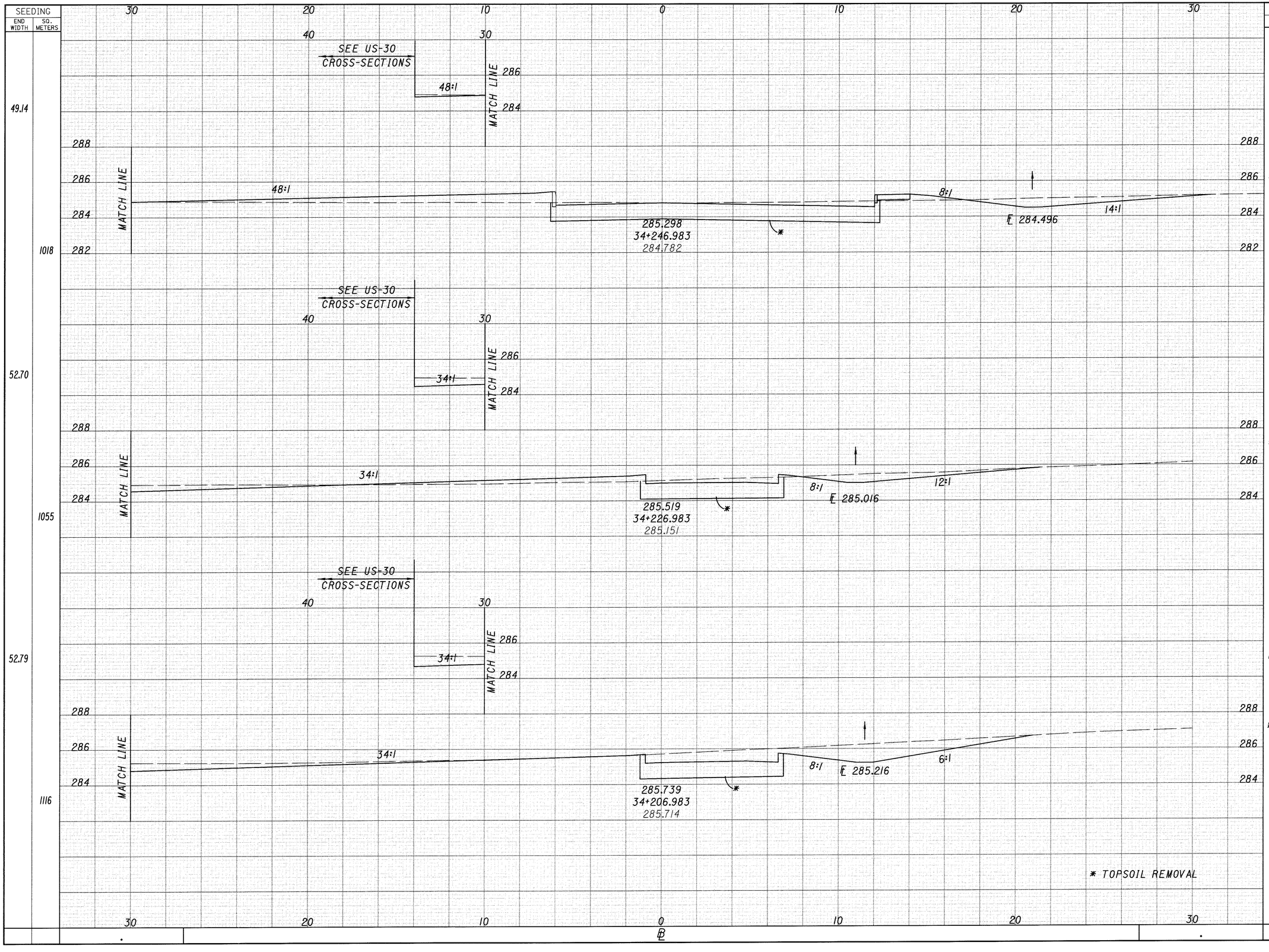
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
49.14	1018	7.94	22.55	170	327
		*15.2		*221	
52.70		9.09	10.15		
		*6.91			
	1055			281	173
				*140	
52.79		19.05	7.10		
		*7.04			
	1116			684	142
				*141	

CALCULATED AM
CHECKED REA

RAMP J CROSS SECTIONS
STA 34+206.983 TO STA 34+246.983

WYA/CRA-30-28.009/0.000

1126
2116



SEEDING	
END WIDTH	SQ. METERS
64.36	
	1287
64.37	
	1296
65.19	
	1143

END AREA	
CUT	FILL
116.09	22.36
*15.27	
54.88	15.89
*15.27	
26.12	16.73
*15.25	

VOLUME	
CUT	FILL
1710	383
*305	
810	326
*305	
341	393
*305	

CALCULATED AM

CHECKED REA

RAMP J CROSS SECTIONS

STA 34+266.983 TO STA 34+306.983

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1127
2116

SEEDING	
END WIDTH	SQ. METERS
56.29	
	1216
65.33	
	1297
64.37	
	1287

END AREA		VOLUME	
CUT	FILL	CUT	FILL
26.90	19.69		
*15.26			
		1409	409
		*305	
114.00	21.25		
*15.27			
		2927	407
		*305	
178.71	19.47		
*15.27			
		2948	418
		*305	

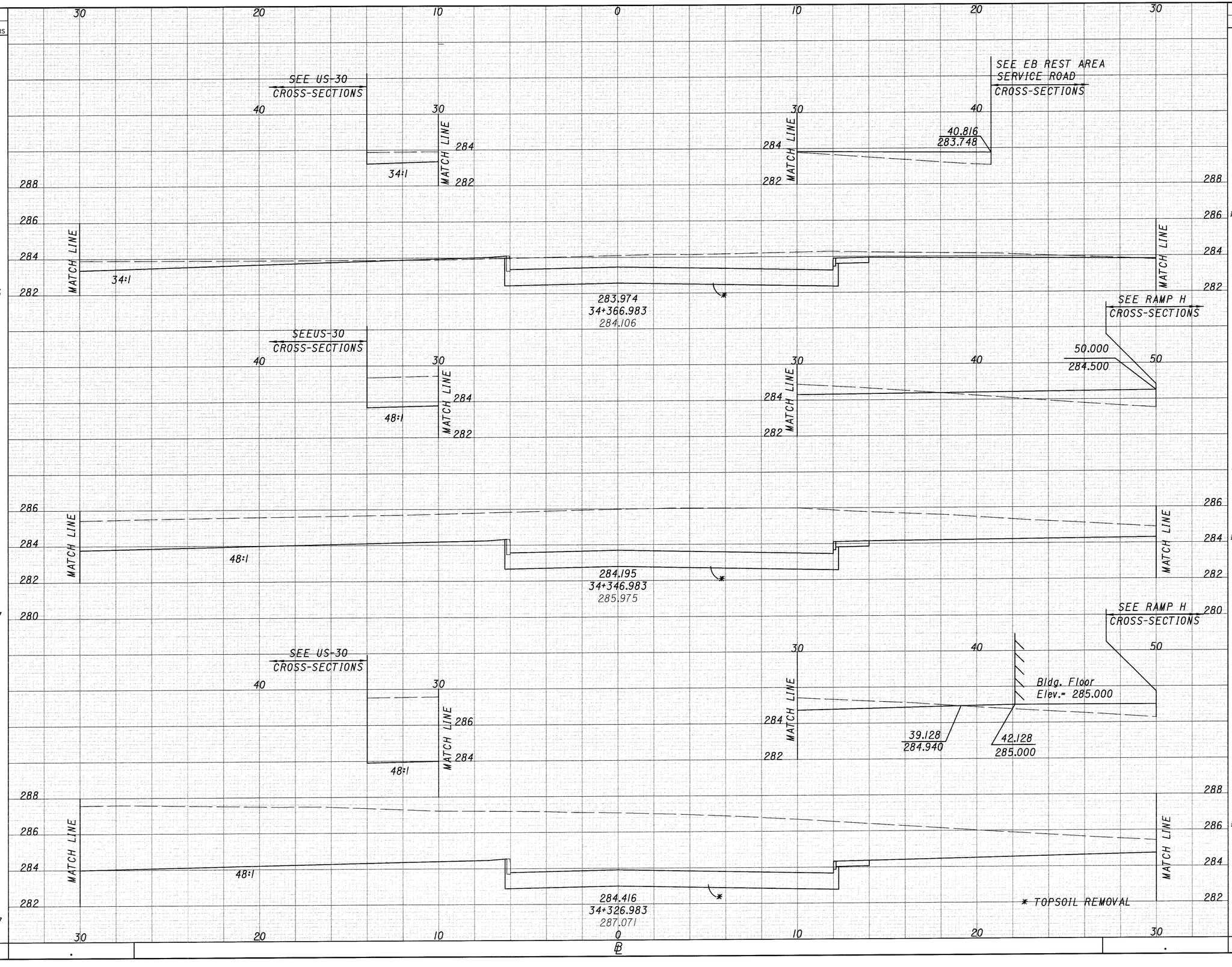
CALCULATED AM

CHECKED REA

RAMP J CROSS SECTIONS STA 34+326.983 TO STA 34+366.983

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1128
2116



SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
38.93	507	4.35	17.88	71	205
		*4.93		*105	
49.57	452	8.06	17.90	149	160
		*13.36		*122	

30 20 10 0 10 20 30

SEE US-30 CROSS-SECTIONS

40 30

MATCH LINE 284 282

34:1

288 286 284 282

MATCH LINE

34:1

283.754
34+386.983
282.937

SEE EB REST AREA SERVICE ROAD CROSS-SECTIONS

11.000
283.638

288 286 284 282

SEE US-30 CROSS-SECTIONS

40 30

MATCH LINE 284 282

603, 48.7m x 375mm Conduit Type C @ 0.70%

Sta. 34+375.042, 6m Lt.
604, No. 3 CB
Grate = 283.598
Inv. 300mm = 282.502
Inv. 375mm = 282.427

Sta. 34+376.469, 12m Rt.
604, No. 3 CB
Grate = 283.708
Inv. 300mm = 282.593

SEE EB REST AREA SERVICE ROAD CROSS-SECTIONS

286 284 282 280

MATCH LINE

47:1

603, 48.7m x 375mm Conduit Type C @ 0.70%

603, 18.1m x 300mm Conduit Type B @ 0.50%

283.880
34+375.520
283.550

26.000
283.500

30.250
283.398

286 284 282 280

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

CALCULATED AM

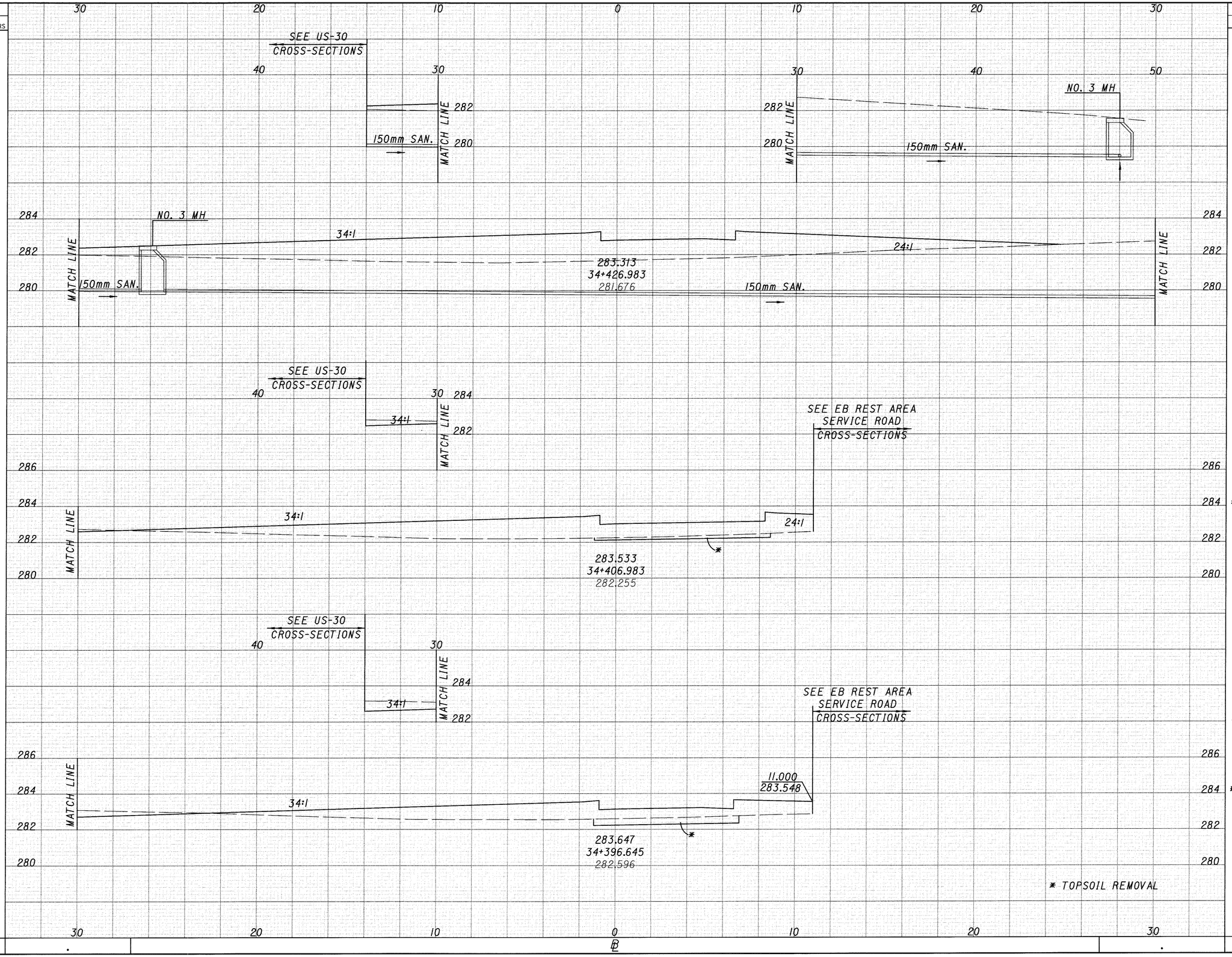
CHECKED REA

RAMP J CROSS SECTIONS
STA 34+375.520 TO STA 34+386.983

WYA/CRA-30-28.009/0.000

1129
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
54.28	910	0.00	53.27	11	824
		*0			
36.75	389	1.09	29.10	*15	
		*1.54			
38.46	374	3.26	23.01	22	269
		*3.01		*24	
				37	198
				*38	



CALCULATED AM

CHECKED REA

RAMP J CROSS SECTIONS

STA 34+396.645 TO STA 34+426.983

WYA / CRA-30-28.009 / 0.000

1130
2116

SEEDING	
END WIDTH	SQ. METERS
87.88	
	1084
79.47	
	1001
63.38	
	967

END AREA		VOLUME	
CUT	FILL	CUT	FILL
110.75			
		1295	
89.23			
		1135	
72.80			
		1036	

CALCULATED AM
CHECKED REA

RAMP J CROSS SECTIONS

STA 34+443.417 TO STA 34+470.382

WYA / CRA-30-28.009 / 0.000

1131
2116

SEEDING	
END WIDTH	SQ. METERS
123.62	
	1007
110.52	
	1049
98.56	
	1076

END AREA		VOLUME	
CUT	FILL	CUT	FILL
124.23			
		1105	
132.65			
		1295	
125.39			
		1363	

CALCULATED AM

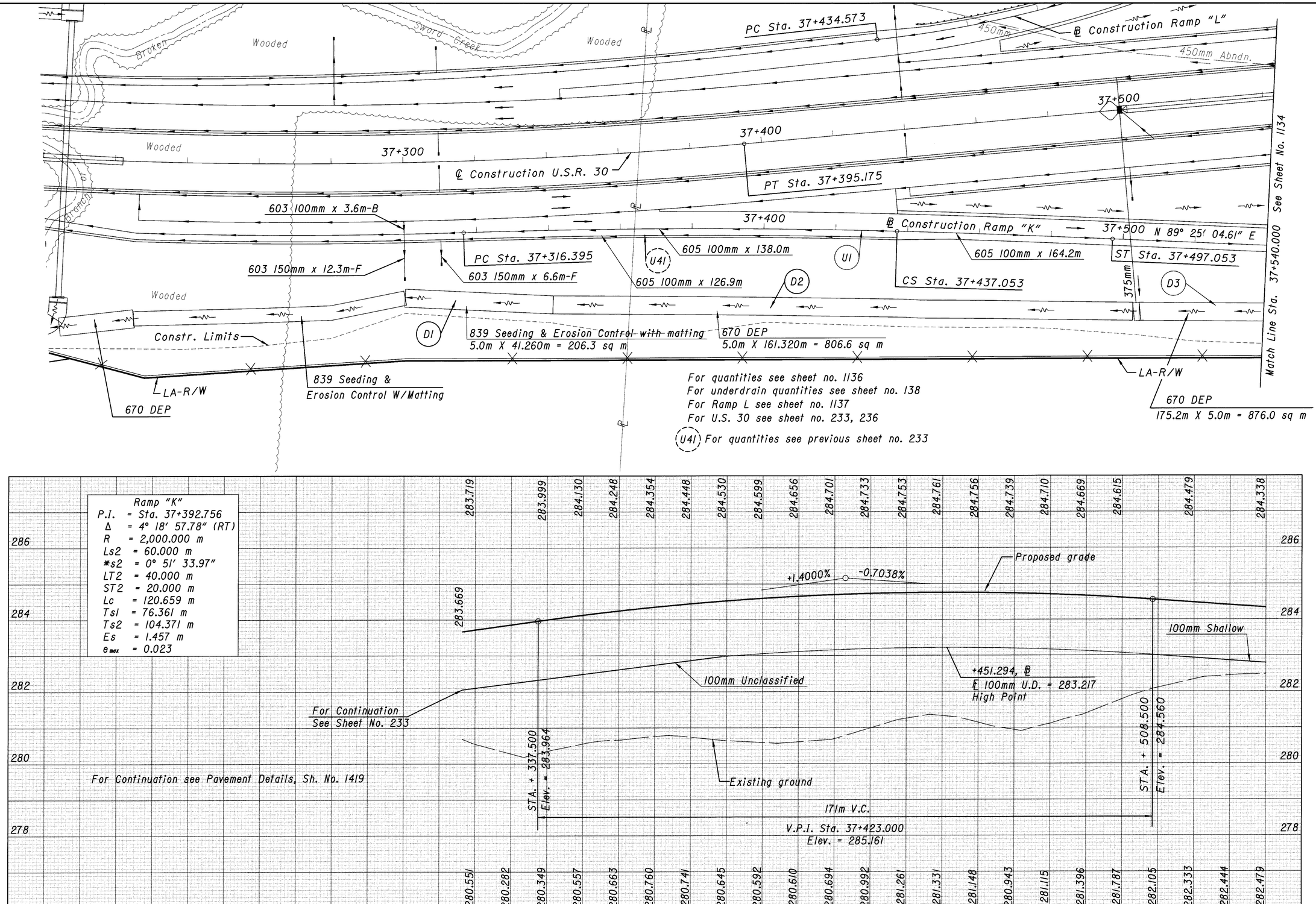
CHECKED REA

RAMP J CROSS SECTIONS

STA 34+481.925 TO STA 34+500.566

WYA / CRA-30-28.009 / 0.000

1132
2116



HORIZONTAL SCALE IN METERS

0 10 20

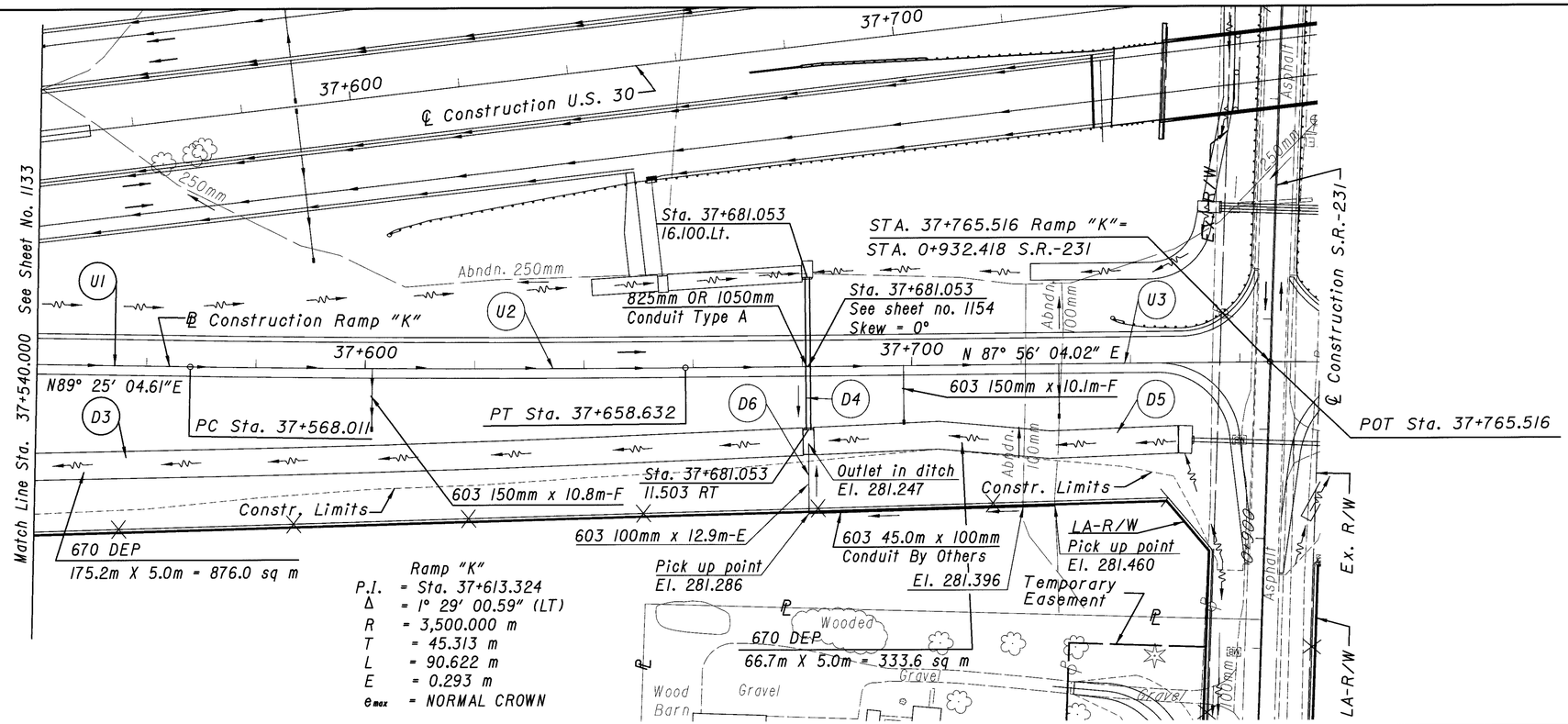
CALCULATED JGB

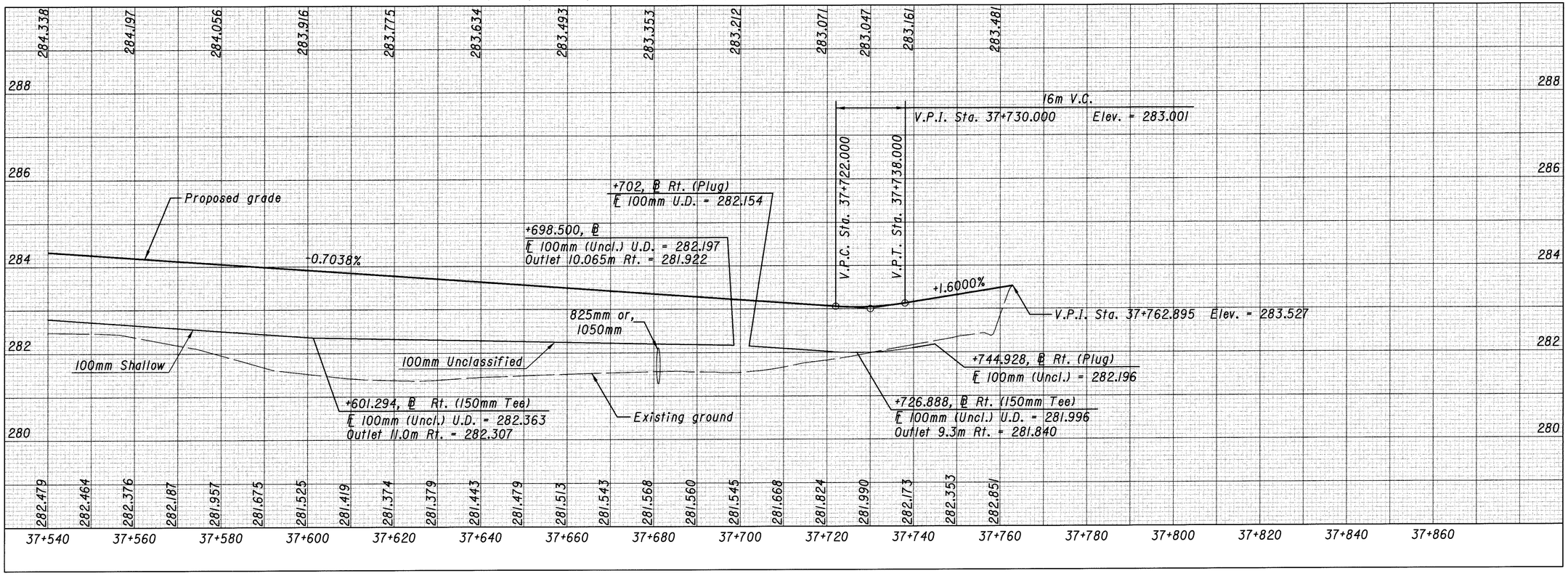
CHECKED REA

PLAN AND PROFILE - RAMP K
STA. 37+316.395 TO STA. 37+540

WYA/CRA-30-28.009/0.000

1133
2116





N

0 10 20 HORIZONTAL SCALE IN METERS

CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - RAMP K
STA. 37+540 TO STA. 37+765.516

WYA/CRA-30-28.009/0.000

1134
2116

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (CU M)	601 RIPRAP USING 150 MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)		603 100 MM CONDUIT, TYPE E (METER)					603 825 MM CONDUIT, TYPE A, 706.02, OR 1050 MM, OR 707.09 (13MM CORR.)OR 707.21 (METER)						670 DITCH EROSION PROTECTION (SQ M)		839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)																FOR INFORMATION ONLY (EACH) 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND		MASONRY COLLAR
D1	1133	37+300.00 (US-30) TO 37+341.01 "K"	RT																				206.3																				
D2	1133	37+341.01 TO 37+503.57	RT																		806.6																						
D3	1133	37+505.37 TO 37+680.04	RT																		876.0																						
D4	1134	37+681.053	LT & RT	4.5	6.0	1.66							27.6																														
D5	1134	37+682.06 TO 37+748.66	RT																		333.6																						
D6	1134	37+681.05	RT					12.9																																			

Ramp "L"
P.I. = Sta. 37+489.544
Δ = 18° 01′ 55.16″ (LT)
R = 330.000 m
Ls2 = 80.000 m
*s2 = 6° 56′ 41.79″
LT2 = 53.374 m
ST2 = 26.704 m
Lc = 63.857 m
Ts1 = 54.970 m
Ts2 = 89.861 m
Es = 4.547 m
e max = 0.08

Ramp "L"
P.I. = Sta. 37+672.111
Δ = 26° 41′ 45.16″ (RT)
R = 230.000 m
Ls1 = 80.000 m
Ls2 = 60.000 m
*s1 = 9° 57′ 52.14″
*s2 = 7° 28′ 24.11″
LT1 = 53.418 m
LT2 = 40.036 m
ST1 = 26.744 m
ST2 = 20.032 m
Lc = 37.164 m
Ts1 = 93.680 m
Ts2 = 85.838 m
Es = 7.318 m
e max = 0.08

Wooded
670 DEP
LA-R/W
Constr. Limits
839 Seeding & Erosion Control, W/ Matting
Branch of Broken
Swamp
Woven Wire/Barbed Wire
℄ Construction Service RD. No. 6
POT Sta. 0+450.965
POT Sta. 0+563.181
R/W
0+500
0+600
Constr. Limits
Wooded
Wooded
D1
See Sheet No. 1138
37+620.000
March Line Sta.
670 DEP
LA-R/W
670 DEP
40.014m X 7.0m = 280.1 sq m
D2
670 DEP
373.033m X 6.0m = 2238.2 sq m
250mm Abndn.
Wooded
PC Sta. 37+434.573
603 150mm x 8.2m-F
603 150mm x 9.5m-B
Woven Wire/Barbed Wire
R1
CS Sta. 37+498.430
Type B Anchor Assembly
37+500
SRS Sta. 37+578.430
37+535.847
End GR 6.3m Lt.
U2
37+600
℄ Construction Ramp "L"
605 100mm x 177.3m
Guardrail, Type 5
605 100mm x 138.4m
U1
250mm
670 DEP
100mm Abndn.
PT Sta. 37+395.175
37+400
℄ Construction U.S.R. 30
37+500
CS Sta. 37+437.053
37+400
℄ Construction Ramp "K"
250mm Abndn.
37+600
670 DEP
Constr. Limits

284.517 284.783 284.912 285.030 285.136 285.232 285.317 285.392 285.455 285.507 285.549 285.579 285.599 285.608 285.605 285.592 285.568 285.533

For quantities see sheet no. 1139-1140
For underdrain quantities see sheet no. 138
For U.S. 30 see sheet no. 236
For Service Rd. No. 6 see sheet no. 1212-1213

Proposed grade
-1.3955%
V.P.I. Sta. 37+434.573 Elev. = 284.445
+1.3303%
+440, ℄ Lt. (150mm Cross)
℄ 100mm U.D. = 282.821
Outlet 31.1m Lt. = 282.802
For Continuation see Pavement Details, Sh. No. 1420
V.P.C. Sta. 37+461.000
100mm Shallow
37578.43, ℄ Rt. (Plug)
℄ 100mm U.D. = 284.063
37578.43, 4.8m Rt. (Plug)
℄ 100mm U.D. = 284.063
+583.010,
℄ 100mm U.D. = 284.064
For Continuation See Sheet No. 236
Existing ground
250m V.C.
V.P.I. Sta. 37+586.000 Elev. = 286.459

288 286 284 282 280 278

279.839 279.779 279.801 279.821 279.817 279.837 280.029 280.355 280.876 281.292 281.651 281.504 281.361 281.382 281.379 281.527 281.696 281.841 281.902 281.890

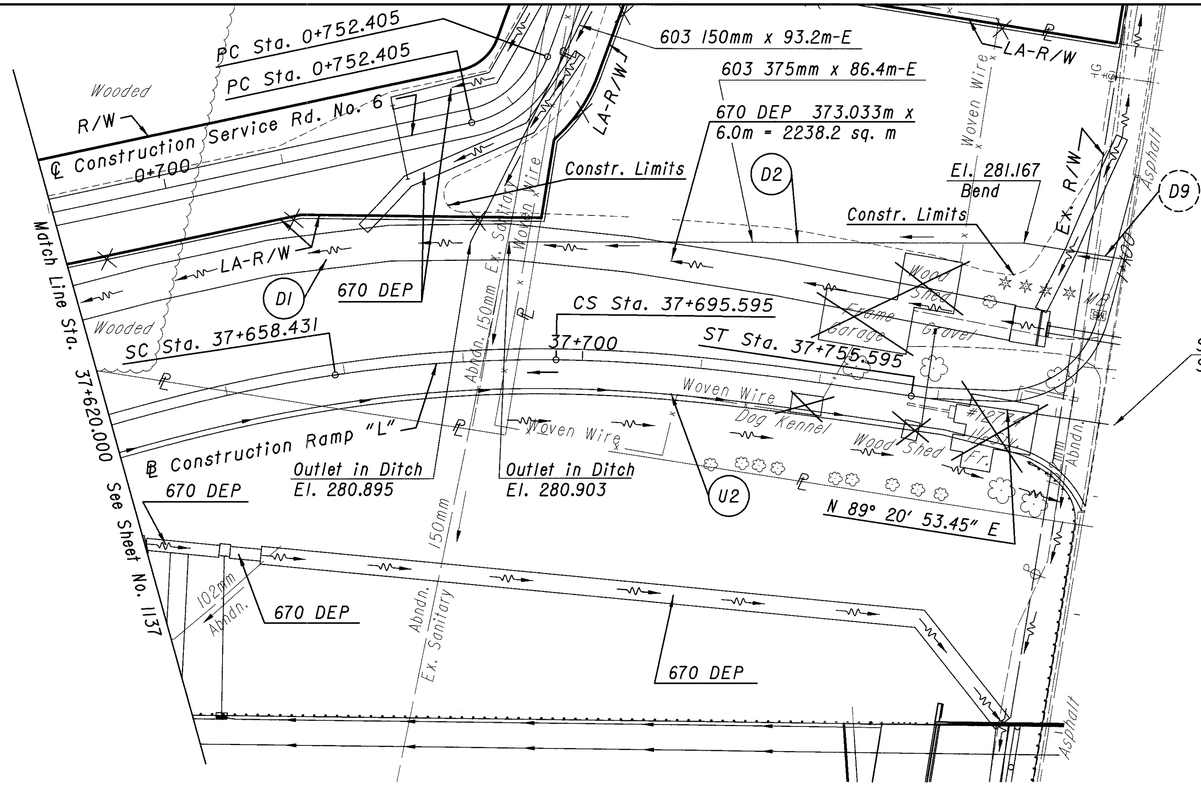
37+420 37+440 37+460 37+480 37+500 37+520 37+540 37+560 37+580 37+600 37+620

HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - RAMP L
STA. 37+434.573 TO STA. 37+620

WYA/CRA-30-28.009/0.000

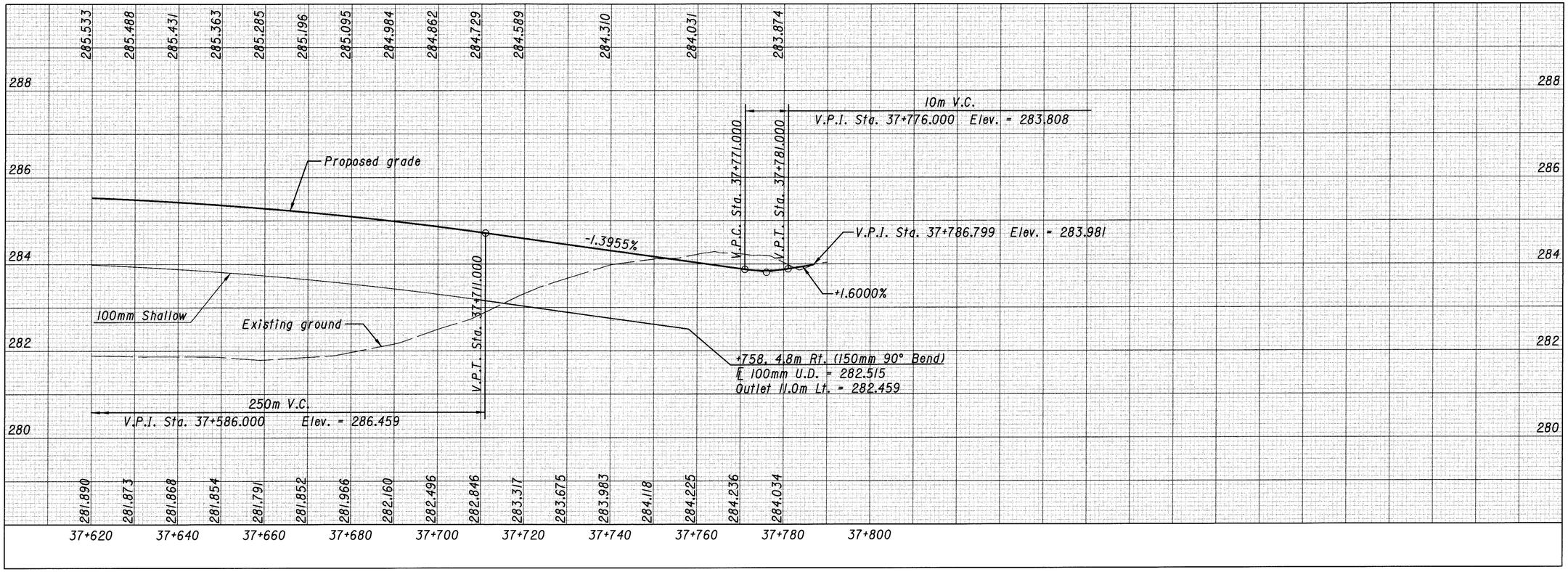
1137
2116



Ramp "L"
P.I. = Sta. 37+672.111
Δ = 26° 41′ 45.16″ (RT)
R = 230.000 m
Ls1 = 80.000 m
Ls2 = 60.000 m
*s1 = 9° 57′ 52.14″
*s2 = 7° 28′ 24.11″
LT1 = 53.418 m
LT2 = 40.036 m
ST1 = 26.744 m
ST2 = 20.032 m
Lc = 37.164 m
Ts1 = 93.680 m
Ts2 = 85.838 m
Es = 7.318 m
e_{max} = 0.08m

(D9) For quantities see sheet no. 828

For quantities see sheet no. 1139-1140
For underdrain quantities see sheet no. 138
For S.R. 231 see sheet no. 827-828
For Service Rd. No. 6 see sheet no. 1213



HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - RAMP L
STA. 37+620 TO STA. 37+789.991

WYA/CRA-30-28.009/0.000

1138
2116

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		RAMP L																															
RI	1137	37+146.128 ML TO 37+535.847 L	LT														377.190					1		1									
TOTALS CARRIED TO SUB-SUMMARY																	377.190					1		1								

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

1139
2116

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

CALCULATED AM
CHECKED REA

REF NO.	SHEET NO.	STATION	SIDE	603 375 MM CONDUIT, TYPE E	670 DITCH EROSION PROTECTION	FOR INFORMATION ONLY 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
				METER	SQ M	EACH		
D1	1137	37+400.50 TO 37+770.60	LT		2238.2			
D2	1138	37+688.03 TO 37+770.53	LT	86.4				
							TOTALS	
TOTALS CARRIED TO SUB-SUMMARY				86.4	2238.2			

Ramp "M"

P.I. = Sta. 38+153.724
Δ = 7° 55′ 44.09″ (LT)
R = 1,250.000 m
Lsl = 60.000 m
*sl = 1° 22′ 30.36″
LTl = 40.001 m
STl = 20.001 m
Lc = 142.982 m
Tsl = 115.767 m
Ts2 = 87.499 m
Es = 3.059 m
e max = 0.035m

For quantities see sheet no. 1146
For underdrain quantities see sheet no. 138
For U.S. 30 see sheet no. 237-238, 241-242
For S.R. 231 see sheet no. 827-828
For Service Rd. No. 11 see sheet no. 1216
For Profile see sheet no. 1142
For Ramp N see sheet no. 1147-1148

(R2) For Quantities see Sheet No. 241

Constr. Limits LA-R/W
Ex. R/W
Asphalt
Ex. R/W
LA-R/W
Woven Wire w/ 1 Barbed Wire
Gas Regulator Facility
Gravel
Woven Wire
Pick up point El. 281.300
603 148.8m x 375mm Conduit By Others
603 148.8m x 375mm Conduit By others
Pick up point El. 282.251
670 DEP
670 DEP 45.889m X 9.0m = 413.0 sq m
670 DEP 60.414m X 7.0m = 422.9 sq m
670 DEP 40.363m X 8.0m = 322.9 sq m
670 DEP 179.02m X 5.0m = 895.1 sq m
LA-R/W
Constr. Limits
D1
D2
D3
D4
380mm
190mm
100mm
POT Sta. 37+778.750
603 150mm x 11.0m-F
603 150mm x 15.2m-F
603 150mm x 8.0m-F
See Sheet No. 1143
U1
U2
R2
Type T Anchor Assembly
37+924.332 Begin GR
TS Sta. 38+037.957
SC Sta. 38+097.957
37+800
37+900
38+000
38+100.000
N 89° 48′ 24.11″ E
605 100mm x 165.8m
℄ Construction Ramp "M"
605 100mm x 135.3m
Abndn. (Typ.)
℄ Construction Ramp "L"
STA. 37+779.052 Ramp "M"=
STA. 1+072.264 S.R.-231
STA. 37+789.991 Ramp "L"
POT Sta. 37+789.991
839 Seeding & Erosion Control, W/ Matting
670 DEP
100mm
200mm
450mm
℄ S.R.-231
℄ Construction U.S.30
Match Line Sta. 38+100.000
1+000
STA. 37+771.504 U.S. 30=
STA. 1+000.000 S.R.-231
℄ Construction Ramp "N"
SC Sta. 38+046.756
SRS Sta. 37+966.756
CS Sta. 37+886.756
Outlet in Ditch El. 283.572
Pick up point El. 283.612
Constr. Limits
LA-R/W
Ex. R/W

HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED JGB
CHECKED REA

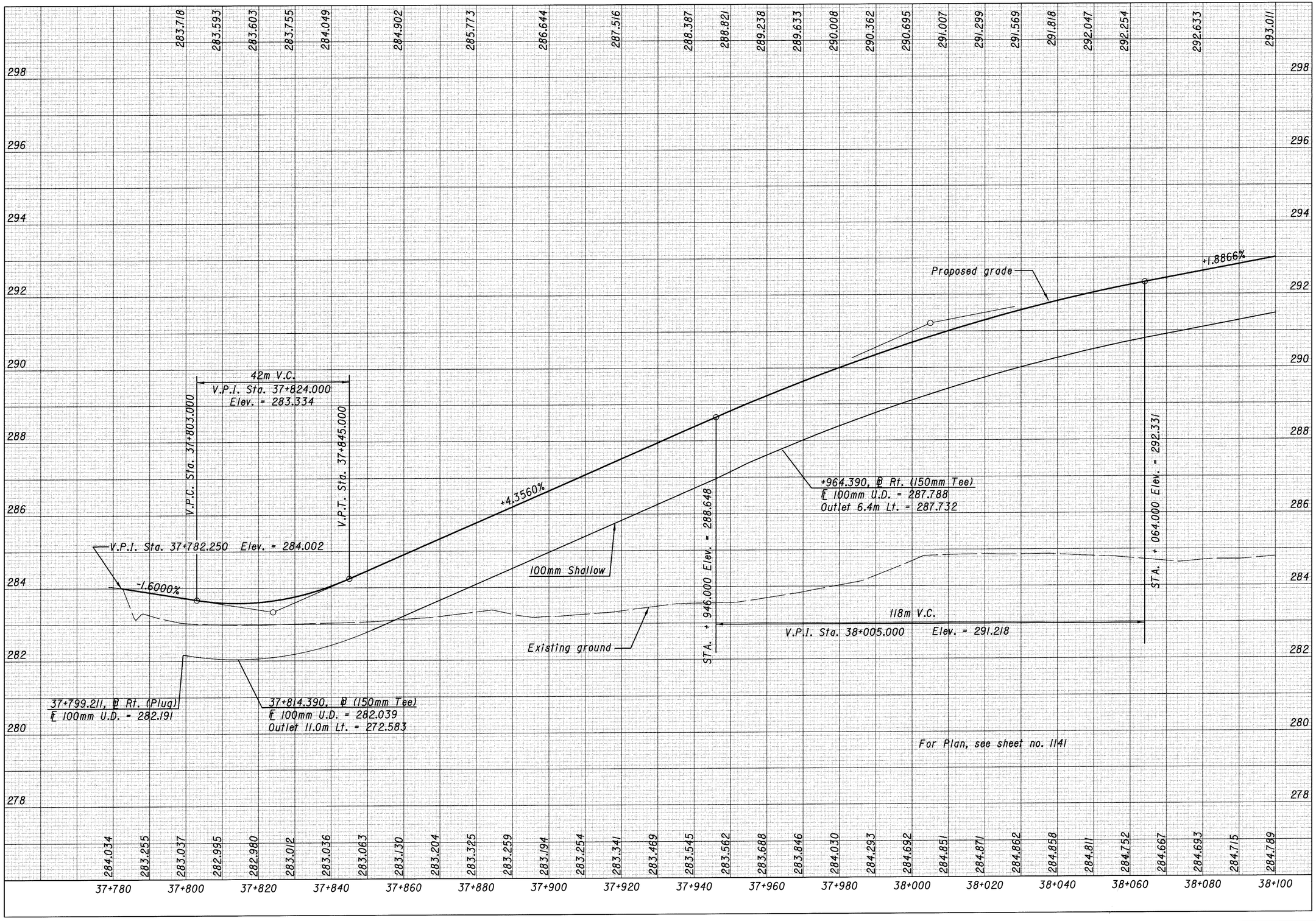
PLAN - RAMP M
STA. 37+778.750 TO STA. 38+100

WYA / CRA-30-28.009 / 0.000

1141
2116

CALCULATED JGB
CHECKED REA

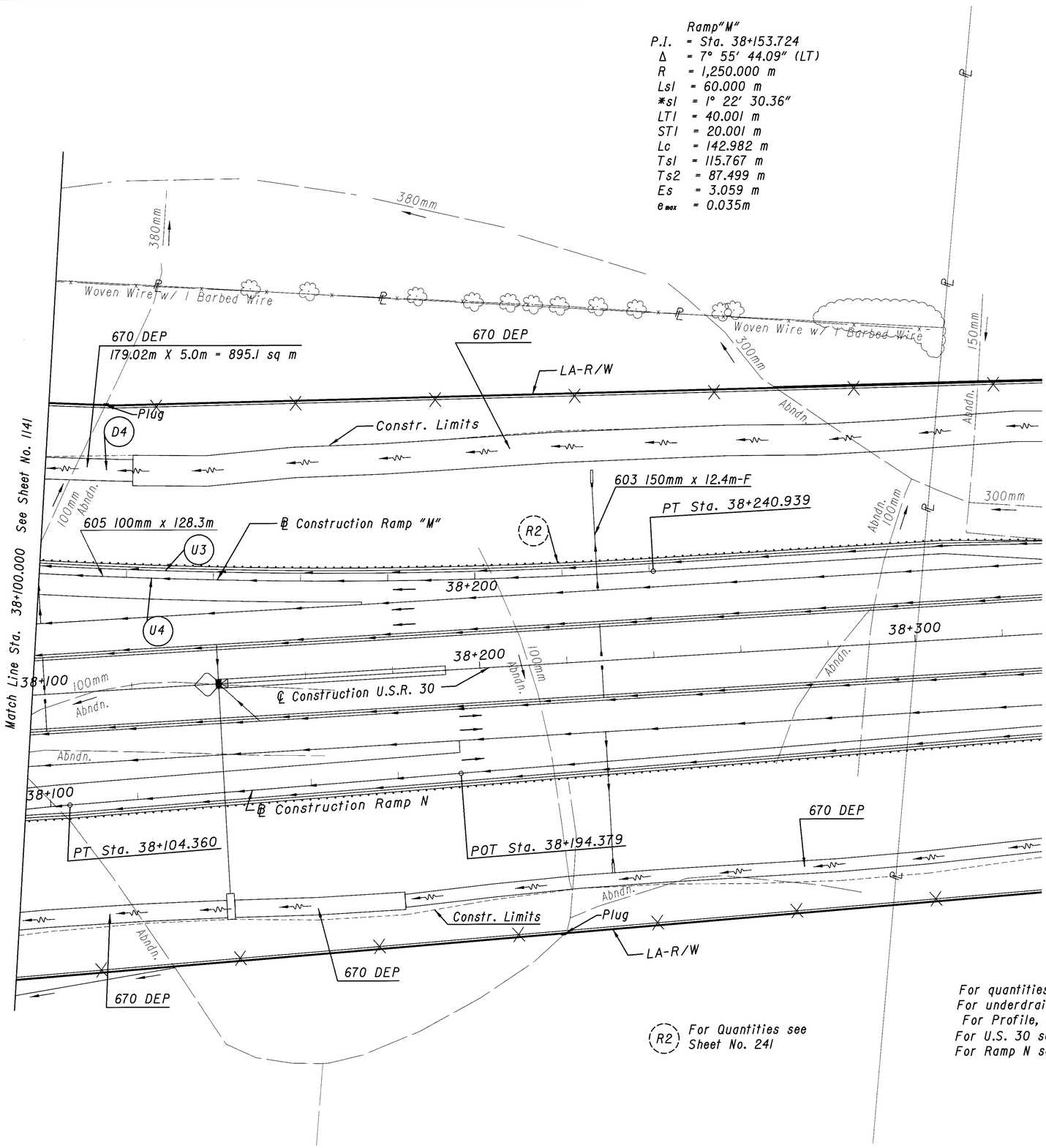
PROFILE - RAMP M
STA. 37+778.750 TO STA. 38+100



WYA / CRA-30-28.009 / 0.000

1142
2116

Ramp "M"
P.I. = Sta. 38+153.724
Δ = 7° 55' 44.09" (LT)
R = 1,250.000 m
Lsl = 60.000 m
*sl = 1° 22' 30.36"
LTl = 40.001 m
STl = 20.001 m
Lc = 142.982 m
Tsl = 115.767 m
Ts2 = 87.499 m
Es = 3.059 m
e_{max} = 0.035m



(R2) For Quantities see Sheet No. 241

For quantities see sheet no. 1146
For underdrain quantities see sheet no. 138
For Profile, see sheet no. 1144
For U.S. 30 see sheet no. 241-242
For Ramp N see sheet no. 1148

N

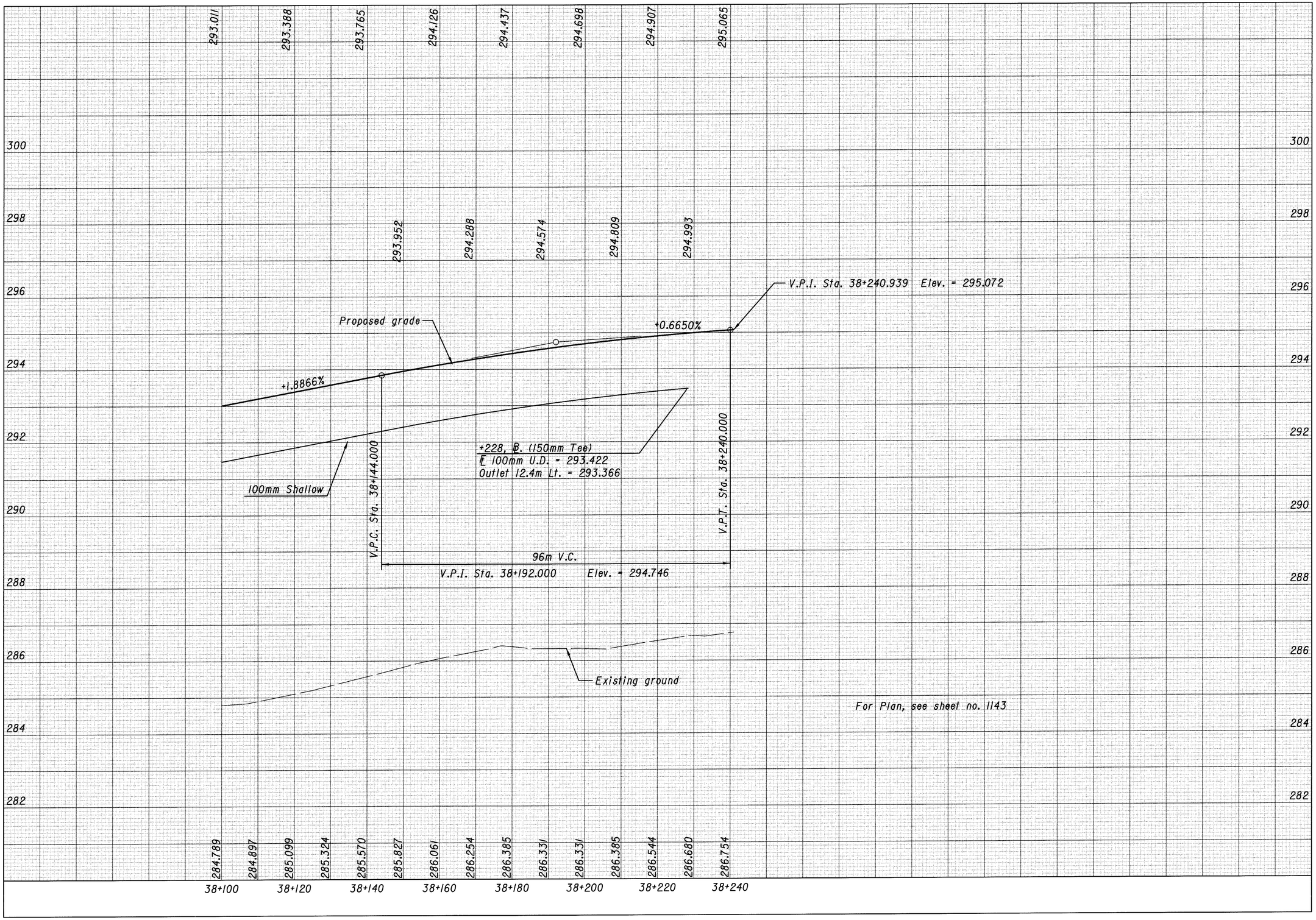
0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED JGB
CHECKED REA

PLAN - RAMP M
STA. 38+100 TO STA. 38+240.939

WYA/CRA-30-28.009/0.000

1143
2116



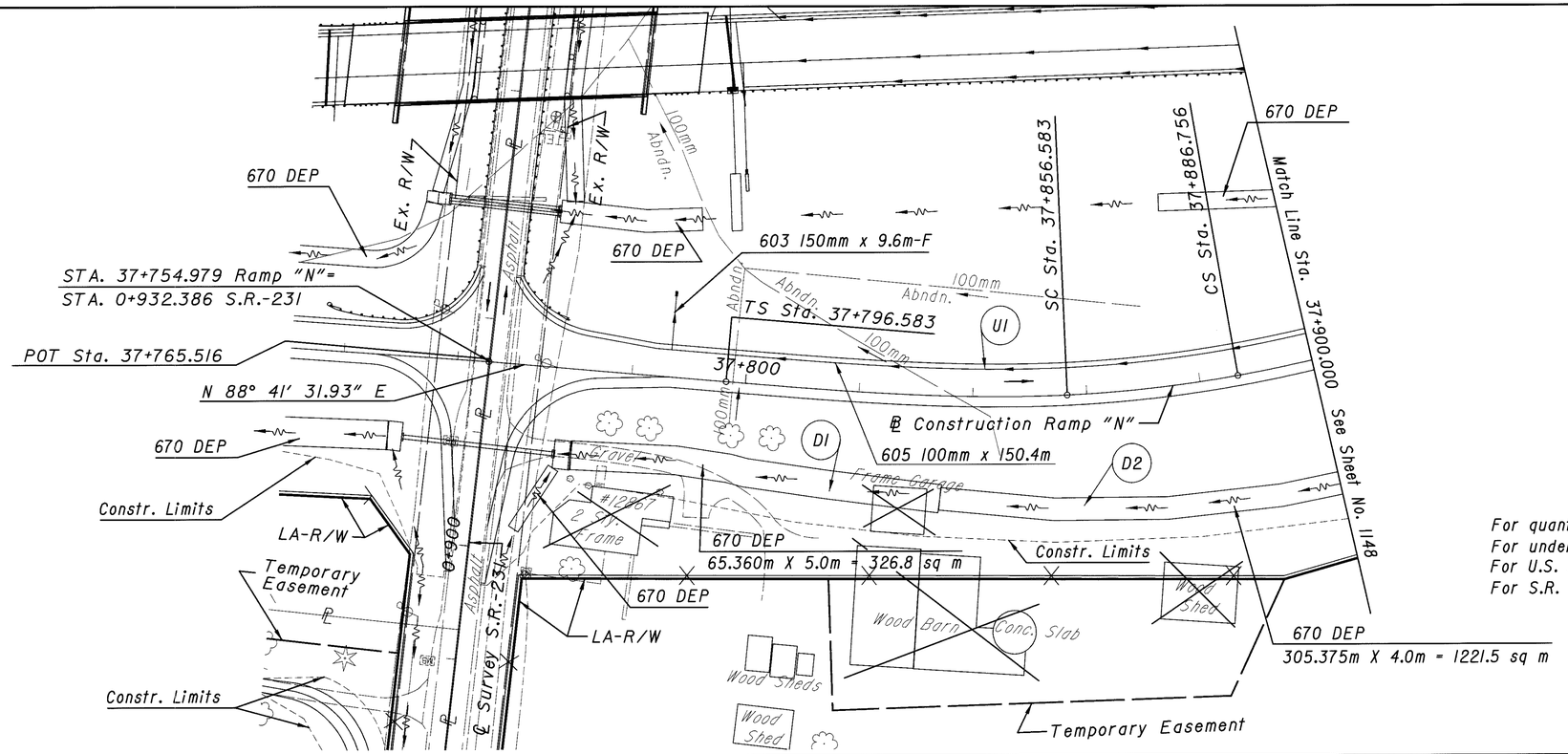
CALCULATED JGB
CHECKED REA

PROFILE - RAMP M
STA. 38+100 TO STA. 38+240.939

WYA/CRA-30-28.009/0.000

1144
2116

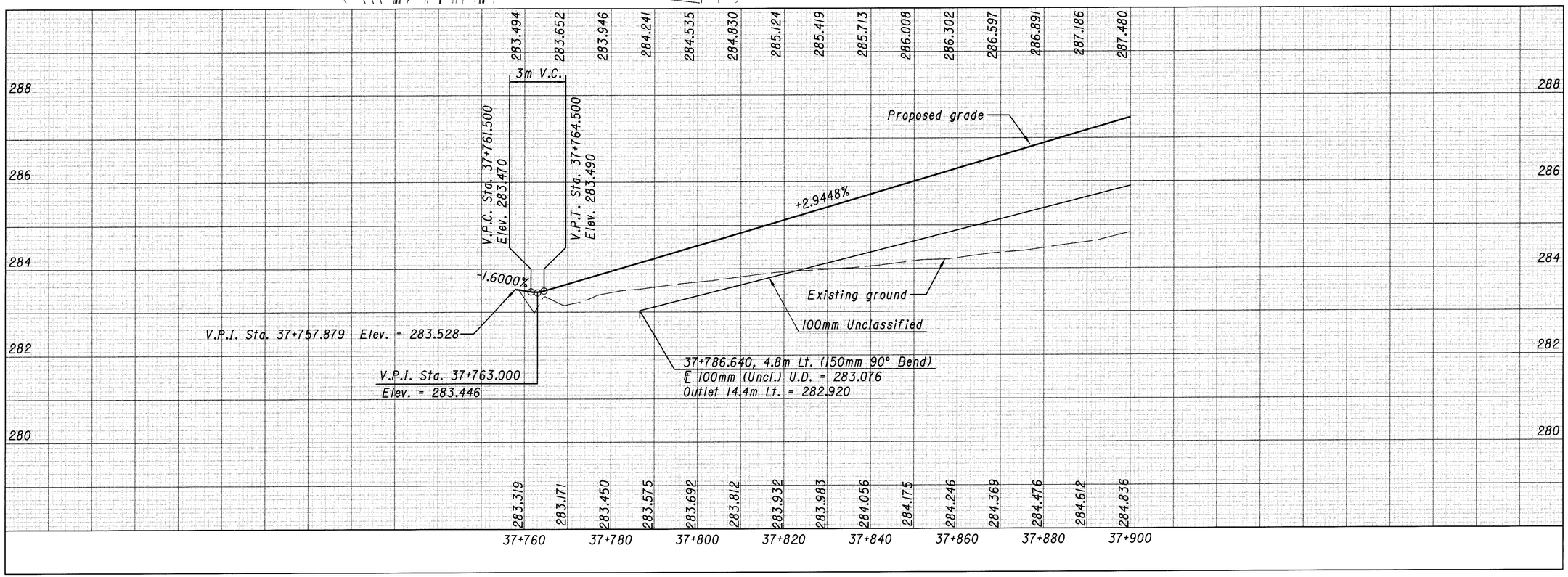
REF NO.	SHEET NO.	STATION	SIDE	670 DITCH EROSION PROTECTION SQ M	FOR INFORMATION ONLY 300 MM X 300 MM 22.5° BEND EACH	375 MM X 375 MM 22.5° BEND EACH	MASONRY COLLAR EACH
D1	1141	37+793.48 TO 37+840.58	LT	413.0			
D2	1141	37+840.58 TO 37+900.71	LT	422.9			
D3	1141	37+900.71 TO 37+940.71	LT	322.9			
D4	1141	37+940.71 TO 38+120.50	LT	895.1			



Ramp N

P.I. = Sta. 37+878.804
Δ = 24° 57' 15.52" (LT)
R = 230.000 m
Ls1 = 60.000 m
Ls2 = 80.000 m
*s1 = 7° 28' 24.11"
*s2 = 9° 57' 52.14"
LT1 = 40.036 m
LT2 = 53.418 m
ST1 = 20.032 m
ST2 = 26.744 m
Lc = 30.173 m
Ts1 = 82.221 m
Ts2 = 89.909 m
Es = 6.493 m
e_{max} = 0.08

For quantities see sheet no. 1150
For underdrain quantities see sheet no. 138
For U.S. 30 see sheet no. 237-238
For S.R. 231 see sheet no. 827-828



HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

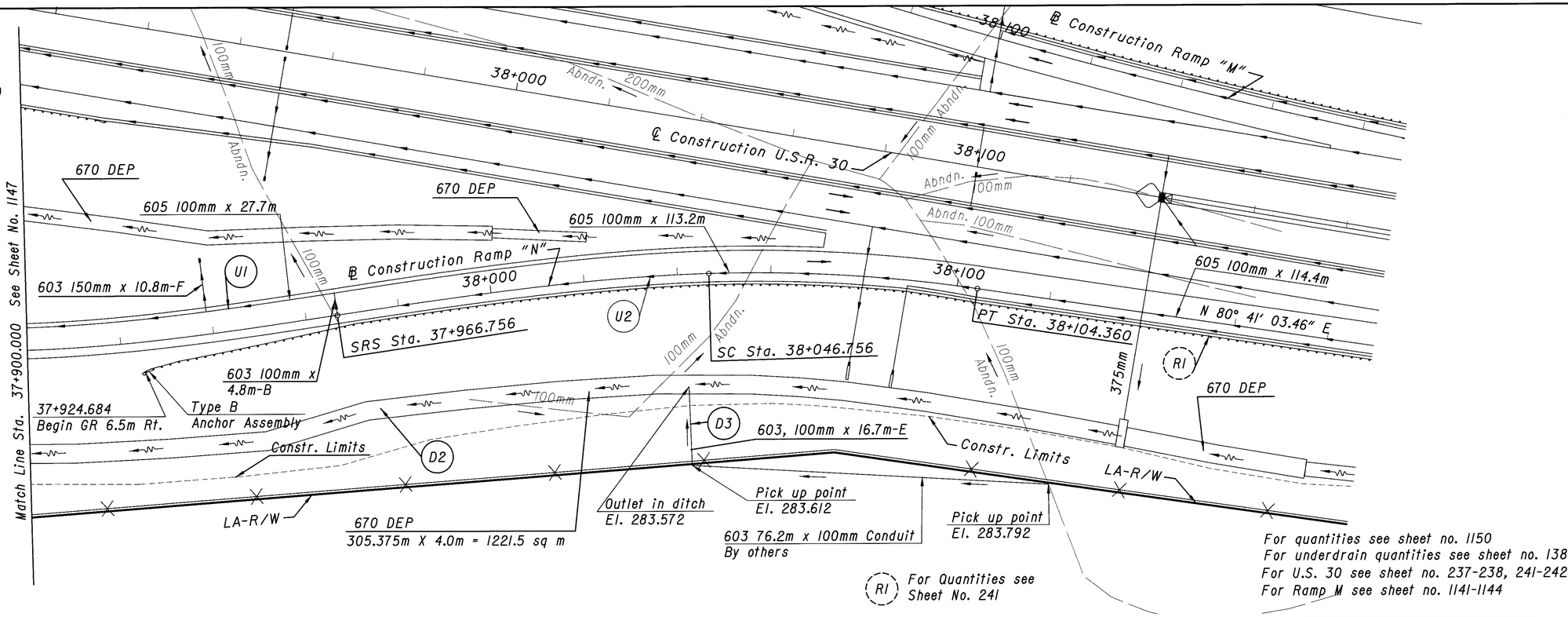
PLAN AND PROFILE - RAMP N
STA. 37+754.766 TO STA. 37+900

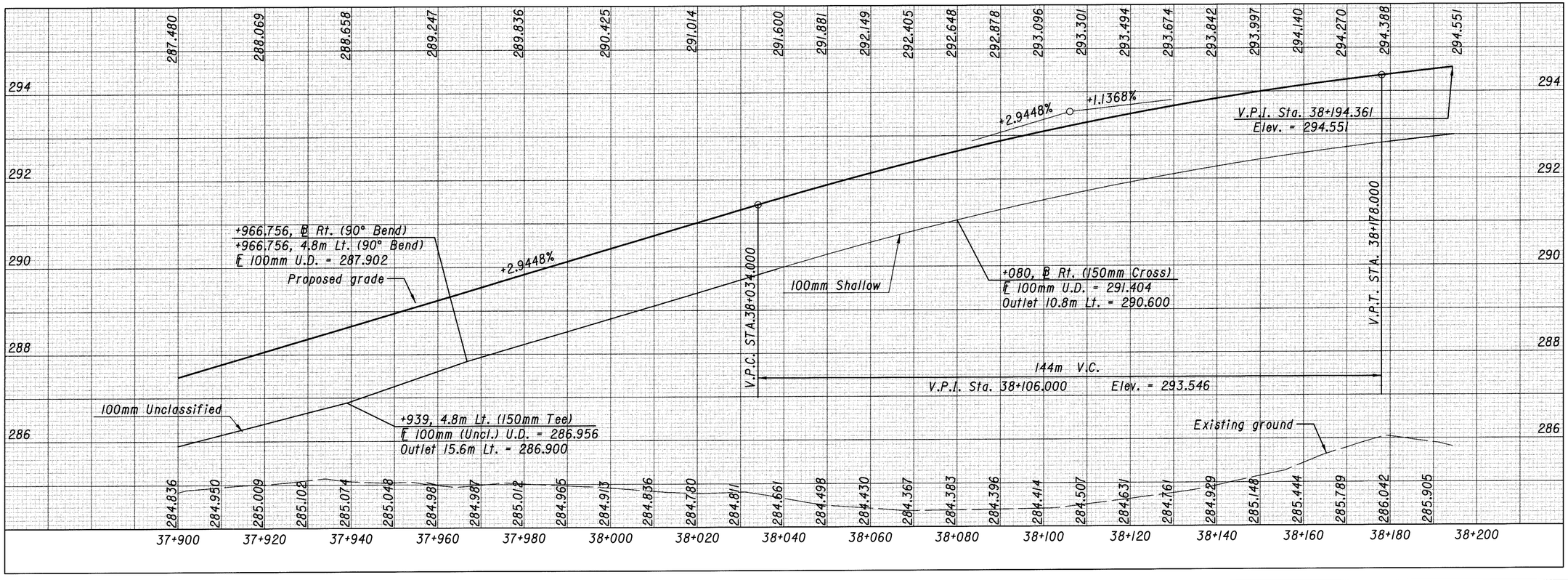
WYA/CRA-30-28.009/0.000

1147
2116

Ramp "N"
P.I. = Sta. 37+878.804
Δ = 24° 57′ 15.52" (LT)
R = 230.000 m
Ls1 = 60.000 m
Ls2 = 80.000 m
θs1 = 7° 28′ 24.11"
θs2 = 9° 57′ 52.14"
LT1 = 40.036 m
LT2 = 53.418 m
ST1 = 20.032 m
ST2 = 26.744 m
Lc = 30.173 m
Ts1 = 82.221 m
Ts2 = 89.909 m
Es = 6.493 m
e_{max} =0.08

Ramp "N"
P.I. = Sta. 38+053.247
Δ = 16° 56′ 46.86" (RT)
R = 330.000 m
Ls1 = 80.000 m
θs1 = 6° 56′ 41.79"
LT1 = 53.374 m
ST1 = 26.704 m
Lc = 57.604 m
Ts1 = 86.491 m
Ts2 = 51.932 m
Es = 4.061 m
e_{max} =0.08





HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED JGB
CHECKED REA

PLAN AND PROFILE - RAMP N
STA. 37+900 TO STA. 38+194.361 US 30

WYA/CRA-30-28.009/0.000

1148
2116

REF NO.	SHEET NO.	STATION	SIDE	603 100MM CONDUIT, TYPE E METER	670 DITCH EROSION PROTECTION SQ M	FOR INFORMATION ONLY 300 MM X 300 MM 22.5° BEND EACH	375 MM X 375 MM 22.5° BEND EACH	MASONRY COLLAR EACH
D1	1147	37+770.51 TO 37+834.80	RT		326.8			
D2	1147	37+834.80 TO 38+138.55	RT		1221.5			
D3	1147	30+041.519	RT	16.7				
								TOTALS
TOTALS CARRIED TO SUB-SUMMARY				16.7	1548.3			

CALCULATED AM
CHECKED REA

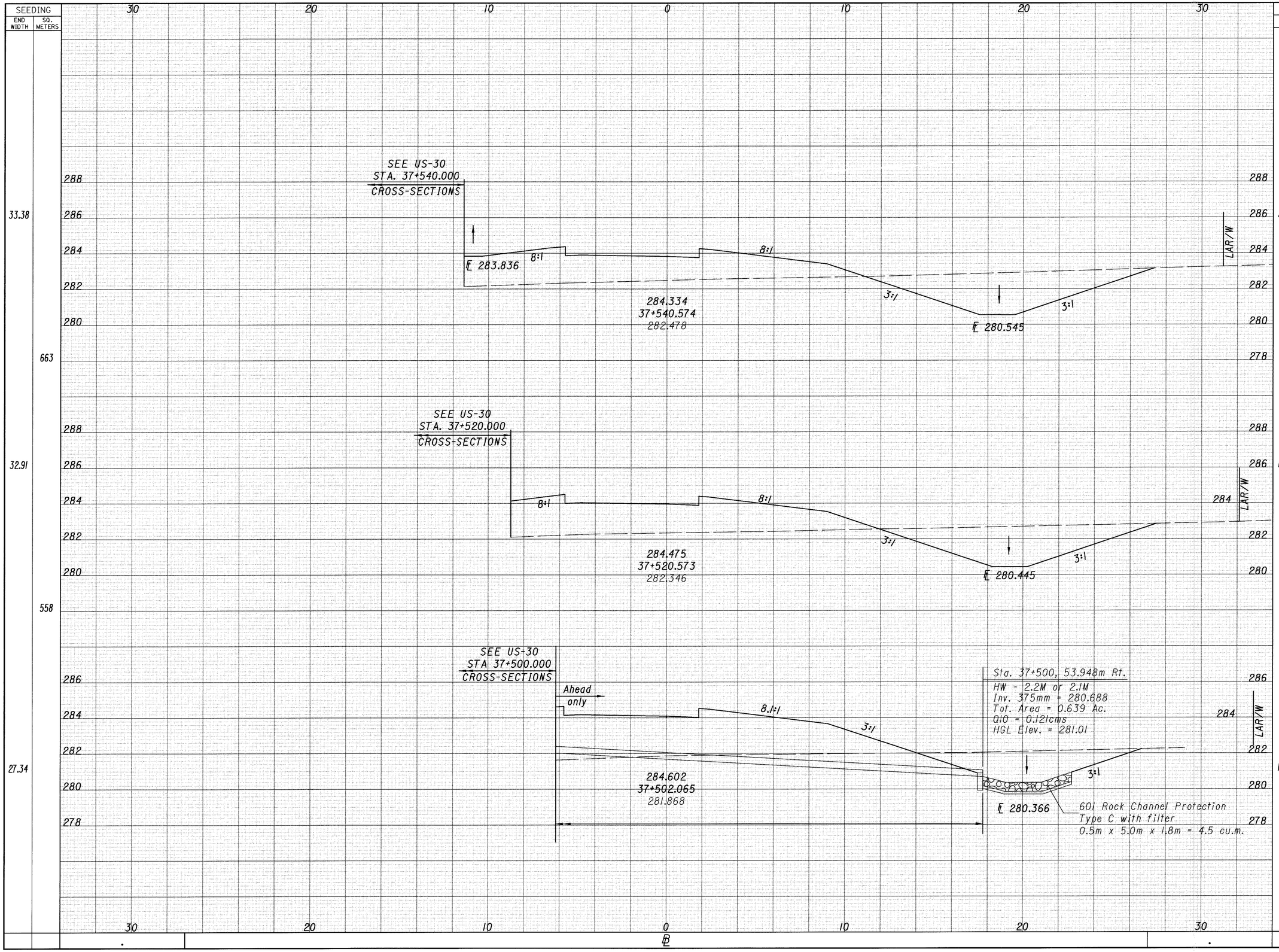
ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

1150
2116

SEEDING END WIDTH	SEEDING SQ. METERS
33.38	
	663
32.91	
	558
27.34	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
21.30	30.35		
		409	617
19.64	31.37		
		330	646
16.06	38.47		



CALCULATED AM

CHECKED REA

RAMP K CROSS SECTIONS

STA 37+502.065 TO STA 37+540.574

WYA/CRA-30-28.009/0.000

1151
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
35.80	712	5.97	62.76	174	1129		
35.08	702	11.32	49.61	294	858		
34.87	683	18.01	35.94	393	663		

30 20 10 0 10 20 30

SEE US-30
STA. 37+600.000
CROSS-SECTIONS

286 284 282 280

3:1 8:1 8:1 3:1 4:1

℄ 283.166

283.910
37+600.732
281.517

℄ 280.846

LAR/W

SEE US-30
STA. 37+580.000
CROSS-SECTIONS

288 286 284 282 280

3:1 8:1 8:1 3:1 3:1

℄ 283.468

284.052
37+580.633
281.939

℄ 280.745

LAR/W

SEE US-30
STA. 37+560.000
CROSS-SECTIONS

288 286 284 282 280

3:1 8:1 8:1 3:1 3:1

℄ 283.737

284.193
37+560.574
282.365

℄ 280.645

LAR/W

30 20 10 0 10 20 30

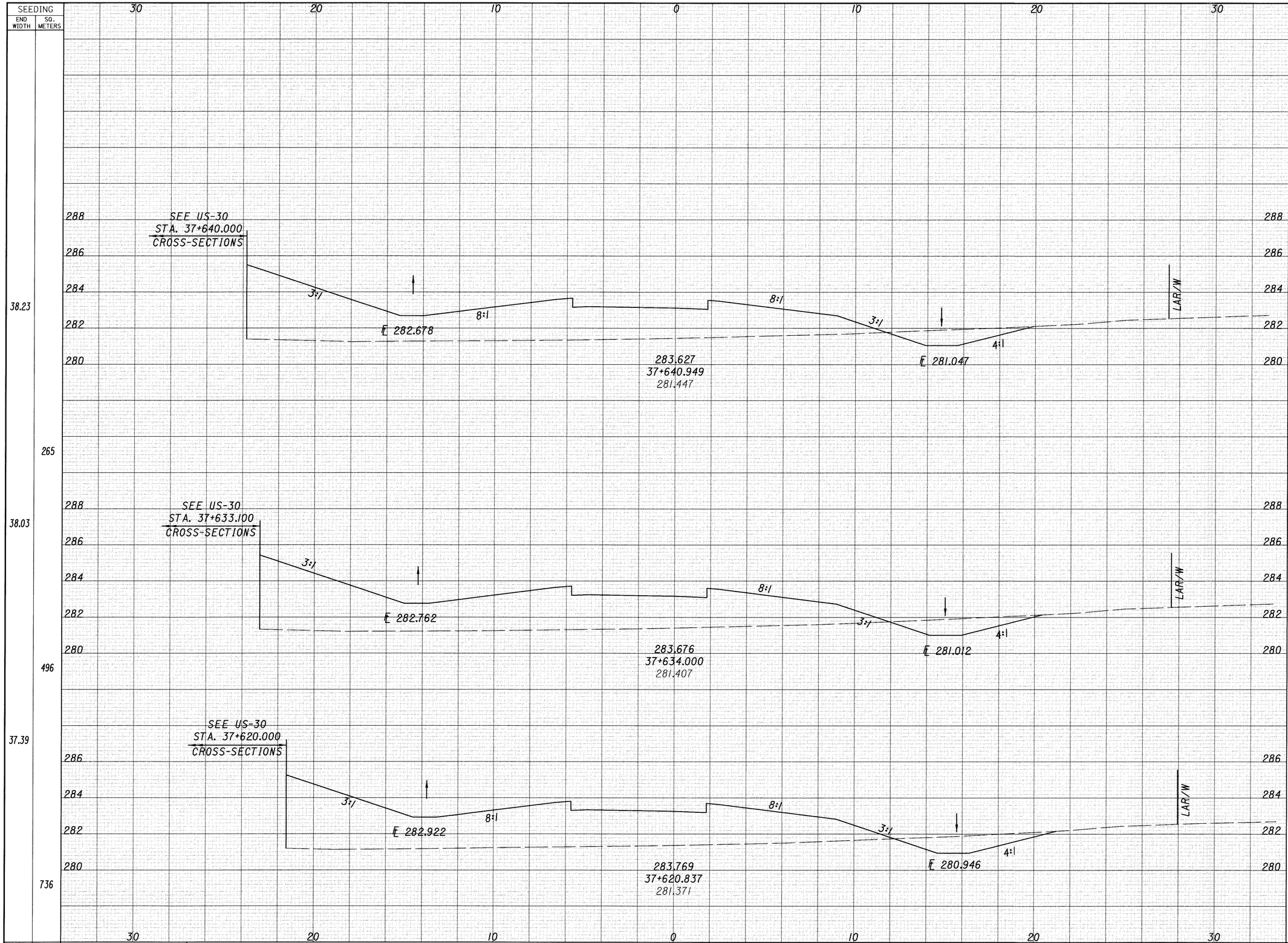
℄

RAMP K CROSS SECTIONS
STA 37+560.574 TO STA 37+600.732

WYA/CRA-30-28.009/0.000

1152
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
38.23	265	4.26	66.31	31	446
38.03	496	4.54	67.79	63	892
37.39	736	5.01	67.70	110	1311



CALCULATED AM

CHECKED REA

RAMP K CROSS SECTIONS STA 37+620.837 TO STA 37+640.949

WYA / CRA-30-28.009 / 0.000

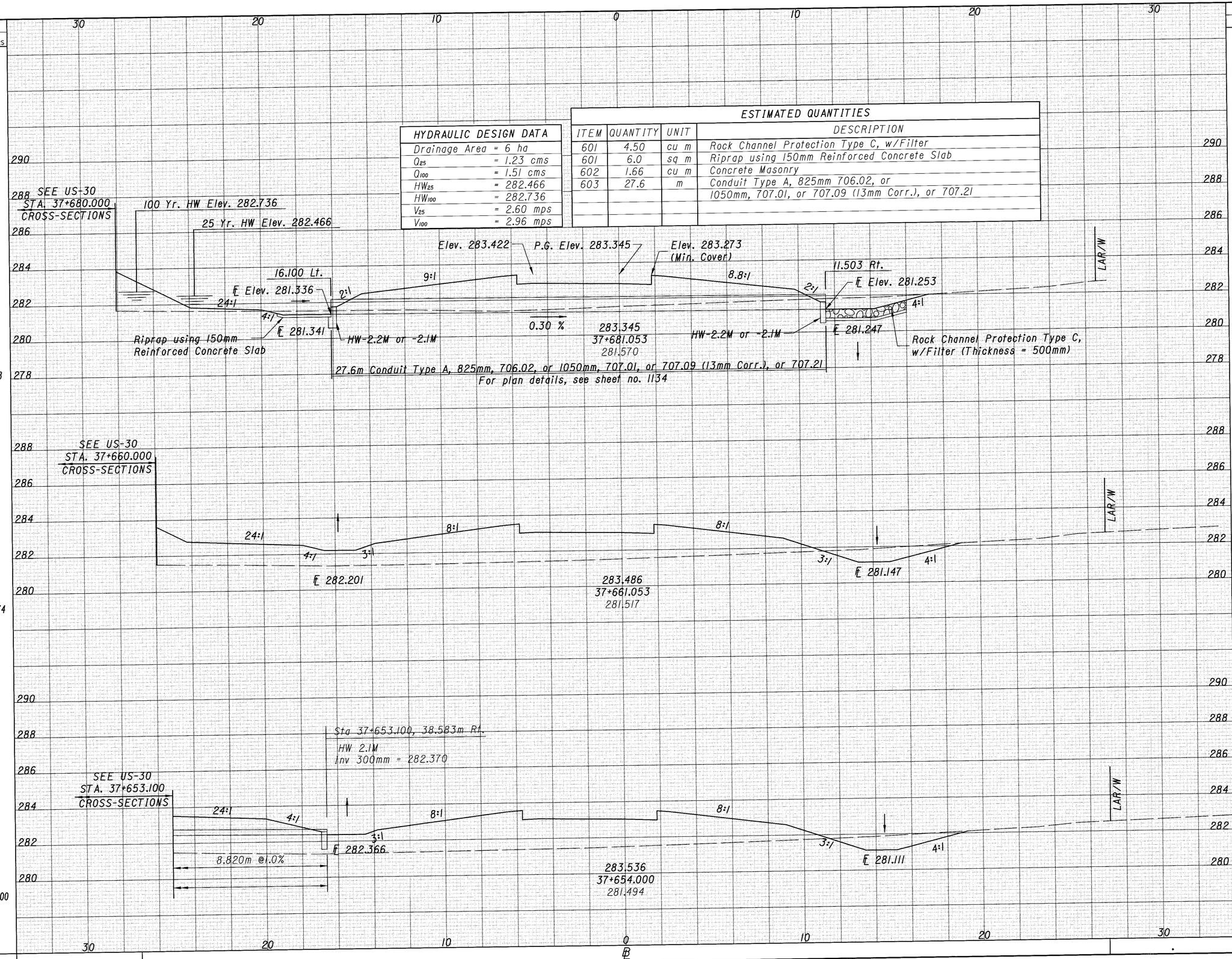
1153
2116

SEEDING END WIDTH	SEEDING SQ. METERS
42.71	818
39.12	274
38.46	500

HYDRAULIC DESIGN DATA	
Drainage Area	= 6 ha
Q_{25}	= 1.23 cms
Q_{100}	= 1.51 cms
HW_{25}	= 282.466
HW_{100}	= 282.736
V_{25}	= 2.60 mps
V_{100}	= 2.96 mps

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	4.50	cu m	Rock Channel Protection Type C, w/Filter
601	6.0	sq m	Riprap using 150mm Reinforced Concrete Slab
602	1.66	cu m	Concrete Masonry
603	27.6	m	Conduit Type A, 825mm 706.02, or 1050mm, 707.01, or 707.09 (13mm Corr.), or 707.21



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
6.74	37.24		
		103	868
3.57	49.59		
		26	371
3.71	55.65		
		52	796

CALCULATED AM

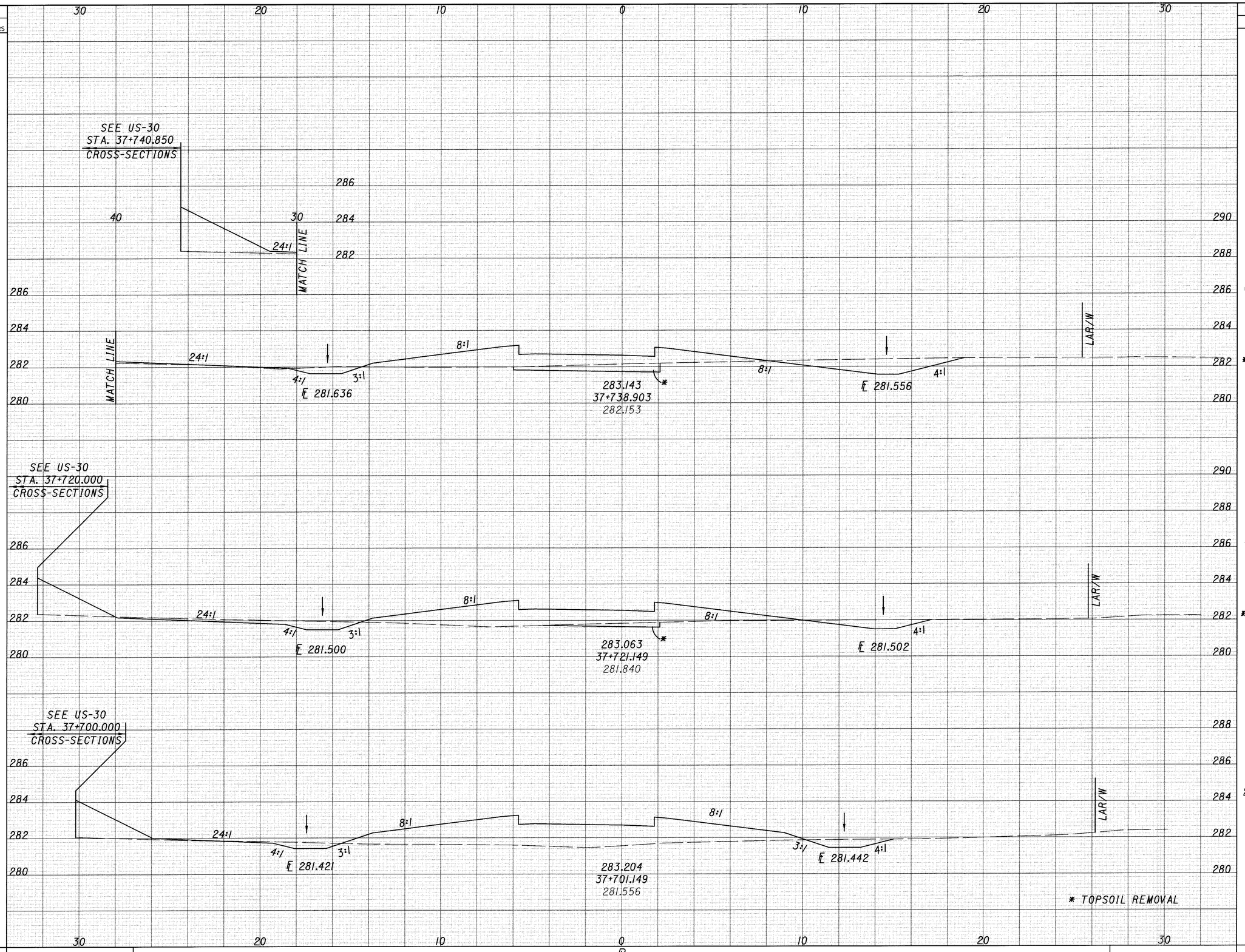
CHECKED REA

RAMP K CROSS SECTIONS
STA 37+654.000 TO STA 37+681.053

WYA / CRA-30-28.009 / 0.000

1154
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
50.17		6.13	22.07		
		*2.71			
				95	395
	830			*32	
43.33		4.61	22.45		
		*0.92			
				72	523
	825			*9	
39.18		2.56	29.89		
		*0			
	823			93	675



CALCULATED AM

CHECKED REA

RAMP K CROSS SECTIONS
STA 37+701.149 TO STA 37+738.903

WYA / CRA-30-28.009 / 0.000

1155
2116

SEEDING	
END WIDTH	SQ. METERS
50.79	446

END AREA		VOLUME	
CUT	FILL	CUT	FILL
8.52	23.70		
*2.95			
		65	202
		*25	

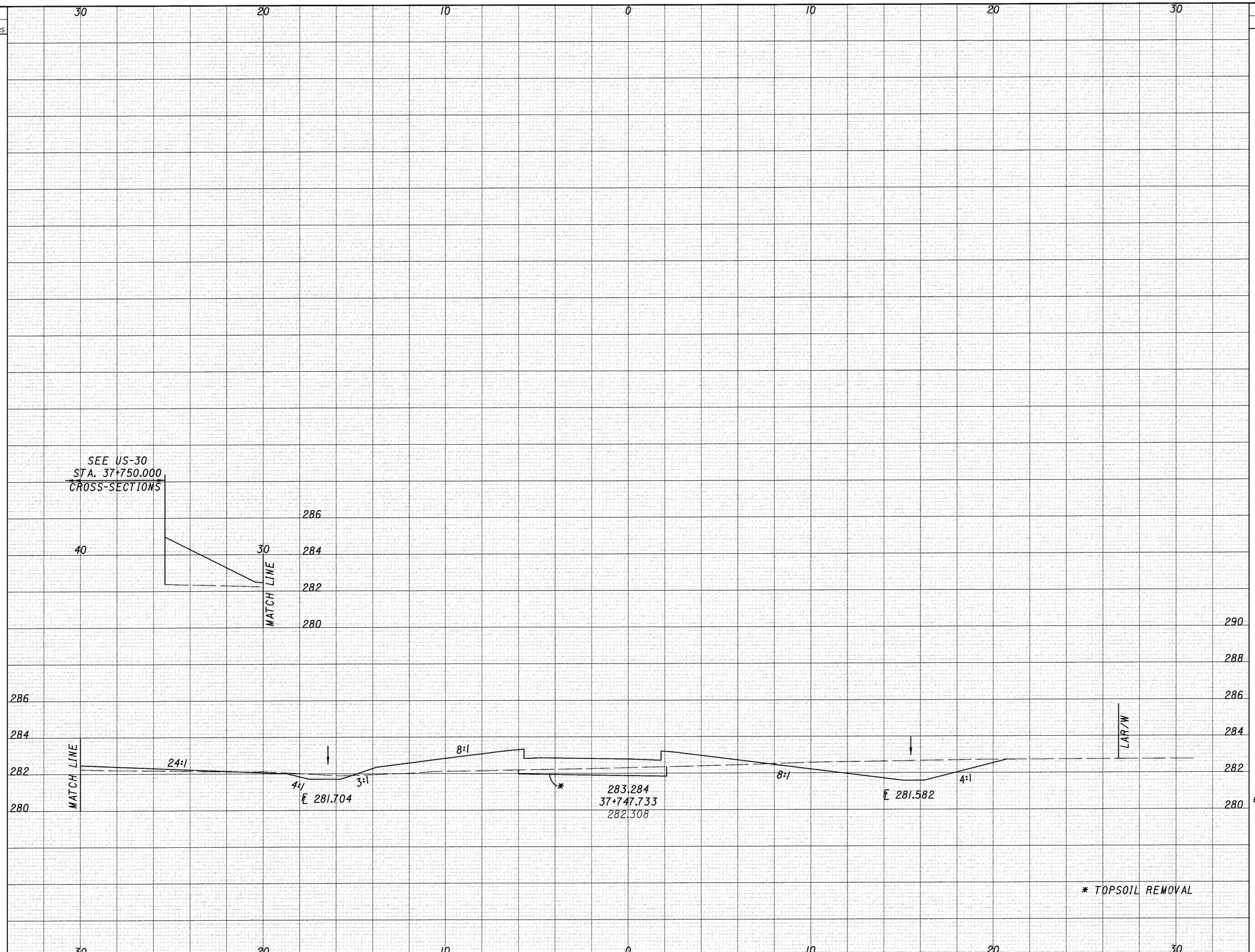
CALCULATED AM

CHECKED REA

RAMP K CROSS SECTIONS
STA 37+747.733

WYA/CRA-30-28.009/0.000

1156
2116



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
43.70		15.92	97.43		
	805			352	1684
38.76		20.18	75.05		
	656			339	1236
37.00		19.04	67.79		

30 20 10 0 10 20 30

288 286 284 282 280 278

SEE US-30
STA. 37+540.000
CROSS-SECTIONS

8:1 8:1 3:1 3:1

LAR/W
36.271

℄ 279.514

285.495
37+537.423
281.547

SEE US-30
STA. 37+520.000
CROSS-SECTIONS

8:1 8:1 3:1 3:1

LAR/W
37.436

℄ 279.331

285.377
37+517.899
281.211

Ahead only

SEE US-30
STA. 37+500.000
CROSS-SECTIONS

8:1 3:1 3:1

LAR/W
37.539

℄ 279.169

285.238
37+500.591
280.385

℄

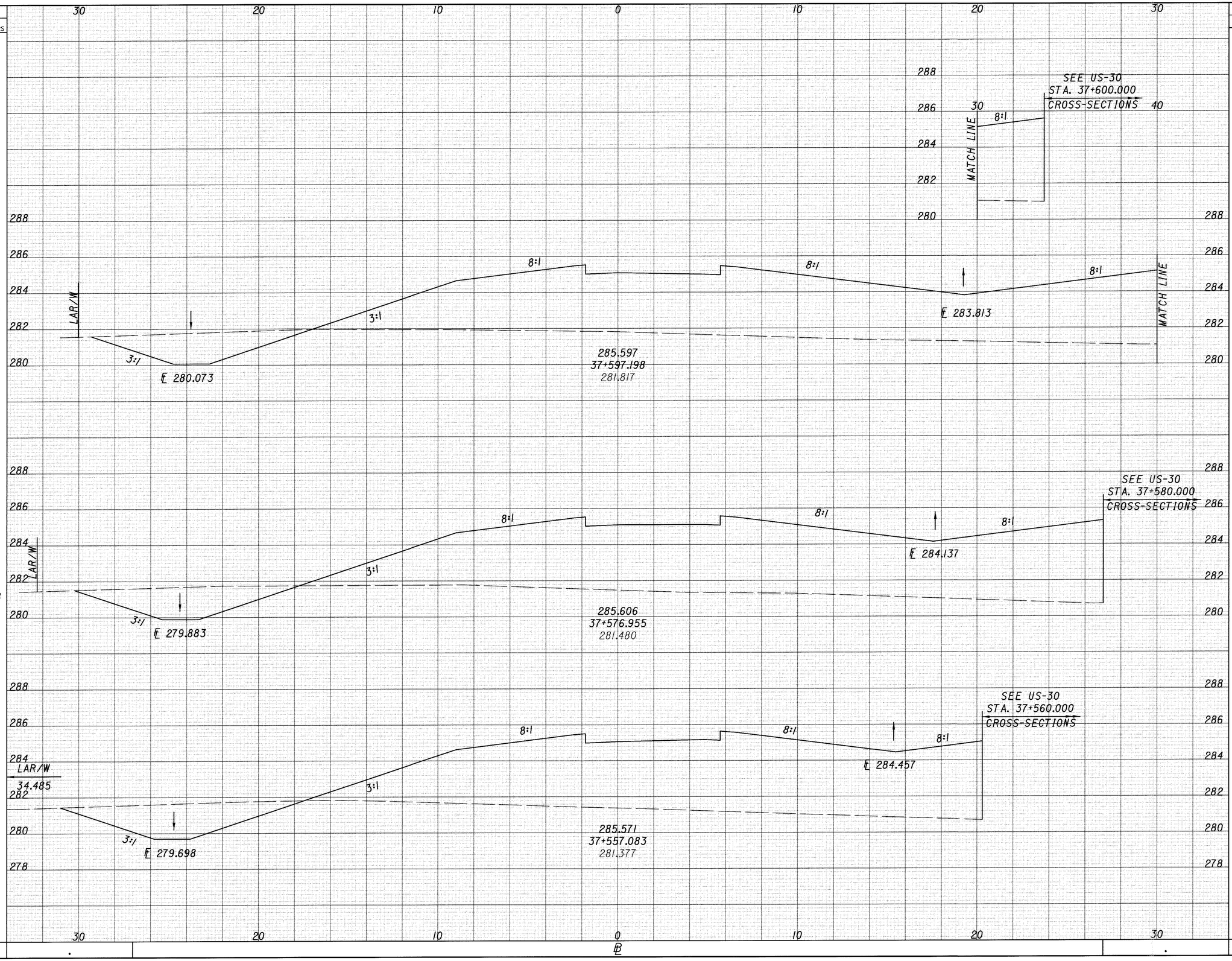
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CHECKED: REA

RAMP L CROSS SECTIONS
STA 37+500.591 TO STA 37+537.423

WYA/CRA-30-28.009/0.000

1157
2116

SEEDING END WIDTH	SEEDING SQ. METERS
60.99	1176
55.20	1038
49.27	914



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
12.13	154.33		
		255	3027
13.06	144.74		
		280	2676
15.12	124.55		
		305	2182

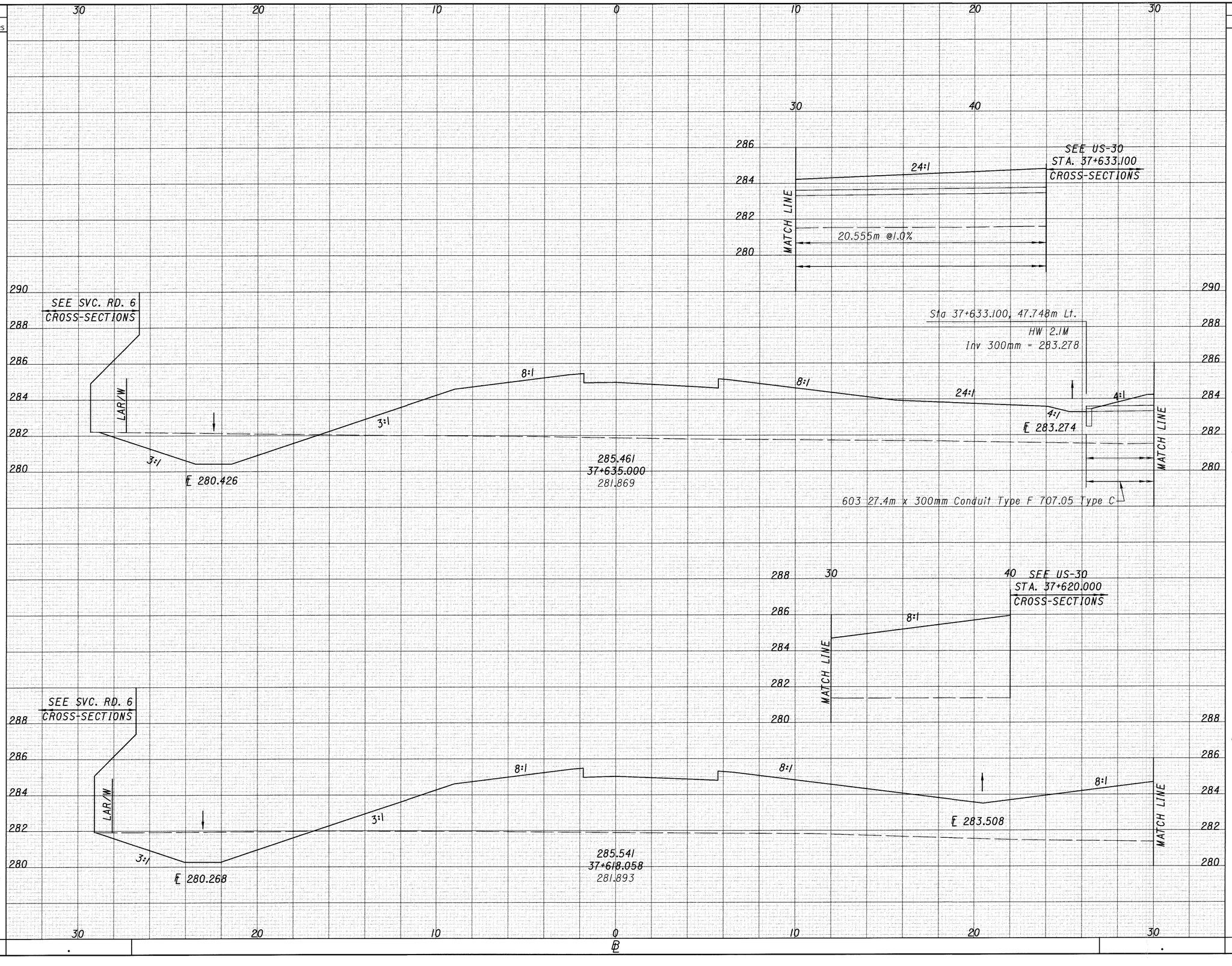
CALCULATED AM

CHECKED REA

RAMP L CROSS SECTIONS
STA 37+557.083 TO STA 37+597.198

WYA / CRA-30-28.009 / 0.000

SEEDING	
END WIDTH	SQ. METERS
70.76	
	1167
67.01	
	1335



END AREA		VOLUME	
CUT	FILL	CUT	FILL
12.19	154.42		
11.74	160.47		
203	2667		
249	3283		

CALCULATED AM

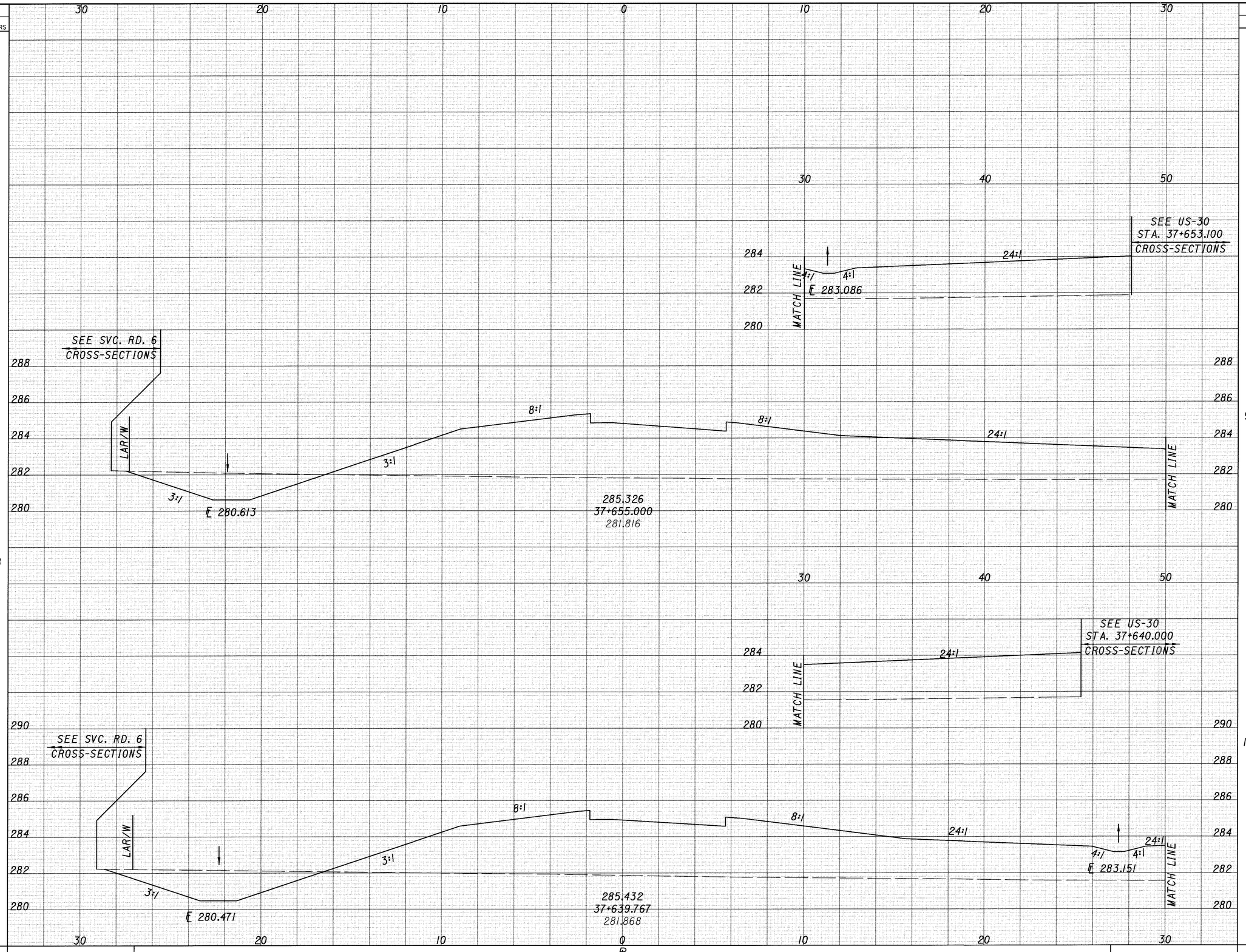
CHECKED REA

RAMP L CROSS SECTIONS
STA 37+618.058 TO STA 37+635.000

WYA/CRA-30-28.009/0.000

1159
2116

SEEDING	
END WIDTH	SQ. METERS
73.67	
	1108
71.85	
	340



END AREA		VOLUME	
CUT	FILL	CUT	FILL
9.58	107.88		
		163	1914
11.85	143.40		
		57	710

CALCULATED AM

CHECKED REA

RAMP L CROSS SECTIONS

STA 37+639.767 TO STA 37+655.000

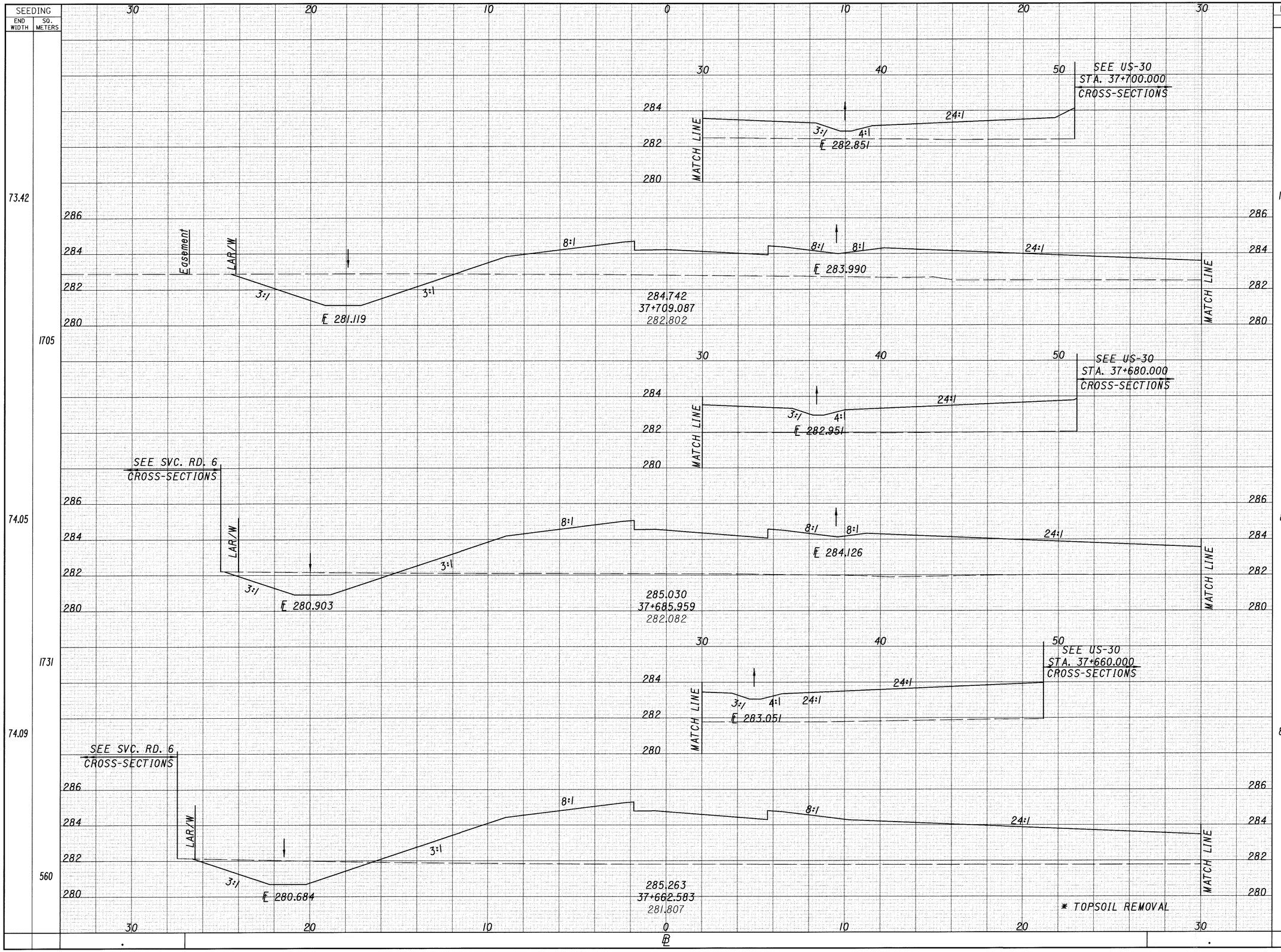
WYA/CRA-30-28.009/0.000

1160
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
73.42	1705	13.91	48.24	256	1462
74.05	1731	8.19	78.17	198	1995
74.09	560	8.78	92.50	70	760
		*0		*0	

CALCULATED AM

CHECKED REA



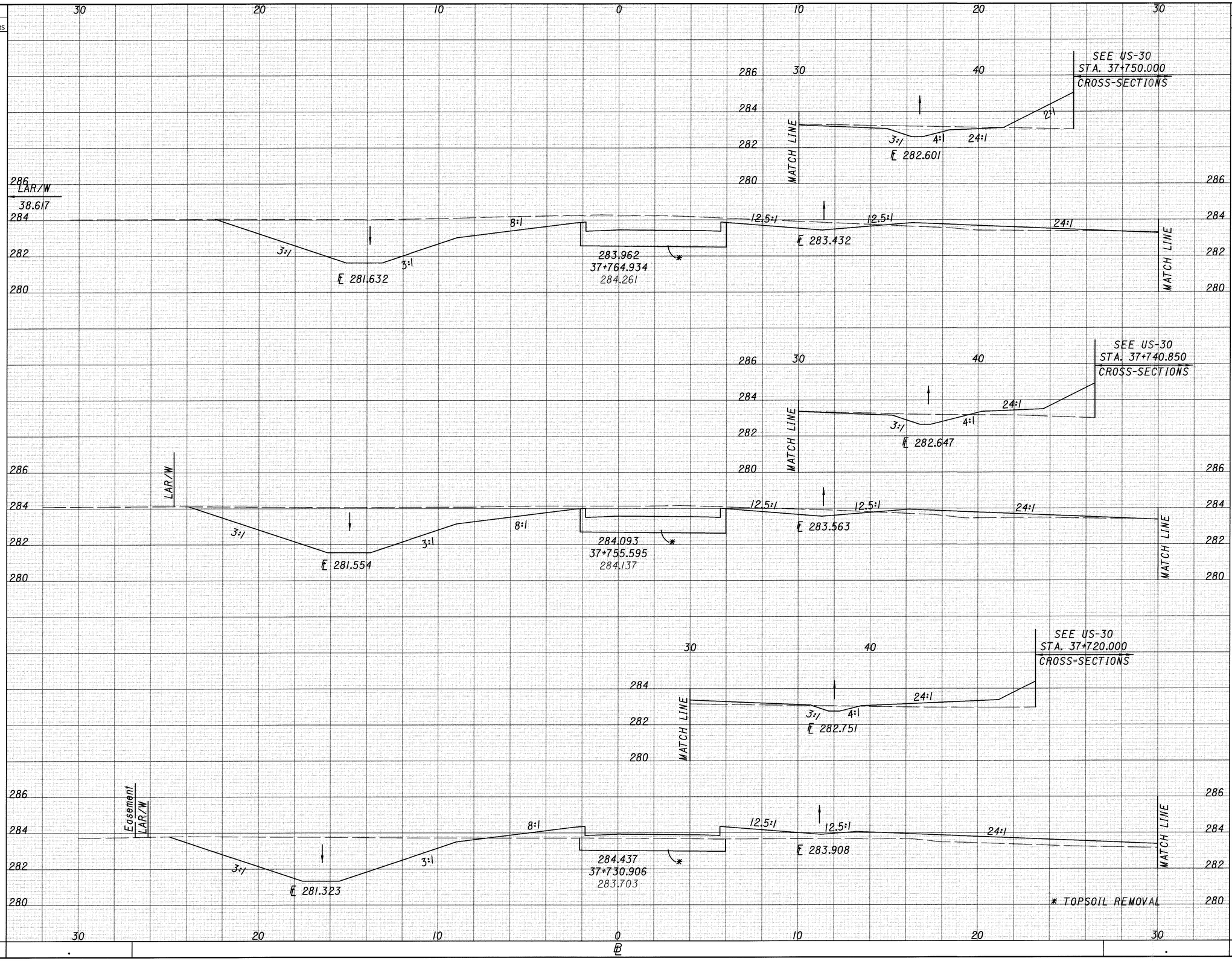
RAMP L CROSS SECTIONS

STA 37+662.583 TO STA 37+709.087

WYA/CRA-30-28.009/0.000

1161
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
65.74	627	43.49	11.02	400	101
		*7.06		*65	
68.43	1735	42.18	10.55	820	367
		*7.06		*131	
72.13	1588	24.28	19.15	417	735
		*5.47		*55	

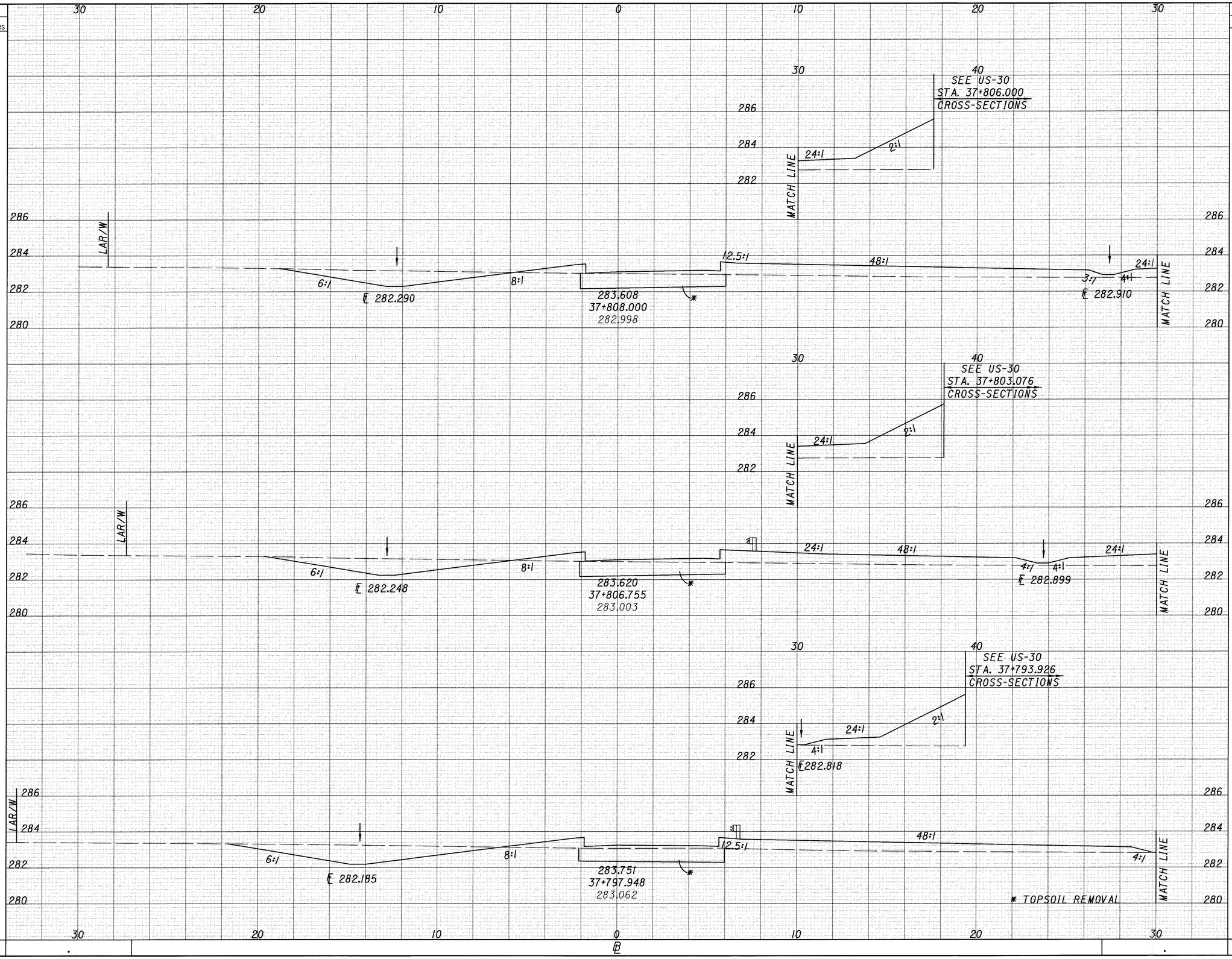


RAMP L CROSS SECTIONS
STA 37+730.906 TO STA 37+764.934

WYA / CRA-30-28.009 / 0.000

1162
2116

SEEDING	
END WIDTH	SQ. METERS
53.63	
	69
57.95	
	513
58.53	
	0



END AREA		VOLUME	
CUT	FILL	CUT	FILL
5.99	29.63		
*6.07			
		8	38
		*8	
6.66	31.10		
*6.02			
		67	262
		*53	
8.49	28.32		
*6.01			

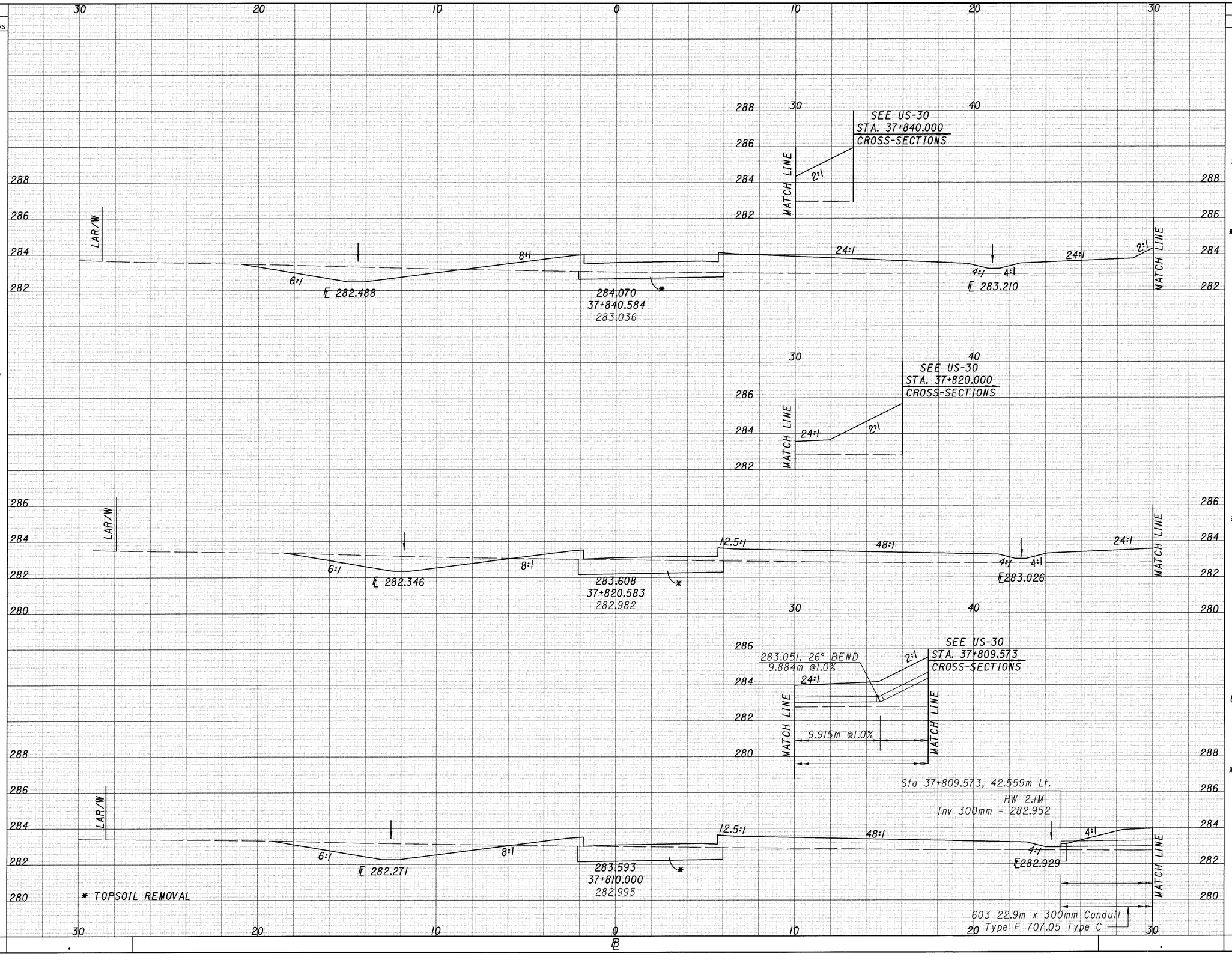
CALCULATED AM

CHECKED KEA

RAMP M CROSS SECTIONS STA 37+797.948 TO STA 37+808.000

WYA/CRA-30-28.009/0.000

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
51.45	1031	5.53	35.61	111	663
		*2.68		*86	
51.65	558	5.61	30.69	63	343
		*5.9		*64	
53.81	107	6.35	34.06	12	64
		*6.16		*12	



CALCULATED AM

CHECKED REA

RAMP M CROSS SECTIONS

STA 37+810.000 TO STA 37+840.584

WYA / CRA-30-28.009 / 0.000

STA

1164
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
42.48	860	0.84	137.79	22	2544
43.47	887	1.37	116.57	36	1867
45.25	918	2.18	70.08	49	1204
46.56	986	2.72	50.28	83	864
		*0		*27	

30 20 10 0 10 20 30

290 288 286 284 282

LAR/W

8:1 3:1 6:1

℄ 282.968

287.547
37+920.712
283.350

SEE US-30
STA. 37+920.000
CROSS-SECTIONS

℄ 286.620

8:1 3:1 6:1

℄ 282.915

286.675
37+900.711
283.196

SEE US-30
STA. 37+900.000
CROSS-SECTIONS

℄ 285.586

8:1 3:1 6:1

℄ 282.773

285.804
37+880.710
283.333

SEE US-30
STA. 37+880.000
CROSS-SECTIONS

℄ 283.578

8:1 3:1 6:1 24:1 4:1 2:1

℄ 282.631

284.933
37+860.709
283.135

SEE US-30
STA. 37+860.000
CROSS-SECTIONS

℄ 283.394

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

CALCULATED AM

CHECKED RE4

RAMP M CROSS SECTIONS

STA 37+860.709 TO STA 37+920.712

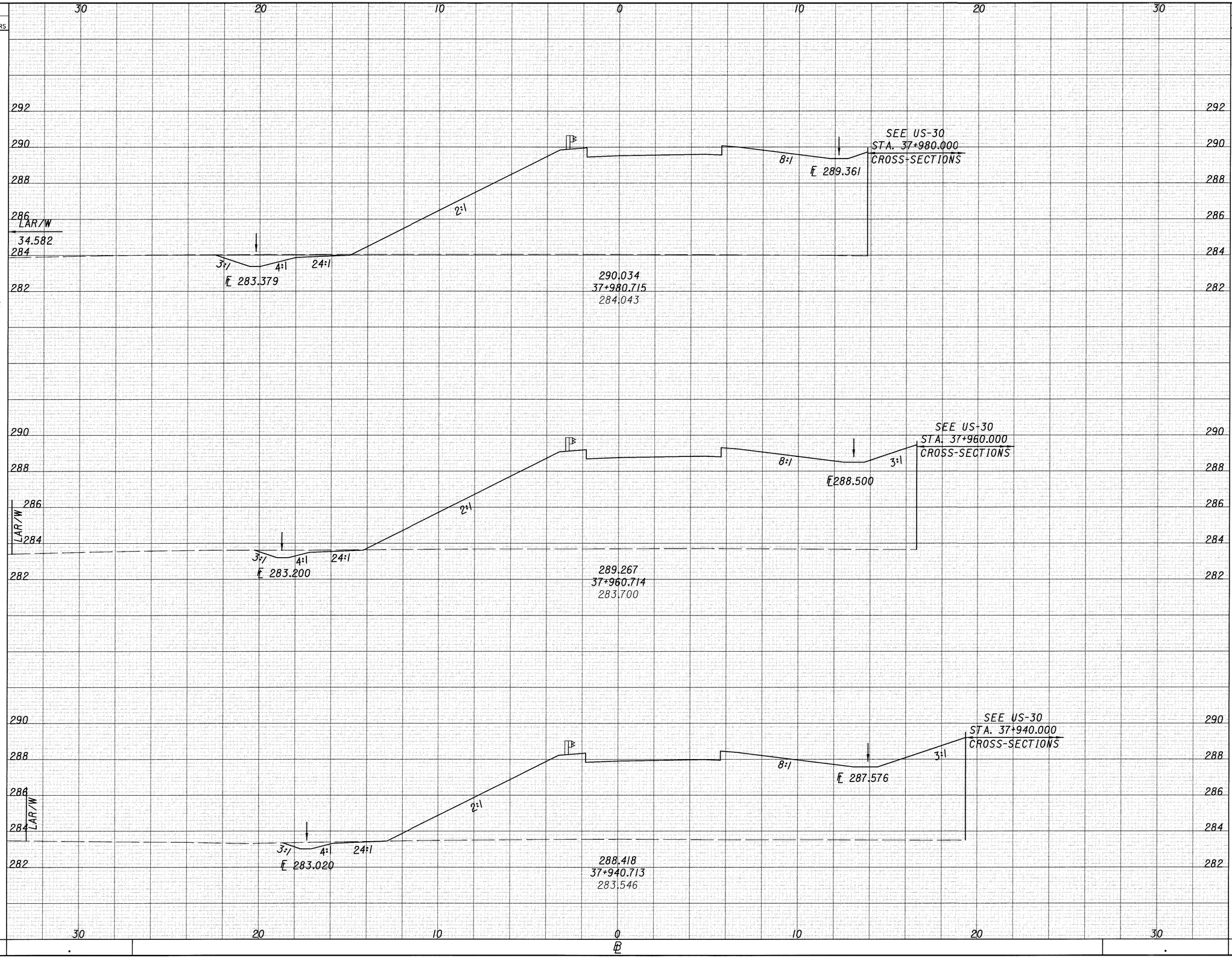
WYA / CRA-30-28.009 / 0.000

1165
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
34.10	685	2.04	128.00	30	2592
34.36	697	1.00	131.17	18	2561
35.37	779	0.75	124.91	16	2627

CALCULATED AM

CHECKED REA



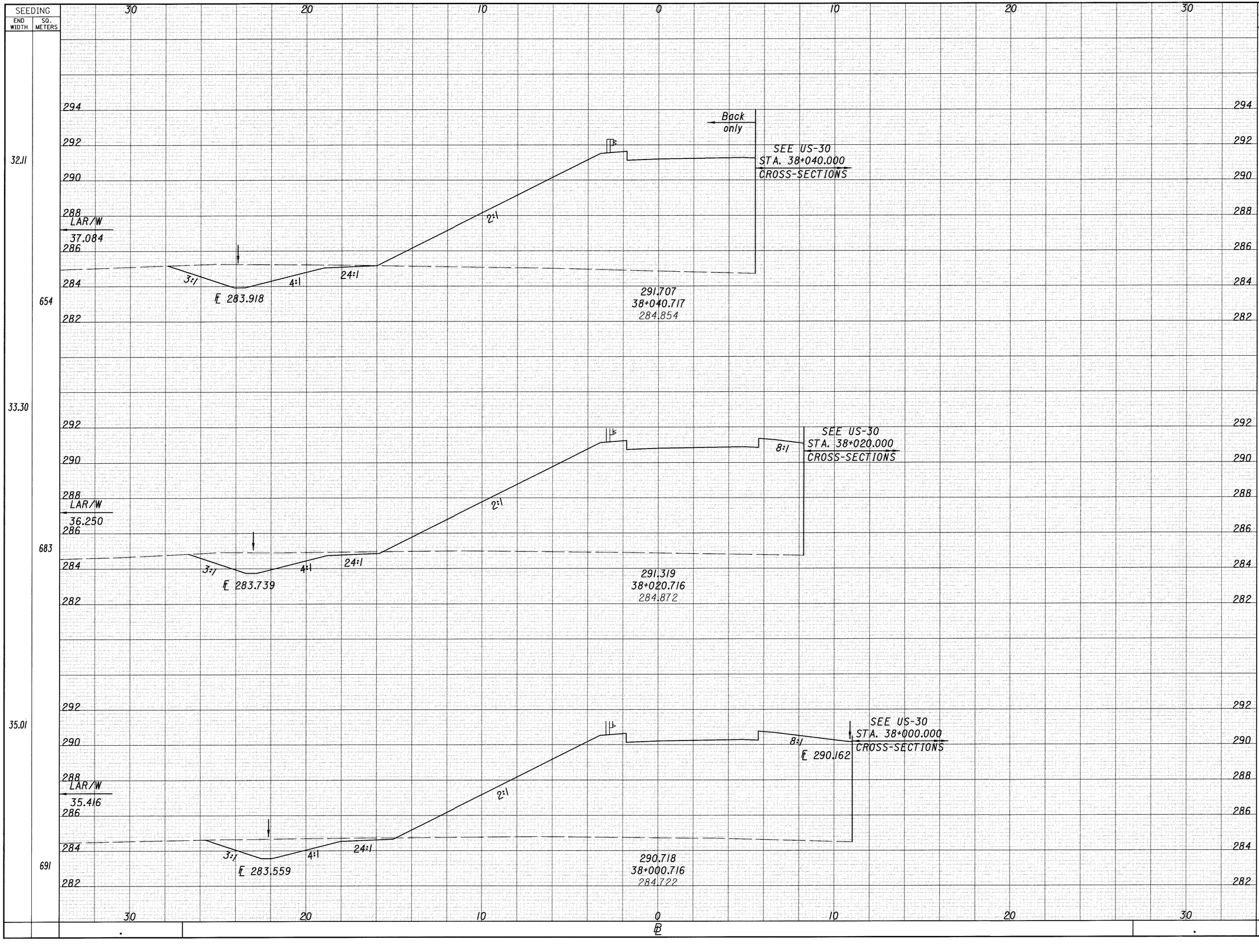
RAMP M CROSS SECTIONS

STA 37+940.713 TO STA 37+980.715

WYA/CRA-30-28.009/0.000

1166
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
32.11	654	7.04	97.93	126	2041
33.30	683	5.56	106.18	107	2189
35.01	691	5.15	112.70	72	2407



CALCULATED AM

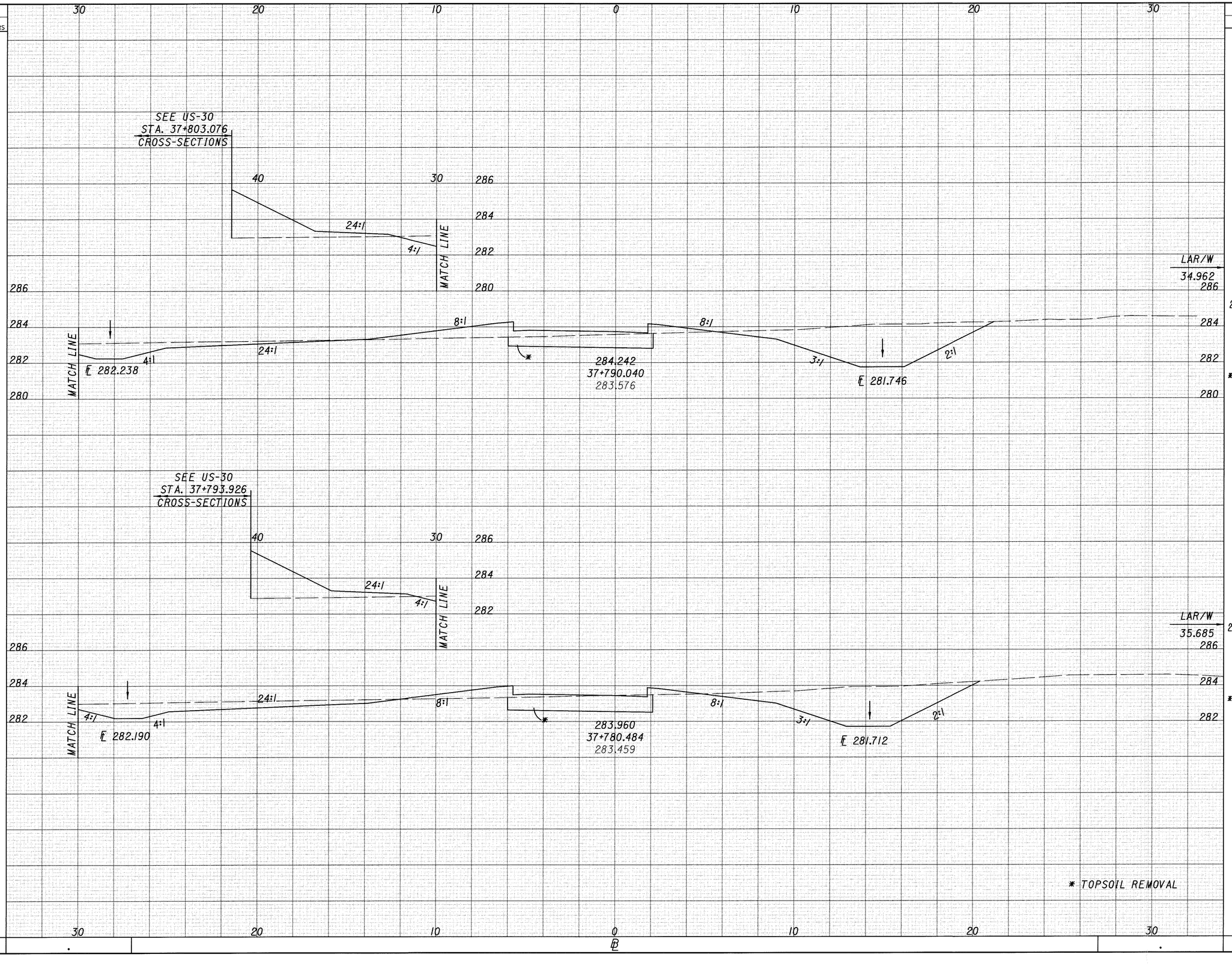
CHECKED REA

RAMP M CROSS SECTIONS
STA 38+000.716 TO STA 38+040.717

WYA / CRA-30-28.009 / 0.000

1167
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
61.02	574	24.91	19.54	242	178		
59.09		*5.34		*57			
		25.82	17.64				
		*6.55					



RAMP N CROSS SECTIONS
STA 37+780.484 TO STA 37+790.040

WYA/CRA-30-28.009/0.000

1168
2116

SEEDING	
END WIDTH	SQ. METERS
62.95	
	246
61.91	
	370

END AREA		VOLUME	
CUT	FILL	CUT	FILL
24.81	22.78		
*4.12			
		102	86
*17			
26.87	21.02		
*4.46			
		156	122
		*30	

CALCULATED AM

CHECKED KEA

RAMP N CROSS SECTIONS
STA 37+796.061 TO STA 37+800.000

WYA/CRA-30-28.009/0.000

1169
2116

SEE US-30
STA. 37+809.573
CROSS-SECTIONS

2:1 24:1 4:1 ℄ 282.288 MATCH LINE

LAR/W
37.366

4:1 24:1 8:1 8:1 3:1 2:1 MATCH LINE

284.535
37+800.000
283.693

℄ 281.781

SEE US-30
STA. 37+806.000
CROSS-SECTIONS

603, 2.512m x 375mm Conduit
Type F 707.05 Type C @ 1.0%

Sta. 37+806, 35.461m Rt.
HW = 2.1M
Inv. 375mm = 282.743
Tot. Area = 0.851 Ac.
QIO = 0.174cms
HGL Elev. = 283.09

14.7:1 MATCH LINE

282.768
26.0° Bend

LAR/W
37.812

4:1 24:1 8:1 8:1 3:1 2:1 MATCH LINE

284.419
37+796.061
283.653

℄ 282.268

℄ 281.767

* TOPSOIL REMOVAL

℄

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
70.87	1555	29.36	37.18	698	738
68.92	1420	33.42	29.20	675	569
65.72	660	30.53	24.74	284	244
		*0		*25	
		*2.39		*33	

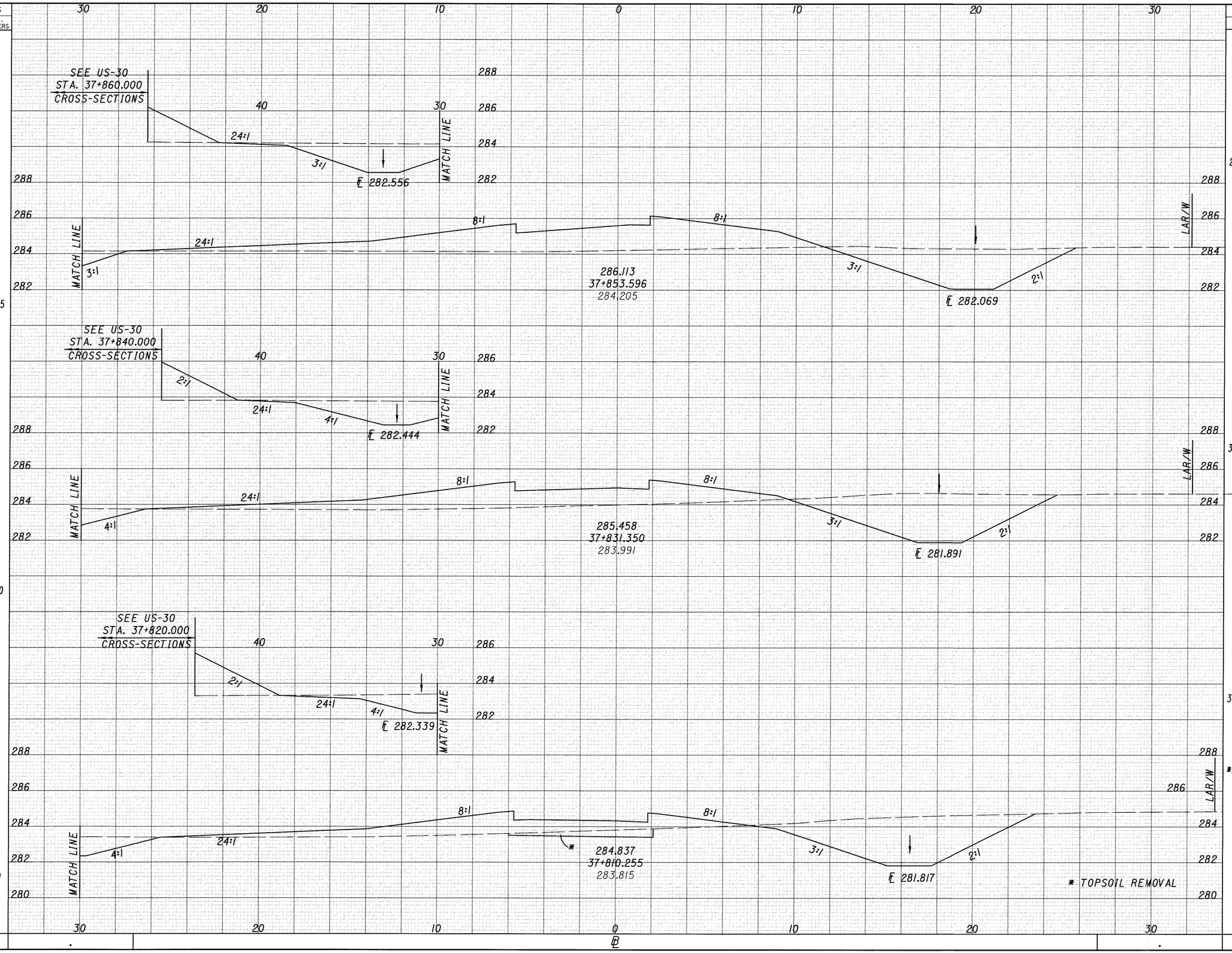
CALCULATED AM

CHECKED REA

RAMP N CROSS SECTIONS
STA 37+810.255 TO STA 37+853.596

WYA/CRA-30-28.009/0.000

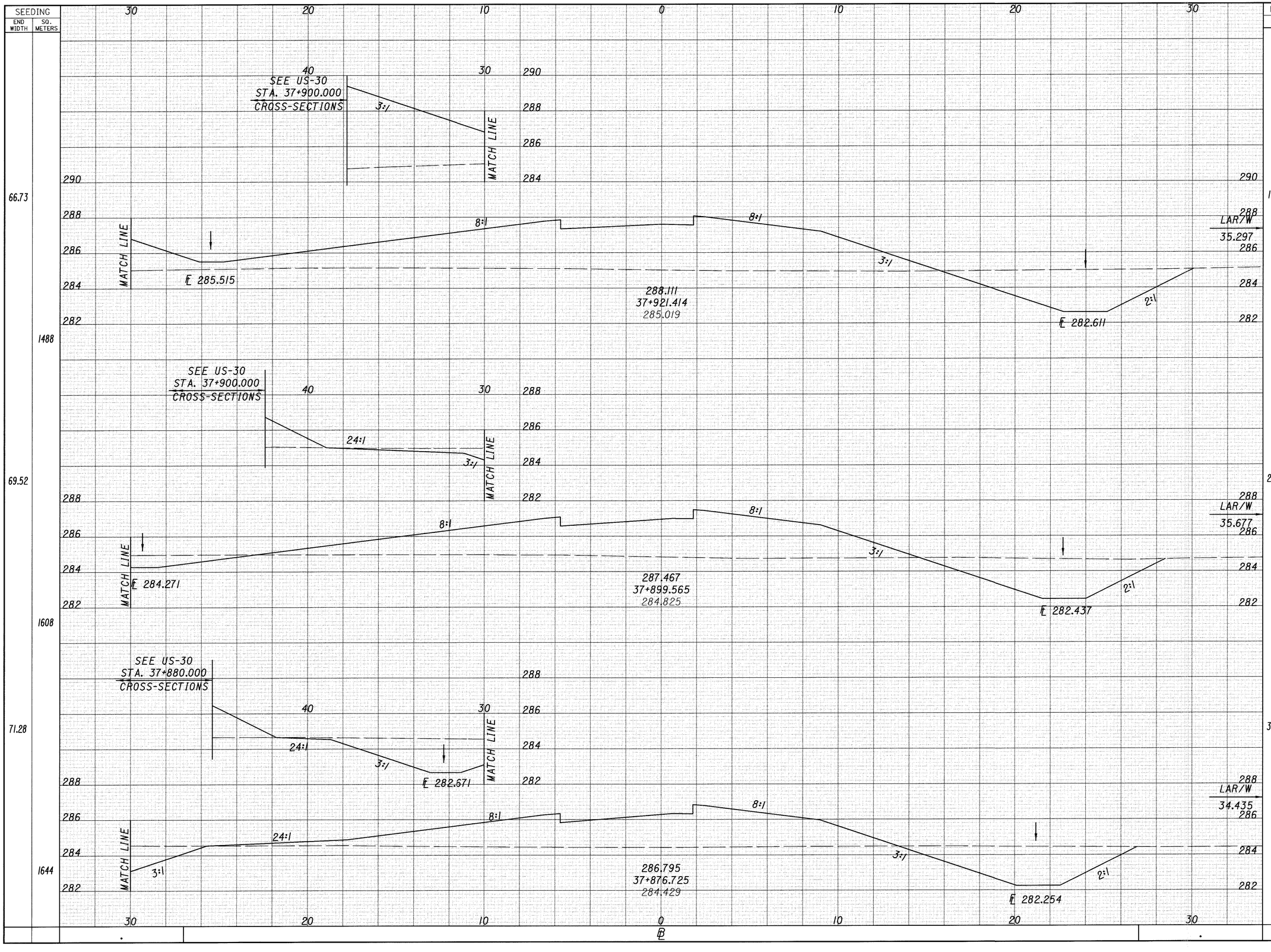
1170
2116



SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
66.73	1488	19.95	104.77	468	1777
69.52	1608	22.85	57.92	627	1208
71.28	1644	32.06	47.83	710	983

CALCULATED AM

CHECKED REA

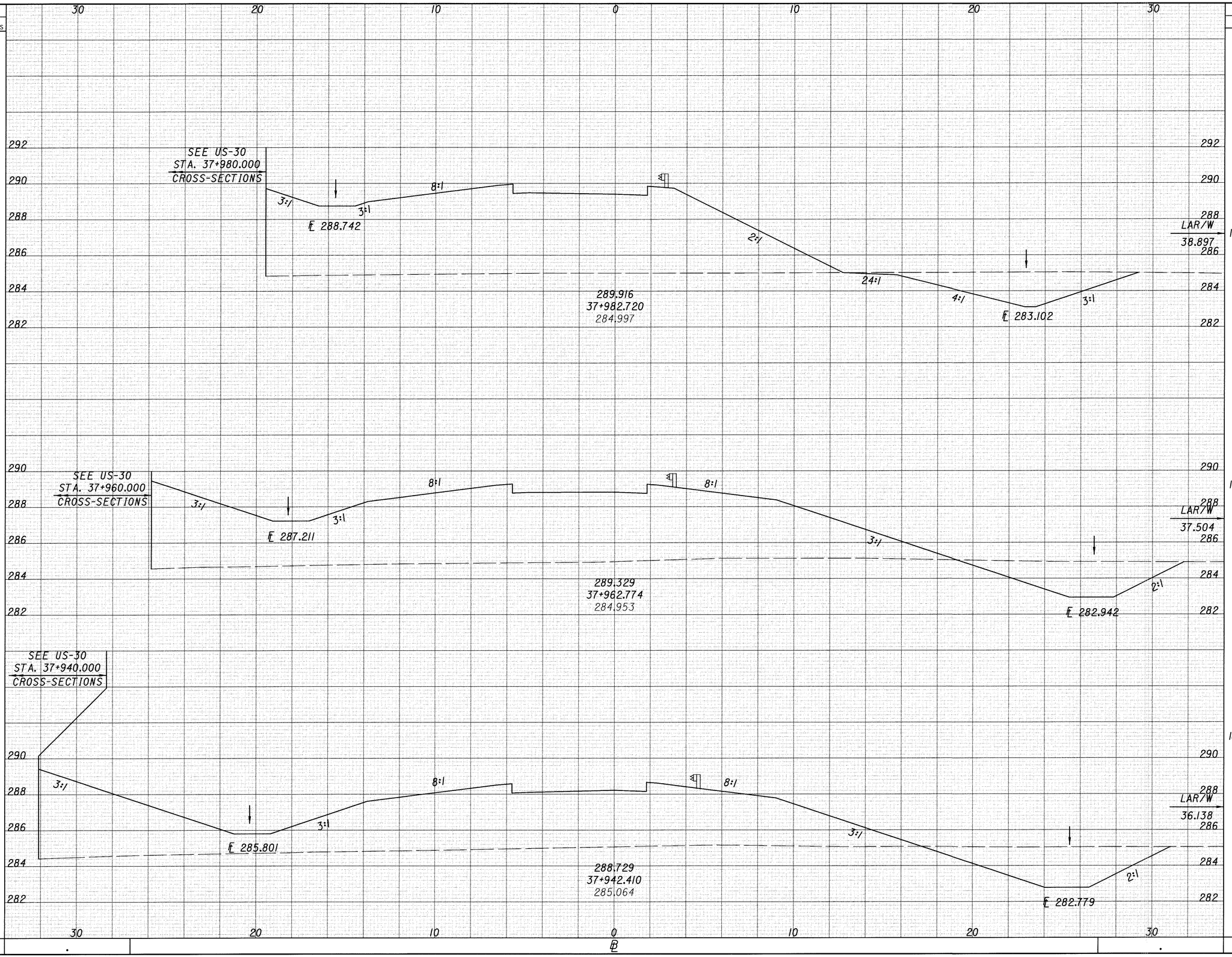


RAMP N CROSS SECTIONS
STA 37+876.725 TO STA 37+921.414

WYA/CRA-30-28.009/0.000

1171
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
47.30	1082	14.36	122.66	293	2655
61.22	1307	14.97	143.57	340	2767
67.17	1406	18.44	128.20	403	2446



CALCULATED AM

CHECKED REA

RAMP N CROSS SECTIONS

STA 37+942.410 TO STA 37+982.720

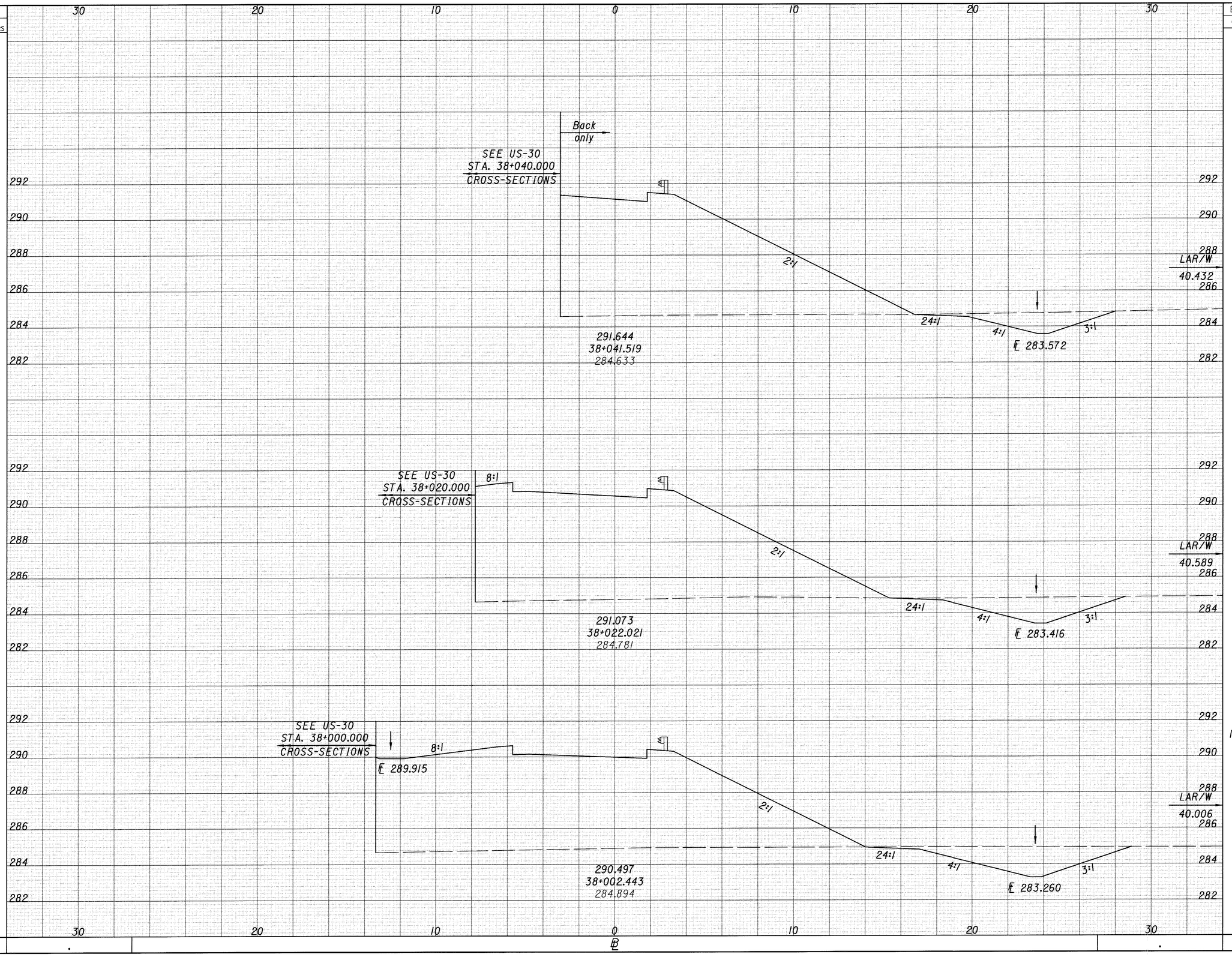
WYA/CRA-30-28.009/0.000

1172
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
32.31	655		86.85	137	1847
34.90	741		102.57	190	2155
40.76	868	11.10	117.61	251	2369

CALCULATED AM

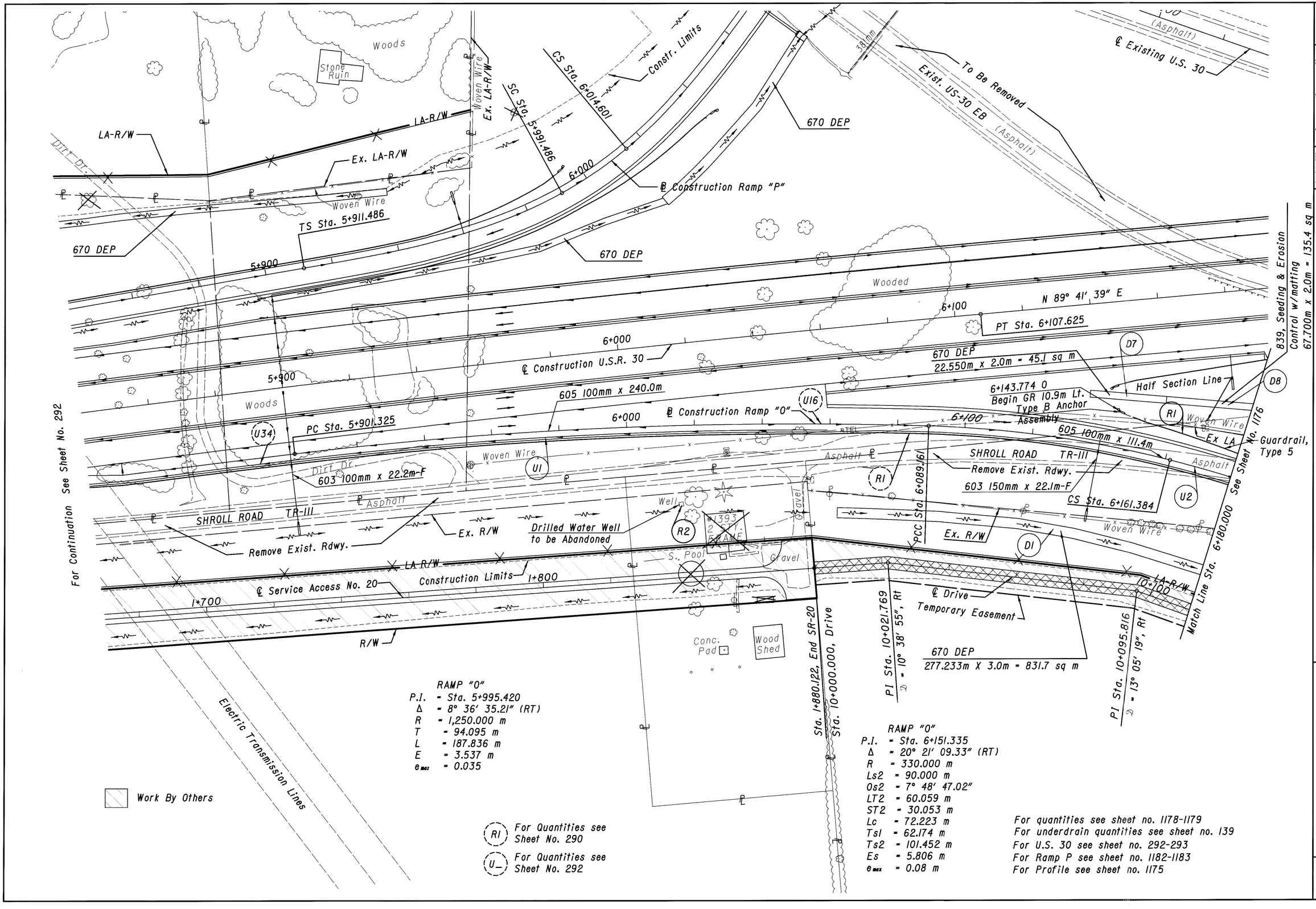
CHECKED REA



RAMP N CROSS SECTIONS
STA 38+002.443 TO STA 38+041.519

WYA / CRA-30-28.009 / 0.000

1173
2116



RAMP "O"
P.I. = Sta. 5+995.420
Δ = 8° 36' 35.21" (RT)
R = 1,250.000 m
T = 94.095 m
L = 187.836 m
E = 3.537 m
e_{max} = 0.035

RAMP "O"
P.I. = Sta. 6+151.335
Δ = 20° 21' 09.33" (RT)
R = 330.000 m
Ls2 = 90.000 m
Os2 = 7° 48' 47.02"
LT2 = 60.059 m
ST2 = 30.053 m
Lc = 72.223 m
Tsl = 62.174 m
Ts2 = 101.452 m
Es = 5.806 m
e_{max} = 0.08 m

For quantities see sheet no. 1178-1179
For underdrain quantities see sheet no. 139
For U.S. 30 see sheet no. 292-293
For Ramp P see sheet no. 1182-1183
For Profile see sheet no. 1175

HORIZONTAL SCALE IN METERS
0 10 20
CALCULATED JGB
CHECKED REA

PLAN - RAMP O
STA. 5+901.325 TO STA. 6+180

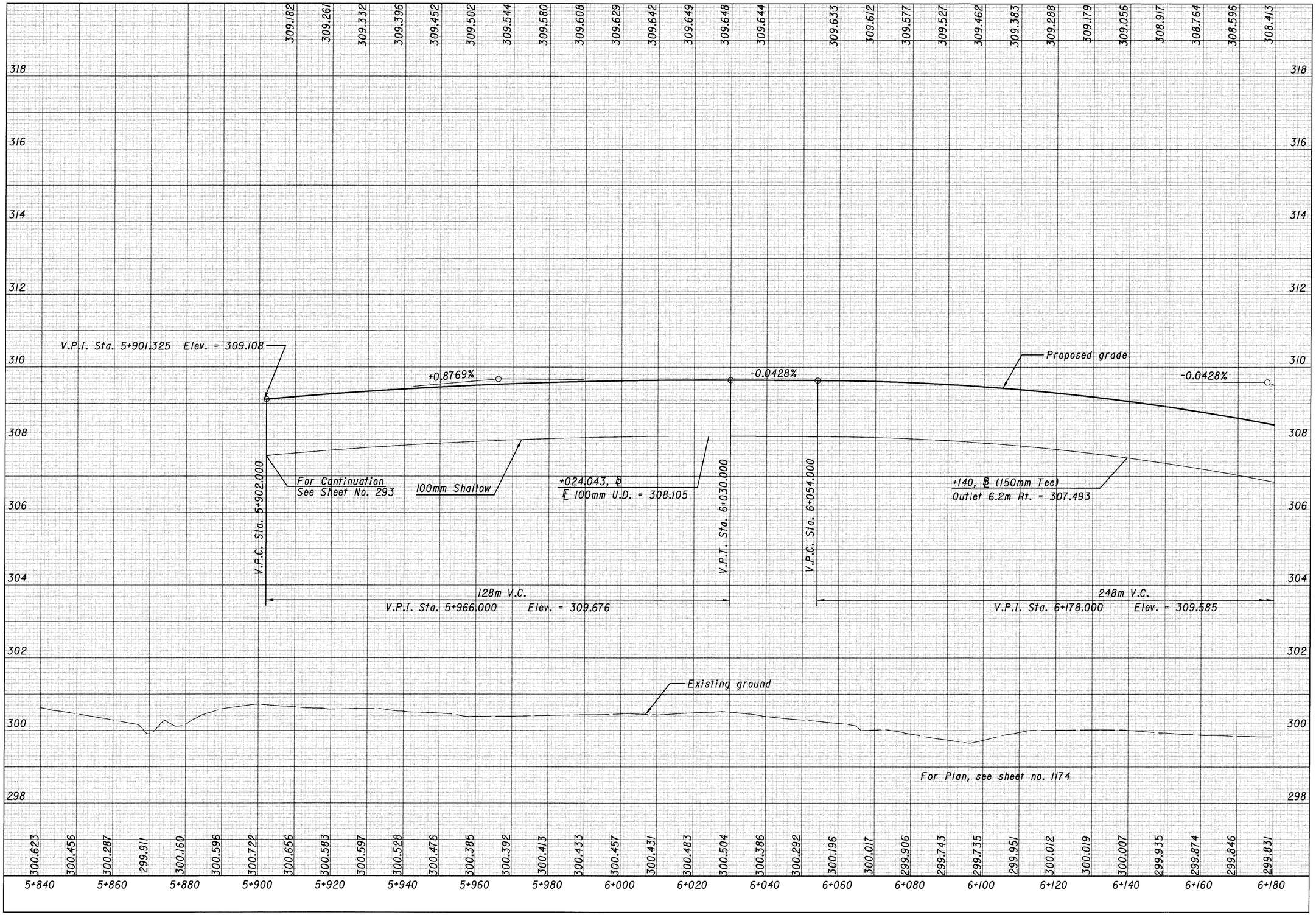
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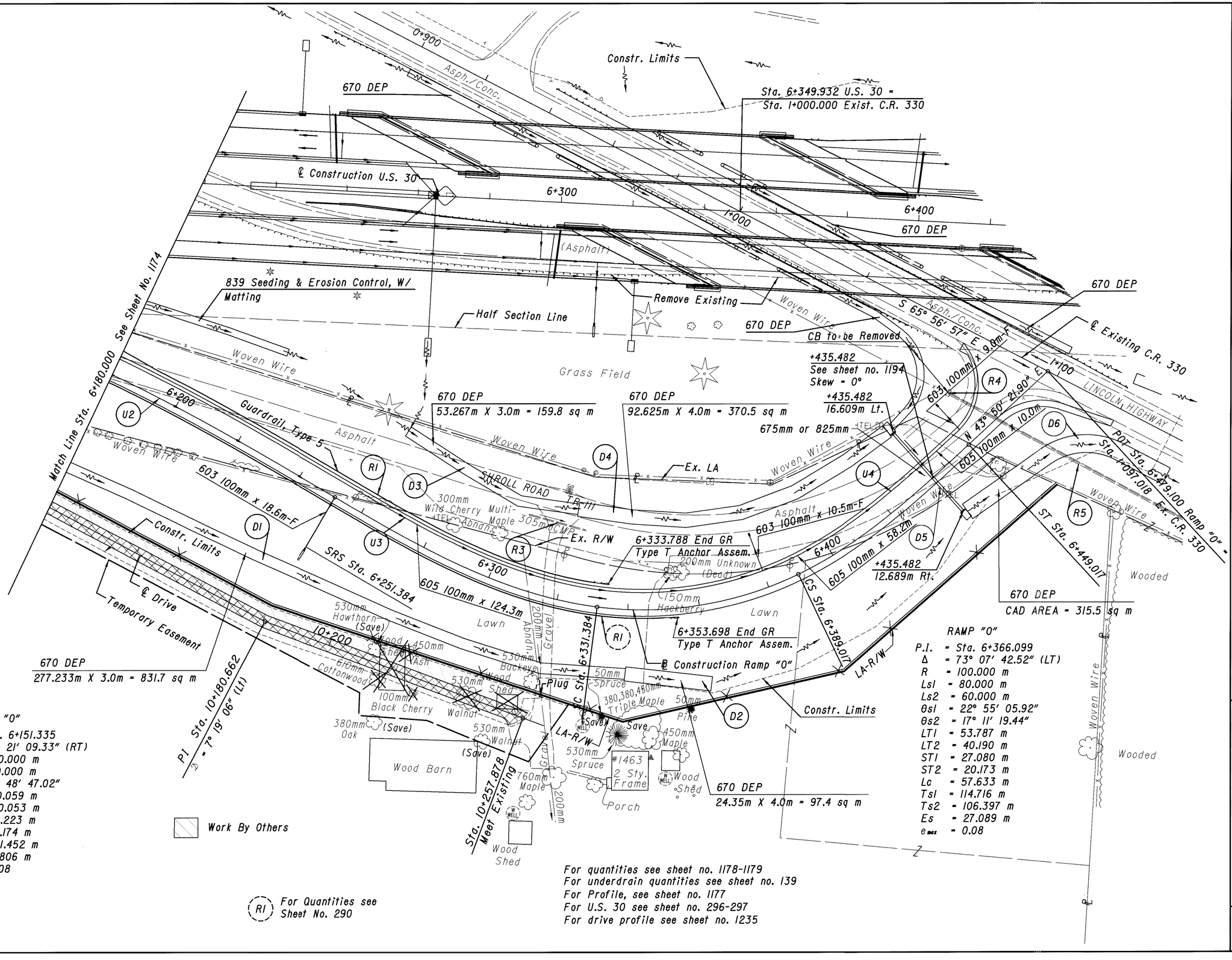
1174
2116

CALCULATED JGB
CHECKED REA

PROFILE - RAMP O
STA. 5+901.325 TO STA. 6+180

WYA/CRA-30-28.009/0.000

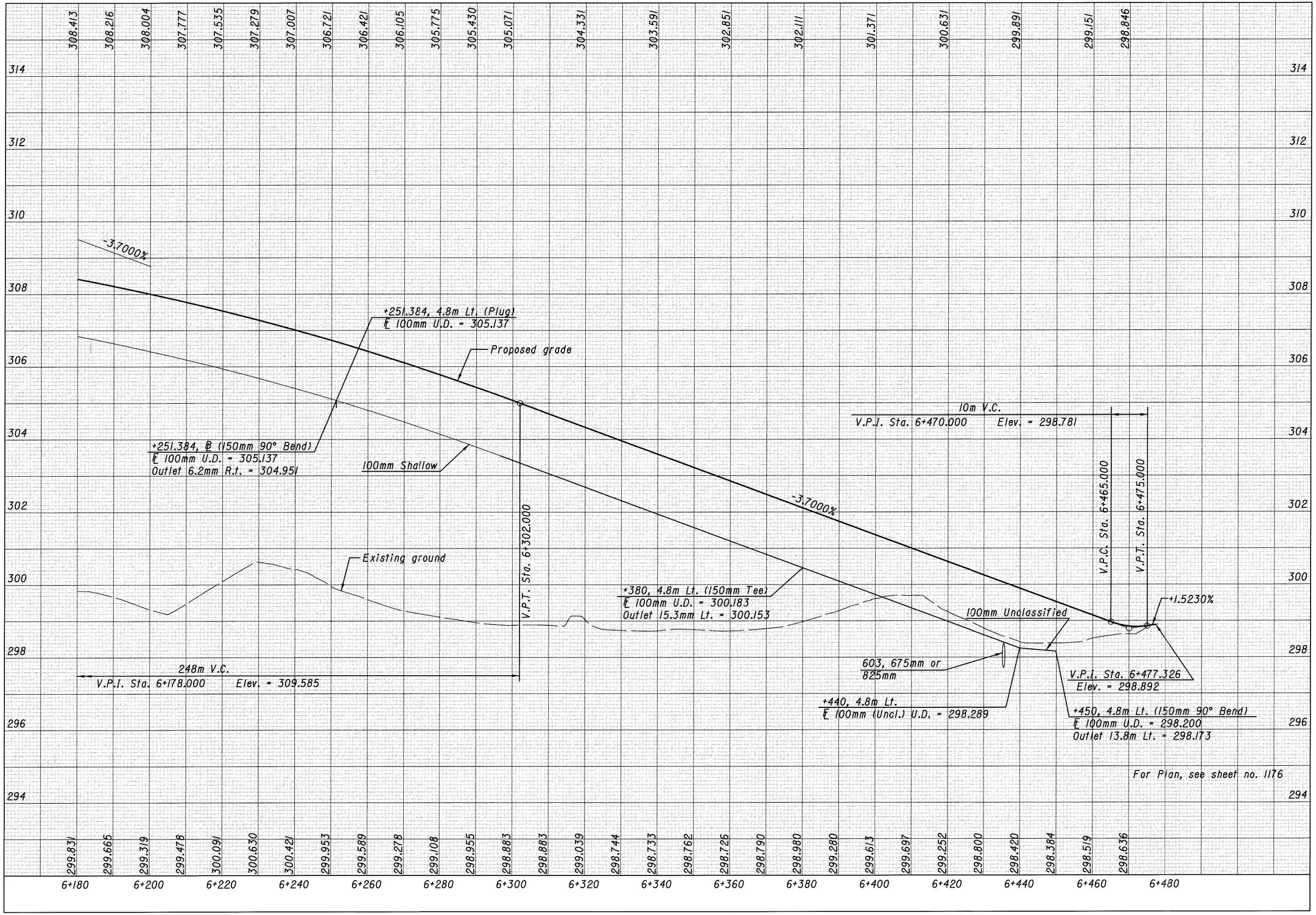



0+900
Asph./Conc.
Constr. Limits
670 DEP
Sta. 6+349.932 U.S. 30 =
Sta. 1+000.000 Exist. C.R. 330
℄ Construction U.S. 30
6+300
1+000
6+400
670 DEP
(Asphalt)
839 Seeding & Erosion Control, W/ Matting
Half Section Line
Remove Existing
Woven Wire
670 DEP
CB to be Removed
S 65° 56' 57" E 9.8m-F
Asph./Conc.
℄ Existing C.R. 330
1+100
LINCOLN HIGHWAY
+435.482
See sheet no. 1194
Skew = 0°
+435.482
16.609m Lt.
675mm or 825mm CMP
603 100mm x 9.8m-F
R4
603 100mm x 21.90m-F
N 43° 50' 10.0m
D6
605 100mm x 10.0m
POT Sta. 1+097.018
POT Sta. 6+479.100 Ramp "O"
Ex. C.R. 330
Match Line Sta. 6+180.000 See Sheet No. 1174
U2
6+200
Guardrail, Type 5
Asphalt
Woven Wire
670 DEP
53.267m X 3.0m = 159.8 sq m
670 DEP
92.625m X 4.0m = 370.5 sq m
R1
D3
D4
Ex. LA
SHROLL ROAD
TR-111
300mm Wild Cherry Multi-Maple ATEL Abndns
305mmCMP
U4
603 100mm x 10.5m-F
Asphalt
Woven Wire
D1
603 100mm x 18.6m-F
U3
R3
Ex. R/W
6+333.788 End GR
Type T Anchor Assem.
200mm Unknown (Dead)
6+300
6+400
605 100mm x 58.2m
+435.482
12.689m Rt.
D5
CS Sta. 6+389.017
ST Sta. 6+449.017
R5
Woven Wire
Wooded
Constr. Limits
℄ Drive
Temporary Easement
SRS Sta. 6+251.384
605 100mm x 124.3m
530mm Hawthorn (Save)
10+200
530mm Lawn
200mm Abndn Level Grade
6+331.384
R1
6+353.698 End GR
Type T Anchor Assem.
150mm Hackberry
Lawn
CS Sta. 6+389.017
670 DEP
CAD AREA = 315.5 sq m
Wooded
670 DEP
277.233m X 3.0m = 831.7 sq m
610mm Cottonwood
100mm Black Cherry
530mm Ash
530mm Walnut
530mm Buckeye
Wood Shed
℄ Construction Ramp "O"
50mm Spruce
380,380,450mm Triple Maple
50mm Pine
Plug
LA-R/W
Constr. Limits
D2
PI Sta. 10+180.662
Δ = 7° 19' 06" (LT)
380mm Oak
(Save)
530mm Walnut
(Save)
Wood Barn
530mm Spruce
#1463 2 Sty. Frame
Porch
450mm Maple
Wood Shed
760mm Maple
200mm
Sta. 10+257.878 Meet Existing
Wood Shed
Work By Others
RAMP "O"
P.I. = Sta. 6+151.335
Δ = 20° 21' 09.33" (RT)
R = 330.000 m
Ls2 = 90.000 m
θs2 = 7° 48' 47.02"
LT2 = 60.059 m
ST2 = 30.053 m
Lc = 72.223 m
Ts1 = 62.174 m
Ts2 = 101.452 m
Es = 5.806 m
e max = 0.08
RAMP "O"
P.I. = Sta. 6+366.099
Δ = 73° 07' 42.52" (LT)
R = 100.000 m
Ls1 = 80.000 m
Ls2 = 60.000 m
θs1 = 22° 55' 05.92"
θs2 = 17° 11' 19.44"
LT1 = 53.787 m
LT2 = 40.190 m
ST1 = 27.080 m
ST2 = 20.173 m
Lc = 57.633 m
Ts1 = 114.716 m
Ts2 = 106.397 m
Es = 27.089 m
e max = 0.08
(R1) For Quantities see Sheet No. 290
For quantities see sheet no. 1178-1179
For underdrain quantities see sheet no. 139
For Profile, see sheet no. 1177
For U.S. 30 see sheet no. 296-297
For drive profile see sheet no. 1235
N
0 10 20
HORIZONTAL SCALE IN METERS
CALCULATED JGB
CHECKED REA
PLAN - RAMP O
STA. 6+180 TO STA. 6+479.100
WYA/CRA-30-28.009/0.000
1176
2116

CALCULATED JGB
CHECKED REA

PROFILE - RAMP O
STA. 6+180 TO STA. 6+479.100

WYA/CRA-30-28.009/0.000



REF NO.	SHEET NO.	STATION	SIDE	202										SPECIAL		606									830		622	606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		RAMP O																															
R1	1174	6+143.774 TO 6+333.788	LT														179.070					1		1									
R2	1174	6+015.083	RT												1																		
R3	1176	6+304.682 TO 6+323.734	LT		16.0																												
R4	1176	6+454.642	LT									1																					
R5	1176	6+454.647 TO 6+479.587	RT		76.3																												
TOTALS CARRIED TO SUB-SUMMARY					92.3							1			1		179.070					1		1								

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

1178
2116

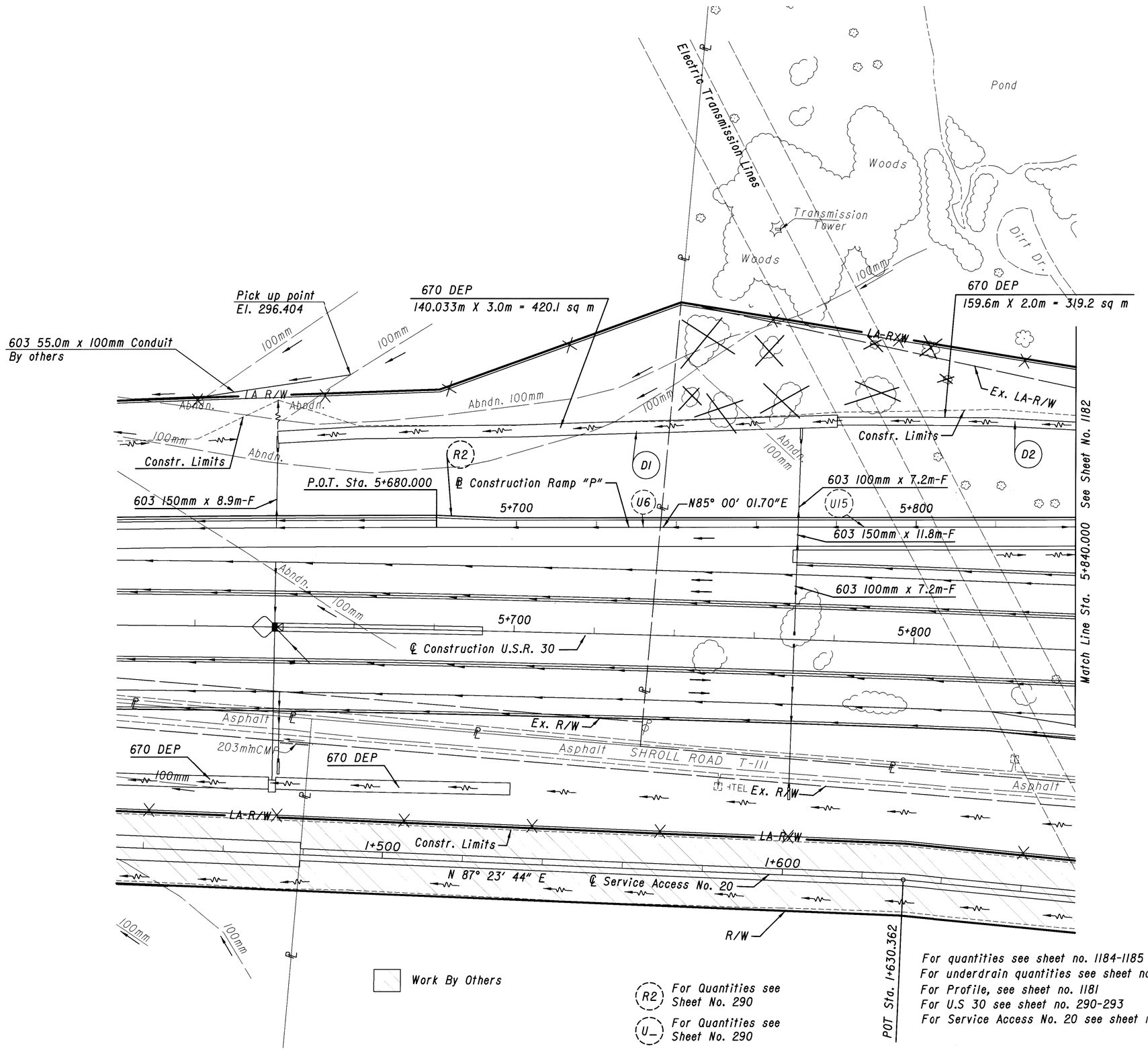
REF NO.	SHEET NO.	STATION	SIDE	601 RIPRAP USING 150 MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 675 MM CONDUIT, TYPE A, 706.02, OR 825 MM, 707.01, OR 707.09 (13MM CORR.), OR 707.21 (METER)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY (EACH): 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
D1	1174	6+062.45 TO 6+340.00	RT				831.7				
D2	1176	6+340.00 TO 6+360.00	RT				97.4				
D3	1176	6+2640.00 TO 6+320.00	LT				159.8				
D4	1176	6+320.00 TO 6+434.542	LT				370.5				
D5	1176	6+435.482	LT & RT	6.3	1.18	29.3		4.5			
D6	1176	6+436.356 "0" TO 1+140.00 (CR-330)	RT				315.5				
D7	1174	6+134.82 TO 6+156.22	LT				45.1				
D8	1174	6+156.22 TO 6+220.00	LT					135.4			
		TOTALS CARRIED TO SUB-SUMMARY		6.3	1.18	29.3	1820.0	139.9			
											TOTALS

CALCULATED AM
CHECKED REA

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

1179
2116



N

0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED JGB
CHECKED REA

PLAN - RAMP P
STA. 5+589.663 TO STA. 5+840

WYA/CRA-30-28.009/0.000

1180
2116

CALCULATED JGB
CHECKED REA

PROFILE - RAMP P
STA. 5+589.663 TO STA. 5+840

304.032 304.213 304.397 304.582 304.770 304.960 305.152 305.346 305.735 306.124 306.513 306.897 307.064 307.209 307.331 307.430 307.506 307.560 307.591 307.599 307.584 307.547

316 314 312 310 308 306 304 302 300 298 296

Sta. 5+818.394, 4.8m Rt.
Low Wire Elev. = 316.457
Prop. Pav't. Elev = 307.676
Clearance = 8.781m

68m V.C.
V.P.I. Sta. 5+624.000 Elev. = 304.645

V.P.C. Sta. 5+590.000

V.P.T. Sta. 5+658.000

Sta. 5+680 25.575m Lt. US30 =
Sta. 5+680 Ramp "P"

+1.9460%

Proposed grade

+818.573, ℄ Rt.
℄ 100mm U.D. = 306.055
High Point

100mm Shallow

+770.378, ℄ Rt. (150mm Cross)
℄ 100mm U.D. = 305.784
Outlet 7.2m Lt. = 305.746

+1.8039%

V.P.I. Sta. 5+589.663 Elev. = 304.026

For Continuation
See Sheet No. 291

V.P.C. Sta. 5+733.000

254m V.C.
V.P.I. Sta. 5+860.000 Elev. = 309.238

Existing ground

For Plan, see sheet no. 1180

297.742 297.687 297.645 297.689 297.668 297.593 297.489 297.504 297.570 297.686 297.791 297.911 298.034 298.084 298.147 298.152 298.261 298.350 298.449 298.558 298.897 299.185 299.424 299.573 299.782 299.881 299.847

5+580 5+600 5+620 5+640 5+660 5+680 5+700 5+720 5+740 5+760 5+780 5+800 5+820 5+840

WYA/CRA-30-28.009/0.000

RAMP "P"
P.I. = Sta. 5+999.907
Δ = 44° 27' 34.44" (LT)
R = 120.000 m
Ls1 = 80.000 m
Ls2 = 60.000 m
θs1 = 19° 05' 54.94"
θs2 = 14° 19' 26.20"
LT1 = 53.647 m
LT2 = 40.132 m
ST1 = 26.952 m
ST2 = 20.120 m
Lc = 23.116 m
Ts1 = 88.421 m
Ts2 = 80.871 m
Es = 11.511 m
emax = 0.08

MATCH LINE A

Pond

Wooded

Stone Ruin

Dirt Dr.

LA-R/W

See Sheet No. 1180

Constr. Limits

N85° 00' 01.70"E

D2

U15

5+840.000

Match Line Sta. 5+840.000

5+900

670 DEP
159.6m X 2.0m = 319.2 sq m

TS Sta. 5+911.486

Woven Wire

Ex. LA-R/W

603 150mm x 9.2m-F

5+896.651
Begin GR

Type T Anchor Assembly

Woods

Asphalt

SHROLL ROAD T-III

Ditr Dr.

Ex. R/W

PC Sta. 5+901.325

LA-R/W

Constr. Limits

℄ Service Access Road No. 20

R/W

1+800

S 89° 18' 02" E

Electric Transmission Lines

Work By Others

Ex. LA

Constr. Limits

1.000 m

Sta. 0+382.156

0+400

Ex. Sign

S 65° 56' 57" E

Asph./Conc.

Woven Wire

Constr. Limits

0+500

℄ Exist. U.S. 30

MATCH LINE A

Ex. LA

Constr. Limits

Asph./Conc.

0+600

Woven Wire

Fill and Plug
Existing Conduit

℄ Exist. U.S. 30

R2 For Quantities see Sheet No. 290

U_ For Quantities see Sheet No. 290

For quantities see sheet no. 1184-1185
For underdrain quantities see sheet no. 139
For U.S. 30 see sheet no. 292-293
For Service Access No. 20 see sheet no. 1228
For profile see sheet no. 1183

R3

Catch Basin
to be Removed

1.000 m

Sta. 0+642.342

P.O.T. Sta. 6+108.580 Ramp "P" -
Sta. 0+695.632 Exist. U.S. 30

(Asphalt)

Constr. Limits

603 150mm x 9.2m-F

ST Sta. 6+074.601

6+100

0+700

+072.000
11.664m LT

N40° 32' 27.26"E

+072.000
See sheet no. 1205
Skew = 0°

+072.000
16.045m Rt.

S 65° 56' 57" E

Asph./Conc.

SC Sta. 6+014.601

CS Sta. 6+014.601

605 100mm x 110.3m

U1

℄ Construction Ramp "P"

675mm or 825mm

181mm

Exist. Ramp A

(Asphalt)

R2

D5

6+040.412
End GR 10.8m Rt.

Type B Anchor Assembly

R1

D4

D3

670 DEP 2.0m x
120.35m = 240.7 sq. m

670 DEP
63.333m X 3.0m = 187.0 sq m

6+000

℄ Construction U.S.R. 30

6+000

℄ Construction Ramp "0"

PT Sta. 6+107.625

Wooded

6+100

N 89° 41' 39" E

Well

#397

Septic Tank

Gravel Fill

Asphalt

Woven Wire

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED JGB
CHECKED REA

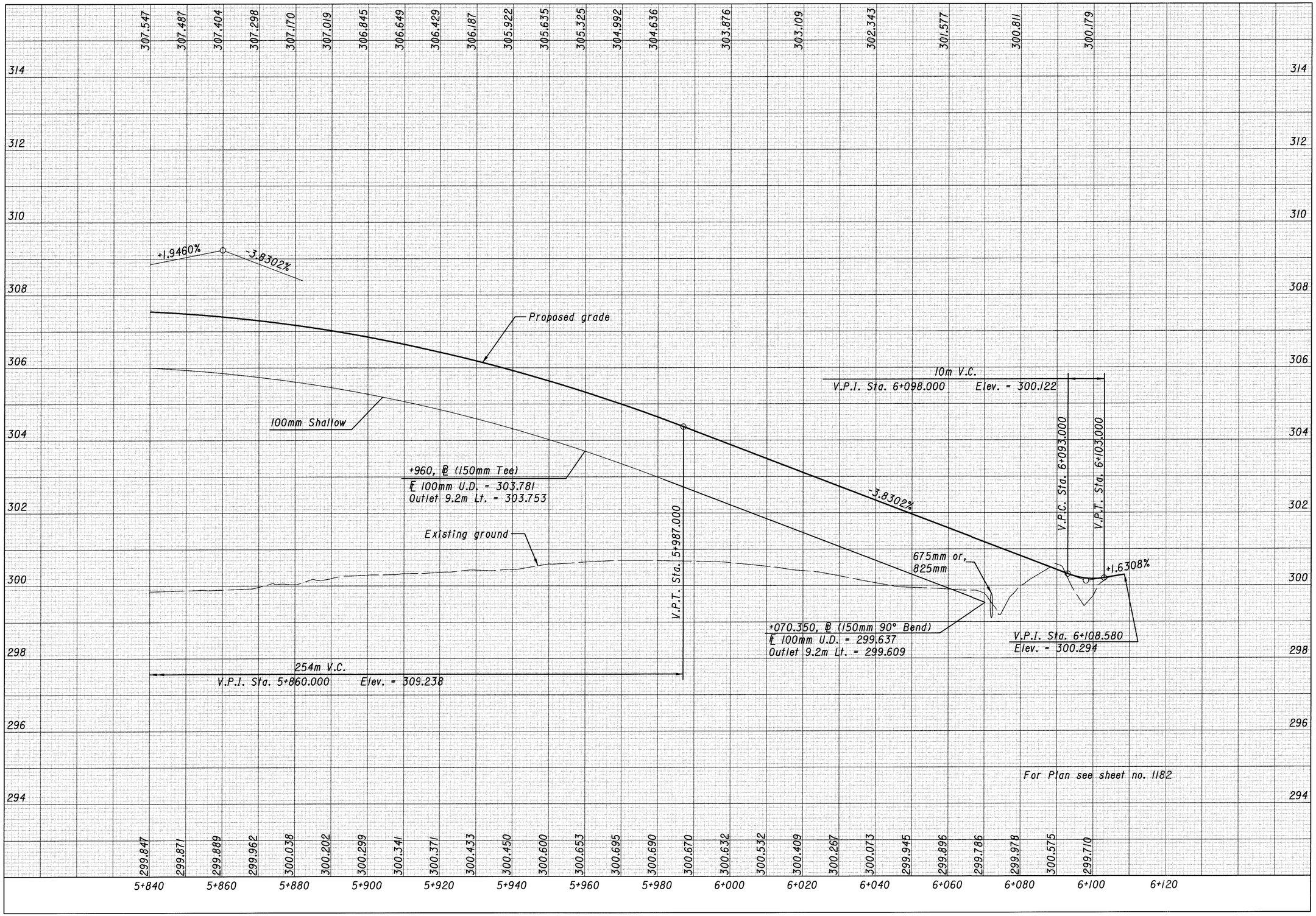
PLAN - RAMP P
STA. 5+840 TO STA. 6+108.580

WYA/CRA-30-28.009/0.000

1182
2116

CALCULATED JGB
CHECKED REA

PROFILE - RAMP P
STA. 5+840 TO STA. 6+108.580



WYA/CRA-30-28.009/0.000

1183
2116

REF NO.	SHEET NO.	STATION	SIDE	202											SPECIAL		606									830			622		606	
				CURB REMOVED	PIPE REMOVED 600 MM AND UNDER	PIPE REMOVED OVER 600 MM	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	STRUCTURE REMOVED		UNDERGROUND STORAGE TANK REMOVED	CATCH BASIN REMOVED	CATCH BASIN ABANDONED	SEPTIC TANK REMOVED	DRILLED WATER WELL ABANDONED	FILL AND PLUG EXISTING CONDUIT	GUARDRAIL, TYPE 5		GUARDRAIL BARRIER DESIGN, TYPE 5	FLARED END SECTION		ANCHOR ASSEMBLY, TYPE B-98	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY TYPE I		CURB, TYPE 6	CURB, TYPE 7		CONCRETE BARRIER, TYPE D		IMPACT ATTENUATOR, TYPE I-98 (BI-DIRECTIONAL)	
				METER	METER	METER	METER	METER			EACH	EACH	EACH	EACH	EACH	METER	METER		METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH		METER	METER		METER		EACH	
		RAMP P																															
R1	1182	5+896.651 TO 6+040.412	RT														140.970					1		1									
R2	1182	6+071.301 TO 6+100.339	RT		29.1																											
R3	1182	6+079.104 TO 6+100.740	LT									1				22.4																
TOTALS CARRIED TO SUB-SUMMARY					29.1							1				22.4	140.970					1		1							

CALCULATED JAG
CHECKED REA

ESTIMATED ROADWAY QUANTITIES

WYA/CRA-30-28.009/0.000

1184
2116

ESTIMATED DRAINAGE QUANTITIES

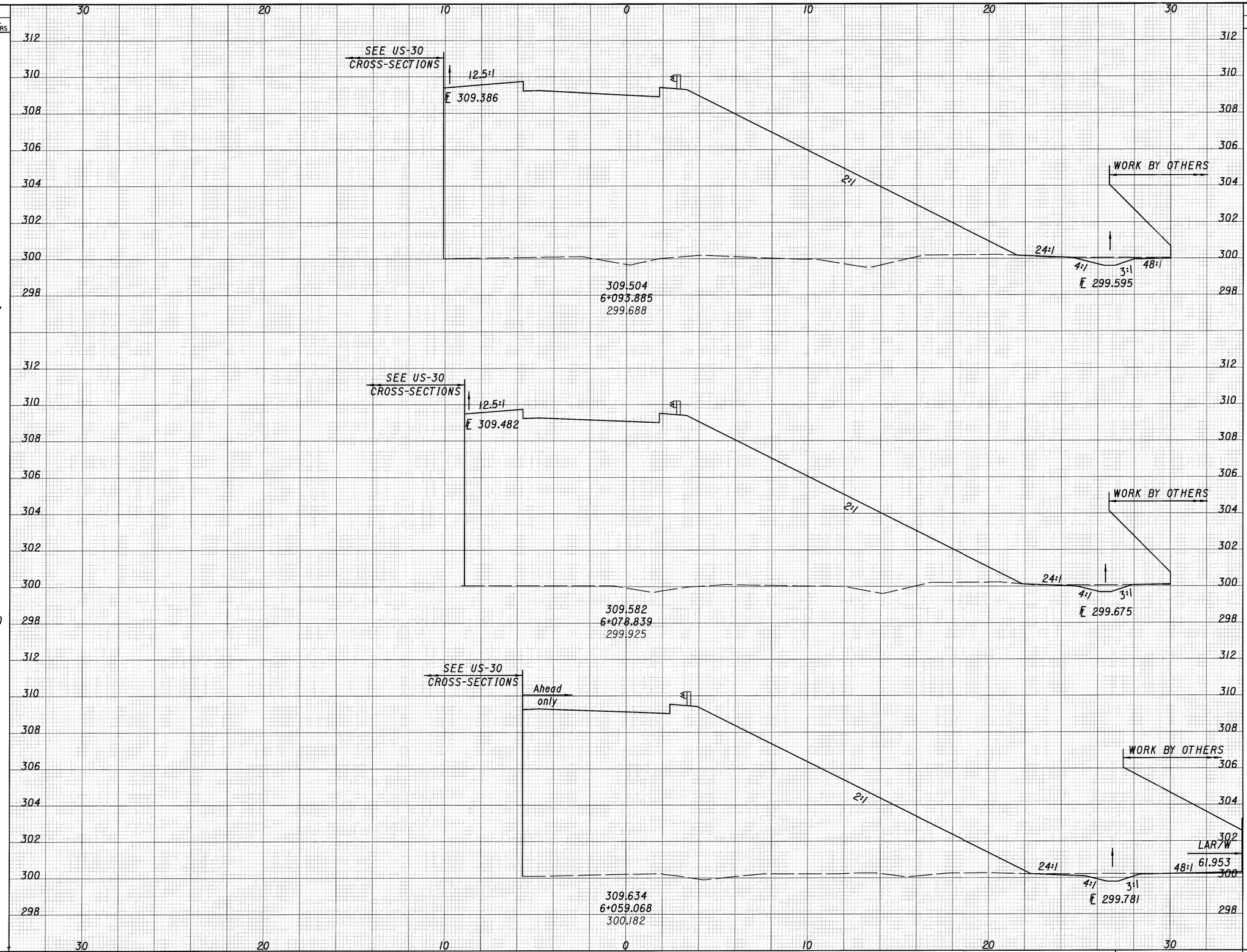
CALCULATED AM
CHECKED REA

WYA/CRA-30-28.009/0.000

1185
2116

REF NO.	SHEET NO.	STATION	SIDE	601 RIPRAP USING 150 MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 675 MM CONDUIT, TYPE A, 706.02, OR 825 MM, 707.01, OR 707.09 (13MM CORR.), OR 707.21 (METER)	670 DITCH EROSION PROTECTION (SQ M)	839 SEEDING AND EROSION CONTROL WITH REVEGETATION MAT (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	375 MM X 375 MM 22.5° BEND (EACH)	MASONRY COLLAR (EACH)
D1	1180	5+640.00 (US-30) TO 5+780.16 "P"	LT				420.1				
D2	1180	5+780.16 TO 5+940.21	LT				319.2				
D3	1182	5+900.695 TO 6+013.71	RT				240.7				
D4	1182	6+013.71 TO 6+071.107	RT				187.0				
D5	1182	6+072.00	LT & RT	5.4	1.18	27.7		4.5			
									TOTALS		
TOTALS CARRIED TO SUB-SUMMARY				5.4	1.18	27.7	1167.0	4.5			

SEEDING END WIDTH	SEEDING SQ. METERS
34.92	517
33.77	670
34.01	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1.11	209.77		
0.83	200.86		
1.08	172.17		
		15	3089
		19	3688

CALCULATED AM

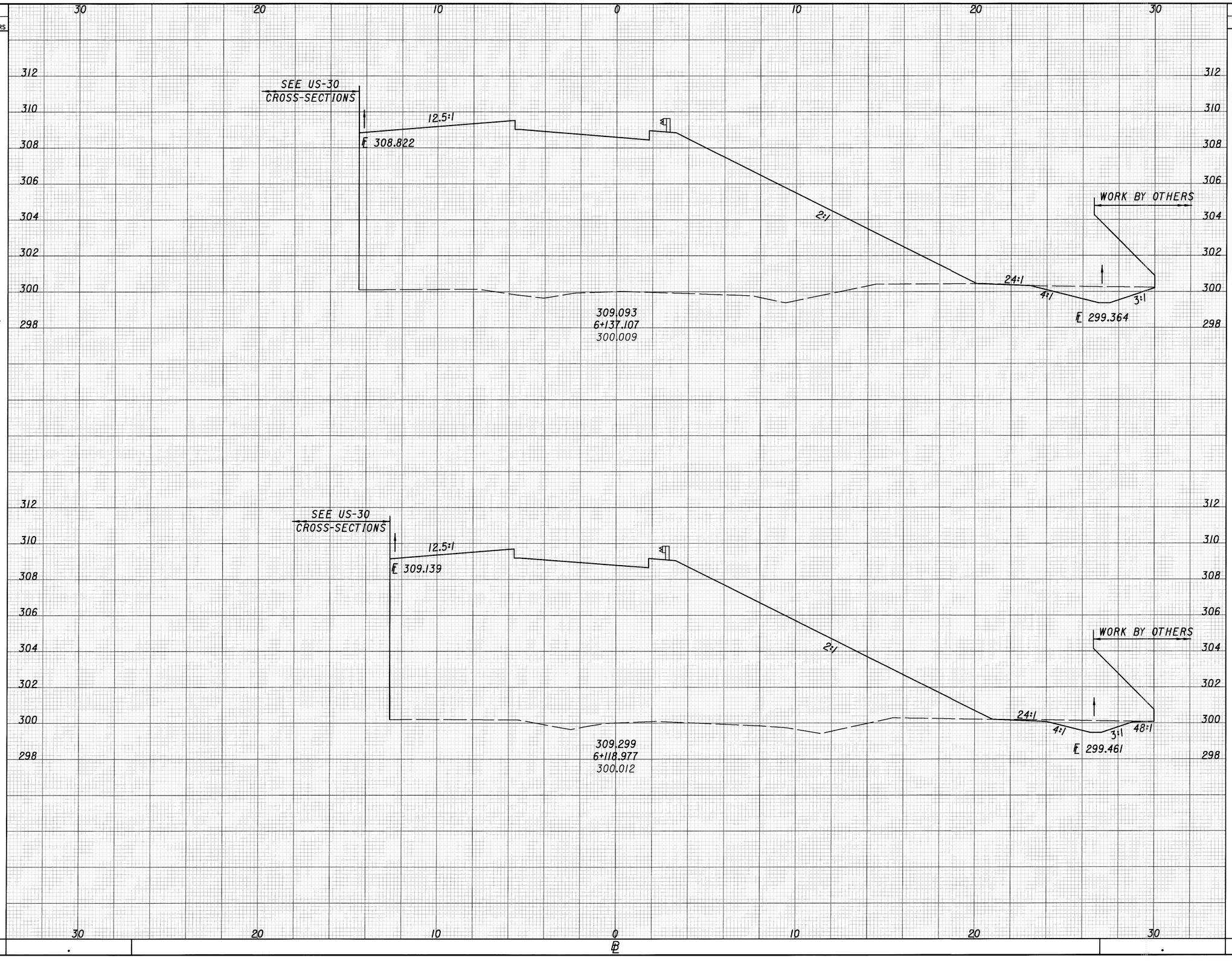
CHECKED REA

RAMP O CROSS SECTIONS
STA 6+059.068 TO STA 6+093.885

WYA/CRA-30-28.009/0.000

1186
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
40.03	703	3.50	235.88	51	4198
37.48	908	2.12	227.22	41	5482



CALCULATED AM

CHECKED REA

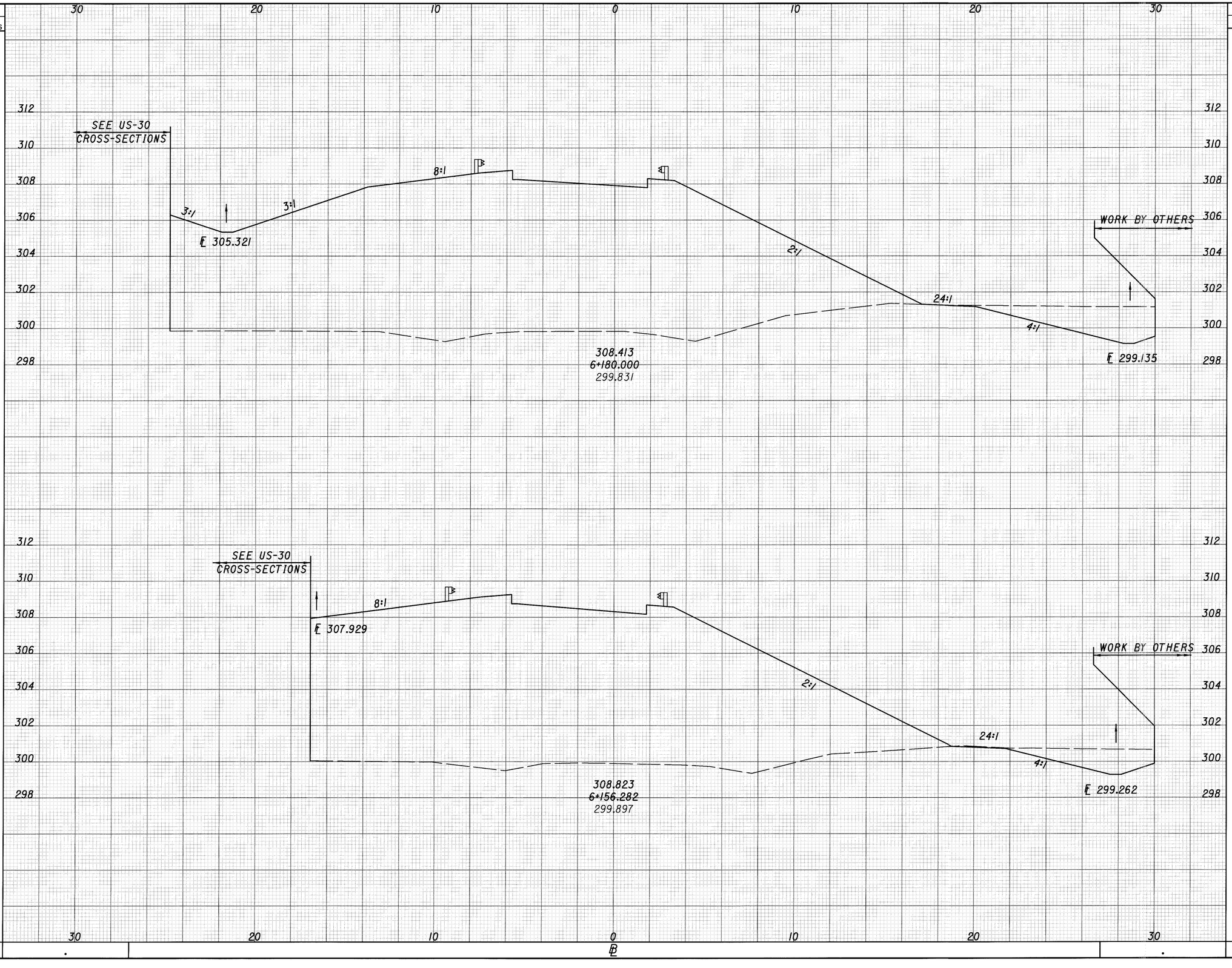
RAMP O CROSS SECTIONS

STA 6+118.977 TO STA 6+137.107

WYA/CRA-30-28.009/0.000

1187
2116

SEEDING	
END WIDTH	SQ. METERS
50.25	1097
42.24	789



END AREA		VOLUME	
CUT	FILL	CUT	FILL
12.04	273.68	228	6161
7.21	245.81	103	4618

CALCULATED AM

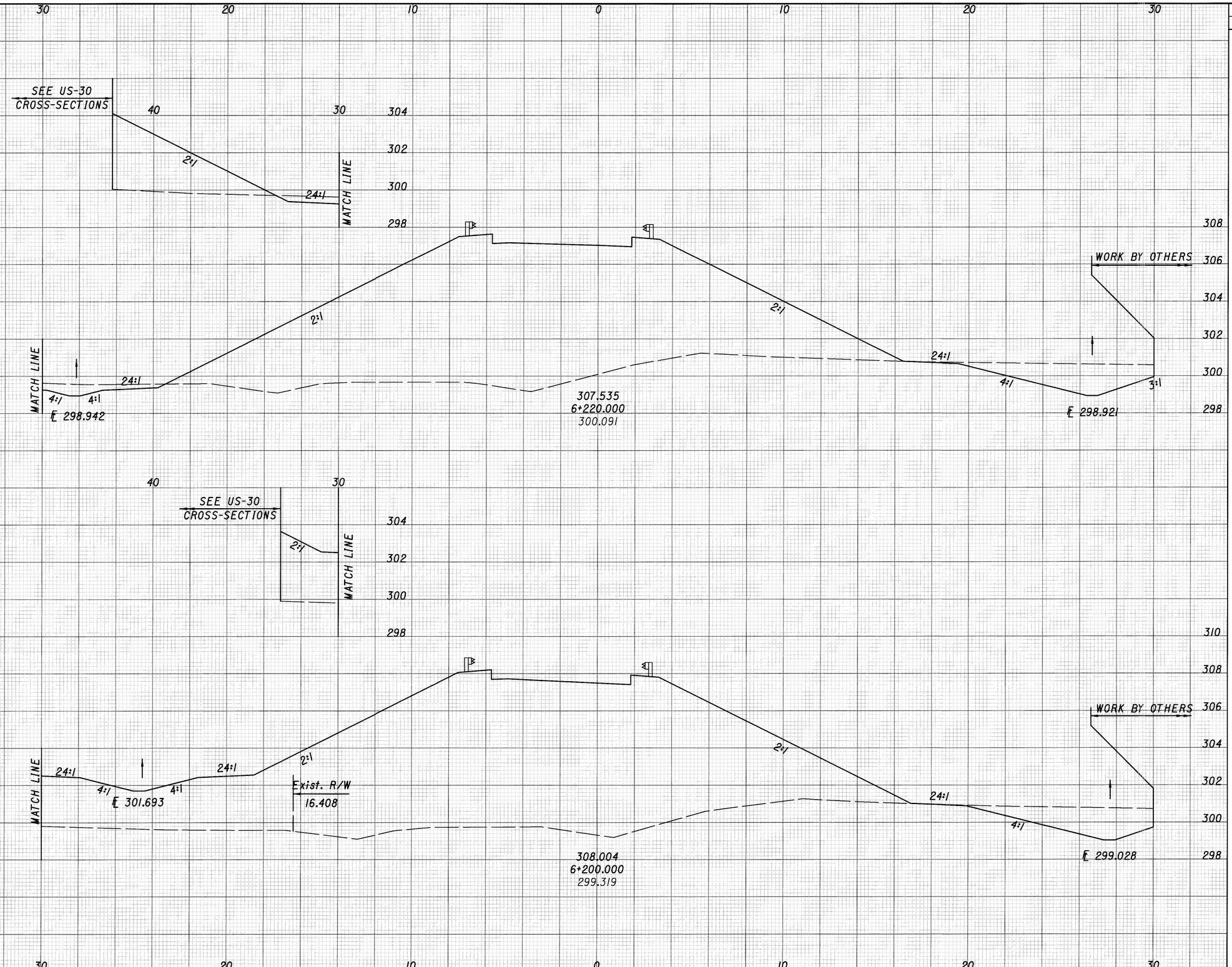
CHECKED REA

RAMP O CROSS SECTIONS
STA 6+156.282 TO STA 6+180.000

WYA / CRA-30-28.009 / 0.000

1188
2116

SEEDING	
END WIDTH	SQ. METERS
70.80	1308
60.01	1103



END AREA		VOLUME	
CUT	FILL	CUT	FILL
14.36	201.16		
10.52	237.94		
		249	4391
		226	5116

CALCULATED AM

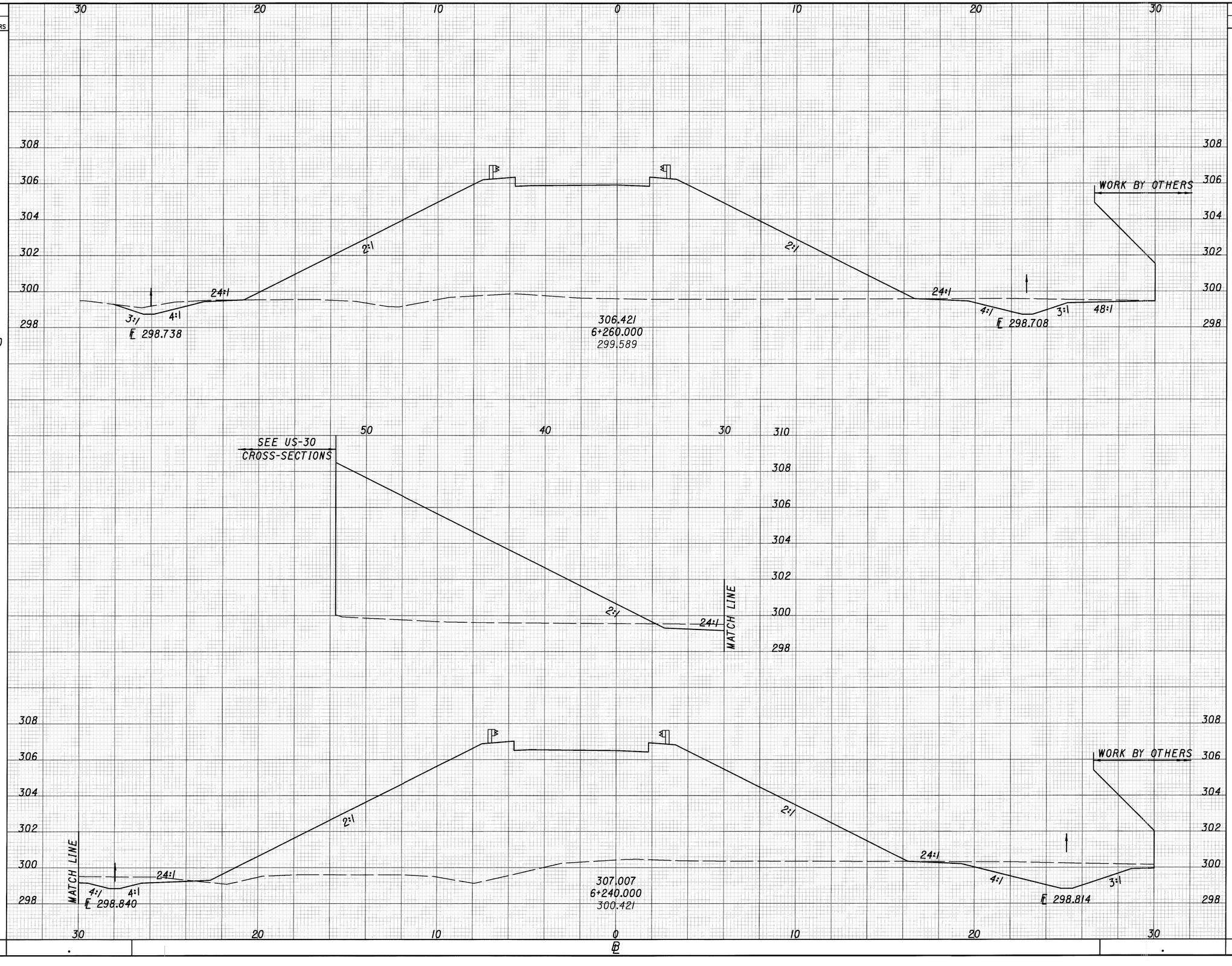
CHECKED REA

RAMP O CROSS SECTIONS
STA 6+200.000 TO STA 6+220.000

WYA / CRA-30-28.009 / 0.000

1189
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
57.83	1380	5.27	157.47	172	4022
80.16	1510	11.94	244.69	263	4459



CALCULATED AM

CHECKED REA

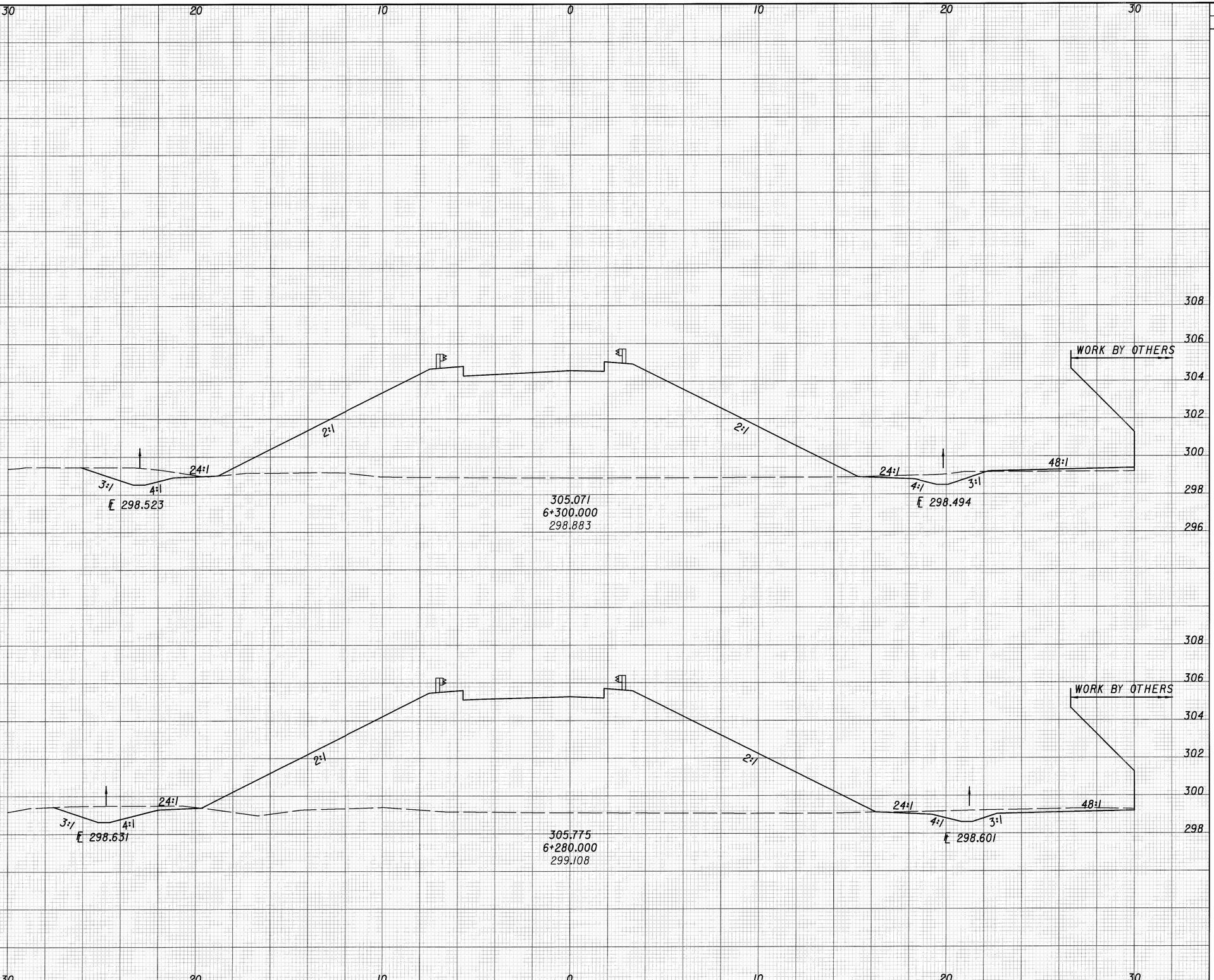
RAMP O CROSS SECTIONS

STA 6+240.000 TO STA 6+260.000

WYA/CRA-30-28.009/0.000

1190
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
55.67	1130	4.69	129.18	109	2765
57.31	1151	6.18	147.34	115	3048



CALCULATED AM

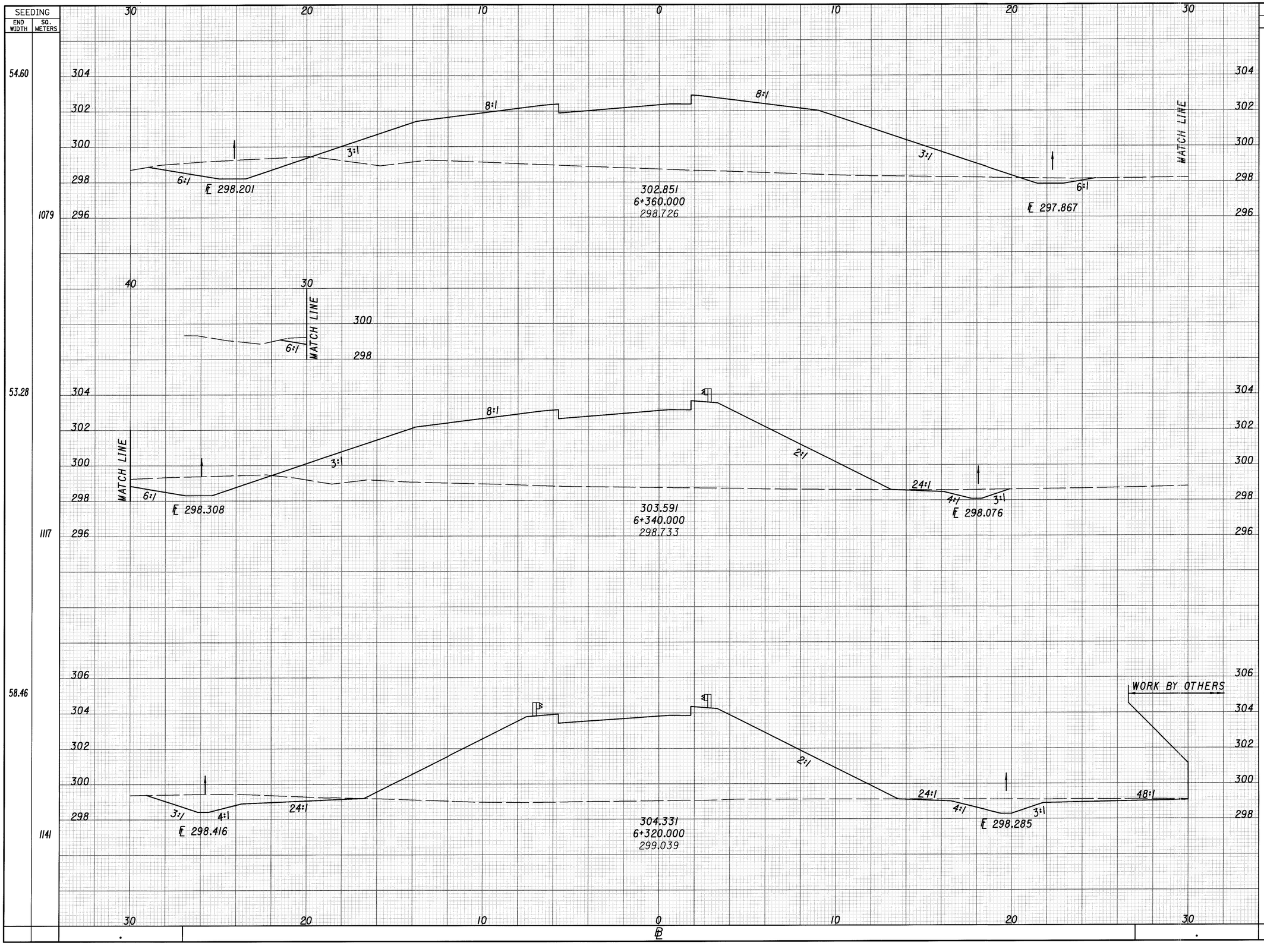
CHECKED REA

RAMP O CROSS SECTIONS
STA 6+280.000 TO STA 6+300.000

WYA / CRA-30-28.009 / 0.000

1191
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
54.60	1079	6.66	104.44	142	2102
53.28	1117	7.52	105.72	170	2058
58.46	1141	9.45	100.08	141	2293



CALCULATED AM

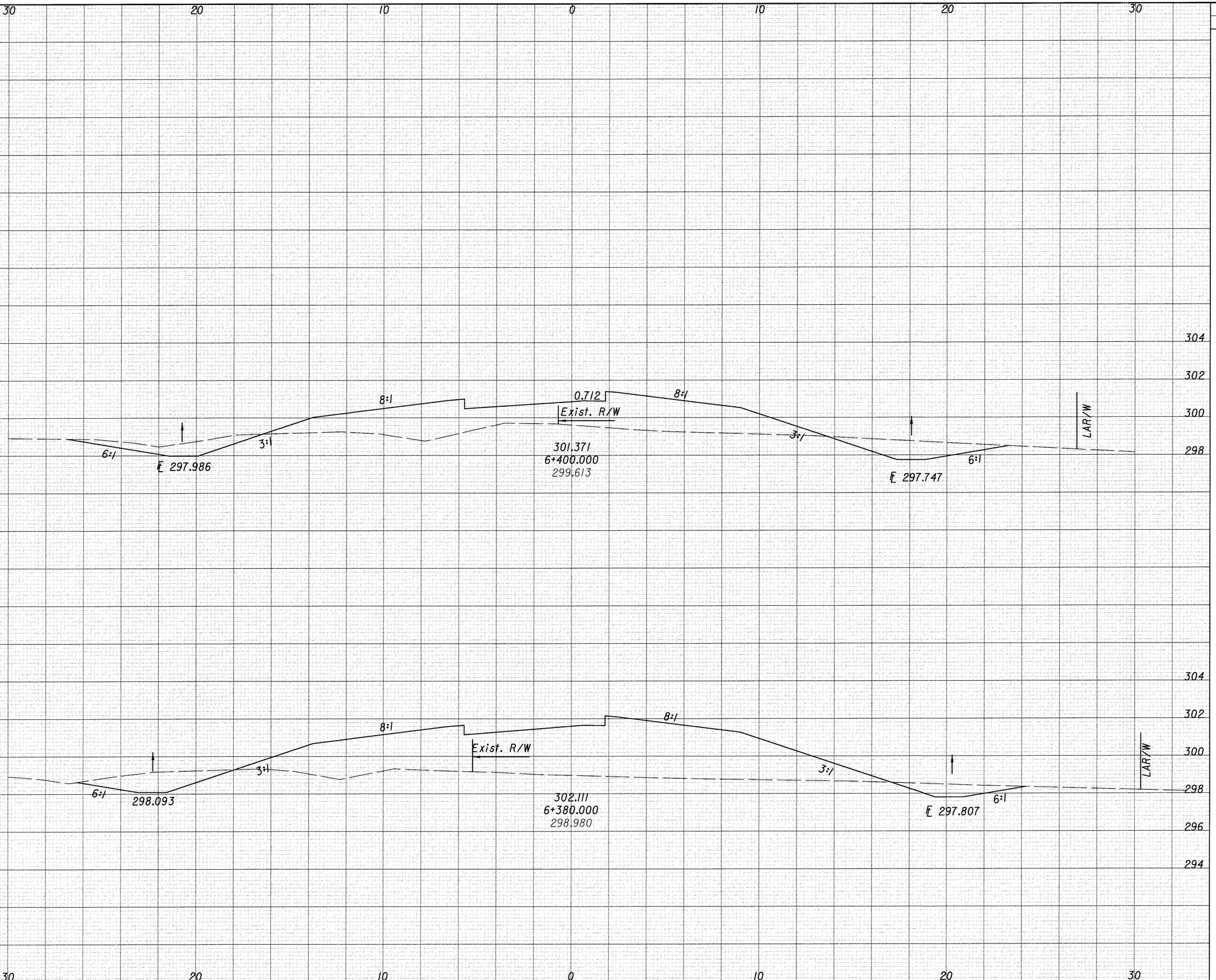
CHECKED REA

RAMP O CROSS SECTIONS
STA 6+320.000 TO STA 6+360.000

WYA / CRA-30-28.009 / 0.000

1192
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
51.32	1281	9.70	36.35	178	1045
76.78	1314	8.14	68.10	148	1725



CALCULATED AM

CHECKED REA

RAMP O CROSS SECTIONS
STA 6+380.000 TO STA 6+400.000

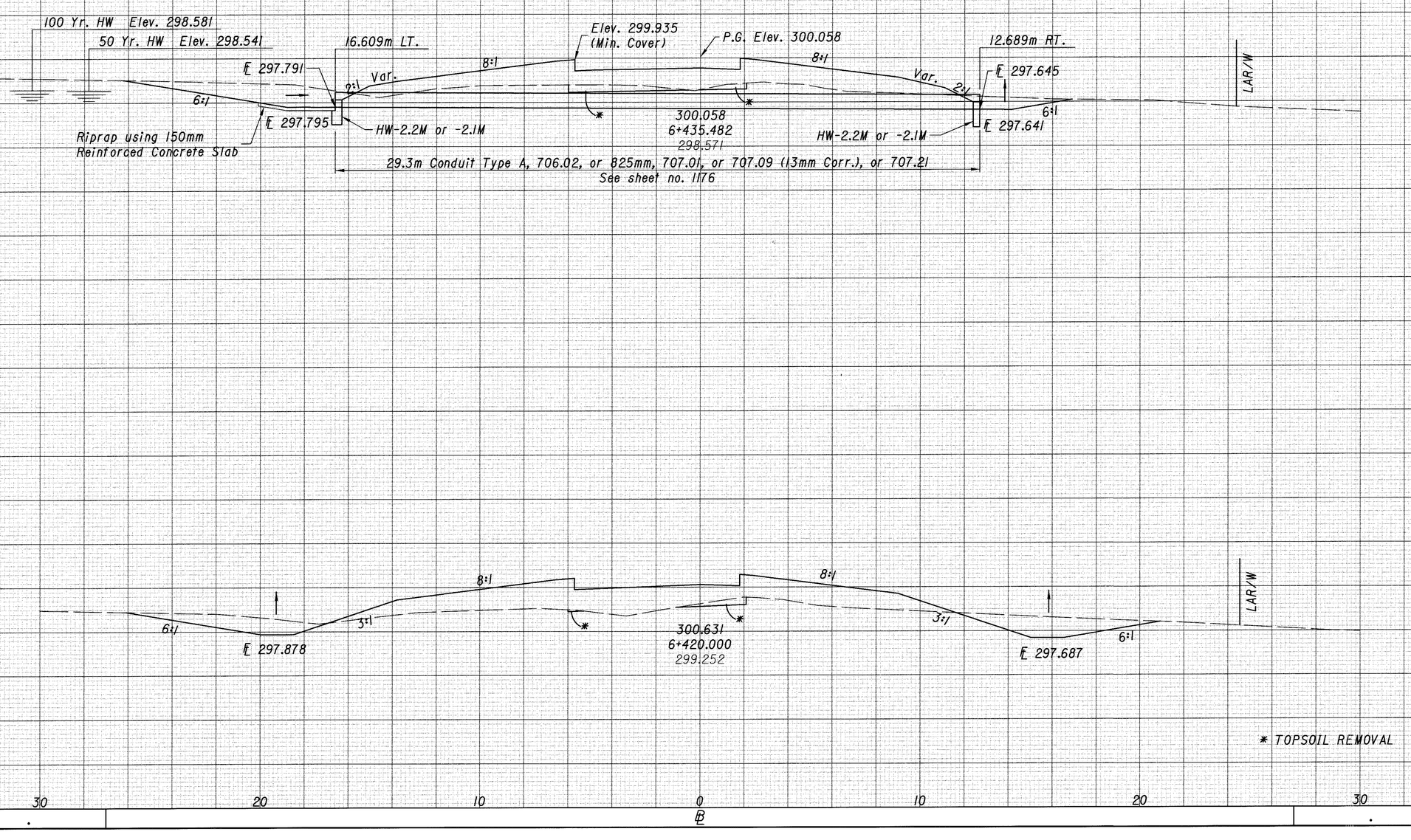
WYA/CRA-30-28.009/0.000

1193
2116

SEEDING	
END WIDTH	SQ. METERS
44.00	713
48.10	994

HYDRAULIC DESIGN DATA	
Drainage Area	= 3 ha
Q_{50}	= 0.61 cms
Q_{100}	= 0.71 cms
HW_{50}	= 298.54l
HW_{100}	= 298.58l
V_{50}	= 2.07 mps
V_{100}	= 1.87 mps

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	6.3	sq m	Riprap using 150mm Reinforced Concrete Slab
602	1.18	cu m	Concrete Masonry
603	29.3	m	675mm Conduit Type A, 706.02, or 825mm, 707.01, or 707.09 (13mm Corr.), or 707.21
839	4.5	sq m	Seeding and Erosion Control with Revegetation Mat
			~~Drainage quantities carried to sheet no.~~



END AREA		VOLUME	
CUT	FILL	CUT	FILL
8.37	21.92		
*1.64			
		135	353
		*13	
9.13	23.74		
0.00			
		188	601

CALCULATED AM

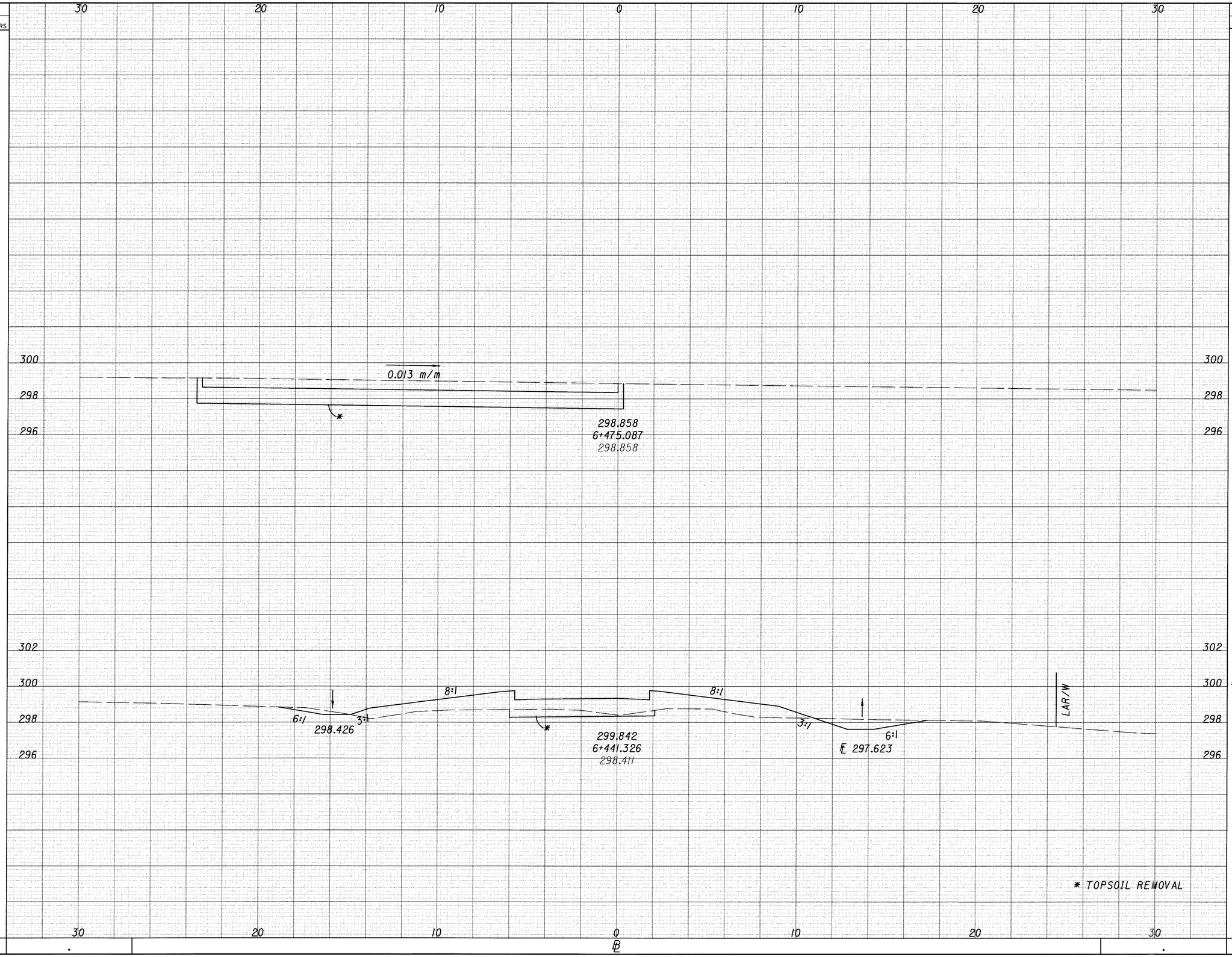
CHECKED REA

RAMP O CROSS SECTIONS
STA 6+420.000 TO STA 6+435.482

WYA / CRA-30-28.009 / 0.000

1194
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
		13.97	19.61		
0.00		*19.61			
				282	617
	609			*331	
36.07		2.71	16.93		
		*0.00			
	234			32	114
				*5	



CALCULATED AM

CHECKED REA

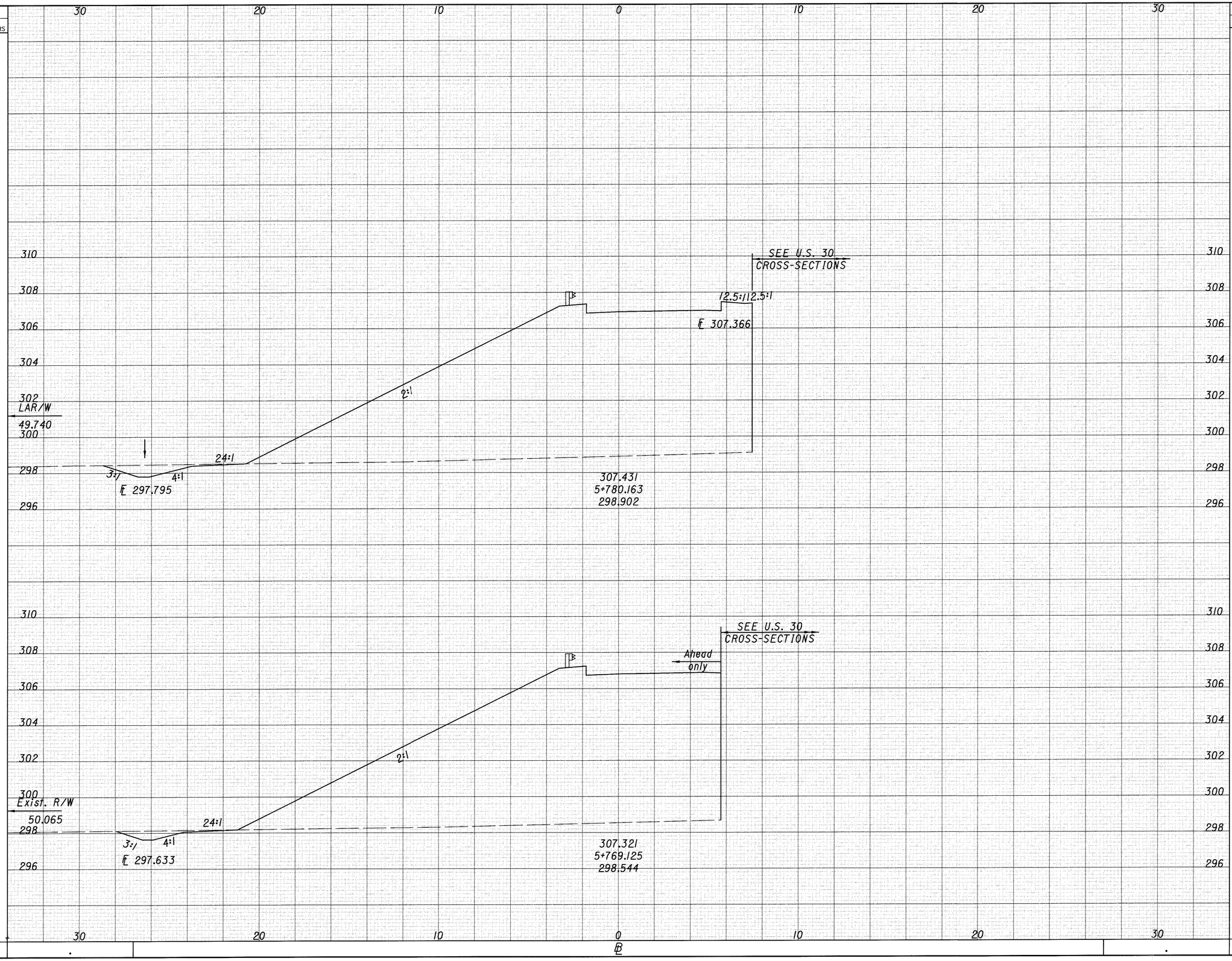
RAMP O CROSS SECTIONS

STA 6+441.326 TO STA 6+475.087

WYA/CRA-30-28.009/0.000

1195
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
34.52	366	2.12	160.57	19	1728
31.87		1.30	152.49		



CALCULATED AM

CHECKED REA

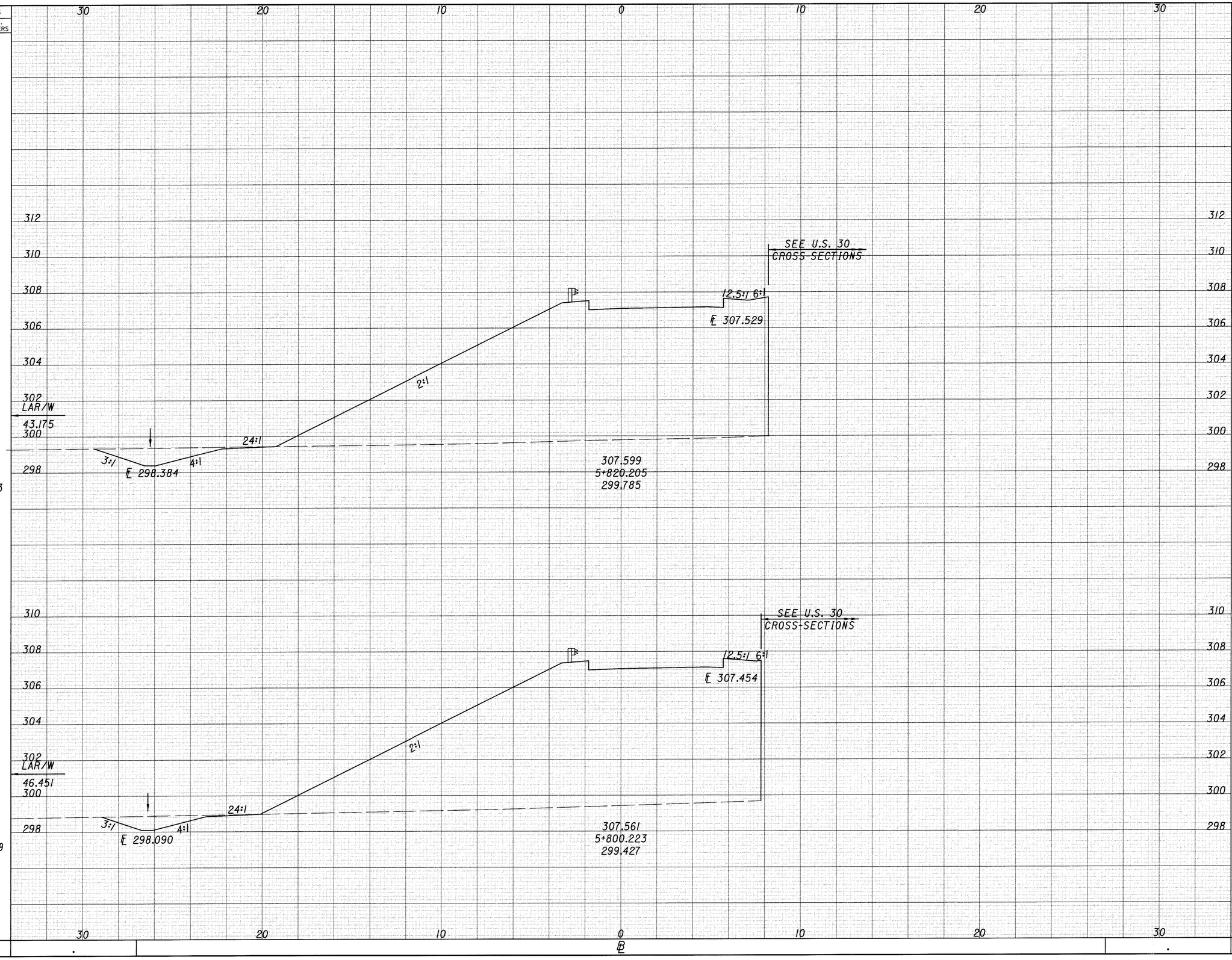
RAMP P CROSS SECTIONS

STA 5+769.125 TO STA 5+780.163

WYA / CRA-30-28.009 / 0.000

1196
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
36.20	713	4.04	146.89	68	2997
35.20	699	2.76	153.10	49	3146



CALCULATED AM

CHECKED REA

RAMP P CROSS SECTIONS
STA 5+800.223 TO STA 5+820.205

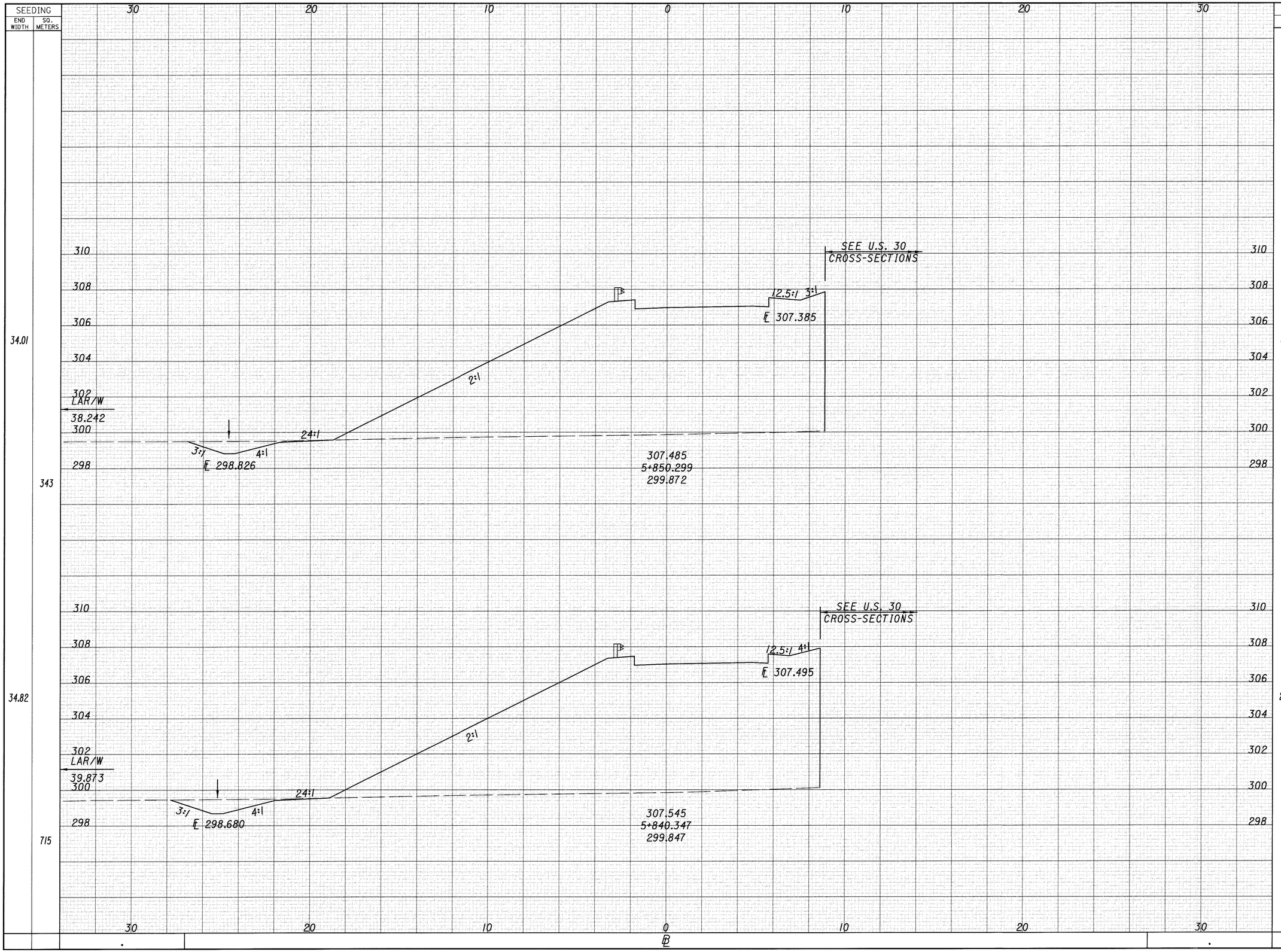
WYA / CRA-30-28.009 / 0.000

1197
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
34.01	343	2.14	145.15	24	1447
34.82	715	2.77	145.55	69	2945

CALCULATED AM

CHECKED REA



RAMP P CROSS SECTIONS
STA 5+840.347 TO STA 5+850.299

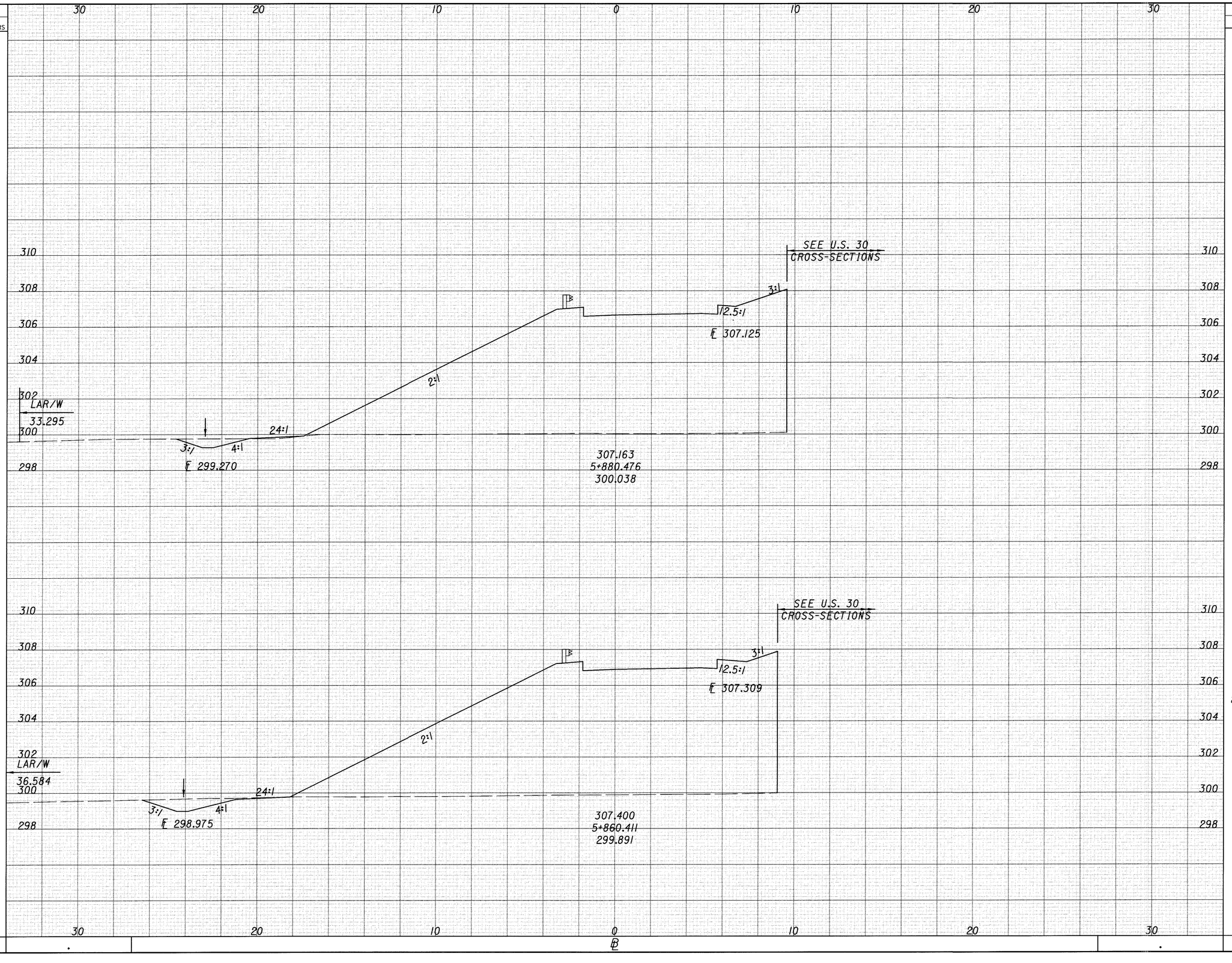
WYA / CRA-30-28.009 / 0.000

1198
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
32.06	660	1.14	137.14	34	2815
33.68	342	2.21	143.45	22	1459

CALCULATED AM

CHECKED REA

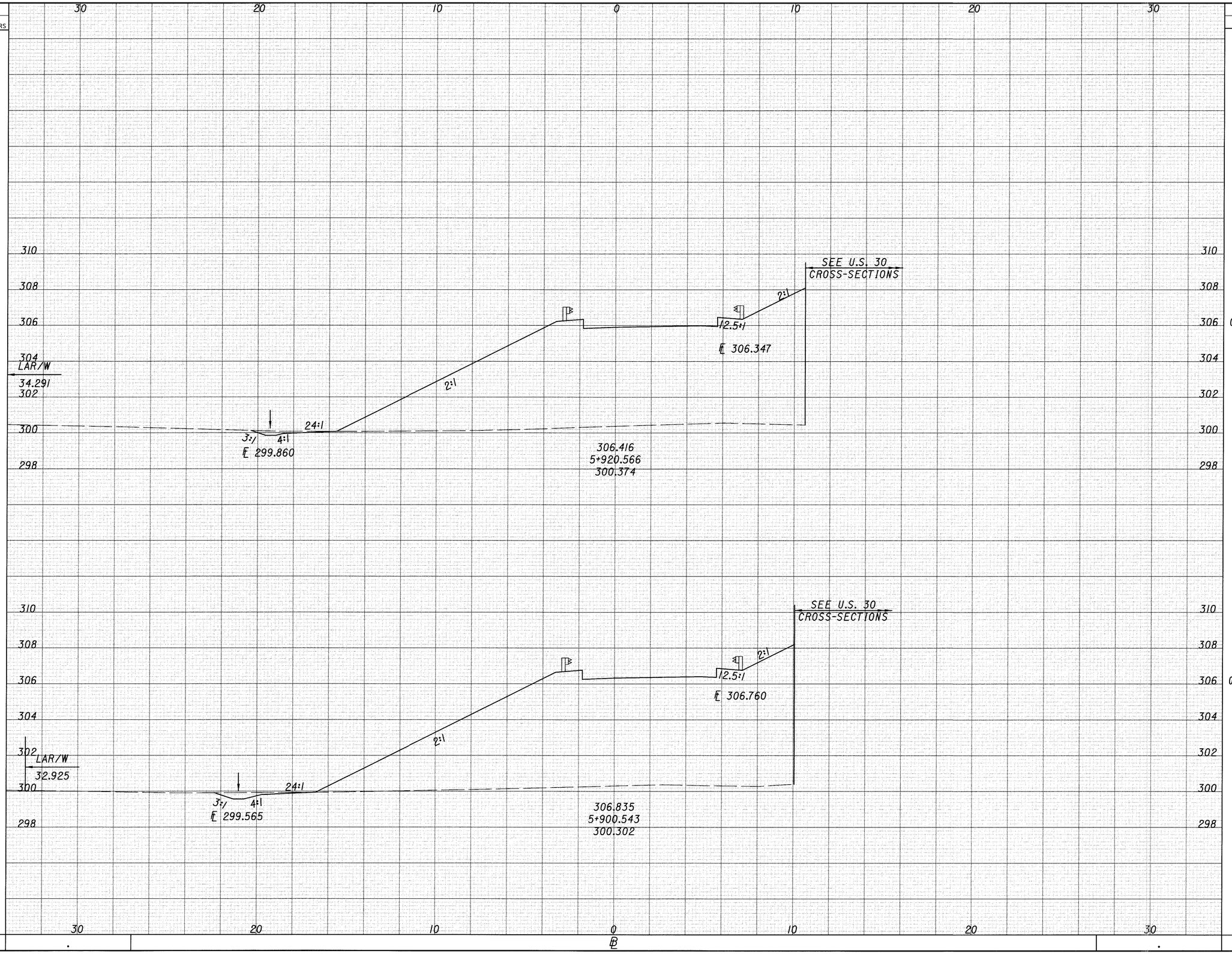


RAMP P CROSS SECTIONS
STA 5+860.411 TO STA 5+880.476

WYA/CRA-30-28.009/0.000

1199
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
28.68	590	0.50	118.75	13	2471
30.29	626	0.80	128.05	19	2661



CALCULATED AM

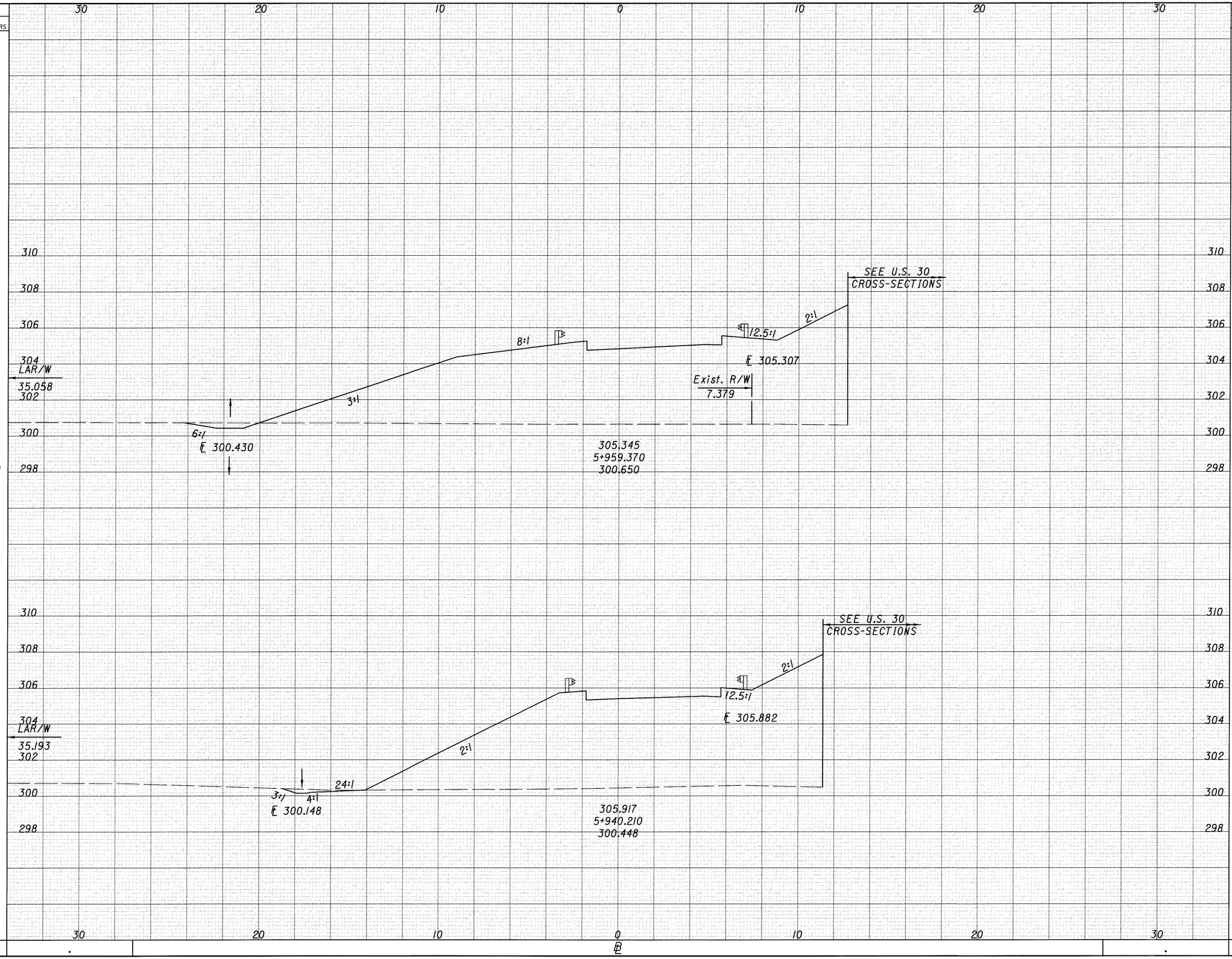
CHECKED REA

RAMP P CROSS SECTIONS
STA 5+900.543 TO STA 5+920.566

WYA/CRA-30-28.009/0.000

1200
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
33.92	590	0.82	119.26	12	2178	
27.62	553	0.46	108.07	9	2228	



CALCULATED AM

CHECKED REA

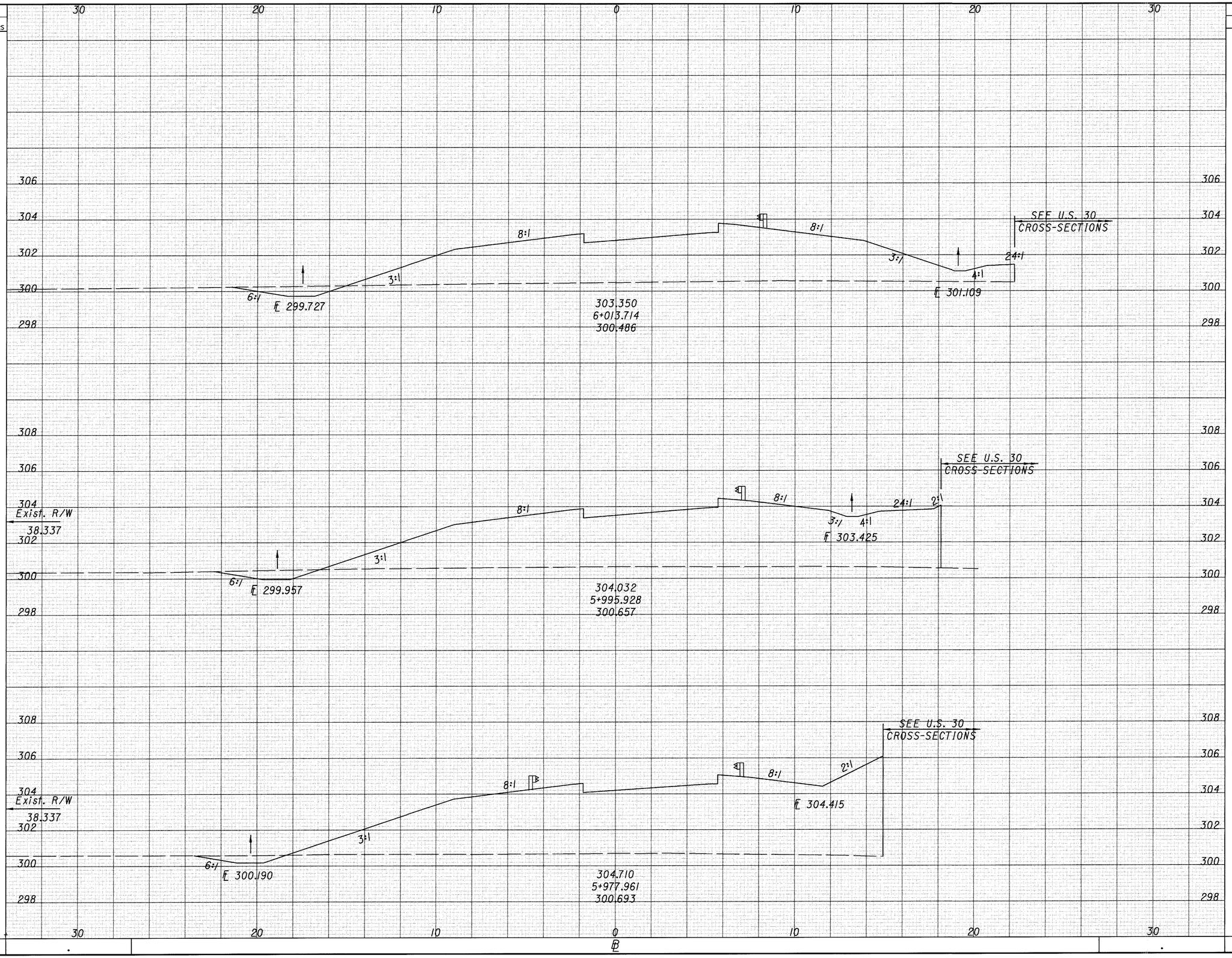
RAMP P CROSS SECTIONS

STA 5+940.210 TO STA 5+959.370

WYA/CRA-30-28.009/0.000

1201
2116

SEEDING END WIDTH	SEEDING SQ. METERS	
43.06	737	
39.82	699	
38.02	669	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2.18	73.76		
		36	1483
1.90	93.03		
		29	1796
1.32	106.86		
		20	2106

CALCULATED AM

CHECKED REA

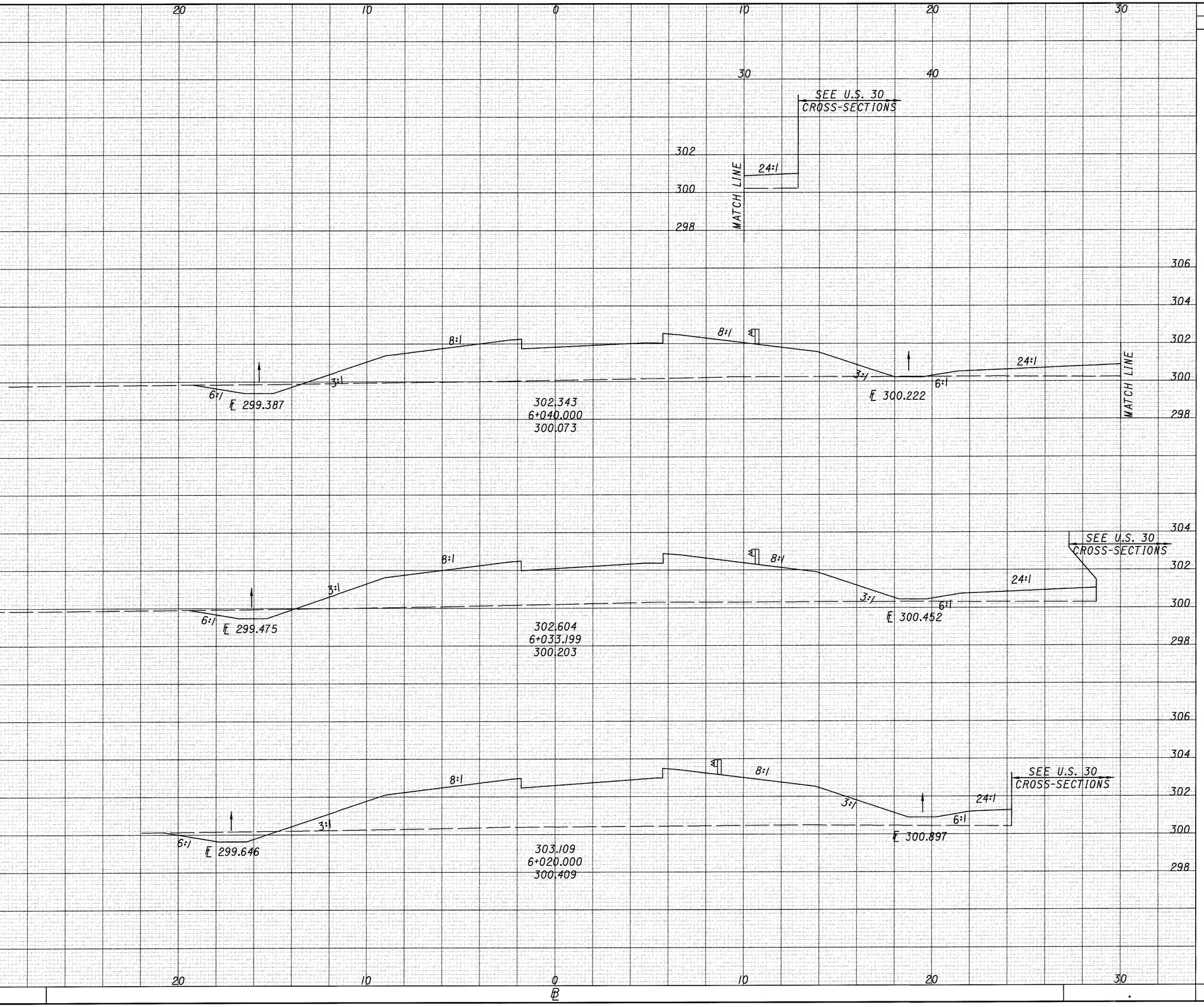
RAMP P CROSS SECTIONS

STA 5+977.961 TO STA 6+013.714

WYA/CRA-30-28.009/0.000

1202
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
65.52	384	1.78	54.21	12	384
47.40	606	1.66	58.69	24	843
44.38	275	1.97	68.98	13	449



CALCULATED AM

CHECKED REA

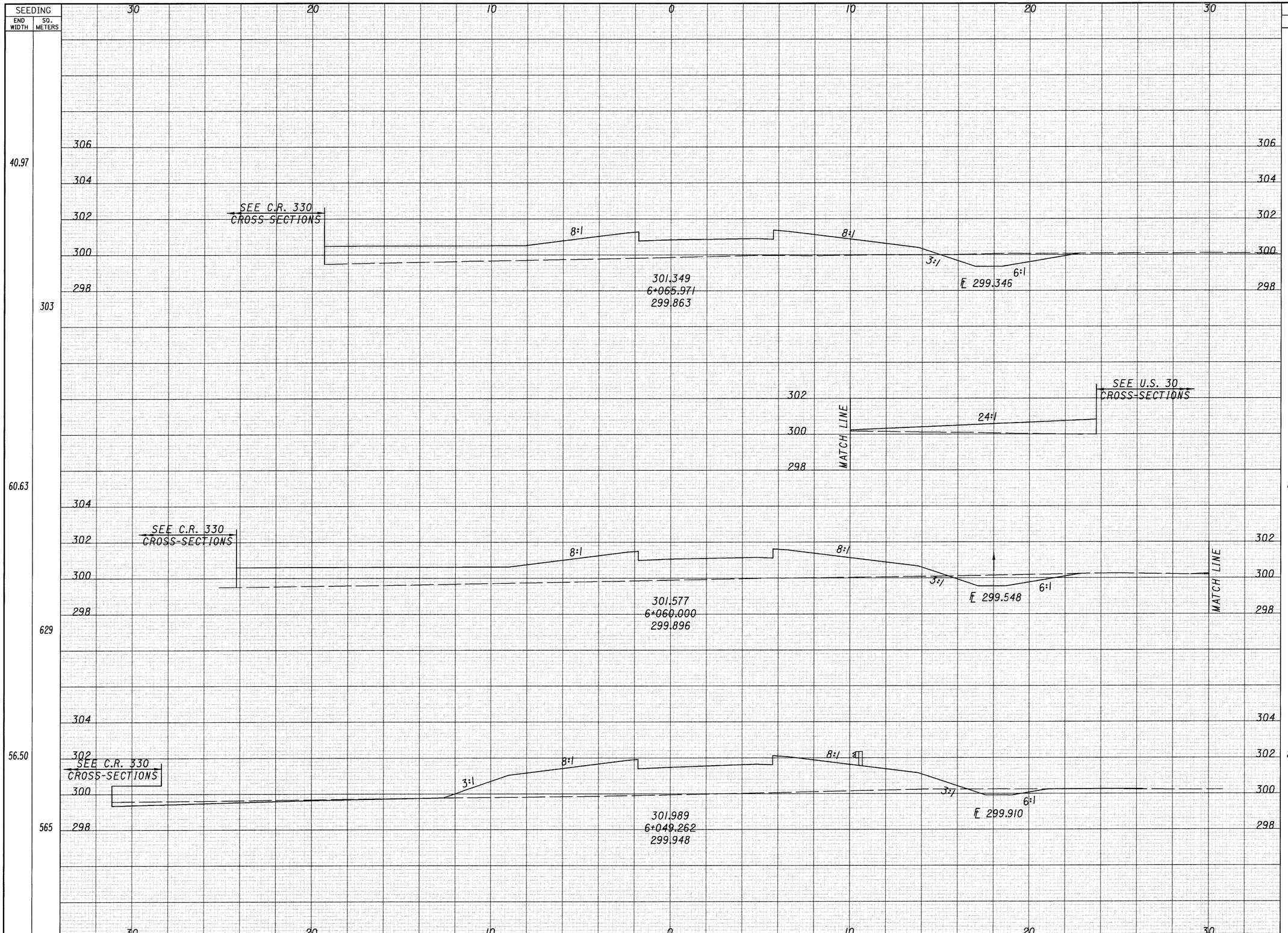
RAMP P CROSS SECTIONS

STA 6+020.000 TO STA 6+040.000

WYA/CRA-30-28.009/0.000

1203
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
40.97	303	3.31	32.16	18	242
60.63	629	2.68	49.04	29	473
56.50	565	2.75	39.14	21	432



CALCULATED AM

CHECKED REA

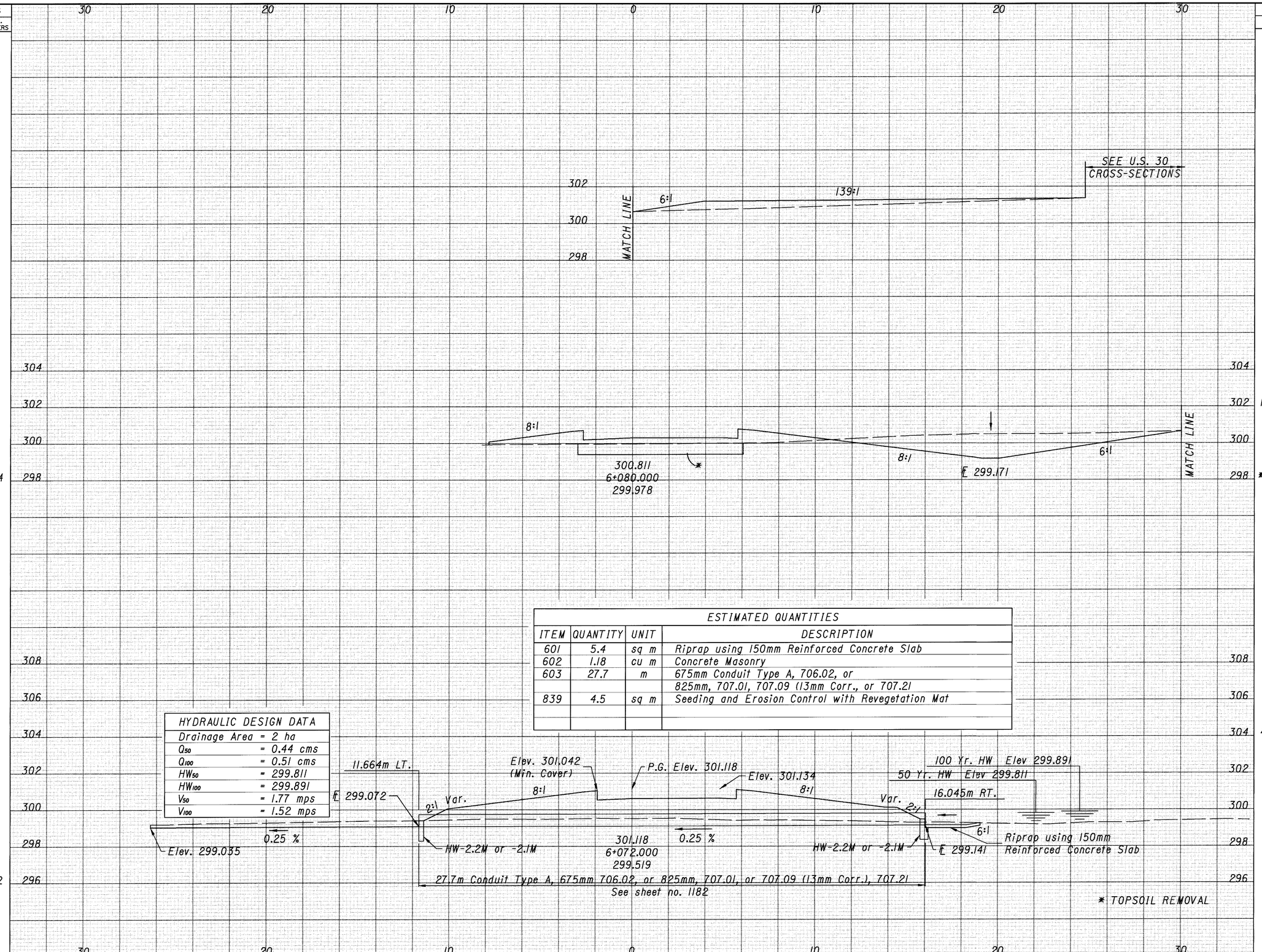
RAMP P CROSS SECTIONS

STA 6+049.262 TO STA 6+065.971

WYA/CRA-30-28.009/0.000

1204
2116

SEEDING	
END WIDTH	SQ. METERS
54.43	
	374
39.13	
	242



ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	5.4	sq m	Riprap using 150mm Reinforced Concrete Slab
602	1.18	cu m	Concrete Masonry
603	27.7	m	675mm Conduit Type A, 706.02, or
			825mm, 707.01, 707.09 (13mm Corr., or 707.21
839	4.5	sq m	Seeding and Erosion Control with Revegetation Mat

END AREA		VOLUME	
CUT	FILL	CUT	FILL
13.41	17.60		
*5.29			
		72	183
		*21	
4.62	28.12		
*0			
		24	182

* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

RAMP P CROSS SECTIONS
STA 6+072.000 TO STA 6+080.000

WYA / CRA-30-28.009 / 0.000

1205
2116

For service road cross sections see sheet no. 1236-1249
For US 30 plan and profile see sheet no. 197-198

SECTION 2
SECTION 1
℄ Begin Service Road No. 1
℄ Sta. 0+196.670
P.I. Sta.0+407.499
Δ = 00° 17' 40" Lt.
No Curve
Wooded
Wooded
Constr. Limits
R/W
R/W
LA-R/W
0+200
0+300
0+400
0+500
Constr. Limits
R/W
N 88° 34' 47" E
℄ Construction Service Road No.1
N 88° 17' 07" E
Match Line Sta. 0+520.000 See Sheet No. 1207
670 DEP
670 DEP
670 DEP
LA-R/W
100mm
100mm
100mm
100mm
Z
375mm
31+300
31+400
31+500
670 DEP
℄ Construction US-30
Dist. Dr.

Weet Existing
STA. + 197.000 Elev. = 268.629 268.625
268.666
STA. + 207.000 Elev. = 268.768
STA. + 212.000
Elev. = 268.849
STA. + 228.000
Elev. = 269.070
STA. + 302.000
Elev. = 269.913
STA. + 318.000
Elev. = 270.029
STA. + 354.000
Elev. = 270.137
STA. + 370.000
Elev. = 270.065
STA. + 410.000
Elev. = 269.585
STA. + 426.000
Elev. = 269.793
STA. + 476.000
Elev. = 271.697
STA. + 492.000
Elev. = 271.977
HP 270.141
270.138
LP 269.562
269.621
HP 271.979
268.969 269.207 269.435 269.663 269.891 270.035 270.095 269.945 269.705 270.326 271.088 271.829 271.953 271.893
268.402 268.511 268.662 268.655 268.677 268.734 268.887 268.984 269.074 269.201 269.325 269.432 269.557 269.700 269.770 269.820 269.823 269.837 269.831 269.698 269.518 269.323 269.145 269.079 269.166 269.348 269.667 270.044 270.563 271.034 271.419 271.591 271.532 271.500 271.472
Proposed grade
Existing ground
10.000 m V.C.
16.000 m V.C.
16.000 m V.C.
16.000 m V.C.
16.000 m V.C.
16.000 m V.C.
+1.1630%
+1.6187%
+1.1400%
+1.1400%
+0.3000%
+0.3000%
-1.2000%
-1.2000%
+3.8073%
+3.8073%
V.P.I. Sta. 0+202.000
Elev. = 268.687
V.P.I. Sta. 0+220.000
Elev. = 268.979
V.P.I. Sta. 0+310.000
Elev. = 270.005
V.P.I. Sta. 0+362.000
Elev. = 270.161
V.P.I. Sta. 0+418.000
Elev. = 269.489
V.P.I. Sta. 0+484.000
Elev. = 272.001
274
272
270
268
266
264
0+180 0+200 0+220 0+240 0+260 0+280 0+300 0+320 0+340 0+360 0+380 0+400 0+420 0+440 0+460 0+480 0+500 0+520

N
0 10 20
HORIZONTAL SCALE IN METERS
CALCULATED AM
CHECKED REA

PLAN AND PROFILE SERVICE ROAD NO. 1
STA. 0+180.000 TO STA. 0+520.000

WYA/CRA-30-28.009/0.000

1206
2116

For service road cross sections see sheet no. 1236-1249
For US 30 plan and profile see sheet no. 198-201

Match Line Sta. 0+520.000 See Sheet No. 1206

Match Line Sta. 0+860.000 See Sheet No. 1208

603, 51.2m x 300mm Conduit
By others

Pick up point
El. 268.539

Pick up point
El. 268.434

Constr. Limits

R/W

0+600

0+700

0+800

N 88° 17' 07" E

℄ Construction Service Road No.1

LA-R/W

670 DEP

375mm

300mm

100mm

1350mm RCP or
1650mm CMP

31+600

31+700

31+800

31+900

℄ Construction US-30

271.893 271.833 271.711 271.448 271.105 270.441 269.761 LP 269.472 269.500 269.657 269.815 269.973 270.135 270.450 270.810 271.170 271.530 271.872 HP 271.890 271.674

-0.3000%

-1.3200%

-3.4000%

+0.7880%

+1.8000%

16.000 m V.C.

16.0 m V.C.

STA. + 546.000 Elev. = 271.815

STA. + 562.000 Elev. = 271.686

V.P.I. Sta. 0+554.000
Elev. = 271.791

STA. + 588.966 Elev. = 271.330

STA. + 604.966 Elev. = 270.952

V.P.I. Sta. 0+596.966
Elev. = 271.224

STA. + 642.000 Elev. = 269.693

STA. + 658.000 Elev. = 269.484

V.P.I. Sta. 0+650.000
Elev. = 269.421

Proposed grade

Existing ground

STA. + 736.000 Elev. = 270.099

STA. + 752.000 Elev. = 270.306

V.P.I. Sta. 0+744.000
Elev. = 270.162

V.P.I. Sta. 0+844.000
Elev. = 271.962

STA. + 836.000 Elev. = 271.818

STA. + 852.000 Elev. = 271.818

274 272 270 268 266 264

0+520 0+540 0+560 0+580 0+600 0+620 0+640 0+660 0+680 0+700 0+720 0+740 0+760 0+780 0+800 0+820 0+840 0+860

271.472 271.456 271.454 271.468 271.384 271.267 271.100 270.970 270.681 270.359 269.925 269.603 269.272 269.097 269.017 269.064 269.149 269.307 269.475 269.592 269.640 269.686 269.715 269.844 269.995 270.174 270.396 270.675 270.872 271.029 271.264 271.439 271.534 271.448 271.234

N

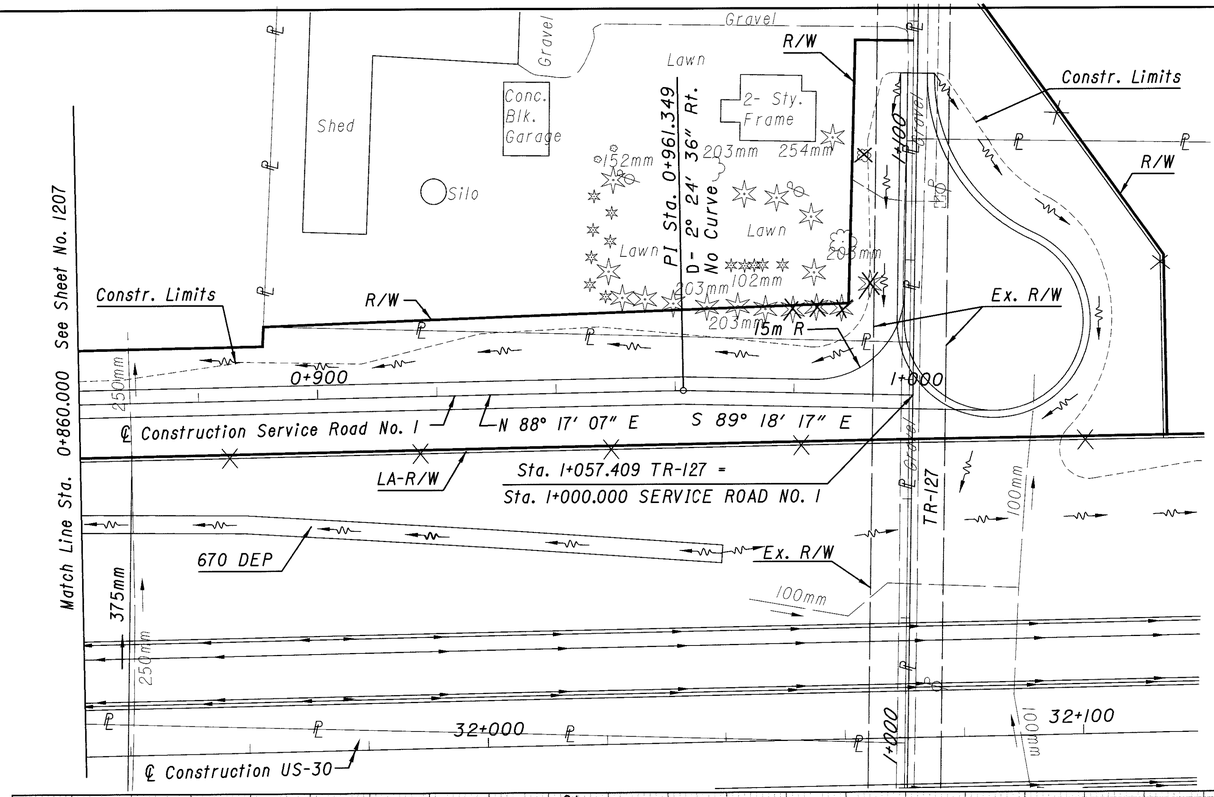
HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

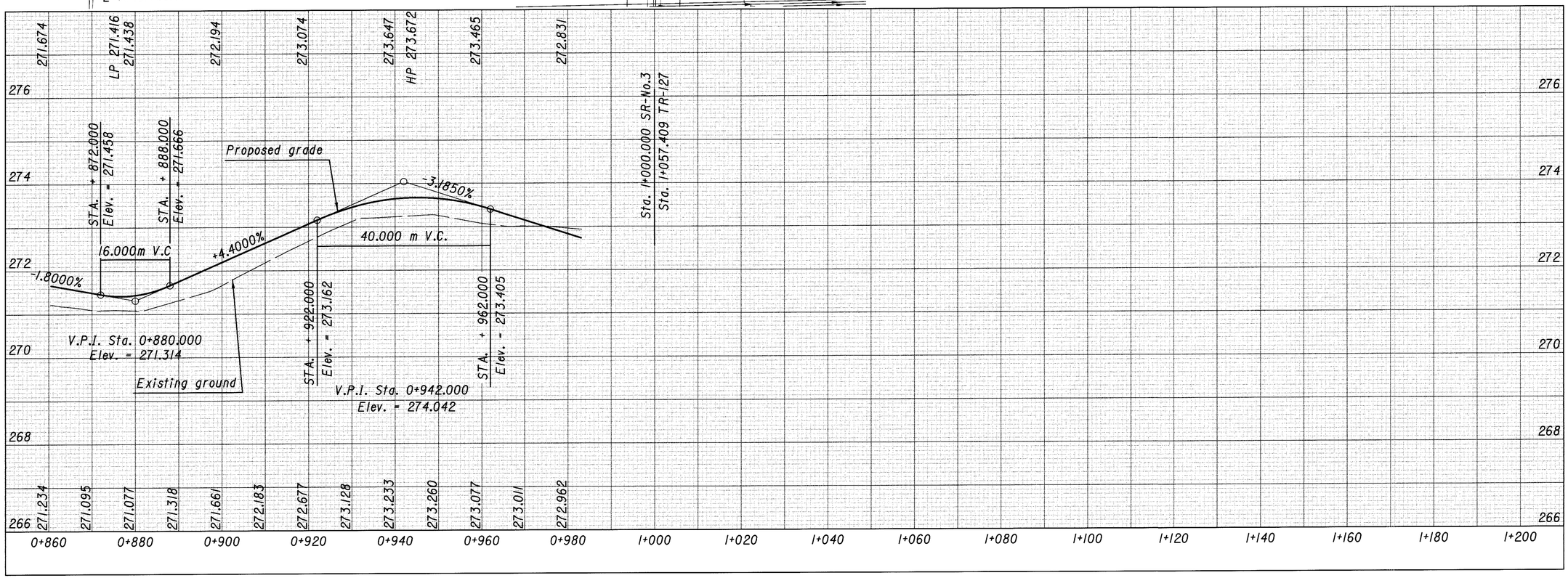
PLAN AND PROFILE SERVICE ROAD No. 1
STA. 0+520 TO STA. 0+860

WYA/CRA-30-28.009/0.000

1207
2116



For service road cross sections see sheet no. 1236-1249
For TR-127, see sheet no. 961
For US 30 plan and profile see sheet no. 201
For cul-de-sac detail see sheet no. 142



HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AW
CHECKED REA

PLAN AND PROFILE SERVICE ROAD No. 1
STA. 0+860.000 TO STA. 1+049.000

WYA/CRA-30-28.009/0.000

1208
2116

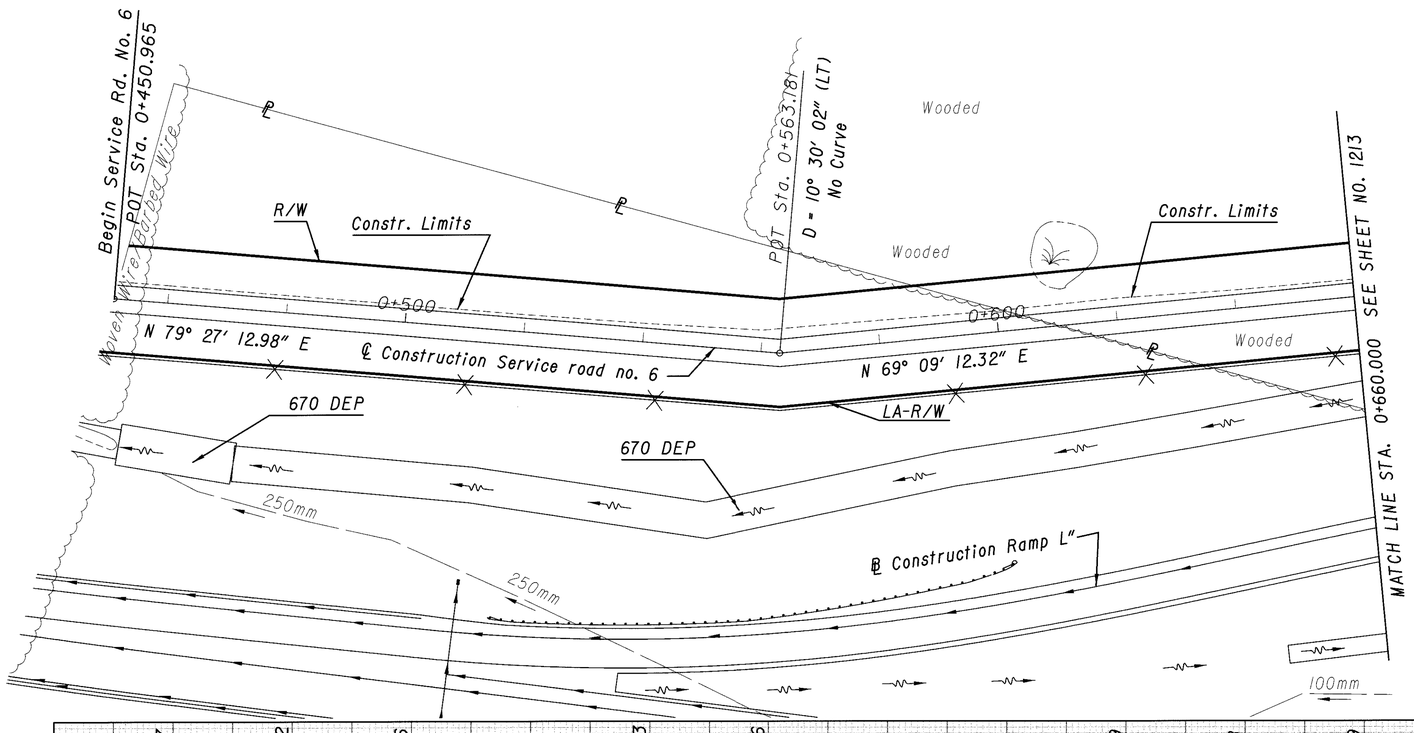
For quantities see sheet no. 1215
For service road cross sections see sheet no. 1250-1251
For CR-128, see sheet no. 823, 824

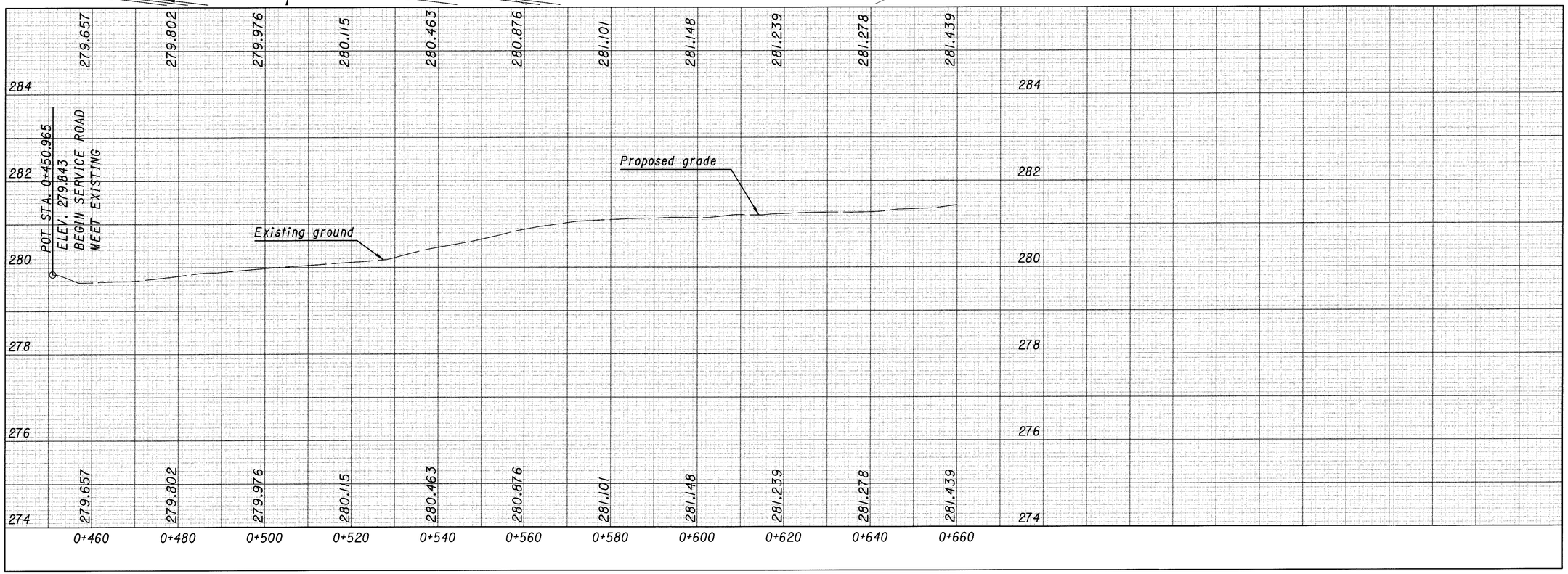
SERVICE ROAD No. 3
P.I. = Sta. 0+965.759
Δ = 89° 53′ 58.54″ (RT)
R = 30.000 m
T = 29.947 m
L = 47.071 m
E = 12.389 m
e_{max} = NORMAL CROWN

Permanent Easement
Begin Service Rd. No.3 Sta. 0+900.255
PC Sta. 0+935.811
R/W
Constr. Limits
N 89° 56′ 54.43″ E
Sta. 0+922.000, ℄ Service Rd. No. 3
300mm Conduit Type D
See sheet no. 1250
LA-R/W
D11
D1
670 DEP
2.0m X 48.25m = 96.5 sq m
Wooded
℄ Construction Service road no.3
Constr. Limits
Sta. 0+995.705, ℄ Service Rd. No. 3
300mm Conduit Type D
See sheet no. 1251
S 89° 57′ 05.60″ E
PT Sta. 0+982.882
LA
Sta. 1+238.984 CR-128
Sta. 1+000.000 Service Road No. 3
Ex. R/W
℄ Construction CR-128
SECTION 1
SECTION 6
Asphalt
305mmCPP
305mmCI
1+200
1+300
1+400
N 0° 03′ 06.55″ W
D12

Begin Service Rd. 273.539
Sta. 0+900.255
El.273.539
Existing ground
Future Grade
STA. + 901.000
Elev. = 273.505
STA. + 915.000
Elev. = 273.513
V.P.I. Sta. 0+922.000
Elev. = 273.842
V.P.I. Sta. 0+964.000
Elev. = 274.262
STA. + 989.000
Elev. = 274.262
STA. + 995.000
Elev. = 274.341
14.000 m V.C.
6.000 m V.C.
Proposed grade
+1.0000%
+0.0000%
+2.6200%
-4.6000%
+4.1099%
V.P.I. Sta. 0+992.000
Elev. = 274.262
V.P.I. Sta. 0+908.000
Elev. = 273.183
5.000 m V.C.
6.000 m V.C.
STA. + 919.500
Elev. = 273.724
STA. + 924.500
Elev. = 273.867
STA. + 967.000
Elev. = 274.262
STA. + 961.000
Elev. = 274.232

| | | |





For quantities see sheet no. 1215
For service road cross sections see sheet no. 1252-1260
For Ramp L, see sheet no. 1137

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE SERVICE RD. NO. 6
STA. 0+450.965 TO STA. 0+660.000

WYA/CRA-30-28.009/0.000

1212
2116

304 Aggregate Base (200 mm)

452 150 mm Plain Concrete Pavement

MATCH LINE STA. 0+660.000 SEE SHEET NO. 1212

Wooded

R/W

N 69° 09′ 12.39″ E

0+700

0+600

℄ Construction Ramp L

Constr. Limits

LA-R/W

Outlet in Ditch
El. 280.895

Outlet in Ditch
El. 280.903

150mm

Drive 2
P.I. = Sta. 0+019.314
Δ = 27° 20′ 11.61″ (LT)
R = 15.000 m

CURVE 1
P.I. = Sta. 0+762.017
Δ = 58° 06′ 47.50″ (LT)
R = 17.300 m
T = 9.612 m
L = 17.547 m
E = 2.491 m
PC Sta. 0+752.405
PT Sta. 0+769.952

Sta. 0+740.000, ℄ Service Rd. No. 6
300mm Conduit Type D
See sheet no. 1257

603 150mm x 93.2m
E-707.44

Pick up Point
Estimated
El. 283.500±

Temporary
Easement

Sta. 0+004.476, ℄ Drive
Length = 17.069m
300mm Conduit Type D
Inv. Inlet = 282.859m
Inv. Outlet = 282.817m

POT Sta. 0+030.555

N 89° 52′ 35.92″ W

0+936.168 Service road no. 6
0+000.000 Drive 3

Drive 2

N 62° 32′ 24.31″ W

N 46° 48′ 19..25″ E

Sta. 0+992.598,
℄ Svc. Rd. No. 6
Length = 18.158m
300mm Conduit
Type D, 706.02
Inv. Inlet = 283.192m
Inv. Outlet = 283.065m

Drive 2
P.I. = Sta. 0+022.249
Δ = 43° 28′ 54.85″ (RT)
R = 15.000 m

1+298.599 SR-231 ≠
1+000.000 Service Road no.6

Curve 3

S 43° 11′ 42.59″ E

N 46° 48′ 19.25″ E

Curve 2

300mm

Drive 3

R/W

Constr. Limits

LA-R/W

SR-231

S 89° 42′ 48.37″ E

MATCH LINE STA. 1+000.000 SEE SHEET NO. 1213

Asphalt

Gravel & Dirt

Concrete

Lawn

Conc. Blk. Garage

D1 D2 D3 D4 D5 D6 D7 D8 D9 D10

0+800

0+900

0+999.900

1+100

1+200

℄ Construction Service road no. 6

N 11° 02′ 25.88″ E

Curve 1

150mm

670 DEP
2.0m X 8.400m = 16.8 sq m

670 DEP
2.0m X 54.700m = 109.4 sq m

670 DEP
2.0m X 47.950m = 95.9 sq m

Woven Wire

0+000.000 Drive 2 ℄
0+900.350 Service road no. 6

1 Sty. #12704 Fr.

POT Sta. 0+054.600

S 43° 11′ 42.59″ E

203mm

100mm

CURVE 2
P.I. = Sta. 0+901.432
Δ = 35° 45′ 54.37″ (RT)
R = 30.000 m
T = 9.680 m
L = 18.727 m
E = 1.523 m
PC Sta. 0+891.753
PT Sta. 0+910.479

Sta. 0+006.062, ℄ Drive
Length = 14.63m
300mm Conduit Type D
Inv. Inlet = 283.293m
Inv. Outlet = 282.959m

CURVE 3
P.I. = Sta. 0+975.737
Δ = 43° 28′ 52.38″ (RT)
R = 17.300 m
T = 6.899 m
L = 13.129 m
E = 1.325 m
PC Sta. 0+968.838
PT Sta. 0+981.967

For quantities see sheet no. 1215
For service road cross sections see sheet no. 1252-1260
For Ramp L, see sheet no. 1138
For SR-231, see sheet no. 828
For Drive profile see sheet no. 1234

281.439 281.950 282.323 282.448 282.347 282.463 282.733 283.042 283.123 283.333 283.460 283.570 283.679 283.781 283.594 283.787 284.048 284.357

286 284 282 280 278 276

Sta. 0+005.058, ℄ Drive 1
603, 19.4m x 450m Conduit
Type D, @ 1.34%
Inv. Inlet = 282.353m
Inv. Outlet = 282.093m

Inv. 281.412 @ ℄

Sta. 0+740.000, ℄ Service Rd. no.6
603, 13.1m x 300mm Conduit
Type D, @ 3.22%
Inv. Inlet = 281.611m
Inv. Outlet = 281.170m

POT STA. 0+852.965
ELEV. 283.422
MEET EXISTING

Proposed grade

+0.5458%

Existing ground

Sta. 0+004.476, ℄ Drive 2
603, 17.1m x 300mm Conduit
Type D, @ .25%
Inv. Inlet = 282.859m
Inv. Outlet = 282.817m

POT STA. 0+919.465
ELEV. 283.785
MEET EXISTING

Sta. 0+006.062, ℄ Drive 3
603, 14.6m x 300mm Conduit
Type D, @ 2.29%
Inv. Inlet = 283.293m
Inv. Outlet = 282.959m

0+660 0+680 0+700 0+720 0+740 0+760 0+780 0+800 0+820 0+840 0+860 0+880 0+900 0+920 0+940 0+960 0+980 1+000

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AW
CHECKED REA

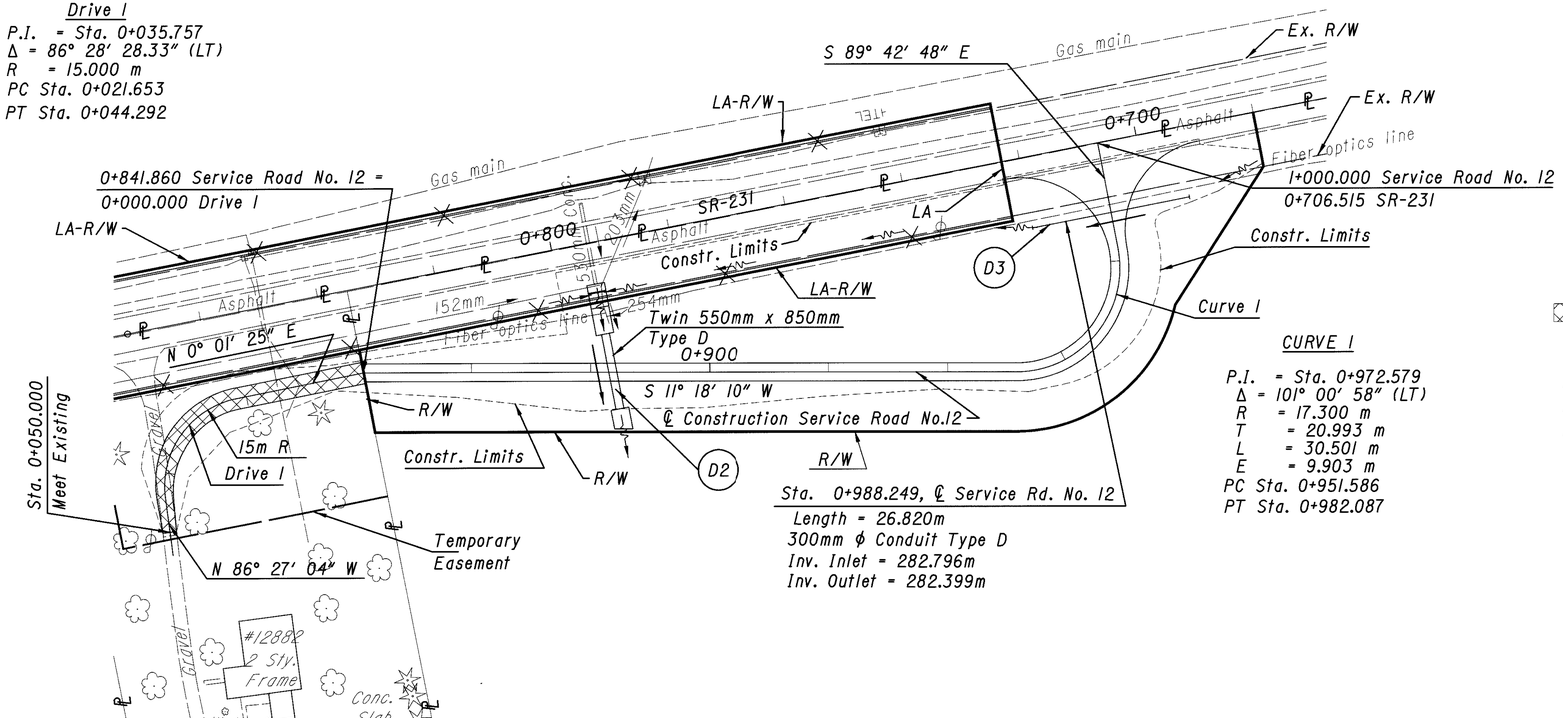
PLAN AND PROFILE SERVICE RD. NO. 6
STA. 0+660.000 TO STA. 1+000.000

WYA / CRA-30-28.009 / 0.000

1213
2116

REF NO.	SHEET NO.	STATION	SIDE	602 CONCRETE MASONRY (CU M)	603 150 MM CONDUIT, TYPE E (METER)	603 300 MM CONDUIT, TYPE D, 706.02 (METER)	670 DITCH EROSION PROTECTION (SQ M)	FOR INFORMATION ONLY: 300 MM X 300 MM 22.5° BEND (EACH)	375 MM X 375 MM 22.5° BEND (EACH)	MASONRY COLLAR (EACH)
D1	1211	0+940.00 TO 0+980.00	LT				96.5			
D2	1213	0+730.50 TO 0+800.00	RT				151.0			
D3	1213	0+740.00	LT & RT	0.34		12.5				
D4	1213	0+740.00 TO 0+800.00	LT				109.4			
D5		NOT USED								
D6		NOT USED								
D7	1213	0+893.07 TO 0+907.63	LT	0.34		17.1				
D8	1213	0+928.85 TO 0+943.48	RT	0.34		14.6				
D9	1213	0+992.60	LT & RT			18.2				
D10	1213	0+748.15 TO 0+829.12	LT & RT		93.2					
D11	1211	0+922.00 SVC. RD. 3	LT & RT	0.34		11.5				
D12	1211	0+995.71 SVC. RD. 3	LT & RT			25.1				

Drive 1
P.I. = Sta. 0+035.757
Δ = 86° 28′ 28.33″ (LT)
R = 15.000 m
PC Sta. 0+021.653
PT Sta. 0+044.292

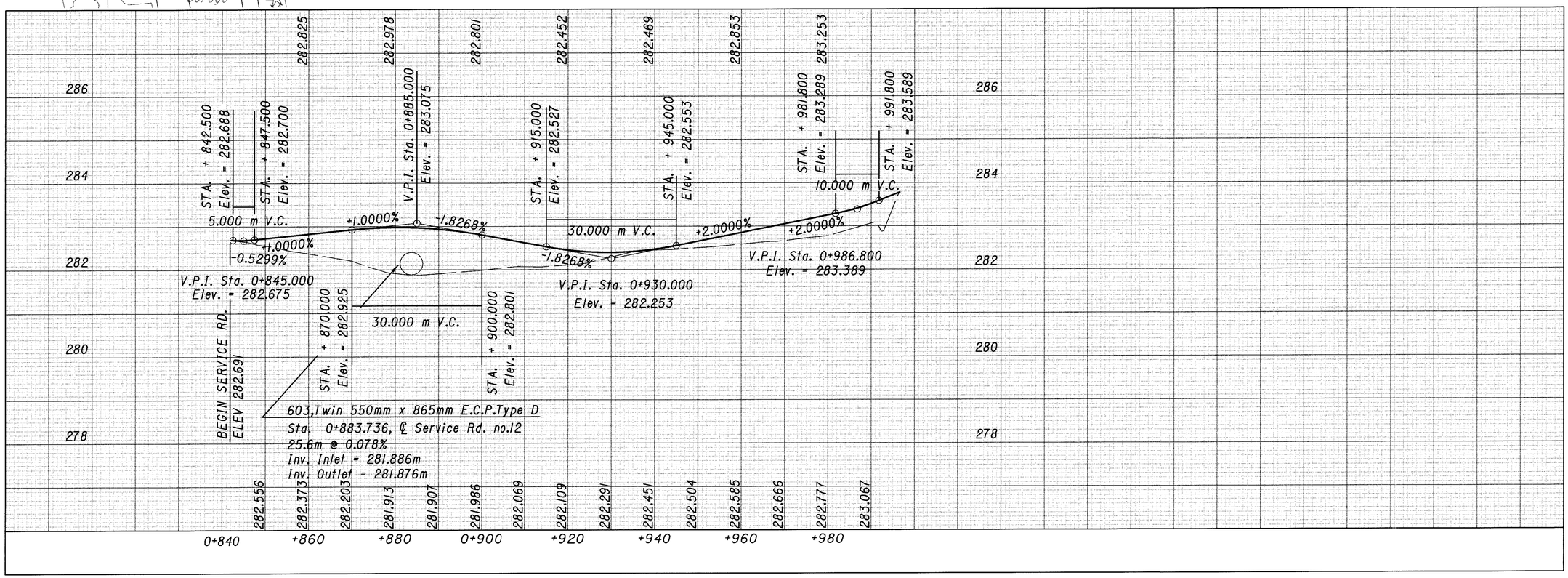


CURVE 1

P.I. = Sta. 0+972.579
Δ = 101° 00′ 58″ (LT)
R = 17.300 m
T = 20.993 m
L = 30.501 m
E = 9.903 m
PC Sta. 0+951.586
PT Sta. 0+982.087

304 Aggregate Base (200 mm)

For quantities see sheet no. 1220
For service road cross sections see sheet no. 883-886
For Drive profile see sheet no. 1234
For SR-231 , see sheet no. 827



HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE SERVICE RD. NO. 12
STA. 0+841.860 TO STA. 1+000.000

WYA/CRA-30-28.009/0.000

1217
2116

MATCH LINE Sta. 0+040

Constr. Limits

Temporary Easement

R/W

N 1° 30′ 59″ E

6.2m R

1.5m R

Sta. 1+124.750 End Service Access No. 14

Elec. Fence

CURVE 2

70°

N 69° 07′ 20″ W

8m R

Sta. 1+118.518 Service Access No. 14 = Sta. 0+000.000 Drive 2

Ex. R/W

Constr. Limits

Curve 1

1+100

N 0° 52′ 40.71″ E

0+760.000 T.R.-10 = 0+999.521 Service Access No. 14 0+800

Asphalt 100mm

D5

S 89° 07′ 19.52″ E

℄ Construction Service Access Rd. No. 14

D4

300mm Type D See sheet no. 1261

R/W

670 DEP
2.0m X 40.100m = 80.2 sq m

R/W

0+700

Asphalt 100mm

Elec. Fence

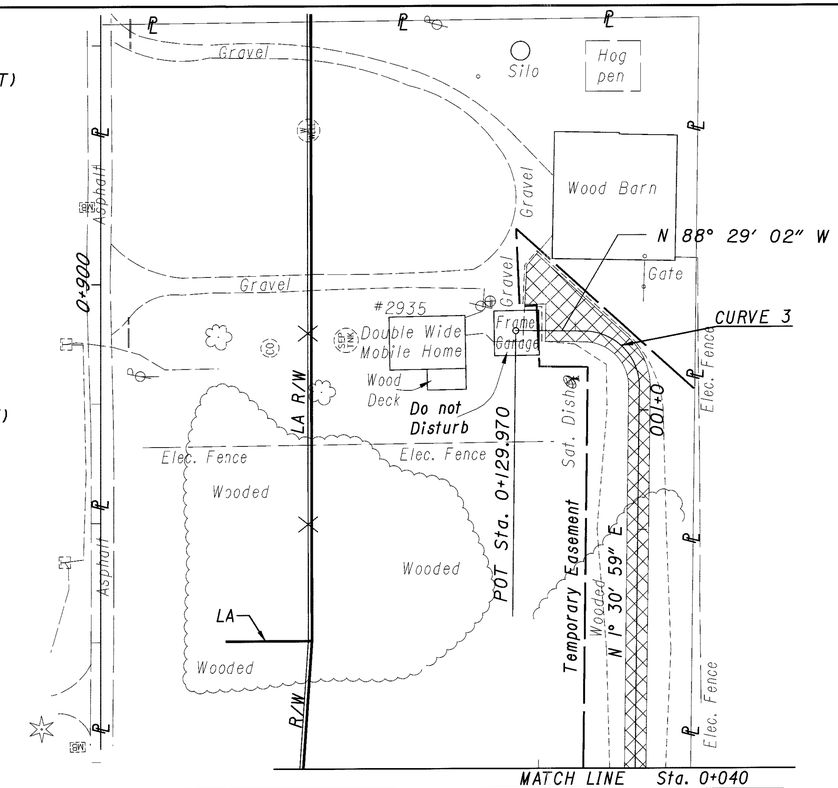
CURVE 1
P.I. = Sta. 1+100.562
Δ = 89° 59′ 59.77″ (LT)
R = 17.300 m
T = 17.300 m
L = 27.175 m
E = 7.166 m
PC Sta. 1+083.262
PT Sta. 1+110.437

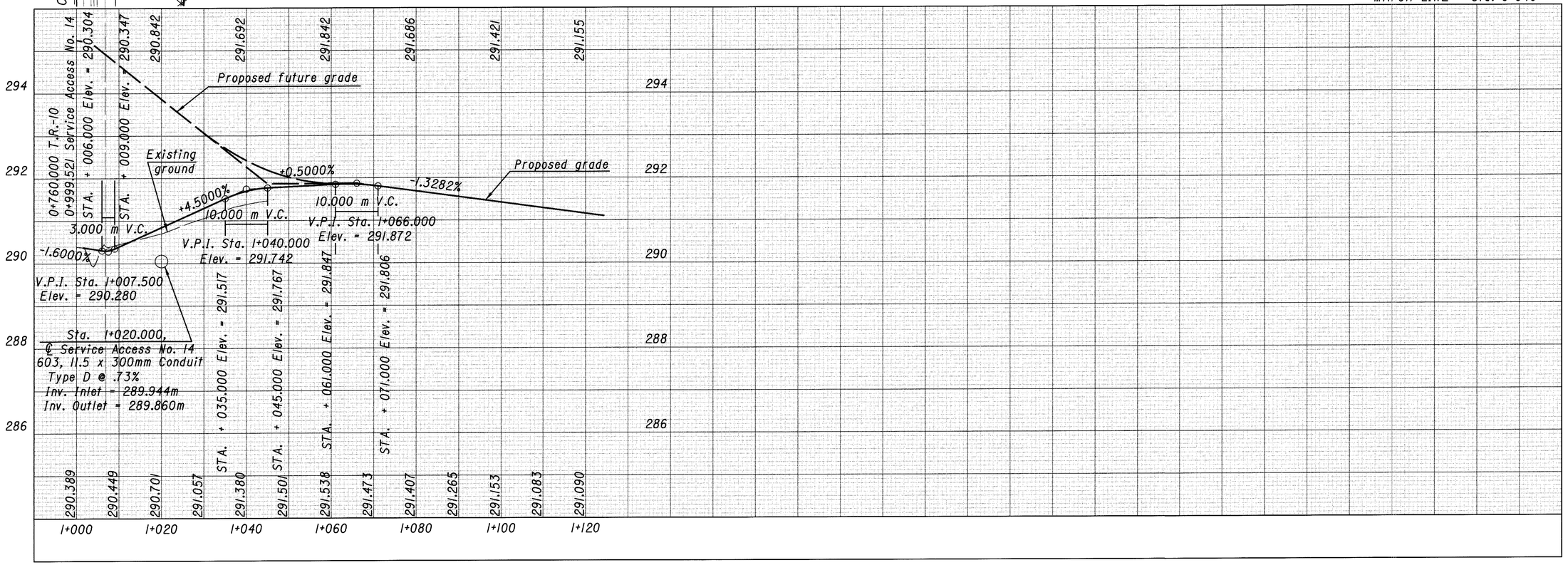
304 Aggregate Base (200 mm)

For quantities see sheet no. 1220
For service access cross sections see sheet no. 1261-1262
For Drive profile see sheet no. 1235
For TR- 10, see sheet no. 831

CURVE 2
P.I. = Sta. 0+012.368
Δ = 70° 38′ 19.17″ (RT)
R = 8.000 m
T = 5.668 m
L = 9.863 m
E = 1.805 m
PC Sta. 0+006.700
PT Sta. 0+016.563

CURVE 3
P.I. = Sta. 0+113.133
Δ = 90° 00′ 01″ (LT)
R = 9.300m
T = 9.300m
L = 14.608m
E = 3.852m
PC Sta. 0+103.833
PT Sta. 0+129.970





HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AW
CHECKED REA

PLAN AND PROFILE SERVICE ACCESS NO. 14
STA. 1+000.000 TO STA. 1+124.750

WYA/CRA-30-28.009/0.000

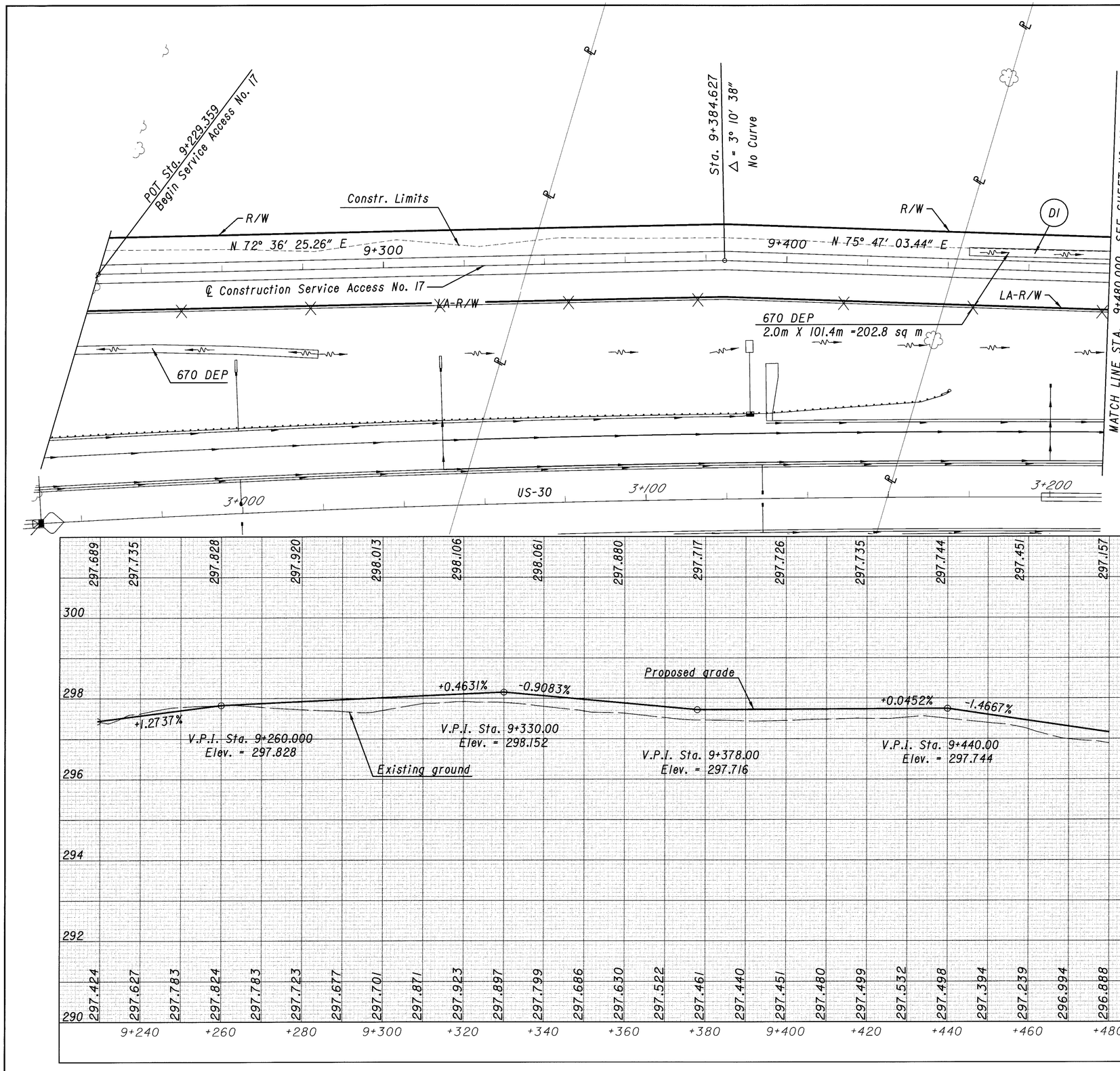
1218
2116

ESTIMATED DRAINAGE QUANTITIES

WYA/CRA-30-28.009/0.000

CALCULATED AM
CHECKED REA

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	601 RIPRAP USING 150 MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 300 MM CONDUIT, TYPE D, 706.02 (METER)	603 550 MM X 865 MM CONDUIT TYPE D, 706.04 CLASS HE-11 (METER)	670 DITCH EROSION PROTECTION (SQ M)	FOR INFORMATION ONLY (EACH) 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND	MASONRY COLLAR
D1	1216	NOT USED										
D2	1217	0+883.736 SER. RD. 12	LT & RT	3.8	18.1	1.84		25.6	10.3			
D3	1217	0+988.25 SER. RD. 12	LT & RT			0.34	26.8					
D4	1218	1+020.00 TO 1+060.00	RT						80.2			
D5	1218	1+020.00	LT & RT			0.34	11.5					



For quantities see sheet no. 1224
For service access cross sections see sheet no. 1263-1273
For proposed US-30 see sheet no. 272-274

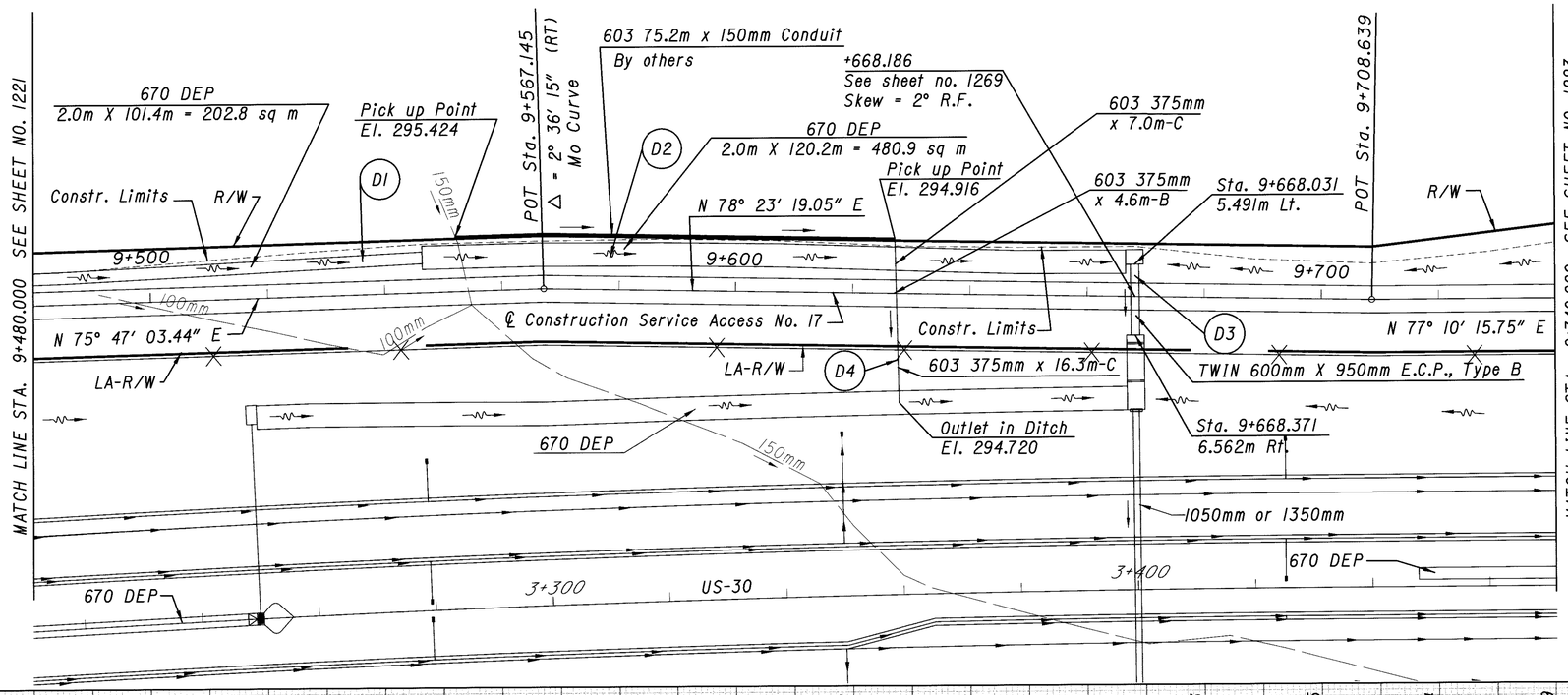
HORIZONTAL SCALE IN METERS
0 10 20

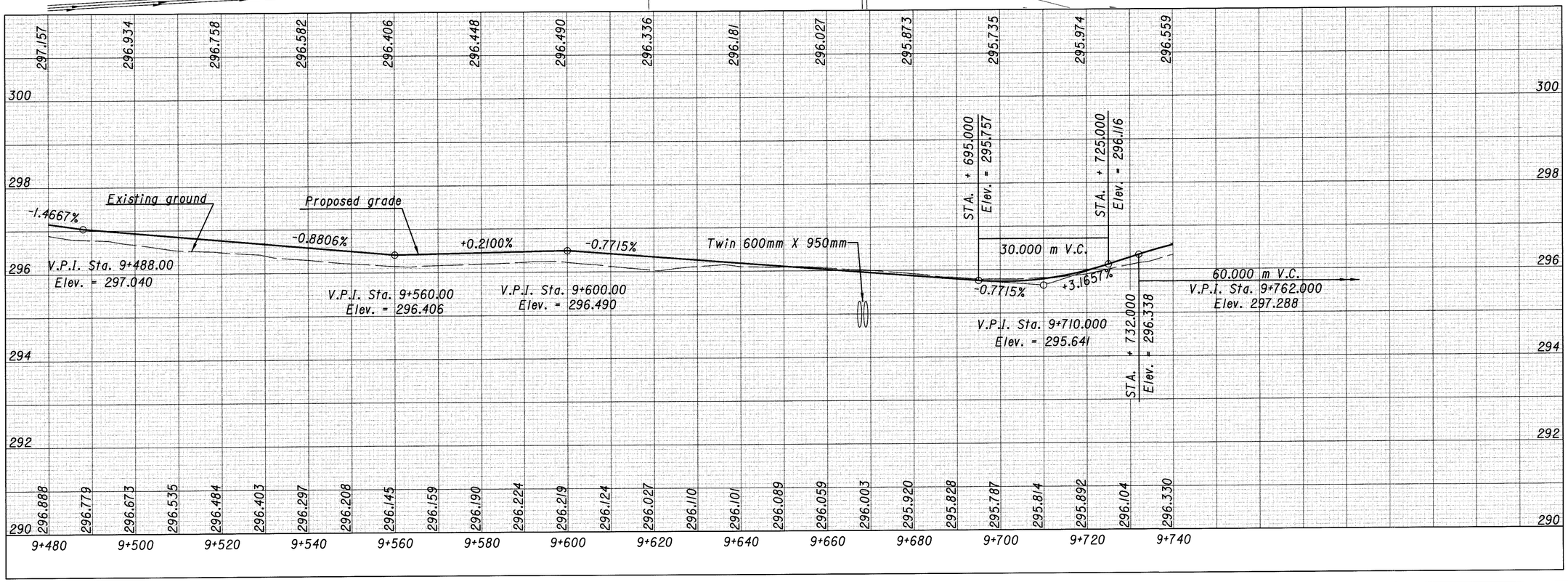
CALCULATED AM
CHECKED REA

PLAN AND PROFILE SERVICE ACCESS NO. 17
STA. 9+229.359 TO STA. 9+480.000

WYA / CRA-30-28.009 / 0.000

1221
2116





For quantities see sheet no. 1224
For proposed US-30 see sheet no. 274, 277
For service access cross sections see sheet no. 1263-1273

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AM
CHECKED REA

PLAN AND PROFILE SERVICE ACCESS NO. 17
STA. 9+480.000 TO STA. 9+740.000

WYA/CRA-30-28.009/0.000

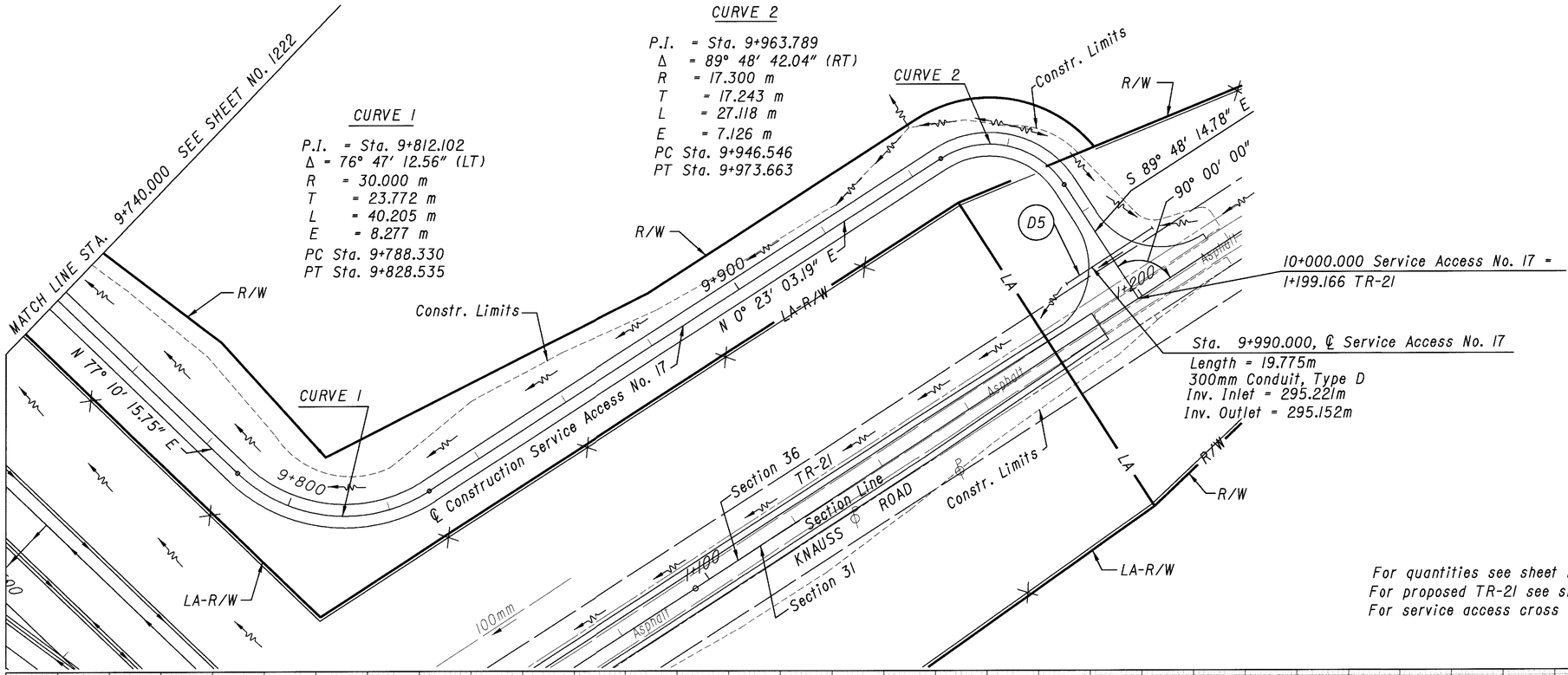
1222
2116

CURVE 2

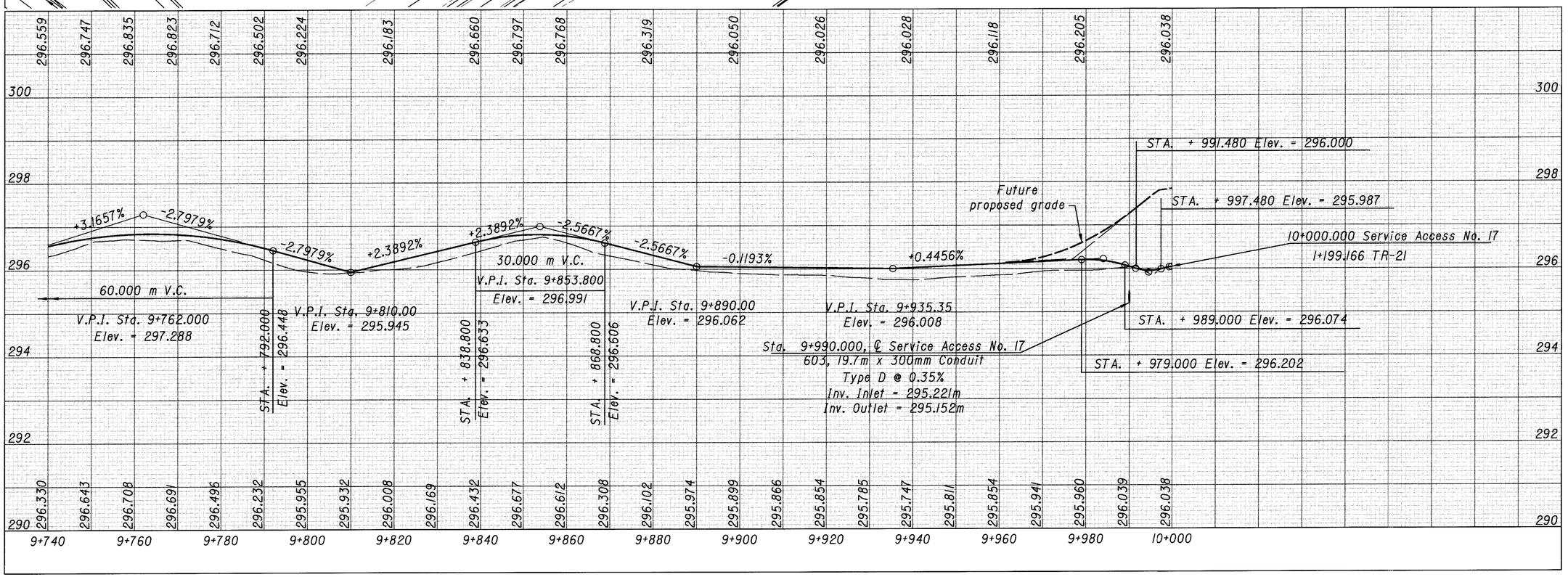
P.I. = Sta. 9+963.789
Δ = 89° 48′ 42.04″ (RT)
R = 17.300 m
T = 17.243 m
L = 27.118 m
E = 7.126 m
PC Sta. 9+946.546
PT Sta. 9+973.663

CURVE 1

P.I. = Sta. 9+812.102
Δ = 76° 47′ 12.56″ (LT)
R = 30.000 m
T = 23.772 m
L = 40.205 m
E = 8.277 m
PC Sta. 9+788.330
PT Sta. 9+828.535



For quantities see sheet no. 1224
For proposed TR-21 see sheet no. 837
For service access cross sections see sheet no. 1263-1273



HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AW
CHECKED REA

PLAN AND PROFILE SERVICE ACCESS NO. 17
STA. 9+740.000 TO STA. 10+000.000

WYA/CRA-30-28.009/0.000

1223
2116

ESTIMATED DRAINAGE QUANTITIES

CALCULATED AM
CHECKED REA

WYA/CRA-30-28.009/0.000

1224
2116

REF NO.	SHEET NO.	STATION	SIDE	601 ROCK CHANNEL PROTECTION TYPE C W/ FILTER (CU M)	601 RIPRAP USING 150 MM REINFORCED CONCRETE SLAB (SQ M)	602 CONCRETE MASONRY (CU M)	603 300 MM CONDUIT, TYPE D, 706.02 (METER)	603 375 MM CONDUIT, TYPE B (METER)	603 375 MM CONDUIT, TYPE C (METER)	603 610 MM X 960 MM CONDUIT TYPE D, 706.04 HE-II (METER)	670 DITCH EROSION PROTECTION (SQ M)	FOR INFORMATION ONLY (EACH) 300 MM X 300 MM 22.5° BEND	375 MM X 375 MM 22.5° BEND		MASONRY COLLAR
D1	1221	9+445.16 TO 9+546.56	LT								202.8				
D2	1222	9+546.56 TO 9+666.52	LT								480.9				
D3	1222	9+668.186	LT & RT	9.4	12.0	2.36				24.1					
D4	1222	9+627.05	LT & RT					4.6	23.3						
D5	1223	9+990.00	LT & RT			0.34	19.8								
			TOTALS												
		TOTALS CARRIED TO SUB-SUMMARY		9.4	12.0	2.70	19.8	4.6	23.3	24.1	683.7				

DRIVEWAY PROFILE
T.R. 133 - Sta. 0+930.143, Rt.

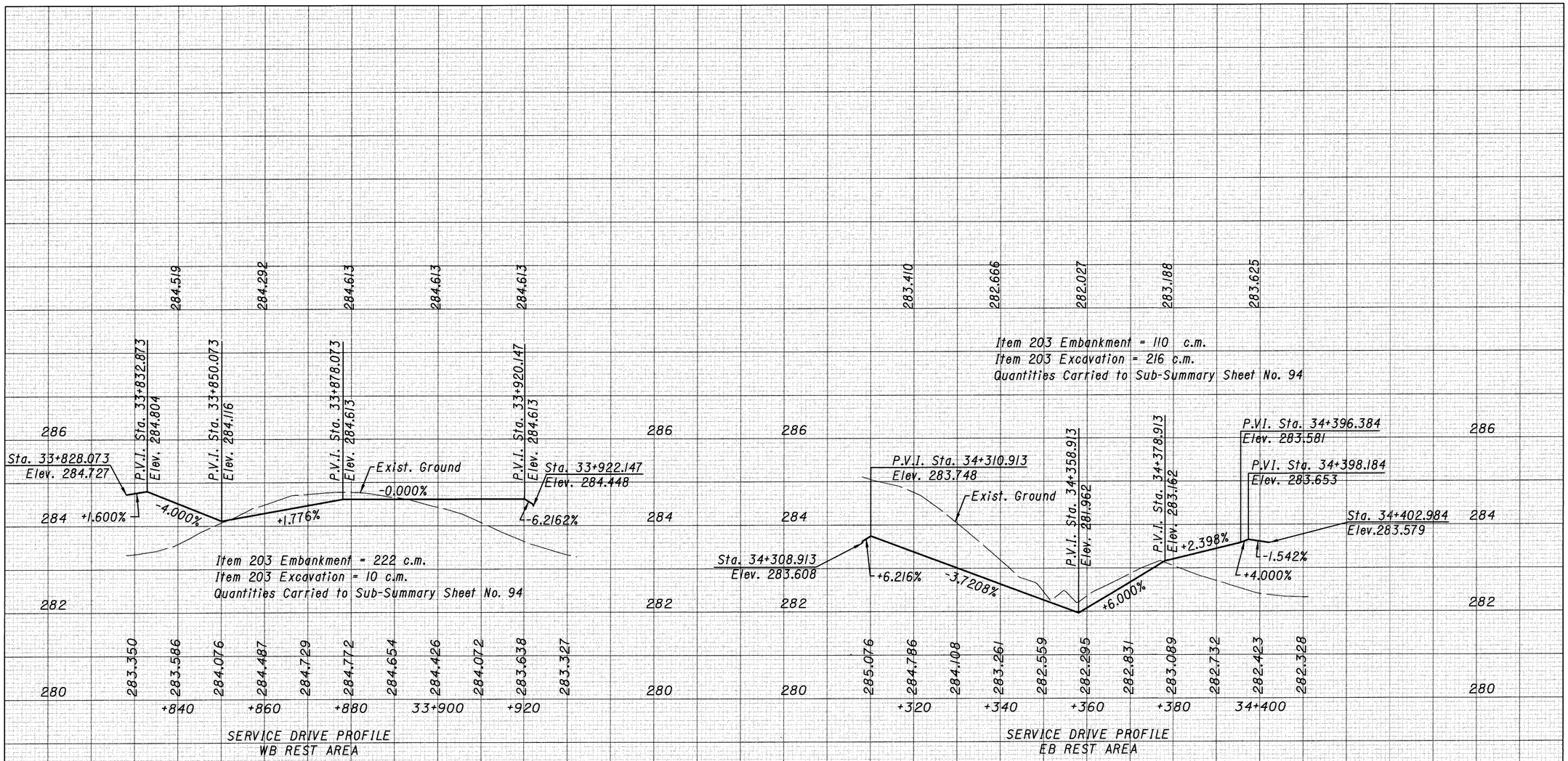
DRIVEWAY PROFILE
T.R. 133 - Sta. 1+110.469, Rt.

CALCULATED AM
CHECKED REA

DRIVEWAY PROFILES
T.R. 133

WYA/CRA-30-28.009/0.000

1232
2116

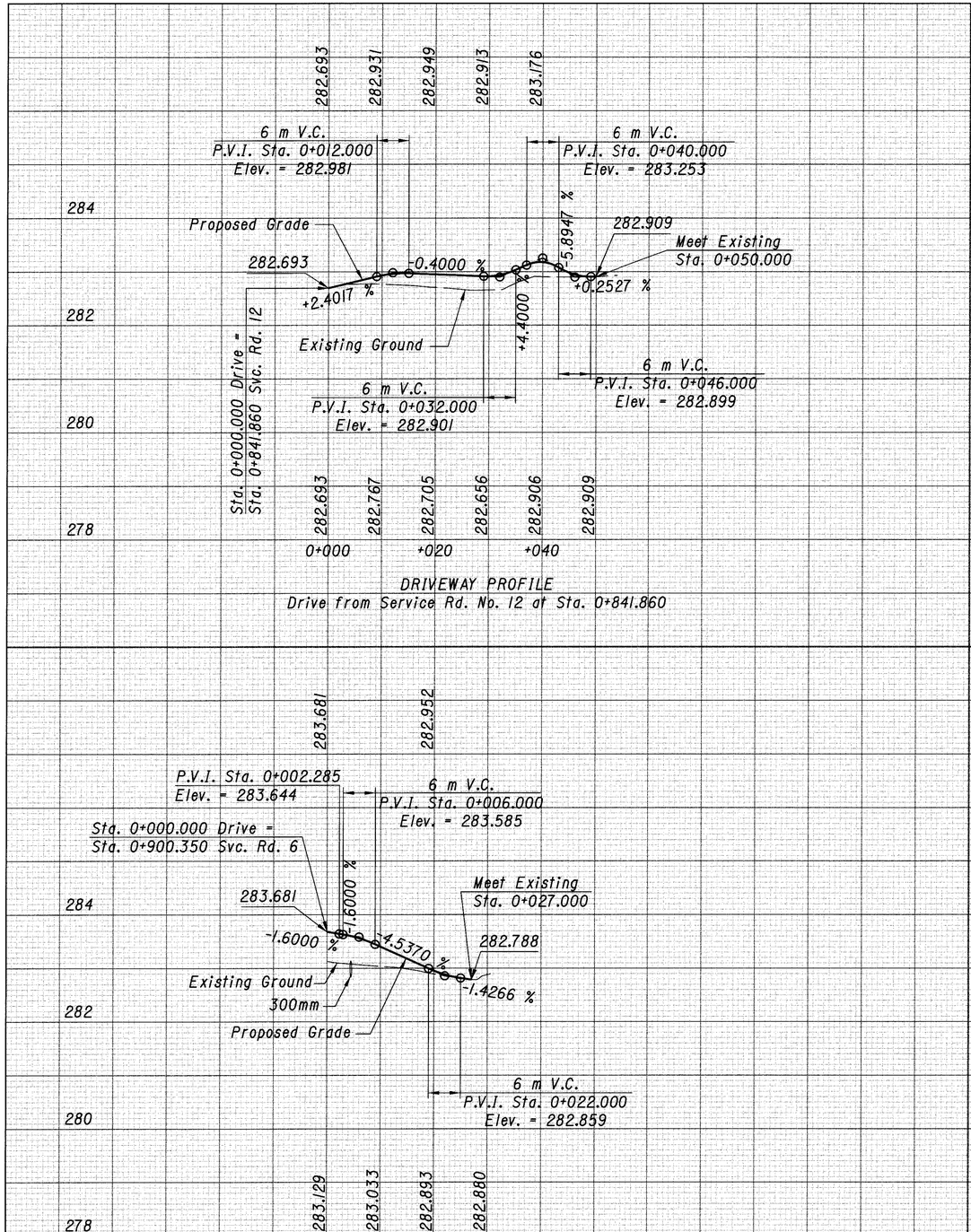


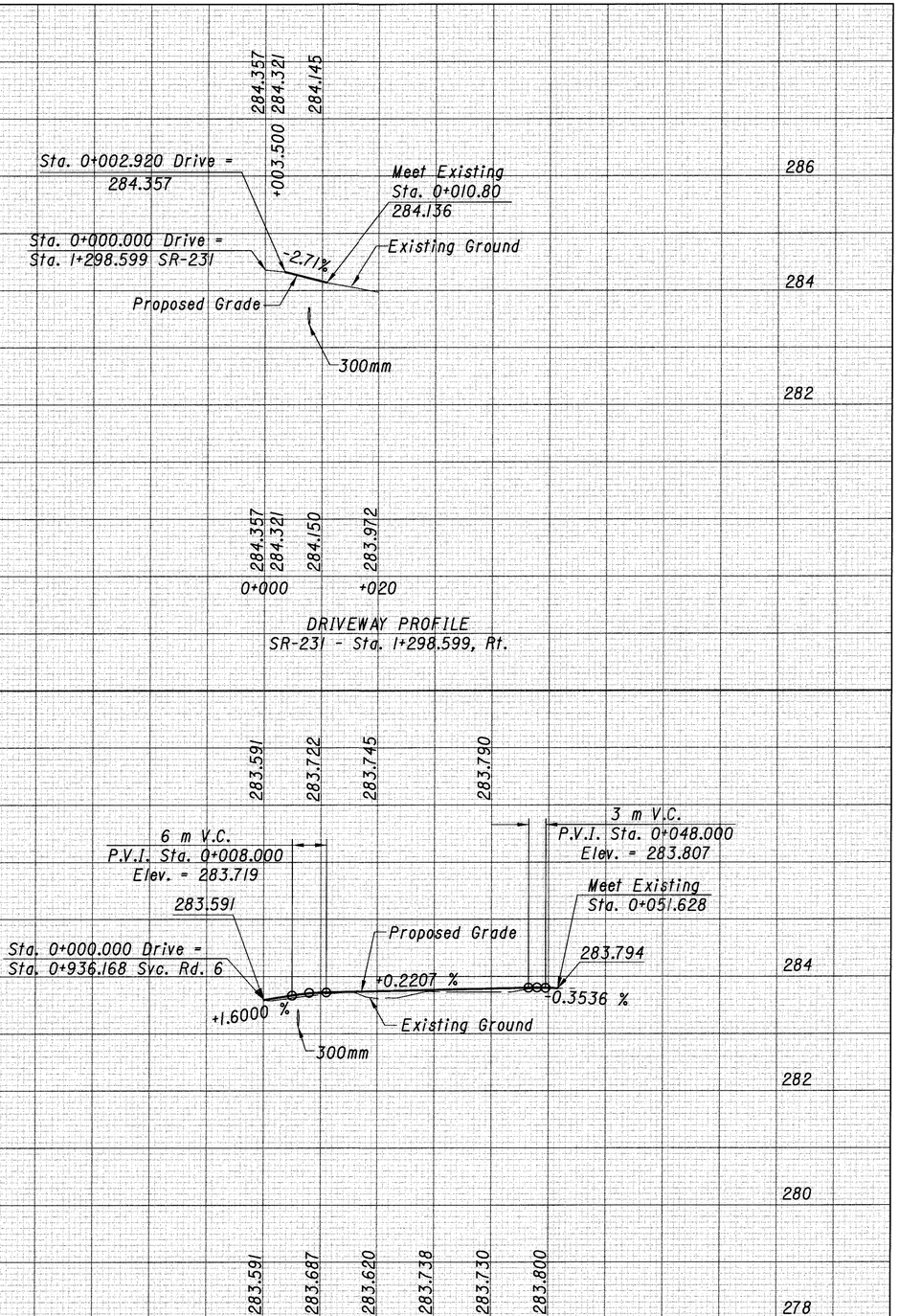
CALCULATED AM
CHECKED REA

SERVICE DRIVE PROFILES
EASTBOUND & WESTBOUND REST AREAS

WYA / CRA-30-28.009 / 0.000

1233
2116



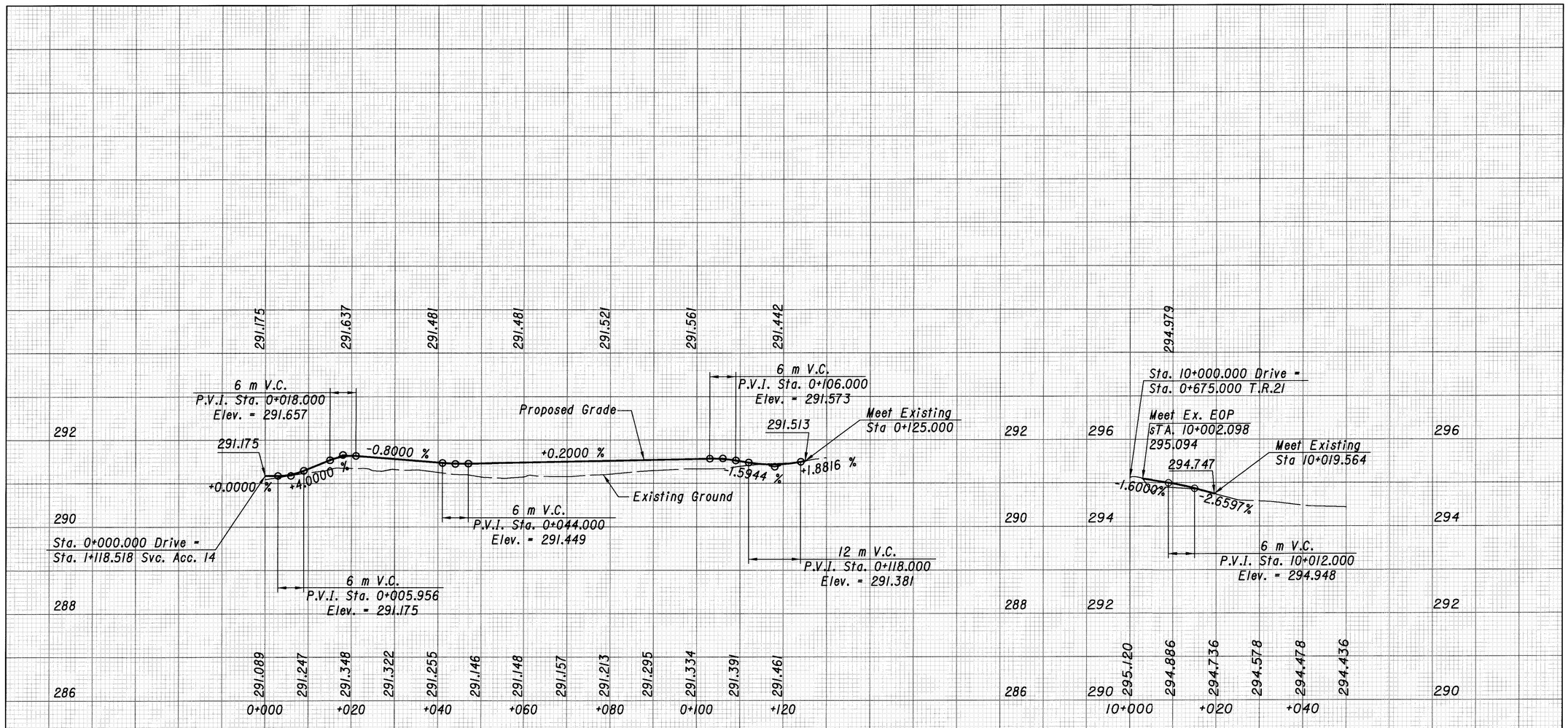


CALCULATED AW
CHECKED REA

DRIVEWAY PROFILES
SERVICE ROAD NO.12 , SERVICE ROAD NO. 6 & SR-231

WYA/CRA-30-28.009/0.000

1234
2116



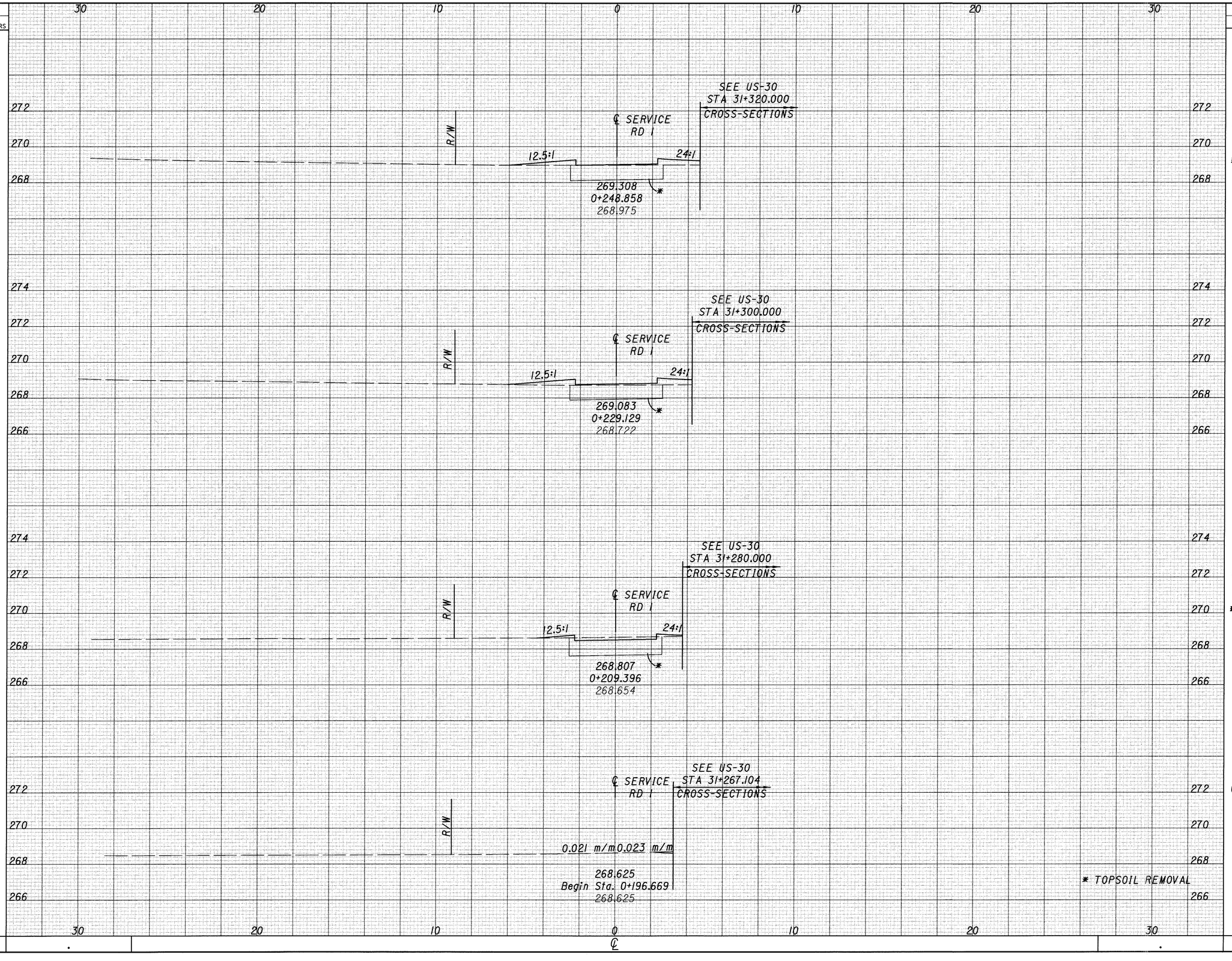
CALCULATED AM
CHECKED REA

DRIVEWAY PROFILES
SERVICE ACCESS NO. 14 & T.R. 21

WYA/CRA-30-28.009/0.000

1235
2116

SEEDING END WIDTH	SEEDING SQ. METERS
9.34	181
9.02	154
6.55	68
4.13	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.00	5.86		
×4.25			
		0	116
		×82	
0.00	5.88		
×4.1			
		5	108
		×87	
0.46	5.02		
×4.72			
		3	32
		×30	
0.06	0.00		
×0			

CALCULATED AM

CHECKED REA

SERVICE ROAD 1 CROSS SECTIONS
STA 0+196.669 TO STA 0+248.858

WYA/CRA-30-28.009/0.000

1236
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10.13	204	0.00	5.74	0	116
		*4.41		*85	
10.53	202	0.00	6.03	0	118
		*4.19		*82	
9.93	190	0.00	5.95	0	116
		*4.16		*83	

30 20 10 0 10 20 30

276 274 272 270 268

SEE US-30
STA 31+380.000
CROSS-SECTIONS

℄ SERVICE RD 1

R/W

12.5:1 12.5:1

269.973
0+308.029
269.671

SEE US-30
STA 31+360.000
CROSS-SECTIONS

℄ SERVICE RD 1

R/W

12.5:1 12.5:1

269.757
0+288.307
269.414

SEE US-30
STA 31+340.000
CROSS-SECTIONS

℄ SERVICE RD 1

R/W

12.5:1 12.5:1

269.532
0+268.584
269.183

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

CALCULATED AM

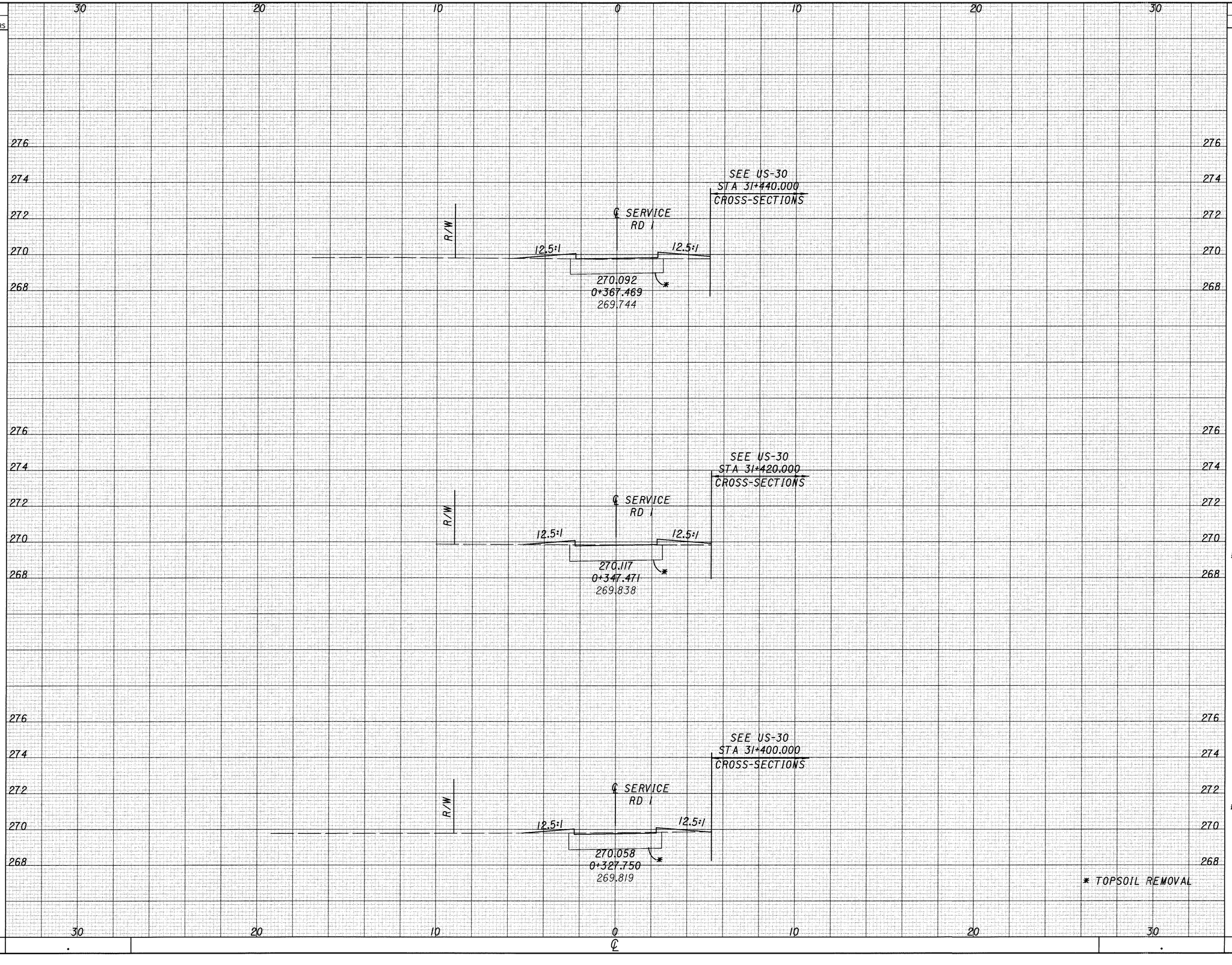
CHECKED REA

SERVICE ROAD 1 CROSS SECTIONS
STA 0+268.584 TO STA 0+308.029

WYA/CRA-30-28.009/0.000

1237
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
9.50	184	0.00	5.85	0	114
		*4.19		*87	
8.90	177	0.01	5.59	1	108
		*4.52		*91	
9.01	189	0.07	5.36	1	109
		*4.66		*89	



CALCULATED AM

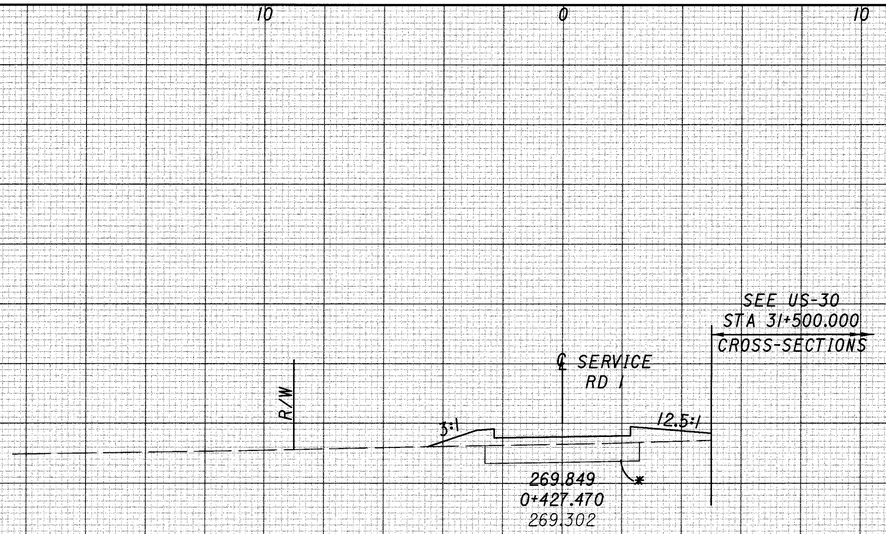
CHECKED REA

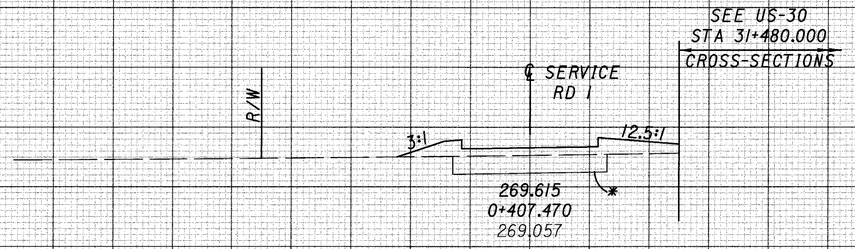
SERVICE ROAD 1 CROSS SECTIONS
STA 0+327.750 TO STA 0+367.469

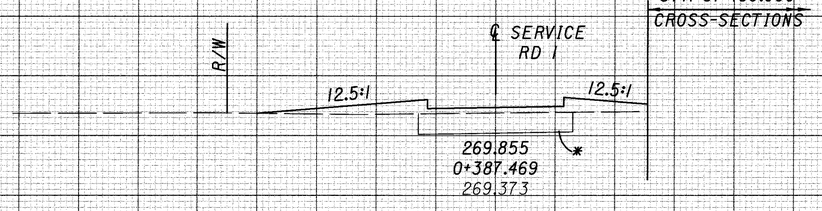
WYA/CRA-30-28.009/0.000

1238
2116

SEEDING END WIDTH	SEEDING SQ. METERS
8.28	166
8.29	201
11.81	213







END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.00	6.26		
✱3.15		0	126
		✱62	
0.00	6.36		
✱3.09		0	134
		✱66	
0.00	7.00		
✱3.47		0	129
		✱77	

✱ TOPSOIL REMOVAL

CALCULATED AM

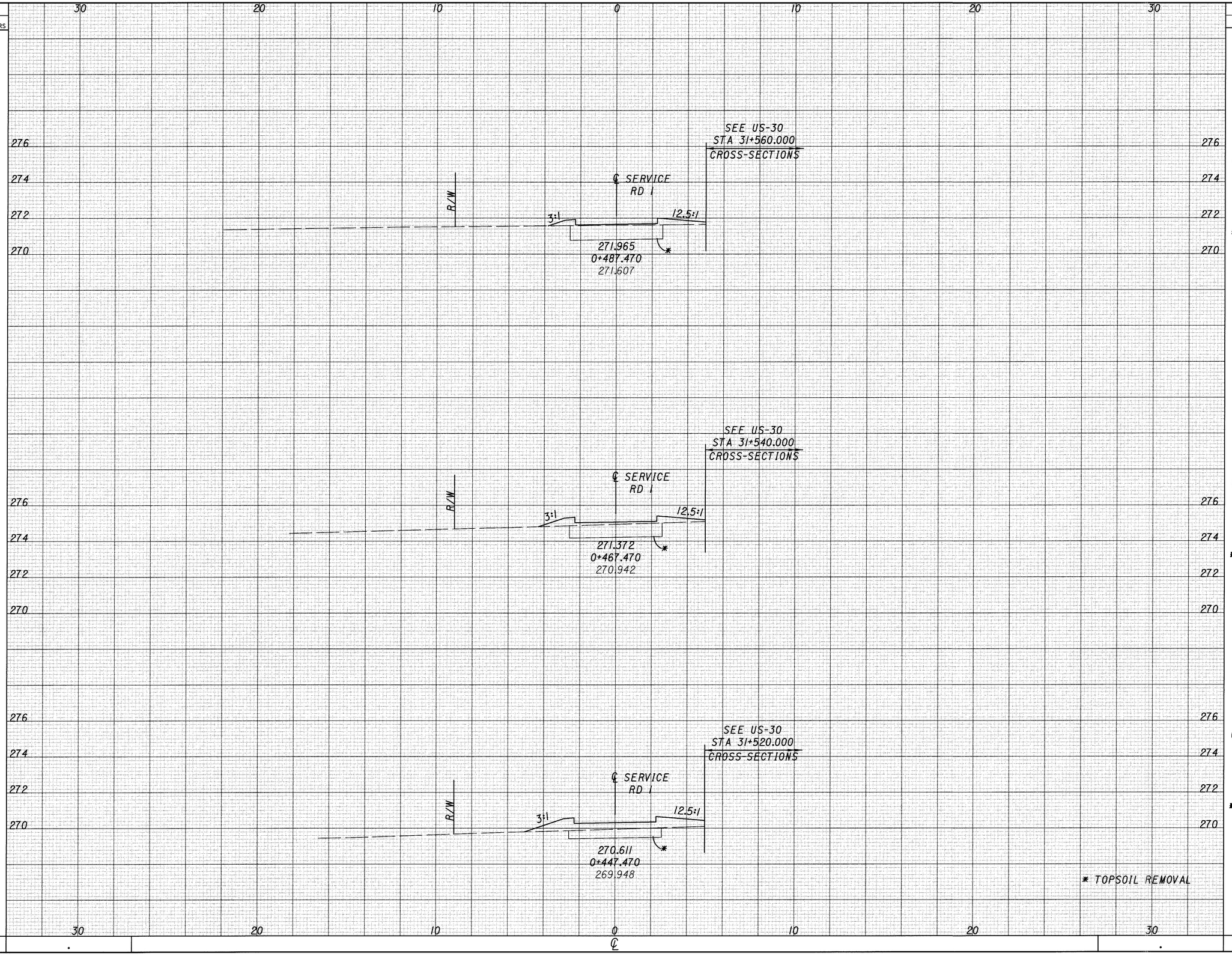
CHECKED REA

SERVICE ROAD 1 CROSS SECTIONS
STA 0+387.469 TO STA 0+427.470

WYA/CRA-30-28.009/0.000

1239
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
7.43	153	0.00	5.60	0	114		
		*4.12		*79			
7.84	168	0.00	5.80	0	126		
		*3.74		*63			
8.95	172	0.00	6.85	0	131		
		*2.54		*57			



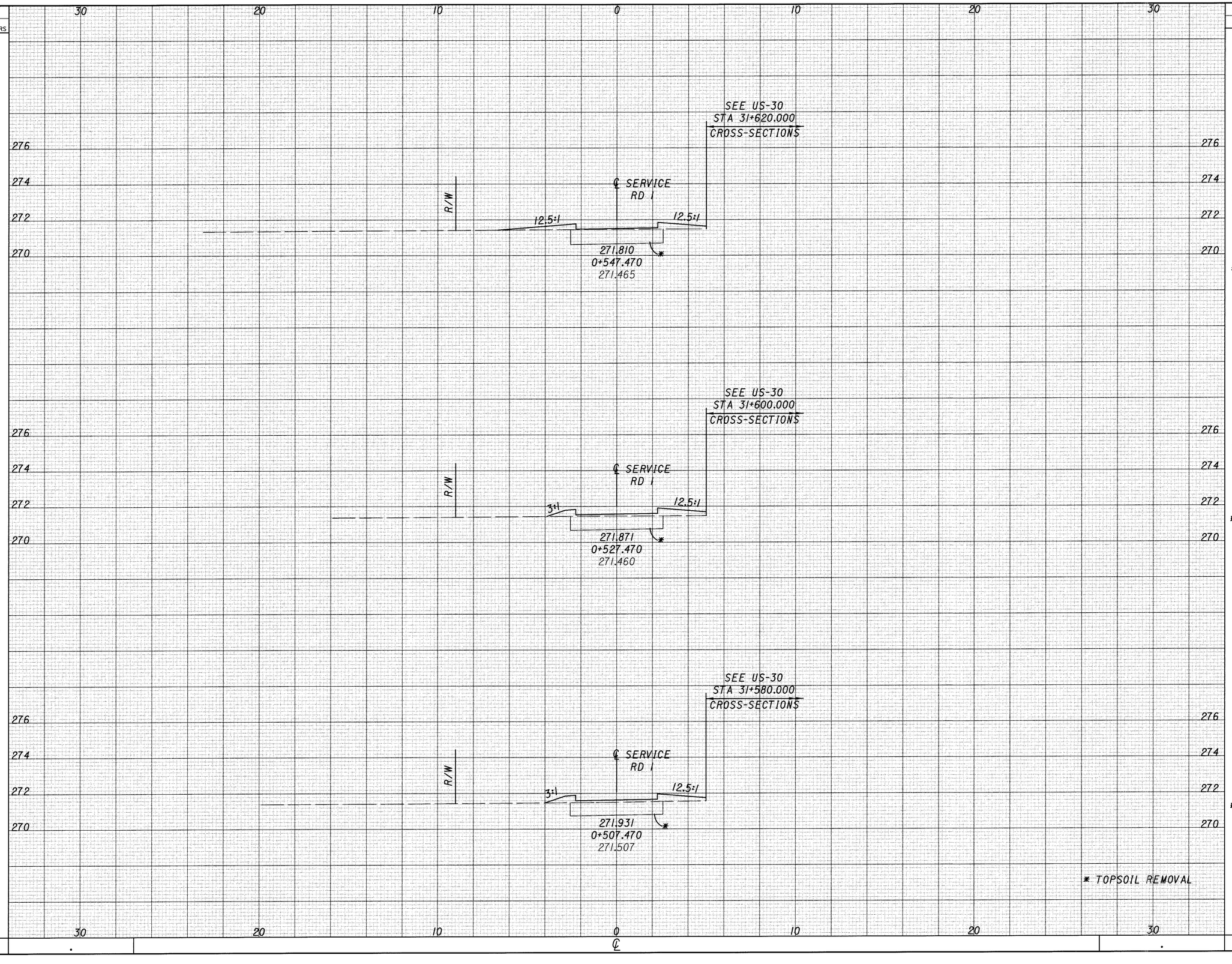
* TOPSOIL REMOVAL

SERVICE ROAD 1 CROSS SECTIONS
STA 0+447.470 TO STA 0+487.470

WYA/CRA-30-28.009/0.000

1240
2116

SEEDING END WIDTH	SEEDING SQ. METERS	STATION	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10.23	179	SEE US-30 STA 31+620.000 CROSS-SECTIONS	0.00	6.01	0	119
			*4.18		*80	
7.63	153	SEE US-30 STA 31+600.000 CROSS-SECTIONS	0.00	5.84	0	117
			*3.84		*76	
7.69	151	SEE US-30 STA 31+580.000 CROSS-SECTIONS	0.00	5.83	0	114
			*3.78		*79	



* TOPSOIL REMOVAL

CALCULATED AM

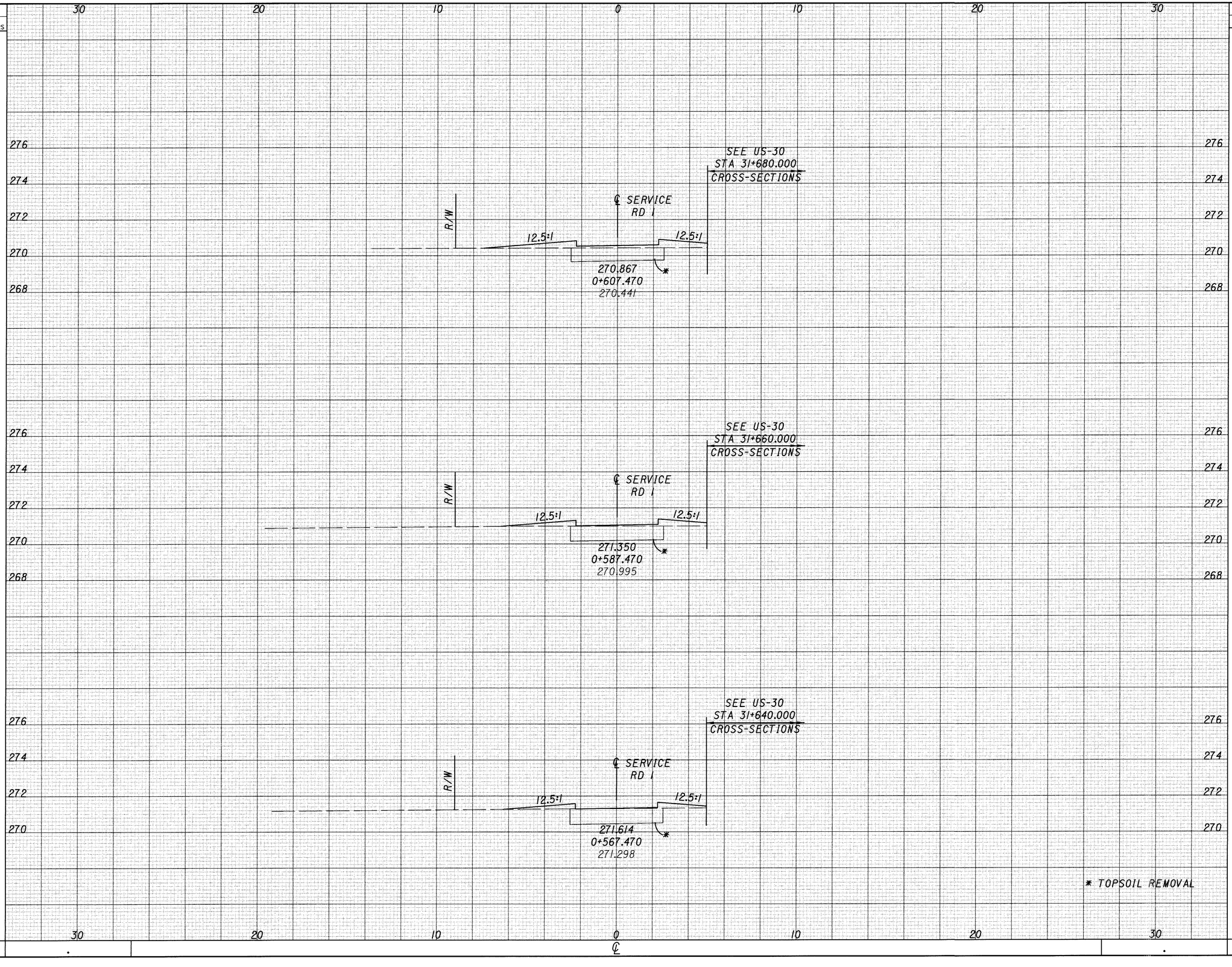
CHECKED REA

SERVICE ROAD 1 CROSS SECTIONS STA 0+507.470 TO STA 0+547.470

WYA/CRA-30-28.009/0.000

1241
2116

SEEDING		END AREA		VOLUME		CALCULATED AM / CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
11.12	212	0.00	6.52	0	125	
		₭3.75		₭79		
10.07	199	0.00	6.01	0	118	
		₭4.13		₭85		
9.85	201	0.00	5.80	0	118	
		₭4.34		₭85		

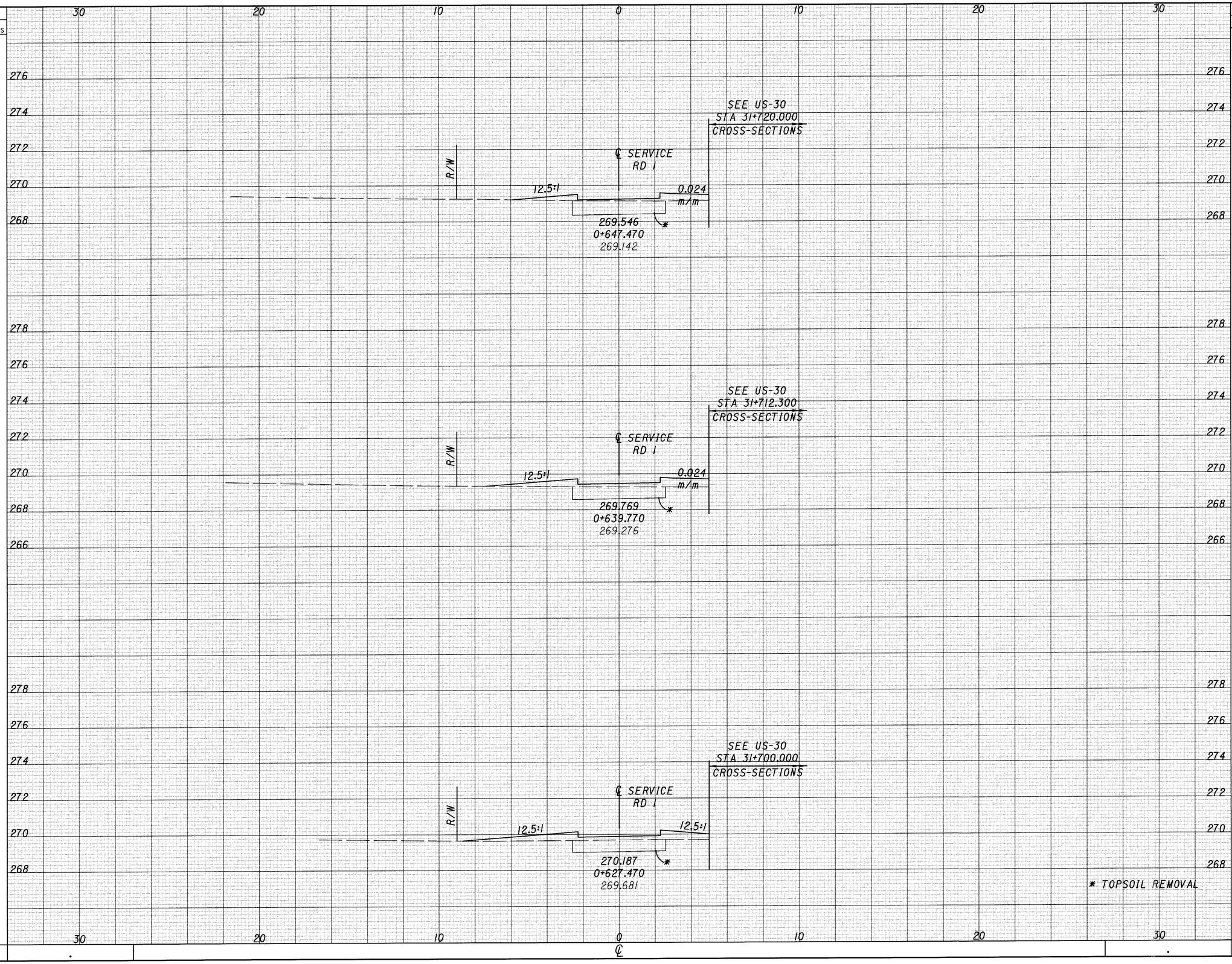


SERVICE ROAD 1 CROSS SECTIONS
STA 0+567.470 TO STA 0+607.470

WYA / CRA-30-28.009 / 0.000

1242
2116

SEEDING	
END WIDTH	SQ. METERS
9.67	81
11.27	146
12.45	236



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.00	6.24		
×3.88		0	51
		×28	
0.00	6.95		
×3.42		0	87
		×42	
0.00	7.26		
×3.35		0	138
		×71	

CALCULATED AM

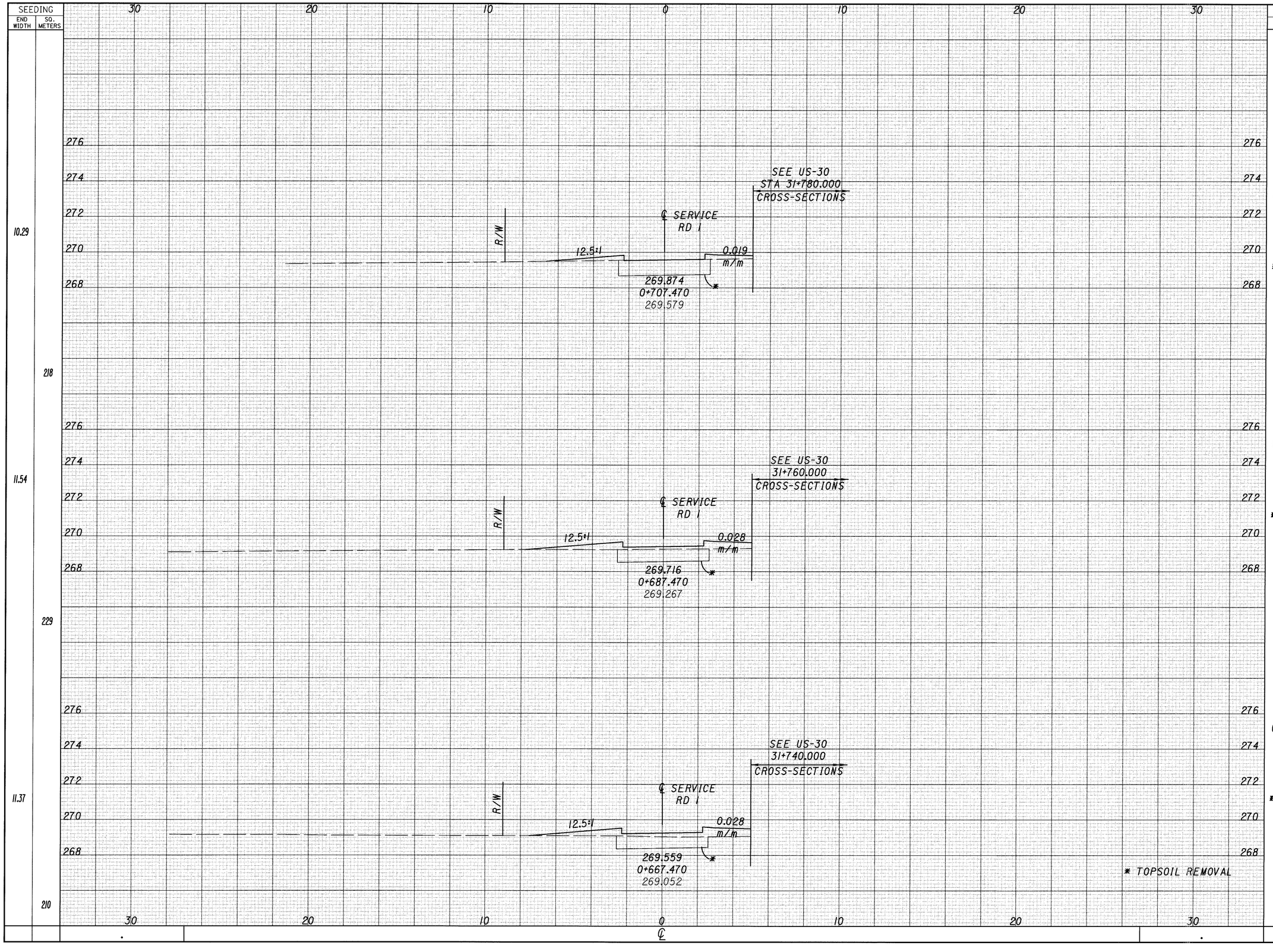
CHECKED REA

SERVICE ROAD 1 CROSS SECTIONS
STA 0+627.470 TO STA 0+647.470

WYA / CRA-30-28.009 / 0.000

1243
2116

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL	
						CALCULATED AM
						CHECKED REA
10.29		0.00	5.87			
		*4.44				
	218			0	127	
				*81		
11.54		0.00	6.78			
		*3.64				
	229			0	137	
				*70		
11.37		0.00	6.90			
		*3.39				
	210			0	131	
				*73		



SERVICE ROAD 1 CROSS SECTIONS
STA 0+667.470 TO STA 0+707.470

WYA/CRA-30-28.009/0.000

1244
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
8.07		0.00	6.09		
		#3.6			
	160			0	121
				#74	
7.91		0.00	6.01		
		#3.77			
	186			0	122
				#79	
10.67		0.00	6.17		
		#4.17			
	210			0	120
				#86	

SEE US-30
STA 31+840.000
CROSS-SECTIONS

℄ SERVICE RD 1

R/W

3:1

0.014 m/m

270.584
0+767.470
270.126

SEE US-30
STA 31+820.000
CROSS-SECTIONS

℄ SERVICE RD 1

R/W

3:1

0.010 m/m

270.231
0+747.470
269.805

SEE US-30
STA 31+800.000
CROSS-SECTIONS

℄ SERVICE RD 1

R/W

12.5:1

0.014 m/m

270.032
0+727.470
269.683

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

CALCULATED AM

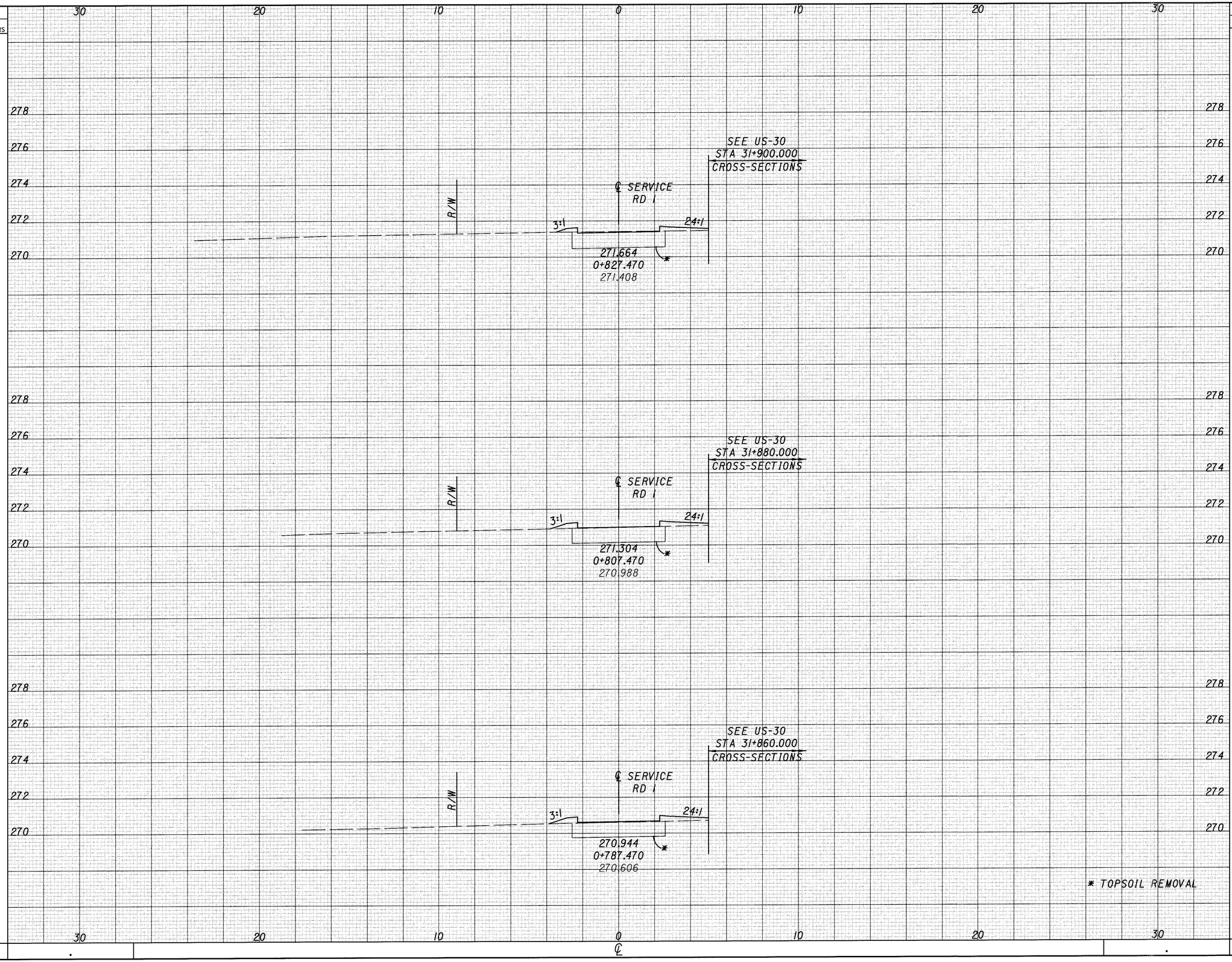
CHECKED REA

SERVICE ROAD 1 CROSS SECTIONS
STA 0+727.470 TO STA 0+767.470

WYA/CRA-30-28.009/0.000

1245
2116

SEEDING	
END WIDTH	SQ. METERS
7.08	145
7.41	149
7.52	156



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.00	5.34		
⌀4.63			
		0	108
		⌀90	
0.00	5.48		
⌀4.33			
		0	111
		⌀86	
0.00	5.58		
⌀4.22			
		0	117
		⌀78	

CALCULATED AM

CHECKED RLA

SERVICE ROAD 1 CROSS SECTIONS
STA 0+787.470 TO STA 0+827.470

WYA / CRA-30-28.009 / 0.000

1246
2116

SEEDING END WIDTH	SEEDING SQ. METERS	30	20	10	0	10	20	30	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		278	278	278	278	278	278	278				
		276	276	276	276	276	276	276				
		274	274	274	274	274	274	274				
		272	272	272	272	272	272	272				
		270	270	270	270	270	270	270				
10.21				R/W ℄ SERVICE RD 1	SEE US-30 STA 31+960.000 CROSS-SECTIONS				0.00	123		
				12.5:1	0.024 m/m				*78			
					271.643 0+887.470 271.245							
	180										6.28	*3.93
7.80				R/W ℄ SERVICE RD 1	SEE US-30 STA 31+940.000 CROSS-SECTIONS				0.00	6.01		
				3:1	0.028 m/m				*3.84			
					271.539 0+867.470 271.135							
	153										0	119
									*79			
7.55				R/W ℄ SERVICE RD 1	SEE US-30 STA 31+920.000 CROSS-SECTIONS				0.00	5.89		
				3:1	24:1				*4.03			
					271.876 0+847.470 271.502							
											0	112
	146										*87	
		30	20	10	0	10	20	30				

* TOPSOIL REMOVAL

CALCULATED AM

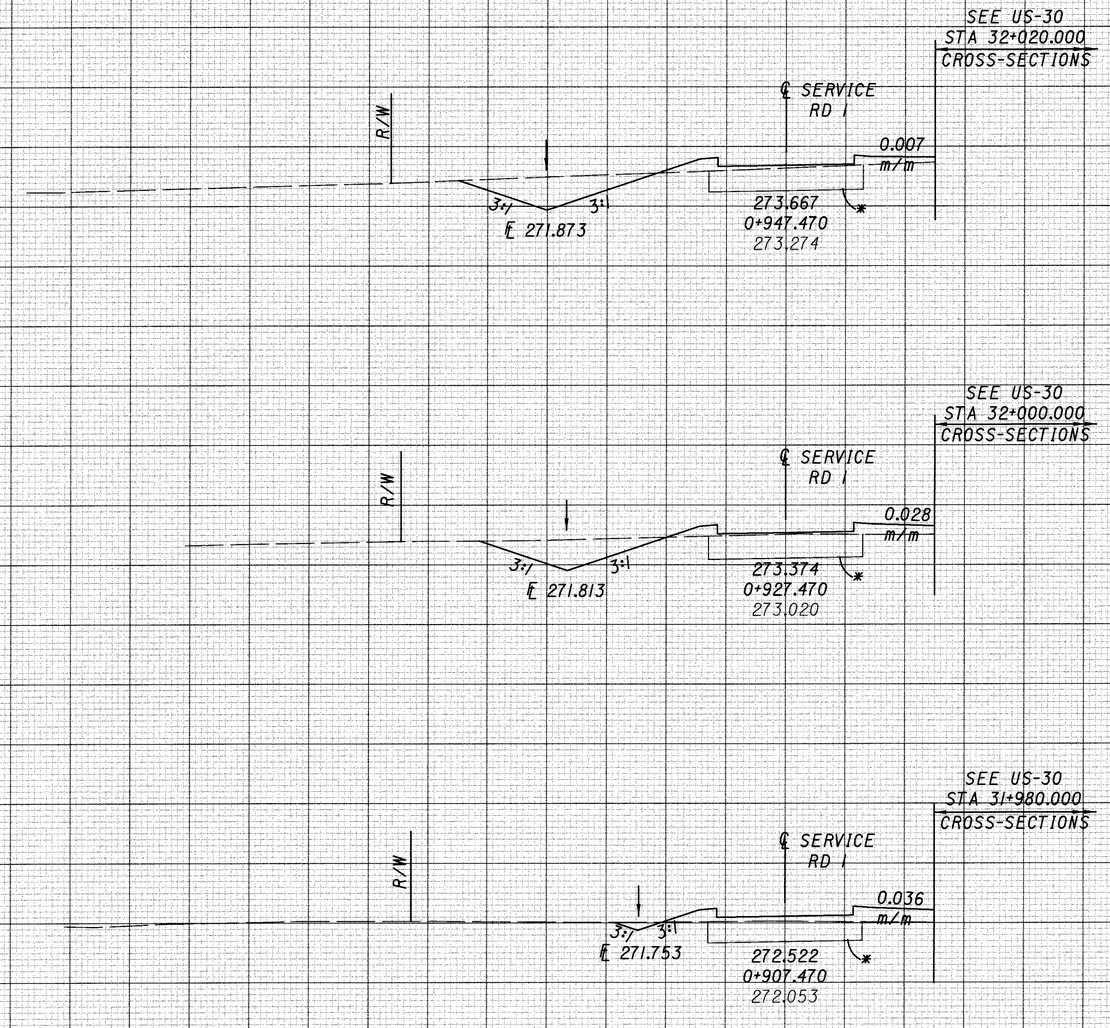
CHECKED REA

SERVICE ROAD 1 CROSS SECTIONS STA 0+847.470 TO STA 0+887.470

WYA / CRA-30-28.009 / 0.000

1247
2116

SEEDING			END AREA		VOLUME	
END WIDTH	SQ. METERS		CUT	FILL	CUT	FILL
		30				
		20				
		10				
		0				
		10				
		20				
		30				
		278				
		276				
15.99		274				
		272				
		278	3.67	5.78		
		276				
		274	*3.93			
		272				
					69	117
					*80	
	314	278	3.20	5.88		
		276				
15.36		274	*4.06			
		272				
					34	121
					*76	
	254	278	0.21	6.27		
		276				
10.00		274	*3.51			
		272				
		270				
					2	126
	202				*74	



* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

SERVICE ROAD 1 CROSS SECTIONS
STA 0+907.470 TO STA 0+947.470

WYA/CRA-30-28.009/0.000

1248
2116

SEEDING	
END WIDTH	SQ. METERS
11.66	198
13.43	294

30 20 10 0 10 20 30

278
276
274
272
270

SEE US-30
STA 32+055.739
CROSS-SECTIONS

℄ SERVICE RD 1

R/W

3:1 3:1

℄ 271.980

0.014 m/m

272.729
0+983.228
272.932

SEE US-30
STA 32+040.000
CROSS-SECTIONS

℄ SERVICE RD 1

R/W

3:1 3:1

℄ 271.933

0.005 m/m

273.230
0+967.475
273.004

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
5.17	0.00		
#0			
		61	41
		#37	
2.53	5.23		
#4.67			
		62	110
		#86	

CALCULATED AM

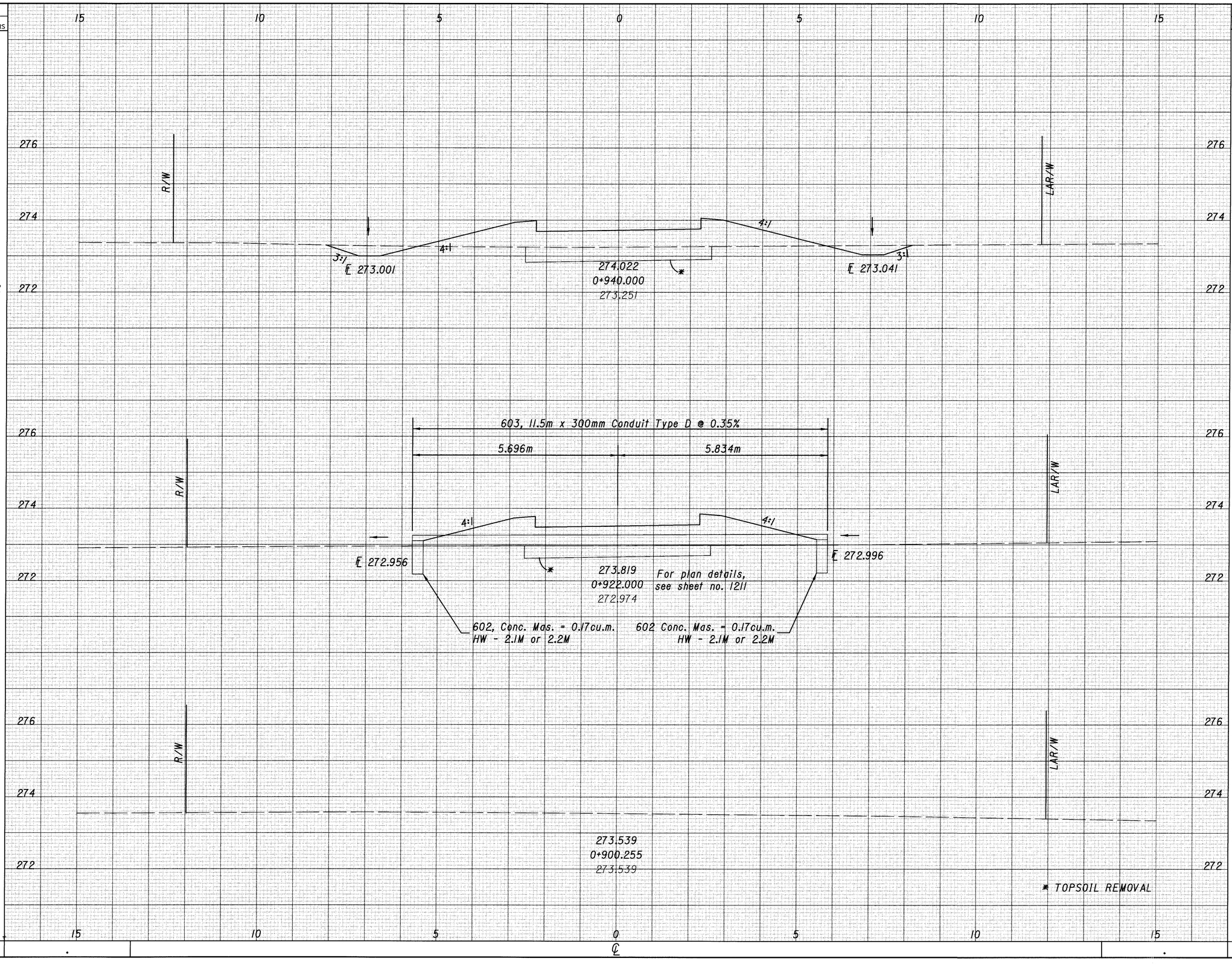
CHECKED REA

SERVICE ROAD 1 CROSS SECTIONS
STA 0+967.475 TO STA 0+983.228

WYA / CRA-30-28.009 / 0.000

1249
2116

SEEDING END WIDTH	SEEDING SQ. METERS
12.63	
	192
8.71	
	95
0.00	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.84	7.23		
*1.99			
		8	135
		*32	
0.00	7.82		
*1.6			
		15	85
		*17	
1.37	0.00		
*0			

CALCULATED AM

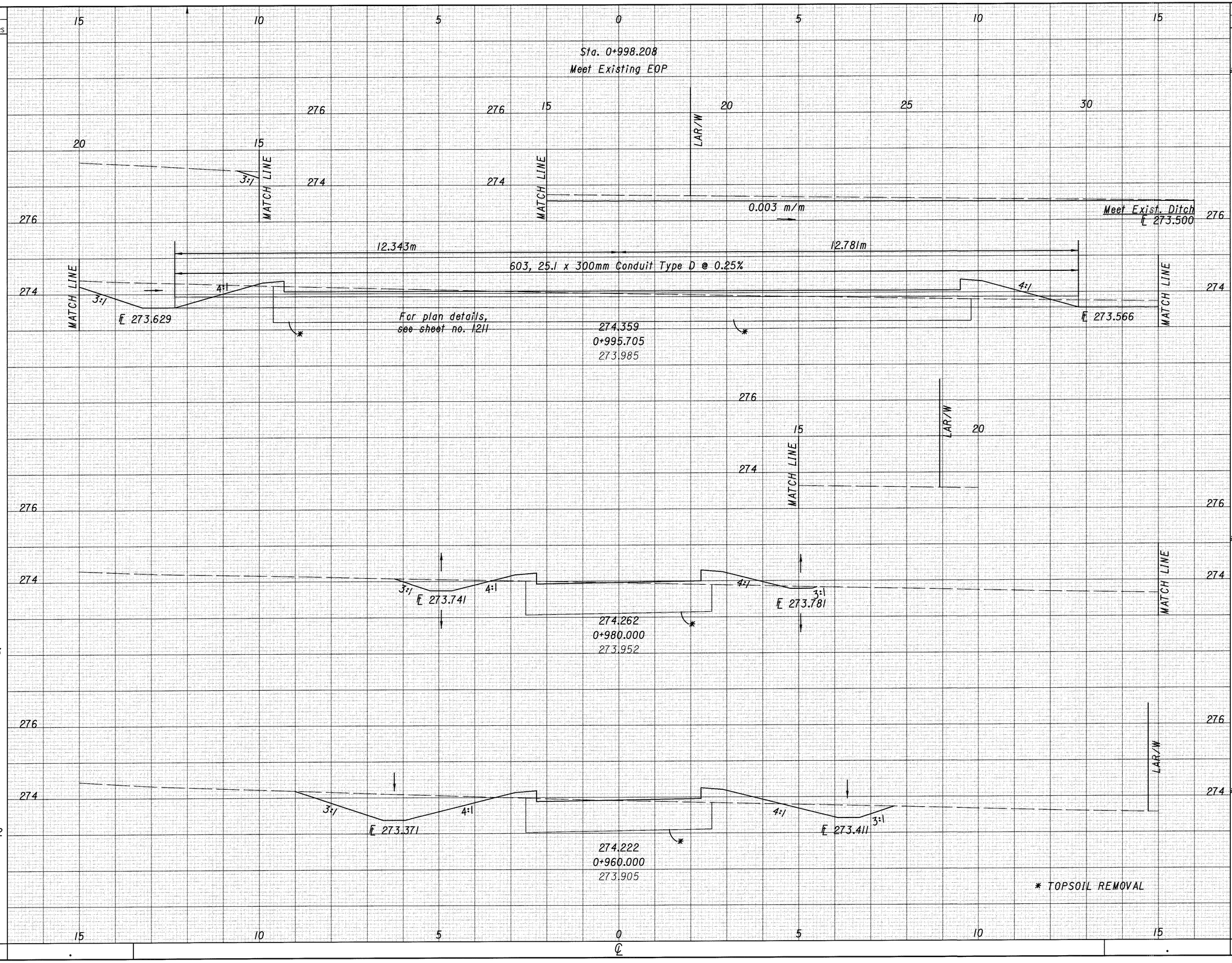
CHECKED REA

SERVICE ROAD 3 CROSS SECTIONS STA 0+900.255 TO STA 0+940.000

WYA/CRA-30-28.009/0.000

1250
2116

SEEDING END WIDTH	SEEDING SQ. METERS
0.00	
	4
3.24	
	86
7.73	
	213
13.61	
	262



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
8.78	0.00		
*0.00			
		17	23
		*19	
4.48	18.37		
*15.1			
		40	186
		*153	
0.57	5.30		
*4.35			
		35	106
		*87	
2.92	5.30		
*4.33			
		38	125
		*63	

CALCULATED AM

CHECKED REJ

SERVICE ROAD 3 CROSS SECTIONS
STA 0+960.000 TO STA 0+995.705

WYA/CRA-30-28.009/0.000

1251
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
12.45	197	1.20	4.81	24	96		
7.28	71	1.20	4.81	11	44		
8.50		1.17	4.85				

30 20 10 0 10 20 30

286 284 282 280 278

R/W

0.016

14:1

279.802
0+480.000
279.802

SEE U.S. 30
CROSS-SECTIONS

#4.81

#96

286 284 282 280 278

R/W

8.:1 0.016 16:1

279.657
0+460.000
279.657

#4.80

#43

286 284 282 280 278

7:1 0.016 12.5:1

279.843
0+450.965
279.843

#4.79

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

SERVICE ROAD 6 CROSS SECTIONS
STA 0+450.965 TO STA 0+480.000

WYA/CRA-30-28.009/0.000

1252
2116

SEEDING END WIDTH	SEEDING SQ. METERS
9.60	170
7.36	146
7.27	197

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2.13	4.81		
*4.79			
		33	96
		*96	
1.17	4.82		
*4.80			
		23	96
		*96	
1.17	4.81		
*4.80			
		24	96
		*96	

30 20 10 0 10 20 30

286 284 282 280 278

SEE U.S. 30 CROSS-SECTIONS

R/W

0.016

48:1

280.463
0+540.000
280.463

SEE U.S. 30 CROSS-SECTIONS

R/W

8:1 0.016 12.5:1

280.115
0+520.000
280.115

SEE U.S. 30 CROSS-SECTIONS

R/W

10:1 0.016 10:1

279.976
0+500.000
279.976

SEE U.S. 30 CROSS-SECTIONS

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

CALCULATED AM

CHECKED REA

SERVICE ROAD 6 CROSS SECTIONS
STA 0+500.000 TO STA 0+540.000

WYA/CRA-30-28.009/0.000

1253
2116

SEEDING END WIDTH	SEEDING SQ. METERS
10.03	204
10.35	205
10.12	197

30 20 10 0 10 20 30

288 286 284 282 280 278

SEE U.S. 30 CROSS-SECTIONS

R/W

12.5:1 0.016 48:1

281.148
0+600.000
281.148

281.101
0+580.000
281.101

280.876
0+560.000
280.876

* TOPSOIL REMOVAL

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2.38	4.83		
⧗4.78			
		49	97
		⧗96	
2.55	4.84		
⧗4.78			
		46	97
		⧗96	
2.09	4.84		
⧗4.78			
		42	96
		⧗96	

CALCULATED AM

CHECKED REA

SERVICE ROAD 6 CROSS SECTIONS STA 0+560.000 TO STA 0+600.000

WYA/CRA-30-28.009/0.000

1254
2116

SEEDING	
END WIDTH	SQ. METERS
12.74	
	223
9.61	
	198
10.21	
	202

30 20 10 0 10 20 30

288 286 284 282 280

R/W

0.016 48:1

281.439
0+660.000
281.439

SEE U.S. 30 CROSS-SECTIONS

12.5:1 0.016 48:1

281.278
0+640.000
281.278

SEE U.S. 30 CROSS-SECTIONS

12.5:1 0.016 48:1

281.239
0+620.000
281.239

SEE U.S. 30 CROSS-SECTIONS

* TOPSOIL REMOVAL

℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.24	4.80		
≠4.80		47	96
		≠96	
2.41	4.81		
≠4.79		48	96
		≠96	
2.42	4.84		
≠4.78		48	97
		≠96	

CALCULATED AM

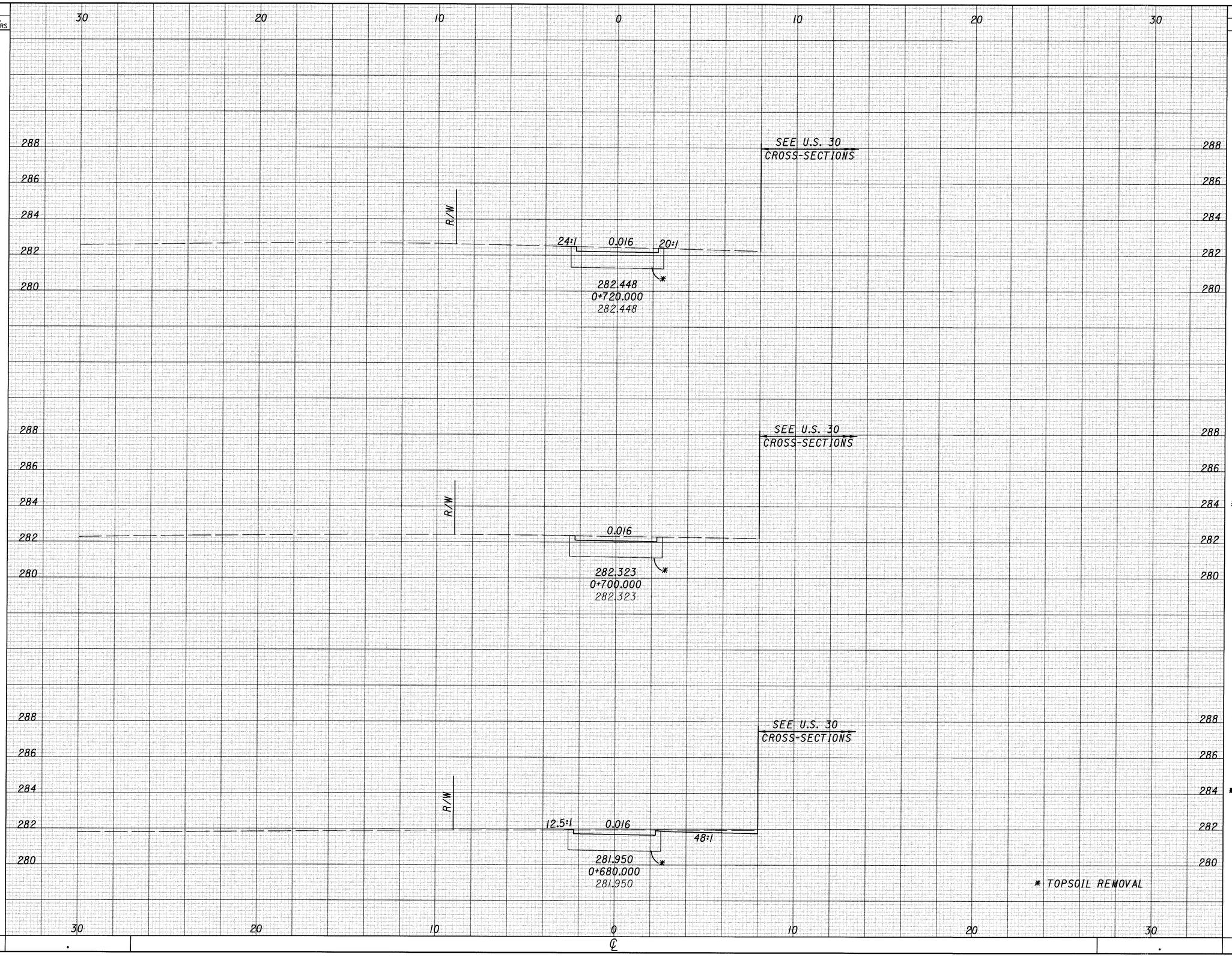
CHECKED REA

SERVICE ROAD 6 CROSS SECTIONS STA 0+620.000 TO STA 0+660.000

WYA/CRA-30-28.009/0.000

1255
2116

SEEDING END WIDTH	SEEDING SQ. METERS
7.22	148
7.54	169
9.38	221



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
1.16	4.81		
*4.80			
		23	96
		*96	
1.15	4.81		
*4.81			
		30	96
		*96	
1.89	4.80		
*4.79			
		41	96
		*96	

CALCULATED AM

CHECKED REA

SERVICE ROAD 6 CROSS SECTIONS STA 0+680.000 TO STA 0+720.000

WYA / CRA-30-28.009 / 0.000

1256
2116

SEEDING	
END WIDTH	SQ. METERS
18.35	348
16.47	384
21.90	291

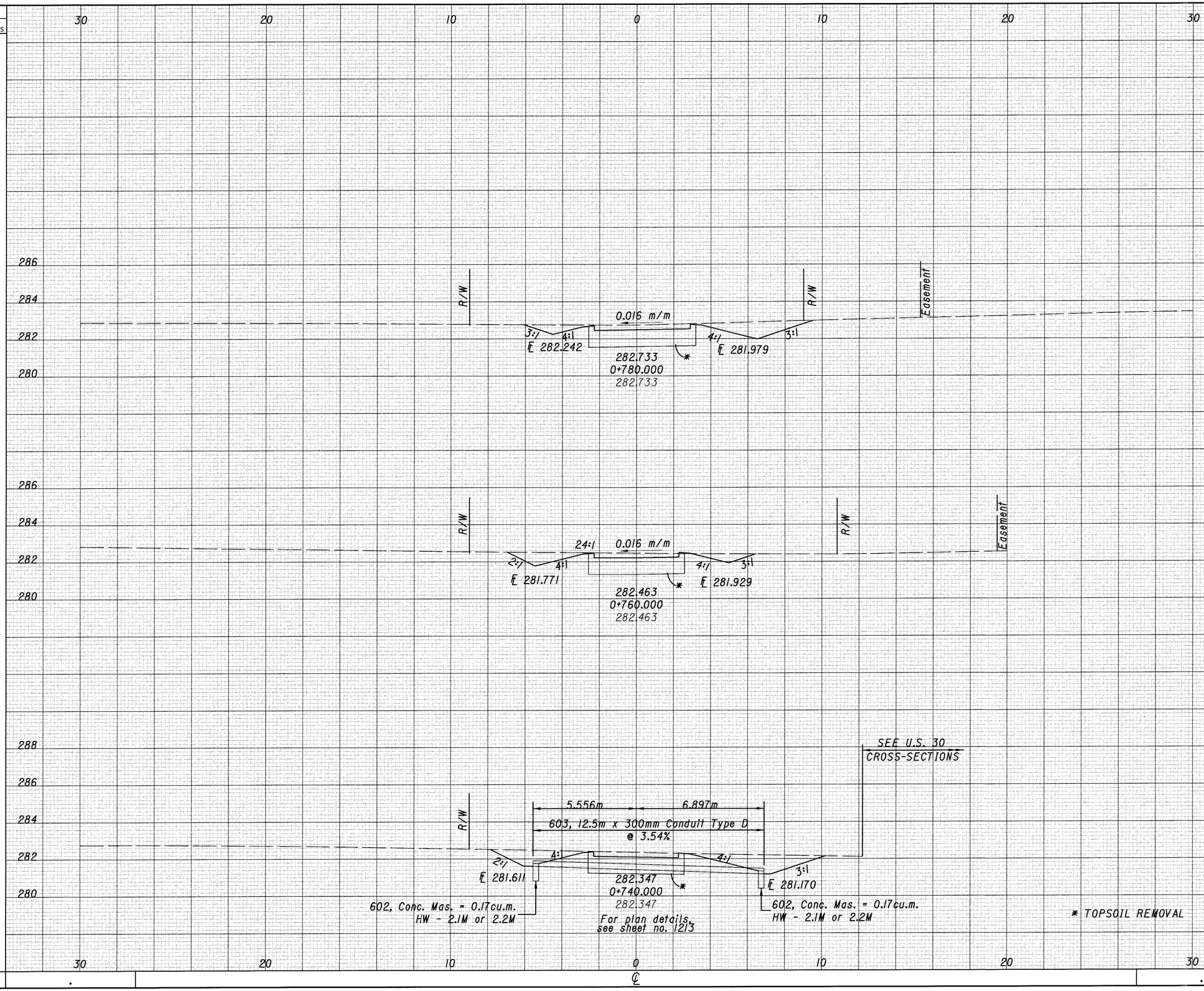
END AREA		VOLUME	
CUT	FILL	CUT	FILL
5.31	5.34		
*5.34			
		89	101
		*101	
3.61	4.81		
*4.78			
		110	96
		*96	
7.39	4.80		
*4.80			
		85	96
		*96	

CALCULATED AM

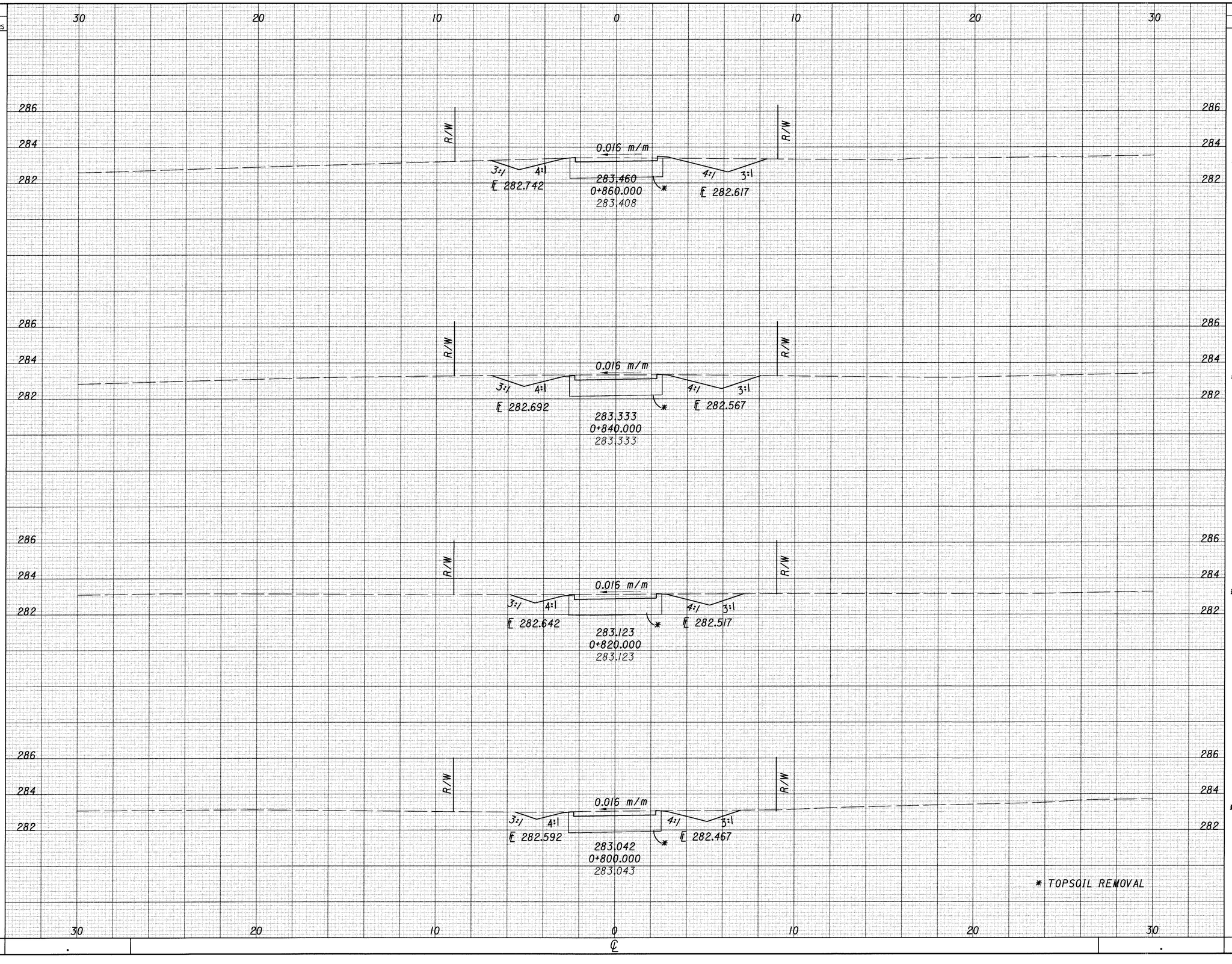
CHECKED REA

WYA/CRA-30-28.009/0.000
SERVICE ROAD 6 CROSS SECTIONS
STA 0+740.000 TO STA 0+780.000

1257
2116



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
18.45	366	4.04	4.83	86	96
		*4.77		*96	
18.15	340	4.53	4.80	78	96
		*4.79		*96	
15.83	311	3.30	4.80	63	96
		*4.80		*96	
15.31	337	3.04	4.80	84	101
		*4.80		*101	



CALCULATED AM

CHECKED REA

SERVICE ROAD 6 CROSS SECTIONS
STA 0+800.000 TO STA 0+860.000

WYA/CRA-30-28.009/0.000

1258
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
15.00	106	3.61	3.40	25	20
		₹3.37		₹19	
21.71	269	4.88	3.58	44	204
		₹3.26		₹140	
16.20	330	1.30	25.14	23	310
		₹16.44		₹198	
16.84	353	1.02	5.84	51	107
		₹3.39		₹82	

CALCULATED AM

CHECKED KEA

SERVICE ROAD 6 CROSS SECTIONS
STA 0+880.000 TO STA 0+920.000

WYA/CRA-30-28.009/0.000

1259
2116

30 20 10 0 10 20 30

286
284
282

Easement
R/W
283.781
0+920.000
283.782
4:1
3:1
℄ 282.767

Easement
31.484
R/W
3:1
4:1
℄ 282.877
283.756
0+914.197
283.533
4:1
3:1
℄ 282.752

For driveway profile see sheet no.
R/W
300mm CONC.
℄ 282.842
0.016 m/m
283.679
0+900.000
283.127
4:1
3:1
℄ 282.717

Easement
33.180
R/W
3:1
4:1
℄ 282.792
0.016 m/m
283.570
0+880.000
283.065
4:1
3:1
℄ 282.667

* TOPSOIL REMOVAL

℄

SEEDING	
END WIDTH	SQ. METERS
11.72	
	216
9.87	
	249

30 20 10 0 10 20 30

286
284
282

R/W

4:1

283.787
0+960.000
283.787

For driveway Profile
see sheet no. 1234

283.594
0+940.000
283.594

300mm CONC.
℄ 282.817

* TOPSOIL REMOVAL

℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.69	3.44		
*3.36			
		23	111
		*108	
1.57	7.61		
*7.48			
		52	110
		*109	

CALCULATED AM

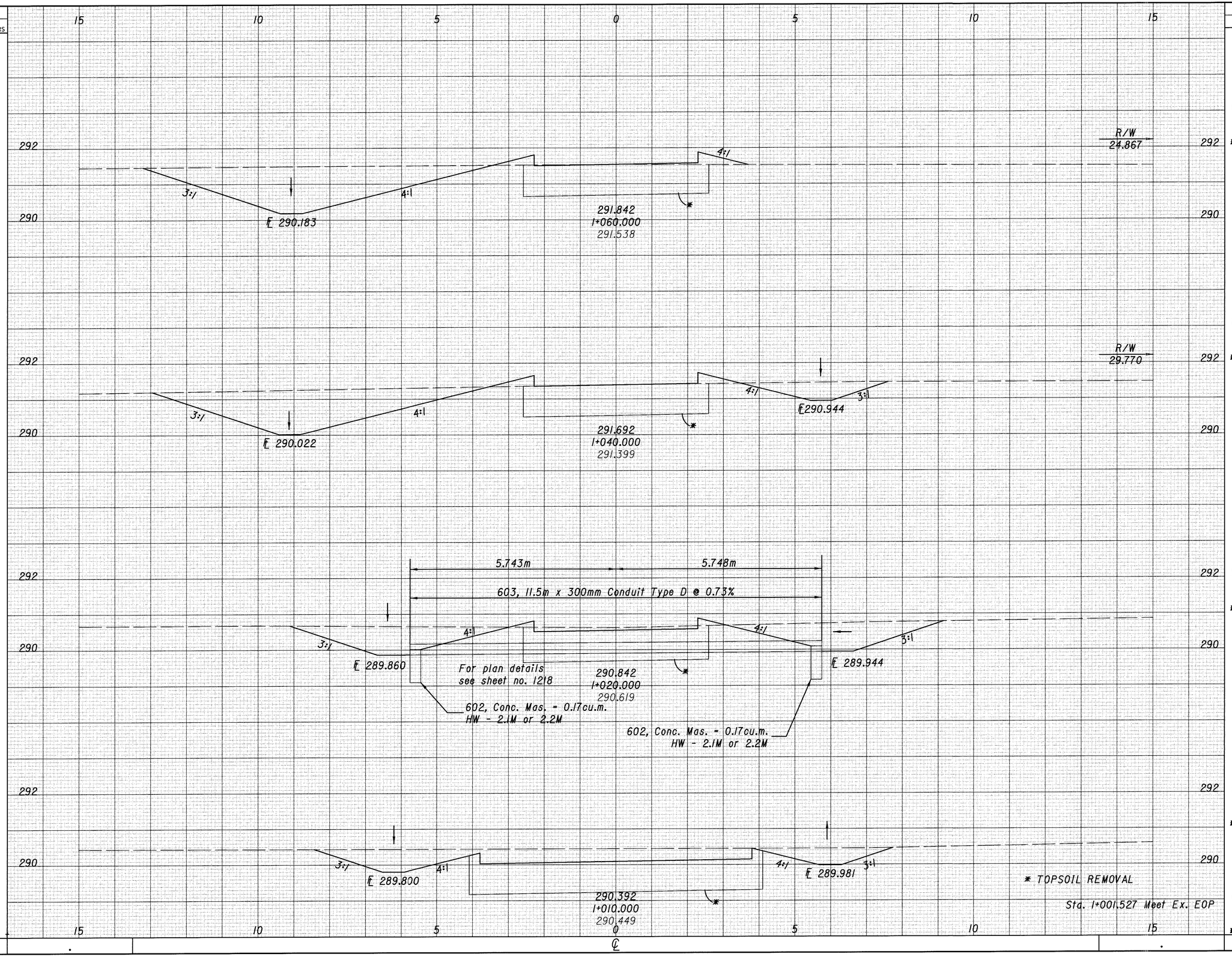
CHECKED REA

SERVICE ROAD 6 CROSS SECTIONS STA 0+940.000 TO STA 0+960.000

WYA/CRA-30-28.009/0.000

1260
2116

SEEDING END WIDTH	SEEDING SQ. METERS
19.98	
	442
24.25	
	464
22.11	
	191
15.99	
	68
0.00	



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
6.77	5.02		
¤4.37			
		141	100
		¤88	
7.36	4.99		
¤4.43			
		129	98
		¤91	
5.56	4.84		
¤4.69			
		54	62
		¤61	
5.19	7.50		
¤7.50			
		59	32
		¤0	
8.81	0.00		
¤0.00			

CALCULATED AM

CHECKED REA

SERVICE ACCESS 14 CROSS SECTIONS
STA 1+010.000 TO STA 1+060.000

WYA/CRA-30-28.009/0.000

1261
2116

SEEDING	
END WIDTH	SQ. METERS
10.017	
	54
12.539	
	277
15.118	
	332
18.089	
	381

15 10 5 0 5 10 15

292
290

Driveway
291.447
0+012.762
291.278

1+124.750
291.096

R/W

For driveway profile
see sheet no. 1235

℄ Driveway

3:1 4:1
℄ 290.668

4:1

291.155
1+120.000
291.090

3:1 4:1
℄ 290.506

4:1

291.421
1+100.000
291.153

3:1 4:1
℄ 290.345

4:1

291.686
1+080.000
291.408

* TOPSOIL REMOVAL

℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.16	4.54		
⌘4.22			
		10	36
		⌘35	
3.91	10.59		
⌘10.54			
		64	156
		⌘151	
2.51	4.97		
⌘4.52			
		75	99
		⌘90	
5.01	4.96		
⌘4.52			
		118	100
		⌘89	

CALCULATED AM

CHECKED REA

SERVICE ACCESS 14 CROSS SECTIONS
STA 1+080.000 TO STA 1+124.750

WYA/CRA-30-28.009/0.000

1262
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
15.56		0.03	5.89		
		*4.54			
				3	112
	265			*93	
10.56		0.27	5.14		
		*4.65			
				30	101
	234			*96	
12.55		2.68	4.82		
		*4.78			
				48	98
	262			*97	
13.30		2.01	4.84		
		*4.76			

US 30 STA. 3+040
CROSS-SECTIONS

R/W
℄ 297.696
12.5:1
48:1
298.028
9+303.325
297.759

US 30 STA. 3+020
CROSS-SECTIONS

R/W
3:1
3:1
℄ 297.533
48:1
297.935
9+283.043
297.707

US 30 STA. 3+000
CROSS-SECTIONS

R/W
3:1
3:1
℄ 297.371
48:1
297.841
9+262.759
297.831

US 30 STA. 2+980
CROSS-SECTIONS

R/W
3:1
3:1
℄ 297.209
48:1
297.747
9+242.470
297.676

* TOPSOIL REMOVAL

30 20 10 0 10 20 30

℄

CALCULATED AM
CHECKED REA

SERVICE ACCESS 17 CROSS SECTIONS
STA 9+242.470 TO STA 9+303.325

WYA / CRA-30-28.009 / 0.000

1263
2116

SEEDING END WIDTH	SEEDING SQ. METERS
13.15	263
12.75	264
13.30	253
11.62	276

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.00	5.64		
#4.61			
		0	113
		#93	
0.03	5.52		
#4.61			
		0	113
		#93	
0.01	5.62		
#4.56			
		2	110
		#94	
0.19	5.25		
#4.68			
		2	113
		#93	

US 30 STA. 3+120
CROSS-SECTIONS

R/W
12.5:1
℄ 297.506
12.5:1
297.719
9+384.436
297.457

US 30 STA. 3+100
CROSS-SECTIONS

R/W
12.5:1
℄ 297.585
12.5:1
297.842
9+364.159
297.585

US 30 STA. 3+080
CROSS-SECTIONS

R/W
12.5:1
℄ 297.723
12.5:1
298.026
9+343.882
297.756

US 30 STA. 3+060
CROSS-SECTIONS

R/W
12.5:1
℄ 297.963
12.5:1
298.122
9+323.604
297.906

* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

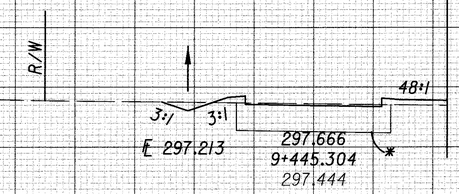
SERVICE ACCESS 17 CROSS SECTIONS
STA 9+323.604 TO STA 9+384.719

WYA / CRA-30-28.009 / 0.000

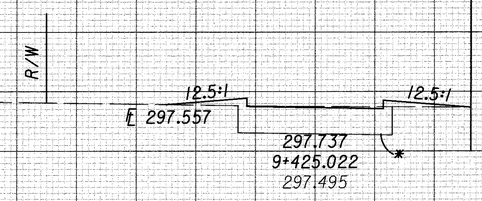
1264
2116

SEEDING END WIDTH	SEEDING SQ. METERS
8.57	174
8.63	217
12.73	185
13.25	80

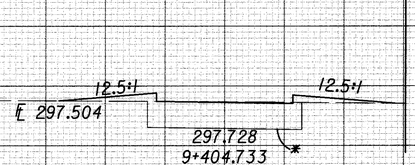
US 30 STA. 3+180
CROSS-SECTIONS



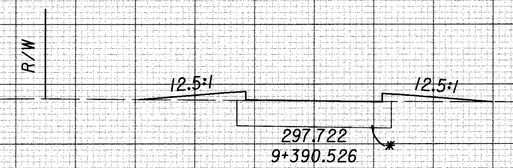
US 30 STA. 3+160
CROSS-SECTIONS



US 30 STA. 3+140
CROSS-SECTIONS



US 30 STA. 3+126
CROSS-SECTIONS



* TOPSOIL REMOVAL

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.38	5.23		
#4.68			
		4	107
		#95	
0.06	5.33		
#4.67			
		1	110
		#94	
0.01	5.52		
#4.62			
		0	80
		#65	
0.00	5.70		
#4.51			
		0	35
		#28	

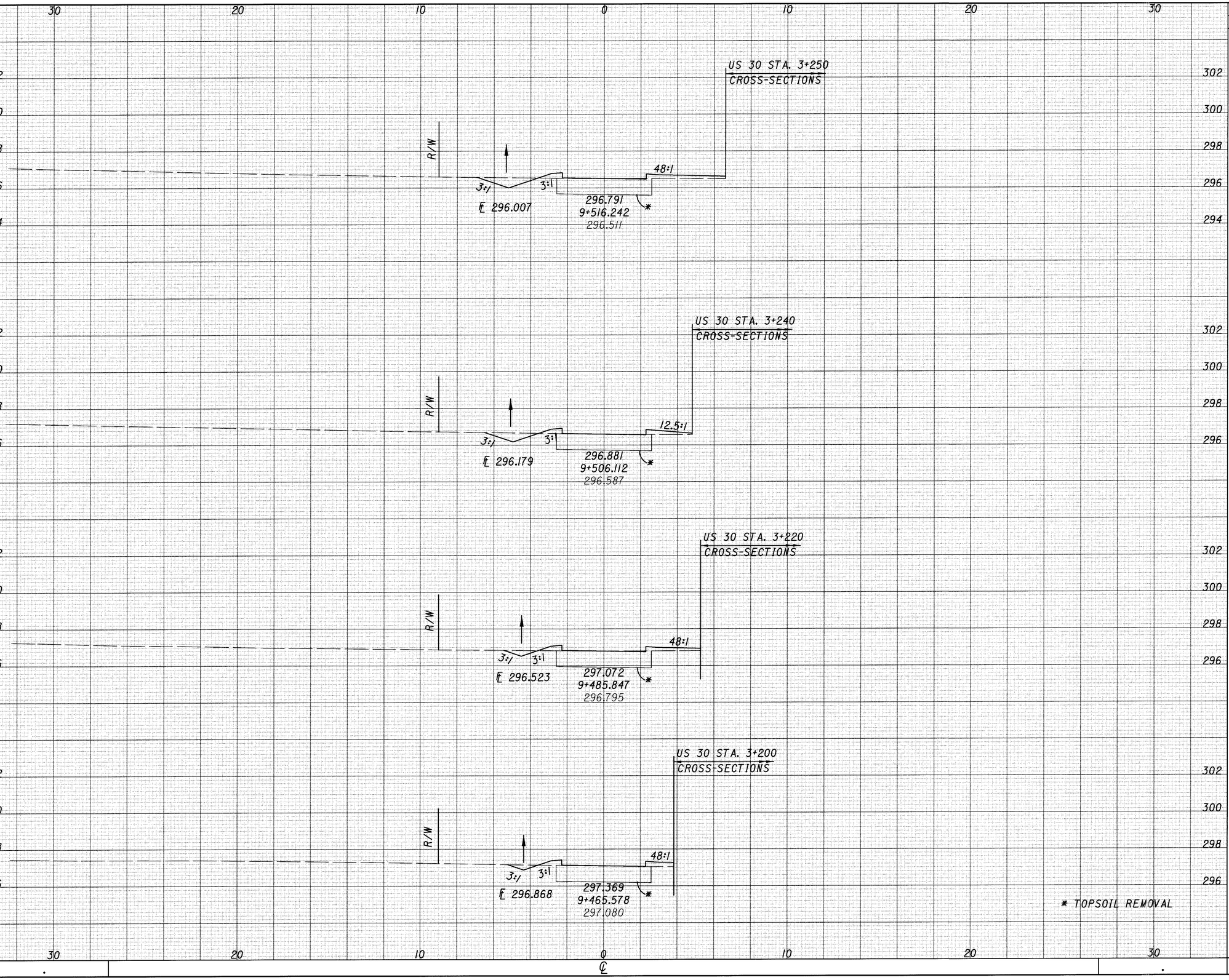
CALCULATED AM
CHECKED REA

SERVICE ACCESS 17 CROSS SECTIONS
STA 9+390.526 TO STA 9+445.304

WYA / CRA-30-28.009 / 0.000

1265
2116

SEEDING	
END WIDTH	SQ. METERS
12.87	
	118
10.46	
	205
9.73	
	181
8.11	
	169



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.91	5.64		
#4.53			
		8	55
		#46	
0.72	5.31		
#4.47			
		10	108
		#91	
0.29	5.39		
#4.56			
		5	108
		#92	
0.22	5.25		
#4.48			
		6	106
		#93	

* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

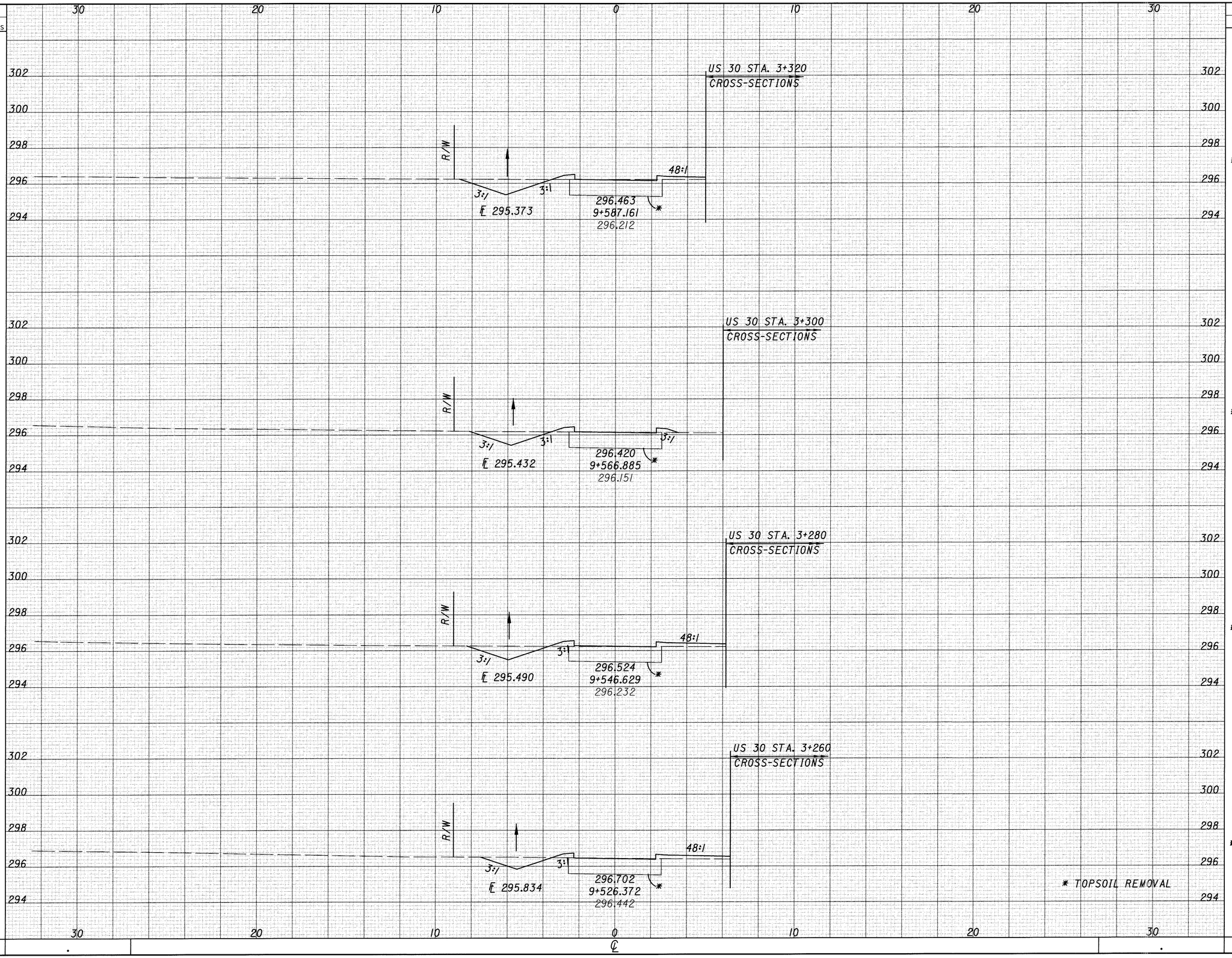
SERVICE ACCESS 17 CROSS SECTIONS STA 9+465.578 TO STA 9+516.242

WYA / CRA-30-28.009 / 0.000

1266
2116

SEEDING END WIDTH	SEEDING SQ. METERS
13.46	250
11.20	256
14.10	279
13.44	133

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2.23	5.33		
*4.63			
		40	106
		*93	
1.71	5.10		
*4.57			
		35	109
		*91	
1.74	5.65		
*4.46			
		31	114
		*92	
1.33	5.64		
*4.62			
		11	57
		*46	



CALCULATED AM

CHECKED REA

SERVICE ACCESS 17 CROSS SECTIONS
STA 9+526.372 TO STA 9+587.161

WYA / CRA-30-28.009 / 0.000

1267
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14.29		3.82	4.82		
		₭4.78			
	254			58	99
				₭96	
10.81		1.91	5.00		
		₭4.69			
	237			41	104
				₭93	
12.57		2.12	5.26		
		₭4.52			
	264			44	107
				₭93	

30 20 10 0 10 20 30

302 300 298 296 294

US 30 STA. 3+380
CROSS-SECTIONS

R/W
3:1 3:1
℄ 295.198
296.120
9+647.940
296.084
24:1

US 30 STA. 3+360
CROSS-SECTIONS

R/W
3:1 3:1
℄ 295.257
296.276
9+627.688
296.093

US 30 STA. 3+340
CROSS-SECTIONS

R/W
3:1 3:1
℄ 295.315
296.433
9+607.428
296.152
24:1

* TOPSOIL REMOVAL

℄

CALCULATED AM

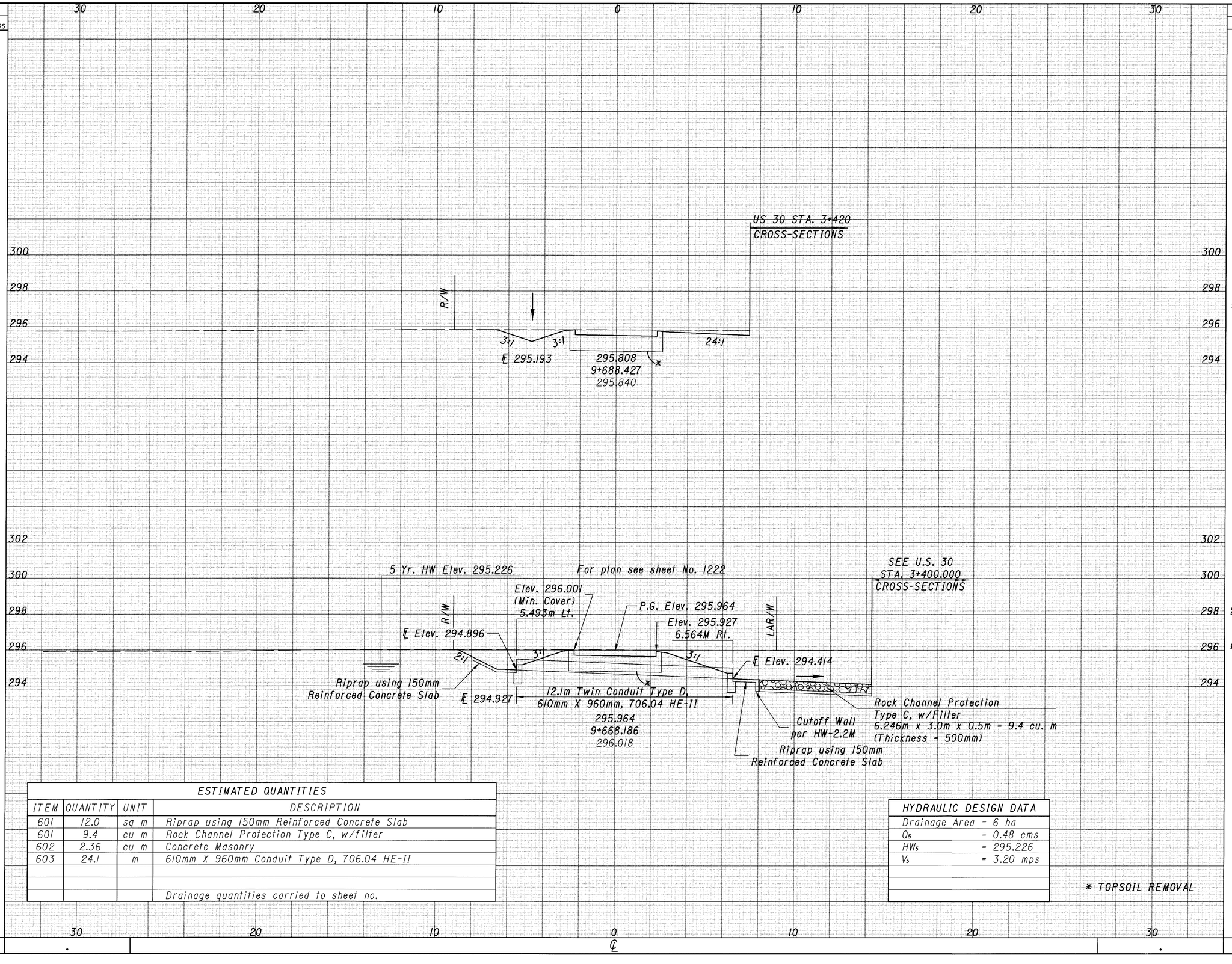
CHECKED REA

SERVICE ACCESS 17 CROSS SECTIONS
STA 9+607.428 TO STA 9+647.940

WYA/CRA-30-28.009/0.000

1268
2116

SEEDING	
END WIDTH	SQ. METERS
13.40	
	409
26.97	
	418



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3.54	4.80		
*4.80			
		295	97
		*97	
25.60	4.80		
*4.80			
		298	97
		*97	

CALCULATED AM

CHECKED REA

SERVICE ACCESS 17 CROSS SECTIONS
STA 9+668.186 TO STA 9+688.427

WYA/CRA-30-28.009/0.000

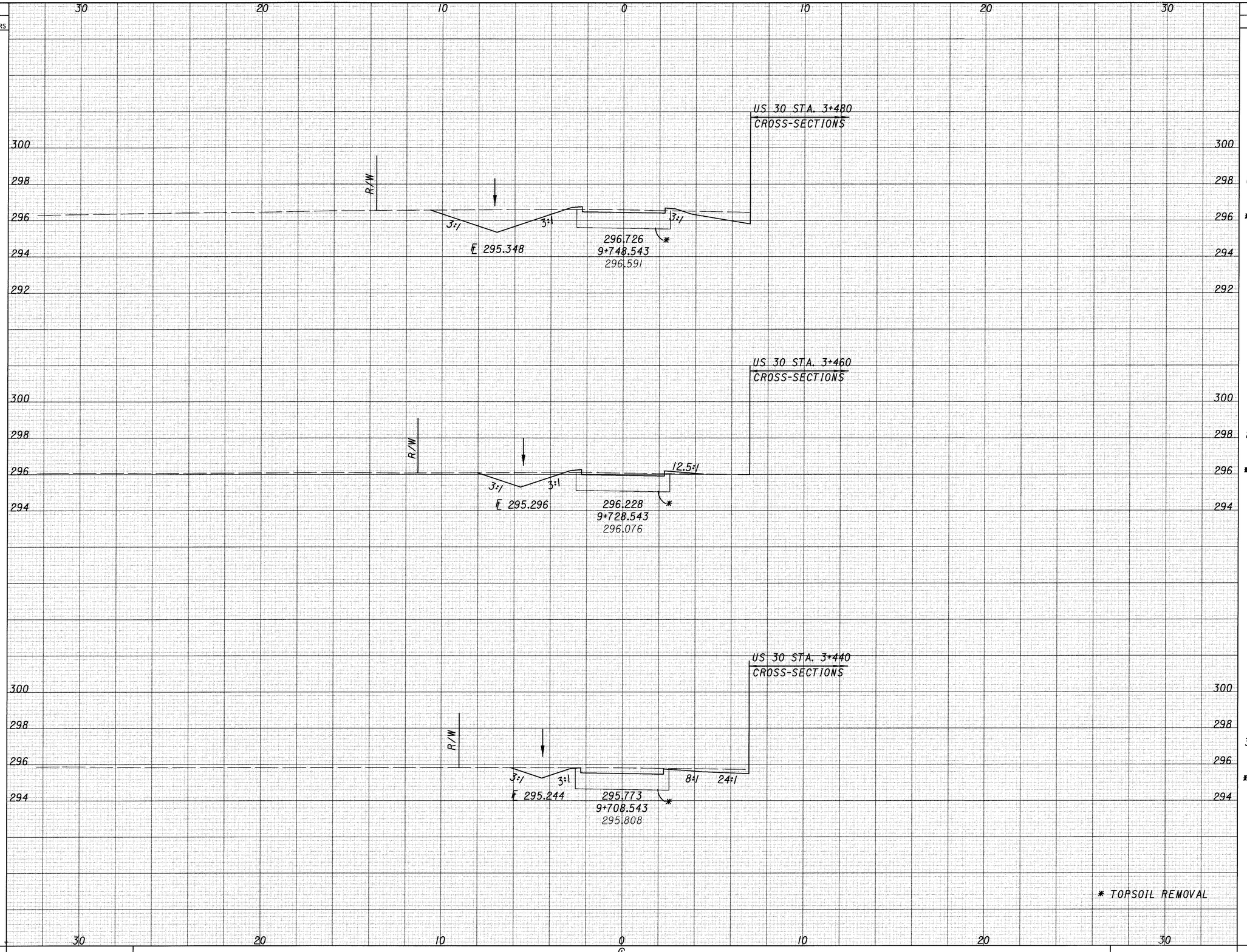
1269
2116

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	12.0	sq m	Riprap using 150mm Reinforced Concrete Slab
601	9.4	cu m	Rock Channel Protection Type C, w/filter
602	2.36	cu m	Concrete Masonry
603	24.1	m	610mm X 960mm Conduit Type D, 706.04 HE-II
			Drainage quantities carried to sheet no.

HYDRAULIC DESIGN DATA	
Drainage Area	= 6 ha
Q_5	= 0.48 cms
HW_5	= 295.226
V_5	= 3.20 mps

* TORSOIL REMOVAL

SEEDING END WIDTH	SEEDING SQ. METERS
18.43	
	304
11.98	
	243
12.35	
	259



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
6.53	4.91		
#4.72			
		89	99
		#94	
2.39	4.97		
#4.72			
		54	98
		#95	
3.02	4.80		
#4.80			
		66	97
		#97	

CALCULATED AM

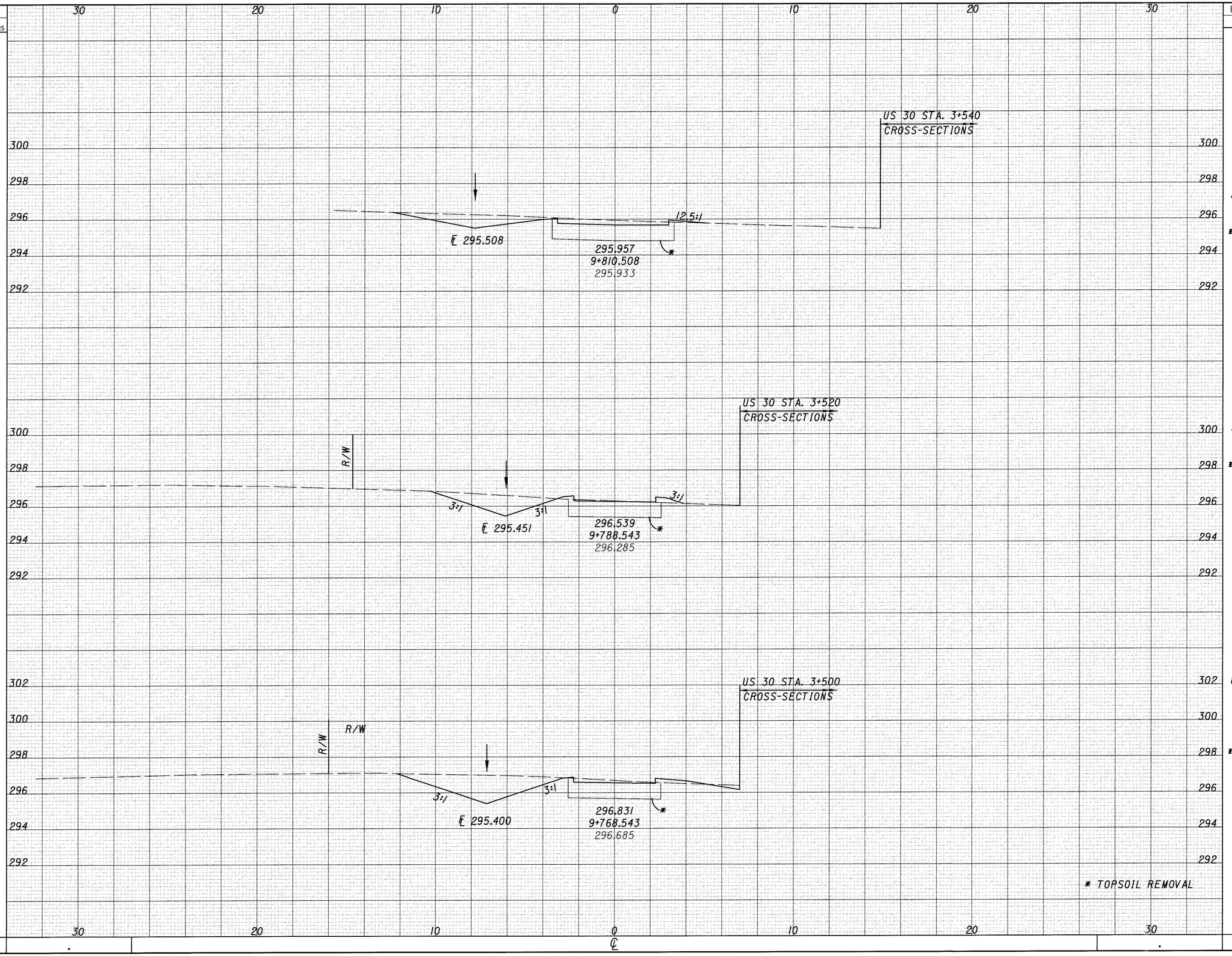
CHECKED REA

SERVICE ACCESS 17 CROSS SECTIONS STA 9+708.543 TO STA 9+748.543

WYA / CRA-30-28.009 / 0.000

1270
2116

SEEDING END WIDTH	SEEDING SQ. METERS
15.56	327
14.20	338
19.60	380



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
4.87	6.37		
⧗6.25			
		99	126
		⧗119	
4.14	5.08		
⧗4.60			
		123	102
		⧗93	
8.16	5.16		
⧗4.72			
		147	101
		⧗94	

CALCULATED AM

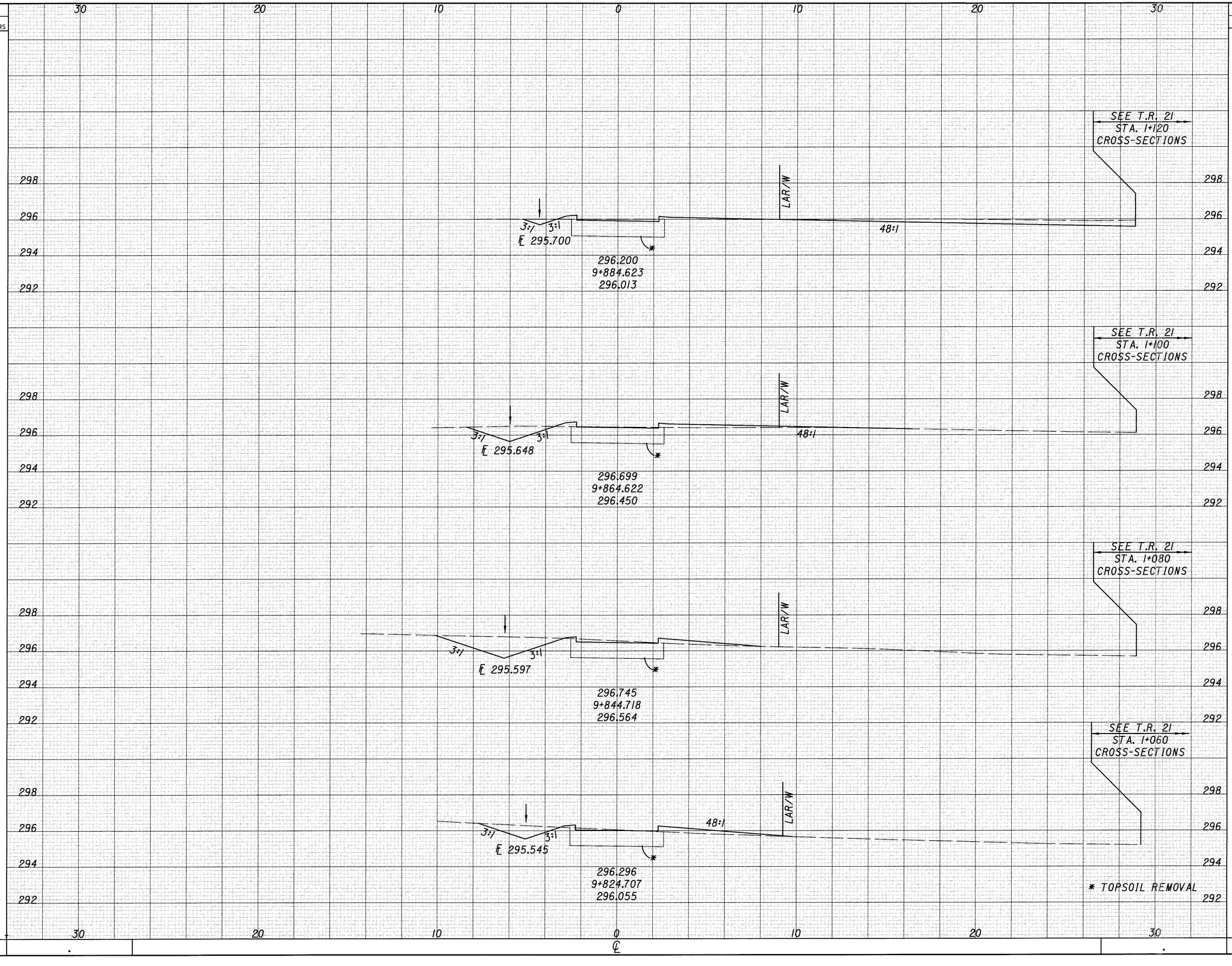
CHECKED REA

SERVICE ACCESS 17 CROSS SECTIONS
STA 9+768.543 TO STA 9+810.508

WYA/CRA-30-28.009/0.000

1271
2116

SEEDING END WIDTH	SEEDING SQ. METERS
27.28	516
24.34	453
21.19	413
20.04	253



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2.72	5.28		
⧗4.69			
		48	113
		⧗93	
2.11	6.00		
⧗4.65			
		66	115
		⧗93	
4.57	5.56		
⧗4.70			
		64	116
		⧗93	
1.81	6.04		
⧗4.64			
		47	88
		⧗77	

* TOPSOIL REMOVAL

CALCULATED AM

CHECKED REA

SERVICE ACCESS 17 CROSS SECTIONS

STA 9+824.707 TO STA 9+884.623

WYA/CRA-30-28.009/0.000

1272
2116

SEEDING END WIDTH	SEEDING SQ. METERS
5.42	153
23.63	252
25.172	454
20.18	343
14.13	414

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.22	15.62		
₭15.13			
		2	119
		₭107	
0.21	7.12		
₭5.15			
		1	74
		₭50	
0.00	7.24		
₭4.54			
		2	138
		₭92	
0.22	6.54		
₭4.68			
		7	117
		₭94	
0.48	5.14		
₭4.71			
		32	104
		₭94	

CALCULATED AM

CHECKED REA

SERVICE ACCESS 17 CROSS SECTIONS
STA 9+904.623 TO STA 9+965.460

WYA/CRA-30-28.009/0.000

1273
2116

30 20 10 0 10 20 30

298 296 294 292

SEE T.R. 21
STA. 1+197.237
CROSS-SECTIONS

R/W R/W 6:1

296.142
9+965.460
295.894

SEE T.R. 21
STA. 1+190
CROSS-SECTIONS

R/W R/W 48:1

296.095
9+954.957
295.831

SEE T.R. 21
STA. 1+180
CROSS-SECTIONS

R/W 48:1 LAR/W 48:1

296.049
9+944.623
295.772

SEE T.R. 21
STA. 1+160
CROSS-SECTIONS

12.5:1 3:1 3:1 ℄ 295.800 LAR/W 48:1

296.021
9+924.623
295.812

SEE T.R. 21
STA. 1+140
CROSS-SECTIONS

3:1 3:1 LAR/W 48:1

296.044
9+904.623
295.583

* TOPSOIL REMOVAL

℄

SEEDING				END AREA		VOLUME		
END WIDTH	SQ. METERS			CUT	FILL	CUT	FILL	
		15						
			286					286
0.00			284	3.22	0.00			284
				₹0.00				
			282					282
	44					22	23	
						₹23		
			286					286
7.58				0.52	3.91			
			284	₹3.87				284
	166		282			8	79	282
						₹77		
9.05			284	0.28	4.03			284
				₹3.83				
			282			4	40	282
	81					₹39		
7.08			284	0.60	3.90			284
				₹3.88				
			282					282
		15						

283.794
0+051.644
283.794

12.5:1 12.5:1 Easement

283.790
0+040.000
283.731

R/W

12.5:1 12.5:1

283.745
0+020.000
283.620

R/W

12.5:1 12.5:1

283.722
0+010.000
283.687

* TOPSOIL REMOVAL

℄

CALCULATED AM | CHECKED KEA

CROSS SECTIONS SVC. RD. 6 STA. 0+936.168 RT.
STA 0+010.000 TO STA 0+051.644

DRIVEWAY CR

WYA / CRA-30-28.009 / 0.000

1292
2116

SEEDING END WIDTH	SEEDING SQ. METERS
11.50	
	136
6.76	
	17
0	

15 10 5 0 5 10 15

284

Easement
21.034

12.5:1

12.5:1

LAR/W

282

282.949
0+020.000
282.705

286

SEE SR-231
STA. 0+840.000
CROSS-SECTIONS

284

Easement
21.090

282

282.817
0+005.177
282.770

284

Easement
21.110

Sta. 0+000.000 Driveway =
Sta. 0+841.860 Service Rd. 12

LAR/W

282

0+000.000
282.693

* TOPSOIL REMOVAL

15 10 5 0 5 10 15

℄

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.00	4.41		
×3.62			
		4	62
		×56	
0.57	3.90		
×3.88			
		3	10
		×10	
0.73	0.00		
×0.00			

CALCULATED AM

CHECKED REA

DRIVEWAY CROSS SECTIONS SVC. RD. 12 STA. 0+841.860
STA 0+000.000 TO STA 0+020.000

WYA / CRA-30-28.009 / 0.000

1293
2116

SEEDING	
END WIDTH	SQ. METERS
0	
	55
11.02	
	169
11.91	
	61

15 10 5 0 5 10 15

284
282
286
284
282
284
282
286
284
282

Meet Existing
0+050.000
282.910

Easement

4:1
4:1
283.176
0+040.000
282.906

Easement

SEE SR-231
STA. 0+860.000
CROSS-SECTIONS

Easement
20.592
13:1
12.8:1
LAR/W
282.928
0+025.212
282.663

* TOPSOIL REMOVAL

15 10 5 0 5 10 15

℄

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0.47	0.00		
×0.00			
		2	21
		×15	
0.00	4.28		
×3.06			
		0	66
		×49	
0.00	4.63		
×3.61			
		0	24
		×19	

CALCULATED AM

CHECKED REA

DRIVEWAY CROSS SECTIONS SVC. RD. 12 STA. 0+841.860 TO STA 0+025.212 TO STA 0+050.000

WYA/CRA-30-28.009/0.000

1294
2116

SEEDING END WIDTH	SEEDING SQ. METERS
14.04	
	273
13.22	
	250
11.80	
	275
15.72	
	114
15.72	

15 10 5 0 5 10 15

292 290 294 292 290 294 292 290 294 292 290

Easement Easement

12.5:1 12.5:1

291.521
0+080.000
291.213

291.481
0+060.000
291.148

291.481
0+040.000
291.255

291.637
0+020.000
291.348

Sta. 0+012.765 Driveway

Sta. 0+012.765 Driveway

* TOPSOIL REMOVAL

℄

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.00	4.99		
#3.34			
		0	98
		#66	
0.00	4.80		
#3.29			
		0	92
		#70	
0.00	4.42		
#3.68			
		0	95
		#71	
0.00	5.06		
#3.42			
		0	37
		#25	
0.00	5.06		
#3.42			

CALCULATED AM

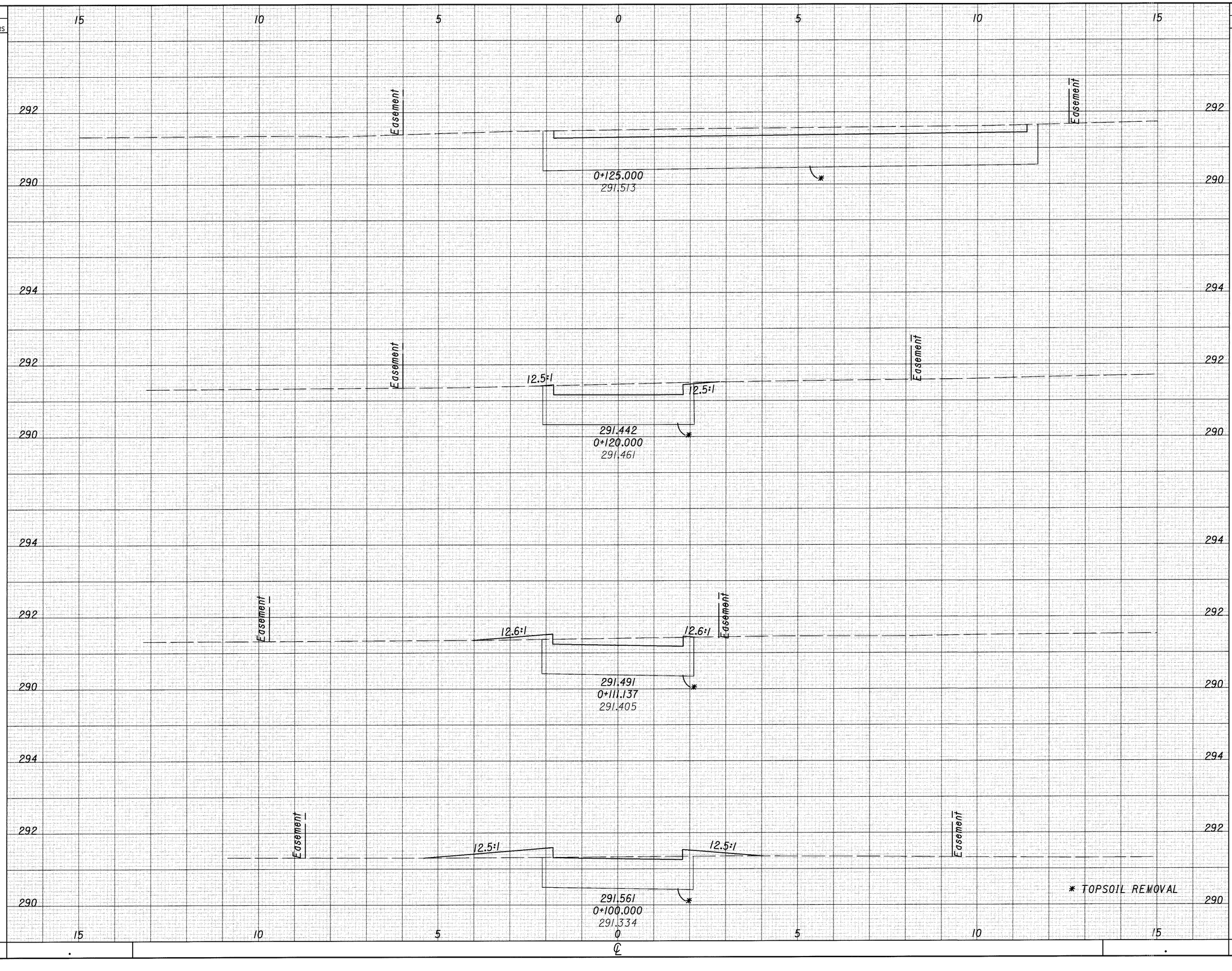
CHECKED REA

DRIVEWAY CROSS SECTIONS SVC ACC 14 STA 1+118.518 LT
STA 0+020.000 TO STA 0+080.000

WYA/CRA-30-28.009/0.000

1298
2116

SEEDING	
END WIDTH	SQ. METERS
0.00	
	19
7.42	
	82
11.00	
	127
11.85	
	259



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2.63	0.00		
⌘0.00			
		9	10
		⌘10	
0.83	3.91		
⌘3.91			
		6	35
		⌘34	
0.42	4.08		
⌘3.87			
		2	47
		⌘42	
0.01	4.45		
⌘3.67			
		0	94
		⌘70	

CALCULATED AM

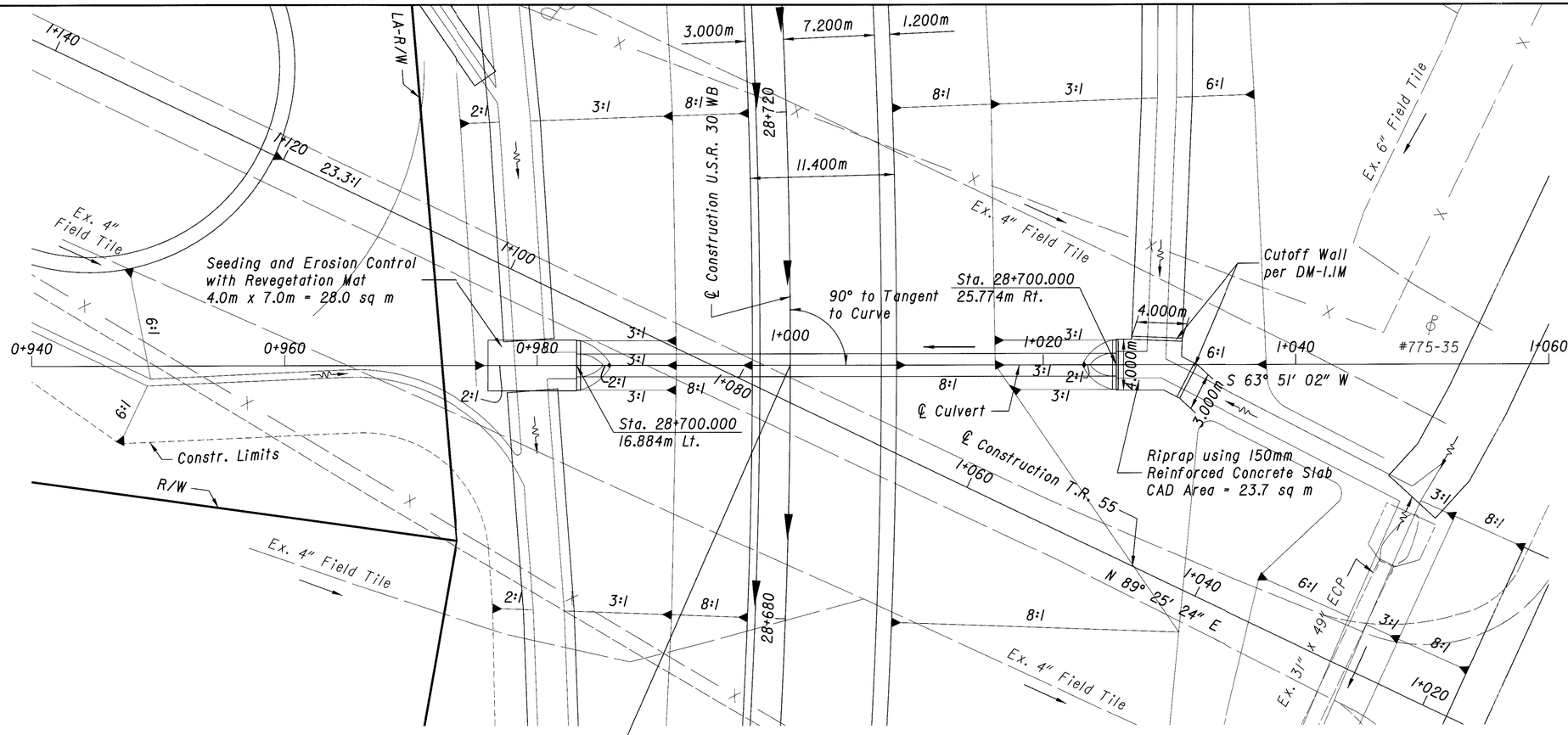
CHECKED REA

CROSS SECTIONS SVC ACC 14 STA 1+118.518 LT STA 0+100.000 TO STA 0+125.000

DRIVEWAY CROSS SECTIONS

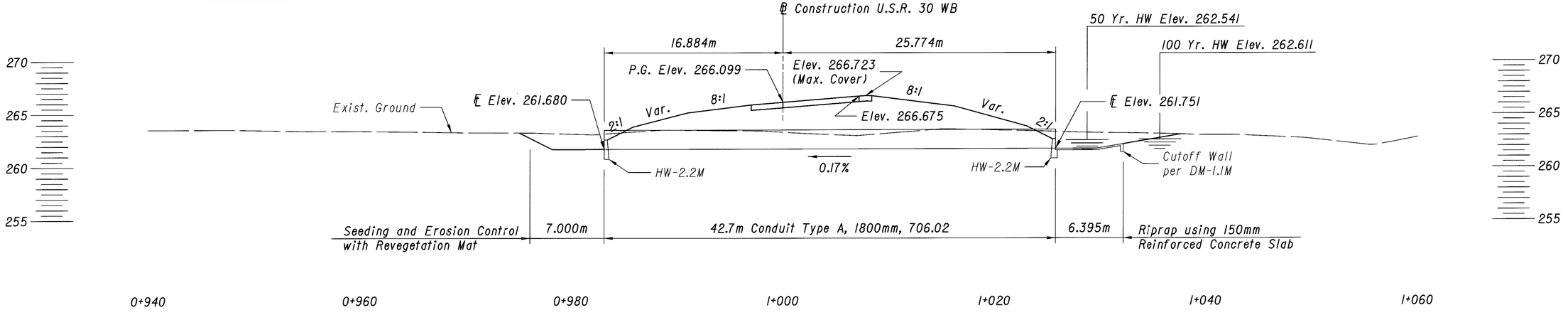
WYA / CRA-30-28.009 / 0.000

1299
2116



HYDRAULIC DESIGN DATA	
Drainage Area	= 13 ha
Q_{50}	= 1.33 cms
Q_{100}	= 1.54 cms
HW_{50}	= 262.54
HW_{100}	= 262.61
V_{50}	= 1.92 mps
V_{100}	= 2.04 mps

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	23.7	sq m	Riprap using 150mm Reinforced Concrete Slab
602	5.34	cu m	Concrete Masonry
603	42.7	m	1800mm Conduit Type A, 706.02
839	28.0	sq m	Seeding and Erosion Control with Revegetation Mat



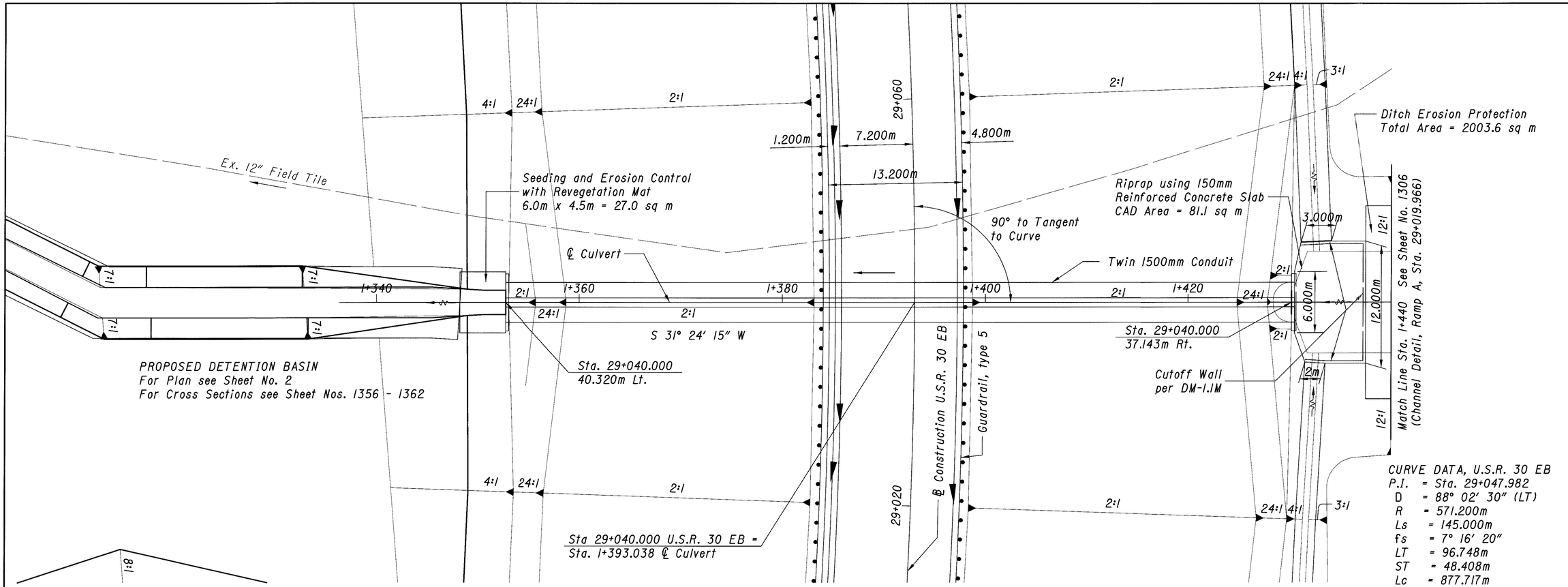
HORIZONTAL SCALE IN METERS

CALCULATED AM
CHECKED REA

CULVERT DETAIL
U.S.R. 30 WESTBOUND - STA. 28+700.000

WYA/CRA-30-28.009/0.000

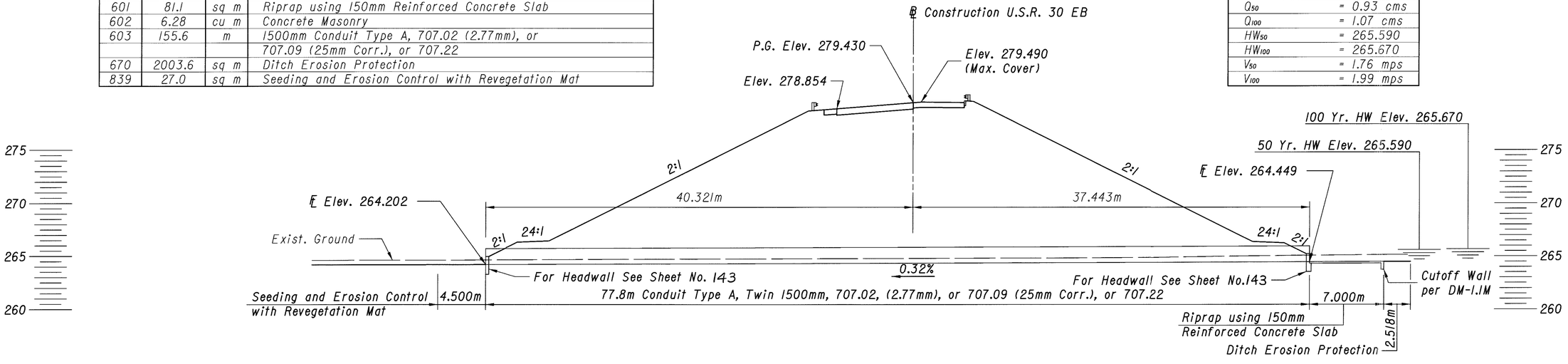
1304
2116



CURVE DATA, U.S.R. 30 EB
P.I. = Sta. 29+047.982
D = 88° 02' 30" (LT)
R = 571.200m
Ls = 145.000m
fs = 7° 16' 20"
LT = 96.748m
ST = 48.408m
Lc = 877.717m
Ts = 787.175m
Es = 344.681m
$e_{max.}$ =

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	81.1	sq m	Riprap using 150mm Reinforced Concrete Slab
602	6.28	cu m	Concrete Masonry
603	155.6	m	1500mm Conduit Type A, 707.02 (2.77mm), or
			707.09 (25mm Corr.), or 707.22
670	2003.6	sq m	Ditch Erosion Protection
839	27.0	sq m	Seeding and Erosion Control with Revegetation Mat

HYDRAULIC DESIGN DATA	
Drainage Area	= 6 ha
Q_{50}	= 0.93 cms
Q_{100}	= 1.07 cms
HW_{50}	= 265.590
HW_{100}	= 265.670
V_{50}	= 1.76 mps
V_{100}	= 1.99 mps



HORIZONTAL SCALE IN METERS
0 5 10
CALCULATED AM
CHECKED REA

CULVERT DETAIL
U.S.R. 30 EASTBOUND - STA. 29+040.000

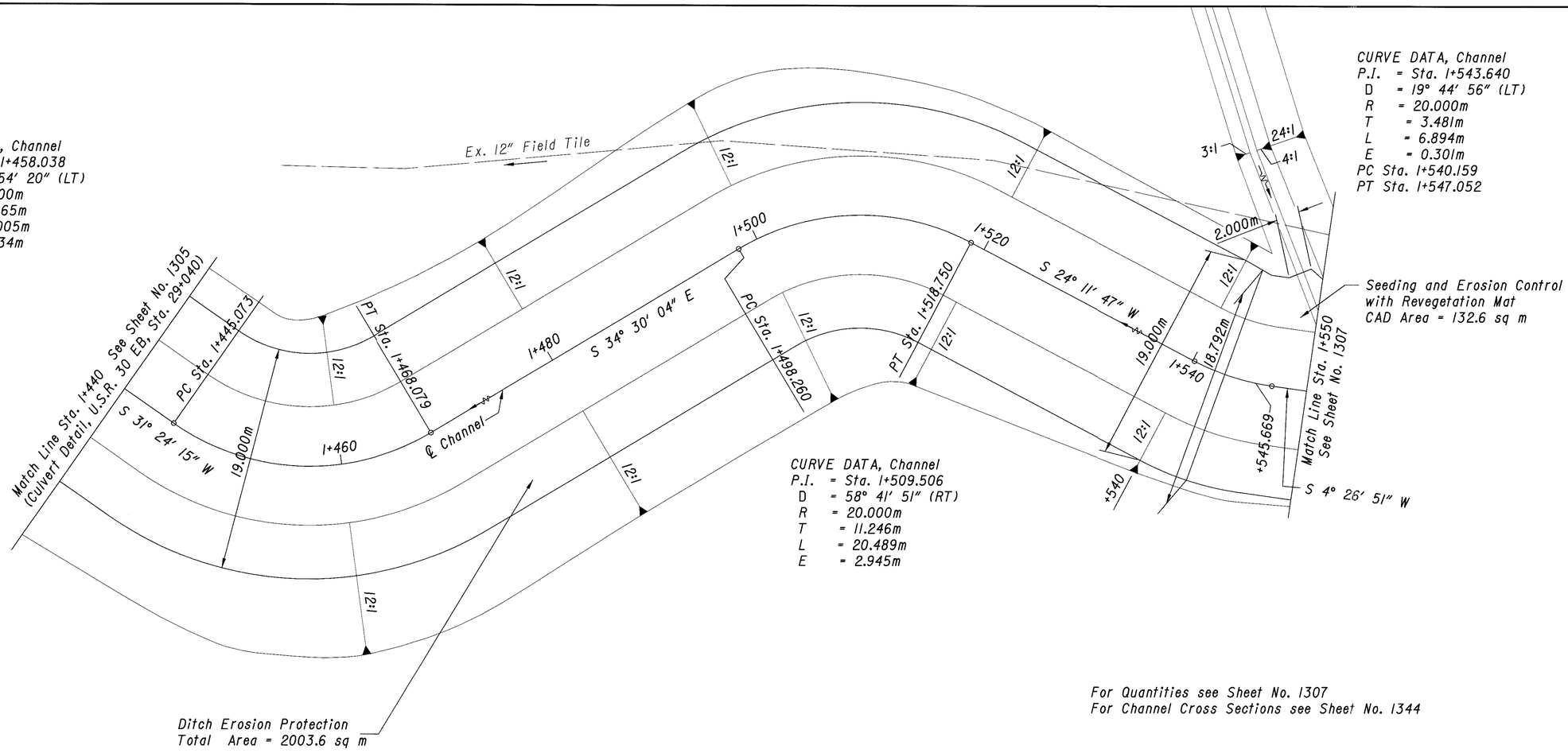
WYA/CRA-30-28.009/0.000

1305
2116

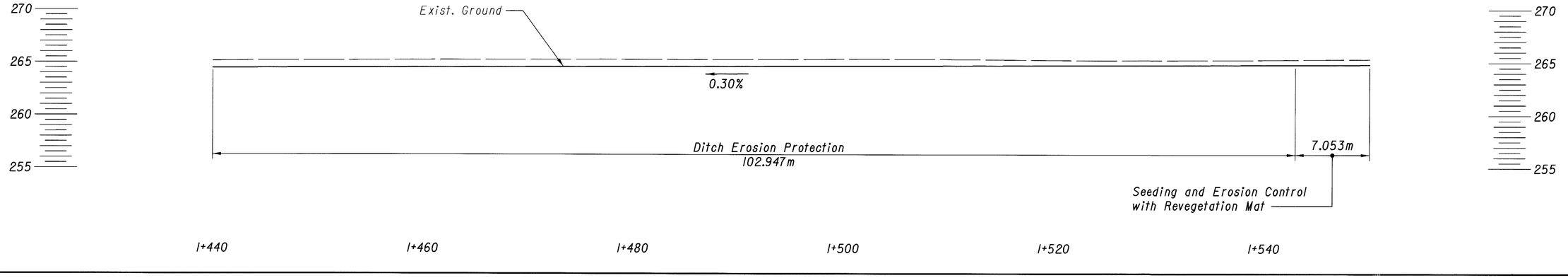
CURVE DATA, Channel
P.I. = Sta. 1+458.038
D = 65° 54′ 20″ (LT)
R = 20.000m
T = 12.965m
L = 23.005m
E = 3.834m

CURVE DATA, Channel
P.I. = Sta. 1+543.640
D = 19° 44′ 56″ (LT)
R = 20.000m
T = 3.481m
L = 6.894m
E = 0.301m
PC Sta. 1+540.159
PT Sta. 1+547.052

CURVE DATA, Channel
P.I. = Sta. 1+509.506
D = 58° 41′ 51″ (RT)
R = 20.000m
T = 11.246m
L = 20.489m
E = 2.945m



For Quantities see Sheet No. 1307
For Channel Cross Sections see Sheet No. 1344



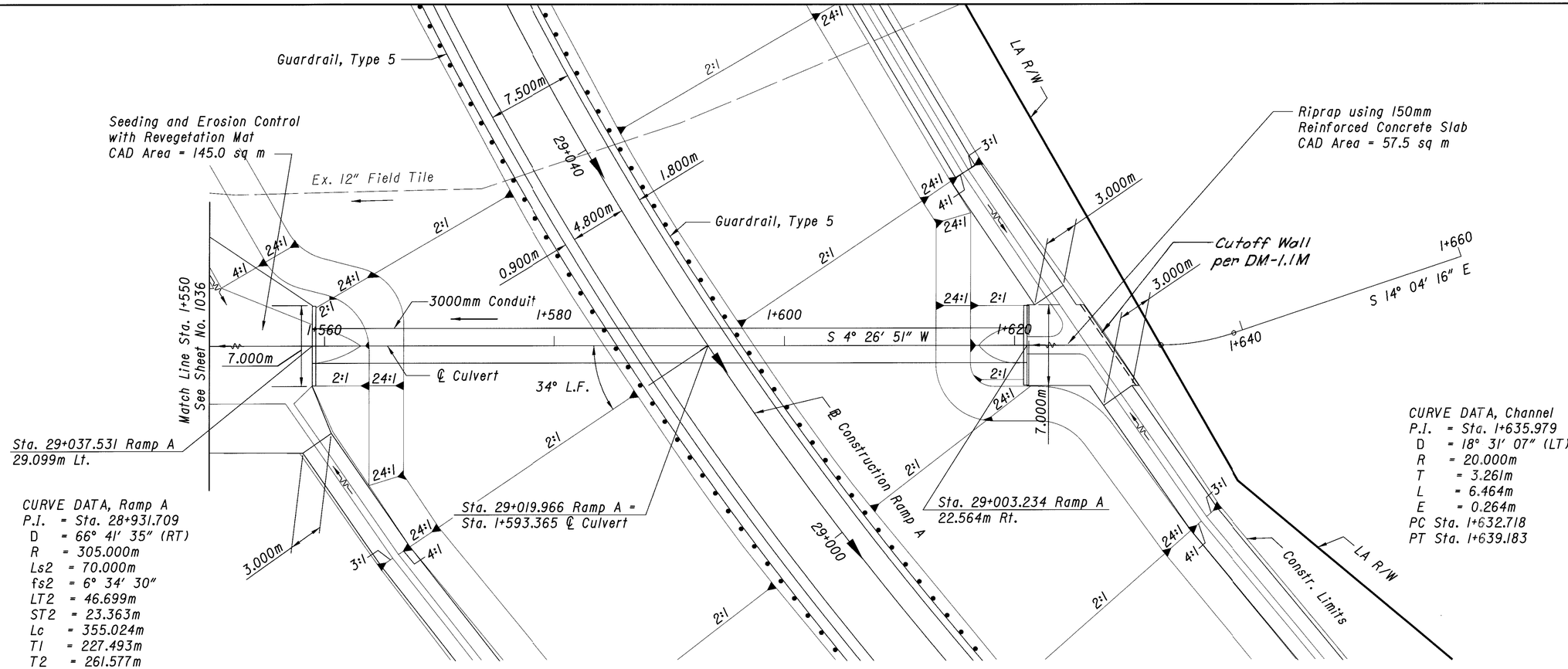
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED AM
CHECKED REA

CHANNEL DETAIL
RAMP A - STA. 29+019.966

WYA/CRA-30-28.009/0.000

1306
2116

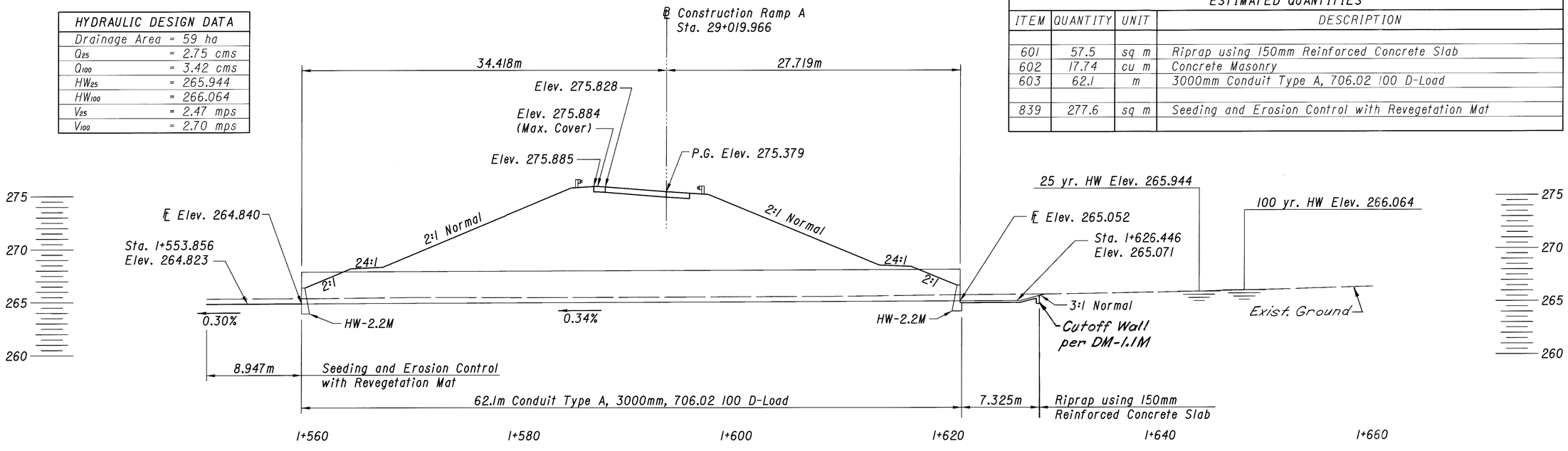


CURVE DATA, Ramp A
P.I. = Sta. 28+931.709
D = 66° 41' 35" (RT)
R = 305.000m
Ls2 = 70.000m
fs2 = 6° 34' 30"
LT2 = 46.699m
ST2 = 23.363m
Lc = 355.024m
T1 = 227.493m
T2 = 261.577m
Es = 75.497m
$\theta_{max.}$ =

CURVE DATA, Channel
P.I. = Sta. 1+635.979
D = 18° 31' 07" (LT)
R = 20.000m
T = 3.261m
L = 6.464m
E = 0.264m
PC Sta. 1+632.718
PT Sta. 1+639.183

Note: For Channel Cross Sections see Sheet No. 1344

HYDRAULIC DESIGN DATA	
Drainage Area	= 59 ha
Q_{25}	= 2.75 cms
Q_{100}	= 3.42 cms
HW_{25}	= 265.944
HW_{100}	= 266.064
V_{25}	= 2.47 mps
V_{100}	= 2.70 mps



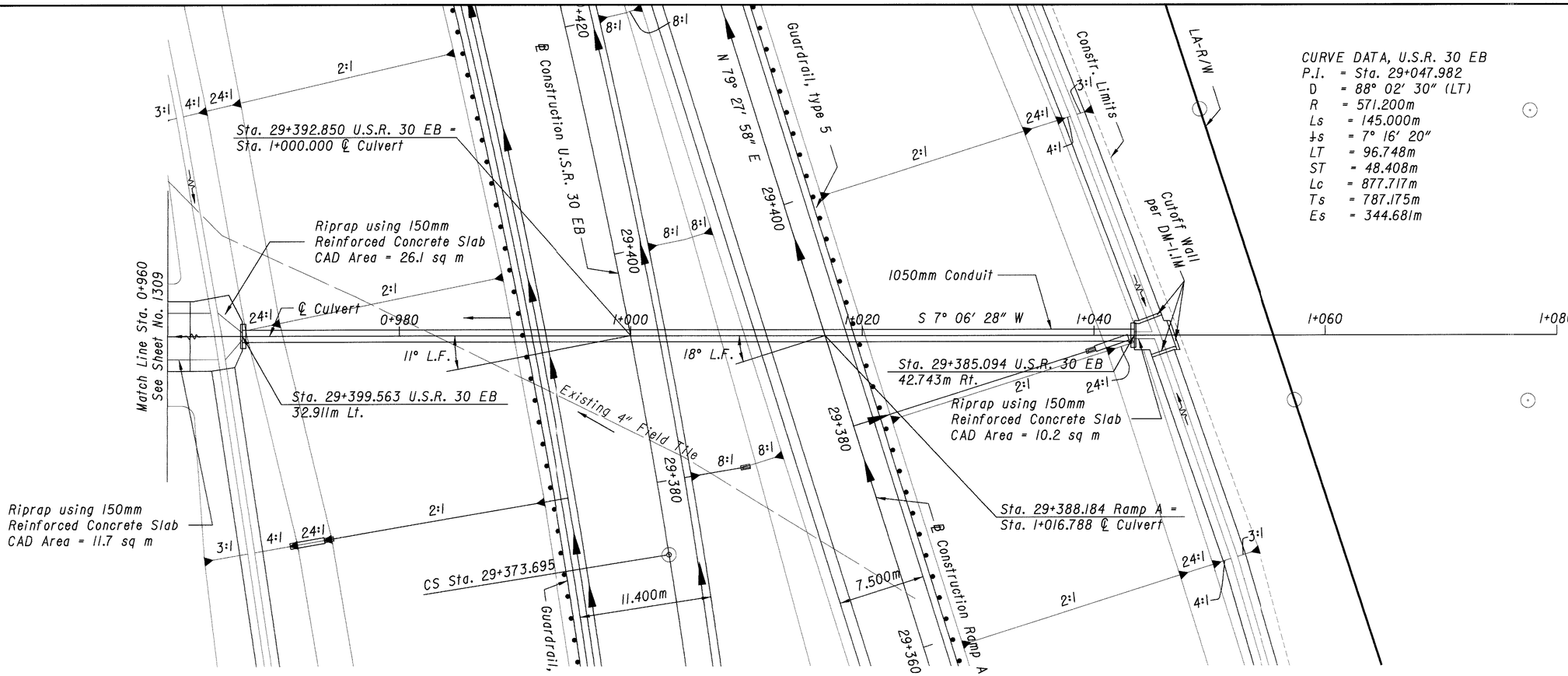
ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	57.5	sq m	Riprap using 150mm Reinforced Concrete Slab
602	17.74	cu m	Concrete Masonry
603	62.1	m	3000mm Conduit Type A, 706.02 100 D-Load
839	277.6	sq m	Seeding and Erosion Control with Revegetation Mat

HORIZONTAL SCALE IN METERS
0 5 10
CALCULATED AM
CHECKED REA

CULVERT DETAIL
RAMP A - STA. 29+019.966

WYA/CRA-30-28.009/0.000

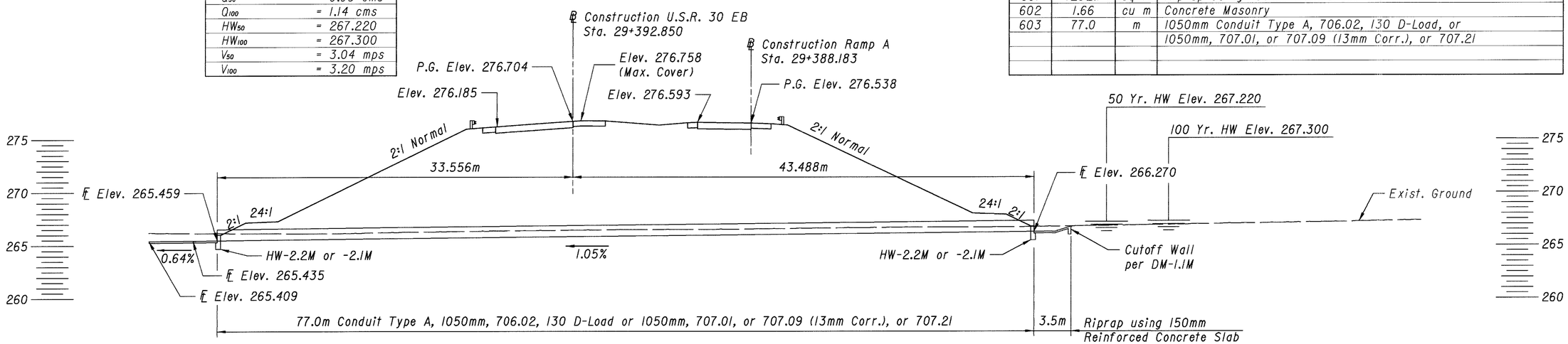
1307
2116



CURVE DATA, U.S.R. 30 EB
P.I. = Sta. 29+047.982
D = 88° 02' 30" (LT)
R = 571.200m
Ls = 145.000m
ϟs = 7° 16' 20"
LT = 96.748m
ST = 48.408m
Lc = 877.717m
Ts = 787.175m
Es = 344.681m

For Channel Cross Sections see Sheet No. 1345

HYDRAULIC DESIGN DATA	
Drainage Area	= 7 ha
Q_{50}	= 0.98 cms
Q_{100}	= 1.14 cms
HW_{50}	= 267.220
HW_{100}	= 267.300
V_{50}	= 3.04 mps
V_{100}	= 3.20 mps



ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	1232.1	sq m	Riprap using 150mm Reinforced Concrete Slab
602	1.66	cu m	Concrete Masonry
603	77.0	m	1050mm Conduit Type A, 706.02, 130 D-Load, or
			1050mm, 707.01, or 707.09 (13mm Corr.), or 707.21

HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED AM
CHECKED REA

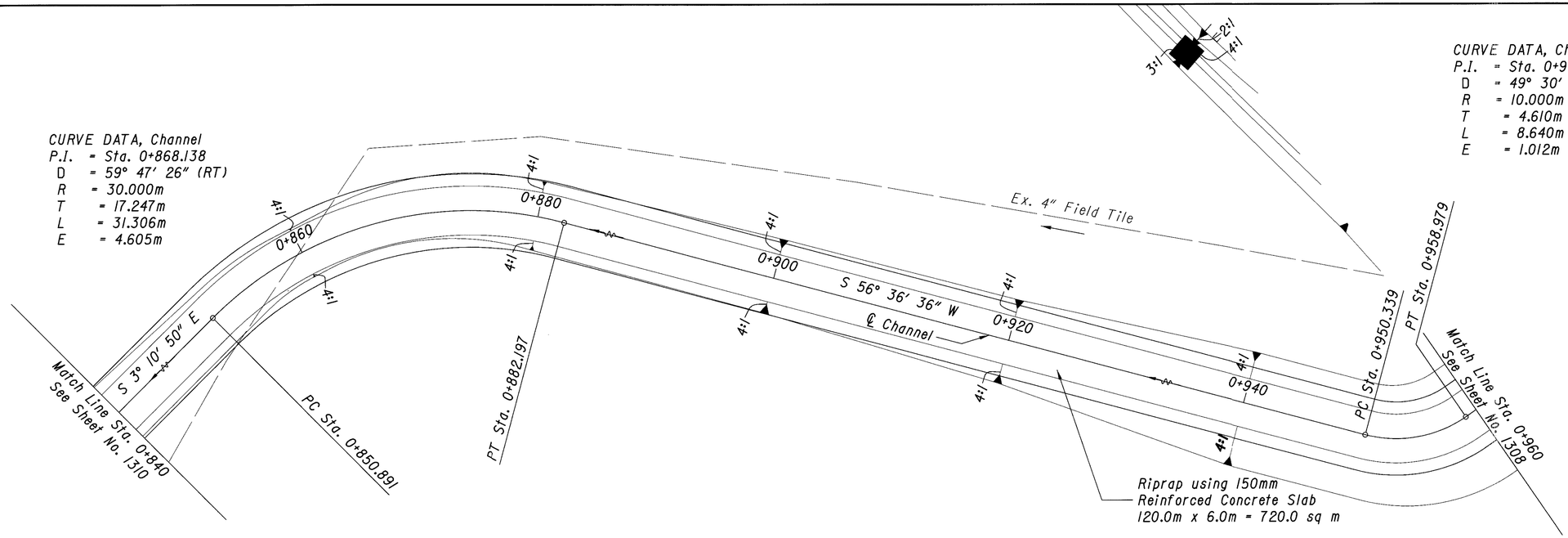
CULVERT DETAIL
U.S.R. 30 EASTBOUND - STA. 29+392.850

WYA/CRA-30-28.009/0.000

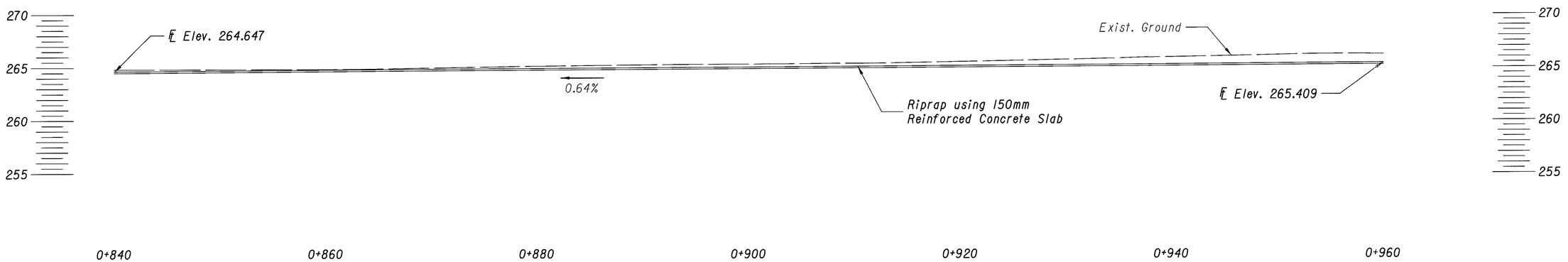
1308
2116

CURVE DATA, Channel
P.I. = Sta. 0+868.138
D = 59° 47′ 26″ (RT)
R = 30.000m
T = 17.247m
L = 31.306m
E = 4.605m

CURVE DATA, Channel
P.I. = Sta. 0+954.950
D = 49° 30′ 08″ (LT)
R = 10.000m
T = 4.610m
L = 8.640m
E = 1.012m



For Quantities see Sheet No. 1308
For Channel Cross Sections see Sheet No. 1345



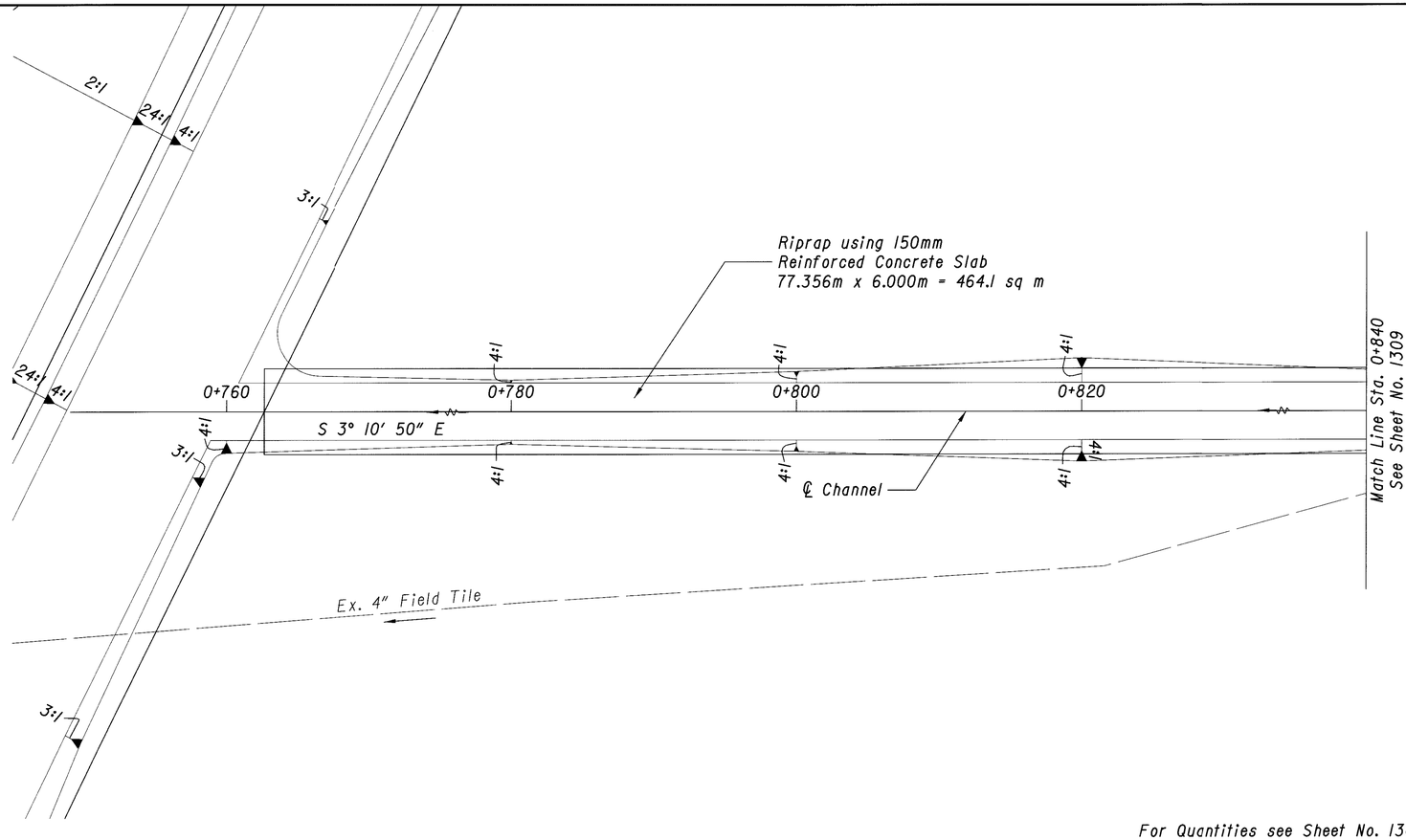
HORIZONTAL
SCALE IN METERS
0 5 10

CALCULATED AM
CHECKED REA

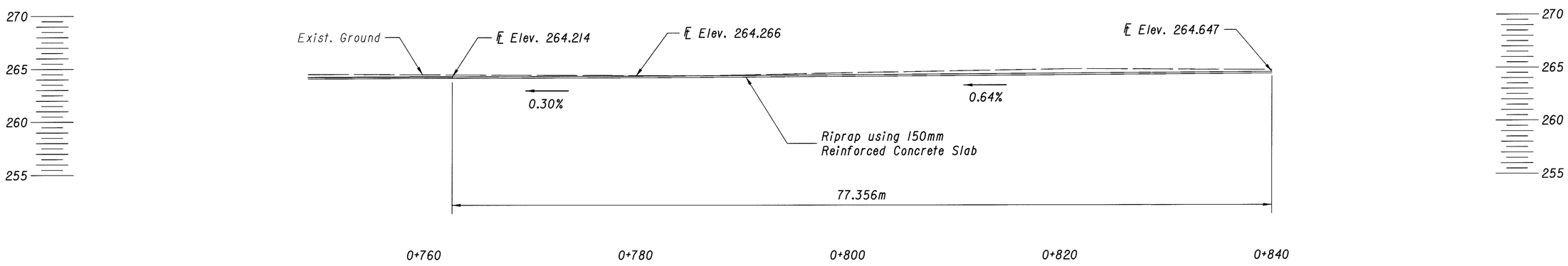
CHANNEL DETAIL
U.S.R. 30 EASTBOUND - STA. 29+392.850

WYA/CRA-30-28.009/0.000

1309
2116



For Quantities see Sheet No. 1308
For Channel Cross Sections see Sheet No. 1345



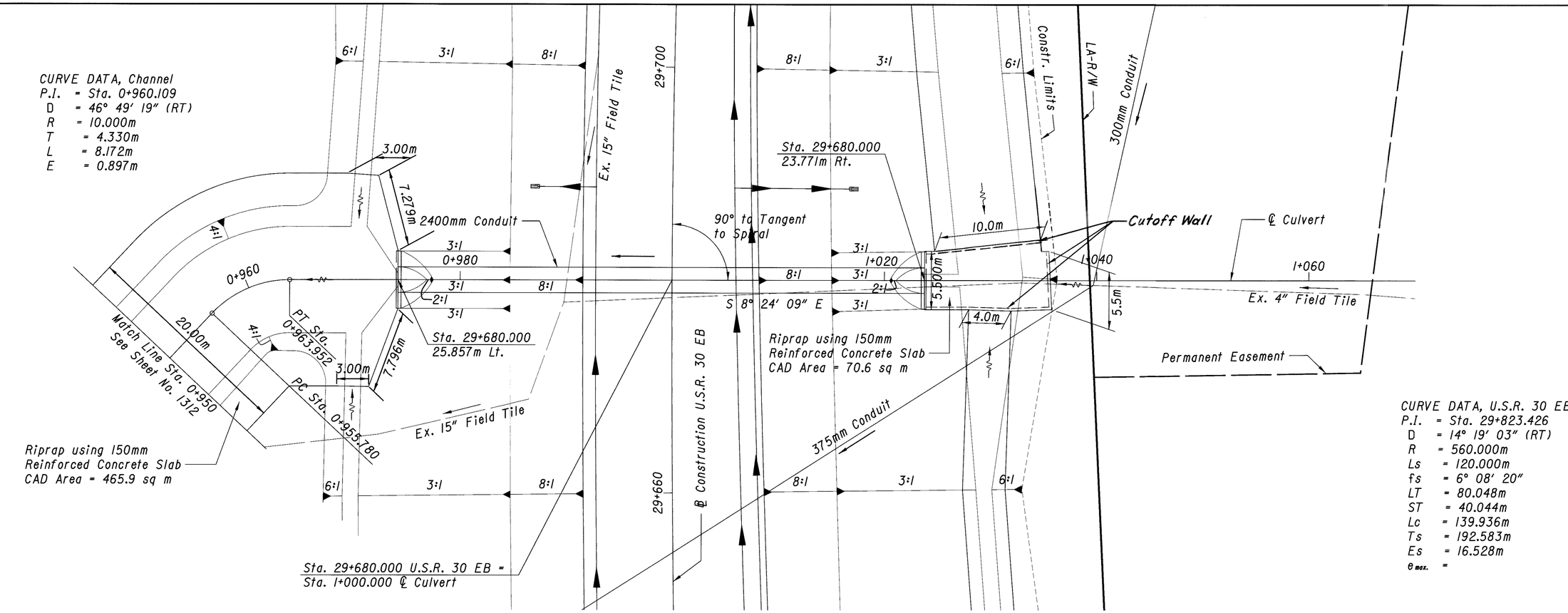
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED AW
CHECKED REA

CHANNEL DETAIL
U.S.R. 30 EASTBOUND - STA. 29+392.850

WYA/CRA-30-28.009/0.000

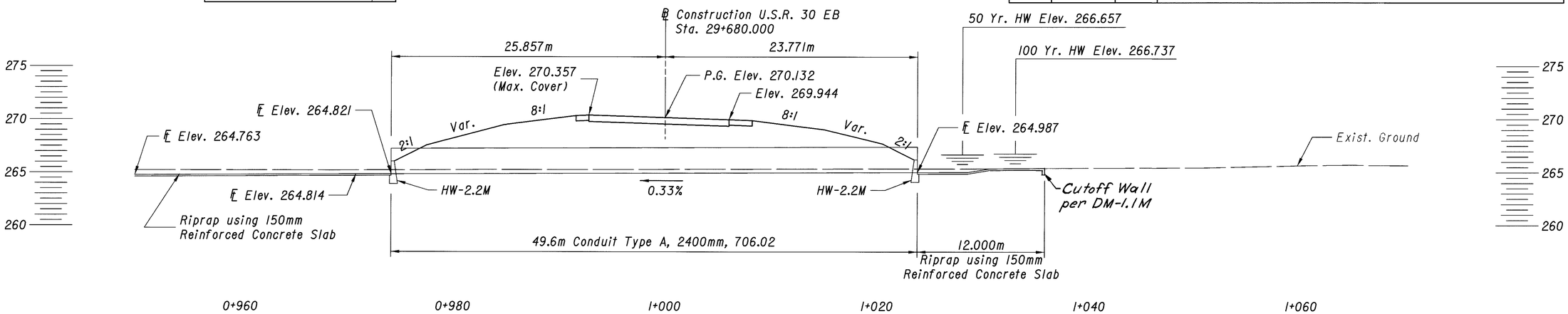
1310
2116



For Channel Cross Sections see Sheet No. 1346

HYDRAULIC DESIGN DATA	
Drainage Area	= 194 ha
Q_{50}	= 6.62 cms
Q_{100}	= 7.16 cms
HW_{50}	= 266.657
HW_{100}	= 266.737
V_{50}	= 3.16 mps
V_{100}	= 3.23 mps

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	3946.8	sq m	Riprap using 150mm Reinforced Concrete Slab
602	8.14	cu m	Concrete Masonry
603	49.6	m	2400mm Conduit TYpe A, 706.02



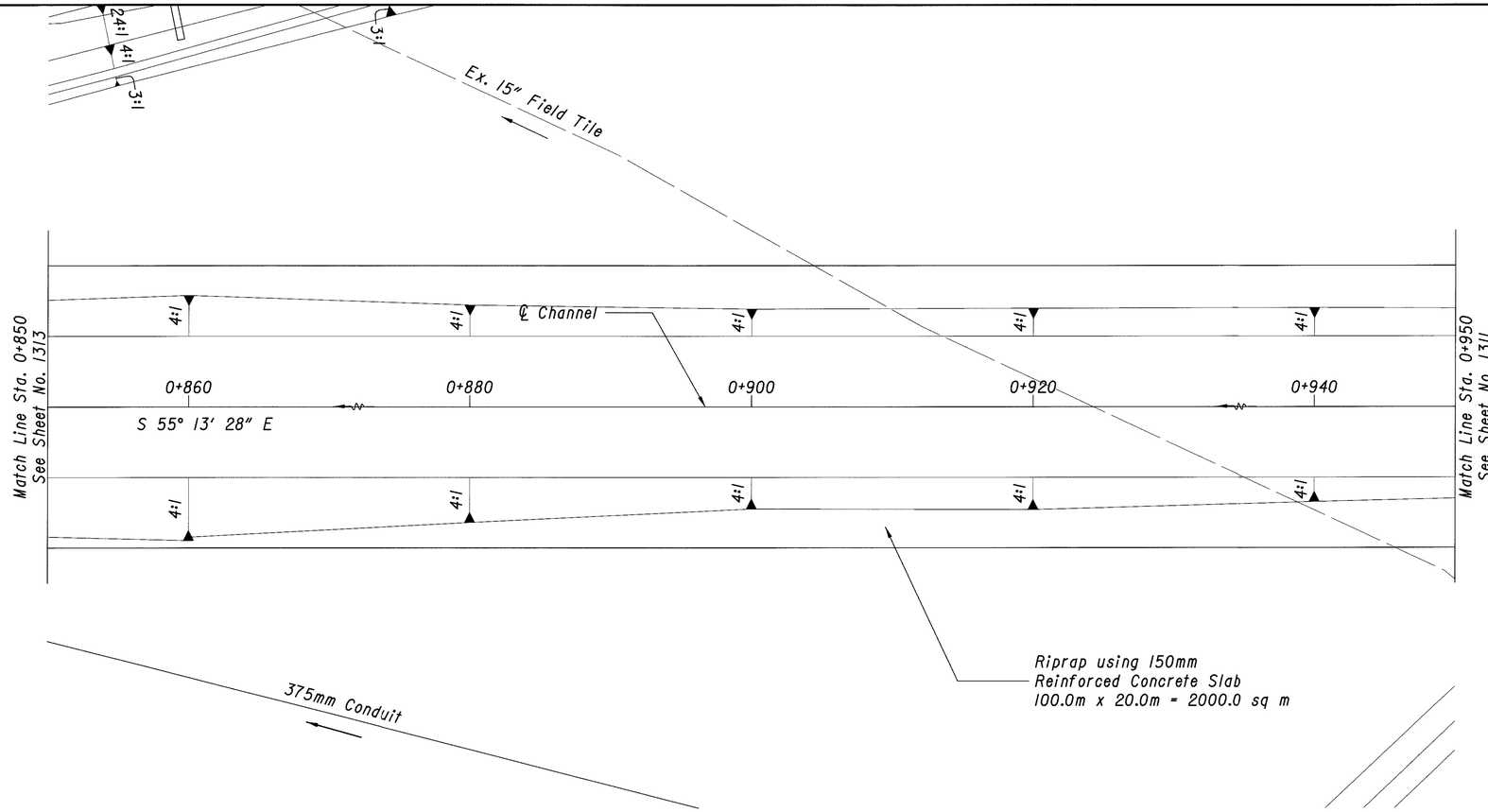
HORIZONTAL SCALE IN METERS

CALCULATED A.M. CHECKED REA

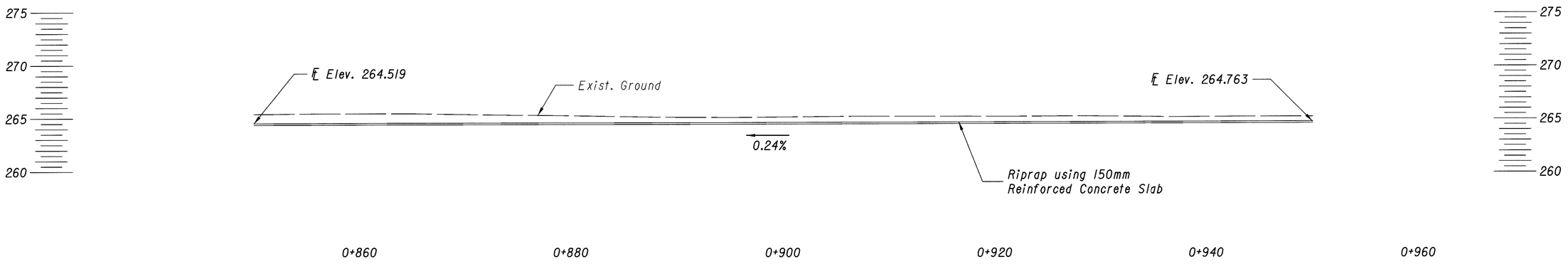
CULVERT DETAIL
U.S.R. 30 EASTBOUND - STA. 29+680.000

WYA/CRA-30-28.009/0.000

1311
2116



For Quantities see Sheet No. 1311
For Channel Cross Sections see Sheet No. 1346



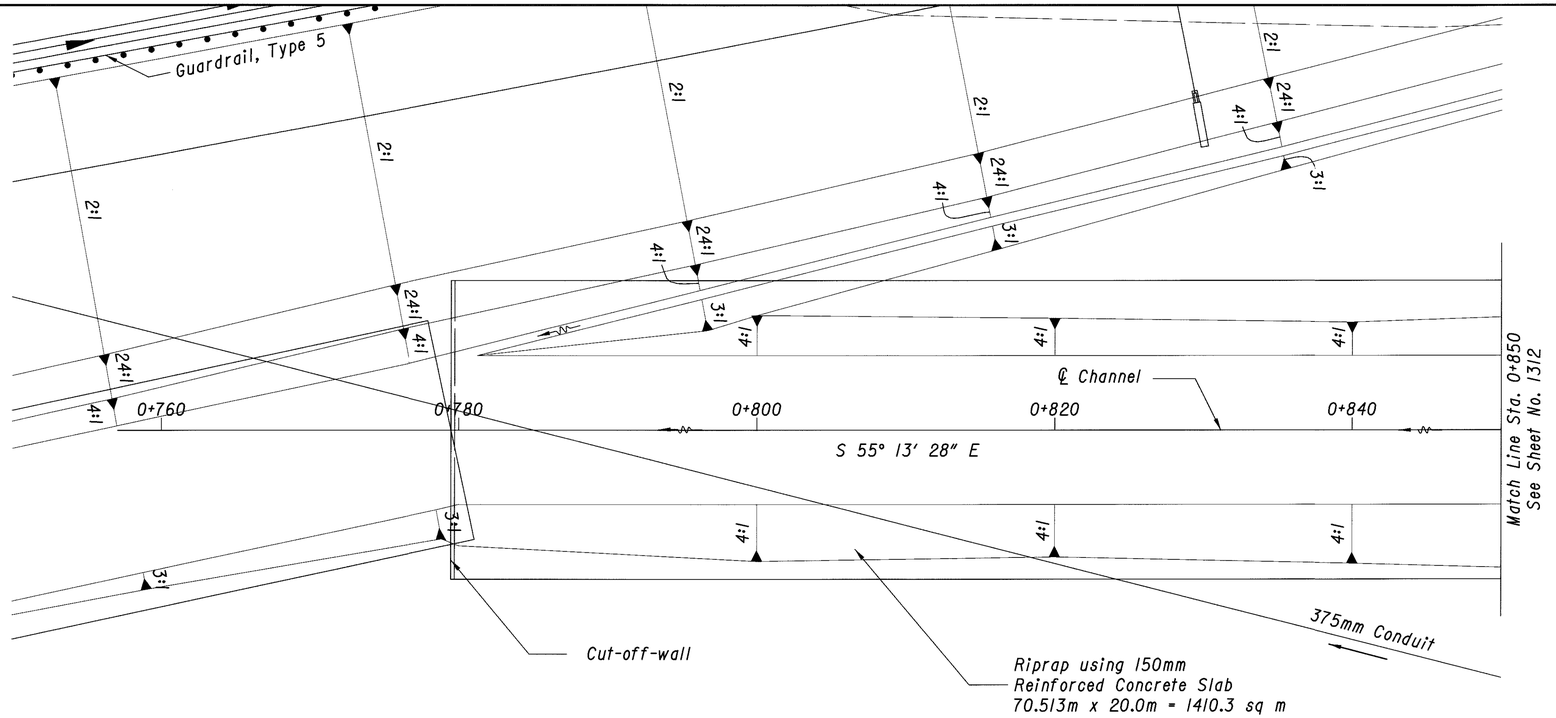
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED AM
CHECKED REA

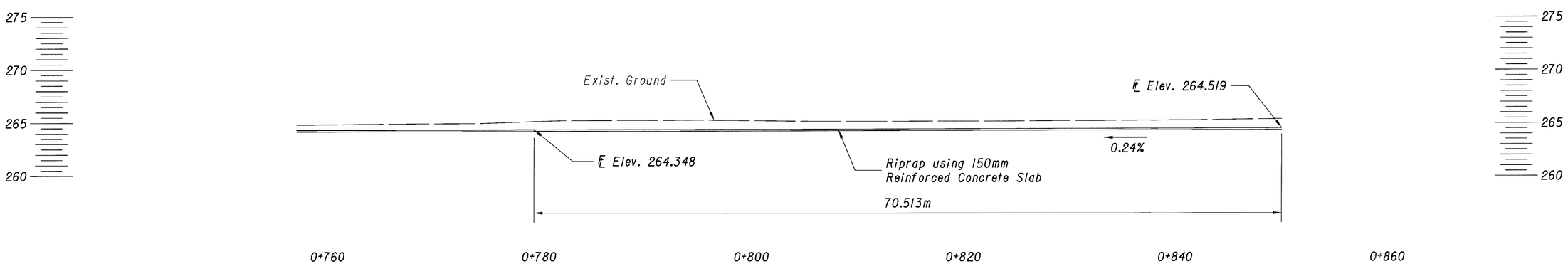
CHANNEL DETAIL
U.S.R. 30 EASTBOUND - STA. 29+680.000

WYA/CRA-30-28.009/0.000

1312
2116



For Quantities see Sheet No. 1311
For Channel Cross Sections see Sheet No. 1346



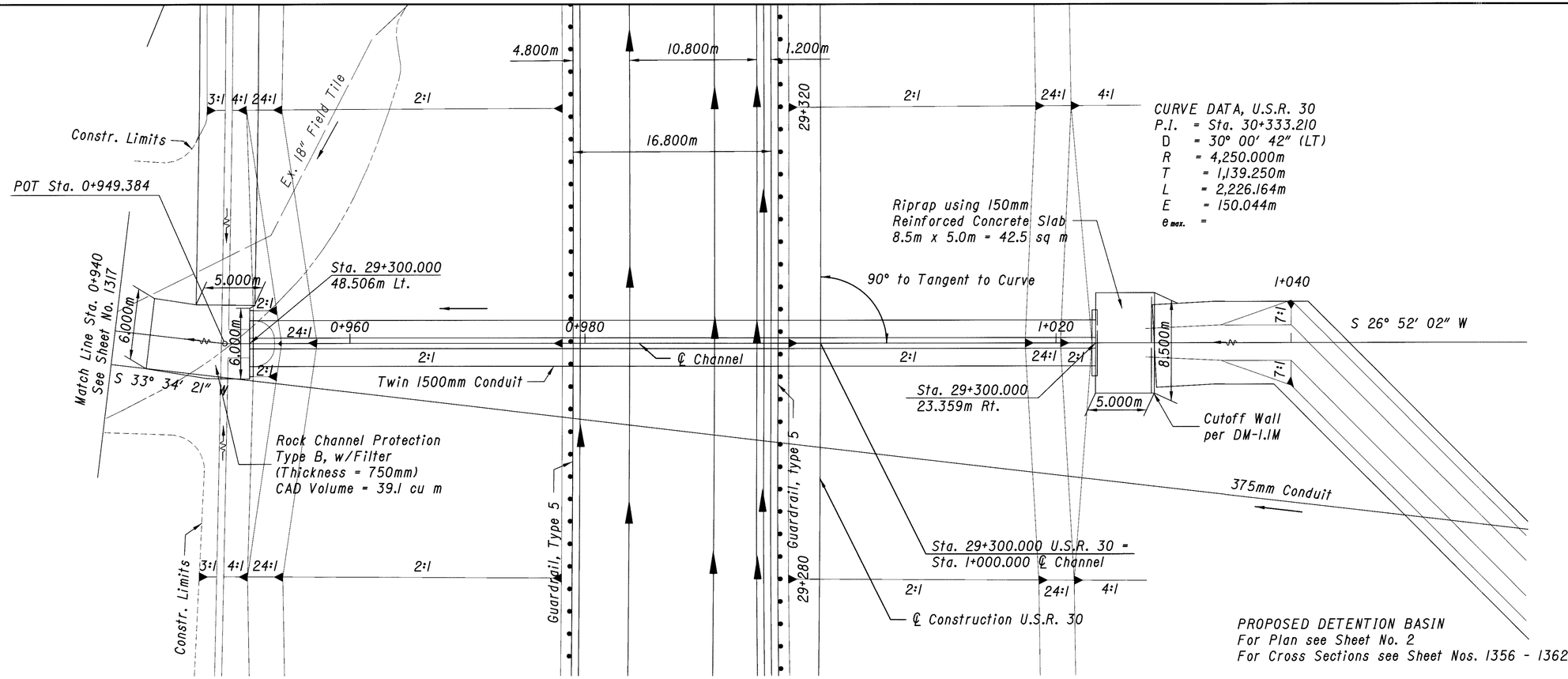
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED AM
CHECKED REA

CHANNEL DETAIL
U.S.R. 30 EASTBOUND - STA. 29+680.000

WYA/CRA-30-28.009/0.000

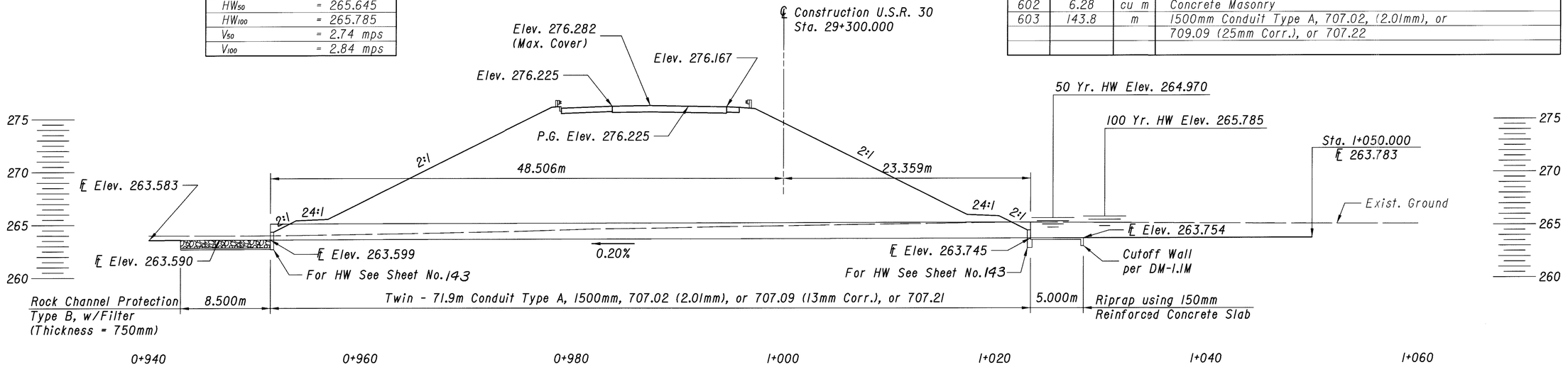
1313
2116



Note: For Channel Cross Sections see Sheet No. 1348

HYDRAULIC DESIGN DATA	
Drainage Area	= 213 ha
Q_{50}	= 6.39 cms
Q_{100}	= 6.87 cms
HW_{50}	= 265.645
HW_{100}	= 265.785
V_{50}	= 2.74 mps
V_{100}	= 2.84 mps

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	42.5	sq m	Riprap using 150mm Reinforced Concrete Slab
601	39.1	cu m	Rock Channel Protection Type B with Filter
602	6.28	cu m	Concrete Masonry
603	143.8	m	1500mm Conduit Type A, 707.02, (2.01mm), or
			709.09 (25mm Corr.), or 707.22



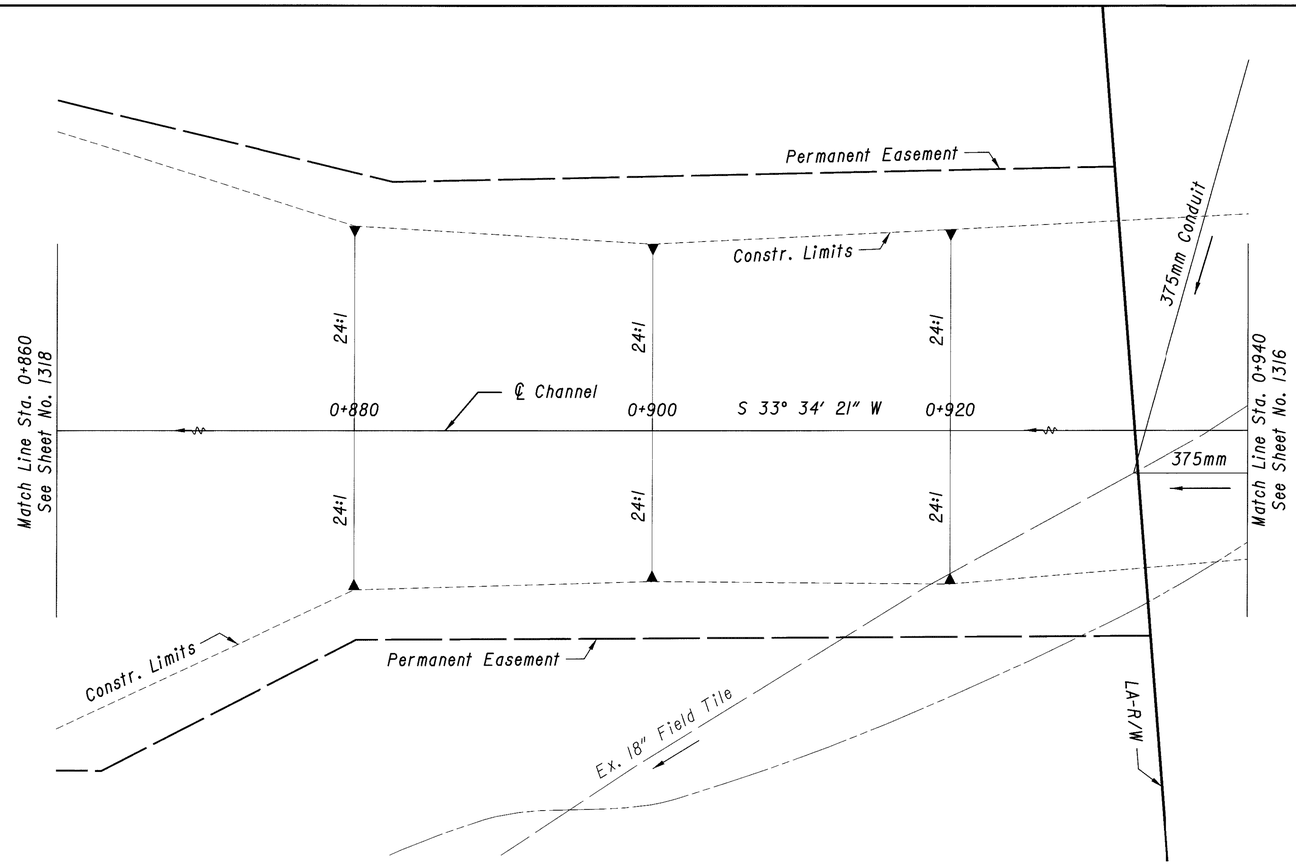
HORIZONTAL SCALE IN METERS

CALCULATED AM
CHECKED REA

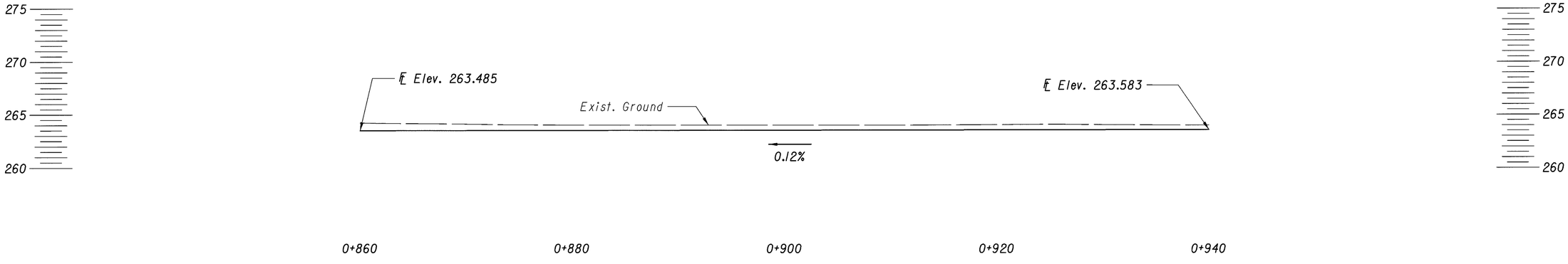
CULVERT DETAIL
U.S.R. 30 - STA. 29+300.000

WYA/CRA-30-28.009/0.000

1316
2116



For Quantities see Sheet No. 1316
For Channel Cross Sections see Sheet No. 1348



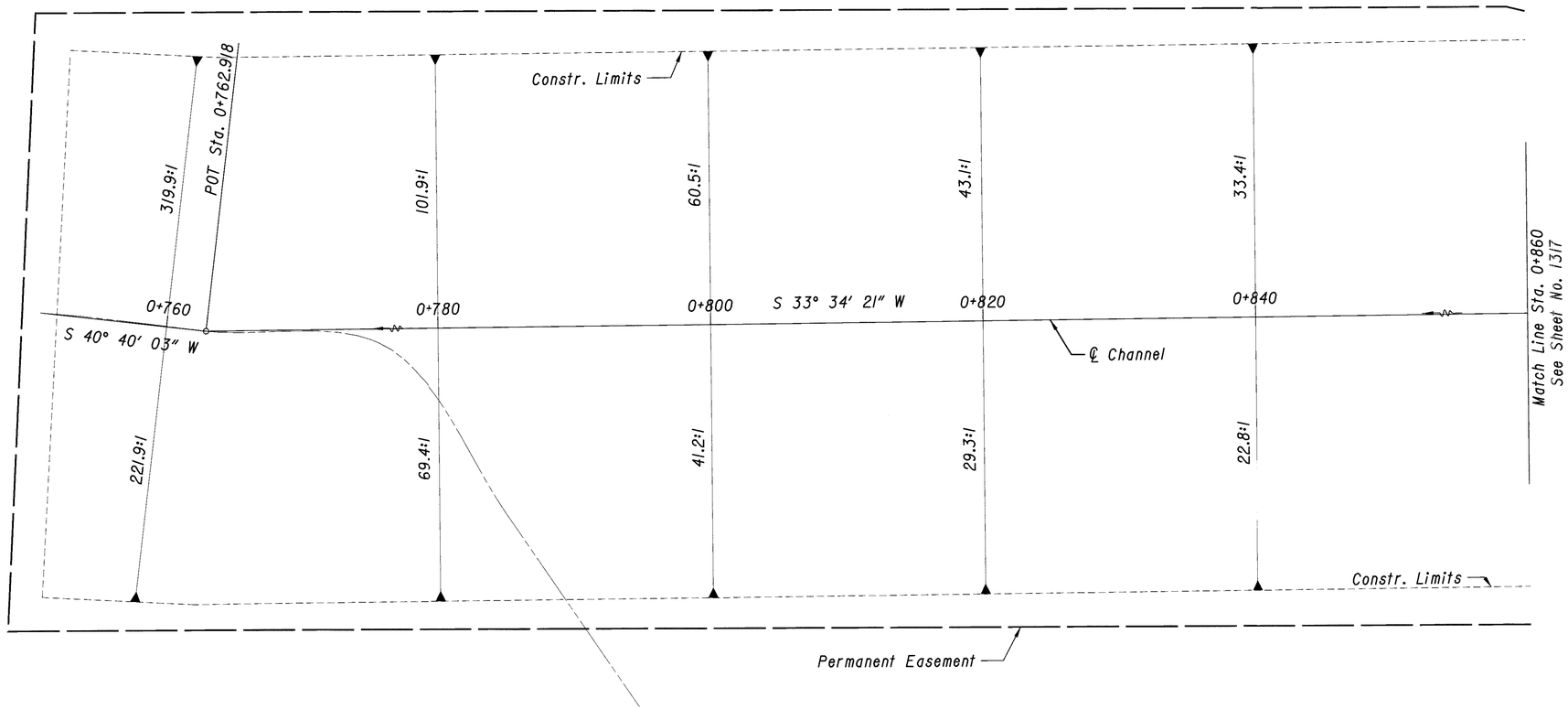
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED AM
CHECKED REA

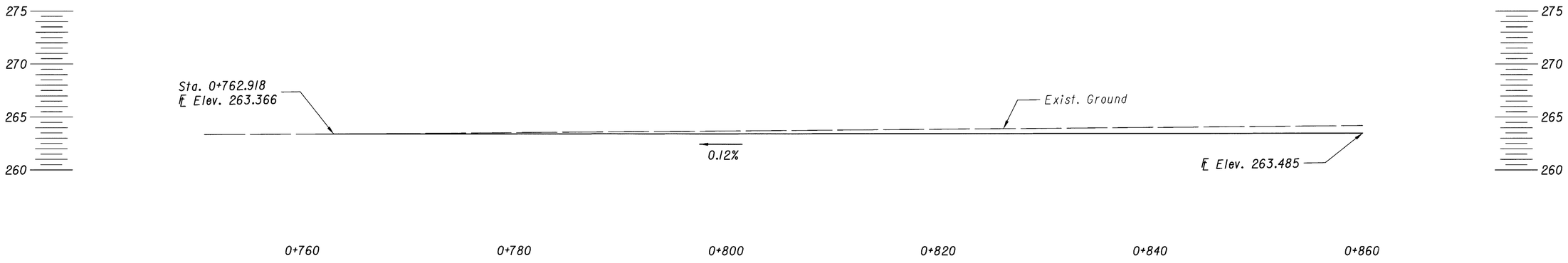
CHANNEL DETAIL
U.S.R. 30 - STA. 29+300.000

WYA/CRA-30-28.009/0.000

1317
2116



For Quantities see Sheet No. 1316
For Channel Cross Sections see Sheet No. 1348



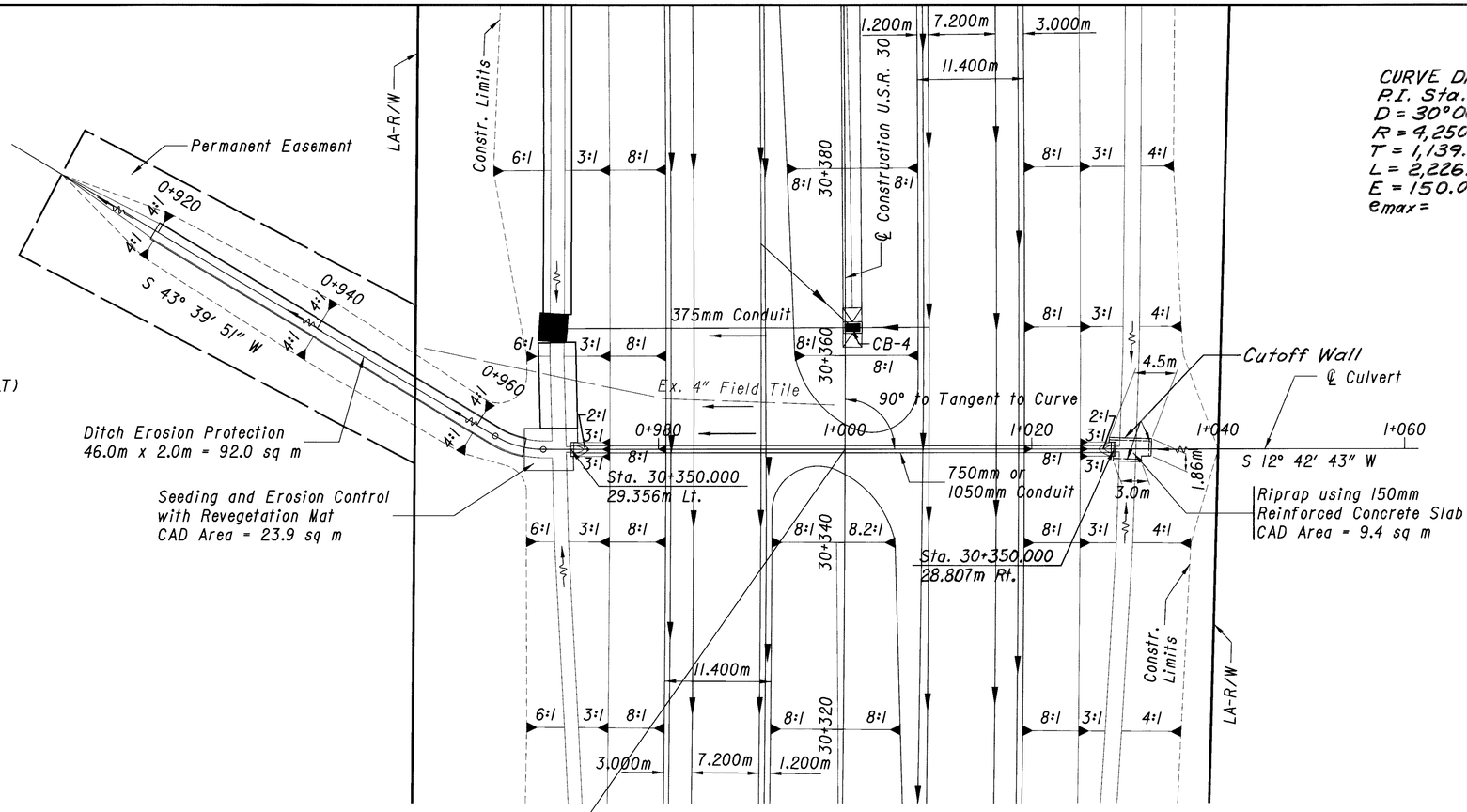
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED AM
CHECKED REA

CHANNEL DETAIL
U.S.R. 30 - STA. 29+300.000

WYA/CRA-30-28.009/0.000

1318
2116



CURVE DATA, U.S.R. 30
P.I. Sta. 30+333.210
D = 30°00' 42" (Lt.)
R = 9,250.000m
T = 1,139.250m
L = 2,226.164m
E = 150.044 m
emax =

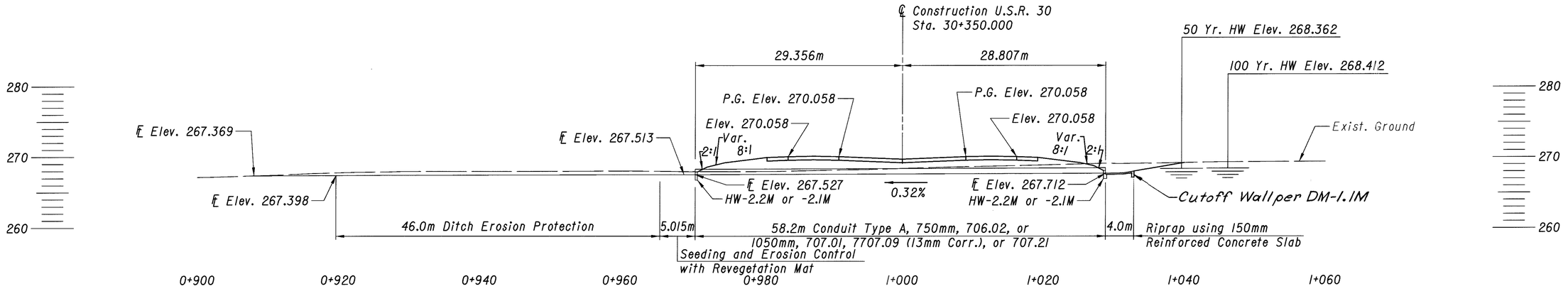
CURVE DATA, Channel
P.I. = Sta. 0+965.035
D = 30° 57' 08" (LT)
R = 10.000m
T = 2.769m
L = 5.402m
E = 0.376m
PC Sta. 0+962.267
PT Sta. 0+967.669

HYDRAULIC DESIGN DATA	
Drainage Area	= 5 ha
Q_{50}	= 0.47 cms
Q_{100}	= 0.54 cms
HW_{50}	= 268.362
HW_{100}	= 268.412
V_{50}	= 1.83 mps
V_{100}	= 1.89 mps

Note: For Channel Cross Sections see Sheet No. 1350

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	9.4	sq m	Riprap using 150mm Reinforced Concrete Slab
602	1.66	cu m	Concrete Masonry
603	58.2	m	750mm Conduit Type A, 706.02, or
			1050mm, 707.01, 707.09 (13mm Corr.), or 707.21
670	92.0	sq m	Ditch Erosion Protection
839	23.9	sq m	Seeding and Erosion Control with Revegetation Mat

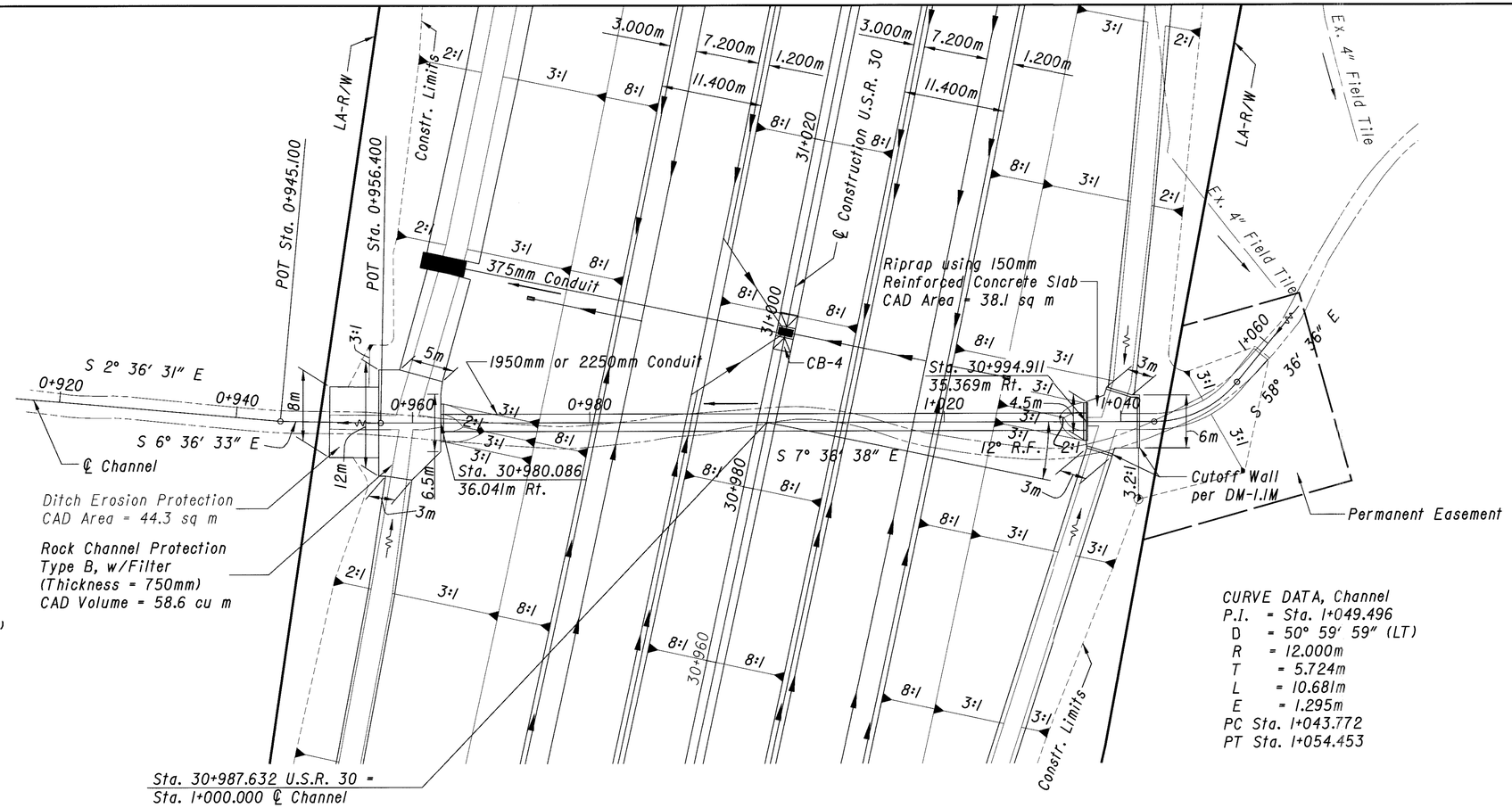


HORIZONTAL SCALE IN METERS
0 5 10
CALCULATED AM
CHECKED REA

CULVERT DETAIL
U.S.R. 30 - STA. 30+350.000

WYA/CRA-30-28.009/0.000

1319
2116



CURVE DATA, U.S.R. 30
P.I. = Sta. 30+333.210
D = 30° 00′ 42″ (LT)
R = 4,250.000m
T = 1,139.250m
L = 2,226.164m
E = 150.044m
θ max. =

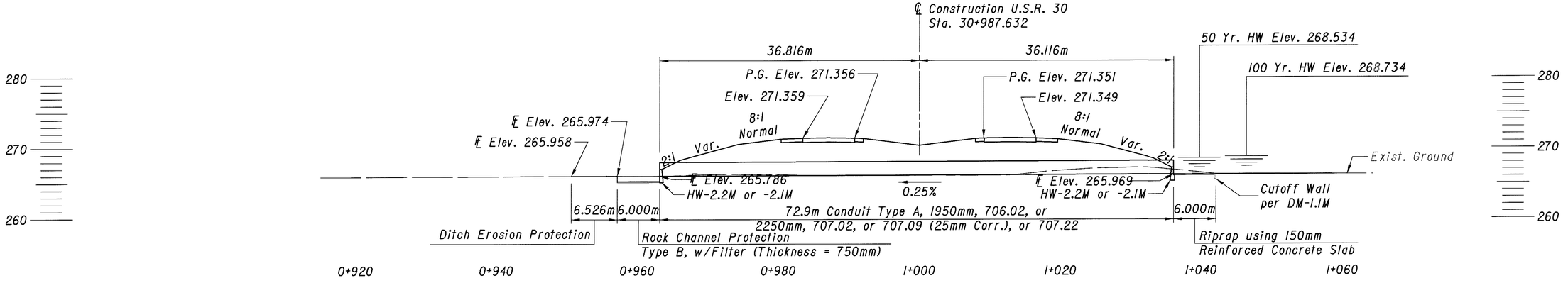
CURVE DATA, Channel
P.I. = Sta. 1+049.496
D = 50° 59′ 59″ (LT)
R = 12.000m
T = 5.724m
L = 10.681m
E = 1.295m
PC Sta. 1+043.772
PT Sta. 1+054.453

Note: For Channel Cross Sections see Sheet No. 1350

HYDRAULIC DESIGN DATA	
Drainage Area	= 309 ha
Q_{50}	= 7.82 cms
Q_{100}	= 8.82 cms
HW_{50}	= 268.534
HW_{100}	= 268.734
V_{50}	= 3.45 mps
V_{100}	= 3.65 mps

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	38.1	sq m	Riprap using 150mm Reinforced Concrete Slab
601	58.6	cu m	Rock Channel Protection Type B with Filter
602	7.32	cu m	Concrete Masonry
603	72.9	m	1950mm Conduit Type A, 706.02, or
			2250mm, 707.02, or 707.09 (25mm Corr.), or 707.22
670	44.3	sq m	Ditch Erosion Protection



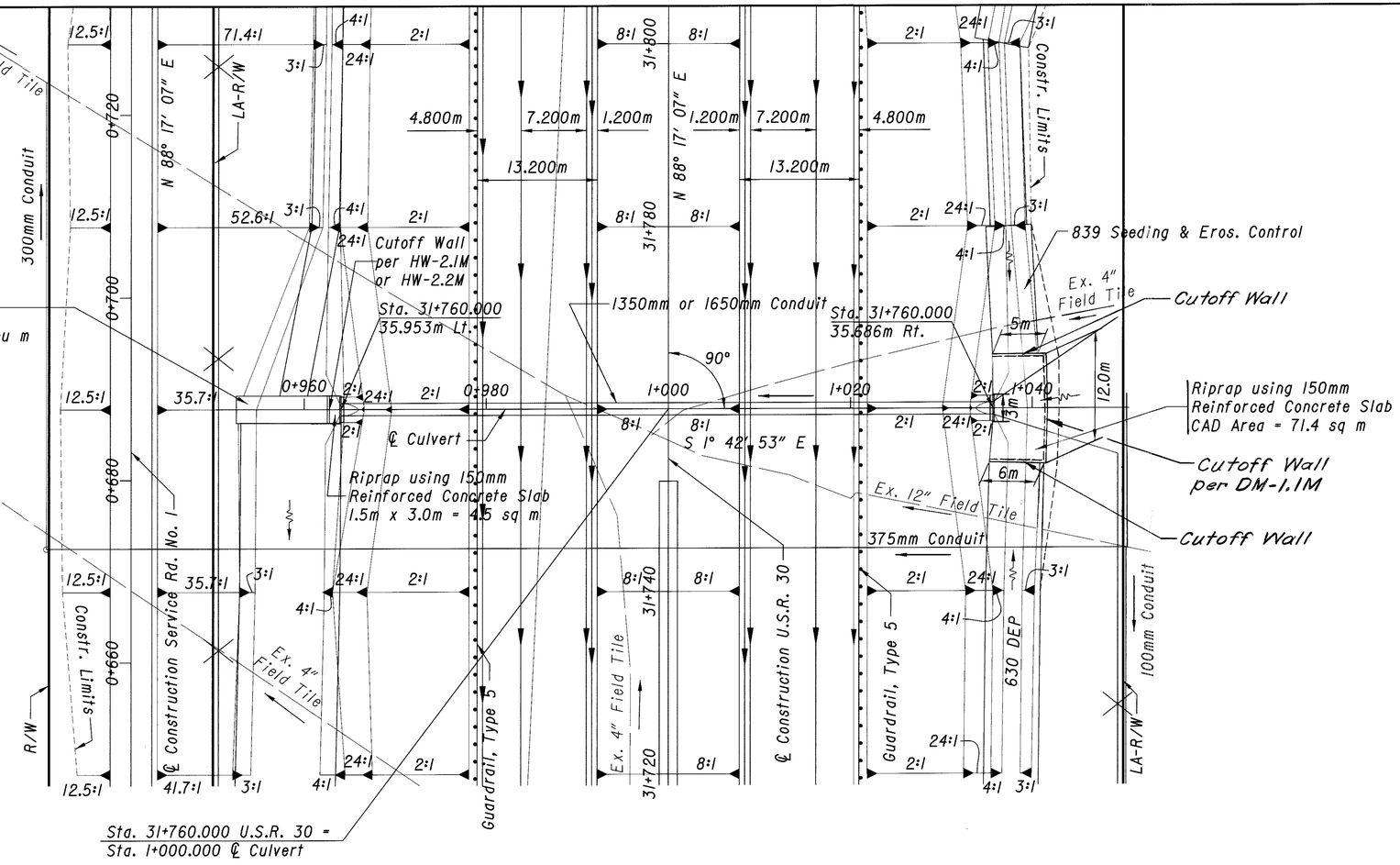
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED AM
CHECKED REA

CULVERT DETAIL
U.S.R. 30 - STA. 30+987.632

WYA / CRA-30-28.009 / 0.000

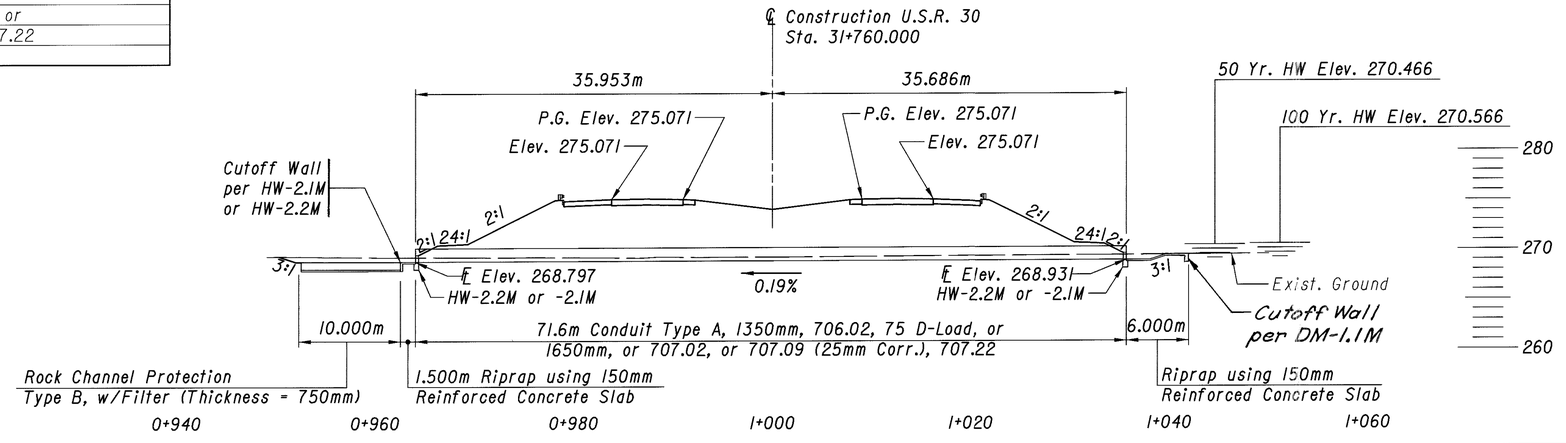
1320
2116



HYDRAULIC DESIGN DATA	
Drainage Area	= 60 ha
Q_{50}	= 2.85 cms
Q_{100}	= 3.18 cms
HW_{50}	= 270.466
HW_{100}	= 270.566
V_{50}	= 2.76 mps
V_{100}	= 2.88 mps

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	75.9	sq m	Riprap using 150mm Reinforced Concrete Slab
601	22.5	cu m	Rock Channel Protection Type B with Filter
602	3.76	cu m	Concrete Masonry
603	71.6	m	1350mm Conduit Type A, 706.02, 75 D-Load, or
			1650mm, 707.02, 707.09 (25mm Corr.), or 707.22





HORIZONTAL SCALE IN METERS

0 5 10

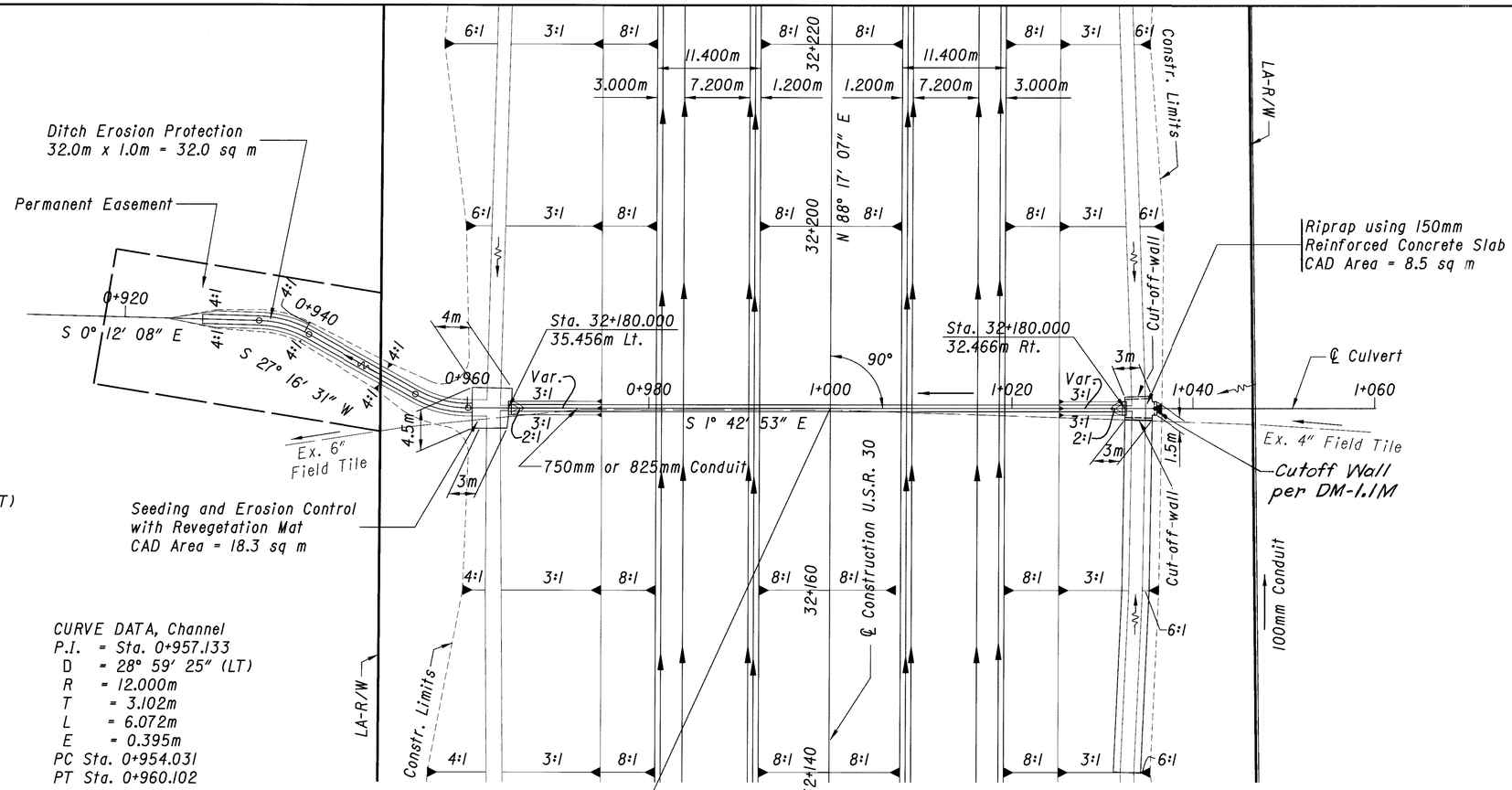
CALCULATED AM

CHECKED REA

CULVERT DETAIL
U.S.R. 30 - STA. 31+760.000

WYA / CRA-30-28.009 / 0.000

1321
2116



CURVE DATA, Channel
P.I. = Sta. 0+937.698
D = 27° 28' 39" (RT)
R = 12.000m
T = 2.934m
L = 5.755m
E = 0.353m
PC Sta. 0+934.764
PT Sta. 0+940.519

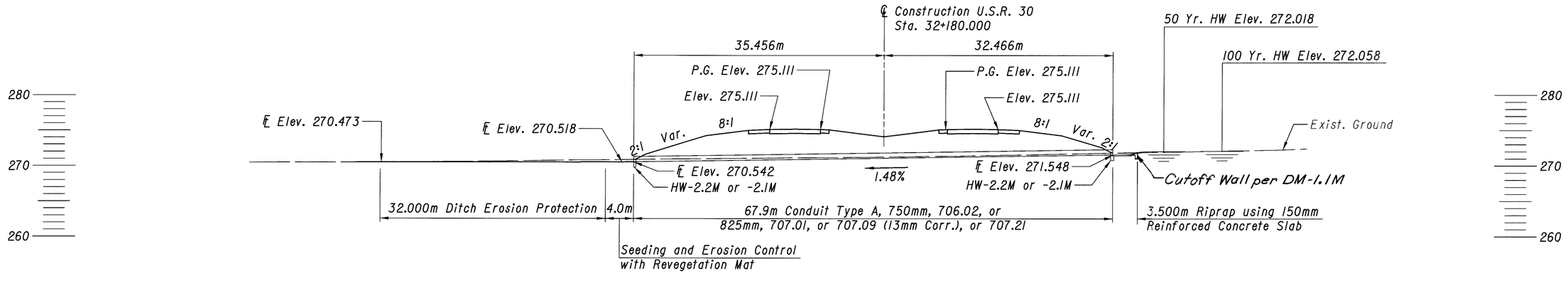
CURVE DATA, Channel
P.I. = Sta. 0+957.133
D = 28° 59' 25" (LT)
R = 12.000m
T = 3.102m
L = 6.072m
E = 0.395m
PC Sta. 0+954.031
PT Sta. 0+960.102

Note: For Channel Cross Sections see Sheet No. 1351

HYDRAULIC DESIGN DATA	
Drainage Area	= 2 ha
Q_{50}	= 0.30 cms
Q_{100}	= 0.35 cms
HW_{50}	= 272.018
HW_{100}	= 272.058
V_{50}	= 2.49 mps
V_{100}	= 2.67 mps

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	8.5	sq m	Riprap using 150mm Reinforced Concrete Slab
602	1.18	cu m	Concrete Masonry
603	67.9	m	750mm Conduit Type A, 706.02, or
			825mm, 707.01, or 707.09(13mm Corr.), or 707.21
670	32.0	sq m	Ditch Erosion Protection
839	18.3	sq m	Seeding and Erosion Control with Revegetation Mat



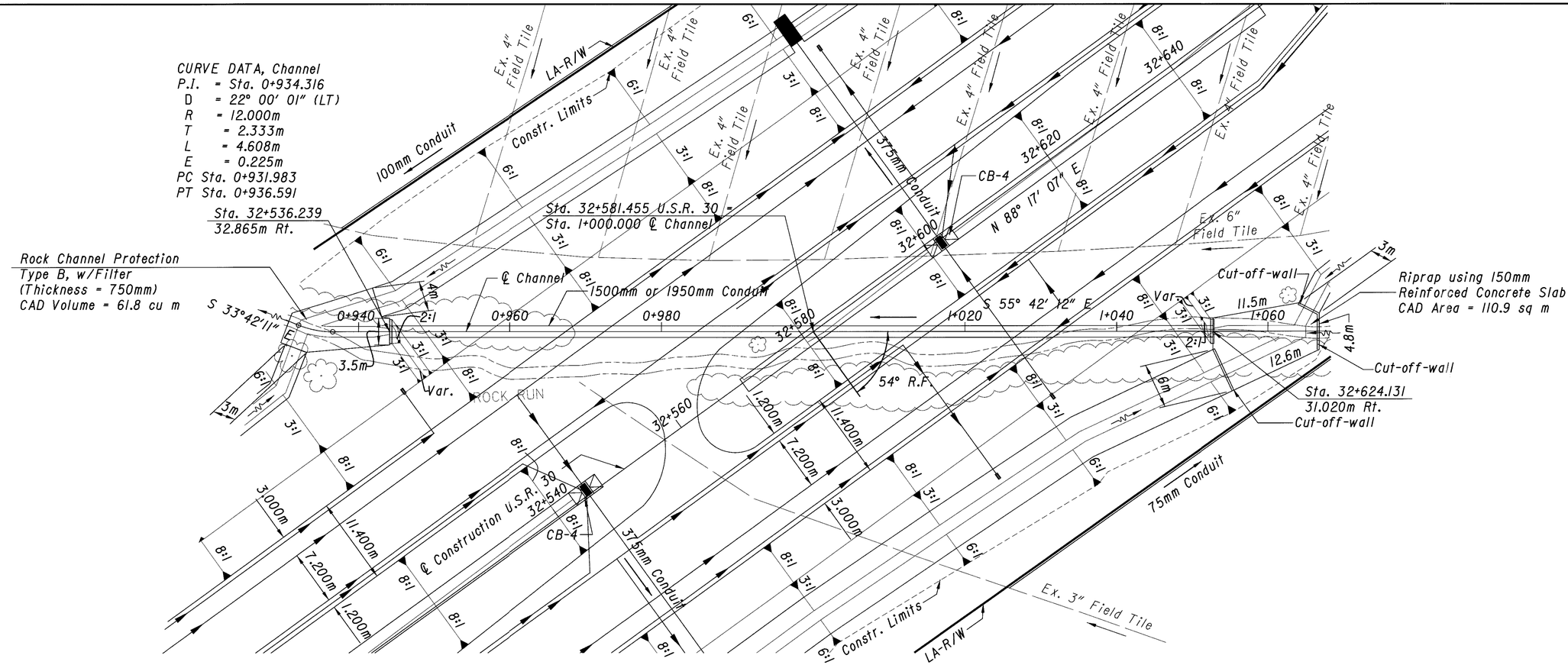
HORIZONTAL SCALE IN METERS

CALCULATED AM
CHECKED REA

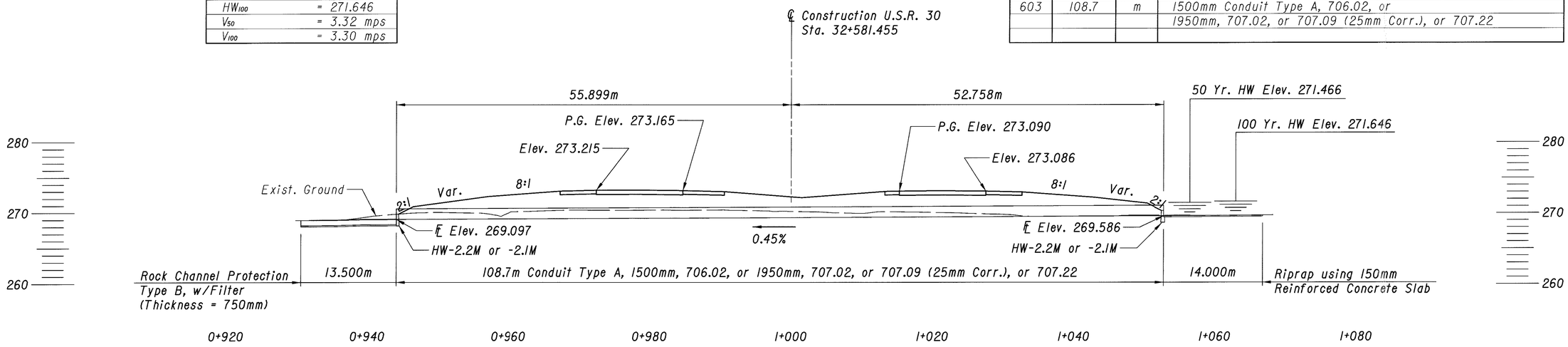
CULVERT DETAIL
U.S.R. 30 - STA. 32+180.000

WYA/CRA-30-28.009/0.000

1322
2116



HYDRAULIC DESIGN DATA	
Drainage Area	= 132 ha
Q_{50}	= 4.94 cms
Q_{100}	= 5.62 cms
HW_{50}	= 271.466
HW_{100}	= 271.646
V_{50}	= 3.32 mps
V_{100}	= 3.30 mps



ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	110.9	sq m	Riprap using 150mm Reinforced Concrete Slab
601	61.8	cu m	Rock Channel Protection Type B with Filter
602	5.36	cu m	Concrete Masonry
603	108.7	m	1500mm Conduit Type A, 706.02, or
			1950mm, 707.02, or 707.09 (25mm Corr.), or 707.22

N

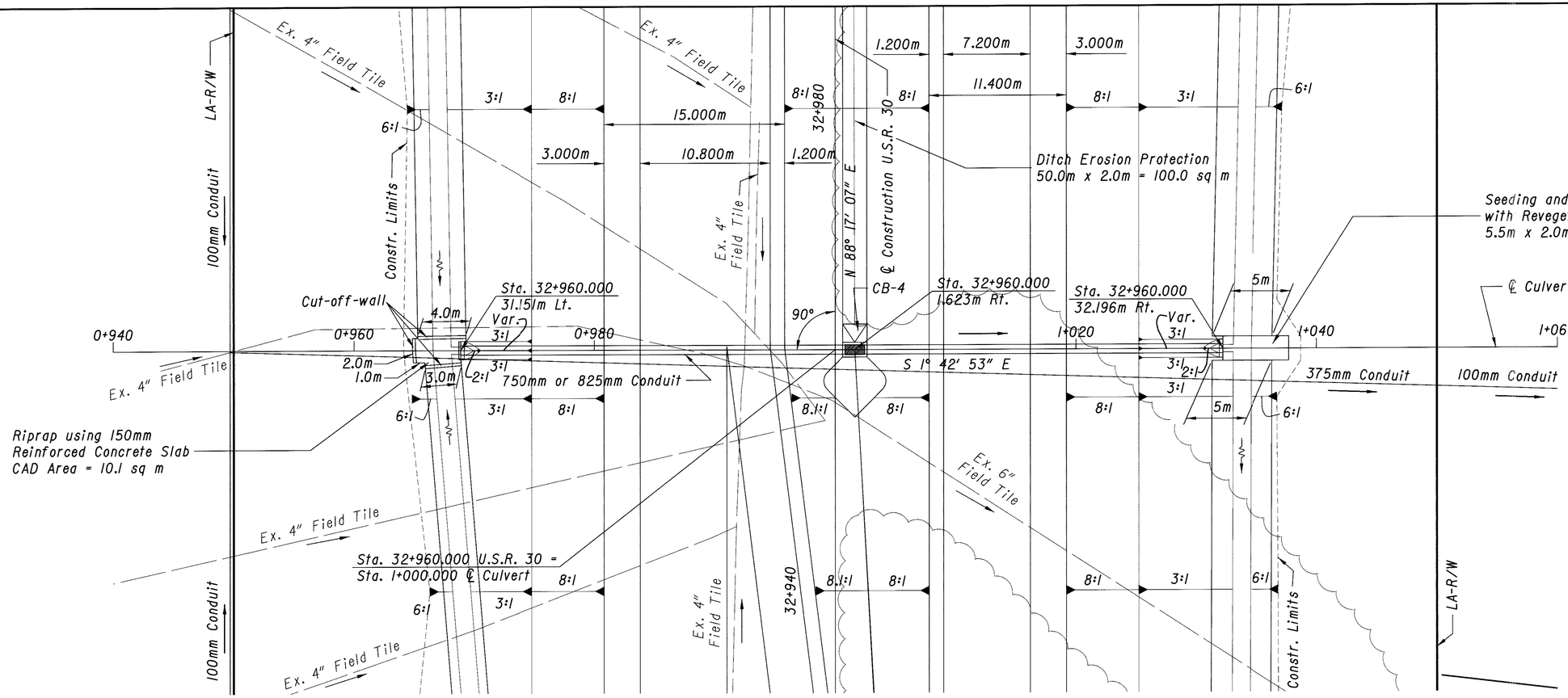
0 5 10
HORIZONTAL
SCALE IN METERS

CALCULATED AM
CHECKED REA

CULVERT DETAIL
U.S.R. 30 - STA. 32+581.455

WYA/CRA-30-28.009/0.000

1323
2116

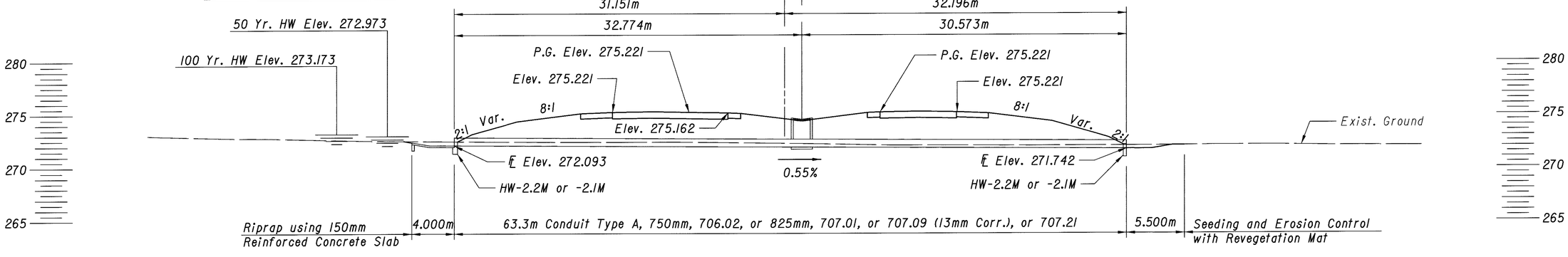


HYDRAULIC DESIGN DATA	
Drainage Area	= 5 ha
Q_{50}	= 0.66 cms
Q_{100}	= 0.76 cms
HW_{50}	= 272.973
HW_{100}	= 273.173
V_{50}	= 2.18 mps
V_{100}	= 2.26 mps

℄ Construction U.S.R. 30
Sta. 32+960.000

Sta. 32+960, 1.623m Rt.
604, No. 4 CB
Grate = 274.381
Inv. 750mm = 271.912
Inv. 300mm = 272.362
Inv. 150mm = 273.200

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	10.1	sq m	Riprap using 150mm Reinforced Concrete Slab
602	1.18	cu m	Concrete Masonry
603	63.3	m	750mm Conduit Type A, 706.02, or
			825mm, 707.01, or 707.09 (13mm Corr.), or 707.21
604	1	each	Catch Basin No. 4
670	100.0	sq m	Ditch Erosion Protection
839	11.0	sq m	Seeding and Erosion Control with Revegetation Mat



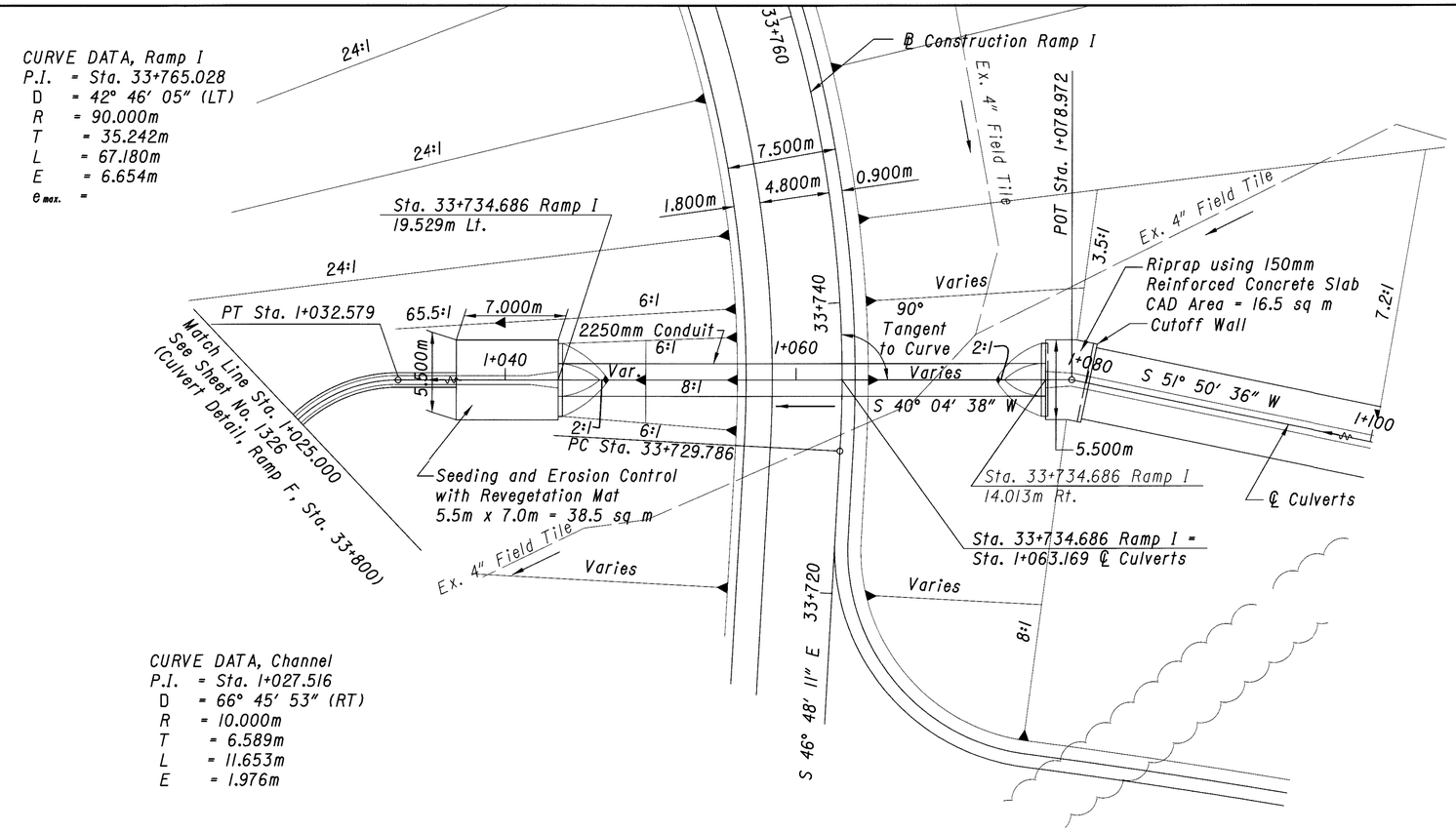
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED AM
CHECKED REA

CULVERT DETAIL
U.S.R. 30 - STA. 32+960.000

WYA/CRA-30-28.009/0.000

1324
2116



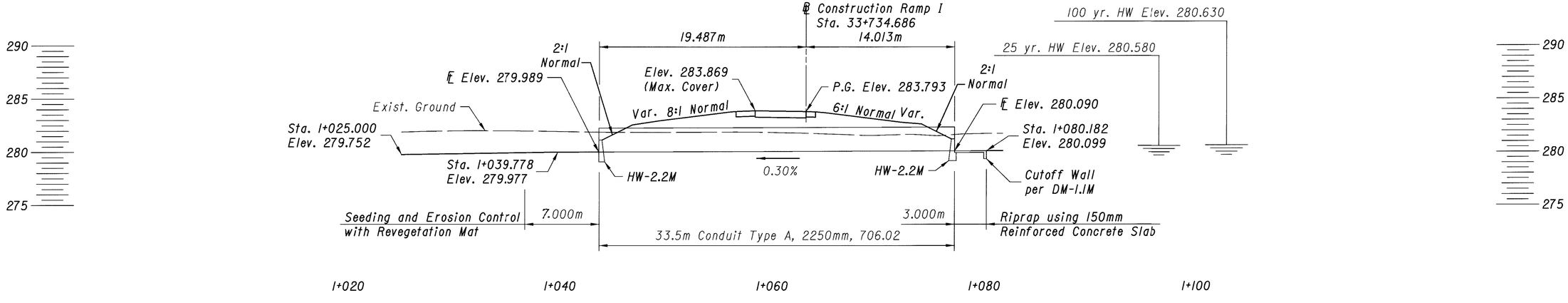
CURVE DATA, Channel
P.I. = Sta. 1+027.516
D = 66° 45′ 53″ (RT)
R = 10.000m
T = 6.589m
L = 11.653m
E = 1.976m

Note: For Channel Cross Sections see Sheet No. 1352

HYDRAULIC DESIGN DATA	
Drainage Area	= 7 ha
Q_{25}	= 0.70 cms
Q_{100}	= 0.87 cms
HW_{25}	= 280.580
HW_{100}	= 280.630
V_{25}	= 1.51 mps
V_{100}	= 1.73 mps

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	16.5	sq m	Riprap using 150mm Reinforced Concrete Slab
602	8.76	cu m	Concrete Masonry
603	33.5	m	2250mm Conduit Type A, 706.02
839	38.5	sq m	Seeding and Erosion Control with Revegetation Mat



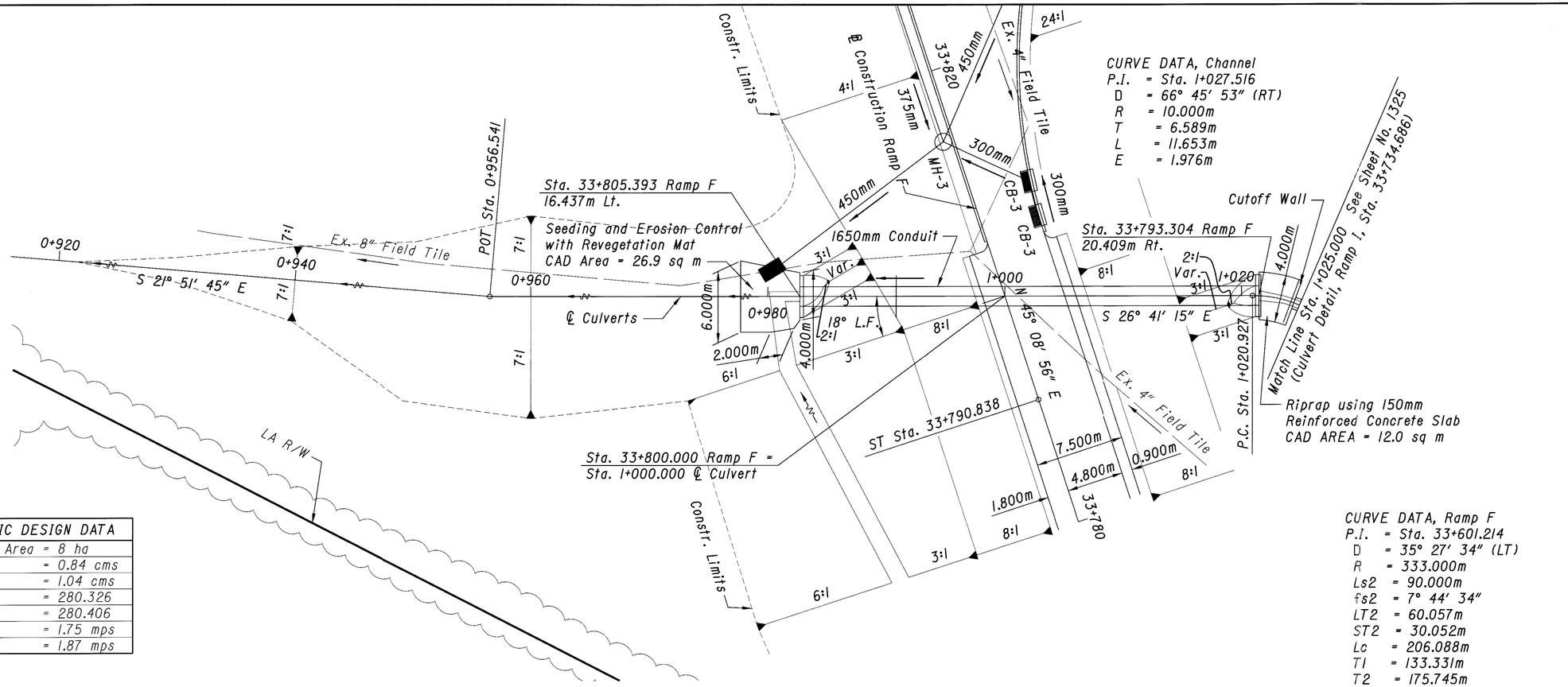
HORIZONTAL SCALE IN METERS

CALCULATED AW CHECKED REA

CULVERT DETAIL RAMP I - STA. 33+734.686

WYA/CRA-30-28.009/0.000

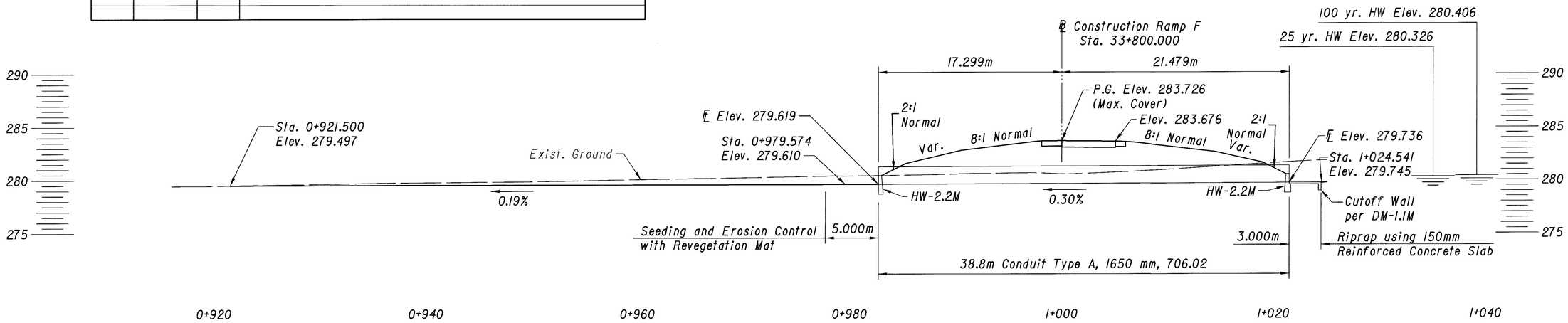
1325
2116



HYDRAULIC DESIGN DATA	
Drainage Area	= 8 ha
Q_{25}	= 0.84 cms
Q_{100}	= 1.04 cms
HW_{25}	= 280.326
HW_{100}	= 280.406
V_{25}	= 1.75 mps
V_{100}	= 1.87 mps

Note: For Channel Cross Sections see Sheet No. 1352

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	12.0	sq m	Riprap using 150mm Reinforced Concrete Slab
602	4.62	cu m	Concrete Masonry
603	38.8	m	1650mm Conduit Type A, 706.02
839	26.9	sq m	Seeding and Erosion Control with Revegetation Mat



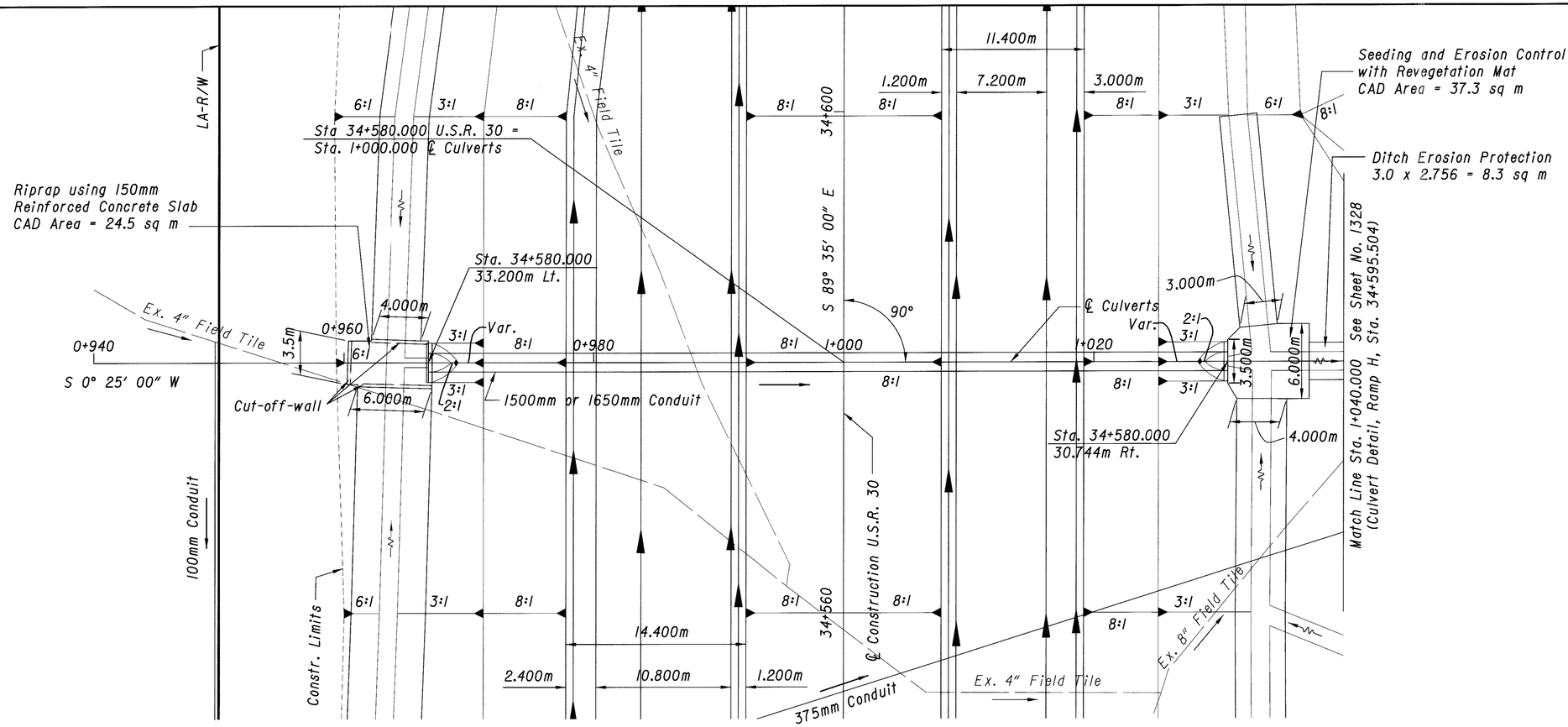
HORIZONTAL SCALE IN METERS

CALCULATED AM CHECKED REA

CULVERT DETAIL
RAMP F - STA. 33+800.000

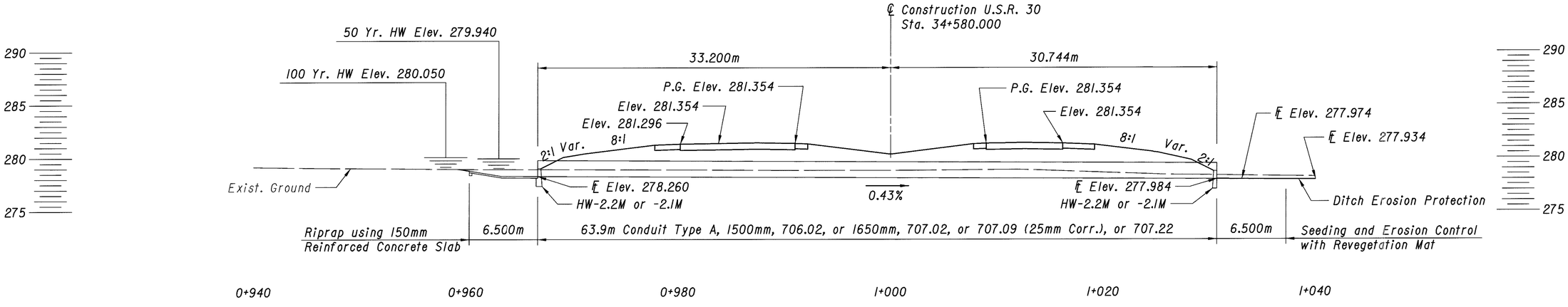
WYA/CRA-30-28.009/0.000

1326
2116



HYDRAULIC DESIGN DATA	
Drainage Area	= 18 ha
Q_{50}	= 2.59 cms
Q_{100}	= 2.99 cms
HW_{50}	= 279.940
HW_{100}	= 280.050
V_{50}	= 1.42 mps
V_{100}	= 1.64 mps

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	24.5	sq m	Riprap using 150mm Reinforced Concrete Slab
602	3.76	cu m	Concrete Masonry
603	63.9	m	1500mm Conduit Type A, 706.02, or
			1650mm, 707.02, or 707.09 (25mm Corr.), or 707.22
670	8.3	sq m	Ditch Erosion Protection
839	37.3	sq m	Seeding and Erosion Control with Revegetation Mat



N

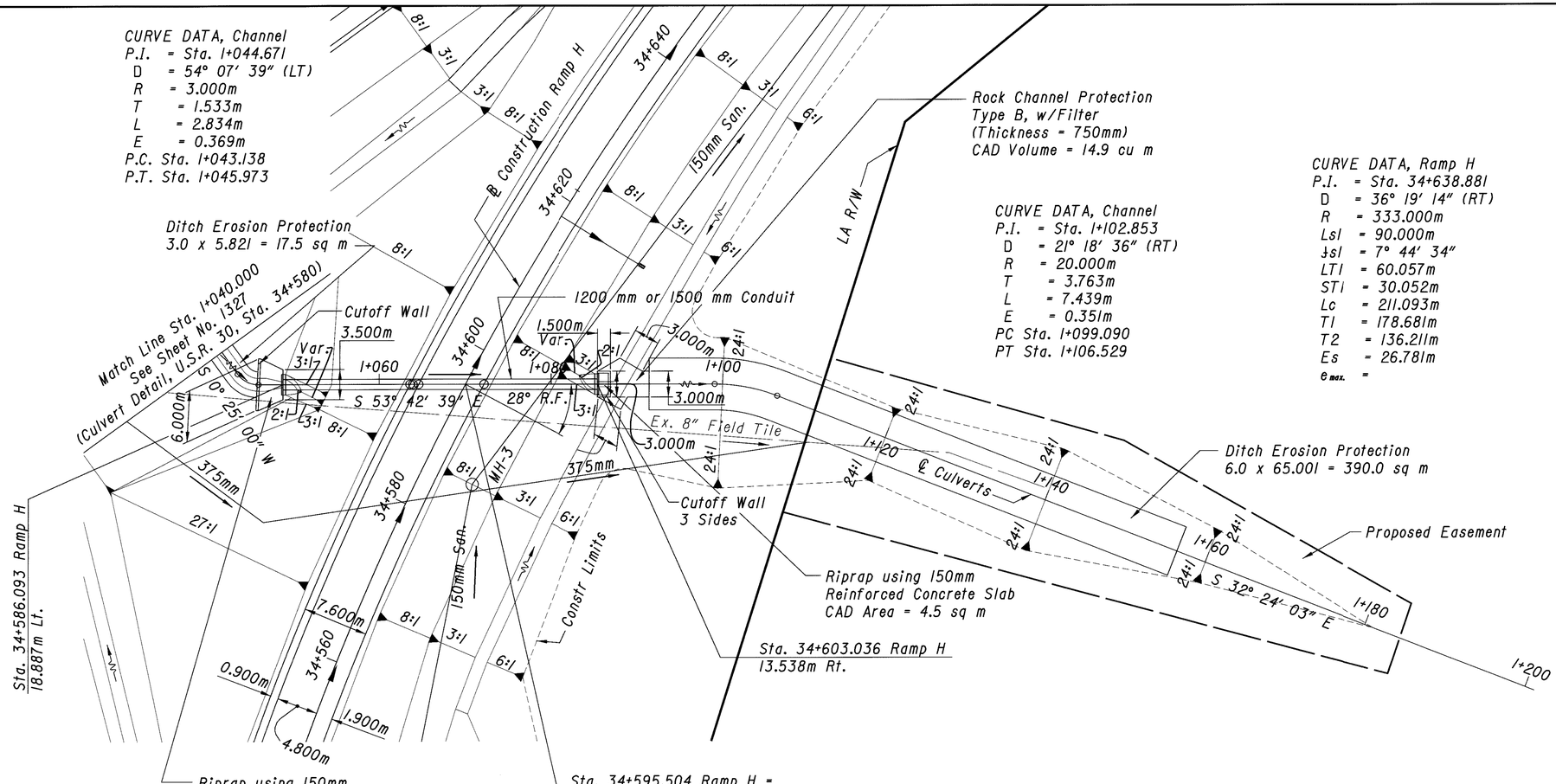
HORIZONTAL SCALE IN METERS
0 5 10

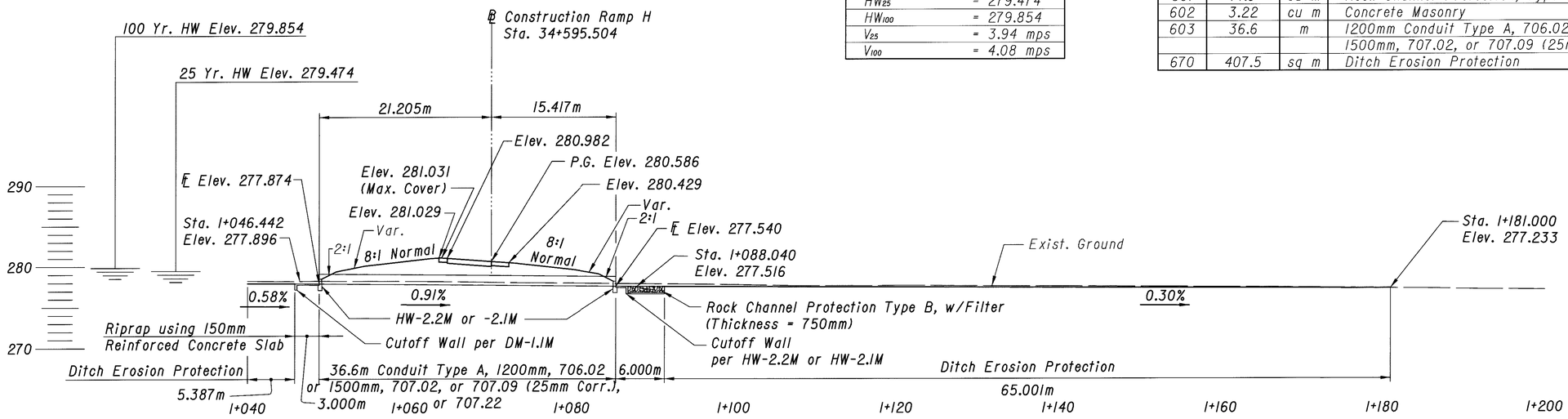
CALCULATED AM
CHECKED REA

CULVERT DETAIL
U.S.R. 30 - STA. 34+580.000

WYA/CRA-30-28.009/0.000

1327
2116





HYDRAULIC DESIGN DATA	
Drainage Area	= 25 ha
Q_{25}	= 3.16 cms
Q_{100}	= 3.89 cms
HW_{25}	= 279.474
HW_{100}	= 279.854
V_{25}	= 3.94 mps
V_{100}	= 4.08 mps

Note: For Channel Cross Sections see Sheet No. 1353

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	19.1	sq m	Riprap using 150mm Reinforced Concrete Slab
601	14.9	cu m	Rock Channel Protection, Type B with Filter
602	3.22	cu m	Concrete Masonry
603	36.6	m	1200mm Conduit Type A, 706.02, or
			1500mm, 707.02, or 707.09 (25mm Corr.), or 707.22
670	407.5	sq m	Ditch Erosion Protection

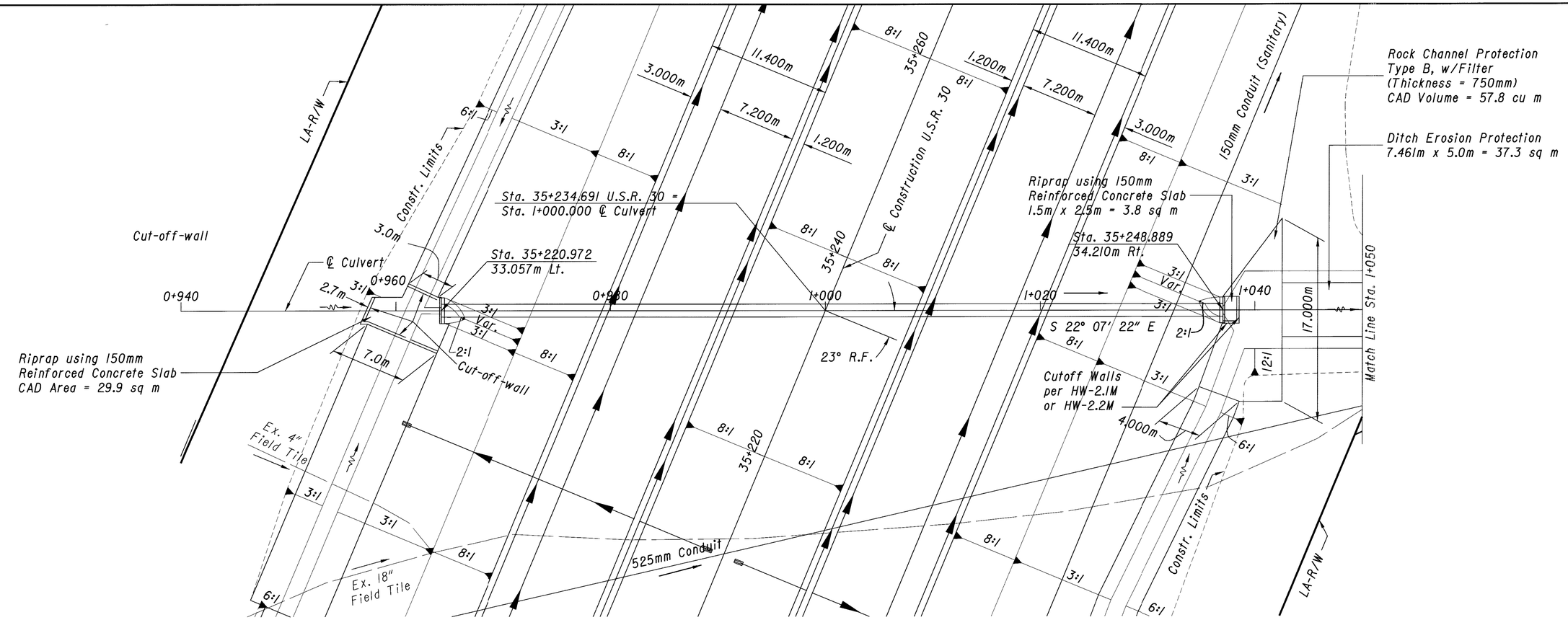
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED AM
CHECKED REA

CULVERT DETAIL
RAMP H - STA. 34+595.504

WYA / CRA-30-28.009 / 0.000

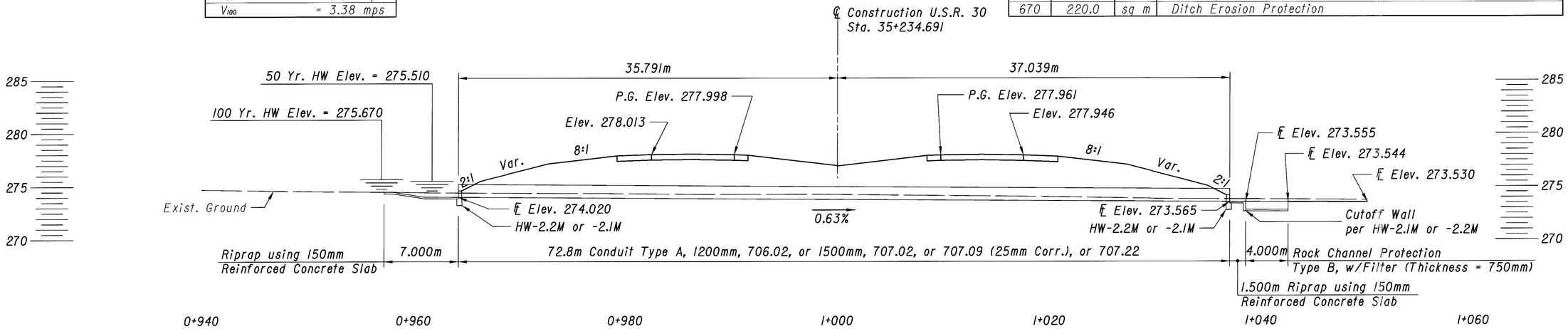
1328
2116



Note: For Channel Cross Sections see Sheet No. 1351

HYDRAULIC DESIGN DATA	
Drainage Area	= 40 ha
Q_{50}	= 2.77 cms
Q_{100}	= 3.18 cms
HW_{50}	= 275.510
HW_{100}	= 275.670
V_{50}	= 3.28 mps
V_{100}	= 3.38 mps

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	33.7	sq m	Riprap using 150mm Reinforced Concrete Slab
601	57.8	cu m	Rock Channel Protection Type B with Filter
602	3.22	cu m	Concrete Masonry
603	72.8	m	1200mm Conduit Type A, 706.02, or
			1500mm, 707.02, or 707.09 (25mm Corr.), or 707.22
670	220.0	sq m	Ditch Erosion Protection



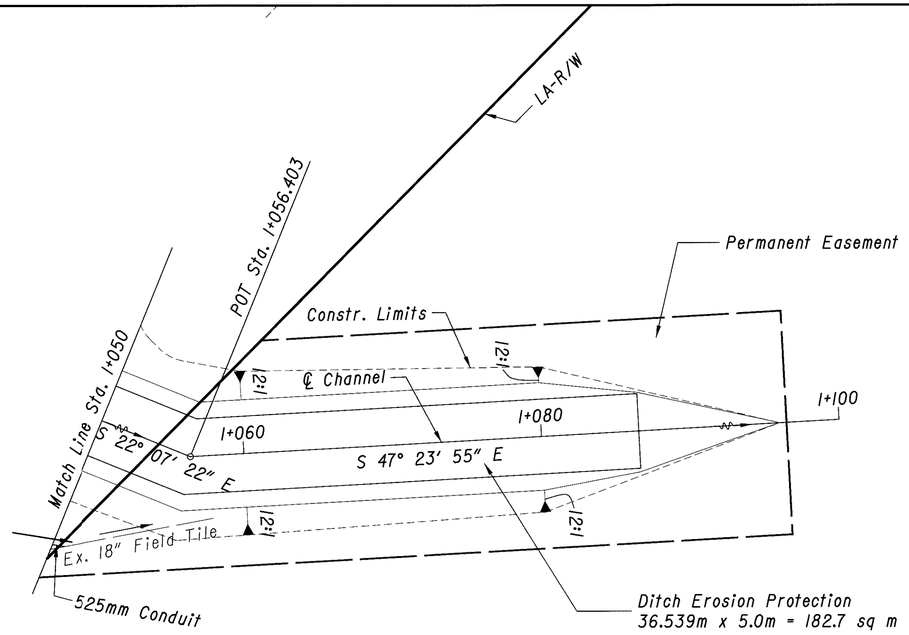
HORIZONTAL SCALE IN METERS

CALCULATED AM
CHECKED R.E.A

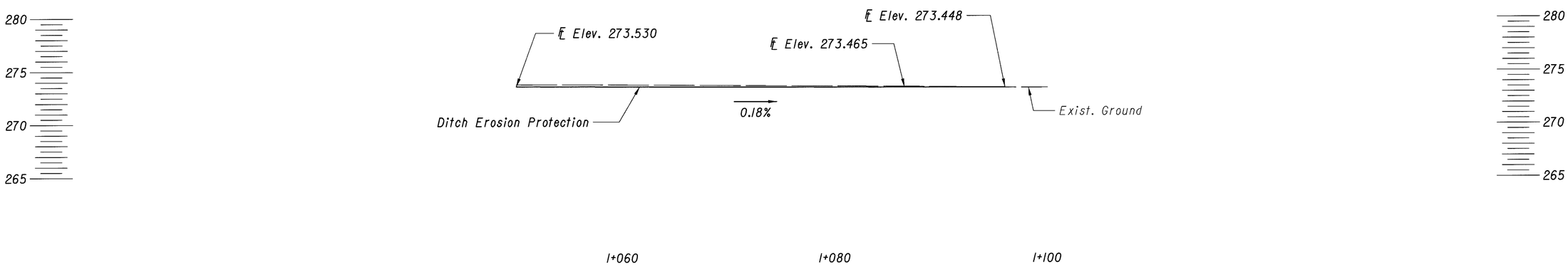
CULVERT DETAIL
U.S.R. 30 - STA. 35+234.691

WYA/CRA-30-28.009/0.000

1329
2116



For Quantities see Sheet No. 1329
For Channel Cross Sections see Sheet No. 1351



HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED AM
CHECKED AEA

CHANNEL DETAIL
U.S.R. 30 - STA. 35+234.691

WYA/CRA-30-28.009/0.000

1330
2116

For Stream Cross Sections
See US-30 Cross Sections
—CF—CF— Construction Protective Fencing, As Per Plan
For Re-planting scheme See Sheets 1331A-1331C

P.I. Sta. = 0+951.956
D = 14° 38′ 07″ (LT)
R = 50.000 m
T = 6.421 m
L = 12.772 m
E = 0.411 m
PC Sta. 0+945.535
PT Sta. 0+958.307

POT Sta. 0+939.956

601, RCP, Type B w/Filter
4.500m x 5.475m x 0.75m = 18.5 Cu.m.

Sta. 37+195.461
36.88 Rt.

38° 42′ 55.84″

℄ Stream

601, Riprap using 150mm Reinforced Concrete Slab
5.475m x 2.5m = 13.7 sq. m.

Permanent Easement

670, DEP

Sta. 37+212.175 ℄ US-30 =
Sta. 1+000.000 ℄ Stream

64.995°
Tangent to Curve

2400mm Conduit

℄ Construction U.S.R. 30

Sta. 37+227.622
32.27 Lt.

Wooded area To be Saved

P.I. Sta. = 1+038.770
D = 60° 34′ 31″ (RT)
R = 3.000 m
T = 1.752 m
L = 3.172 m
E = 0.409 m
PC Sta. 1+037.018
PT Sta. 1+040.190

SEE SHEET NO. 1331A

MATCH LINE STA. 1+060

601, Riprap using 150mm Reinforced Concrete Slab
1.5m x 5.475 = 8.2 Sq.m.

P.I. Sta. = 1+043.523
D = 24° 264′ 06″ (LT)
R = 10.000 m
T = 2.165 m
L = 4.265 m
E = 0.226 m
PC Sta. 1+041.358
PT Sta. 1+045.623

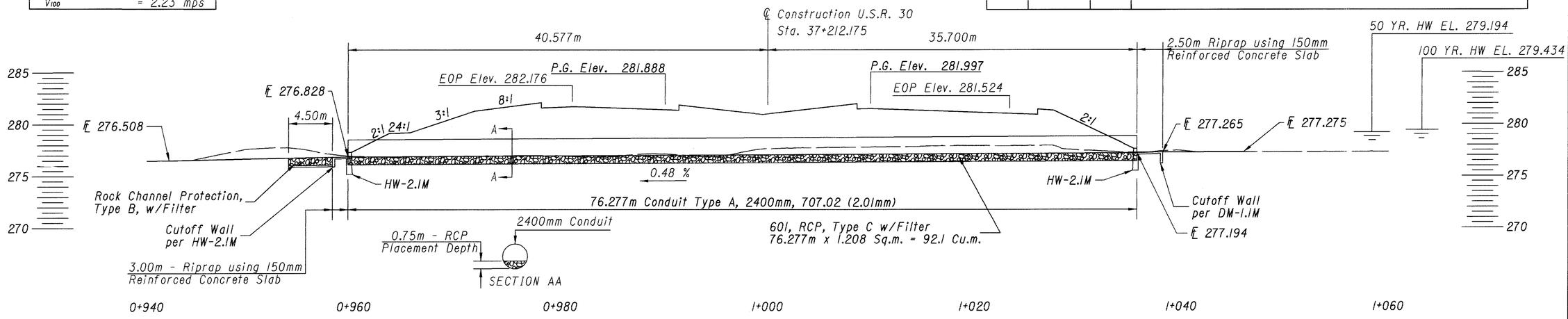
P.I. Sta. = 1+057.613
D = 5° 59′ 53″ (RT)
R = 20.000 m
T = 1.048 m
L = 2.094 m
E = 0.027 m
PC Sta. 1+056.565
PT Sta. 1+058.659

P.I. Sta. = 1+065.343
D = 40° 43′ 51″ (LT)
R = 15.000 m
T = 5.568 m
L = 10.663 m
E = 1.000 m
PC Sta. 1+059.775
PT Sta. 1+070.439

HYDRAULIC DESIGN DATA	
Drainage Area	= 1.888 ha
Q_{50}	= 3.920 cms
Q_{100}	= 4.270 cms
HW_{50}	= 279.194
HW_{100}	= 279.434
V_{50}	= 2.05 mps
V_{100}	= 2.23 mps

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	21.9	sq m	Riprap using 150mm Reinforced Concrete Slab
601	18.5	cu m	Rock channel protection Type B w/Filter
601	92.1	cu m	Rock channel protection Type C w/Filter
602	10.43	cu m	Concrete Masonry
603	76.3	m	2400mm Conduit Type A, 707.02 (2.01mm)



HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED AM
CHECKED AM

CULVERT DETAIL
U.S.R. 30 - STA. 37+212.175

WYA/CRA-30-28.009/0.000

1331
2116

P.I. Sta. = 1+065.343
D = 40° 43′ 51″ (LT)
R = 15.000 m
T = 5.568 m
L = 10.663 m
E = 1.000 m
PC Sta. 1+059.775
PT Sta. 1+070.439

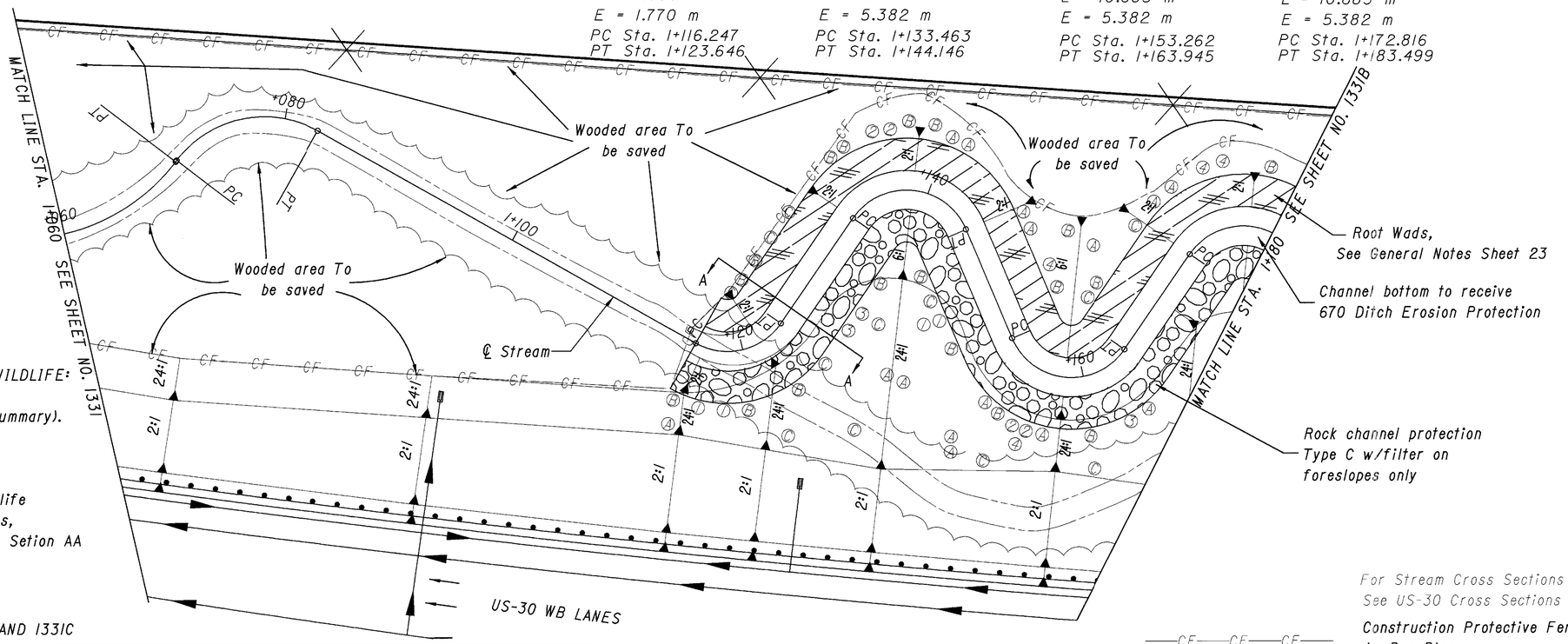
P.I. Sta. = 1+077.965
D = 82° 07′ 28″ (RT)
R = 8.500 m
T = 7.405 m
L = 12.183 m
E = 2.773 m
PC Sta. 1+070.560
PT Sta. 1+082.743

P.I. Sta. = 1+120.811
D = 84° 46′ 55″ (LT)
R = 5.000 m
T = 4.564 m
L = 7.399 m
E = 1.770 m
PC Sta. 1+116.247
PT Sta. 1+123.646

P.I. Sta. = 1+142.561
D = 122° 25′ 04″ (RT)
R = 5.000 m
T = 9.098 m
L = 10.683 m
E = 5.382 m
PC Sta. 1+133.463
PT Sta. 1+144.146

P.I. Sta. = 1+162.361
D = 122° 25′ 04″ (LT)
R = 5.000 m
T = 9.098 m
L = 10.683 m
E = 5.382 m
PC Sta. 1+153.262
PT Sta. 1+163.945

P.I. Sta. = 1+181.915
D = 122° 25′ 04″ (RT)
R = 5.000 m
T = 9.098 m
L = 10.683 m
E = 5.382 m
PC Sta. 1+172.816
PT Sta. 1+183.499



ITEM 870 SEEDING AND MULCHING FOR WILDLIFE:

344 sq. m. (Quantity carried to General Summary).

Disturbed areas between Sta. 37+140 Lt. to Sta. 37+400 Lt. ℄ US-30 that do not receive ditch protection shall receive wildlife seeding Mix as per SS870.11 on 24:1 slopes, and ditch foreslope and back slopes. See Setion AA

QUANTITY INCLUDES SHEET 1331A, 1331B AND 1331C

ESTIMATED QUANTITIES FOR REPLANTING (TOTALS CARRIED TO GENERAL SUMMARY)

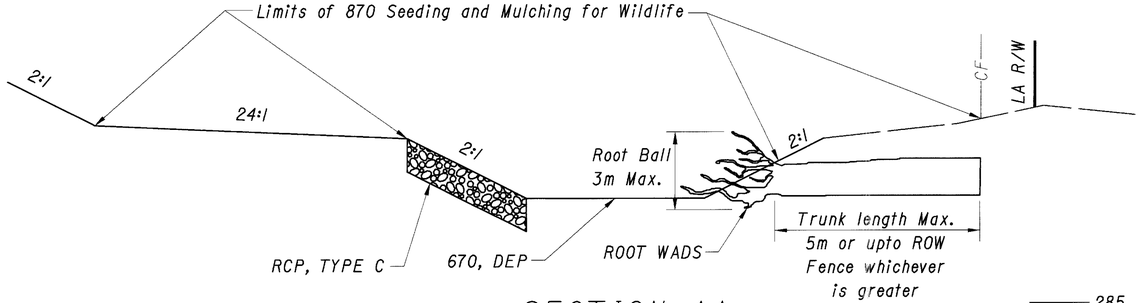
KEY	ITEM	QUANTITY	UNIT	DESCRIPTION
A	661	50	Each	Deciduous Tree, 50mm Caliper, American Elm, Balled & Burlapped (600mm min. ball)
B	661	60	Each	Deciduous Tree, 50mm Caliper, Red Maple, Balled & Burlapped (600mm min. ball)
C	661	35	Each	Deciduous Tree, 50mm Caliper, Green Ash, Balled & Burlapped (600mm min. ball)
1	661	14	Each	Deciduous Shrub, 90cm Height, Gray Dogwood, Balled & Burlapped (300mm min. ball)
2	661	12	Each	Deciduous Shrub, 90cm Height, Arrow Wood, Balled & Burlapped (300mm min. ball)
3	661	12	Each	Deciduous Shrub, 90cm Height, Elderberry, Balled & Burlapped (300mm min. ball)
4	661	12	Each	Deciduous Shrub, 90cm Height, Burning Bush, Balled & Burlapped (300mm min. ball)

General Notes:
Replanting scheme shows approximate location of individual trees and shrubs; minor midification in the field to best fit site conditions are acceptable.

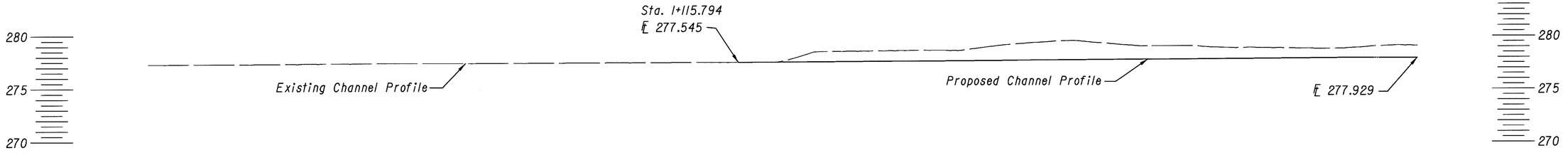
Minor constructed stream channel boundary and profile irregularities may be required to best accommodate specific site conditions or to acieve desired habitat results. These modifications are acceptable following coordination and approval by the project environmental compliance inspector.

For Stream Cross Sections See US-30 Cross Sections

—CF—CF—CF— Construction Protective Fencing, As Per Plan



SECTION AA

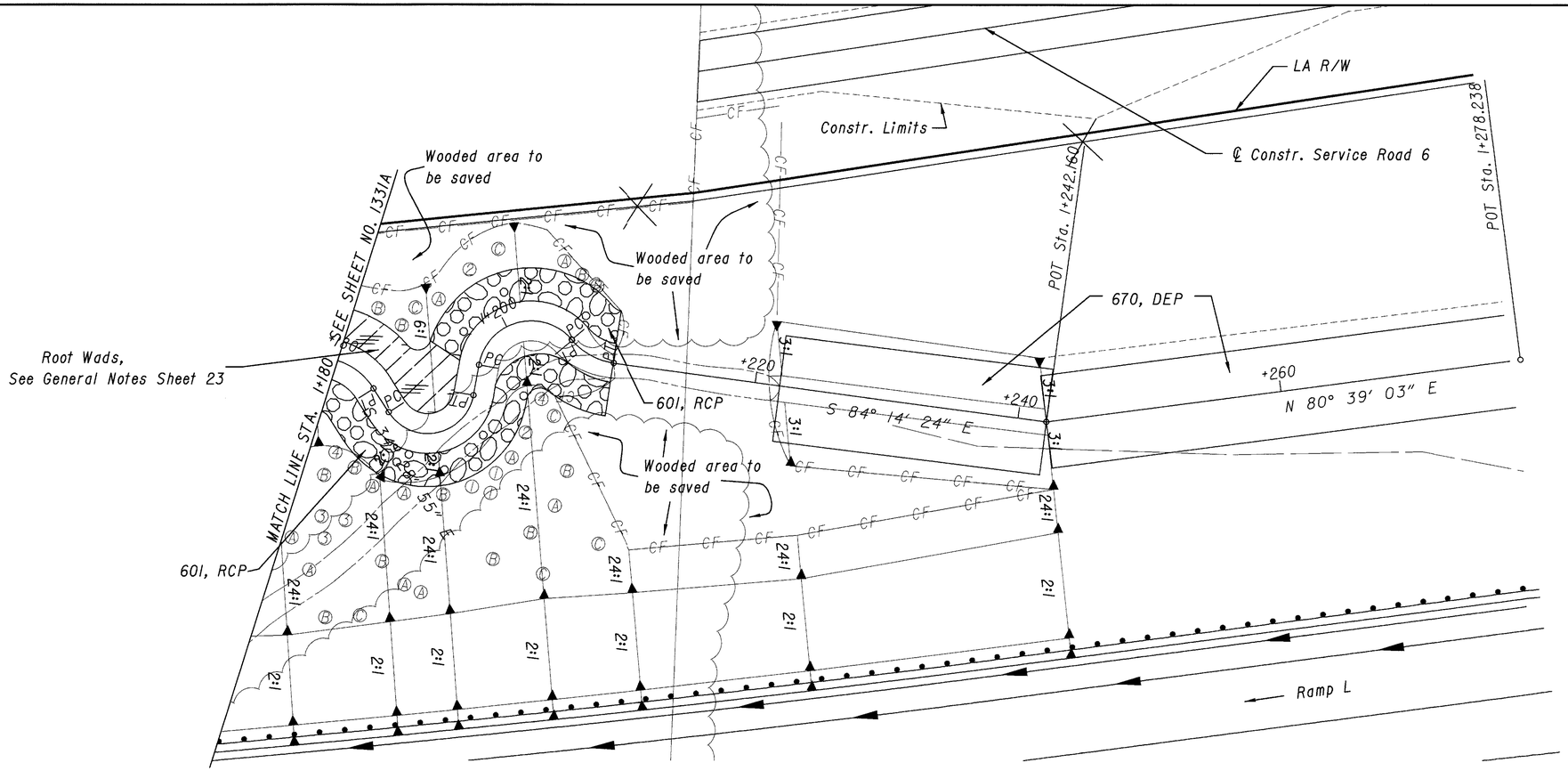


HORIZONTAL SCALE IN METERS
0 5 10
CALCULATED AM
CHECKED AM

CULVERT DETAIL
U.S.R. 30 - STA. 37+212.175

WYA / CRA-30-28.009 / 0.000

1331A
2116



P.I. Sta. = 1+181.915
D = 122° 25' 04" (RT)
R = 5.000 m
T = 9.098 m
L = 10.683 m
E = 5.382 m
PC Sta. 1+172.816
PT Sta. 1+183.499

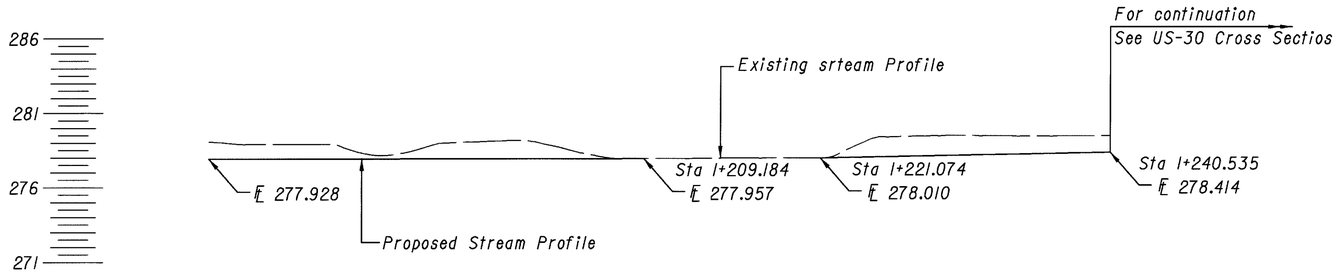
P.I. Sta. = 1+194.618
D = 137° 27' 36" (LT)
R = 3.500 m
T = 8.991 m
L = 8.397 m
E = 6.148 m
PC Sta. 1+185.627
PT Sta. 1+194.024

P.I. Sta. = 1+204.956
D = 130° 14' 57" (RT)
R = 4.000 m
T = 8.627 m
L = 9.093 m
E = 5.509 m
PC Sta. 1+196.329
PRC Sta. 1+205.422

P.I. Sta. = 1+207.409
D = 42° 32' 50" (LT)
R = 5.000 m
T = 1.947 m
L = 3.713 m
E = 0.366 m
PC Sta. 1+205.462
PT Sta. 1+209.175

—CF—CF—CF— Construction Protective Fencing, As per Plan

For Stream Cross Sections See US-30 Cross Section



HORIZONTAL SCALE IN METERS

CALCULATED AM
CHECKED AM

CULVERT DETAIL
U.S.R. 30 - STA. 37+212.175

WYA/CRA-30-28.009/0.000

1331B
2116

For Riparian planting legend & quantities See Sheet No. 1331A

—CF—CF—CF— Construction Protection Fencing, As per Plan

POT Sta. 0+919.791 ℄ Stream =
POC Sta. 37+120.000 ℄ USR 30, 26.42m LT.

POT Sta. 0+939.773

Wooded area to be saved

Wooded area to be saved

Wooded area to be saved

N 44° 55′ 02″ E

N 81° 25′ 48″ E
℄ Stream

S 87° 58′ 07″ E

POT Sta. 1+035.696

WB LANES US-30

2400mm Conduit

37+120

℄ Construction USR 30

P.I. = Sta. 0+949.556
D = 47° 06′ 51″ (LT)
R = 5.000m
T = 2.180m
L = 4.111m
E = 0.455m
PC Sta. 0+947.376
PT Sta. 0+951.488

P.I. = Sta. 0+959.335
D = 61° 53′ 08″ (RT)
R = 5.000m
T = 2.998m
L = 5.401m
E = 0.830m
PC Sta. 0+956.338
PCC Sta. 0+961.738

P.I. = Sta. 0+963.995
D = 48° 35′ 27″ (RT)
R = 5.000m
T = 2.257m
L = 4.240m
E = 0.486m
PCC Sta. 0+961.738
PT Sta. 0+965.979

P.I. = Sta. 0+969.883
D = 69° 12′ 37″ (LT)
R = 5.000m
T = 3.450m
L = 6.040m
E = 1.075m
PC Sta. 0+966.433
PT Sta. 0+972.473

P.I. = Sta. 0+981.850
D = 22° 40′ 27″ (LT)
R = 10.000m
T = 2.005m
L = 3.957m
E = 0.199m
PC Sta. 0+979.845
PT Sta. 0+983.802

P.I. = Sta. 0+985.552
D = 18° 35′ 31″ (LT)
R = 10.000m
T = 1.637m
L = 3.245m
E = 0.133m
PC Sta. 0+983.916
PT Sta. 0+987.161

P.I. = Sta. 0+992.037
D = 70° 17′ 04″ (RT)
R = 5.000m
T = 3.520m
L = 6.133m
E = 1.115m
PC Sta. 0+988.518
PT Sta. 0+994.651

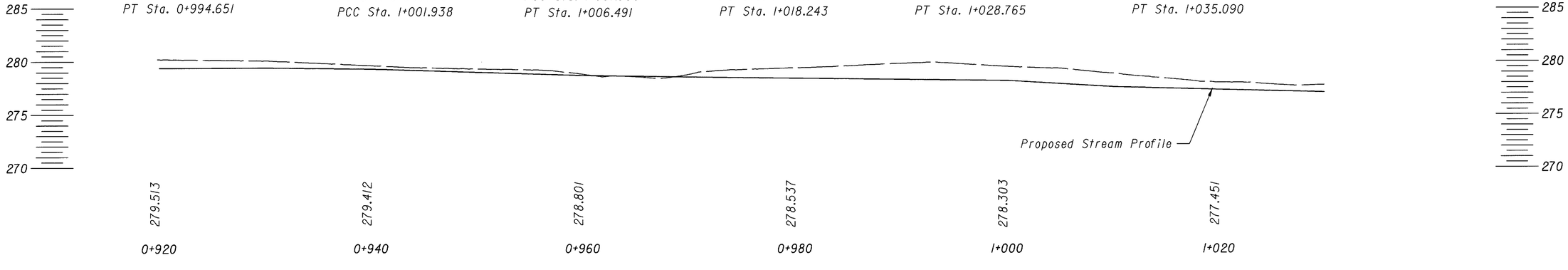
P.I. = Sta. 0+999.683
D = 26° 19′ 02″ (LT)
R = 10.000m
T = 2.338m
L = 4.593m
E = 0.270m
PC Sta. 0+988.518
PCC Sta. 1+001.938

P.I. = Sta. 1+004.255
D = 26° 05′ 12″ (LT)
R = 10.000m
T = 2.317m
L = 4.553m
E = 0.265m
PCC Sta. 1+001.938
PT Sta. 1+006.491

P.I. = Sta. 1+014.512
D = 45° 15′ 16″ (RT)
R = 10.000m
T = 4.168m
L = 7.898m
E = 0.834m
PC Sta. 1+010.344
PT Sta. 1+018.243

P.I. = Sta. 1+026.799
D = 22° 49′ 46″ (LT)
R = 10.000m
T = 2.019m
L = 3.985m
E = 0.202m
PC Sta. 1+024.780
PT Sta. 1+028.765

P.I. = Sta. 1+033.379
D = 89° 01′ 46″ (RT)
R = 3.000m
T = 2.950m
L = 4.662m
E = 1.207m
PC Sta. 1+030.429
PT Sta. 1+035.090



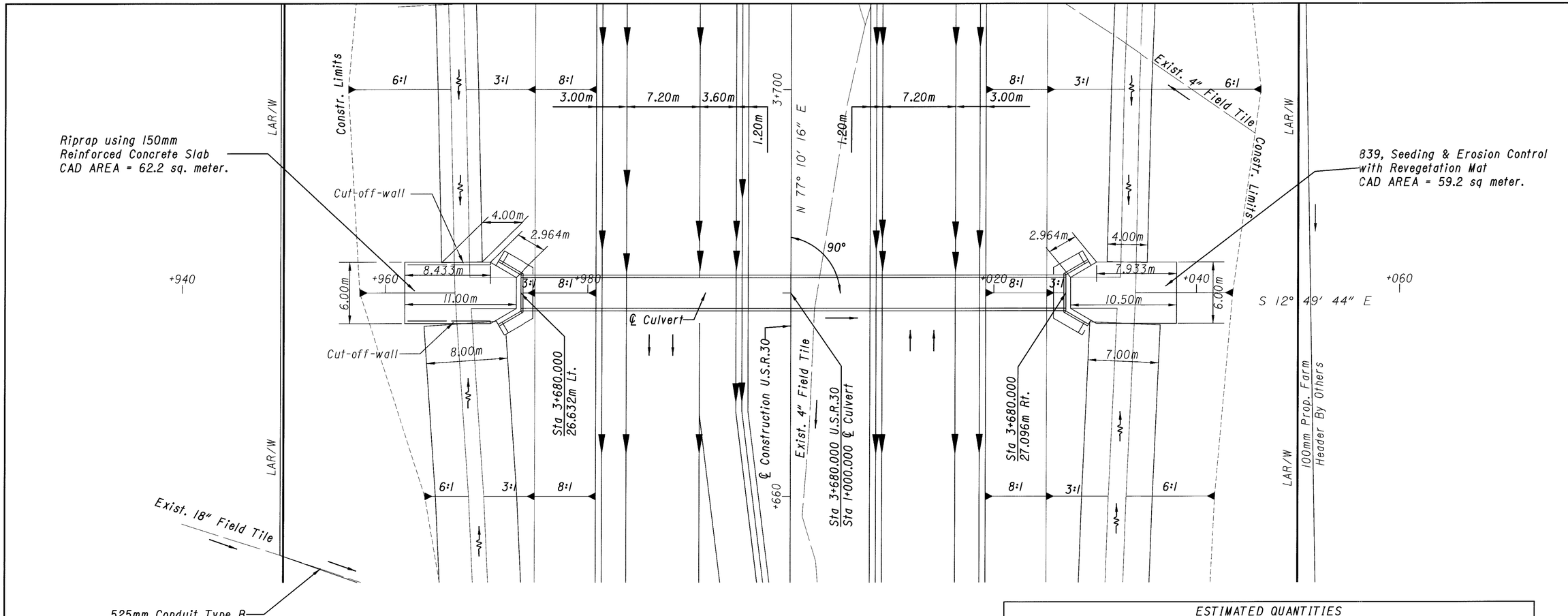
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED AM
CHECKED AM

STREAM DETAIL U.S.R. 30
U.S.R. 30 - STA 37+120.000 TO STA 37+227.822 LT

WYA/CRA-30-28.009/0.000

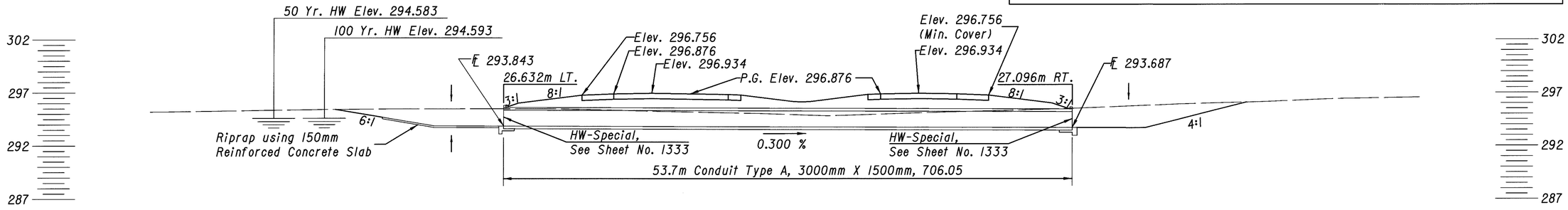
1331C
2116



HYDRAULIC DESIGN DATA	
Drainage Area	= 176 ha
Q_{50}	= 3.38 cms
Q_{100}	= 3.44 cms
HW_{50}	= 294.583
HW_{100}	= 293.593
V_{50}	= 2.33 mps
V_{100}	= 2.34 mps

ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
601	62.2	sq. m.	Riprap using 150mm Reinforced Concrete Slab
602	7.32	cu. m.	Concrete Masonry
603	53.7	m.	3000mm x 1500mm Conduit Type A, 706.05
503	711	cu m	Unclassified Excavation
511	14.68	cu m	Class C Concrete, Retaining Wall or Wingwall
511	36.91	cu m	Class C Concrete, Footing
Spl.	392.7	sq m	Membrane Waterproofing (Sheet Type 2) (See Proposal Note)
516	4.1	sq m	25mm Preformed Expansion Joint Filler
518	9.5	cu m	Porous Backfill with Filter Fabric
839	59.2	sq m	Seeding & Erosion Control, with Matting



CULVERT DETAIL
U.S.R. 30 - STA. 3+680.000

HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED AM
CHECKED REA

WYA/CRA-30-28.009/0.000

1332
2116

metric units

Extend sheet Type 2 membrane waterproofing 300mm past joint, Typical

5060

12-A16M01 top & btm. @ 300 = 3300

℄ Culvert

Precast concrete box

75

Inlet Sta. 3+680.000, 26 632 Lt.
Outlet Sta. 3+680.000, 27 096 Rt.

8-A16M02 top & btm. @ 300

25mm PEJF

18-A16M01 top & btm. @ 300 = 5100

5280

Step key

90°

300

1230

3500

30°

3980

4500

8-A16M03 top & btm. @ 300

900

450

1125

2250

PLAN

250

11-A16M08 FF @ 300 = 3000
11-A16M09 (match A16M08)

Construction joint

1-A16M10 EF

A

Elev. 295.893 (inlet)
Elev. 295.737 (outlet)

1300 Typ.

1000 Typ.

600 Typ.

3000

1500

Inv. 293.843 (inlet)
Inv. 293.687 (outlet)

A16M02

A16M01

Elev. 292.993 (inlet)
Elev. 292.837 (outlet)

ELEVATION

NOTES:
1. For Section A-A, see sheet No. 1334
2. For culvert plan, see sheet No. 1332
3. For culvert profile, see sheet No. 1332

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	CRS	08/02/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FAL	—	—	

BOX CULVERT HEADWALL
STA. 3+680.000
UNDER US 30

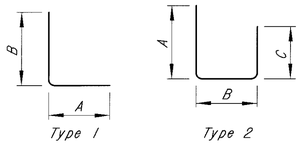
WYA/CRA-30-28.009/0.000

1333
2116

F:\bridge\965MM01.dgn

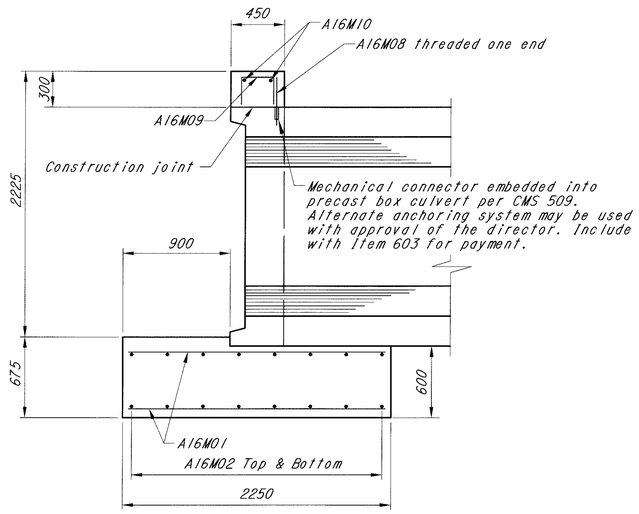
REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A16M01	192	2150	Str.						
A16M02	32	4970	Str.						
A16M03	64	5180	Str.						
	4	1655			1445				
A16M04	Series of	to	1	250	to				35
	16	2930			2720				
A16M05	12	4400	Str.						
	4	1205							
A16M06	Series of	to	Str.						
	4	4115							
A16M07	8	4335	Str.						
A16M08	22	250	Str.						
A16M09	22	770	2	250	350	250			970
A16M10	4	3400	Str.						

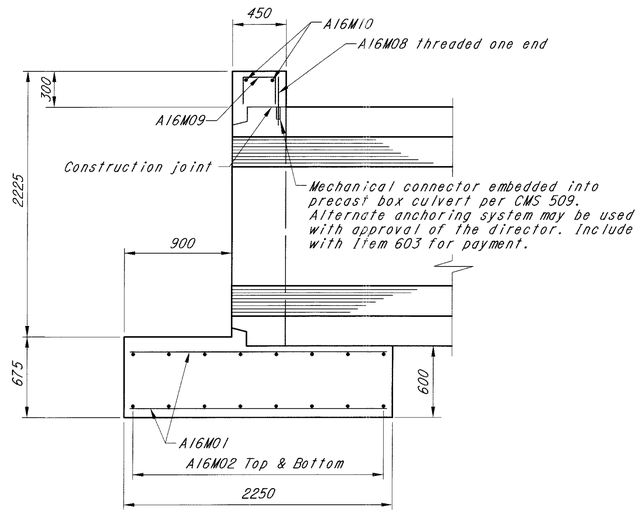


Type 1 Type 2

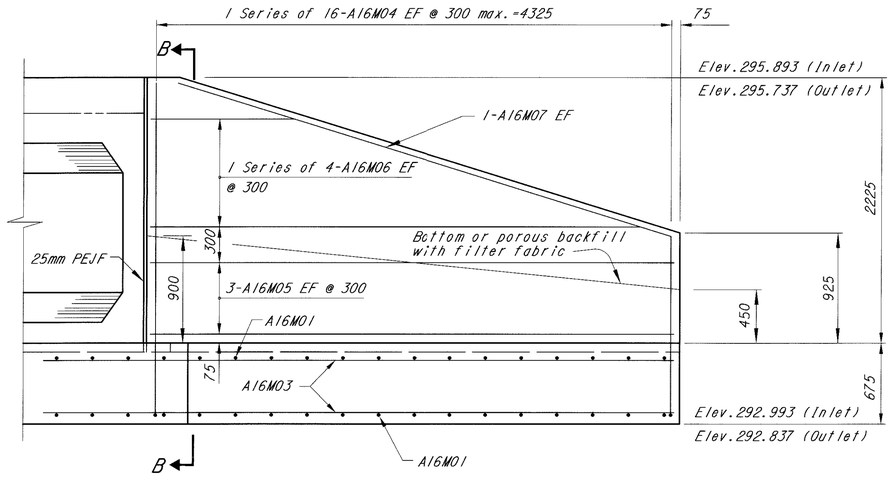
NOTES:
1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.



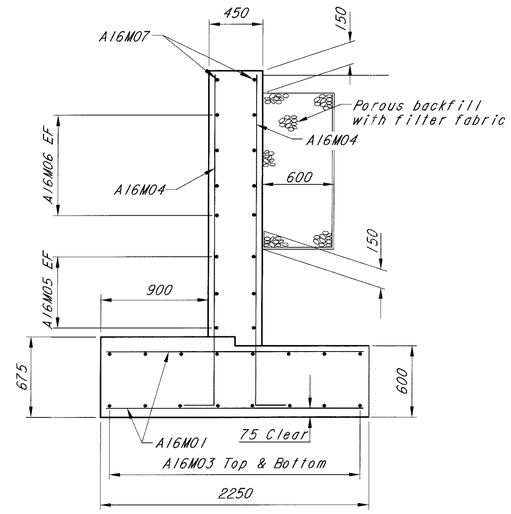
SECTION A-A
(Inlet)



SECTION A-A
(Outlet)



TYPICAL WINGWALL ELEVATION



SECTION B-B

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

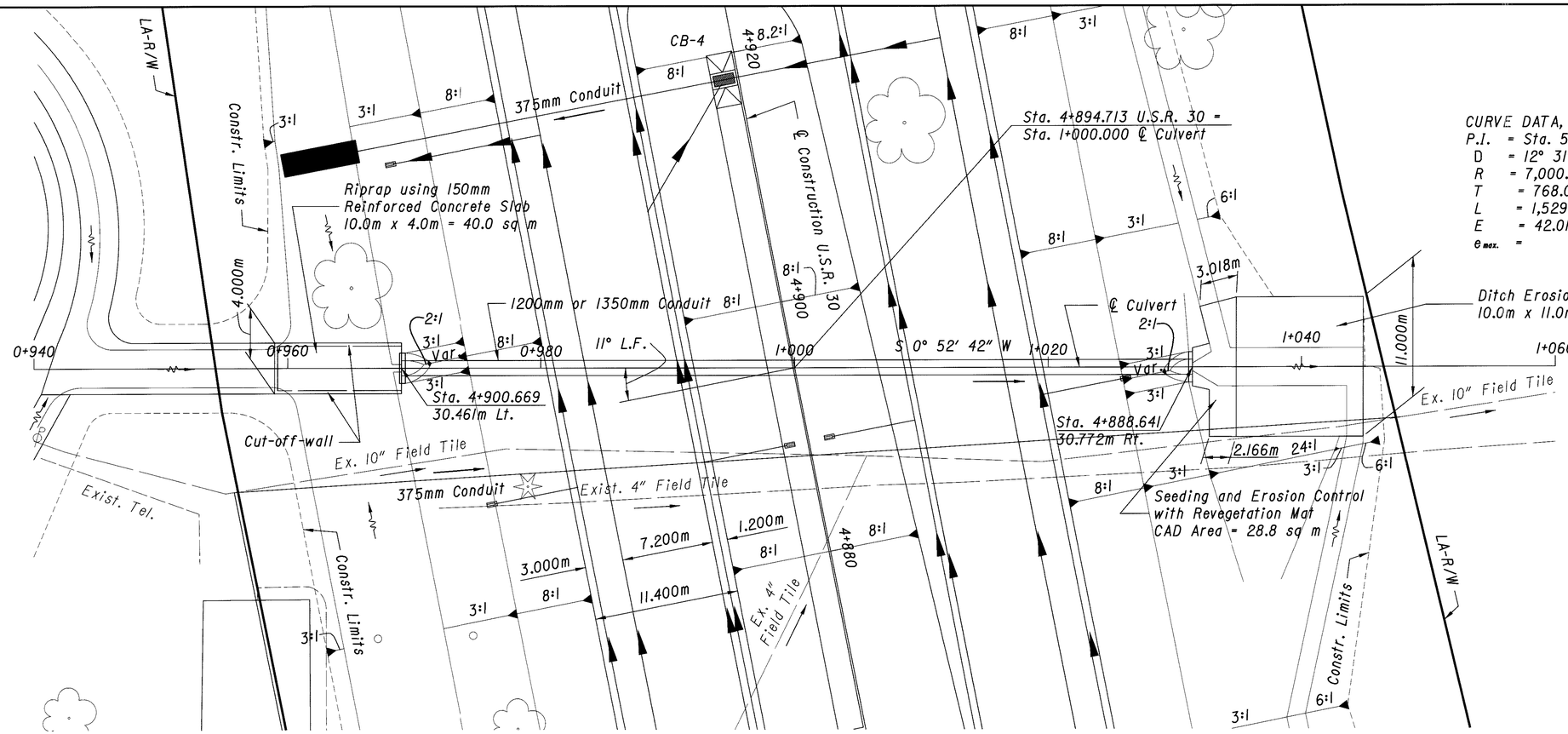
DESIGNED	DRAWN	REVIEWED	DATE
MPS	ALH	CPS	08/02/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	—	

BOX CULVERT HEADWALL
STA. 3+680.000
UNDER US 30

WYA/CRA-30-28.009/0.000

1334
2116

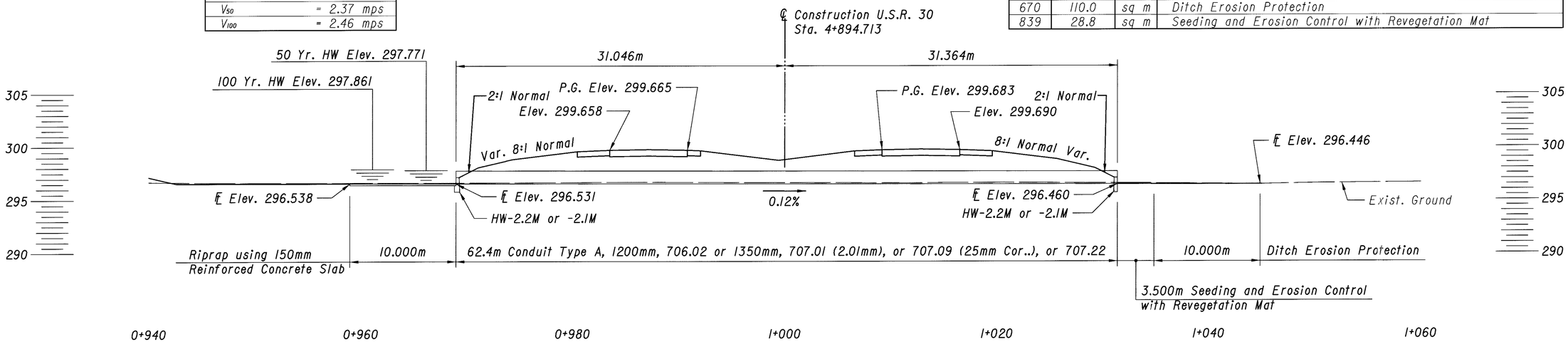
F:\bridge\c-96.54\wall2.dgn



HYDRAULIC DESIGN DATA	
Drainage Area	= 36 ha
Q_{50}	= 1.66 cms
Q_{100}	= 1.87 cms
HW_{50}	= 297.771
HW_{100}	= 297.861
V_{50}	= 2.37 mps
V_{100}	= 2.46 mps

Note: For Channel Cross Sections see Sheet No. 1355

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	40.0	sq m	Riprap using 150mm Reinforced Concrete Slab
602	2.46	cu m	Concrete Masonry
603	62.4	m	1200mm Conduit Type A, 706.02, or
			1350mm, 707.01 (2.01mm), or 707.09 (25mm Corr.), or 707.22
670	110.0	sq m	Ditch Erosion Protection
839	28.8	sq m	Seeding and Erosion Control with Revegetation Mat



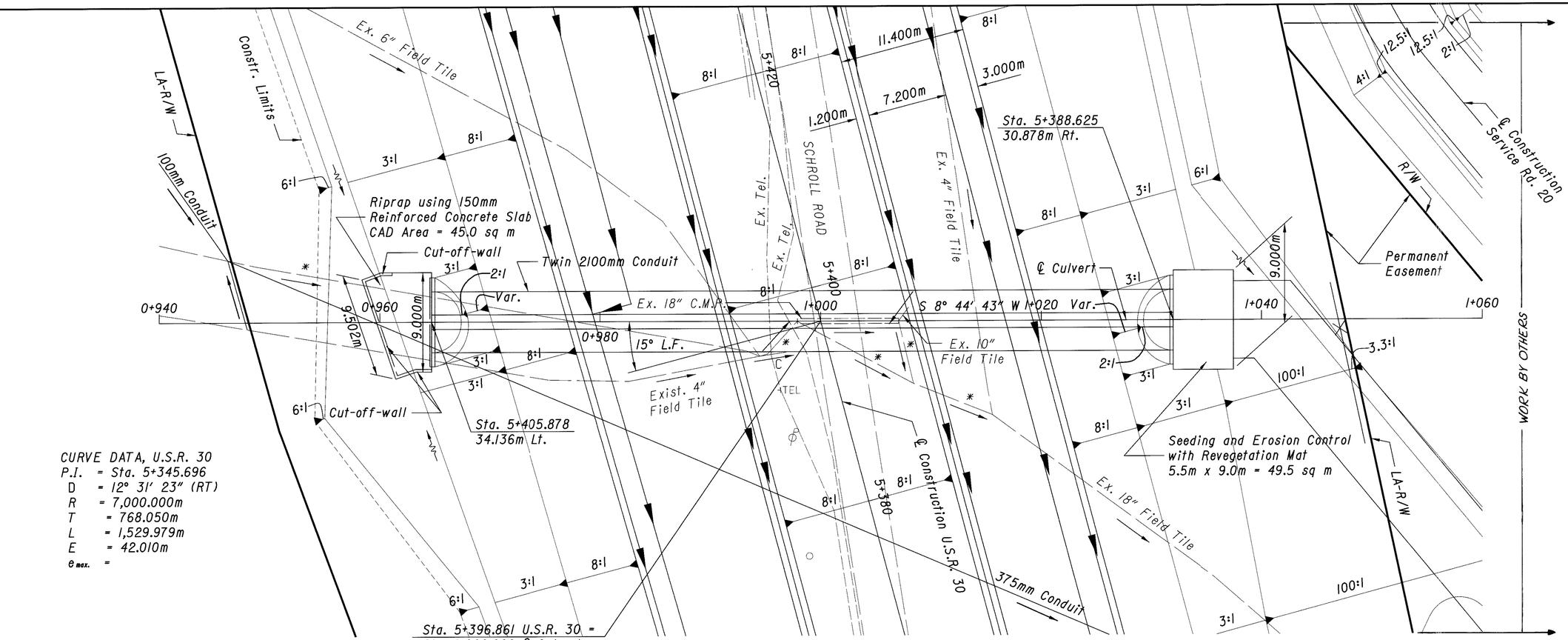
HORIZONTAL SCALE IN METERS

CALCULATED AM
CHECKED REA

CULVERT DETAIL
U.S.R. 30 - STA. 4+894.713

WYA/CRA-30-28.009/0.000

1335
2116

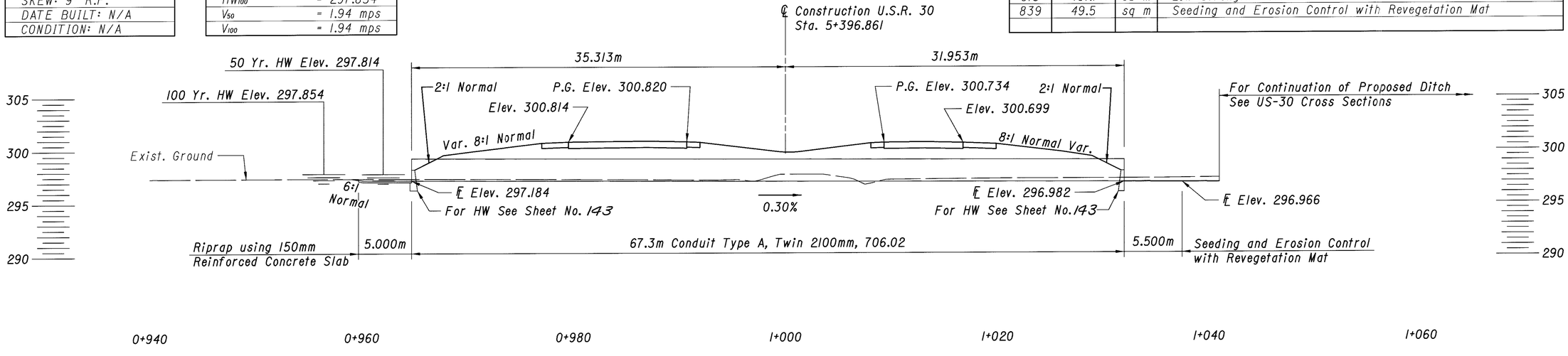


EXISTING STRUCTURE
TYPE: C.M.P.
SIZE: 18"
LENGTH: 9.2m
SKEW: 9° R.F.
DATE BUILT: N/A
CONDITION: N/A

HYDRAULIC DESIGN DATA	
Drainage Area	= 91 ha
Q_{50}	= 2.26 cms
Q_{100}	= 2.53 cms
HW_{50}	= 297.814
HW_{100}	= 297.854
V_{50}	= 1.94 mps
V_{100}	= 1.94 mps

C = Existing 6" Field Tile
* = Existing 18" Field Tile
TEL = Existing Telephone Marker

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	45.0	sq m	Riprap using 150mm Reinforced Concrete Slab
602	14.46	cu m	Concrete Masonry
603	134.6	m	2100mm Conduit Type A, 706.02
613	481.1	cu m	Low Strength Morter Backfill
839	49.5	sq m	Seeding and Erosion Control with Revegetation Mat



CALCULATED AM
CHECKED REA

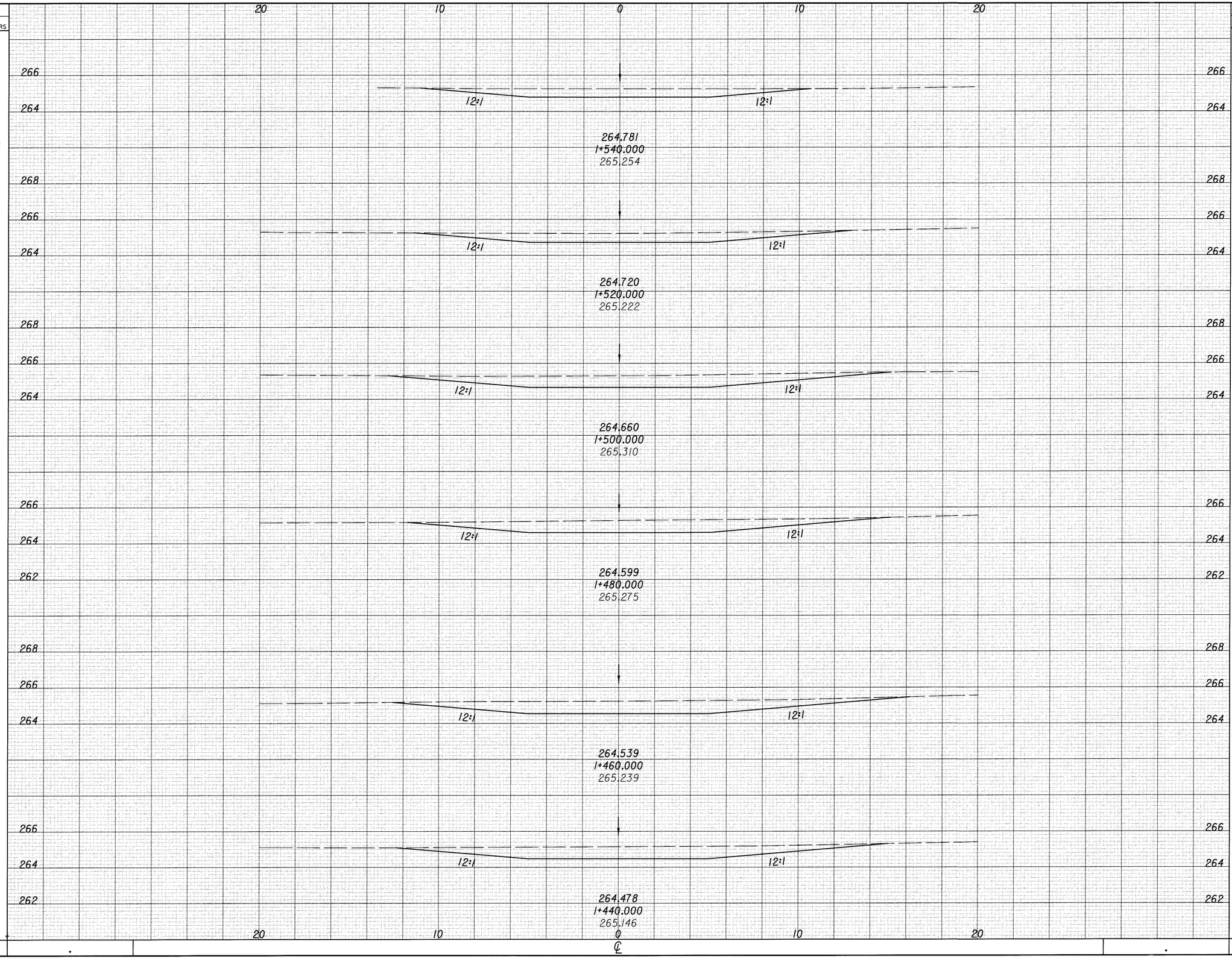
HORIZONTAL SCALE IN METERS
0 5 10

CULVERT DETAIL
U.S.R. 30 - STA. 5+396.861

WYA/CRA-30-28.009/0.000

1336
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
28.74	603	7.45		163	
31.53	671	8.83		214	
35.56	698	12.52		247	
34.29	707	12.17		258	
36.40	713	13.58		260	
34.87		12.39			



CHANNEL CROSS SECTIONS FOR CONDUIT AT STA 29+019.966 RAMP A

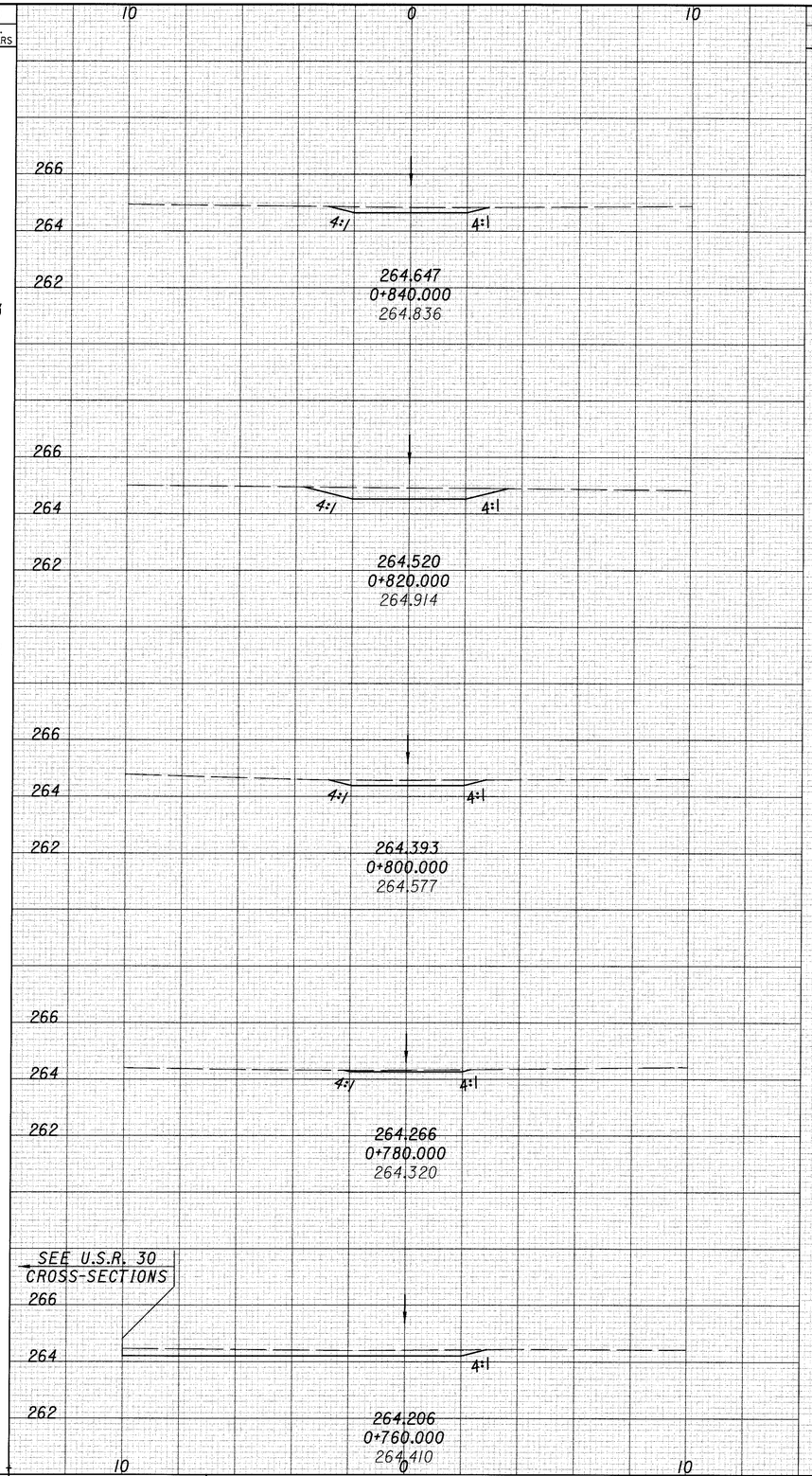
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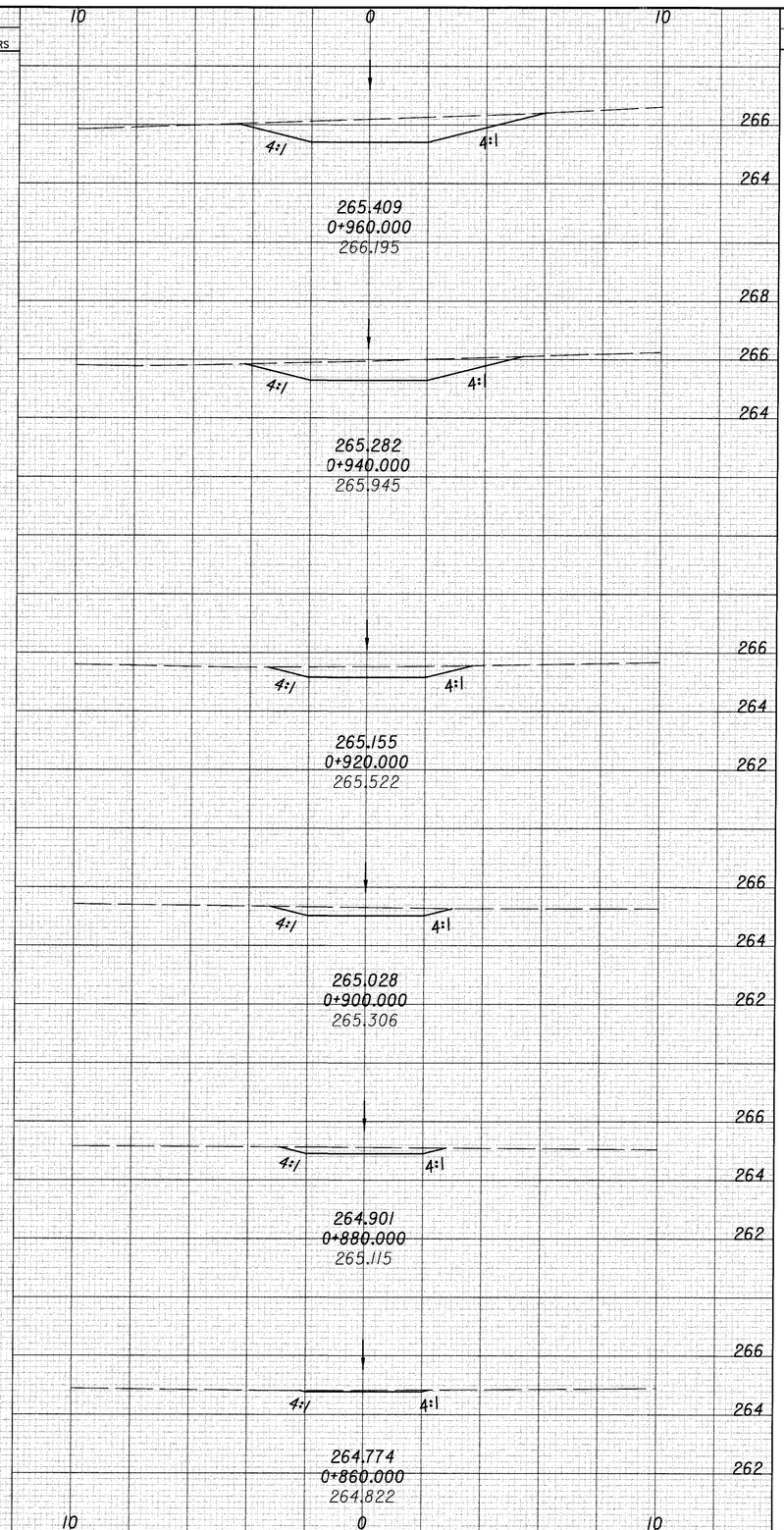
WYA/CRA-30-28.009/0.000

1344
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
12.13	263	0.95		32	
14.13	262	2.23		31	
12.02	226	0.90		11	
10.62	368	0.23		60	
26.17		5.81			



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
16.74	339	5.75		103	
17.11	310	4.55		66	
13.87	268	2.03		35	
12.88	251	1.43		25	
12.18	227	1.04		13	
10.55	227	0.21		12	



CHANNEL CROSS SECTIONS FOR CONDUIT AT STA 29+392.850 US-30EB

WYA / CRA-30-28.009 / 0.000

CALCULATED AM

CHECKED REA

1345
2116

SEEDING END WIDTH	SEEDING SQ. METERS	10 0 10	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
25.46		268 / 266 / 264 — 4:1 — 4:1 — 264.544 0+860.000 265.447	12.38			
	493				225	
23.89		266 / 264 / 262 — 4:1 — 4:1 — 264.495 0+840.000 265.264	10.10			
	476				196	
23.69		266 / 264 / 262 — 4:1 — 4:1 — 264.446 0+820.000 265.169	9.52			
	480				205	
24.30		266 / 264 / 262 — 4:1 — 4:1 — 264.398 0+800.000 265.219	10.93			
	383				178	
14.05		SEE U.S.R. 30 CROSS-SECTIONS — 266 / 264 / 262 — 4:1 — 264.349 0+780.000 265.139	6.83			

SEEDING END WIDTH	SEEDING SQ. METERS	10 0 10	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20.26		266 / 264 / 262 — 4:1 — 4:1 — 264.788 0+960.000 265.193	4.78			
	411				101	
20.81		266 / 264 / 262 — 4:1 — 4:1 — 264.739 0+940.000 265.185	5.31			
	423				116	
21.48		266 / 264 / 262 — 4:1 — 4:1 — 264.690 0+920.000 265.208	6.32			
	428				125	
21.34		266 / 264 / 262 — 4:1 — 4:1 — 264.641 0+900.000 265.154	6.20			
	443				147	
22.94		266 / 264 / 262 — 4:1 — 4:1 — 264.593 0+880.000 265.260	8.49			
	484				209	

CALCULATED AM

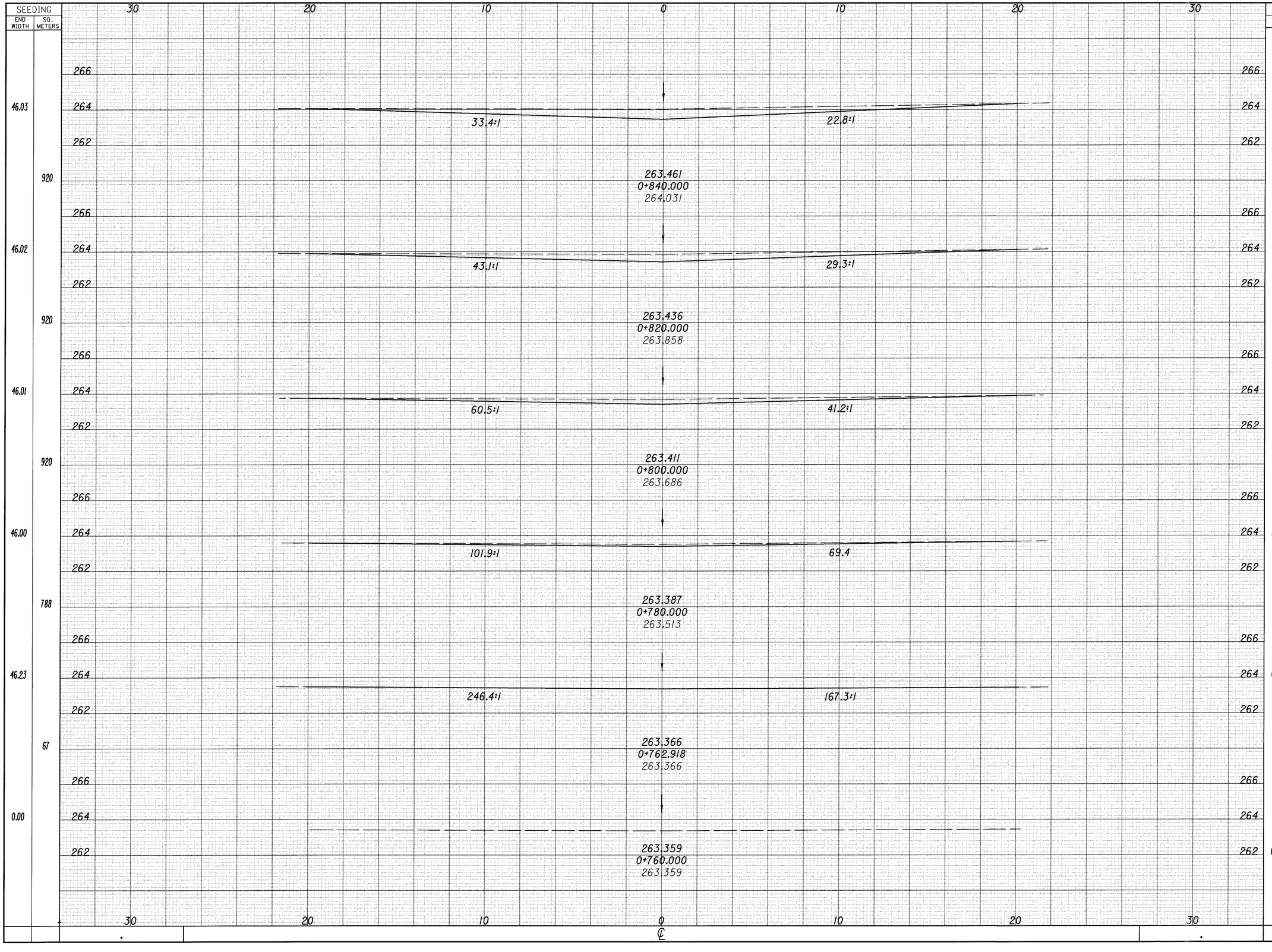
CHECKED REA

CHANNEL CROSS SECTIONS FOR CONDUIT AT STA 29+680.000 US-30EB

WYA/CRA-30-28.009/0.000

1346
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
46.03		11.40			
	920			198	
46.02		8.44			
	920			142	
46.01		5.73			
	920			83	
46.00		2.52			
	788			24	
46.23		0.29			
	67			0	
0.00		0.00			



CALCULATED AM

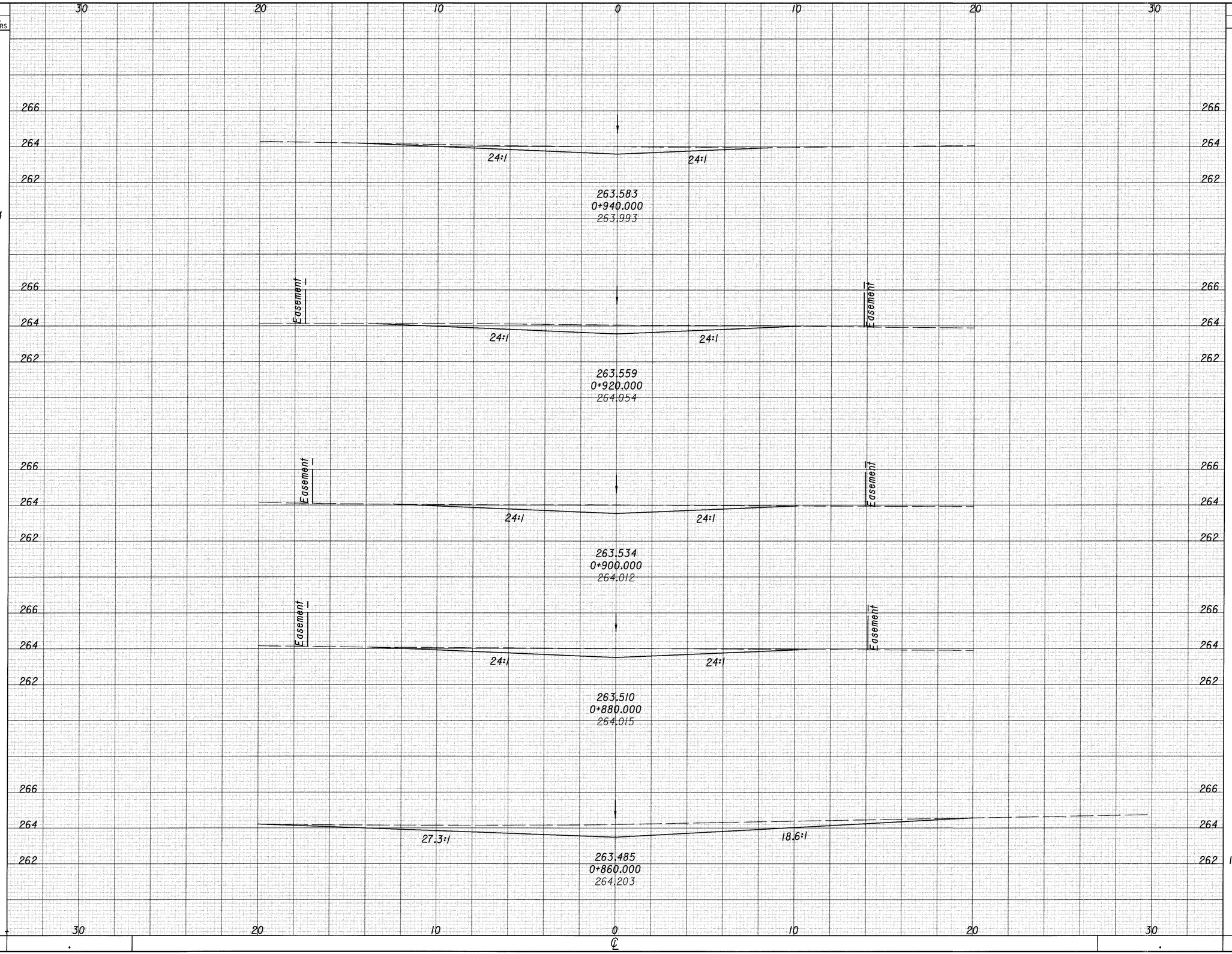
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CHANNEL CROSS SECTIONS FOR CONDUIT AT STA 29+300.000 US-30

WYA/CRA-30-28.009/0.000

1348
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
73.67	1044	4.44		106	
30.75	603	6.11		114	
29.56	610	5.27		114	
31.40	788	6.16		196	
47.43	935	13.48		249	



CALCULATED AM

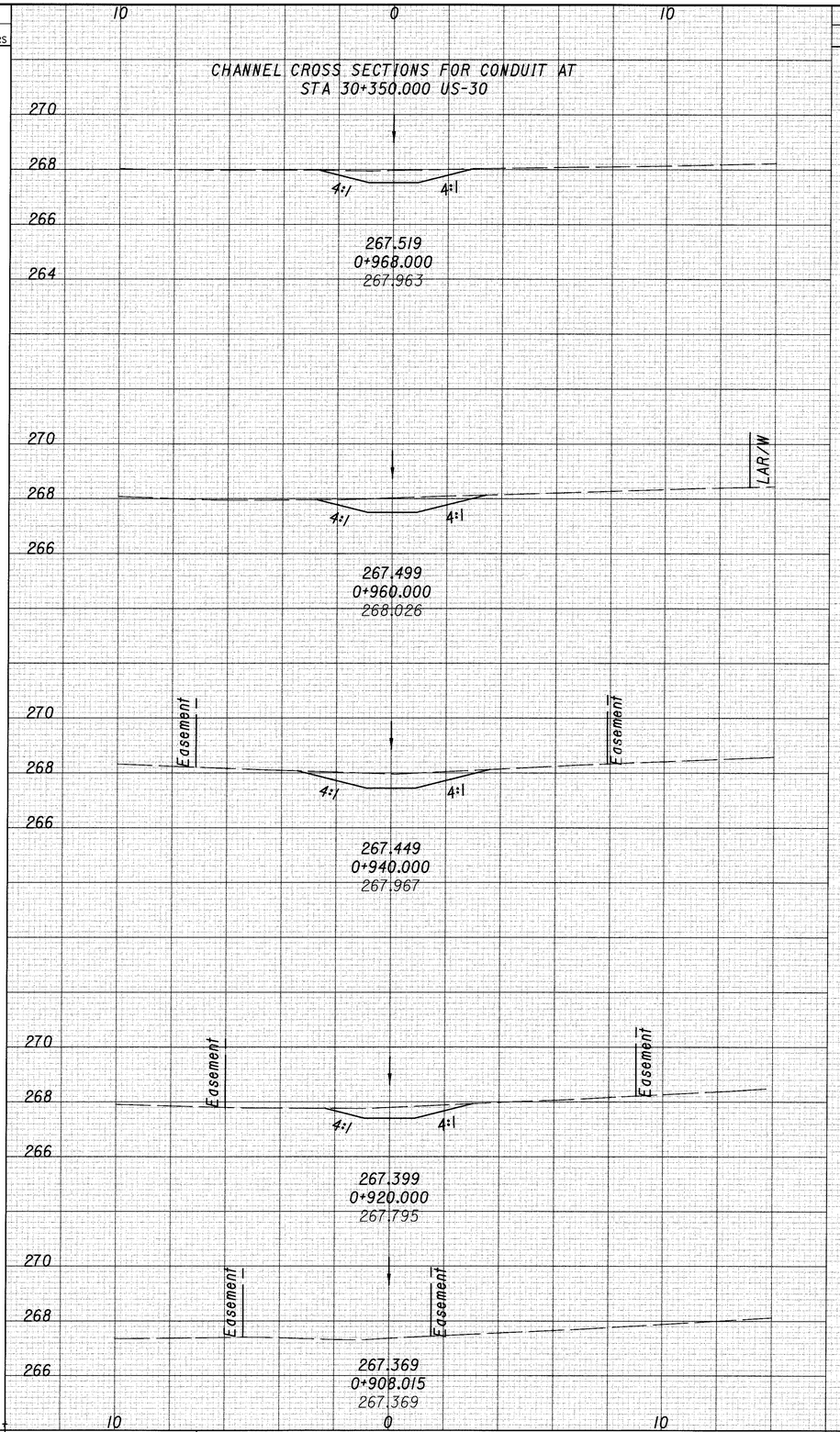
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CHANNEL CROSS SECTIONS FOR CONDUIT AT STA 29+300.000 US-30

WYA/CRA-30-28.009/0.000

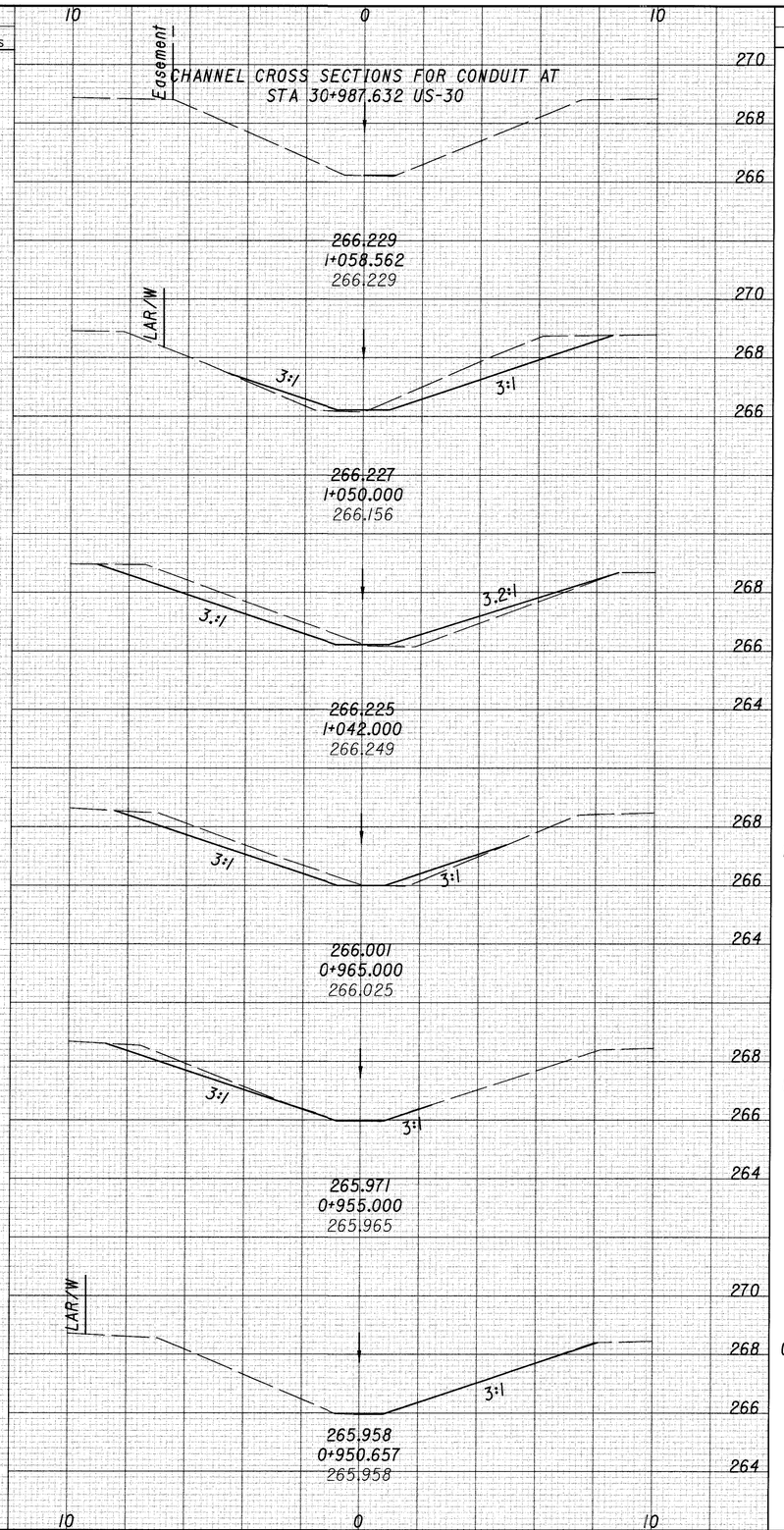
1349
2116

CHANNEL CROSS SECTIONS FOR CONDUITS AT STA 30+350.000 US-30



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
12.72		1.65			
	104			15	
13.40		2.10			
	279			45	
14.49		2.38			
	269			38	
12.42		1.44			
	74			9	
0.00		0.00			

CHANNEL CROSS SECTIONS FOR CONDUITS AT STA 30+987.632 US-30



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
7.08		0.00	0.00		
	120			17	3
20.98		3.91	0.59		
	187			29	8
25.85		3.45	1.46		
	1843			227	79
22.02		2.45	0.60		
	210			18	3
20.08		1.09	0.01		
	78			3	0
15.72		0.08	0.00		

CALCULATED AM

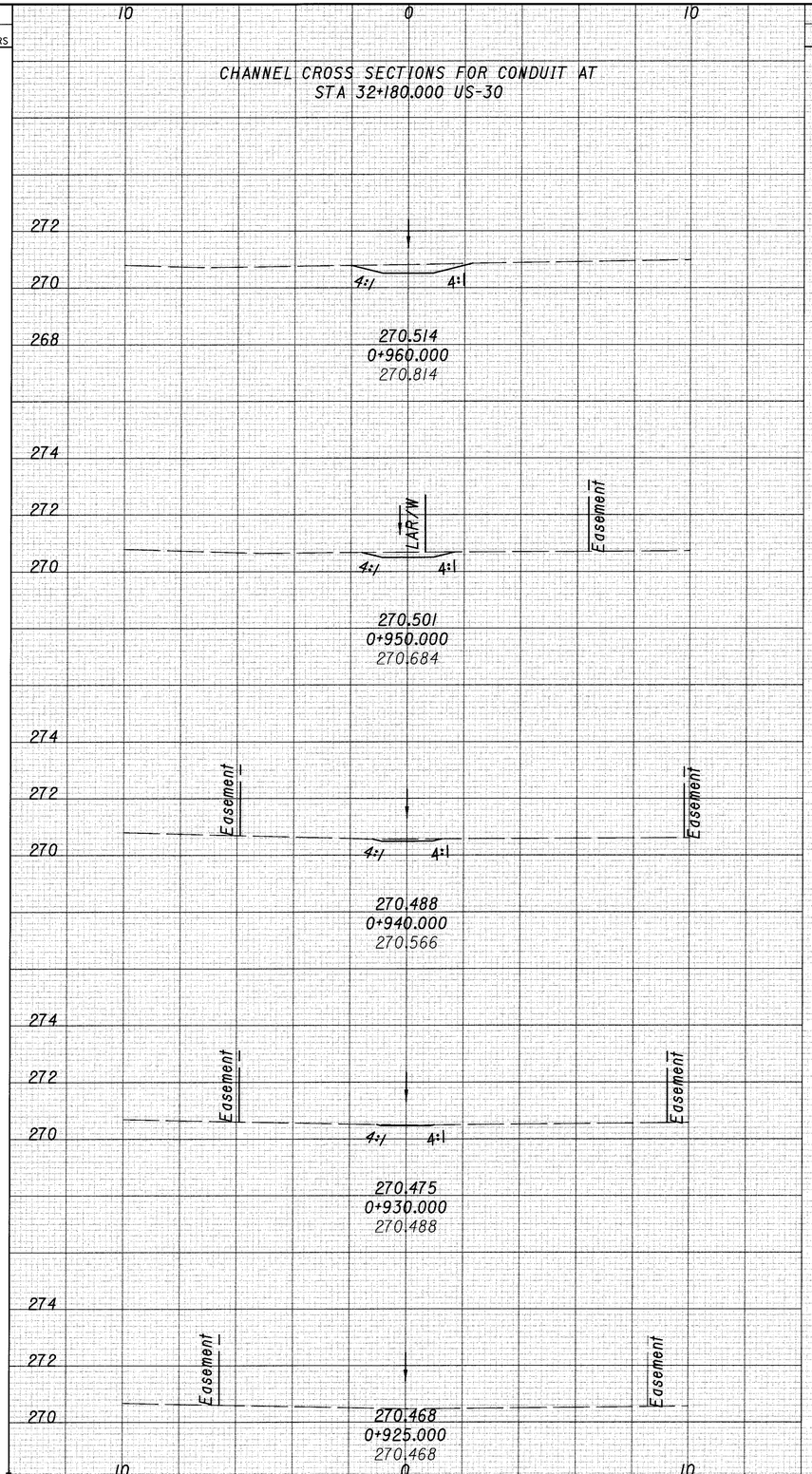
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WYA/CRA-30-28.009/0.000

1350
2116

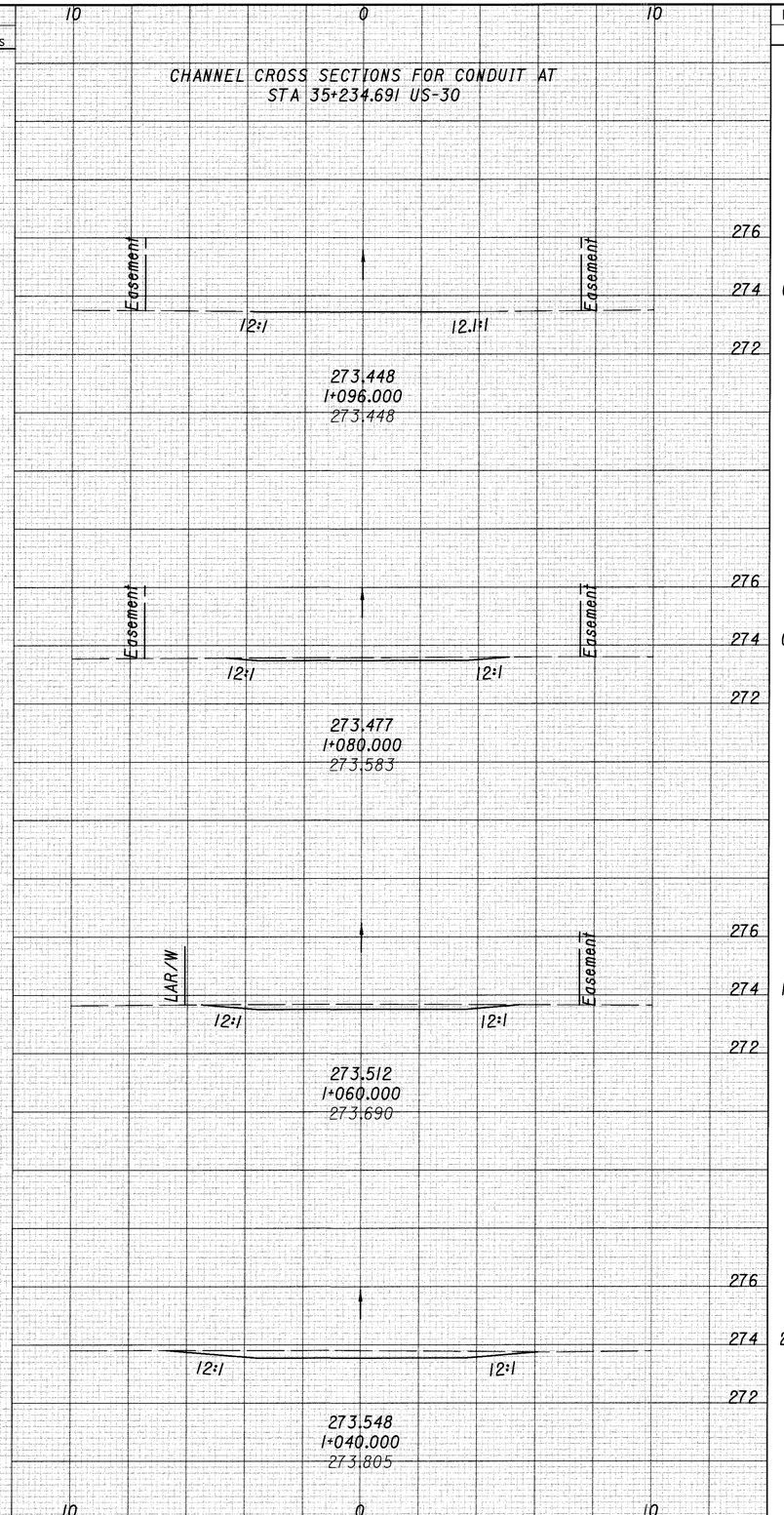
CHANNEL CROSS SECTIONS FOR CONDUIT AT STA 32+180.000 US-30

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10.97	103	0.92		7	
9.68	92	0.46		3	
8.63	83	0.16		1	
7.97	20	0.04		0	
0.00		0.00			



CHANNEL CROSS SECTIONS FOR CONDUIT AT STA 35+234.691 US-30

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
13.49	236	0.04		8	
15.97	333	0.90		25	
17.30	366	1.55		40	
19.27		2.49			



CALCULATED AM

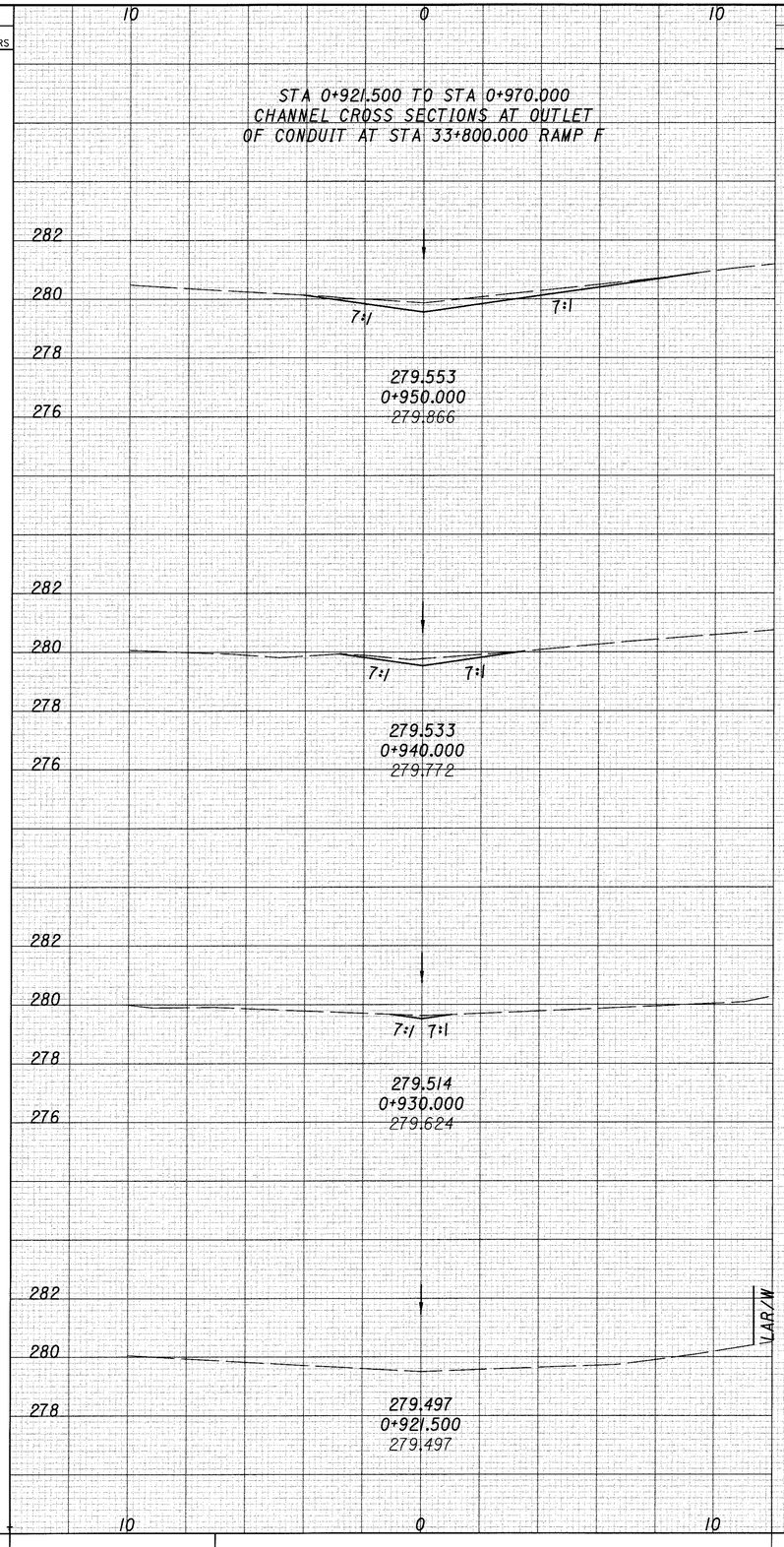
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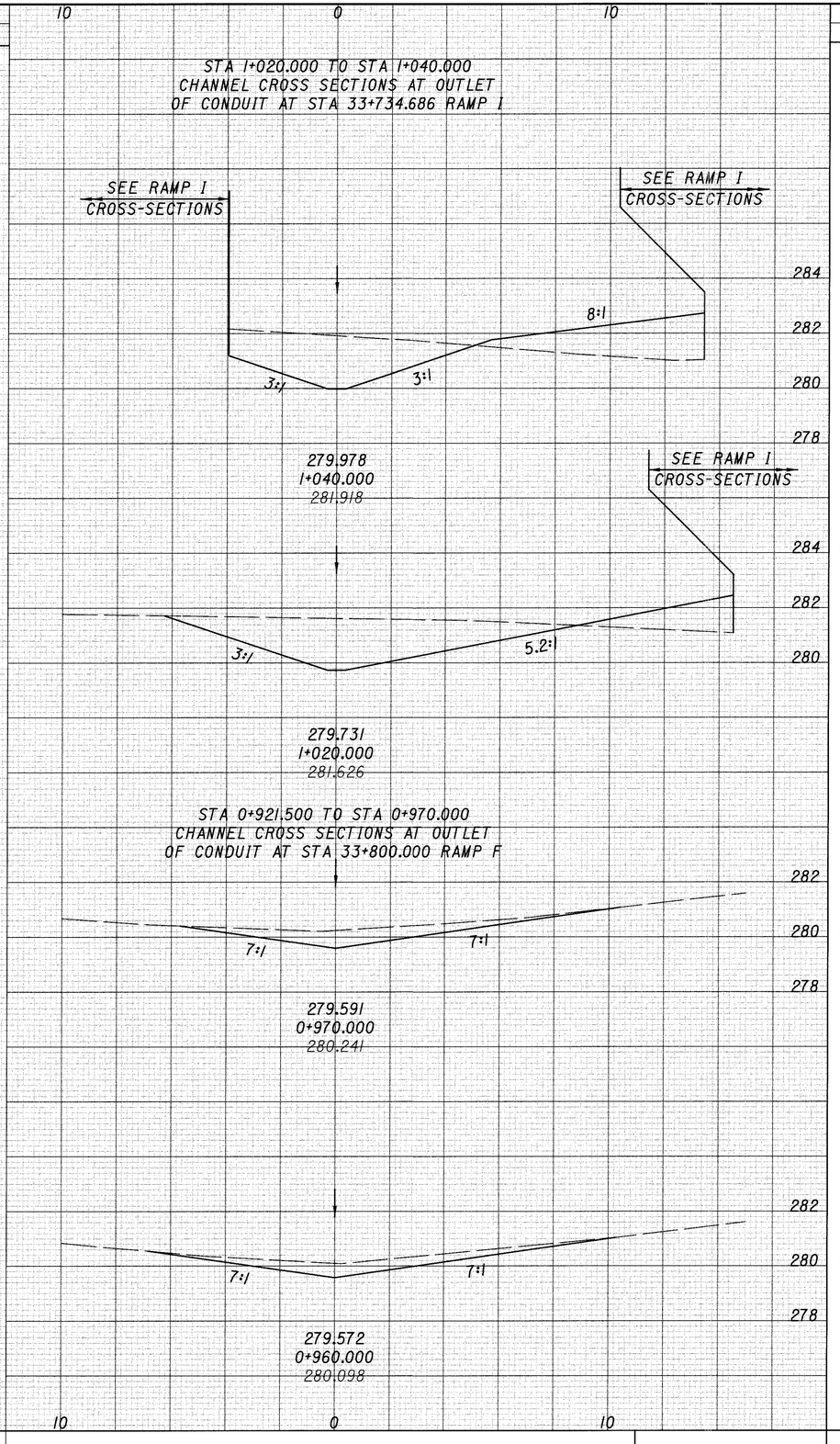
CHANNEL CROSS SECTIONS FOR CONDUITS AT STA 32+180.000 AND STA 35+234.691 US-30

WYA/CRA-30-28.009/0.000

1351
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	SEEDING END WIDTH	SEEDING SQ. METERS
21.37	173	2.00		13		23.34	489
13.27	108	0.69		4		25.57	234
8.40	36	0.11		0		24.27	248
0.00		0.00				25.41	





END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
11.12	8.16		
15.16	3.87	263	120
4.46			
4.15		43	
		31	

CALCULATED AM

CHECKED REA

CHANNEL CROSS SECTIONS FOR CONDUITS AT STA 33+734.686 RAMP I AND STA 33+800.000 RAMP F

WYA/CRA-30-28.009/0.000

1352
2116

SEEDING END WIDTH	SEEDING SQ. METERS	STA 1+100.000 TO STA 1+181.000 CHANNEL CROSS SECTIONS AT OUTLET OF CONDUIT AT STA 34+595.504 RAMP H	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	SEEDING END WIDTH	SEEDING SQ. METERS	STA 1+100.000 TO STA 1+181.000 CHANNEL CROSS SECTIONS AT OUTLET OF CONDUIT AT STA 34+595.504 RAMP H	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
15.35		277.419 1+120.000 277.609	0.87				0.00		277.233 1+181.000 277.233	0.00			
	396				32							0	
24.28		277.480 1+100.000 277.729	2.31				6.36	3	277.236 1+180.000 277.243	0.00			
		STA 1+040.000 TO STA 1+050.000 CHANNEL CROSS SECTIONS AT OUTLET OF CONDUIT AT STA 34+580.000 US-30						192				3	
7.01		277.863 1+050.000 278.195	0.83				12.84		277.297 1+160.000 277.404	0.34			
	85				8			320				13	
9.94		277.934 1+040.000 278.227	0.70				19.14		277.358 1+140.000 277.511	0.92			
								345				18	

CALCULATED AM

CHECKED REA

CHANNEL CROSS SECTIONS FOR CONDUIT AT STA 34+580.000 US-30 AND STA 34+595.504 RAMP H

WYA/CRA-30-28.009/0.000

1353
2116

SEEDING END WIDTH	SEEDING SQ. METERS	STATION
7.88	45	1+045.000
10.07		1+040.000
0.00	36	1+067.501
9.63	208	1+060.000
11.15		1+040.000

STA 1+040.000 TO 1+045.000
CHANNEL CROSS SECTIONS FOR CONDUIT AT
STA 4+894.713 US-30

LAR/W

6:1

296.446
1+045.000
296.446

6:1

296.451
1+040.000
296.489

STA 1+040.000 TO 1+067.501
CHANNEL CROSS SECTIONS FOR CONDUIT AT
STA 4+280.000 US-30

Easement

Easement

295.408
1+067.501
295.408

Easement

Easement

3:1 3:1

295.430
1+060.000
295.510

3:1 3:1

295.490
1+040.000
295.748

298
296
294

30 20 10 0 10 20 30

℄

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.04		0	
0.14			
0.00		1	
0.25			
0.97		12	

CALCULATED AM

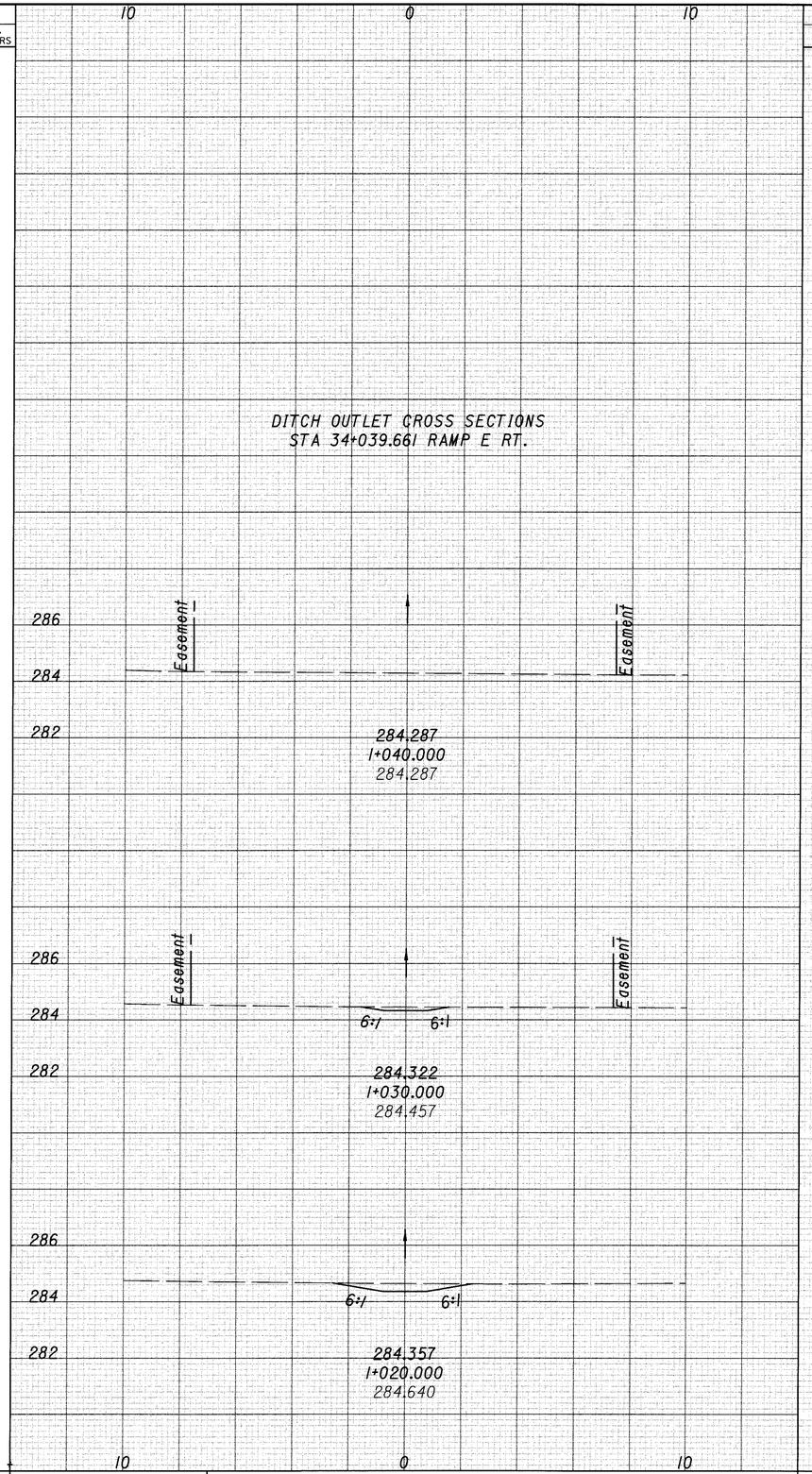
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CHANNEL CROSS SECTIONS FOR CONDUIT AT
STA 4+280.000 AND STA 4+894.713 US-30

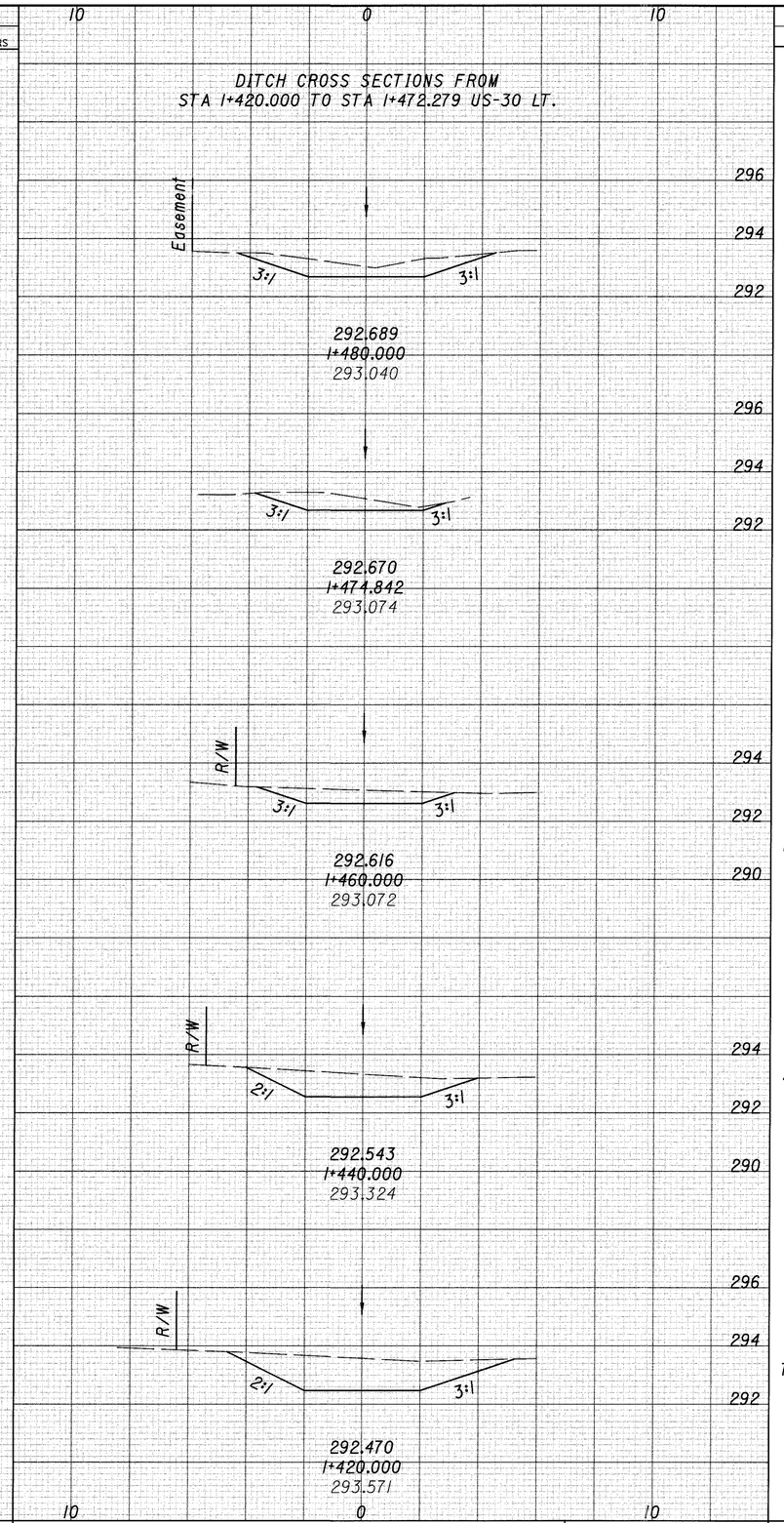
WYA/CRA-30-28.009/0.000

1354
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0.00		0.00			
	47			1.55	
9.42		0.31			
	105			6.10	
11.57		0.91			



SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
16.84		3.45			
	78			15	
13.58		2.20			
	204			35	
13.88		2.48			
	299			71	
16.00		4.66			
	347			123	
18.66		7.64			



CALCULATED AM

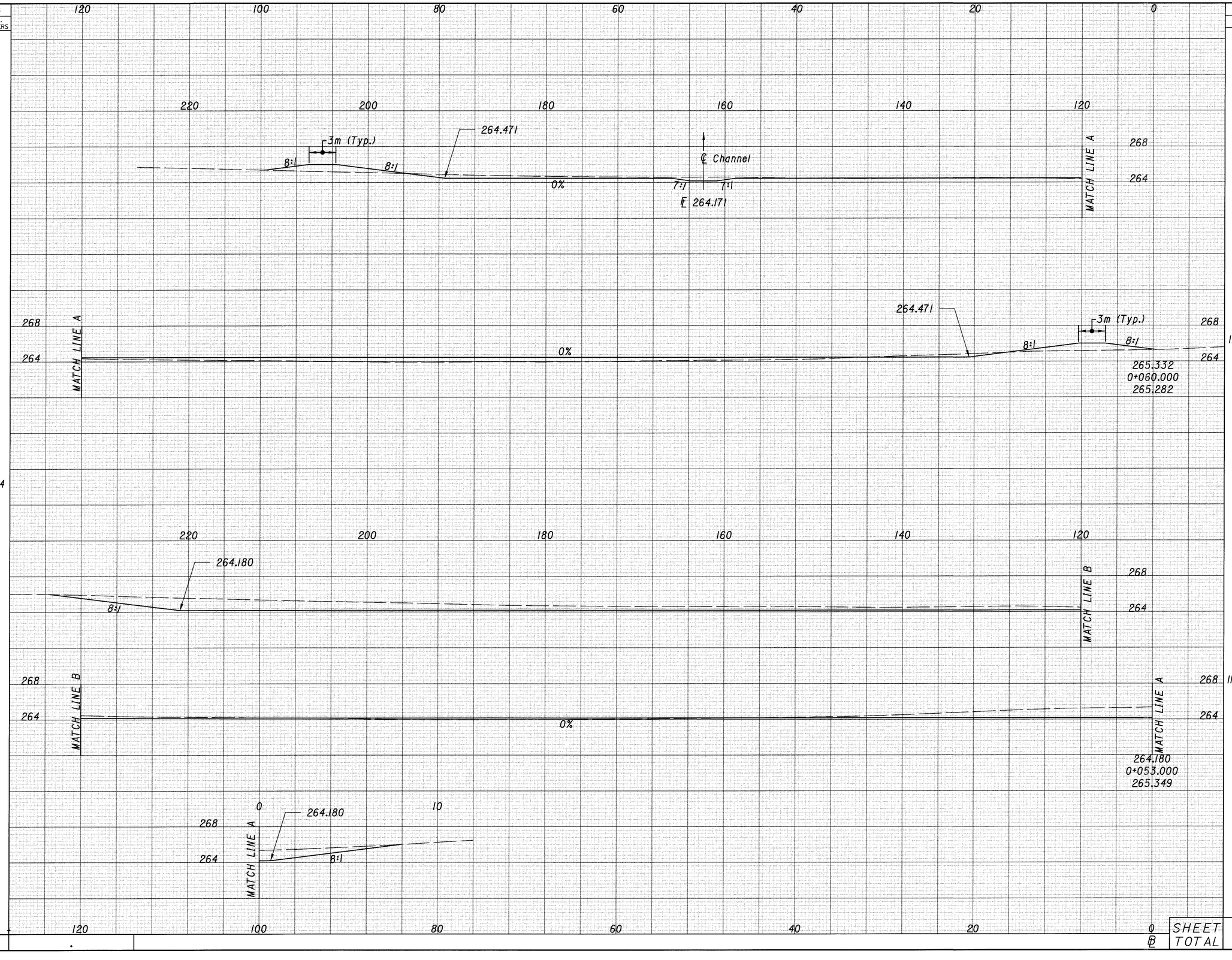
CHECKED REA

DITCH CROSS SECTIONS AT STA 34+039.661 RAMP E RT AND FROM STA 1+420.000 TO 1+472.279 US-30 LT.

WYA/CRA-30-28.009/0.000

1355
2116

SEEDING END WIDTH	SEEDING SQ. METERS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
218.23	1674	12.74	48.49	435	192
259.97		111.60	6.32		
		SHEET TOTAL			



CALCULATED AM

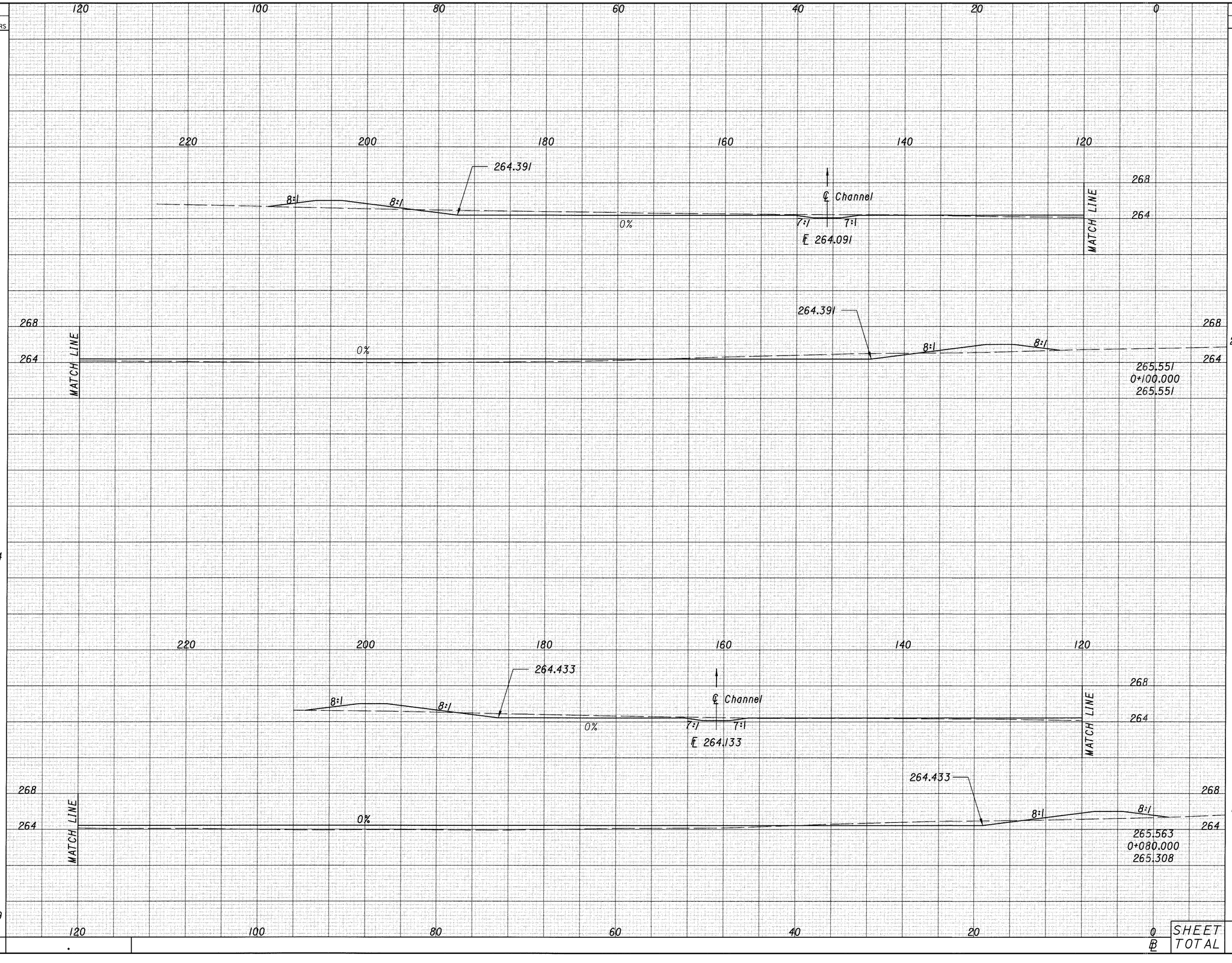
CHECKED REA

DETENTION BASIN CROSS SECTIONS STA 0+053.000 TO STA 0+060.000

WYA/CRA-30-28.009/0.000

1356
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
206.71	4214	23.87	39.22	400	903
214.67	4329	16.11	51.05	289	995



SHEET TOTAL

CALCULATED AM

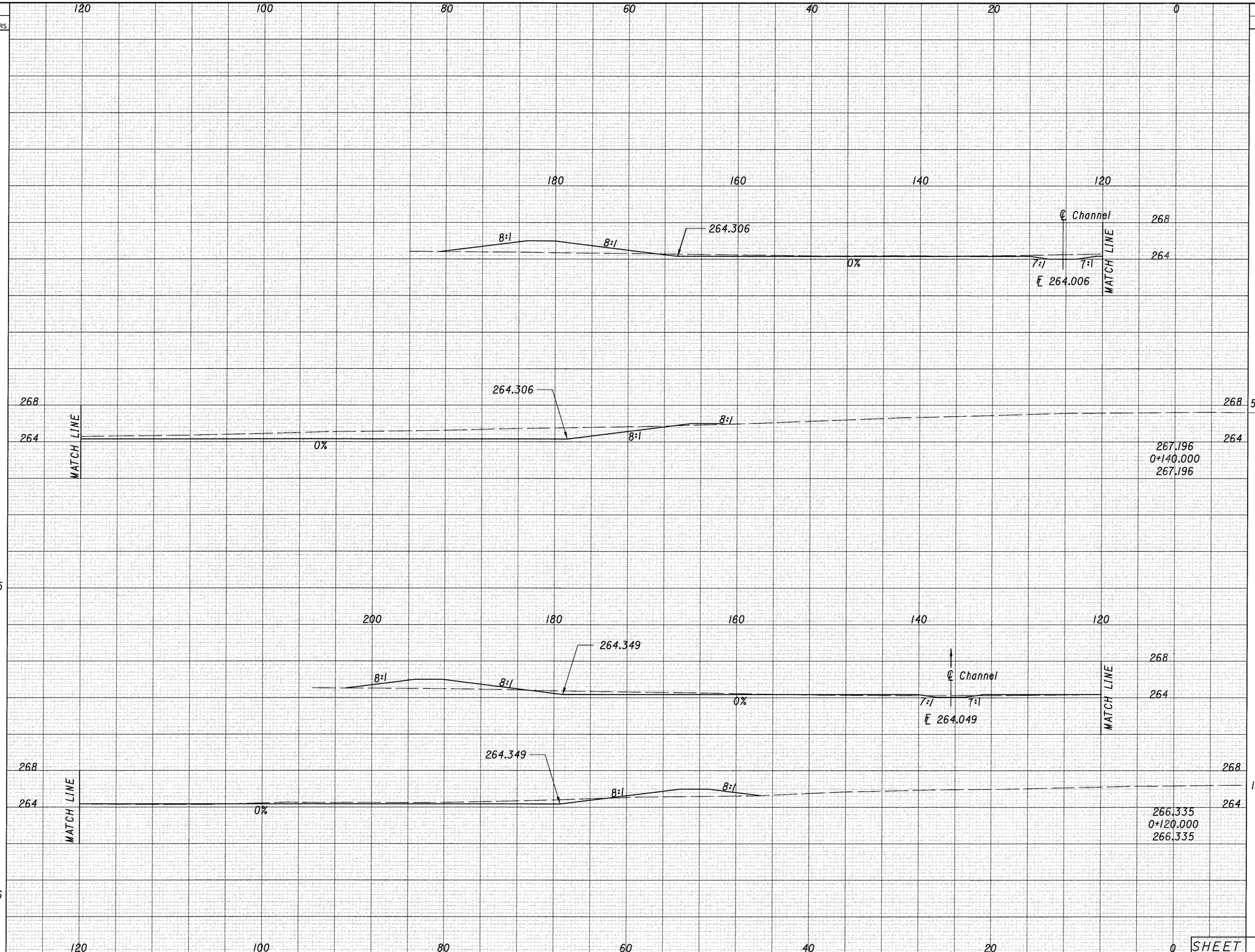
CHECKED REA

DETENTION BASIN CROSS SECTIONS
STA 0+080.000 TO STA 0+100.000

WYA / CRA-30-28.009 / 0.000

1357
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
149.54	3135	53.00	17.73	681	397
163.93	3706	15.10	21.98	390	612



CALCULATED AM

CHECKED REA

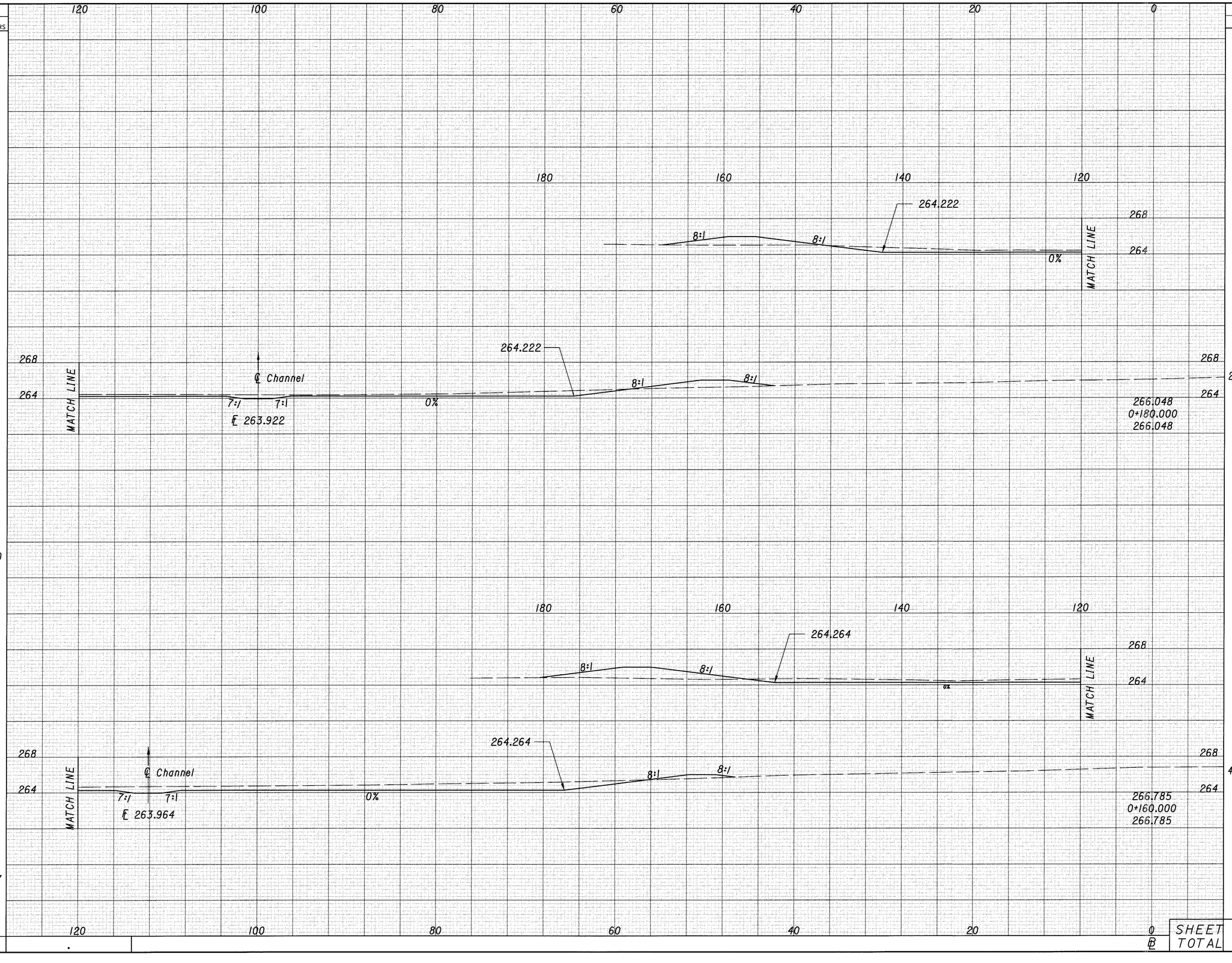
DETENTION BASIN CROSS SECTIONS STA 0+120.000 TO STA 0+140.000

WYA / CRA-30-28.009 / 0.000

SHEET TOTAL

1358
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
130.84	2710	25.51	17.63	747	367
140.19	2897	49.19	19.08	1022	368
			SHEET TOTAL		



CALCULATED AM

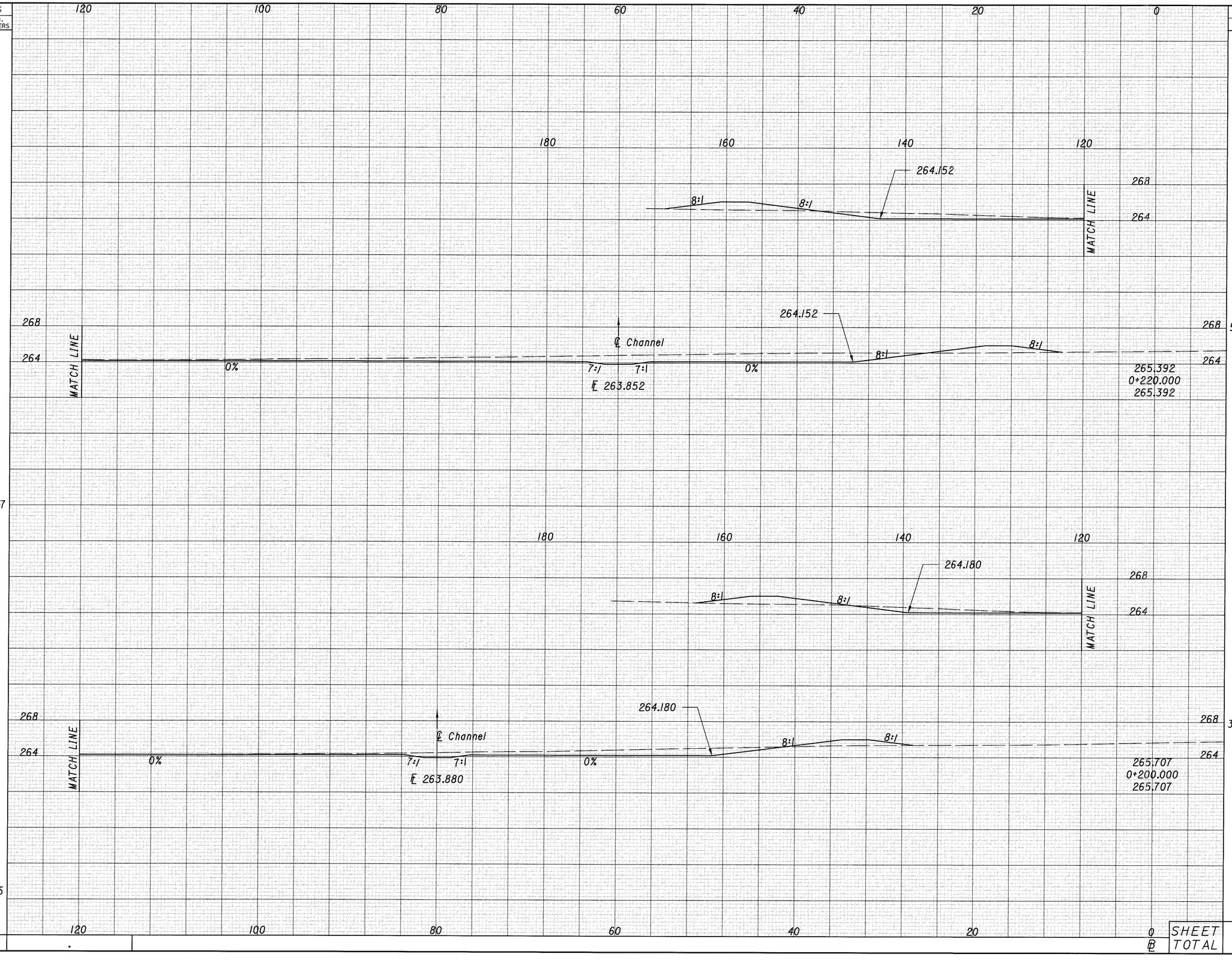
CHECKED REA

DETENTION BASIN CROSS SECTIONS STA 0+160.000 TO STA 0+180.000

WYA/CRA-30-28.009/0.000

1359
2116

SEEDING		END AREA		VOLUME		CALCULATED AM	CHECKED REA
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL		
162.96	3057	57.77	16.19	886	308		
142.71	2735	30.81	14.62	563	323		



SHEET TOTAL

DETENTION BASIN CROSS SECTIONS
STA 0+200.000 TO STA 0+220.000

WYA / CRA-30-28.009 / 0.000

1360
2116

SEEDING END WIDTH	SEEDING SQ. METERS	STATION
		120
		100
		80
		60
		40
		20
		0
		180
		160
		140
		120
200.01		268 / 264 MATCH LINE B, 0%, 264.097, 8:1, 8:1, MATCH LINE B, 264.097, ℄ Channel, 7:1, 7:1, 0%, 8:1, MATCH LINE A, ℄ 263.797
		0
		20
		268 / 264 MATCH LINE A, 8:1, 8:1, 264.432, 0+260.000, 265.095
	3829	
		180
		160
		140
		120
182.87		268 / 264 MATCH LINE, 0%, 264.124, 8:1, 8:1, MATCH LINE, 264.124, ℄ Channel, 7:1, 7:1, 0%, 8:1, 8:1, ℄ 263.824, 265.974, 0+240.000, 265.294
	3458	
		120
		100
		80
		60
		40
		20
		0 ℄

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
132.16	11.03		
		2332	255
101.06	14.42		
		1588	306

SHEET TOTAL

CALCULATED AM

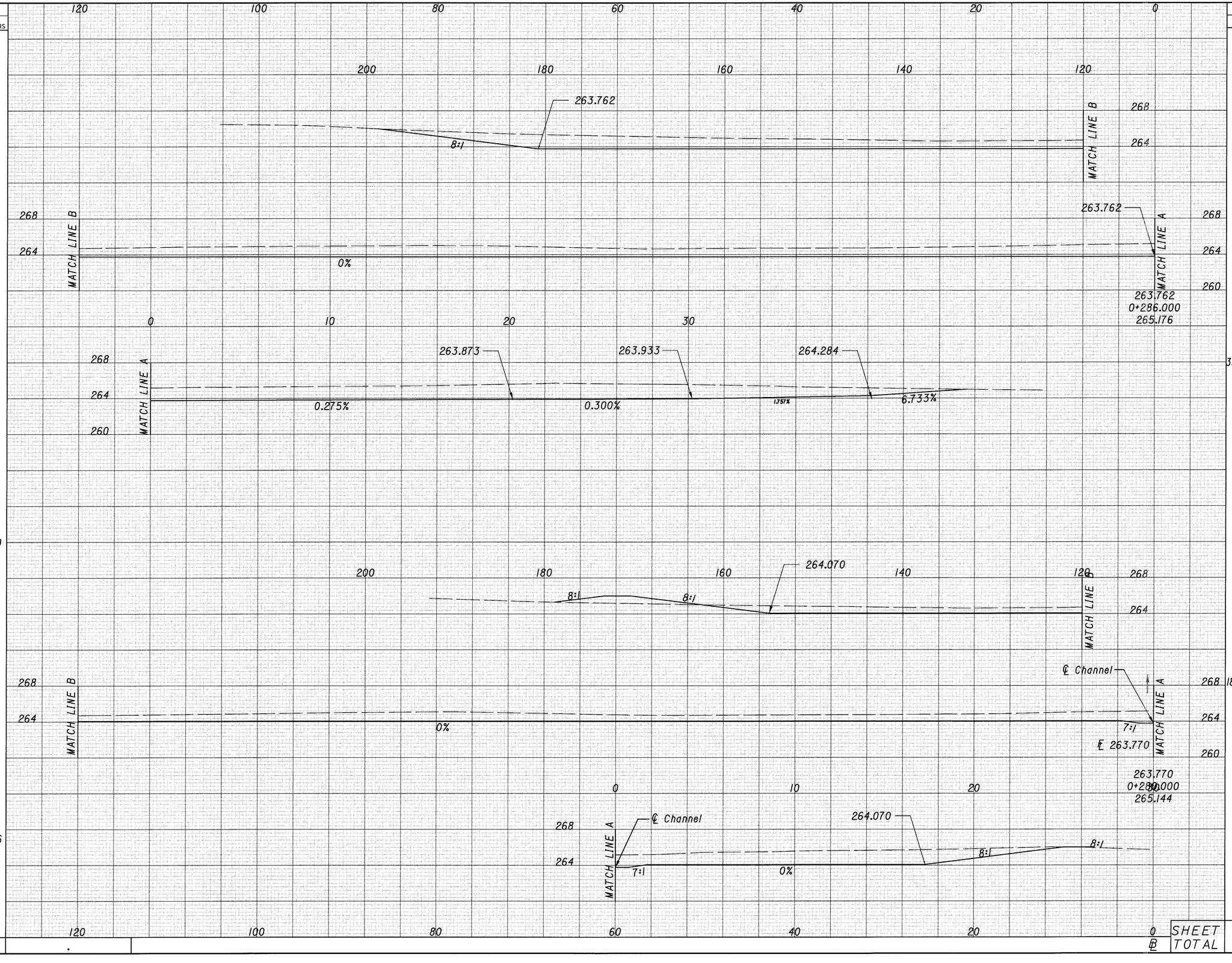
CHECKED REA

DETENTION BASIN CROSS SECTIONS STA 0+240.000 TO STA 0+260.000

WYA/CRA-30-28.009/0.000

1361
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
297.73		338.34	0.00		
	1609			1575	24
238.61		186.63	8.00		
	4386			3188	190



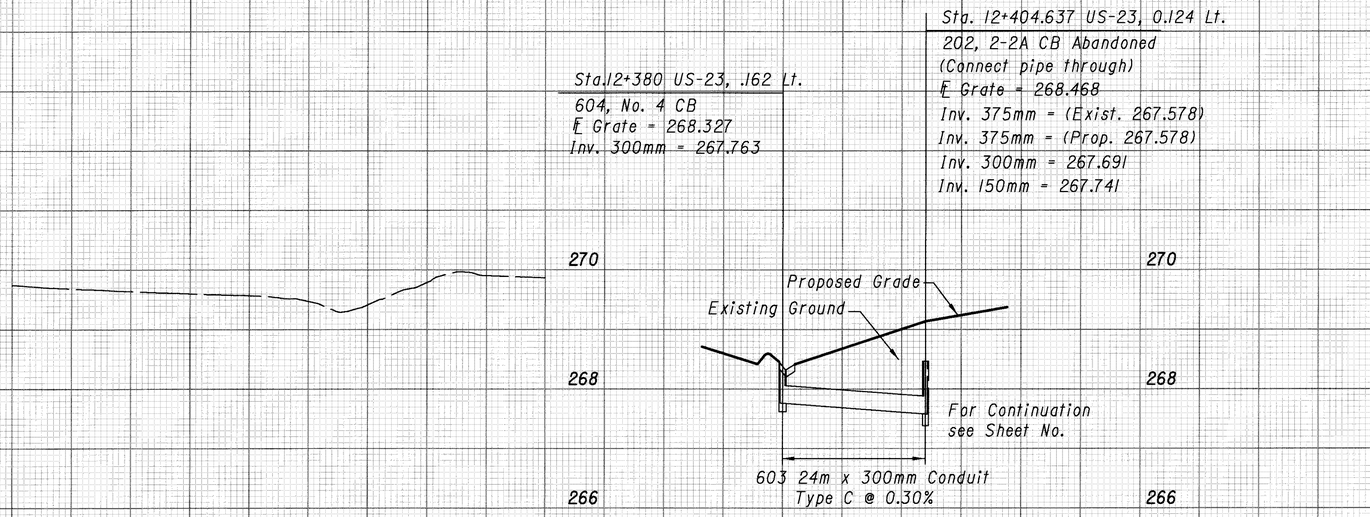
CALCULATED AM

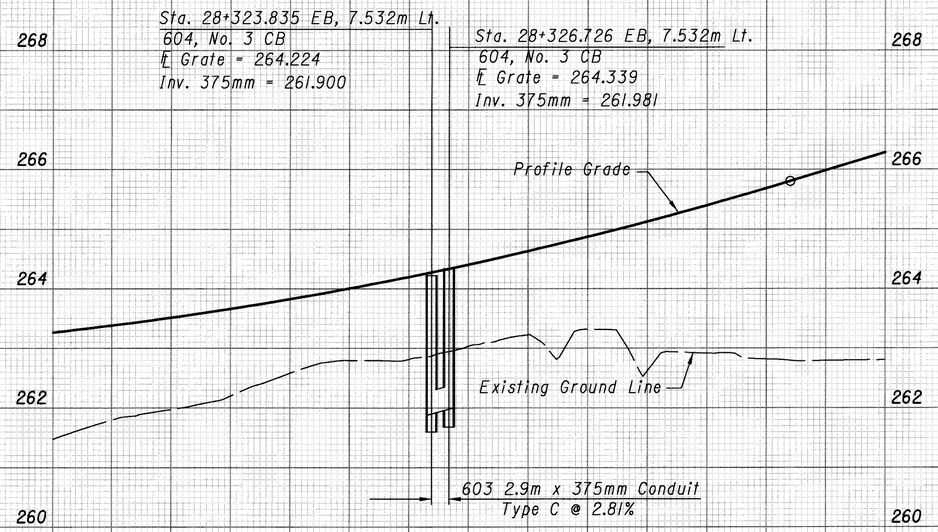
CHECKED REA

DETENTION BASIN CROSS SECTIONS
STA 0+280.000 TO STA 0+286.000

WYA / CRA-30-28.009 / 0.000

1362
2116





CALCULATED REA
CHECKED REA

STORM SEWER PROFILES
US-30 EASTBOUND AND US-23

WYA/CRA-30-28.009/0.000

1363
2116

294
292
290
288
286
284
282
280
278
276
274
272

Sta. 33+814.000, 0.90m Lt.
604, No. 3 MH
Rim = 284.063
Inv. 375mm = 280.542 (N)
Inv. 375mm = 281.484 ($)
Inv. 450mm = 280.467
SEE SHEET NO. 1365

Sta. 33+846.596, 1.22m Lt.
604, No. 3 MH
Rim = 284.394
Inv. 375mm = 281.559
SEE SHEET NO. 1365

Sta. 33+888.758, 5.79m Lt.
604, I-3.0M
℄ = 284.721
Inv. 375mm = 282.371

Sta. 33+928.100, 30.75m Lt.
604, I-3.0M
℄ = 284.909
Inv. 300mm = 283.322
Inv. 375mm = 283.247

Sta. 33+960.000, 30.75m Lt.
604, I-3.0M
℄ = 284.989
Inv. 300mm = 283.641

Sta. 34+000.000, 30.75m Lt.
604, I-3.0M
℄ = 285.197
Inv. 300mm = 284.041

Sta. 34+040.000, 30.75m Lt.
604, I-3.0M
℄ = 285.465
Inv. 300mm = 284.441

Existing Ground

Proposed Grade

603, 32.6m x 375mm
Conduit Type C
@ 3.12%

603, 43.7m x 375mm
Conduit Type C @ 1.86%

603, 47.1m x 375mm
Conduit Type B @ 1.86%

603, 31.9m x 300mm
Conduit Type C
@ 1.00%

603, 40.0m x 300mm
Conduit Type C
@1.00%

603, 40.0m x 300mm
Conduit Type C
@1.00%

CALCULATED REA
CHECKED REA

STORM SEWER PROFILES
WESTBOUND REST AREA - RAMP F

WYA/CRA-30-28.009/0.000

1364
2116

290
288
286
284
282
280
278
276
274
272
270
268

Sta. 33+846.497, 8.0m Rt.
604, No. 3 CB
E Grate = 284.039
Inv. 375mm = 282.401

Sta. 33+846.596, 1.22m Lt.
604, No. 3 MH
Rim = 284.394
Inv. 375mm = 281.559
SEE SHEET 1364

Proposed Grade
Existing Ground

603, 9.1m x 375mm
Conduit Type B @ 9.25%

Sta. 33+805.600, 4.823m Rt.
604, No. 3 CB
E Grate = 283.659
Inv. 300mm = 282.659

Sta. 33+808.600, 5.016m Rt.
604, No. 3 CB
E Grate = 283.676
Inv. 300mm = 282.359
Inv. 375mm = 282.284

Sta. 33+814.000, 0.90m Lt.
604, No. 3 MH
Rim = 284.063
Inv. 375mm = 280.542 (N)
Inv. 375mm = 281.484 (S)
Inv. 450mm = 280.467
SEE SHEET 1364, 1366

Proposed Grade
Existing Ground

603, 3.0m x 300mm
Conduit Type C @ 10.0%

603, 8.0m x 375mm
Conduit Type B @ 10.0%

CALCULATED REA
CHECKED REA

STORM SEWER PROFILES
WESTBOUND REST AREA - RAMP F

WYA/CRA-30-28.009/0.000

1365
2116

Sta. 33+814.000, 0.90m Lt.
604, No. 3 MH
Rim = 284.063
Inv. 375mm = 280.542 (N)
Inv. 375mm = 281.484 (S)
Inv. 450mm = 280.467
See SHEET 1365

Sta. 33+808.500, 17.0m Lt.
604, HW - 2.1M
Inv. 450mm = 279.700

Sta. 33+838.582, 20.201m Rt.
604, I-3.0M
℄ = 283.895
Inv. 450mm = 281.926

Sta. 33+918.500, 45.75m Rt.
604, I-3.0M
℄ = 284.289
Inv. 300mm = 282.600
Inv. 450mm = 282.450

Sta. 33+960.000, 45.75m Rt.
604, I-3.0M
℄ = 284.629
Inv. 300mm = 283.015

Sta. 34+000.000, 45.75m Rt.
604, I-3.0M
℄ = 284.897
Inv. 300mm = 283.415

Sta. 34+032.400, 45.75m Rt.
604, I-3.0M
℄ = 285.113
Inv. 300mm = 283.739

292
290
288
286
284
282
280
278
276
274
272
270

Existing Ground
Proposed Grade

601, RCP Type C w/filter
0.5m x 1.8m x 2.0m = 1.8 c.m.

603, 17.0m x 450mm
Conduit Type C @4.51%

603, 31.5m x 450mm
Conduit Type B
@4.64%

603, 52.4m x 450mm
Conduit Type C @1.00%

603, 41.5m x 300mm
Conduit Type C @1.00%

603, 40.0m x 300mm
Conduit Type C @1.00%

603, 32.4m x 300mm
Conduit Type C
@1.00%

CALCULATED REA
CHECKED REA

STORM SEWER PROFILES
WESTBOUND REST AREA - RAMP F

WYA/CRA-30-28.009/0.000

1366
2116

294
292
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288
286
284
282
280
278
276
274
272

Sta. 34+201.832, 98.806m Lt.
604, No. 2-2B CB
℄ Grate = 283.800
Inv. 300mm = 283.199

Sta. 34+208, 59.0m Lt.
604, No. 2-2B CB
℄ Grate = 283.800
Inv. 300mm = 282.317
Inv. 375mm = 282.242

Sta. 34+203.451, 45.75m Lt.
604, 1-4.2M
℄ = 283.050
Inv. 375mm = 281.942
Inv. 450mm = 281.867

Sta. 34+235, 45.75m Lt.
604, 1-4.2M
℄ = 283.888
Inv. 450mm = 281.564

Sta. 34+280, 45.75m Lt.
604, 1-3.0M
℄ = 283.751
Inv. 450mm = 281.141
Inv. 525mm = 281.066

Sta. 34+320, 45.75m Lt.
604, 1-3.0M
℄ = 283.326
Inv. 525mm = 280.690

Sta. 34+393.432, 19.485m Lt.
604, No. 3 CB
℄ Grate = 282.694
Inv. 300mm = 280.481
Inv. 525mm = 280.256
SEE SHEET 136B

Sta. 34+417.220, 0.70m Rt.
604, No. 3 MH
Rim = 282.777
Inv. 300mm = 280.188
Inv. 375mm = 280.113
Inv. 525mm = 279.963
Inv. 600mm = 279.888
SEE SHEET 136B

Sta. 34+434.144, 17.716m Rt.
604, HW - 2.1M
Inv. 600mm = 279.689

Existing Ground

Proposed Grade

603, 40.3m x 300mm
Conduit Type C @ 2.19%

603, 13.1m x 375mm
Conduit Type C @ 2.29%

603, 31.4m x 450mm
Conduit Type C
@ 0.95%

603, 44.4m x 450mm
Conduit Type C @ 0.95%

603, 40.0m x 525mm
Conduit Type C @ 0.95%

603, 45.3m x 525mm
Conduit Type C @ 0.95%

603, 31.2m x 525mm
Conduit Type B
@ 0.94%

603,
24.0m x 600mm
Conduit Type C
@ 0.83%

839, Seeding & Erosion Control
with Revegetation Matting
1.2m x 23.3m = 28 sq m

CALCULATED REA
CHECKED REA

STORM SEWER PROFILES
EASTBOUND REST AREA - RAMP H

WYA/CRA-30-28.009/0.000

1367
2116

292
290
288
286
284
282
280
278
276
274
272
270

Sta. 34+384.581, 8.0m Lt.
604, No. 3 CB
℄ Grate = 282.949
Inv. 300mm = 280.945

Sta. 34+393.432, 19.485m Lt.
604, No. 3 CB
℄ Grate = 282.694
Inv. 300mm = 280.481
Inv. 525mm = 280.256
SEE SHEET 1367

Proposed Grade
Existing Ground

603, 14.5m x 300mm
Conduit Type B @ 3.20%

Sta. 34+425.645, 4.825m Lt.
604, No. 3 CB
℄ Grate = 282.324
Inv. 300mm = 281.280

Sta. 34+417.220, 5.887m Lt.
604, No. 3 CB
℄ Grate = 282.417
Inv. 300mm = 280.708

Sta. 34+417.220, 0.70m Rt.
604, No. 3 MH
Rim = 282.777
Inv. 300mm = 280.188
Inv. 375mm = 280.113
Inv. 525mm = 279.963
Inv. 600mm = 279.888
SEE SHEET 1367

Proposed Grade
Existing Ground

603, 8.5m x 300mm
Conduit Type C @ 6.73%

603, 6.5m x 300mm
Conduit Type B @ 8.0%

Sta. 34+325.120, 23.141m Rt.
604, No. 3 CB
℄ Grate = 283.681
Inv. 300mm = 281.672

Sta. 34+327.117, 25.38m Rt.
604, No. 3 MH
Rim = 283.673
Inv. 300mm = 281.370
Inv. 375mm = 281.295
SEE SHEET 1369

Existing Ground
Proposed Grade

603, 3.1m x 300mm
Conduit Type C @ 9.73%

CALCULATED | CHECKED

STORM SEWER PROFILES
EASTBOUND REST AREA - RAMP H

WYA/CRA-30-28.009/0.000

1368
2116

294
292
290
288
286
284
282
280
278
276
274
272

Sta. 34+185.392, 30.75m Rt.
604, I-3.0M
℄ = 284.283
Inv. 300mm = 283.082

Sta. 34+220, 30.75m Rt.
604, i-3.0M
℄ = 284.217
Inv. 300mm = 282.663

Sta. 34+260, 30.75m Rt.
604, I-3.0M
℄ = 284.141
Inv. 300mm = 282.179
Inv. 375mm = 282.104

Sta. 34+299.677, 30.75m Rt.
604, I-3.0M
℄ = 283.883
Inv. 375mm = 281.624

Sta. 34+327.117, 25.38m Rt.
604, No. 3 MH
Rim = 283.673
Inv. 300mm = 281.370
Inv. 375mm = 281.295

Sta. 34+417.220, 0.70m Rt.
604, No. 3 MH
Rim = 282.777
Inv. 300mm = 280.188
Inv. 375mm = 280.113
Inv. 525mm = 279.963
Inv. 600mm = 279.888
SEE SHEET 1367, 1368

Existing Ground

Proposed Grade

603, 34.6m x 300mm Conduit Type C @ 1.21%

603, 40.0m x 300mm Conduit Type C @1.21%

603, 39.7m x 375mm Conduit Type C @1.21%

603, 27.2m x 375mm Conduit Type B @ 1.21%

603, 101.9m x 375mm Conduit Type C @ 1.16%

CALCULATED REA
CHECKED REA

STORM SEWER PROFILES
EASTBOUND REST AREA - RAMP H

WYA/CRA-30-28.009/0.000

1369
2116

CALCULATED REA
CHECKED REA

US-30 STORM SEWER PROFILE
STA. 32+890 TO STA. 33+230

282
280
278
276
274
272
270

Sta. 32+903, 4.803m Rt.
604, No. 2-2B CB
℄ Grate = 274.232
Inv. 300mm = 272.875

Proposed Grade

603 57m x 300mm Conduit
Type C @ 0.58%

Sta. 32+960, 1.623m Rt.
604, No. 4 CB
℄ Grate = 274.381
Inv. 750mm = 271.912
Inv. 300mm = 272.362
See SHEET 422

Sta. 33+134, ℄
604, No. 4 CB
℄ Grate = 275.898
Inv. 600mm = 275.054
Inv. 150mm = 275.336

Existing Ground

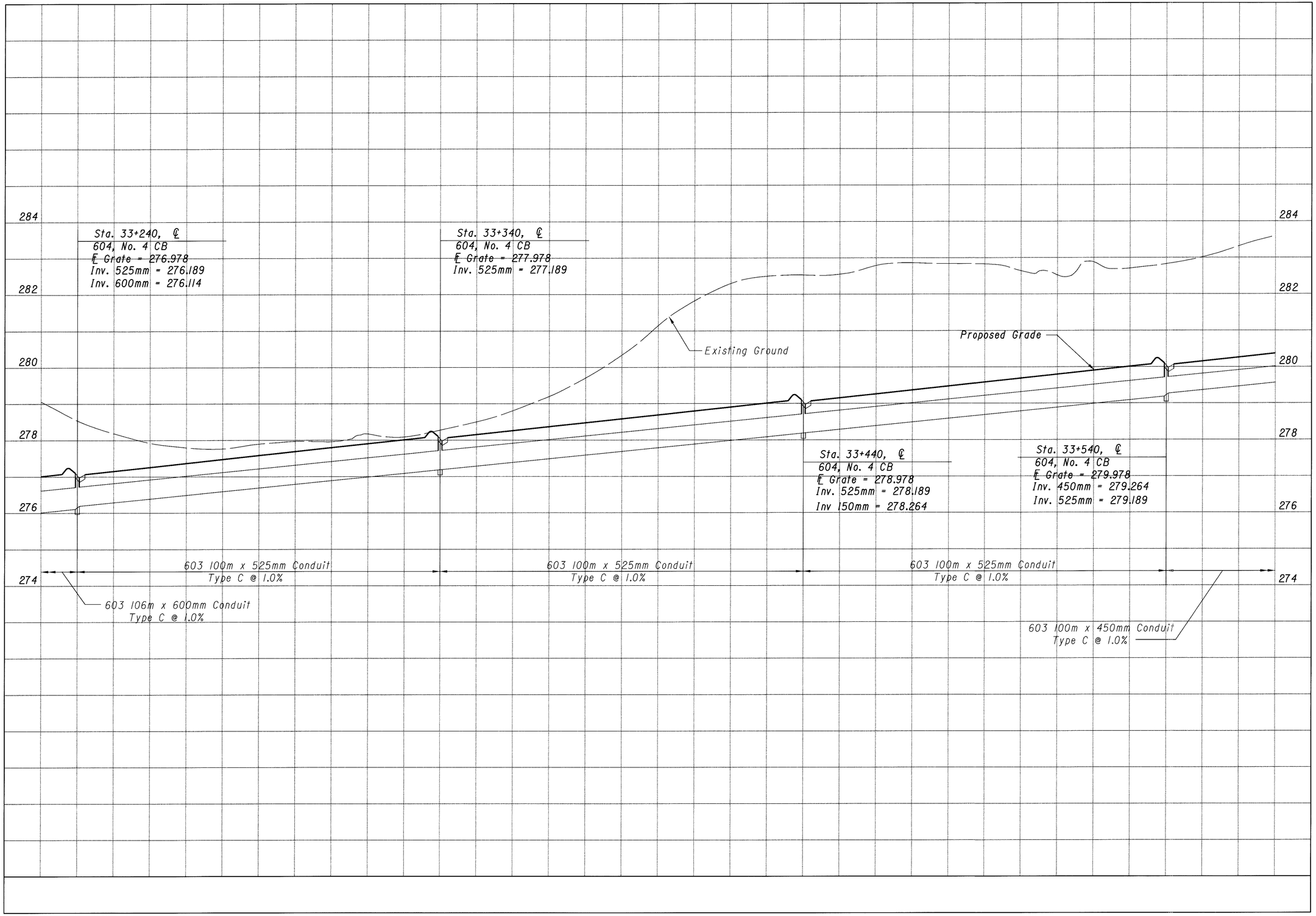
Proposed Grade

603 106m x 600mm Conduit
Type C @ 1.0%

For Continuation
see Sheet No. 426

WYA/CRA-30-28.009/0.000

1370
2116

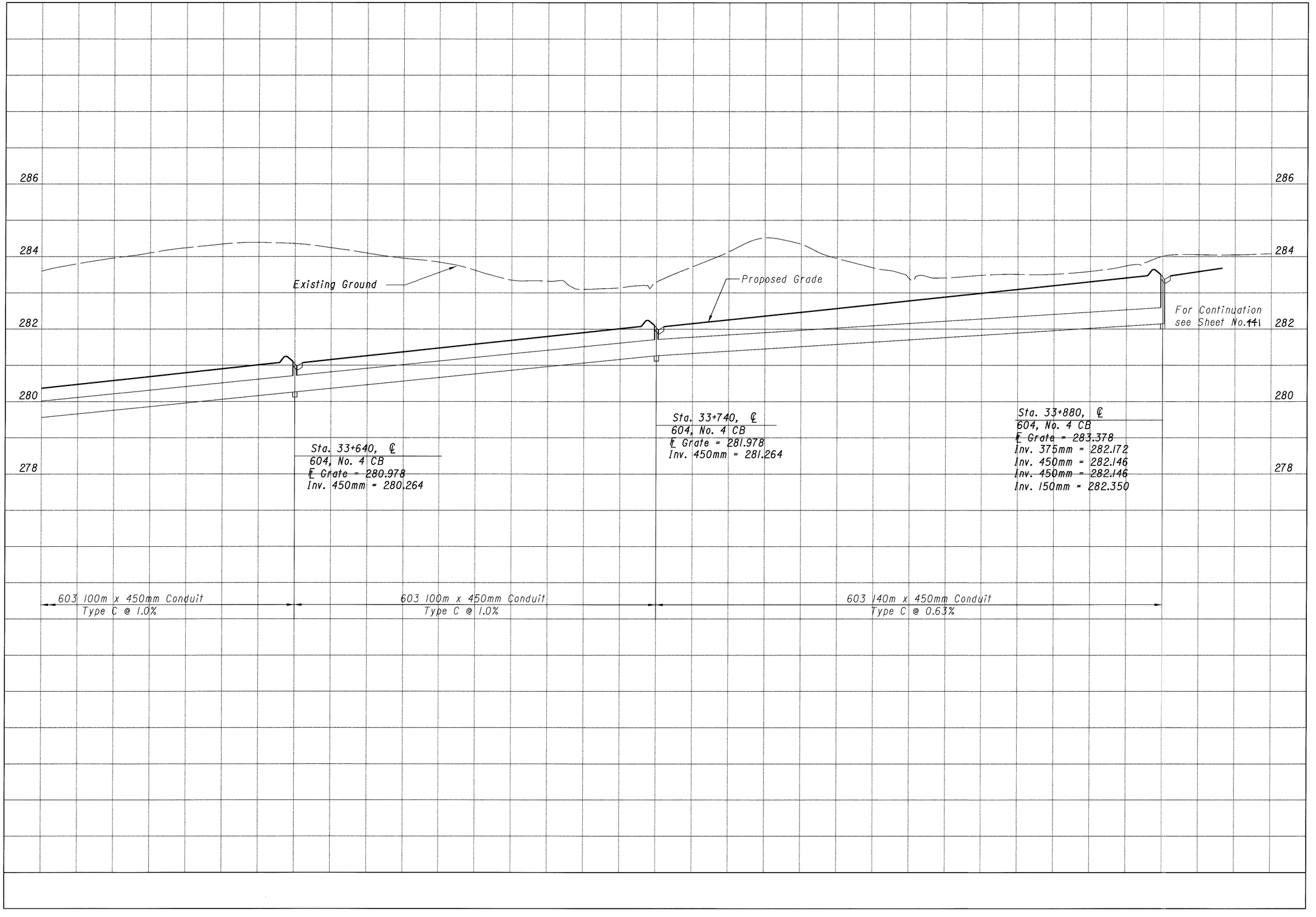


CALCULATED REA
CHECKED REA

US-30 STORM SEWER PROFILE STA. 33+230 TO STA. 33+570

WYA/CRA-30-28.009/0.000

1371
2116

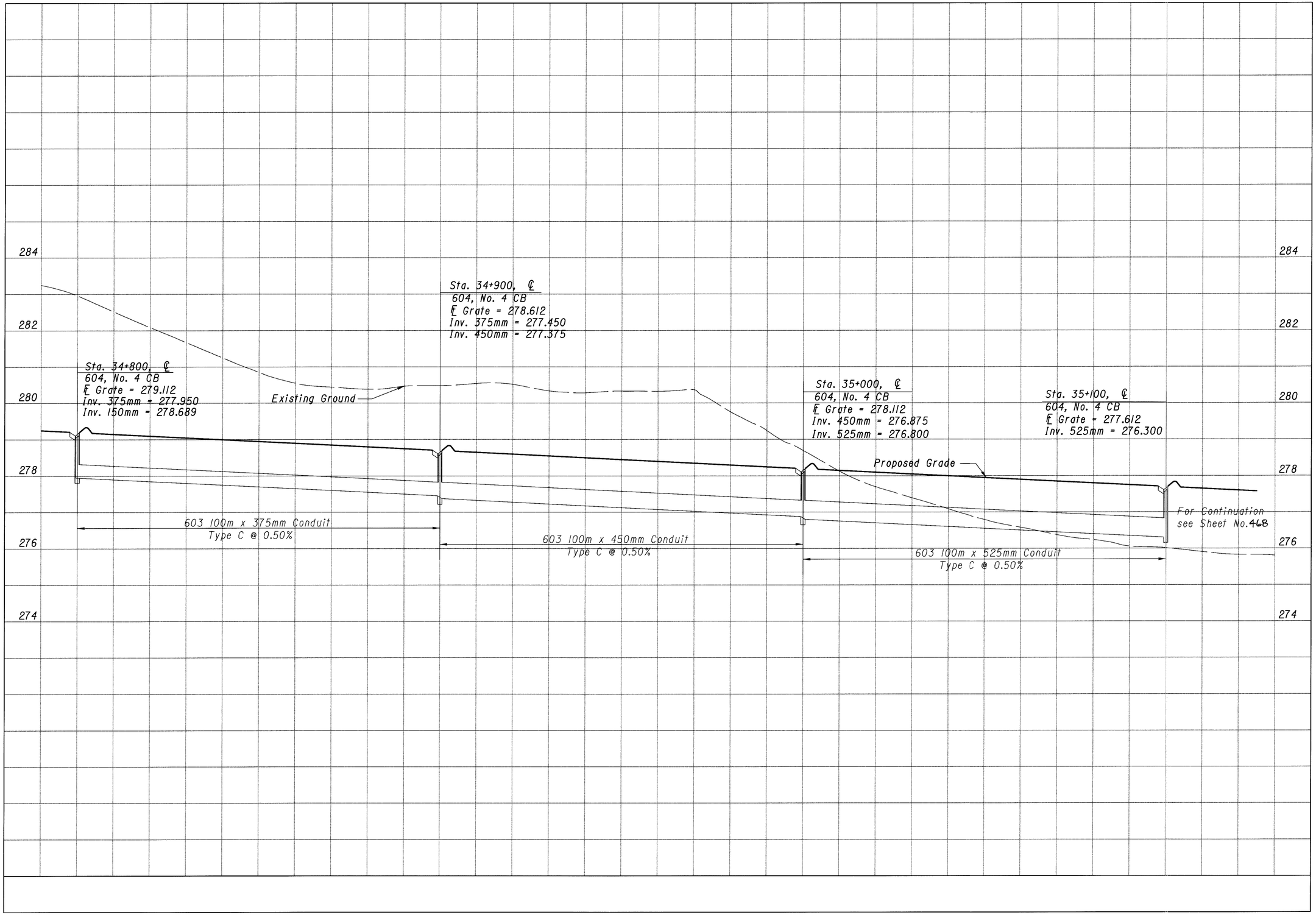


CALCULATED REA
CHECKED REA

US-30 STORM SEWER PROFILE
STA. 33+570 TO STA. 33+910

WYA / CRA-30-28.009 / 0.000

1372
2116



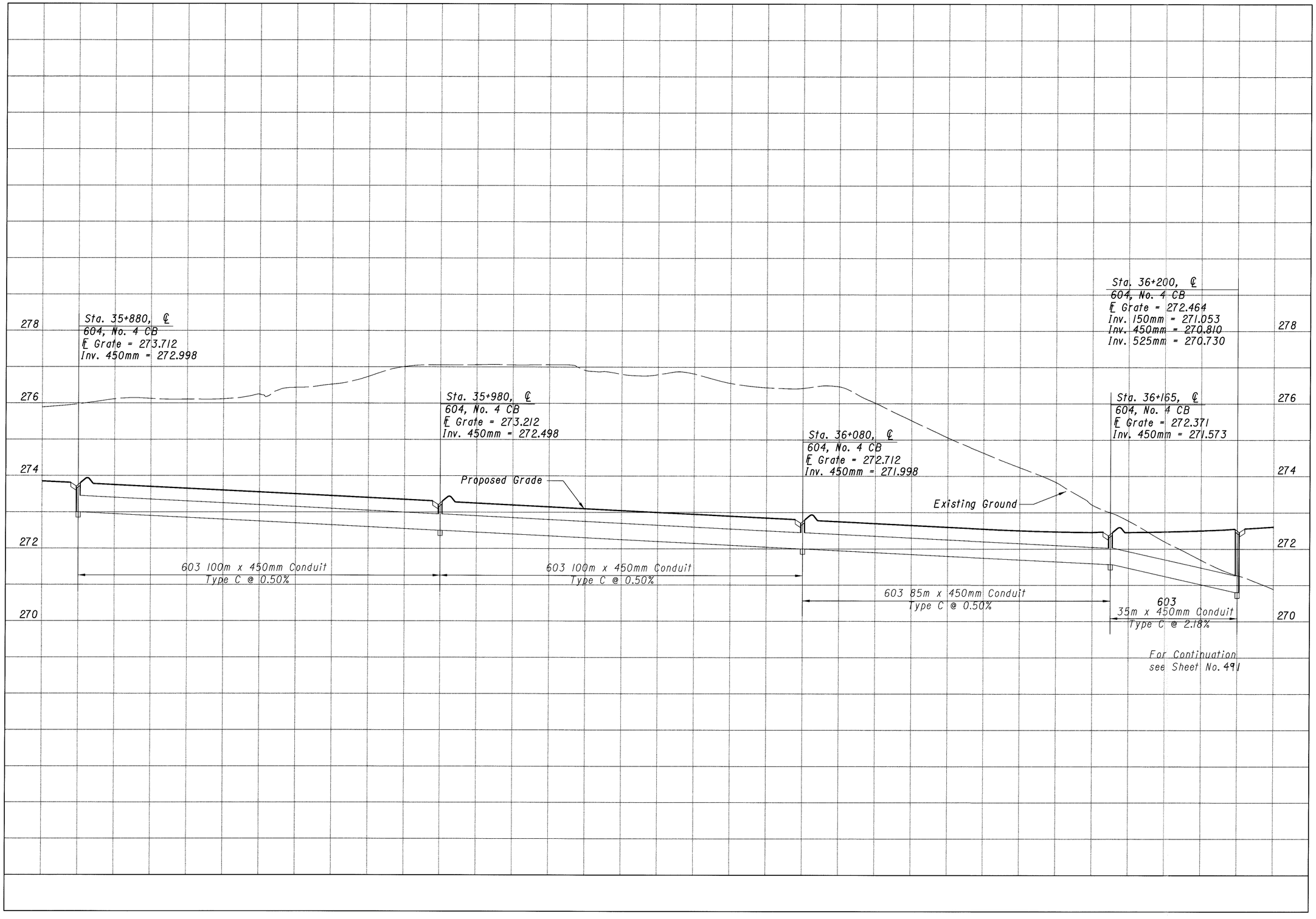
CALCULATED REA
CHECKED REA

US-30 STORM SEWER PROFILE
STA. 34+790 TO STA. 35+130

WYA/CRA-30-28.009/0.000

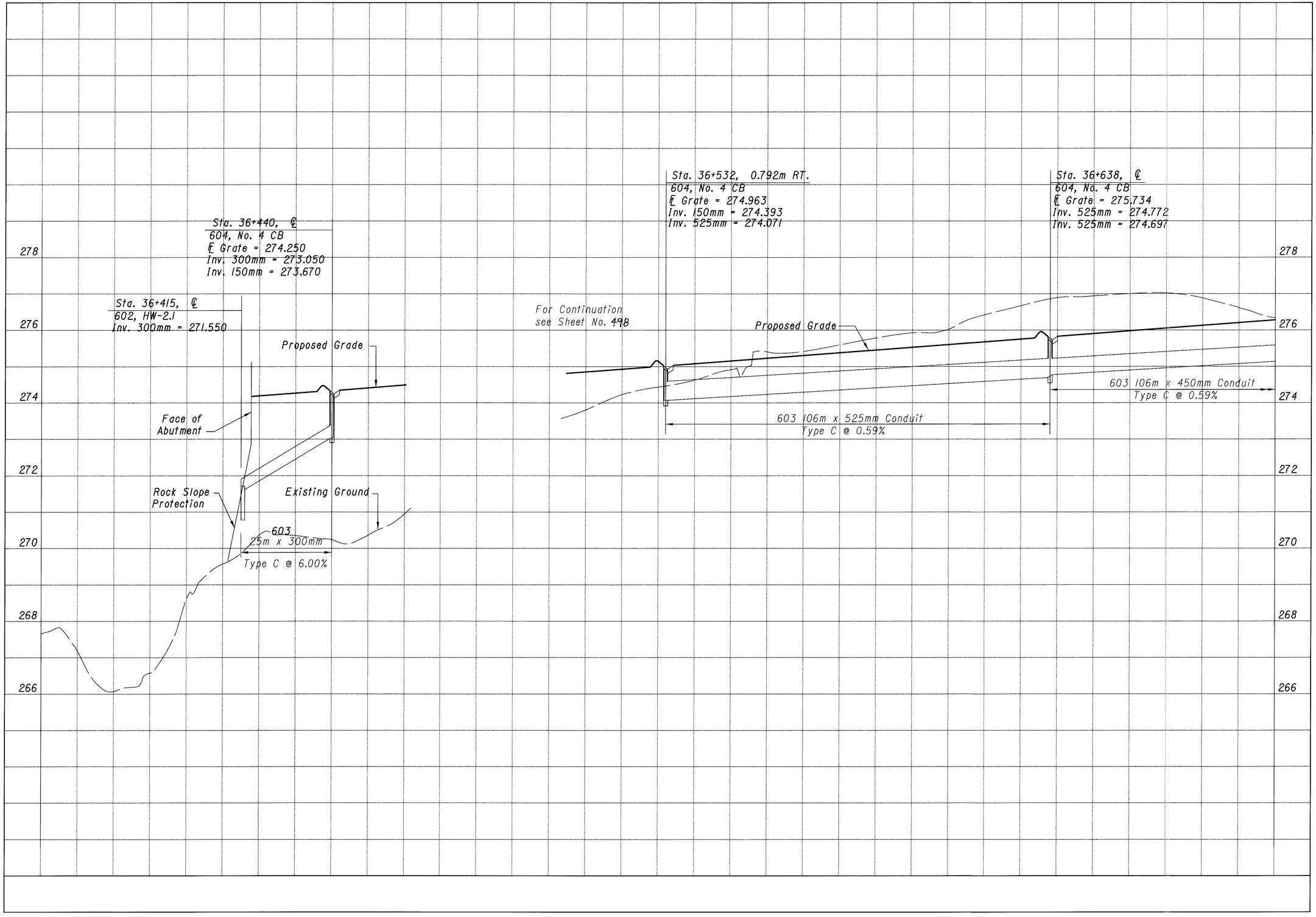
1373
2116

CALCULATED REA
CHECKED REA



US-30 STORM SEWER PROFILE
STA. 35+870 TO STA. 36+210

WYA/CRA-30-28.009/0.000

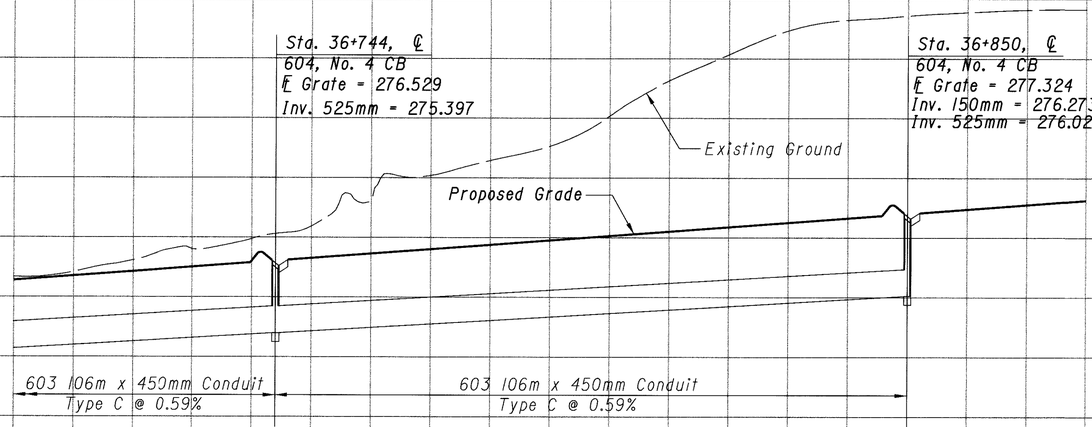


CALCULATED REA
CHECKED REA

US-30 STORM SEWER PROFILE
STA. 36+360 TO STA. 36+700

WYA/CRA-30-28.009/0.000

1375
2116



CALCULATED REA
CHECKED REA

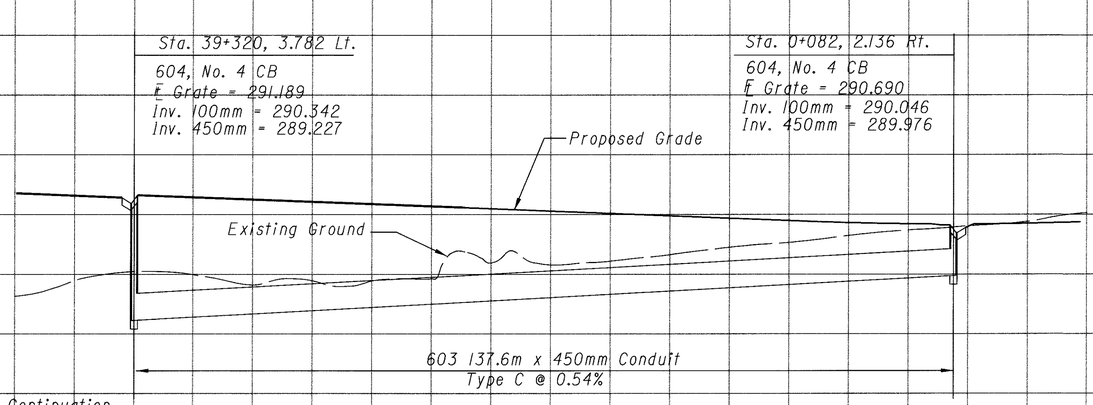
US-30 STORM SEWER PROFILE
STA. 36+700 TO STA. 36+850

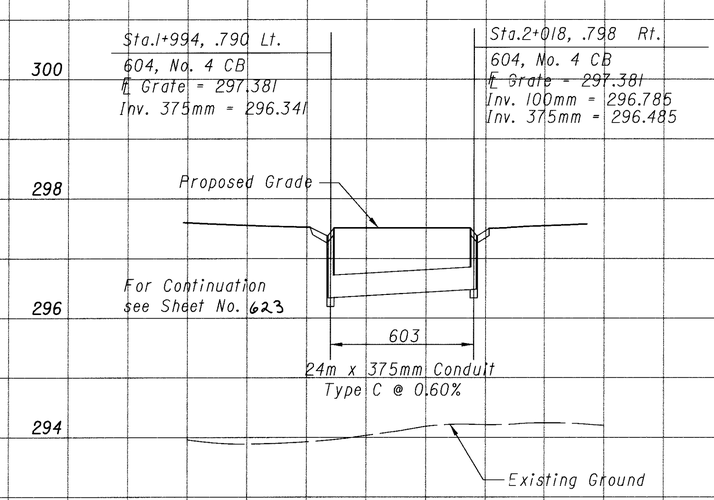
WYA/CRA-30-28.009/0.000

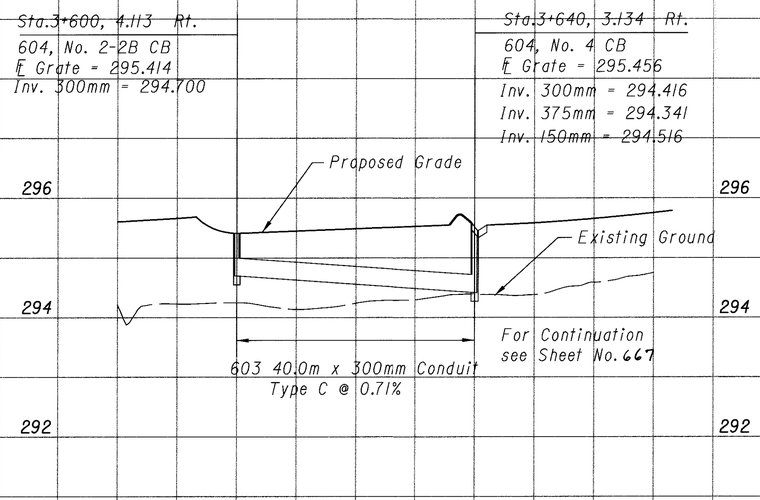
1376
2116

CALCULATED REA
CHECKED REA

US-30 STORM SEWER PROFILES
STA. 39+320 TO STA. 3+640







WYA/CRA-30-28.009/0.000

Sta. 33+961.057, 83.6m Rt. F

604 No. 3 MH, with flat top
Rim= 285.610
Inv. 150mm= 284.685

Sta. 33+961.057, 64.3m Rt. F

604 No. 3 MH, with flat top
Rim= 285.250
Inv. 150mm= 284.523

Sta. 34+020.764, 63.9m Rt. F

604 No. 3 MH, with flat top
Rim= 285.500
Inv. 150mm= 284.500

603, 9.6m x 150mm Conduit
Type B, 707.44 @ 0.67%

603, 7.4m x 150mm Conduit
Type B, 707.44 @ 0.67%

603, 9.5m x 150mm Conduit
Type C, 707.44 @ 0.67%

603, 59.7m x 150mm Conduit
Type C, 707.44 @ 0.67%

603, 74.4m x 150mm Conduit
Type C, 707.44 @ 0.67%

288 West Bound Motorist Service Bldg. 288

Floor Elev. 286.0

286 286

Proposed grade

Existing Ground

284 284

Elev. 284.749

Elev. 284.635

Elev. 284.587

282 282

Trash Trap
See Detail Sheet No. 1648

2.438m

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
WESTBOUND REST AREA

WYA/CRA-30-28.009/0.000

1378
2116

Sta. 34+018.417, 48.3m Lt. 1

604 No. 3 MH
Rim= 286.877
Inv. 150mm= 283.625

603, 74.4m x 150mm Conduit
Type C, 707.44 @ 0.67%

603, 100.0m x 150mm Conduit
Type B, 707.44 @ 0.73%

288

286

284

282

Existing Ground

Proposed Grade

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
WESTBOUND REST AREA

WYA/CRA-30-28.009/0.000

1379
2116

CALCULATED REA
CHECKED REA

Sta. 34+100.0, 3.0m Lt. G

604 No. 3 MH, with flat top
Rim= 284.426
Inv. 150mm= 282.898

Sta. 34+200.0, 3.0m Lt. G

604 No. 3 MH, with flat top
Rim= 284.013
Inv. 150mm= 282.177

603, 100.0m x 150mm Conduit
Type B, 707.44 @ 0.73%

603, 99.2m x 150mm Conduit
Type C, 707.44 @ 0.73%

603, 120.5m x 150mm Conduit
Type C, 707.44 @ 0.73%

288

℄ Ramp G

286

Existing ground

Proposed grade

284

282

280

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

SANITARY SEWER PROFILE
WESTBOUND REST AREA

WYA/CRA-30-28.009/0.000

1380
2116

Sta. 34+321.5, 3.0m Lt. G

604 No. 3 MH
Rim= 283.731
Inv. 150mm= 281.302

603, 120.5m x 150mm Conduit
Type C, 707.44 @ 0.73%

603, 88.2m x 150mm Conduit
Type C, 707.44 @ 0.73%

288
286
284
282
280

Existing Ground

Proposed Grade

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
WESTBOUND REST AREA

WYA/CRA-30-28.009/0.000

1381
2116

Sta. 34+410.2, 4.0m Lt. G

604 No. 3 MH
Rim= 284.247
Inv. 150mm= 280.661

603, 88.2m x 150mm Conduit
Type C, 707.44 @ 0.73%

603, 91.3m x 150mm Conduit
Type B, 707.44 @ 0.73%

℄ US-30

℄ Ramp G

Proposed Grade

Existing Ground

284
282
280
278

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
WESTBOUND REST AREA

WYA/CRA-30-28.009/0.000

1382
2116

Sta. 34+417.0, 25.9m Lt. J

604 No. 3 MH
Rim= 282.559
Inv. 150mm= 279.997

603, 91.3m x 150mm Conduit
Type B, 707.44 @ 0.73%

603, 74.6m x 150mm Conduit
Type B, 707.44 @ 0.81%

Sta. 34+427.0, 48.0m Rt. J

604 No. 3 MH
Rim= 281.800
Inv. 150mm= 279.397

℄ Ramp J

Proposed grade

Existing ground

284
282
280
278

For Continuation see sheet no. 1384

0 5 10
Horizontal Scale

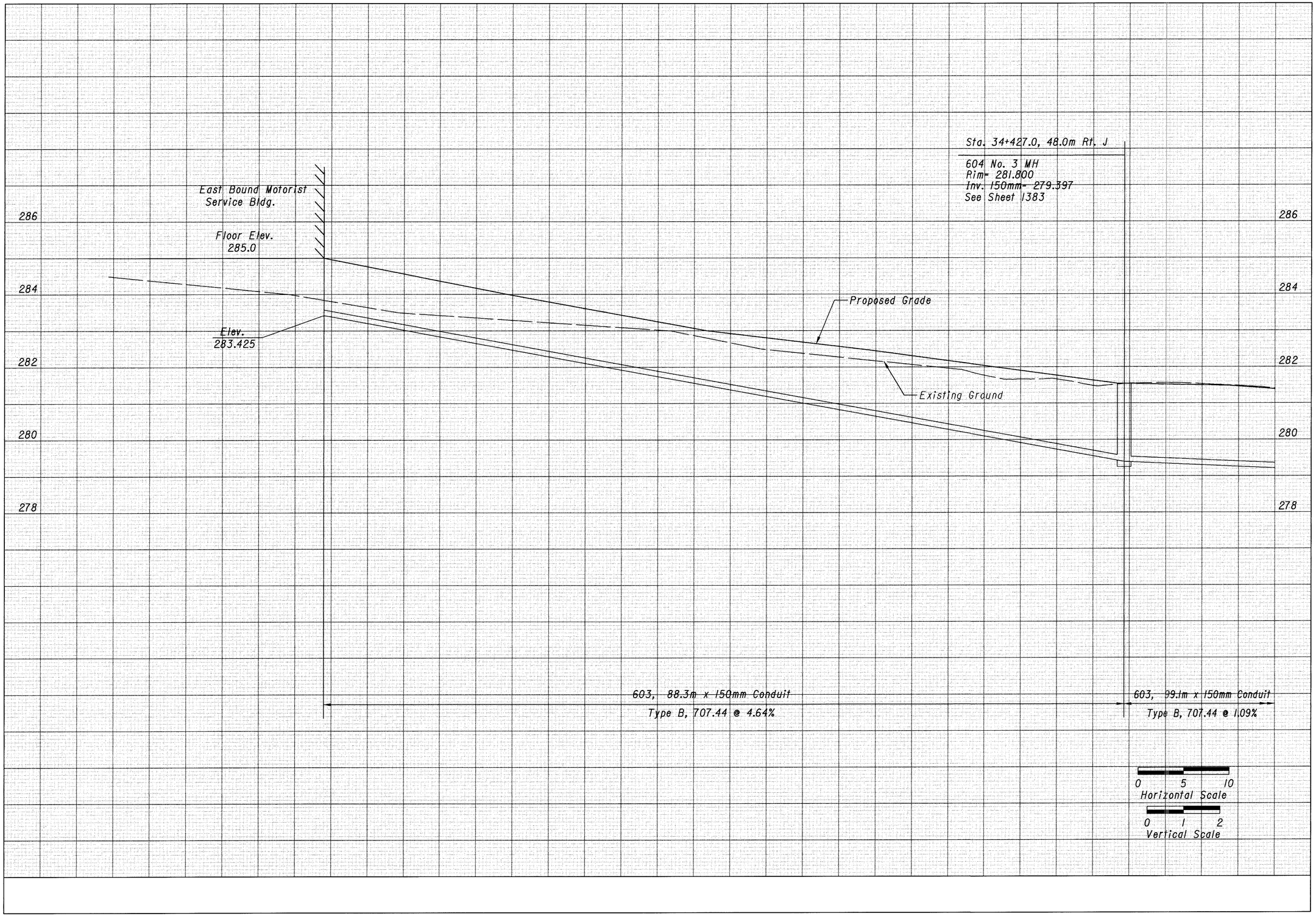
0 1 2
Vertical Scale

CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
WESTBOUND REST AREA

WYA / CRA-30-28.009 / 0.000

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2116

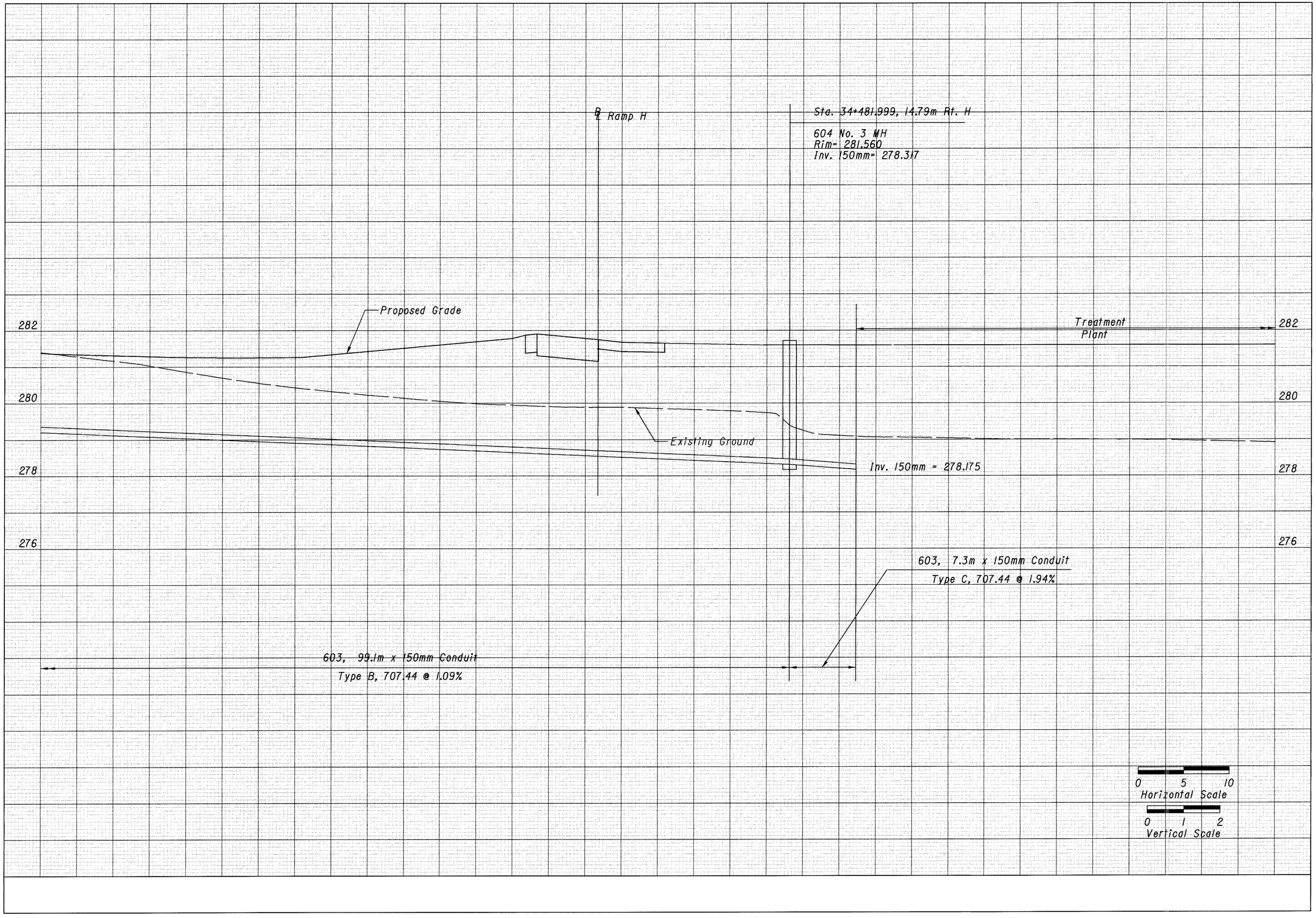


CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

1384
2116

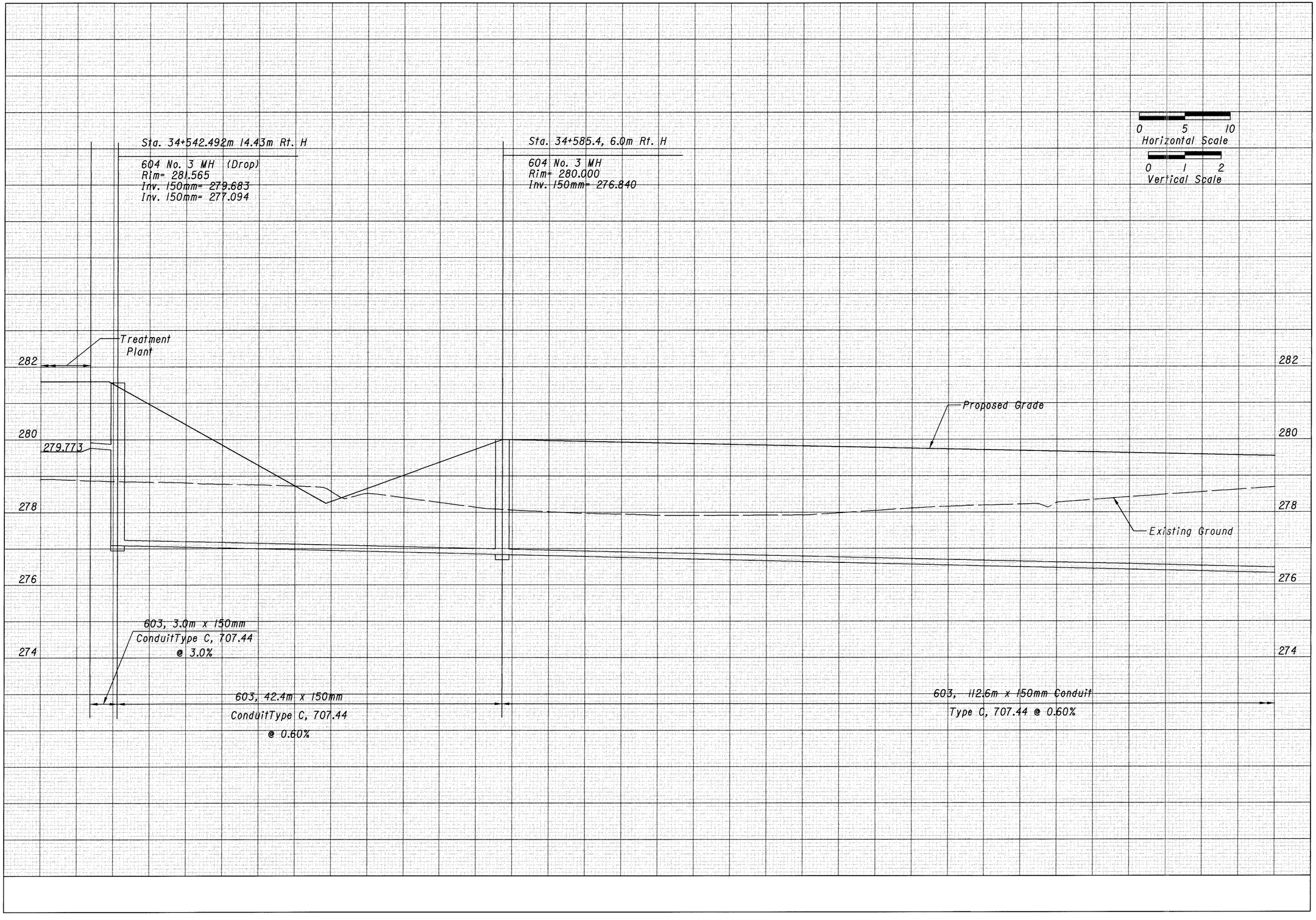


CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

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2116



CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

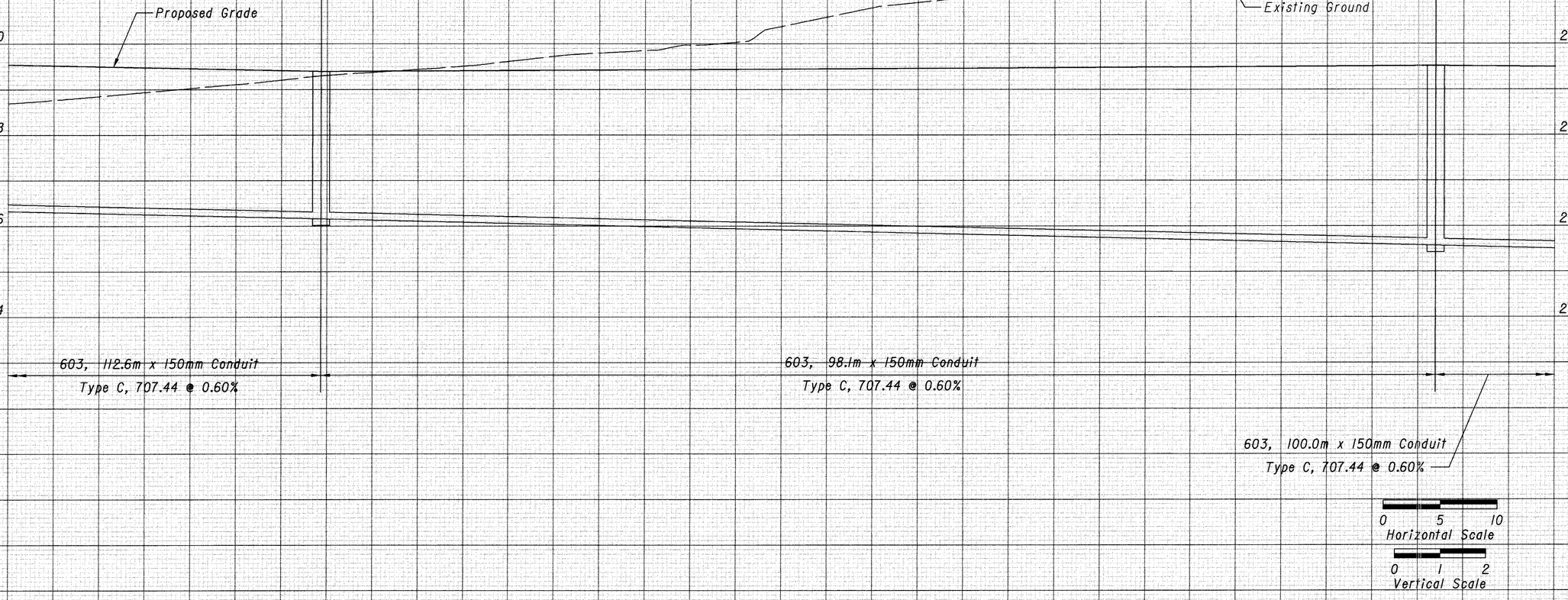
1386
2116

Sta. 34+700.9, 7.9m Rt. H

604 No. 3 MH
Rim= 279.400
Inv. 150mm= 276.165

Sta. 34+800.0, 29.6m Rt.

604 No. 3 MH
Rim= 279.519
Inv. 150mm= 275.576

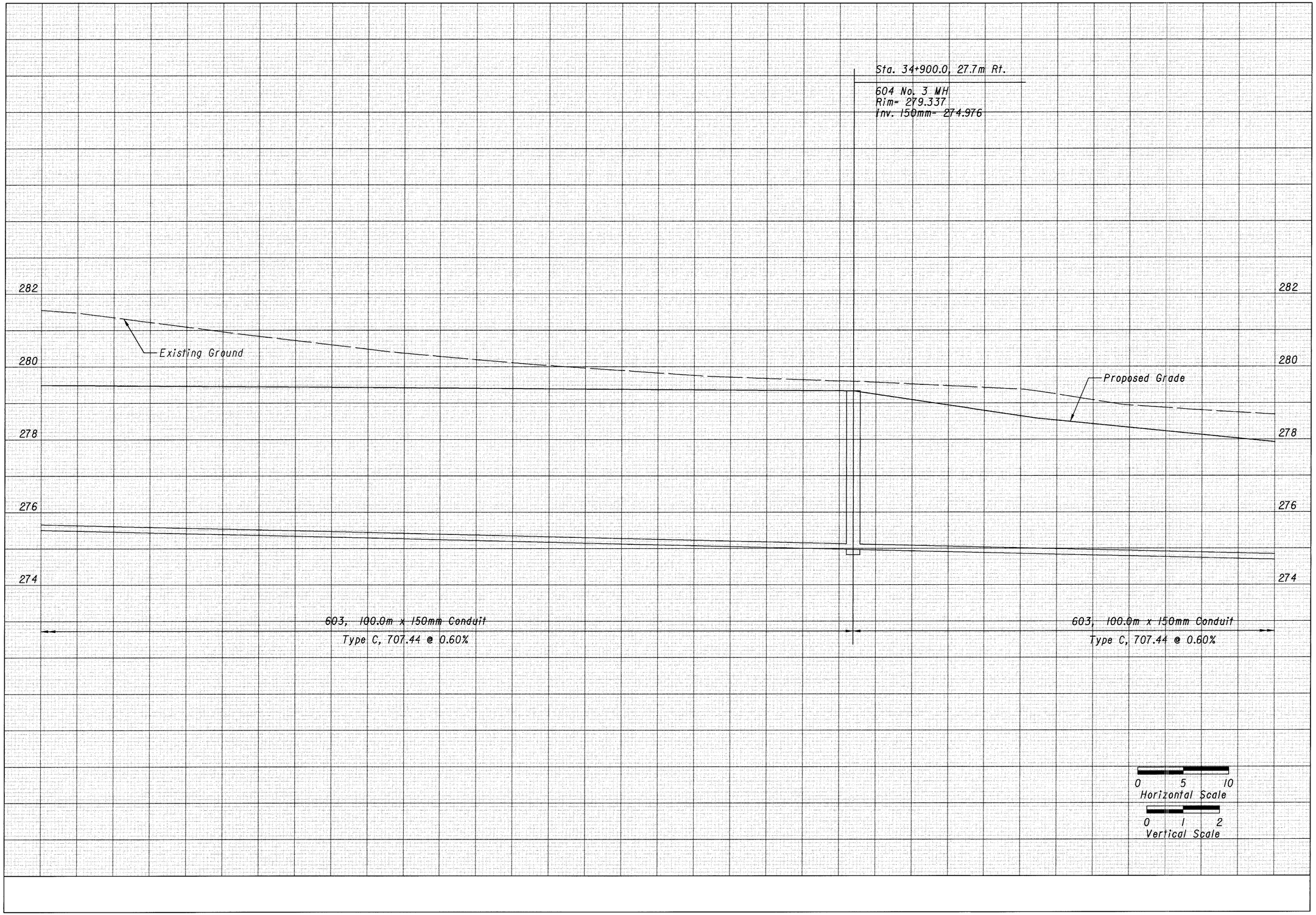


CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

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2116



CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

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2116

Sta. 35+000.0, 30.0m Rt.

604 No. 3 MH
Rim= 277.151
Inv. 150mm= 274.376

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

280

278

276

274

Proposed Grade

Existing Ground

603, 100.0m x 150mm Conduit
Type C, 707.44 @ 0.60%

603, 103.0m x 150mm Conduit
Type C, 707.44 @ 0.60%

CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

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2116

CALCULATED REA
CHECKED REA

Sta. 35+103.0, 30.0m Rt.

604 No. 3 MH, with flat top
Rim= 275.380
Inv. 150mm= 273.758

Sta. 35+200.0, 30.0m Rt.

604 No. 3 MH with flat to
Rim= 274.611
Inv. 150mm= 273.176

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

276

274

272

Existing Ground

603, 103.0m x 150mm Conduit
Type C, 707.44 @ 0.60%

603, 97.0m x 150mm Conduit
Type C, 707.44 @ 0.60%

603, 100.0m x 150mm Conduit
Type C, 707.44 @ 0.60%

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

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2116

Sta. 35+300.0, 30.0m Rt.

604 No. 3 MH, with flat top
Rim= 273.571
Inv. 150mm= 272.576

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

276
274
272

Existing Ground

603, 100.0m x 150mm Conduit
Type C, 707.44 @ 0.60%

603, 100.0m x 150mm Conduit
Type C, 707.44 @ 0.60%

CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

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2116

Sta. 35+400.0, 30.0m Rt.

604 No. 3 MH
Rim= 276.355
Inv. 150mm= 271.976

278
276
274
272
270

Proposed Grade

Existing Ground

603, 100.0m x 150mm Conduit
Type C, 707.44 @ 0.60%

603, 100.7m x 150mm Conduit
Type C, 707.44 @ 0.60%

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

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Sta. 35+500.0, 42.0m Rt.

604 No. 3 MH
Rim= 275.971
Inv. 150mm= 271.372

Sta. 35+600.0, 42.0m Rt.

604 No. 3 MH
Rim= 274.824
Inv. 150mm= 270.772

603, 100.0m x 150mm Conduit
Type C, 707.44 @ 0.60%

603, 101.3m x 150mm Conduit
Type C, 707.44 @ 0.60%

278 278

276 276

274 274

272 272

270 270

Existing Ground

Proposed Grade

603, 100.7m x 150mm Conduit
Type C, 707.44 @ 0.60%

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE EASTBOUND REST AREA

WYA / CRA-30-28.009 / 0.000

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2116

Sta. 35+700.0, 26.0m Rt.

604 No. 3 MH
Rim= 274.685
Inv. 150mm= 270.164

603, 101.3m x 150mm Conduit
Type C, 707.44 @ 0.60%

603, 99.8m x 150mm Conduit
Type C, 707.44 @ 0.60%

278
276
274
272
270
268

Proposed Grade

Existing Ground

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

1394
2116

Sta. 35+800.0, 26.0m Rt.

604 No. 3 MH
Rim= 274.185
Inv. 150mm= 269.565

603, 99.8m x 150mm Conduit
Type C, 707.44 @ 0.60%

603, 99.4m x 150mm Conduit
Type C, 707.44 @ 0.60%

278

278

276

276

Proposed Grade

Existing Ground

274

274

272

272

270

270

268

268

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

1395
2116

Sta. 35+900.0, 26.0m Rt.

604 No. 3 MH
Rim= 273.685
Inv. 150mm= 268.969

603, 99.4m x 150mm Conduit
Type C, 707.44 @ 0.60%

603, 99.4m x 150mm Conduit
Type C, 707.44 @ 0.60%

Sta. 36+000.0, 24.0m Rt.

604 No. 3 MH
Rim= 273.435
Inv. 150mm= 268.373

603, 99.4m x 150mm Conduit
Type C, 707.44 @ 0.60%

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

278

276

274

272

270

268

Existing Ground

Proposed Grade

CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

1396
2116

CALCULATED REA
CHECKED REA

Sta. 364100.0, 24.0m Rt.

604 No. 3 MH
Rim= 272.935
Inv. 150mm= 267.777

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

603, 99.4m x 150mm Conduit
Type C, 707.44 @ 0.60%

603, 81.8m x 150mm Conduit
Type C, 707.44 @ 0.60%

278
276
274
272
270
268
266

Existing Ground

Proposed Grade

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

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2116

Sta. 36+180.0, 44.0m Rt.

604 No. 3 MH
Rim= 271.105
Inv. 150mm= 267.286

Sta. 36+240.0, 44.0m Rt.

604 No. 3 MH, with flat top
Rim= 268.455
Inv. 150mm= 266.930

603, 81.8m x 150mm Conduit
Type C, 707.44 @ 0.60%

0 5 10
Horizontal Scale

0 1 2
Vertical Scale

603, 59.4m x 150mm Conduit
Type C, 707.44 @ 0.60%

603, 106.5m x 150mm Conduit
Type C, 707.44 @ 0.60%

274
272
270
268
266

Proposed Grade

Existing Ground

CALCULATED REA
CHECKED REA

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

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CALCULATED REA
CHECKED REA

Sta. 36+347.6, 47.9m Rt.

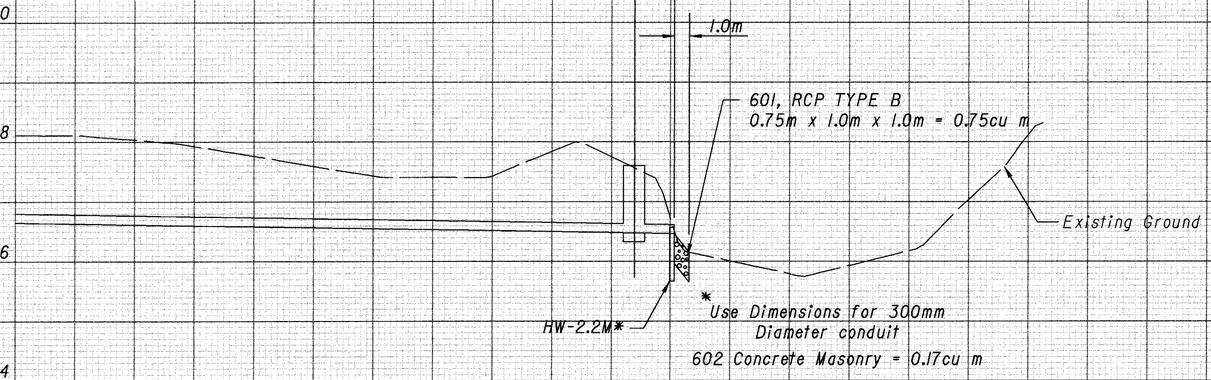
604 No. 3 MH, with flat top
Rim= 267.600
Inv. 150mm= 266.291

Sta. 36+350.6, 48.0m Rt.

Inv. 150mm= 266.273

603, 106.5m x 150mm Conduit
Type C, 707.44 @ 0.60%

603, 3.0m x 150mm Conduit
Type C, 707.44 @ 0.60%



0 5 10
Horizontal Scale

0 1 2
Vertical Scale

SANITARY SEWER PROFILE
EASTBOUND REST AREA

WYA/CRA-30-28.009/0.000

1399
2116

SUPERELEVATION TABLE

U.S. 30 Eastbound

LEFT E.O.P. ELEVATION	LEFT E.O.P. OFFSET	LEFT CROSS SLOPE	LEFT E.O.P. ELEVATION	LEFT E.O.P. OFFSET	LEFT CROSS SLOPE	℄ CONTROL ℄ STATION	℄ CONTROL PROFILE GRADE	RIGHT CROSS SLOPE	RIGHT E.O.P. OFFSET	RIGHT E.O.P. ELEVATION	RIGHT CROSS SLOPE	RIGHT E.O.P. OFFSET	RIGHT E.O.P. ELEVATION
				P.I. STATION 28+160.442 - R = 3500m - MAX SE = 0.019									
262.571	4.800	0.0160				28+113.392	262.494						
262.600	4.800	0.0161				28+120.000	262.522						
262.643	4.800	0.0164				28+130.000	262.564						
262.686	4.800	0.0166				28+140.000	262.606						
262.730	4.800	0.0168				28+150.000	262.649						
262.773	4.800	0.0170				28+160.000	262.691						
262.816	4.800	0.0173				28+170.000	262.733						
262.859	4.800	0.0175				28+180.000	262.775						
262.903	4.800	0.0177				28+190.000	262.818						
262.946	4.800	0.0179				28+200.000	262.860						
262.989	4.800	0.0181				28+210.000	262.902						
263.034	4.800	0.0184				28+220.000	262.946						
263.091	4.800	0.0186				28+230.000	263.002						
263.163	4.800	0.0188				28+240.000	263.073						
263.239	4.800	0.0190				28+248.721	263.148						
263.251	4.800	0.0190				28+250.000	263.160						
263.353	4.800	0.0190				28+260.000	263.262						
263.603	4.800	0.0190				28+280.000	263.512						
263.915	4.800	0.0190				28+300.000	263.824						
264.020	4.800	0.0190				28+306.440	263.937						
264.047	4.800	0.0160				28+308.019	263.966						
264.106	4.800	0.0160				28+311.440	264.029						
264.282	5.320	0.0160				28+320.000	264.197						
264.324	5.440	0.0160				28+321.978	264.237						
				P.I. STATION 29+138.153 (LT) - R = 571.2m - 145m SPIRALS - MAX SE = 0.08									
264.475	5.927	0.0116				28+330.000	264.406						
264.671	6.534	0.0061				28+340.000	264.631						
264.875	7.141	0.0005				28+350.000	264.871						
264.895	7.200	0.0000				28+350.978	264.895						
265.091	7.200	-0.0050				28+360.000	265.127						
265.321	7.200	-0.0105				28+370.000	265.397						
265.569	7.200	-0.0160				28+380.000	265.684						
265.827	7.200	-0.0215				28+390.000	265.982						
266.087	7.200	-0.0270				28+400.000	266.282						
266.348	7.200	-0.0326				28+410.000	266.582						
266.608	7.200	-0.0381				28+420.000	266.882						
266.868	7.200	-0.0436				28+430.000	267.182						
267.128	7.200	-0.0491				28+440.000	267.482						
267.389	7.200	-0.0546				28+450.000	267.782						
267.649	7.200	-0.0602				28+460.000	268.082						
267.909	7.200	-0.0657				28+470.000	268.382						
268.169	7.200	-0.0712				28+480.000	268.682						
268.430	7.200	-0.0767				28+490.000	268.982						
268.596	7.200	-0.0800				28+495.978	269.172						
268.706	7.200	-0.0800				28+500.000	269.282						
269.306	7.200	-0.0800				28+520.000	269.882						
269.906	7.200	-0.0800				28+540.000	270.482						
270.506	7.200	-0.0800				28+560.000	271.082						
271.106	7.200	-0.0800				28+580.000	271.682						
271.705	7.200	-0.0800				28+600.000	272.281						
272.284	7.200	-0.0800				28+620.000	272.860						
272.838	7.200	-0.0800				28+640.000	273.414						
273.369	7.200	-0.0800				28+660.000	273.945						
273.875	7.200	-0.0800				28+680.000	274.451						
274.358	7.200	-0.0800				28+700.000	274.934						
						CONTINUED THIS SHEET							

SUPERELEVATION TABLE

U.S. 30 Eastbound

LEFT E.O.P. ELEVATION	LEFT E.O.P. OFFSET	LEFT CROSS SLOPE	LEFT E.O.P. ELEVATION	LEFT E.O.P. OFFSET	LEFT CROSS SLOPE	℄ CONTROL ℄ STATION	℄ CONTROL PROFILE GRADE	RIGHT CROSS SLOPE	RIGHT E.O.P. OFFSET	RIGHT E.O.P. ELEVATION	RIGHT CROSS SLOPE	RIGHT E.O.P. OFFSET	RIGHT E.O.P. ELEVATION
274.816	7.200	-0.0800				28+720.000	275.392						
275.249	7.200	-0.0800				28+740.000	275.825						
275.659	7.200	-0.0800				28+760.000	276.235						
276.044	7.200	-0.0800				28+780.000	276.620						
276.406	7.200	-0.0800				28+800.000	276.982						
276.743	7.200	-0.0800				28+820.000	277.319						
277.056	7.200	-0.0800				28+840.000	277.632						
277.344	7.200	-0.0800				28+860.000	277.920						
277.609	7.200	-0.0800				28+880.000	278.185						
277.849	7.200	-0.0800				28+900.000	278.425						
278.065	7.200	-0.0800				28+920.000	278.641						
278.257	7.200	-0.0800				28+940.000	278.833						
278.425	7.200	-0.0800				28+960.000	279.001						
278.568	7.200	-0.0800				28+980.000	279.144						
278.688	7.200	-0.0800				29+000.000	279.264						
278.783	7.200	-0.0800				29+020.000	279.359						
278.854	7.200	-0.0800				29+040.000	279.430						
278.901	7.200	-0.0800				29+060.000	279.477						
278.923	7.200	-0.0800				29+080.000	279.499						
278.922	7.200	-0.0800				29+100.000	279.498						
278.896	7.200	-0.0800				29+120.000	279.472						
278.846	7.200	-0.0800				29+140.000	279.422						
278.772	7.200	-0.0800				29+160.000	279.348						
278.674	7.200	-0.0800				29+180.000	279.250						
278.551	7.200	-0.0800				29+200.000	279.127						
278.404	7.200	-0.0800				29+220.000	278.980						
278.233	7.200	-0.0800				29+240.000	278.809						
278.038	7.200	-0.0800				29+260.000	278.614						
277.819	7.200	-0.0800				29+280.000	278.395						
277.576	7.200	-0.0800				29+300.000	278.152						
277.308	7.200	-0.0800				29+320.000	277.884						
277.016	7.200	-0.0800				29+340.000	277.592						
276.700	7.200	-0.0800				29+360.000	277.276						
276.470	7.200	-0.0800				29+373.695	277.046						
276.385	7.200	-0.0765				29+380.000	276.936						
276.246	7.200	-0.0710				29+390.000	276.757						
276.099	7.200	-0.0655				29+400.000	276.571						
275.948	7.200	-0.0600				29+410.000	276.380						
275.791	7.200	-0.0545				29+420.000	276.183						
275.627	7.200	-0.0489				29+430.000	275.979						
275.457	7.200	-0.0434				29+440.000	275.770						
275.281	7.200	-0.0379				29+450.000	275.554						
275.100	7.200	-0.0324				29+460.000	275.333						
274.912	7.200	-0.0269				29+470.000	275.105						
274.718	7.200	-0.0213				29+480.000	274.872						
274.527	7.200	-0.0160	274.584	3.600	-0.0160	29+489.695	274.642						
274.520	7.200	-0.0160	274.578	3.600	-0.0158	29+490.000	274.635						
274.303	7.200	-0.0160	274.361	3.600	-0.0103	29+500.000	274.398						
274.086	7.200	-0.0160	274.144	3.600	-0.0048	29+510.000	274.161						
				P.I. STATION 29+825.675 (RT) - R = 560m - 120m SPIRALS - MAX SE = 0.08									
273.897	7.200	-0.0160	273.955	3.600	0.0000	29+518.695	273.955	0.0000	4.575	273.955	-0.0160	9.375	273.878
273.869	7.200	-0.0160	273.927	3.600	0.0007	29+520.000	273.924	-0.0002	4.548	273.923	-0.0160	9.348	273.846
273.652	7.200	-0.0160	273.709	3.600	0.0062	29+530.000	273.687	-0.0020	4.339	273.678	-0.0160	9.139	273.602
273.435	7.200	-0.0160	273.492	3.600	0.0118	29+540.000	273.450	-0.0038	4.131	273.434	-0.0160	8.931	273.358
273.267	7.200	-0.0160	273.325	3.600	0.0160	29+547.695	273.267	-0.0051	3.971	273.247	-0.0160	8.771	273.170
273.213	7.200	-0.0160	273.271	3.600	0.0160	29+550.000	273.213	-0.0055	3.923	273.191	-0.0160	8.723	273.114
						CONTINUED NEXT SHEET							

CALCULATED JGB
CHECKED REA

SUPERELEVATION TABLES US-30 EASTBOUND

WYA/CRA-30-28.009/0.000

SUPERELEVATION TABLE

U.S. 30 Eastbound

LEFT E.O.P. ELEVATION	LEFT E.O.P. OFFSET	LEFT CROSS SLOPE	LEFT E.O.P. ELEVATION	RIGHT E.O.P. OFFSET	RIGHT CROSS SLOPE	℄ CONTROL STATION	PROFILE GRADE	RIGHT CROSS SLOPE	RIGHT E.O.P. OFFSET	RIGHT E.O.P. ELEVATION	LEFT CROSS SLOPE	LEFT E.O.P. OFFSET	LEFT E.O.P. ELEVATION
CONTINUED FROM PREVIOUS SHEET													
272.976	7.200	-0.0160	273.034	3.600	0.0160	29+560.000	272.976	-0.0073	3.714	272.949	-0.0160	8.514	272.872
272.739	7.200	-0.0160	272.797	3.600	0.0160	29+570.000	272.739	-0.0091	3.506	272.707	-0.0160	8.306	272.630
272.502	7.200	-0.0160	272.560	3.600	0.0160	29+580.000	272.502	-0.0109	3.298	272.466	-0.0160	8.098	272.389
272.265	7.200	-0.0160	272.323	3.600	0.0160	29+590.000	272.265	-0.0126	3.089	272.226	-0.0160	7.889	272.149
272.028	7.200	-0.0160	272.086	3.600	0.0160	29+600.000	272.028	-0.0144	2.881	271.987	-0.0160	7.681	271.910
271.822	7.200	-0.0160	271.880	3.600	0.0160	29+608.695	271.822	-0.0160	2.700	271.779	-0.0160	7.500	271.702
271.793	7.200	-0.0154	271.849	3.600	0.0160	29+610.000	271.791				-0.0160	7.473	271.671
271.580	7.200	-0.0087	271.612	3.600	0.0160	29+620.000	271.554				-0.0160	7.264	271.438
271.367	7.200	-0.0021	271.375	3.600	0.0160	29+630.000	271.317				-0.0160	7.056	271.204
271.301	7.200	0.0000	271.301	3.600	0.0160	29+633.092	271.243				-0.0160	6.992	271.131
271.147	7.200	0.0046				29+640.000	271.080				-0.0160	6.848	270.970
270.924	7.200	0.0113				29+650.000	270.843				-0.0160	6.639	270.737
270.790	7.200	0.0160				29+657.092	270.675				-0.0160	6.492	270.571
270.735	7.200	0.0179				29+660.000	270.606				-0.0179	6.431	270.491
270.546	7.200	0.0246				29+670.000	270.369				-0.0246	6.223	270.216
270.357	7.200	0.0313				29+680.000	270.132				-0.0313	6.014	269.944
270.168	7.200	0.0379				29+690.000	269.895				-0.0379	5.806	269.675
269.979	7.200	0.0446				29+700.000	269.658				-0.0446	5.598	269.408
269.790	7.200	0.0513				29+710.000	269.421				-0.0513	5.389	269.145
269.601	7.200	0.0579				29+720.000	269.184				-0.0579	5.181	268.884
269.417	7.200	0.0646				29+730.000	268.952				-0.0646	4.973	268.631
269.247	7.200	0.0713				29+740.000	268.734				-0.0713	4.764	268.394
269.091	7.200	0.0779				29+750.000	268.530				-0.0779	4.556	268.175
269.046	7.200	0.0800				29+753.092	268.470				-0.0800	4.492	268.111
268.916	7.200	0.0800				29+760.000	268.340				-0.0800	4.348	267.992
268.577	7.200	0.0800				29+780.000	268.001				-0.0800	3.931	267.687
268.292	7.200	0.0800				29+800.000	267.716				-0.0800	3.514	267.435
268.063	7.200	0.0800				29+820.000	267.487				-0.0800	3.098	267.239
267.888	7.200	0.0800				29+840.000	267.312				-0.0800	2.681	267.098
267.769	7.200	0.0800				29+860.000	267.193				-0.0800	2.264	267.012
267.705	7.200	0.0800				29+880.000	267.129				-0.0800	1.848	266.981
267.692	7.200	0.0800				29+893.028	267.116				-0.0800	1.576	266.990
267.662	7.200	0.0754				29+900.000	267.119				-0.0742	1.431	267.013
267.630	7.200	0.0687				29+910.000	267.135				-0.0659	1.223	267.054
267.612	7.200	0.0620				29+920.000	267.165				-0.0575	1.014	267.107
267.607	7.200	0.0554				29+930.000	267.208				-0.0492	0.806	267.168
267.616	7.200	0.0487				29+940.000	267.265				-0.0409	0.598	267.241
267.636	7.200	0.0420				29+950.000	267.333				-0.0325	0.389	267.320
267.656	7.200	0.0354				29+960.000	267.401				-0.0242	0.181	267.397
267.676	7.200	0.0287				29+970.000	267.469						
267.696	7.200	0.0220				29+980.000	267.537						
267.713	7.200	0.0160	267.656	3.600	0.0160	29+989.028	267.598						
267.718	7.200	0.0154	267.663	3.600	0.0160	29+990.000	267.605						
267.762	7.200	0.0087	267.731	3.600	0.0160	30+000.000	267.673						
267.806	7.200	0.0020	267.799	3.600	0.0160	30+010.000	267.741						
267.820	7.200	0.0000	267.820	3.600	0.0160	30+013.028	267.762						
267.854	7.200	-0.0038	267.868	3.600	0.0160	30+020.000	267.810						
267.902	7.200	-0.0094	267.936	3.600	0.0160	30+030.000	267.878						
267.950	7.200	-0.0149	268.004	3.600	0.0160	30+040.000	267.946						
267.960	7.200	-0.0160	268.018	3.600	0.0160	30+042.028	267.960						

SUPERELEVATION TABLE

U.S. 30 Westbound

LEFT E.O.P. ELEVATION	LEFT E.O.P. OFFSET	LEFT CROSS SLOPE	LEFT E.O.P. ELEVATION	LEFT E.O.P. OFFSET	LEFT CROSS SLOPE	℄ CONTROL STATION	PROFILE GRADE	RIGHT CROSS SLOPE	RIGHT E.O.P. OFFSET	RIGHT E.O.P. ELEVATION	RIGHT CROSS SLOPE	RIGHT E.O.P. OFFSET	RIGHT E.O.P. ELEVATION
						℄ SURVEY US-23							
						14+370.084					-0.0160	14.861	269.166
						14+362.823					-0.0160	15.013	268.981
						14+352.827					-0.0160	15.223	268.710
						14+342.832					-0.0160	15.433	268.434
						14+332.836					-0.0160	15.643	268.152
						14+322.840					-0.0160	15.853	267.869
						14+312.845					-0.0160	16.063	267.593
						14+302.849					-0.0160	16.273	267.326
						14+292.854					-0.0160	16.483	267.061
						14+282.858					-0.0160	16.693	266.788
						14+272.862					-0.0160	16.903	266.506
						14+262.867					-0.0160	17.112	266.219
						14+252.871					-0.0160	17.322	265.944
						14+242.875					-0.0160	17.532	265.681
						14+232.880					-0.0160	17.742	265.417
						14+222.884					-0.0160	17.952	265.149
						14+212.889					-0.0160	18.162	264.895
						14+202.893					-0.0160	18.372	264.657
						14+192.897					-0.0160	18.582	264.437
						14+182.902					-0.0160	18.792	264.226
						14+172.906					-0.0160	19.002	264.024
						14+162.910					-0.0160	19.212	263.829
						14+152.915					-0.0160	19.422	263.645
						14+142.919					-0.0160	19.631	263.452
						14+132.924					-0.0160	19.841	263.286
						14+122.928					-0.0160	20.051	263.134
						14+112.932					-0.0160	20.261	262.984
						14+102.937					-0.0160	20.471	262.855
						14+092.941					-0.0160	20.681	262.715
						14+082.945					-0.0160	20.891	262.582
						14+072.950					-0.0160	21.101	262.545
						14+062.954					-0.0160	21.311	262.414
						14+052.959					-0.0160	21.521	262.317
						14+042.963					-0.0160	21.731	262.263
						14+032.967					-0.0160	21.940	262.208
						14+022.972					-0.0160	22.150	262.145
						14+012.976					-0.0160	22.360	262.092
						14+010.066		0.0160	17.621	262.162	-0.0160	22.421	262.085
						14+002.980		0.0160	17.674	262.152	-0.0160	22.570	262.074
						13+992.985		0.0160	17.751	262.153	-0.0160	22.780	262.073
						13+982.989		0.0160	17.828	262.169	-0.0160	22.990	262.086
						13+972.993		0.0160	17.904	262.190	-0.0160	23.200	262.105
						13+962.998		0.0160	17.981	262.211	-0.0160	23.410	262.124
						13+953.002		0.0160	18.058	262.232	-0.0160	23.620	262.143
						13+943.007		0.0160	18.134	262.253	-0.0160	23.830	262.162
						13+933.011		0.0160	18.211	262.274	-0.0160	24.040	262.181
						13+923.015		0.0160	18.287	262.294	-0.0160	24.249	262.199
						13+920.086		0.0160	18.311	262.301	-0.0160	24.311	262.205
US-23 STA.. 13+920.086, 24.311m RT. (BACK) = US-30 WB STA. 28+412.833 (AHEAD)													
US-30 WB - P.I. STATION 28+160.442 - R = 3500m - MAX SE = 0.019													
						28+412.833	262.205				0.0160	6.000	262.301
						28+420.000	262.218				0.0160	6.096	262.316
						28+430.000	262.237				0.0160	6.229	262.337
						28+436.833	262.250				0.0160	6.320	262.351
						28+440.000	262.256				0.0181	6.362	262.371
						CONTINUED NEXT SHEET							

CALCULATED JGB
CHECKED REA

SUPERELEVATION TABLES US-30 EASTBOUND & WESTBOUND

WYA/CRA-30-28.009/0.000

SUPERELEVATION TABLE

U.S. 30 Westbound

LEFT						℄ CONTROL				RIGHT			
E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION
						CONTINUED FROM PREVIOUS SHEET							
						28+450.000	262.275				0.0248	6.496	262.436
						28+460.000	262.294				0.0314	6.629	262.502
						28+470.000	262.312				0.0381	6.762	262.570
						28+480.000	262.331				0.0448	6.896	262.640
						28+490.000	262.350				0.0514	7.029	262.712
						28+500.000	262.370				0.0581	7.162	262.786
						28+502.833	262.377				0.0600	7.200	262.809
						28+510.000	262.401				0.0648	7.200	262.867
						28+520.000	262.450				0.0714	7.200	262.964
						28+530.000	262.514				0.0781	7.200	263.076
						28+532.833	262.535				0.0800	7.200	263.111
						28+540.000	262.595				0.0800	7.200	263.171
						28+560.000	262.805				0.0800	7.200	263.381
						28+580.000	263.080				0.0800	7.200	263.656
						28+600.000	263.420				0.0800	7.200	263.996
						28+620.000	263.826				0.0800	7.200	264.402
						28+640.000	264.296				0.0800	7.200	264.872
						28+660.000	264.832				0.0800	7.200	265.408
						28+680.000	265.433				0.0800	7.200	266.009
						28+700.000	266.099				0.0800	7.200	266.675
						28+720.000	266.806				0.0800	7.200	267.382
						28+740.000	267.511				0.0800	7.200	268.087
						28+760.000	268.194				0.0800	7.200	268.770
						28+780.000	268.849				0.0800	7.200	269.425
						28+800.000	269.476				0.0800	7.200	270.052
						28+820.000	270.076				0.0800	7.200	270.652
						28+840.000	270.648				0.0800	7.200	271.224
						28+860.000	271.193				0.0800	7.200	271.769
						28+880.000	271.711				0.0800	7.200	272.287
						28+900.000	272.200				0.0800	7.200	272.776
						28+920.000	272.663				0.0800	7.200	273.239
						28+940.000	273.098				0.0800	7.200	273.674
						28+960.000	273.505				0.0800	7.200	274.081
						28+980.000	273.885				0.0800	7.200	274.461
						28+987.495	274.020				0.0800	7.200	274.596
						28+990.000	274.065				0.0783	7.200	274.629
						29+000.000	274.238				0.0717	7.200	274.754
						29+010.000	274.403				0.0650	7.200	274.871
						29+020.000	274.562				0.0583	7.200	274.982
						29+030.000	274.715				0.0517	7.200	275.087
						29+040.000	274.860				0.0450	7.200	275.184
						29+050.000	274.998				0.0383	7.200	275.274
						29+060.000	275.130				0.0317	7.200	275.358
						29+070.000	275.254				0.0250	7.200	275.434
						29+080.000	275.372				0.0183	7.200	275.504
						29+083.495	275.412	0.0160	3.600	275.470	0.0160	7.200	275.527
						29+090.000	275.483	0.0160	3.600	275.541	0.0117	7.200	275.583
						29+100.000	275.587	0.0160	3.600	275.645	0.0050	7.200	275.663
						29+107.495	275.661	0.0160	3.600	275.719	0.0000	7.200	275.719
						29+110.000	275.684	0.0160	3.600	275.742	-0.0017	7.200	275.736
						29+120.000	275.775	0.0160	3.600	275.833	-0.0083	7.200	275.803
						29+130.000	275.858	0.0160	3.600	275.916	-0.0150	7.200	275.862
						29+131.495	275.870	0.0160	3.600	275.928	-0.0160	7.200	275.870

SUPERELEVATION TABLE

Ramp A

LEFT						℄ CONTROL				RIGHT			
E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION
						℄ Survey US-23							
				262.436		12+396.680					-0.0160	18.608	269.054
				262.502		12+405.427					-0.0160	18.604	269.002
				262.570		12+415.427					-0.0160	18.600	268.947
						12+425.427					-0.0160	18.595	268.898
						12+435.427					-0.0160	18.590	268.854
						12+445.427					-0.0160	18.586	268.815
						12+455.427					-0.0160	18.581	268.781
						12+463.451					-0.0160	18.577	268.754
		US-23 STA.. 12+463.451, 18.577m RT. (BACK) = RAMP A STA. 28+558.024 (AHEAD)											
		RAMP A - P.I. STATION 28+644.854 (RT.) - R = 1250m - MAX SE = 0.033											
						28+558.024	268.754						
						28+560.000	268.747						
						28+570.000	268.714						
						28+580.000	268.680						
						28+590.000	268.645						
						28+600.000	268.606						
						28+610.000	268.562						
						28+620.000	268.513						
						28+630.000	268.458						
						28+640.000	268.399						
						28+650.000	268.334						
						28+660.000	268.265						
						28+670.000	268.195						
		RAMP A - P.I. STATION 28+644.854 (RT.) - R = 1250m - MAX SE = 0.033											
268.199	4.800	0.0160				28+680.400	268.122						
268.183	4.800	0.0239				28+690.000	268.068						
268.191	4.800	0.0322				28+700.000	268.037						
268.193	4.800	0.0330				28+701.006	268.035						
268.189	4.800	0.0330				28+710.000	268.031						
268.210	4.800	0.0330				28+717.881	268.043						
		RAMP A - P.I. STATION 28+958.499 (RT.) - R = 305m - 70m SPIRAL - MAX SE = 0.080											
268.220	4.800	0.0354				28+720.000	268.049						
268.318	4.800	0.0469				28+730.000	268.093						
268.441	4.800	0.0583				28+740.000	268.161						
268.590	4.800	0.0697				28+750.000	268.255						
268.744	4.800	0.0800				28+759.006	268.360						
268.757	4.800	0.0800				28+760.000	268.373						
269.068	4.800	0.0800				28+780.000	268.684						
269.480	4.800	0.0800				28+800.000	269.096						
269.991	4.800	0.0800				28+820.000	269.607						
270.602	4.800	0.0800				28+840.000	270.218						
271.265	4.800	0.0800				28+860.000	270.881						
271.928	4.800	0.0800				28+880.000	271.544						
272.587	4.800	0.0800				28+900.000	272.203						
273.212	4.800	0.0800				28+920.000	272.828						
273.798	4.800	0.0800				28+940.000	273.414						
274.347	4.800	0.0800				28+960.000	273.963						
274.857	4.800	0.0800				28+980.000	274.473						
275.329	4.800	0.0800				29+000.000	274.945						
275.763	4.800	0.0800				29+020.000	275.379						
276.159	4.800	0.0800				29+040.000	275.775						
276.516	4.800	0.0800				29+060.000	276.132						
276.836	4.800	0.0800				29+080.000	276.452						
276.924	4.800	0.0800				29+086.030	276.540						
276.959	4.800	0.0755				29+090.000	276.597						
						CONTINUED NEXT SHEET							

CALCULATED JGB
CHECKED REA

SUPERELEVATION TABLES US-30 WESTBOUND & RAMP A

WYA / CRA-30-28.009 / 0.000

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SUPERELEVATION TABLE

RAMP A & RAMP B

LEFT						℄ CONTROL		RIGHT					
E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION
				CONTINUED FROM PREVIOUS SHEET									
277.040	4.800	0.0640				29+100.000	276.733						
277.112	4.800	0.0526				29+110.000	276.859						
277.173	4.800	0.0412				29+120.000	276.975						
277.225	4.800	0.0297				29+130.000	277.082						
277.268	4.800	0.0183				29+140.000	277.180						
277.276	4.800	0.0160				29+142.030	277.199						
277.423	4.800	0.0160				29+160.000	277.346						
			RAMP B										
		℄ SURVEY US-23											
269.377	14.757					12+259.876							
269.385	14.945					12+268.753							
269.388	15.157					12+278.750							
269.386	15.369					12+288.748							
269.376	15.581					12+298.746							
269.361	15.793					12+308.744							
269.339	16.005					12+318.741							
269.310	16.217					12+328.739							
269.275	16.429					12+338.737							
269.236	16.641					12+348.735							
269.196	16.853					12+358.733							
269.156	17.064					12+368.730							
269.116	17.276					12+378.728							
269.075	17.488					12+388.726							
269.035	17.700					12+398.724							
268.993	17.912					12+408.721							
268.952	18.124					12+418.719							
268.911	18.336					12+428.717							
268.869	18.548					12+438.715							
268.827	18.760					12+448.712							
268.784	18.972					12+458.710							
268.742	19.184					12+468.708							
268.699	19.396					12+478.706							
268.656	19.607					12+488.703							
268.613	19.819					12+498.701							
268.569	20.031					12+508.699							
268.525	20.243					12+518.697							
268.482	20.455					12+528.694							
268.438	20.667					12+538.692							
268.394	20.879					12+548.690							
268.351	21.091					12+558.688							
268.305	21.303					12+568.685							
268.257	21.515					12+578.683							
268.205	21.727					12+588.681							
268.150	21.938					12+598.679							
268.107	22.094	0.0160	268.184	17.294		12+606.008							
268.091	22.150	0.0160	268.168	17.350		12+608.676							
268.029	22.362	0.0160	268.106	17.562		12+618.674							
267.964	22.574	0.0160	268.041	17.774		12+628.672							
267.896	22.786	0.0160	267.973	17.986		12+638.670							
267.824	22.998	0.0160	267.901	18.198		12+648.667							
267.750	23.210	0.0160	267.827	18.410		12+658.665							
267.716	23.306	0.0160	267.793	18.506		12+663.185							
267.675	23.422	0.0213	267.777	18.622		12+668.663							
267.600	23.634	0.0311	267.749	18.834		12+678.661							
267.526	23.846	0.0409	267.722	19.046		12+688.658							
						CONTINUED THIS SHEET							

SUPERELEVATION TABLE

RAMP B

LEFT						℄ CONTROL		RIGHT					
E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION
267.471	24.001	0.0480	267.701	19.201		12+695.978							
		US-23 STA.. 12+695.978, 24.001m LT. (BACK) = RAMP B STA. 27+027.321 (AHEAD)											
		RAMP B - P.I. STATION 28+110.253 (LT) - R = 305m - 82m SPIRALS - MAX SE = 0.080											
						28+027.321	267.471	0.0480	4.800	267.701			
						28+030.000	267.451	0.0506	4.800	267.694			
						28+040.000	267.376	0.0605	4.800	267.667			
						28+050.000	267.306	0.0704	4.800	267.644			
						28+059.672	267.255	0.0800	4.800	267.639			
						28+060.000	267.254	0.0800	4.800	267.638			
						28+080.000	267.207	0.0800	4.800	267.591			
						28+100.000	267.236	0.0800	4.800	267.620			
						28+120.000	267.340	0.0800	4.800	267.724			
						28+140.000	267.520	0.0800	4.800	267.904			
						28+144.822	267.575	0.0800	4.800	267.959			
						28+150.000	267.639	0.0749	4.800	267.999			
						28+160.000	267.776	0.0652	4.800	268.089			
						28+170.000	267.932	0.0554	4.800	268.198			
						28+180.000	268.108	0.0457	4.800	268.327			
						28+190.000	268.302	0.0359	4.800	268.474			
						28+200.000	268.515	0.0262	4.800	268.641			
						28+210.000	268.747	0.0164	4.800	268.826			
						28+220.000	268.998	0.0067	4.800	269.030			
						28+226.822	269.180	0.0000	4.800	269.180			
		RAMP B - STATION 28+226.822, 4.8m RT. (BACK) = STATION 28+226.822 (AHEAD) SE = 0.000											
		RAMP B - P.I. STATION 29+169.181 (RT) - R = 305m - 82m SPIRALS - MAX SE = 0.080											
			269.180	4.800	0.0000	28+226.822	269.180						
			269.281	4.800	0.0031	28+230.000	269.266						
			269.598	4.800	0.0129	28+240.000	269.536						
			269.915	4.800	0.0226	28+250.000	269.806						
			270.231	4.800	0.0324	28+260.000	270.076						
			270.548	4.800	0.0421	28+270.000	270.346						
			270.865	4.800	0.0519	28+280.000	270.616						
			271.182	4.800	0.0616	28+290.000	270.886						
			271.499	4.800	0.0714	28+300.000	271.156						
			271.778	4.800	0.0800	28+308.822	271.394						
			272.080	4.800	0.0800	28+320.000	271.696						
			272.620	4.800	0.0800	28+340.000	272.236						
			273.160	4.800	0.0800	28+360.000	272.776						
			273.700	4.800	0.0800	28+380.000	273.316						
			274.240	4.800	0.0800	28+400.000	273.856						
			274.780	4.800	0.0800	28+420.000	274.396						
			275.320	4.800	0.0800	28+440.000	274.936						
			275.860	4.800	0.0800	28+460.000	275.476						
			276.400	4.800	0.0800	28+480.000	276.016						
			276.940	4.800	0.0800	28+500.000	276.556						
			277.480	4.800	0.0800	28+520.000	277.096						
			278.020	4.800	0.0800	28+540.000	277.636						
			278.560	4.800	0.0800	28+560.000	278.176						
			279.100	4.800	0.0800	28+580.000	278.716						
			279.611	4.800	0.0800	28+600.000	279.227						
			280.070	4.800	0.0800	28+620.000	279.686						
			280.477	4.800	0.0800	28+640.000	280.093						
			280.832	4.800	0.0800	28+660.000	280.448						
			281.134	4.800	0.0800	28+680.000	280.750						
			281.384	4.800	0.0800	28+700.000	281.000						
			281.582	4.800	0.0800	28+720.000	281.198						
						CONTINUED NEXT SHEET							

CALCULATED JGB
CHECKED REA

SUPERELEVATION TABLES
RAMP A & RAMP B

WYA/CRA-30-28.009/0.000

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SUPERELEVATION TABLE

RAMP B

LEFT						℄ CONTROL							RIGHT
E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION
			CONTINUED FROM PREVIOUS SHEET										
			281.727	4.800	0.0800	28+740.000	281.343						
			281.821	4.800	0.0800	28+760.000	281.437						
			281.862	4.800	0.0800	28+780.000	281.478						
			281.851	4.800	0.0800	28+800.000	281.467						
			281.788	4.800	0.0800	28+820.000	281.404						
			281.672	4.800	0.0800	28+840.000	281.288						
			281.504	4.800	0.0800	28+860.000	281.120						
			281.284	4.800	0.0800	28+880.000	280.900						
			281.012	4.800	0.0800	28+900.000	280.628						
			280.688	4.800	0.0800	28+920.000	280.304						
			280.311	4.800	0.0800	28+940.000	279.927						
			279.882	4.800	0.0800	28+960.000	279.498						
			279.401	4.800	0.0800	28+980.000	279.017						
			279.263	4.800	0.0800	28+985.423	278.879						
			279.125	4.800	0.0755	28+990.000	278.762						
			278.823	4.800	0.0658	29+000.000	278.507						
			278.521	4.800	0.0560	29+010.000	278.252						
			278.219	4.800	0.0463	29+020.000	277.997						
			277.917	4.800	0.0365	29+030.000	277.742						
			277.615	4.800	0.0268	29+040.000	277.487						
			277.315	4.800	0.0170	29+050.000	277.233						
			277.284	4.800	0.0160	29+051.023	277.207						
			277.071	4.800	0.0160	29+060.000	276.994						
			RAMP B - P.I. STATION 29+213.330 (RT) - R = 1250m - MAX SE = 0.035										
			276.142	4.800	0.0160	29+120.000	276.065						
			276.086	4.800	0.0160	29+127.62	276.009						
			276.071	4.800	0.0160	29+130.000	275.994						
			276.023	4.800	0.0160	29+140.000	275.946						
			276.003	4.800	0.0160	29+147.706	275.926						
			276.000	4.800	0.0160	29+150.000	275.923						
			276.000	4.800	0.0160	29+160.000	275.923						
			276.009	4.800	0.0160	29+165.020	275.932						
			276.024	4.800	0.0160	29+170.000	275.947						
			276.064	4.800	0.0160	29+180.000	275.987						
			276.085	4.800	0.0160	29+185.106	276.008						
			276.104	4.800	0.0160	29+190.000	276.027						
			276.145	4.800	0.0160	29+200.000	276.068						
			276.186	4.800	0.0160	29+210.000	276.109						
			276.226	4.800	0.0160	29+220.000	276.149						
			276.265	4.800	0.0160	29+230.000	276.188						
			276.273	4.800	0.0160	29+232.649	276.196						
			276.293	4.800	0.0160	29+240.000	276.216						
			276.323	4.489	0.0160	29+250.000	276.234						
			276.317	4.112	0.0160	29+260.000	276.241						
			276.304	3.838	0.0160	29+270.000	276.238						
			276.285	3.668	0.0160	29+280.000	276.225						
			276.254	3.600	0.0160	29+291.436	276.196						
			US-30 - P.I. STATION 30+333.210 (LT) - R = 4250m - NORMAL CROWN										
						℄ STATION							
276.254	9.000	-0.0160	276.196	5.400	-0.0160	29+291.436	276.254						
276.225	9.000	-0.0160	276.167	5.400	-0.0160	29+300.000	276.225						
276.184	9.000	-0.0160	276.126	5.400	-0.0160	29+310.000	276.184						
276.137	9.000	-0.0160	276.079	5.400	-0.0160	29+320.000	276.137						
276.083	9.000	-0.0160	276.025	5.400	-0.0160	29+330.000	276.083						
276.022	9.000	-0.0160	275.964	5.400	-0.0160	29+340.000	276.022						
						CONTINUED THIS SHEET							

SUPERELEVATION TABLE

US-30

LEFT						℄ CONTROL							RIGHT
E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION
275.954	9.000	-0.0160	275.896	5.400	-0.0160	29+350.000	275.954						
275.880	9.000	-0.0160	275.822	5.400	-0.0160	29+360.000	275.880						
275.798	9.000	-0.0160	275.740	5.400	-0.0160	29+370.000	275.798						
275.710	9.000	-0.0160	275.652	5.400	-0.0160	29+380.000	275.710						
275.615	9.000	-0.0160	275.557	5.400	-0.0160	29+390.000	275.615						
275.512	9.000	-0.0160	275.454	5.400	-0.0160	29+400.000	275.512						
275.403	9.000	-0.0160	275.345	5.400	-0.0160	29+410.000	275.403						
275.287	9.000	-0.0160	275.229	5.400	-0.0160	29+420.000	275.287						

CALCULATED JGB
CHECKED REA

SUPERELEVATION TABLES
RAMP B

WYA/CRA-30-28.009/0.000

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SUPERELEVATION TABLE

U.S. 30

LEFT			℄ CONTROL					RIGHT				
E.O.P. ELEVATION	E.O.P. OFFSET (m)	CROSS SLOPE	E.O.P. ELEVATION	E.O.P. OFFSET (m)	CROSS SLOPE	℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. OFFSET (m)	E.O.P. ELEVATION	CROSS SLOPE	E.O.P. OFFSET (m)	E.O.P. ELEVATION
			P.I. STATION 37+166.600 - R = 1400m - MAX SE = 0.045I										
278.411	16.200	-0.0160	278.469	12.600	0.0160	36+855.909	278.411	0.0160	12.600	278.469	-0.0160	16.200	278.411
278.434	16.200	-0.0160	278.491	12.600	0.0137	36+860.000	278.442	0.0160	12.600	278.500	-0.0137	16.200	278.450
278.489	16.200	-0.0160	278.547	12.600	0.0082	36+870.000	278.517	0.0160	12.600	278.575	-0.0082	16.200	278.545
278.544	16.200	-0.0160	278.602	12.600	0.0027	36+880.000	278.592	0.0160	12.600	278.650	-0.0027	16.200	278.640
278.572	16.200	-0.0160	278.630	12.600	-0.0000	36+885.000	278.630	0.0160	12.600	278.688	0.0000	16.200	278.688
278.593	16.200	-0.0178	278.657	12.600	-0.0028	36+890.000	278.667	0.0160	12.600	278.725	0.0028	16.200	278.735
278.636	16.200	-0.0213	278.712	12.600	-0.0083	36+900.000	278.742	0.0160	12.600	278.800	0.0083	16.200	278.829
278.678	16.200	-0.0249	278.767	12.600	-0.0138	36+910.000	278.817	0.0160	12.600	278.875	0.0138	16.200	278.924
278.696	16.200	-0.0263	278.790	12.600	-0.0160	36+914.091	278.848	0.0160	12.600	278.906	0.0160	16.200	278.963
278.720	16.200	-0.0284	278.823	12.600	-0.0193	36+920.000	278.892	0.0192	12.600	278.961	0.0193	16.200	279.031
278.763	16.200	-0.0320	278.878	12.600	-0.0248	36+930.000	278.967	0.0247	12.600	279.056	0.0248	16.200	279.145
278.805	16.200	-0.0355	278.933	12.600	-0.0303	36+940.000	279.042	0.0302	12.600	279.151	0.0303	16.200	279.260
278.848	16.200	-0.0391	278.988	12.600	-0.0358	36+950.000	279.117	0.0357	12.600	279.246	0.0358	16.200	279.374
278.890	16.200	-0.0426	279.043	12.600	-0.0413	36+960.000	279.192	0.0412	12.600	279.340	0.0413	16.200	279.489
278.920	16.200	-0.0451	279.083	12.600	-0.0451	36+967.000	279.245	0.0451	12.600	279.407	0.0451	16.200	279.570
278.942	16.200	-0.0451	279.105	12.600	-0.0451	36+970.000	279.267	0.0451	12.600	279.429	0.0451	16.200	279.592
279.017	16.200	-0.0451	279.180	12.600	-0.0451	36+980.000	279.342	0.0451	12.600	279.504	0.0451	16.200	279.667
279.051	16.200	-0.0451	279.214	12.600	-0.0451	36+984.573	279.376	0.0451	12.600	279.538	0.0451	16.200	279.701
279.092	16.200	-0.0451	279.255	12.600	-0.0451	36+990.000	279.417	0.0451	12.600	279.579	0.0451	16.200	279.742
279.167	16.200	-0.0451	279.330	12.600	-0.0451	37+000.000	279.492	0.0451	12.600	279.654	0.0451	16.200	279.817
279.242	16.200	-0.0451	279.405	12.600	-0.0451	37+010.000	279.567	0.0451	12.600	279.729	0.0451	16.200	279.892
279.317	16.200	-0.0451	279.480	12.600	-0.0451	37+020.000	279.642	0.0451	12.600	279.804	0.0451	16.200	279.967
279.395	16.200	-0.0451	279.558	12.600	-0.0451	37+030.000	279.720	0.0451	12.600	279.882	0.0451	16.200	280.045
279.480	16.200	-0.0451	279.643	12.600	-0.0451	37+040.000	279.805	0.0451	12.600	279.967	0.0451	16.200	280.130
279.574	16.200	-0.0451	279.737	12.600	-0.0451	37+050.000	279.899	0.0451	12.600	280.061	0.0451	16.200	280.224
279.675	16.200	-0.0451	279.838	12.600	-0.0451	37+060.000	280.000	0.0451	12.600	280.162	0.0451	16.200	280.325
279.785	16.200	-0.0451	279.948	12.600	-0.0451	37+070.000	280.110	0.0451	12.600	280.272	0.0451	16.200	280.435
279.903	16.200	-0.0451	280.066	12.600	-0.0451	37+080.000	280.228	0.0451	12.600	280.390	0.0451	16.200	280.553
280.029	16.200	-0.0451	280.192	12.600	-0.0451	37+090.000	280.354	0.0451	12.600	280.516	0.0451	16.200	280.679
280.159	16.200	-0.0451	280.322	12.600	-0.0451	37+100.000	280.484	0.0451	12.600	280.646	0.0451	16.200	280.809
280.289	16.200	-0.0451	280.452	12.600	-0.0451	37+110.000	280.614	0.0451	12.600	280.776	0.0451	16.200	280.939
280.419	16.200	-0.0451	280.582	12.600	-0.0451	37+120.000	280.744	0.0451	12.600	280.906	0.0451	16.200	281.069
280.549	16.200	-0.0451	280.712	12.600	-0.0451	37+130.000	280.874	0.0451	12.600	281.036	0.0451	16.200	281.199
280.679	16.200	-0.0451	280.842	12.600	-0.0451	37+140.000	281.004	0.0451	12.600	281.166	0.0451	16.200	281.329
280.809	16.200	-0.0451	280.972	12.600	-0.0451	37+150.000	281.134	0.0451	12.600	281.296	0.0451	16.200	281.459
280.939	16.200	-0.0451	281.102	12.600	-0.0451	37+160.000	281.264	0.0451	12.600	281.426	0.0451	16.200	281.589
281.069	16.200	-0.0451	281.232	12.600	-0.0451	37+170.000	281.394	0.0451	12.500	281.556	0.0451	16.200	281.719
281.199	16.200	-0.0451	281.362	12.600	-0.0451	37+180.000	281.524	0.0451	12.500	281.686	0.0451	16.200	281.849
281.329	16.200	-0.0451	281.492	12.600	-0.0451	37+190.000	281.654	0.0451	12.500	281.816	0.0451	16.200	281.979
281.408	16.200	-0.0451	281.571	12.600	-0.0451	37+196.071	281.733	0.0451	12.500	281.895	0.0451	16.200	282.058
281.459	16.200	-0.0451	281.622	12.600	-0.0451	37+200.000	281.784	0.0451	12.500	281.946	0.0451	16.200	282.109
281.589	16.200	-0.0451	281.752	12.600	-0.0451	37+210.000	281.914	0.0451	12.500	282.076	0.0451	16.200	282.239
281.719	16.200	-0.0451	281.882	12.600	-0.0451	37+220.000	282.044	0.0451	12.500	282.206	0.0451	16.200	282.369
281.798	16.200	-0.0451	281.961	12.600	-0.0451	37+226.071	282.123	0.0451	12.500	282.285	0.0451	16.200	282.448
281.849	16.200	-0.0451	282.012	12.600	-0.0451	37+230.000	282.174	0.0451	12.500	282.336	0.0451	16.200	282.499
281.979	16.200	-0.0451	282.142	12.600	-0.0451	37+240.000	282.304	0.0451	12.500	282.466	0.0451	16.200	282.629
282.109	16.200	-0.0451	282.272	12.600	-0.0451	37+250.000	282.434	0.0451	12.500	282.596	0.0451	16.200	282.759
282.239	16.200	-0.0451	282.402	12.600	-0.0451	37+260.000	282.564	0.0451	12.500	282.726	0.0451	16.200	282.889
282.369	16.200	-0.0451	282.532	12.600	-0.0451	37+270.000	282.694	0.0451	12.500	282.856	0.0451	16.200	283.019
282.499	16.200	-0.0451	282.662	12.600	-0.0451	37+280.000	282.824	0.0451	12.500	282.986	0.0451	16.200	283.149
282.629	16.200	-0.0451	282.792	12.600	-0.0451	37+290.000	282.954	0.0451	12.500	283.116	0.0451	16.200	283.279
282.759	16.200	-0.0451	282.922	12.600	-0.0451	37+300.000	283.084	0.0451	12.500	283.246	0.0451	16.200	283.409
282.889	16.200	-0.0451	283.052	12.600	-0.0451	37+310.000	283.214	0.0451	12.600	283.376	0.0451	16.200	283.539
282.972	16.200	-0.0451	283.135	12.600	-0.0451	37+316.395	283.297	0.0451	12.600	283.459	0.0451	16.200	283.622
283.019	16.200	-0.0451	283.182	12.600	-0.0451	37+320.000	283.344	0.0451	12.600	283.506	0.0451	16.200	283.669
					CONTINUED THIS SHEET								

SUPERELEVATION TABLE

U.S. 30

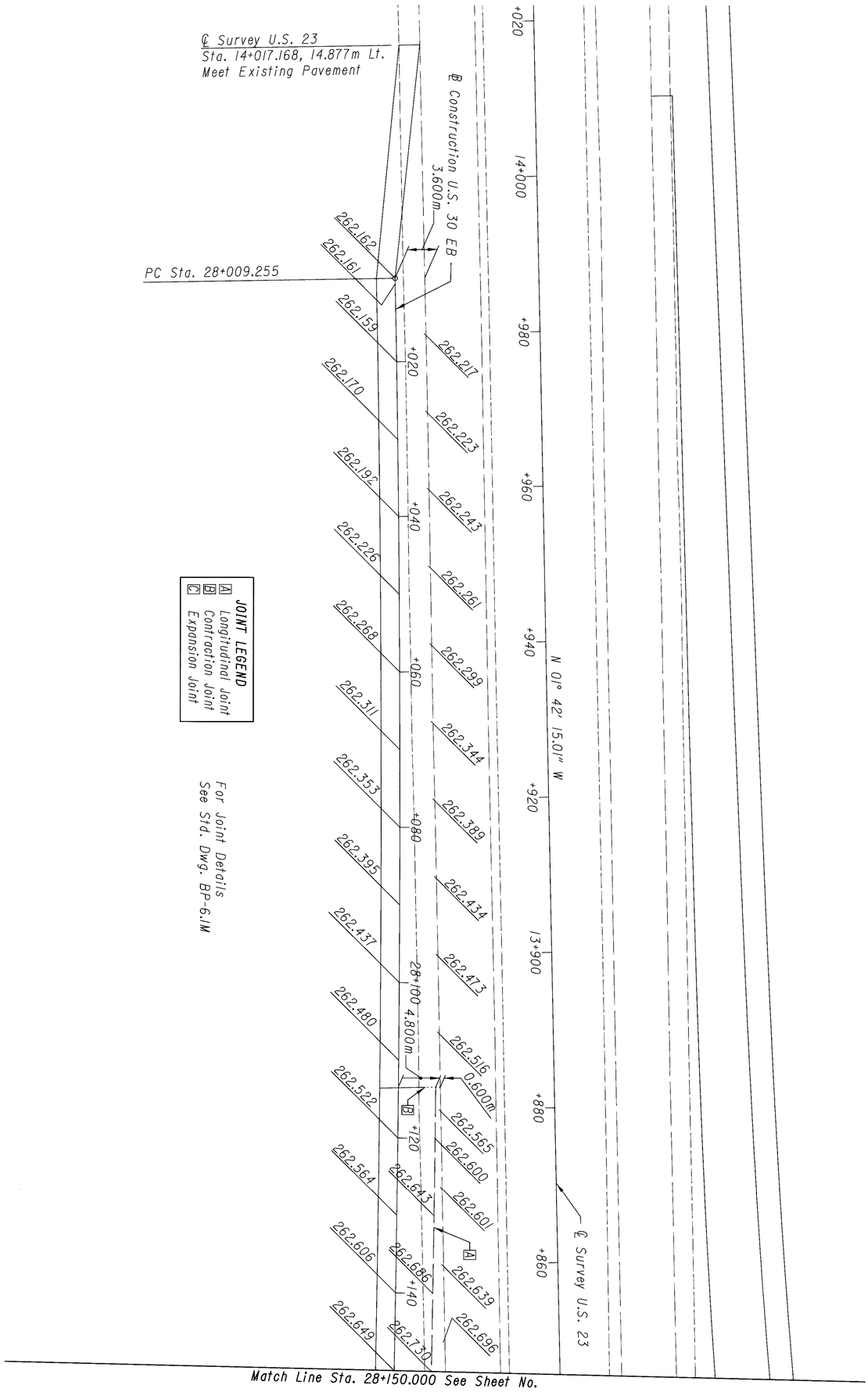
LEFT			℄ CONTROL					RIGHT				
E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION
283.149	16.200	-0.0451	283.312	12.600	-0.0451	37+330.000	283.474	0.0451	12.600	283.636	0.0451	16.200	283.799
283.279	16.200	-0.0451	283.442	12.600	-0.0451	37+340.000	283.604	0.0451	12.600	283.766	0.0451	16.200	283.929
283.338	16.200	-0.0451	283.501	12.600	-0.0451	37+344.573	283.663	0.0451	12.600	283.825	0.0451	16.200	283.988
283.409	16.200	-0.0451	283.572	12.600	-0.0451	37+350.000	283.734	0.0451	12.600	283.896	0.0451	16.200	284.059
283.539	16.200	-0.0451	283.702	12.600	-0.0451	37+360.000	283.864	0.0451	12.600	284.026	0.0451	16.200	284.189
283.565	16.200	-0.0451	283.728	12.600	-0.0451	37+362.000	283.890	0.0451	12.600	284.052	0.0451	16.200	284.215
283.701	16.200	-0.0407	283.847	12.600	-0.0407	37+370.000	283.994	0.0407	12.600	284.141	0.0407	16.200	284.287
283.871	16.200	-0.0352	283.997	12.600	-0.0352	37+380.000	284.124	0.0352	12.600	284.251	0.0352	16.200	284.377
284.040	16.200	-0.0297	284.147	12.600	-0.0297	37+390.000	284.254	0.0297	12.600	284.361	0.0297	16.200	284.468
284.210	16.200	-0.0242	284.297	12.600	-0.0242	37+400.000	284.384	0.0242	12.600	284.471	0.0242	16.200	284.558
284.379	16.200	-0.0187	284.447	12.600	-0.0187	37+410.000	284.514	0.0187	12.600	284.581	0.0187	16.200	284.649
284.462	16.200	-0.0160	284.519	12.600	-0.0160	37+414.909	284.577	0.0160	12.600	284.635	0.0160	16.200	284.692
284.539	16.200	-0.0160	284.596	12.600	-0.0132	37+420.000	284.644	0.0160	12.600	284.702	0.0132	16.200	284.749
284.689	16.200	-0.0160	284.746	12.600	-0.0077	37+430.000	284.774	0.0160	12.600	284.832	0.0077	16.200	284.859
284.757	16.200	-0.0160	284.814	12.600	-0.0052	37+434.573	284.833	0.0160	12.600	284.891	0.0052	16.200	284.909
284.779	16.200	-0.0160	284.836	12.600	-0.0044	37+436.071	284.852	0.0160	12.600	284.910	0.0044	16.200	284.925
284.838	16.200	-0.0160	284.896	12.600	-0.0022	37+440.000	284.904	0.0160	12.600	284.962	0.0022	16.200	284.970
284.898	16.200	-0.0160	284.956	12.600	-0.0000	37+444.000	284.956	0.0160	12.600	285.014	0.0000	16.200	285.014
284.988	16.200	-0.0160	285.046	12.600	0.0033	37+450.000	285.034	0.0160	12.600	285.092	-0.0033	16.200	285.080
285.137	16.200	-0.0160	285.195	12.600	0.0088	37+460.000	285.163	0.0160	12.600	285.221	-0.0088	16.200	285.189
285.287	16.200	-0.0160	285.344	12.600	0.0143	37+470.000	285.293	0.0160	12.600	285.351	-0.0143	16.200	285.299
285.334	16.200	-0.0160	285.392	12.600	0.0160	37+473.091	285.334	0.0160	12.600	285.392	-0.0160	16.200	285.334

CALCULATED JGB
CHECKED REA

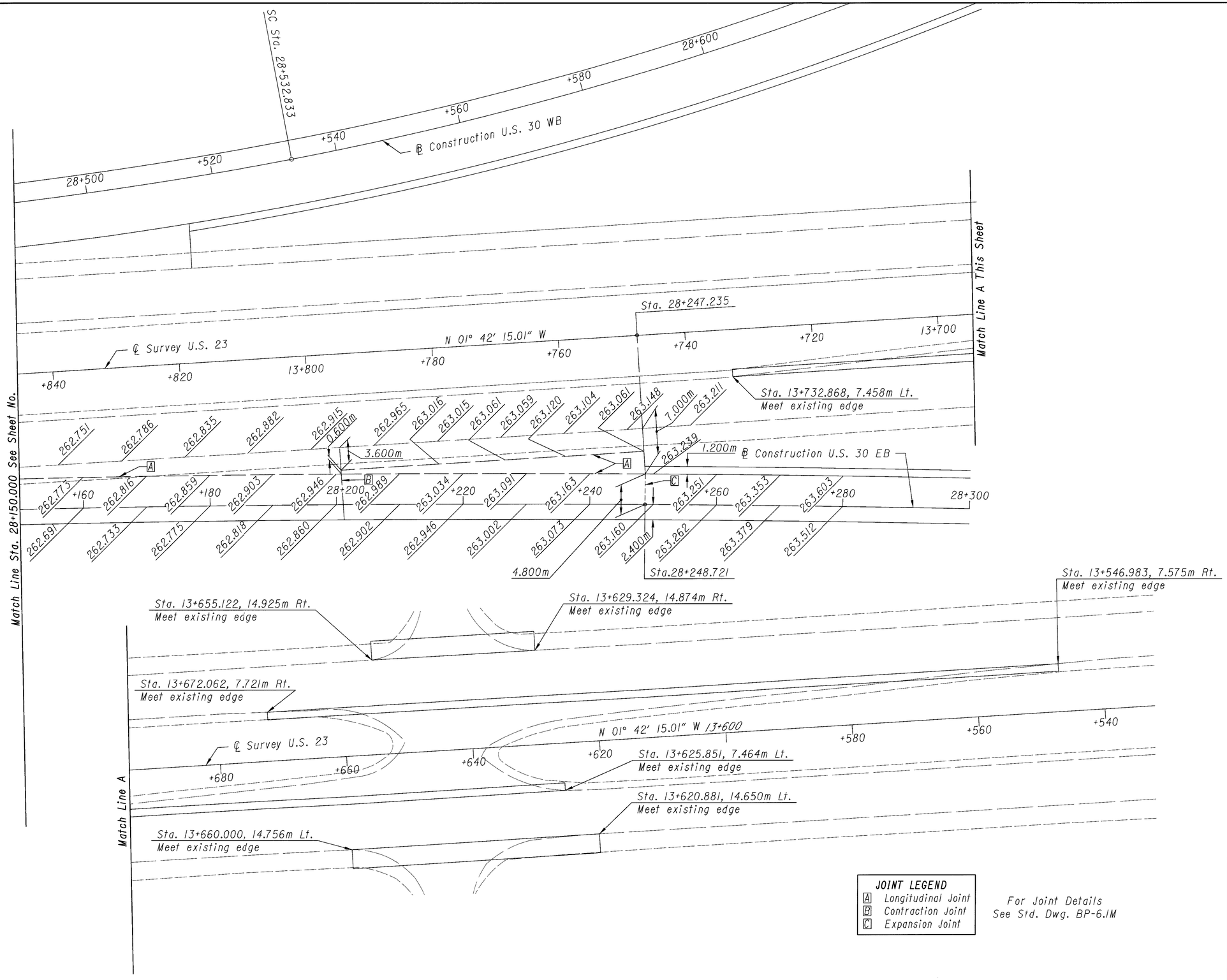
SUPERELEVATION TABLE
U.S. 30

WYA/CRA-30-28.009/0.000

1405
2116



1406 2116	WYA/CRA-30-28.009/0.000	PAVEMENT DETAIL - EASTBOUND U.S.R. 30 EXIT FROM U.S.R. 23 STA. 28+009.255 TO STA. 28+150	CALCULATED JGB CHECKED REA	0 5 10 HORIZONTAL SCALE IN METERS	N



N

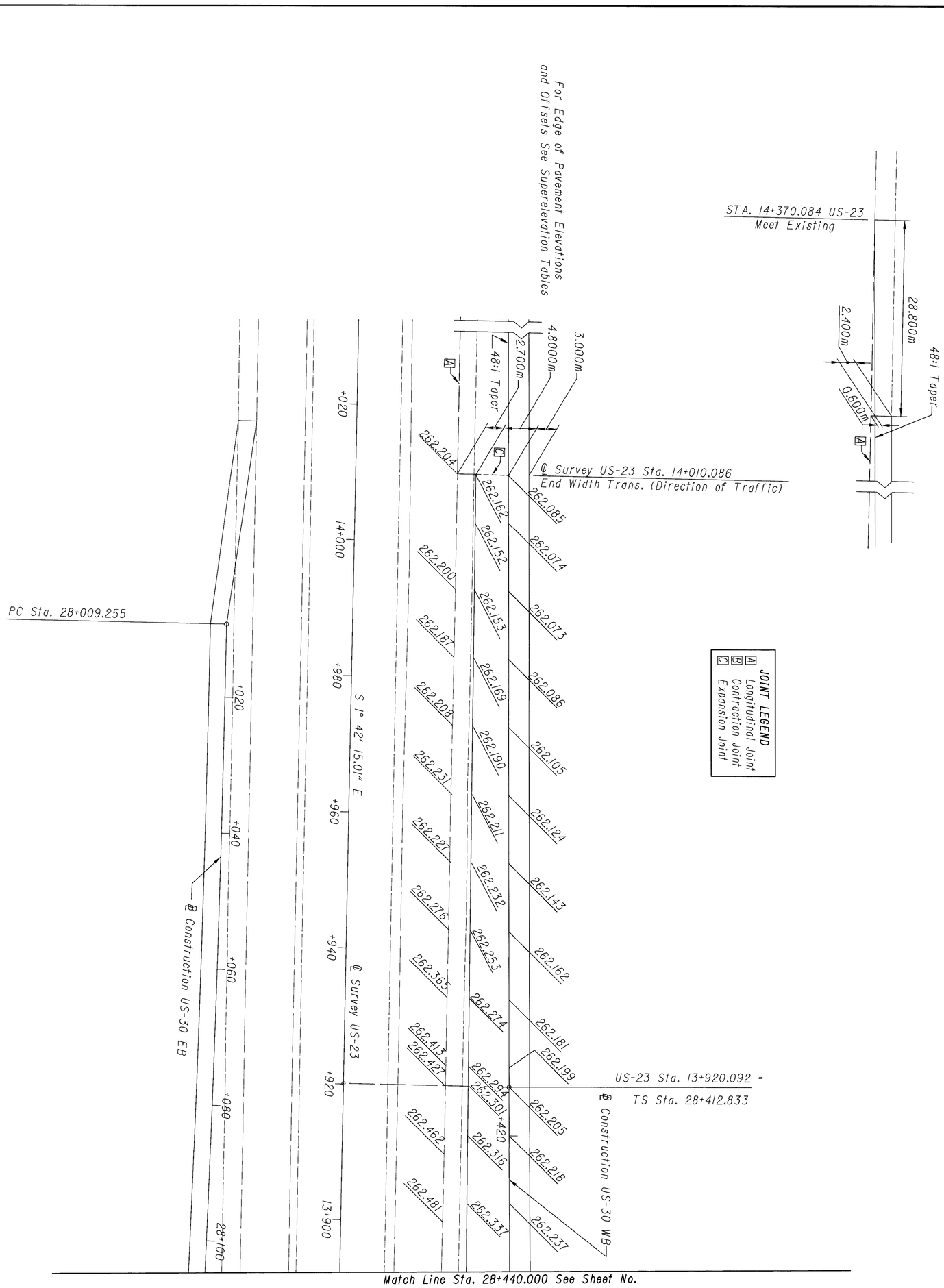
0 5 10
HORIZONTAL
SCALE IN METERS

CALCULATED JGB
CHECKED REA

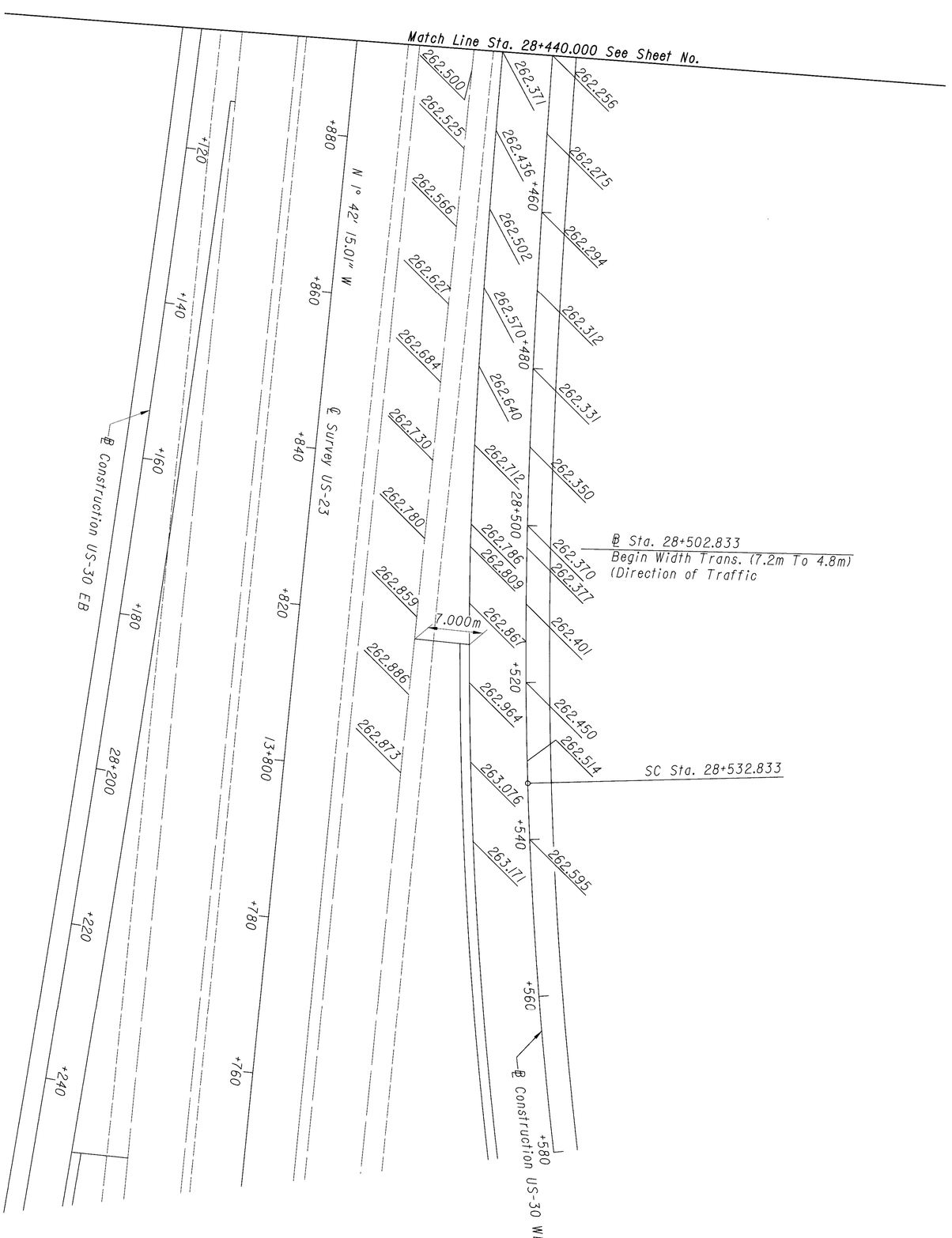
PAVEMENT DETAIL - EASTBOUND U.S.R. 30 EXIT FROM U.S.R. 23
STA. 28+150 TO STA. 28+280

WYA/CRA-30-28.009/0.000

1407
2116



1408 2116	WYA/CRA-30-28.009/0.000	PAVEMENT DETAIL - WESTBOUND U.S.R. 30 ENTRANCE TO U.S.R. 23 STA. 14+010 U.S.R. 23 TO STA. 28+440 WESTBOUND U.S.R. 30	CALCULATED JGB CHECKED REA	0 5 10 HORIZONTAL SCALE IN METERS	N



1409 2116	WYA/CRA-30-28.009/0.000	PAVEMENT DETAIL - WESTBOUND U.S.R. 30 ENTRANCE TO U.S.R. 23 STA. 28+440 TO STA. 28+530	CALCULATED JGB CHECKED REA	0 5 10 HORIZONTAL SCALE IN METERS	N

N

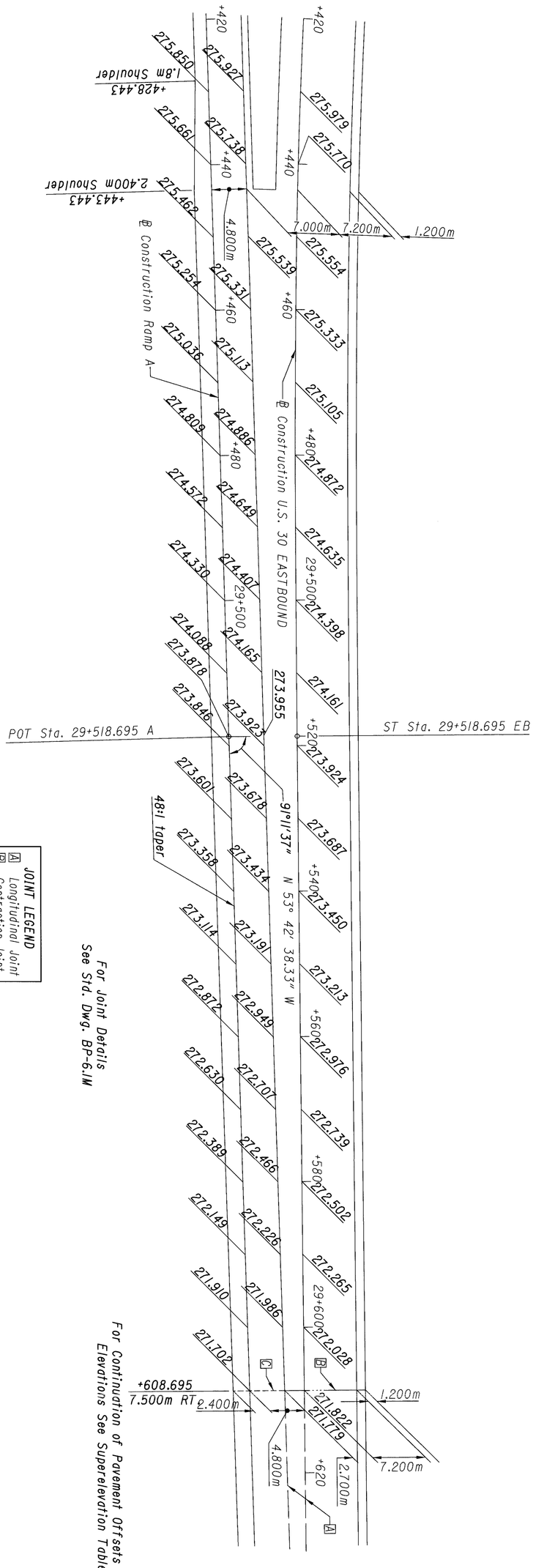
0 5 10
HORIZONTAL
SCALE IN METERS

CALCULATED JGB
CHECKED REA

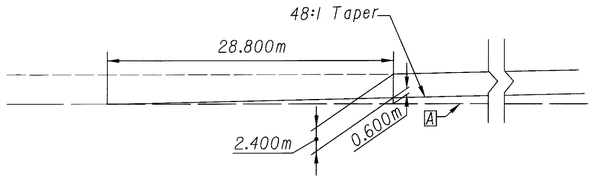
PAVEMENT DETAIL - RAMP A EXIT FROM U.S.R. 23

WYA / CRA-30-28.009 / 0.000

1410
2116



14 11 / 21 16	WYA/CRA-30-28.009/0.000	PAVEMENT DETAIL - RAMP A ENTRANCE TO EASTBOUND U.S.R. 30	CALCULATED JGB CHECKED REA	0 5 10 HORIZONTAL SCALE IN METERS	N



JOINT LEGEND
- A Longitudinal Joint
- B Contraction Joint
- C Expansion Joint

For Joint Details
See Std. Dwg. BP-6.1M

For Elevations see Ramp B
Superelevation Tables

For Continuation of Pavement Offsets and
Elevations Superelevation Tables

HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED JGB
CHECKED REA

PAVEMENT DETAIL - RAMP B ENTRANCE TO U.S.R. 23

WYA/CRA-30-28.009/0.000

1412
2116

JOINT LEGEND

- A Longitudinal Joint
- B Contraction Joint
- C Expansion Joint

For Joint Details
See Std. Dwg. BP-6.1m

HORIZONTAL SCALE IN METERS

0 5 10

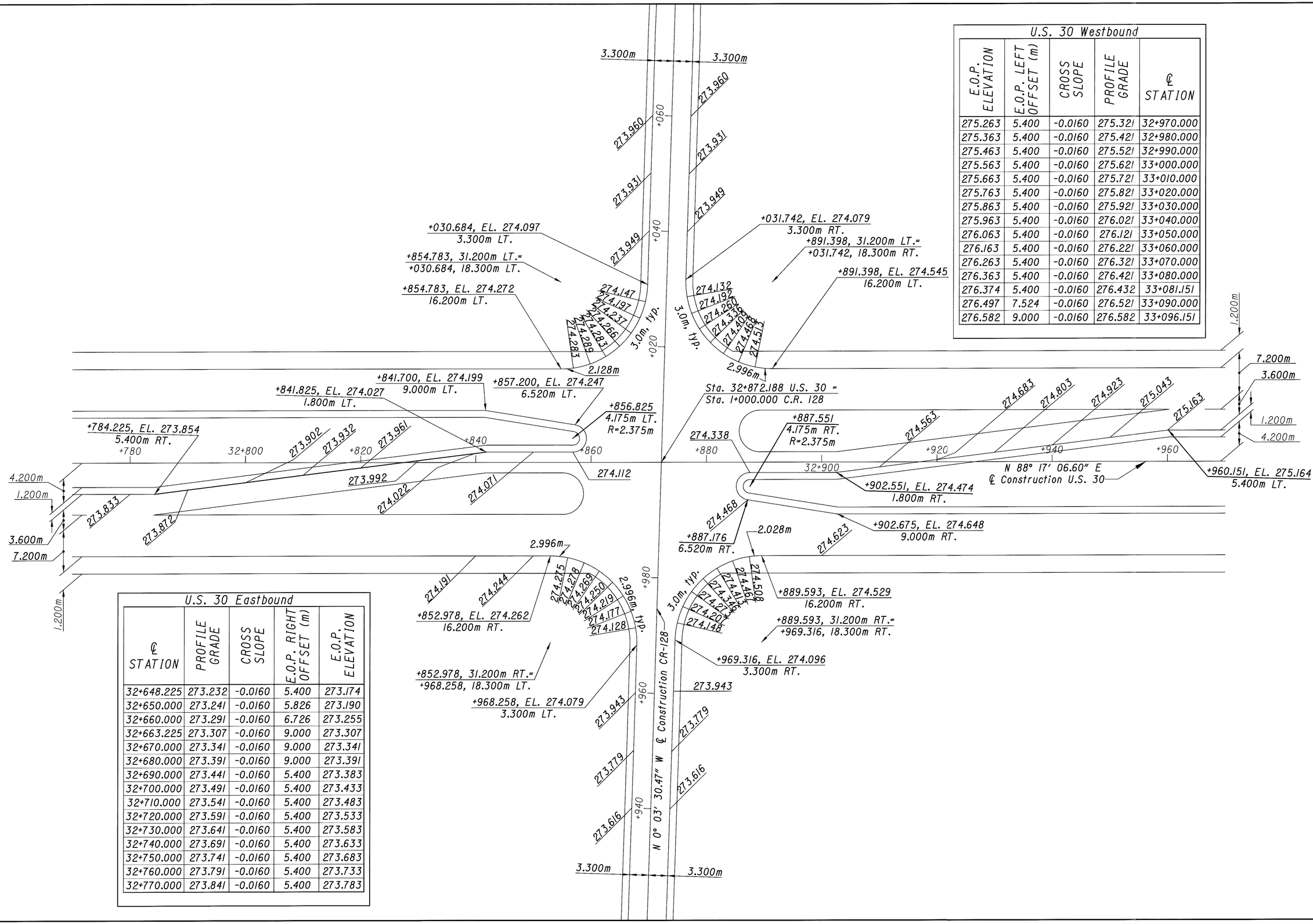
CALCULATED JGB

CHECKED REA

PAVEMENT DETAIL - RAMP B EXIT FROM WESTBOUND U.S.R. 30

WYA/CRA-30-28.009/0.000

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2116



U.S. 30 Westbound

E.O.P. ELEVATION	E.O.P. LEFT OFFSET (m)	CROSS SLOPE	PROFILE GRADE	℄ STATION
275.263	5.400	-0.0160	275.321	32+970.000
275.363	5.400	-0.0160	275.421	32+980.000
275.463	5.400	-0.0160	275.521	32+990.000
275.563	5.400	-0.0160	275.621	33+000.000
275.663	5.400	-0.0160	275.721	33+010.000
275.763	5.400	-0.0160	275.821	33+020.000
275.863	5.400	-0.0160	275.921	33+030.000
275.963	5.400	-0.0160	276.021	33+040.000
276.063	5.400	-0.0160	276.121	33+050.000
276.163	5.400	-0.0160	276.221	33+060.000
276.263	5.400	-0.0160	276.321	33+070.000
276.363	5.400	-0.0160	276.421	33+080.000
276.374	5.400	-0.0160	276.432	33+081.151
276.497	7.524	-0.0160	276.521	33+090.000
276.582	9.000	-0.0160	276.582	33+096.151

U.S. 30 Eastbound

℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. RIGHT OFFSET (m)	E.O.P. ELEVATION
32+648.225	273.232	-0.0160	5.400	273.174
32+650.000	273.241	-0.0160	5.826	273.190
32+660.000	273.291	-0.0160	6.726	273.255
32+663.225	273.307	-0.0160	9.000	273.307
32+670.000	273.341	-0.0160	9.000	273.341
32+680.000	273.391	-0.0160	9.000	273.391
32+690.000	273.441	-0.0160	5.400	273.383
32+700.000	273.491	-0.0160	5.400	273.433
32+710.000	273.541	-0.0160	5.400	273.483
32+720.000	273.591	-0.0160	5.400	273.533
32+730.000	273.641	-0.0160	5.400	273.583
32+740.000	273.691	-0.0160	5.400	273.633
32+750.000	273.741	-0.0160	5.400	273.683
32+760.000	273.791	-0.0160	5.400	273.733
32+770.000	273.841	-0.0160	5.400	273.783

N

0 5 10
HORIZONTAL
SCALE IN METERS

CALCULATED JGB
CHECKED REA

PAVEMENT DETAIL
U.S.R. 30 AT C.R. 128

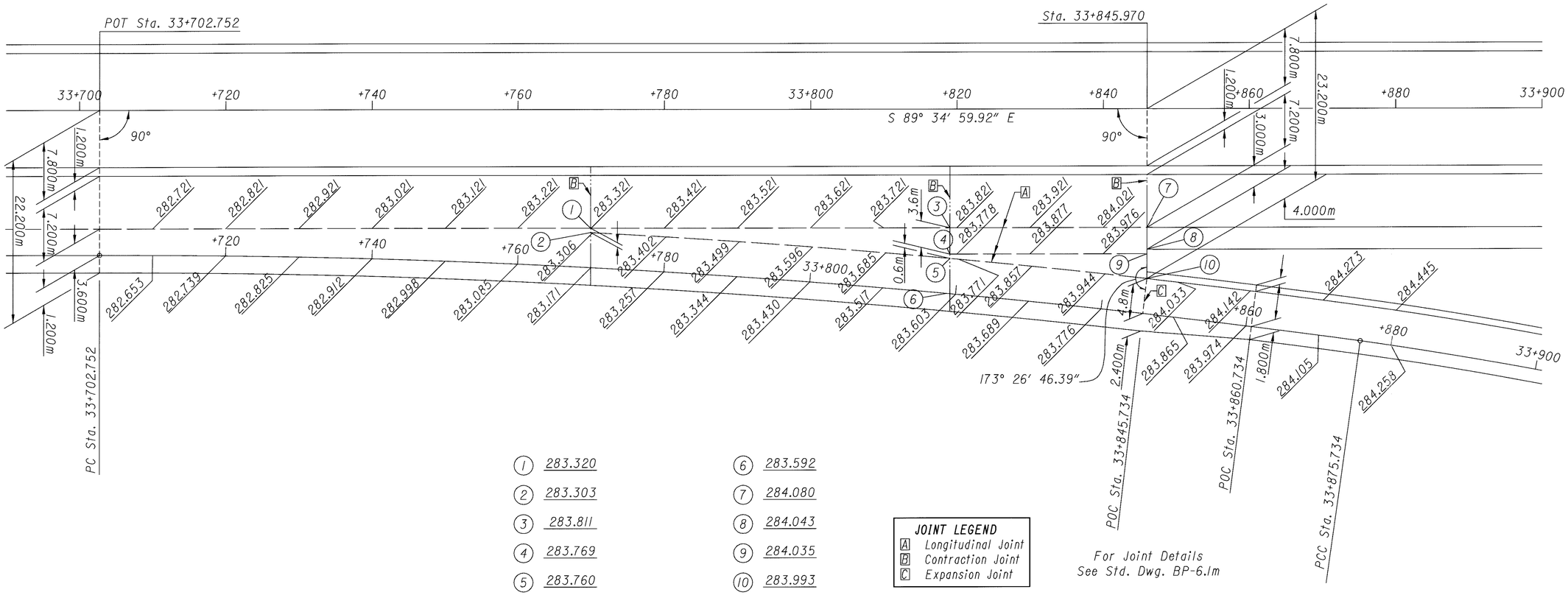
WYA/CRA-30-28.009/0.000

1414
2116

DECELERATION LANE US-30 EB TO RAMP E		
℄ STATION	RIGHT E.O.P. OFFSET (m)	E.O.P. ELEVATION
33+605.970	16.200	281.680
33+610.000	16.684	281.713
33+620.000	17.884	281.794
33+630.000	19.084	281.875
33+635.970	19.800	281.922
33+640.000	19.800	281.963
33+650.000	19.800	282.063
33+660.000	19.800	282.163
33+670.000	19.800	282.263
33+680.000	19.800	282.363
33+690.000	19.800	282.463
33+700.000	19.800	282.563
33+702.752	19.800	282.590

RAMP E
P.I. STATION 34+044.095 (RT.)
R = 500m - 500m SPIRAL
MAX SE = 0.057

PROFILE GRADE	℄ STATION	CROSS SLOPE	E.O.P. ELEV. 4.8m LT.	CROSS SLOPE	LEFT E.O.P. OFFSET (m)	E.O.P. ELEVATION
284.433	33+890.000	0.0486	284.666			
284.608	33+898.892	0.0570	284.882			
284.631	33+900.000	0.0570	284.905			
284.851	33+910.000	0.0570	285.125			
285.093	33+920.000	0.0570	285.367			
285.352	33+930.000	0.0570	285.626			
285.601	33+940.000	0.0570	285.875			
285.830	33+950.000	0.0570	286.104			
286.037	33+960.000	0.0570	286.311			
286.149	33+965.879	0.0570	286.423	0.0570	4.800	286.423
286.223	33+970.000	0.0570	286.497	0.0532	4.998	286.252
286.387	33+980.000	0.0570	286.661	0.0440	5.478	286.479
286.531	33+990.000	0.0570	286.805	0.0348	5.958	286.678
286.654	34+000.000	0.0570	286.928	0.0257	6.438	286.846
286.755	34+010.000	0.0570	287.029	0.0165	6.918	286.984
286.835	34+020.000	0.0570	287.109	0.0073	7.398	287.093
286.894	34+030.000	0.0570	287.168	-0.0019	7.878	287.171
286.932	34+040.000	0.0570	287.206	-0.0111	8.358	287.219
286.934	34+040.879	0.0570	287.208	-0.0119	8.400	287.222
286.948	34+050.000	0.0570	287.222			
286.944	34+060.000	0.0570	287.218			
286.918	34+070.000	0.0570	287.192			
286.889	34+076.772	0.0570	287.163			
286.871	34+080.000	0.0570	287.145			
286.714	34+100.000	0.0570	286.988			
286.507	34+120.000	0.0570	286.781			
286.299	34+140.000	0.0570	286.573			
286.091	34+160.000	0.0570	286.365			
285.991	34+169.638	0.0570	286.265			
285.987	34+170.000	0.0567	286.259			
285.883	34+180.000	0.0472	286.109			
285.779	34+190.000	0.0377	285.960			
285.675	34+200.000	0.0282	285.810			
285.571	34+210.000	0.0187	285.661			
285.542	34+212.796	0.0160	285.619			



(1)	283.320	(6)	283.592
(2)	283.303	(7)	284.080
(3)	283.811	(8)	284.043
(4)	283.769	(9)	284.035
(5)	283.760	(10)	283.993

JOINT LEGEND
[A] Longitudinal Joint
[B] Contraction Joint
[C] Expansion Joint

For Joint Details
See Std. Dwg. BP-6.1m

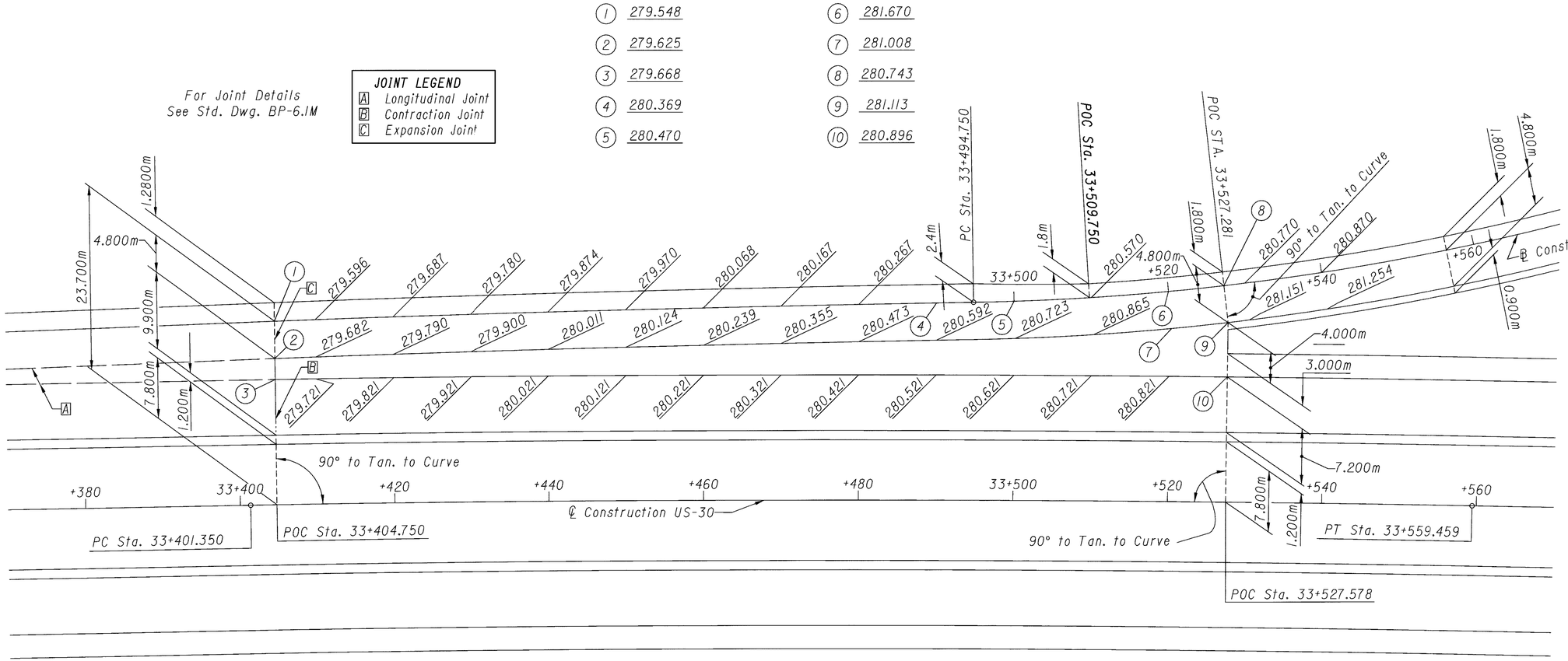
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED JGB
CHECKED REA

PAVEMENT DETAIL - RAMP E

WYA/CRA-30-28.009/0.000

1415
2116



ACCELERATION LANE RAMP F TO US-30 WB		
E.O.P. ELEVATION	LEFT E.O.P. OFFSET (m)	℄ STATION
276.040	16.200	33+040.000
276.068	16.200	33+044.750
276.119	16.309	33+050.000
276.216	16.518	33+060.000
276.313	16.726	33+070.000
276.409	16.934	33+080.000
276.506	17.143	33+090.000
276.603	17.351	33+100.000
276.699	17.559	33+110.000
276.796	17.768	33+120.000
276.893	17.976	33+130.000
276.989	18.184	33+140.000
277.086	18.393	33+150.000
277.183	18.601	33+160.000
277.279	18.809	33+170.000
277.376	19.018	33+180.000
277.473	19.226	33+190.000
277.569	19.434	33+200.000
277.666	19.643	33+210.000
277.763	19.851	33+220.000
277.859	20.059	33+230.000
277.956	20.268	33+240.000
278.053	20.476	33+250.000
278.149	20.684	33+260.000
278.246	20.893	33+270.000
278.343	21.101	33+280.000
278.439	21.309	33+290.000
278.536	21.518	33+300.000
278.633	21.726	33+310.000
278.729	21.934	33+320.000
278.826	22.143	33+330.000
278.923	22.351	33+340.000
279.019	22.559	33+350.000
279.116	22.768	33+360.000
279.213	22.976	33+370.000
279.309	23.184	33+380.000
279.406	23.393	33+390.000
279.503	23.601	33+400.000

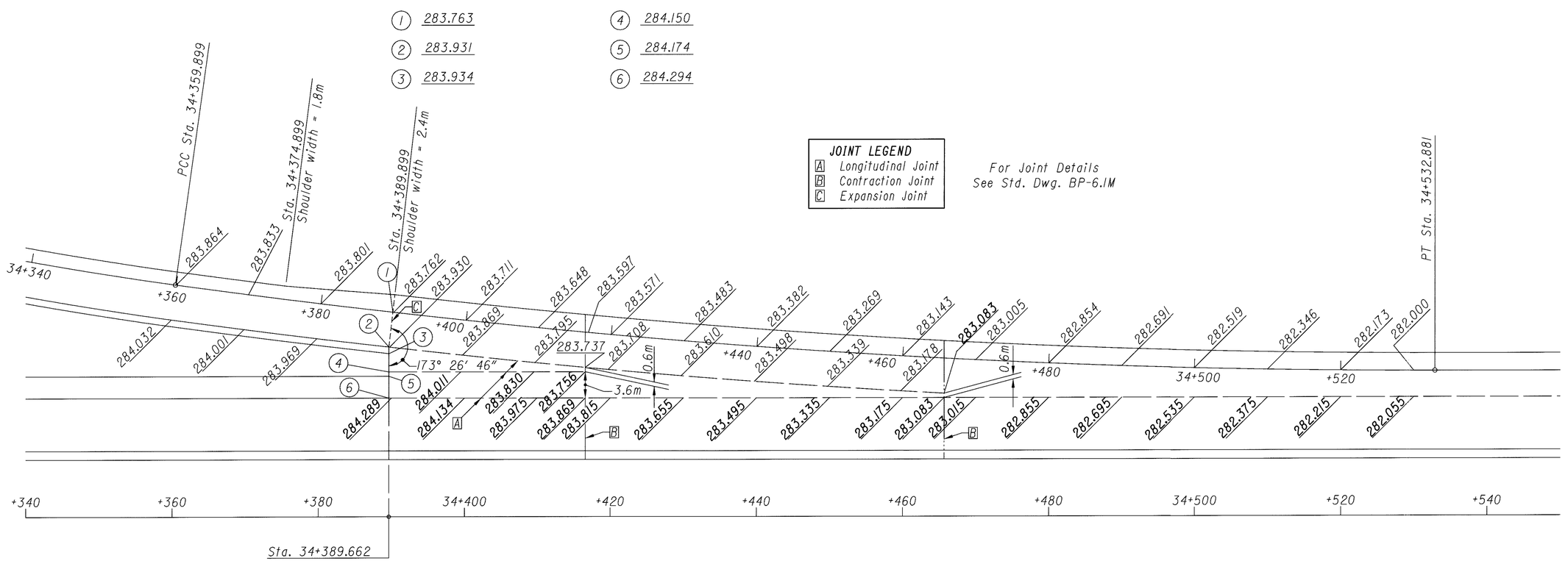
BEGIN RAMP F P.I. STATION 33+628.081 R = 333m - 90m SPIRAL MAX SE = 0.08			
℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. ELEV. 4.8m RT.
33+550.000	280.970	0.0800	281.354
33+560.000	281.070	0.0800	281.454
33+580.000	281.271	0.0800	281.655
33+600.000	281.476	0.0800	281.860
33+620.000	281.690	0.0800	282.074
33+640.000	281.911	0.0800	282.295
33+660.000	282.138	0.0800	282.522
33+680.000	282.365	0.0800	282.749
33+700.000	282.591	0.0800	282.975
33+700.838	282.601	0.0800	282.985
33+710.000	282.705	0.0719	283.050
33+720.000	282.818	0.0630	283.120
33+730.000	282.932	0.0541	283.192
33+740.000	283.045	0.0452	283.262
33+750.000	283.159	0.0363	283.333
33+760.000	283.272	0.0274	283.404
33+770.000	283.386	0.0185	283.475
33+772.838	283.418	0.0160	283.495

HORIZONTAL SCALE IN METERS
0 5 10
CALCULATED JGB
CHECKED REA

PAVEMENT DETAIL - RAMP F

WYA / CRA-30-28.009 / 0.000

1416
2116



BEGIN RAMP G P.I. STATION 34+203.634 (LT.) R = 500m - 60m SPIRAL MAX SE = 0.057						
℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. ELEV. 4.8m RT.	CROSS SLOPE	E.O.P. OFFSET (m)	E.O.P. ELEVATION
34+020.000	284.964	0.0160	285.041			
34+023.234	284.940	0.0160	285.017			
34+030.000	284.902	0.0224	285.010			
34+040.000	284.867	0.0319	285.020			
34+044.750	284.853	0.0364	285.028			
34+050.000	284.836	0.0414	285.035			
34+060.000	284.805	0.0509	285.049			
34+066.392	284.785	0.0570	285.059			
34+070.000	284.773	0.0570	285.047			
34+080.000	284.742	0.0570	285.016			
34+090.000	284.711	0.0570	284.985			
34+100.000	284.679	0.0570	284.953			
34+110.000	284.648	0.0570	284.922			
34+120.000	284.617	0.0570	284.891			
34+130.000	284.585	0.0570	284.859			
34+140.000	284.554	0.0570	284.828			
34+150.000	284.523	0.0570	284.797			
34+158.860	284.495	0.0570	284.769			
34+160.000	284.491	0.0570	284.765			
34+170.000	284.460	0.0570	284.734			
34+180.000	284.428	0.0570	284.702			
34+190.000	284.397	0.0570	284.671			
				RAMP G TO RAMP I		
34+194.774	284.382	0.0570	284.656	0.0119	8.400	284.699
34+200.000	284.366	0.0570	284.640	0.0151	8.149	284.690
34+210.000	284.334	0.0570	284.608	0.0211	7.669	284.668
34+220.000	284.303	0.0570	284.577	0.0271	7.189	284.641
34+230.000	284.272	0.0570	284.546	0.0331	6.708	284.609
34+240.000	284.240	0.0570	284.514	0.0391	6.228	284.569
34+250.000	284.209	0.0570	284.483	0.0451	5.748	284.525
34+260.000	284.178	0.0570	284.452	0.0511	5.268	284.476
34+269.744	284.147	0.0570	284.421	0.0570	4.800	284.421
34+270.000	284.146	0.0570	284.420			
34+280.000	284.115	0.0570	284.389			
34+290.000	284.084	0.0570	284.358			
34+300.000	284.052	0.0570	284.326			
34+310.000	284.021	0.0570	284.295			
34+320.000	283.989	0.0570	284.263			
34+330.000	283.958	0.0570	284.232			
34+336.741	283.937	0.0570	284.211			
34+340.000	283.927	0.0539	284.186			
34+350.000	283.895	0.0444	284.108			
34+359.899	283.864	0.0350	284.032			

DECELERATION LANE US-30 WB TO RAMP G	
E.O.P. ELEVATION	℄ STATION
LEFT E.O.P. OFFSET (m)	
281.950	19.800	34+532.881
281.837	19.800	34+540.000
281.679	19.800	34+550.000
281.536	19.800	34+560.000
281.408	19.800	34+570.000
281.296	19.800	34+580.000
281.198	19.800	34+590.000
281.119	19.800	34+599.662
281.117	19.759	34+600.000
281.069	18.559	34+610.000
281.036	17.359	34+620.000
281.006	16.200	34+629.662
281.005	16.200	34+630.000
280.955	16.200	34+640.000

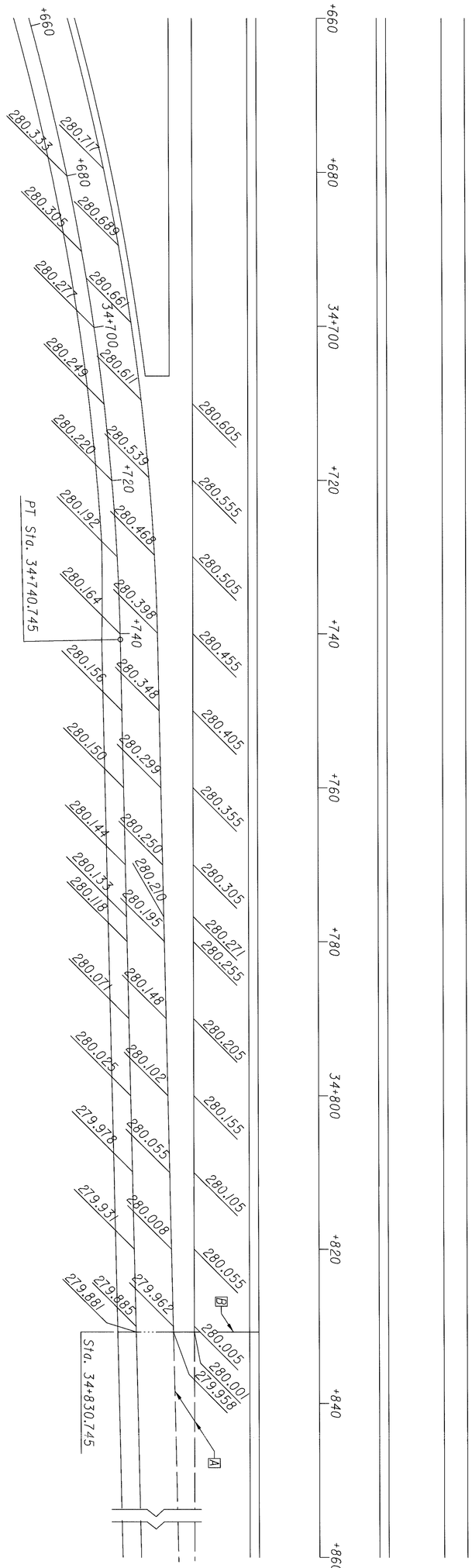
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED JGB
CHECKED REA

PAVEMENT DETAIL - RAMP G

WYA/CRA-30-28.009/0.000

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For Joint Details
See Std. Dwg. BP-6.1M

JOINT LEGEND

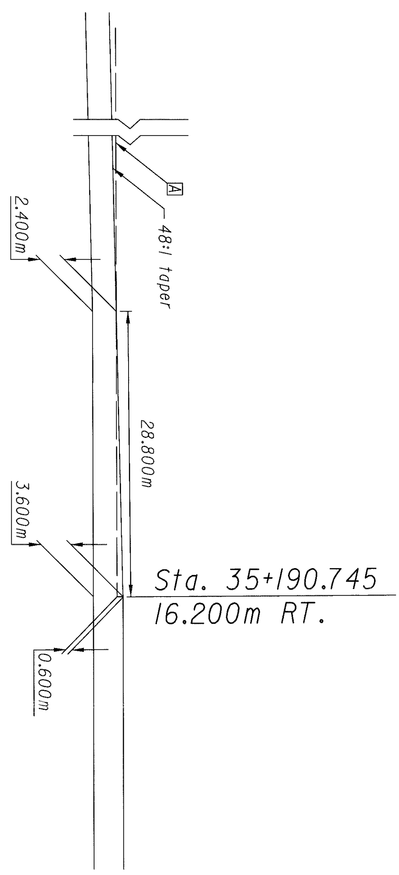
- A — Longitudinal Joint
- B — Contraction Joint
- C — Expansion Joint

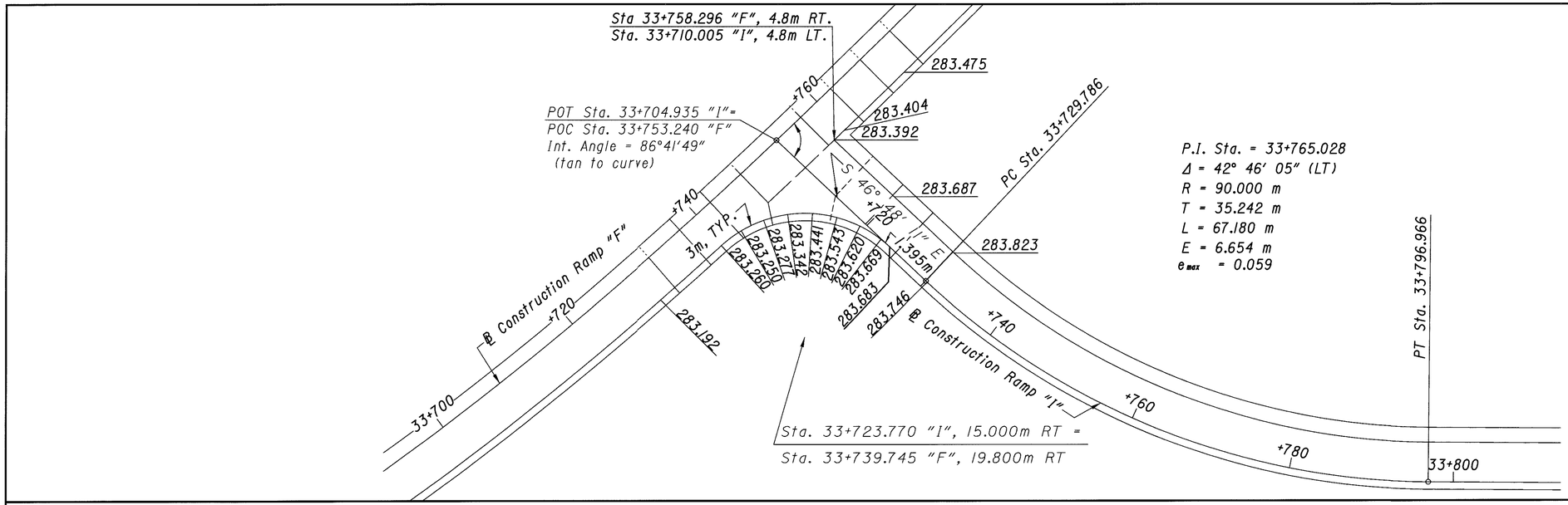
ACCELERATION LANE RAMP H TO US-30 EB

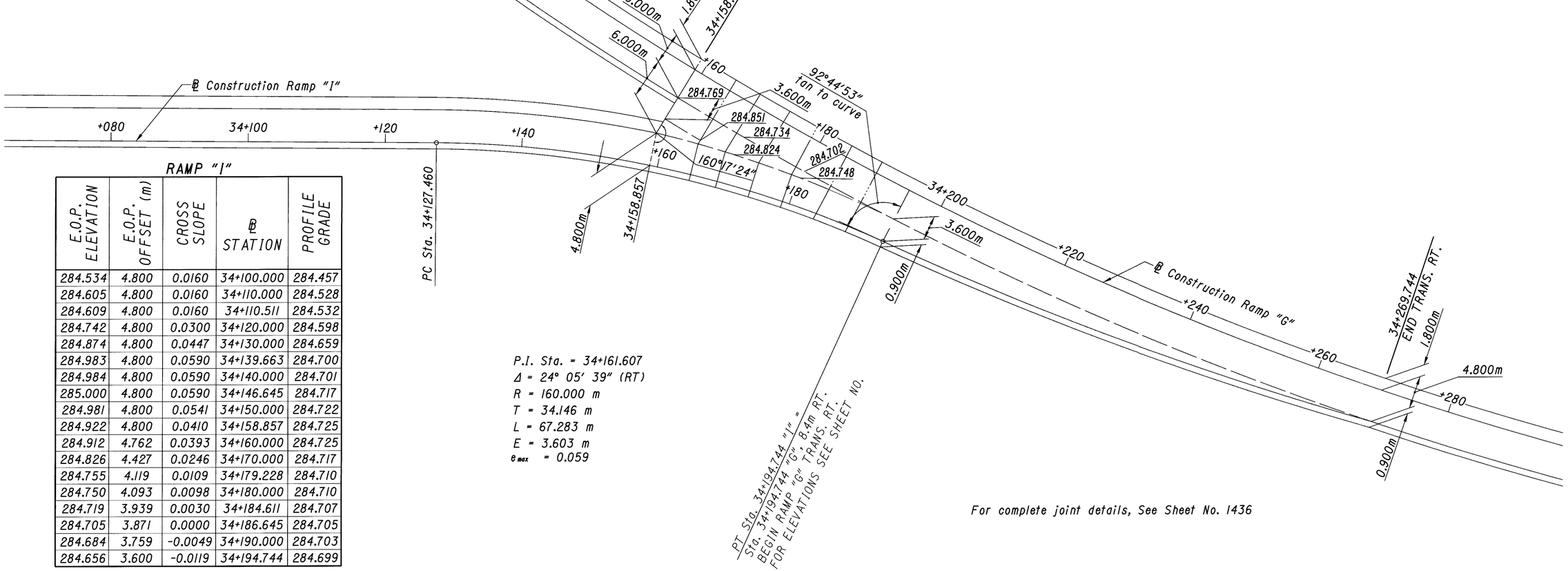
℄ STATION	RIGHT E.O.P. OFFSET (m)	E.O.P. ELEVATION
34+740.745	25.575	280.162
34+750.000	25.382	280.156
34+760.000	25.174	280.150
34+770.000	24.966	280.143
34+776.745	24.825	280.133
34+780.000	24.757	280.118
34+790.000	24.549	280.071
34+800.000	24.341	280.025
34+810.000	24.132	279.978
34+820.000	23.924	279.931
34+830.000	23.716	279.885
34+830.745	23.700	279.881
34+840.000	23.507	279.838
34+850.000	23.299	279.791
34+860.000	23.091	279.745
34+870.000	22.882	279.698
34+880.000	22.674	279.651
34+890.000	22.466	279.605
34+900.000	22.257	279.558
34+910.000	22.049	279.511
34+920.000	21.841	279.465
34+930.000	21.632	279.418
34+940.000	21.424	279.371
34+950.000	21.216	279.325
34+960.000	21.007	279.278
34+970.000	20.799	279.231
34+980.000	20.591	279.185
34+990.000	20.382	279.138
35+000.000	20.174	279.091
35+010.000	19.966	279.045
35+020.000	19.757	278.998
35+030.000	19.549	278.951
35+040.000	19.341	278.905
35+050.000	19.132	278.858
35+060.000	18.924	278.811
35+070.000	18.716	278.765
35+080.000	18.507	278.718
35+090.000	18.299	278.671
35+100.000	18.091	278.625
35+110.000	17.882	278.578
35+120.000	17.674	278.531
35+130.000	17.466	278.485
35+140.000	17.257	278.438
35+150.000	17.049	278.391
35+160.000	16.841	278.345
35+170.000	16.632	278.298
35+180.000	16.424	278.251
35+190.000	16.216	278.205
35+190.745	16.200	278.205

BEGIN RAMP H
P.I. STATION 34+618.333 (RT.)
R = 333m - 90m SPIRAL
MAX SE = 0.080

E.O.P. ELEV. 4.8m LT.	CROSS SLOPE	℄ STATION	PROFILE GRADE
282.071	0.0160	34+450.000	281.994
281.953	0.0160	34+457.652	281.876
281.929	0.0181	34+460.000	281.842
281.840	0.0270	34+470.000	281.711
281.773	0.0359	34+480.000	281.601
281.716	0.0448	34+490.000	281.501
281.658	0.0536	34+500.000	281.401
281.601	0.0625	34+510.000	281.301
281.544	0.0714	34+520.000	281.201
281.488	0.0800	34+529.652	281.104
281.485	0.0800	34+530.000	281.101
281.385	0.0800	34+540.000	281.001
281.287	0.0800	34+550.000	280.903
281.199	0.0800	34+560.000	280.815
281.121	0.0800	34+570.000	280.737
281.053	0.0800	34+580.000	280.669
280.997	0.0800	34+590.000	280.613
280.951	0.0800	34+600.000	280.567
280.915	0.0800	34+610.000	280.531
280.887	0.0800	34+620.000	280.503
280.858	0.0800	34+630.000	280.474
280.830	0.0800	34+640.000	280.446
280.802	0.0800	34+650.000	280.418
280.774	0.0800	34+660.000	280.390
280.745	0.0800	34+670.000	280.361
280.717	0.0800	34+680.000	280.333
280.689	0.0800	34+690.000	280.305
280.661	0.0800	34+700.000	280.277
280.647	0.0800	34+704.745	280.263
280.611	0.0753	34+710.000	280.249
280.539	0.0664	34+720.000	280.220
280.468	0.0576	34+730.000	280.192
280.398	0.0487	34+740.000	280.164
280.392	0.0480	34+740.745	280.162







RAMP "I"

E.O.P. ELEVATION	E.O.P. OFFSET (m)	CROSS SLOPE	℄ STATION	PROFILE GRADE
284.534	4.800	0.0160	34+100.000	284.457
284.605	4.800	0.0160	34+110.000	284.528
284.609	4.800	0.0160	34+110.511	284.532
284.742	4.800	0.0300	34+120.000	284.598
284.874	4.800	0.0447	34+130.000	284.659
284.983	4.800	0.0590	34+139.663	284.700
284.984	4.800	0.0590	34+140.000	284.701
285.000	4.800	0.0590	34+146.645	284.717
284.981	4.800	0.0541	34+150.000	284.722
284.922	4.800	0.0410	34+158.857	284.725
284.912	4.762	0.0393	34+160.000	284.725
284.826	4.427	0.0246	34+170.000	284.717
284.755	4.119	0.0109	34+179.228	284.710
284.750	4.093	0.0098	34+180.000	284.710
284.719	3.939	0.0030	34+184.611	284.707
284.705	3.871	0.0000	34+186.645	284.705
284.684	3.759	-0.0049	34+190.000	284.703
284.656	3.600	-0.0119	34+194.744	284.699

For complete joint details, See Sheet No. 1436

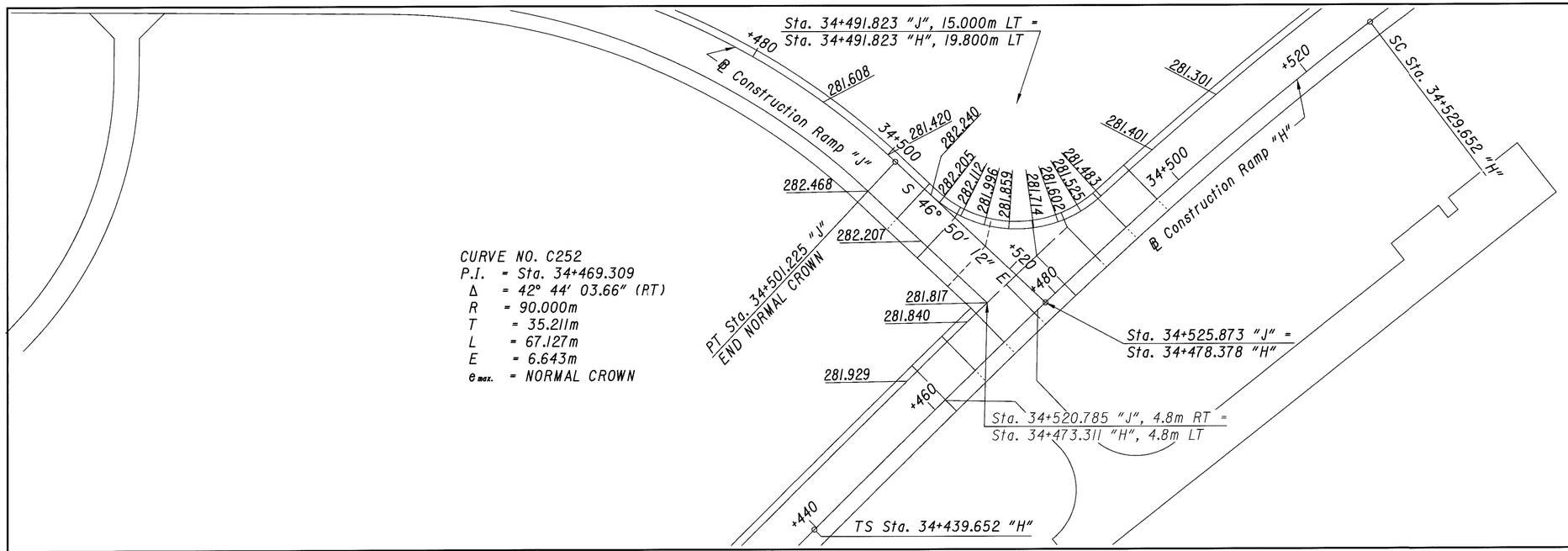
HORIZONTAL SCALE IN METERS
0 5 10

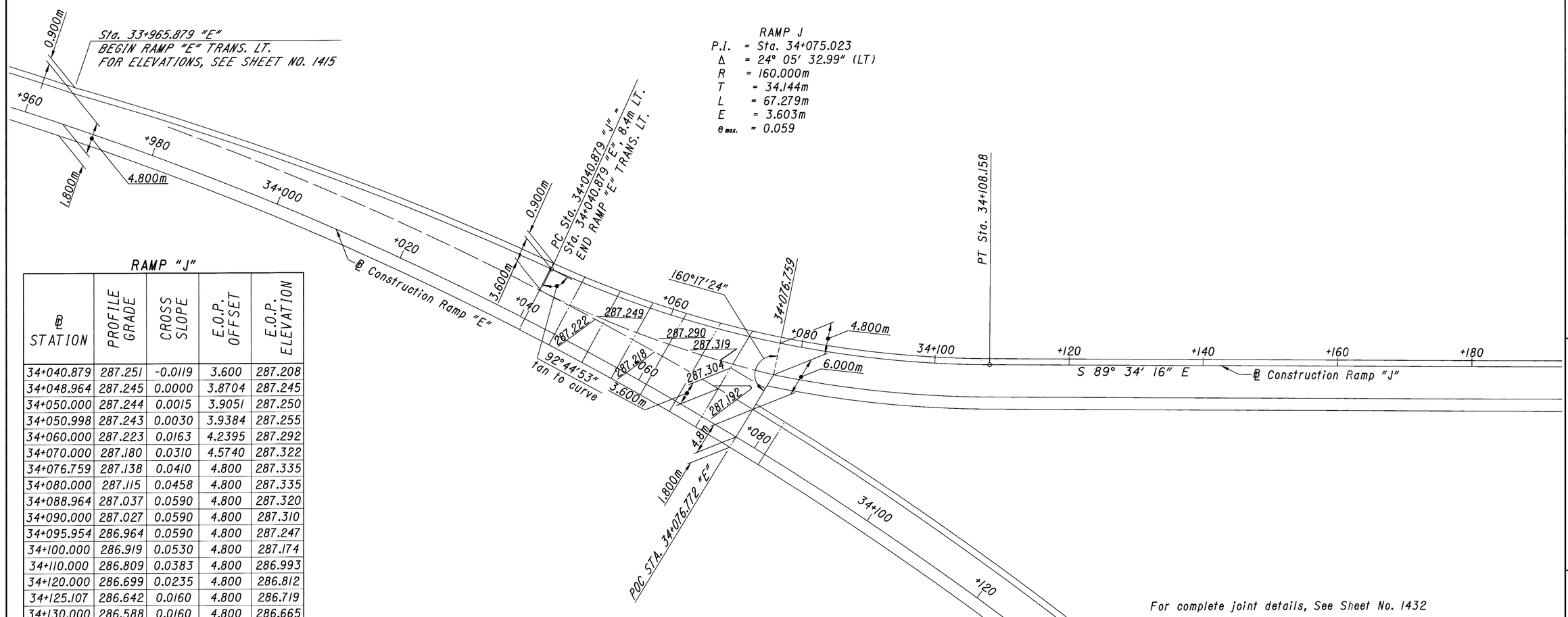
CALCULATED JGB
CHECKED REA

PAVEMENT DETAILS
RAMP I

WYA/CRA-30-28.009/0.000

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RAMP J
P.I. = Sta. 34+075.023
Δ = 24° 05' 32.99" (LT)
R = 160.000m
T = 34.144m
L = 67.279m
E = 3.603m
e max. = 0.059

RAMP "J"

℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. OFFSET	E.O.P. ELEVATION
34+040.879	287.251	-0.0119	3.600	287.208
34+048.964	287.245	0.0000	3.8704	287.245
34+050.000	287.244	0.0015	3.9051	287.250
34+050.998	287.243	0.0030	3.9384	287.255
34+060.000	287.223	0.0163	4.2395	287.292
34+070.000	287.180	0.0310	4.5740	287.322
34+076.759	287.138	0.0410	4.800	287.335
34+080.000	287.115	0.0458	4.800	287.335
34+088.964	287.037	0.0590	4.800	287.320
34+090.000	287.027	0.0590	4.800	287.310
34+095.954	286.964	0.0590	4.800	287.247
34+100.000	286.919	0.0530	4.800	287.174
34+110.000	286.809	0.0383	4.800	286.993
34+120.000	286.699	0.0235	4.800	286.812
34+125.107	286.642	0.0160	4.800	286.719
34+130.000	286.588	0.0160	4.800	286.665

For complete joint details, See Sheet No. 1432

N

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HORIZONTAL
SCALE IN METERS

CALCULATED JGB
CHECKED REA

PAVEMENT DETAILS
RAMP J

WYA/CRA-30-28.009/0.000

1418B
2116

DECELERATION LANE US-30 EB TO RAMP K	E.O.P. ELEVATION	E.O.P. OFFSET (m)
℄ STATION		
37+196.071	282.058	16.200
37+200.000	282.130	16.671
37+210.000	282.308	17.871
37+220.000	282.480	19.071
37+226.071	282.583	19.800
37+230.000	282.629	19.800
37+240.000	282.749	19.800
37+250.000	282.877	19.800
37+260.000	283.000	19.800
37+270.000	283.120	19.800
37+280.000	283.241	19.800
37+290.000	283.361	19.800
37+300.000	283.481	19.800
37+310.000	283.607	19.800
37+316.395	283.669	19.800

RAMP K P.I. STA. 37+392.756 (RT.) R = 2000m - 60m SPIRAL MAX SE = 0.023	PROFILE GRADE	E.O.P. ELEVATION 4.800m LT.
℄ STATION		
37+500.000	284.615	284.692
37+510.000	284.549	284.626
37+520.000	284.479	284.556
37+530.000	284.408	284.485
37+540.000	284.338	284.415
37+550.000	284.268	284.345
37+560.000	284.197	284.274
37+570.000	284.127	284.204
37+580.000	284.056	284.133
37+590.000	283.986	284.063
37+600.000	283.916	283.993
37+610.000	283.845	283.922
37+620.000	283.775	283.852
37+630.000	283.705	283.782
37+640.000	283.634	283.711
37+650.000	283.564	283.641
37+660.000	283.493	283.570
37+670.000	283.423	283.500
37+680.000	283.353	283.430
37+690.000	283.282	283.359
37+700.000	283.212	283.289
37+710.000	283.141	283.218
37+720.000	283.071	283.148
37+730.000	283.047	283.124
37+740.000	283.161	283.238

JOINT LEGEND
- Ⓐ Longitudinal Joint
- Ⓑ Contraction Joint
- Ⓒ Expansion Joint

For Joint Details See Std. Dwg. BP-6.1M

HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED JGB
CHECKED REA

PAVEMENT DETAIL - RAMP K

WYA/CRA-30-28.009/0.000

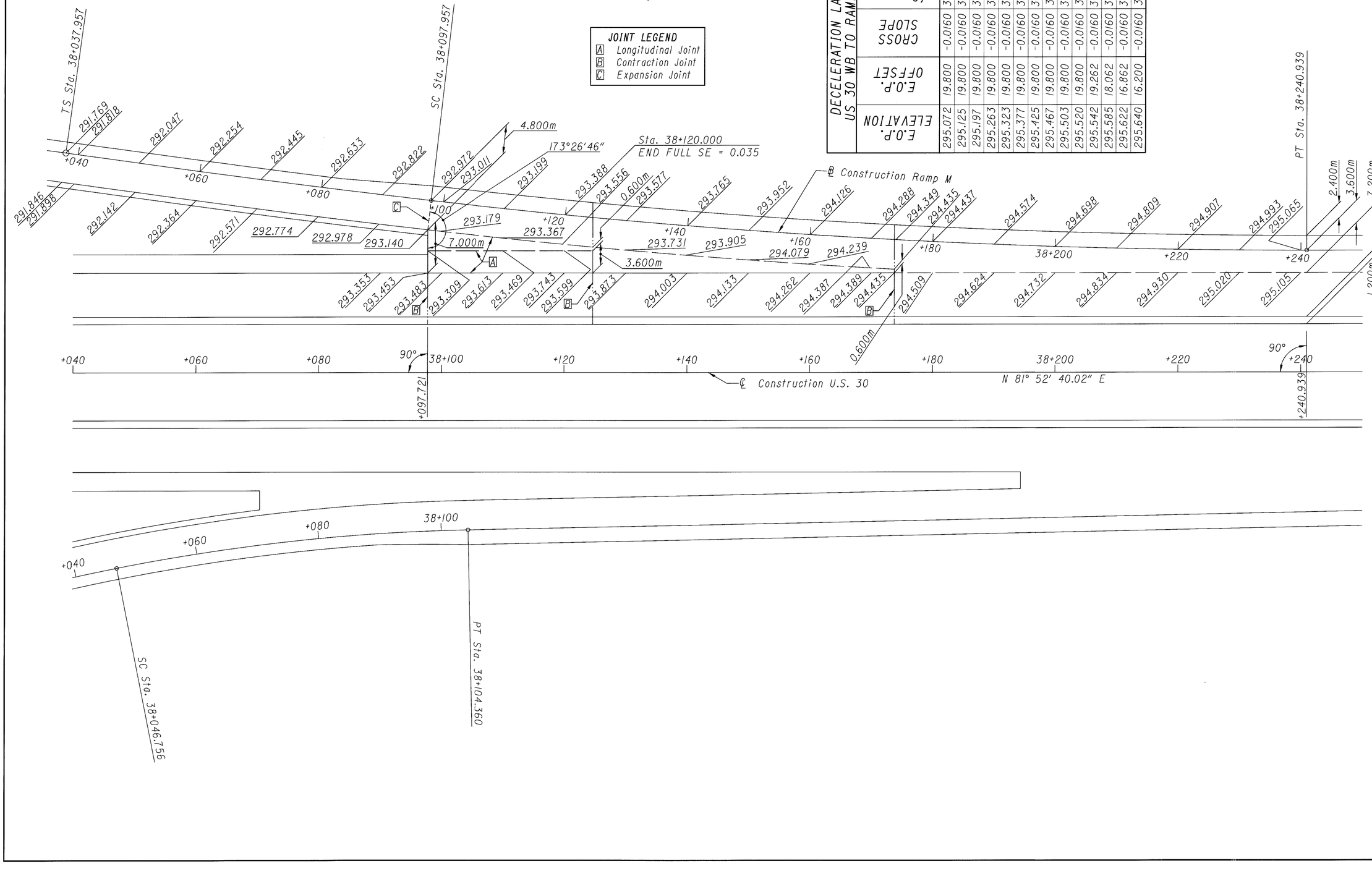
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| ACCELERATION LANE RAMP L TO US-30 WB | | |

For Joint Detail
See Std. Dwg. BP-6.IM

JOINT LEGEND
- A Longitudinal Joint
- B Contraction Joint
- C Expansion Joint

DECELERATION LANE US 30 WB TO RAMP M	E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	℄ STATION
	295.072	19.800	-0.0160	38+240.939
	295.125	19.800	-0.0160	38+250.000
	295.197	19.800	-0.0160	38+260.000
	295.263	19.800	-0.0160	38+270.000
	295.323	19.800	-0.0160	38+280.000
	295.377	19.800	-0.0160	38+290.000
	295.425	19.800	-0.0160	38+300.000
	295.467	19.800	-0.0160	38+310.000
	295.503	19.800	-0.0160	38+320.000
	295.520	19.800	-0.0160	38+325.513
	295.542	19.262	-0.0160	38+330.000
	295.585	18.062	-0.0160	38+340.000
	295.622	16.862	-0.0160	38+350.000
	295.640	16.200	-0.0160	38+355.513



N

HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED JGB
CHECKED REA

PAVEMENT DETAIL - RAMP M

WYA/CRA-30-28.009/0.000

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RAMP N			
℄ STATION	E.O.P. ELEVATION @ 4.800m LT.	CROSS SLOPE	PROFILE GRADE
		0	0
P.I. STA. 37+878.804 (LT.)			
R = 230m - 60m & 80m SPIRALS			
MAX SE = 0.080			
37+796.583	284.435	0.0000	284.435
37+800.000	284.535	-0.0046	284.513
37+810.000	284.830	-0.0179	284.744
37+820.000	285.124	-0.0312	284.974
37+830.000	285.419	-0.0446	285.205
37+840.000	285.713	-0.0579	285.435
37+850.000	286.008	-0.0712	285.666
37+856.583	286.201	-0.0800	285.817
37+860.000	286.302	-0.0800	285.918
37+870.000	286.597	-0.0800	286.213
37+880.000	286.891	-0.0800	286.507
37+886.756	287.090	-0.0800	286.706
37+890.000	287.186	-0.0768	286.818
37+900.000	287.480	-0.0668	287.160
37+910.000	287.774	-0.0568	287.502
37+920.000	288.069	-0.0468	287.845
37+930.000	288.363	0.0368	288.187
37+940.000	288.658	-0.0268	288.530
37+950.000	288.952	-0.0168	288.872
37+960.000	289.247	-0.0068	289.215
P.I. STA. 38+053.247 (RT.)			
R = 330m - 80m SPIRAL			
MAX SE = 0.080			
37+966.756	289.446	0.0000	289.446
37+970.000	289.541	0.0032	289.557
37+980.000	289.836	0.0132	289.900
37+990.000	290.130	0.0232	290.242
38+000.000	290.425	0.0332	290.585
38+010.000	290.719	0.0432	290.927
38+020.000	291.014	0.0532	291.270
38+030.000	291.308	0.0632	291.612
38+040.000	291.600	0.0732	291.952
38+046.756	291.791	0.0800	292.175
38+050.000	291.881	0.0800	292.265
38+060.000	292.149	0.0800	292.533
38+070.000	292.405	0.0800	292.789
38+077.360	292.585	0.0800	292.969
38+080.000	292.648	0.0774	293.019
38+090.000	292.878	0.0674	293.201
38+100.000	293.096	0.0574	293.371
38+104.360	293.187	0.0530	293.441

ACCELERATION LANE RAMP N TO US-30 EB			
℄ STATION 0.000	RIGHT E.O.P. OFFSET (m) 2.000	E.O.P. ELEVATION 0.000	
38+200.000	23.583	294.589	
38+210.000	23.374	294.704	
38+220.000	23.166	294.819	
38+230.000	22.958	294.912	
38+240.000	22.749	295.000	
38+240.939	22.730	295.008	
38+250.000	22.541	295.082	
38+260.000	22.333	295.157	
38+270.000	22.124	295.226	
38+280.000	21.916	295.290	
38+290.000	21.708	295.347	
38+300.000	21.499	295.398	
38+310.000	21.291	295.444	
38+320.000	21.083	295.483	
38+325.513	20.968	295.502	
38+330.000	20.874	295.516	
38+340.000	20.666	295.544	
38+350.000	20.458	295.565	
38+355.513	20.343	295.574	
38+360.000	20.249	295.580	
38+370.000	20.041	295.589	
38+380.000	19.833	295.592	
38+390.000	19.624	295.589	
38+400.000	19.416	295.581	
38+410.000	19.208	295.565	
38+420.000	18.999	295.544	
38+430.000	18.791	295.518	
38+440.000	18.583	295.484	
38+450.000	18.374	295.447	
38+460.000	18.166	295.411	
38+470.000	17.958	295.374	
38+480.000	17.749	295.337	
38+490.000	17.541	295.301	
38+500.000	17.333	295.264	
38+510.000	17.124	295.227	
38+520.000	16.916	295.191	
38+530.000	16.708	295.154	
38+540.000	16.499	295.117	
38+550.000	16.291	295.081	
38+554.360	16.200	295.065	

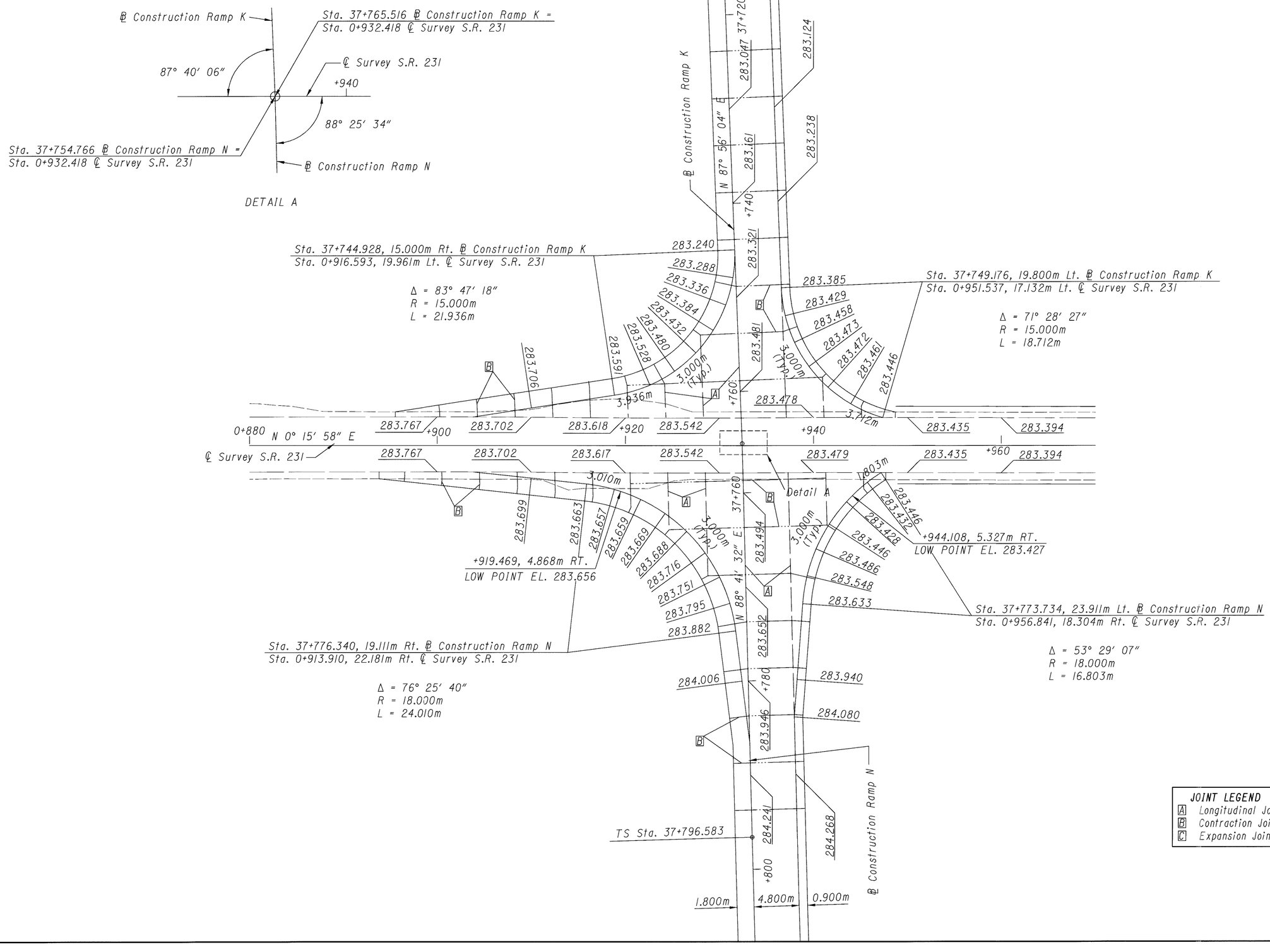
CALCULATED JGB
CHECKED REA

HORIZONTAL SCALE IN METERS
0 5 10

PAVEMENT DETAIL - RAMP N

WYA/CRA-30-28.009/0.000

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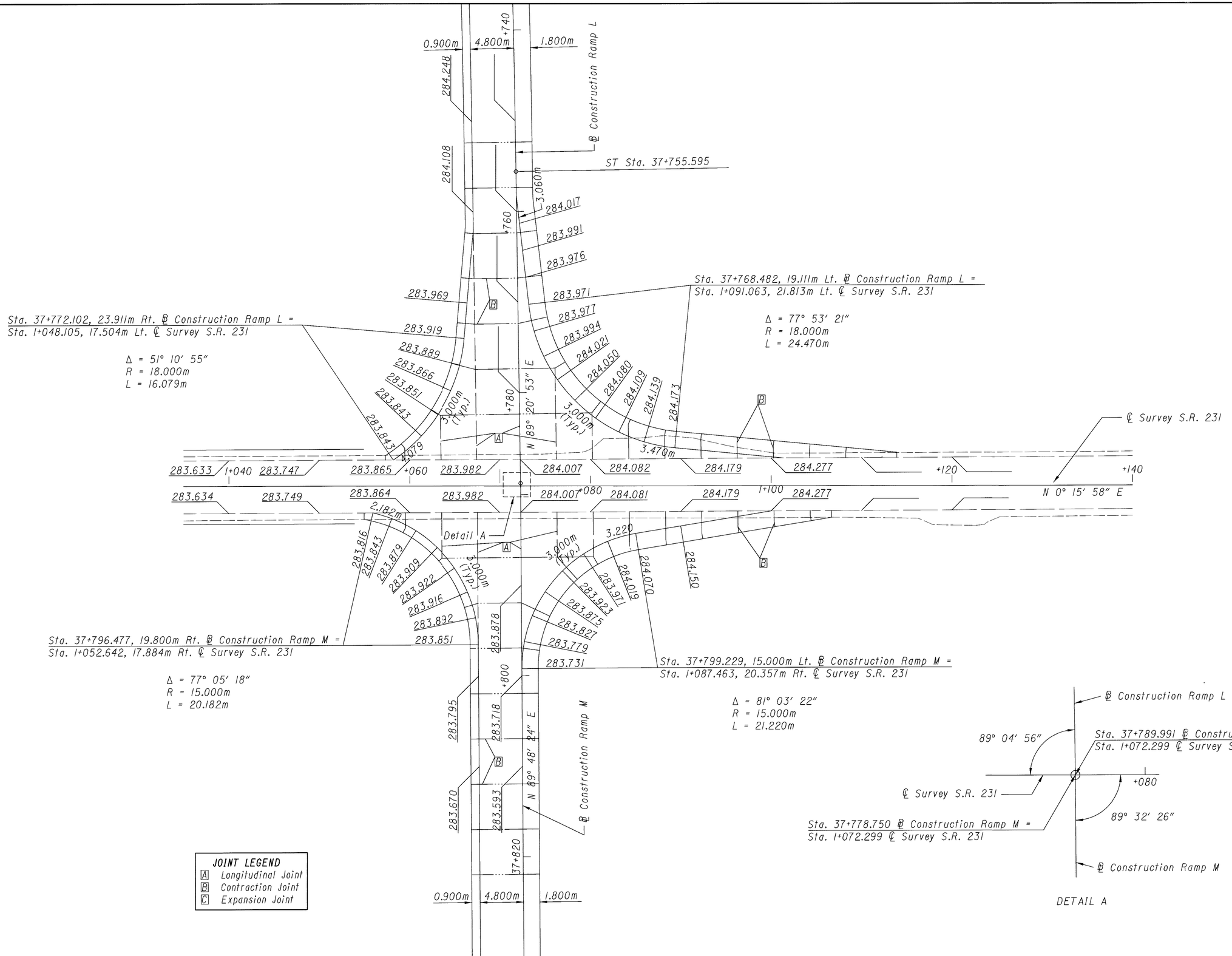
HORIZONTAL SCALE IN METERS
0 5 10

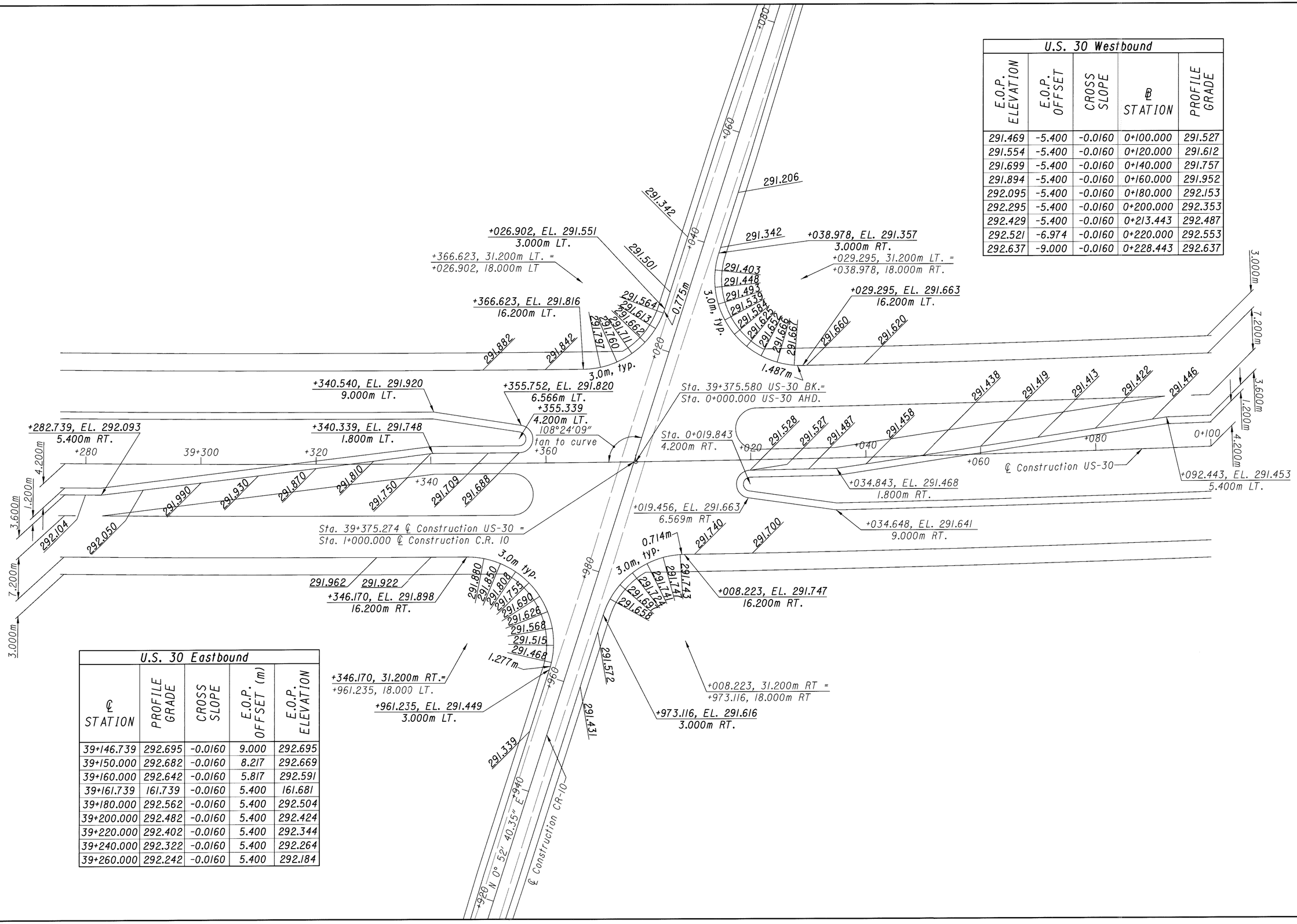
CALCULATED JGB
CHECKED REA

PAVEMENT DETAIL - RAMPS K & N AT S.R. 231

WYA/CRA-30-28.009/0.000

1423
2116


0.900m
4.800m
1.800m
+740
℄ Construction Ramp L
284.248
284.108
ST Sta. 37+755.595
3.060m
284.017
+760
283.991
283.976
283.969
B
283.971
Sta. 37+768.482, 19.111m Lt. ℄ Construction Ramp L =
Sta. 1+091.063, 21.813m Lt. ℄ Survey S.R. 231
Sta. 37+772.102, 23.911m Rt. ℄ Construction Ramp L =
Sta. 1+048.105, 17.504m Lt. ℄ Survey S.R. 231
Δ = 77° 53′ 21″
R = 18.000m
L = 24.470m
283.977
283.919
283.994
283.889
284.021
283.866
284.050
283.851
284.080
283.843
284.109
284.139
284.173
Δ = 51° 10′ 55″
R = 18.000m
L = 16.079m
+780
3.000m (Typ.)
89° 20′ 53″ E
3.000m (Typ.)
283.841
16.079
A
N
3.470m
℄ Survey S.R. 231
283.633
1+040
283.747
283.865
+060
283.982
284.007
284.082
284.179
284.277
+120
+140
283.634
283.749
283.864
283.982
284.007
+080
284.081
284.179
1+100
284.277
N 0° 15′ 58″ E
2.182m
Detail A
3.220
3.000m (Typ.)
283.816
283.843
283.879
283.909
283.922
283.916
283.892
283.851
284.019
284.070
284.150
283.971
283.923
283.875
283.827
283.779
283.731
Sta. 37+796.477, 19.800m Rt. ℄ Construction Ramp M =
Sta. 1+052.642, 17.884m Rt. ℄ Survey S.R. 231
Sta. 37+799.229, 15.000m Lt. ℄ Construction Ramp M =
Sta. 1+087.463, 20.357m Rt. ℄ Survey S.R. 231
Δ = 77° 05′ 18″
R = 15.000m
L = 20.182m
Δ = 81° 03′ 22″
R = 15.000m
L = 21.220m
+800
283.795
283.718
N 89° 48′ 24″ E
℄ Construction Ramp M
283.670
283.593
37+820
0.900m
4.800m
1.800m
JOINT LEGEND
A Longitudinal Joint
B Contraction Joint
C Expansion Joint
℄ Construction Ramp L
89° 04′ 56″
Sta. 37+789.991 ℄ Construction Ramp L =
Sta. 1+072.299 ℄ Survey S.R. 231
+080
℄ Survey S.R. 231
89° 32′ 26″
Sta. 37+778.750 ℄ Construction Ramp M =
Sta. 1+072.299 ℄ Survey S.R. 231
℄ Construction Ramp M
DETAIL A
N
0
5
10
HORIZONTAL
SCALE IN METERS
CALCULATED
JGB
CHECKED
REA
PAVEMENT DETAIL - RAMPS L & M AT S.R. 231
WYA/CRA-30-28.009/0.000
1424
2116



U.S. 30 Westbound				
E.O.P. ELEVATION	E.O.P. OFFSET	CROSS SLOPE	℄ STATION	PROFILE GRADE
291.469	-5.400	-0.0160	0+100.000	291.527
291.554	-5.400	-0.0160	0+120.000	291.612
291.699	-5.400	-0.0160	0+140.000	291.757
291.894	-5.400	-0.0160	0+160.000	291.952
292.095	-5.400	-0.0160	0+180.000	292.153
292.295	-5.400	-0.0160	0+200.000	292.353
292.429	-5.400	-0.0160	0+213.443	292.487
292.521	-6.974	-0.0160	0+220.000	292.553
292.637	-9.000	-0.0160	0+228.443	292.637

U.S. 30 Eastbound				
℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. OFFSET (m)	E.O.P. ELEVATION
39+146.739	292.695	-0.0160	9.000	292.695
39+150.000	292.682	-0.0160	8.217	292.669
39+160.000	292.642	-0.0160	5.817	292.591
39+161.739	161.739	-0.0160	5.400	161.681
39+180.000	292.562	-0.0160	5.400	292.504
39+200.000	292.482	-0.0160	5.400	292.424
39+220.000	292.402	-0.0160	5.400	292.344
39+240.000	292.322	-0.0160	5.400	292.264
39+260.000	292.242	-0.0160	5.400	292.184

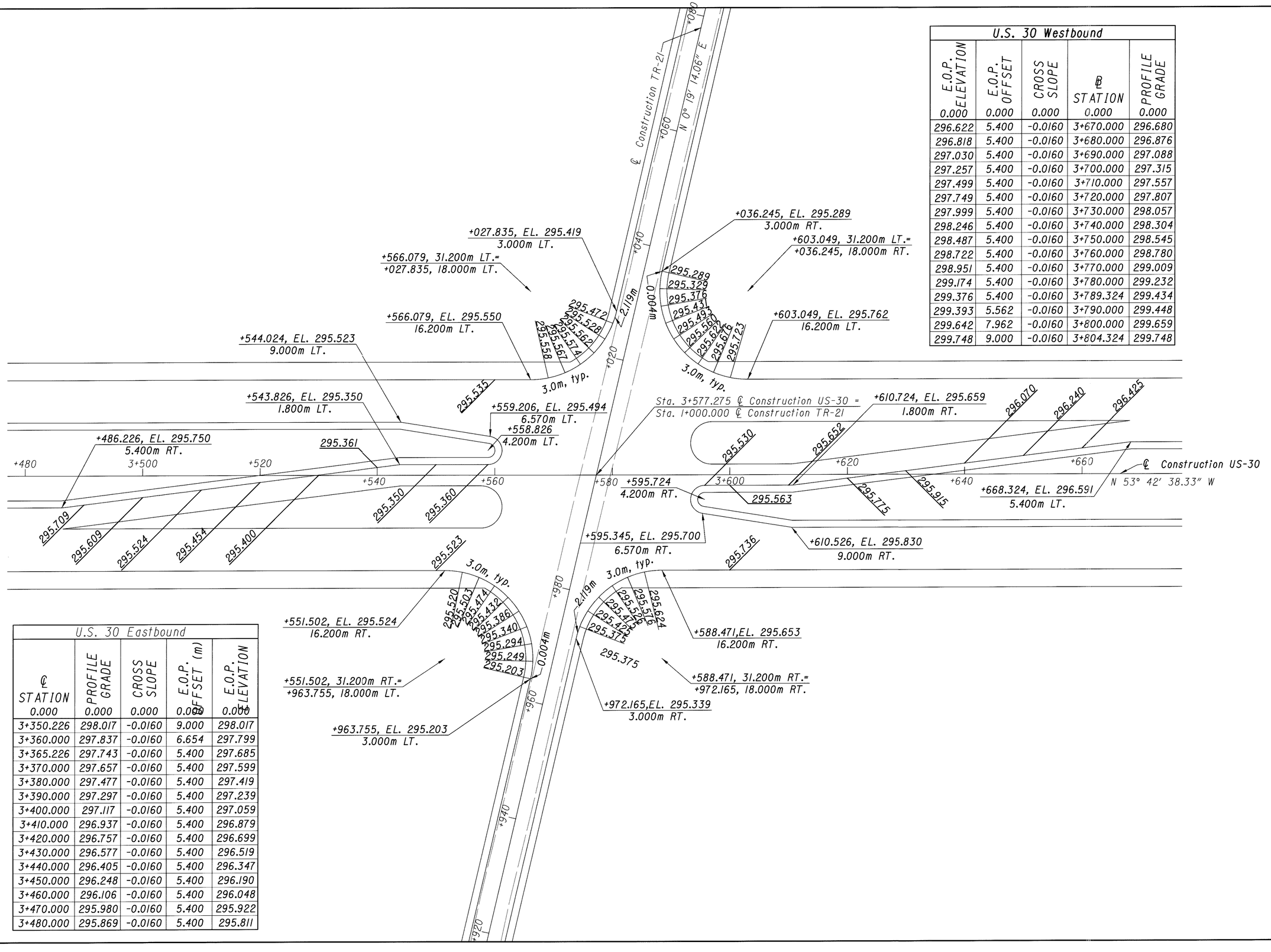
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED JGB
CHECKED REA

PAVEMENT DETAIL
U.S.R. 30 AT T.R. 10

WYA / CRA-30-28.009 / 0.000

1425
2116



U.S. 30 Westbound				
E.O.P. ELEVATION 0.000	E.O.P. OFFSET 0.000	CROSS SLOPE 0.000	℄ STATION 0.000	PROFILE GRADE 0.000
296.622	5.400	-0.0160	3+670.000	296.680
296.818	5.400	-0.0160	3+680.000	296.876
297.030	5.400	-0.0160	3+690.000	297.088
297.257	5.400	-0.0160	3+700.000	297.315
297.499	5.400	-0.0160	3+710.000	297.557
297.749	5.400	-0.0160	3+720.000	297.807
297.999	5.400	-0.0160	3+730.000	298.057
298.246	5.400	-0.0160	3+740.000	298.304
298.487	5.400	-0.0160	3+750.000	298.545
298.722	5.400	-0.0160	3+760.000	298.780
298.951	5.400	-0.0160	3+770.000	299.009
299.174	5.400	-0.0160	3+780.000	299.232
299.376	5.400	-0.0160	3+789.324	299.434
299.393	5.562	-0.0160	3+790.000	299.448
299.642	7.962	-0.0160	3+800.000	299.659
299.748	9.000	-0.0160	3+804.324	299.748

U.S. 30 Eastbound				
℄ STATION 0.000	PROFILE GRADE 0.000	CROSS SLOPE 0.000	E.O.P. OFFSET (m) 0.000	E.O.P. ELEVATION 0.000
3+350.226	298.017	-0.0160	9.000	298.017
3+360.000	297.837	-0.0160	6.654	297.799
3+365.226	297.743	-0.0160	5.400	297.685
3+370.000	297.657	-0.0160	5.400	297.599
3+380.000	297.477	-0.0160	5.400	297.419
3+390.000	297.297	-0.0160	5.400	297.239
3+400.000	297.117	-0.0160	5.400	297.059
3+410.000	296.937	-0.0160	5.400	296.879
3+420.000	296.757	-0.0160	5.400	296.699
3+430.000	296.577	-0.0160	5.400	296.519
3+440.000	296.405	-0.0160	5.400	296.347
3+450.000	296.248	-0.0160	5.400	296.190
3+460.000	296.106	-0.0160	5.400	296.048
3+470.000	295.980	-0.0160	5.400	295.922
3+480.000	295.869	-0.0160	5.400	295.811

HORIZONTAL SCALE IN METERS

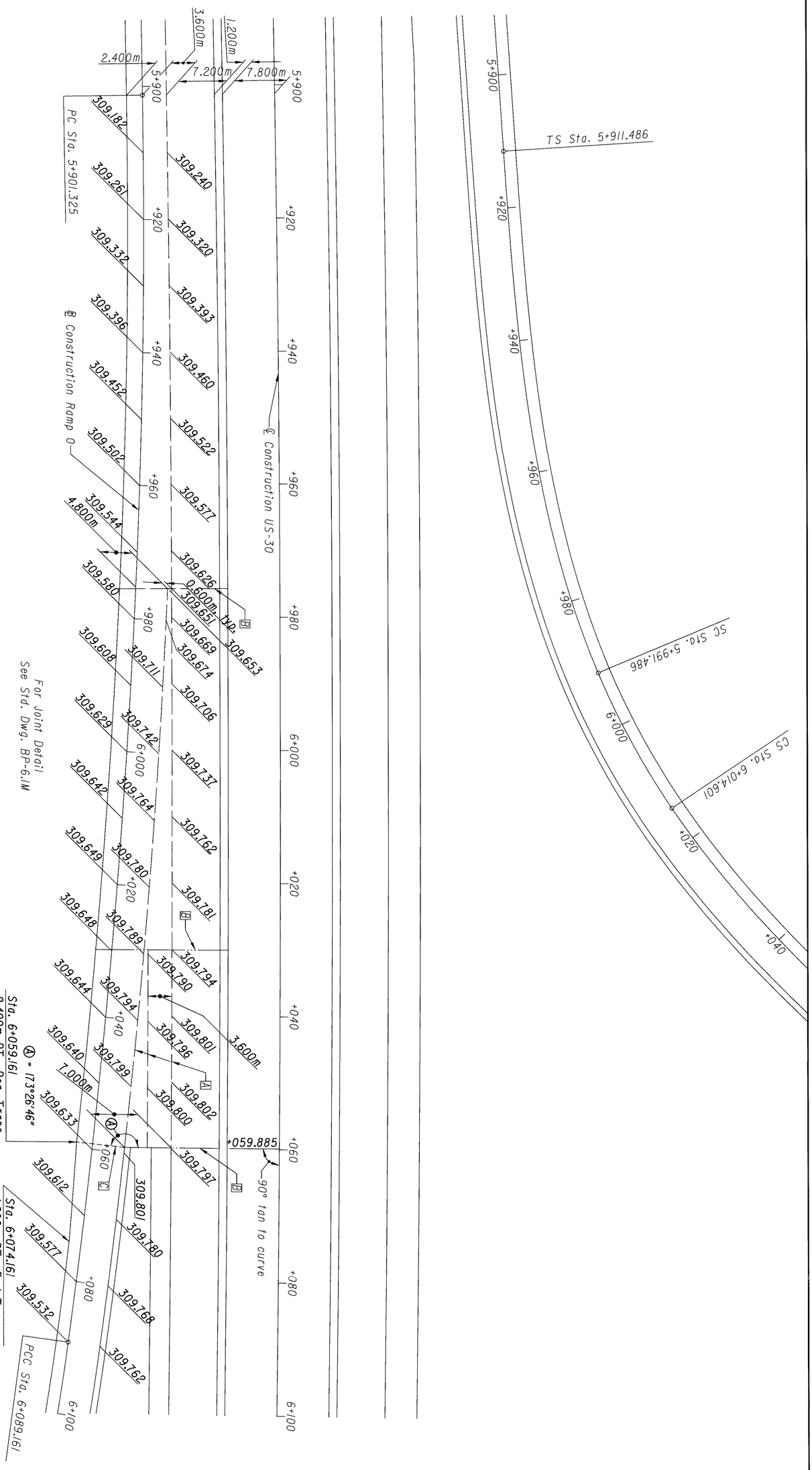
CALCULATED JGB
CHECKED REA

PAVEMENT DETAIL
U.S.R. 30 AT T.R. 21

WYA/CRA-30-28.009/0.000

DECELERATION LANE US-30 TO RAMP 0		
℄ STATION	E.O.P. OFFSET (m)	E.O.P. ELEVATION
5+819.885	16.200	308.252
5+820.000	16.214	308.253
5+830.000	17.414	308.368
5+840.000	18.614	308.476
5+849.885	19.800	308.578
5+850.000	19.800	308.579
5+860.000	19.800	308.694
5+870.000	19.800	308.804
5+880.000	19.800	308.908
5+890.000	19.800	309.005
5+900.000	19.800	309.097
5+901.325	19.800	309.109

RAMP 0 P.I. STA. 6+151.335 (RT.) R = 330m - 90m SPIRAL MAX SE = 0.080			
E.O.P. ELEVATION	CROSS SLOPE	℄ STATION	PROFILE GRADE
309.761	0.0487	6+090.000	309.527
309.739	0.0576	6+100.000	309.462
309.702	0.0665	6+110.000	309.383
309.650	0.0754	6+120.000	309.288
309.618	0.0800	6+125.161	309.234
309.563	0.0800	6+130.000	309.179
309.440	0.0800	6+140.000	309.056
309.301	0.0800	6+150.000	308.917
309.148	0.0800	6+160.000	308.764
309.126	0.0800	6+161.384	308.742
308.943	0.0723	6+170.000	308.596
308.718	0.0635	6+180.000	308.413
308.478	0.0546	6+190.000	308.216
308.223	0.0457	6+200.000	308.004
307.954	0.0368	6+210.000	307.777
307.669	0.0279	6+220.000	307.535
307.370	0.0190	6+230.000	307.279
307.056	0.0101	6+240.000	307.007
306.727	0.0012	6+250.000	306.721
P.I. STA. 6+366.099 (LT.) R = 100m - 80m & 60m SPIRALS MAX SE = 0.080			
306.681	0.0000	6+251.384	306.681
306.380	-0.0086	6+260.000	306.421
306.016	-0.0186	6+270.000	306.105
305.638	-0.0286	6+280.000	305.775
305.245	-0.0386	6+290.000	305.430
304.838	-0.0486	6+300.000	305.071
304.420	-0.0586	6+310.000	304.701
304.002	-0.0686	6+320.000	304.331
303.584	-0.0786	6+330.000	303.961
303.526	-0.0800	6+331.384	303.910
303.207	-0.0800	6+340.000	303.591
302.837	-0.0800	6+350.000	303.221
302.467	-0.0800	6+360.000	302.851
302.097	-0.0800	6+370.000	302.481
301.727	-0.0800	6+380.000	302.111
301.393	-0.0800	6+389.017	301.777
301.363	-0.0787	6+390.000	301.741
301.057	-0.0654	6+400.000	301.371
300.751	-0.0520	6+410.000	301.001
300.445	-0.0387	6+420.000	300.631
300.139	-0.0254	6+430.000	300.261
299.833	-0.0120	6+440.000	299.891
299.557	0.0000	6+449.017	299.557



WYA/CRA-30-28.009/0.000	PAVEMENT DETAIL - RAMP 0	CALCULATED JGB / CHECKED REA	HORIZONTAL SCALE IN METERS

1427
2116

ACCELERATION LANE RAMP P TO US-30 WB		
℄ STATION	LEFT E.O.P. OFFSET (m)	E.O.P. ELEVATION
5+230.000	16.200	298.322
5+240.000	16.408	298.376
5+250.000	16.617	298.445
5+260.000	16.825	298.530
5+270.000	17.033	298.631
5+280.000	17.242	298.746
5+290.000	17.450	298.877
5+300.000	17.658	299.024
5+310.000	17.867	299.185
5+320.000	18.075	299.360
5+330.000	18.283	299.538
5+340.000	18.492	299.714
5+350.000	18.700	299.892
5+360.000	18.908	300.069
5+370.000	19.117	300.245
5+380.000	19.325	300.423
5+390.000	19.533	300.600
5+400.000	19.742	300.777
5+410.000	19.950	300.954
5+420.000	20.158	301.131
5+430.000	20.367	301.308
5+440.000	20.575	301.485
5+450.000	20.783	301.663
5+460.000	20.992	301.839
5+470.000	21.200	302.016
5+480.000	21.408	302.194
5+490.000	21.617	302.370
5+500.000	21.825	302.547
5+510.000	22.033	302.725
5+520.000	22.242	302.901
5+530.000	22.450	303.079
5+540.000	22.658	303.256
5+550.000	22.867	303.432
5+560.000	23.075	303.610
5+570.000	23.283	303.787
5+580.000	23.492	303.964

P.I. STA. 5+999.907 (LT.) R = 120m - 80m & 60m SPIRALS MAX SE = 0.080			
℄ STATION	PROFILE GRADE	CROSS SLOPE	E.O.P. ELEVATION 4.800m RT.
5+927.486	306.250	0.0160	306.327
5+930.000	306.187	0.0185	306.276
5+940.000	305.922	0.0285	306.059
5+950.000	305.635	0.0385	305.820
5+960.000	305.325	0.0485	305.558
5+970.000	304.992	0.0585	305.273
5+980.000	304.636	0.0685	304.965
5+990.000	304.259	0.0785	304.636
5+991.486	304.202	0.0800	304.586
6+000.000	303.876	0.0800	304.260
6+010.000	303.493	0.0800	303.877
6+014.601	303.316	0.0800	303.700
6+020.000	303.109	0.0728	303.458
6+030.000	302.726	0.0595	303.011
6+040.000	302.343	0.0461	302.564
6+050.000	301.960	0.0328	302.117
6+060.000	301.577	0.0195	301.670
6+070.000	301.194	0.0061	301.223
6+074.601	301.018	0.0000	301.018

JOINT LEGEND
- A Longitudinal Joint
- B Contraction Joint
- C Expansion Joint

N

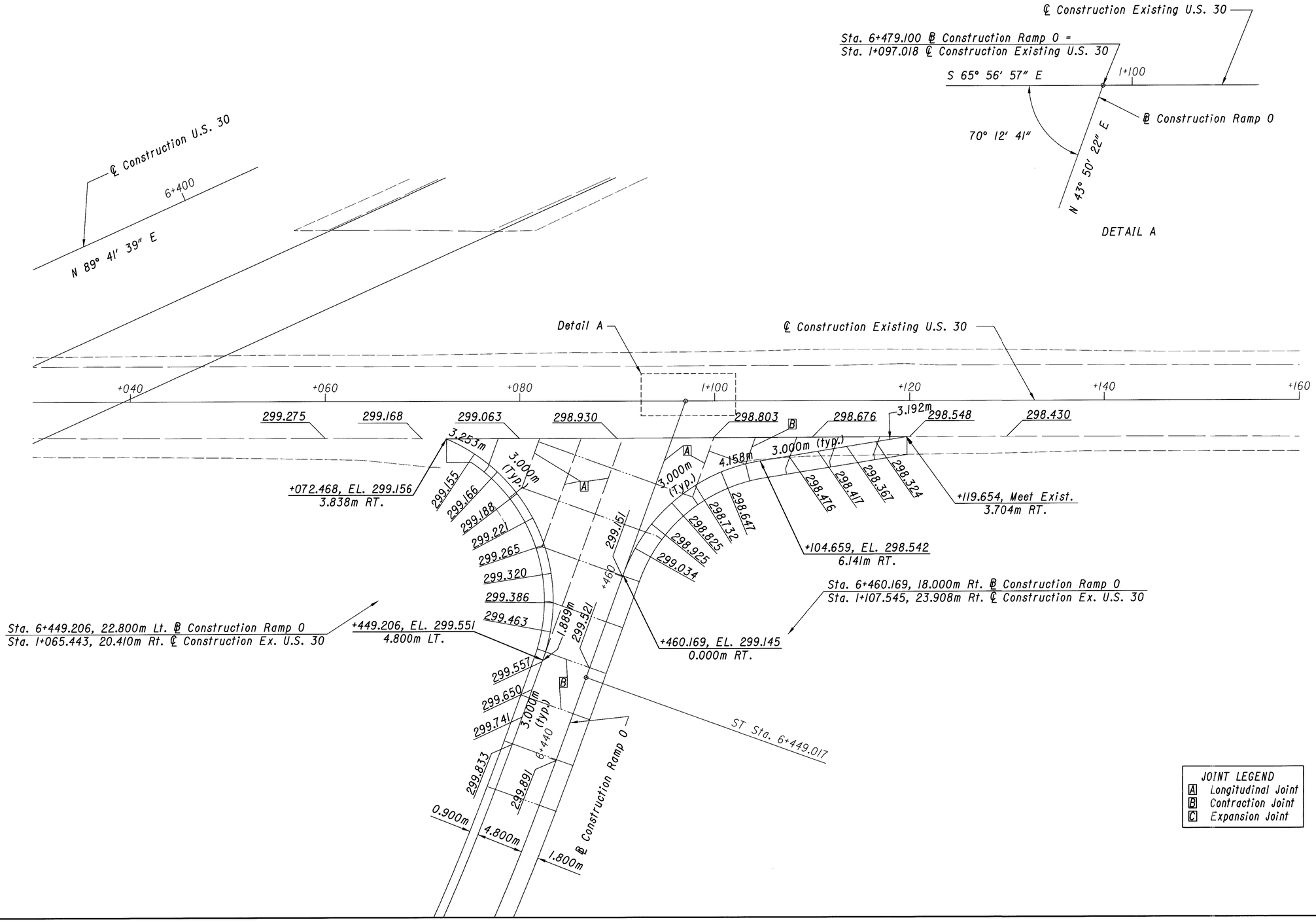
0 5 10
HORIZONTAL SCALE IN METERS

CALCULATED JGB
CHECKED REA

PAVEMENT DETAIL - RAMP P

WYA/CRA-30-28.009/0.000

1428
2116



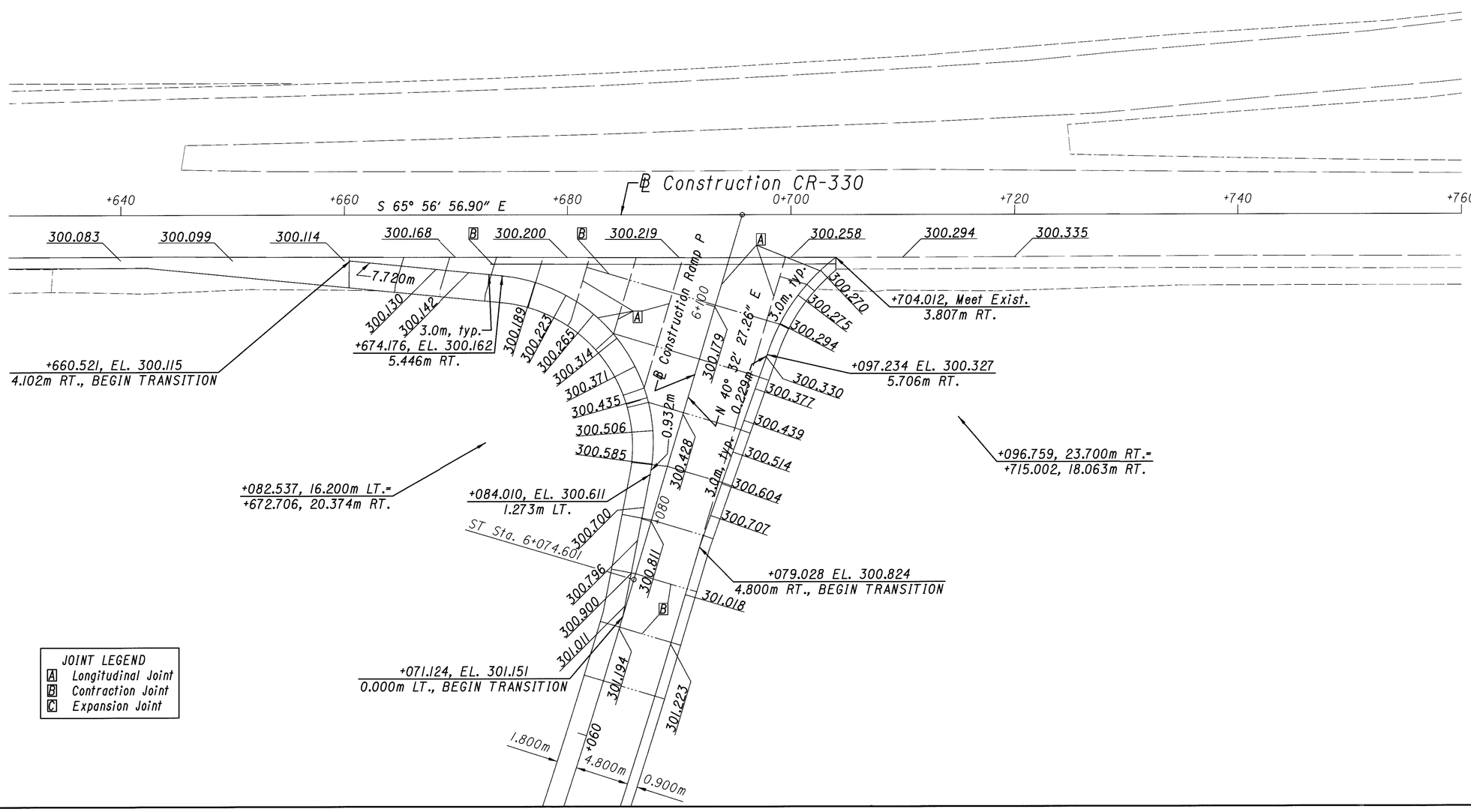
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED JGB
CHECKED REA

PAVEMENT DETAIL - RAMP O AT EXISTING U.S.R. 30

WYA/CRA-30-28.009/0.000

1429
2116



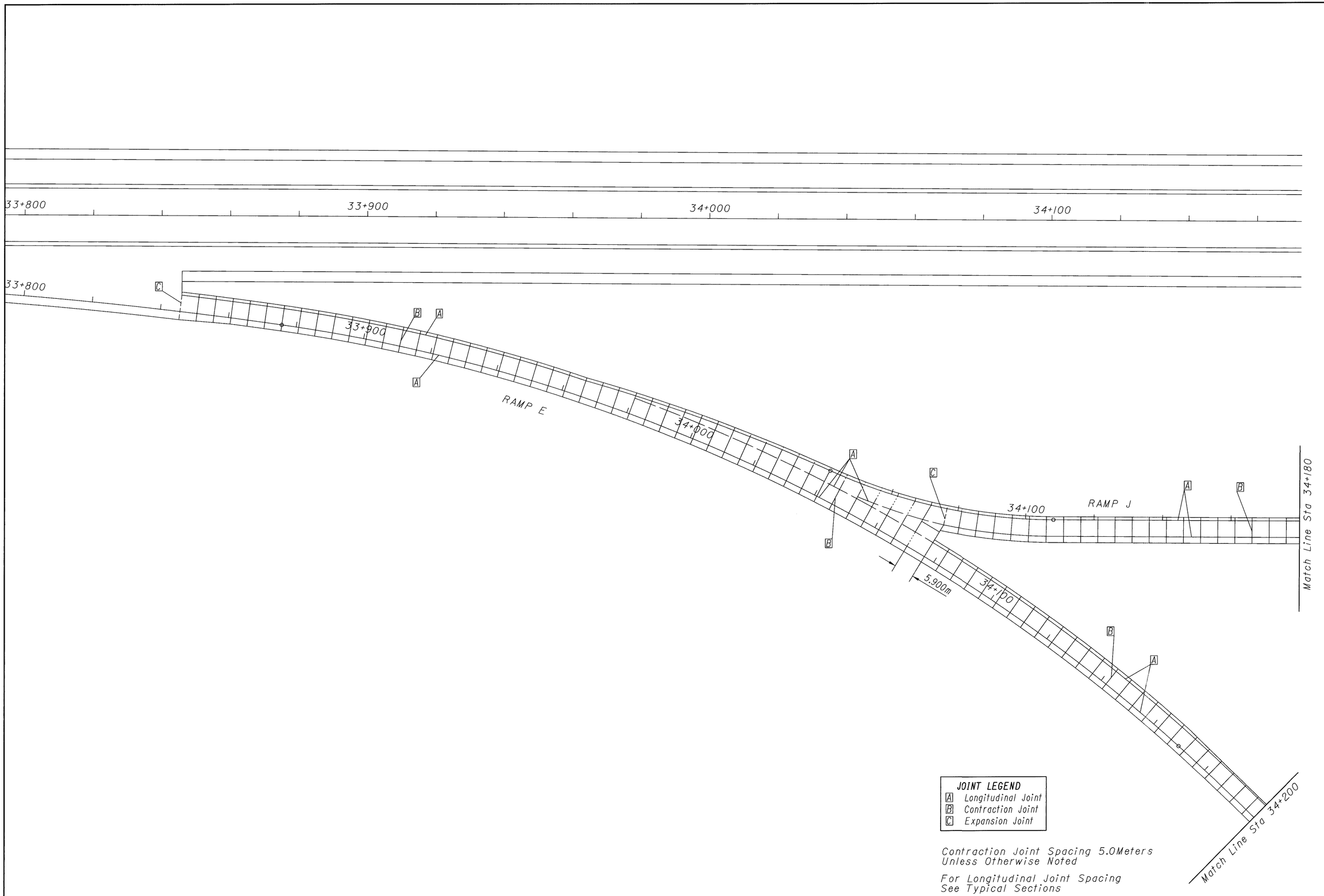
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED JGB
CHECKED REA

PAVEMENT DETAIL - RAMP P AT EXISTING U.S.R. 30

WYA/CRA-30-28.009/0.000

1430
2116



N

0 10 20
HORIZONTAL
SCALE IN METERS

CALCULATED LEH
CHECKED REA

EASTBOUND REST AREA PAVEMENT JOINT DETALS

WYA/CRA-30-28.009/0.000

1431
2116

Match Line Sta 34+180

RAMP J

34+200

34+300

34+400

2.0m

6.0m

Match Line Sta 34+500

34+500

RAMP H

Match Line Sta 34+200

RAMP E

0.6m Typical

34+200

34+300

34+400

Dowell

150mm Typical

1

6

5

Typical Dowell Placement
In All Longitudinal and
Transverse Joints

JOINT LEGEND

- A Longitudinal Joint
- B Contraction Joint
- C Expansion Joint

For Joint Spacing See Typical
Section Sheet No. 14

Contraction Joint Spacing 5.0Meters
Unless Otherwise Noted

For Longitudinal Joint Spacing
See Typical Sections

N

0 10 20

HORIZONTAL
SCALE IN METERS

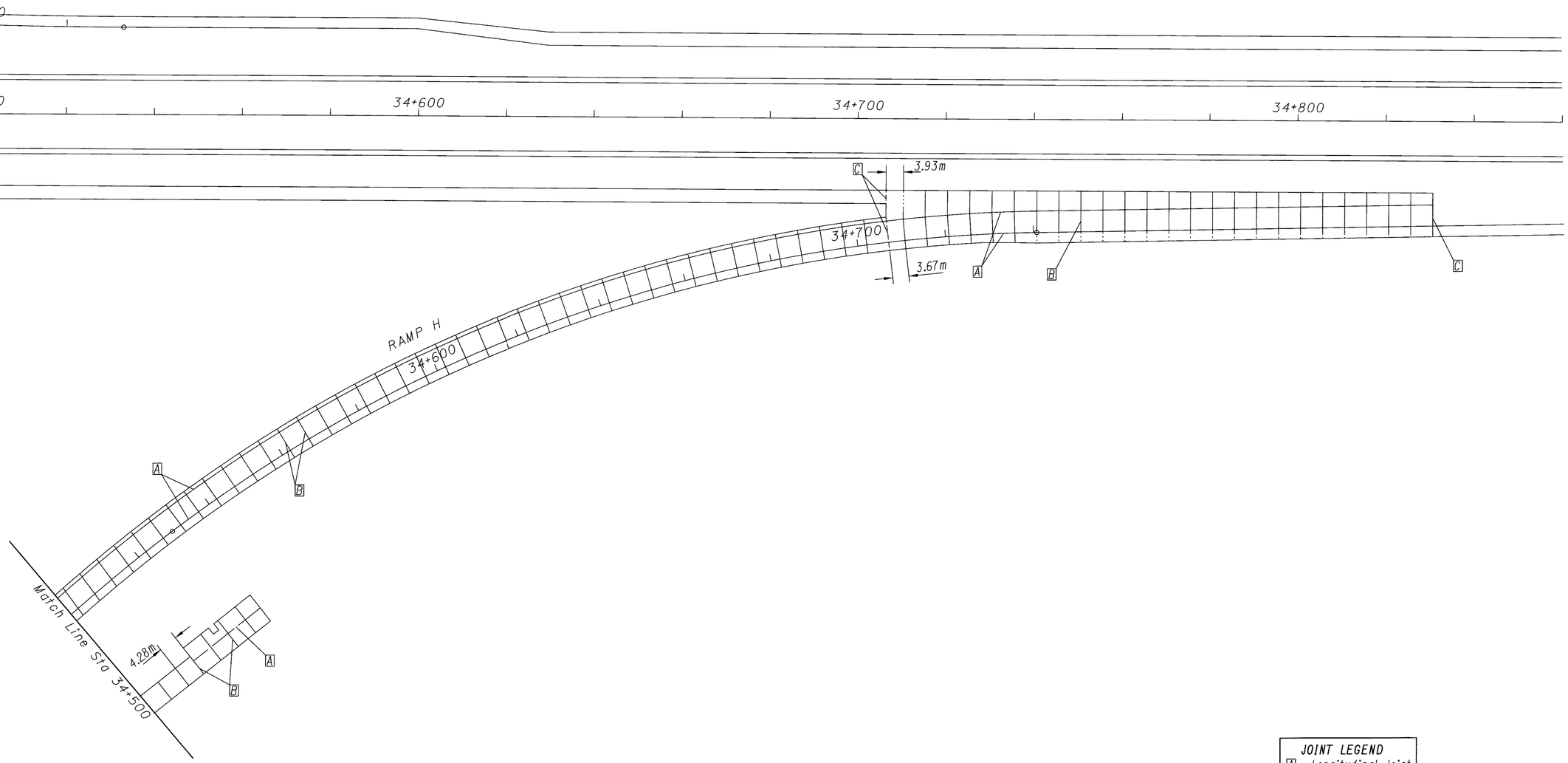
CALCULATED LEH

CHECKED REA

EASTBOUND REST AREA
PAVEMENT JOINT DETAILS

WYA-CRA-30-28.009/0.000

1432
2116



JOINT LEGEND
- A Longitudinal Joint
- B Contraction Joint
- C Expansion Joint

Contraction Joint Spacing 5.0Meters
Unless Otherwise Noted

For Longitudinal Joint Spacing
See Typical Sections

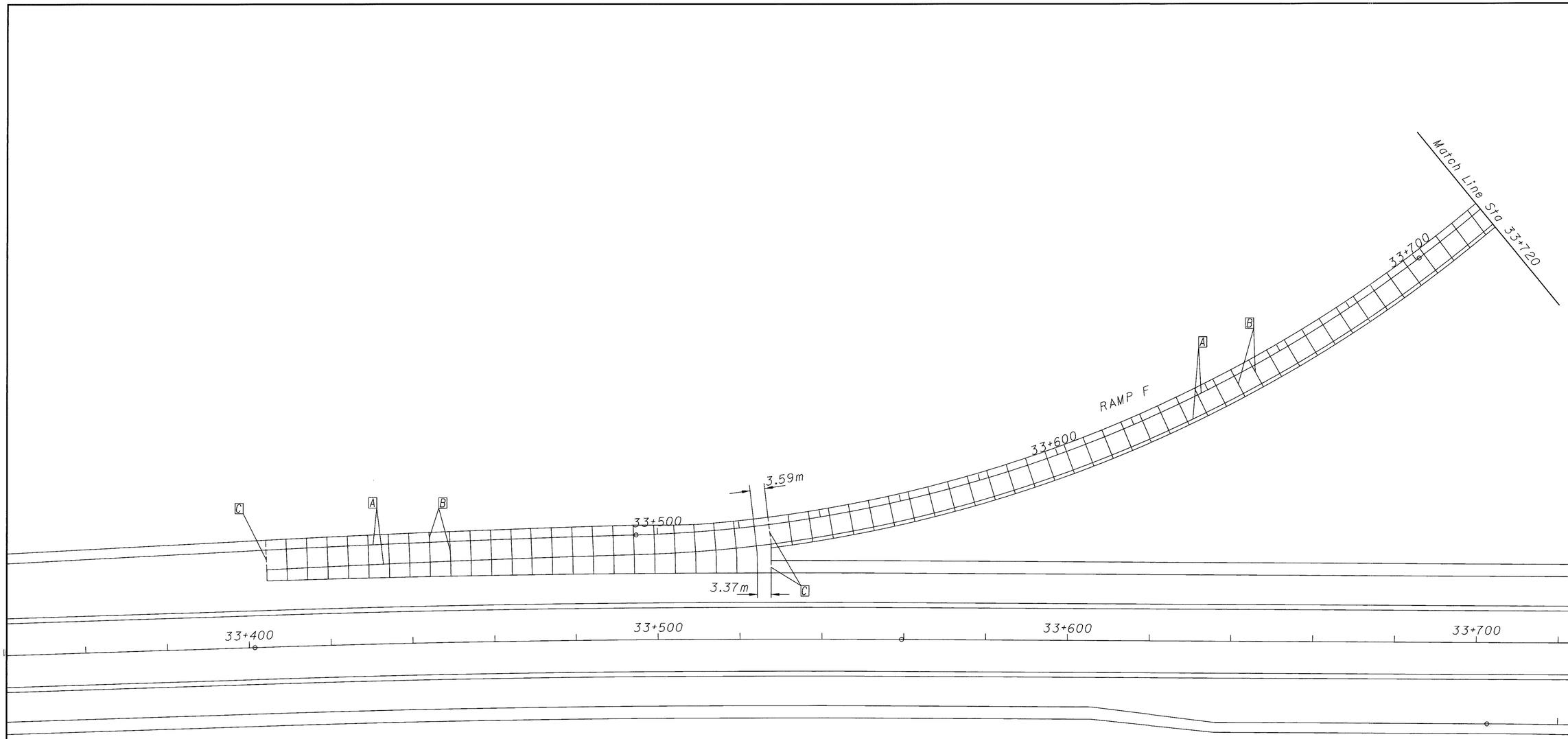
HORIZONTAL
SCALE IN METERS
0 10 20

CALCULATED LEH
CHECKED REA

EASTBOUND REST AREA
PAVEMENT JOINT DETAILS

WYA/CRA-30-28.009/0.000

1433
2116



JOINT LEGEND
- A Longitudinal Joint
- B Contraction Joint
- C Expansion Joint

Contraction Joint Spacing 5.0Meters
Unless Otherwise Noted

For Longitudinal Joint Spacing
See Typical Sections

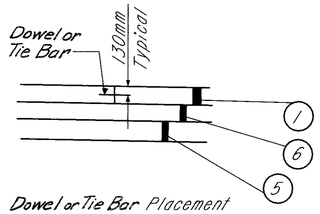
HORIZONTAL
SCALE IN METERS
0 10 20

CALCULATED LEH
CHECKED REA

WESTBOUND RSET AREA
PAVEMENT JOINT DETAILS

WYA/CRA-30-28.009/0.000

1434
2116



Dowel or Tie Bar Placement In All Longitudinal and Transverse Joints **(Typical)**

JOINT LEGEND

- [A] Longitudinal Joint
- [B] Contraction Joint
- [C] Expansion Joint

For Joint Spacing See Typical Section Sheet No. 14

Contraction Joint Spacing 5.0Meters Unless Otherwise Noted

For Longitudinal Joint Spacing See Typical Sections

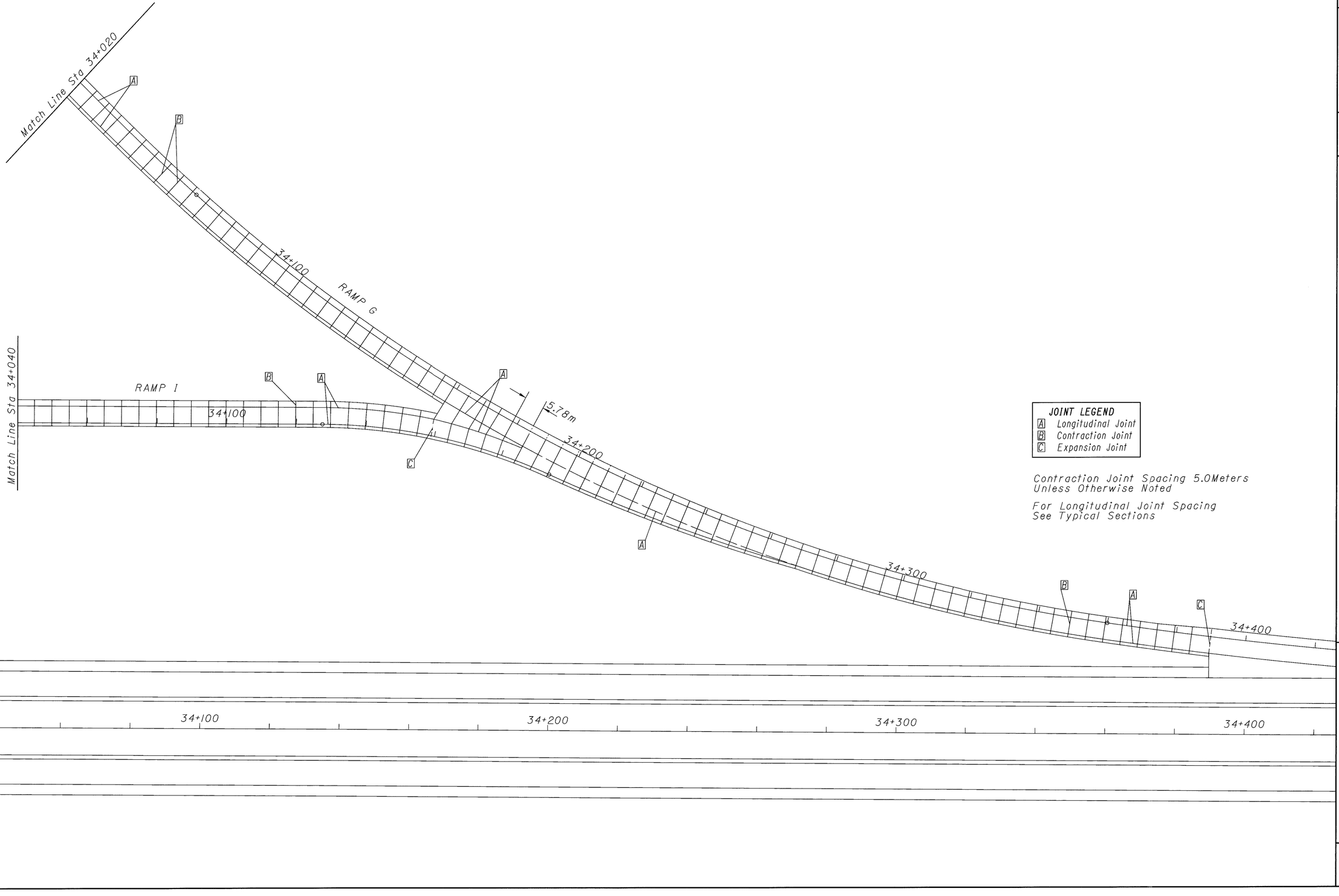
HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED LEH
CHECKED REA

WESTBOUND REST AREA PAVEMENT JOINT DETAILS

WYA/CRA-30-28.009/0.000

1435
2116



N

0 10 20
HORIZONTAL
SCALE IN METERS

CALCULATED LEH
CHECKED REA

WESTBOUND REST AREA
PAVEMENT JOINT DETAILS

WYA/CRA-30-28.009/0.000

1436
2116

Sta 33+979.333
56.750m LT
El 284.986

Sta 33+996.333
56.750m LT
El 285.694

250mm, Item 304

Sta 33+996.333
45.472m LT
El 286.164

Sta 33+988.611
37.750m LT
El 285.964

3.600m

Sta 33+979.333
37.750m LT
El 285.577

90°

2.0m max.

Type 7 Curb

1m

Sta 33+985.031
30.750m LT
El 285.186

5.6m Depressed Curb

TRUCK PARKING

TO REST AREA SERVICE BLDG.

℄ Ramp "F"

33+980

34+000

REST AREA STORAGE BLDG.

285.543 285.543 285.551 285.558 285.565 285.572 285.579 285.586 285.593 285.600 285.607 285.613 285.620 285.625 285.645 285.650 285.660 285.660 285.640

3m

2.332m

Lc = 23.562m

R = 30m

2.562m

3m

PC Sta.34+052.376 F
30.750m Lt.

PT Sta.34+073.545 F
21.963m Lt.

Type 7 Curb

3m

4.061m

TRUCK PARKING

Sta. 34+095.508 Ramp "F" =
Sta. 33+969.947 Ramp "G"

34+060

34+080

286.146

℄ Ramp "F"

285.930

285.617

+980

285.475

℄ Ramp "G"

285.333

Type 7 Curb

34+000

285.191

TS Sta. 34+006.392

285.116

+020

284.964

285.026

285.571 285.520

Type 7 Curb

3m

285.660 285.692 285.675 285.710 285.723 285.710 285.692 285.660 285.629 285.598 285.564 285.514 285.463 285.413 285.362 285.312 285.261

R = 46m

Lc = 72.293m

285.520 285.404 285.347 285.289 285.256 285.234 285.213 285.192 285.170 285.149 285.128 285.112

3m

PC Sta.34+052.139 F
28.473m Rt.

2.0m

3.0m

4.405m

PT Sta.34+005.414 G, 4.8m Rt.

284.947

Type 6 Curb

285.081

Sidewalk

2m

285.180 34+034.862 F
45.75m Rt.

N

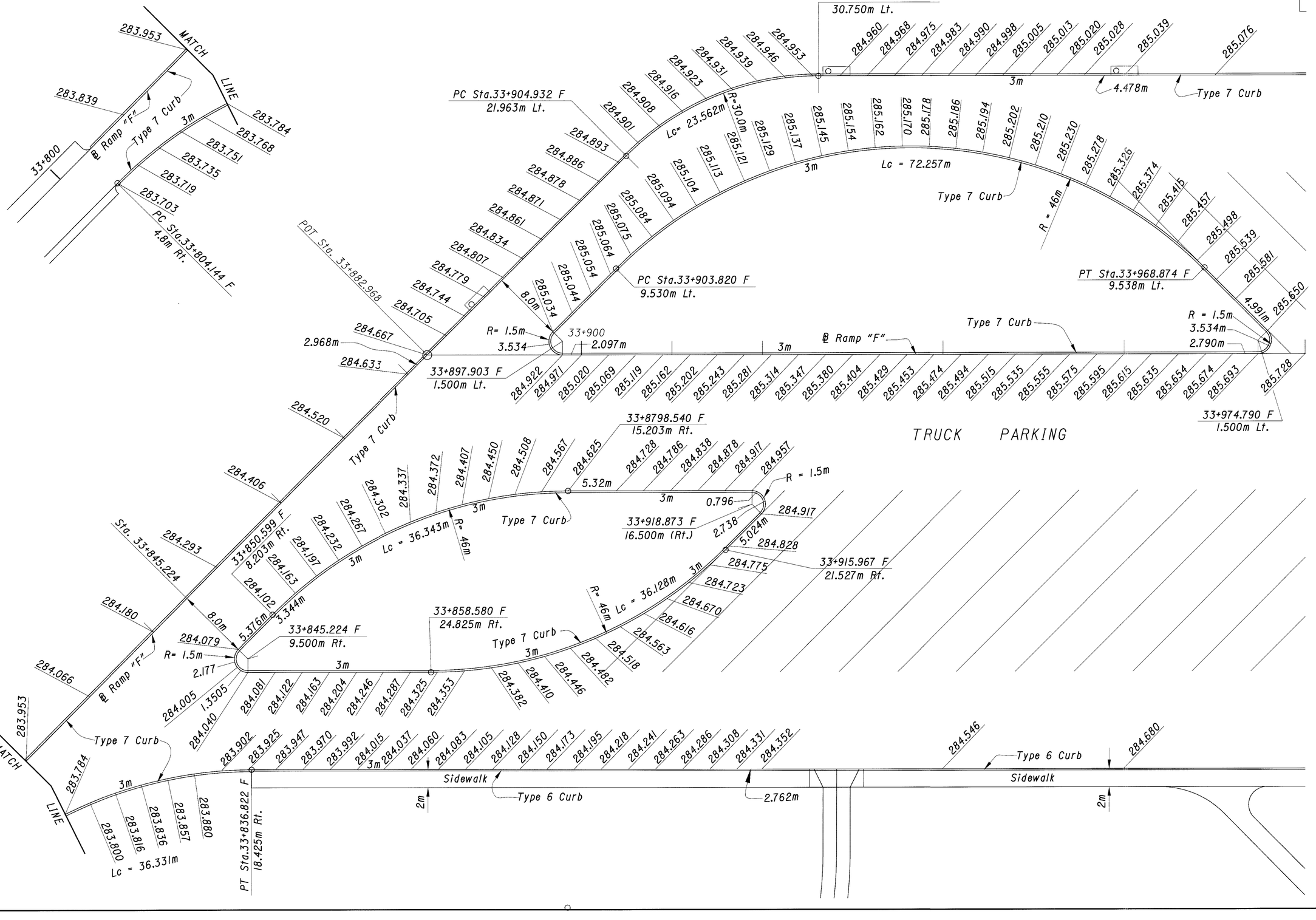
0 5 10
HORIZONTAL
SCALE IN METERS

CALCULATED JGB
CHECKED REA

PAVEMENT DETAILS
WESTBOUND TRUCK PARKING (ENTRANCE)

WYA/CRA-30-28.009/0.000

1445
2116



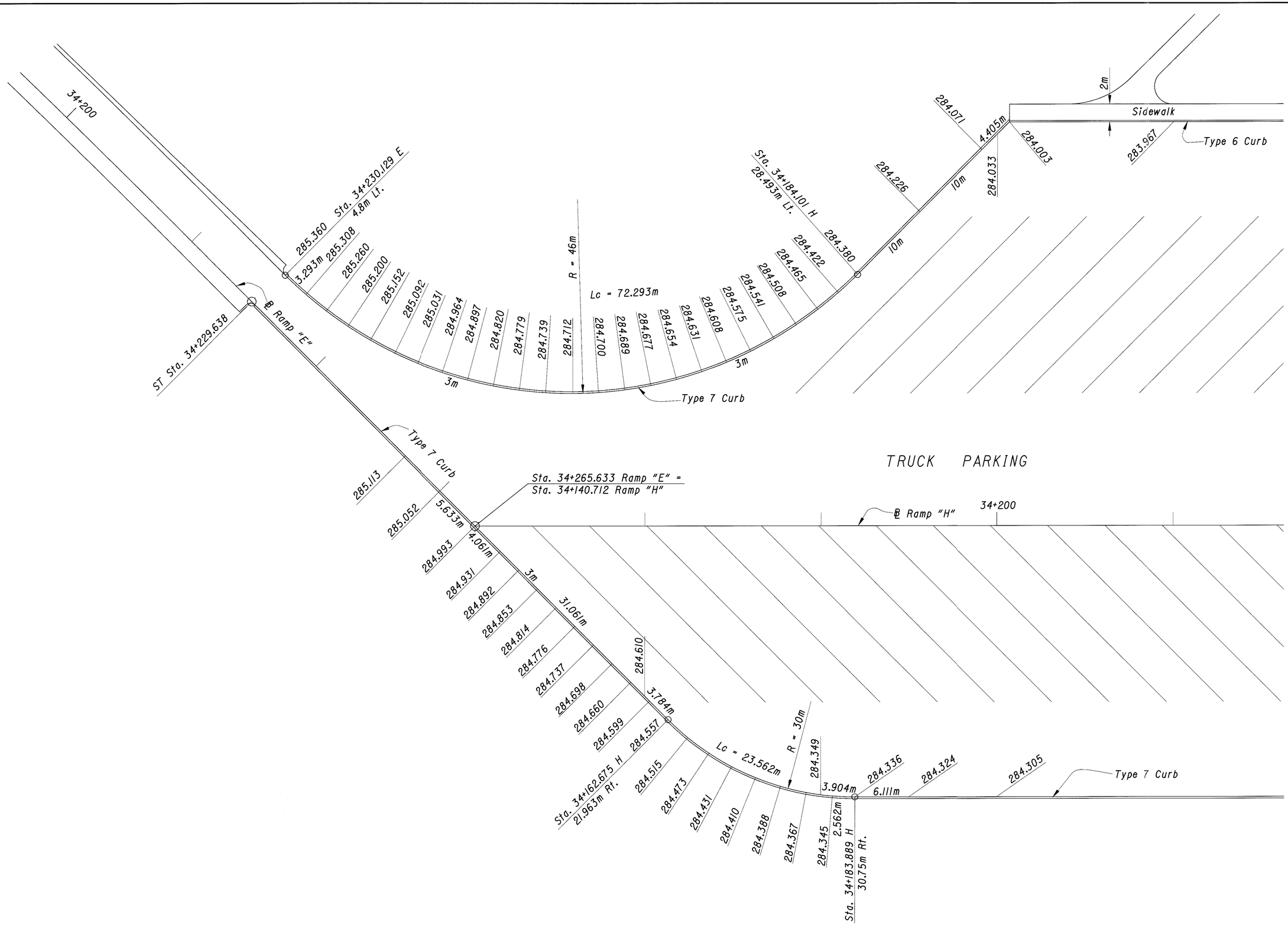
HORIZONTAL SCALE IN METERS

CALCULATED JGB
CHECKED REA

PAVEMENT DETAILS
WESTBOUND TRUCK PARKING (EXIT)

WYA/CRA-30-28.000/0.000

1446
2116



TRUCK PARKING

HORIZONTAL SCALE IN METERS

CALCULATED JGB
CHECKED REA

PAVEMENT DETAILS
EASTBOUND TRUCK PARKING (ENTRANCE)

WYA/CRA-30-28.009/0.000

1447
2116

Sta 34+427.161 H
4.8m Lt.

Sta 34+394.488 H
18.419m Lt.

Lc = 36.335m
R = 46m
3.335m
9.409m
3m
2m

Sidewalk
Sidewalk
Type 6 Curb
Type 6 Curb
Type 7 Curb
Type 7 Curb

282.355 282.399 282.433 282.461 282.490 282.519 282.548 282.577 282.606 282.635 282.664 282.693 282.725
282.579 282.624 282.464 282.767 282.897
283.630 283.376 283.079 282.972 282.845

Sta 34+3376.322 H
21.477m Lt.

Sta 34+386.081 H
9.5m Lt.

34+400

Lc = 36.128m
R = 46m
3.128m
3m
8.0m
R = 1.5m
℄ Ramp "H"

283.194 283.195 283.221 283.270 283.318 283.378 283.443 283.507 283.571 283.643 283.713 283.785 283.856
283.064 283.143 283.093 283.055 283.017 282.984 282.934 283.018 283.262

Sta 34+320.254 H
21.527m Lt.

Lc = 36.334m
R = 46m
3.335m
3m

283.240 283.290 283.340 283.390 283.445 283.513 283.581 283.649 283.716 283.784 283.991
283.078 283.144 283.192

Sta 34+380.695 H
8.0m Lt.

284.020
R = 1.5m
Sta 34+317.348 H
16.5m Lt.

Sta 34+332.759 H
15.0m Lt.

284.004 283.980 283.937 283.895 283.852

Type 7 Curb
283.628

Sta 34+348.331 =
0+000 ℄ Drive
See Detail "A"

Sta 34+333.395 H
1.5m Rt.

283.994

TRUCK PARKING

Sta 34+261.431 H
1.5m Rt.

284.806 284.771 284.716 284.667 284.641 34+300 284.545 284.428 284.291 284.149

℄ Ramp "H"
Type 7 Curb
R = 1.5m
283.994
8.0m

283.971 283.960 283.951 283.941 283.931 283.951 283.973 284.004 284.038 284.072 284.106 284.140 284.173 284.207 284.241 284.275 284.308 284.342 284.377 284.423 284.468 284.513 284.559 284.604 284.649 284.767

Lc = 71.938m
R = 46m
3m
3m

Sta 34+265.030 H
6.933m Rt.

Sta 34+329.796 H
6.933m Rt.

Type 7 Curb

POT Sta. 34+348.331
4.060m

283.996 283.998 283.994 283.976 283.934 283.893 283.851 283.809 283.768 283.740 283.728

Sta 34+348.331
20.000m RT

Sta 34+354.029
20.000m RT
El 284.691

El 285.078
9.278m

250mm, Item 304

Sta 34+354.029
39.000m RT
El 283.900

90°, typ.

REST AREA STORAGE BLDG.

El 285.078
11.278m
17.000m
El 284.608

R = 30m
Lc = 23.622m
3m

Sta 34+305.154 H
30.750m Rt.

Type 7 Curb

Sta 34+326.410 H
21.921m Rt.

283.736 283.761 283.786 283.811 283.836 283.862 283.887 283.930 284.052 284.101 284.096 284.191

Detail "A"
5.6m Depressed Curb
1m
℄ Drive
2.0m max.
3.600m

N

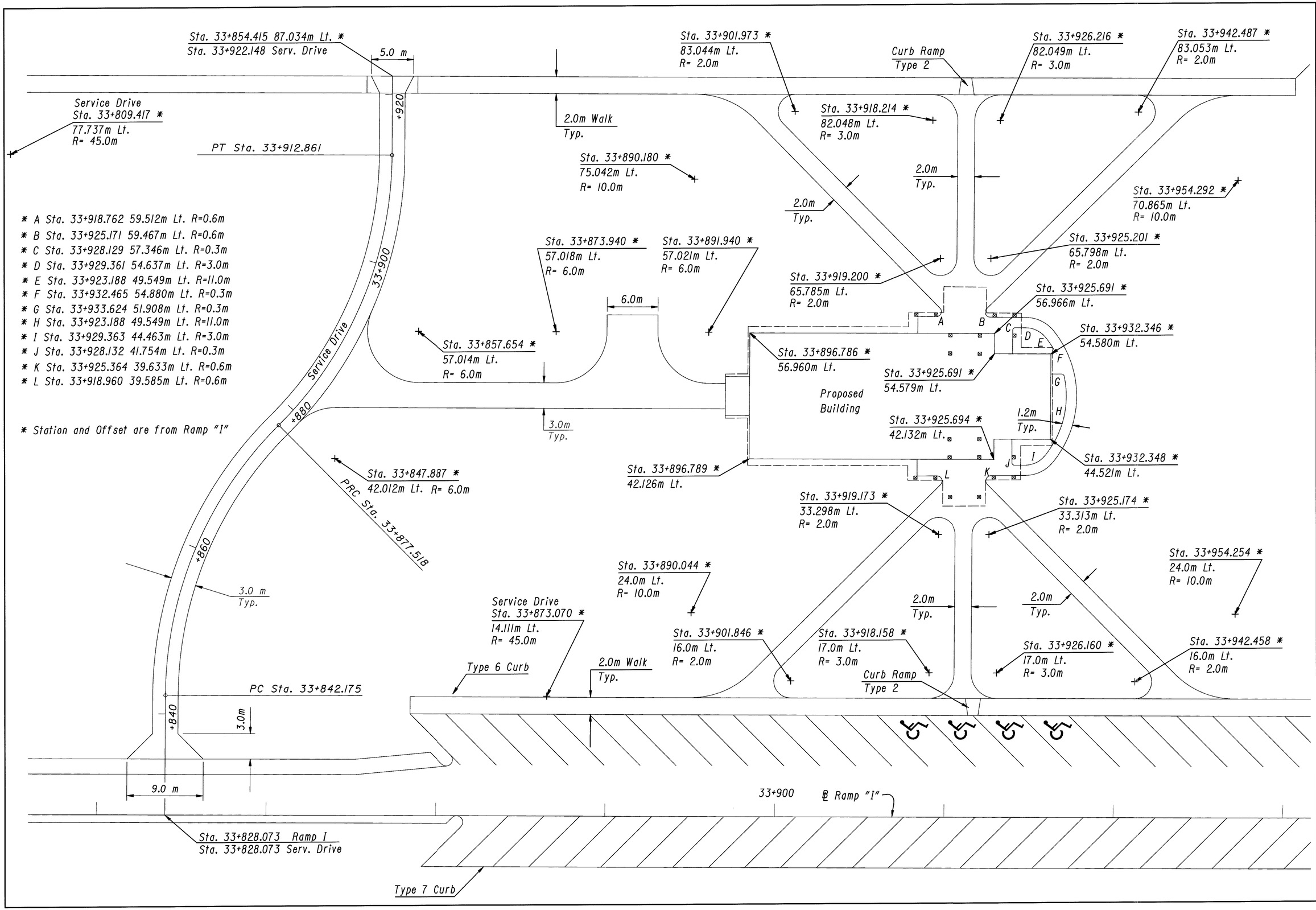
0 5 HORIZONTAL SCALE IN METERS

CALCULATED JGB
CHECKED REA

PAVEMENT DETAILS
EASTBOUND TRUCK PARKING (EXIT)

WYA/CRA-30-28.009/0.000

1448
2116



N

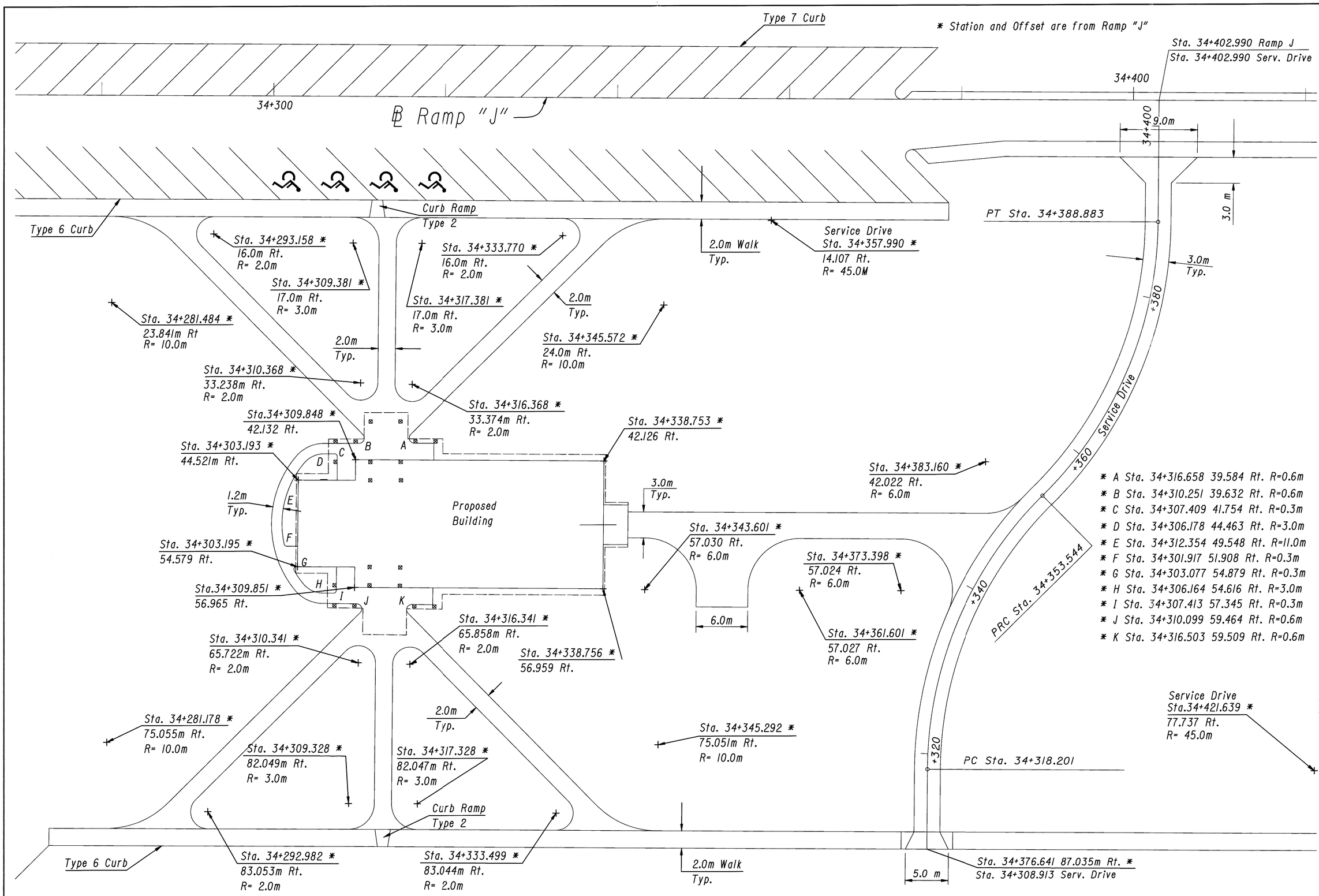
HORIZONTAL SCALE IN METERS
0 5 10

CALCULATED EHF
CHECKED REA

WESTBOUND REST AREA LAYOUT BUILDING, WALKS AND DRIVES

WYA/CRA-30-28.009/0.000

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2116


Type 7 Curb
* Station and Offset are from Ramp "J"
Sta. 34+402.990 Ramp J
Sta. 34+402.990 Serv. Drive
34+400
34+300
℄ Ramp "J"
34+400
9.0m
Curb Ramp
Type 2
Type 6 Curb
Sta. 34+293.158 *
16.0m Rt.
R= 2.0m
Sta. 34+309.381 *
17.0m Rt.
R= 3.0m
Sta. 34+281.484 *
23.841m Rt
R= 10.0m
2.0m
Typ.
Sta. 34+310.368 *
33.238m Rt.
R= 2.0m
Sta. 34+333.770 *
16.0m Rt.
R= 2.0m
Sta. 34+317.381 *
17.0m Rt.
R= 3.0m
2.0m
Typ.
Sta. 34+345.572 *
24.0m Rt.
R= 10.0m
2.0m Walk
Typ.
Service Drive
Sta. 34+357.990 *
14.107 Rt.
R= 45.0M
PT Sta. 34+388.883
3.0 m
3.0m
Typ.
+380
Service Drive
Sta. 34+316.368 *
33.374m Rt.
R= 2.0m
Sta.34+309.848 *
42.132 Rt.
Sta. 34+303.193 *
44.521m Rt.
Sta. 34+338.753 *
42.126 Rt.
A
B
C
D
E
F
G
H
I
J
K
1.2m
Typ.
Proposed
Building
3.0m
Typ.
Sta. 34+383.160 *
42.022 Rt.
R= 6.0m
Sta. 34+343.601 *
57.030 Rt.
R= 6.0m
Sta. 34+373.398 *
57.024 Rt.
R= 6.0m
6.0m
Sta. 34+361.601 *
57.027 Rt.
R= 6.0m
+360
+340
PRC Sta. 34+353.544
Sta. 34+303.195 *
54.579 Rt.
Sta.34+309.851 *
56.965 Rt.
Sta. 34+316.341 *
65.858m Rt.
R= 2.0m
Sta. 34+338.756 *
56.959 Rt.
Sta. 34+310.341 *
65.722m Rt.
R= 2.0m
2.0m
Typ.
Sta. 34+345.292 *
75.051m Rt.
R= 10.0m
Service Drive
Sta.34+421.639 *
77.737 Rt.
R= 45.0m
+320
PC Sta. 34+318.201
Sta. 34+281.178 *
75.055m Rt.
R= 10.0m
Sta. 34+309.328 *
82.049m Rt.
R= 3.0m
Sta. 34+317.328 *
82.047m Rt.
R= 3.0m
Curb Ramp
Type 2
Type 6 Curb
Sta. 34+292.982 *
83.053m Rt.
R= 2.0m
Sta. 34+333.499 *
83.044m Rt.
R= 2.0m
2.0m Walk
Typ.
5.0 m
Sta. 34+376.641 87.035m Rt. *
Sta. 34+308.913 Serv. Drive
* A Sta. 34+316.658 39.584 Rt. R=0.6m
* B Sta. 34+310.251 39.632 Rt. R=0.6m
* C Sta. 34+307.409 41.754 Rt. R=0.3m
* D Sta. 34+306.178 44.463 Rt. R=3.0m
* E Sta. 34+312.354 49.548 Rt. R=11.0m
* F Sta. 34+301.917 51.908 Rt. R=0.3m
* G Sta. 34+303.077 54.879 Rt. R=0.3m
* H Sta. 34+306.164 54.616 Rt. R=3.0m
* I Sta. 34+307.413 57.345 Rt. R=0.3m
* J Sta. 34+310.099 59.464 Rt. R=0.6m
* K Sta. 34+316.503 59.509 Rt. R=0.6m
N
0
5
10
HORIZONTAL
SCALE IN METERS
CALCULATED
EHF
CHECKED
REA
EASTBOUND REST AREA LAYOUT
BUILDING, WALKS AND DRIVES
WYA/CRA-30-28.009/0.000
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℄ US-30 WB

END WBUS-30 P.O.T. STA 29+193.960
BEGIN US-30 P.C. STA 29+193.960

STA 0+320.000 ℄ DETENTION BASIN =
STA 29+300.000 ℄ US-30

℄ US-30

28+900

29+000

29+100

29+100 B

29+200 B

29+200 US-30

29+300

29+400

29+500

28+900 B

29+000 B

℄ RAMP B

MATCH LINE STA 29+600.000 ℄ US-30, SEE SHEET NO.

℄ DETENTION BASIN

0+200

N 26° 52' 02" E

0+100

DETENTION BASIN

MATCH LINE STA 29+600.009 ℄ US-30 EB, SEE SHEET NO.

28+900

29+000

29+100

29+200

29+300

29+400

29+500

℄ US-30 EB

℄ RAMP A

STA 0+011.503 ℄ DETENTION BASIN =
STA 29+208.147 ℄ US-30EB

HORIZONTAL
SCALE IN METERS
0 20 40

CALCULATED JGB
CHECKED REA

GRADING PLAN
US-30 WB, US-30 EB, RAMP A, RAMP B, & US-30

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MATCH LINE STA 29+600.000 ℄ US-30, SEE SHEET NO.

℄ US-30

℄ US-30 EB

℄ TR-124

MATCH LINE STA 29+700.000 EB US-30, SEE SHEET NO.

29+700

29+800

29+900

30+000

30+100

266

268

270

0 20 40

HORIZONTAL SCALE IN METERS

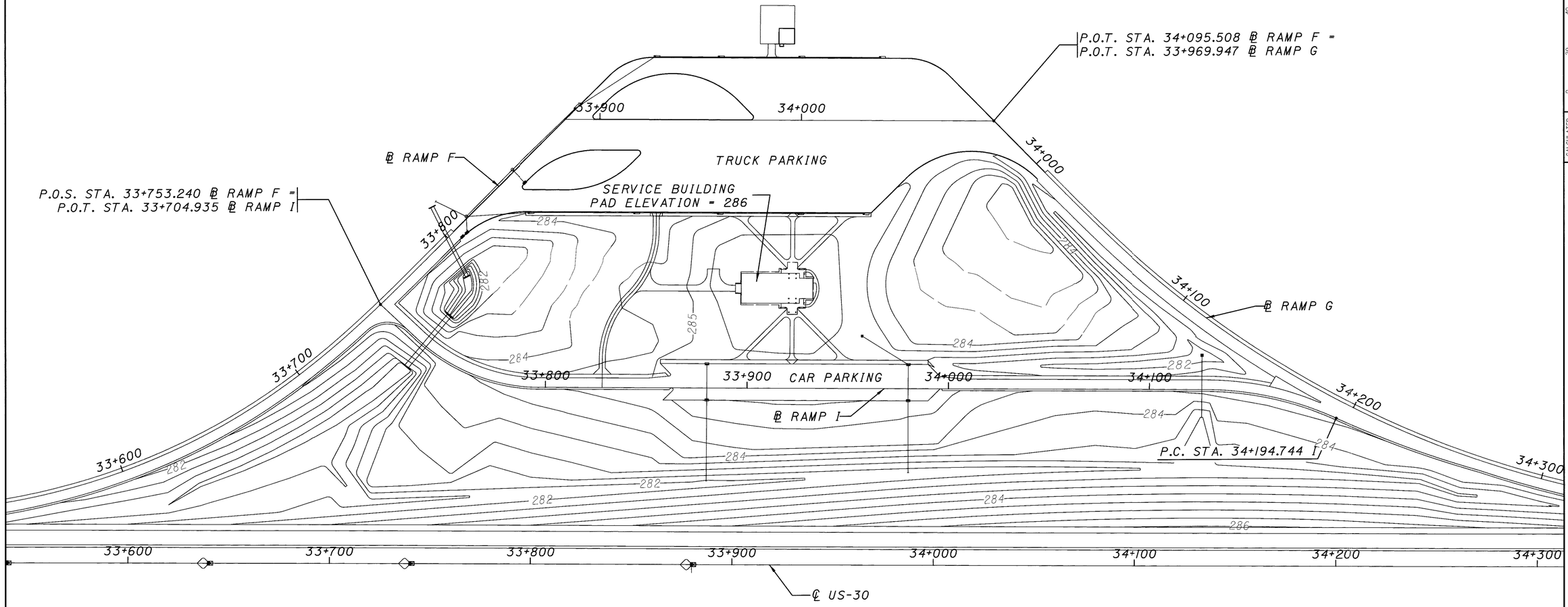
CALCULATED JGB

CHECKED REA

GRADING PLAN US-30 & US-30 EB

WYA/CRA-30-28.009/0.000

1452
2116



HORIZONTAL SCALE IN METERS
0 20 40

CALCULATED JGB
CHECKED REA

GRADING PLAN
WEST BOUND REST AREA

WYA/CRA-30-28.009/0.000

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2116

℄ US-30

33+900 34+000 34+100 34+200 34+300 34+400 34+500 34+600

284 286 288 282 280 278

P.C. STA. 34+040.879 ℄ RAMP J

℄ RAMP E

℄ RAMP J

CAR PARKING

SERVICE BUILDING
PAD ELEVATION 285

TRUCK PARKING

℄ RAMP H

P.O.T. STA. 34+265.633 ℄ RAMP E =
P.O.T. STA. 34+206.883 ℄ RAMP H

P.O.T. STA. 34+525.866 ℄ RAMP J=
P.O.S. STA. 34+478.378 ℄ RAMP H

N

0 20 40
HORIZONTAL
SCALE IN METERS

CALCULATED JGB
CHECKED REA

GRADING PLAN
EAST BOUND REST AREA

WYA/CRA-30-28.009/0.000

1454
2116

SERVICE ROAD No. II

P.O.T. STA 37+789.991 L =
P.O.T. STA 1+072.266 ℄ S.R.231 =
P.O.T. STA 37+778.750 M

SERVICE ROAD No. 6

℄ RAMP L

P.C. STA 37+434.573 L

℄ RAMP M

℄ RAMP K

℄ US-30

℄ RAMP N

P.T. STA 38+104.360 N

P.O.T. STA 37+765.516 K =
P.O.T. STA 0+932.389 ℄ S.R.231 =
P.O.T. STA 37+754.979 N

SERVICE ROAD No. 12

℄ S.R.231

1+200
1+100
1+000
0+900
0+800

37+400
37+500
37+600
37+700
37+800
37+900
38+000
38+100

284
286
288
290
292
294
280
282

N

0 20 40
HORIZONTAL
SCALE IN METERS

CALCULATED JGB
CHECKED REA

GRADING PLAN
US-30, SR-231, RAMPS K, L, M, & N

WYA/CRA-30-28.009/0.000

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2116

POT Sta. 0+303.385

℄ CR-330

P.O.T. STA 6+108.580 P =
P.O.T. STA 0+695.632 ℄ CR-330

℄ RAMP P

P.O.T. STA 6+479.100 O =
P.O.T. STA 1+097.018 ℄ CR-330

℄ US-30

SERVICE ACCESS No. 20

DRIVEWAY

℄ RAMP O

HORIZONTAL SCALE IN METERS
0 20 40

CALCULATED JGB
CHECKED REA

GRADING PLAN
US-30, RAMPS O. & P. & CR-330

WYA/CRA-30-28.009/0.000

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2116

SHEET NUMBER														ITEM	ITEM EXIT	GRAND TOTAL	UNIT	DESCRIPTION
1458	1459	1460	1461	1462	1463	1464	1465	1472	1473	1474	1556							
																		GROUND MOUNTED SIGNS
17.1	13.8	96.1	29.9	16.1	3.6	15.2	80.7							630	02100	272.5	Meter	Ground Mounted Support, No. 2 Post
8.2	133.0	108.8	122.8	232.7	179.4	29.5	4.0							630	03100	818.4	Meter	Ground Mounted Support, No. 3 Post
17.5	48.6	12.4	48.6	15.8										630	04100	142.9	Meter	Ground Mounted Support, No. 4 Post
29.6	40.6	18.4	19.6	10.2	55.1	16.8	8.8							630	06400	199.1	Meter	Ground Mounted Support, S100x11.5 Beam
19.4	46.7	22.4	31.7	50.4	8.6	21.5	9.3							630	06500	210.0	Meter	Ground Mounted Support, W150x13.5 Beam
	27.3	15.1	58.3		43.3	28.1								630	07000	172.1	Meter	Ground Mounted Support, W200x26.6 Beam
	28.6		16.1	34.1										630	07500	78.8	Meter	Ground Mounted Support, W250x32.7 Beam
54.1	26.3	13.2	51.6	89.7	37.5	13.4	10.9							630	07600	296.7	Meter	Ground Mounted Support, W250x17.9 Beam
			16.2	26.1										630	08002	42.3	Meter	One Way Support, No. 2 Post
18	30	12	27	20	18	14	6							630	09000	145	Each	Breakaway Beam Connection
											1			630	20700	1	Each	Overhead Sign Support, Type TC-12.30M, Design 7
											2			630	35500	2	Each	Overhead Sign Support, Type TC-7.65M, Design 6
17.4	51.1	37.9	40.2	48.9	32.9	5.2	5.1							630	80102	238.7	SQ m	Sign, Flat Sheet, Type G
34.2	63.6	20.2	87.7	87.9	62.7	39.6	10.7				50.2			630	80204	456.8	SQ m	Sign, Extrusheet, Type G
30.1	16.1		11.0		6.8	11.4	3.8							630	80300	79.2	SQ m	Sign, Temporary Overlay
	3	2	3											630	82000	8	Each	Sign Backing Assembly
18	24	12	29	28	26	14	6							630	84500	157	Each	Ground Mounted Beam Support Foundation
											5			630	84510	5	Each	Rigid Overhead Sign Support Foundation
33					4	15	12							630	84900	64	Each	Removal of Ground Mounted Sign and Disposal
3						2								630	85100	5	Each	Removal of Ground Mounted Sign and Reerection
36					4	21	8							630	86002	69	Each	Removal of Ground Mounted Post Support and Disposal
4														630	86102	4	Each	Removal of Ground Mounted Beam Support and Disposal
																		PAVEMENT MARKING
										688				620	10300	688	Each	Delineator, Type C, Post Mounted
										175				620	15300	175	Each	Delineator, Type D, Post Mounted
									3294					621	00200	3294	Each	Raised Pavement Marker, Installation Only
									485					626	00100	485	Each	Barrier Reflector, Type A
									83					626	00200	83	Each	Barrier Reflector, Type B
								93.58						828	10000	93.58	Kilometer	Edge Line
								37.08						828	10100	37.08	Kilometer	Lane Line
								1.76						828	10200	1.76	Kilometer	Center Line
								2474						828	10300	2474	Meter	Channelizing Line
								28						828	10400	28	Meter	Stop Line
								3282						828	10600	3282	Meter	Transverse Line
								8						828	10900	8	Each	Handicap Symbol
								3280						828	20200	3280	Meter	Parking Lot Stall Marking
								336						828	50100	336	Meter	Removal of Pavement Marking

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL GENERAL SUMMARY

WYA / CRA-30-28.009 / 0.000

1457
2116

| REFERENCE NO. | STATION | SIDE | GE, Level 2 | GF 1.8m x 1.5m | W-38-36 | R-10-48 | W-49R-48 | W-54A | X-4 | W-1-36-2 | R-9A-48 | | |

GROUND MOUNTED SIGNING QUANTITIES

CALCULATED AG | CHECKED REA

WYA/CRA-30-28.009/0.000

1459/2116

REFERENCE NO.	STATION	SIDE	GE Level 2	GF 1.8m x 1.5m	GB Level 2	GM Level 2	GJ Level 3	M-1-36-2	M-40-36	M-37-36	M-39-36	N-20-24	R-123-36	R-19-24	R-9A-48	R-10-48	W-49R-48	W-54B	W-48-30	W-24-48	X-4	R-31C-48	R-41A-36	R-2-36	R-43R-48	M-25-30	R-37R-48	R-41B-36	R-43L-48	R-1-36	R-107A-24	D-7-96	RA-1-132	N-86-120
	US 30		Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea
56	13+740	Lt.		1																													
59	14+384 US-23	Rt.						2	1	1																							
60	14+685 US-23	Rt.													1																		
61	14+685 US-23	Rt.														1																	
62	15+360 US-23	Lt.	1	(3.3m x 3.0m)																													
63	14+557 US-23	Lt.	1	(3.9m x 3.0m)																													
64	Not Used																																
65	29+350 US-30 EB	Rt.															1																
66	28+980 US-30 WB	Rt.																1															
67	28+980 US-30 WB	Lt.																1															
68	29+143 US-30 WB			1																													
69	Not Used																																
70	Overhead Sign See Sht No. 1557																																
71	Bridge Mtd. See Sht No. 1557																																
72	30+115	Rt.						1			1																						
73	Not Used																																
74	30+420	Rt.													1																		
75	30+342	Rt.											1	1																			
76	30+420	Rt.														1																	
77	30+357	Lt.											1	1																			
78	Not Used																																
79	30+725	Rt.						1 (3.6m x 1.65m)																									
80	Overhead Sign See Sht No. 1557																																
81	Not Used																																
82	31+860	Lt.		1 (3.9m x 3.0m)																													
83	Not Used																																
84	32+000	Rt.										1																			1	1	
85	0+913 TR-127	Lt.																		1													
86	32+086	Rt.						1 (2.7m x 1.5m)																									
87	0+894 TR-127	Lt.																	1														
88	32+100	Lt.						1 (4.8m x 1.65m)																									
89	1+021 TR-127	Lt.																		1													
90	1+108 TR-127	Lt.																	1														
99	32+400	Lt.													1																		
100	32+476	Rt.																		1													
101	32+513	Lt.											1	1																			
102	32+400	Lt.														1																	
103	32+566	Lt.											1	1																			
104	32+663	Rt.																				1											
105	32+663	Rt.																				1											
106	32+732	Rt.						1 (2.7m x 0.9m)																									
107	32+800	Rt.																				1	1										
108	32+784	Lt.																						1	1								
109	32+784	Lt.																				1	1										
110	32+856	Lt.																								1							
111	0+974 TR-128	Lt.																									1	1					
112	0+974 TR-128	Rt.																											1	1			
113	32+885	Rt.																													1		
114	0+978 TR-128	Rt.																							1		1						
115	32+890	Rt.																								1							
116	32+893	Rt.																						1	1								
	Total																																

630

Sign, Backing Assembly	Ground Mounted Beam Support Foundation	Ground Mounted Support, No. 2 Post	Ground Mounted Support, No. 3 Post	Ground Mounted Support, No. 4 Post		Breakaway Beam Connection	Ground Mounted Supports, S100x11.5 Beam	Ground Mounted Supports, W150x13.5 Beam	Ground Mounted Supports, W250x17.9 Beam	Ground Mounted Supports, W200x26.6 Beam	Ground Mounted Supports, W250x32.7 Beam	Sign, Flat Sheet, Type G	Sign, Extrusheet, Type G	Sign, Temporary Overlay
Each	Each	Meter	Meter	Meter		Each	Meter	Meter	Meter	Meter	Meter	SQ m	SQ m	SQ m
	2					2	5.1/5.2						2.7	3.3
2	2					2	5.3/5.8					2.51		
			4.4/5.0									1.85		
			4.4/5.0									1.85		
	2					2				6.9/6.9			9.90	6.8
	2					2					6.1/7.0		11.7	6.0
	2					2	4.4/4.5					1.49		
						2		5.4/6.4				4.46		
						2		5.4/6.4				4.46		
	2					2	5.1/5.2						2.7	
				4.9/5.0								1.25		
			4.2/4.3									1.85		
				4.0								1.30		
			4.1/4.2									1.85		
				4.0								1.30		
	2					2			6.4/6.5				5.94	
	2					2					8.0/7.5		11.7	
1	2					2			6.4/7.0			1.76	4.60	
		3.5				2						0.21		
	2					2		5.3/5.5					4.05	
			3.9									0.58		
	2					2				6.3/7.2			7.92	
		3.5										0.21		
			3.9									0.58		
			4.3/4.2									1.85		
				4.1/4.2								1.49		
				4.0								1.30		
			4.2/4.1									1.85		
				4.0								1.30		
			4.5/4.5									1.08		
			4.6/4.7									1.08		
	2					2		6.2/6.1					2.43	
			4.6/4.7									1.62		
			4.0									1.02		
			4.5/4.5									1.62		
			4.8/4.8									1.80		
			4.7/4.9									1.53		
				4.8								0.97		
		3.4	3.4									1.12		
			4.5/4.5									1.80		
				4.8/4.8								1.11		
			4.0									1.02		
3	24	13.8	133.0	48.6		30	40.6	46.7	26.3	27.3	28.6	51.1	63.6	16.1

GROUND MOUNTED SIGN QUANTITIES

CALCULATED AG | CHECKED REA

WYA / CRA-30-28.009 / 0.000

(1460 / 2116)

REFERENCE NO.	STATION	SIDE	D-7-96	GM-1	W-25-30	W-1-36-2	W-40-36	W-39-36	N-20-24	N-48	R-3IC-48	R-41A-36	R-43R-48	R-43L-48	R-1-36	R-107A-24	R-10-48	R-9A-48	RA-2-132	R-59B(R)-12	R-1-30	R-400-24 "SPECIAL"	R-41B-30	R-10-24	RA-4-72	W-24-48	W-49R	L-59B(L)-12	N-86-120	N-62-48	W-48-30	X-4	GM Level 2	630 Sign, Backing Assembly	630 Ground Mounted Beam Support Foundation	630 Ground Mounted Support, No. 2 Post	630 Ground Mounted Support, No. 3 Post	630 Ground Mounted Support, No. 4 Post		630 Breakaway Beam Connection	630 Ground Mounted Supports, S100x11.5 Beam	630 Ground Mounted Supports, W150x13.5 Beam	630 Ground Mounted Supports, W250x17.9 Beam	630 Ground Mounted Supports, W200x26.6 Beam		630 Sign, Flat Sheet, Type G	630 Sign, Extrusheet, Type G
	US 30		Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Each	Each	Meter	Meter	Meter		Each	Meter	Meter	Meter	Meter		SQ m	SQ m			
117	32+825	Lt.				1	1																													4.9/5.0											1.25				
118	1+022 TR-128	Lt.											1	1																						4.5/4.5											1.11				
119	32+858	Lt.	1																																3.4/3.4											1.12				
120	1+026 TR-128	Lt.													1	1																				4.0/4.9											0.97				
121	1+025 TR-128	Rt.												1									1															4.5										1.38				
122	Not Used																																																			
123	32+960	Lt.									1	1																								4.2/4.5											1.49				
124	Not Used																																																			
125	32+960	Lt.									1	1																								4.1/4.1											1.49				
127	32+920	Rt.				1		1																												4.9/5.0											1.25				
128	33+011	Lt.		1	(2.7m x 0.9m)																														2						2		5.5/6.1					2.43	
129	33+268	Lt.																								1												4.0/3.9										1.49				
130	33+340	Rt.															1																			4.7/4.8											1.85				
131	33+340	Rt.																1																		4.9/5.0											1.85				
132	33+600	Rt.							1										1										1	1					1	2					2			6.9/6.3				3.62	3.96		
133	33+535 RAMP "F"	Lt.								1																										3.7/3.5											1.08				
134	33+580	Lt.																									1									4.1/4.2											1.49				
135	33+081	Lt.									1																									4.2/4.5											0.93				
136	33+081	Lt.									1																									4.1/4.1											0.93				
137	33+880	Rt.																						1													2					2	4.6/4.6						2.88	
138	33+677	Lt.																															1	(2.7m x 1.5m)		2					2		5.4/5.4					4.05	
139	33+932 RAMP "I"	Lt.																									1									3.7											0.14				
140	33+916 RAMP "I"	Lt.																		1																3.7											0.14				
141	33+713 RAMP "I"	Lt.																			1															3.7											0.51				
143	34+235 RAMP "J"	Rt.																					1													3.8											0.58				
144	34+080 RAMP "E"	Lt.																				1														3.8											0.58				
145	Not Used																																																			
146	34+235 RAMP "J"	Lt.																					1													3.8											0.58				
147	34+020 RAMP "J"	Rt.																		1																3.7											0.14				
148	34+000 RAMP "J"	Rt.																										1								3.7											0.14				
149	34+000 RAMP "I"	Lt,Rt																					2													3.8/3.8											1.16				
150	Not Used																																																			
151	34+160 RAMP "G"	Rt.																					1													3.8											0.58				
152	Not Used																																																			
153	34+040 RAMP "G"	Lt.																						1												3.8											0.47				
154	34+518 RAMP "J"	Rt.																			1															3.8											0.51				
155	34+380	Lt.																							1											2					2	4.6/4.6						2.88	
156	34+630	Lt.						1										1										1	1					1	2					2				7.2/7.9			3.62	3.96		
157	34+655	Rt.																									1										4.1/4.1											1.49				
158	Not Used																																																			
159	Not Used																																																			
160	34+700 RAMP "H"	Rt.								1																										4.6/4.8											1.08				
161	Not Used																																																			
162	Not Used																																																			
163	TR-133 @ CR-56	Rt.																												1								4.0										0.58				
164	0+946 TR-133	CL																													1				3.7											0.21				
165	35+340	Rt.				1		1																												4.8/5.0											1.25				
166	1+059 TR-133	CL																													1				3.7											0.21				
167	TR-133 @ TR-55	Lt.																												1								4.0										0.58				
	Total																																	2	12	96.1	108.8	12.4		12	18.4	22.4	13.2	15.1		37.9	20.2			

| REFERENCE NO. | STATION | SIDE | D-4B-48 | GJ Level 3 | GB Level 2 | GF 1.8m x 1.5m | GH-1 Level 4 | M-2-36-3 | M-25-30 | M-39-36 | M-1-36-2 | M-38-36 | M-40-36 | R-31C-48 | GM Level 2 | N-20-24 | R-19-24 | R-123-36 | RA-1-132 | R-9A-48 | R-10-48 | R-41A-36 | R-1-48 | R-41B-36 | W-49R-48 | R-43L-48 | R-43R-48 | M-21-30 | M-52A-108 | M-40-30 | N-86-120 | M-2-30-3 | R-15A-36 | M-25-24 | 630 One Way Support No. 2 Post | 630 Sign, Backing Assembly | | 630 Ground Mounted Beam Support Foundation | 630 Ground Mounted Support, No. 2 Post | 630 Ground Mounted Support, No. 3 Post | 630 Ground Mounted Support, No. 4 Post | | 630 Breakaway Beam Connection | 630 Ground Mounted Supports, S100x11.5 Beam | 630 Ground Mounted Supports, W150x13.5 Beam | 630 Ground Mounted Supports, W250x17.9 Beam | 630 Ground Mounted Supports, W200x26.6 Beam | 630 Ground Mounted Supports, W250x32.7 Beam | 630 Sign, Flat Sheet, Type G | 630 Sign, Extrusheet, Type G | 630 Sign, Temporary Overlay | | |
|---|---|---

| REFERENCE NO. | STATION | SIDE | D-7-96 | GJ Level 3 | GB Level 2 | GM-1 Level 2 | GP Level 2 | M-39-36 | M-1-36-2 | M-25-30 | M-17-24 | R-43L-48 | R-43R-48 | R-2-36 | R-41A-36 | R-19-24 | R-123-36 | R-1-36 | R-41B-36 | R-31C-48 | R-107A-24 | R-37R-36 | R-37A-36 | R-10-48 | R-9A-48 | W-24-48 | M-40-36 | 630 | | |

GROUND MOUNTED SIGN QUANTITIES

CALCULATED AG | CHECKED REA

WYA / CRA-30-28.009 / 0.000

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| REFERENCE NO. | STATION | SIDE | D-7-96 | GB Level 2 | GM-I Level 2 | GA-I Level 2 | GE-Level 2 | M-40-36 | M-I-36-2 | M-25-30 | GF 1.8m x 1.5m | M-I7-24 | M-I-24-2 | R-I9-24 | D-4B | R-4IB-36 | R-43L-48 | R-I-36 | R-I07A-24 | R-I-36 | R-43R-48 | R-37R-36 | R-2-36 | R-4IA-36 | M-40-24 | R-3IC-48 | R-9A-48 | R-I0-48 | R-I23-36 | M-2-24-2 | W-24-48 | X-4 | W-49R-48 | R-I5A-36 | M-2I-2I | M-52A-I08 | GH-I Level 4 | GM Level 2 | M-39-36 | 630 | | |

GROUND MOUNTED SIGN QUANTITIES

CALCULATED AG | CHECKED REA

WYA/CRA-30-28.009/0.000

REFERENCE NO.	STATION	SIDE	D-4B-48 Level 4	GE Level 2	GB- Level 2	M-1-24-2	M-17-24	M-52A	R-10-24	R-41B-30	W-48-30	M-2-24-3	M-37-24	630 Sign, Temporary Overlay	Ground Mounted Beam Support Foundation	Ground Mounted Support, No. 2 Post	Ground Mounted Support, No. 3 Post	Breakaway Beam Connection	Ground Mounted Supports, S100x11.5 Beam	Ground Mounted Supports, W150x13.5 Beam	Ground Mounted Supports, W250x17.9 Beam	Ground Mounted Supports, W200x26.6 Beam	Sign, Flat Sheet, Type G	Sign, Extrusheet, Type G	Removal of Ground Mounted Sign and Reerection	Removal of Ground Mounted Sign and Disposal	Removal of Ground Mounted Post Support and Disposal
	US 30		Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	Ea	SQ m	Each	Meter	Meter	Each	Meter	Meter	Meter	Meter	SQ m	SQ m	Each	Each	Each
337	6+556-6+464	Lt.															4.2/4.3								1		1
338	6+679	Rt.																								2	2
339	6+691	Rt.																								1	1
340	6+737	Lt.																								1	1
341	6+747	Lt.																								2	2
342	Not Used																										
343	Not Used																										
344	6+802	Lt.																								1	1
345	6+804	Lt.		1 (3.0m x 2.7m)											2			2			6.7/6.7			8.10			
346	6+851	Lt.																								1	1
347	6+908	Lt.																								1	1
348	6+804	Lt.																								1	1
349	7+389	Lt.																								2	4
350	7+594	Lt.			1 (3.9m x 2.7m)										2			2				6.9/7.2		10.53			
351	8+399	Lt.			1 (3.3m x 2.7m)										2			2				6.9/7.1		8.91			
352	7+068	Lt.																								2	4
353-356	Not Used																										
	Ramp "E"																										
357	Not Used																										
358	34+230	Rt/Lt								2						3.8/3.8							1.16				
359-362	Not Used																										
	Ramp "G"																										
363	34+006	Rt/Lt								2						3.8/3.8							1.16				
364-373	Not Used																										
	SR-231																										
374	0+628	Rt.				1	1							0.4			4.1						0.56				
375	0+719	Rt.						1						1.3	2			2	4.2/4.0					2.09			
376	0+841	Rt.	1											4.0	2			2		5.5/5.1				3.96			
377-378	Not Used																										
379	1+155	Rt.										1	1				4.6						0.65				
380	1+275	Rt.																							1		1
381	1+162	Lt.	1											4.0	2			2		5.7/5.2				3.96			
382	1+272	Lt.						1						1.3	2			2	4.4/4.2					2.09			
383	1+333	Lt.																								1	1
384	1+363	Lt.				1	1							0.4			4.1						0.56				
385	Not Used																										
	TR-21																										
386	1+150	Lt.				1	1										4.2						0.56				
387	1+371	Rt.									1						4.0						0.58				
Sub-Total														11.4	14	15.2	29.5	14	16.8	21.5	13.4	28.1	5.2	39.6	2	15	21

1464
2116

GROUND MOUNTED SIGN QUANTITIES

CALCULATED AG | CHECKED REA

WYA / CRA-30-28.009 / 0.000

1465
2116

REFERENCE NO.	STATION	SIDE	M-1-24-2	M-17-24	M-52A-108	D-4B-48	GH-1 Level 4	630 Ground Mounted Beam Support Foundation	630 Ground Mounted Support, No. 2 Post	630 Ground Mounted Support, No. 3 Post		630 Breakaway Beam Connection	630 Ground Mounted Supports, S100x11.5 Beam	630 Ground Mounted Supports, W150x13.5 Beam	630 Ground Mounted Supports, W250x17.9 Beam	630 Sign Support Assembly, Bridge Mounted, Type 1	630 Sign, Temporary Overlay	630 Sign, Flat Sheet, Type G	630 Sign, Extrusheet, Type G		630 Removal of Ground Mounted Sign and Disposal	630 Removal of Ground Mounted Post Support and Disposal
	C.R. -330		Ea	Ea	Ea	Ea	Ea	Each	Meter	Meter		Each	Meter	Meter	Meter	Each	SQ m	SQ m	SQ m		Each	Each
390	0+396	Rt.	1	1						4.0								0.56				
391	0+487	Rt.			1			2				2	4.3/4.5				1.3		2.09			
392	0+564	Rt.																			1	1
393	0+609	Rt.				1		2				2			5.2/5.7		2.5		5.04			
394	0+627	Rt.																			1	1
395	0+662	Rt.																			4	2
396	Not Used																					
397	0+435	Rt.																			1	2
398	0+402	Lt.																			2	1
399	Not Used																					
400	1+495 (CR-330)	Rt.					1 (2.1m x 1.7m)	2				2		4.7/4.6					3.57			
401	1+497	Rt.																			3	1
	Total							6		4.0		6	8.8	9.3	10.9		3.8	0.56	10.7		12	8

PAVEMENT MARKINGS

828

SHEET NO.	STATION TO STATION	SIDE	Edge Line (White)	Edge Line (Yellow)		Lane Line		Center Line (Double Solid)		Channelizing Line	Stop Line	Transverse Line (White)	Removal of Pavement Marking	Parking Lot Stall Marking
			Km.	Km.		Km.		Km.		m	m	m	m	m
	U.S. 23 S.B.													
1475	12+245.827-12+320.000	Lt.	.074											
	U.S. 23 S.B.													
1476	12+320.000-12+660.000	Lt.	.340											
1476	12+488.916-12+565.299	Lt.				.076								
1476	12+565.299-12+605.981	Lt.								40.691				
1476	12+565.299-12+660	Lt.	.090											
1476	12+605.981-12+660.000	Lt.		.054										
	U.S. 23 N.B.													
1476	12+366.678-12+463.452	Rt.	.097											
1476	12+456.807-12+510.964	Rt.				.054								
1476	12+510.964-12+606.659	Rt.								95.695				
1476	12+510.964-12+606.659	Rt.										125.140		
	Ramp "A"													
1476	28+558.024-28+755.573	Rt.	.197											
1476	28+605.414-28+701.000	Lt.								90.131				
1476	28+701.000-28+754.465	Lt.		.055										
	Ramp "A"													
1477	28+755.513-28+900.000	Rt.	.144											
1477	28+754.465-28+900.000	Lt.		.146										
	Ramp"B"													
1477	12+660.000-12+695.977	Rt.		.036										
1477	12+660.000-12+695.977	Lt.	.036											
1477	28+027.321-28+260.000	Rt.		.232										
1477	28+027.321-28+260.000	Lt.	.232											
1477	12+660-12+695.977 US-23	Lt.	.069											
	Ramp "B"													
1478	28+260.000-28+600.000	Lt.	.340											
1478	28+260.000-28+600.000	Rt.		.340										
	U.S. 30 E.B.													
1479	28+660.546-28+900	℄	.239											
1479	28+661.781-28+900	Lt.				.238								
1479	28+663.034-28+900	Lt.		.237										
	Ramp "B"													
1479	28+600.000-28+749.406	℄		.149										
1479	28+600.000-28+741.561	Lt.	.142											
	U.S. 30 E.B.													
1480	28+316.564-28+660.546	℄	.344											
1480	28+350.879-28+661.781	Lt.				.311								
1480	28+316.123-28+663.034	Lt.		.414										
	Ramp "B"													
1480	28+749.406-28+880	℄		.131										
1480	28+741.561-28+880	Lt.	.138											
	U.S. 30 W.B.													
1480	28+654.355-28+760.000	℄		.106										
1480	28+656.946-28+760.000	Lt.	.103											
1480	28+697-28+760.000	Rt.				.063								
	U.S. 23 S.B.													
1480	13+625.851-13+680.000	Rt.		.054										
1480	13+620.877-13+660.004	Lt.	.039											
	U.S. 23 N.B.													
1480	13+629.324-13+655.122	Rt.	.026											
1480	13+546.983-13+672.062	Rt.		.125										
	U.S. 23 S.B.													
1481	13+680.000-13+732.868	Rt.		.053										
1481	13+747.560-13+902.053	Lt.								154.493				
1481	13+987.423-14+017.068	Lt.	.030											
	U.S. 23 N.B.													
1481	13+920.086-14+020.000	Rt.	.100											
1481	13+920.086-14+010.077	Rt.		.090										
1481	14+010.077-14+020.000	Rt.								9.923				
1481	14+010.077-14+020.000	Rt.	.010											
	U.S. 30 W.B.													
1481	28+412.736-28+660.000	℄	.247											
1481	28+412.736-28+660.000	Rt.		.247										

PAVEMENT MARKINGS

828

SHEET NO.	STATION TO STATION	SIDE	Edge Line (White)	Edge Line (Yellow)		Lane Line		Center Line (Double Solid)		Channelizing Line	Stop Line	Transverse Line (White)	Removal of Pavement Marking	Parking Lot Stall Marking
			Km.	Km.		Km.		Km.		m	m	m	m	m
	U.S. 30 E.B.													
1481	28+248.721-28+316.123	Lt.		.068										
1481	28+009.000-28+316.564	℄	.307											
1481	28+094.262-28+248.721	Lt.								154.459				
1481	28+094.262-28+248.721	Lt.										313.283		
1481	28+051.764-28+094.262	Lt.				.042								
	U.S. 23 N.B.													
1482	14+020.000-14+360.000	Rt.	.340											
1482	14+020.000-14+051.507	Rt.								31.507				
1482	14+020.000-14+051.505	Rt.	.032											
1482	14+051.507-14+143.817	Rt.				.092								
	U.S. 23 N.B.													
1483	14+360.000-14+370.084	Rt.	.010											
	U.S. 30 E.B.													
1484	28+900.000-29+240.000	Rt.	.340											
1484	28+900.000-29+240.000	℄				.340								
1484	28+900.000-29+240.000	Lt.		.340										
1484	29+518.695-29+580.000	Rt.	.061											
1484	29+518.695-29+580.000	Rt.		.061										
	Ramp "A"													
1484	28+900.000-29+220.000	Rt.	.320											
1484	28+900.000-29+220.000	Lt.		.320										
	U.S. 23 E.B.													
1485	29+240.000-29+580.000	Rt.	.340											
1485	29+240.000-29+580.000	℄				.340								
1485	29+240.000-29+580.000	Lt.		.340										
1485	29+518.695-29+580.000	Rt.	.061											
1485	29+518.695-29+580.000	Rt.		.061										
	Ramp "A"													
1485	29+220-29+518.695	Rt.	.299											
1485	29+220-29+518.695	Lt.		.299										
	U.S. 30 E.B.													
1486	29+580.000-29+900.000	Lt.		.320										
1486	29+580.000-29+900.000	℄				.320								
1486	29+580.000-29+633.984	Rt.	.054											
1486	29+580.000-29+608.695	Rt.		.029										
1486	29+580.000-29+900.000	Rt.	.320											
1486	29+608.695-29+633.984	Rt.								25.289				
1486	29+633.984-29+738.167	Rt.				.104								
	U.S. 30 WB Lanes													
1486	29+660.000-29+900.000	Lt.	.240											
1486	29+660.000-29+900.000	℄				.240								
1486	29+660.000-29+900.000	Rt.		.240										
	U.S. 30 W.B.													
1487	28+760.000-29+060.000	Lt.	.300											
1487	28+760.000-29+060.000	℄				.300								
1487	28+760.000-29+060.000	Lt.		.300										
	Ramp "B"													
1487	28+880.000-29+060.000	℄		.180										
1487	28+880.000-29+060.000	Lt.	.180											
	U.S. 30 W.B.													
1488	29+060.000 WB-29+360.000 US30	℄	.301											
1488	29+060.000 WB-29+360.000 US30	℄				.301								
1488	29+060.000 WB-29+164.690 WB	Rt.		.105										
1488	29+164.690 WB-29+243.570 US30	Lt.								78.880				
1488	29+164.690-29+243.570 US30	Lt.										171.230		
1488	29+243.400-29+306.933	Lt.				.064								
	Ramp "B"													
1488	29+060.000-29+165.021	Lt.	.105											
1488	29+060.000-29+360.000 US30	℄		.300										
1488	29+165.021-29+243.400	Lt.								78.379				
	U.S. 30 W.B. Lanes													
1489	29+360.000-29+660.000	Lt.	.300											
1489	29+360.000-29+660.000	℄				.300								
1489	29+360.000-29+660.000	Lt.		.300										
	U.S. 30													
1490	29+900.218 EB-30+240.000 US30	Lt.		.340										
1490	29+900.000 EB-30+240.000 US30	℄				.340								
1490	29+900.000 EB-30+240.000 US30	Rt.	.341											
	SUB-TOTAL THIS SHEET		7.288	6.072		3.525				759.447		609.653		

CALCULATED AG
CHECKED REA

PAVEMENT MARKING QUANTITIES

WYA/CRA-30-28.009/0.000

1466
2116

PAVEMENT MARKINGS

828

SHEET NO.	STATION TO STATION	SIDE	Edge Line (White)	Edge Line (Yellow)		Lane Line		Center Line (Double Solid)		Channelizing Line	Stop Line	Transverse Line (White)	Removal of Pavement Marking	Parking Lot Stall Marking
			Km.	Km.		Km.		Km.		m	m	m	m	m
	U.S. 30 W.B. Lanes													
1490	29+900.000-30+240.000	Lt.	.340											
1490	29+900.000-30+240.000	Lt.				.340								
1490	29+900.000-30+240.000	Lt.		.340										
	T.R.-124													
1490	0+880.000-1+100.000	Lt.	.220											
1490	0+880.000-1+100.000	℄						.220						
1490	0+880.000-1+100.000	Rt.	.220											
	U.S. 30 E.B. Lanes													
1491	30+240.000-30+580.000	Lt.		.340										
1491	30+240.000-30+580.000	℄				.340								
1491	30+240.000-30+580.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1491	30+240.000-30+580.000	Lt.	.340											
1491	30+240.000-30+580.000	℄				.340								
1491	30+240.000-30+580.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1492	30+580.000-30+920.000	Lt.		.340										
1492	30+580.000-30+920.000	℄				.340								
1492	30+580.000-30+920.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1492	30+580.000-30+920.000	Lt.	.340											
1492	30+580.000-30+920.000	℄				.340								
1492	30+580.000-30+920.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1493	30+920.000-31+260.000	Lt.		.340										
1493	30+920.000-31+260.000	℄				.340								
1493	30+920.000-31+260.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1493	30+920.000-31+260 .000	Lt.	.340											
1493	30+920.000-31+260.000	℄				.340								
1493	30+920.000-31+260.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1494	31+260.000-31+600.000	Lt.		.340										
1494	31+260.000-31+600.000	℄				.340								
1494	31+260.000-31+600.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1494	31+260.000-31+600.000	Lt.	.340											
1494	31+260.000-31+600.000	℄				.340								
1494	31+260.000-31+600.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1495	31+600.000-31+940.000	Lt.		.340										
1495	31+600.000-31+940.000	℄				.340								
1495	31+600.000-31+940.000	Rt.	.340											
1495	31+600.000-31+940.000	Rt.		.340										
1495	31+600.000-31+940.000	℄				.340								
1495	31+600.000-31+940.000	Rt.	.340											
	U.S. 30 E.B. Lanes													
1496	31+940.000-32+280.000	Lt.		.340										
1496	31+940.000-32+280.000	℄				.340								
1496	31+940.000-32+280.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1496	31+940.000-32+280.000	Lt.	.340											
1496	31+940.000-32+280.000	℄				.340								
1496	31+940.000-32+280.000	Rt.		.340										
	T.R. 127													
1496	1+054.964-1+122.319	Lt./Rt.	.163											
1496	0+877.668-0+944.960	Lt./Rt.	.157											
	U.S. 30 E.B. Lanes													
1497	32+280.000-32+620.000	Lt.		.340										
1497	32+280.000-32+620.000	℄				.340								
1497	32+280.000-32+620.000	Rt.	.340											

PAVEMENT MARKINGS

828

SHEET NO.	STATION TO STATION	SIDE	Edge Line (White)	Edge Line (Yellow)		Lane Line		Center Line (Double Solid)		Channelizing Line	Stop Line	Transverse Line (White)	Removal of Pavement Marking	Parking Lot Stall Marking
			Km.	Km.		Km.		Km.		m	m	m	m	m
	U.S. 30 E.B. Lanes													
1497	32+280.000-32+620.000	Lt.	.340											
1497	32+280.000-32+620.000	℄				.340								
1497	32+280.000-32+620.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1498	32+620.000-32+858.700	Lt.		.239										
1498	32+620.000-32+858.701	℄				.239								
1498	32+620.000-32+863.731	Rt.	.245											
1498	32+673.101-32+784.101	Lt.								111				
1498	32+784.101-32+858.701	Lt.										234.964		
1498	32+784.101-32+858.701	Lt.	.083	.071										
1498	32+885.676-32+960.000	Lt.		.074										
1498	32+885.638-32+960.000	℄				.074								
1498	32+879.141-32+960.000	Rt.	.081											
	U.S. 30 W.B. Lanes													
1498	32+620.000-32+865.235	Lt.	.245											
1498	32+620.000-32+858.701	℄				.239								
1498	32+620.000-32+858.700	Rt.		.239										
1498	32+880.855-32+960.000	Lt.	.086											
1498	32+885.638-32+960.000	℄				.075								
1498	32+885.675-32+960.000	Rt.	.083	.071										
1498	32+885.675-32+960.000	Rt.										231.618		
1498	32+885.686-32+960.000	Rt.		.076										
	T.R. - 128													
1498	0+880.000-0+979.022	Lt.	.100											
1498	0+880.000-0+974.383	℄						.094			4.200			
1498	0+880.000-0+979.768	Rt.	.100											
1498	1+020.232-1+100.000	Lt.	.081											
1498	1+025.824-1+100.000	℄				.074		.074			4.200			
1498	1+020.765-1+100.000	Rt.	.081											
	U.S. 30 E.B. Lanes													
1499	32+960.000-33+300.000	Lt.		.340										
1499	32+960.000-33+300.000	℄				.340								
1499	32+960.000-33+300.000	Rt.		.340										
	U.S. 30 W.B. Lanes													
1499	32+960.000-33+300.000	Lt.	.340											
1499	32+960.000-33+300.000	℄				.340								
1499	32+960.000-33+071.275	Rt.								111.275				
1499	32+960.000-33+300.000	Rt.		.340										
1499	33+275.202-33+300.000	Lt.				.025								
	U.S. 30 E.B. Lanes													
1500	33+300.000-33+640.000	Lt.		.340										
1500	33+300.000-33+640.000	℄				.340								
1500	33+300.000-33+640.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1500	33+300.000-33+494.750	Lt.	.195											
1500	33+300.000-33+361.606	Lt.				.062								
1500	33+300.000-33+640.000	℄				.340								
1500	33+300.000-33+640.000	Rt.		.340										
1500	33+361.606-33+404.750	Lt.								43.144				
1500	33+361.606-33+640.000	Lt.	.278											
1500	33+404.750-33+494.750	Lt.		.090										
	Ramp "F"													
1500	33+494.750-33+640.000	Lt.	.145											
1500	33+494.750-33+640.000	Rt.		.145										
	U.S. 30 E.B. Lanes													
1501	33+640.000-33+980.000	Lt.		.340										
1501	33+640.000-33+980.000	℄				.340								
1501	33+640.000-33+702.752	Rt.	.063											
1501	33+699.461-33+757.614	Rt.				.058								
1501	33+757.614-33+846.218	Rt.								88.604				
1501	33+757.614-33+846.218	Rt.										197.147		
1501	33+846.218-33+980.000	Rt.	.134											
	U.S. 30 W.B. Lanes													
1501	33+640.000-33+980.000	Lt.	.340											
1501	33+640.000-33+980.000	℄				.340								
1501	33+640.000-33+980.000	Rt.		.340										
	SUB-TOTAL THIS SHEET		8.880	8.485		8.485		.388		354.023	8.4	663.729		

CALCULATED AG
CHECKED REA

PAVEMENT MARKING QUANTITES

WYA/CRA-30-28.009/0.000

PAVEMENT MARKINGS

828

SHEET NO.	STATION TO STATION	SIDE	Edge Line (White)	Edge Line (Yellow)	Handicap Symbol	Lane Line		Center Line (Double Solid)		Channelizing Line	Stop Line	Transverse Line (White)	Removal of Pavement Marking	Parking Lot Stall Marking
			Km.	Km.	Each	Km.		Km.		m	m	m	m	m
	Ramp "E"													
1501	33+702.752-33980	Rt.	.277											
1501	33+757.614-33+845.970	Lt.								88.356				
1501	33+845.970-33+980.000	Lt.		.134										
	Ramp "F"													
1501	33+640.000-33+753.240	Lt.	.113											
1501	33+640.000-33+749.796	Rt.		.110										
	Ramp "I"													
1501	33+710.004-33+861.322	Lt.	.151											
1501	33+713.584-33+861.322	Rt.		.148										
1501	33+861.170-33+970.000	Lt.			4									212.125
1501	33+861.170-33+970.000	Rt.												212.125
	U.S. 30 E.B. Lanes													
1502	33+980.000-34+320.000	Lt.		.340										
1502	33+980.000-34+320.000	℄				.340								
1502	33+980.000-34+320.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1502	33+980.000-34+320.000	Lt.	.340											
1502	33+980.000-34+320.000	℄				.340								
1502	33+980.000-34+320.000	Rt.		.340										
	Ramp "E"													
1502	33+980.000-34+040.879	Lt.		.061										
1502	33+980.000-34+100.000	Rt.	.120											
1502	34+053.194-34+076.772	Lt.								23.802				
1502	34+053.194-34+076.772	Lt.										41.703		
1502	34+076.772-34+100.000	Lt.		.023										
	Ramp "G"													
1502	34+120.000-34+320.000	Lt.	.200											
1502	34+120.000-34+158.796	Rt.		.039										
1502	34+158.796-34+182.436	Rt.								23.640				
1502	34+194.761-34+320.000	Rt.		.125										
	Ramp "I"													
1502	33+970.000-33+991.622	Lt.												42.425
1502	33+970.000-33+991.622	Rt.												42.425
1502	33+996.944-34+158.791	Lt.	.162											
1502	33+996.944-34+194.744	Rt.		.198										
1502	34+158.791-34+182.842	Lt.								24.051				
1502	34+158.791-34+182.842	Lt.										42.815		
	Ramp "J"													
1502	34+040.879-34+238.597	Lt.		.198										
1502	34+052.771-34+076.759	Rt.								23.578				
1502	34+076.759-34+238.597	Rt.	.162											
1502	34+243.920-34+330.000	Lt.												169.700
1502	34+243.920-34+330.000	Rt.			4									161.215
	U.S. 30 E.B. Lanes													
1503	34+320.000-34+660	Lt.		.340										
1503	34+320.000-34+660	℄				.340								
1503	34+320.000-34+660	Rt.	.340											
	U.S. 30 W.B. Lanes													
1503	34+320.000-34+389.670	Lt.	.071											
1503	34+320.000-34+660.000	℄				.340								
1503	34+320.000-34+660.000	Rt.		.340										
1503	34+389.670-34+478.015	Rt.								88.345				
1503	34+389.670-34+478.015	Rt.										204.156		
1503	34+478.015-34+539.216	Rt.				.061								
1503	34+532.881-34+660.000	Rt.	.127											
	Ramp "G"													
1503	34+320.000-34+532.881	Lt.	.213											
1503	34+320.000-34+389.898	Rt.		.070										
1503	34+389.898-34+478.015	Rt.								88.117				
	Ramp "H"													
1503	34+481.529-34+660.000	Lt.		.178										
1503	34+478.378-34+660.000	Rt.	.182											
	Ramp "J"													
1503	34+330.000-34+372.955	Lt.												84.850
1503	34+330.000-34+372.955	Rt.												84.850
1503	34+374.219-34+516.962	Lt.		.142										
1503	34+374.219-34+520.785	Rt.	.147											

PAVEMENT MARKINGS

828

SHEET NO.	STATION TO STATION	SIDE	Edge Line (White)	Edge Line (Yellow)	Handicap Symbol	Lane Line		Center Line (Double Solid)		Channelizing Line	Stop Line	Transverse Line (White)	Removal of Pavement Marking	Parking Lot Stall Marking
			Km.	Km.	Each	Km.		Km.		m	m	m	m	m
	U.S. 30 E.B. Lanes													
1504	34+660.000-35+000.000	Lt.		.340										
1504	34+660.000-35+000.000	℄				.340								
1504	34+660.000-34+873.897	Rt.	.214											
1504	34+660.000 H-34+830.745	Rt.		.171										
1504	34+830.745-34+873.897	Rt.								43.152				
1504	34+873.897-34+960.301	Rt.				.086								
1504	34+660.000-35+000.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1504	34+660.000-35+000.000	Lt.	.340											
1504	34+660.000-35+000.000	℄				.340								
1504	34+660.000-35+000.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1505	35+000.000-35+340.000	Lt.		.340										
1505	35+000.000-35+340.000	℄				.340								
1505	35+000.000-35+340.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1505	35+000.000-35+340.000	Lt.	.340											
1505	35+000.000-35+340.000	℄				.340								
1505	35+000.000-35+340.000	Rt.		.340										
	T.R. - 133													
1505	0+890.638-0+944.998	Lt.	.065											
1505	0+890.638-0+944.998	Rt.	.065											
1505	1+055.044-1+110.462	Lt.	.074											
1505	1+055.044-1+110.462	Rt.	.064											
	U.S. 30 E.B. Lanes													
1506	35+340.000-35+680.000	Lt.		.340										
1506	35+340.000-35+680.000	℄				.340								
1506	35+340.000-35+680.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1506	35+340.000-35+680.000	Lt.	.340											
1506	35+340.000-35+680.000	℄				.340								
1506	35+340.000-35+680.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1507	35+680.000-36+020.000	Lt.		.340										
1507	35+680.000-36+020.000	℄				.340								
1507	35+680.000-36+020.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1507	35+680.000-36+020.000	Lt.	.340											
1507	35+680.000-36+020.000	℄				.340								
1507	35+680.000-36+020.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1508	36+020.000-36+360.000	Lt.		.340										
1508	36+020.000-36+360.000	℄				.340								
1508	36+020.000-36+360.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1508	36+020.000-36+360.000	Lt.	.340											
1508	36+020.000-36+360.000	℄				.340								
1508	36+020.000-36+360.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1509	36+360.000-36+700.000	Lt.		.340										
1509	36+360.000-36+700.000	℄				.340								
1509	36+360.000-36+700.000	Rt.	.340											
1509	U.S. 30 W.B. Lanes													
1509	36+360.000-36+700.000	Lt.	.340											
1509	36+360.000-36+700.000	℄				.340								
1509	36+360.000-36+700.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1510	36+700.000-37+040.000	Lt.		.340										
1510	36+700.000-37+040.000	℄				.340								
1510	36+700.000-37+040.000	Rt.	.340											
	U.S. 30 E.B. Lanes													
1510	36+700.000-37+040.000	Lt.	.340											
1510	36+700.000-37+040.000	℄				.340								
1510	36+700.000-37+040.000	Rt.		.340										
	SUB-TOTAL THIS SHEET		8.187	7.717	8	6.267				314.685		288.674		1009.715

CALCULATED AG
CHECKED REA

PAVEMENT MARKING QUANTITES

WYA/CRA-30-28.009/0.000

PAVEMENT MARKINGS

828

SHEET NO.	STATION TO STATION	SIDE	Edge Line (White)	Edge Line (Yellow)		Lane Line		Center Line (Double Solid)		Channelizing Line	Stop Line	Transverse Line (White)	Removal of Pavement Marking	Parking Lot Stall Marking
			Km.	Km.		Km.		Km.		m	m	m	m	m
	U.S. 30 E.B. Lanes													
1511	37+040.000-37+380.000	Lt.		.340										
1511	37+040.000-37+380.000	℄				.340								
1511	37+040.000-37+316.395	Rt.	.276											
1511	37+309.786-37+360.516	Rt.				.052								
1511	37+360.516-37+380.000	Rt.								29.616				
1511	37+360.516-37+380.000	Rt.										18.806		
	U.S. 30 W.B. Lanes													
1511	37+040.000-37+380.000	Lt.	.340											
1511	37+040.000-37+380.000	℄				.340								
1511	37+040.000-37+380.000	Rt.		.340										
1511	37+214.670-37+301.421	Lt.				.087								
1511	37+301.421-37+344.573	Lt.								43.152				
1511	37+301.421-37+380.000	Lt.	.079											
1511	37+344.573-37+380.000	Lt.		.035										
	Ramp "K"													
1511	37+360.516-37+380.000	Lt.								29.616				
1511	37+316.395-37+380.000	Rt.	.064											
	U.S. 30 E.B. Lanes													
1512	37+380.000-37+720.000	Lt.		.340										
1512	37+380.000-37+720.000	℄				.340								
1512	37+380.000-37+437.053	Rt.								57.053				
1512	37+380.000-37+437.053	Rt.										148.533		
1512	37+437.053-37+720.000	Rt.	.283											
	U.S. 30 W.B. Lanes													
1512	37+380.000-37+434.573	Lt.	.055											
1512	37+380.000-37+434.573	Lt.				.055								
1512	37+380.000-37+720.000	Lt.	.340											
1512	37+380.000-37+720.000	℄				.340								
1512	37+380.000-37+720.000	Rt.		.340										
	Ramp "K"													
1512	37+380.000-37+437.053	Lt.								57.053				
1512	37+380.000-37+720.000	Rt.	.340											
1512	37+437.053-37+720.000	Lt.		.283										
	Ramp "L"													
1512	37+434.573-37+720.000	Lt.	.285											
1512	37+434.573-37+720.000	Rt.		.285										
	U.S. 30 E.B. Lanes													
1513	37+720.000-38+060.000	Lt.		.340										
1513	37+720.000-38+060.000	℄				.340								
1513	37+720.000-38+060.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1513	37+720.000-38+060.000	Lt.	.340											
1513	37+720.000-38+060.000	℄				.340								
1513	37+720.000-38+060.000	Rt.		.340										
	Ramp "K"													
1513	37+720.000-37+763.400	Lt.		.048										
1513	37+720.000-37+761.537	Rt.	.061											
	Ramp "L"													
1513	37+720.000-37+787.710	Lt.	.087											
1513	37+720.000-37+787.180	Rt.		.070										
	Ramp "M"													
1513	37+782.067-38+060.000	Lt.	.297											
1513	37+781.282-38+060.000	Rt.		.287										
	Ramp "N"													
1513	37+758.270-38+060.000	Lt.		.305										
1513	37+756.980-38+060.000	Rt.	.321											
	U.S. 30 E.B. Lanes													
1514	38+060.000-38+400.000	Lt.		.340										
1514	38+060.000-38+400.000	℄				.340								
1514	38+060.000-38+237.561	Rt.	.177											

PAVEMENT MARKINGS

828

SHEET NO.	STATION TO STATION	SIDE	Edge Line (White)	Edge Line (Yellow)		Lane Line		Center Line (Double Solid)		Channelizing Line	Stop Line	Transverse Line (White)	Removal of Pavement Marking	Parking Lot Stall Marking
			Km.	Km.		Km.		Km.		m	m	m	m	m
1514	38+104.360-38+194.361	Rt.		.090										
1514	38+104.360-38+400.000	Rt.	.296											
1514	38+194.361-38+237.561	Rt.								43.200				
1514	38+237.561-38+323.961	Rt.				.086								
	U.S. 30 W.B. Lanes													
1514	38+060.000-38+097.721	Lt.	.037											
1514	38+060.000-38+400.000	℄				.340								
1514	38+060.000-38+400.000	Rt.		.340										
1514	38+097.721-38+186.075	Lt.								88.354				
1514	38+097.721-38+186.075	Lt.										188.747		
1514	38+186.075-38+251.000	Lt.				.065								
1514	38+240.939-38+400.000	Lt.	.159											
	Ramp "M"													
1514	38+060.000-38+240.939	Lt.	.181											
1514	38+060.000-38+097.957	Rt.		.038										
1514	38+097.957-38+186.075	Rt.								88.118				
	Ramp "N"													
1514	38+060.000-38+104.360	Lt.		.044										
1514	38+060.000-38+104.360	Rt.	.044											
	U.S. 30 E.B. Lanes													
1515	38+400.000-38+740.000	Lt.		.340										
1515	38+400.000-38+740.000	℄				.340								
1515	38+400.000-38+740.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1515	38+400.000-38+740.000	Lt.	.340											
1515	38+400.000-38+740.000	℄				.340								
1515	38+400.000-38+740.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1516	38+740.000-39+080.000	Lt.		.340										
1516	38+740.000-39+080.000	℄				.340								
1516	38+740.000-39+080.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1516	38+740.000-39+080.000	Lt.	.340											
1516	38+740.000-39+080.000	℄				.340								
1516	38+740.000-39+080.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1517	39+080.000-39+357.732	Lt.		.278										
1517	39+080.000-39+357.741	℄				.277								
1517	39+080.000-39+358.242	Rt.	.278											
1517	39+171.918-39+282.940	Lt.				.111								
1517	39+282.940-39+357.741	Lt.	.083											
1517	39+282.940-39+357.741	Lt.		.071										
1517	39+282.940-39+357.741	Lt.										226.5605		
	U.S. 30 W.B. Lanes													
1517	39+080.000-39+375.449	Lt.	.295											
1517	39+080.000-39+357.741	℄				.278								
1517	39+080.000-39+357.732	Rt.		.278										
	T.R. - 10													
1517	0+848.500-0+973.372	Lt.	.125											
1517	0+848.500-0+981.878	Rt.	.133											
1517	0+848.500-0+979.461	℄								.131				
1517	0+979.461	Rt.									4.4251			
	U.S. 30 E.B. Lanes													
1518	0+017.453-0+340.000	Lt.		.323										
1518	0+017.452-0+340.000	℄				.323								
1518	0+000.000-0+340.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1518	0+017.034-0+340.000	Lt.	.323											
1518	0+017.452-0+340.000	℄				.323								
1518	0+021.050-0+092.248	Rt.		.071										
1518	0+017.445-0+092.248	Rt.	.075											
1518	0+017.445-0+092.248	Rt.										225.147		
1518	0+092.248-0+203.248	Rt.				.111								
1518	0+017.453-0+340.000	Rt.		.323										
	T.R. - 10													
1518	1+018.023-1+118.000	Lt.	.100											
1518	1+020.186-1+118.000	℄								.098				
1518	1+026.678-1+118.000	Rt.	.091											
1518	1+020.186	Lt.									4.539			
	SUB-TOTAL THIS SHEET		7.605	6.909		5.848		.229		436.391	8.964	807.794		

CALCULATED AG
CHECKED REA

PAVEMENT MARKING QUANTITES

WYA/CRA-30-28.009/0.000

PAVEMENT MARKINGS

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SHEET NO.	STATION TO STATION	SIDE	Edge Line (White)	Edge Line (Yellow)		Lane Line		Center Line (Double Solid)		Channelizing Line	Stop Line	Transverse Line (White)	Removal of Pavement Marking	Parking Lot Stall Marking
			Km.	Km.		Km.		Km.		m	m	m	m	m
	U.S. 30 E.B. Lanes													
1519	0+340.000-0+680.000	Lt.		.340										
1519	0+340.000-0+680.000	℄				.340								
1519	0+340.000-0+680.000	Rt.	.340											
	U.S. 30 E.B. Lanes													
1519	0+340.000-0+680.000	Lt.	.340											
1519	0+340.000-0+680.000	℄				.340								
1519	0+340.000-0+680.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1520	0+680.000-1+020.000	Lt.		.340										
1520	0+680.000-1+020.000	℄				.340								
1520	0+680.000-1+020.000	Rt.	.340											
	U.S. 30 E.B. Lanes													
1520	0+680.000-1+020.000	Lt.	.340											
1520	0+680.000-1+020.000	℄				.340								
1520	0+680.000-1+020.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1521	1+020.000-1+360.000	Lt.		.340										
1521	1+020.000-1+360.000	℄				.340								
1521	1+020.000-1+360.000	Rt.	.340											
	U.S. 30 E.B. Lanes													
1521	1+020.000-1+360.000	Lt.	.340											
1521	1+020.000-1+360.000	℄				.340								
1521	1+020.000-1+360.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1522	1+360.000-1+700.000	Lt.		.340										
1522	1+360.000-1+700.000	℄				.340								
1522	1+360.000-1+700.000	Rt.	.340											
	U.S. 30 E.B. Lanes													
1522	1+360.000-1+700.000	Lt.	.340											
1522	1+360.000-1+700.000	℄				.340								
1522	1+360.000-1+700.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1523	1+700.000-2+040.000	Lt.		.340										
1523	1+700.000-2+040.000	℄				.340								
1523	1+700.000-2+040.000	Rt.	.340											
	U.S. 30 E.B. Lanes													
1523	1+700.000-2+040.000	Lt.	.340											
1523	1+700.000-2+040.000	℄				.340								
1523	1+700.000-2+040.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1524	2+040.000-2+380.000	Lt.		.340										
1524	2+040.000-2+380.000	℄				.340								
1524	2+040.000-2+380.000	Rt.	.340											
	U.S. 30 E.B. Lanes													
1524	2+040.000-2+380.000	Lt.	.340											
1524	2+040.000-2+380.000	℄				.340								
1524	2+040.000-2+380.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1525	2+380.000-2+720.000	Lt.		.340										
1525	2+380.000-2+720.000	℄				.340								
1525	2+380.000-2+720.000	Rt.	.340											
	U.S. 30 E.B. Lanes													
1525	2+380.000-2+720.000	Lt.	.340											
1525	2+380.000-2+720.000	℄				.340								
1525	2+380.000-2+720.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1526	2+720.000-3+060.000	Lt.		.340										
1526	2+720.000-3+060.000	℄				.340								
1526	2+720.000-3+060.000	Rt.	.340											
	U.S. 30 E.B. Lanes													
1526	2+720.000-3+060.000	Lt.	.340											
1526	2+720.000-3+060.000	℄				.340								
1526	2+720.000-3+060.000	Rt.		.340										

PAVEMENT MARKINGS

828

SHEET NO.	STATION TO STATION	SIDE	Edge Line (White)	Edge Line (Yellow)		Lane Line		Center Line (Double Solid)		Channelizing Line	Stop Line	Transverse Line (White)	Removal of Pavement Marking	Parking Lot Stall Marking
			Km.	Km.		Km.		Km.		m	m	m	m	m
	U.S. 30 E.B. Lanes													
1527	3+060.000-3+400.000	Lt.		.340										
1527	3+060.000-3+400.000	℄				.340								
1527	3+060.000-3+400.000	Rt.	.340											
1527	3+375.424-3+400.000	Lt.								24.576				
	U.S. 30 E.B. Lanes													
1527	3+060.000-3+400.000	Lt.	.340											
1527	3+060.000-3+400.000	℄				.340								
1527	3+060.000-3+400.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1528	3+400.000-3+561.226	Lt.		.161										
1528	3+400.000-3+486.424	Lt.								86.424				
1528	3+400.000-3+561.226	℄				.161								
1528	3+400.000-3+563.264	Rt.	.164											
1528	3+486.424-3+561.226	Lt.	.083											
1528	3+486.424-3+561.226	Lt.										226.586		
1528	3+486.424-3+557.654	Lt.		.071										
1528	3+593.333-3+740.000	Lt.		.147										
1528	3+593.371-3+740.000	℄				.147								
1528	3+579.160-3+740.000	Rt.	.161											
	U.S. 30 W.B. Lanes													
1528	3+400.000-3+575.414	Lt.	.175											
1528	3+400.000-3+561.226	℄				.161								
1528	3+400.000-3+561.219	Rt.		.161										
1528	3+591.310-3+740.000	Lt.	.149											
1528	3+593.371-3+740.000	℄				.147								
1528	3+596.906-3+668.126	Rt.		.071										
1528	3+593.324-3+668.126	Rt.	.075											
1528	3+593.324-3+668.126	Rt.										224.415		
1528	3+593.333-3+740.000			.147										
1528	3+668.126-3+740.000	Rt.								70.874				
	T.R. - 21													
1528	0+850.000-0+975.557	Lt.	.126											
1528	0+850.000-0+979.462	℄						.130						
1528	0+850.000-0+981.541	Rt.	.132											
1528	0+979.462-0+979.462	Rt.									5.372			
1528	1+018.565-1+120.000	Lt.	.101											
1528	1+019.770-1+019.770	Lt.									5.386			
1528	1+019.770-1+120.000	℄						.100						
1528	1+024.548-1+120.000	Rt.	.095											
	U.S. 30 E.B. Lanes													
1529	3+740.000-4+080.000	Lt.		.340										
1529	3+740.000-4+080.000	℄				.340								
1529	3+740.000-4+080.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1529	3+740.000-4+080.000	Lt.	.340	.340										
1529	3+740.000-3+779.126	℄				.340								
1529	3+740.000-4+080.000	Rt.								39.126				
1529	3+740.000-4+080.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1530	4+080.000-4+420.000	Lt.		.340										
1530	4+080.000-4+420.000	℄				.340								
1530	4+080.000-4+420.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1530	4+080.000-4+420.000	Lt.	.340											
1530	4+080.000-4+420.000	℄				.340								
1530	4+080.000-4+420.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1531	4+420.000-4+760.000	Lt.		.340										
1531	4+420.000-4+760.000	℄				.340								
1531	4+420.000-4+760.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1531	4+420.000-4+760.000	Lt.	.340											
1531	4+420.000-4+760.000	℄				.340								
1531	4+420.000-4+760.000	Rt.		.340										
	SUB-TOTAL THIS SHEET		9.421	9.258		8.776		.230		221.000	10.758	451.001		

CALCULATED AG
CHECKED REA

PAVEMENT MARKING QUANTITES

WYA/CRA-30-28.009/0.000

1470
2116

PAVEMENT MARKINGS

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SHEET NO.	STATION TO STATION	SIDE	Edge Line (White)	Edge Line (Yellow)		Lane Line		Center Line (Double Solid)		Channelizing Line	Stop Line	Transverse Line (White)	Removal of Pavement Marking	Parking Lot Stall Marking
			Km.	Km.		Km.		Km.		m	m	m	m	m
	U.S. 30 E.B. Lanes													
1532	4+760.000-5+100.000	Lt.		.340										
1532	4+760.000-5+100.000	℄				.340								
1532	4+760.000-5+100.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1532	4+760.000-5+100.000	Lt.	.340											
1532	4+760.000-5+100.000	℄				.340								
1532	4+760.000-5+100.000	Rt.		.340										
	U.S. 30 E.B. Lanes													
1533	5+100.000-5+440.000	Lt.		.340										
1533	5+100.000-5+440.000	℄				.340								
1533	5+100.000-5+440.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1533	5+100.000-5+440.000	Lt.		.340										
1533	5+100.000-5+440.000	℄				.340								
1533	5+100.000-5+440.000	Rt.	.340											
	U.S. 30 E.B. Lanes													
1534	5+440.000-5+780.000	Lt.		.340										
1534	5+440.000-5+780.000	℄				.340								
1534	5+440.000-5+780.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1534	5+440.000-5+680.000	Lt.	.240											
1534	5+440.000-5+780.000	℄				.340								
1534	5+440.000-5+780.000	Rt.		.340										
1534	5+460.449-5+546.851	Lt.				.086								
1534	5+546.851-5+589.999	Lt.								43.148				
1534	5+546.851-5+780.000	Lt.	.233											
1534	5+590.516-5+680.000	Lt.		.089										
	Ramp "P"													
1534	5+680.000-5+780.000	Lt.	.100											
1534	5+680.000-5+780.000	Rt.		.100										
	U.S. 30 E.B. Lanes													
1535	5+780.000-6+120.000	Lt.		.340										
1535	5+780.000-6+120.000	℄				.340								
1535	5+780.000-5+901.325	Rt.	.121											
1535	5+906.000-5+962.000	Rt.				.056								
1535	5+962.000-6+059.885	Rt.								97.882				
1535	5+962.000-6+059.885	Rt.										226.768		
1535	6+059.885-6+120.000	Rt.	.060											
	U.S. 30 W.B. Lanes													
1535	5+780.000-6+120.000	Lt.	.340											
1535	5+780.000-6+120.000	℄				.340								
1535	5+780.000-6+120.000	Rt.		.340										
	Ramp "O"													
1535	5+962.000-6+058.444	Lt.								96.444				
1535	5+901.324-6+120.000	Rt.	.219											
1535	6+059.885-6+120.000	Lt.		.107										
	Ramp "P"													
1535	5+780.000-6+095.307	Lt.	.341											
1535	5+780.000-6+107.000	Rt.		.060										

PAVEMENT MARKINGS

828

SHEET NO.	STATION TO STATION	SIDE	Edge Line (White)	Edge Line (Yellow)		Lane Line		Center Line (Double Solid)		Channelizing Line	Stop Line	Transverse Line (White)	Removal of Pavement Marking	Parking Lot Stall Marking
			Km.	Km.		Km.		Km.		m	m	m	m	m
	U.S. 30 W.B. Lanes													
1536	6+120.000-6+460.000	Lt.		.340										
1536	6+120.000-6+460.000	℄				.340								
1536	6+120.000-6+460.000	Rt.	.340											
	U.S. 30 W.B. Lanes													
1536	6+120.000-6+460.000	Lt.	.340											
1536	6+120.000-6+460.000	℄				.340								
1536	6+120.000-6+460.000	Rt.		.340										
	Ramp "O"													
1536	6+120.000-6+468.451	Lt.		.356										
1536	6+120.000-6+251.384	Rt.	.146											
	U.S. 30 E.B. Lanes													
1537	6+460.000-6+733.232	Lt.		.273										
1537	6+460.000-6+731.157	℄				.271								
1537	6+460.000-6+729.083	Rt.	.269											
	U.S. 30 W.B. Lanes													
1537	6+460.000-6+564.244	Lt.	.104											
1537	6+460.000-6+760.000	℄				.300								
1537	6+460.000-6+800.000	Rt.		.340										
1537	6+564.244-6+639.480	Lt.								150.846				
1537	6+564.244-6+639.480	Lt.										234.419		
1537	6+577.485-6+760.000	Lt.	.183											
1537	6+639.480-6+704.847	Lt.				.065								
1537	6+564.244-6+800.000	Lt.											236	
	U.S. 30 W.B. Lanes													
1538	6+800.000-6+900.160	Rt.		.100									100	
	Ramp "E"													
1539	34+100.000-34+229.638	Lt.		.130										
1539	34+100.000-34+229.638	Rt.	.130											
	Ramp "H"													
1539	34+147.218-34+160.000	Rt.												33.459
	Ramp "F"													
1540	33+720.000-33+804.144	Lt.	.084											
1540	33+758.296-33+804.144	Rt.		.046										
1540	33+964.917-34+060.000	Lt.												415.269
1540	33+908.999-34+060.000	Rt.												593.972
1540	33+720.000-33+749.796	Rt.		.031										
	Ramp "F"													
1541	34+060.000-34+089.003	Rt.												173.610
	Ramp "G"													
1541	34+005.944-34+120.000	Lt.	.114											
1541	34+005.944-34+120.000	Rt.		.114										
	Ramp "H"													
1542	34+177.114-34+327.221	Lt.												593.972
1542	34+160.000-34+271.304	Rt.												460.384
1542	34+427.160-34+520.785	Lt.		.046										
1542	34+427.160-34+500.000	Rt.	.072											
1542	34+481.530-34+500.000	Lt.		.020										
	SUB-TOTAL THIS SHEET		5.136	5.212		4.178				388.320		461.187	336	2270.666

CALCULATED AG
CHECKED REA

PAVEMENT MARKING QUANTITIES

WYA/CRA-30-28.009/0.000

1471
2116

PAVEMENT MARKINGS

828

SHEET NO.	STATION TO STATION	SIDE	Edge Line (White)	Edge Line (Yellow)	Handicap Symbol	Lane Line		Center Line (Double Solid)		Channelizing Line	Stop Line	Transverse Line (White)	Removal of Pavement Marking	Parking Lot Stall Marking
			Km.	Km.		Km.		Km.		m	m	m	m	m
	T.R. - 128													
1547	0+754.000-0+880	Lt.	.126											
1547	0+765.000-0+880	℄						.115						
1547	0+754.000-0+880	Rt.	.126											
	T.R. - 128													
1548	1+100.000-1+139.000	Lt.	.039											
1548	1+100.000-1+134.000	℄						.034						
1548	1+100.000-1+139.000	Rt.	.039											
	T.R. - 21													
1551	1+120.000-1+190.000	Lt.	.070											
1551	1+120.000-1+171.500	℄						.052						
1551	1+120.000-1+190.000	Rt.	.070											
	C.R. - 330													
1554	0+382.000-0+684.436	Rt.	.304											
	SUB-TOTAL THIS SHEET		0.774					0.201						
	SUB-TOTAL SHEET NO. 1466		7.288	6.072		3.525				759.447		609.653		
	SUB-TOTAL SHEET NO. 1467		8.880	8.485		8.485		.388		354.023	8.400	663.729		
	SUB-TOTAL SHEET NO. 1468		8.187	7.717	8	6.267				314.685		288.674		1009.715
	SUB-TOTAL SHEET NO. 1469		7.605	6.909		5.848		.229		436.391	8.964	807.794		
	SUB-TOTAL SHEET NO. 1470		9.421	9.258		8.776		.230		221.000	10.758	451.001		
	SUB-TOTAL SHEET NO. 1471		7.574	5.432		4.178				388.320		461.187	336	2270.666
	SUB-TOTAL SHEET NO. 1472		2.194					.914						
			48.955	43.873										
	TOTAL TO GENERAL SUMMARY		92.828		8	37.079		1.048		2473.866	28.122	3282.038	336	3280.381

CALCULATED AG
CHECKED REA

PAVEMENT MARKING QUANTITES

WYA/CRA-30-28.009/0.000

1472
2116

621 RAISED PAVEMENT MARKERS, INSTALLATION ONLY

STATION TO STATION	SIDE	SPACING	TYPE	QUANTITY
U.S. 30 East Bound				
28+051.509-30+028	℄	36m	1 way (white)	55
28+094.007-28+247.981	Lt.	12m	2 way (white/red)	13
28+247.981-30+013.028	Lt.	24m	1 way (yellow)	74
U.S. 30 West Bound				
28+697.000-29+193.960	℄	36m	1 way (white)	14
28+412.833 29+193.960	Rt.	24m	1 way (yellow)	33
U.S. 23 North Bound (Mainline)				
12+366.678-12+463.452	Rt.	24m	2 way (yellow/red)	4
13+920.086-14+010.077	Rt.	24m	2 way (yellow/red)	4
14+010.077-14+051.507	Rt.	12m	2 way (white/red)	3
U.S. 23 South Bound (Mainline)				
12+565.299-12+605.981	Lt.	12m	2 way (white/red)	3
12+605.981-12+695.977	Lt.	24m	2 way (yellow/red)	4
Ramp "A"				
28+605.368-28+700.997	Lt.	12m	2 way (white/red)	8
28+700.997-29+518.695	Lt.	24m	2 way (yellow/red)	34
Ramp"B"				
28+027.321-29+165.020	R.T.	24m	2 way (yellow/red)	47
29+165.020-29+193.960	Lt.	12m	2 way (white/red)	2
Ramp "E"				
33+757.422-33+845.734	Lt.	12m	2 way (white/red)	7
33+845.734-34+040.879	Lt.	24m	2 way (yellow/red)	8
Ramp "F"				
33+494.750-33+739.747	Rt.	24m	2 way (yellow/red)	10
Ramp "G"				
34+194.761-34+389.898	Rt.	24m	2 way (yellow/red)	8
34+389.89834+478.207	Rt.	12m	2 way (white/red)	7
Ramp "H"				
34+491.827-34+740.745	Lt.	24m	2 way (yellow/red)	10
Ramp "K"				
37+360.916-37+436.591	Lt.	12m	2 way (white/red)	6
37+436.591-37+745.549	Lt.	24m	2 way (yellow/red)	13
Ramp "L"				
37+434.573-37+770.339	Rt.	24m	2 way (yellow/red)	12
Ramp "M"				
37+799.148-38+097.957	Rt.	24m	2 way (yellow/red)	12
38+097.957-38+186.268	Rt.	12m	2 way (white/red)	7
Ramp "N"				
37+771.866-38+104.360	Lt.	24m	2 way (yellow/red)	14
Ramp "O"				
5+961.683-6+059.161	Rt.	12m	2 way (white/red)	8
6+059.161-6+460.187	Rt.	24m	2 way (yellow/red)	17
Ramp "P"				
5+680.000-6+084.358	Lt.	24m	2 way (yellow/red)	17

621 RAISED PAVEMENT MARKERS, INSTALLATION ONLY

STATION TO STATION	SIDE	SPACING	TYPE	QUANTITY
U.S. 30 West Bound (Mainline)				
29+193.960-32+858.701	℄	24m	1-way (white)	153
32+885.638-39+357.741	℄	24m	1-way (white)	270
0+017.445-3+561.176	℄	24m	1-way (white)	148
3+593.370-6+759.480	℄	24m	1-way (white)	132
29+291.435-32+840.701 Rt.	Rt.	24m	1-way (yellow)	148
32+903.638-39+339.741	Rt.	24m	1-way (yellow)	268
0+035.445 3+543.176	Rt.	24m	1-way (yellow)	146
3+611.370-6+900.160	Rt.	24m	1-way (yellow)	137
33+361.606-33+404.750	Lt.	12m	2 way (white/red)	4
33+404.750-33+494.750	Lt.	24m	2 way (yellow/red)	4
34+389.470-34+478.015	Lt.	12m	2 way (white/red)	7
37+301.314-37+344.622	Lt.	12m	2 way (white/red)	4
37+344.622-37+434.573	Lt.	24m	2 way (yellowred)	4
38+097.689-38+186.075	Lt.	12m	2 way (white/red)	7
5+546.851-5+590.516	Lt.	12m	2 way (white/red)	4
5+590.516-5+680.000	Lt.	24m	2 way (yellow/red)	4
6+576.786-6+639.480	Lt.	12m	2 way (white/red)	9
Left Turn Lanes W.B. (Mainline)				
32+673.101-32+784.101	Rt.	24m	1 way (yellow)	5
32+784.101-32+855.101	Rt.	24m	1 way (yellow)	3
39+171.918-39+282.939	Rt.	24m	1 way (yellow)	5
39+282.939-39+354.153	Rt.	24m	1 way (yellow)	3
3+375.424-3+486.424	Rt.	24m	1 way (yellow)	5
3+486.424-3+557.600	Rt.	24m	1 way (yellow)	3
U.S. 30 East Bound (Mainline)				
30+013.028-32+840.701	℄	24m	2 way (white/red)	118
32+903.638-39+339.741	℄	24m	2 way (white/red)	268
0+017.446-3+543.176	℄	24m	2 way (white/red)	147
3+611.370-6+546.000	℄	24m	2 way (white/red)	122
30+013.028-32+838.558	Lt.	24m	1 way (yellow)	117
32+905.675-39+337.327	Lt.	24m	1 way (yellow)	268
0+019.456-3+540.821	Lt.	24m	1 way (yellow)	147
3+613.526-6+546.000	Lt.	24m	1 way (yellow)	122
33+757.614-33+846.218	Rt.	24m	1 way (yellow)	4
34+740.745-34+829.335	Rt.	24m	2 way (yellow/red)	4
34+829.335-34+873.897	Rt.	12m	2 way (white/red)	4
37+360.516-37+436.789	Rt.	12m	2 way (white/red)	6
38+104.360-38+194.013	Rt.	24m	2 way (yellow/red)	4
38+194.361-38+237.433	Rt.	12m	2 way (white/red)	4
5+962.033-6+059.885	Rt.	12m	2 way(white/red)	8
Left Turn Lanes E.B. (Mainline)				
32+889.253-32+959.972	Lt.	24m	1 way (yellow)	3
32+959.972-33+071.275	Lt.	24m	1 way (yellow)	5
0+021.050-0+092.248	Lt.	24m	1 way (yellow)	3
0+092.248-0+203.000	Lt.	24m	1 way (yellow)	5
3+596.906-3+668.126	Lt.	24m	1 way (yellow)	3
3+668.126-3+779.126	Lt.	24m	1 way (yellow)	5
TOTAL				3294

626 BARRIER REFLECTORS

STATION TO STATION	SIDE	TYPE A WHITE	TYPE A YELLOW	TYPE B WHITE	TYPE B YELLOW
U.S. 30 Eastbound					
28+304.230 - 29+573.940	Lt.		29		15
U.S. 30 Westbound					
28+766.254 - 29+039.094	Rt.		11		
U.S. 30 Mainline (WB Lanes)					
30+846.183 - 30+876.541	Lt.		3		
36+349.405 - 36+496.822	Lt.		3		3
37+750.758 - 37+870.848	Lt.		3		2
37+924.332 W - 39+015.486 U.S. 30	Lt.	38			
1+463.315 - 1+604.783	Lt.		3		3
1+796.633 - 1+916.780	Lt.		3		2
2+209.235 - 2+379.714	Lt.		3		4
5+526.303 U.S. 30 - 5+995.421 P *	Lt.	19			
6+270.895 - 6+471.165	Lt.		3		5
6+702.002 - 6+807.782	Lt.		3		2
6+711.007 - 6+757.732	Lt.	1		2	
U.S. 30 Mainline (EB Lanes)					
36+268.191 - 36+415.816	Rt.		3		3
37+673.078 - 37+793.168	Rt.		3		2
37+924.684 N - 38+467.994 U.S. 30 *	Rt.	26			
1+408.668 - 1+550.145	Rt.		3		3
1+712.762 - 1+832.908	Rt.		3		2
2+159.586 - 2+330.926	Rt.		3		4
5+444.597 U.S. 30 - 6+353.698 0 *	Rt.	38			
6+144.590 - 6+546.481	Rt.	10		4	
6+228.656 - 6+428.925	Rt.		3		5
6+618.857 - 6+724.662	Rt.		3		2
6+676.734 - 6+714.957	Rt.	1		2	
U.S. 23					
12+392.411 - 12+440.917	Lt./Rt.		3		
12+426.502 - 12+475.057	Lt./Rt.		3		
14+014.189 - 14+044.504	Lt.		3		
14+244.611 - 14+370.084	Rt.	5			
C.R. 128					
0+827.942 - 0+913.058	Lt.	4			
0+827.943 - 0+913.058	Rt.	4			
S.R. 231					
0+948.705 - 1+054.847	Lt.	5			
0+948.928 - 1+053.856	Rt.	5			
C.R. 1					
0+904.937 - 1+073.809	Rt.	7			
0+926.974 - 1+095.864	Lt.	7			

Unless noted, spacing is 30m for runs longer than 60m or 3 reflectors per run for runs less than or equal to 60m.

626 BARRIER REFLECTORS

STATION TO STATION	SIDE	TYPE A WHITE	TYPE A YELLOW	TYPE B WHITE	TYPE B YELLOW
C.R. 18					
0+880.199 - 1+062.442	Rt.	7			
0+938.660 - 1+113.217	Lt.	7			
EX. C.R. 330					
0+876.154 - 1+056.508	Rt.	7			
0+938.726 - 1+119.086	Lt.	7			
RAMP A					
28+794.949 A - 29+573.927 EB *	Rt.	39			
28+845.257 - 29+224.624 *	Lt.		25		
RAMP B					
28+326.479 - 29+038.984 *	Lt.	41		9	
28+366.841 B - 29+695.401 U.S. 30 *	Rt./Lt.		60		9
RAMP L					
37+446.179 - 37+535.847 *	Lt.	7			
RAMP O					
6+143.774 - 6+333.788 *	Lt.		11		
RAMP P					
5+896.651 - 6+040.412 *	Rt.		10		
SUBTOTALS		285	200	17	66
TOTALS		485		83	

* Quantity provided includes reflectors at 15m spacing where baseline radius is less than or equal to 350m.

CALCULATED AG
CHECKED REA

RAISED PAVEMENT MARKERS AND BARRIER REFLECTORS

WYA/CRA-30-28.009/0.000

1473
2116

DELINEATORS

SHEET NO.	STATION TO STATION	SIDE	SPACING	620 Delineator, Type C, Flexable Mounted (White)	620 Delineator, Type D, Flexable Mounted (Yellow)		
	U.S. 30 WEST BOUND (Mainline)						
183-205	29+193.960-32+861.597	Lt./Lt.	61	60			
205-210	32+884.575-33+494.750	Lt./Lt.	61	10			
210-215	33+527.578-34+389.662	Lt./Lt.	61	14			
215-236	34+532.881-37+434.573	Lt./Lt.	61	48			
236-237	37+468.510-37+746.971	Lt./Lt.	61	5			
237-241	37+802.773-38+097.721	Lt./Lt.	61	5			
241-248	38+240.939-39+373.478	Lt./Lt.	61	19			
251-261	0+022.440-1+429.044	Lt./Lt.	61	23			
261-263	1+543.729-1+781.383	Lt./Lt.	61	4			
263-266	1+873.209-2+158.988	Lt./Lt.	61	5			
266-277	2+310.289-3+572.816	Lt./Lt.	61	20			
277-290	3+596.341-5+680.000	Lt./Lt.	61	34			
290-296	5+768.943-6+239.049	Lt./Lt.	61	8			
296-298	6+367.502-6+564.244	Lt./Lt.	61	3			
	U.S. 30 EAST BOUND (Mainline)						
188-205	30+013.028-32+859.793	Rt./Rt.	61	47			
205-211	32+882.778-33+702.752	Rt./Rt.	61	13			
211-218	33+845.970-34+706.467	Rt./Rt.	61	14			
218-233	34+740.745-37+316.395	Rt./Rt.	61	42			
236-237	37+436.526-37+740.751	Rt./Rt.	61	5			
237-241	37+796.553-38+070.424	Rt./Rt.	61	4			
241-248	38+104.360-39+352.944	Rt./Rt.	61	20			
251-261	0+001.449-1+498.648	Rt./Rt.	61	25			
261-263	1+605.631-1+757.074	Rt./Rt.	61	2			
263	1+757.074-1+848.900	Rt./Rt.	61	1			
266-277	2+389.973-3+558.414	Rt./Rt.	61	19			
277-292	3+581.577-5+901.325	Rt./Rt.	61	38			
292-296	6+059.885-6+313.823	Rt./Rt.	61	4			
298	6+460.276-6+546.000	Rt./Rt.	61	1			
	U.S. 30 EAST BOUND						
158-171	28+248.721-30+013.028	Lt.	61		29		
158-169	28+009.255-29+443.589	Rt.	61	23			
169-171	29+518.695-30+013.028	Rt.	61	8			
	U.S. 30 WEST BOUND						
174-179	28+412.833-29+193.960	Lt.	61	13			
174-183	28+515.201-29+195.446	Rt.	61		11		
	Ramp "A"						
985	28+558.024-28+731.006 "A"	Rt.	61	3			
985-986	28+731.006-29+109.364 "A"	Lt.	27.4		13		
985-986	28+731.006-29+109.364 "A"	Rt.	27.4	13			
986-988	29+109.364-29+442.745 "A"	Lt.	61		5		
986-988	29+109.364-29+518.695 "A"	Rt.	61	7			
	Ramp "B"						
992-1001	28+027.321-29+012.756 "B"	Lt.	27.4	36			
992-1001	28+059.559-29+012.756 "B"	Rt.	27.4		35		
1001-1003	29+012.756-29+193.832 "B"	Rt.	61		3		
SUB-TOTAL				596	96		

SHEET NO.	STATION TO STATION	SIDE	SPACING	620 Delineator, Type C, Flexable Mounted (White)	620 Delineator, Type D, Flexable Mounted (Yellow)		
	Ramp "E"						
1050-1051	33+702.752-34+040.879 "E"	Rt.	61	6			
1050-1051	33+875.734-34+040.879 'E"	Lt.	61		3		
	Ramp "F"						
1054	33+494.750-33+718.305 "F"	Lt.	30.5	6			
1054	33+527.169-33+718.305 "F"	Rt.	30.5		5		
1054	33+718.305-33+753.240 "F"	Lt.	6.1	1			
1054	33+718.305-33+739.747 "F"	Rt.	6.1		1		
	Ramp "G"						
1058-1059	34+194.761-34+389.000 "G"	Rt.	61		3		
1058-1059	34+194.761-34+532.881 "G"	Lt.	61	6			
	Ramp "H"						
1063	34+478.378-34+599.458 "H"	Rt.	61	2			
1063	34+491.827-34+512.561 "H"	Lt.	30.5		1		
1063	34+599.458-34+740.745 "H"	Rt.	30.5	4			
1063	34+512.561-34+707.000 "H"	Lt.	61		3		
	Ramp "K"						
1133-1134	37+316.395-37+749.002 "K"	Rt.	61	7			
1133-1134	37+477.371-37+749.002 "K"	Lt.	61		4		
	Ramp "L"						
1137	37+434.573-37+605.098 "L"	Lt.	30.5	5			
1137	37+468.000-37+605.098 "L"	Rt.	30.5		4		
1137-1138	37+605.098-37+715.595 "L"	Lt.	24.4	4			
1137-1138	37+468.000-37+715.595 "L"	Rt.	24.4		9		
1138	37+715.595-37+764.309 "L"	Lt.	61	1			
1138	37+715.595-37+764.309 "L"	Rt.	61		1		
	Ramp "M"						
1141	37+799.148-38+098.000 "M"	Rt.	61		5		
1141-1143	37+799.148-38+240.939 "M"	Lt.	61	7			
	Ramp "N"						
1147	37+780.700-37+816.583"N"	Rt.	61	1			
1147	37+780.700-37+816.583"N"	Lt.	61		1		
1147-1148	37+816.583-37+993.423 "N"	Rt.	24.4	6			
1147-1148	37+816.583-37+993.423 "N"	Lt.	24.4		6		
1148	37+993.423-38+104.360 "N"	Rt.	30.5	3			
1148	37+993.423-38+069.000 "N"	Lt.	30.5		2		
	Ramp "O"						
1174	5+901.325-6+089.161 "O"	Rt.	61	3			
1174-1176	6+089.161-6+217.384 "O"	Lt.	30.5		3		
1174-1176	6+089.161-6+217.384 "O"	Rt.	30.5	3			
1176	6+217.384-6+429.017 "O"	Lt.	18.3		11		
1176	6+217.384-6+429.017 "O"	Rt.	18.3	11			
1176	6+429.017-6+462.383 "O"	Lt.	61		1		
1176	6+429.017-6+462.383 "O"	Rt.	61	1			
	Ramp "P"						
1180-1182	5+680.000-5+911.486 "P"	Lt.	61	4			
1180-1182	5+769.125-5+938.153 "P"	Rt.	61		3		
1182	5+991.486-6+054.601 "P"	Lt.	18.3	2			
1182	5+938.153-6+014.601 "P"	Rt.	18.3		3		
1182	6+054.601-6+083.833 "P"	Lt.	61	1			
1182	6+054.601-6+083.833 "P"	Rt.	61		1		
SUB-TOTAL				84	70		

DELINEATORS AT HEAD OF E-98 GUARDRAIL UNITS

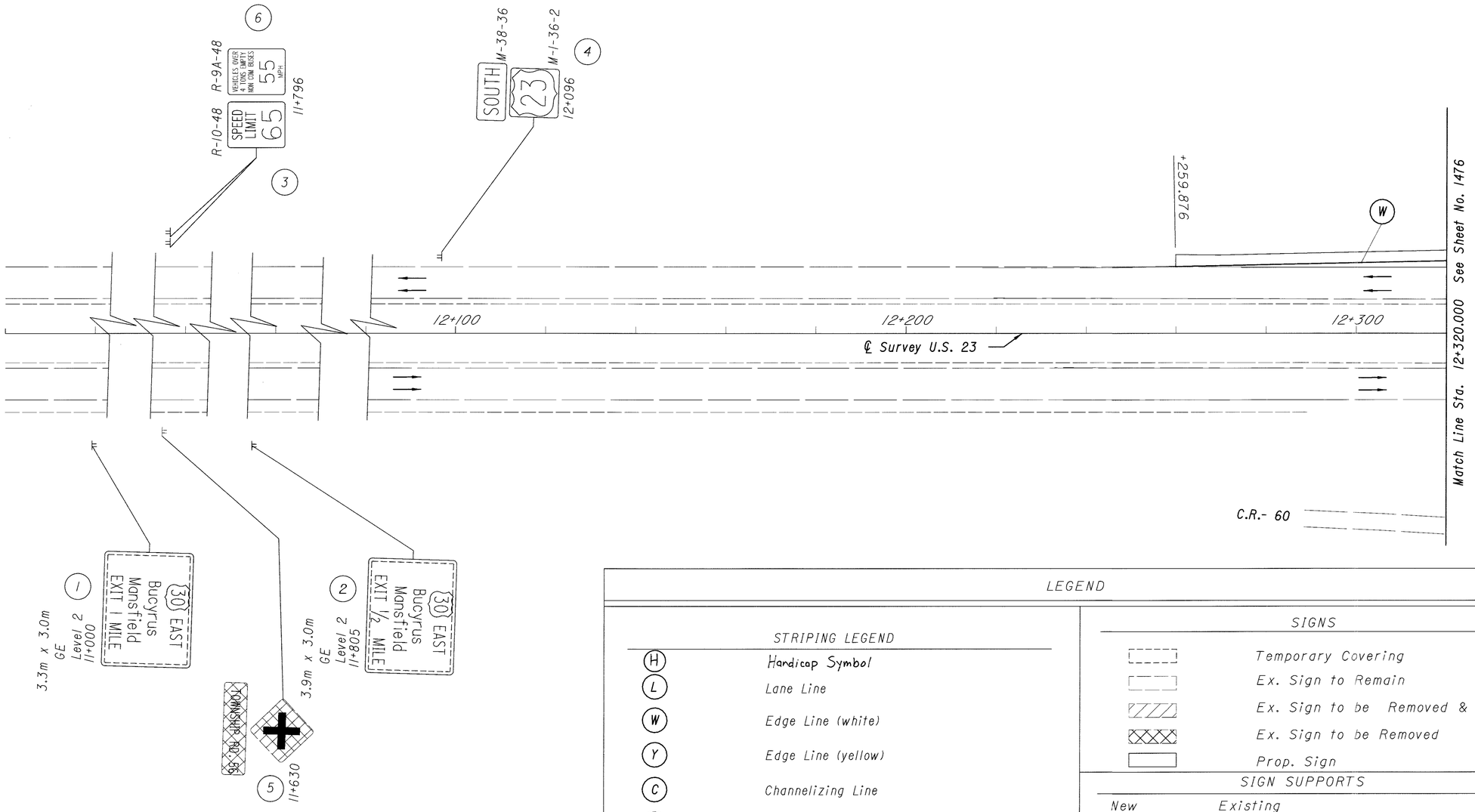
SHEET NO.	STATION	SIDE	SPACING	620 Delineator, Type C, Flexable Mounted (White)	620 Delineator, Type D, Flexable Mounted (Yellow)		
	EB US 30						
158	28+304.200	Lt.	—		1		
	TR 128						
822	0+827.900	Lt.	—		1		
822	0+827.900	Rt.	—	1			
823	0+913.100	Rt.	—	1			
823	0+913.100	Lt.	—		1		
	CR 1						
263	0+904.900	Rt.	—	1			
263	0+926.900	Lt.	—		1		
263	1+073.900	Rt.	—		1		
263	1+095.900	Lt.	—	1			
	CR 18						
266	0+880.100	Rt.	—	1			
266	0+938.600	Lt.	—		1		
266	1+062.400	Rt.	—		1		
266	1+113.200	Lt.	—	1			
	EX 30						
296	0+876.100	Rt.	—	1			
296	0+938.700	Lt.	—		1		
298	1+056.500	Rt.	—		1		
298	1+119.100	Lt.	—	1			
SUB-TOTAL				596	96		
SUB-TOTAL				84	70		
SUB-TOTAL				8	9		
TOTALS TO GENERAL SUMMARY				688	175		

CALCULATED AG
CHECKED REA

DELINEATORS

WYA/CRA-30-28.009/0.000

1474
2116



LEGEND

STRIPING LEGEND

(H)	Handicap Symbol
(L)	Lane Line
(W)	Edge Line (white)
(Y)	Edge Line (yellow)
(C)	Channelizing Line
(T)	Transverse Line
(S)	Stop Line
(P)	Parking Lot Stall Markings

NOTE:

All Signs Will Have Type "G" Sheeting Unless Otherwise Noted.

* Not a Type "G" Sheeting sign

SIGNS

- Temporary Covering
- Ex. Sign to Remain
- Ex. Sign to be Removed & Reerected
- Ex. Sign to be Removed
- Prop. Sign

SIGN SUPPORTS

New	Existing	
○—	○— - -	Overhead Single Arm Support
○—○	○— - -	Span
⊤	⊤	Single
⊤⊤	⊤⊤	Two
⊣	⊣	Single, Back to Back
⊣⊣	⊣⊣	Two, Back to Back
⊣⊢	⊣⊢	One Way, Do Not Enter Pole Mounted

N

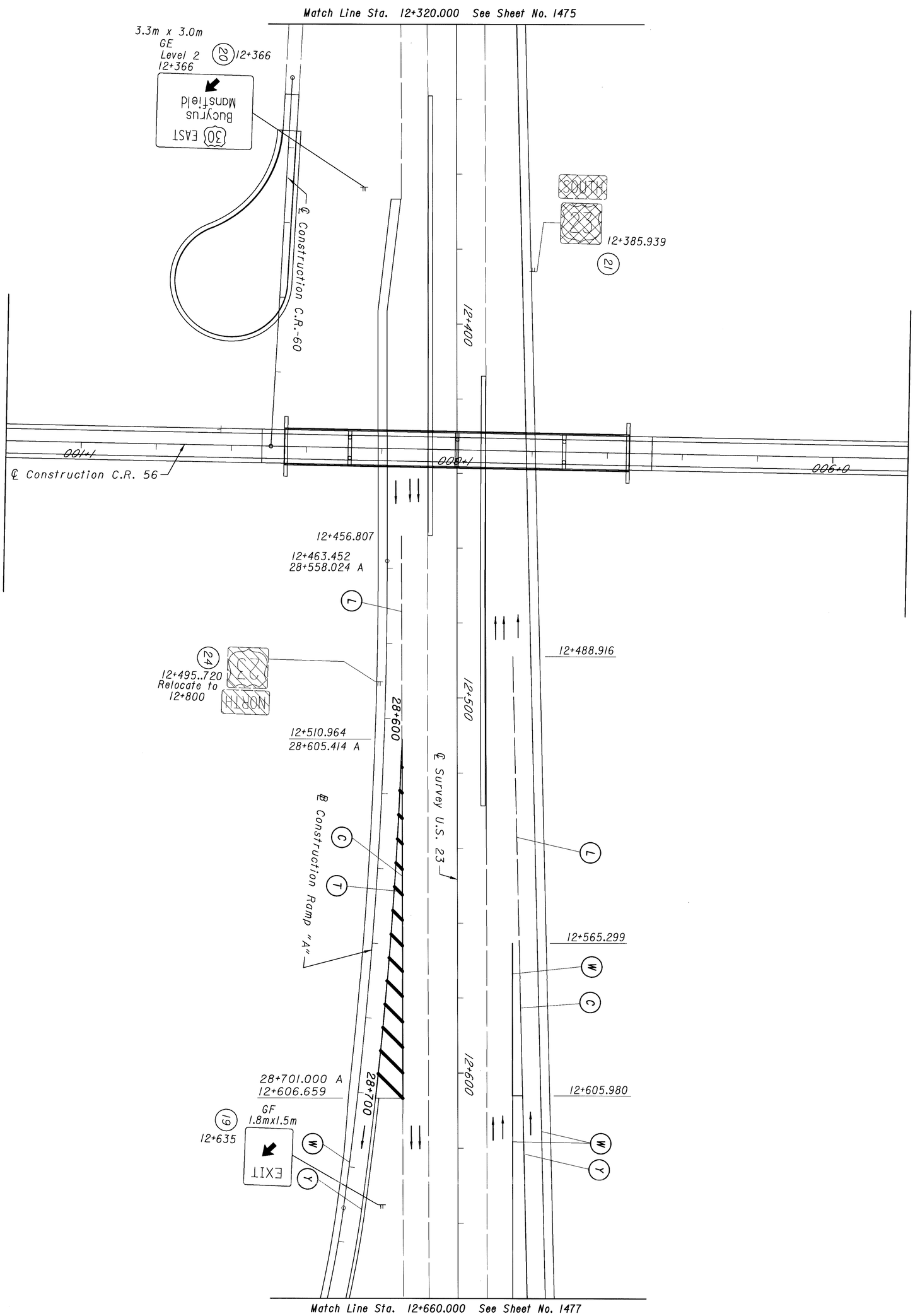
0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-23 STA. 12+000TO STA. 12+320

WYA/CRA-30-28.009/0.000

1475
2116



For Legend See Sheet No. 1475

2116 / 1476	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-23 STA.12+320 TO STA.12+660	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS	N

Match Line Sta. 28+260 "B" See Sheet No. 1478

28+200

W

Y

12+747.702

29

TOWNSHIP RD. 66

28+027.321 B

12+695.977

28+027.321 B

℄ Construction Ramp "B"

28+100

30

W-49R-48

12+780

12+695.977

Match Line Sta. 12+660.000 See Sheet No. 1476

12+700

12+800

12+900

℄ SURVEY U.S. 23

Match Line Sta. 13+000.000 See Sheet No. 1478

26

23

NORTH

12+800
Relocated from
12+495.720

28+800

W

Y

℄ Construction Ramp "A"

Match Line Sta. 28+900 "A" See Sheet No. 1484

For Legend See Sheet No. 1475

N

0 0 20

HORIZONTAL
SCALE IN METERS

CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN US-23
STA. 12+660 TO STA. 13+000

WYA/CRA-30-28.009/0.000

1477
2116

For Legend See Sheet No. 1475

N

0 10 20
HORIZONTAL
SCALE IN METERS

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN RAMP B
STA. 28+260 TO STA. 28+600

WYA/CRA-30-28.009/0.000

1478
2116

Match Line Sta. 13+000.000 See Sheet No. 1477

13+100

℄ SURVEY U.S. 23

13+200

13+300

Match Line Sta. 13+340.000 See Sheet No. 1480

Match Line Sta. 28+600 "B" See Sheet No. 1478

W

Y

℄ Construction Ramp "B"

28+700

28+100

28+600

℄ Construction U.S. 30 EB

Match Line Sta. 28+900 EB See Sheet No. 1484

W

Y

L

TOWNSHIP 80 55

33

13+306.755

For Legend See Sheet No. 1475

N

0 10 20

HORIZONTAL
SCALE IN METERS

CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN US-23
STA. 13+000 TO STA. 13+340

WYA / CRA-30-28.009 / 0.000

1479
2116

Match Line Sta. 13+340.000 See Sheet No. 1479

℄ Construction U.S. 30 EB

28+500

28+600

13+400

13+500

13+600

℄ SURVEY U.S. 23

+546.983

+620.877

+625.851

+629.324

+655.122

+672.062

+350.723

+660.004

0+996.237

0+980.119

0+977.379

13+532.413

Relocate at Same Station

Do Not Disturb

SOUTH 23

X-4

0+930

0+900

0+000+1

13+656.444

Match Line Sta. 13+680.000 See Sheet No. 1481

13+632.329

1+002.560

1+002.560

1+023.072

28+800

℄ Construction Ramp "B"

Match Line Sta. 28+880 "B" See Sheet No. 1487

Match Line Sta. 28+760 WB See Sheet No. 1487

℄ Construction U.S. 30 WB

28+700

+69

℄ Construction T.R. 55

1+100

W-5.44A 28+691

3.66m x 1.22m LEFT LANE ENDS MERGE RIGHT

X-4

1+120.387

W Y L

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS

0 10 20

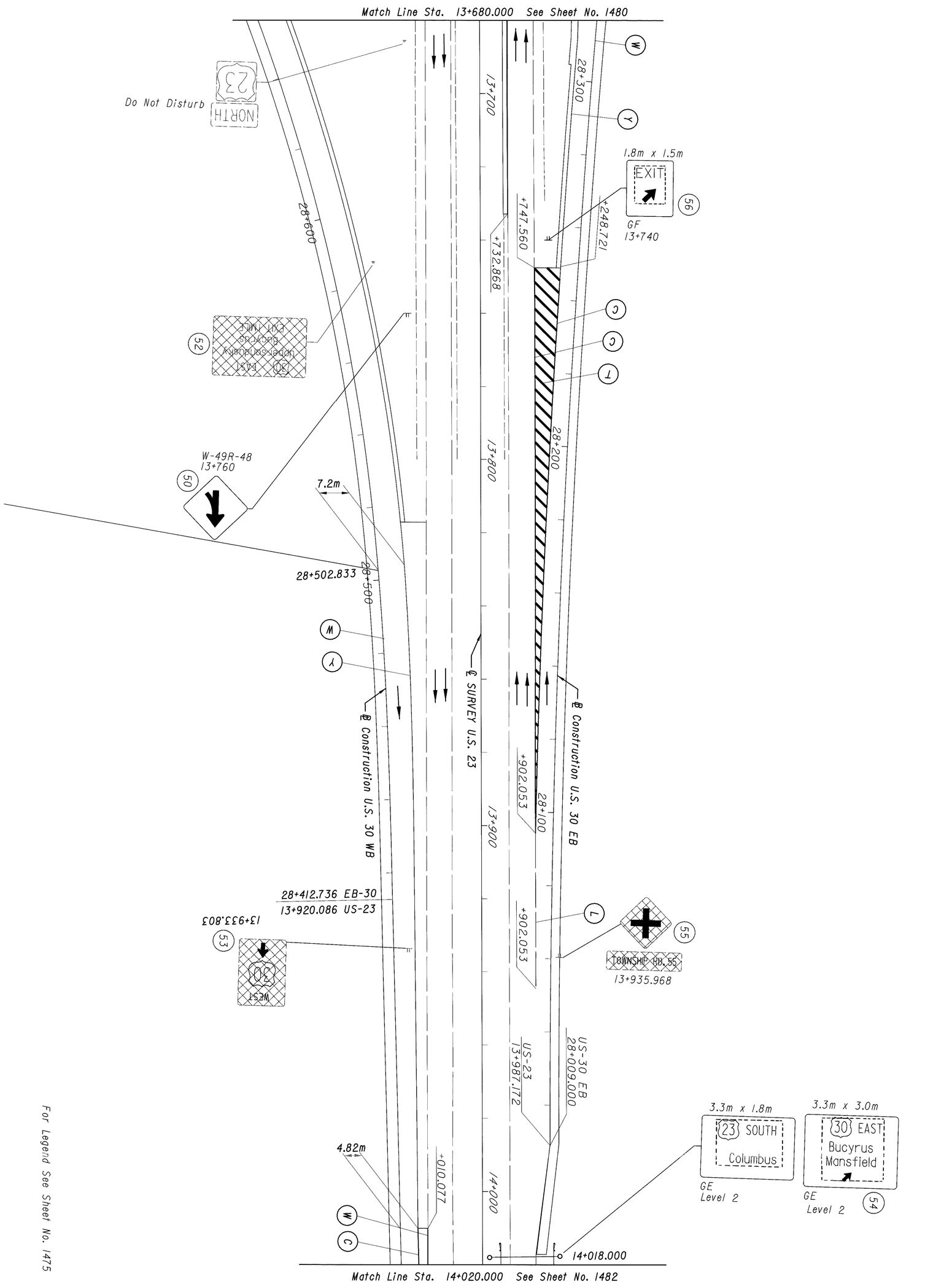
CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN US-23 STA. 13+340 TO STA. 13+680

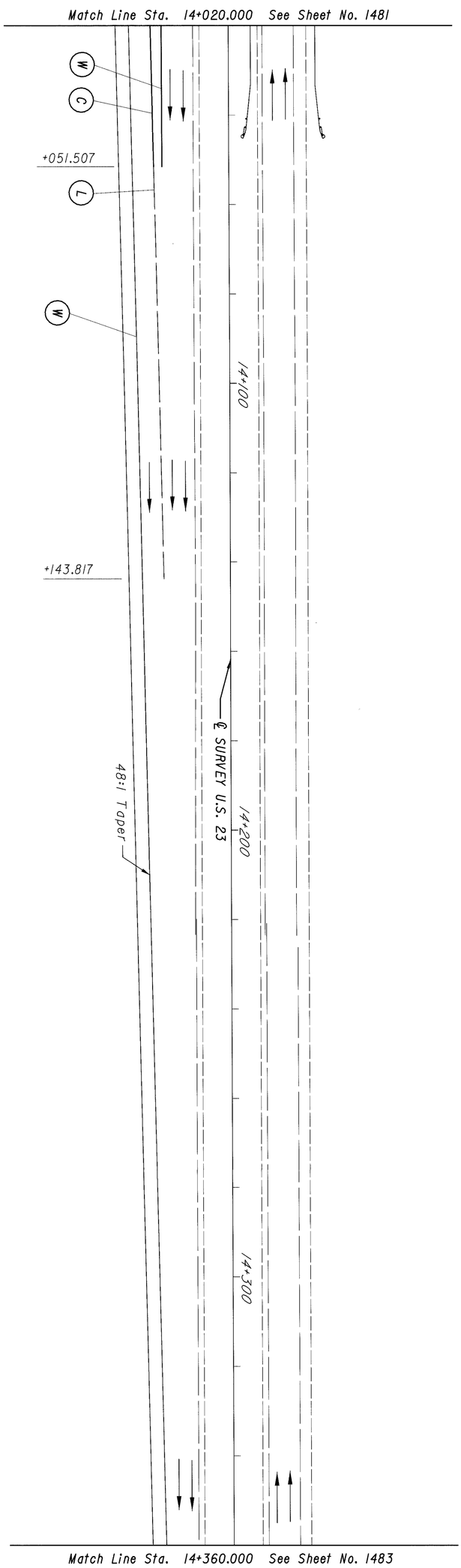
WYA / CRA-30-28.009 / 0.000

1480
2116



For Legend See Sheet No. 1475

1481 / 2116	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-23 STA.13+680 TO STA. 14+020	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS	N



For Legend See Sheet No. 1475

1482 / 2116	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-23 STA. 14+020 TO STA. 14+360	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS

TYPICAL SPEED LIMIT SIGN DETAIL
(Does not apply at protected locations)

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-23 STA. 14+360 TO STA. 14+660

WYA/CRA-30-28.009/0.000

1483
2116

Match Line Sta. 28+900.000 See Sheet No. 1479

29+000

29+100

℄ Construction U.S. 30 E.B.

29+200

W

L

Y

See Sheet No. 1485 Match Line Sta. 29+240.000

Match Line Sta. 29+040 "A"

29+100

℄ Construction Ramp "A"

W

Y

Match Line Sta. 28+900 "A" See Sheet No. 1477

See Sheet No. 1485 Match Line Sta. 29+220.000

Y

W

29+200

℄ Construction Ramp "A"

29+100

Match Line Sta. 29+040 "A"

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN U.S 30 E.B. STA. 28+900 TO STA. 29+240

WYA/CRA-30-28.009/0.000

1484
2116

Match Line Sta. 29+240.000 See Sheet No. 1484

CS Sta. 29+273.695

29+443.334

ST Sta. 29+518.695

Match Line Sta. 29+580.000 See Sheet No. 1486

29+300

29+400

29+500

℄ Construction U.S. 30 E.B.

℄ Construction Ramp "A"

POT Sta. 29+518.695

W-49R-48
29+350

65

Match Line Sta. 29+220 A See Sheet No.1484

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN US-30 E.B. STA. 29+240 TO STA. 29+580

WYA/CRA-30-28.009/0.000

1485
2116

Match Line Sta. 29+660.000 See Sheet No. 1489

℄ Construction USR-30

29+700

29+800

Match Line Sta. 29+900 See Sheet No. 1490

TS Sta. 29+633.092

Match Line Sta. 29+580.000 See Sheet No. 1485

29+600

29+700

29+800

℄ Construction USR-30 EB

48:1 Taper

4.8m

29+738.167

SC Sta. 29+753.092

29+608.695

29+633.984

CS Sta. 29+893.028

Match Line Sta. 29+900 A See Sheet No. 1490

W L Y C

For Legend See Sheet No. 1475

N

0 10 20

HORIZONTAL SCALE IN METERS

CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN US-30 E.B. STA. 29+580 TO STA. 29+900

WYA/CRA-30-28.009/0.000

1486
2116

Match Line Sta. 28+760.000 See Sheet No. 1480

28+800

28+900

29+000

Match Line Sta. 29+060.000 See Sheet No. 1488

3.6m x 1.2m
LEFT LANE ENDS
1/4 MILE
W-54B
28+980

67

66

W

Y

℄ Construction U.S. 30 W.B.

Match Line Sta. 28+880.000 See Sheet No. 1480

28+900

29+000

W

Y

℄ Construction Ramp "B"

℄ Survey U.S. 23

13+500

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS

0 10 20

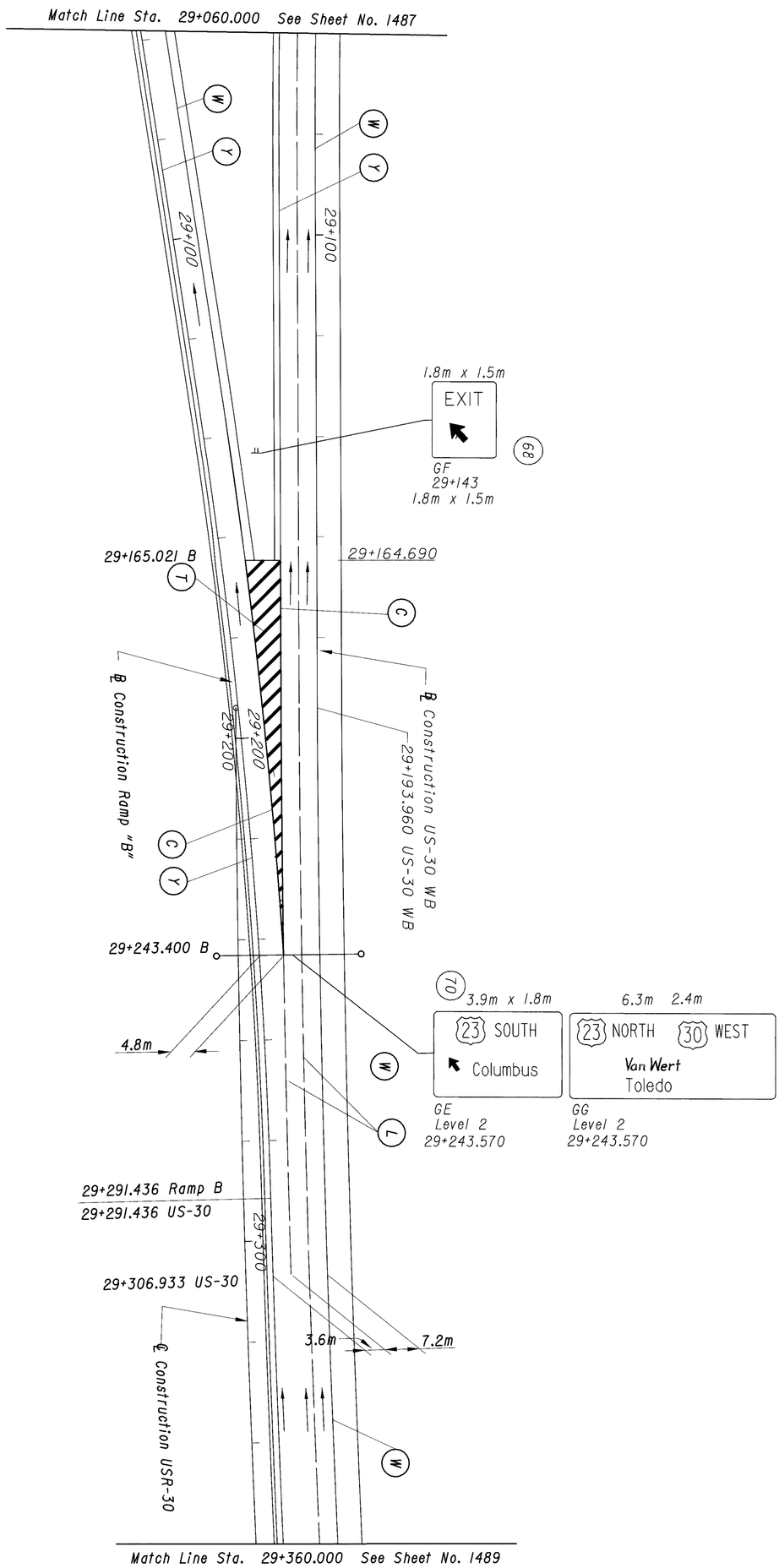
CALCULATED AG

CHECKED AEA

TRAFFIC CONTROL PLAN US-30 WB STA. 28+760 TO STA. 29+060

WYA/CRA-30-28.009/0.000

1487
2116



For Legend See Sheet No. 1475

1488 / 2116	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-30 WB STA. 29+060 TO STA. 29+360	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS

For Legend See Sheet No. 1475

N

0 10 20
HORIZONTAL
SCALE IN METERS

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-30 WB
STA. 29+360 TO STA. 29+660

WYA/CRA-30-28.009/0.000

1489
2116

℄ Construction TR-124

5.4m x 2.4m
23 SOUTH
Columbus
EIXT LEFT 1/2 MILE
Bridge Mounted
GB
Level 2
30+013.171
71

W L Y

Match Line Sta. 29+900.000 See Sheet No. 1486

30+000

30+100

30+200

℄ Construction U.S.R. 30

Match Line Sta. 30+240.000 See Sheet No. 1491

48:1 Taper

℄ Construction U.S. 30 E.B.

+968.695
End Taper

30+013.028 E.B.=
30+013.028 U.S. 30

0+000

W L Y

30+115
30
EAST
72
M-1-36-2
M-39-36

For Legend See Sheet No. 1475

N

0 10 20
HORIZONTAL
SCALE IN METERS

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA. 29+900 TO STA. 30+240

WYA/CRA-30-28.009/0.000

1490
2116

See Detail, Sheet No. 1483.

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN US-30 STA. 30+240 TO STA. 30+580

WYA/CRA-30-28.008/0.000

1491
2116

For Legend See Sheet No. 1475

N

0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-30 STA. 30+580 TO STA. 30+920

WYA/CRA-30-28.009/0.000

1492
2116

For Legend See Sheet No. 1475

N

0 10 20
HORIZONTAL
SCALE IN METERS

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA. 30+920 TO STA. 31+260

WYA/CRA-30-28.009/0.000

1493
2116

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED AG

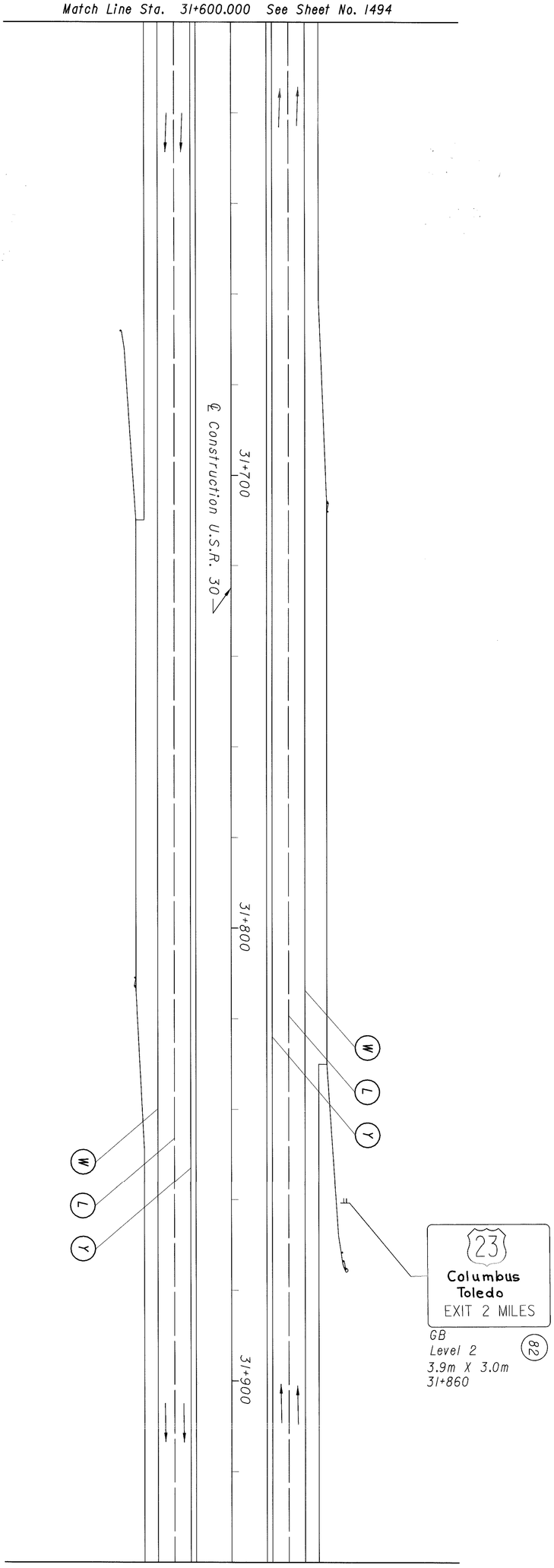
CHECKED REA

TRAFFIC CONTROL PLAN US-30 STA. 31+260 TO STA. 31+600

WYA/CRA-30-28.009/0.000

1494
2116

Match Line Sta. 31+600.000 See Sheet No. 1494



Match Line Sta. 31+940.000 See Sheet No. 1496

For Legend See Sheet No. 1475

1495
2116

WYA/CRA-30-28.009/0.000

TRAFFIC CONTROL PLAN US-30
STA. 31+600 TO STA. 31+940

CALCULATED AG
CHECKED REA

0 10 20
HORIZONTAL SCALE IN METERS

N

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA. 31+940 TO STA. 32+280

WYA/CRA-30-28.009/0.000

1496
2116

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA. 32+280 TO STA. 32+620

WYA/CRA-30-28.009/0.000

1497
2116

Match Line Sta. 1+100 TR 128 See Sheet No. 1548

Match Line Sta. 32+620.000 See Sheet No. 1497

℄ Construction U.S.R. 30

32+700

32+800

32+858.70

32+885.638

1+825.824

1+000

0+974.383

+784.101

+784.101

4.6m

3.6m

32+673.101

+960.275

Match Line Sta. 32+960.000 See Sheet No. 1499

Match Line Sta. 0+880 TR 128 See Sheet No. 1547

℄ Construction T.R.-128

0+900

For Legend See Sheet No. 1475

104 R-31C-48 ONLY ONLY 32+663

105

106 32+732 GM-1 CR 128 2.7m x 0.9m

107

109 R-31C-48 ONLY ONLY

R-41A-36 WRONG WAY 32+784

108 R-2-36 YIELD ONE WAY R-43R-48 32+853

110 R-37R-48 KEEP RIGHT 32+856

111 R-41B-36 DO NOT ENTER ONE WAY R-43L-48 0+974

112 STOP R-1-36 DIVIDED HIGHWAY R-107A-24 0+974

113 D-7-96 32+885 WYANDOT COUNTY CR 128

114 R-43L-48 ONE WAY ONE WAY R-43R-48 0+978

115 R-37R-36 KEEP RIGHT 32+890

116 R-43R-48 ONE WAY YIELD R-2-36 32+893

117 M-40-36 WEST 30 M-1-36-2 32+825

118 R-43R-48 ONE WAY R-43L-48 ONE WAY 1+022

119 WYANDOT COUNTY CR 128 D-7-96 32+858

120 R-107A-24 DIVIDED HIGHWAY R-1-36 STOP 1+026

121 R-43L-48 ONE WAY R-41B-36 DO NOT ENTER 1+025

123 R-41A-36 WRONG WAY R-31C-48 ONLY ONLY 32+960

125

127 M-1-36-2 30 32+920 M-39-36 EAST

W L Y T W L CL W T Y W L W T Y

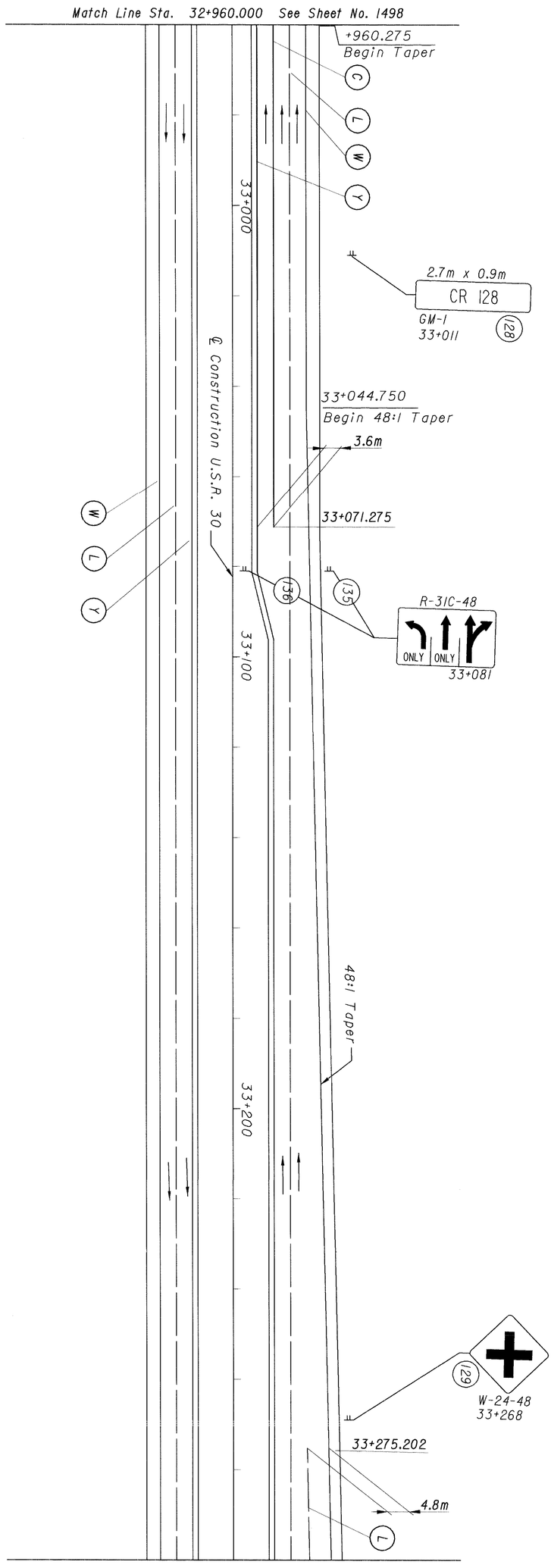
HORIZONTAL SCALE IN METERS 0 10 20

CALCULATED AG CHECKED REA

TRAFFIC CONTROL PLAN US-30 STA. 32+620 TO STA. 32+960

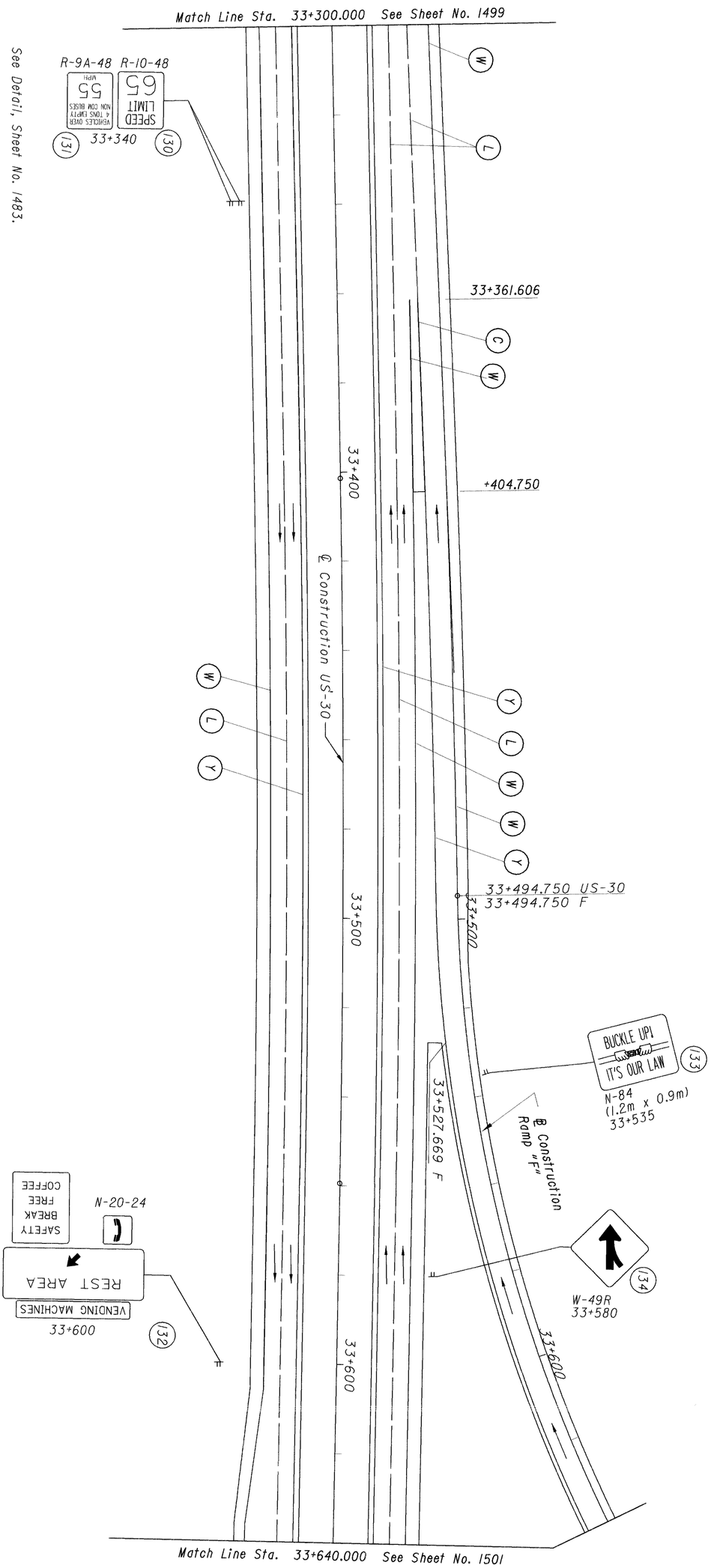
WYA/CRA-30-28.009/0.000

1498 2116



For Legend See Sheet No. 1475

1499 2116	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-30 STA. 32+960 TO STA. 33+300	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS	N


Match Line Sta. 33+300.000 See Sheet No. 1499
See Detail, Sheet No. 1483.
R-9A-48
R-10-48
SPEED LIMIT 65
VEHICLES OVER 4 TONS EMPTY NON COM BUSES 55 V/H
131
33+340
130
W
L
33+361.606
C
W
33+400
+404.750
℄ Construction US-30
W
L
Y
Y
L
W
W
Y
33+494.750 US-30
33+494.750 F
33+500
33+500
BUCKLE UP! IT'S OUR LAW
133
N-84
(1.2m x 0.9m)
33+535
33+527.669 F
℄ Construction Ramp "F"
134
W-49R
33+580
33+600
N-62-48
(Hinged)
SAFETY BREAK FREE COFFEE
N-20-24
RA-2-132
3.3m x 1.2m
REST AREA
VENDING MACHINES
N-86-120
33+600
132
33+600
Match Line Sta. 33+640.000 See Sheet No. 1501
For Legend See Sheet No. 1475

For Continuation See Sheet No. 1540

℄ Construction Ramp "F"

33+700

STOP (141) R-1-30 33+713

4.8m

Y W

33+800

℄ Construction Ramp "I"

6.0m

+861.322

(140) RESERVED PARKING R-59B(L)-12 33+916

3m Typ. P

45°

6m

3m 33+900 4m

4m Typ. H

4m 3m

45°

45°

6m

45°

P

(139) RESERVED PARKING L-59B(L)-12 33+932

Match Line Sta. 33+970.000 See Sheet No. 1502

Level 2 CR 128 1/2 MILE (138) GM 2.7m x 1.5m 33+677

W L Y

Match Line Sta. 33+640.000 See Sheet No. 1500

33+700 33+800 33+900

℄ Construction U.S.R. 30

33+846.218

33+800

+846.218 E

33+900

Match Line Sta. 33+980.000 See Sheet No. 1502

W L Y

33+699.461

33+702.752 E

3.6m

L

4.8m

33+757.614

W C C T

W Y

℄ Construction Ramp "E"

RA-4-72 33+880 REST AREA (137)

For Legend See Sheet No. 1475

N

0 10 20 HORIZONTAL SCALE IN METERS

CALCULATED AG CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA. 33+640 TO STA. 33+980

WYA/CRA-30-28.009/0.000

1501
2116

TRAFFIC CONTROL PLAN US-30
STA.33+980 TO STA.34+320

WYA/CRA-30-28.009/0.000

1502
2116

CALCULATED AG
CHECKED REA

HORIZONTAL SCALE IN METERS
0 10 20

Match Line Sta. 33+970.000 See Sheet No. 1501

+996.944

34+000

34+100

℄ Construction Ramp "I"

Match Line Sta. 34+120 "G" See Sheet No. 1541

34+158.796

34+182.436

4.8m

34+200

℄ Construction Ramp "G"

34+194.744

34+300

6m

6.0m

R-41B-30 34+000 ENTER DO NOT

149

TRUCKS AND TRAILERS ONLY

R-400-24 "SPECIAL" 34+160

151

Match Line Sta. 33+980.000 See Sheet No. 1501

34+000

34+100

34+200

34+300

℄ Construction U.S.R. 30

Match Line Sta. 34+320.000 See Sheet No. 1503

℄ Construction Ramp "E"

34+040.879

R-400-24 "SPECIAL" 34+080

144

TRUCKS AND TRAILERS ONLY

4.8m

34+053.194

34+076.772

34

See Sheet No. 1539

Match Line Sta. 34+100 "E"

℄ Construction Ramp "J"

+238.597

146

143

DO NOT ENTER

R-41B-30 34+235

6.0m

45°

4m Typ.

3m Typ.

34+000 L-59B(L)-12

148

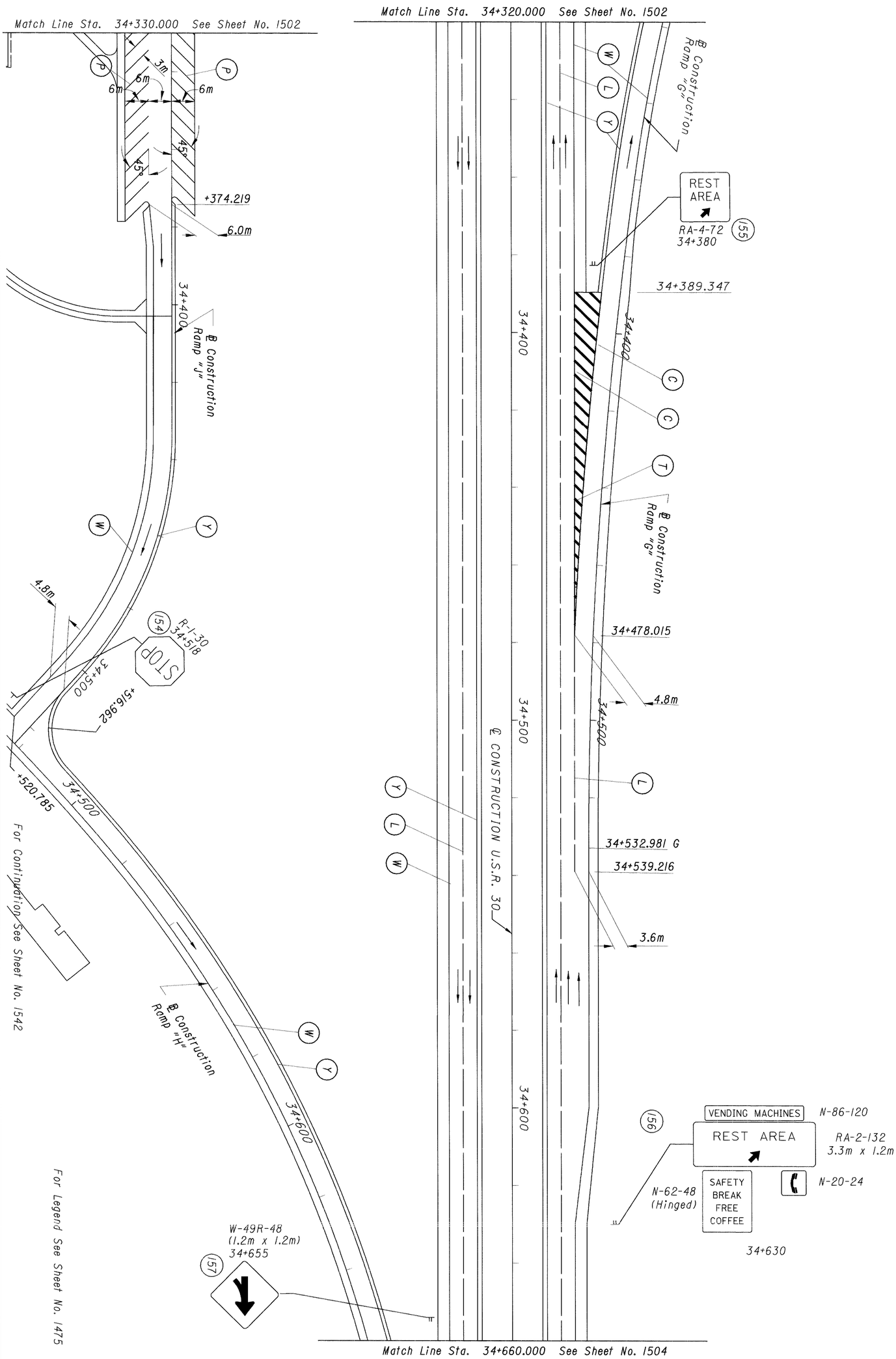
RESERVED PARKING

147

R-59B(R)-42 34+080

Match Line Sta. 34+330.000 See Sheet No. 1503

For Legend See Sheet No. 1475



1503 / 2116	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-30 STA.34+320 TO STA. 34+660	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS

0 10 20

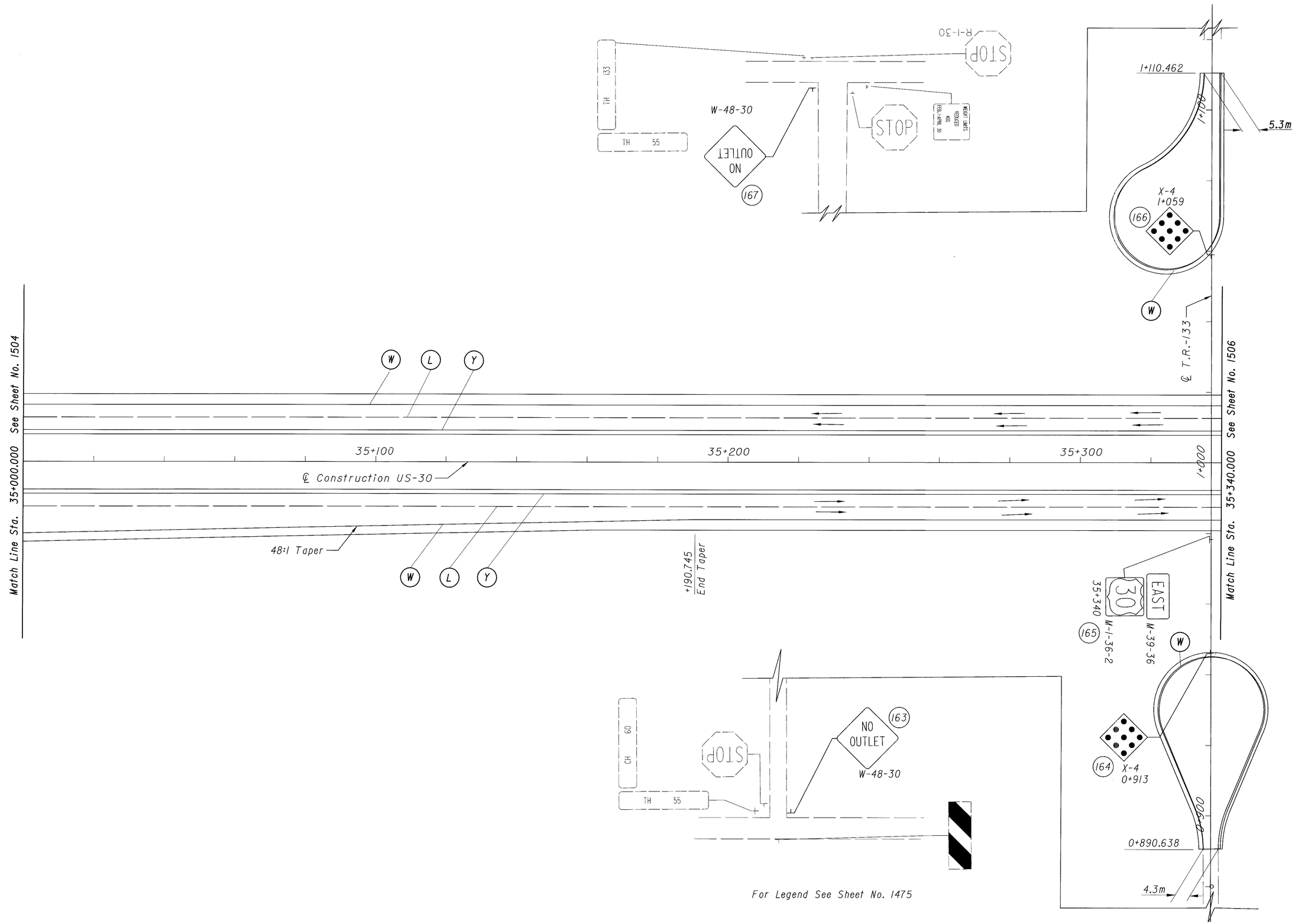
CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA. 34+660 TO STA. 35+000

WYA/CRA-30-28.009/0.000

1504
2116



CALCULATED AG
CHECKED REA

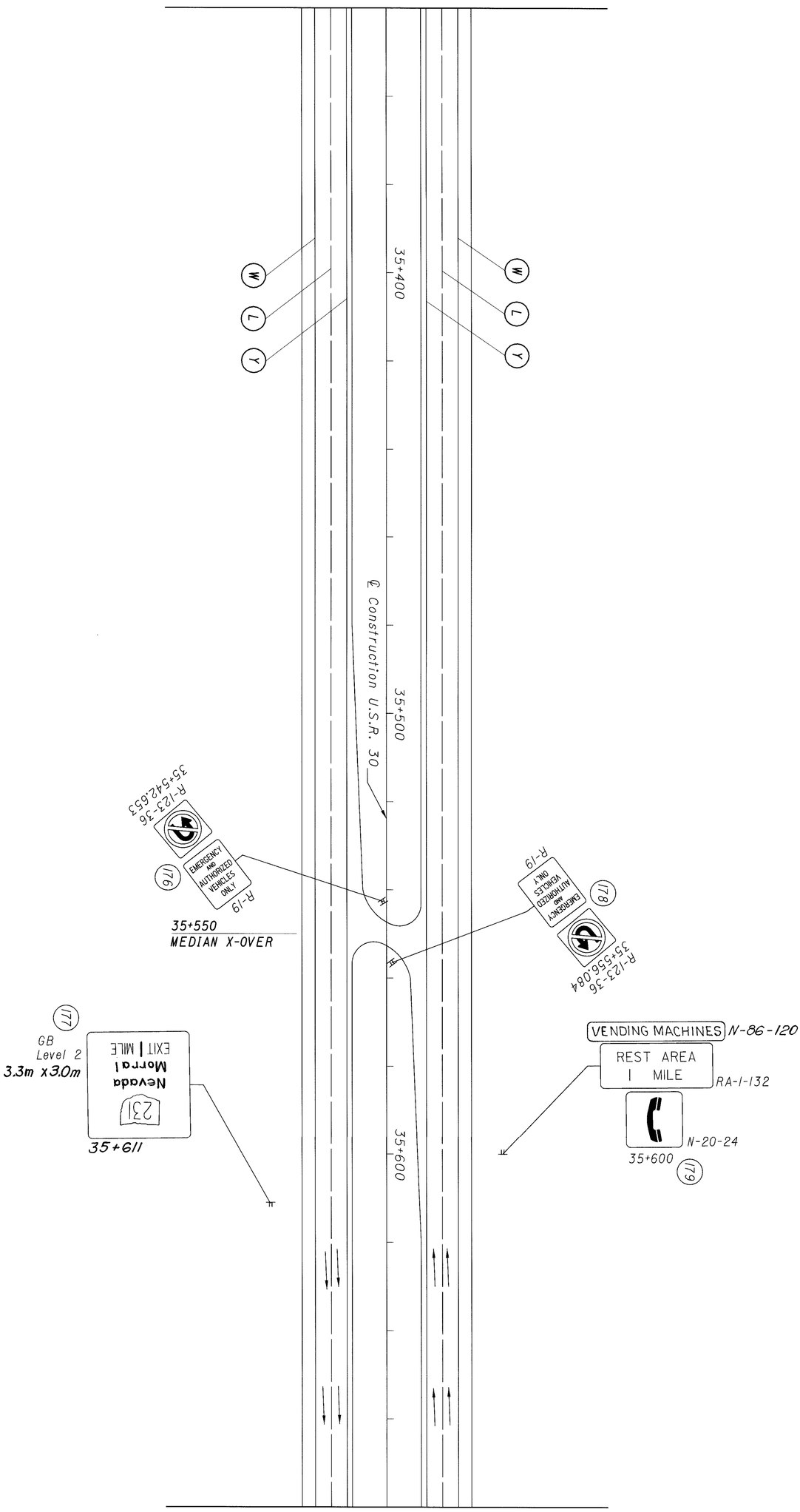
HORIZONTAL SCALE IN METERS
0 10 20

TRAFFIC CONTROL PLAN US-30 STA. 35+000 TO STA. 35+340

WYA / CRA-30-28.009 / 0.000

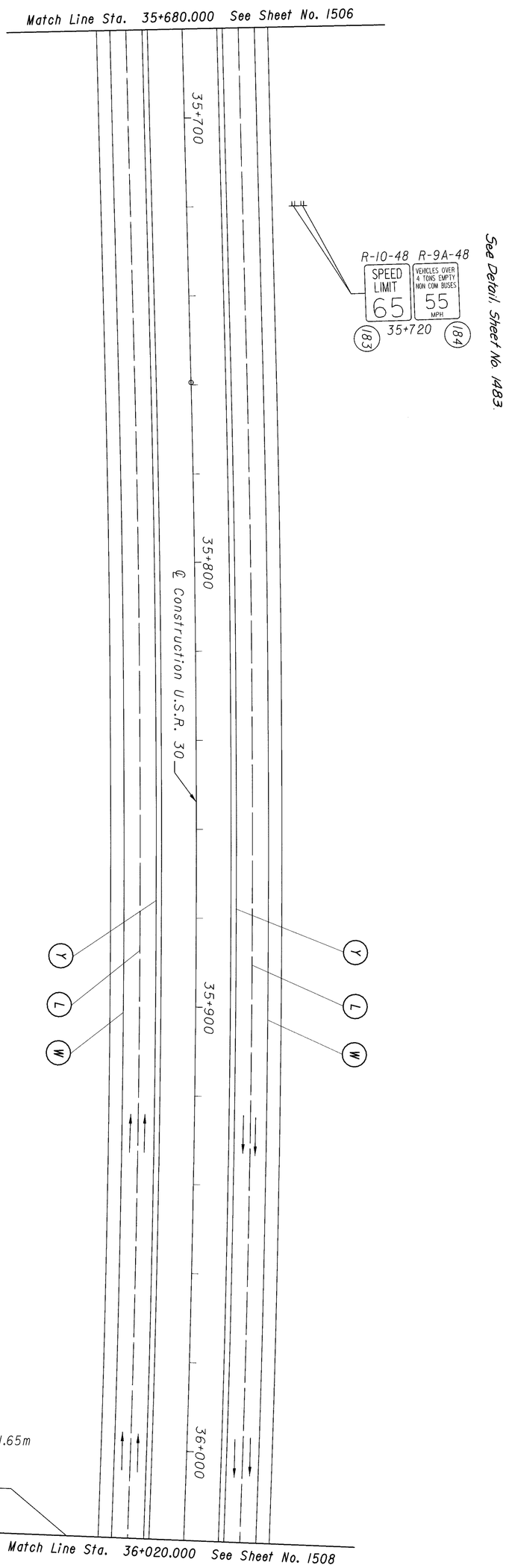
1505
2116

Match Line Sta. 35+340.000 See Sheet No. 1505



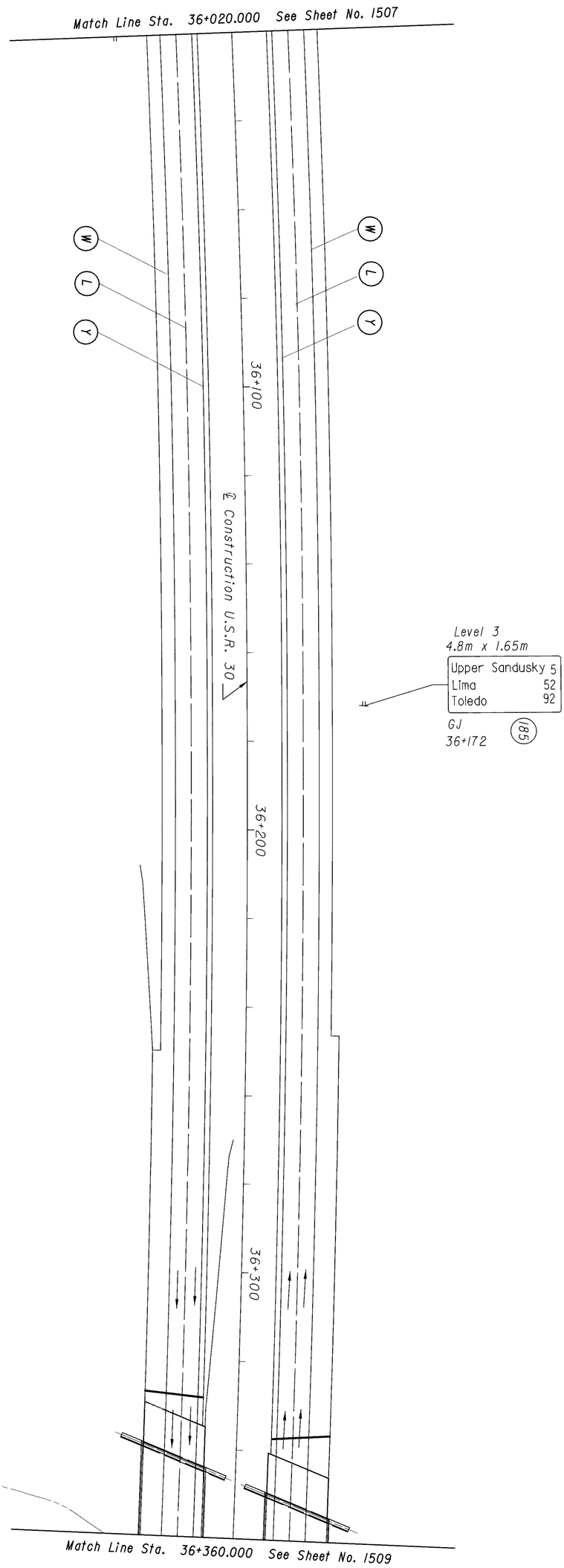
Match Line Sta. 35+680.000 See Sheet No. 1507

For Legend See Sheet No. 1475



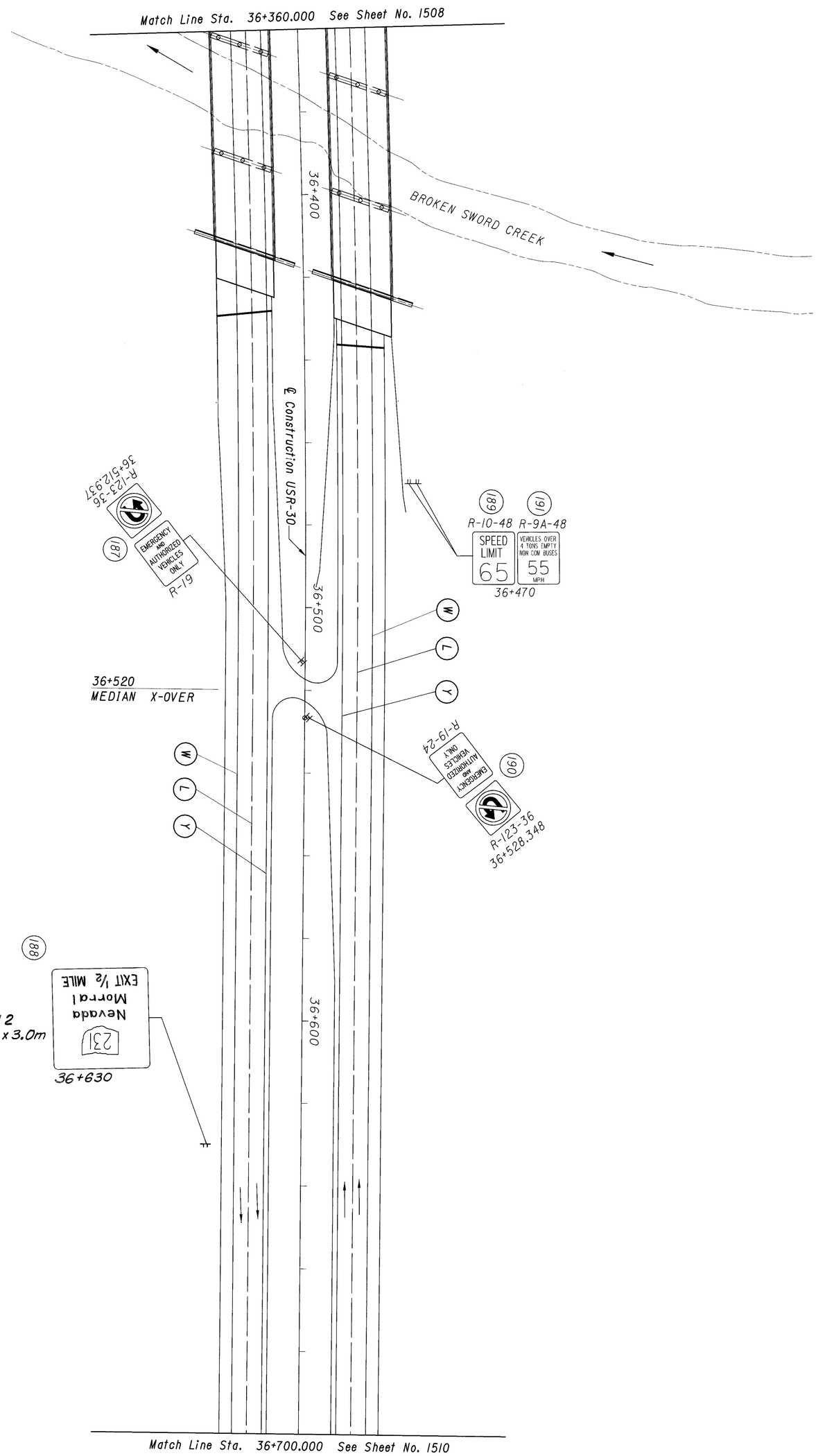
For Legend See Sheet No. 1475

1507 / 2116	WYA / CRA-30-28.009 / 0.000	TRAFFIC CONTROL PLAN US-30 STA. 35+680 TO STA. 36+020	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS	N



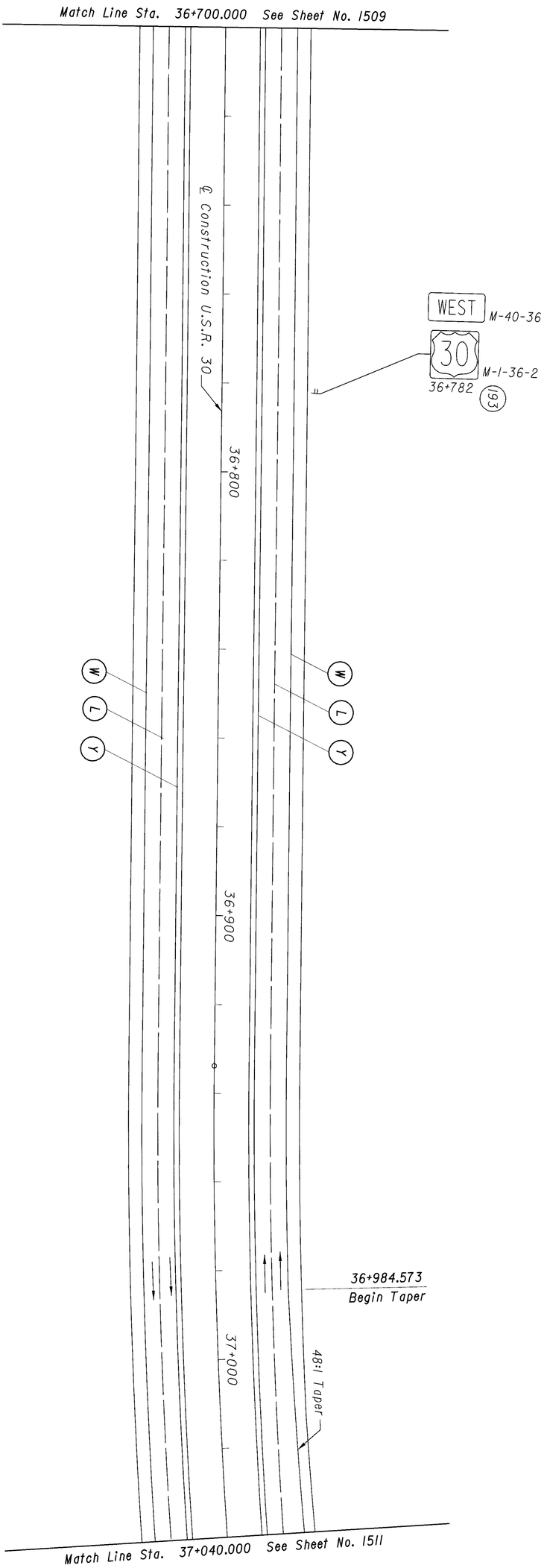
For Legend See Sheet No. 1475

1508 / 2116	WYA / CRA-30-28.009 / 0.000	TRAFFIC CONTROL PLAN US-30 STA. 36+020 TO STA. 36+360	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS	N



For Legend See Sheet No. 1475

1509 / 2116	WYA / CRA-30-28.009 / 0.000	TRAFFIC CONTROL PLAN US-30 STA. 36+360 TO STA. 36+700	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS	N



For Legend See Sheet No. 1475

1510 / 2116	WYA / CRA-30-28.009 / 0.000	**TRAFFIC CONTROL PLAN US-30** **STA. 36+700 TO STA. 37+040**	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA.37+040 TO STA. 37+380

WYA/CRA-30-28.009/0.000

1511
2116

Match Line Sta. 37+380.000 See Sheet No. 1511

37+400 37+500 37+600 37+700

℄ Construction U.S.R. 30

Match Line Sta. 37+720.000 See Sheet No. 1513

37+434.573

37+468.5/0

℄ Construction Ramp "L"

W Y

37+500

198

W-49R-48
37+520

W L Y

37+600

37+700

37+400

37+500

37+600

37+700

W L Y

C C T

37+437.053

GF 37+470

EXIT

197

1.8m x 1.5m

W Y

℄ Construction Ramp "K"

200

WRONG WAY

R-41A-36
37+688

℄ Construction Ramp "K"

37+700

WRONG WAY

R-41A-36
37+688

199

Nevada
Mora l
12 ½

D-48-48

M-25-24

231

205

M-2-30-3

37+600

For Legend See Sheet No. 1475

N

0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-30 STA. 37+380 TO STA. 37+720

WYA/CRA-30-28.009/0.000

1512
2116

Match Line Sta. 1+130 SR 231 See Sheet No. 1550

Match Line Sta. 37+720.000 See Sheet No. 1512

Match Line Sta. 38+060.000 See Sheet No. 1514

Match Line Sta. 0+870 See Sheet No. 1549

℄ Survey S.R.-231

℄ Construction USR-30

℄ Construction Ramp "L"

℄ Construction Ramp "M"

℄ Construction Ramp "N"

℄ Construction Ramp "K"

N 0° 18' 08.6" E

37+800

37+900

38+000

1+000

0+900

218 PROHIBITED PEDESTRIANS FARM MACHINERY ANIMALS BICYCLES OR MOTORCYCLES (LESS THAN 5 BRAKE HP) R-15A-36 37+750

222 30 WEST Upper Sandusky GH-1 Level 4 1+085 3.3m x 1.65m

4.8m

221 DO NOT ENTER STOP R-1-48 R-41B-36 37+806

223 WRONG WAY R-41A-36 37+820

219 231 M-2-30-3 M-25-24 D-48-48 Nevada 1/2 Morral 12 37+900

217 M-52A-108 1+060 EAST 30 WEST 2.7m x 0.9m

213 M-21-30 1+024 M-1-36-2 30 M-39-30 EAST

215 R-43R-48 ONE WAY DO NOT ENTER R-41B-36 ONE WAY R-43L-48 1+060

216 R-41A-36 37+820 WRONG WAY

206 R-43L-48 37+753 ONE WAY DO NOT ENTER R-41B-36 ONE WAY R-43R-48 37+753

204 R-1-48 STOP DO NOT ENTER R-41B-30 37+748

203 0+880 231 M-2-36-3 SOUTH M-38-36

208 2.7m x 0.9m WEST 30 EAST M-52A-108 0+950

209 WEST M-40-30 30 M-1-36-2 M-21-30 0+975

211 PROHIBITED PEDESTRIANS FARM MACHINERY ANIMALS BICYCLES OR MOTORCYCLES (LESS THAN 5 BRAKE HP) 37+795 R-15A-36

210 Mansfield 30 EAST GH-1 Level 4 0+920 2.7m x 1.8m

212 W-49R-48 38+020

Y L W

For Legend See Sheet No. 1475

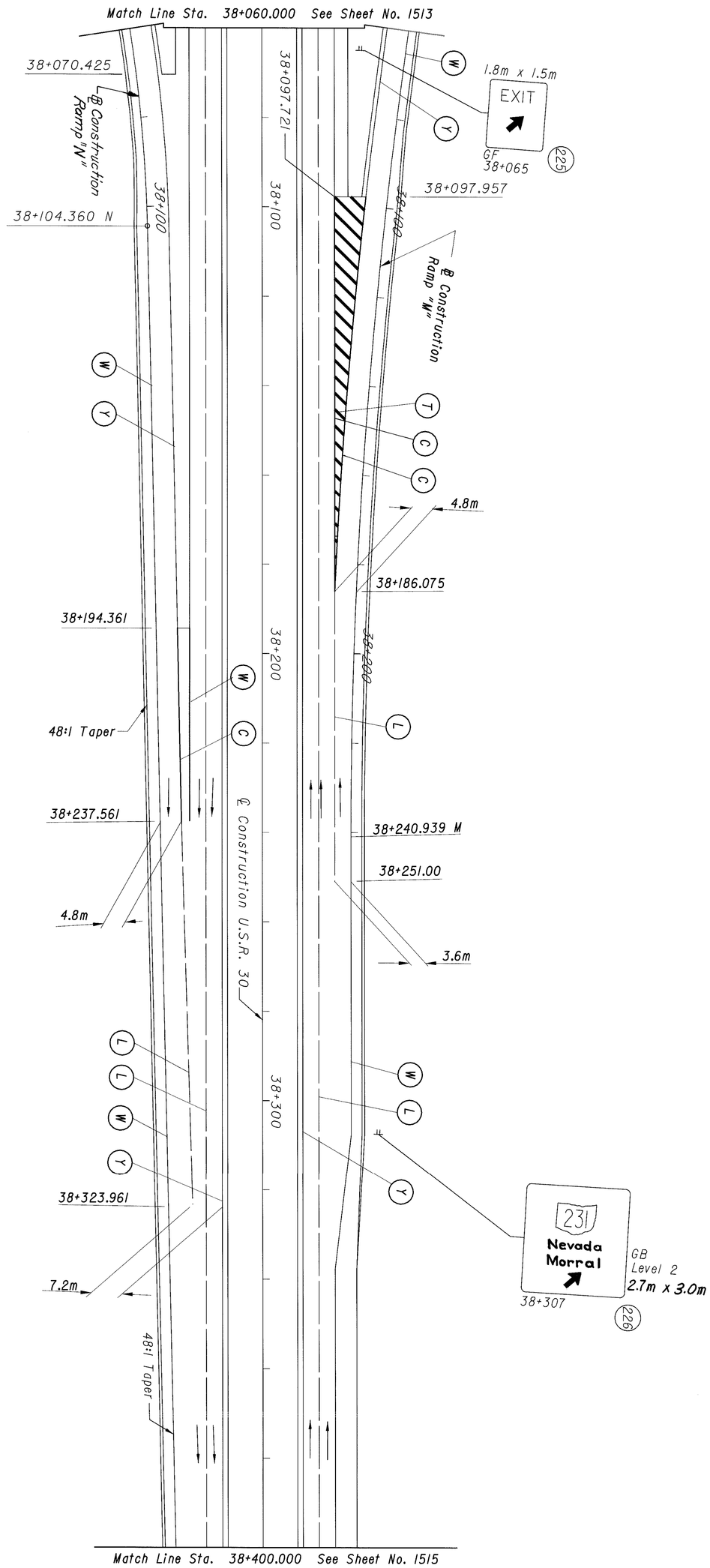
HORIZONTAL SCALE IN METERS 0 10 20

CALCULATED AG CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA. 37+720 TO STA. 38+060

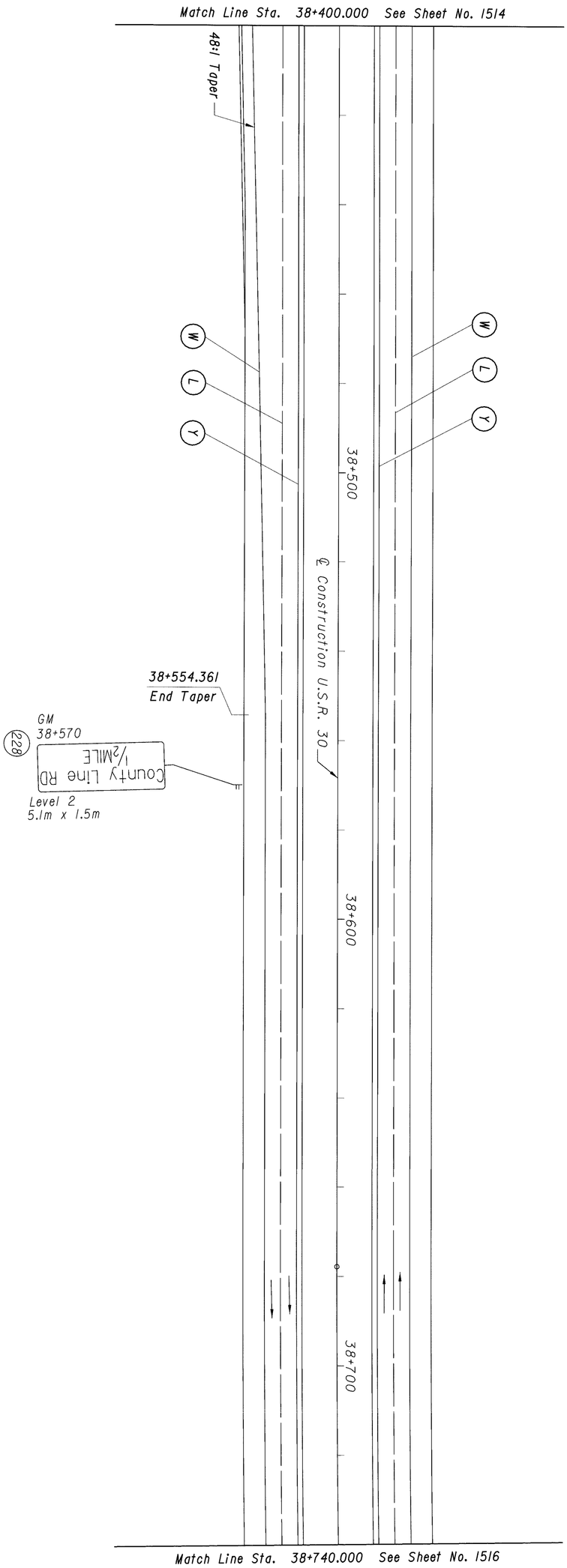
WYA/CRA-30-28.009/0.000

1513
2116



For Legend See Sheet No. 1475

1514 / 2116	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-30 STA.38+060 TO STA.38+400	CALCULATED AG CHECKED REA	HORIZONTAL SCALE IN METERS



For Legend See Sheet No. 1475

1515 / 2116	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-30 STA.38+400 TO STA. 38+740	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS	N

For Legend See Sheet No. 1475

N

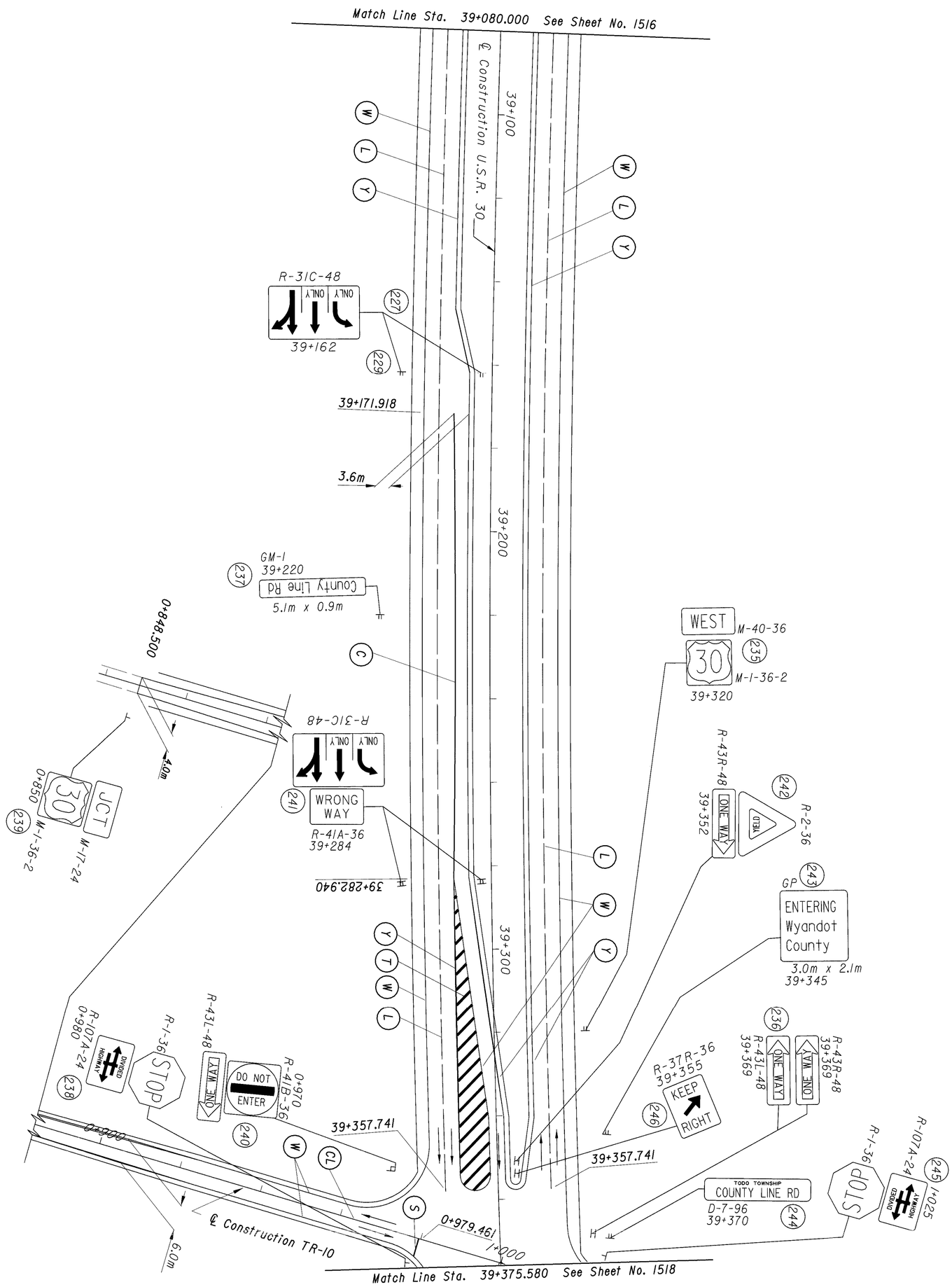
0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA. 38+740 TO STA. 39+080

WYA/CRA-30-28.009/0.000

1516
2116



For Legend See Sheet No. 1475

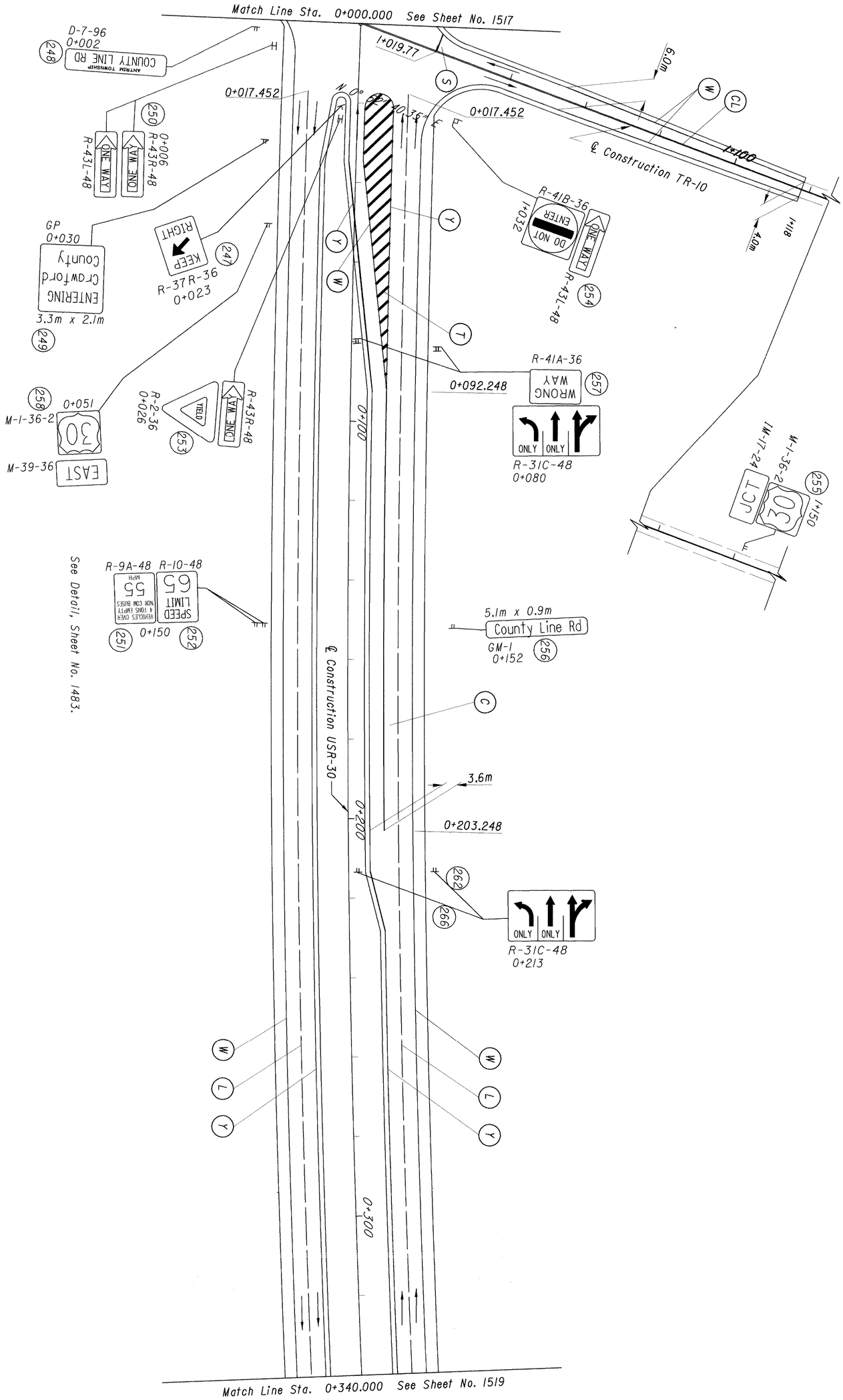
WYA/CRA-30-28.009/0.000

TRAFFIC CONTROL PLAN US-30
STA. 39+080.000 TO STA. 39+375.580

CALCULATED AG
CHECKED REA

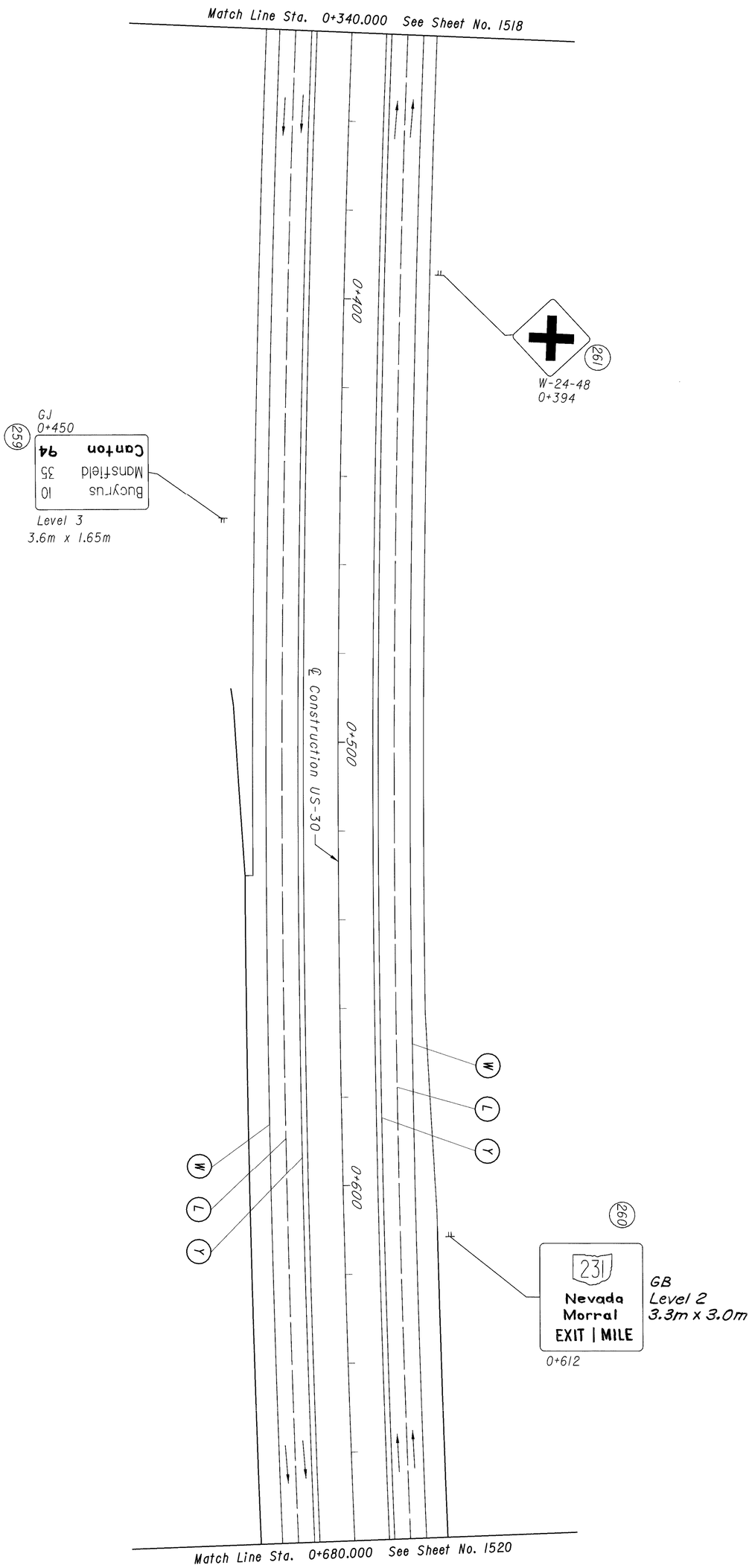
0 10 20
HORIZONTAL SCALE IN METERS

N



For Legend See Sheet No. 1475

1518 / 2116	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-30 STA.0+000 TO STA.0+340	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS	N



For Legend See Sheet No. 1475

1519 / 2116	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-30 STA.0+340 TO STA. 0+680	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS
0 10 20

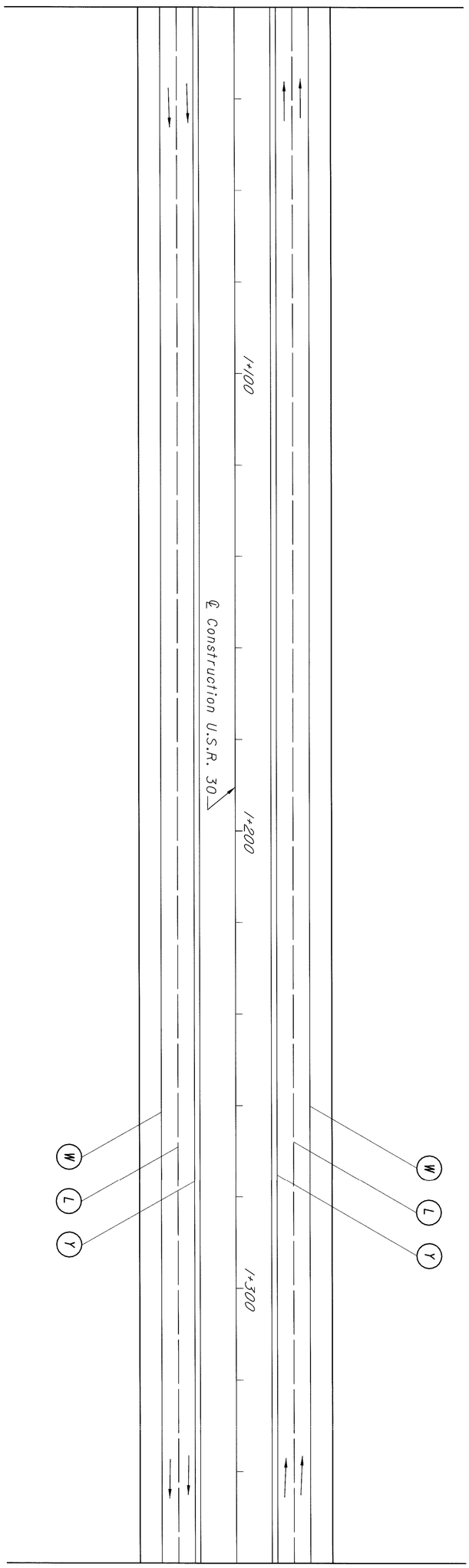
CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA. 0+680 TO STA.1+020

WYA/CRA-30-28.009/0.000

1520
2116

Match Line Sta. 1+020.000 See Sheet No. 1520

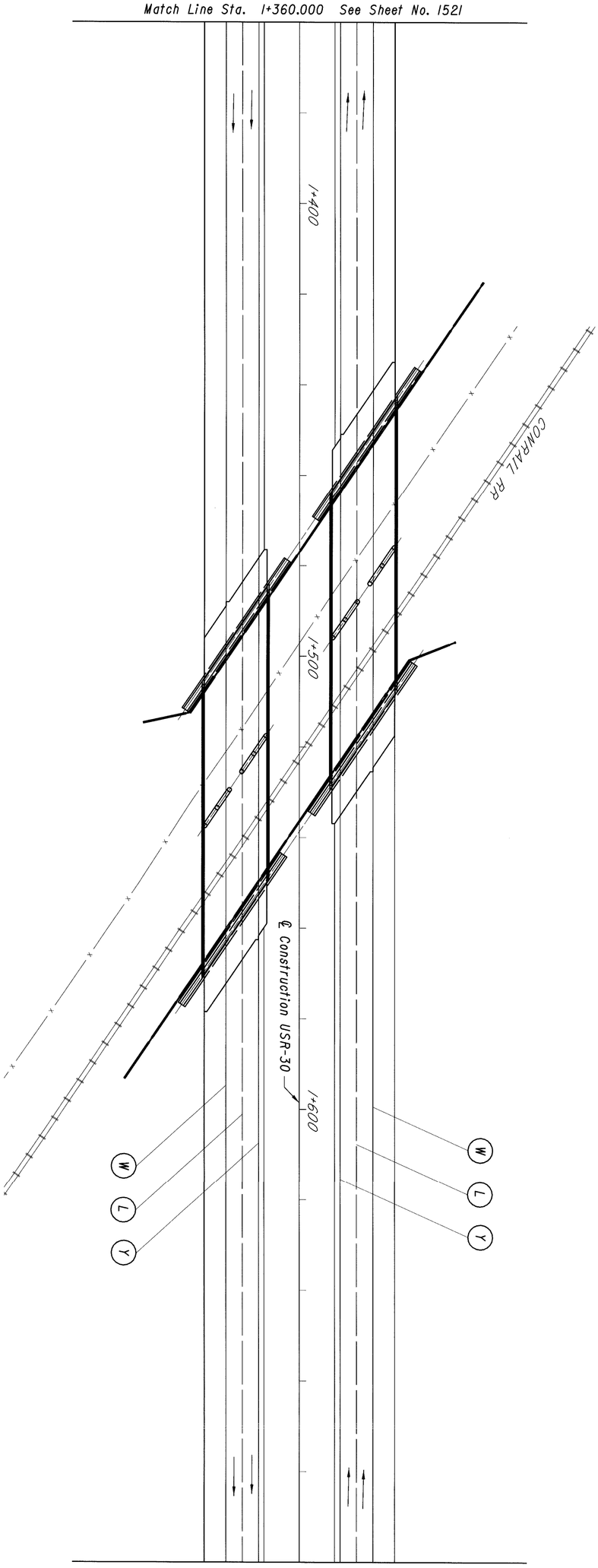


Match Line Sta. 1+360.000 See Sheet No. 1522

For Legend See Sheet No. 1475

1521 / 2116	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-30 STA. 1+020 TO STA. 1+360	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS	

Match Line Sta. 1+360.000 See Sheet No. 1521



Match Line Sta. 1+700.000 See Sheet No. 1523

For Legend See Sheet No. 1475

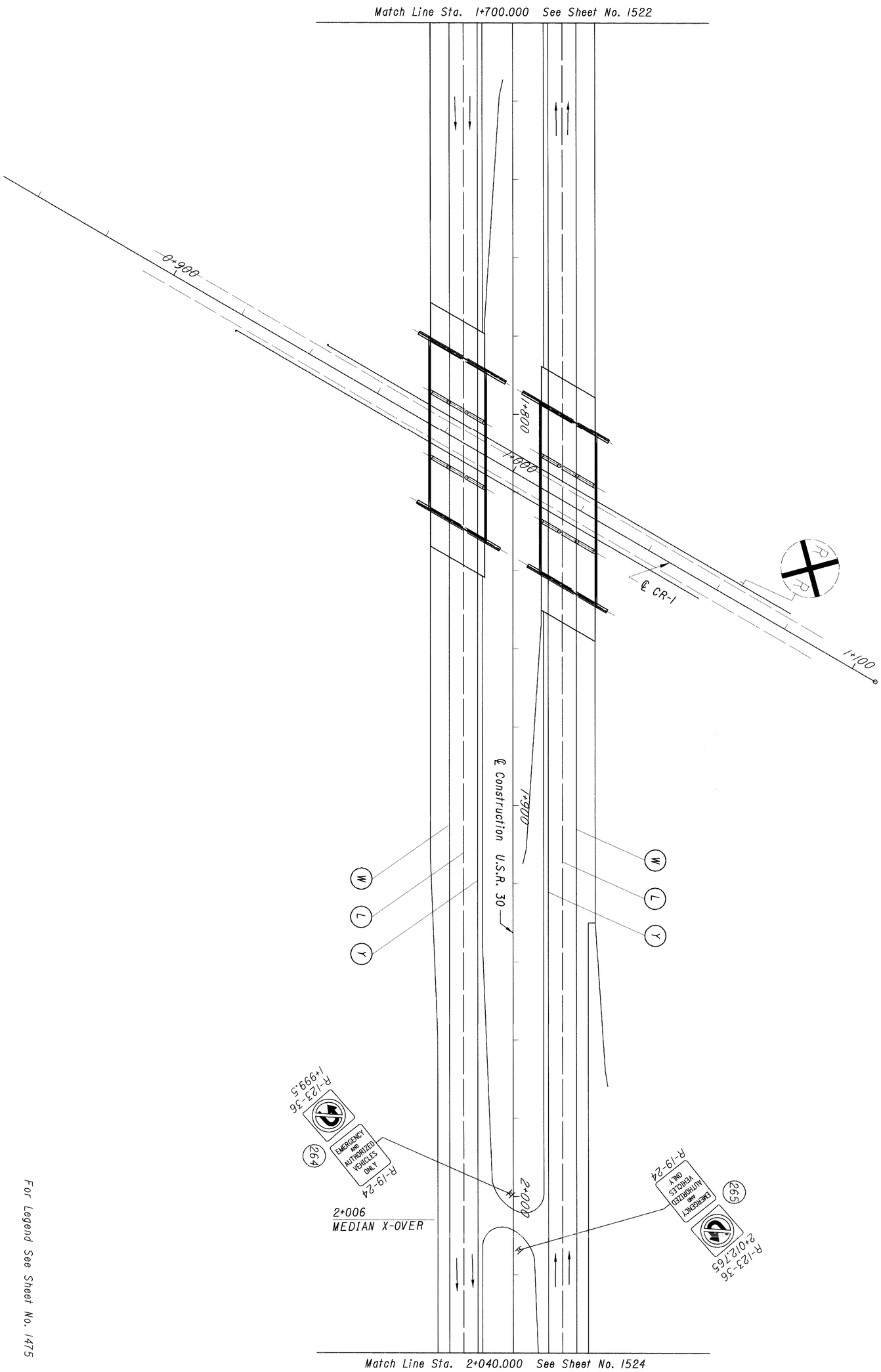
1522
2116

WYA/CRA-30-28.009/0.000

TRAFFIC CONTROL PLAN US-30
STA. 1+360 TO STA. 1+700

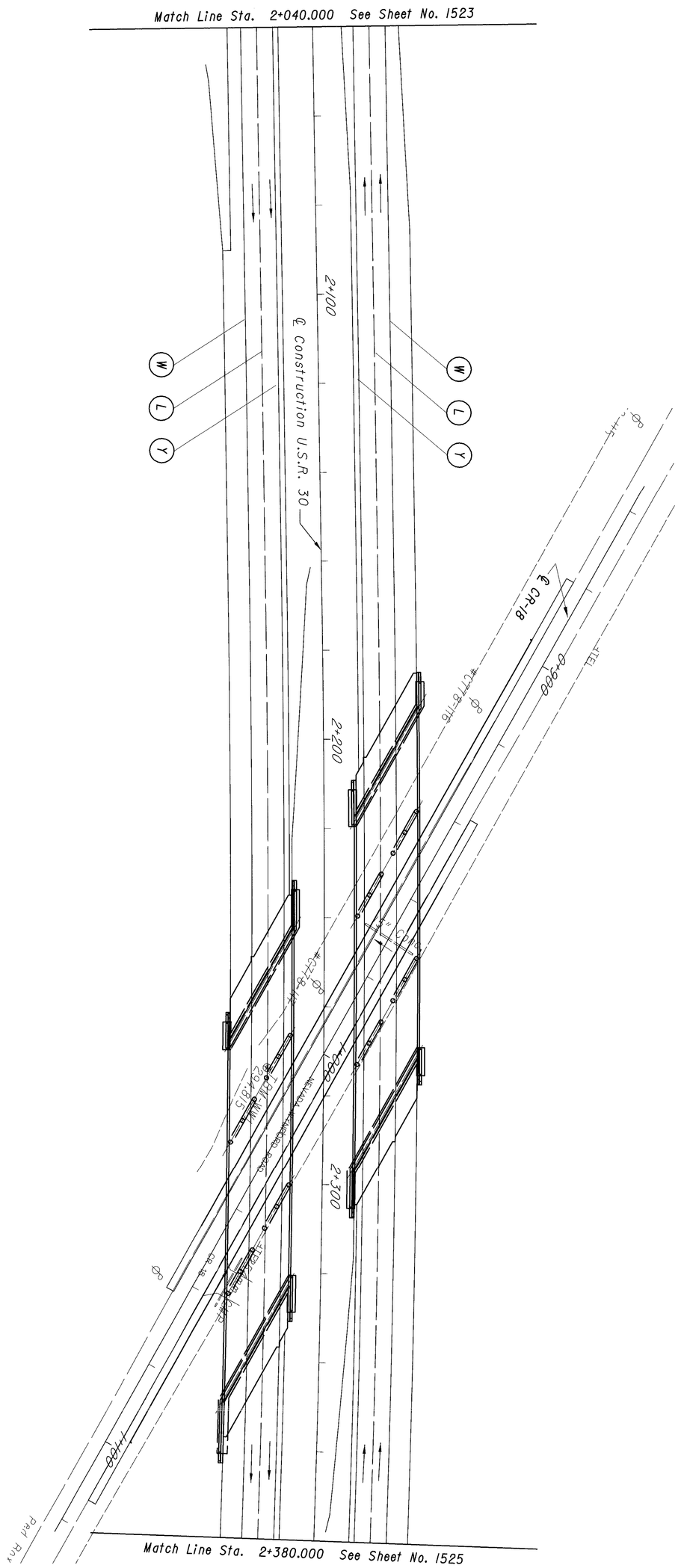
CALCULATED AG
CHECKED REA

0 10 20
HORIZONTAL SCALE IN METERS



For Legend See Sheet No. 1475

1523 2/16	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-30 STA. 1+700 TO STA. 2+040	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS



For Legend See Sheet No. 1475

1524 / 2116	WYA / CRA-30-28.009 / 0.000	TRAFFIC CONTROL PLAN US-30 STA. 2+040 TO STA. 2+380	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS	

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA. 2+380 TO STA. 2+720

WYA/CRA-30-28.009/0.000

1525
2116

For Legend See Sheet No. 1475

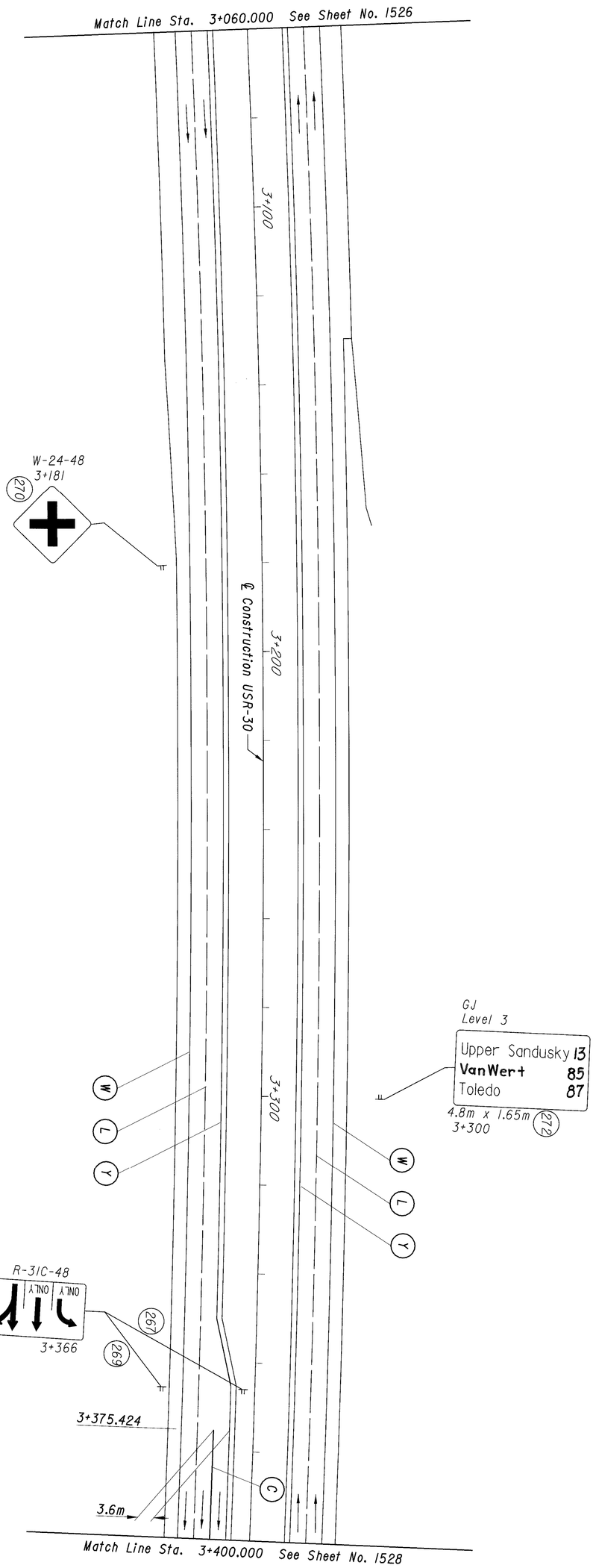
HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA. 2+720 TO STA. 3+060

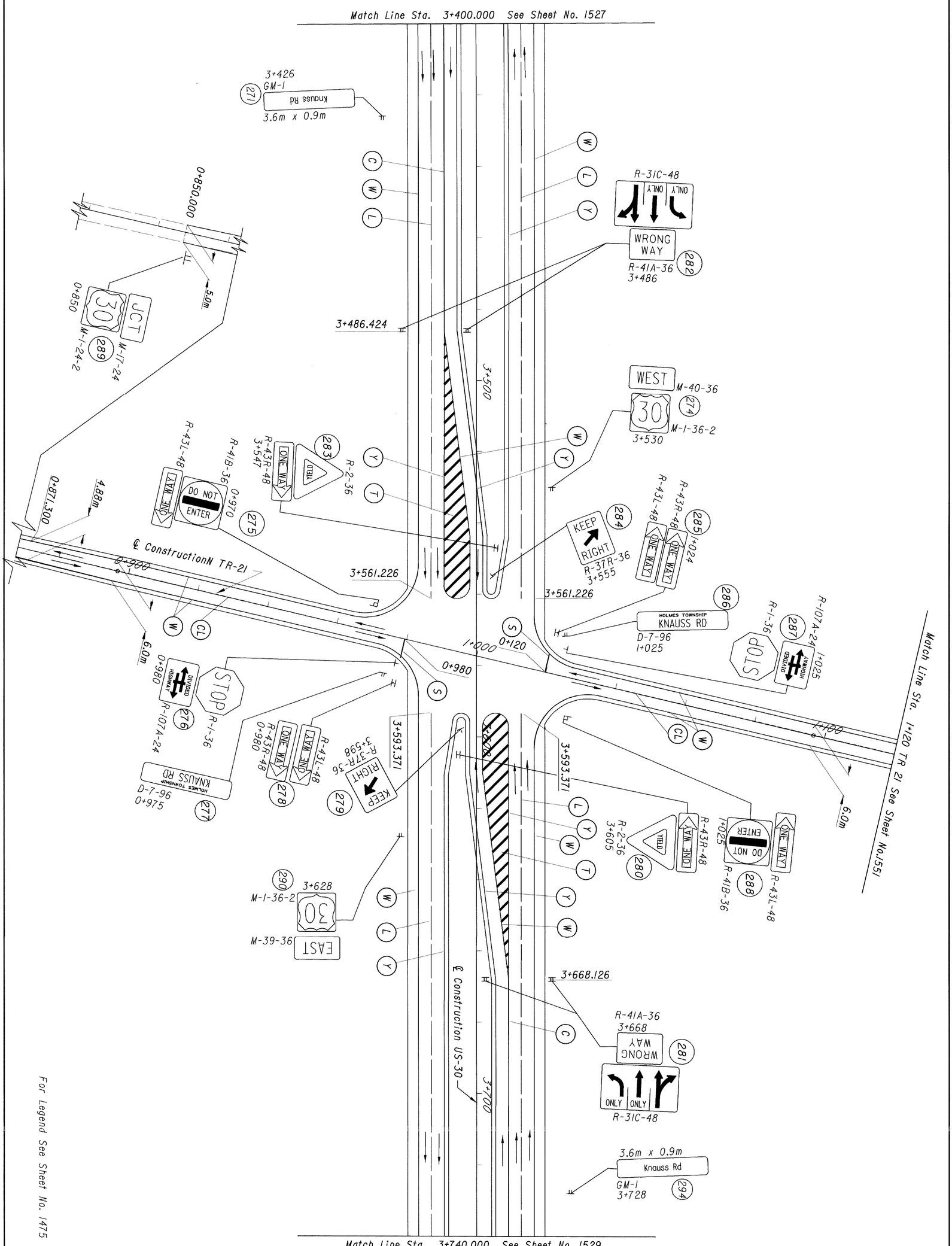
WYA/CRA-30-28.009/0.000

1526
2116

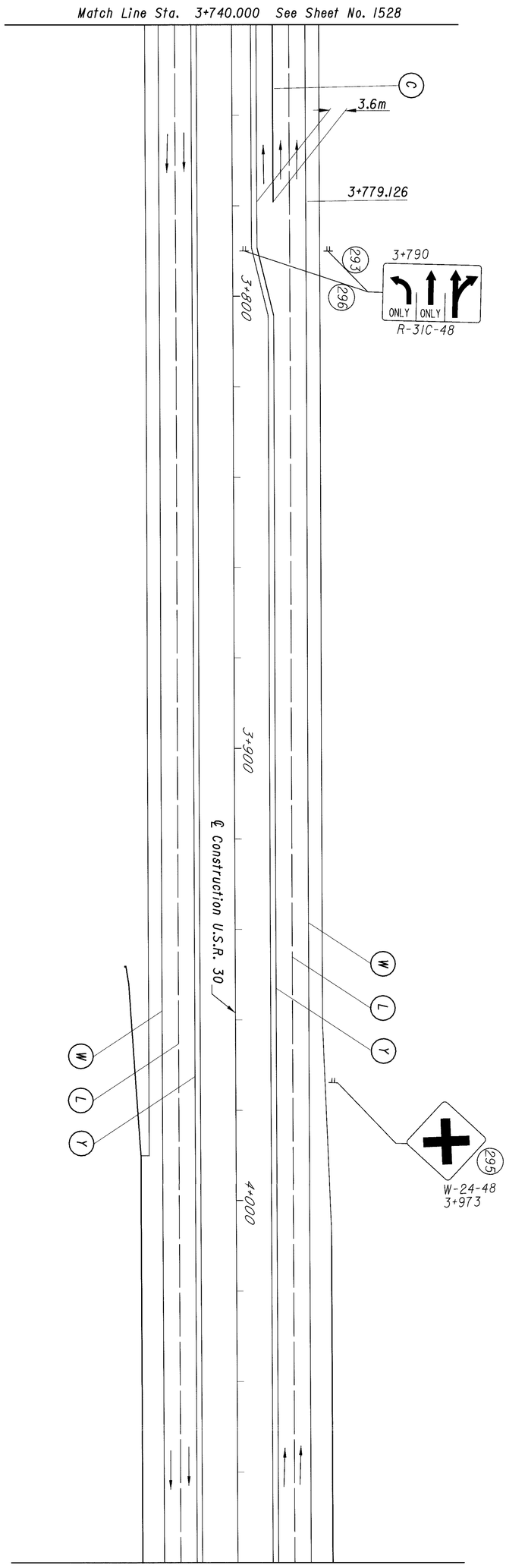


For Legend See Sheet No. 1475

1527 / 2116	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-30 STA. 3+060 TO STA. 3+400	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS

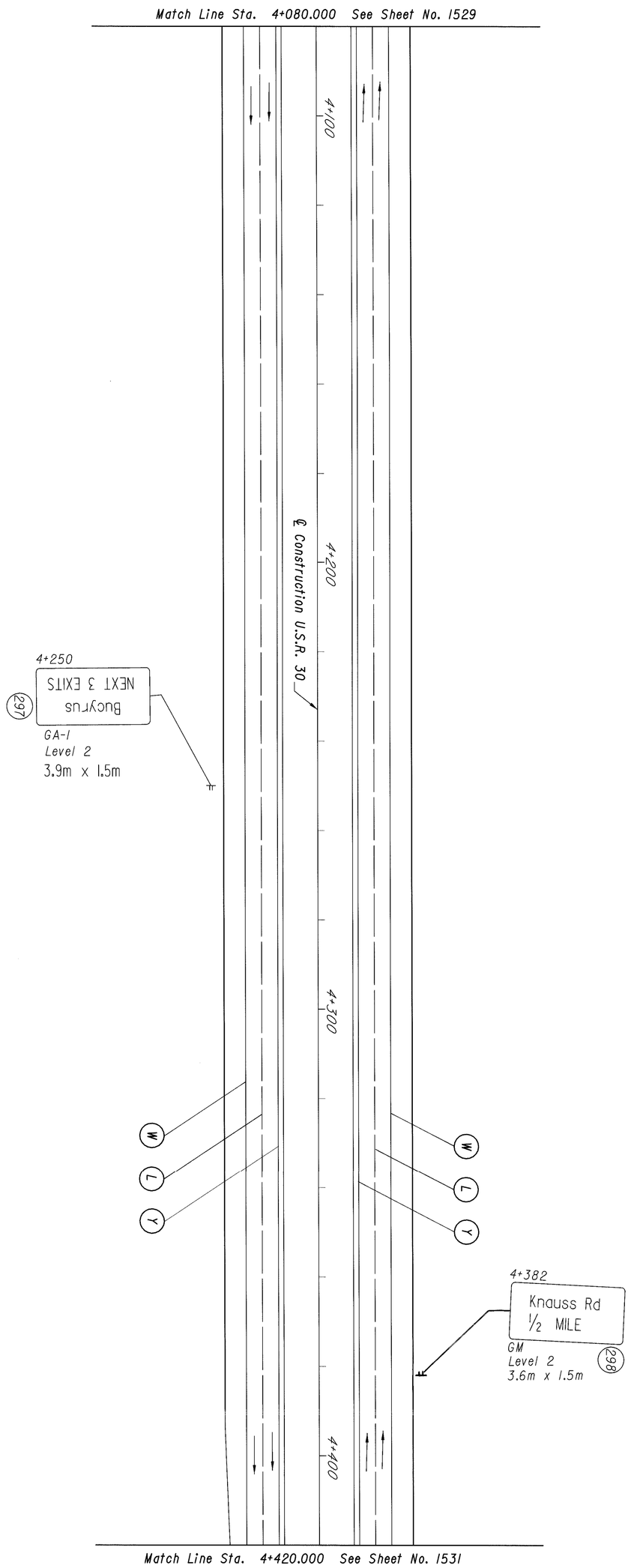


1528 2/16	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-30 STA. 3+400 TO STA. 3+740	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS



For Legend See Sheet No. 1475

1529 / 2116	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-30 STA. 3+740 TO STA.4+080	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS



For Legend See Sheet No. 1475

1530 / 2116	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN US-30 STA. 4+080 TO STA. 4+420	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS	N

SHROLL RD. TR III

Match Line Sta. 4+420.000 See Sheet No. 1530

4+500 4+600 4+700

℄ Construction U.S.R. 30

Match Line Sta. 4+760.000 See Sheet No. 1532

W L Y

W L Y

F

4+450

CR 330
Bucyrus
Osceola
EXIT 1 MILE

GB
Level 2
3.3m x 2.7m

300

For Legend See Sheet No. 1475

N

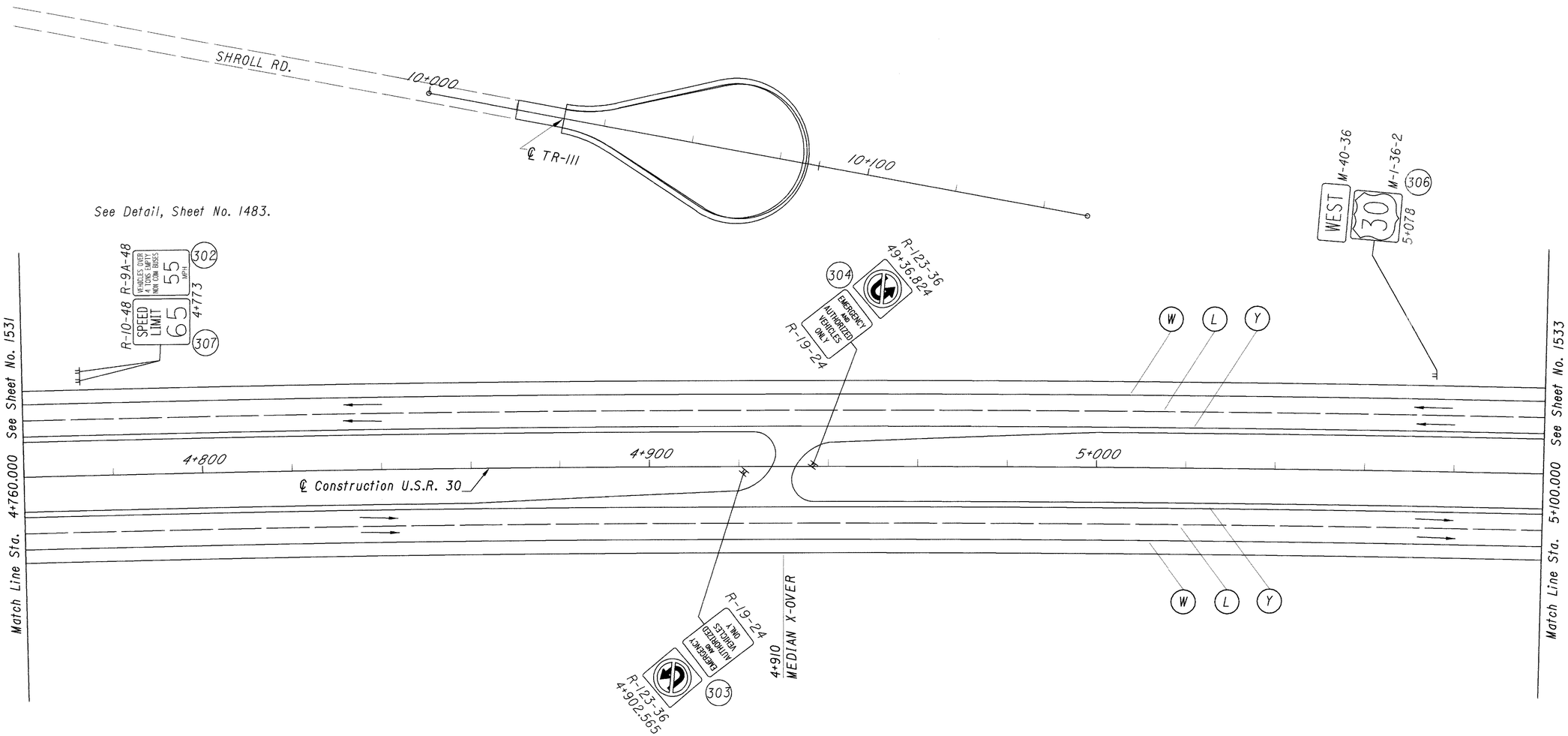
0 10 20
HORIZONTAL
SCALE IN METERS

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-30 STA.4+420 TO STA. 4+760

WYA/CRA-30-28.009/0.000

1531
2116



For Legend See Sheet No. 1475

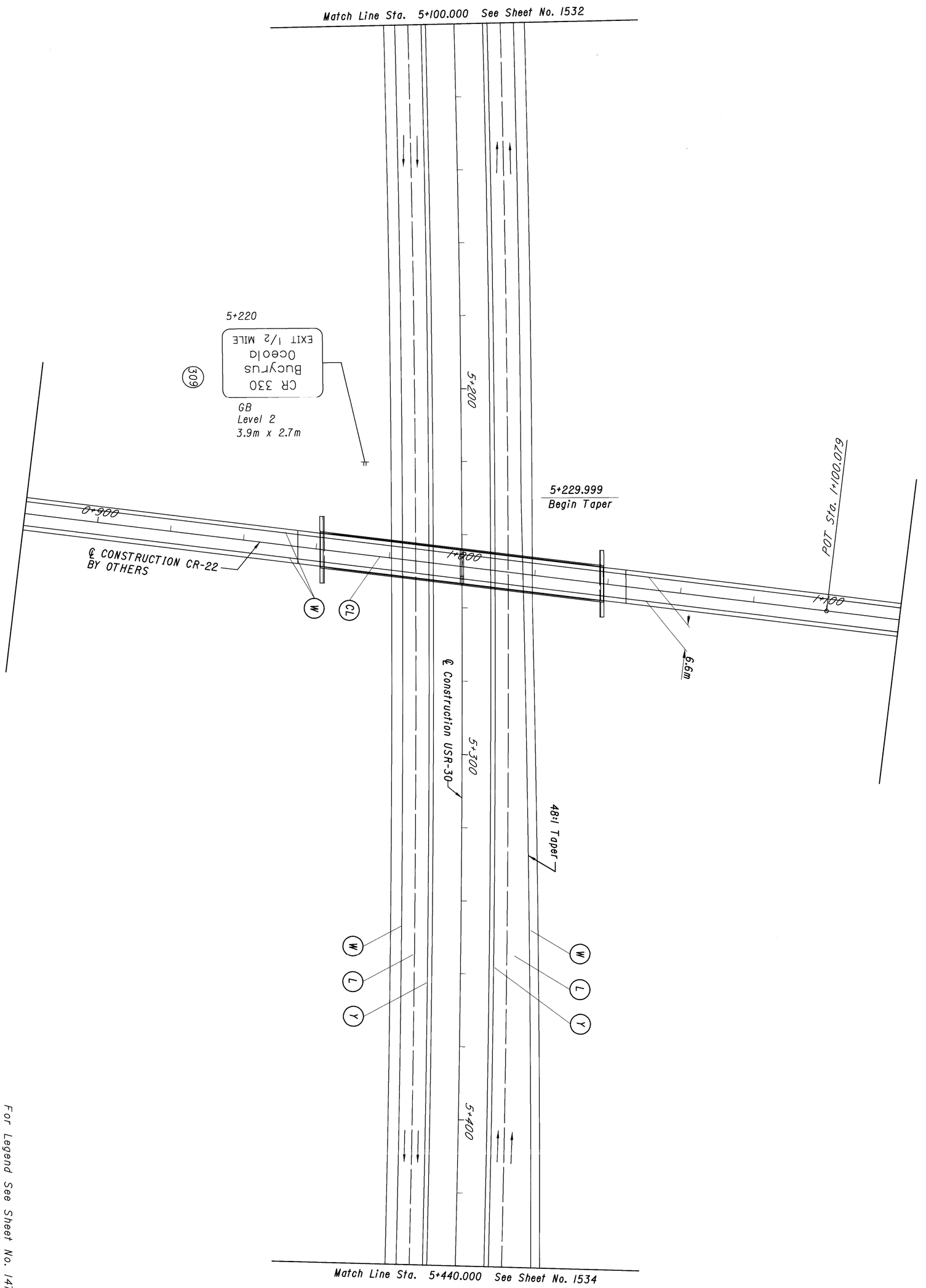
HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA. 4+760 TO STA. 5+100

WYA/CRA-30-28.009/0.000

1532
2116



For Legend See Sheet No. 1475

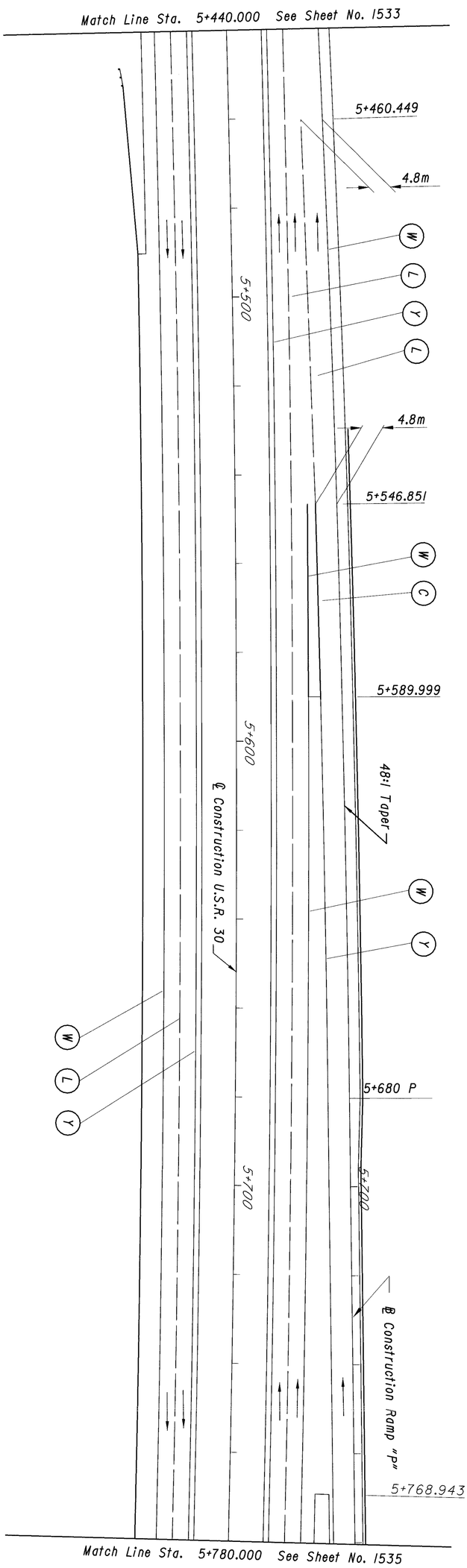
WYA/CRA-30-28.009/0.000

TRAFFIC CONTROL PLAN US-30
STA. 5+100 TO STA.5+440

CALCULATED AG
CHECKED REA

0 10 20
HORIZONTAL
SCALE IN METERS

N



For Legend See Sheet No. 1475

1534
2116

WYA/CRA-30-28.009/0.000

TRAFFIC CONTROL PLAN US-30
STA. 5+440 TO STA.5+780

CALCULATED AG
CHECKED REA

0 10 20
HORIZONTAL SCALE IN METERS

N

Match Line Sta. 5+780.000 See Sheet No. 1534

5+800

5+900

℄ Construction Ramp "P"

316 W-49R-48 5+820

W Y

6+000

6+100

℄ CR 330

See Sheet No. 1536

317 R-15A-56 6+090 PROHIBITED FOREST TRANS FARM MACHINERY ANIMALS BICYCLES OR MOPEDS LESS THAN 5 GRADE HP

318 M-52A-108 0+710 EAST 30 WEST

W L Y

L

5+800 5+900 6+000 6+100

℄ Construction U.S.R. 30

6+059.885

6+120.000 See Sheet No. 1536

Match Line Sta.

5+901.325

5+906

3.6m

L

5+962

4.8m

6+000

6+100

Y

℄ Construction Ramp "O"

W

C T C

6+058.444 O

GF 6+094

EXIT

315 1.8m x 1.5m

Electric Transmission Lines

5+820

CR 330 Bucyrus Ocala

3.0m x 2.7m

GE Level 2

314

For Legend See Sheet No. 1475

N

0 10 20

HORIZONTAL SCALE IN METERS

CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN US-30 STA. 5+780 TO STA. 6+120

WYA/CRA-30-28.009/0.000

1535 2116

Ramp "B"
0+800
℄ CR 330
331
GH-1
Level 4
33m x 165m
30
WEST
Upper Sandusky
0+850
CO. RD. 330
328
Oceola
Bucyrus
3
3
D-4B
Level 4
1+095
2.4m x 0.6m
Ramp "B"
0+900
Ramp "C"
STOP
STOP
330
W
L
Y
ONE WAY
329
W-40-24
WEST
30
W-2-24-2
W-21-21
1+010
327
6+200
6+300
6+400
1+000
℄ Construction US-30
Match Line Sta. 6+120.000 See Sheet No. 1535
Match Line Sta. 6+460.000 See Sheet No. 1537
W
L
Y
326
R-431-48
ONE WAY
R-41B-36
6+460
DO NOT
ENTER
ONE WAY
R-43R-48
1+100
322
6+200
Y
W
323
WRONG
WAY
R-41A-36
6+390
325
R-41B-36
DO NOT
ENTER
STOP
R-1-36
6+464
324
6+400
6+300
℄ Construction Ramp "O"
320
WRONG
WAY
R-41A-36
6+390
321
D-4B
6+270
Level 4
Bucyrus
Oceola
3
3
3.3m x 0.9m
For Legend See Sheet No. 1475

N

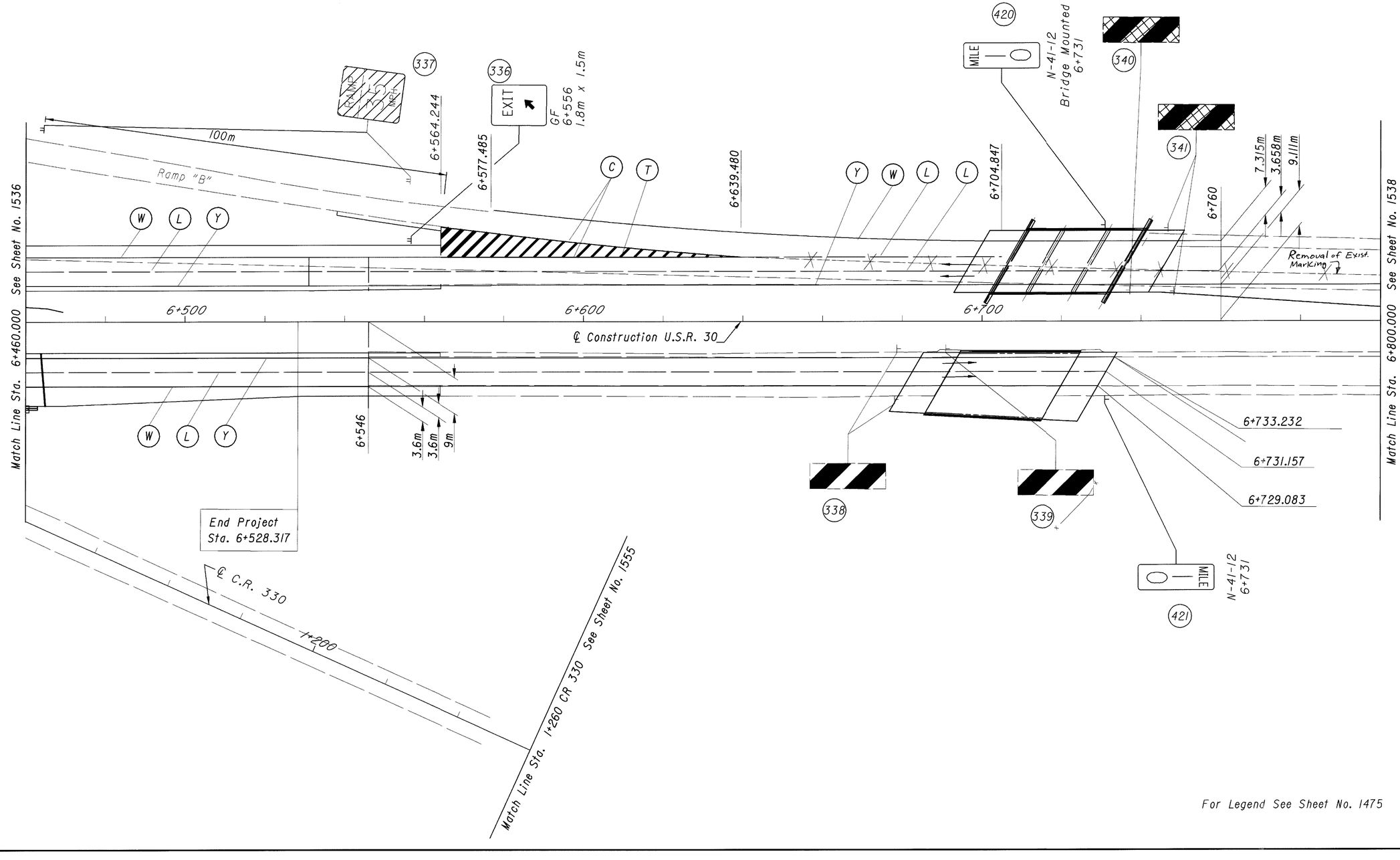
0 10 20
HORIZONTAL
SCALE IN METERS

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA. 6+120 TO STA. 6+460

WYA/CRA-30-28.009/0.000

1536
2116



For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS

0 10 20

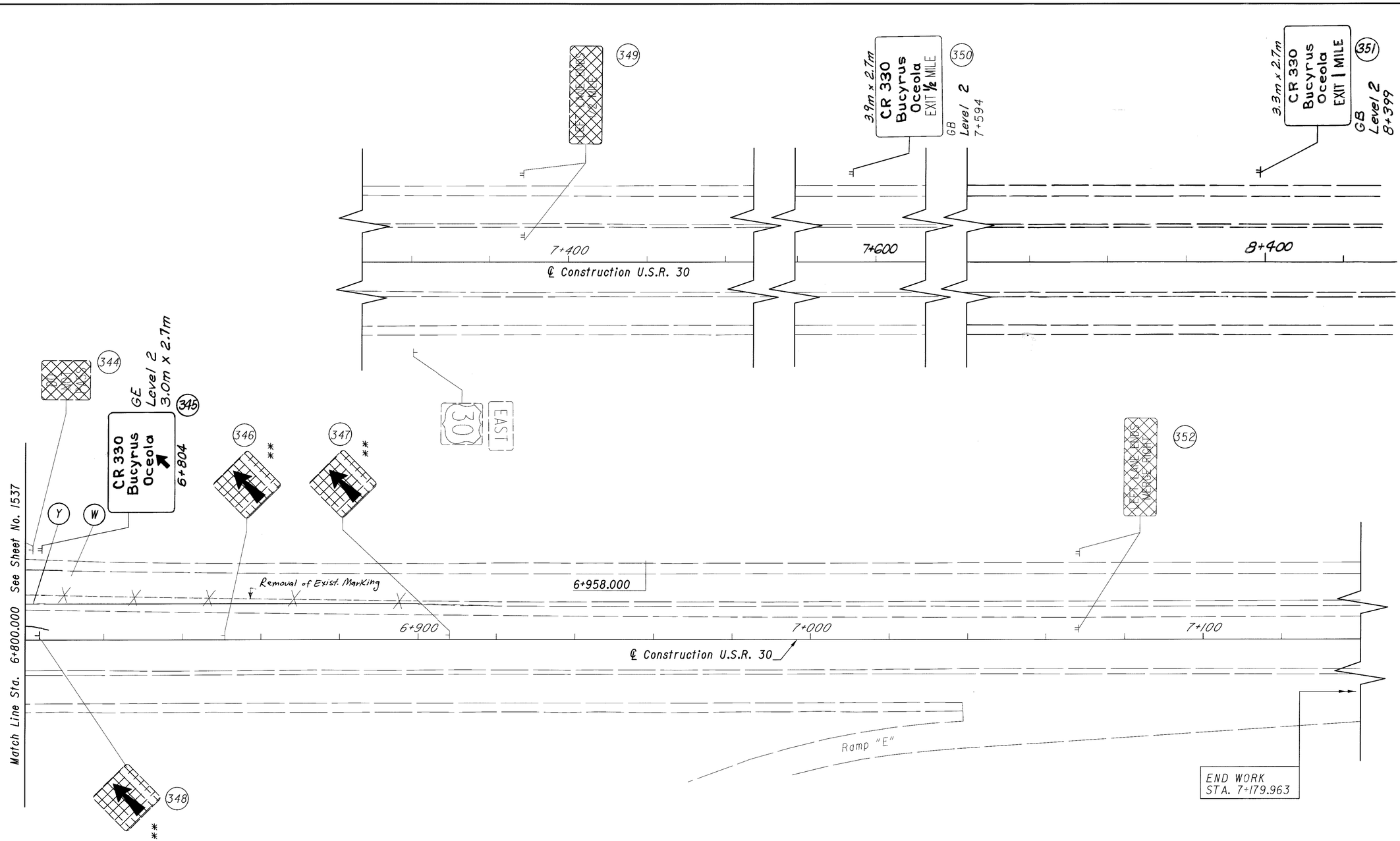
CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN US-30 STA.6+460 TO STA. 6+800

WYA/CRA-30-28.009/0.000

1537
2116



** The existing signs shall either be covered, removed and reinstalled or left in place as required by the Maintenance of Traffic Plans

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN US-30
STA.6+800 TO STA. 7+140

WYA/CRA-30-28.009/0.000

1538
2116

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN RAMP "E"
STA. 34+100 TO STA. 34+270

WYA/CRA-30-28.009/0.000

1539
2116

℄ Construction Ramp "F"

34+900

+804.144

33+800

For Continuation See Sheet No. 1501

W

Y

STOP (141)
R-1-30
33+713

4.8m

33+800

℄ Construction Ramp "I"

6.0m

+861.322

6m

6m

3m

33+900

4m

45°

H

(140)
RESERVED PARKING
R-59B(L)-12
33+916

(139)
RESERVED PARKING
R-59B(R)-12
33+932

P

45°

20m

15m

10.75m

4.6m Typ.

℄ Construction Ramp "F"

34+800

Match Line Sta. 34+060.000 See Sheet No. 1541

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN RAMP "F"
STA. 33+720 TO STA. 34+060

WYA/CRA-30-28.009/0.000

1540
2116

For Legend See Sheet No. 1475

TRAFFIC CONTROL PLAN RAMP "G"
STA. 33+969.947 TO STA. 34+120

CALCULATED AG
CHECKED REA

0 10 20
HORIZONTAL SCALE IN METERS

WYA/CRA-30-28.009/0.000

1541
2116

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS

0 10 20

CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN RAMP "H"
STA. 34+160 TO STA. 34+500

WYA/CRA-30-28.009/0.000

1542
2116

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS

0 10 20

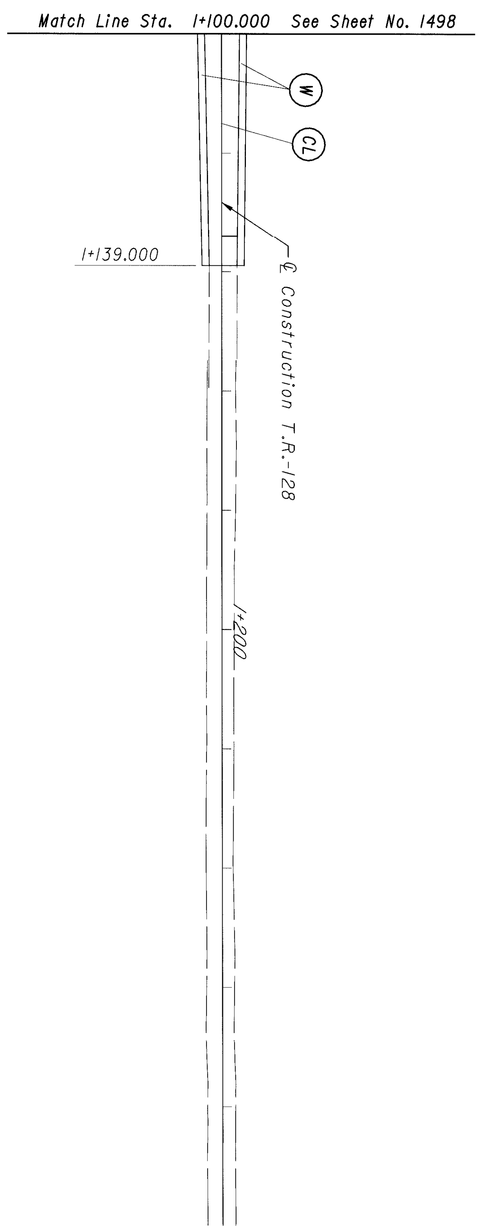
CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN T.R.-128 STA. 0+600 TO STA. 0+880

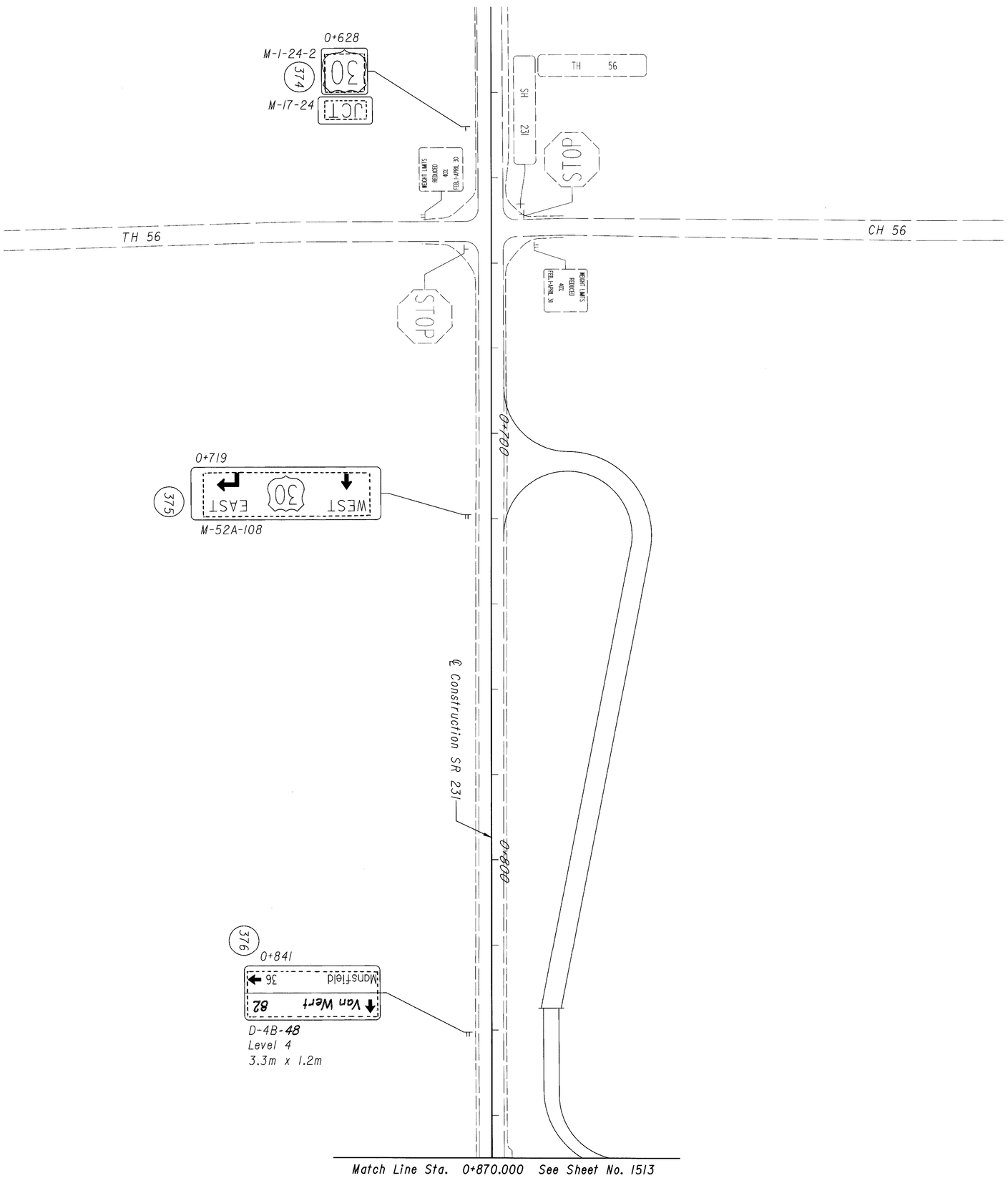
WYA/CRA-30-28.009/0.000

1547
2116



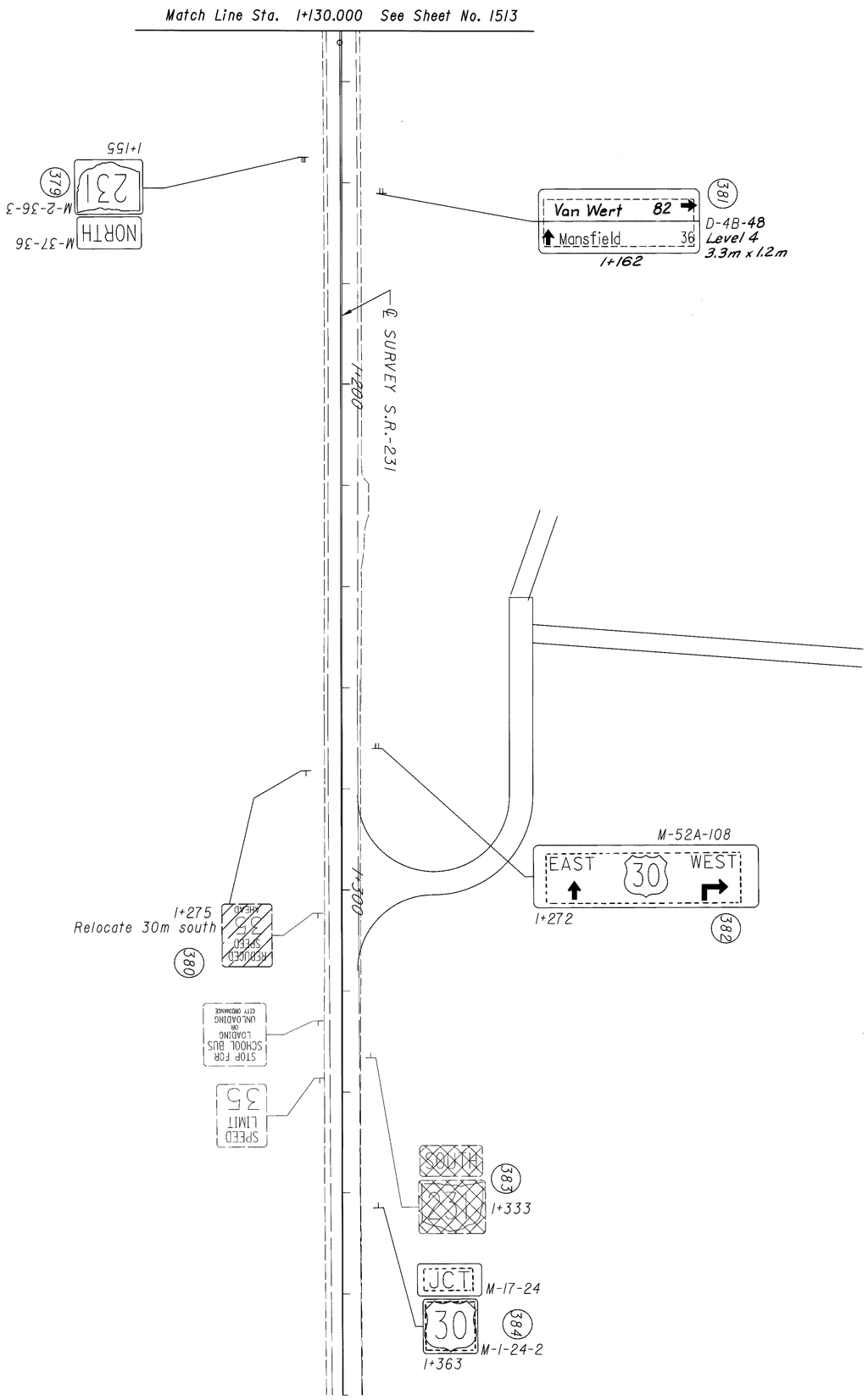
For Legend See Sheet No. 1475

1548 / 2116	WYA / CRA-30-28.009 / 0.000	TRAFFIC CONTROL PLAN T.R.-128 STA. 1+100 TO STA.1+300	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS



For Legend See Sheet No. 1475

1549 / 2116	WYA / CRA-30-28.009 / 0.000	TRAFFIC CONTROL PLAN S.R.-231 STA. 0+600 TO STA. 0+870	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS



For Legend See Sheet No. 1475

1550 2116	WYA/CRA-30-28.009/0.000	TRAFFIC CONTROL PLAN S.R.-231 STA. 1+130 TO STA. 1+400	CALCULATED AG CHECKED REA	0 10 20 HORIZONTAL SCALE IN METERS	N

For Legend See Sheet No. 1475

N

0 10 20
HORIZONTAL SCALE IN METERS

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN T.R.-21
STA. 1+120 TO STA. 1+420

WYA/CRA-30-28.009/0.000

1551
2116

For Legend See Sheet No. 1475

HORIZONTAL SCALE IN METERS

CALCULATED AG

CHECKED REA

TRAFFIC CONTROL PLAN C.R.-330 STA. 0+380 TO STA. 0+720

WYA/CRA-30-28.009/0.000

1554
2116

℄ Construction U.S.R. 30

338

339

℄ Survey C.R.-330

1+300

1+400

1+500

Ramp "E"

WEST 30 EAST

PROHIBITED
PEDESTRIANS
FARM MACHINERY
ANIMALS
BICYCLES OR MOTORCYCLES
(LESS THAN 5 BRAKE HP)

Match Line Sta. 1+260.000 See Sheet No. 1537

30 EAST

GH-I
level
4
1+495

30 EAST
Mansfield

2.7m x 1.8m

400

401

For Legend See Sheet No. 1475

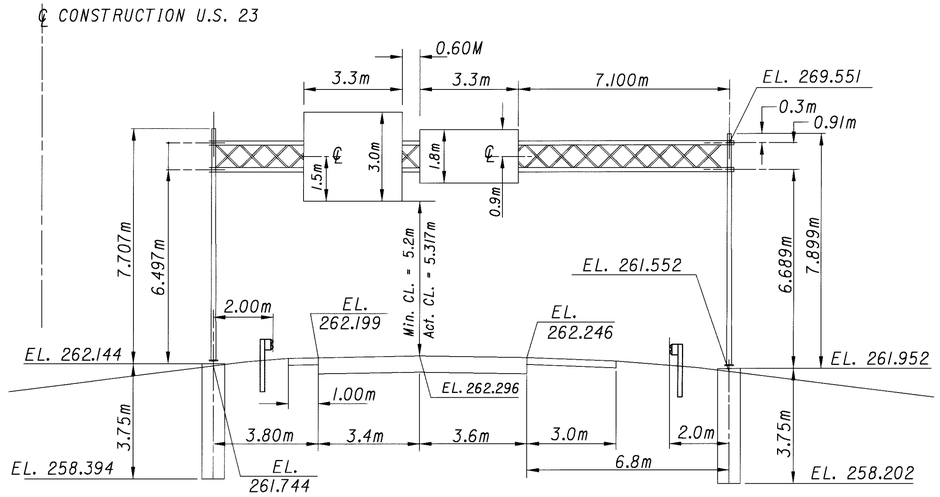
HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED AG
CHECKED REA

TRAFFIC CONTROL PLAN C.R.-330
STA. 1+260 TO STA. 1+600

WYA/CRA-30-28.009/0.000

1555
2116



54

STA. 14+018 U.S. 23

Sign Area - 3.3m x 1.8m + 3.3m x 3.0mm = 15.840 SQ m
Span - 17.600m
TC-7.65M Des.6; 0.91m Box
7.707m & 7.899m Poles

OVERHEAD SIGN SUB-SUMMARY

				630							
Reference No.	Station	Type and Size		Overhead Sign Support, TC-7.65M, Design 6, 22.6m Span	Overhead Sign Support, TC-12.30M, Design 7 7.1m Span	Overpass Structure Mtd. TC-18.26M, Design 3		Sign Extrusheet Type G	Rigid Overhead Sign Support Foundation		
			Side	Each	Each	Each		SQ m	Each		
54	14+018.000 US23	GE, 3.3mx3.0m	Lt	1				9.90	2		
		GE, 3.3mx1.8m						5.94			
70	29+243.570	GE, 4.0mx1.8m	Lt	1				7.02	2		
		GG, 6.0mx2.4m						14.40			
80	30+850.000	GB, 5.4mx2.4m	Lt		1			12.96	1		
TOTAL				2	1			50.22	5		

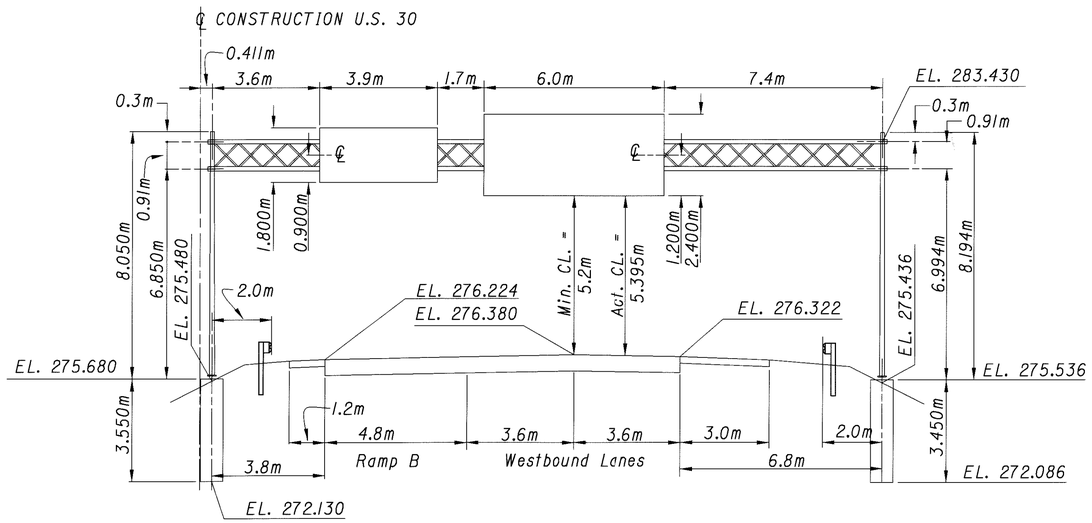
NOTE:
For Number of Brackets and Bracket spacing see Std. Const. Drawing TC-31.21m, 03/31/94.

CALCULATED REA
CHECKED REA

SIGN SUPPORTS

WYA / CRA-30-28.009 / 0.000

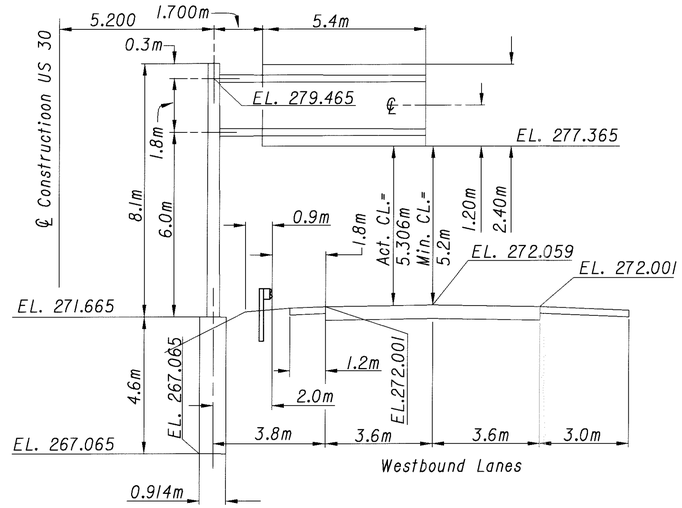
1556
2116



70

STA. 29+243.570 US-30

Sign Area - 3.9m x 1.8m + 6.0m x 2.4m = 21.420 SQ m
Span - 22.6m
TC-7.65M Des.6; 0.91m Box
8.050m & 8.194m Poles



80

STA. 30+850.000 US-30

Sign Area - 5.4m x 2.74m = 12.96 SQ m
8.1m pole & 7.1m Arm
TC-12.30m Des. 7

NOTE:
For Number of Brackets and Bracket spacing see Std. Const. Drawing TC-31.21m, 03/31/94.

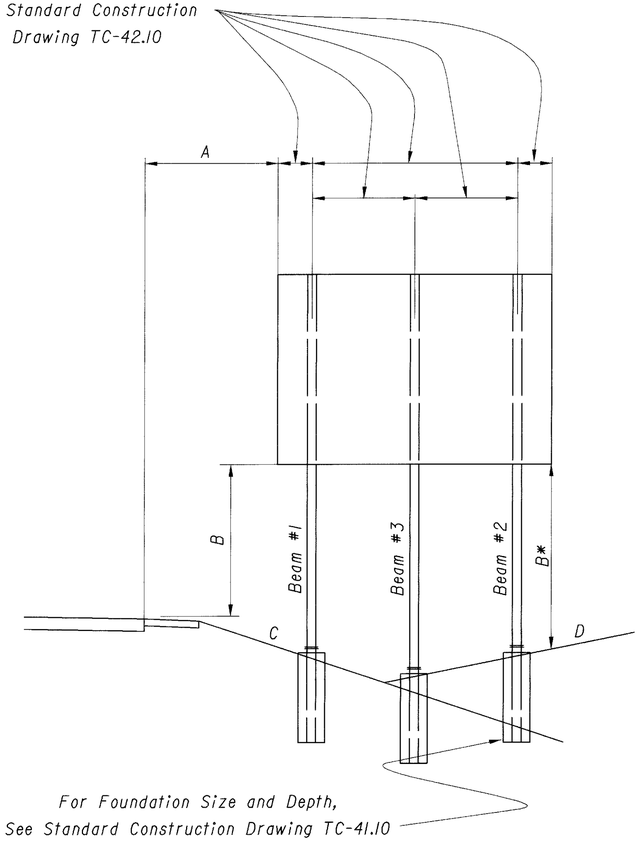
CALCULATED REA
CHECKED REA

SIGN SUPPORTS

WYA/CRA-30-28.009/0.000

1557
2116

For Beam Spacing
See Standard Construction
Drawing TC-42.10



For Foundation Size and Depth,
See Standard Construction Drawing TC-41.10

STATION AND LOCATION	REFERENCE NO.	SIDE	Sign Area Sq. Meter	Beam Type		A Meter	B or B* Meter	Beam #1 Lenght Meter	Beam #2 Lenght Meter	Beam #3 Lenght Meter	C	D
11+000 (US 23)	1	Rt.	9.30	W250x17.9		9.1	1.5*	7.6	6.7	-	4:1	-
11+805 (US 23)	2	Rt.	9.30	W250x17.9		9.1	1.5*	6.5	7.0	-	4:1	-
12+366 (US 23)	20	Rt.	9.30	W250x17.9		9.1	1.5	6.8	6.9	-	20:1	-
12+635 (US 23)	19	Rt.	2.70	S100x11.5		3.7	1.5	4.8	4.8	-	8:1	8:1
13+532.413 (US 23)	46	Lt.	Existing	W250x17.9		9.1	1.5	6.0.	6.0.	-	8:1	-
13+740.00 (US 23)	56	Lt.	2.70	S100x11.5		9.1	1.5	5.1	5.2	-	3:1	8:1
14+557 (US 23)	63	Lt.	9.30	W250x32.7		9.1	1.5	6.1	7.0	-	8:1	-
15+360 (US 23)	62	Lt.	9.30	W250x26.6		9.1	1.5	6.9	6.9	-	8:1	8:1
0+487 (330)	391	Rt.	2.09	S100x11.5		3.7	1.5	4.3	4.5	-	8:1	-
0+609 (330)	393	Rt.	5.04	W250x17.9		3.7	2.1	5.2	5.7	-	48:1/4:1	-
0+710 CR-330	318	Rt.	2.09	S100x11.5		3.7	1.5	4.2	4.4	-	8:1	-
0+850 (330)	331	Lt.	5.45	W250x17.9		3.7	2.1	6.0	6.3	-	8:1	-
1+095 (330)	328	Lt.	1.44	S100x11.5		3.7	1.5	3.8	3.8	-	8:1	8:1
1+495 (330)	400	Rt.	4.86	W150x13.5		3.7	1.5	4.7	4.6	-	8:1	-
0+719 (SR 231)	375	Rt.	2.09	S100x11.5		3.7	2.1	4.2	4.0	-	4:1	8:1
0+920 (SR 231)	210	Lt.	4.86	W150x13.5		3.7	2.1	5.3	5.4	-	4:1	-
0+950 (SR 231)	208	Rt.	4.86	W150x13.5		3.7	2.1	5.3	5.4	-	4:1	-
0+841 (SR 231)	376	Rt.	3.96	W150x13.5		3.7	2.1	5.5	5.1	-	-	5:1
1+085 (SR 231)	222	Rt.	5.45	W250x17.9		3.7	2.1	6.1	6.6	-	4:1	-
1+272 (SR 231)	382	Lt.	2.09	S100x11.5		3.7	2.1	4.4	4.2	-	4:1	8:1
1+162 TR-231	381	Lt.	3.96	W150x13.5		3.7	2.1	5.7	5.2	-	-	3:1/12:1
0+975 TR-21	277	Rt.	4.59	W150x13.5		3.7	1.5	6.4	7.1	-	4:1	-
1+025 TR21	286	Lt.	1.12	S100x11.5		3.7	1.5	4.2	4.3	-	8:1	-
37+900 (Ramp "M")	219	Lt.	4.60	W150x13.5		3.7	2.1	5.2	5.4	-	8:1	-
6+270 (Ramp "O")	321	Rt.	2.97	S100x11.5		4.9	1.5	4.1	5.5	-	2:1	-
37+600 (Ramp "K")	205	Rt.	4.60	W150x13.5		3.7	2.1	5.1	5.3	-	8:1	-

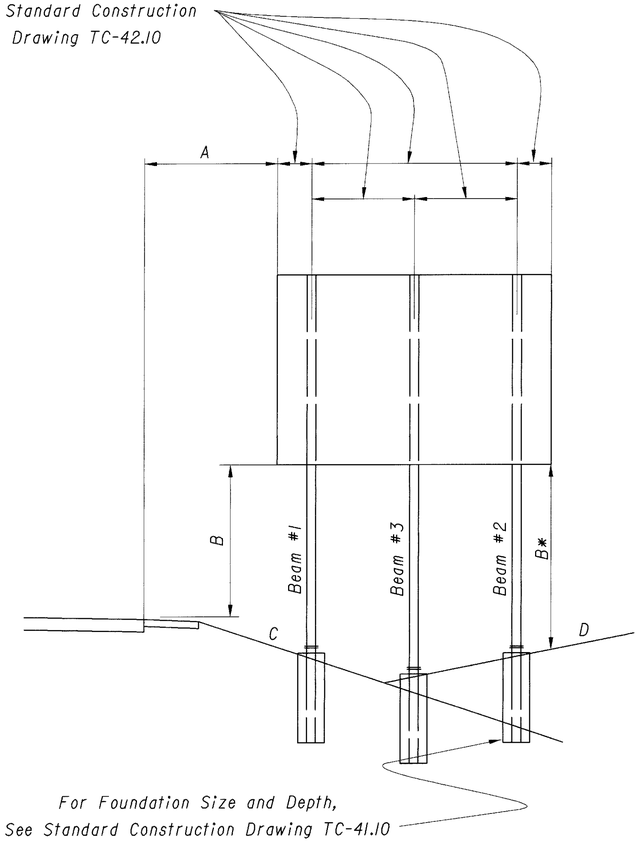
CALCULATED AG
CHECKED REA

GROUND MOUNTED SIGNING DETAILS

WYA/CRA-30-28.009/0.000

1558
2116

For Beam Spacing
See Standard Construction
Drawing TC-42.10



For Foundation Size and Depth,
See Standard Construction Drawing TC-41.10

STATION AND LOCATION	REFERENCE NO.	SIDE	Sign Area Sq. Meter	Beam Type		A Meter	B or B* Meter	Beam #1 Lenght Meter	Beam #2 Lenght Meter	Beam #3 Lenght Meter	C	D
33+677	138	Lt.	4.05	W150x13.5		9.1	1.5	5.4	5.4	-	30:1	-
32+000	84	Rt.	6.36	W250x17.9		9.1	1.5	6.4	7.0	-	3:1	-
30+725	79	Rt.	7.56	W250x17.9		9.1	1.5	6.4	6.5	-	3:1	6:1
31+860	82	Lt.	11.7	W250x32.7		8.0	2.1	8.0	7.5	-	8:1	3:1
32+086	86	Rt.	4.0	W150x13.5		9.1	1.5	5.3	5.5	-	3:1	-
32+100	88	Lt.	7.92	W200x26.6		9.1	1.5	6.3	7.2	-	3:1	-
32+732	106	Rt.	2.43	W150x13.5		9.1	1.5	6.2	6.1	-	3:1	6:1
33+880	137	Rt.	2.88	S100x11.5		9.1	1.5	4.6	4.6	-	8:1	-
33+011	128	Lt.	2.43	W150x13.5		9.1	1.5	5.5	6.1	-	3:1	-
33+600	132	Rt.	7.58	W250x17.9		9.1	1.5	6.9	6.3	-	-	3:1
34+380	155	Lt.	2.88	S100x11.5		3.7	2.1	4.6	4.6	-	8:1	-
34+630	156	Lt.	7.58	W200x26.6		9.1	1.5	7.2	7.9	-	3:1	-
35+611	177	Rt.	9.90	W200x26.6		9.1	1.5	7.2	7.4	-	8:1	-
35+600	179	Lt.	6.36	W250x17.9		9.1	1.5	6.4	7.0	-	3:1	-
36+020	182	Rt.	8.82	W250x17.9		9.4	1.5	6.4	6.4	-	8:1	4:1
36+172	185	Lt.	7.92	W200x26.6		12.0	2.1	6.1	6.8	-	8:1	4:1
36+630	188	Rt.	11.70	W250x32.7		9.1	1.5	7.6	8.5	-	3:1	-
37+200	195	Rt.	8.10	W200x26.6		9.1	1.5	7.3	7.8	-	3:1	-
37+470	197	Rt.	2.78	S100x11.5		4.8	1.5	4.9	4.9	-	8:1	-
38+065	225	Lt.	2.78	S100x11.5		4.8	2.1	4.9	4.9	-	8:1	-
38+307	226	Lt.	8.10	W200x26.6		4.2	2.1	7.5	8.2	-	2:1	-
38+570	228	Rt.	7.65	W250x17.9		6.6	1.5	5.6	7.1	-	2:1	-
38+900	233	Lt.	11.70	W250x32.7		6.6	2.1	8.0	9.3	-	2:1	-
39+220	237	Rt.	4.59	W250x17.9		9.1	1.5	5.5	6.4	-	3:1	-
39+345	243	Lt.	6.30	W250x17.9		9.1	1.5	3.8	3.7	-	3:1	-
39+370	244	Lt.	4.59	W150x13.5		9.1	1.5	6.4	7.1	-	3:1	1.3:1
0+002	248	Rt.	4.59	W150x13.5		9.1	1.5	6.4	7.1	-	8:1	-
0+030	249	Rt.	6.93	W250x17.9		12.5	1.5	6.6	6.4	-	-	6:1
0+152	256	Lt.	4.59	S150x13.5		9.1	1.5	4.9	5.0	-	-	6:1
0+450	259	Rt.	5.94	W250x17.9		9.1	1.5	5.9	6.8	-	3:1	-
0+612	260	Lt.	9.90	W250x32.7		6.6	2.1	8.0	8.8	-	2.2:1	-
0+805	263	Lt.	7.65	W250x17.9		6.6	1.5	5.8	7.3	-	2:1	-
2+772	268	Rt.	5.40	W150x17.9		6.6	1.5	5.5	6.8	-	2:1	-
3+300	272	Lt.	7.92	W250x17.9		9.1	1.5	6.1	7.0	-	3:1	-
3+426	271	Rt.	3.24	S100x11.5		9.1	1.5	4.7	5.5	-	3:1	-
3+728	294	Lt.	3.24	S100x11.5		9.1	1.5	4.4	5.3	-	3:1	-
4+250	297	Rt.	5.85	W250x17.9		6.6	1.5	5.7	5.7	-	2:1	-
4+382	298	Lt.	5.40	W250x17.9		6.6	1.5	5.6	6.9	-	2:1	-
4+450	300	Rt.	8.91	W200x26.6		9.1	1.5	7.1	7.7	-	3:1	-
5+220	309	Rt.	10.53	W200x26.6		9.1	2.1	6.6	6.3	-	-	6:1
5+820	314	Rt.	8.10	W200x26.6		6.6	2.1	7.4	8.2	-	2:1	-
6+094	315	Rt.	2.78	S100x11.5		4.8	2.1	4.8	4.8	-	8:1	8:1
6+556	336	Lt.	2.78	S100x11.5		4.8	2.1	4.8	4.8	-	8:1	8:1
7+594	350	Lt.	10.53	W200x26.6		9.1	1.5	6.9	7.2	-	8:1	-
8+399	351	Lt.	8.91	W200x26.6		9.1	1.5	6.9	7.1	-	8:1	-
6+804	345	Lt.	8.10	W250x17.9		9.1	1.5	6.7	6.7	-	40:1	-
28+697 (US 30 WB)	51	Lt.	4.46	W150x13.5		6.0	1.5	4.2	5.5	-	3:1	-
28+980 (US 30 WB)	67	Lt.	4.46	W150x13.5		9.1	1.5	5.4	6.4	-	2:1	-
29+143 (US 30 WB)	68	Rt.	2.79	S100x11.5		3.7	1.5	5.1	5.2	-	8:1	-
28+980 (US 30 WB)	66	Rt.	4.46	W150x13.5		4.8	1.5	5.4	6.4	-	2:1	-
28+697 (US 30 WB)	49	Rt.	4.46	W150x13.5		6.0	1.5	4.2	5.5	-	3:1	-

CALCULATED AG
CHECKED REA

GROUND MOUNTED SIGNING DETAILS

WYA/CRA-30-28.009/0.000

1559
2116

POWER SERVICE, AS PER PLAN

THE POWER SUPPLYING AGENCIES ARE:

AMERICAN ELECTRIC POWER
125 E. FAIRVIEW ST.
UPPER SANDUSKY, OHIO 43351

NORTH CENTRAL ELECTRIC COOPERATIVE
13978 EAST COUNTY ROAD 56
ATTICA, OHIO 44807

THE TYPE OF SERVICE AT EACH CONTROL CENTER SHALL BE 480/240 V, 1ϕ - 3 WIRE, GROUNDED NEUTRAL.

THE CONTRACTOR SHALL FURNISH A CONTROL CENTER TO SERVE LIGHTING CIRCUITS. THIS BID ITEM SHALL INCLUDE CONTROL CENTER EQUIPMENT FROM PULL BOX ON AS SHOWN ON PLAN SHEETS.

ELECTRICAL ENERGY FROM EXISTING POWER SOURCE SHALL CONTINUE TO BE CHARGED TO THE MAINTAINING AGENCY. THE CONTRACTOR SHALL PAY ELECTRICAL CHARGES FOR NEW POWER SERVICE ESTABLISHED BY THIS PROJECT. AFTER ACCEPTANCE OF THE LIGHTING WORK, POWER SERVICE ELECTRICAL ENERGY ACCOUNTS SHALL BE TRANSFERRED TO THE MAINTAINING AGENCIES NOTED IN THE PLANS. THIS SHALL INCLUDE NEW POWER SERVICE ESTABLISHED BY THIS PROJECT AS WELL AS REASSIGNMENT OF EXISTING SERVICE DUE TO WORK PERFORMED BY THIS PROJECT.

PADLOCKS AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 48KA OR WILSON BOHANNAN 660A, AND SHALL BE KEYED IN ACCORDANCE WITH SPECIFICATION 631.08, PARAGRAPH 3. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEMS BEING LOCKED.

UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO THE STANDARD DRAWINGS FOR DETAILS OF DRAINAGE PULL BOXES. UNDERDRAIN FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 6 METERS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY.

603 100 MM CONDUIT TYPE E 396 METER

HIGH VOLTAGE DIRECT CURRENT TEST

A HIGH VOLTAGE DIRECT CURRENT TEST, AS DESCRIBED IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, SHALL BE PERFORMED AT THE REST AREA AND US-23 INTERCHANGE. AT EACH CONTROL CENTER. A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR THIS ITEM.

625.07 - HIGH MAST LUMINAIRES

THE LUMINAIRE ARRAYS AND ASSOCIATED ILLUMINATION TEST AREAS SPECIFIED IN SECTION 713.21 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS ARE HEREBY WAIVED FOR THIS PROJECT. INSTEAD, THE LUMINAIRES FOR TOWER LIGHTING SHALL MEET THE FOLLOWING REQUIREMENTS.

SYMMETRIC, TYPE V, LUMINAIRES FOR TOWER LIGHTING MAY BE HOLOPHANE "HMST" TEST 36383, OR GENERAL ELECTRIC "HMA" TEST 6312, OR COPPER TEST # HMX4SDW.

IN ADDITION, OTHER LUMINAIRES WILL BE CONSIDERED IF THE DESIGNED INTENSITY AND UNIFORMITY ARE PROVIDED USING THE DESIGNED POLE LOCATIONS AND THE DESIGNED NUMBER AND TYPE OF FIXTURES PER POLE.

HIGH MAST LIGHT TOWERS

LOWERING DEVICES SHALL BE HOLOPHANE OR GENERAL ELECTRIC OR APPROVED EQUAL MEETING THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.
THE MANUFACTURER SHALL SUBMIT A REPORT FROM AN INDEPENDENT TESTING LABORATORY TO SHOW THAT THE LUMINARIES DO NOT RECEIVE MORE THAN THE SPECIFIED ACCELERATION LOAD. THE TESTING LABORATORY'S REPORT SHALL SPECIFY IN DETAIL THE MOUNTING LOCATIONS OF THE ACCELEROMETERS AND THE TEST PROCEDURES USED. IN ADDITION TO THIS REPORT, ODOT RESERVES THE RIGHT TO CONDUCT FIELD MEASUREMENTS OF THOSE ACCELERATION LOADS AND TO ACCEPT ONLY THOSE DESIGNS IN WHICH THE TESTED INSTALLATIONS MEET THE SPECIFICATIONS. THE TERMINAL BLOCK SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS SHALL BE INCLUDED IN THE PRICE OF THE TOWER.

713.14 LAMPS

HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX", WESTINGHOUSE "CERAMALUX", SYLVANIA "LUMALUX", OR EQUAL APPROVED CBY THE ENGINEER.

LIGHT TOWER FOUNDATION, AS PER PLAN

IN LIEU OF STANDARD DRAWINGS, THE TOP OF THE FOUNDATION SHALL BE SET 300 mm ABOVE FINISHED GRADE.

TOWER LIGHTNING PROTECTION

THE TOWER LIGHTNING PROTECTION SYSTEM HAS BEEN REVISED. THE INSULATED CONDUCTOR FROM THE TOP OF THE POLE DOWN TO A GROUND ROD HAS BEEN ELIMINATED. THE AIR TERMINAL AND BONDING JUMPER AT THE TOP OF THE TOWER ARE STILL REQUIRED. A GROUNDED JUMPER IS REQUIRED BETWEEN THE TERMINAL BLOCK NEUTRAL AND THE TOWER GROUND. TWO GROUND RODS ARE STILL REQUIRED. THE RODS SHALL BE LOCATED A MINIMUM OF 3 METERS FROM THE TOWER AND ON OPPOSITE ADJACENT TO CIRCUIT CABLES. EACH GROUND ROD SHALL BE INDEPENDENTLY CABLED TO THE BOTTOM OF THE POLE. IN ACCORDANCE WITH SPECIFICATIONS AND/OR STANDARD DRAWINGS.- TOWER LIGHTNING PROTECTION SHALL BE INCIDENTAL TO THE BID PRICE FOR TOWERS EXCEPT FOR GROUND RODS WHICH ARE PAID FOR SEPARATELY.

PORTABLE POWER UNIT

THE CONTRACTOR SHALL SUPPLY A PORTABLE POWER UNIT AS SPECIFIED IN THE O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS. A QUANTITY OF 2 EACH OF ITEM 625, PORTABLE POWER UNIT IS INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE. THE UNIT SHALL BE TURNED OVER TO O.D.O.T. UPON COMPLETION OF THE PROJECT.

625.09 - GLARE SHIELDS, AS PER PLAN

WHEN GLARE SHIELDS ARE CALLED FOR IN THE PLANS THEY SHALL BE 90° GLARE SHIELDS INSTALLED ON THE SIDE OF THE LUMINAIRE AWAY FROM THE ROADWAY SIDE (HOUSE SIDE) SO AS TO REDUCE LIGHT TREPASS INTO ADJACENT FIELDS.

LIGHT TOWER MAINTENANCE PLATFORM, TYPE C, AS PER PLAN

WHEN LIGHT TOWER MAINTENANCE PLATFORMS, TYPE C, ARE CALLED FOR IN THE PLANS, THEY SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWINGS HL-20.22M AND HL-20.23M. TO CONTROL SLOPE EROSION AROUND THE PLATFORM, SOD SHALL BE PLACED FOR A WIDTH OF 1 METER AROUND ALL SIDES OF THE PLATFORM IN ACCORDANCE WITH ITEM 660 SODDING. PAYMENT SHALL BE INCLUDED WITH THE BID ITEM "LIGHT TOWER MAINTENANCE PLATFORM, TYPE C, AS PER PLAN".

ITEM SPECIAL - PLASTIC CAUTION TAPE

THE LOCATION OF UNDERGROUND DUCT CABLE OR NON-METALLIC CONDUIT, WHEN INSTAALLED IN LOCATIONS AS INDICATED IN THE PLANS, SHALL BE MARKED BY THE USE OF A CONTINUOUS IDENTIFYING TAPE BURIED IN THE TRENCH ABOVE THE LINE. THE IDENTIFYING TAPE SHALL BE AN INERT MATERIAL, APPROXIMATELY 150MM WIDE, COMPOSED OF POLYETHYLENE PLASTIC, HIGHLY RESISTANT TO ALKALIS, ACID OR OTHER CHEMICAL COMPONENTS LIKELY TO BE ENCOUNTERED IN SOILS. THE TAPE SHALL BE BRIGHT YELLOW WITH IDENTIFYING PRINTING "ELECTRIC" IN BLACK LETTERS, ONE SIDE ONLY. TAPES SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH THE IDENTIFYING LETTERING REPEATED CONTINUOUSLY THE FULL LENGTH OF THE TAPE. IDENTIFYING TAPES SHALL BE BURIED IN THE ELECTRIC LINE TRENCH WITH ONE STRIP PLACED APPROXIMATELY DOWN THE CENTERLINE AND LOCATED APPROXIMATELY 200MM-300MM BELOW THE FINAL FINISHED GRADE. THE TAPE SHALL BE PLACED IN THE TRENCH WITH PRINTED SIDE UP AND SHALL BE ESSENTIALLY PARALLEL WITH THE FINISHED SURFACE. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO ENSURE THAT THE TAPE IS NOT PULLED, DISTORTED, OR OTHERWISE MISPLACED IN COMPLETING THE TRENCH BACKFILL. TAPE SHALL BE ALLEN SYSTEM'S, TERRA TAPE , TECTA TAPE OR EQUAL AS APPROVED BY THE ENGINEER.

THE TAPE SHALL BE PAID FOR PER LINEAR METER OF "ITEM SPECIAL - PLASTIC CAUTION TAPE," COMPLETE AND IN PLACE.

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LIGHTING GENERAL NOTES

WYA / CRA-30-28.009 / 0.000

1562
2116

SHEET NUMBER										ITEM NO.	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	1562		1565		1566A		1566C		1566E						
														LIGHTING	
	396									603	00400	396	METER	100 MM CONDUIT, TYPE E	
			105				150			625	01500	255	EACH	CABLE SPLICING KIT	
			9				14			625	13200	23	EACH	LIGHT TOWER, BBBB30.5	
			6				13			625	13204	19	EACH	LIGHT TOWER, BBBB33.5	
			6							625	13208	6	EACH	LIGHT TOWER, BBBB36.6	
			11							625	13210	11	EACH	LIGHT TOWER, BBBB39.6	
			5							625	13220	5	EACH	LIGHT TOWER, BBBB42.7	
			5				6			625	13400	11	EACH	LIGHT TOWER, BBBBBB30.5	
			2				6			625	13404	8	EACH	LIGHT TOWER, BBBBBB33.5	
			4							625	13406	4	EACH	LIGHT TOWER, BBBBBB36.6	
			32				39			625	15100	71	EACH	LIGHT TOWER FOUNDATION, 914 MM X 6.1 M DEEP	
			16							625	15400	16	EACH	LIGHT TOWER FOUNDATION, 1067 MM X 7.6 M DEEP	
			1				1			625	20000	2	EACH	PORTABLE POWER UNIT	
			8							625	21201	8	EACH	LIGHT TOWER MAINTENANCE PLATFORM, TYPE C, AS PER PLAN	1562
			933				1221			625	23200	2154	METER	NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE	
			270							625	23300	270	METER	NO. 2 AWG 5000 VOLT DISTRIBUTION CABLE	
			6578				4935			625	24320	11513	METER	38 MM DUCT CABLE WITH THREE NO. 4 AWG 5000 VOLT CABLES	
			1478				839			625	24330	2317	METER	38 MM DUCT CABLE WITH THREE NO. 2 AWG 5000 VOLT CABLES	
			233				373			625	25500	606	METER	CONDUIT, 76 MM, 713.04	
			92							625	25900	92	METER	CONDUIT, JACKED OR DRILLED 76MM	
					214		180			625	26260	394	EACH	LUMINAIRE, HIGH MAST TYPE V, 400 WATT HPS 480 VOLT, SYMMETRIC	
					64		112			625	28001	176	EACH	GLARE SHIELD, AS PER PLAN	1562
					7540		5756			625	29002	13296	METER	TRENCH, 0.6 M DEEP	
					23		35			625	30700	58	EACH	PULL BOX, 713.08, 450 MM	
					4		4			625	30706	8	EACH	PULL BOX, 713.08, 600 MM	
					100				82	625	32000	100	EACH	GROUND ROD	
					4				4	625	34001	8	EACH	POWER SERVICE, AS PER PLAN	1562
					7540				5756	SPECIAL	62536000	13296	METER	SPECIAL - PLASTIC CAUTION TAPE	
										625	38000	LUMP		HIGH VOLTAGE TEST	
					4				4	633	70500	8	SQ METER	CONTROLLER WORK PAD	

CALCULATED RET
CHECKED AM

LIGHTING GENERAL SUMMARY

WYA\CRA-30-28.009-0.000

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2116

LIGHTING SUBSUMMARY

CALCULATED: RET
CHECKED: AM

WYA / CRA-30-28.009-0.000

625

SHEET NO.	REFERENCE NO.	STATION TO STATION	SIDE	CABLE SPLICING KIT	LIGHT TOWER, BBBB30.5	LIGHT TOWER, BBBB33.5	LIGHT TOWER, BBBB36.6	LIGHT TOWER, BBBB39.6	LIGHT TOWER, BBBB42.7	LIGHT TOWER, BBBBBB30.5	LIGHT TOWER, BBBBBB33.5	LIGHT TOWER, BBBBBB36.6	LIGHT TOWER FOUNDATION, 914 MM X 6.1 M DEEP	LIGHT TOWER FOUNDATION, 1067 MM X 7.6 M DEEP	PORTABLE POWER UNIT	LIGHT TOWER MAINTENANCE PLATFORM, TYPE C, AS PER PLAN	NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE	NO. 2 AWG 5000 VOLT DISTRIBUTION CABLE	38 MM DUCT CABLE WITH THREE NO. 4 AWG 5000 VOLT CABLES	38 MM DUCT CABLE WITH THREE NO. 2 AWG 5000 VOLT CABLES	CONDUIT, 76 MM, 713.04	CONDUIT, JACKED OR DRILLED, 76 MM	
				EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	METER	METER	METER	METER	METER	METER	
1574	1	STA 14+166.620 US-23 TO STA 28+036.949 EB-30	LT/RT			1							1						224		3		
1574	2	STA 28+036.949 EB-30 TO STA 28+192.552 EB-30	RT			1							1						178				
1574/1573	3	STA 28+192.552 EB-30 TO STA 28+347.582 EB-30	RT			1							1						186				
1573	4	STA 28+347.582 EB-30 TO STA 28+382.531 EB-30, CC-B	RT			1							1						73				CC-B
1573		STA 28+382.531 EB-30, CC-B TO STA 28+502.651 EB-30, P6	RT																143		2.5		
1573	4A	STA 28+502.651 EB-30, PI2 TO STA 28+502.651 EB-30	LT				1						1						5				
1573		STA 28+502.651 EB-30, PI2 TO STA 28+502.651 P6	LT/RT	3													66				19		
1573	5	STA 28+502.651 EB-30, P6 TO STA 28+625.974 EB-30	RT	6				1						1					140				
1573		STA 28+382.531 EB-30, CC-B TO STA 28+656.145 EB-30 P4	RT	6																303			
1573	86	STA 28+797.282 EB-30 TO STA 28+721.548 EB-30, P3	LT/RT	6					1					1					92				
1573		STA 28+721.548 EB-30, P3 TO STA 28+767.798 RAMP B, PI3	LT/RT	3															57				
1573		STA 28+656.145 EB-30, P4 TO STA 28+767.798 RAMP B, PI3	LT/RT														135				42		
1573	11	STA 28+576.301 RAMP B TO STA 28+672.428 RAMP B	RT					1						1		1			126				
1573	12	STA 28+672.428 RAMP B TO STA 28+656.145 EB-30, P4	RT					1						1		1			83				
1574	13	STA 14+262.614 US-23 TO STA 14+060.703 US-23	RT				1						1						228		3		
1574	14	STA 14+060.703 US-23 TO STA 13+951.059 US-23	RT			1							1						126				
1574	15	STA 13+951.059 US-23 TO STA 28+538.324 WB-30	LT/RT		1								1						176				
1573, 1574	16	STA 28+538.324 WB-30 TO STA 28+658.000 WB-30 CC-C	LT		1								1						141		2.5		CC-C
1573		STA 28+658.000 WB-30 CC-C TO STA 28+658.000 WB-30 PI9	LT	6															38				
1573		STA 28+658.000 WB-30 PI9 TO STA 28+658.00 WB-30 P20	LT/RT	6													120				17		
1573	17	STA 28+684.201 WB-30 TO STA 28+658.000 WB-30 P20	RT			1							1						47				
1573	18	STA 28+800.742 WB-30 TO STA 28+684.201 WB-30	RT				1						1						148				
1573	19	STA 28+925.679 WB-30 TO STA 28+800.742 WB-30	RT					1						1					173				
1573		STA 28+934.530 RAMP B, P26 TO STA 28+925.679 WB-30	LT/RT	3															42				
1573		STA 28+934.530 RAMP B, P26 TO STA 28+934.530 RAMP B P5	LT/RT	6													48				13		
1573	21	STA 28+857.930 RAMP B TO STA 28+934.530 RAMP B, P5	RT				1						1			1			80				
1573	20	STA 29+017.113 RAMP B TO STA 28+934.530 RAMP B, P5	RT							1			1			1			97				
1573, 1575	31	STA 29+148.424 RAMP B TO STA 29+017.113 RAMP B	RT						1					1					162				
1573	106	STA 13+574.978 US-23 TO STA 28+658.000 WB-30 P20	RT							1			1						127				
1573	105	STA 13+450.914 US-23 TO STA 13+574.978 US-23	RT							1			1						141				
1573	25	STA 28+914.788 EB-30 TO STA 28+721.548 EB-30, P3	LT					1						1		1			206				
1573	24	STA 29+046.159 EB-30 TO STA 28+914.788 EB-30	LT						1					1		1			153				
1573, 1575	23	STA 29+158.459 EB-30 TO STA 29+046.159 EB-30	LT				1						1			1			129				
1572	7	STA 12+688.703 US-23 TO STA 12+528.536 US-23	LT		1								1						180				
1572	6	STA 12+528.536 US-23 TO STA 12+411.249 US-23 P22	LT	3	1								1						133				
1572		STA 12+411.236 US-23 P2I TO STA 12+411.249 US-23 P22	LT/RT	3													150					47	
1572		STA 12+411.236 US-23 P2I TO STA 12+417.438 US-23	RT																17				
1572	27	STA 12+417.438 US-23 TO STA 28+566.947 RAMP A, CC-A	RT		1								1						73		2.5		CC-A
1572, 1573	104	STA 13+127.247 US-23 TO STA 12+974.106 US-23	LT							1			1						172				
1572	103	STA 12+974.106 US-23 TO STA 12+850.000 US-23, P2	LT	6						1			1						133				
1572		STA 12+850.000 US-23, P2 TO STA 12+850.087 US-23 P23	LT/RT	3														144				45	
1572	8	STA 28+163.801 RAMP B TO STA 12+850.000 US-23, P2	RT/LT							1			1						23				
1572		STA 28+840.651 RAMP A, P24 TO STA 12+850.087 US-23 P23	LT/RT	6																130			
1572	88	STA 29+104.159 RAMP A TO STA 28+960.536 RAMP A	LT					1						1		1			189				
1572	30	STA 28+960.536 RAMP A TO STA 28+854.422 RAMP A	LT					1						1					136				
1572	29	STA 28+854.422 RAMP A TO STA 28+840.651 RAMP A P24	LT								1		1						25				
1572		STA 28+840.651 RAMP A P25 TO STA 28+840.651 RAMP A P24	LT/RT	6													54	54			15		
1572		STA 28+840.651 RAMP A P25 TO STA 28+660.184 RAMP A	RT																189				
1572	28	STA 28+660.184 RAMP A TO STA 28+566.947 RAMP A, CC-A	RT		1								1						113				
1572		STA 28+566.947A CC-A TO STA 28+840.651 RAMP A P25	RT																	288			
1572, 1573	10	STA 28+443.296 RAMP B TO STA 28+295.626 RAMP B	RT					1						1					188				
TOTALS CARRIED TO SHEET NO. 1565				72	6	6	5	8	3	5	1	1	24	11	0	8	573	198	5092	721	119.50	92.00	

LIGHTING SUBSUMMARY

CALCULATED RET
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625

SHEET NO.	REFERENCE NO.	STATION TO STATION	SIDE	CABLE SPLICING KIT	LIGHT TOWER, BBBB30.5	LIGHT TOWER, BBBB33.5	LIGHT TOWER, BBBB36.6	LIGHT TOWER, BBBB39.6	LIGHT TOWER, BBBB42.7	LIGHT TOWER, BBBBBB30.5	LIGHT TOWER, BBBBBB33.5	LIGHT TOWER, BBBBBB36.6	LIGHT TOWER FOUNDATION, 914 MM X 6.1 M DEEP	LIGHT TOWER FOUNDATION, 1067 MM X 7.6 M DEEP	PORTABLE POWER UNIT	LIGHT TOWER MAINTENANCE PLATFORM, TYPE C, AS PER PLAN	NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE	NO. 2 AWG 5000 VOLT DISTRIBUTION CABLE	38 MM DUCT CABLE WITH THREE NO. 4 AWG 5000 VOLT CABLES	38 MM DUCT CABLE WITH THREE NO. 2 AWG 5000 VOLT CABLES	CONDUIT, 76 MM, 713.04	CONDUIT, JACKED OR DRILLED, 76 MM	
				EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	METER	METER	METER	METER	METER	METER	
		TOTALS CARRIED FROM SHEET NO. 1564		72	6	6	5	8	3	5	1	1	24	11	0	8	573	198	5092	721	119.50	92.00	
1572	9	STA 28+295.626 RAMP B TO STA 28+163.801 RAMP B	RT									1	1						172				
1575	35	STA 29+253.051 EB-30 TO STA 29+340.841 EB-30 P16	RT	3								1	1						119				
1575		STA 29+340.841 EB-30 P15 TO STA 29+340.841 EB-30 P16	LT/RT														60				17		
1575		STA 29+340.841 EB-30 P15 TO STA 29+340.852 EB-30	LT	3															20				
1575	22	STA 29+340.852 EB-30 TO STA 29+484.211 EB-30	LT					1						1					164				
1575	36	STA 29+484.211 EB-30 TO STA 29+642.273 EB-30	LT					1						1					189				
1576	37	STA 29+642.273 EB-30 TO STA 29+859.815 EB-30, P10	LT									1	1						248				
1575	32	STA 29+274.607 US-30 TO STA 29+393.419 US-30	RT						1					1					159				
1575	87	STA 29+393.419 US-30 TO STA 29+533.609 US-30	RT						1					1					178				
1575/1576	32A	STA 29+533.609 US-30 TO STA 29+635.028 US-30	RT					1						1					135				
1576	33	STA 29+635.028 US-30 TO STA 29+763.232 US-30	RT				1						1							168			
1576	34	STA 29+763.232 US-30 TO STA 29+856.158 US-30, P9	RT								1		1							114			
1576	38	STA 29+870.021 US-30 TO STA 29+856.158 US-30, P27	LT		1								1						29				
1576		STA 29+856.158 US-30, P9 TO STA 29+856.158 US-30, P27	LT/RT	9													84				25		
1576		STA 29+856.158 US-30, P9 TO STA 29+859.815 EB-30, P10	LT/RT																	15			
1576		STA 29+859.815 EB-30, P10 TO STA 29+859.827 EB-30 P17	LT/RT	12													72	72			21		
1576		STA 29+859.827 EB-30 P17 TO STA 29+985.287 EB-30	RT																	131			
1576	40	STA 29+985.287 EB-30 TO STA 30+068.789 US-30, CC-D	RT		1								1							101	2.5		CC-D
1576		STA 30+068.789 US-30, CC-D TO STA 29+859.827 EB-30 P17	RT																	228			
1576		STA 30+068.789 US-30, CC-D TO STA 30+107.582 US-30 P29	RT																55				
1576		STA 30+107.582 US-30 P29 TO STA 30+107.312 US-30 P28	LT/RT	6													144				45		
1576	39	STA 30+107.230 US-30 TO STA 30+107.312 US-30, P28	LT		1								1		1				18		3		
TOTAL TO GENERAL SUMMARY				105	9	6	6	11	5	5	2	4	32	16	1	8	933	270	6578	1478	233	92	

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1565
2116

LIGHTING SUBSUMMARY

CALCULATED RET
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SHEET NO.	REFERENCE NO.	STATION TO STATION	SIDE	625 LUMINAIRE, HIGH MAST TYPE V, 400 WATT HPS 480 VOLT, SYMMETRIC (EACH)	625 GLARE SHIELD, AS PER PLAN (EACH)	625 TRENCH, 0.6 M DEEP (METER)	625 PULL BOX, 713.08, 450 MM (EACH)	625 PULL BOX, 713.08, 600 MM (EACH)	625 GROUND ROD (EACH)	625 POWER SERVICE, AS PER PLAN (EACH)	625 SPECIAL - PLASTIC CAUTION TAPE (METER)	633 CONTROLLER WORK PAD (EACH)	
1574	1	STA 14+166.620 US-23 TO STA 28+036.949 EB-30	LT/RT	4	4	224			2		224		
1574	2	STA 28+036.949 EB-30 TO STA 28+192.552 EB-30	RT	4	4	178			2		178		
1574/1573	3	STA 28+192.552 EB-30 TO STA 28+347.582 EB-30	RT	4	4	186			2		186		
1573	4	STA 28+347.582 EB-30 TO STA 28+382.531 EB-30, CC-B	RT	4	4	73			2		73		CC-B
1573		STA 28+382.531 EB-30, CC-B TO STA 28+502.651 EB-30, P6	RT			143		1	1	1	143	1	
1573	4A	STA 28+502.651 EB-30, P12 TO STA 28+502.651 EB-30	LT	4		5			2		5		
1573		STA 28+502.651 EB-30, P12 TO STA 28+502.651 P6	LT/RT				1						
1573	5	STA 28+502.651 EB-30, P6 TO STA 28+625.974 EB-30	RT	4	4	140	1		2		140		
1573		STA 28+382.531 EB-30, CC-B TO STA 28+656.145 EB-30 P4	RT			303	1				303		
1573	86	STA 28+797.282 EB-30 TO STA 28+721.548 EB-30, P3	LT/RT	4		92	1		2		92		
1573		STA 28+721.548 EB-30, P3 TO STA 28+767.798 RAMP B, P13	LT/RT			57	1				57		
1573		STA 28+656.145 EB-30, P4 TO STA 28+767.798 RAMP B, P13	LT/RT										
1573	11	STA 28+576.301 RAMP B TO STA 28+672.428 RAMP B	RT	4		126			2		126		
1573	12	STA 28+672.428 RAMP B TO STA 28+656.145 EB-30, P4	RT	4		83			2		83		
1574	13	STA 14+262.614 US-23 TO STA 14+060.703 US-23	RT	4	4	228			2		228		
1574	14	STA 14+060.703 US-23 TO STA 13+951.059 US-23	RT	4	4	126			2		126		
1574	15	STA 13+951.059 US-23 TO STA 28+538.324 WB-30	LT/RT	4	4	176			2		176		
1573, 1574	16	STA 28+538.324 WB-30 TO STA 28+658.000 WB-30 CC-C	LT	4	4	141		1	3	1	141	1	CC-C
1573		STA 28+658.000 WB-30 CC-C TO STA 28+658.000 WB-30 P19	LT			38	1				38		
1573		STA 28+658.000 WB-30 P19 TO STA 28+658.00 WB-30 P20	LT/RT				1						
1573	17	STA 28+684.201 WB-30 TO STA 28+658.000 WB-30 P20	RT	4		47			2		47		
1573	18	STA 28+800.742 WB-30 TO STA 28+684.201 WB-30	RT	4		148			2		148		
1573	19	STA 28+925.679 WB-30 TO STA 28+800.742 WB-30	RT	4		173			2		173		
1573		STA 28+934.530 RAMP B, P26 TO STA 28+925.679 WB-30	LT/RT			42	1				42		
1573		STA 28+934.530 RAMP B, P26 TO STA 28+934.530 RAMP B P5	LT/RT				1						
1573	21	STA 28+857.930 RAMP B TO STA 28+934.530 RAMP B, P5	RT	4		80			2		80		
1573	20	STA 29+017.113 RAMP B TO STA 28+934.530 RAMP B, P5	RT	6		97			2		97		
1573, 1575	31	STA 29+148.424 RAMP B TO STA 29+017.113 RAMP B	RT	4		162			2		162		
1573	106	STA 13+574.978 US-23 TO STA 28+658.000 WB-30 P20	RT	6		127			2		127		
1573	105	STA 13+450.914 US-23 TO STA 13+574.978 US-23	RT	6		141			2		141		
1573	25	STA 28+914.788 EB-30 TO STA 28+721.548 EB-30, P3	LT	4		206			2		206		
1573	24	STA 29+046.159 EB-30 TO STA 28+914.788 EB-30	LT	4		153			2		153		
1573, 1575	23	STA 29+158.459 EB-30 TO STA 29+046.159 EB-30	LT	4		129			2		129		
1572	7	STA 12+688.703 US-23 TO STA 12+528.536 US-23	LT	4	4	180			2		180		
1572	6	STA 12+528.536 US-23 TO STA 12+411.249 US-23 P22	LT	4	4	133	1		2		133		
1572		STA 12+411.236 US-23 P21 TO STA 12+411.249 US-23 P22	LT/RT				1						
1572		STA 12+411.236 US-23 P21 TO STA 12+417.438 US-23	RT			17					17		
1572	27	STA 12+417.438 US-23 TO STA 28+566.947 RAMP A, CC-A	RT	4	4	73		1	3	1	73	1	CC-A
1572, 1573	104	STA 13+127.247 US-23 TO STA 12+974.106 US-23	LT	6		172			2		172		
1572	103	STA 12+974.106 US-23 TO STA 12+850.000 US-23, P2	LT	6		133	1		2		133		
1572		STA 12+850.000 US-23, P2 TO STA 12+850.087 US-23 P23	LT/RT				1						
1572	8	STA 28+163.801 RAMP B TO STA 12+850.000 US-23, P2	RT/LT	6		23			2		23		
1572		STA 28+840.651 RAMP A, P24 TO STA 12+850.087 US-23 P23	LT/RT			130	1				130		
1572	88	STA 29+104.159 RAMP A TO STA 28+960.536 RAMP A	LT	4		189			2		189		
1572	30	STA 28+960.536 RAMP A TO STA 28+854.422 RAMP A	LT	4		136			2		136		
1572	29	STA 28+854.422 RAMP A TO STA 28+840.651 RAMP A P24	LT	6		25			2		25		
1572		STA 28+840.651 RAMP A P25 TO STA 28+840.651 RAMP A P24	LT/RT				1						
1572		STA 28+840.651 RAMP A P25 TO STA 28+660.184 RAMP A	RT			189					189		
1572	28	STA 28+660.184 RAMP A TO STA 28+566.947 RAMP A, CC-A	RT	4	4	113			2		113		
1572		STA 28+566.947A CC-A TO STA 28+840.651 RAMP A P25	RT										
1572, 1573	10	STA 28+443.296 RAMP B TO STA 28+295.626 RAMP B	RT	4		188			2		188		
TOTALS CARRIED TO SHEET NO. 1566A				154	52	5525	15	3	73	3	5525	3	

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SHEET NO.	REFERENCE NO.	STATION TO STATION	SIDE	625 LUMINAIRE, HIGH MAST TYPE V, 400 WATT HPS 480 VOLT, SYMMETRIC (EACH)	625 GLARE SHIELD, AS PER PLAN (EACH)	625 TRENCH, 0.6 M DEEP (METER)	625 PULL BOX, 713.08, 450 MM (EACH)	625 PULL BOX, 713.08, 600 MM (EACH)	625 GROUND ROD (EACH)	625 POWER SERVICE, AS PER PLAN (EACH)	625 SPECIAL - PLASTIC CAUTION TAPE (METER)	633 CONTROLLER WORK PAD (EACH)	
		TOTALS CARRIED FROM SHEET NO. 1566		154	52	5525	15	3	73	3	5525	3	
1572	9	STA 28+295.626 RAMP B TO STA 28+163.801 RAMP B	RT	6		172			2		172		
1575	35	STA 29+253.051 EB-30 TO STA 29+340.841 EB-30 P16	RT	6		119	1		2		119		
1575		STA 29+340.841 EB-30 P15 TO STA 29+340.841 EB-30 P16	LT/RT										
1575		STA 29+340.841 EB-30 P15 TO STA 29+340.852 EB-30	LT			20	1				20		
1575	22	STA 29+340.852 EB-30 TO STA 29+484.211 EB-30	LT	4		164			2		164		
1575	36	STA 29+484.211 EB-30 TO STA 29+642.273 EB-30	LT	4		189			2		189		
1576	37	STA 29+642.273 EB-30 TO STA 29+859.815 EB-30, P10	LT	6		248			2		248		
1575	32	STA 29+274.607 US-30 TO STA 29+393.419 US-30	RT	4		159			2		159		
1575	87	STA 29+393.419 US-30 TO STA 29+533.609 US-30	RT	4		178			2		178		
1575/1576	32A	STA 29+533.609 US-30 TO STA 29+635.028 US-30	RT	4		135			2		135		
1576	33	STA 29+635.028 US-30 TO STA 29+763.232 US-30	RT	4		168			2		168		
1576	34	STA 29+763.232 US-30 TO STA 29+856.158 US-30, P9	RT	6		114			2		114		
1576	38	STA 29+870.021 US-30 TO STA 29+856.158 US-30, P27	LT	4	4	29			2		29		
1576		STA 29+856.158 US-30, P9 TO STA 29+856.158 US-30, P27	LT/RT				2						
1576		STA 29+856.158 US-30, P9 TO STA 29+859.815 EB-30, P10	LT/RT			15					15		
1576		STA 29+859.815 EB-30, P10 TO STA 29+859.827 EB-30 P17	LT/RT				2						
1576		STA 29+859.827 EB-30 P17 TO STA 29+985.287 EB-30	RT			131					131		
1576	40	STA 29+985.287 EB-30 TO STA 30+068.789 US-30, CC-D	RT	4	4	101		1	3	1	101	1	CC-D
1576		STA 30+068.789 US-30, CC-D TO STA 29+859.827 EB-30 P17	RT										
1576		STA 30+068.789 US-30, CC-D TO STA 30+107.582 US-30 P29	RT			55					55		
1576		STA 30+107.582 US-30 P29 TO STA 30+107.312 US-30 P28	LT/RT				2						
1576	39	STA 30+107.230 US-30 TO STA 30+107.312 US-30, P28	LT	4	4	18			2		18		
TOTAL TO GENERAL SUMMARY				214	64	7540	23	4	100	4	7540	4	

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LIGHTING SUBSUMMARY

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LIGHTING SUBSUMMARY

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SHEET NO.	REFERENCE NO.	STATION TO STATION	SIDE	CABLE SPLICING KIT	LIGHT TOWER, BBBB30.5	LIGHT TOWER, BBBB33.5	LIGHT TOWER, BBBBBB30.5	LIGHT TOWER, BBBBBB33.5	LIGHT TOWER FOUNDATION, 914 MM X 6.1 M DEEP	NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE	38 MM DUCT CABLE WITH THREE NO. 4 AWG 5000 VOLT CABLES	38 MM DUCT CABLE WITH THREE NO. 2 AWG 5000 VOLT CABLES	CONDUIT, 76 MM, 713.04	LUMINAIRE, HIGH MAST TYPE V, 400 WATT HPS 480 VOLT, SYMMETRIC	GLARE SHIELD, AS PER PLAN	TRENCH, 0.6 M DEEP	PULL BOX, 713.08, 450 MM	PULL BOX, 713.08, 600 MM	GROUND ROD	
				EACH	EACH	EACH	EACH	EACH	EACH	METER	METER	METER	METER	EACH	EACH	METER	EACH	EACH	EACH	
1576A	41	STA 32+703.856 US-30 TO STA 0+963.249 TR 128 PBE-4	LT/RT			1			1		186		3	4	4	186			2	
1576A		STA 0+963.249 TR 128 PBE-4 TO STA 0+963.257 TR 128 PBE-1	LT/RT	12						54			15				2			
1576A	42	STA 32+750.751 US-30 TO STA 1+038.077 TR-128 PBE-5	LT				1		1		131		3	6	6	131			2	
1576A		STA 1+038.077 TR-128 PBE-5 TO STA 1+038.094 TR-128 PBE-6	LT/RT	6						57			16				2			
1576A	43	STA 0+963.257 TR 128 TO STA 0+963.257 TR 128 PBE-1	RT		1				1		11			4	4	11			2	
1576A		STA 0+931.552 TR 128 CC-E TO STA 0+963.257 TR 128 PBE-1	RT									35	2.5			35		1	1	CC-E
1576A	44	STA 33+030.506 US-30 TO STA 32+970.174 US 30 PBE-3	LT					1	1		65			6	6	65			2	
1576A		STA 32+970.174 US 30 PBE-2 TO STA 32+970.174 US 30 PBE-3	LT/RT	12						138			43				2			
1576A		STA 1+038.094 TR 128 PBE-6 TO STA 32+970.174 US 30 PBE-3	LT								101					101				
1576A		STA 0+963.257 TR 128 PBE-1 TO STA 32+970.174 US 30 PBE-2	LT/RT									106				106				
1576A / 1577	45	STA 33+030.506 US 30 TO STA 33+300.834 US 30	LT				1		1		279			6	6	279			2	
1576A / 1577	46	STA 33+159.041 US 30 TO STA 32+970.174 US 30 PBE-3	RT					1	1			197		6	6	197			2	
1577	47	STA 33+159.041 US 30 TO STA 33+439.393 US 30	RT				1		1			288		6	6	288			2	
1577	48	STA 33+560.041 RAMP F TO STA 33+662.399 RAMP F	LT				1		1		104			6	6	104			2	
1577	49	STA 33+439.393 US 30 TO STA 33+580.148 US 30	RT		1				1		147			4	4	147			2	
1577	50	STA 33+662.399 RAMP F TO STA 33+742.483 RAMP F PBG-3	LT	6	1				1		81			4	4	81	1		2	
1577		STA 33+742.872 RAMP F PBG-6 TO STA 33+742.483 RAMP F PBG-3	LT/RT	3						51			14				1			
1577	51	STA 33+720.325 RAMP E TO STA 33+580.148 US 30	RT		1				1		145			4	4	145			2	
1577	52	STA 33+742.483 RAMP F PBG-6 TO STA 33+740.117 RAMP F	RT			1			1		18			4		18			2	
1577 / 1578		STA 33+740.117 RAMP F TO STA 33+803.350 RAMP I PBG-4	RT	6							89					89	1			
1578		STA 33+803.350 RAMP I PBG-4 TO STA 33+803.250 RAMP I PBG-7	LT/RT	3						48			13				1			
1578	53	STA 33+802.938 RAMP I TO STA 33+803.350 RAMP I PBG-7	LT			1			1		45			4		45			2	
1578	54	STA 33+885.452 RAMP I TO STA 33+803.350 RAMP I PBG-4	RT		1				1		101			4		101			2	
1577/1578		STA 33+742.483 RAMP F PBG-3 TO STA 33+963.950 RAMP F PBG-2	LT	6							242					242	1			
1578		STA 33+963.950 RAMP F PBG-2 TO STA 33+964.113 RAMP F PBG-8	LT	3						69			20				1			
1578	55	STA 33+964.176 RAMP F TO STA 33+963.950 RAMP F PBG-8	LT		1				1		11			4		11			2	
1578		STA 33+963.950 RAMP F PBG-2 TO STA 33+980.681 RAMP F PBG-9	LT	3							20					20	1			
1578		STA 33+980.681 RAMP F PBG-9 TO STA 33+989.381 RAMP F PBG-10	LT	3						33			8				1			
1578	56	STA 34+092.714 RAMP F PBG-1 TO STA 34+092.714 RAMP F CC-G	LT								76					76		1	1	CC-G
1578		STA 33+989.381 RAMP F PBG-10 TO STA 34+092.714 RAMP F PBG-1	LT	6							113					113	1			
1578	57	STA 34+092.714 RAMP F PBG-1 TO STA 34+095.508 RAMP F	LT		1				1		15			4		15			2	
1578	58	STA 33+977.933 RAMP I TO STA 34+067.985 RAMP G	RT		1				1		108			4		108			2	
1578		STA 34+095.508 RAMP F TO STA 34+067.985 RAMP G PBG-5	LT	6							101					101	1			
1578		STA 34+067.985 RAMP G PBG-5 TO STA 34+067.969 RAMP G PBG-11	RT	3						45			12				1			
1578	59	STA 34+067.985 RAMP G PBG-5 TO STA 34+231.761 RAMP G	LT			1			1		170			4		170			2	
1578	60	STA 34+231.761 RAMP G TO STA 34+334.951 RAMP G	LT			1			1		104			4	4	104			2	
1578	61	STA 34+067.985 RAMP G TO STA 34+067.985 RAMP G PBG-11	RT		1				1		11			4		11			2	
1578	62	STA 34+139.777 US 30 TO STA 34+280.173 US 30 PBH-3	LT	3		1			1		146			4		146	1		2	
1578	63	STA 33+999.773 US-30 TO STA 34+139.777 US-30	LT			1			1		147			4		147			2	
1578		STA 34+280.173 US 30 PBH-3 TO STA 34+280.173 US-30 PBH-4	LT/RT	3						129			40				1			
1578	64	STA 34+280.173 US-30 TO STA 34+420.169 US 30	RT			1			1		147			4		147			2	
1578		STA 34+280.173 US-30 TO STA 34+280.173 US 30 PBH-4	RT								6					6				
1578/1580	65	STA 34+420.169 US 30 TO STA 34+535.821 US 30 PBH-6	RT			1			1		122			4		122			2	
1579/1580	70	STA 34+332.516 RAMP J TO STA 34+508.107 RAMP J PBF-4	LT	6	1				1		190			4		190	1		2	
1579	71	STA 34+257.989 RAMP J TO STA 34+237.447 RAMP J PBF-6	RT	3	1				1		65			4		65	1		2	
1579		STA 34+237.372 RAMP J PBF-5 TO STA 34+237.447 RAMP J PBF-6	LT/RT							45			12							
1579		STA 34+237.372 RAMP J PBF-5 TO STA 34+332.516 RAMP J	LT	3							101					101	1			
1579 / 1580	72	STA 34+432.985 RAMP J TO STA 34+448.087 RAMP H PBF-3	LT/RT	6		1			1		60			4		60	1		2	
1579	73	STA 33+888.863 RAMP E TO STA 34+003.996 RAMP E	RT				1		1		121			6	6	121			2	
1579	74	STA 34+003.996 RAMP E TO STA 34+148.797 RAMP E	RT			1			1		151			4	4	151			2	
1579	75	STA 34+148.797 RAMP E TO STA 34+265.500 RAMP E	RT		1				1		127			4	4	127			2	
1579	76	STA 34+265.500 RAMP E TO STA 34+266.655 RAMP H PBF-2	RT	6	1				1		145			4	4	145	1		2	
TOTAL CARRIED TO SHEET 1566C				108	13	11	5	2	31	669	4002	626	201.5	138	78	4628	24	2	64	

LIGHTING SUBSUMMARY

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SHEET NO.	REFERENCE NO.	STATION TO STATION	SIDE	CABLE SPLICING KIT	LIGHT TOWER, BBBB30.5	LIGHT TOWER, BBBB33.5	LIGHT TOWER, BBBBBB30.5	LIGHT TOWER, BBBBBB33.5	LIGHT TOWER FOUNDATION, 914 MM X 6.1 M DEEP	PORTABLE POWER UNIT	NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE	38 MM DUCT CABLE WITH THREE NO. 4 AWG 5000 VOLT CABLES	38 MM DUCT CABLE WITH THREE NO. 2 AWG 5000 VOLT CABLES	CONDUIT, 76 MM, 713.04	LUMINAIRE, HIGH MAST TYPE V, 400 WATT HPS 480 VOLT, SYMMETRIC	GLARE SHIELD, AS PER PLAN	TRENCH, 0.6 M DEEP	PULL BOX, 713.08, 450 MM	PULL BOX, 713.08, 600 MM	
				EACH	EACH	EACH	EACH	EACH	EACH	EACH	METER	METER	METER	METER	EACH	EACH	METER	EACH	EACH	
		TOTALS CARRIED FROM SHEET NO. 1566B		108	13	11	5	2	31	0	669	4002	626	201.5	138	78	4628	24	2	
1579		STA 34+266.655 RAMP H PBF-2 TO STA 34+266.655 RAMP H PBF-7	RT	3							90			27				1		
1579	77	STA 34+266.434 RAMP H TO STA 34+266.655 RAMP H PBF-7	RT		1				1			7			4		7			
1579		STA 34+266.655 RAMP H PB F2 TO STA 34+348.000 RAMP H PBF-8	RT	3								90					90	1		
1579		STA 34+348.000 RAMP H PBF-8 TO STA 34+352.680 RAMP H PBF-9	RT	3							33			8				1		
1579/1580		STA 34+352.680 RAMP H PBF-9 TO STA 34+448.087 RAMP H PBF-1	RT	6								101					101	1		
1580	CC-H	STA 34+520.387 RAMP G CC-H TO STA 34+535.766 US-30 PBH-1	LT	6									35	2.5			35	1	1	CC-H
1580		STA 34+535.766 US-30 PBH-1 TO STA 34+535.821 US 30 PBH-6	LT/RT	3							141			44				1		
1580		STA 34+535.766 US-30 PBH-1 TO STA 34+559.766 US-30	LT										30				30			
1580	78	STA 34+559.766 US 30 TO STA 33+699.967 US 30	LT					1	1				148		6	6	148			
1580	79	STA 34+699.967 US 30 TO STA 34+979.805 US 30	LT					1	1			290			6	6	290			
1580	80	STA 34+979.805 US 30 TO STA 34+996.340 US 30 PBH-5	LT	3			1		1			20			6	6	20	1		
1580		STA 34+996.340 US 30 PBH-5 TO STA 34+996.441 US-30 PBH-2	LT/RT	6							144			45				1		
1580	81	STA 34+508.107 RAMP J PBF-4 TO STA 34+495.191 RAMP H	LT			1			1			18			4		18			
1580		STA 34+508.107 RAMP J PBF-4 TO STA 34+508.076 RAMP J PBF-10	LT/RT	3							45			12				1		
1580		STA 34+508.076 RAMP J PBF-10 TO STA 34+448.087 RAMP H PBF-3	LT/RT									31					31			
1580		STA 34+448.087 RAMP H PBF-3 TO STA 34+448.087 RAMP H PBF-1	LT/RT								54			15						
1580		STA 34+495.191 RAMP H TO STA 34+549.500 RAMP H PBF-11	LT	3								61					61	1		
1580		STA 34+549.500 RAMP H PBF-11 TO STA 34+549.544 RAMP H PBF-12	LT/RT	3							45			12				1		
1580	82	STA 34+549.544 RAMP H PBF-12 TO STA 34+549.546 RAMP H	RT			1			1			15			4	4	15			
1580	83	STA 34+840.238 US 30 TO STA 34+996.441 US 30 PBH-2	RT					1	1			161			6	6	161			
1580	84	STA 34+996.441 US 30 PBH-2 TO STA 35+095.202 US 30	RT					1	1			103		3	6	6	103			
1580	CC-F	STA 34+447.892 RAMP H CC-F TO STA 34+448.087 RAMP H PBF-1	RT							1		36		2.5			18		1	CC-F
		TOTAL TO GENERAL SUMMARY		150	14	13	6	6	39	1	1221	4935	839	373	180	112	5756	35	4	

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SHEET NO.	REFERENCE NO.	STATION TO STATION	SIDE	625																												
					POWER SERVICE, AS PER PLAN		SPECIAL - PLASTIC CAUTION TAPE		CONTROLLER WORK PAD																							
					EACH		METER		EACH																							
1576A	41	STA 32+703.856 US-30 TO STA 0+963.249 TR 128 PBE-4	LT/RT				186																									
1576A		STA 0+963.249 TR 128 PBE-4 TO STA 0+963.257 TR 128 PBE-1	LT/RT																													
1576A	42	STA 32+750.751 US-30 TO STA 1+038.077 TR-128 PBE-5	LT				131																									
1576A		STA 1+038.077 TR-128 PBE-5 TO STA 1+038.094 TR-128 PBE-6	LT/RT																													
1576A	43	STA 0+963.257 TR 128 TO STA 0+963.257 TR 128 PBE-1	RT				11																									
1576A		STA 0+931.552 TR 128 CC-E TO STA 0+963.257 TR 128 PBE-1	RT		1		35		1																							CC-E
1576A	44	STA 33+030.506 US-30 TO STA 32+970.174 US 30 PBE-3	LT				65																									
1576A		STA 32+970.174 US 30 PBE-2 TO STA 32+970.174 US 30 PBE-3	LT/RT																													
1576A		STA 1+038.094 TR 128 PBE-6 TO STA 32+970.174 US 30 PBE-3	LT				101																									
1576A		STA 0+963.257 TR 128 PBE-1 TO STA 32+970.174 US 30 PBE-2	LT/RT				106																									
1576A / 1577	45	STA 33+030.506 US 30 TO STA 33+300.834 US 30	LT				279																									
1576A / 1577	46	STA 33+159.041 US 30 TO STA 32+970.174 US 30 PBE-3	RT				197																									
1577	47	STA 33+159.041 US 30 TO STA 33+439.393 US 30	RT				288																									
1577	48	STA 33+560.041 RAMP F TO STA 33+662.399 RAMP F	LT				104																									
1577	49	STA 33+439.393 US 30 TO STA 33+580.148 US 30	RT				147																									
1577	50	STA 33+662.399 RAMP F TO STA 33+742.483 RAMP F PBG-3	LT				81																									
1577		STA 33+742.872 RAMP F PBG-6 TO STA 33+742.483 RAMP F PBG-3	LT/RT																													
1577	51	STA 33+720.325 RAMP E TO STA 33+580.148 US 30	RT				145																									
1577	52	STA 33+742.483 RAMP F PBG-6 TO STA 33+740.117 RAMP F	RT				18																									
1577 / 1578		STA 33+740.117 RAMP F TO STA 33+803.350 RAMP I PBG-4	RT				89																									
1578		STA 33+803.350 RAMP I PBG-4 TO STA 33+803.250 RAMP I PBG-7	LT/RT																													
1578	53	STA 33+802.938 RAMP I TO STA 33+803.350 RAMP I PBG-7	LT				45																									
1578	54	STA 33+885.452 RAMP I TO STA 33+803.350 RAMP I PBG-4	RT				101																									
1577/1578		STA 33+742.483 RAMP F PBG-3 TO STA 33+963.950 RAMP F PBG-2	LT				242																									
1578		STA 33+963.950 RAMP F PBG-2 TO STA 33+964.113 RAMP F PBG-8	LT																													
1578	55	STA 33+964.176 RAMP F TO STA 33+963.950 RAMP F PBG-8	LT				11																									
1578		STA 33+963.950 RAMP F PBG-2 TO STA 33+980.681 RAMP F PBG-9	LT				20																									
1578		STA 33+980.681 RAMP F PBG-9 TO STA 33+989.381 RAMP F PBG-10	LT																													
1578	56	STA 34+092.714 RAMP F PBG-1 TO STA 34+092.714 RAMP F CC-G	LT		1		76		1																							CC-G
1578		STA 33+989.381 RAMP F PBG-10 TO STA 34+092.714 RAMP F PBG-1	LT				113																									
1578	57	STA 34+092.714 RAMP F PBG-1 TO STA 34+095.508 RAMP F	LT				15																									
1578	58	STA 33+977.933 RAMP I TO STA 34+067.985 RAMP G	RT				108																									
1578		STA 34+095.508 RAMP F TO STA 34+067.985 RAMP G PBG-5	LT				101																									
1578		STA 34+067.985 RAMP G PBG-5 TO STA 34+067.969 RAMP G PBG-11	RT																													
1578	59	STA 34+067.985 RAMP G PBG-5 TO STA 34+231.761 RAMP G	LT				170																									
1578	60	STA 34+231.761 RAMP G TO STA 34+334.951 RAMP G	LT				104																									
1578	61	STA 34+067.985 RAMP G TO STA 34+067.985 RAMP G PBG-11	RT				11																									
1578	62	STA 34+139.777 US 30 TO STA 34+280.173 US 30 PBH-3	LT				146																									
1578	63	STA 33+999.773 US-30 TO STA 34+139.777 US-30	LT				147																									
1578		STA 34+280.173 US 30 PBH-3 TO STA 34+280.173 US-30 PBH-4	LT/RT																													
1578	64	STA 34+280.173 US-30 TO STA 34+420.169 US 30	RT				147																									
1578		STA 34+280.173 US-30 TO STA 34+280.173 US 30 PBH-4	RT				6																									
1578/1580	65	STA 34+420.169 US 30 TO STA 34+535.821 US 30 PBH-6	RT				122																									
1579/1580	70	STA 34+332.516 RAMP J TO STA 34+508.107 RAMP J PBF-4	LT				190																									
1579	71	STA 34+257.989 RAMP J TO STA 34+237.447 RAMP J PBF-6	RT				65																									
1579		STA 34+237.372 RAMP J PBF-5 TO STA 34+237.447 RAMP J PBF-6	LT/RT																													
1579		STA 34+237.372 RAMP J PBF-5 TO STA 34+332.516 RAMP J	LT				101																									
1579 / 1580	72	STA 34+432.985 RAMP J TO STA 34+448.087 RAMP H PBF-3	LT/RT				60																									
1579	73	STA 33+888.863 RAMP E TO STA 34+003.996 RAMP E	RT				121																									
1579	74	STA 34+003.996 RAMP E TO STA 34+148.797 RAMP E	RT				151																									
1579	75	STA 34+148.797 RAMP E TO STA 34+265.500 RAMP E	RT				127																									
1579	76	STA 34+265.500 RAMP E TO STA 34+266.655 RAMP H PBF-2	RT				145																									
TOTALS CARRIED TO SHEET NO. 1566E					2		4628		2																							

CALCULATED RET CHECKED AW

LIGHTING SUBSUMMARY

WYA / CRA-30-28.009-0.000

1566D
2116

SHEET NO.	REFERENCE NO.	STATION TO STATION	SIDE	625 GROUND ROD EACH	POWER SERVICE, AS PER PLAN EACH	SPECIAL - PLASTIC CAUTION TAPE METER	CONTROLLER WORK PAD EACH	
		TOTALS CARRIED FROM SHEET NO. 1566D		64	2	4628	2	
1579		STA 34+266.655 RAMP H PBF-2 TO STA 34+266.655 RAMP H PBF-7	RT					
1579	77	STA 34+266.434 RAMP H TO STA 34+266.655 RAMP H PBF-7	RT	2		7		
1579		STA 34+266.655 RAMP H PB F2 TO STA 34+348.000 RAMP H PBF-8	RT			90		
1579		STA 34+348.000 RAMP H PBF-8 TO STA 34+352.680 RAMP H PBF-9	RT					
1579/1580		STA 34+352.680 RAMP H PBF-9 TO STA 34+448.087 RAMP H PBF-1	RT			101		
1580	CC-H	STA 34+520.387 RAMP G CC-H TO STA 34+535.766 US-30 PBH-1	LT	1	1	35	1	CC-H
1580		STA 34+535.766 US-30 PBH-1 TO STA 34+535.821 US 30 PBH-6	LT/RT					
1580		STA 34+535.766 US-30 PBH-1 TO STA 34+559.766 US-30	LT			30		
1580	78	STA 34+559.766 US 30 TO STA 33+699.967 US 30	LT	2		148		
1580	79	STA 34+699.967 US 30 TO STA 34+979.805 US 30	LT	2		290		
1580	80	STA 34+979.805 US 30 TO STA 34+996.340 US 30 PBH-5	LT	2		20		
1580		STA 34+996.340 US 30 PBH-5 TO STA 34+996.441 US-30 PBH-2	LT/RT					
1580	81	STA 34+508.107 RAMP J PBF-4 TO STA 34+495.191 RAMP H	LT	2		18		
1580		STA 34+508.107 RAMP J PBF-4 TO STA 34+508.076 RAMP J PBF-10	LT/RT					
1580		STA 34+508.076 RAMP J PBF-10 TO STA 34+448.087 RAMP H PBF-3	LT/RT			31		
1580		STA 34+448.087 RAMP H PBF-3 TO STA 34+448.087 RAMP H PBF-1	LT/RT					
1580		STA 34+495.191 RAMP H TO STA 34+549.500 RAMP H PBF-11	LT			61		
1580		STA 34+549.500 RAMP H PBF-11 TO STA 34+549.544 RAMP H PBF-12	LT/RT					
1580	82	STA 34+549.544 RAMP H PBF-12 TO STA 34+549.546 RAMP H	RT	2		15		
1580	83	STA 34+840.238 US 30 TO STA 34+996.441 US 30 PBH-2	RT	2		161		
1580	84	STA 34+996.441 US 30 PBH-2 TO STA 35+095.202 US 30	RT	2		103		
1580	CC-F	STA 34+447.892 RAMP H CC-F TO STA 34+448.087 RAMP H PBF-1	RT	1	1	18	1	CC-F
		TOTAL TO GENERAL SUMMARY		82	4	5756	4	

CALCULATED RET CHECKED AM

LIGHTING SUBSUMMARY

WYA / CRA-30-28.009-0.000

1566E
2116

HORIZONTAL SCALE IN METERS
0 10000 20000

CALCULATED EF
CHECKED AM

LIGHTING SCHEMATIC PLAN

WYA / CRA-30-28.009 / 0.000

1567
2116

LIGHTING PLAN US-23, RAMP A, RAMP B

WYA/CRA-30-28.009/0.000

1572
2116

CALCULATED RET
CHECKED AM

HORIZONTAL SCALE IN METERS
0 20 40

N

Ex. Underground Telephone

Structure No. WYA-23-12429 ⊛

Begin Work Sta. 12+240.000 ℄ US-23

Begin Work Sta. 0+520.000 ℄ CR-56 ⊛

6 — Sta 12+528.536, ℄ US-23, 13.626m Lt. (A-1-6)
4-400W, 30.5m, Type V, [13.034m]

103 — Sta 12+974.106, ℄ US-23, 15.331m Lt. (A-2-4)
6-400W, 30.5m, Type V

9 — Sta 28+295.626, ℄ Ramp B, 23.684m Rt. (A-2-2)
6-400W, 36.6m, Type V

8 — Sta 28+163.801, ℄ Ramp B, 19.666m Rt. (A-2-1)
6-400W, 30.5m, Type V

7 — Sta 12+688.703, ℄ US-23, 13.470m Lt. (A-1-7)
4-400W, 30.5m, Type V

SC Sta. 28+226.822
CS Sta. 28+226.822, 4.8m Rt., Ahead

Guardrail, Type 5

Ckt. A-2, No. 4

Match Line Sta. 28+400 ℄ Ramp B
See Sheet No. 1573

℄ Ramp B

90° Glare Shield

Ckt. A-1, No.4

Pull Box, 450mm

Ckt. A-2, No. 4

P2

P22

2

3

4.8m

28+100

28+200

28+300

12+400

12+500

12+600

12+700

12+800

12+900

13+000

Impact Attenuator

76mm Conduit Jacked or Drilled

G.R. Type 5

7.2m

3.6m

P21

A

1

P1

LAR/W

Pull Box, 600mm

Ckt. A-1, No. 4
Ckt. A-2, No. 2

28+600

28+700

28+800

7.2m ℄ Constr. US-23

76mm Conduit

P24

P23

Ckt. A-2, No. 2

Ckt. A-1, No.4

Sta 28+854.422, ℄ Ramp A, 16.728m Lt. (A-1-2)
6-400W, 33.5m, Type V — 29

2 3

Sta 28+660.184, ℄ Ramp A, 12.357m Rt. (A-1-1)
4-400W, 30.5m, Type V, [14.772m] — 28

P25

Ckt. A-1, No.4

Guardrail, Type 5

28+900

Sta 28+566.947, ℄ Ramp A, 19.052m Rt.
Control Center A (CC-A)
Power Service, As Per Plan

℄ Ramp A

Sta 28+960.536, ℄ Ramp A, 25.423m Lt. (A-1-3) — 30
4-400W, 39.6m, Type V

29+000

Ckt. A-1, No.4

Sta 29+104.159, ℄ Ramp A, 20.821m Lt. (A-1-4) — 88
4-400W, 39.6m, Type V, MP-C, As Per Plan

29+100

A 3m x 76mm Conduit with End Cap for Future use.

Match Line Sta. 29+130 ℄ Ramp A
See Sheet No. 1575

For Quantities see sheet no. 1564, 1566

POT Sta. 0+901.295

℄ CR-60

90° Glare Shield

POT Sta. 1+000.000

℄ CR-56

1+100

1+200

Guardrail, Type 5

Ckt. A-1, No.4

LAR/W

Sta 12+417.438, ℄ US-23, 12.846 m Rt. (A-1-5)
4-400W, 30.5m, Type V

27

End Work Sta. 1+223.583 ℄ CR-56 ⊛

Power Service, As Per Plan
1+044.900, 35.5m Lt.
AEP 55' CL 3, 799-28

Ex. Underground Telephone

⊛ C.R. 56 Embankment, Roadway & Str. No. WYA-23-12429 by Others under Separate Contract.

LEGEND

Sta 28+660.184, ℄ Ramp A, 12.357m Rt. (A-1-1) — 28
4-400W, 30.5m, Type V, [14.772m], (MP-C)

Sta. 28+660.184, ℄ Ramp A, 12.357m Rt.
Ref. Sta., Control Baseline, Offset from Traveled Edge of Pavement

(A-1-1) (Power Source - Circuit No. - Pole No.)

4-400W, 30.5m, Type V, [14.772m]
No. of Luminaires, Pole Height,
I.E.S. Luminaire Distribution,
Non-standard Pavement Width

(MP-C)
Maintenance Platform - Type C, As Per Plan
Pole Design Reference Number

(28) - Sub-summary Reference No.

- Traffic Direction Arrow
- Proposed 38mm² Duct Cable (Unless otherwise specified as Distribution Cable)
- Proposed Conduit under Pavement
- Proposed Control Center
- Proposed Pull Box
- Proposed Poles For New Power Service
- Proposed High Mast Symmetrical Lighting Fixture, 4 Luminaires
- Proposed High Mast Symmetrical Lighting Fixture, 6 Luminaires
- 90° Glare Shield

NOTE: ALL DUCT CABLES SHALL BE 38MM² WITH THREE 5000 VOLT CABLES. CIRCUIT NUMBERS AND WIRE SIZE IN AWG WILL BE SPECIFIED AT CABLE LOCATIONS WHEREVER POSSIBLE.

X Feeder Type

1 Ckt. A1, No. 4

2 Ckt. A1, Distribution Cable No. 4

3 Ckt. A2, Distribution Cable No. 2

Match Line Sta. 28+400, ℄ Ramp B
See Sheet No. 1572

4.8m

Sta 28+443.296, ℄ Ramp B, 24.827m Rt. (A-2-3)
4-400W, 39.6m, Type V — 10

28+500

℄ Ramp B

Ckt A-2, No. 4

Guardrail, Type 5

Sta 28+576.301, ℄Ramp B, 20.650m Rt. (B-2-2)
4-400W, 39.6m, Type V, MP-C, As per plan — 11

28+600

Ckt B-2, No. 4

Sta 28+672.428, ℄ Ramp B, 20.273m Rt. (B-2-1)
4-400W, 39.6m, Type V, MP-C, As per plan — 12

Power Service, As Per Plan
Proposed AEP Pole
Control Center B (CC-B)
Sta. 28+382.531, ℄ EB-30, 29.314m Rt.
Power Service, As Per Plan

Begin Work
Sta. 0+871.80
℄ TR-55

TR-55

4A Sta 28+502.651, ℄ EB-30, 8.311m Lt. (B-1-5)
4-400W, 36.6m, Type V

Pull Box, 600mm

0+900

90° Glare Shield

Sta 28+347.582,
℄ EB-30, 21.133m Rt.
(B-1-11), 4-400W, 33.5m,
Type V, [6.722m]

4

R/W

LAR/W

Sta 28+625.974, ℄ EB-30, 20.469m Rt. (B-1-6)
4-400W, 39.6m, Type V — 5

90° Glare Shield

Pull Box, 450mm

Ckt B-1, No. 4
and Ckt B-2,
No. 2

P12

7

P6

2 3

P7

1

1

104 Sta 13+127.247, ℄ US-23, 17.621m Lt. (A-2-5)
6-400W, 30.5m, Type V

Ckt A-2, No. 4

Match Line Sta. 13+050 ℄ US-23
See Sheet No. 1572

7.2m

13+100

13+200

℄ Constr. US-23

9

P4

Pull Box. 450mm

Ckt B-2, No. 2

28+700

28+600

Ckt B-2, No. 4

G.R. Type 5

STRUCTURE NO.
WYA-30-28682

13+300

Impact
Attenuator

28+700

Concrete Barrier,
Type D

Impact 13+400
Attenuator

76mm
Conduit

7.2m

Guardrail,
Type 5

7.2m

4.8m

28+500 ℄ EB-30 28+400

13+500

13+600

℄ US-23

1+000

Match Line Sta. 28+300 ℄ US-30EB
See Sheet No. 1574

76mm Conduit,
Jacked or
Drilled

Concrete
Barrier,
Type D

Ckt B-2,
No. 4

G.R. TYPE 5

Pull Box, 450mm

STRUCTURE NO.
WYA-30-28566

P3

Ckt B-2, No. 4

28+800

Ckt B-2, No. 4

2

7.2m

Ckt C-1, No. 4

Ckt C-2,
No. 4

8

P20

76mm
Conduit

Match Line
Sta. 28+650 ℄ US-30WB
See Sheet No. 1574

P19

6

5

P8

86 Sta 28+797.282, ℄ EB-30, 16.290m Rt. (B-2-3)
4-400W, 42.7m, Type V

℄ Ramp B

P13

Sta 13+450.914, ℄ US-23,
11.000m Rt. (C-1-6)
6-400W, 30.5m,
Type V

106 Sta 13+574.978, ℄ US-23,
12.000m Rt. (C-1-5)
6-400W, 30.5m, Type V

Ckt C-1,
No. 4

Relocation
Pole by AEP

Ckt C-2, No. 4

7.2m

21 Sta 28+857.930, ℄ Ramp B, 11.231m Rt. (C-2-4)
4-400W, 36.6m, Type V, MP-C, As per plan

Ckt C-2, No. 4

Pull Box, 450mm

28+900

105 Guardrail, Type 5

28+800

℄ WB-30

LAR/W

R/W

TR-55

1+200

R/W

Pull Box, 600mm

Sta 28+684.201, ℄ WB-30,
24.603m Rt. (C-2-1)
4-400W, 33.5m,
Type V

17

Relocation
Pole by AEP

End Work
Sta. 1+176.506
℄ TR-55

Power Service, As Per Plan
Proposed AEP Pole
Control Center C (CC-C)
Sta. 28+658.000, ℄ WB-30, 23.000m Lt.
Power Service, As Per Plan

P5

76mm
Conduit

10

Ckt C-2, No. 4

4.8m

P26

Ckt C-2, No. 4

Guardrail, Type 5

29+000

7.2m

Sta 28+800.742, ℄ WB-30,
22.553m Rt. (C-2-2)
4-400W, 36.6m, Type V

18

Ex. Underground
Telephone

Ckt C-2,
No. 4

Match Line Sta. 29+050
℄ Ramp B
See Sheet No. 1575

Match Line Sta. 29+050
℄ US-30WB
See Sheet No. 1575

Sta 28+925.679, ℄ WB-30, 29.182m Rt. (C-2-3)
4-400W, 39.6m, Type V — 19

Sta 29+017.113, ℄ Ramp B, 11.706m Rt. (C-2-5)
6-400W, 36.6m, Type V, MP-C, As per plan — 20

25 Sta 28+914.788, ℄ EB-30,
15.723m Lt. (B-2-4)
4-400W, 39.6m,
Type V,
MP-C, As per plan

28+900

℄ EB-30

Guardrail, Type 5

29+000

Ckt B-2, No. 4

29+100

Ckt B-2,
No. 4

Match Line Sta. 29+130
℄ US-30EB
See Sheet No. 1575

Sta 29+046.159 ℄ EB-30, 19.655m Lt. (B-2-5)
4-400W, 42.7m, Type V, MP-C, As per plan — 24

X	Feeder Type
1	Ckt B-1, No. 4
2	Ckt B-1, No. 4
3	Ckt B-2, No. 2
5	Ckt C-1, No. 4 and Ckt C-2, No. 4
6	Ckt C-1, No. 4
7	Ckt B-1, Distribution Cable No. 4
8	Ckt C-1, Distribution Cable No. 4 Ckt C-2, Distribution Cable No. 4
9	Ckt B-2, Distribution Cable No. 4
10	Ckt C-2, Distribution Cable No. 4

For Legend see sheet no. 1572
For Quantities see sheet no. 1564, 1566

N

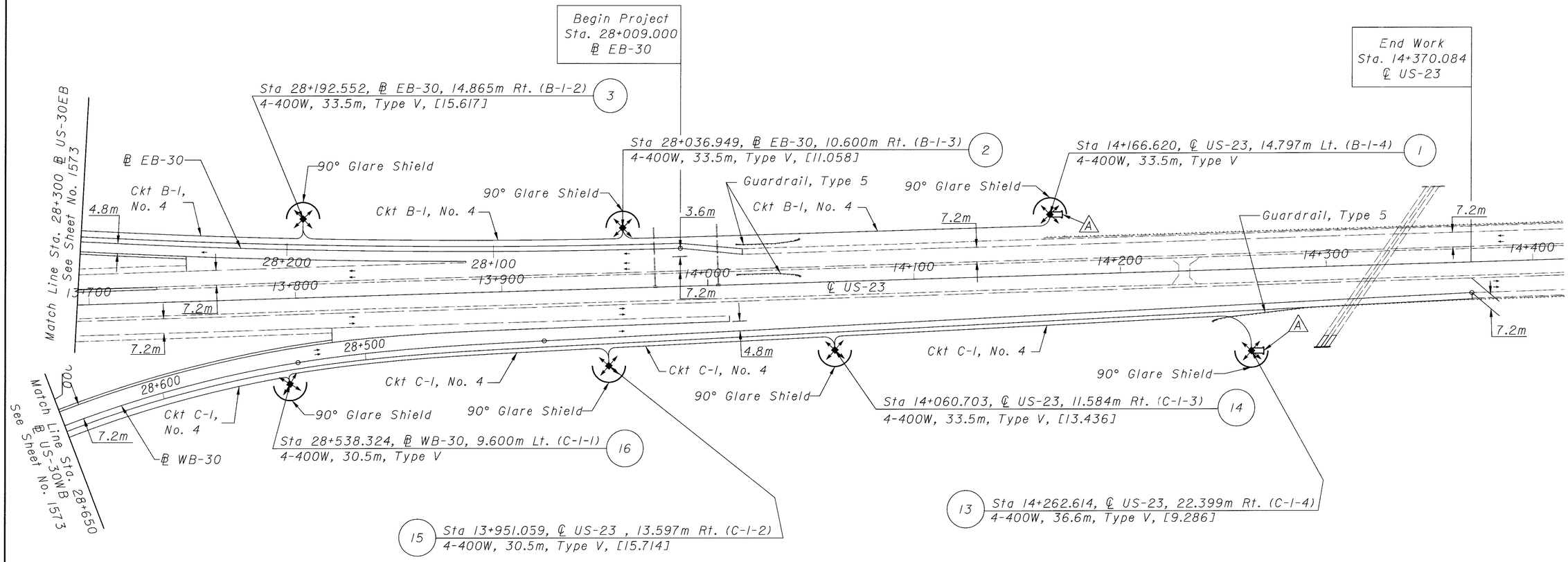
0 20 40
HORIZONTAL
SCALE IN METERS

CALCULATED RET
CHECKED AM

LIGHTING PLAN EB-30, WB-30, RAMP B, US-23

WYA/CRA-30-28.009/0.000

1573
2116



For Legend see sheet no. 1572
For Quantities see sheet no. 1564, 1566

A 3m x 76mm Conduit with End Cap for Future use.

N

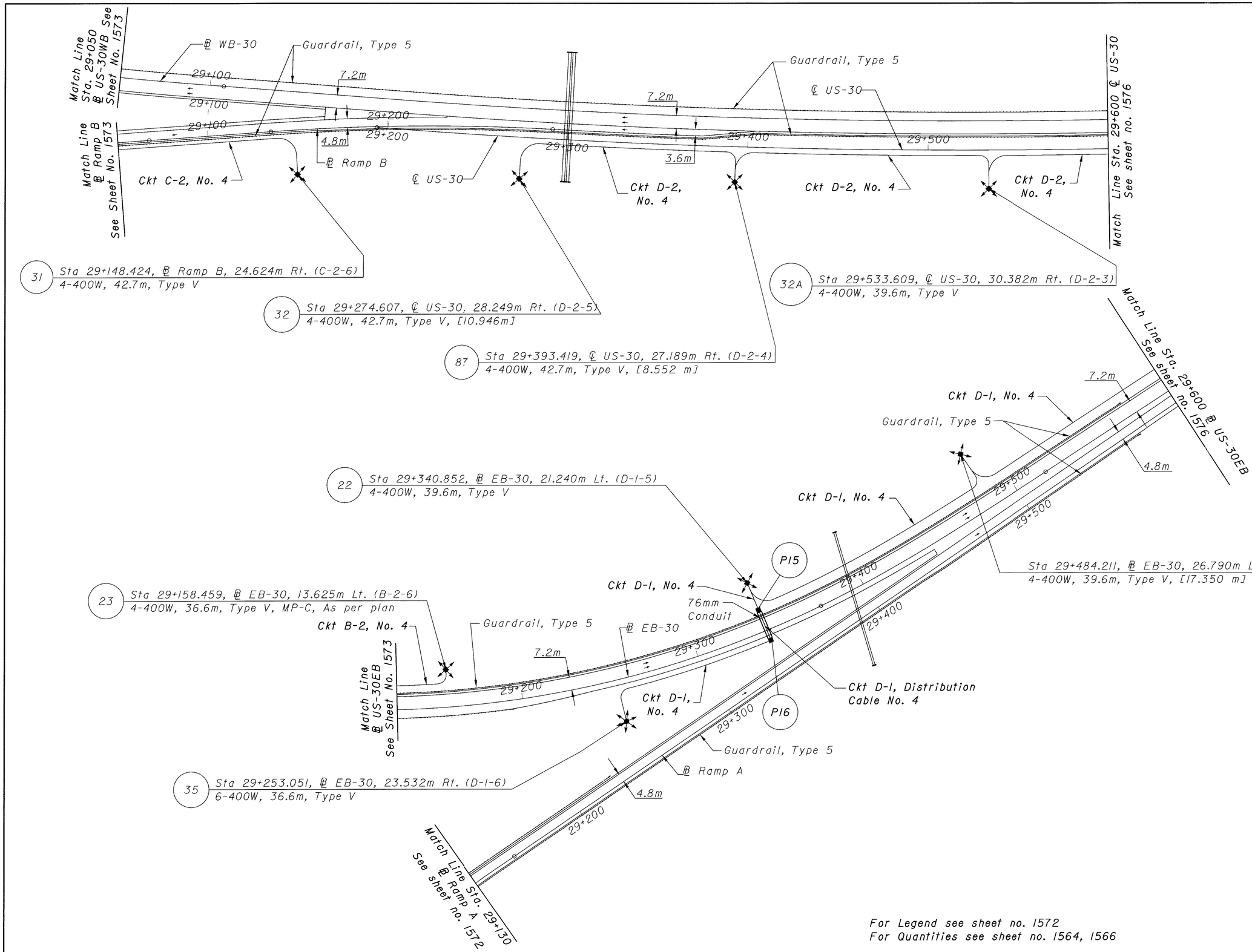
0 20 40
HORIZONTAL SCALE IN METERS

CALCULATED RET
CHECKED AM

LIGHTING PLAN EB-30, WB-30, US-23

WYA/CRA-30-28.009/0.000

1574
2116



For Legend see sheet no. 1572
For Quantities see sheet no. 1564, 1566

N

HORIZONTAL SCALE IN METERS
0 20 40

CALCULATED RET
CHECKED AM

LIGHTING PLAN EB-30, WB-30, RAMP A, RAMP B, US-30

WYA/CRA-30-28.009/0.000

1575
2116

Ex. Underground Telephone

38 Sta 29+870.021, ℄ US-30, 20.716m Lt. (D-2-6)
4-400W, 30.5m, Type V

Match Line Sta. 29+600 ℄ US-30
See Sheet No. 1575

Sta 29+635.028, ℄ US-30, 27.860m Rt. (D-2-2) 33
4-400W, 36.6m, Type V

Guardrail, Type 5

Sta 29+763.232, ℄ US-30, 33.025m Rt. (D-2-1) 34
6-400W, 33.5m, Type V

90° Glare Shield

Ckt D-2, No. 4

7.2m

P27

76mm Conduit

1

Ckt D-2, No. 4

℄ US-30

Ckt D-2, No. 2

29+700

29+800

29+900

Ckt D-1, No. 2
Ckt D-2, No. 2

Structure No.
WYA-30-30006-By Others ⊛

End Work
Sta. 1+223.583
℄ TR-124 ⊛

1+100

℄ TR-124

Guardrail, Type 5

Prop. Primary Line Pole w/Anchor
as instructed by, North Central Elec. Co-op.

90° Glare Shield

Sta 30+107.230, ℄ US-30, 21.182m Lt. (D-1-2) 39
4-400W, 30.5m, Type V

LAR/W

Impact Attenuator

P28

A

Ckt D-1, No. 4

3

30+000

30+100

30+200

30+300

G.R., Type 5

7.2m

76mm, Conduit

Ckt D-1, No. 4

P29

LAR/W

Pull Box, 600mm

℄ Constr. US-30

Control Center D (CC-D)
Sta. 30+068.789 24.708m Rt. ℄ US-30
Power Service, As Per Plan

Prop. Power Pole
Preferred Location for
Transformer as instructed
by, North Central Elec. Co-op.

Ckt D-1, No. 4

Ckt D-1, No. 4

Ckt D-2, No. 2

Ckt D-2, No. 2
No. 2

7.2m

℄ EB-30

76mm Conduit

2

P17

P10 Pull Box 450mm

P9 Pull Box 450mm

90° Glare Shield

LAR/W

40 Sta 29+985.287, ℄ EB-30, 10.000m Rt. (D-1-1)
4-400W, 30.5m, Type V

Ckt D-1, No. 2
Ckt D-2, No. 2

P11

LAR/W

Match Line Sta. 29+600 ℄ US-30EB
See Sheet No. 1575

Sta 29+642.273, ℄ EB-30, 29.978m Lt. (D-1-3)
6-400W, 36.6m, Type V, [13.169m]

37

Guardrail, Type 5

Begin Work
Sta. 0+520.000
℄ TR-124 ⊛

Ex. Underground Telephone

A 3m x 76mm Conduit with End Cap for Future use.

1 Ckt D-2, Distribution Cable No. 4

2 Ckt D-1, Distribution Cable No. 4
Ckt D-2, Distribution Cable No. 2

3 Ckt D-1, Distribution Cable No. 4

For Legend see sheet no. 1572
For Quantities see sheet no. 1564, 1565, 1566, 1566A

⊛ T.R. 124 Embankment, Roadway & Str. No. WYA-30-30006
to be constructed by Others under separate Contract.

HORIZONTAL SCALE IN METERS
0 20 40

CALCULATED RET
CHECKED AM

LIGHTING PLAN EB-30, US-30

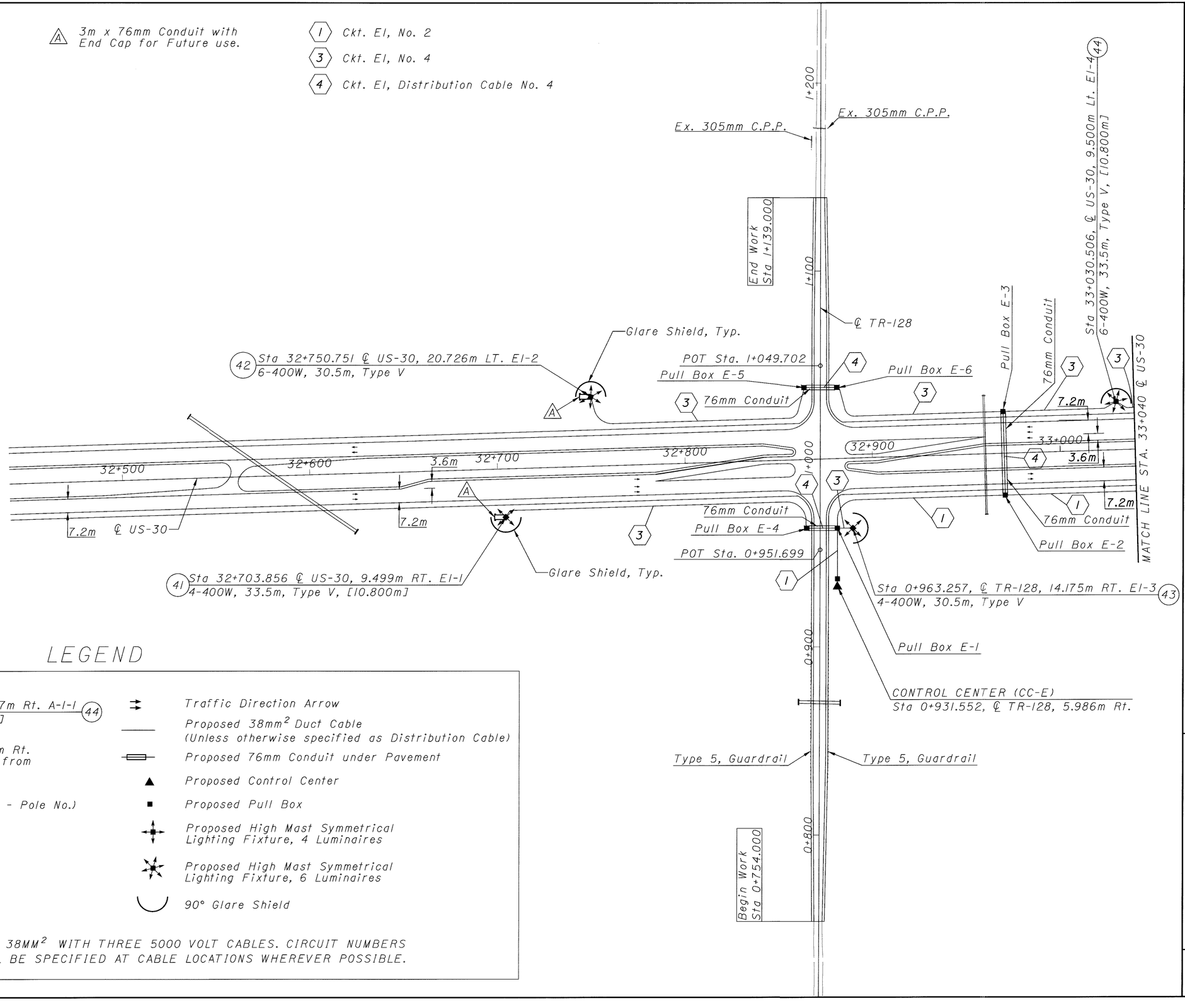
WYA/CRA-30-28.009/0.000

(A) 3m x 76mm Conduit with End Cap for Future use.

(1) Ckt. El, No. 2

(3) Ckt. El, No. 4

(4) Ckt. El, Distribution Cable No. 4



LEGEND

Sta 28+660.184, ℄ Ramp A, 12.357m Rt. A-1-1 (44)
4-400W, 30.5m, Type V, [14.772m]

Sta. 28+660.184, ℄ Ramp A, 12.357m Rt.
Ref. Sta., Control Baseline, Offest from
Traveled Edge of Pavement

(A-1-1) (Power Source - Circuit No. - Pole No.)

4-400W, 30.5m, Type V, [14.772m]
No. of Luminaires, Pole Height,
I.E.S. Luminaire Distribution,
Non-standard Pavement Width

(28) - Sub-summary Reference No.

Traffic Direction Arrow

Proposed 38mm² Duct Cable
(Unless otherwise specified as Distribution Cable)

Proposed 76mm Conduit under Pavement

Proposed Control Center

Proposed Pull Box

Proposed High Mast Symmetrical Lighting Fixture, 4 Luminaires

Proposed High Mast Symmetrical Lighting Fixture, 6 Luminaires

90° Glare Shield

NOTE: ALL DUCT CABLES SHALL BE 38MM² WITH THREE 5000 VOLT CABLES. CIRCUIT NUMBERS AND WIRE SIZE IN AWG WILL BE SPECIFIED AT CABLE LOCATIONS WHEREVER POSSIBLE.

N

HORIZONTAL SCALE IN METERS 0 20 40

CALCULATED RET CHECKED AM

LIGHTING PLAN US-30 REST AREA

WYA/CRA-30-28.009/0.000

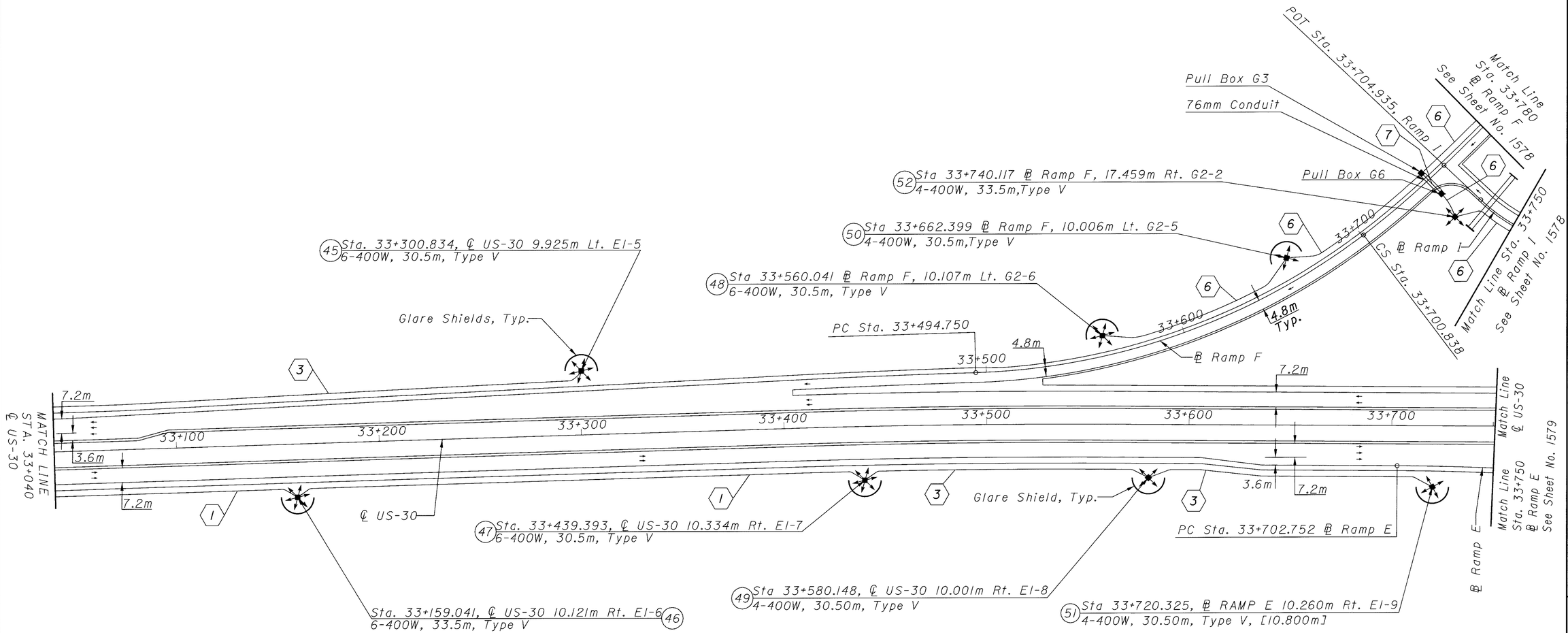
1576A
2116

(1) Ckt. E1, No. 2

(3) Ckt. E1, No. 4

(6) Ckt. G2, No. 4

(7) Ckt. G2, Distribution Cable No. 4



For Legend See Sheet No. 1576A
For Quantities See Sheet No.

N

HORIZONTAL SCALE IN METERS 0 20 40

CALCULATED RET CHECKED AM

I-80 & US-30 REST AREA

LIGHTING PLAN

WYA/CRA-30-28.009/0.000

1577
2116

4 Ckt. GI, No. 4

6 Ckt. G2, No. 4

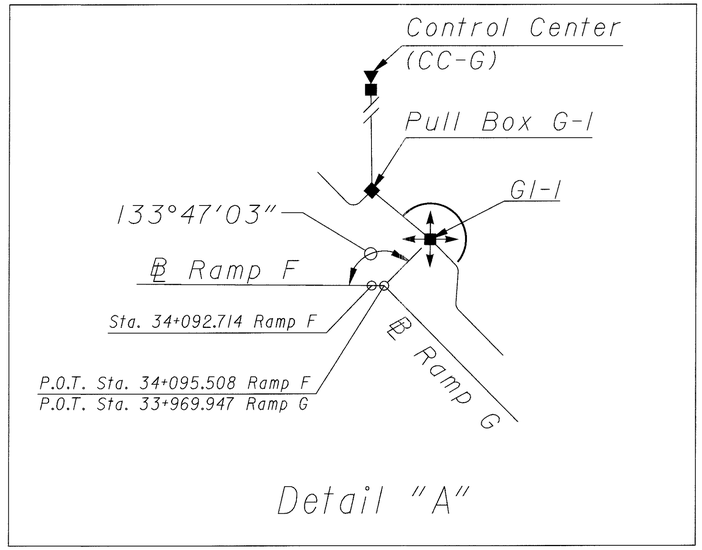
7 Ckt. HI, No. 4

10 Ckt. G2, Distribution Cable No. 4

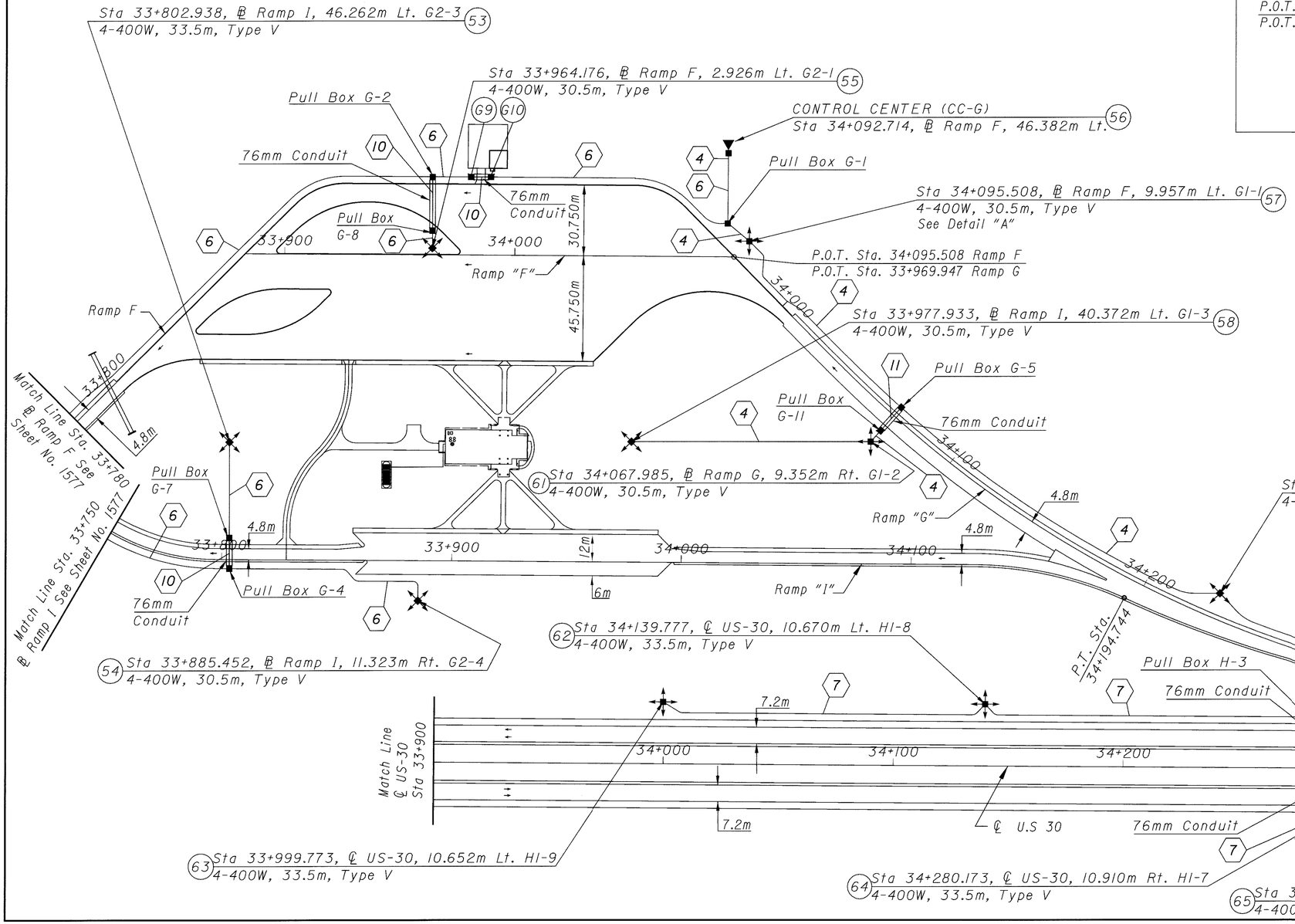
11 Ckt. GI, Distribution Cable No. 4

12 Ckt. HI, Distribution Cable No. 4

For Legend See Sheet No. 1576A
For Quantities See Sheet No.



Detail "A"



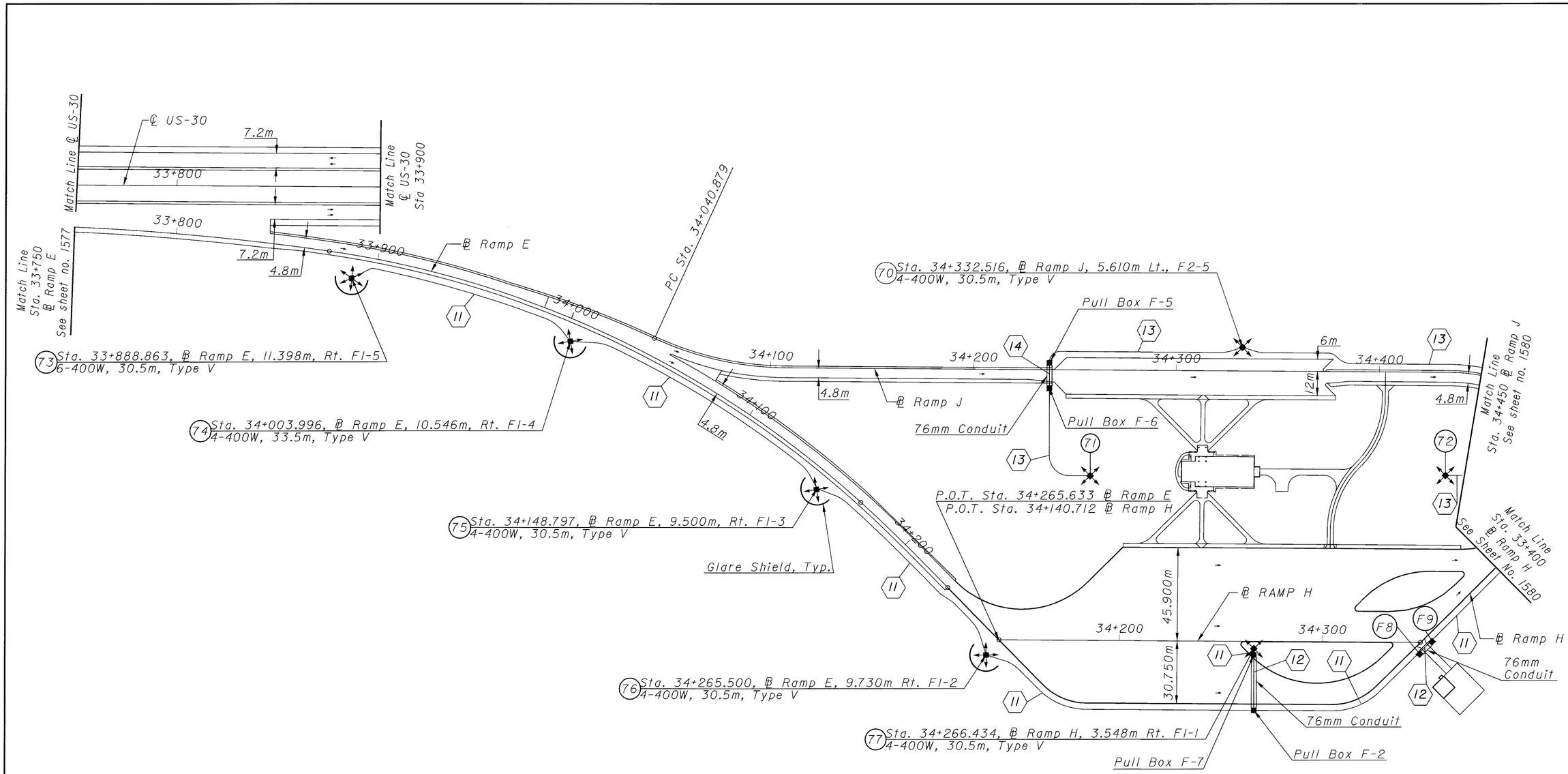
HORIZONTAL SCALE IN METERS
0 20 40

CALCULATED RET
CHECKED AM

LIGHTING PLAN US-30 REST AREA

WYA/CRA-30-28.009/0.000

1578
2116



11 Ckt. F1, No. 4

12 Ckt. F1, Distribution Cable No. 4

13 Ckt. F2, No. 4

14 Ckt. F2, Distribution Cable No. 4

F8 Pull Box F-8

F9 Pull Box F-9

71 Sta. 34+257.989, ℄ Ramp J, 51.949m, Rt. F2-6
4-400W, 30.5m, Type V

72 Sta. 34+432.985, ℄ Ramp J, 50.639m, Rt. F2-1
4-400W, 33.5m, Type V

For Legend See Sheet No. 1576A
For Quantities See Sheet No.

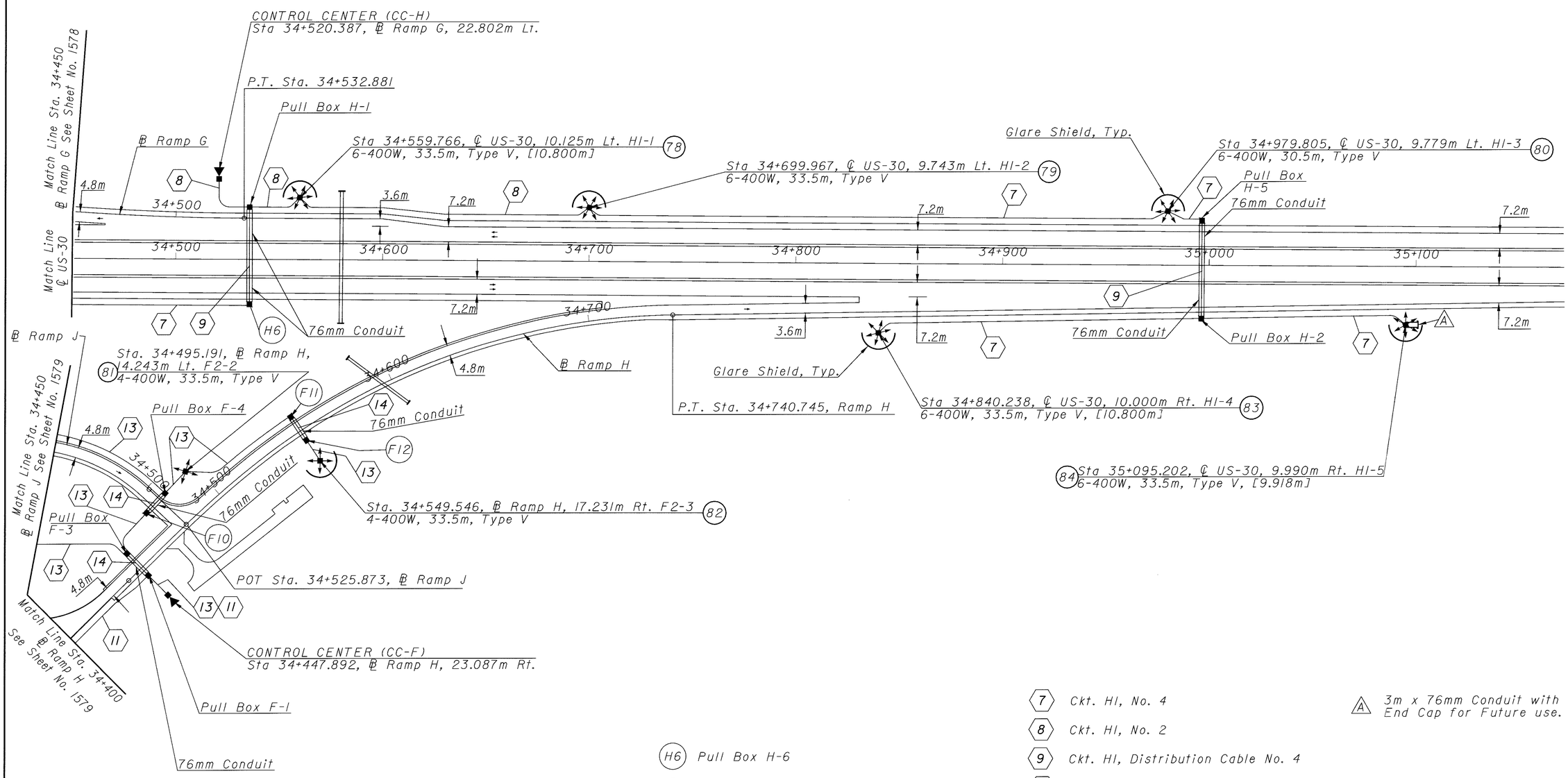
HORIZONTAL SCALE IN METERS
0 20 40

CALCULATED RET
CHECKED AM

LIGHTING PLAN US-30 REST AREA

WYA/CRA-30-28.009/0.000

1579
2116



(H6) Pull Box H-6
(F10) Pull Box F-10
(F11) Pull Box F-11
(F12) Pull Box F-12

(7) Ckt. HI, No. 4
(8) Ckt. HI, No. 2
(9) Ckt. HI, Distribution Cable No. 4
(11) Ckt. FI, No. 4
(13) Ckt. F2, No. 4
(14) Ckt. F2, Distribution Cable No. 4

(A) 3m x 76mm Conduit with End Cap for Future use.

For Legend See Sheet No. 1576A
For Quantities See Sheet No.

HORIZONTAL SCALE IN METERS
0 10 20

CALCULATED RET
CHECKED AM

LIGHTING PLAN US-30 REST AREA

WYA/CRA-30-28.009/0.000

1580
2116

(US-30/US-23) PULL BOX DATA			
REFERENCE NUMBER	STATION	OFFSET	BASELINE/ CENTERLINE
P1	28+566.831	15.448 RT.	℄ RAMP A
P2	12+850.000	21.783 LT.	℄ US-23
P3	28+721.548	12.503 LT.	℄ EB-30
P4	28+656.145	9.638 RT.	℄ EB-30
P5	28+934.530	5.200 RT.	℄ RAMP B
P6	28+502.651	9.100 RT.	℄ EB-30
P7	28+382.475	28.015 RT.	℄ EB-30
P8	28+658.000	21.700 LT.	℄ WB-30
P9	29+856.158	3.034 RT.	℄ US-30
P10	29+859.815	14.623 LT.	℄ EB-30
P11	30+068.789	24.708 RT.	℄ EB-30
P12	28+502.651	10.310 LT.	℄ EB-30
P13	28+767.798	8.710 RT.	℄ RAMP B
P15	29+340.841	12.223 LT.	℄ EB-30
P16	29+340.841	5.832 RT.	℄ EB-30
P17	29+859.827	7.329 RT.	℄ EB-30
P19	28+658.000	6.800 LT.	℄ WB-30
P20	28+658.000	12.200 RT.	℄ WB-30
P21	12+411.236	23.266 RT.	℄ US-23
P22	12+411.249	23.706 LT.	℄ US-23
P23	12+850.087	22.850 RT.	℄ US-23
P24	28+840.651	9.500 LT.	℄ RAMP A
P25	28+840.651	5.030 RT.	℄ RAMP A
P26	28+934.530	10.900 LT.	℄ RAMP B
P27	29+856.158	23.000 LT.	℄ US-30
P28	30+107.312	23.504 LT.	℄ US-30
P29	30+107.582	22.147 RT.	℄ US-30

CONTROL CENTER DATA (US-30/US-23 INTERCHANGE)								TYPE OF SERVICE
CONTROL CENTER	CONNECTED LOAD KVA	SERVICE ENTRANCE CONDUCTOR SIZE - AWG	ENCLOSURE RATING AMPS	CIRCUIT NUMBER	CIRCUIT LOAD AMPS	CIRCUIT FUSE SIZE AMPS	REMARKS	
CC-A	27.55	#2	100	1	29.7	40		480/240 V 3 WIRE 1ϕ GROUNDED NEUTRAL
				2	27.7	40		
CC-B	22.8	#2	100	1	23.8	30		
				2	23.8	30		
CC-C	24.7	#2	100	1	25.7	40		
				2	25.7	40		
CC-D	25.65	#2	100	1	27.7	40		
				2	25.7	40		

CALCULATED RET
CHECKED AM

LIGHTING DETAIL SHEET

WYA / CRA-30-28.009 / 0.000

1580A1
2116

(REST AREA) PULL BOX DATA			
REFERENCE NUMBER	STATION	BASELINE/ CENTERLINE	OFFSET
E1	0+963.257	℄ C.R. 128	9.142m RT.
E2	32+970.174	℄ US-30	22.200m RT.
E3	32+970.174	℄ US-30	22.200m LT.
E4	0+963.249	℄ C.R. 128	7.206m LT.
E5	1+038.077	℄ C.R. 128	8.800m LT.
E6	1+038.094	℄ C.R. 128	8.800m RT.
F1	34+448.087	℄ RAMP H	4.900m RT.
F2	34+266.655	℄ RAMP H	33.953m RT.
F3	34+448.087	℄ RAMP H	9.835m LT.
F4	34+508.107	℄ RAMP J	3.647m LT.
F5	34+237.372	℄ RAMP J	3.450m LT.
F6	34+237.447	℄ RAMP J	9.150m RT.
F7	34+266.404	℄ RAMP H	6.636m RT.
F8	34+348.000	℄ RAMP H	5.796m RT.
F9	34+352.680	℄ RAMP H	3.755m RT.
F10	34+508.076	℄ RAMP J	9.153m RT.
F11	34+549.500	℄ RAMP H	8.262m LT.
F12	34+549.544	℄ RAMP H	5.371m RT.
G1	34+092.714	℄ RAMP F	14.685m LT.
G2	33+963.950	℄ RAMP F	33.953m LT.
G3	33+742.483	℄ RAMP F	4.800m LT.
G4	33+803.350	℄ RAMP I	3.900m RT.
G5	34+067.985	℄ RAMP G	4.688m LT.
G6	33+742.872	℄ RAMP F	9.372m RT.
G7	33+803.250	℄ RAMP I	9.505m LT.
G8	33+964.113	℄ RAMP F	10.413m LT.
G9	33+980.681	℄ RAMP F	33.952m LT.
G10	33+989.381	℄ RAMP F	33.979m LT.
G11	34+067.969	℄ RAMP G	8.688m RT.
H1	34+535.766	℄ US-30	25.200m LT.
H2	34+996.441	℄ US-30	25.649 RT.
H3	34+280.173	℄ US-30	21.500 LT.
H4	34+280.173	℄ US-30	21.500 RT.
H5	34+996.340	℄ US-30	21.534 LT.
H6	34+535.821	℄ US-30	21.664 RT.

CONTROL CENTER DATA (US-30/REST AREA)								TYPE OF SERVICE
CONTROL CENTER	CONNECTED LOAD KVA	SERVICE ENTRANCE CONDUCTOR SIZE - AWG	ENCLOSURE RATING AMPS	CIRCUIT NUMBER	CIRCUIT LOAD AMPS	CIRCUIT FUSE SIZE AMPS	REMARKS	
CC-E	21.85	#6	60	1	45.52	60		480/240 V 3 WIRE 1ϕ GROUNDED NEUTRAL
CC-F	19.95	#6	60	1	41.56	60		
CC-G	21.85	#6	60	1	45.52	60		
CC-H	21.85	#6	60	1	45.52	60		

CALCULATED RET
CHECKED AM

LIGHTING DETAIL SHEET

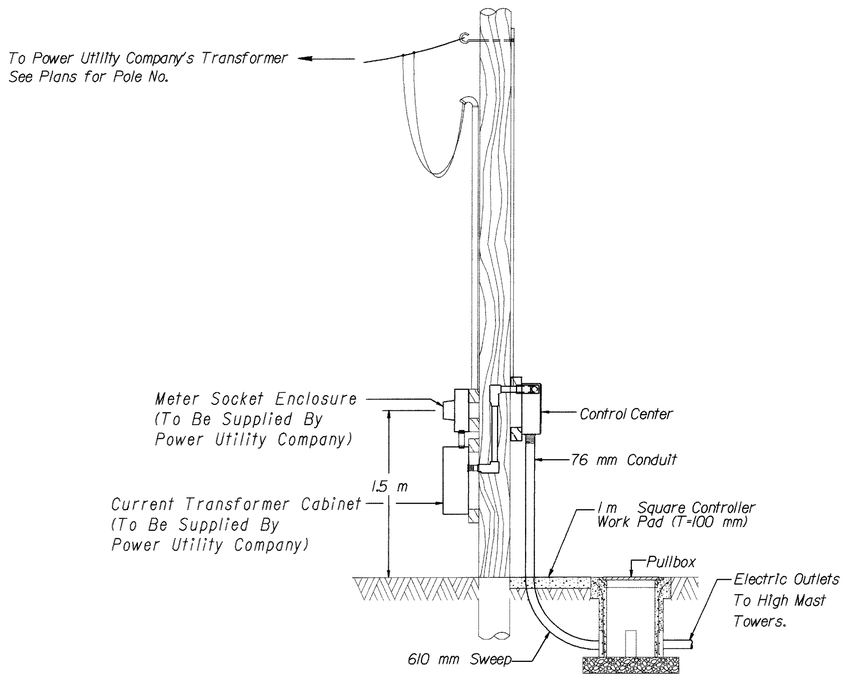
WYA/CRA-30-28.009/0.000

1580A2
2116

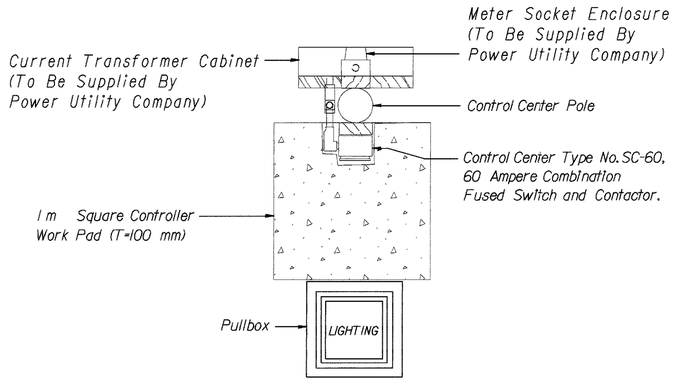
NOTE ~ FOR ADDITIONAL NOTES & DETAILS SEE STANDARD DRAWINGS HL-30.1M, HL-40.0M, HL-60.2M AND HL-60.3M. THE CONTROL CENTERS AND CIRCUITS SHALL BE FED BY A 3-WIRE SERVICE WITH A GROUNDED NEUTRAL. THE 120/240 VOLT, 3 WIRE GROUNDED NEUTRAL SINGLE CIRCUIT WIRING SCHEME SHALL BE USED WITH 480 VOLTS INSTEAD OF 120/240 VOLTS SHOWN.

At Control Centers: Strip Duct, extend cables into the control equipment without splicing at the pull box.

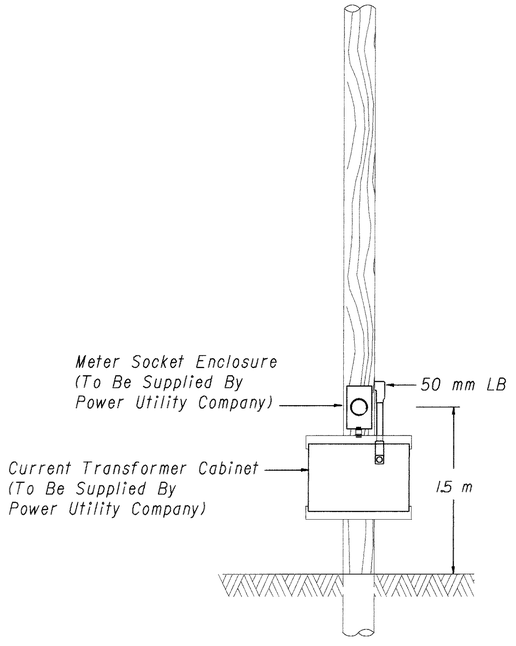
One Controller Work Pad (1 Sq.M.) shall be carried to the General Summary for each Power Service.



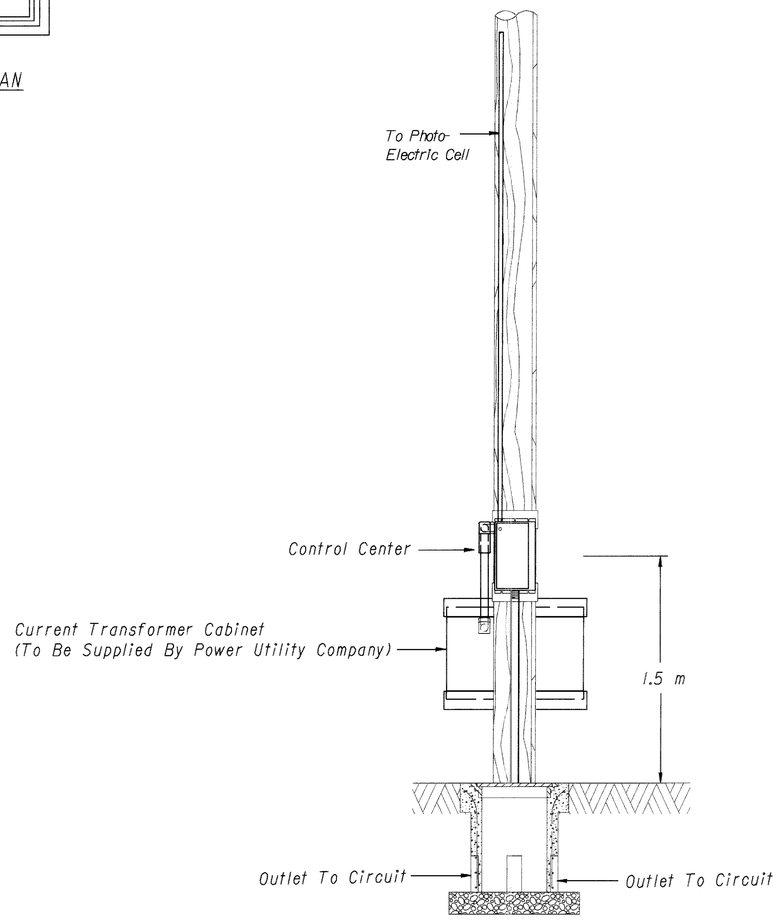
TYPICAL CONTROL CENTER DETAILS



PLAN



REAR ELEVATION



FRONT ELEVATION

CALCULATED RET
CHECKED AN

LIGHTING DETAIL SHEET

WYA/CRA-30-28.009/0.000

1580A
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF

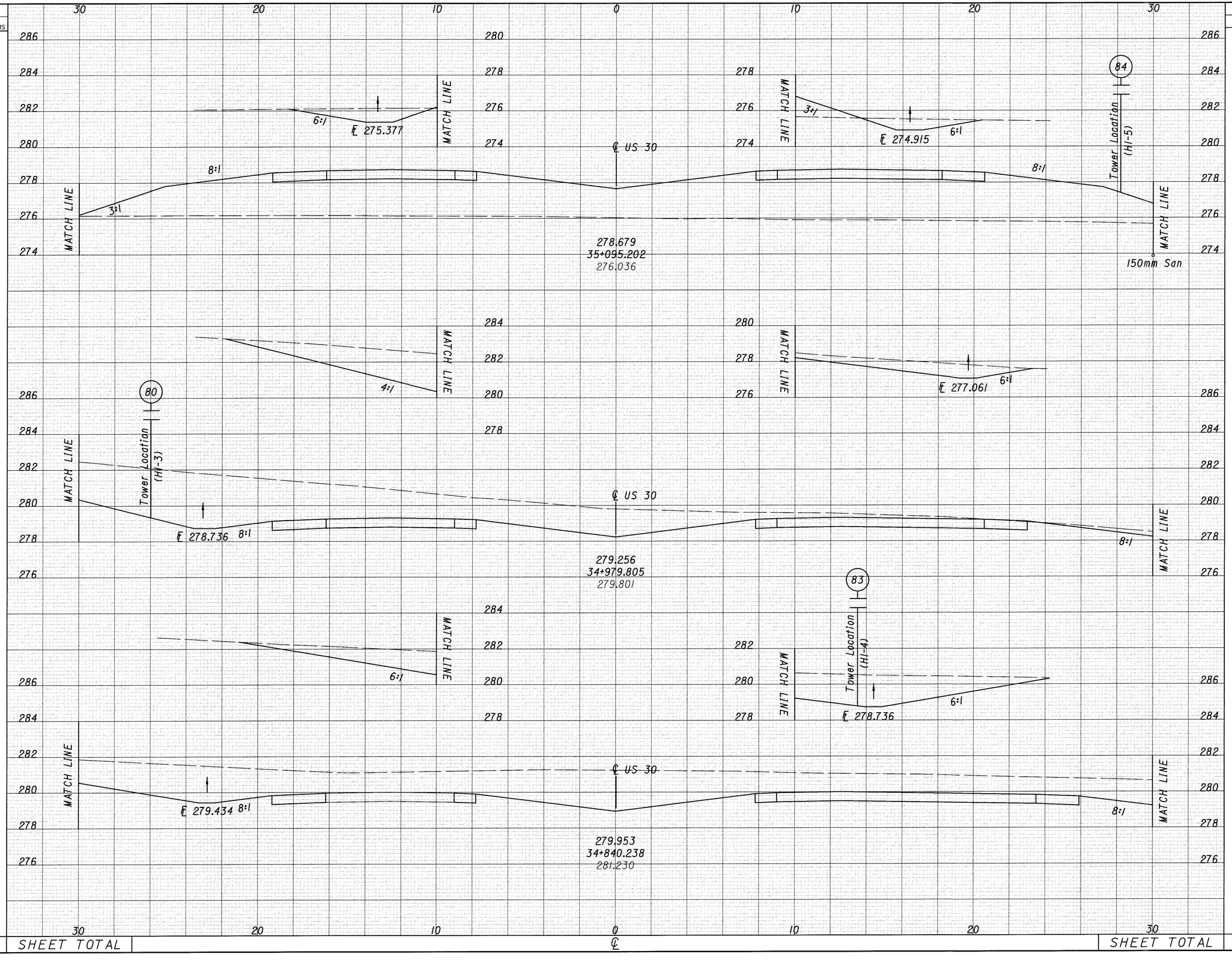
CHECKED AM

REST AREA LIGHTING TOWER CROSS SECTIONS US-30

STA 34+840.238 TO STA 35+095.202

WYA/CRA-30-28.009/0.000

1580AA
2116

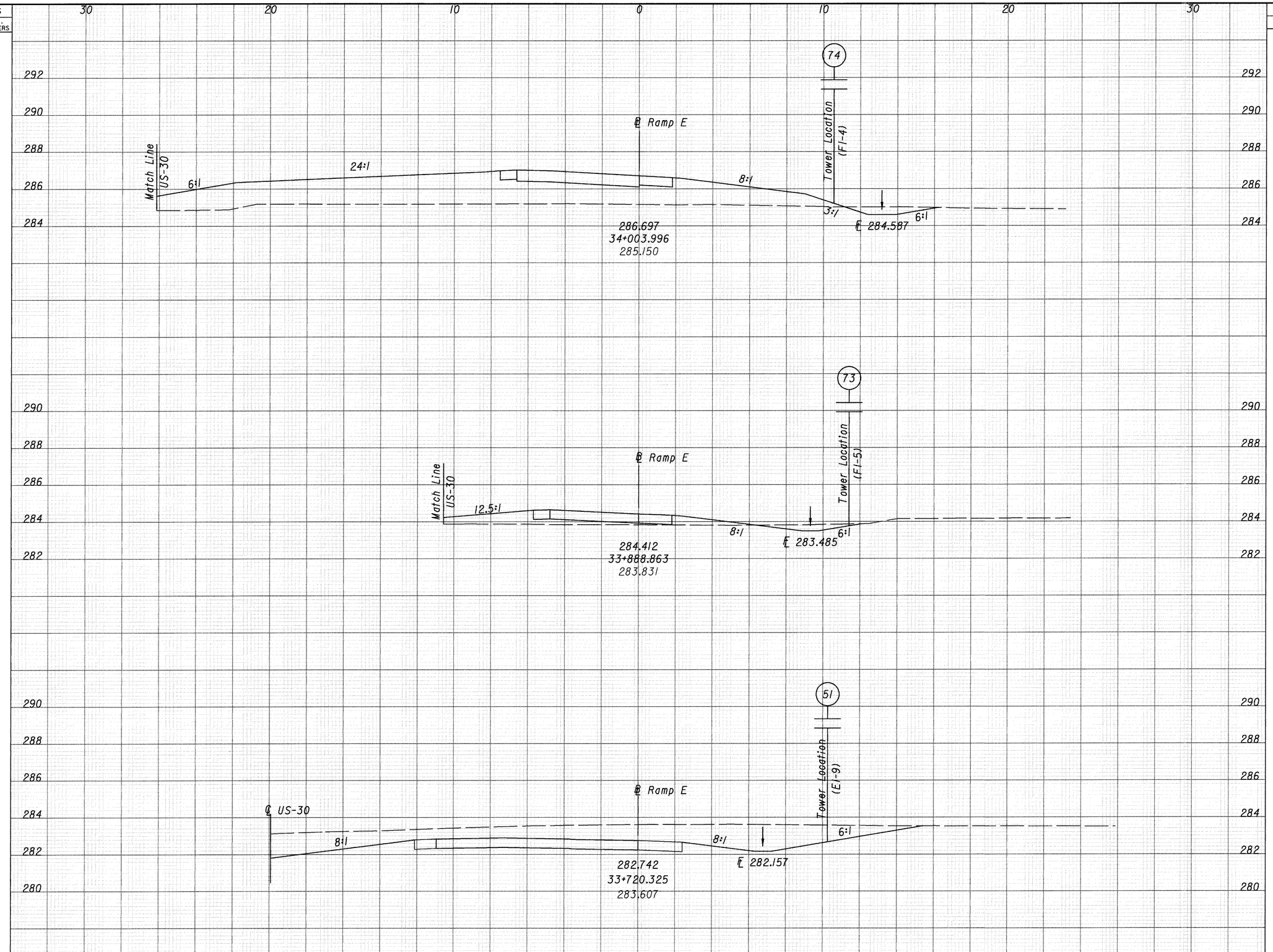


SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF

CHECKED AM



SHEET TOTAL

℄

SHEET TOTAL

REAST AREA LIGHTING TOWER CROSS SECTIONS
RAMP E STA 33+720.325 TO STA 34+003.996

WYA/CRA-30-28.009/0.000

1580AB
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF

CHECKED AM

30 20 10 0 10 20 30

294 292 290 288 286 284

76

Tower Location (F1-2)

℄ Ramp E

3:1 4:1 4:1 3:1

℄ 284.496

284.994
34+265.500
288.068

℄ 284.343

75

Tower Location (F1-3)

℄ Ramp E

6:1 8:1 8:1 4:1

℄ 285.804

286.208
34+148.797
288.474

℄ 285.511

SHEET TOTAL

℄

SHEET TOTAL

REST AREA LIGHTING TOWER CROSS SECTIONS
RAMP E STA 34+148.797 TO STA 34+265.500

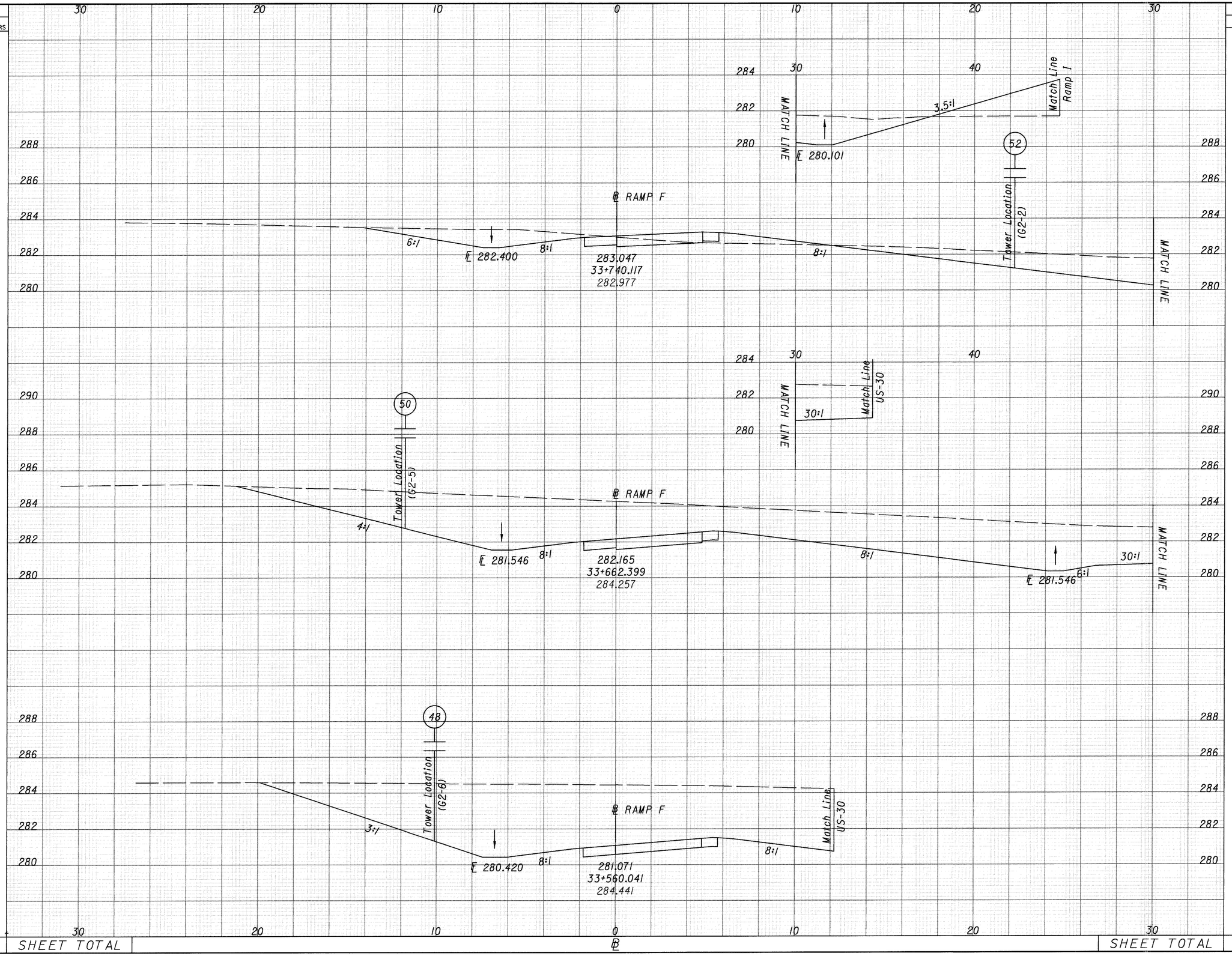
WYA/CRA-30-28.009/0.000

1580AC
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF
CHECKED AM



REST AREA LIGHTING TOWER CROSS SECTIONS
RAMP F STA 33+560.041 TO STA 33+740.117

WYA/CRA-30-28.009/0.000

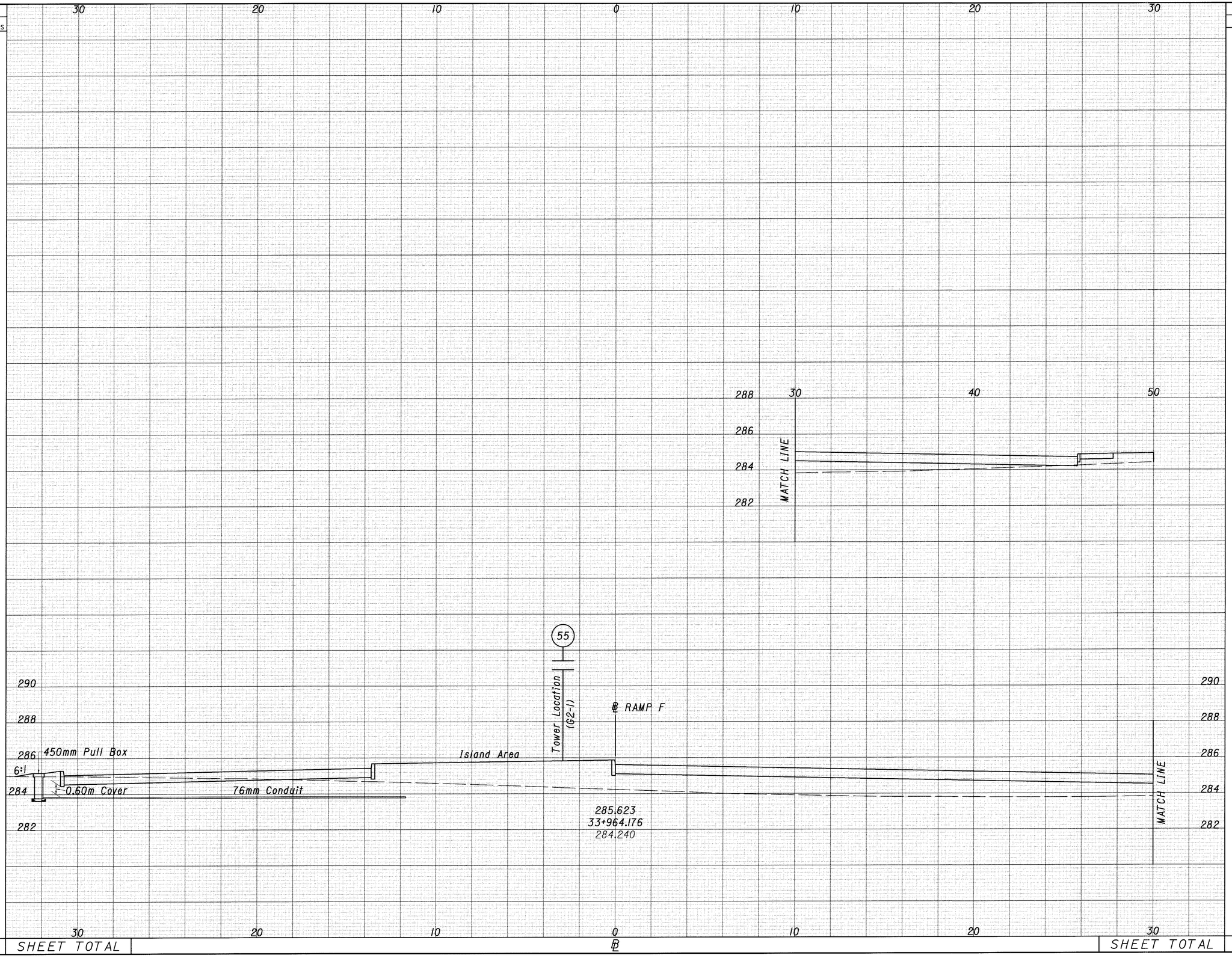
1580AD
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF

CHECKED AM



SHEET TOTAL

SHEET TOTAL

REST AREA LIGHTING TOWER CROSS SECTIONS

RAMP F STA 33+964.176

WYA/CRA-30-28.009/0.000

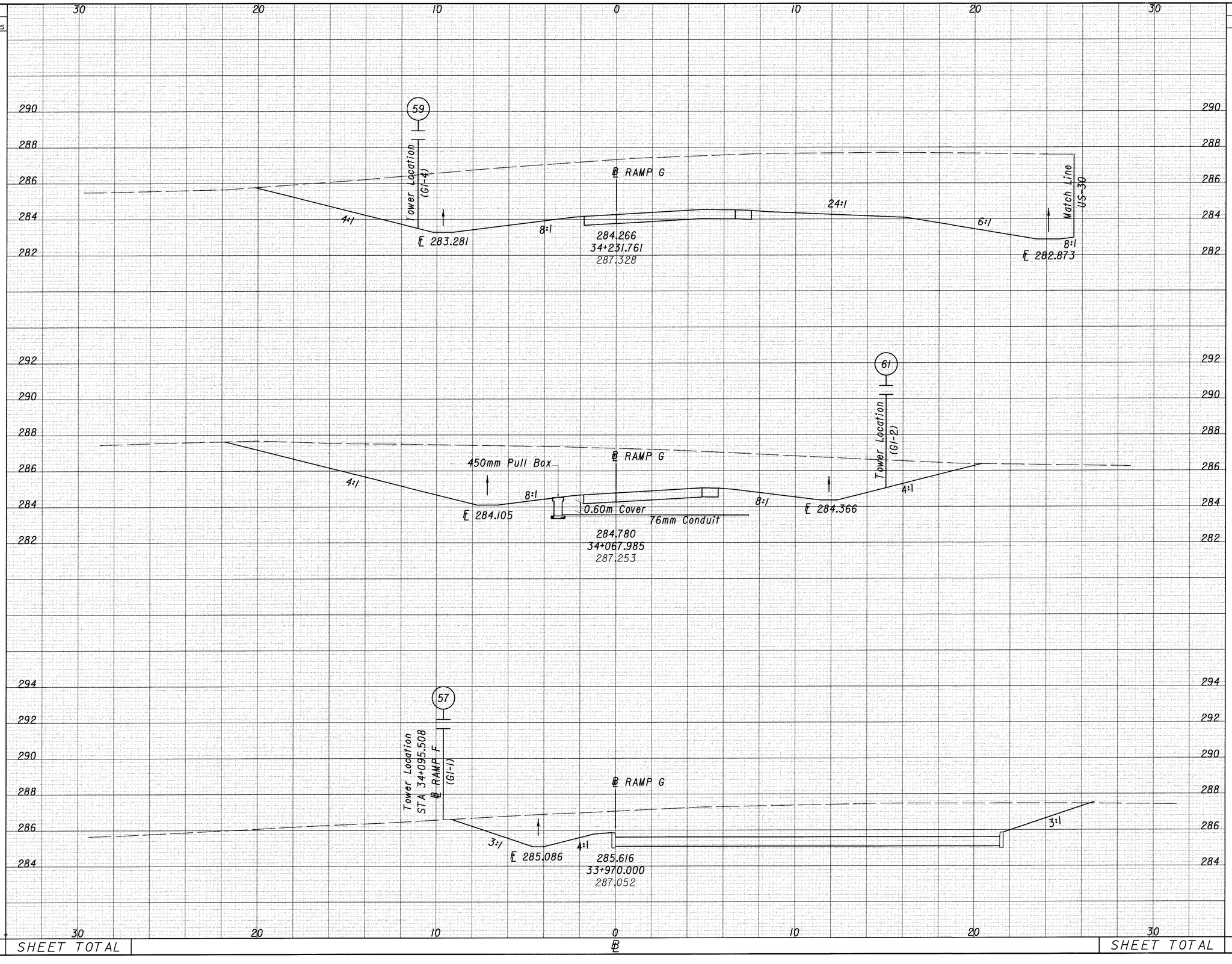
1580AE
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF

CHECKED AM



SHEET TOTAL

℄

SHEET TOTAL

REST AREA LIGHTING TOWER CROSS SECTIONS
RAMP G STA 33+970.000 TO STA 34+231.761

WYA/CRA-30-28.009/0.000

1580AF
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF

CHECKED AM

30 20 10 0 10 20 30

290
288
286
284
282

60

Tower Location (GI-5)

℄ RAMP G

Match Line US-30

4:1 8:1 6:1 6:1

℄ 282.770

283.943
34+334.951
284.589

℄ 283.745

30 20 10 0 10 20 30

SHEET TOTAL ℄ SHEET TOTAL

REST AREA LIGHTING TOWER CROSS SECTIONS
RAMP G STA 34+334.951

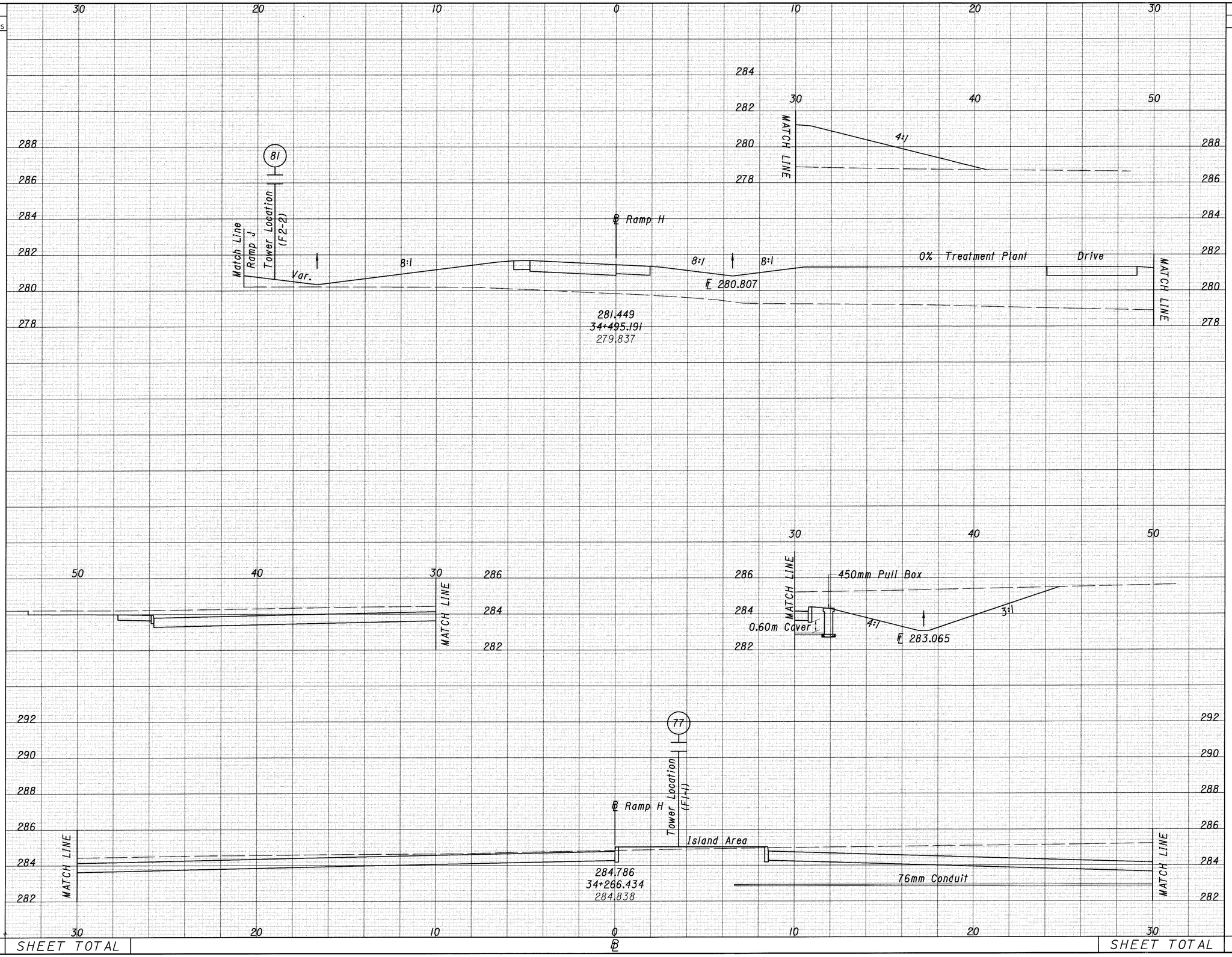
WYA/CRA-30-28.009/0.000

1580AG
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF
CHECKED AM



SHEET TOTAL

SHEET TOTAL

REST AREA LIGHTING TOWER CROSS SECTIONS
RAMP H STA 34+266.434 TO STA 34+495.191

WYA / CRA-30-28.009 / 0.000

1580AH
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF

CHECKED AM

30 20 10 0 10 20 30

286 284 282 280 278

82

℄ Ramp H

Tower Location (F2-3)

8:1 8:1 3:1

6:1 6:1

℄ 279.276

280.907
34+549.546
279.510

℄ 277.999

30 20 10 0 10 20 30

SHEET TOTAL ℄ SHEET TOTAL

REST AREA LIGHTING TOWER CROSS SECTIONS
RAMP H STA 34+549.546

WYA/CRA-30-28.009/0.000

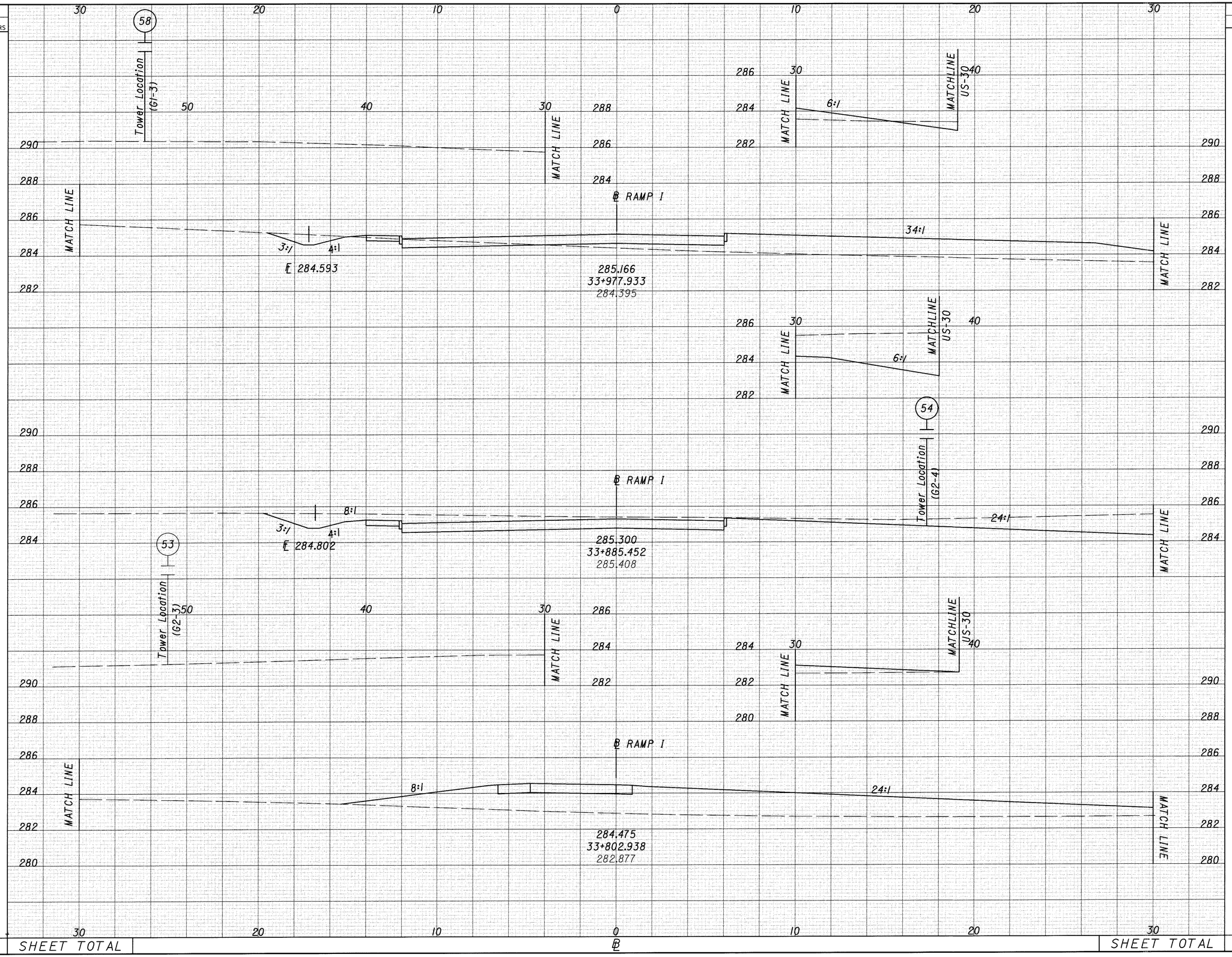
1580A1
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF

CHECKED AM



SHEET TOTAL ℄ SHEET TOTAL

REST AREA LIGHTING TOWER CROSS SECTIONS
RAMP I STA 33+802.938 TO STA 33+977.933

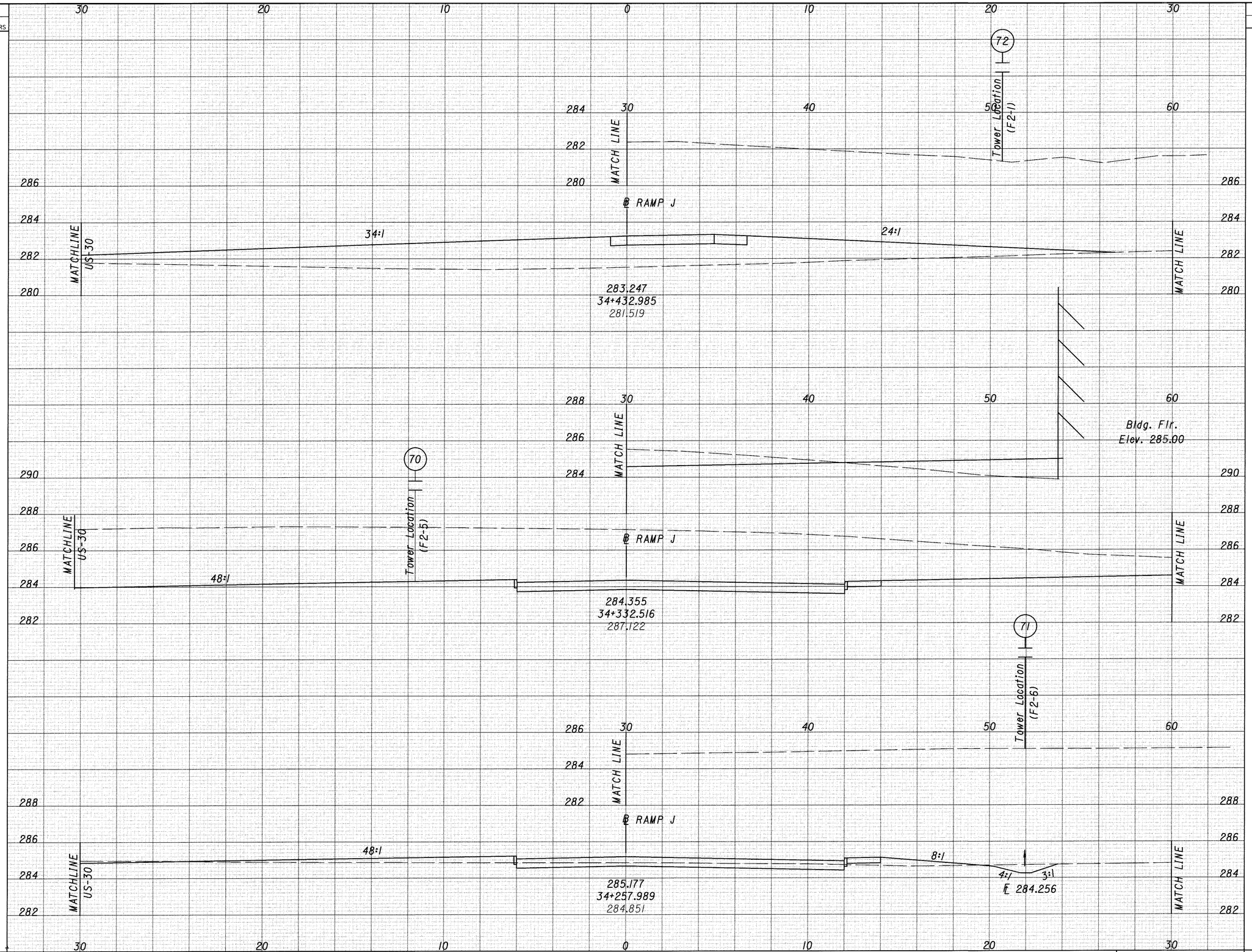
WYA/CRA-30-28.009/0.000

1580AJ
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF
CHECKED AM



REST AREA LIGHTING TOWER CROSS SECTIONS
RAMP J STA 34+257.989 TO STA 34+432.985

WYA/CRA-30-28.009/0.000

1580AK
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF
CHECKED AM

REST AREA LIGHTING TOWER CROSS SECTIONS US-30
WYA/CRA-30-28.009/0.000
STA 32+703.856 TO STA 33+030.503

1580AL
2116

30 20 10 0 10 20 30

Tower Location (E1-4) — 44
MATCH LINE — 6:1 — 40 30
℄ 273.646 — MATCH LINE — 8:1 — 3:1
℄ US 30
275.926
33+030.503
273.662
℄ 271.945 — MATCH LINE — 6:1 — 30 40
8:1 — 3:1 — MATCH LINE

Tower Location (E1-2) — 42
MATCH LINE — 3:1 — 40 30
MATCH LINE — 6:1 — 30 40

℄ 271.604 — MATCH LINE — 8:1 — 3:1
℄ US 30
273.744
32+750.751
274.182
8:1 — 3:1 — ℄ 272.045 — MATCH LINE

℄ 271.041 — MATCH LINE — 3:1 — 40 30
MATCH LINE — 6:1 — ℄ 271.012 — 30 40 — 41
Tower Location (E1-1)

℄ US 30
273.510
32+703.856
272.118
MATCH LINE — 3:1 — 3:1 — MATCH LINE

270 272 274 276 278 280 282

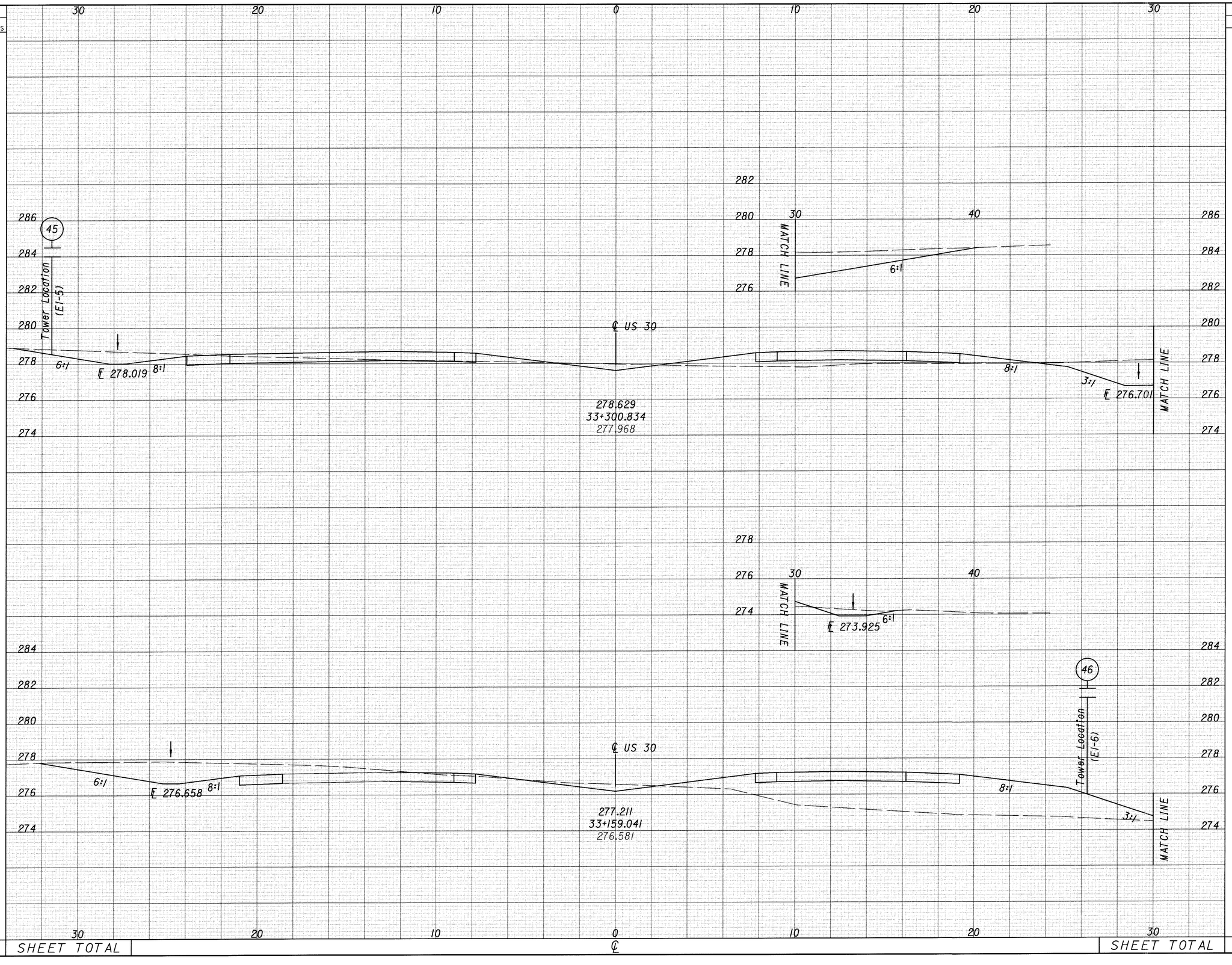
SHEET TOTAL ℄ SHEET TOTAL

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF

CHECKED AM



SHEET TOTAL ℄ SHEET TOTAL

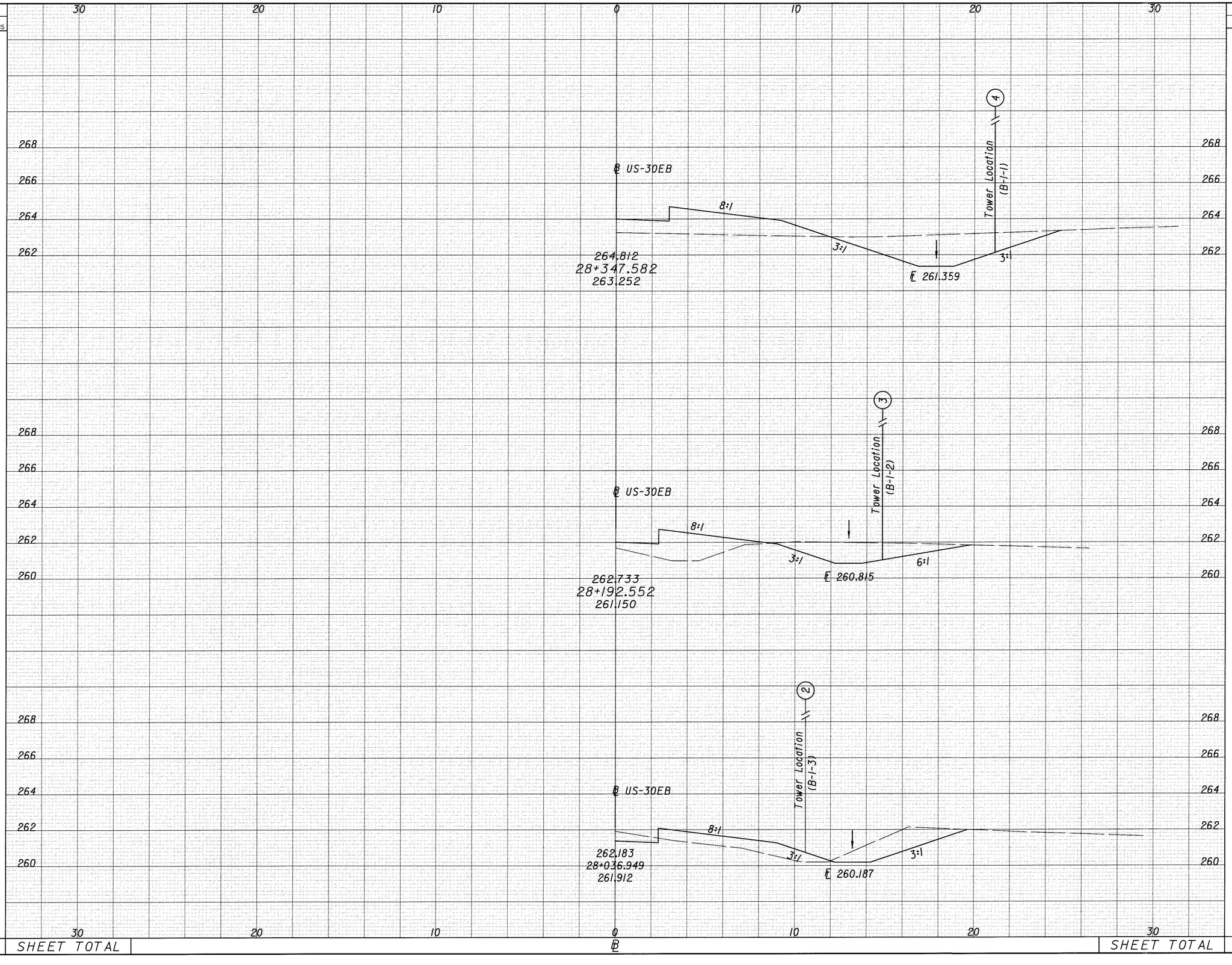
REST AREA LIGHTING TOWER CROSS SECTIONS US-30

STA 33+159.041 TO STA 33+300.834

WYA/CRA-30-28.009/0.000

1580AM
2116

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JGB
CHECKED EHF

LIGHTING TOWER CROSS SECTIONS US-30EB
STA 28+036.949 TO STA 28+347.582

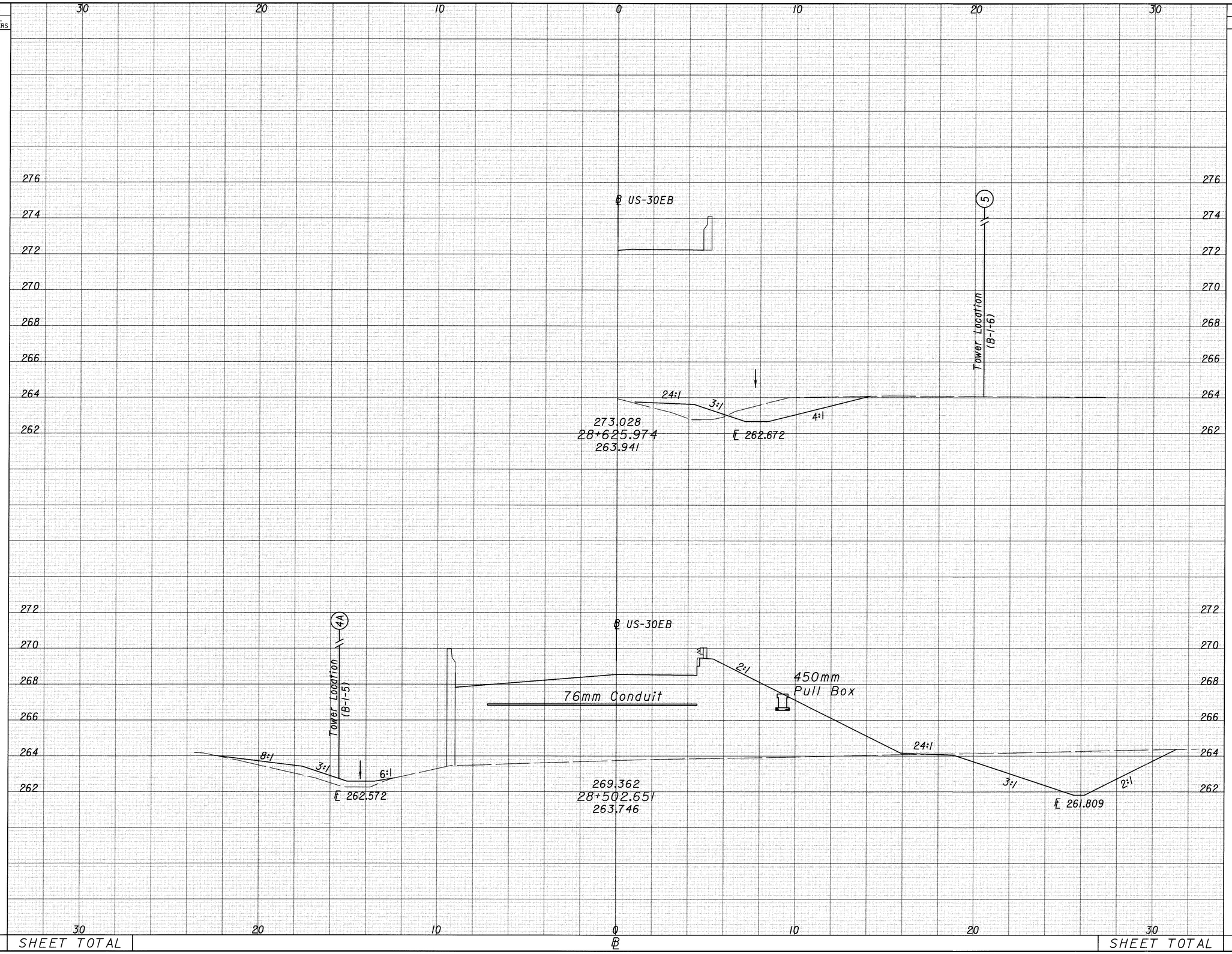
WYA/CRA-30-28.009/0.000

1580B
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JOB
CHECKED EHF



LIGHTING TOWER CROSS SECTIONS US-30EB
STA 28+502.651 TO STA 28+625.974

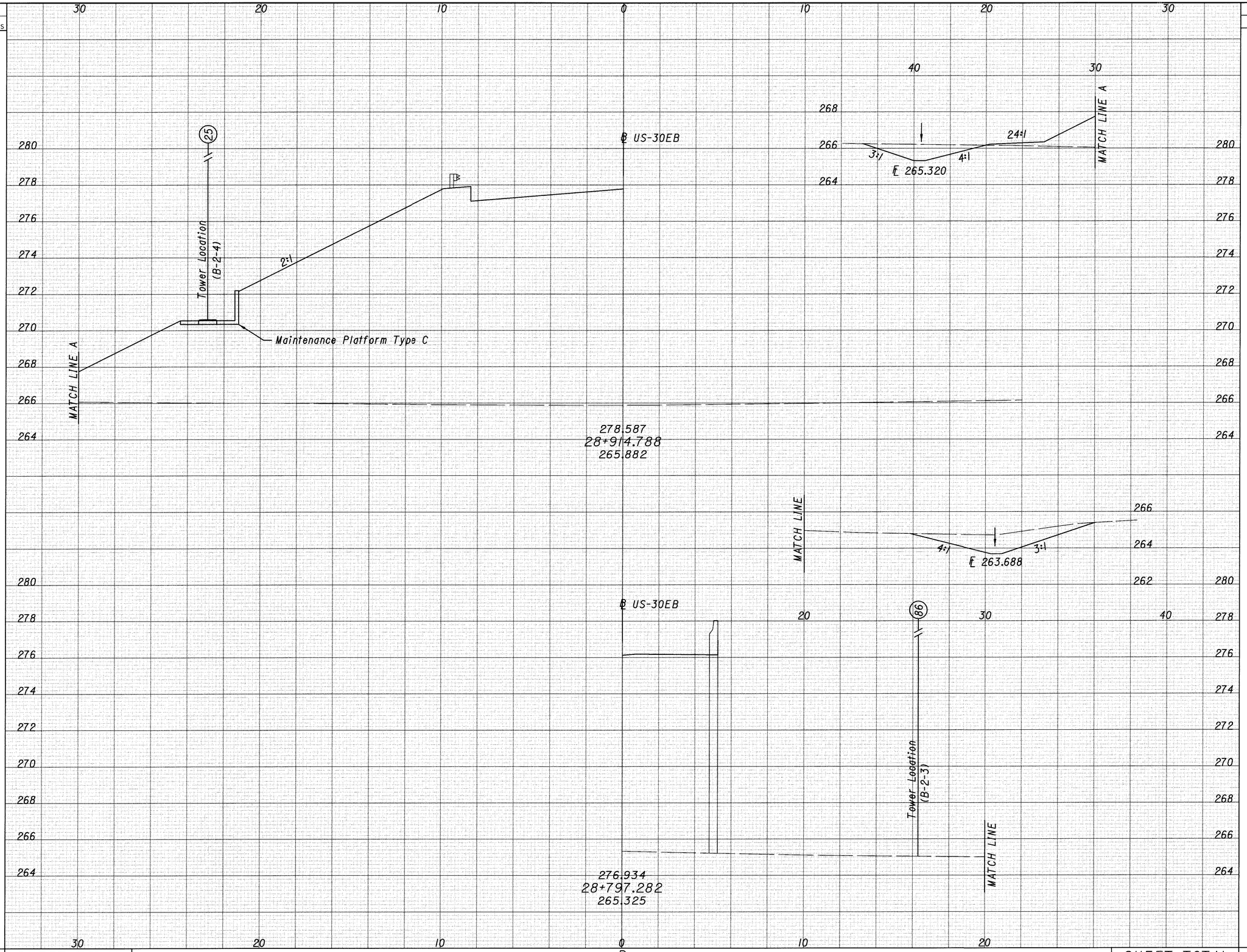
WYA/CRA-30-28.009/0.000

15800
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JGB
CHECKED EHF



SHEET TOTAL

℄

SHEET TOTAL

LIGHTING TOWER CROSS SECTIONS US-30EB
STA 28+797.282 TO STA 28+914.788

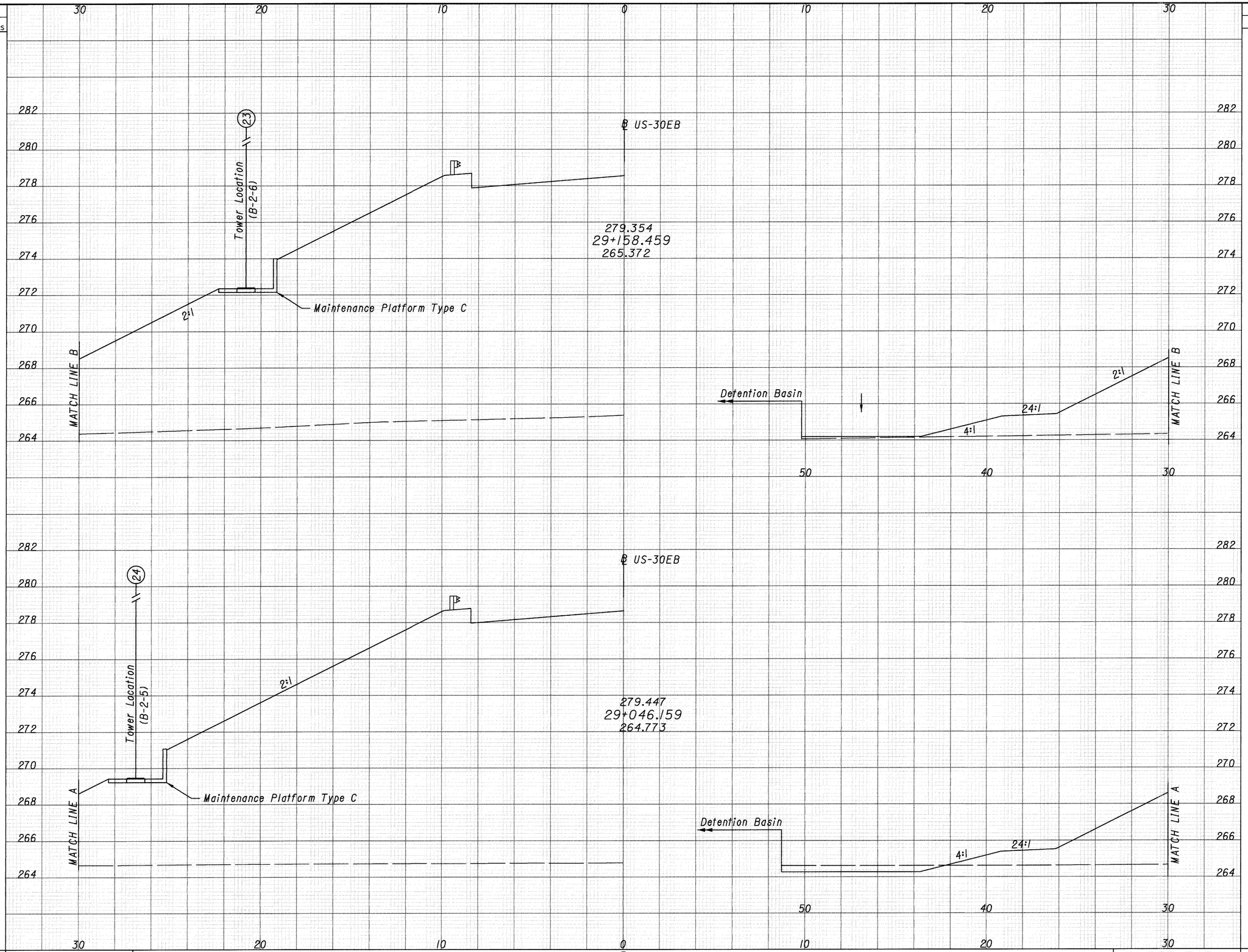
WYA / CRA-30-28.009 / 0.000

1580D
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JGB
CHECKED EHF



SHEET TOTAL ℄ SHEET TOTAL

LIGHTING TOWER CROSS SECTIONS US-30EB
STA 29+046.159 TO STA 29+158.459

WYA / CRA-30-28.009 / 0.000

1580E
2116

SEEDING	
END WIDTH	SQ. METERS

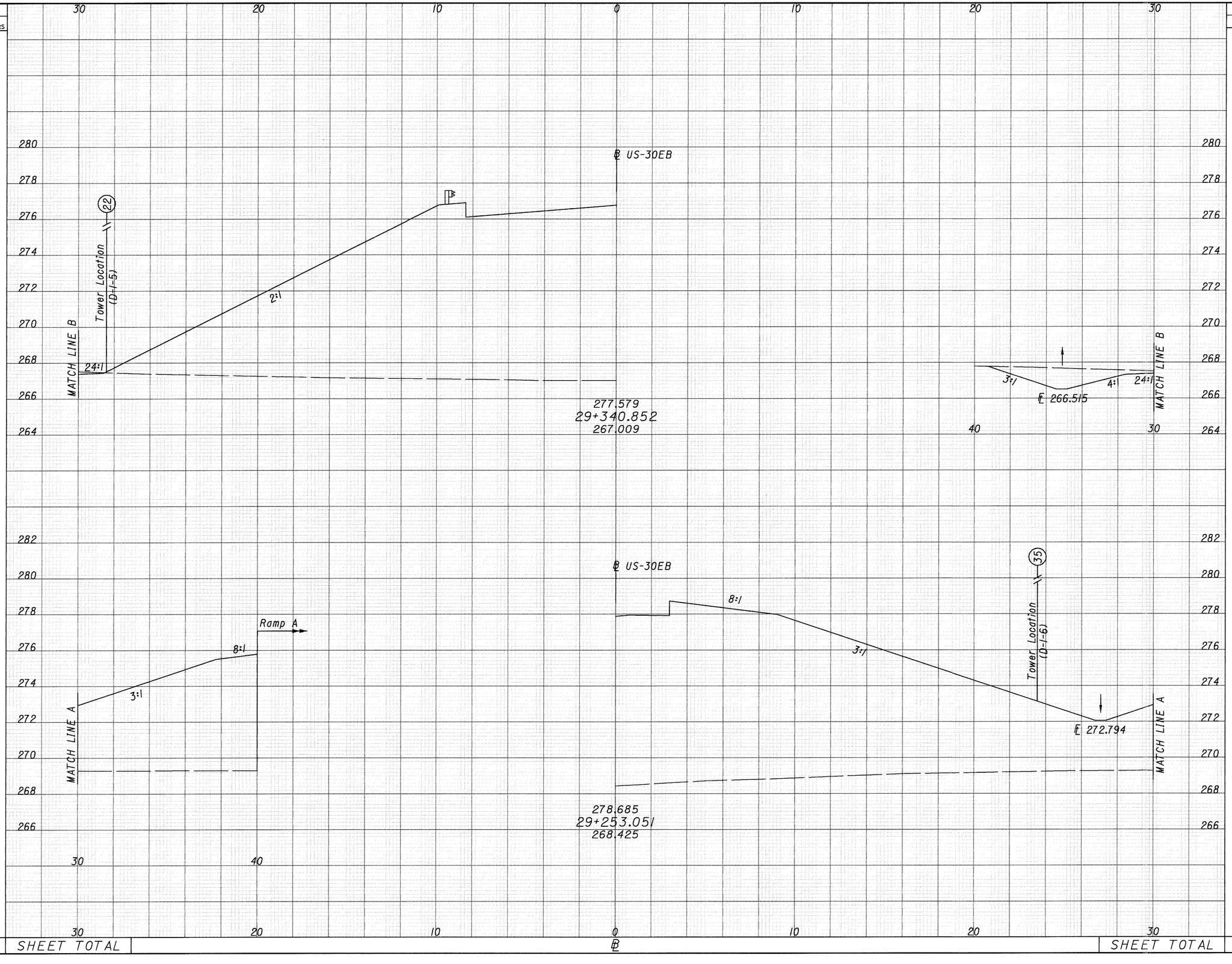
END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JGB
CHECKED EHF

LIGHTING TOWER CROSS SECTIONS US-30EB
STA 29+253.051 TO STA 29+340.852

WYA/CRA-30-28.009/0.000

1580F
2116

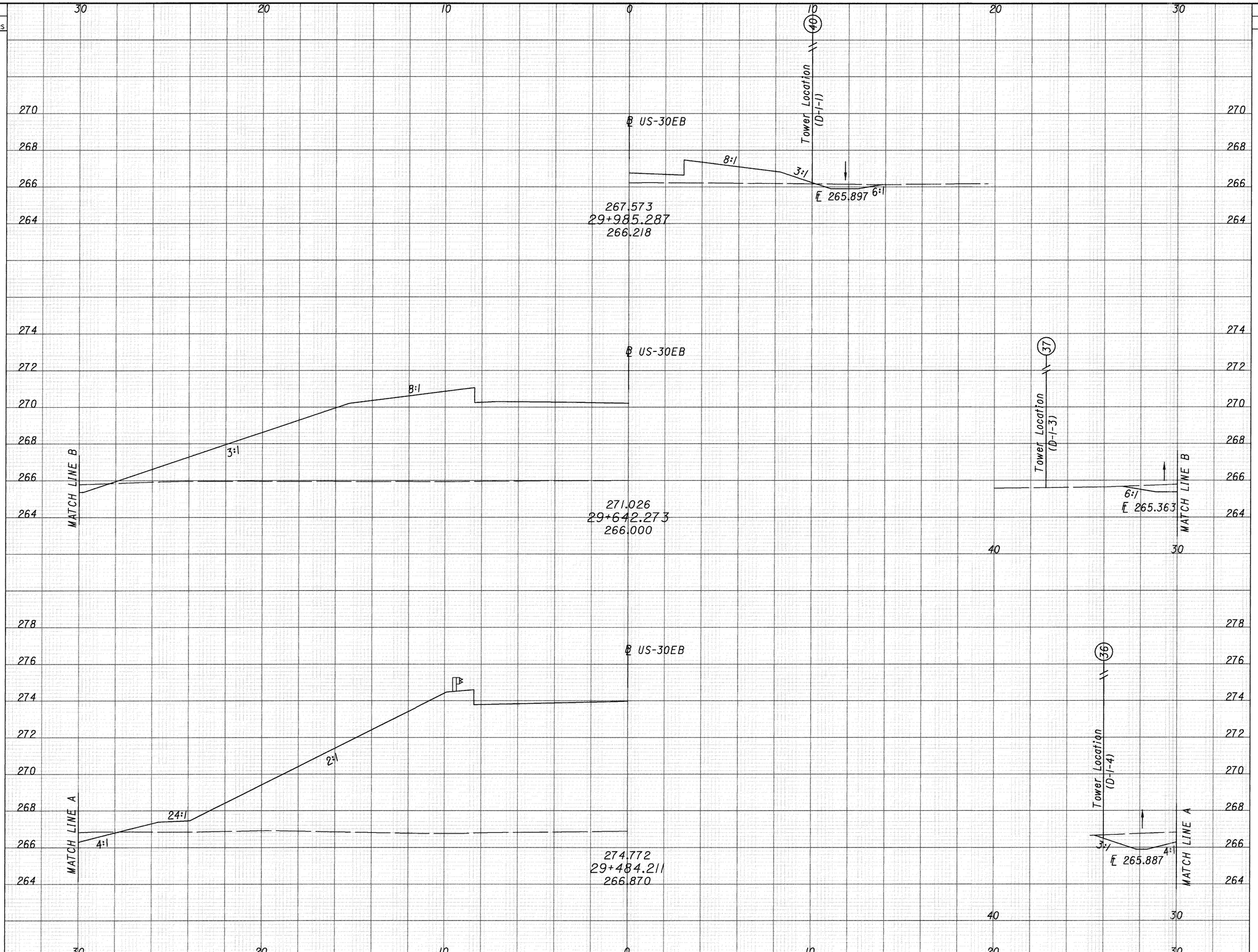


SHEET TOTAL ℄ SHEET TOTAL

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JOB
CHECKED EHF



SHEET TOTAL ℄ SHEET TOTAL

LIGHTING TOWER CROSS SECTIONS US-30EB

STA 29+484.211 TO STA 29+985.287

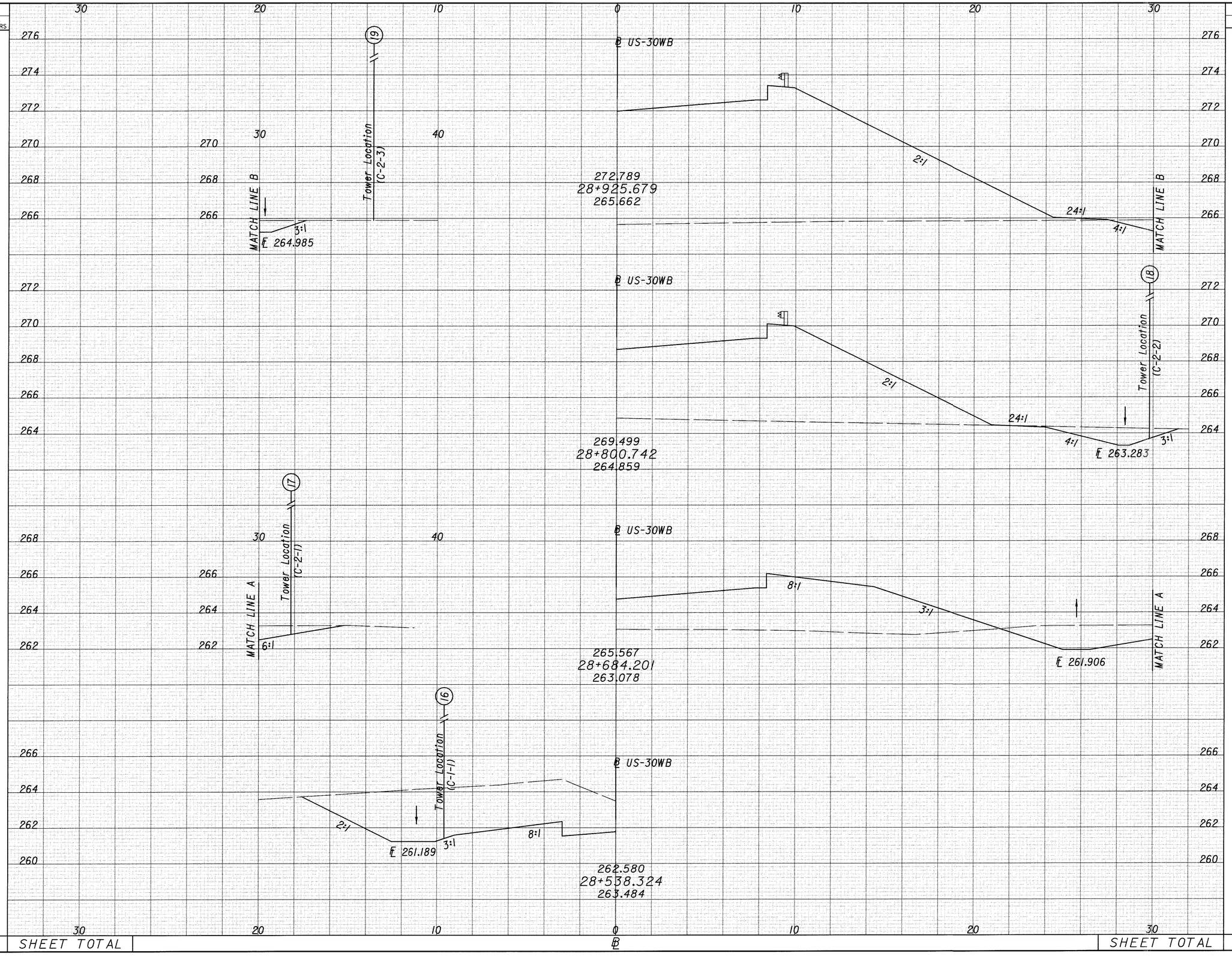
WYA / CRA-30-28.009 / 0.000

1580G
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED dGB
CHECKED EF



SHEET TOTAL ℄ SHEET TOTAL

LIGHTING TOWER CROSS SECTIONS US-30WB

STA 28+070.700 TO STA 28+925.679

WYA/CRA-30-28.009/0.000

1580H
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JGB
CHECKED EF

30 20 10 0 10 20 30

276 274 272 270 268 266

Tower Location (29) (A-1-2)

8:1 3:1 6:1

℄ 267.172

℄ Ramp A

271.125
28+854.422
267.651

278 276 274 272 270 268 266

Tower Location (28) (A-1-1)

℄ Ramp A

8:1 6:1

℄ 267.736

268.265
28+660.184
267.947

30 20 10 0 10 20 30

SHEET TOTAL ℄ SHEET TOTAL

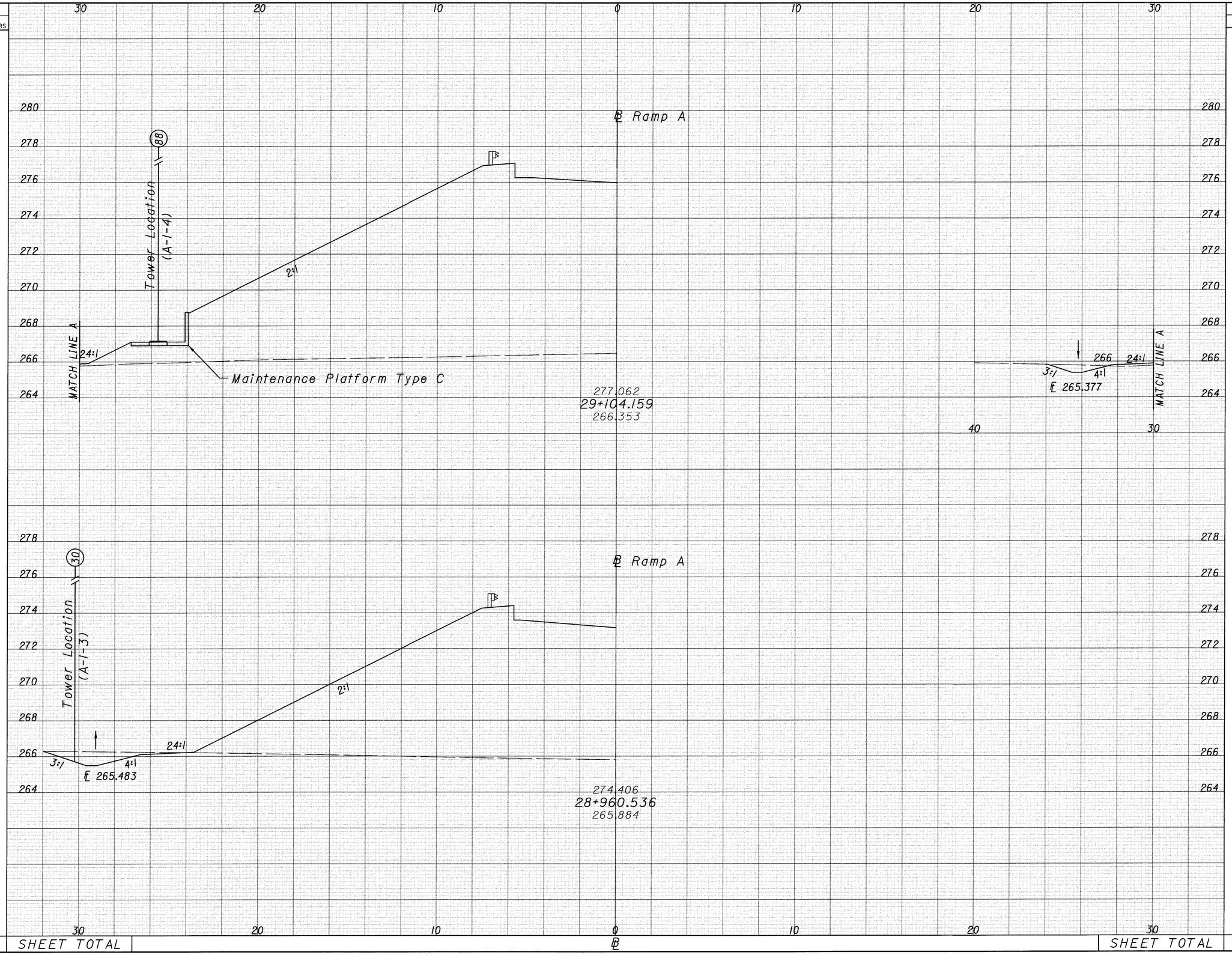
LIGHTING TOWER CROSS SECTIONS RAMP A
STA 28+660.000 TO STA 28+854.422

WYA/CRA-30-28.009/0.000

15801
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL



SHEET TOTAL ℄ SHEET TOTAL

CALCULATED JGB
CHECKED EF

LIGHTING TOWER CROSS SECTIONS RAMP A
STA 28+960.536 TO STA 29+104.159

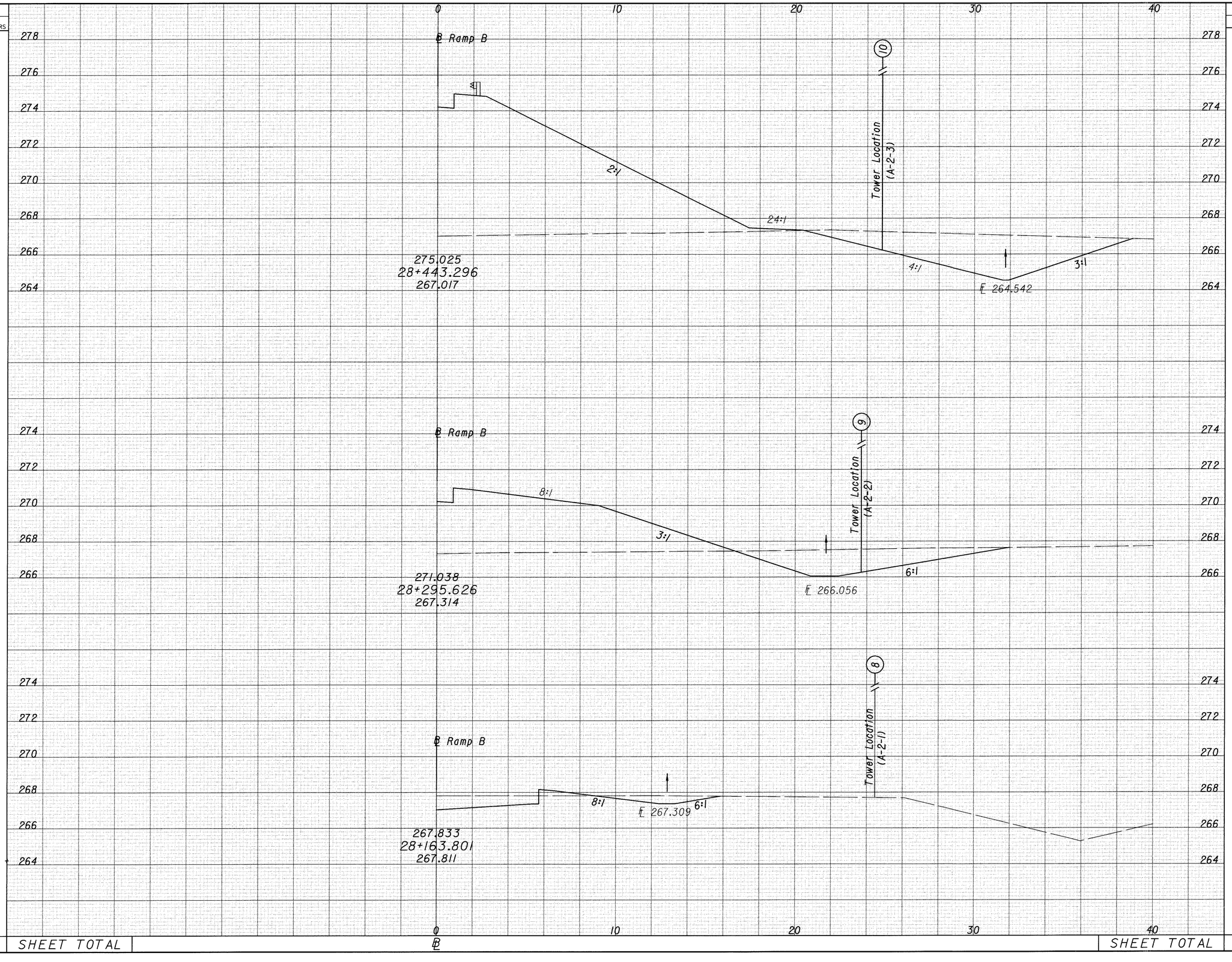
WYA/CRA-30-28.009/0.000

15800
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JDB
CHECKED EF



SHEET TOTAL

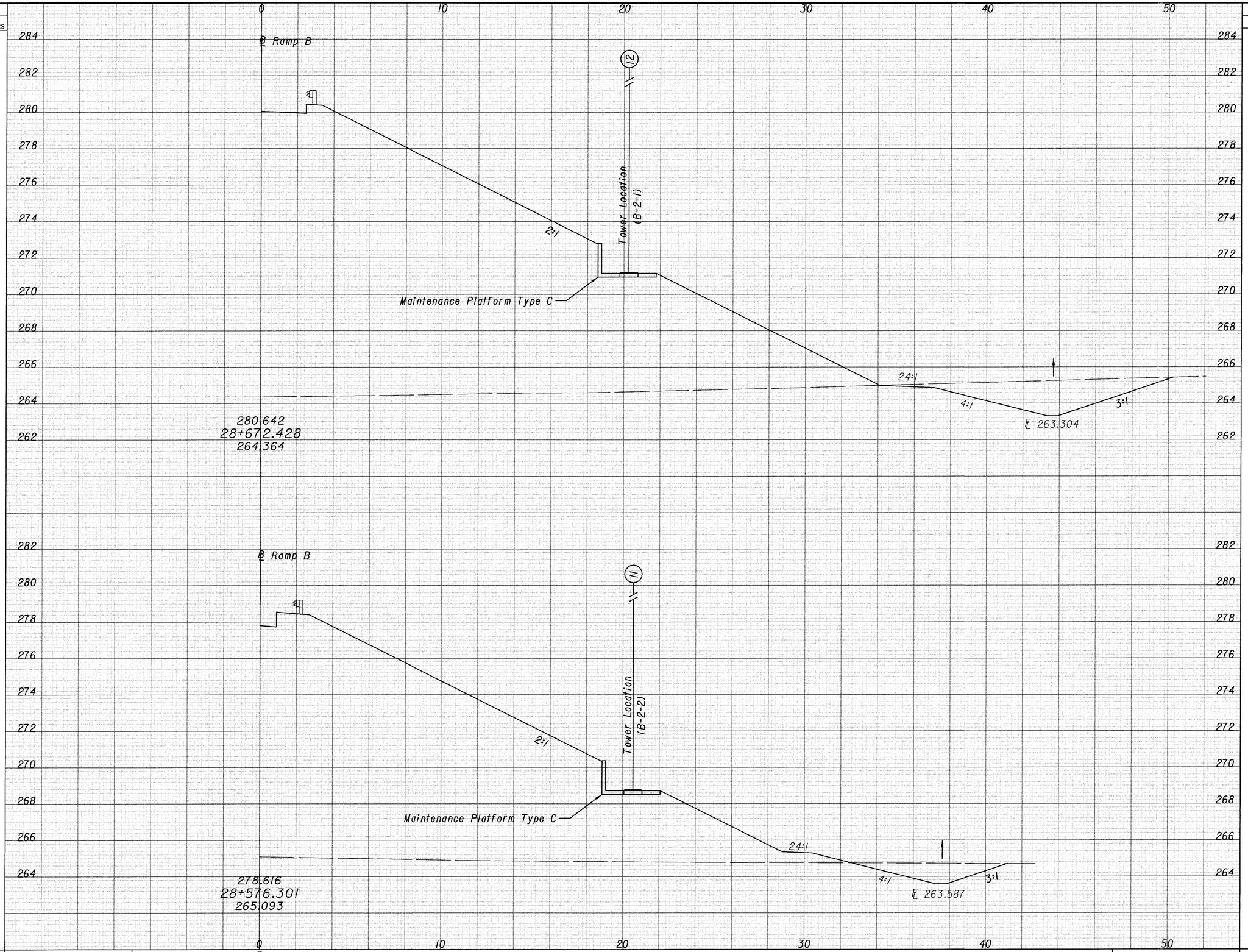
SHEET TOTAL

LIGHTING TOWER CROSS SECTIONS RAMP B
STA 28+163.801 TO STA 28+443.296

WYA/CRA-30-28.009/0.000

1580K
2116

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JOB
CHECKED EF

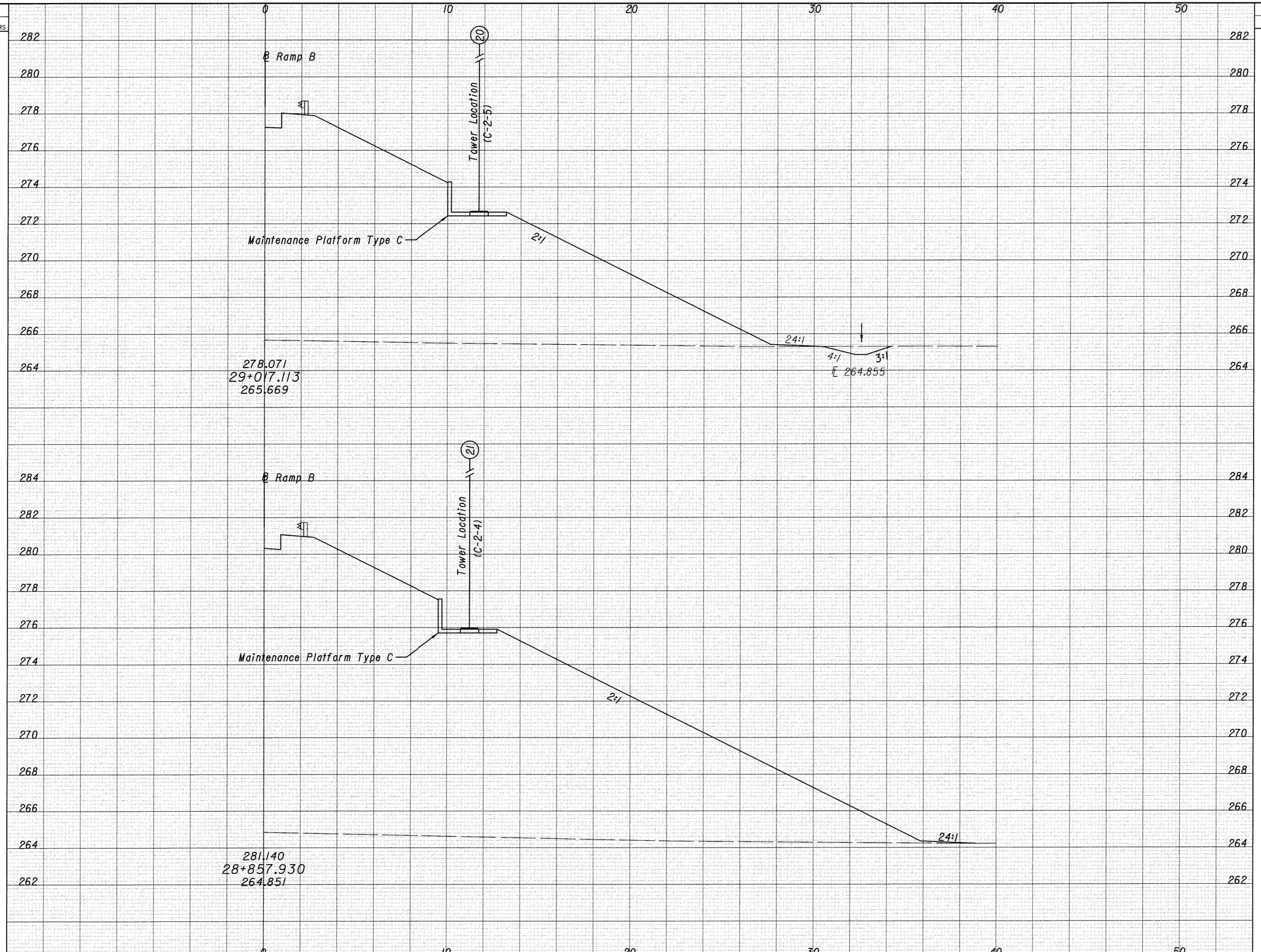
LIGHTING TOWER CROSS SECTIONS RAMP B
STA 28+576.301 TO STA 28+672.428

WYA/CRA-30-28.009/0.000

1580L
2116

SHEET TOTAL ℄ SHEET TOTAL

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JGB
CHECKED EF

LIGHTING TOWER CROSS SECTIONS RAMP B
STA 28+857.930 TO STA 29+017.113

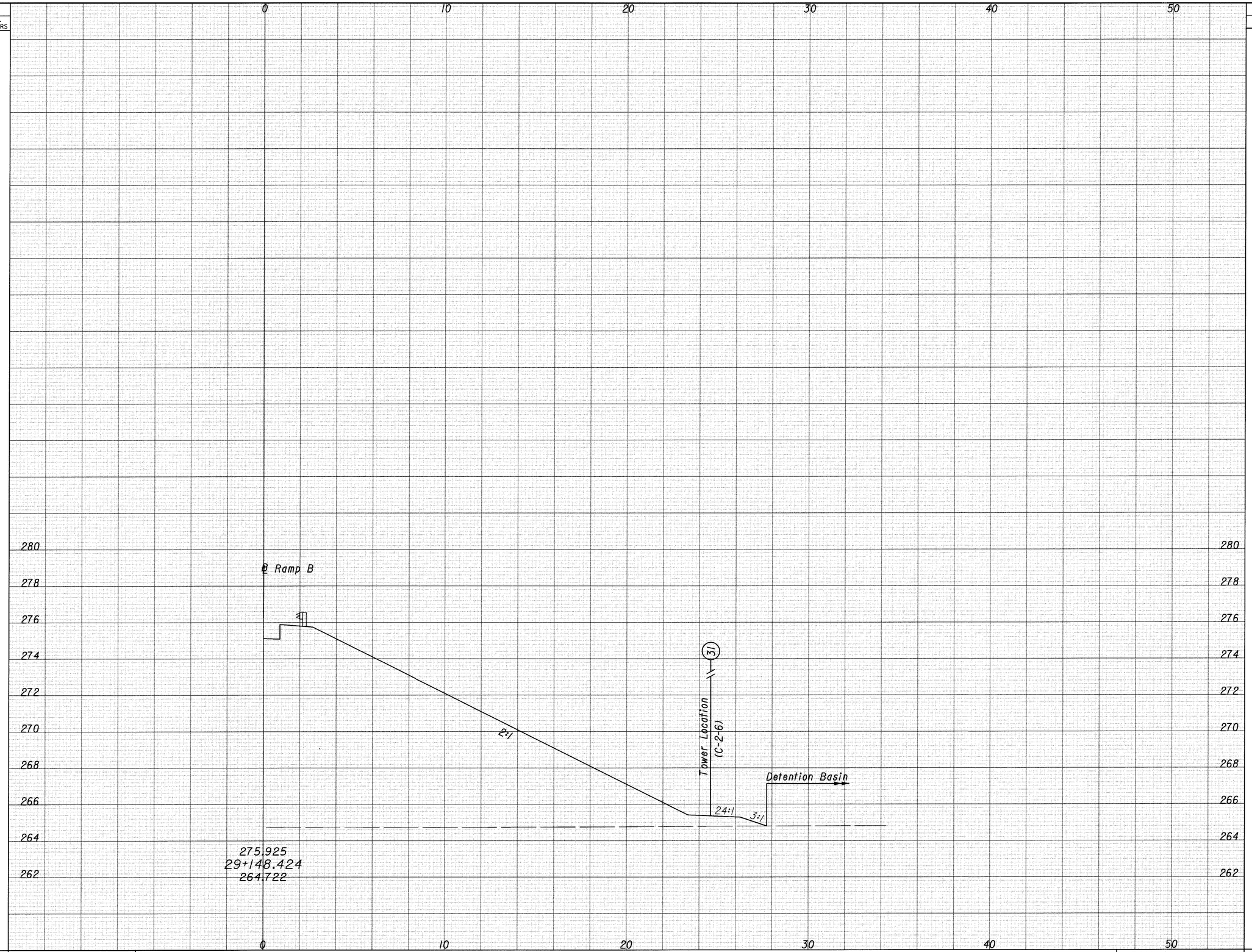
WYA/CRA-30-28.009/0.000

1580M
2116

SHEET TOTAL ℄ SHEET TOTAL

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL



SHEET TOTAL

℄

SHEET TOTAL

CALCULATED JGB

CHECKED EF

LIGHTING TOWER CROSS SECTIONS RAMP B

STA 29+148.424

WYA/CRA-30-28.009/0.000

1580N 2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

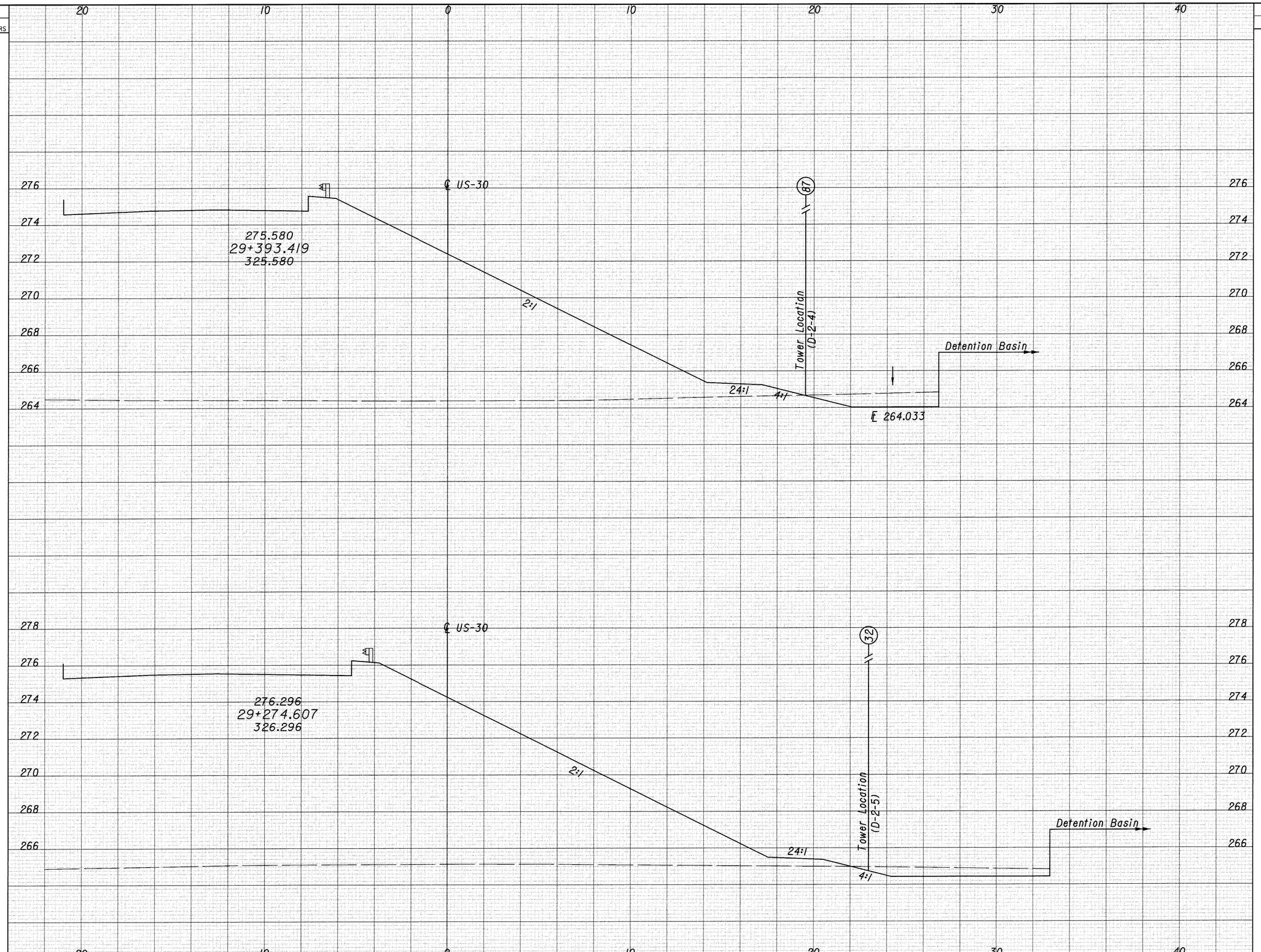
CALCULATED JGB

CHECKED EF

LIGHTING TOWER CROSS SECTIONS US-30
STA 29+274.607 TO STA 29+393.419

WYA / CRA-30-28.009 / 0.000

15800
2116



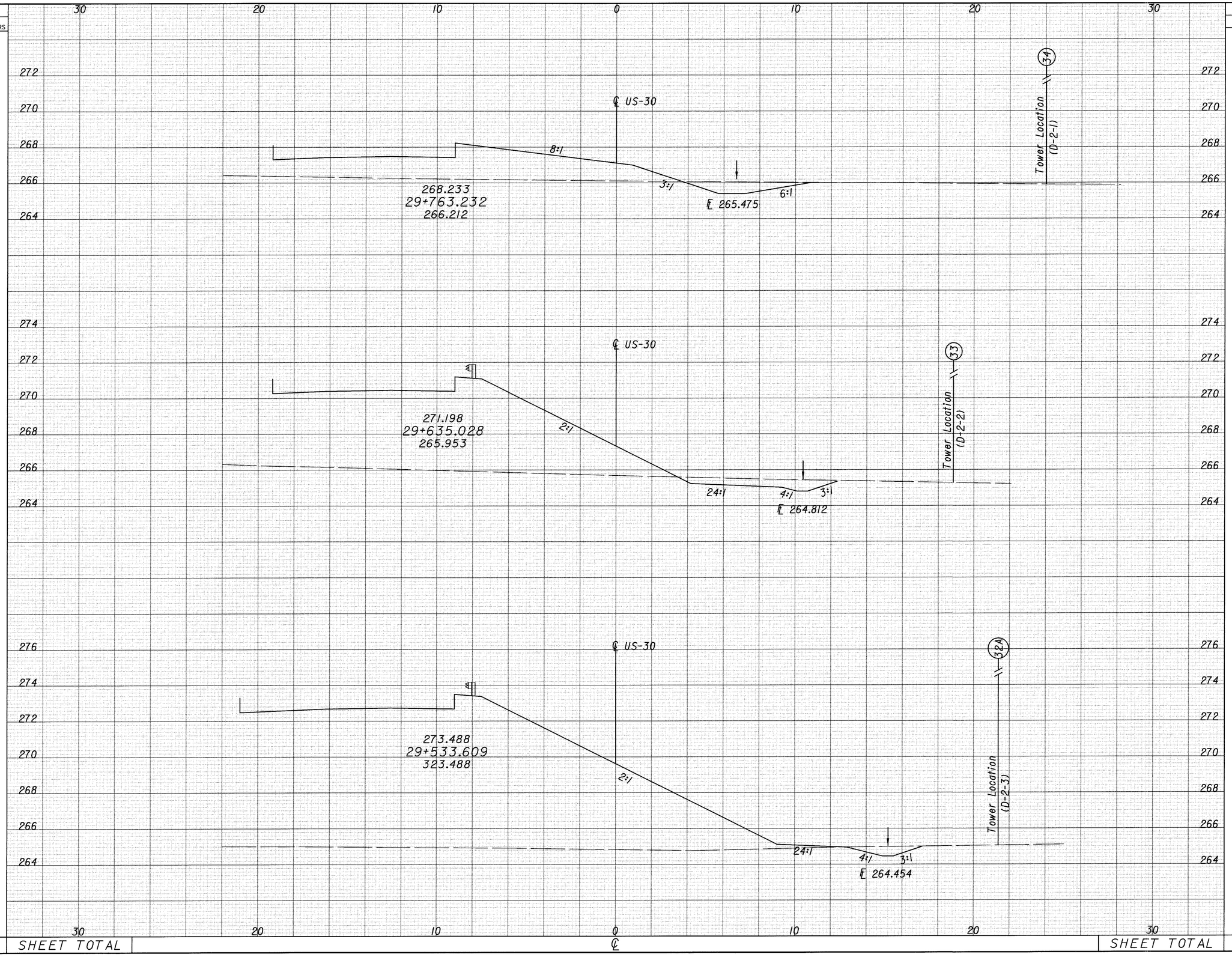
SHEET TOTAL ℄ SHEET TOTAL

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JCB

CHECKED AM



LIGHTING TOWER CROSS SECTIONS US-30

STA 29+533.609 TO STA 29+763.232

WYA / CRA-30-28.009 / 0.000

1580P
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JDB

CHECKED EF

40 30 20 10 0 10

274 272 270 268 266 264 262

Tower Location (D-1-2) (39)

℄ 266.425

3:1 3:1 8:1 8:1

℄ US-30

268.284
30+107.230
267.628

Tower Location (D-2-6) (38)

℄ 265.535

6:1 3:1 8:1 8:1

℄ US-30

266.961
29+870.021
266.524

40 30 20 10 0 10

SHEET TOTAL ℄ SHEET TOTAL

LIGHTING TOWER CROSS SECTIONS US-30

STA 28+870.021 TO STA 30+107.230

WYA / CRA-30-28.009 / 0.000

15800
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JGB

CHECKED EF

30 20 10 0 10 20

274 272 270 268 266 264

(7) Tower Location (A-1-7)

℄ 266.840

6:1 8:1

267.825

Accel. Lane Ramp B

℄ US-23

12+688.703
266.927

(6) Tower Location (A-1-6)

℄ 267.800

6:1 8:1

268.580

Accel. Lane Ramp B

℄ US-23

12+528.536
267.747

(27) Tower Location (A-1-5)

MATCH LINE A

℄ 267.678

3:1 6:1

℄ US-23

269.063

Decel. Lane Ramp A

MATCH LINE A

12+417.438
268.938

SHEET TOTAL ℄ SHEET TOTAL

LIGHTING TOWER CROSS SECTIONS US-23
STA 12+417.438 TO STA 12+688.703

WYA / CRA-30-28.009 / 0.000

1580R
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JGB

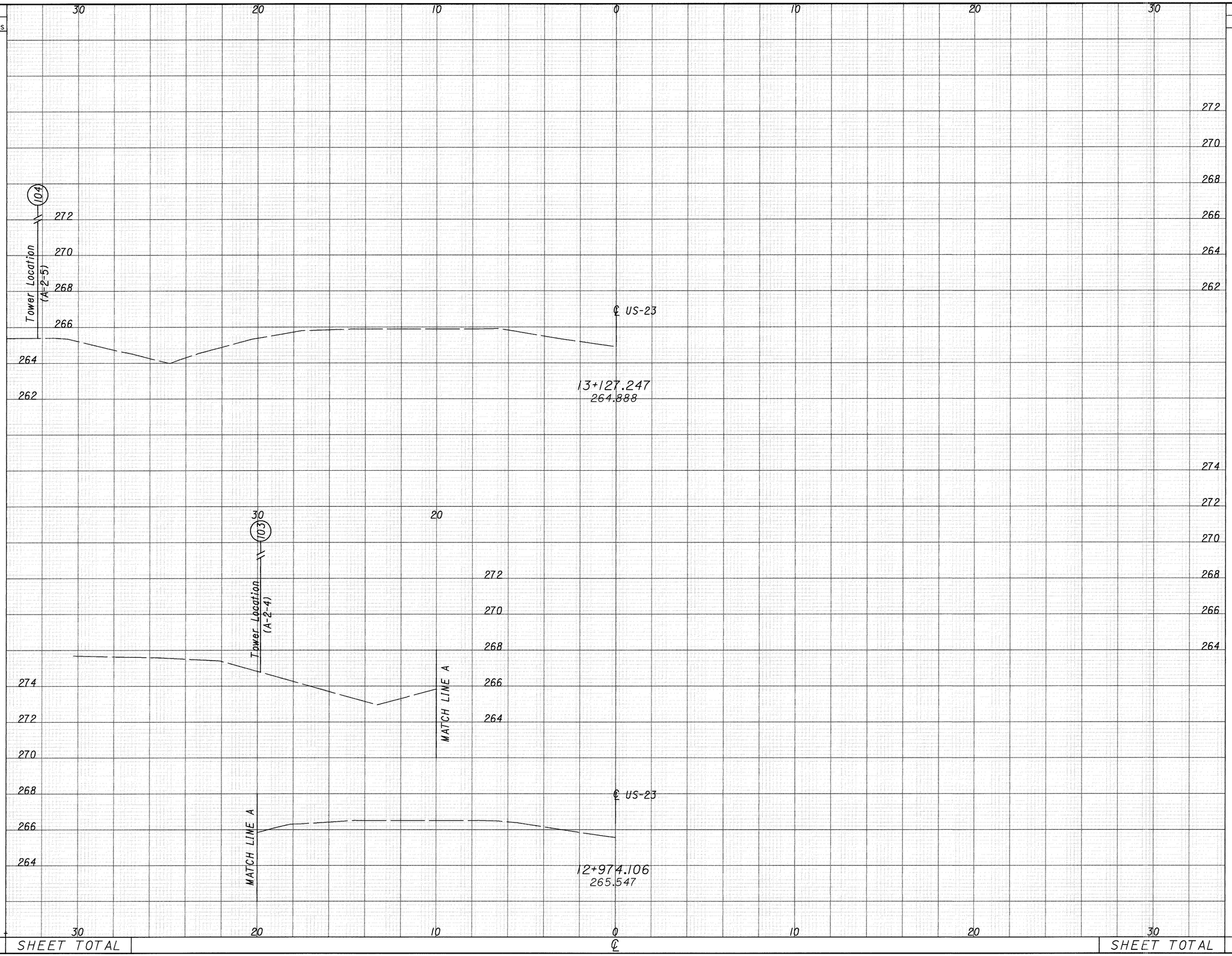
CHECKED EF

LIGHTING TOWER CROSS SECTIONS US-23

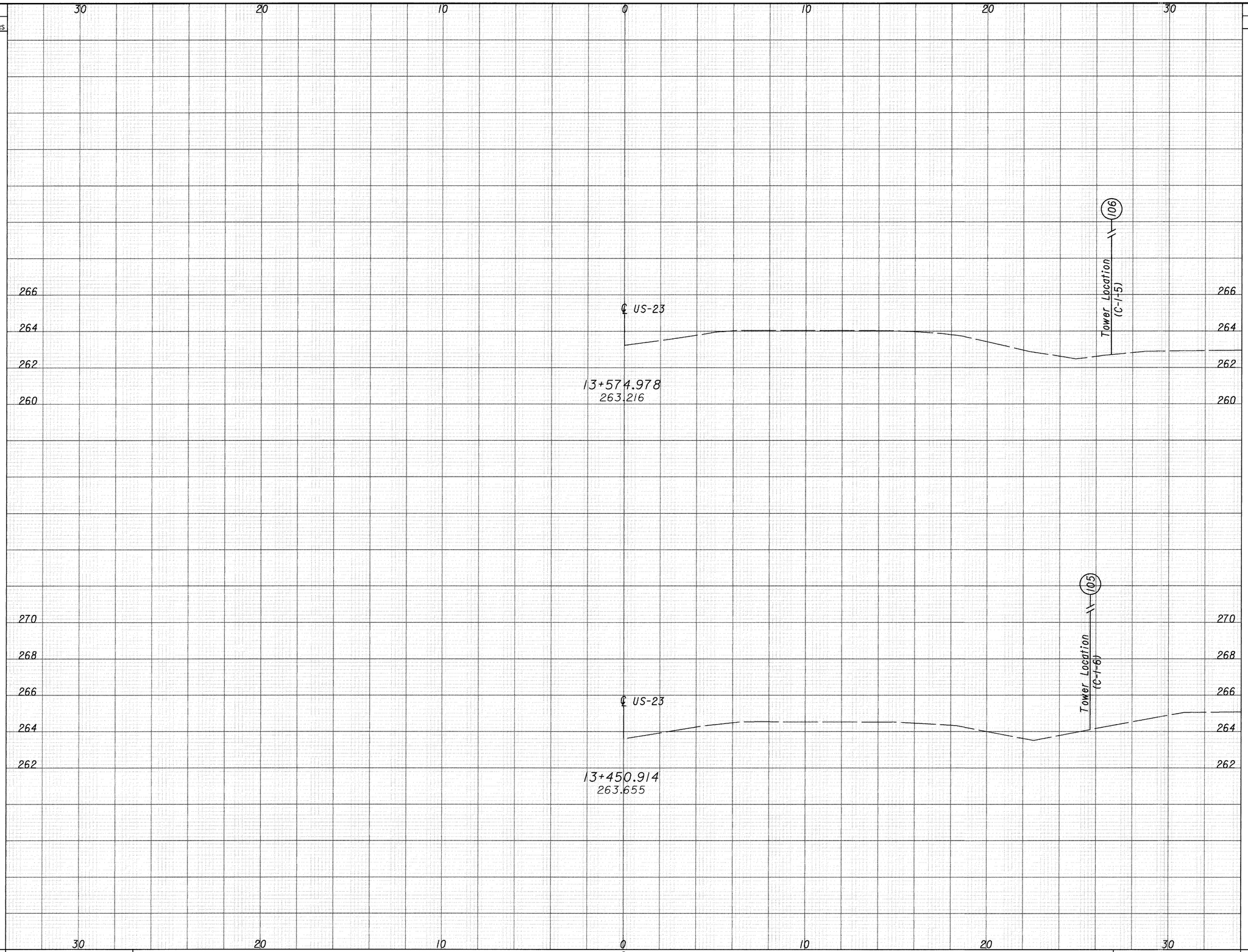
STA 12+974.106 TO STA 13+127.247

WYA/CRA-30-28.009/0.000

1580S
2116



SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL



CALCULATED JGB

CHECKED EF

LIGHTING TOWER CROSS SECTIONS US-23

STA 13+450.914 TO STA 14+166.620

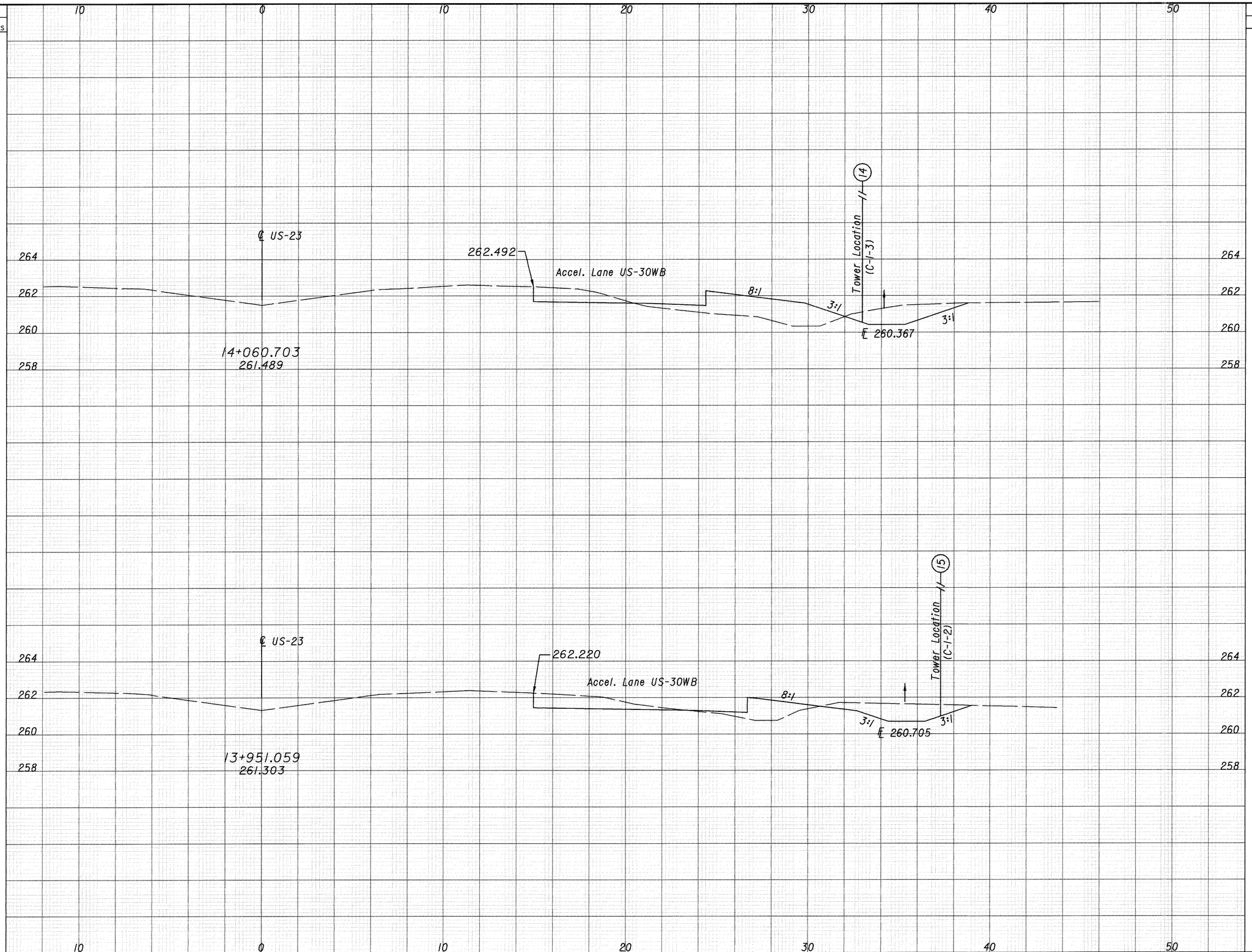
WYA/CRA-30-28.009/0.000

1580T
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JGB
CHECKED EF



LIGHTING TOWER CROSS SECTIONS US-23

STA 13+951.059 TO STA 14+060.703

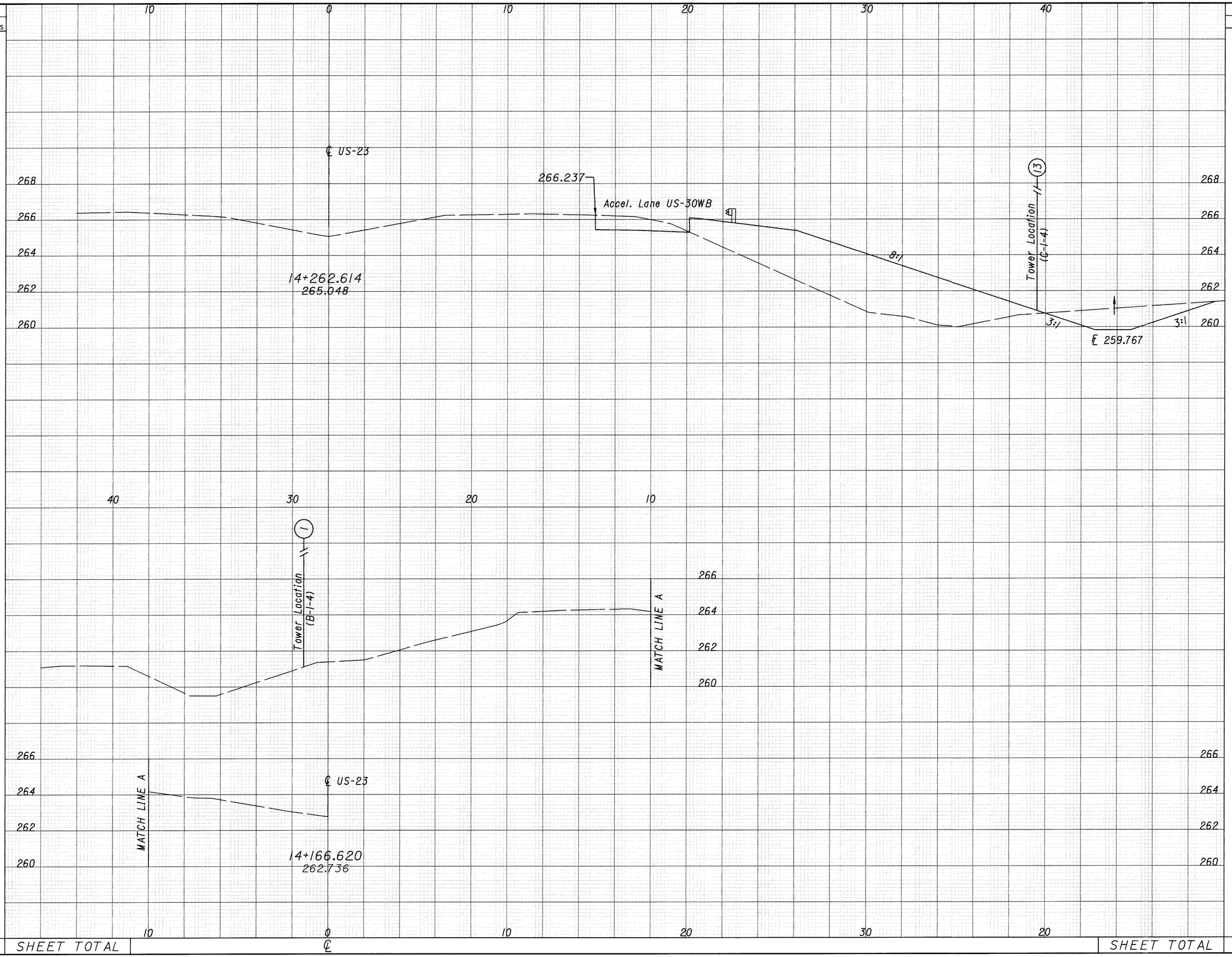
WYA/CRA-30-28.009/0.000

15800
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED JGB
CHECKED EF



SHEET TOTAL

SHEET TOTAL

LIGHTING TOWER CROSS SECTIONS US-23
STA 14+166.620 TO STA 14+262.614

WYA / CRA-30-28.009 / 0.000

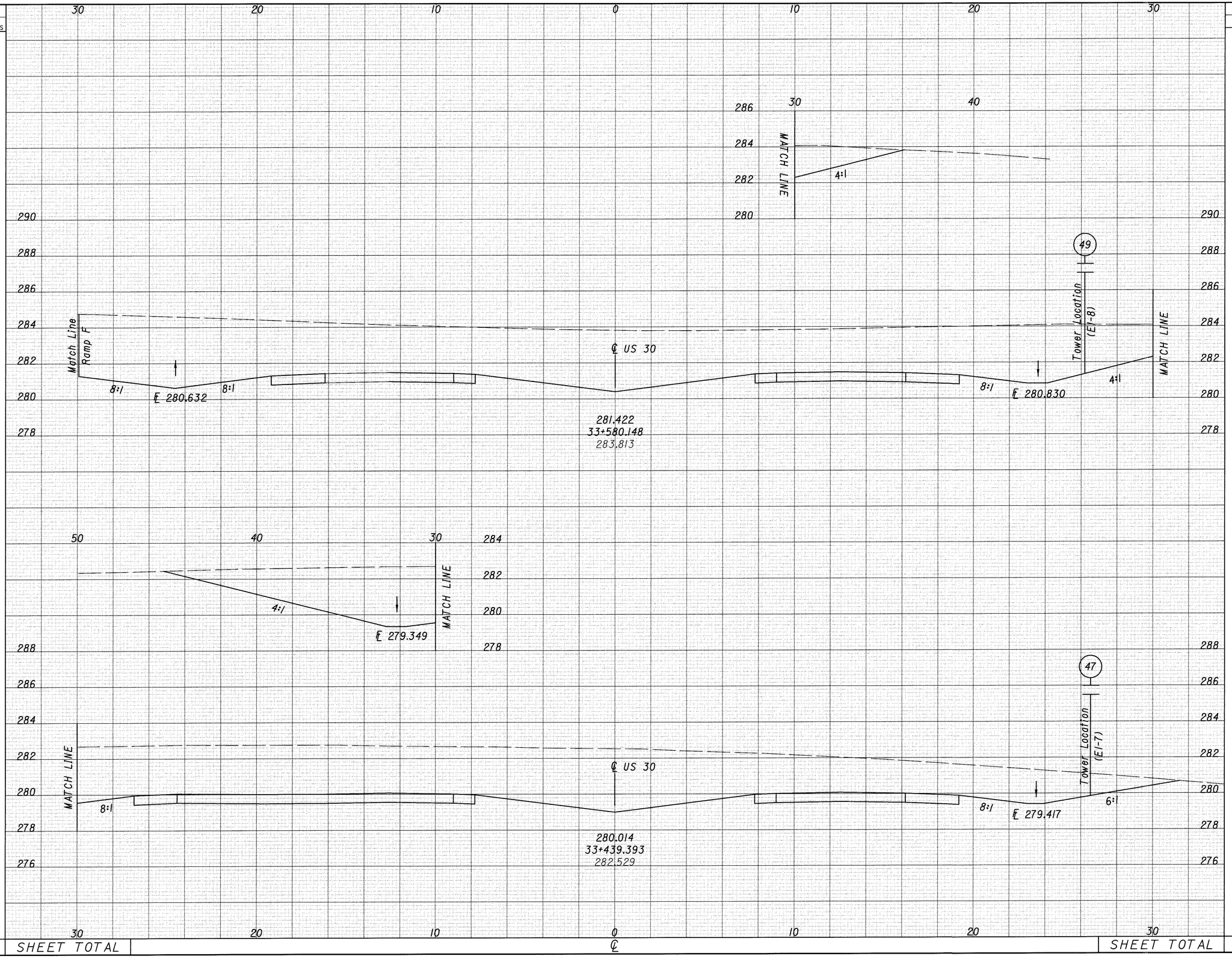
1580V
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF

CHECKED AM



SHEET TOTAL ℄ SHEET TOTAL

REST AREA LIGHTING TOWER CROSS SECTIONS US-30

STA 33+439.393 TO STA 33+580.148

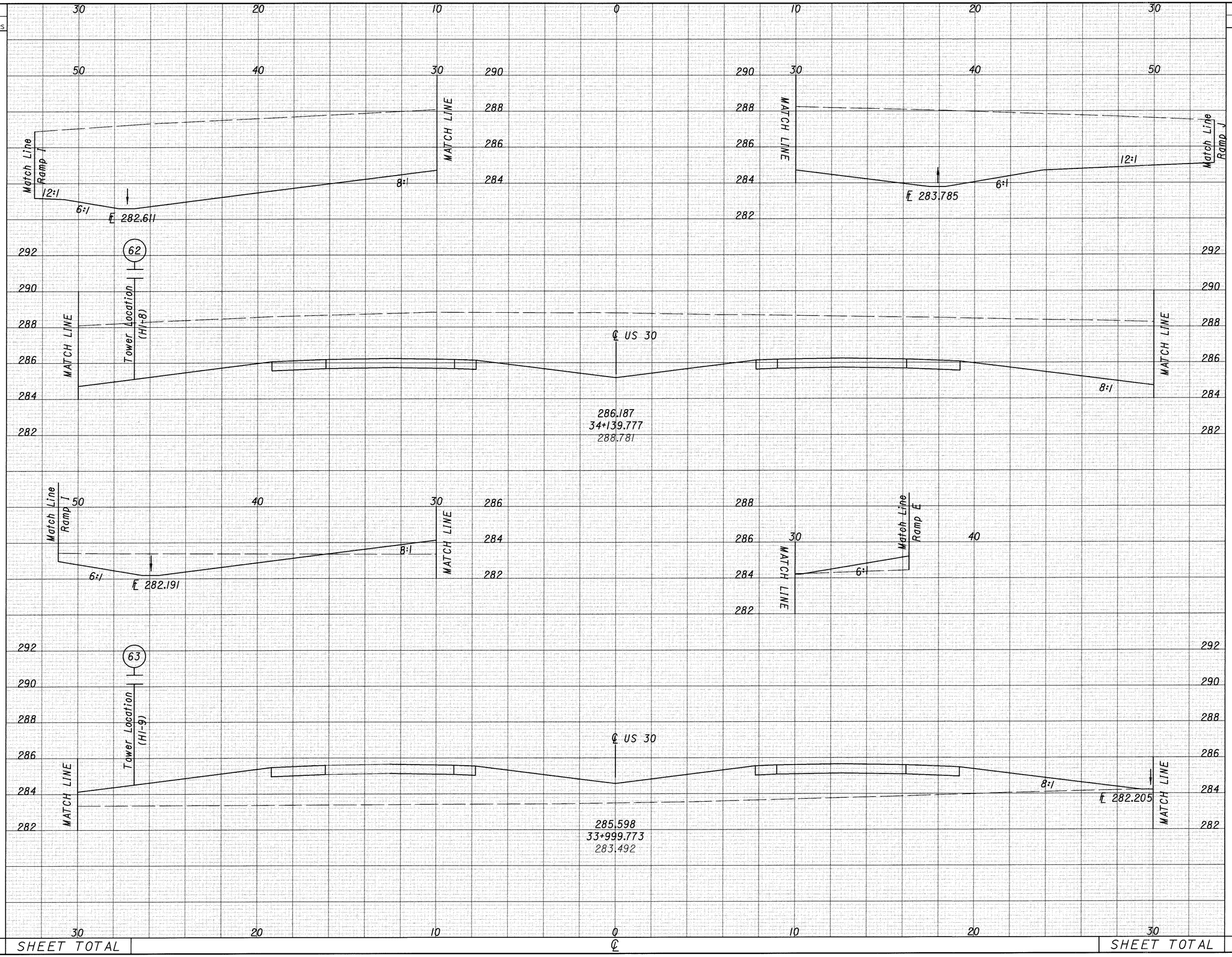
WYA/CRA-30-28.009/0.000

1580W
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF
CHECKED AM



SHEET TOTAL ℄ SHEET TOTAL

REST AREA LIGHTING TOWER CROSS SECTIONS US-30 STA 33+999.773 TO STA 34+139.777

WYA/CRA-30-28.009/0.000

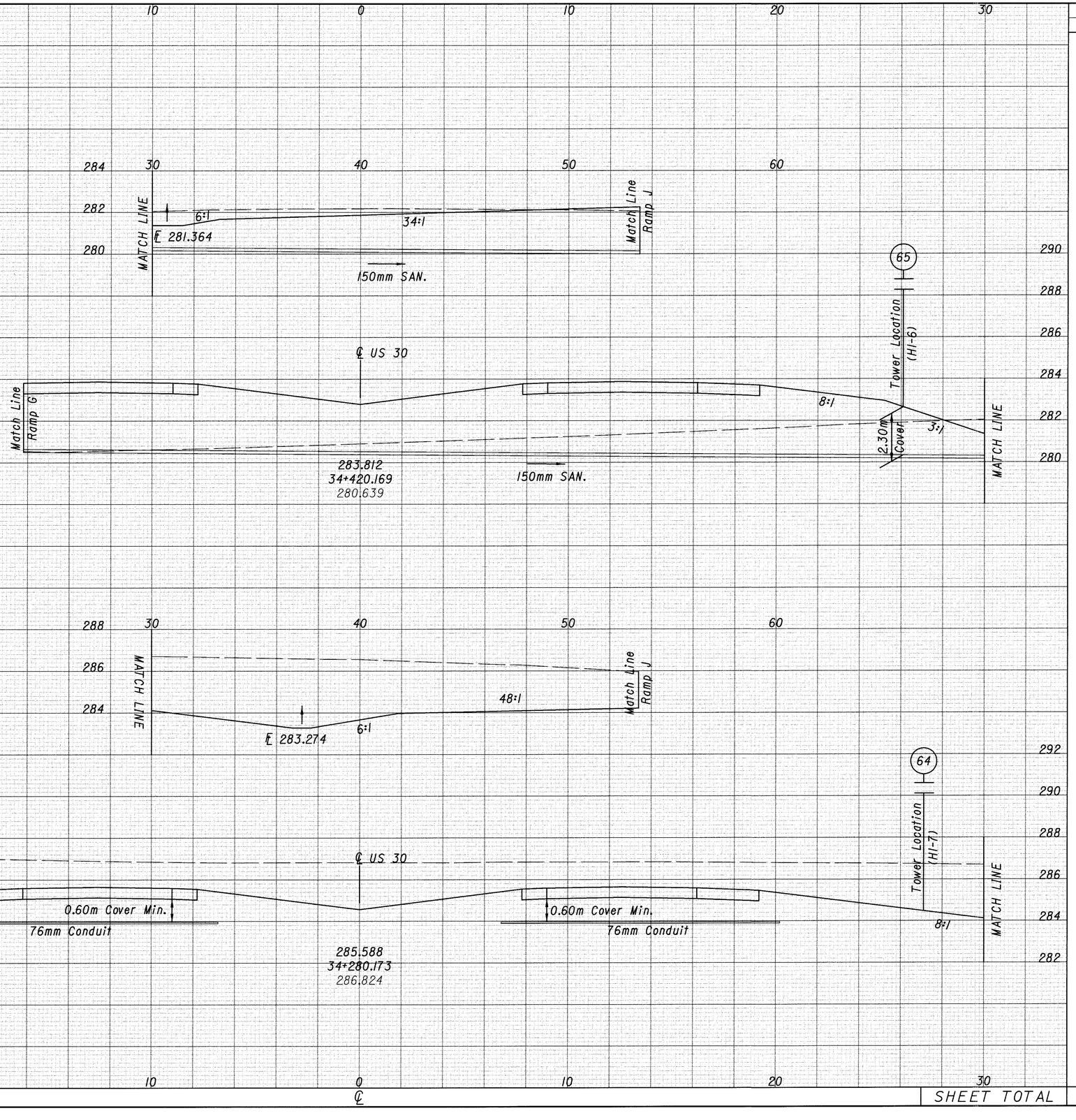
1580X
2116

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED EF

CHECKED AM



SHEET TOTAL ℄ SHEET TOTAL

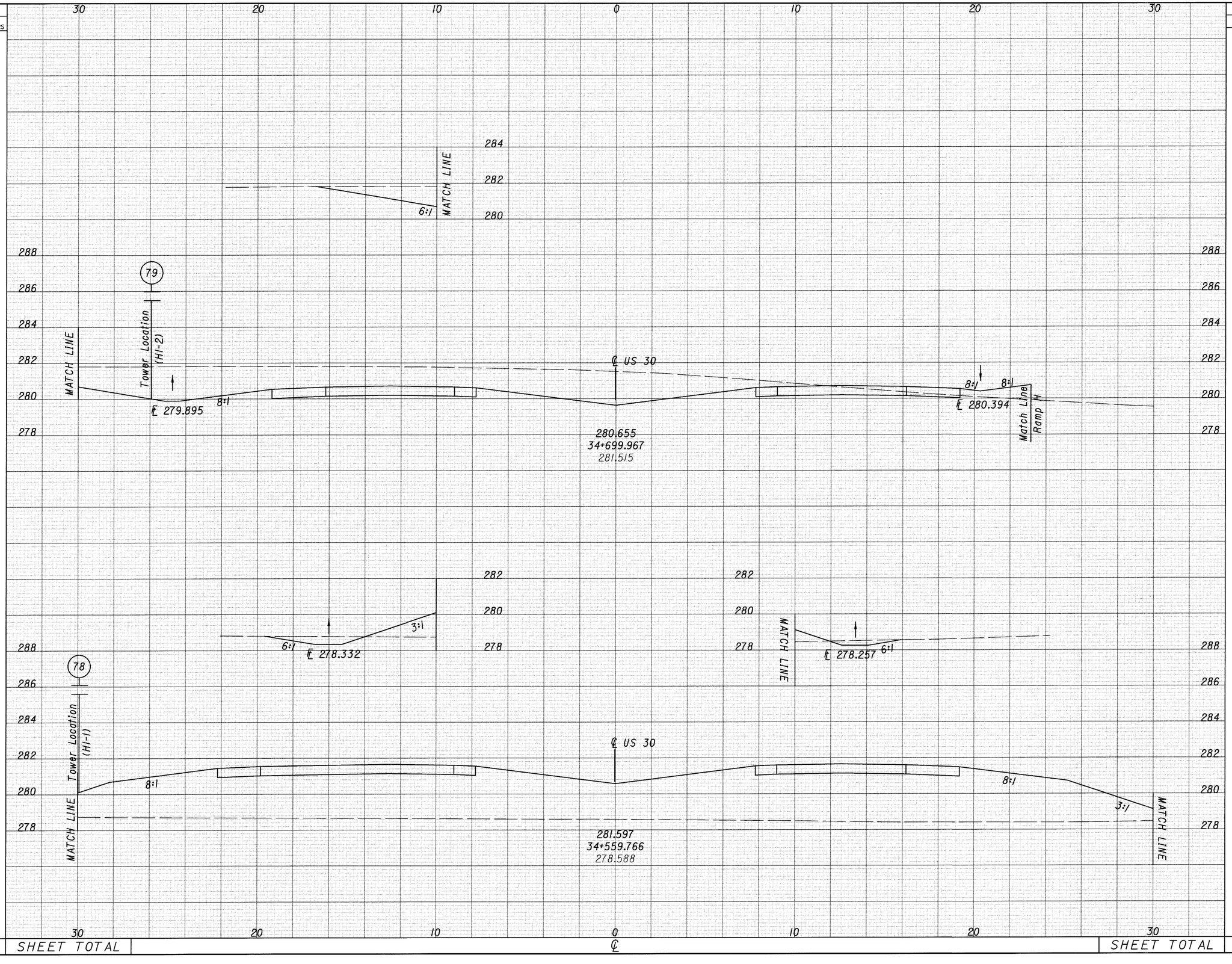
REST AREA LIGHTING TOWER CROSS SECTIONS US-30

STA 34+280.173 TO STA 34+420.169

WYA/CRA-30-28.009/0.000

15807
2116

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL



CALCULATED EF

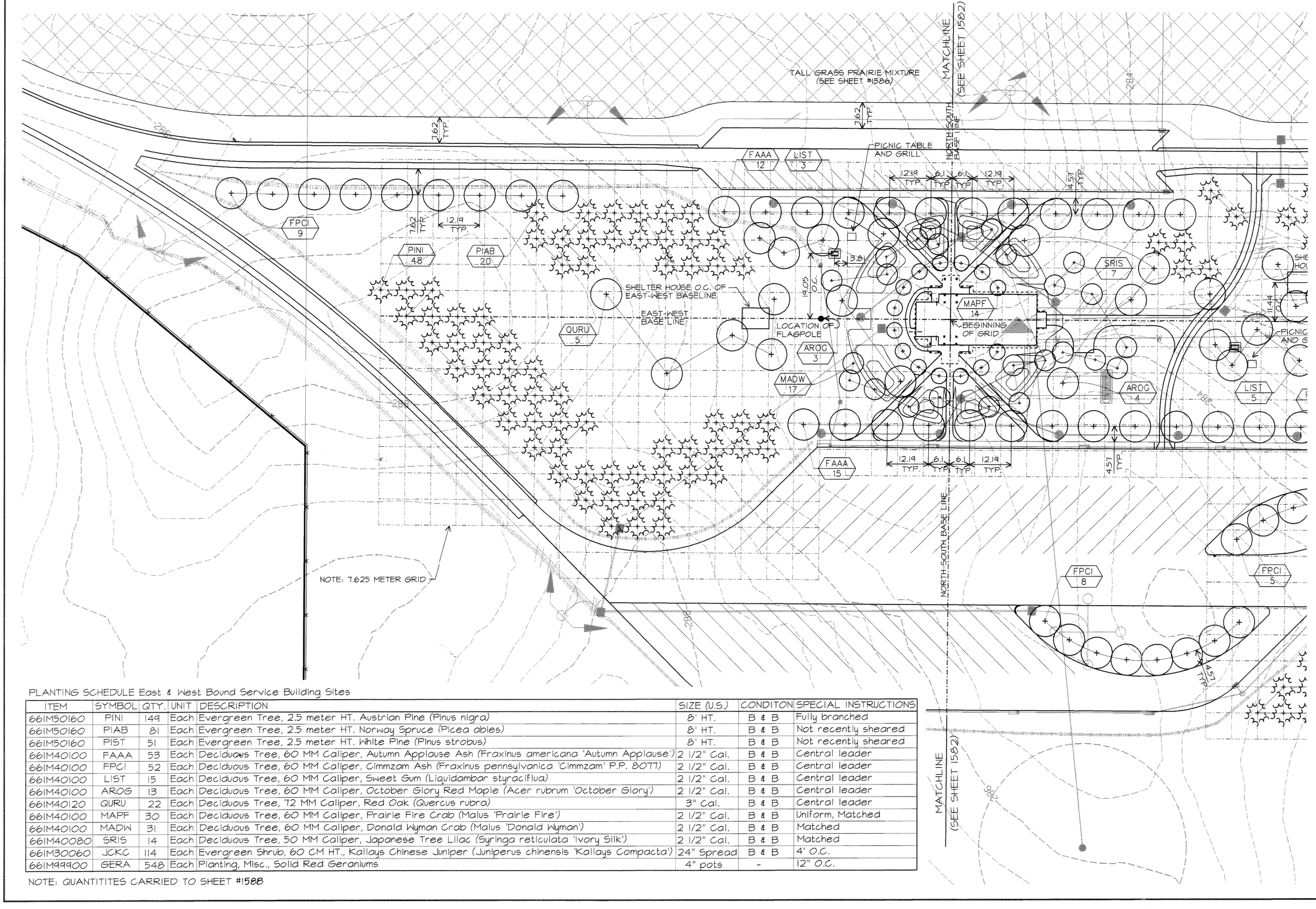
CHECKED AM

REST AREA LIGHTING TOWER CROSS SECTIONS US-30

STA 34+559.967 TO STA 34+699.967

WYA/CRA-30-28.009/0.000

15802
2116



PLANTING SCHEDULE East & West Bound Service Building Sites

ITEM	SYMBOL	QTY.	UNIT	DESCRIPTION	SIZE (U.S.)	CONDITON	SPECIAL INSTRUCTIONS
661M50160	PINI	149	Each	Evergreen Tree, 2.5 meter HT. Austrian Pine (Pinus nigra)	8' HT.	B & B	Fully branched
661M50160	PIAB	81	Each	Evergreen Tree, 2.5 meter HT. Norway Spruce (Picea abies)	8' HT.	B & B	Not recently sheared
661M50160	PIST	51	Each	Evergreen Tree, 2.5 meter HT. White Pine (Pinus strobus)	8' HT.	B & B	Not recently sheared
661M40100	FAAA	53	Each	Deciduous Tree, 60 MM Caliper, Autumn Applause Ash (Fraxinus americana 'Autumn Applause')	2 1/2" Cal.	B & B	Central leader
661M40100	FPCI	52	Each	Deciduous Tree, 60 MM Caliper, Cimmzam Ash (Fraxinus pennsylvanica 'Cimmzam' P.P. 8077)	2 1/2" Cal.	B & B	Central leader
661M40100	LIST	15	Each	Deciduous Tree, 60 MM Caliper, Sweet Gum (Liquidambar styraciflua)	2 1/2" Cal.	B & B	Central leader
661M40100	AROG	13	Each	Deciduous Tree, 60 MM Caliper, October Glory Red Maple (Acer rubrum 'October Glory')	2 1/2" Cal.	B & B	Central leader
661M40120	QURU	22	Each	Deciduous Tree, 72 MM Caliper, Red Oak (Quercus rubra)	3" Cal.	B & B	Central leader
661M40100	MAPF	30	Each	Deciduous Tree, 60 MM Caliper, Prairie Fire Crab (Malus 'Prairie Fire')	2 1/2" Cal.	B & B	Uniform, Matched
661M40100	MADW	31	Each	Deciduous Tree, 60 MM Caliper, Donald Wyman Crab (Malus 'Donald Wyman')	2 1/2" Cal.	B & B	Matched
661M40080	SRIS	14	Each	Deciduous Tree, 50 MM Caliper, Japanese Tree Lilac (Syringa reticulata 'Ivory Silk')	2 1/2" Cal.	B & B	Matched
661M30060	JCKC	114	Each	Evergreen Shrub, 60 CM HT., Kallays Chinese Juniper (Juniperus chinensis 'Kallays Compacta')	24" Spread	B & B	4' O.C.
661M99900	GERA	548	Each	Planting, Misc., Solid Red Geraniums	4" pots	-	12" O.C.

NOTE: QUANTITITES CARRIED TO SHEET #1588

CALCULATED LB
CHECKED JAB

0 5 10 15 20
HORIZONTAL SCALE IN METERS

SITE LANDSCAPE PLAN
REST AREA SERVICE BUILDING / EAST BOUND 1

WYA/CRA-30-28.009/0.000

1581
2116

TALL GRASS PRAIRIE MIXTURE
(SEE SHEET #1586)

MATCHLINE
(SEE SHEET 1581)

NORTH-SOUTH BASE LINE

7.62 TYP.

PICNIC TABLE AND GRILL

FAAA 12

LIST 3

12.19 TYP. | 6.1 TYP. | 6.1 TYP. | 12.19 TYP.

4.57 TYP.

3.81

19.05

10.2

LOCATION OF FLAGPOLE

MAPF 14

BEGINNING OF GRID

AROG 3

MADW 17

SRIS 7

AROG 4

SHELTER HOUSE

11.44

PICNIC TABLE AND GRILL

EAST-WEST BASE LINE

QURU 6

PINI 25

LIST 5

PIAB 12

PIST 14

FAAA 15

12.19 TYP. | 6.1 TYP. | 6.1 TYP. | 12.19 TYP.

4.57 TYP.

14.57 TYP.

PIAB 16

NOTE: 7.625 METER GRID

FPCI 8

FPCI 5

PIST 16

4.57 TYP.

NORTH-SOUTH BASE LINE

(SEE SHEET 1581)
MATCHLINE

284 | 280 | 282 | 278

NOTE: FOR PLANTING SCHEDULE SEE SHEET #1581

N

0 5 10 15 20
HORIZONTAL
SCALE IN METERS

CALCULATED LB
CHECKED JAB

SITE LANDSCAPE PLAN
REST AREA SERVICE BUILDING / EAST BOUND 2

WYA/CRA-30-28.009/0.000

1582
2116

NOTE: FOR PLANTING SCHEDULE SEE SHEET #1581

NOTE: 7.625 METER GRID

MATCHLINE (SEE SHEET 1584)

MATCHLINE (SEE SHEET 1584)

NORTH-SOUTH BASE LINE

EAST-WEST BASELINE

PICNIC TABLE AND GRILL

SHELTER HOUSE O.C. OF EAST-WEST BASELINE

BEGINNING OF GRID

LOCATION OF FLAGPOLE

TALL GRASS PRAIRIE MIXTURE (SEE SHEET #1586)

PIST 9

PIST 12

FPCI 8

FPCI 6

AROG 3

FAAA 14

LIST 4

MAPF 16

PIAB 15

QURU 5

SRIS 7

MADW 14

PINI 29

LIST 3

FAAA 12

4.57 TYP.

12.19 TYP.

6 TYP.

19.05 O.C.

1.62 TYP.

282

284

286

CALCULATED LB

CHECKED JAB

0 5 10 15 20

HORIZONTAL SCALE IN METERS

SITE LANDSCAPE PLAN

REST AREA SERVICE BUILDING / WEST BOUND 1

WYA/CRA-30-28.009/0.000

1583

2116

NOTE: FOR PLANTING SCHEDULE SEE SHEET #1581

(SEE SHEET 1583) MATCHLINE

NORTH-SOUTH BASE LINE

EAST-WEST BASE LINE

NOTE: 7.625 METER GRID

PIST 12

FPCI 8

FPCI 6

AROG 3

FAAA 14

LIST 4

MADW 14

SRIS 7

MAPF 16

QURU 6

PIAB 18

PINI 47

FPCI 6

LIST 3

FAAA 12

PICNIC TABLE AND GRILL

LOCATION OF FLAGPOLE

SHELTER HOUSE O.C. OF EAST-WEST BASELINE

BEGINNING OF GRID

19.05 O.C.

4.57 TYP.

12.19 TYP.

6.1 TYP.

1.62 TYP.

TALL GRASS PRAIRIE MIXTURE (SEE SHEET #1586)

284

286

CALCULATED LB

CHECKED JAB

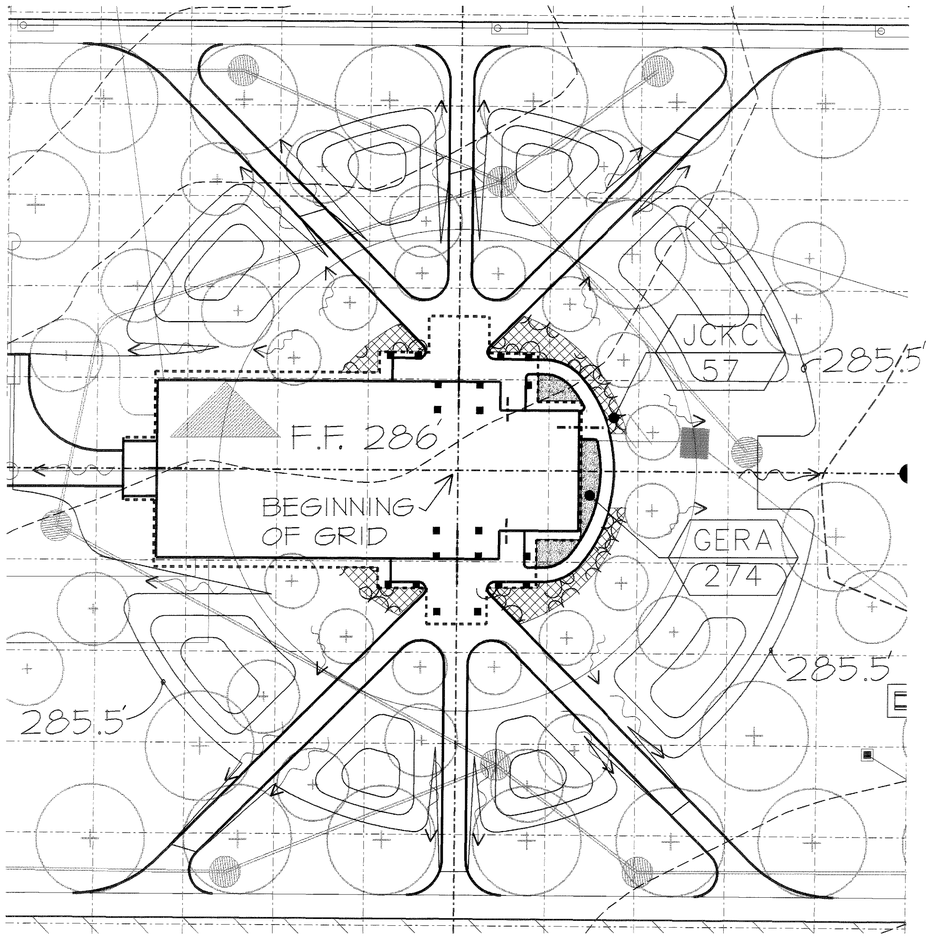
HORIZONTAL SCALE IN METERS 0 5 10 15 20

SITE LANDSCAPE PLAN
REST AREA SERVICE BUILDING / WEST BOUND 2

WYA/CRA-30-28009/0.000

1584
2116

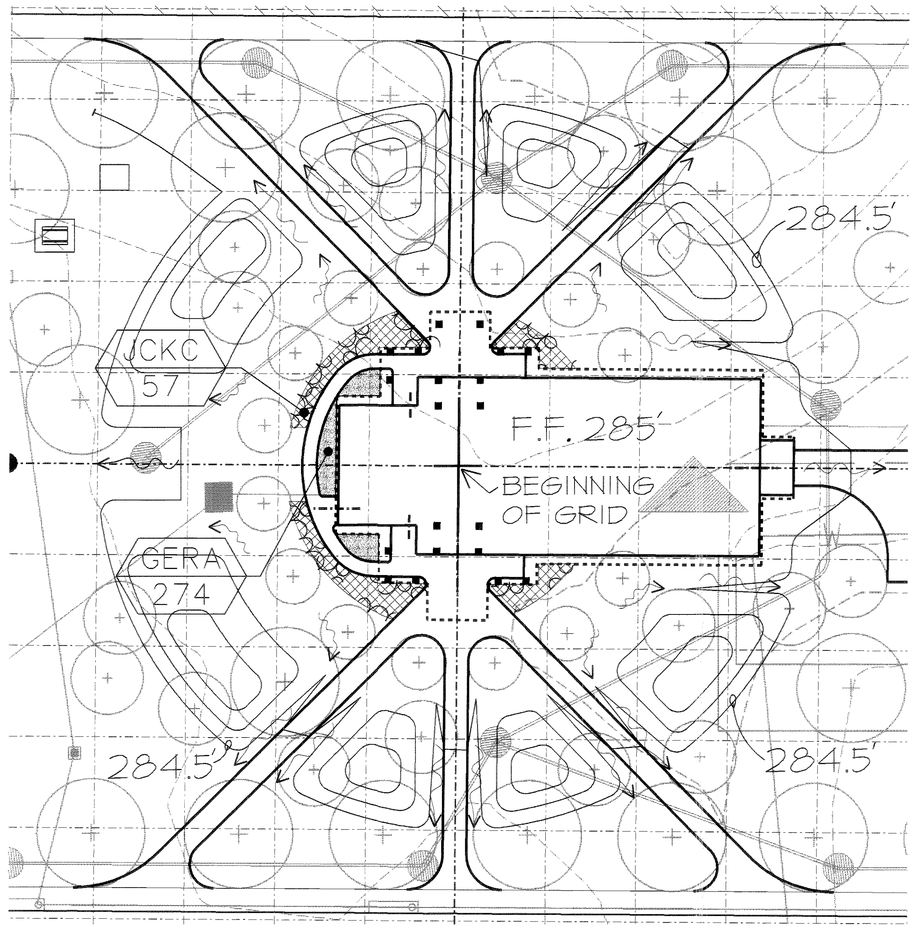
NOTE: FOR PLANTING SCHEDULE SEE SHEET #1581



REST AREA SERVICE BUILDING / WEST BOUND

SCALE 1:250

GENERAL NOTE REGARDING ENLARGED PLANS:
GRADING PLAN IS CONCEPTUAL ONLY. ALL
DRAINAGE WAYS SHALL BE KEPT FREE
AND AWAY FROM STRUCTURES AND WALKS.



REST AREA SERVICE BUILDING / EAST BOUND

SCALE 1:250

N

0 2.5 5 7.5 10
HORIZONTAL
SCALE IN METERS

CALCULATED LB
CHECKED JAB

ENLARGED LANDSCAPE PLANS
REST AREA SERVICE BUILDING / EAST AND WEST BOUND

WYA/CRA-30-28.009/0.000

1585
2116

'A' TALL GRASS PRAIRIE MIXTURE
30,657 SQ. METERS

'A' TALL GRASS PRAIRIE MIXTURE
30,657 SQ. METERS

'A' = ITEM 659 SEEDING & MULCHING AS PER PLAN,
QUANTITY CARRIED TO SHEET #1588

N

0 18 36 54 72
HORIZONTAL
SCALE IN METERS

CALCULATED LB
CHECKED JAB

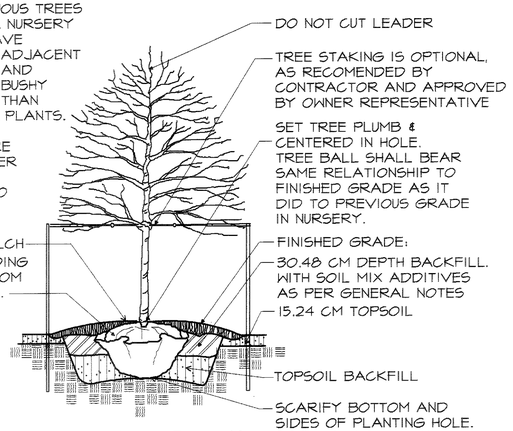
PRAIRIE SEEDING PLAN
REST AREA SERVICE BUILDING / EAST AND WEST BOUND

WYA/CRA-30-28.009/0.000

1586
2116

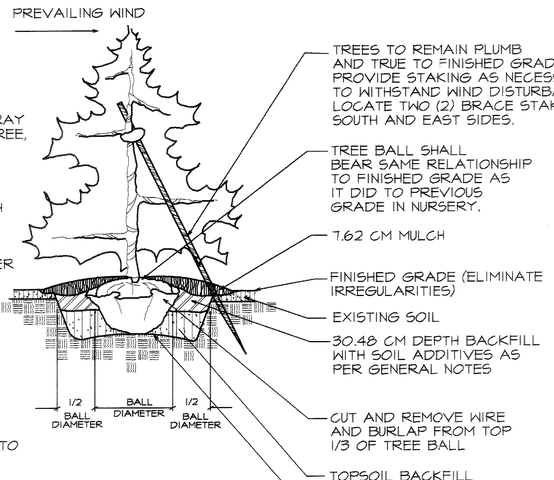
NOTES

EVERGREEN AND DECIDUOUS TREES TO BE SPECIMEN GRADE, NURSERY GROWN STOCK, WHICH HAVE NOT BEEN CROWDED BY ADJACENT PLANTS IN THE NURSERY AND ARE FULLY DEVELOPED, BUSHY AND BETTER BRANCHED THAN ORDINARY NURSERY-RUN PLANTS. FILL PLANT HOLE WITH WATER 24 HOURS BEFORE PLANTING TREE. IF WATER REMAINS IN HOLE, TAKE CORRECTIVE ACTIONS TO FACILITATE DRAINAGE.



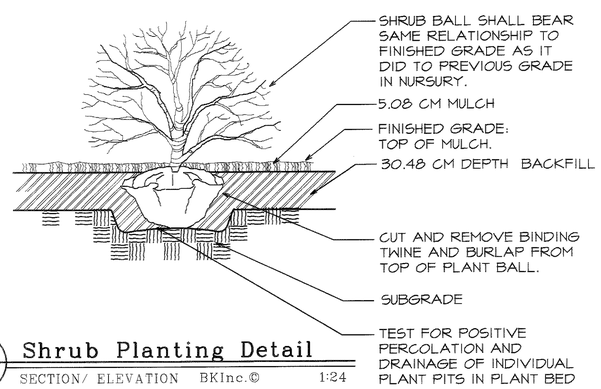
A **Deciduous Tree Planting Detail**

SECTION/ELEVATION BKInc. 1:48



B **Evergreen Tree Planting Detail**

SECTION BKInc. 1:48



C **Shrub Planting Detail**

SECTION/ ELEVATION BKInc.© 1:24

GENERAL NOTES

DRAINAGE
Provide positive drainage away from all structures, including temporary drainage during construction.

Keep all natural and man-made drainage ways open and free flowing at all times.

Provide and maintain erosion control during construction.

LAYOUT
Contractor is responsible for accurate layout staking of all plant materials and supplemental topsoil grading.

SOIL MIX
Soil mix for planting backfill shall be natural, friable topsoil from site, free of subsoil materials, and shall contain 6-12% organic matter (by weight), pH range shall be between 6.0 and 7.2 (or if irricacious plants are to be used, pH shall be 5.5 to 6.5). With reference to ODOT Item 661.11, the proportion of sand and peat moss to topsoil may be adjusted to prevent excessive water from migrating to the tree pits.

SOIL MIX ADDITIVES
a.Soil Polymers
Incorporate within the top 20 CM (8") of backfill mix Terra Sorb' or approved equal polymer, for moisture retention in accordance with the manufacturer's recommendations. Terra Sorb may be incorporated with mycorrhizae and organic biostimulants by using MycorTreeTM (or approved equal product) at the rate of (1) 3 oz. pak per 1" tree trunk caliper. Plant Health Care, Inc., 1-800-421-9051.
b. Slow Release Fertilizer
Slow-release micronutrient planting tablets by Plant Health Care, Inc., to be Healthy StartTM macro tablets 12-8-8, or approved equal. PHC 1-800-421-9051.

870 SEEDING AND MULCHING, AS PER PLAN
Prairie Seeding

Materials

All materials shall conform to the following requirements:

1. All seeds shall be guaranteed by the Prairie Contractor to be true to name and variety.

2. All seeds shall be proportioned by seed count and seed count percentage. Seed mixtures shall be approved by the Engineer.

3. The seed counts and seed count percentage indicated per hectare in these specifications shall mean the total amount of pure live seed per hectare for all species listed except forbs.

4. At least two weeks prior to the time of seeding, the Prairie Contractor shall provide for the approval of the engineer a written description of the grass sedge, rush, and forbs seed and/or plant mix showing the percentage by number of seeds and/or plants of each species. This description shall also include the following:
   A. Name and location of seed and/or plant supplier.
   B. Origin of the various species of seed.
   C. A statement of the purity of the grasses.
   D. The estimated number of seeds per gram (or lb.) of each of the kinds of seed to be furnished.

5. All seeds shall have the proper stratification and/or scarification to break seed dormancy for other than fall planting.

6. All legumes shall be inoculated with the proper rhizobia and at the appropriate time prior to planting.

7. All seeds shall be packed and covered in such a manner as to insure adequate protection against damage and maintain dormancy while in transit, storage, or during planting operations.

8. Seeds and plants shall be true to their name as specified. Preferably, if practical, the source shall be within a 322 kilometer radius of the project location.

Mesic to Dry Prairie with Flowers, Seed Mix

PERMANENT MATRIX		
Big Blue Stem	1,684 g/ha	(1.50 lb./ac.)
Little Blue Stem	842 g/ha	(0.75 lb./ac.)
Side Oats Grama	1,123 g/ha	(1.00 lb./ac.)
Prairie Wild Rye	1,123 g/ha	(1.00 lb./ac.)
Prairie Switch Grass	281 g/ha	(4.00 oz./ac.)
Indian Grass	1,123 g/ha	(1.00 lb./ac.)
TEMPORARY MATRIX		
Slender Wheat Grass	561 g/ha	(.50 lb./ac.)
Seed Oats	35,929 g/ha	(32.00 lb./ac.)
Prairie Wild Rye	1,123 g/ha	(1.00 lb./ac.)
Annual Rye	16,842 g/ha	(15.00 lb./ac.)
Timothy	2,246 g/ha	(2.00 lb./ac.)
FORBS		
Butterfly Weed	70 g/ha	(1.00 oz./ac.)
Sky-Blue Aster	7 g/ha	(0.10 oz./ac.)
Smooth Blue Aster	17.50 g/ha	(0.25 oz./ac.)
New England Aster	35 g/ha	(0.50 oz./ac.)
White Wild Indigo	88 g/ha	(1.25 oz./ac.)
Partridge Pea	140 g/ha	(2.00 oz./ac.)
New Jersey Tea	70 g/ha	(1.00 oz./ac.)
Prairie Coreopsis	17.50 g/ha	(0.25 oz./ac.)
Gray Dogwood	35 g/ha	(0.50 oz./ac.)
American hazelnut	140 g/ha	(2.00 oz./ac.)
Illinois Sensitive Plant	140 g/ha	(2.00 oz./ac.)
Pale Purple Coneflower	281 g/ha	(4.00 oz./ac.)
Rattlesnake Master	140 g/ha	(2.00 oz./ac.)
Round-Headed Bush Clover	140 g/ha	(2.00 oz./ac.)
Rough Blazing Star	140 g/ha	(2.00 oz./ac.)
Prairie Blazing Star	140 g/ha	(2.00 oz./ac.)
Wild Lupine	140 g/ha	(2.00 oz./ac.)
Prairie Bergamot	17.50 g/ha	(0.25 oz./ac.)
Wild Quinine	140 g/ha	(2.00 oz./ac.)
Large-Flowered Beard Tongue	211 g/ha	(3.00 oz./ac.)
White Prairie Clover	70 g/ha	(1.00 oz./ac.)
Purple Prairie Clover	211 g/ha	(3.00 oz./ac.)
Prairie Cinquefoil	35 g/ha	(0.50 oz./ac.)
Mountain Mint	17.50 g/ha	(0.25 oz./ac.)
Black Chokeberry	35 g/ha	(0.50 oz./ac.)
Yellow Coneflower	281 g/ha	(4.00 oz./ac.)
Early Wild Rose	140 g/ha	(2.00 oz./ac.)
Black-Eyed Susan	211 g/ha	(3.00 oz./ac.)
Compass Plant	140 g/ha	(2.00 oz./ac.)
Prairie Dock	70 g/ha	(1.00 oz./ac.)
Old-Field Goldenrod	70 g/ha	(1.00 oz./ac.)
Stiff Goldenrod	140 g/ha	(2.00 oz./ac.)
Showy Goldenrod	70 g/ha	(1.00 oz./ac.)
Hoary Vervain	70 g/ha	(1.00 oz./ac.)
Culver's Root	70 g/ha	(1.00 oz./ac.)
Golden Alexanders	35 g/ha	(0.50 oz./ac.)

N

SCALE AS SHOWN
HORIZONTAL SCALE IN METERS

CALCULATED: LB
CHECKED: JAB

LANDSCAPE DETAILS AND GENERAL NOTES
REST AREA SERVICE BUILDING / EAST AND WEST BOUND

WYA/CRA-30-28.009/0.000

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ANNUALS AND SHORT-LIVED PERENNIALS

Annual & Short-lived Perennial Mix	3,368 g/ha	(3.00 lb./ac.)
Shasta Daisy	421 g/ha	(6.00 oz./ac.)
Sand Coreopsis	702 g/ha	(10.00 oz./ac.)
Brd.-Lvd. Purple Coneflower	421 g/ha	(6.00 oz./ac.)
Blanket Flower	351 g/ha	(5.00 oz./ac.)
Dame's Rocket	175 g/ha	(2.50 oz./ac.)
Perennial Blue Flax	175 g/ha	(2.50 oz./ac.)
Red Hat Coneflower	70 g/ha	(1.00 oz./ac.)
Upright Yellow Coneflower	140 g/ha	(2.00 oz./ac.)
Black-Eyed Susan	175 g/ha	(2.50 oz./ac.)
Gloriosa Daisy	140 g/ha	(2.00 oz./ac.)
Midwest Wildflower Mix*	1,123 g/ha	(1.00 lb./ac.)

(*contains the following seed)

- Yarrow
- Bishop's Flower
- Poor Man's Weather Glass
- Prairie Aster
- Dwarf Cornflower
- Foxglove
- Blanket Flower
- Baby's Breath
- Standing Cypress
- Toadflax
- Scarlet Flax
- Lemon Mint
- Evening Primrose
- Missouri Primrose
- Corn Poppy
- Purple Prairie Clover
- Annual Phlox
- Tall Catchfly

SEEDING EQUIPMENT

If the Prairie Contractor elects to use the following seeding equipment, it shall meet the following requirements. Any other equipment deemed necessary shall be subject to approval of the Engineer.

Disc: Any disc proposed for use shall be in a good state of repair with sound, unbroken blades. The disc shall be weighted if necessary to achieve the required tillage depth.

Hydroseeding: Hydraulic seeding equipment shall include a pump rated and operated at no less than 378.5 liters (100 gallons) per minute and no less than (100 pounds per square inch) pressure. The tank shall have a mechanical agitator powerful enough to keep the seed in suspension in the water.

Roller or Cultipackers: The roller or cultipacker shall have rollers at least 15.24 CM (6") in diameter and shall be of sufficient weight to pulverize the clods of soil.

Spinning Disc Seeder: When spinning disc seeders are used, the individual seeds comprising the seeding mixture shall be mixed with an appropriate dispersal medium prior to sowing, and grass seeds with awns shall be de-bearded.

Tractor-Drawn or Mounted Seeders: Tractor-drawn or mounted seeders shall have an adjustable gate opening providing uniform flow over a width adapted to the work, and shall drop the seed directly into place on the prepared seedbed. The seeder may be of the type mounted on cultipacker rollers, which covers the seed and rolls the seedbed in one operation, and shall be approved the Engineer prior to use.

SEEDBED PREPARATION

General: Seedbed preparation methods shall be approved by the Engineer. Cultivation shall be accomplished at such a time that seeding may occur immediately and without delay. No seeds shall be sown until the seedbed has been approved by the engineer.

No-till Seedbed Preparation: Prior to no-till operation, unless a bare, weed-free surface exists and a no-till drill is to be used, the following preparations should be made:

On degraded sites, the non-native vegetation in the area to be interseeded shall be wicked or sprayed with an appropriate no-selective herbicide, allowed to die, and burned (7 to 10 day interval). Existing native vegetation in the area to be interseeded shall be mowed and removed.

SEEDING METHODS

General: The preferred method of seed installation shall be the rangeland type native grass and wildflower seed drill except where slopes (steeper than 3 to 1) prohibit the use of a rangeland drill.

The Engineer shall examine and then approve any equipment to be used. Prior to starting work, all seeding equipment shall be calibrated and adjusted to sow seeds at the proper seeding rate. Equipment shall be operated in a manner to insure complete coverage of the entire area to be seeded. The Engineer shall be notified 48 hours prior to beginning the seeding operations.

No-till or Drill Method: If a rangeland grass drill or no-till rangeland grass drill is used, rolling of the seed bed shall not be required. The rangeland grass drill will be used to install the permanent grass and forb seeds. Where slopes, permanently saturated soils or size constraints prohibit the use of the rangeland grass drill, the broadcast or hydroseeding method may be used with approval by the Engineer.

Broadcast Method: The broadcast method of seeding will be allowed to install permanent grasses and flowers only where the physical conditions of the site prohibit the use of the rangeland type grass drill. For broadcast seeders, no seeds shall be sown during high winds or when the seedbed is not in a proper condition for seeding. The broadcast method will be used to install the temporary grass and annual and short-lived perennial wildflower seed on all areas. Within twelve hours, if conditions permit or as soon thereafter as practical, all seeded areas shall be rolled at right angles to the run-off with an approved type roller or cultipacker to compact the seedbed and place the seed in contact with the soil.

Hydroseeding: The hydraulic seeding equipment shall meet requirements previously mentioned. A minimum of 3,785 liters (1,000 gallons) of slurry shall be used. Calibration of the hydraulic seeding equipment shall be accurate and to the satisfaction of the Engineer.

SEEDING TIME

Seeding operations shall be between April 1st, or as soon thereafter as the soil is free of frost and in workable condition, and July 30th; and from October 1st to freeze-up (later if a no-till rangeland grass drill is used). Written permission from the Engineer is required for any adjustment to these dates. If using a no-till rangeland grass drill, planting can be done any time except from August 1st to October 1st for most communities. Wetlands are prohibited only from August 1st to September 1st (to take advantage of the 'rainy' season in September).

SEED MIXTURES

The species to be sown shall include both warm and cool season grasses, sedges, temporary grasses, and forbs. The planting rates for the Mesic to Dry Prairie are as follows:

Wet to Mesic Prairie and Mesic to Dry Prairie: Grasses at least 6,435,644 seeds per hectare (2,600,000/ac.) and temporary grass seeds at least 19,616,337 seeds per hectare (7,925,000/ac.) when using no forbs; and grasses at least 3,217,822 seeds per hectare (1,300,000/ac.), temporary grasses at least 19,616,337 seeds per hectare (7,925,000/ac.) and forbs 3,217,822 seeds per hectare (1,300,000/ac.) when using flowers.

Subject to approval by the Engineer, adjustments may be made to these seeding mixtures depending on species availability. A temporary cover crop of Oats at 35,929 to 71,857 grams/ha or (32 to 64 lbs. per acre) and Timothy at 1,123 to 2,246 grams/ha or (1 to 2 lbs. per acre) shall be sown with the grass/forb mixture. Under no circumstances shall wheat, cereal rye, or barley be used as a temporary cover crop.

Substitute species are acceptable if they are approved by the Engineer.

PRAIRIE CONTRACTOR'S RESPONSIBILITY

The Prairie Contractor shall be responsible for the satisfactory growth of grass, forb, sedge, and rush species on all areas seeded and/or planted under the Contract until final acceptance of the work. Acceptance of the work will be determined using a time meander search by the Engineer. The search shall be conducted at the end of the third full growing season or the second burn after seeding and/or planting (not to exceed thirty-six months). The search will randomly sample 20% of the area for each community that was seeded and/or planted. If 75% of the species seeded and/or planted are alive and apparent and the sample area has 80% ground cover of acceptable species, the work will be accepted.

If not accepted, the Prairie Contractor will replant, to fulfill Contract responsibility, at no cost to the Owner. Where desirable native species are present, all replanting shall be done with a no-till rangeland drill after the planting area is burned in the fall. Where no desirable species are present, all soil preparation and installation methods will be recommended by the Prairie Contractor and approved by the Engineer.

MEASUREMENT

Seeding: Prairie seeding areas to be contracted, will be measured for payment under item 659, seeding and mulching as per plan, with the area seeded and/or planted measured in square meters. The seeding areas to be contracted, will be delineated in the field by the Engineer or be determined as delineated in the plans. If there is no delineation in the field, then it is the responsibility of the Engineer to ensure that all areas are distinctly and clearly distinguishable by contrasting cross-hatch patterns on the plans.

The Contractor bears the responsibility for verifying delineated boundaries on the Plan with layout in the field.

POST-PLANTING MANAGEMENT

The Prairie Contractor shall be responsible for the initial post-planting 'Prescribed Burn.' This 'Prescribed Burn' will be executed in the early spring or late fall following the first year anniversary of the particular installation to be burned, or as approved by the Engineer. The prescription will be presented to the Engineer at least two weeks prior to the intended burn for approval. It shall be 'prescribed' and supervised by a recognized, experienced, and insured authority on 'Prescribed Burning.'

NOT APPLICABLE

HORIZONTAL SCALE IN METERS

CALCULATED LB

CHECKED JAB

LANDSCAPE GENERAL NOTES CONTINUED
REST AREA SERVICE BUILDING / EAST AND WEST BOUND

WYA/CRA-30-28009/0.000

1587A
2116

metric units

ITEM	QUANTITY	UNIT	DESCRIPTION	FROM SHT. NO.
			LANDSCAPING	
651	9785	CU. METER	TOPSOIL STOCKPILED	*
652	9785	CU. METER	PLACING STOCKPILED TOPSOIL	*
659	61078	SQ. METER	SEEDING AND MULCHING, AS PER PLAN	1586
661	149	EACH	EVERGREEN TREE, 2.5 METER HT. AUSTRIAN PINE (PINUS NIGRA) B AND B	1581
661	81	EACH	EVERGREEN TREE, 2.5 METER HT. NORWAY SPRUCE (PICEA ABIES) B AND B	1581
661	51	EACH	EVERGREEN TREE, 2.5 METER HT. WHITE PINE (PINUS STROBUS) B AND B	1581
661	53	EACH	DECIDUOUS TREE, 60MM CALIPER, AUTUMN APPLAUSE ASH (FRAXINUS AMERICANA 'AUTUMN APPLAUSE') B AND B	1581
661	52	EACH	DECIDUOUS TREE, 60MM CALIPER, CIMMZOM ASH (FRAXINUS PENNSYLVANICA 'CIMMZOM' P.P. 8077) B AND B	1581
661	15	EACH	DECIDUOUS TREE, 60MM CALIPER, SWEET GUM (LIQUIDAMBOR STYRACIFLUA) B AND B	1581
661	13	EACH	DECIDUOUS TREE, 60MM CALIPER, OCTOBER GLORY RED MAPLE (ACER RUBRUM 'OCTOBER GLORY') B AND B	1581
661	22	EACH	DECIDUOUS TREE, 72MM CALIPER, RED OAK (QUERCUS RUBRA) B AND B	1581
661	30	EACH	DECIDUOUS TREE, 60MM CALIPER, PRAIRIE FIRE CRAB (MALUS 'PRAIRIE FIRE') B AND B	1581
661	31	EACH	DECIDUOUS TREE, 60MM CALIPER, DONALD WYMAN CRAB (MALUS 'DONALD WYMAN') B AND B	1581
661	14	EACH	DECIDUOUS TREE, 50 MM CALIPER, JAPANESE TREE LILAC (SYRINGA RETICULATA 'IVORY SILK') B AND B	1581
661	114	EACH	EVERGREEN SHRUB, 60CM HEIGHT, KALLAYS CHINESE JUNIPER (JUNIPERUS CHINENSIS 'KALLAYS COMPACTA') B AND B	1581
661	548	EACH	PLANTING, MISC.: SOLID RED GERANIUMS, 100MM POTS	1581

QUANTITIES CARRIED TO GENERAL SUMMARY.

* THESE QUANTITIES ARE FROM THE REST AREA PARKING LOT LOCATIONS.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DRAWN JAP | SCALE: AS SHOWN
DESIGNED JAP | CHECKED RLP

WYANDOT COUNTY
REST AREAS

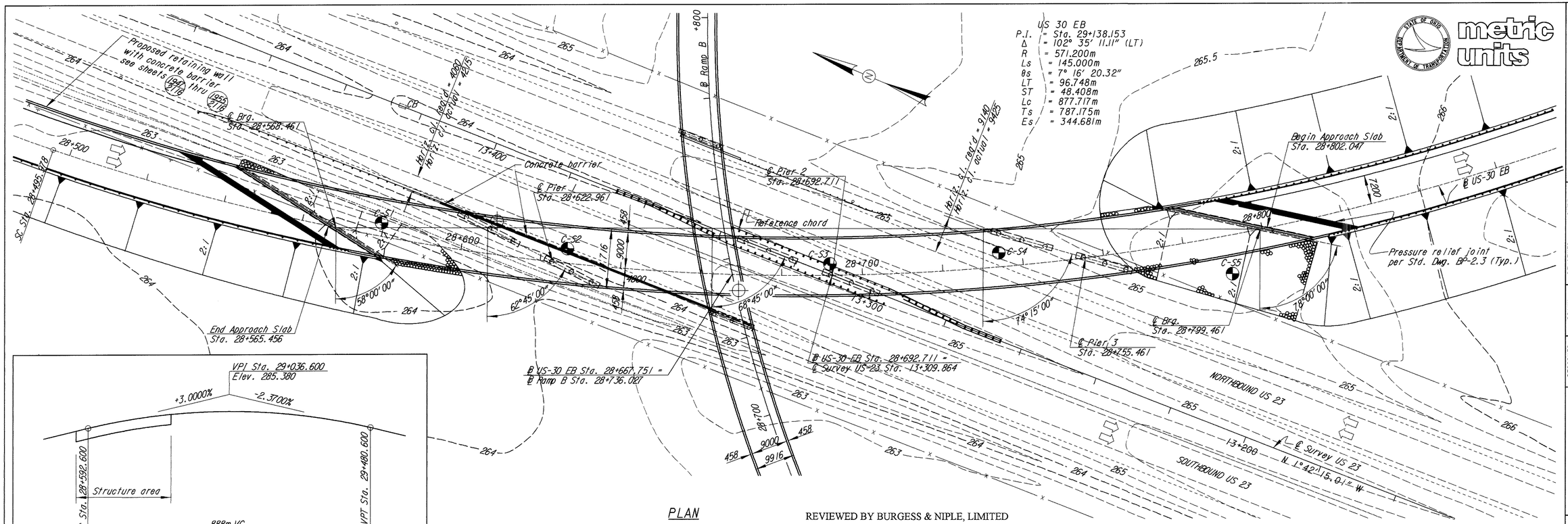
LANDSCAPING SUB-SUMMARY

WYA/CRA-30-28.009/0.000

11 / 11

1588
2116

Filename: sub-summary.dgn

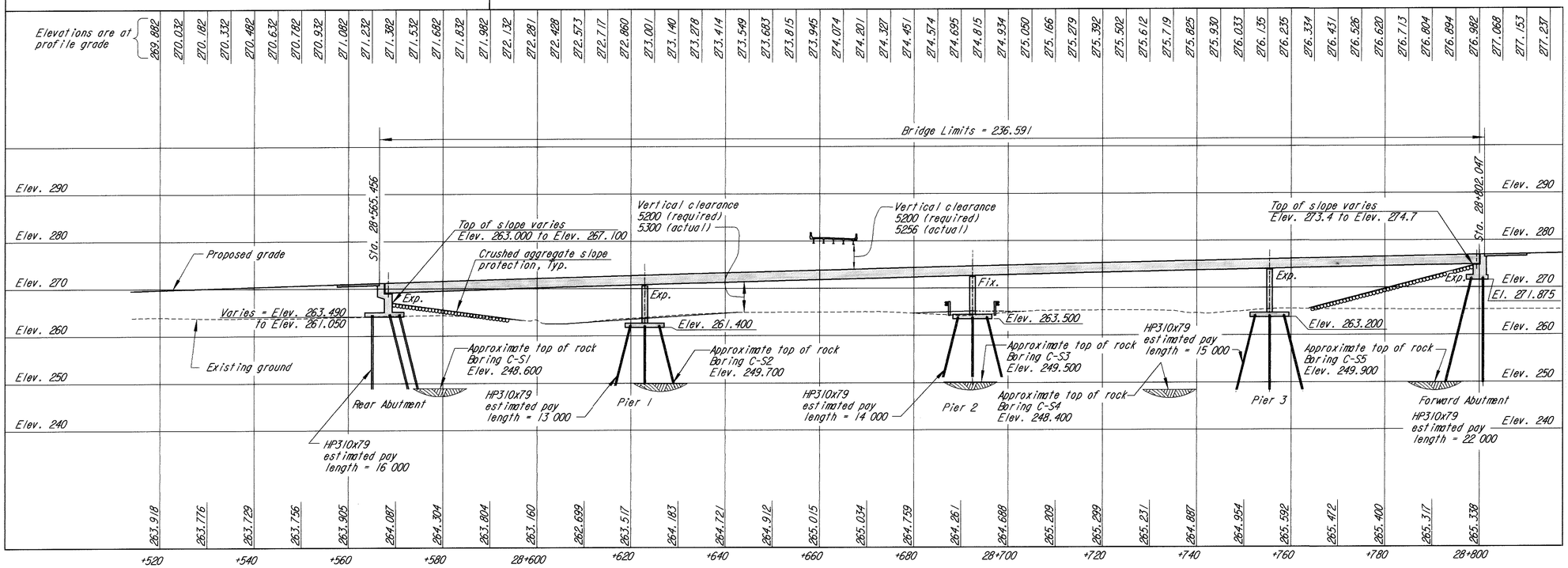


PLAN

REVIEWED BY BURGESS & NIPLE, LIMITED

JLG 10-99

PROFILE



SECTION ALONG ℄ US 30 EB

Traffic Data

2000	2020
ADT = 3572	ADT = 5361
ADTT = 1000	ADTT = 1501

Notes:
Earthwork limits shown are approximate. Actual slopes shall conform to plan cross sections.

All stations and elevations are in meters.

All dimensions and lengths are in millimeters.

℄ Point of min. vertical clearance

Boring location

PROPOSED STRUCTURE

Type: Four span continous plate girder (A572M) with composite reinforced conc. slab on reinforced conc. substructure

Spans: 54 500, 69 750, 62 750, 44 000 (measured ℄ Brg., along ℄)

Roadway width: 13 800 toe to toe parapets

Live loading: MS18 (load case II) & the alternate military loading

Skew angle: Varies

Wearing surface: Monolithic concrete

Approach slabs: AS-1-81M (9150)

Alignment: 571.2m radius curve left

Superelevation: 0.08

Latitude: N 40° 48' 45"

Longitude: W 83° 14' 15"

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MPS	ALH	CPS	9/9/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	8502.088	

WYANDOT COUNTY
STA. 28+565.456
STA. 28+802.047

SITE PLAN
BRIDGE NO. WYA-30-28.009/0.000
US 30 EB OVER US 23

1 / 38

1669
2116

Filename: 28565p1.dgn

GENERAL PLAN

BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGN AGENCY

DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	CRS	9/9/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FAL	—	8502.188	

GENERAL PLAN
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

2 / 38

1670
2116

F:\Inroms\28566gp1.dgn

GENERAL NOTES

All dimensions in the plans are shown in millimeters.

All elevations and stations in the plans are shown in meters.

REFERENCE shall be made to Standard Drawings:

AS-1-81M	Dated 10-25-94
BR-1M	Dated 12-15-94
BP-2.3	Dated 4-29-99
GSD-1-96M	Dated 11-21-97
EXJ-4-87M	Revised 2-18-97

and to supplemental specifications:

848	Dated 6-30-98
816	Dated 4-21-97
842	Dated 1-6-99
863	Dated 9-9-97
899	Dated 10-21-98
910	Dated 7-28-98
894	Dated 10-12-99

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1996, the 1997 & 1998 interims and the ODOT Bridge Design Manual.

DESIGN LOADING: MS18 (LOAD CASE II) and the alternate military loading.

DESIGN DATA:

Concrete Class S - compressive strength 31.0 MPa (superstructure)

Concrete Class C - compressive strength 27.5 MPa (substructure)

Reinforcing Steel -ASTM A615M, A616M or A617M
Grade 400 - minimum yield strength 400 MPa.
Spiral reinforcing may be plain bars, ASTM A82M or A615M.
Structural steel - ASTM A572M - yield strength 350 MPa.

REINFORCING STEEL in superstructure, substructure and approach slabs shall be epoxy coated.

DECK PROTECTION METHOD:

Epoxy coated reinforcing steel

65mm concrete cover

MONOLITHIC WEARING SURFACE is assumed, for design purposes, to be 25mm thick.

PILE DRIVING CONSTRAINTS: Prior to driving piles, the spill through slopes and the bridge approach embankment behind the abutments shall be constructed up to the level of the subgrade elevation for a minimum distance of 60 meters behind each abutment. The excavation for the abutment footings and the installation of the abutment and pier piles, for piers 1 & 2, shall not begin until after the above required embankment has been constructed and has undergone a 90 day waiting period.

PILES TO BEDROCK: Piles shall be driven to refusal on bedrock. Refusal shall be considered as obtained by penetrating soft bedrock for several millimeters with a minimum resistance of 20 blows per 25mm or refusal shall be considered as obtained after the pile has contacted hard bedrock and the pile has then received at least 20 blows.

The ultimate bearing value for the HP310 x 79 abutment piles is 1245 kN per pile

Abutment piles:
27 piles 22 meters long, estimated length @ fwd. abutment
48 piles 15 meters long, estimated length & order length @ rear abutment
20 piles 14 meters long, estimated length & order length @ rear abutment
43 piles 13 meters long, estimated length & order length @ rear abutment
27 piles of order length 18 meters long
27 piles of order length 4 meters long
82 splices

The ultimate bearing value for the HP310 x 79 pier piles is 1250 kN per pile

Pier piles:
48 piles 13 meters, estimated length & order length
48 piles 14 meters, estimated length & order length
48 piles 15 meters, estimated length & order length
72 splices

ITEM 507 - STEEL POINTS, AS PER PLAN: Steel pile points shall be used to protect the tips of the proposed steel "H" piling at Piers 2 and 3 and at the Forward Abutment. The steel points shall be furnished by Associated Pile and Fitting Corporation, 262 Rutherford Boulevard, Clifton, New Jersey 07014; International Construction Equipment, Inc., 301 Warehouse Drive, Matthews, North Carolina 28015; Dougherty Foundation Products, Inc., P.O. Box 688, Franklin Lakes, New Jersey 07417; Versa Steel, Inc., 3601 N.W. Yeon Avenue, P.O. Box 10559, Portland, Oregon 97210; Piling Accessories, Inc.,3467 Gribble Road, Matthews, North Carolina 28105; or by a manufacturer that can furnish a steel point that is acceptable to the Director. Thematerial used for the manufacturing of pile points shall conform to ASTM A27 65/35 - Class 2 - Heat Treated or AASHTO M103 65/35 - Heat Treated. A notarized copy of the mill test report shall be submitted to the Engineer.

ITEM 503 - UNCLASSIFIED EXCAVATION: Shall be in accordance with 503 except that the backfill material behind the abutments shall be 203 granular material placed in 150mm lifts and compacted in accordance with 304.04. The 203 granular material shall extend 30 meters behind each abutment.

FIELD PAINTING OF NEW STEEL, SYSTEM 1ZEU: The surface area pay quantity is based on the surface area of the main members increased by 25 percent to account for the area of the crossframes, bearings, and other structural steel incidentals to be cleaned and painted.

ESTIMATED QUANTITIES

Calculated by: WJH Dated: 6/99
Checked by: FKL Dated: 6/99

Item	Extension	Total	Unit	Description	Superstructure	Abutment	Pier	General
503	21301	Lump	-	Unclassified excavation, as per plan		Lump	Lump	
505	11100	Lump	-	Pile driving equipment mobilization				Lump
507	00200	4169	Meter	Steel piles HP310 x 79, furnished		2153	2016	
507	00250	4169	Meter	Steel piles HP310 x 79, driven		2153	2016	
507	50500	154	Each	Steel pile splices		82	72	
507	93301	123	Each	Steel point (or shoe), as per plan		27	96	
512	33000	7.2	Sq. Meter	Type 2 Waterproofing		7.2		
Special	51267502	2951.8	Sq. Meter	Sealing of concrete surfaces (epoxy) *	1503.4	609.5	838.9	
516	11210	79.9	Meter	Structural expansion joint including elastomeric strip seal		79.9		
516	13600	7	Sq. Meter	25mm Preformed expansion joint filler		7		
516	44100	6	Each	Elastomeric bearing with internal laminates and load plate (neoprene), (525 x 525 x 171 with 626 x 551 x 51 min. load plate) *		6		
516	44100	6	Each	Elastomeric bearing with internal laminates and load plate (neoprene), (500 x 500 x 157 with 626 x 526 x 51 min. load plate) *		6		
516	44200	12	Each	Elastomeric bearing with internal laminates and load plate (neoprene), (700 x 700 x 140 with 726 x 726 x 51 min. load plate) *			12	
516	44400	6	Each	Elastomeric bearing with internal laminates and load plate (neoprene), (700 x 700 x 140 with 850 x 726 x 51 min. load plate) *			6	
518	21230	Lump	-	Porous backfill with filter fabric		Lump		
518	40000	41	Meter	150mm Perforated corrugated plastic pipe		41		
518	40010	15	Meter	150mm Non-perforated corrugated plastic pipe, including specials		15		
601	20000	1387	Sq. Meter	Crushed aggregate slope protection				1387
816	00620	8360	Sq. Meter	Field painting of new steel, intermediate and finish coat, system 1ZEU	8360			
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			
842	42000	325.9	Cu. Meter	Class C concrete, pier above footing			325.9	
842	43500	264.3	Cu. Meter	Class C concrete, abutment including footing		264.3		
842	44100	392.8	Cu. Meter	Class C concrete, abutment not including footing		392.8		
842	46500	483.1	Cu. Meter	Class C concrete, footing		271.1	212.0	
863	10100	Lump	-	Structural steel members, level five (5) fabrication	Lump			
863	20000	8952	Each	Welded stud shear connector	8952			
894	10000	1076.6	Cu. Meter	High Performance Concrete, for Bridge Deck with Warranty	1076.6			

* See proposal note.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	9/9/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FLK	—	8502188	

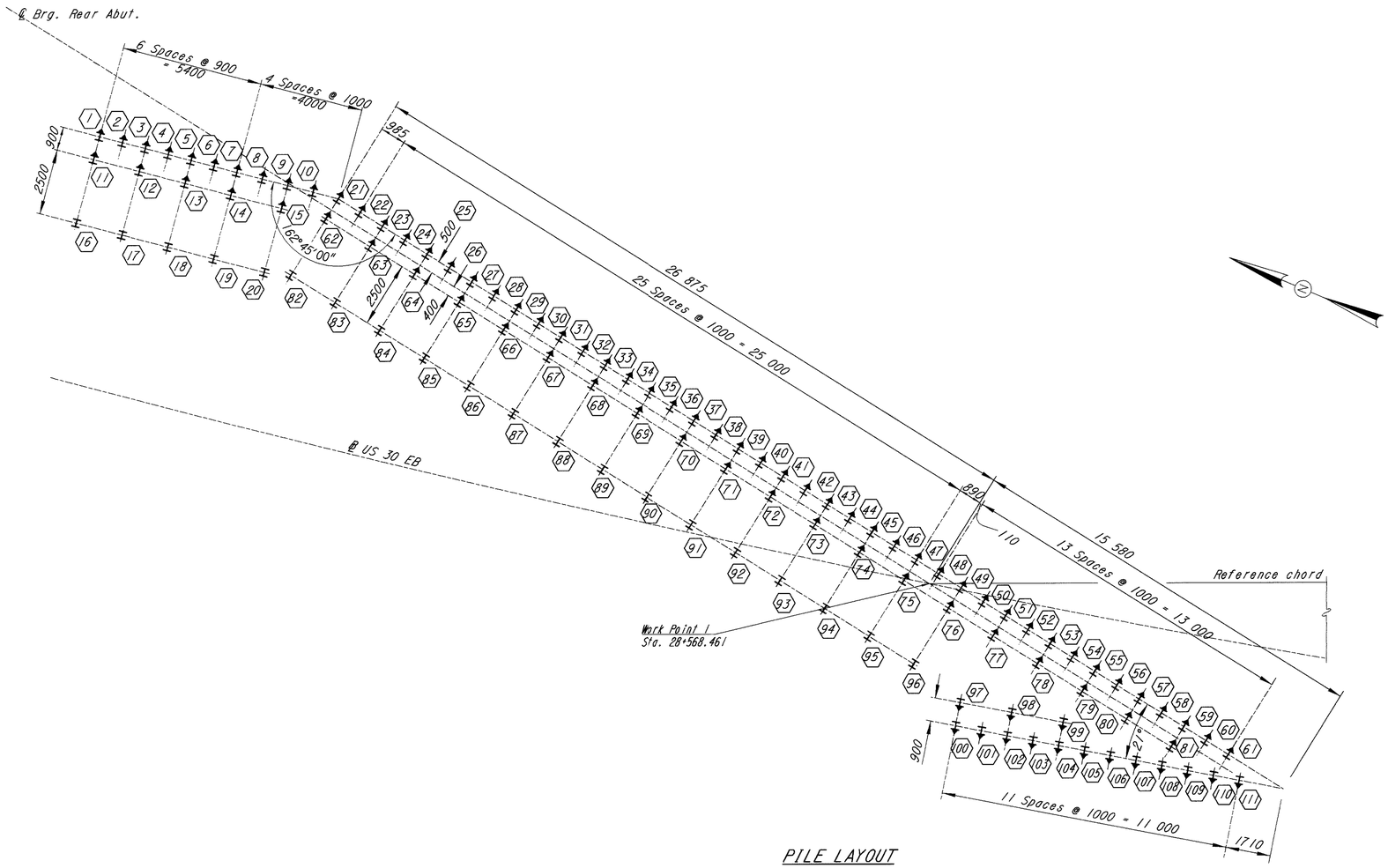
GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

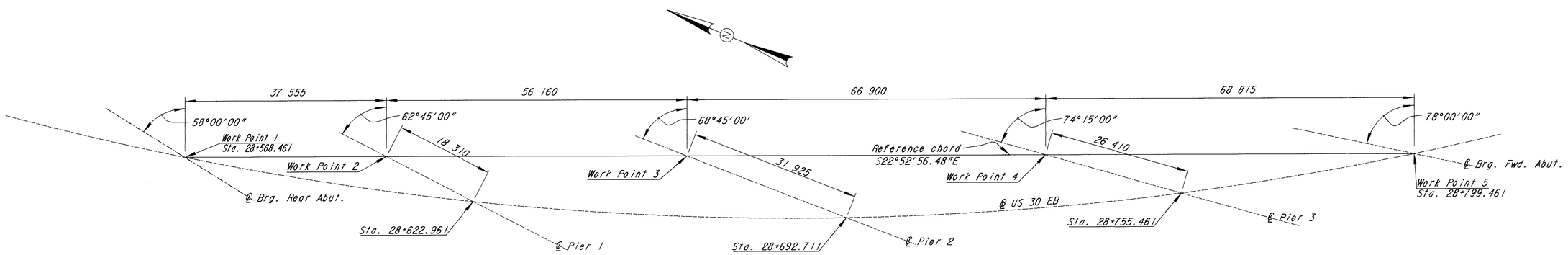
1671
2116

F:\mnms_28566gn1.dgn

metric units



PILE LAYOUT



LAYOUT DIAGRAM

NOTES:
1. All piles are HP310x79.
2. (33) I Designates pile number and location.
3. ↦ Denotes pile battered 1:3 in direction of arrrow.

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DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	CRS	9/9/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	8502188	

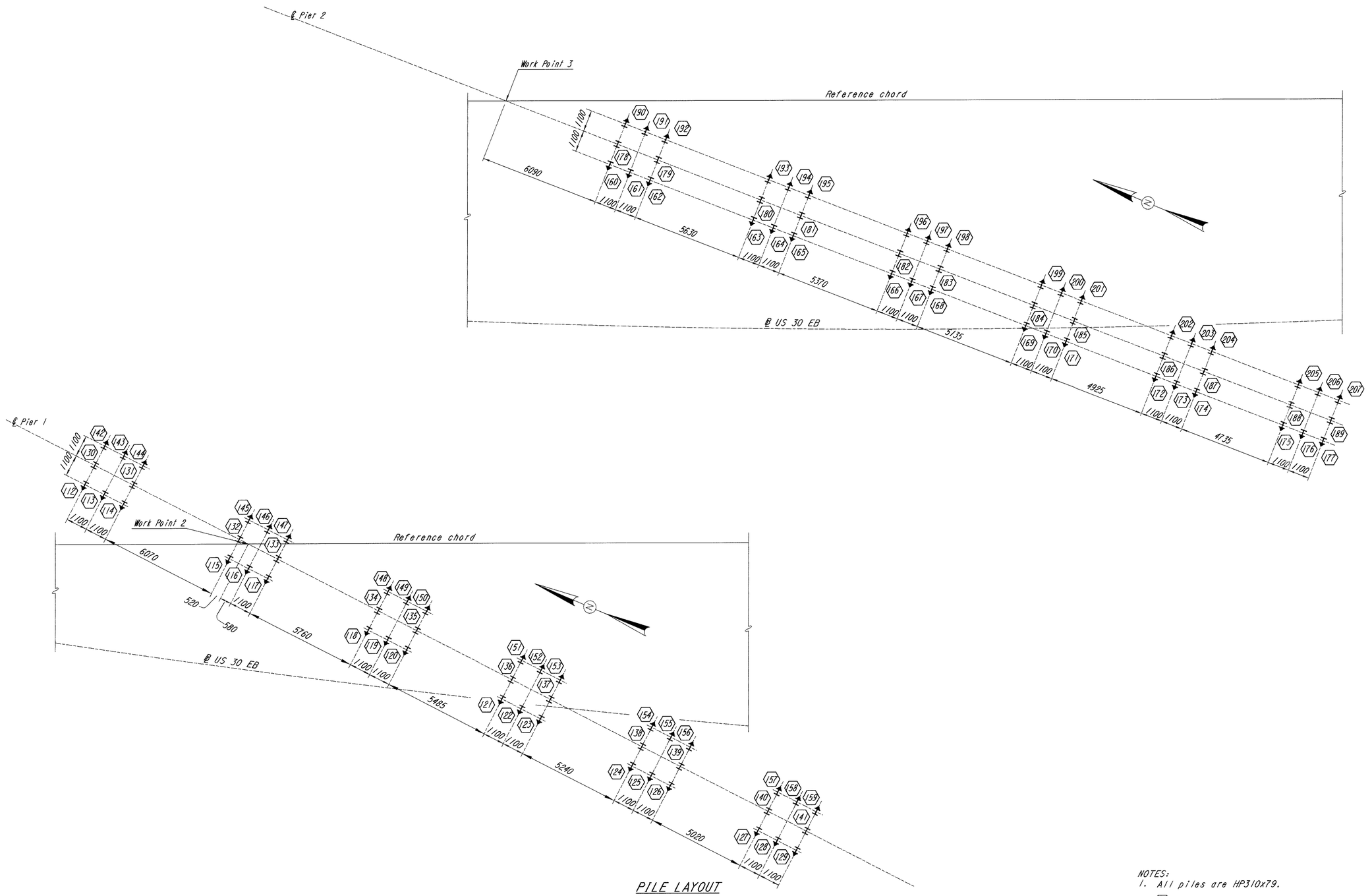
PILE LAYOUT
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

1672
2116

File name: 28566sb1.dgn

metric units



PILE LAYOUT

NOTES:
1. All piles are HP310x79.
2. (33) I Designates pile number and location.
3. ↦ Denotes pile battered 1:3 in direction of arrow.

DESIGN AGENCY	DATE
BALKE ENGINEERS 1848 Summit Road Cincinnati, Ohio 45237	
DESIGNED: MKS	DRAWN: ALH
CHECKED: FKL	REVISED: —
REVIEWED: CRS	9/9/99
STRUCTURE FILE NUMBER	8502188

PILE LAYOUT
BRIDGE NO. WYA-30-28366
US 30 EB OVER US 23

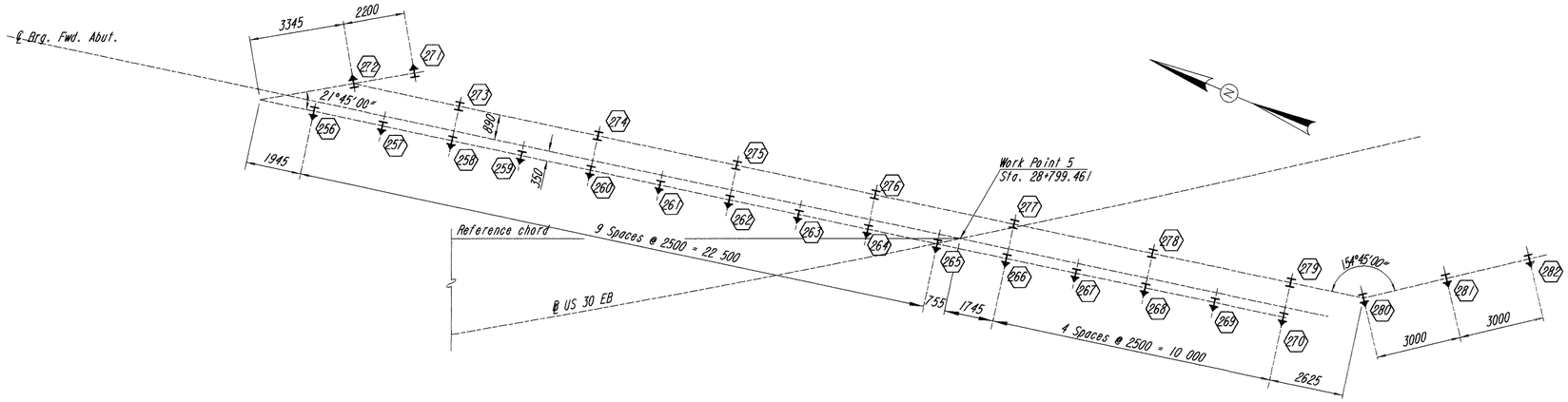
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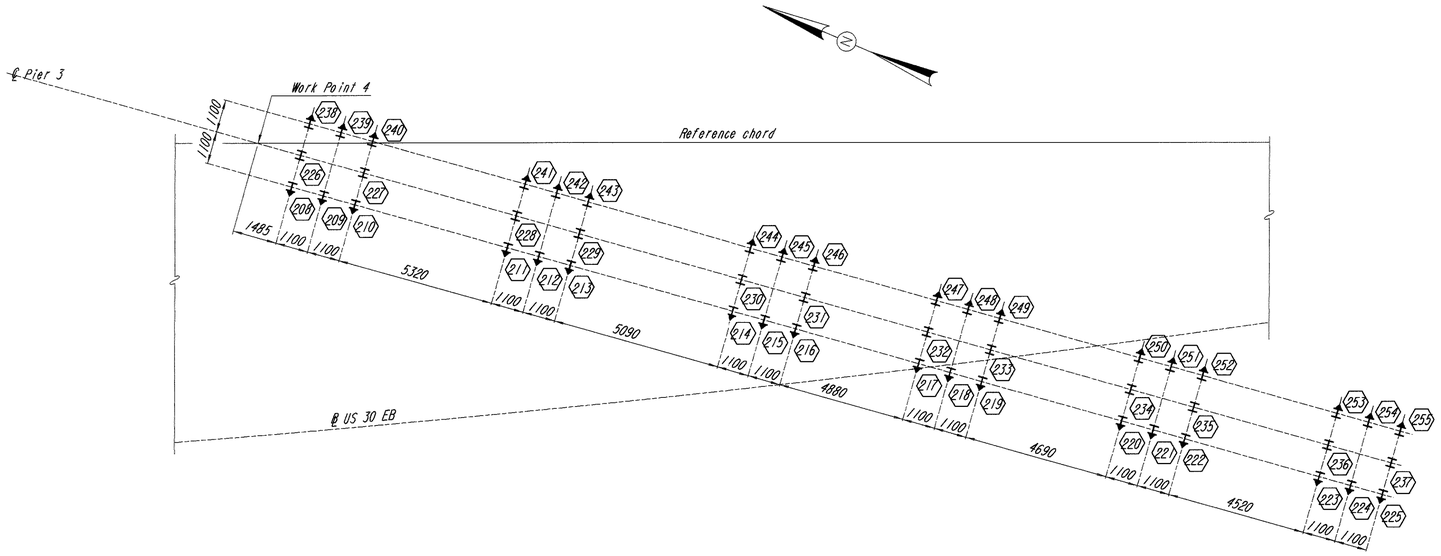
5 / 38

1673
2116

Filename: BR8566sc2.dgn

metric units





PILE LAYOUT

NOTES:
1. All piles are HP310x79.
2. (33) I Designates pile number and location.
3. ↳ Denotes pile battered 1:3 in direction of arrow.

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PILE LAYOUT
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

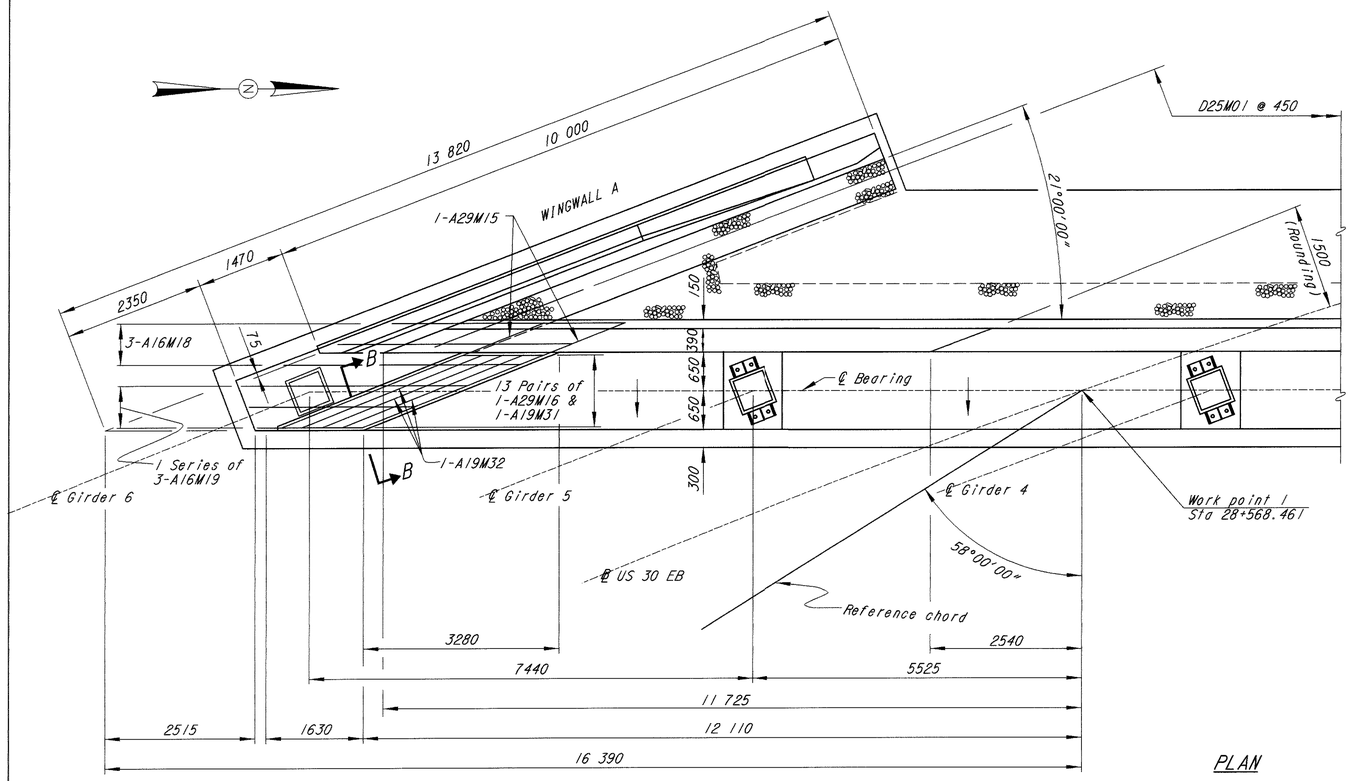
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6 / 38

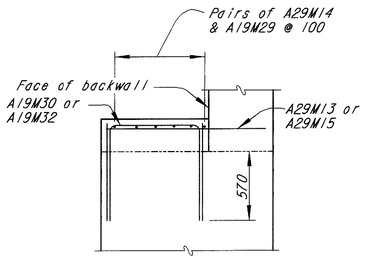
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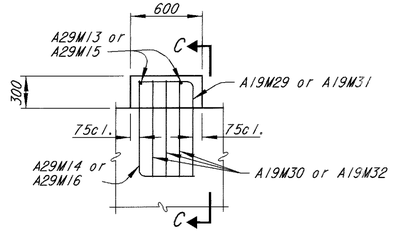
metric units



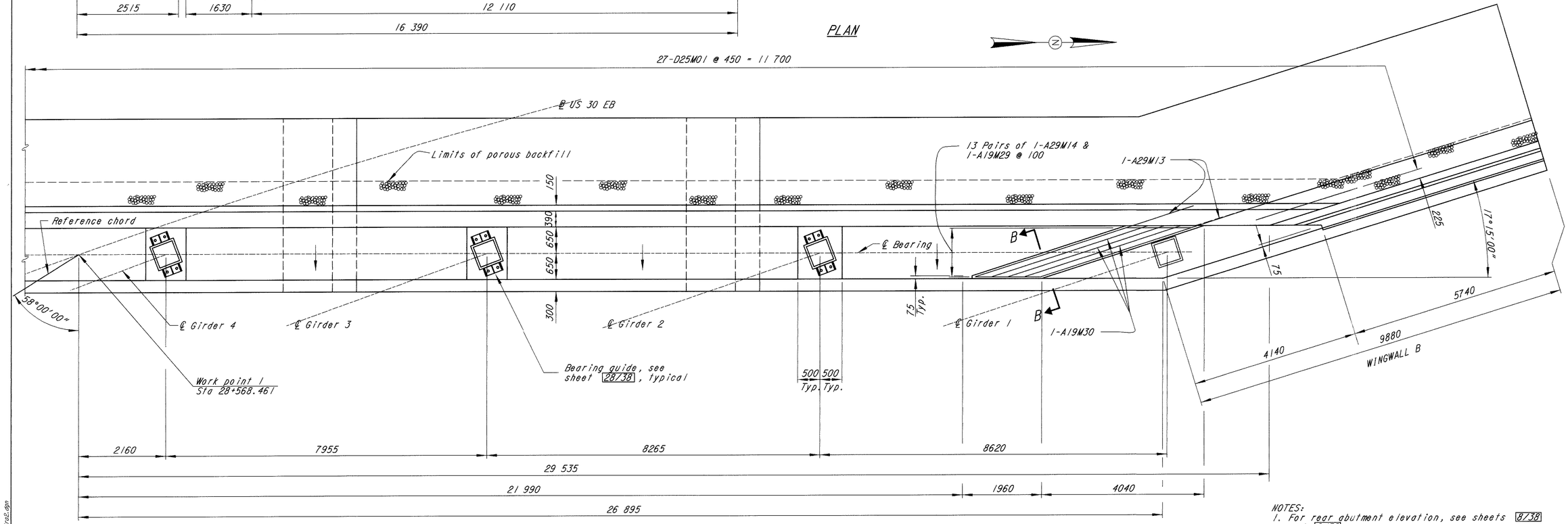
PLAN



VIEW C-C



SECTION B-B



PLAN

NOTES:
1. For rear abutment elevation, see sheets 8/38 and 9/38.
2. For elastomeric bearing orientation, see sheet 13/38.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
FHL	—	0502188	

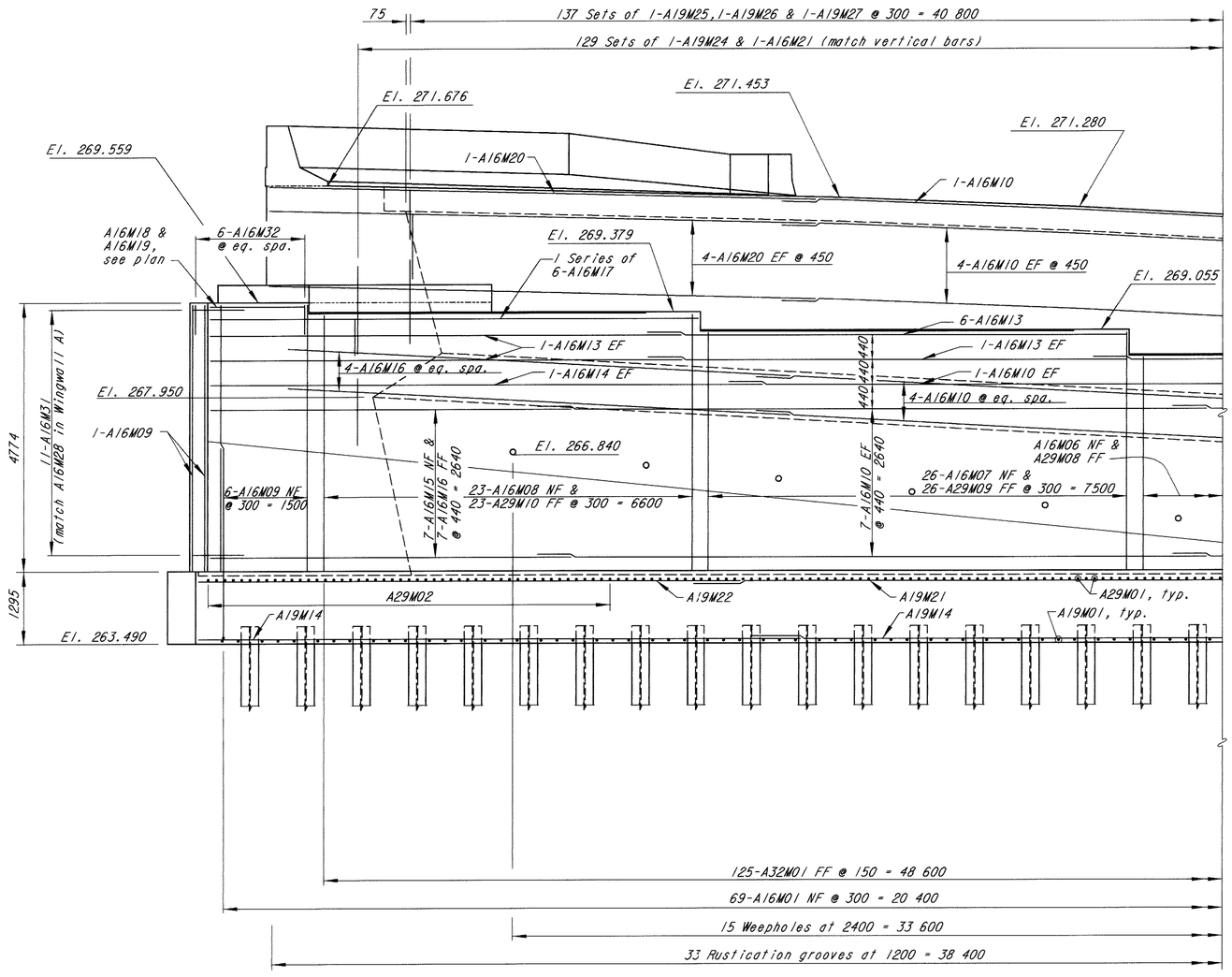
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BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

7/38

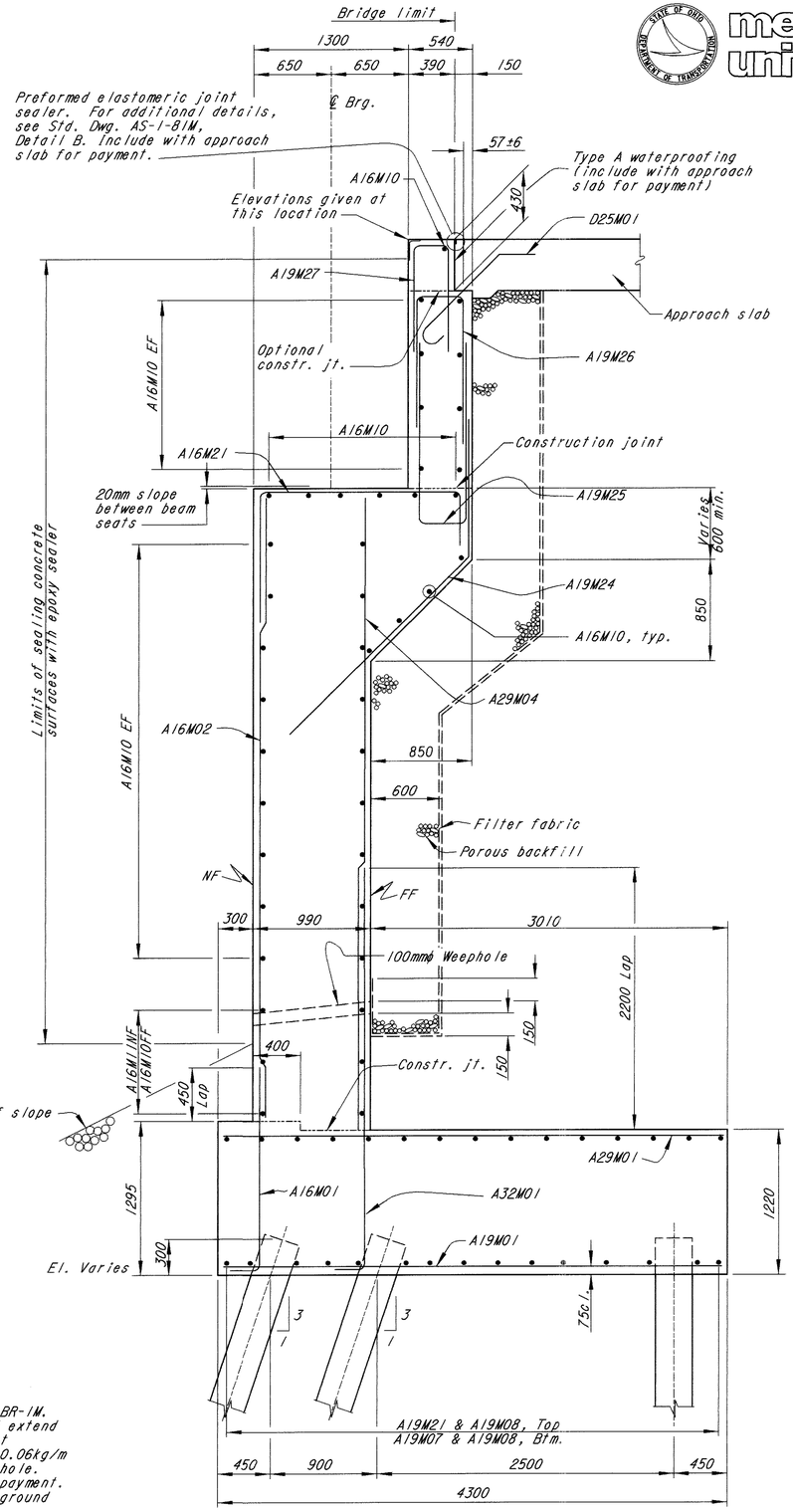
1675
2116

File name: 28566ro2.dgn



ELEVATION

NOTES:
1. EF = Each Face
   NF = Near Face
   FF = Far Face
2. For additional details on the parapets, see Std. Dwg. BR-1M.
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, 300mm below the embankment surface, and laterally to the ends of the wingwalls. 0.06kg/m of bagged No. 3 aggregate shall be placed at each weephole. Bagged aggregate is included with porous backfill for payment.
4. Rustication grooves shall extend 300mm below finished ground line.
5. For rustication groove detail, see sheet 13/38 .
6. Work this sheet with sheet 9/38 .



SECTION A-A

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

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1848 Summit Road
Cincinnati, Ohio 45237

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
FRL	—		8502188

REAR ABUTMENT DETAILS

BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

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1676
2116

Filename: 28566rd5.dgn

metric units

Sets of A19M25, A19M26 & A19M27

Sets of A19M24 & A16M21 (match vertical bars)

El. 271.280

600 Typ.

A16M10

1-A16M10

A

El. 269.765

A16M10

El. 269.055

El. 268.614

4-A16M10 EF @ 450

A16M13

A16M13 EF

6-A16M13

El. 268.162

4-A16M10 EF @ 450

El. 267.697

A16M10 EF

6-A16M10

Construction joint

A16M10

6-A16M10

4-A16M10 @ eq. spa.

4-A16M10 @ eq. spa.

A16M10 EF

A16M07 NF & A29M09 FF

14-A16M06 NF & 14-A29M08 FF @ 300 = 3900

13-A16M05 NF & 13-A29M07 FF @ 300 = 3600

7-A16M10 EF @ 440 = 2540

21-A16M04 NF & 21-A29M06 FF @ 300 = 6000

El. 265.770

Groundline

9-A16M10 EF @ 440 = 3520

7-A16M03 NF & 7-A29M05 FF @ 300 = 1800

27-A16M02 NF & 27-A29M04 FF @ 300 = 7800

5352

241 Typ.

A19M21

A19M14

440

3-A16M12 NF & 3-A16M10FF @ 440 = 880

El. 263.480

440

3-A16M11 NF & 3-A16M10FF @ 440 = 880

A19M01, typ.

A19M06

A29M01, Typ.

15-A19M28

El. 262.270

A19M08

15-A19M28

1-A19M01

El. 261.050

1-A19M01

A

A32M01 FF

A16M01 NF

75

34-A16M01 NF @ 300 max. = 9800 & 67-A32M01 FF @150 max. = 9800

75

34-A16M01 NF @ 300 = 9900 & 67-A32M01 FF @150 = 9900

Weepholes at 2400

1800

Rustication grooves at 1200

1200

ELEVATION

NOTES:
1. For rear abutment plan, see sheet 7/38 .
2. For Section A-A, see sheet 8/38
3. EF = Each Face
   NF = Near Face
   FF = Far Face
4. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, 300mm below the embankment surface, and laterally to the ends of the wingwalls. 0.06kg/m of bagged No. 3 aggregate shall be placed at each weephole. Bagged aggregate is included with porous backfill for payment.
5. Rustication grooves shall extend 300mm below finished ground line.
6. For rustication groove detail, see sheet 13/38 .
7. Work this sheet with sheet 8/38.

DESIGN AGENCY
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1848 Summit Road
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DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	CRS	9/9/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	8502188	

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BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

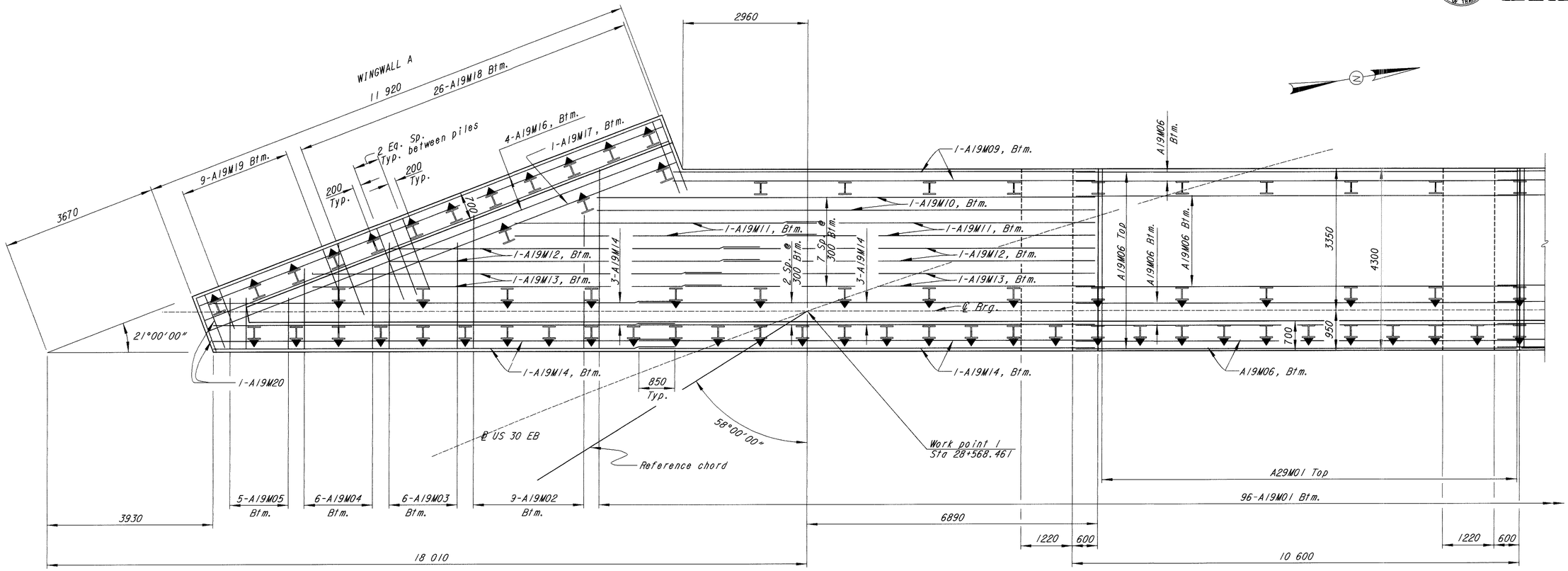
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9 / 38

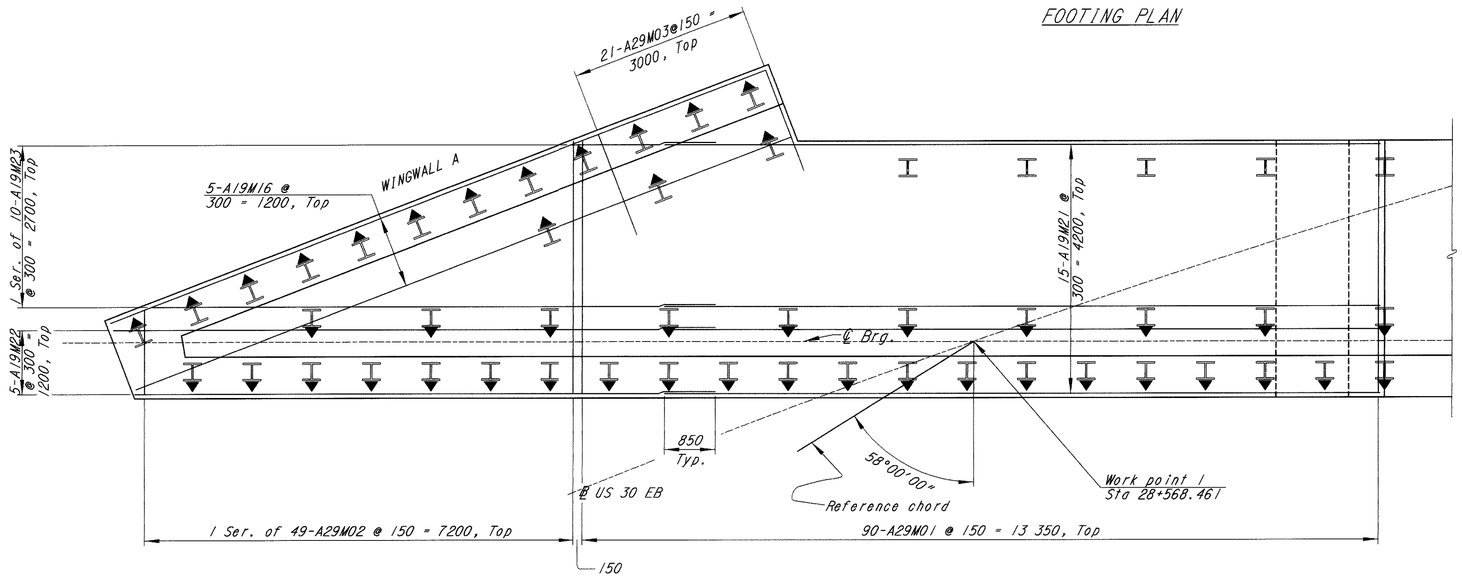
1677
2116

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metric units



FOOTING PLAN



PARTIAL FOOTING PLAN
(Showing top reinforcement only)

NOTES:
1. For PILE LAYOUT PLAN, see sheet 4/38 .
2. For additional reinforcing steel in footing, see sheet 11/38 .

Filename: 28566PA2.dgn

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	CRS	9/9/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	0502188	

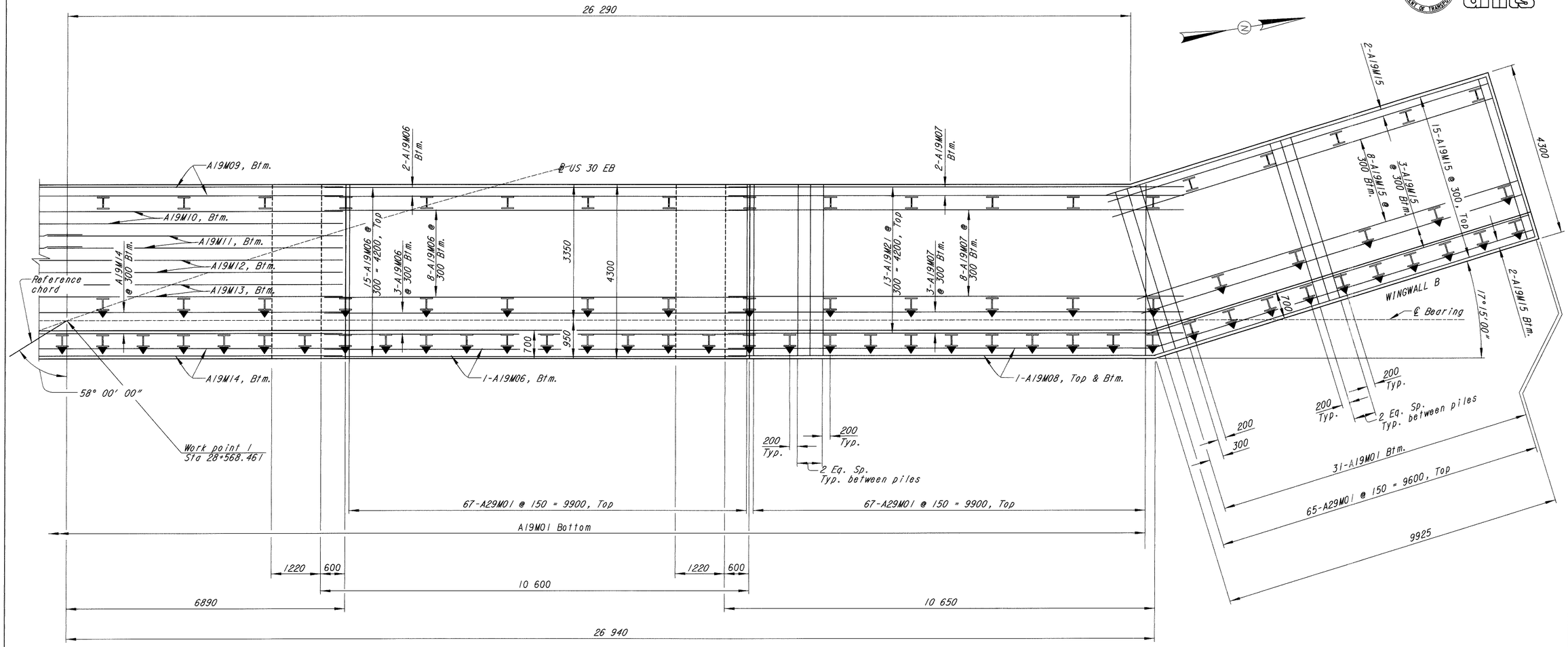
REAR ABUTMENT FOOTING PLAN
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

10/38

1678
2116

metric units



FOOTING PLAN

NOTES:
1. For PILE LAYOUT PLAN, see sheet 4/38 .
2. Work this sheet with sheet 10/38 .

DESIGN AGENCY	BALKE ENGINEERS 1848 Summit Road Cincinnati, Ohio 45237
DESIGNED	MPS
DRAWN	ALH
CHECKED	FAL
REVIEWED	CRS
REVISED	—
DATE	9/9/99
STRUCTURE FILE NUMBER	8502188

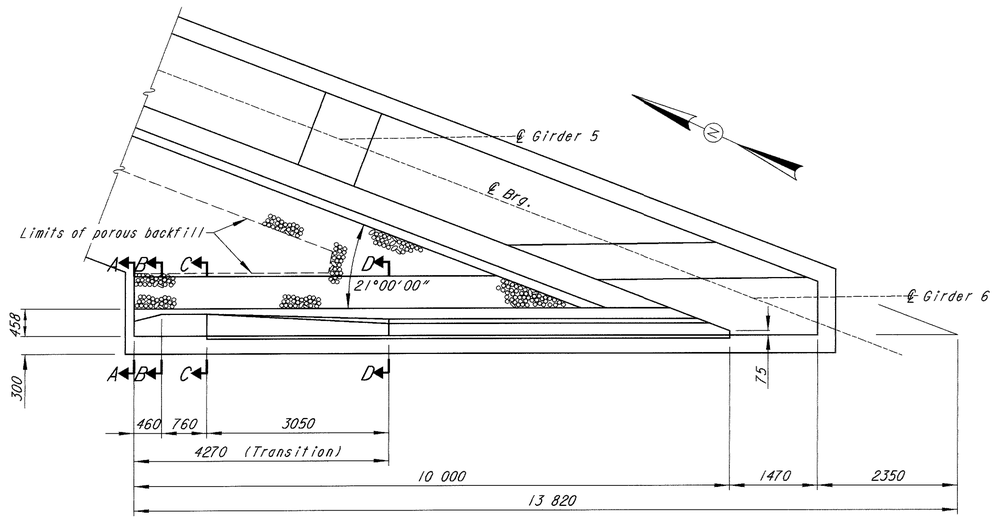
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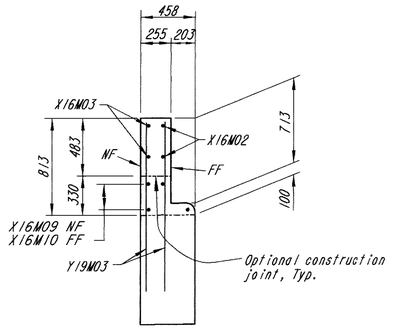
11/38

1679
2116

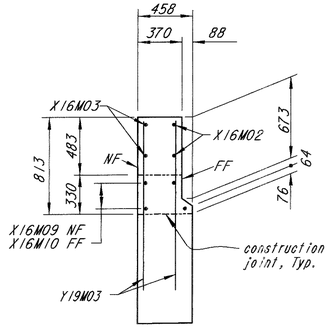
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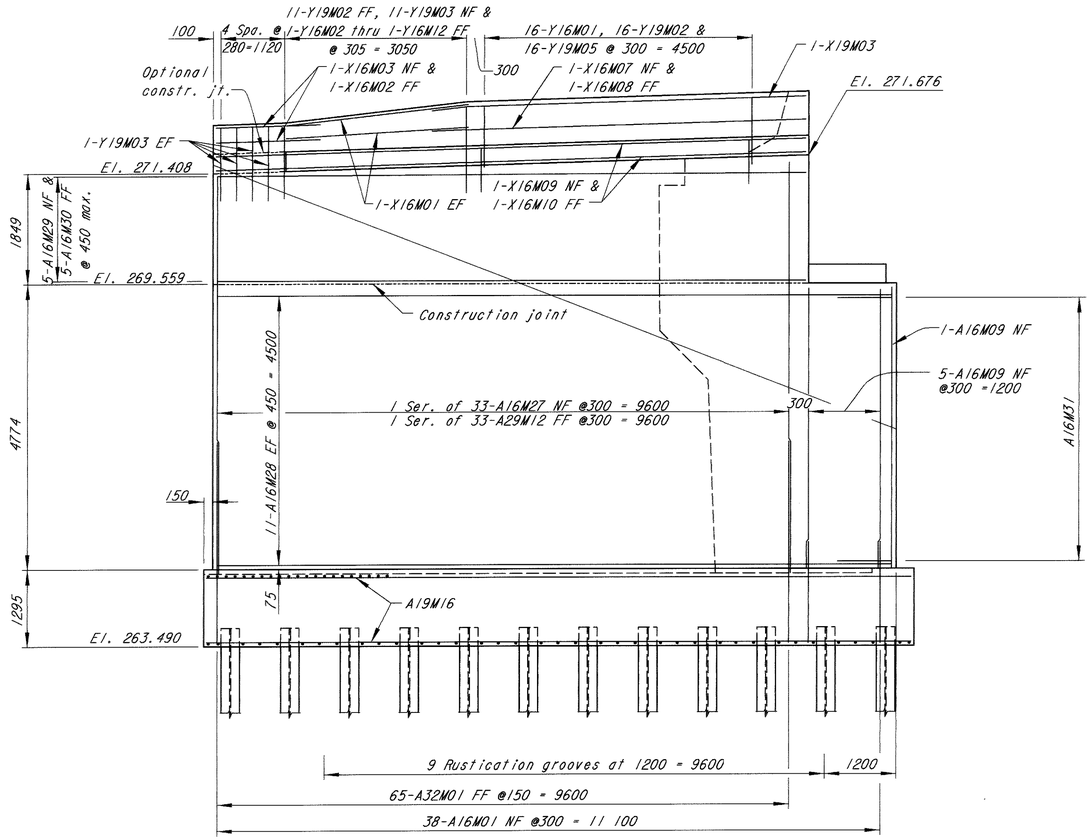
PLAN



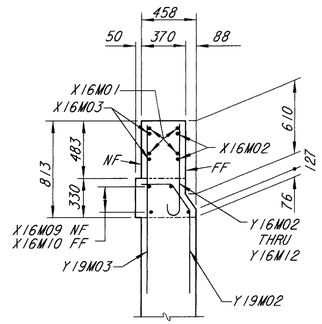
SECTION A-A



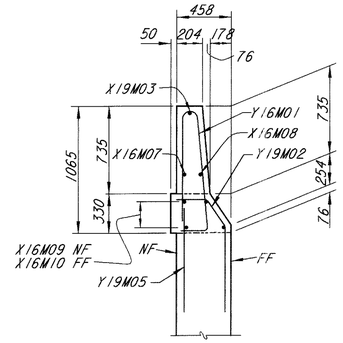
SECTION B-B



ELEVATION
WINGWALL A



SECTION C-C



SECTION D-D

NOTES:
1. EF = Each Face
   NF = Near Face
   FF = Far Face
2. For additional details on the parapets, see Std. Dwg. BR-1M.
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, 300mm below the embankment surface, and laterally to the ends of the wingwalls. 0.06kg/m of bagged No. 3 aggregate shall be placed at each weephole. Bagged aggregate is included with porous backfill for payment.
4. Rustication grooves shall extend 300mm below finished ground line.
5. For rustication groove detail, see sheet 13/38 .

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	CRS	9/9/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	0502188	

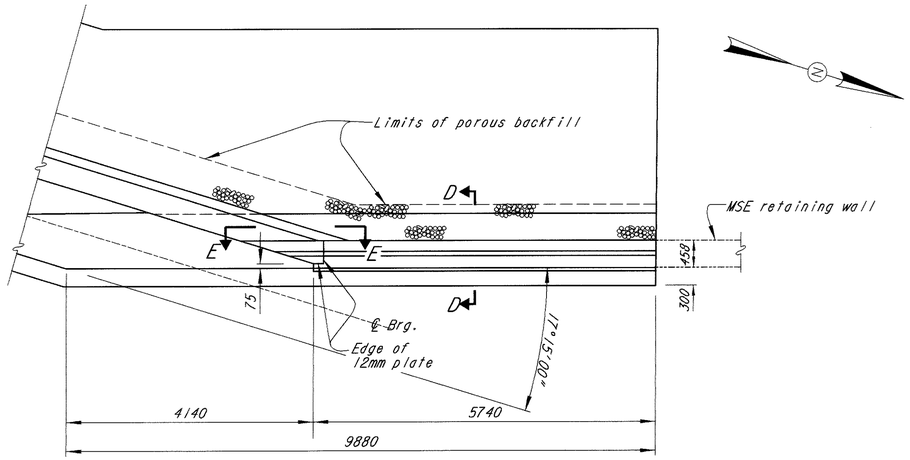
REAR ABUTMENT DETAILS
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

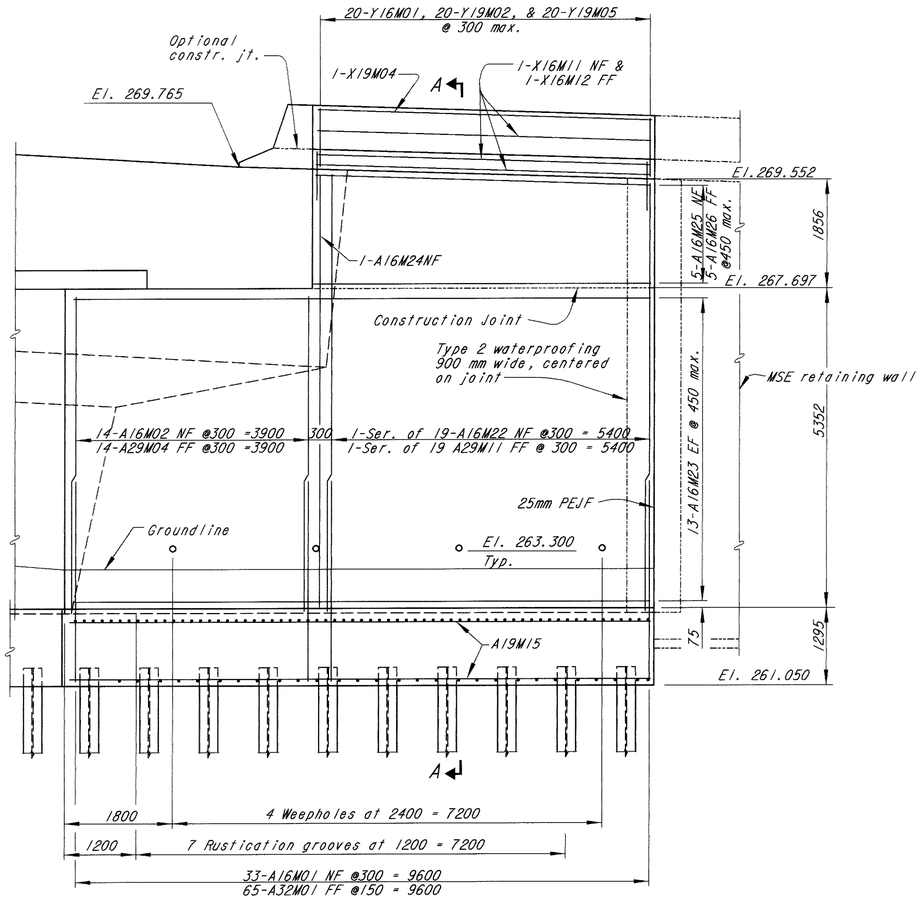
12/38

1680
2116

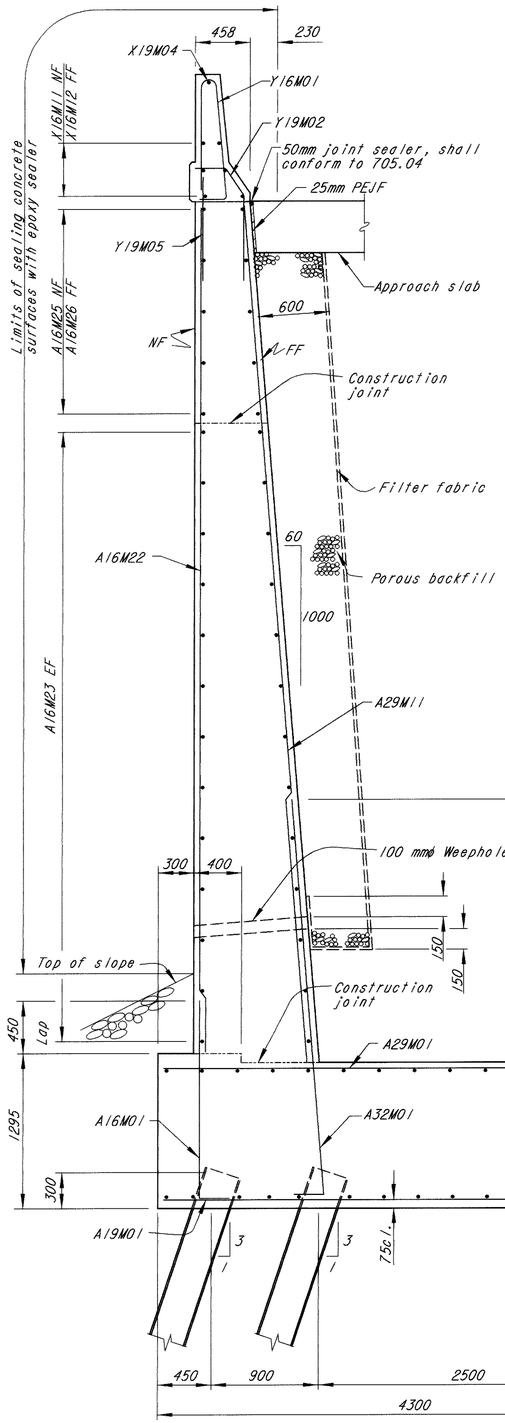
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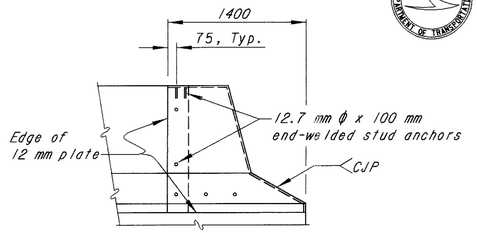
PLAN



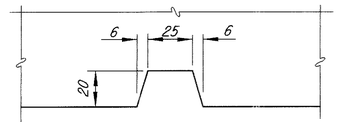
ELEVATION
WINGWALL B



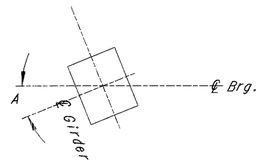
SECTION A-A
(Wingwall B shown,
Wingwall A similar)



SECTION E-E



RUSTICATION GROOVE



ELASTOMERIC PAD ORIENTATION

LOCATION	ANGLE "A"
Girder 1	21°40'00"
Girder 2	21°00'00"
Girder 3	20°20'00"
Girder 4	19°30'00"
Girder 5	18°40'00"
Girder 6	17°45'00"

NOTES:
1. EF = Each Face
   NF = Near Face
   FF = Far Face
   PEJF = Preformed Expansion Joint Filler
2. For additional details on the parapets, see Std. Dwg. BR-1M.
3. For Section D-D, see sheet 12/38 .
4. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, 300mm below the embankment surface, and laterally to the ends of the wingwalls. 0.06kg/m of bagged No. 3 aggregate shall be placed at each weephole. Bagged aggregate is included with porous backfill for payment.
5. Rustication grooves shall extend 300mm below finished ground line.

metric units

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BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

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MRS	ALH	CRS	9/9/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	0502188	

REAR ABUTMENT DETAILS
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

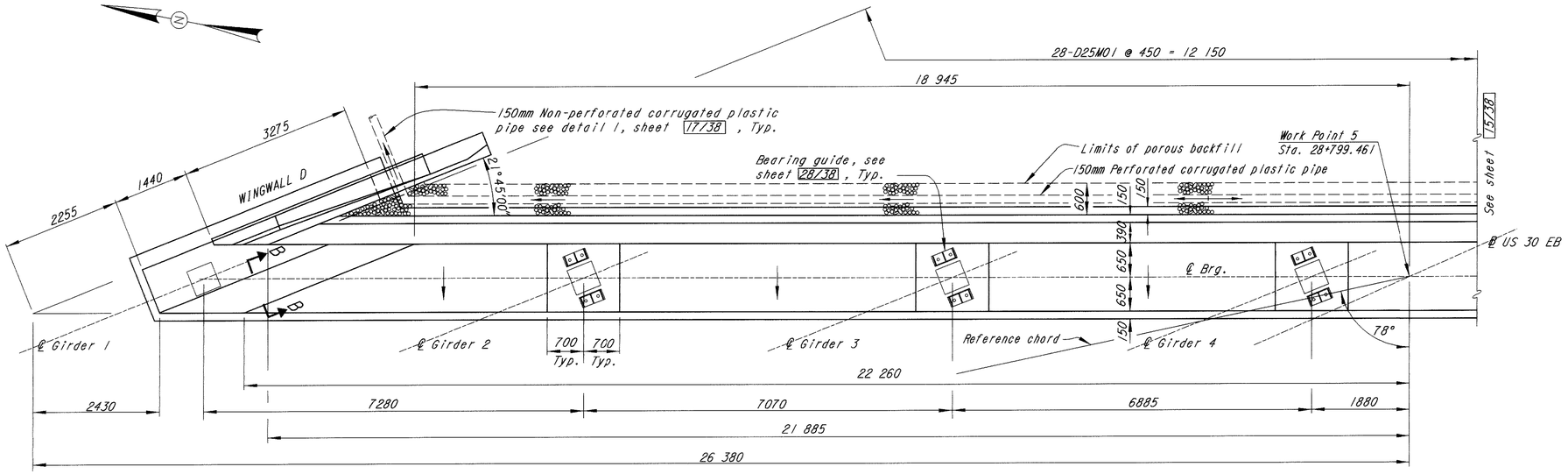
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13/38

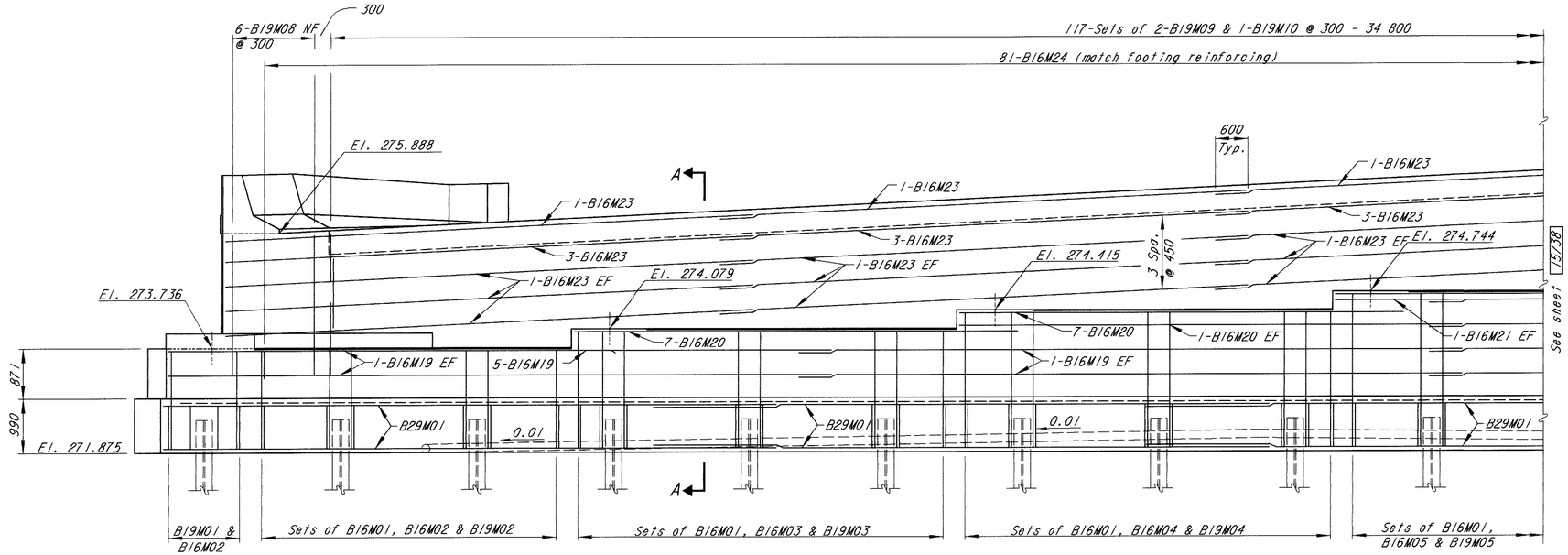
1681
2116

Filename: 28566dt.dgn

metric units



PLAN



ELEVATION

NOTES:
1. For PILE LAYOUT PLAN, see sheet 6/38 .
2. For footing plan, see sheet 16/38 .
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, 300mm below the embankment surface, and laterally as shown.
4. For wingwall details, see sheet 18/38 .
5. For Sections A-A, B-B and Elastomeric pad orientation see sheet 17/38 .
6. EF = Each Face
   NF = Near Face
   FF = Far Face

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FORWARD ABUTMENT DETAILS

BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

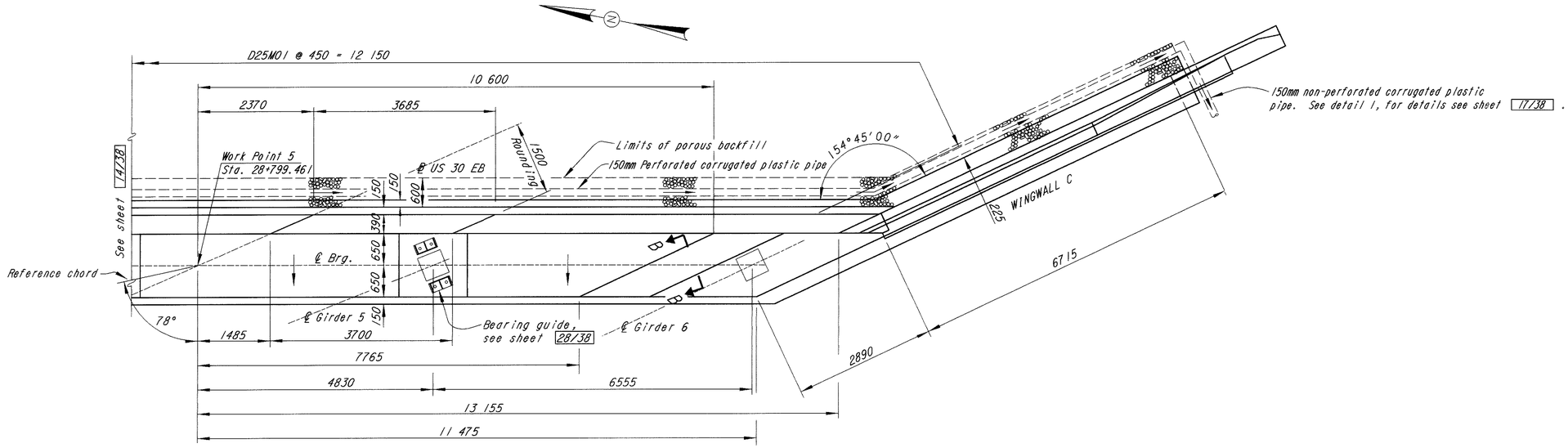
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14/38

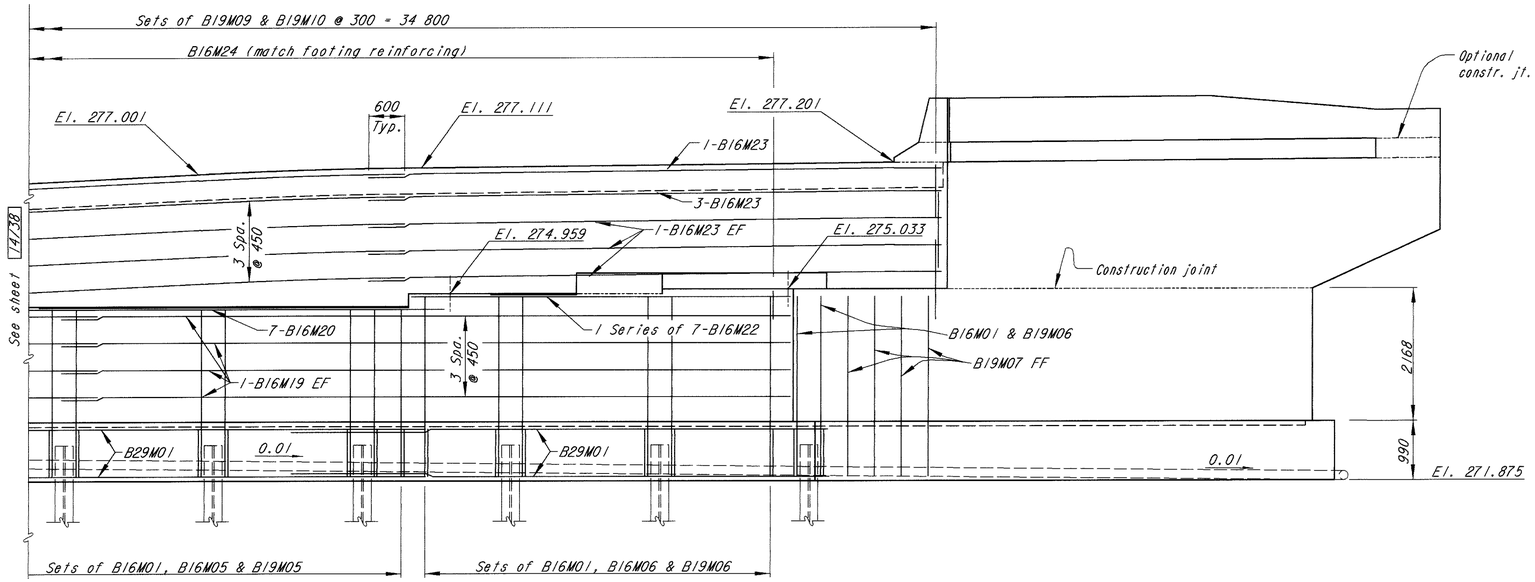
1682
2116

F:\Inmm_28566\d1.dgn

metric units



PLAN



ELEVATION

NOTES:
1. For PILE LAYOUT PLAN, see sheet 6/38 .
2. For footing plan, see sheet 16/38 .
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, 300mm below the embankment surface, and laterally as shown.
4. For wingwall details, see sheet 18/38 .
5. For Section B-B and Elastomeric pad orientation see sheet 17/38 .
6. EF = Each Face
   NF = Near Face
   FF = Far Face

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	8502188	

FORWARD ABUTMENT DETAILS

BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

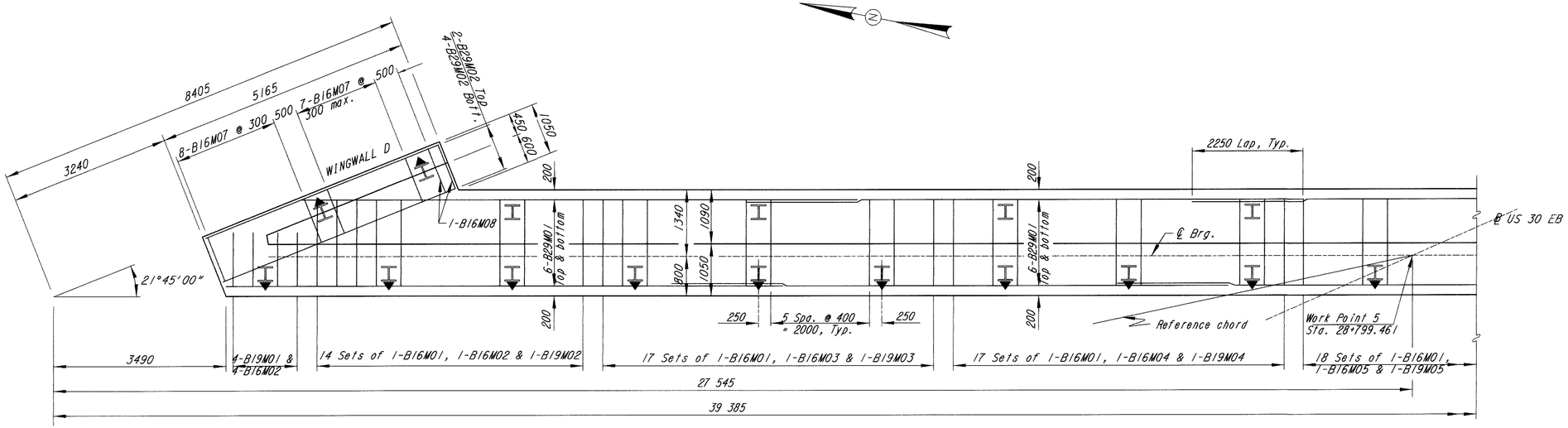
WYA/CRA-30-28.009/0.000

15 / 38

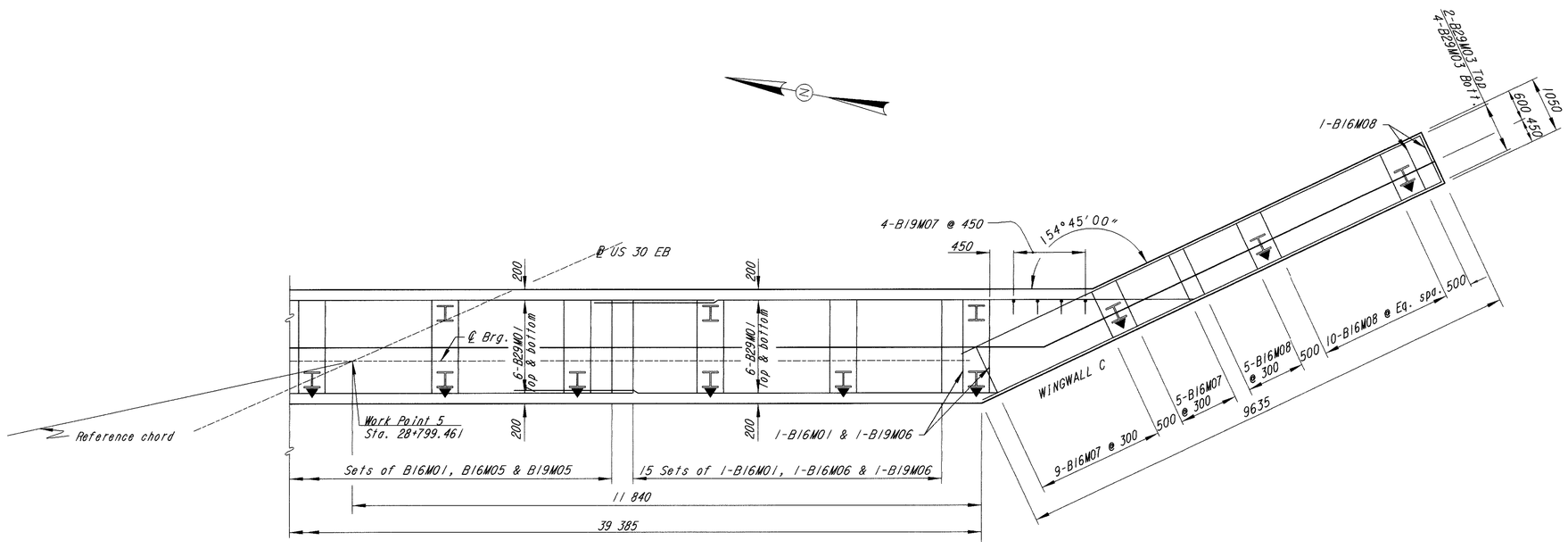
1683
2116

F:\Name: 28566f05.dgn

metric units



FOOTING PLAN



FOOTING PLAN

NOTES:
1. For PILE LAYOUT PLAN, see sheet 6/38 .

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FORWARD ABUTMENT DETAILS
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

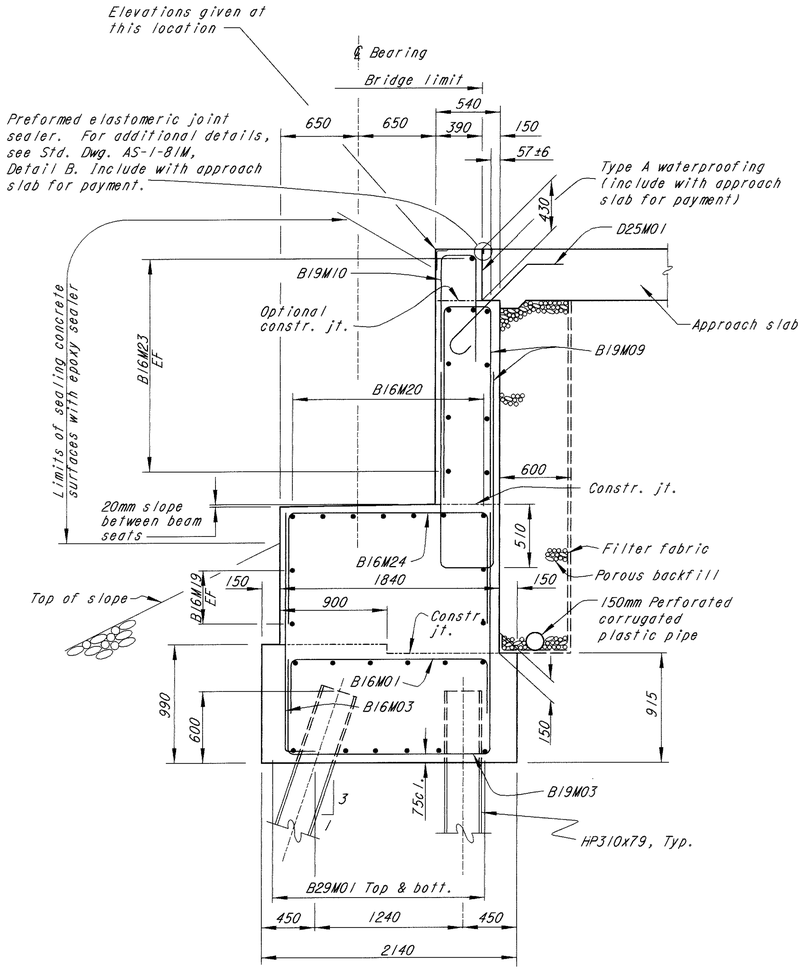
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16 / 38

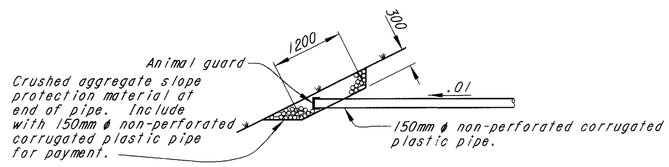
1684
2116

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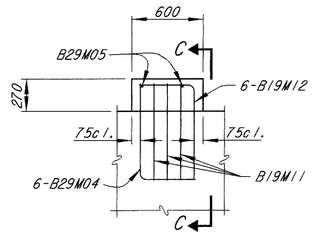
metric units



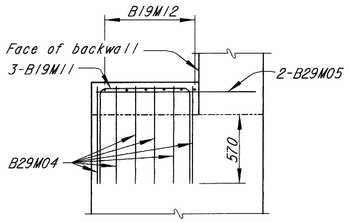
SECTION A-A



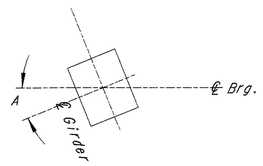
DETAIL 1



SECTION B-B
(SEISMIC PEDESTAL)



VIEW C-C



ELASTOMERIC PAD ORIENTATION

LOCATION	ANGLE "A"
Girder 1	21°30'00"
Girder 2	22°00'00"
Girder 3	22°45'00"
Girder 4	23°30'00"
Girder 5	24°00'00"
Girder 6	24°40'00"

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1848 Summit Road
Cincinnati, Ohio 45237

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FAL	—	0502188	

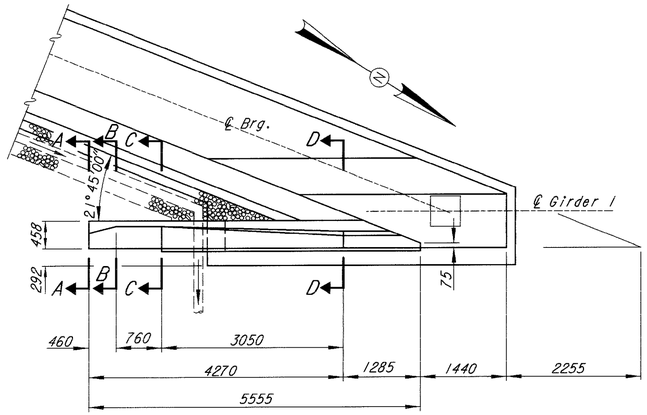
FORWARD ABUTMENT DETAILS
BRIDGE NO. WYA-30-28366
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

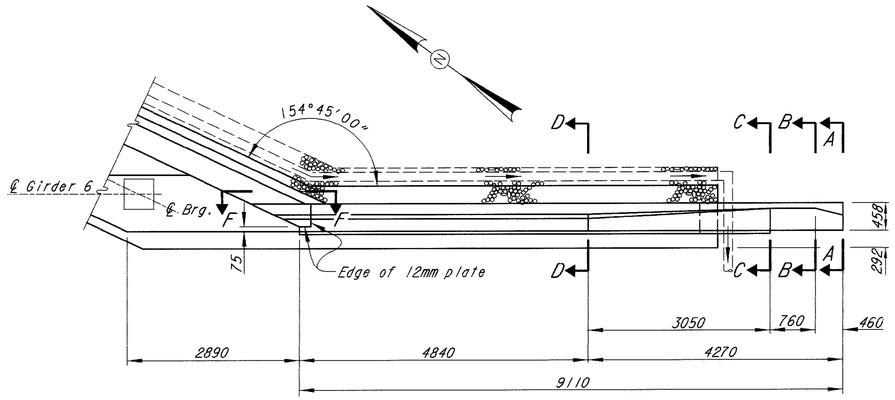
17 / 38

1685
2116

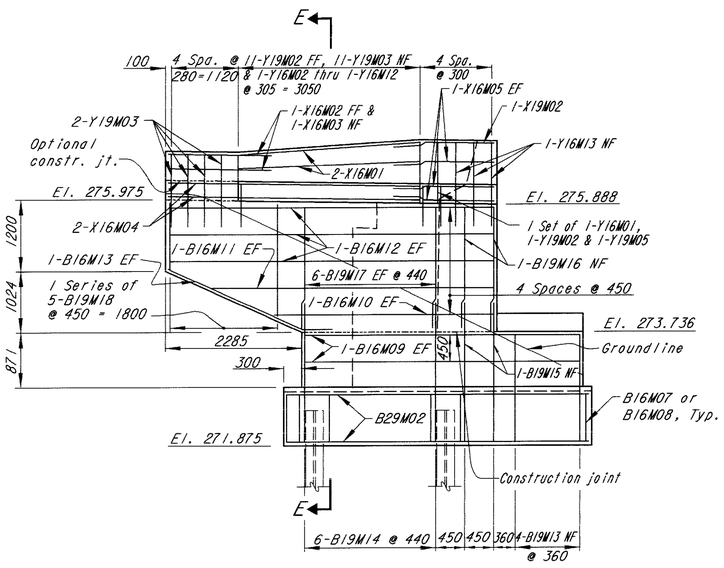
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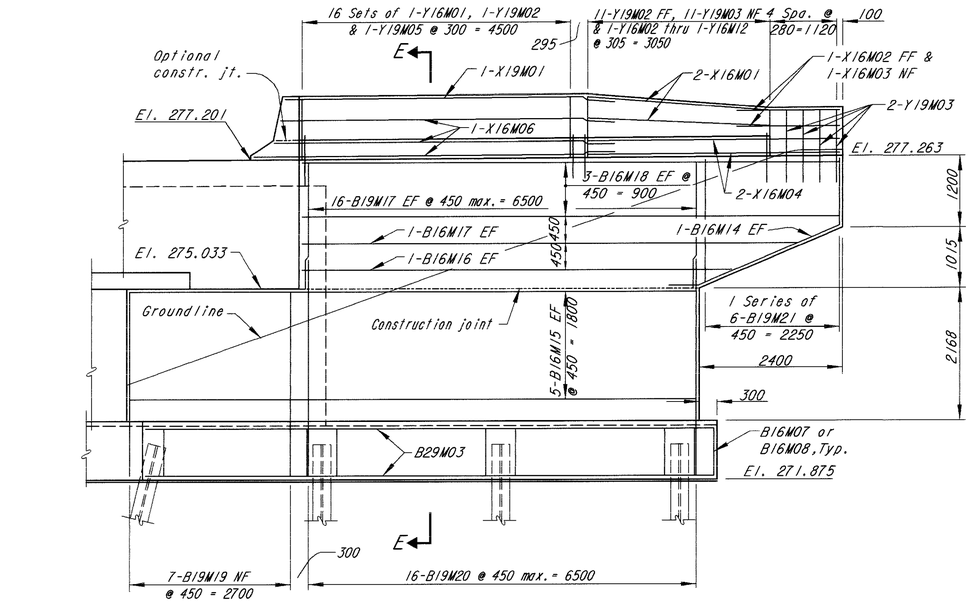
PLAN



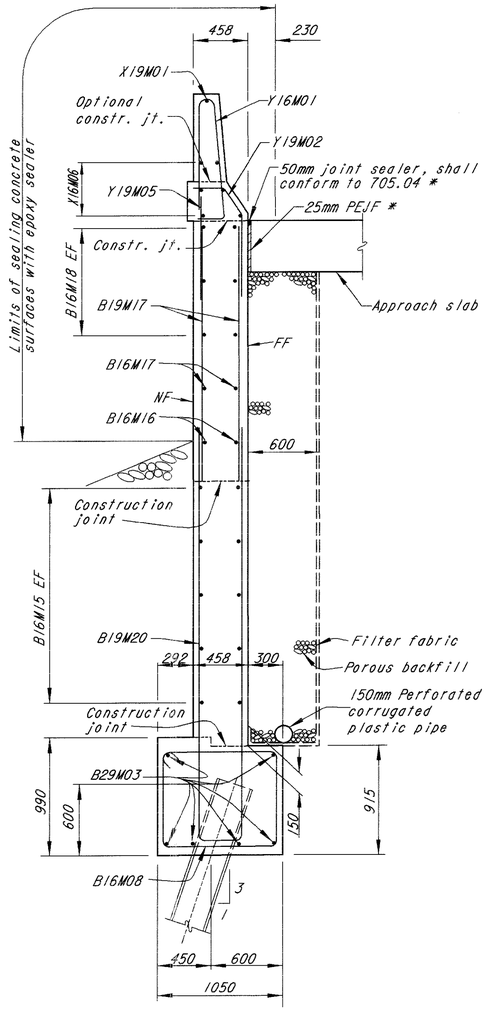
PLAN



ELEVATION
WINGWALL D

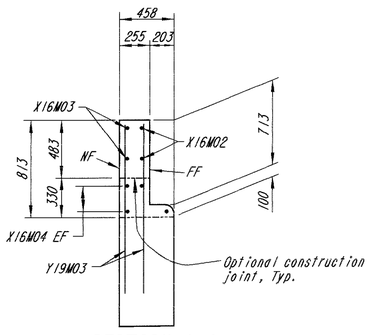


ELEVATION
WINGWALL C

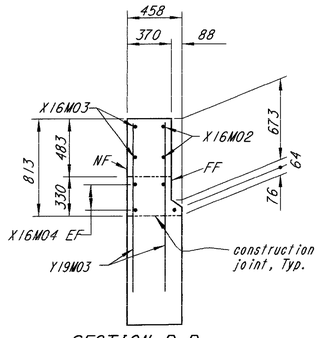


SECTION E-E

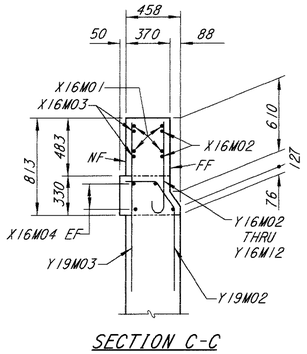
(Wingwall C shown
Wingwall D similar)



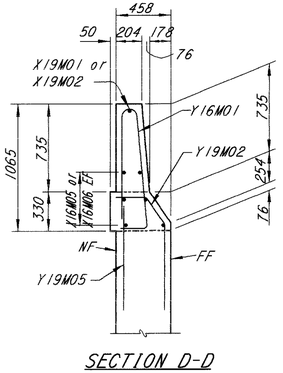
SECTION A-A



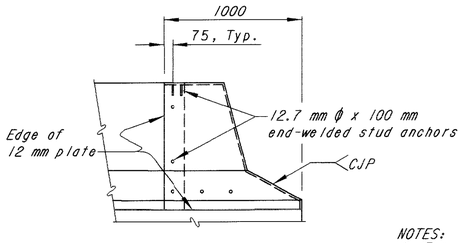
SECTION B-B



SECTION C-C



SECTION D-D



SECTION F-F

NOTES:
1. For additional approach slab information, see std. dwg. AS-1-81M.
2. EF = Each Face
   FF = Far Face
   NF = Near Face
3. For additional parapet details, see Std. Dwg. BR-1M.
4. * Include with approach slab for payment.

metric units

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BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	CRS	9/9/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	8502/88	

FORWARD ABUTMENT DETAILS

BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

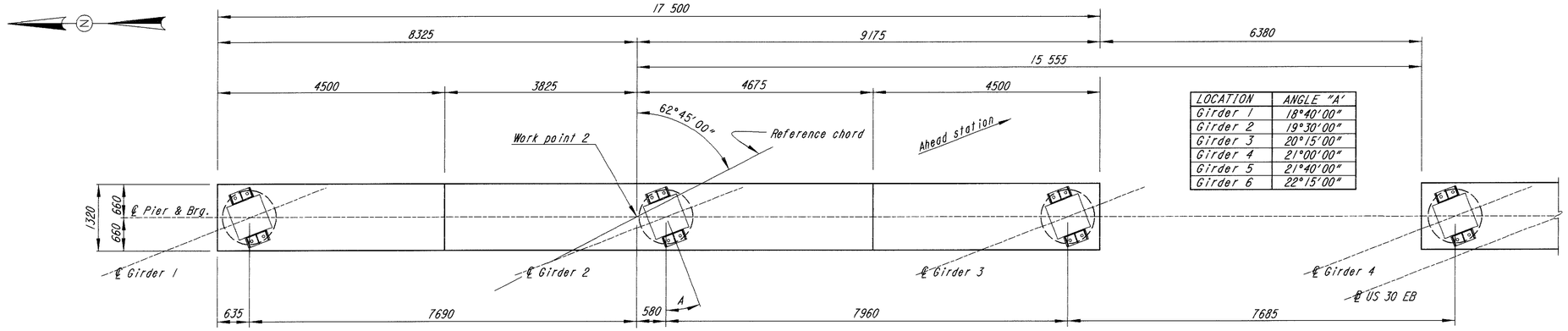
WYA/CRA-30-28.009/0.000

18 / 38

1686
2116

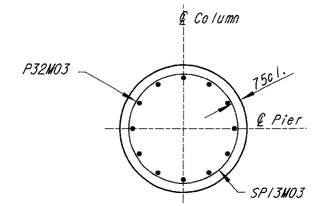
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metric units

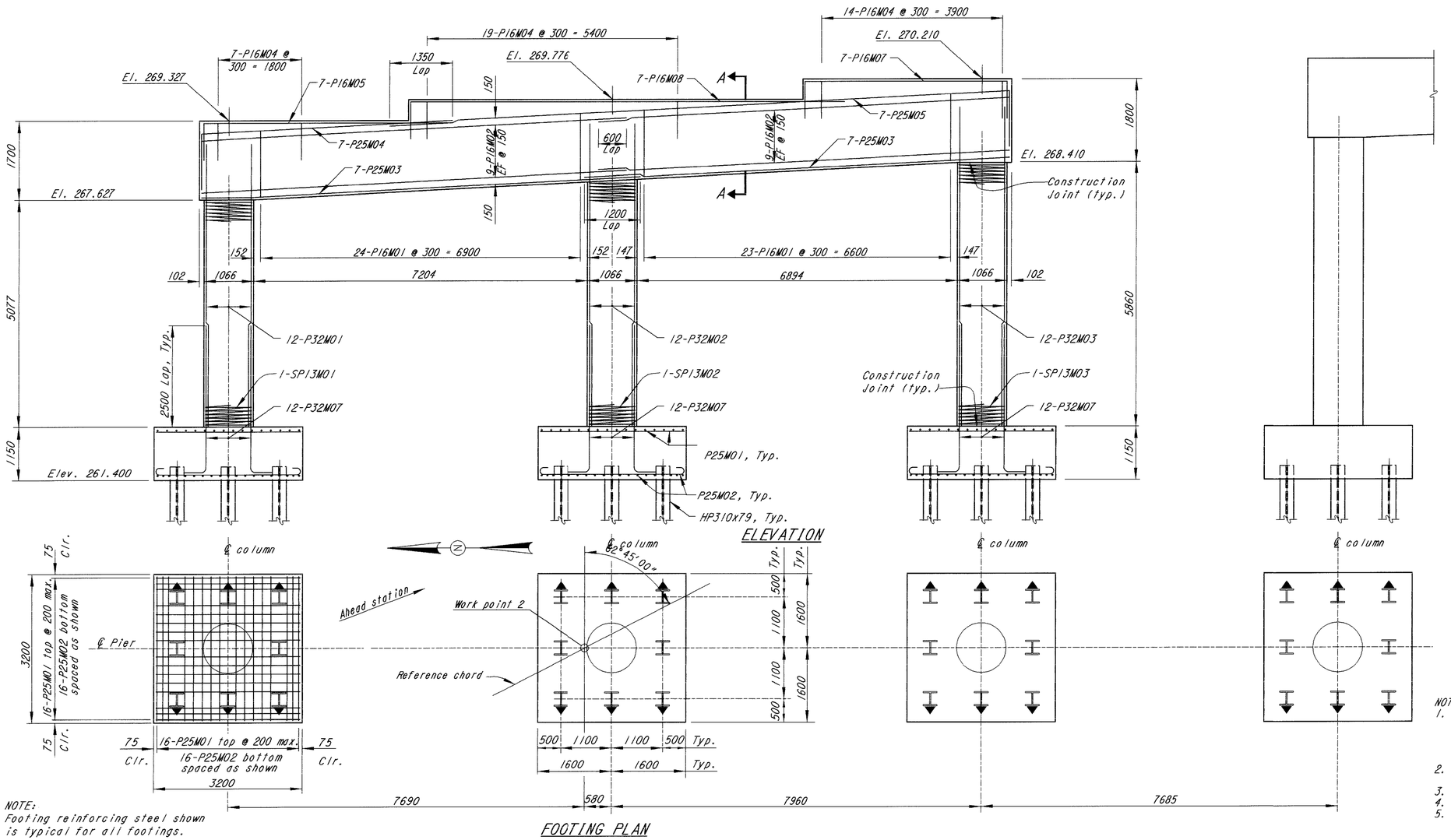


LOCATION	ANGLE "A"
Girder 1	18°40'00"
Girder 2	19°30'00"
Girder 3	20°15'00"
Girder 4	21°00'00"
Girder 5	21°40'00"
Girder 6	22°15'00"

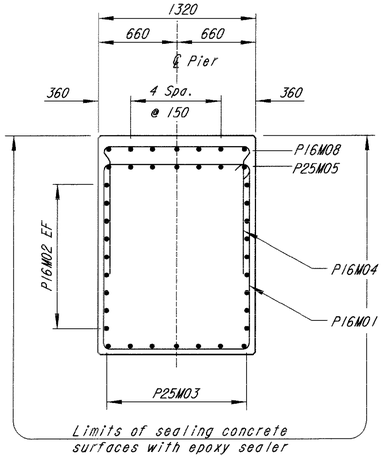
PLAN



TYPICAL COLUMN SECTION



ELEVATION



SECTION A-A

FOOTING PLAN

NOTE:
Footing reinforcing steel shown is typical for all footings.

NOTES:
1. Reinforcing steel in the vicinity of the bearing retainer shall be accurately placed to avoid interference with the drilling of bearing retainer anchor holes or the pre-setting of the bearing retaining anchors.
2. ⊥ Denotes pile battered 1:3 in direction of arrow.
3. Work this sheet with sheet 20738.
4. For pile layout, see sheet 5738.
5. EF = Each Face

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FAL	—	0502188	

PIER 1
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

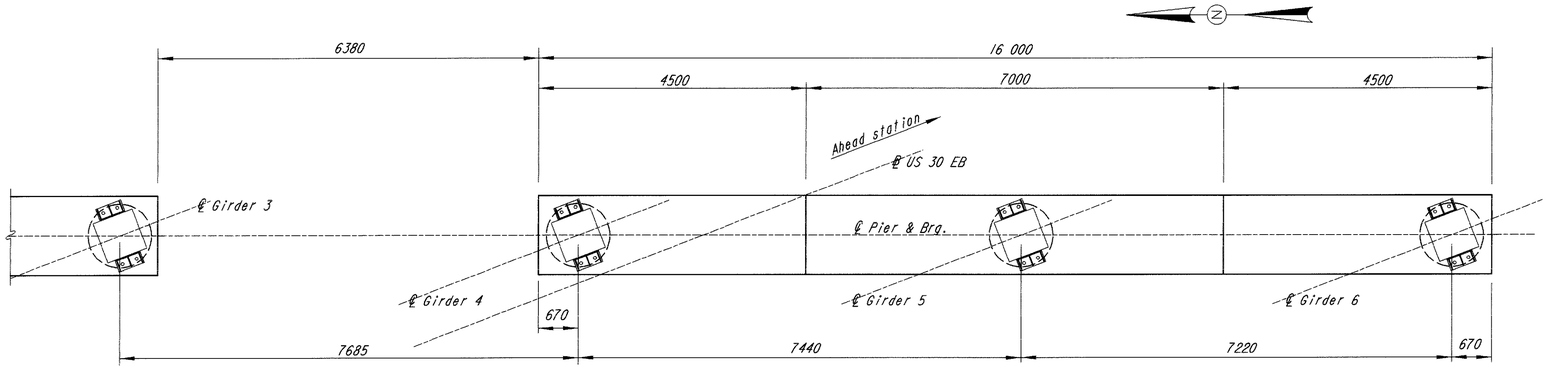
19/38

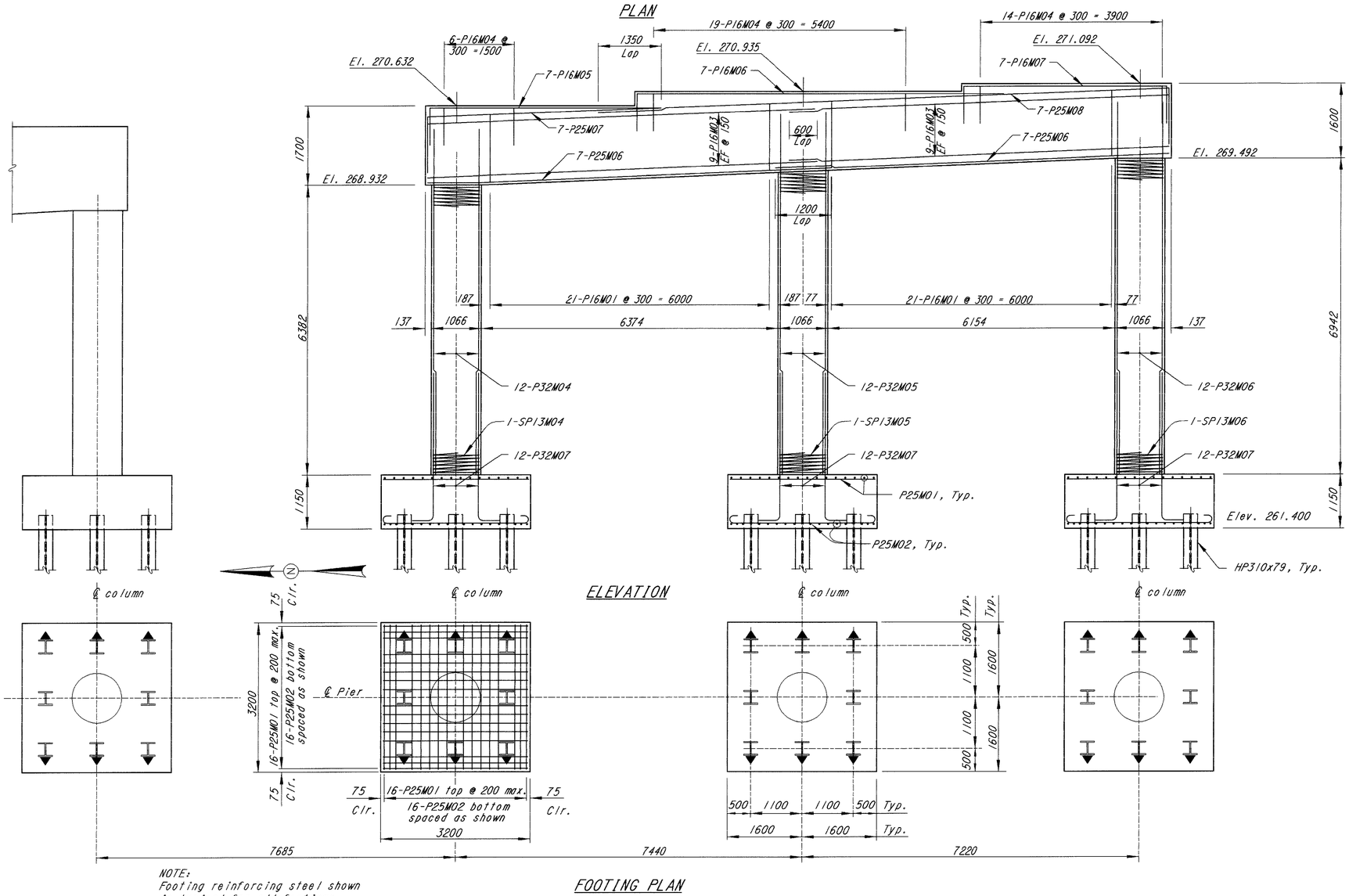
1687
2116

Filename: 28566p1.dgn

metric units

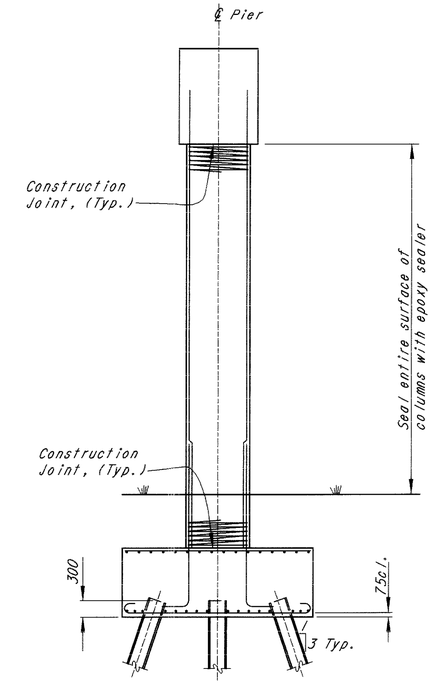
PLAN





FOOTING PLAN

NOTE:
Footing reinforcing steel shown is typical for all footings.



END ELEVATION

NOTES:
1. Reinforcing steel in the vicinity of the bearing retainer shall be accurately placed to avoid interference with the drilling of bearing retainer anchor holes or the pre-setting of the bearing retaining anchors.
2. ⊤ Denotes pile battered 1:3 in direction of arrow.
3. Work this sheet with sheet 19/38.
4. For pile layout, see sheet 5/38.
5. EF = Each Face

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PIER 1
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

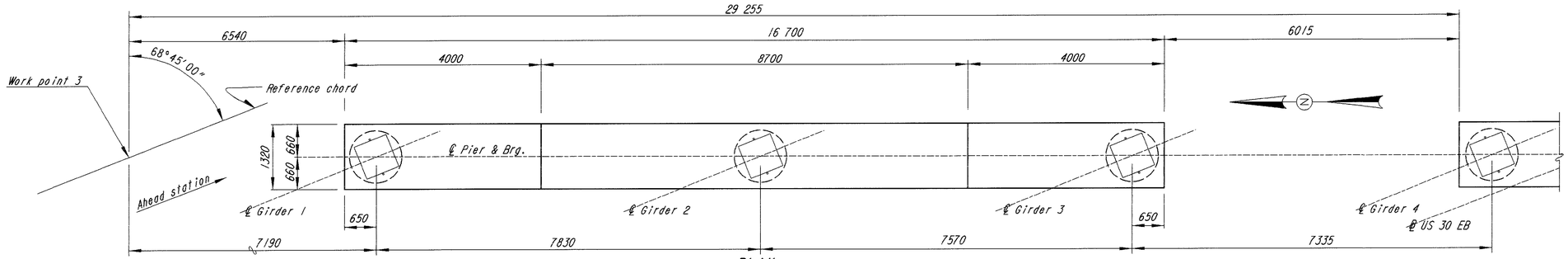
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20/38

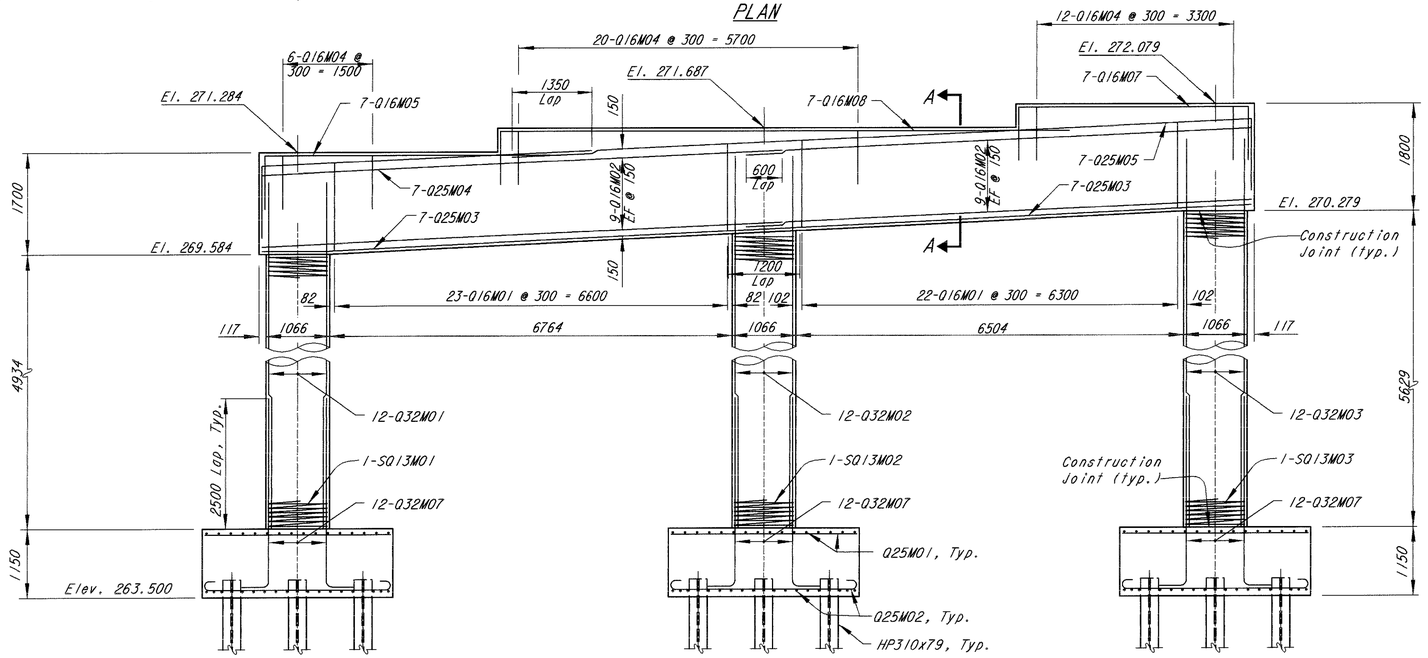
1688
2116

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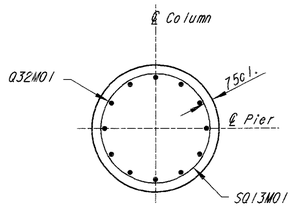
metric units



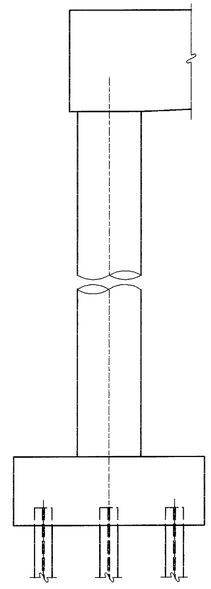
PLAN

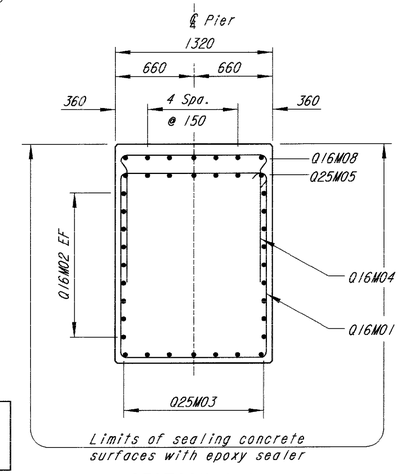


ELEVATION

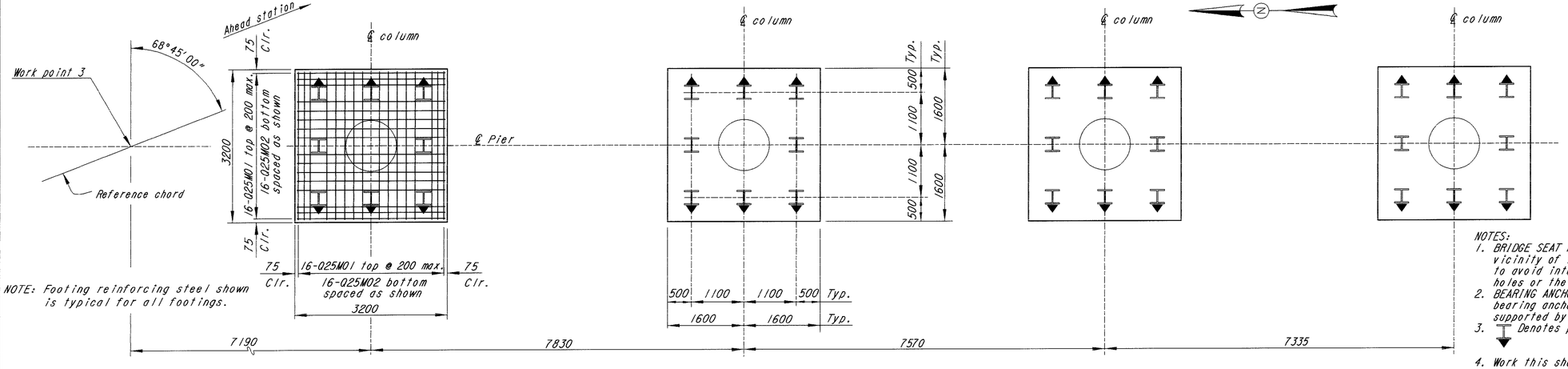


TYPICAL COLUMN SECTION





SECTION A-A



NOTE: Footing reinforcing steel shown is typical for all footings.

FOOTING PLAN

NOTES:
1. BRIDGE SEAT REINFORCEMENT: Reinforcing steel in the vicinity of the bridge seat shall be accurately placed to avoid interference with the drilling of bearing anchor holes or the pre-setting of bearing anchors.
2. BEARING ANCHORS: At the option of the Contractor, bearing anchors (or formed holes), located and supported by templates, may be cast-in-place.
3. ▼ Denotes pile battered 1:3 in direction of arrow.
4. Work this sheet with sheet 22/38.
5. For pile layout, see sheet 5/38.
6. EF = Each Face

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	0502188	

PIER 2
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

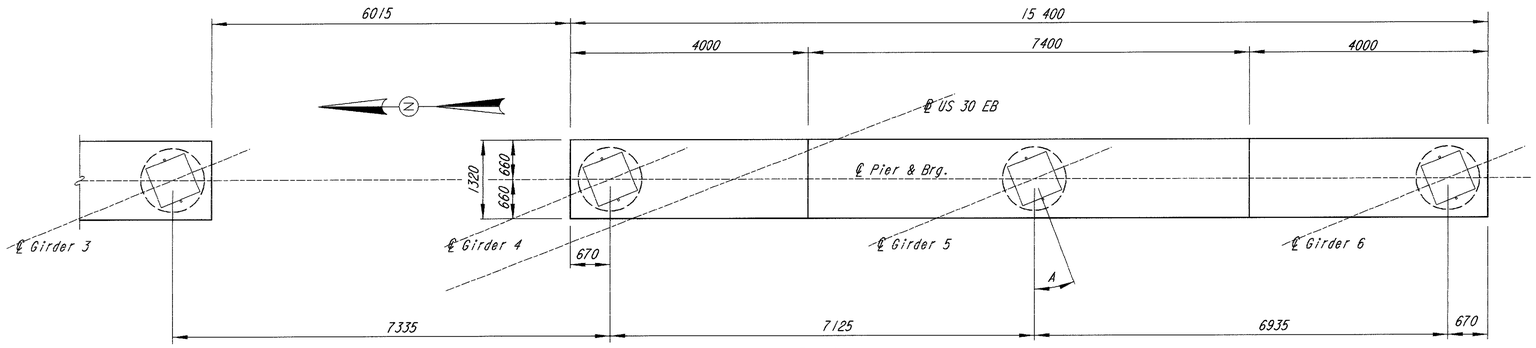
WYA/CRA-30-28.009/0.000

21/38

1689/2116

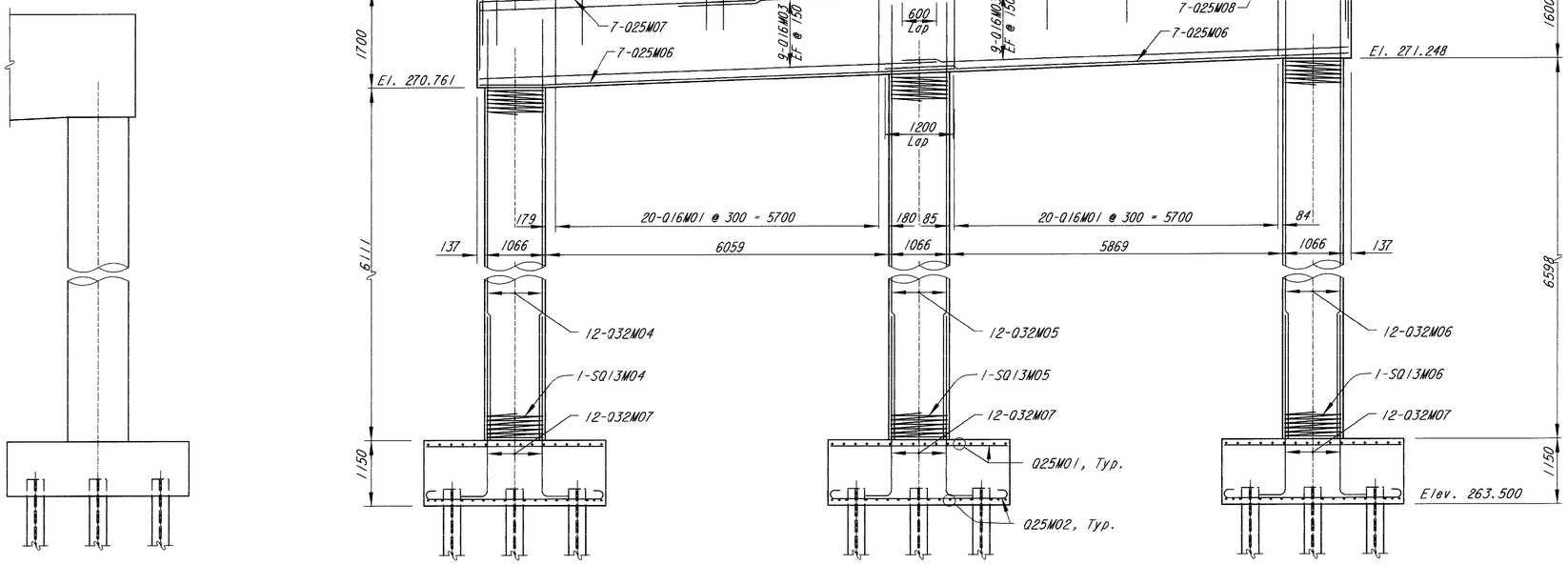
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metric units

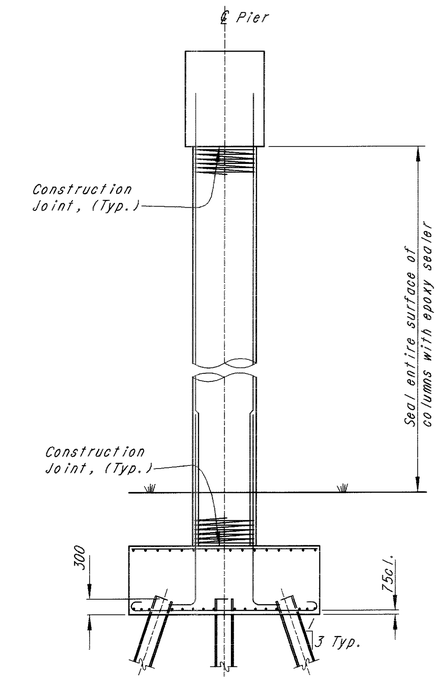


PLAN

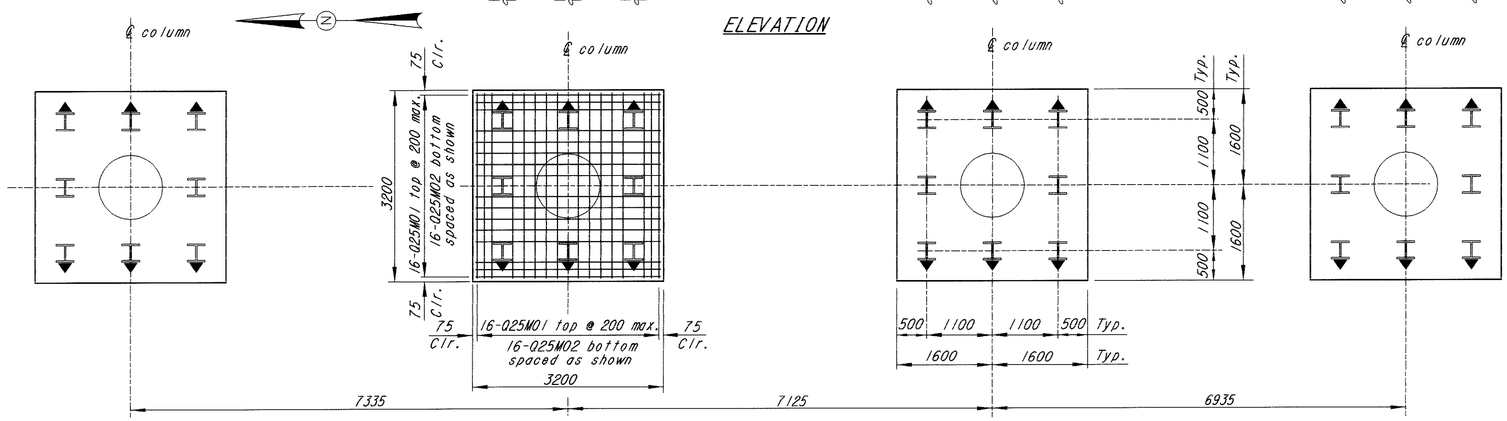
LOCATION	ANGLE "A"
Girder 1	19°45'00"
Girder 2	20°30'00"
Girder 3	21°15'00"
Girder 4	21°45'00"
Girder 5	22°30'00"
Girder 6	23°15'00"



ELEVATION



END ELEVATION



FOOTING PLAN

NOTES:
1. Reinforcing steel in the vicinity of the bearing retainer shall be accurately placed to avoid interference with the drilling of bearing retainer anchor holes or the pre-setting of the bearing retaining anchors.
2. ▼ Denotes pile battered 1:3 in direction of arrow.
3. Work this sheet with sheet 21/38.
4. For pile layout, see sheet 5/38.
5. EF = Each Face

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BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

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PIER 2
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

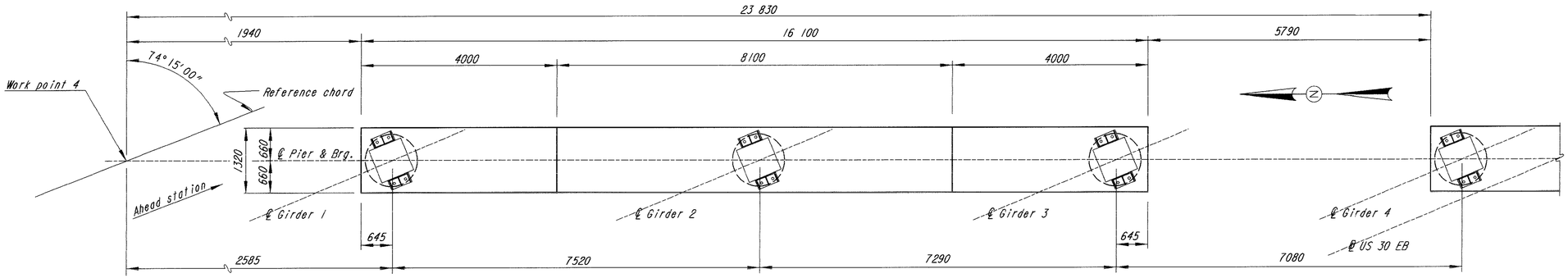
WYA/CRA-30-28.009/0.000

22/38

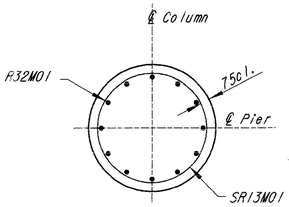
1690
2116

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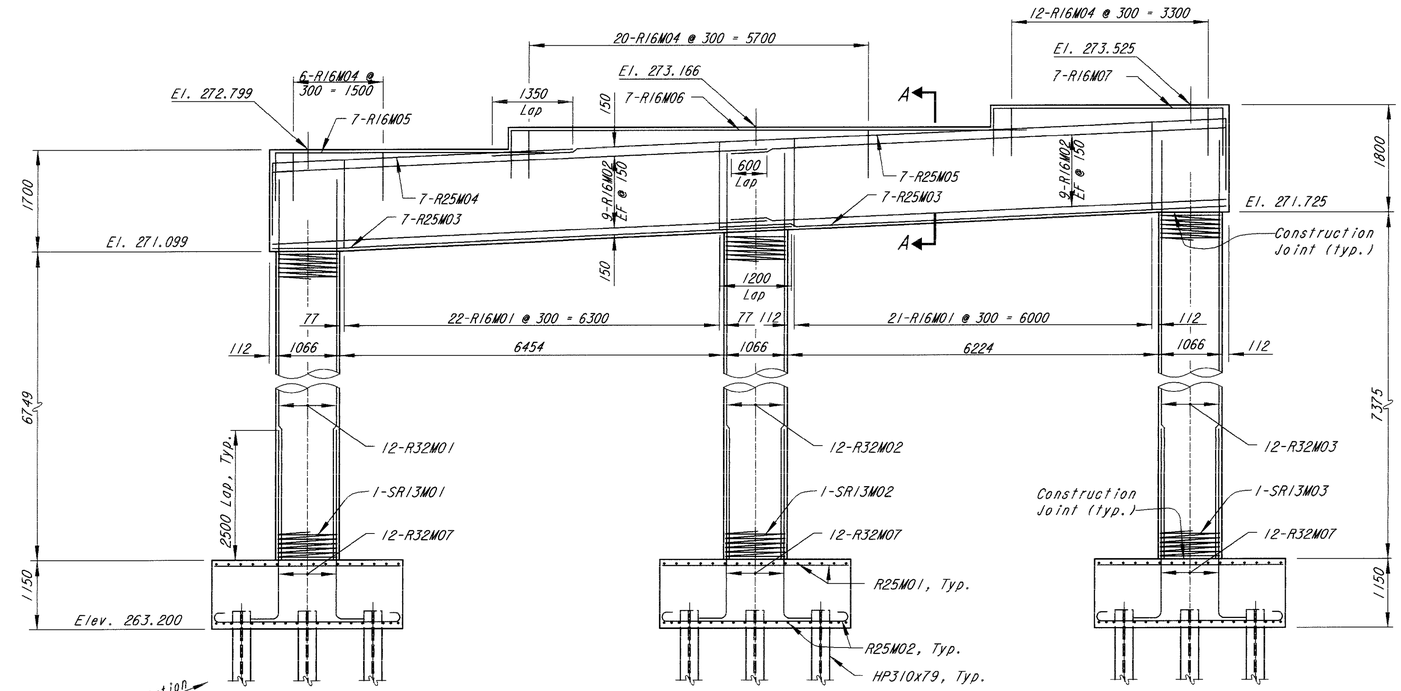
metric units



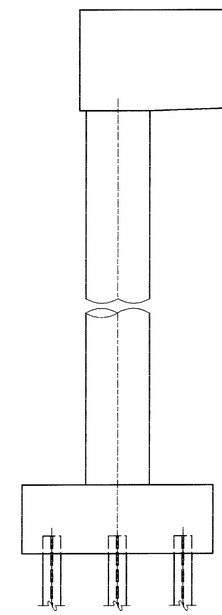
PLAN

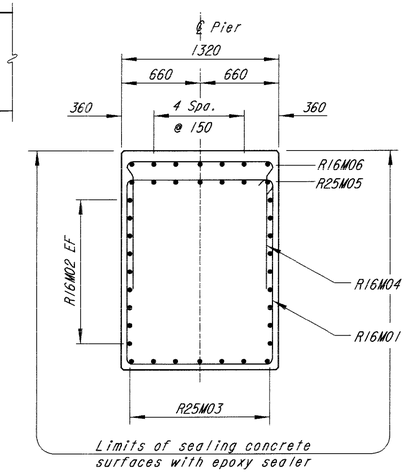


TYPICAL COLUMN SECTION

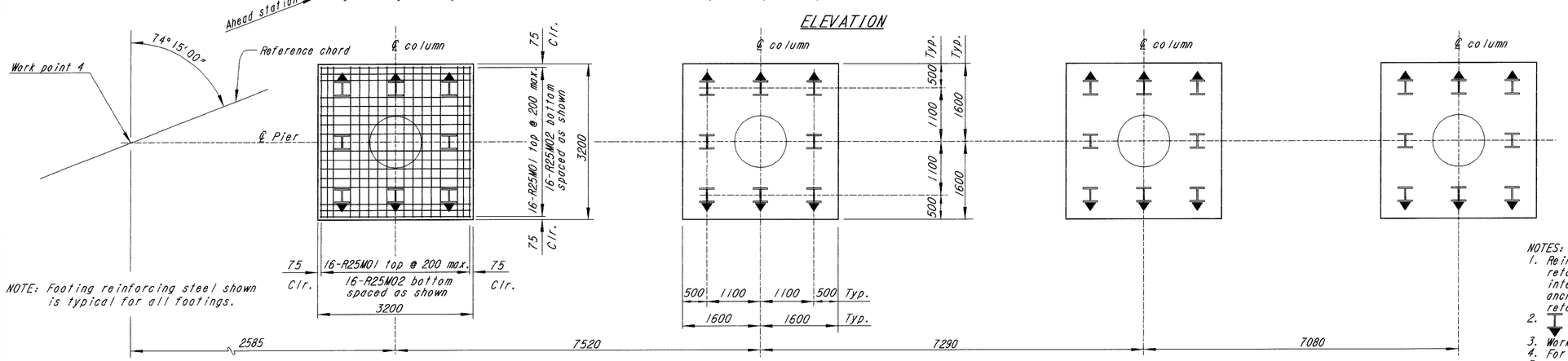


ELEVATION





SECTION A-A



NOTE: Footing reinforcing steel shown is typical for all footings.

FOOTING PLAN

NOTES:
1. Reinforcing steel in the vicinity of the bearing retainer shall be accurately placed to avoid interference with the drilling of bearing retainer anchor holes or the pre-setting of the bearing retaining anchors.
2. ▼ Denotes pile battered 1:3 in direction of arrow.
3. Work this sheet with sheet 24/38.
4. For pile layout, see sheet 6/38.
5. EF = Each Face

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PIER 3
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

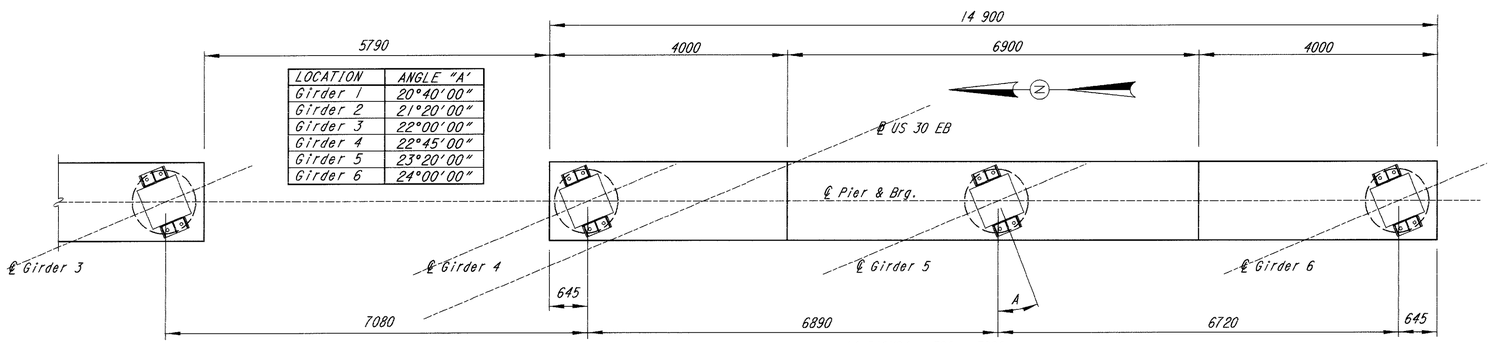
23/38

1691
2116

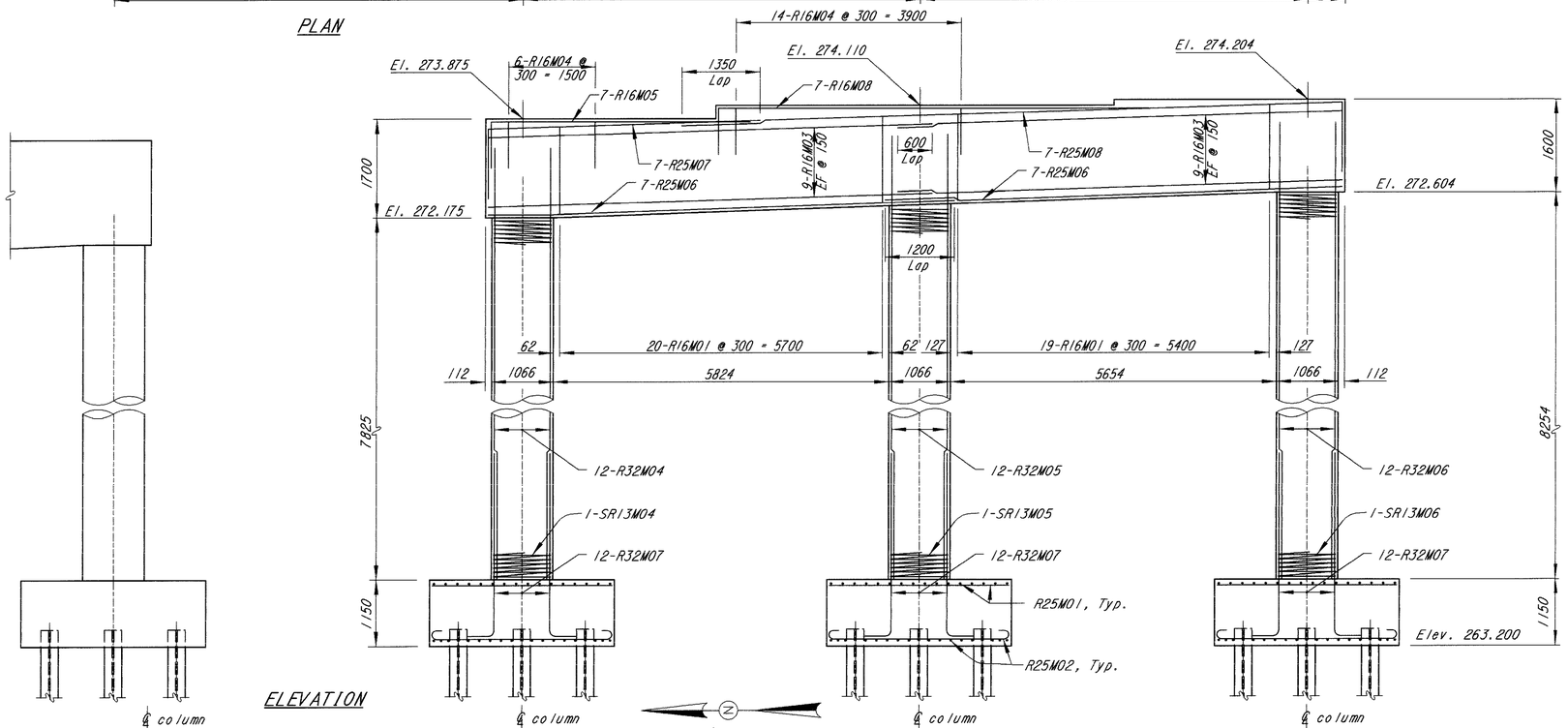
Filename: 28566s1.dgn

metric units

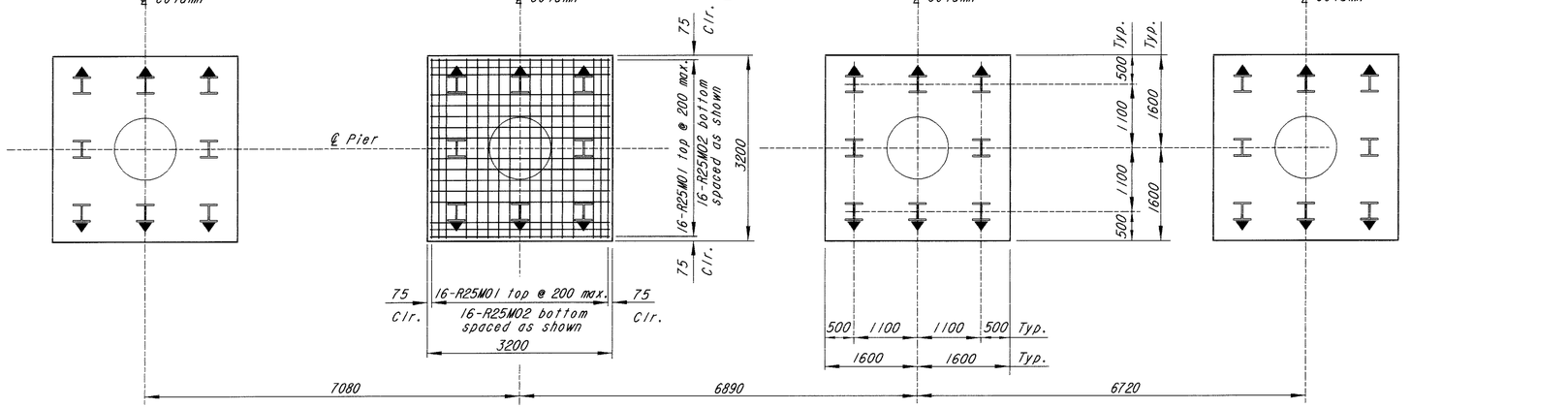
LOCATION	ANGLE "A"
Girder 1	20°40'00"
Girder 2	21°20'00"
Girder 3	22°00'00"
Girder 4	22°45'00"
Girder 5	23°20'00"
Girder 6	24°00'00"



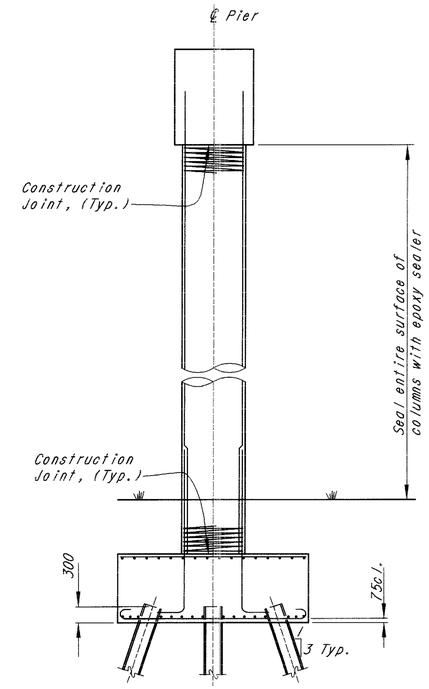
PLAN



ELEVATION



FOOTING PLAN



END ELEVATION

NOTES:
1. Reinforcing steel in the vicinity of the bearing retainer shall be accurately placed to avoid interference with the drilling of bearing retainer anchor holes or the pre-setting of the bearing retaining anchors.
2. ▼ Denotes pile battered 1:3 in direction of arrow.
3. Work this sheet with sheet 23/38.
4. For pile layout, see sheet 6/38.
5. EF = Each Face

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FHL	—	0502188	

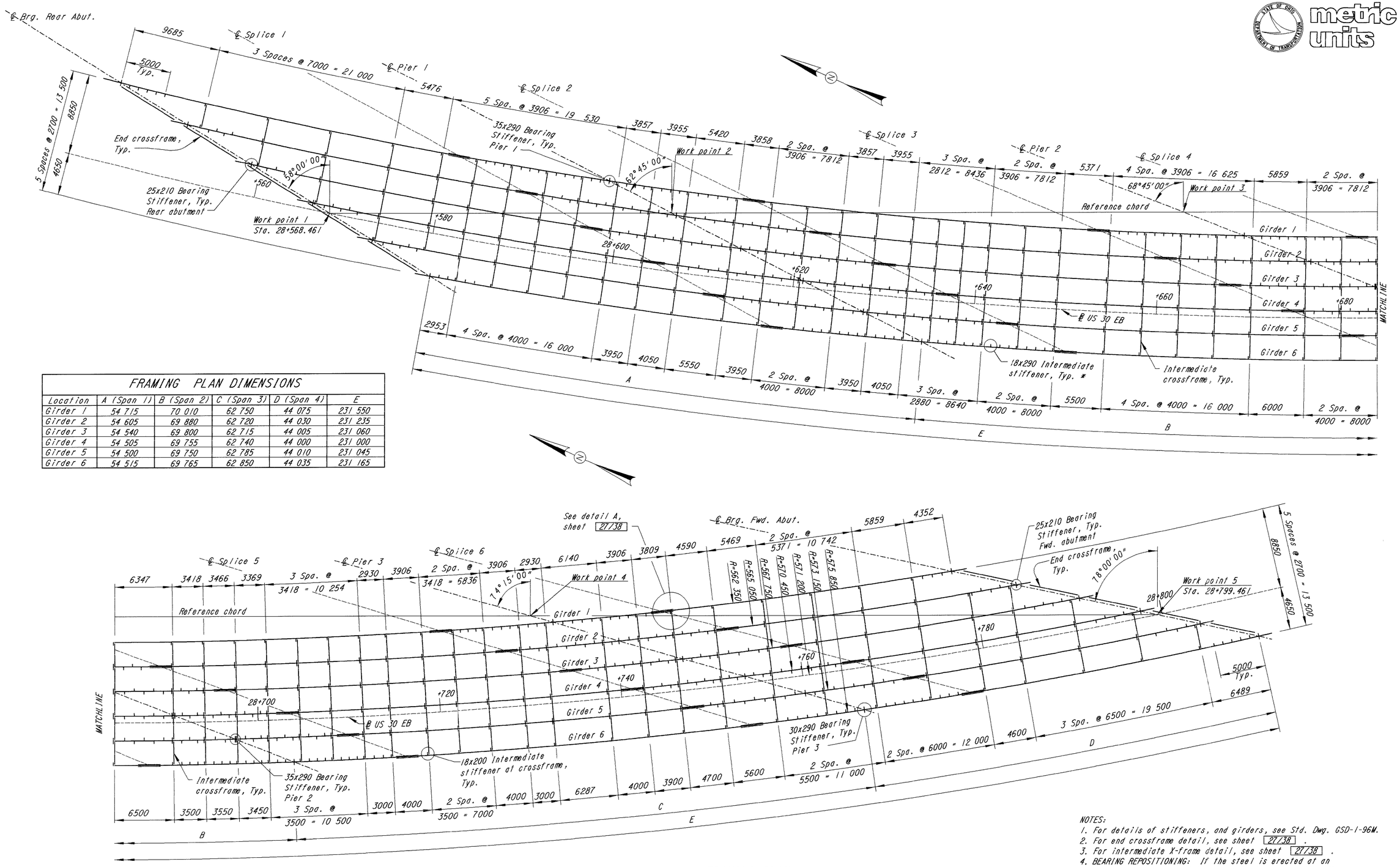
PIER 3
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

24/38

1692
2116

File name: 28566a3x.dgn



FRAMING PLAN DIMENSIONS

Location	A (Span 1)	B (Span 2)	C (Span 3)	D (Span 4)	E
Girder 1	54 715	70 010	62 750	44 075	231 550
Girder 2	54 605	69 880	62 720	44 030	231 235
Girder 3	54 540	69 800	62 715	44 005	231 060
Girder 4	54 505	69 755	62 740	44 000	231 000
Girder 5	54 500	69 750	62 785	44 010	231 045
Girder 6	54 515	69 765	62 850	44 035	231 165

FRAMING PLAN

NOTES:
1. For details of stiffeners, and girders, see Std. Dwg. GSD-1-96M.
2. For end crossframe detail, see sheet 27/38 .
3. For intermediate X-frame detail, see sheet 27/38 .
4. BEARING REPOSITIONING: If the steel is erected at an ambient temperature higher than 27° C or lower than 4° C and the bearing shear deflection exceeds 1/6 of the bearing height at 15° C (+/-) 5° C, the beams or girders shall be raised to allow the bearings to return to their undeformed shape at 15° C (+/-) 5° C.
5. * Intermediate stiffeners, where shown, shall be spaced at a maximum of 1100mm.

metric units

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FRAMING PLAN
BRIDGE NO. WYA-30-20566
US 30 E.B. OVER US 23

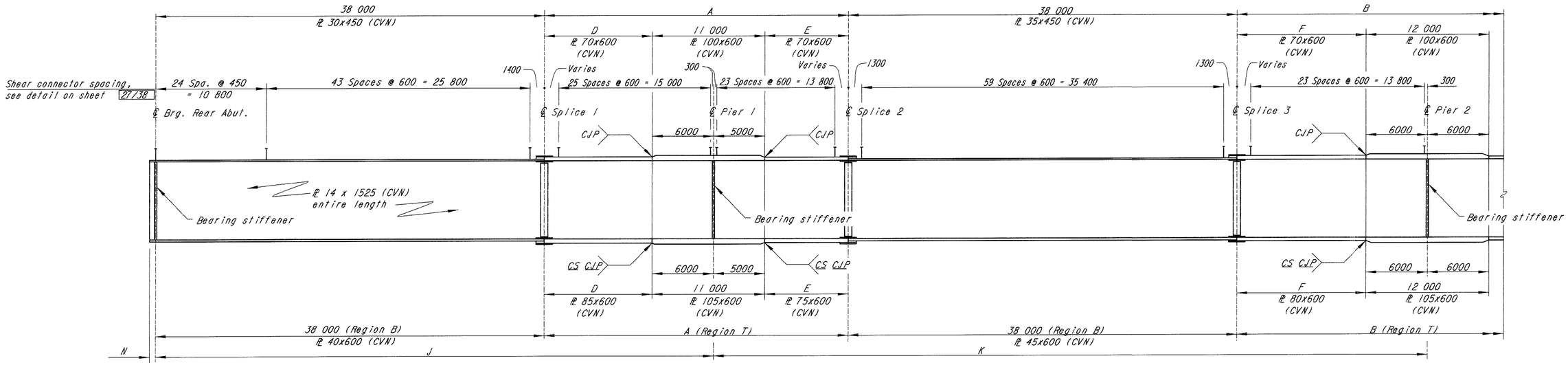
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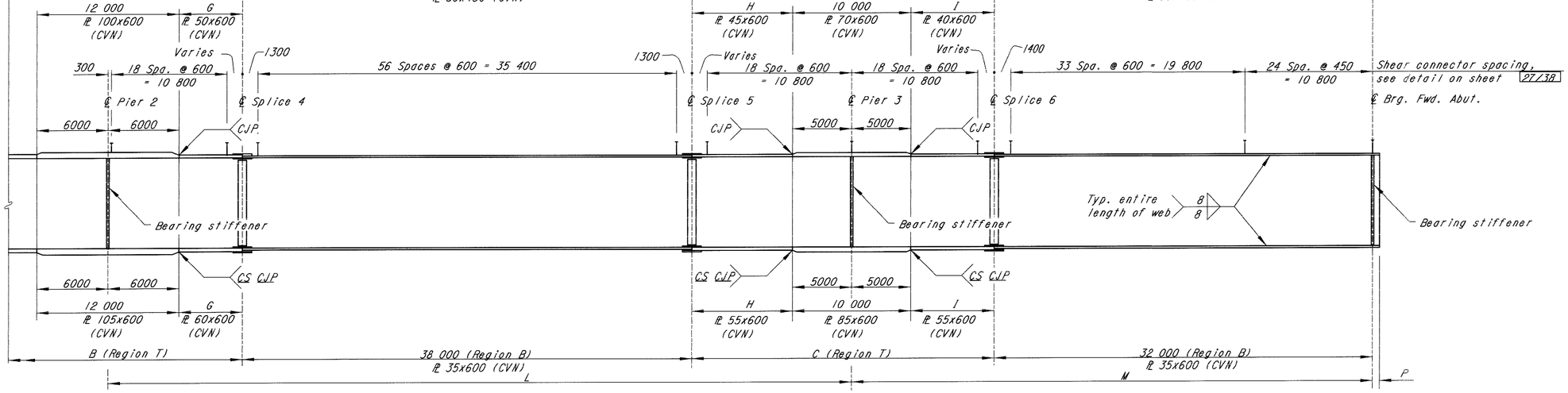
25/38

1693
2116

Filename: 20566fp1.dgn

metric units





GIRDER ELEVATION

Note:
Intermediate stiffeners not shown for clarity.

Girder No.	Dimension														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P
1	32 725	28 375	24 450	10 715	11 010	10 000	6375	7375	7075	54 715	70 010	62 750	44 075	1890	1570
2	32 545	28 300	24 390	10 605	10 940	9940	6360	7360	7030	54 605	69 880	62 720	44 030	1805	1520
3	32 440	28 260	24 360	10 540	10 900	9900	6360	7355	7005	54 540	69 800	62 715	44 005	1735	1480
4	32 385	28 245	24 370	10 505	10 880	9875	6370	7370	7000	54 505	69 755	62 740	44 000	1675	1440
5	32 375	28 265	24 405	10 500	10 875	9875	6390	7395	7010	54 500	69 750	62 785	44 010	1615	1410
6	32 400	28 305	24 460	10 515	10 885	9880	6425	7425	7035	54 515	69 765	62 850	44 035	1565	1375

NOTES:
1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. WELDED ATTACHMENT of supports for concrete deck finishing machine may be made to areas of the fascia stringer flanges designated Region B. Attachments shall not be made to areas designated Region T. Fillet welds to compression flanges shall not be closer than 25mm from edge of flange, be not more than 50mm long and be not smaller than the minimum size required by AASHTO.
3. Region B = Bottom flange in tension; top flange in compression.
   Region T = Top flange in tension; bottom flange in compression.
4. CS - Indicates butt weld subject to compressive stresses only.
   CJP - Indicates complete joint penetration.
5. For splice details and flange clip details, see sheet 27/38 .
6. All butt welds shall have weld reinforcement removed by grinding in direction parallel to centerline of girder.
7. For additional details of stiffeners and girders, see Std. Dwg. GSD-1-96M.

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MMS	—	0502188	

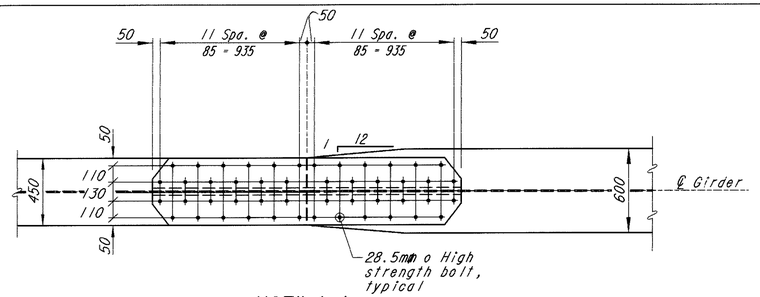
GIRDER DETAILS
BRIDGE NO. WYA-30-28566
US 30 E.B. OVER US 23

WYA/CRA-30-28.009/0.000

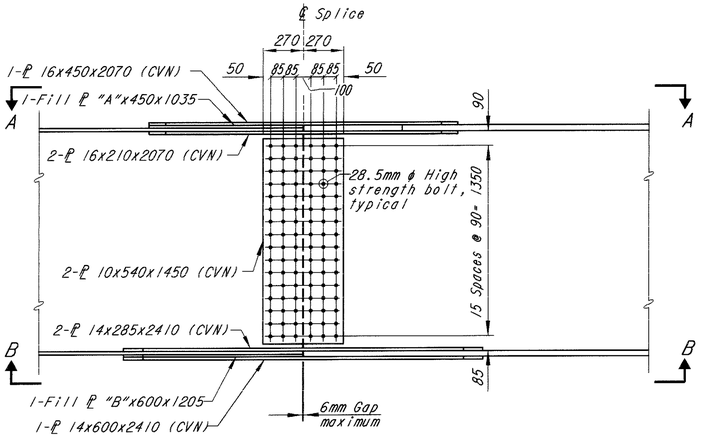
26 / 38

1694
2116

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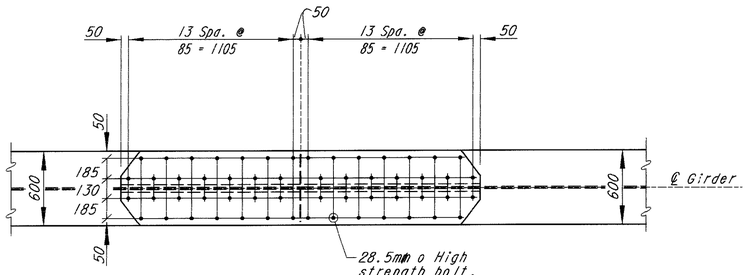


VIEW A-A



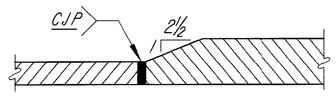
FIELD SPLICE ELEVATION

(Splice 1,3,5 shown, splice 2,4,6 opposite hand)

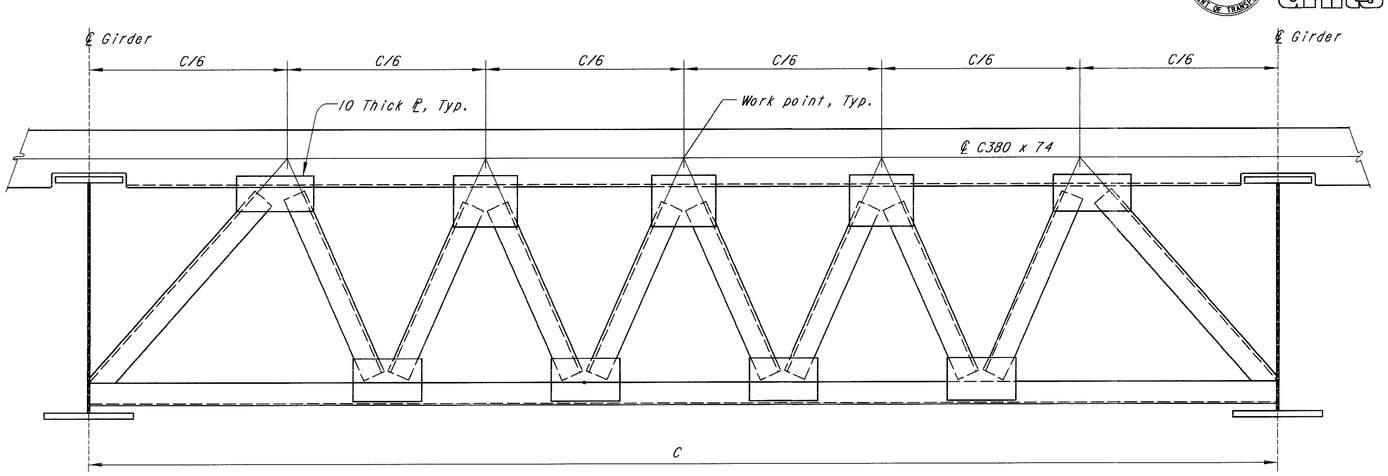


VIEW B-B

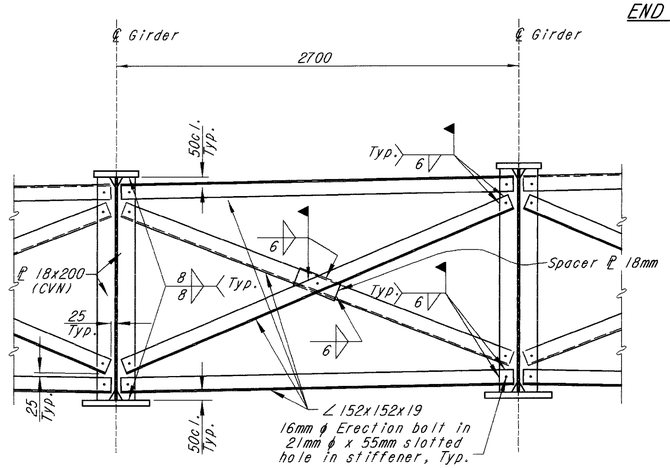
FILL ℄ THICKNESSES		
SPLICE NO.	DIMENSION "A"	DIMENSION "B"
1	40	45
2	25	30
3	35	35
4	20	25
5	10	20
6	10	20



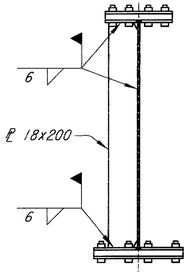
FLANGE THICKNESS TRANSITION DETAIL



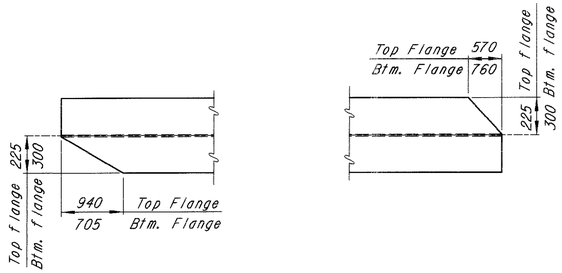
END CROSSFRAME DETAIL



INTERMEDIATE CROSSFRAME DETAIL

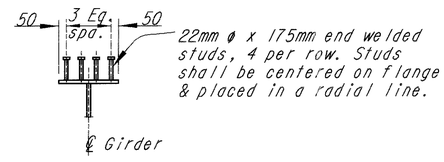


DETAIL A



REAR ABUTMENT FWD. ABUTMENT

FLANGE CLIPS



SHEAR CONNECTOR DETAIL

NOTES

1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. High strength bolts shall be 28.5mm diameter, A325 galvanized.
3. In web splice plates, bolt heads shall be placed on the exposed side of the fascia girders. In bottom flange splice plates, nuts shall be placed on top surface of bottom flange splice plates.
4. For additional information, see Std. Dwg. GSD-1-96M.

metric units

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FAL	—	0502188	

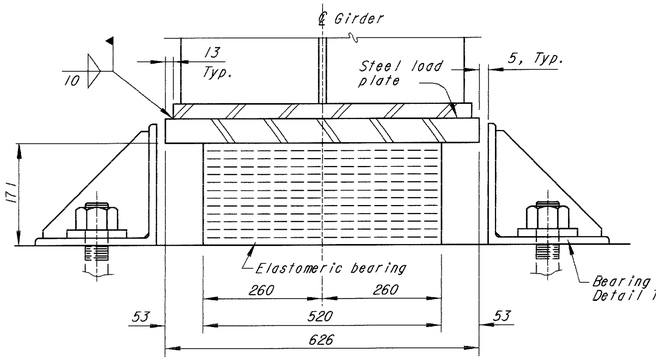
STRUCTURAL STEEL DETAILS
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

27/38

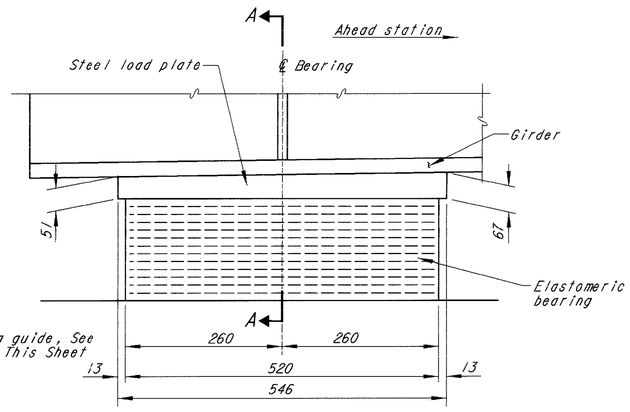
1695/2116

Filename: 0285670s3.dgn



SECTION A-A

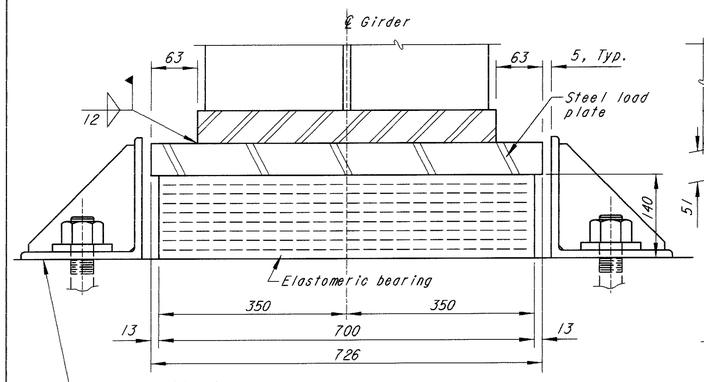
(Provide bearing guide where indicated on plans)



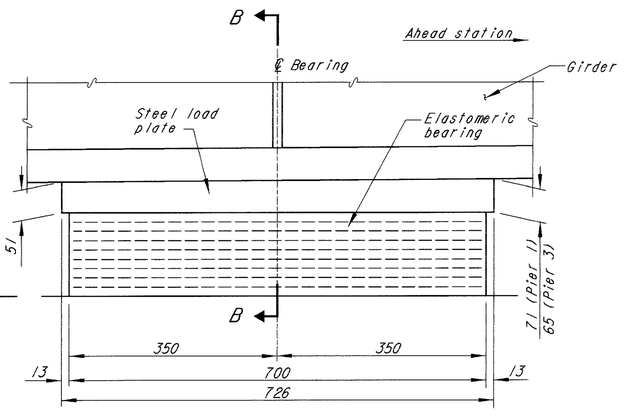
ELEVATION

(Bearing guide not shown for clarity)

BEARING AT REAR ABUTMENT



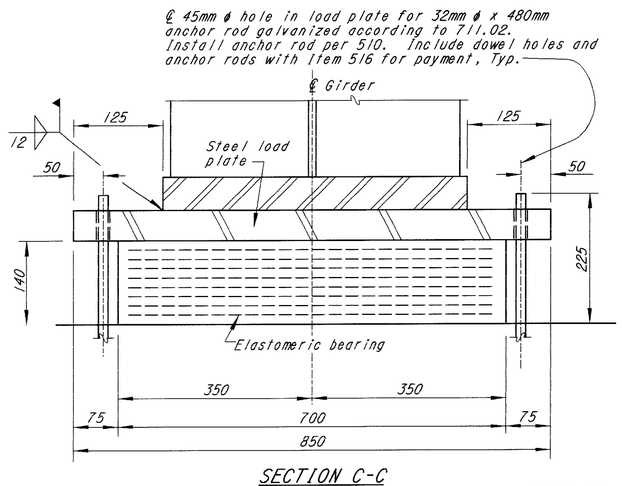
SECTION B-B



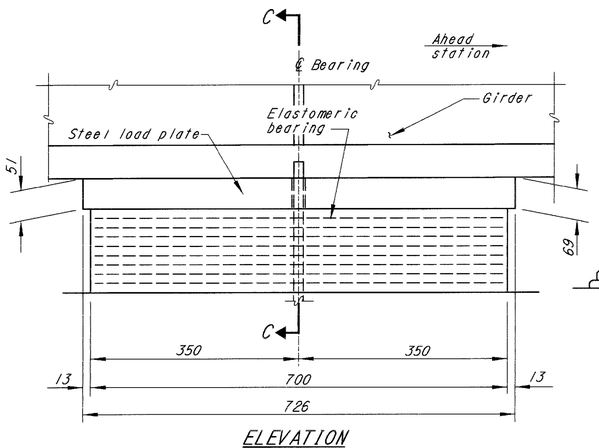
ELEVATION

(Bearing guide not shown for clarity)

BEARING AT PIER 1 & 3

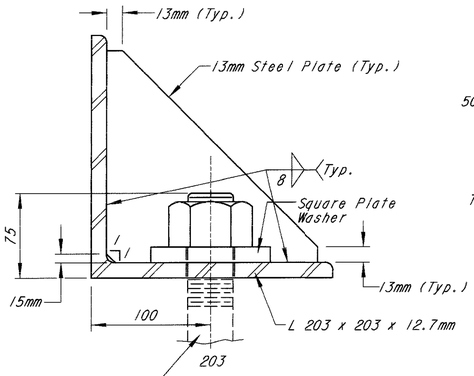


SECTION C-C



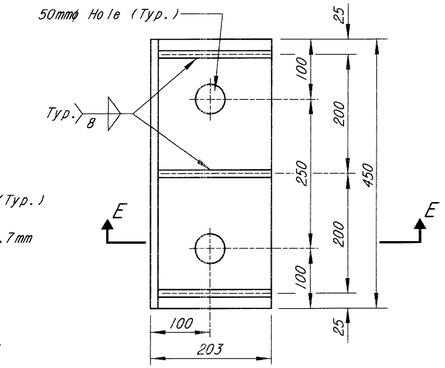
ELEVATION

BEARING AT PIER 2



SECTION E-E

38mmø Anchor bolts with nut & 100 x 100 x 13mm plate washer with 45mmø holes. Grout with epoxy nonshrinking grout in 45mmø x 250mm deep holes per 510.



BEARING GUIDE PLAN

Bearing Location	No. of Internal Elastomer Layers	Internal Elastomer Thickness	External Elastomer Thickness (2 Req'd)	No. of Steel Laminates	Total No. of Bearings	Dead Load	Live Load	Total Load
Rear Abutment	11	12	8	12	6	690kN	240kN	930kN
Pier 1	7	15	10	8	6	2740kN	590kN	3330kN
Pier 2	7	15	10	8	6	2715kN	600kN	3315kN
Pier 3	7	15	10	8	6	2250kN	685kN	2935kN
Forward Abutment	10	12	8	11	6	435kN	370kN	805kN

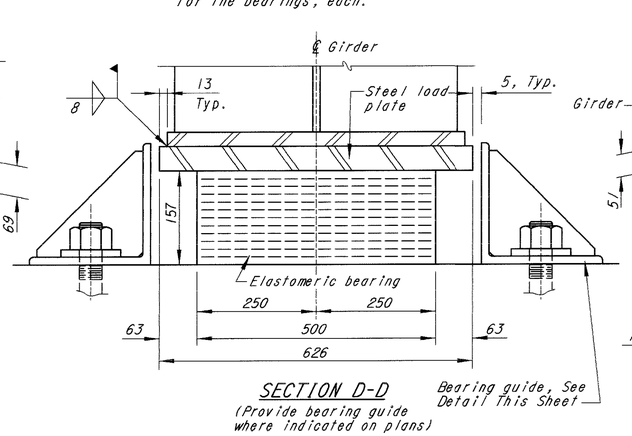
NOTES FOR LAMINATED ELASTOMERIC BEARINGS AND LOAD PLATE

LOAD PLATE: The steel load plate shall be bonded by vulcanization to the elastomer during the molding process. Welding of the load plate to the superstructure shall be controlled so that the plate temperature at the elastomer bonded surface does not exceed 150°C as determined by the use of pyrometric sticks or other temperature monitoring devices.

The load plate & guide shall be the same material as the attached structural steel and be similarly cleaned and coated. Surface preparation and priming shall be done in the shop and be included in the price bid for the bearings. Field coats shall be included in the price bid for painting main structural steel.

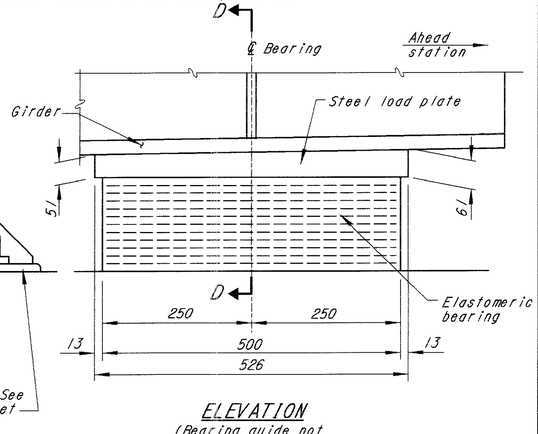
BASIS OF PAYMENT: The unit bid price shall include all materials, labor, testing, guides, anchor rods, dowel holes and incidentals necessary to furnish and install laminated elastomeric bearings. Payment will be made at the contract price for Item 516, each, elastomeric bearings with internal laminates (neoprene). Cost of the bearing guides shall be included for payment with Item 516 also.

ELASTOMERIC BEARINGS shall comply with Item 516 and AASHTO Standard Specification for Highway Bridges, Section 18, Bearing Devices, Division II, Construction, Articles 18.4.5.1 and 18.5.6.2. Bearings shall be Grade 3, 50 durometer elastomer, and shall be subjected to the load testing requirements defined in Article 18.7.4.5 of the AASHTO document listed above. Bearings were designed under Section 14.6.6 of Section 14, Bearings, Division I, Design. Testing shall be included in the unit price bid for the bearings, each.



SECTION D-D

(Provide bearing guide where indicated on plans)



ELEVATION

(Bearing guide not shown for clarity)

BEARING AT FORWARD ABUTMENT

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
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BEARING DETAILS
BRIDGE NO. WYA-30-20566
US 30 EB OVER US23

WYA/CRA-30-28.009/0.000

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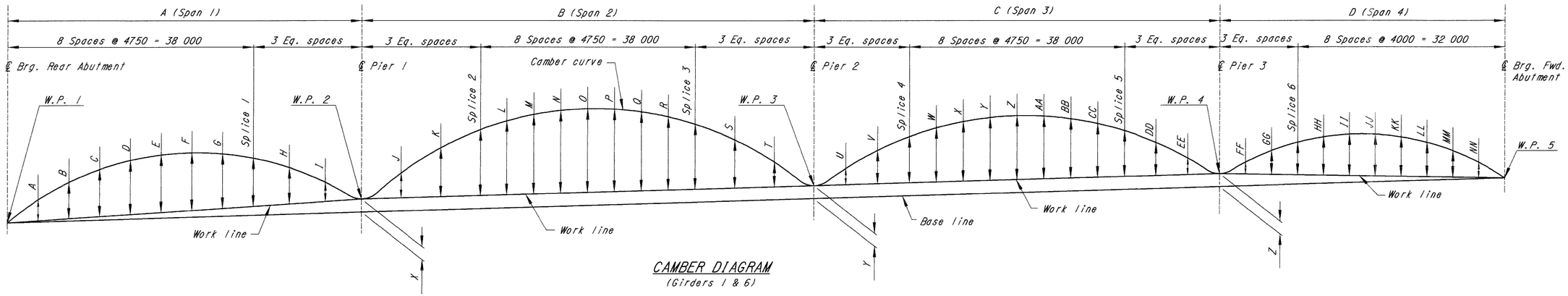
1696
2116

File Name: BRSGdet.dgn

BASELINE OFFSET			
Location	X	Y	Z
Girder 1	244	381	243
Girder 2	260	386	245
Girder 3	270	390	245

FRAMING PLAN DIMENSIONS					
Location	A (Span 1)	B (Span 2)	C (Span 3)	D (Span 4)	Total
Girder 1	54 715	70 010	62 750	44 075	231 550
Girder 2	54 605	69 880	62 720	44 030	231 235
Girder 3	54 540	69 800	62 715	44 005	231 060

metric units



CAMBER DIAGRAM
(Girders 1 & 6)

DEFLECTION AND CAMBER TABLE: GIRDER 1

	SPAN 1												SPAN 2													SPAN 3														SPAN 4											
	REAR ABUT	A	B	C	D	E	F	G	SPL 1	H	I	PIER 1	J	K	SPL 2	L	M	N	O	P	Q	R	SPL 3	S	T	PIER 2	U	V	SPL 4	W	X	Y	Z	AA	BB	CC	SPL 5	DD	EE	PIER 3	FF	GG	SPL 6	HH	II	JJ	KK	LL	MM	NN	FWD ABUT
Deflection due to weight of steel	0	14	26	36	42	44	42	36	28	16	6	0	0	8	20	30	39	45	48	47	42	33	23	14	7	0	-3	-1	3	10	17	21	24	22	19	13	6	4	1	0	0	0	2	6	9	12	13	12	9	6	0
Deflection due to remaining DL	0	38	71	96	112	117	110	95	71	42	17	0	-2	13	42	64	85	101	107	103	91	71	48	29	13	0	-6	3	22	40	58	70	75	70	58	39	19	12	5	0	-3	-1	5	13	23	31	34	33	26	15	0
Adjustment for vertical curve	0	0	0	0	0	0	0	0	0	0	0	0	13	23	30	35	37	38	38	36	32	28	22	16	8	0	10	18	25	28	30	31	30	28	24	19	13	9	5	0	5	9	12	14	15	14	13	12	9	5	0
Total	0	52	97	132	154	161	152	131	99	58	23	0	11	44	92	129	161	184	193	186	165	132	93	59	28	0	1	20	50	78	105	122	128	120	101	71	38	25	11	0	2	8	19	33	47	57	60	57	44	26	0

DEFLECTION AND CAMBER TABLE: GIRDER 2

	SPAN 1												SPAN 2													SPAN 3														SPAN 4											
	REAR ABUT	A	B	C	D	E	F	G	SPL 1	H	I	PIER 1	J	K	SPL 2	L	M	N	O	P	Q	R	SPL 3	S	T	PIER 2	U	V	SPL 4	W	X	Y	Z	AA	BB	CC	SPL 5	DD	EE	PIER 3	FF	GG	SPL 6	HH	II	JJ	KK	LL	MM	NN	FWD ABUT
Deflection due to weight of steel	0	11	22	30	34	34	32	25	19	10	3	0	3	10	21	29	37	42	44	43	38	31	22	13	5	0	-2	-1	4	9	15	19	21	20	17	13	7	4	2	0	0	2	4	7	9	11	12	10	8	5	0
Deflection due to remaining DL	0	32	59	80	91	92	84	69	49	28	10	0	3	21	45	65	83	96	100	97	85	68	47	26	11	0	-1	6	21	38	54	64	69	65	56	40	24	13	6	0	0	3	10	19	26	33	34	31	25	14	0
Adjustment for vertical curve	0	0	1	1	2	2	3	3	4	4	3	0	12	21	29	33	36	37	38	36	33	29	23	17	9	0	9	17	22	26	29	30	30	29	26	22	16	11	6	0	5	9	12	14	15	15	14	12	10	5	0
Total	0	43	82	111	128	128	118	97	72	42	16	0	18	52	95	127	156	176	182	176	156	128	92	56	25	0	6	22	47	73	97	113	120	114	99	75	47	28	14	0	5	14	26	40	50	58	60	53	43	24	0

DEFLECTION AND CAMBER TABLE: GIRDER 3

	SPAN 1												SPAN 2													SPAN 3														SPAN 4											
	REAR ABUT	A	B	C	D	E	F	G	SPL 1	H	I	PIER 1	J	K	SPL 2	L	M	N	O	P	Q	R	SPL 3	S	T	PIER 2	U	V	SPL 4	W	X	Y	Z	AA	BB	CC	SPL 5	DD	EE	PIER 3	FF	GG	SPL 6	HH	II	JJ	KK	LL	MM	NN	FWD ABUT
Deflection due to weight of steel	0	10	19	25	29	28	26	20	14	7	2	0	3	10	20	29	37	42	44	43	38	31	23	13	6	0	-1	0	4	9	15	19	21	20	17	13	7	4	2	0	0	2	5	8	10	12	12	12	8	5	0
Deflection due to remaining DL	0	29	52	70	79	78	70	55	38	19	6	0	7	24	45	66	84	96	101	97	85	69	48	27	11	0	0	7	21	38	54	64	69	65	56	40	24	13	4	0	1	6	13	23	31	37	38	35	27	14	0
Adjustment for vertical curve	0	1	3	4	4	6	7	9	9	8	5	0	11	20	27	32	35	37	38	37	33	31	25	19	10	0	9	16	22	26	29	30	30	29	26	22	16	11	6	0	5	9	12	14	14	15	14	12	8	5	0
Total	0	40	74	99	112	112	102	85	61	35	13	0	21	54	92	127	156	175	183	177	156	131	96	59	27	0	8	23	47	73	98	113	120	114	99	75	47	28	12	0	6	17	30	45	55	64	64	59	43	24	0

NOTES FOR CAMBER AND DEFLECTION

1. Work Points (W.P.) are at the center of the girder, on the centerline of bearing.
2. Work lines are straight lines through the Work Points, along the ℄ of girder.
3. The base line is a straight line through W.P. 1 and W.P. 5, along the ℄ of girder..
4. Tabulated values in the deflection and camber table are measured from the work lines.

DESIGN AGENCY
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1848 Summit Road
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DEFLECTION AND CAMBER DETAILS
BRIDGE NO. WYA-30-28.009
US 30 EB OVER US 23

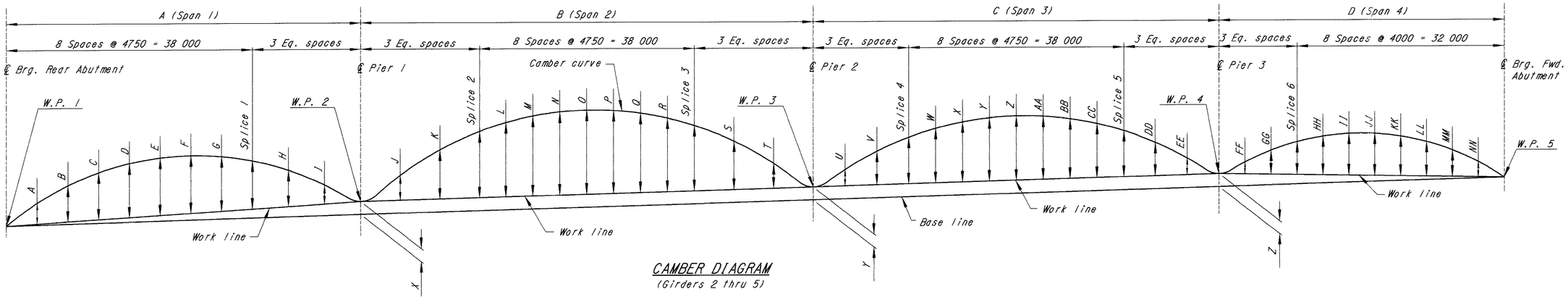
WYA/CRA-30-28.009/0.000

F:\Inroom\8856com.dgn

BASELINE OFFSET			
Location	X	Y	Z
Girder 4	279	393	245
Girder 5	283	393	245
Girder 6	285	393	244

FRAMING PLAN DIMENSIONS					
Location	A (Span 1)	B (Span 2)	C (Span 3)	D (Span 4)	Total
Girder 4	54 505	69 755	62 740	44 000	231 000
Girder 5	54 500	69 750	62 785	44 010	231 045
Girder 6	54 515	69 765	62 850	44 035	231 165

metric units



CAMBER DIAGRAM
(Girders 2 thru 5)

DEFLECTION AND CAMBER TABLE: GIRDER 4

	SPAN 1												SPAN 2													PIER 2	SPAN 3														PIER 3	SPAN 4										FWD ABUT
	REAR ABUT	A	B	C	D	E	F	G	SPL 1	H	I	PIER 1	J	K	SPL 2	L	M	N	O	P	Q	R	SPL 3	S	T		U	V	SPL 4	W	X	Y	Z	AA	BB	CC	SPL 5	DD	EE		FF	GG	SPL 6	HH	II	JJ	KK	LL	MM	NN	
Deflection due to weight of steel	0	10	17	23	26	26	23	18	12	6	1	0	4	11	21	29	38	44	46	44	40	34	25	15	6	0	-1	0	3	9	15	19	21	20	17	13	8	4	2	0	1	3	6	9	12	14	14	13	9	5	0
Deflection due to remaining DL	0	26	48	64	72	70	62	47	32	15	3	0	8	25	45	68	87	99	105	101	89	72	51	28	10	0	1	7	20	38	54	64	71	68	58	43	26	13	4	0	2	8	18	27	36	41	43	38	29	16	0
Adjustment for vertical curve	0	2	5	6	9	11	13	14	13	11	6	0	10	19	26	30	34	36	37	36	34	32	26	19	11	0	8	15	19	24	29	30	30	29	27	24	18	13	8	0	5	9	12	14	15	15	13	11	9	5	0
Total	0	38	70	93	107	107	98	79	57	32	10	0	22	55	92	127	159	179	188	181	163	138	102	62	27	0	8	22	42	71	98	113	122	117	102	80	52	30	14	0	8	20	36	50	63	70	70	62	47	26	0

DEFLECTION AND CAMBER TABLE: GIRDER 5

	SPAN 1												SPAN 2													PIER 2	SPAN 3														PIER 3	SPAN 4										FWD ABUT
	REAR ABUT	A	B	C	D	E	F	G	SPL 1	H	I	PIER 1	J	K	SPL 2	L	M	N	O	P	Q	R	SPL 3	S	T		U	V	SPL 4	W	X	Y	Z	AA	BB	CC	SPL 5	DD	EE		FF	GG	SPL 6	HH	II	JJ	KK	LL	MM	NN	
Deflection due to weight of steel	0	10	18	23	26	25	23	17	11	4	0	0	4	11	21	31	40	46	50	49	45	38	28	17	7	0	1	1	4	10	15	20	22	21	19	14	9	4	1	0	1	4	8	12	14	16	16	15	11	6	0
Deflection due to remaining DL	0	27	48	63	70	68	59	45	29	12	1	0	10	26	48	71	92	105	111	107	96	77	56	31	10	0	1	10	24	42	58	70	75	72	61	46	27	13	4	0	4	11	22	33	44	49	49	44	33	18	0
Adjustment for vertical curve	0	3	6	10	13	15	16	17	15	12	7	0	9	17	23	29	33	35	37	36	35	32	27	21	11	0	8	14	19	24	27	29	30	30	28	25	20	14	8	0	5	9	12	14	15	15	14	12	9	5	0
Total	0	40	72	96	109	108	98	79	55	28	8	0	22	54	93	131	164	186	197	192	176	147	112	68	28	0	10	25	47	76	100	119	127	123	108	85	56	31	13	0	10	24	42	59	73	80	79	71	53	29	0

DEFLECTION AND CAMBER TABLE: GIRDER 6

	SPAN 1												SPAN 2													PIER 2	SPAN 3														PIER 3	SPAN 4										FWD ABUT
	REAR ABUT	A	B	C	D	E	F	G	SPL 1	H	I	PIER 1	J	K	SPL 2	L	M	N	O	P	Q	R	SPL 3	S	T		U	V	SPL 4	W	X	Y	Z	AA	BB	CC	SPL 5	DD	EE		FF	GG	SPL 6	HH	II	JJ	KK	LL	MM	NN	
Deflection due to weight of steel	0	12	22	28	31	28	23	16	9	2	-1	0	5	13	23	35	46	54	58	56	51	42	32	18	6	0	0	1	5	11	18	24	26	25	21	15	9	4	0	0	2	6	10	16	19	22	21	19	14	7	0
Deflection due to remaining DL	0	32	58	74	80	73	59	41	22	6	-2	0	12	30	52	80	103	119	125	120	106	83	60	29	8	0	2	12	26	45	67	80	84	79	65	46	26	11	2	0	6	16	30	44	55	62	62	55	42	23	0
Adjustment for vertical curve	0	4	9	14	17	19	20	19	17	13	7	0	9	16	22	27	32	34	36	36	35	32	29	21	12	0	7	12	17	22	26	29	30	29	27	24	20	14	8	0	5	8	11	13	14	15	14	11	8	5	0
Total	0	48	89	116	128	120	102	76	48	21	4	0	26	59	97	142	181	207	219	212	192	157	121	68	26	0	9	25	48	78	111	133	140	133	113	85	55	29	10	0	13	30	51	73	88	99	97	85	64	35	0

NOTES FOR CAMBER AND DEFLECTION

1. Work Points (W.P.) are at the center of the girder, on the centerline of bearing.
2. Work lines are straight lines through the Work Points, along the ℄ of girder.
3. The base line is a straight line through W.P. 1 and W.P. 5, along the ℄ of girder..
4. Tabulated values in the deflection and camber table are measured from the work lines.

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FKL	—	8502188	

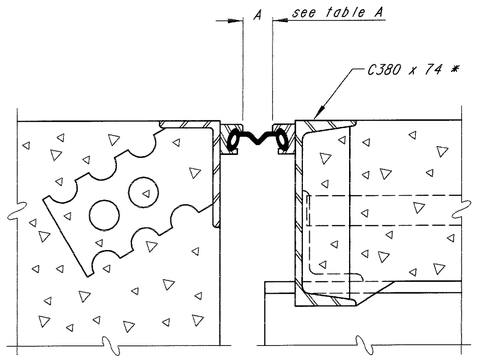
DEFLECTION AND CAMBER DETAILS
BRIDGE NO. WYA-30-28.56
US 30 EB OVER US 23

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30 / 38

1698
2116

Filename: 28566d2.dgn

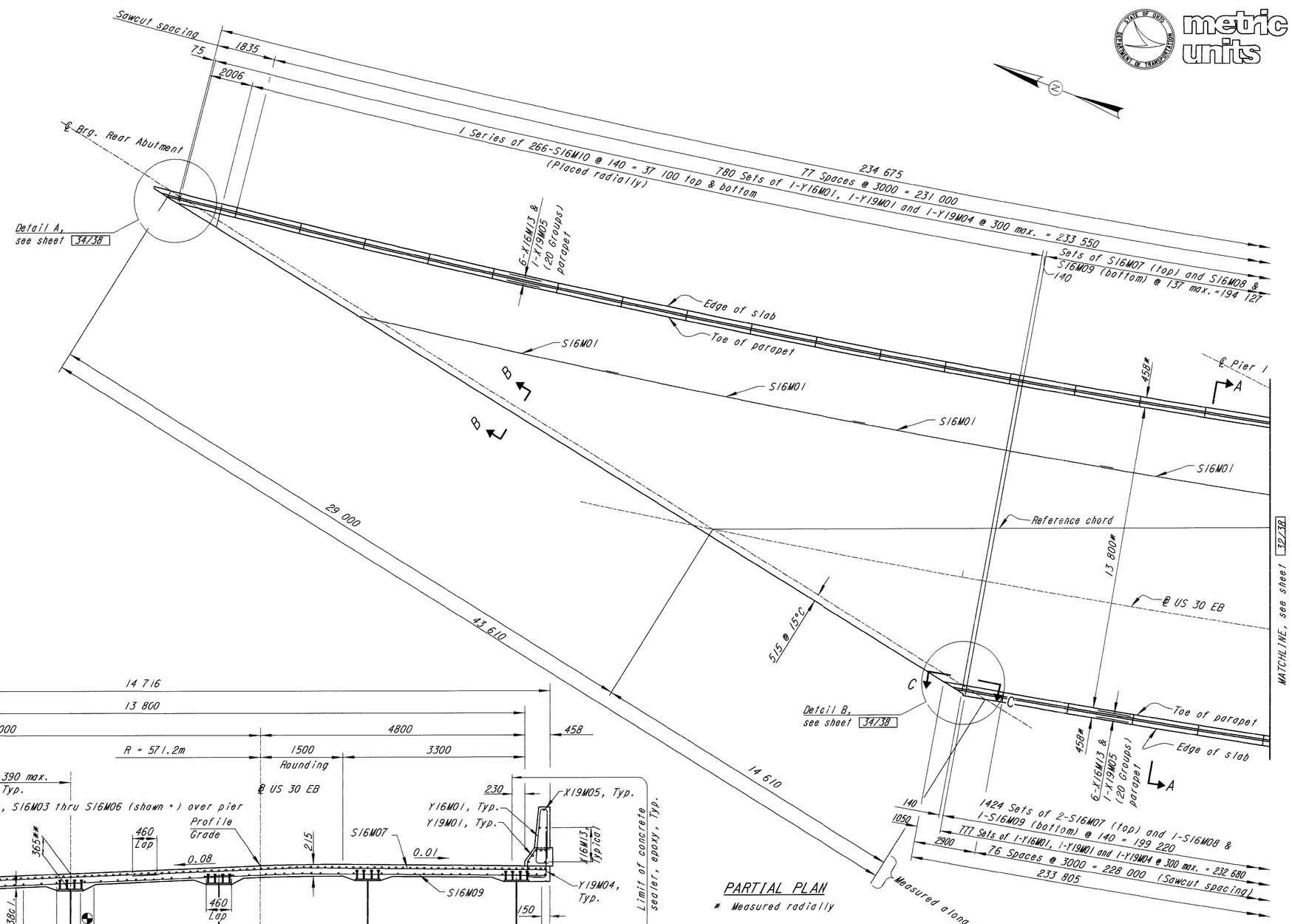


SECTION B-B

For details of joint see
Standard Drawing EXJ-4-87M

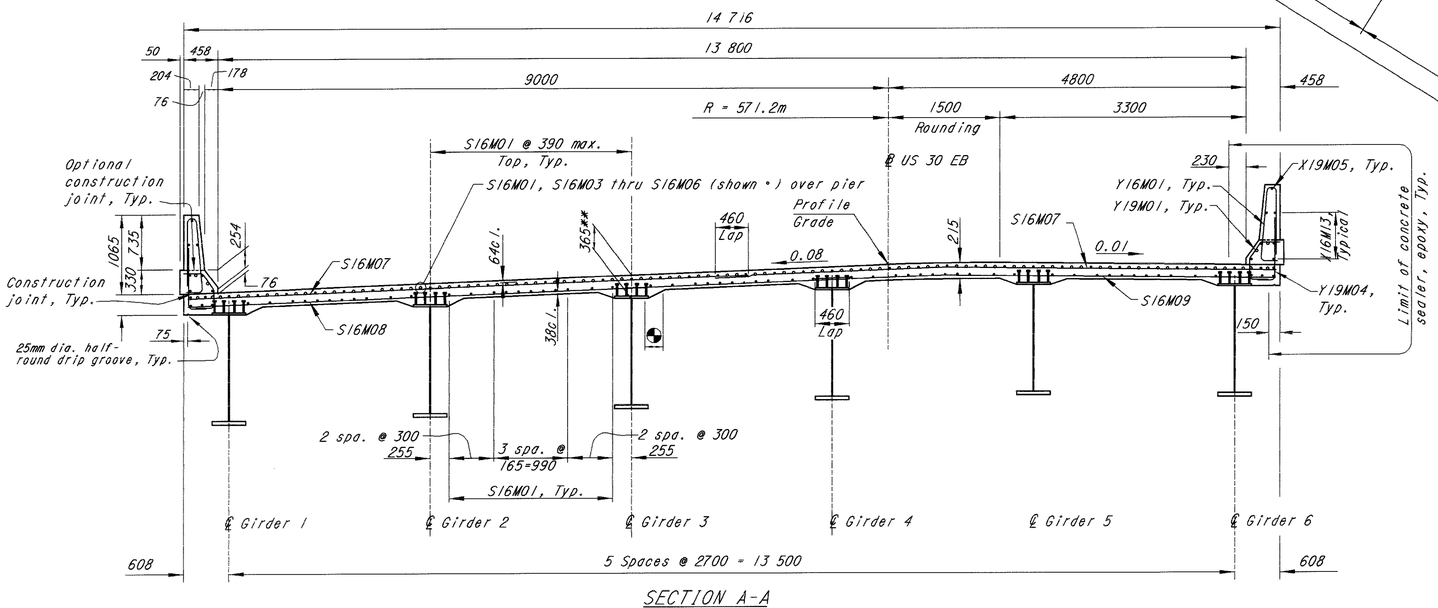
TABLE A	
C°	Dimension A
25	45
20	50
15	60
10	65
5	70
0	80

* Fabricate to conform with deck surface elevation. See grid lines (1) and (51), sheet 35/38 and 36/38.



PARTIAL PLAN

* Measured radially



SECTION A-A

Note: All horizontal dimensions are measured radially.

NOTES:

1. ** DECK SLAB DEPTH: The distance shown from the top of the deck slab to the bottom of the top flange is the theoretical design dimension including the design haunch thickness of 150mm. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per SS 842.
2. ◔ A HAUNCH WIDTH of 225mm shall be used for computing quantity of concrete. However the haunch width may vary between 150mm and 300mm.
3. For additional details of the parapets and sawcuts, see Std. Dwg. BR-1M. Contrary to the standard drawing, the sawcuts shall be sealed for the full length of the cut.
4. For Section C-C, see sheet 34/38.

metric units

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FKL	—	0502218	

DECK PLAN
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

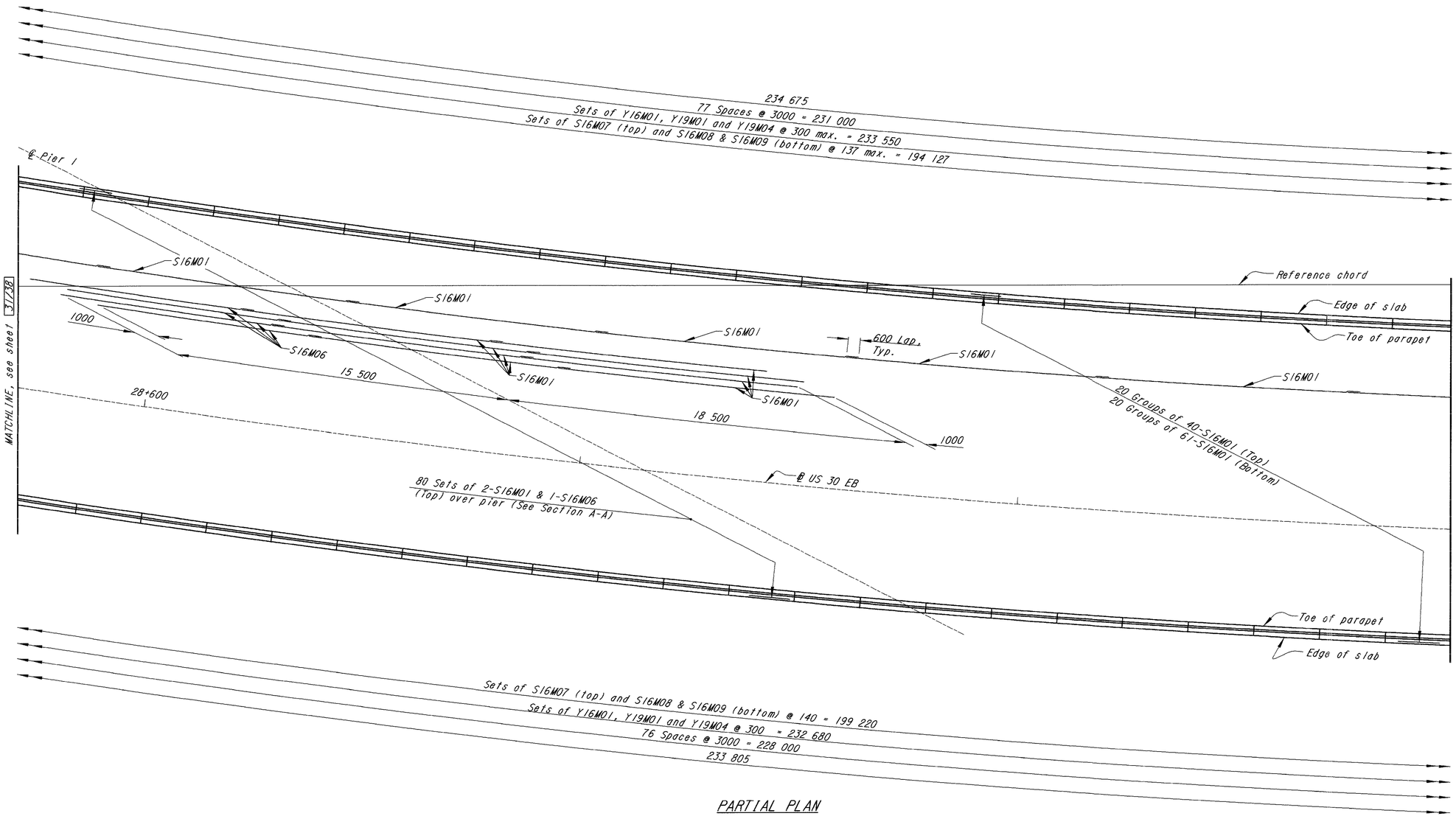
WYA/CRA-30-28.009/0.000

31 / 38

1699
2116

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metric units



PARTIAL PLAN

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FAL	—	0502188	

DECK PLAN
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

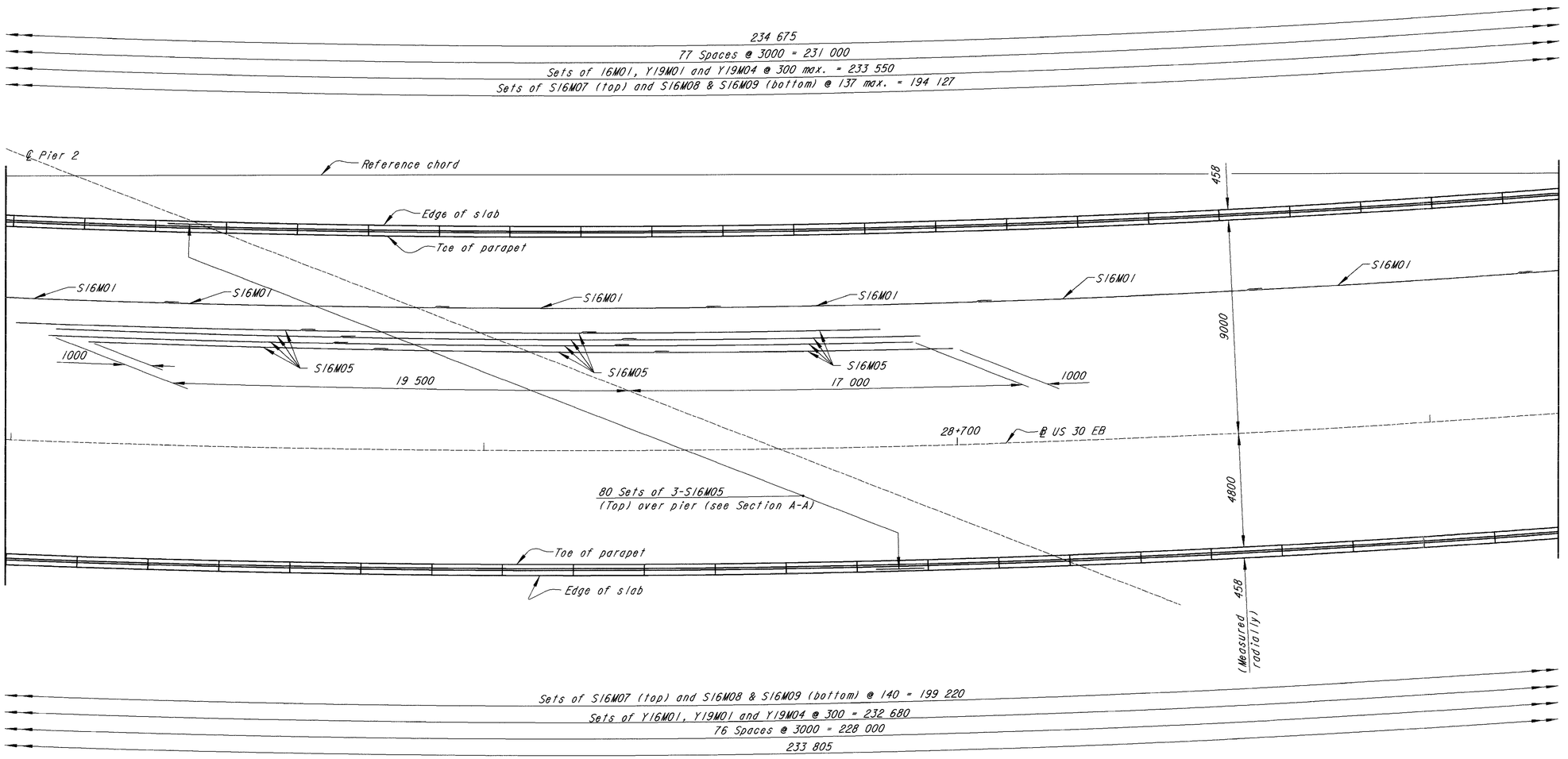
WYA/CRA-30-28.009/0.000

32/38

1700/2116

File name: 28566d2.dgn

metric units



PARTIAL PLAN

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	0902188	

DECK PLAN
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

33/38

1701
2116

Filename: 28566b3.dgn

metric units

MATCHLINE, see sheet 33/38

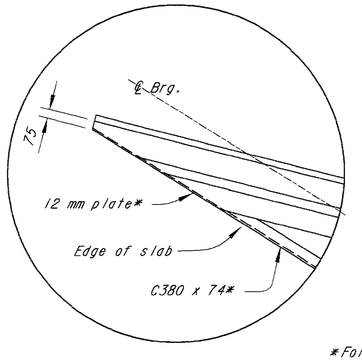
234 675
77 Spaces @ 3000 = 231 000
Sets of Y16M01, Y19M01 and Y19M04 @ 300 max. = 233 550
Sets of S16M07 (top) and S16M08 & S16M09 (bottom) @ 140 max. = 194 127

1840
1050
1050

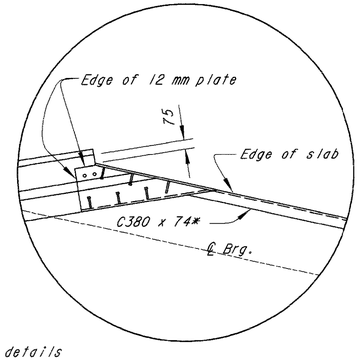
℄ Brg. Forward Abutment
See Detail B
C
C
6-X16M14 & 1-X19M06
S16M01
S16M02
1 Group of 40-S16M02 (Top)
1 Group of 61-S16M02 (Bottom)
515 @ 150
24 785
37 625
12 840
28+800
B
B
Reference chord
6-X16M15 & 1-X19M07
℄ US 30 EB
A
Edge of slab
Toe of parapet
℄ Pier 3
S16M01
S16M01
S16M01
S16M03
S16M01
S16M04
1000
12 000
18 000
1000
80 Sets of 1-S16M01, 1-16M03 & 1-S16M04 (Top) over pier (see Section A-A)
1195
115
2905
1 Series of 231-S16M11 top & bottom @ 140 = 32 200
140
Toe of parapet
Edge of slab
A
Sets of S16M07 (top) and S16M08 & S16M09 (bottom) @ 140 = 199 220
Sets of Y16M01, Y19M01 and Y19M04 @ 300 = 232 680
76 Spaces @ 3000 = 228 000
233 805

Notes:
1. For Section A-A and B-B, see sheet 31/38

PARTIAL PLAN

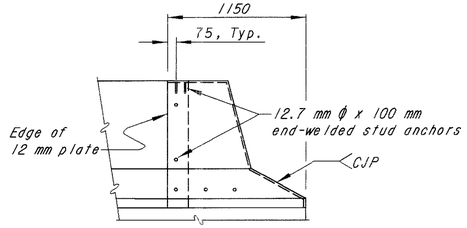


DETAIL A



DETAIL B

*For additional details see Std. Dwg. EXJ-4-87M



SECTION C-C

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DESIGNED	DRAWN	REVIEWED	DATE
MPS	ALH	CRS	9/9/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FHL	—	0502188	

DECK PLAN
BRIDGE NO. WYA-30-28366
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

34/38

1702
2116

File name: 28366dk4.dgn

PLAN

PLAN

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	CMS	9/9/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FAL	—	0502188	

SCREED ELEVATIONS
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

35/38

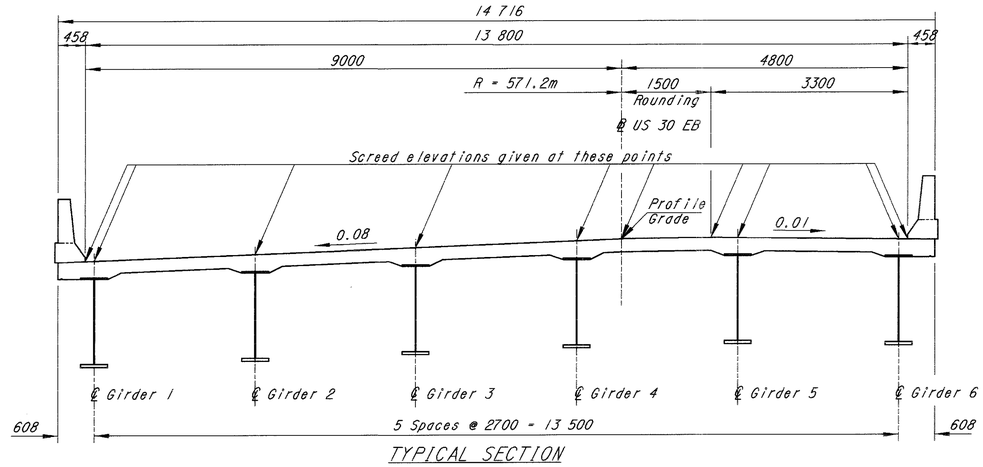
1703
2116

Filename: 28566sr1.dgn

metric units

SCREED ELEVATIONS

Location	Left T.O.P.	Girder 1	Girder 2	Girder 3	Girder 4	℄ US 30 E.B.	Edge/Rounding	Girder 5	Girder 6	Right T.O.P.
Grid line 1	269.830	269.857	270.322	270.774	271.215	271.336	271.508	271.539	271.719	271.728
Grid line 2	270.013	270.039	270.498	270.946	271.384	271.505	271.677	271.708	271.892	271.902
Grid line 3	270.191	270.217	270.669	271.113	271.549	271.669	271.840	271.871	272.059	272.069
Grid line 4	270.361	270.387	270.834	271.274	271.707	271.828	271.998	272.028	272.217	272.226
Grid line 5	270.522	270.548	270.989	271.426	271.858	271.978	272.147	272.177	272.363	272.372
Grid line 6	270.671	270.697	271.134	271.569	271.999	272.119	272.286	272.316	272.494	272.504
Grid line 7	270.809	270.835	271.270	271.704	272.133	272.253	272.418	272.447	272.618	272.627
Grid line 8	270.939	270.965	271.399	271.833	272.260	272.378	272.543	272.572	272.736	272.745
Grid line 9	271.060	271.086	271.523	271.958	272.385	272.502	272.665	272.693	272.852	272.861
Grid line 10	271.201	271.226	271.670	272.103	272.528	272.645	272.805	272.834	272.990	272.999
Grid line 11	271.345	271.371	271.818	272.252	272.674	272.790	272.950	272.978	273.135	273.143
Grid line 12	271.498	271.523	271.972	272.406	272.828	272.943	273.103	273.131	273.288	273.296
Grid line 13	271.693	271.718	272.152	272.574	272.982	273.096	273.244	273.271	273.419	273.436
Grid line 14	271.902	271.927	272.344	272.750	273.143	273.257	273.390	273.416	273.555	273.580
Grid line 15	272.122	272.147	272.541	272.928	273.307	273.420	273.540	273.566	273.693	273.728
Grid line 16	272.281	272.306	272.695	273.081	273.458	273.570	273.691	273.716	273.846	273.880
Grid line 17	272.437	272.462	272.846	273.229	273.605	273.716	273.838	273.863	273.993	274.026
Grid line 18	272.587	272.611	272.990	273.370	273.744	273.854	273.976	274.000	274.131	274.164
Grid line 19	272.726	272.750	273.124	273.503	273.875	273.985	274.105	274.130	274.258	274.291
Grid line 20	272.853	272.877	273.249	273.625	273.995	274.104	274.223	274.247	274.373	274.405
Grid line 21	272.970	272.994	273.364	273.738	274.105	274.214	274.333	274.357	274.477	274.509
Grid line 22	273.079	273.102	273.473	273.845	274.210	274.317	274.434	274.457	274.571	274.603
Grid line 23	273.183	273.206	273.576	273.946	274.308	274.415	274.531	274.553	274.664	274.695
Grid line 24	273.272	273.295	273.674	274.052	274.420	274.526	274.650	274.672	274.781	274.804
Grid line 25	273.363	273.386	273.777	274.161	274.535	274.640	274.771	274.792	274.907	274.921
Grid line 26	273.456	273.479	273.882	274.274	274.656	274.761	274.900	274.921	275.043	275.050
Grid line 27	273.599	273.622	274.007	274.390	274.759	274.863	274.996	275.017	275.132	275.144
Grid line 28	273.756	273.778	274.139	274.511	274.866	274.969	275.098	275.119	275.228	275.245
Grid line 29	273.920	273.942	274.277	274.639	274.978	275.081	275.205	275.225	275.327	275.349
Grid line 30	274.054	274.076	274.408	274.767	275.106	275.208	275.331	275.351	275.452	275.474
Grid line 31	274.188	274.209	274.537	274.893	275.231	275.332	275.454	275.473	275.579	275.600
Grid line 32	274.313	274.335	274.659	275.013	275.349	275.450	275.571	275.590	275.695	275.715
Grid line 33	274.431	274.452	274.774	275.126	275.461	275.561	275.681	275.699	275.801	275.821
Grid line 34	274.537	274.558	274.879	275.230	275.563	275.662	275.780	275.799	275.896	275.916
Grid line 35	274.634	274.655	274.978	275.324	275.656	275.755	275.871	275.889	275.981	276.001
Grid line 36	274.723	274.744	275.068	275.413	275.743	275.841	275.956	275.974	276.060	276.079
Grid line 37	274.810	274.831	275.156	275.499	275.826	275.924	276.036	276.053	276.136	276.155
Grid line 38	274.857	274.878	275.215	275.563	275.897	275.994	276.109	276.126	276.211	276.225
Grid line 39	274.903	274.924	275.277	275.628	275.971	276.067	276.186	276.203	276.291	276.300
Grid line 40	274.951	274.972	275.339	275.698	276.048	276.144	276.267	276.284	276.377	276.382
Grid line 41	275.036	275.056	275.424	275.782	276.131	276.226	276.350	276.366	276.460	276.465
Grid line 42	275.124	275.145	275.511	275.868	276.217	276.311	276.435	276.451	276.546	276.551
Grid line 43	275.216	275.236	275.601	275.957	276.305	276.400	276.524	276.539	276.635	276.640
Grid line 44	275.308	275.328	275.692	276.046	276.392	276.486	276.611	276.626	276.723	276.728
Grid line 45	275.401	275.421	275.779	276.132	276.478	276.571	276.697	276.712	276.807	276.812
Grid line 46	275.491	275.510	275.866	276.216	276.559	276.651	276.776	276.791	276.887	276.891
Grid line 47	275.575	275.594	275.946	276.294	276.635	276.728	276.849	276.864	276.958	276.962
Grid line 48	275.654	275.673	276.021	276.367	276.704	276.796	276.917	276.931	277.021	277.025
Grid line 49	275.726	275.745	276.092	276.433	276.768	276.859	276.977	276.991	277.077	277.081
Grid line 50	275.793	275.812	276.156	276.495	276.827	276.918	277.033	277.046	277.127	277.130
Grid line 51	275.855	275.874	276.217	276.553	276.882	276.972	277.084	277.097	277.171	277.175



TYPICAL SECTION

NOTES:
SCREED ELEVATIONS shown are for the deck slab surface prior to concrete placement. Allowance has been made for anticipated calculated dead load deflections.

T.O.P. = Toe Of Parapet

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MPS	ALH	CRS	9/9/99
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FAL	—	8502188	

SCREED ELEVATIONS
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

36 / 38

1704
2116

File name: 28566sedc.dgn

REAR ABUTMENT REINFORCING STEEL LIST

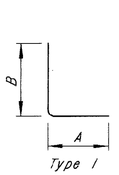
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A32M01	389	3785	1	550	3325				
A29M01	289	4150	Str						
	1	1400							
A29M02	Series of	to	Str.						55
	49	4040							
A29M03	21	2000	Str.						
A29M04	41	5335	Str.						
A29M05	7	5800	Str.						
A29M06	21	4580	Str.						
A29M07	13	5030	Str.						
A29M08	14	3810	Str.						
A29M09	26	4250	Str.						
A29M10	23	4575	Str.						
	1	7235							
A29M11	Series of	to	Str.						10
	19	7415							
	1	6530							
A29M12	Series of	to	Str.						9
	33	6820							
A29M13	2	5500	Str.						
A29M14	13	2180	1	1450	820				
A29M15	2	4575	Str.						
A29M16	13	3940	1	1220	820				
D25M01	54	3100	14	2395	430	305	305		
A19M01	131	4150	Str.						
A19M02	9	3150	Str.						
A19M03	6	2500	Str.						
A19M04	6	1900	Str.						
A19M05	5	1200	Str.						
A19M06	30	10 450	Str.						
A19M07	13	11 300	Str.						
A19M08	4	10 550	Str.						
A19M09	2	10 000	Str.						
A19M10	2	11 800	Str.						
A19M11	4	7300	Str.						
A19M12	4	8800	Str.						
A19M13	4	9700	Str.						
A19M14	10	10 800	Str.						
A19M15	30	9800	Str.						
A19M16	9	11 750	Str.						
A19M17	1	8300	Str.						
A19M18	26	1800	Str.						
A19M19	9	1000	Str.						
A19M20	2	1300	Str.						
A19M21	28	12 000	Str.						
A19M22	5	10 200	Str.						
	1	2750							
A19M23	Series of	to	Str.						750
	10	9500							
A19M24	129	3400	17	1600	1800	1273	1273		
A19M25	137	4340	2	2000	440	2000			
A19M26	137	2340	2	1000	440	1000			
A19M27	137	1990	2	900	290	900			
A19M28	30	3500	17	1000	2500	707	707		
A19M29	13	2220	1	1450	820				
A19M30	3	5290	2	820	3750	820			
A19M31	13	1990	1	1220	820				
A19M32	3	4640	2	820	3100	820			
X19M03	1	6000	Str.						
X19M04	1	5800	Str.						
Y19M02	47	1135	28	685	264	205	152	216	
Y19M03	19	1375	Str.						
Y19M05	36	865	Str.						
A16M01	208	1860	1	250	1650				
A16M02	41	5260	Str.						
A16M03	7	5725	Str.						
A16M04	21	4505	Str.						
A16M05	13	4955	Str.						
A16M06	14	3735	Str.						
A16M07	26	4175	Str.						
A16M08	23	4500	Str.						
A16M09	14	4680	Str.						
A16M10	105	12 000	Str.						
A16M11	3	9900	Str.						
A16M12	3	8800	Str.						
A16M13	18	8600	Str.						
A16M14	2	10 000	Str.						
A16M15	7	6800	Str.						
A16M16	11	9000	Str.						
	1	6400							
A16M17	Series of	to	Str.						460
	6	8700							
A16M18	3	3600	Str.						

REAR ABUTMENT REINFORCING STEEL LIST CONTINUED

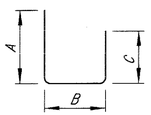
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	1	1900							
A16M19	Series of	to	Str.						900
	3	3700							
A16M20	9	9800	Str.						
A16M21	129	2620	2	480	1740	480			
	1	7160							
A16M22	Series of	to	Str.						10
	19	7340							
A16M23	26	9830	Str.						
A16M24	1	7350	Str.						
A16M25	5	5640	Str.						
A16M26	5	6300	Str.						
	1	6605							
A16M27	Series of	to	Str.						9
	33	6895							
A16M28	22	11 350	Str.						
A16M29	5	9600	Str.						
A16M30	5	8900	Str.						
A16M31	11	2700	32	1000	750	1000	358		
A16M32	6	3410	1	450	3000				
X16M01	4	3050	Str.						
X16M02	2	1725	18	555	738	432	38	127	
X16M03	2	1725	Str.						
X16M07	1	6100	Str.						
X16M08	1	5300	Str.						
X16M09	2	9600	Str.						
X16M10	2	8900	Str.						
X16M11	3	5600	Str.						
X16M12	3	6400	Str.						
Y16M01	36	2130	26	915	990	205	1¼	38	
Y16M02	1	1170	12	990					
Y16M03	1	1145	12	965					
Y16M04	1	1120	12	940					
Y16M05	1	1095	12	915					
Y16M06	1	1070	12	890					
Y16M07	1	1045	12	865					
Y16M08	1	1020	12	840					
Y16M09	1	995	12	815					
Y16M10	1	970	12	790					
Y16M11	1	945	12	765					
Y16M12	1	920	12	740					

PIER 1 REINFORCING STEEL LIST

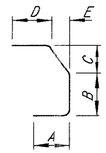
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P32M01	12	6030	Str.						
P32M02	12	6420	Str.						
P32M03	12	6810	Str.						
P32M04	12	7335	Str.						
P32M05	12	7615	Str.						
P32M06	12	7895	Str.						
P32M07	72	3860	1	425	3425				
P25M01	192	3100	Str.						
P25M02	192	3650	13	3100					
P25M03	14	9300	Str.						
P25M04	7	6485	1						
P25M05	7	14 445	1	1200	5345				
				1200	13 305				
P25M06	14	8550	Str.						
P25M07	7	6105	1	1200	4965				
P25M08	7	13 325	1	1200	12 185				
P16M01	89	5090	8	1405	1220				
P16M02	36	9000	Str.						
P16M03	36	8250	Str.						
P16M04	79	2740	2	800	1220	800			
P16M05	14	6160	1	800	5400				
P16M06	7	8560	1	800	7800				
P16M07	14	5880	2	800	4400	800			
P16M08	7	10 060	1	800	9300				
SP13M01	1	4880	21	4880					
SP13M02	1	5275	21	5275					
SP13M03	1	5670	21	5670					
SP13M04	1	6200	21	6200					
SP13M05	1	6480	21	6480					
SP13M06	1	6760	21	6760					



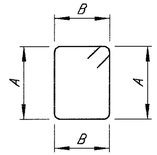
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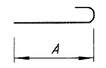
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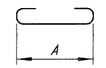
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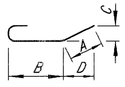
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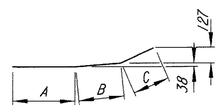
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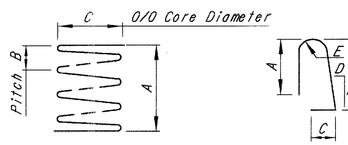
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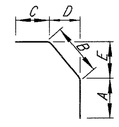


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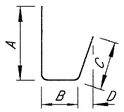


Type 21

Type 26



Type 28



Type 32

NOTES:

1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.
3. SPIRAL REINFORCING BARS: The "length" shown in the steel list for the spiral bars is the length of the spiral along the axis of the spiral. One and one-half closed-coil turns shall be provided at the ends of each spiral unit.
4. SPACERS: Concrete spacers or other approved noncorrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 3050 mm) to insure concentric spacing for the entire cage length. Spacers shall be constructed of approved material equal in quality and durability to the concrete specified for the shaft. The spacers shall have adequate dimensions to ensure a minimum 75 mm clear space between the outside of the reinforcing cage and the design dimension of the drilled shaft or column. Cylindrical concrete feet (bottom supports) shall be provided to ensure that the bottom of the cage is maintained at the proper distance above the base.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	9/9/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FAL	—		8902188

REINFORCING STEEL LIST
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

37 / 38

17052116

Filename: 8856501.dgn

PIER 2 REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
Q32M01	12	6135	Str.						
Q32M02	12	6485	Str.						
Q32M03	12	6830	Str.						
Q32M04	12	7315	Str.						
Q32M05	12	7560	Str.						
Q32M06	12	7800	Str.						
Q32M07	72	3860	1	425	3425				
Q25M01	192	3100	Str.						
Q25M02	192	3650	13	3100					
Q25M03	14	8900	Str.						
Q25M04	7	6330	1	1200	5190				
Q25M05	7	13 225	1	1200	12 085				
Q25M06	14	8250	Str.						
Q25M07	7	6000	1	1200	4860				
Q25M08	7	12 260	1	1200	11 120				
Q16M01	85	5480	8	1440	1220				
Q16M02	36	8600	Str.						
Q16M03	36	7950	Str.						
Q16M04	64	2740	2	800	1220	800			
Q16M05	14	5610	1	800	4850				
Q16M06	7	9010	1	800	8250				
Q16M07	14	5420	2	800	3900	800			
Q16M08	7	10 310	1	800	9550				
SQ13M01	1	5840	21	5840					
SQ13M02	1	6190	21	6190					
SQ13M03	1	6535	21	6535					
SQ13M04	1	7020	21	7020					
SQ13M05	1	7265	21	7265					
SQ13M06	1	7510	21	7510					

PIER 3 REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
R32M01	12	7950	Str.						
R32M02	12	8265	Str.						
R32M03	12	8575	Str.						
R32M04	12	9025	Str.						
R32M05	12	9240	Str.						
R32M06	12	9455	Str.						
R32M07	72	3860	1	425	3425				
R25M01	192	3100	Str.						
R25M02	192	3650	13	3100					
R25M03	14	8600	Str.						
R25M04	7	6170	1	1200	5030				
R25M05	7	13 460	1	1200	12 320				
R25M06	14	8000	Str.						
R25M07	7	5855	1	1200	4715				
R25M08	7	12 575	1	1200	11 435				
R16M01	82	5390	8	1465	1220				
R16M02	36	8300	Str.						
R16M03	36	7700	Str.						
R16M04	58	2740	2	800	1220	800			
R16M05	14	5310	1	800	4550				
R16M06	7	9410	1	800	8650				
R16M07	7	5420	2	800	3900	800			
R16M08	7	8210	1	800	7450				
SR13M01	1	6400	21	6400					
SR13M02	1	6715	21	6715					
SR13M03	1	7025	21	7025					
SR13M04	1	7485	21	7485					
SR13M05	1	7700	21	7700					
SR13M06	1	7915	21	7915					

FORWARD ABUTMENT REINFORCING STEEL LIST CONTINUED

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B29M01	48	11 300	Str.						
B29M02	6	5065	Str.						
B29M03	6	9535	Str.						
B29M04	12	1150	1	740	500				
B29M05	4	4200	Str.						
D25M01	55	1385	14	430	675	305	305		
B19M01	4	2840	2	1075	790	1075			
B19M02	14	4290	2	1785	1740	865			
B19M03	17	4830	2	2125	1740	865			
B19M04	17	4970	2	2465	1740	865			
B19M05	18	5295	2	2790	1740	865			
B19M06	17	5635	2	3130	1740	865			
B19M07	4	3280	1	3130	200				
B19M08	6	2650	1	2500	200				
B19M09	234	3060	2	1360	440	1360			
B19M10	117	1850	2	830	290	830			
B19M11	6	4330	2	740	2950	740			
B19M12	12	1190	1	740	500				
B19M13	4	2230	1	1780	500				
B19M14	6	4825	2	2285	355	2285			
B19M15	2	2735	1	2285	500				
B19M16	2	2050	Str.						
B19M17	44	2070	Str.						
	1	2515		1130		1130			
B19M18	Series of	to	2	to	355	to			380
	5	4035		1890		1890			
B19M19	7	3530	1	3080	500				
B19M20	16	7415	2	3580	355	3580			
	1	2495		1120		1120			
B19M21	Series of	to	2	to	355	to			300
	6	4295		2020		2020			
X19M01	1	5400	Str.						
X19M02	1	1700	Str.						
Y19M02	39	1135	28	685	265	205	152	216	
Y19M03	38	1725	Str.						
Y19M05	17	865	Str.						
B16M01	83	2860	2	600	1740	600			
B16M02	18	2045	1	1785	300				
B16M03	17	2385	1	2125	300				
B16M04	17	2720	1	2460	300				
B16M05	18	3050	1	2790	300				
B16M06	15	3265	1	3005	300				
B16M07	29	2550	2	950	730	950			
B16M08	19	3520	8	950	730				
B16M09	4	4615	Str.						
B16M10	2	3680	Str.						
B16M11	2	4720	Str.						
B16M12	6	5460	Str.						
B16M13	2	2950	17	500	2450	200	460		
B16M14	2	3050	17	500	2550	200	460		
B16M15	10	9500	Str						
B16M16	2	7200	Str.						
B16M17	2	8300	Str.						
B16M18	6	9010	Str.						
B16M19	16	12 210	Str.						
B16M20	25	9275	Str.						
B16M21	2	2325	Str.						
	1	6400							
B16M22	Series of	to	Str.						615
	7	10 090							
B16M23	40	9790	Str.						
B16M24	81	2660	2	500	1740	500			
X16M01	8	3050	Str.						
X16M02	4	1725	18	555	738	432			
X16M03	4	1725	Str.						
X16M04	8	4220	Str.						
X16M05	6	1700	Str.						
X16M06	6	6000	Str.						
Y16M01	17	2130	26						
Y16M02	2	1170	12	915	990	205	1¼	38	
Y16M03	2	1145	12	990					
Y16M04	2	1120	12	965					
Y16M05	2	1095	12	940					
				915					
Y16M06	2	1070	12						
Y16M07	2	1045	12	890					
Y16M08	2	1020	12	865					
Y16M09	2	995	12	840					
Y16M10	2	970	12	815					
				790					
Y16M11	2	945	12						
Y16M12	2	920	12	765					
Y16M13	2	1465	Str.	740					

SUPERSTRUCTURE REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
X19M05	40	12 000	Str.						
X19M06	1	6600	Str.						
X19M07	1	5000	Str.						
Y19M01	1557	925	3	265	265	216	152	230	
Y19M04	1557	1080	1	280	850				
S16M01	2260	12 000	Str.						
S16M02	101	6600	Str.						
S16M03	80	7750	Str.						
S16M04	80	11 750	Str.						
S16M05	240	12 665	Str.						
S16M06	80	11 500	Str.						
S16M07	2848	7540	Str.						
S16M08	1424	8890	Str.						
S16M09	1424	6190	Str.						
	2	1050							
S16M10	Series of	to	Str.						49
	266	14 035							
	2	850							
S16M11	Series of	to	Str.						57
	231	13 960							
X16M13	240	12 000	Str.						
X16M14	6	6600	Str.						
X16M15	6	5000	Str.						
Y16M01	1557	2130	26	915	990	205	1¼	38	

For notes and bar bending diagram, see sheet 37/38 .

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

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FKL	—	8502188	

REINFORCING STEEL LIST
BRIDGE NO. WYA-30-28566
US 30 EB OVER US 23

WYA/CRA-30-28.009/0.000

38/38

1706
2116

Filename: 28566R2.dgn

RAMP B
P.I. = Sta. 29+169.181
Δ = 142° 30' 24.91" (RT)
R = 305.000m
Ls = 82.000m
θs = 7° 42' 07.40"
LT = 54.719m
ST = 27.380m
Lc = 676.601m
Ts = 942.359m
Es = 646.882m

℄ Bearing Rear Abut.
Sta. 28+683.340

End Approach Slab
Sta. 28+682.078

℄ Pier 1

℄ US 30 E.B.

℄ Pier 2

℄ Bearing Fwd. Abut.
Sta. 28+808.340

Begin Approach slab
Sta. 28+809.224

℄ Ramp B (US 30 WB)

℄ Survey US 23

Reference line

N57°06'16"E

N1°42'15.07"W

30°00'00" (Typ.)

℄ Ramp B - Sta. 28+746.387
℄ US 23 - Sta. 13+338.454

℄ Ramp B - Sta. 28+736.027
℄ US 30 EB - Sta. 28+668.006

Horiz. clearance (req'd.) 40'
Horiz. clearance (actual) 41'-5"

Horiz. clearance (req'd.) 40'
Horiz. clearance (actual) 40'-9"

Crushed aggregate slope protection, Typ.

Pressure relief joint per Std. Dwg. BP-2.3 (Typ.)

B-S1 (Typ.)
B-S2
B-S3
B-S4

4800
7200
9916
1800
1000

1:2
2:1

REVIEWED BY BURGESS & NIPLE, LIMITED

DWR 10-99

PLAN

TRAFFIC DATA

ADT = 3572 (2000) ADT = 5361 (2020)
ADTT = 1001 (2000) ADTT = 1501 (2020)

Notes:
Earthwork limits shown are approximate. Actual slopes shall conform to plan cross sections.

All stations and elevations are in meters.

All dimensions and lengths are in millimeters.

⊕ Point of min. vertical clearance

◓ Boring location

280.750 280.817 280.882 280.942 281.000 281.054 281.106 281.153 281.198 281.239 281.278 281.312 281.344 281.372 281.397 281.419 281.437 281.452 281.464 281.473 281.478 281.480 281.479 281.475 281.467 281.456 281.442

Elevations are at profile grade

Sta. 28+682.078

Sta. 28+809.224

402m V.C.
V.P.I. Sta. 28+780
Elev. 284.116

+2.70% -2.5495%

Bridge Limits = 127 146

Elev. 285

Top of slope El. 275.500

Top of slope varies El. 279.250, min.

Elev. 280

Exp.

Fix.

El. 277.410

Elev. 275

El. 273.550

Crushed aggregate slope protection, Typ.

HP310x79 piles estimated pay length = 30 000

Elev. 270

Approximate top of rock, Boring B-S4 Elev. 247.700

Elev. 265

5200
5250

Min. vertical clr. (req'd)
Min. vertical clr. (actual)

El. 261.900

El. 262.500

Approximate top of rock, Boring B-S1 Elev. 249.100

HP310x79 piles estimated pay length = 25 000

HP310x79 piles estimated pay length = 13 000

Approximate top of rock, Boring B-S2 Elev. 249.500

Approximate top of rock, Boring B-S3 Elev. 249.000

HP310x79 piles estimated pay length = 14 000

264.330 264.605 264.939 264.811 263.773 264.787 264.621 264.304 264.793 263.992 263.996 263.960 263.975

28+680 28+700 28+720 28+740 28+760 28+780 28+800

SECTION ALONG ℄ RAMP B

PROPOSED STRUCTURE

Type: Curved steel plate girder w/ composite conc. deck, T-Type piers, spill-thru & wall abutments
Spans: 39 700, 45 600, 39 700 c/c brg.
Roadway width: 9000 toe/toe parapets
Live loading: MS18 case II & the alternate military loading
Skew angle: 30°00'00" L.F. to reference line
Wearing surface: Monolithic concrete
Approach slabs: AS-1-81M (9150)
Alignment: 305m radius curve (Rt.)
Superelevation: 0.08
Latitude: N 40°48'45"
Longitude: W 83°14'15"

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

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WYANDOT COUNTY
STA. 28+682.078
STA. 28+809.224

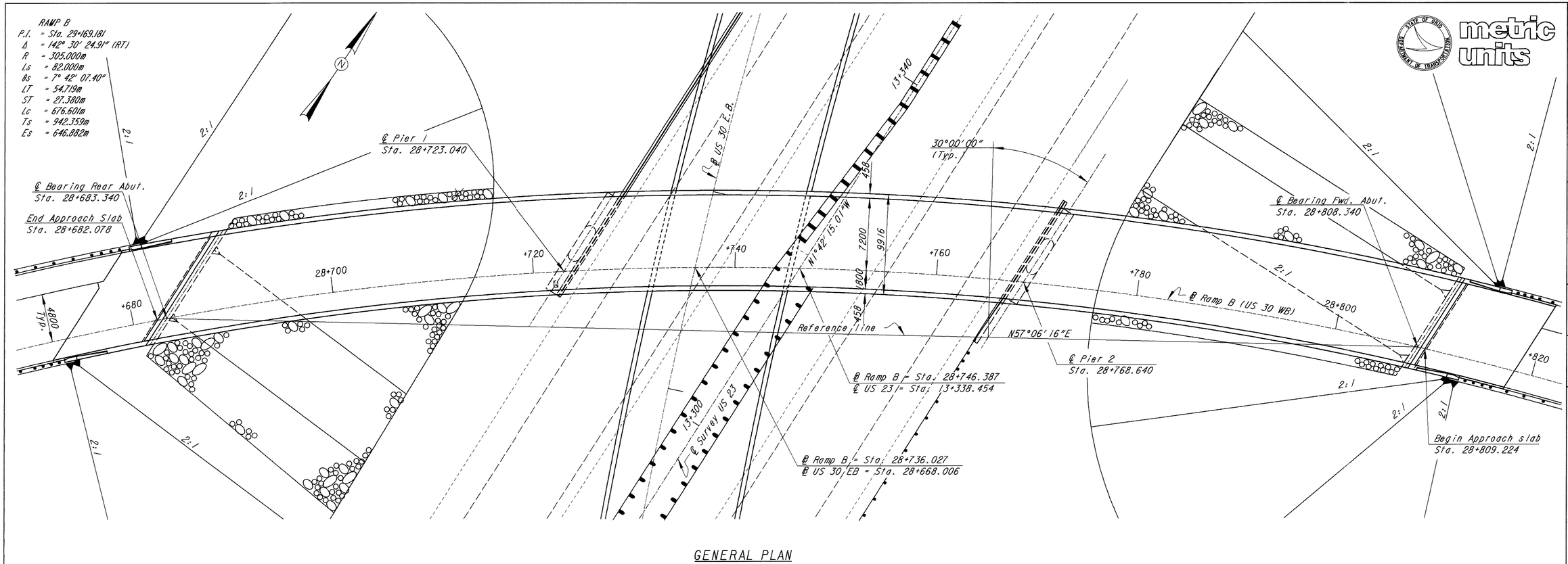
SITE PLAN
BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 E.B. & US 23

WYA/CRA-30-28.009/0.000

1/25

1707
2116

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GENERAL PLAN

DESIGN AGENCY	BALKE ENGINEERS, 1848 Summit Road, Cincinnati, Ohio 45237
REVIEWED	CPS
DATE	7/28/99
STRUCTURE FILE NUMBER	0602218
DRAWN	ALH
REVISED	—
DESIGNED	MPS
CHECKED	FAL

GENERAL PLAN
BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 E.B. & US 23

WYA/CRA-30-28.009/0.000

2 / 25

1708
2116

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GENERAL NOTES

All dimensions in the plans are shown in millimeters.

All elevations and stations in the plans are shown in meters.

REFERENCE shall be made to Standard Drawings:

AS-1-81M	Dated 10-25-94
BR-1M	Dated 12-15-94
BP-2.3	Dated 4-29-99
GSD-1-96M	Dated 11-21-97
EXJ-4-87M	Revised 2-18-97

and to supplemental specifications:

848	Dated 6-30-98
816	Dated 4-21-97
842	Dated 1-6-99
863	Dated 9-9-97
899	Dated 10-21-98
910	Dated 9-21-97
894	Dated 10-12-99

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1996, the 1997 & 1998 interims and the ODOT Bridge Design Manual.

DESIGN LOADING: MS18 (LOAD CASE II) and the alternate military loading.

DESIGN DATA:
Concrete Class S - compressive strength 31.0 MPa (superstructure)

Concrete Class C - compressive strength 27.5 MPa (substructure)

Reinforcing Steel -ASTM A615M, A616M or A617M
Grade 400 - minimum yield strength 400 MPa.

Structural steel - ASTM A572M - yield strength 350 MPa.

REINFORCING STEEL in superstructure, substructure and approach slabs shall be epoxy coated.

DECK PROTECTION METHOD:

Epoxy coated reinforcing steel

65mm concrete cover

MONOLITHIC WEARING SURFACE is assumed, for design purposes, to be 25mm thick.

PILE DRIVING CONSTRAINTS: Prior to driving piles, the spill through slopes and the bridge approach embankment behind the abutments shall be constructed up to the level of the subgrade elevation for a minimum distance of 60 meters behind each abutment. The excavation for the abutment footings and the installation of the abutment and pier piles, for piers 1 & 2, shall not begin until after the above required embankment has been constructed and has undergone a 90 day waiting period.

PILES TO BEDROCK: Piles shall be driven to refusal on bedrock. Refusal shall be considered as obtained by penetrating soft bedrock for several millimeters with a minimum resistance of 20 blows per 25mm or refusal shall be considered as obtained after the pile has contacted hard bedrock and the pile has then received at least 20 blows.

The ultimate bearing value for the HP310 x 79 abutment piles is 1245 kN per pile

Abutment piles:
22 piles 25 meters long, estimated length
4 piles 27 meters long, estimated length
13 piles 28 meters long, estimated length
5 piles 29 meters long, estimated length } Rear abutment
11 piles 30 meters long, estimated length - Forward abutment
55 piles of order length 18 meters long
22 piles of order length 7 meters long
4 piles of order length 9 meters long
13 piles of order length 10 meters long
5 piles of order length 11 meters long
11 piles of order length 12 meters long
55 splices

The ultimate bearing value for the HP310 x 79 pier piles is 1250 kN per pile

Pier piles:
30 piles 13 meters, estimated length & order length - Pier 1
30 piles 14 meters, estimated length & order length - Pier 2
30 splices

ITEM 507 - STEEL POINTS, AS PER PLAN: Steel pile points shall be used to protect the tips of the proposed steel "H" piling. The steel points shall be furnished by Associated Pile and Fitting Corporation, 262 Rutherford Boulevard, Clifton, New Jersey 07014; International Construction Equipment, Inc., 301 Warehouse Drive, Matthews, North Carolina 28015; Dougherty Foundation Products, Inc., P.O. Box 688, Franklin Lakes, New Jersey 07417; Versa Steel, Inc., 3601 N.W. Yeon Avenue, P.O. Box 10559, Portland, Oregon 97210; Piling Accessories, Inc.,3467 Gribble Road, Matthews, North Carolina 28105; or by a manufacturer that can furnish a steel point that is acceptable to the Director. Thematerial used for the manufacturing of pile points shall conform to ASTM A27 65/35 - Class 2 - Heat Treated or AASHTO M103 65/35 - Heat Treated. A notorized copy of the mill test report shall be submitted to the Engineer.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN: Shall be in accordance with 503 except that the backfill material behind the abutments shall be 203 granular material placed in 150mm lifts and compacted in accordance with 304.04. The 203 granular material shall extend 30 meters behind each abutment.

FIELD PAINTING OF NEW STEEL, SYSTEM 1ZEU: The surface area pay quantity is based on the surface area of the main members increased by 20 percent to account for the area of the crossframes, bearings, and other structural steel incidentals to be cleaned and painted.

ESTIMATED QUANTITIES

Calculated by: ALH Date: 4/99
Checked by: WJH Date: 5/99

Item	Extension	Total	Unit	Description	Superstructure	Abutment	Pier	General
503	21301	Lump	-	Unclassified excavation, as per plan		Lump	Lump	
505	11100	Lump	-	Pile driving equipment mobilization				Lump
507	00200	2307	Meter	Steel piles HP310 x 79, furnished		1497	810	
507	00250	2307	Meter	Steel piles HP310 x 79, driven		1497	810	
507	50500	85	Each	Steel pile splices		55	30	
507	93301	115	Each	Steel point (or shoe), as per plan		55	60	
512	33000	7.7	Sq. Meter	Type 2 Waterproofing		7.7		
Special	51267502	1479.0	Sq. Meter	Sealing of concrete surfaces (epoxy) *	803.0	300.1	375.9	
516	11210	23.3	Meter	Structural expansion joint including elastomeric strip seal		23.3		
516	13600	7	Sq. Meter	25mm Preformed expansion joint filler		7		
516	44100	5	Each	Elastomeric bearing with internal laminates and load plate (neoprene), (630 x 370 x 69 with 780 x 396 x 51 min. load plate) *			5	
516	44100	5	Each	Elastomeric bearing with internal laminates and load plate (neoprene), (630 x 370 x 69 with 656 x 396 x 51 min. load plate) *			5	
516	44200	5	Each	Elastomeric bearing with internal laminates and load plate (neoprene), (400 x 300 x 92 with 526 x 326 x 38 load plate) *		5		
516	44400	5	Each	Elastomeric bearing with internal laminates and load plate (neoprene), (400 x 400 x 127 with 526 x 426 x 38 min. load plate) *		5		
518	21230	Lump	-	Porous backfill with filter fabric		Lump		
518	40000	12	Meter	150mm Perforated corrugated plastic pipe		12		
518	40010	5	Meter	150mm Non-perforated corrugated plastic pipe, including specials		5		
601	20000	1331	Sq. Meter	Crushed aggregate slope protection				1331
816	00620	3010	Sq. Meter	Field painting of new steel, intermediate and finish coat, system 1ZEU	3010			
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]			
842	42000	177.5	Cu. Meter	Class C concrete, pier above footing			177.5	
842	43500	67.6	Cu. Meter	Class C concrete, abutment including footing		67.6		
842	44100	148.0	Cu. Meter	Class C concrete, abutment not including footing		148.0		
842	46500	248.1	Cu. Meter	Class C concrete, footing		90.3	157.8	
863	10100	Lump	-	Structural steel members, level five (5) fabrication	Lump			
863	20000	3056	Each	Welded stud shear connector	3056			
894	10000	398.5	Cu. Meter	High Performance Concrete, for Bridge Deck with Warranty	398.5			

* See proposal note.

metric units

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BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

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ALH	ALH	CPS	7/28/99
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FAL	—	0502218	

GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 EB & US 23

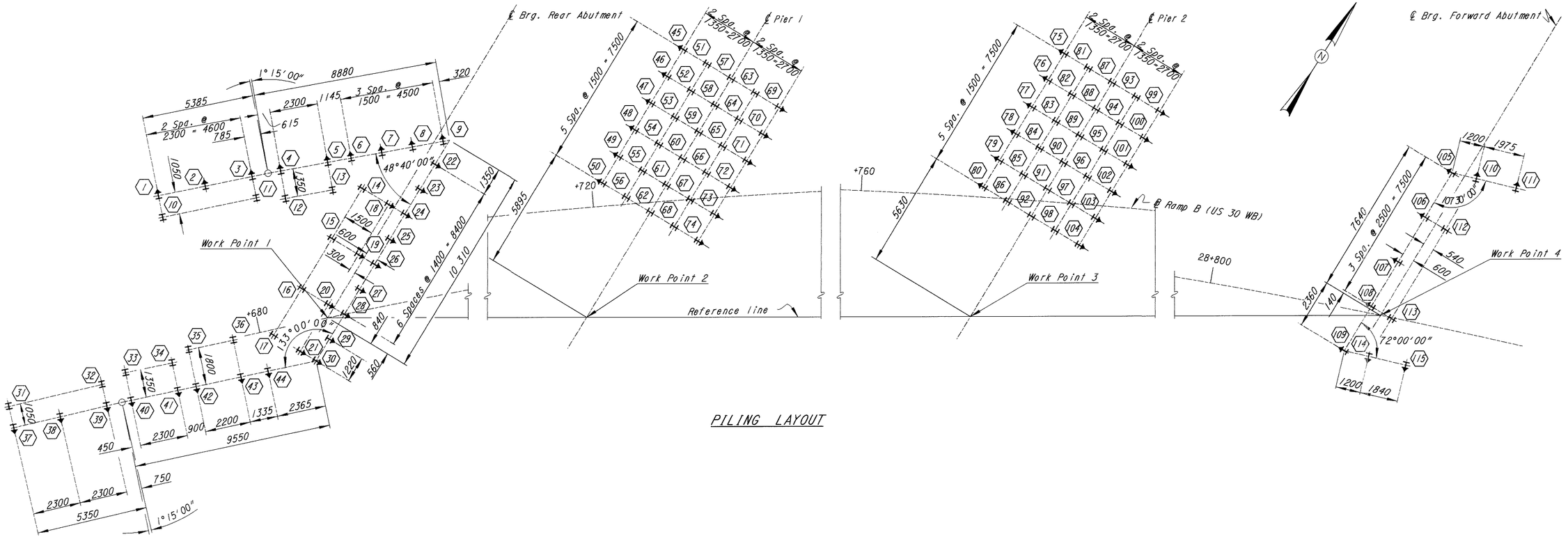
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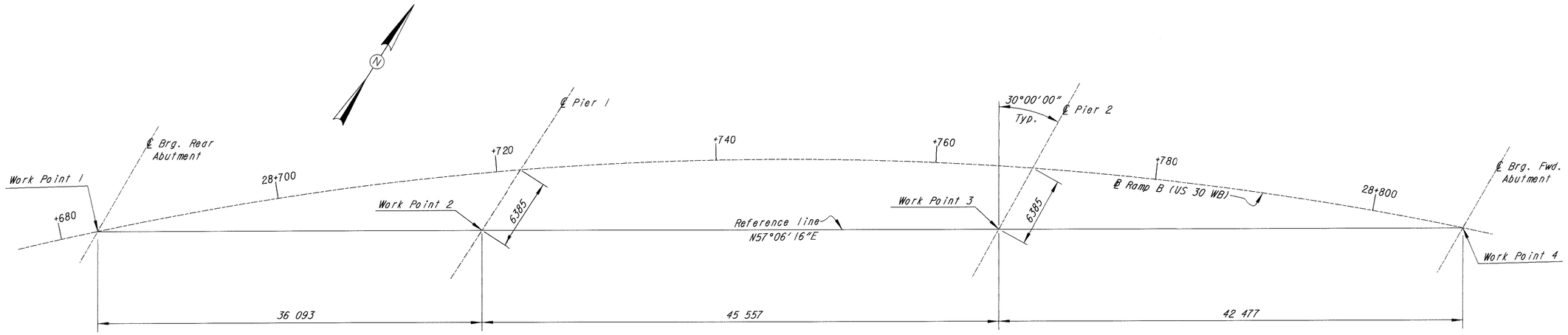
1709
2116

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metric units



PILING LAYOUT



LAYOUT DIAGRAM

NOTES:
1. All piles are HP310x79.
2. (33) I Designates pile number and location.
3. ↳ Denotes pile battered 1:3 in direction of arrow.

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FKL	—	850218	

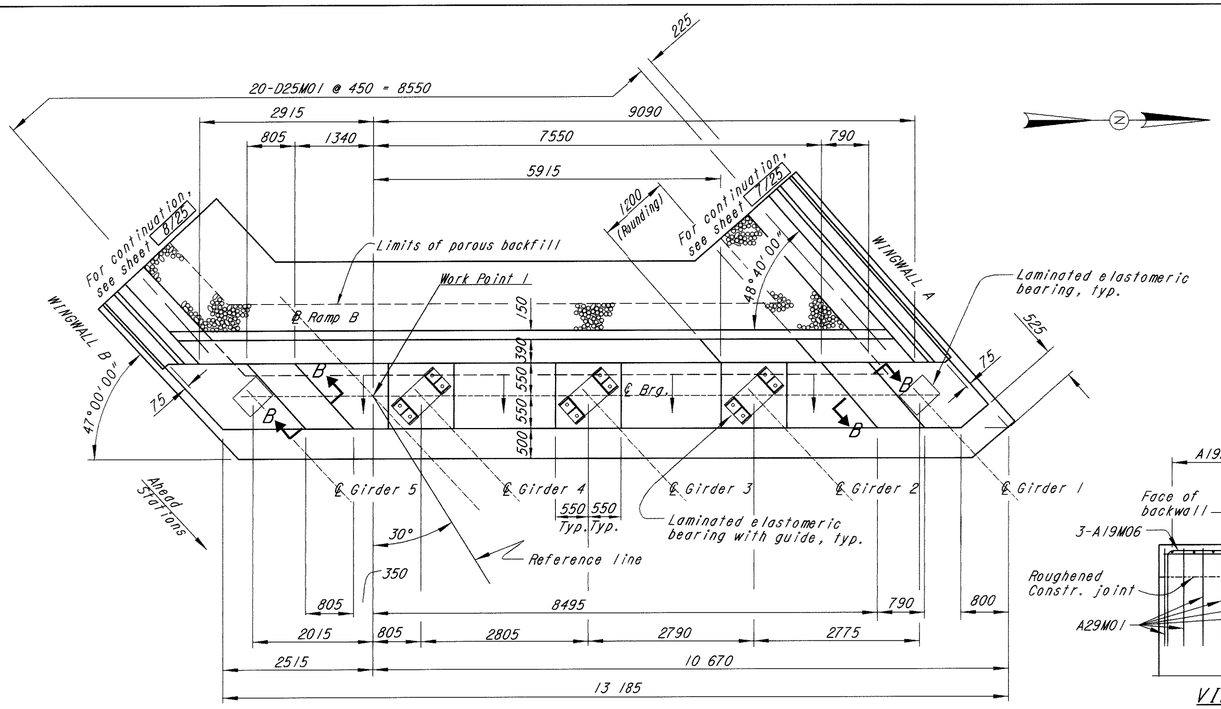
PILE LAYOUT
BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 EB & US 23

WYA/CRA-30-28.009/0.000

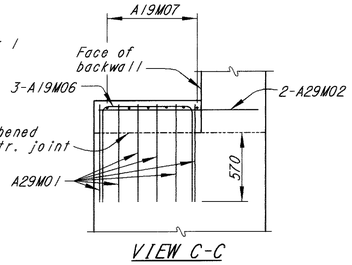
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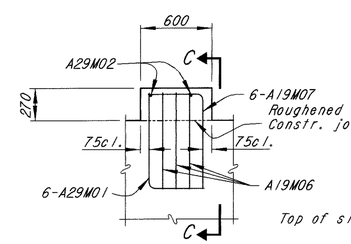
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PLAN

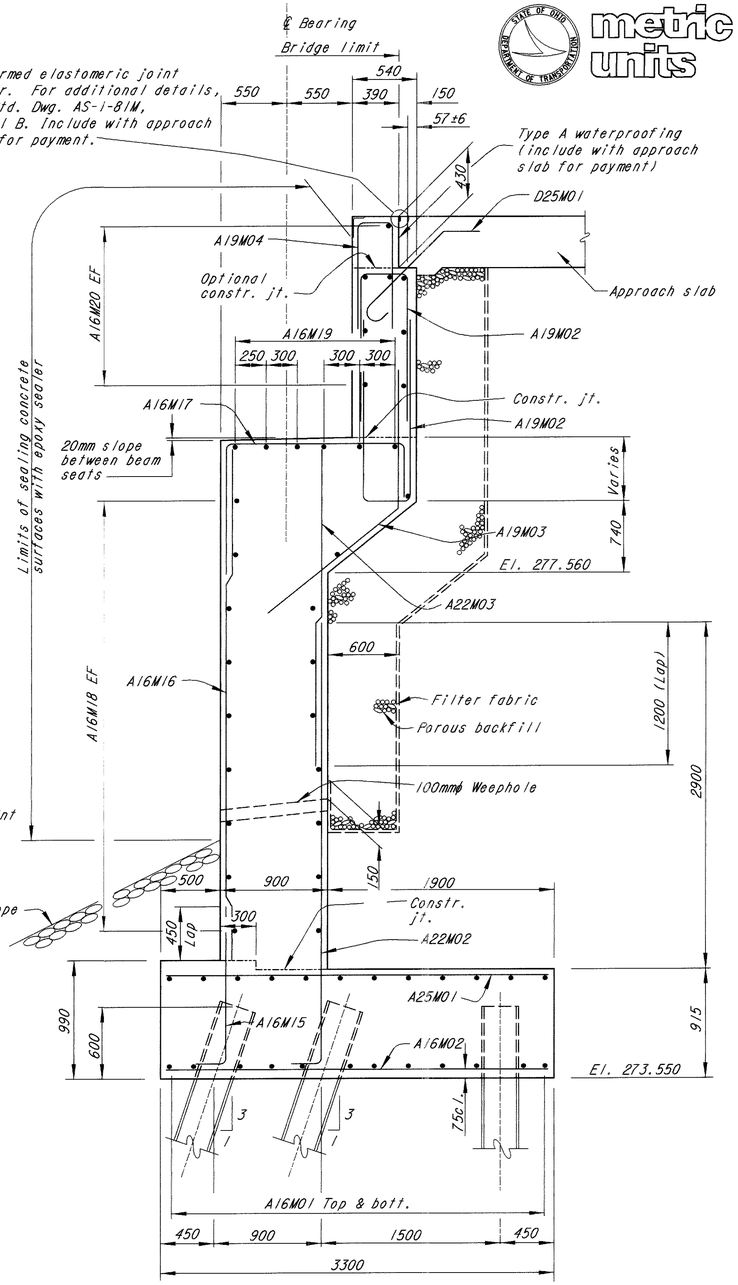


VIEW C-C

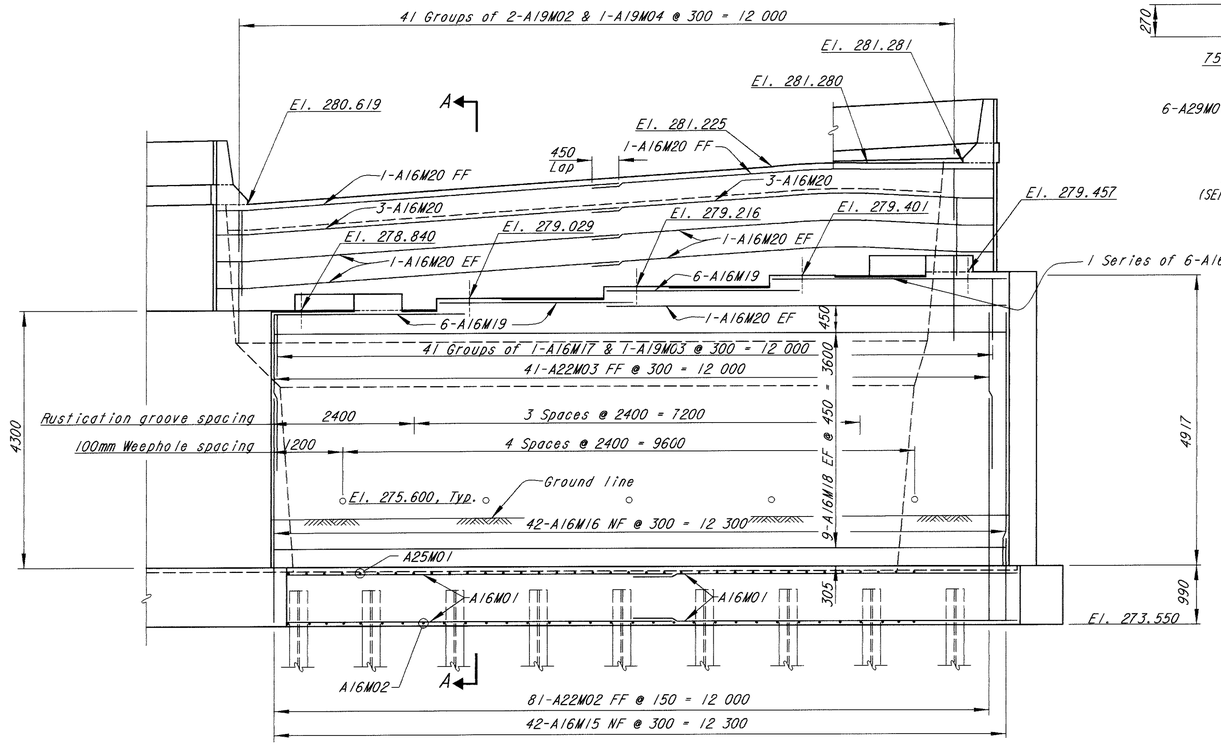


SECTION B-B

(SEISMIC PEDESTAL, 2 REQUIRED)



SECTION A-A



ELEVATION

NOTES;

1. For PILE LAYOUT PLAN, see sheet 4/25 .
2. For footing plan, see sheet 6/25 .
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, 300mm below the embankment surface, and laterally to the ends of the wingwalls. 0.06Kg/m of bagged No. 3 aggregate shall be placed at each weephole. Bagged aggregate is included with porous backfill for payment.
4. For wingwall details, see sheet 7/25 & 8/25 .
5. EF = Each Face
   NF = Near Face
   FF = Far Face
6. Rustication grooves shall extend 300mm below ground line up to beam seat.
7. For rustication groove and expansion joint detail, see sheet 8/25 .
8. For expansion joint details, see Std. Dwg. EXJ-4-87M.
9. BRIDGE SEAT REINFORCING in the vicinity of the bridge seat shall be accurately placed to avoid interference with the drilling of anchor bar holes.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	850218	

REAR ABUTMENT DETAILS

BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 EB & US 23

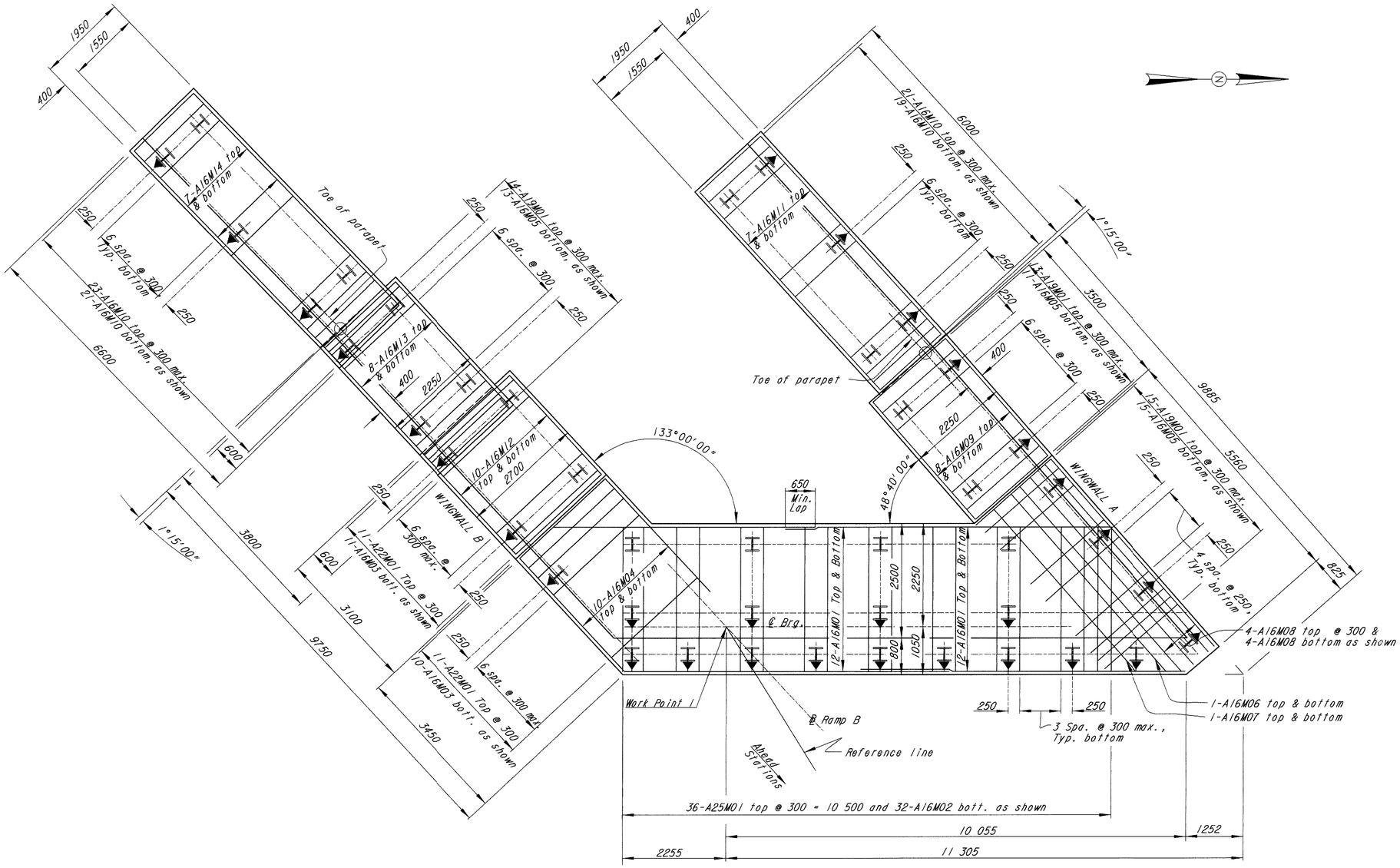
WYA/CRA-30-28.009/0.000

5 / 25

1711
2116

f:\rename - 28682\rd1.dgn

metric units



FOOTING PLAN

NOTES:
1. For PILE LAYOUT PLAN, see sheet 4725 .

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FAL	—	850228	

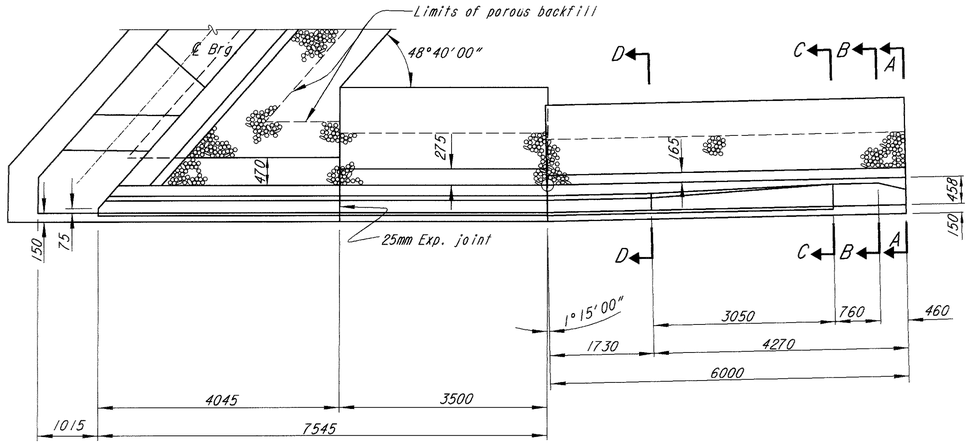
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RAMP B OVER US 30 EB & US 23

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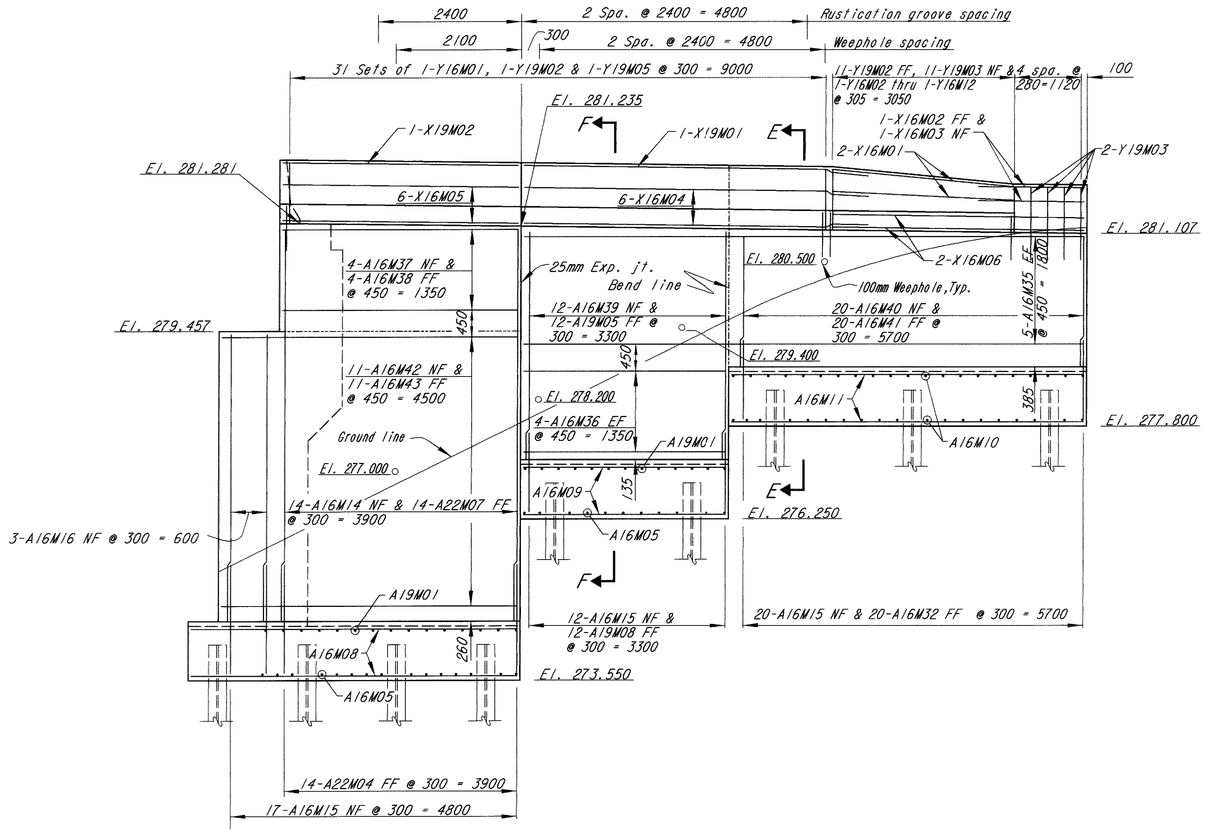
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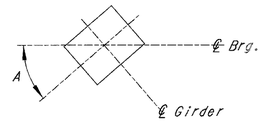
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PLAN



ELEVATION
WINGWALL A
(Developed view)



ELASTOMERIC PAD ORIENTATION

Girder	Angle 'A'
1	40°40'00"
2	41°00'00"
3	41°20'00"
4	41°40'00"
5	42°00'00"

NOTES:
1. For PILE LAYOUT PLAN, see sheet 4/25 .
2. For footing plan, see sheet 6/25 .
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, 300mm below the embankment surface, and laterally to the ends of the wingwalls. 0.06Kg/m³ of bagged No. 3 aggregate shall be placed at each weephole. Bagged aggregate is included with porous backfill for payment.
4. EF = Each Face
   NF = Near Face
   FF = Far Face
   PEJF = Preformed Expansion Joint Filler
5. For Section A-A, B-B, C-C and D-D, see sheet 12/25 .
6. For Section F-F and G-G, see sheet 9/25 .
7. Rustication grooves shall extend 300mm below ground line up to base of parapet or beam seat.
8. For rustication groove and expansion joint detail, see sheet 8/25 .

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
metric units

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FAL	—	850228	

REAR ABUTMENT DETAILS
BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 EB & US 23

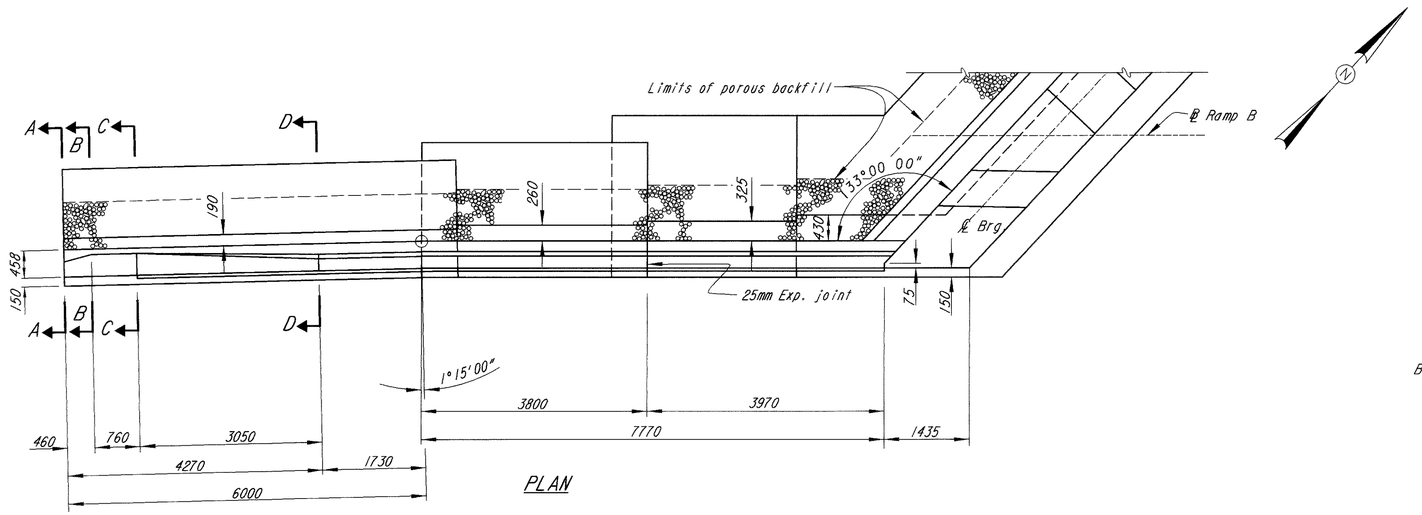
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7 / 25

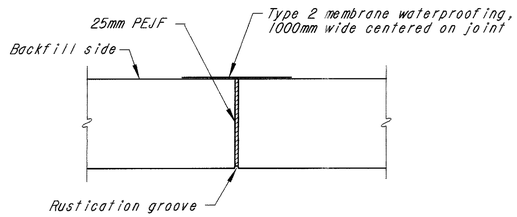
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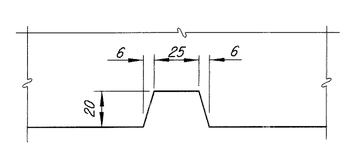
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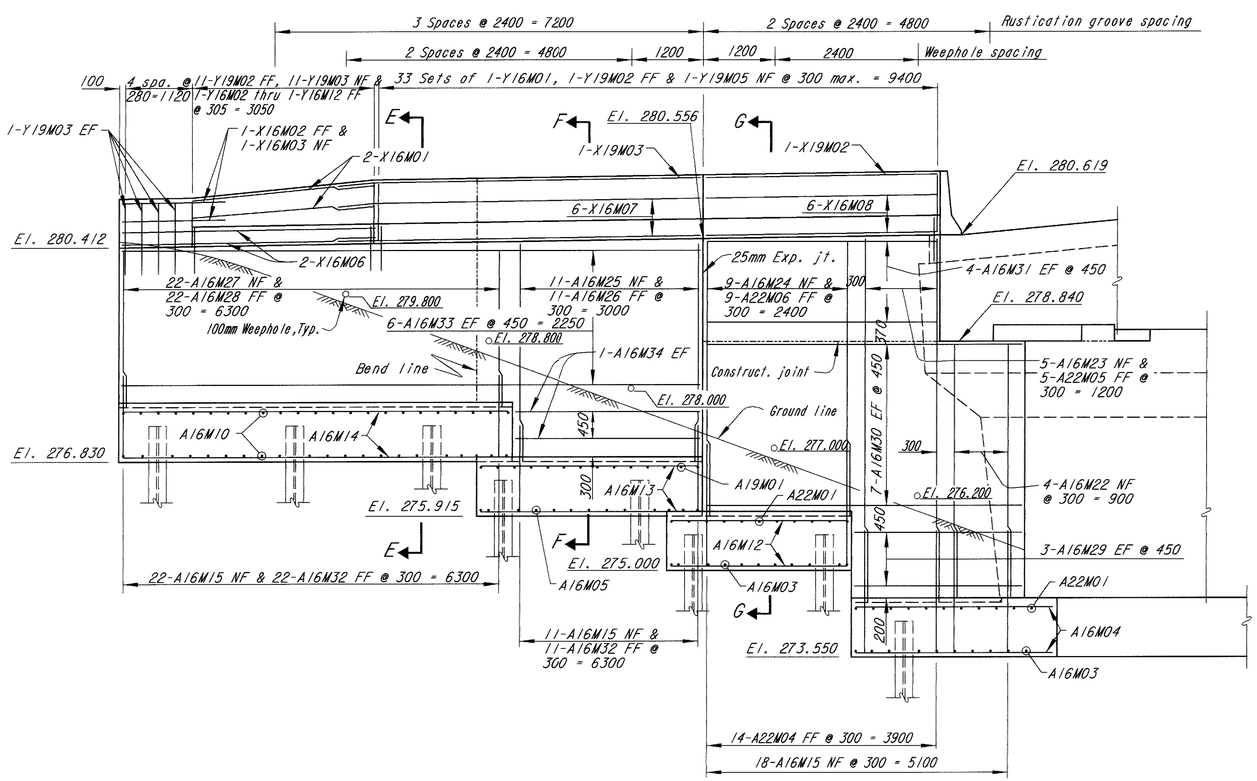
PLAN



EXPANSION JOINT



RUSTICATION GROOVE



ELEVATION
WINGWALL B
(DEVELOPED VIEW)

NOTES:
1. For PILE LAYOUT PLAN, see sheet 4/25 .
2. For footing plan, see sheet 6/25 .
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, 300mm below the embankment surface, and laterally to the ends of the wingwalls. 0.06Kg/m³ of bagged No. 3 aggregate shall be placed at each weephole. Bagged aggregate is included with porous backfill for payment.
4. EF = Each Face
   NF = Near Face
   FF = Far Face
   PEJF = Preformed Expansion Joint Filler
5. For Section A-A, B-B, C-C and D-D, see sheet 12/25 .
6. For Section E-E, F-F and G-G, see sheet 9/25 .
7. Rustication grooves shall extend 300mm below ground line up to base of parapet or beam seat.

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FAL	—		850221B

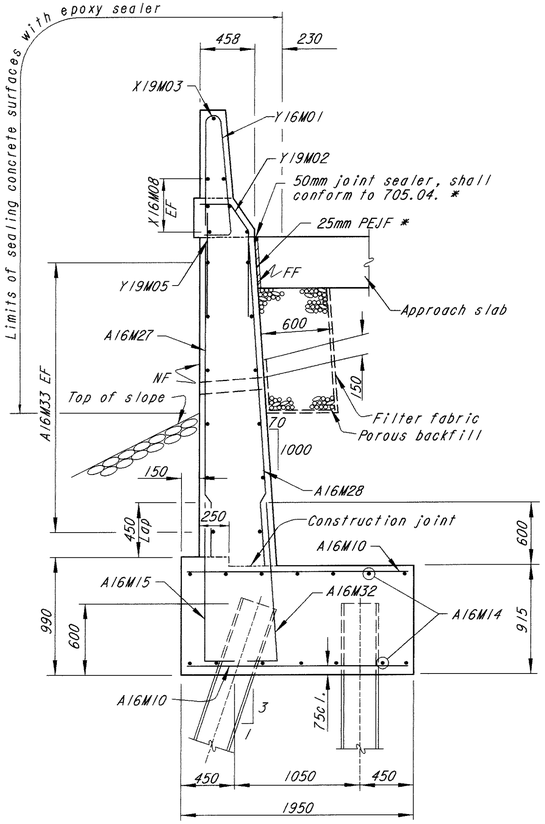
REAR ABUTMENT DETAILS
BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 EB & US 23

WYA/CRA-30-28.009/0.000

8 / 25

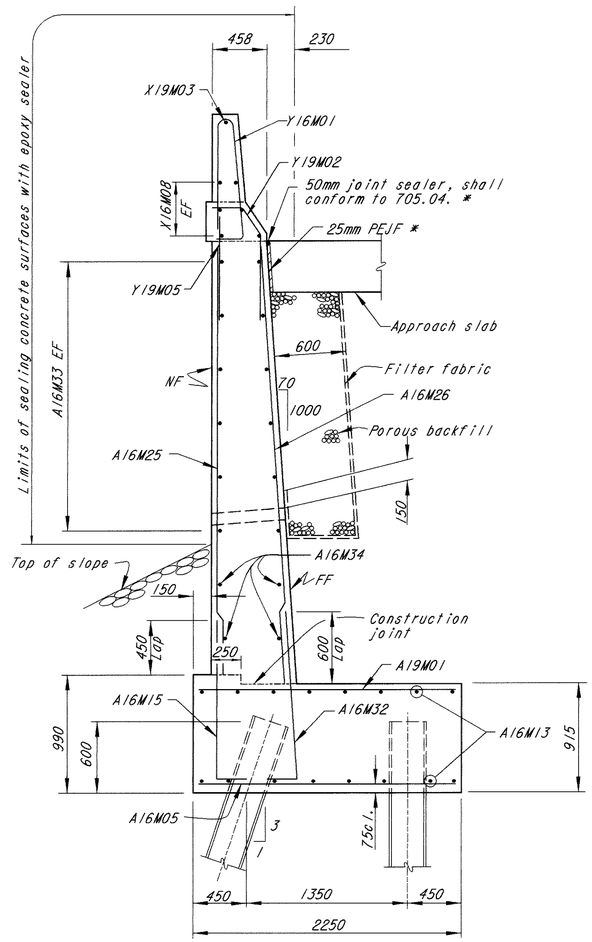
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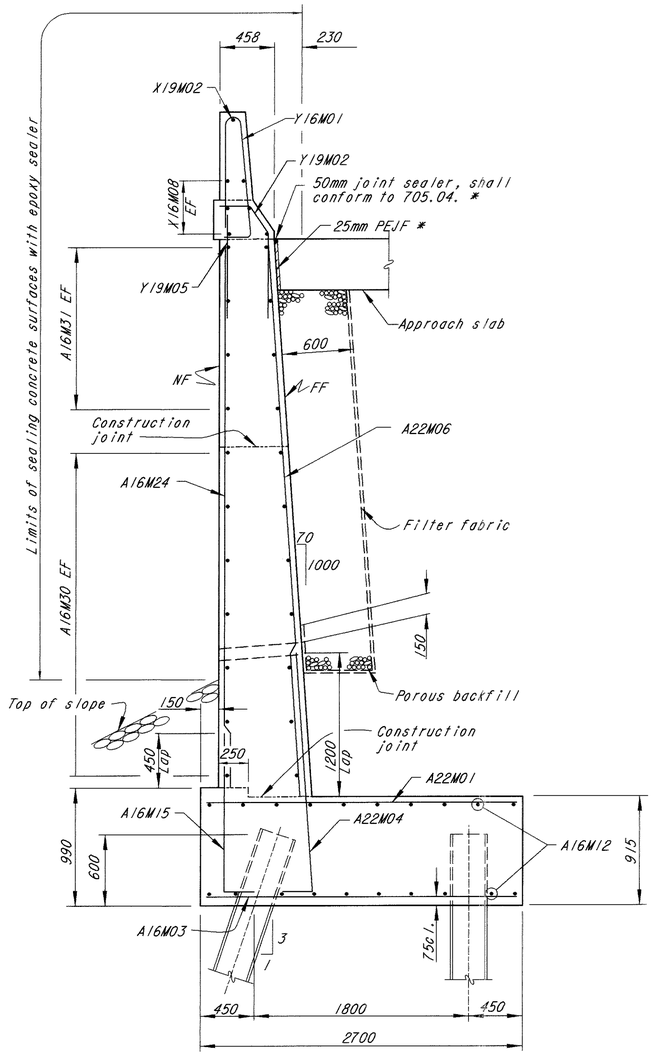
SECTION E-E

(Wingwall B shown
Wingwall A similar)



SECTION F-F

(Wingwall B shown
Wingwall A similar)



SECTION G-G

NOTES:
1. EF = Each Face
   NF = Near Face
   FF = Far Face
   PEJF = Preformed Expansion Joint Filler
2. For additional details on the parapets, see Std. Dwg. BR-1M.
3. Include with approach slab for payment.

metric units

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FAL	—	8502218	

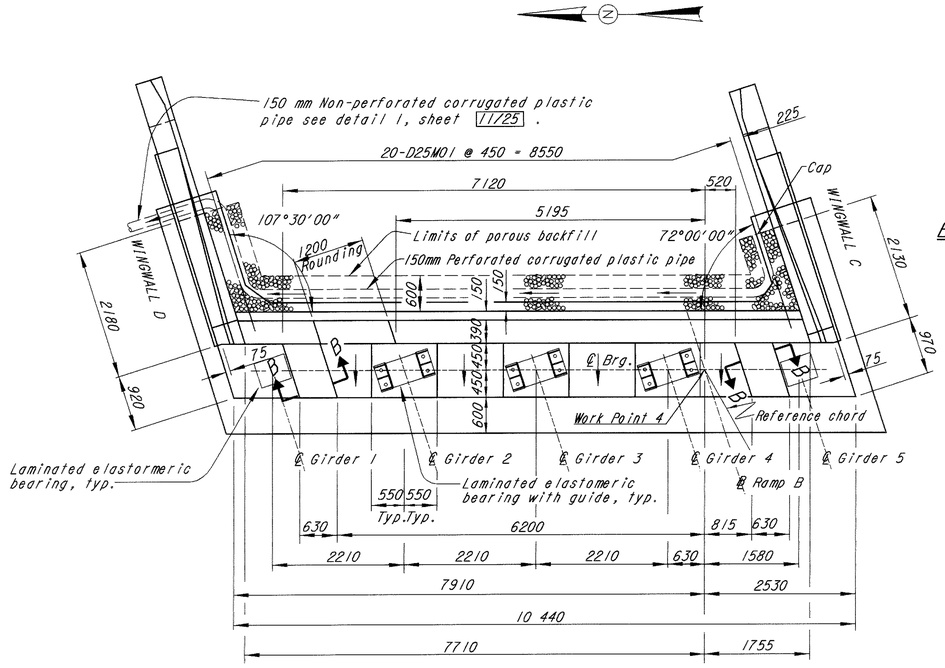
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BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 EB & US 23

WYA/CRA-30-28.009/0.000

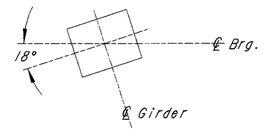
9 / 25

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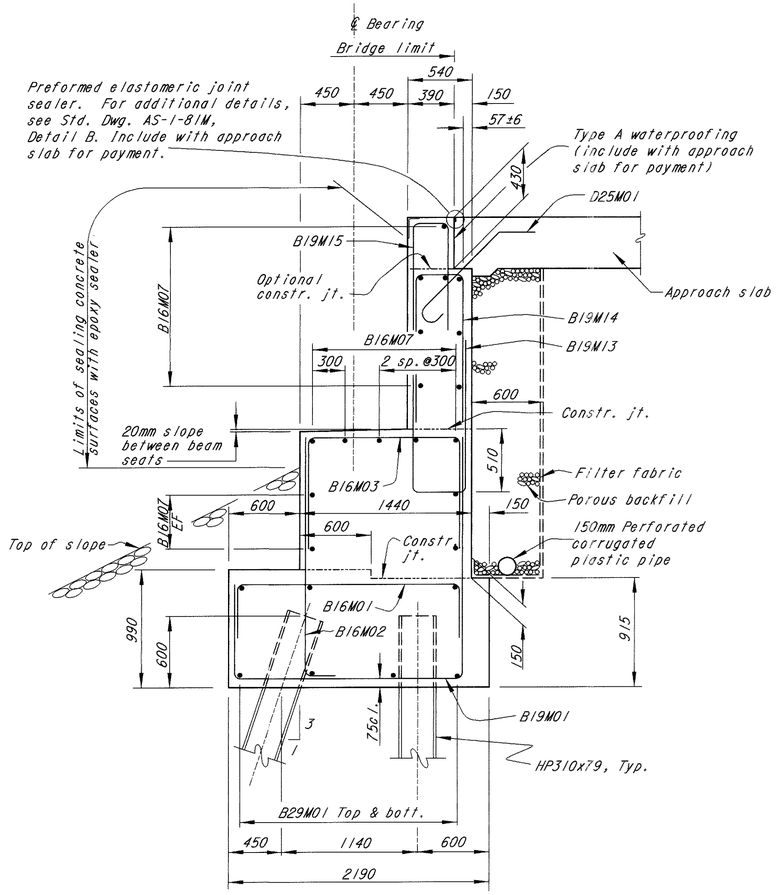
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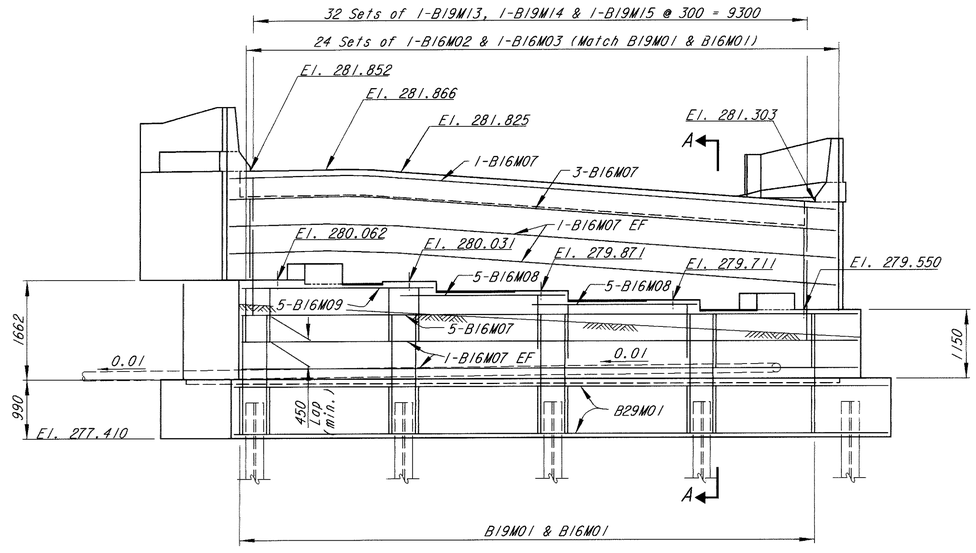
PLAN



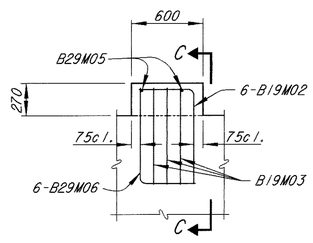
ELASTOMERIC PAD ORIENTATION



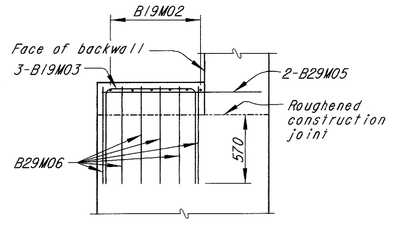
SECTION A-A



ELEVATION



SECTION B-B
(SEISMIC PEDESTAL)



VIEW C-C

NOTES:
1. For PILE LAYOUT PLAN, see sheet 4/25 .
2. For footing plan, see sheet 11/25 .
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, 300mm below the embankment surface, and laterally as shown.
4. For wingwall details, see sheet 12/25 .
5. EF = Each Face
6. For expansion joint details, see Std. Dwg. EXJ-4-87M.
7. BRIDGE SEAT REINFORCING: Reinforcing steel in the vicinity of the bridge seat shall be accurately placed to avoid interference with the drilling of the anchor bar holes.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

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FKL	—	8502218	

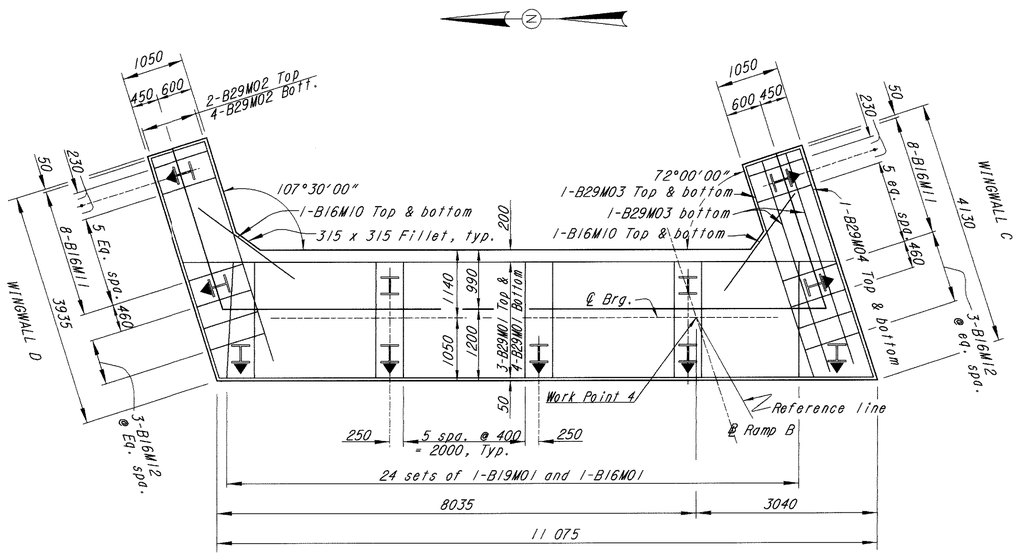
FORWARD ABUTMENT DETAILS
BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 EB & US 23

WYA/CRA-30-28.009/0.000

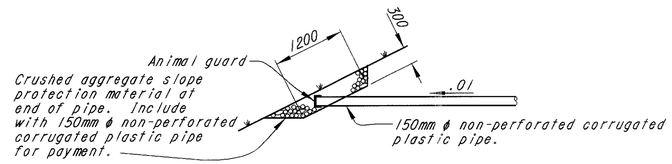
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FOOTING PLAN



DETAIL 1

NOTES:
1. For PILE LAYOUT PLAN, see sheet 4/25 .

metric units

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FKL	—	8502218	

FORWARD ABUTMENT DETAILS
BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 EB & US 23

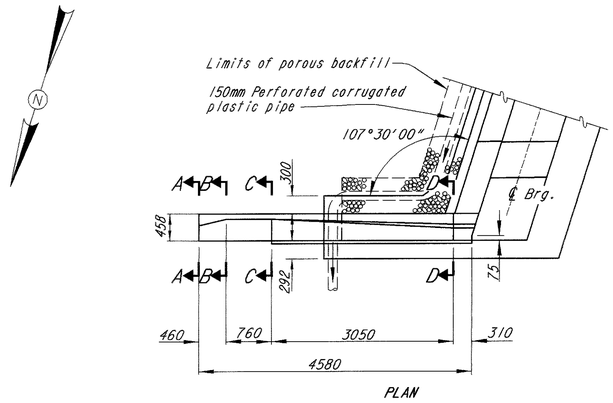
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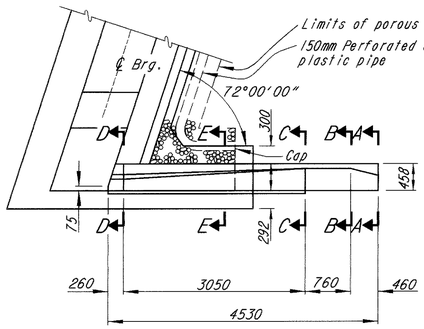
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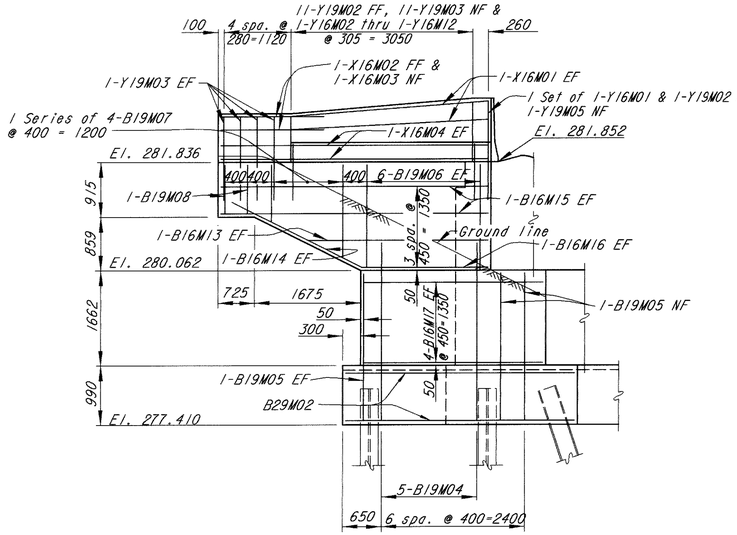
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PLAN

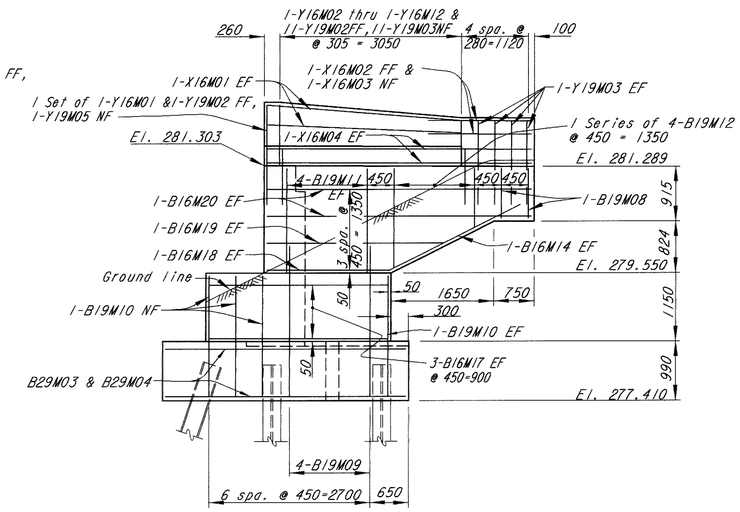


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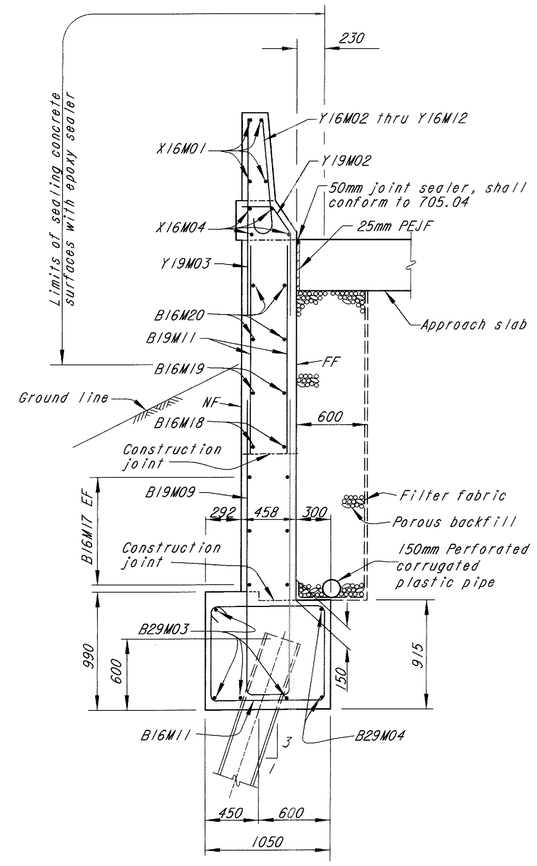
ELEVATION

WINGWALL D



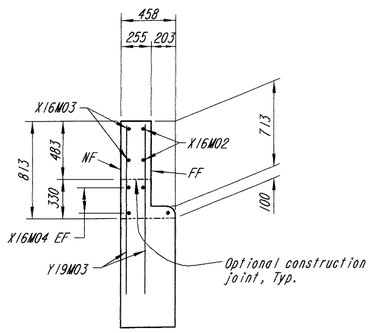
ELEVATION

WINGWALL C

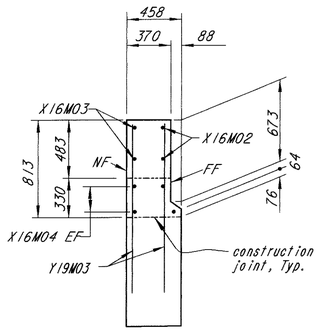


SECTION E-E

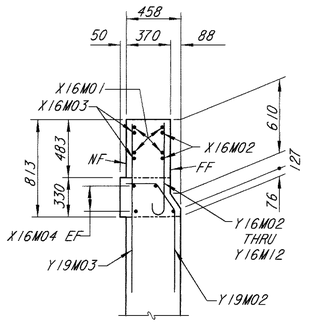
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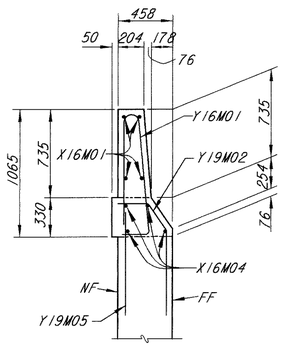
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:
1. For additional approach slab information, see Std. Dwg. AS-1-81M.
2. EF = Each Face
   FF = Far Face
   NF = Near Face
3. For additional parapet details, see Std. Dwg. BR-1M.

DESIGNED	DRAWN	REVIEWED	DATE
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FKL	—		8502218

DESIGN AGENCY
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FORWARD ABUTMENT DETAILS

BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 EB & US 23

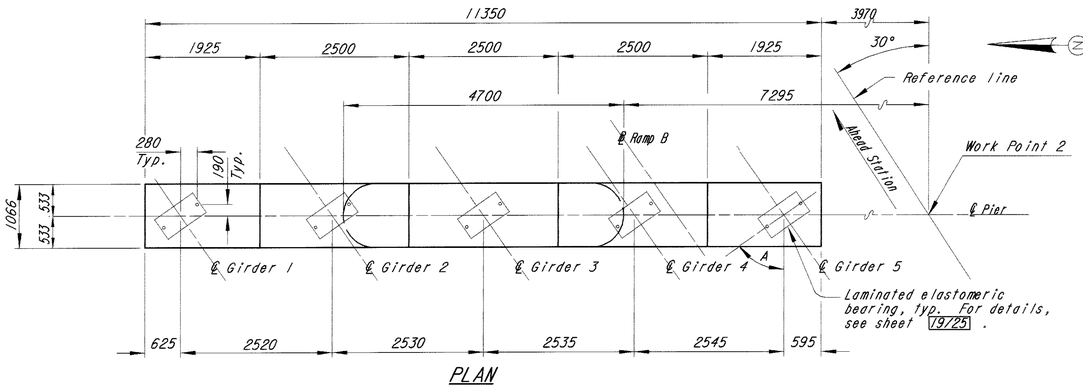
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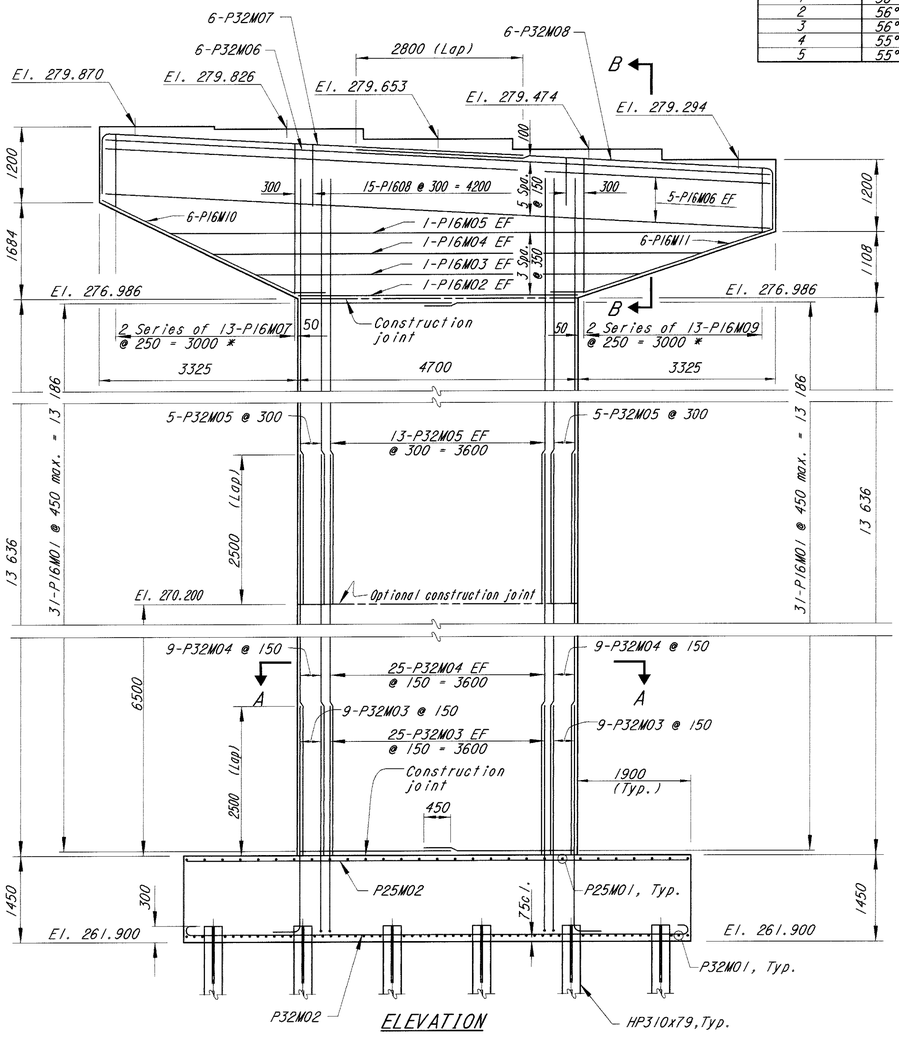
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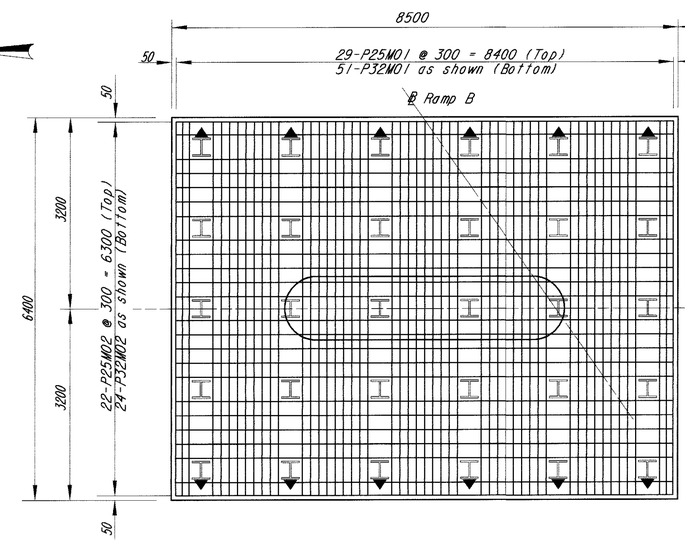


PLAN

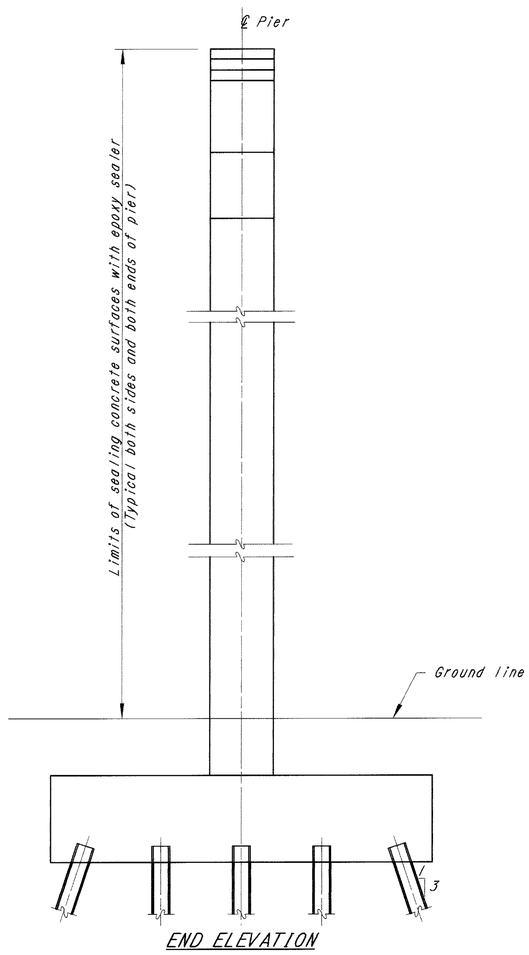
A = Angle to ℄ bearing	
Girder No.	Angle
1	56°30′
2	56°45′
3	56°00′
4	55°15′
5	55°30′



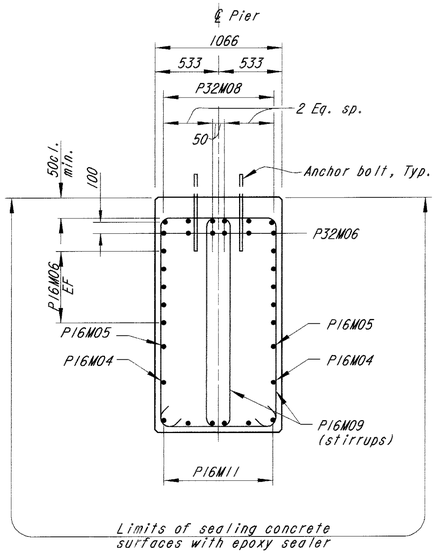
ELEVATION



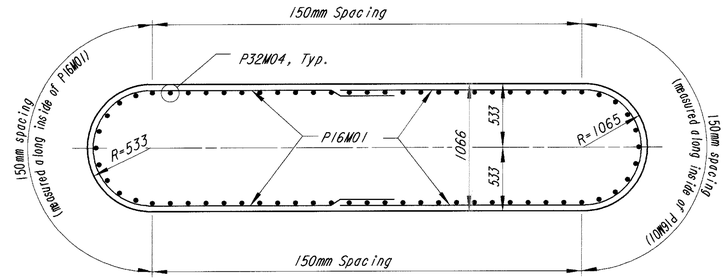
FOOTING PLAN



END ELEVATION



SECTION B-B



SECTION A-A

NOTES:
1. * Denotes stirrup hooks located at the bottom.
2. Denotes pile battered 1:3 in direction of arrow.
3. EF = Each Face
4. For PILE LAYOUT PLAN, see sheet 4725 .
5. BRIDGE SEAT REINFORCING: Reinforcing steel in the vicinity of the bridge seat shall be accurately placed to avoid interference with the drilling of bearing anchor holes or the pre-setting of bearing anchors.

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FKL	—	850218	

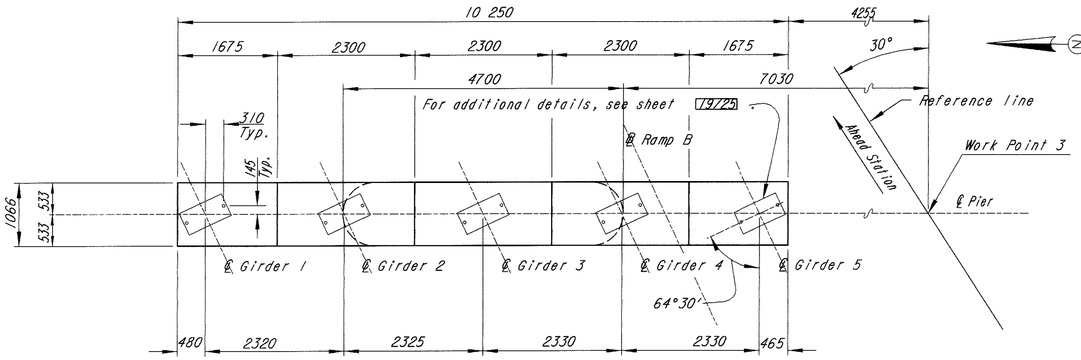
PIER 1
BRIDGE NO. CRA-30-28682
RAMP B OVER US 30 EB & US 23

WYA/CRA-30-28.009/0.000

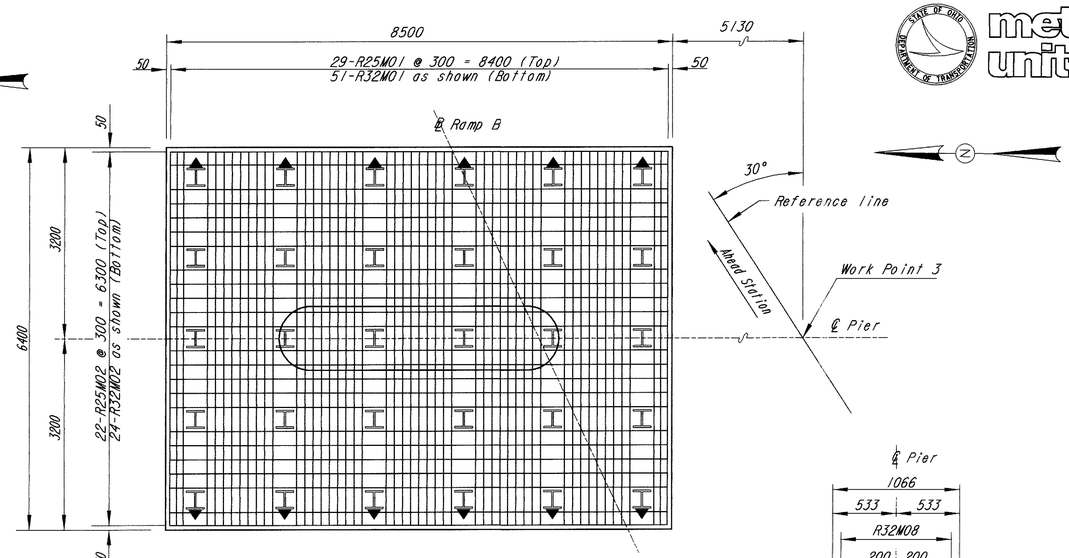
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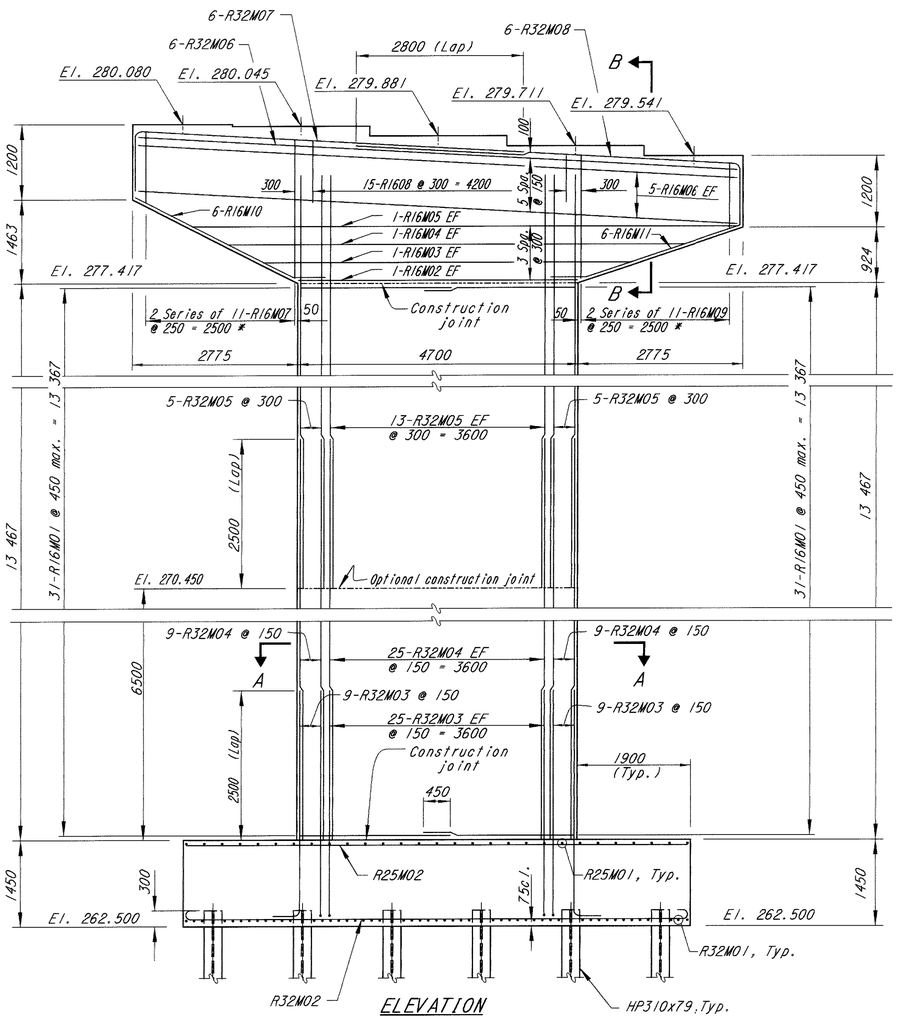
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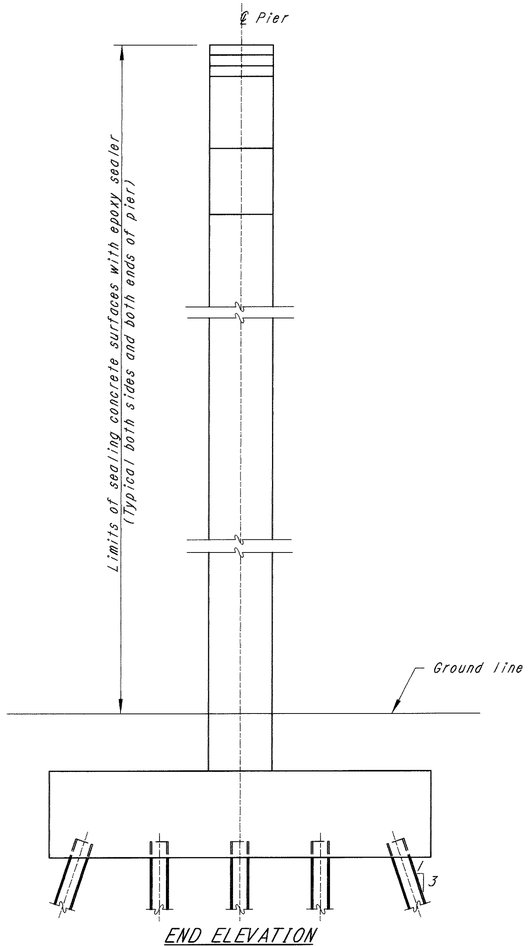
CAP PLAN



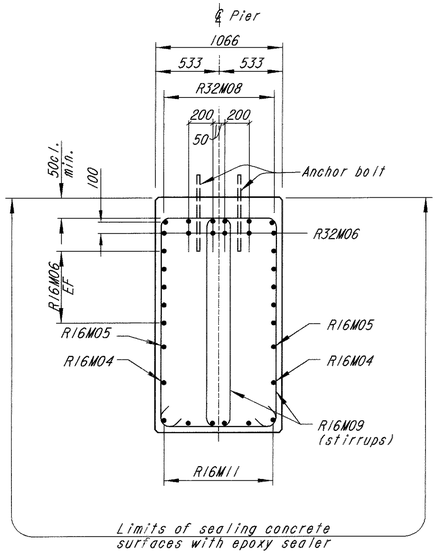
FOOTING PLAN



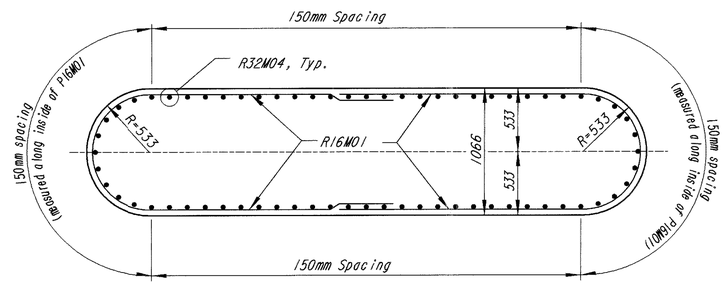
ELEVATION



END ELEVATION



SECTION B-B



SECTION A-A

NOTES:
1. * Denotes stirrup hooks located at the bottom.
2. Denotes pile battered 1:3 in direction of arrow.
3. EF = Each Face
4. For PILE LAYOUT PLAN, see sheet 4/25 .
5. BRIDGE SEAT REINFORCING: Reinforcing steel in the vicinity of the bridge seat shall be accurately placed to avoid interference with the drilling of bearing anchor holes or the pre-setting of bearing anchors.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

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FHL	—	6502218	

PIER 2
BRIDGE NO. CRA-30-28682
RAMP B OVER US 30 EB & US 23

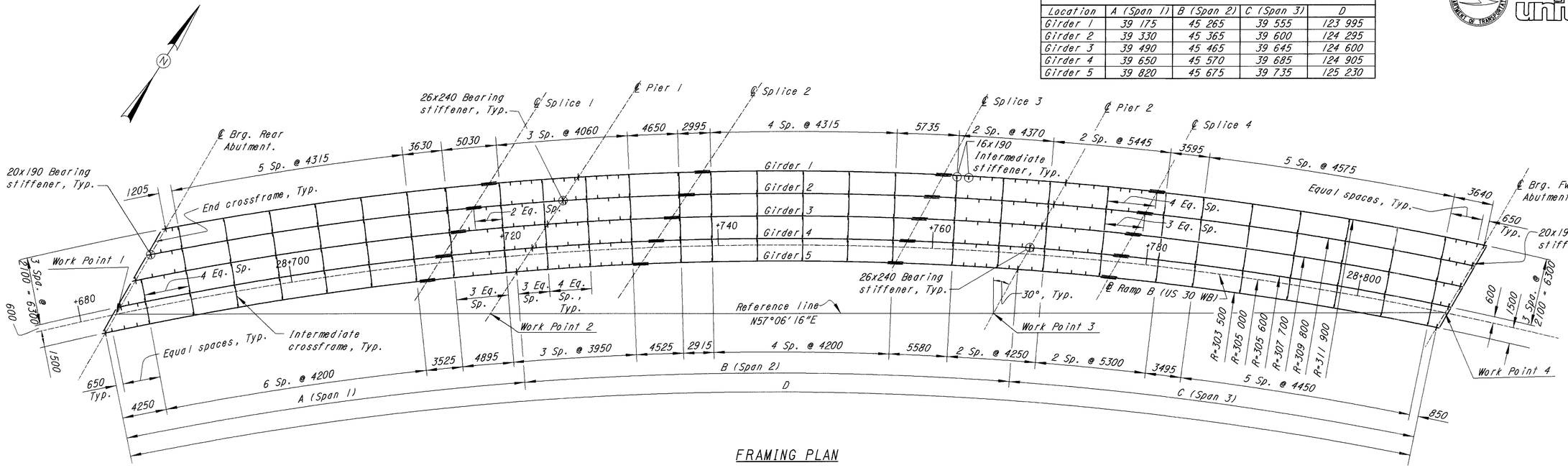
WYA/CRA-30-28.009/0.000

14 | 25

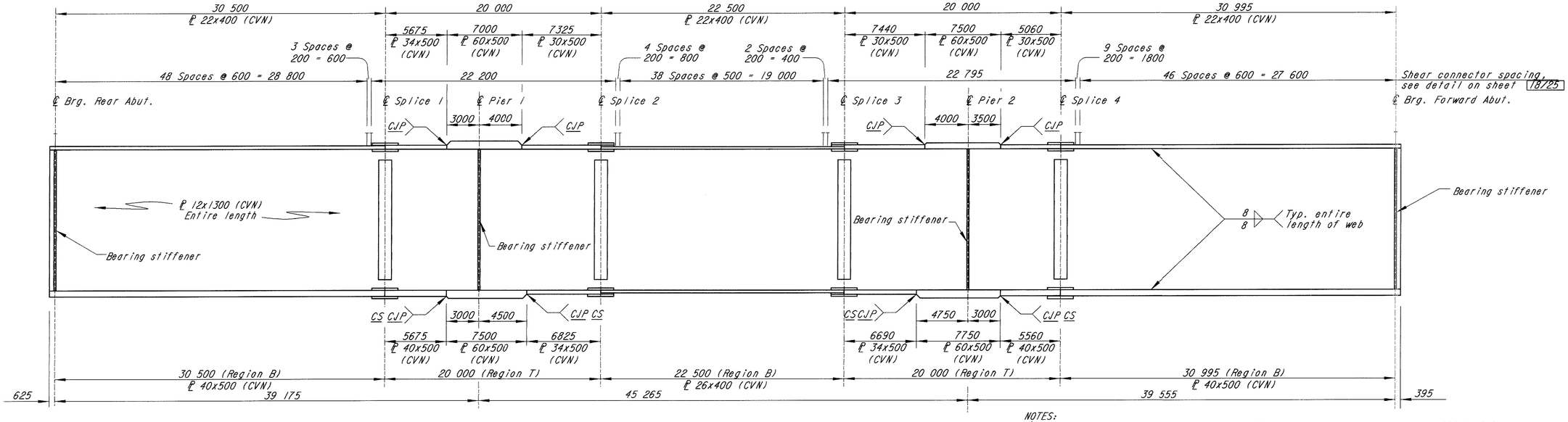
1720
2116

File name - 28682p2.dgn

FRAMING PLAN DIMENSIONS				
Location	A (Span 1)	B (Span 2)	C (Span 3)	D
Girder 1	39 175	45 265	39 555	123 995
Girder 2	39 330	45 365	39 600	124 295
Girder 3	39 490	45 465	39 645	124 600
Girder 4	39 650	45 570	39 685	124 905
Girder 5	39 820	45 675	39 735	125 230



FRAMING PLAN



GIRDER 1 ELEVATION

Note:
Intermediate stiffeners not shown for clarity.

NOTES:
1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. WELDED ATTACHMENT of supports for concrete deck finishing machine may be made to areas of the fascia stringer flanges designated Region B. Attachments shall not be made to areas designated Region T. Fillet welds to compression flanges shall not be closer than 25mm from edge of flange, be not more than 50mm long and be not smaller than the minimum size required by AASHTO.
3. Region B = Bottom flange in tension; top flange in compression.
   Region T = Top flange in tension; bottom flange in compression.
4. CS - Indicates butt weld subject to compressive stresses only.
   CJP - Indicates complete joint penetration.
5. For splice details and flange clip details, see sheet 18/25 .
6. All butt welds shall have weld reinforcement removed by grinding in direction parallel to centerline of girder.
7. For details of stiffeners, end crossframes and girders, see Std. Dwg. GSD-1-96M.
8. For intermediate X-frame details, see sheet 18/25 .

metric units

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DESIGNED	DRAWN	REVIEWED	DATE
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FHL	—	850022/8	

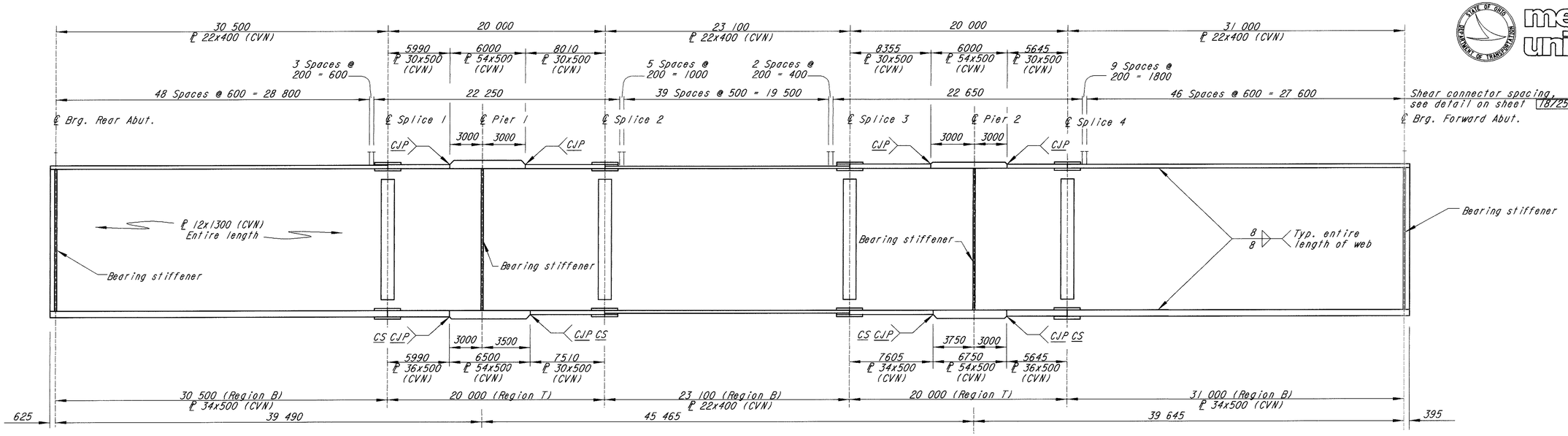
FRAMING PLAN
BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 EB & US 23

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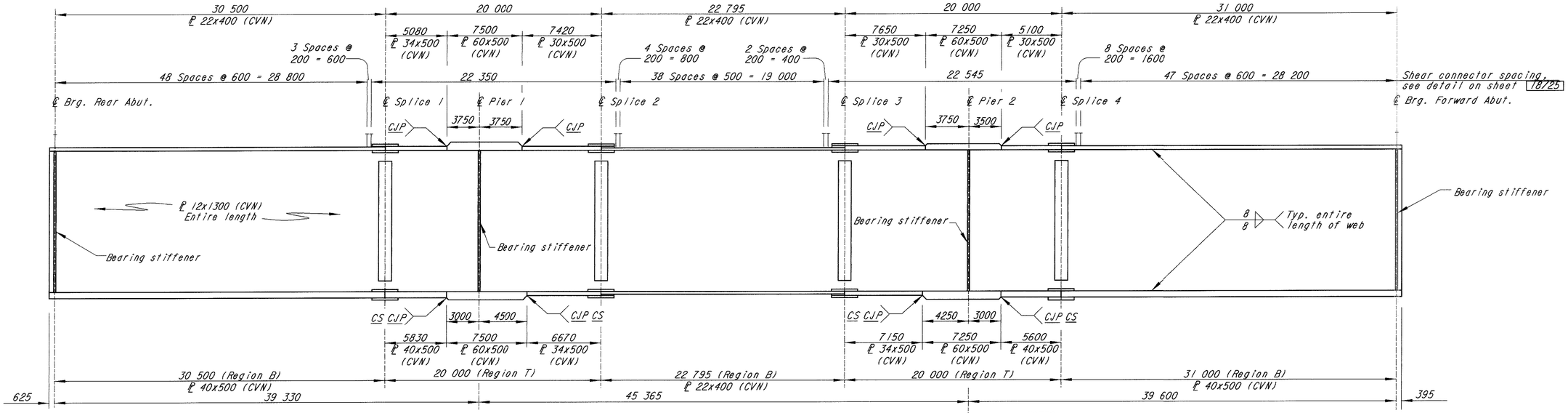
1721
2116

Filename: 28682fp1.dgn



GIRDER 3 ELEVATION

Note:
Intermediate stiffeners not shown for clarity.



GIRDER 2 ELEVATION

Note:
Intermediate stiffeners not shown for clarity.

NOTES:
1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. WELDED ATTACHMENT of supports for concrete deck finishing machine may be made to areas of the fascia stringer flanges designated Region B. Attachments shall not be made to areas designated Region T. Fillet welds to compression flanges shall not be closer than 25mm from edge of flange, be not more than 50mm long and be not smaller than the minimum size required by AASHTO.
3. Region B = Bottom flange in tension; top flange in compression.
   Region T = Top flange in tension; bottom flange in compression.
4. CS - Indicates butt weld subject to compressive stresses only.
   CJP - Indicates complete joint penetration.
5. For splice details and flange clip details, see sheet 18725 .
6. All butt welds shall have weld reinforcement removed by grinding in direction parallel to centerline of girder.

metric units

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Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
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FKL	—	850221B	

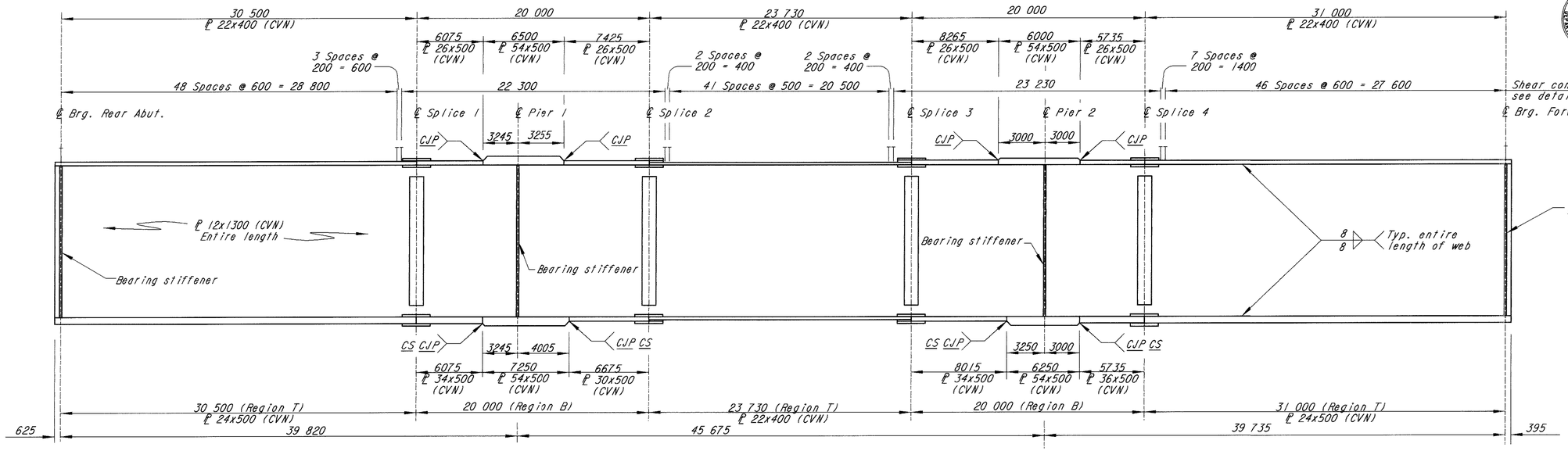
GIRDER DETAILS
BRIDGE NO. WYA-30-28632
RAMP B OVER US 30 EB AND US 23

WYA/CRA-30-28.009/0.000

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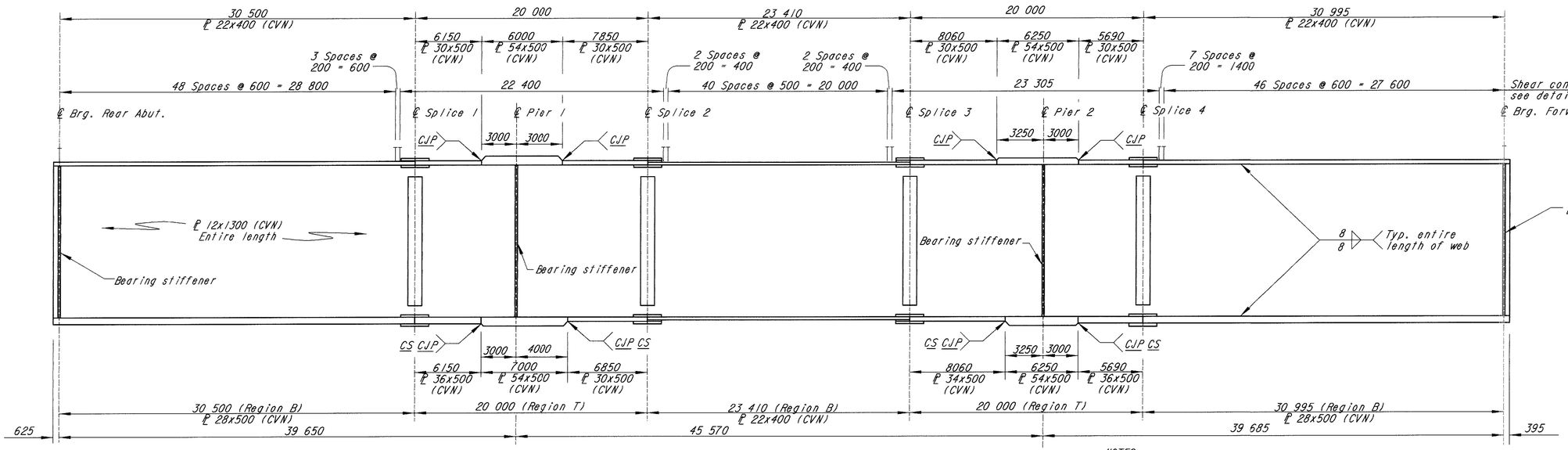
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GIRDER 5 ELEVATION

Note:
Intermediate stiffeners not shown for clarity.



GIRDER 4 ELEVATION

Note:
Intermediate stiffeners not shown for clarity.

NOTES:
1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. WELDED ATTACHMENT of supports for concrete deck finishing machine may be made to areas of the fascia stringer flanges designated Region B. Attachments shall not be made to areas designated Region T. Fillet welds to compression flanges shall not be closer than 25mm from edge of flange, be not more than 50mm long and be not smaller than the minimum size required by AASHTO.
3. Region B = Bottom flange in tension; top flange in compression.
   Region T = Top flange in tension; bottom flange in compression.
4. CS - Indicates butt weld subject to compressive stresses only.
   CJP - Indicates complete joint penetration.
5. For splice details and flange clip details, see sheet 18725 .
   All butt welds shall have weld reinforcement removed by grinding in direction parallel
6. to centerline of girder.

metric units

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1848 Summit Road
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DESIGNED	DRAWN	REVIEWED	DATE
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FHL	—	850218	

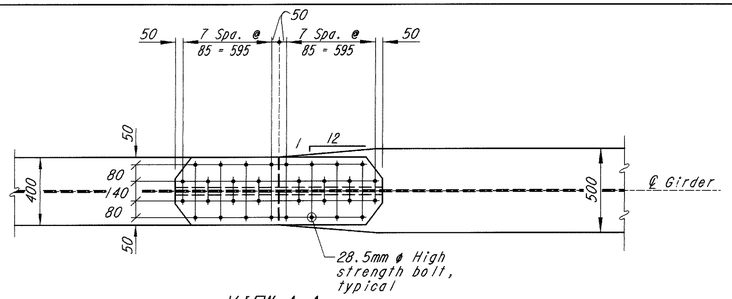
GIRDER DETAILS
BRIDGE NO. WYA-30-28632
RAMP B OVER US 30 EB AND US 23

WYA/CRA-30-28.009/0.000

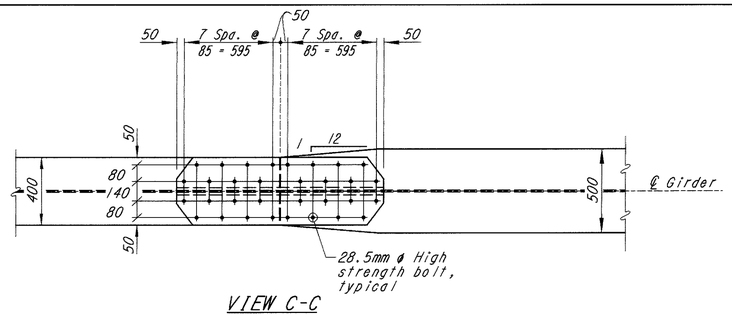
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1723
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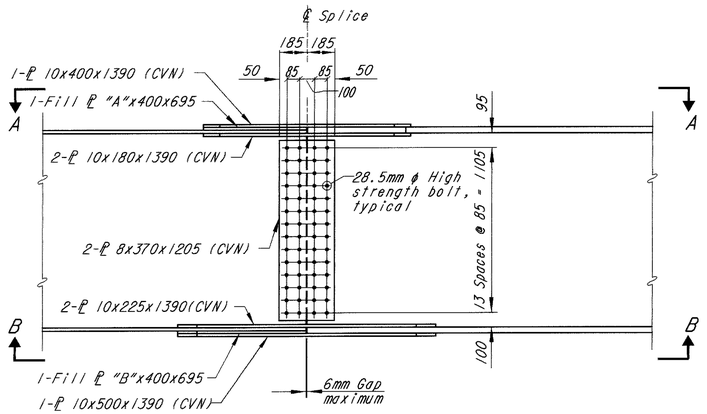
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VIEW A-A

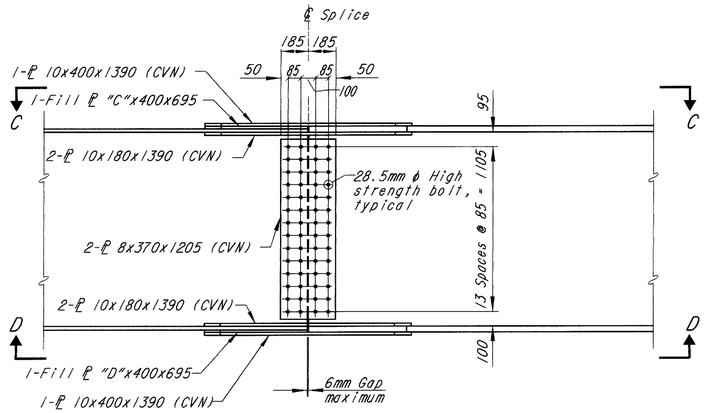


VIEW C-C



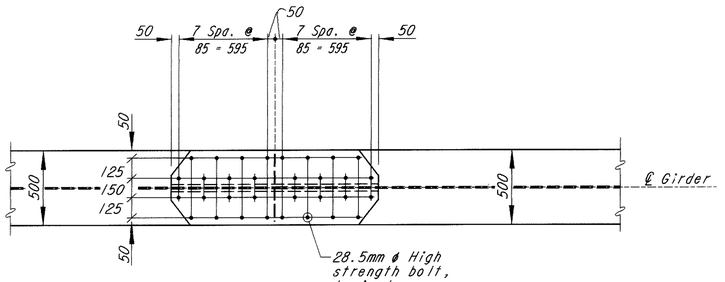
SPLICE 1 AND 4 ELEVATION

(Splice 1 shown, splice 4 opposite hand)

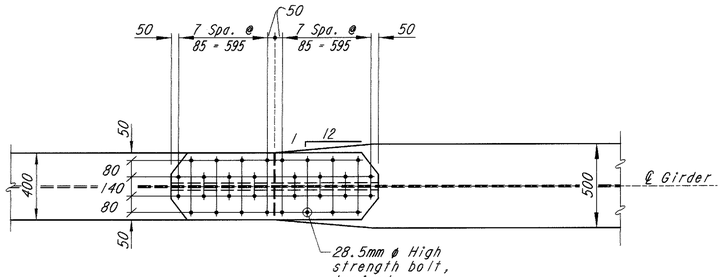


SPLICE 2 AND 3 ELEVATION

(Splice 3 shown, splice 2 opposite hand)

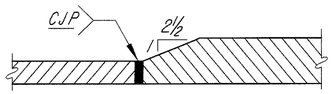


VIEW B-B

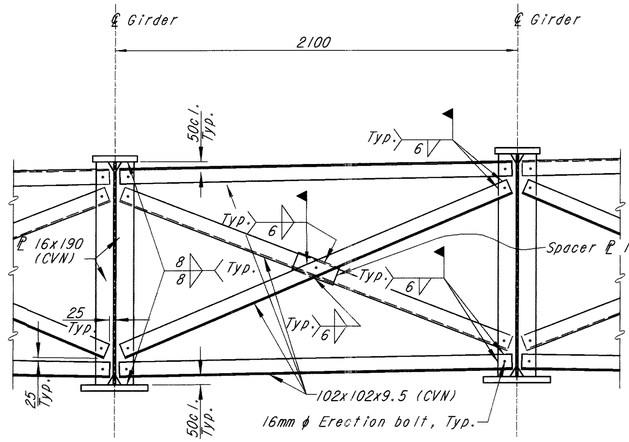


VIEW D-D

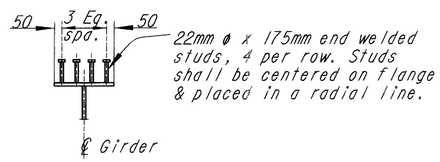
FILL ℄ THICKNESSES								
GIRDER	SPLICE 1		SPLICE 4		SPLICE 2		SPLICE 3	
	"A"	"B"	"A"	"B"	"C"	"D"	"C"	"D"
1	12	0	8	0	8	8	8	8
2	12	0	8	0	8	12	8	12
3	8	2	8	2	8	8	8	12
4	8	8	8	8	8	8	8	12
5	4	10	4	12	4	8	4	12



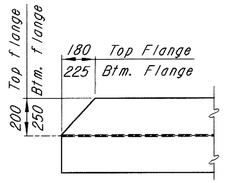
FLANGE THICKNESS TRANSITION DETAIL



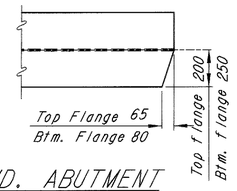
INTERMEDIATE CROSSFRAME DETAIL



SHEAR CONNECTOR DETAIL



REAR ABUTMENT



FWD. ABUTMENT

FLANGE CLIPS

NOTES

1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. High strength bolts shall be 28.5mm diameter, A325 galvanized.
3. In web splice plates, bolt heads shall be placed on the exposed side of the fascia girders. In bottom flange splice plates, nuts shall be placed on top surface of bottom flange splice plates.

metric units

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1848 Summit Road
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FKL	—	8502218	

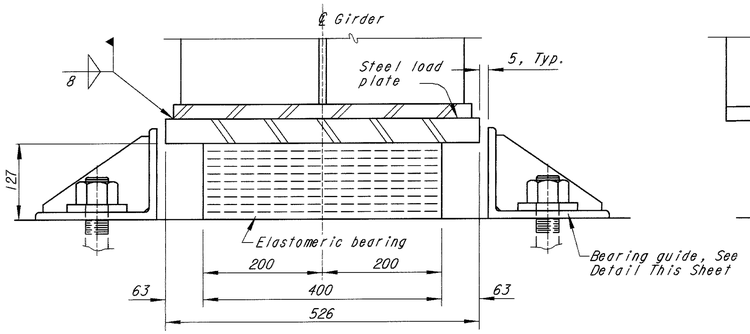
STRUCTURAL STEEL DETAILS
BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 EB AND US 23

WYA/CRA-30-28.009/0.000

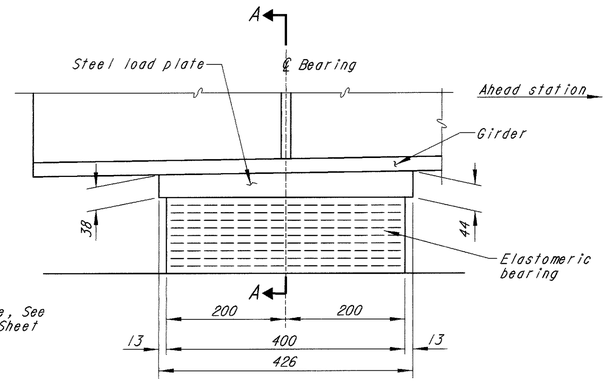
18 / 25

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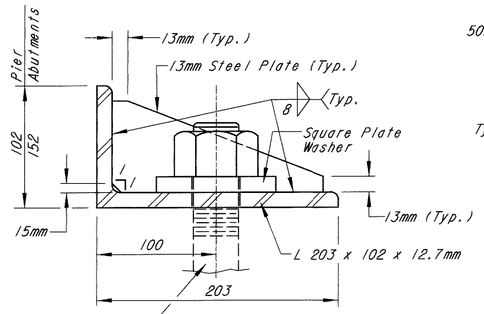
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SECTION A-A
(Provide bearing guide where indicated on plans)

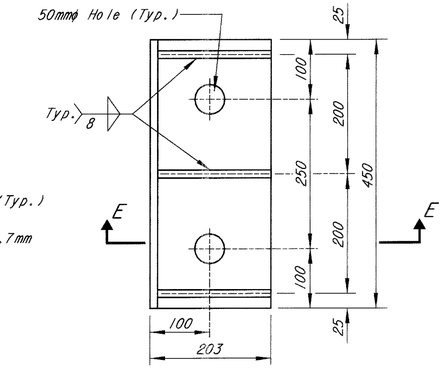


ELEVATION
BEARING AT REAR ABUTMENT

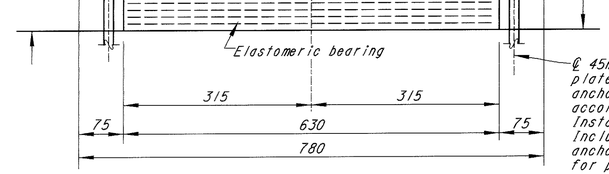


SECTION E-E

38mmϕ Anchor bolts with nut & 100 x 100 x 13mm plate washer with 45mmϕ holes. Grout with epoxy nonshrinking grout in 45mmϕ x 250mm deep holes per 510.

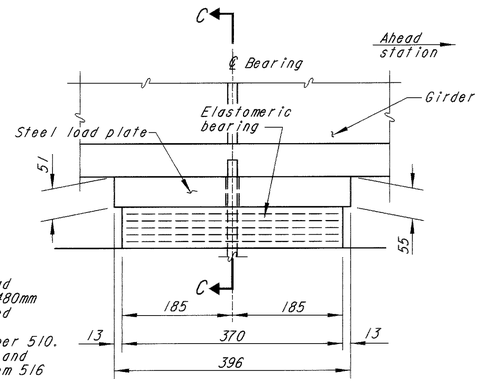


BEARING GUIDE PLAN



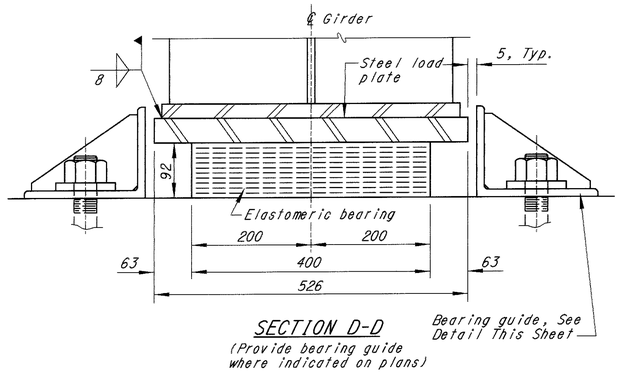
SECTION C-C

℄ 45mm ϕ hole in load plate for 32mm ϕ x 480mm anchor rod galvanized according to 711.02. Install anchor rod per 510. Include dowel holes and anchor rods with Item 516 for payment, Typ.

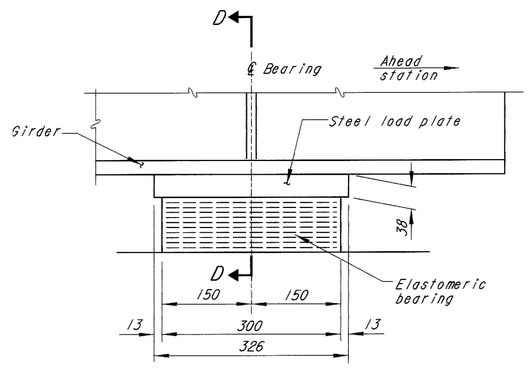


ELEVATION
BEARING AT PIER 1 & 2

Bearing Location	No. of Internal Elastomer Layers	Internal Elastomer Thickness	External Elastomer Thickness (2 Req'd)	No. of Steel Laminates (1.88mm)	Total No. of Bearings	Dead Load	Live Load	Total Load
Rear Abutment	8	12	7	9	5	415kN	240kN	655kN
Pier 1	4	11	8	5	5	1260kN	340kN	1600kN
Pier 2	4	11	8	5	5	1315kN	400kN	1715kN
Forward Abutment	9	7	5	10	5	400kN	215kN	615kN



SECTION D-D
(Provide bearing guide where indicated on plans)



ELEVATION
BEARING AT FORWARD ABUTMENT

NOTES FOR LAMINATED ELASTOMERIC BEARINGS AND LOAD PLATE

LOAD PLATE & BEARING GUIDE:
The load plate & guide shall be the same material as the attached structural steel and be similarly cleaned and coated. Surface preparation and priming shall be done in the shop and be included in the price bid for the bearings. Field coats shall be included in the price bid for painting main structural steel. The steel load plate shall be bonded by vulcanization to the elastomer during the molding process. Welding of the load plate to the superstructure shall be controlled so that the plate temperature at the elastomer bonded surface shall not exceed 150°C as determined by the use of pyrometric sticks or other temperature monitoring levels.

ELASTOMERIC BEARINGS shall comply with Item 516 and AASHTO Standard Specification for Highway Bridges, Section 18, Bearing Devices, Division II, Construction, Articles 18.4.5.1 and 18.5.6.2. Bearings shall be Grade 3, 50 durometer elastomer, and shall be subjected to the load testing requirements defined in Article 18.7.4.5 of the AASHTO document listed above. Bearings were designed under Section 14.6.6 of Section 14, Bearings, Division 1, Design. Testing shall be included in the unit price bid for the bearings, each.

BASIS OF PAYMENT: The unit bid price shall include all materials, labor, testing, guides, anchor rods, dowel holes and incidentals necessary to furnish and install laminated elastomeric bearings. Payment will be made at the contract price for Item 516, each, elastomeric bearings with internal laminates (neoprene). Cost of the bearing guides shall be included for payment with Item 516 also.

BEARING REPOSITIONING: If the steel is erected at an ambient temperature higher than 27° C or lower than 4° C and the bearing shear deflection exceeds 1/6 of the bearing height at 15° C (+/-) 5° C, the beams or girders shall be raised to allow the bearings to return to their undeformed shape at 15° C (+/-) 5° C.

metric units

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BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MRS	RHH	CRS	7/28/99
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FKL	—	850228	

BEARING DETAILS
BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 EB & US23

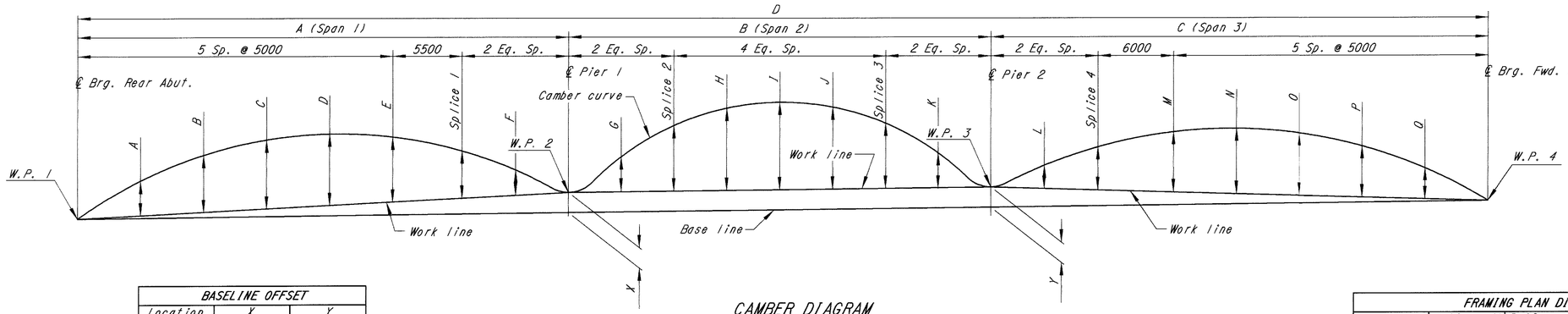
WYA/CRA-30-28.009/0.000

19 / 25

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Filename: 28682bdp1.dgn

metric units



CAMBER DIAGRAM

BASELINE OFFSET		
Location	X	Y
Girder 1	208	209
Girder 2	212	213
Girder 3	215	216
Girder 4	221	221
Girder 5	225	225

FRAMING PLAN DIMENSIONS				
Location	A (Span 1)	B (Span 2)	C (Span 3)	D
Girder 1	39 175	45 265	39 555	123 995
Girder 2	39 330	45 365	39 600	124 295
Girder 3	39 490	45 465	39 645	124 600
Girder 4	39 650	45 570	39 685	124 905
Girder 5	39 820	45 675	39 735	125 230

DEFLECTION AND CAMBER TABLE

		SPAN 1									SPAN 2								SPAN 3							
		REAR ABUTMENT	A	B	C	D	E	SPLICE 1	F	PIER 1	G	SPLICE 2	H	I	J	SPLICE 3	K	PIER 2	L	SPLICE 4	M	N	O	P	Q	FORWARD ABUTMENT
Girder 1	Deflection due to weight of steel	0	12	21	26	25	20	11	5	0	-2	-1	0	2	1	-1	-2	0	5	12	22	27	28	22	13	0
	Deflection due to remaining DL	0	31	56	67	65	50	28	10	0	1	12	26	31	25	12	0	0	12	29	56	71	73	62	34	0
	Adjustment for vertical curve	0	11	19	24	25	23	17	10	0	14	26	31	33	31	25	15	0	10	17	24	26	24	19	11	0
	Total	0	54	96	117	115	93	56	25	0	13	37	57	66	57	36	13	0	27	58	102	124	125	103	58	0
Girder 2	Deflection due to weight of steel	0	11	19	24	23	19	10	4	0	-1	1	3	4	3	0	-1	0	5	11	20	25	25	20	12	0
	Deflection due to remaining DL	0	31	55	65	64	50	28	11	0	2	16	29	34	27	15	1	0	11	29	55	70	72	60	34	0
	Adjustment for vertical curve	0	11	19	24	25	23	18	10	0	15	24	32	34	32	25	15	0	10	17	24	26	24	19	11	0
	Total	0	53	93	113	112	92	56	25	0	16	41	64	72	62	40	15	0	26	57	99	121	121	99	57	0
Girder 3	Deflection due to weight of steel	0	10	18	22	22	18	10	4	0	0	2	5	6	5	2	-1	0	4	10	18	23	24	19	11	0
	Deflection due to remaining DL	0	31	55	66	65	50	28	10	0	3	16	32	38	31	17	2	0	10	28	54	68	70	58	34	0
	Adjustment for vertical curve	0	11	19	24	25	24	18	10	0	14	25	31	34	32	25	16	0	10	17	24	26	24	19	11	0
	Total	0	52	92	112	112	92	56	24	0	17	43	68	78	68	44	17	0	24	55	96	117	118	96	56	0
Girder 4	Deflection due to weight of steel	0	10	17	21	21	17	10	4	0	0	3	6	8	7	3	0	0	3	8	17	21	22	18	10	0
	Deflection due to remaining DL	0	31	56	67	65	51	29	10	0	3	17	34	40	34	19	4	0	9	26	52	67	68	58	33	0
	Adjustment for vertical curve	0	11	19	24	26	24	18	10	0	14	25	31	34	32	25	15	0	11	18	24	26	24	19	11	0
	Total	0	52	92	112	112	92	57	24	0	17	45	71	82	73	47	19	0	23	52	93	114	114	95	54	0
Girder 5	Deflection due to weight of steel	0	10	17	21	20	16	9	4	0	0	3	8	10	9	5	0	0	2	7	15	19	19	16	9	0
	Deflection due to remaining DL	0	32	57	68	66	53	30	10	0	2	17	34	42	36	21	5	0	8	24	49	64	66	57	32	0
	Adjustment for vertical curve	0	11	19	24	26	24	19	11	0	14	24	32	34	32	25	15	0	11	18	24	26	24	19	11	0
	Total	0	53	93	113	112	93	58	25	0	16	44	74	86	77	51	20	0	21	49	88	109	109	92	52	0

NOTES FOR CAMBER AND DEFLECTION

1. Work points (W.P.) are at the center of the girder, on the centerline of bearing.
2. Work lines are straight lines through the work points, along the ℄ of girder.
3. The base line is a straight line through W.P. 1 and W.P. 4, along the ℄ of girder.
4. Tabulated values in the deflection and camber table are measured from the work lines.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MPS	RMH	CRS	7/28/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FAL	—	850228	

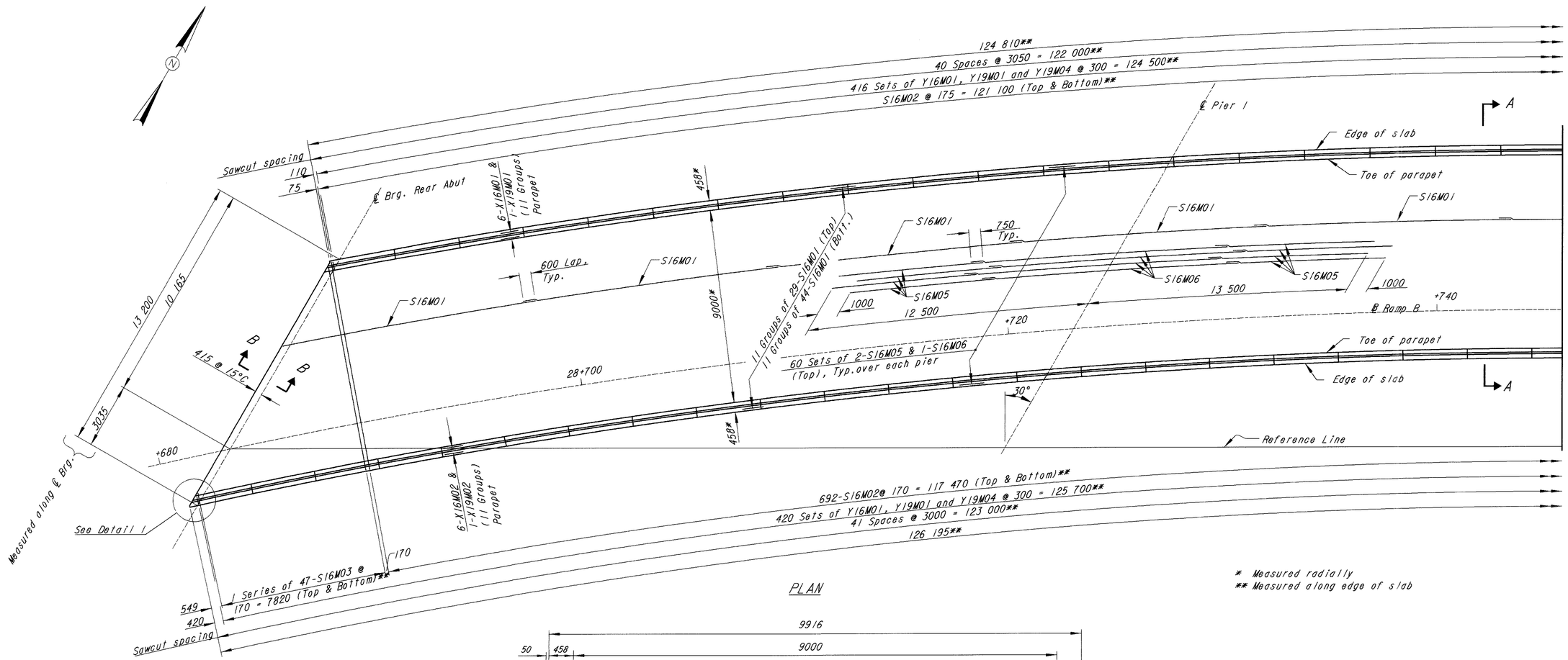
DEFLECTION AND CAMBER DETAILS
BRIDGE NO. WYA-30-28668
RAMP B OVER US 30 EB & US 23

WYA/CRA-30-28.009/0.000

1726
2116

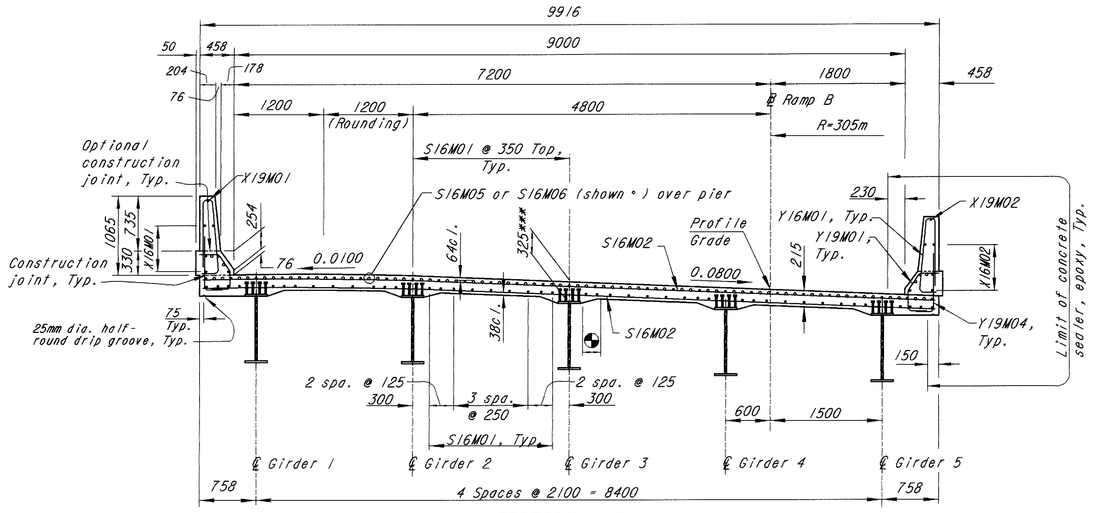
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metric units



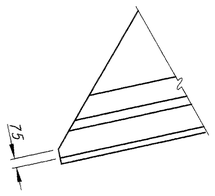
PLAN

* Measured radially
** Measured along edge of slab



SECTION A-A

Note: All horizontal dimensions are measured radially.



DETAIL 1

NOTES:

1. *** DECK SLAB DEPTH: The distance shown from the top of the deck slab to the bottom of the top flange is the theoretical design dimension including the design haunch thickness of 325mm. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per SS 842.
2. ◔ A HAUNCH WIDTH of 225mm shall be used for computing quantity of concrete. However the haunch width may vary between 150mm and 300mm.
3. For Section B-B, see sheet 22/25 .
4. For additional details of the parapets and sawcuts, see Std. dwg. BR-1M. Contrary to the standard drawing, the sawcuts shall be sealed for the full length of the cut.
5. Lap lengths for all longitudinal parapet steel are 450mm.

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FAL	—	850218	

DECK PLAN
BRIDGE NO. WYA-30-28632
RAMP B OVER US 30 EB & US 23

WYA/CRA-30-28.009/0.000

21 / 25

1727
2116

F:\Version - 28632bts1.dgn

metric units

124 810**
40 Spaces @ 3050 = 122 000**
Sets of Y16M01, Y19M01 and Y19M04 @ 300 = 124 500**
S16M02 @ 175 = 121 100 (Top & Bottom)**

458 *
9000 *
458 *

MATCHLINE, see sheet 21/25

A
A

℄ Pier 2

S16M01
S16M01
S16M01
S16M01
S16M01
S16M01

+760
+780
℄ Ramp B
28+800

30°00'00", Typ.

Reference Line

1 Series of 17-S16M04
@ 175 = 2800 (Top & Bottom)**

2810
175
Sawcut spacing
200
660

℄ Brg. Forward Abutment

See Detail 1

B
B

315 @ 15°C

8055
10 435
2380

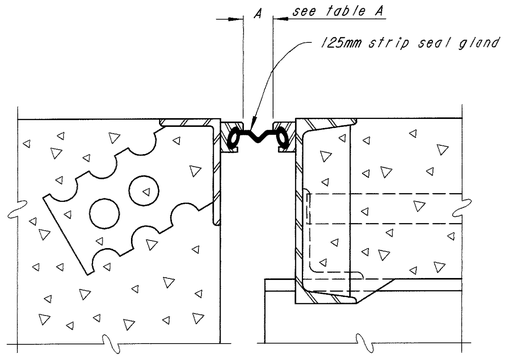
S16M02 @ 170 = 117 470 (Top & Bottom)**
Sets of Y16M01, Y19M01 and Y19M04 @ 300 = 125 700**
41 Spaces @ 3000 = 123 000**
126 195**

186
75
3195
Sawcut spacing

Measured along ℄ Brg.

* Measured radially
** Measured along edge of slab

PLAN



SECTION B-B

For details of joint see
Standard Drawing EXJ-4-87M

TABLE A	
C°	Dimension A
35	45
30	50
25	55
20	60
15	60
10	65
5	70
0	75

For notes and Section A-A, see sheet 21/25 .

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FKL	—	0502218	

DECK PLAN
BRIDGE NO. WYA-30-2868
RAMP B OVER US 30 EB & US 23

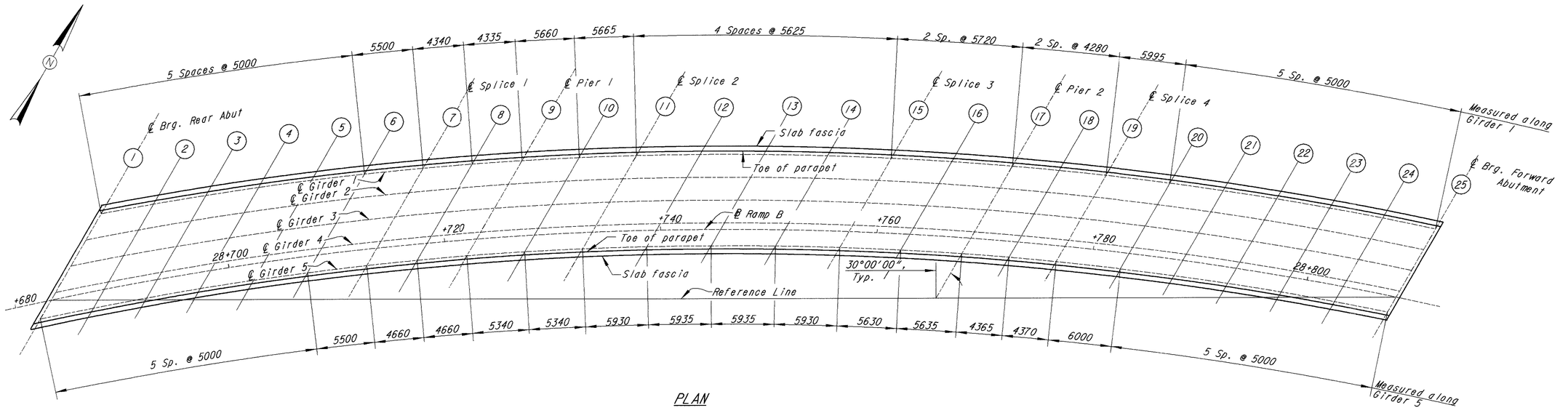
WYA/CRA-30-28.009/0.000

22/25

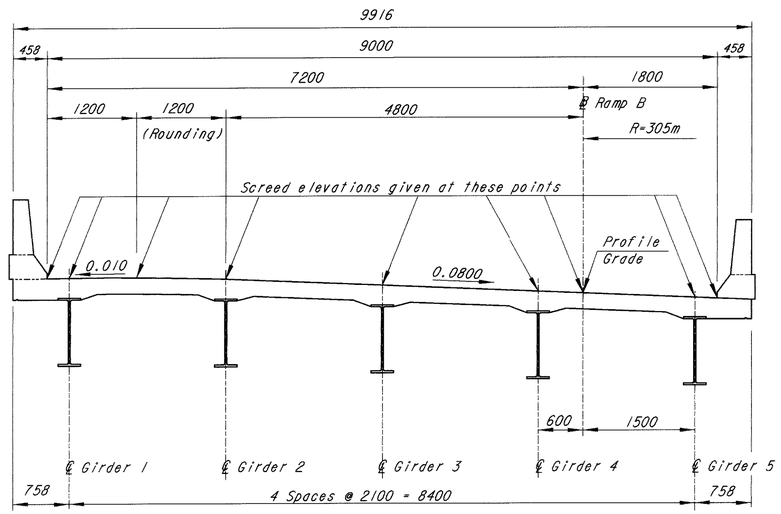
1728
2116

File name: 2868Blo2.dgn

metric units



PLAN



TYPICAL SECTION

Note: All horizontal dimensions are measured radially.

SCREED ELEVATIONS

Location	Left T.O.P.	Girder 1	Edge of rounding	Girder 2	Girder 3	Girder 4	℄ Ramp B	Girder 5	Right T.O.P.
Grid line 1	281.290	281.290	281.289	281.234	281.043	280.850	280.795	280.657	280.630
Grid line 2	281.361	281.381	281.381	281.327	281.137	280.946	280.892	280.756	280.728
Grid line 3	281.463	281.463	281.463	281.409	281.221	281.033	280.979	280.843	280.816
Grid line 4	281.528	281.529	281.530	281.474	281.289	281.102	281.048	280.915	280.888
Grid line 5	281.576	281.576	281.578	281.526	281.340	281.155	281.102	280.970	280.943
Grid line 6	281.608	281.609	281.611	281.560	281.377	281.194	281.141	281.009	280.983
Grid line 7	281.633	281.634	281.638	281.589	281.406	281.224	281.172	281.041	281.015
Grid line 8	281.652	281.653	281.657	281.609	281.427	281.246	281.194	281.066	281.040
Grid line 9	281.675	281.677	281.681	281.633	281.454	281.275	281.223	281.095	281.069
Grid line 10	281.716	281.718	281.722	281.676	281.498	281.320	281.269	281.141	281.115
Grid line 11	281.763	281.765	281.770	281.726	281.550	281.372	281.321	281.194	281.168
Grid line 12	281.808	281.809	281.815	281.773	281.599	281.425	281.375	281.250	281.224
Grid line 13	281.841	281.843	281.850	281.809	281.637	281.465	281.415	281.292	281.267
Grid line 14	281.859	281.861	281.868	281.827	281.657	281.487	281.438	281.316	281.291
Grid line 15	281.866	281.868	281.876	281.835	281.665	281.496	281.447	281.326	281.301
Grid line 16	281.870	281.873	281.880	281.838	281.669	281.499	281.450	281.328	281.304
Grid line 17	281.882	281.885	281.893	281.850	281.680	281.510	281.461	281.340	281.315
Grid line 18	281.900	281.903	281.912	281.869	281.698	281.527	281.479	281.357	281.332
Grid line 19	281.921	281.924	281.933	281.891	281.721	281.550	281.502	281.379	281.355
Grid line 20	281.950	281.953	281.962	281.919	281.750	281.580	281.532	281.410	281.386
Grid line 21	281.964	281.968	281.977	281.933	281.763	281.595	281.547	281.424	281.400
Grid line 22	281.961	281.964	281.973	281.931	281.762	281.593	281.546	281.423	281.399
Grid line 23	281.941	281.945	281.954	281.910	281.742	281.575	281.527	281.407	281.383
Grid line 24	281.902	281.905	281.915	281.874	281.707	281.541	281.493	281.373	281.350
Grid line 25	281.854	281.857	281.867	281.826	281.660	281.494	281.447	281.328	281.305

NOTES:
SCREED ELEVATIONS shown are for the deck slab surface prior to concrete placement. Allowance has been made for anticipated calculated dead load deflections.

T.O.P. = Toe Of Parapet

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MRS	ALH	CRS	7/28/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FHL	—	850021.8	

SCREED ELEVATIONS
BRIDGE NO. WYA-30-28.682
RAMP B OVER US 30 E.B. & US 23

WYA-CRA-30-28.009/0.000

1729
2116

E:\Inroom\28682br1.dgn

REAR ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A29M01	12	1200	1	790	500				
A29M02	4	2000	Str.						
A25M01	36	3200	Str.						
D25M01	20	2020	14	430	1310	305	305		
A22M01	22	2600	Str.						
A22M02	81	4035	1	375	3710				
A22M03	41	2550	Str.						
A22M04	28	2340	7	2015	375	2010	140		
A22M05	5	6100	Str.						
A22M06	9	4550	Str.						
A22M07	14	6685	Str.						
A19M01	42	2150	Str.						
A19M02	82	2840	2	1250	440	1250			
A19M03	41	2550	17	1500	1050	1060	1060		
A19M04	41	1850	2	830	290	830			
A19M05	12	3985	Str.						
A19M06	6	2845	2	790	1345	790			
A19M07	12	1250	1	790	500				
A19M08	12	1745	7	1495	300	1490	105		
X19M01	1	5780	Str.						
X19M02	2	3900	Str.						
X19M03	1	6100	Str.						
Y19M02	86	1135	28	685	265	205	152	216	
Y19M03	38	1375	Str.						
Y19M05	64	865	Str.						
A16M01	48	7090	Str.						
A16M02	32	3200	Str.						
A16M03	21	2600	Str.						
A16M04	20	3350	Str.						
A16M05	39	2150	Str.						
A16M06	2	5145	Str.						
A16M07	2	4705	Str.						
A16M08	8	5460	Str.						
A16M09	16	3400	Str.						
A16M10	84	1850	Str.						
A16M11	14	5900	Str.						
A16M12	20	3000	Str.						
A16M13	16	3700	Str.						
A16M14	28	6585	Str.						
A16M15	142	1545	1	250	1335				
A16M16	45	4225	Str.						
A16M17	41	3020	2	1070	1540	490			
A16M18	18	12 285	Str.						
A16M19	18	3320	Str.						
A16M20	18	6800	Str.						
A16M21	1 Series of 6	3225 to 3850	Str.						125
A16M22	4	4225	Str.						
A16M23	5	6020	Str.						
A16M24	9	4460	Str.						
A16M25	11	3550	Str.						
A16M26	11	3580	Str.						
A16M27	22	2540	Str.						
A16M28	22	2625	Str.						
A16M29	6	2805	Str.						
A16M30	14	5305	Str.						
A16M31	8	3870	Str.						105
A16M32	53	1705	7	1495	250	1490			
A16M33	12	9700	Str.						
A16M34	4	3100	Str.						
A16M35	10	9400	Str.						
A16M36	8	3400	Str.						
A16M37	4	3945	Str.						
A16M38	4	3220	Str.						
A16M39	12	3895	Str.						
A16M40	20	2270	Str.						
A16M41	20	2355	Str.						
A16M42	11	4955	Str.						
A16M43	11	4690	Str.						
X16M01	8	3050	Str.						
X16M02	4	1725	18	555	738	432			
X16M03	4	1725	Str.						
X16M04	6	5780	Str.						
X16M05	6	3635	Str.						

REAR ABUTMENT REINFORCING STEEL LIST CONTINUED

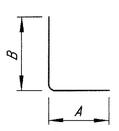
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X16M06	8	4170	Str.						
X16M07	6	6100	Str.						
X16M08	6	3870	Str.						
Y16M01	64	2130	26	915	990	205	1¼	38	
Y16M02	2	1170	12	990					
Y16M03	2	1145	12	965					
Y16M04	2	1120	12	940					
Y16M05	2	1095	12	915					
Y16M06	2	1070	12	890					
Y16M07	2	1045	12	865					
Y16M08	2	1020	12	840					
Y16M09	2	995	12	815					
Y16M10	2	970	12	790					
Y16M11	2	945	12	765					
Y16M12	2	920	12	740					

PIER 1 REINFORCING STEEL LIST

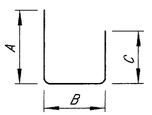
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P32M01	51	7150	13	6300					
P32M02	24	9250	13	8400					
P32M03	68	4280	1	550	3820				
P32M04	68	9000	Str.						
P32M05	36	9070	Str.						
P32M06	6	11 165	Str.						
P32M07	6	7935	7	1000	7025	1000	55		
P32M08	6	7935	17	1000	7025	55	1000		
P25M01	29	6300	Str.						
P25M02	22	8400	Str.						
P16M01	62	5610	4	2045	1520	2045	483		
P16M02	2	4680	Str.						
P16M03	2	6450	Str.						
P16M04	2	8215	Str.						
P16M05	2	9985	Str.						
P16M06	10	11 165	Str.						
P16M07	2 Series of 13	3710 to 6350	8	1195 to 2515	580				230
P16M08	15	2945	2	1030	965	1030			
P16M09	2 Series of 13	3420 to 5820	8	1050 to 2250	580				200
P16M10	6	4100	17	450	3650	140	425		
P16M11	6	3900	17	450	3450	195	405		

PIER 2 REINFORCING STEEL LIST

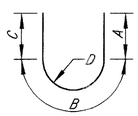
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R32M01	51	7150	13	6300					
R32M02	24	9250	13	8400					
R32M03	68	4280	1	550	3820				
R32M04	68	9000	Str.						
R32M05	36	8770	Str.						
R32M06	6	10 065	Str.						
R32M07	6	7385	7	1000	6475	1000	55		
R32M08	6	7385	17	1000	6475	55	1000		
R25M01	29	6300	Str.						
R25M02	22	8400	Str.						
R16M01	62	5610	4	2045	1520	2045	483		
R16M02	2	4680	Str.						
R16M03	2	6175	Str.						
R16M04	2	7670	Str.						
R16M05	2	9165	Str.						
R16M06	10	10 065	Str.						
R16M07	2 Series of 11	3710 to 5710	8	1195 to 2295	580				220
R16M08	15	2945	2	1030	965	1030			
R16M09	2 Series of 11	3440 to 5440	8	1060 to 2060	580				200
R16M10	6	3510	17	450	3060	200	400		
R16M11	6	3325	17	450	2875	140	425		



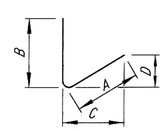
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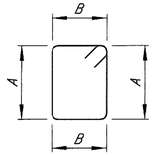
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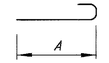
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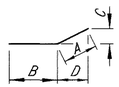
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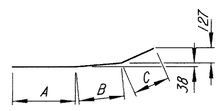
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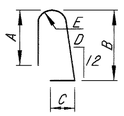
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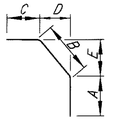
Type 17



Type 18



Type 26



Type 28

NOTES:

1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.
3. SPIRAL REINFORCING BARS: The "length" shown in the steel list for the spiral bars is the length of the spiral along the axis of the spiral. One and one-half closed-coil turns shall be provided at the ends of each spiral unit.
4. SPACERS: Concrete spacers or other approved noncorrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 3050 mm) to insure concentric spacing for the entire cage length. Spacers shall be constructed of approved material equal in quality and durability to the concrete specified for the shaft. The spacers shall have adequate dimensions to ensure a minimum 75 mm clear space between the outside of the reinforcing cage and the design dimension of the drilled shaft or column. Cylindrical concrete feet (bottom supports) shall be provided to ensure that the bottom of the cage is maintained at the proper distance above the base.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	7/28/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	8502218	

REINFORCING STEEL LIST
BRIDGE NO. WYA-30-28682
RAMP B OVER US 30 EB & US 23

WYA/CRA-30-28.009/0.000

24/25

1730
2116

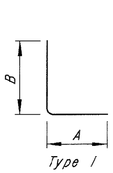
Filename: 8502BPS1.dgn

FORWARD ABUTMENT REINFORCING STEEL LIST

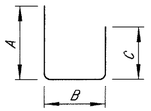
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B29M01	7	10 950	Str.						
B29M02	6	3835	Str.						
B29M03	4	3700	Str.						
B29M04	2	4000	Str.						
B29M05	4	1400	Str.						
B29M06	12	1200	1	790	500				
D25M01	20	1700	14	430	990	305	305		
B19M01	24	4645	2	790	1940	2015			
B19M02	12	1250	1	790	500				
B19M03	6	2325	2	790	845	790			
B19M04	5	6325	2	3035	355	3035			
B19M05	4	2465	Str.						
B19M06	12	1710	Str.						
	1	2055		900		900			
B19M07	Series of	to	2	to	355	to			400
	4	3255		1500		1500			
B19M08	4	1885	2	815	355	815			
B19M09	4	5285	2	2515	355	2515			
B19M10	4	2015	Str.						
B19M11	8	1700	Str.						
	1	2085		915		915			
B19M12	Series of	to	2	to	355	to			450
	4	3435		1590		1590			
B19M13	32	2560	2	1100	440	1100			
B19M14	32	2890	2	1275	440	1275			
B19M15	32	1850	2	830	290	830			
Y19M02	24	1135	28	685	265	205	152	216	
Y19M03	38	1375	Str.						
Y19M05	2	865	Str.						
B16M01	24	2740	2	450	1940	450			
B16M02	24	2225	1	250	2015				
B16M03	24	3200	2	970	1340	970			
B16M04	Not	used							
B16M05	Not	used							
B16M06	Not	used							
B16M07	17	10 340	Str.						
B16M08	10	2760	Str.						
B16M09	5	3310	Str.						
B16M10	4	2000	Str.						
B16M11	16	3640	8	790	950				
B16M12	6	2450	2	790	950	790			
B16M13	2	3020	Str.						
B16M14	4	2450	Str.						
B16M15	4	4480	Str.						
B16M16	2	2115	Str.						
B16M17	14	3000	Str.						
B16M18	2	2070	Str.						
B16M19	2	2970	Str.						
B16M20	4	4430	Str.						
X16M01	8	3310	Str.						
X16M02	4	1725	18	555	738	432			
X16M03	4	1725	Str.						
X16M04	8	4305	Str.						
Y16M01	2	2130	26	915	990	205	1¼	38	
Y16M02	2	1170	12	990					
Y16M03	2	1145	12	965					
Y16M04	2	1120	12	940					
Y16M05	2	1095	12	915					
Y16M06	2	1070	12	890					
Y16M07	2	1045	12	865					
Y16M08	2	1020	12	840					
Y16M09	2	995	12	815					
Y16M10	2	970	12	790					
Y16M11	2	945	12	765					
Y16M12	2	920	12	740					

SUPERSTRUCTURE REINFORCING STEEL LIST

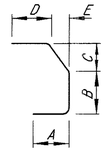
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
X19M01	11	11 840	Str.						
X19M02	11	11 965	Str.						
Y19M01	836	960	3	265	300	216	230	152	
Y19M04	836	1030	1	280	800				
S16M01	803	11 965	Str.						
S16M02	1384	9790	Str.						
	2	500							
S16M03	Series of	to	Str.						196
	47	9515							
	2	850							
S16M04	Series of	to	Str.						530
	17	9330							
S16M05	240	7750	Str.						
S16M06	120	12 000	Str.						
X16M01	66	11 840	Str.						
X16M02	66	11 965	Str.						
Y16M01	836	2130	26	915	990	205	1¼	38	



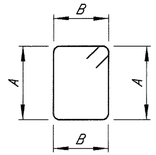
Type 1



Type 2



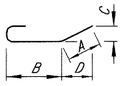
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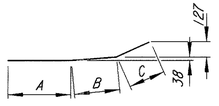
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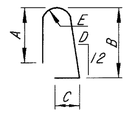
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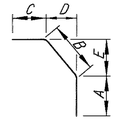
Type 14



Type 18



Type 26



Type 28

NOTES:

1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.
3. SPIRAL REINFORCING BARS: The "length" shown in the steel list for the spiral bars is the length of the spiral along the axis of the spiral. One and one-half closed-coil turns shall be provided at the ends of each spiral unit.
4. SPACERS: Concrete spacers or other approved noncorrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 3050 mm) to insure concentric spacing for the entire cage length. Spacers shall be constructed of approved material equal in quality and durability to the concrete specified for the shaft. The spacers shall have adequate dimensions to ensure a minimum 75 mm clear space between the outside of the reinforcing cage and the design dimension of the drilled shaft or column. Cylindrical concrete feet (bottom supports) shall be provided to ensure that the bottom of the cage is maintained at the proper distance above the base.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	7/28/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	8502218	

REINFORCING STEEL LIST

BRIDGE NO. WYA-30-20682
RAMP B OVER US 30 EB & US 23

WYA/CRA-30-28.009/0.000

25 | 25

1731
2116

File name: 28682R2.dgn

metric units

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	5-99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—		0502390

WYANDOT COUNTY
STA. 36+346.902
STA. 36+418.190

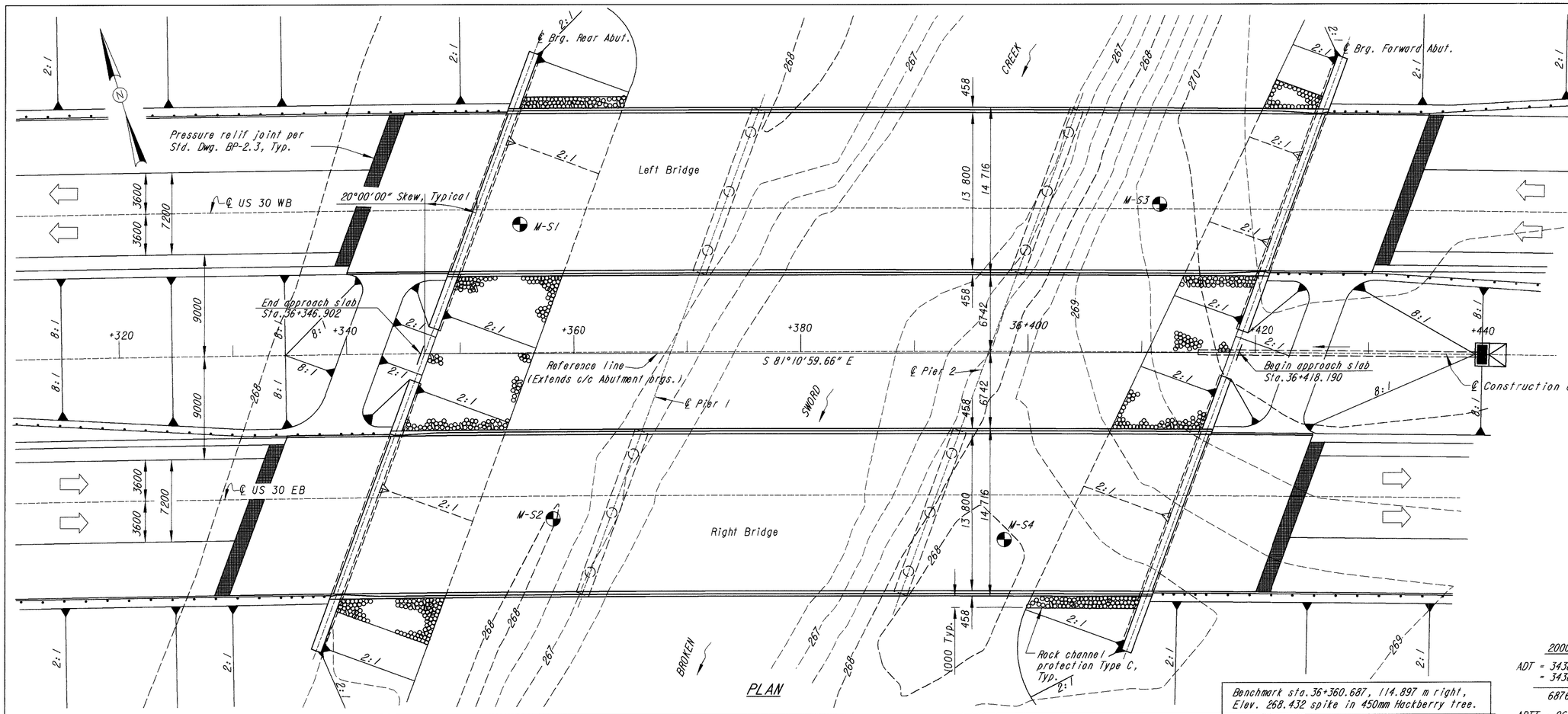
SITE PLAN

BRIDGE NO. WYA-30-36.347
OVER THE BROKEN SWORD CREEK

WYA/CRA-30-28.009/0.000

1 / 26

1746
2116



Benchmark sta.36+360.687, 114.897 m right, Elev. 268.432 spike in 450mm Hackberry tree.

TRAFFIC DATA

2000	2020
ADT = 3438 WB	ADT = 5154 WB
= 3438 EB	= 5154 EB
6876	10308
ADTT = 963 WB	ADTT = 1443 WB
= 963 EB	= 1443 EB
1926	2886

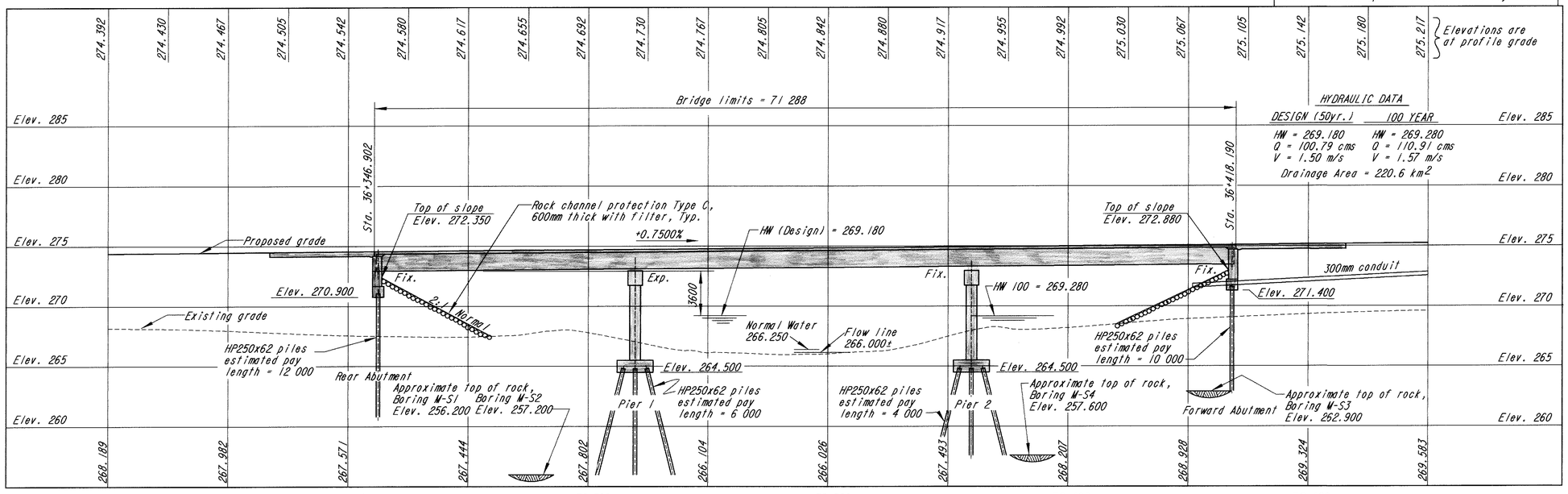
Notes:
Earthwork limits shown are approximate. Actual slopes shall conform to plan cross sections.

All stations and elevations are in meters.

All dimensions and lengths are in millimeters.

Boring location

NOTE:
See General Plan sheet, for temporary stream crossing.



SECTION ALONG ℄ US 30 EB
(LEFT BRIDGE SIMILAR)

PROPOSED STRUCTURE

Type: Prestressed concrete I Beams with composite slab on integeral abutment and cap and column pier.

Spans: 21 700, 27 250, 21 700 (measured ℄ bearing/℄ Pier, ℄ Pier/℄ Pier, ℄ Pier/ ℄ bearing along ℄ construction)

Roadway width: 13 800 Toe/Toe parapets

Live loading: MS18 & the alternate military loading

Skew angle: 20° L.F. (to reference line)

Wearing surface: Monolithic concrete

Approach slabs: AS-1-81M (9150)

Alignment: 4250m radius curve, Rt.

Crown: 0.016

Latitude: N 40°48'30"

Longitude: W 83°8'45"

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metric units

℄ Brg. Rear Abut.
℄ Pier 1
℄ Pier 2
℄ Brg. Forward Abut.
Left Bridge
Right Bridge
℄ US 30 WB
℄ US 30 EB
End approach slab Sta. 36+346.902
20°00'00" Skew, Typical
Angle between ℄ Broken Sword Creek & Section AA Line = 118.26°
Detail 1
Work point 2
Work point 4 Sta. 36+417.872
Reference line (Extends c/c Abut. Brgs.)
Work point 3
Cross Section Line Thru ℄ Temp. Crossing
Work point 1 Sta. 36+347.222
Temp Crossing
4 x 2700mm Conduit for Temp. Crossing
N 37° 05' 20" E
S 81°10'59.66" E
Begin approach slab Sta. 36+418.190
℄ Construction U.S. 30
℄ Broken Sword Creek
BROKEN SWORD CREEK
+160
+180
+200
+220
+240
+260
+280
+300
+320
+340
+360
+380
36+400
+420
+440
458.220
13 800
14 T16
6742
458
2700
3600
7200
9000
6.00m
8:1
2:1

℄ US-30
P.I. = Sta. 36+144.106
D = 10° 20' 34.58" (RT)
R = 4,250.000m
T = 384.647m
L = 767.203m
E = 17.371m

PLAN

POT Sta 0+192.41 ℄ Broken Sword Creek=
P.O.C. Sta 36+383.480 ℄ US-30

POT Sta. 0+155.810

℄ Pier 1
135°
Sta. 36+368.922
℄ Construction US 30
Reference line
Work point 2

DETAIL 1

℄ Pier 2
135°
Sta. 36+396.172
℄ Construction US 30
Reference line
Work point 3

DETAIL 2

℄ Temp. Crossing
6.00m 6.00m
271
266
℄ 265.974
℄ 266.157
2:1
4 Nos. x 29.21m x 2700mm Conduit, Type A
706.02, or 707.02
266.049
266.151
266.214
266.089
+160
+180
0+200
+220

TEMPORARY CULVERT PROFILE

NOTE:-
CONTRACTOR SHALL INSTALL TEMPORARY CULVERTS AND BUILD A TEMPORARY CROSSING ACROSS BROKEN SWORD CREEK AS SHOWN IN THIS PLAN

℄ Broken Sword Creek
35m
1.95m
3.88m
6.92m
1.95m
26.96m
0.00 %
-8.00 %
-1.00 %
Prop. Temp. Crossing Profile
4 x 2700mm Conduit
3.60m 3.60m 3.60m

SECTION AA

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

REVIEWED	DATE
CRS	5/99
DRAWN	STRUCTURE FILE NUMBER
ALH	8502390
DESIGNED	REVISED
FKL	—
CHECKED	
MRS	

GENERAL PLAN
BRIDGE NO. WYA-30-36.347
OVER THE BROKEN SWORD CREEK

WYA/CRA-30-28.009/0.000

2 / 26

1747
2116

F:\Windows 3634\gpl.dgn

metric units

GENERAL NOTES

All dimensions in the plans are shown in millimeters.

All elevations and stations in the plans are shown in meters.

REFERENCE shall be made to Standard Drawings:

AS-1-81M	Dated 10-25-94
BR-1M	Dated 12-15-94
BP-2.3	Dated 4-29-99
ICD-1-82M	Dated 3-20-95
PSID-1-95M	Dated 9-18-95

and to Supplemental Specification:

846	Dated 9-9-97
842	Dated 1-6-99
865	Dated 1-6-98
899	Dated 10-21-98
954	Dated 9-9-97

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1996, the 1997 & 1998 Interim Specifications and the ODOT Bridge Design Manual.

DESIGN LOADING: MS18 and the alternate military loading.

DESIGN DATA:

Concrete Class S - compressive strength 31.0 MPa (superstructure)

Concrete Class C - compressive strength 27.5 MPa (substructure)

Reinforcing Steel -ASTM A615M, A616M or A617M
Grade 400 - minimum yield strength 400 MPa.
Spiral reinforcement may be plain bars, ASTM A82M or A615M.

Mild reinforcing steel for the concrete prestressed beams Grade 400, minimum yield strength 400 MPa

Concrete for prestressed beams
Compressive Strength- 38 MPa
Unit stress- 15.2 MPa compression
3.1 Mpa tension

Prestressing strand ASTM A416M

12.7 mm dia., As = 99 sq. millimeters
f's = 1860 MPa
Initial stress = 0.75 f's (Low relaxation strands)

REINFORCING STEEL in superstructure, substructure and approach slabs shall be epoxy coated.

DECK PROTECTION METHOD:

Epoxy coated reinforcing steel

65mm concrete cover

MONOLITHIC WEARING SURFACE is assumed, for design purposes, to be 25mm thick.

PILE DRIVING CONSTRAINTS: Prior to driving piles, the spill through slopes and the bridge approach embankment behind the abutments shall be constructed up to the level of the subgrade elevation for a minimum distance of 60 meters behind each abutment. The excavation for the abutment footings and the installation of the abutment piles shall not begin until after the above required embankment has been constructed and has undergone a waiting period of 30 days minimum.

PILES TO BEDROCK: Piles shall be driven to refusal on bedrock. Refusal shall be considered as obtained by penetrating soft bedrock for several millimeters with a minimum resistance of 20 blows per 25mm or refusal shall be considered as obtained after the pile has contacted hard bedrock and the pile has then received at least 20 blows.

The ultimate bearing value for the HP250 x 62 abutment piles is 900 kN per pile

The estimated end order length for the abutment piles is:
28 piles 12 meters long - rear abutment, 14 Lt., 14 Rt.
28 piles 10 meters long - forward abutment, 14 Lt., 14 Rt.
28 splices

The ultimate bearing value for the HP250 x 62 pier piles is 800 kN per pile

The estimated end order length for the pier piles is:
48 piles 6 meters long - pier 1, 24 Lt., 24 Rt.
48 piles 4 meters long - pier 2, 24 Lt., 24 Rt.
48 splices

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN: Shall be in accordance with 503 except that the backfill material behind the abutments shall be 203 granular material placed in 150mm lifts and compacted in accordance with 304.04. The 203 granular material shall extend 30 meters behind each abutment.

ITEM 507, STEEL POINTS, AS PER PLAN: Steel pile points shall be used to protect the tips of the proposed steel "H" piling. The steel points shall be furnished by Associated Pile and Fitting Corporation, 262 Rutherford Blvd., Clifton, New Jersey 07014; Dougherty Foundation Products, Inc., P.O. Box 688, Franklin Lakes, New Jersey 07417; Versa Steel Inc., 3601 N.W. Yeon Ave., P.O. Box 10559, Portland, Oregon 97210; Piling Acessories, Inc., 3467 Gribble Road, Mathews, North Caroling 28105; or by a manufacturer that can furnish a steel point that is acceptable to director. The material used for the manufacturing of pile points shall conform to ASTM A27 65/35 - 2 - Heat Treated or AASHTO M103 65/35 Heat Treated. A notarized copy of the mill test report shall be submitted to the Engineer.

APPROACH SLAB CONCRETE shall be placed towards the superstructure during days when sudden temperature changes are unlikely and be completed at least 4 hours prior to the concrete placement day's peak ambient temperature.

ALTHOUGH OTHERWISE SHOWN IN THESE PLANS, THE STRUCTURE FILE NUMBERS ARE : 8801584L/8801592R

ITEM 511 - CLASS C CONCRETE, ABUTMENT, AS PER PLAN: Install a 900mm wide strip, 2.5mm thick, general purpose, heavy duty neoprene sheet with nylon fabric reinforcement at locations shown in the plans. Secure the 1 meter wide neoprene sheeting to the concrete with 32 x 3mm (length x shank diameter) galvanized button head spikes through a 25mm outside diameter, 3mm galvanized washer. Maximum fastener spacing is 225mm. Other similar galvanized devices which will not damage either the neoprene or the concrete may be used subject to the approval of the Engineer.

Center the neoprene strips on all joints. For horizontal joints, secure the horizontal neoprene strip by using a single line of fasteners, starting at 150mm (+/-) from the top of the neoprene strip. For vertical joints secure the vertical neoprene strip by using a single vertical line of fasteners, starting at 150mm (+/-) from the vertical edge of the neoprene strip nearest to the centerline of roadway. For vertical joints, install 2 additional fasteners at 150mm center-to-center across the top of the neoprene strip on the same side of the vertical joint as the single vertical row of fasteners is located.

The vertical neoprene strips should completely overlap the horizontal strips. Laps in the length of the horizontal strips due to material manufacturing shall be at least 300mm in length, if not vulcanized or adhesive bonded, or 150mm in length if the lap is vulcanized or adhesive bonded. No laps are acceptable in vertically installed neoprene strips.

The neoprene sheeting shall be 2.5mm thick general purpose, heavy duty neoprene sheet with nylon fabric reinforcement. The sheeting shall be "Fairprene Number NW-0003", by E. I. Dupont De Nemours and Company, Inc., "Wingprene" by the Goodyear Tire and Rubber Company, or an approved alternate. The neoprene sheeting shall conform to the following:

Description of Test	ASTM Method	Requirement
Thickness, mm	D 751	2.5 +/- 0.25
Breaking strength, grab WXF, W, minimum	D 751	3130 x 3130
Adhesive 25mm strip, 50mm minimum, W minimum	D 751	27
Burst strength (mullen) MPa, minimum	D 751	9.65
Heat aging 70 hours T 100C, 180 bend without cracking	D 2136	No cracking of coating
Low temperature brittleness 1 hour at -40C, bend around 6mm mandrel	D 2136	No cracking of coating

Payment for labor, materials and installation of these items shall be included in Item 511, Class C Concrete, Abutment including footing, As Per Plan.

Calculated by: ALH Dated: 7/98
Checked by: FKL Dated 7/98

		WYA-30-36347 L	WYA-30-36347 R	ESTIMATED QUANTITIES		Left Bridge				Right Bridge			
Item	Extension	Total	Total	Unit	Description	Superstructure	Abutment	Pier	General	Superstructure	Abutment	Pier	General
503	21301	Lump	Lump	-	Unclassified excavation, as per plan		Lump	Lump			Lump	Lump	
505	11100	Lump	Lump	-	Pile driving equipment mobilization				Lump				Lump
507	00100	548	548	Meter	Steel piles HP250 x 62, furnished		308	240			308	240	
507	00150	548	548	Meter	Steel piles HP250 x 62, driven		308	240			308	240	
507	50500	38	38	Each	Steel pile splices		14	24			14	24	
507	93301	76	76	Each	Steel point (or shoe), as per plan		28	48			28	48	
Special	51267502	688.8	688.8	Sq. Meter	Sealing of concrete surfaces (epoxy) *	440.6	66.7	181.5		440.6	66.7	181.5	
516	13200	9.8	9.8	Sq. Meter	13mm Preformed expansion joint filler		9.8				9.8		
516	13600	13.1	13.1	Sq. Meter	25mm Preformed expansion joint filler		13.1				13.1		
516	43300	12	12	Each	Elastomeric bearing with internal laminates (neoprene), (250 x 500 x 51) *			12				12	
516	43300	12	12	Each	Elastomeric bearing with internal laminates (neoprene), (250 x 500 x 81) *			12				12	
518	21230	Lump	Lump	-	Porous backfill with filter fabric		Lump				Lump		
518	40000	50.6	50.6	Meter	150mm Perforated corrugated plastic pipe		50.6				50.6		
518	40010	10.0	10.0	Meter	150mm Non-perforated corrugated plastic pipe, including specials		10.0				10.0		
601	32200	427.4	427.4	Cu. Meter	Rock channel protection, Type C with filter				427.4				427.4
842	41000	69.1	69.1	Cu. Meter	Class C concrete, pier above footing			69.1				70.0	
842	43501	95.6	95.6	Cu. Meter	Class C concrete, abutment including footing, as per plan		95.6				92.0		
842	46500	55.3	55.3	Cu. Meter	Class C concrete, footing			55.3				55.3	
846	73000	35.2	35.2	Sq. Meter	Treating concrete bridge decks with HMWM resin	35.2				35.2			
865	14020	6	6	Each	Straight strand prestressed concrete bridge I-beam members, level 2, Type 4, 21 670mm long	6				6			
865	14020	6	6	Each	Straight strand prestressed concrete bridge I-beam members, level 2, Type 4, 21 760mm long	6				6			
865	14020	6	6	Each	Straight strand prestressed concrete bridge I-beam members, level 2, Type 4, 21 020mm long	6				6			
894	10000	367.9	367.9	Cu. Meter	High Performance Concrete, for Bridge Deck with Warranty	367.9				367.9			

* See proposal note

Filename: 36347GN1.dgn

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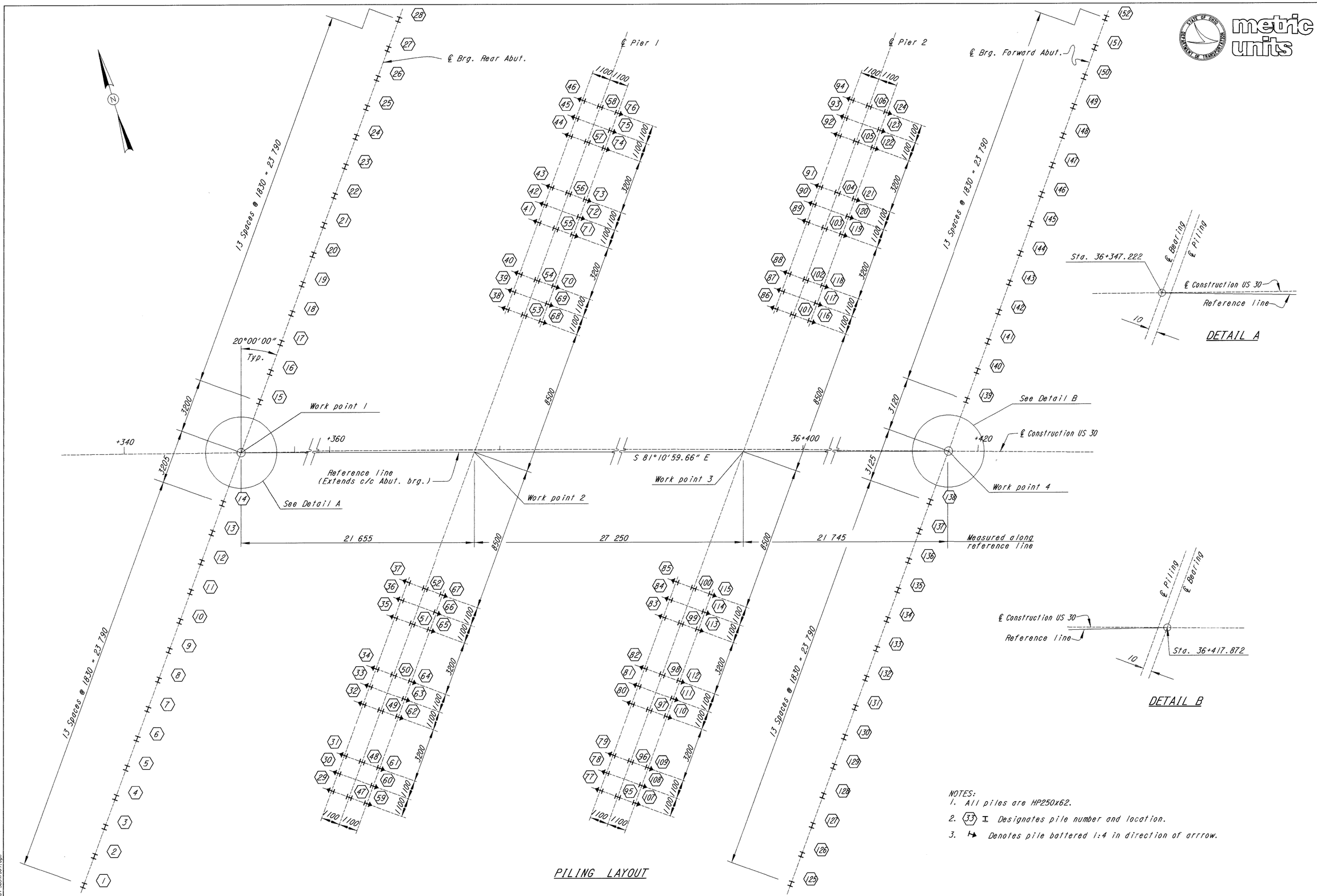
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ALH	ALH	CRS	5/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	8801584L/8801592R	

GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

WYA/CRA-30-28009.0000

3/26

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	0502390	

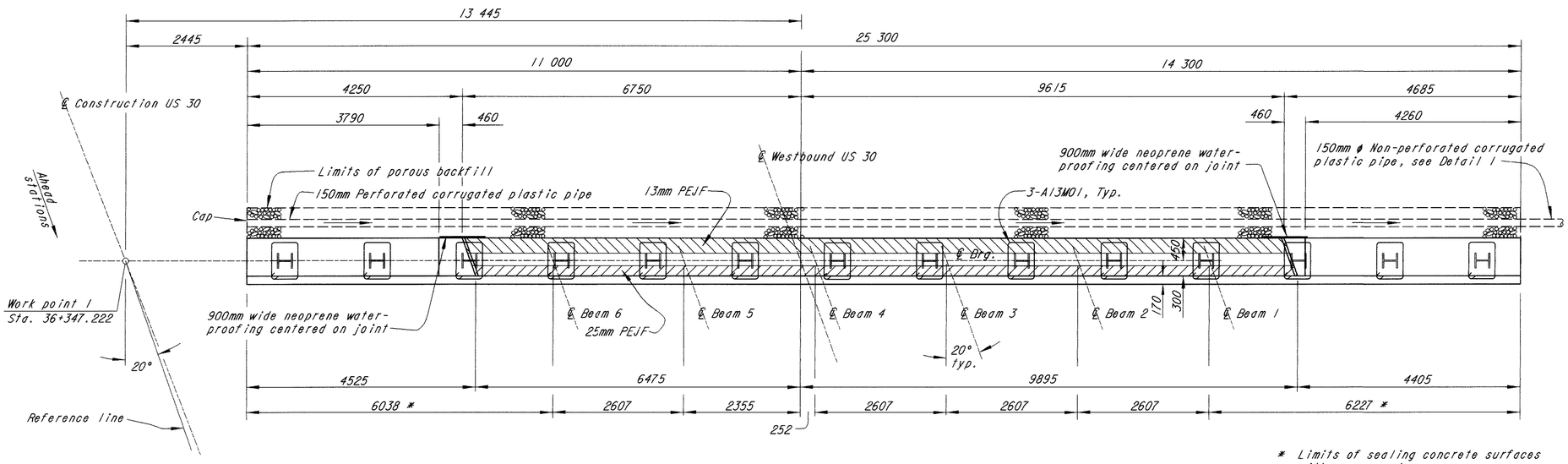
PILING LAYOUT
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

WYA/CRA-30-28.009/0.000

4 / 26

1749
2116

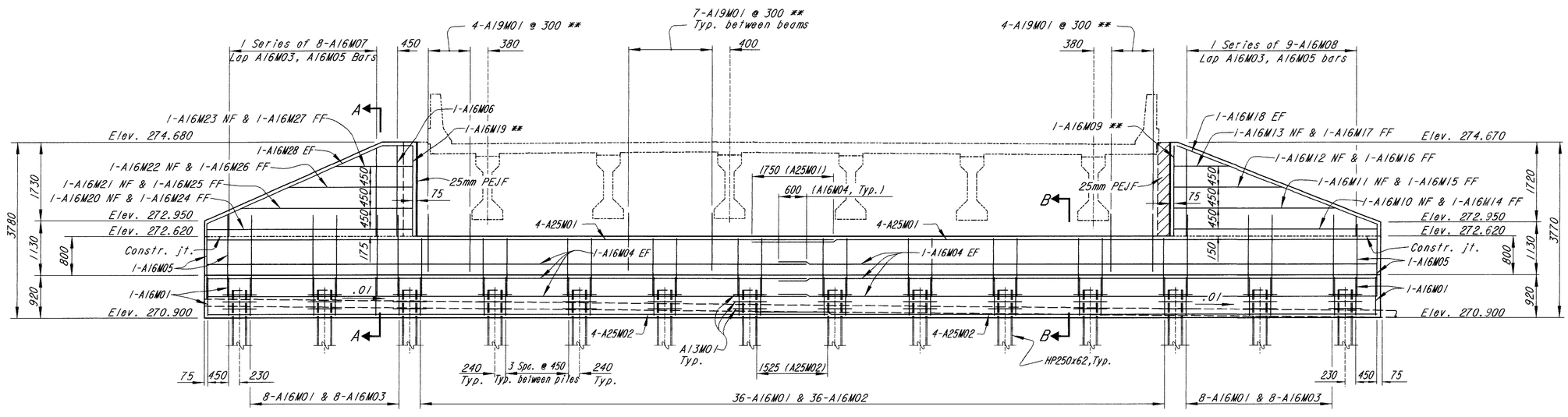
metric units



PLAN

* Limits of sealing concrete surfaces with epoxy sealer

** Place bars parallel to girders



ELEVATION

NOTES:
1. For pile layout, see sheet 4/26.
2. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
3. EF = Each Face
   NF = Near Face
   FF = For Face
   PEJF = Preformed Expansion Joint Filler
4. For Section A-A, Section B-B and Detail 1, see sheet 9/26.
5. For additional details see Std. Dwg. ICD-1-82M.

DESIGN AGENCY
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MRS	—	8502390	

REAR ABUTMENT LEFT BRIDGE DETAILS

BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

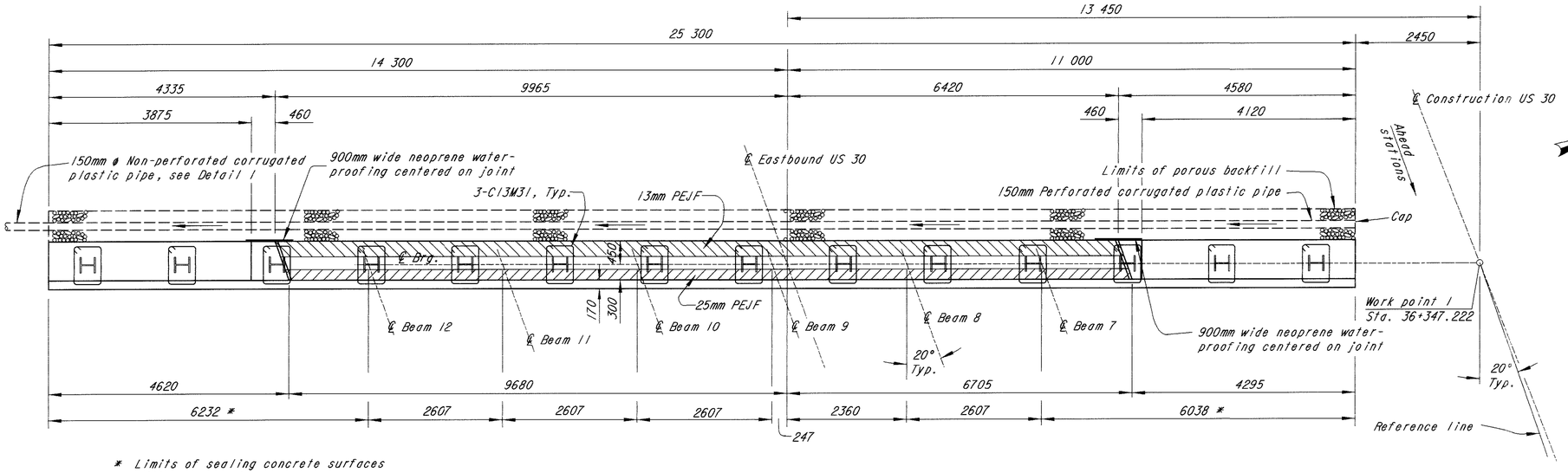
WYA/CRA-30-28.009/0.000

5 / 26

1750
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Filename: 36347R1.dgn

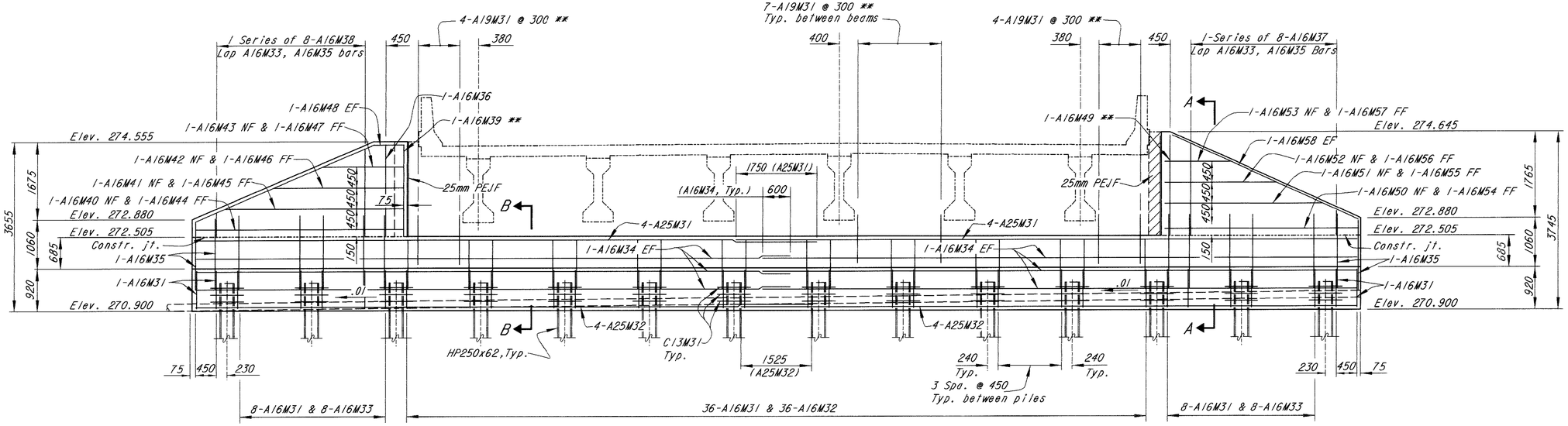
metric units



* Limits of sealing concrete surfaces with epoxy sealer

** Place bars parallel to girders

PLAN



ELEVATION

NOTES:
1. For pile layout, see sheet 4/26.
2. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
3. EF = Each Face
   NF = Near Face
   FF = Far Face
   PEJF = Preformed Expansion Joint Filler
4. For Section A-A, Section B-B and Detail 1, see sheet 9/26.
5. For additional details see Std. Dwg. ICD-1-82M.

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CHECKED	MRS	REVISED	—			STRUCTURE FILE NUMBER	0502390

REAR ABUTMENT RIGHT BRIDGE DETAILS
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

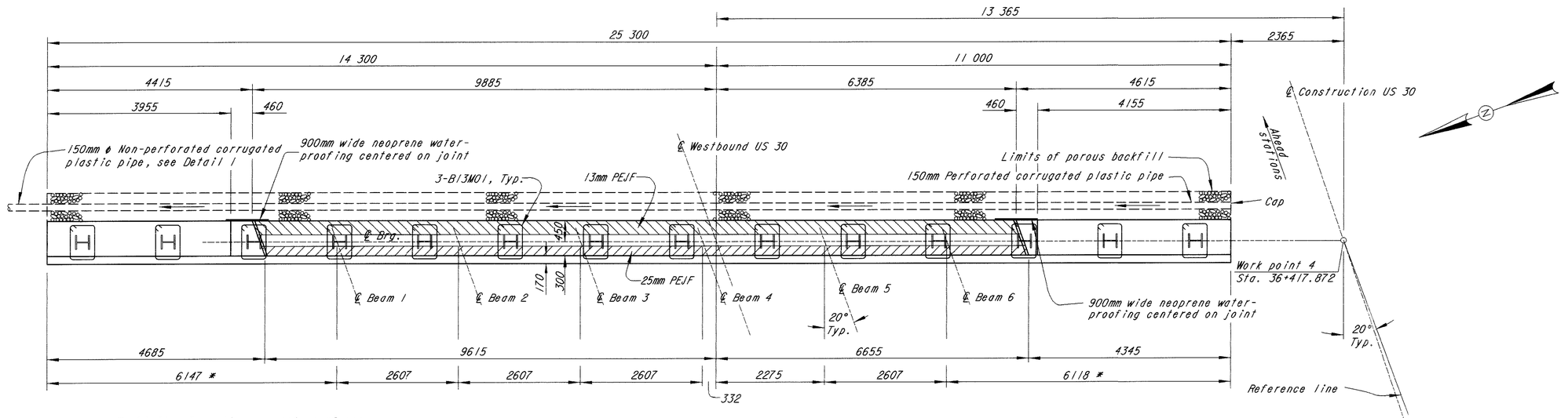
WYA/CRA-30-28.009/0.000

6 / 26

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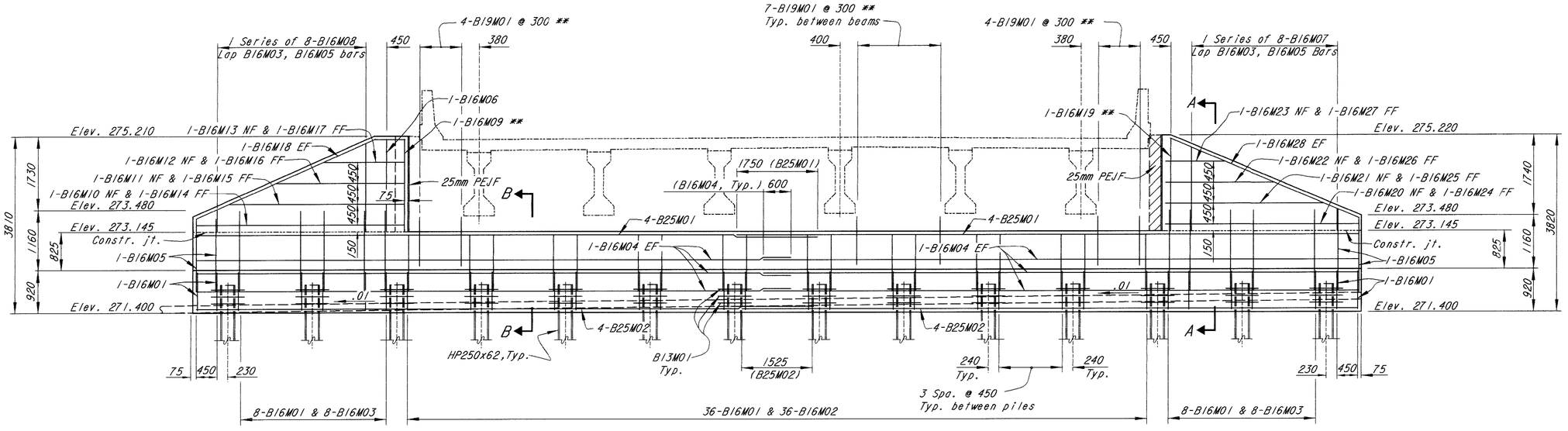
metric units



* Limits of sealing concrete surfaces with epoxy sealer

** Place bars parallel to girder

PLAN



ELEVATION

NOTES:
1. For pile layout, see sheet 4/26.
2. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
3. EF = Each Face
   NF = Near Face
   FF = Far Face
   PEJF = Preformed Expansion Joint Filler
4. For Section A-A, Section B-B and Detail 1, see sheet 9/26.
5. For additional details see Std. Dwg. ICD-1-82M

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CRS	5.99
STRUCTURE FILE NUMBER	
0502390	
DRAWN	REVISED
ALH	—
DESIGNED	CHECKED
FHL	MRS

FORWARD ABUTMENT LEFT BRIDGE DETAILS
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

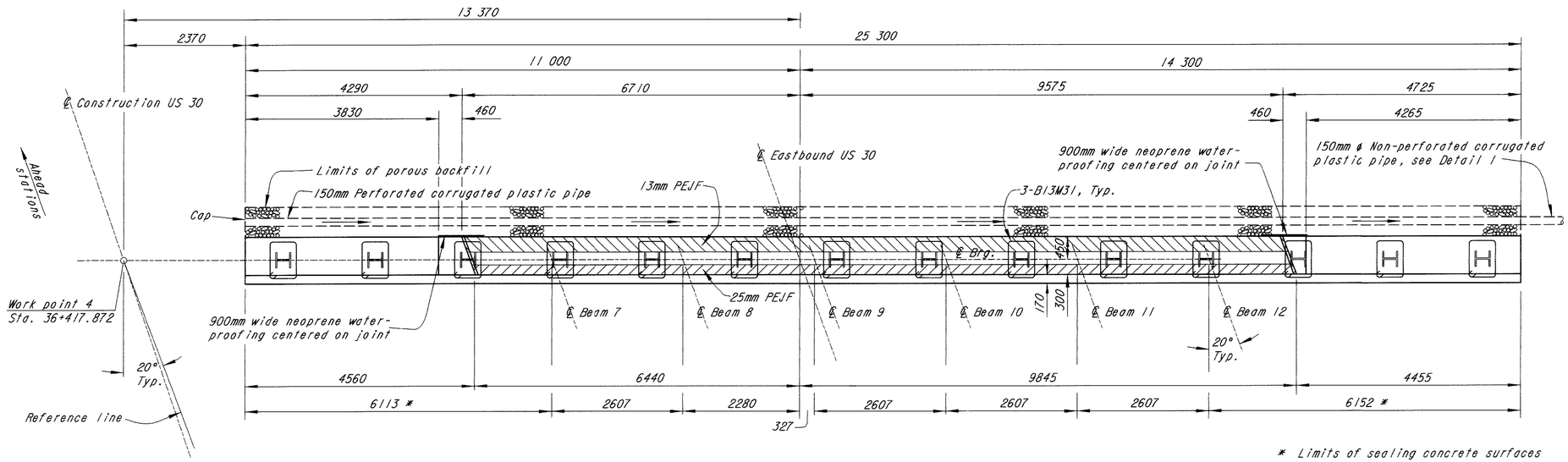
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7 / 26

1752
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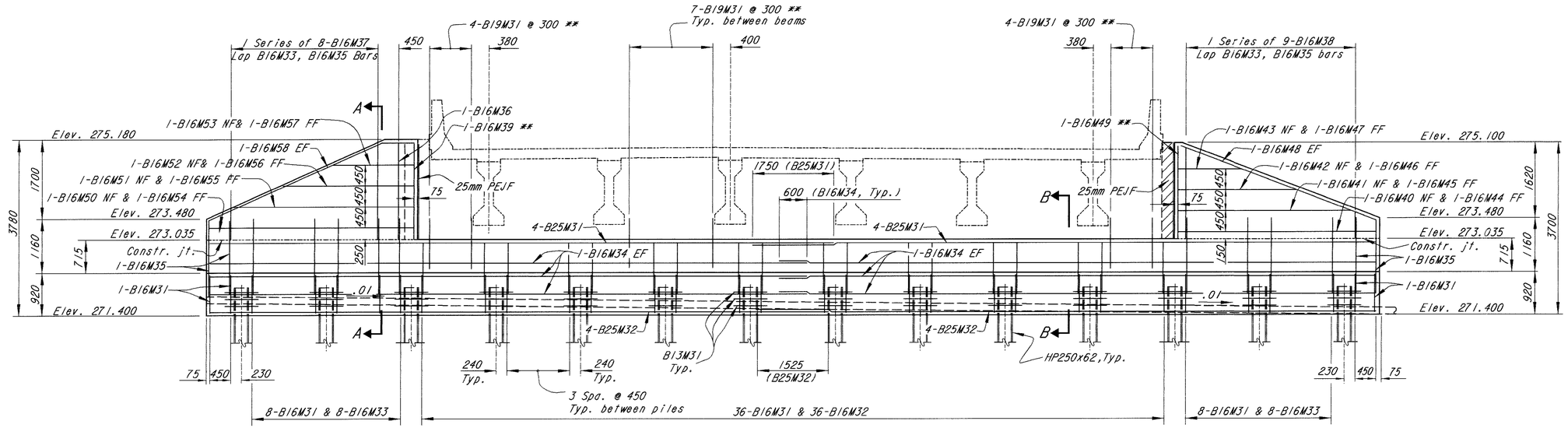
metric units



PLAN

* Limits of sealing concrete surfaces with epoxy sealer

** Place bars parallel to girders



ELEVATION

NOTES:
1. For pile layout, see sheet 4/26 .
2. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
3. EF = Each Face
   NF = Near Face
   FF = Far Face
   PEJF = Preformed Expansion Joint Filler
4. For Section A-A, Section B-B and Detail 1, see sheet 9/26 .
5. For additional details see Std. Dwg. ICD-1-82M.

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MRS	—	8502390	

FORWARD ABUTMENT RIGHT BRIDGE DETAILS
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

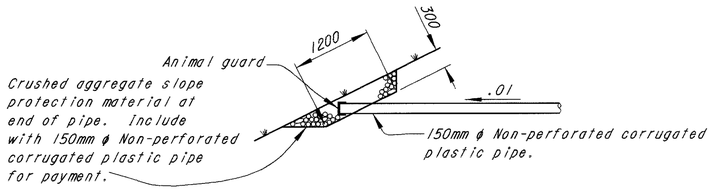
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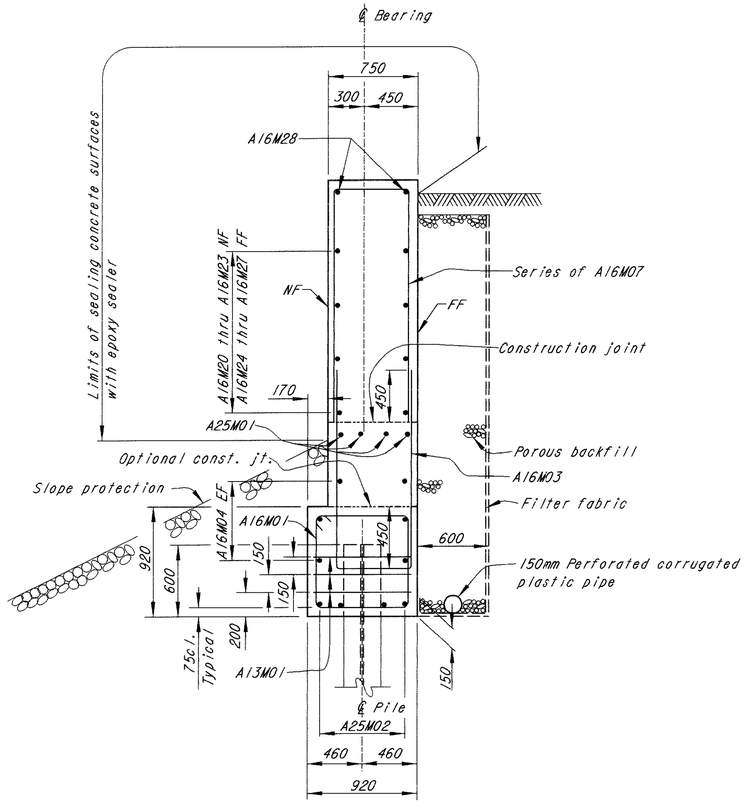
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metric units



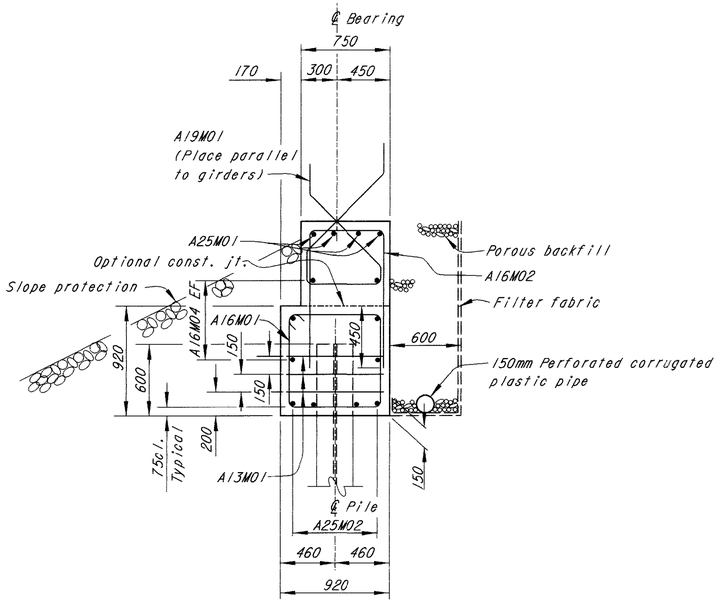
DETAIL 1

DRAIN PIPE DETAIL



SECTION A-A

(Rear abutment left bridge shown, others similar)



SECTION B-B

(Rear abutment left bridge shown, others similar)

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MRS	—	8502390	

ABUTMENT DETAILS
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OVER THE BROKEN SWORD CREEK

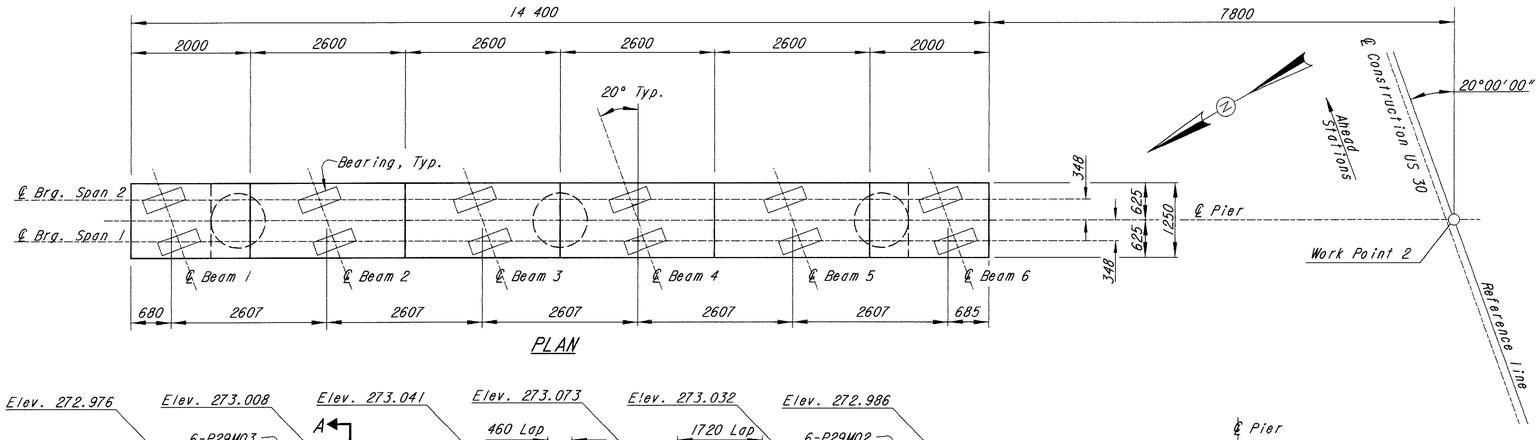
WYA/CRA-30-28.009/0.000

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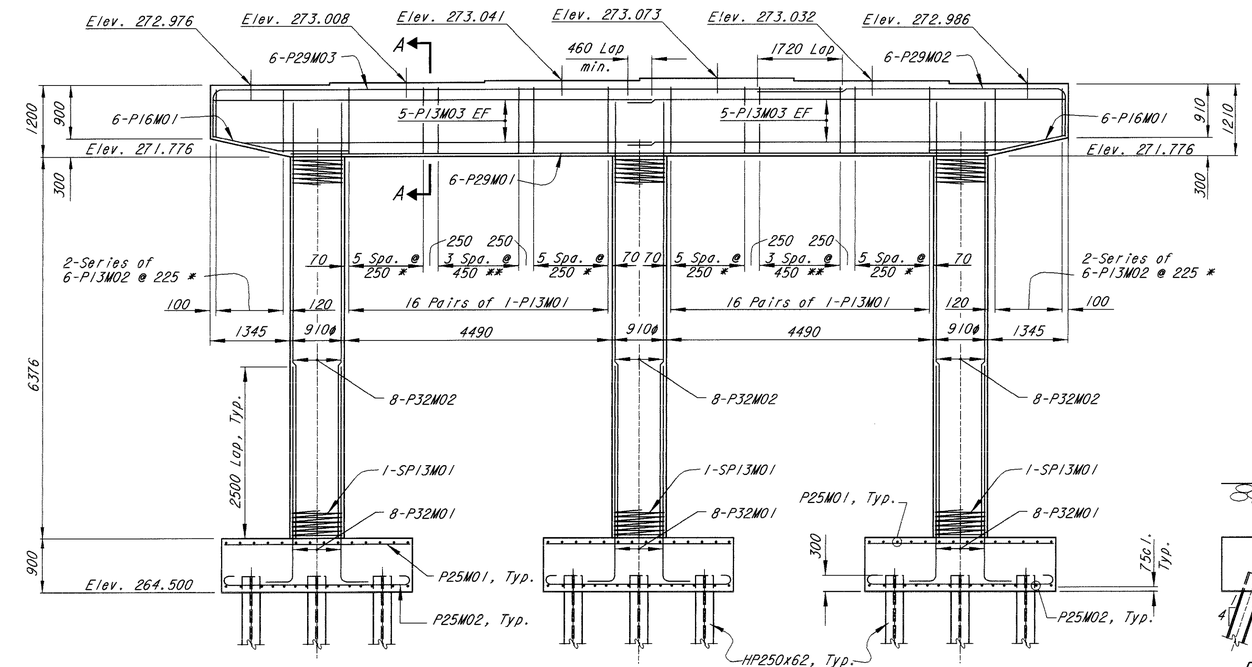
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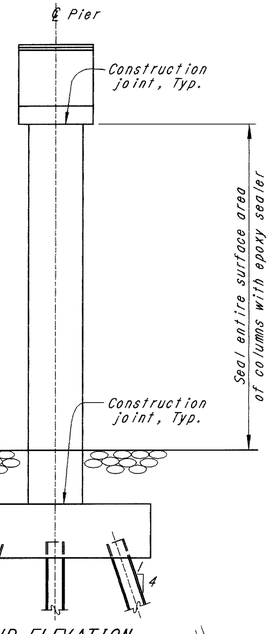
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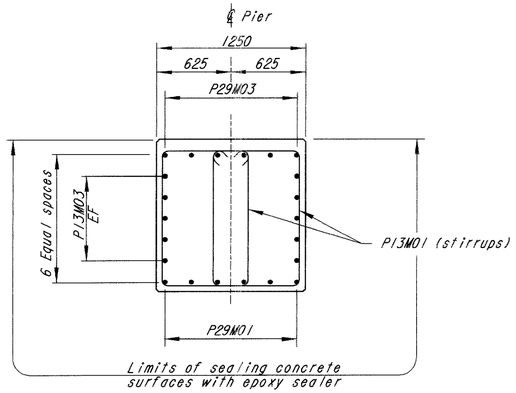
PLAN



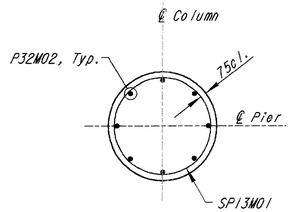
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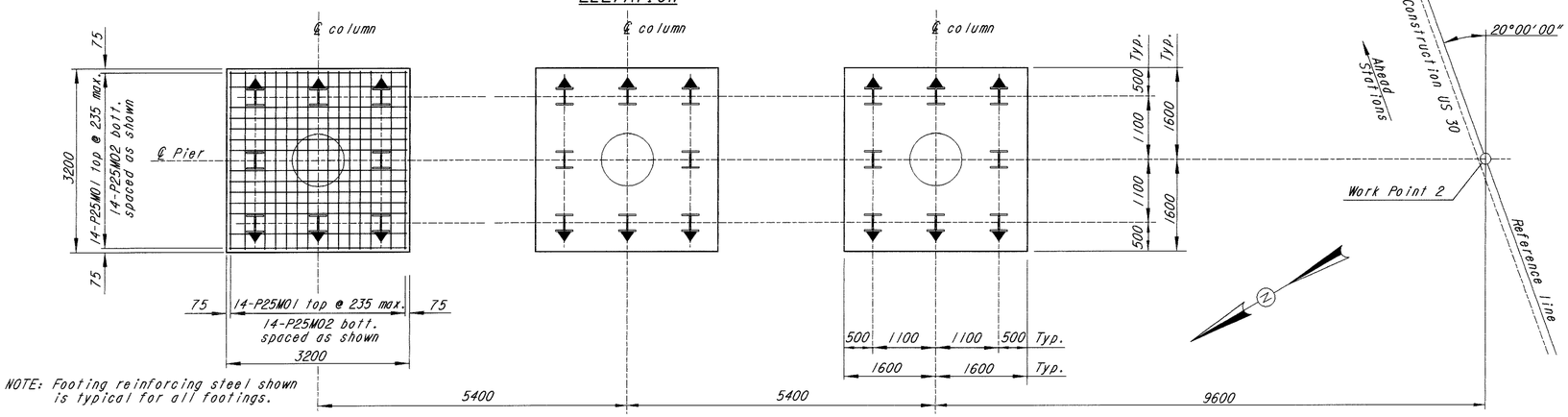
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SECTION A-A



TYPICAL COLUMN SECTION



FOOTING PLAN

NOTE: Footing reinforcing steel shown is typical for all footings.

NOTES:
1. * Denotes stirrup hooks located at the bottom.
   ** Denotes stirrup hooks located at the top
2. Denotes pile battered 1:4 in direction of arrow.
3. EF = Each Face

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MPS	—	8502390	

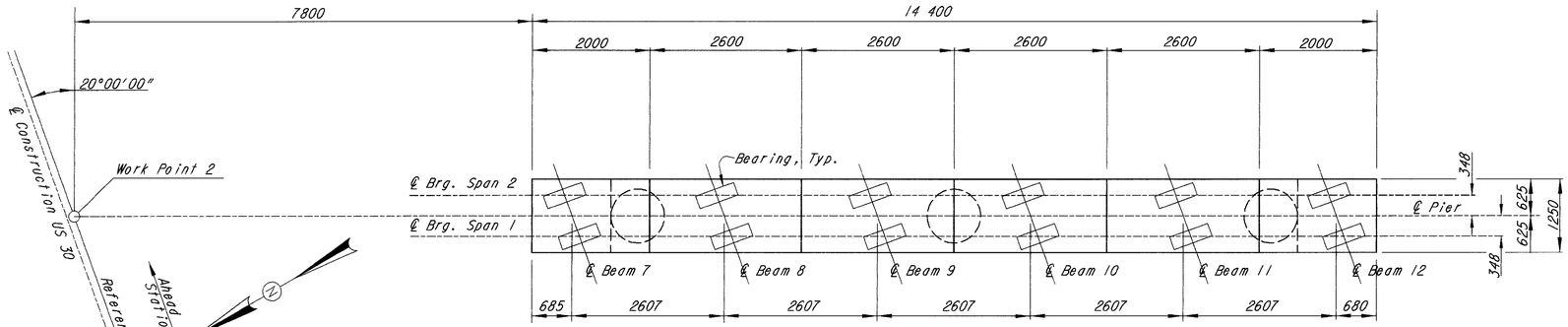
PIER 1 LEFT BRIDGE
BRIDGE NO. WYA-30-36.347
OVER THE BROKEN SWORD CREEK

WYA/CRA-30-28.009/0.000

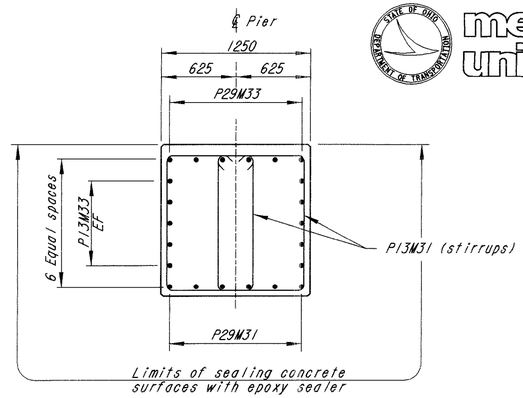
10/26

1755/2116

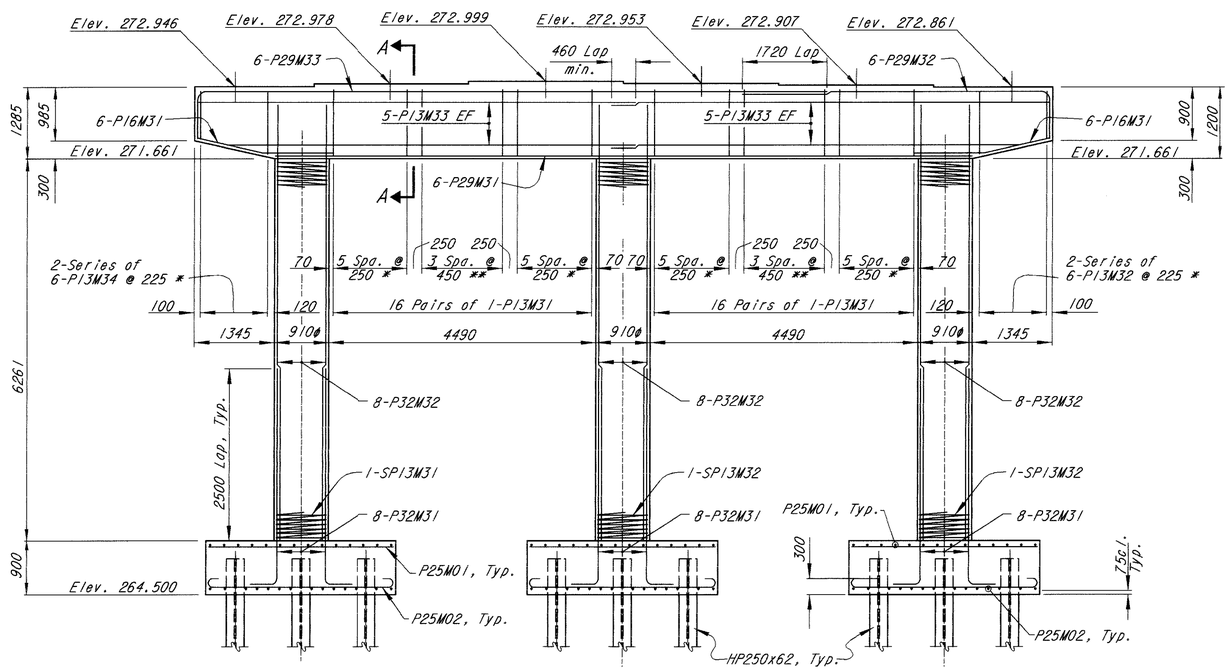
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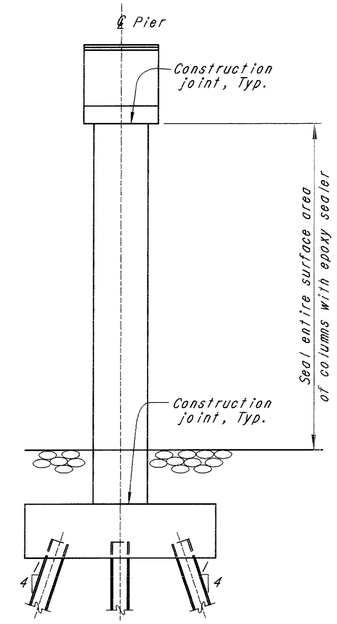
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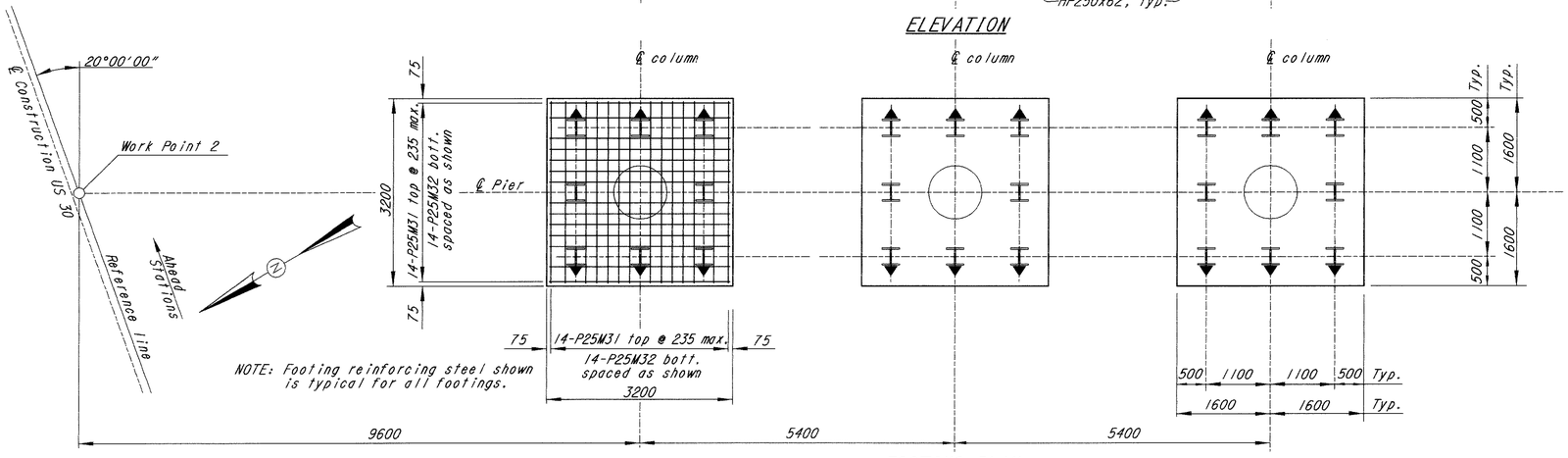
SECTION A-A



ELEVATION

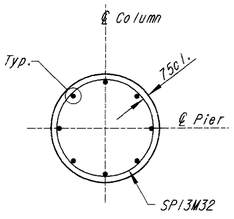


END ELEVATION



FOOTING PLAN

NOTE: Footing reinforcing steel shown is typical for all footings.



TYPICAL COLUMN SECTION

NOTES:
1. * Denotes stirrup hooks located at the bottom.
   ** Denotes stirrup hooks located at the top
2. ▼ Denotes pile battered 1:4 in direction of arrow.
3. EF = Each Face

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CHECKED	MRS	REVISED	—
		STRUCTURE FILE NUMBER	8502390

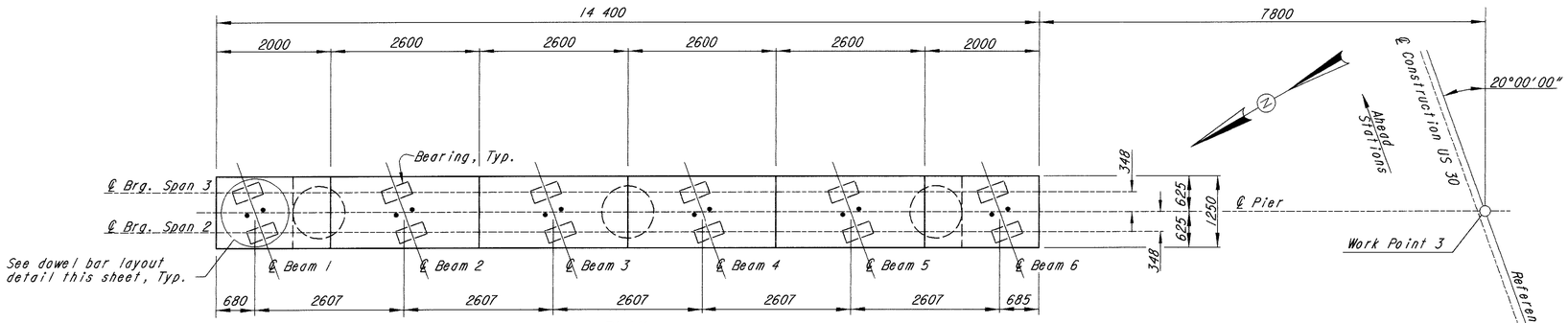
PIER 1 RIGHT BRIDGE
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

WYA/CRA-30-28.009/0.000

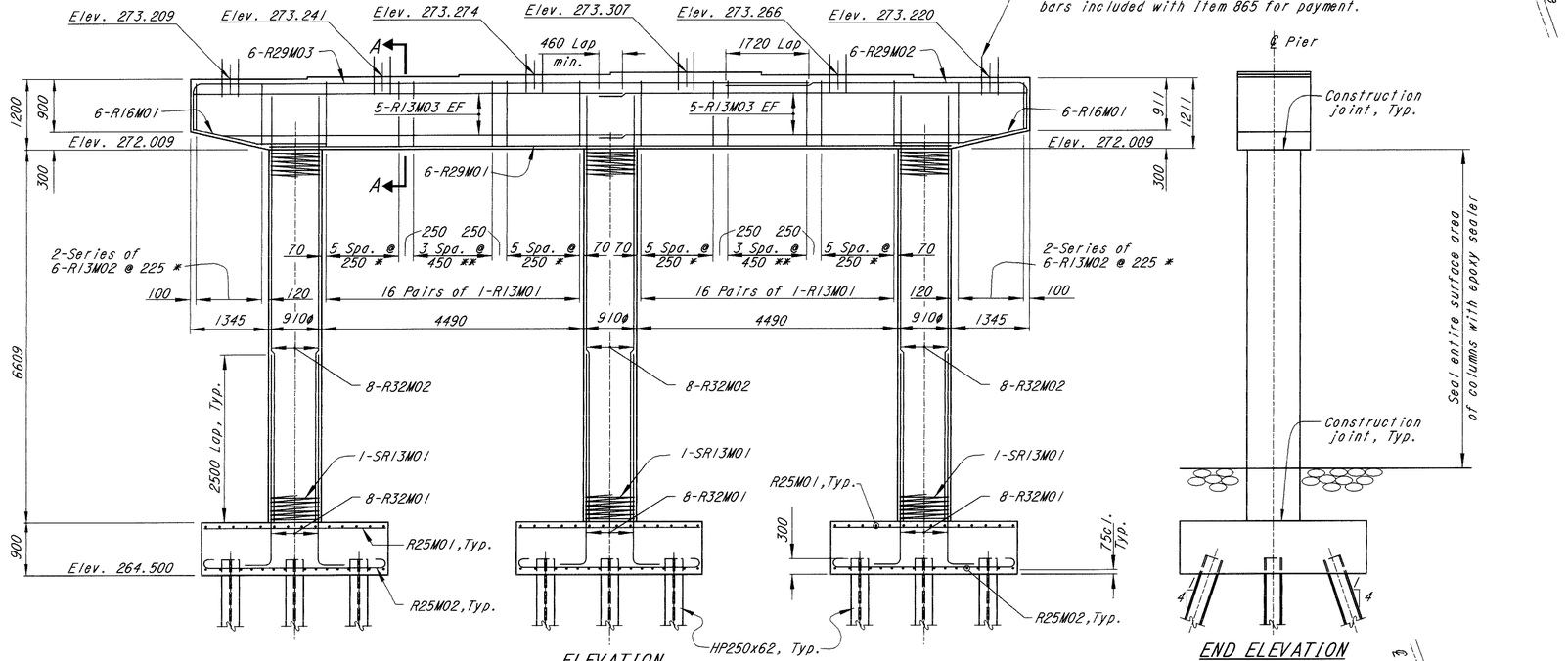
11 / 26

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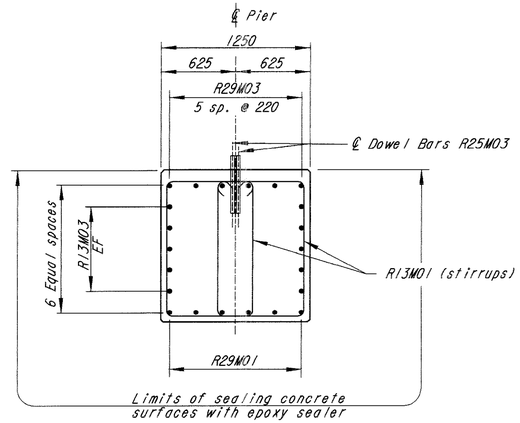


PLAN

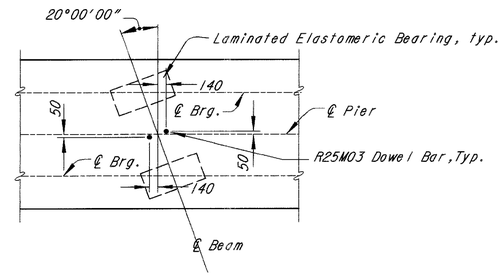


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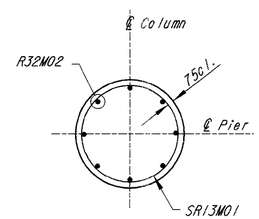
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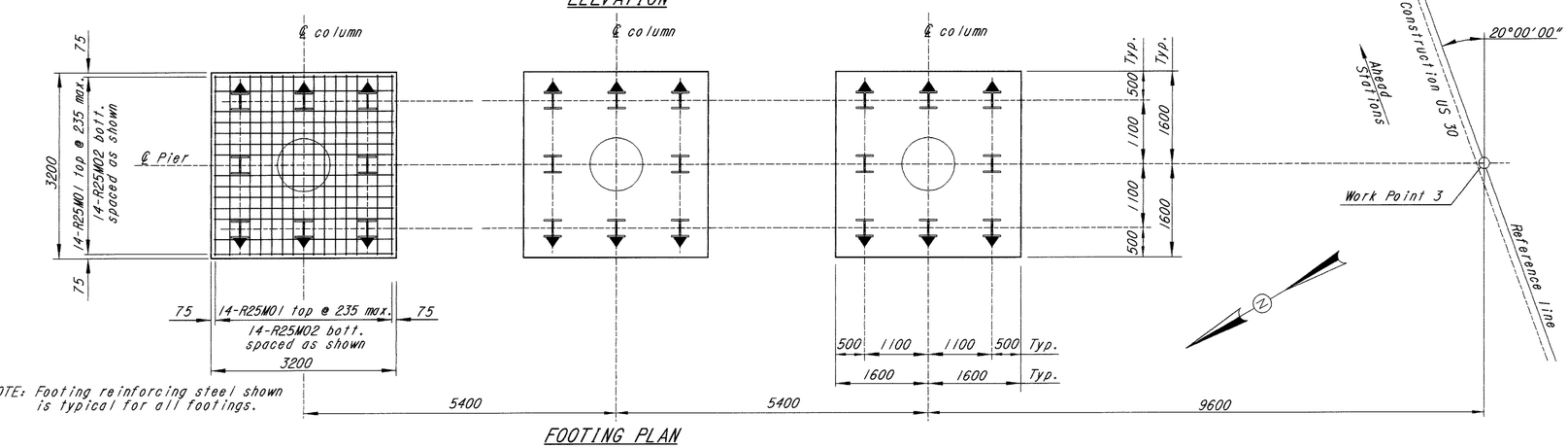
SECTION A-A



DOWEL BAR LAYOUT



TYPICAL COLUMN SECTION



FOOTING PLAN

NOTE: Footing reinforcing steel shown is typical for all footings.

NOTES:
1. * Denotes stirrup hooks located at the bottom.
   ** Denotes stirrup hooks located at the top.
2. BRIDGE SEAT REINFORCEMENT: Reinforcing steel in the vicinity of the bridge seat shall be accurately placed to avoid interference with the drilling of bearing anchor holes or the pre-setting of bearing anchors.
3. BEARING ANCHORS: At the option of the Contractor, bearing anchors (or formed holes), located and supported by templates, may be cast-in-place.
4. ⊥ Denotes pile battered 1:4 in direction of arrow.
5. EF = Each Face

metric units

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Cincinnati, Ohio 45237

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	0502390	

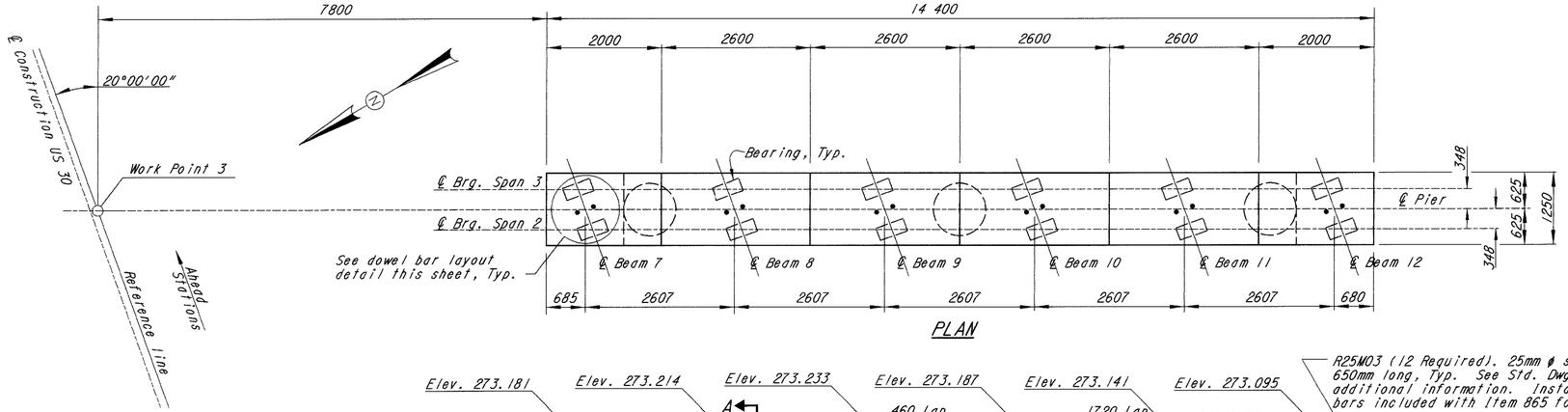
PIER 2 LEFT BRIDGE
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

WYA/CRA-30-28.009/0.000

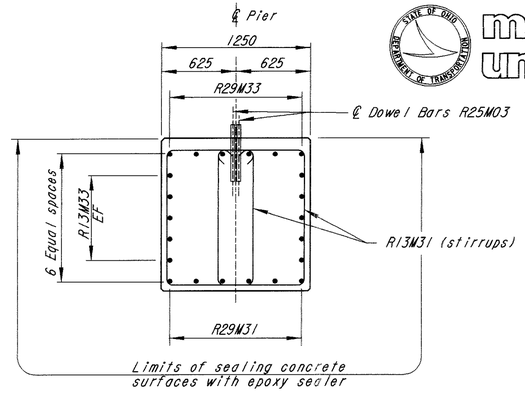
12/26

1757/2116

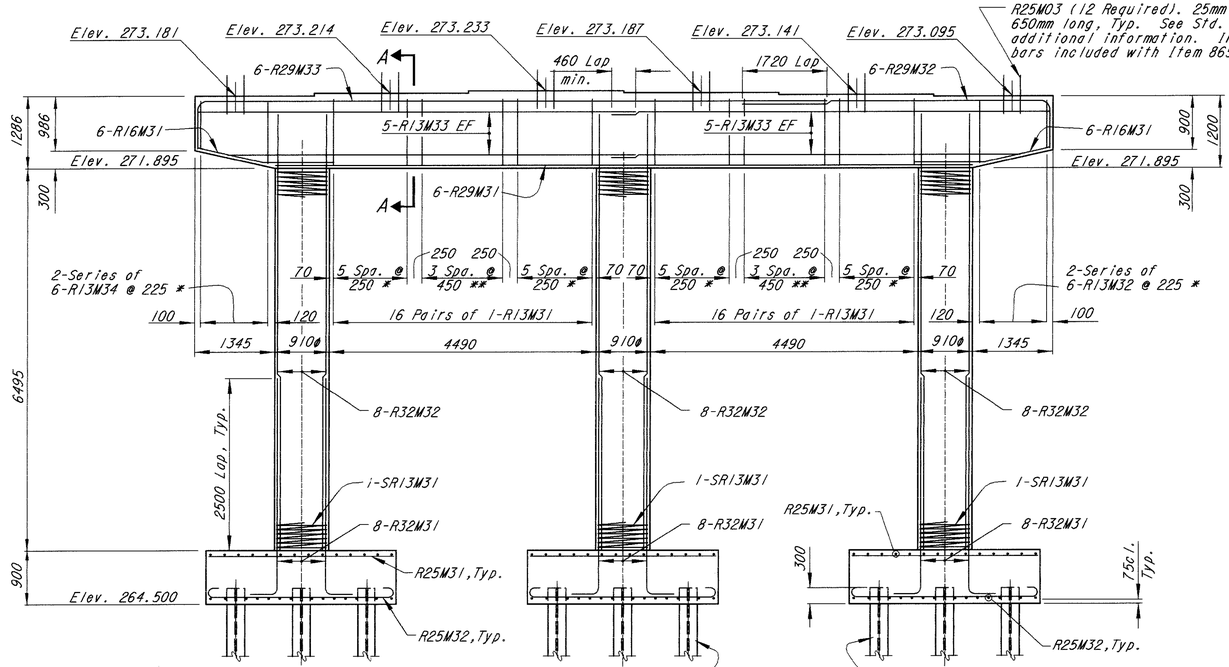
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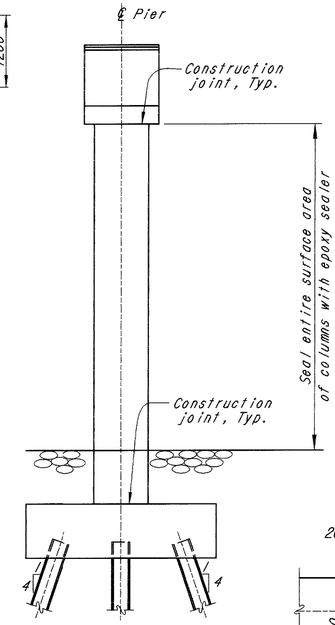
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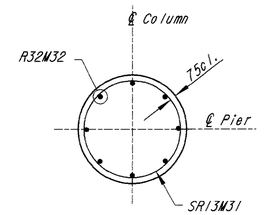
SECTION A-A



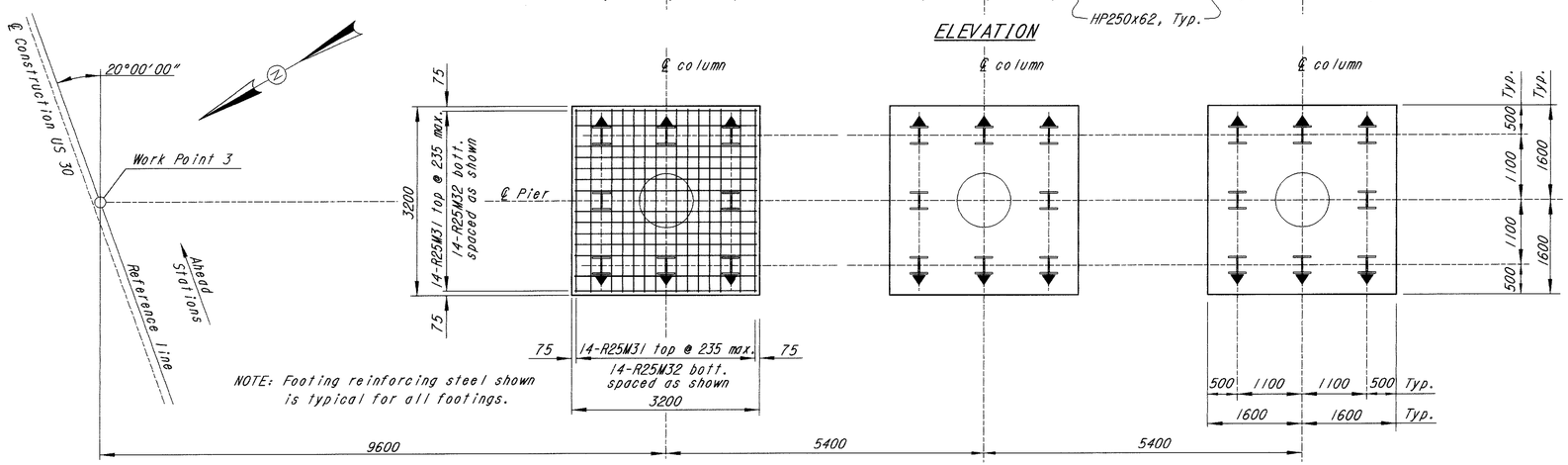
ELEVATION



END ELEVATION

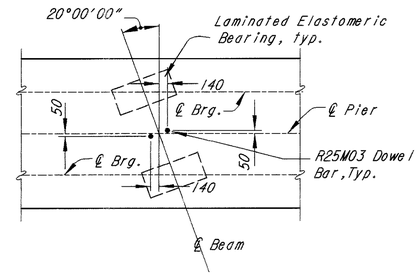


TYPICAL COLUMN SECTION



NOTE: Footing reinforcing steel shown is typical for all footings.

FOOTING PLAN



DOWEL BAR LAYOUT

NOTES:
1. * Denotes stirrup hooks located at the bottom.
   ** Denotes stirrup hooks located at the top.
2. BRIDGE SEAT REINFORCEMENT: Reinforcing steel in the vicinity of the bridge seat shall be accurately placed to avoid interference with the drilling of bearing anchor holes or the pre-setting of bearing anchors.
3. BEARING ANCHORS: At the option of the Contractor, bearing anchors (or formed holes), located and supported by templates, may be cast-in-place.
4. ▼ Denotes pile battered 1:4 in direction of arrow.
5. EF = Each Face

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

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DRAWN	ALH	REVISED	—
CHECKED	MRS	REVIEWED	CRS
		STRUCTURE FILE NUMBER	8502390

PIER 2 RIGHT BRIDGE

BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

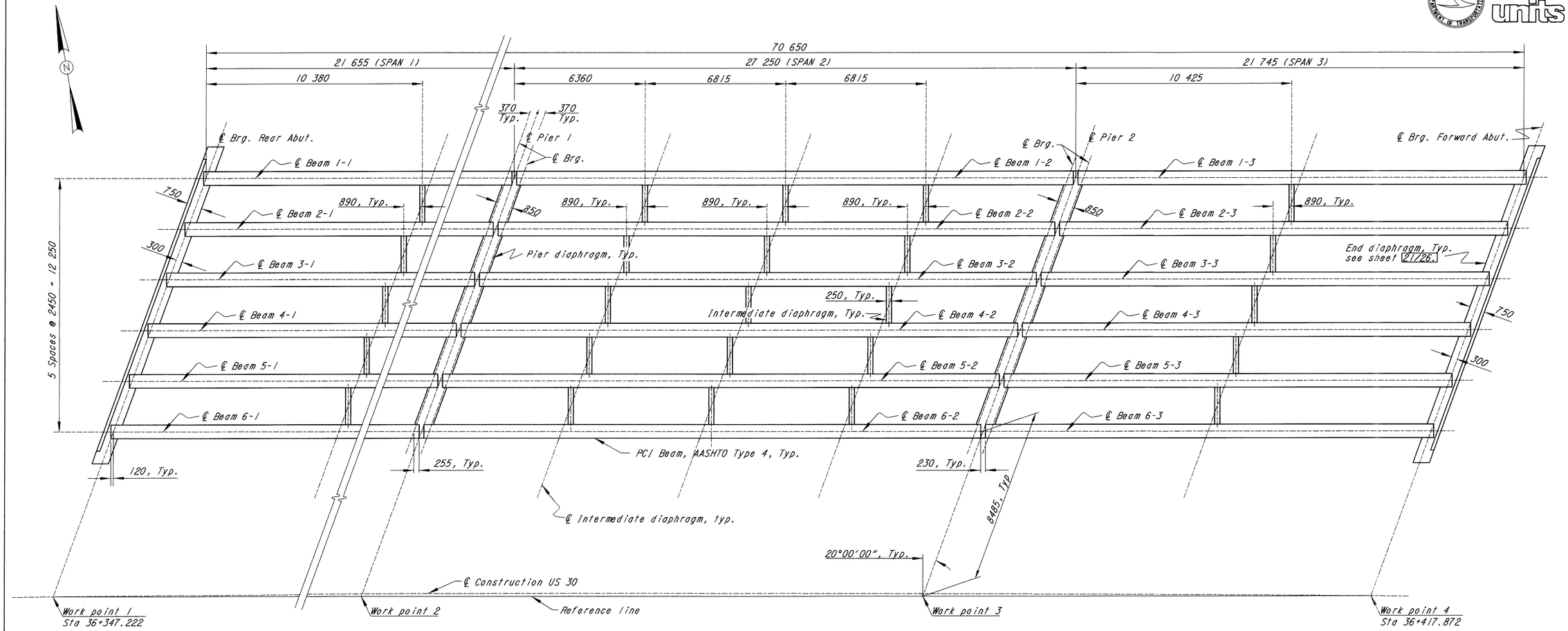
WYA/CRA-30-28.009/0.000

13/26

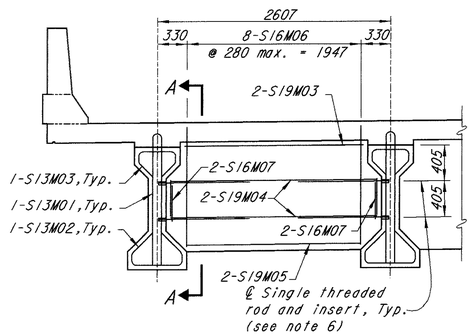
1758/2116

File name: 36347p01.dgn

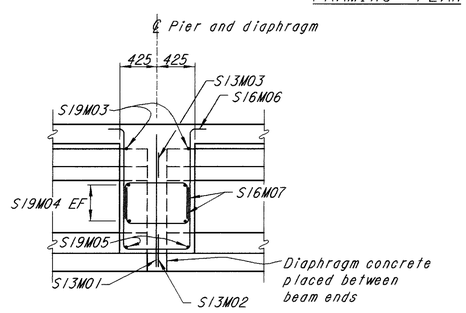
metric units



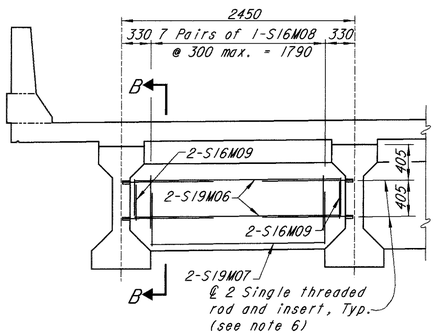
FRAMING PLAN



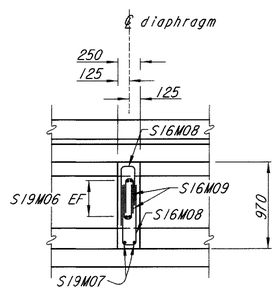
PIER DIAPHRAGM
10 required



SECTION A-A



INTERMEDIATE DIAPHRAGM
25 required



SECTION B-B

NOTES:
1. EF = Each Face
2. For details of end diaphragms see sheet 21/26
3. Pier diaphragm shall be placed at same time slab above diaphragm is placed.
4. Intermediate diaphragms shall be completed not less than 48 hours prior to placing deck.
5. For additional details on beams & diaphragms, see Std. Dwg. PSID-1-95M
6. Threaded rod shall be epoxy coated and included with Item 865 for payment.

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MRS	—		8502390

FRAMING PLAN LEFT BRIDGE
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

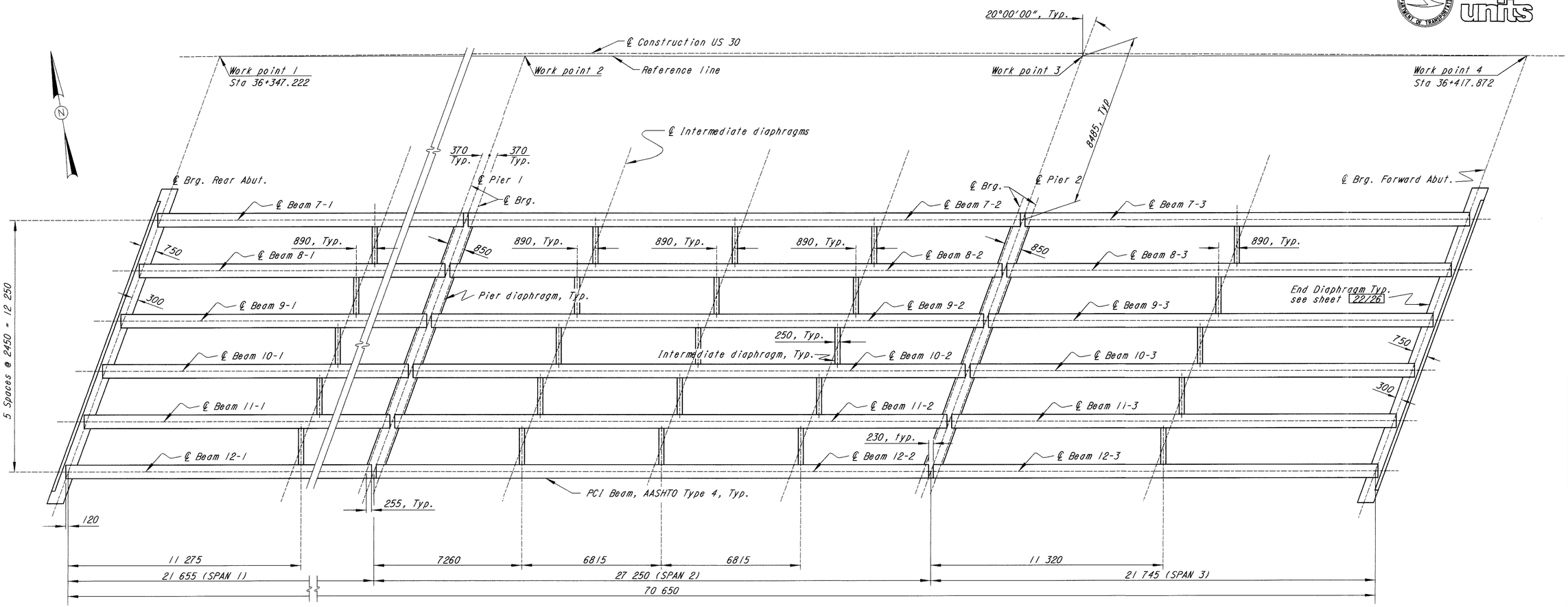
WYA/CRA-30-28.009/0.000

14 | 26

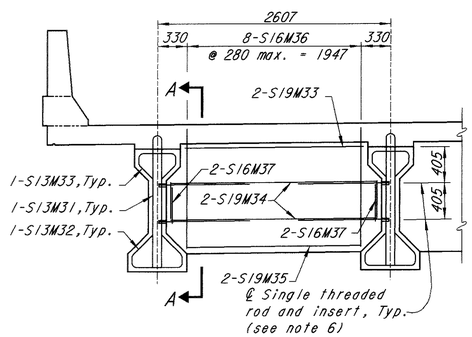
1759
2116

Filename: 36347fp1.dgn

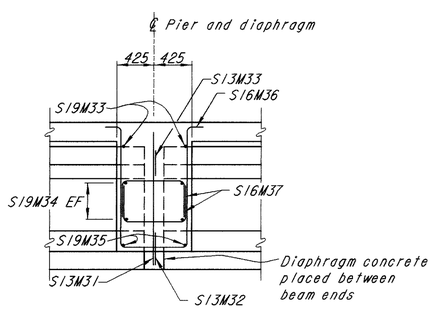
metric units



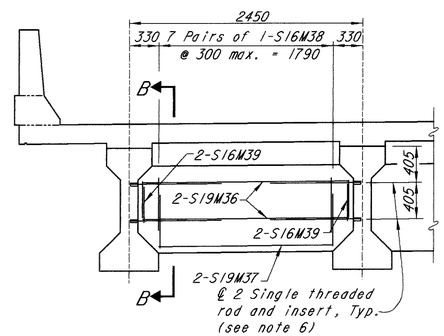
FRAMING PLAN



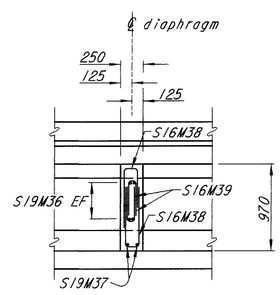
PIER DIAPHRAGM
10 required



SECTION A-A



INTERMEDIATE DIAPHRAGM
25 required



SECTION B-B

NOTES:
1. EF = Each Face
2. For details of end diaphragms see sheet 22/26
3. Pier diaphragm shall be placed at same time slab above diaphragm is placed.
4. Intermediate diaphragms shall be completed not less than 48 hours prior to placing deck.
5. For additional details on beams & diaphragms, see Std. Dwg. PSID-1-95M
6. Threaded rod shall be epoxy coated and included with Item 865 for payment.

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BALKE ENGINEERS
1848 Summit Road
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MRS	—		8502390

FRAMING PLAN RIGHT BRIDGE AND DIAPHRAGM DETAILS
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

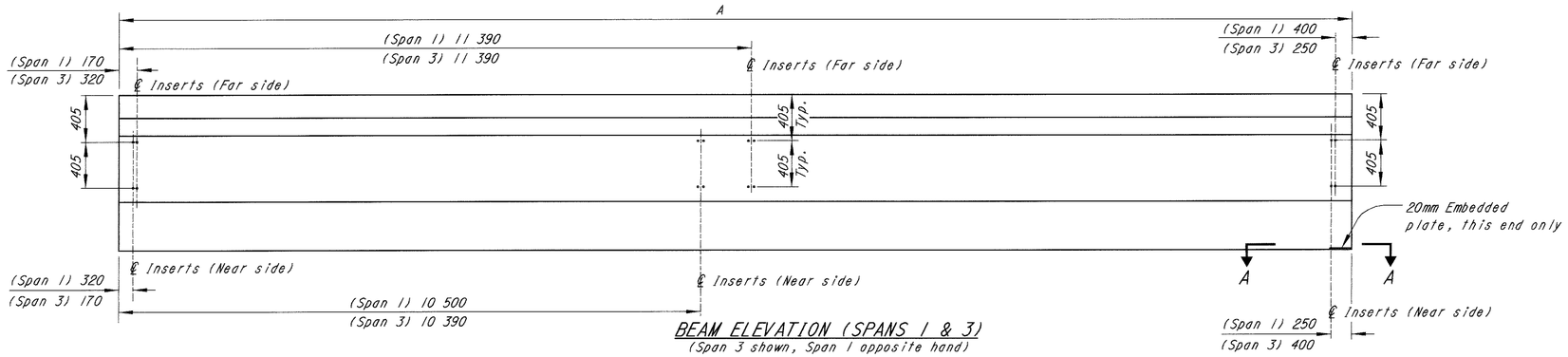
WYA/CRA-30-28.009/0.000

15/26

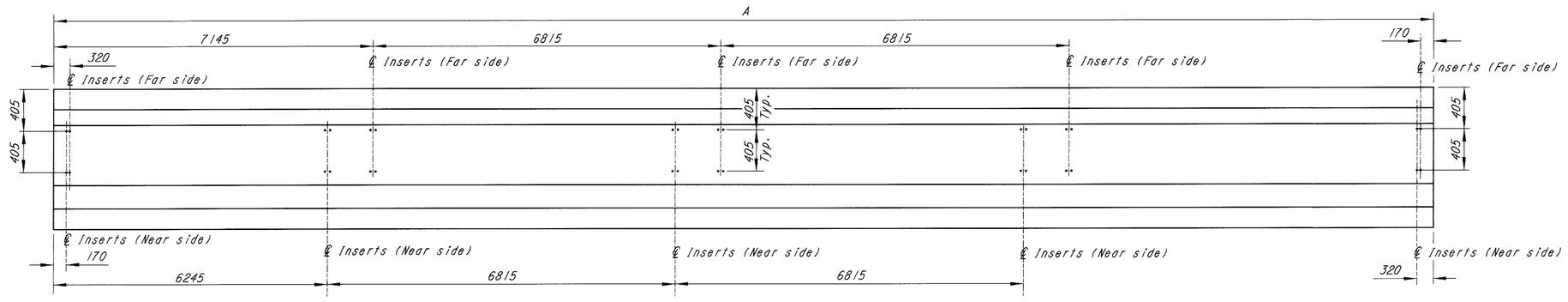
1760
2116

F:\Versions - 36.MFT\2C.dgn

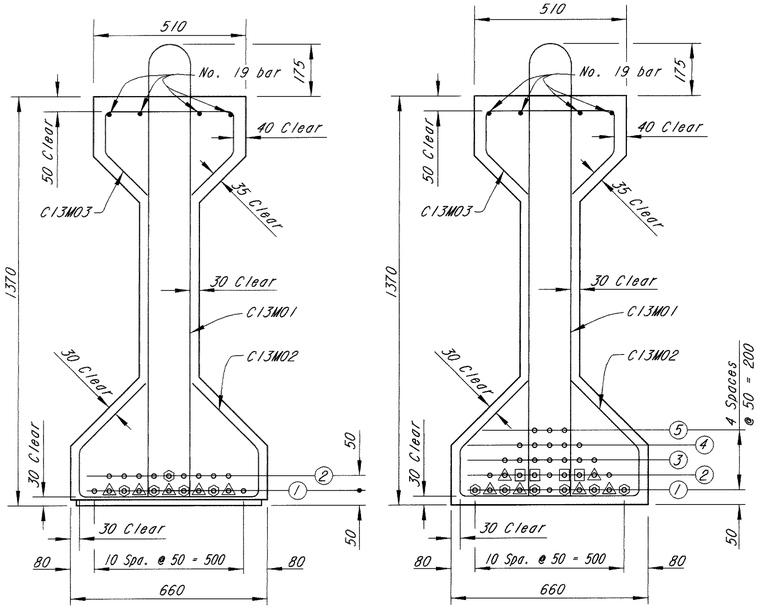
metric units



BEAM ELEVATION (SPANS 1 & 3)
(Span 3 shown, Span 1 opposite hand)



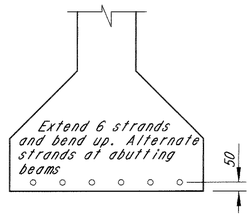
BEAM ELEVATION (SPAN 2)



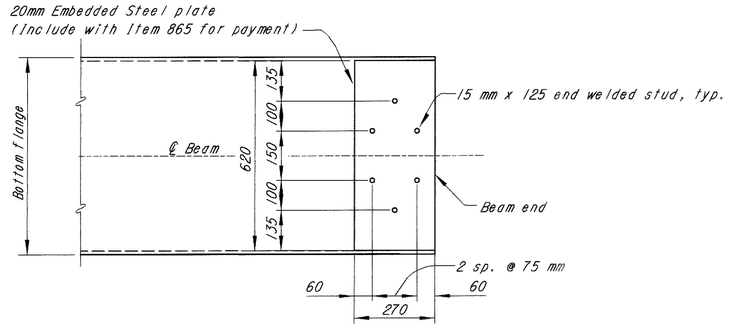
SPANS 1 & 3
AASHTO TYPE 4

SPAN 2
AASHTO TYPE 4

○ = Debonded 1500mm at each end
△ = Debonded 3000mm at each end
□ = Debonded 4500mm at each end



TYPICAL END OF BEAM AT PIERS



SECTION A-A

BEAM DIMENSIONS - Measured along ℄ of beam (For location of A thru I, see Std. Dwg. PSID-1-95M												
BEAM LOCATION	NUMBER REQUIRED	DIMENSIONS (mm)										APPROXIMATE WEIGHT (kg)
		A	B	C	D	E	F	G	H	I		
Span 1	12	21 660	16	1125	15	250	3500	27	450 max	11 660		26 300
Span 2	12	27 020	16	1125	15	250	3500	39	450 max	17 020		32 775
Span 3	12	21 750	16	1125	15	250	3500	27	450 max	11 750		26 400

NUMBER OF STRANDS PER ROW										CONCRETE STRENGTHS		C13M01 BARS REQ'D.	C13M02 BARS REQ'D.	C13M03 BARS REQ'D.
BEAM LOCATION	ROW NUMBER								TOTAL STRANDS	f'ci	f'c			
	①	②	③	④	⑤	⑥	⑦	⑧						
Spans 1 & 3	11	9	-	-	-	-	-	-	20	27.5	38.0	89	89	89
Span 2	11	9	7	5	3	-	-	-	35	27.5	38.0	101	101	101

NOTES:
1. See sheet 3 / 26 and Std. Dwg. PSID-1-95M for additional details.
2. The bars shown as 13M on this sheet replace the 10M bars on the standard drawing.
3. End welded studs may be moved slightly in order to avoid reinforcing steel and prestressing strands.
4. To allow for fit-up, the embedded plate width may be decreased by 10 mm. The edge distance to the first stud shall be adjusted accordingly.

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		STRUCTURE FILE NUMBER	8502390

FRAMING PLAN DETAILS
BRIDGE NO. WYA-30-36347
OVER BROKEN SWORD CREEK

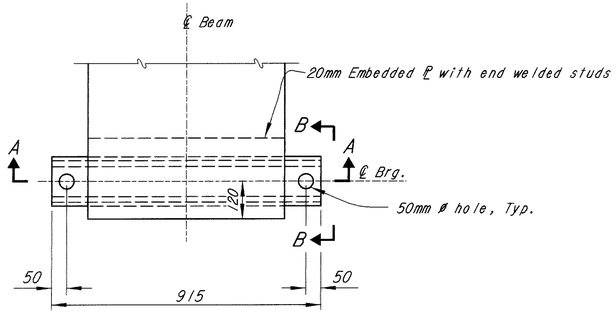
WYA/CRA-30-28.009/0.000

16 / 26

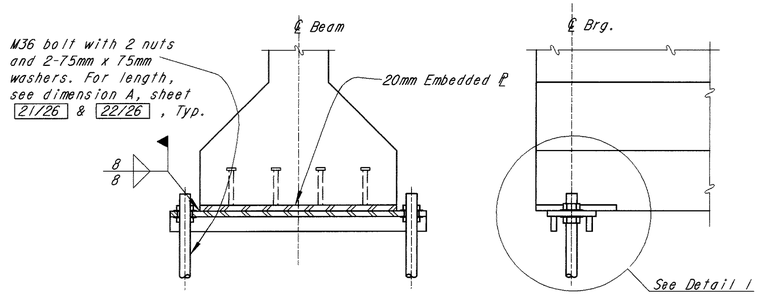
1761
2116

File name = 36347p3.dgn

metric units

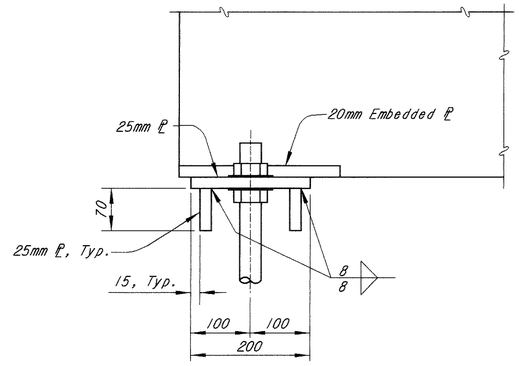


PLAN



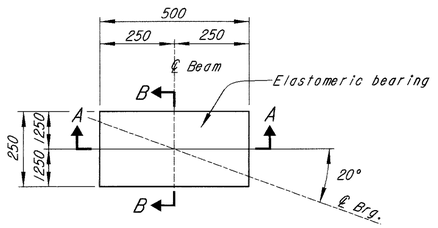
SECTION A-A

VIEW B-B

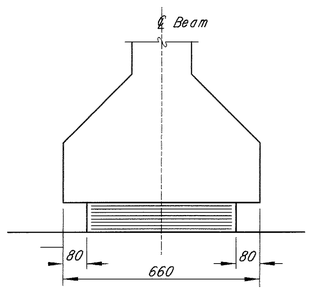


DETAIL 1

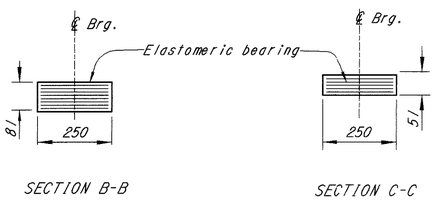
BEARING DETAIL ABUTMENTS



PLAN



SECTION A-A



SECTION B-B

SECTION C-C

EXPANSION BEARING PIER 1

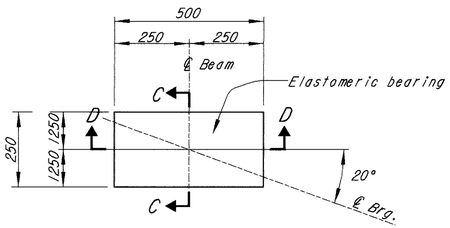
Thickness of external elastomer = 5mm
(2 required)

Thickness of internal elastomer = 8mm
(7 required)

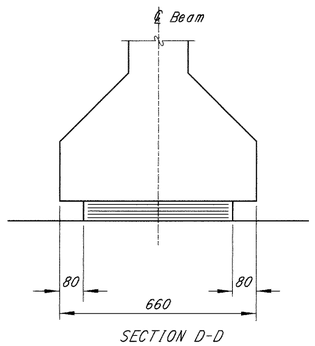
Internal steel laminate thickness = 1.90mm
(8 required)

D.L. = 505kN
L.L. = 275kN

Maximum design load = 780kN



PLAN



SECTION D-D

FIXED BEARING PIER 2

Thickness of external elastomer = 5mm
(2 required)

Thickness of internal elastomer = 8mm
(4 required)

Internal steel laminate thickness = 1.90mm
(5 required)

D.L. = 505kN
L.L. = 275kN

Maximum design load = 780kN

NOTES:

1. BEARING REPOSITIONING: If the beams are erected at an ambient temperature higher than 27° C or lower than 4° C and the bearing shear deflection exceeds 1/6 of the bearing height at 15° C (±) 5°C, the beams shall be raised to allow the bearings to return to their undeformed shape at 15° C (±) 5° C.

2. ELASTOMERIC BEARINGS shall comply with item 516 and Articles 18.2.5 through 18.2.8 of Section 18, Bearing Devices, Division II, Construction of the AASHTO Standard Specification for Highway Bridges. Bearings shall be Grade 3, 50 durometer elastomer, and shall be subjected to the load testing requirements corresponding to Design Method A. Testing shall be included in the unit price bid for the bearings, each.

3. BASIS OF PAYMENT: The unit bid price shall include all materials, labor, testing, and incidentals necessary to furnish and install laminated elastomeric bearings. Payment will be made at the contract price for item 516, each, elastomeric bearings with internal laminates (neoprene).

4. Steel support plates at abutments shall be ASTM A572m, grade 50 steel. Plates shall be painted per system IZEU. Steel plates, anchor bolts, nuts and washers shall be included with item 511, concrete class C, abutments including footings, as per plan.

5. For additional information not shown, see Std. Dwg. PSID-1-95M.

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1848 Summit Road
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MRS	—	8502390	

BEARING DETAILS
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

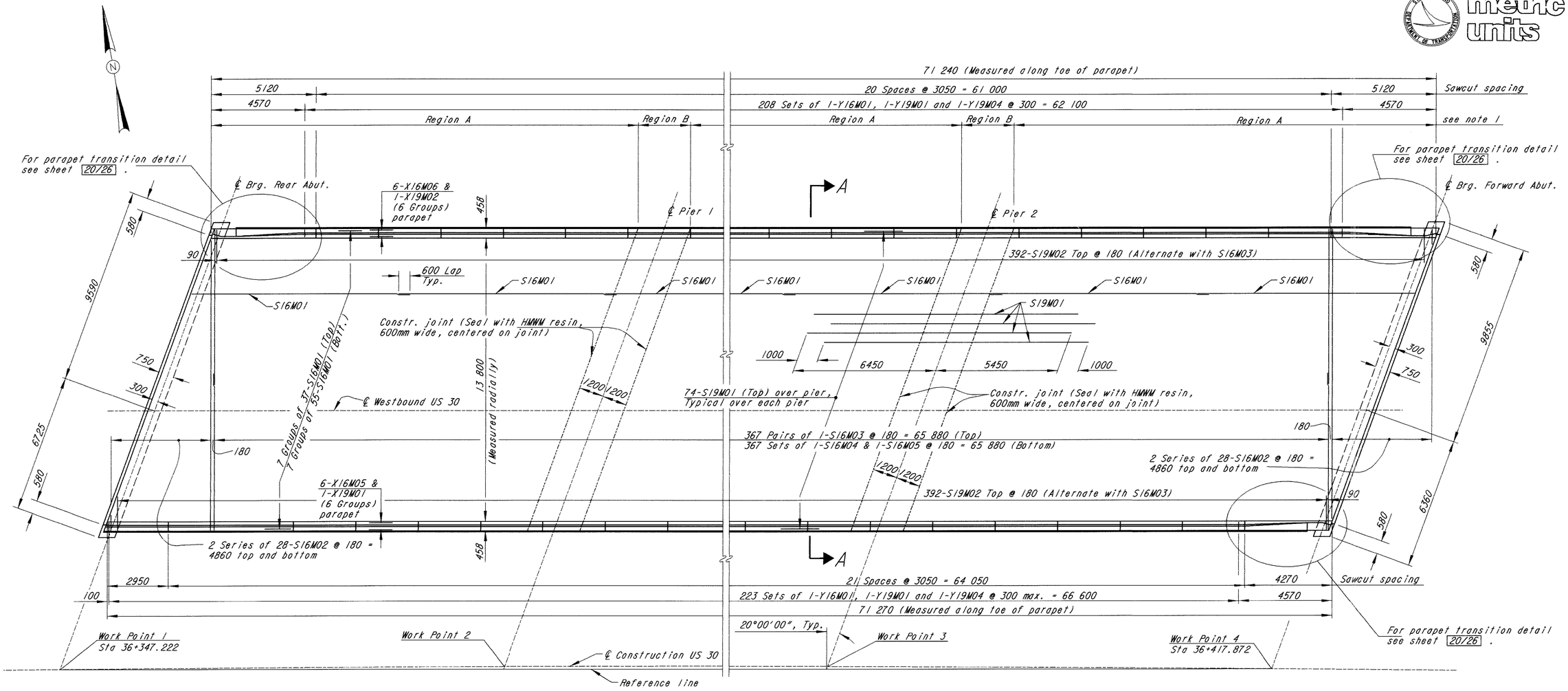
WYA/CRA-30-28.009/0.000

17 / 26

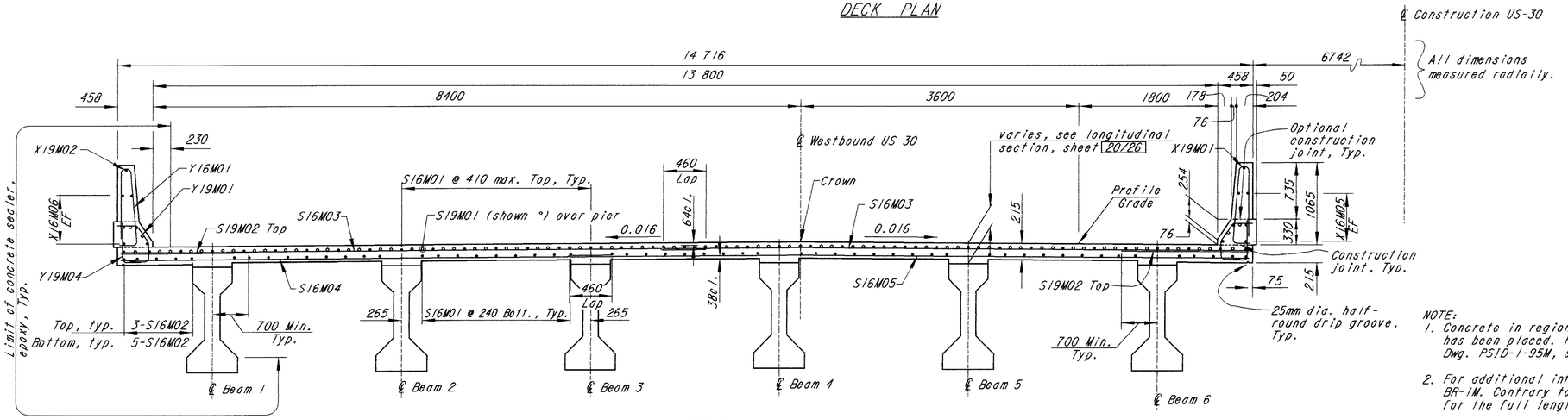
1762
2116

Filename: 36470i1.dgn

metric units



DECK PLAN



SECTION A-A

NOTE:
1. Concrete in region B shall be placed after the concrete in region A has been placed. For alternative deck placement procedure, see Std. Dwg. PSID-1-95M, sheet 7 of 7.
2. For additional information on parapets and sawcuts, see Std. Dwg. BR-1M. Contrary to the standard drawing, sawcuts shall be sealed for the full length.
3. Lap length for X16M05 and X16M06 bars is 450mm.

Filename: 36347dt1.dgn

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DECK PLAN LEFT BRIDGE
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

WYA/CRA-30-28.009/0.000

18 / 26

1763
2116

metric units

Work Point 1
Sta 36+347.222

Work Point 2

℄ Construction US 30

Reference line

20°00'00", Typ.

Work Point 3

Work Point 4
Sta 36+417.872

71 305 (Measured along toe of parapet)

21 Spaces @ 3050 = 64 050

223 Sets of 1-Y16M31, 1-Y19M31 and 1-Y19M34 @ 300 max. = 66 600

4270
4570

2985
Sawcut spacing
135
see note 1

Region A
Region B
Region A
Region B
Region A

For parapet transition detail
see sheet 20/26 .

℄ Brg. Rear Abut.

℄ Brg. Forward Abut.

6-X16M35 &
1-X19M31
(6 Groups)
parapet

458

℄ Pier 1

℄ Pier 2

A

392-S19M32 Top @ 180 (Alternate with S16M33)

6395
580
90
580
6680
300
750
9935
180
9550
580

S16M31
S19M31
600 Lap
Typ.
℄ Eastbound US 30
13 800 (Measured radially)
7 Groups of 37-S16M31 (Top)
7 Groups of 55-S16M31 (Bott.)

1000
6450
5450
1000

74-S19M31 (Top) over pier,
Typical over each pier

Constr. joint (Seal with HMWM resin,
600mm wide, centered on joint)

1200
1200

Constr. joint (Seal with HMWM resin,
600mm wide, centered on joint)

367 Pairs of 1-S16M33 @ 180 = 65 880 (Top)
367 Sets of 1-S16M34 & 1-S16M35 @ 180 = 65 880 (Bottom)

2 Series of 28-S16M32 @ 180 =
4860 top and bottom

392-S19M32 Top @ 180 (Alternate with S16M33)

6-X16M36 &
1-X19M32
(6 Groups)
parapet

2 Series of 28-S16M32 @ 180 =
4860 top and bottom

458

22

A

5165
4570

20 Spaces @ 3050 = 61 000

209 Sets of 1-Y16M31, 1-Y19M31 and 1-Y19M34 @ 300 max. = 62 195

5170
4570

Sawcut spacing

71 335 (Measured along toe of parapet)

For parapet transition detail
see sheet 20/26 .

For parapet transition detail
see sheet 20/26 .

DECK PLAN

℄ Construction US-30

6742
14 716
13 800
50
458
204
178
1800
3600
8400
458

All dimensions
measured radially.

Optional
construction
joint, Typ.

varies, see longitudinal
section, sheet 20/26 .

℄ Eastbound US 30

X19M31
76
254
Profile
Grade
215
S16M33
0.016
Crown
460
Lap
646
0.016
S16M31 @ 410 max. Top, Typ.
S19M31 (shown ∘) over pier
S16M33
S19M32 Top
230
X19M32
Y16M31
Y19M31
X16M35
EF
1065
735
330
X16M36
EF
76
Construction
joint, Typ.
215
75
S19M32 Top
S16M35
S16M34
Y19M34
460
Lap
265
S16M31 @ 240 Bott., Typ.
265
700 Min.
Typ.
3-S16M31 Top, typ.
5-S16M31 Bottom, typ.
Limit of concrete sealer,
epoxy, Typ.
25mm dia. half-
round drip groove, Typ.
700 Min.
Typ.
℄ Beam 7
℄ Beam 8
℄ Beam 9
℄ Beam 10
℄ Beam 11
℄ Beam 12

SECTION A-A

NOTE:
1. Concrete in region B shall be placed after the concrete in region A has been placed. For alternative deck placement procedure, see Std. Dwg. PSID-1-95M, sheet 7 of 7.
2. For additional information on parapets and sawcuts, see Std. Dwg. BR-1M. Contrary to the standard drawing, sawcuts shall be sealed for the full length.
3. Lap length for X16M35 and X16M36 bars is 450mm.

Filename: 3634602.dgn

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DESIGNED	FKL	DRAWN	ALH	REVIEWED	CRS	DATE	5-99
CHECKED	MPS	REVISED	—			STRUCTURE FILE NUMBER	8502390

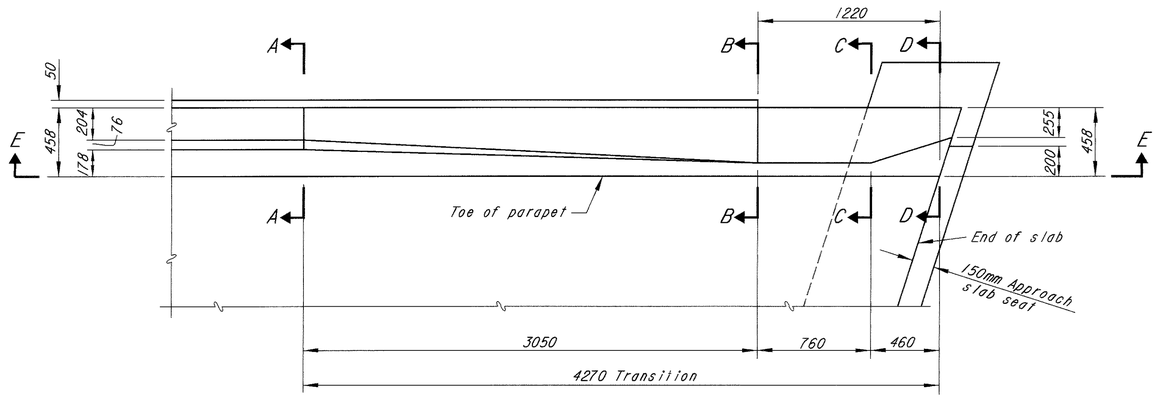
DECK PLAN RIGHT BRIDGE
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

WYA/CRA-30-28.009/0.000

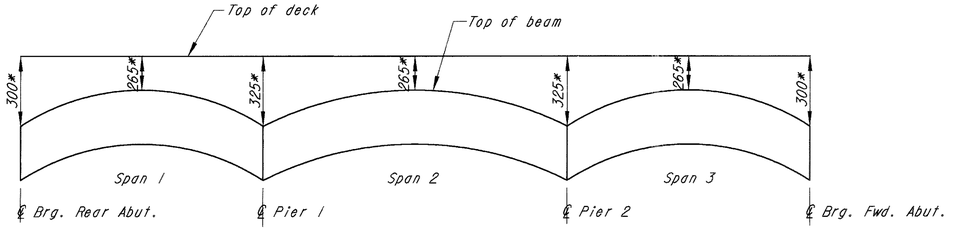
19 / 26

1764
2116

metric units

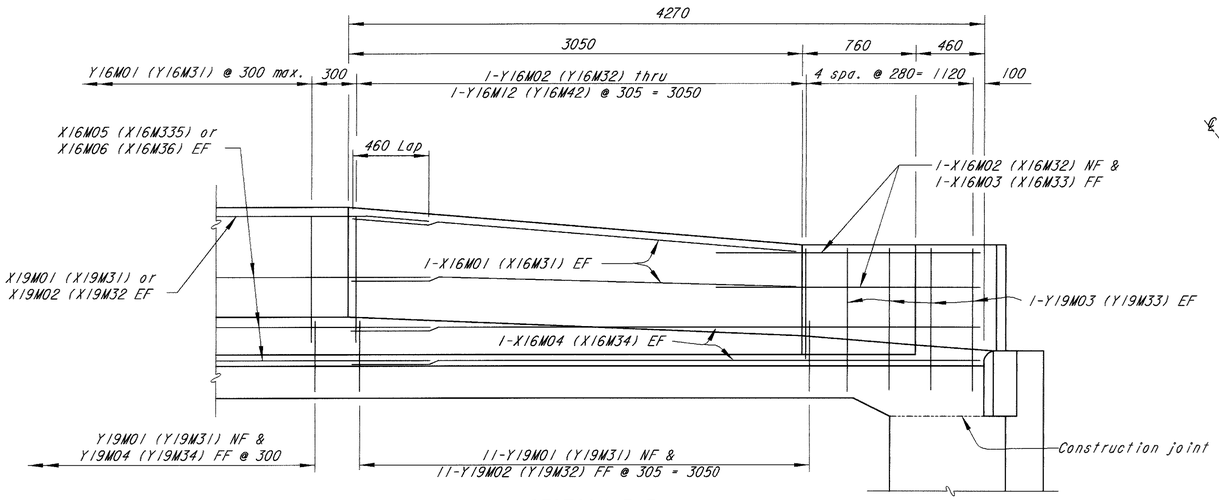


PLAN



LONGITUDINAL SECTION THROUGH DECK

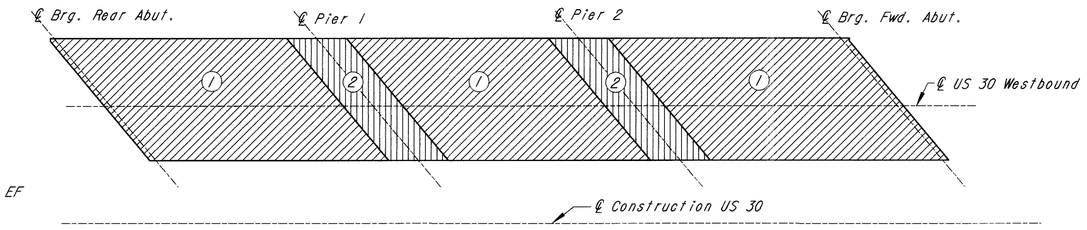
* This is the nominal dimension. The pay quantity of that portion of the deck concrete over the beams shall be based on the average of this dimension and the depth at beam bearings even though deviation from this average may occur because the top of the beam may not have the camber anticipated in the design; i.e., 45mm spans 1 & 3 & 90mm span 2. The camber of the beams shall be measured in the field before the deck is placed. The actual depth at mid span shall be the nominal dimension plus or minus the difference between actual and anticipated camber.



SECTION E-E

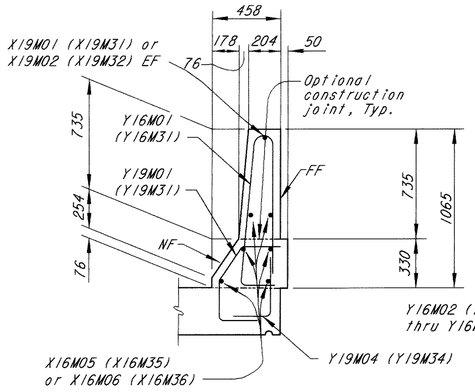
PARAPET TRANSITION DETAIL

(6 Required)

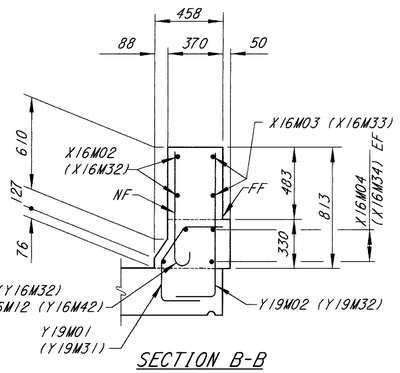


DECK POUR SEQUENCE

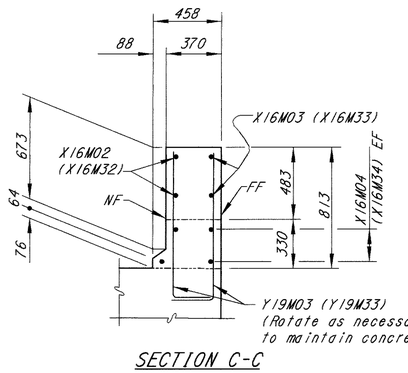
(Left bridge shown, right bridge similar)



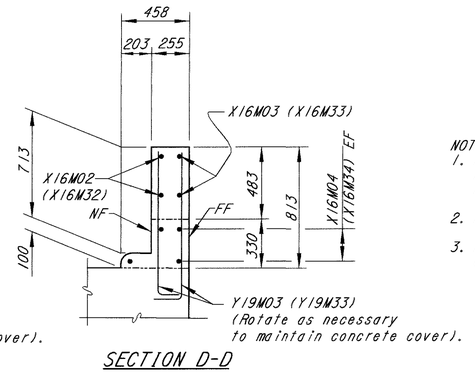
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:
1. FF = Far Face
   NF = Near Face
   EF = Each Face
2. For additional details see Std. Dwg. BR-1M.
3. Bar marks shown "( )" are for the right bridge. Unenclosed bar marks are for the left bridge.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	8502390	

DECK DETAILS
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

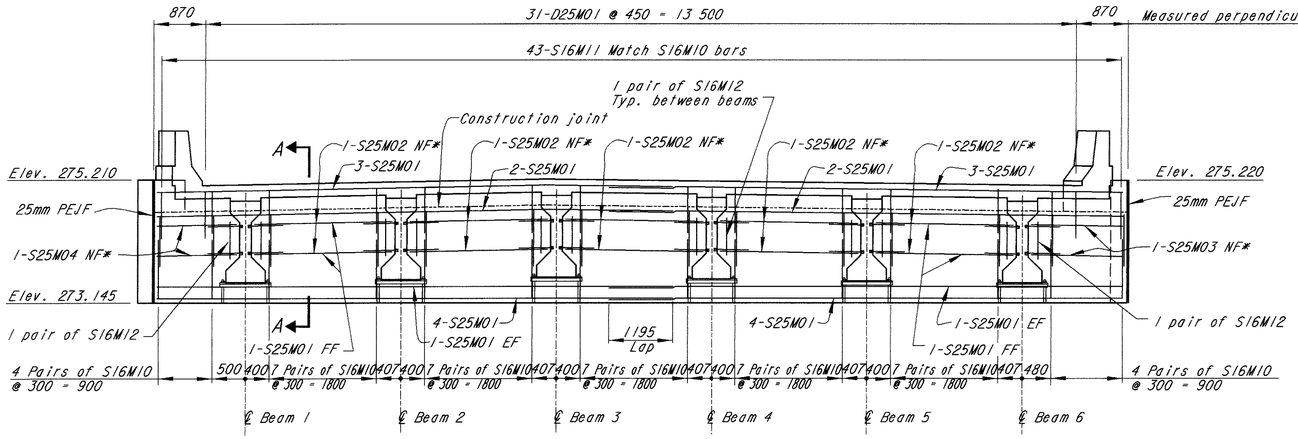
WYA/CRA-30-28.009/0.000

20 / 26

1765
2116

Filename: 36347dt3.dgn

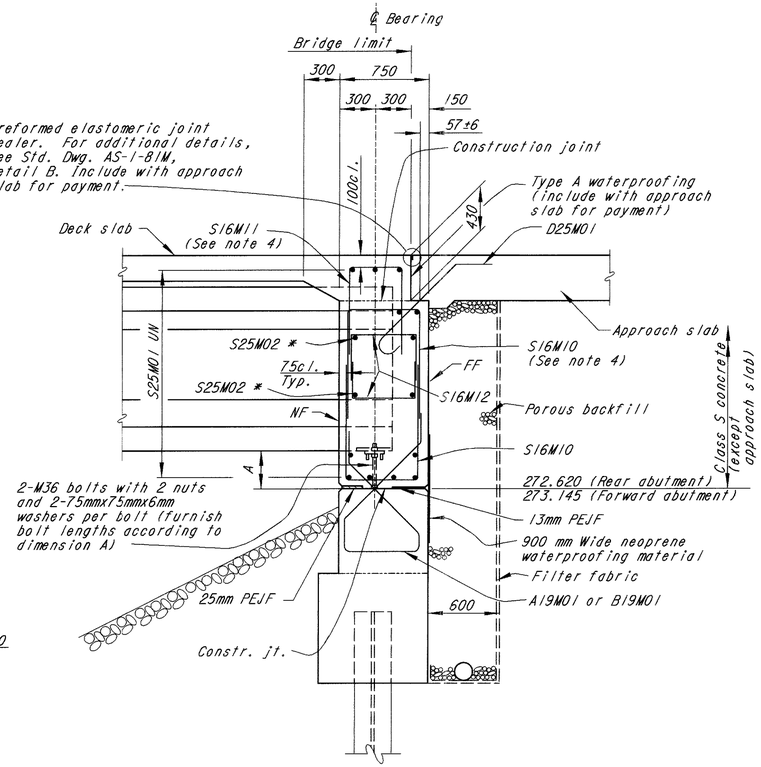
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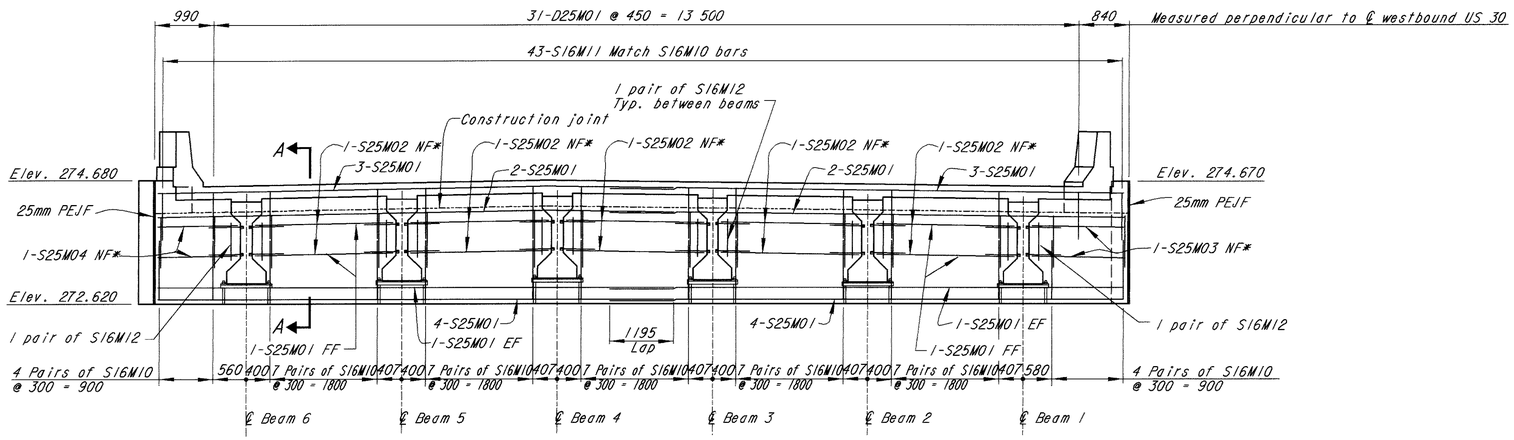
* Lap with threaded insert

END ELEVATION FORWARD ABUTMENT

DIMENSION A		
BEAM	REAR ABUT.	FORWARD ABUT.
1	300	300
2	332	333
3	365	366
4	397	399
5	359	363
6	313	317



SECTION A-A



* Lap with threaded insert

END ELEVATION REAR ABUTMENT

NOTES:
1. For additional details, see Standard Drawing ICD-1-82M.

2. EF = Each Face
   NF = Near Face
   FF = Far Face
   UN = Unless Noted
   PEJF = Preformed Expansion Joint Filler

3. DIAPHRAGM concrete encasing the beams shall be placed at least 48 hours before the actual deck concrete is poured.

4. All vertical bars shall be placed parallel to beams.

5. End-Diaphragm Concrete shall be placed during days when sudden temperature changes are unlikely and be completed at least 4 hours prior to the concrete placement day's peak ambient temperature.

6. ABUTMENT BACKFILL above the bridge seat shall not be placed until after the concrete deck slab has cured for at least 48 hours. Backfill shall then be placed simultaneously at both abutments.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	5/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS		8502390	

DECK DETAILS LEFT BRIDGE
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

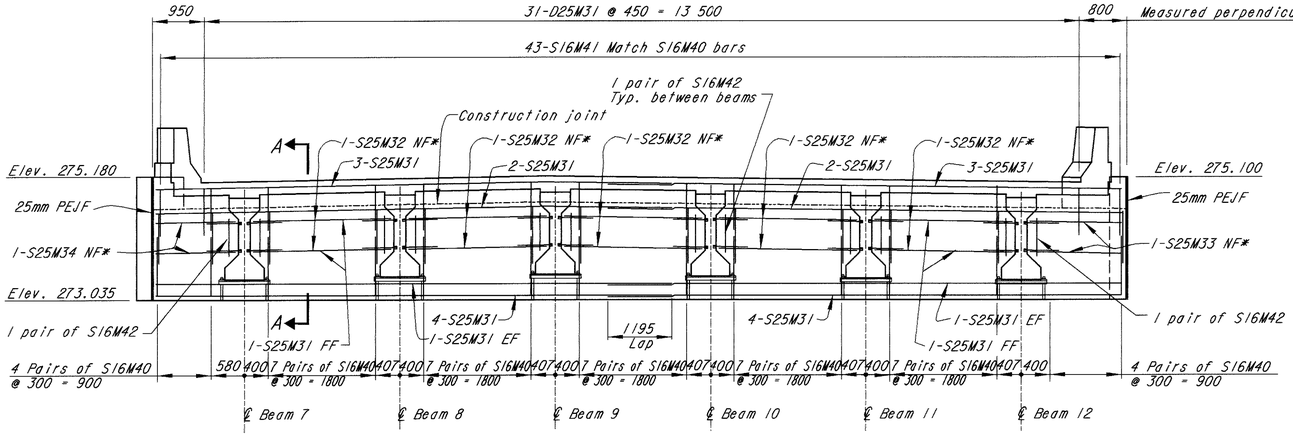
WYA/CRA-30-28.009/0.000

21/26

1766
2116

File Name = 36347054.dgn

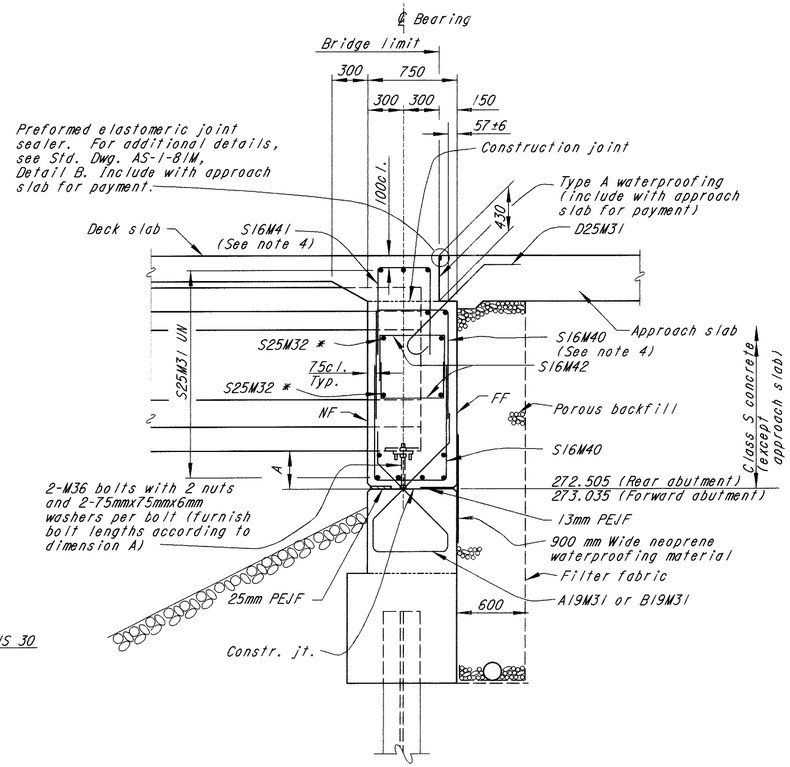
metric units



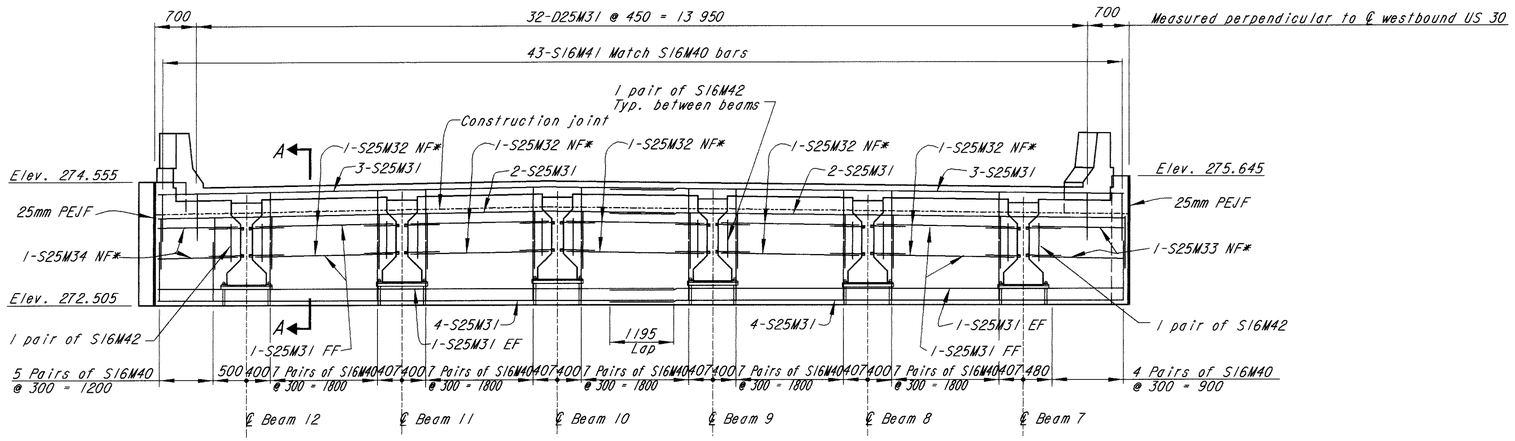
* Lap with threaded insert

END ELEVATION FORWARD ABUTMENT

DIMENSION A		
BEAM	REAR ABUT.	FORWARD ABUT.
7	381	382
8	413	414
9	438	437
10	392	391
11	346	345
12	300	300



SECTION A-A



* Lap with threaded insert

END ELEVATION REAR ABUTMENT

NOTES:
1. For additional details, see Standard Drawing ICD-1-82M.
2. EF = Each Face
   NF = Near Face
   FF = Far Face
   UN = Unless Noted
   PEJF = Preformed Expansion Joint Filler
3. DIAPHRAGM concrete encasing the beams shall be placed at least 48 hours before the actual deck concrete is poured.
4. All vertical bars shall be placed parallel to beams.
5. End-Diaphragm Concrete shall be placed during days when sudden temperature changes are unlikely and be completed at least 4 hours prior to the concrete placement day's peak ambient temperature.
6. ABUTMENT BACKFILL above the bridge seat shall not be placed until after the concrete deck slab has cured for at least 48 hours. Backfill shall then be placed simultaneously at both abutments.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

REVIEWED	DATE
CRS	5/99
STRUCTURE FILE NUMBER	
8502390	

DRAWN	REVISED
ALH	
DESIGNED	REVISED
FHL	
CHECKED	
MRS	

DECK DETAILS RIGHT BRIDGE

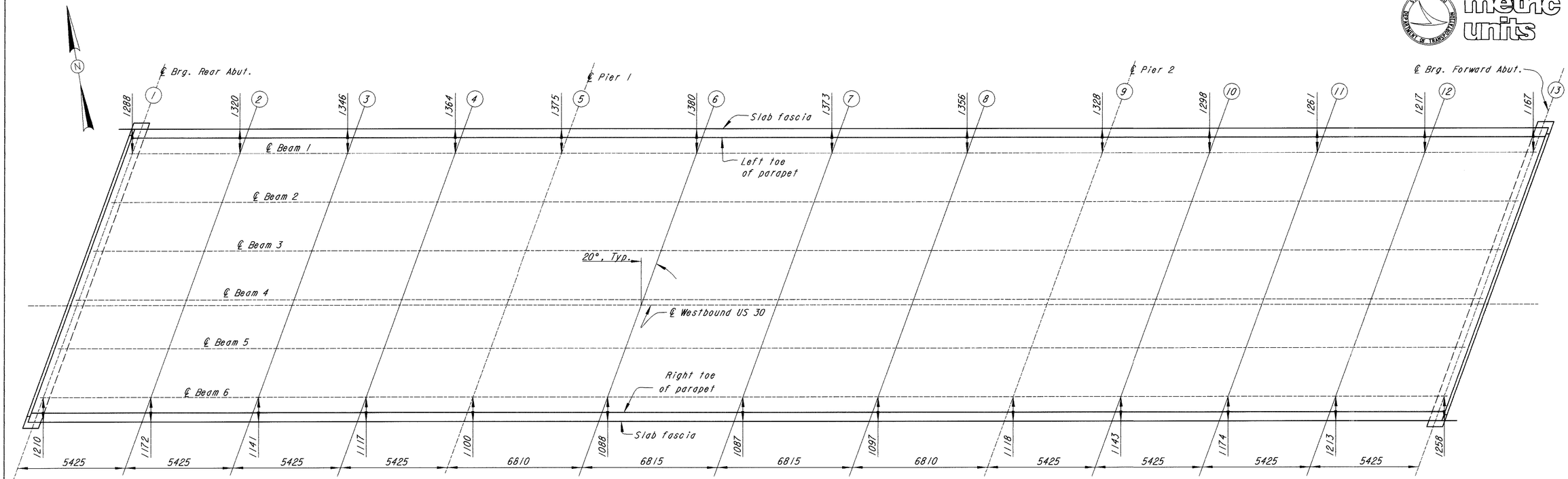
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

WYA/CRA-30-28.009/0.000

22/26

1767/2116

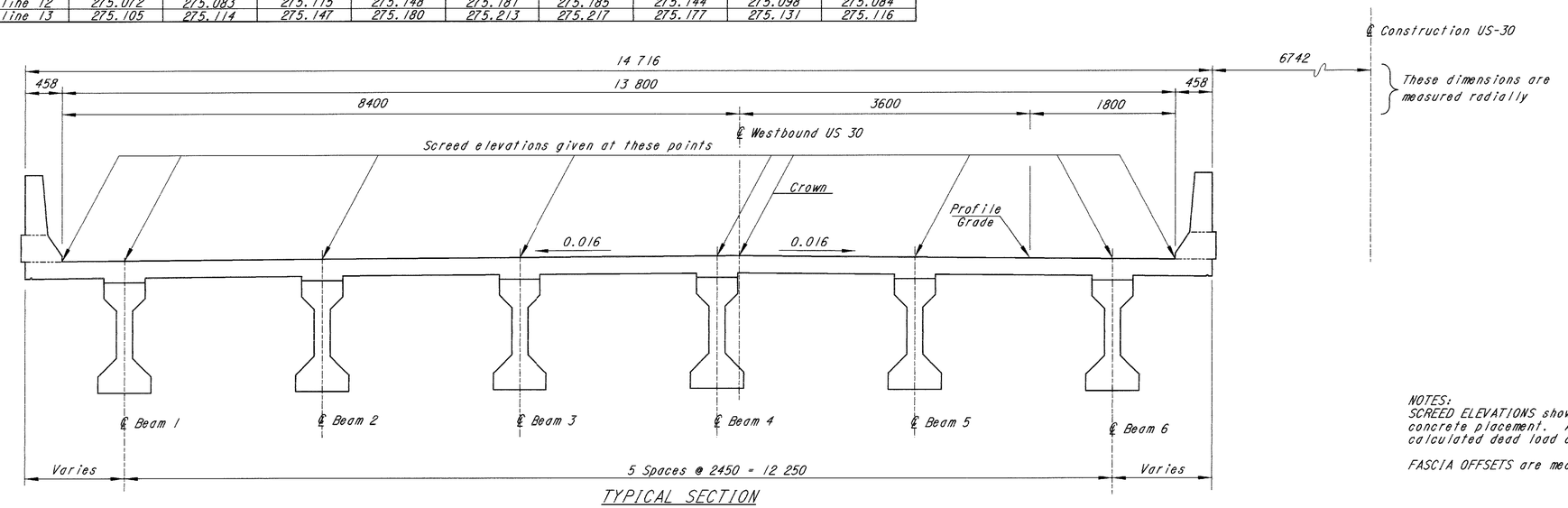
File name - 36347DS5.dgn



PLAN

SCREED ELEVATIONS

Location	Left toe of parapet	Beam 1	Beam 2	Beam 3	Beam 4	℄ US 30 W.B.	Beam 5	Beam 6	Right toe of parapet
Grid line 1	274.578	274.589	274.621	274.654	274.686	274.689	274.648	274.602	274.588
Grid line 2	274.626	274.638	274.670	274.703	274.735	274.738	274.695	274.650	274.636
Grid line 3	274.670	274.682	274.714	274.746	274.779	274.781	274.738	274.693	274.680
Grid line 4	274.707	274.719	274.752	274.784	274.817	274.819	274.776	274.730	274.717
Grid line 5	274.740	274.752	274.784	274.817	274.849	274.851	274.808	274.762	274.750
Grid line 6	274.813	274.825	274.857	274.890	274.922	274.924	274.881	274.835	274.823
Grid line 7	274.870	274.883	274.915	274.948	274.980	274.982	274.939	274.893	274.881
Grid line 8	274.914	274.926	274.959	274.991	275.024	275.026	274.983	274.937	274.925
Grid line 9	274.943	274.955	274.987	275.020	275.053	275.055	275.012	274.966	274.954
Grid line 10	274.991	274.003	275.035	275.068	275.101	275.103	275.061	275.015	275.003
Grid line 11	275.035	275.046	275.078	275.111	275.144	275.147	275.105	275.060	275.046
Grid line 12	275.072	275.083	275.115	275.148	275.181	275.185	275.144	275.098	275.084
Grid line 13	275.105	275.114	275.147	275.180	275.213	275.217	275.177	275.131	275.116



TYPICAL SECTION

NOTES:
SCREED ELEVATIONS shown are for the deck slab surface prior to concrete placement. Allowance has been made for anticipated calculated dead load deflections.

FASCIA OFFSETS are measured perpendicular to the girder.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	FKL	DRAWN	ALH	REVIEWED	CRS	DATE	5-99
CHECKED	MRS	REVISED	—	STRUCTURE FILE NUMBER			8502390

SCREED ELEVATIONS AND FASCIA OFFSETS LEFT BRIDGE

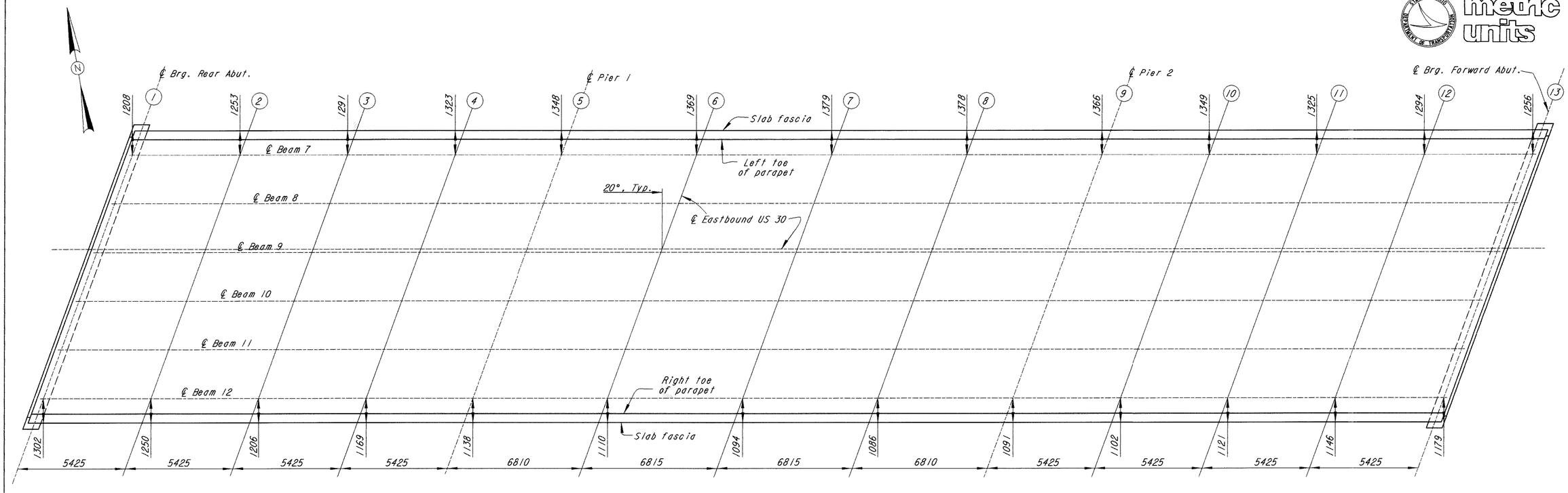
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

WYA/CRA-30-28.009/0.000

23/26

1768
2116

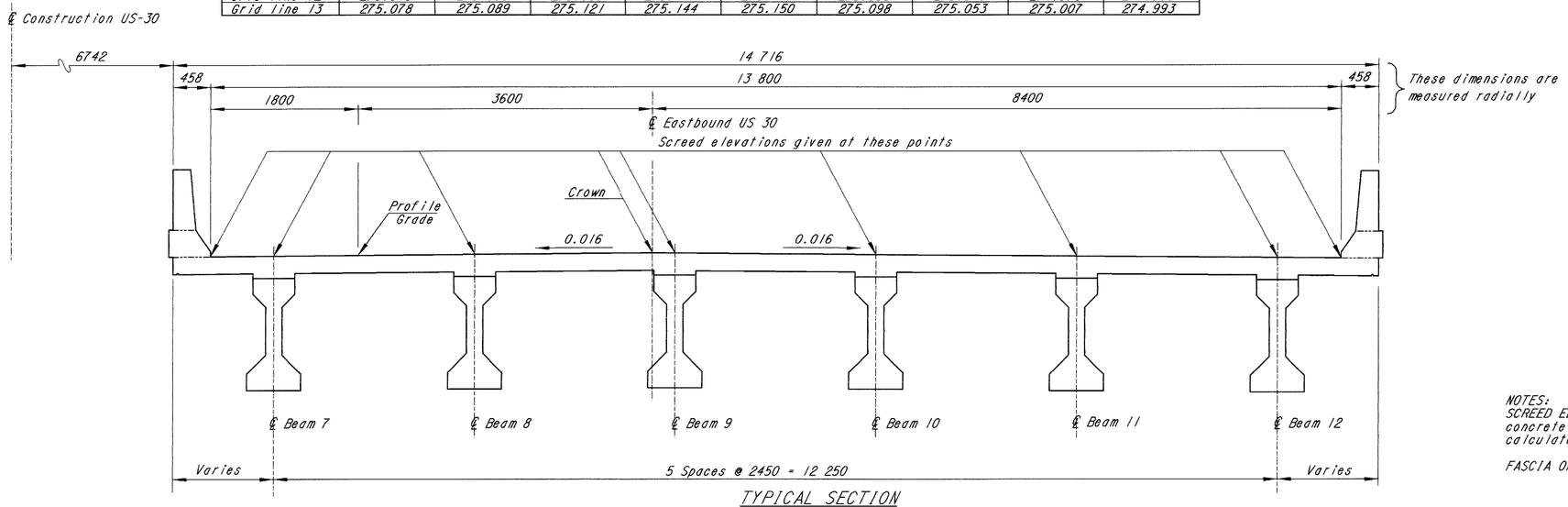
Filename: 36347se1.dgn



PLAN

SCREED ELEVATIONS

Location	Left toe of parapet	Beam 7	Beam 8	Beam 9	℄ US 30 E.B.	Beam 10	Beam 11	Beam 12	Right toe of parapet
Grid line 1	274.547	274.557	274.589	274.614	274.618	274.568	274.522	274.476	274.460
Grid line 2	274.596	274.606	274.639	274.662	274.667	274.616	274.570	274.524	274.509
Grid line 3	274.640	274.651	274.683	274.705	274.711	274.659	274.613	274.567	274.553
Grid line 4	274.678	274.689	274.721	274.742	274.749	274.696	274.650	274.604	274.591
Grid line 5	274.710	274.722	274.754	274.775	274.782	274.729	274.683	274.637	274.624
Grid line 6	274.784	274.796	274.828	274.847	274.855	274.802	274.756	274.710	274.697
Grid line 7	274.842	274.854	274.886	274.905	274.913	274.860	274.814	274.768	274.756
Grid line 8	274.886	274.898	274.931	274.950	274.958	274.904	274.858	274.812	274.800
Grid line 9	274.915	274.927	274.960	274.979	274.987	274.933	274.887	274.841	274.829
Grid line 10	274.964	274.976	275.008	275.028	275.036	274.982	274.936	274.891	274.878
Grid line 11	275.008	275.019	275.052	275.072	275.079	275.027	274.981	274.935	274.922
Grid line 12	275.045	275.056	275.089	275.111	275.117	275.065	275.019	274.973	274.960
Grid line 13	275.078	275.089	275.121	275.144	275.150	275.098	275.053	275.007	274.993



TYPICAL SECTION

NOTES:
SCREED ELEVATIONS shown are for the deck slab surface prior to concrete placement. Allowance has been made for anticipated calculated dead load deflections.

FASCIA OFFSETS are measured perpendicular to the girder.

Filename: 36347sh2.dgn

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	FKL	REVIEWED	CRS	DATE	5-99
CHECKED	MRS	DRAWN	ALH	STRUCTURE FILE NUMBER	8502390
		REVISED	—		

SCREED ELEVATIONS AND FASCIA OFFSETS RIGHT BRIDGE
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

WYA/CRA-30-28.009/0.000

24/26

1769
2116

REAR ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A25MO1	8	13 450	Str.						
A25MO2	8	13 340	Str.						
A19MO1	43	3140	41						
A16MO1	56	3160	8	770	770				
A16MO2	36	2870	2	1175	600	1175			
A16MO3	16	3920	2	1700	600	1700			
A16MO4	12	12 875	Str.						
A16MO5	4	3520	2	1500	600	1500			
A16MO6	1	4320	2	1900	600	1900			
	1	1520		500		500			
A16MO7	Series of	to	2	to	600	to			408
	8	4380		1930		1930			
	1	1480		480		480			
A16MO8	Series of	to	2	to	600	to			360
	9	4500		1920		1920			
A16MO9	1	4360	2	1975	640	1975			
A16M10	1	4250	Str.						
A16M11	1	3600	Str.						
A16M12	1	2400	Str.						
A16M13	1	1300	Str.						
A16M14	1	4500	Str.						
A16M15	1	3875	Str.						
A16M16	1	2675	Str.						
A16M17	1	1575	Str.						
A16M18	2	4500	Str.						
A16M19	1	4510	2	1975	640	1975			
A16M20	1	4350	Str.						
A16M21	1	3800	Str.						
A16M22	1	2800	Str.						
A16M23	1	1600	Str.						
A16M24	1	4100	Str.						
A16M25	1	4050	Str.						
A16M26	1	3050	Str.						
A16M27	1	1850	Str.						
A16M28	2	4475	17	375	4100	150	345		
A13MO1	42	2435	8	515	740				

FORWARD ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B25MO1	8	13 450	Str.						
B25MO2	8	13 340	Str.						
B19MO1	43	3140	41						
B16MO1	56	3160	8	770	770				
B16MO2	36	2920	2	1200	600	1200			
B16MO3	16	3970	2	1725	600	1725			
B16MO4	12	12 875	Str.						
B16MO5	4	3590	2	1535	600	1535			
B16MO6	1	4500	2	1990	600	1990			
	1	1520		500		500			
B16MO7	Series of	to	2	to	600	to			370
	8	4110		1795		1795			
	1	1520		500		500			
B16MO8	Series of	to	2	to	600	to			390
	8	4250		1865		1865			
B16MO9	1	4540	2	1990	640	1990			
B16M10	1	4525	Str.						
B16M11	1	3900	Str.						
B16M12	1	2800	Str.						
B16M13	1	1900	Str.						
B16M14	1	4255	Str.						
B16M15	1	3630	Str.						
B16M16	1	2530	Str.						
B16M17	1	1630	Str.						
B16M18	2	4575	17	375	4200	150	345		
B16M19	1	4560	2	2000	640	2000			
B16M20	1	4200	Str.						
B16M21	1	3600	Str.						
B16M22	1	2500	Str.						
B16M23	1	1400	Str.						
B16M24	1	4470	Str.						
B16M25	1	3870	Str.						
B16M26	1	2770	Str.						
B16M27	1	1670	Str.						
B16M28	2	4350	Str.						
B13MO1	42	2435	8	515	740				

PIER 1 REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
P32MO1	24	3750	1	550	3300				
P32MO2	24	7275	Str.						
P29MO1	6	11 700	Str.						
P29MO2	6	6005	1	785	5310				
P29MO3	6	11 405	1	785	10 710				
P25MO1	84	3100	Str.						
P25MO2	84	3650	13	3100					
P16MO1	12	2660	17	1330	1330	290	1300		

PIER 1 REINFORCING STEEL LIST (CONT.)

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
P13MO1	64	3725	8	1100	700				
	4	3125		800					
P13MO2	Series of	to	8	to	700				100
	6	3625		1050					
P13MO3	20	7350	Str.						
SP13MO1	3	6375	21	6375	115	760			

PIER 2 REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
R32MO1	24	3750	1	550	3300				
R32MO2	24	7500	Str.						
R29MO1	6	11 700	Str.						
R29MO2	6	6005	1	785	5310				
R29MO3	6	11 405	1	785	10 710				
R25MO1	84	3100	Str.						
R25MO2	84	3650	13	3100					
R25MO3	12	650	Str						
R16MO1	12	2660	17	1330	1330	290	1300		
R13MO1	64	3725	8	1100	700				
	4	3125		800					
R13MO2	Series of	to	8	to	700				100
	6	3625		1050					
R13MO3	20	7350	Str.						
SR13MO1	3	6610	21	6610	115	760			

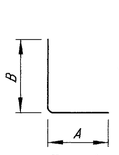
SUPERSTRUCTURE REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
D25MO1	62	1620	14	430	915	305	305		
S25MO1	52	8650	Str.						
S25MO2	20	2300	Str.						
S25MO3	4	1425	Str.						
S25MO4	4	1350	Str.						
S19MO1	148	11 900	Str.						
S19MO2	784	2100	Str.						
S19MO3	20	2000	Str.						
S19MO4	40	2305	Str.						
S19MO5	20	1945	Str.						
S19MO6	100	2150	Str.						
S19MO7	50	1790	Str.						
Y19MO1	464	750	3	125	200	216	230	152	
	3	1205			965				
Y19MO2	Series of	to	1	280	to				25
	11	1455			1215				
Y19MO3	24	1415	1	280	1185				
Y19MO4	431	680	1	280	450				
S16MO1	644	10 700	Str.						495
	4	735							
S16MO2	Series of	to	Str.						
	28	14 100							
S16MO3	734	7540	Str.						
S16MO4	367	6450	Str.			800	250		
S16MO5	367	8790	Str.			400			
S16MO6	80	3710	24	250	1285	600			
S16MO7	40	1520	2	400	800	400			
S16MO8	350	1270	2	600	150	970			
S16MO9	100	870	2	400	150	780			
S16M10	172	2500	2	970	640	400			
S16M11	86	1960	2	780	480				
S16M12	48	1360	2	400	640				
X19MO1	6	11650	Str.						
X19MO2	6	11 050	Str.						
						432			
X16MO1	12	3050	Str.						
X16MO2	6	1725	18	555	738				
X16MO3	6	1725	Str.						
X16MO4	12	4250	Str.						
X16MO5	36	11 650	Str.						
X16MO6	36	11 050	Str.			205	1174	38	
Y16MO1	431	2130	26	915	990				
Y16MO2	3	1170	12	990					
Y16MO3	3	1165	12	965					
Y16MO4	3	1120	12	940					
Y16MO5	3	1095	12	915					
Y16MO6	3	1070	12	890					
Y16MO7	3	1045	12	865					
Y16MO8	3	1020	12	840					
Y16MO9	3	995	12	815					
Y16M10	3	970	12	790					
Y16M11	3	945	12	765					
Y16M12	3	920	12	740					
S13MO1	12	3110	4	1445	220	1445	70		
S13MO2	12	1460	42	155	600	220	220		
S13MO3	12	1020	42	140	430	135	135		

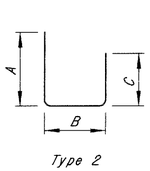
STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

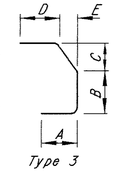
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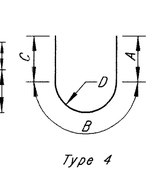
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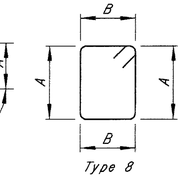
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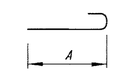
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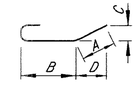
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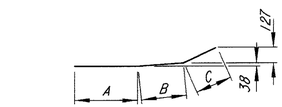
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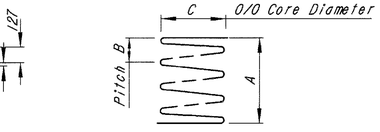
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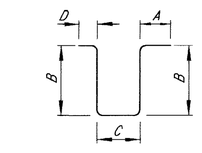
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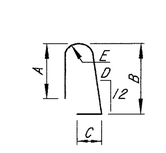
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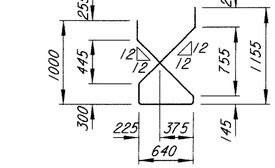
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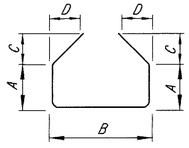
Type 26



Type 41



Type 42



NOTES:

1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.
3. SPIRAL REINFORCING BARS: The "length" shown in the steel list for the spiral bars is the length of the spiral along the axis of the spiral. One and one-half closed-coil turns shall be provided at the ends of each spiral unit.
4. SPACERS: Concrete spacers or other approved noncorrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 3050 mm) to insure concentric spacing for the entire cage length. Spacers shall be constructed of approved material equal in quality and durability to the concrete specified for the shaft. The spacers shall have adequate dimensions to ensure a minimum 75 mm clear space between the outside of the reinforcing cage and the design dimension of the drilled shaft or column. Cylindrical concrete feet (bottom supports) shall be provided to ensure that the bottom of the cage is maintained at the proper distance above the base.

DESIGN AGENCY
BALKE ENGINEERS
1648 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	5-99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	8902390	

REINFORCING STEEL LIST LEFT BRIDGE
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

WYA/CRA-30-28.009/0.000

25/26

1770
2116

File name: 36347r23.dgn

REAR ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A25M31	8	13 450	Str.						
A25M32	8	13 340	Str.						
A19M31	43	3140	41						
A16M31	56	3160	8	770	770				
A16M32	36	2640	2	1060	600	1060			
A16M33	16	3690	2	1585	600	1585			
A16M34	12	12 875	Str.						
A16M35	4	3390	2	1435	600	1435			
A16M36	1	4470	2	1975	600	1975			
	1	1570		525		525			
A16M37	Series of	to	2	to	600	to			408
	8	4230		1855		1955			
	1	1570		525		525			
A16M38	Series of	to	2	to	600	to			390
	8	4300		1890		1890			
A16M39	1	4510	2	1975	640	1975			
A16M40	1	4470	Str.						
A16M41	1	4100	Str.						
A16M42	1	2900	Str.						
A16M43	1	1800	Str.						
A16M44	1	4185	Str.						
A16M45	1	3815	Str.						
A16M46	1	2615	Str.						
A16M47	1	1515	Str.						
A16M48	2	4525	17	375	4150	150	345		
A16M49	1	4840	2	2160	600	2160			
A16M50	1	4140	Str.						
A16M51	1	3900	Str.						
A16M52	1	2700	Str.						
A16M53	1	1600	Str.						
A16M54	1	4425	Str.						
A16M55	1	4185	Str.						
A16M56	1	2985	Str.						
A16M57	1	1885	Str.						
A16M58	2	4400	Str.						
A13M31	42	2435	8	515	740				

FORWARD ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B25M31	8	13 450	Str.						
B25M32	8	13 340	Str.						
B19M31	43	3140	41						
B16M31	56	3160	8	770	770				
B16M32	36	2700	2	1090	600	1090			
B16M33	16	3750	2	1615	600	1615			
B16M34	12	12 875	Str.						
B16M35	4	3590	2	1535	600	1535			
B16M36	1	4660	2	2070	600	2070			
	1	1660		570		570			
B16M37	Series of	to	2	to	600	to			408
	8	4520		2000		2000			
	1	1620		550		550			
B16M38	Series of	to	2	to	600	to			340
	9	4340		1910		1910			
B16M39	1	4700	2	2070	640	2070			
B16M40	1	4300	Str.						
B16M41	1	3900	Str.						
B16M42	1	2700	Str.						
B16M43	1	1500	Str.						
B16M44	1	4570	Str.						
B16M45	1	4170	Str.						
B16M46	1	2970	Str.						
B16M47	1	1770	Str.						
B16M48	2	4450	Str.						
B16M49	1	4540	2	1990	640	1990			
B16M50	1	4400	Str.						
B16M51	1	3900	Str.						
B16M52	1	2900	Str.						
B16M53	1	1900	Str.						
B16M54	1	4130	Str.						
B16M55	1	3630	Str.						
B16M56	1	2630	Str.						
B16M57	1	1630	Str.						
B16M58	2	4490	17	375	4115	145	345		
B13M31	42	2435	8	515	740				

PIER 1 REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
P32M31	24	3750	1	550	3300				
P32M32	24	7160	Str.						
P29M31	6	11 700	Str.						
P29M32	6	6005	1	785	5310				
P29M33	6	11 405	1	785	10 710				
P25M31	84	3100	Str.						
P25M32	84	3650	13	3100					
P16M31	12	2660	17	1330	1330	290	1300		

PIER 1 REINFORCING STEEL LIST (CONT.)

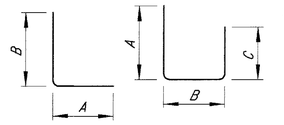
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
P13M31	64	3725	8	1100	700				
	2	3125		800					
P13M32	Series of	to	8	to	700				100
	6	3625		1050					
P13M33	20	7350	Str.						
	2	3295		885					
P13M34	Series of	to	8	to	700				100
	6	3795		1175					
SP13M31	3	6260	21	6260	115	760			

PIER 2 REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
R32M31	24	3750	1	550	3300				
R32M32	24	7400	Str.						
R29M31	6	11 700	Str.						
R29M32	6	6005	1	785	5310				
R29M33	6	11 405	1	785	10 710				
R25M31	84	3100	Str.						
R25M32	84	3650	13	3100					
R25M33	12	650	Str.						
R16M31	12	2660	17	1330	1330	290	1300		
R13M31	64	3725	8	1100	700				
	2	3125		800					
R13M32	Series of	to	8	to	700				100
	6	3625		1050					
R13M33	20	7350	Str.						
	2	3295		885					
R13M34	Series of	to	8	to	700				100
	6	3795		1135					
SR13M31	3	6495	21	6495	115	760			

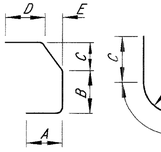
SUPERSTRUCTURE REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
D25M31	63	1620	14	430	915	305	305		
S25M31	52	8650	Str.						
S25M32	20	2300	Str.						
S25M33	4	1250	Str.						
S25M34	4	1450	Str.						
S19M31	148	11 900	Str.						
S19M32	784	2100	Str.						
S19M33	20	2000	Str.						
S19M34	40	2305	Str.						
S19M35	20	1945	Str.						
S19M36	100	2150	Str.						
S19M37	50	1790	Str.						
Y19M31	465	750	3	125	200	216	230	152	
	3	1205			965				
Y19M32	Series of	to	1	280	to				25
	11	1455			1215				
Y19M33	24	1415	1	280	1185				
Y19M34	432	680	1	280	450				
S16M31	644	10 700	Str.						
	4	735			965				
S16M32	Series of	to	1	280	to				495
	28	14 100			1215				
S16M33	734	7540	Str.						
S16M34	367	6450	Str.						
S16M35	367	8790	Str.						
S16M36	80	3710	24	250	1285	800	250		
S16M37	40	1520	2	400	800	400			
S16M38	350	1270	2	600	150	600			
S16M39	100	870	2	400	150	400			
S16M40	174	2500	2	970	640	970			
S16M41	86	1960	2	780	480	780			
S16M42	48	1360	2	400	640	400			
X19M31	6	11 675	Str.						
X19M32	6	11 075	Str.						
X16M31	12	3050	Str.						
X16M32	6	1725	18	555	738	432			
X16M33	6	1725	Str						
X16M34	12	4250	Str.						
X16M35	36	11 675	Str.						
X16M36	36	11 075	Str.						
Y16M31	432	2130	26	915	990	205	1174	38	
Y16M32	3	1170	12	990					
Y16M33	3	1165	12	965					
Y16M34	3	1120	12	940					
Y16M35	3	1095	12	915					
Y16M36	3	1070	12	890					
Y16M37	3	1045	12	865					
Y16M38	3	1020	12	840					
Y16M39	3	995	12	815					
Y16M40	3	970	12	790					
Y16M41	3	945	12	765					
Y16M42	3	920	12	740					
S13M31	12	3110	4	1445	220	1445	70		
S13M32	12	1460	42	155	600	220	220		
S13M33	12	1020	42	140	430	135	135		

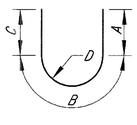


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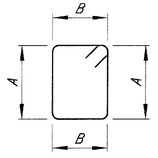
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Type 3



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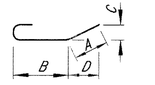
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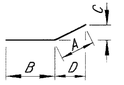
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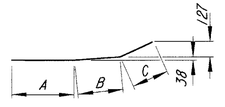
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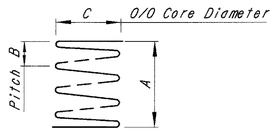
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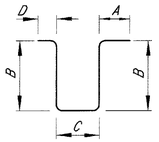
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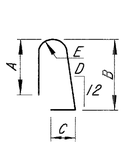
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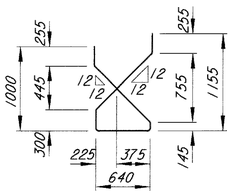
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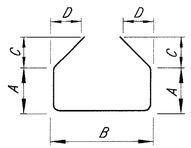
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Type 26



Type 41



Type 42

NOTES:

1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.
3. SPIRAL REINFORCING BARS: The "length" shown in the steel list for the spiral bars is the length of the spiral along the axis of the spiral. One and one-half closed-coil turns shall be provided at the ends of each spiral unit.
4. SPACERS: Concrete spacers or other approved noncorrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 3050 mm) to insure concentric spacing for the entire cage length. Spacers shall be constructed of approved material equal in quality and durability to the concrete specified for the shaft. The spacers shall have adequate dimensions to ensure a minimum 75 mm clear space between the outside of the reinforcing cage and the design dimension of the drilled shaft or column. Cylindrical concrete feet (bottom supports) shall be provided to ensure that the bottom of the cage is maintained at the proper distance above the base.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	5/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	8502390	

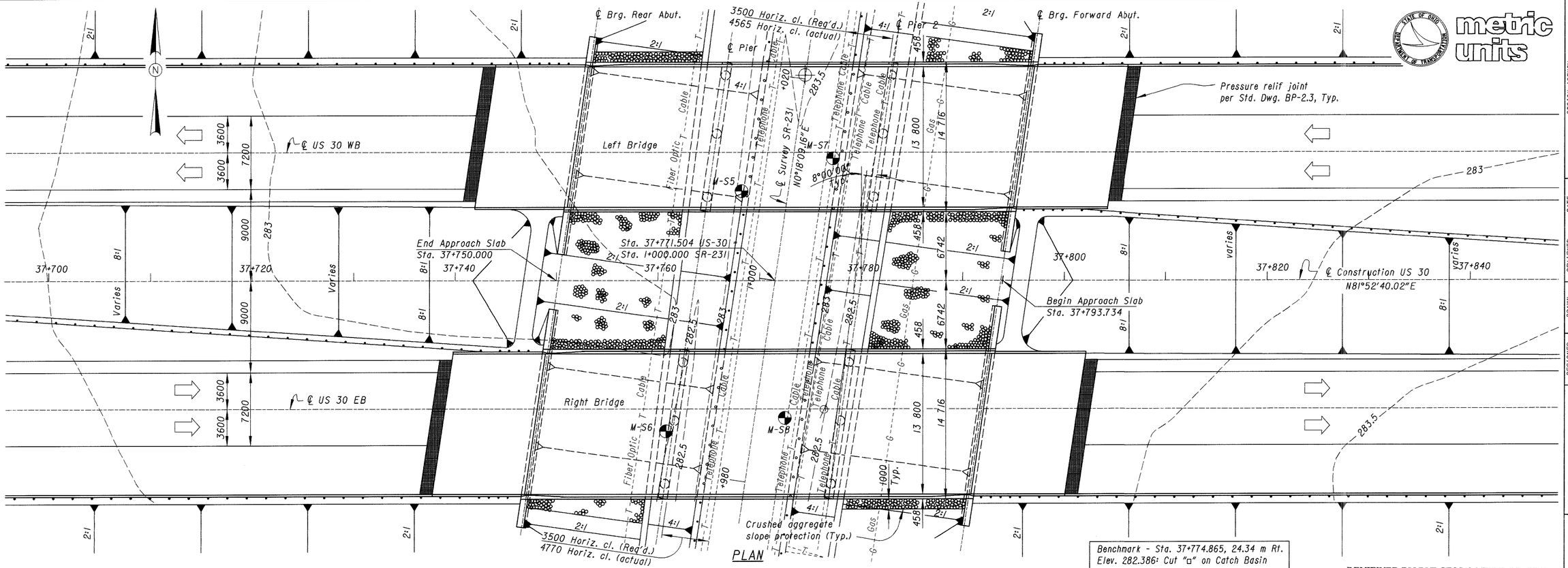
REINFORCING STEEL LIST RIGHT BRIDGE
BRIDGE NO. WYA-30-36347
OVER THE BROKEN SWORD CREEK

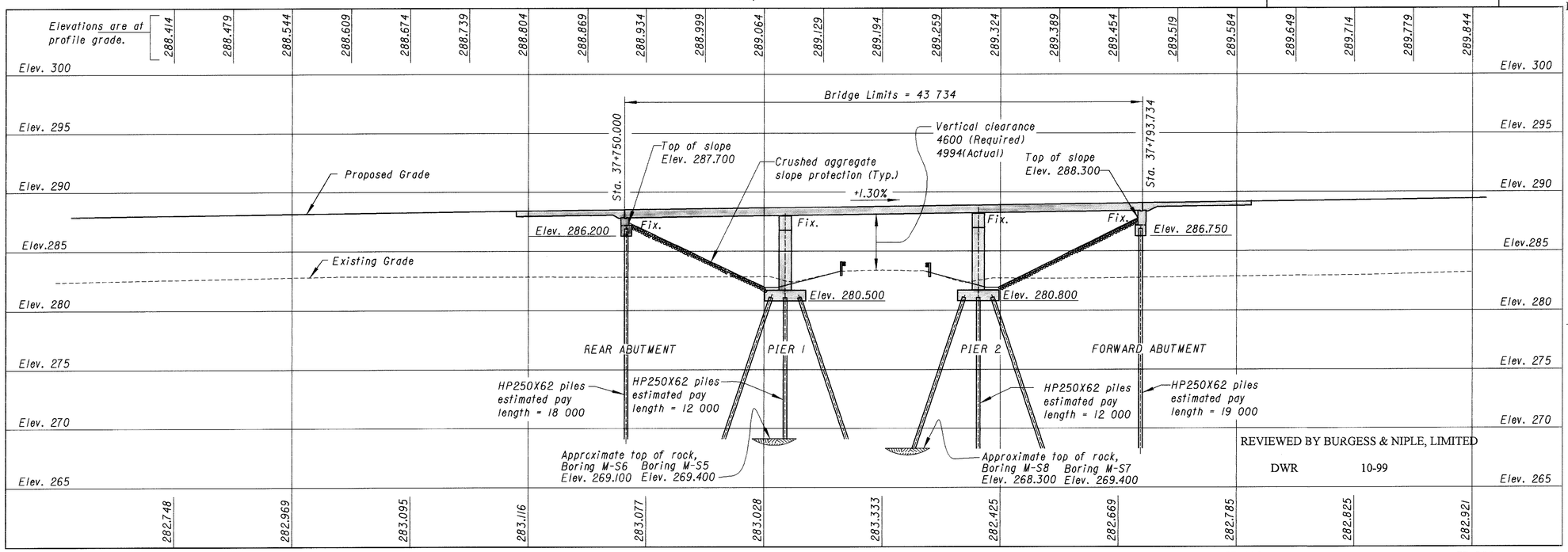
WYA/CRA-30-28.009/0.000

26 | 26

1771
2116

F:\Inventor 10\Metric\.dgn





SECTION ALONG ℄ U.S. 30 E.B.

(LEFT BRIDGE SIMILAR)

REVIEWED BY BURGESS & NIPLE, LIMITED

DWR 10-99

REVIEWED BY BURGESS & NIPLE, LIMITED

DWR 10-99

TRAFFIC DATA

ADT = 3484 WB (2000)
3484 EB (2000)

ADTT = 976 WB (2000)
976 EB (2000)

ADT = 5226 WB (2020)
5226 EB (2020)

ADTT = 1464 WB (2020)
1464 EB (2020)

Notes:

Earthwork limits shown are approximate. Actual slopes shall conform to plan cross sections.

All stations and elevations are in meters.

All dimensions and lengths are in millimeters.

℄ Point of min. vertical clearance

Boring location

PROPOSED STRUCTURE

Type: Continuous concrete slab on capped pile abutments and cap & column piers.
Spans: 13 500, 16 350, 13 500
(Measured c/c Brg.)
Roadway width: 13 800 toe to toe parapets
Live loading: MS18 & the alternate military loading
Skew angle: 8°00'00" L.F.
Wearing surface: Monolithic concrete
Approach slabs: AS-1-81M (9150)
Alignment: Tangent
Crown: 0.016
Latitude: N40°48'30"
Longitude: W83°07'45"

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	FKL	DATE	5/26/99
DRAWN	ALH	REVIEWED	CRS
CHECKED	MRS	REVISED	—
		STRUCTURE FILE NUMBER	8502412

WYANDOT COUNTY
STA. 37+750.000
STA. 37+793.734

SITE PLAN
BRIDGE NO. WYA-30-37.50
OVER SR 231

WYA/CRA-30-28.009/0.000

1 / 17

1772
2116

GENERAL NOTES

All dimensions in the plans are shown in millimeters.

All elevations and stations in the plans are shown in meters.

REFERENCE shall be made to Standard Drawings:

AS-1-81M	Dated 10-25-94
BR-1M	Dated 12-15-94
CPA-5-94M	Dated 10-25-94
CPP-2-94M	Dated 12-19-94
CS-1-93M	Revised 6-30-95
BP-2.3	Dated 4-29-99

and to Supplemental Specifications:

842	Dated 01-06-99
899	Dated 10-21-98

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1996, including the 1997 & 1998 Interim Specifications and the ODOT Bridge Design Manual.

DESIGN LOADING: MS18 and the alternate military loading.

DESIGN DATA:
Concrete Class S - compressive strength 31.0 MPa (superstructure)

Concrete Class C - compressive strength 27.5 MPa (substructure)

Reinforcing Steel -ASTM A615M, A616M or A617M
Grade 400 - minimum yield strength 400 MPa.
Spiral reinforcement may be plain bars, ASTM A82M or A615M.

REINFORCING STEEL in superstructure, substructure and approach slabs shall be epoxy coated.

DECK PROTECTION METHOD:
Epoxy coated reinforcing steel
65mm concrete cover

MONOLITHIC WEARING SURFACE is assumed, for design purposes, to be 25mm thick.

PILES TO BEDROCK: Piles shall be driven to refusal on bedrock. Refusal shall be considered as obtained by penetrating soft bedrock for several millimeters with a minimum resistance of 20 blows per 25mm or refusal shall be considered as obtained after the pile has contacted hard bedrock and the pile has then received at least 20 blows.

The ultimate bearing value for the HP250 x 62 abutment piles is 800 kN per pile

Abutment piles:
18 piles 18 meters long, estimated length - rear abutment, 9 Lt., 9 Rt.
18 piles 19 meters long, estimated length - forward abutment, 9 Lt., 9 Rt.
36 piles of order length 18 meters long
18 piles of order length 1 meter long
36 Splices

The ultimate bearing value for the HP250 x 62 pier piles is 825 kN per pile

The estimated and order length for the pier piles is:
72 piles 12 meters long, 18 each pier, left and right
36 splices

ITEM 507, STEEL POINTS, AS PER PLAN: Steel pile points shall be used to protect the tips of the proposed steel "H" piling. The steel points shall be furnished by Associated Pile and Fitting Corporation, 262 Rutherford Blvd., Clifton, New Jersey 07014; Dougherty Foundation Products, Inc., P.O. Box 688, Franklin Lakes, New Jersey 07417; Versa Steel Inc., 3601 N.W. Yeon Ave., P.O. Box 10559, Portland, Oregon 97210; Piling Accessories, Inc., 3467 Gribble Road, Mathews, North Carolina 28105; or by a manufacturer that can furnish a steel point that is acceptable to the Director. The material used for the manufacturing of pile points shall conform to ASTM A27 65/35 - Class 2 - Heat Treated or AASHTO M103 65/35 - Heat Treated. A notarized copy of the mill test report shall be submitted to the Engineer.

PILE DRIVING CONSTRAINTS: Prior to driving piles, the spill through slopes and the bridge approach embankment behind the abutments shall be constructed up to the level of the subgrade elevation for a minimum distance of 60 meters behind each abutment. The excavation for the abutment footings and the installation of the abutment piles shall not begin until after the above required embankment has been constructed and has undergone a waiting period of 30 days minimum.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN:
Unclassified excavation shall be in accordance with 503 except that the backfill material behind the abutments shall be 203 granular material placed in 150mm lifts and compacted in accordance with 304.04. The 203 granular material shall extend 30 meters behind each abutment.

APPROACH SLAB CONCRETE shall be placed towards the superstructure during days when sudden temperature changes are unlikely and be completed at least 4 hours prior to the concrete placement day's peak ambient temperature.

UTILITY LINES: All expense involved in relocation (installing) the affected utility lines shall be borne by the Utility(ies). The Contractor and Utility(ies) are to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

ALTHOUGH OTHERWISE SHOWN IN THESE PLANS, THE STRUCTURE FILE NUMBERS ARE : 8801608L/8801614R

metric units

ESTIMATED QUANTITIES

Calculated by: ALH dated: 10/98
Checked by: FKL dated: 10/98

Item	Extension	WYA-30-37750 L Total	WYA-30-37750 R Total	Unit	Description	LEFT BRIDGE Superstructure	LEFT BRIDGE Abutment	LEFT BRIDGE Pier	LEFT BRIDGE General	RIGHT BRIDGE Superstructure	RIGHT BRIDGE Abutment	RIGHT BRIDGE Pier	RIGHT BRIDGE General
503	21301	Lump	Lump	-	Unclassified excavation, as per plan				Lump				Lump
505	11100	Lump	Lump	-	Pile driving equipment mobilization				Lump				Lump
507	00100	774	774	Meter	Steel piles HP250 x 62, furnished		342	432			342	432	
507	00150	774	774	Meter	Steel piles HP250 x 62, driven		342	432			342	432	
507	50500	36	36	Each	Steel pile splices		18	18			18	18	
507	93301	54	54	Each	Steel point (or shoe), as per plan		18	36			18	36	
Special	51267502	496.6	496.6	Sq. Meter	Sealing of concrete surfaces (epoxy) (see proposal note)	309.1	46.9	140.6		309.1	46.9	140.6	
518	21230	Lump	-		Porous backfill with filter fabric		Lump				Lump		
518	40000	42	42	Meter	150mm Perforated corrugated plastic pipe		42				42		
518	40010	10	10	Meter	150mm Non-perforated corrugated plastic pipe, including specials		10				10		
601	20000	600	600	Sq. Meter	Crushed aggregate slope protection		600				600		
842	41000	46.3	46.3	Cu. Meter	Class C concrete, pier above footing			46.3				47.2	
842	43500	63.8	63.8	Cu. Meter	Class C concrete, abutment including footing		63.8				62.2		
842	46500	55.3	55.3	Cu. Meter	Class C concrete, footing			55.3				55.3	
894	10000	455.0	455.0	Cu. Meter	High Performance Concrete, for Bridge Deck with Warranty	455.0				455.0			

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CPS	5/26/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	8801608L/8801614R	

GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. WYA-30-37750
OVER SR 231

WYA/CRA-30-28009/0.000

2 / 11

1173
2116

Filename: 37750gn1.dgn

℄ Brg. Rear Abutment

℄ Pier 1

℄ Pier 2

℄ Brg. Forward Abutment

℄ Piles

℄ Bearings

℄ Construction US 30

40

8 Spaces @ 2450 = 19 600

3745

3885

6370

4570

100/100

8°00'00" Typical

Sta. 37+750.192

Sta. 37+763.692

Sta. 37+780.042

Sta. 37+793.542

PLAN

NOTES:
1. All piles are HP250x62.
2. (33) I Designates pile number and location.
3. ↦ Denotes pile battered 1:4 in direction of arrrow.

metric units

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1848 Summit Road
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
FAL	—	8902412	

PILING LAYOUT
BRIDGE NO. WYA-30-37750
OVER SR 231

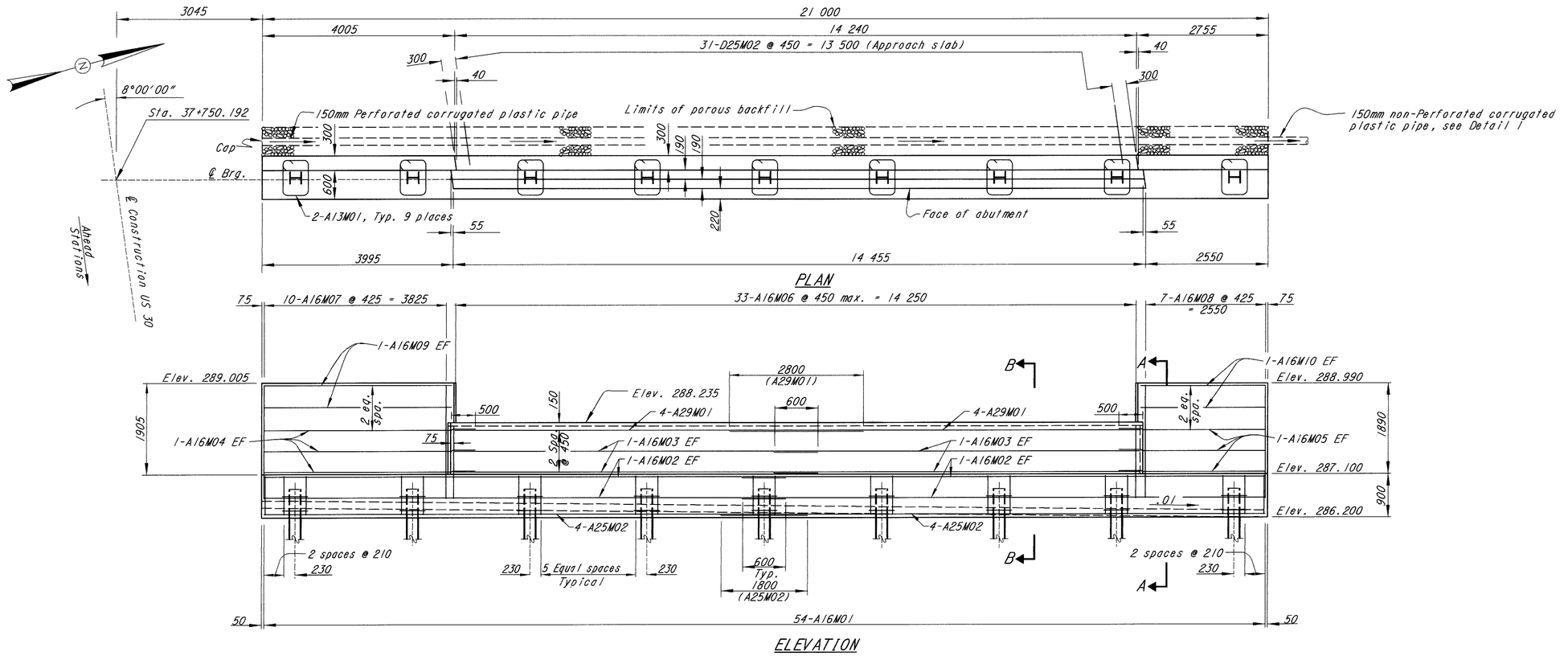
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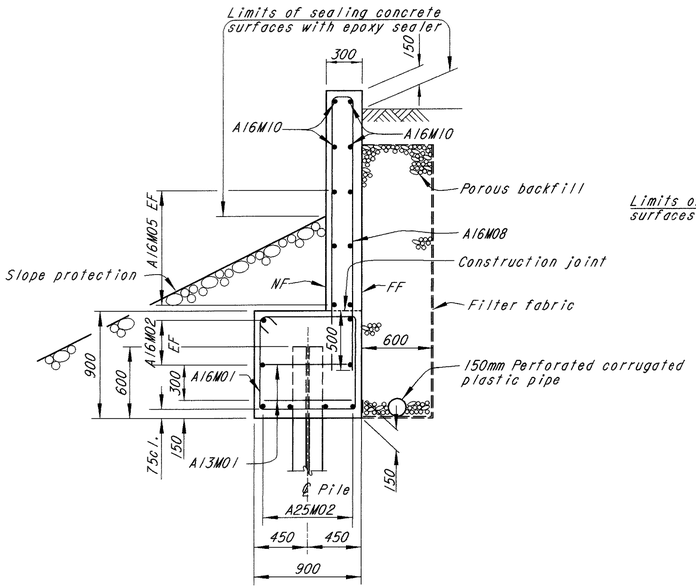
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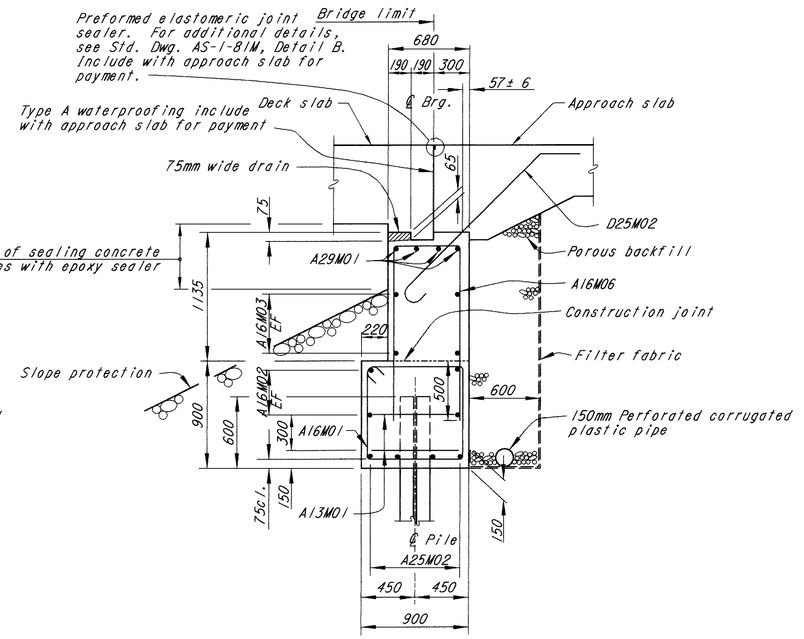
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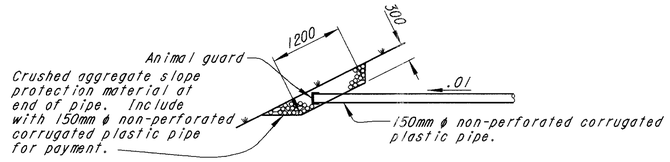
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metric units









NOTES:
1. For pile layout, see sheet 3/17
2. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
3. EF = Each Face
   NF = Near Face
   FF = For Face
4. For additional details, see Std. Dwg. CPA-5-94M.

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1848 Summit Road
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
PKL	—	850241 2	

REAR ABUTMENT LEFT BRIDGE DETAILS

BRIDGE NO. WYA-30-37750
OVER SR 231

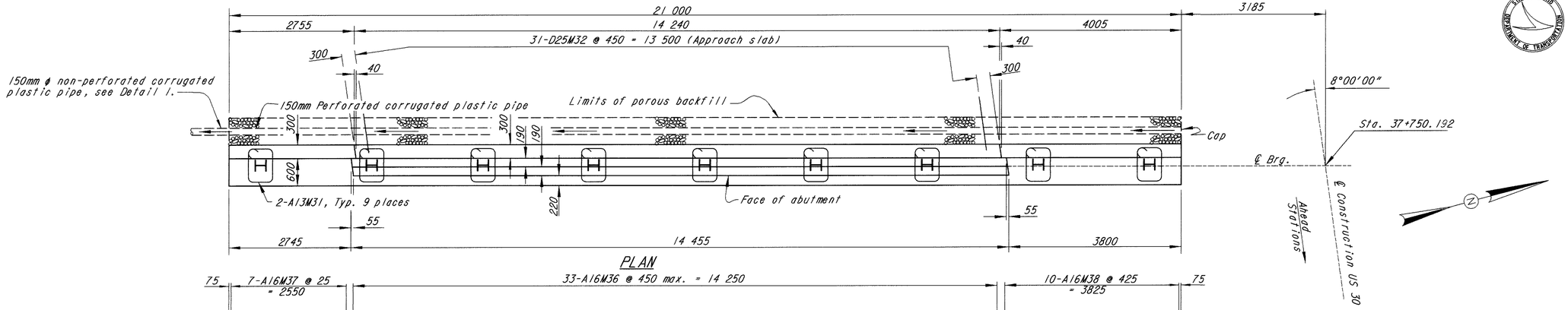
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4/17

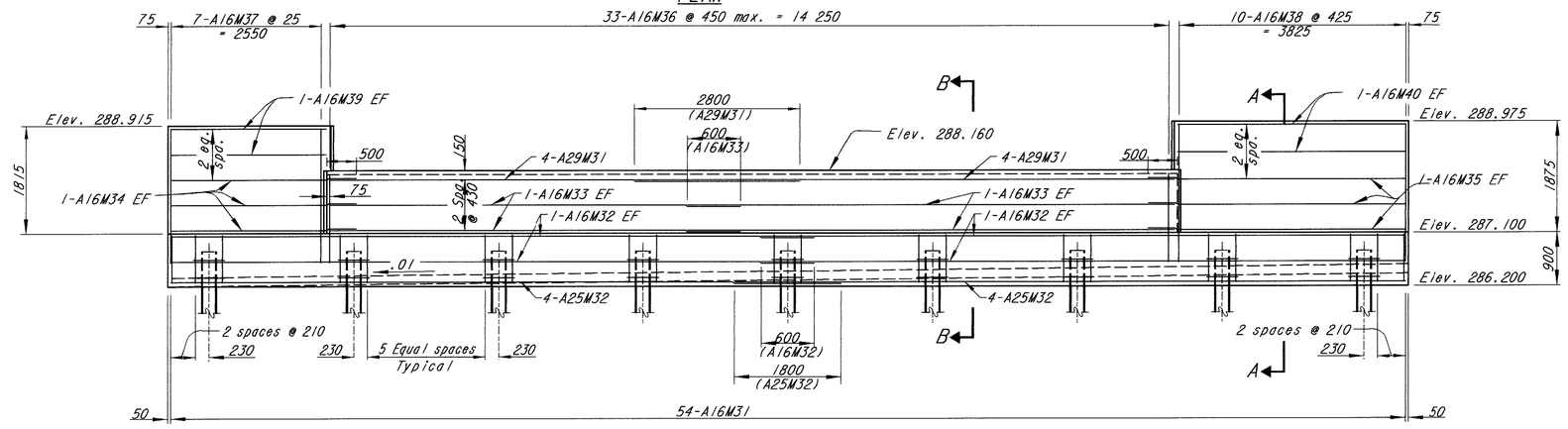
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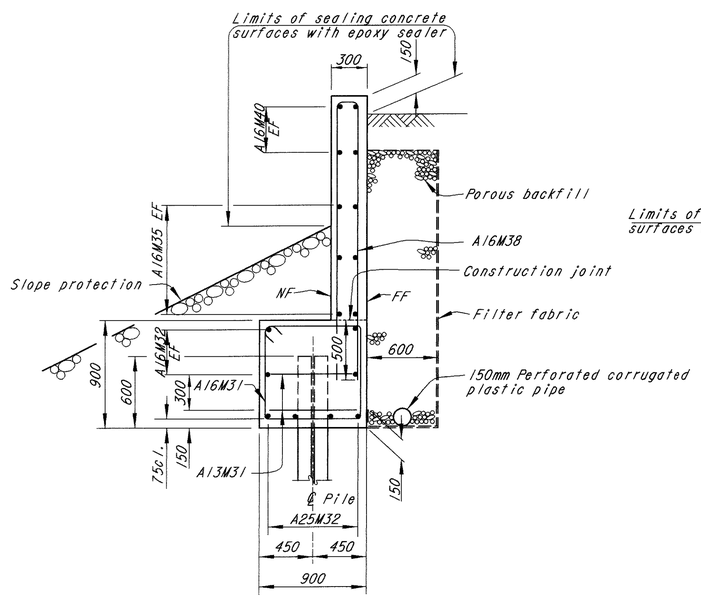
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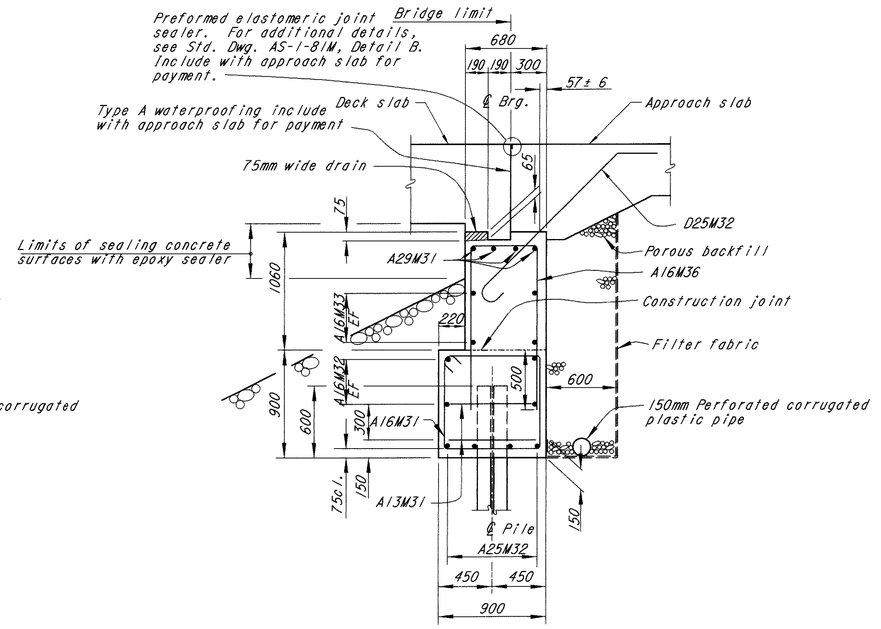
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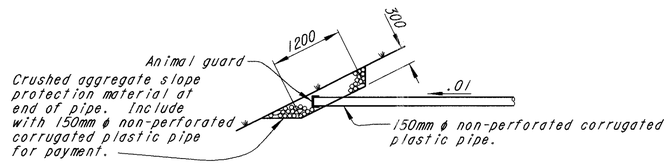
ELEVATION



SECTION A-A



SECTION B-B



DETAIL 1

NOTES:
1. For pile layout, see sheet 3/17
2. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
3. EF = Each Face
   NF = Near Face
   FF = For Face
4. For additional details, see Std. Dwg. CPA-5-94M.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MPS	ALH	CRS	5/26/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FAL	—	850241Z	

REAR ABUTMENT RIGHT BRIDGE DETAILS
BRIDGE NO. WYA-30-37750
OVER SR 231

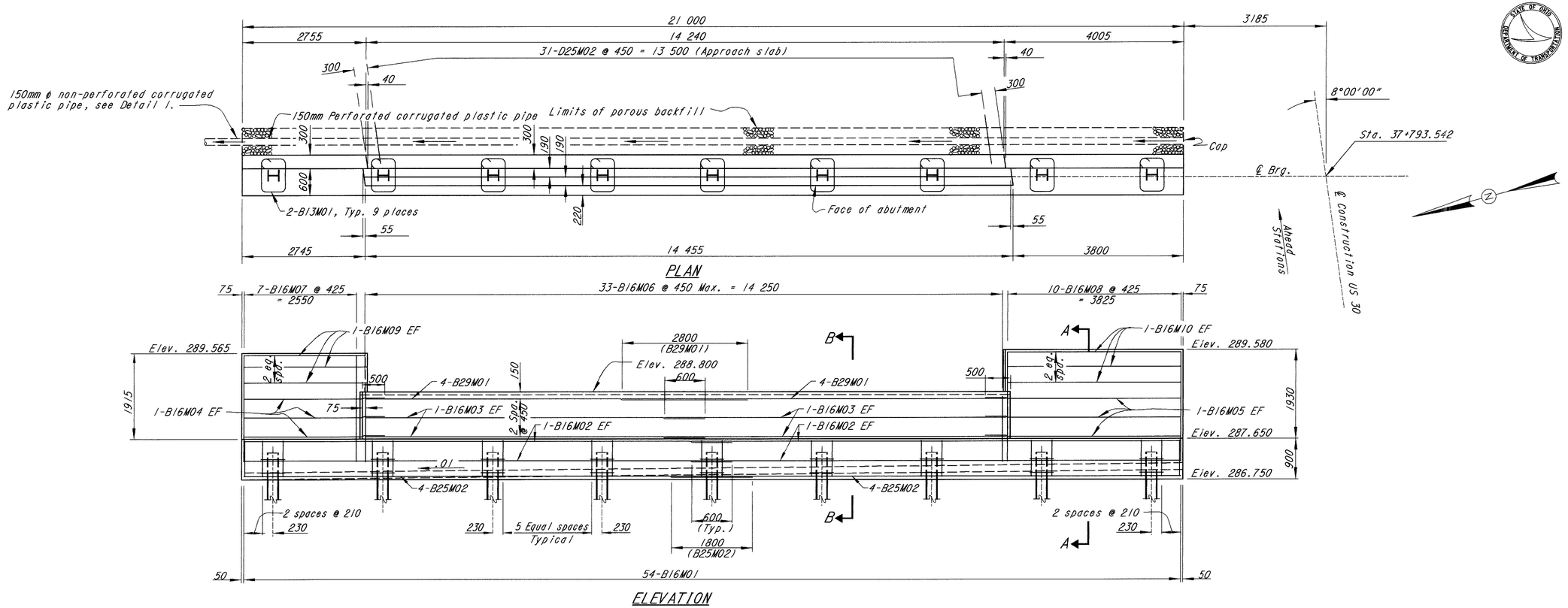
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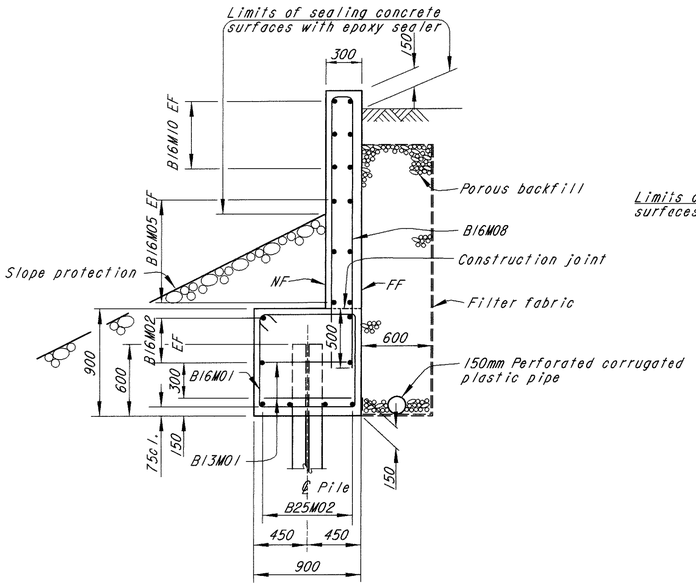
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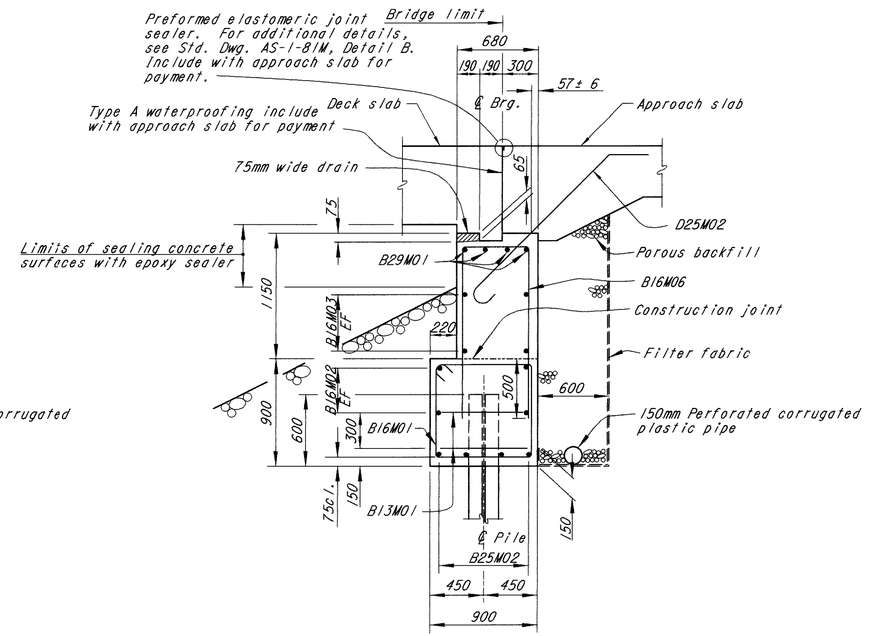
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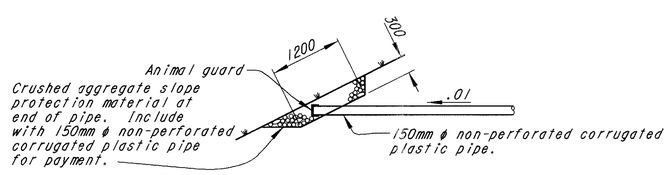
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metric units









DETAIL 1

NOTES:
1. For pile layout, see sheet 3/17
2. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
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   NF = Near Face
   FF = Far Face
4. For additional details, see Std. Dwg. CPA-5-94M.

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FKL	—		8502412

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BRIDGE NO. WYA-30-37750
OVER SR 231

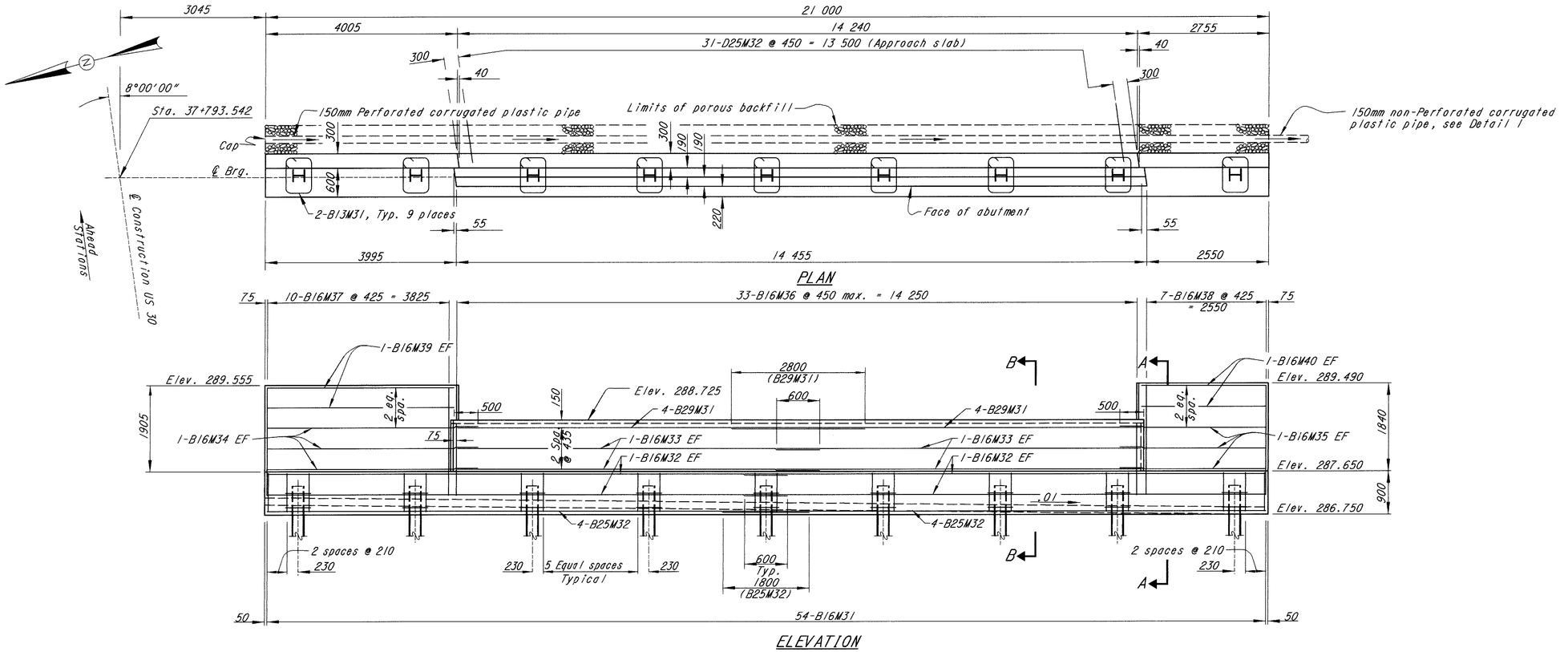
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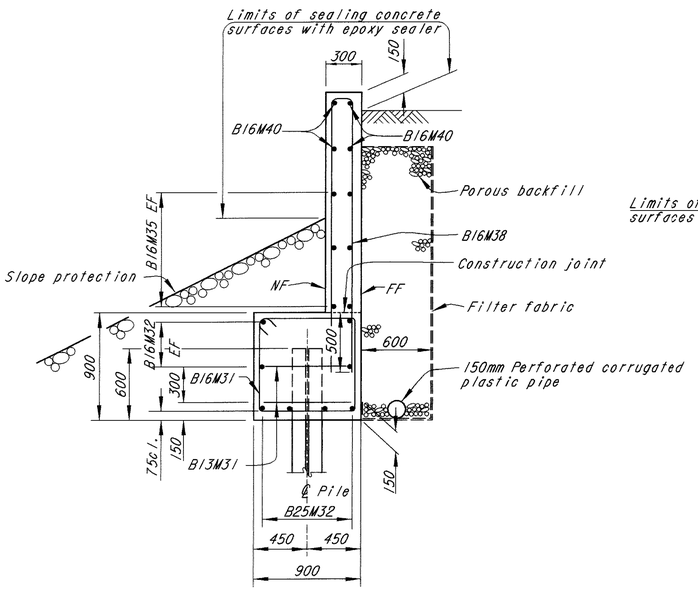
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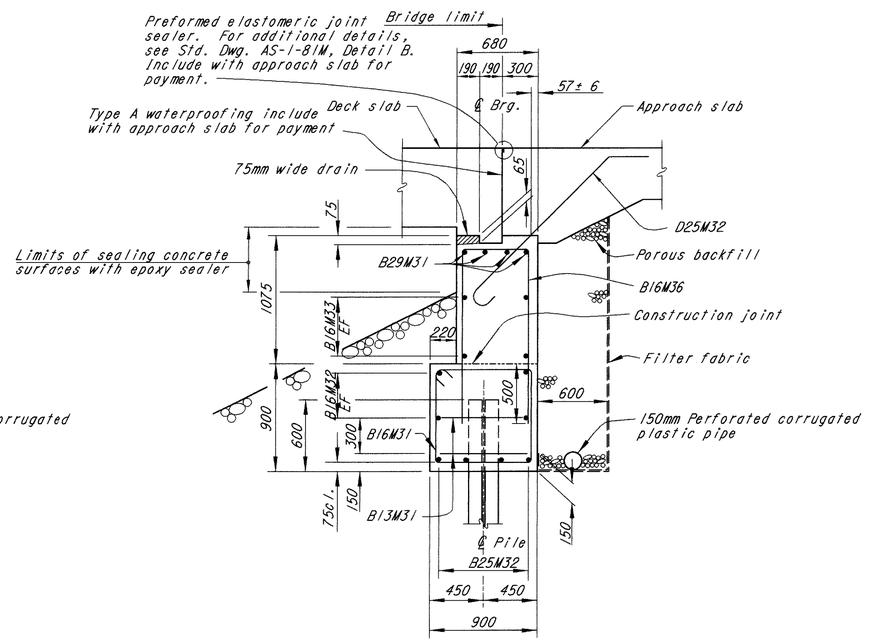
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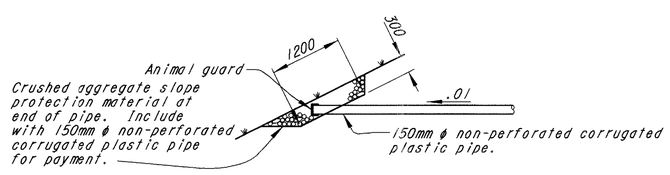
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metric units









DETAIL 1

NOTES:
1. For pile layout, see sheet 3/17
2. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
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MRS	ALH	CRS	5/26/99
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FKL	—	850241.2	

FORWARD ABUTMENT RIGHT BRIDGE DETAILS
BRIDGE NO. WYA-30-37750
OVER SR 231

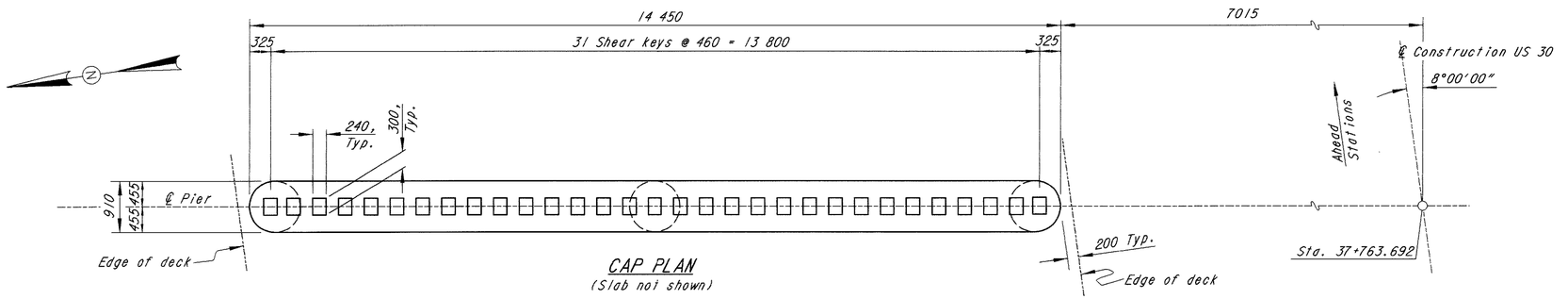
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7 / 17

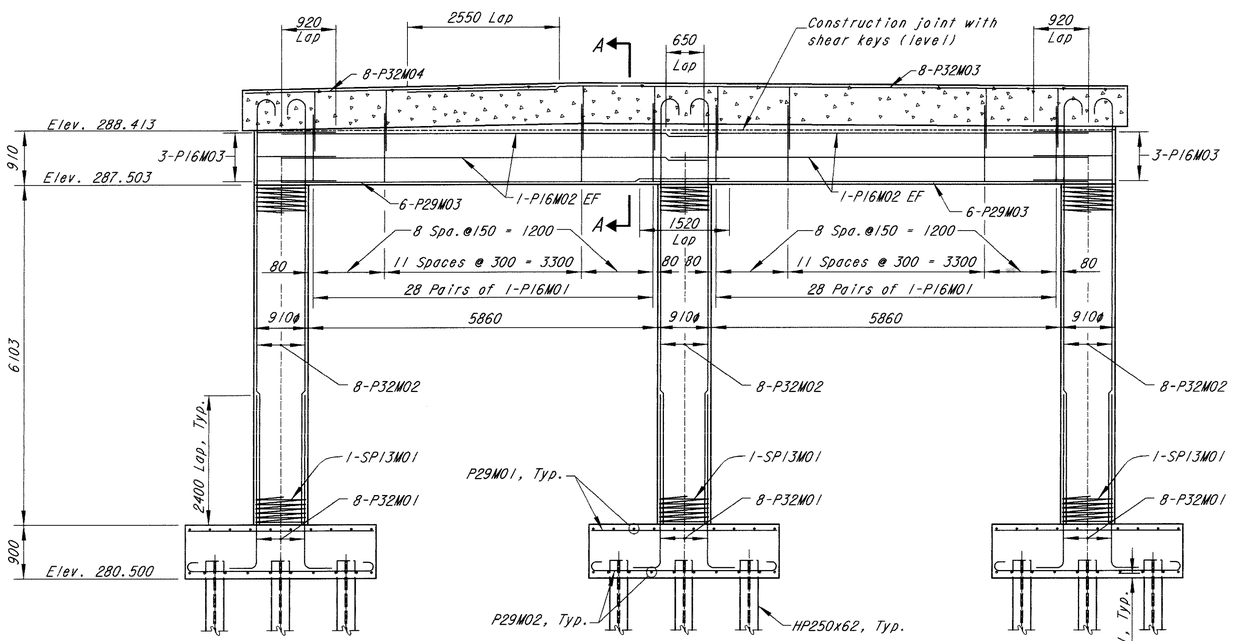
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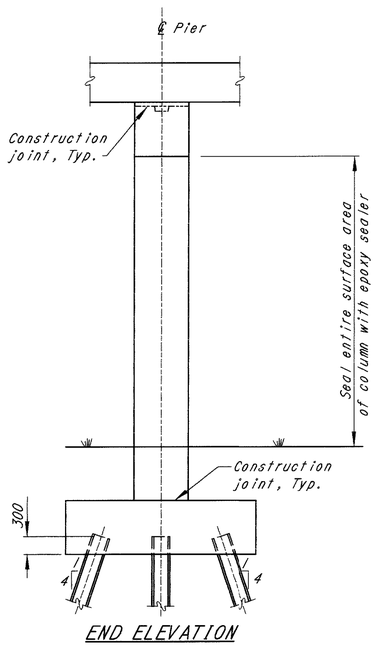
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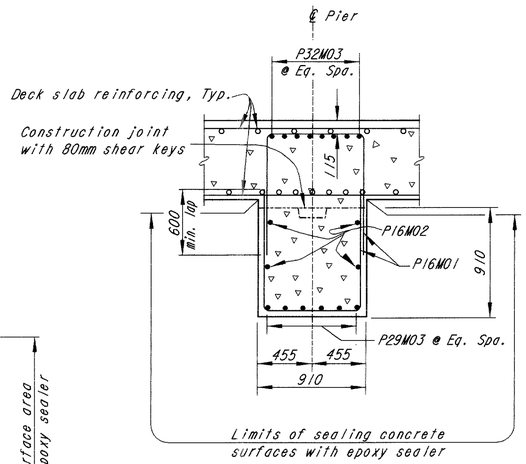
CAP PLAN
(Slab not shown)



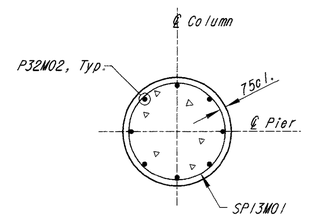
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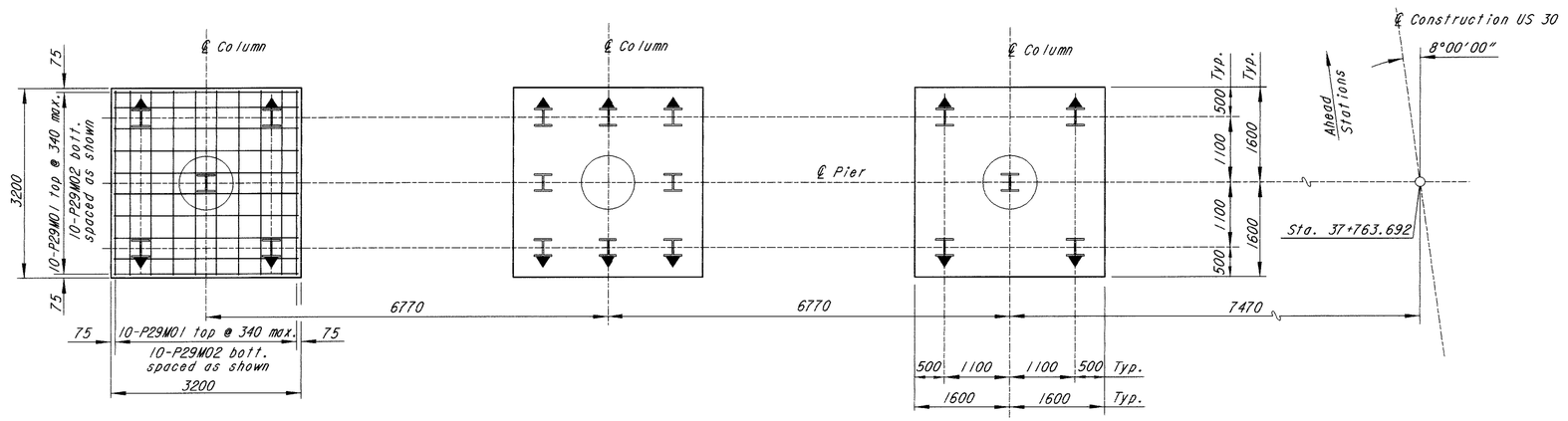
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SECTION A-A



TYPICAL COLUMN SECTION



FOOTING PLAN

NOTES:
1. The pier cap shall be shored while the slab is placed. The pier cap shall not be loaded without shoring until after the slab concrete has hardened,
2. ▼ Denotes pile battered 1:4 in direction of arrow.

NOTE: Footing reinforcing steel shown is typical for all footings.

Filename: 37750s3.dgn

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

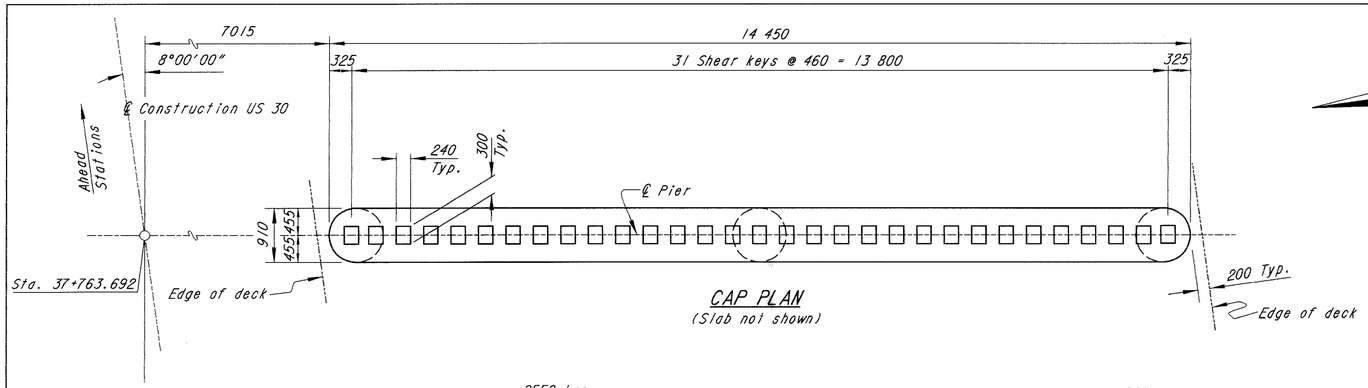
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MRS	RHH	CRS	5/26/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FAL	—	8502412	

PIER 1 LEFT BRIDGE
BRIDGE NO. WYA-30-37.50
OVER SR 231

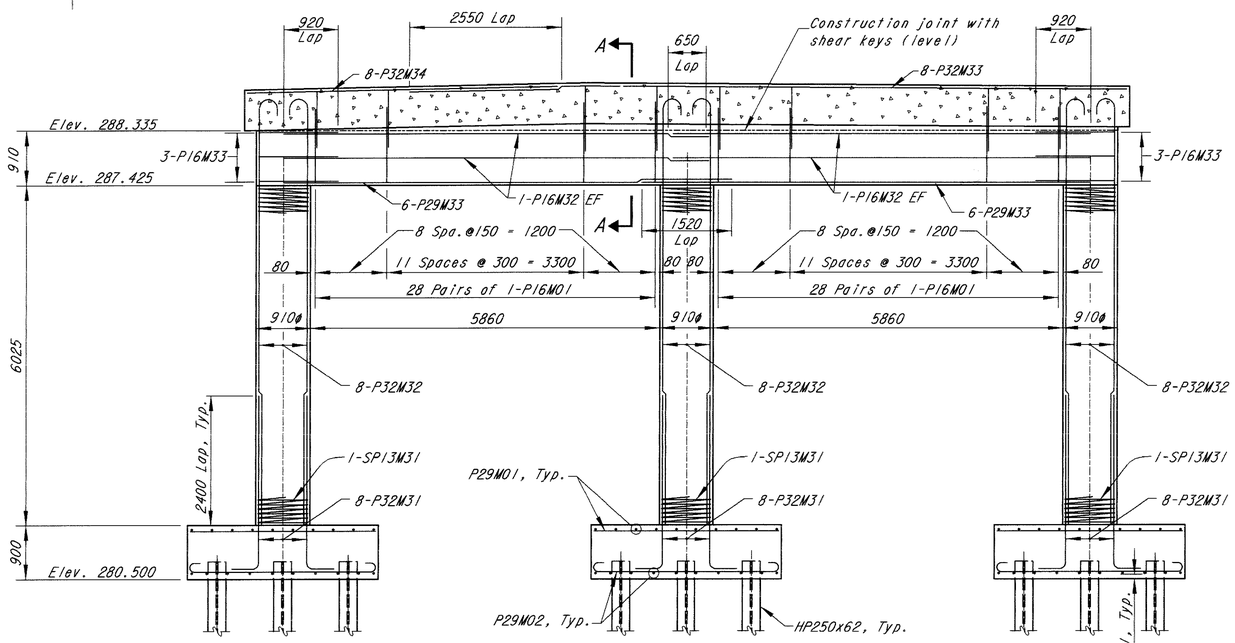
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8 | 17

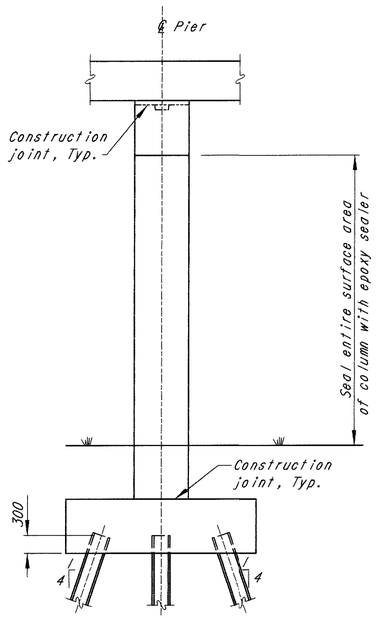
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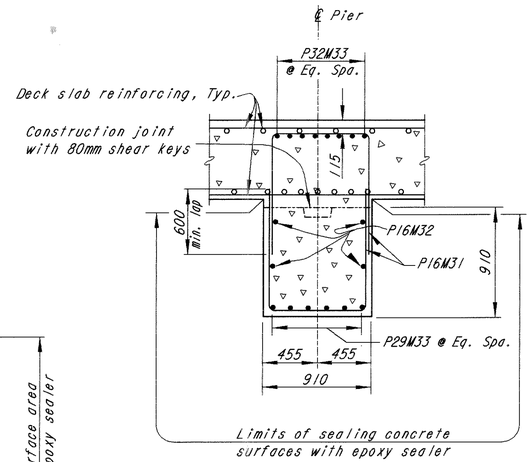
CAP PLAN
(Slab not shown)



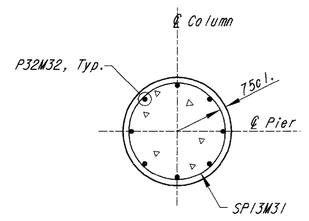
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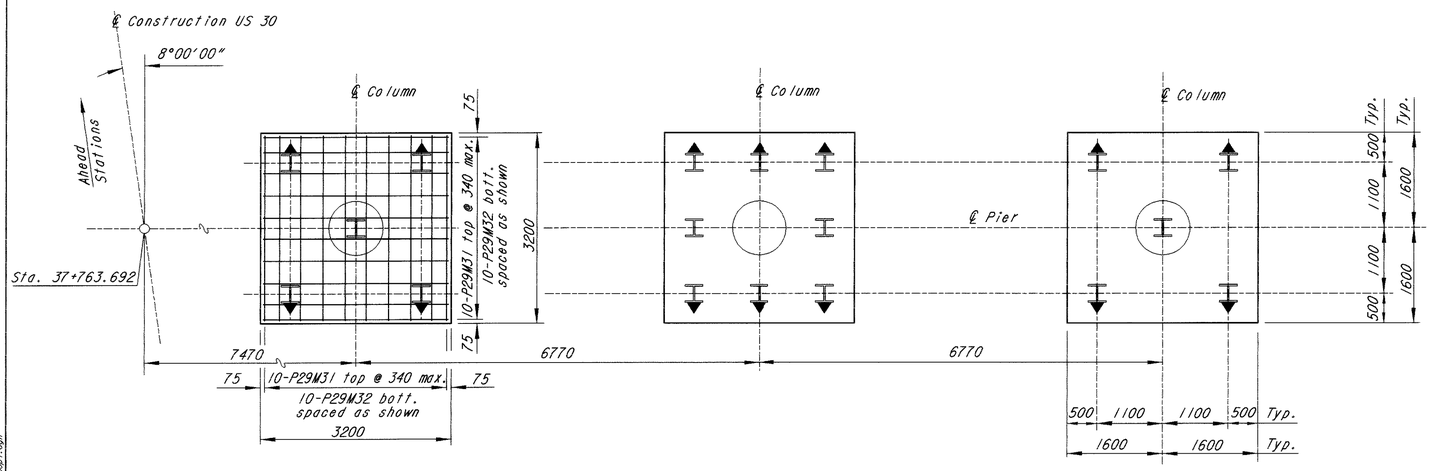
END ELEVATION



SECTION A-A



TYPICAL COLUMN SECTION



FOOTING PLAN

NOTE: Footing reinforcing steel shown is typical for all footings.

NOTES:
1. The pier cap shall be shored while the slab is placed. The pier cap shall not be loaded without shoring until after the slab concrete has hardened,
2. ▼ Denotes pile battered 1:4 in direction of arrow.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MMS	RHH	CRS	5/26/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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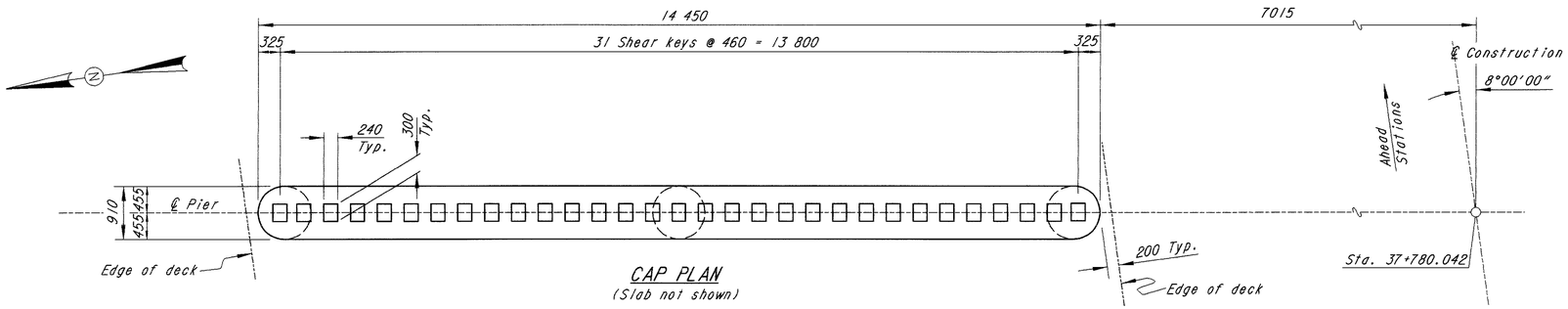
PIER I RIGHT BRIDGE
BRIDGE NO. WYA-30-37750
OVER SR 231

WYA/CRA-30-28.009/0.000

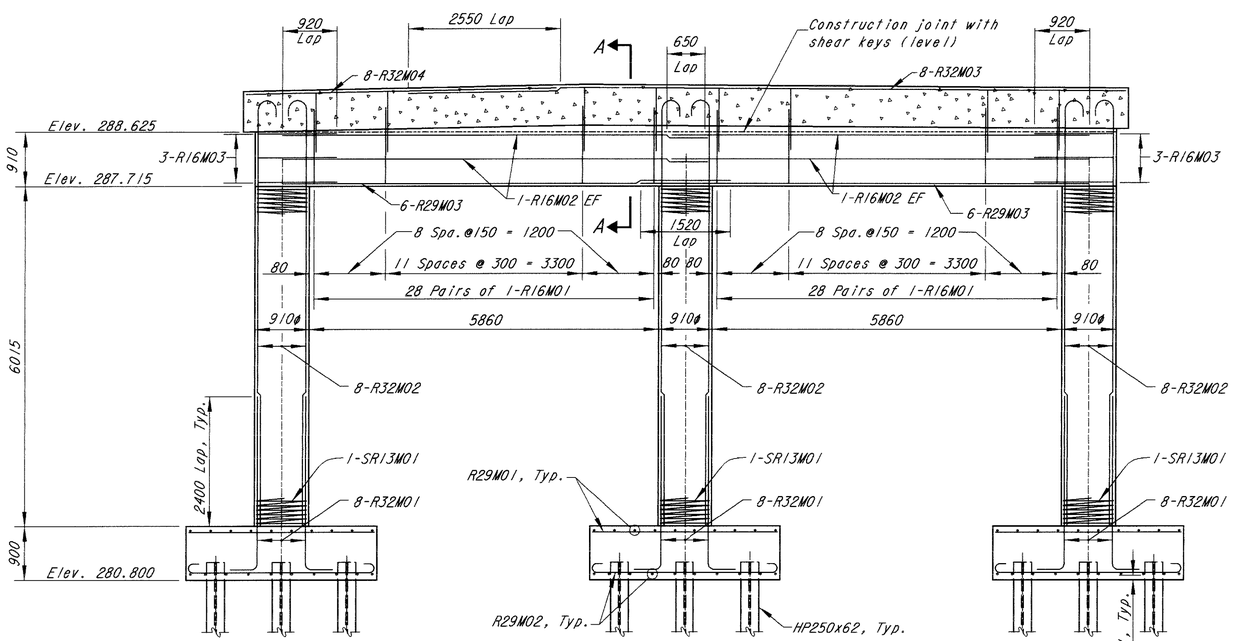
9 / 17

(1780 / 2116)

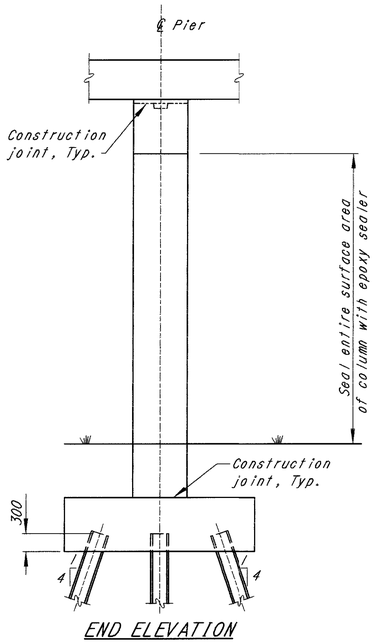
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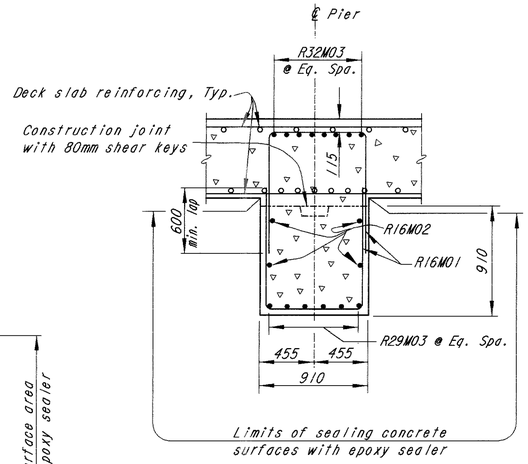
CAP PLAN
(Slab not shown)



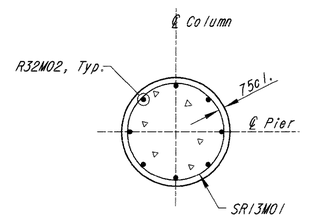
ELEVATION



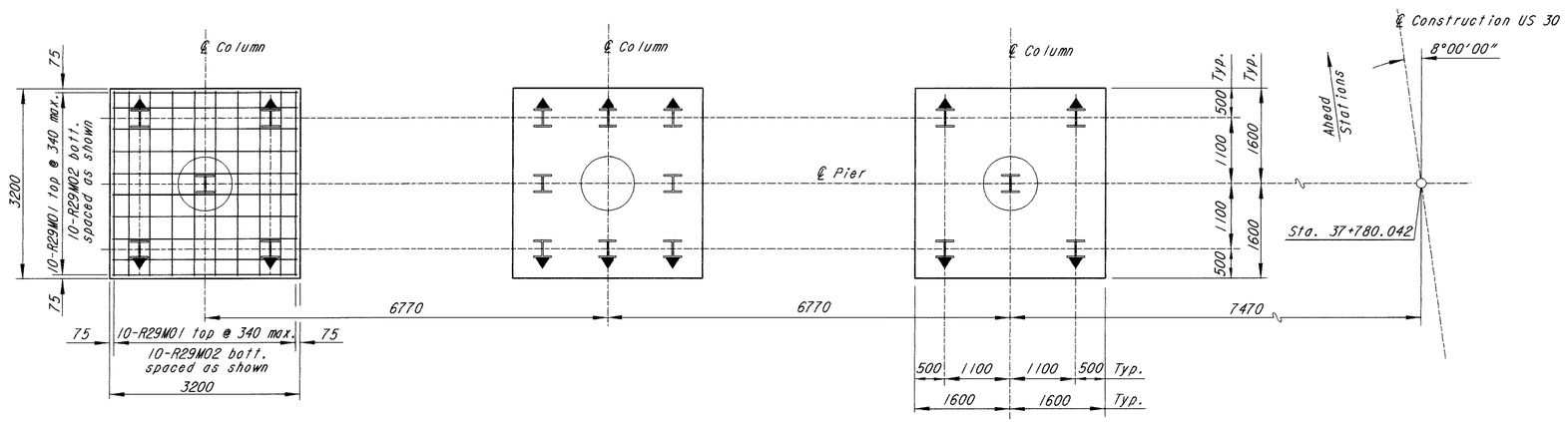
END ELEVATION



SECTION A-A



TYPICAL COLUMN SECTION



FOOTING PLAN

NOTE: Footing reinforcing steel shown is typical for all footings.

NOTES:
1. The pier cap shall be shored while the slab is placed. The pier cap shall not be loaded without shoring until after the slab concrete has hardened,
2. ▼ Denotes pile battered 1:4 in direction of arrow.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MHS	RHH	CRS	5/26/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FAL	—	8502412	

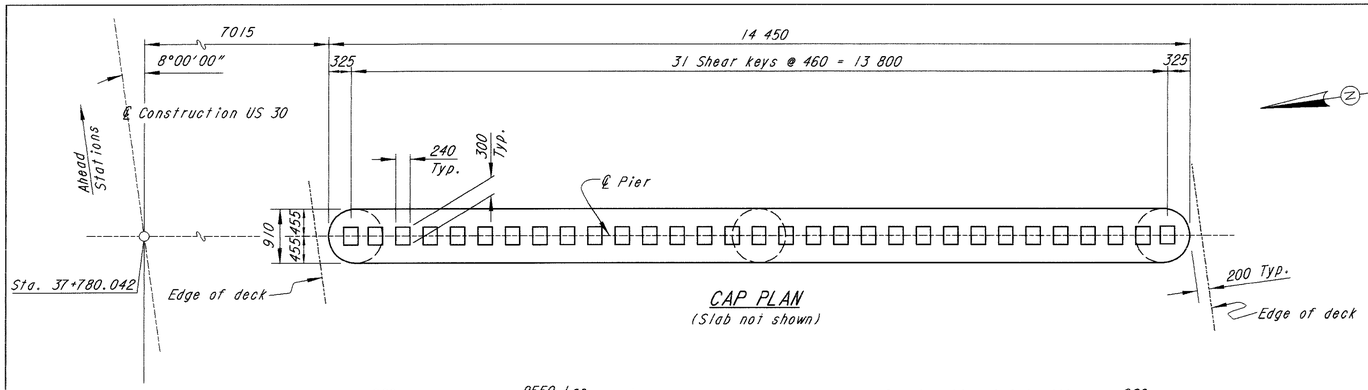
PIER 2 LEFT BRIDGE
BRIDGE NO. WYA-30-37750
OVER SR 231

WYA/CRA-30-28.009/0.000

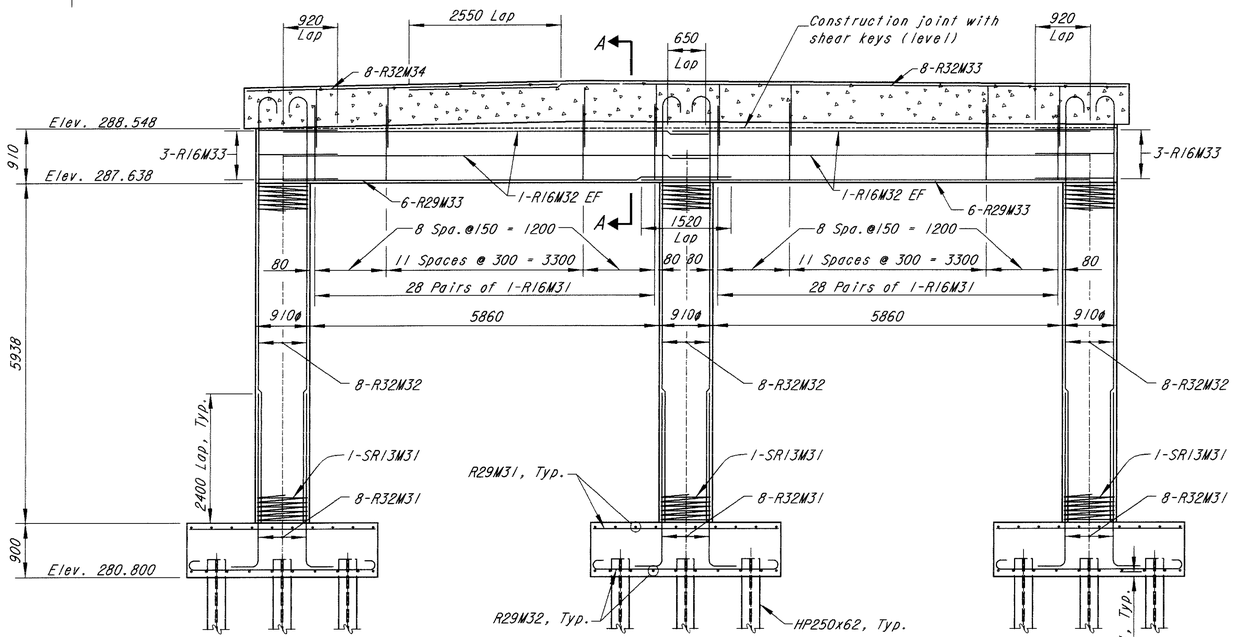
10/17

1781
2116

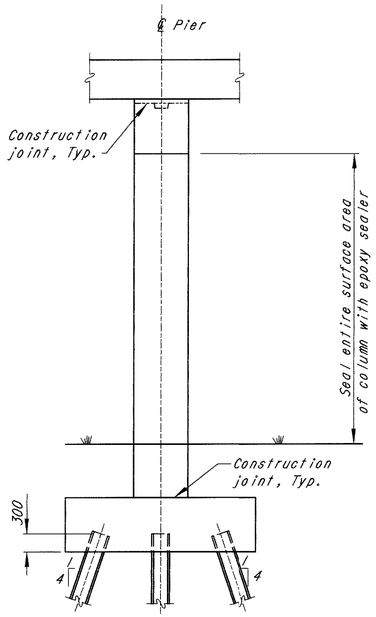
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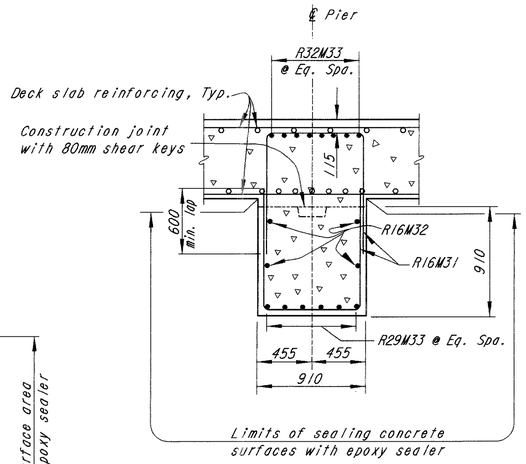
CAP PLAN
(Slab not shown)



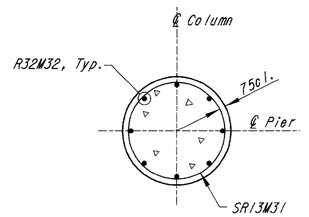
ELEVATION



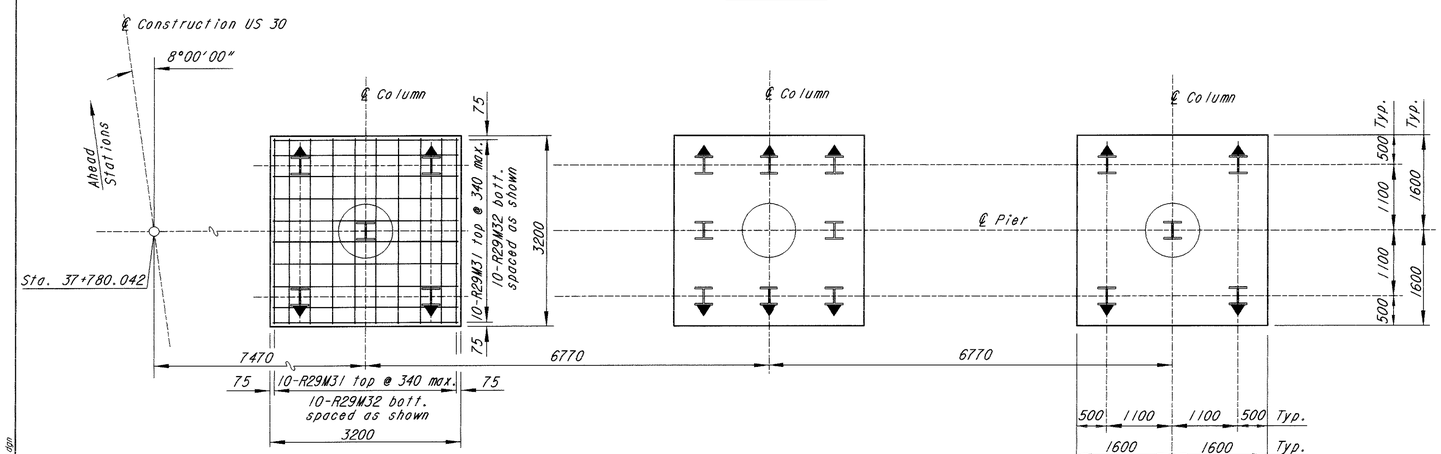
END ELEVATION



SECTION A-A



TYPICAL COLUMN SECTION



FOOTING PLAN

NOTE: Footing reinforcing steel shown is typical for all footings.

NOTES:
1. The pier cap shall be shored while the slab is placed. The pier cap shall not be loaded without shoring until after the slab concrete has hardened,
2. ▼ Denotes pile battered 1:4 in direction of arrow.

metric units

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
FAL	—	5802412	

PIER 2 RIGHT BRIDGE
BRIDGE NO. WYA-30-37750
OVER SR 231

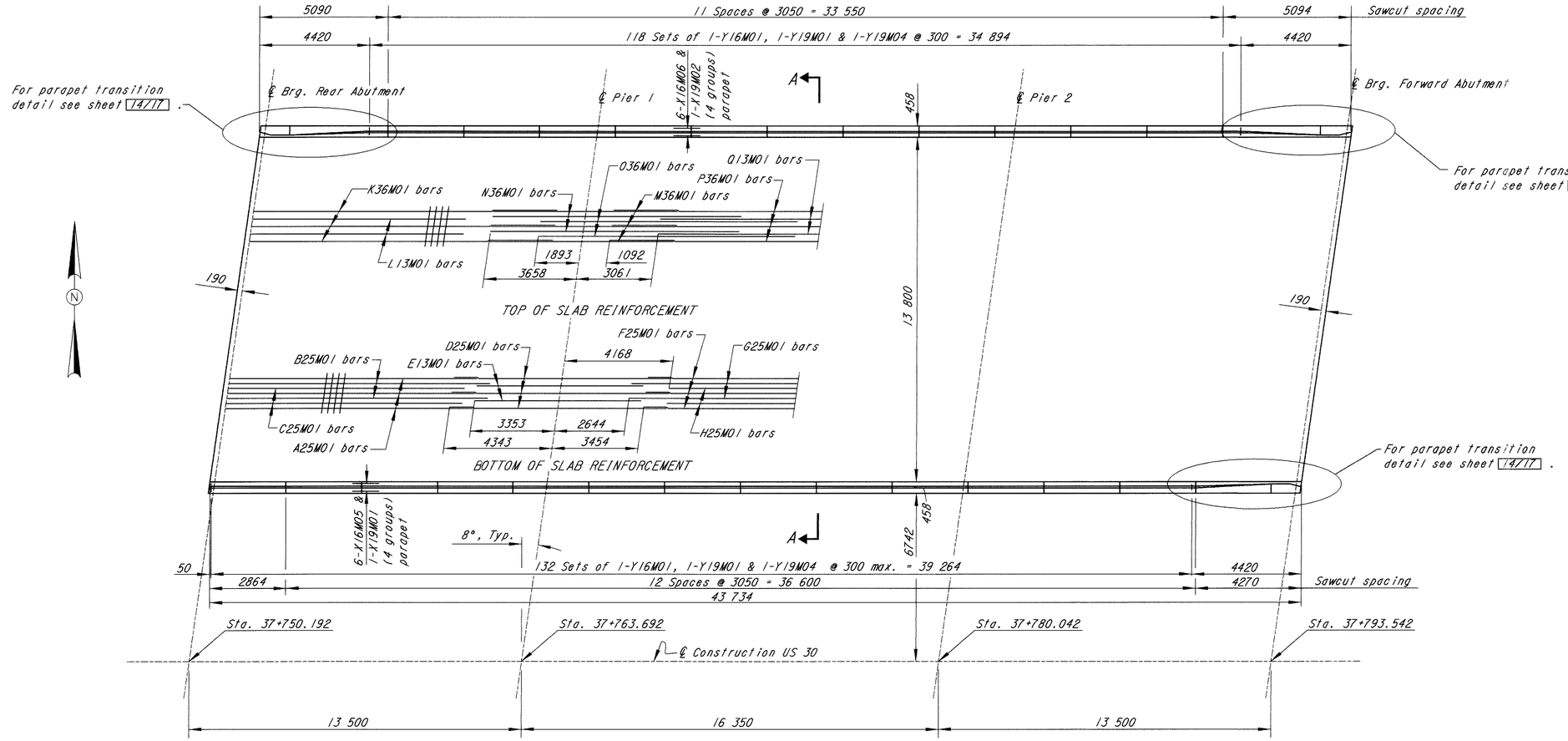
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11 | 17

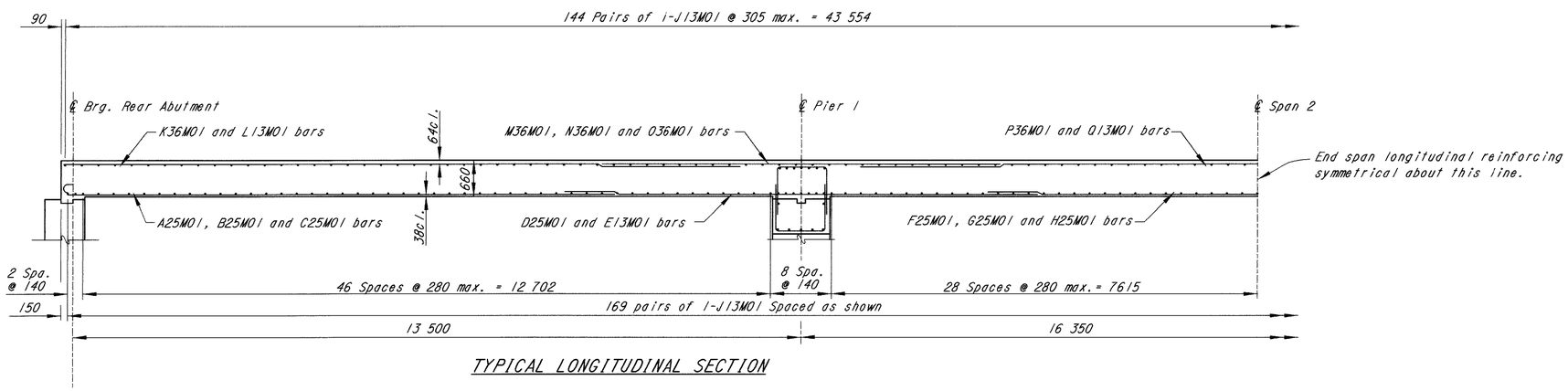
1782
2116

File name: 37750b2.dgn

metric units



LEFT BRIDGE DECK PLAN



TYPICAL LONGITUDINAL SECTION

NOTES:
1. For additional details on the parapets and sawcut joints, see Std. Dwg. BR-1M. Contrary to the standard drawing, sawcut joints shall be sealed for the full length.
2. Lap length for X16M05 & X16M06 bars is 450mm.
3. For Section A-A, see sheet 13/17 .
4. For additional information, see Std. Dwg. CS-1-93M.

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FAL	—	850241 2	

DECK DETAILS
BRIDGE NO. WYA-30-37750
OVER SR 231

WYA/CRA-30-28.009/0.000

12/17

1783
2116

F:\decomm_ST\Deck1.dgn

metric units

13 500 | 16 350 | 13 500

Sta. 37+750.192 | Sta. 37+763.692 | Sta. 37+780.042 | Sta. 37+793.542

℄ Construction US 30

43 734

Sawcut spacing, 4270 / 4420 — 12 Spaces @ 3050 = 36 600 — 132 Sets of 1-Y16M31, 1-Y19M31 & 1-Y19M34 @ 300 max. = 39 264 — 2864 — 50

8°, Typ.

For parapet transition detail see sheet 14/17 .

A

6-X16M35 & 1-X19M31 (4 groups) parapet

458 | 6742

190

13 800

3061 | 3658 | 1092 | 1893

O13M31 bars | P36M31 bars | M36M31 bars | N36M31 bars | O36M31 bars | L13M31 bars | K36M31 bars

TOP OF SLAB REINFORCEMENT

3454 | 4343 | 2644 | 3353 | 4168

H25M31 bars | G25M31 bars | F25M31 bars | E13M31 bars | D25M31 bars | C25M31 bars | B25M31 bars | A25M31 bars

BOTTOM OF SLAB REINFORCEMENT

For parapet transition detail see sheet 14/17 .

℄ Brg. Rear Abutment | ℄ Pier 1 | ℄ Pier 2 | ℄ Brg. Forward Abutment

6-Y16M36 & 1-Y19M32 (4 groups) parapet

4420 — 118 Sets of 1-Y16M31, 1-Y19M31 & 1-Y19M34@ 300 max. = 34 894 — 4420

Sawcut spacing 5090 — 11 Spaces @ 3050 = 33 550 — 5094

A = 475 for L, O & E Bars
= 550 for N, B & G Bars

RIGHT BRIDGE DECK PLAN

14 716 | 13 800 | 50 | 458 | 1800 | 3600 | 8400 | 458 | 50

2 Sets of 30-L13M31, 30-N36M31 & 1 Set of 30-O13M31 @ 475 = 13 775
2 Sets of 30-O36M31 @ 475 = 13 775
2 Sets of 31-K36M31, 31-M36M31 & 1 Set of 31-P36M31 @ 475 = 14 250

390 | 75 | 160 | 156 | 75 | 230

X19M31 | Level construction joint, Typical | Profile Grade | Crown | J13M31 | 0.016 | 0.016 | J13M31 | Y16M31, Typ. | Y19M31, Typ. | X19M32 | Optional construction joint, level, Typ.

1065 | 735 | 330 | Y16M35 EF | 254 | 76 | 64 c.l. | Y16M36 EF

660 | 660

2 Sets of 1-K36M31 & 1-M36M31 & 1 set of 1-P36M31

2 Sets of 1-K36M31 & 1-M36M31 & 1 set of 1-P36M31

Y19M34

169-U13M31 match with bottom layer of J13M31 bars

Limit of concrete sealer, epoxy Typical

2 Sets of 1-A25M31 & 1-D25M31 & 1 set of 1-F25M31

25mm dia. half-round groove, Typ.

38 c.l. | 650 Lap | 150

2 Sets of 1-A25M31 & 1-D25M31 & 1 set of 1-F25M31

169-U13M31 match with bottom layer of J13M31 bars

A

2 Sets of 30-B25M31, 30-E13M31 & 1 Set of 30-G25M31 @ 475 = 13 775
2 Sets of 30-C25M31 & 1 Set of 30-H25M31 @ 475 = 13 775
2 Sets of 31-A25M31, 31-D25M31 & 1 Set of 31-F25M31 @ 475 = 14 250

390 | 75 | 160 | 156 | 75

SECTION A-B

NOTES:
1. For additional details on the parapets and sawcut joints, see Std. Dwg. BR-1M. Contrary to the standard drawing, sawcut joints shall be sealed for the full length.
2. Lap length for X16M35 & X16M36 bars is 450mm.
3. For additional information, see Std. Dwg. CS-1-93M.

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FAL	—	0302412	

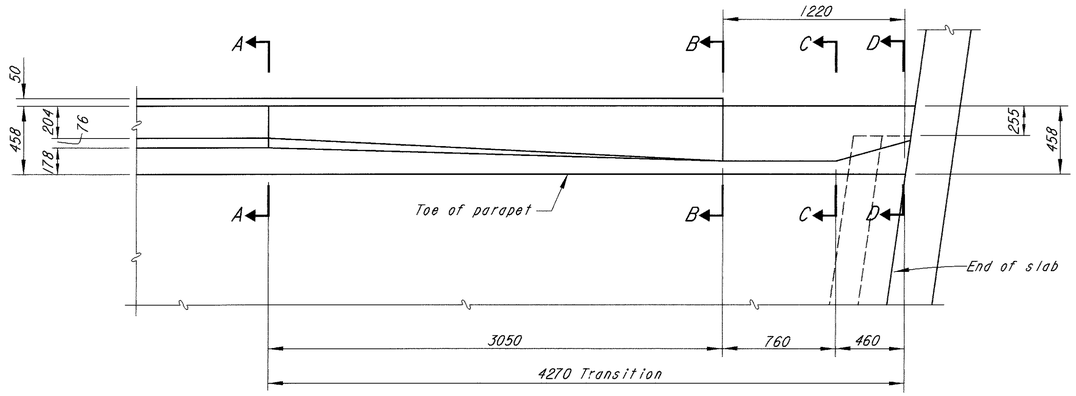
DECK DETAILS
BRIDGE NO. WYA-30-37750
OVER SR 231

WYA/CRA-30-28.009/0.000

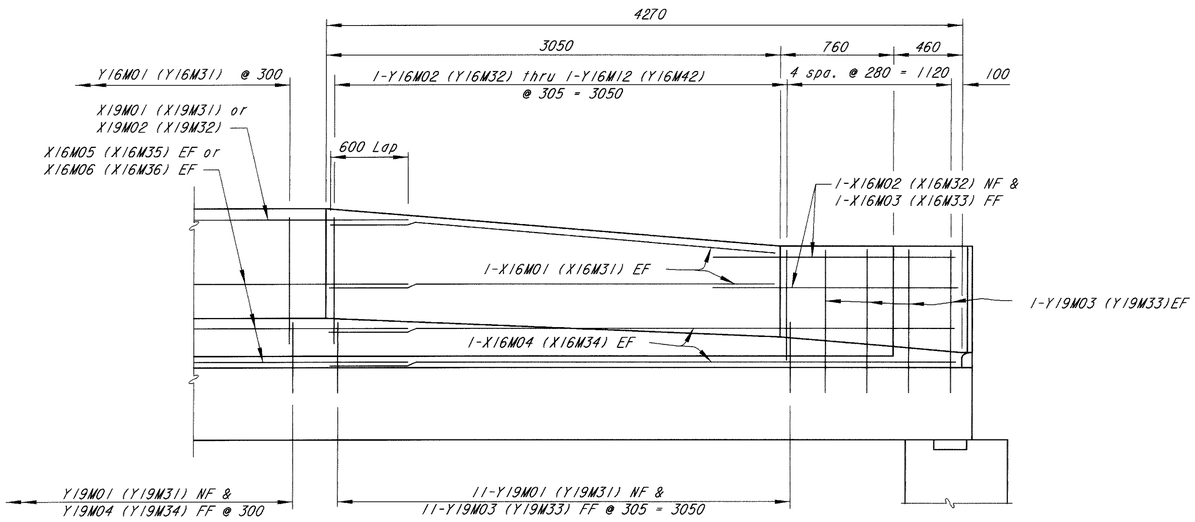
13/17

1784
2116

File name: 37750d2.dgn



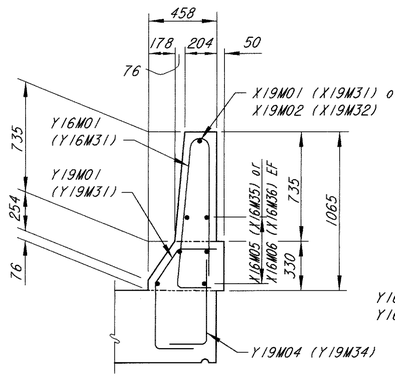
PLAN



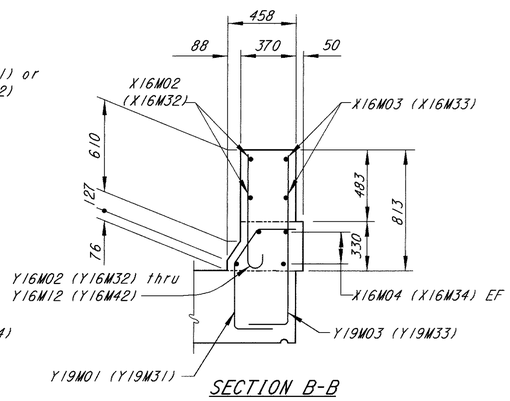
ELEVATION

PARAPET TRANSITION DETAIL

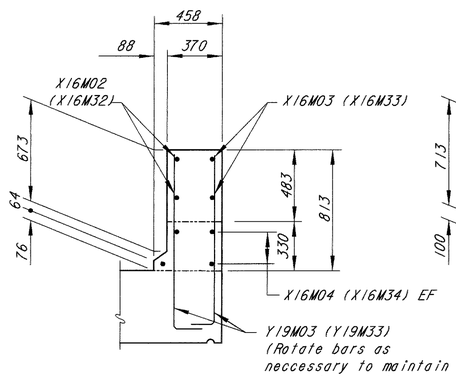
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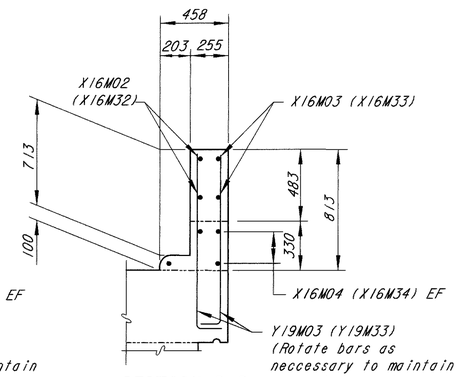
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:
1. FF = Far Face
   NF = Near Face
   EF = Each Face
2. Bar marks shown "( )" are for the right bridge.
   Unenclosed bar marks are for the left bridge.
3. For additional information, see Std. Dwg. BR-1M.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MPS	RHH	CRS	5/26/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	850241 2	

DECK DETAILS
BRIDGE NO. WYA-30-37750
OVER SR 231

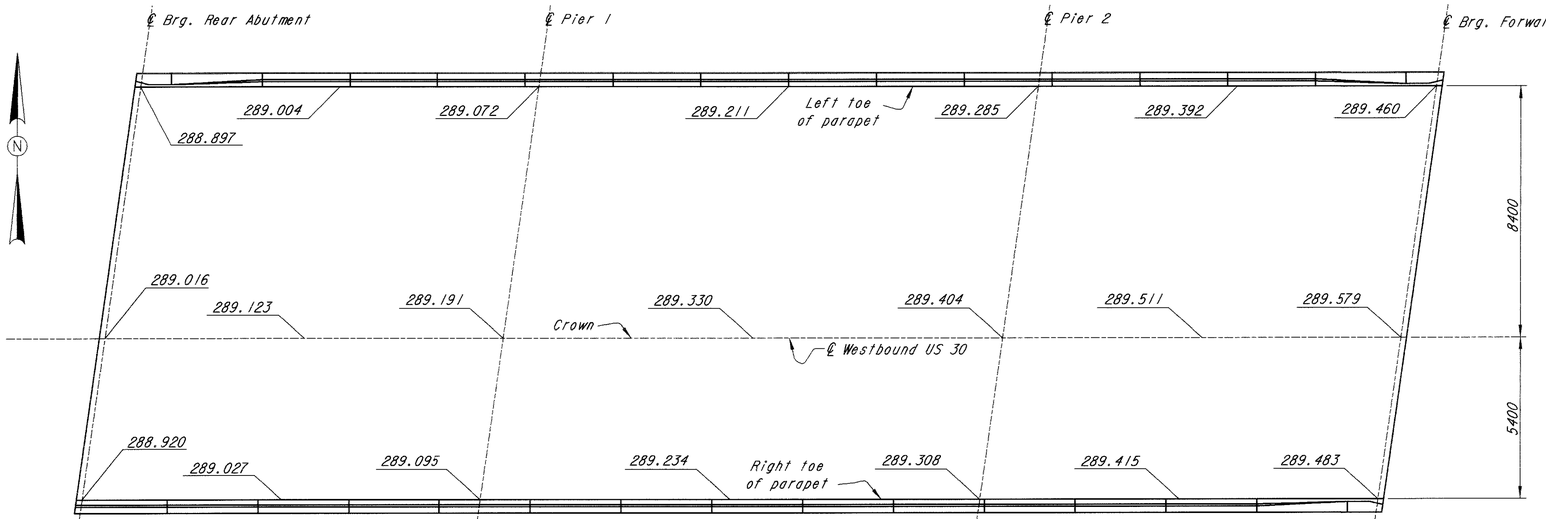
WYA/CRA-30-28.009/0.000

14 / 17

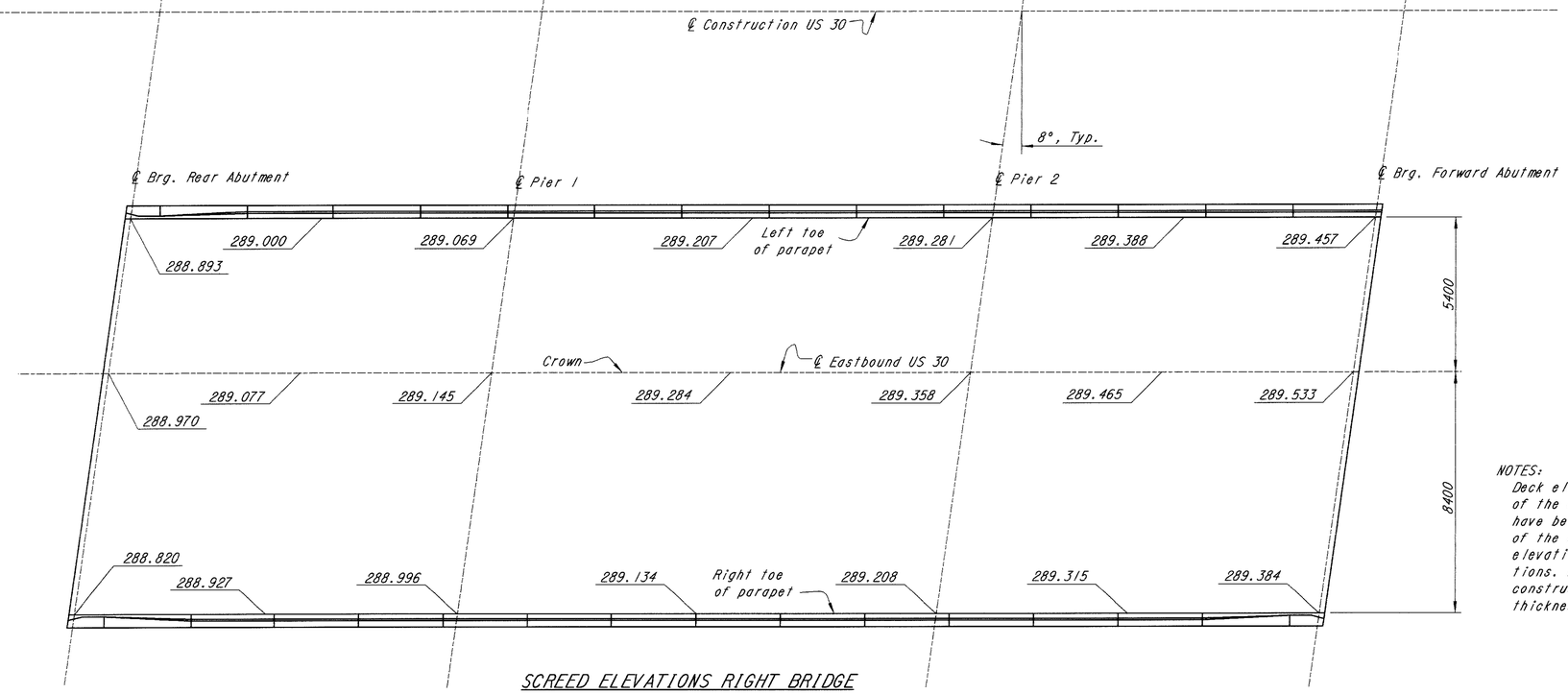
11785
2116

Filename_37750s5.dgn

metric units



SCREED ELEVATIONS LEFT BRIDGE



SCREED ELEVATIONS RIGHT BRIDGE

NOTES:
Deck elevations shown on this plan are for the top surface of the concrete deck prior to concrete placement. Allowances have been made for anticipated deflections due to the weight of the concrete deck. The contractor shall adjust these elevations as necessary to compensate for falsework deflections. Forms for the bottom surface of the slab shall be constructed parallel to and a constant distance (slab thickness) below adjusted screed elevations.

DESIGN AGENCY
BALKE ENGINEERS
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DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	850241Z	

SCREED ELEVATIONS RIGHT AND LEFT BRIDGES
BRIDGE NO. WYA-30-37750
OVER SR 231

WYA/CRA-30-28.009/0.000

15/17

1786
2116

Filename: 37750s1.dgn

EPOXY COATED REINFORCING STEEL LIST

REAR ABUTMENT

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A29M01	8	8570	Str.						
A25M02	8	11 350	Str.						
D25M02	31	1995	14	430	1290	305	305		
A16M01	54	3325	8	775	800				
A16M02	8	10 750	Str.						
A16M03	8	7480	Str.						
A16M04	6	4660	Str.						
A16M05	6	3255	Str.						
A16M06	33	3520	2	1510	580	1510			
A16M07	10	4830	2	2355	200	2355			
A16M08	7	4800	2	2340	200	2340			
A16M09	4	3900	Str.						
A16M10	4	2615	Str.						
A13M01	18	2645	8	730	530				

FORWARD ABUTMENT

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B29M01	8	8580	Str.						
B25M02	8	11 350	Str.						
D25M02	31	1995	14	430	1290	305	305		
B16M01	54	3325	8	775	800				
B16M02	8	10 750	Str.						
B16M03	8	7480	Str.						
B16M04	6	3250	Str.						
B16M05	6	4500	Str.						
B16M06	33	3550	2	1525	580	1525			
B16M07	7	4850	2	2365	200	2365			
B16M08	10	4880	2	2380	200	2380			
B16M09	6	2655	Str.						
B16M10	6	3865	Str.						
B13M01	18	2645	8	730	530				

PIER 1

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
P32M01	24	3660	1	550	3200				
P32M02	24	7890	12	7465					
P32M03	8	12 000	Str.						
P32M04	8	5300	Str.						
P29M01	60	3100	Str.						
P29M02	60	3850	13	3100					
P29M03	12	7530	Str.						
P16M01	112	2820	2	1050	800	1050			
P16M02	8	7100	Str.						
P16M03	6	3110	4	920	1270	920	405		
SP13M01	3	6100	21	6100	115	760			

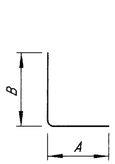
PIER 2

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
R32M01	24	3660	1	550	3200				
R32M02	24	7775	12	7350					
R32M03	8	12 000	Str.						
R32M04	8	5300	Str.						
R29M01	60	3100	Str.						
R29M02	60	3850	13	3100					
R29M03	12	7530	Str.						
R16M01	112	2820	2	1050	800	1050			
R16M02	8	7100	Str.						
R16M03	6	3110	4	920	1270	920	405		
SR13M01	3	6015	21	6015	115	760			

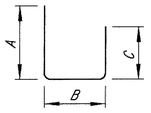
SUPERSTRUCTURE

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
K36M01	66	12 561	Str.						
M36M01	66	7315	Str.						
N36M01	60	8230	Str.						
O36M01	60	8370	Str.						
P36M01	33	14 230	Str.						
A25M01	66	10 249	Str.						
B25M01	60	10 908	Str.						
C25M01	60	9716	12	9360					
D25M01	66	8687	Str.						
F25M01	33	9505	Str.						
G25M01	30	9601	Str.						
H25M01	30	9601	Str.						
X19M01	8	10 400	Str.	125	625	216	230	152	
X19M02	8	9475	Str.						
				280	1350				
Y19M01	283	1175	3	280	850				
Y19M02	Not	Used							
Y19M03	57	1580	1						
Y19M04	250	1080	1						
X16M01	12	3050	Str.						
X16M02	6	1725	18	555	738	432			
X16M03	6	1725	Str.						
X16M04	12	4250	Str.						
X16M05	24	10 350	Str.						
X16M06	24	9425	Str.						
Y16M01	250	2130	26	915	990	205	1¼	38	
Y16M02	3	1170	12	990					
Y16M03	3	1165	12	965					
Y16M04	3	1120	12	940					
Y16M05	3	1095	12	915					
Y16M06	3	1070	12	890					
Y16M07	3	1045	12	865					
Y16M08	3	1020	12	840					
Y16M09	3	995	12	815					
Y16M10	3	970	12	790					
Y16M11	3	945	12	765					
Y16M12	3	920	12	740					
E13M01	60	6706	Str.						
J13M01	626	7750	Str.						
L13M01	60	10 579	Str.						
O13M01	30	10 468	Str.						
U13M01	338	1200	2	380	508	380			

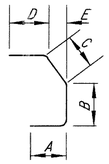
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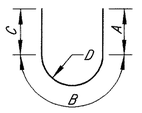
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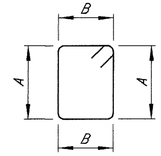
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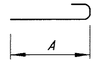
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Type 4



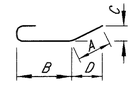
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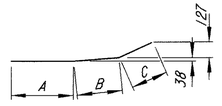
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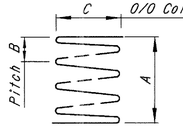
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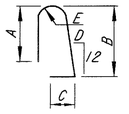
Type 14



Type 18



Type 21



Type 26

NOTES:

1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.
3. SPIRAL REINFORCING BARS: The "length" shown in the steel list for the spiral bars is the length of the spiral along the axis of the spiral. One and one-half closed-coil turns shall be provided at the ends of each spiral unit.
4. SPACERS: Concrete spacers or other approved noncorrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 3050 mm) to insure concentric spacing for the entire cage length. Spacers shall be constructed of approved material equal in quality and durability to the concrete specified for the shaft. The spacers shall have adequate dimensions to ensure a minimum 75 mm clear space between the outside of the reinforcing cage and the design dimension of the drilled shaft or column. Cylindrical concrete feet (bottom supports) shall be provided to ensure that the bottom of the cage is maintained at the proper distance above the base.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	5/26/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FAL	—	850241.2	

REINFORCING STEEL LIST LEFT BRIDGE
BRIDGE NO. WYA-30-37750
OVER SR 231

WYA/CRA-30-28.009/0.000

16 / 17

1787
2116

File Name= 37750R1.dgn

EPOXY COATED REINFORCING STEEL LIST

REAR ABUTMENT

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A29M31	8	8570	Str.						
A25M32	8	11 350	Str.						
D25M32	31	1995	14	430	1290	305	305		
A16M31	54	3325	8	775	800				
A16M32	8	10 750	Str.						
A16M33	8	7480	Str.						
A16M34	6	3250	Str.						
A16M35	6	4500	Str.						
A16M36	33	3370	2	1435	580	1435			
A16M37	7	4650	2	2265	200	2265			
A16M38	10	4770	2	2325	200	2325			
A16M39	4	2655	Str.						
A16M40	4	3865	Str.						
A13M31	18	2645	8	730	530				

FORWARD ABUTMENT

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B29M31	8	8580	Str.						
B25M32	8	11 350	Str.						
D25M32	31	1995	14	430	1290	305	305		
B16M31	54	3325	8	775	800				
B16M32	8	10 750	Str.						
B16M33	8	7480	Str.						
B16M34	6	4440	Str.						
B16M35	6	3160	Str.						
B16M36	33	3400	2	1450	580	1450			
B16M37	10	4830	2	2355	200	2355			
B16M38	7	4700	2	2290	200	2290			
B16M39	4	3900	Str.						
B16M40	4	2615	Str.						
B13M31	18	2645	8	730	530				

PIER 1

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
P32M31	24	3660	1	550	3200				
P32M32	24	7785	12	7360					
P32M03	8	12 000	Str.						
P32M04	8	5300	Str.						
P29M31	60	3100	Str.						
P29M32	60	3850	13	3100					
P29M33	12	7530	Str.						
P16M31	112	2820	2	1050	800	1050			
P16M32	8	7100	Str.						
P16M33	6	3110	4	920	1270	920	405		
SP13M31	3	6025	21	6025	115	760			

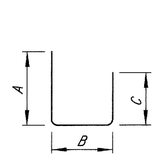
PIER 2

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
R32M31	24	3660	1	550	3200				
R32M32	24	7775	12	7350					
R32M03	8	12 000	Str.						
R32M04	8	5300	Str.						
R29M31	60	3100	Str.						
R29M32	60	3850	13	3100					
R29M33	12	7530	Str.						
R16M31	112	2820	2	1050	800	1050			
R16M32	8	7100	Str.						
R16M33	6	5110	4	920	1270	920	405		
SR13M31	3	5940	21	5940	115	760			

SUPERSTRUCTURE

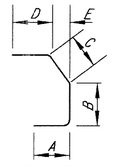
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
K36M31	66	12 561	Str.						
M36M31	66	7315	Str.						
N36M31	60	8230	Str.						
O36M31	60	8370	Str.						
P36M31	33	14 230	Str.						
A25M31	66	10 249	Str.						
B25M31	60	10 808	Str.						
C25M31	60	9716	12	9360					
D25M31	66	8687	Str.						
F25M31	33	9505	Str.						
G25M31	30	9601	Str.						
H25M31	30	9601	Str.						
X19M31	4	10 350	Str.						
X19M32	4	9425	Str.						
Y19M31	283	1175	3	125	625	216	230	152	
Y19M32	Not	Used							
Y19M33	57	1580	1	280	1350				
Y19M34	250	1080	1	280	850				
X16M31	12	3050	Str.						
X16M32	6	1725	18	555	738	432			
X16M33	6	1725	Str.						
X16M34	12	4250	Str.						
X16M35	24	10 350	Str.						
X16M36	24	9425	Str.						
Y16M31	250	2130	26	915	990	205	1¼	38	
Y16M32	3	1170	12	990					
Y16M33	3	1165	12	965					
Y16M34	3	1120	12	940					
Y16M35	3	1095	12	915					
Y16M36	3	1070	12	890					
Y16M37	3	1045	12	865					
Y16M38	3	1020	12	840					
Y16M39	3	995	12	815					
Y16M40	3	970	12	790					
Y16M41	3	945	12	765					
Y16M42	3	920	12	740					
E13M31	60	6706	Str.						
J13M31	626	7750	Str.						
L13M31	60	10 579	Str.						
O13M31	30	10 468	Str.						
U13M31	338	1200	2	380	508	380			

Type 1

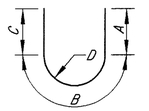


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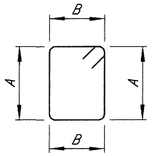
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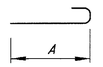
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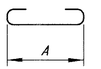
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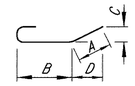
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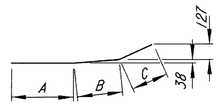
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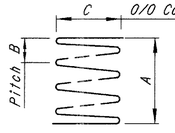
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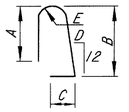
Type 18



Type 21



Type 26



NOTES:

1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.
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STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	5/26/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	8502412	

REINFORCING STEEL LIST RIGHT BRIDGE

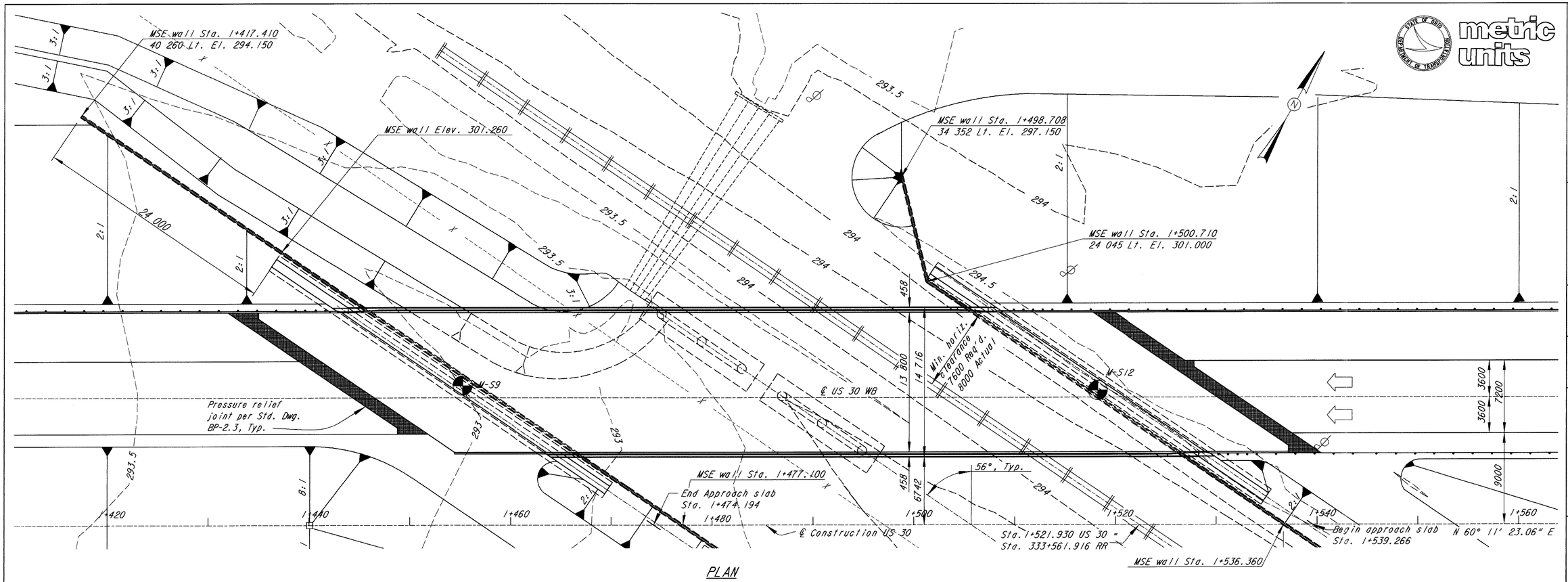
BRIDGE NO. WYA-30-37750
OVER SR 231

WYA/CRA-30-28.009/0.000

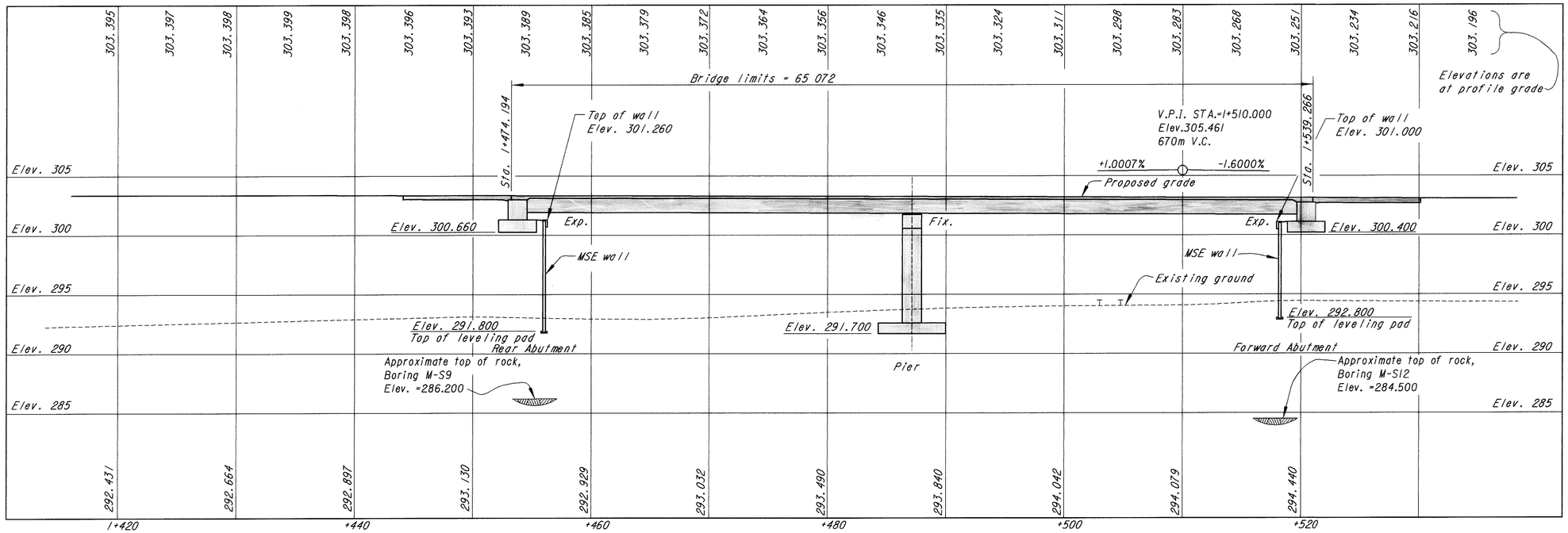
17 / 17

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PLAN



SECTION ALONG ℄ US 30 WB

REVIEWED BY BURGESS & NIPLE, LIMITED

RMK 10-99

TRAFFIC DATA

(2000)	(2020)
ADT = 3484 WB	ADT = 5226 WB
ADTT = 976 WB	ADTT = 1463 WB

Notes:
Earthwork limits shown are approximate. Actual slopes shall conform to plan cross sections.

All stations and elevations are in meters.

All dimensions and lengths are in millimeters.

⊕ Point of min. vertical clearance

◒ Boring location

PROPOSED STRUCTURE

Type: Two span cont. plate girders (A588M) with composite slab on semi-integral abutments on MSE walls and cap and column piers.
Spans: 2 @ 32 000 (measured c/c bearing along center line)
Roadway width: 13 800 Toe/Toe parapets
Live loading: MS18 load case II & the alternate military loading
Skew angle: 56°00'00" R.F.
Wearing surface: Monolithic concrete
Approach slabs: AS-1-81M (9150)
Alignment: Tangent
Crown: 0.016
Latitude: N40°49'00"
Longitude: W83°05'45"

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

REVIEWED	DATE
CRS	7/14/99
DRAWN	STRUCTURE FILE NUMBER
ALH	1700952
DESIGNED	REVISED
MPS	—
CHECKED	
FKL	

CRAWFORD COUNTY
STA. 1+474.194
STA. 1+539.266

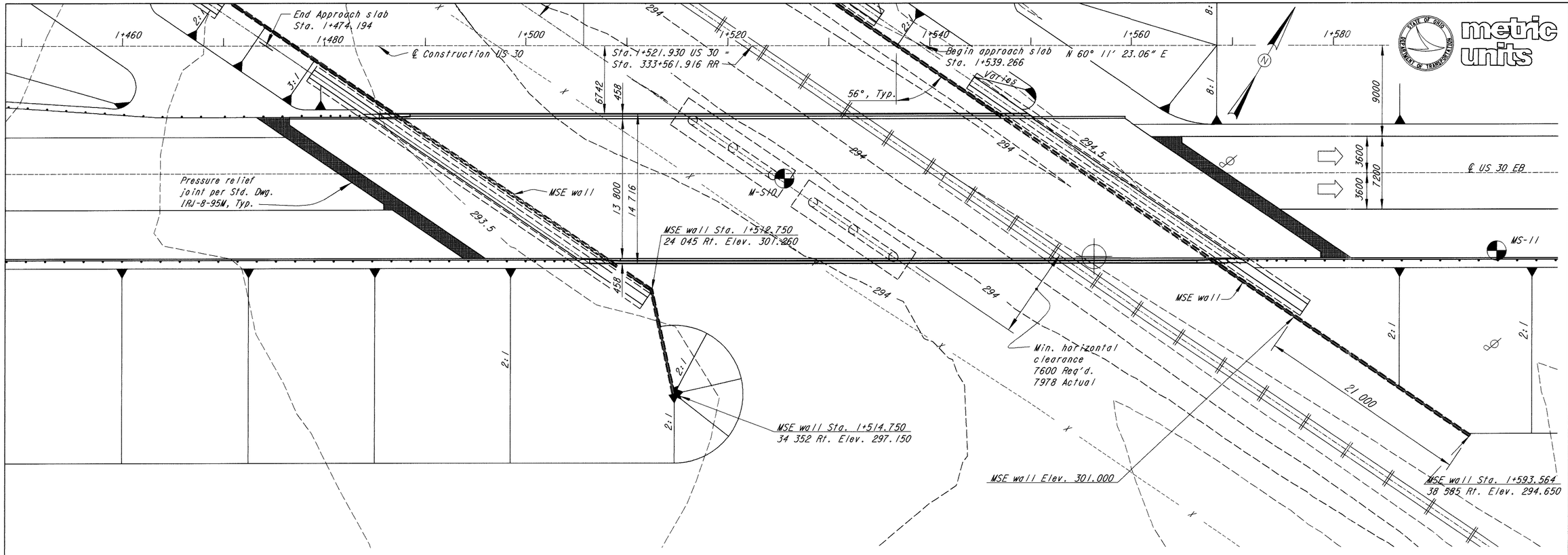
SITE PLAN
BRIDGE NO. CRA-30-0147A
US 30 OVER C.S.X. RAILROAD

WYA/CRA-30-28.009/0.000

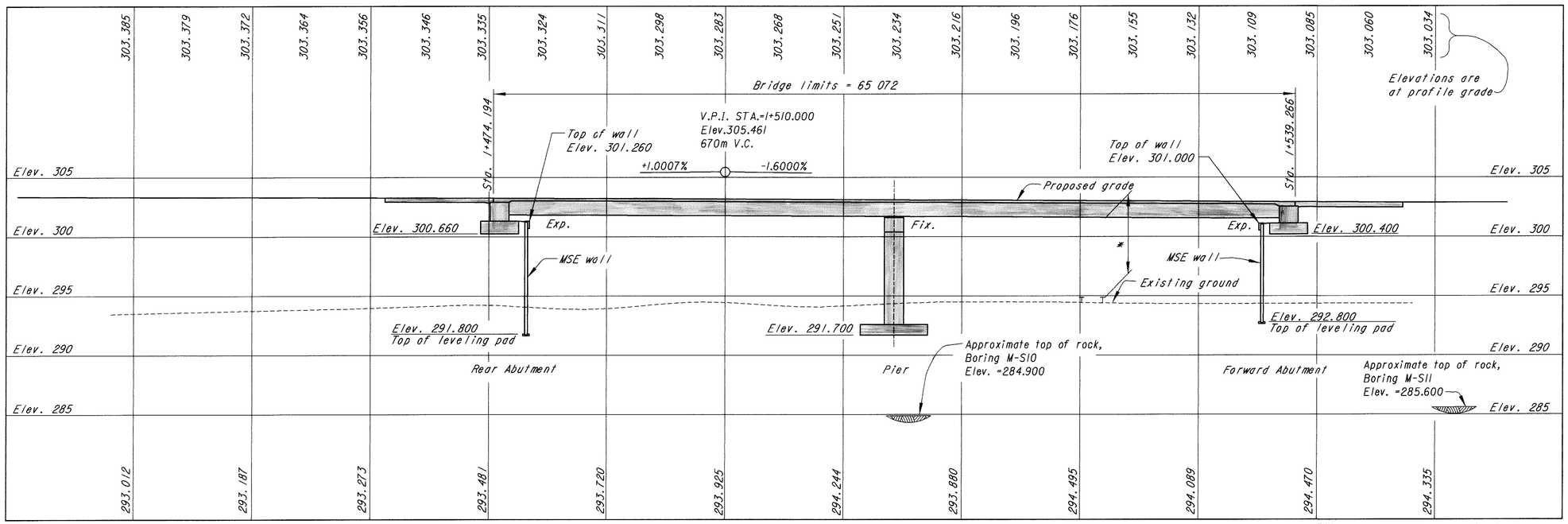
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File name: D1\480SP1.dgn



PLAN



SECTION ALONG ℄ US 30 WB

TRAFFIC DATA

(2000)	(2020)
ADT = 3484 WB	ADT = 5226 WB
ADTT = 976 WB	ADTT = 1463 WB

Notes:
Earthwork limits shown are approximate. Actual slopes shall conform to plan cross sections.

All stations and elevations are in meters.

All dimensions and lengths are in millimeters.

⊕ Point of min. vertical clearance

◒ Boring location

PROPOSED STRUCTURE

Type: Two span cont. plate girders (A588M) with composite slab on semi-integral abutments on MSE walls and cap and column piers.
Spans: 2 @ 32 000 (measured c/c bearing along center line)
Roadway width: 13 800 Toe/Toe parapets
Live loading: MS18 load case II & the alternate military loading
Skew angle: 56°00'00" R.F.
Wearing surface: Monolithic concrete
Approach slabs: AS-1-81M (9150)
Alignment: Tangent
Crown: 0.016
Latitude: N40°49'00"
Longitude: W83°05'45"

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	MPS	DATE	7/14/99
DRAWN	ALH	REVIEWED	CRS
CHECKED	FKL	REVISED	—
		STRUCTURE FILE NUMBER	1700852

CRAWFORD COUNTY
STA. 1+474.194
STA. 1+539.266

SITE PLAN
BRIDGE NO. CRA-30-01.474
US 30 OVER CSX RAILROAD

WYA/CRA-30-28.009/0.000

2 / 33

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GENERAL NOTES

All dimensions in the plans are shown in millimeters.

All elevations and stations in the plans are shown in meters.

REFERENCE shall be made to Standard Drawings:

AS-1-81M	Dated	03-20-95
BP-1M	Revised	01-06-99
BP-2.3	Dated	04-29-99
GSD-1-96M	Dated	11-21-97
SICD-1-96M	Dated	02-12-97

And to supplemental specifications:

863	Dated	01-06-98
842	Dated	01-06-99
899	Dated	10-21-98

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1996, including the 1997 & 1998 Interims Specifications, and the ODOT Bridge Design Manual.

DESIGN LOADING: MS18 (LOAD CASE II) and the alternate military loading.

DESIGN DATA:

Concrete Class S - compressive strength 31.0 MPa (superstructure)

Concrete Class C - compressive strength 27.5 MPa (substructure)

Reinforcing Steel -ASTM A615M, A616M or A617M
Grade 400 - minimum yield strength 400 MPa.
Spiral reinforcement may be plain bars, ASTM A82M or A615M.

Structural steel - ASTM A588M - yield strength 345 MPa.

REINFORCING STEEL in superstructure, substructure and approach slabs shall be epoxy coated.

DECK PROTECTION METHOD:

Epoxy coated reinforcing steel

65mm concrete cover

MONOLITHIC WEARING SURFACE is assumed, for design purposes, to be 25mm thick.

UTILITY LINES: All expense involved in relocation (installing) the affected utility lines shall be borne by the Utility(ies). The Contractor and the Utility(ies) are to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

APPROACH SLAB CONCRETE shall be placed towards the superstructure during days when sudden temperature changes are unlikely and be completed at least 4 hours prior to the concrete placement day's peak ambient temperature.

FOUNDATION BEARING PRESSURE: Abutment footings, as designed, produce a maximum bearing pressure of 150 kPa. The allowable bearing pressure is 190 kPa. Pier footings as designed, produce a maximum bearing pressure of 160 kPa. The allowable bearing pressure is 190 kPa. MSE walls, as designed, produce a maximum bearing pressure of 300 kPa. The allowable bearing pressure is 300 kPa.

CONSTRUCTION CONSTRAINTS:
MSE Walls shall be constructed to the level of the abutment footing, then the fill shall undergo a 30 day waiting period prior to commencing construction of the abutments.

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN: Shall be in accordance with 503 except that the required backfill material beyond the limits of the select granular material for a distance of 60 meters behind the abutments shall be 203 granular material placed in 150mm lifts and compacted in accordance with 304.04. At the option of the Contractor, select granular material can be used in lieu of the 203 granular material, at no additional cost to the state.

SELECT GRANULAR EMBANKMENT: Material (see special provisions for MSE Walls) used as structure backfill shall be placed and compacted up to the level of the abutment footings. Then after placement of the footing, bridge seat and abutment anchorage, the select backfill material shall be placed and compacted up to the bridge seat and on a 1:1 slope from the bridge seat up to the level of the subgrade and to within 150mm of the embankment surface. Abutment diaphragms may then be placed. The remainder of the structure backfill and approach slabs may then be placed.

ABUTMENT ANCHORAGE: Abutments shall be anchored to the select granular embankment by the standard reinforcing strips used in the construction of the MSE Walls. The number of anchors, cast-in-place connectors and strip lengths required at each abutment will be based on the requirements of the specific MSE wall manufacturer. The anchors shall be located in a single row 300mm above the bottom of the abutment Footing and be equally spaced along the back of the abutment. Anchors shall be included for payment in the cost of Item 203, select granular embankment.

CONSTRUCTION CLEARANCE OF 4.25 meters horizontally from the center of tracks and 6.7 meters vertically from a point level with the top of the higher rail, and 2.0 meters from the center of tracks, shall be maintained at all times.

ALTHOUGH OTHERWISE SHOWN IN THESE PLANS, THE STRUCTURE FILE NUMBERS ARE : 1700952L/1700960R

ESTIMATED QUANTITIES

Calculated by: FKL Date: 3/99
Checked by: ALH Date: 6/99

Item	Extension	CRA-30-0474 L Total	CRA-30-0474 R Total	Unit	Description	LEFT BRIDGE Superstructure	LEFT BRIDGE Abutment	LEFT BRIDGE Pier	LEFT BRIDGE General	RIGHT BRIDGE Superstructure	RIGHT BRIDGE Abutment	RIGHT BRIDGE Pier	RIGHT BRIDGE General
503	11100	Lump	Lump	-	Cofferdams, cribs & sheeting				Lump				Lump
503	21301	Lump	Lump	-	Unclassified excavation, as per plan		Lump	Lump			Lump	Lump	
Special	51267502	678.3	678.3	Sq. Meter	Sealing of concrete surfaces (epoxy) (see proposal note)	422.4	74.9	181.0		422.4	75.5	178.7	
516	13900	12.6	12.6	Sq. Meter	51mm Preformed expansion joint filler		12.6				13.0		
516	44101	12	12	Each	Elastomeric bearing with internal laminates and load plate (neoprene), as per plan (410 x 240 x 74 with 440 x 270 x 38 load plate) *		12				12		
516	44101	6	6	Each	Elastomeric bearing with internal laminates and load plate (neoprene), as per plan (590 x 360 x 62 with 740 x 390 x 51 load plate) *			6				6	
518	21230	Lump	Lump	-	Porous backfill with filter fabric		Lump				Lump		
518	40000	80	80	Meter	150mm Perforated corrugated plastic pipe		80				80		
518	40010	3	3	Meter	150mm Non-perforated corrugated plastic pipe, including specials		3				3		
842	41000	54.2	54.2	Cu. Meter	Class C concrete, pier above footing			54.2		369.3		54.1	
842	43501	162.9	162.9	Cu. Meter	Class C concrete, abutment including footing, as per plan		162.9				150.6		
842	46500	70.2	70.2	Cu. Meter	Class C concrete, footing			70.2				70.2	
863	10080	Lump	Lump	-	Structural steel members, level four (4) fabrication	Lump				Lump			
863	20000	1692	1692	Each	Welded stud shear connector	1692				1692			
894	10000	366.5	366.5	Cu. Meter	High Performance Concrete, for Bridge Deck with Warranty	366.5							
					MECHANICALLY STABILIZED EARTH WALL								
203	35000	8687	8687	Cu. Meter	Select granular embankment **				8687				8687
518	40000	124.0	124.0	Meter	150mm Perforated corrugated plastic pipe				124.0				124.0
518	40010	14.0	14.0	Meter	150mm Non-perforated corrugated plastic pipe, including specials				14.0				14.0
Special	61013500	999.0	999.0	Sq. Meter	Reinforced Earth Wall **				999.0				999.0

* See proposal note
** See special provisions for Reinforced Earth Wall

metric units

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BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CBS	7/14/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	1700952L/1700960R	

GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. CRA-30-0474
US 30 OVER CSX RAILROAD

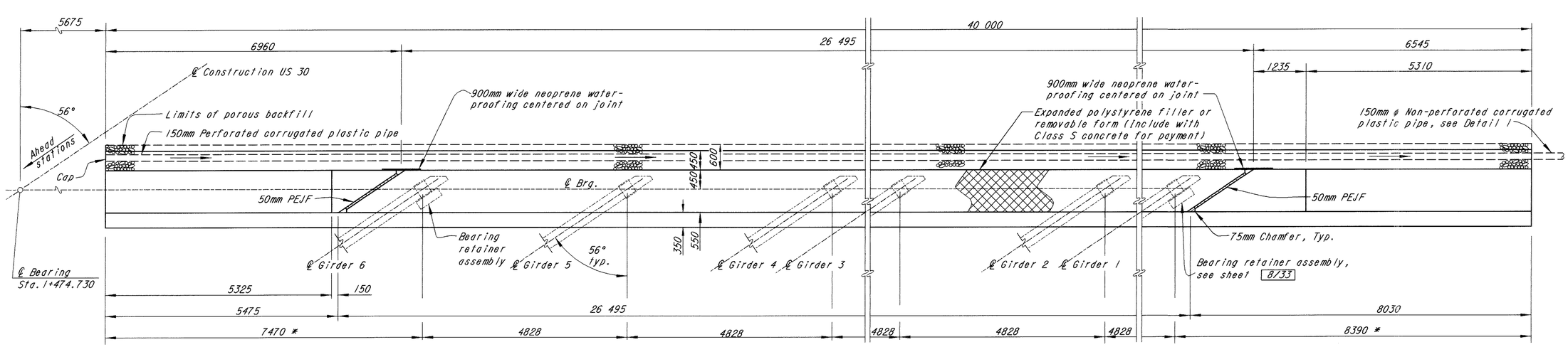
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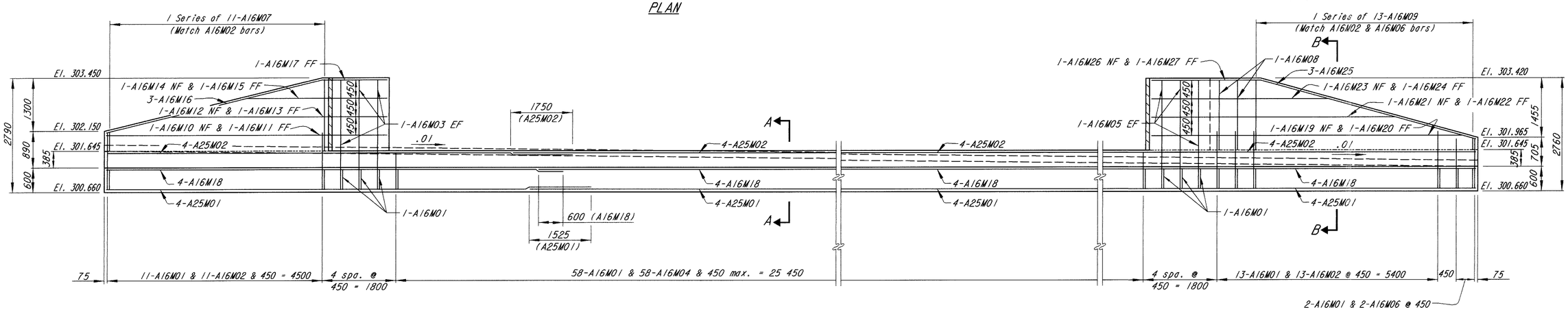
1791 / 2116

Filename: 01-048p1.dgn

metric units



PLAN



ELEVATION

NOTES:
1. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
2. EF = Each Face
   NF = Near Face
   FF = Far Face
   PEJF = Preformed Expansion Joint Filler
3. For Section A-A, Section B-B and Detail 1, see sheet 8/33.
4. For additional details see Std. Dwg. SICD-1-96M.

DESIGN AGENCY
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1848 Summit Road
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MRS	—	1700952	

REAR ABUTMENT LEFT BRIDGE DETAILS
BRIDGE NO. CRA-30-0147A
US 30 OVER CSX RAILROAD

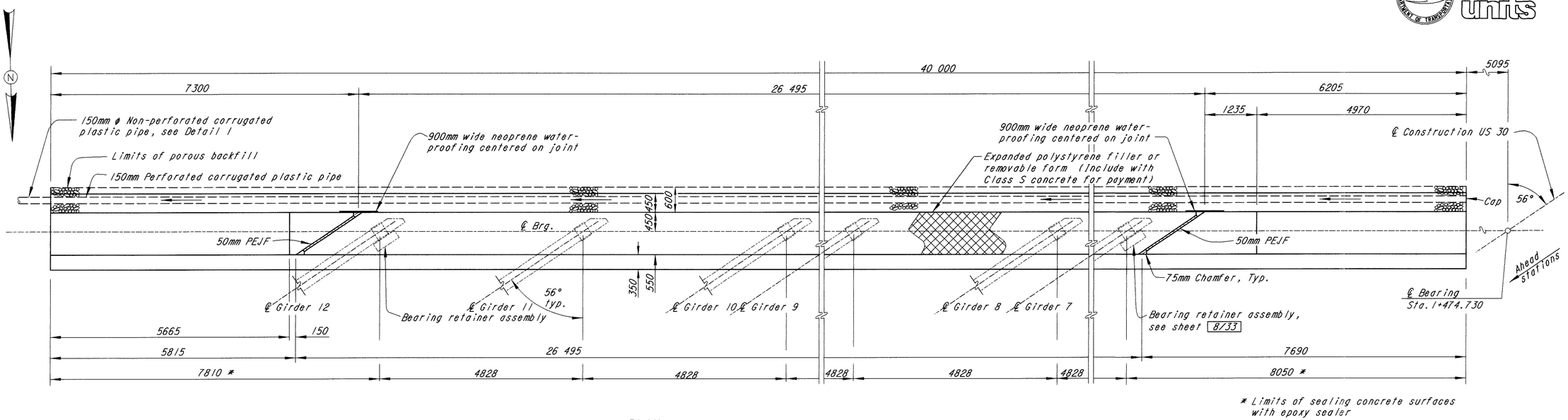
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1792 / 2116

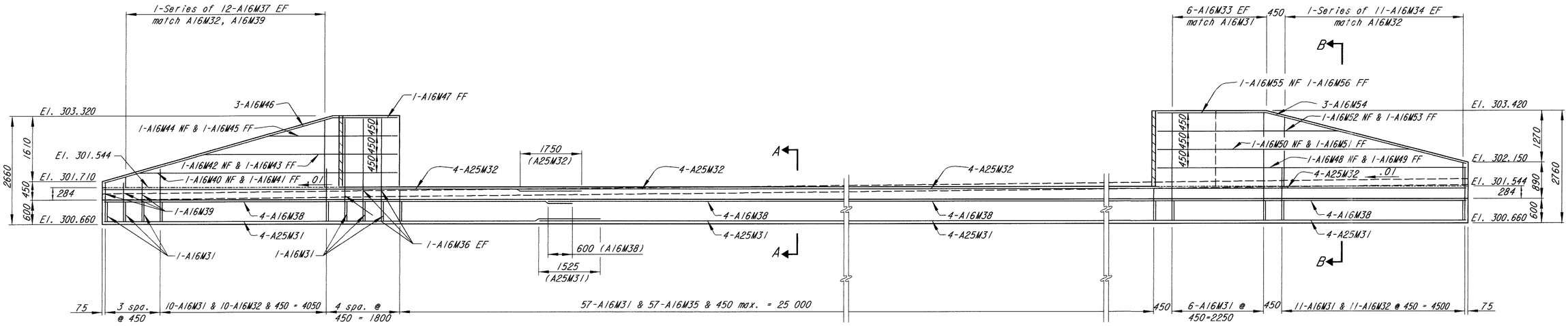
File name: 01448rd1.dgn

metric units



* Limits of sealing concrete surfaces with epoxy sealer

PLAN



ELEVATION

NOTES:
1. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
2. EF = Each Face
   NF = Near Face
   FF = Far Face
   PEJF = Preformed Expansion Joint Filler
3. For Section A-A, Section B-B and Detail 1, see sheet 8/33.
4. For additional details see Std. Dwg. SICD-1-96M.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700952	

REAR ABUTMENT RIGHT BRIDGE DETAILS

BRIDGE NO. CRA-30-0.1474
US 30 OVER CSX RAILROAD

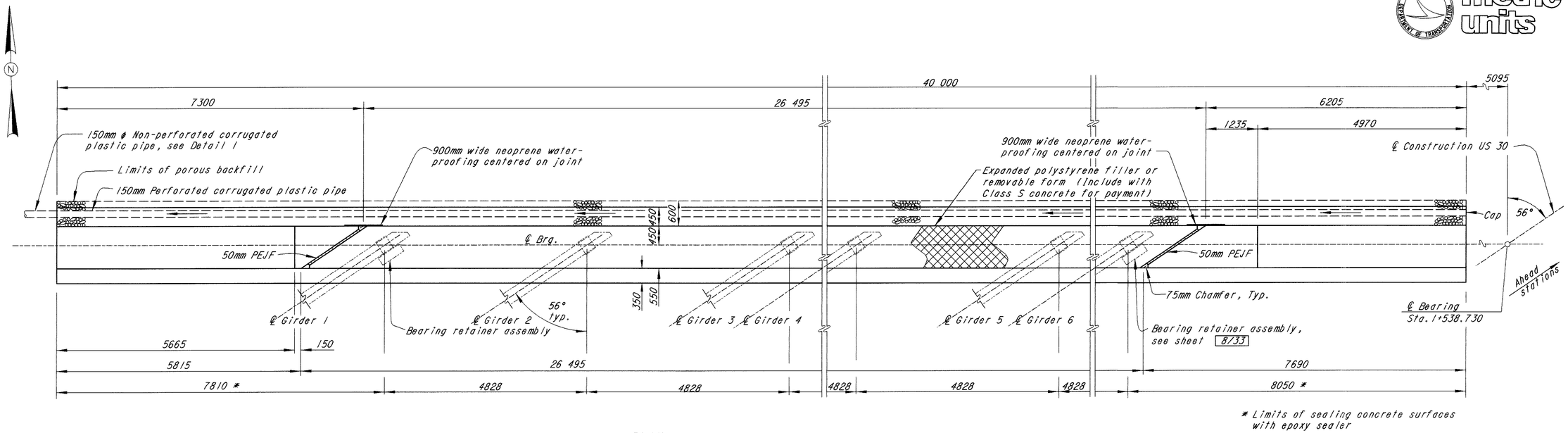
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1793
2116

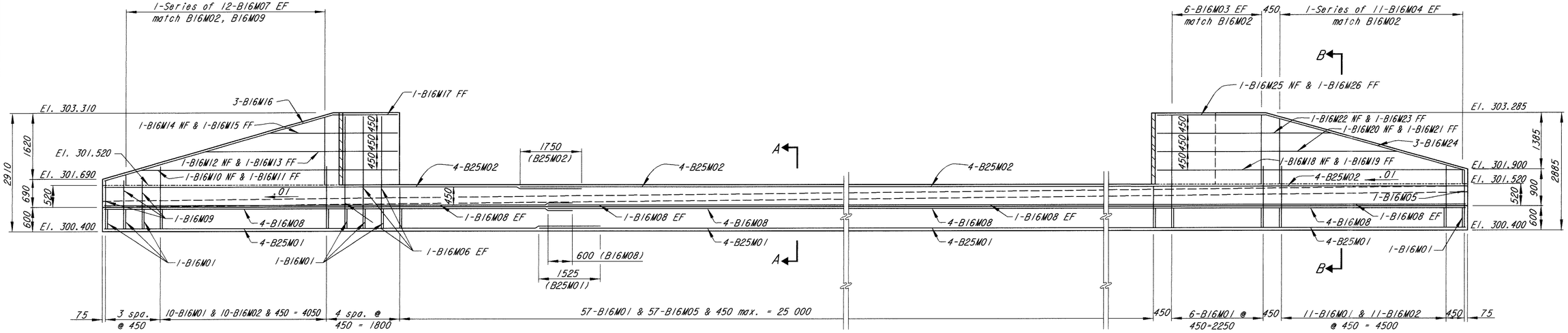
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metric units



* Limits of sealing concrete surfaces with epoxy sealer

PLAN



ELEVATION

NOTES:
1. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
2. EF = Each Face
   NF = Near Face
   FF = Far Face
   PEJF = Preformed Expansion Joint Filler
3. For Section A-A, Section B-B and Detail 1, see sheet 8/33.
4. For additional details see Std. Dwg. SICD-1-96M.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700352	

FORWARD ABUTMENT LEFT BRIDGE DETAILS

BRIDGE NO. CRA-30-0147A
US 30 OVER CSX RAILROAD

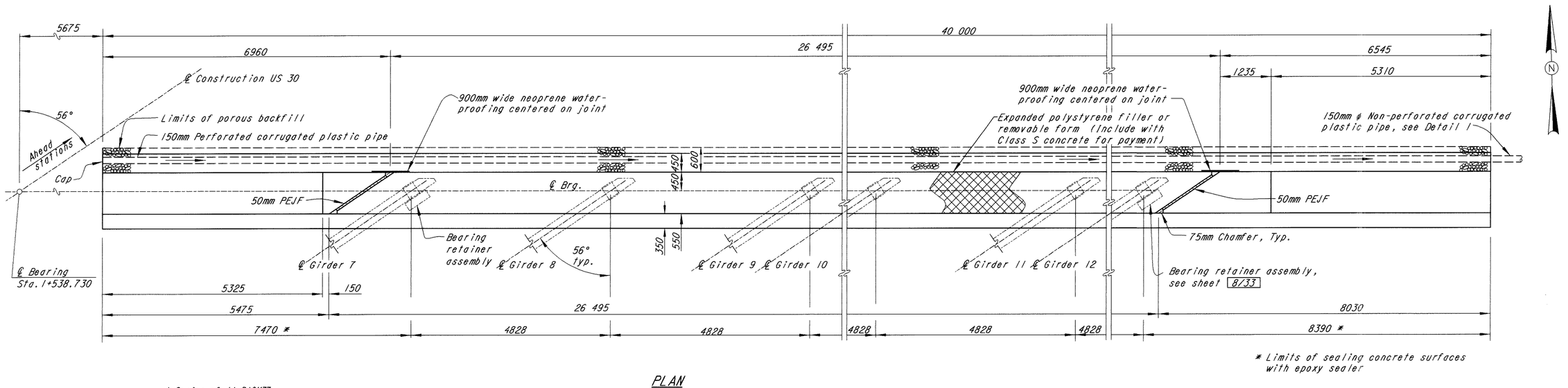
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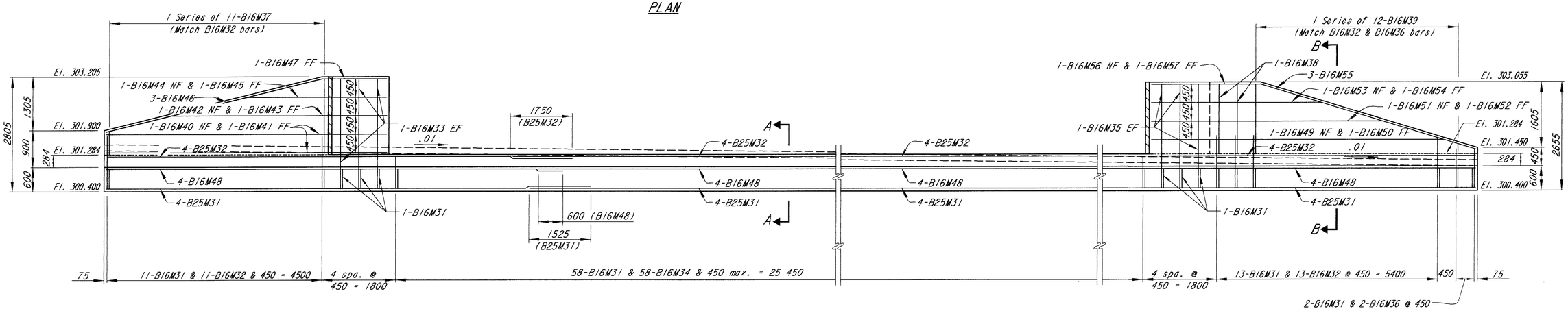
1794 / 2116

Filename: 0147Afr1.dgn

metric units



PLAN



ELEVATION

NOTES:
1. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
2. EF = Each Face
   NF = Near Face
   FF = Far Face
   PEJF = Preformed Expansion Joint Filler
3. For Section A-A, Section B-B and Detail 1, see sheet 8/33.
4. For additional details see Std. Dwg. SICD-1-96M.

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DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700352	

FORWARD ABUTMENT RIGHT BRIDGE DETAILS
BRIDGE NO. CRA-30-0147A
US 30 OVER CSX RAILROAD

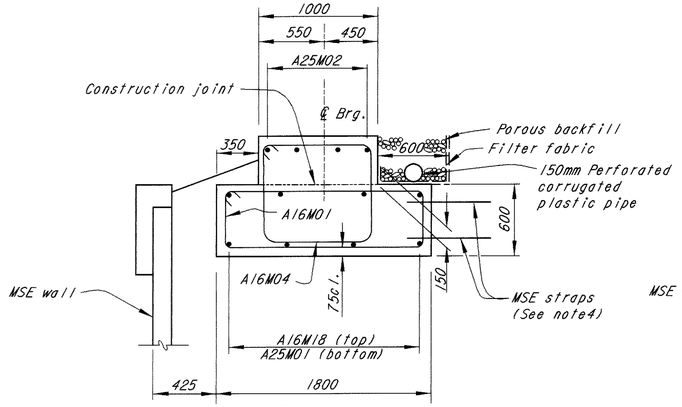
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1795
2116

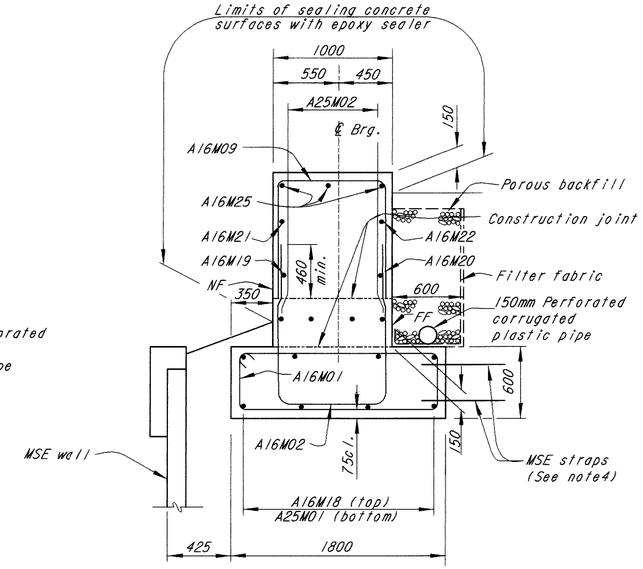
F:\Inroute-01\448702.dgn

metric units



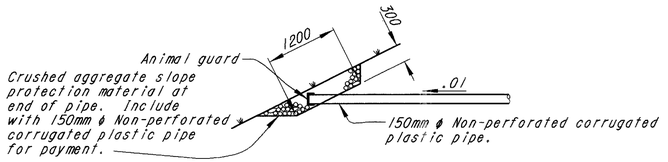
SECTION A-A

(Rear abutment left bridge shown, others similar)

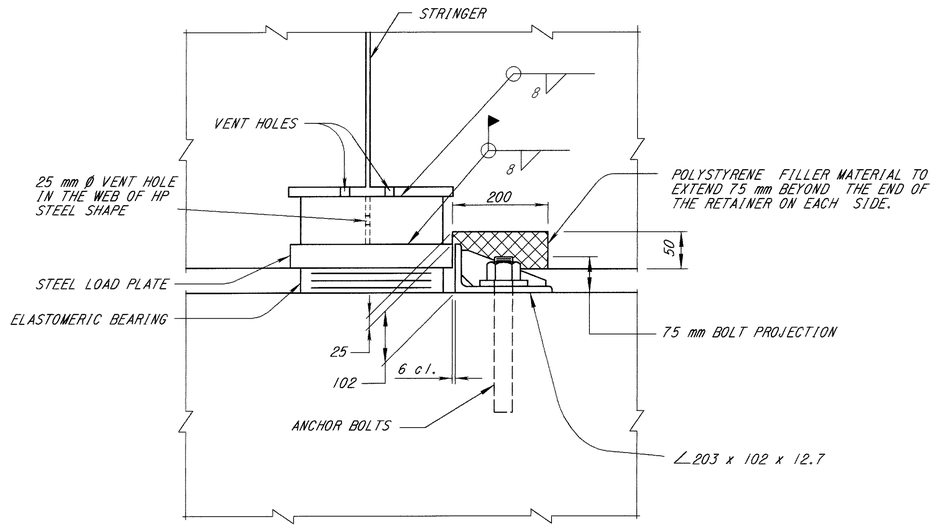


SECTION B-B

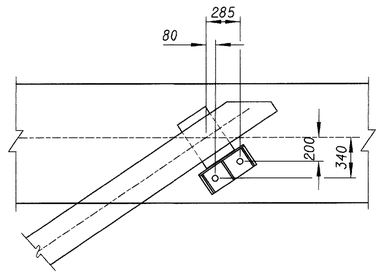
(Rear abutment left bridge shown, others similar)



DETAIL 1



SECTION J-J



BEARING RETAINER DETAIL

NOTES:
1. Bearing retainer to be same material as girder.
2. For additional details on bearing retainer, see Std. Dwg. SICD-1-96M.
3. BRIDGE SEAT REINFORCING in the vicinity of the bridge seat shall be accurately placed to avoid interference with the drilling of bearing retainer anchor holes or the pre-setting of anchor holes.
4. Number, size, spacing and connection details of the straps shall be per the MSE wall company requirements.

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FKL	ALH	CRS	7/14/99
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MMS	—	17002562	

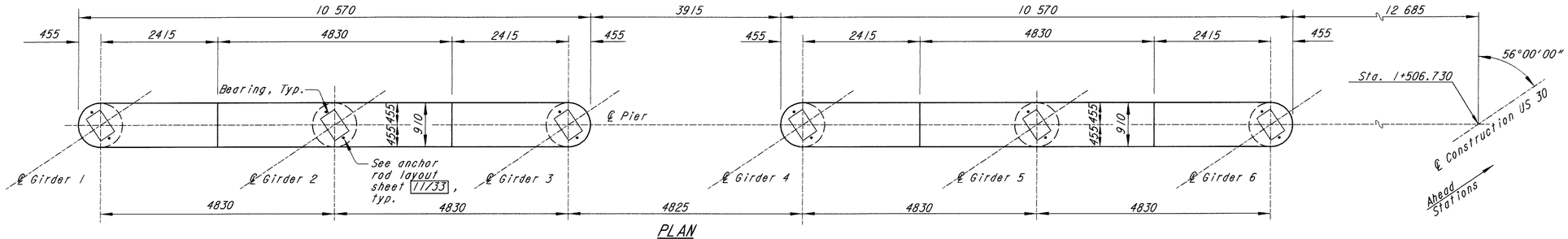
ABUTMENT DETAILS
BRIDGE NO. CRA-30-0147.4
US 30 OVER CSX RAILROAD

WYA/CRA-30-28.009/0.000

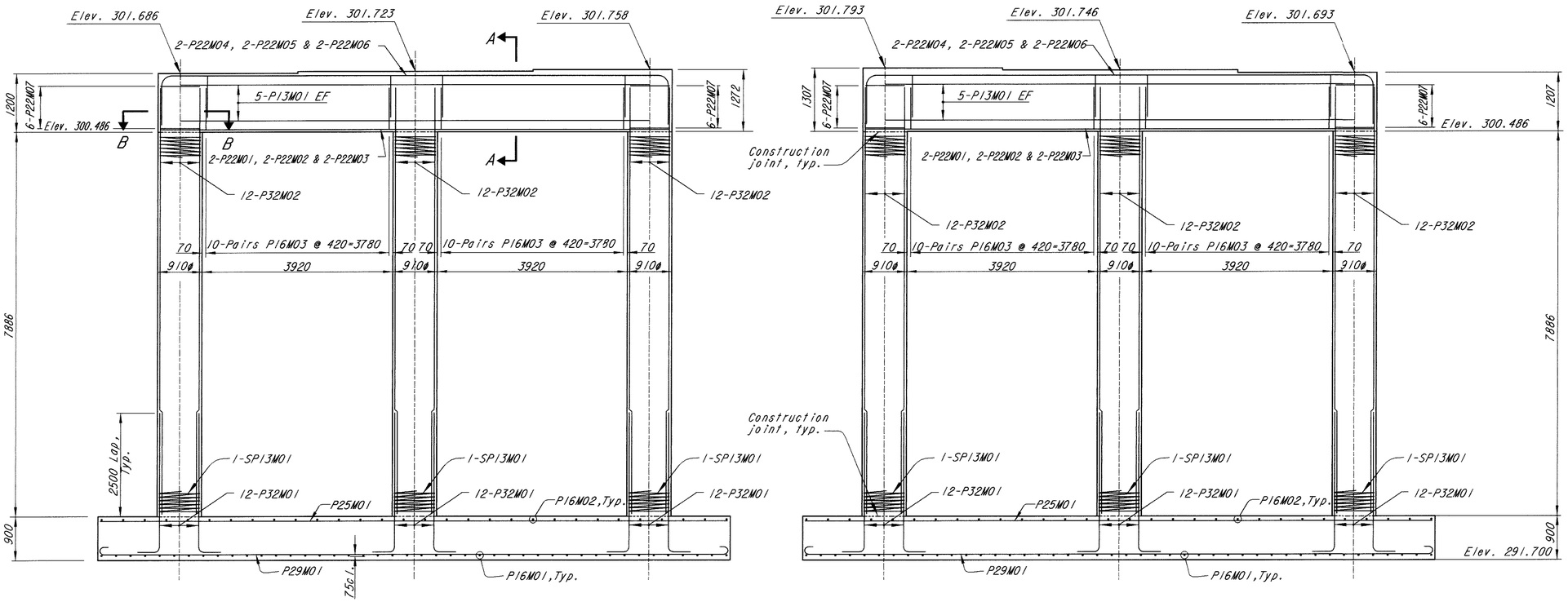
8 / 33

1796
2116

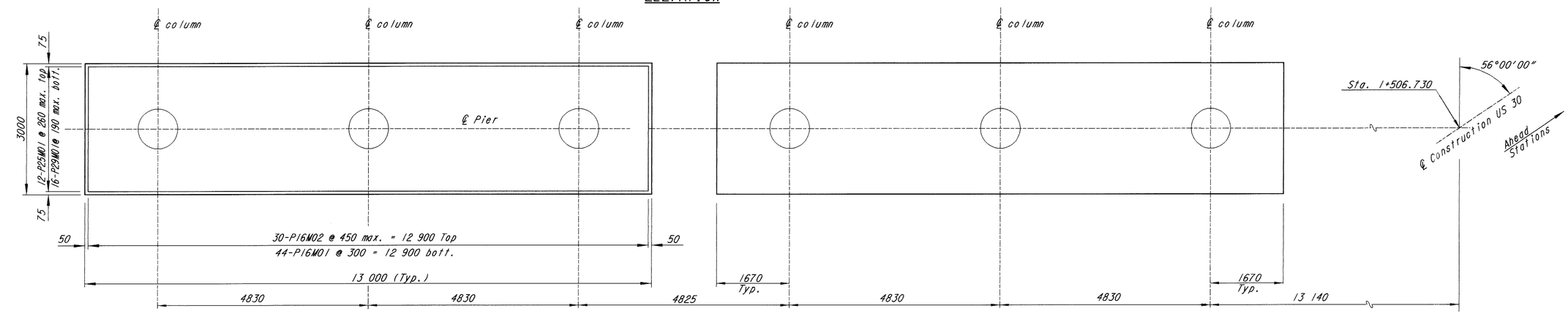
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PLAN



ELEVATION



NOTE: Footing reinforcing steel shown is typical for both footings.

FOOTING PLAN

Notes:
For notes, end elevation and sections, see sheet 11/33 .

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DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	7/14/99
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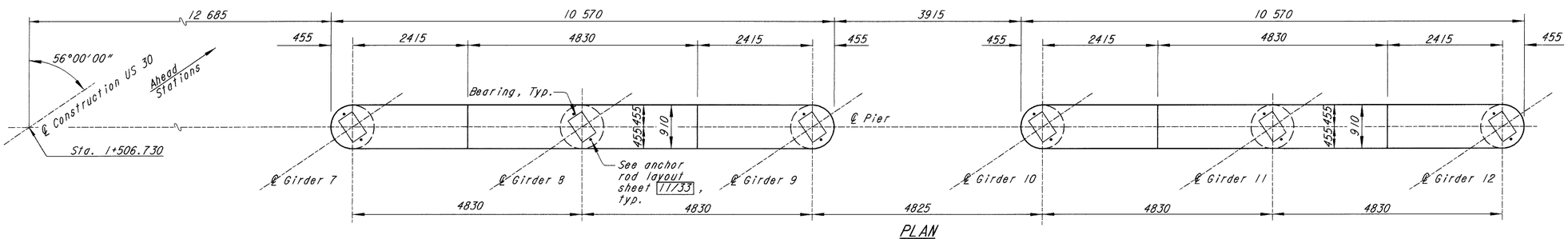
PIER LEFT BRIDGE
BRIDGE NO. CRA-30-01474
US 30 OVER CSX RAILROAD

WYA/CRA-30-28.009/0.000

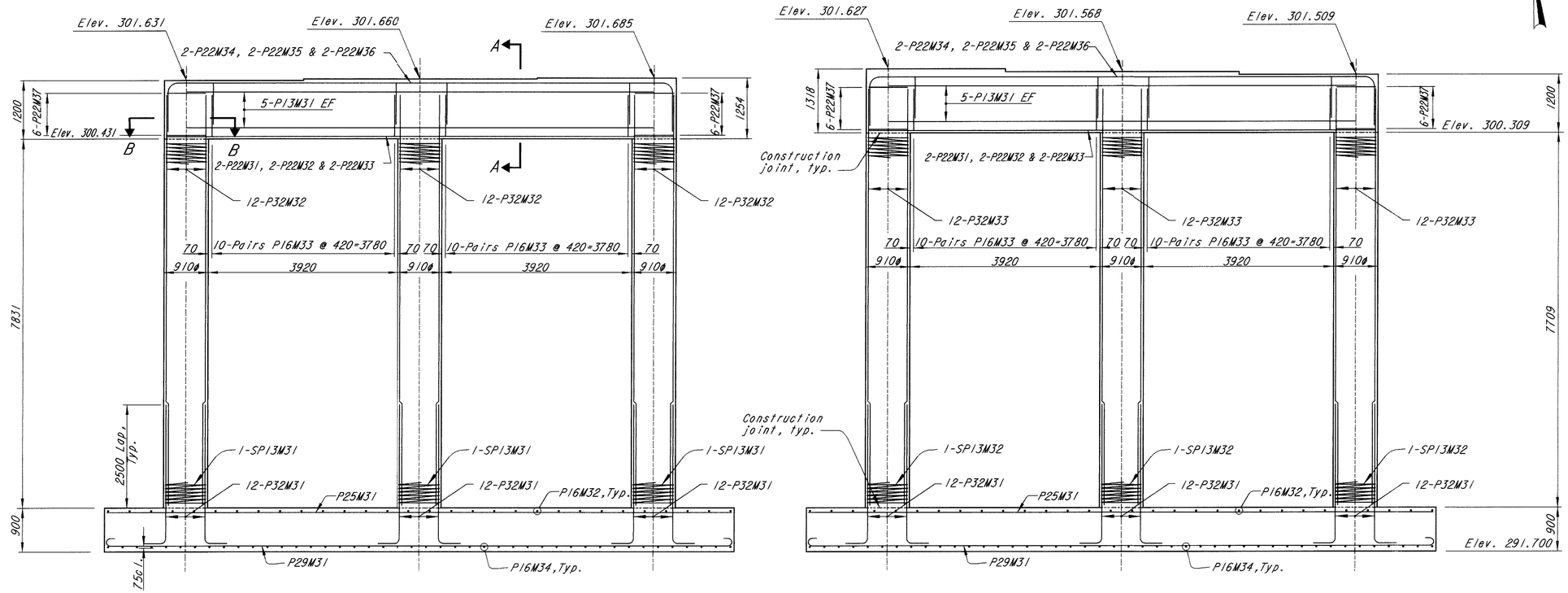
9 / 33

1797
2116

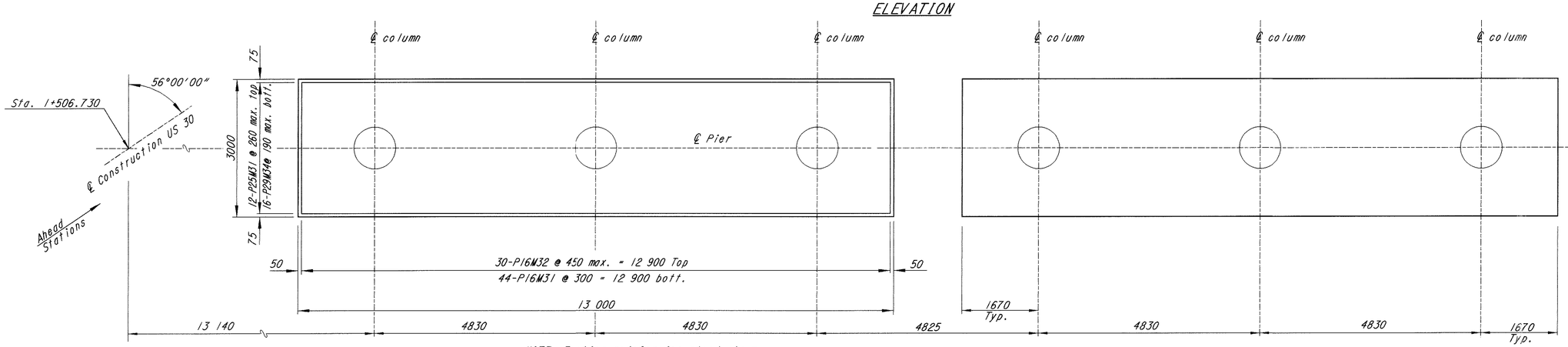
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PLAN



ELEVATION



NOTE: Footing reinforcing steel shown is typical for both footings.

FOOTING PLAN

Notes:
For notes, end elevation and sections, see sheet 11/33 .

metric units

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DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—		1700952

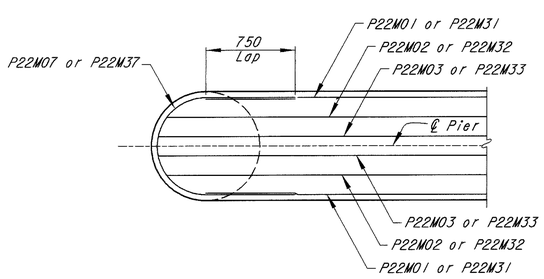
PIER RIGHT BRIDGE
BRIDGE NO. CRA-30-0.474
US 30 OVER CSX RAILROAD

WYA/CRA-30-28.009/0.000

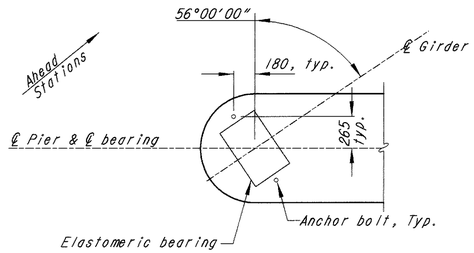
10/33

1798
2116

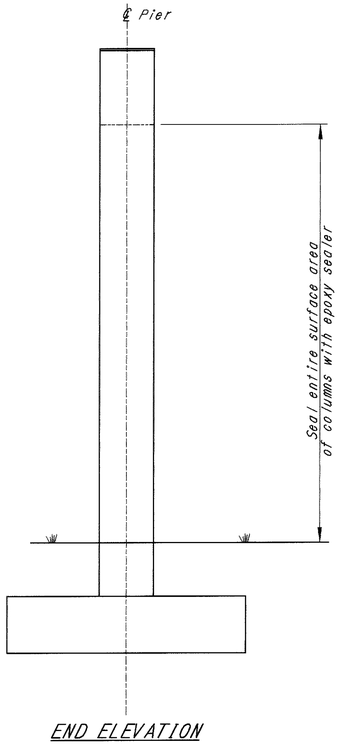
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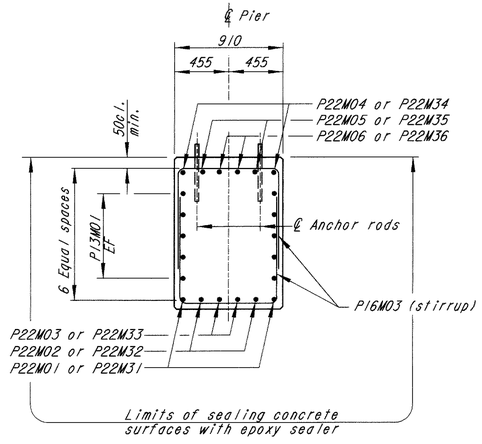
SECTION B-B



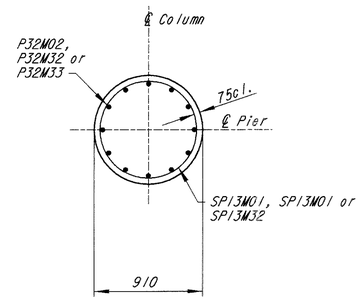
ANCHOR ROD LAYOUT



END ELEVATION



SECTION A-A



TYPICAL COLUMN SECTION

NOTES:
1. BRIDGE SEAT REINFORCEMENT: Reinforcing steel in the vicinity of the bridge seat shall be accurately placed to avoid interference with the drilling of bearing anchor holes or the pre-setting of bearing anchors.
2. BEARING ANCHORS: At the option of the Contractor, bearing anchors (or formed holes), located and supported by templates, may be cast-in-place.

metric units

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MRS	—	1700852	

PIER DETAILS
BRIDGE NO. CRA-30-01474
US 30 OVER CSX RAILROAD

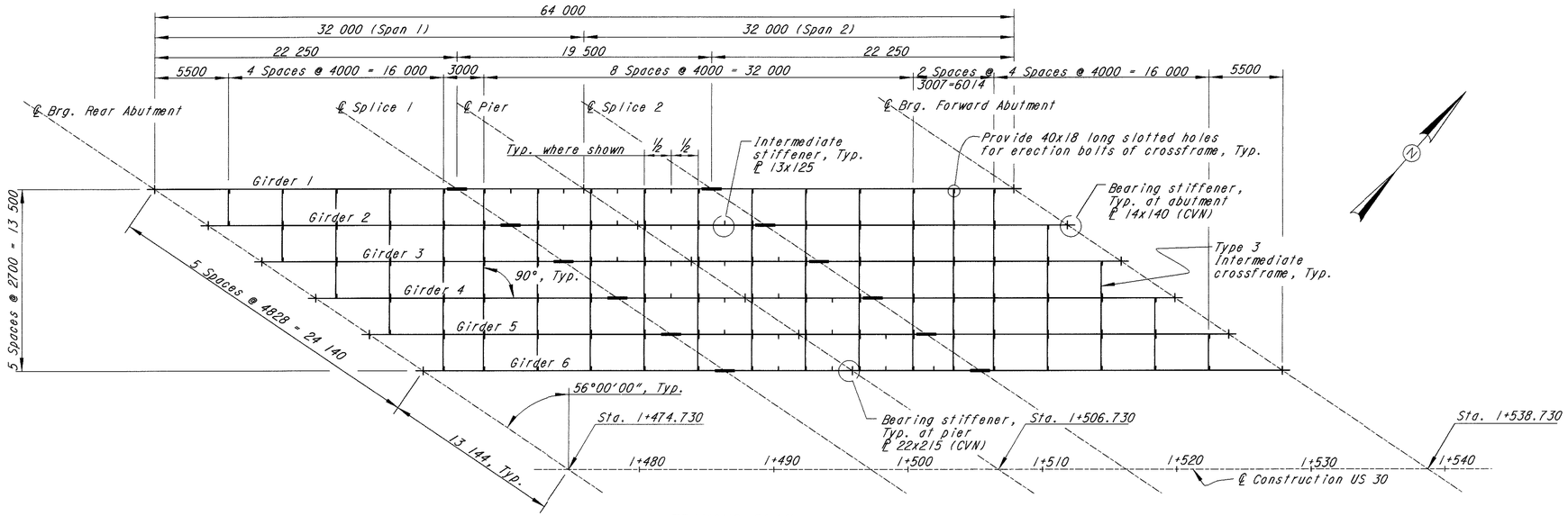
WYA/CRA-30-28.009/0.000

11 / 33

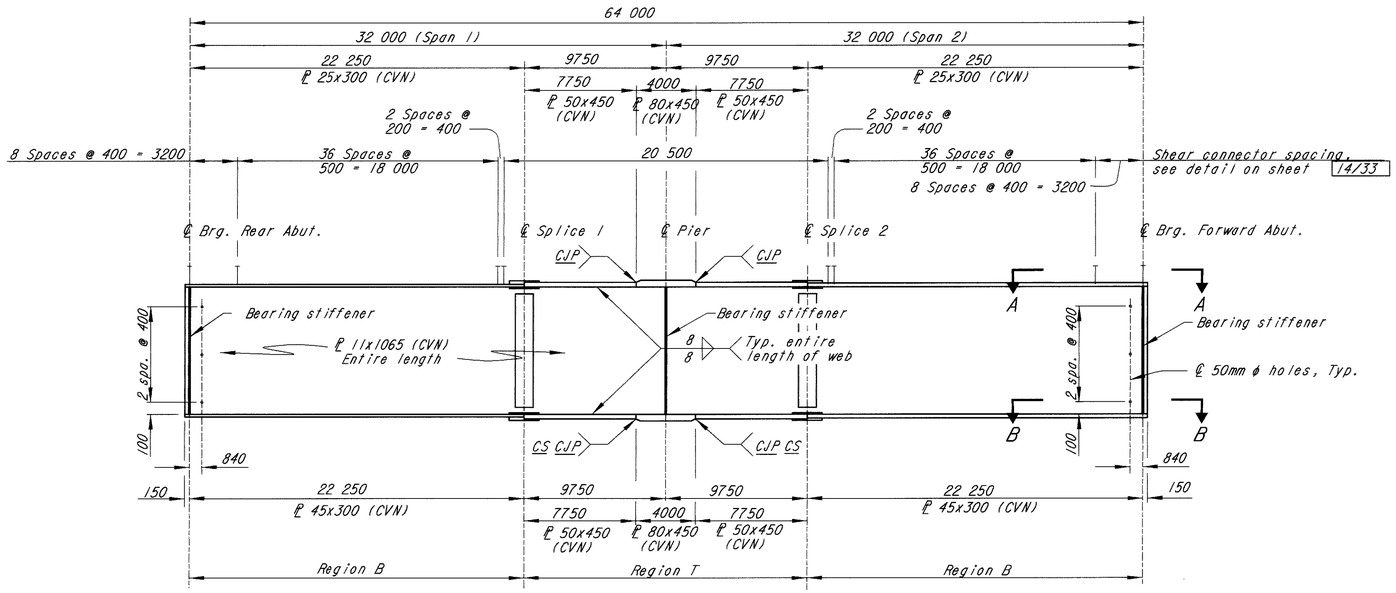
1799
2116

Filename: 01448s3.dgn

metric units



FRAMING PLAN



GIRDER ELEVATION

(Typical)

Note:
Intermediate stiffeners not shown for clarity.

NOTES:
1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. WELDED ATTACHMENT of supports for concrete deck finishing machine may be made to areas of the fascia stringer flanges designated Region B. Attachments shall not be made to areas designated Region T. Fillet welds to compression flanges shall not be closer than 25mm from edge of flange, be not more than 50mm long and be not smaller than the minimum size required by AASHTO.
3. Region B = Bottom flange in tension; top flange in compression.
   Region T = Top flange in tension; bottom flange in compression.
4. CS - Indicates butt weld subject to compressive stresses only.
   CJP - Indicates complete joint penetration.
5. For splice details and Section A-A, see sheet 14/33 .
6. All butt welds shall have weld reinforcement removed by grinding in direction parallel to centerline of girder.
7. For crossframe, stiffener and additional details, see Std. Dwg. GSD-1-96M.

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MRS	—	1700952	

FRAMING PLAN LEFT BRIDGE
BRIDGE NO. CRA-30-0.474
US 30 OVER CSX RAILROAD

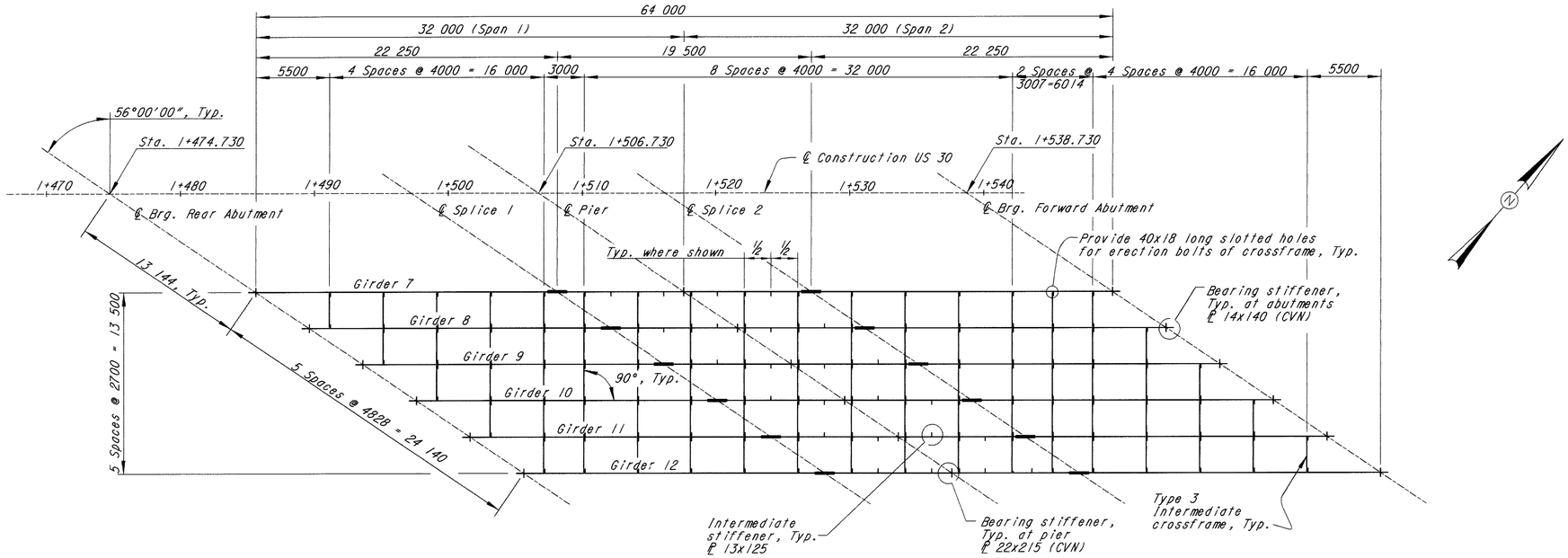
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12 / 33

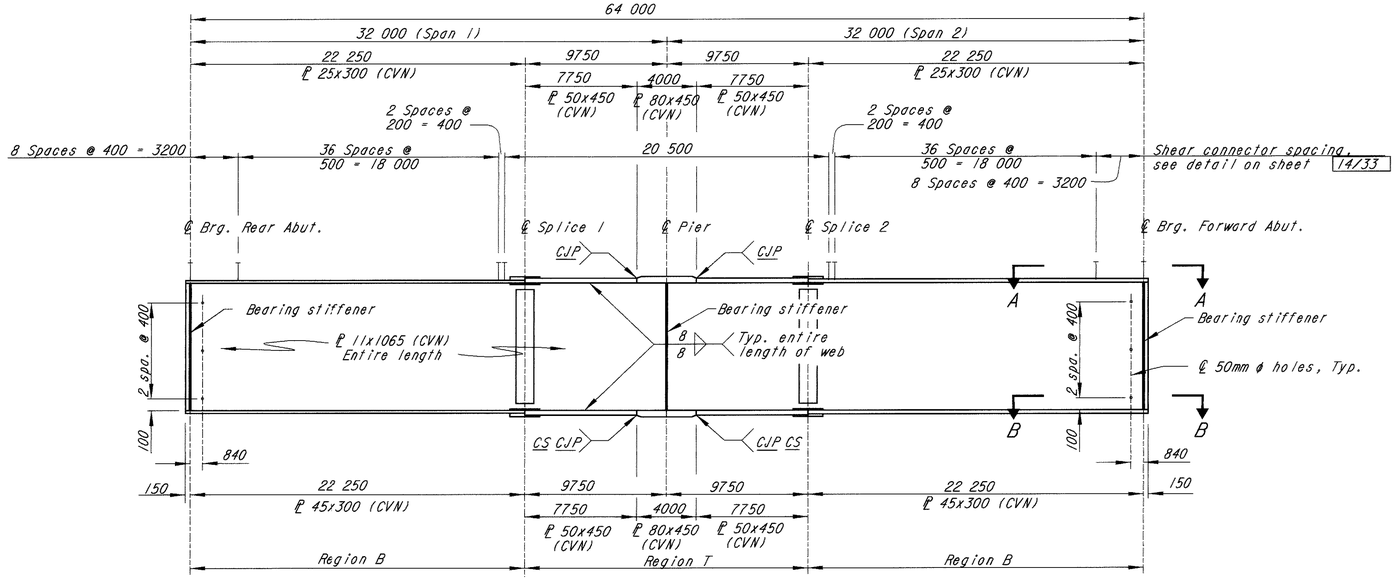
1800 / 2116

E:\Bridges-01\480\pic.dgn

metric units



FRAMING PLAN



GIRDER ELEVATION

(Typical)

Note:
Intermediate stiffeners not shown for clarity.

NOTES:

1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. WELDED ATTACHMENT of supports for concrete deck finishing machine may be made to areas of the fascia stringer flanges designated Region B. Attachments shall not be made to areas designated Region T. Fillet welds to compression flanges shall not be closer than 25mm from edge of flange, be not more than 50mm long and be not smaller than the minimum size required by AASHTO.
3. Region B = Bottom flange in tension; top flange in compression.
   Region T = Top flange in tension; bottom flange in compression.
4. CS - Indicates butt weld subject to compressive stresses only.
   CJP - Indicates complete joint penetration.
5. For splice details, and Section A-A, see sheet 14/33 .
6. All butt welds shall have weld reinforcement removed by grinding in direction parallel to centerline of girder.
7. For crossframe, stiffener and additional details, see Std. Dwg. GSD-1-96M.

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MRS	—	17000952	

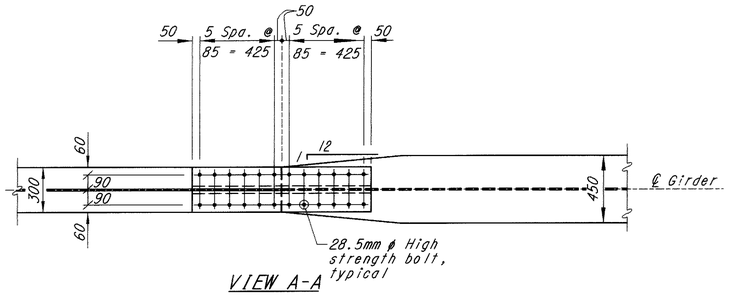
FRAMING PLAN RIGHT BRIDGE
BRIDGE NO. CRA-30-0147.4
US 30 OVER C&SX RAILROAD

WYA/CRA-30-28.009/0.000

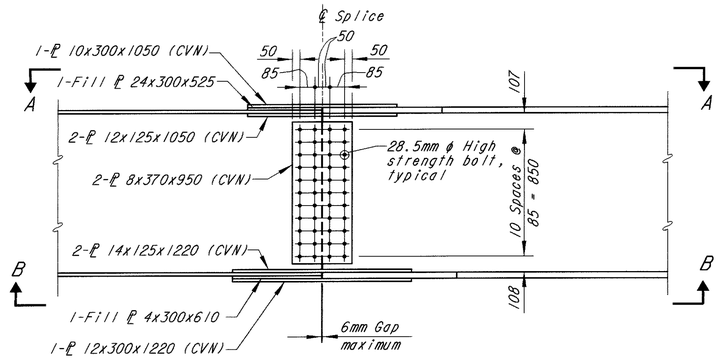
13/33

1801
2116

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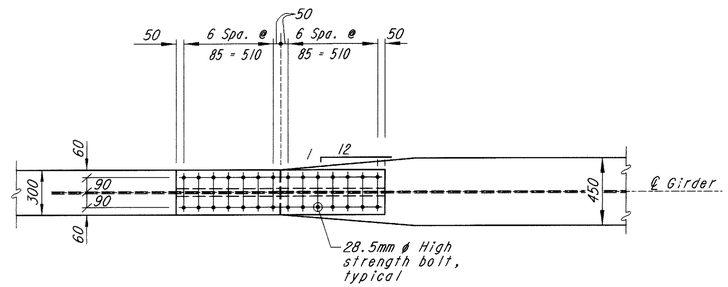


VIEW A-A

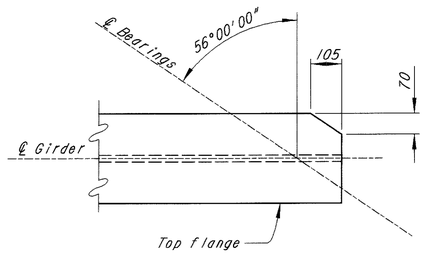


SPLICE ELEVATION

(Splice 1 shown, splice 2 opposite hand)

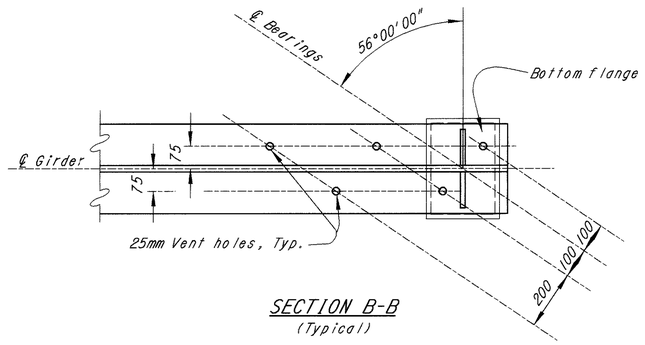


VIEW B-B



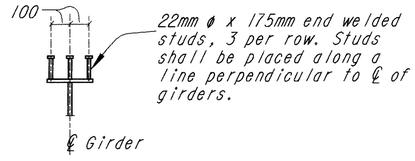
SECTION A-A

(Typical)

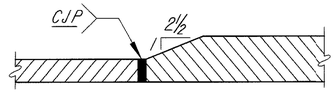


SECTION B-B

(Typical)



SHEAR CONNECTOR DETAIL



FLANGE THICKNESS TRANSITION DETAIL

SPLICE NOTES

1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. High strength bolts shall be 28.5mm diameter, A325M Type 3.
3. In web splice plates, bolt heads shall be placed on the exposed side of the fascia girders. In bottom flange splice plates, nuts shall be placed on top surface of bottom flange splice plates.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

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FKL	ALH	CRS	7/14/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700352	

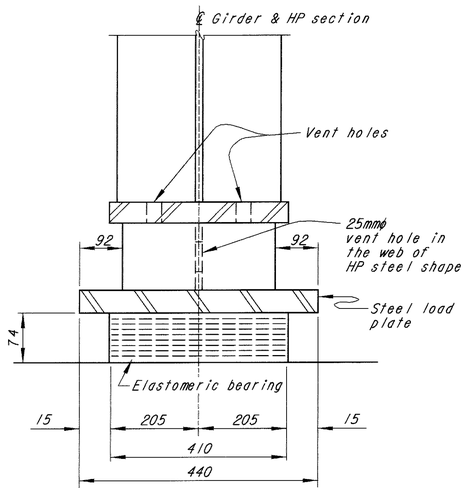
STRUCTURAL STEEL DETAILS
BRIDGE NO. CRA-30-0147A
US 30 OVER C&X RAILROAD

WYA/CRA-30-28.009/0.000

14 / 33

1802
2116

File name: 02B67p3.dgn



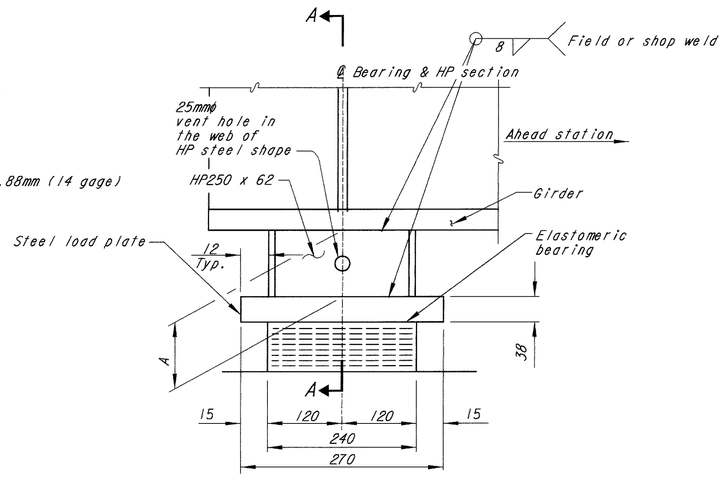
SECTION A-A

Thickness of external elastomer = 5mm (2 required)

Thickness of internal elastomer = 7mm (7 required)

Internal steel laminate thickness = 1.88mm (14 gage) (8 required)

D.L. = 300kN
L.L. = 250kN
Total 550kN



ELEVATION
BEARING AT ABUTMENTS

DIMENSION A		
GIRDER	REAR ABUT.	FWD. ABUT.
1	110	128
2	151	159
3	192	190
4	232	220
5	189	168
6	142	110
7	207	256
8	242	281
9	271	300
10	218	237
11	164	174
12	110	110

SECTION B-B

Thickness of external elastomer = 7mm (2 required)

Thickness of internal elastomer = 9.5mm (4 required)

Internal steel laminate thickness = 1.88mm (14 gage) (5 required)

D.L. = 1170kN
L.L. = 395kN
Total 1565kN

ELEVATION
BEARING AT PIER

NOTES FOR LAMINATED ELASTOMERIC BEARINGS AND LOAD PLATE

LOAD PLATE: The steel load plate shall be bonded by vulcanization to the elastomer during the molding process.

The steel load plate and HP 250 x 62 shall be the same material as the attached structural steel.

WELDING shall be controlled so that the plate temperature at the elastomer bonded surface does not exceed 150°C as determined by the use of pyrometric sticks or other temperature monitoring devices.

BASIS OF PAYMENT: The unit bid price shall include all materials, labor, testing, anchor rods and incidentals necessary to furnish and install laminated elastomeric bearings. Payment will be made at the contract price for Item 516, each, elastomeric bearings with internal laminates (neoprene). Cost of the HP section shall be included for payment with Item 516 also.

ELASTOMERIC BEARINGS shall comply with Item 516 and AASHTO Standard Specification for Highway Bridges, Section 18, Bearing Devices, Division II, Construction, Articles 18.4.5.1 and 18.5.6.2. Bearings shall be Grade 3, 50 durometer elastomer, and shall be subjected to the load testing requirements defined in Article 18.7.4.5 of the AASHTO document listed above. Bearings were designed under Section 14.6.6 of Section 14, Bearings, Division I, Design. Testing shall be included in the unit price bid for the bearings, each.

BEARING REPOSITIONING: If the steel is erected at an ambient temperature higher than 27° C or lower than 4° C and the bearing shear deflection exceeds 1/6 of the bearing height at 15° C (+/-) 5° C, the beams or girders shall be raised to allow the bearings to return to their undeformed shape at 15° C (+/-) 5° C.

metric units

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MRS	—	1700952	

BEARING DETAILS
BRIDGE NO. CRA-30-01474
US 30 OVER CSX RAILROAD

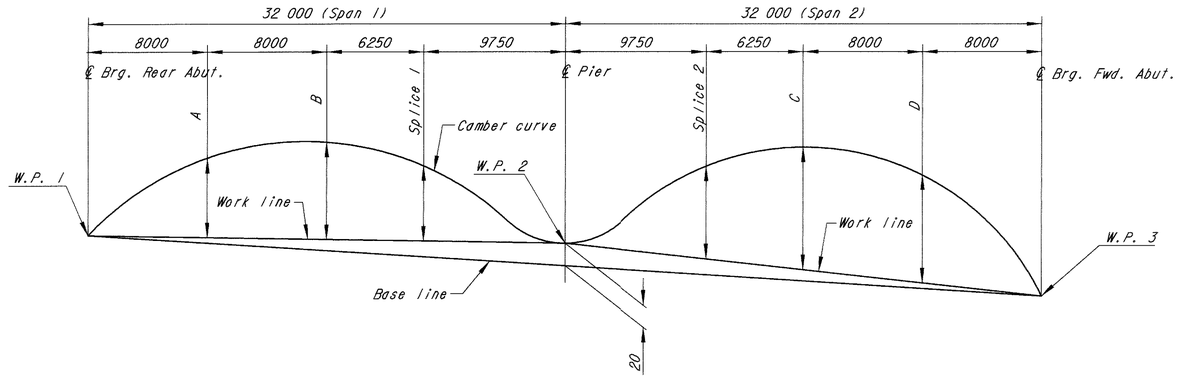
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15 / 33

1803
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metric units



DEFLECTION AND CAMBER

DEFLECTION AND CAMBER TABLE (GIRDERS 1, 6, 7 AND 12)									
	SPAN 1					SPAN 2			
	REAR ABUTMENT	A	B	SPLICE 1	PIER 1	SPLICE 2	C	D	FORWARD ABUTMENT
Deflection due to weight of steel	0	8	9	5	0	5	9	8	0
Deflection due to remaining DL	0	25	28	14	0	14	28	25	0
Adjustment required for vertical curve	0	4	5	4	0	4	5	4	0
Required shop camber	0	37	42	23	0	23	42	37	0

DEFLECTION AND CAMBER TABLE (GIRDERS 2 THRU 5 & 8 THRU 11)									
	SPAN 1					SPAN 2			
	REAR ABUTMENT	A	B	SPLICE 1	PIER 1	SPLICE 2	C	D	FORWARD ABUTMENT
Deflection due to weight of steel	0	8	9	5	0	5	9	8	0
Deflection due to remaining DL	0	41	43	23	0	23	43	41	0
Adjustment required for vertical curve	0	4	5	4	0	4	5	4	0
Required shop camber	0	53	57	32	0	32	57	53	0

NOTES FOR CAMBER AND DEFLECTION

1. Work points (W.P.) are at the center of the girder, on the centerline of bearing.
2. Work lines are straight lines through the work points.
3. The base line is a straight line through W.P. 1 and W.P. 3.
4. Tabulated values in the deflection and camber table are measured from the work lines.

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MRS	—	1700852	

DEFLECTION AND CAMBER DETAILS
BRIDGE NO. CRA-30-0147A
US 30 OVER CSX RAILROAD

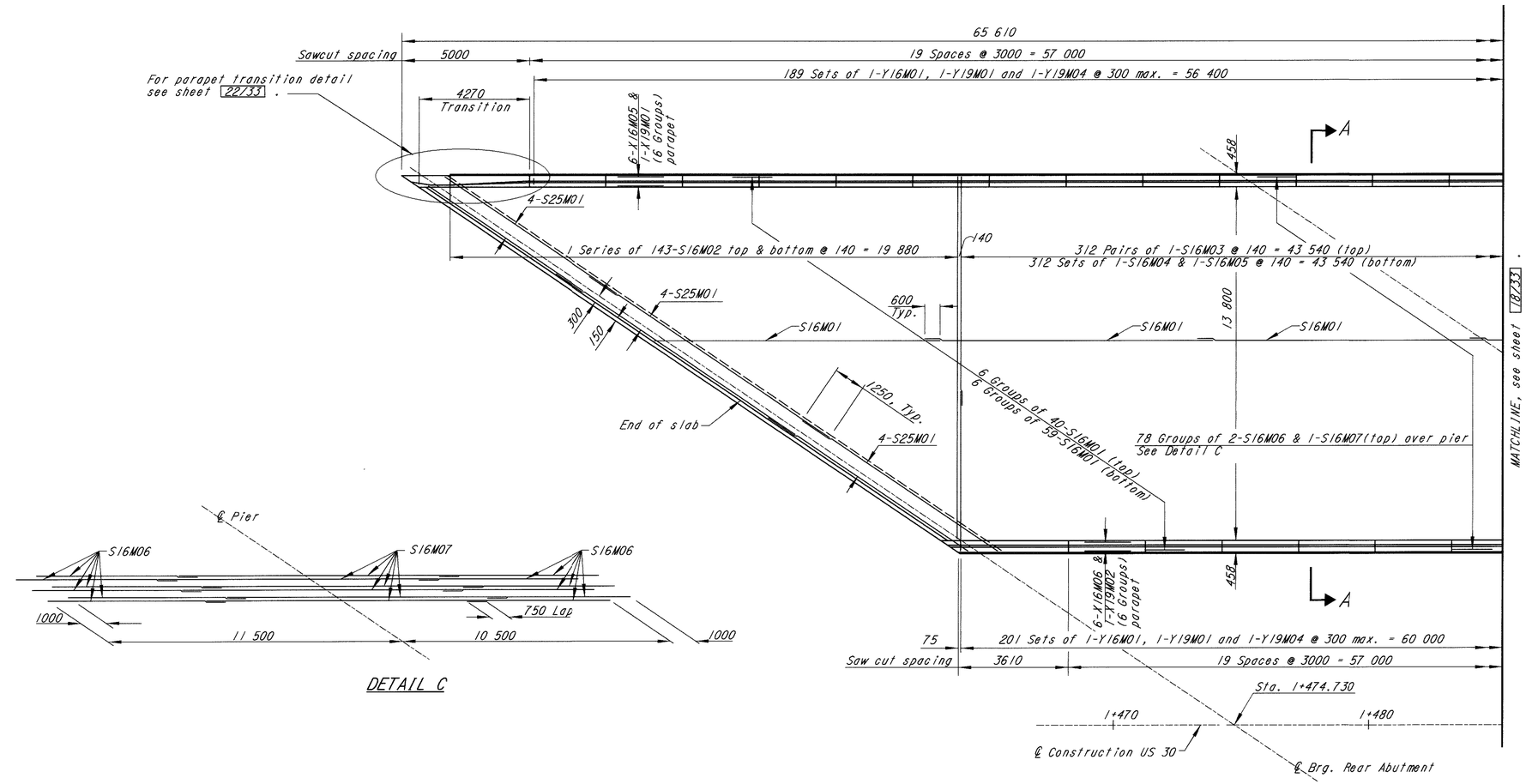
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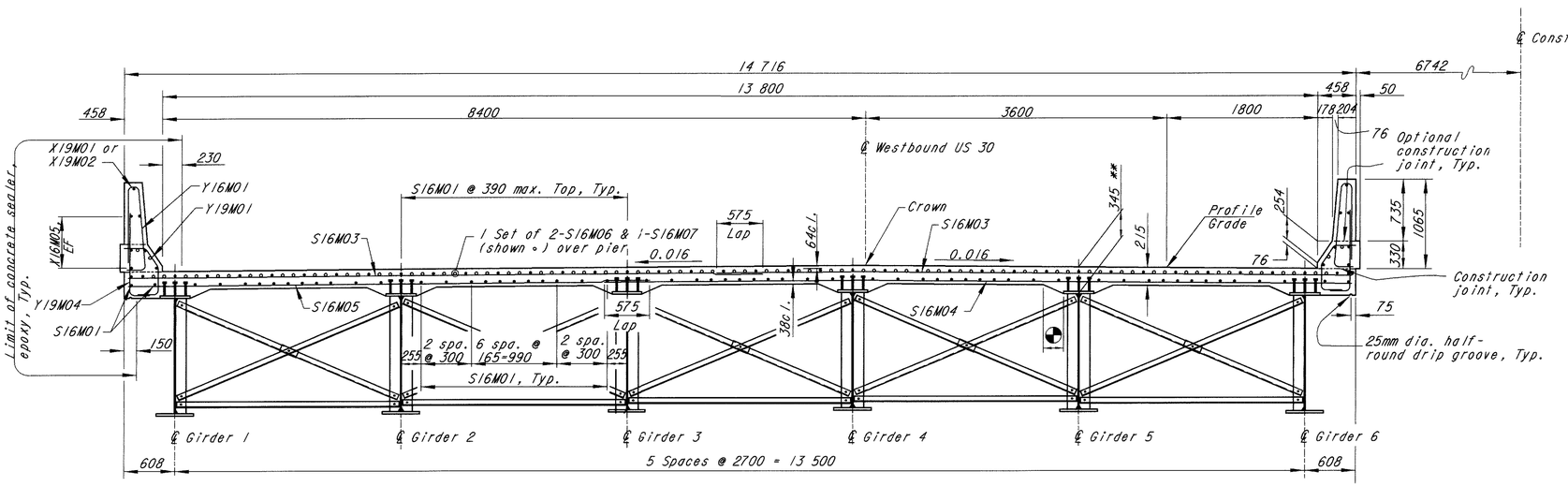
F:\Drawings\0146Bcam.dgn

metric units



DECK PLAN

DETAIL C



SECTION A-A

NOTES:

1. ** DECK SLAB DEPTH: The distance shown from the top of the deck slab to the bottom of the top flange is the theoretical design dimension including the design haunch thickness of 130 mm. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per SS 842.
2. ◒ A HAUNCH WIDTH of 225mm shall be used for computing quantity of concrete. However the haunch width may vary between 150mm and 300mm.
3. For additional information on parapets and sawcut joints see Std. Dwg. BR-1M. Contrary to standard drawing, sawcut joint shall be sealed for the full length.
4. Lap length for X16M05, X16M06, X19M01 and X19M02 is 450 mm.

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MRS	—	1700852	

DECK PLAN LEFT BRIDGE
BRIDGE NO. CRA-30-0/4
US 30 OVER CSX RAILROAD

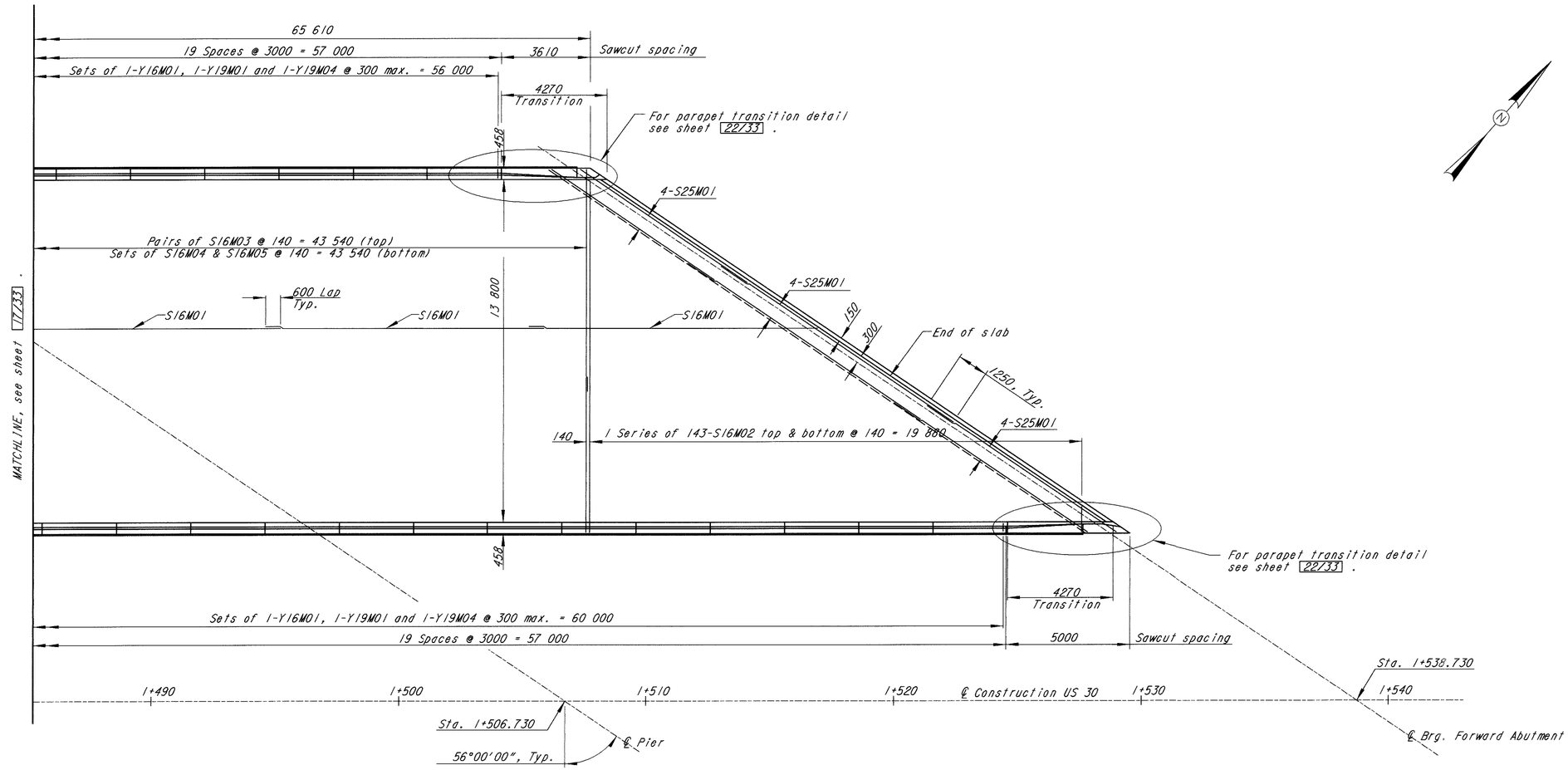
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17 / 33

1805
2116

File name: 0148063.dgn

metric units



DECK PLAN

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DECK PLAN LEFT BRIDGE
BRIDGE NO. CRA-30-0147.4
US 30 OVER CSX RAILROAD

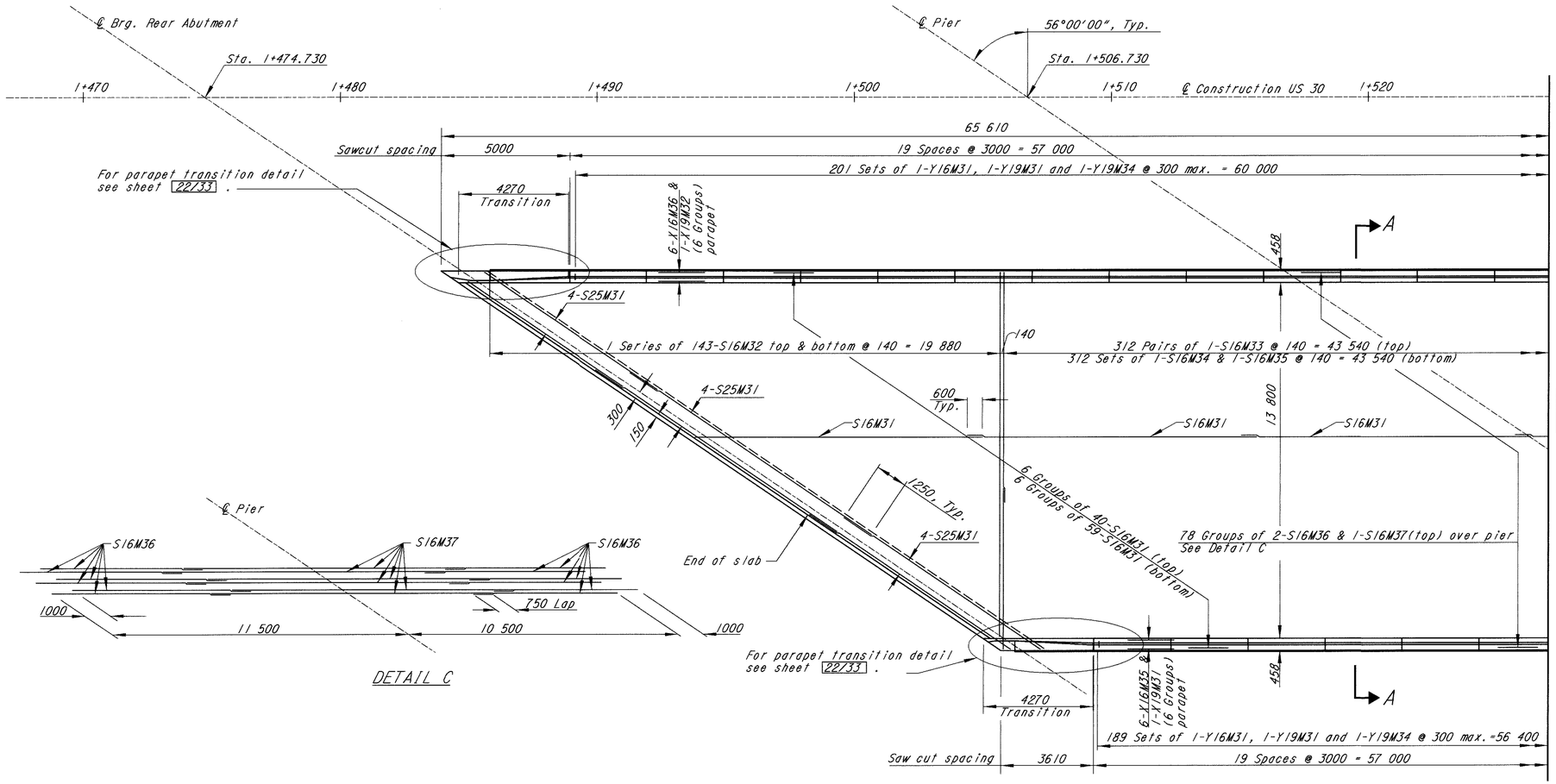
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18/33

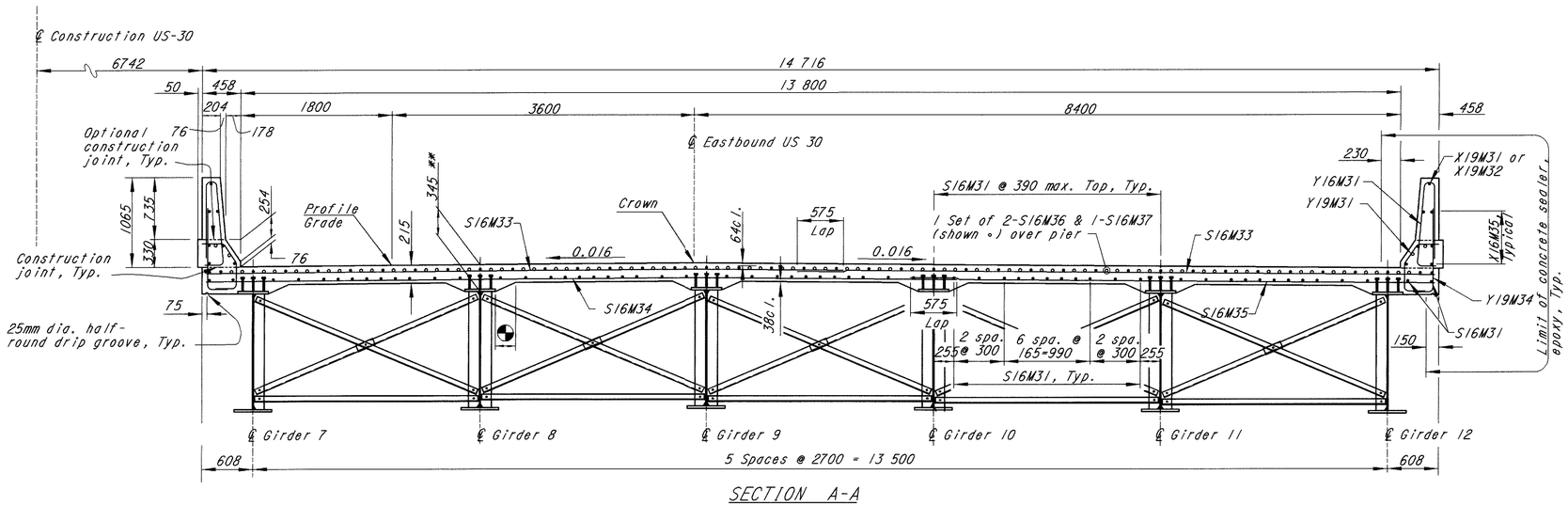
1806
2116

File name: 0140864.dgn

metric units



DECK PLAN



SECTION A-A

NOTES:

1. ** DECK SLAB DEPTH: The distance shown from the top of the deck slab to the bottom of the top flange is the theoretical design dimension including the design haunch thickness of 130 mm. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per SS 842.

2. ◒ A HAUNCH WIDTH of 225mm shall be used for computing quantity of concrete. However the haunch width may vary between 150mm and 300mm.

3. For additional information on parapets and sawcut joints see Std. Dwg. BR-1M. Contrary to standard drawing, sawcut joint shall be sealed for the full length.

4. Lap length for X16M35, X16M36, X19M31 and X19M32 is 450 mm.

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MRS	—	1700952	

DECK PLAN RIGHT BRIDGE
BRIDGE NO. CRA-30-01474
US 30 OVER CSX RAILROAD

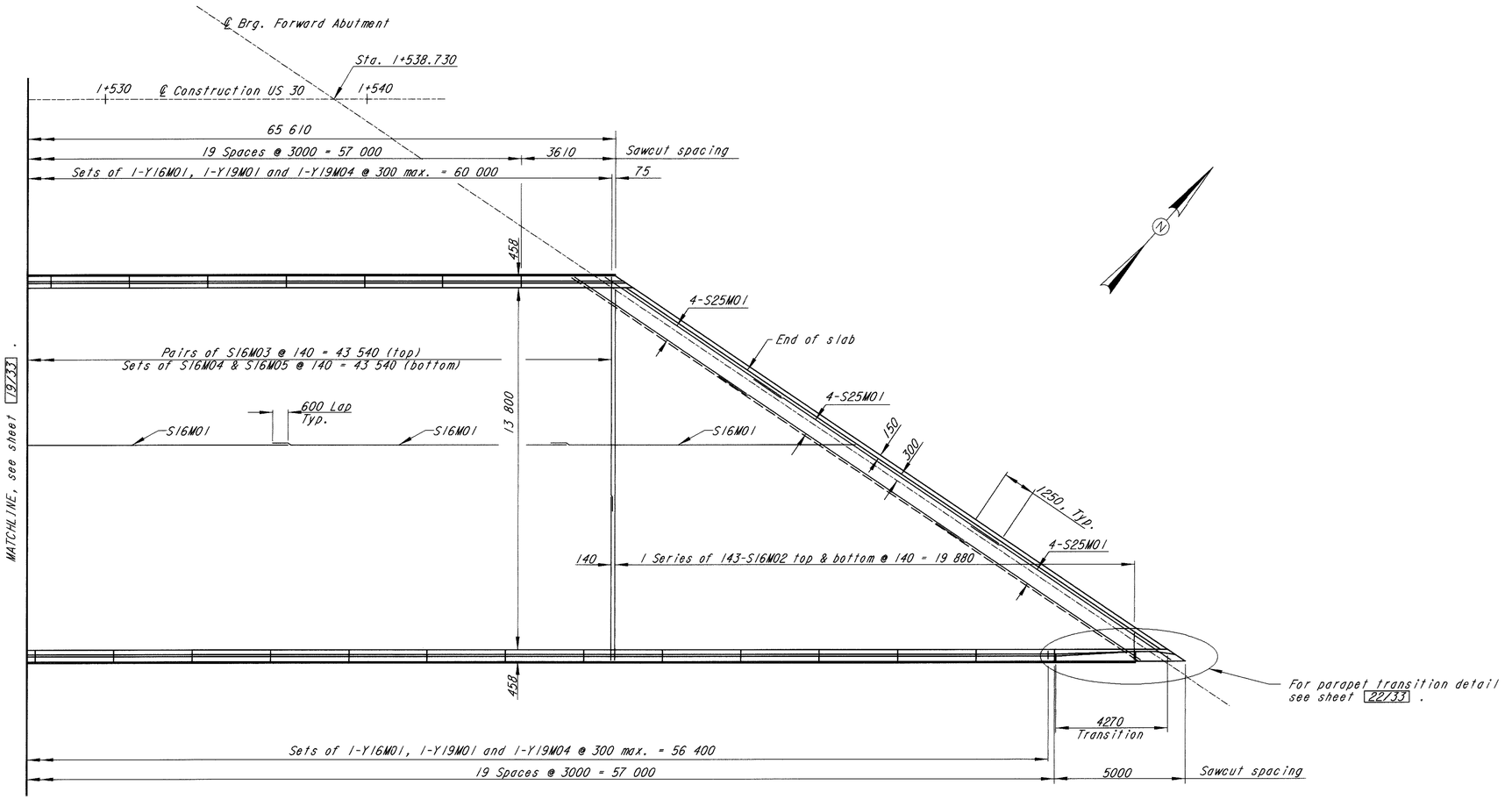
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File name: 01448bl.dgn

metric units



DECK PLAN

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MRS	—	1700852	

DECK PLAN RIGHT BRIDGE
BRIDGE NO. CRA-30-0147
US 30 OVER CSX RAILROAD

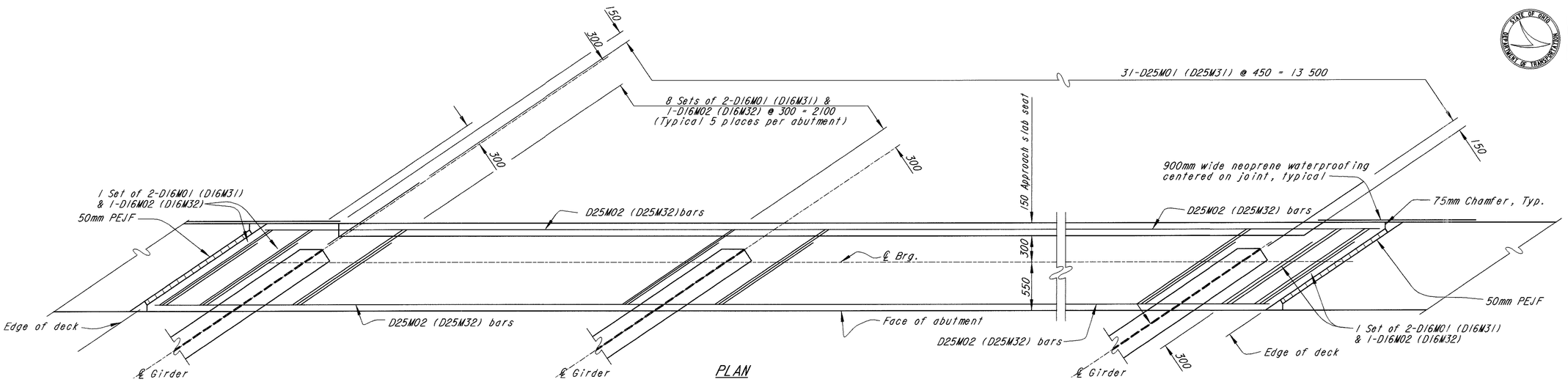
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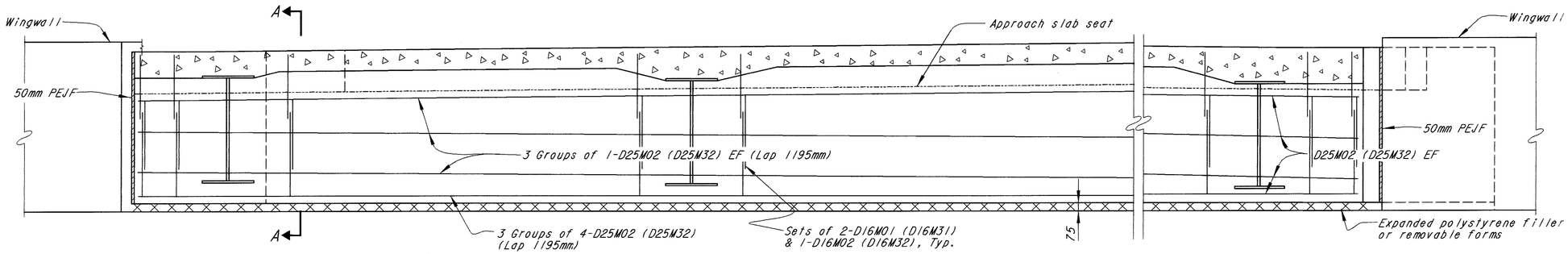
1808
2116

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metric units

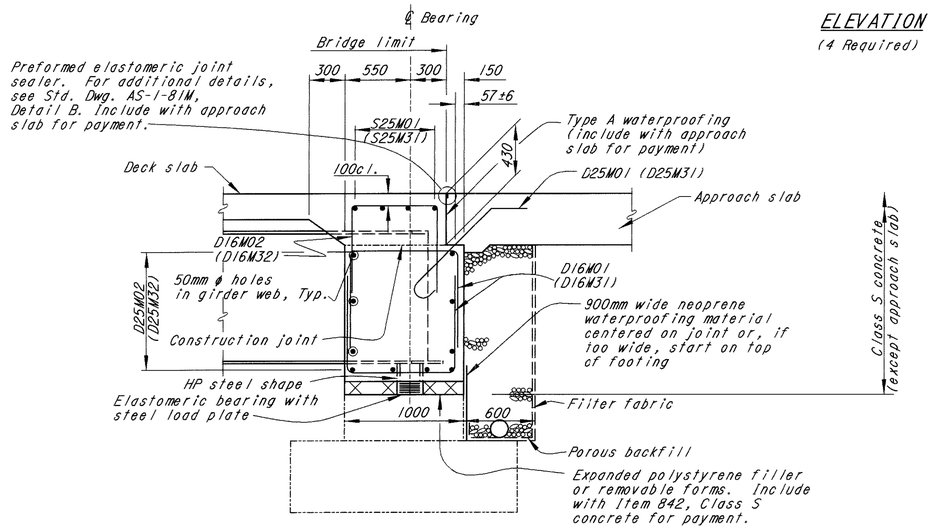


PLAN



ELEVATION

(4 Required)



SECTION A-A

NOTES:
1. For additional information see Std. Dwg. SICD-1-96M.
2. Work this sheet with DECK PLAN sheets 17733 thru 20733 .
3. PEJF = Preformed Expansion Joint Filler.
4. END-DIAPHRAGM CONCRETE shall be placed during days when sudden temperature changes are unlikely and be completed at least 4 hours prior to the concrete placement day's peak ambient temperature.
5. ABUTMENT BACKFILL above the bridge seat shall not be placed until after the concrete deck slab has cured for at least 48 hours. Backfill shall be placed simultaneously at both abutments.
6. DIAPHRAGM concrete encasing the structural member sections shall be placed at least 48 hours before the actual deck concrete is placed.
7. Bar marks shown " ( ) " are for the right bridge. Unenclosed bar marks are for the left bridge.

DESIGN AGENCY
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MRS	—	1700352	

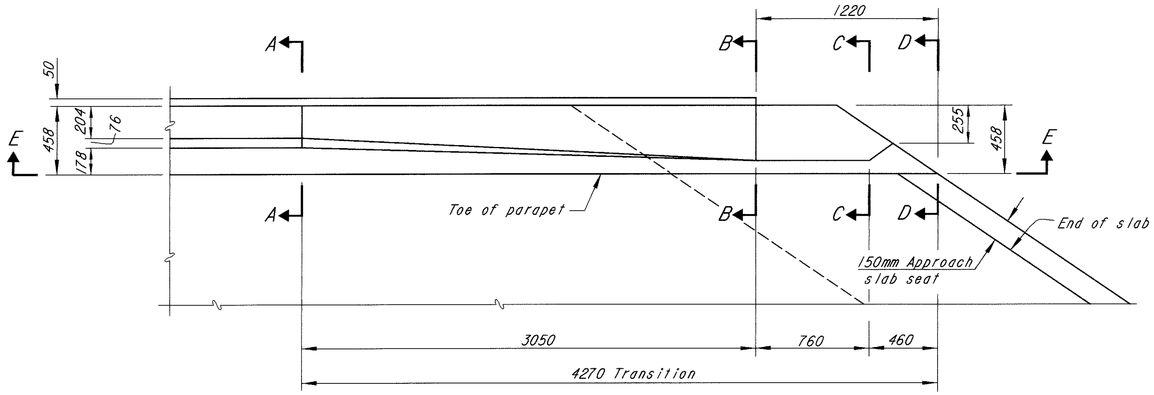
ABUTMENT DIAPHRAGM DETAILS
BRIDGE NO. CRA-30-0147
US 30 OVER CSX RAILROAD

WYA/CRA-30-28.009/0.000

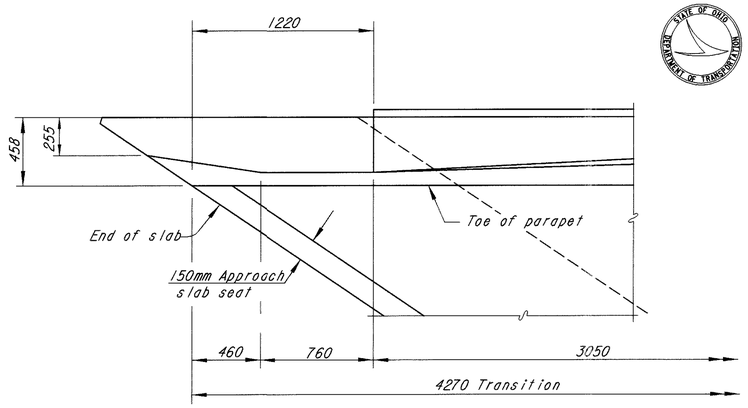
21/33

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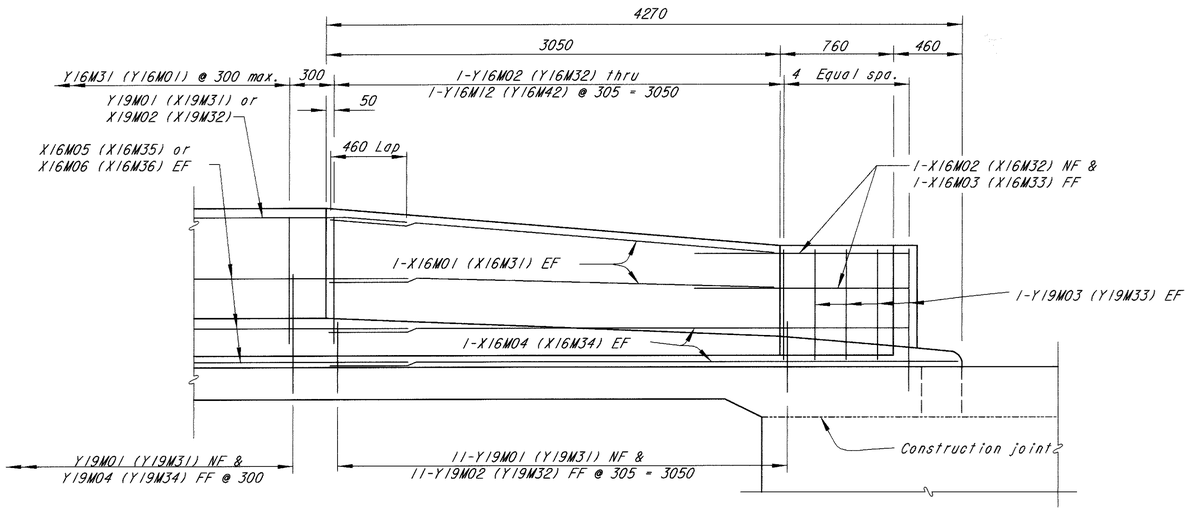
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PLAN

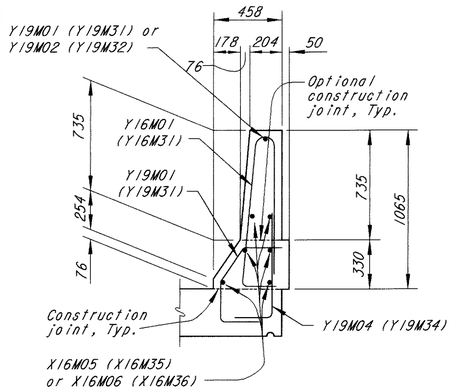


PARTIAL PLAN
(Showing alternate end of transition)

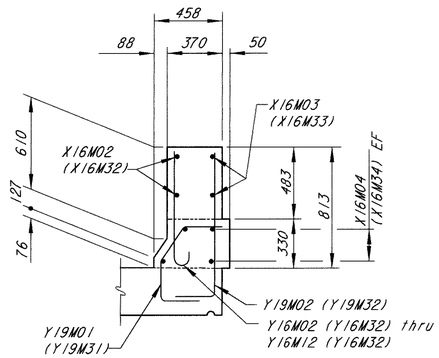


SECTION E-E

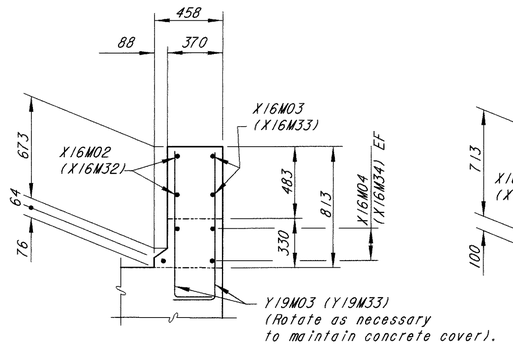
PARAPET TRANSITION DETAIL
(6 Required)



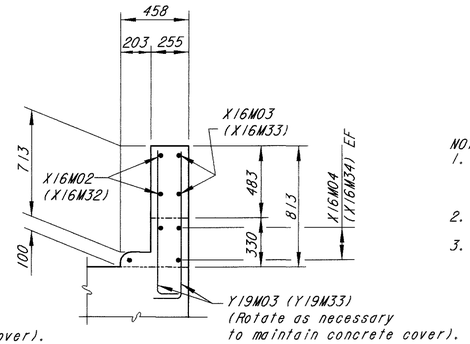
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:
1. FF = Far Face
   NF = Near Face
   EF = Each Face
2. For additional details see Std. Dwg. BR-1M.
3. Bar marks shown "( )" are for the right bridge.
   Unenclosed bar marks are for the left bridge.

metric units

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MRS	—	1700852	

DECK DETAILS
BRIDGE NO. CRA-30-0147A
US 30 OVER CSX RAILROAD

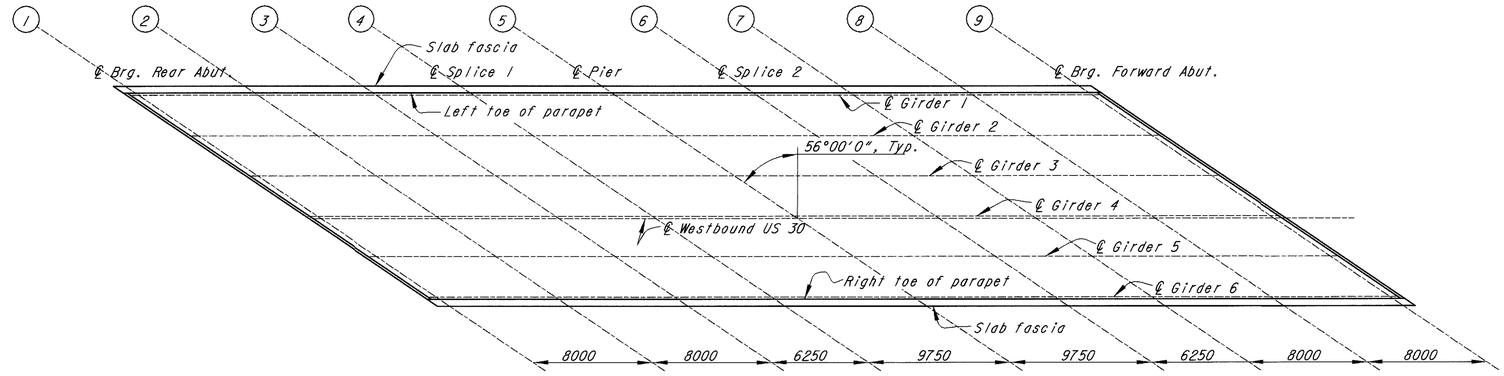
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22/33

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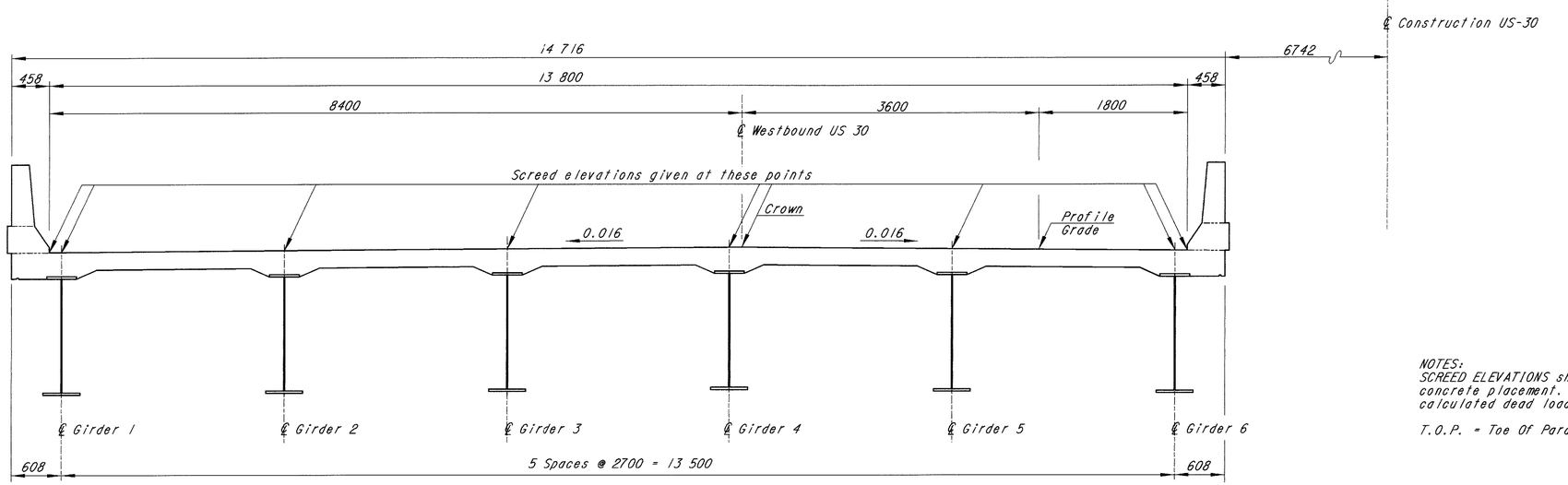
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metric units



PLAN

SCREED ELEVATIONS									
Location	Left T.O.P.	Girder 1	Girder 2	Girder 3	Girder 4	℄ US 30 W.B.	Girder 5	Girder 6	Right T.O.P.
Grid line 1	303.320	303.322	303.363	303.404	303.444	303.446	303.401	303.354	303.351
Grid line 2	303.346	303.348	303.398	303.437	303.476	303.478	303.433	303.374	303.371
Grid line 3	303.340	303.342	303.392	303.430	303.467	303.469	303.423	303.361	303.358
Grid line 4	303.319	303.321	303.364	303.402	303.438	303.439	303.392	303.335	303.332
Grid line 5	303.286	303.288	303.325	303.360	303.395	303.397	303.348	303.295	303.292
Grid line 6	303.286	303.288	303.329	303.363	303.396	303.398	303.348	303.287	303.284
Grid line 7	303.287	303.289	303.333	303.366	303.399	303.401	303.349	303.283	303.280
Grid line 8	303.266	303.268	303.311	303.342	303.374	303.375	303.323	303.256	303.253
Grid line 9	303.213	303.215	303.246	303.277	303.307	303.308	303.255	303.197	303.194



TYPICAL SECTION

NOTES:
SCREED ELEVATIONS shown are for the deck slab surface prior to concrete placement. Allowance has been made for anticapated calculated dead load deflections.

T.O.P. = Toe Of Parapet

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MRS	—	1700852	

SCREED ELEVATIONS LEFT BRIDGE
BRIDGE NO. CRA-30-0147.4
US 30 OVER CSX RAILROAD

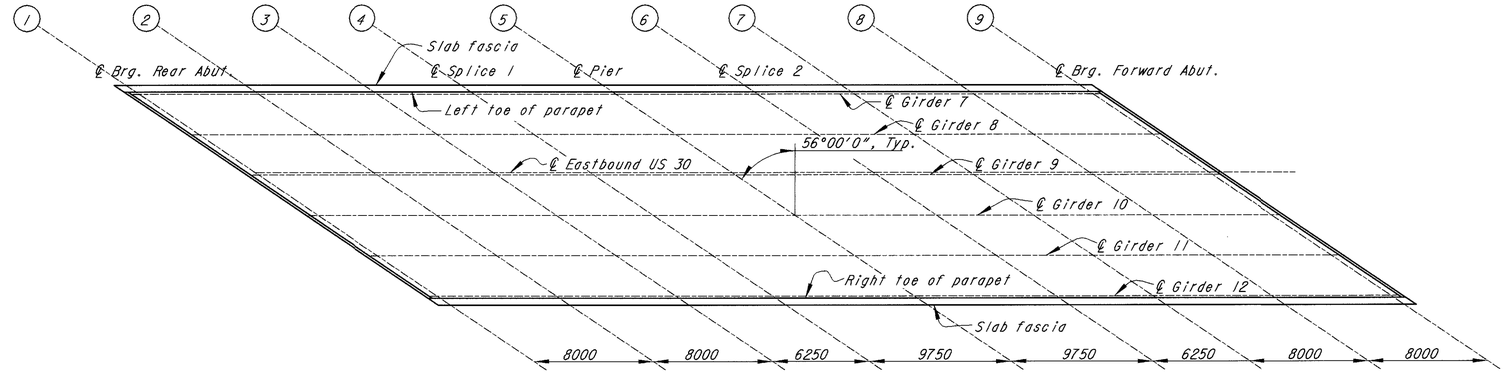
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23/33

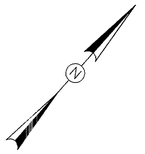
1811
2116

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metric units

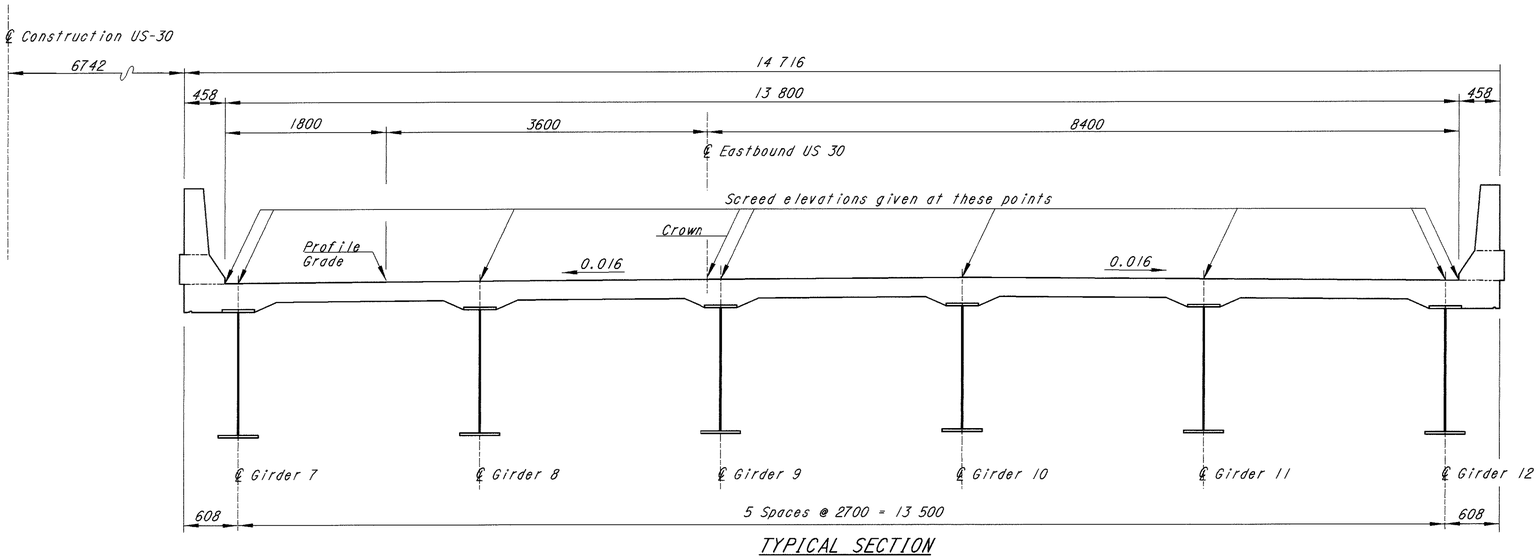


PLAN



SCREED ELEVATIONS

Location	Left T.O.P.	Girder 7	Girder 8	℄ US 30 E.B.	Girder 9	Girder 10	Girder 11	Girder 12	Right T.O.P.
Grid line 1	303.316	303.318	303.353	303.385	303.382	303.329	303.275	303.221	303.218
Grid line 2	303.330	303.331	303.375	303.406	303.403	303.349	303.294	303.228	303.225
Grid line 3	303.310	303.312	303.355	303.385	303.382	303.327	303.271	303.203	303.200
Grid line 4	303.279	303.281	303.318	303.347	303.344	303.287	303.230	303.167	303.164
Grid line 5	303.231	303.233	303.262	303.290	303.287	303.229	303.170	303.111	303.108
Grid line 6	303.215	303.217	303.251	303.277	303.274	303.214	303.154	303.087	303.084
Grid line 7	303.205	303.207	303.245	303.270	303.267	303.207	303.145	303.073	303.069
Grid line 8	303.172	303.173	303.209	303.233	303.230	303.168	303.106	303.033	303.030
Grid line 9	303.106	303.107	303.132	303.155	303.151	303.088	303.025	302.961	302.957



TYPICAL SECTION

NOTES:
SCREED ELEVATIONS shown are for the deck slab surface prior to concrete placement. Allowance has been made for anticipated calculated dead load deflections.

T.O.P. = Toe Of Parapet

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	7/14/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700952	

SCREED ELEVATIONS RIGHT BRIDGE

BRIDGE NO. CRA-30-0.474
US 30 OVER CSX RAILROAD

WYA/CRA-30-28.009/0.000

Fi \known\ 01480s2.dgn

TAI

The Reinforced Earth Company

8614 Westwood Center Drive Suite 1100, Vienna, Virginia 22182 (703) 821-1175

GENERAL NOTES

DESIGN CRITERIA

1. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE REINFORCED EARTH VOLUME, METHODS OF CONSTRUCTION AND QUALITY OF PREFABRICATED MATERIALS SHALL CONFORM TO THE CONTRACTING AGENCY'S TECHNICAL SPECIFICATIONS FOR REINFORCED EARTH WALLS.

2. SOILS CHARACTERISTICS ASSUMED FOR DESIGN:

   SELECT GRANULAR BACKFILL
   Ø = 34 degrees, c = 0 ɣ = 18.80kN/m3

   RANDOM BACKFILL
   Ø = 30 degrees, c = 0 ɣ = 18.80kN/m3

   FOUNDATION MATERIAL
   Ø = 30 degrees, c = 0 p.s.f.

3. THE MAXIMUM APPLIED BEARING PRESSURE AT THE FOUNDATION LEVEL IS AS SHOWN ON THE WALL ELEVATIONS FOR EACH DESIGN CASE. IT IS THE RESPONSIBILITY OF THE OWNER TO DETERMINE THAT THIS APPLIED BEARING PRESSURE IS ALLOWABLE FOR THAT LOCATION.

4. ANY UNSUITABLE FOUNDATION MATERIAL BELOW THE REINFORCED EARTH VOLUME, AS DETERMINED BY THE ENGINEER, SHALL BE EXCAVATED AND REPLACED WITH SUITABLE MATERIAL OR OTHERWISE STABILIZED AS DIRECTED BY THE ENGINEER.

5. REINFORCING STRIPS FOR REINFORCED EARTH WALLS SHALL BE 50mm WIDE AND 4mm THICK, AND SHALL CONFORM TO THE PHYSICAL AND MECHANICAL PROPERTIES OF ASTM A-572M GRADE 450. GALVANIZATION SHALL BE APPLIED IN ACCORDANCE WITH ASTM A-123.

WALL CONSTRUCTION

6. STATIONS SHOWN ARE ALONG CENTERLINE OF ROADWAY.

7. REINFORCED EARTH WALLS IN CURVES WILL FORM A SERIES OF SHORT CHORDS OF 1.50m EACH TO MATCH DESIRED WALL ALIGNMENT.

8. FOR LOCATION AND ALIGNMENT OF REINFORCED EARTH WALLS SEE CONTRACT PLANS.

9. IF MANHOLES AND DROP INLETS ARE PRESENT, THEY SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS.

10. IF PILES ARE LOCATED WITHIN THE REINFORCED EARTH VOLUME, THEY SHALL BE DRIVEN PRIOR TO CONSTRUCTION OF THE REINFORCED EARTH WALL UNLESS A METHOD TO PROTECT THE STRUCTURE, WHICH IS ACCEPTABLE TO THE ENGINEER AND THE REINFORCED EARTH COMPANY, AND IS PROPOSED AND APPROVED IN WRITING.

11. BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR REINFORCED EARTH WALLS TO A LEVEL OF 50mm (±) ABOVE THE TIE STRIPS EMBEDDED IN THE PANELS. INSTALLATION OF REINFORCING STRIPS SHALL BE PERMITTED ONLY AFTER PLACEMENT AND COMPACTION OF THE BACKFILL MATERIAL HAS REACHED THE REQUIRED LEVEL.

WALL CONSTRUCTION (CONT.)

12. COMPACTION AND OPERATION EQUIPMENT SHALL BE KEPT A MINIMUM DISTANCE OF 1.0m FROM THE BACK FACE OF THE REINFORCED EARTH PANELS. COMPACTION WITHIN 1.0m OF THE REINFORCED EARTH PANELS SHALL BE ACHIEVED WITH AT LEAST THREE (3) PASSES OF A LIGHTWEIGHT MECHANICAL TAMPER, ROLLER OR VIBRATORY SYSTEM. NO COMPACTION DENSITY TESTS SHALL BE TAKEN WITHIN THE 1.0m ZONE.

13. IF STRUCTURES IN EXCESS OF 6m IN HEIGHT OCCUR, THE FINISHED GRADE IN FRONT OF THE WALL SHALL BE PLACED AND COMPACTED BEFORE WALL CONSTRUCTION EXCEEDS A HEIGHT OF 6m. FINISHED GRADE BACKFILL SHALL BE COMPACTED TO 95% OF ASTM D-698, METHODS 'C' OR 'D', UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

14. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY GUARDRAIL POSTS BEHIND THE REINFORCED EARTH PANELS. PRIOR TO PLACEMENT OF THE TOP LAYER OF REINFORCING STRIPS, INDIVIDUAL STRIPS MAY BE SKEWED TO AVOID THE POST LOCATIONS IF AUTHORIZED BY THE REINFORCED EARTH COMPANY. ANY DAMAGE DONE TO THE REINFORCING STRIPS DUE TO THE INSTALLATION OF THE GUARDRAIL SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

15. IF EXISTING OR FUTURE STRUCTURES, PIPES, FOUNDATIONS OR GUARDRAIL POSTS WHICH ARE WITHIN THE REINFORCED EARTH VOLUME INTERFERE WITH THE NORMAL PLACEMENT OF REINFORCING STRIPS AND SPECIFIC DIRECTION HAS NOT BEEN PROVIDED ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE REINFORCED EARTH COMPANY TO DETERMINE WHAT COURSE OF ACTION SHOULD BE TAKEN.

16. ALL DETAILING AND CHECKING OF REINFORCING STEEL FOR ANY C.I.P. CONCRETE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

17. TOP PANELS BENEATH CAST-IN-PLACE COPING SHALL HAVE #15m DOWELS PROTRUDING FROM THEIR TOP EDGE.

18. FOR OTHER INFORMATION PERTAINING TO WALL CONSTRUCTION PLEASE REFER TO THE REINFORCED EARTH CONSTRUCTION MANUAL.

19. THE CONTRACTOR IS RESPONSIBLE FOR GRADUALLY DEFLECTING UPPER REINFORCING STRIPS DOWNWARD TO AVOID CONFLICTS WITH PAVING AND SUBGRADE PREPARATION. THE CONTRACTOR'S ATTENTION IS DIRECTED ESPECIALLY TO SITUATIONS WHERE ROADWAY SUPERELEVATION AND/OR SOIL MIXING ARE ANTICIPATED.

20. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING STORM WATER DRAINAGE IN THE VICINITY OF THE WALL DURING CONSTRUCTION. STORM WATER RUNOFF IS TO BE COLLECTED AND DISCHARGED AWAY FROM THE WALL AND REINFORCED BACKFILL.

MATERIALS NOTES

21. NOMINAL STRIP LENGTHS

    THE REINFORCING STRIP LENGTHS SHOWN ON THE PLANS, MEASURED FROM BACK FACE OF PANEL, ARE THE NOMINAL LENGTHS REQUIRED BY CALCULATION. THE ACTUAL FABRICATED STRIP LENGTHS ARE OFTEN LONGER (UP TO 15cm) DUE TO MANUFACTURING TOLERANCES. THE REQUIRED HORIZONTAL LIMIT OF GRANULAR BACKFILL IS EQUAL TO THE NOMINAL STRIP LENGTH. ADDITIONAL GRANULAR BACKFILL BEYOND THE NOMINAL STRIP LENGTH IS NOT REQUIRED BY CALCULATION.

22. SELECT BACKFILL QUANTITY

    THE SELECT BACKFILL QUANTITY INDICATED BY THE REINFORCED EARTH COMPANY IS CALCULATED BY MULTIPLYING THE NOMINAL STRIP LENGTHS SHOWN ON THE PLANS (PLUS C m) BY THEIR TRIBUTARY WALL SURFACE AREA AND CONVERTING THE RESULT TO A NEATLINE CUBIC-YARD QUANTITY. THIS INFORMATION IS FURNISHED FOR THE CONTRACTOR'S INFORMATION ONLY AND IS NOT INTENDED TO REPRESENT THE ACTUAL QUANTITIES REQUIRED TO COMPLETE THE WORK. THE CONTRACTOR MUST CALCULATE HIS OWN EXCAVATION AND BACKFILL QUANTITIES BASED UPON THE SPECIFIC CONDITIONS OF THE PROJECT.

23. PANEL FINISH

    THE PRECAST PANELS FOR THIS PROJECT SHALL HAVE A PLAIN FINISH UNLESS OTHERWISE SPECIFIED.

24. NOTE TO CONTRACTORS

    ONLY THE FOLLOWING MATERIALS ARE SUPPLIED BY THE REINFORCED EARTH COMPANY:
    - PRECAST CONCRETE FACING PANELS
    - REINFORCING STRIPS
    - BOLT SETS (FOR ATTACHING PANELS TO THE REINFORCING STRIPS)
    - BEARING BLOCKS
    - RUBBER SHIMS
    - FILTER CLOTH AND ADHESIVE (FOR PANEL JOINTS ONLY)

    ANY OTHER MATERIALS CALLED FOR IN THE CONTRACT PLANS OR SPECIFICATIONS ARE TO BE SUPPLIED BY THE CONTRACTOR. ANY JOINT MATERIALS SHOWN AT THE INTERFACE OF PRECAST PANELS AND CAST-IN-PLACE CONCRETE STRUCTURES ARE TO BE SUPPLIED BY THE ERECTION CONTRACTOR. ALL SANDBLASTING, PAINTING, SEALERS OR OTHER SPECIAL APPLIED COATINGS ARE ALSO SUPPLIED/INSTALLED BY THE CONTRACTOR IN THE FIELD FOLLOWING PANEL ERECTION.

25. THE REINFORCED EARTH COMPANY SUPPLIED PRECAST CONCRETE FACING PANELS AND ACCESSORIES ARE TO BE USED IN CONJUNCTION WITH OTHER MATERIALS IN THE CONSTRUCTION OF THE REINFORCED EARTH (R) RETAINING WALLS DETAILED HEREIN. THE CONTRACTOR IS TO DEVISE UNILATERALLY AN ERECTION SEQUENCE AND FALL PROTECTION SYSTEM NEEDED TO ACCOMPLISH THE CONSTRUCTION INTENDED. THE CONSTRUCTION AND QUALITY CONTROL PROCEDURE MANUAL FURNISHED BY THE REINFORCED EARTH COMPANY AS PART OF THIS CONTRACT IS TO PROVIDE AN EXPLANATION FOR THE SYSTEM. COMPLIANCE WITH THE GUIDELINES IN THIS MANUAL DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO ADHERE TO THE PROJECT PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS OR COMPLIANCE WITH ALL FALL PROTECTION AND SAFETY STANDARDS AND PROCEDURES AT THE JOBSITE.

26. ALL DIMENSIONS ARE IN METRIC UNITS UNLESS OTHERWISE NOTED.

NOTE: REINFORCED EARTH INTERNAL DESIGN IS IN STRICT ACCORD WITH O.D.O.T. SPECIAL PROVISIONS, AND IS COVERED BY ARCHITECTS AND ENGINEERS ERRORS AND OMISSIONS INSURANCE POLICY NO. 4LY000032 BY KEMPER ENVIROMENTAL, LONG GROOVE, ILLINOIS.

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY



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The Reinforced Earth Company®
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Suite 1100 Vienna, Virginia 22182
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DESIGNED	DRAWN	REVIEWED	DATE
SAA/AO	AO	SAA	4/7/1999
CHECKED	REVISED	STRUCTURE FILE NO.	
SAA		1700952	

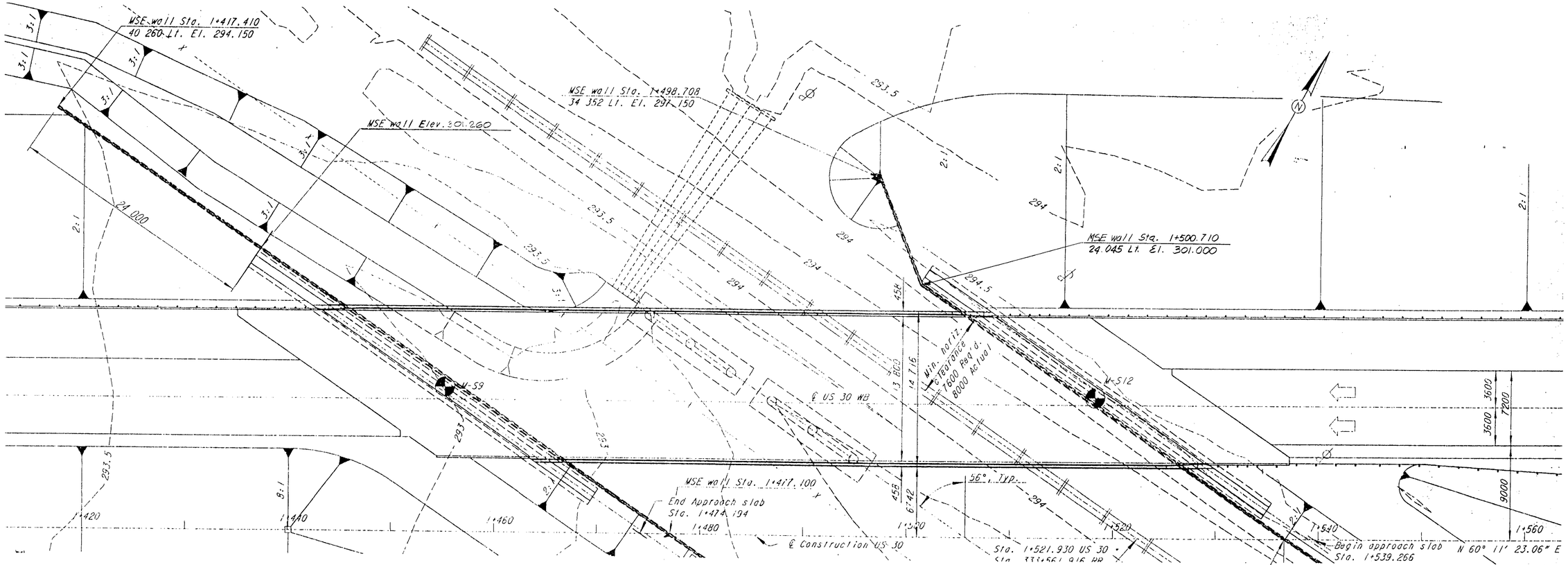
GENERAL NOTES
REINFORCED EARTH WALL
BRIDGE NO. CRA-30-01474
US 30 OVER CSX RAILROAD

WYA/CRA-30-28.009/0.000
CRAWFORD COUNTY
STA.1+474.194 TO STA.1+539.265

25/33

1813/2116

RE-7212



CERTIFIED WITH
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INTERNAL STABILITY
OF REINFORCED EARTH
STRUCTURES ONLY

STATE OF OHIO
EUGENE A. LAMBERSON
E-85228
REGISTERED
PROFESSIONAL ENGINEER

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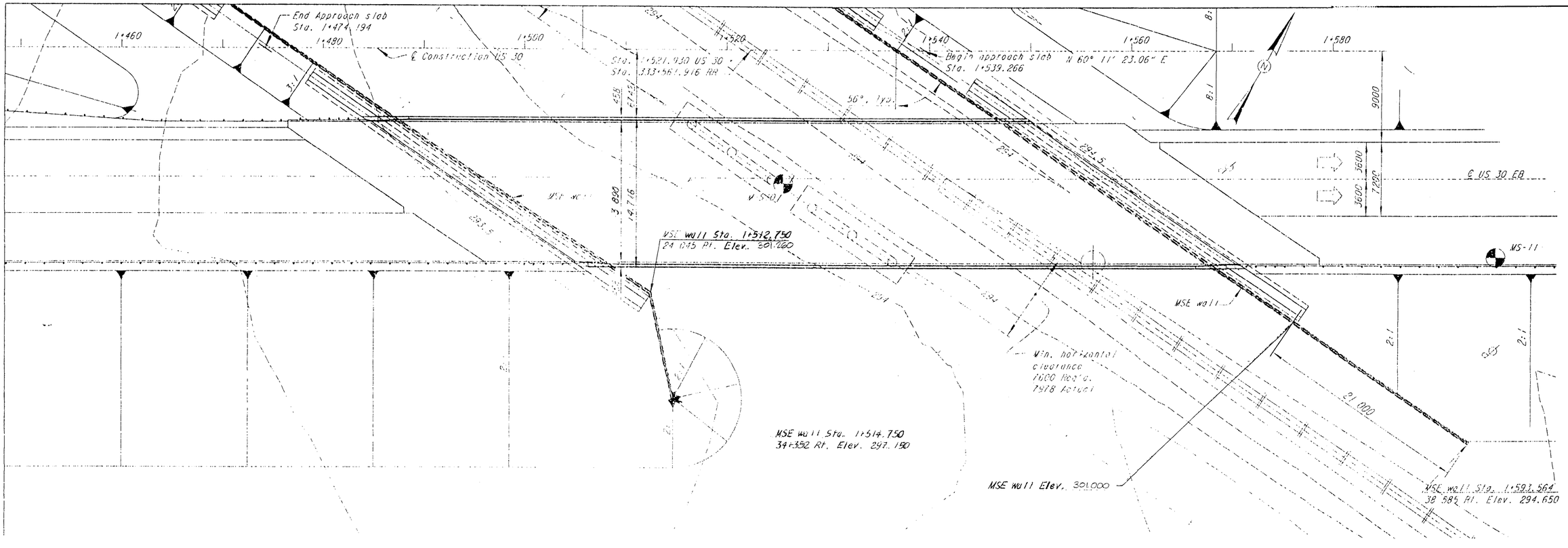
PLAN VIEW
REINFORCED EARTH WALL
BRIDGE NO. CRA-30-01474
US 30 OVER CSX RAILROAD

WYA/CRA-30-28.009/0.006
CRAWFORD COUNTY
STA.1+474.194 TO STA.1+539.265

26/33

1814
2116

RE-7212



CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF OHIO
EUGENE A. LAMBERSON
E-61227
REGISTERED PROFESSIONAL ENGINEER

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Suite 1100 Vienna, Virginia 22182
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SAA		1700952	

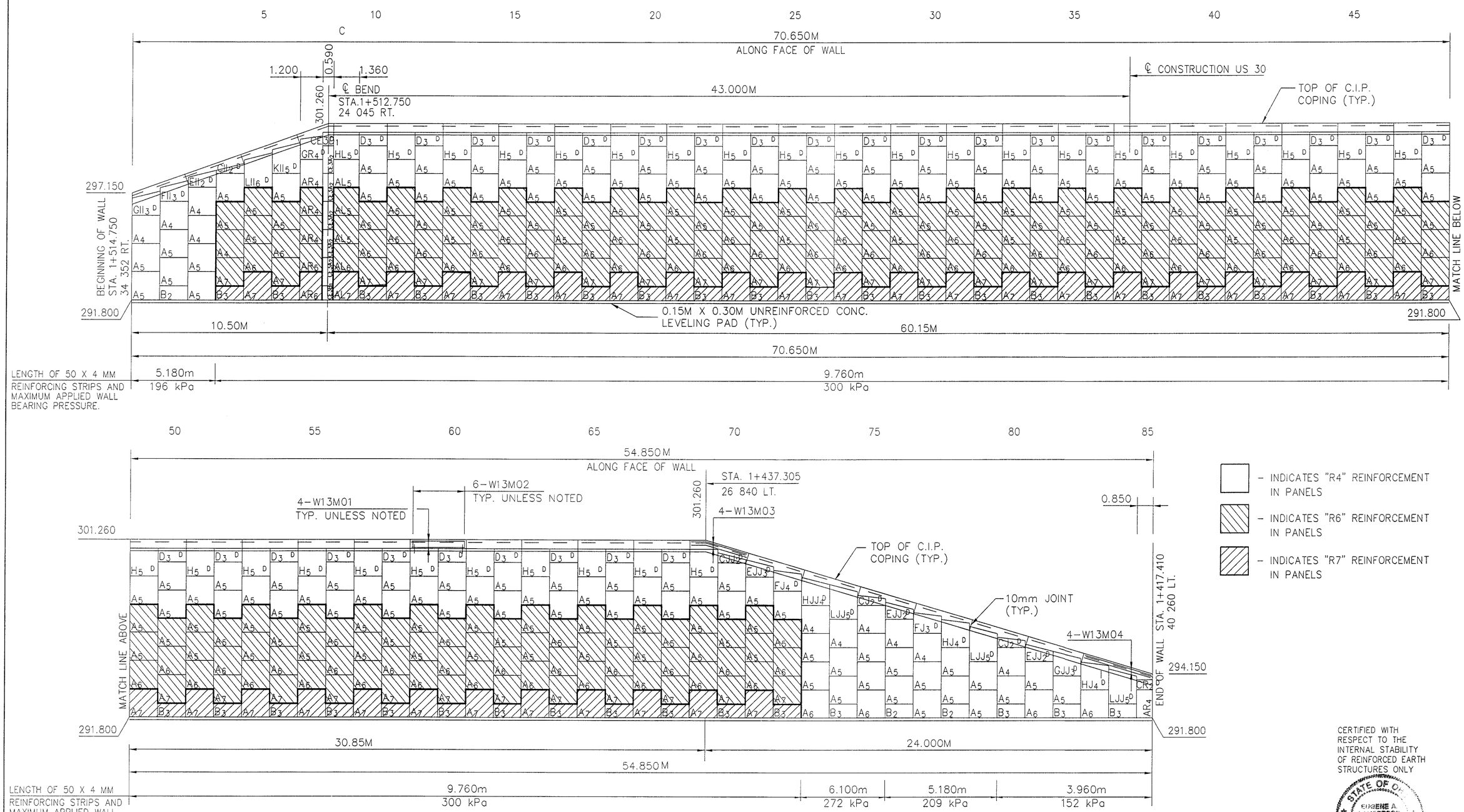
PLAN VIEW
REINFORCED EARTH WALL
BRIDGE NO. CRA-30-01474
US 30 OVER CSX RAILROAD

WYA/CRA-30-28.009/0.000
CRAWFORD COUNTY
STA.1+474.194 TO STA.1+539.265

27/33

1815
2116

RE-7212



– INDICATES "R4" REINFORCEMENT IN PANELS

– INDICATES "R6" REINFORCEMENT IN PANELS

– INDICATES "R7" REINFORCEMENT IN PANELS

ELEVATION – FRONT FACE REAR ABUT.

SCALE = 1 : 100

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF OHIO
EUGENE A. LAMBERSON
E-51228
REGISTERED PROFESSIONAL ENGINEER

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The Reinforced Earth Company
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Suite 1100 Vienna, Virginia 22182
(703) 821–1175 FAX–(703) 821–1815

DESIGNED SAA/AO | DRAWN AO | REVIEWED SAA 04/07/1999 | DATE
CHECKED SAA | REVISED | STRUCTURE FILE NO. 1700952

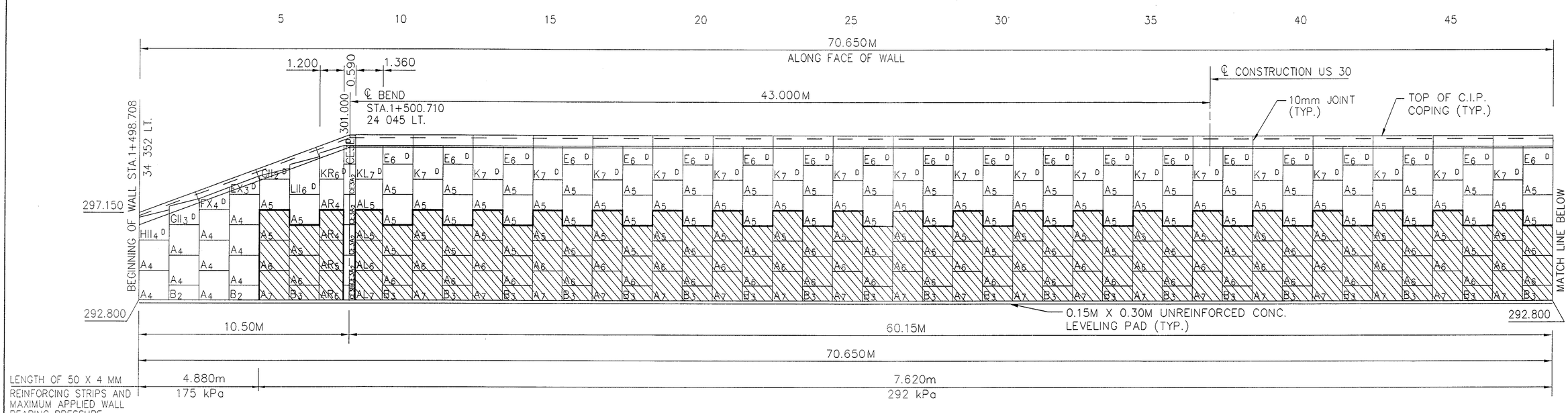
ELEVATION REAR ABUTMENT
REINFORCED EARTH WALL
BRIDGE NO. CRA–30–01474
US 30 OVER CSX RAILROAD

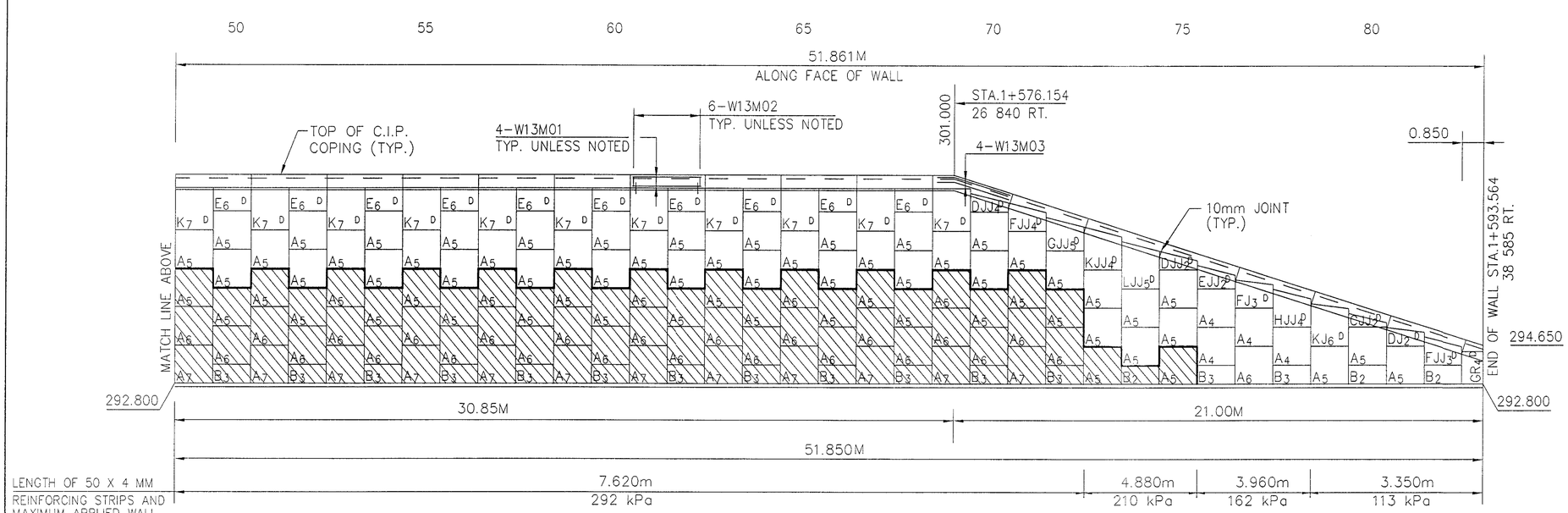
WYA/CRA–30–28.009/0.000
CRAWFORD COUNTY
STA.1+474.194 TO STA.1+539.265

28/33

1816
2116

RE–7212





- INDICATES "R4" REINFORCEMENT IN PANELS
- INDICATES "R6" REINFORCEMENT IN PANELS
- INDICATES "R7" REINFORCEMENT IN PANELS

ELEVATION – FRONT FACE FORWARD ABUTMENT

SCALE = 1 : 100

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF OHIO
EUGENE A. LAMBERSON
E-61288
REGISTERED
PROFESSIONAL ENGINEER

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SAA		1700952	

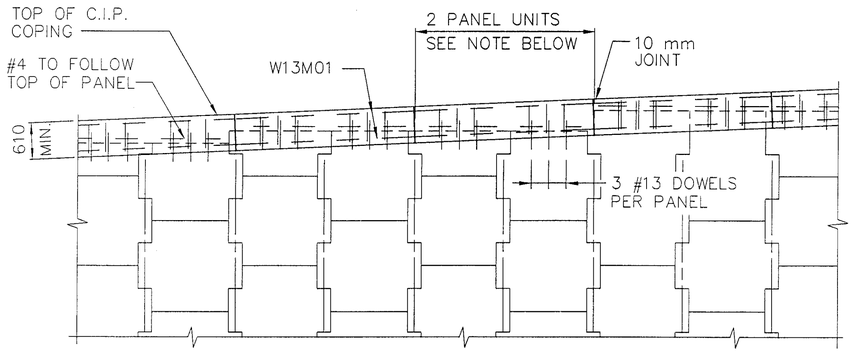
ELEVATION FORWARD ABUTMENT
REINFORCED EARTH WALL
BRIDGE NO. CRA-30-01474
US 30 OVER CSX RAILROAD

WYA/CRA-30-28.009/0.000
CRAWFORD COUNTY
STA.1+474.194 TO STA.1+539.265

29/33

1817
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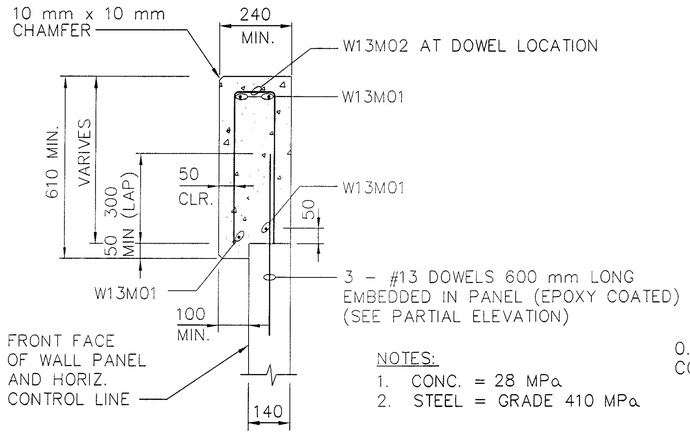
RE-7212



C.I.P. COPING – PARTIAL ELEVATION

SCALE 1:50

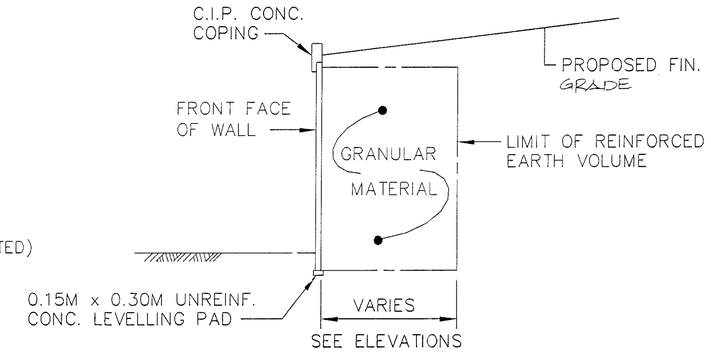
NOTE:
JOINTS IN COPING SHALL BE AT 2 PANEL INTERVALS AND COINCIDE APPROXIMATELY WITH ℄ OF ALIGNMENT PINS. REINFORCING STEEL SHALL BE STOPPED 50mm SHORT OF EITHER SIDE OF THE JOINTS.



NOTES:
1. CONC. = 28 MPa.
2. STEEL = GRADE 410 MPa.

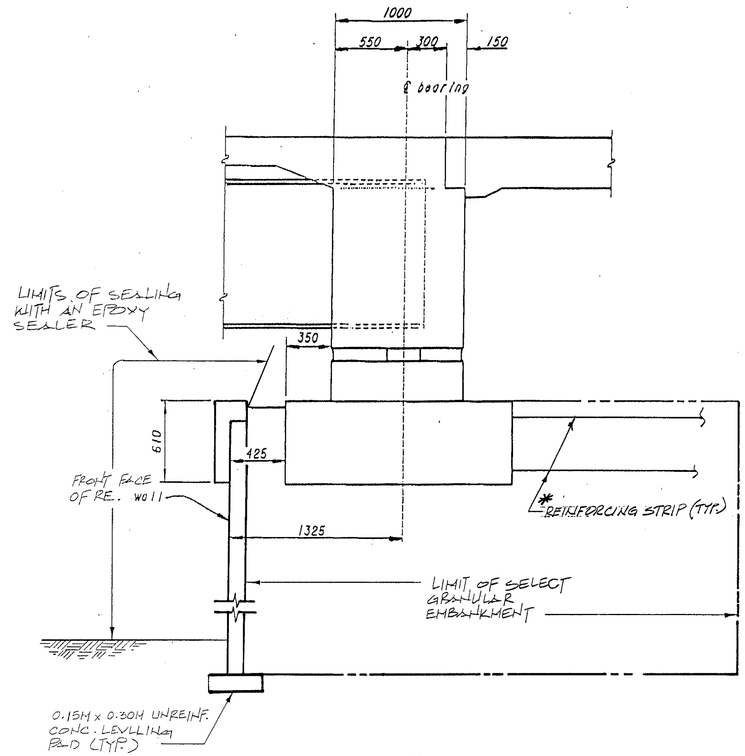
C.I.P. CONC. COPING

SCALE 1:10



TYPICAL SECTION @ WINGWALLS

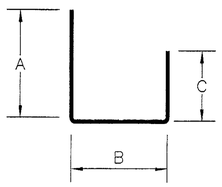
N.T.S.



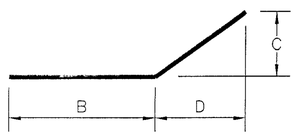
TYPICAL
ABUTMENT SECTION

REINFORCING STEEL LIST							
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			
				A	B	C	D
W13M01	324	2900	STR.				
W13M02	504	1100	2	510	140	510	
W13M03	8	2970	17	670	2300	300	600
W13M04	4	3800	STR.				

NOTES :
1. ALL DIMENSIONS ARE OUT TO OUT OF BAR.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.

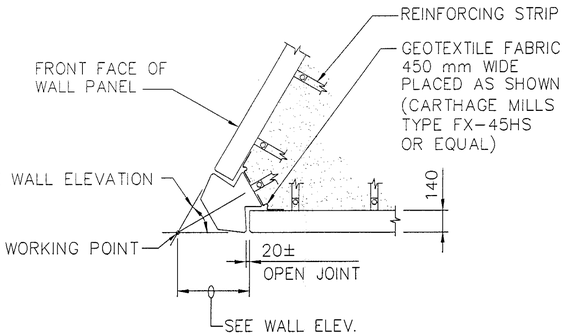


TYPE 2



TYPE 4

* STRIPS ARE 7.62 m LONG AT FWD. ABUTMENT AND 9.76 m LONG AT REAR ABUTMENT, AT SAME SPACING AS PROVIDED IN PANELS.



45° CORNER ELEMENT DETAIL

SCALE 1:20

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF OHIO
EUGENE A. LAMBERSON
E-61222
REGISTERED PROFESSIONAL ENGINEER

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reinforced earth®

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SAA		1700952	

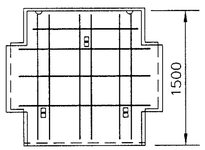
STANDARD DETAILS
REINFORCED EARTH WALL
BRIDGE NO. CRA-30-01474
US 30 OVER CSX RAILROAD

WYA/CRA-30-28.009/0.000
CRAWFORD COUNTY
STA.1+474.194 TO STA.1+539.265

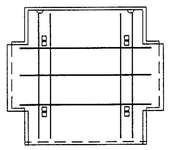
30/33

1818
2116

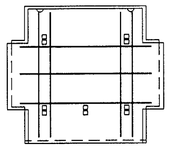
RE-7212



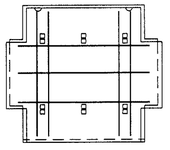
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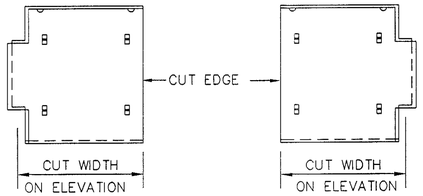
A-4-R4



A-5-R4

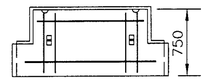


A-6-R4

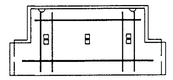


AL-4-R4

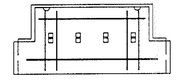
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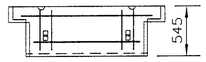
B-2-R4



B-3-R4



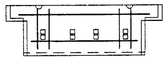
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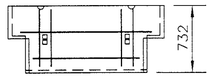
C-2-R4



C-3-R4



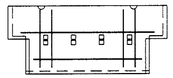
C-4-R4



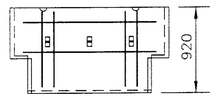
D-2-R4



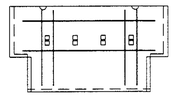
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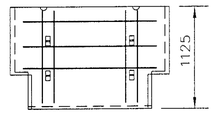
D-4-R4



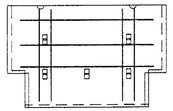
E-3-R4



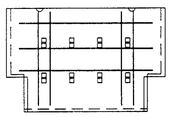
E-4-R4



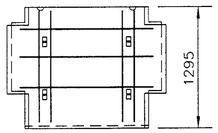
F-4-R4



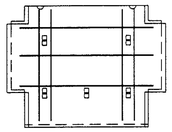
F-5-R4



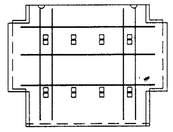
F-8-R4



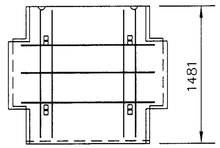
G-4-R4



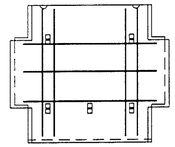
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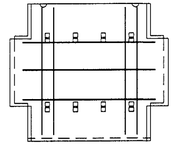
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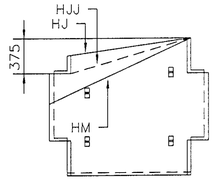
H-4-R4



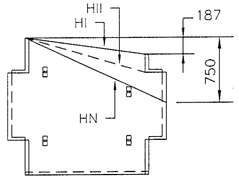
H-5-R4



H-8-R4

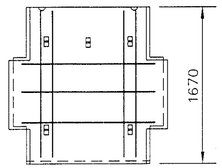


HJ-4-R4

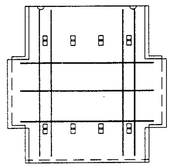


HI-4-R4

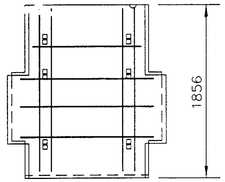
SLOPED TOP PANELS
"H" PANEL USED FOR ILLUSTRATION ONLY.



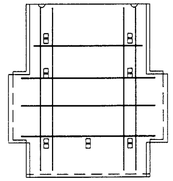
K-5-R4



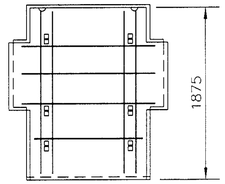
K-8-R4



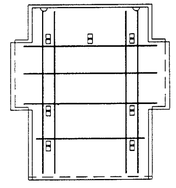
L-6-R4



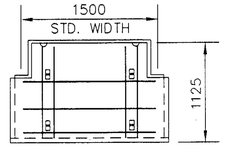
L-7-R4



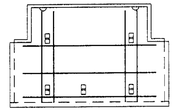
P-6-R4



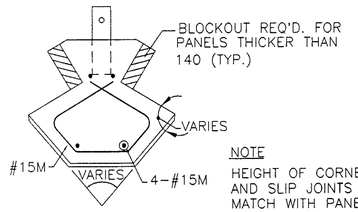
P-7-R4



Q-4-R4

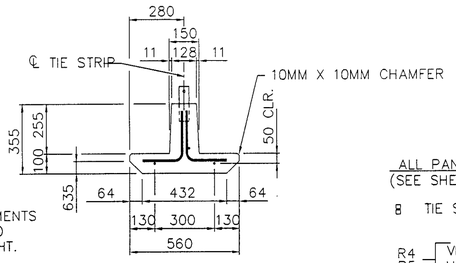


Q-5-R4



CORNER ELEMENT
SIZE VARIES WITH ANGLES

NOTE
HEIGHT OF CORNER ELEMENTS AND SLIP JOINTS SHOULD MATCH WITH PANEL HEIGHT.



SLIP JOINT

ALL PANELS ARE SHOWN BACK FACE VIEW
(SEE SHEET FOR STANDARD PANEL DETAILS.)

8 TIE STRIP LOCATION

R4, R5 — VERTICAL BARS ARE #10M AS SHOWN
HORIZONTAL BARS ARE #15M AS SHOWN

R6 — VERTICAL BARS ARE 6-#10M
HORIZONTAL BARS ARE 4-#15M

R7 — VERTICAL BARS ARE 6-#15M
HORIZONTAL BARS ARE 4-#20M

* INCLUDES HORIZONTAL JOINT MATERIAL BETWEEN PANELS.



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The Reinforced Earth Company
8614 Westwood Center Drive
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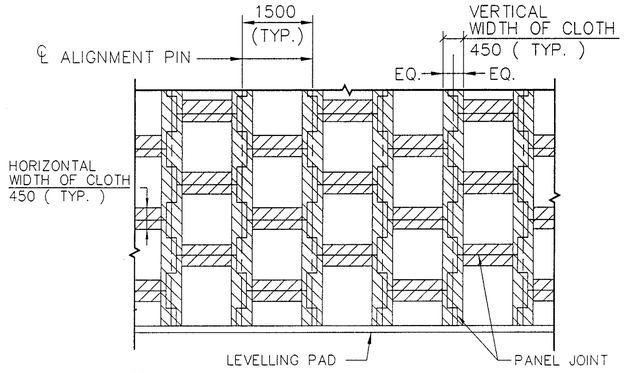
DESIGNED SAA/AO | DRAWN AO | REVIEWED SAA | DATE 1/21/1999
CHECKED SAA | REVISED | STRUCTURE FILE NO. 1700952

STANDARD PANELS
REINFORCED EARTH WALL
BRIDGE NO. CRA-30-01474
US 30 OVER CSX RAILROAD

WYA/CRA-30-28.009/0.000
CRAWFORD COUNTY
STA.1+474.194 TO STA.1+539.265

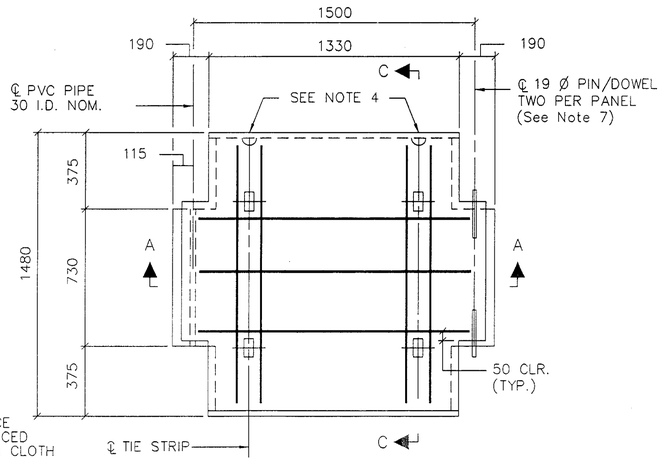
30A/33

RE-7212

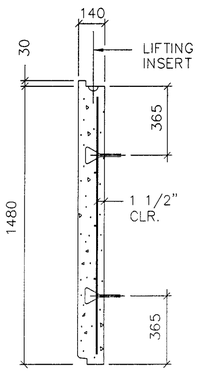


NOTE:
STRIPS OF FILTER CLOTH SHALL BE PLACED ON BACK FACE OF PANEL, OVER PANEL JOINTS. FILTER CLOTH SHALL BE ADHERED TO BACK FACE OF PANELS USING AN ADHESIVE COMPOUND SUPPLIED BY THE REINFORCED EARTH COMPANY. ADHESIVE SHALL BE APPLIED TO PANEL THEN FILTER CLOTH SHALL BE APPLIED TO PANELS.

FILTER CLOTH DETAIL
PARTIAL ELEVATION – BACK FACE



PANEL TYPE "A"
WITH R 4 REINFORCEMENT
FRONT VIEW

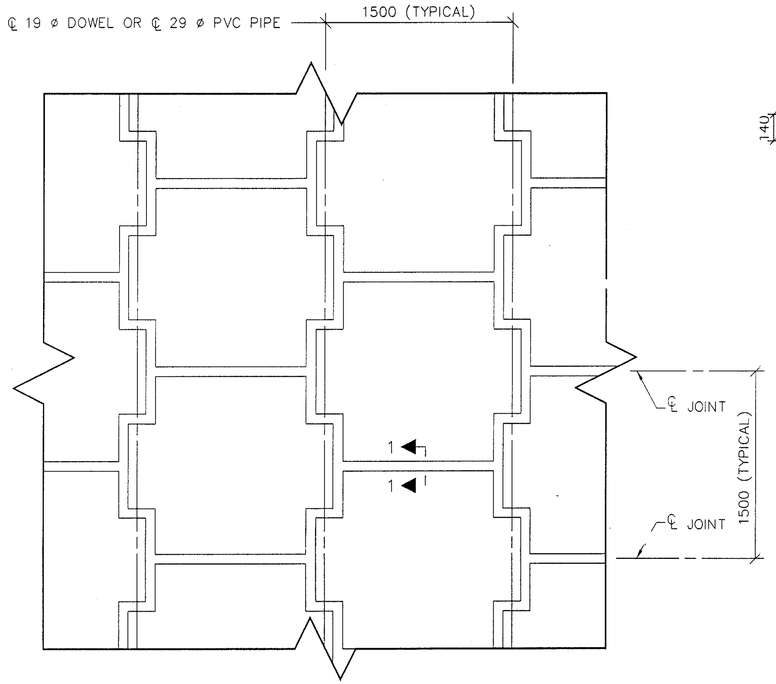


SECTION C–C

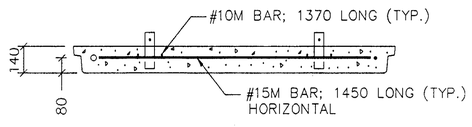
PANEL THICKNESS	REINFORCEMENT DESIGNATION	PANEL REINFORCEMENT	MAXIMUM ALLOWABLE HORIZONTAL STRESS AT FACING (kPa)
140mm	R4	4–#10 VERTICAL 3–#15 HORIZONTAL	52.6
	R6	6–#10 VERTICAL 3–#15 HORIZONTAL	76.6
	R7	6–#10 VERTICAL 3–#15 HORIZONTAL	122.1

NOTES:

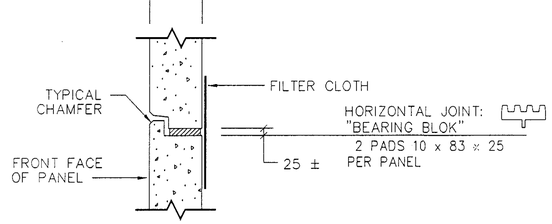
1. REINFORCING STEEL TO BE A615 GRADE 400.
2. 10mm x 10mm CHAMFER SHALL BE PROVIDED ON ALL EXPOSED EDGES (FRONT FACE ONLY).
3. ALL PANEL TYPES AND OTHER RELATED ELEMENTS WILL BE DETAILED ON SHOP DRAWINGS.
4. ALL PANELS SHALL HAVE TWO LIFTING INSERTS OF ONE TON CAPACITY EACH.
5. PANEL DESIGN THICKNESS IS 140mm THICKNESS OF CONCRETE MUST INCREASE TO ACCOMODATE ANY ARCHITECTURAL SURFACE FINISH THAT MAY BE SPECIFIED.
6. ACTUAL PANEL REINFORCEMENT FOR ALL PANEL TYPES ON THIS PROJECT IS DESIGNATED ABOVE. R ILLUSTRATED FOR INFORMATION ONLY.
7. EACH 19mm Ø DOWEL SHALL HAVE A TYP. LENGTH OF 150mm. DOWELS MAY BE GALVANIZED STEEL OR PVC ROD. A SINGLE FULL LENGTH DOWEL MAY BE USED AT THE DISCRETION OF THE MANUFACTURER.
8. THE USE OF PVC. PINS AND PVC. SLEEVES IS AT THE DISCRETION OF RECO.



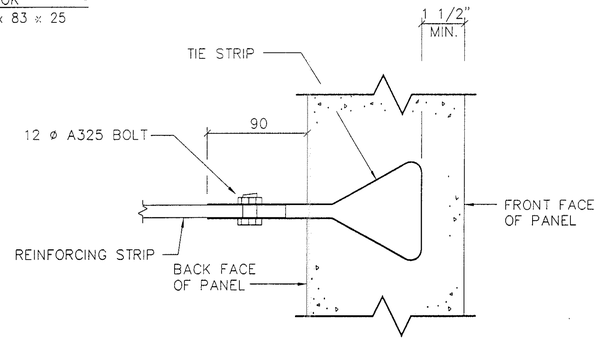
TYPICAL PANEL LAYOUT
PARTIAL ELEVATION – FRONT FACE



SECTION A–A



SECTION 1–1



CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

STATE OF OHIO
EUGENE A. LAMBERSON
E-81228
REGISTERED PROFESSIONAL ENGINEER

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reinforced earth®

DESIGNED	DRAWN	REVIEWED	DATE
SAA/AO	AO	SAA	1/21/1999
CHECKED	REVISED	STRUCTURE FILE NO.	
SAA		1700952	

STANDARD PANEL DETAILS
REINFORCED EARTH WALL
BRIDGE NO. CRA-30-01474
US 30 OVER CSX RAILROAD

WYA/CRA-30-28.009/0.000
CRAWFORD COUNTY
STA.1+474.194 TO STA.1+539.265

31/33

189
2116

RE-7212

REAR ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A25M01	16	11 125	Str.						
A25M02	16	11 290	Str.						
A16M01	90	4510	8	475	1700				
A16M02	24	3300	2	1240	900	1240			
A16M03	6	2665	Str.						
A16M04	58	3680	8	860	900				
A16M05	6	2635	Str.						
A16M06	2	3130	2	1155	900	1155			
	1	1770		475		475			
A16M07	Series of	to	2	to	900	to			306
	11	4320		1750		1750			
A16M08	2	4270	2	1725	900	1725			
	1	1400		290		290			
A16M09	Series of	to	2	to	900	to			240
	13	4270		1725		1725			
A16M10	1	5370	Str.						
A16M11	1	6745	Str.						
A16M12	1	3775	Str.						
A16M13	1	5170	Str.						
A16M14	1	1935	Str.						
A16M15	1	3330	Str.						
A16M16	3	5440	Str.						
A16M17	1	1575	Str.						
A16M18	16	10 425	Str.						
A16M19	1	7585	Str.						
A16M20	1	6100	Str.						
A16M21	1	5945	Str.						
A16M22	1	4460	Str.						
A16M23	1	4300	Str.						
A16M24	1	2815	Str.						
A16M25	3	5465	Str.						
A16M26	1	2665	Str.						
A16M27	1	1180	Str.						

FORWARD ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B25M01	16	11 125	Str.						
B25M02	16	11 290	Str.						
B16M01	90	4510	8	475	1700				
B16M02	23	3500	2	1340	900	1340			
B16M03	12	2760	Str.						
	1	1510		345		345			
B16M04	Series of	to	2	to	900	to			125
	11	4010		1595		1595			
B16M05	1	3950	2	995	900	1300			
B16M06	6	2745	Str.						
	1	1370		275		275			
B16M07	Series of	to	2	to	900	to			250
	12	4190		1685		1685			
B16M08	24	10 425	Str.						
B16M09	3	3100	2	1140	900	1140			
B16M10	1	4620	Str.						
B16M11	1	6195	Str.						
B16M12	1	3050	Str.						
B16M13	1	4625	Str.						
B16M14	1	1635	Str.						
B16M15	1	3110	Str.						
B16M16	3	5850	Str.						
B16M17	1	1485	Str.						
B16M18	1	7390	Str.						
B16M19	1	5815	Str.						
B16M20	1	5775	Str.						
B16M21	1	4440	Str.						
B16M22	1	4160	Str.						
B16M23	1	2830	Str.						
B16M24	3	5090	Str.						
B16M25	1	2555	Str.						
B16M26		1220	Str.						

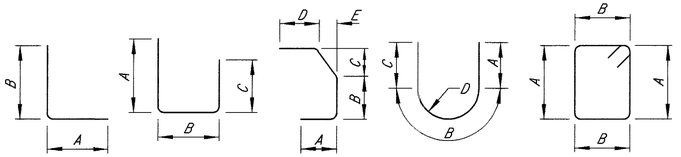
PIER REINFORCING STEEL LIST

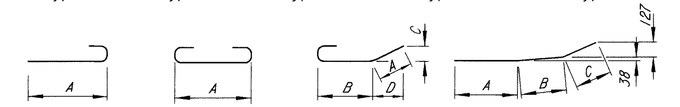
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
P32M01	72	3785	1	550	3325				
P32M02	72	8790	Str.						
P29M01	32	13 650	13	12 900					
P25M01	24	12 900	Str.						
P22M01	4	9660	Str.						
P22M02	4	10 300	Str.						
P22M03	4	10 400	Str.						
P22M04	4	11 560	2	1000	9660	1000			
P22M05	4	12 200	2	1000	10 300	1000			
P22M06	4	12 300	2	1000	10 400	1000			
P16M07	24	2695	4	750	1270	750	405		
P16M01	88	3250	13	2900					
P16M02	60	2900	Str.						
P16M03	80	2530	2	900	810	900			
P13M01	20	9660	Str.						
SP13M01	6	7885	21	7885	115	760			

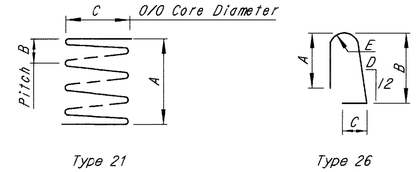
SUPERSTRUCTURE REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
D25M01	62	2245	14	430	1535	305	305		
D25M02	60	9730	Str.						
D16M01	176	3380	2	925	1610	925			
D16M02	88	2820	2	780	1340	780			
S25M01	24	9635	Str.						
S16M01	594	11 420	Str.						
	4	640							
S16M02	Series of	to	Str.						95
	143	14 130							
S16M03	624	7600	Str.						
S16M04	312	8950	Str.						
S16M05	312	6250	Str.						
S16M06	156	7250	Str.						
S16M07	78	12 000	Str.						
Y19M01	423	1020	3	265	360	216	230	152	
	3	1205			965				
Y19M02	Series of	to	1	280	to				25
	11	1455			1215				
Y19M03	24	1300	1	280	1070				
Y19M04	390	1305	1	280	1075				
Y16M01	390	2130	26	915	990	205	1¼	38	
Y16M02	3	1170	12	990					
Y16M03	3	1155	12	965					
Y16M04	3	1120	12	940					
Y16M05	3	1095	12	915					
Y16M06	3	1070	12	890					
Y16M07	3	1045	12	865					
Y16M08	3	1020	12	840					
Y16M09	3	995	12	815					
Y16M10	3	970	12	790					
Y16M11	3	945	12	765					
Y16M12	3	920	12	740					
X19M01	6	10 200	Str.						
X19M02	6	10 705	Str.						
X16M01	12	3050	Str.						
X16M02	6	1725	18	555	738	432			
X16M03	6	1725	Str.						
X16M04	12	4220	Str.						
X16M05	36	10 200	Str.						
X19M06	36	10 705	Str.						

metric units







NOTES:

1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.
3. SPIRAL REINFORCING BARS: The "length" shown in the steel list for the spiral bars is the length of the spiral along the axis of the spiral. One and one-half closed-coil turns shall be provided at the ends of each spiral unit.
4. SPACERS: Concrete spacers or other approved noncorrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 3050 mm) to insure concentric spacing for the entire cage length. Spacers shall be constructed of approved material equal in quality and durability to the concrete specified for the shaft. The spacers shall have adequate dimensions to ensure a minimum 75 mm clear space between the outside of the reinforcing cage and the design dimension of the drilled shaft or column. Cylindrical concrete feet (bottom supports) shall be provided to ensure that the bottom of the cage is maintained at the proper distance above the base.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	7/14/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	1700952	

REINFORCING STEEL LIST LEFT BRIDGE
BRIDGE NO. CRA-30-01474
US 30 OVER CSX RAILROAD

WYA/CRA-30-28.009/0.000

32/33

1820/2116

F:\Inroame\D1\MBrs1.dgn

REAR ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A25M31	16	11 125	Str.						
A25M32	16	11 290	Str.						
A16M31	90	4510	8	475	1700				
A16M32	24	3500	2	1340	900	1340			
A16M33	12	2595	Str.						
	1	1910		545		545			
A16M34	Series of	to	2	to	900	to			110
	11	4110		1645		1645			
A16M35	57	3480	8	760	900	760			
A16M36	6	2495	Str.						
	1	1350		265		255			
A16M37	Series of	to	2	to	900	to			230
	12	4220		1670		1670			
A16M38	16	10 425	Str.						
A16M39	3	2630	2	905	900	905			
A16M40	1	4750	Str.						
A16M41	1	6235	Str.						
A16M42	1	3165	Str.						
A16M43	1	4650	Str.						
A16M44	1	1585	Str.						
A16M45	1	3070	Str.						
A16M46	3	5845	Str.						
A16M47	1	1500	Str.						
A16M48	1	7500	Str.						
A16M49	1	6105	Str.						
A16M50	1	6070	Str.						
A16M51	1	4735	Str.						
A16M52	1	4310	Str.						
A16M53	1	2975	Str.						
A16M54	3	5085	Str.						
A16M55	1	2555	Str.						
A16M56	1	1220	Str.						

FORWARD ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B25M31	16	11 125	Str.						
B25M32	16	11 290	Str.						
B16M31	90	4510	8	475	1700				
B16M32	24	3300	2	1240	900	1240			
B16M33	6	2640	Str.						
B16M34	58	3480	8	740	900				
B16M35	6	2490	Str.						
B16M36	2	2590	2	885	900	885			
	1	1990		585		585			
B16M37	Series of	to	2	to	900	to			260
	11	4560		1870		1870			
B16M38	2	4260	2	1720	900	1720			
	1	1370		275		275			
B16M39	Series of	to	2	to	900	to			240
	12	4260		1720		1720			
B16M40	2	5370	Str.						
B16M41	2	6745	Str.						
B16M42	1	3775	Str.						
B16M43	1	5170	Str.						
B16M44	1	1935	Str.						
B16M45	1	3330	Str.						
B16M46	3	5435	Str.						
B16M47	1	1575	Str.						
B16M48	16	10 425	Str.						
B16M49	1	7035	Str.						
B16M50	1	5640	Str.						
B16M51	1	5550	Str.						
B16M52	1	4155	Str.						
B16M53	1	4060	Str.						
B16M54	1	2665	Str.						
B16M55	3	2570	Str.						
B16M56	1	1175	Str.						
B16M57	1	5500	Str.						

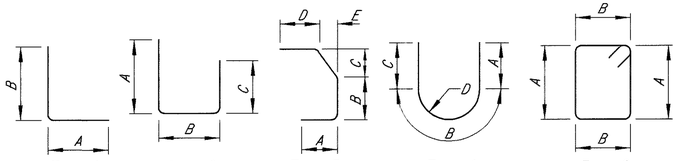
PIER REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
P32M31	72	3785	1	550	3325				
P32M32	36	8730	Str.						
P32M33	36	8610	Str.						
P29M31	32	13 650	13	12 900					
P25M31	24	12 900	Str.						
P22M31	4	9660	Str.						
P22M32	4	10 300	Str.						
P22M33	4	10 400	Str.						
P22M34	4	11 560	2	1000	9660	1000			
P22M35	4	12 200	2	1000	10 300	1000			
P22M36	4	12 300	2	1000	10 400	1000			
P22M37	24	2770	4	750	1270	750	405		
P16M31	88	3250	13	2900					
P16M32	60	2900	Str.						
P16M33	80	2530	2	900	810	900			
P13M31	20	9660	Str.						
SP13M31	3	7830	21	7830	115	760			
SP13M32	3	7710	21	7710	115	760			

SUPERSTRUCTURE REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
D25M31	62	2245	14	430	1535	305	305		
D25M32	60	9730	Str.						
D16M31	176	3380	2	925	1610	925			
D16M32	88	2820	2	780	1340	780			
S25M31	24	9635	Str.						
S16M31	594	11 420	Str.						
	4	640							
S16M32	Series of	to	Str.						95
	143	14 130							
S16M33	624	7600	Str.						
S16M34	312	8950	Str.						
S16M35	312	6250	Str.						
S16M36	156	7100	Str.						
S16M37	78	12 000	Str.						
Y19M31	423	1020	3	265	360	216	230	152	
	3	1205			965				
Y19M32	Series of	to	1	280	to				25
	11	1455			1215				
Y19M33	24	1300	1	280	1070				
Y19M34	390	1305	1	280	1075	205	1¼	38	
Y16M31	390	2130	26	915	990				
Y16M32	3	1170	12	990					
Y16M33	3	1155	12	965					
Y16M34	3	1120	12	940					
Y16M35	3	1095	12	915					
Y16M36	3	1070	12	890					
Y16M37	3	1045	12	865					
Y16M38	3	1020	12	840					
Y16M39	3	995	12	815					
Y16M40	3	970	12	790					
Y16M41	3	945	12	765					
Y16M42	3	920	12	740					
X19M31	6	10 200	Str.						
X19M32	6	10 705	Str.						
X16M31	12	3050	Str.						
X16M32	6	1725	18	555	738	432			
X16M33	6	1725	Str.						
X16M34	12	4220	Str.						
X16M35	36	10 200	Str.						
X19M36	36	10 705	Str.						

metric units



NOTES:

1. All dimensions are out to out of bar.
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DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

REVIEWED	DATE
CRS	7/14/99
STRUCTURE FILE NUMBER	
1700952	
DRAWN	
ALH	
REVISED	
—	
DESIGNED	
ALH	
CHECKED	
FKL	

REINFORCING STEEL LIST RIGHT BRIDGE

BRIDGE NO. CRA-30-01474
US 30 OVER **CSX** RAILROAD

WYA/CRA-30-28.009/0.000

33/33

1821
2116

Filename: 01468s12.dgn

metric units

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6-99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700979	

CRAWFORD COUNTY
STA. 1+792.780
STA. 1+836.720

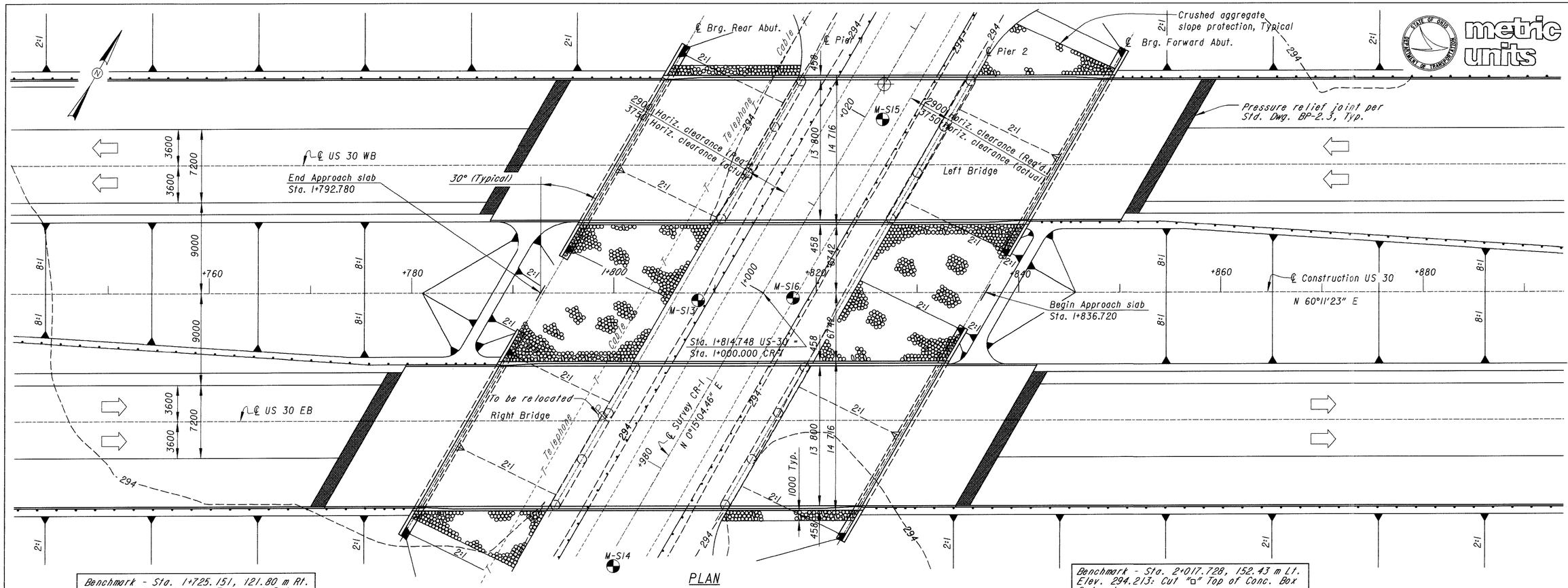
SITE PLAN

WYA/CRA-30-28.009/0.000

BRIDGE NO. CRA-30-01732
OVER CR1 (MARION MELMORE RD.)

1 / 17

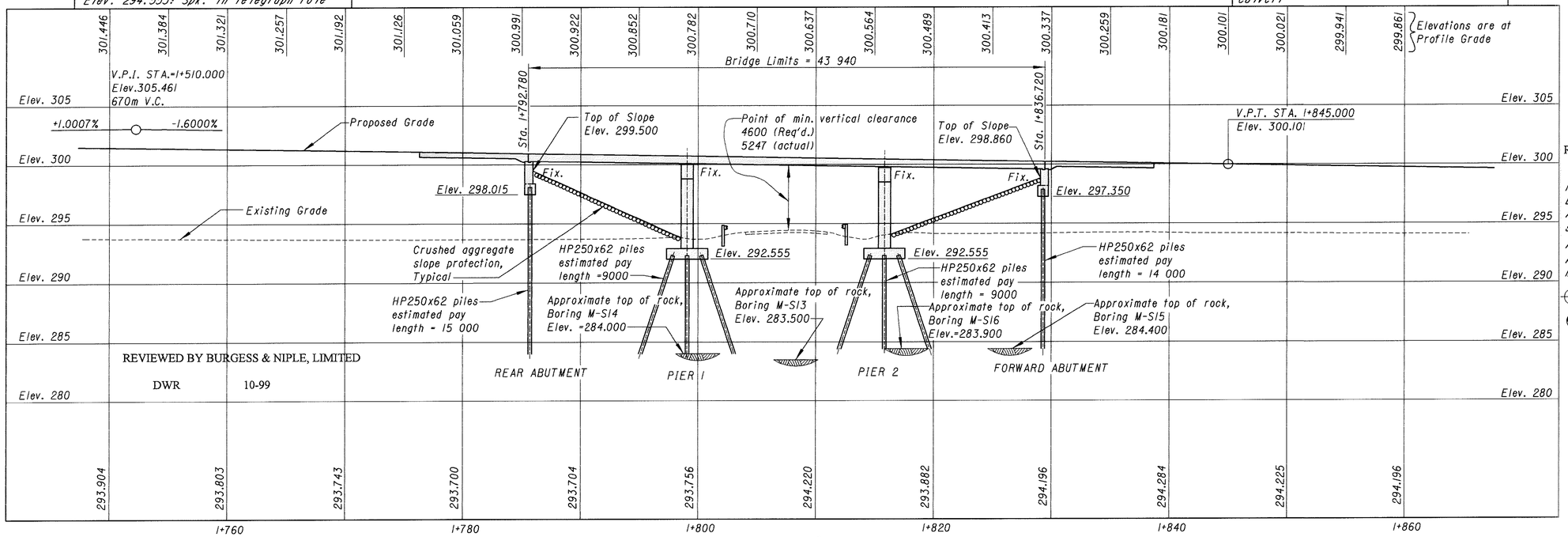
1822
2116



PLAN

Benchmark - Sta. 1+725.151, 121.80 m Rt.
Elev. 294.553: Spk. in Telegraph Pole

Benchmark - Sta. 2+017.728, 152.43 m Lt.
Elev. 294.213: Cut "□" Top of Conc. Box Culvert



SECTION ALONG ℄ U.S. 30 E.B.
(LEFT BRIDGE SIMILAR)

REVIEWED BY BURGESS & NIPLE, LIMITED
DWR 10-99

TRAFFIC DATA

(2000)	(2020)
ADT = 3484 WB	ADT = 5226 WB
3484 EB	5226 EB
6968	10452
ADTT = 976 WB	ADTT = 1463 WB
976 EB	1463 EB
1952	2926

REVIEWED BY BURGESS & NIPLE, LIMITED
DWR 10-99

Notes:
Earthwork limits shown are approximate. Actual slopes shall conform to plan cross sections.
All stations and elevations are in meters.
All dimensions and lengths are in millimeters.

℄ Point of min. vertical clearance
Boring location

PROPOSED STRUCTURE

Type: Continuous concrete slab bridge on capped pile abutments and cap & column piers.
Spans: 13 375, 16 750, 13 375 (measured ℄ brg. to ℄ brg.)
Roadway width: 13 800 toe/toe parapet
Live loading: MS18 & the alternate military loading
Skew angle: 30° L.F.
Wearing surface: Monolithic concrete
Approach slabs: AS-1-81M (9150)
Alignment: Tangent
Crown: 0.016
Latitude: N 40°49'00"
Longitude: W 83°5'30"

File name: ????????.dgn

GENERAL NOTES

All dimensions in the plans are shown in millimeters.

All elevations and stations in the plans are shown in meters.

REFERENCE shall be made to Standard Drawings:

AS-1-81M	Dated	10-25-94
BR-1M	Dated	12-15-94
CPA-5-94M	Dated	10-25-94
CPP-2-94M	Dated	12-19-94
CS-1-93M	Revised	06-30-95
BP-2.3	Dated	04-29-99

and to supplemental specification:

842	Dated	01-06-99
899	Dated	10-21-98

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1996, including the 1997 & 1998 Interim specifications and the ODOT Bridge Design Manual.

DESIGN LOADING: MS18 and the alternate military loading.

DESIGN DATA:
Concrete Class S - compressive strength 31.0 MPa (superstructure)

Concrete Class C - compressive strength 27.5 MPa (substructure)

Reinforcing Steel -ASTM A615M, A616M or A617M
Grade 400 - minimum yield strength 400 MPa.
Spiral reinforcement may be plain bars, ASTM A82M or A615M.

REINFORCING STEEL in superstructure, substructure and approach slabs shall be epoxy coated.

DECK PROTECTION METHOD:
Epoxy coated reinforcing steel
65mm concrete cover

MONOLITHIC WEARING SURFACE is assumed, for design purposes, to be 25mm thick.

PILES TO BEDROCK: Piles shall be driven to refusal on bedrock. Refusal shall be considered as obtained by penetrating soft bedrock for several millimeters with a minimum resistance of 20 blows per 25mm or refusal shall be considered as obtained after the pile has contacted hard bedrock and the pile has then received at least 20 blows.

The ultimate bearing value for the HP250 x 62 abutment piles is 800 kN per pile

The estimated and order length for the abutment piles is:
22 piles 15 meters long - rear abutment, 11 Lt., 11 Rt.
22 piles 14 meters long - forward abutment, 11 Lt., 11 Rt.
22 Splices

The ultimate bearing value for the HP250 x 62 pier piles is 900 kN per pile

The estimated and order length for the pier piles is:
128 piles 9 meters long - 32 each pier left and right
64 splices

PILE DRIVING CONSTRAINTS: Prior to driving piles, the spill through slopes and the bridge approach embankment behind the abutments shall be constructed up to the level of the subgrade elevation for a minimum distance of 60 meters behind each abutment. The excavation for the abutment fgotings and the installation of the abutment piles shall not begin until after the above required embankment has been constructed and has undergone a waiting period of 30 days minimum.

ITEM 507, STEEL POINTS, AS PER PLAN: Steel pile points shall be used to protect the tips of the proposed steel "H" piling. The steel points shall be furnished by Associated Pile and Fitting Corporation, 262 Rutherford Blvd., Clifton, New Jersey 07014; Dougherty Foundation Products, Inc., P.O. Box 688, Franklin Lakes, New Jersey 07417; Versa Steel Inc., 3601 N.W. Yeon Ave., P.O. Box 10559, Portland, Oregon 97210; Piling Accessories, inc., 3467 Gribble Road, Mathews, North Caroling 28105; or by a manufacturer that can furnish a steel point that is acceptable to the Director. The material used for the manufacturing of pile points shall conform to ASTM A27 65/35 - Class 2 - Heat Treated or AASHTO M103 65/35 - Heat Treated. A notarized copy of the mill test report shall be submitted to the Engineer.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN:
Unclassified excavation shall be in accordance with 503 except that the backfill material behind the abutments shall be 203 granular material placed in 150mm lifts and compacted in accordance with 304.04. The 203 granular material shall extend 30 meters behind each abutment.

APPROACH SLAB CONCRETE shall be placed towards the superstructure during days when sudden temperature changes are unlikely and be completed at least 4 hours prior to the concrete placement day's peak ambient temperature.

UTILITY LINES: All expense involved in relocation (installing) the affected utility lines shall be borne by the Utility(ies). The Contractor and Utility(ies) are to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

ALTHOUGH OTHERWISE SHOWN IN THESE PLANS, THE STRUCTURE FILE NUMBERS ARE : 1700979L/1700987R

metric units

Calculated by: RHH dated: 8/98
Checked by: FKL dated: 8/98

ESTIMATED QUANTITIES

Item	Extension	CRA-30-01792 L Total	CRA-30-01792 R Total	Unit	Description	LEFT BRIDGE Superstructure	LEFT BRIDGE Abutment	LEFT BRIDGE Pier	LEFT BRIDGE General	RIGHT BRIDGE Superstructure	RIGHT BRIDGE Abutment	RIGHT BRIDGE Pier	RIGHT BRIDGE General
503	21301	Lump	Lump	-	Unclassified excavation, as per plan				Lump				Lump
505	11100	Lump	Lump	-	Pile driving equipment mobilization				Lump				Lump
507	00100	895	895	Meter	Steel piles HP250 x 62, furnished		319	576			319	576	
507	00150	895	895	Meter	Steel piles HP250 x 62, driven		319	576			319	576	
507	50500	43	43	Each	Steel pile splices		11	32			11	32	
507	93301	86	86	Each	Steel point (or shoe), as per plan		22	64			22	64	
Special	51261502	527.7	527.7	Sq. Meter	Sealing of concrete surfaces (epoxy) (see proposal note)	295.2	47.0	185.8		295.2	47.0	185.8	
518	21230	Lump	Lump	-	Porous backfill with filter fabric		Lump				Lump		
518	40000	48	48	Meter	150mm Perforated corrugated plastic pipe		48				48		
518	40010	12	12	Meter	150mm Non-perforated corrugated plastic pipe, including specials		12				12		
601	20000	600	600	Sq. Meter	Crushed aggregate slope protection		600				600		
842	41000	45.7	45.7	Cu. Meter	Class C concrete, pier above footing			45.7				47.9	
842	43500	69.5	69.5	Cu. Meter	Class C concrete, abutment including footing		69.5				77.3		
842	46500	73.7	73.7	Cu. Meter	Class C concrete, footing			73.7				73.7	
894	10000	457.3	457.3	Cu. Meter	High Performance Concrete, for Bridge Deck with Warranty	457.3				457.3			

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVISED	DATE
ALH	ALH	CRS	6-99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	1700979L/1700987R	

GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. CRA-30-01792
OVER CR 1 (MARION MELMORE RD)

WYA/CRA-30-28009/00000

2 / 11

1823
2116

File name: 01792GN1.dgn

metric units

℄ Brg. Rear Abutment

℄ Pier 1

℄ Pier 2

℄ Brg. Forward Abutment

℄ Piles

℄ Bearings

℄ Construction US 30

40

10 Spaces @ 2200 = 22 000

4915

5480

7440

2960

1100 1100

30°00'00" Typical

Sta. 1+793.000

Sta. 1+806.375

Sta. 1+823.125

Sta. 1+836.500

PLAN

NOTES:
1. All piles are HP250x62.
2. (33) I Designates pile number and location.
3. ↦ Denotes pile battered 1:4 in direction of arrrow.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	17008079	

PILING LAYOUT
BRIDGE NO. WYA-30-01792
OVER CR 1 (MARION WELMORE RD.)

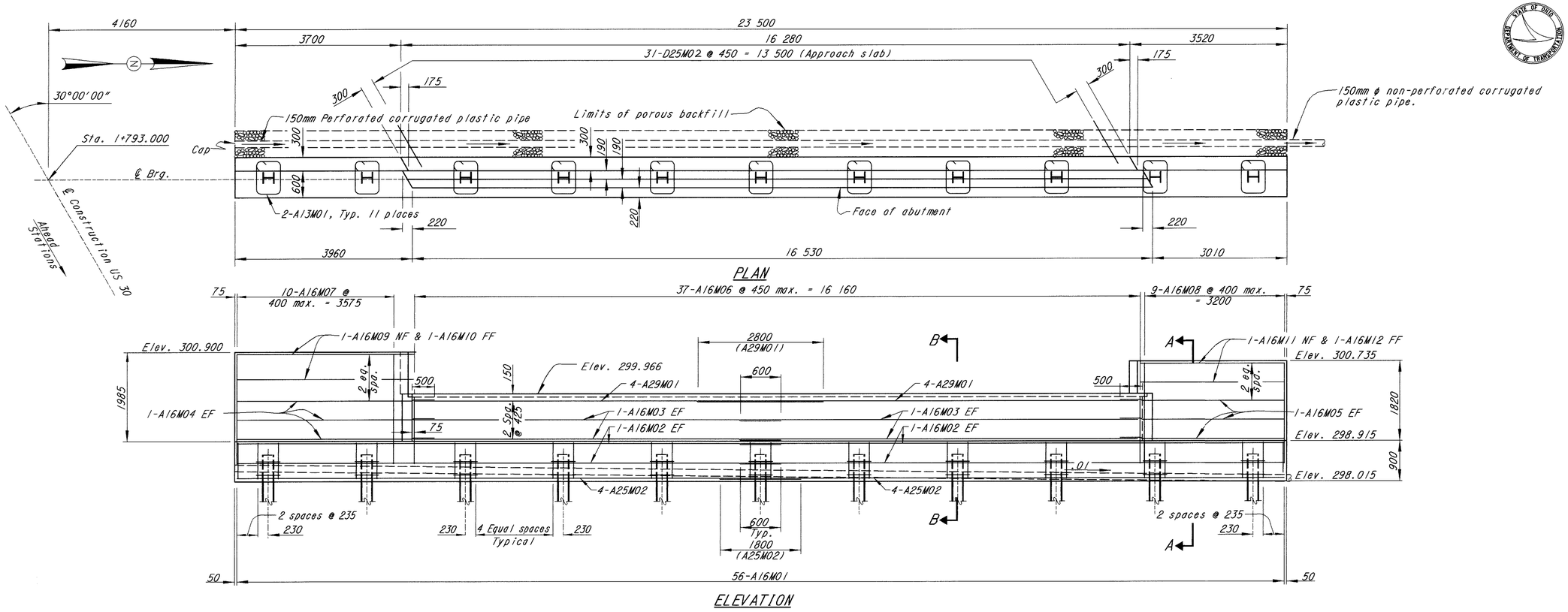
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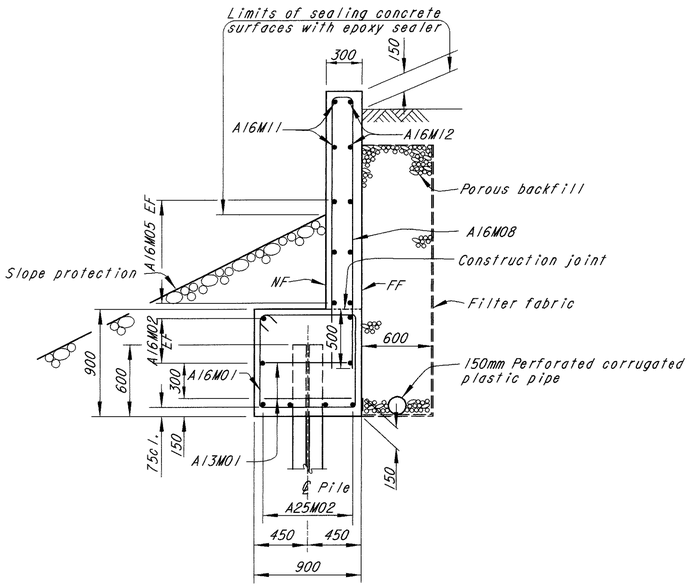
3 / 17

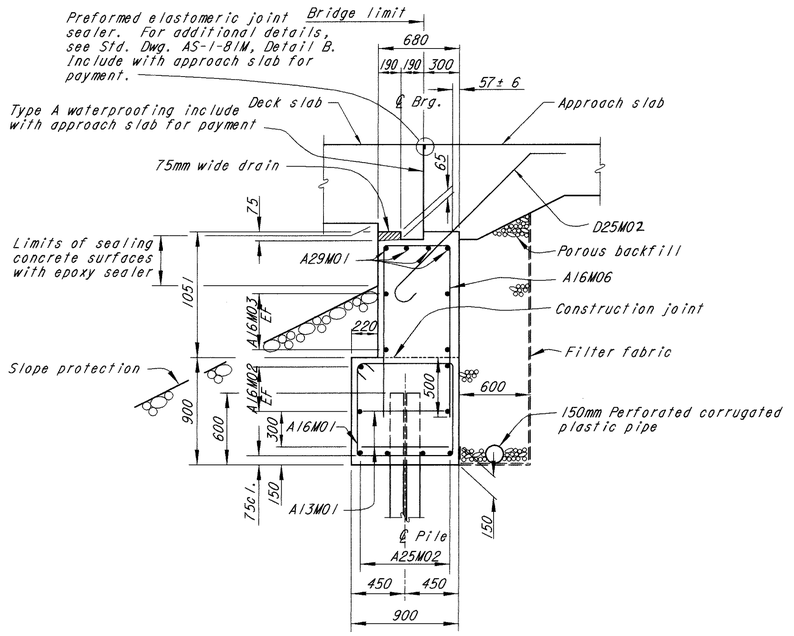
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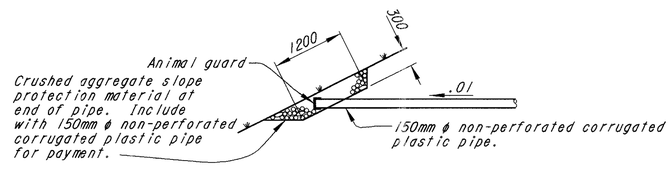
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metric units









DETAIL 1

NOTES:
1. For pile layout, see sheet 3/17
2. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
3. EF = Each Face
   NF = Near Face
   FF = Far Face
4. For additional details, see Std. Dwg. CPA-5-94M.

DESIGN AGENCY
BALKE ENGINEERS
1348 Summit Road
Cincinnati, Ohio 45237

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ALH	1700979
DESIGNED	REVISED
FKL	—
CHECKED	
MRS	

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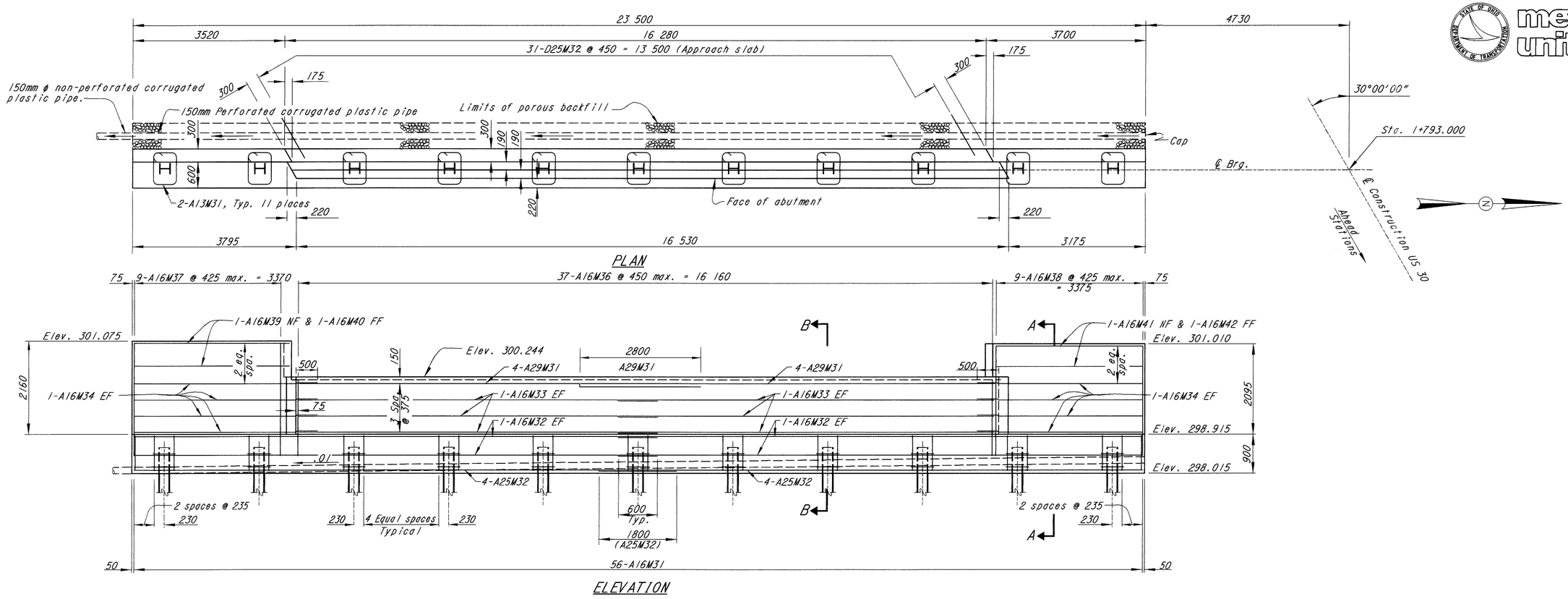
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OVER CR1 (MARION WELMORE RD.)

WYA/CRA-30-28.009/0.000

4/17

1825/2116

F:\Inroame-01792MAC.dgn



NOTES:
1. For pile layout, see sheet 3/17
2. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
3. EF = Each Face
   NF = Near Face
   FF = Far Face
4. For additional details, see Std. Dwg. CPA-5-94M.

metric units

DESIGN AGENCY
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1848 Summit Road
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DESIGNED	DRAWN	REVIEWED	DATE
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MPS	—	1700979	

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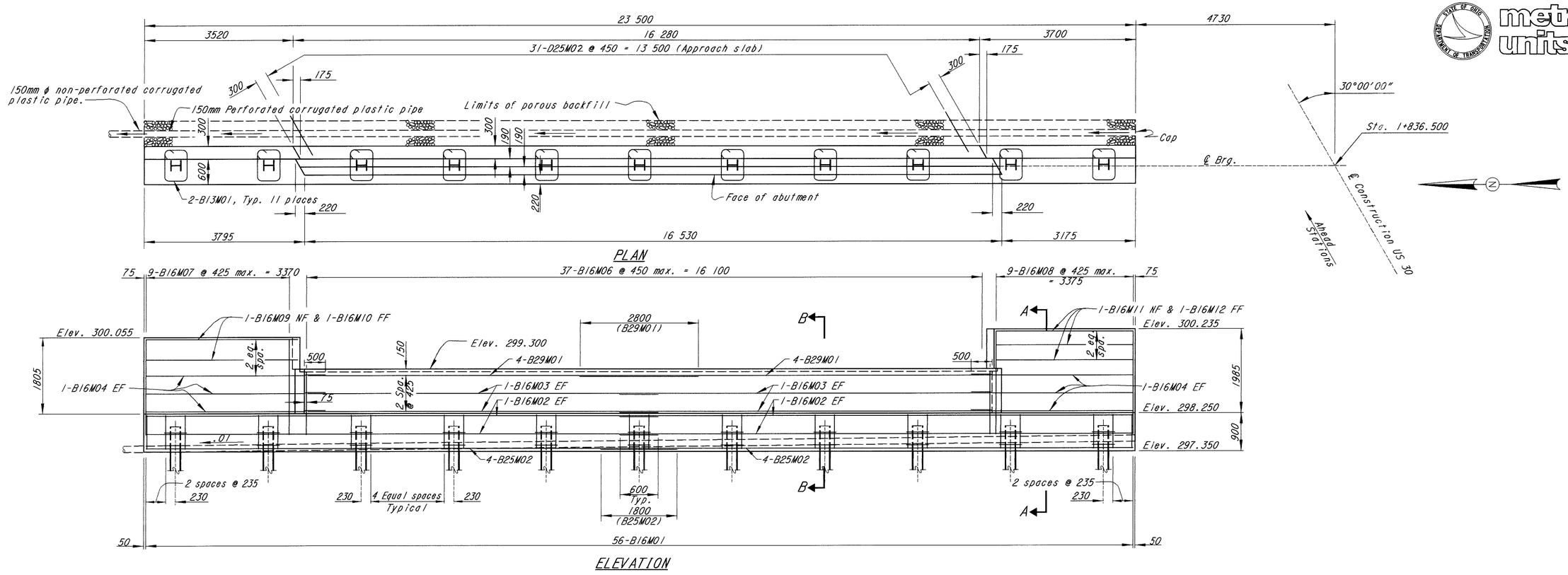
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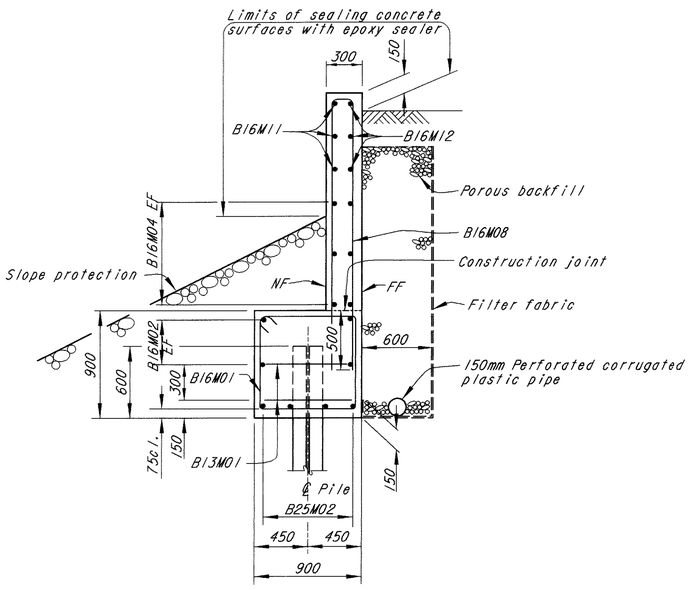
5 / 17

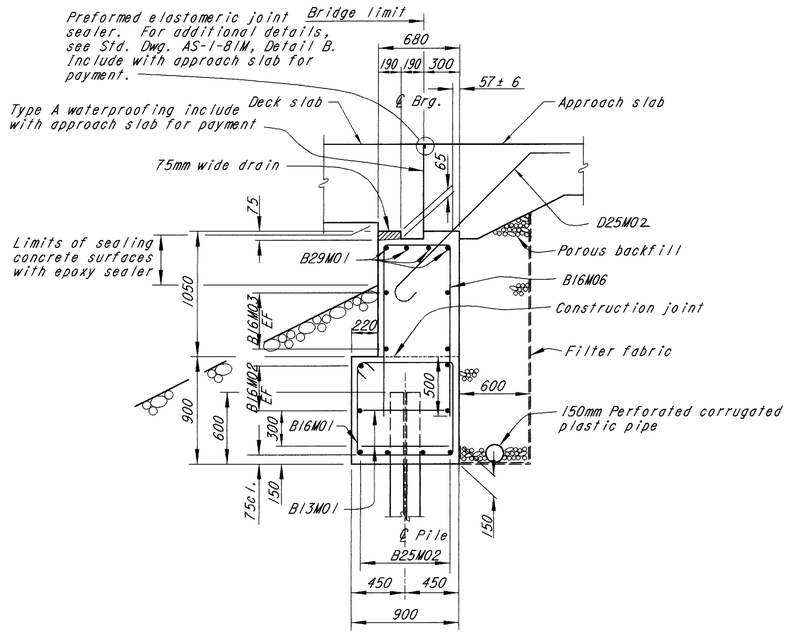
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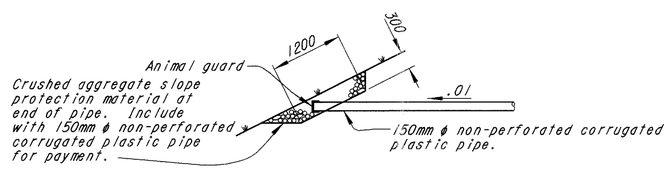
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metric units









DETAIL 1

NOTES:
1. For pile layout, see sheet 3/17
2. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
3. EF = Each Face
   NF = Near Face
   FF = Far Face
4. For additional details, see Std. Dwg. CPA-5-94M.

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DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
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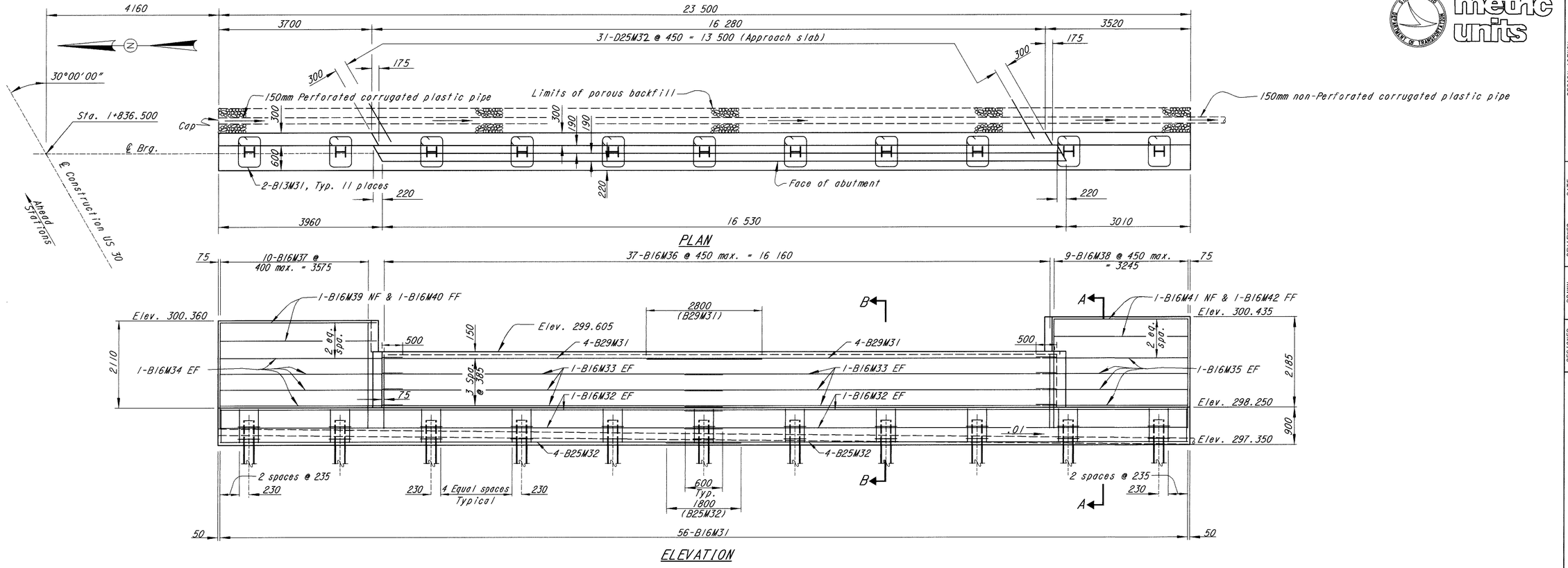
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OVER CR1 (MARION WELMORE RD.)

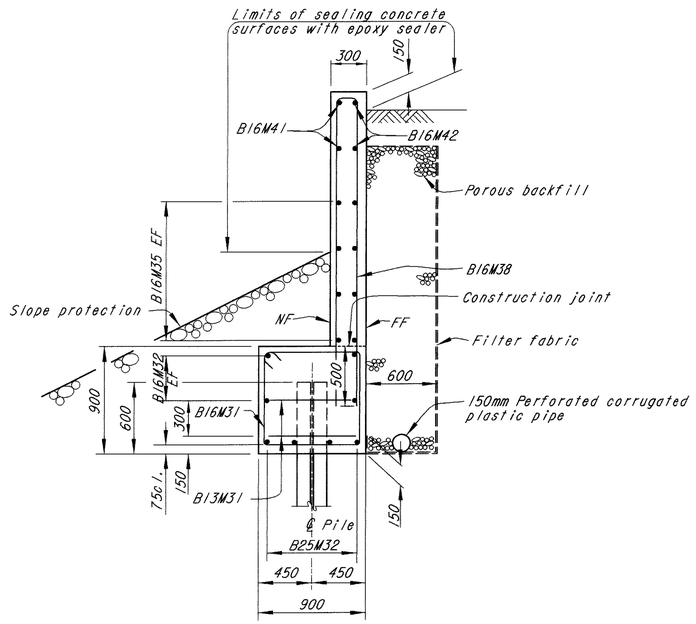
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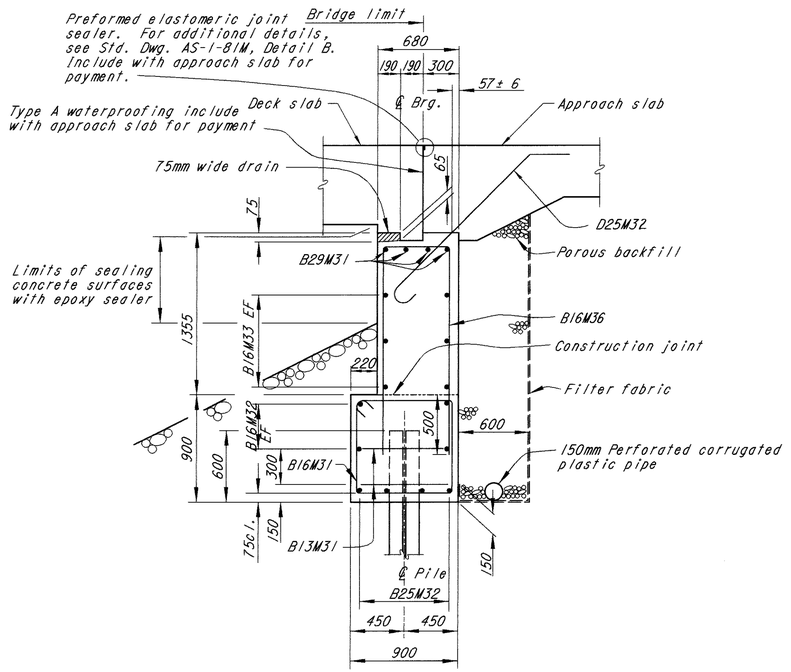
6 / 17

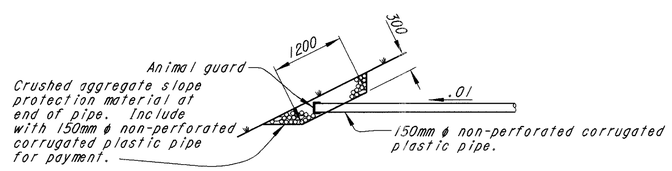
1827
2116

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NOTES:
1. For pile layout, see sheet 3/17
2. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
3. EF = Each Face
   NF = Near Face
   FF = Far Face
4. For additional details, see Std. Dwg. CPA-5-94M.

metric units

DESIGN AGENCY
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1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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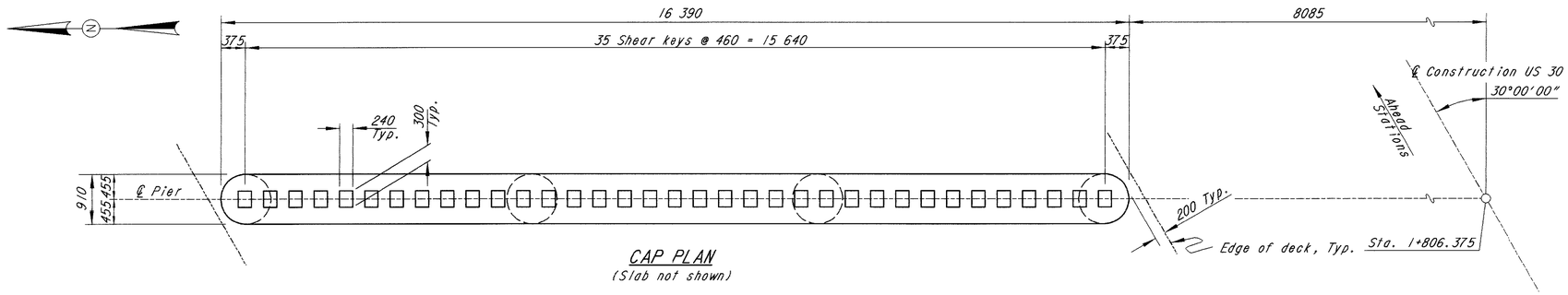
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WYA/CRA-30-28.009/0.000

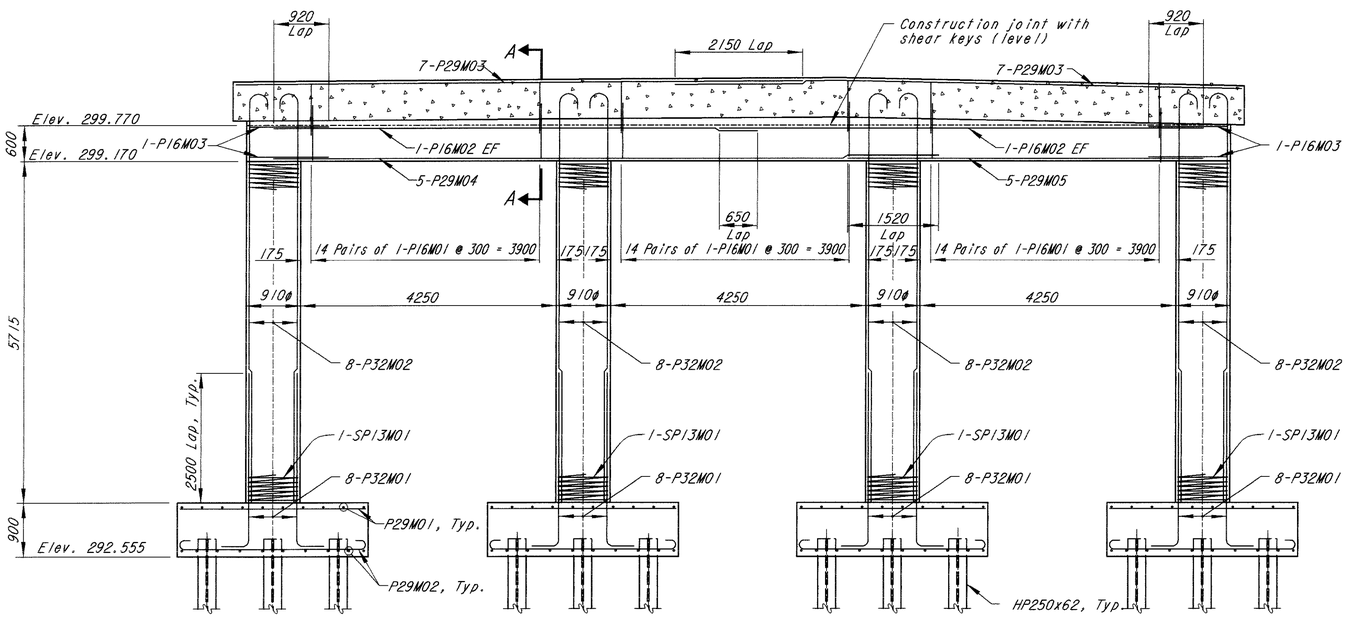
7 / 17

1828
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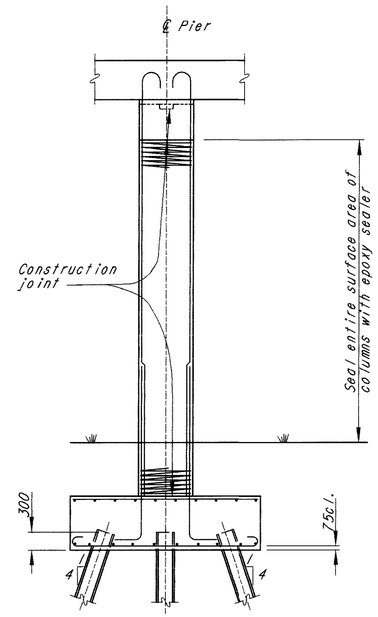
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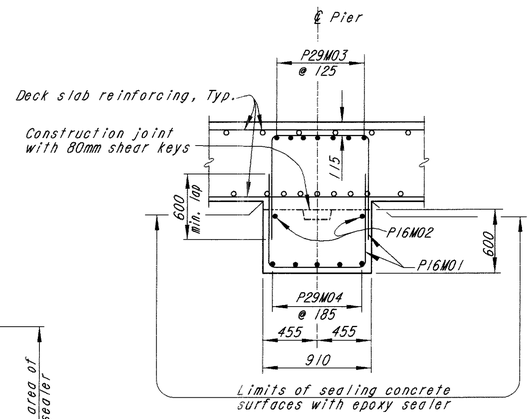
CAP PLAN
(Slab not shown)



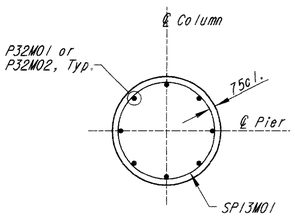
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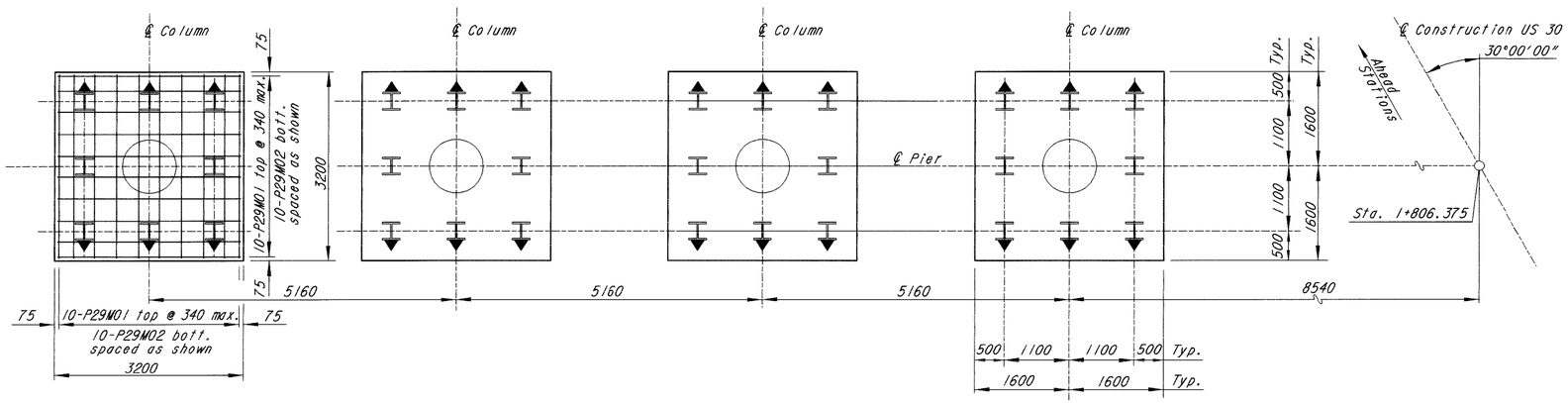
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SECTION A-A



TYPICAL COLUMN SECTION



FOOTING PLAN

NOTE: Footing reinforcing steel shown is typical for all footings.

NOTES:
1. The pier cap shall be shored while the slab is placed. The pier cap shall not be loaded without shoring until after the slab concrete has hardened.
2. ⊤ Denotes pile battered 1:4 in direction of arrow.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

REVIEWED	DATE
CRS	6.99
STRUCTURE FILE NUMBER	
1700979	
DRAWN	REVISED
ALH	—
DESIGNED	CHECKED
FKL	MPS

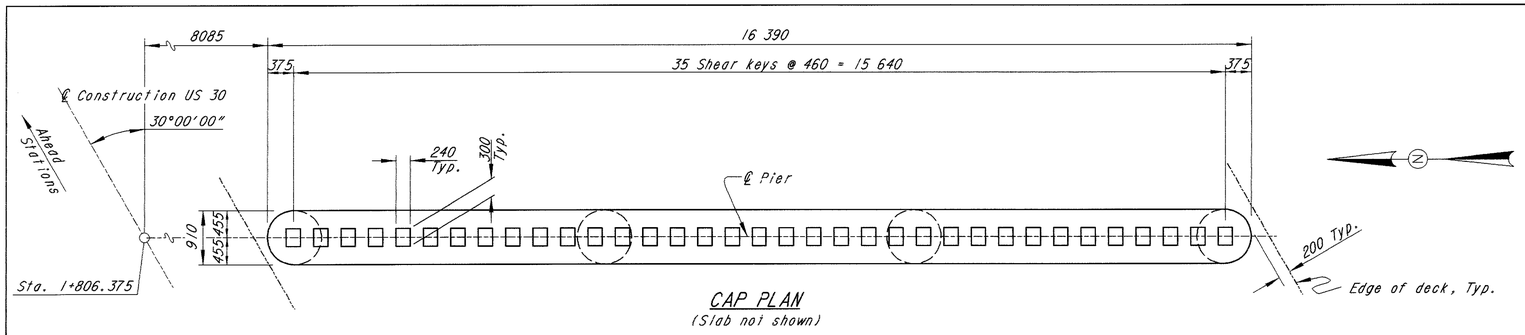
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BRIDGE NO. CRA-30-01792
OVER CR 1 (MARION MELMORE RD.)

WYA/CRA-30-28.009/0.000

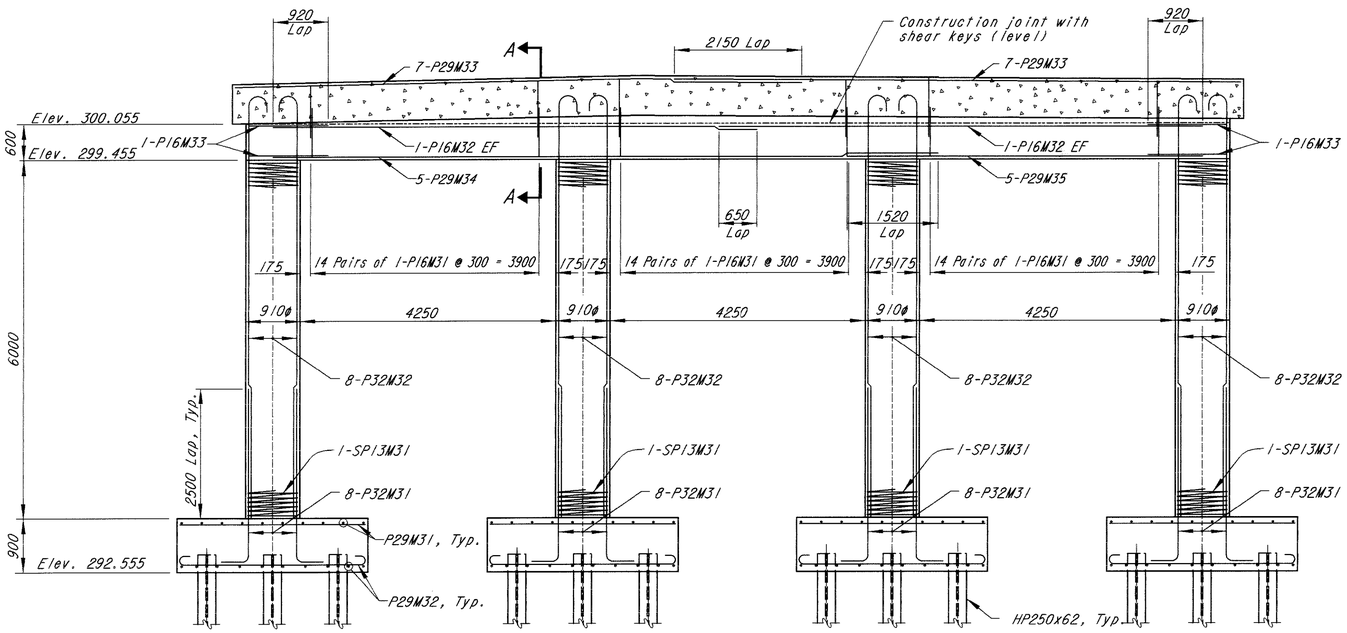
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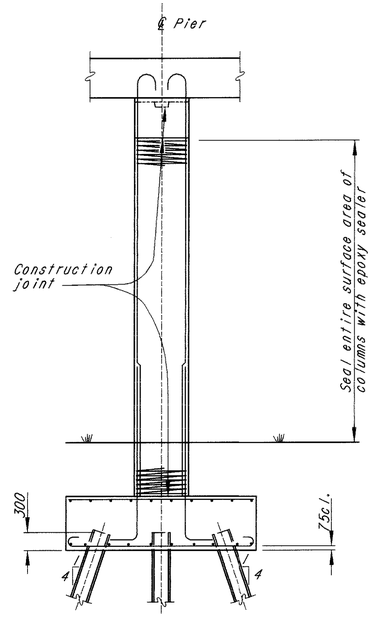
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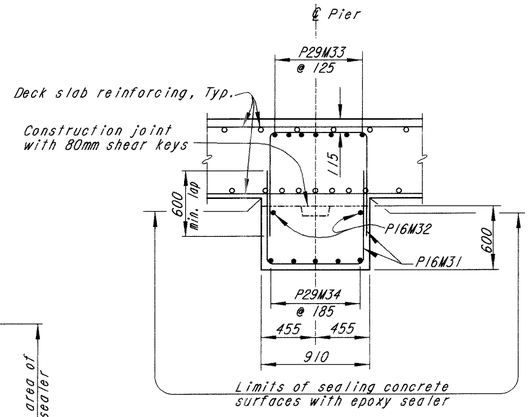
CAP PLAN
(Slab not shown)



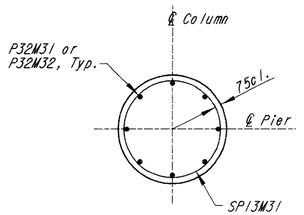
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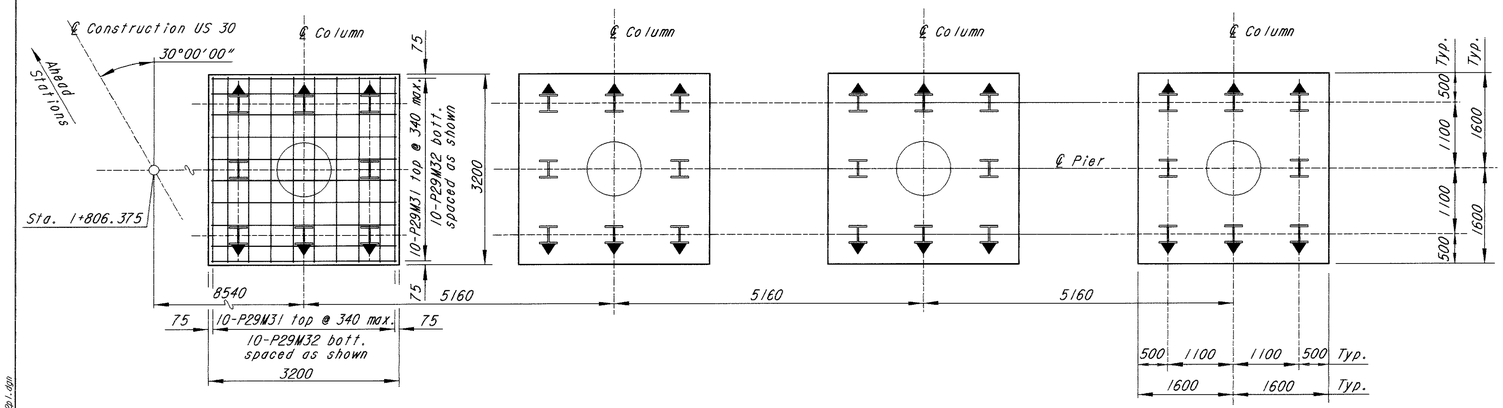
END ELEVATION



SECTION A-A



TYPICAL COLUMN SECTION



NOTE: Footing reinforcing steel shown is typical for all footings.

FOOTING PLAN

NOTES:
1. The pier cap shall be shored while the slab is placed. The pier cap shall not be loaded without shoring until after the slab concrete has hardened,
2. ⊥ Denotes pile battered 1:4 in direction of arrow.

metric units

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	17008979	

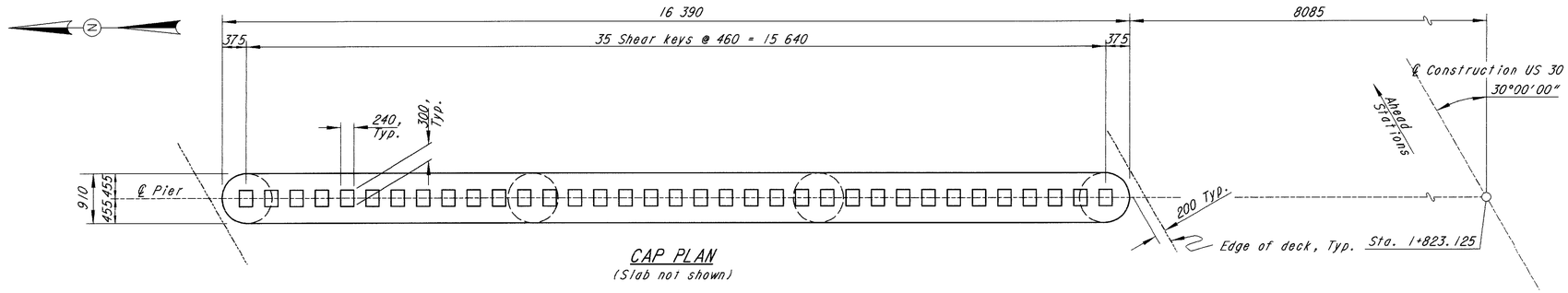
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BRIDGE NO. CRA-30-01792
OVER CR I (MARION MELMORE RD.)

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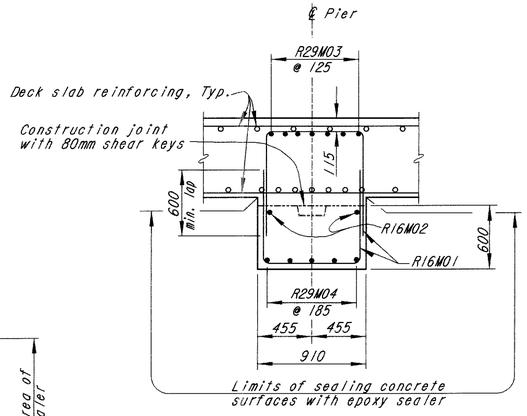
9 / 17

1830
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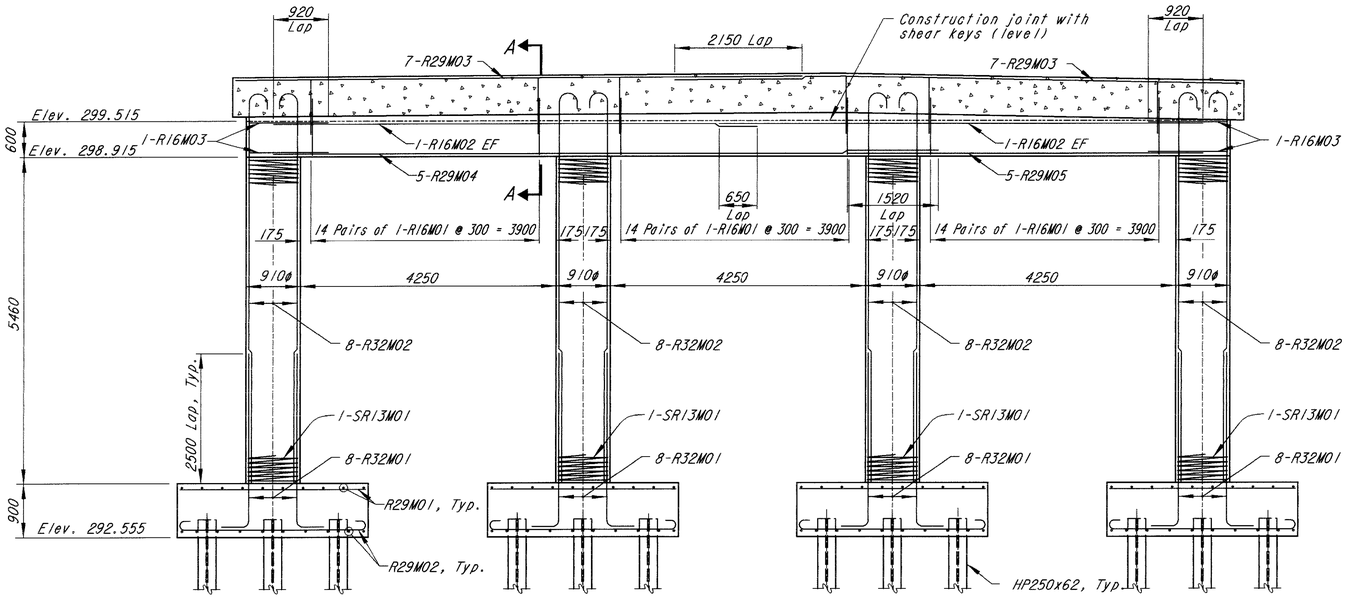
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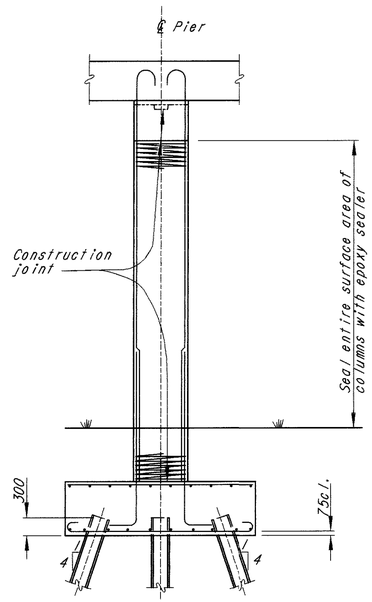
CAP PLAN
(Slab not shown)



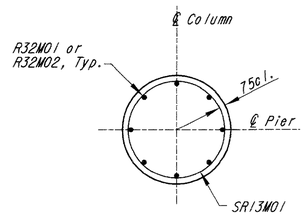
SECTION A-A



ELEVATION

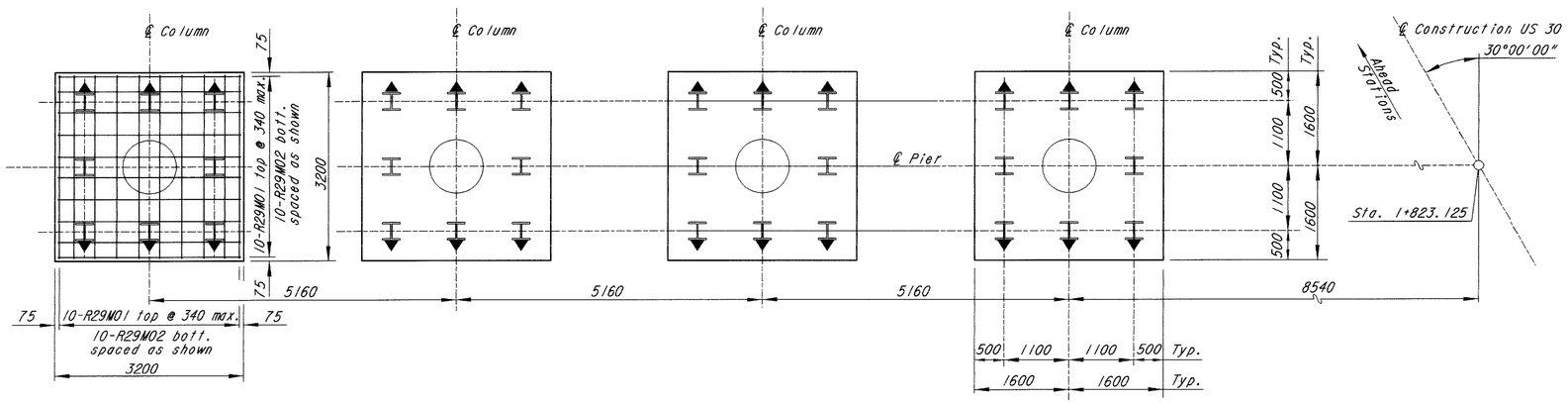


END ELEVATION



TYPICAL COLUMN SECTION

NOTES:
1. The pier cap shall be shored while the slab is placed. The pier cap shall not be loaded without shoring until after the slab concrete has hardened,
2. ⊤ Denotes pile battered 1:4 in direction of arrow.



NOTE: Footing reinforcing steel shown is typical for all footings.

FOOTING PLAN

Filename: 017324.dgn

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1848 Summit Road
Cincinnati, Ohio 45237

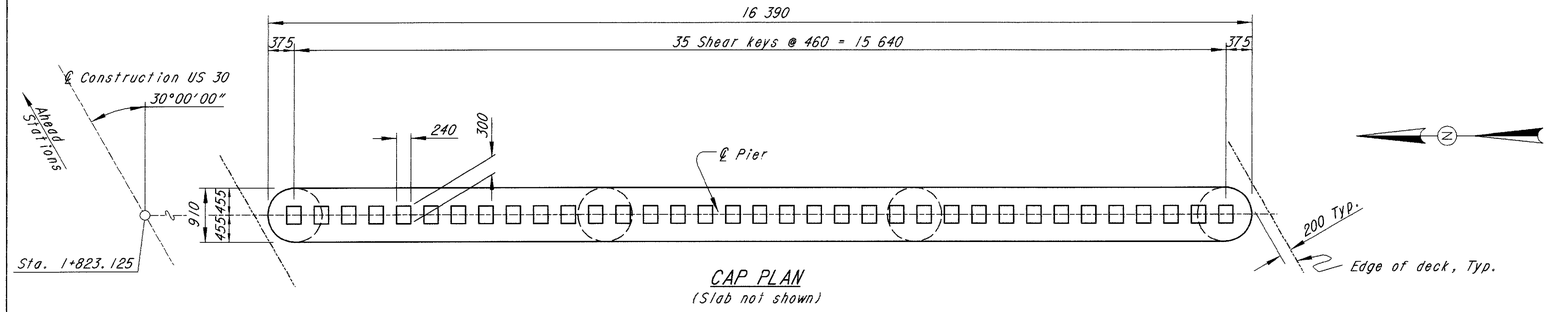
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MRS	—	1700879	

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OVER CR 1 (MARION WELLMORE RD.)

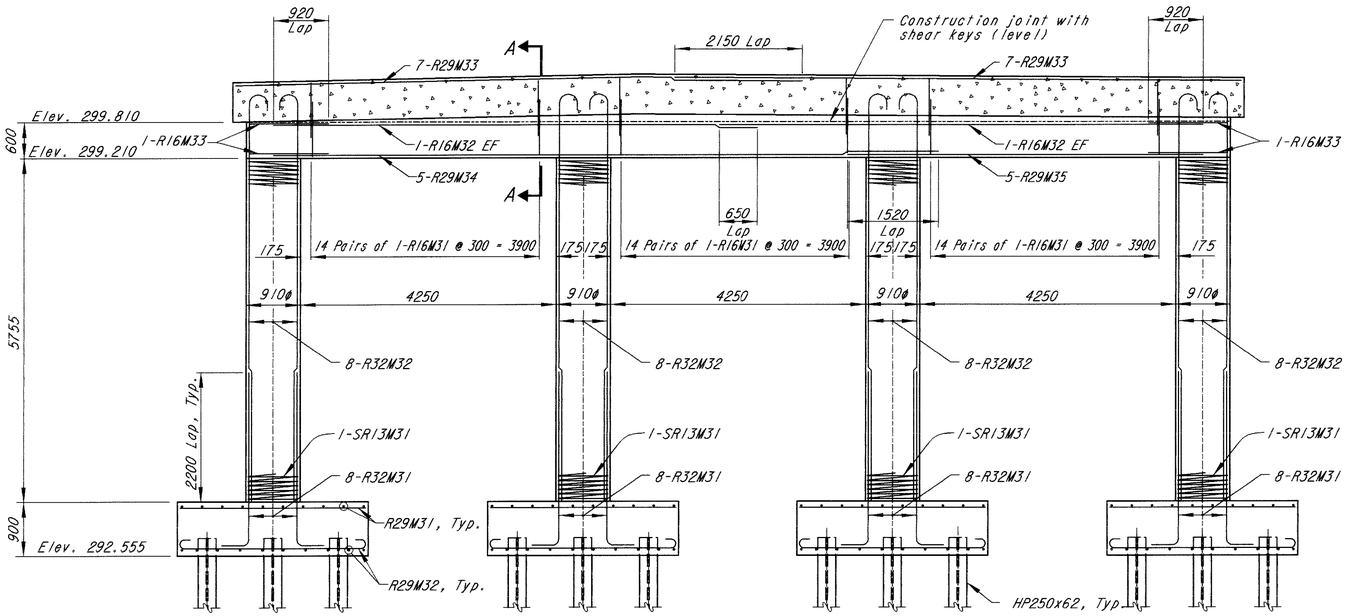
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10/17

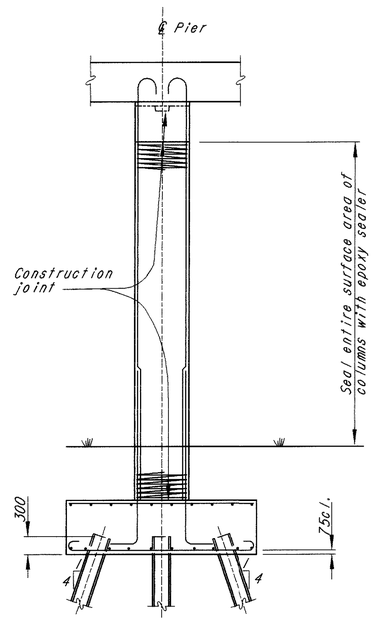
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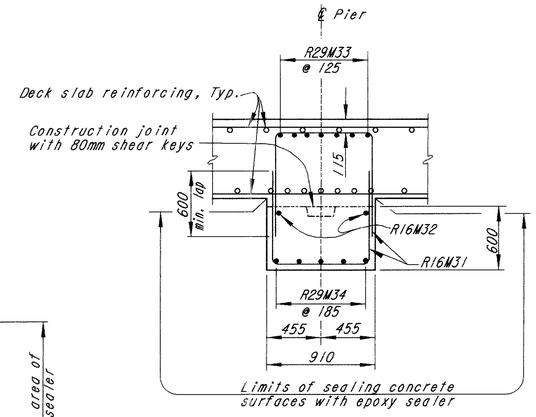
CAP PLAN
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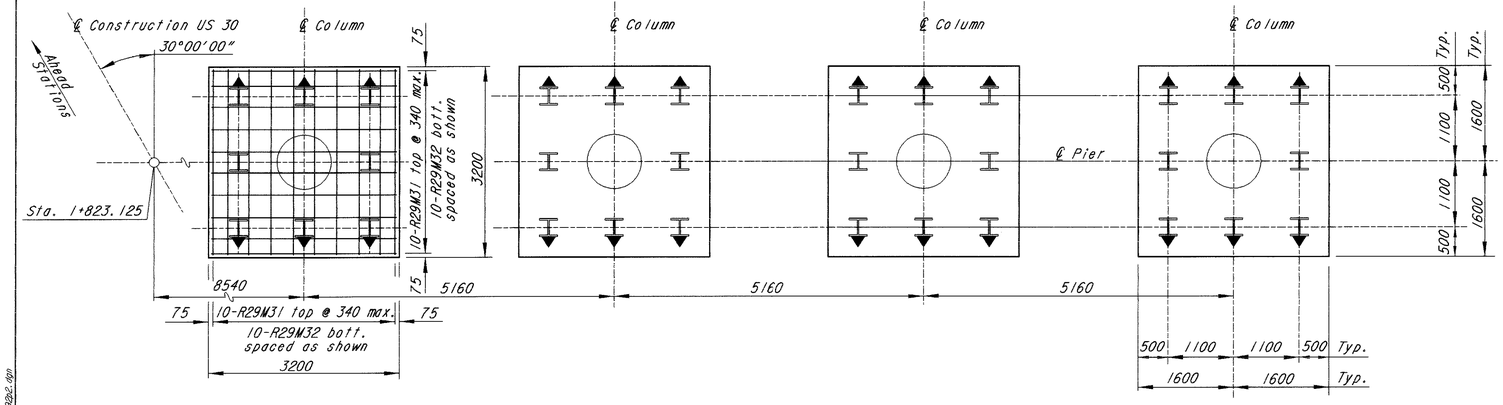
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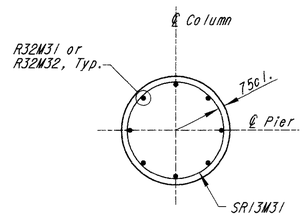


SECTION A-A



NOTE: Footing reinforcing steel shown is typical for all footings.

FOOTING PLAN



TYPICAL COLUMN SECTION

NOTES:
1. The pier cap shall be shored while the slab is placed. The pier cap shall not be loaded without shoring until after the slab concrete has hardened,
2. Denotes pile battered 1:4 in direction of arrow.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700979	

PIER 2 RIGHT BRIDGE
BRIDGE NO. CRA-30-01792
OVER CR 1 (MARION MELMORE RD.)

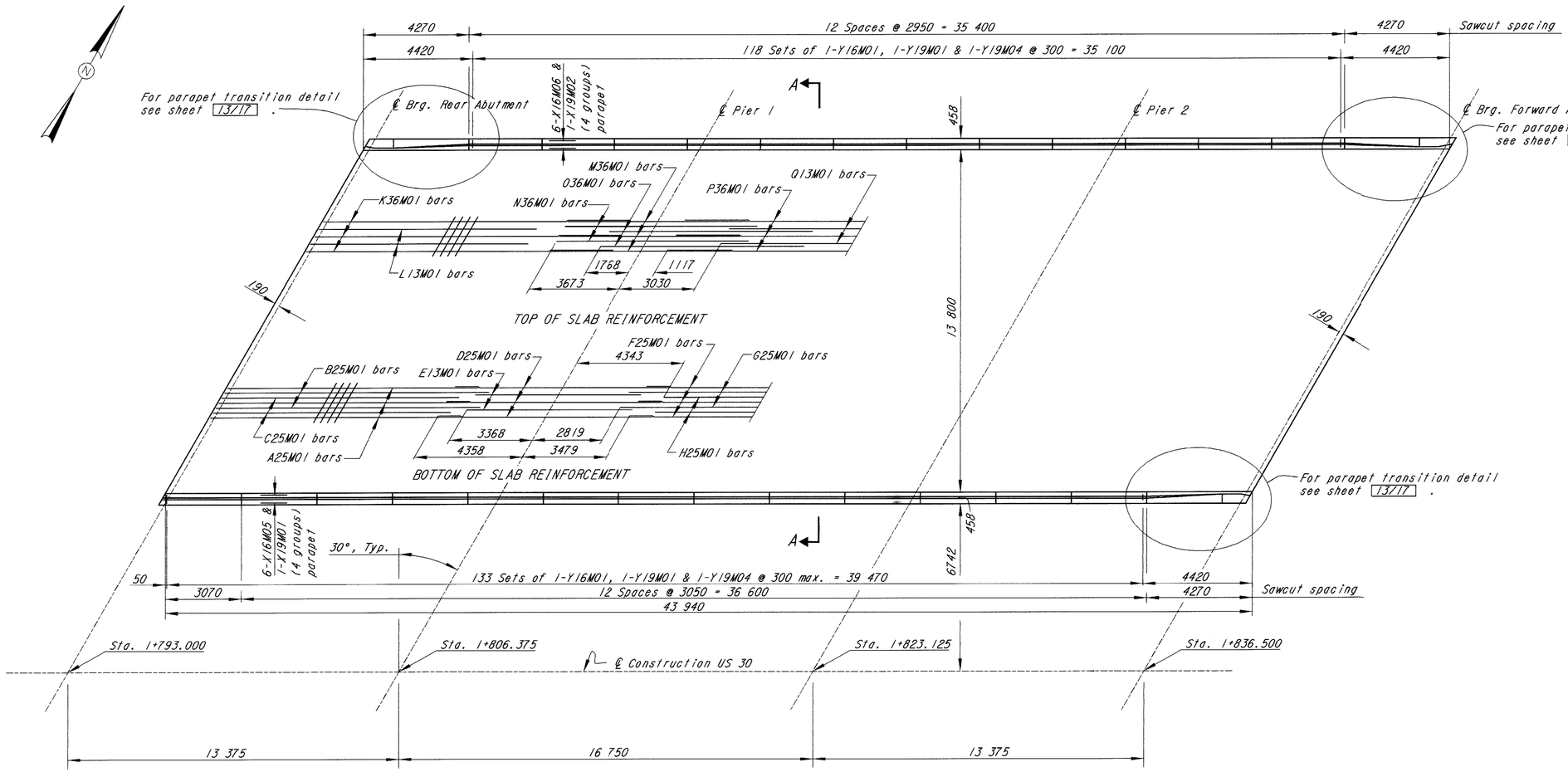
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11/17

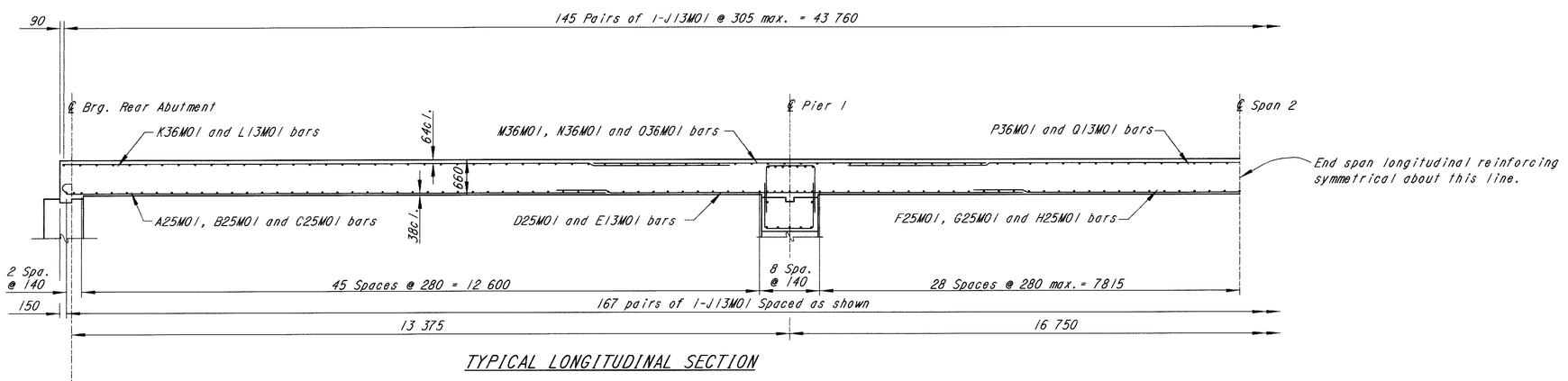
1832
2116

Filename: 01792c.dgn

metric units



LEFT BRIDGE DECK PLAN



TYPICAL LONGITUDINAL SECTION

NOTES:
1. For additional details on the parapets and sawcut joints, see Std. Dwg. BR-1M. Contrary to the standard drawing, sawcut joints shall be sealed for the full length.
2. Lap length for X16M05 & X16M06 bars is 450mm.
3. For Section A-A, see sheet 13/17 .
4. For additional information, see Std. Dwg. CS-1-93M

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Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	17008979	

DECK DETAILS
BRIDGE NO. CRA-30-0179.2
OVER CR 1 (MARION MELMORE RD.)

WYA/CRA-30-28.009/0.000

12/17

1833
2116

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metric units

13 375 | 16 750 | 13 375

Sta. 1+793.000 | Sta. 1+806.375 | Sta. 1+823.125 | Sta. 1+836.500

℄ Construction US 30

43 940

Sawcut spacing: 4270 / 4420 — 12 Spaces @ 3050 = 36 600 — 133 Sets of 1-Y16M31, 1-Y19M31 & 1-Y19M34 @ 300 max. = 39 470 — 3070 / 50

For parapet transition detail see sheet 14/17 .

458 | 6742 | 13 800 | 190

30°, Typ.

6-X16M35 & 1-X19M31 (4 groups) parapet

A

3673 | 3673 | 3030 | 1117 | 1768

Q13M31 bars | P36M31 bars | O36M31 bars | N36M31 bars | M36M31 bars | L13M31 bars | K36M31 bars

TOP OF SLAB REINFORCEMENT

3479 | 4358 | 2819 | 3368 | 4343

H25M31 bars | G25M31 bars | F25M31 bars | E13M31 bars | D25M31 bars | C25M31 bars | B25M31 bars | A25M31 bars

BOTTOM OF SLAB REINFORCEMENT

For parapet transition detail see sheet 14/17 .

℄ Brg. Rear Abutment | ℄ Pier 1 | ℄ Pier 2 | ℄ Brg. Forward Abutment

6-X16M36 & 1-X19M32 (4 groups) parapet

Sawcut spacing: 4420 / 4270 — 118 Sets of 1-Y16M31, 1-Y19M31 & 1-Y19M34 @ 300 = 35 100 — 12 Spaces @ 2950 = 35 400 — 4420 / 4270

RIGHT BRIDGE DECK PLAN

A = 475 for L, O & E Bars
= 550 for N, B & G Bars

NOTES:
1. For additional details on the parapets and sawcut joints, see Std. Dwg. BR-1M. Contrary to the standard drawing, sawcut joints shall be sealed for the full length.
2. Lap length for X16M35 & X16M36 bars is 450mm.
3. For additional information, see Std. Dwg. CS-1-93M.

14 716 | 13 800 | 50 | 458 | 1800 | 3600 | 8400

2 Sets of 30-L13M31, 30-N36M31 & 1 Set of 30-Q13M31 @ 475 = 13 775
2 Sets of 30-O36M31 @ 475 = 13 775
2 Sets of 31-K36M31, 31-M36M31 & 1 Set of 31-P36M31 @ 475 = 14 250

390 | 75 | 160 | 156 | 230

Level construction joint, Typical — X19M31

Y16M31, Typ. — Y19M31, Typ. — X19M32 — Optional construction joint, Level

1065 | 735 | 330 | X16M35 EF | 254 | 76 | 64 c.l. | 660

Profile Grade | Crown | J13M31 | 0.016 | 0.016 | J13M31

2 Sets of 1-K36M31 & 1-M36M31 & 1 set of 1-P36M31

X16M36 EF

Y19M34

167-U13M31 match with bottom layer of J13M31 bars

Limit of concrete sealer, epoxy Typical

2 Sets of 1-A25M31 & 1-D25M31 & 1 set of 1-F25M31

25mm dia. half-round groove, Typ.

38 c.l. | 650 Lap | 150

167-U13M31 match with bottom layer of J13M31 bars

2 Sets of 30-B25M31, 30-E13M31 & 1 Set of 30-G25M31 @ 475 = 13 775
2 Sets of 30-C25M31 & 1 Set of 30-H25M31 @ 475 = 14 250
2 Sets of 31-A25M31, 31-D25M31 & 1 Set of 31-F25M31 @ 475 = 14 250

SECTION A-A

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	17008979	

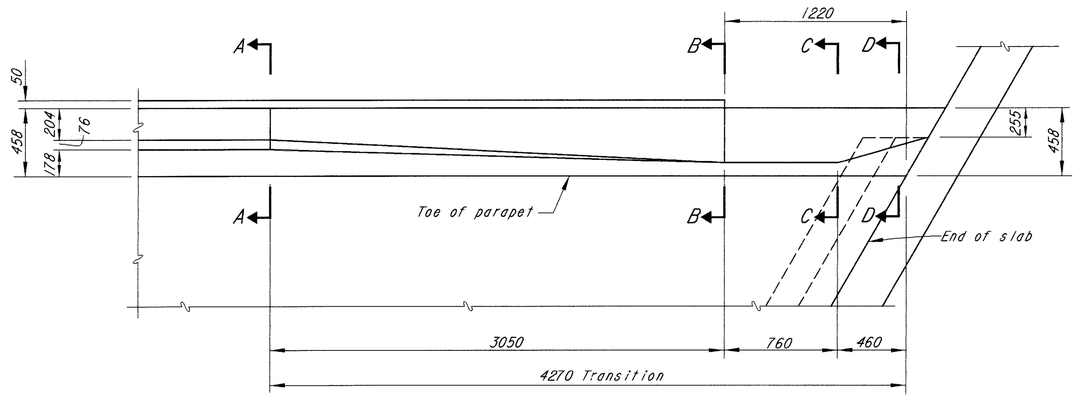
DECK DETAILS
BRIDGE NO. CRA-30-01792
OVER CR 1 (MARION MELMORE RD.)

WYA/CRA-30-28.009/0.000

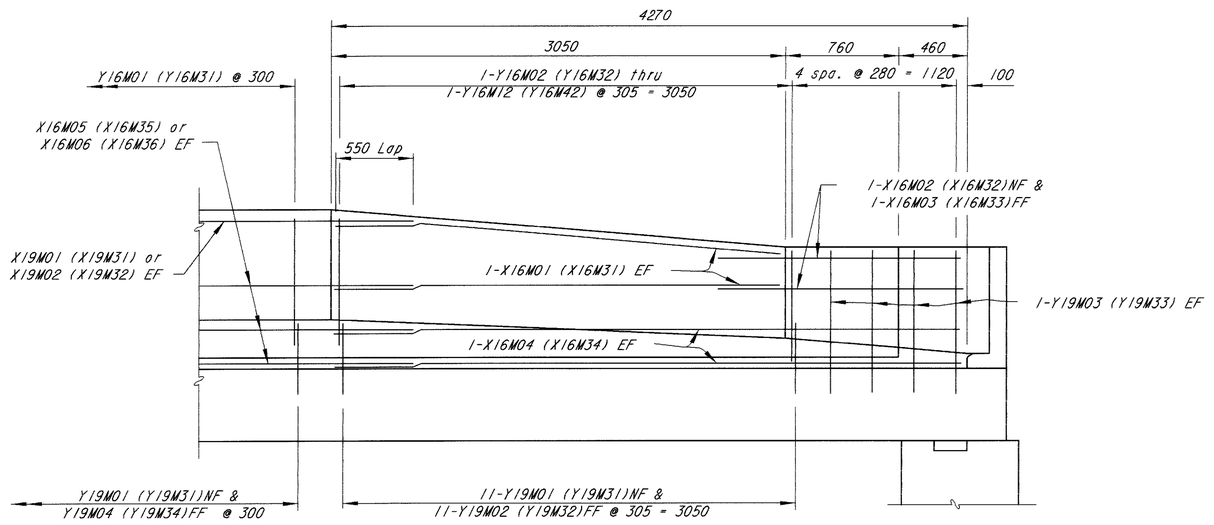
13/17

1834
2116

Filename: 01792ds2.dgn



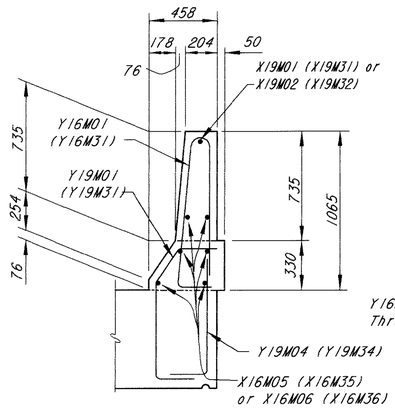
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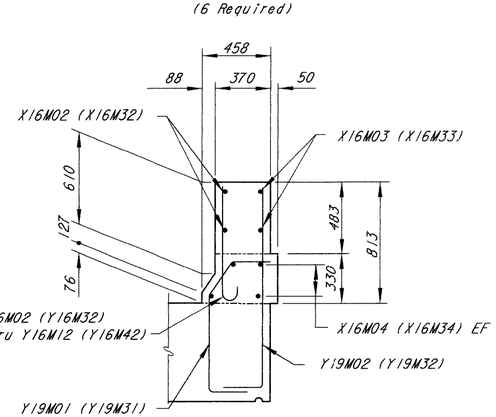
ELEVATION

PARAPET TRANSITION DETAIL

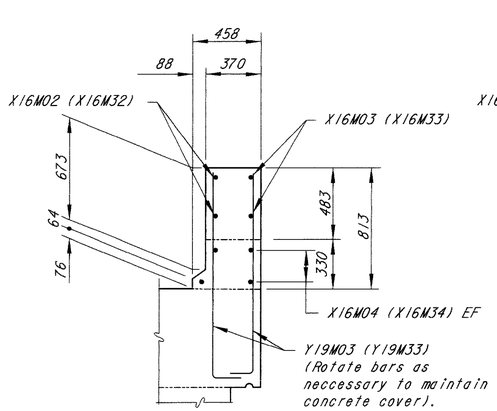
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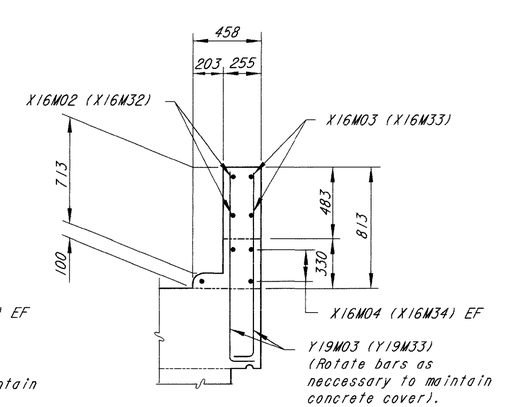
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:
1. FF = Far Face
   NF = Near Face
   EF = Each Face
2. For additional information, see Std. Dwg. BR-1M
3. Bar marks shown "( )" are for the right bridge. Unenclosed bar marks are for the left bridge.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	17008979	

DECK DETAILS
BRIDGE NO. CRA-30-0792
OVER CR 1 (MARION MELMORE RD.)

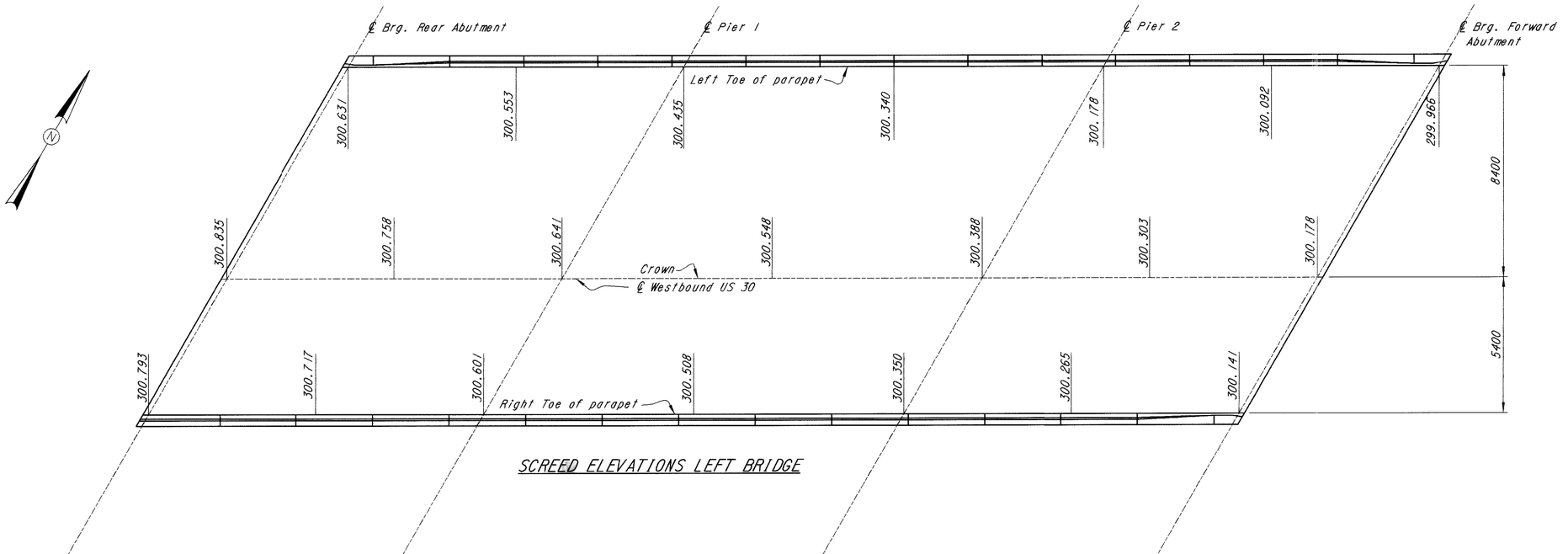
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14/17

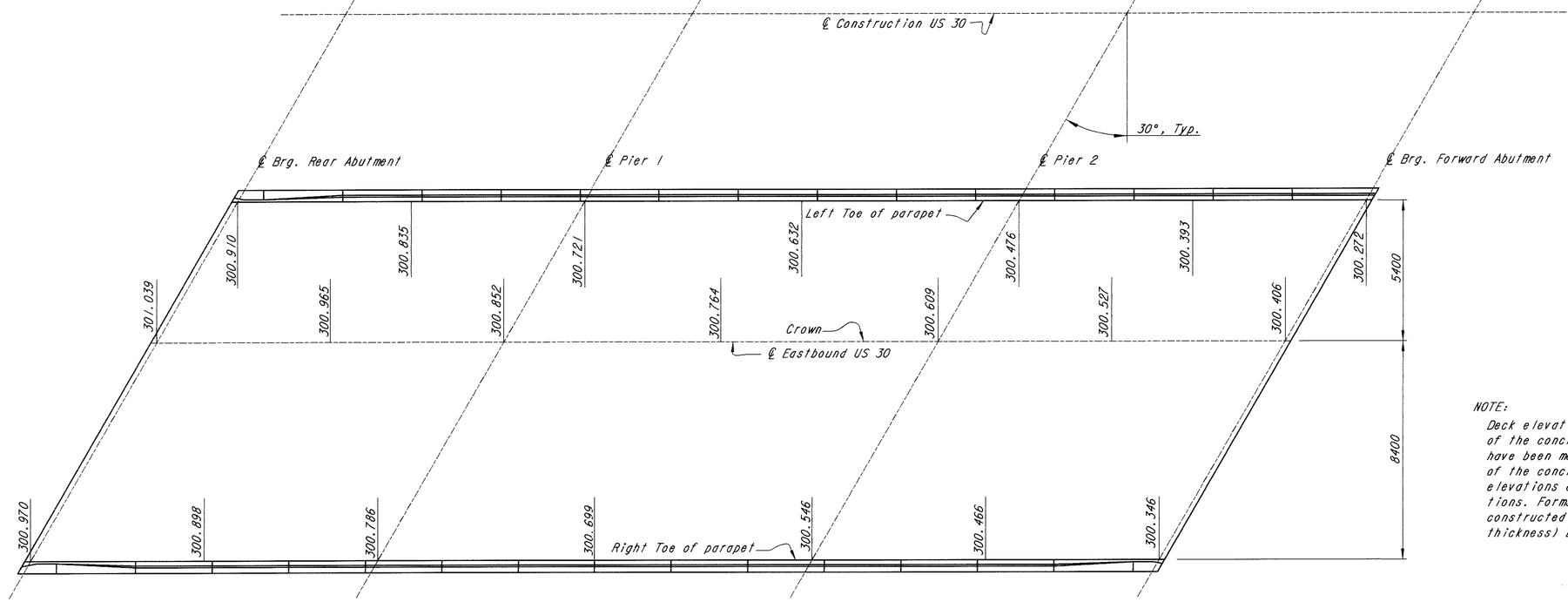
1835
2116

Filename: 0179265.dgn

metric units



SCREED ELEVATIONS LEFT BRIDGE



SCREED ELEVATIONS RIGHT BRIDGE

NOTE:
Deck elevations shown on this plan are for the top surface of the concrete deck prior to concrete placement. Allowances have been made for anticipated deflections due to the weight of the concrete deck. The contractor shall adjust these elevations as necessary to compensate for falsework deflections. Forms for the bottom surface of the slab shall be constructed parallel to and a constant distance (slab thickness) below adjusted screed elevations.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	RHH	CRS	6/99
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MPS	—	1700979	

SCREED ELEVATIONS LEFT AND RIGHT BRIDGES
BRIDGE NO. CRA-30-01792
OVER CR 1 (MARION MELMORE RD.)

WYA/CRA-30-28.009/0.000

15/17

1836
2116

Filename: 01792e1.dgn

EPOXY COATED REINFORCING STEEL LIST

REAR ABUTMENT

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A29M01	8	9615	Str.						
A25M02	8	12 600	Str.						
A16M01	56	3325	8	775	800				
A16M02	8	12 000	Str.						
A16M03	8	8515	Str.						
A16M04	6	4500	Str.						
A16M05	6	4000	Str.						
A16M06	37	3350	2	1425	580	1425			
A16M07	10	4990	2	2435	200	2435			
A16M08	9	4660	2	2270	200	2270			
A16M09	2	3775	Str.						
A16M10	2	3600	Str.						
A16M11	2	3245	Str.						
A16M12	2	3350	Str.						
A13M01	22	2645	8	730	530				
D25M01	31	2180	14	430	1475	305	305		

FORWARD ABUTMENT

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B29M01	8	9615	Str.						
B25M02	8	12 600	Str.						
B16M01	56	3325	8	775	800				
B16M02	8	12 000	Str.						
B16M03	8	8515	Str.						
B16M04	12	4150	Str.						
B16M05	Not	Used							
B16M06	37	3350	2	1425	580	1425			
B16M07	9	4620	2	2250	200	2250			
B16M08	9	4980	2	2430	200	2430			
B16M09	2	3500	Str.						
B16M10	2	3400	Str.						
B16M11	3	3425	Str.						
B16M12	3	3550	Str.						
B13M01	22	2645	8	730	530				
D25M01	31	2180	14	430	1475	305	305		

PIER 1

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
P32M01	32	3760	1	550	3000				
P32M02	32	7140	12	6715					
P29M01	80	3100	Str.						
P29M02	80	3850	13	3100					
P29M03	14	9525	Str.						
P29M04	5	11 060	Str.						
P29M05	5	5900	Str.						
P16M01	84	2630	2	950	810	950			
P16M02	4	8050	Str.						
P16M03	4	3110	4	920	1270	920	405		
SP13M01	4	5715	21	5715	115	760			

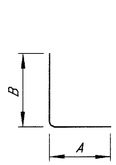
PIER 2

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
R32M01	32	3760	1	550	3000				
R32M02	32	6885	12	6460					
R29M01	80	3100	Str.						
R29M02	80	3850	13	3100					
R29M03	14	9525	Str.						
R29M04	5	11 060	Str.						
R29M05	5	5900	Str.						
R16M01	84	2630	2	950	810	950			
R16M02	4	8050	Str.						
R16M03	4	3110	4	920	1270	920	405		
SR13M01	4	5460	21	5460	115	760			

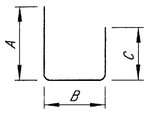
SUPERSTRUCTURE

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
K36M01	66	12 421	Str.						
M16M01	66	7355	Str.						
N36M01	60	8270	Str.						
O36M01	60	8270	Str.						
P36M01	33	14 580	Str.						
A25M01	66	10 109	Str.						
B25M01	60	10 683	Str.						
C25M01	60	9591	12	9235					
D25M01	66	8727	Str.						
F25M01	33	9855	Str.						
G25M01	30	9651	Str.						
H25M01	30	9651	Str.						
X19M01	4	10 400	Str.						
X19M02	4	9475	Str.						
Y19M01	284	1175	3	125	625	265	230	152	
	3	1205			965				
Y19M02	Series of	to	1	280	to				25
	11	1455			1215				
Y19M03	24	1580	1	280	1350				
Y19M04	251	1080	1	280	850				
					738	432			
X16M01	12	3050	Str.						
X16M02	6	1725	18	555					
X16M03	6	1725	Str.						
X16M04	12	4250	Str.						
X16M05	24	10 400	Str.		990	205	1¼	38	
X16M06	24	9475	Str.						
Y16M01	251	2130	26	915					
Y16M02	3	1170	12	990					
Y16M03	3	1165	12	965					
Y16M04	3	1120	12	940					
Y16M05	3	1095	12	915					
Y16M06	3	1070	12	890					
Y16M07	3	1045	12	865					
Y16M08	3	1020	12	840					
Y16M09	3	995	12	815					
Y16M10	3	970	12	790					
Y16M11	3	945	12	765					
Y16M12	3	920	12	740					
E13M01	60	6746	Str.						
J13M01	624	8775	Str.						
L13M01	60	10 454	Str.						
Q13M01	30	10 693	Str.						
U13M01	334	1200	2	380	508	380			

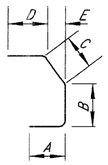
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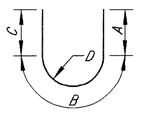
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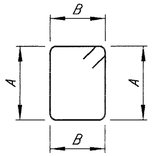
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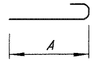
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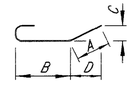
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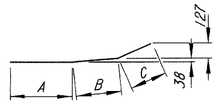
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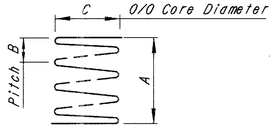
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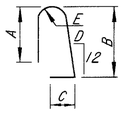
Type 14



Type 18



Type 21



Type 26

NOTES:

1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.
3. SPIRAL REINFORCING BARS: The "length" shown in the steel list for the spiral bars is the length of the spiral along the axis of the spiral. One and one-half closed-coil turns shall be provided at the ends of each spiral unit.
4. SPACERS: Concrete spacers or other approved noncorrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 3050 mm) to insure concentric spacing for the entire cage length. Spacers shall be constructed of approved material equal in quality and durability to the concrete specified for the shaft. The spacers shall have adequate dimensions to ensure a minimum 75 mm clear space between the outside of the reinforcing cage and the design dimension of the drilled shaft or column. Cylindrical concrete feet (bottom supports) shall be provided to ensure that the bottom of the cage is maintained at the proper distance above the base.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	6/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	1700979	

REINFORCING STEEL LIST LEFT BRIDGE
BRIDGE NO. CRA-30-01792
OVER CR 1 (MARION WELMORE RD.)

WYA/CRA-30-28.009/0.000

16 / 17

1837
2116

File name: 01792EL1.dgn

EPOXY COATED REINFORCING STEEL LIST

REAR ABUTMENT

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A29M31	8	9615	Str.						
A25M32	8	12 600	Str.						
A16M31	56	3325	8	775	800				
A16M32	8	12 000	Str.						
A16M33	12	8515	Str.						
A16M34	16	4150	Str.						
A16M35	Not	Used							
A16M36	37	3900	2	1700	580	1700			
A16M37	9	5320	2	2600	200	2600			
A16M38	9	5170	2	2525	200	2525			
A16M39	2	3500	Str.						
A16M40	2	3400	Str.						
A16M41	2	3425	Str.						
A16M42	2	3550	Str.						
A13M31	22	2645	8	730	530				
D25M32	31	2180	14	430	1475	305	305		

FORWARD ABUTMENT

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B29M31	8	9615	Str.						
B25M32	8	12 600	Str.						
B16M31	56	3325	8	775	800				
B16M32	8	12 000	Str.						
B16M33	12	8515	Str.						
B16M34	8	4500	Str.						
B16M35	8	4000	Str.						
B16M36	37	3960	2	1730	580	1730			
B16M37	9	5250	2	2565	200	2565			
B16M38	9	5370	2	2625	200	2625			
B16M39	2	3745	Str.						
B16M40	2	3600	Str.						
B16M41	2	3400	Str.						
B16M42	2	3550	Str.						
B13M31	22	2645	8	730	530				
D25M32	31	2180	14	430	1475	305	305		

PIER 1

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
P32M31	32	3760	1	550	3000				
P32M32	32	7425	12	7000					
P29M31	80	3100	Str.						
P29M32	80	3850	13	3100					
P29M33	14	9525	Str.						
P29M34	5	11 060	Str.						
P29M35	5	5900	Str.						
P16M31	84	2630	2	950	810	950			
P16M32	4	8050	Str.						
P16M33	4	3110	4	920	1270	920	405		
SP13M31	4	6000	21	6000	115	760			

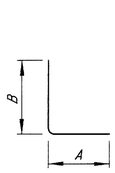
PIER 2

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
R32M31	32	3760	1	550	3000				
R32M32	32	7180	12	6755					
R29M31	80	3100	Str.						
R29M32	80	3850	13	3100					
R29M33	14	9525	Str.						
R29M34	5	11 060	Str.						
R29M35	5	5900	Str.						
R16M31	84	2630	2	950	810	950			
R16M32	4	8050	Str.						
R16M33	4	3110	4	920	1270	920	405		
SR13M31	4	5755	21	5755	115	760			

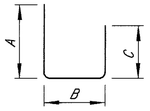
SUPERSTRUCTURE

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
K36M31	66	12 421	Str.						
M46M31	66	7355	Str.						
N36M31	60	8270	Str.						
O36M31	60	8270	Str.						
P36M31	33	14 580	Str.						
A25M31	66	10 109	Str.						
B25M31	60	10 683	Str.						
C25M31	60	9591	12	9235					
D25M31	66	8727	Str.						
F25M31	33	9855	Str.						
G25M31	30	9651	Str.						
H25M31	30	9651	Str.						
X19M31	4	10 400	Str.						
X19M32	4	9475	Str.						
Y19M31	284	1175	3	125	625	265	230	152	
	3	1205			965				
Y19M32	Series of	to	1	280	to				25
	11	1455			1215				
Y19M33	24	1580	1	280	1350				
Y19M34	251	1080	1	280	850				
X16M31	12	3050	Str.						
X16M32	6	1725	18	555	738	432			
X16M33	6	1725	Str.						
X16M34	12	4250	Str.						
X16M35	24	10 400	Str.				1¼	38	
X16M36	24	9475	Str.						
Y16M31	251	2130	26	915	990	205			
Y16M32	3	1170	12	990					
Y16M33	3	1165	12	965					
Y16M34	3	1120	12	940					
Y16M35	3	1095	12	915					
Y16M36	3	1070	12	890					
Y16M37	3	1045	12	865					
Y16M38	3	1020	12	840					
Y16M39	3	995	12	815					
Y16M40	3	970	12	790					
Y16M41	3	945	12	765					
Y16M42	3	920	12	740					
E13M31	60	6746	Str.						
J13M31	624	8775	Str.						
L13M31	60	10 454	Str.						
Q13M31	30	10 693	Str.						
U13M01	334	1200	2	380	508	380			

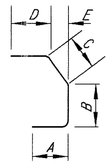
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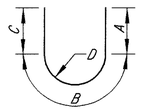
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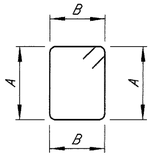
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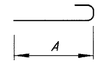
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Type 4



Type 8



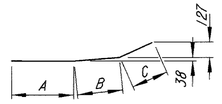
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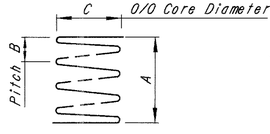
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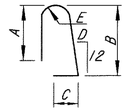
Type 14



Type 18



Type 21



Type 26

NOTES:

1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.
3. SPIRAL REINFORCING BARS: The "length" shown in the steel list for the spiral bars is the length of the spiral along the axis of the spiral. One and one-half closed-coil turns shall be provided at the ends of each spiral unit.
4. SPACERS: Concrete spacers or other approved noncorrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 3050 mm) to insure concentric spacing for the entire cage length. Spacers shall be constructed of approved material equal in quality and durability to the concrete specified for the shaft. The spacers shall have adequate dimensions to ensure a minimum 75 mm clear space between the outside of the reinforcing cage and the design dimension of the drilled shaft or column. Cylindrical concrete feet (bottom supports) shall be provided to ensure that the bottom of the cage is maintained at the proper distance above the base.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	6/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	1700979	

REINFORCING STEEL LIST RIGHT BRIDGE
BRIDGE NO. CRA-30-01792
OVER CR 1 (MARION MELMORE RD.)

WYA/CRA-30-28.009/0.000

17 / 17

1838
2116

F:\Inroads\01792R02.dgn

℄ U.S. 30
P.I. = Sta. 2+804.412
Δ = 16° 58′ 52.82″ (RT)
R = 4,250.000 m
T = 634.459 m
L = 1,259.616 m
E = 47.097 m

metric units

Telephone Cable
3500 Horizontal clearance req'd.
4590 Horizontal clearance actual
3500 Horizontal clearance req'd.
4420 Horizontal clearance actual
℄ Survey CR 18
589°35′20.29″E
℄ Brg. Rear Abut.
℄ Brg. Forward Abut.
Crushed aggregate slope protection, Typ.
1000, Typ.
Pressure relief joint per Std. Dwg. BP-2.3 (Typ.)
℄ US 30 WB
℄ Pier 1
℄ Pier 2
W-S17
W-S19
294.5
2:1
2.8:1
8:1
4:1
13.800
4 7/6
9000
3600
3600
7200
+920
+940
+960
+980
+1000
2+180
2+200
2+220
2+240
2+260
2+280
2+300
2+320
295
458
End Approach Slab
Sta. 2+229.892
Work Point 1
61°00′00″, Typ.
Reference Line
℄ Construction U.S. 30
Sta. 2+270.667 ℄ US 30 =
Sta. 1+000 ℄ SURVEY CR 18
Begin Approach Slab
Sta. 2+309.629
Work Point 4

PLAN

REVIEWED BY BURGESS & NIPLE, LIMITED
DWR 10-99

Sta. 2+017.728, 152 434 Lt., Elev. 294.213
☐ Top of concrete box culvert north side of Nevada Wynford road

Elevations are at profile grade
300.469 300.549 300.629 300.709 300.789 300.869 300.949 301.029 301.109 301.189 301.269 301.349 301.429 301.509 301.589 301.669 301.749 301.829 301.909 301.989 302.069 302.149 302.229

Bridge limits = 79 737
Sta. 2+229.892
Sta. 2+309.629
Top of slope Elev. 298.650
Top of slope Elev. 299.950
Crushed aggregate slope protection, Typ.
+1.600%
Proposed grade
Existing grade
Elev. 297.100
Elev. 298.300
Elev. 293.000
Elev. 292.850
EXP.
EXP.
FIX.
EXP.
Vertical clearance 4600 (Required) 4600 (Actual)
HP250X62 piles estimated pay length = 12 000
HP250X62 piles estimated pay length = 16 000
HP250X62 piles estimated pay length = 12 000
HP250X62 piles estimated pay length = 16 000
REAR ABUTMENT
PIER 1
PIER 2
FORWARD ABUTMENT
Approximate top of rock, Boring W-S17 Elev. 282.200
Approximate top of rock, Boring W-S19 Elev. 282.500
Elev. 305
Elev. 300
Elev. 295
Elev. 290
Elev. 285
294.035 294.059 294.121 294.231 294.351 294.920 295.030 294.584 294.473 294.523 294.600 294.646
2+200 +220 +240 +260 +280 2+300

SECTION ALONG ℄ US 30 EB

TRAFFIC DATA
(2000) (2020)
ADT = 3350 EB ADT = 5025 EB
ADTT = 938 EB ADTT = 1407 EB

Notes:
Earthwork limits shown are approximate. Actual slopes shall conform to plan cross sections.
All stations and elevations are in meters.
All dimensions and lengths are in millimeters.

⊕ Point of min. vertical clearance
◒ Boring location

PROPOSED STRUCTURE
Type: Plate girders (A572M) with composite slab on semi-integral abutments and cap and column piers.
Spans: 22 500, 33 500, 22 500 (measured c/c bearing along ℄ construction)
Roadway width: 13 800 Toe/Toe parapets
Live loading: MS18 load case II & the alternate military loading
Skew angle: 61°00′00″ R.F. with reference line
Wearing surface: Monolithic concrete
Approach slabs: AS-1-81M (9150)
Alignment: Curved 4250m radius (Rt.)
Crown: 0.016
Latitude: N40°49′15″
Longitude: W83°05′15″

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DRAWN	REVIEWED	DATE
ALH	CRS	6/29/99
DESIGNED	CHECKED	REVISED
FKL	MRS	—

STRUCTURE FILE NUMBER 1700895

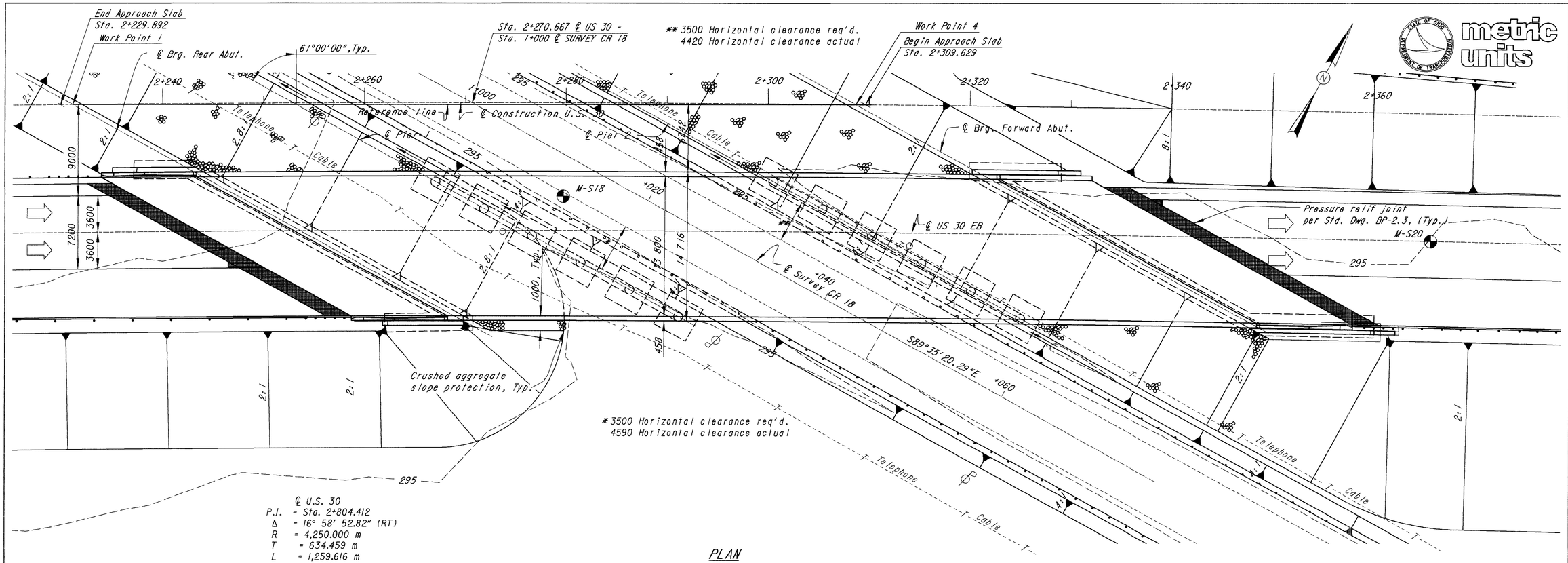
CRAWFORD COUNTY
STA. 2+229.892
STA. 2+309.629

SITE PLAN
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

WYA/CRA-30-28.009/0.000

1 / 41

1839
2116


End Approach Slab
Sta. 2+229.892
Work Point 1
℄ Brg. Rear Abut.
61°00'00", Typ.
Sta. 2+270.667 ℄ US 30 =
Sta. 1+000 ℄ SURVEY CR 18
** 3500 Horizontal clearance req'd.
4420 Horizontal clearance actual
Work Point 4
Begin Approach Slab
Sta. 2+309.629
metric units
DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237
Reference Line
℄ Construction U.S. 30
℄ Pier
℄ Brg. Forward Abut.
M-S18
M-S20
℄ US 30 EB
℄ Survey CR 18
Pressure relif joint
per Std. Dwg. BP-2.3, (Typ.)
Crushed aggregate
slope protection, Typ.
S89°35'20.29"E
* 3500 Horizontal clearance req'd.
4590 Horizontal clearance actual
Telephone
Cable
℄ U.S. 30
P.I. = Sta. 2+804.412
Δ = 16° 58' 52.82" (RT)
R = 4,250.000 m
T = 634.459 m
L = 1,259.616 m
E = 47.097 m
PLAN
Benchmark - Sta. 2+273.800, 12.66 m Rt.
Elev. 294.815: Spk. in Fence Post
Benchmark - Sta. 2+524.168, 135.20 m Rt.
Elev. 295.799: Concrete pipe south side of
Nevada Wynford road
Elevations are at profile grade
Bridge limits = 79 737
Top of slope
Elev. 298.650
Top of slope
Elev. 299.950
Sta. 2+229.892
Sta. 2+309.629
Proposed grade
Existing grade
+1.600%
EXP.
FIX.
Elev. 297.100
Elev. 298.300
Elev. 293.000
Elev. 292.850
HP250X62 piles
estimated pay
length = 12 000
HP250X62 piles
estimated pay
length = 16 000
REAR ABUTMENT
PIER 1
PIER 2
FORWARD ABUTMENT
Approximate top of rock,
Boring M-S18
Elev. 281.700
Approximate top of rock,
Boring M-S20
Elev. 282.800
SECTION ALONG ℄ US 30 EB
TRAFFIC DATA
(2000) (2020)
ADT = 3350 EB ADT = 5025 EB
ADTT = 938 EB ADTT = 1407 EB
Notes:
Earthwork limits shown are approximate. Actual slopes shall conform to plan cross sections.
All stations and elevations are in meters.
All dimensions and lengths are in millimeters.
Boring location
PROPOSED STRUCTURE
Type: Plate girders (A572M) with composite slab on semi-integral abutments and cap and column piers.
Spans: 22 500, 33 500, 22 500 (measured c/c bearing along ℄ construction)
Roadway width: 13 800 Toe/Toe parapets
Live loading: MS18 load case 11 & the alternate military loading
Skew angle: 61°00'00" R.F. with reference line
Wearing surface: Monolithic concrete
Approach slabs: AS-1-81M (9150)
Alignment: Curved 4250m radius (Rt.)
Crown: 0.016
Latitude: N40°49'15"
Longitude: W83°05'15"
REVIEWED CRS DATE 6/29/99
DRAWN ALH REVISED —
DESIGNED FKL CHECKED MRS
STRUCTURE FILE NUMBER 1700995
CRAWFORD COUNTY
STA. 2+229.892
STA. 2+309.629
SITE PLAN
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)
WYA/CRA-30-28.009/0.000
2 / 41
1840
2116

℄ U.S. 30
P.I. = Sta. 2+804.412
Δ = 16° 58' 52.82" (RT)
R = 4,250.000 m
T = 634.459 m
L = 1,259.616 m
E = 47.097 m

metric units

℄ Brg. Rear Abutment
℄ Brg. Forward Abutment
℄ Survey CR 18
+940
+960
+980
+040
+060
℄ US 30 WB
℄ US 30 EB
℄ Construction U.S. 30
Work Point 1
Sta. 2+230.500
End approach slab
Sta. 2+229.892
Detail 1
℄ Pier 1
Sta. 2+253.000
Reference line
(N61°32'06.53"E)
Sta. 2+270.667 US 30=
Sta. 1+000.000 CR 18
1+000
℄ Pier 2
Sta. 2+286.500
Detail 2
Work Point 4
Sta. 2+309.000
Begin Approach Slab
Sta. 2+309.629
S89°35'20.29"E
2+180
2+200
2+220
2+240
2+260
2+280
2+300
2+320
2+340
2+360
458
13 800
14 716
6742
7200
3600
9000
22 765
33 500
22 235
78 500
Measured along reference line

PLAN

℄ Pier 1
61°
Sta. 2+253.000
℄ Construction U.S. 30
Reference line
30m
Work Point 2
22 765
to ℄ Brg.
Rear Abut.
33 500
to ℄ Pier 2

DETAIL 1

℄ Pier 2
61°
Sta. 2+286.500
℄ Construction U.S. 30
Reference line
30m
Work Point 3
33 500
to ℄ Pier 1
22 235
to ℄ Brg.
Fwd. Abut.

DETAIL 2

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6/29/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700995	

GENERAL PLAN
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WINFORD RD.)

WYA/CRA-30-28.009/0.000

3 / 41

1841
2116

F:\Inroute\02230p1.dgn

GENERAL NOTES

All dimensions in the plans are shown in millimeters.

All elevations and stations in the plans are shown in meters.

REFERENCE shall be made to Standard Drawings:

AS-1-81M	Dated 10-25-94
BR-1M	Dated 12-15-94
GSD-1-96M	Dated 11-21-97
BP-2.3	Dated 4-29-99
SICD-1-96M	Dated 2-12-97

and to the supplemental specification:

842	Dated 1-6-99
863	Dated 9-9-97
899	Dated 10-21-98

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1996, the 1997 & 1998 Interims, and the ODOT Bridge Design Manual.

DESIGN LOADING: MS18 (LOAD CASE II) and the alternate military loading.

DESIGN DATA:

Concrete Class S - compressive strength 31.0 MPa (superstructure)

Concrete Class C - compressive strength 27.5 MPa (substructure)

Reinforcing Steel -ASTM A615M, A616M or A617M
Grade 400 - minimum yield strength 400 MPa.
Spiral reinforcing may be plain bars ASTM A82M or A615M,

Structural steel - ASTM A572M - yield strength 350 MPa.
(Galvanized)

REINFORCING STEEL in superstructure, substructure and approach slabs shall be epoxy coated.

DECK PROTECTION METHOD:

Epoxy coated reinforcing steel

65mm concrete cover

MONOLITHIC WEARING SURFACE is assumed, for design purposes, to be 25mm thick.

PILES TO BEDROCK: Piles shall be driven to refusal on bedrock. Refusal shall be considered as obtained by penetrating soft bedrock for several millimeters with a minimum resistance of 20 blows per 25mm or refusal shall be considered as obtained after the pile has contacted hard bedrock and the pile has then received at least 20 blows.

The ultimate bearing value for the HP250 x 62 abutment piles is 880 kN per pile

The estimated and order length for the abutment piles is:
118 piles 16 meters long - 56 Lt. , 62 Rt.
59 splices

The ultimate bearing value for the HP250 x 62 pier piles is 840 kN per pile

The estimated and order length for the pier piles is:
120 piles 12 meters long - 30 each pier, left and right
60 splices

PILE DRIVING CONSTRAINTS: Prior to driving piles, the spill through slopes and the bridge approach embankment behind the abutments shall be constructed up to the level of the subgrade elevation for a minimum distance of 60 meters behind each abutment. The excavation for the abutment footings and the installation of the abutment piles shall not begin until after the above required embankment has been constructed and has undergone a waiting period of 30 days minimum.

ITEM 507 - STEEL POINTS, AS PER PLAN: Steel pile points shall be used to protect the tips of the proposed steel "H" piling. The steel points shall be furnished by Associated Pile and Fitting Corporation, 262 Rutherford Boulevard, Clifton, New Jersey 07014; International Construction Equipment, Inc., 301 Warehouse Drive, Matthews, North Carolina 28015; Dougherty Foundation Products, Inc., P.O. Box 688, Franklin Lakes, New Jersey 07417; Versa Steel, Inc., 3601 N.W. Yeon Avenue, P.O. Box 10559, Portland, Oregon 97210; Piling Accessories, Inc.,3467 Gribble Road, Matthews, North Carolina 28105; or by a manufacturer that can furnish a steel point that is acceptable to the Director. Thematerial used for the manufacturing of pile points shall conform to ASTM A27 65/35 - Class 2 - Heat Treated or AASHTO M103 65/35 - Heat Treated. A notarized copy of the mill test report shall be submitted to the Engineer.

UTILITY LINES: All expense involved in relocation (installing) the affected utility lines shall be borne by the Utility(ies). The Contractor and Utility(ies) are to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN: Unclassified excavation shall be in accordance with 503 except that the backfill material behind the abutments shall be 203 granular material placed in 150mm lifts and compacted in accordance with 304.04. The 203 granular material shall extend 30 meters behind each abutment.

APPROACH SLAB CONCRETE shall be placed towards the superstructure during days when sudden temperature changes are unlikely and be completed at least 4 hours prior to the concrete placement day's peak ambient temperature.

Item 863, Structural Steel Members, Level 4 Fabrication, Galvanized, A572M grade 350 As Per Plan:

1. All structural steel shall be ASTM A572M and galvanized per 711.02.

2. Where a shape or plate is designated (CVN), the material shall meet specified minimum notch toughness requirements as specified in 711.01 of the specifications. All field splice material shall be (CVN).

3. All field splices shall have 28.5mm diameter high strength bolts conforming to ASTM A 325, type 1 galvanized with washers supplied under the head and the nut. The holes shall be oversized 32mm diameter holes. Bolts shall be placed with their heads on the outside face of the exterior beam, on the bottom of the bottom flange plates and top of the top flange plates.

4. Beams and Girders shall be prepared by the fabricator to Steel Structures Painting Council (SSPC) grade six (6) Commercial blast cleaning prior to galvanizing. All material shall be free of paint marks. Secondary angle, plates, bars and shapes need not be blast cleaned.

5. Areas of field connections shall have a uniform galvanized coating thickness free of local excessive roughness which would prevent splice plates, bearings or other field connections from making intimate contact.

6. Faying surfaces of the bolted splices shall be roughened in the shop after galvanizing by hand wire brushing. Power wire brushing is not permitted. All field splice bolt holes shall be free of zinc build up and each hole shall be checked in the shop after galvanizing to receive a 28.5mm diameter drift pin. Consideration will be given to other methods of treating the faying surfaces if a written request is submitted to the Director in accordance with CMS 108.05.

7. Material shall be free of imperfections or depressions caused by material handling. The fabricator, galvanizer and erector shall use lifting clamps or softeners for handling. Prior to galvanizing, imperfections may be repaired by grinding as allowed by ASTM A6 by the fabricator. Imperfections that are greater than the limits allowed by grinding per A6 shall be documented. Repair or replacement of this member shall be at the discretion of the Director.

8. After galvanizing, material shall be placed in a second shop assembly per CMS section 863.26 to check alignment of holes, sweep and camber against the fabricators original recorded lay down dimensions. This shop assembly may be performed at the galvanizers facility by the fabricators personnel if approved by the Director. The second Lay down may be waived by the Director if the fabricator records individual beam cambers and sweeps during the first Lay down and compares dimensions after galvanizing to the first within the following tolerances: Bearing points after galvanizing shall be 3mm + or - from the first Lay down. Camber points after galvanizing shall be + 6mm or - 0 inch from first Lay down. Sweep points after galvanizing shall be 10mm + or - from the first Lay down. Individual Beams that exceed the listed tolerances shall be placed with at least two adjacent beams in Lay down for checking against the recorded shop assembly records per 863.07.

9. All damaged galvanizing shall be repaired in accordance with ASTM A780, method A1 or A3.

10. Special care shall be exercised to insure the girders with attached load plates and HP sections etc. are transported safely to the job site.

ALTHOUGH OTHERWISE SHOWN IN THESE PLANS, THE STRUCTURE FILE NUMBERS ARE :
17009.95/17010.02R

ESTIMATED QUANTITIES

Calculated by: RHH Date: 11/98
Checked by: ALH Date: 11/98

Item	Extension	CRA-30-02230 L Total	CRA-30-02230 R Total	Unit	Description	LEFT BRIDGE Superstructure	LEFT BRIDGE Abutment	LEFT BRIDGE Pier	RIGHT BRIDGE Superstructure	RIGHT BRIDGE Abutment	RIGHT BRIDGE Pier	General
503	11100	Lump	Lump	-	Cofferdams, cribs and sheeting							Lump
503	21301	Lump	Lump	-	Unclassified excavation, as per plan		Lump	Lump		Lump	Lump	
505	11100	Lump	Lump	-	Pile driving equipment mobilization							Lump
507	00100	1616	1712	Meter	Steel piles HP250 x 62, furnished		896	720		992	720	
507	00150	1616	1712	Meter	Steel piles HP250 x 62, driven		896	720		992	720	
507	50500	58	61	Each	Steel pile splices		28	30		31	30	
507	93301	116	122	Each	Steel point (or shoe), as per plan		56	60		62	60	
Special	51267502	621.5	621.5	Sq. Meter	Sealing of concrete surfaces (epoxy) *	530.1	48.4	43.0	530.1	48.4	43.0	
516	13900	14.3	14.5	Sq. Meter	51mm Preformed expansion joint filler		14.3			14.5		
516	43200	6	6	Each	Elastomeric bearing with internal laminates only (neoprene), (350 x 540 x 63) *			6			6	
516	43200	6	6	Each	Elastomeric bearing with internal laminates only (neoprene), (300 x 540 x 55) *			6			6	
516	43300	12	12	Each	Elastomeric bearing with internal laminates only (neoprene), (250 x 300 x 83) *		12			12		
518	21230	Lump	Lump	-	Porous backfill with filter fabric		Lump			Lump		
518	40000	80	84	Meter	150mm Perforated corrugated plastic pipe		80			84		
518	40010	20	20	Meter	150mm Non-perforated corrugated plastic pipe, including specials		20			20		
601	20000	142.6	142.7	Sq. Meter	Crushed aggregate slope protection							285.3
842	41000	93.9	100.0	Cu. Meter	Class C concrete, pier above footing			93.9			100.0	
842	43501	246.5	319.5	Cu. Meter	Class C concrete, abutment including footing, as per plan		246.5			319.5		
842	46500	110.6	110.6	Cu. Meter	Class C concrete, footing			110.6			110.6	
863	10081	Lump	Lump	-	Structural steel members, level four (4) fabrication, galvanized, A572M grade 350, as per plan	Lump			Lump			
863	20000	1998	1998	Each	Welded stud shear connector	1998			1998			
894	10000	404.5	416.2	Cu. Meter	High Performance Concrete, for Bridge Deck with Warranty	404.5			416.2			

* See proposal note

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	6/29/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PAL	—	17009.95/17010.02R	

GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. CRA-30-0223.0
OVER CR 18 (NEVADA WYNFORD RD.)

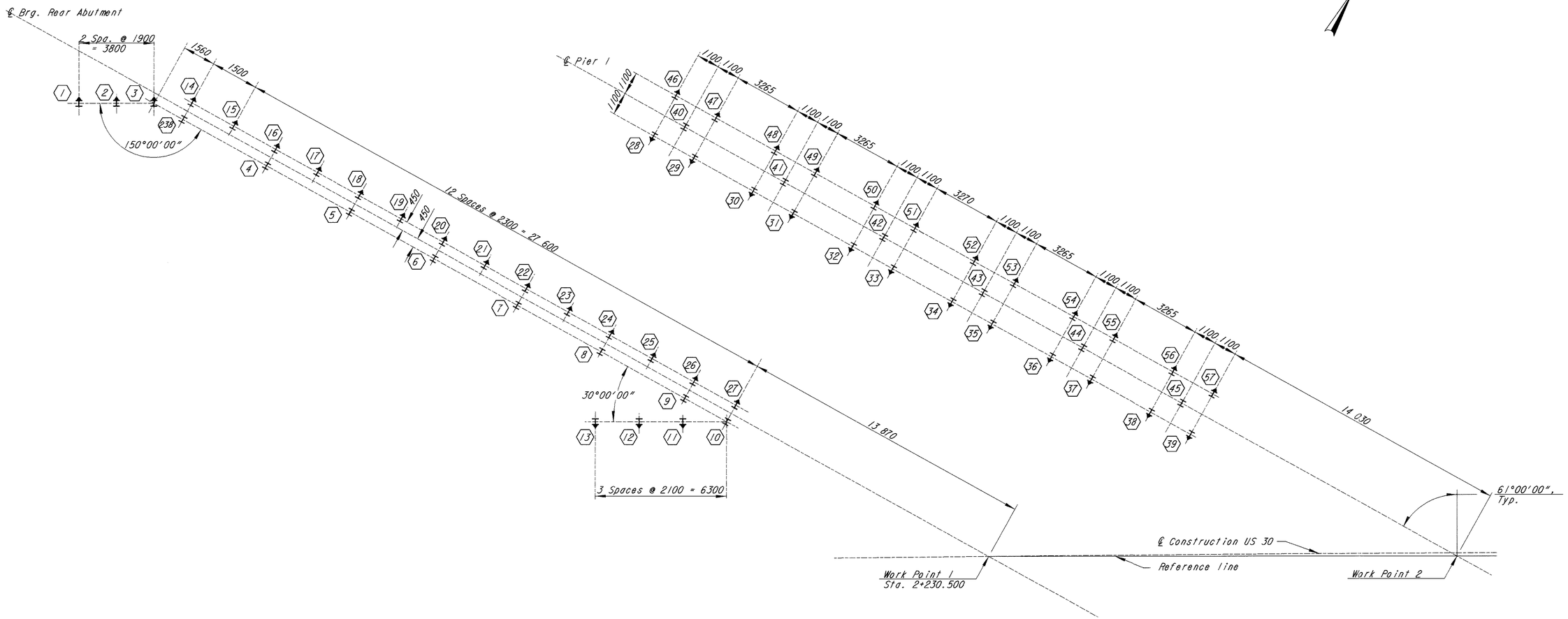
WYA/CRA-30-28.009/0.0000

4 / 41

1842
2116

Filename: 022301.dgn

metric units



PLAN

NOTES:
1. All piles are HP250x62.
2. (33) I Designates pile number and location.
3. ⊢▸ Denotes pile battered in direction of arrow.
4. Abutment piles battered 1:3 where shown.
5. Pier piles battered 1:4 where shown.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700996	

PILING LAYOUT LEFT BRIDGE
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

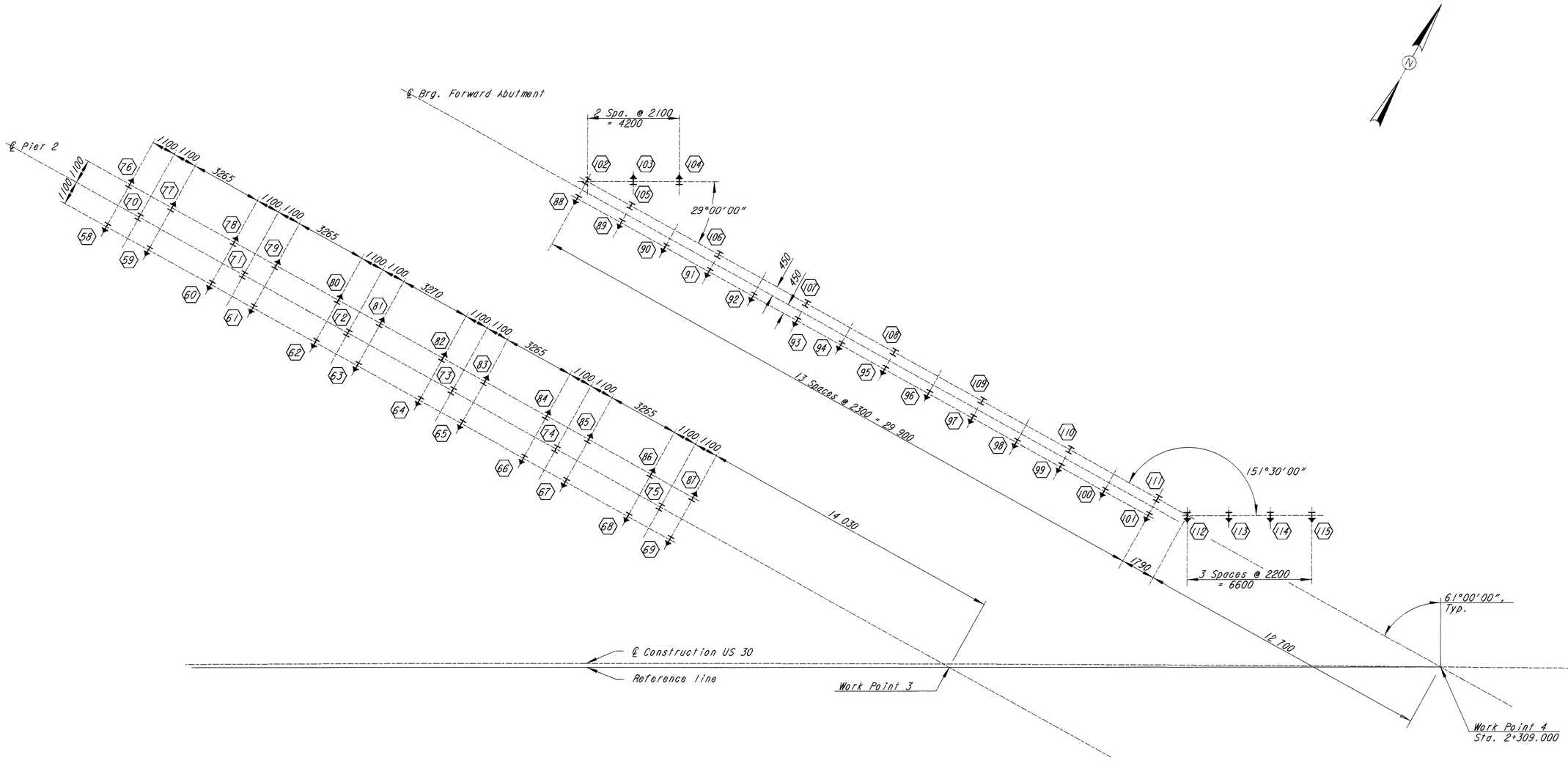
WYA/CRA-30-28.009/0.000

5 / 41

(1843 / 2116)

F:\filename\02230sa1.dgn

metric units



PLAN

NOTES:
1. All piles are HP250x62.
2. (33) I Designates pile number and location.
3. ↦ Denotes pile battered in direction of arrow.
4. Abutment piles battered 1:3 where shown.
5. Pier piles battered 1:4 where shown.

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MRS	—	1700595	

PILING LAYOUT LEFT BRIDGE
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

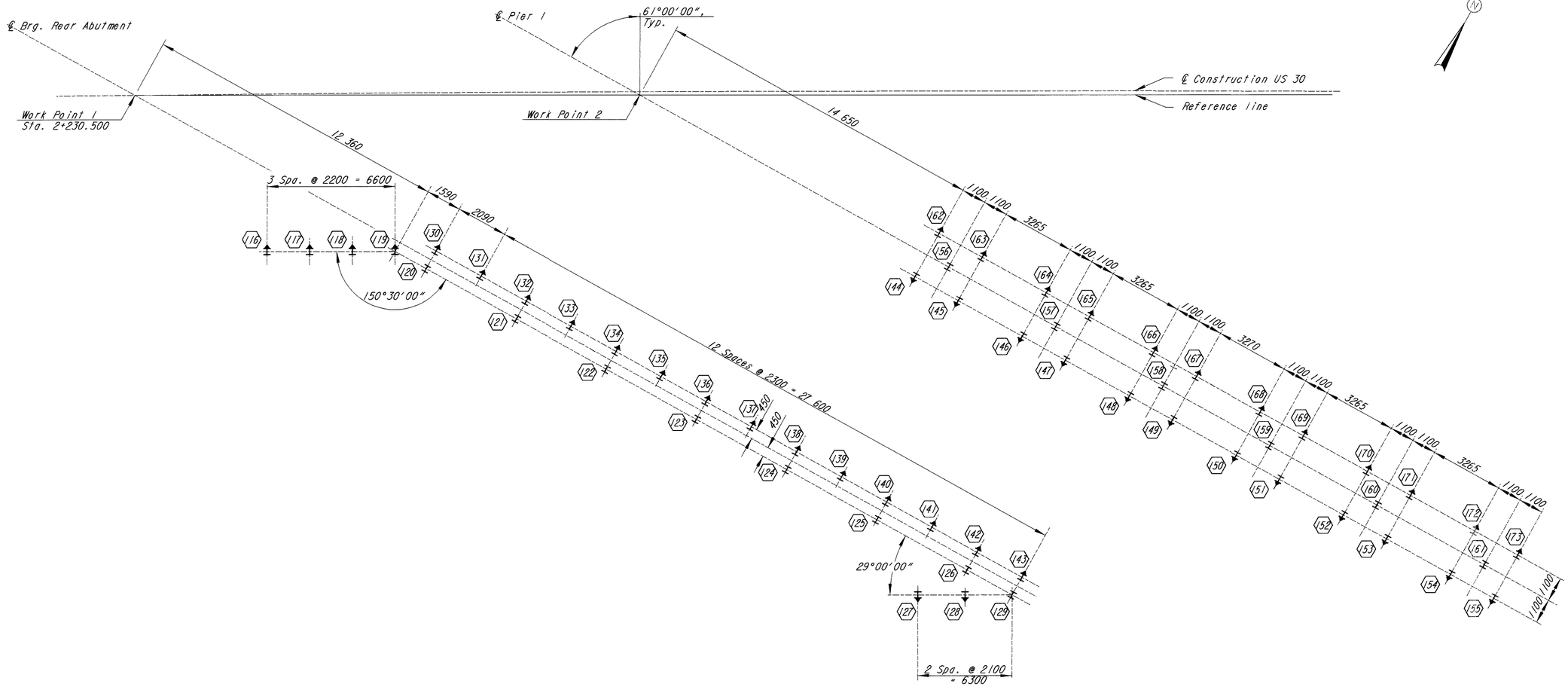
WYA/CRA-30-28.009/0.000

6 / 41

1844
2116

Filename: 02230s2.dgn

metric units



NOTES:
1. All piles are HP250x62.
2. (33) I Designates pile number and location.
3. ↳ Denotes pile battered in direction of arrow.
4. Abutment piles battered 1:3 where shown.
5. Pier piles battered 1:4 where shown.

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MRS	—	1700995	

PILING LAYOUT RIGHT BRIDGE

BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WWFORD RD.)

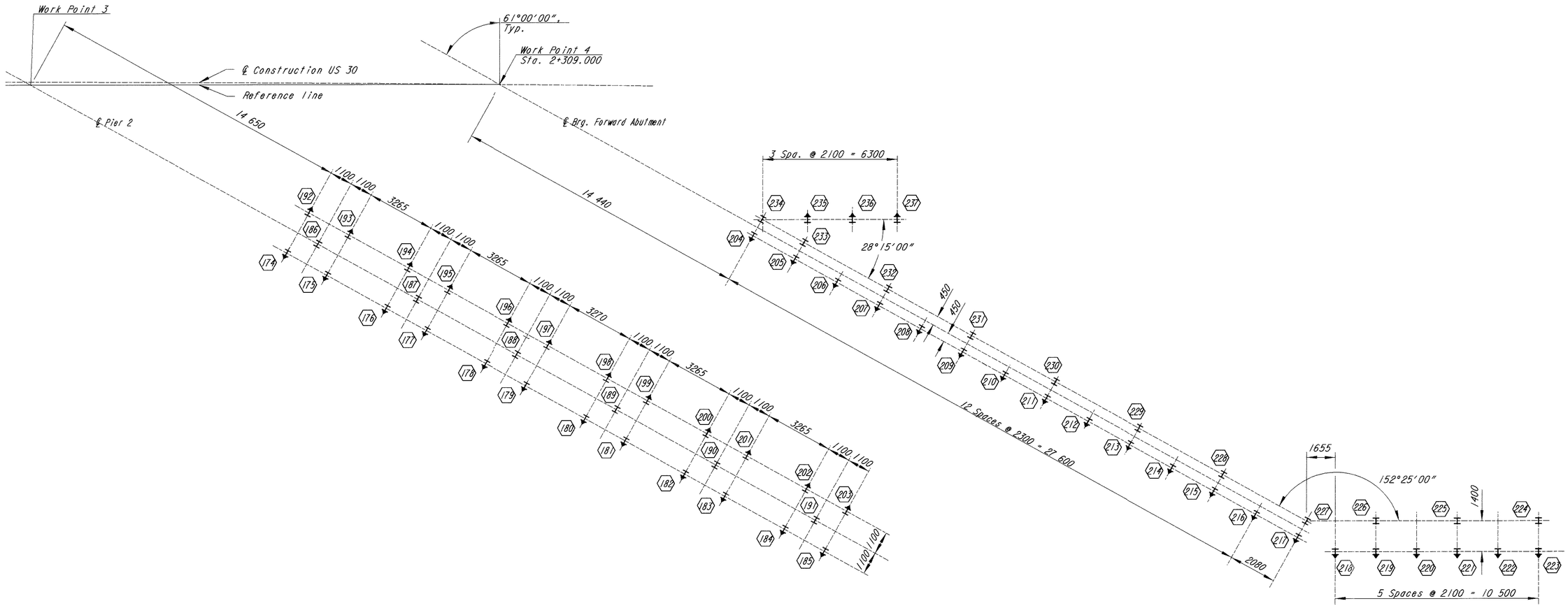
WYA/CRA-30-28.009/0.000

7 / 41

1845
2116

F:\Honam\02230s3.dgn

metric units



NOTES:
1. All piles are HP250x62.
2. (33) I Designates pile number and location.
3. ↳ Denotes pile battered in direction of arrow.
4. Abutment piles battered 1:3 where shown.
5. Pier piles battered 1:4 where shown.

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FKL	ALH	CPS	6/29/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MPS	—	1700895	

PILING LAYOUT RIGHT BRIDGE

BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

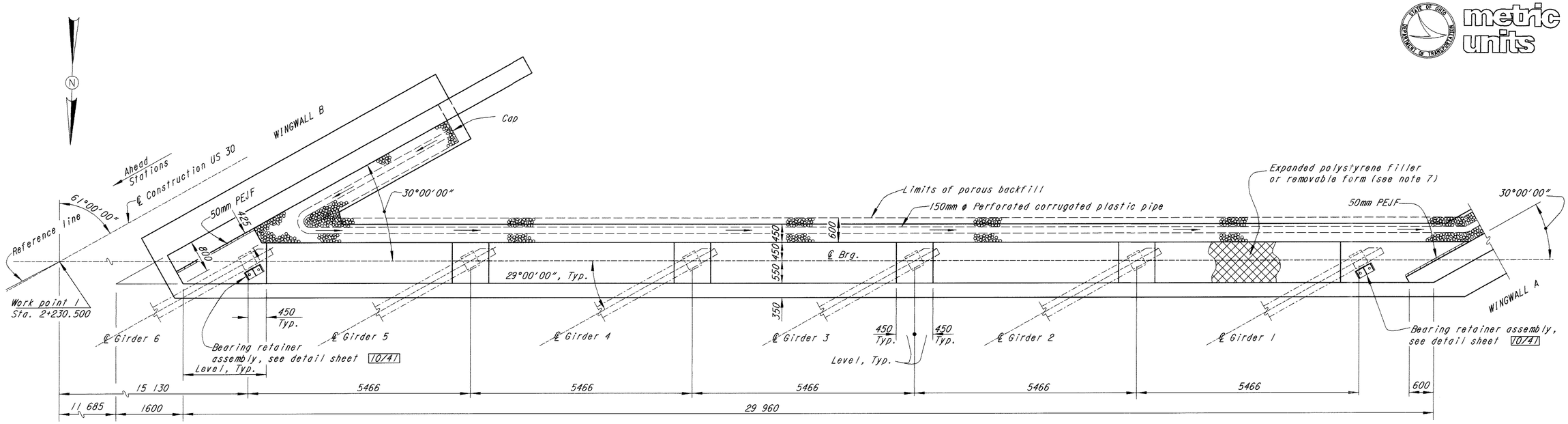
WYA/CRA-30-28.009/0.000

8 / 41

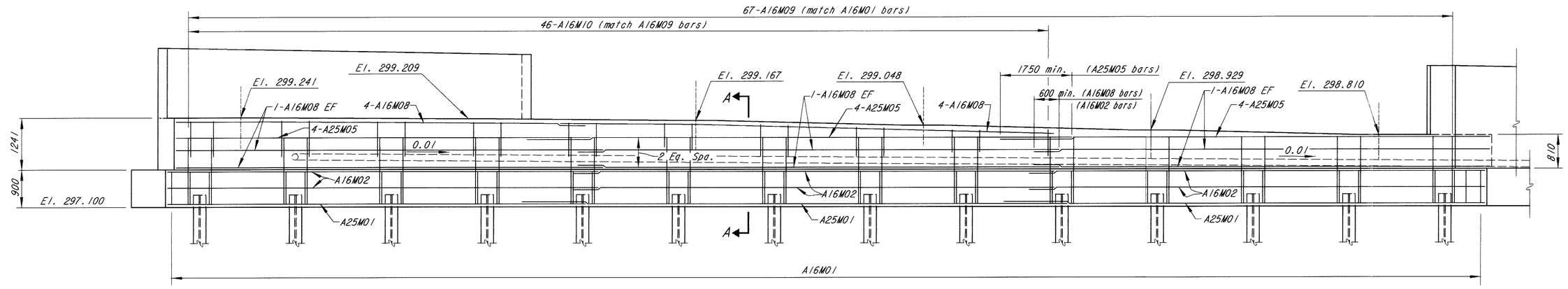
1846
2116

File Name: 02230x4.dgn

metric units



PLAN



ELEVATION

NOTES:
1. For pile layout, see sheet 5/41 .
2. For footing plan, and Section A-A, see sheet 10/41 .
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally as shown
4. For wingwall details, see sheet 11/41 .
5. EF = Each Face
   PEJF = Preformed Expansion Joint Filler
6. For additional information on abutment, see Std. Dwg. SICD-1-96M.
7. Include with Item 842 Class S concrete for payment.

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BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

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FKL	ALH	CRS	6/29/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	17000995	

REAR ABUTMENT LEFT BRIDGE DETAILS
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

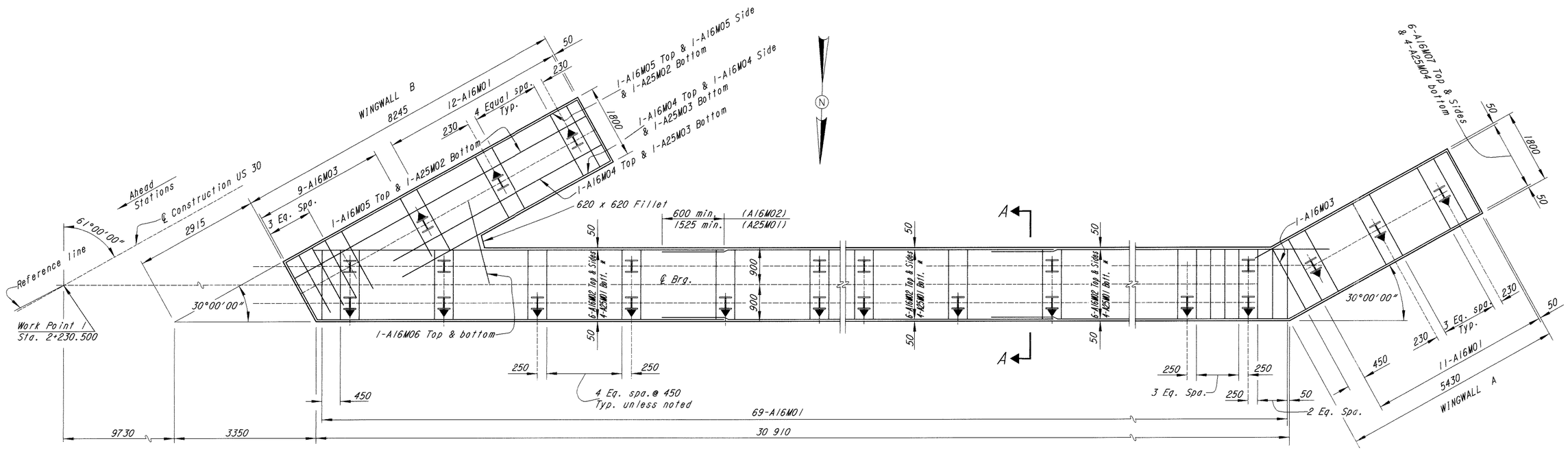
WYA/CRA-30-28.009/0.000

9 / 41

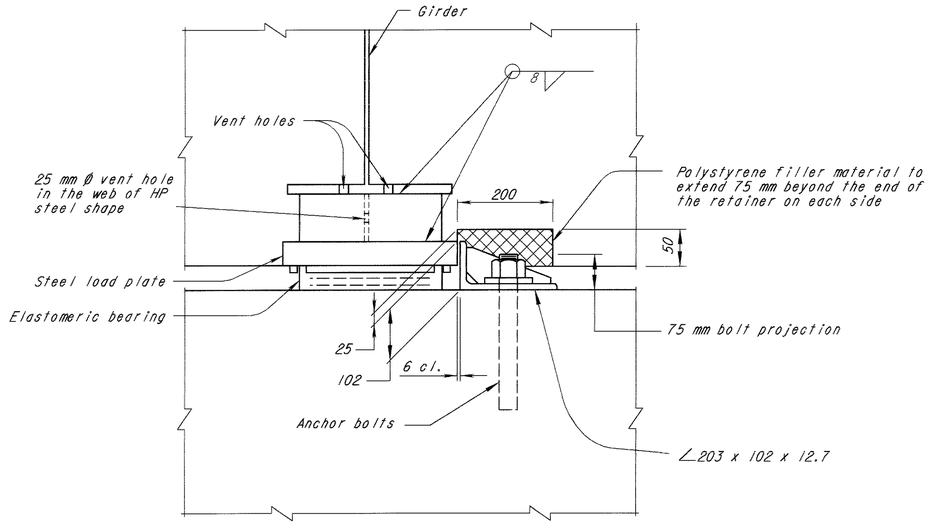
1847
2116

F:\Inroute\02230rd1.dgn

metric units

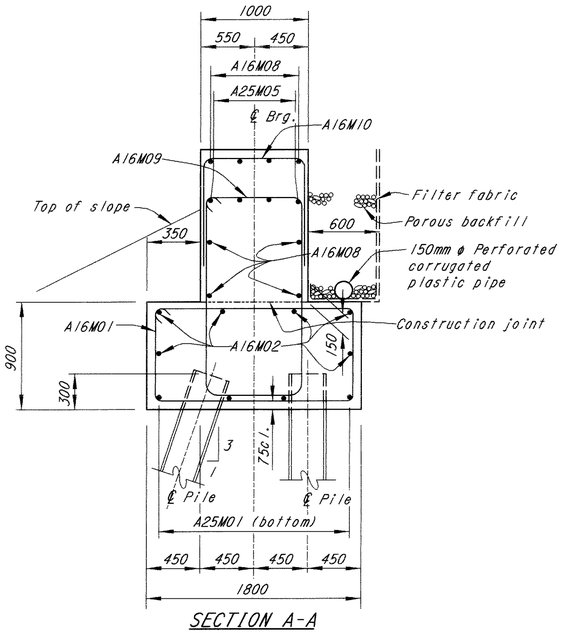


FOOTING PLAN



BEARING RETAINER ASSEMBLY DETAIL

(For additional details, see Std. Dwg. SICD-1-96M)



SECTION A-A

NOTES:
1. For PILE LAYOUT PLAN, see sheet 5/41 .
2. * For location of reinforcing steel, see Section A-A on this sheet.

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STRUCTURE FILE NUMBER	
1700995	

DRAWN	DESIGNED
ALH	FKL
REVISED	CHECKED
—	MRS

REAR ABUTMENT LEFT BRIDGE DETAILS
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OVER CR 18 (NEVADA WYNFORD RD.)

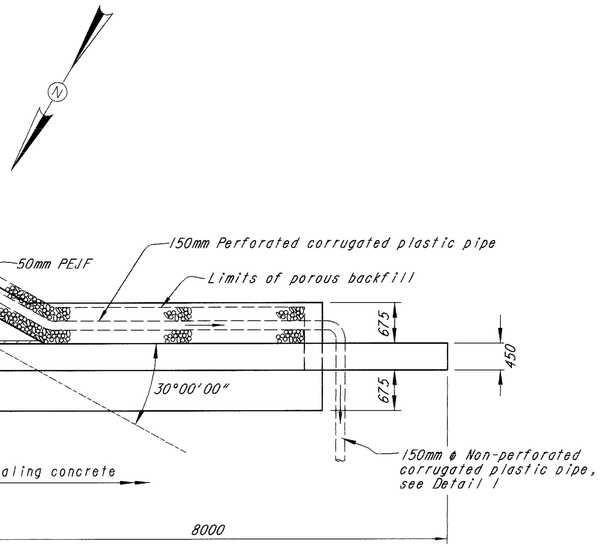
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10 / 41

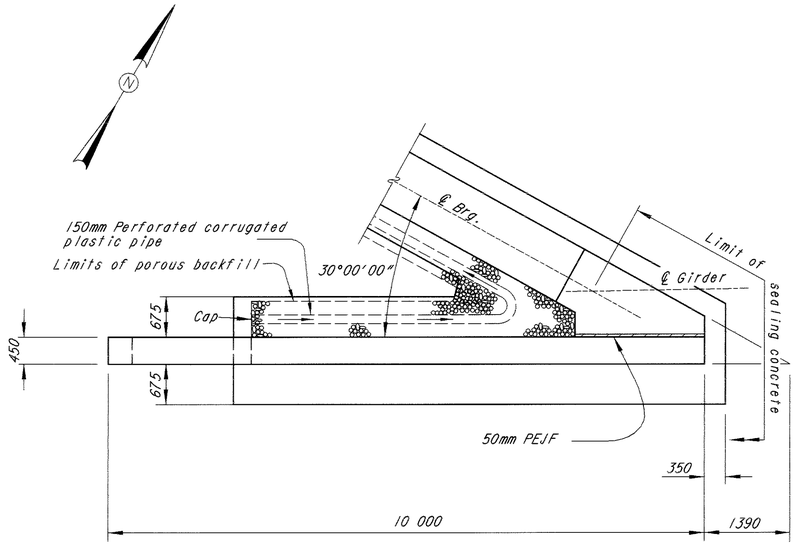
1848
2116

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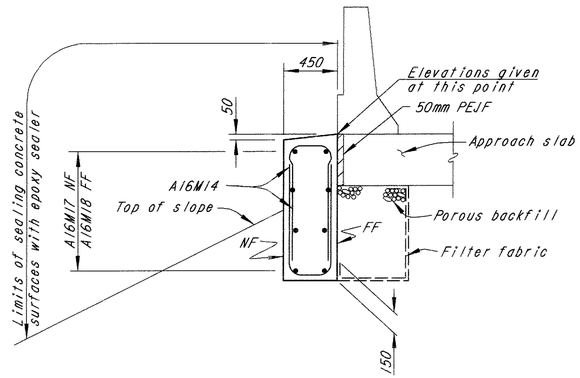
metric units



PLAN

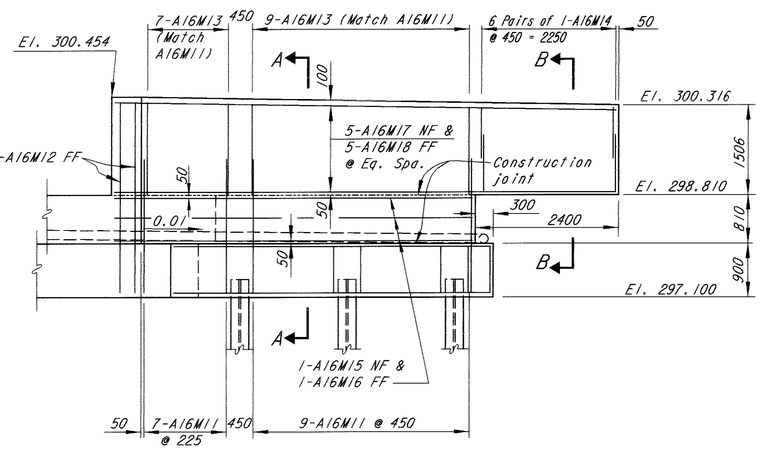


PLAN



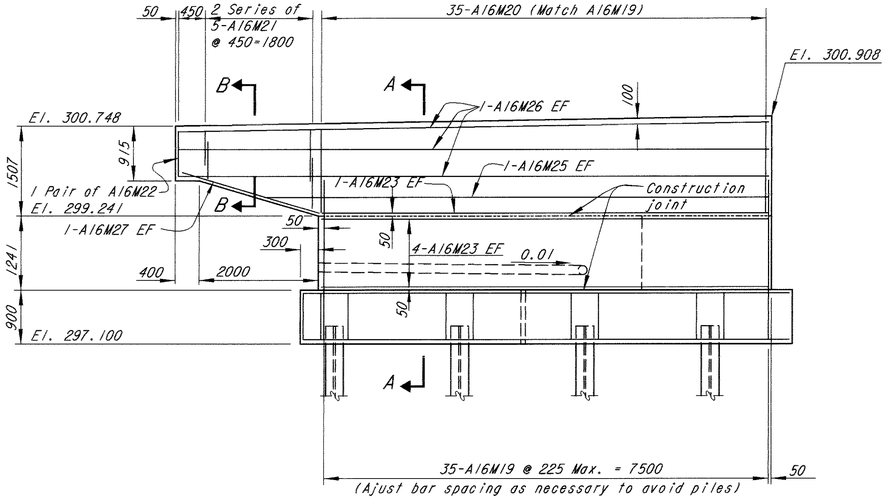
SECTION B-B

(Wingwall A shown Wingwall B similar)



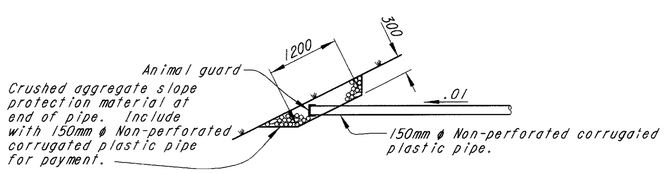
ELEVATION

WINGWALL A



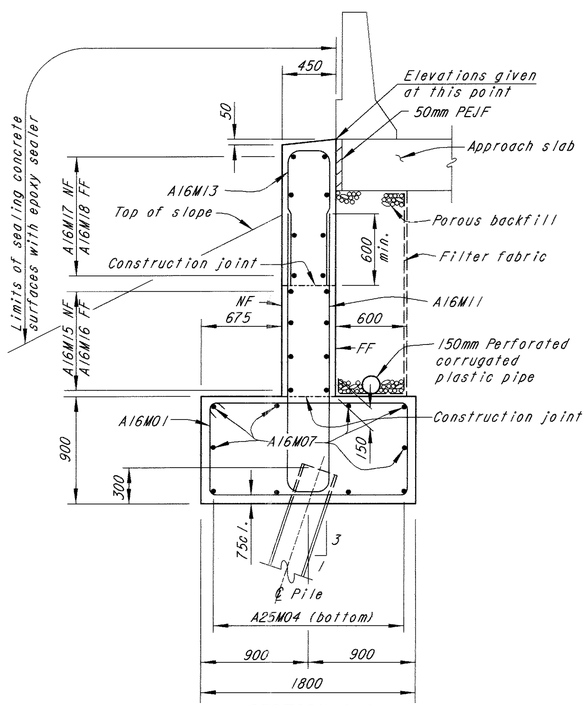
ELEVATION

WINGWALL B



DETAIL 1

NOTES:
EF = Each Face
NF = Near Face
FF = Far Face
PEJF = Preformed Expansion Joint Filler



SECTION A-A

(Wingwall A shown Wingwall B similar)

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1848 Summit Road
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700995	

REAR ABUTMENT LEFT BRIDGE DETAILS
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

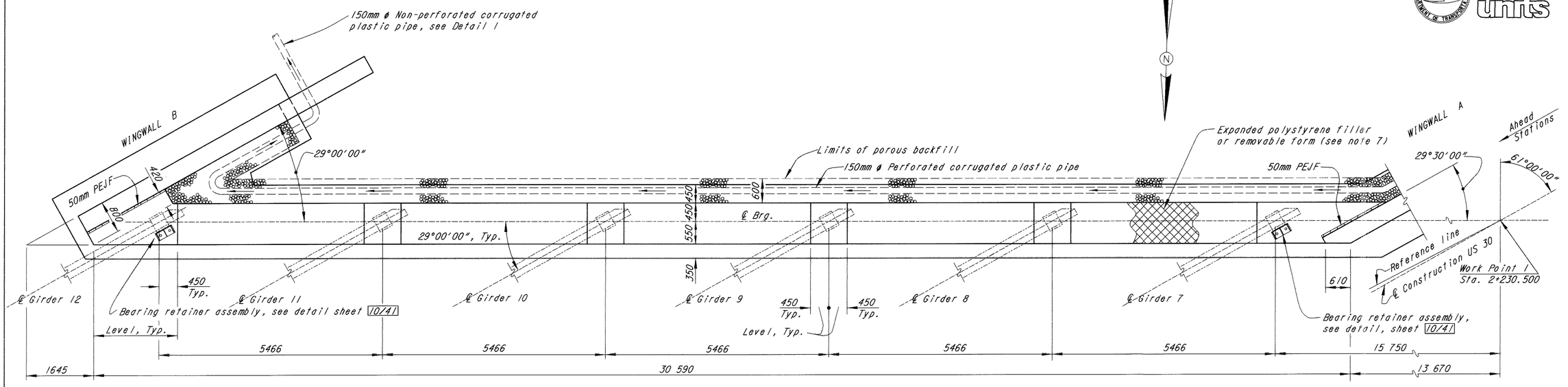
WYA/CRA-30-28.009/0.000

11 / 41

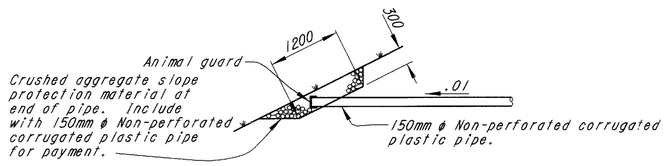
1849
2116

F:\Imnam-0223\ra3.dgn

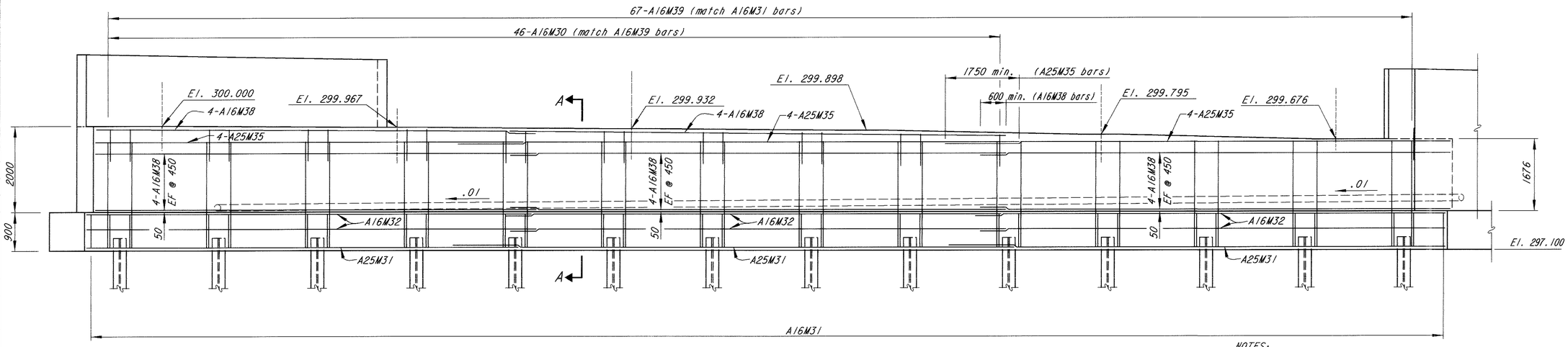
metric units



PLAN



DETAIL 1



ELEVATION

NOTES:
1. For pile layout, see sheet 7/41 .
2. For footing plan and Section A-A, see sheet 13/41 .
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally as shown
4. For wingwall details, see sheet 14/41 .
5. EF = Each Face
   PEJF = Preformed Expansion Joint Filler
6. For additional information on abutment, see Std. Dwg. SICD-1-96M.
7. Include with Item 842 Class S concrete for payment.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FAL	ALH	CRS	6/29/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700995	

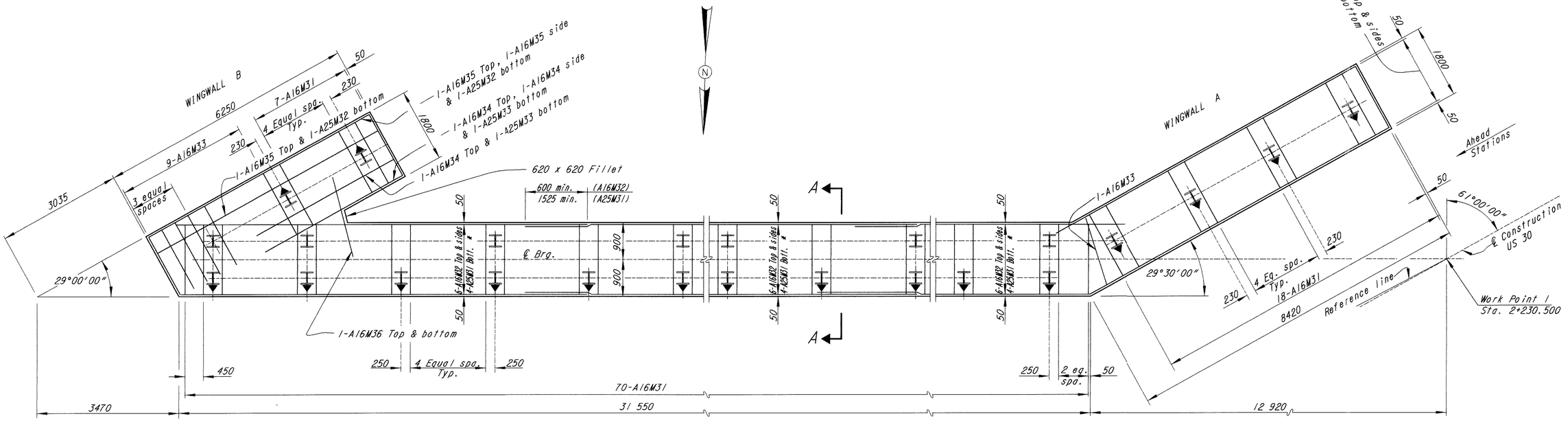
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BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

WYA/CRA-30-28.009/0.000

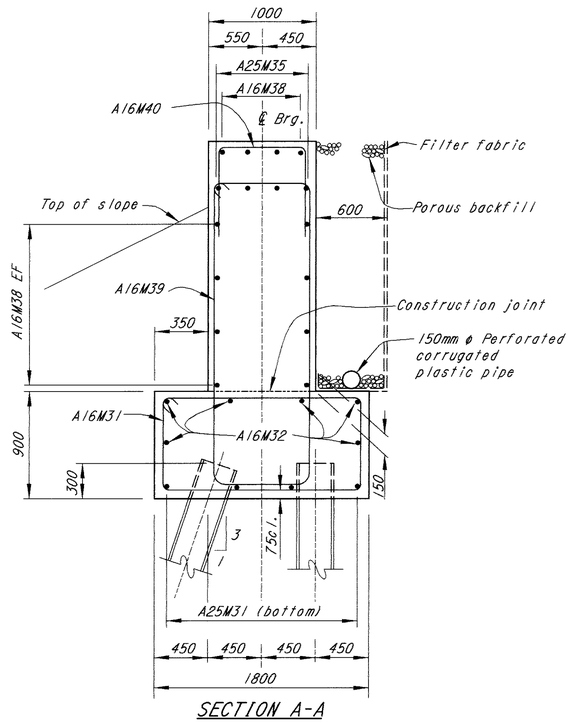
12/41

1850
2116

Filename: 02230rd4.dgn



FOOTING PLAN



SECTION A-A

NOTES:
1. For PILE LAYOUT PLAN, see sheet 7741 .
2. * For location of reinforcing steel, see Section A-A this sheet .

metric units

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700995	

REAR ABUTMENT RIGHT BRIDGE DETAILS
BRIDGE NO. CRA-30-02230
OVER CR 18 NEVADA WYNFORD RD.

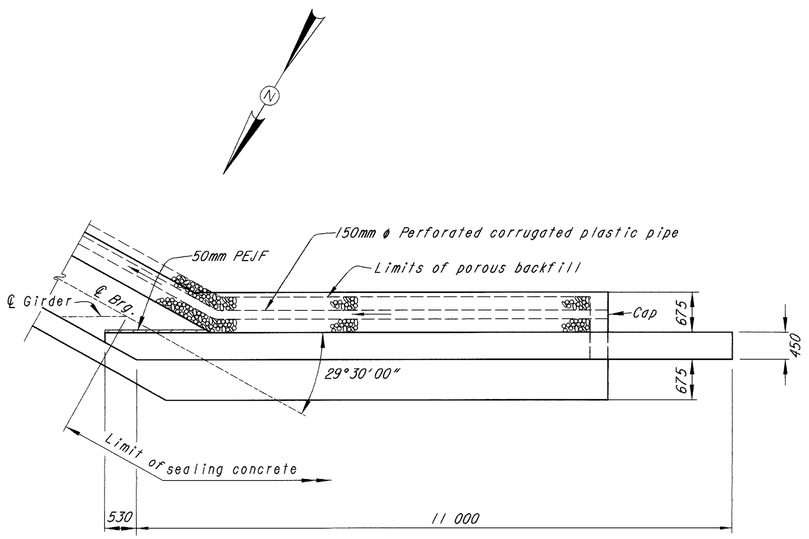
WYA/CRA-30-28.009/0.000

13 / 41

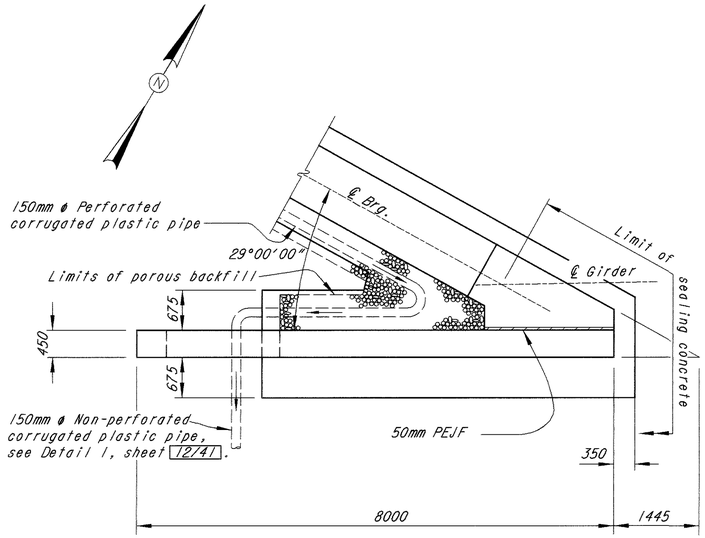
1851 / 2116

File Name: 02230rs5.dgn

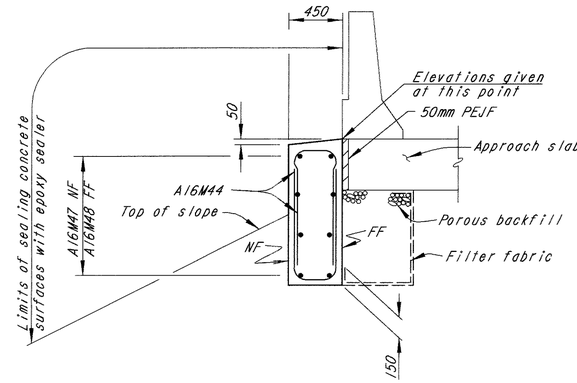
metric units



PLAN

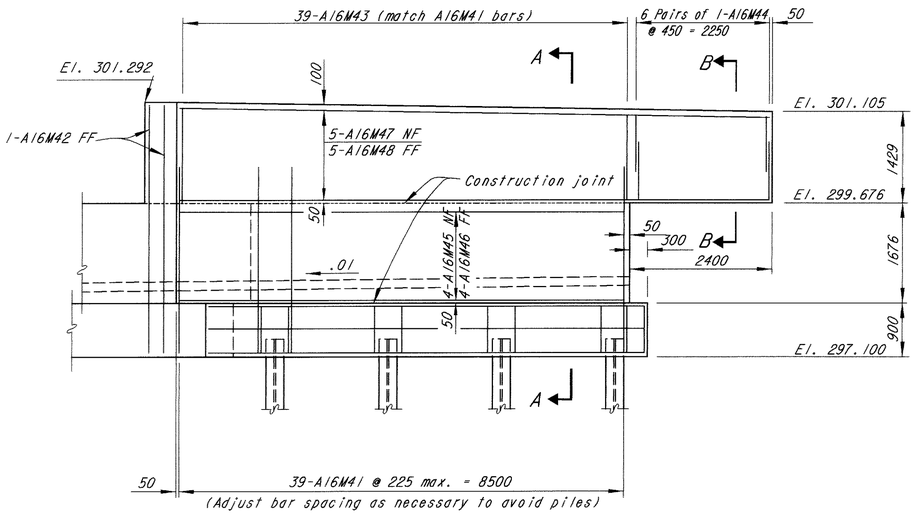


PLAN



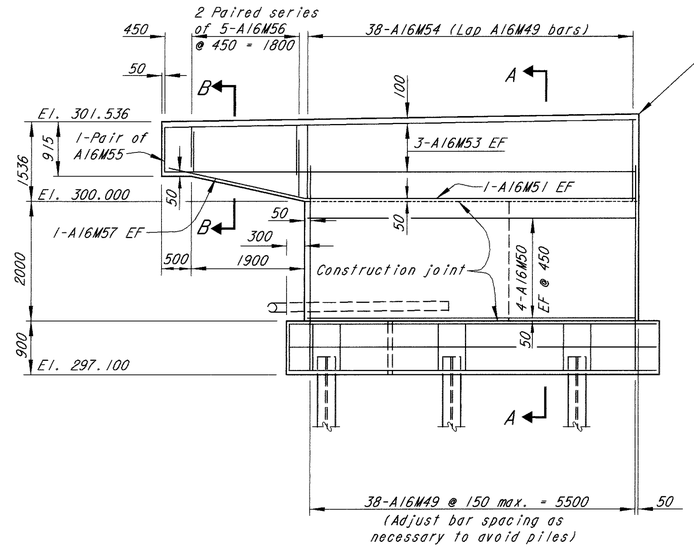
SECTION B-B

(Wingwall A shown Wingwall B similar)



ELEVATION

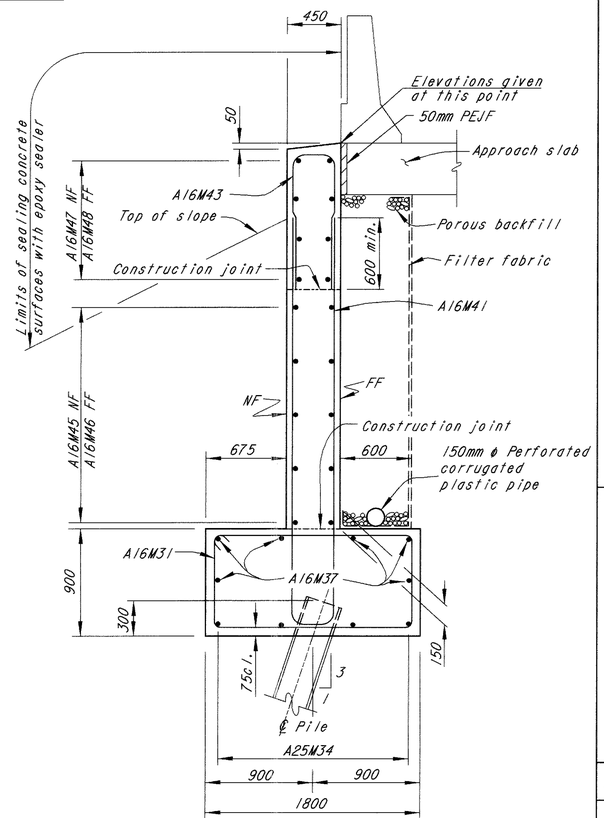
WINGWALL A



ELEVATION

WINGWALL B

NOTES:
EF = Each Face
NF = Near Face
FF = Far Face
PEJF = Preformed Expansion Joint Filler



SECTION A-A

(Wingwall A shown Wingwall B similar)

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700995	

REAR ABUTMENT RIGHT BRIDGE DETAILS
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

WYA/CRA-30-28.009/0.000

14 / 41

1852
2116

F:\Inserv-02230\rb6.dgn

metric units

150mm ϕ Non-perforated corrugated plastic pipe, see Detail 1

WINGWALL C

50mm PEJF

420

800

29°00'00"

29°00'00", Typ.

Limits of porous backfill

150mm Perforated corrugated plastic pipe

Expanded polystyrene filler or removable form (see note 7)

WINGWALL D

50mm PEJF

28°30'00"

61°00'00"

Ahead Stations

℄ Brg.

℄ Construction US 30

Reference line Work Point 4

Sta. 2+309.000

℄ Girder 1

℄ Girder 2

℄ Girder 3

℄ Girder 4

℄ Girder 5

℄ Girder 6

Bearing retainer assembly, see detail, sheet 10/41

Bearing retainer assembly, see detail, sheet 10/41

Level, Typ.

Level, Typ.

450

550

450

450

600

350

450 Typ.

450 Typ.

630

5466

5466

5466

5466

5466

15 130

1650

30 940

14 070

PLAN

Animal guard

Crushed aggregate slope protection material at end of pipe. Include with 150mm ϕ Non-perforated corrugated plastic pipe for payment.

1200

300

.01

150mm ϕ Non-perforated corrugated plastic pipe.

DETAIL 1

67-B16M09 (match B16M01 bars)

46-B16M10 (match B16M09 bars)

1750 min. (B25M05 bars)

600 min. (B16M08 bars)

El. 300.070

El. 300.189

El. 300.307

El. 300.422

El. 300.457

El. 300.491

El. 298.300

1-B16M08 EF

4-B25M05

4-B16M08

2 Spa. @ 440

0.01

B16M02

B25M01

A

870

900

1291

B16M01

ELEVATION

NOTES:
1. For pile layout, see sheet 6/41 .
2. For footing plan and Section A-A, see sheet 16/41 .
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally as shown
4. For wingwall details, see sheet 17/41 .
5. EF = Each Face
   PEJF = Preformed Expansion Joint Filler
6. For additional information, see std. dwg. SICD-1-96M.
7. Include with Item 842 Class S concrete for payment.

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1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700995	

FORWARD ABUTMENT LEFT BRIDGE DETAILS

BRIDGE NO. CRA-30-0223O
OVER CR 18 (NEVADA WINFORD RD.)

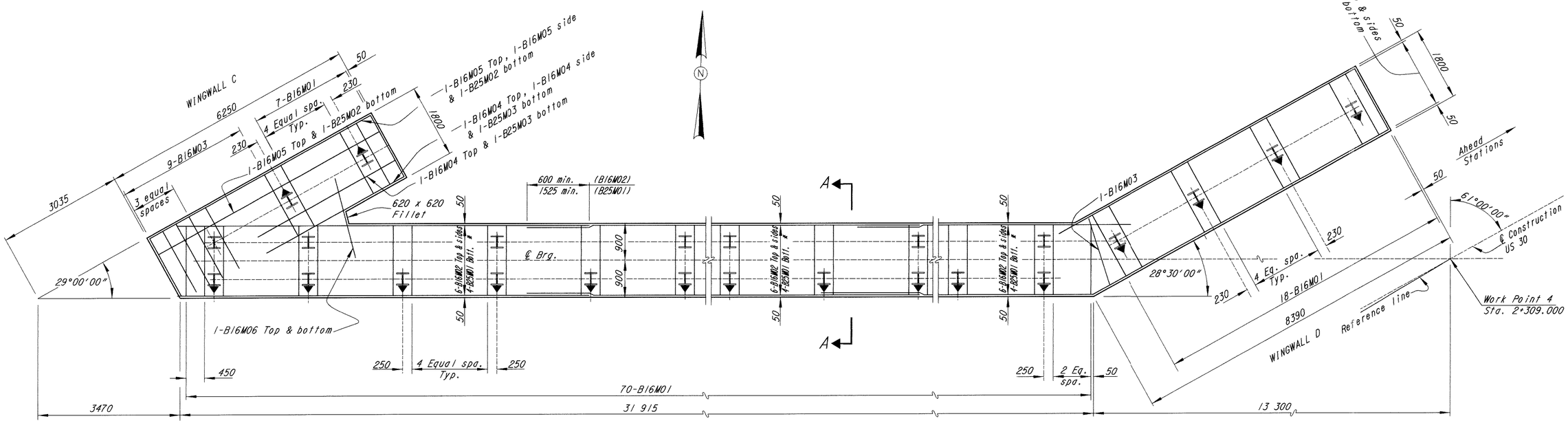
WYA/CRA-30-28.009/0.000

15 | 41

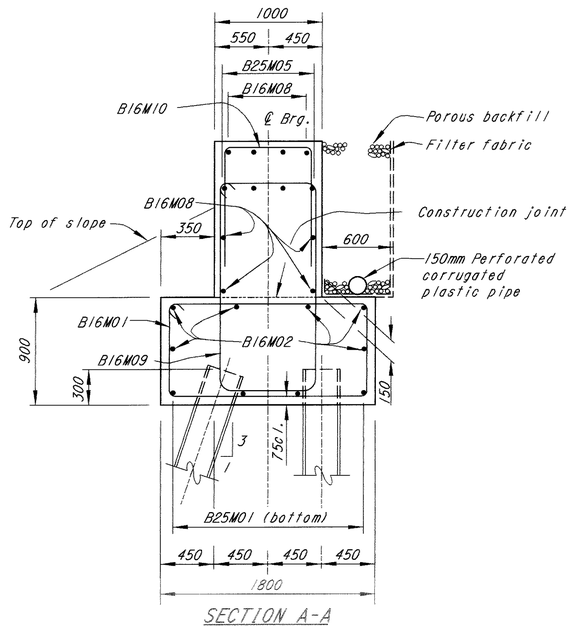
1853
2116

Filename: 0223O01.dgn

metric units



FOOTING PLAN



SECTION A-A

NOTES:
1. For PILE LAYOUT PLAN, see sheet 6741 .
2. * For location of reinforcing steel, see Section A-A this sheet.

DESIGN AGENCY
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1848 Summit Road
Cincinnati, Ohio 45237

REVIEWED	DATE
CRS	6/29/99
STRUCTURE FILE NUMBER	
1700895	

DRAWN	REVISED
ALH	—

DESIGNED	
FAL	
CHECKED	
MRS	

FORWARD ABUTMENT LEFT BRIDGE DETAILS

BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WINFORD RD.)

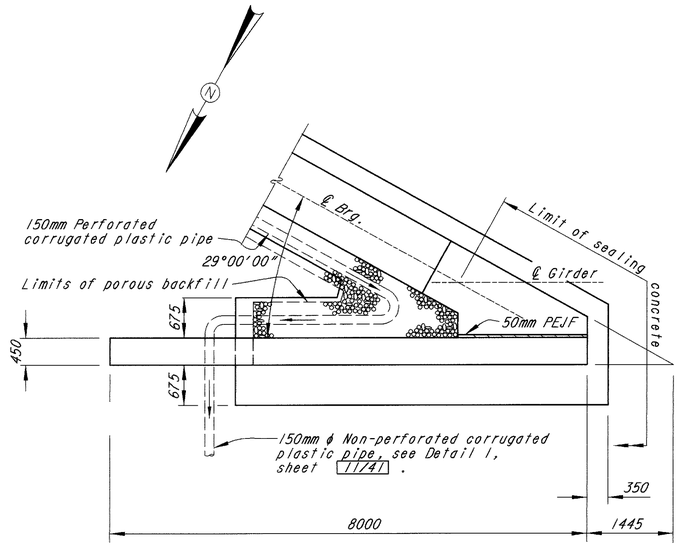
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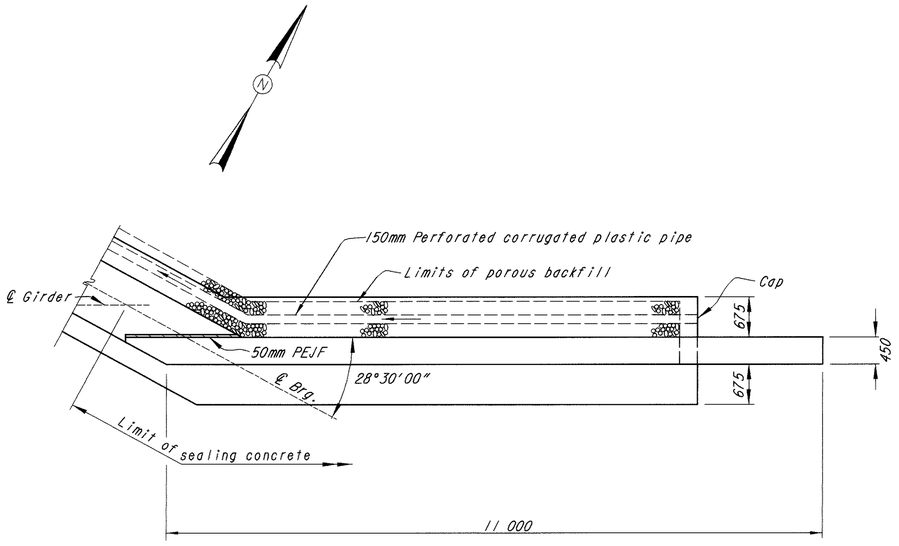
16 / 41

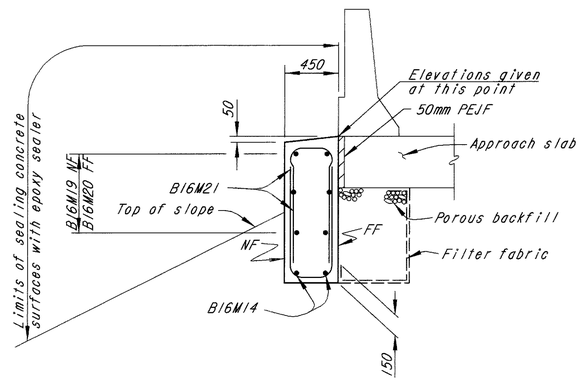
1854
2116

FI Version: 02230fig6.dgn

metric units

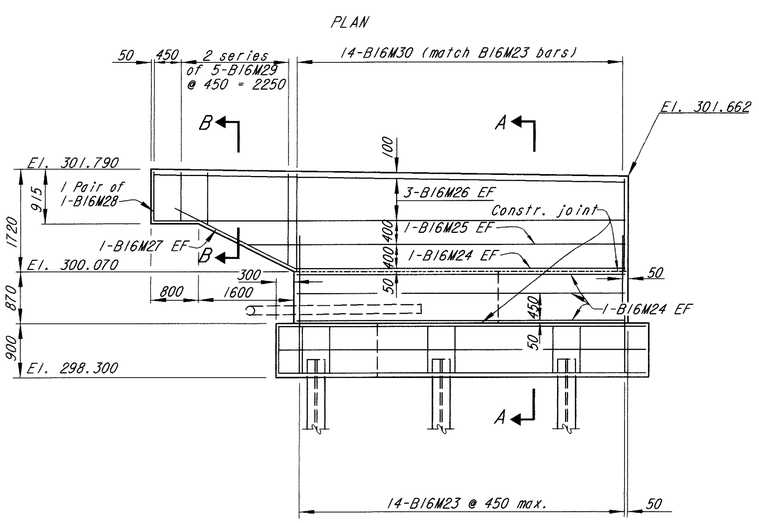




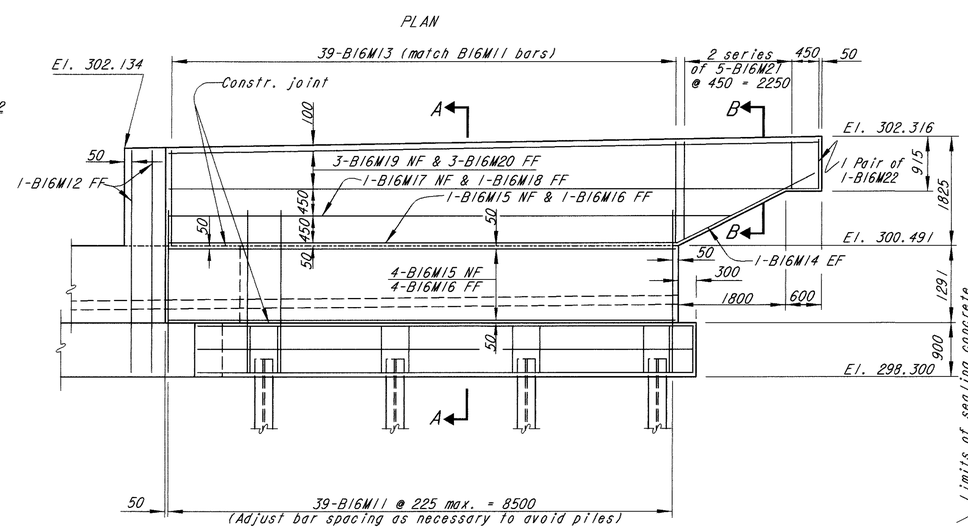


SECTION B-B

(Wingwall D shown Wingwall C similar)

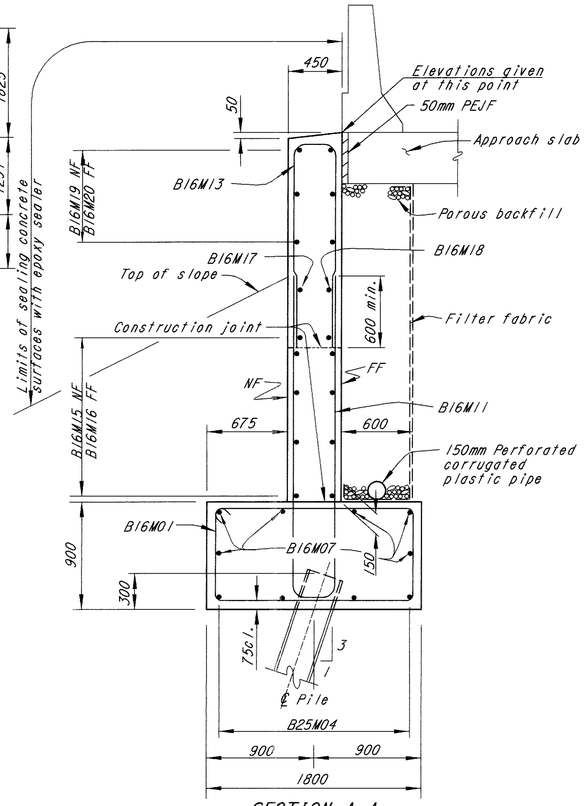


WINGWALL C



WINGWALL D

NOTES:
EF = Each Face
NF = Near Face
FF = Far Face
PEJF = Preformed Expansion Joint Filler



SECTION A-A

(Wingwall D shown Wingwall C similar)

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
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MRS	—	1700995	

FORWARD ABUTMENT LEFT BRIDGE DETAILS

BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

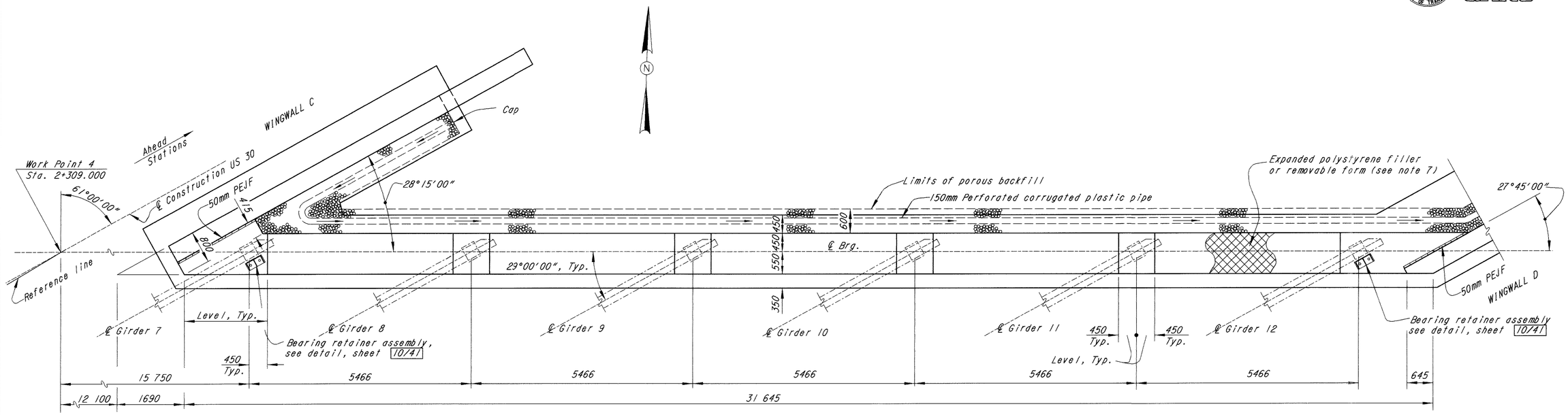
WYA/CRA-30-28.009/0.000

17 / 41

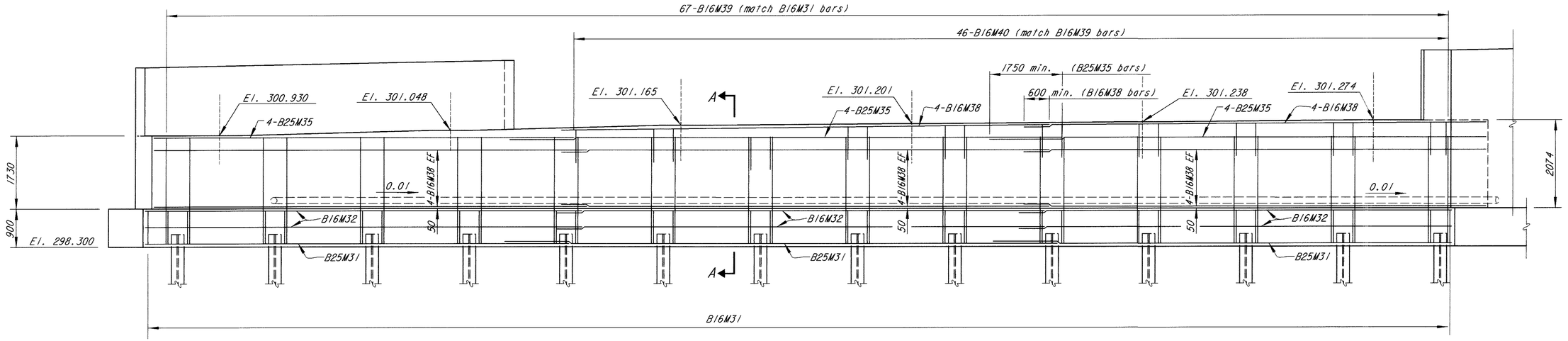
1855
2116

File name: 02830ra3.dgn

metric units



PLAN



ELEVATION

NOTES:
1. For pile layout, see sheet 8/41 .
2. For footing plan and Section A-A, see sheet 19/41 .
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally as shown
4. For wingwall details, see sheet 20/41 .
5. EF = Each Face
   PEJF = Preformed Expansion Joint Filler
6. For additional information on abutment, see Std. Dwg. SICD-1-96M.
7. Include with Item 842 Class S concrete for payment.

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CHECKED	MRS	REVISED	—
		STRUCTURE FILE NUMBER	7700995

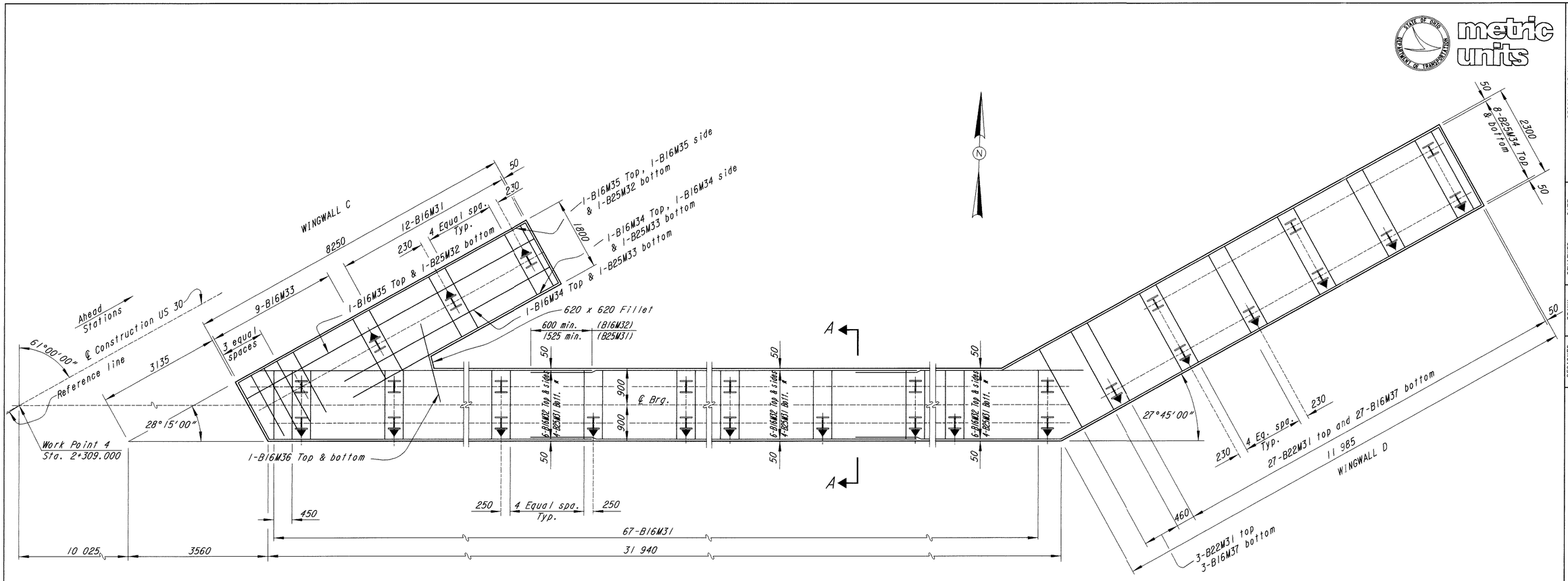
FORWARD ABUTMENT RIGHT BRIDGE DETAILS
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

WYA/CRA-30-28.009/0.000

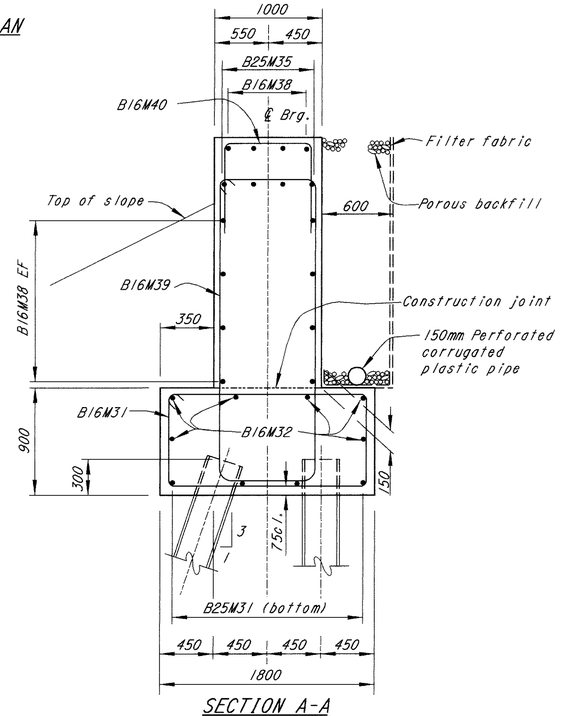
18 / 41

1856
2116

F:\Inroom-02230754.dgn



FOOTING PLAN



SECTION A-A

NOTES:
1. For PILE LAYOUT PLAN, see sheet 8/41 .
2. * For location of reinforcing steel, see Section A-A this sheet.

metric units

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FORWARD ABUTMENT RIGHT BRIDGE DETAILS

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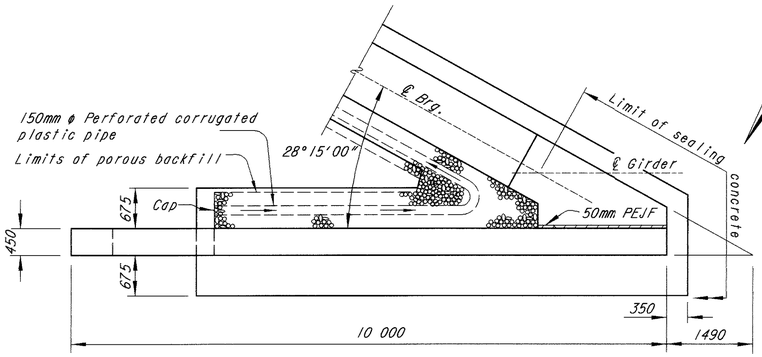
WYA/CRA-30-28.009/0.000

19 / 41

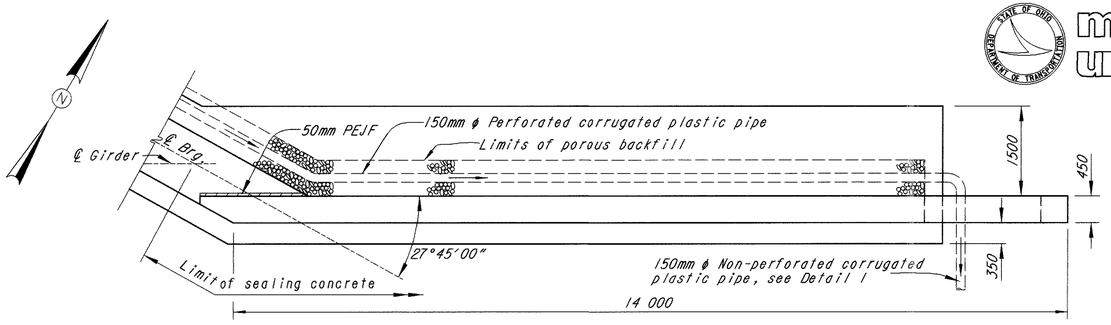
1857
2116

Filename: 02230f45.dgn

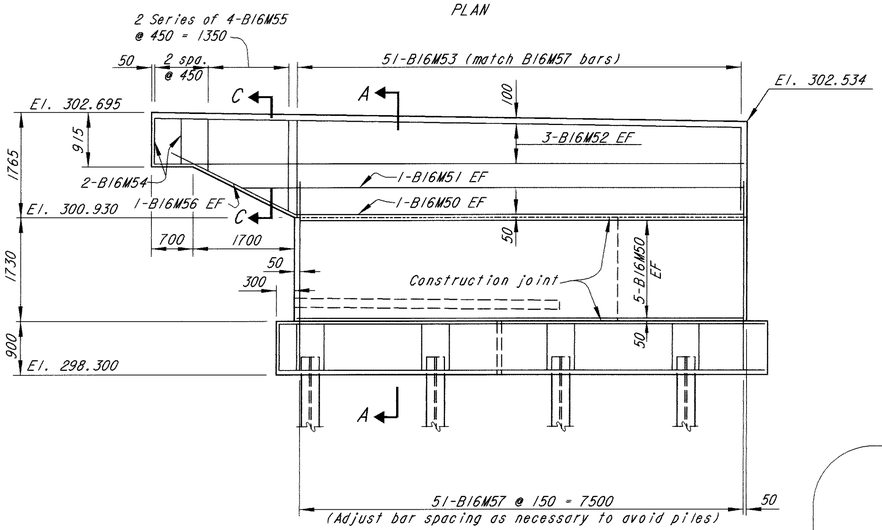
metric units



PLAN

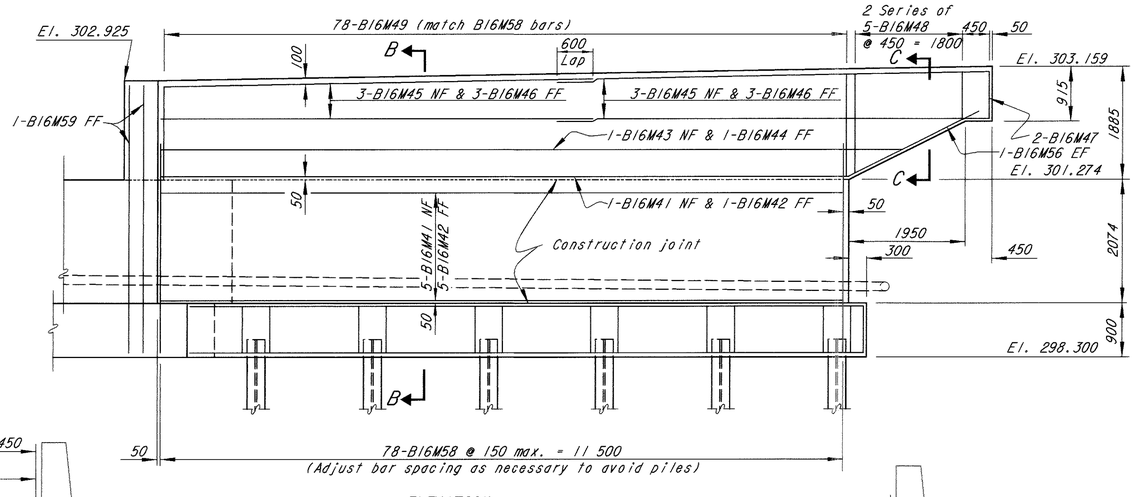


PLAN



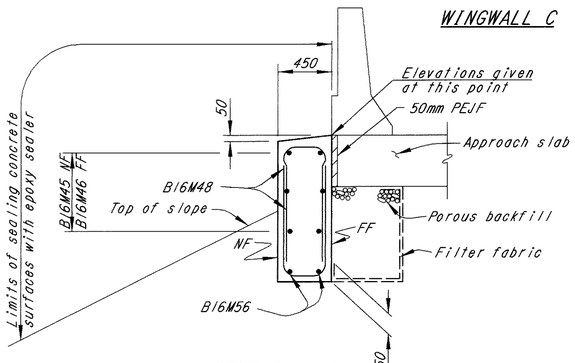
ELEVATION

WINGWALL C



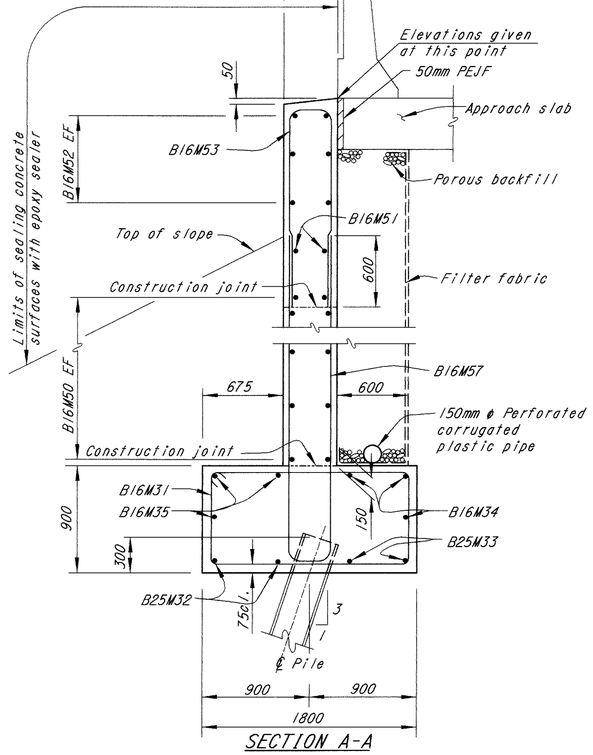
ELEVATION

WINGWALL D

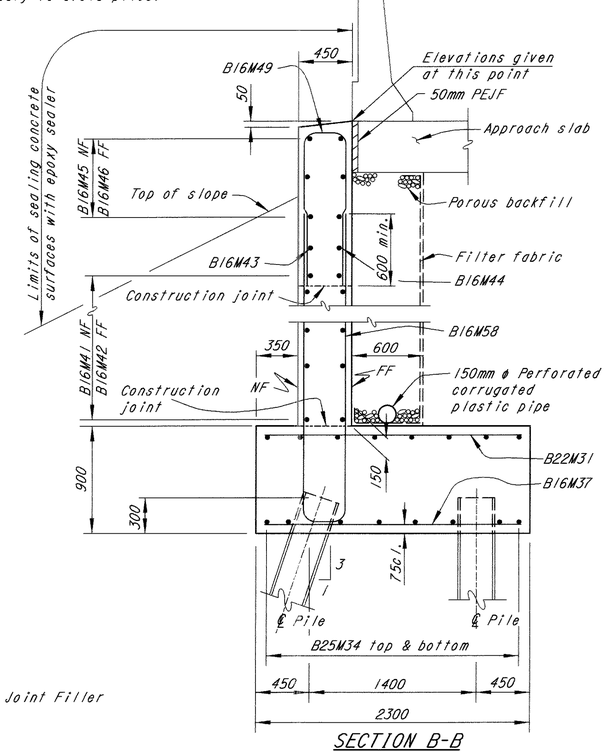


SECTION C-C

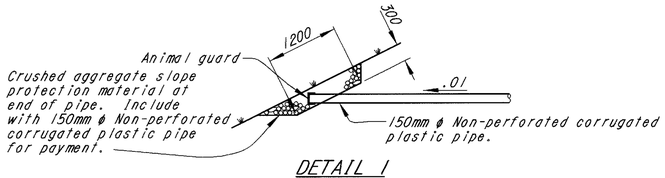
Wingwall D shown Wingwall C similar



SECTION A-A



SECTION B-B



DETAIL I

NOTES:
EF = Each Face
NF = Near Face
FF = Far Face
PEJF = Preformed Expansion Joint Filler

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MRS	—	1700996	

FORWARD ABUTMENT RIGHT BRIDGE DETAILS

BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

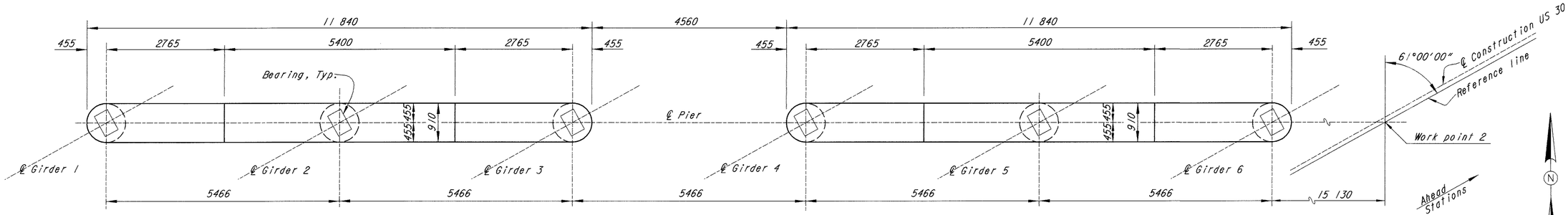
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20/41

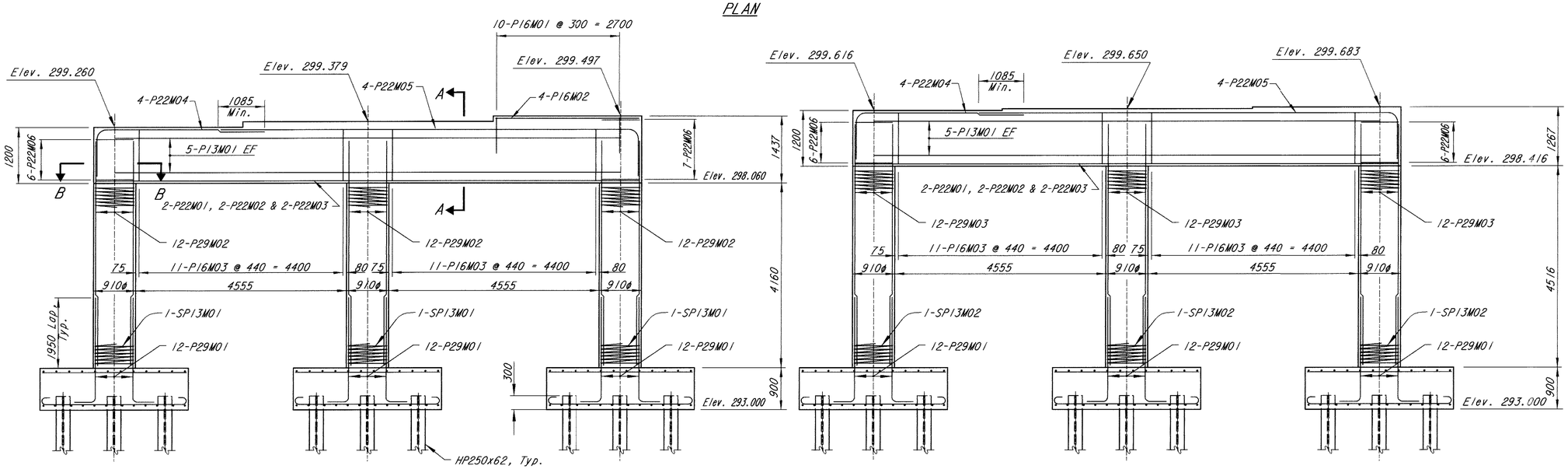
1858
2116

F:\Inroute\02230\06.dgn

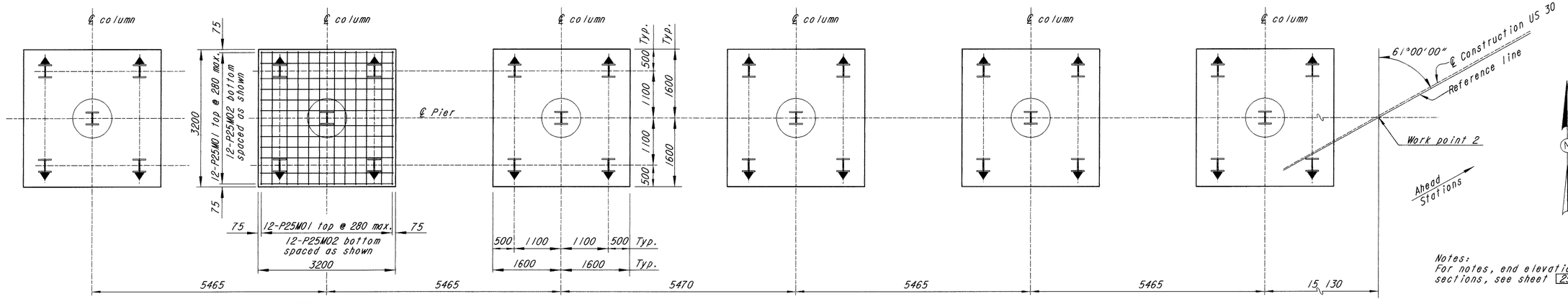
metric units



PLAN



ELEVATION



NOTE: Footing reinforcing steel shown is typical for all footings.

FOOTING PLAN

Notes:
For notes, end elevation and sections, see sheet 25/41 .

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MRS	—	17008995	

PIER 1 LEFT BRIDGE
BRIDGE NO. CRA-30-02330
OVER CR 18 (NEVADA WYNFORD RD.)

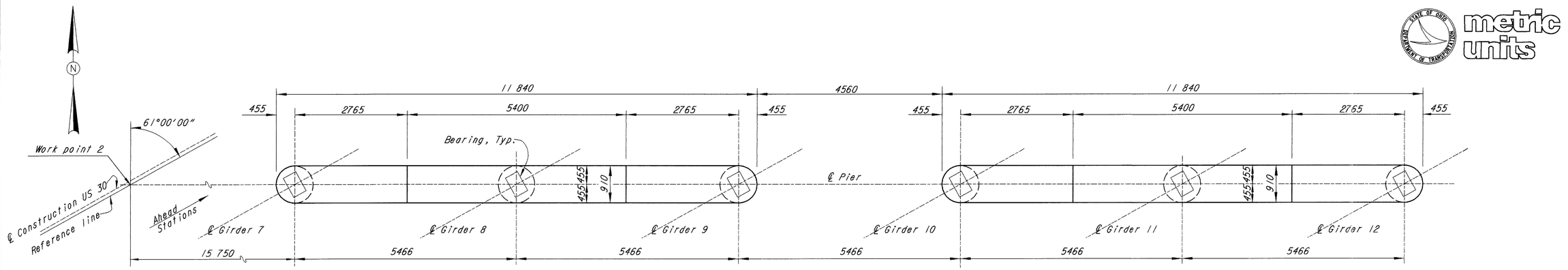
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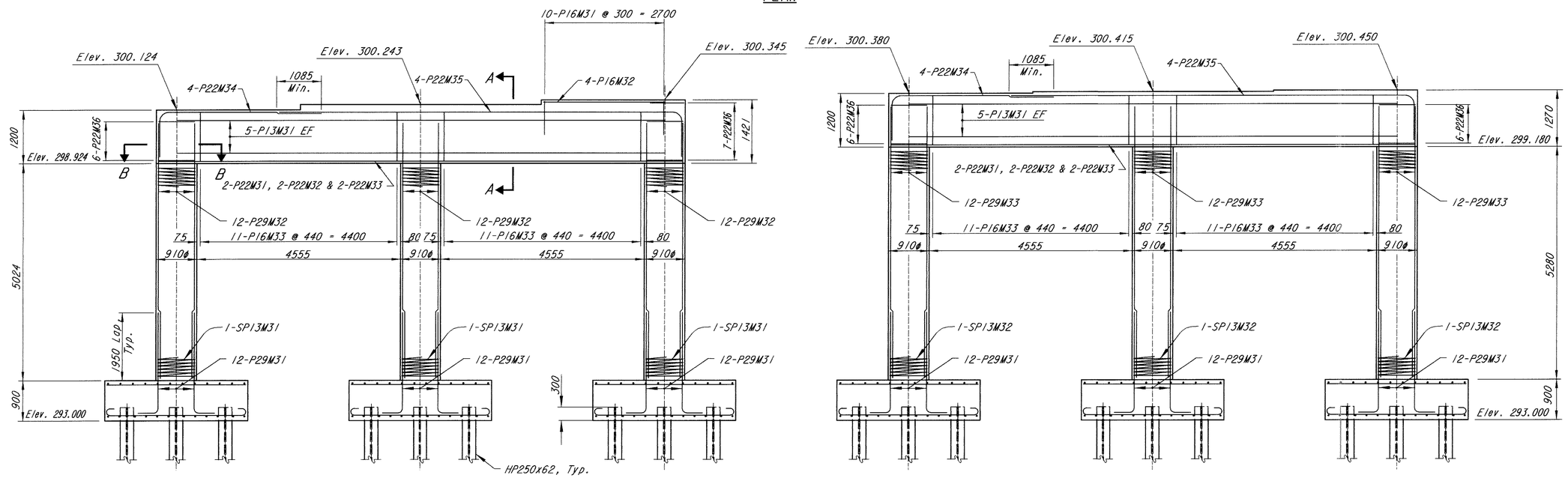
1859
2116

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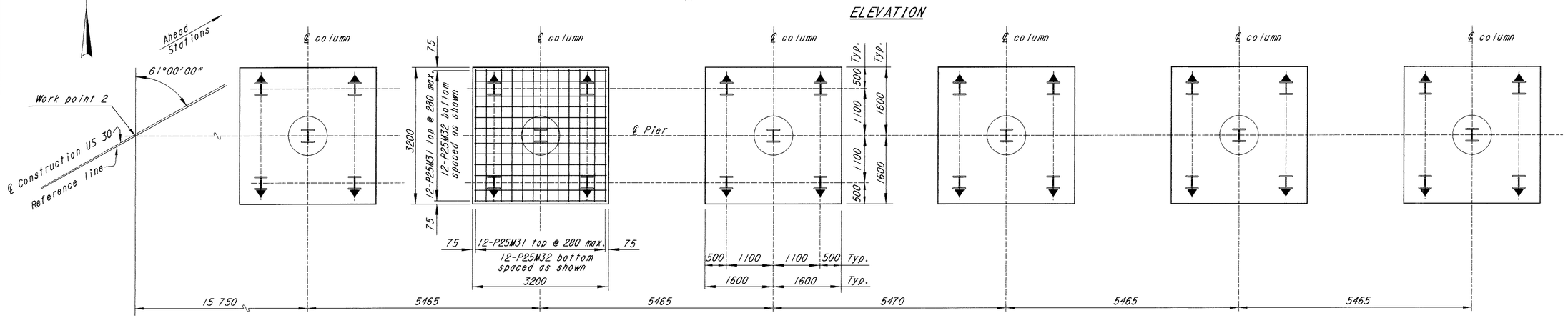
metric units



PLAN



ELEVATION



NOTE: Footing reinforcing steel shown is typical for all footings.

FOOTING PLAN

Notes:
For notes, end elevation and sections, see sheet 25/41 .

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700995	

PIER 1 RIGHT BRIDGE

BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

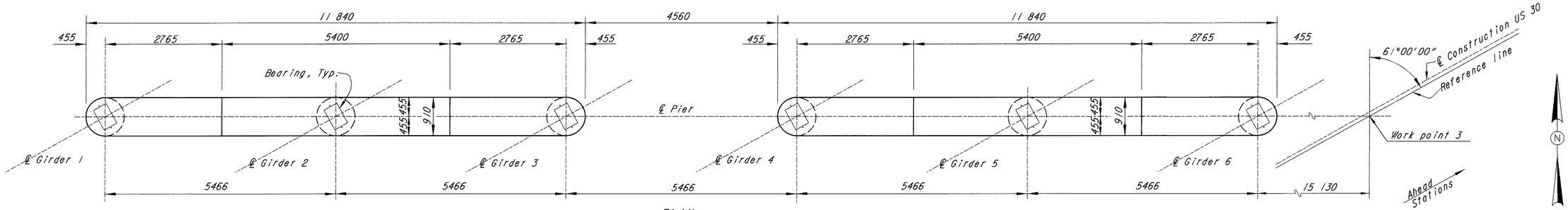
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22/41

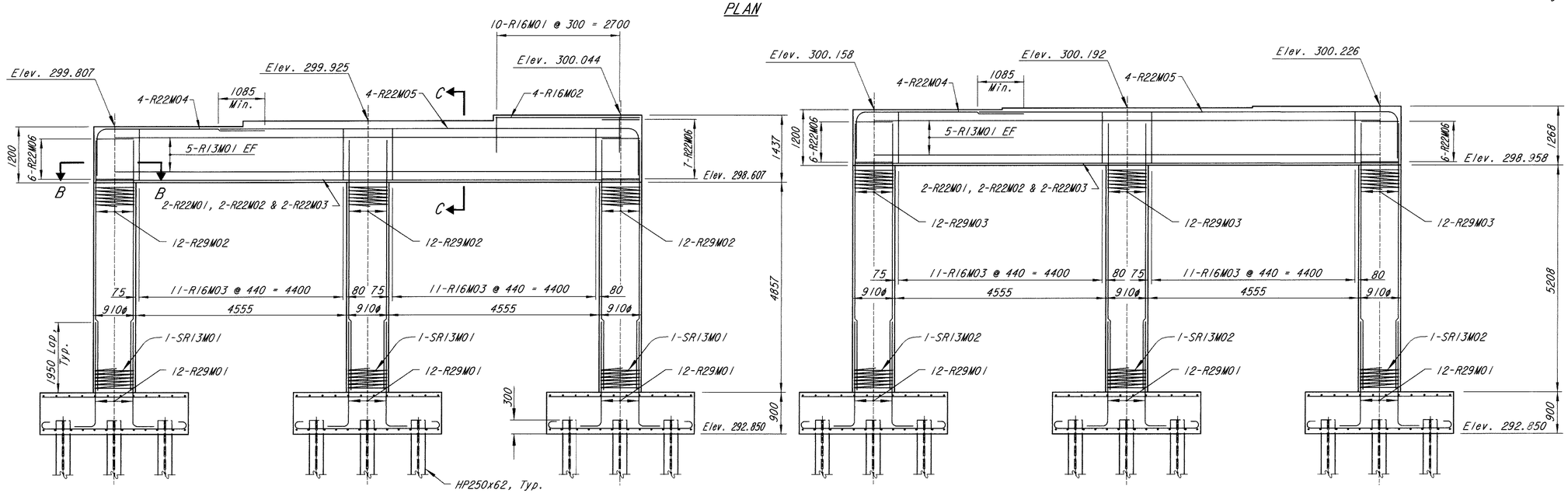
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2116

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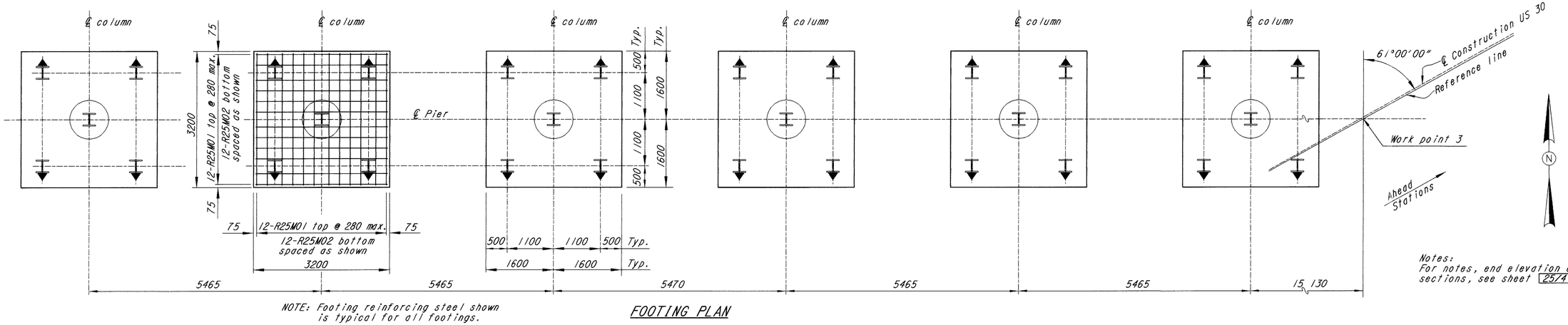
metric units



PLAN



ELEVATION



NOTE: Footing reinforcing steel shown is typical for all footings.

FOOTING PLAN

Notes:
For notes, end elevation and sections, see sheet 25/41 .

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MRS	—	1700995	

PIER 2 LEFT BRIDGE
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

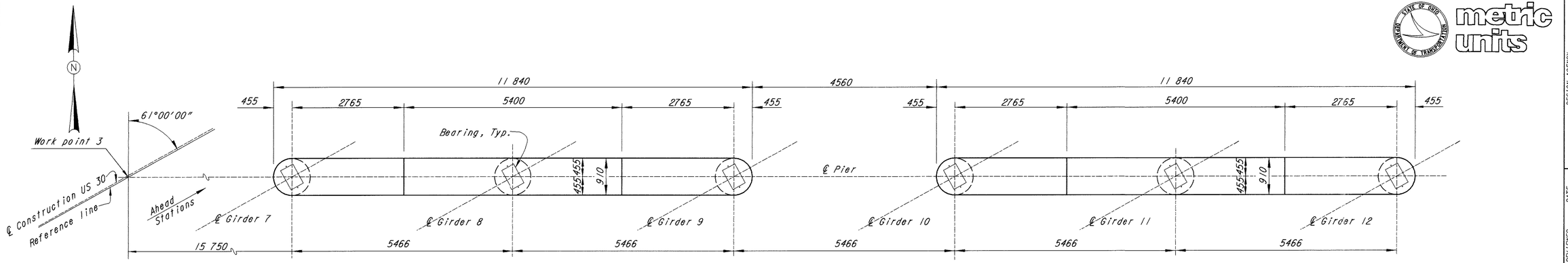
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23/41

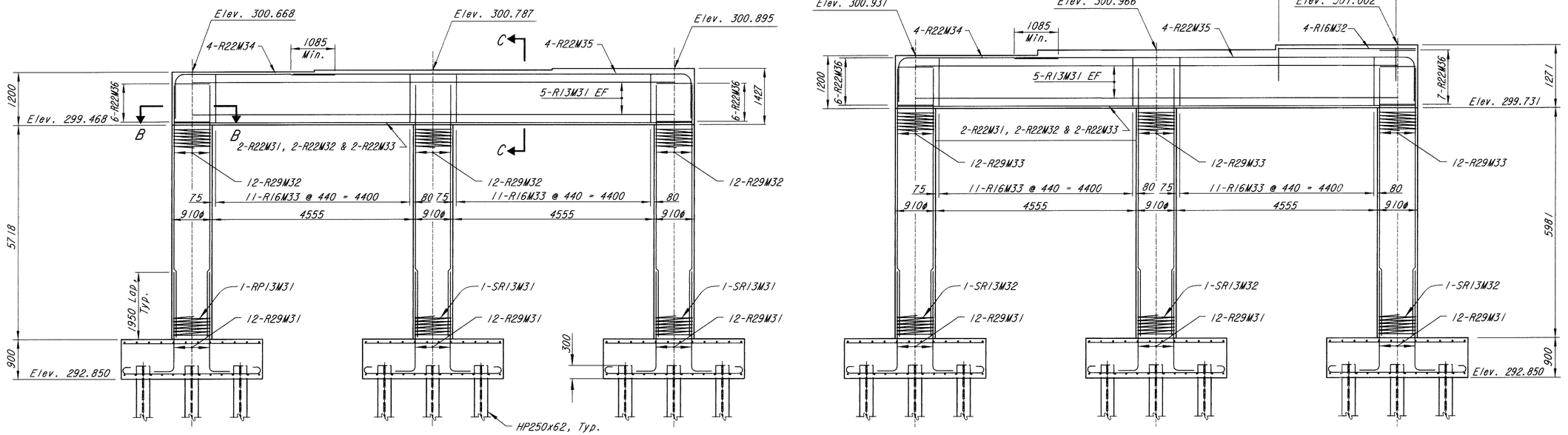
1861/2116

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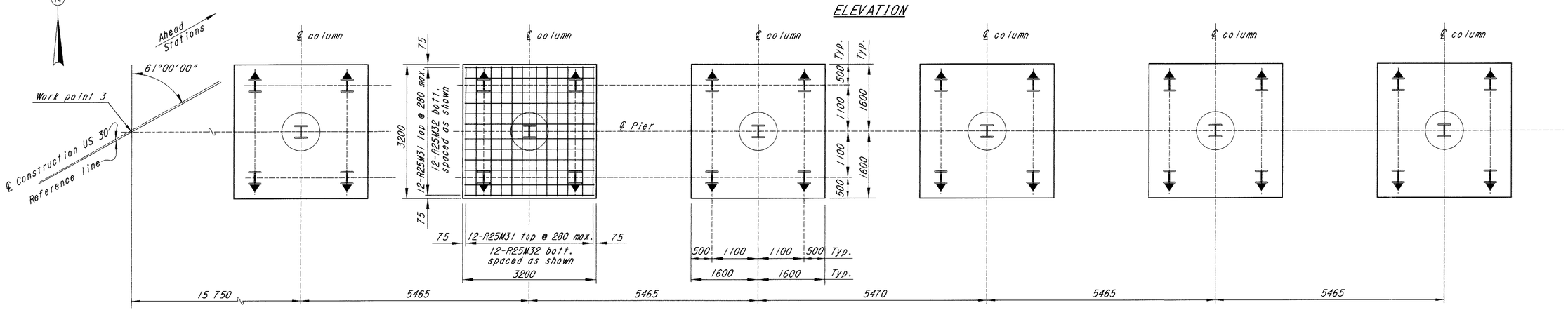
metric units



PLAN



ELEVATION



NOTE: Footing reinforcing steel shown is typical for all footings.

FOOTING PLAN

Notes:
For notes, end elevation and sections, see sheet 25/41.

Filename: 06298c4.dgn

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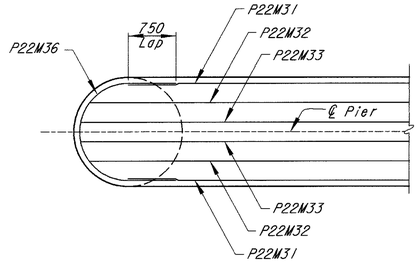
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BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

WYA/CRA-30-28.009/0.000

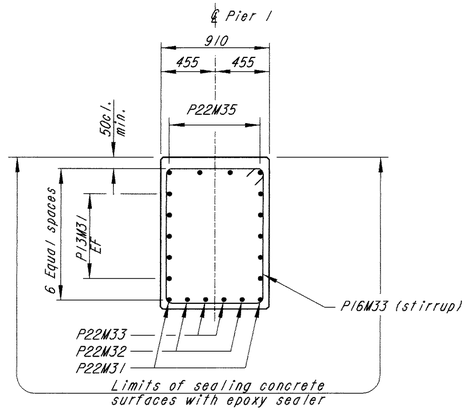
24/41

1862
2216

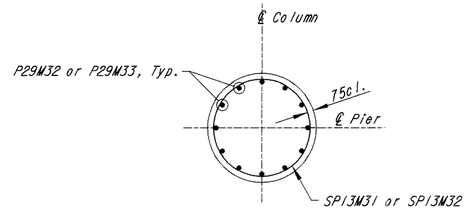
metric units



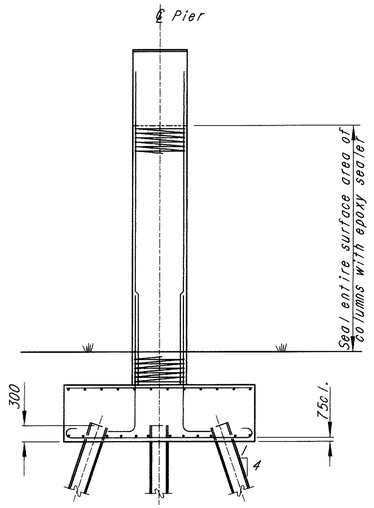
SECTION B-B
(Pier 1 shown Pier 2 similar))



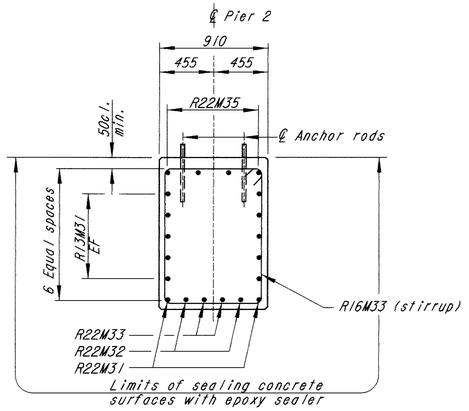
SECTION A-A
(Pier 1)



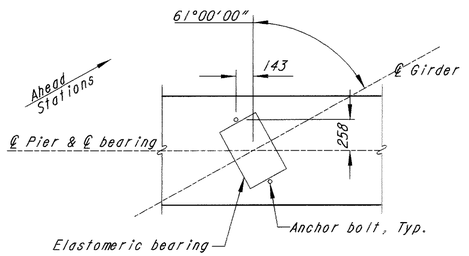
TYPICAL COLUMN SECTION
(Pier 1 shown Pier 2 similar))



END ELEVATION
Typical all piers



SECTION C-C
(Pier 2)



ANCHOR ROD LAYOUT
(Pier 2)

NOTES:
1. BRIDGE SEAT REINFORCEMENT: Reinforcing steel in the vicinity of the bridge seat shall be accurately placed to avoid interference with the drilling of bearing anchor holes or the pre-setting of bearing anchors.
2. BEARING ANCHORS: At the option of the Contractor, bearing anchors (or formed holes), located and supported by templates, may be cast-in-place.

3. EF = Each Face

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MRS	—	1700995	

PIER DETAILS
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

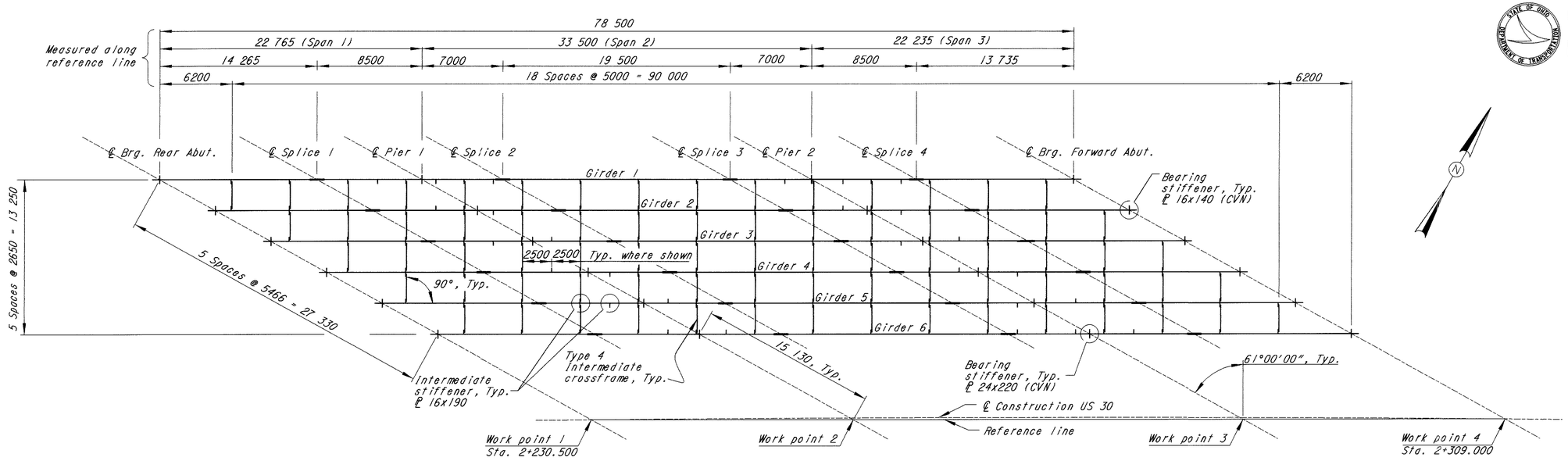
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25 / 41

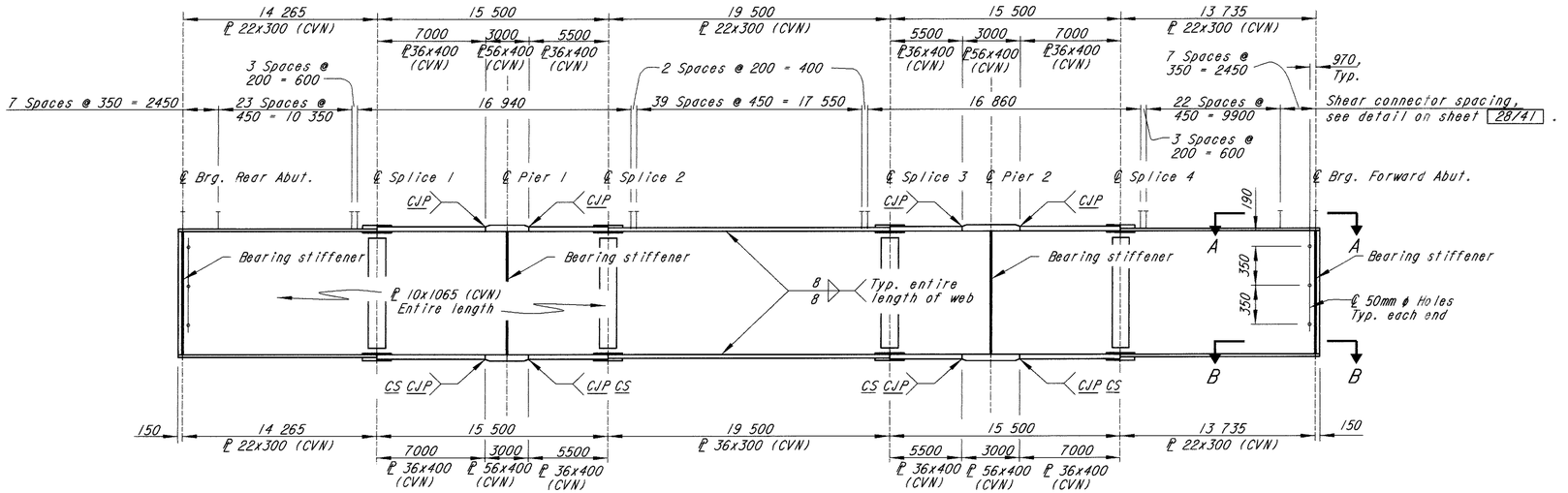
1863
2116

Filename: 06986s.dgn

metric units



FRAMING PLAN



GIRDER ELEVATION

Note: (Typical)
Intermediate stiffeners not shown for clarity.

NOTES:
1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. Supports for concrete deck finishing machine shall not be welded to girders. Contractor shall provide details of his support system to the Engineer prior to pouring deck.
3. Shear connectors shall be shop welded.
4. CS - Indicates butt weld subject to compressive stresses only.
   CJP - Indicates complete joint penetration weld.
5. For splice, shear connector, and flange transition details and Sections A-A and B-B, see sheet 28741.
6. All butt welds shall have weld reinforcement removed by grinding in direction parallel to centerline of girder.
7. For crossframe, stiffener and additional details, see Std. Dwg. GSD-1-96M.
8. All steel shall be galvanized per CMS 711.02.

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MRS	—	1700995	

FRAMING PLAN LEFT BRIDGE
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

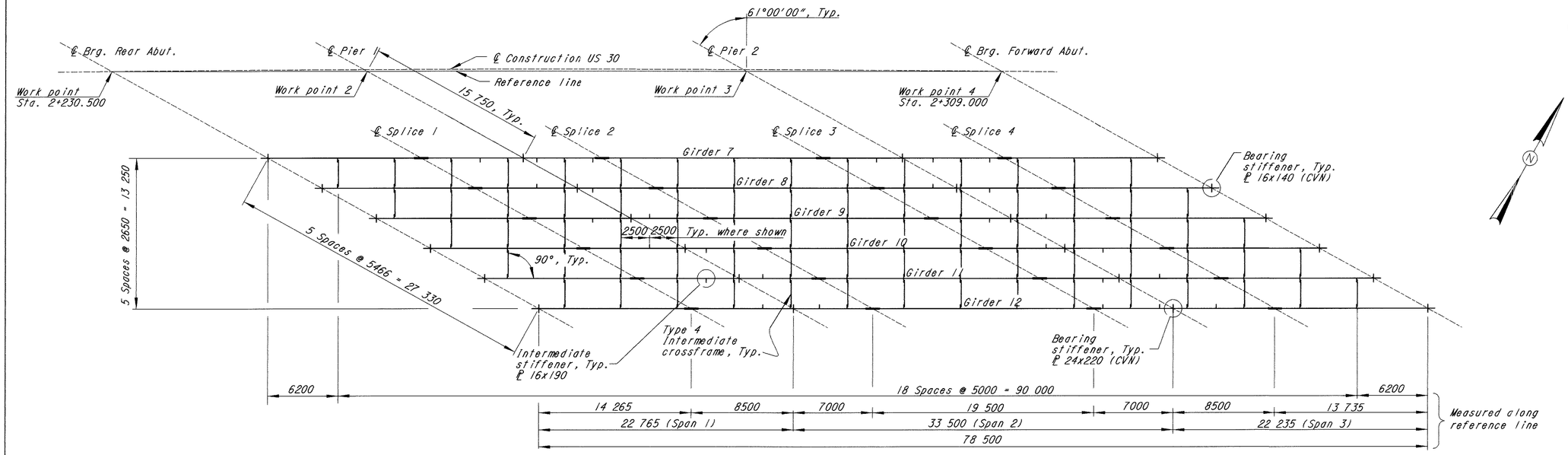
WYA/CRA-30-28.009/0.000

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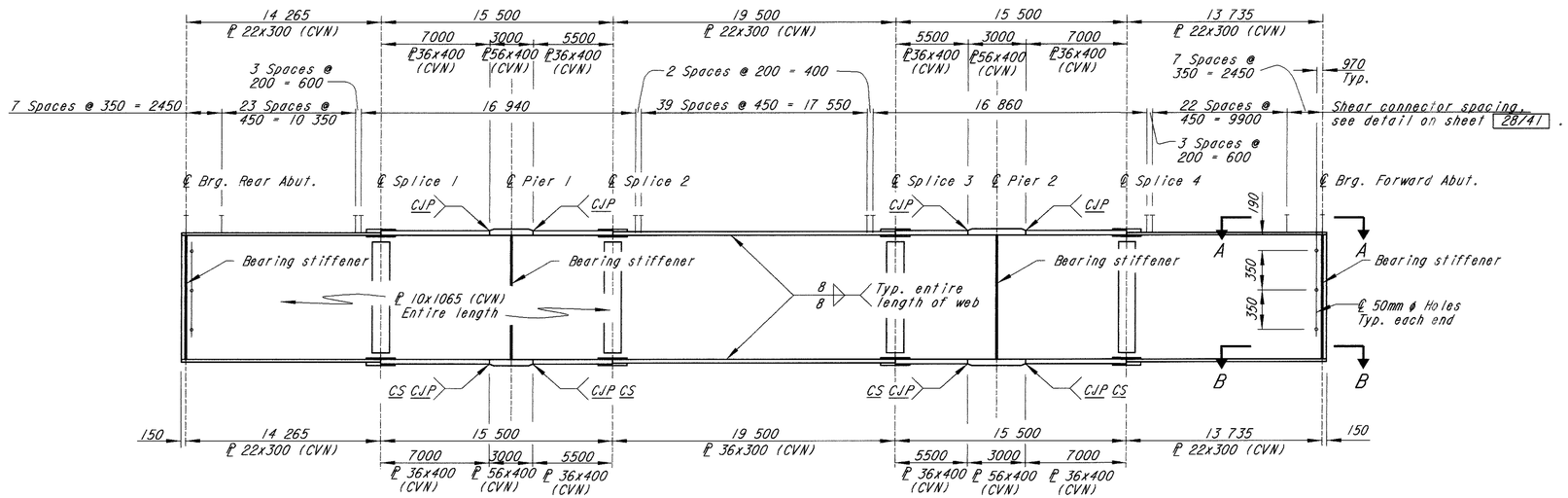
1864
2116

F:\Inroute\02350\plt.dgn

metric units



FRAMING PLAN



GIRDER ELEVATION

Note: (Typical)
Intermediate stiffeners not shown for clarity.

NOTES:
1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. Supports for concrete deck finishing machine shall not be welded to girders. Contractor shall provide details of his support system to the Engineer prior to pouring deck.
3. Shear connectors shall be shop welded.
4. CS - Indicates butt weld subject to compressive stresses only.
   CJP - Indicates complete joint penetration weld.
5. For splice, shear connector, and flange transition details and Sections A-A and B-B, see sheet 28/41 .
6. All butt welds shall have weld reinforcement removed by grinding in direction parallel to centerline of girder.
7. For crossframe, stiffener and additional details, see Std. Dwg. GSD-1-96M.
8. All steel shall be galvanized per CMS 711.02.

DESIGN AGENCY			
BALKE ENGINEERS			
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		STRUCTURE FILE NUMBER	1700995

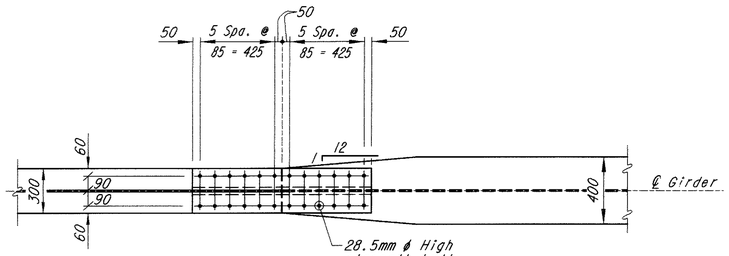
FRAMING PLAN RIGHT BRIDGE
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WINFORD RD.)

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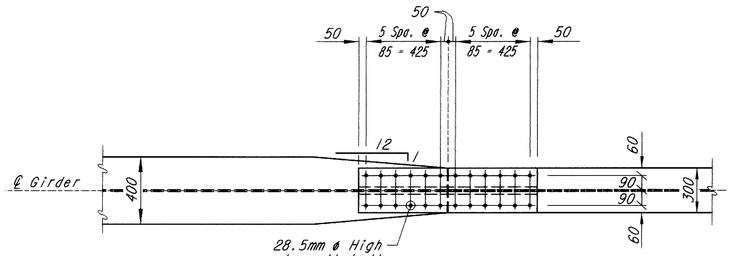
27 / 41

1865
2116

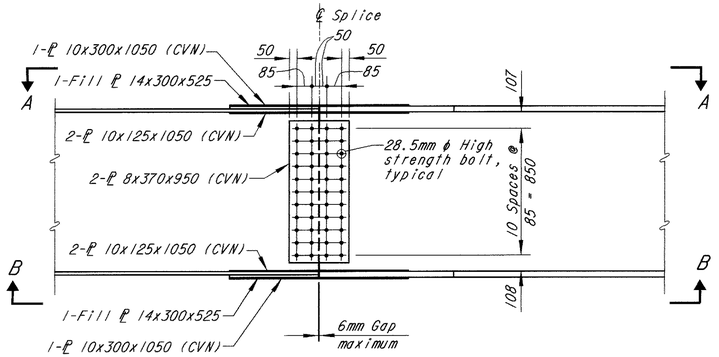
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VIEW A-A

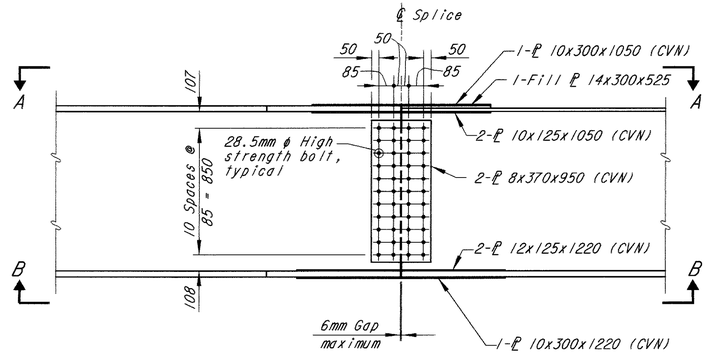


VIEW A-A



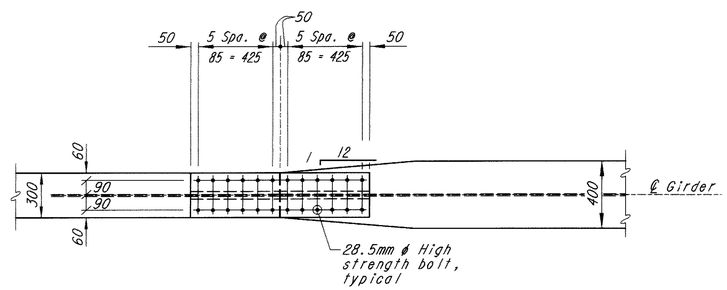
SPLICE ELEVATION

(Splice 1 shown, splice 4 opposite hand)

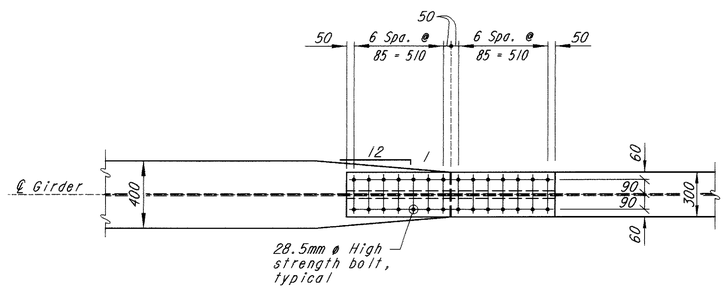


SPLICE ELEVATION

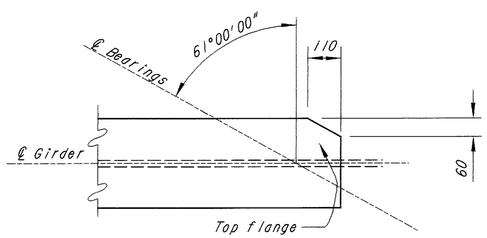
(Splice 2 shown, splice 3 opposite hand)



VIEW B-B

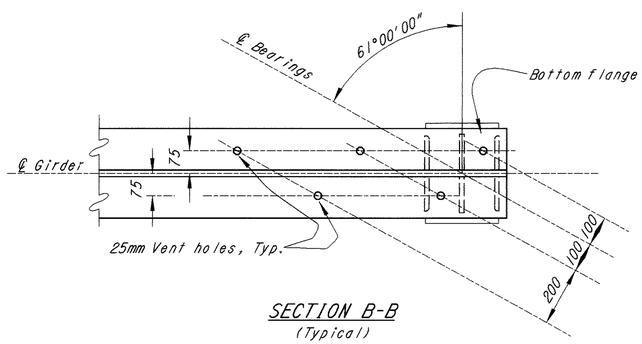


VIEW B-B



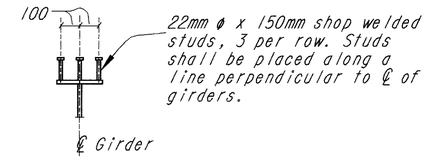
SECTION A-A

(Typical)

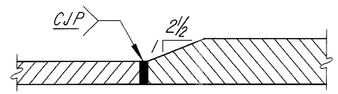


SECTION B-B

(Typical)



SHEAR CONNECTOR DETAIL



FLANGE THICKNESS TRANSITION DETAIL

SPLICE NOTES

1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. High strength bolts shall be 28.5mm diameter, A325M galvanized.
3. In web splice plates, bolt heads shall be placed on the exposed side of the fascia girders. In bottom flange splice plates, nuts shall be placed on top surface of bottom flange splice plates.

metric units

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CHECKED	MRS	REVISED	—
REVIEWED	CRS	STRUCTURE FILE NUMBER	1700895

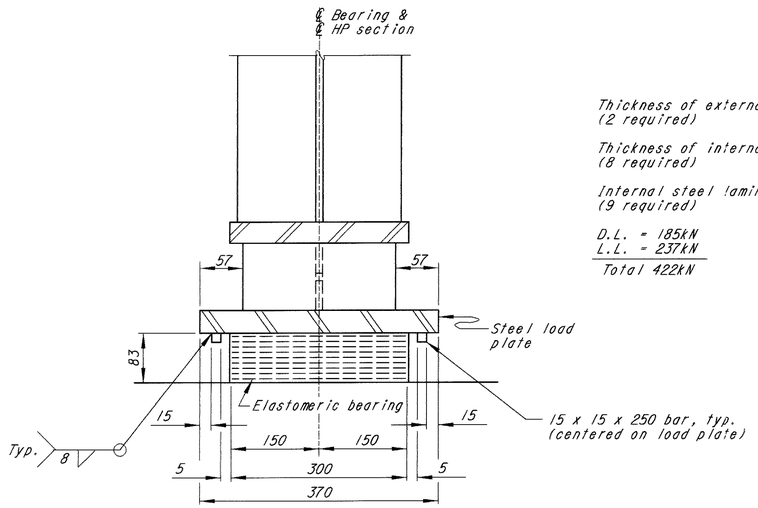
STRUCTURAL STEEL DETAILS
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA) WYNFORD RD.)

WYA/CRA-30-28.009/0.000

28 | 41

1866
2116

Filename: 062895s3.dgn



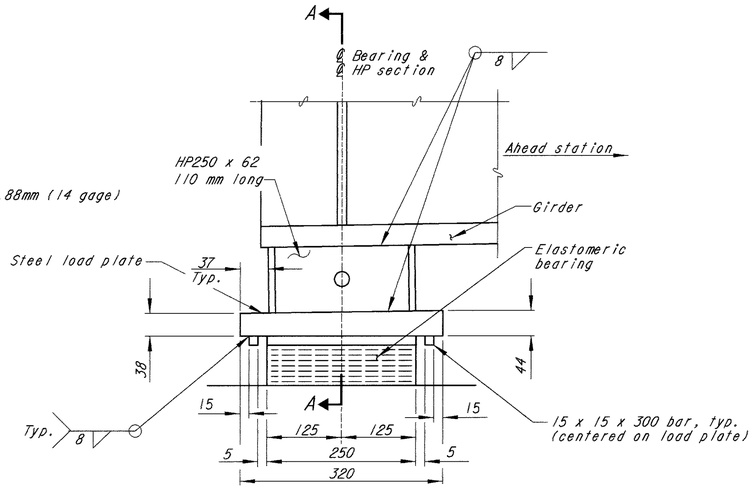
SECTION A-A

Thickness of external elastomer = 5mm
(2 required)

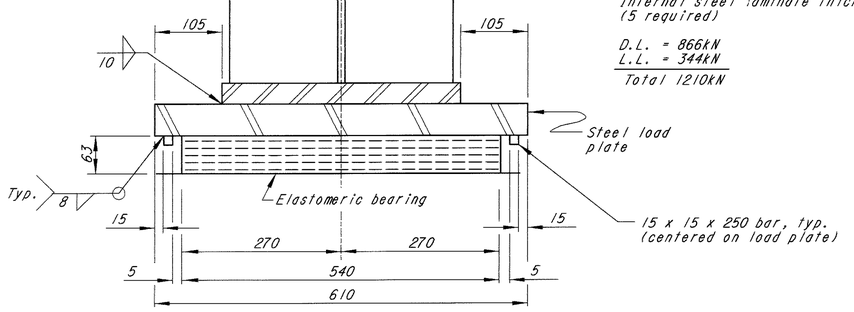
Thickness of internal elastomer = 7mm
(8 required)

Internal steel laminate thickness = 1.88mm (14 gage)
(9 required)

D.L. = 185kN
L.L. = 237kN
Total 422kN



ELEVATION
BEARING AT ABUTMENTS



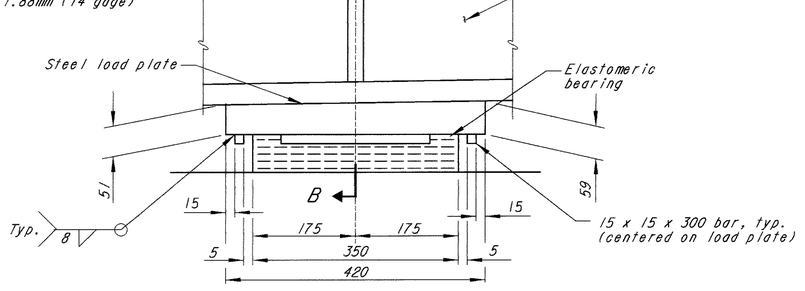
SECTION B-B

Thickness of external elastomer = 7mm
(2 required)

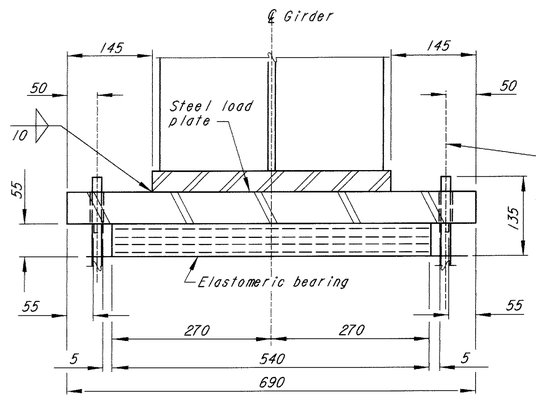
Thickness of internal elastomer = 10mm
(4 required)

Internal steel laminate thickness = 1.88mm (14 gage)
(5 required)

D.L. = 866kN
L.L. = 344kN
Total 1210kN



ELEVATION
BEARING AT PIER 1



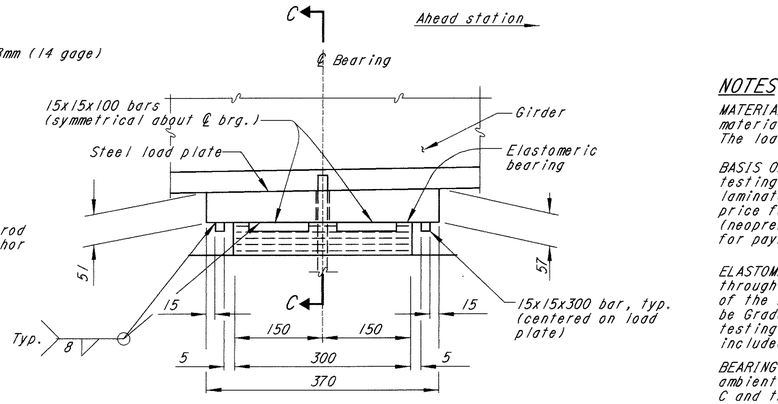
SECTION C-C

Thickness of external elastomer = 6mm
(2 required)

Thickness of internal elastomer = 8.5mm
(4 required)

Internal steel laminate thickness = 1.88mm (14 gage)
(5 required)

D.L. = 866kN
L.L. = 344kN
Total 1210kN



ELEVATION
BEARING AT PIER 2

NOTES

MATERIAL: The HP section and the steel load plate shall be the same material as the attached structural steel and be similarly galvanized. The load plate and HP section shall be shop welded to the girders

BASIS OF PAYMENT: The unit bid price shall include all materials, labor, testing, anchor rods and incidentals necessary to furnish and install laminated elastomeric bearings. Payment will be made at the contract price for Item 516, each, elastomeric bearings with internal laminates (neoprene). Cost of the HP section and load plate shall be included for payment with Item 863, Structural steel members.

ELASTOMERIC BEARINGS shall comply with item 516 and Articles 18.2.5 through 18.2.8 of Section 18, Bearing Devices, Division II, Construction of the AASHTO Standard Specification for Highway Bridges. Bearings shall be Grade 3, 50 durometer elastomer,and shall be subjected to the load testing requirements corresponding to Design Method A. Testing shall be included in the unit price bid for the bearings, each.

BEARING REPOSITIONING: If the steel is erected at an ambient temperature higher than 27° C or lower than 4° C and the bearing shear deflection exceeds 1/6 of the bearing height at 15° C (+/-) 5° C, the beams or girders shall be raised to allow the bearings to return to their undeformed shape at 15° C (+/-) 5° C.

metric units

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MRS	—	17008995	

BEARING DETAILS
BRIDGE NO. CRA-30-0223O
OVER CR 18 (NEVADA WINFORD RD.)

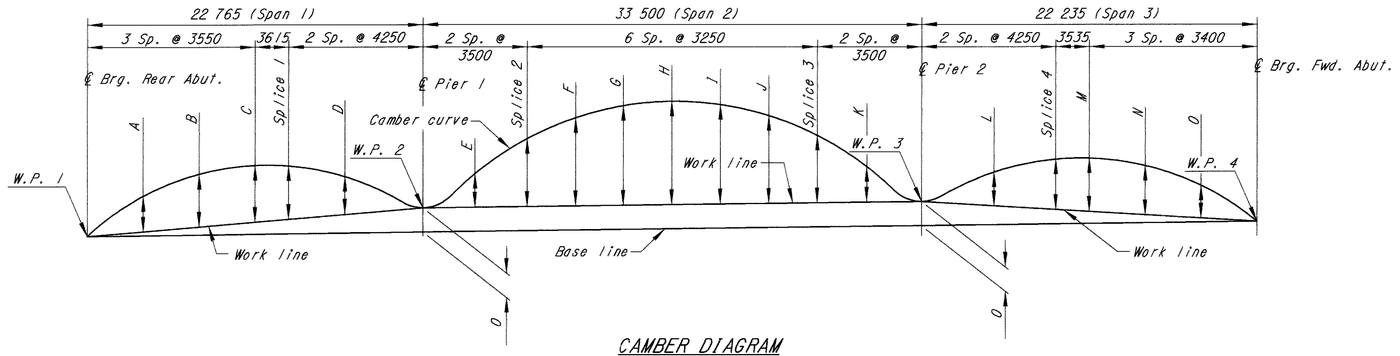
WYA/CRA-30-28.009/0.000

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1867
2116

Filename: 0223Bmdn.dgn

metric units



CAMBER DIAGRAM

DEFLECTION AND CAMBER TABLE (GIRDERS 1, 6, 7 AND 12)

	SPAN 1							SPAN 2										SPAN 3						
	REAR ABUTMENT	A	B	C	SPLICE 1	D	PIER 1	E	SPLICE 2	F	G	H	I	J	SPLICE 3	K	PIER 2	L	SPLICE 4	M	N	O	FORWARD ABUTMENT
Deflection due to weight of steel	0	1	2	1	0	0	0	1	4	6	8	8	8	6	4	2	0	0	0	1	1	1	0
Deflection due to remaining DL	0	5	7	7	4	0	0	4	12	20	26	28	26	20	12	5	0	0	3	6	6	4	0
Total	0	6	9	8	4	0	0	5	16	26	34	36	34	26	16	7	0	0	3	7	7	5	0

DEFLECTION AND CAMBER TABLE (GIRDERS 2 THRU 5 & 8 THRU 11)

	SPAN 1							SPAN 2										SPAN 3						
	REAR ABUTMENT	A	B	C	SPLICE 1	D	PIER 1	E	SPLICE 2	F	G	H	I	J	SPLICE 3	K	PIER 2	L	SPLICE 4	M	N	O	FORWARD ABUTMENT
Deflection due to weight of steel	0	1	2	1	0	0	0	1	4	6	8	8	8	6	4	2	0	0	0	1	1	1	0
Deflection due to remaining DL	0	8	11	10	6	0	0	7	18	30	38	41	38	30	19	7	0	0	4	9	9	7	0
Total	0	9	13	11	6	0	0	8	22	36	46	49	46	36	23	9	0	0	4	10	10	8	0

NOTES FOR CAMBER AND DEFLECTION

1. Work points (W.P.) are at the center of the girder, on the centerline of bearing.
2. Work lines are straight lines through the work points.
3. The base line is a straight line through W.P. 1 and W.P. 4.
4. Tabulated values in the deflection and camber table are measured from the work lines.

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DEFLECTION AND CAMBER DETAILS
BRIDGE NO. CRA-30-0223O
OVER CR 18 (NEVADA WYNFORD RD.)

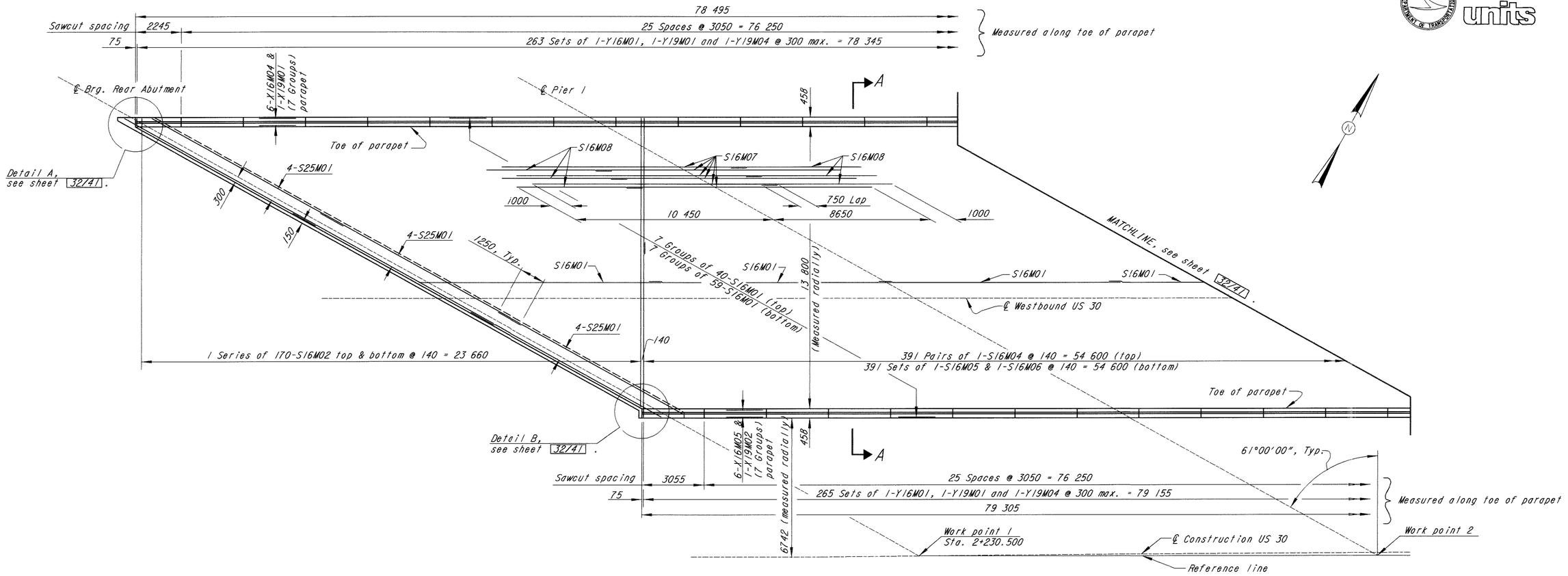
WYA/CRA-30-28.009/0.000

30 | 41

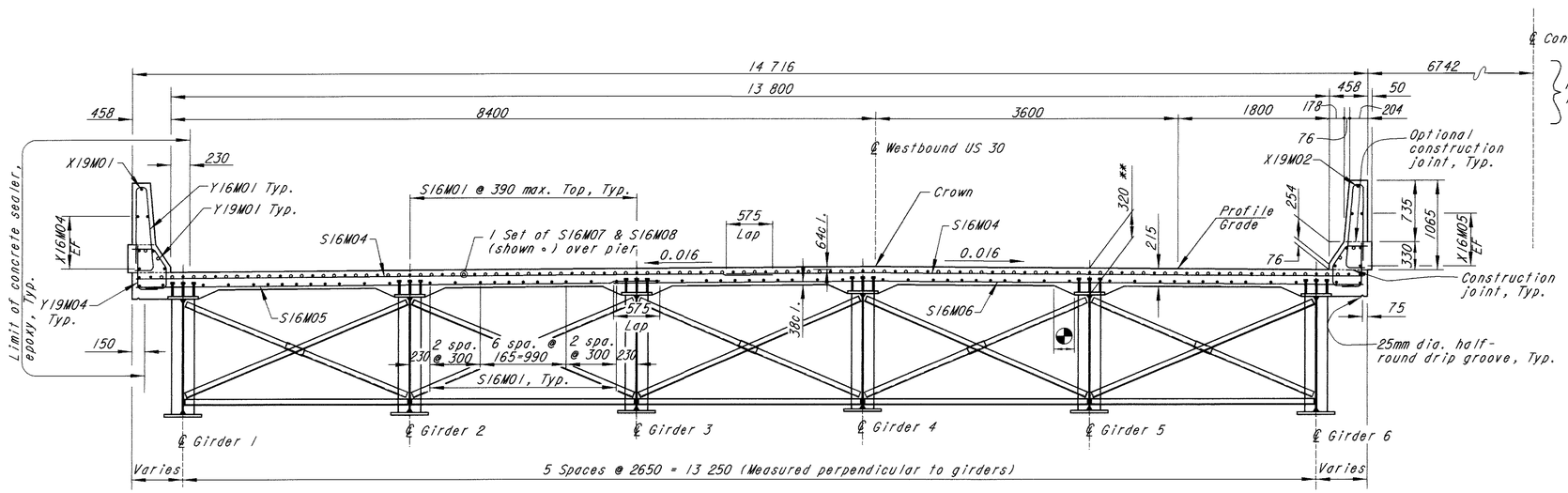
1868
2116

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metric units



DECK PLAN



SECTION A-A

NOTES:

1. ** DECK SLAB DEPTH: The distance shown from the top of the deck slab to the bottom of the top flange is the theoretical design dimension including the design haunch thickness of 105 mm. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per SS 842.
2. ◔ A HAUNCH WIDTH of 225mm shall be used for computing quantity of concrete. However the haunch width may vary between 150mm and 300mm.
3. Lap length for X16M04 & X16M05 bars is 600mm
4. For additional information on parapets and sawcuts, see Std. Dwg. BR-1M. Contrary to the standard drawing, sawcuts shall be sealed for the full length of the cut.

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MRS	—	1700995	

DECK PLAN LEFT BRIDGE
BRIDGE NO. CRA-30-00230
OVER CR 18 (NEVADA WYNFORD RD.)

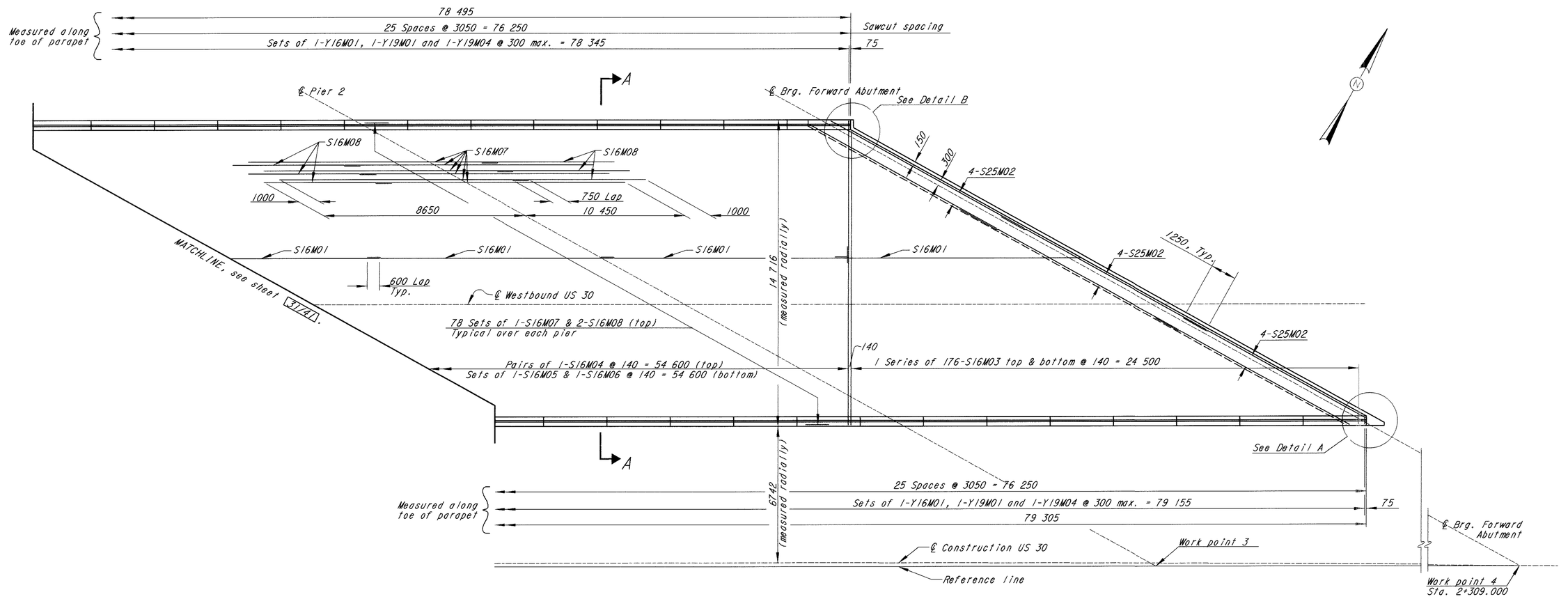
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31 / 41

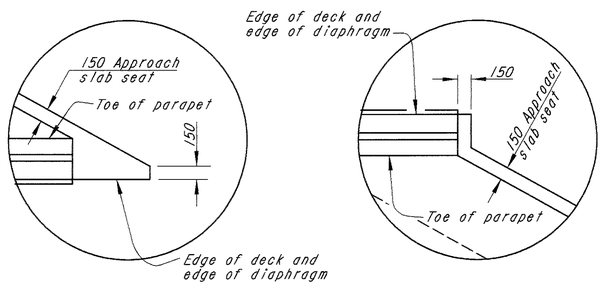
1869
2116

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metric units



DECK PLAN



DETAIL A

DETAIL B

NOTE:

1. For Section A-A, see sheet 31741.

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BALKE ENGINEERS
1848 Summit Road
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MRS	—	1700895	

DECK PLAN LEFT BRIDGE
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WINFORD RD.)

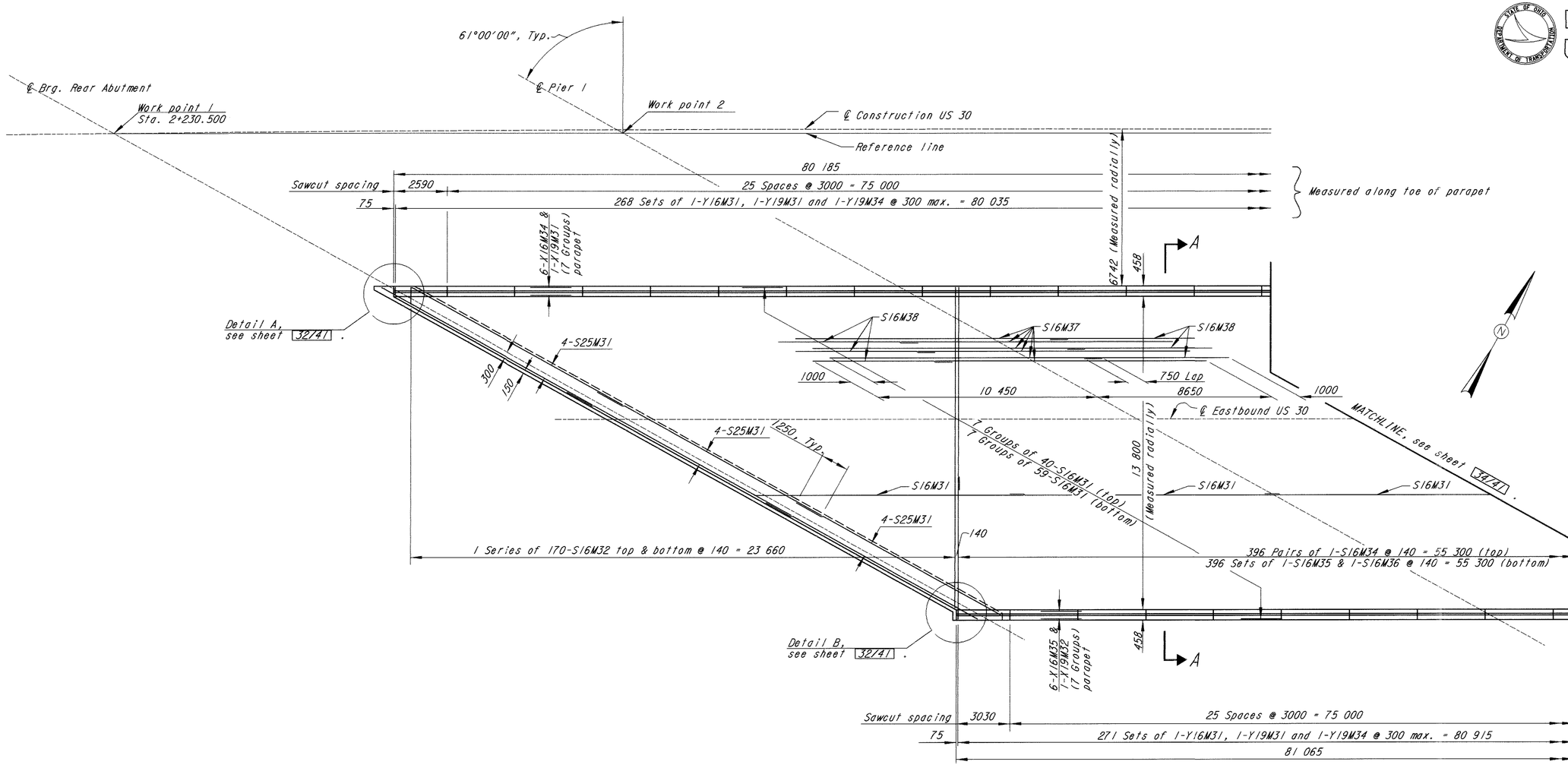
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32 / 41

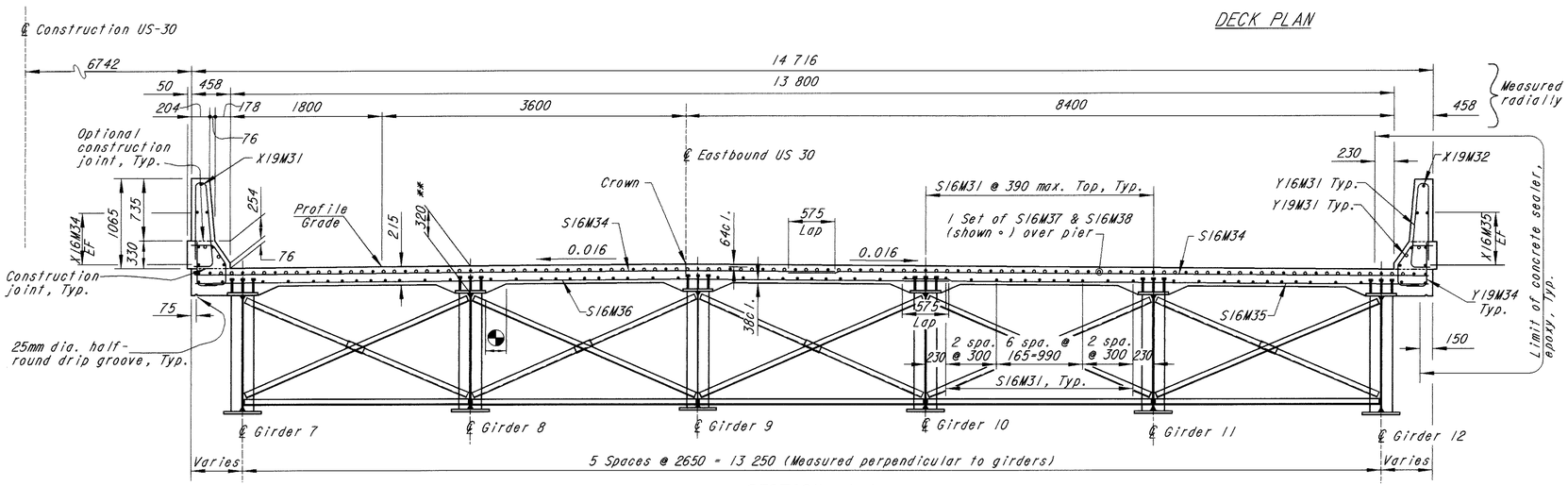
1870
2116

Filename: 02230bd4.DGN

metric units



DECK PLAN



SECTION A-A

NOTES:

1. ** DECK SLAB DEPTH: The distance shown from the top of the deck slab to the bottom of the top flange is the theoretical design dimension including the design haunch thickness of 105 mm. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per SS 842.

2. ◒ A HAUNCH WIDTH of 225mm shall be used for computing quantity of concrete. However the haunch width may vary between 150mm and 300mm.

3. Lap length for X16M34 & X16M35 bars is 600 mm

4. For additional information on parapets and sawcuts, see Std. Dwg. BR-1M. Contrary to the standard drawing, sawcuts shall be sealed for the full length of the cut.

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DECK PLAN RIGHT BRIDGE
BRIDGE NO. CRA-30-0223
OVER CR 18 (NEVADA WYNFORD RD.)

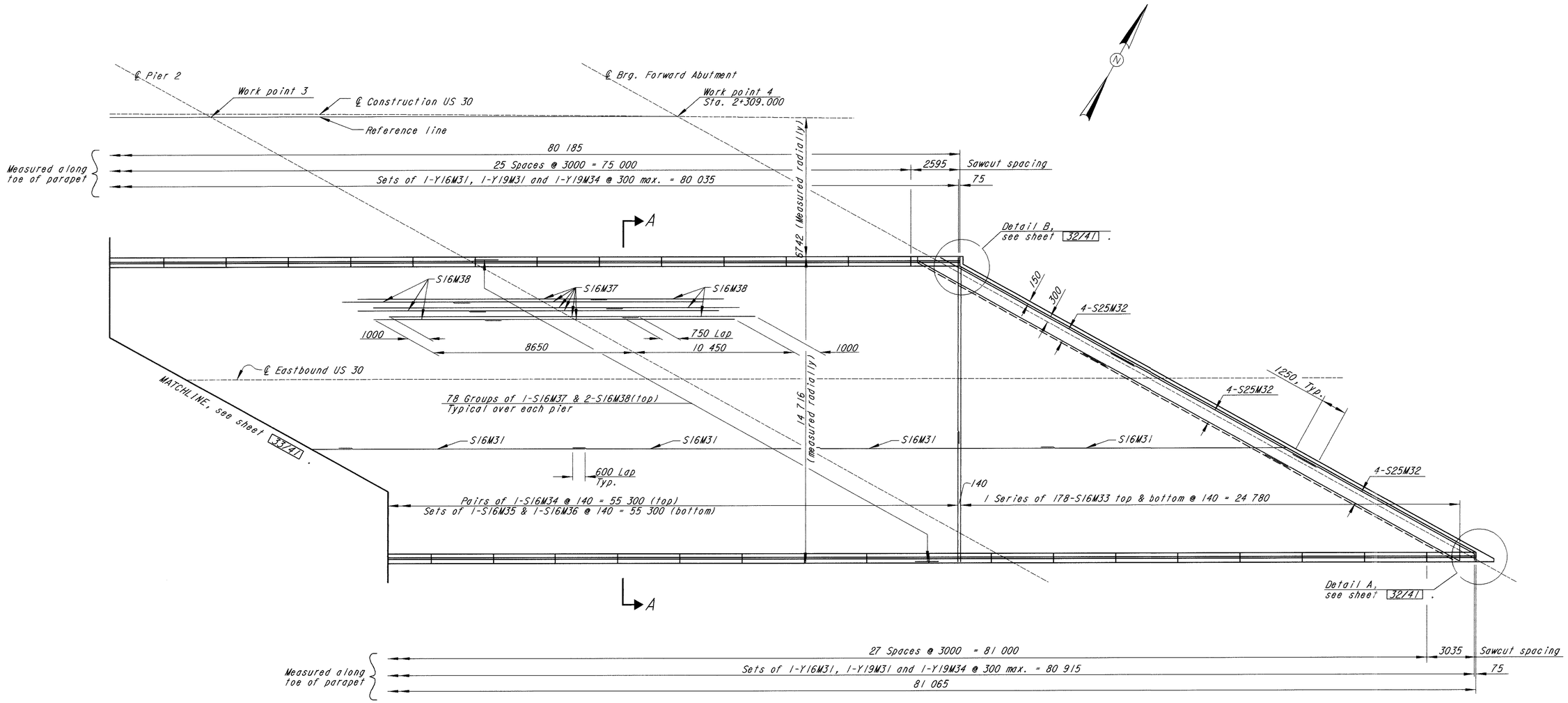
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33/41

1871/2116

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metric units



DECK PLAN

NOTE:

1. For Section A-A, see sheet 33/41 .

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MRS	—	1700995	

DECK PLAN RIGHT BRIDGE
BRIDGE NO. CRA-30-0223
OVER CR 18 (NEVADA WYNFORD RD.)

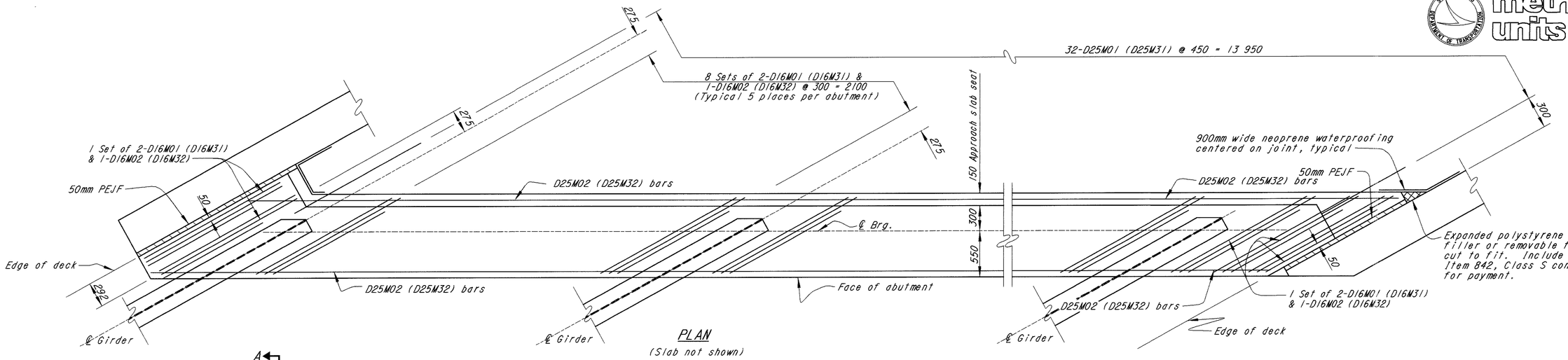
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34/41

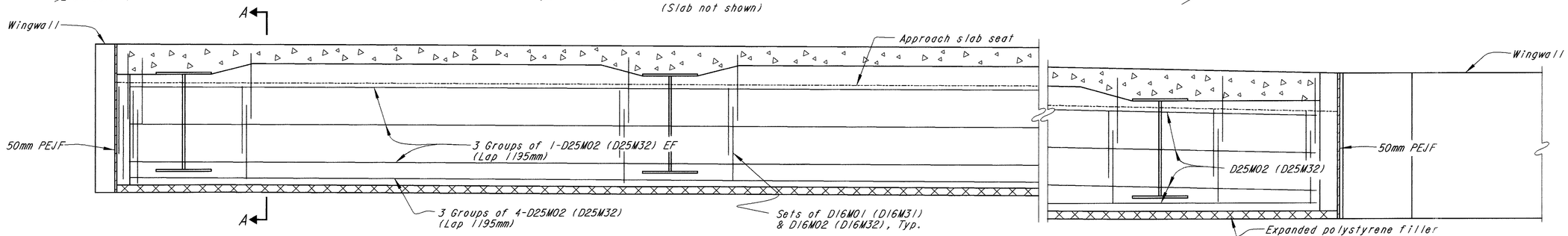
1872
2116

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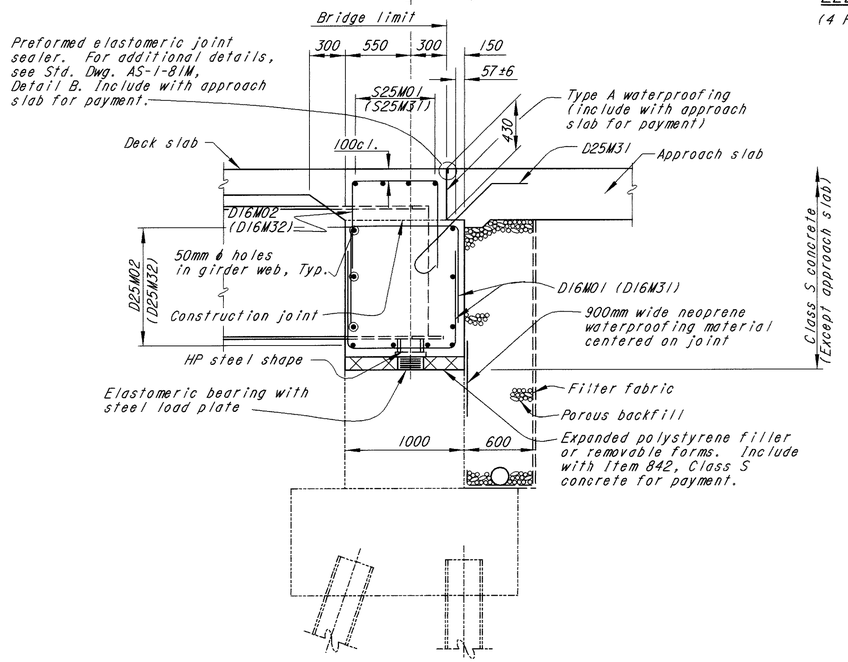
metric units



PLAN
(Slab not shown)



ELEVATION
(4 Required)



SECTION A-A

NOTES:
1. For additional information see Std. Dwg. SICD-1-96M.
2. Work this sheet with DECK PLAN sheets 31/41 thru 34/41 & 9/44 thru 20/41 .
3. PEJF = Preformed Expansion Joint Filler
   EF = Each Face
4. END-DIAPHRAGM CONCRETE shall be placed during days when sudden temperature changes are unlikely and be completed at least 4 hours prior to the concrete placement day's peak ambient temperature.
5. ABUTMENT BACKFILL above the bridge seat shall not be placed until after the concrete deck slab has cured for at least 48 hours. Backfill shall be placed simultaneously at both abutments.
6. DIAPHRAGM concrete encasing the structural member sections shall be placed at least 48 hours before the actual deck concrete is placed.
7. Bar marks shown " ( ) " are for the right bridge. Unenclosed bar marks are for the left bridge.

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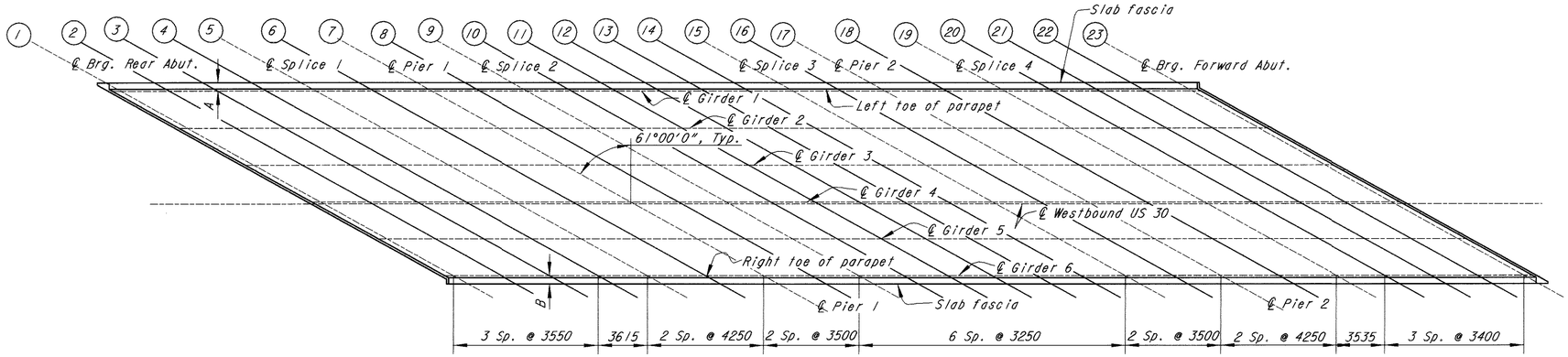
ABUTMENT DIAPHRAGM DETAILS
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

WYA/CRA-30-28.009/0.000

35/41

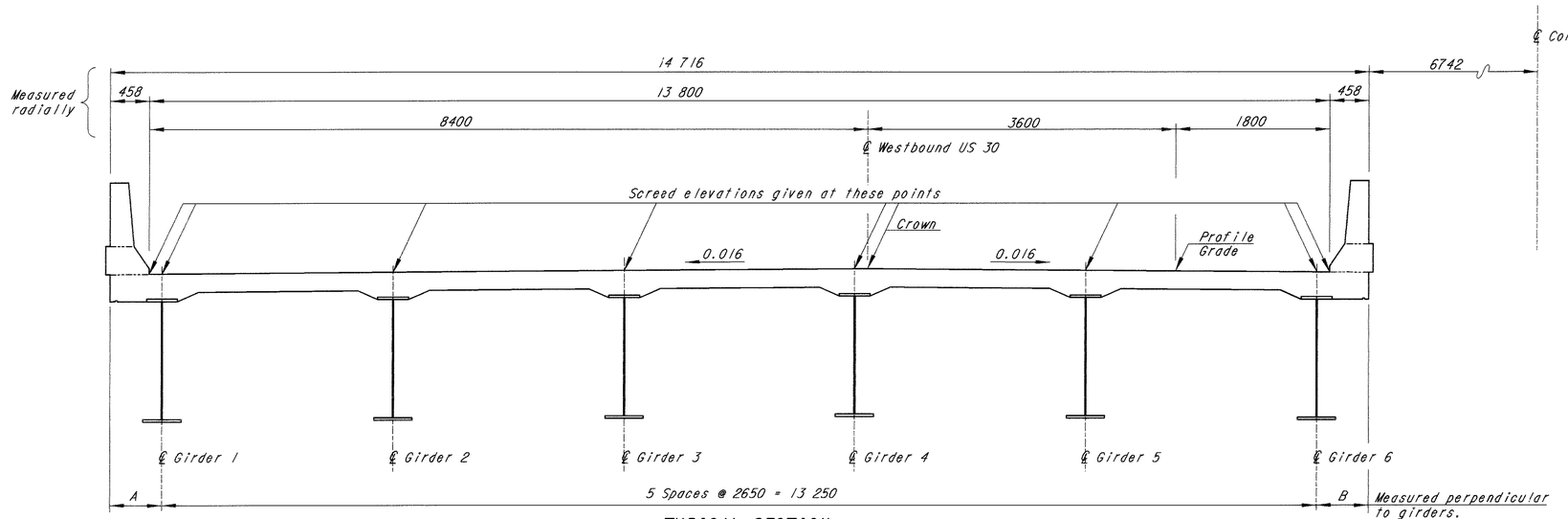
1873
2116

File name = 02230d5.dgn



PLAN

SCREED ELEVATIONS										Fascia Offsets		
Location	Left T.O.P.	Girder 1	Girder 2	Girder 3	Girder 4	℄ US 30 W.B.	Girder 5	Girder 6	Right T.O.P.	A	B	Location
Grid line 1	300.454	300.451	300.570	300.689	300.808	300.821	300.850	300.882	300.886	371	735	Grid line 1
Grid line 2	300.516	300.515	300.636	300.755	300.874	300.886	300.915	300.945	300.948	433	693	Grid line 2
Grid line 3	300.575	300.577	300.698	300.817	300.936	300.945	300.975	301.004	301.007	492	654	Grid line 3
Grid line 4	300.628	300.632	300.753	300.872	300.991	300.998	301.029	301.059	301.061	548	617	Grid line 4
Grid line 5	300.680	300.686	300.806	300.925	301.044	301.050	301.081	301.112	301.114	602	583	Grid line 5
Grid line 6	300.741	300.750	300.869	300.988	301.107	301.110	301.142	301.175	301.176	662	547	Grid line 6
Grid line 7	300.807	300.819	300.938	301.056	301.175	301.177	301.209	301.242	301.243	717	516	Grid line 7
Grid line 8	300.869	300.882	301.003	301.122	301.241	301.241	301.274	301.305	301.305	760	493	Grid line 8
Grid line 9	300.935	300.950	301.072	301.191	301.309	301.309	301.342	301.372	301.372	800	473	Grid line 9
Grid line 10	300.997	301.014	301.138	301.257	301.375	301.374	301.408	301.433	301.433	834	456	Grid line 10
Grid line 11	301.056	301.074	301.201	301.320	301.436	301.435	301.469	301.493	301.493	866	443	Grid line 11
Grid line 12	301.110	301.129	301.256	301.375	301.491	301.490	301.524	301.547	301.546	895	432	Grid line 12
Grid line 13	301.158	301.178	301.305	301.424	301.539	301.538	301.573	301.596	301.596	922	423	Grid line 13
Grid line 14	301.201	301.222	301.347	301.466	301.581	301.580	301.615	301.641	301.641	946	417	Grid line 14
Grid line 15	301.241	301.264	301.386	301.505	301.620	301.618	301.653	301.682	301.682	968	413	Grid line 15
Grid line 16	301.285	301.309	301.428	301.547	301.661	301.660	301.695	301.728	301.727	989	412	Grid line 16
Grid line 17	301.332	301.357	301.475	301.594	301.708	301.706	301.742	301.776	301.775	1007	414	Grid line 17
Grid line 18	301.399	301.425	301.543	301.662	301.776	301.774	301.810	301.844	301.843	1025	420	Grid line 18
Grid line 19	301.470	301.495	301.615	301.734	301.848	301.846	301.882	301.915	301.915	1038	430	Grid line 19
Grid line 20	301.531	301.557	301.677	301.796	301.910	301.908	301.944	301.976	301.975	1046	441	Grid line 20
Grid line 21	301.585	301.611	301.732	301.850	301.964	301.963	301.999	302.031	302.031	1052	455	Grid line 21
Grid line 22	301.638	301.664	301.784	301.902	302.017	302.015	302.051	302.084	302.084	1054	472	Grid line 22
Grid line 23	301.685	301.711	301.830	301.948	302.063	302.062	302.098	302.132	302.133	1054	491	Grid line 23



TYPICAL SECTION

NOTES:
SCREED ELEVATIONS shown are for the deck slab surface prior to concrete placement. Allowance has been made for anticipated calculated dead load deflections.

T.O.P. = Toe Of Parapet

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6/29/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700995	

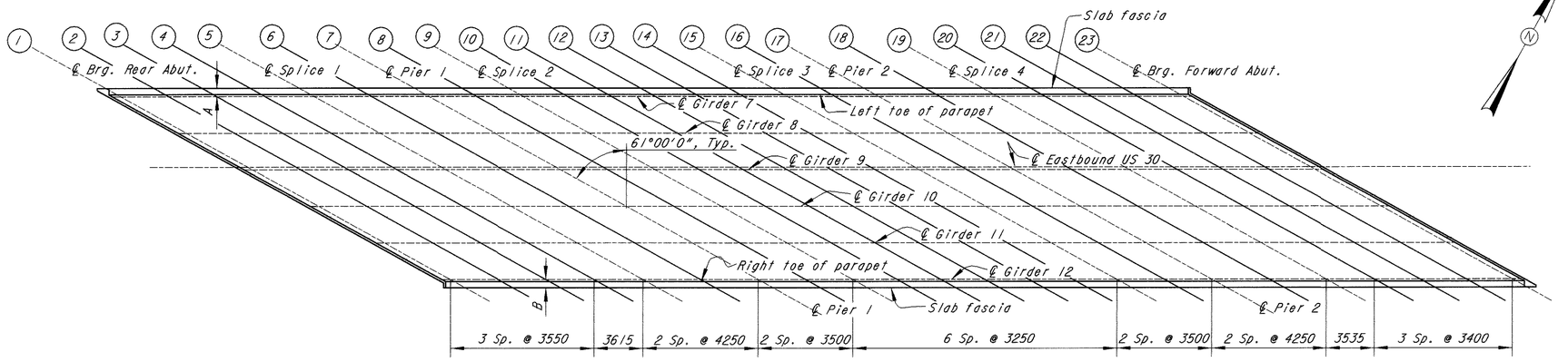
SCREED ELEVATIONS LEFT BRIDGE
BRIDGE NO. CRA-30-0223D
OVER CR 18 (NEVADA WYNFORD RD.)

WYA/CRA-30-28.009/0.000

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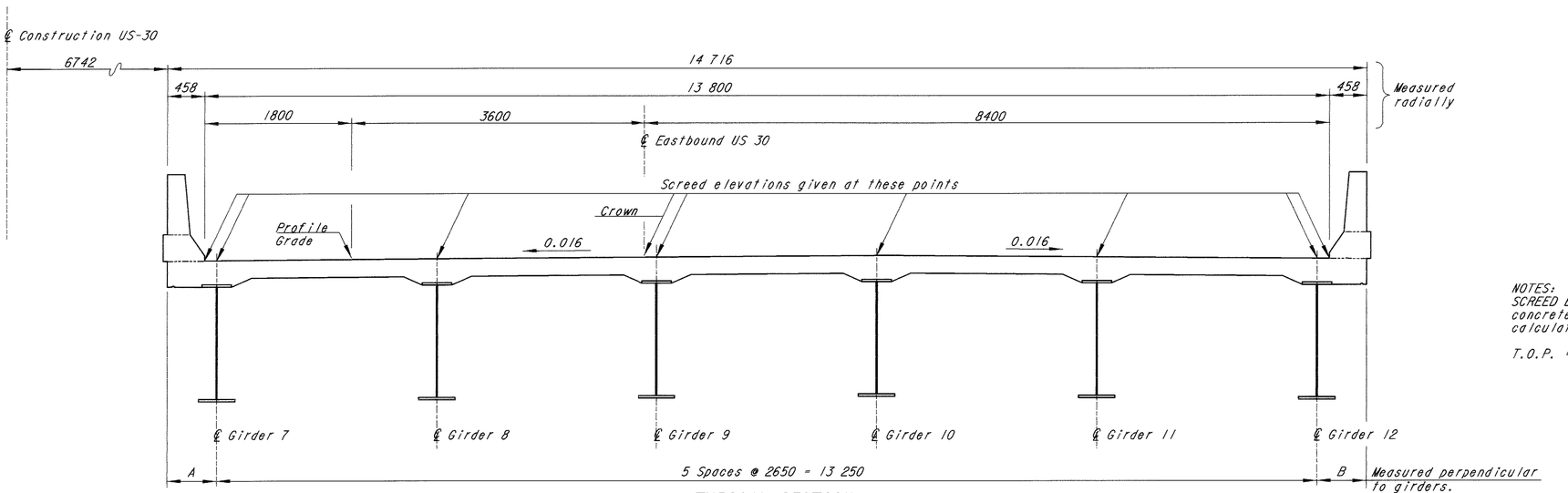
1874
2116

Filename: 0223DSEL.dgn



PLAN

SCREED ELEVATIONS										Fascia Offsets		
Location	Left T.O.P.	Girder 7	Girder 8	Girder 9	Girder 10	℄ US 30 E.B.	Girder 11	Girder 12	Right T.O.P.	A	B	Location
Grid line 1	301.292	301.317	301.436	301.539	301.573	301.533	301.608	301.642	301.641	1000	391	Grid line 1
Grid line 2	301.357	301.382	301.502	301.605	301.639	301.599	301.674	301.706	301.705	1018	391	Grid line 2
Grid line 3	301.417	301.443	301.563	301.666	301.700	301.660	301.735	301.766	301.765	1035	395	Grid line 3
Grid line 4	301.472	301.498	301.618	301.721	301.755	301.714	301.790	301.821	301.821	1049	401	Grid line 4
Grid line 5	301.525	301.552	301.671	301.774	301.808	301.767	301.843	301.877	301.876	1060	410	Grid line 5
Grid line 6	301.587	301.614	301.734	301.836	301.871	301.829	301.905	301.940	301.940	1069	425	Grid line 6
Grid line 7	301.655	301.683	301.802	301.904	301.939	301.898	301.974	302.009	302.009	1074	444	Grid line 7
Grid line 8	301.719	301.747	301.867	301.970	302.004	301.963	302.039	302.072	302.072	1075	463	Grid line 8
Grid line 9	301.787	301.815	301.936	302.039	302.074	302.033	302.109	302.140	302.140	1073	485	Grid line 9
Grid line 10	301.852	301.880	302.002	302.105	302.140	302.099	302.175	302.203	302.203	1068	508	Grid line 10
Grid line 11	301.914	301.941	302.064	302.168	302.203	302.162	302.238	302.263	302.264	1061	533	Grid line 11
Grid line 12	301.969	301.996	302.119	302.223	302.258	302.217	302.294	302.318	302.319	1052	561	Grid line 12
Grid line 13	302.018	302.045	302.168	302.273	302.308	302.267	302.343	302.369	302.371	1040	592	Grid line 13
Grid line 14	302.062	302.088	302.209	302.315	302.350	302.310	302.386	302.414	302.417	1025	625	Grid line 14
Grid line 15	302.102	302.127	302.248	302.355	302.390	302.350	302.426	302.456	302.459	1008	660	Grid line 15
Grid line 16	302.147	302.171	302.290	302.397	302.433	302.393	302.468	302.503	302.507	987	701	Grid line 16
Grid line 17	302.195	302.218	302.337	302.445	302.481	302.441	302.516	302.552	302.556	963	745	Grid line 17
Grid line 18	302.264	302.285	302.404	302.514	302.550	302.510	302.585	302.621	302.626	930	802	Grid line 18
Grid line 19	302.337	302.357	302.476	302.587	302.623	302.584	302.659	302.694	302.699	893	863	Grid line 19
Grid line 20	302.400	302.418	302.538	302.650	302.686	302.648	302.722	302.755	302.762	859	918	Grid line 20
Grid line 21	302.455	302.472	302.592	302.705	302.741	302.703	302.778	302.812	302.819	823	973	Grid line 21
Grid line 22	302.509	302.524	302.643	302.759	302.795	302.757	302.831	302.866	302.874	785	1030	Grid line 22
Grid line 23	302.558	302.571	302.689	302.806	302.842	302.805	302.879	302.915	302.924	744	1091	Grid line 23



TYPICAL SECTION

NOTES:
SCREED ELEVATIONS shown are for the deck slab surface prior to concrete placement. Allowance has been made for anticipated calculated dead load deflections.

T.O.P. = Toe Of Parapet

File Name: 028006Z1.dgn

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

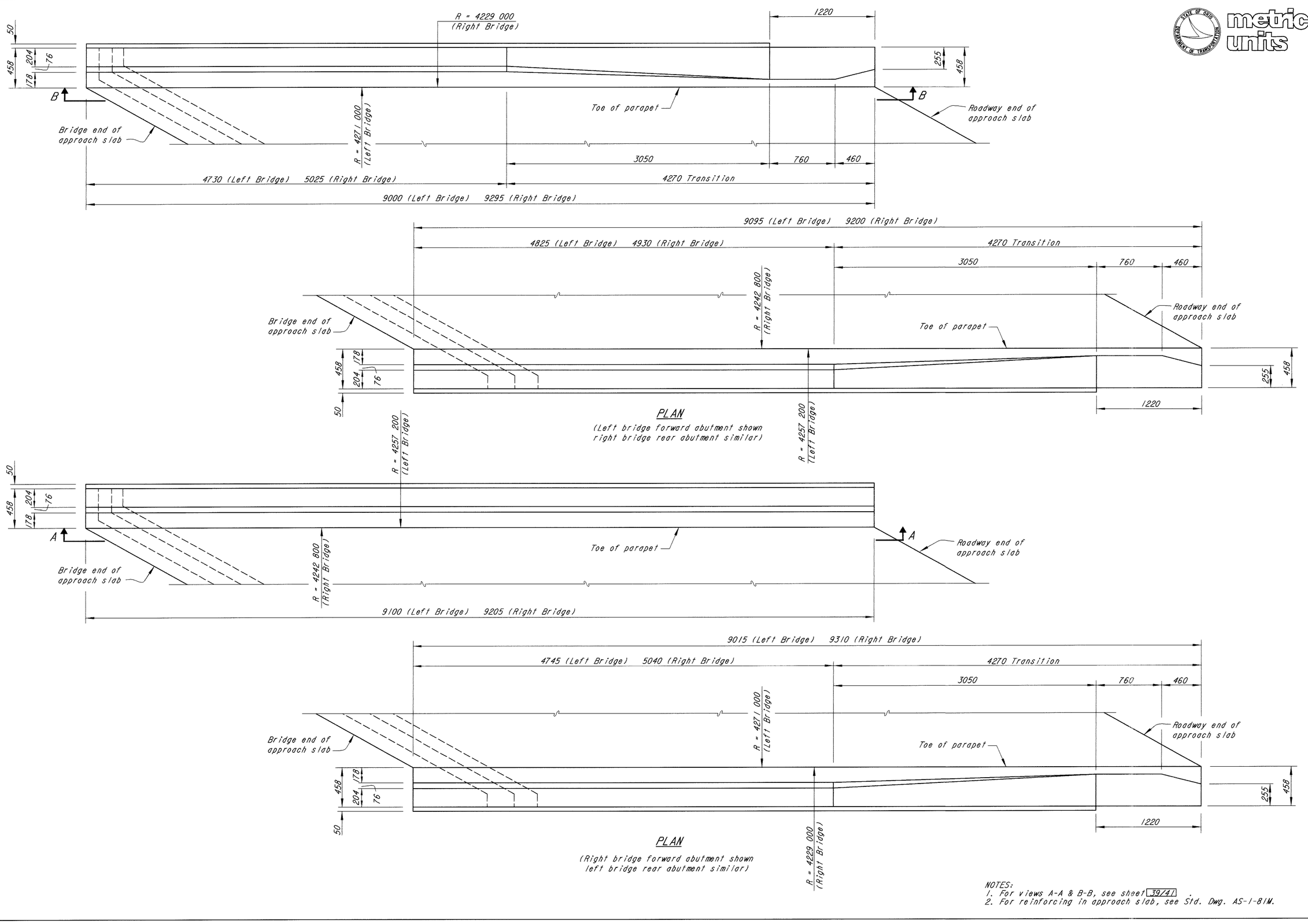
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FKL	ALH	CRS	6/29/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700895	

SCREED ELEVATIONS RIGHT BRIDGE
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WHFORD RD.)

WYA/CRA-30-28.009/0.000

37 / 41

1875
2116



NOTES:
1. For views A-A & B-B, see sheet 39/41 .
2. For reinforcing in approach slab, see Std. Dwg. AS-1-81M.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1700995	

APPROACH SLAB DETAILS
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

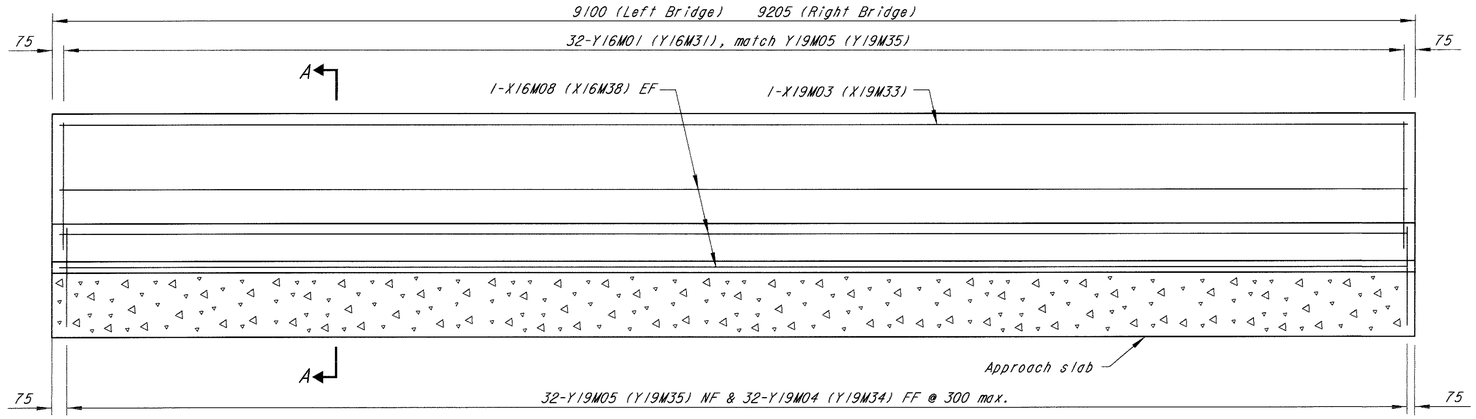
WYA/CRA-30-28.009/0.000

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(1876/2116)

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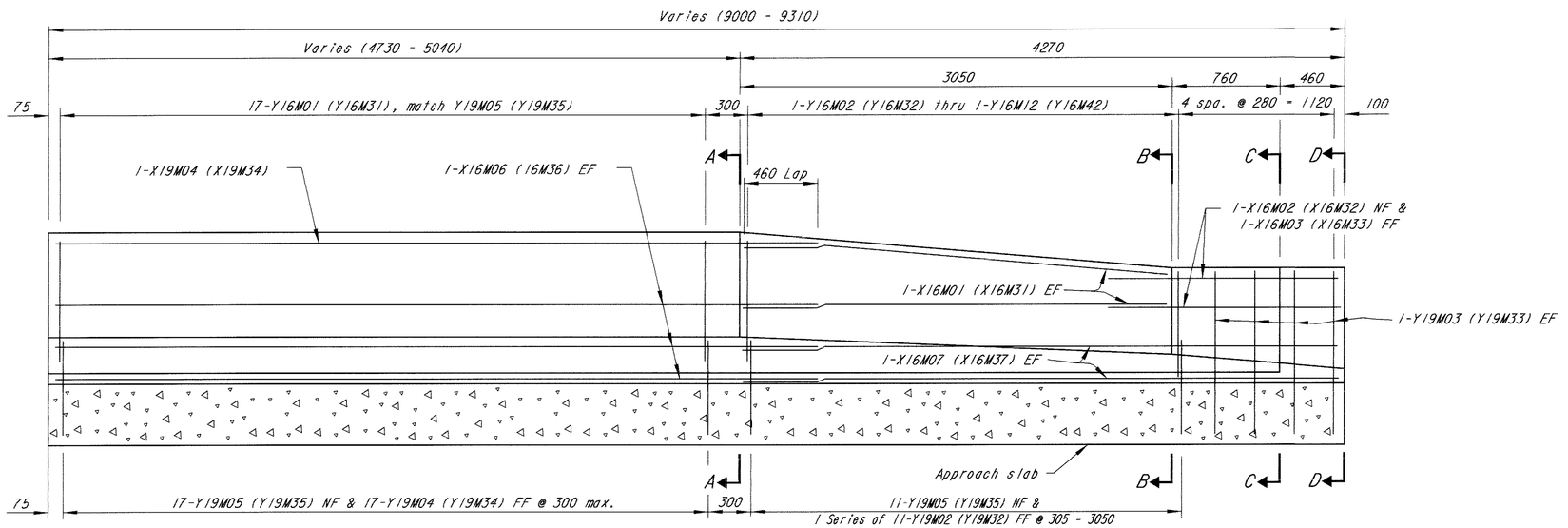
metric units



VIEW A-A

PARAPET DETAIL

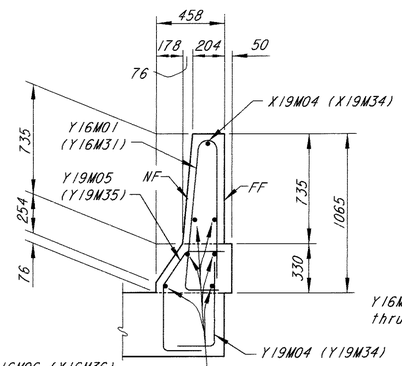
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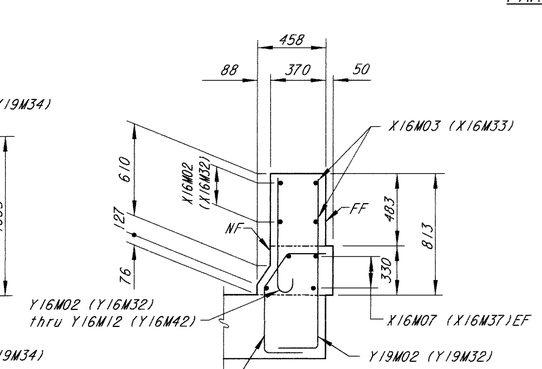
VIEW B-B

PARAPET TRANSITION DETAIL

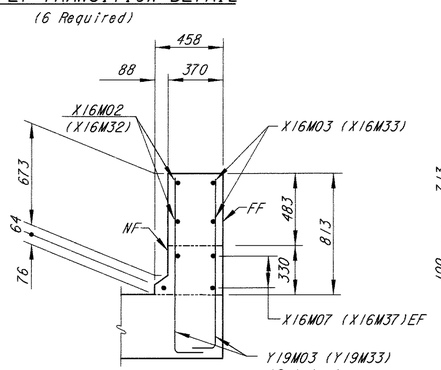
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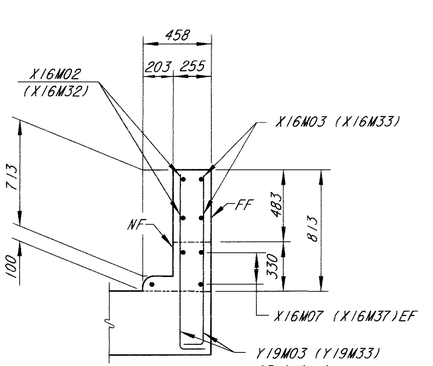
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:
1. Work this sheet with 38741 .
2. For additional information, see Std. Dwg. AS-1-81M. and Std. Dwg. BR-1M
3. FF= Far Face
   NF = Near Face
   EF = Each Face
4. Bar marks shown "( )" are for the right bridge. Unenclosed bar marks are for the left bridge.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CPS	6/29/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	17000295	

APPROACH SLAB DETAILS
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

WYA/CRA-30-28.009/0.000

39/41

1877
2116

F:\Honma-02230b7.dgn

REAR ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A25M01	12	12 000	Str.						
A25M02	2	8145	Str.						
A25M03	2	6000	Str.						
A25M04	4	5330	Str.						
A25M05	12	11 320	Str.						
A16M01	92	5110	8	1700	775				
A16M02	18	11 370	Str.						
A16M03	10	3920	2	1630	740	1630			
A16M04	3	6000	Str.						
A16M05	3	8145	Str.						
A16M06	2	2000	Str.						
A16M07	6	5330	Str.						
A16M08	20	10 600	Str.						
A16M09	67	5050	8	1545	900				
A16M10	46	2620	2	900	900	900			
A16M11	16	5020	2	2375	350	2375			
A16M12	2	3225	Str.						
A16M13	16	3250	2	1490	350	1490			
A16M14	12	2330	2	1030	350	1030			
A16M15	3	5500	Str.						
A16M16	3	5950	Str.						
A16M17	5	7900	Str.						
A16M18	5	8350	Str.						
A16M19	35	5870	2	2800	350	2800			
A16M20	35	3250	2	1490	350	1490			
	2	1870		800		800			
A16M21	Series of	to	2	to	350	to			110
	5	2310		1020		1020			
A16M22	2	1870	2	800	350	800			
A16M23	10	7500	Str.						
A16M24	Not	Used							
A16M25	2	8700	Str.						
A16M26	6	9900	Str.						
A16M27	2	2700	Str.						

FORWARD ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B25M01	12	12 315	Str.						
B25M02	2	6150	Str.						
B25M03	2	4000	Str.						
B25M04	4	8290	Str.						
B25M05	12	11 625	Str.						
B16M01	95	5110	8	1700	775				
B16M02	18	11 700	Str.						
B16M03	10	3920	2	1630	740	1630			
B16M04	3	4000	Str.						
B16M05	3	6150	Str.						
B16M06	2	2000	Str.						
B16M07	6	8290	Str.						
B16M08	20	10 900	Str.						
B16M09	67	5170	8	1605	900				
B16M10	46	2570	2	875	900	875			
B16M11	39	6020	2	2875	350	2875			
B16M12	2	3785	1	155	3670				
B16M13	39	3360	2	1545	350	1545			
B16M14	2	2600	Str.						
B16M15	5	8500	Str.						
B16M16	5	9190	Str.						
B16M17	1	9340	Str.						
B16M18	1	10 030	Str.						
B16M19	3	10 900	Str.						
B16M20	3	11 590	Str.						
	2	1850		790		790			
B16M21	Series of	to	2	to	350	to			400
	5	3450		1590		1590			
B16M22	2	1850	2	790	350	790			
B16M23	14	5070	2	2400	350	2400			
B16M24	8	5500	Str.						
B16M25	2	6330	Str.						
B16M26	6	7900	Str.						
B16M27	2	2300	Str.						
B16M28	2	1770	2	750	350	750			
	2	1790		760		760			
B16M29	Series of	to	2	to	350	to			360
	5	3230		1480		1480			
B16M30	14	3230	2	1480	350	1480			

PIER 1 REINFORCING STEEL LIST

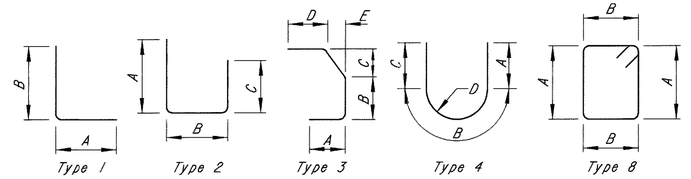
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P29M01	72	3135	1	475	2725				
P29M02	36	5060	Str.						
P29M03	36	5415	Str.						
P25M01	144	3100	Str.						
P25M02	144	3650	13	3100					
P22M01	4	10 930	Str.						
P22M02	4	11 180	Str.						
P22M03	4	11 280	Str.						
P22M04	8	4620	1	1000	3680				
P22M05	8	10 015	1	1000	9065				
P22M06	25	2695	4	750	1195	750	380		
P16M01	10	2330	2	800	810	800			
P16M02	4	2700	Str.						
P16M03	44	3980	8	1100	810				
P13M01	20	10 930	Str.						
SP13M01	3	4160	21	4160	115	760			
SP13M02	3	4515	21	4515	115	760			

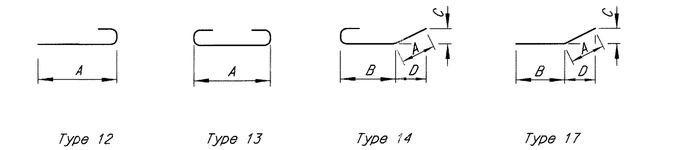
PIER 2 REINFORCING STEEL LIST

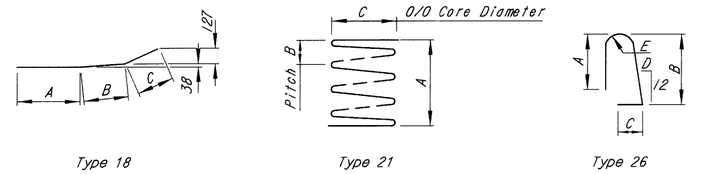
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
R29M01	72	3135	1	475	2750				
R29M02	36	5760	Str.						
R29M03	36	6110	Str.						
R25M01	144	3100	Str.						
R25M02	144	3650	13	3100					
R22M01	4	10 930	Str.						
R22M02	4	11 180	Str.						
R22M03	4	11 280	Str.						
R22M04	8	4620	1	1000	3680				
R22M05	8	10 015	1	1000	9065				
R22M06	25	2695	4	750	1195	750	380		
R16M01	20	2330	2	800	810	800			
R16M02	4	2700	Str.						
R16M03	44	3980	8	1100	810				
R13M01	20	10 930	Str.						
SR13M01	3	4860	21	4860	115	760			
SR13M02	3	5210	21	5210	115	760			

SUPERSTRUCTURE REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
D25M01	64	2485	14	430	1775	305	305		
D25M02	60	10 805	Str.						
S25M01	12	11 325	Str.						
S25M02	12	11 700	Str.						
X19M01	7	11 600	Str.						
X19M02	7	11 715	Str.						
Y19M01	528	800	3	125	250	216	230	152	
Y19M04	528	730	1	280	500				
D16M01	180	2450	2	815	900	815			
D16M02	90	2330	2	830	750	830			
S16M01	693	11 845	Str.						
	2	14 000							
S16M02	Series of	to	Str.						80
	170	480							
	2	14 000							
S16M03	Series of	to	Str.						77
	176	525							
S16M04	782	7600	Str.						
S16M05	391	6700	Str.						
S16M06	391	8675	Str.						
S16M07	156	12 000	Str.						
S16M08	312	4150	Str.						
X16M04	42	11 730	Str.						
X16M05	42	11 845	Str.						
Y16M01	528	2130	26	915	990	205	1¼	38	







APPROACH SLAB REINFORCING STEEL LIST *

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
X19M03	1	9000	Str.						
X19M04	1	5540	Str.						
	3	1205			965				
Y19M02	Series of	to	1	280	to				25
	11	1455			1215				
Y19M03	24	1300	1	280	1070				
Y19M04	83	815	1	280	585				
Y19M05	116	905	3	125	355	216	230	152	
X16M01	12	3050	Str.						
X16M02	6	1725	18	555	738	432			
X16M03	6	1725	Str.						
X16M06	18	5230	Str.						
X16M07	12	4220	Str.						
X16M08	6	9000	Str.						
Y16M01	83	2130	26	915	990	905	1 1/4	38	
Y16M02	3	990	12	990					
Y16M03	3	965	12	965					
Y16M04	3	940	12	940					
Y16M05	3	915	12	915					
Y16M06	3	890	12	890					
Y16M07	3	865	12	865					
Y16M08	3	840	12	840					
Y16M09	3	815	12	815					
Y16M10	3	790	12	790					
Y16M11	3	765	12	765					
Y16M12	3	740	12	740					

NOTES:

* Reinforcing steel shown for parapets only see Std. Dwg. AS-1-81M for additional reinforcing.

1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.
3. SPIRAL REINFORCING BARS: The "length" shown in the steel list for the spiral bars is the length of the spiral along the axis of the spiral. One and one-half closed-coil turns shall be provided at the ends of each spiral unit.
4. SPACERS: Concrete spacers or other approved noncorrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 3050 mm) to insure concentric spacing for the entire cage length. Spacers shall be constructed of approved material equal in quality and durability to the concrete specified for the shaft. The spacers shall have adquate dimensions to ensure a minimum 75 mm clear space between the outside of the reinforcing cage and the design dimension of the drilled shaft or column. Cylindrical concrete feet (bottom supports) shall be provided to ensure that the bottom of the cage is maintained at the proper distance above the base.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	6/29/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FHL	—	17000995	

REINFORCING STEEL LIST LEFT BRIDGE
BRIDGE NO. CRA-30-0223
OVER CR 18 (NEVADA WYNFORD RD.)

WYA/CRA-30-28.009/0.000

40/41

1878
2116

File name= 0223bridge2.dgn

REAR ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A25M31	12	12 200	Str.						
A25M32	2	6150	Str.						
A25M33	2	4000	Str.						
A25M34	4	8320	Str.						
A25M35	12	11 530	Str.						
A16M31	95	5110	8	1700	775				
A16M32	18	11 600	Str.						
A16M33	10	3920	2	1630	740	1630			
A16M34	3	4000	Str.						
A16M35	3	6150	Str.						
A16M36	2	2000	Str.						
A16M37	6	8320	Str.						
A16M38	32	10 775	Str.						
A16M39	67	6780	8	2410	900				
A16M40	46	2370	2	775	900	775			
A16M41	39	6770	2	3250	350	3250			
A16M42	2	4115	1	155	4000				
A16M43	39	3110	2	1420	350	1420			
A16M44	12	2920	2	1325	350	1325			
A16M45	4	8500	Str.						
A16M46	4	9030	Str.						
A16M47	5	10 900	Str.						
A16M48	5	11 430	Str.						
A16M49	38	7370	2	3550	350	3550			
A16M50	8	5500	Str.						
A16M51	2	5540							
A16M52	Not	Used	Str.						
A16M53	6	7900	Str.						
A16M54	38	3320	2	1525	350	1525			
A16M55	2	1770	2	750	350	750			
	2	1790		760		760			
A16M56	Series of	to	2	to	350	to			200
	5	2340		1035		1035			
A16M57	2	2400	Str.						

FORWARD ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B25M31	12	12 325	Str.						
B25M32	2	8150	Str.						
B25M33	2	6000	Str.						
B25M34	16	11 885	Str.						
B25M35	12	12 360	Str.						
B22M31	30	2200	Str.						
B16M31	79	5110	8	1700	775				
B16M32	18	11 715	Str.						
B16M33	9	3920	2	1630	740	1630			
B16M34	3	6000	Str.						
B16M35	3	8150	Str.						
B16M36	2	2000	Str.						
B16M37	30	2200	Str.						
B16M38	32	11 615	Str.						
B16M39	67	6970	8	2505	900				
B16M40	46	2370	2	775	900	775			
B16M41	6	11 500	Str.						
B16M42	6	12 000	Str.						
B16M43	2	12 440	Str.						
B16M44	2	13 000	Str.						
B16M45	6	7250	Str.						
B16M46	6	7535	Str.						
B16M47	2	1770	2	750	350	750			
	2	1790		760		760			
B16M48	Series of	to	2	to	350	to			440
	5	3550		1640		1640			
B16M49	78	3370	2	1550	350	1550			
B16M50	12	7500	Str.						
B16M51	2	8440	Str.						
B16M52	6	9900	Str.						
B16M53	51	3270	2	1500	350	1500			
B16M54	4	1790	2	760	350	760			
	2	1980		855		855			
B16M55	Series of	to	2	to	350	to			430
	4	3270		1500		1500			
B16M56	4	2300	Str.						
B16M57	51	6820	2	3275	350	3275			
B16M58	78	7570	2	3650	350	3650			
B16M59	2	4400	Str.						

PIER 1 REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
P29M31	72	3135	1	475	2725				
P29M32	36	5925	Str.						
P29M33	36	6180	Str.						
P25M31	144	3100	Str.						
P25M32	144	3650	13	3100					
P22M31	4	10 930	Str.						
P22M32	4	11 180	Str.						
P22M33	4	11 280	Str.						
P22M34	8	4620	1	1000	3680				
P22M35	8	10 015	1	1000	9065				
P22M36	25	2695	4	750	1195	750	380		
P16M31	10	2330	2	800	810	800			
P16M32	4	2700	Str.						
P16M33	44	3980	8	1100	810				
P13M31	20	10 930	Str.						
SP13M31	3	5025	21	5025	115	760			
SP13M32	3	5480	21	5480	115	760			

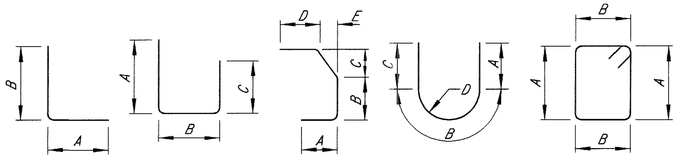
PIER 2 REINFORCING STEEL LIST

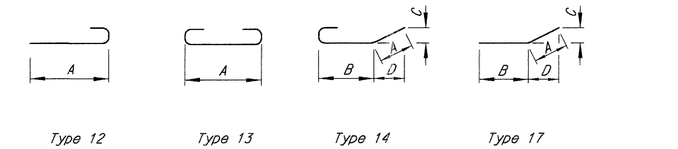
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
R29M31	72	3135	1	475	2725				
R29M32	36	6620	Str.						
R29M33	36	6880	Str.						
R25M31	144	3100	Str.						
R25M32	144	3650	13	3100					
R22M31	4	10 930	Str.						
R22M32	4	11 180	Str.						
R22M33	4	11 280	Str.						
R22M34	8	4620	1	1000	3680				
R22M35	8	10 015	1	1000	9065				
R22M36	25	2695	4	750	1195	750	380		
R16M31	10	2330	2	800	810	800			
R16M32	4	2700	Str.						
R16M33	44	3980	8	1100	810				
R13M31	20	10 930	Str.						
SR13M31	3	5720	21	5720	115	760			
SR13M32	3	5980	21	5980	115	760			

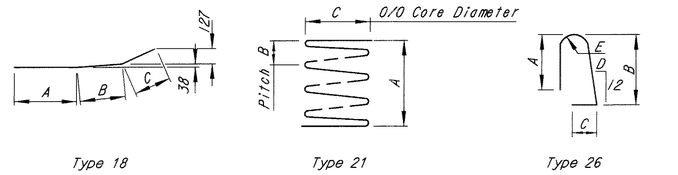
SUPERSTRUCTURE REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
D25M31	64	2485	14	430	1775	305	305		
D25M32	60	10 805	Str.						
S25M31	12	11 580	Str.						
S25M32	24	11 945	Str.						
X19M31	7	11 845	Str.						
X19M34	7	11 975	Str.						
Y19M31	539	800	3	125	250	216	230	152	
Y19M34	539	730	1	280	500				
D16M31	180	2450	2	815	900	815			
D16M32	90	2330	2	830	750	830			
S16M31	693	11 970	Str.						
	2	13 900							
S16M32	Series of	to	Str.						80
	170	770							
	2	14 000							
S16M33	Series of	to	Str.						75
	178	725							
S16M34	792	7600	Str.						
S16M35	396	6700	Str.						
S16M36	396	8675	Str.						
S16M37	156	12 000	Str.						
S16M38	312	4150	Str.						
X16M34	42	11 970	Str.						
X16M35	42	12 095	Str.						
Y16M01	539	2130	26	915	990	205	1¼	38	

metric units







APPROACH SLAB REINFORCING STEEL LIST *

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
X19M33	1	9000	Str.						
X19M34	1	5540	Str.						
	3	1205			965				
Y19M02	Series of	to	1	280	to				25
	11	1455			1215				
Y19M33	24	1300	1	280	1070				
Y19M34	83	815	1	280	585				
Y19M05	116	905	3	125	355	216	230	152	
X16M31	12	3050	Str.						
X16M32	6	1725	18	555	738	432			
X16M33	6	1725	Str.						
X16M36	18	5230	Str.						
X16M37	12	4220	Str.						
X16M38	6	9000	Str.						
Y16M31	83	2130	26	915	990	205	1 1/4	38	
Y16M32	3	990	12	990					
Y16M33	3	965	12	965					
Y16M34	3	940	12	940					
Y16M35	3	915	12	915					
Y16M36	3	890	12	890					
Y16M37	3	865	12	865					
Y16M38	3	840	12	840					
Y16M39	3	815	12	815					
Y16M40	3	790	12	790					
Y16M41	3	765	12	765					
Y16M42	3	740	12	740					

NOTES:

* Reinforcing steel shown for parapets only see Std. Dwg. AS-1-81M for additional reinforcing.

1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.
3. SPIRAL REINFORCING BARS: The "length" shown in the steel list for the spiral bars is the length of the spiral along the axis of the spiral. One and one-half closed-coil turns shall be provided at the ends of each spiral unit.
4. SPACERS: Concrete spacers or other approved noncorrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 3050 mm) to insure concentric spacing for the entire cage length. Spacers shall be constructed of approved material equal in quality and durability to the concrete specified for the shaft. The spacers shall have adquate dimensions to ensure a minimum 75 mm clear space between the outside of the reinforcing cage and the design dimension of the drilled shaft or column. Cylindrical concrete feet (bottom supports) shall be provided to ensure that the bottom of the cage is maintained at the proper distance above the base.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	6/29/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	1700995	

REINFORCING STEEL LIST RIGHT BRIDGE
BRIDGE NO. CRA-30-02230
OVER CR 18 (NEVADA WYNFORD RD.)

WYA/CRA-30-28.009/0.000

41/41

1879
2116

E:\Itemnm-0223\rsl.dgn

metric units

+920 ℄ Survey CR 330 S65°56'56.90"E

+940

+960

+980

300

301

302

303

304

305

Min. horizontal clearance 4700 (req'd.), 5005 (actual)

℄ Brg. Rear Abut.

℄ Pier 1

℄ Pier 2

℄ Brg. Fwd. Abut

LEFT BRIDGE

℄ US 30 WB

M-S21

M-S23

Crushed aggregate slope protection (Typ.)

1000 Typ.

458

14 716

13 800

6742

2:1

4:1

8:1

66° Typ.

3600

3600

7200

9000

Pressure relief joint per Std. Dwg. BP-2.3, Typ.

6+260

6+280

6+300

6+320

6+340

6+360

6+380

1+000

℄ Construction US 30

End Approach Slab Sta. 6+296.162

Sta. 6+349.932 ℄ US 30 = Sta. 1+000.000 ℄ survey CR 330

N89°41'38.87"E

Begin Approach Slab Sta. 6+403.637

PLAN

308.548 308.485 308.422 308.357 308.290 308.222 308.152 308.080 308.007 307.933 307.857 307.780 307.701 307.620 307.538 307.455 307.370 307.283 307.195 307.106 307.015 306.922 306.828 306.732 306.635 306.537 306.437

Elevations are at profile grade

Bridge limits = 107 475

V.P.I. Sta. 6+094.000
Elev. 313.353
692m V.C.

+1.8039% -2.3802%

Sta. 6+296.162

Sta. 6+403.637

Elev. 315

Elev. 310

Elev. 305

Elev. 300

Elev. 295

Elev. 290

Elev. 285

Proposed grade

Existing ground

Elev. 304.220

Top of slope varies Elev. 305.800 to Elev. 306.150

Crushed aggregate slope protection (Typ.)

Top of slope varies Elev. 303.950 to Elev. 304.500

Exp.

Exp.

Fix.

Exp.

Elev. 302.380

HP250x62 piles estimated pay length = 20 000

REAR ABUTMENT

HP250x62 piles estimated pay length = 15 000

Elev. 298.300

PIER 1

HP250x62 piles estimated pay length = 15 000

Elev. 298.250

PIER 2

FORWARD ABUTMENT

HP250x62 piles estimated pay length = 19 000

304.877

Approximate top of rock, Boring M-S21 Elev. 284.300

Approximate top of rock, Boring M-S23 Elev. 284.500

305.276 305.498 305.791 303.455 301.340 300.462 300.111 300.125 300.185 300.049 300.392 302.296 304.242

+260 +280 6+300 +320 +340 +360

SECTION ALONG ℄ US 30 W.B.

REVIEWED BY BURGESS & NIPLE, LIMITED

DWR 10-99

WESTBOUND TRAFFIC DATA

ADT = 3484 (2000) ADT = 5226 (2020)
ADTT = 976 (2000) ADTT = 1463 (2020)

Notes:
Earthwork limits shown are approximate. Actual slopes shall conform to plan cross sections.

All stations and elevations are in meters.

All dimensions and lengths are in millimeters.

Boring location

PROPOSED STRUCTURE

Type: Three span continuous steel plate girder (A572M) with composite reinforced concrete slab on semi-integral abutment and cap and column pier.
Spans: 30 000, 46 000, 30 000 (Measured c/c bearings)
Roadway width: 13 800 toe to toe parapets
Live loading: MS18 (load case 1) & the alternate military loading
Skew angle: 66° RF
Wearing surface: Monolithic concrete
Approach slabs: AS-1-81M (9150)
Alignment: Tangent
Crown: 0.016
Latitude: N40°49'30"
Longitude: W83°02'30"

DESIGN AGENCY
BALKE ENGINEERS
1648 Summit Road
Cincinnati, Ohio 45237

DATE 6/16/99
REVIEWED CRS
STRUCTURE FILE NUMBER 170137
DRAWN ALH
REVISED —
DESIGNED FAL
CHECKED MRS

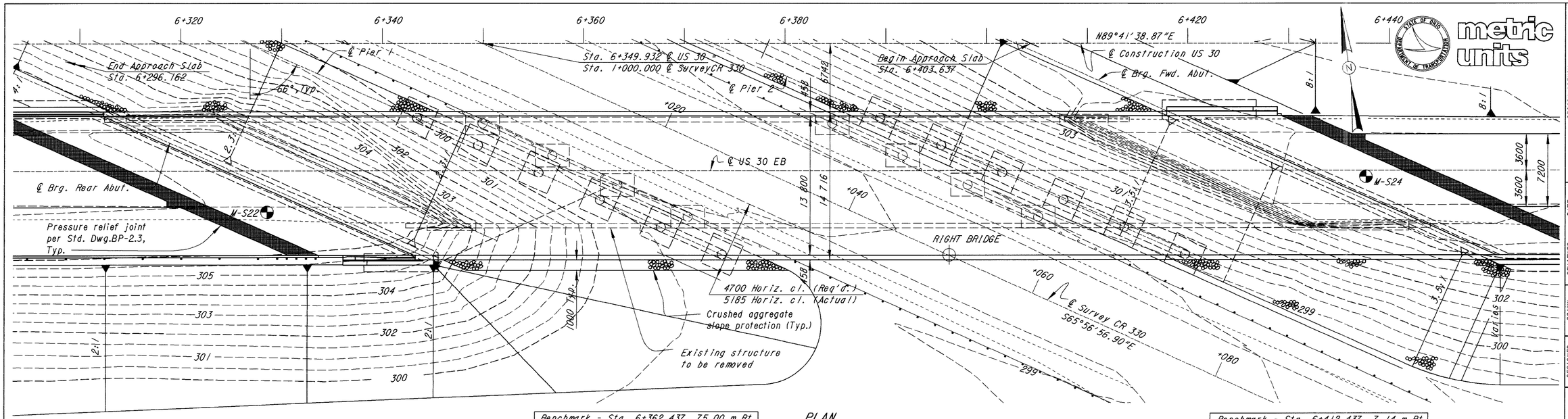
CRAWFORD COUNTY
STA. 6+296.162
STA. 6+403.637

SITE PLAN
BRIDGE NO. CRA-30-06.96
OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

1 / 40

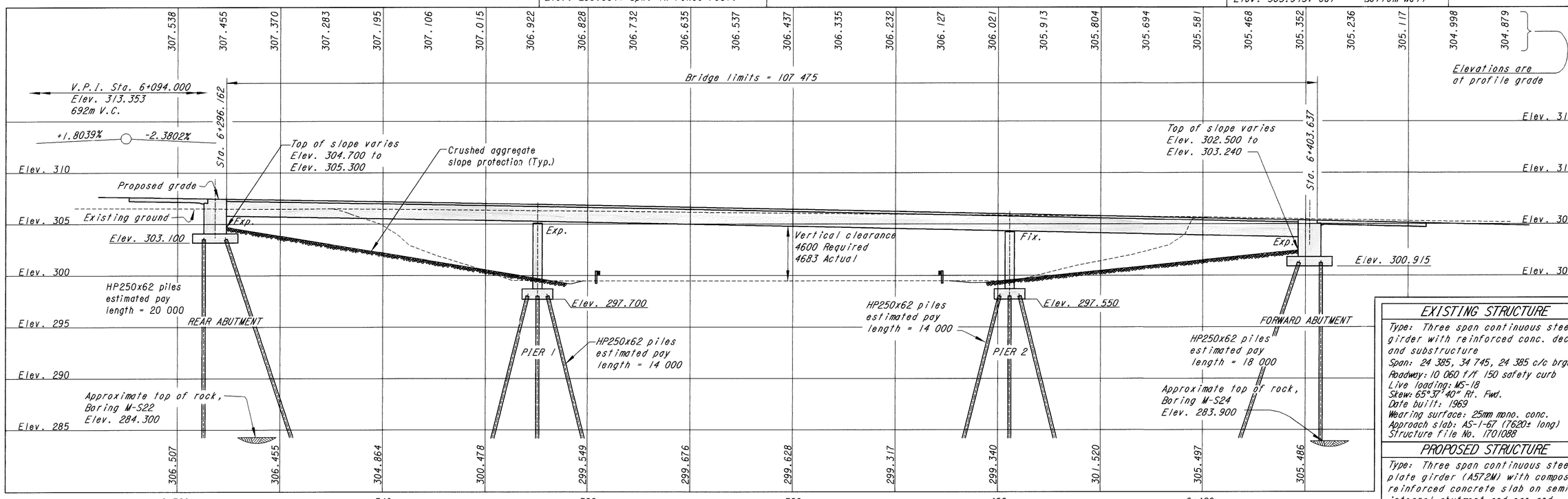
1894
2116



Benchmark - Sta. 6+362.437, 75.00 m Rt.
Elev. 299.004: Spk. in Fence Post.

PLAN

Benchmark - Sta. 6+412.437, 7.14 m Rt.
Elev. 305.943: Cut " " Bottom Wall



SECTION ALONG ℄ US 30 EB
(Existing bridge not shown for clarity)

EASTBOUND TRAFFIC DATA

ADT = 3484 (2000) ADT = 5226 (2020)
ADTT = 976 (2000) ADTT = 1463 (2020)

Notes:
Earthwork limits shown are approximate. Actual slopes shall conform to plan cross sections.

All stations and elevations are in meters.

All dimensions and lengths are in millimeters.

⊕ Point of min. vertical clearance

◒ Boring location

EXISTING STRUCTURE

Type: Three span continuous steel girder with reinforced conc. deck and substructure
Span: 24 385, 34 745, 24 385 c/c brgs.
Roadway: 10 060 f/f 150 safety curb
Live loading: MS-18
Skew: 65°37'40" Rt. Fwd.
Date built: 1969
Wearing surface: 25mm mono. conc.
Approach slab: AS-1-67 (7620± long)
Structure file No. 1701088

PROPOSED STRUCTURE

Type: Three span continuous steel plate girder (A572M) with composite reinforced concrete slab on semi-integral abutment and cap and column pier.
Spans: 30 000, 46 000, 30 000
(Measured c/c bearings)
Roadway width: 13 800 toe to toe parapets
Live loading: MS18 (load case II) & the alternate military loading
Skew angle: 66°00'00" RF
Wearing surface: Monolithic concrete
Approach slabs: AS-1-81M (9150)
Alignment: Tangent
Crown: 0.016
Latitude: N40°49'30"
Longitude: W83°02'30"

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED FKL
DRAWN ALH
CHECKED MRS
REVIEWED CRS
REVISED —
DATE 6/16/99
STRUCTURE FILE NUMBER 1701088 1701037

CRAWFORD COUNTY
STA. 6+296.162
STA. 6+403.637

SITE PLAN
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

2 / 40

1895
2116

GENERAL NOTES

All dimensions in the plans are shown in millimeters.

All elevations and stations in the plans are shown in meters.

REFERENCE shall be made to Standard Drawings:

AS-1-81M	Dated 10-25-94
BR-1M	Dated 12-15-94
GSD-1-96M	Dated 11-21-97
BP-2.3	Dated 4-29-99
SICD-1-96M	Dated 2-12-97

and to supplemental specifications:

816	Dated 4-21-97
842	Dated 1-6-99
863	Dated 9-9-97
899	Dated 10-21-98
910	Dated 4-21-97

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1996, the 1997 & 1998 Interims and the ODOT Bridge Design Manual.

DESIGN LOADING: MS18 (LOAD CASE II) and the alternate military loading.

DESIGN DATA:
Concrete Class S - compressive strength 31.0 MPa (superstructure)

Concrete Class C - compressive strength 27.5 MPa (substructure)

Reinforcing Steel -ASTM A615M, A616M or A617M
Grade 400 - minimum yield strength 400 MPa.
Spiral reinforcing may be plain bars ASTM A82M or A615M.

Structural steel - ASTM A572M - yield strength 350 MPa.

REINFORCING STEEL in superstructure, substructure and approach slabs shall be epoxy coated.

DECK PROTECTION METHOD:

Epoxy coated reinforcing steel

65mm concrete cover

MONOLITHIC WEARING SURFACE is assumed, for design purposes, to be 25mm thick.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN: Shall be in accordance with 503 except that the backfill material behind the abutments shall be 203 granular material placed in 150mm lifts and compacted in accordance with 304.04. The 203 granular material shall extend 30 meters behind each abutment.

APPROACH SLAB CONCRETE shall be placed towards the superstructure during days when sudden temperature changes are unlikely and be completed at least 4 hours prior to the concrete placement day's peak ambient temperature.

FIELD PAINTING OF NEW STEEL, SYSTEM 1ZEU: The surface area pay quantity is based on the surface area of the main members increased by 20 percent to account for the area of the crossframes, bearings, and other structural steel incidentals to be cleaned and painted.

PILE DRIVING CONSTRAINTS: Prior to driving piles, the spill through slopes and the bridge approach embankment behind the abutments shall be constructed up to the level of the subgrade elevation for a minimum distance of 60 meters behind each abutment. The excavation for the abutment footings and the installation of the abutment piles shall not begin until after the above required embankment has been constructed and has undergone a waiting period of 30 days minimum.

PILE REMOVAL: To avoid interference with driving a proposed pile next to an existing pile, proposed pile in an outside row may be shifted up to 300mm laterally (parallel to the footing direction) to clear an existing pile and permit driving. A proposed pile in an inside row may be shifted 300mm laterally or longitudinally. Proposed piles shall not be placed closer than 600mm from an adjacent proposed pile nor closer than 300mm from the edge of the footing. Where piles penetrate the Footing reinforcing mat, pile shifting shall be limited to ensure that the proposed reinforcement between pile rows can be placed essentially as specified. Where pile shifting is not sufficient to avoid interference with driving a proposed pile next to an existing pile, at the direction of the Engineer, the existing pile shall be entirely removed.

The void left by pile removal shall immediately be completely filled with granular material satisfactory to the Engineer. Costs for pile removal and void filling shall be included for payment in the unit price bid for Item 202, "Removal miscellaneous; existing pile."

Existing piles within the area of the proposed footing which are to remain in place shall be cut off at 300 mm below the bottom of the proposed footing and be covered with granular material suitable to the Engineer. Costs for this removal and covering shall be included with Item 202, "Structure removed, over 6 m span" for payment.

PILES TO BEDROCK: Piles shall be driven to refusal on bedrock. Refusal shall be considered as obtained by penetrating soft bedrock for several millimeters with a minimum resistance of 20 blows per 25mm or refusal shall be considered as obtained after the pile has contacted hard bedrock and the pile has then received at least 20 blows.

The ultimate bearing value for the HP250 x 62 abutment piles is 920 kN per pile

Abutment piles:
65 piles 20 meters long, estimated length - rear abutment, 32 Lt., 33 Rt.
32 piles 19 meters long, estimated length - forward abutment, left bridge
32 piles 18 meters long, estimated length - forward abutment, right bridge
129 piles of order length 18 meters long
65 piles of order length 2 meters long
32 piles of order length 1 meter long
113 splices

The ultimate bearing value for the HP250 x 62 pier piles is 950 kN per pile

The estimated and order length for the pier piles is:
84 piles 15 meters long - Piers 1 and 2, left bridge
84 piles 14 meters long - Piers 1 and 2, right bridge
84 splices

ITEM 507 - STEEL POINTS, AS PER PLAN: Steel pile points shall be used to protect the tips of the proposed steel "H" piling. The steel points shall be furnished by Associated Pile and Fitting Corporation, 262 Rutherford Boulevard, Clifton, New Jersey 07014; International Construction Equipment, Inc., 301 Warehouse Drive, Matthews, North Carolina 28015; Dougherty Foundation Products, Inc., P.O. Box 688, Franklin Lakes, New Jersey 07417; Versa Steel, Inc., 3601 N.W. Yeon Avenue, P.O. Box 10559, Portland, Oregon 97210; Piling Accessories, Inc.,3467 Gribble Road, Matthews, North Carolina 28105; or by a manufacturer that can furnish a steel point that is acceptable to the Director. The material used for the manufacturing of pile points shall conform to ASTM A27 65/35 - Class 2 - Heat Treated or AASHTO M103 65/35 - Heat Treated. A notorized copy of the mill test report shall be submitted to the Engineer.

ALTHOUGH OTHERWISE SHOWN IN THESE PLANS, THE STRUCTURE FILE NUMBERS ARE : 1701037L/1701045R

ESTIMATED QUANTITIES

Calculated by: RHH Dated: 11/98
Checked by: ALH Dated: 11/98

		CRA-30-06296 L	CRA-30-06296 R			LEFT BRIDGE			RIGHT BRIDGE			
Item	Extension	Total	Total	Unit	Description	Superstructure	Abutment	Pier	Superstructure	Abutment	Pier	General
202	11002		Lump	-	Structure removed, over 6m span							Lump
202	98100		8	Each	Removal miscellaneous, existing pile					4	4	
503	11100	Lump	Lump	-	Cofferdams, cribs & sheeting							Lump
503	21301	Lump	Lump	-	Unclassified excavation, as per plan		Lump	Lump		Lump	Lump	
505	11100	Lump	Lump	-	Pile driving equipment mobilization							Lump
507	00100	2508	2412	Meter	Steel piles HP250 x 62, furnished		1248	1260		1236	1176	
507	00150	2508	2412	Meter	Steel piles HP250 x 62, driven		1248	1260		1236	1176	
507	50500	106	91	Each	Steel pile splices		64	42		49	42	
507	93301	148	149	Each	Steel point (or shoe), as per plan		64	84		65	84	
Special	51267502	1214.8	1214.8	Sq. Meter	Sealing of concrete surfaces (epoxy) *	688.7	226.8	356.3	688.7	230.3	339.2	
516	13900	20	20	Sq. Meter	51mm Preformed expansion joint filler		20			20		
516	44100	6	6	Each	Elastomeric bearing with internal laminates and load plate (neoprene), (500 x 500 x 63 with 650 x 530 x 51 min. load plate) *			6			6	
516	44300	6	6	Each	Elastomeric bearing with internal laminates and load plate (neoprene), (500 x 500 x 123 with 530 x 530 x 51 min. load plate) *			6			6	
516	44300	12	12	Each	Elastomeric bearing with internal laminates and load plate (neoprene), (330 x 330 x 110 with 360 x 360 x 38 min. load plate) *		12			12		
518	21230	Lump	Lump	-	Porous backfill with filter fabric		Lump			Lump		
518	40000	99	101	Meter	150mm Perforated corrugated plastic pipe		99			101		
518	40010	12	10	Meter	150mm Non-perforated corrugated plastic pipe, including specials		12			10		
601	20000	1686	1686	Sq. Meter	Crushed aggregate slope protection							3372
816	00620	3160	3160	Sq. Meter	Field painting of new steel, intermediate and finish coat, system 1ZEU	3160			3160			
842	41000	105.0	101.7	Cu. Meter	Class C concrete, pier above footing			105.0			101.7	
842	43501	300.0	320.7	Cu. Meter	Class C concrete, abutment including footing, as per plan		300.0			320.7		
842	46500	110.6	110.6	Cu. Meter	Class C concrete, footing			110.6			110.6	
863	10080	Lump		-	Structural steel members, level four (4) fabrication	Lump			Lump			
863	20000	2496	2496	Each	Welded stud shear connector	2496			2496			
894	10000	594.5	594.5	Cu. Meter	High Performance Concrete, For Bridge Deck with Warranty	594.5			594.5			

* See proposal note.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

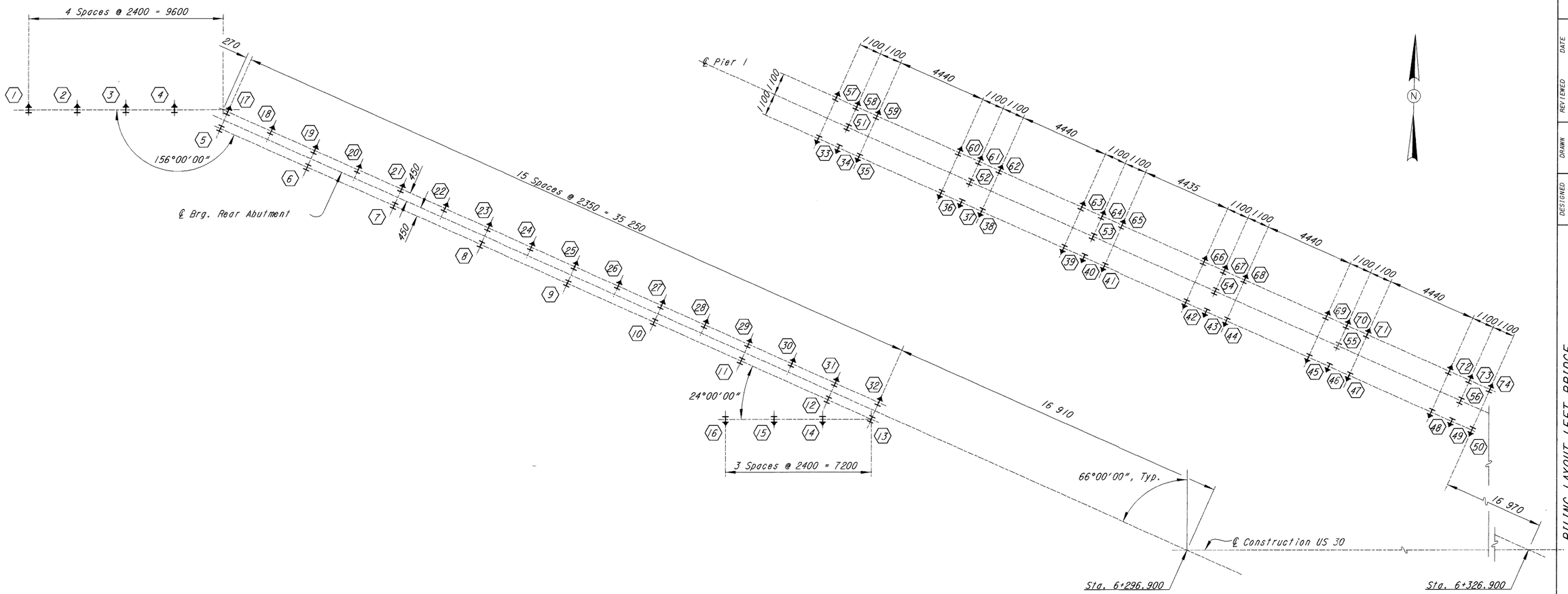
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ALH	ALH	CRS	6/16/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PAL	—		

GENERAL NOTES AND ESTIMATED QUANTITIES
OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.0000

1896
2116

Filename: 0628gnot.dgn



PLAN

NOTES:
1. All piles are HP250x62.
2. (33) I Designates pile number and location.
3. ↦ Denotes pile battered in direction of arrow.
4. Abutment piles battered 1:3 where shown.
5. Pier piles battered 1:4 where shown.

metric units

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FKL	ALH	CRS	6/16/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	170107	

PILING LAYOUT LEFT BRIDGE

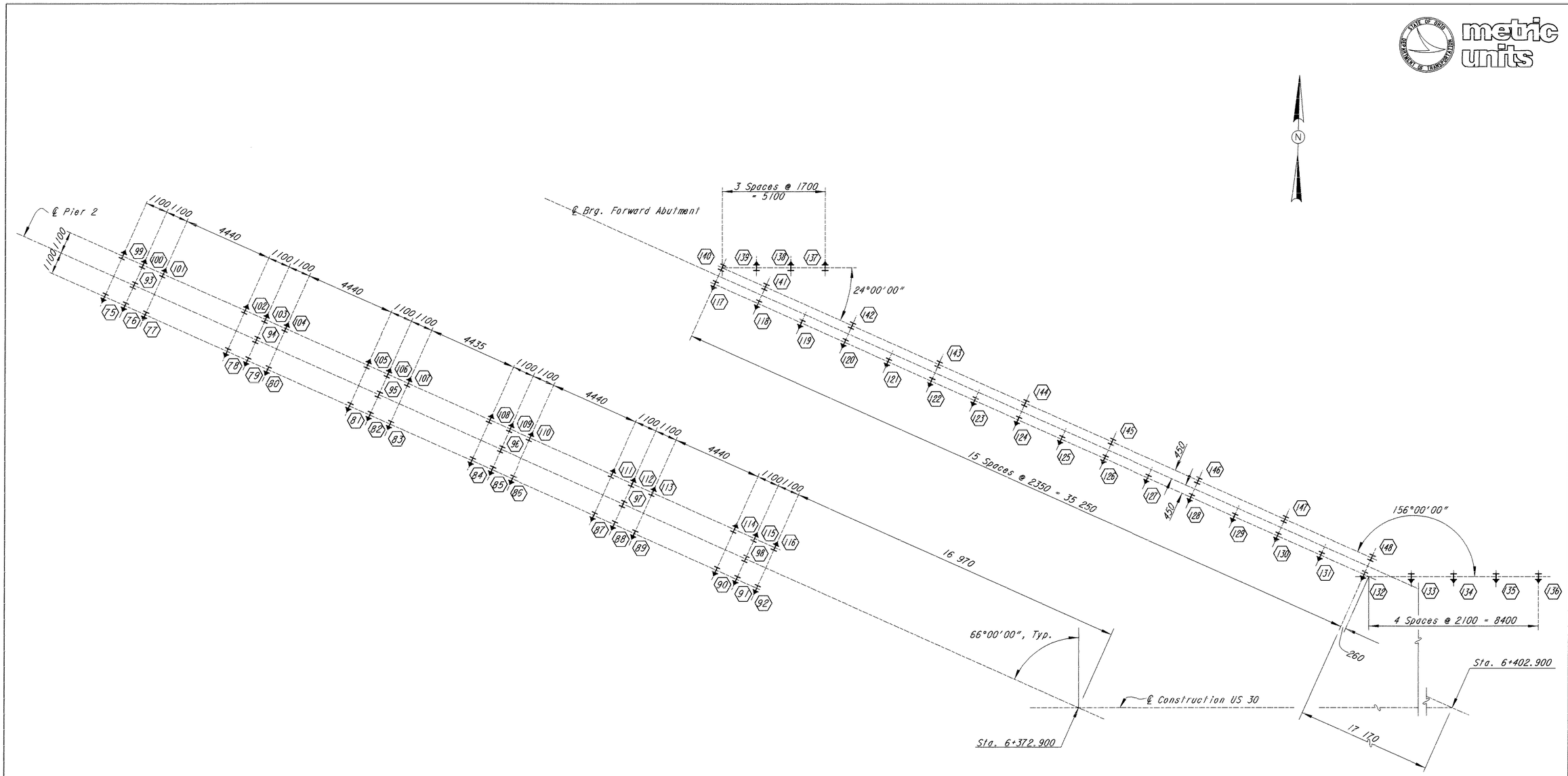
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

4 | 40

1897
2116

Filename: 06296sc1.dgn



PLAN

NOTES:
1. All piles are HP250x62.
2. (33) I Designates pile number and location.
3. ↳ Denotes pile battered in direction of arrrow.
4. Abutment piles battered 1:3 where shown.
5. Pier piles battered 1:4 where shown.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6/16/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	170137	

PILING LAYOUT LEFT BRIDGE
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

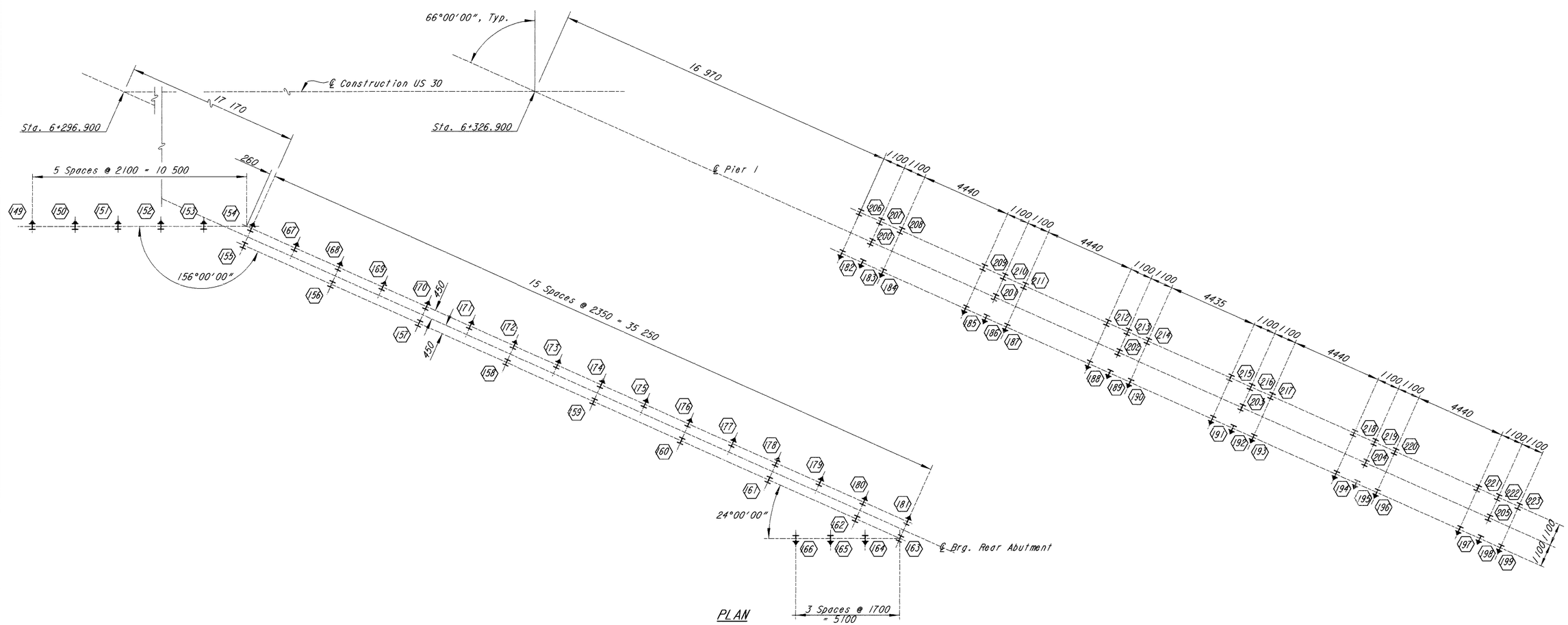
WYA/CRA-30-28.009/0.000

5 / 40

1898
2116

Filename: 06296sl2.dgn

metric units



PLAN

NOTES:
1. All piles are HP250x62.
2. (33) I Designates pile number and location.
3. ↦ Denotes pile battered in direction of arrow.
4. Abutment piles battered 1:3 where shown.
5. Pier piles battered 1:4 where shown.

Filename: 06296s3.dgn

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BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6/16/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	170137	

PILING LAYOUT RIGHT BRIDGE

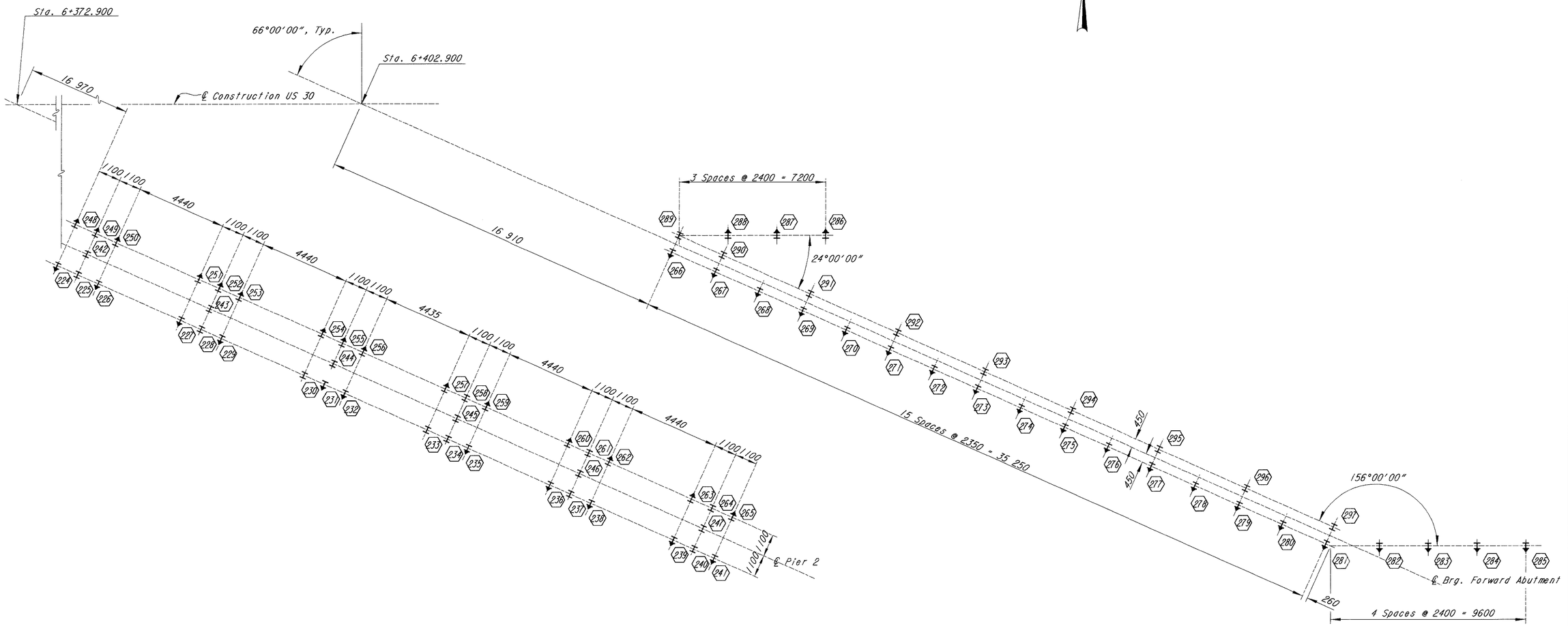
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

6 / 40

1899
2116

metric units



PLAN

NOTES:
1. All piles are HP250x62.
2. (33) I Designates pile number and location.
3. ↦ Denotes pile battered in direction of arrow.
4. Abutment piles battered 1:3 where shown.
5. Pier piles battered 1:4 where shown.

Filename: 062960s4.dgn

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DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6/16/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	170137	

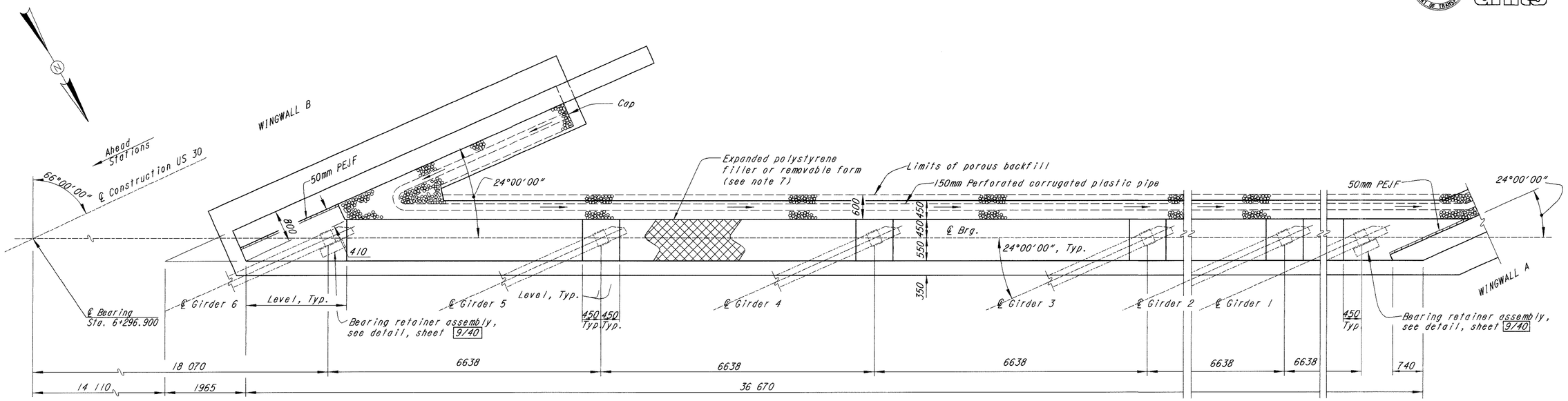
PILING LAYOUT RIGHT BRIDGE
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

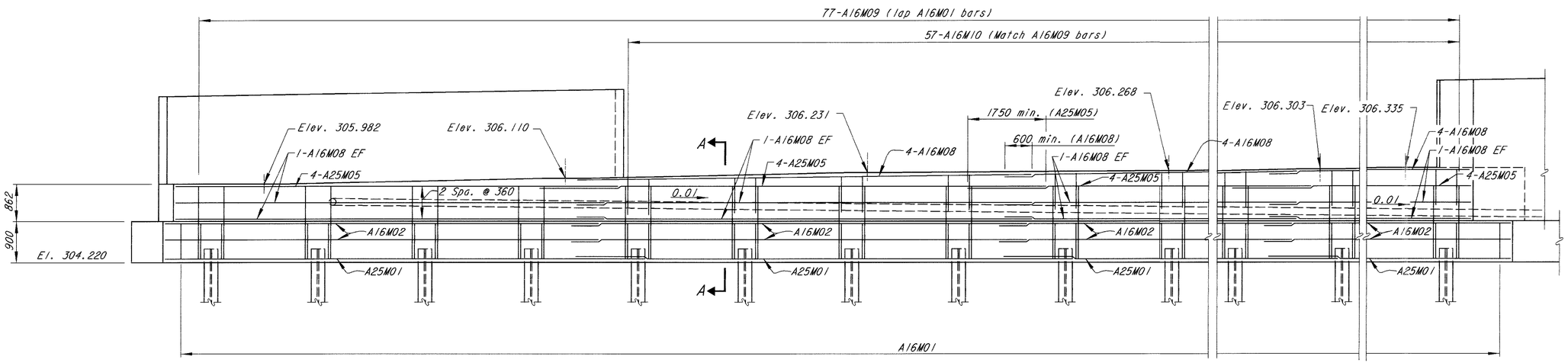
7 / 40

1900
2116

metric units



PLAN



ELEVATION

NOTES:
1. For pile layout, see sheet 4/40.
2. For footing plan and Section A-A, see sheet 9/40.
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally as shown.
4. For wingwall details, see sheet 10/40.
5. EF = Each Face
   PEJF = Preformed Expansion Joint Filler
6. For additional information, see std. dwg. SICD-1-96M.
7. Include with Item 842 Class S concrete for payment.

DESIGN AGENCY
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1848 Summit Road
Cincinnati, Ohio 45237

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FKL	ALH	CRS	6/16/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	170137	

REAR ABUTMENT LEFT BRIDGE DETAILS

BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

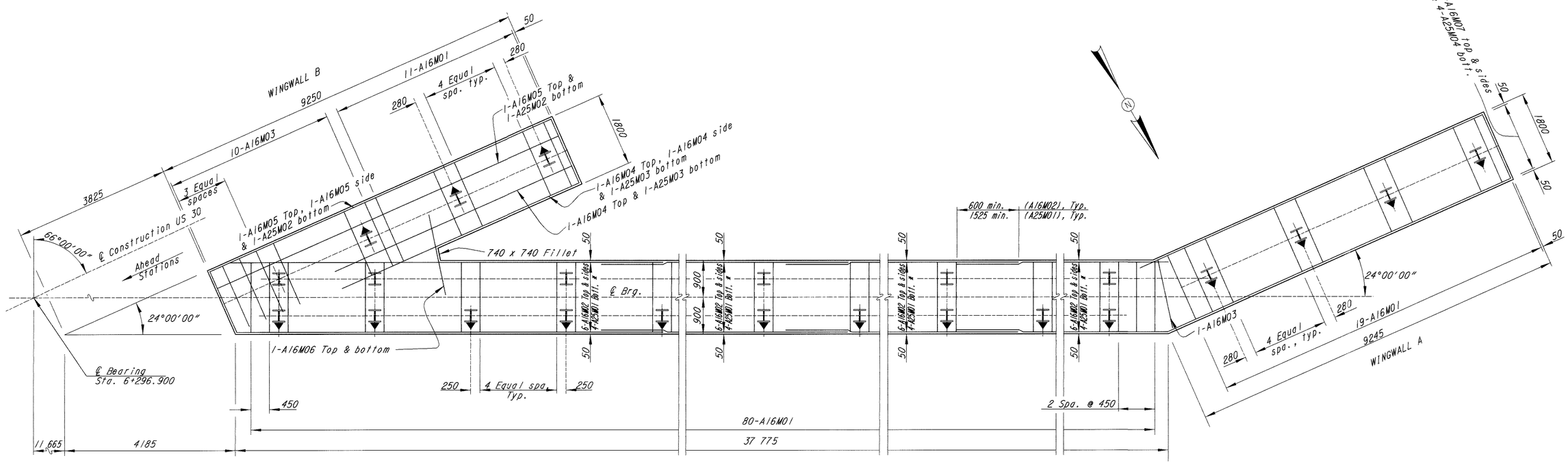
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8/40

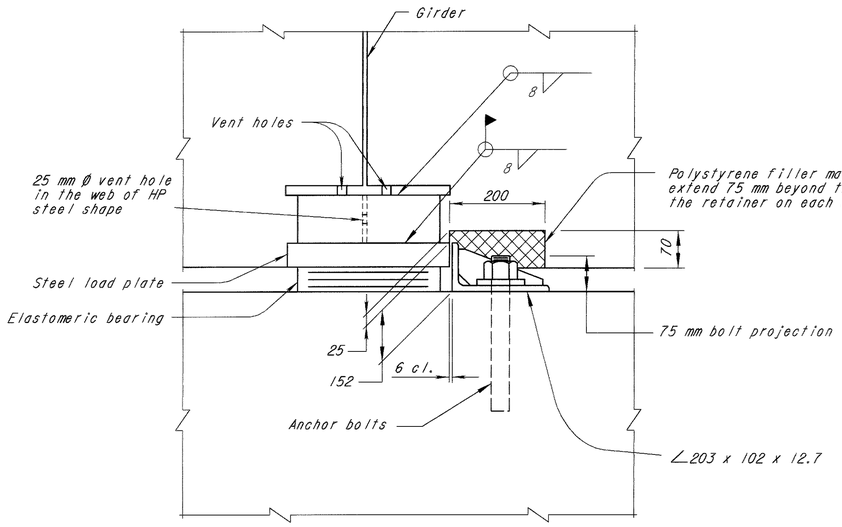
1901
2116

F:\bridge\06296rv1.dgn

metric units

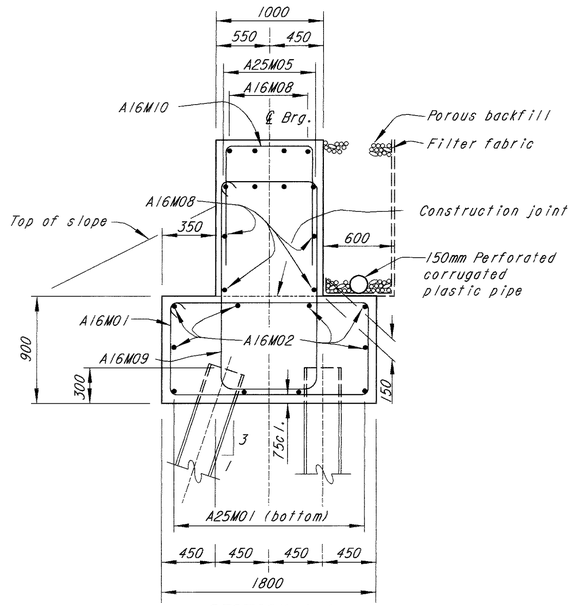


FOOTING PLAN

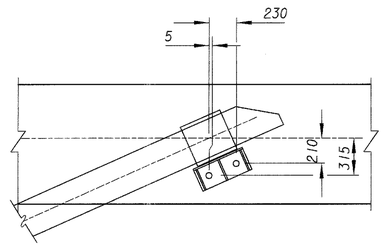


BEARING RETAINER ASSEMBLY DETAIL

(For additional details, see Std. Dwg. SICD-1-96M)



SECTION A-A



BEARING RETAINER ANCHOR BOLT DETAIL

NOTES:
1. For PILE LAYOUT PLAN, see sheet 4/40 .
2. * For location of reinforcing steel, see Section A-A on this sheet.

DESIGN AGENCY
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	170137	

REAR ABUTMENT LEFT BRIDGE DETAILS
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

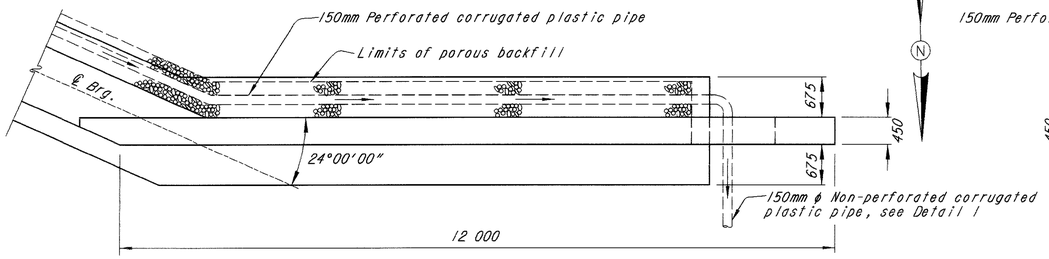
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9 / 40

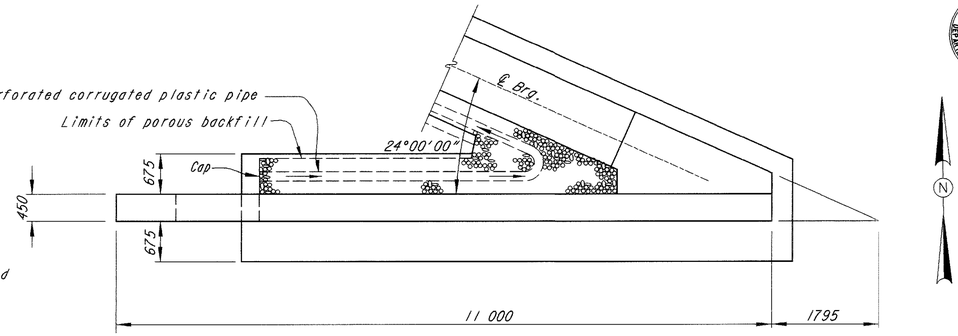
1902
2116

File name: 06296-rd2.dgn

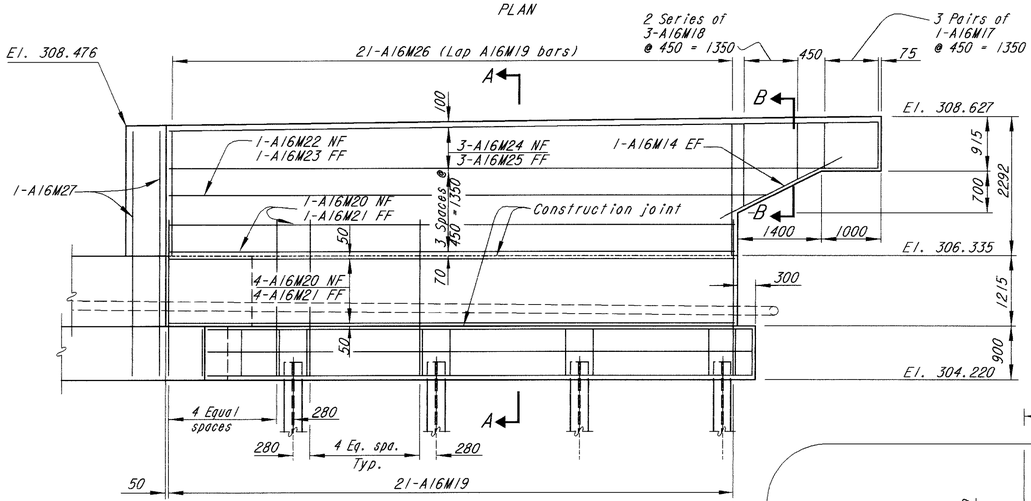
metric units



PLAN

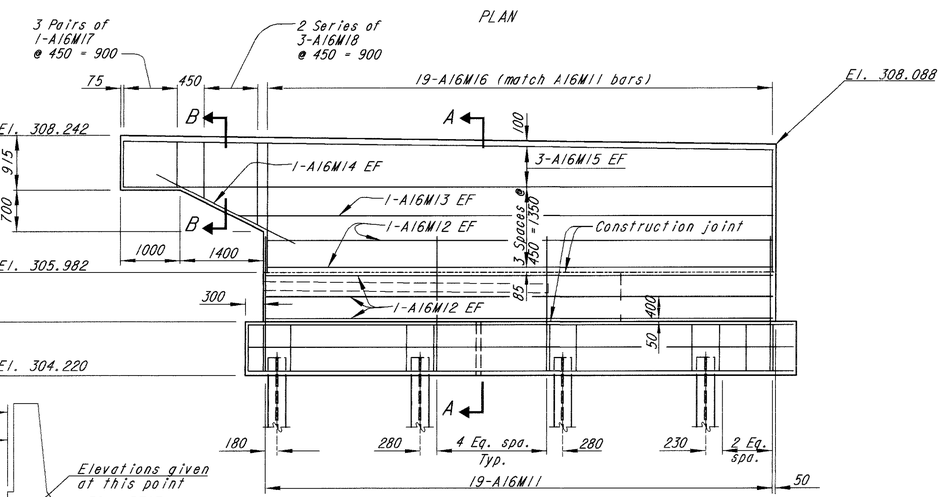


PLAN



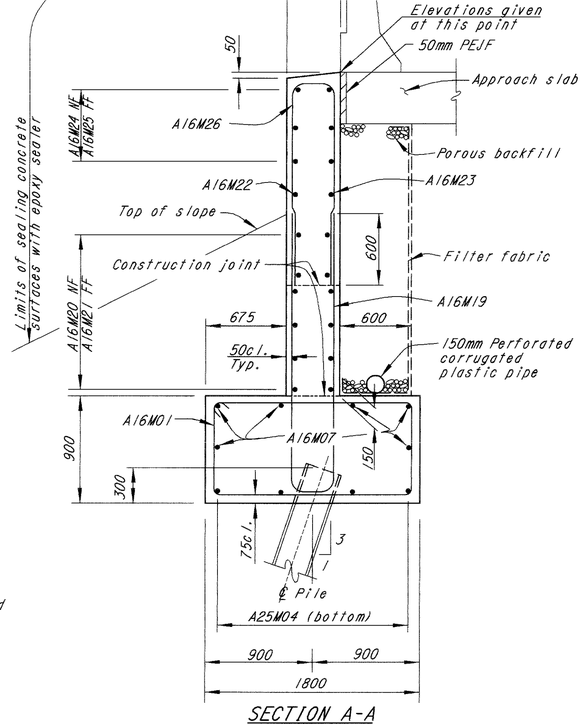
ELEVATION

WINGWALL A



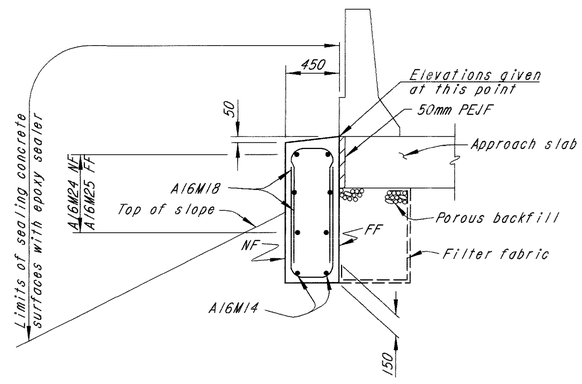
ELEVATION

WINGWALL B



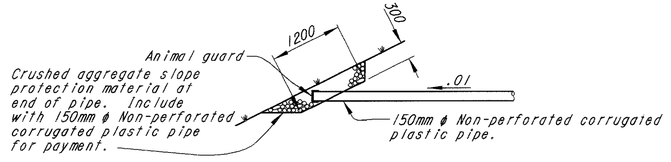
SECTION A-A

(Wingwall A shown Wingwall B similar)



SECTION B-B

(Wingwall A shown Wingwall B similar)



DETAIL I

NOTES:
EF = Each Face
NF = Near Face
FF = Far Face
PEJF = Preformed Expansion Joint Filler

DESIGN AGENCY
BALKE ENGINEERS
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MMS	—	170103	

REAR ABUTMENT LEFT BRIDGE DETAILS
BRIDGE NO. CRA-30-0629G
OVER CR 330 (LINCOLN HIGHWAY)

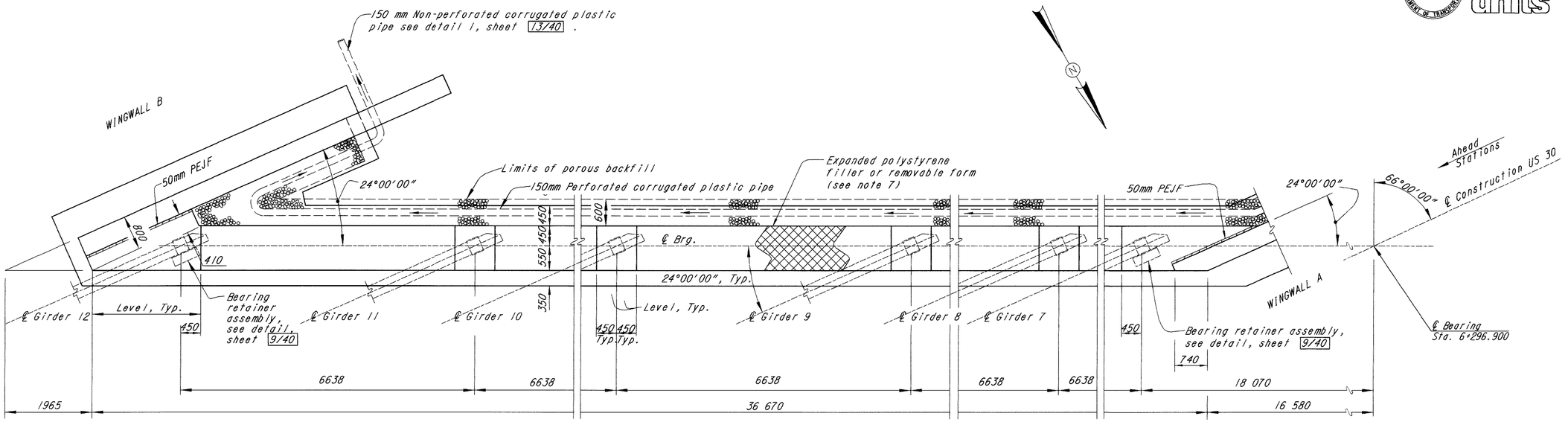
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10 / 40

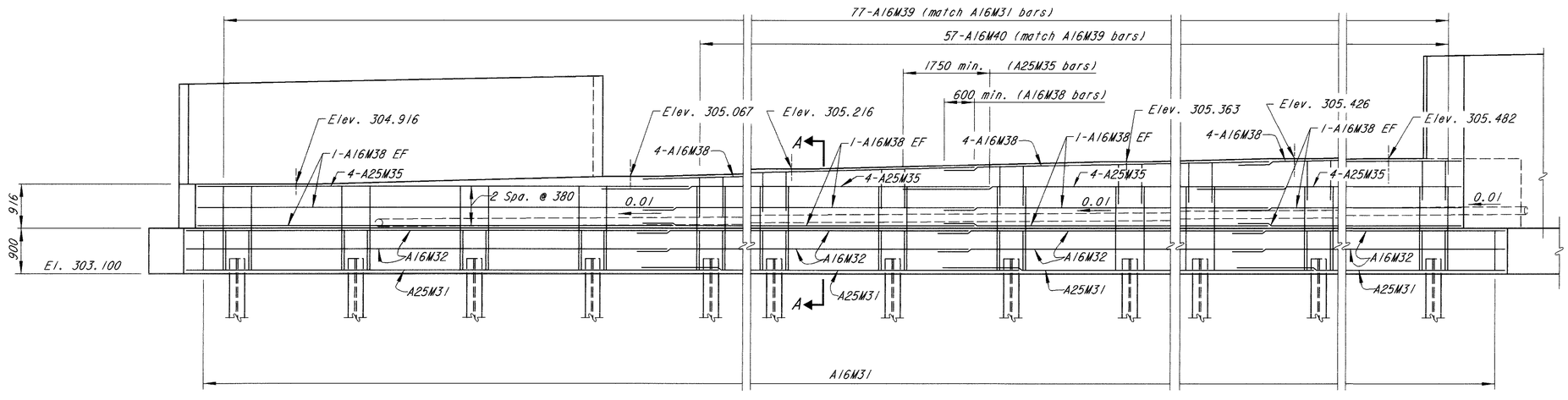
1903
2116

Filename: 06296s3.dgn

metric units



PLAN



ELEVATION

NOTES:
1. For pile layout, see sheet 6/40 .
2. For footing plan and Section A-A, see sheet 12/40 .
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally as shown
4. For wingwall details, see sheet 13/40 .
5. EF = Each Face
   PEJF = Preformed Expansion Joint Filler
6. For additional information, see std. dwg. SICD-1-96M.
7. Include with Item 842 Class S concrete for payment.

DESIGN AGENCY
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DESIGNED	FKL	DATE	6/16/99
DRAWN	ALH	REVIEWED	CRS
CHECKED	MRS	REVISED	—
		STRUCTURE FILE NUMBER	170137

REAR ABUTMENT RIGHT BRIDGE DETAILS

BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

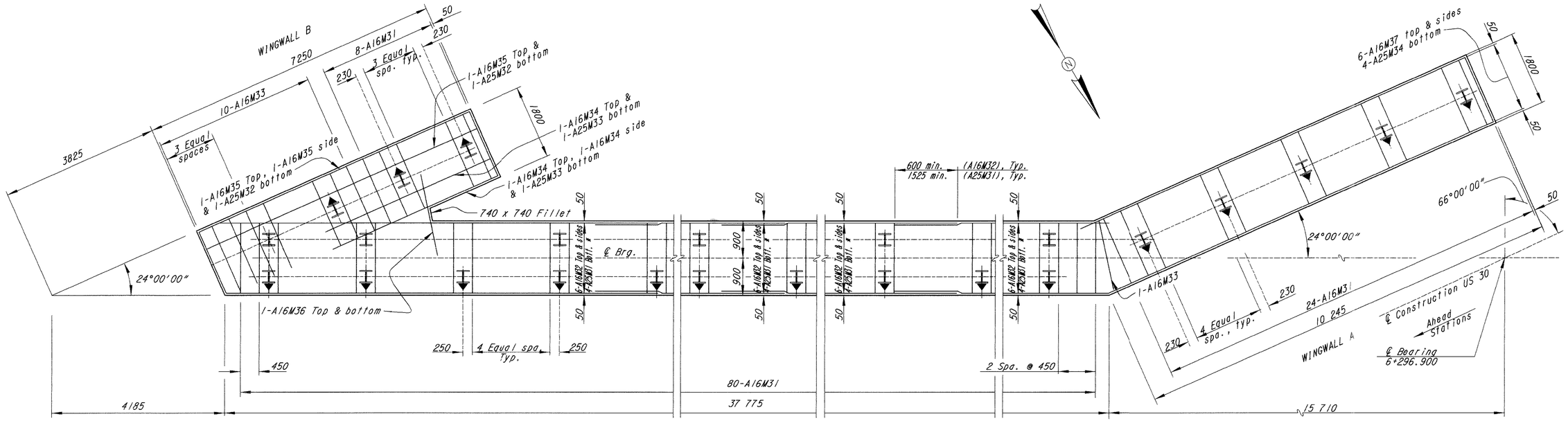
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11/40

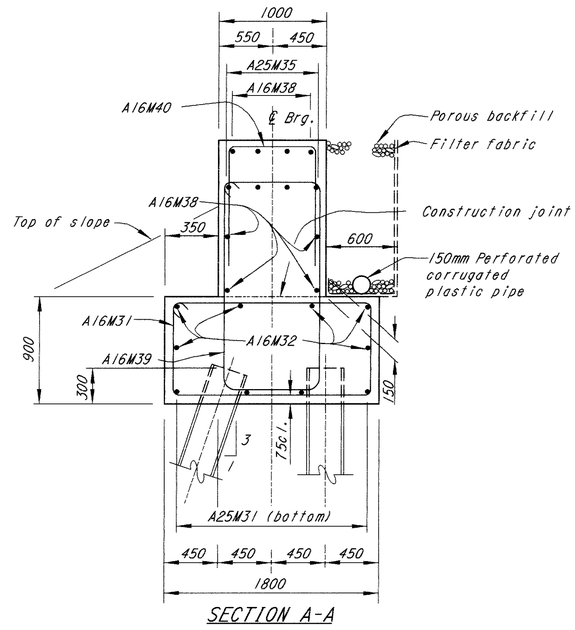
1904
2116

Filename: 06296ra1.dgn

metric units



FOOTING PLAN



SECTION A-A

NOTES:
1. For PILE LAYOUT PLAN, see sheet 6/40 .
2. * For location of reinforcing steel, see Section A-A on this sheet.

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MRS	—		170137

REAR ABUTMENT RIGHT BRIDGE DETAILS
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

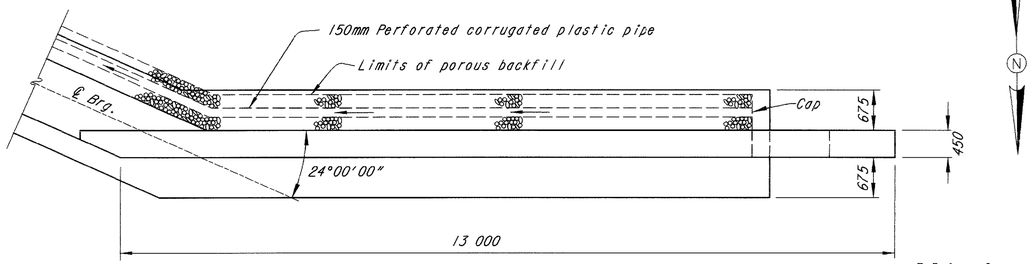
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12/40

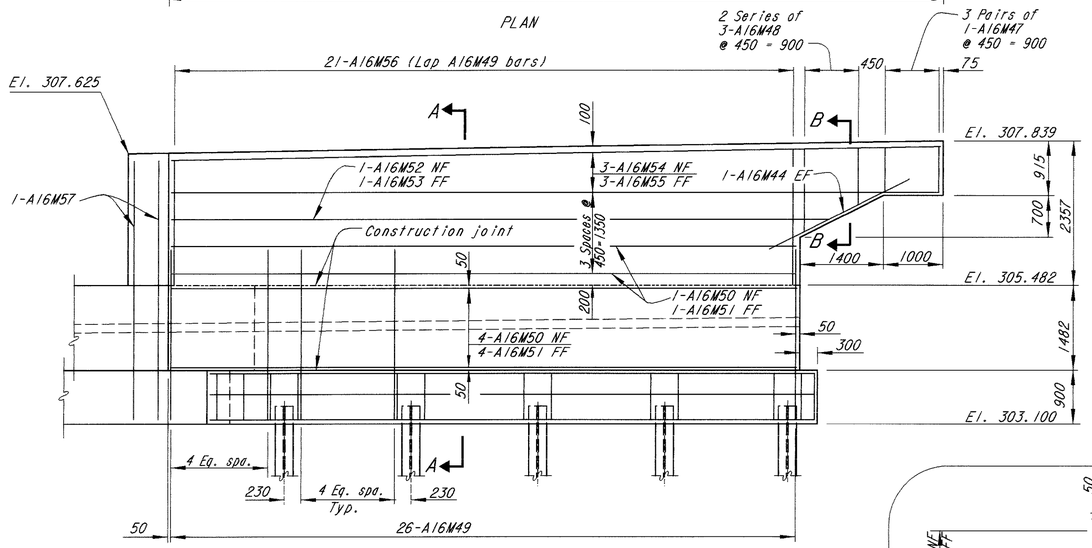
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2116

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metric units

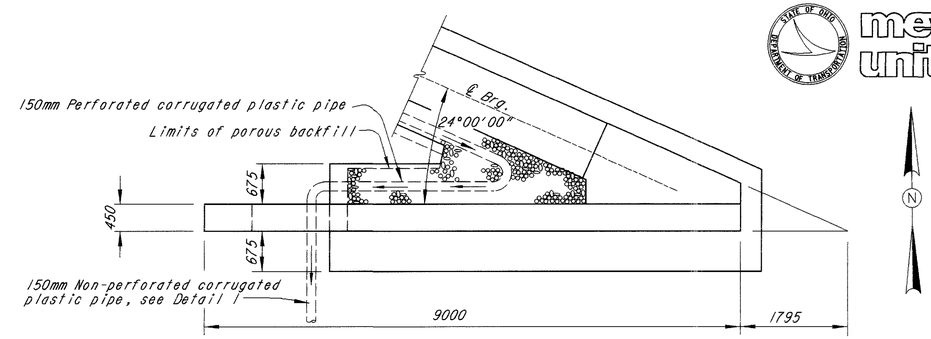


PLAN

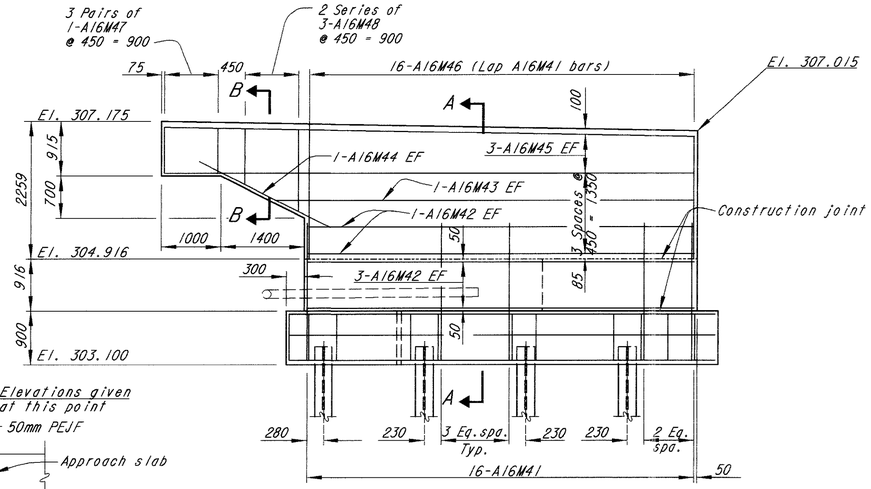


ELEVATION

WINGWALL A



PLAN

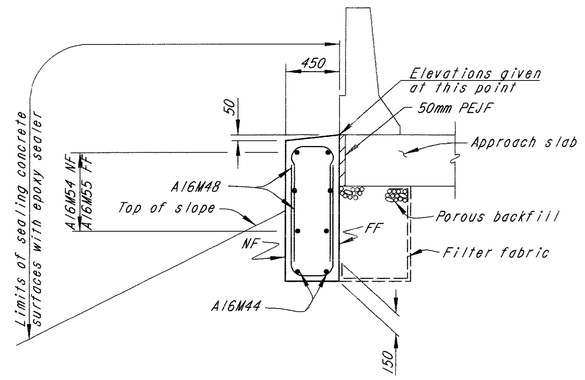


ELEVATION

WINGWALL B

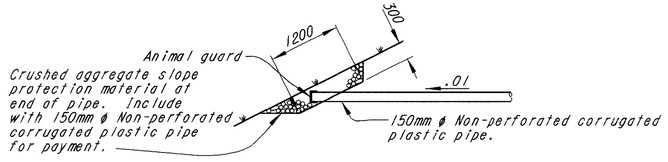
SECTION A-A

(Wingwall A shown Wingwall B similar)



SECTION B-B

(Wingwall A shown Wingwall B similar)



DETAIL 1

NOTES:
EF = Each Face
NF = Near Face
FF = Far Face
PEJF = Preformed Expansion Joint Filler

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6/16/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	170/037	

REAR ABUTMENT RIGHT BRIDGE DETAILS

BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

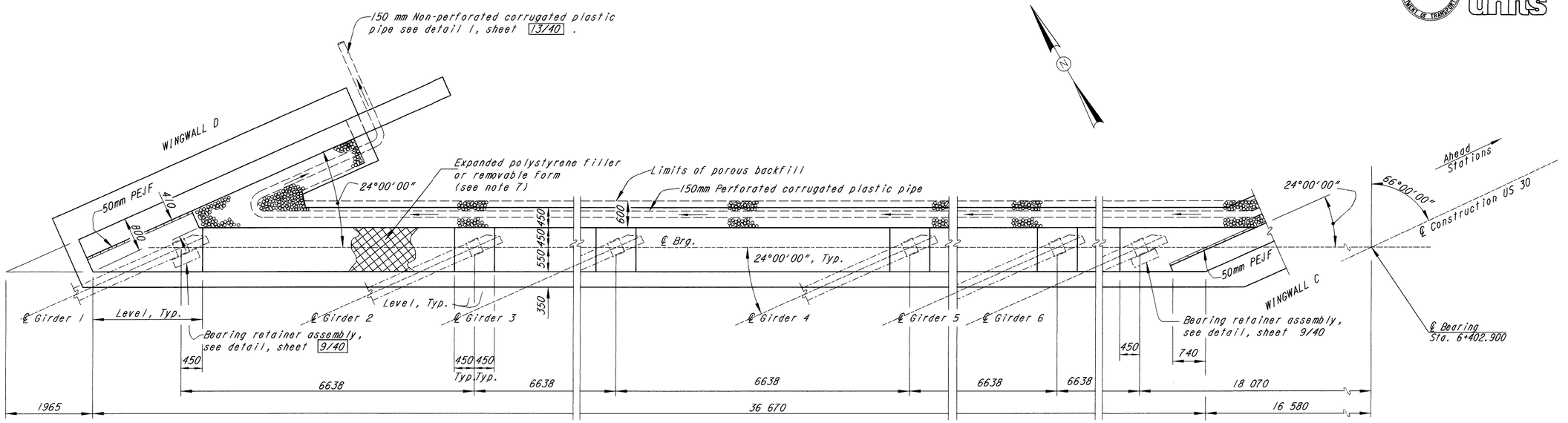
WYA/CRA-30-28.009/0.000

13/40

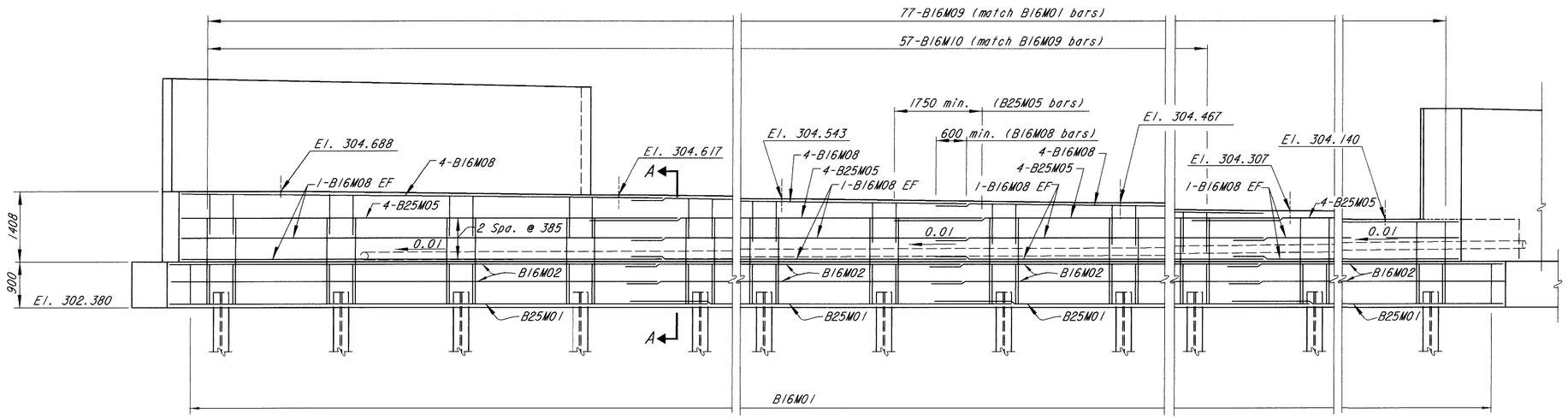
1906
2116

Filename: 06296rd6.dgn

metric units



PLAN



ELEVATION

NOTES:
1. For pile layout, see sheet 5/40 .
2. For footing plan and Section A-A, see sheet 15/40 .
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally as shown
4. For wingwall details, see sheet 16/40 .
5. EF = Each Face
   PEJF = Preformed Expansion Joint Filler
6. For additional information, see std. dwg. SICD-1-96M.
7. Include with Item 842 Class S concrete for payment.

DESIGN AGENCY
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1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CTS	6/16/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1701037	

FORWARD ABUTMENT LEFT BRIDGE DETAILS

BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

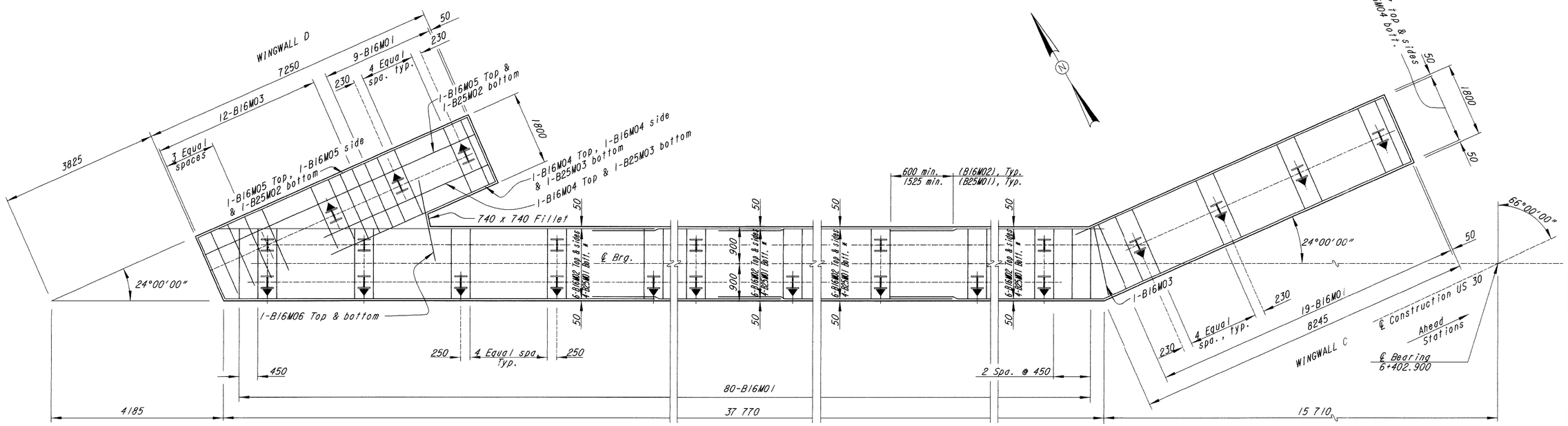
WYA/CRA-30-28.009/0.000

14/40

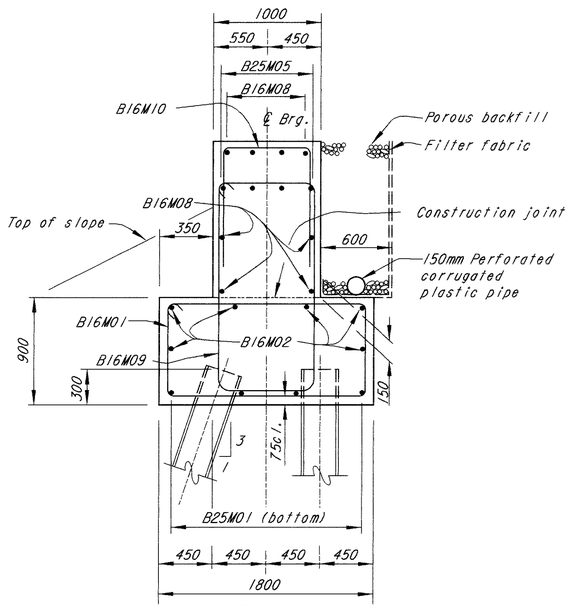
1907
2116

Filename: 06296fr4.dgn

metric units



FOOTING PLAN



SECTION A-A

NOTES:
1. For PILE LAYOUT PLAN, see sheet 5/40 .
2. * For location of reinforcing steel, see Section A-A on this sheet.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6/16/99
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MRS	—	170137	

FORWARD ABUTMENT LEFT BRIDGE DETAILS

BRIDGE NO. CRA-30-0629
OVER CR 330 (LINCOLN HIGHWAY)

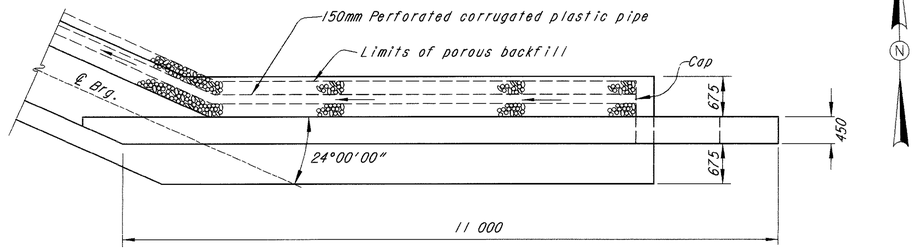
WYA/CRA-30-28.009/0.000

15/40

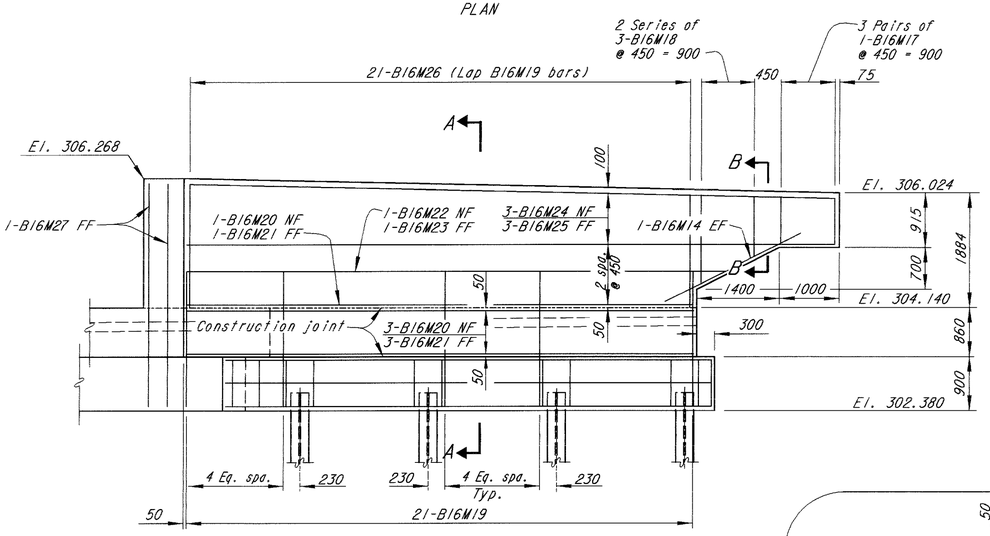
1908
2116

Filename: 0629fig5.dgn

metric units

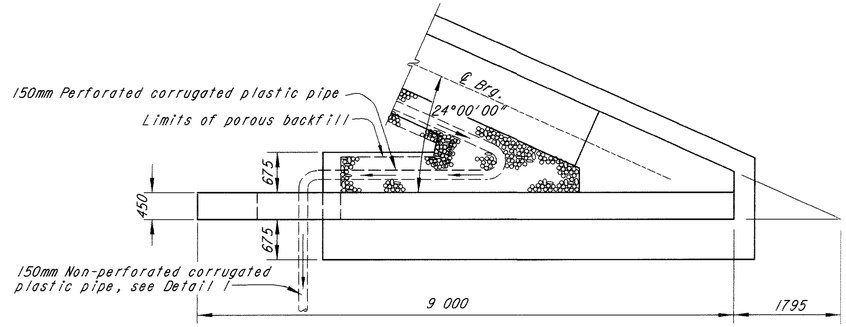


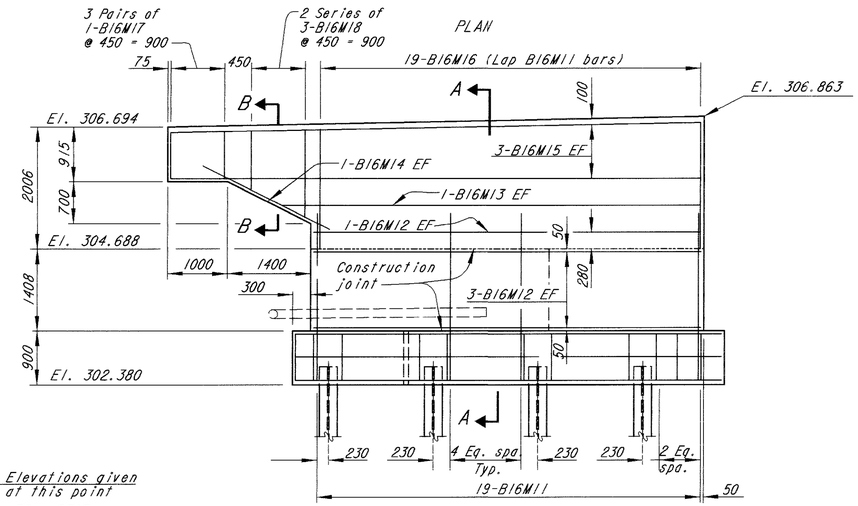
PLAN



ELEVATION

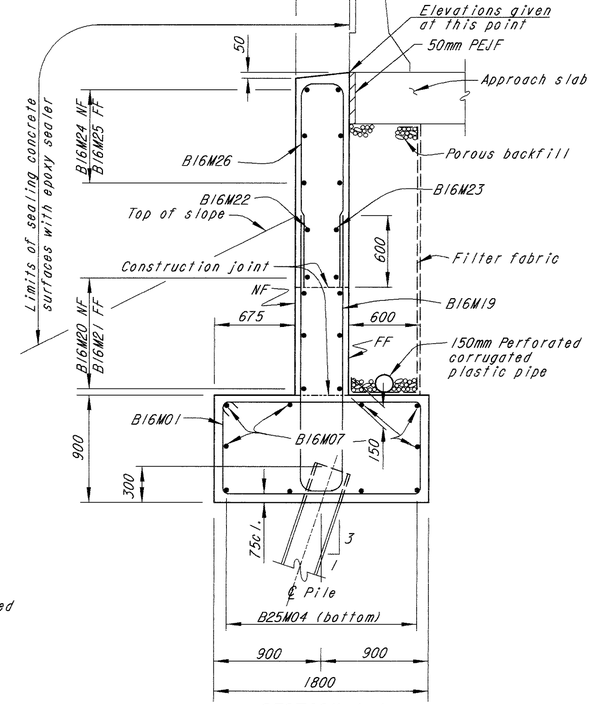
WINGWALL C





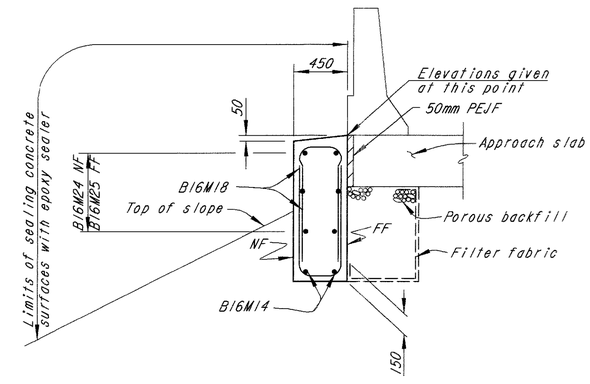
ELEVATION

WINGWALL D



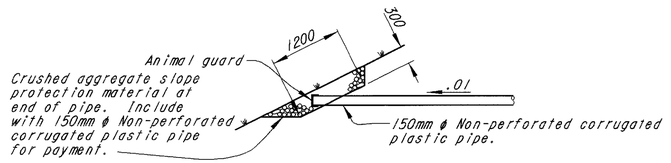
SECTION A-A

(Wingwall C shown Wingwall D similar)



SECTION B-B

(Wingwall A shown Wingwall B similar)



DETAIL I

NOTES:
EF = Each Face
NF = Near Face
FF = Far Face
PEJF = Preformed Expansion Joint Filler

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MRS	—	1701037	

FORWARD ABUTMENT LEFT BRIDGE DETAILS

BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

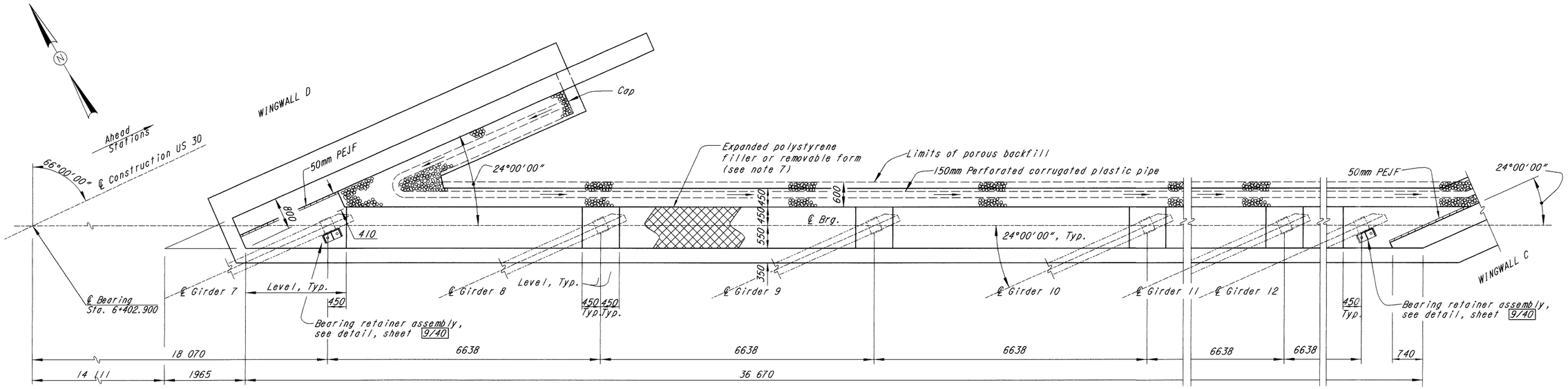
WYA/CRA-30-28.009/0.000

16 / 40

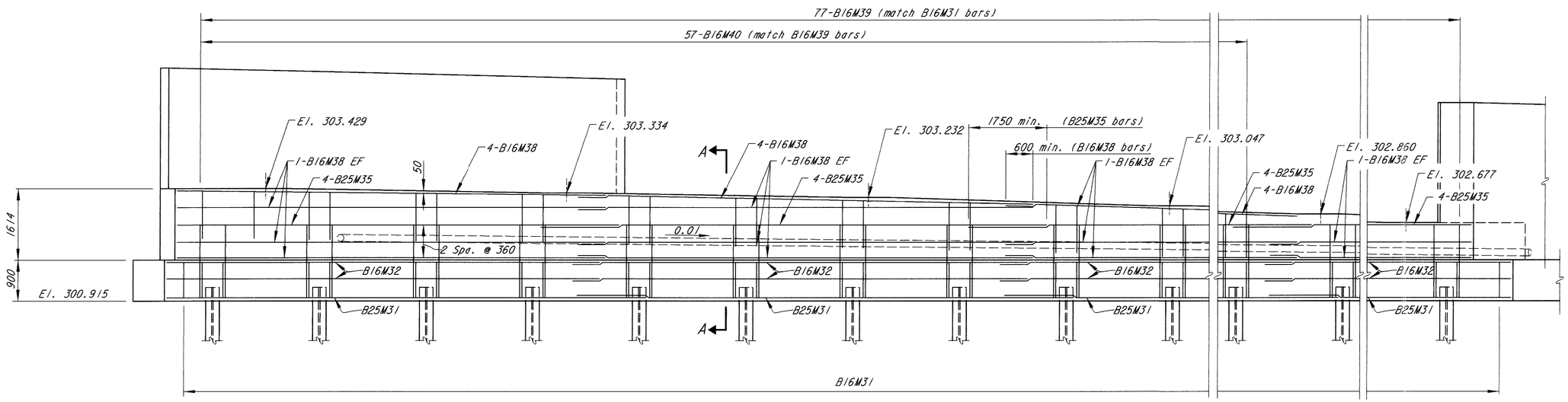
1909
2116

Filename: 0629616.dgn

metric units



PLAN



ELEVATION

NOTES:
1. For pile layout, see sheet 7/40 .
2. For footing plan and Section A-A, see sheet 18/40.
3. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally as shown
4. For wingwall details, see sheet 19/40.
5. EF = Each Face
   PEJF = Preformed Expansion Joint Filler
6. For additional information, see std. dwg. SICD-1-96M.
7. Include with Item 842 Class S concrete for payment.

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MRS	—	1101037	

FORWARD ABUTMENT RIGHT BRIDGE DETAILS
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

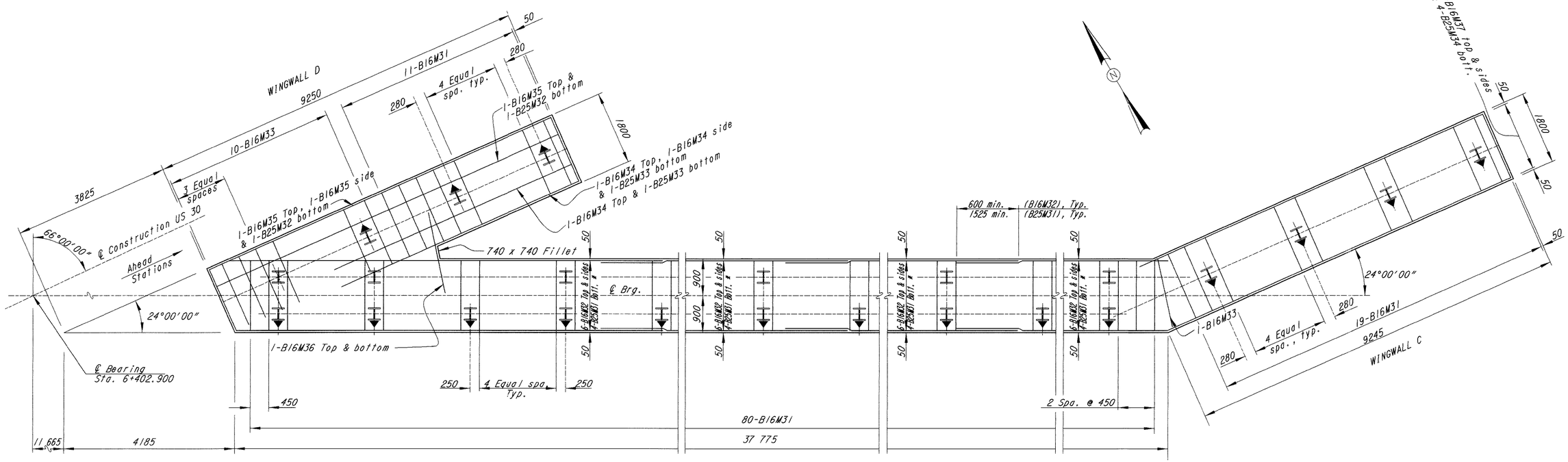
WYA/CRA-30-28.009/0.000

17 / 40

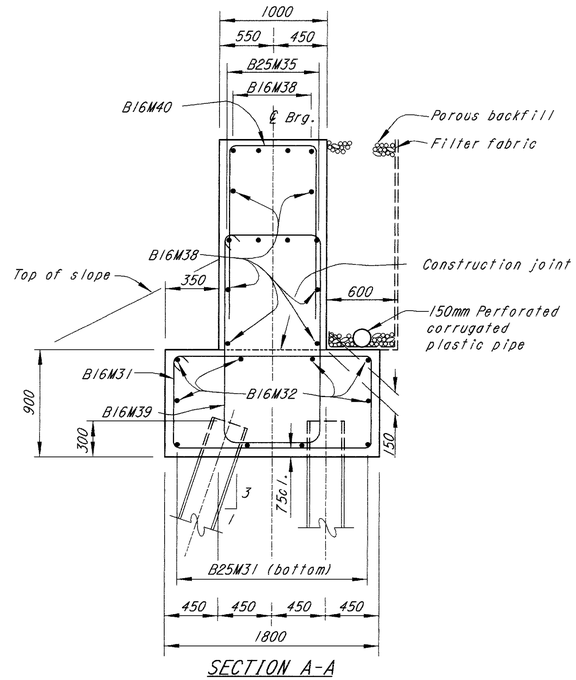
1910
2116

File name: 06296fr1.dgn

metric units



FOOTING PLAN



SECTION A-A

NOTES:
1. For PILE LAYOUT PLAN, see sheet 17/40 .
2. * For location of reinforcing steel, see Section A-A on this sheet.

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FORWARD ABUTMENT RIGHT BRIDGE DETAILS

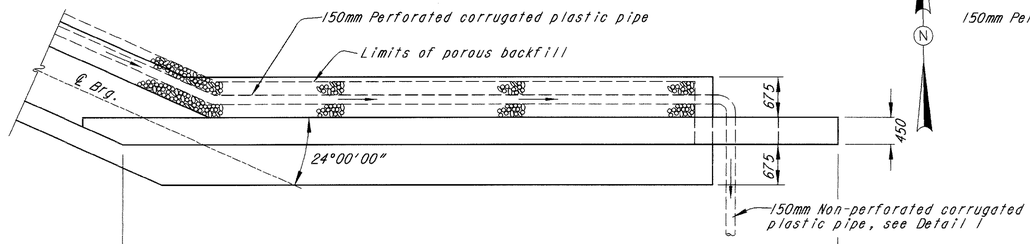
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OVER CR 330 (LINCOLN HIGHWAY)

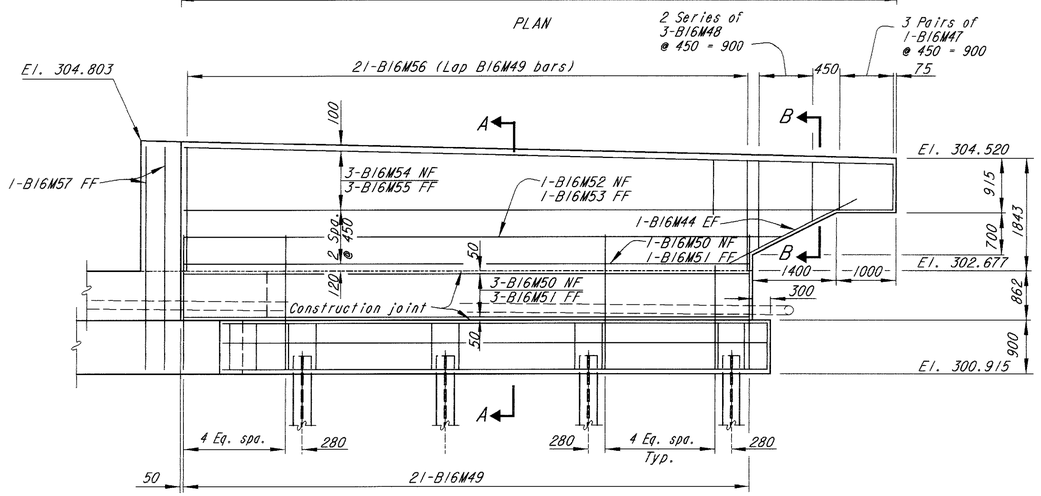
WYA/CRA-30-28.009/0.000

18/40

1911
2116

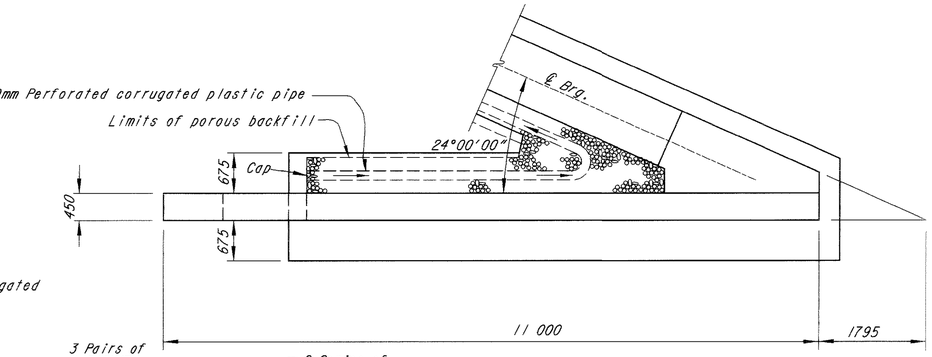
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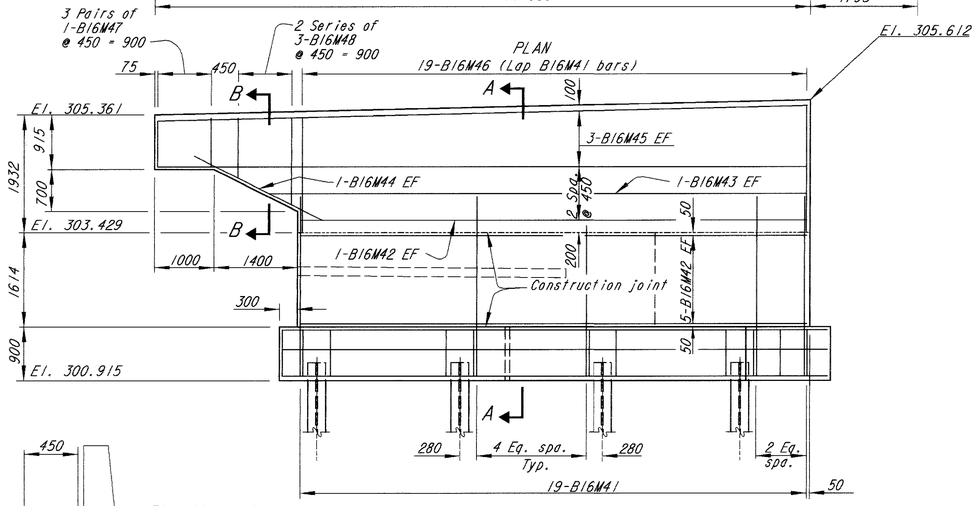




ELEVATION

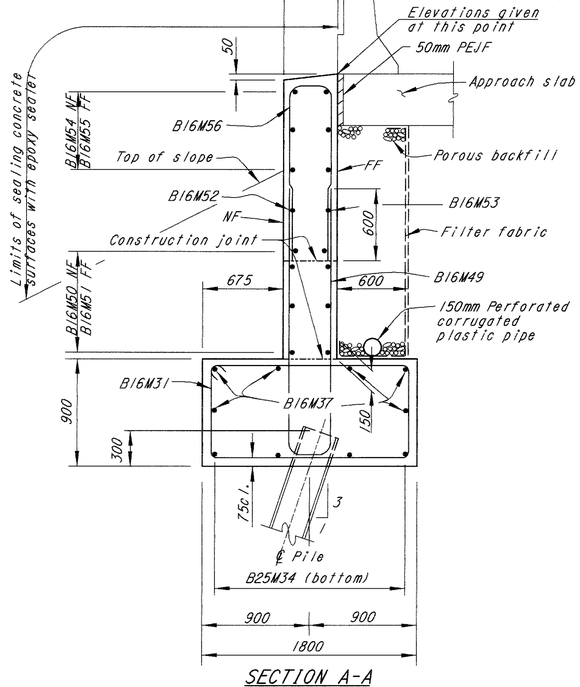
WINGWALL C





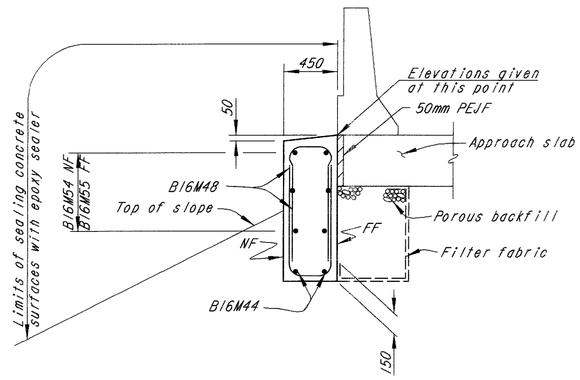
ELEVATION

WINGWALL D



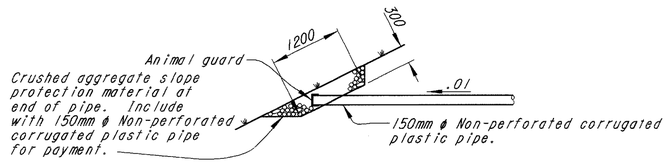
SECTION A-A

(Wingwall C shown Wingwall D similar)



SECTION B-B

(Wingwall C shown Wingwall D similar)



DETAIL 1

NOTES:
EF = Each Face
NF = Near Face
FF = Far Face
PEJF = Preformed Expansion Joint Filler

metric units

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MRS	—	170107	

FORWARD ABUTMENT RIGHT BRIDGE DETAILS
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

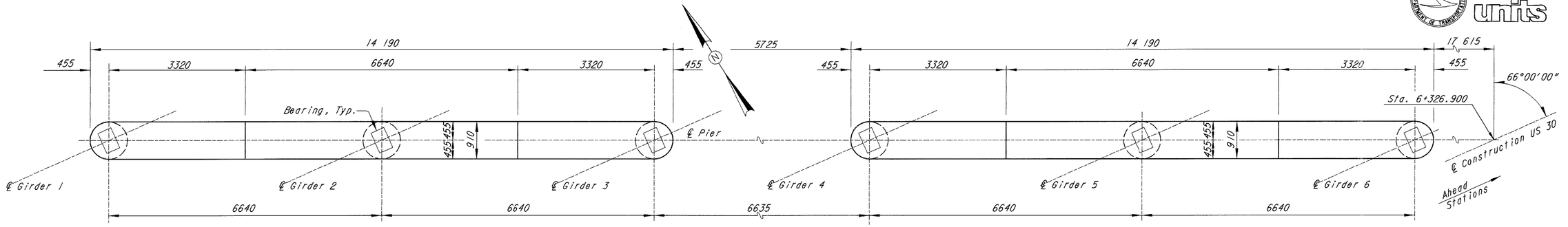
WYA/CRA-30-28.009/0.000

19/40

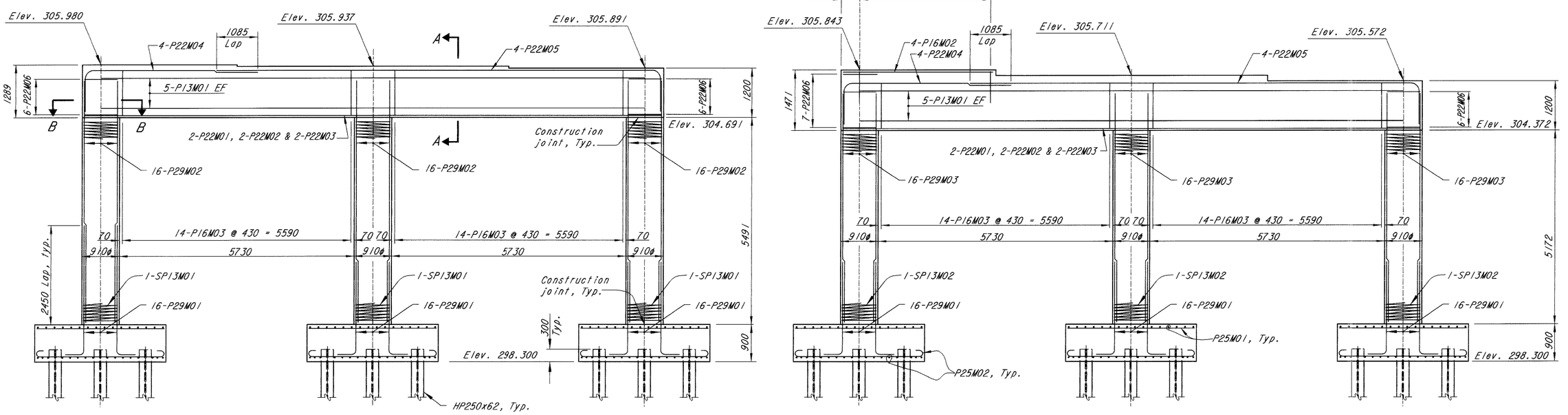
1912
2116

Filename: 06296f3.dgn

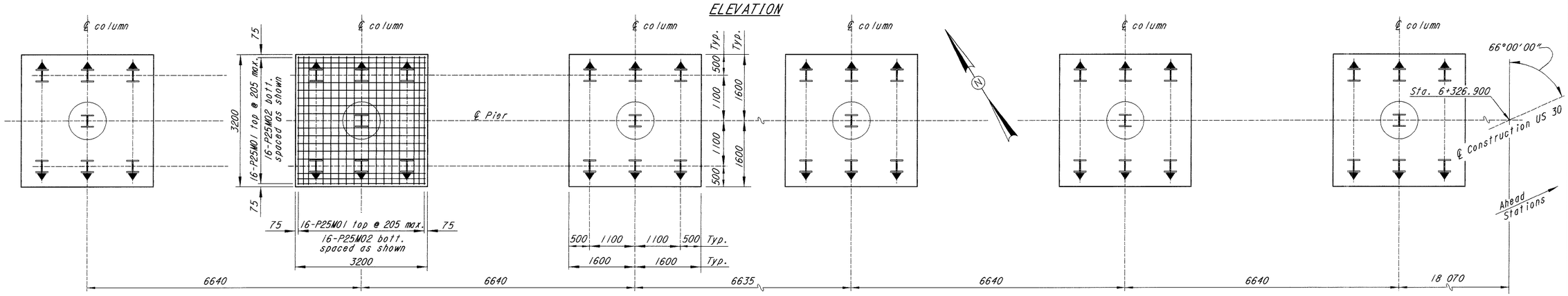
metric units



PLAN



ELEVATION



NOTE: Footing reinforcing steel shown is typical for all footings.

FOOTING PLAN

Notes:
For notes, end elevation and sections, see sheet 24/40 .

DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
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DESIGN AGENCY
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1848 Summit Road
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PIER 1 LEFT BRIDGE

BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

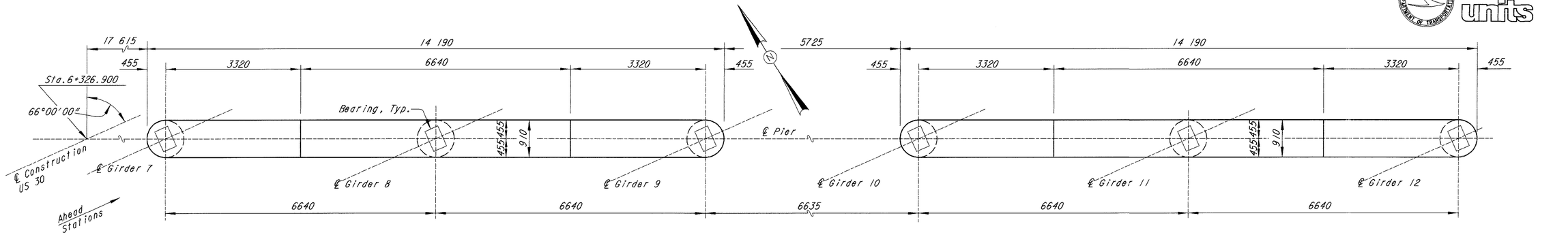
WYA/CRA-30-28.009/0.000

20/40

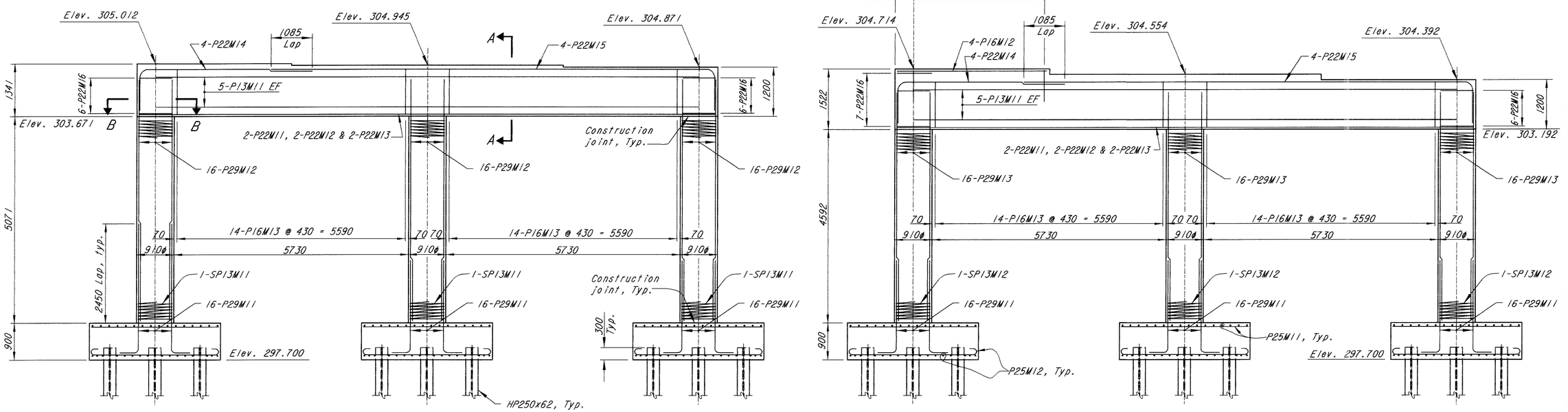
1913
2116

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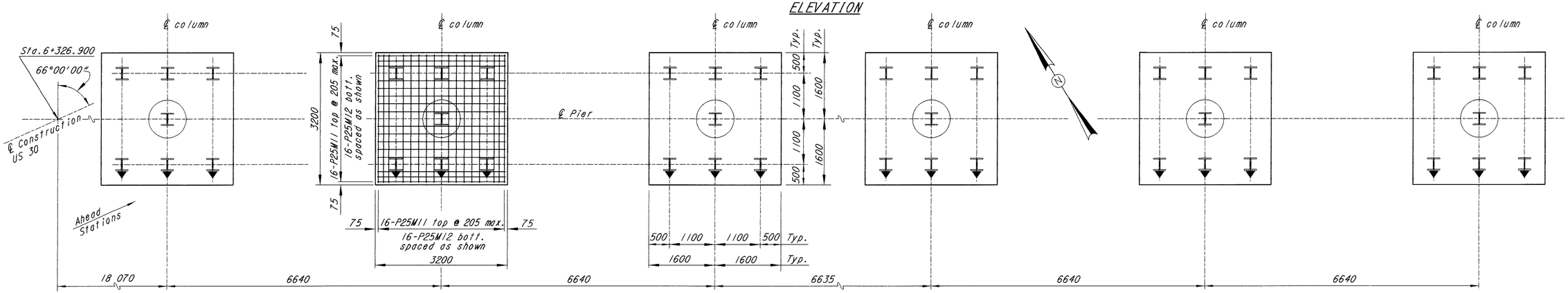
metric units



PLAN



ELEVATION



NOTE: Footing reinforcing steel shown is typical for all footings.

FOOTING PLAN

Notes:
For notes, end elevation and sections, see sheet 24/40 .

DESIGN AGENCY
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MRS	—	1701037	

PIER 1 RIGHT BRIDGE
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

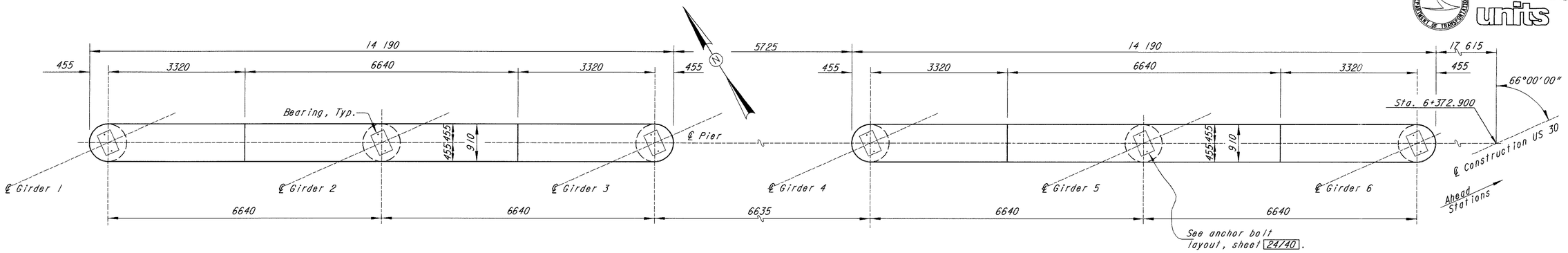
WYA/CRA-30-28.009/0.000

21/40

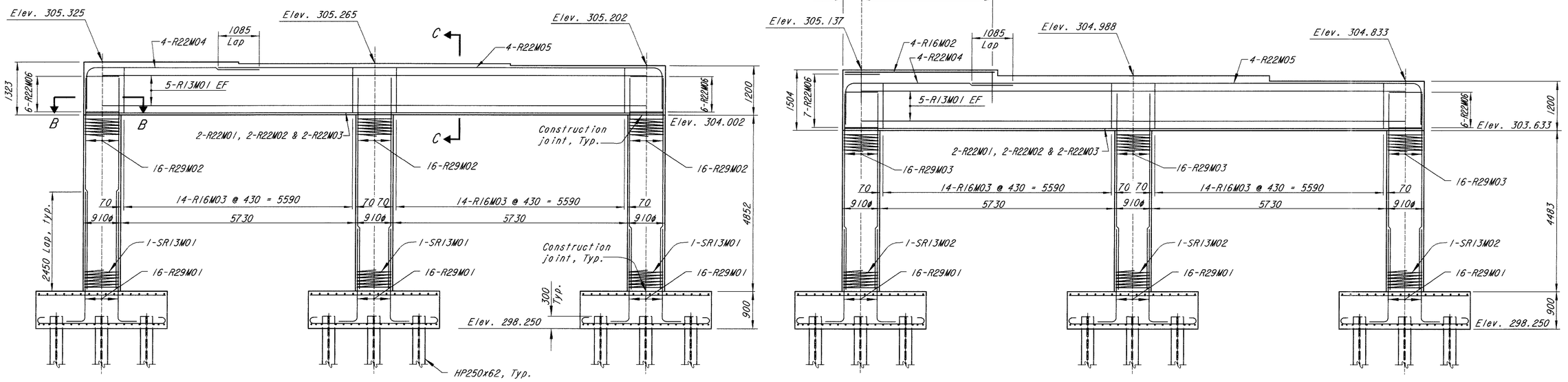
1914
2116

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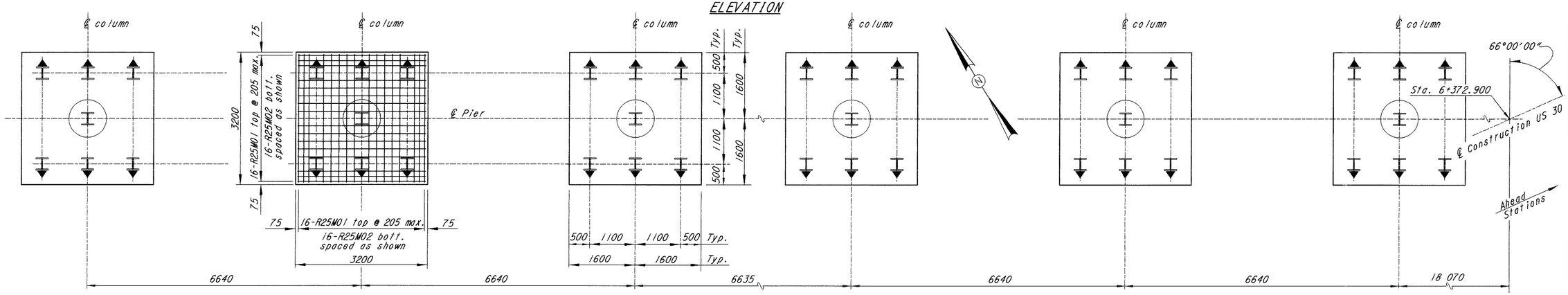
metric units



PLAN



ELEVATION



NOTE: Footing reinforcing steel shown is typical for all footings.

FOOTING PLAN

Notes:
For notes, end elevation and sections, see sheet 24/40.

DESIGN AGENCY
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MRS	—	110037	

PIER 2 LEFT BRIDGE
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

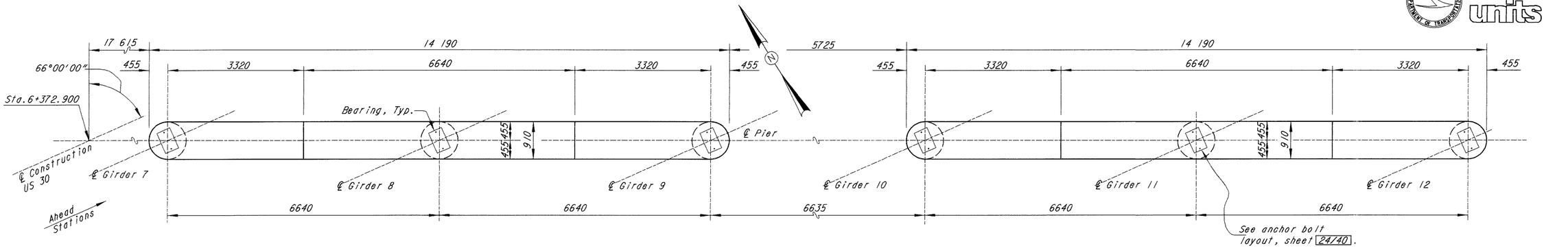
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22/40

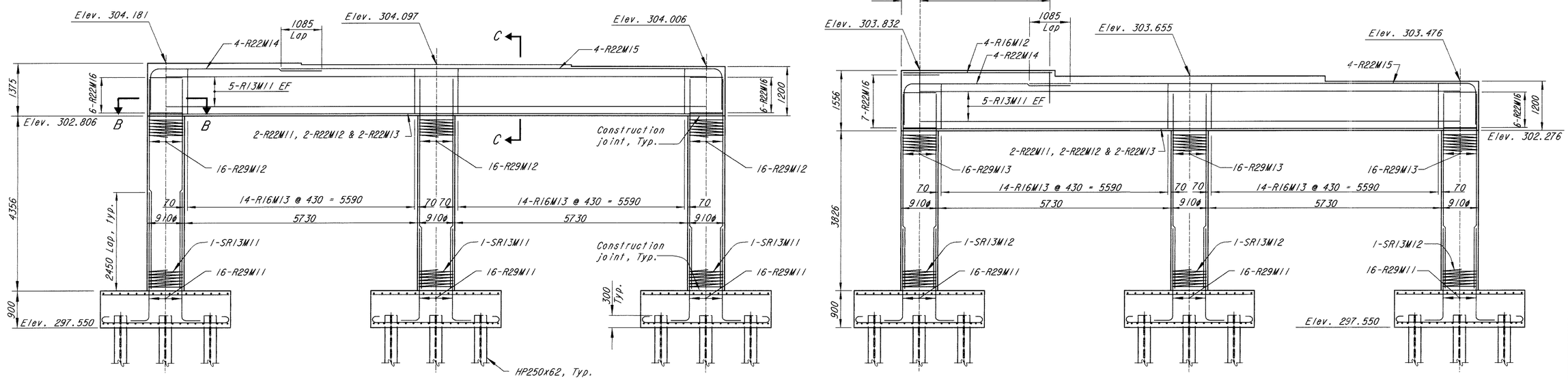
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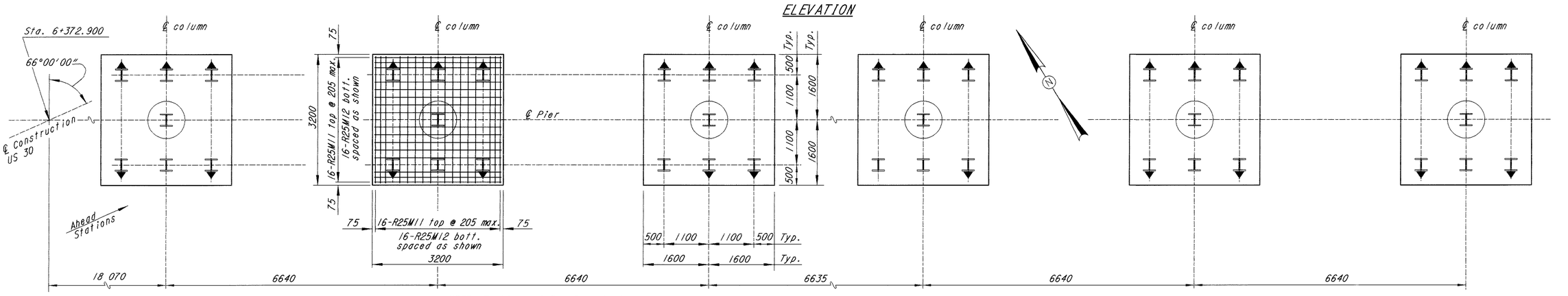
metric units



PLAN



ELEVATION



NOTE: Footing reinforcing steel shown is typical for all footings.

FOOTING PLAN

Notes:
For notes, end elevation and sections, see sheet 24/40.

DESIGN AGENCY
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PIER 2 RIGHT BRIDGE

BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

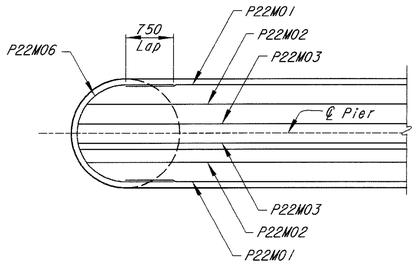
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23/40

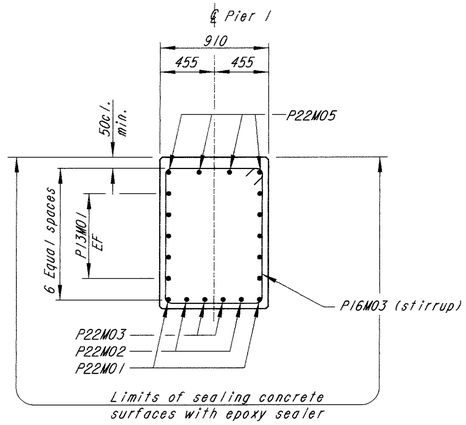
1916
2116

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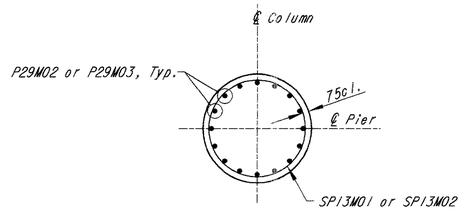
metric units



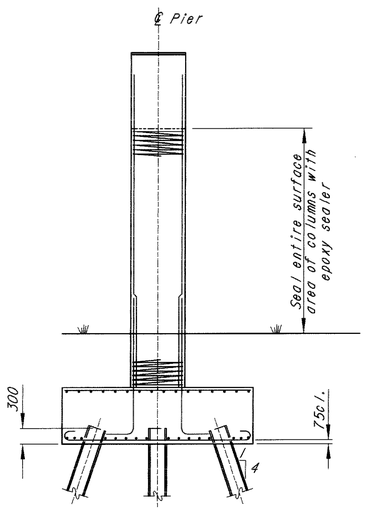
SECTION B-B
(Pier 1 shown Pier 2 similar)



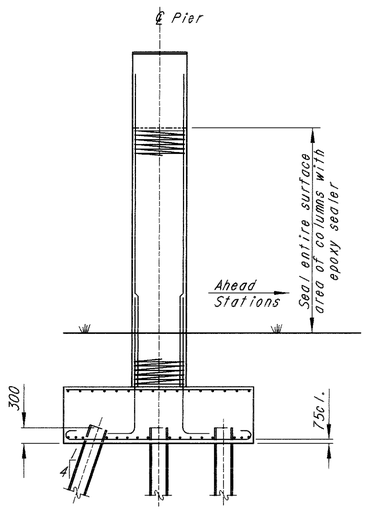
SECTION A-A
(Pier 1 left shown
Pier 1 right similar)



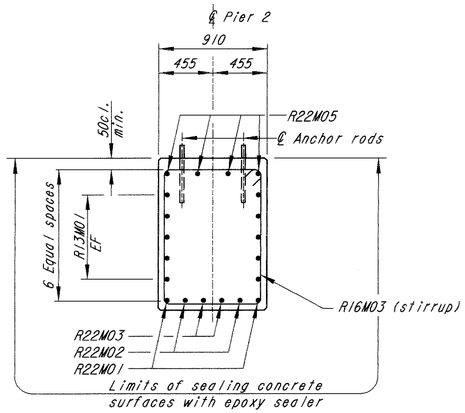
TYPICAL COLUMN SECTION
(Pier 1 shown Pier 2 similar)



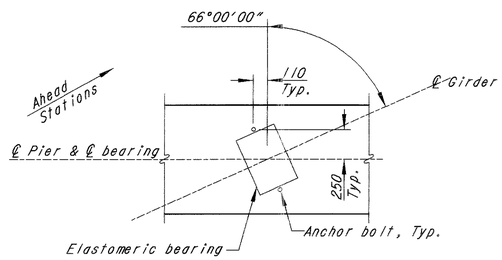
END ELEVATION
(Typical)



END ELEVATION
(Pier 1 Rt.)



SECTION C-C
(Pier 2 left shown
Pier 2 right similar)



ANCHOR ROD LAYOUT
(Pier 2)

NOTES:
1. BRIDGE SEAT REINFORCEMENT: Reinforcing steel in the vicinity of the bridge seat shall be accurately placed to avoid interference with the drilling of bearing anchor holes or the pre-setting of bearing anchors.
2. BEARING ANCHORS: At the option of the Contractor, bearing anchors (or formed holes), located and supported by templates, may be cast-in-place.
3. ▼ Denotes pile battered 1:4 in direction of arrow.

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PIER DETAILS
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

24 / 40

1917
2116

Filename: 062905.dgn

metric units

106 000
30 000 (Span 1) | 46 000 (Span 2) | 30 000 (Span 3)
19 500 | 19 000 | 29 000 | 19 000 | 19 500
7600 | 9 Spaces @ 6400 = 57 600 | 5920 | 9 Spaces @ 6400 = 57 600 | 7600

Typ. where shown unless noted — 2 Eq. Sp.

℄ Brg. Rear Abut. | ℄ Splice 1 | ℄ Pier 1 | ℄ Splice 2 | ℄ Splice 3 | ℄ Pier 2 | ℄ Splice 4 | ℄ Brg. Forward Abut.

Girder 1 | Girder 2 | Girder 3 | Girder 4 | Girder 5 | Girder 6

5 Spaces @ 2700 = 13 500

5 Spaces @ 6638 = 33 190

90° Typ.

18 070, Typ.

Bearing stiffener, Typ. ℄ 16x140 (CVN)

Intermediate stiffener, Typ. ℄ 16x190 *

Type 3 Intermediate crossframe, Typ.

■ = 2 Equal Spaces

Bearing stiffener, Typ. ℄ 30x140 (CVN)

66°00'00", Typ.

℄ Bearing Forward Abut.

℄ Construction US 30

Sta. 6+296.900 | Sta. 6+326.900 | Sta. 6+372.900 | Sta. 6+402.900

* In Span 2, all stiffeners with crossframes attached shall be provided with a 40 x 18 mm vertical slotted hole. Erection bolts shall be provided with an 8 mm thick plate washer.

FRAMING PLAN

106 000
30 000 (Span 1) | 46 000 (Span 2) | 30 000 (Span 3)
19 500 | 10 500 | 8500 | 29 000 | 8500 | 10 500 | 19 500
℄ 22x300 (CVN) | ℄ 22x400 (CVN) | ℄ 22x300 (CVN)
8000 | 5000 | 6000 | 6000 | 5000 | 8000
℄ 40x400 (CVN) | ℄ 62x400 (CVN) | ℄ 40x400 (CVN) | ℄ 40x400 (CVN) | ℄ 62x400 (CVN) | ℄ 40x400 (CVN)

3 Spaces @ 300 = 900 | 3 Spaces @ 300 = 900

40 Spaces @ 450 =18000 | 23 600 | 33 Spaces @ 600 = 19 800 | 23 600 | 40 Spaces @ 450 = 18 000

2 Spa. @300=600 | 2 Spa. @ 300=600

1160 Typ.

Shear connector spacing, see detail on sheet 27/40

℄ Brg. Rear Abut. | ℄ Splice 1 | ℄ Pier 1 | ℄ Splice 2 | ℄ Splice 3 | ℄ Pier 2 | ℄ Splice 4 | ℄ Brg. Forward Abut.

CJP | CJP | CJP | CJP

Bearing stiffener | Bearing stiffener | Bearing stiffener

℄ 13x1525 (CVN) Entire length

8 / 8 Typ. entire length of web

165

B | B

3 Spa. @ 425

Bearing stiffener

℄ 50mm ϕ Holes Typ. each end

A | A

CS CJP | CJP CS | CS CJP | CJP CS

150 | 19 500 | 10 500 | 8500 | 29 000 | 8500 | 10 500 | 19 500 | 150
℄ 22x300 (CVN) | 8000 | 5000 | 6000 | ℄ 36X400 (CVN) | 6000 | 5000 | 8000 | ℄ 22x300 (CVN)
℄ 40x400 (CVN) | ℄ 62x400 (CVN) | ℄ 40x400 (CVN) | ℄ 40X400 (CVN) | ℄ 62x400 (CVN) | ℄ 40X400 (CVN)

Region B | Region T | Region B | Region T | Region B

GIRDER ELEVATION

Note: (Typical)
Intermediate stiffeners not shown for clarity.

NOTES:
1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. WELDED ATTACHMENT of supports for concrete deck finishing machine may be made to areas of fascia stringer flanges designated Region B. Attachments shall not be made to areas designated Region T. Fillet welds to compression flanges shall not be closer than 25mm from edge of flange, be not more than 50mm long and be not smaller than the minimum size required by AASHTO.
3. Region B = Bottom flange in tension; top flange in compression.
   Region T = Top flange in tension; bottom flange in compression.
4. CS - Indicates butt weld subject to compressive stresses only.
   CJP - Indicates complete joint penetration weld.
5. For splice details, shear connector, flange transition details and Sections A-A and B-B, see sheet 27/40 .
6. All butt welds shall have weld reinforcement removed by grinding in direction parallel to centerline of girder.
7. For crossframe, stiffener and additional details, see Std. Dwg. GSD-1-96M.
8. Clip outer edge of intermediate stiffeners at 45° where stiffener projects beyond flange.

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1848 Summit Road
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MPS	—	170107	

FRAMING PLAN LEFT BRIDGE
BRIDGE NO. CRA-30-0829.6
OVER CR 330 (LINCOLN HIGHWAY)

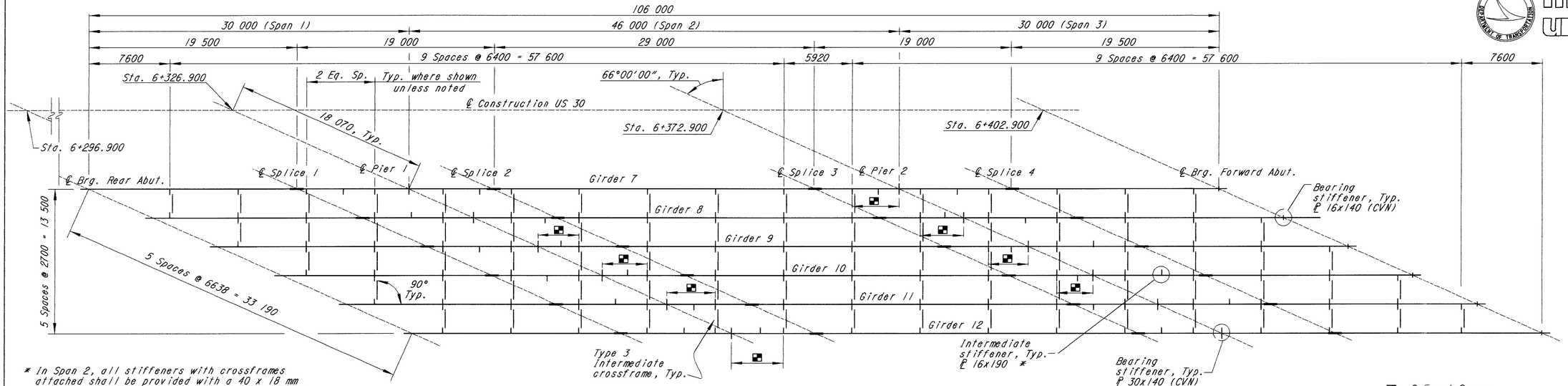
WYA/CRA-30-28.009/0.000

25 | 40

(1918 / 2116)

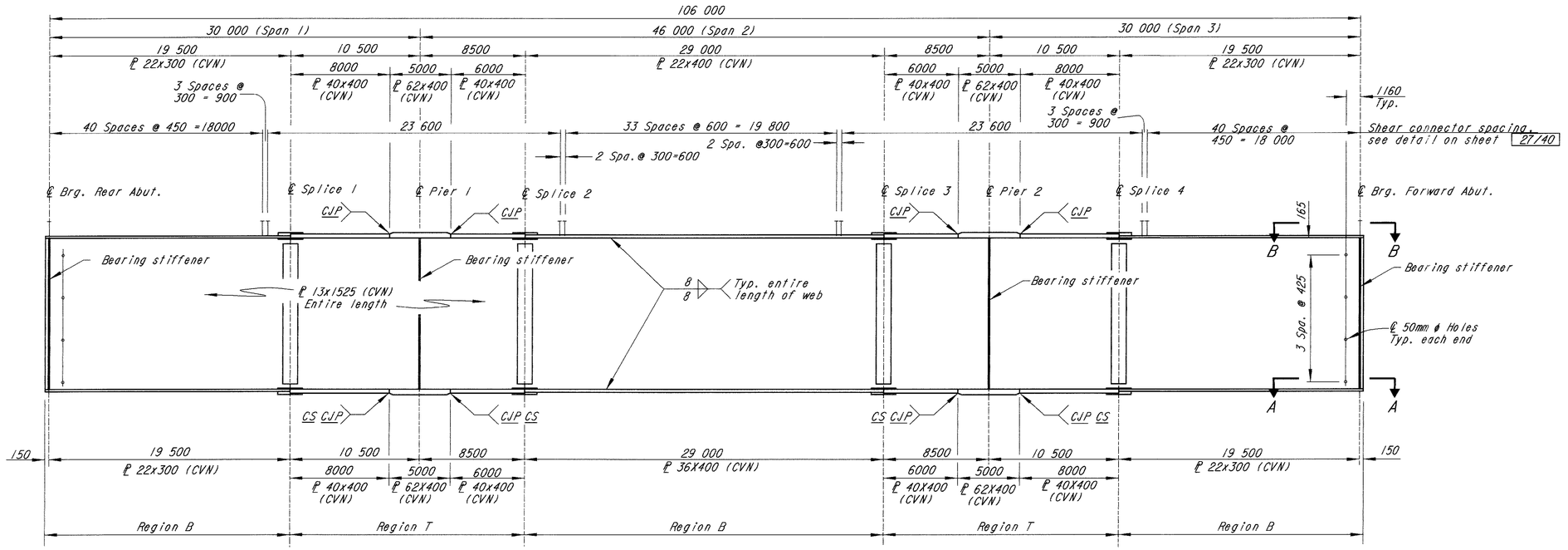
Filename: 082961gl.dgn

metric units



* In Span 2, all stiffeners with crossframes attached shall be provided with a 40 x 18 mm vertical slotted hole. Erection bolts shall be provided with an 8 mm thick plate washer.

FRAMING PLAN



GIRDER ELEVATION

Note: (Typical)
Intermediate stiffeners not shown for clarity.

NOTES:
1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. WELDED ATTACHMENT of supports for concrete deck finishing machine may be made to areas of fascia stringer flanges designated Region B. Attachments shall not be made to areas designated Region T. Fillet welds to compression flanges shall not be closer than 25mm from edge of flange, be not more than 50mm long and be not smaller than the minimum size required by AASHTO.
3. Region B = Bottom flange in tension: top flange in compression.
   Region T = Top flange in tension: bottom flange in compression.
4. CS - Indicates butt weld subject to compressive stresses only.
   CJP - Indicates complete joint penetration weld.
5. For splice details, shear connector, flange transition details and Sections A-A and B-B, see sheet 27/40 .
6. All butt welds shall have weld reinforcement removed by grinding in direction parallel to centerline of girder.
7. For crossframe, stiffener and additional details, see Std. Dwg. GSD-1-96M.
8. Clip outer edge of intermediate stiffeners at 45° where stiffener projects beyond flange.

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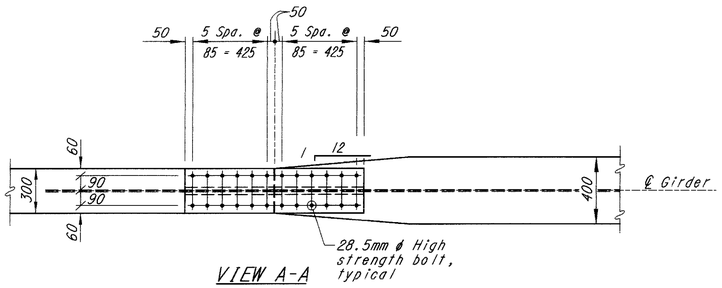
FRAMING PLAN RIGHT BRIDGE
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

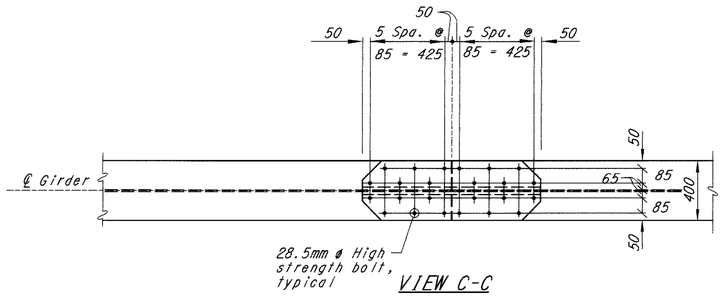
26/40

1919
2116

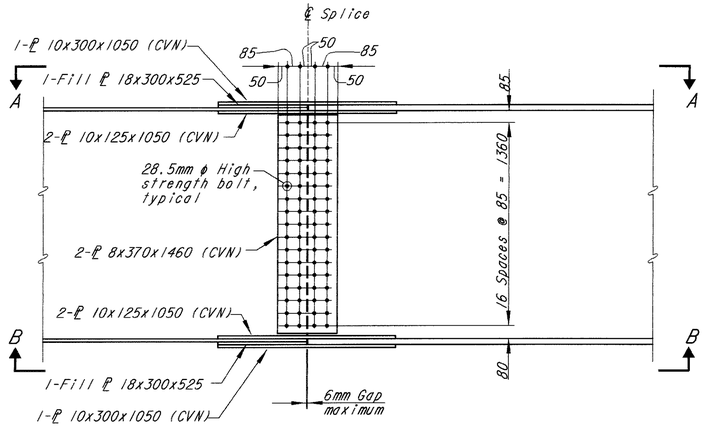
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VIEW A-A

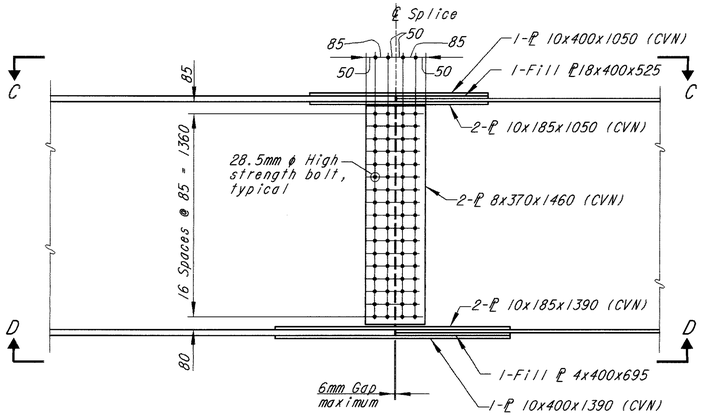


VIEW C-C



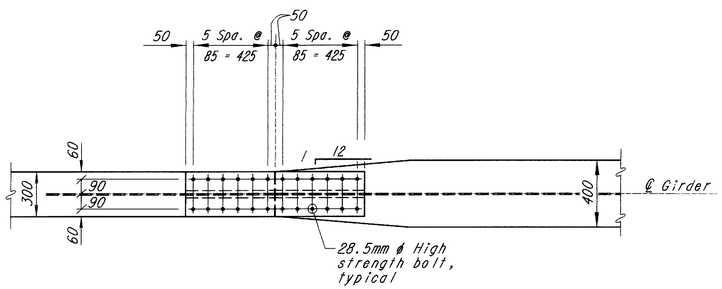
SPLICE ELEVATION

(Splice 1 shown, splice 4 opposite hand)

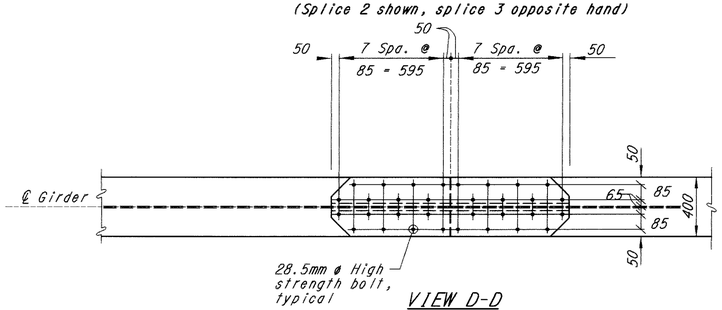


SPLICE ELEVATION

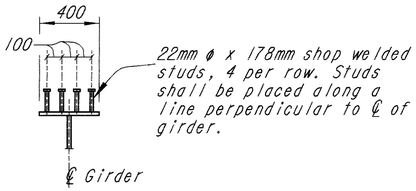
(Splice 2 shown, splice 3 opposite hand)



VIEW B-B

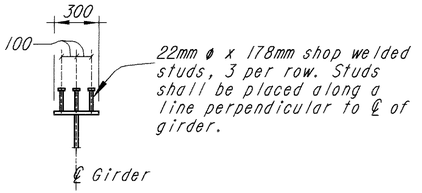


VIEW D-D



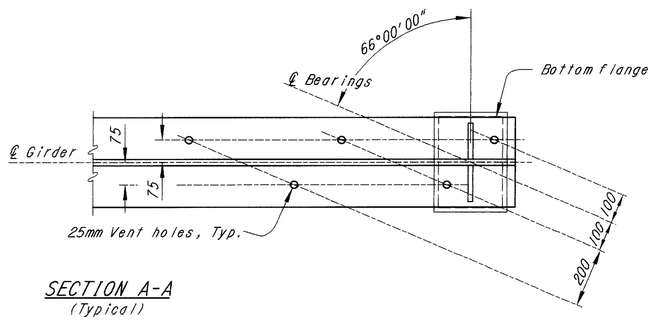
SHEAR CONNECTOR DETAIL

(400mm WIDE FLANGE)



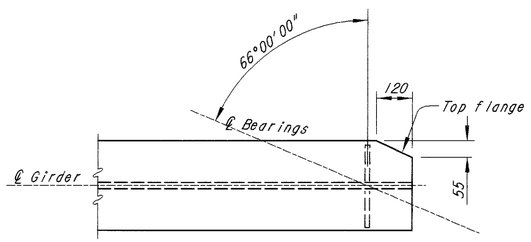
SHEAR CONNECTOR DETAIL

(300mm WIDE FLANGE)



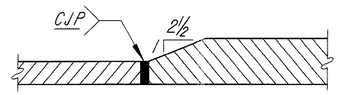
SECTION A-A

(Typical)



SECTION B-B

(Typical)



FLANGE THICKNESS TRANSITION DETAIL

SPLICE NOTES

1. Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.
2. High strength bolts shall be 28.5mm diameter, A325M galvanized.
3. In web splice plates, bolt heads shall be placed on the exposed side of the fascia girders. In bottom flange splice plates, nuts shall be placed on top surface of bottom flange splice plates.

metric units

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MPS	—	170107	

STRUCTURAL STEEL DETAILS
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

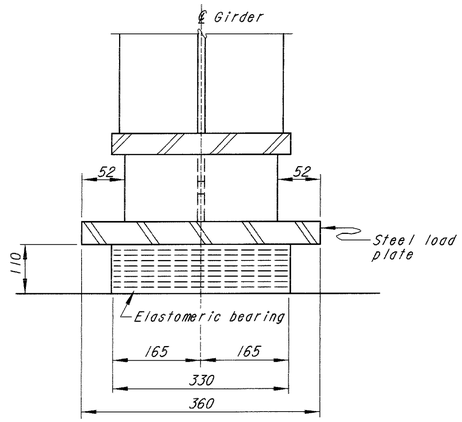
WYA/CRA-30-28.009/0.000

27 / 40

1920
2116

Filename: 06296fig3.dgn

metric units



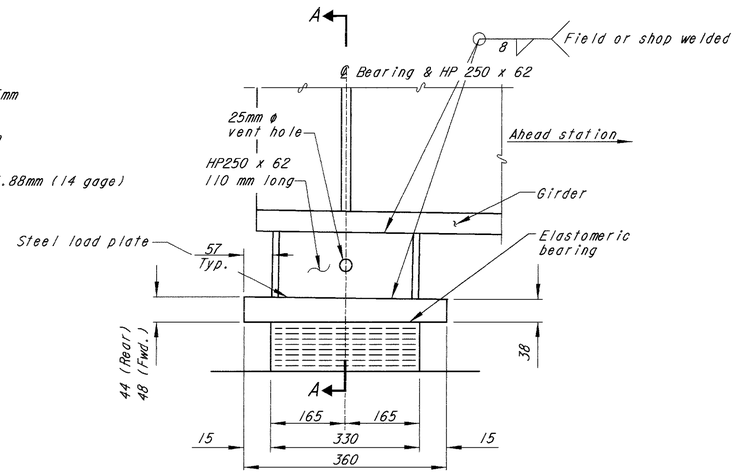
SECTION A-A

Thickness of external elastomer = 4.5mm
(2 required)

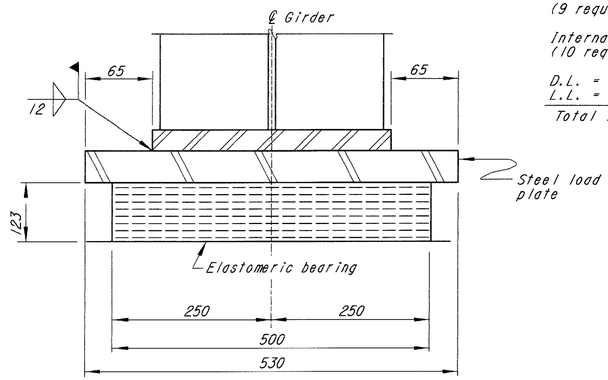
Thickness of internal elastomer = 8mm
(10 required)

Internal steel laminate thickness = 1.88mm (14 gage)
(11 required)

D.L. = 250kN
L.L. = 250kN
Total 500kN



ELEVATION
BEARING AT ABUTMENTS



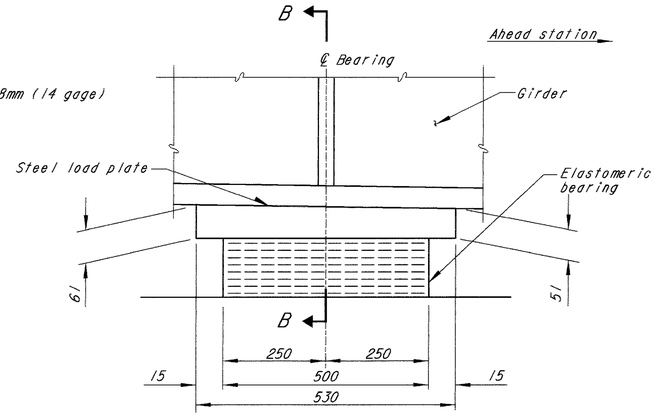
SECTION B-B

Thickness of external elastomer = 7mm
(2 required)

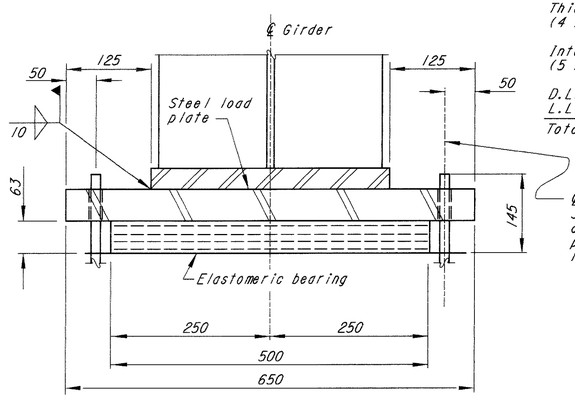
Thickness of internal elastomer = 10mm
(9 required)

Internal steel laminate thickness = 1.88mm (14 gage)
(10 required)

D.L. = 1200kN
L.L. = 430kN
Total 1630kN



ELEVATION
BEARING AT PIER 1



SECTION C-C

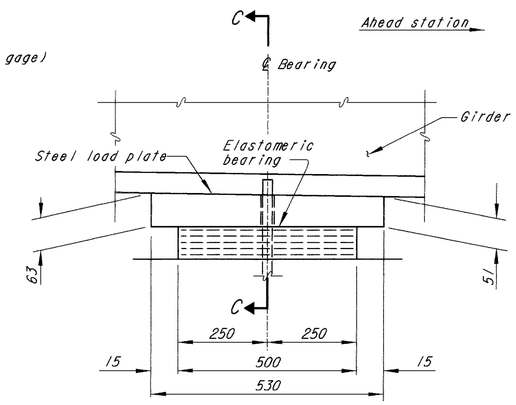
Thickness of external elastomer = 7mm
(2 required)

Thickness of internal elastomer = 10mm
(4 required)

Internal steel laminate thickness = 1.88mm (14 gage)
(5 required)

D.L. = 1200kN
L.L. = 430kN
Total 1630kN

℄ 45mm ϕ hole in load plate for 32mm ϕx480mm anchor rod galvanized according to 711.02. Install anchor rod per 510. Include dowel holes and anchor rods with Item 516 for payment, Typ.



ELEVATION
BEARING AT PIER 2

NOTES FOR LAMINATED ELASTOMERIC BEARINGS AND LOAD PLATE

LOAD PLATE: The steel load plate shall be bonded by vulcanization to the elastomer during the molding process.

The steel load plate shall be the same material as the attached structural steel and be similarly cleaned and coated. Surface preparation and priming shall be done in the shop and be included in the price bid for the bearings. FIELD COATS shall be included in the price bid for painting structural steel.

WELDING shall be controlled so that the plate temperature at the elastomer bonded surface does not exceed 150°C as determined by the use of pyrometric sticks or other temperature monitoring devices.

BASIS OF PAYMENT: The unit bid price shall include all materials, labor, testing, anchor rods and incidentals necessary to furnish and install laminated elastomeric bearings. Payment will be made at the contract price for Item 516, each, elastomeric bearings with internal laminates (neoprene). Cost of the HP section shall be included for payment with Item 516 also.

ELASTOMERIC BEARINGS shall comply with Item 516 and AASHTO Standard Specification for Highway Bridges, Section 18, Bearing Devices, Division II, Construction, Articles 18.4.5.1 and 18.5.6.2. Bearings shall be Grade 3, 50 durometer elastomer, and shall be subjected to the load testing requirements defined in Article 18.7.4.5 of the AASHTO document listed above. Bearings were designed under Section 14.6.6 of Section 14, Bearings, Division I, Desighn. Testing shall be included in the unit price bid for the bearings, each.

BEARING REPOSITIONING: If the steel is erected at an ambient temperature higher than 27° C or lower than 4° C and the bearing shear deflection exceeds 1/6 of the bearing height at 15° C (+/-) 5° C, the beams or girders shall be raised to allow the bearings to return to their undeformed shape at 15° C (+/-) 5° C.

Filename: 0628bdp.dgn

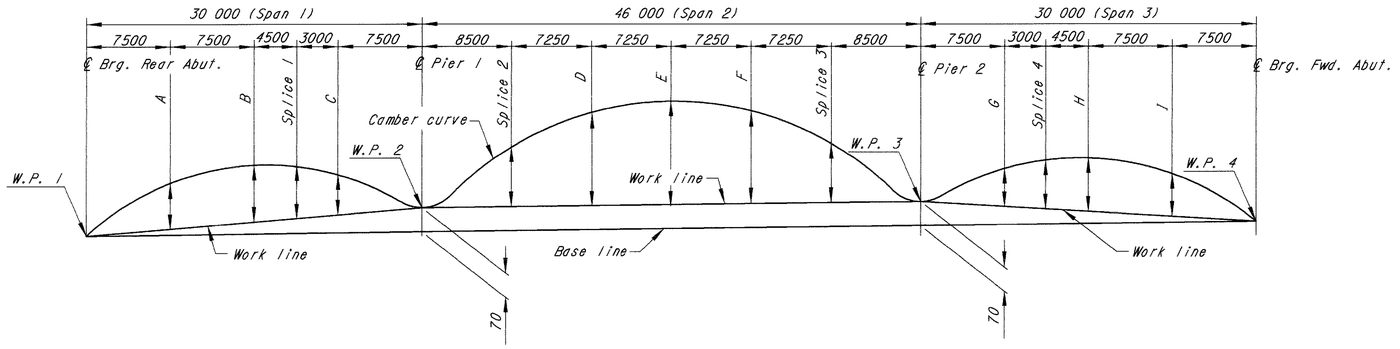
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FKL	ALH	CRS	6/16/99
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MRS	—	1701037	

BEARING DETAILS
BRIDGE NO. CRA-30-0628S
OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

metric units



DEFLECTION AND CAMBER

DEFLECTION AND CAMBER TABLE (GIRDERS 1 AND 6, 7 AND 12)

	SPAN 1						SPAN 2						SPAN 3				
	REAR ABUTMENT	A	B	SPLICE 1	C	PIER 1	SPLICE 2	D	E	F	SPLICE 3	PIER 2	G	SPLICE 4	H	I	FORWARD ABUTMENT
Deflection due to weight of steel	0	2	1	0	-1	0	7	13	17	13	7	0	-1	0	1	2	0
Deflection due to remaining DL	0	8	7	3	1	0	21	41	48	41	21	0	1	3	7	8	0
Adjustment required for vertical curve	0	5	7	6	5	0	10	14	16	14	10	0	5	6	7	5	0
Required shop camber	0	15	15	9	5	0	38	68	81	68	38	0	5	9	15	15	0

DEFLECTION AND CAMBER TABLE (GIRDERS 2 THRU 5 AND 8 THRU 11)

	SPAN 1						SPAN 2						SPAN 3				
	REAR ABUTMENT	A	B	SPLICE 1	C	PIER 1	SPLICE 2	D	E	F	SPLICE 3	PIER 2	G	SPLICE 4	H	I	FORWARD ABUTMENT
Deflection due to weight of steel	0	2	1	0	-1	0	7	13	17	13	7	0	-1	0	1	2	0
Deflection due to remaining DL	0	11	9	4	1	0	27	53	67	53	27	0	1	4	9	11	0
Adjustment required for vertical curve	0	5	7	6	5	0	10	14	16	14	10	0	5	6	7	5	0
Required shop camber	0	18	17	10	5	0	44	80	100	80	44	0	5	10	17	18	0

NOTES FOR CAMBER AND DEFLECTION

1. Work points (W.P.) are at the center of the girder, on the centerline of bearing.
2. Work lines are straight lines through the work points.
3. The base line is a straight line through W.P. 1 and W.P. 4.
4. Tabulated values in the camber table are measured from the work lines.

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MRS	—	170137	

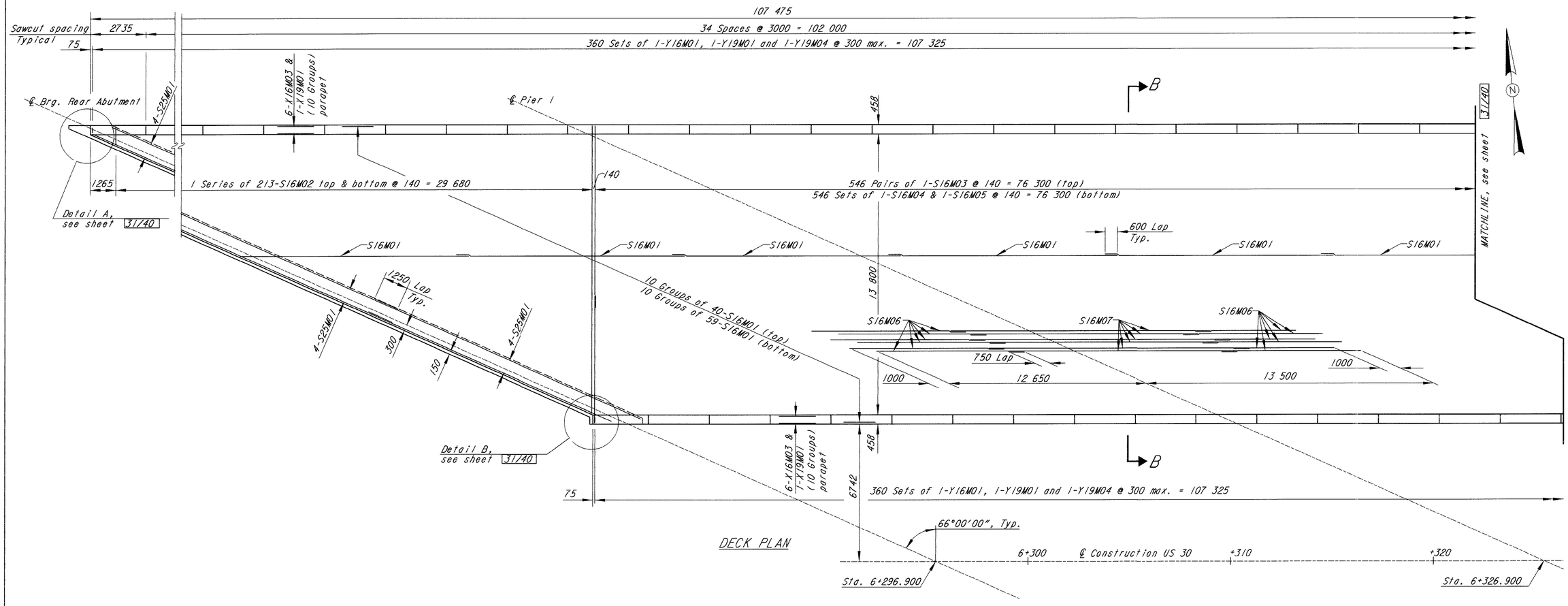
DEFLECTION AND CAMBER DETAILS
BRIDGE NO. CRA-30-0629.96
OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

1922
2116

Filename: 06296dim.dgn

metric units



NOTES:

1. ** DECK SLAB DEPTH: The distance shown from the top of the deck slab to the bottom of the top flange is the theoretical design dimension including the design haunch thickness of 115 mm. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per SS 842.

2. ◒ A HAUNCH WIDTH of 225mm shall be used for computing quantity of concrete. However the haunch width may vary between 150mm and 300mm.

3. Lap length for X16M04 & X16M05 bars is 600mm

4. For additional information on parapets and sawcuts, see Std. Dwg. BR-1M. Contrary to the standard drawing, sawcuts shall be sealed for the full length of the cut.

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MPS	—	170137	

DECK PLAN LEFT BRIDGE
BRIDGE NO. CRA-30-06296
US 30 OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

30/40

1923
2116

File name: 06296053.dgn

metric units

107 475
34 Spaces @ 3000 = 102 000 | 2740 | Sawcut spacing, Typical
Sets of 1-Y16M01, 1-Y19M01 and 1-Y19M04 @ 300 max. = 107 325 | 75

℄ Pier 2

B

℄ Brg. Forward Abutment See Detail B

4-S25M01

Pairs of 1-S16M03 @ 140 = 76 300 (top)
Sets of 1-S16M04 & 1-S16M05 @ 140 = 76 300 (bottom) | 140

1 Series of 213-S16M02 top & bottom @ 140 = 29 680 | 1265

S16M01 S16M01 S16M01 S16M01 S16M01

S16M06 S16M07 S16M06

1000 | 13 500 | 750 Lap | 12 650 | 1000

78 Groups of 2-S16M06 & 1-S16M07(top) over pier
Typical over each pier

4-S25M01 | 300 | 150 | 4-S25M01 | 1250 Lap Typ.

14 716

See Detail A

MATCHLINE, see sheet 30/40

B

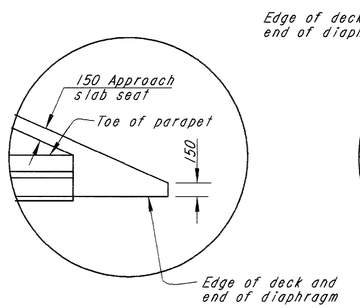
Sets of 1-Y16M01, 1-Y19M01 and 1-Y19M04 @ 300 max. = 107 325 | 75

6742

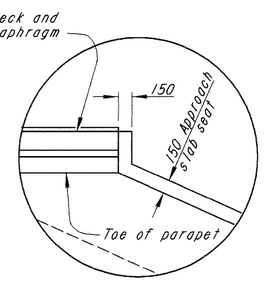
Sta. 6+372.900 | Sta. 6+402.900

+330 +340 +350 ℄ Construction US 30 +360 +370 +380 ℄ Construction US 30 6+400

DECK PLAN



DETAIL A



DETAIL B

Notes:
1. For section B-B see sheet 30/40.

Filename: 0830601.dgn

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Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	6/16/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	170137	

DECK PLAN LEFT BRIDGE
BRIDGE NO. CRA-30-0623
OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

31/40

1924
2116

metric units

℄ Brg. Rear Abutment
Sta. 6+296.900
6+300 +310 +320 +330 +340 +350 ℄ Construction US 30 +360
66°00'00", Typ.
℄ Pier 1
Sta. 6+326.900
Sawcut spacing Typical
2735
75
107 475
34 Spaces @ 3000 = 102 000
360 Sets of 1-Y16M31, 1-Y19M31 and 1-Y19M34 @ 300 max. = 107 325
6742
458
6-X16M33 & 1-Y19M31 (10 Groups) parapet
A
33740
MATCHLINE, see sheet
Detail A, see sheet 31/40
1265
1 Series of 213-S16M32 top & bottom @ 140 = 29 680
140
546 Pairs of 1-S16M33 @ 140 = 76 300 (top)
546 Sets of 1-S16M34 & 1-S16M35 @ 140 = 76 300 (bottom)
4-S25M31
10 Groups of 40-S16M31 (top)
10 Groups of 59-S16M31 (bottom)
S16M31
600 Lap Typ.
S16M36
S16M37
750 Lap
13 800
1250 Lap Typ.
300
150
458
Detail B, see sheet 31/40
6-X16M33 & 1-Y19M31 (10 Groups) parapet
A
75
360 Sets of 1-Y16M31, 1-Y19M31 and 1-Y19M34 @ 300 max. = 107 325

DECK PLAN

℄ Construction US-30
6742
14 716
13 800
50 458 1800 3600 8400 458
178
204
76
Optional construction joint, Typ.
℄ Eastbound US 30
230
X19M31, Typ.
Y16M31, Typ.
Y19M31, Typ.
S16M31 @ 390 max. Top, Typ.
1 Set of S16M36 & S16M37 (shown ∘) over pier
S16M33
1065
735
330
254
Profile Grade
215
330 **
Crown
S16M33
0.016
640 ℓ.
575 Lap
0.016
X16M33 Typical
Construction joint, Typ.
76
S16M34
380 ℓ.
575 Lap
S16M35
Y19M34, Typ.
Limit of concrete sealer, epoxy, Typ.
75
25mm dia. half-round drip groove, Typ.
255
2 spa. @ 300
6 spa. @ 165=990
2 spa. @ 300
255
150
S16M31, Typ.
℄ Girder 7
℄ Girder 8
℄ Girder 9
℄ Girder 10
℄ Girder 11
℄ Girder 12
608
5 Spaces @ 2700 = 13 500
608

SECTION A-A

NOTES:
1. ** DECK SLAB DEPTH: The distance shown from the top of the deck slab to the bottom of the top flange is the theoretical design dimension including the design haunch thickness of 115 mm. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per SS 842.

2. ◒ A HAUNCH WIDTH of 225mm shall be used for computing quantity of concrete. However the haunch width may vary between 150mm and 300mm.

3. Lap length for X16M34 & X16M35 bars is 600 mm

4. For additional information on parapets and sawcuts, see Std. Dwg. BR-1M. Contrary to the standard drawing, sawcuts shall be sealed for the full length of the cut.

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Cincinnati, Ohio 45237

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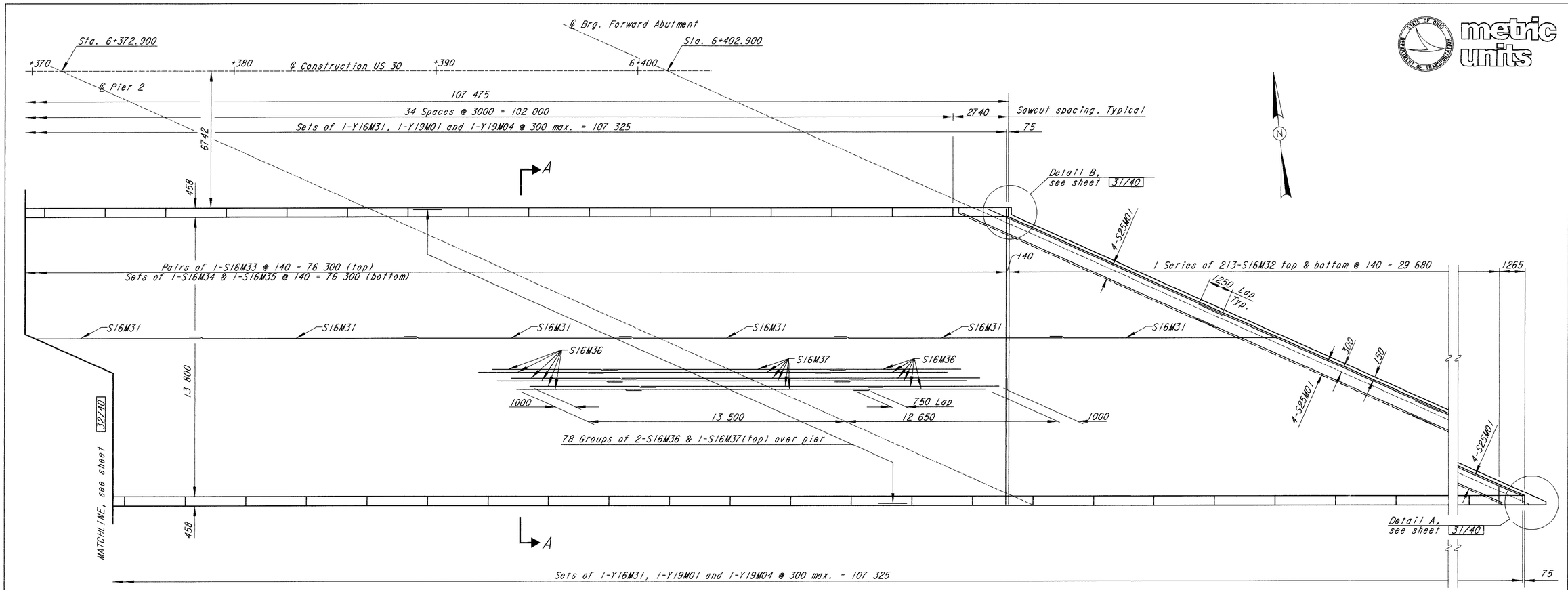
DECK PLAN RIGHT BRIDGE
BRIDGE NO. CRA-30-0629
US 30 OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

32/40

1925
2116

File name: 0629601.dgn



DECK PLAN

Notes:
1. For section A-A see sheet 32/40.

metric units

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BALKE ENGINEERS
1848 Summit Road
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DECK PLAN RIGHT BRIDGE
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

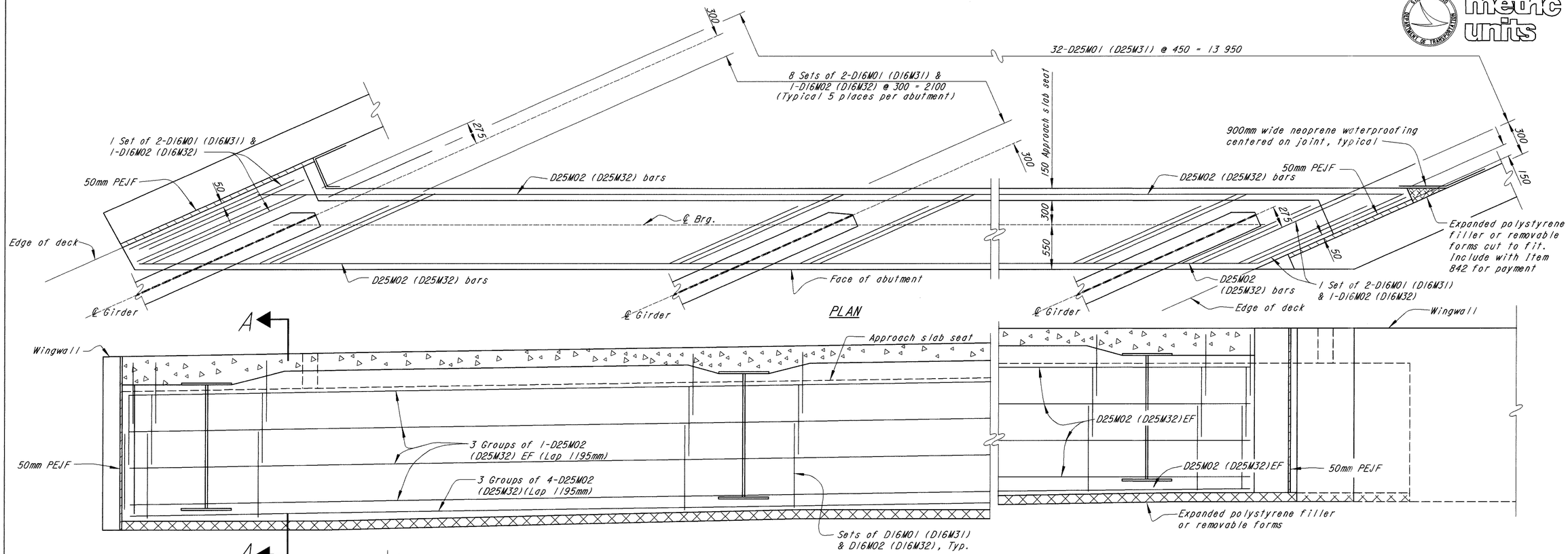
WYA/CRA-30-28.009/0.000

33/40

1926
2116

Filename: 06296dc2.dgn

metric units



NOTES:
1. For additional information see Std. Dwg. SICD-1-96M.
2. Work this sheet with DECK PLAN sheets 30/40 thru 33/40 & 8/40 thru 19/40 .
3. PEJF = Preformed Expansion Joint Filler.
   EF = Each Face
4. END-DIAPHRAGM CONCRETE shall be placed during days when sudden temperature changes are unlikely and be completed at least 4 hours prior to the concrete placement day's peak ambient temperature.
5. ABUTMENT BACKFILL above the bridge seat shall not be placed until after the concrete deck slab has cured for at least 48 hours. Backfill shall be placed simultaneously at both abutments.
6. DIAPHRAGM concrete encasing the structural member sections shall be placed at least 48 hours before the actual deck concrete is placed.
7. Bar marks shown " ( ) " are for the right bridge. Unenclosed bar marks are for the left bridge.

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DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CTS	6/16/99
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MRS	—	1701037	

ABUTMENT DIAPHRAGM DETAILS
BRIDGE NO. CRA-30-06296
OVER CR 330 LINCOLN HIGHWAY

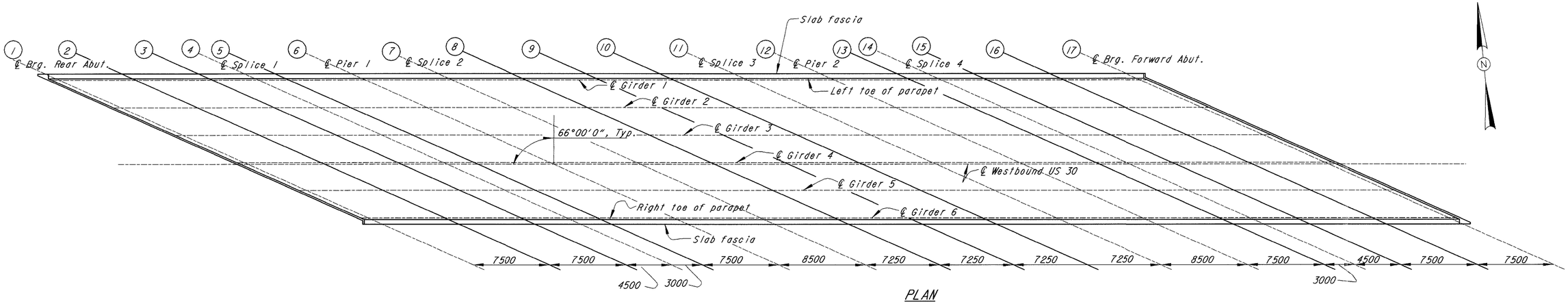
WYA/CRA-30-28.009/0.000

34/40

1927
2116

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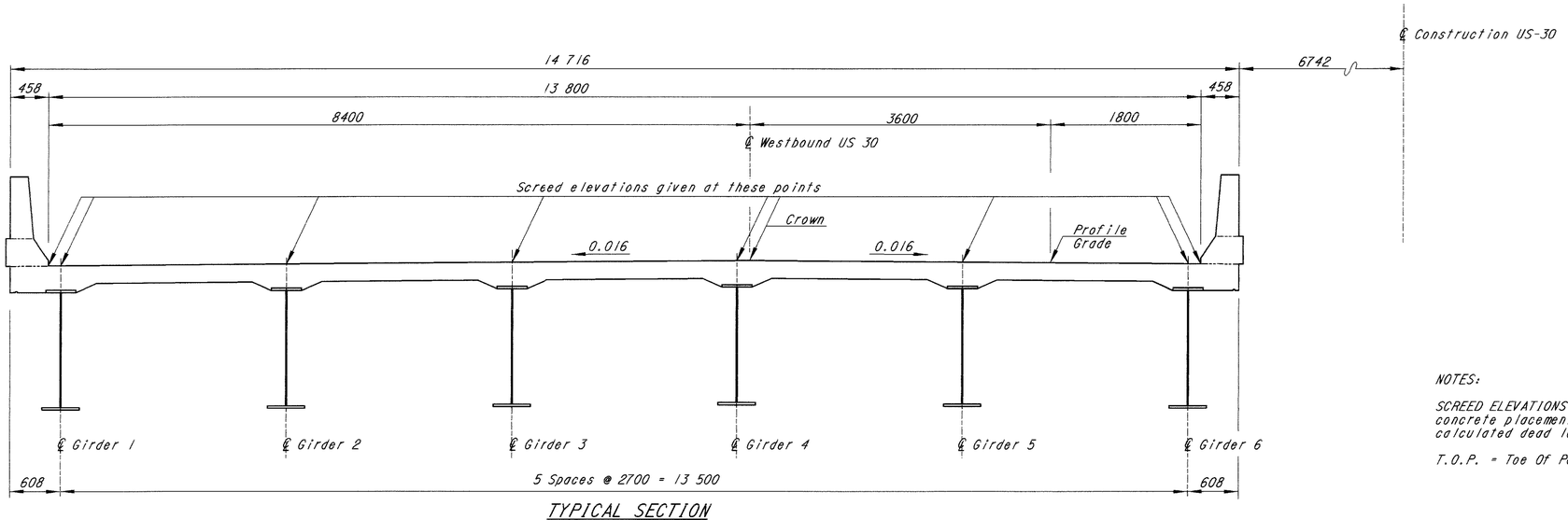
metric units



PLAN

SCREED ELEVATIONS

Location	Left T.O.P.	Girder 1	Girder 2	Girder 3	Girder 4	℄ US 30 W.B.	Girder 5	Girder 6	Right T.O.P.
Grid line 1	308.475	308.473	308.441	308.406	308.369	308.366	308.248	308.120	308.113
Grid line 2	308.390	308.388	308.357	308.319	308.279	308.277	308.156	308.021	308.014
Grid line 3	308.291	308.289	308.253	308.213	308.171	308.168	308.044	307.908	307.900
Grid line 4	308.227	308.224	308.186	308.144	308.099	308.097	307.971	307.835	307.828
Grid line 5	308.182	308.180	308.138	308.095	308.049	308.048	307.920	307.785	307.777
Grid line 6	308.079	308.076	308.033	307.987	307.939	307.936	307.807	307.668	307.660
Grid line 7	307.977	307.974	307.934	307.885	307.834	307.831	307.699	307.550	307.542
Grid line 8	307.890	307.887	307.851	307.799	307.745	307.742	307.608	307.450	307.442
Grid line 9	307.789	307.786	307.749	307.695	307.639	307.635	307.498	307.336	307.328
Grid line 10	307.665	307.662	307.620	307.564	307.504	307.501	307.361	307.198	307.190
Grid line 11	307.527	307.524	307.474	307.414	307.352	307.349	307.206	307.047	307.038
Grid line 12	307.366	307.362	307.302	307.239	307.174	307.171	307.025	306.870	306.861
Grid line 13	307.236	307.233	307.169	307.103	307.035	307.033	306.884	306.726	306.717
Grid line 14	307.188	307.184	307.121	307.054	306.986	306.982	306.833	306.672	306.664
Grid line 15	307.112	307.109	307.046	306.978	306.907	306.903	306.753	306.589	306.580
Grid line 16	306.979	306.975	306.911	306.840	306.767	306.762	306.610	306.442	306.432
Grid line 17	306.832	306.828	306.756	306.682	306.607	306.602	306.447	306.280	306.271



TYPICAL SECTION

NOTES:

SCREED ELEVATIONS shown are for the deck slab surface prior to concrete placement. Allowance has been made for anticipated calculated dead load deflections.

T.O.P. = Toe Of Parapet

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MRS	—	170137	

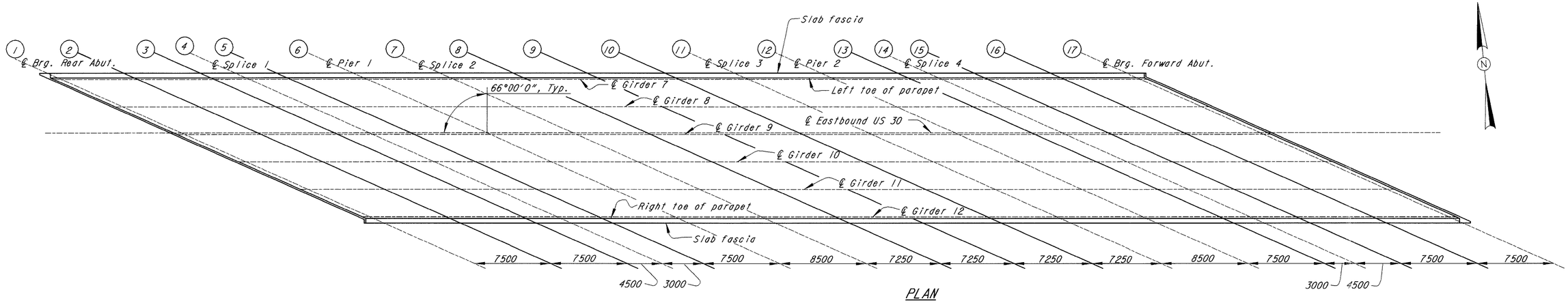
SCREED ELEVATIONS LEFT BRIDGE
BRIDGE NO. CRA-30-0696
OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

35/40

1928
2/16

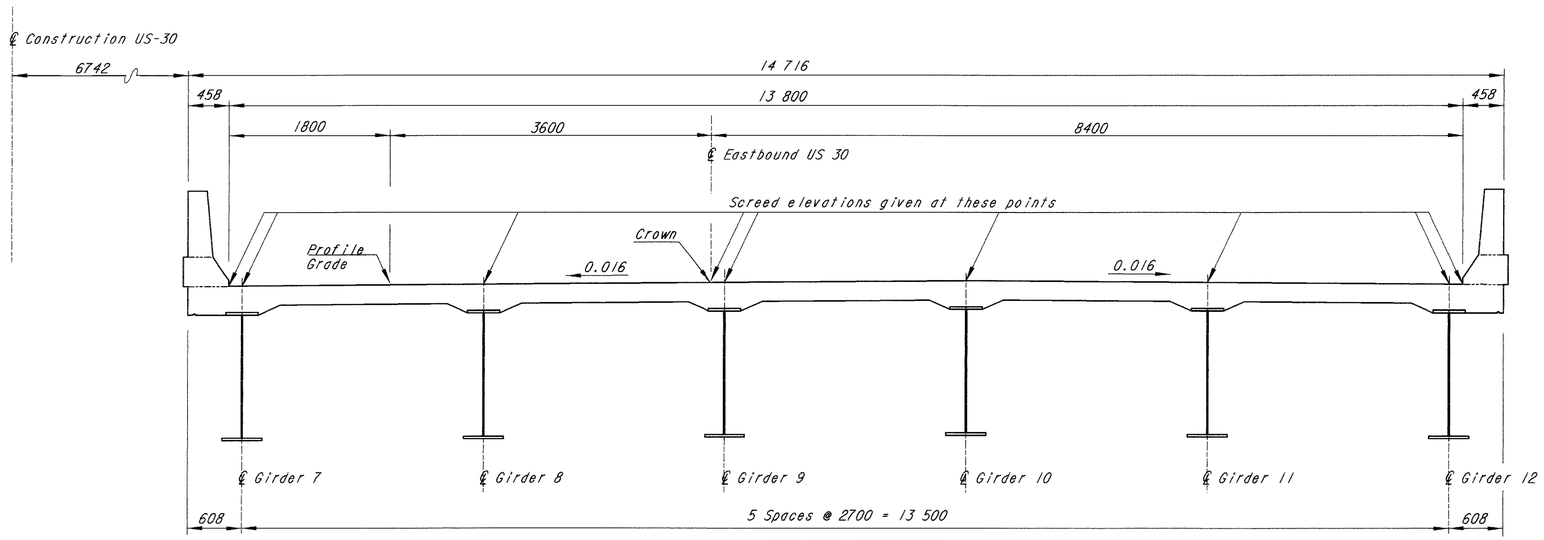
FILENAME = 0696SCR1.dgn



PLAN

SCREED ELEVATIONS

Location	Left T.O.P.	Girder 7	Girder 8	℄ US 30 E.B.	Girder 9	Girder 10	Girder 11	Girder 12	Right T.O.P.
Grid line 1	307.623	307.620	307.564	307.509	307.501	307.354	307.205	307.054	307.046
Grid line 2	307.509	307.506	307.451	307.394	307.386	307.236	307.084	306.927	306.918
Grid line 3	307.381	307.378	307.319	307.259	307.251	307.099	306.944	306.785	306.776
Grid line 4	307.300	307.296	307.234	307.173	307.164	307.010	306.854	306.695	306.686
Grid line 5	307.243	307.240	307.175	307.113	307.104	306.949	306.792	306.633	306.624
Grid line 6	307.112	307.108	307.041	306.976	306.967	306.810	306.650	306.488	306.478
Grid line 7	306.977	306.973	306.910	306.842	306.833	306.672	306.509	306.337	306.328
Grid line 8	306.863	306.859	306.799	306.726	306.719	306.556	306.390	306.209	306.200
Grid line 9	306.734	306.730	306.670	306.596	306.587	306.421	306.253	306.067	306.058
Grid line 10	306.582	306.578	306.513	306.437	306.428	306.259	306.088	305.903	305.893
Grid line 11	306.416	306.412	306.338	306.260	306.251	306.079	305.906	305.723	305.713
Grid line 12	306.222	306.218	306.134	306.053	306.043	305.869	305.692	305.513	305.503
Grid line 13	306.064	306.059	305.972	305.889	305.879	305.701	305.524	305.341	305.331
Grid line 14	306.004	306.000	305.913	305.828	305.818	305.540	305.459	305.276	305.265
Grid line 15	305.912	305.907	305.821	305.734	305.724	305.544	305.362	305.174	305.164
Grid line 16	305.750	305.745	305.657	305.568	305.558	305.375	305.190	305.000	304.988
Grid line 17	305.573	305.568	305.473	305.382	305.372	305.186	304.999	304.816	304.806



TYPICAL SECTION

NOTES:

SCREED ELEVATIONS shown are for the deck slab surface prior to concrete placement. Allowance has been made for anticipated calculated dead load deflections

T.O.P. = Toe Of Parapet

metric units

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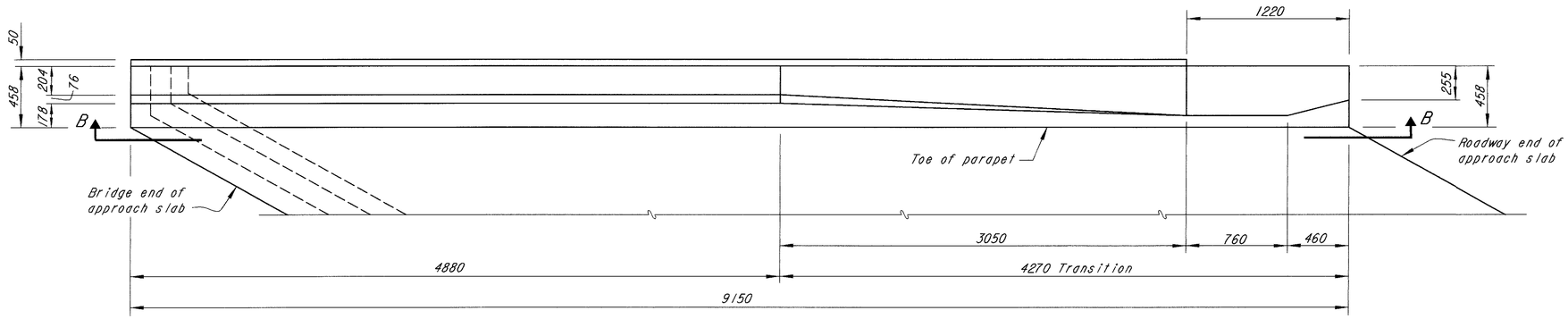
SCREED ELEVATIONS RIGHT BRIDGE
BRIDGE NO. CRA-30-08296
OVER CR 330 (LINCOLN HIGHWAY)

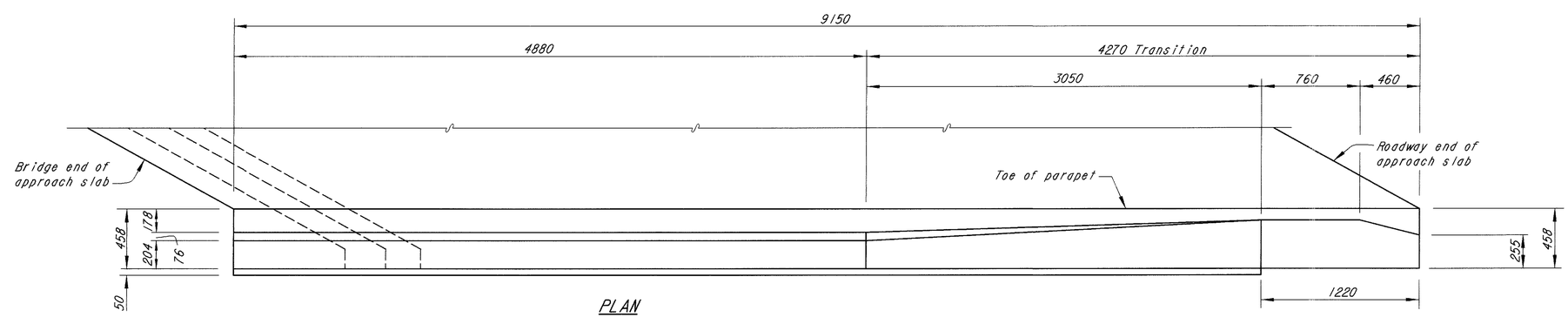
WYA/CRA-30-28.009/0.000

36 / 40

1929
2116

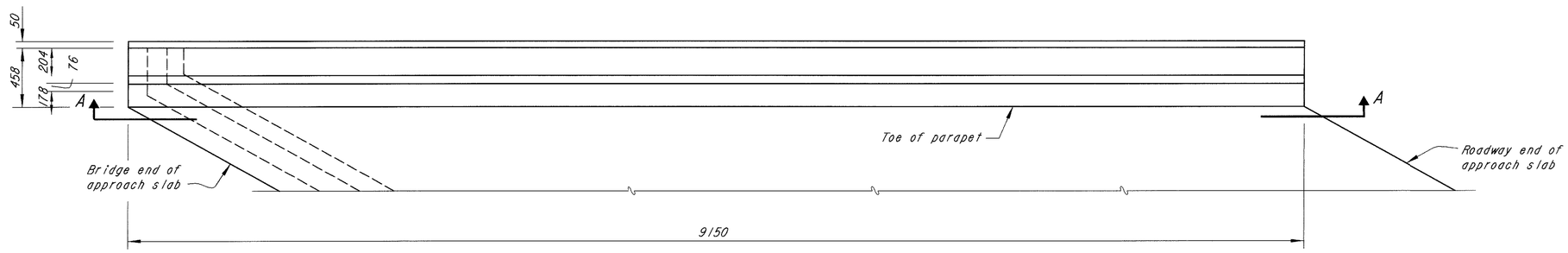
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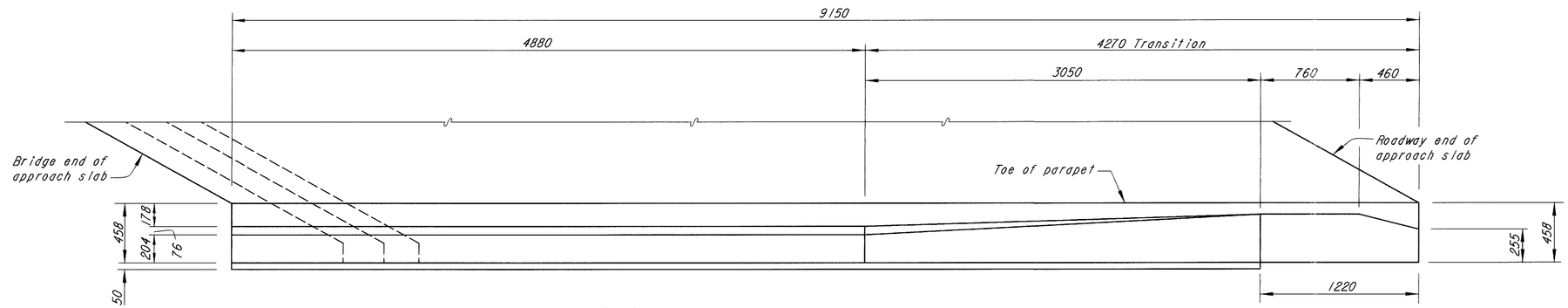




PLAN

(Left bridge forward abutment shown,
Right bridge rear abutment similar)





PLAN

(Right bridge forward abutment shown,
Left bridge rear abutment similar)

NOTES:
1. For views A-A & B-B see sheet 38/40 .
2. For additional information, see Std. Dwg. AS-1-81M.

metric units

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MRS	—	1701037	

APPROACH SLAB DETAILS
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

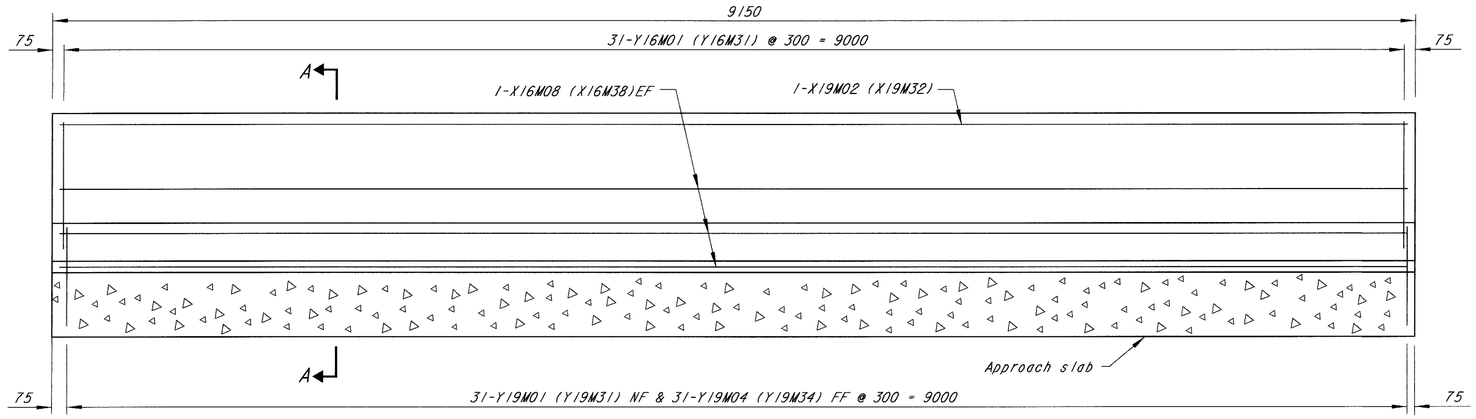
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37/40

1930
2116

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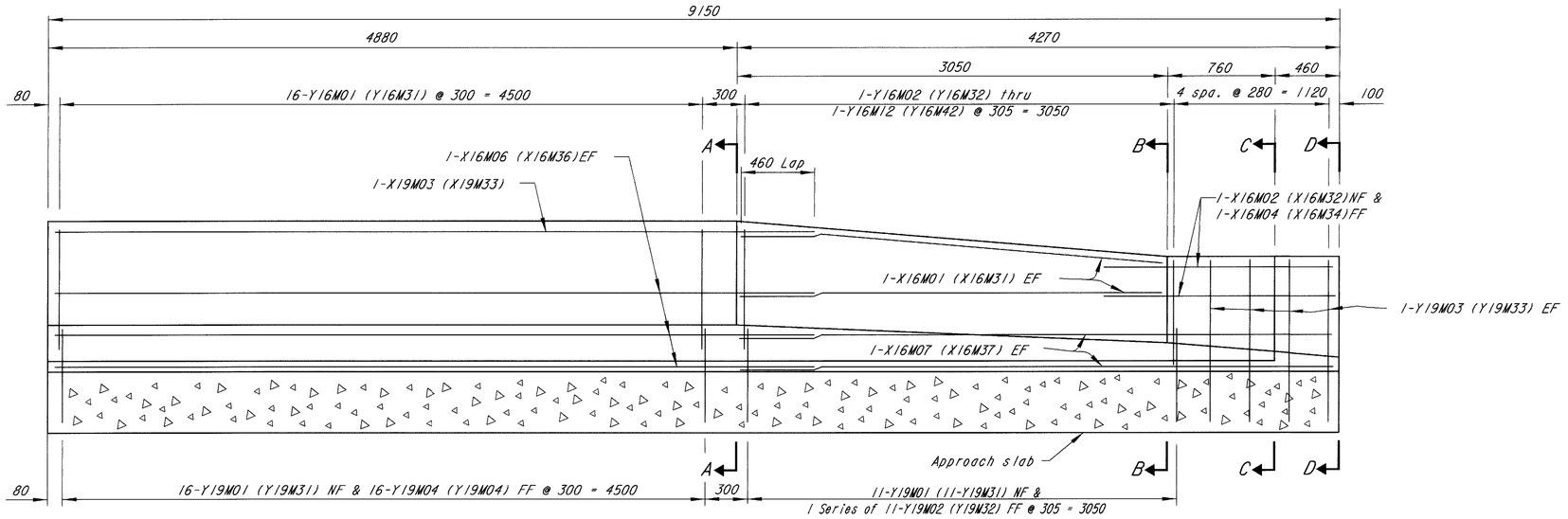
metric units



VIEW A-A

PARAPET DETAIL

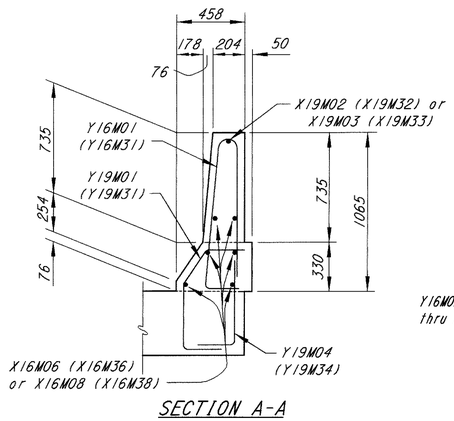
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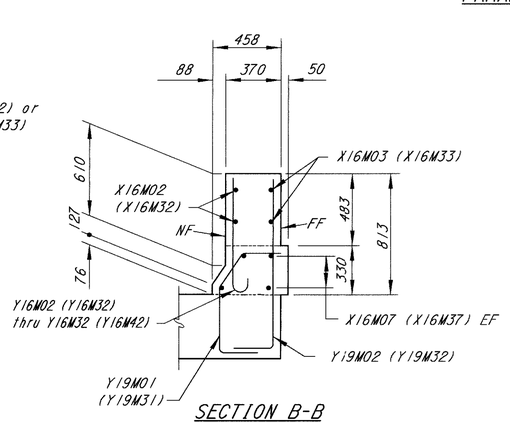
VIEW B-B

PARAPET TRANSITION DETAIL

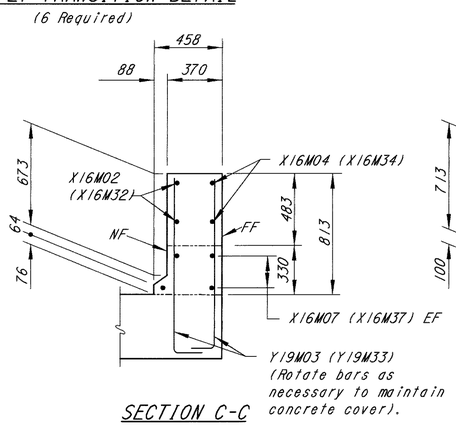
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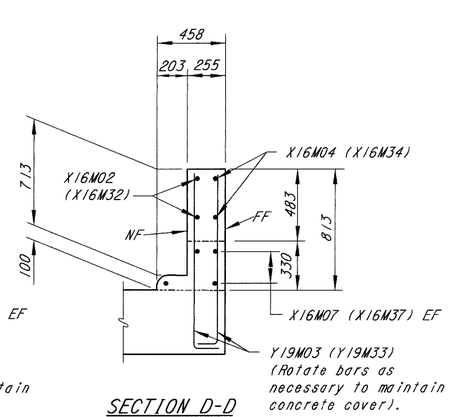
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:
1. Work this sheet with sheet 37/40 .
2. For additional information, see Std. Dwgs. AS-1-81M and BR-1M.
3. FF= Far Face
   NF = Near Face
   EF = Each Face
4. Bar marks shown "( )" are for the right bridge.
   Unenclosed bar marks are for the left bridge.

DESIGN AGENCY
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MRS	—	1701037	

APPROACH SLAB DETAILS
BRIDGE NO. CRA-30-06296
OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

38/40

1931
2116

Filename: 06296sf1.dgn

REAR ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A25M01	16	10 965	Str.						
A25M02	2	9150	Str.						
A25M03	2	6000	Str.						
A25M04	4	9145	Str.						
A25M05	16	10 600	Str.						
A16M01	110	5110	8	775	1700				
A16M02	24	10 270	Str.						
A16M03	11	3920	2	1630	740	1630			
A16M04	3	6000	Str.						
A16M05	3	9150	Str.						
A16M06	2	2000	Str.						
A16M07	6	9145	Str.						
A16M08	28	9750	Str.						
A16M09	77	5180	8	1610	900				
A16M10	57	2620	2	900	900	900			
A16M11	19	5090	2	2410	350	2410			
A16M12	10	8500	Str						
A16M13	2	9030	Str.						
A16M14	4	2200	Str.						
A16M15	6	10 900	Str.						
A16M16	19	4360	2	2045	350	2045			
A16M17	12	1770	2	750	350	750			
	4	2150		940		940			
A16M18	Series of	to	2	to	350	to			430
	3	3010		1370		1370			
A16M19	21	5790	2	2760	350	2760			
A16M20	6	9500	Str.						
A16M21	6	10 170	Str.						
A16M22	1	9940	Str.						
A16M23	1	10 610	Str.						
A16M24	3	11 900	Str.						
A16M25	3	12 570	Str.						
A16M26	21	4430	2	2080	350	2080			
A16M27	2	4080	Str.						

FORWARD ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B25M01	16	10 965	Str.						
B25M02	2	7150	Str.						
B25M03	2	4200	Str.						
B25M04	4	8145	Str.						
B25M05	16	10 600	Str.						
B16M01	108	5110	8	775	1700				
B16M02	24	10 270	Str.						
B16M03	13	3920	2	1630	740	1630			
B16M04	3	4200	Str.						
B16M05	3	7150	Str.						
B16M06	2	2000	Str.						
B16M07	6	8145	Str.						
B16M08	28	9750	Str.						
B16M09	77	5050	8	1555	900				
B16M10	57	2370	2	775	900	775			
B16M11	19	6190	2	2960	350	2960			
B16M12	8	6500	Str.						
B16M13	2	7030	Str.						
B16M14	4	2200	Str.						
B16M15	6	8900	Str.						
B16M16	19	4250	2	1990	350	1990			
B16M17	12	1770	2	750	350	750			
	4	2150		940		940			
B16M18	Series of	to	2	to	350	to			430
	3	3010		1370		1370			
B16M19	21	5240	2	2485	350	2485			
B16M20	4	8500	Str.						
B16M21	4	9175	Str.						
B16M22	1	9040	Str.						
B16M23	1	9715	Str.						
B16M24	3	10 900	Str.						
B16M25	3	11 575	Str.						
B16M26	21	4020	2	1875	350	1875			
B16M27	2	3715	Str.						

PIER 1 REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
P29M01	96	3660	1	475	3275				
P29M02	48	6390	Str.						
P29M03	48	6075	Str.						
P25M01	192	3100	Str.						
P25M02	192	3410	13	3100					
P22M01	4	13 280	Str.						
P22M02	4	13 925	Str.						
P22M03	4	14 075	Str.						
P22M04	8	5300	1	1000	4360				
P22M05	8	11 855	1	1000	10 915				
P22M06	25	2695	4	750	1195	750	380		
P16M01	12	2280	2	775	810	775			
P16M02	4	3270	Str.						
P16M03	56	3980	8	1100	810				
P13M01	20	13 280	Str.						
SP13M01	3	5490	21	5490	115	760			
SP13M02	3	5170	21	5170	115	760			

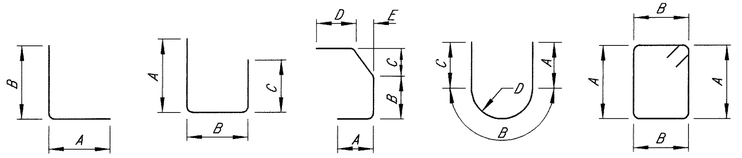
PIER 2 REINFORCING STEEL LIST

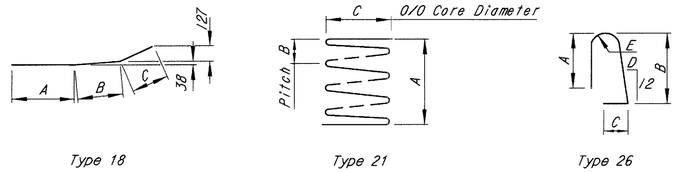
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
R29M01	96	3660	1	475	3275				
R29M02	48	5750	Str.						
R29M03	48	5335	Str.						
R25M01	192	3100	Str.						
R25M02	192	3410	13	3100					
R22M01	4	13 280	Str.						
R22M02	4	13 925	Str.						
R22M03	4	14 075	Str.						
R22M04	8	5300	1	1000	4360				
R22M05	8	11 855	1	1000	10 915				
R22M06	25	2695	4	750	1195	750	380		
R16M01	12	2280	2	775	810	775			
R16M02	4	3270	Str.						
R16M03	56	3980	8	1100	810				
R13M01	20	13 280	Str.						
SR13M01	3	4850	21	4850	115	760			
SR13M02	3	4485	21	4485	115	760			

SUPERSTRUCTURE REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
D25M01	64	2535	14	430	1825	305	305		
D25M02	60	12 930	Str.						
S25M01	24	12 860	Str.						
Y19M01	720	800	3	125	250	216	230	152	
Y19M04	720	730	1	280	500				
D16M01	176	2320	2	750	900	750			
D16M02	88	2330	2	830	750	830			
S16M01	990	11 290	Str.						
	4	14 000							
S16M02	Series of	to	Str.						62
	213	856							
S16M03	1092	7600	Str.						
S16M04	546	8890	Str.						
S16M05	546	6190	Str.						
S16M06	312	7825	Str.						
S16M07	156	12 000	Str.						
X19M01	20	11 290	Str.						
X16M03	120	11 290	Str.						
Y16M01	720	2130	26	915	990	205	1¼	38	

metric units





APPROACH SLAB REINFORCING STEEL LIST *

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
X19M02	1	9000	Str.						
X19M03	3	5260	Str.						
Y19M01	112	1105	3	265	445	215	230	150	
	3	1355		1115	280				
Y19M02	Series of	to	1	to					25
	11	1605		1365					
Y19M03	24	1370	1	280	1140				
Y19M04	79	890	1	280	660				
X16M01	12	3050	Str.						
X16M02	6	1725	18	555	740	430			
X16M04	6	1725	Str.						
X16M06	18	5290	Str.						
X16M07	12	4220	Str.						
X16M08	6	9050	Str.						
Y16M01	79	2130	26	915	990	205	1 1/4	38	
Y16M02	3	1170	12	990					
Y16M03	3	1145	12	965					
Y16M04	3	1120	12	940					
Y16M05	3	1095	12	915					
Y16M06	3	1070	12	890					
Y16M07	3	1045	12	865					
Y16M08	3	1020	12	840					
Y16M09	3	995	12	815					
Y16M10	3	970	12	790					
Y16M11	3	945	12	765					
Y16M12	3	920	12	740					

* Reinforcing steel shown for parapets only see std.dwg. AS-1-81M for additional reinforcing.

NOTES:

1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.
3. SPIRAL REINFORCING BARS: The "length" shown in the steel list for the spiral bars is the length of the spiral along the axis of the spiral. One and one-half closed-coil turns shall be provided at the ends of each spiral unit.
4. SPACERS: Concrete spacers or other approved noncorrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 3050 mm) to insure concentric spacing for the entire cage length. Spacers shall be constructed of approved material equal in quality and durability to the concrete specified for the shaft. The spacers shall have adquate dimensions to ensure a minimum 75 mm clear space between the outside of the reinforcing cage and the design dimension of the drilled shaft or column. Cylindrical concrete feet (bottom supports) shall be provided to ensure that the bottom of the cage is maintained at the proper distance above the base.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	6/16/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	170137	

REINFORCING STEEL LIST LEFT BRIDGE

WYA/CRA-30-28.009/0.000

BRIDGE NO. CRA-30-08296
OVER CR 330 (LINCOLN HIGHWAY)

39/40

1932
2116

Filename: 08296s1.dgn

REAR ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A25M31	16	10 870	Str.						
A25M32	2	7150	Str.						
A25M33	2	4500	Str.						
A25M34	4	10 145	Str.						
A25M35	16	11 100	Str.						
A16M31	112	5110	8	775	1700	775			
A16M32	24	10 270	Str.						
A16M33	11	3920	2	1630	740	1630			
A16M34	3	4500	Str.						
A16M35	3	7150	Str.						
A16M36	2	2000	Str.						
A16M37	6	10 145	Str.						
A16M38	28	10 245	Str.						
A16M39	77	5210	8	1625	900	1625			
A16M40	57	2620	2	900	900	900			
A16M41	16	5210	2	2470	350	2470			
A16M42	10	6500	Str.						
A16M43	2	7030	Str.						
A16M44	4	2200	Str.						
A16M45	6	8900	Str.						
A16M46	16	4350	2	2040	350	2040			
A16M47	12	1770	2	750	350	750			
	4	2150		940		940			
A16M48	Series of	to	2	to	350	to			430
	3	3010		1370		1370			
A16M49	26	6490	2	3110	350	3110			
A16M50	2	10 500	Str						
A16M51	2	11 070	Str.						
A16M52	1	11 040	Str.						
A16M53	1	11 610	Str.						
A16M54	3	12 900	Str.						
A16M55	3	13 570	Str.						
A16M56	21	4470	2	2100	350	2100			
A16M57	2	4350	Str.						

FORWARD ABUTMENT REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B25M31	16	10 965	Str.						
B25M32	2	9150	Str.						
B25M33	2	6000	Str.						
B25M34	4	9145	Str.						
B25M35	16	11 100	Str.						
B16M31	110	5110	8	775	1700	775			
B16M32	24	10 270	Str.						
B16M33	11	3920	2	1630	740	1630			
B16M34	3	6000	Str.						
B16M35	3	9150	Str.						
B16M36	2	2000	Str.						
B16M37	6	9145	Str.						
B16M38	34	9750	Str.						
B16M39	77	5160	8	1610	900	1610			
B16M40	57	3020	2	1100	900	1100			
B16M41	19	6750	2	3240	350	3240			
B16M42	12	8500	Str.						
B16M43	2	9030	Str.						
B16M44	4	2200	Str.						
B16M45	6	10 900	Str.						
B16M46	19	4130	2	1930	350	1930			
B16M47	12	1770	2	750	350	750			
	4	2150		940		940			
B16M48	Series of	to	2	to	350	to			430
	3	3010		1370		1370			
B16M49	21	5290	2	2510	350	2510			
B16M50	4	9500	Str.						
B16M51	4	10 175	Str.						
B16M52	1	10 040	Str.						
B16M53	1	10 715	Str.						
B16M54	3	11 900	Str.						
B16M55	3	12 575	Str.						
B16M56	21	3950	2	1840	350	1840			
B16M57	2	3715	Str.						

PIER 1 REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
P29M11	96	3660	1	475	3275				
P29M12	48	5970	Str.						
P29M13	48	5490	Str.						
P25M11	192	3100	Str.						
P25M12	192	3410	13	3100					
P22M11	4	13 280	Str.						
P22M12	4	13 925	Str.						
P22M13	4	14 075	Str.						
P22M14	8	5300	1	1000	4360				
P22M15	8	11 885	1	1000	10 915				
P22M16	25	2695	4	750	1195	750	380		
P16M11	12	2280	2	775	810	775			
P16M12	4	3270	Str.						
P16M13	56	3980	8	1100	810				
P13M11	20	13 280	Str.						
SP13M11	3	5070	21	5070	115	760			
SP13M12	3	4590	21	4590	115	760			

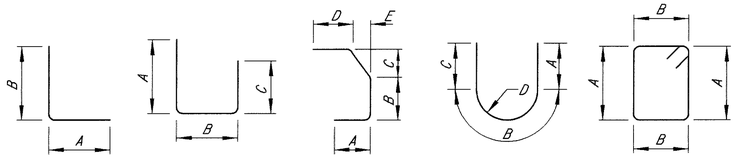
PIER 2 REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
R29M11	96	3660	1	475	3275				
R29M12	48	5255	Str.						
R29M13	48	4725	Str.						
R25M11	192	3100	Str.						
R25M12	192	3410	13	3100					
R22M11	4	13 280	Str.						
R22M12	4	13 925	Str.						
R22M13	4	14 075	Str.						
R22M14	8	5300	1	1000	4275				
R22M15	8	11 885	1	1000	10 915				
R22M16	25	2695	4	750	1195	750	380		
R16M11	12	2280	2	775	810	775			
R16M12	4	3270	Str.						
R16M13	56	3980	8	1100	810				
R13M11	20	13 280	Str.						
SR13M11	3	4355	21	4355	115	760			
SR13M12	3	3825	21	3825	115	760			

SUPERSTRUCTURE REINFORCING STEEL LIST

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
D25M31	64	2535	14	430	1825	305	305		
D25M32	60	12 930	Str.						
S25M31	24	12 860	Str.						
Y19M31	720	800	3	125	250	216	230	152	
Y19M34	720	730	1	280	500				
D16M31	176	2320	2	750	900	750			
D16M32	88	2330	2	830	750	830			
S16M31	990	11 290	Str.						
	4	14 000							
S16M32	Series of	to	Str.						62
	213	856							
S16M33	1092	7600	Str.						
S16M34	546	8890	Str.						
S16M35	546	6190	Str.						
S16M36	312	7825	Str.						
S16M37	156	12 000	Str.						
X19M31	20	11 290	Str.						
X16M33	120	11 290	Str.						
Y16M31	720	2130	26	915	990	205	1¼	38	

metric units



APPROACH SLAB REINFORCING STEEL LIST *

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
X19M32	1	9050	Str.						
X19M33	3	5260	Str.						
Y19M31	112	1105	3	265	445	215	230	150	
	3	1355			1115				
Y19M32	Series of	to	1	280	to				25
	11	1605			1365				
Y19M33	24	1370	1	280	1140				
Y19M34	79	890	1	280	660				
X16M31	12	3050	Str.						
X16M32	6	1725	18	555	740	430			
X16M34	6	1725	Str.						
X16M36	18	5290	Str.						
X16M37	12	4220	Str.						
X16M38	6	9050	Str.						
Y16M31	79	2130	26	915	990	205	1 1/4	38	
Y16M32	3	1170	12	990					
Y16M33	3	1145	12	965					
Y16M34	3	1120	12	940					
Y16M35	3	1095	12	915					
Y16M36	3	1070	12	890					
Y16M37	3	1045	12	865					
Y16M38	3	1020	12	840					
Y16M39	3	995	12	815					
Y16M40	3	970	12	790					
Y16M41	3	945	12	765					
Y16M42	3	920	12	740					

* Reinforcing steel shown for parapets only see std. dwg. AS-1-81M for additional reinforcing.

NOTES:

1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.
3. SPIRAL REINFORCING BARS: The "length" shown in the steel list for the spiral bars is the length of the spiral along the axis of the spiral. One and one-half closed-coil turns shall be provided at the ends of each spiral unit.
4. SPACERS: Concrete spacers or other approved noncorrosive spacing devices shall be used at sufficient intervals (near the bottom and at intervals not exceeding 3050 mm) to insure concentric spacing for the entire cage length. Spacers shall be constructed of approved material equal in quality and durability to the concrete specified for the shaft. The spacers shall have adquate dimensions to ensure a minimum 75 mm clear space between the outside of the reinforcing cage and the design dimension of the drilled shaft or column. Cylindrical concrete feet (bottom supports) shall be provided to ensure that the bottom of the cage is maintained at the proper distance above the base.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CBS	6/16/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	1701037	

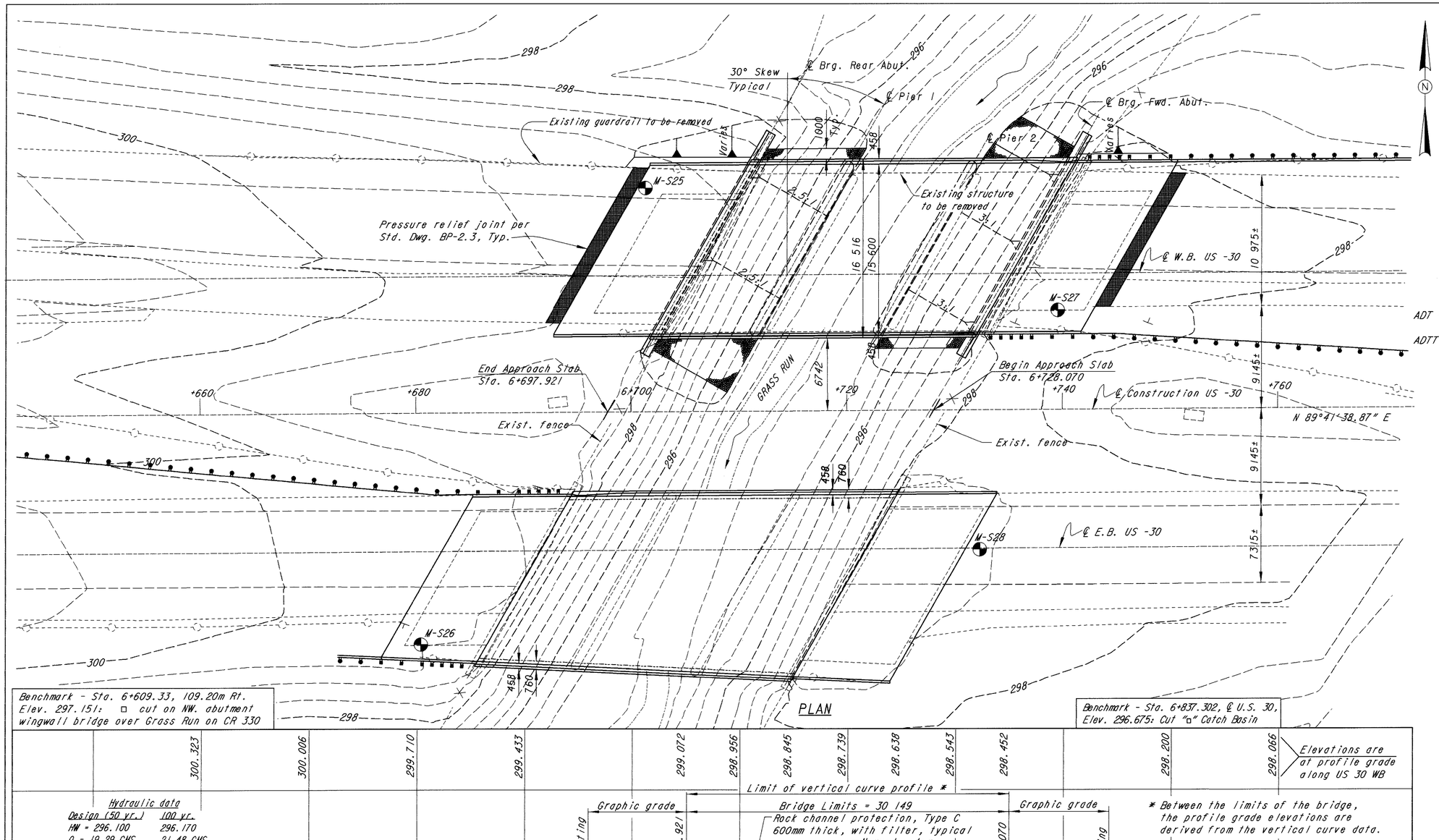
REINFORCING STEEL LIST RIGHT BRIDGE
BRIDGE NO. CRA-30-08296
OVER CR 330 (LINCOLN HIGHWAY)

WYA/CRA-30-28.009/0.000

40/40

1933
2116

Filename: 08296rsd.dgn



PLAN

REVIEWED BY BURGESS & NIPLE, LIMITED

JLG 10-99

TRAFFIC DATA

ADT = 3526 WB (2000) ADT = 5268 WB (2020)
3526 EB (2000) 5268 EB (2020)
ADTT = 987 WB (2000) ADTT = 1474 WB (2020)
987 EB (2000) 1474 EB (2020)

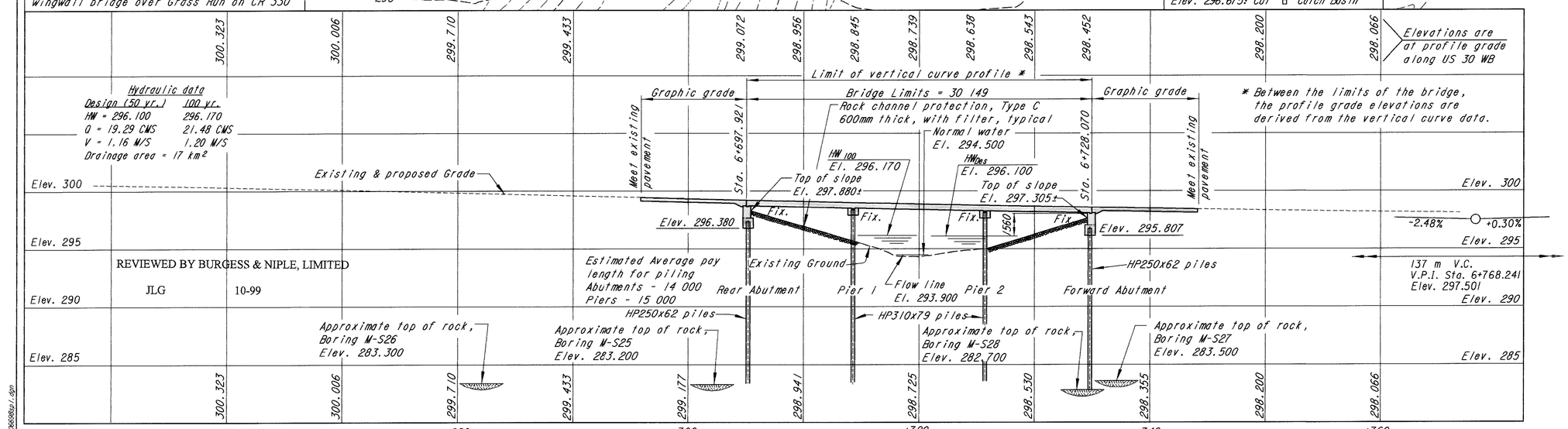
Notes:
Earthwork limits shown are approximate actual slopes shall conform to plan cross sections.

Denotes soil borings

All Stations and Elevations are in Meters.

All Dimensions and lengths are in Millimeters.

Existing left bridge to be removed. Existing bridge not shown in profile for clarity.



SECTION ALONG ℄ US 30 WB

REVIEWED BY BURGESS & NIPLE, LIMITED

JLG 10-99

Hydraulic data

Design (50 yr.)	100 yr.
HW = 296.100	296.170
Q = 19.29 CMS	21.48 CMS
V = 1.16 M/S	1.20 M/S

Drainage area = 17 km²

EXISTING STRUCTURE

Type: Continuous concrete slab on capped pile piers & abutments.
Spans: 9144±, 11 430±, 9144±
Roadway width: 14 630±(Lt.), Varies (Rt.)
Live loading: MS18
Skew angle: 30°00'00" (LF.)
Date built: 1969
Structure file no.: 1701118 L.
1701142 R.
Wearing surface: 32mm Concrete overlay
Approach slabs: 7620±

PROPOSED STRUCTURE (Lt.)

Type: Continuous concrete slab on capped pile piers & abutments.
Spans: 9140, 11 430, 9140 c/c brg.
Roadway width: 15 600 toe/toe parapets
Live loading: MS18 & the alternate military loading
Skew angle: 30°0'0" LF
Wearing surface: Monolithic concrete
Approach slabs: AS-1-81M (9150)
Alignment: Tangent
Crown: 0.016
Latitude: 39°9'45" N
Longitude: 83°1'30" W

PROPOSED STRUCTURE (Rt.)

Proposed Work: Replace edges of deck, add parapets, replace approach slabs, encase piles, & overlay deck.
Type: Continuous concrete slab on capped pile piers & abutments.
Spans: 9144±, 11 430±, 9144±
Roadway width: Varies
Live loading: MS18
Skew angle: 30°00'00" LF.
Wearing surface: Microsilica modified concrete overlay
Approach slabs: AS-1-81M (9150)
Alignment: Tangent
Crown: 0.0156
Latitude: 39°09'45" N
Longitude: 83°01'30" W

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

REVIEWED	DATE
CRS	5/10/99
DRAWN	STRUCTURE FILE NUMBER
ALH	1701061
DESIGNED	REVISED
MPS	—
CHECKED	
FAL	

CRAWFORD COUNTY
STA. 6+697.921
STA. 6+728.070

SITE PLAN
BRIDGE NO. CRA-30-0.06698
OVER GRASS RUN

WYA/CRA-30-28.009/0.000

1 / 13

1934
2116

F:\Inputs\06698p1.dgn

GENERAL NOTES

All dimensions in the plans are shown in millimeters.

All elevations and stations in the plans are shown in meters.

REFERENCE shall be made to Standard Drawings:

AS-1-81M	Dated	10-25-94
BR-1M	Dated	12-15-94
CPA-5-94M	Dated	10-25-94
CPP-2-94M	Dated	12-19-94
CS-1-93M	Revised	06-30-95
BP-2.3	Dated	4-29-99

and to supplemental specifications:

842	Dated	01-06-99
899	Dated	10-21-98

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications For Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1996, including the 1997 & 1998 Interm Specifications and the ODOT Bridge Design Manual.

SCOPE OF WORK FOR RIGHT BRIDGE

1. Encase existing cast-in-place piles at piers.
2. Remove and replace edges of deck to the limits shown.
3. Construct concrete parapets.
4. Remove and replace approach slabs.
5. Apply micro-silica modified concrete overlay to deck.

DESIGN LOADING: MS18 and the alternate military loading.

DESIGN DATA:
Concrete Class S - compressive strength 31.0 MPa (superstructure)

Concrete Class C - compressive strength 27.5 MPa (substructure)

Reinforcing Steel -ASTM A615M, A616M or A617M
Grade 400 - minimum yield strength 400 MPa.

REINFORCING STEEL in superstructure, substructure and approach slabs shall be epoxy coated.

DECK PROTECTION METHOD:
Epoxy coated reinforcing steel

65mm concrete cover

MONOLITHIC WEARING SURFACE is assumed, for design purposes, to be 25mm thick.

PILES TO BEDROCK: Piles shall be driven to refusal on bedrock. Refusal shall be considered as obtained by penetrating soft bedrock for several millimeters with a minimum resistance of 20 blows per 25mm or refusal shall be considered as obtained after the pile has contacted hard bedrock and the pile has then received at least 20 blows.

The ultimate bearing value for the HP250 x 62 abutment piles is 430 kN per pile

The estimated and order length for the abutment piles is:
20 piles 14 meters long
10 Splices

The ultimate bearing value for the HP310 x 79 pier piles is 460 kN per pile

The estimated and order length for the pier piles is:
18 piles 15 meters long
9 splices

ITEM 507, STEEL POINTS, AS PER PLAN: Steel pile points shall be used to protect the tips of the proposed steel "H" piling. The steel points shall be furnished by Associated Pile and Fitting Corporation, 262 Rutherford Blvd., Clifton, New Jersey 07014; Dougherty Foundation Products, Inc., P.O. Box 688, Franklin Lakes, New Jersey 07417; Versa Steel Inc., 3601 N.W. Yeon Ave., P.O. Box 10559, Portland, Oregon 97210; Piling Accessories, Inc., 3467 Gribble Road, Mathews, North Carolina 28105; or by a manufacturer that can furnish a steel point that is acceptable to the Director. The material used for the manufacturing of pile points shall conform to ASTM A27 65/35 - Class 2 - Heat Treated or AASHTO M103 65/35 - Heat Treated. A notarized copy of the mill test report shall be submitted to the Engineer.

EXISTING STRUCTURE VERIFICATION: Details and dimensions shown on these plans pertaining to the existing structure have been obtained from plans of the existing structure and from field observations and measurements. Consequently, they are indicative of the existing structure and the proposed work but they shall be considered tentative and approximate. The Contractor is referred to CMS Sections 102.05 and 105.02.

Contract bid prices shall be based upon a recognition of the uncertainties described above and upon a prebid examination of the existing structure by the Contractor. However, all project work shall be based upon actual details and dimensions which have been verified by the Contractor in the field.

REMOVAL OF EXISTING LEFT STRUCTURE: When no longer needed to maintain traffic, the existing left bridge shall be removed. Abutments, including piles, shall be removed to 300mm below proposed abutment or grade. Piers, including piles, shall be removed to 300mm below proposed grade.

PORTIONS OF STRUCTURES REMOVED, AS PER PLAN shall include the elements indicated in the plans and general notes and are not separately listed for payment, except for wearing course removal. Items to be removed include all existing materials being replaced by new construction and miscellaneous items that are not shown to be incorporated into the final construction and are directed to be removed by the Engineer. The use of explosives, headache balls and/or hoe-rams will not be permitted. The method of removal and the weight of hammer shall be approved by the Engineer. All work shall be done in a manner that will not cut, elongate or damage the existing reinforcing steel to be preserved. Chipping hammers shall not be heavier than the nominal 41 kilogram class. Pneumatic hammers shall not be placed in direct contact with reinforcing steel that is to be retained in the rebuilt structure.

PAYMENT: This work will be paid for at the contract lump sum price bid, which price and payment shall be full compensation for all labor, equipment, materials and incidentals necessary to complete the work in conformance with these requirements, with pertinent provisions of 202, and to the satisfaction of the Engineer.

CUT LINE CONSTRUCTION JOINT PREPARATION: Saw cut boundaries of proposed concrete removals 25 mm deep. Remove concrete to a rough surface. Where practicable, the existing reinforcing steel which is required in the plans shall be left in place. Install dowel bars if specified. Prior to concrete placement, abrasively clean joint surface and exposed reinforcement to remove loose and disintegrated concrete and loose rust. Then, the joint surface and exposed reinforcement shall be thoroughly cleaned of all dirt, dust, or other foreign material by the use of water, air under pressure, or other methods that produce satisfactory results. Concrete bonding surfaces shall be wet without free water as concrete is placed.

SUBSTRUCTURE CONCRETE REMOVAL: Shall be by means of approved pneumatic hammers employing pointed or blunted chisel tools. Hydraulic hoe-ram type hammers will not be permitted. The weight of the hammer shall not be more than 16 kilograms for removal within 450 mm of portions to be preserved. Outside the 450 mm limit. A hammer heavier than 16 kilograms, but not to exceed 41 kilograms, may be used at the approval of the Engineer. Pneumatic hammers shall not be placed in direct contact with reinforcing steel that is to be retained in the rebuilt structure.

REPLACEMENT OF EXISTING REINFORCING STEEL: Any existing reinforcing bars which are to be incorporated into the new work and which are made unusable by concrete removal operations shall be replaced with new steel at the Contractor's cost. Any existing reinforcing bars deemed by the Engineer to be unusable because of corrosion shall be replaced with new steel. An allowance for the cost of this steel shall be made in the price bid for Item 842, Class S Concrete, Superstructure.

ITEM SPECIAL - PILE ENCASEMENT

All piles for the capped pile piers shall be encased in Class S concrete (SS 899.03) and shall be in accordance with 842, except as modified and supplemented herein. The required slump is 150mm, plus or minus 12mm. The maximum water to cement ratio shall be 0.50. If concrete is placed under water, the requirements of adding 10 percent more cement to the concrete shall be waived. The concrete shall be placed within a form that consists of polyethylene pipe (707.32). The encasement shall extend from 1 meter below the finished ground surface up to 300mm below the concrete pier cap and shall be positioned so that at least 75mm of concrete cover is provided around the exterior of the pile.

The length of pile encasement shall be measured in meters along the length of the pile. This item includes all work and materials necessary to furnish the required encasement. Payment will be made at the contract unit price per meter of pile encasement approved in place.

In lieu of encasing the pile in concrete, at the option of the Contractor, the pile may be galvanized as per 711.02. The galvanizing shall be continuous from a minimum of 1 meter below the finish ground surface up to the concrete pier cap. The galvanized coating thickness shall be a minimum of 10 micrometer. All gouges, scrapes, scratches or other surface imperfections caused by the handling or the driving of the pile shall be repaired to the satisfaction of the Engineer. Payment for the galvanizing will be made at the contract unit price for Item Special, Pile Encasement. Payment will only be made for the galvanized length of pile as required by the plan and/or approved by the Engineer. All galvanizing provided beyond the project requirements is at the Contractor's expense.

PATCHING CONCRETE STRUCTURES: All surfaces to be patched and the exposed reinforcing steel within shall be thoroughly cleaned by abrasive blasting prior to the cleaning specified by 519.04 and 520.05. Cleaning shall precede application of the patching material or erection of the forms by not more than 24 hours.

ALTHOUGH OTHERWISE SHOWN IN THESE PLANS, THE STRUCTURE FILE NUMBERS ARE : 1701061L/1701142R

metric units

ESTIMATED QUANTITIES

Calculated by: NLH dated: 6/98
Checked by: RHH dated: 7/98

Item	Extension	CRA-30-06698 L Total	CRA-30-06698 R Total	Unit	Description	LEFT BRIDGE Superstructure	LEFT BRIDGE Abutment	LEFT BRIDGE Pier	LEFT BRIDGE General	RIGHT BRIDGE Superstructure	RIGHT BRIDGE Abutment	RIGHT BRIDGE Pier	RIGHT BRIDGE General
202	11000	Lump		-	Structure removed				Lump				
202	11201		Lump	-	Portions of structure removed, as per plan								Lump
202	23500		500.5	Sq. Meter	Wearing course removed					500.5			
503	21300	Lump		-	Unclassified excavation				Lump				
505	11100	Lump		-	Pile driving equipment mobilization				Lump				
507	00100	310		Meter	Steel piles HP250 x 62, furnished		310						
507	00150	310		Meter	Steel piles HP250 x 62, driven		310						
507	00300	279		Meter	Steel pile HP310 x 79, furnished			279					
507	00250	279		Meter	Steel pile HP310 x 79, driven			279					
507	50500	19		Each	Steel pile splices		10	9					
Special	50771200	72	57	Meter	Pile encasement			72				57	
507	93301	38		Each	Steel point (or shoe), as per plan		20	18					
Special	51267502	233.8	200	Sq. Meter	Sealing of concrete surfaces (epoxy) (see proposal note)	202.5	31.3			200.0			
518	21230	Lump		-	Porous backfill with filter fabric		Lump						
518	40000	49		Meter	150mm Perforated corrugated plastic pipe		49						
518	40010	19.6		Meter	150mm Non-perforated corrugated plastic pipe, including specials		19.6						
519	11101		5.7	Sq. Meter	Patching concrete structure, as per plan						4.7	1	
Special	51922000		473.2	Sq. Meter	Micro-silica modified concrete overlay (32mm thick) (see proposal note)					473.2			
Special	51922100		1	Cu. Meter	Micro-silica modified concrete overlay (Variable thickness) (see proposal note)					1			
601	32200	398.9		Cu. Meter	Rock channel protection, Type C with filter		398.9						
842	32202		38.4	Cu. Meter	Class S concrete, superstructure					38.4			
842	42500	19.8		Cu. Meter	Class C concrete, pier cap			19.8					
842	43500	53.6		Cu. Meter	Class C concrete, abutment including footing		53.6						
894	10000	263.8		Cu. Meter	High Performance Concrete, for Bridge Deck with Warranty	263.8							

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
NLH	NLH	CKS	5/1099
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PAL	—	1701061L/1701142R	

GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. CRA-30-06698
OVER GRASS RUN

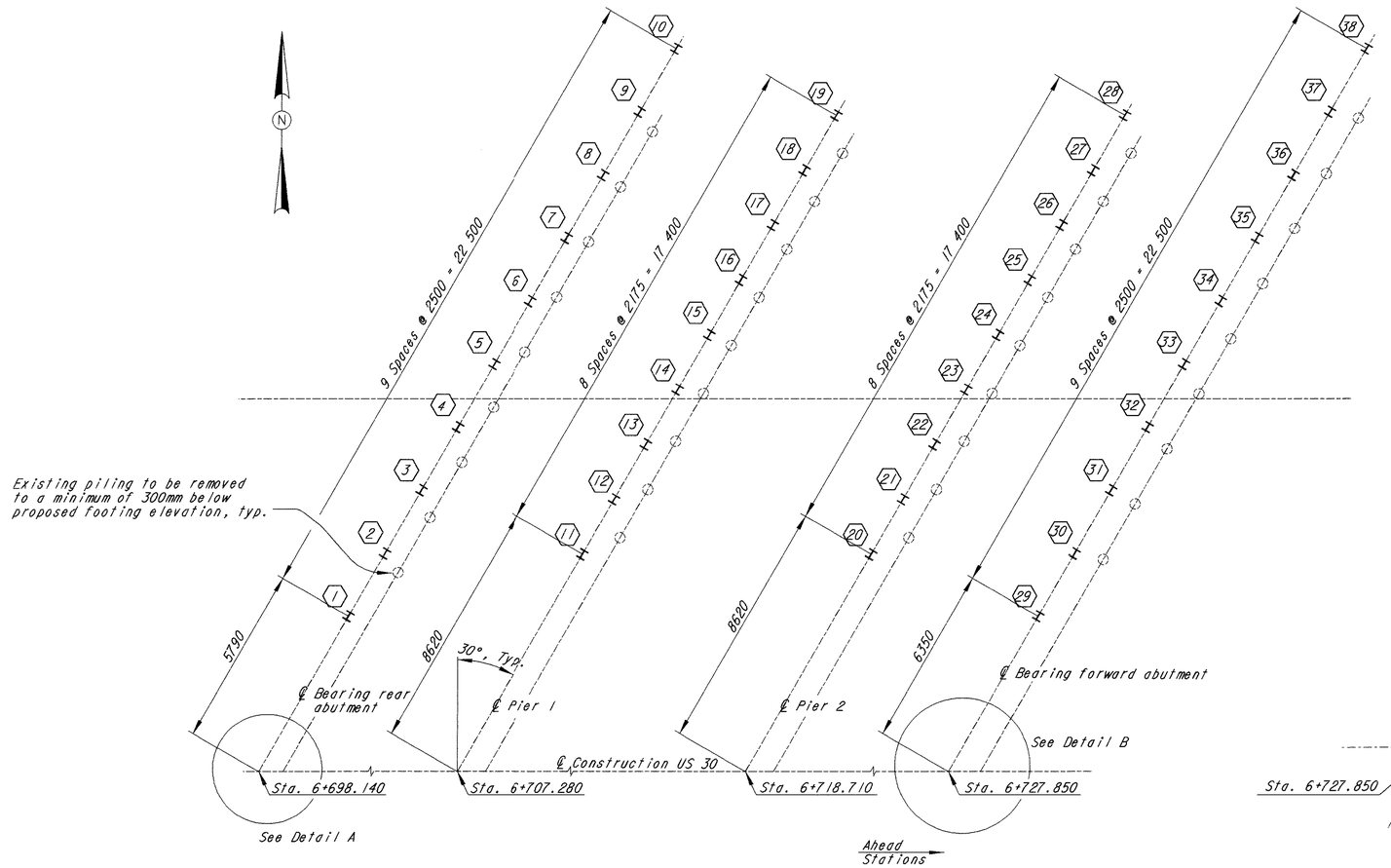
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2/13

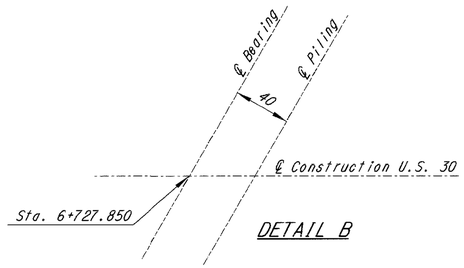
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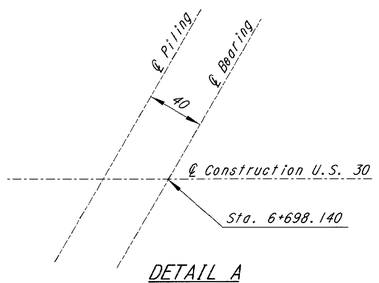
metric units



PILING LAYOUT



DETAIL B



DETAIL A

NOTES:
1. Pier piles are HP310x79, abutment piles are HP250x62.
2. (33) I Designates pile number and location.
3. ○ Denotes existing 350mm± cast-in-place piles, see General Notes.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
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DESIGNED	DRAWN	REVIEWED	DATE
MPS	ALH	CRS	5/10/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	1701061	

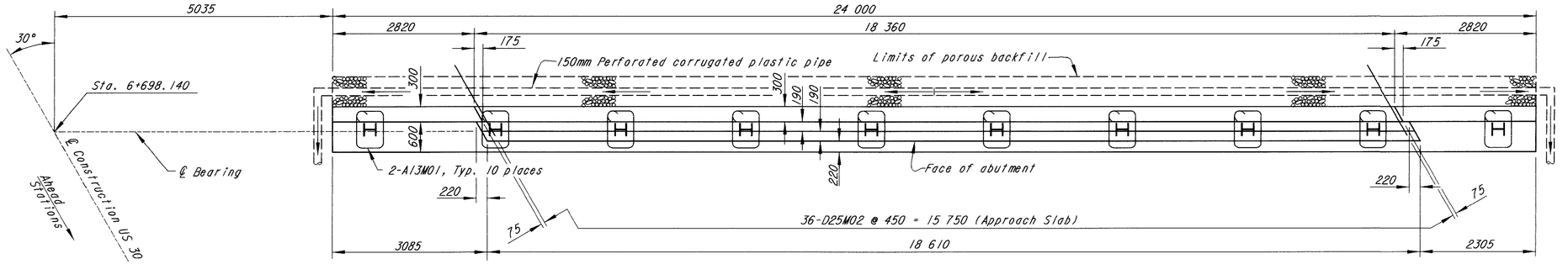
PILING LAYOUT LEFT BRIDGE
BRIDGE NO. CRA-30-06698
OVER GRASS RUN

WYA/CRA-30-28.009/0.000

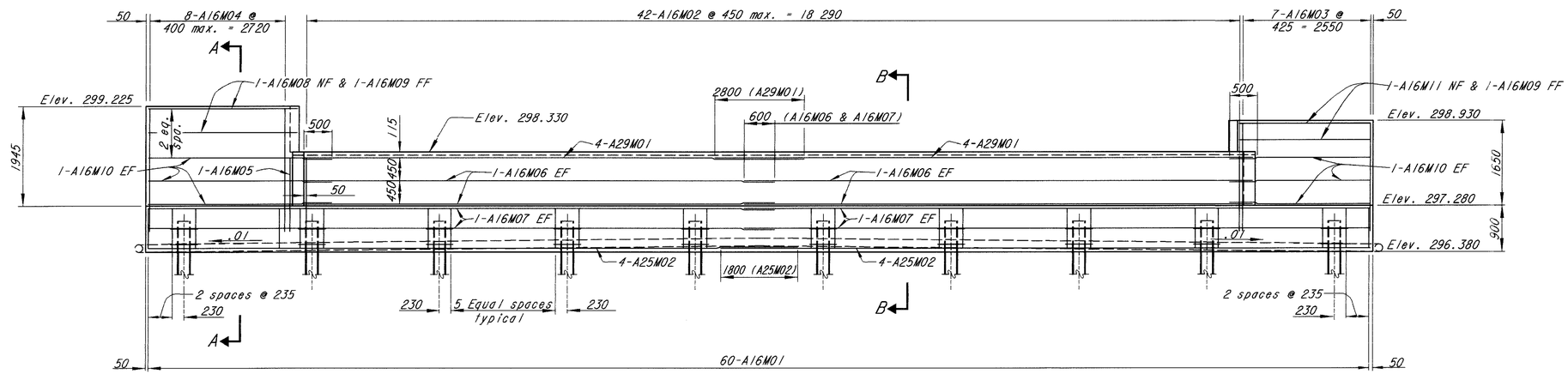
3/13

1936
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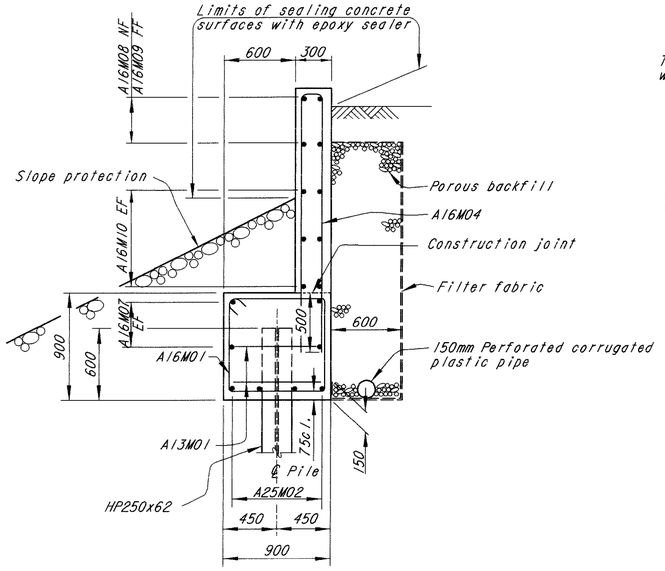
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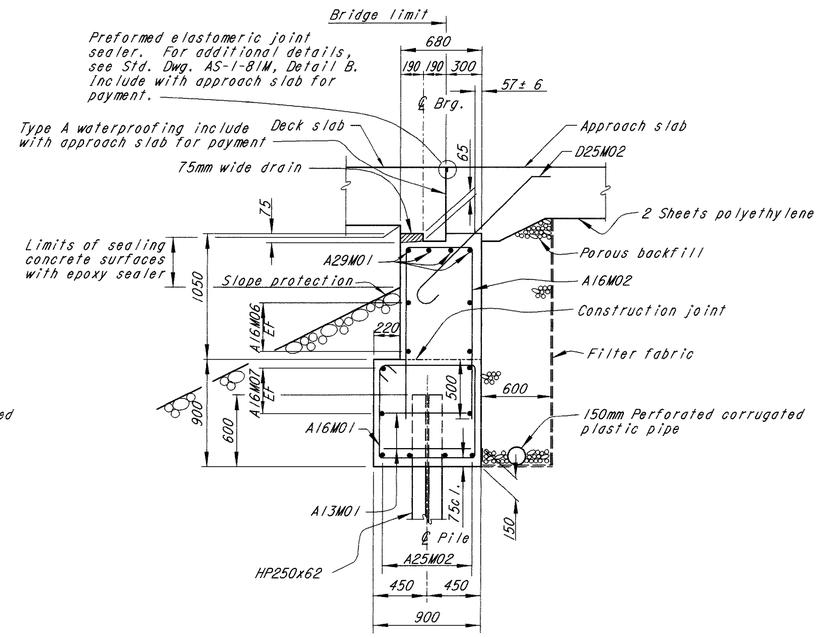
PLAN



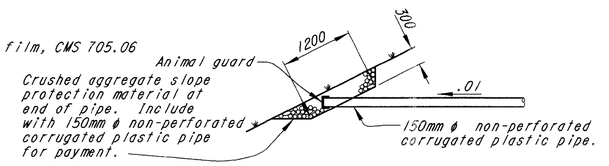
ELEVATION



SECTION A-A



SECTION B-B



DETAIL 1

NOTES:
1. For pile layout, see sheet 3/13
2. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
3. EF = Each Face
   NF = Near Face
   FF = Far Face
4. For additional details see Std. Dwg. CPA-5-94M.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	5/10/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	1701061	

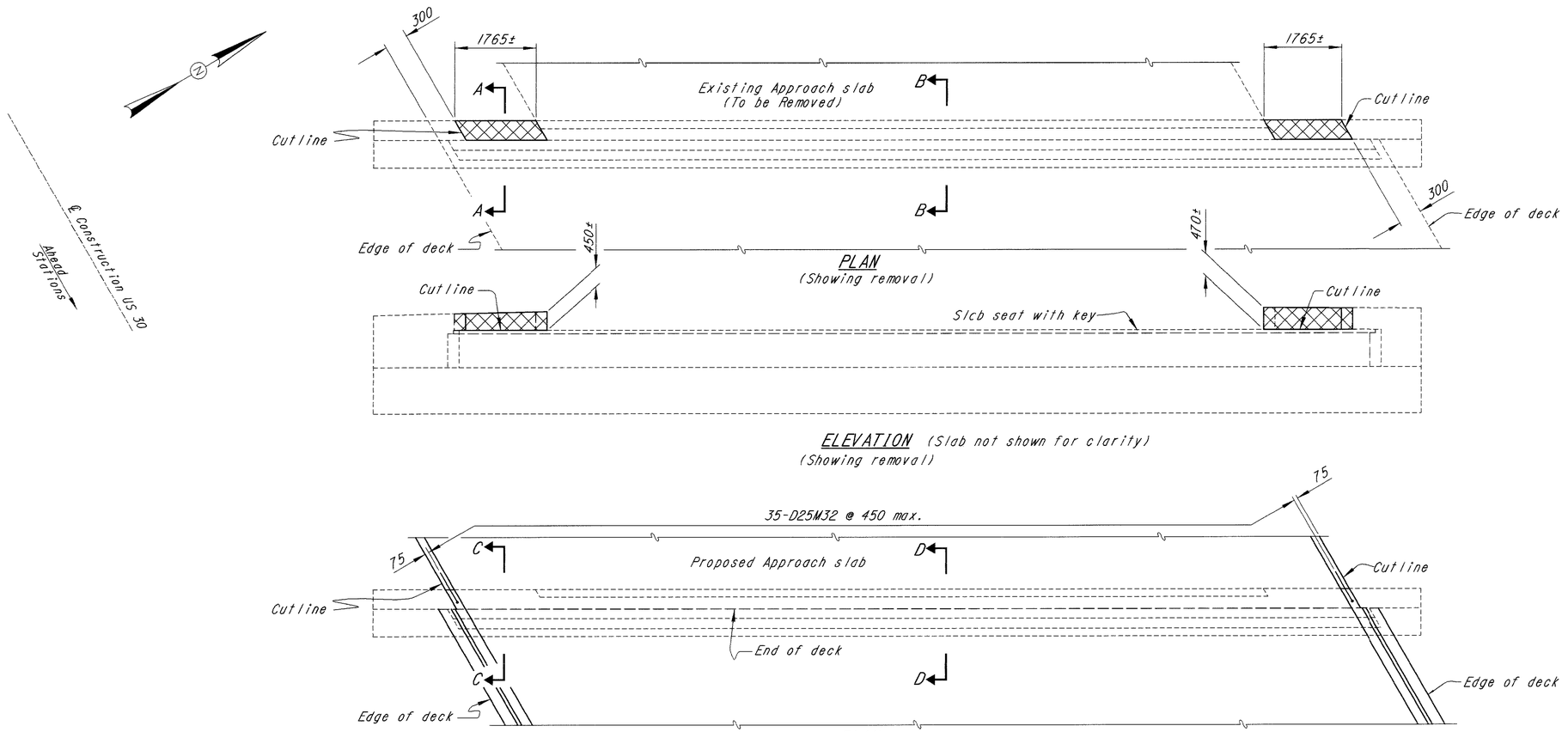
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BRIDGE NO. CRA-30-0669.8
OVER GRASS RUN

WYA/CRA-30-28.009/0.000

4 / 13

1937
2116

File name: 0669891.dgn



NOTES:

1. Limits of concrete and reinforcing to be removed.
2. Concrete to be patched per CMS 519
3. * Bars to be dowelled into existing concrete per CMS 510. Include with Item 842 Class S concrete for payment.

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MRS	—	170106/	

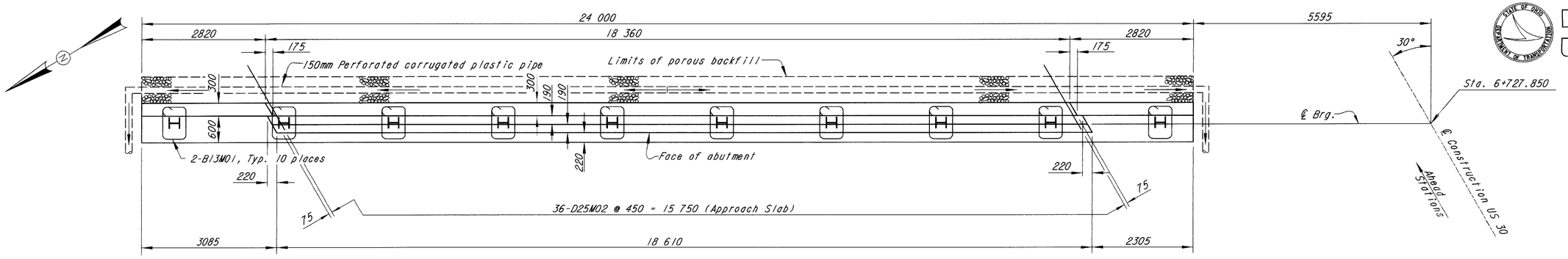
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BRIDGE NO. CRA-30-06698
OVER GRASS RUN

WYA/CRA-30-28.009/0.000

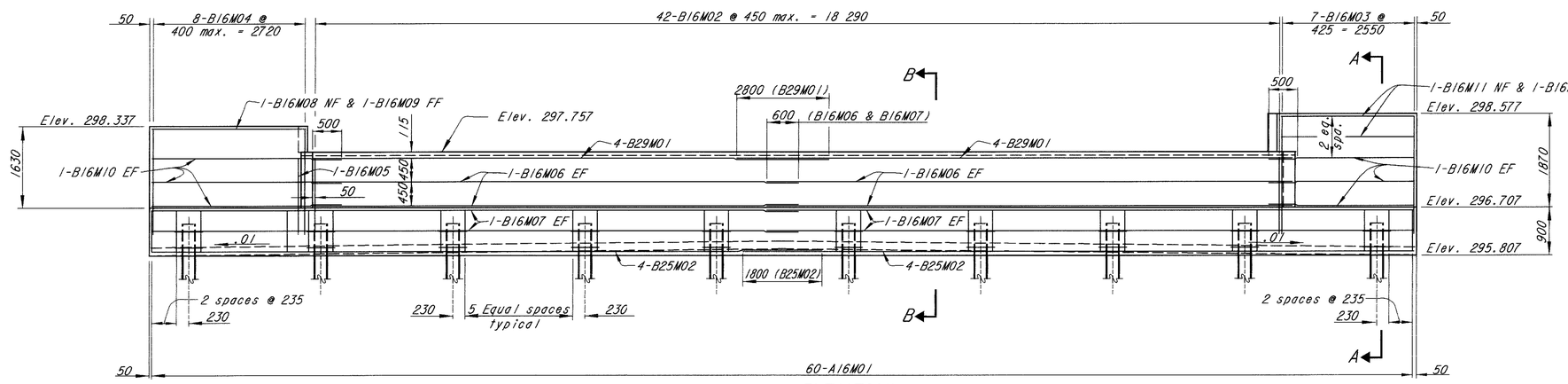
5 / 13

1938
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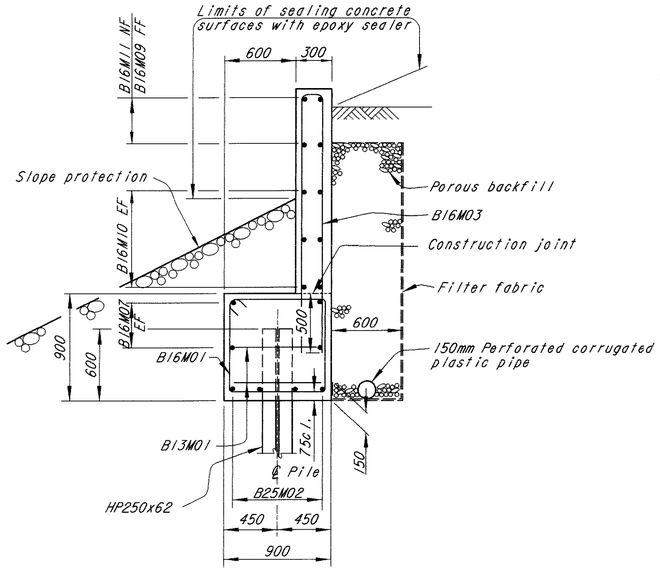
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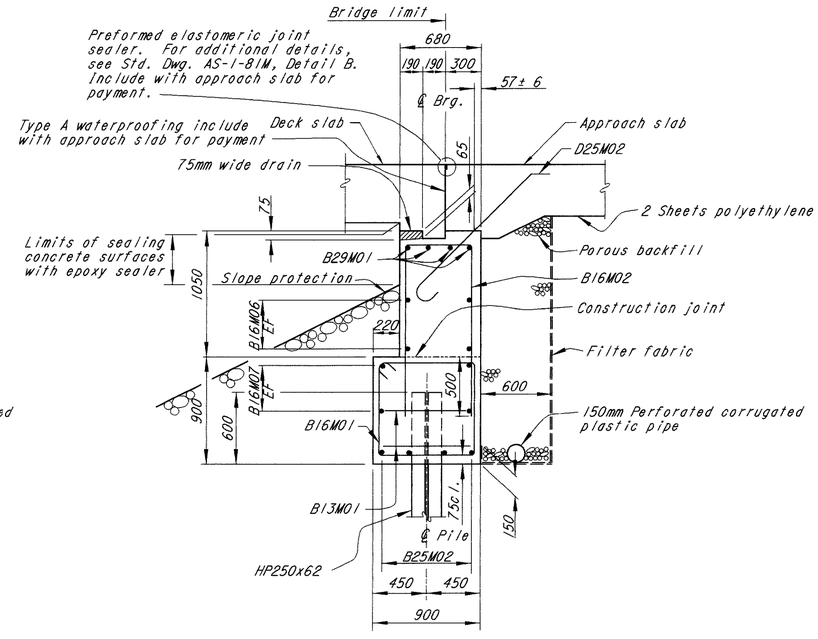
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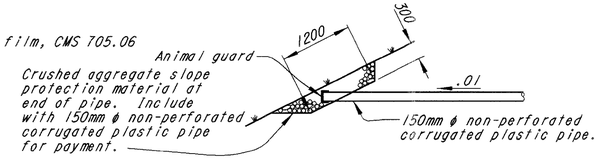
ELEVATION



SECTION A-A



SECTION B-B



DETAIL 1

NOTES:
1. For pile layout, see sheet 3/13
2. Porous backfill with filter fabric, 600mm thick, shall extend up to the plane of subgrade, to 300mm below the embankment surface, and laterally to the ends of the wingwalls.
3. EF = Each Face
   NF = Near Face
   FF = For Face
4. For additional details see Std. Dwg. CPA-5-94M.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	FKL	REVIEWED	CRS	DATE	5/10/99
DRAWN	ALH	REVISED		STRUCTURE FILE NUMBER	170106 1
CHECKED	MRS	REVISED			

FORWARD ABUTMENT LEFT BRIDGE DETAILS

BRIDGE NO. CRA-30-06698
OVER GRASS RUN

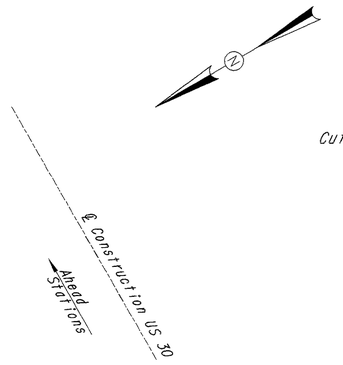
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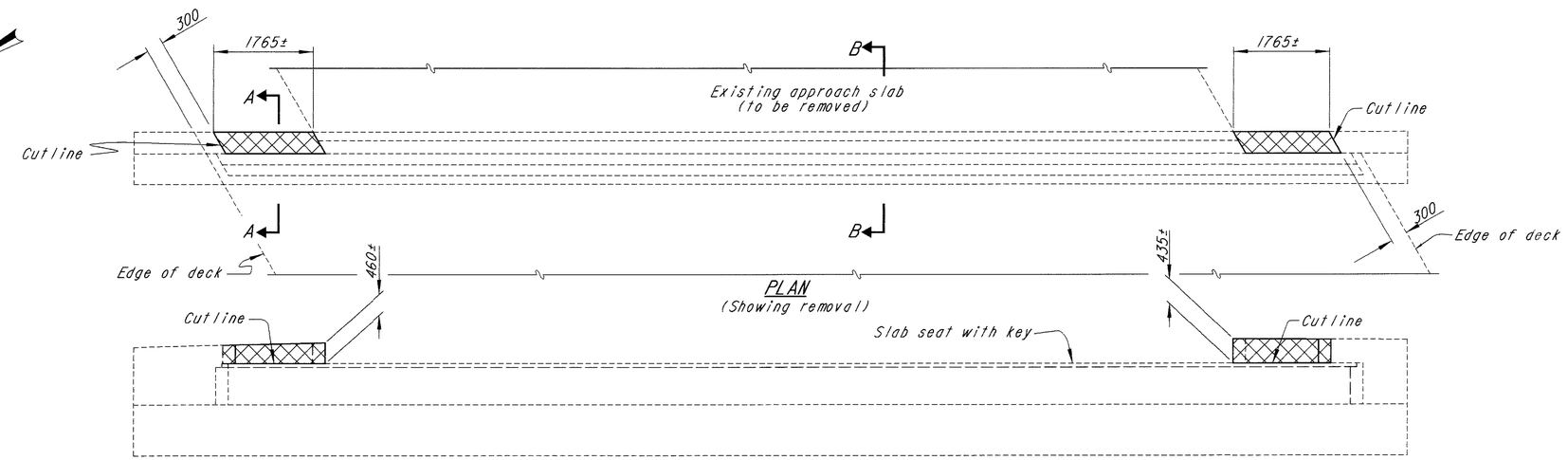
6 / 13

1939
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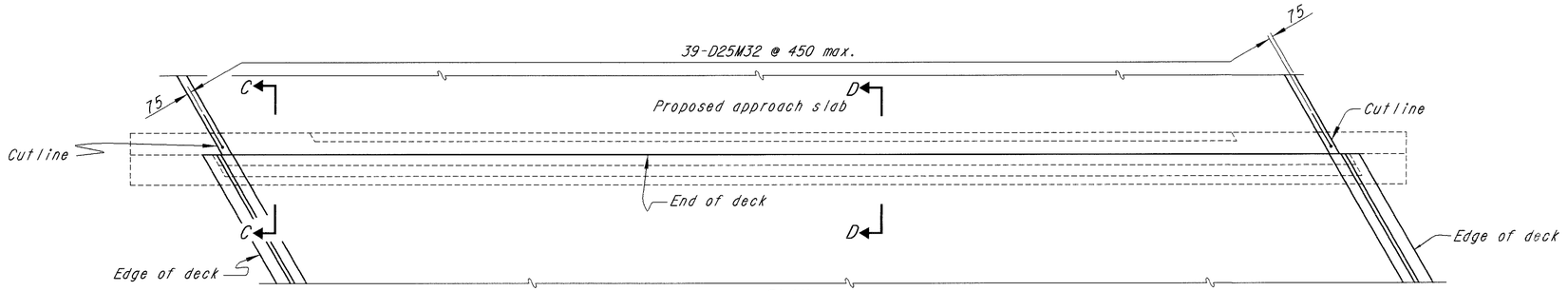
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metric units

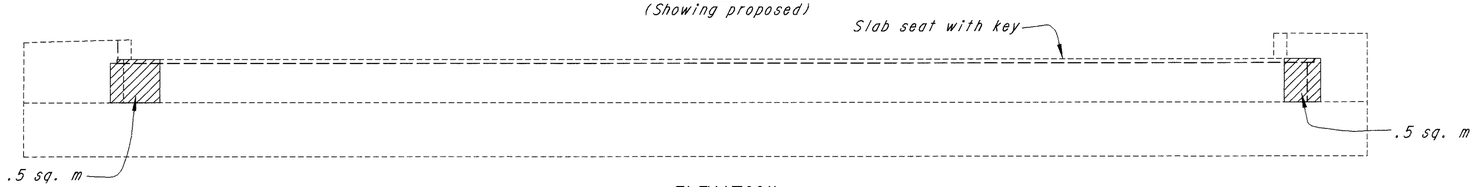




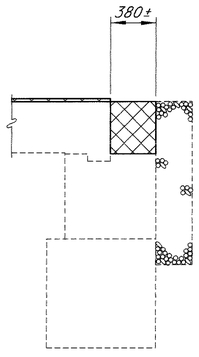
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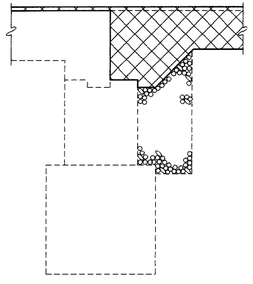
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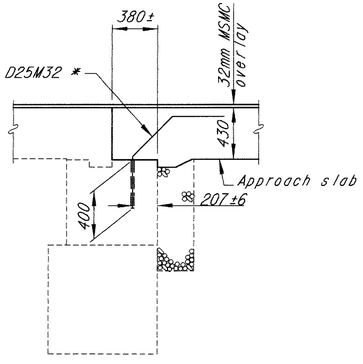
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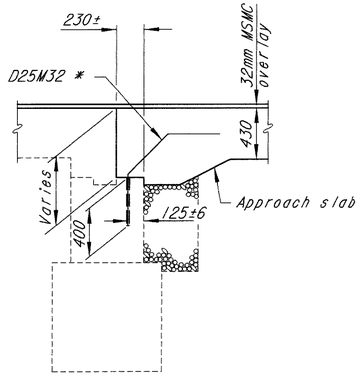
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:
1. Limits of concrete and reinforcing to be removed.
2. Concrete to be patched per CMS 519
3. * Bars to be dowelled into existing concrete per CMS 510. Include with Item 842 Class S concrete for payment.

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	5/10/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	170106/	

FORWARD ABUTMENT RIGHT BRIDGE DETAILS

BRIDGE NO. CRA-30-06698
OVER GRASS RUN

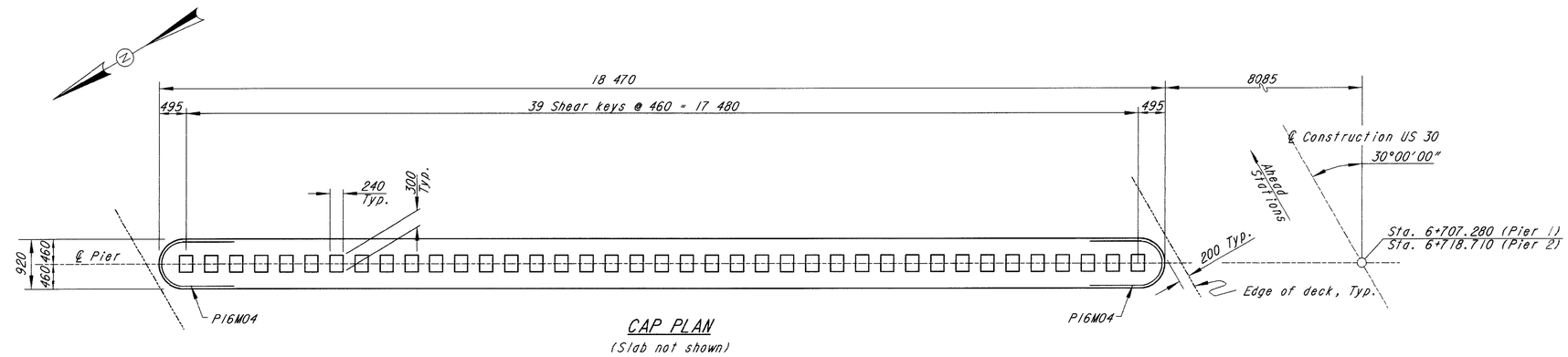
WYA-CRA-30-28.009/0.000

7 / 13

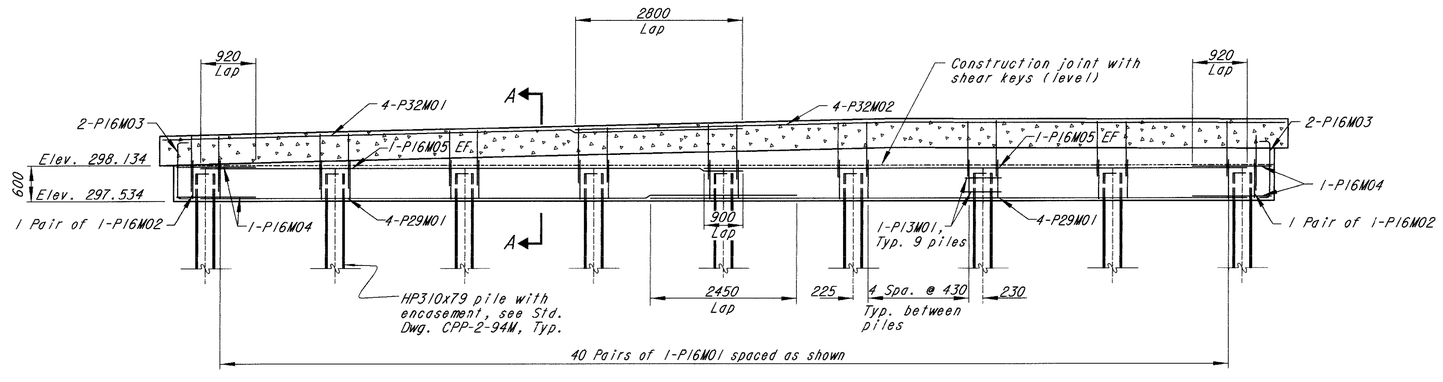
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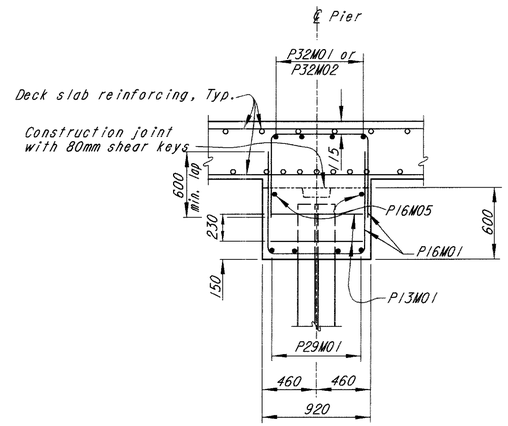
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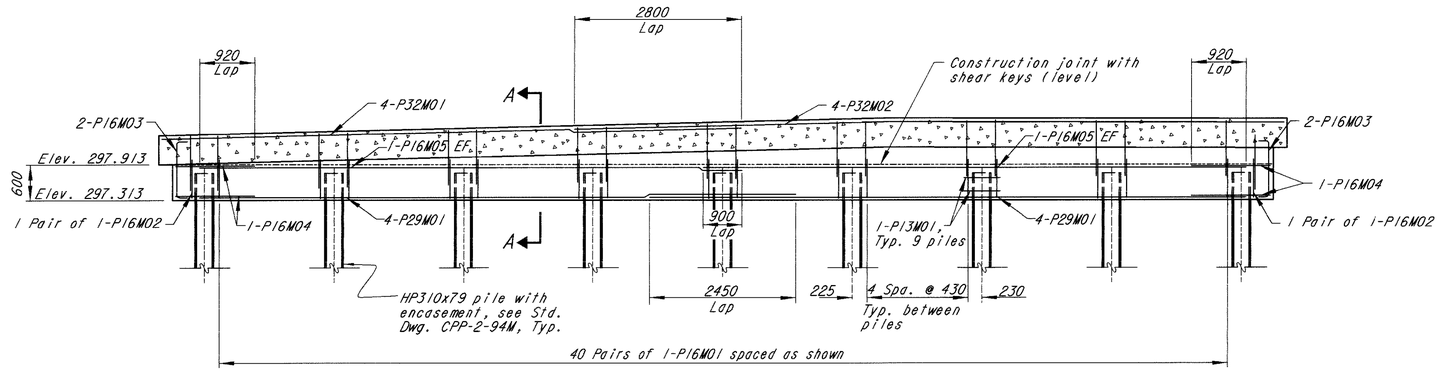
CAP PLAN
(Slab not shown)



PIER 1 ELEVATION



SECTION A-A



PIER 2 ELEVATION

NOTES:
1. The pier cap shall be shored while the slab is placed. The pier cap shall not be loaded without shoring until after the slab concrete has hardened,
2. For additional details, see Std. Dwg. CPP-2-94M.

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DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	5/10/99
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MPS	—	170106/	

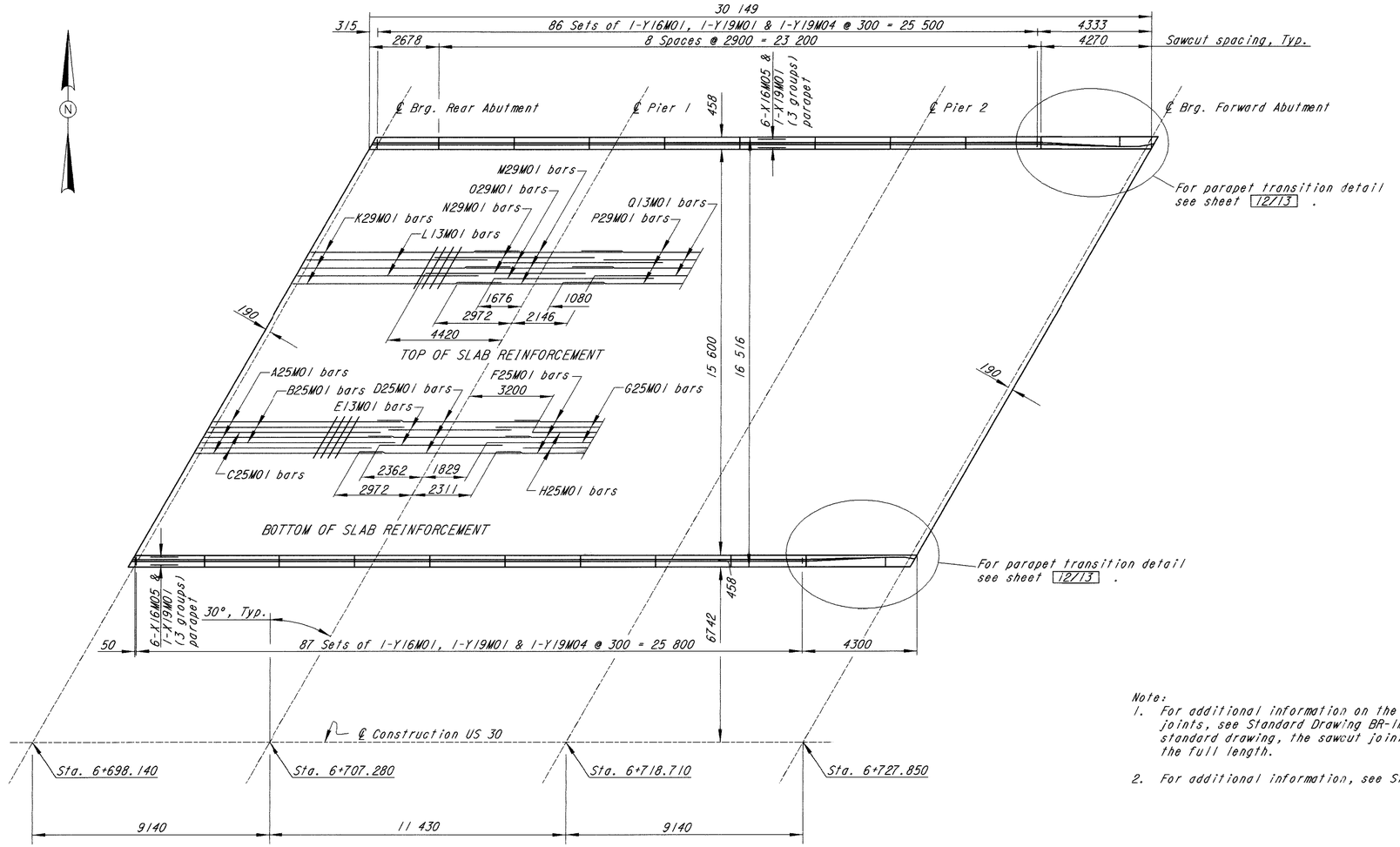
PIERS 1 & 2 LEFT BRIDGE
BRIDGE NO. CRA-30-06698
OVER GRASS RUN

WYA/CRA-30-28.009/0.000

8/13

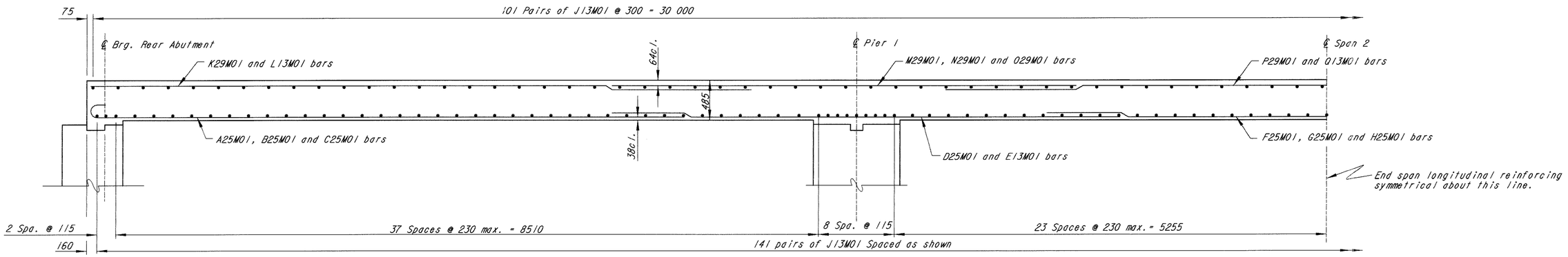
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Filename: 06698p1.dgn



DECK PLAN

Note:
1. For additional information on the parapets and sawcut joints, see Standard Drawing BR-1M. Contrary to the standard drawing, the sawcut joint shall be sealed for the full length.
2. For additional information, see Std. Dwg. CS-1-93M.



TYPICAL LONGITUDINAL SECTION

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	5/10/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MMS	—	170106	

DECK DETAILS LEFT BRIDGE
BRIDGE NO. CRA-30-06698
OVER GRASS RUN

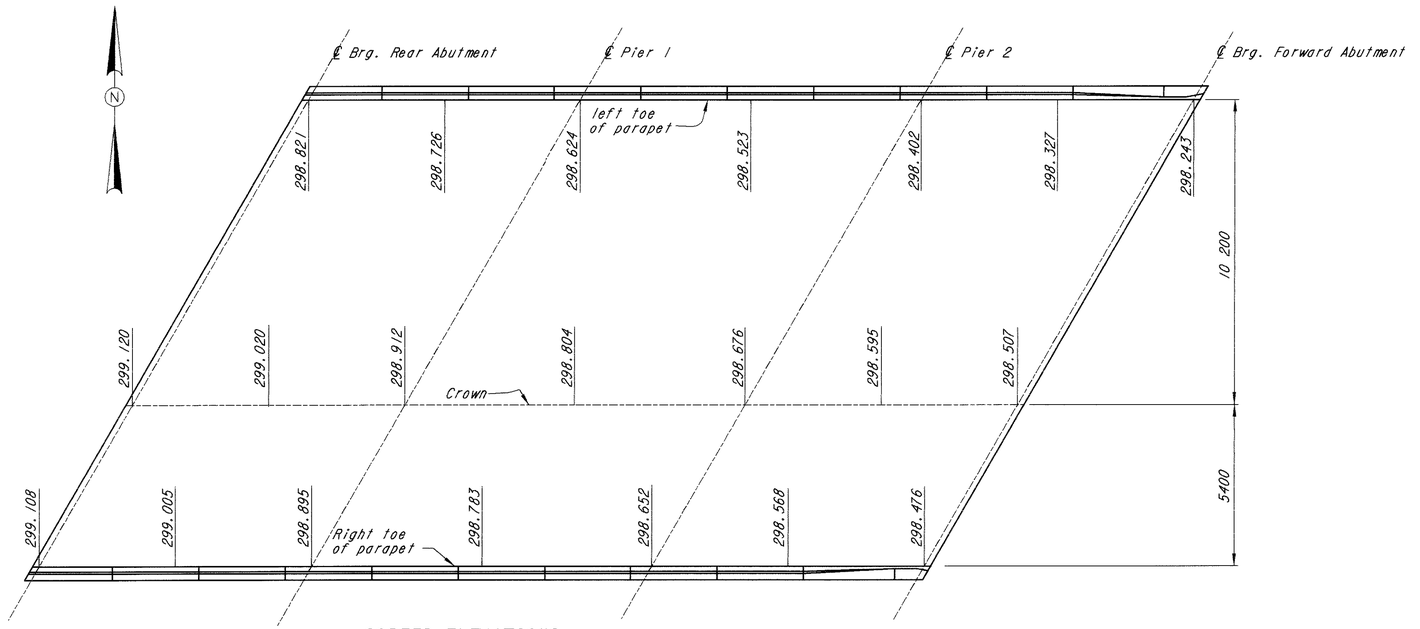
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9/13

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2116

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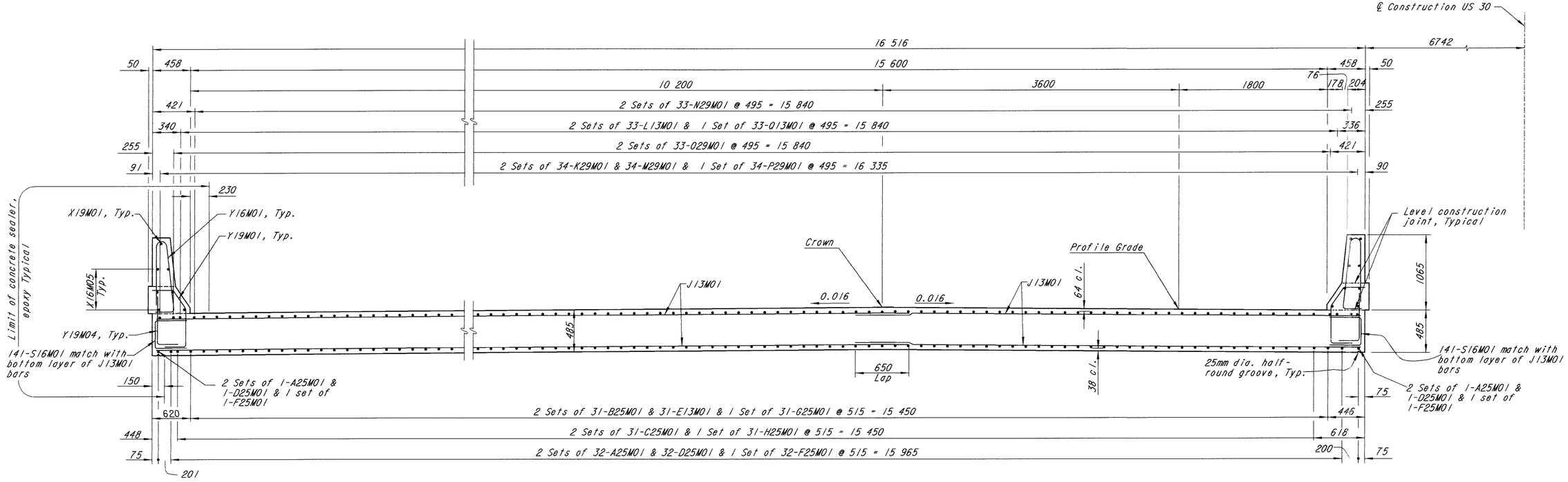
metric units



SCREED ELEVATIONS

NOTES:

Deck elevations shown on this plan are for the top surface of the concrete deck prior to concrete placement. Allowances have been made for anticipated deflections due to the weight of the concrete deck. The contractor shall adjust these elevations as necessary to compensate for falsework deflections. Forms for the bottom surface of the slab shall be constructed parallel to and a constant distance (slab thickness) below adjusted screed elevations.



TYPICAL SECTION

(Looking ahead Station)

NOTES:
For additional details on the parapets, see Std. Dwg. BA-1M. Contrary to the standard drawing, the sawcut joints shall be sealed for the full length of the cut.

DESIGN AGENCY
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1848 Sunmit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	5/10/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	170106/	

DECK DETAILS LEFT BRIDGE
BRIDGE NO. CRA-30-06698
OVER GRASS RUN

WYA/CRA-30-28.009/0.000

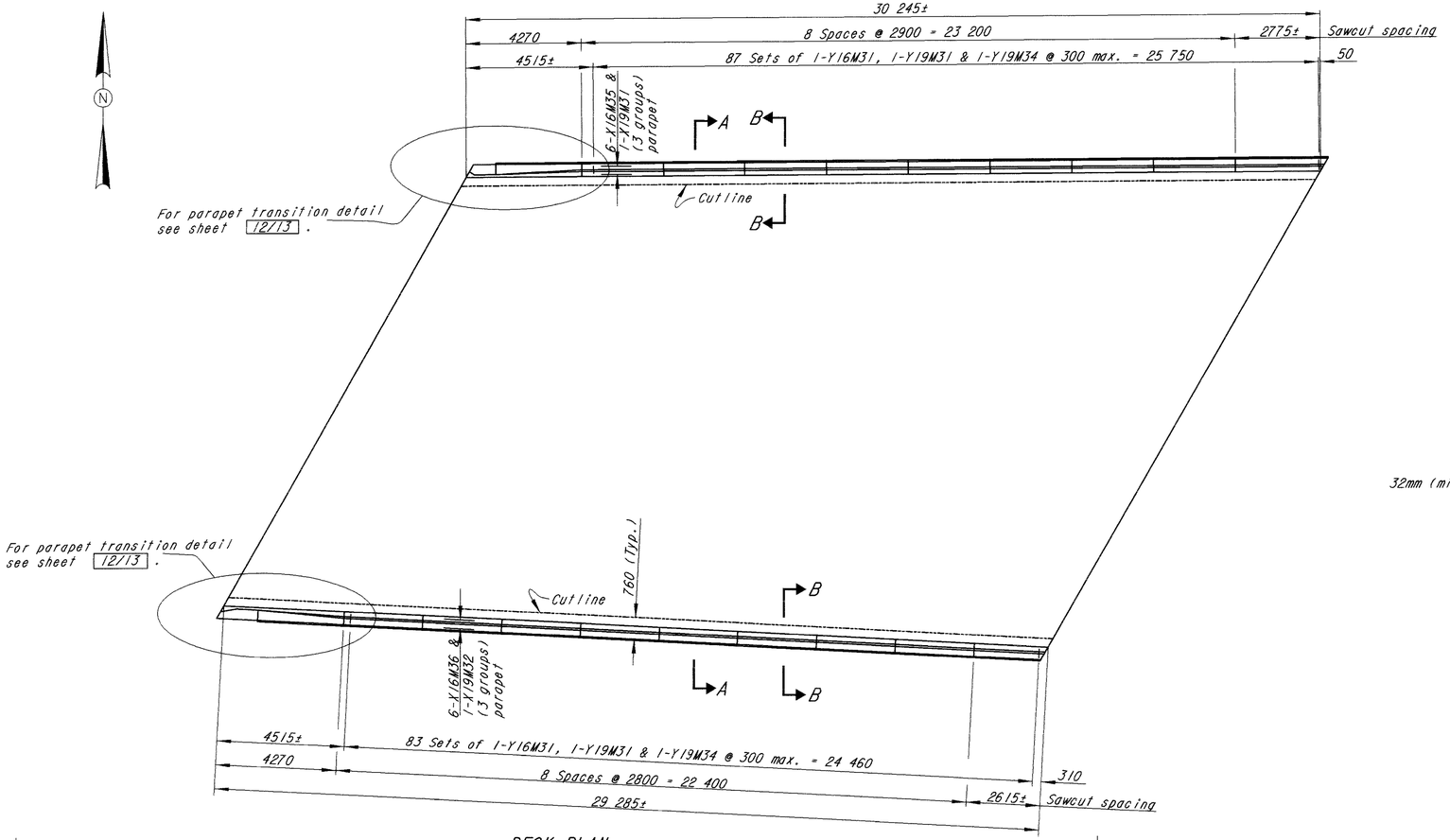
10/13

1943
2116

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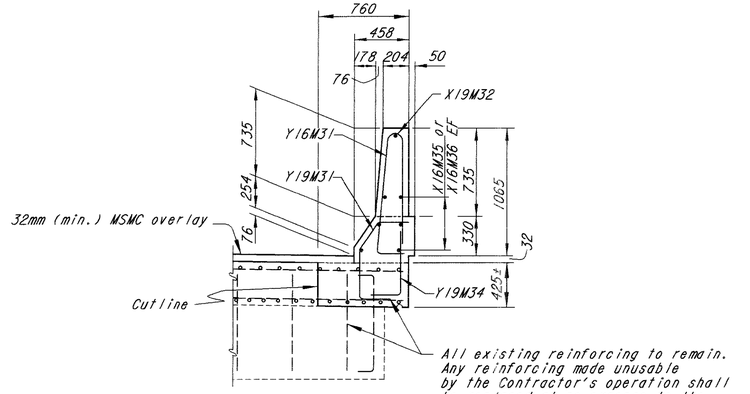
6+680 6+700 ℄ Construction US -30 6+720 6+740

metric units

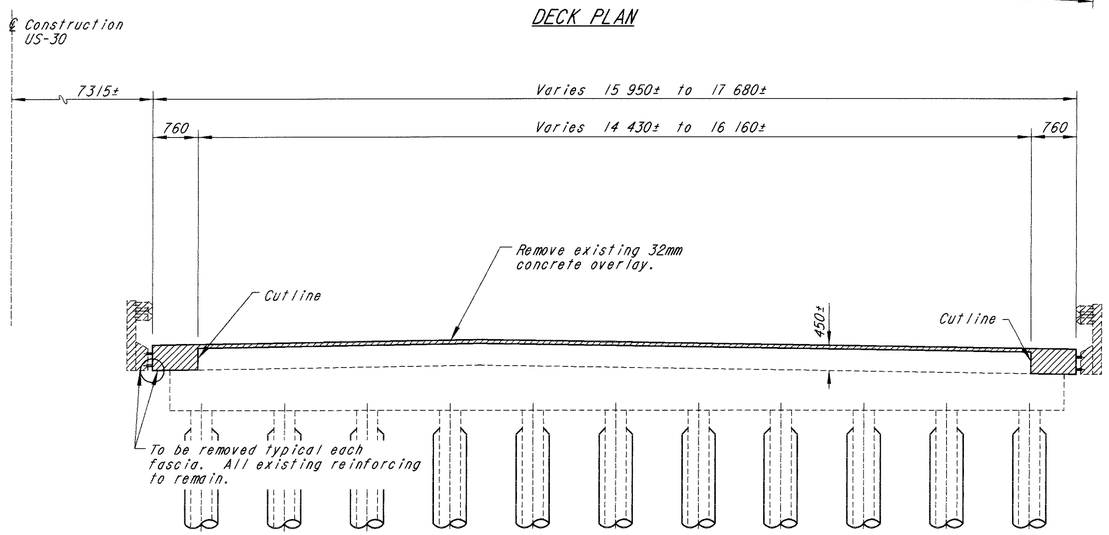


DECK PLAN

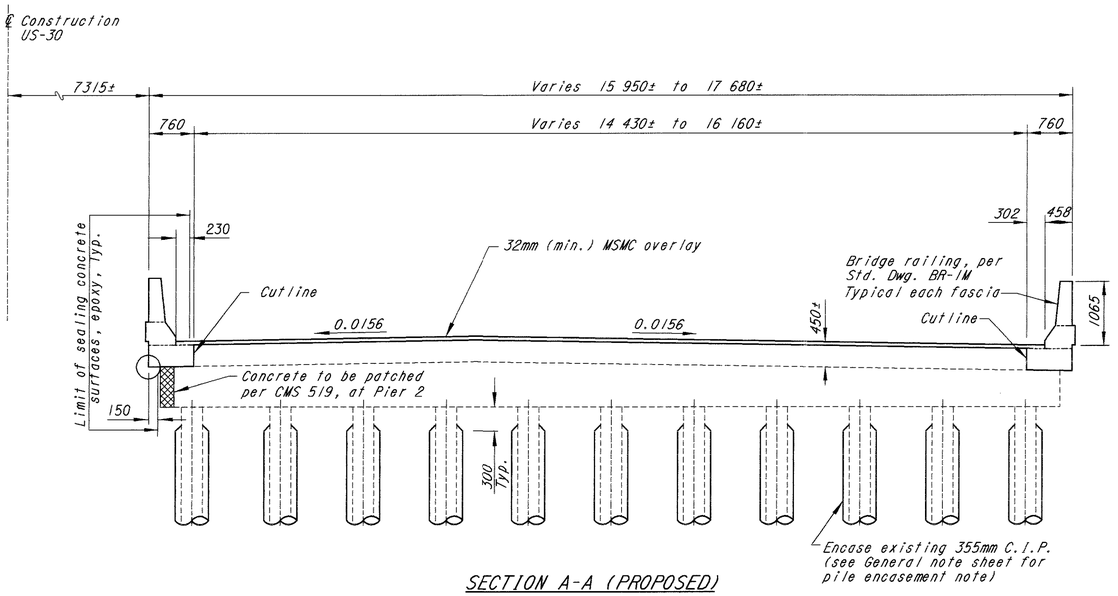
Notes:
1. MSMC - Micro Silica Modified Concrete.
2. Lap length for X16M35 & X16M36 bars is 450mm.
3. For additional information on the parapets and sawcut joints, see Standard Drawing BR-1M. Contrary to the standard drawing, the sawcut joint shall be sealed for the full length.



SECTION B-B



SECTION A-A (EXISTING)



SECTION A-A (PROPOSED)

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	5/10/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	170106/	

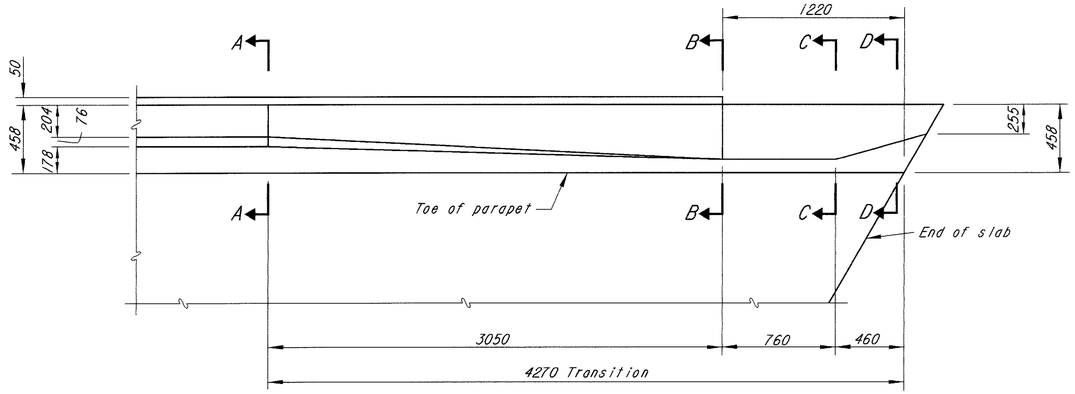
DECK DETAILS RIGHT BRIDGE
BRIDGE NO. CRA-30-0666
OVER GRASS RUN

WYA/CRA-30-28.009/0.000

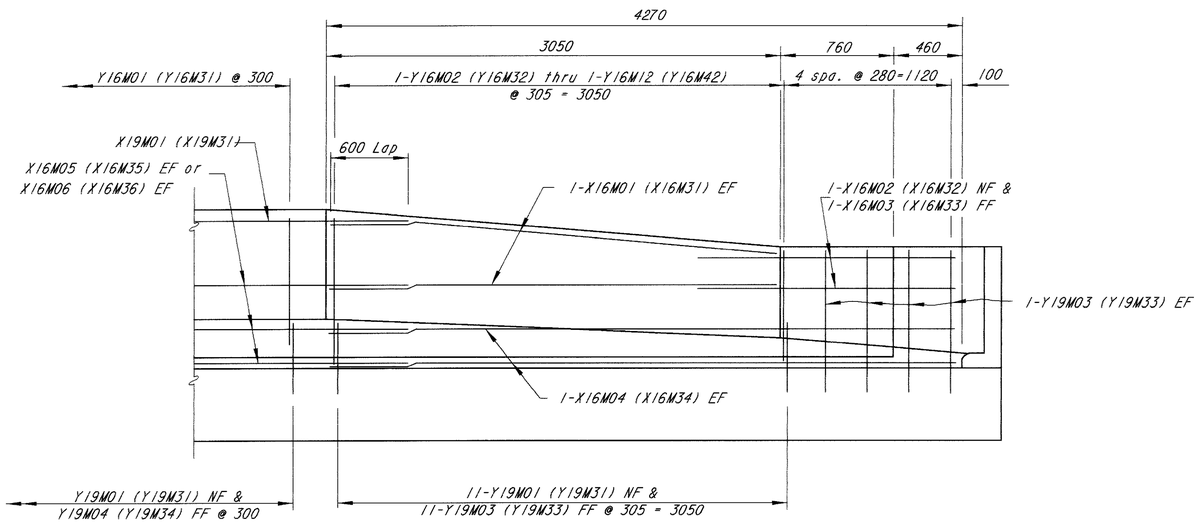
11 / 13

1944
2116

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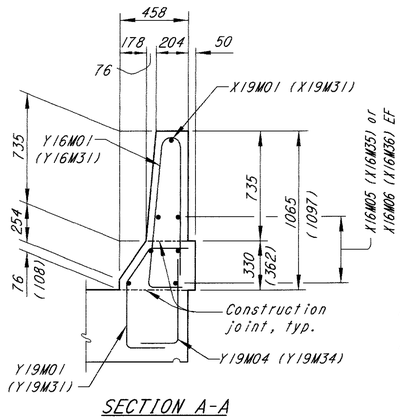
PLAN



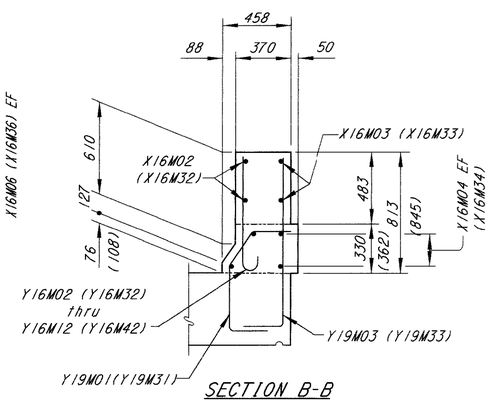
ELEVATION

PARAPET TRANSITION DETAIL

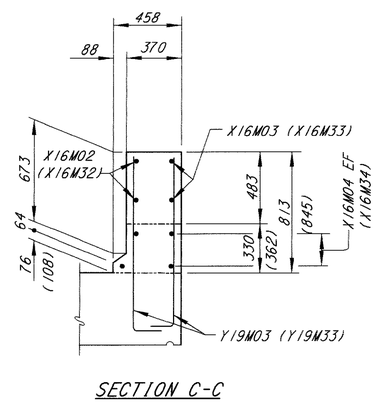
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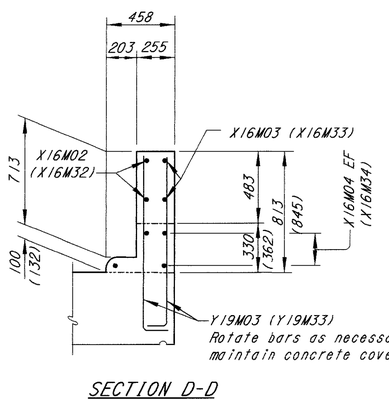
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:
1. FF = Far Face
   NF = Near Face
   EF = Each Face
   UN = Unless Noted
2. For additional details, see Std. Dwg. BR-1M, sheet 272 .
3. Bar marks and dimensions shown "( )" are for the right bridge. Unenclosed bar marks and dimensions are for the left bridge.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
FKL	ALH	CRS	5/10/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRS	—	170106	

DECK DETAILS
BRIDGE NO. CRA-30-06698
OVER GRASS RUN

WYA/CRA-30-28.009/0.000

12 / 13

1945
2116

Filename: 06606d15.dgn

EPOXY COATED REINFORCING STEEL LIST

LEFT BRIDGE: REAR ABUTMENT

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
A29M01	8	10 655	Str.						
A25M02	8	12 850	Str.						
D25M02	36	1510	14	430	1080	305	305		
A16M01	60	3275	8	775	800				
A16M02	42	3350	2	1425	580	1425			
A16M03	7	4320	2	2100	200	2100			
A16M04	8	4900	2	2390	200	2390			
A16M05	1	2970	2	1425	200	1425			
A16M06	8	9560	Str.						
A16M07	8	12 250	Str.						
A16M08	2	2875	Str.						
A16M09	4	2700	Str.						
A16M10	12	3535	Str.						
A16M11	2	2525	Str.						
A13M01	20	2645	8	730	530				

LEFT BRIDGE: FORWARD ABUTMENT

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
B29M01	8	10 655	Str.						
B25M02	8	12 850	Str.						
D25M02	36	1510	14	430	1080	305	305		
B16M01	60	3275	8	775	800				
B16M02	42	3350	2	1425	580	1425			
B16M03	7	4560	2	2320	200	2320			
B16M04	7	4080	2	2080	200	2080			
B16M05	1	2970	2	1425	200	1425			
B16M06	8	9560	Str.						
B16M07	8	12 250	Str.						
B16M08	1	2875	Str.						
B16M09	3	2700	Str.						
B16M10	12	3535	Str.						
B16M11	2	2525	Str.						
B13M01	20	2645	8	730	530				

LEFT BRIDGE: PIER 1 AND PIER 2

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
P32M01	8	9800	Str.						
P32M02	8	12 020	Str.						
P29M01	16	10 410	Str.						
P16M01	160	2630	2	950	810	950			
P16M02	8	2560	2	950	760	950			
P16M03	8	1335	2	250	915	250			
P16M04	8	2985	4	920	1145	920	365		
P16M05	8	9635	Str.						
P13M01	36	2935	8	770	610				

LEFT BRIDGE: SUPERSTRUCTURE

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
K29M01	68	8026	Str.						
M29M01	68	5639	Str.						
N29M01	66	6147	Str.						
O29M01	66	6147	Str.						
P29M01	34	9271	Str.						
A25M01	68	7214	Str.						
B25M01	62	7468	Str.						
C25M01	62	6680	12	6325					
D25M01	68	6172	Str.						
F25M01	34	6807	Str.						
G25M01	31	6401	Str.						
H25M01	31	6401	Str.						
X19M01	6	9160	Str.						
Y19M01	195	1000	3	125	450	265	230	152	
Y19M02	NOT	USED							
Y19M03	38	1395	1	280	1165				
Y19M04	173	905	1	280	675				

LEFT BRIDGE: SUPERSTRUCTURE (CONT.)

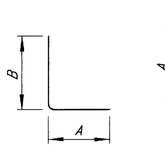
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
S16M01	282	1045	2	380	333	380			
X16M01	8	3050	Str.						
X16M02	4	1725	18	555	738	432			
X16M03	4	1725	Str.						
X16M04	8	4250	Str.						
X16M05	36	9160	Str.						
Y16M01	173	2130	26	915	990	205	1¼	38	
Y16M02	2	1170	12	990					
Y16M03	2	1165	12	965					
Y16M04	2	1120	12	940					
Y16M05	2	1095	12	915					
Y16M06	2	1070	12	890					
Y16M07	2	1045	12	865					
Y16M08	2	1020	12	840					
Y16M09	2	995	12	815					
Y16M10	2	970	12	790					
Y16M11	2	945	12	765					
Y16M12	2	920	12	740					
E13M01	62	4724	Str.						
J13M01	484	9825	Str.						
L13M01	66	6960	Str.						
Q13M01	33	7137	Str.						

RIGHT BRIDGE: ABUTMENTS (COMBINED)

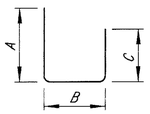
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
D25M32	74	1630	28	430	770	430	545	545	

RIGHT BRIDGE: SUPERSTRUCTURE

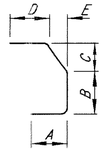
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS A	B	C	D	E	INC.
X19M31	3	9160	Str.						
X19M32	3	8820	Str.						
Y19M31	192	1000	3	125	450	265	230	152	
Y19M32	NOT	USED							
Y19M33	38	1395	1	280	1165				
Y19M34	170	905	1	280	675				
X16M31	8	3050	Str.						
X16M32	4	1725	18	555	738	432			
X16M33	4	1725	Str.						
X16M34	8	4250	Str.						
X16M35	18	9210	Str.						
X16M36	18	8870	Str.						
Y16M31	170	2130	26	915	990	205	1¼	38	
Y16M32	2	1170	12	990					
Y16M33	2	1165	12	965					
Y16M34	2	1120	12	940					
Y16M35	2	1095	12	915					
Y16M36	2	1070	12	890					
Y16M37	2	1045	12	865					
Y16M38	2	1020	12	840					
Y16M39	2	995	12	815					
Y16M40	2	970	12	790					
Y16M41	2	945	12	765					
Y16M42	2	920	12	740					



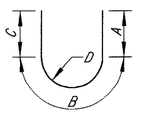
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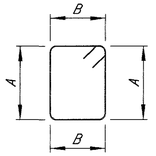
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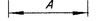
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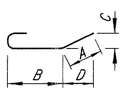
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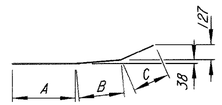
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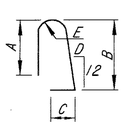
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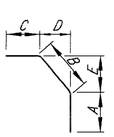
Type 14



Type 18



Type 26



Type 28

NOTES:
1. All dimensions are out to out of bar.
2. All reinforcing steel shall be epoxy coated.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
ALH	ALH	CRS	5/10/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	170106	

REINFORCING STEEL LIST
BRIDGE NO. CRA-30-06698
OVER GRASS RUN

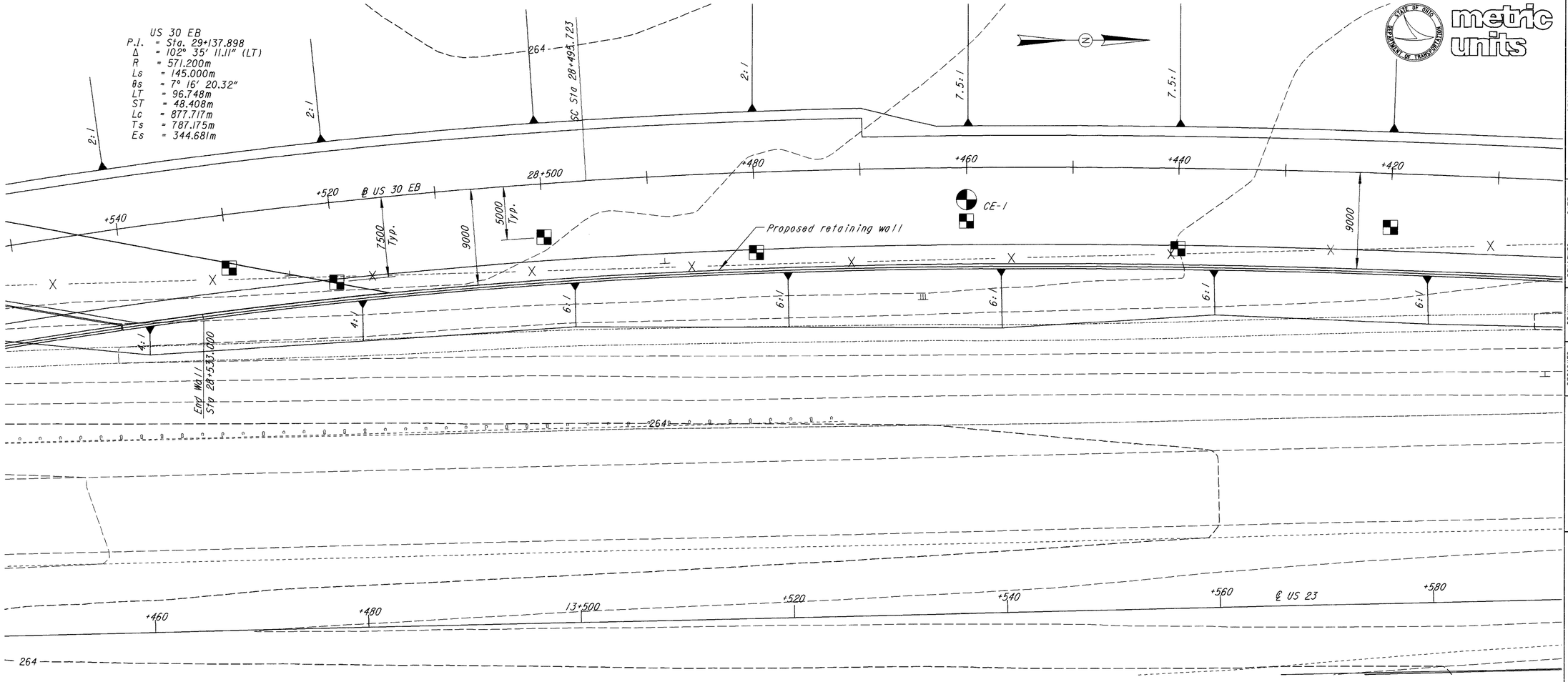
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13/13

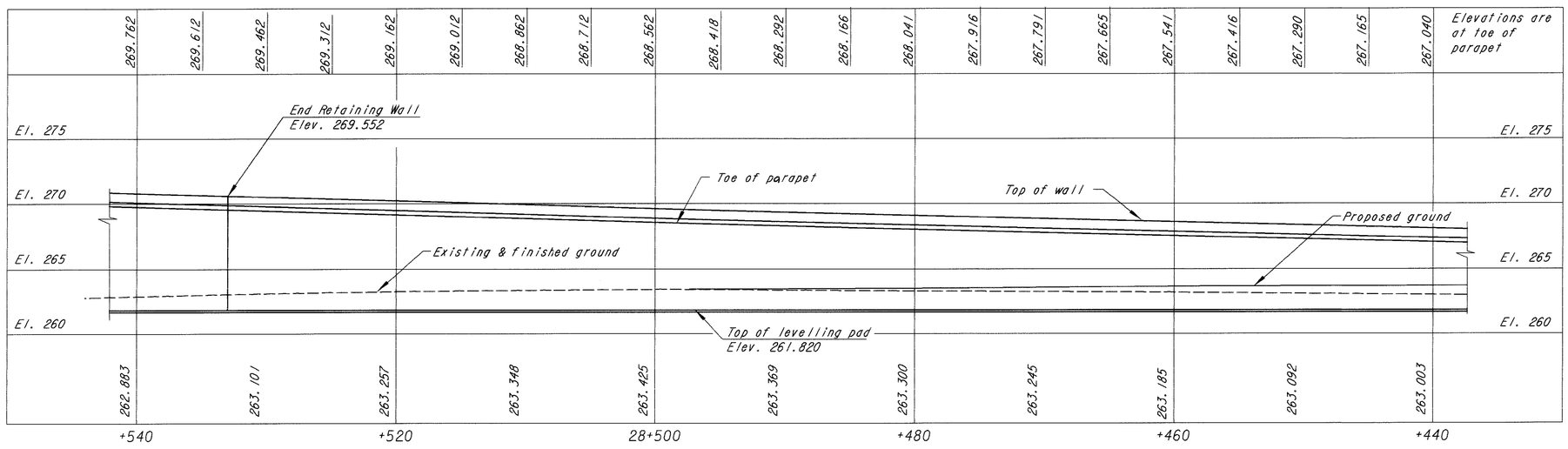
1946
2116

File name: 0606985.dgn

US 30 EB
P.I. = Sta. 29+137.898
Δ = 102° 35' 11.11" (LT)
R = 571.200m
Ls = 145.000m
θs = 7° 16' 20.32"
LT = 96.748m
ST = 48.408m
Lc = 877.717m
Ts = 787.175m
Es = 344.681m



PLAN



ELEVATION

Notes:
Earthwork limits shown are approximate. Actual slopes shall conform to plan cross sections.

All stations and elevations are in meters. All dimensions and lengths are in millimeters.

Boring Location

Settlement platform Location

PROPOSED STRUCTURE

Type: MSE Retaining wall

Live loading: MS18 & the alternate military loading

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MPS	MPS	CRS	1/7/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FAL	—	—	

WYANDOT COUNTY
STA. 28+329.000
STA. 28+533.000

SITE PLAN
Retaining Wall
Along US 30 Eastbound

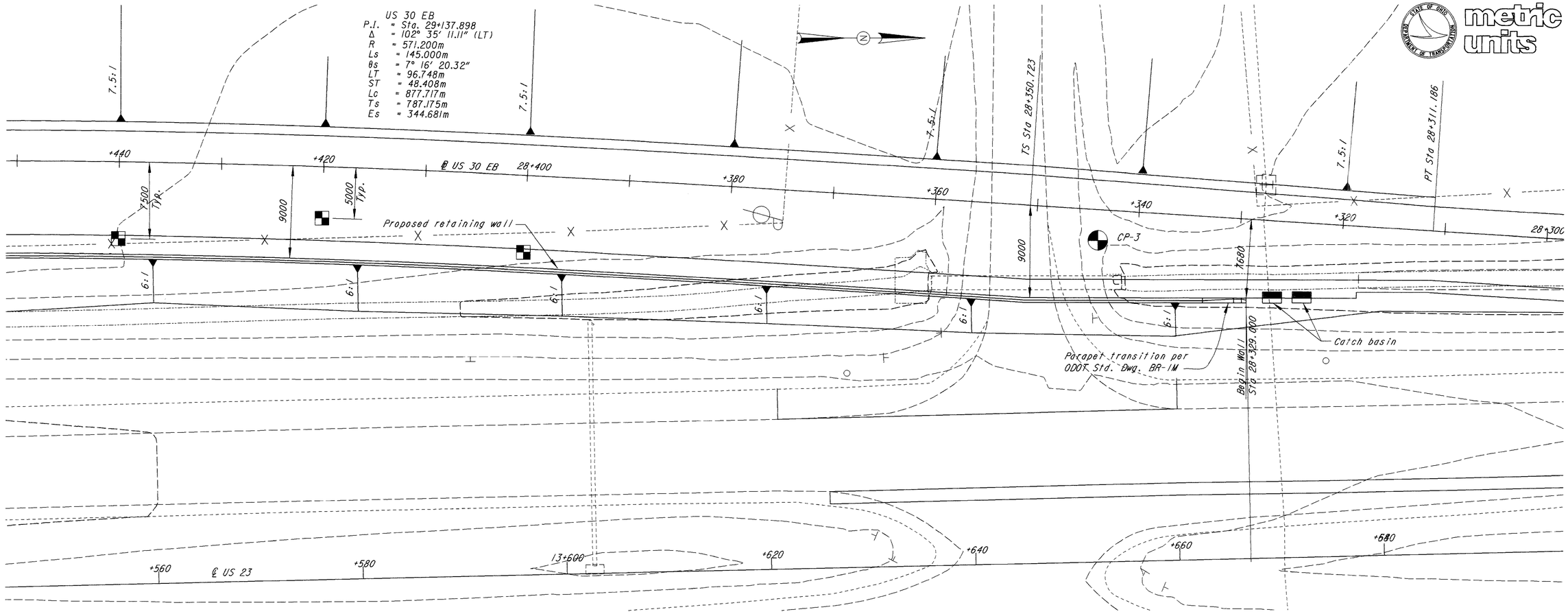
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1947
2/16

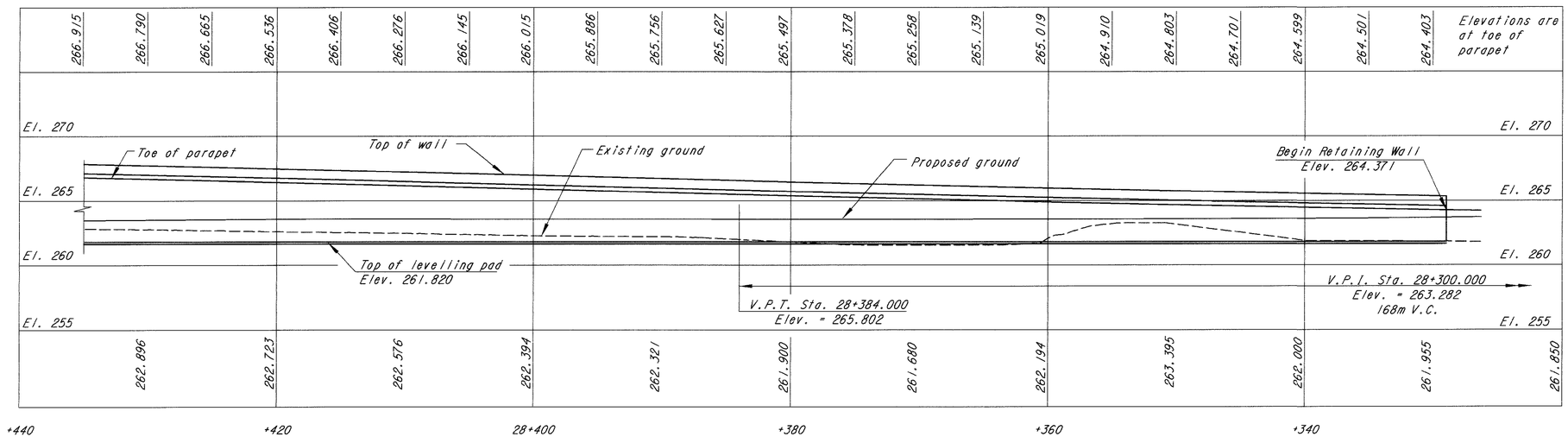
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US 30 EB
P.I. = Sta. 29+137.898
Δ = 102° 35' 11.11" (LT)
R = 571.200m
Ls = 145.000m
θs = 7° 16' 20.32"
LT = 96.748m
ST = 48.408m
Lc = 877.717m
Ts = 787.175m
Es = 344.681m

metric units



PLAN



ELEVATION

Notes:
Earthwork limits shown are approximate. Actual slopes shall conform to plan cross sections.
All stations and elevations are in meters.
All dimensions and lengths are in millimeters.

Boring Location

Settlement platform Location

PROPOSED STRUCTURE

Type: MSE Retaining wall

Live loading: MS18 & the alternate military loading

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	MPS	DATE	1/17/99
DRAWN	ALH	REVIEWED	CRS
CHECKED	FHL	REVISED	—
		STRUCTURE FILE NUMBER	—

WYANDOT COUNTY
STA. 28+329.000
STA. 28+533.000

SITE PLAN
Retaining Wall
Along US 30 Eastbound

WYA/CRA-30-28.009/0.000

1948
2/16

File name: rtwl1982.dgn

REFERENCE shall be made to Standard Drawing(s):

BR-1M Dated 01-06-99

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1992*, including the 1997 & 1998 Interim Specifications and the ODOT Bridge Design Manual.

DESIGN LOADING: MS18, Case (I or II) and the Alternate Military Loading.

DESIGN DATA FOR CONCRETE BARRIER:

Concrete Class S - compressive strength 31.0 Mpa (superstructure)

Reinforcing Steel - ASTM A615M, A616M or A617M Grade 400 minimum yield strength 400 MPa

WALL CONSTRUCTION CONSTRAINTS: The MSE wall retained embankment shall be constructed in five equal height stages with a waiting period between stages of a minimum of twenty days. The waiting period may be waived by the Director at the request of the Contractgor if the Contractor elects to undercut and backfill below the MSE wall embankment, at his own expense. Limits of undercutting and backfilling shall be as defined in the following note.

MSE RETAINING WALLS, REMOVAL OF IN-SITU SOILS AND BACKFILLING WITH 304: At the Contractors option, prior to the construction of Mechanically Stabilized Earth Retaining Walls the existing in-situ soils may be removed and the resulting excavation shall be backfilled as per Item 304 of CMS. The limits of the removal of the in-situ soils shall be defined as follows: the width of the excavation shall be defined from a line 1050 in front of the face of the wall panels to a line 1050 behind the end of the MSE Wall reinforcing elements. The length of the excavation shall be between Sta. 28+440.000 and Sta. 28+533.000. The depth of the excavation shall be 1200 below the top of the leveling pad elevations shown on the MSE Retaining Wall plans. The excavation shall be backfilled as per Item 304 to the bottom of select granular backfill elevations.

ITEM SPECIAL, SETTLEMENT PLATFORMS:

DESCRIPTION: This item consists of furnishing, constructing, and maintaining settlement platforms and obtaining settlement readings as required by the Plans or as directed by the Engineer. A completed copy of the settlement readings shall be sent to the Office of Structural Engineering, Attention: Foundation Engineer.

MATERIALS: Sound lumber, such as 19mm exterior grade plywood, shall be used for the base. The pipe shall be 63.5mm standard black pipe with threaded fittings as shown on the Plans. A steel plate, 900 x 900 x3, may be substituted for the lumber for the platforms, at the Contractor's option.

CONSTRUCTION REQUIREMENTS: The 900 x 900 platform shall conform to the details shown on the Plans. The platform shall be set on a level surface. The pipes shall be firmly secured to the platforms and shall be maintained in a plumb position during the placement of the embankment. Pipes shall be marked at intervals by the Contractor to facilitate measurement of the depth of fill. The Contractor shall stop work in any location where a settlement platform has been disturbed or damaged until the necessary corrections or replacement has been performed.

Prior to paving, the top of the settlement platform pipe shall be cut off 600mm below the finished surface of the subgrade or topsoil surface, whichever is applicable.

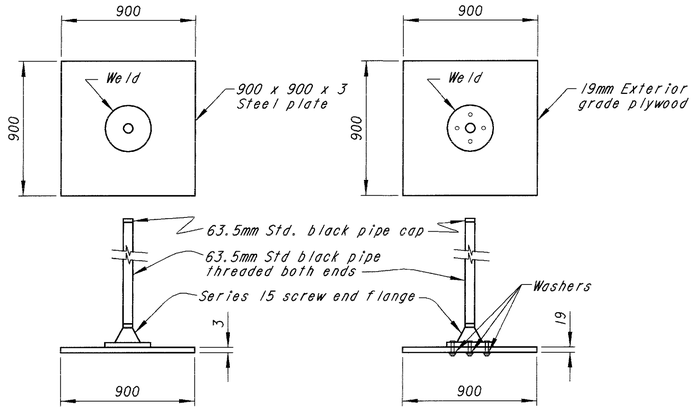
METHOD OF MEASUREMENT: The number of settlement platforms to be paid for will be the actual number of settlement platforms completed, maintained, and accepted by the Engineer.

BASIS OF PAYMENT: Payment will be made at the contract unit price per each for "Item Special, Settlement Platforms" which is compensation for constructing, maintaining and monitoring the settlement platforms including furnishing all labor, equipment, materials and incidentals necessary to complete this work. Payment will not be made for settlement platforms which become useless because of damage inflicted by the Contractor's operations.

ESTIMATED QUANTITIES

Calculated by: ALH
Checked by: FKL

Item	Extension	Total	Unit	Description
203	35001	4137	Cu. Meter	Select granular embankment, as per plan
503	21100	1076	Cu. Meter	Unclassified excavation
Special	51267510	1231	Sq. meter	Sealing of concrete surfaces, epoxy
518	40000	405	Meters	150mm Perforated corrurgated plastic pipe
Special		8	Each	Settlement platforms
Special	61013500	1288	Sq. meter	Reinforced Earth Walls



SETTLEMENT PLATFORM DETAIL

1. Settlement plates shall be placed at the locations indicated in the plans.
2. Contractor has option of using either steel or plywood platform base.
3. Contractor shall furnish materials and labor to extend pipe up through entire fill.
4. Settlement platforms shall be anchored by stakes driven at each corner to prevent overturning.

metric units

DESIGN AGENCY
BALKE ENGINEERS
1848 Summit Road
Cincinnati, Ohio 45237

DESIGNED	DRAWN	REVIEWED	DATE
MPS	ALH	CRS	7/7/99
CHECKED	REVISED	STRUCTURE FILE NUMBER	
FKL	—	—	

GENERAL NOTES AND ESTIMATED QUANTITIES
RETAINING WALL
ALONG US 30 EASTBOUND

WYA/CRA-30-28.009/0.000

1949
2116

Filename: wallnote.dgn

TAI
The Reinforced Earth Company

8614 Westwood Center Drive Suite 1100, Vienna, Virginia 22182 (703) 821–1175

GENERAL NOTES

DESIGN CRITERIA

1. DESIGN IS BASED ON THE ASSUMPTION THAT THE MATERIAL WITHIN THE REINFORCED EARTH VOLUME, METHODS OF CONSTRUCTION AND QUALITY OF PREFABRICATED MATERIALS SHALL CONFORM TO THE CONTRACTING AGENCY'S TECHNICAL SPECIFICATIONS FOR REINFORCED EARTH WALLS.

2. SOILS CHARACTERISTICS ASSUMED FOR DESIGN:

   SELECT GRANULAR BACKFILL
   $\emptyset$ = 34 degrees, c = KPa., γ = 18.8 KN/m^3

   RANDOM BACKFILL
   $\emptyset$ = 30 degrees, c = KPa., γ = 18.8 KN/m^3

   FOUNDATION MATERIAL
   $\emptyset$ = 30 degrees, c = KPa.,

3. THE MAXIMUM APPLIED BEARING PRESSURE AT THE FOUNDATION LEVEL IS AS SHOWN ON THE WALL ELEVATIONS FOR EACH DESIGN CASE. IT IS THE RESPONSIBILITY OF THE OWNER TO DETERMINE THAT THIS APPLIED BEARING PRESSURE IS ALLOWABLE FOR THAT LOCATION.

4. ANY UNSUITABLE FOUNDATION MATERIAL BELOW THE REINFORCED EARTH VOLUME, AS DETERMINED BY THE ENGINEER, SHALL BE EXCAVATED AND REPLACED WITH SUITABLE MATERIAL OR OTHERWISE STABILIZED AS DIRECTED BY THE ENGINEER.

5. REINFORCING STRIPS SHALL BE 50mm WIDE AND 4mm THICK, AND SHALL CONFORM TO THE PHYSICAL AND MECHANICAL PROPERTIES OF ASTM A–572M GRADE 450. GALVANIZATION SHALL BE APPLIED IN ACCORDANCE WITH ASTM A–123 OR AASHTO M111 (610 g/m^2).

WALL CONSTRUCTION

6. STATIONS SHOWN ARE ALONG CENTERLINE OF ROADWAY.

7. REINFORCED EARTH WALLS IN CURVES WILL FORM A SERIES OF SHORT CHORDS OF 1.50m EACH TO MATCH DESIRED WALL ALIGNMENT.

8. FOR LOCATION AND ALIGNMENT OF REINFORCED EARTH WALLS. SEE SHEET No.2.

9. IF MANHOLES AND DROP INLETS ARE PRESENT, THEY SHALL BE LOCATED AS SHOWN ON WALL ELEVATIONS.

10. IF PILES ARE LOCATED WITHIN THE REINFORCED EARTH VOLUME, THEY SHALL BE DRIVEN PRIOR TO CONSTRUCTION OF THE REINFORCED EARTH WALL UNLESS A METHOD TO PROTECT THE STRUCTURE, WHICH IS ACCEPTABLE TO THE ENGINEER AND THE REINFORCED EARTH COMPANY, AND IS PROPOSED AND APPROVED IN WRITING.

11. BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR REINFORCED EARTH WALLS TO A LEVEL OF 50mm (±) ABOVE THE TIE STRIPS EMBEDDED IN THE PANELS. INSTALLATION OF REINFORCING STRIPS SHALL BE PERMITTED ONLY AFTER PLACEMENT AND COMPACTION OF THE BACKFILL MATERIAL HAS REACHED THE REQUIRED LEVEL.

WALL CONSTRUCTION (CONT.)

12. COMPACTION AND OPERATION EQUIPMENT SHALL BE KEPT A MINIMUM DISTANCE OF 1.0m FROM THE BACK FACE OF THE REINFORCED EARTH PANELS. COMPACTION WITHIN 1.0m OF THE REINFORCED EARTH PANELS SHALL BE ACHIEVED WITH AT LEAST THREE (3) PASSES OF A LIGHTWEIGHT MECHANICAL TAMPER, ROLLER OR VIBRATORY SYSTEM. NO COMPACTION DENSITY TESTS SHALL BE TAKEN WITHIN THE 1.0m ZONE.

13. IF STRUCTURES IN EXCESS OF 6m IN HEIGHT OCCUR, THE FINISHED GRADE IN FRONT OF THE WALL SHALL BE PLACED AND COMPACTED BEFORE WALL CONSTRUCTION EXCEEDS A HEIGHT OF 6m. FINISHED GRADE BACKFILL SHALL BE COMPACTED TO 95% OF ASTM D–698, METHODS 'C' OR 'D', UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

14. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY GUARDRAIL POSTS BEHIND THE REINFORCED EARTH PANELS. PRIOR TO PLACEMENT OF THE TOP LAYER OF REINFORCING STRIPS, INDIVIDUAL STRIPS MAY BE SKEWED TO AVOID THE POST LOCATIONS IF AUTHORIZED BY THE REINFORCED EARTH COMPANY. ANY DAMAGE DONE TO THE REINFORCING STRIPS DUE TO THE INSTALLATION OF THE GUARDRAIL SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

15. IF EXISTING OR FUTURE STRUCTURES, PIPES, FOUNDATIONS OR GUARDRAIL POSTS WHICH ARE WITHIN THE REINFORCED EARTH VOLUME INTERFERE WITH THE NORMAL PLACEMENT OF REINFORCING STRIPS AND SPECIFIC DIRECTION HAS NOT BEEN PROVIDED ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE REINFORCED EARTH COMPANY TO DETERMINE WHAT COURSE OF ACTION SHOULD BE TAKEN.

16. ALL DETAILING AND CHECKING OF REINFORCING STEEL FOR ANY C.I.P. CONCRETE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

17. TOP FANELS BENEATH CAST–IN–PLACE COPING SHALL HAVE #15m DOWELS PROTRUDING FROM THEIR TOP EDGE.

18. FOR OTHER INFORMATION PERTAINING TO WALL CONSTRUCTION PLEASE REFER TO THE REINFORCED EARTH CONSTRUCTION MANUAL.

19. THE CONTRACTOR IS RESPONSIBLE FOR GRADUALLY DEFLECTING UPPER REINFORCING STRIPS DOWNWARD TO AVOID CONFLICTS WITH PAVING AND SUBGRADE PREPARATION. THE CONTRACTOR'S ATTENTION IS DIRECTED ESPECIALLY TO SITUATIONS WHERE ROADWAY SUPERELEVATION AND/OR SOIL MIXING ARE ANTICIPATED.

20. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING STORM WATER DRAINAGE IN THE VICINITY OF THE WALL DURING CONSTRUCTION. STORM WATER RUNOFF IS TO BE COLLECTED AND DISCHARGED AWAY FROM THE WALL AND REINFORCED BACKFILL.

21. NOMINAL STRIP LENGTHS

    THE REINFORCING STRIP LENGTHS SHOWN ON THE PLANS, MEASURED FROM BACK FACE OF PANEL, ARE THE NOMINAL LENGTHS REQUIRED BY CALCULATION. THE ACTUAL FABRICATED STRIP LENGTHS ARE OFTEN LONGER (UP TO 15cm) DUE TO MANUFACTURING TOLERANCES. THE REQUIRED HORIZONTAL LIMIT OF GRANULAR BACKFILL IS EQUAL TO THE NOMINAL STRIP LENGTH. ADDITIONAL GRANULAR BACKFILL BEYOND THE NOMINAL STRIP LENGTH IS NOT REQUIRED BY CALCULATION.

22. SELECT BACKFILL QUANTITY

    THE SELECT BACKFILL QUANTITY INDICATED BY THE REINFORCED EARTH COMPANY IS CALCULATED BY MULTIPLYING THE NOMINAL STRIP LENGTHS SHOWN ON THE PLANS (PLUS 0m) BY THEIR TRIBUTARY WALL SURFACE AREA AND CONVERTING THE RESULT TO A NEATLINE CUBIC YARD QUANTITY. THIS INFORMATION IS FURNISHED FOR THE CONTRACTOR'S INFORMATION ONLY AND IS NOT INTENDED TO REPRESENT THE ACTUAL QUANTITIES REQUIRED TO COMPLETE THE WORK. THE CONTRACTOR MUST CALCULATE HIS OWN EXCAVATION AND BACKFILL QUANTITIES BASED UPON THE SPECIFIC CONDITIONS OF THE PROJECT.

23. PANEL FINISH

    THE PRECAST PANELS FOR THIS PROJECT SHALL HAVE A PLAIN FINISH UNLESS OTHERWISE SPECIFIED.

24. NOTE TO CONTRACTORS

    ONLY THE FOLLOWING MATERIALS ARE SUPPLIED BY THE REINFORCED EARTH COMPANY:

    – PRECAST CONCRETE FACING PANELS
    – REINFORCING STRIPS
    – BOLT SETS (FOR ATTACHING PANELS TO THE REINFORCING STRIPS)
    – BEARING BLOCKS
    – RUBBER SHIMS
    – FILTER CLOTH AND ADHESIVE (FOR PANEL JOINTS ONLY)

    ANY OTHER MATERIALS CALLED FOR IN THE CONTRACT PLANS OR SPECIFICATIONS ARE TO BE SUPPLIED BY THE CONTRACTOR. ANY JOINT MATERIALS SHOWN AT THE INTERFACE OF PRECAST PANELS AND CAST–IN–PLACE CONCRETE STRUCTURES ARE TO BE SUPPLIED BY THE ERECTION CONTRACTOR. ALL SANDBLASTING, PAINTING, SEALERS OR OTHER SPECIAL APPLIED COATINGS ARE ALSO SUPPLIED/INSTALLED BY THE CONTRACTOR IN THE FIELD FOLLOWING PANEL ERECTION.

25. THE REINFORCED EARTH COMPANY SUPPLIES PRECAST CONCRETE FACING PANELS AND ACCESSORIES TO BE USED IN CONJUNCTION WITH OTHER MATERIALS IN THE CONSTRUCTION OF THE REINFORCED EARTH® RETAINING WALLS DETAILED HEREIN. THE CONSTRUCTION AND QUALITY CONTROL PROCEDURES MANUAL FURNISHED BY THE REINFORCED EARTH COMPANY IS INTENDED TO PROVIDE A GENERAL EXPLANATION OF THE SYSTEM. IT IS THE CONTRACTOR'S OBLIGATION TO DEVISE AND EXECUTE A PROJECT SPECIFIC ERECTION SEQUENCE, PANEL UNLOADING, HANDLING AND BRACING SYSTEM, AND FALL PROTECTION SYSTEM. THE BRACING SYSTEM SHOWN IN THE CONSTRUCTION AND QUALITY CONTROL PROCEDURES MANUAL IS GENERAL IN NATURE AND DOES NOT ACCOUNT FOR PROJECT SPECIFIC CRITERIA. COMPLIANCE WITH THE GUIDELINES IN THIS MANUAL DOES NOT RELIEVE THE CONTRACTOR OF ITS RESPONSIBILITY TO ADHERE TO THE PROJECT PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS OR COMPLIANCE WITH ALL FALL PROTECTION, SAFETY, LAWS, STANDARDS AND PROCEDURES AT THE JOBSITE. CONTRACTORS SHOULD TAKE SPECIAL PRECAUTIONS TO PREVENT THE PANELS FROM SHIFTING OR FALLING DURING THE ERECTION PROCESS.

25. ALL DIMENSIONS ARE IN METRIC UNITS UNLESS OTHERWISE NOTED.

25. REINFORCED EARTH INTERNAL DESIGN IS IN STRICT ACCORD WITH IN D.O.T. PROJECT SPECIAL PROVISIONS. REINFORCED EARTH DESIGN IS COVERED BY ARCHITECTS AND ENGINEER'S ERRORS AND OMISSIONS INSURANCE POLICY BY KEMPER ENVIRONMENTAL, LONG GROVE, ILLINOIS.

INDEX

SHEET NO.	CONTENTS
1	GENERAL NOTES
2	PLAN VIEW
3	WALL ELEVATION PAGE 1
4	WALL ELEVATION PAGE 2
5	DETAILS
6	STANDARD PANEL DETAILS

1950
2116

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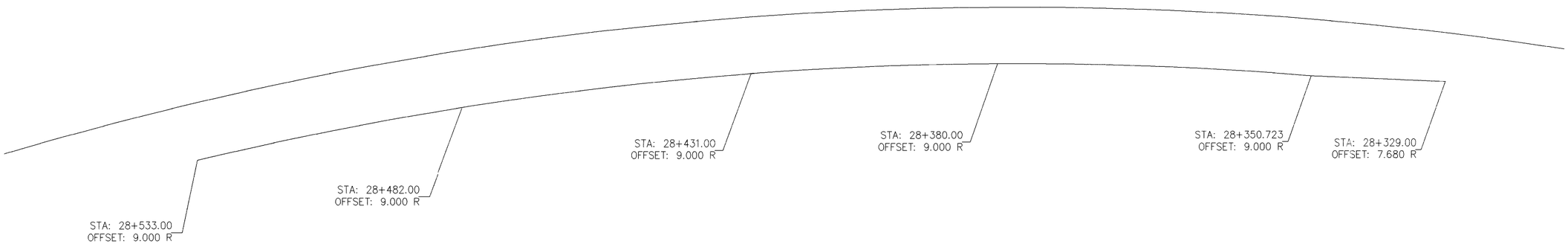
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TAI
The Reinforced Earth Company
8614 Westwood Center Drive Suite 1100, Vienna, Virginia 22182 (703) 821–1175

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DESIGNED BY: HPKA				PROJECT NAME	US 30 EASTBOUND	DATE 02–24–99
PROJECT ENGR: HPKA				LOCATION	WYANDOT COUNTY OHIO	CONTRACT NO. RE–7212
CHECKED BY: SA				OWNER	OHIO DEPT. OF TRANSPORTATION	DRAWING NO. 1 OF 6
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	GENERAL NOTES	SCALE AS SHOWN



RE WALL PLAN VIEW
US 30 EASTBOUND

1951
2116

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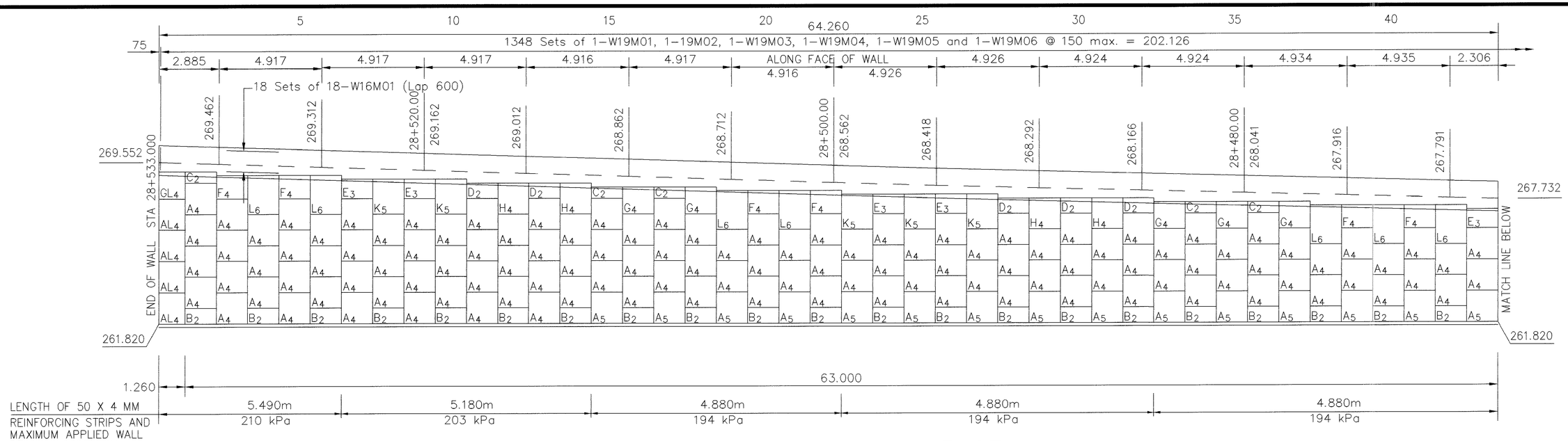
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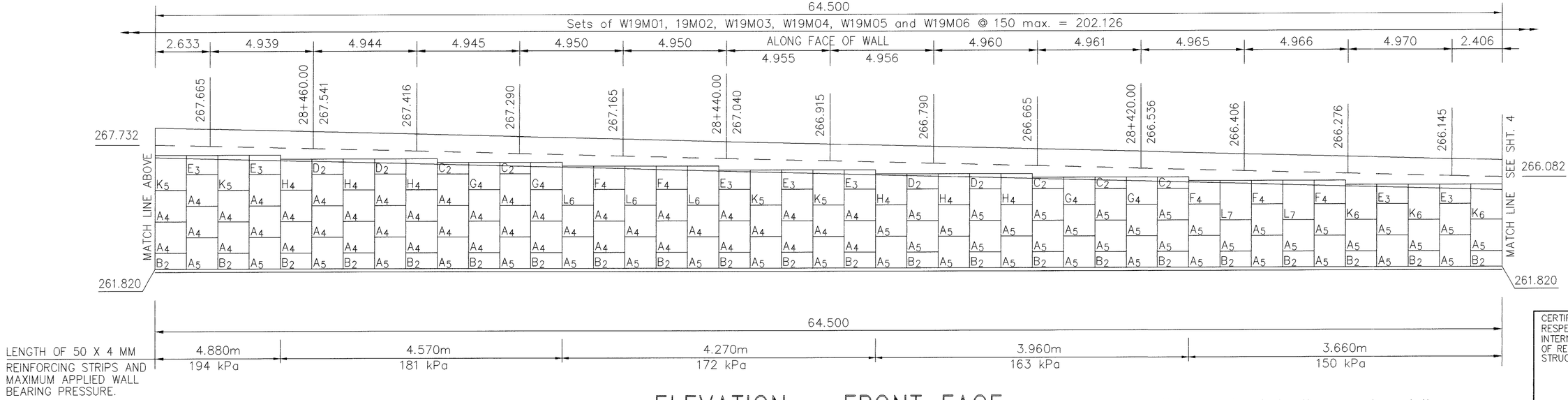
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PROJECT ENGR: HPKA				LOCATION	WYANDOT COUNTY OHIO	CONTRACT NO.	RE-7212
CHECKED BY: SA				OWNER	OHIO DEPT. OF TRANSPORTATION	DRAWING NO.	2 OF 6
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	PLAN VIEW	SCALE	AS SHOWN



ELEVATION – FRONT FACE

SCALE = 1 : 100



ELEVATION – FRONT FACE

SCALE = 1 : 100

Note: Top of wall elevations are given at the toe of parapet.

1952
2116

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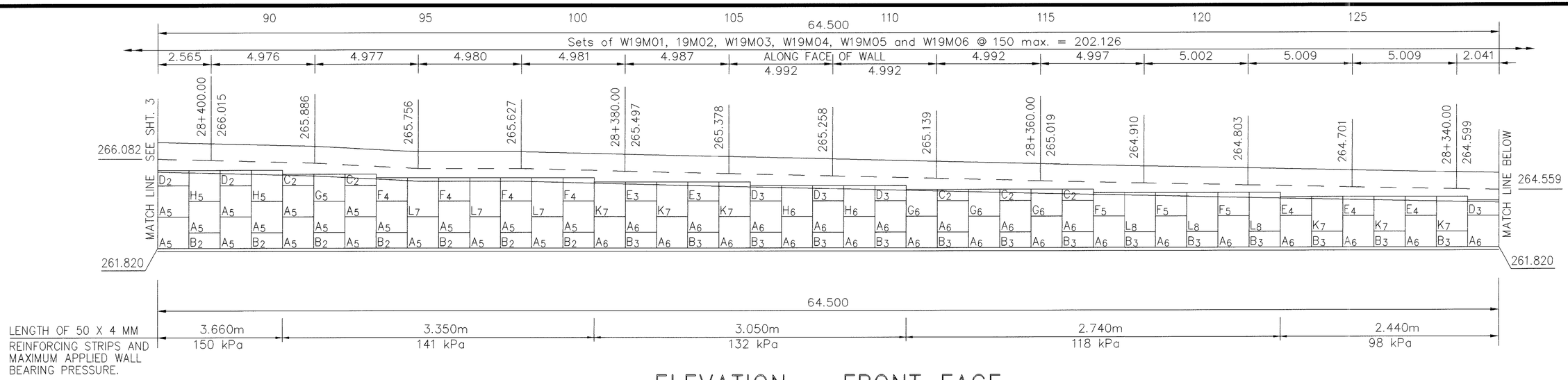
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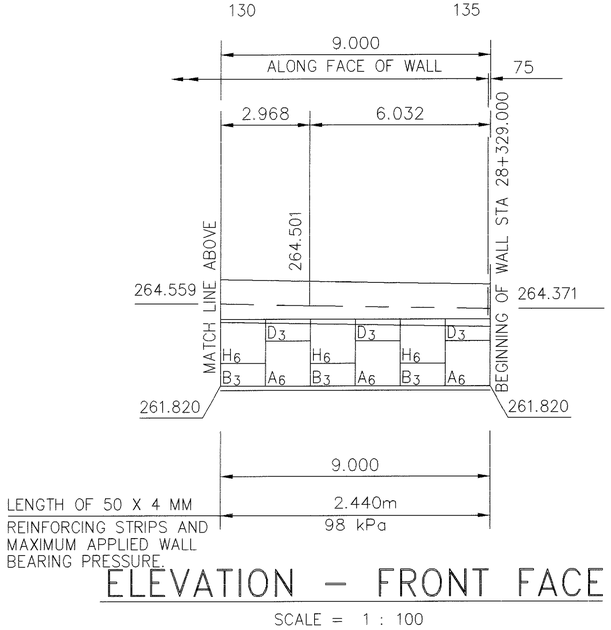
DESIGNED BY: HPKA				PROJECT NAME	US 30 EASTBOUND	DATE 02–24–99
PROJECT ENGR: HPKA				LOCATION	WYANDOT COUNTY OHIO	CONTRACT NO. RE–7212
CHECKED BY: SA				OWNER	OHIO DEPT. OF TRANSPORTATION	DRAWING NO. 3 OF 6
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	WALL ELEVATION	SCALE AS SHOWN



ELEVATION – FRONT FACE

SCALE = 1 : 100

Note: Top of wall elevations are given at toe of parapet.

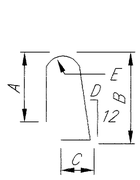


ELEVATION – FRONT FACE

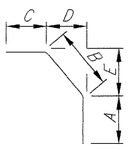
SCALE = 1 : 100

REINFORCING STEEL LIST

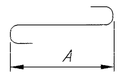
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS				
				A	B	C	D	E
W19M01	1348	2130	26	915	990	205	1 1/4	38
W19M02	1348	840	Str.					
W19M03	1348	1095	28	620	270	255	150	220
W19M04	1348	2590	43	2190				
W19M05	1348	2400	44	1730	510			
W19M06	1348	1850	28	300	1300	300	1080	725
W16M01	324	11 800	Str.					



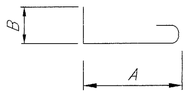
Type 26



Type 28



Type 43



Type 44

1953
2116

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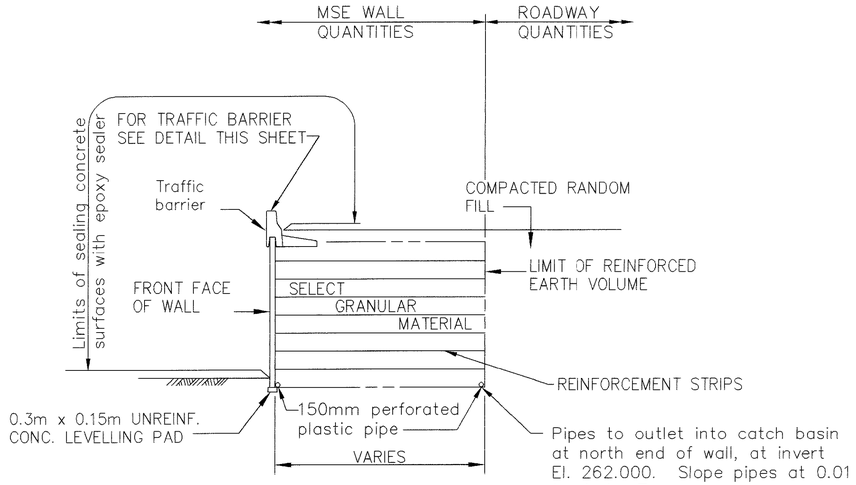
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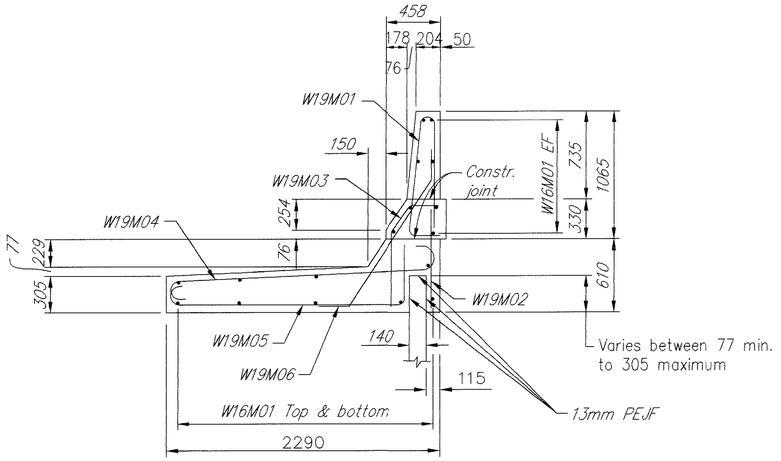
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8614 Westwood Center Drive Suite 1100, Vienna, Virginia 22182 (703) 821-1175

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DESIGNED BY: HPKA				PROJECT NAME	US 30 EASTBOUND	DATE	02-24-99
PROJECT ENGR: HPKA				LOCATION	WYANDOT COUNTY OHIO	CONTRACT NO.	RE-7212
CHECKED BY: SA				OWNER	OHIO DEPT. OF TRANSPORTATION	DRAWING NO.	4 OF 6
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	WALL ELEVATION	SCALE	AS SHOWN

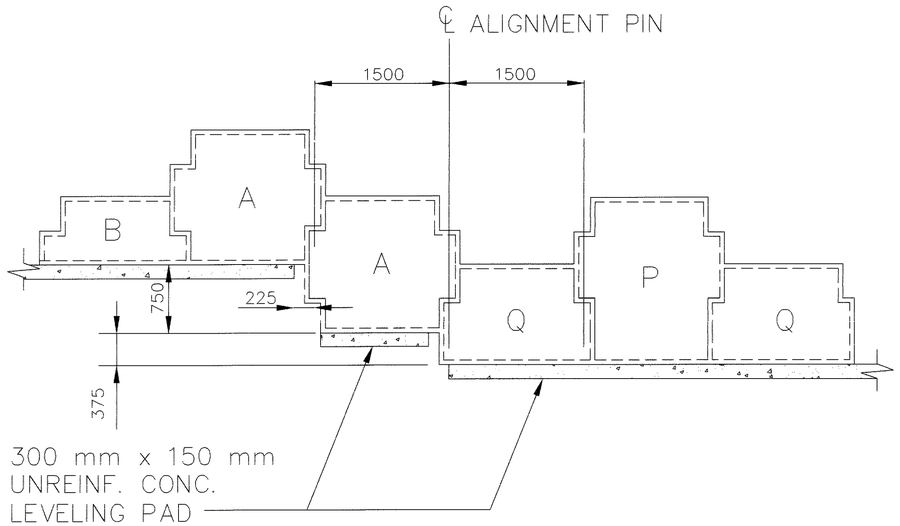


TYPICAL SECTION



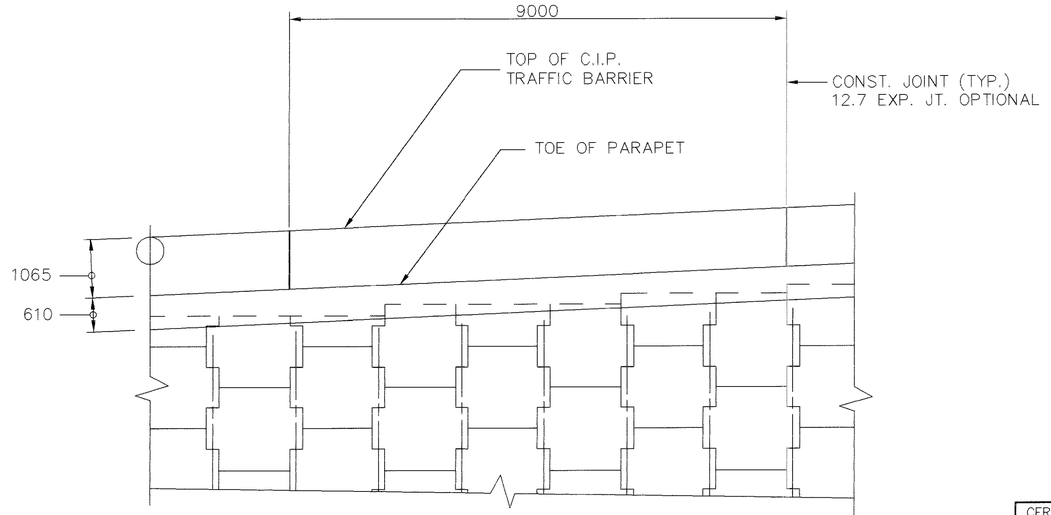
C.I.P. TRAFFIC BARRIER DETAIL

SCALE: Not To Scale



TYPICAL LEVELING PAD STEP DETAIL

SCALE 1:50



C.I.P. TRAFFIC BARRIER PARTIAL ELEVATION

SCALE: Not To Scale

1954
2116

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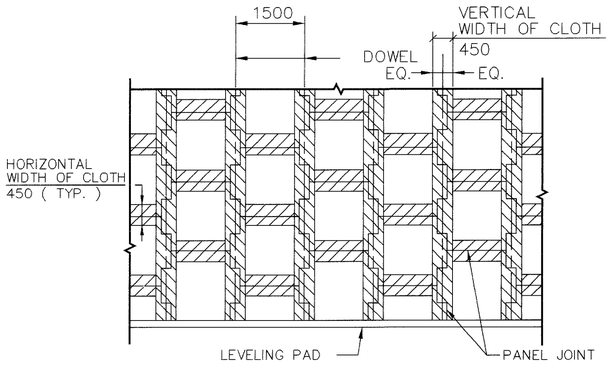
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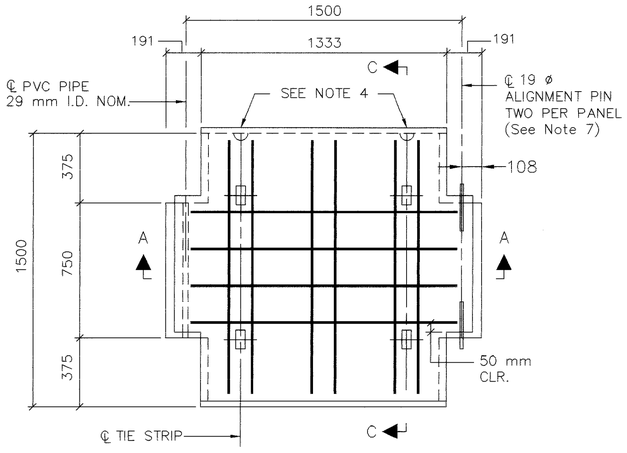
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DESIGNED BY: HA				PROJECT NAME	US 30 EASTBOUND	DATE 02-24-99
PROJECT ENGR: SA				LOCATION	WYANDOT COUNTY OHIO	CONTRACT NO. RE-7212
CHECKED BY: SA				OWNER	OHIO DEPT. OF TRANSPORTATION	DRAWING NO. 5 OF 6
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	DETAILS	SCALE AS SHOWN

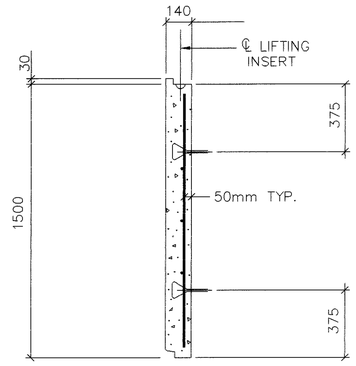


NOTE:
STRIPS OF FILTER CLOTH SHALL BE PLACED ON BACK FACE OF PANEL, OVER PANEL JOINTS. FILTER CLOTH SHALL BE ADHERED TO BACK FACE OF PANELS USING AN ADHESIVE COMPOUND SUPPLIED BY THE REINFORCED EARTH COMPANY.

FILTER CLOTH DETAIL
PARTIAL ELEVATION – BACK FACE
SCALE: Not To Scale



PANEL TYPE "A"
WITH R4 REINFORCEMENT
FRONT VIEW
SCALE: Not To Scale

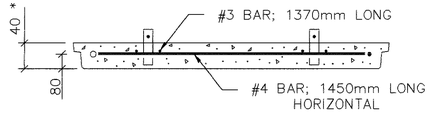


SECTION C–C
SCALE: Not To Scale

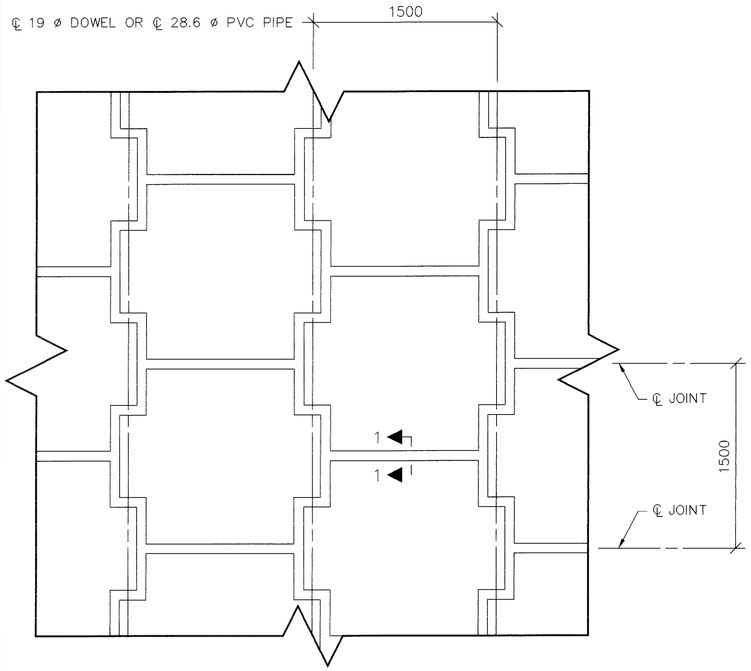
PANEL THICKNESS	REINFORCEMENT DESIGNATION	PANEL REINFORCEMENT	MAXIMUM ALLOWABLE HORIZONTAL STRESS AT FACING (KPa)
140 mm			
	R4	4–#3 (9.5 MM) VERTICAL 3–#4 (12.7 MM) HORIZONTAL	52.67

NOTES:

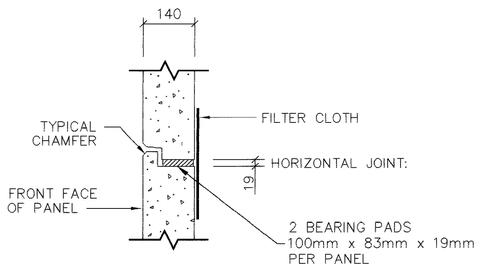
1. REINFORCING STEEL TO BE A615 GRADE 420.
2. 10mm x 10mm CHAMFER SHALL BE PROVIDED ON ALL EXPOSED EDGES (FRONT FACE ONLY).
3. ALL PANEL TYPES AND OTHER RELATED ELEMENTS WILL BE DETAILED ON SHOP DRAWINGS.
4. ALL PANELS SHALL HAVE TWO LIFTING INSERTS OF ONE TON CAPACITY EACH.
- *5. PANEL DESIGN THICKNESS IS 140 mm FOR PLAIN FINISH PANELS.
6. ACTUAL PANEL REINFORCEMENT FOR ALL PANEL TYPES ON THIS PROJECT IS DESIGNATED ABOVE.
7. EACH 19mm ø DOWEL SHALL HAVE A TYP. LENGTH OF 250mm. DOWELS MAY BE GALVANIZED STEEL OR PVC ROD. A SINGLE FULL LENGTH ALIGN. PIN MAY BE USED AT THE DISCRETION OF THE MANUFACTURER.



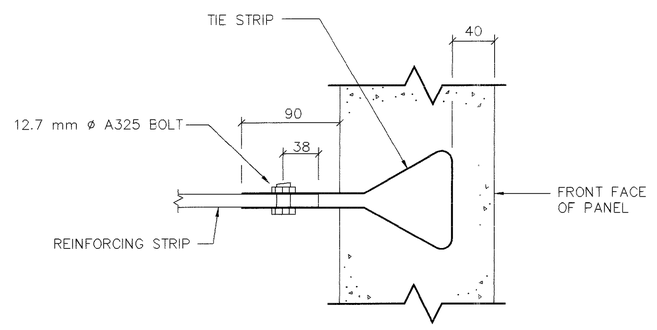
SECTION A–A
SCALE : Not To Scale



TYPICAL PANEL LAYOUT
PARTIAL ELEVATION – FRONT FACE
SCALE: Not To Scale



SECTION 1–1



CONNECTION DETAIL
SCALE: Not To Scale

1955
2116

CERTIFIED WITH RESPECT TO THE INTERNAL STABILITY OF REINFORCED EARTH STRUCTURES ONLY

This drawing contains information proprietary to The Reinforced Earth Company, and is being furnished for the use of OHIO DEPARTMENT OF TRANSPORTATION only in connection with this project, and the information contained herein is not to be transmitted to any other organization unless specifically authorized in writing by The Reinforced Earth Company. The Reinforced Earth Company is exclusive licensee in the United States under patents issued to Henri Vidal, and the furnishing of this drawing does not constitute an expressed or implied license under the Vidal patents.

The design contained on these drawings is based on information provided by the owner. On the basis of this information, The Reinforced Earth Company has designed, and is responsible for the internal stability of the structure only. External stability, including foundation and slope stability, is the responsibility of the owner.

TAI
The Reinforced Earth Company
8614 Westwood Center Drive Suite 1100, Vienna, Virginia 22182 (703) 821-1175

"REINFORCED EARTH" is the registered trademark of The Reinforced Earth Company.

DESIGNED BY: HPKA				PROJECT NAME	US 30 EASTBOUND	DATE 02–24–99
PROJECT ENGR: HPKA				LOCATION	WYANDOT COUNTY OHIO	CONTRACT NO. RE–7212
CHECKED BY: SA				OWNER	OHIO DEPT. OF TRANSPORTATION	DRAWING NO. 6 OF 6
ENG. MANAGER	REV.	DATE	DESCRIPTION	DRAWING COVERS	STANDARD PANEL DETAILS	SCALE AS SHOWN

LEGEND

C.P.A.	Corner Post Assembly
E.P.A.	End Post Assembly
G.P.A	Gate Post Assembly
I.A.P.A.	Intermediate Anchor Post Assembly
P.B.T.R.	Post Brace and Truss Assembly
A.C.	Abutment Connection
F.T.-Type (A),(B) or (D)	Fence Terminal
x x x	Fence Type 47
xx xx xx	Fence Type C.L.

HORIZONTAL SCALE IN METERS
0 40 80

CALCULATED AF
CHECKED REA

FENCING PLAN US-30
STA. 12+282.745 U.S. 23 TO STA. 29+300 U.S. 30

WYA/CRA-30-28.009/0.000

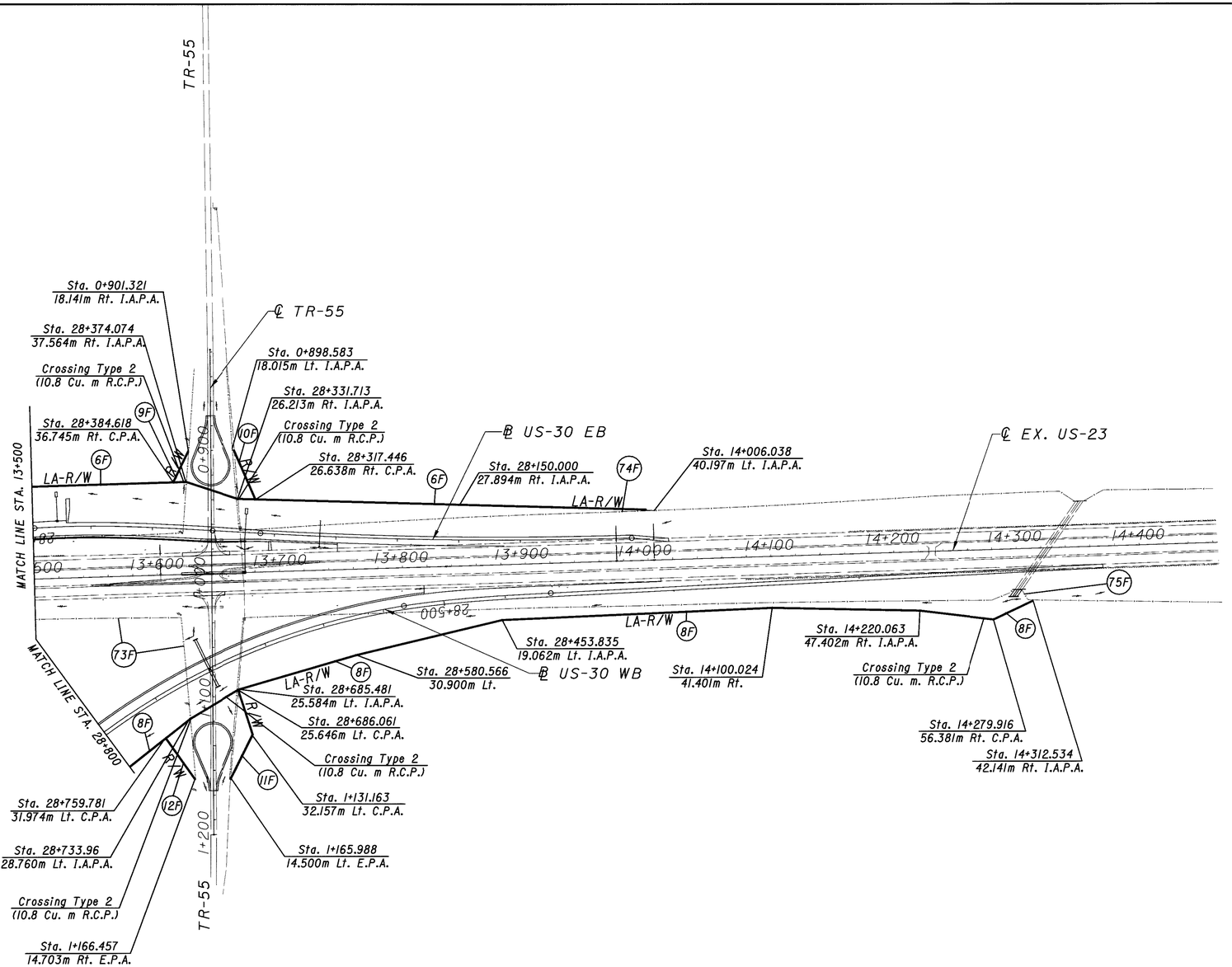
1956
2116

N

R/W CR-56 R/W
0+500 0+600 0+700 0+800 0+900 1+000 1+100 1+200 1+300 1+400 1+500
LA-R/W
Driveway
Sta. 0+801.880
29.880m Rt. E.P.A.
Sta. 0+799.314
20.014m Lt. F.T. (A)
Crossing Type 2
(10.8 Cu. m/R.C.P.)
Sta. 0+820.020
34.086m Lt. C.P.A.
Sta. 12+426.542
45.187m Lt. F.T.(D)
Crossing Type 3
Sta. 0+953.765
29.880m Rt. C.P.A.
Sta. 12+394.613
35.695m Lt. C.P.A.
Sta. 12+442.539
44.898m Lt. F.T.(D)
Sta. 0+949.990
34.110m Lt. C.P.A.
Crossing Type 2
(10.8 Cu. m R.C.P.)
Sta. 12+282.745
29.804m Lt. I.A.P.A.
Crossing Type 3
℄ CR-60
Crossing Type 3
CR-60
Sta. 12+350.000
38.263m Rt. I.A.P.A.
Crossing Type 3
Sta. 12+561.645
25.777m Rt. C.P.A.
Sta. 12+739.089
23.050m Rt. I.A.P.A.
Sta. 12+373.000
40.914m Rt. C.P.A.
Sta. 12+440.900
45.187m Rt. F.T.(D)
Sta. 12+414.000
43.354m Rt. C.P.A.
Sta. 12+424.914
44.898m Rt. F.T.(D)
Ex. R/W
Sta. 1+198.091
29.185m Lt. E.P.A.
℄ CR-56
R/W CR-56 R/W
Sta. 28+076.419
25.849m Lt. I.A.P.A.
Sta. 12+600.000
51.814m Lt. I.A.P.A.
LA-R/W
Sta. 28+840.891
18.903m Rt. C.P.A.
℄ RAMP A
Sta. 28+980.603
28.751m Rt. I.A.P.A.
Sta. 29+060.436
33.720m Rt. I.A.P.A.
Sta. 29+260.000
37.592m Rt. I.A.P.A.
MATCH LINE STA. 29+300
℄ RAMP B
Sta. 28+340.009
44.386m Lt. I.A.P.A.
Sta. 28+300.069
39.399m Lt. I.A.P.A.
Crossing Type 2
(10.8 Cu. m R.C.P.)
Sta. 28+199.756
14.442m Lt. I.A.P.A.
Sta. 28+460.042
34.400m Lt. I.A.P.A.
Sta. 28+540.066
49.395m Lt. I.A.P.A.
Sta. 28+620.070
54.402m Lt. I.A.P.A.
Sta. 13+500.000
74.400m Lt. I.A.P.A.
Sta. 13+379.893
74.400m Lt. C.P.A.
℄ EX. US-23
28+100 28+200 28+300 28+400 28+500 28+600 28+700 28+800 28+900 29+000 29+100 29+200 29+300
12+300 12+400 12+500 12+600 12+700 12+800 12+900 13+000 13+100 13+200 13+300 13+400 13+
MATCH LINE STA. 13+500
℄ US-30 EB
DETENTION BASIN
MATCH LINE STA. 28+800
Sta. 28+860.311
33.707m Lt. I.A.P.A.
℄ US-30 WB
Sta. 28+980.186
33.505m Lt. I.A.P.A.
Sta. 29+160.084
39.402m Lt. I.A.P.A.
Sta. 29+209.812
69.400m Lt. I.A.P.A.
Crossing Type 2
(10.8 Cu. m R.C.P.)
Sta. 29+285.412
67.520m Lt. C.P.A.
Sta. 29+298.052
48.506m Lt. F.T. (A)
MATCH LINE STA. 29+300

1F 2F 6F 7F 8F 71F 72F 73F

For Quantities See Sheet No. 1970



For Quantities See Sheet No. 1970

N

0 40 80
HORIZONTAL
SCALE IN METERS

CALCULATED RF
CHECKED REA

FENCING PLAN US-30
STA. 27+962.736 TO STA. 28+800

WYA / CRA-30-28.009 / 0.000

1957
2116

Sta. 29+301.851
48.506m Lt. F.T. (A)
Crossing Type 2
(10.8 Cu. m R.C.P.)
Sta. 29+310.002
66.584m Lt. C.P.A.
MATCH LINE STA. 29+300
13F
Sta. 29+440.000
59.482m Lt. I.A.P.A.
℄ US-30
LA-R/W
Sta. 29+559.971
49.400m Lt. I.A.P.A.
Detention Basin
Sta. 29+690.000
46.369m Lt. I.A.P.A.
Sta. 29+820.000
39.403m Lt. I.A.P.A.
Sta. 1+099.192
30.856m Lt. E.P.A.
Sta. 29+989.170
37.454m Lt. F.T.(D)
Type 2 Crossing
Sta. 29+959.851
39.388m Lt. E.P.A.
CR-56
1+300
1+200
1+100
R/W
R/W
Sta. 1+098.898
22.952m Rt. E.P.A.
Sta. 30+008.339
37.509m Lt. F.T.(D)
Type 2 Crossing
Sta. 30+043.441
39.398m Lt. E.P.A.
15F
Sta. 30+100.015
39.400m Lt.
Sta. 30+200.000
43.591m Lt. I.A.P.A.
Crossing Type 2
(12.4 Cu. m R.C.P.)
LA-R/W
Sta. 30+370.000
45.366m Lt. I.A.P.A.
Sta. 30+660.000
39.395m Lt. I.A.P.A.
15F
Sta. 30+520.000
43.914m Lt. I.A.P.A.
LA-R/W
15F
MATCH LINE STA. 30+700
30+500
30+400
30+300
29+500
29+400
300
MATCH LINE STA. 29+300
7F
Sta. 29+880.006
18.302m Rt. I.A.P.A.
LA-R/W
Sta. 29+780.065
28.462m Rt. I.A.P.A.
Sta. 29+986.892
44.414m Rt. C.P.A.
Crossing Type 2
(22.8 Cu. m R.C.P.)
Sta. 30+013.667
38.556m Rt. F.T.(D)
7F
Sta. 29+650.000
39.920m Rt. I.A.P.A.
Crossing Type 2
(10.8 Cu. m R.C.P.)
Sta. 29+460.000
35.379m Rt. I.A.P.A.
7F
℄ RAMP A
℄ US-30 EB
Sta. 0+926.353
35.768m Lt. C.P.A.
Crossing Type 2
(10.8 Cu. m R.C.P.)
Sta.0+921.949
26.183m Lt. F.T. (B)
0+900
0+800
0+700
0+600
0+500
LA-R/W
LA-R/W
LA-R/W
LA-R/W
Sta. 30+160.000
39.401m Rt. I.A.P.A.
Sta. 30+018.530
44.449m Rt. C.P.A.
Crossing Type 2
(10.8 Cu. m R.C.P.)
Sta. 30+320.000
38.857m Rt. I.A.P.A.
16F
Crossing Type 2
(10.8 Cu. m R.C.P.)
Sta. 30+032.501
37.564m Rt. F.T.(D)
Sta. 30+479.999
44.399m Rt. I.A.P.A.
Sta. 30+650.000
40.190m Rt. I.A.P.A.
16F
MATCH LINE STA. 30+700
Sta. 0+914.017
35.467m Lt. C.P.A.
Crossing Type 2
(10.8 Cu. m R.C.P.)
14F
Sta. 0+918.049
26.183m Lt. F.T. (B)
Sta. 0+780.000
32.205m Lt. I.A.P.A.
Sta. 0+780.000
38.266m Rt. I.A.P.A.
16F
℄ TR-124
Sta. 0+639.369
28.434m Lt. E.P.A.
Sta. 0+639.015
35.392m Rt. E.P.A.
R/W
R/W
℄ CR-56
009+1
CR-56
For Quantities See Sheet No. 1970

N

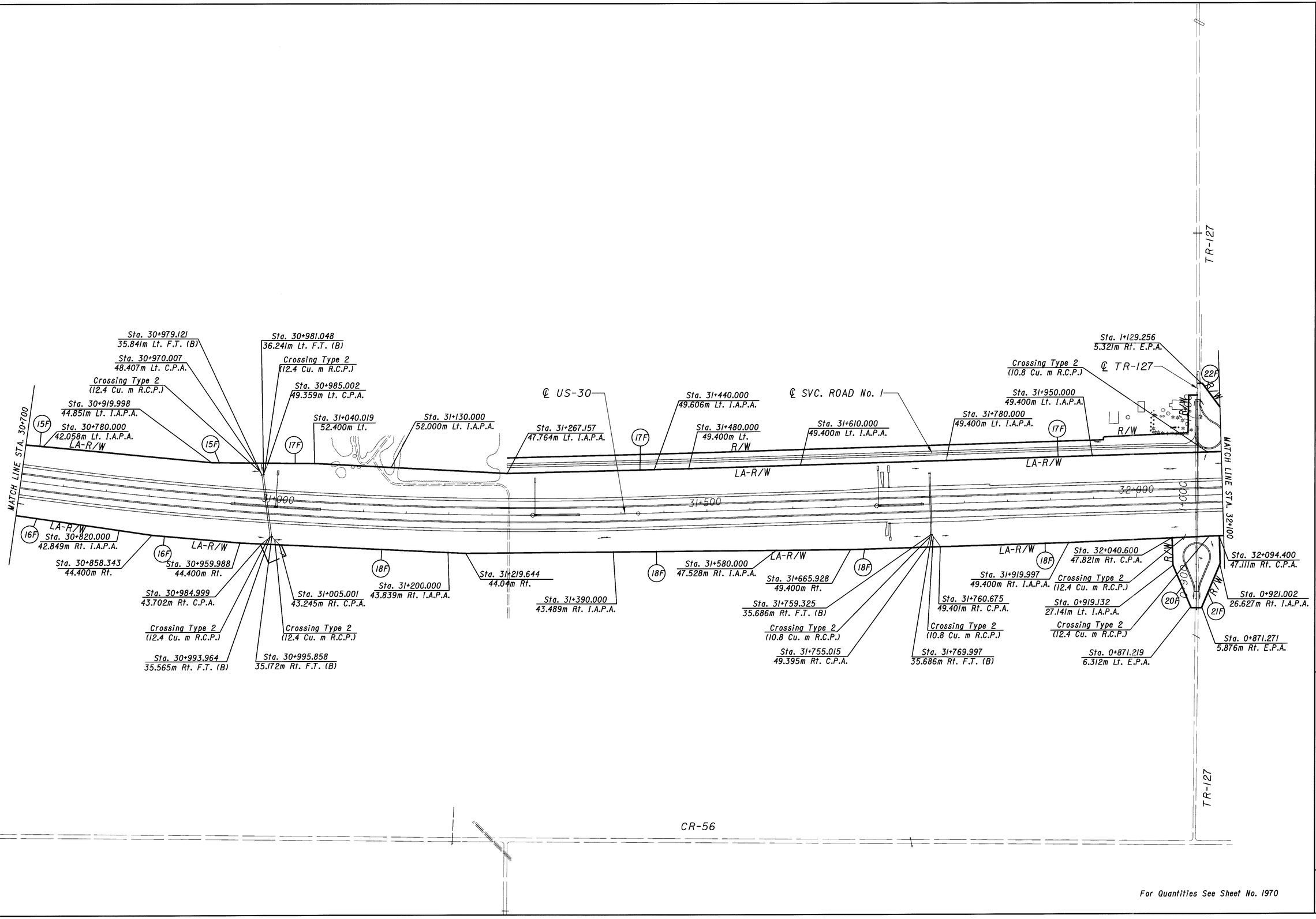
0 40 80
HORIZONTAL
SCALE IN METERS

CALCULATED RF
CHECKED REA

FENCING PLAN US-30
STA. 29+300 TO STA. 30+700

WYA/CRA-30-28.009/0.000

1958
2116



For Quantities See Sheet No. 1970

HORIZONTAL SCALE IN METERS
0 40 80

CALCULATED RF
CHECKED REA

PLAN US-30
STA. 30+700 TO STA. 32+100

WYA/CRA-30-28.009/0.000

1959
2116

FENCING PLAN US-30
STA. 32+100 TO STA. 33+500

HORIZONTAL SCALE IN METERS
0 40 80

CALCULATED RF
CHECKED REA

WYA/CRA-30-28.009/0.000

1960
2116

Sta. 1+220.044
34.558m Lt. E.P.A.

℄ SVC. ROAD No. 3

Sta. 1+219.863
34.242m Rt. E.P.A.

℄ CR-128

℄ RAMP F

Sta. 32+535.798
32.258m Lt. F.T. (B)

Sta. 32+536.680
33.472m Lt. F.T. (B)

Sta. 32+535.000
46.941m Lt. C.P.A.

Crossing Type 2
(12.4 Cu. m R.C.P.)

Sta. 32+838.745
49.456m Lt. C.P.A.

Sta. 32+912.594
49.399m Lt. C.P.A.

Sta. 33+060.321
49.539m Lt. I.A.P.A.

Sta. 33+220.000
51.959m Lt. I.A.P.A.

Sta. 33+380.000
54.588m Lt. I.A.P.A.

Sta. 32+114.401
79.811m Lt. C.P.A.

Sta. 32+114.400
49.218m Lt. C.P.A.

Crossing Type 2
(12.4 Cu. m R.C.P.)

Sta. 32+310.000
48.427m Lt. I.A.P.A.

Sta. 32+740.061
39.403m Lt. I.A.P.A.

Sta. 32+505.000
47.631m Lt. C.P.A.

Sta. 32+640.000
43.078m Lt. I.A.P.A.

LA-R/W

MATCH LINE STA. 32+100

MATCH LINE STA. 33+500

32+500

33+000

Crossing Type 2
(12.4 Cu. m R.C.P.)

Sta. 32+623.691
31.626m Rt. F.T. (B)

Sta. 32+650
42.394m Rt. C.P.A.

Sta. 32+624.573
30.413m Rt. F.T. (B)

Sta. 32+830.863
44.407m Rt. C.P.A.

Sta. 32+500.000
40.733m Rt. I.A.P.A.

Sta. 32+240.000
45.189m Rt. I.A.P.A.

Sta. 32+380.000
40.000m Rt. I.A.P.A.

Crossing Type 3

Sta. 32+300.000
45.000m Rt.

Sta. 32+627.073
42.006m Rt. C.P.A.

Crossing Type 2
(10.8 Cu. m R.C.P.)

Sta. 0+879.652
37.869m Lt. C.P.A.

Sta. 0+871.545
11.247m Lt. F.T. (A)

Sta. 0+864.221
37.415m Lt. C.P.A.

Sta. 0+870.045
11.287m Lt. F.T. (A)

Sta. 0+780.007
34.949m Lt. E.P.A.

Sta. 0+780.045
33.854m Rt. E.P.A.

Sta. 32+919.590
49.400m Rt. C.P.A.

Sta. 33+039.985
49.400m Rt. I.A.P.A.

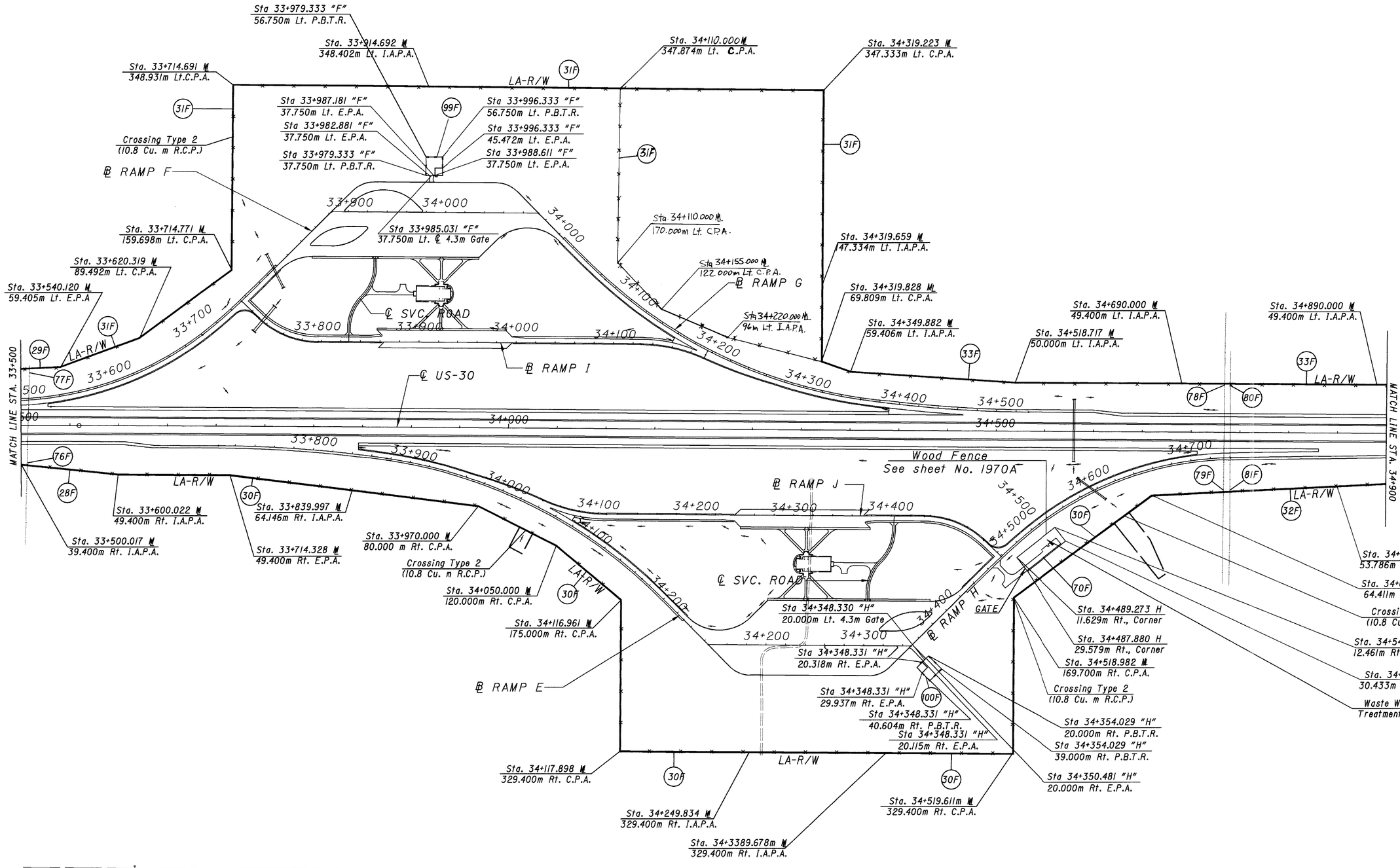
Sta. 33+200.000
41.260m Rt. I.A.P.A.

Sta. 33+309.117
45.496m Rt. I.A.P.A.

℄ US-30

CR-56

For Quantities See Sheet No.1970



For Quantities See Sheet No. 1970

HORIZONTAL SCALE IN METERS
0 40 80

CALCULATED RF
CHECKED REA

FENCING PLAN US-30
STA. 33+500 TO STA. 34+900

WYA/CRA-30-28.000/0.000

1961
2116

TR-133

Sta. 1+128.968
7.397m Lt. E.P.A.

℄ TR-133

Sta. 1+079.941
41.282m Lt. C.P.A.

35F

R/W

100

Crossing Type 2
(10.8 Cu. m R.C.P.)

Sta. 35+040.000
49.400m Lt. I.A.P.A.

Sta. 35+295.599
47.521m Lt. C.P.A.

Sta. 35+390.000
45.600m Lt. I.A.P.A.

Sta. 35+700.008
39.404m Lt. I.A.P.A.

℄ US-30

Sta. 35+860.015
49.399m Lt. I.A.P.A.

Sta. 36+099.990
49.400m Lt. I.A.P.A.

Sta. 36+199.997
44.400m Lt. I.A.P.A.

Sta. 35+199.989
49.400m Lt. I.A.P.A.

Sta. 35+560.000
42.200m Lt. I.A.P.A.

33F

LA-R/W

MATCH LINE STA. 34+900

82F

35+000

35+500

36+000

MATCH LINE STA. 36+300

Crossing Type 2
(10.8 Cu. m R.C.P.)

Crossing Type 2
(12.4 Cu. m R.C.P.)

Crossing Type 2
(10.8 Cu. m R.C.P.)

83F

34F

32F

Sta. 35+010.000
49.400m Rt. I.A.P.A.

Sta. 35+240.020
49.370m Rt. C.P.A.

Sta. 35+365.599
49.400m Rt. C.P.A.

Sta. 35+365.603
53.700m Rt. C.P.A.

Sta. 35+540.000
52.946m Rt. I.A.P.A.

Sta. 35+720.000
51.968m Rt. I.A.P.A.

Sta. 35+895.487
48.940m Rt. I.A.P.A.

Sta. 36+060.000
39.797m Rt. I.A.P.A.

Sta. 36+200.000
47.452m Rt. I.A.P.A.

Sta. 34+928.506
49.400m Rt.

Sta. 35+248.336
34.440m Rt. F.T.(A)

Sta. 35+249.444
33.980m Rt. F.T.(A)

Sta. 35+265.003
49.400m Rt. C.P.A.

Sta. 35+310.718
49.400m Rt. C.P.A.

Sta. 0+928.108
30.729m Lt. I.A.P.A.

Sta. 0+842.639
10.133m Lt. C.P.A.

Sta. 0+842.634
7.168m Lt. E.P.A.

0+900

Sta. 0+938.915
27.090m Rt. E.P.A.

Sta. 0+920.032
27.033m Rt. I.A.P.A.

Sta. 0+871.654
8.042m Rt. E.P.A.

37F

36F

CR-56

For Quantities See Sheet No. 1970

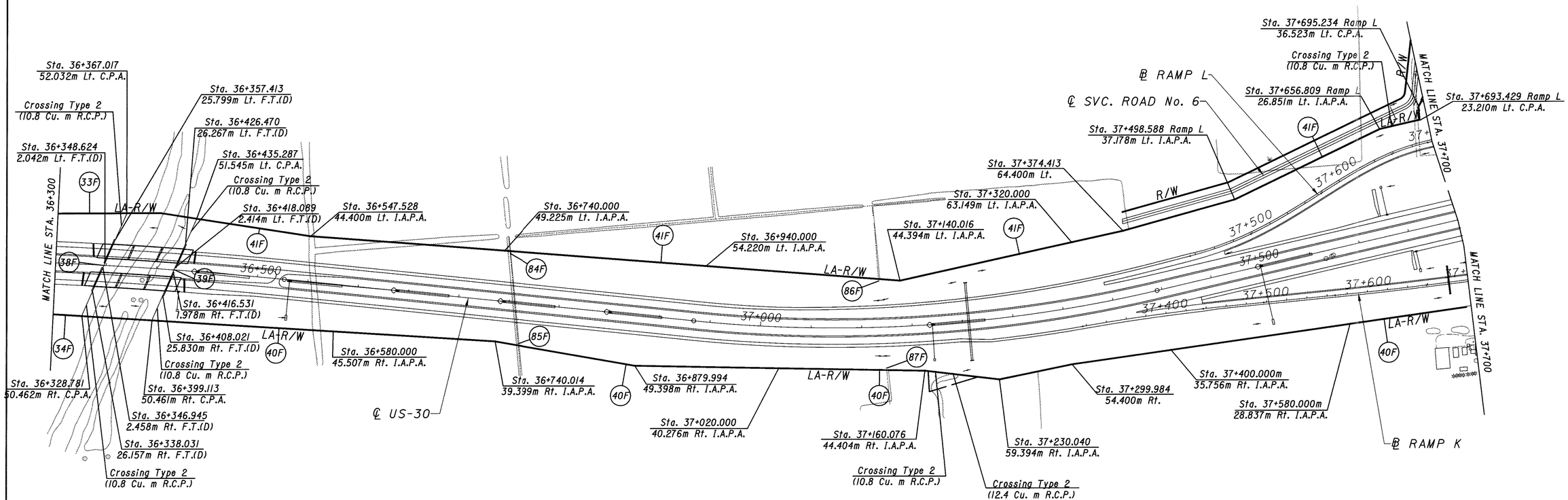
HORIZONTAL
SCALE IN METERS
0 40 80

CALCULATED RF
CHECKED REA

FENCING PLAN US-30
STA. 34+900 TO STA. 36+300

WYA/CRA-30-28.009/0.000

1962
2116



For Quantities See Sheet No. 1970

HORIZONTAL SCALE IN METERS
0 40 80

CALCULATED RF
CHECKED REA

FENCING PLAN US-30
STA. 36+300 TO STA. 37+700

WYA/CRA-30-28.009/0.000

1963
2116

SR-231

1+400

Sta. 1+281.978
9.584m Lt. E.P.A.

Sta. 1+281.953
9.216m Rt. E.P.A.

℄ SVC. ROAD No. 6

R/W

41F

43F

LA-R/W

℄ SR-231

Sta. 1+135.177
9.737m Lt. C.P.A.

Sta. 1+134.838
91.263m Lt. C.P.A.

R/W

LA-R/W

MATCH LINE STA. 37+700

Sta. 1+114.724
9.070m Rt. C.P.A.

℄ RAMP M

Sta. 37+803.724 Ramp M
26.603m Lt. C.P.A.

Sta. 38+000.000 Ramp M
34.786m Lt. I.A.P.A.

Sta. 38+115.902 Ramp M
38.545m Lt.

Sta. 38+200.000 Ramp M
41.267m Lt. I.A.P.A.

℄ US-30

Sta. 38+400.000
55.161m Lt. I.A.P.A.

Sta. 38+574.577
49.400m Lt. I.A.P.A.

Sta. 38+720.000
49.400m Lt. I.A.P.A.

Sta. 38+879.995
49.400m Lt.

Sta. 39+030.000
49.519m Lt. I.A.P.A.

41F

88F

43F

LA-R/W

1+800

1+700

37+900

38+000

38+100

38+200

38+500

39+000

℄ RAMP L

MATCH LINE STA. 39+100

38+000

38+100

37+800

37+900

LA-R/W

40F

42F

Sta. 38+075.871 Ramp N
37.219m Rt. I.A.P.A.

Sta. 38+270.000
59.796m Rt. I.A.P.A.

Sta. 38+465.000
55.071m Rt. I.A.P.A.

Sta. 38+665.000
50.226m Rt. I.A.P.A.

Sta. 38+859.997
49.400m Rt. I.A.P.A.

Sta. 38+990.000
49.400m Rt. I.A.P.A.

Sta. 39+099.994
49.400m Rt. I.A.P.A.

Sta. 37+888.377 Ramp N
36.009m Rt. I.A.P.A.

Sta. 37+773.427 Ramp N
36.785m Rt. C.P.A.

Sta. 37+746.711
Ramp K
24.690m Rt. C.P.A.

℄ RAMP N

℄ RAMP K

Driveway

Sta. 0+797.634
9.591m Lt. C.P.A.

R/W

LA-R/W

0+800

℄ SVC. ROAD No. 12

Crossing Type 2
(10.8 Cu. m R.C.P.)

Sta. 0+722.951
9.504m Lt. E.P.A.

Sta. 0+723.011
9.292m Rt. E.P.A.

0+700

0+600

0+500

SR-231

For Quantities See Sheet No. 1970

N

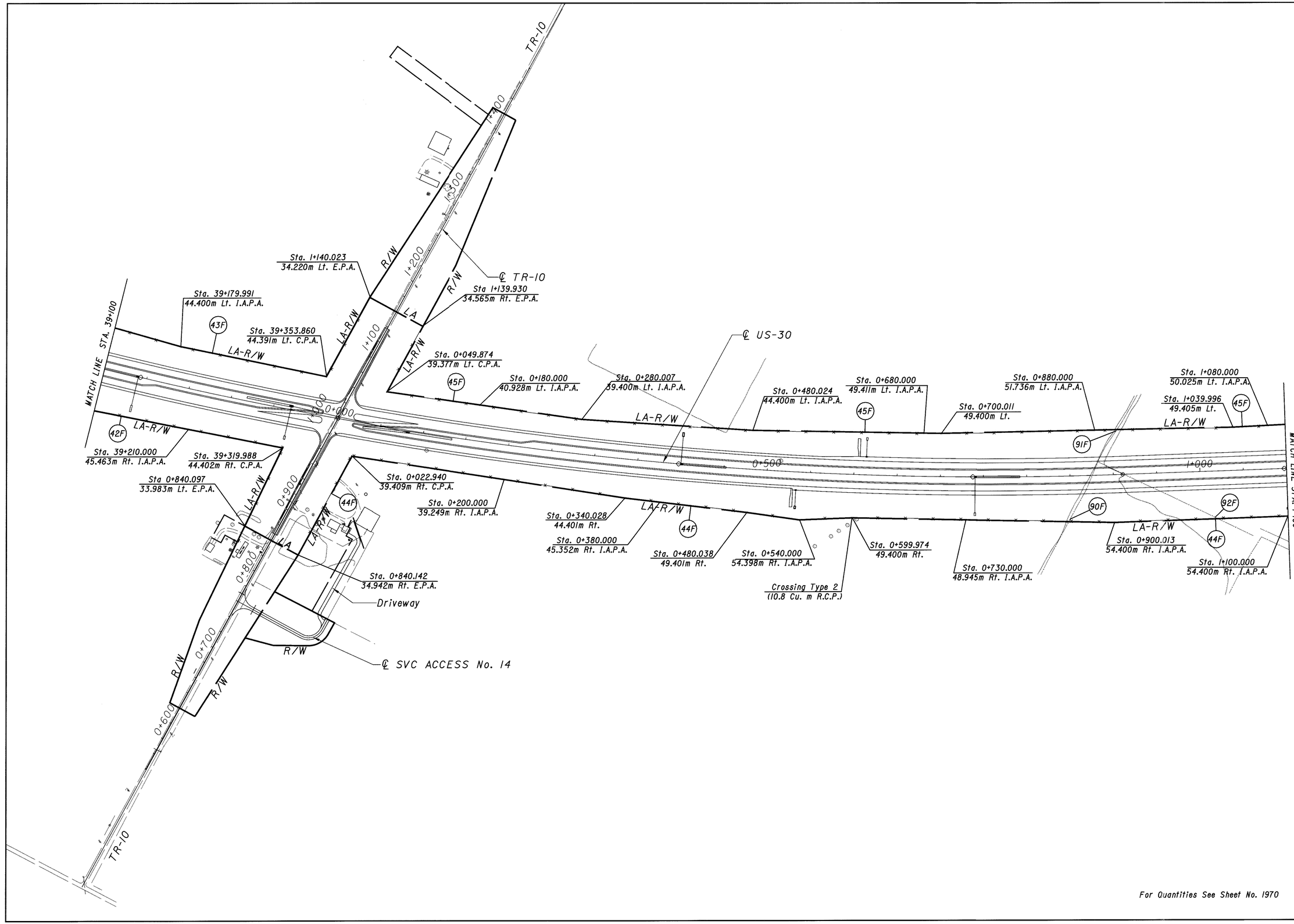
0 40 80
HORIZONTAL
SCALE IN METERS

CALCULATED RF
CHECKED REA

FENCING PLAN US-30
STA. 37+700 TO STA. 39+100

WYA/CRA-30-28.009/0.000

1964
2116



For Quantities See Sheet No. 1970

N

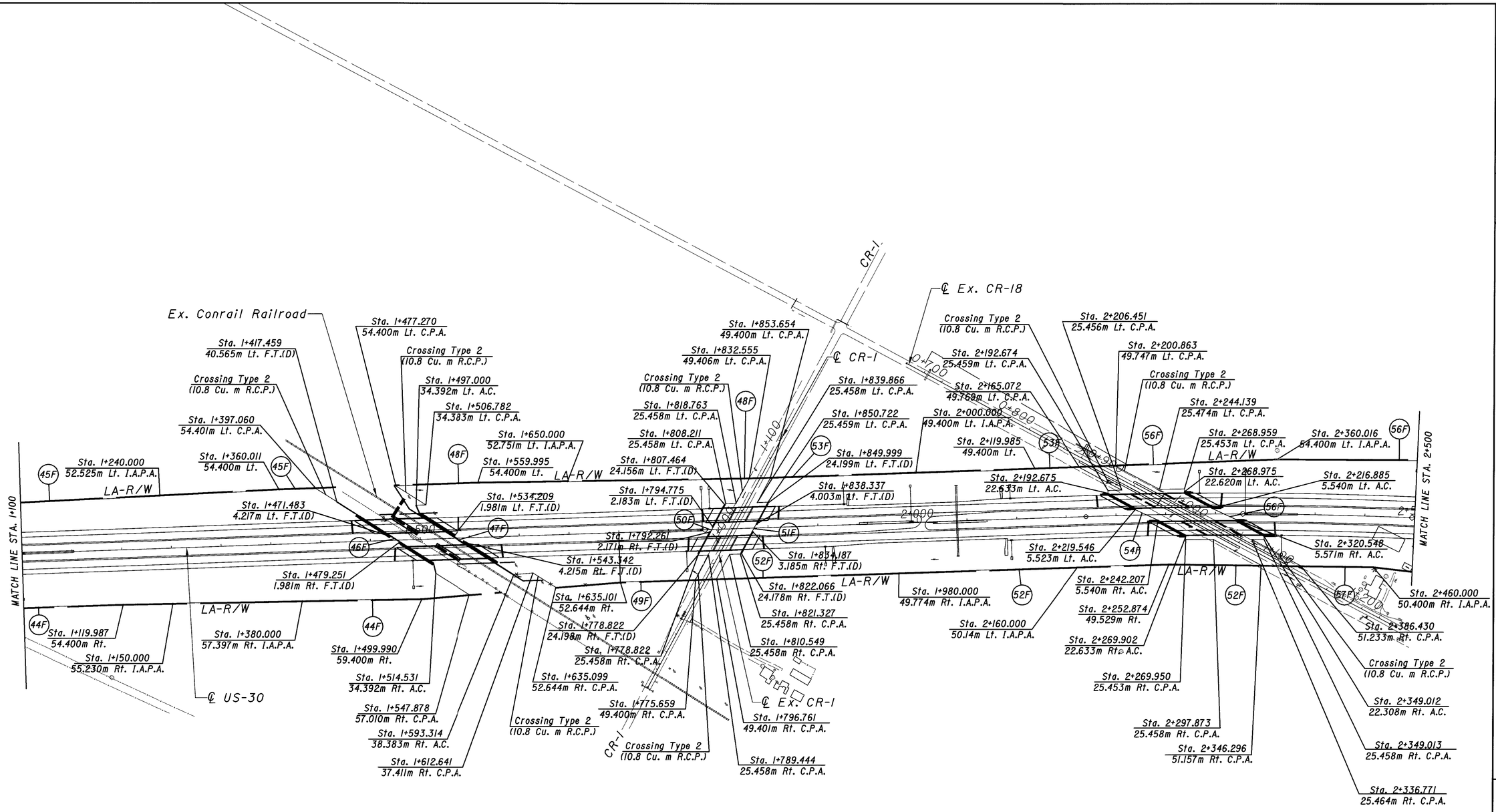
0 40 80
HORIZONTAL
SCALE IN METERS

CALCULATED RF
CHECKED REA

FENCING PLAN US-30
STA. 39+100 TO STA. 1+100

WYA/CRA-30-28.009/0.000

1965
2116



For Quantities See Sheet No. 1970

HORIZONTAL SCALE IN METERS
0 40 80

CALCULATED RF
CHECKED REA

FENCING PLAN US-30 STA. 1+100 TO STA. 2+500

WYA / CRA-30-28.009 / 0.000

1966
2116

℄ US-30

℄ SVC. ACCESS No. 17

℄ TR-21

Sta. 2+540.006
59.400m Lt. I.A.P.A.

Sta. 2+670.000
57.384m Lt. I.A.P.A.

Sta. 2+799.988
59.399m Lt. I.A.P.A.

Sta. 2+960.000
51.344m Lt. I.A.P.A.

Sta. 3+120.302
50.042m Lt. I.A.P.A.

Sta. 3+299.984
44.400m Lt. I.A.P.A.

Sta. 3+439.994
39.400m Lt. I.A.P.A.

Sta. 3+551.167
39.400m Lt. C.P.A.

Sta. 1+180.050
34.042m Lt. E.P.A.

Sta. 1+179.814
34.760m Rt. E.P.A.

Sta. 3+820.000
49.400m Lt. I.A.P.A.

Sta. 3+629.353
49.400m Lt. C.P.A.

Sta. 2+560.028
57.401m Rt.

Sta. 2+700.000
58.176m Rt. I.A.P.A.

Sta. 2+839.990
54.400m Rt.

Sta. 2+960.000
51.079m Rt. I.A.P.A.

Sta. 3+080.005
44.398m Rt. I.A.P.A.

Sta. 3+144.309
49.399m Rt. I.A.P.A.

Sta. 3+239.983
44.400m Rt. I.A.P.A.

Sta. 3+300.220
44.402m Rt. I.A.P.A.

Sta. 3+380.019
49.400m Rt.

Sta. 3+480.212
49.398m Rt. C.P.A.

Sta. 0+910.422
44.543m Lt. C.P.A.

Sta. 0+819.968
39.454m Lt. E.P.A.

Sta. 3+619.751
49.400m Rt. C.P.A.

Sta. 0+940.128
39.315m Rt. C.P.A.

Sta. 3+840.010
49.400m Rt.

Sta. 3+800.000
49.400m Rt. I.A.P.A.

Sta 1+819.994
36.334m Rt. E.P.A.

LA-R/W

R/W

MATCH LINE STA. 2+500

MATCH LINE STA. 3+900

For Quantities See Sheet No. 1970

HORIZONTAL
SCALE IN METERS
0 40 80

CALCULATED RF
CHECKED REA

FENCING PLAN US-30
STA. 2+500 TO STA. 3+900

WYA/CRA-30-28.009/0.000

1967
2116

HORIZONTAL SCALE IN METERS
0 40 80

CALCULATED RF
CHECKED REA

FENCING PLAN US-30
STA. 3+900 TO STA. 5+300

WYA/CRA-30-28.009/0.000

1968
2116

MATCH LINE STA. 3+900

℄ US-30

℄ TR-111

℄ CR-22

℄ SVC. ACCESS No. 20
Driveway

LA-R/W

R/W

LA

CR-22

Sta. 4+020.000
49.400m Lt. I.A.P.A.

Sta. 4+210.000
49.400m Lt. I.A.P.A.

Sta. 4+360.000
49.400m Lt. I.A.P.A.

Sta. 4+479.978
49.400m Lt. I.A.P.A.

Sta. 4+579.852
44.407m Lt. I.A.P.A.

Sta. 4+760.000
43.882m Lt. I.A.P.A.

Sta. 4+800.004
44.400m Lt.

Sta. 4+899.988
44.400m Lt.

Sta. 10+066.219
23.654m Lt. I.A.P.A.

Sta. 10+080.795
26.388m Lt. C.P.A.

Sta. 10+022.034
6.885m Lt. C.P.A.

Sta. 10+093.136
13.848m Lt. C.P.A.

Sta. 4+944.404
42.493m Lt. C.P.A.

Sta. 5+039.989
39.400m Lt.

Sta. 5+262.479
37.771m Lt. F.T.(D)

Sta. 5+244.378
37.647m Lt. F.T.(D)

Sta. 5+080.000
39.002m Lt. I.A.P.A.

Sta. 5+219.004
39.407m Lt. C.P.A.

Sta 1+139.983
34.520m Lt. E.P.A.

Sta 1+139.983
34.293m Rt. E.P.A.

Sta. 5+287.928
39.342m Lt. C.P.A.

Sta. 5+234.903
37.605m Rt. F.T.(D)

Sta. 5+253.201
37.618m Rt. F.T.(D)

Sta. 5+278.568
39.365m Rt. C.P.A.

Sta. 0+920.005
34.159m Rt. C.P.A.

Sta. 0+910.524
26.081m Rt. F.T. (B)

Sta. 0+906.911
28.223m Rt. F.T. (B)

Sta. 0+904.999
34.145m Rt. C.P.A.

Sta. 0+844.941
34.067m Rt. E.P.A.

Crossing Type 2
(12.4 Cu. m R.C.P.)

Crossing Type 2
(10.8 Cu. m R.C.P.)

Sta. 4+899.980
44.400m Rt.

Sta. 5+059.988
39.400m Rt. I.A.P.A.

Sta. 4+879.869
45.229m Rt. C.P.A.

Sta. 4+888.050
30.656m Rt. F.T. (A)

Sta. 4+889.934
44.821m Rt. C.P.A.

Sta. 4+889.233
30.888m Rt. F.T. (A)

Sta. 5+203.786
39.444m Rt. C.P.A.

Sta. 0+880.281
42.403m Lt. C.P.A.

Sta. 0+877.954
28.870m Lt. F.T. (B)

Sta. 0+874.341
26.728m Lt. F.T. (B)

Sta. 0+860.000
43.166m Lt. C.P.A.

Crossing Type 2
(10.8 Cu. m R.C.P.)

Sta. 0+845.035
43.732m Lt. E.P.A.

Sta. 4+740.108
49.398m Rt.

Sta. 4+680.000
50.193m Rt. I.A.P.A.

Sta. 4+480.000
49.821m Rt. I.A.P.A.

Sta. 4+408.804
49.423m Rt.

Sta. 4+284.961
49.323m Rt. C.P.A.

Sta. 4+280.572
38.013m Rt. F.T. (A)

Sta. 4+274.997
49.413m Rt. C.P.A.

Sta. 4+279.399
38.056m Rt. F.T. (A)

Sta. 4+079.981
49.400m Rt.

Sta. 3+979.993
54.399m Rt. I.A.P.A.

60F 95F 96F 98F 93F 94F 59F 61F 97F 63F 68F 66F 67F

4+000 4+500 5+000 0+900 0+800 0+700 0+600 0+500

For Quantities See Sheet No. 1970

Existing US-30

0+500

℄ RAMP P

℄ US-30

Sta. 5+741.035
56.163m Lt. I.A.P.A.

Sta. 5+888.001
31.453m Lt. I.A.P.A.

Sta. 5+976.215
33.161m Lt. C.P.A.

Sta. 5+400.033
49.400m Lt. I.A.P.A.

Sta. 5+540.000
52.985m Lt. I.A.P.A.

Sta. 5+680.848
33.821m Lt. I.A.P.A.

Crossing Type 2
(10.8 Cu. m R.C.P.)

67F

67R

LA-R/W

5+500

5+700

5+800

5+900

6+000

6+100

6+200

6+300

6+400

6+500

MATCH LINE STA. 5+300

68F

69F

R/W

Sta. 5+340.000
43.039m Rt. C.P.A.

Crossing Type 2
(10.8 Cu. m R.C.P.)

Sta. 5+385.954
30.168m Rt. F.T. (B)

Sta. 5+391.298
31.587m Rt. F.T. (B)

Sta. 5+395.000
45.876m Rt. C.P.A.

Crossing Type 2
(10.8 Cu. m R.C.P.)

Sta. 5+479.993
49.399m Rt. I.A.P.A.

Sta. 5+559.990
44.399m Rt. I.A.P.A.

℄ SVC. ACCESS No. 20

Sta. 5+680.000
39.775m Rt. I.A.P.A.

Sta. 5+800.022
49.400m Rt. I.A.P.A.

Sta. 5+920.000
35.779m Rt. I.A.P.A.

Electric Transmission Lines

Sta. 6+054.854
32.908m Rt. I.A.P.A.

Sta. 6+161.353
34.396m Rt. I.A.P.A.

Sta. 6+251.229
34.402m Rt. I.A.P.A.

Sta. 6+340.003
30.717m Rt. C.P.A.

℄ RAMP O

Sta. 6+459.841
24.409m Rt. C.P.A.

Sta. 6+389.006
29.381m Rt. I.A.P.A.

CR-330

For Quantities See Sheet No. 1970

N

0 40 80
HORIZONTAL
SCALE IN METERS

CALCULATED RF
CHECKED REA

FENCING PLAN US-30
STA. 5+300 TO STA. 6+564

WYA/CRA-30-28.009/0.000

FENCING SUB-SUMMARY

Ref. No.	Station to Station	Side	Item 601 R.C.P. Type B, w/Filter	Item 607 Fence Type 47	Item 607 Fence Type 47RA	Item 607 Fence Type CL	Item 607 Fence, Misc.: Wood	For Information Only: Fence Terminal Type A	Fence Terminal Type B	Fence Terminal Type D	C.P.A.	E.P.A.	G.P.A.	I.A.P.A.	P.B.T.R.	A.C.	Item 607 Fence, Misc.: Wood Gate	Item 607 Gate Type CL	Item 625 Ground Rod	For Information Only: Crossing Type 2	Crossing Type 3
			CU. M	METER	METER	METER	METER	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
1F	12+350.000 US 23 - 12+424.914 US 23	Rt./Rt.	10.8	536.590						1	2			1					1	1	1
2F	12+282.745 US 30 - 0+801.880 CR 56	Lt./Rt.		300.127						1	2	1		1					2		1
3F	NOT USED																				
4F	NOT USED																				
5F	NOT USED																				
6F	0+799.314 CR 56 - 14+006.038 US 23	Lt./Lt.	54.0	1784.577				1		1	3			14					3	5	1
7F	1+198.091 CR 56 - 0+921.949.TR 124	Lt./Lt.	44.4	1632.531					1	2	4	1		8					2	2	1
8F	14+312.534 US 23 - 29+298.053 US 30	Rt./Lt.	43.2	1260.239				1			2			8					1	4	
9F	0+901.321 TR 55 - 28+384.618 EB US 30	Rt./Rt.		27.731							1			1					2		
10F	28+317.446 EB US 30 - 0+898.583 TR 55	Rt./Lt.		45.817							1			1							
11F	28+686.061 WB US 30 - 1+165.988 TR 55	Lt./Lt.		77.689							2	1									
12F	1+166.457 TR 55 - 28+759.781 WB US 30	Rt./Lt.		41.255							1	1							2		
13F	29+301.851 WB US 30 - 1+099.192 TR 124	Lt./Lt.	10.8	749.535				1		1	2	1		5					2	2	
14F	0+639.369 - 0+918.049 TR 124	Lt.	10.8	284.938					1		1	1		1					3	1	
15F	1+098.898 TR 124 - 30+979.121 US 30	Rt./Lt.	24.8	1044.542					1	1	1	2		6					3	3	
16F	0+639.015 TR 124 - 30+993.964 US 30	Rt./Rt.	34.0	1275.277					1	1	2	1		6					3	3	
17F	30+981.048 - 32+535.798 US 30	Lt.	48.0	1563.090					2		2			7					1	4	
18F	30+995.858 - 31+759.325 US 30	Rt.	23.2	780.950					2		2			3					1	2	
19F	31+769.997 - 32+623.691 US 30	Rt.	44.8	882.362					2		2			4						4	1
20F	32+040.600 US 60 - 0+871.219 TR 127	Rt./Lt.		84.306							1	1		1					2		
21F	0+871.271 TR 127 - 32+094.400 US 30	Rt./Rt.		86.652							1	1		1					2		
22F	1+129.256 TR 127 - 32+114.400 US 30	Rt./Lt.		90.446							2	1									
23F	32+624.573 US 30 - 0+871.545 CR 128	Rt./Lt.	23.2	311.485				1	1		3										2
24F	32+536.680 US 30 - 1+220.044 CR 128	Lt./Lt.	12.4	489.458					1		2	1		1							1
25F	NOT USED																				
26F	NOT USED																				
27F	NOT USED																				
28F	0+760.000 CR 128 - 33+714.328 US 30	Rt./Rt.	23.2	990.674							1	2		5							2
29F	1+258.861 CR 128 - 33+538.858 US 30	Rt./Lt.		797.918							1	2		4							
30F	33+714.328 - 34+660.000 US 30	Rt.	32.4		1327.107						6			3					4	3	
31F	33+540.120 - 34+319.828 US 30	Lt.	10.8		1689.683						8			3					5	1	
32F	34+660.327 - 35+248.336 US 30	Rt.	12.4	597.182				1			1	1		2						1	
33F	34+319.828 - 36+357.413 US 30	Lt.	32.4	2923.185						1	1	1		10					1	3	
34F	35+249.444 - 36+338.031 US 30	Rt.	21.6	1110.231				1		1	4			5					4	2	
35F	35+295.599 US 30 - 1+128.968 TR 133	Lt./Lt.		91.844							2	1							2		
36F	35+310.718 US 30 - 0+842.634 TR 133	Rt./Lt.		110.868							2	1		1					2		
37F	0+871.654 TR 133 - 35+365.603 US 30	Rt./Rt.		70.856								2		1					2		
38F	36+346.945 - 36+848.624 US 30	Lt./Rt.		4.803						2											
39F	36+416.531 - 36+418.089 US 30	Rt./Lt.		4.661						2											
40F	36+408.021 US 30 - 0+722.951 SR 231	Rt./Lt.	44.8	1573.220						1	3	1		8					2	4	
41F	36+426.470 US 30 - 1+281.978 SR 231	Lt./Lt.	21.6	1539.879						1	5	1		7					2	2	
42F	0+723.011 SR 231 - 0+840.097 TR 10	Rt./Lt.		1840.916							2	2	1	8					4		
43F	1+281.953 SR 231 - 1+140.023 TR 10	Rt./Lt.		1832.580							3	2	1	7					4		
44F	0+840.142 TR 10 - 1+514.531 US 30	Rt./Rt.	10.8	1704.89							3	1		8		1			3	1	
45F	1+139.930 TR 10 - 1+417.459 US 30	Rt./Lt.	10.8	1455.504						1	2	1		7					3	1	
46F	1+471.483 - 1+479.251 US 30	Lt./Rt.		11.037						2									2		
47F	1+534.209 - 1+543.342 US 30	Lt./Rt.		11.037						2									2		
48F	1+497.000 - 1+807.464 US 30	Lt.	21.6	440.460						1	5			1		1			3	2	
49F	1+593.314 - 1+778.822 US 30	Rt.	21.6	226.828						1	5					1			3	2	
50F	1+792.261 - 1+794.775 US 30	Lt./Rt.		5.028						2									2		
51F	1+834.187 - 1+838.337 US 30	Rt./Lt.		8.300						2									2		
52F	1+834.187 - 2+269.902 US 30	Rt.		672.351							6			2		2			3		
53F	1+849.999 - 2+192.675 US 30	Lt.	10.8	416.180						1	6			1		1			3	1	
54F	2+192.675 - 2+219.546 US 30	Lt./Rt.		25.217												2			2		
55F	2+216.885 - 2+320.548 US 30	Lt./Rt.		26.141												2			2		
56F	2+268.975 US 30 - 1+180.050 TR 21	Lt./Lt.	10.8	1591.548							4	1		9		1			3	1	
57F	2+349.013 US 30 - 0+819.968 TR 21	Rt./Lt.	10.8	1283.451							5	1		7		1			3	1	
58F	NOT USED																				
59F	1+819.994 - 4+279.399 TR 21	Rt./Rt.	10.8	808.323				1			3	1		1					2	1	
60F	1+179.814 TR 21 - 1+139.983 CR 22	Rt./Lt.	12.4	1863.343						1	2	2		8					5	1	1
61F	4+280.572 - 4+880.050 US 30	Rt.	21.6	621.642				2			2			2						2	
62F	10+022.034 TR 111 - 4+944.404 US 30	Lt./Lt.		117.008							4			1					2		
63F	4+889.233 US 30 - 0+845.035 CR 22	Rt./Lt.	32.4	445.767				1	1	1	4	1		1					2	2	
64F	NOT USED																				
65F	NOT USED																				
66F	0+826.736 - 0+906.911 CR 22	Rt.	10.8	74.495					1		1	1							2	1	
67F	1+139.983 CR 22 - 5+976.215 RAMP P	Rt./Lt.	10.8	807.279						1	2	1		5					4	1	1
68F	0+910.524 CR 22 - 5+385.954 US 30	Rt./Rt.	21.6	190.831					2	1	3								2	2	
69F	5+391.298 US 30 - 6+459.841 RAMP O	Rt.	10.8	1095.629					1		3			9					4	1	
70F	WASTE WATER TREATMENT PLANT, RAMP O	Rt.					136										1				
99F	33+979.333 - 33+996.333 RAMP "F"	Lt.				52.256						4			3			1			
100F	34+348.331 - 34+354.029 RAMP "H"	Rt.				52.256						4			3			1			
Total			812.0	40740.703	3016.790	104.512	136	10	17	32	138	47	2	195	6	12	1	2	121	67	12
Totals Carried to General Summary			812	40741	3017	105	136										1	2	121		

FENCING SUB-SUMMARY

Ref. No.	Station to Station	Side	Item 202 Fence * Removed
			METER
71F	12+718.723 - 13+182.352 US 23	Rt.	463.630
72F	12+822.672 - 13+258.616 US 23	Lt.	435.944
73F	13+405.802 US 23 - 1+54.416 TH 55	Rt./Rt.	231.443
74F	13+941.814 - 14+006.038 US 23	Lt.	64.224
75F	14+308.225 - 14+312.487 US 23	Rt.	4.654
76F	33+506.232 - 33+506.555 US 30	Rt.	11.691
77F	33+508.026 - 33+508.899 US 30	Lt.	12.922
78F	34+733.865 - 34+733.960 US 30	Lt.	13.124
79F	34+733.807 - 34+733.744 US 30	Rt.	17.834
80F	34+739.820 - 34+739.700 US 30	Lt.	12.227
81F	34+740.337 - 34+740.233 US 30	Rt.	18.116
82F	34+927.290 - 34+927.427 US 30	Lt.	9.253
83F	34+928.257 - 34+928.302 US 30	Rt.	5.342
84F	36+745.722 - 36+747.443 US 30	Lt.	9.074
85F	36+761.046 - 36+763.167 US 30	Rt.	11.213
86F	37+119.077 - 37+117.980 US 30	Lt.	16.255
87F	37+123.138 - 37+123.383 US 30	Rt.	4.364
88F	37+760.445 - 37+760.540 Ramp "M"	Lt.	8.973
89F	0+563.308 - 0+651.558 T-21	Rt.	100.040
90F	0+847.668 - 0+850.095 US 30	Rt.	4.961
91F	0+903.406 - 0+906.013 US 30	Lt.	4.312
92F	1+002.476 - 1+019.114 US 30	Rt.	18.810
93F	4+176.820 - 4+178.492 US 30	Rt.	7.692
94F	4+184.321 - 4+186.031 US 30	Rt.	7.809
95F	4+197.685 - 4+199.290 US 30	Lt.	7.260
96F	4+204.857 - 4+206.391 US 30	Lt.	7.099
97F	4+408.519 - 4+409.828 US 30	Rt.	5.479
98F	4+429.700 - 4+432.016 US 30	Lt.	16.037
Total			1529.782
Total Carried to General Summary			1530

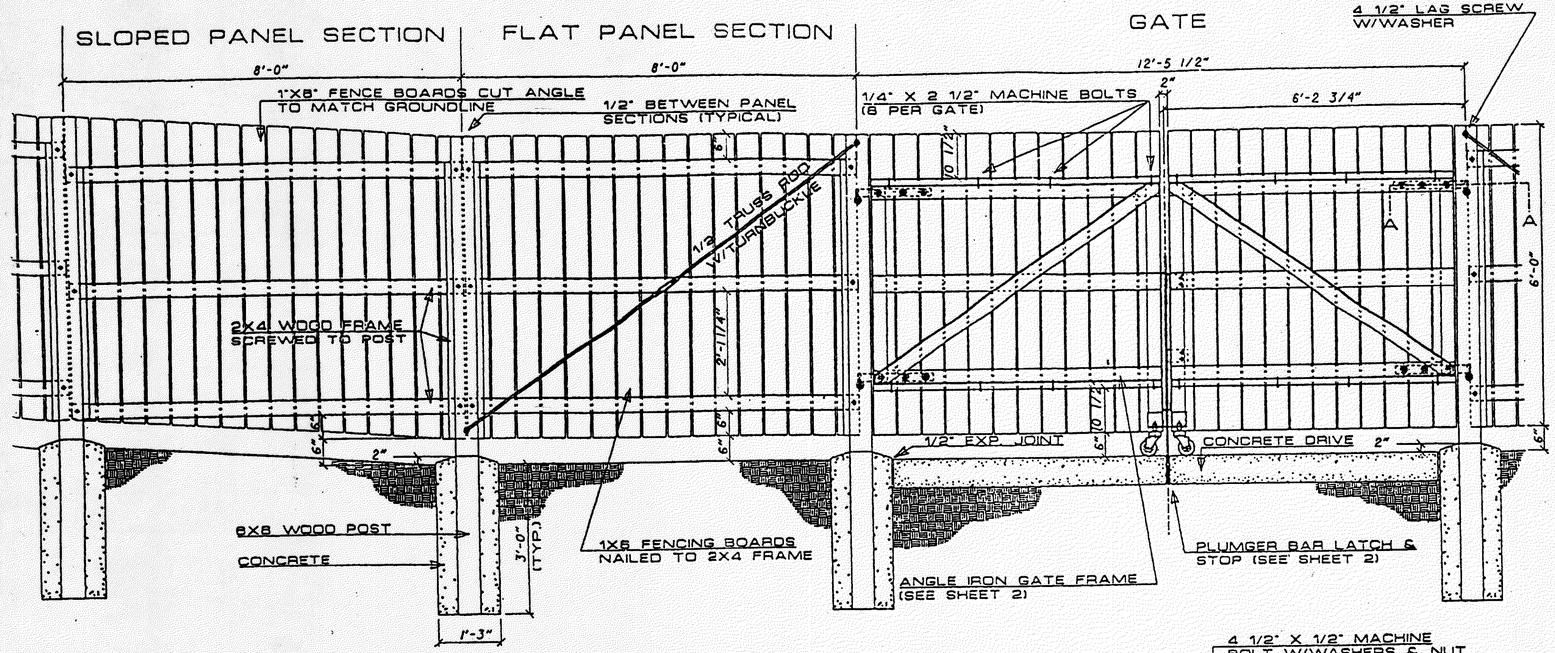
* Fence not designated for removal under Item 202
Fence Removed Shall be removed under Item 201 Clearing and Grubbing.

CALCULATED RF
CHECKED REA

FENCING PLAN US-30
Fencing Sub-Summary

WYA/CRA-30-28.009/0.000

1970
2116



REVISED 4-14-92

NOTES:

CONCRETE: ALL CONCRETE SHALL BE CLASS C. THE PROVISIONS OF 511.12 ARE MODIFIED TO THE EXTENT THAT THE CONCRETE SHALL BE PROTECTED DURING THE CURING PROCESS IN A MANNER SUCH THAT IT WILL NOT FREEZE.

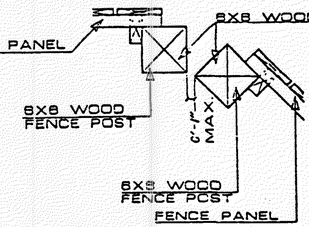
WOOD: ALL WOOD MEMBERS SHALL BE CLEAR DOUGLAS FIR. REDWOOD OR CCA PRESSURE TREATED PINE.

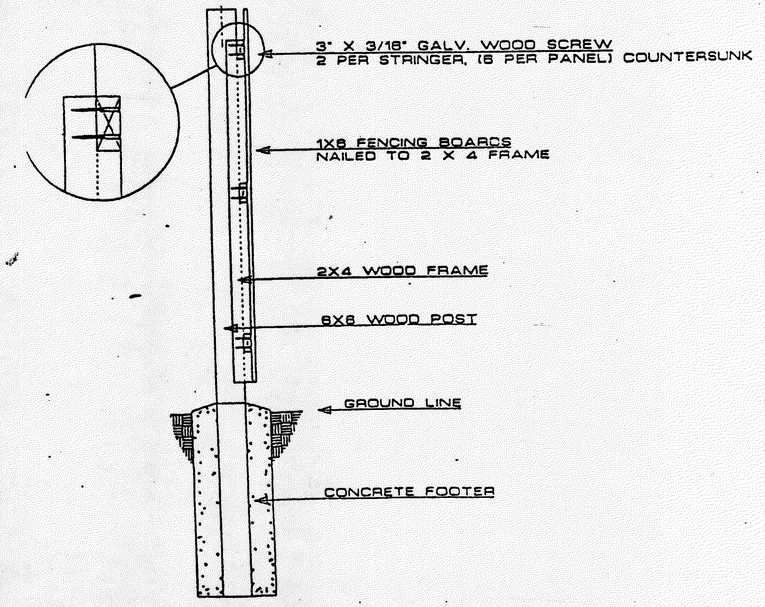
HARDWARE: ALL HARDWARE, WITH THE EXCEPTION OF THE BOLT HOOK AND STRAP HINGES, SHALL BE HOT DIPPED GALVANIZED.

GATES: EACH GATE SHALL BE EQUIPPED WITH A GALVANIZED PLUNGER BAR, LATCH AND STOP ALONG WITH AN APPROVED PADLOCK WITH DOUBLE LOCKING BOLT, FIVE PIN TUMBLER, LAMINATED STEEL CASE, BRASS CYLINDER AND BE RUST PROOF. WHERE COMPANION GATES ARE INSTALLED ON OPPOSITE SIDES OF THE HIGHWAY, TUMBLERS SHALL BE IDENTICAL IN EACH LOCK. TWO KEYS SHALL BE FURNISHED WITH EACH LOCK.

ANGLE IRON FRAME: ALL ANGLE IRON SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

POST PLACEMENT: IN THOSE SITUATIONS WHERE A FENCE CORNER IS SOMETHING OTHER THAN 90°. TWO POSTS WILL BE PLACED SIDE BY SIDE, AS SHOWN BELOW. A COMMON CONCRETE FOOTER SHALL BE CONSTRUCTED FOR BOTH POSTS.





WOOD PANEL FRAME DETAIL

BOLT HOOK & STRAP HINGE DETAIL

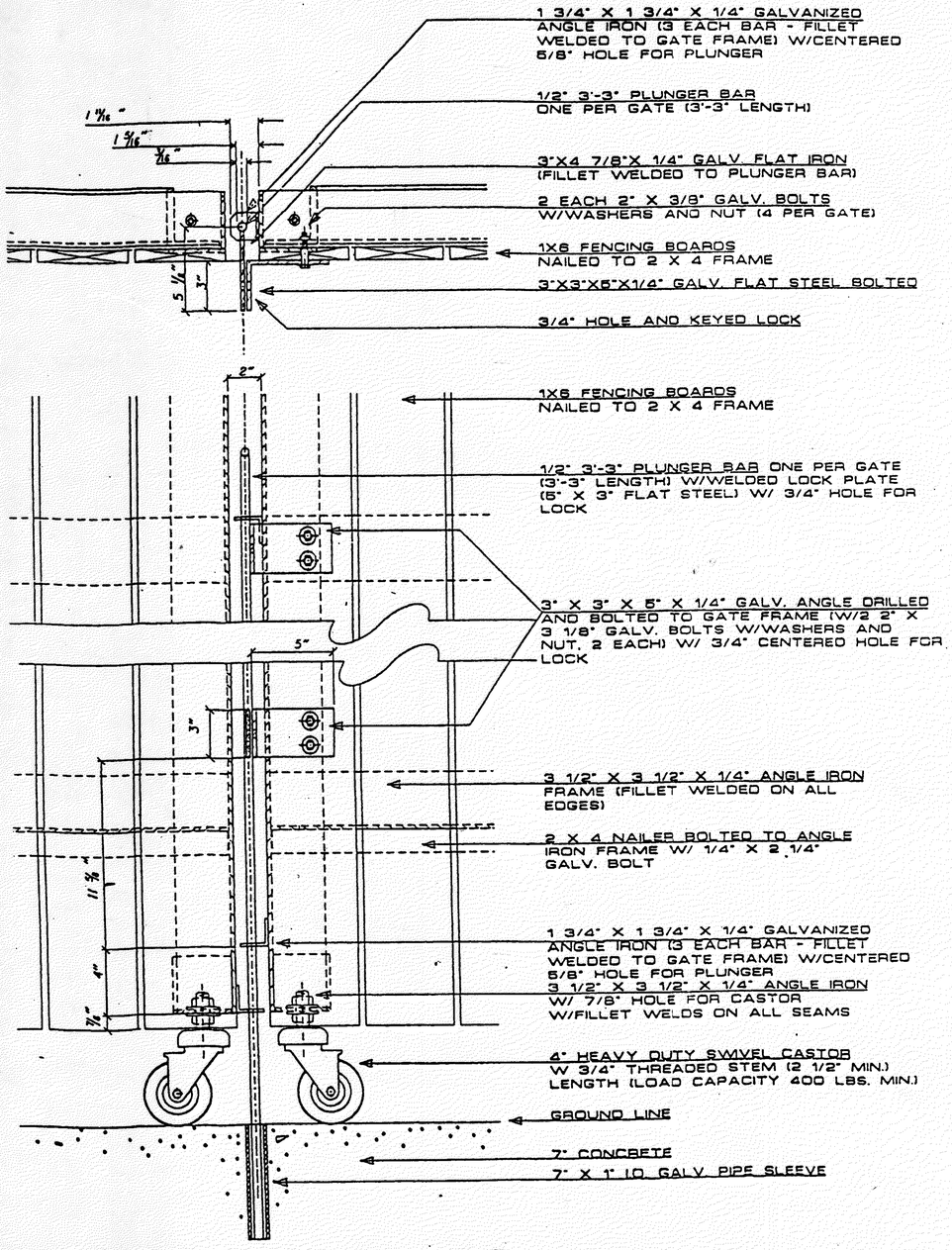
WOOD FENCE
SHEET 1 OF 2

WOOD FENCE DETAILS

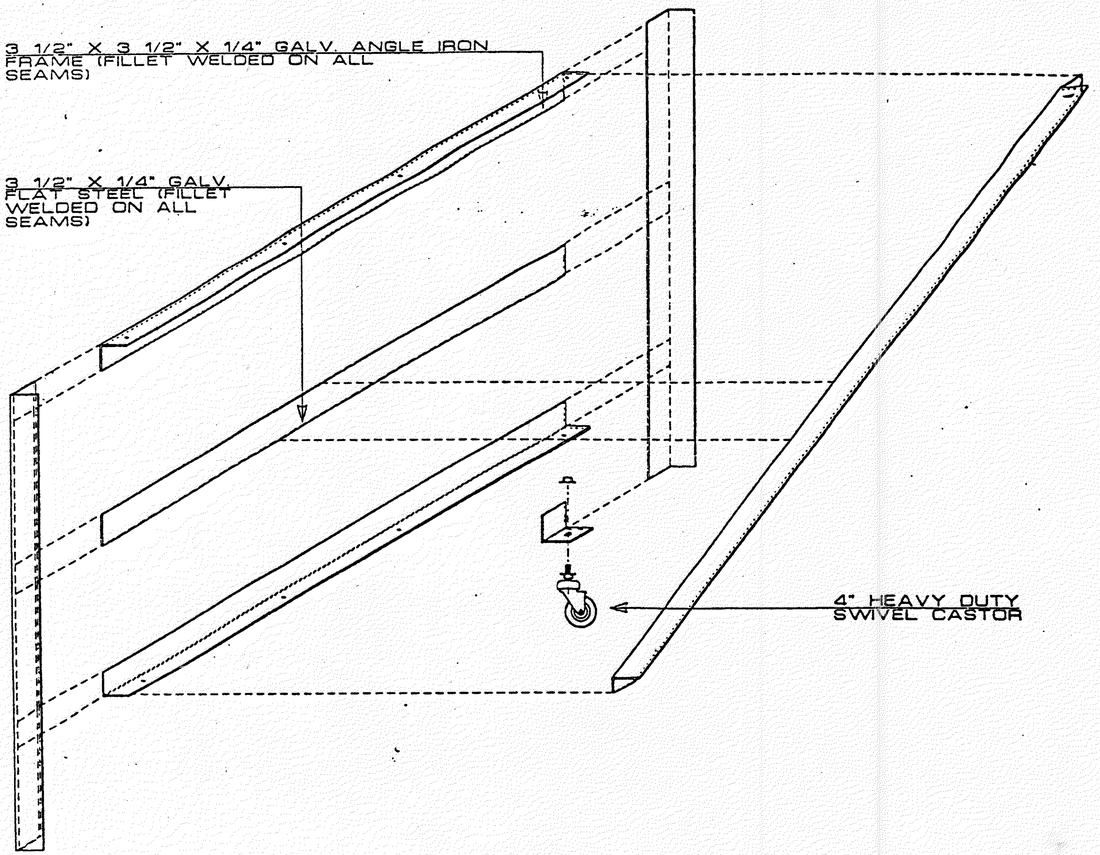
WYA/CRA-30-28.009/0.000

1970A
2116

REVISED 4-14-92



GATE, WHEEL & LATCH DETAIL



GATE FRAME DETAIL

WOOD FENCE
SHEET 2 OF 2

WOOD FENCE DETAILS

WYA/CRA-30-28.009/0.000

1970B
2.116

WYA/CRA-30-28.009/0.000
WYANDOT COUNTY
CRANE TOWNSHIP
SEC. 2&3, T.-3S, R.-14E
PITT TOWNSHIP
SEC. 10, T.-3S, R.-14E

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE REVISED CODE OF OHIO.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION — metric units

SHEET 1 OF 8

SCALE IN METERS 1:4000

PID NO. 10289

NOTE: THE EXISTING ℄ AND R/W WIDTH AND LOCATION WERE DETERMINED USING:

EXISTING MONUMENTATION
WYA-23-6.67
CRA-19/30N-16.09/4.04
CRAWFORD COUNTY TAX MAPS
WYANDOT COUNTY ROAD RECORDS

SPIRAL NOTE: ALL STATIONING HAS BEEN CALCULATED ALONG THE SPIRAL. ALL ANGLE POINTS IN RIGHT OF WAY AND PROPERTY LINES, AND PROPERTY CORNERS FALLING WITHIN THE SPIRALED PORTION OF THE CURVE ARE REFERENCED FROM THE CENTERLINE OF SPIRAL. THIS AVOIDS ANY STATION EQUATIONS ON THE CENTERLINE. FROM S.C. TO C.S., USE NORMAL CENTERLINE STATIONING.

RECEIVED _____,19____
RECORDED _____,19____
BOOK _____ PAGE _____
_____
COUNTY RECORDER

U.S. 30 EAST
CURVE NO. C-1
P.I. Sta. 28+160.442
D = 4° 56′ 49″ (RT)
R = 3,500.000m (11,482.92′)
T = 151.187m (496.02′)
L = 302.186m (991.422′)
E = 3.264m (10.71′)
P.C. Sta. 28+009.255
P.T. Sta. 28+311.441

℄ Monument 1.984(6.51′) Lt.

BEGIN PROJECT
STA. 28+009.000 US 30 E.B.
SLD= 28.009

Sta. 28+009.255 ℄ U.S. 30 E.B.=
Sta. 13+987.168 US-23 (18.478 RT.)

Sta. 28+412.833 ℄ U.S. 30 W.B.=
Sta. 13+920.086 US-23 (24.311 RT.)

U.S. 30 WEST
CURVE NO. SCS-4
P.I. Sta. 28+788.931
D = 58° 47′ 45″ (LT)
R = 560.000m (1,837.27′)
Ls = 120.000m (393.70′)
θs/ = 6°08′20″
LT = 80.048m (262.62′)
ST = 40.044m (131.38′)
Lc = 454.662m (1,491.67′)
Ts = 376.098m (1,233.91′)
Es = 83.998m (275.58′)
T.S. Sta. 28+412.833
S.C. Sta. 28+532.833
C.S. Sta. 28+987.495
S.T. Sta. 29+107.495

U.S. 30 EAST
CURVE NO. SCS-2
P.I. Sta. 29+138.153
D = 102° 35′ 11″ (LT)
R = 571.200m (1,874.01′)
Ls = 145.000m (475.72′)
θs = 7° 16′ 20″
LT = 96.748m (317.41′)
ST = 48.408m (158.82′)
Lc = 877.717m (2,879.64′)
Ts = 787.175m (2,582.59′)
Es = 344.681m (1,130.84′)
T.S. Sta. 28+350.978
S.C. Sta. 28+495.978
C.S. Sta. 29+373.695
S.T. Sta. 29+518.695

RAMP "B"
CURVE NO. C-8
P.I. Sta. 29+213.330
D = 7° 10′ 10″ (RT)
R = 1,250.000m (4,101.04′)
T = 78.310m (256.92′)
L = 156.416m (513.17′)
E = 2.451m (8.04′)
P.C. Sta. 29+135.020
P.T. Sta. 29+291.436

RAMP "B"
CURVE NO. SCS-7
P.I. Sta. 29+169.182
D = 142° 30′ 25″ (RT)
R = 305.000m (1,000.65′)
Ls = 82.000m (269.03′)
θs = 7° 42′ 07″
LT = 54.719m (179.52′)
ST = 27.380m (89.83′)
Lc = 676.601m (2,219.82′)
Ts = 942.359m (3,091.72′)
Es = 646.882m (2,122.31′)
T.S. Sta. 28+226.822
S.C. Sta. 28+308.822
C.S. Sta. 28+985.423
S.T. Sta. 29+067.423

Sta. 29+193.960 ℄ W.B. U.S. 30=
Sta. 29+193.960 ℄ U.S.-30 (16.200 LT)

Sta. 29+291.435 ℄ Ramp "B"=
Sta. 29+291.435 ℄ U.S. 30 (5.400 LT)

Sta. 29+575.484

STA. 29+963.023 ℄ E.B. U.S.-30=
STA. 29+963.023 ℄ U.S.-30(16.200 RT

Sta. 29+518.695 ℄ Ramp "A"=
Sta. 29+568.765 ℄ US-30(186.228 Rt.)

RAMP "A"
CURVE NO. C-5
P.I. Sta. 28+644.654
D = 7° 55′ 44″ (RT)
R = 1,250.000m (4,101.04′)
T = 86.629m (284.22′)
L = 172.982m (567.53′)
E = 2.998m (9.84′)
P.C. Sta. 28+558.024
P.C.C. Sta. 28+731.006

RAMP "A"
CURVE NO. C-6
P.I. = Sta. 28+958.499
D = 73° 16′ 04.82″ (RT)
R = 305.000 m (1000.65′)
Ls2 = 70.000 m (229.66′)
θs2 = 6° 34′ 29.73″
LT2 = 46.699 m (153.21′)
ST2 = 23.363 m (76.65′)
Lc = 355.024 m (1,164.77′)
Tsl = 227.493 m (746.37′)
Ts2 = 261.577 m (858.19′)
Es = 75.497 m (247.69′)
P.C.C. Sta. 28+731.006
C.S.Sta. 29+086.030
S.T. Sta. 29+156.030

U.S. 30 EAST
CURVE NO. C-3
P.I. = Sta. 29+825.675
D = 26° 35′ 42.18″ (RT)
R = 560.000 m (1837.27′)
Ls = 120.000 m (393.70′)
θs = 6° 08′ 19.80″
LT = 80.048 m (262.62′)
ST = 40.044 m (131.38′)
Lc = 139.936 m (459.11′)
Ts = 192.583 m (631.83′)
Es = 16.528 m (54.23′)
T.S. Sta. 29+633.092
S.C. Sta. 29+753.092
C.S. Sta. 29+893.028
S.T. Sta. 30+013.028

Found Iron Pin & Cap at NE Section Corner

US-30
CURVE NO. C-9
P.I. Sta. 30+333.210
D = 30° 00′ 42″ (LT)
R = 4,250.000m (13,943.54′)
T = 1,139.250m (3,737.69′)
L = 2,226.164m (7,303.67′)
E = 150.044m (492.27′)
P.C. Sta. 29+193.960
P.T. Sta. 31+420.124

FOR CENTERLINE MONUMENT TABLE, DETAIL, AND COORDINATE LISTING SEE SHEET NO. 7.

RAMP "B"
CURVE NO. CS-6
P.I. Sta. 28+110.253
D = 29° 46′ 31″ (LT)
R = 305.000m (1,000.65′)
Ls2 = 82.000m (269.03′)
θs2 = 7° 42′ 07″
LT2 = 54.719m (179.52′)
ST2 = 27.380m (89.83′)
Lc = 117.501m (385.50′)
TI = 82.932m (272.09′)
T2 = 120.455m (395.19′)
Es = 11.074m (36.33′)
P.C. Sta. 28+027.321
C.S. Sta. 28+144.822
S.T. Sta. 28+226.822

Sta. 28+027.321 ℄ RAMP "B"=
Sta. 12+695.977 US-23 (24.001 LT.)

Sta. 12+463.452 US-23 (18.577 RT.)

Sta. 12+433.448 US-23 =
Sta. 1+000.000 CR-56

Sta. 30+014.086 US-30=
Sta. 1+000.000 TR-124

Sta. 30+438.557

Sta. 31+267.302

Fnd. Copper Pin in Conc.

N= 126540.0197
E= 538698.0152 PAF
N= 126528.6146
E= 538649.4623 SP NAD83

Stone in Mon. Box
Fnd. at 1/4 Corner

N= 126521.0397
E= 537100.1125 PAF
N= 126509.6364
E= 537051.7037 SP NAD83

Fnd. Stone in Mon. Box

Fnd. Stone in Mon. Box

PAF N= 126523.4271
E= 540340.6232
SP NAD83 N= 126512.0235
E= 540291.9223

BASIS FOR BEARINGS
BEARINGS ARE BASED UPON STATE PLANE COORDINATES, NAD83 OHIO NORTH ZONE (3401).

PAF= PROJECT ADJUSTMENT FACTOR.
PAF COORDINATES ARE SURFACE COORDINATES AND YIELD SURFACE MEASURED DISTANCES.
TO CONVERT FROM PAF COORDINATES TO STATE PLANE NAD83 OHIO NORTH ZONE COORDINATES, MULTIPLY BY THE AVERAGE COMBINATION SCALE FACTOR OF 0.99990987.

MONUMENT LEGEND
- ○ Existing Iron Pin Found
- □ Existing Monument Box
- ◎ Existing Conc. Monument
- ■ Proposed Monument Box
- ● Proposed Reference Monument
- Ⓜ Proposed Monument at Section Line and Quarter Section Line Crossings

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF TRANSPORTATION IN 1998 BY BALKE ENGINEERING.

THE ESTABLISHMENT OF THE PROPERTY LINES AND EXISTING RIGHT OF WAY LINES SHOWN ON THIS PLAN AS OF THIS DATE WAS PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

Joseph D. Kuhlmann DATE 3/30/1999
REGISTERED SURVEYOR NO. 6823 True Copy 12/16/1999

STATE OF OHIO — JOSEPH D. KUHLMANN — S-6823 — REGISTERED LAND SURVEYOR

CENTERLINE PLAT
WYA/CRA-30-28.009/0.000
STA. 28+009.000 TO STA. 31+200.000

1 / 146

1971
2116

WYA/CRA-30-28.009/0.000
WYANDOT COUNTY
CRANE TOWNSHIP
SEC. 1, T.-3S, R.-14E
ANTRIM TOWNSHIP
SEC. 6, T.-3S, R.-15E

Found Iron Pin & Cap at NW Section Corner

Found Stone in Mon. Box at NW Section Corner

P.O.T. 1+778.158

℄ US-30
CURVE NO. C-9
P.I. Sta. 30+333.210
D = 30° 00′ 42″ (LT)
R = 4,250.000m (13,943.54′)
T = 1,139.250m (3,737.69′)
L = 2,226.164m (7,303.67′)
E = 150.044m (492.27′)
P.C. Sta. 29+193.960
P.T. Sta. 31+420.124

RAMP "F"
CURVE NO. CS-20
P.I. Sta. 33+628.621
D = 43° 12′ 07″ (LT)
R = 333.000m (1,092.52′)
Ls2 = 90.000m (295.28′)
θs2 = 7° 44′ 34″
LT2 = 60.057m (197.04′)
ST2 = 30.052m (98.60′)
Lc = 206.087m (676.14′)
T1 = 133.330m (437.43′)
T2 = 175.745m (576.59′)
Es = 25.700m (84.32′)
P.R.C. Sta. 33+494.750
C.S. Sta. 33+700.838
S.T. Sta. 33+790.838

RAMP "I"
CURVE NO. C-24
P.I. Sta. 33+765.028
D = 42° 46′ 05″ (LT)
R = 90.000m (295.28′)
T = 35.242m (115.62′)
L = 67.180m (220.41′)
E = 6.654m (21.83′)
P.C. Sta. 33+729.786
P.T. Sta. 33+796.966

RAMP "I"
CURVE NO. C-25
P.I. Sta. 34+161.607
D = 24° 05′ 39″ (RT)
R = 160.000m (524.93′)
T = 34.146m (112.03′)
L = 67.283m (220.74′)
E = 3.603m (11.82′)
P.C. Sta. 34+127.460
P.T. Sta. 34+194.744

metric units

SHEET 2 OF 8

RAMP "G"
CURVE NO. SC-21
P.I. Sta. 34+203.634
D = 37° 04′ 16″ (LT)
R = 500.000m (1,640.42′)
Ls1 = 60.000m (196.85′)
θs1 = 3° 26′ 16″
LT1 = 40.008m (131.26′)
ST1 = 20.007m (65.64′)
Lc = 293.506m (962.94′)
T1 = 197.242m (647.12′)
T2 = 168.140m (551.64′)
Es = 27.514m (90.27′)
T.S. Sta. 34+006.392
S.C. Sta. 34+066.392
P.C.C. Sta. 34+359.899

SCALE IN METERS 1:4000 (0, 40, 80, 160)

PID NO. 10289

CENTERLINE PLAT
WYA/CRA-30-28.009/0.000 STA. 31+200.000 TO STA. 34+200.000

2 / 146

1972 / 2116

N 0°09′03″ E SECTION 2 — SECTION 1 — CRANE TWP.-SECTION 1 — C.H. 128 — N 0°02′54″ E — ANTRIM TWP.-SECTION 6

POT Sta. 32+871.639 US-30=
POT Sta. 1+000.000 CH-128

STA. 33+494.750 ℄ Ramp "F"=
STA. 33+494.750 U.S.-30 (25.575 LT.)

STA. 33+702.752 ℄ RAMP "E"=
STA. 33+702.752 U.S.-30 (19.800 RT)

Sta. 32+070.020

Sta. 33+714.241

C-9 — P.I. — 31+500 — 32+000 — 32+500 — 33+000 — 33+500 — 34+000 — C-10 — P.I. — C-17 — C-24 — C-25 — C-26

N 88°17′07″ E — S 89°35′00″ E — S 89°34′16″ E — S 46°48′11″ E — S 44°35′00″ E — S 44°32′16″ E

P.R.C. — P.C. — P.T. — P.C.C. — P.C.C. — P.C. — P.T. — P.C. — P.T. — T.S. — S.C. — S.T. — P.O.T.

℄ RAMP "F" CS-20 — ℄ RAMP "I" — ℄ RAMP "G" SC-21 — ℄ RAMP "J" — ℄ RAMP "E" CS-18

377.521m (1238.58′) SECTION 2 — SECTION 1 — 403.541m (1323.95′) N 0°08′21″ E — SECTION 1 — C.H. 128 — 432.270m (1418.21′) SECTION 6

SECTION 1 — SECTION 6

P.O.T. 0+567.730

Fnd. Stone in Mon. Box
N= 126523.4271
E= 540340.6232 PAF
N= 126512.0235
E= 540291.9223 SP NAD83

Fnd. Stone in Mon. Box
(0.328 S, 0.000 E)
(1.08′ S, 0.000′ E)

Fnd. Stone in Mon. Box
N= 126513.9397
E= 541944.9194 PAF
N= 126502.5370
E= 541896.0739 SP NAD83

PITT TWP.-SECTION 12 — ANTRIM TWP.-SECTION 7

RAMP "J"
CURVE NO. C-26
P.I. Sta. 34+075.023
D = 24° 05′ 33″ (LT)
R = 160.000m (524.93′)
T = 34.144m (112.02′)
L = 67.279m (220.73′)
E = 3.603m (11.82′)
P.C. Sta. 34+040.879
P.T. Sta. 34+108.158

RAMP "E"
CURVE NO. C-17
P.I. Sta. 33+789.381
D = 7° 55′ 44″ (RT)
R = 1,250.000m (4,101.04′)
T = 86.629m (284.22′)
L = 172.982m (567.53′)
E = 2.998m (9.84′)
P.C. Sta. 33+702.752
P.C.C. Sta. 33+875.734

RAMP "E"
CURVE NO. CS-18
P.I. Sta. 34+044.095
D = 37° 07′ 00″ (RT)
R = 500.000m (1,640.42′)
Ls2 = 60.000m (196.85′)
θs2 = 3° 26′ 16″
LT2 = 40.008m (131.26′)
ST2 = 20.007m (65.64′)
Lc = 293.904m (964.25′)
T1 = 168.361m (552.36′)
T2 = 197.464m (647.85′)
Es = 27.584m (90.50′)
P.C.C. Sta. 33+875.734
C.S. Sta. 34+169.638
S.T. Sta. 34+229.638

MONUMENT LEGEND

- ○ Existing Iron Pin Found
- □ Existing Monument Box
- ◎ Existing Conc. Monument
- ■ Proposed Monument Box
- ● Proposed Reference Monument
- Ⓜ Proposed Monument at Section Line and Quarter Section Line Crossings

FOR CENTERLINE MONUMENT TABLE, DETAIL, AND COORDINATE LISTING SEE SHEET NO. 7.

WYA/CRA-30-28.009/0.000
WYANDOT COUNTY
ANTRIM TOWNSHIP
SEC. 4,5&6, T.-3S, R.-15E

metric units

SCALE IN METERS 1:4000

PID NO. 10289

CENTERLINE PLAT
WYA/CRA-30-28.009/0.000 STA. 34+200.000 TO STA. 37+100.000

RAMP "G"
CURVE NO. SC-21
P.I. Sta. 34+203.634
D = 37° 04' 16" (LT)
R = 500.000m (1,640.42')
Lsl = 60.000m (196.85')
θsl = 3° 26' 16"
LTl = 40.008m (131.26')
STl = 20.007m (65.64')
Lc = 293.506m (962.94')
Tl = 197.242m (647.12')
T2 = 168.140m (551.64')
Es = 27.514m (90.27')
T.S. Sta. 34+006.392
S.C. Sta. 34+066.392
P.C.C. Sta. 34+359.899

Found RR Spike in Township Road 55

RAMP "I"
CURVE NO. C-25
P.I. Sta. 34+161.607
D = 24° 05' 39" (RT)
R = 160.000m (524.93')
T = 34.146m (112.03')
L = 67.283m (220.74')
E = 3.603m (11.82')
P.C. Sta. 34+127.460
P.T. Sta. 34+194.744

RAMP "G"
CURVE NO. C-22
P.I. Sta. 34+446.528
D = 7° 55' 44" (LT)
R = 1,250.000m (4,101.04')
T = 86.629m (284.22')
L = 172.982m (567.53')
E = 2.998m (9.84')
P.C.C. Sta. 34+359.899
P.T. Sta. 34+532.881

Found Stone in Mon. Box in Township Road 55

℄ US-30
CURVE NO. C-12
P.I. Sta. 37+166.600
D = 18° 52' 55" (LT)
R = 1,400.000m (4,593.17')
T = 232.796m (763.76')
L = 461.371m (1,513.68')
E = 19.223m (63.07')
P.C. Sta. 36+933.804
P.T. Sta. 37+395.175

SECTION 6 | SECTION 5 | SECTION 4

N 0°11'28" E

℄ RAMP "I" S 81°39'16" E
℄ RAMP "G" SC-21
S.C. P.C. C-25 P.T. P.C.C. C-22 P.T.
STA. 34+532.881 ℄ Ramp "G"= STA. 34+532.881 ℄ U.S.-30 (19.800 LT)
Sta. 34+518.914
34+500 35+000 35+500 36+000 36+500 37+000
S 89°35'00" E
Sta. 35+337.452
Sta. 36+151.496
P.C. C-11 P.T. P.C. C-12
S 79°14'25" E
Sta. 36+962.779

℄ RAMP "J" S 89°34'16" E
S.C. P.C. C-27 P.T.
℄ RAMP "H"
SC-23
Sta. 34+740.745 ℄ Ramp "H"= Sta. 34+740.745 ℄ U.S.-30 (25.575 RT)

℄ RAMP "E"
S.T. P.O.T.
S 89°35'00" E
S 44°32'16" E
N 45°09'36" E
457.803m (1501.98')

457.078m (1499.60') N 0°11'52" E

N 0°15'19" E
434.420m (1425.26')

Fnd. Stone in Mon. Box
N= 126499.0740
E= 543590.7515 PAF
N= 126487.6726
E= 543541.7577 SP NAD83

Fnd. Stone in Mon. Box

Fnd. Stone in Mon. Box
N= 126492.5222
E= 54522.1943 PAF
N= 126481.1214
E= 54517.2802 SP NAD83

RAMP "E"
CURVE NO. CS-18
P.I. Sta. 34+044.095
D = 37° 07' 00" (RT)
R = 500.000m (1,640.42')
Ls2 = 60.000m (196.85')
θs2 = 3° 26' 16"
LT2 = 40.008m (131.26')
ST2 = 20.007m (65.64')
Lc = 293.904m (964.25')
Tl = 168.361m (552.36')
T2 = 197.464m (647.85')
Es = 27.584m (90.50')
P.C.C. Sta. 33+875.734
C.S. Sta. 34+169.638
S.T. Sta. 34+229.638

RAMP "J"
CURVE NO. C-27
P.I. Sta. 34+469.309
D = 42° 44' 04" (RT)
R = 90.000m (295.28')
T = 35.211m (115.52')
L = 67.127m (220.23')
E = 6.643m (21.79')
P.C. Sta. 34+434.098
P.T. Sta. 34+501.225

RAMP "H"
CURVE NO. SC-23
P.I. Sta. 34+618.363
D = 44° 03' 48" (RT)
R = 333.000m (1,092.52')
Ls1 = 90.000m (295.28')
θs1 = 7° 44' 34"
LTl = 60.057m (197.04')
STl = 30.052m (98.60')
Lc = 211.093m (692.56')
Tl = 178.681m (586.22')
T2 = 136.211m (446.89')
Es = 26.781m (87.86')
T.S. Sta. 34+439.652
S.C. Sta. 34+529.652
P.T. Sta. 34+740.745

℄ US-30
CURVE NO. C-11
P.I. Sta. 36+144.106
D = 10° 20' 35" (RT)
R = 4,250.000m (13,943.54')
T = 384.647m (1,261.96')
L = 767.203m (2,517.07')
E = 17.371m (56.99')
P.C. Sta. 35+759.459
P.T. Sta. 36+526.662

FOR CENTERLINE MONUMENT TABLE, DETAIL, AND COORDINATE LISTING SEE SHEET NO. 7.

MONUMENT LEGEND
- ○ Existing Iron Pin Found
- □ Existing Monument Box
- ◎ Existing Conc. Monument
- ■ Proposed Monument Box
- ● Proposed Reference Monument
- Ⓜ Proposed Monument at Section Line and Quarter Section Line Crossings

WYA/CRA-30-28.009/0.000
WYANDOT COUNTY
ANTRIM TOWNSHIP
SEC. 3&4, T.-3S, R.-15E
CRAWFORD COUNTY
TOD TOWNSHIP
SEC. 2, T.-3S, R.-15E

metric units

SHEET 4 OF 8

SCALE IN METERS 1:4000

PID NO. 10289

CENTERLINE PLAT
STA. 37+100.000 TO STA. 0+700.000
WYA/CRA-30-28.009/0.000

4 / 146

1974 / 2116

RAMP "L"
CURVE NO. CS-30
P.I. Sta. 37+489.543
D = 18° 01′ 55″ (LT)
R = 330.000m (1,082.68′)
Ls2 = 80.000m (262.47′)
θs2 = 6° 56′ 42″
LT2 = 53.374m (175.11′)
ST2 = 26.704m (87.61′)
Lc = 64.857m (212.79′)
T1 = 54.970m (180.35′)
T2 = 89.861m (294.82′)
Es = 4.547m (14.92′)
P.C. Sta. 37+434.573
C.S. Sta. 37+498.430
S.R.S. Sta. 37+578.430

RAMP "L"
CURVE NO. SCS-31
P.I. Sta. 37+672.111
D = 26° 41′ 45″ (RT)
R = 230.000m (754.59′)
Ls1 = 80.000m (262.47′)
Ls2 = 60.000m (196.85′)
θs1 = 9° 57′ 52″
θs2 = 7° 28′ 24″
LT1 = 53.418m (175.26′)
LT2 = 40.036m (131.35′)
ST1 = 26.744m (87.74′)
ST2 = 20.032m (65.72′)
Lc = 37.165m (121.93′)
T1 = 93.680m (307.35′)
T2 = 85.838m (281.62′)
Es = 7.318m (24.01′)
S.R.S. Sta.37+578.430
S.C. Sta. 37+658.430
C.S. Sta. 37+695.595
S.T. Sta. 37+755.595

RAMP "M"
CURVE NO. SC-32
P.I. Sta. 38+153.723
D = 7° 55′ 44″ (LT)
R = 1,250.000m (4,101.04′)
Ls1 = 60.000m (196.85′)
θs1 = 1° 22′ 30″
LT1 = 40.001m (131.24′)
ST1 = 20.001m (65.62′)
Lc = 142.982m (469.10′)
T1 = 115.766m (379.81′)
T2 = 87.498m (287.07′)
Es = 3.059m (10.04′)
T.S. Sta. 38+037.957
S.C. Sta. 38+097.957
P.T. Sta. 38+240.939

℄ US-30
CURVE NO. C-12
P.I. Sta. 37+166.600
D = 18° 52′ 55″ (LT)
R = 1,400.000m (4,593.17′)
T = 232.796m (763.76′)
L = 461.371m (1,513.68′)
E = 19.223m (63.07′)
P.C. Sta. 36+933.804
P.T. Sta. 37+395.175

℄ US-30
CURVE NO. C-13
P.I. Sta. 39+027.489
D = 9° 24′ 24″ (LT)
R = 4,250.000m (13,943.54′)
T = 349.663m (1,147.19′)
L = 697.753m (2,289.21′)
E = 14.360m (47.11′)
P.C. Sta. 38+677.827
P.T. Sta. 39+375.580

℄ US-30
CURVE NO. C-14
P.I. Sta. 0+457.247
D = 12° 16′ 53″ (LT)
R = 4,250.000m (13,943.54′)
T = 457.247m (1,500.15′)
L = 910.991m (2,988.81′)
E = 24.526m (80.47′)
P.C. Sta. 0+000.000
P.T. Sta. 0+910.991

P.O.T. 2+045.062

P.O.T. 1+457.779

Sta. 37+771.504 US-30 =
Sta. 1+000.000 SR-231

Sta. 37+434.573 ℄ Ramp "L"=
Sta. 37+434.573 ℄ U.S.-30(25.575 LT)

Sta. 1+072.292 SR-231 =
Sta. 37+778.750 Ramp M =
Sta. 37+789.991 Ramp L

Sta. 38+240.939 ℄ Ramp "M"=
Sta. 38+240.939 ℄ U.S-30 (19.800 LT)

Sta. 38+566.954

Sta. 38+104.360 ℄ Ramp "N"=
Sta. 38+104.361 ℄ U.S.30 (25.575 RT)

Sta. 37+316.741 ℄ Ramp "K"=
Sta. 37+316.395 ℄ U.S.-30(19.800 RT)

Sta. 0+932.418 SR-231 =
Sta. 37+765.516 Ramp K =
Sta. 37+754.766 Ramp N

Sta. 0+539.547

PT Sta. 39+375.580 BK US-30 =
PC Sta. 0+000.000 AHD US-30 =
Sta. 1+000.000 TH-10

Found Spike

N 0°15′58″ E

N89°20′54″E

N89°48′24″E

N 81°52′40″ E

N89°25′05″E

N87°56′04″E

N88°41′32″E

347.954m (1141.58′)

614.511m (2016.11′)

557.851m (1830.22′)

SECTION 4

SECTION 3

SECTION 2

T.H. 10

T- 11

C-12

C-13

C-14

39+000

38+500

38+000

37+500

1+500

1+000

0+500

P.C.

P.T.

T.S.

S.C.

C.S.

S.T.

S.R.S.

CS-28

SCS-31

SCS-33

SC-32

SC-34

CS-30

℄ RAMP "K"

℄ RAMP "L"

℄ RAMP "M"

℄ RAMP "N"

S.R. 231

P.T. US-30

RAMP "K"
CURVE NO. CS-28
P.I. Sta. 37+392.756
D = 4° 18′ 58″ (RT)
R = 2,000.000m (6,561.67′)
Ls2 = 60.000m (196.85′)
θs2 = 0° 51′ 34″
LT2 = 40.000m (131.23′)
ST2 = 20.000m (65.62′)
Lc = 120.659m (395.86′)
T1 = 76.361m (250.53′)
T2 = 104.371m (342.42′)
Es = 1.457m (4.78′)
P.C. Sta. 37+316.394
C.S. Sta. 37+437.053
S.T. Sta. 37+497.053

SECTION 4
P.O.T. 0+652.046

RAMP "K"
CURVE NO. C-29
P.I. Sta. 37+613.324
D = 1° 29′ 01″ (LT)
R = 3500.000m (11482.92′)
T = 45.313m (148.66′)
L = 90.622m (297.32′)
E = 0.293m (0.96′)
P.C. Sta. 37+568.011
P.T. Sta. 37+658.632

Fnd. Stone in Mon. Box
N= 126491.8869
E= 546825.3977 PAF
N= 126480.4862
E= 546776.1123 SP NAD83

RAMP "N"
CURVE NO. SCS-33
P.I. Sta. 37+878.804
D = 24° 57′ 15″ (LT)
R = 230.000m (1754.59′)
Ls1 = 60.000m (196.85′)
Ls2 = 80.000m (262.47′)
θs1 = 7° 28′ 24″
θs2 = 9° 57′ 52″
LT1 = 40.036m (131.35′)
LT2 = 53.418m (175.26′)
ST1 = 20.032m (65.72′)
ST2 = 26.744m (87.74′)
Lc = 30.173m (98.99′)
T1 = 82.22m (269.75′)
T2 = 89.909m (294.98′)
Es = 6.493m (21.30′)
T.S. Sta. 37+796.583
S.C. Sta. 37+856.583
C.S. Sta. 37+886.756
S.R.S. Sta. 37+966.756

RAMP "N"
CURVE NO. SC-34
P.I. Sta. 38+053.247
D = 16° 56′ 47″ (RT)
R = 330.000m (1,082.68′)
Ls1 = 80.000m (262.47′)
θs1 = 6° 56′ 42″
LT1 = 53.374m (175.11′)
ST1 = 26.704m (87.61′)
Lc = 57.604m (188.99′)
T1 = 86.491m (283.76′)
T2 = 51.932m (170.38′)
Es = 4.061m (13.32′)
S.R.S. Sta. 37+966.756
S.C. Sta. 38+046.756
P.T. Sta. 38+104.359

SECTION 3
P.O.T. 0+385.489

T.H. 56

SECTION 2

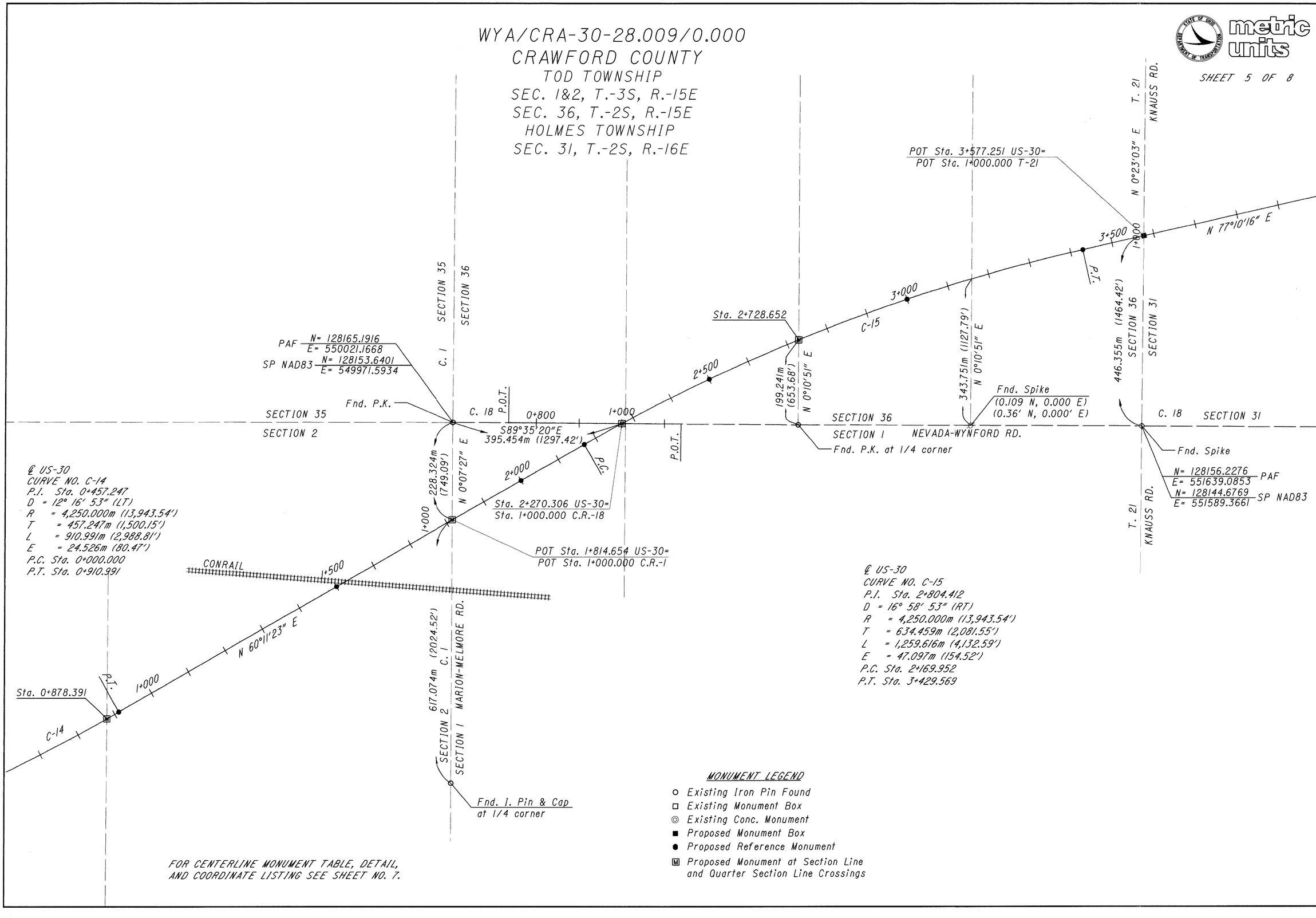
Fnd. Spike
N= 126508.1563
E= 548394.8912 PAF
N= 126496.7541
E= 548345.4643 SP NAD83

MONUMENT LEGEND
- ○ Existing Iron Pin Found
- □ Existing Monument Box
- ◎ Existing Conc. Monument
- ■ Proposed Monument Box
- ● Proposed Reference Monument
- Ⓜ Proposed Monument at Section Line and Quarter Section Line Crossings

FOR CENTERLINE MONUMENT TABLE, DETAIL, AND COORDINATE LISTING SEE SHEET NO. 7.

WYA/CRA-30-28.009/0.000
CRAWFORD COUNTY
TOD TOWNSHIP
SEC. 1&2, T.-3S, R.-15E
SEC. 36, T.-2S, R.-15E
HOLMES TOWNSHIP
SEC. 31, T.-2S, R.-16E

metric units



℄ US-30
CURVE NO. C-14
P.I. Sta. 0+457.247
D = 12° 16' 53" (LT)
R = 4,250.000m (13,943.54')
T = 457.247m (1,500.15')
L = 910.991m (2,988.81')
E = 24.526m (80.47')
P.C. Sta. 0+000.000
P.T. Sta. 0+910.991

℄ US-30
CURVE NO. C-15
P.I. Sta. 2+804.412
D = 16° 58' 53" (RT)
R = 4,250.000m (13,943.54')
T = 634.459m (2,081.55')
L = 1,259.616m (4,132.59')
E = 47.097m (154.52')
P.C. Sta. 2+169.952
P.T. Sta. 3+429.569

FOR CENTERLINE MONUMENT TABLE, DETAIL, AND COORDINATE LISTING SEE SHEET NO. 7.

MONUMENT LEGEND
- ○ Existing Iron Pin Found
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- Ⓜ Proposed Monument at Section Line and Quarter Section Line Crossings

SCALE IN METERS 1:4000

PID NO. 10289

CENTERLINE PLAT
STA. 0+700.000 TO STA. 3+900.000

WYA/CRA-30-28.009/0.000

1975
2116

WYA/CRA-30-28.009/0.000
CRAWFORD COUNTY
HOLMES TOWNSHIP
SEC. 31&32, T.-2S, R.-16E

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

SECTION 31 | SECTION 32

C. 22 BETHEL RD.

N 0°16'15" E

Fnd. I. Pin & Cap

PAF N= 129777.7792 E= 554875.7104

SP NAD83 N= 129766.0823 E= 554825.6995

RAMP "P"
CURVE NO. SCS-38
P.I. Sta. 5+999.907
D = 44° 27' 34" (LT)
R = 120.000m (393.70')
Ls1 = 80.000m (262.47')
Ls2 = 60.000m (196.85')
θs1 = 19° 05' 55"
θs2 = 14° 19' 26"
LT1 = 53.647m (176.01')
LT2 = 40.132m (131.67')
ST1 = 26.952m (88.43')
ST2 = 20.120m (66.01')
Lc = 23.116m (75.84')
T1 = 88.421m (290.09')
T2 = 80.871m (265.32')
Es = 11.511m (37.77')
T.S. Sta. 5+911.486
S.C. Sta. 5+991.486
C.S. Sta. 6+014.601
S.T. Sta. 6+074.601

END PROJECT
STA. 6+528.317
SLD= 6.528

SECTION 32 | SECTION 33

P.O.T.

EX. U.S.-30

0+500

Sta. 6+108.580 ℄ Ramp "P"=
Sta. 0+695.632 CR-330

Sta. 1+097.018 CR-330 =
Sta. 6+479.100 US 30

Sta. 5+911.486 ℄ Ramp "P"=
Sta. 5+910.352 ℄ U.S. 30 (34.205 LT)

PAF N= 128957.8139 E= 553277.7880

SP NAD83 N= 128946.1909 E= 553227.9210

Sta. 5+385.621 US-30 =
Sta. 1+000.000 TR-111

Fnd. I. Pin & Cap at 1/4 Corner

136.114m (446.57')

℄ RAMP P SCS-38 T.S. S.C. C.S. S.T. N 40°52'27" E

Fnd. Spike

1/2 SECTION LINE

T.R. 111 SHROLL RD.

15.688m (51.47')

5+500

6+000

1+000

6+500

N 89°41'39" E

7+000

P.T.

84.838m (278.34')

5+000

C-16

N 89°47'58" E

Sta. 5+901.325 ℄ Ramp "O"=
Sta. 5+901.325 ℄ U.S.-30 (19.800 RT)

P.C.

6+000

C-35

P.C.C.

C.S.

CS-36

℄ RAMP O SCS-37

S.T.

N 43°50'22" E

P.O.T.

C. 330

Sta. 4+420.428

4+500

℄ U.S. -30

P.C.

Fnd. Stone at Center Section

P.R.S.

S.C.

C.S.

PT Sta. 6+107.625

4+000

N 77°10'16" E

POC Sta. 5+248.623 US-30 =
POT Sta. 1+000.000 CR-22

N 0°04'39" E

790.052m (2592.03')

C. 22 BETHEL RD.

SECTION 31 | SECTION 32

SECTION 32 | SECTION 33

SECTION 31 | SECTION 32

℄ US-30
CURVE NO. C-16
P.I. Sta. 5+345.696
D = 12° 31' 23" (RT)
R = 7,000.000m (22965.83')
T = 768.050m (2519.84')
L = 1,529.979m (5019.61')
E = 42.010m (137.83')
P.C. Sta. 4+577.646
P.T. Sta. 6+107.625

RAMP "O"
CURVE NO. C-35
P.I. Sta. 5+995.420
D = 8° 36' 35" (RT)
R = 1,250.000m (4101.04')
T = 94.095m (308.71')
L = 187.836m (617.26')
E = 3.537m (11.60')
P.C. Sta. 5+901.325
P.C.C. Sta. 6+089.161

RAMP "O"
CURVE NO. CS-36
P.I. Sta. 6+151.335
D = 20° 21' 09" (RT)
R = 330.000m (1082.68')
Ls2 = 90.000m (295.28')
θs2 = 7° 48' 47"
LT2 = 60.059m (197.04')
ST2 = 30.053m (98.60')
Lc = 72.223m (236.95')
T1 = 62.174m (203.98')
T2 = 101.452m (332.85')
Es = 5.806m (28.89')
P.C.C. Sta. 6+089.161
C.S. Sta. 6+161.384
P.R.S. Sta. 6+251.384

RAMP "O"
CURVE NO. SCS-37
P.I. Sta. 6+366.099
D = 73° 07' 43" (LT)
R = 100.000m (328.08')
Ls1 = 80.000m (262.47')
Ls2 = 60.000m (196.85')
θs1 = 22° 55' 06"
θs2 = 17° 11' 19"
LT1 = 53.787m (176.47')
LT2 = 40.190m (131.86')
ST1 = 27.080m (88.84')
ST2 = 20.173m (66.18')
Lc = 57.633m (189.08')
T1 = 114.716m (376.36')
T2 = 106.397m (349.07')
Es = 27.089m (88.87')
P.R.S. Sta. 6+251.384
S.C. Sta. 6+331.384
C.S. Sta. 6+389.017
S.T. Sta. 6+449.017

PAF N= 128152.0833 E= 553281.5968

SP NAD83 N= 128140.5330 E= 553231.7295

MONUMENT LEGEND

- ○ Existing Iron Pin Found
- □ Existing Monument Box
- ◎ Existing Conc. Monument
- ■ Proposed Monument Box
- ● Proposed Reference Monument
- Ⓜ Proposed Monument at Section Line and Quarter Section Line Crossings

FOR CENTERLINE MONUMENT TABLE, DETAIL, AND COORDINATE LISTING SEE SHEET NO. 7.

N

SCALE IN METERS 1:4000

PID NO. 10289

CENTERLINE PLAT
WYA/CRA-30-28.009/0.000
STA. 3+900.000 TO STA. 7+000.000

1976
2116

metric units

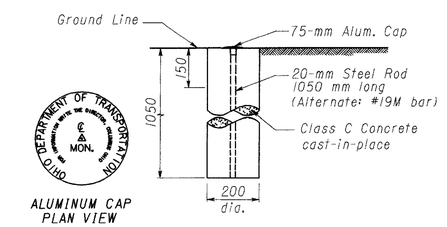
SHEET 7 OF 8

STATION	TYPE	LOCATION	PROJECT COORDINATES ON ADJUSTMENT FACTOR		STATE PLANE NAD 83 OHIO NORTH ZONE	
			NORTH	EAST	NORTH	EAST
		MAINLINE US 30				
P.C. STA. 29+193.960	ACM	CENTERLINE	127408.7314	538352.5672	127397.2481	538304.0455
P.O.C. STA. 29+500.000	CM	CENTERLINE	127273.4794	538627.0247	127262.0082	538578.4782
INT. TR-124 STA. 30+014.086	ACM	CENTERLINE	127091.8255	539107.6117	127080.3707	539059.0219
P.O.C. STA. 30+000.000	CM	CENTERLINE	127096.0225	539094.1659	127084.5673	539045.5773
P.O.C. STA. 30+500.000	CM	CENTERLINE	126974.6234	539578.9071	126963.1792	539530.2749
P.O.C. STA. 31+000.000	CM	CENTERLINE	126910.9603	540074.5468	126899.5218	540025.8699
P.T. STA. 31+420.124	CM	CENTERLINE	126902.7730	540494.4201	126891.3353	540445.7053
P.O.T. STA. 31+500.000	CM	CENTERLINE	126905.1633	540574.2602	126893.7253	540525.5382
P.O.T. STA. 32+000.000	CM	CENTERLINE	126920.1258	541074.0363	126908.6865	541025.2693
P.O.T. STA. 32+500.000	CM	CENTERLINE	126935.0884	541573.8124	126923.6477	541525.0004
P.O.T. STA. 33+000.000	CM	CENTERLINE	126950.0509	542073.5884	126938.6089	542024.7313
P.C. STA. 33+401.350	CM	CENTERLINE	126962.0613	542474.7589	126950.6182	542425.8656
P.O.C. STA. 33+500.000	CM	CENTERLINE	126963.8688	542573.3899	126952.4255	542524.4878
P.T. STA. 33+559.459	CM	CENTERLINE	126963.8523	524632.8485	126952.4090	524585.5633
P.O.T. STA. 34+000.000	CM	CENTERLINE	126960.6484	543073.3778	126949.2054	543024.4306
P.O.T. STA. 34+500.000	CM	CENTERLINE	126957.0122	543573.3645	126945.5696	543524.3722
P.O.T. STA. 35+000.000	CM	CENTERLINE	126953.3759	544073.3513	126941.9336	544024.3140
P.O.T. STA. 35+500.000	CM	CENTERLINE	126949.7396	544573.3381	126938.2976	544524.2557
P.C. STA. 35+759.459	CM	CENTERLINE	126947.9527	544832.7905	126936.5109	544783.6847
P.O.C. STA. 36+000.000	CM	CENTERLINE	126939.2993	545073.1470	126927.8583	545024.0196
P.O.C. STA. 36+500.000	CM	CENTERLINE	126878.1414	545569.1021	126866.7059	5455!9.9300
P.T. STA. 36+526.662	CM	CENTERLINE	126873.2460	545595.3110	126861.8109	545546.1365
P.C. STA. 36+933.804	CM	CENTERLINE	126797.2370	545995.2952	126785.8088	545946.0846
P.O.C. STA. 37+000.000	CM	CENTERLINE	126786.4208	546060.5950	126774.9935	546011.3786
P.T. STA. 37+395.175	CM	CENTERLINE	126786.6672	546454.4591	126775.2399	546405.2072
P.O.T. STA. 37+500.000	CM	CENTERLINE	126801.4774	546558.2328	126790.0488	546508.9715
P.O.T. STA. 37+771.504	ACM	CENTERLINE	126839.8369	546827.0133	126828.4048	546777.7278
P.O.T. STA. 38+000.000	CM	CENTERLINE	126872.1199	547053.2173	126860.6849	547003.9114
P.O.C. STA. 38+200.00	CM	CENTERLINE	126900.3770	547251.2111	126888.9395	547201.8873
P.O.T. STA. 38+500.000	CM	CENTERLINE	126942.7625	547548.2017	126931.3211	547498.8512
P.C. STA. 38+677.827	CM	CENTERLINE	126967.8868	547724.2449	126956.4432	547674.8785
P.O.C. STA. 39+000.000	CM	CENTERLINE	127025.4444	548041.1564	127013.9956	547991.7615
P.T. STA. 39+375.580	ACM	CENTERLINE	127122.6025	548403.8259	127111.1449	548354.3983
P.C. STA. 0+000.000	ACM	CENTERLINE	127122.6025	548403.8259	127111.1449	548354.3983
P.O.C. STA. 0+500.000	CM	CENTERLINE	127300.8621	548870.6613	127289.3885	548821.1916
P.T. STA. 0+910.991	CM	CENTERLINE	127487.6302	549236.5841	127476.1397	549187.0814
P.O.T. STA. 1+000.000	CM	CENTERLINE	127531.8793	549313.8154	127520.3849	549264.3057
P.O.T. STA. 1+500.000	CM	CENTERLINE	127780.4440	549747.6536	127768.9271	549698.1048
P.O.T. STA. 2+000.000	CM	CENTERLINE	128029.0087	550181.4918	128017.4694	550131.9039
P.C. STA. 2+169.952	CM	CENTERLINE	128113.4970	550328.9555	128101.9501	550279.3544
P.O.C. STA. 2+500.000	CM	CENTERLINE	128266.2944	550621.4100	128254.7338	550571.7825
P.O.C. STA. 3+000.000	CM	CENTERLINE	128453.4123	551084.7659	128441.8348	551035.0966
P.T. STA. 3+429.569	CM	CENTERLINE	128569.7811	551498.0822	128558.1931	551448.3757
P.O.T. STA. 3+500.000	CM	CENTERLINE	128585.4197	551566.7555	128573.8303	551517.0428
P.O.T. STA. 4+000.000	CM	CENTERLINE	128696.4401	552054.2742	128684.8407	552004.5175
P.O.T. STA. 4+500.000	CM	CENTERLINE	128807.4604	552541.7929	128795.8510	552491.9923
P.C. STA. 4+577.646	CM	CENTERLINE	128824.7010	552617.5007	128813.0900	552567.6933
P.O.C. STA. 5+000.000	CM	CENTERLINE	128906.0041	553031.8901	128894.3858	552982.0453
P.O.C. STA. 5+500.000	CM	CENTERLINE	128969.7447	553527.7034	128958.1207	553477.8139
P.O.C. STA. 6+000.000	CM	CENTERLINE	128997.9376	554026.8015	128986.3110	553976.8671
P.T. STA. 6+107.625	CM	CENTERLINE	128999.3394	554134.4167	128987.7127	554084.4726
P.O.T. STA. 6+500.000	CM	CENTERLINE	129001.4341	554526.7857	128989.8072	554476.8062

CM = CENTERLINE REFERENCE MONUMENT
ACM = ADJUSTABLE CENTERLINE MONUMENT
(See Details this sheet)

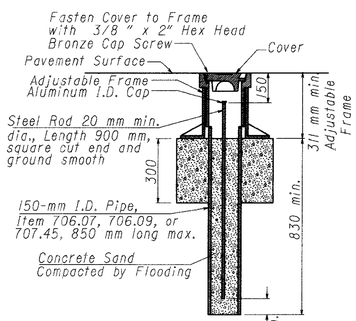
PROJECT COORDINATES ARE ON AN ADJUSTMENT FACTOR TO YIELD SURFACE MEASURED DISTANCES. TO CONVERT FROM PROJECT COORDINATES TO STATE PLANE NAD83 OHIO NORTH ZONE COORDINATES, MULTIPLY BY THE AVERAGE COMBINATION SCALE FACTOR OF 0.99990987.

STATION	TYPE	LOCATION	PROJECT COORDINATES ON ADJUSTMENT FACTOR		STATE PLANE NAD 83 OHIO NORTH ZONE	
			NORTH	EAST	NORTH	EAST
		BASELINE US 30 EAST				
P.C. STA. 28+009.255	ACM	BASELINE	128083.6631	537889.1184	128072.1189	537840.6385
P.T. STA. 28+311.441	ACM	BASELINE	127781.5988	537885.0446	127770.0818	537836.5650
T.S. STA. 28+350.978	ACM	BASELINE	127742.1247	537882.8057	127730.6113	537834.3263
S.C. STA. 28+495.978	ACM	BASELINE	127597.2434	537880.7262	127585.7431	537832.2470
P.O.C. STA. 29+000.000	ACM	BASELINE	127171.8432	538119.4971	127160.3812	538070.9964
C.S. STA. 29+373.695	ACM	BASELINE	127066.5210	538471.1287	127055.0685	538422.5963
S.T. STA. 29+518.695	ACM	BASELINE	127083.9699	538614.9704	127072.5158	538566.4250
T.S. STA. 29+633.092	ACM	BASELINE	127102.5363	538727.8508	127091.0805	538679.2953
S.C. STA. 29+753.092	ACM	BASELINE	127117.7643	538846.8190	127106.3072	538798.2527
C.S. STA. 29+893.028	ACM	BASELINE	127108.1323	538986.0583	127096.6760	538937.4795
S.T. STA. 30+013.028	ACM	BASELINE	127076.6681	539101.7965	127065.2147	539053.2073
		BASELINE US 30 WEST				
T.S. STA. 28+412.833	ACM	BASELINE	128017.8828	537933.8838	128006.3445	537885.3998
S.C. STA. 28+532.833	ACM	BASELINE	127898.3920	537944.2398	127886.8645	537895.7549
C.S. STA. 28+987.495	ACM	BASELINE	127524.5737	538180.6050	127513.0799	538132.0988
S.T. STA. 29+107.495	ACM	BASELINE	127463.9836	538284.1142	127452.4953	538235.5987
P.O.T. STA. 29+193.960	ACM	BASELINE	127422.9956	538360.2470	127411.5110	538311.7246
		RAMP A				
P.C. STA. 28+558.024	ACM	BASELINE	126561.7226	537971.4715	126550.3156	537922.9841
P.C.C. STA. 28+731.006	ACM	BASELINE	126734.4351	537978.2083	126723.0125	537929.7203
C.S. STA. 29+086.030	ACM	BASELINE	126993.0082	538191.6987	126981.5623	538143.1915
S.T. STA. 29+156.030	ACM	BASELINE	127008.4184	538259.9394	126996.9711	538211.4260
P.O.T. STA. 29+518.695	ACM	BASELINE	127074.7192	538616.4920	127063.2660	538567.9465
		RAMP B				
P.C. STA. 28+027.321	ACM	BASELINE	126792.8791	537921.9971	126781.4513	537873.5142
C.S. STA. 28+144.882	ACM	BASELINE	126906.2086	537893.8354	126894.7705	537845.3550
S.T. STA. 28+226.822	ACM	BASELINE	126977.0749	537852.7114	126965.6305	537804.2347
T.S. STA. 28+226.822	ACM	BASELINE	126979.6673	537856.7511	126968.2226	537808.2741
S.C. STA. 28+308.822	ACM	BASELINE	127050.5336	537815.6272	127039.0825	537767.1539
C.S. STA. 28+985.423	ACM	BASELINE	127477.6032	538156.0616	127466.1136	538107.5576
S.T. STA. 29+067.423	ACM	BASELINE	127453.3115	538234.3120	127441.8241	538185.8009
P.C. STA. 29+135.020	ACM	BASELINE	127430.3990	538297.9078	127418.9137	538249.3910
P.T. STA. 29+291.436	ACM	BASELINE	127368.3244	538441.3675	127356.8447	538392.8378



ALUMINUM CAP PLAN VIEW

CENTERLINE MONUMENT DETAIL



ADJUSTABLE CENTERLINE MONUMENT DETAIL

ADJUSTABLE CENTERLINE MONUMENTS AND REFERENCE MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM 1.1M (REV. 4-8-97) OF THE OHIO DEPARTMENT OF TRANSPORTATION. THE PLACING OF THE MONUMENTS SHALL BE UNDER THE DIRECTION OF A REGISTERED SURVEYOR AND ARE TO BE SET, AS SHOWN BY THE HIGHWAY CONTRACTOR AT THE TIME OF CONSTRUCTION. ANY ALTERATIONS, WITH PRIOR APPROVAL OF THE OHIO DEPARTMENT OF TRANSPORTATION, SHALL BE NOTED AND O.D.O.T SHALL BE NOTIFIED OF THE NEW LOCATIONS.

PID NO. 10289

CENTERLINE PLAT
REFERENCE MONUMENT LOCATION

WYA / CRA-30-28.009 / 0.000

1977
2116

STATION	TYPE	LOCATION	PROJECT COORDINATES ON ADJUSTMENT FACTOR		STATE PLANE NAD 83 OHIO NORTH ZONE	
			NORTH	EAST	NORTH	EAST
RAMP E						
P.C. STA. 33+702.752		BASELINE	126943.0107	542775.9937	126931.5693	542727.0733
P.C.C. STA. 33+875.734		BASELINE	126929.8070	542948.3327	126918.3668	542899.3968
C.S. STA. 34+169.638		BASELINE	126806.5310	543210.4850	126795.1019	543161.5254
S.T. STA. 34+229.638		BASELINE	126764.6206	543253.4077	126753.1953	543204.4443
RAMP F						
P.C. STA. 33+494.750		BASELINE	126989.4045	542567.9371	126977.9589	542519.0355
C.S. STA. 33+700.838		BASELINE	127056.7011	542759.2615	127045.2495	542710.3426
S.T. STA. 33+790.838		BASELINE	127117.1891	542825.8052	127105.7320	542776.8803
RAMP G						
T.S. STA. 34+006.392		BASELINE	127154.6625	543129.2367	127143.2021	543080.2845
S.C. STA. 34+066.392		BASELINE	127112.7862	543172.1927	127101.3295	543123.2366
P.C.C. STA. 34+359.899		BASELINE	126989.7762	543434.0496	126978.3306	543385.0699
P.T. STA. 34+532.881		BASELINE	126976.5725	543606.3885	126965.1281	543557.3933
RAMP H						
T.S. STA. 34+439.652		BASELINE	126801.8472	543551.0206	126790.4186	543502.0303
S.C. STA. 34+529.652		BASELINE	126862.3222	543617.5760	126850.8881	543568.5797
P.T. STA. 34+740.745		BASELINE	126929.6870	543813.9176	126918.2468	543764.9036
RAMP I						
P.C. STA. 33+729.786		BASELINE	127073.8726	542817.0599	127062.4194	542768.1358
P.T. STA. 33+796.9658		BASELINE	127049.4856	542877.9919	127038.0346	542829.0623
P.C. STA. 34+127.460		BASELINE	127047.0116	543208.4772	127035.5609	543159.5178
P.T. STA. 34+194.7436		BASELINE	127032.5833	543273.6886	127021.1339	543224.7233
RAMP J						
P.C. STA. 34+040.879		BASELINE	126886.9975	543108.7002	126875.5612	543059.7498
P.T. STA. 34+108.158		BASELINE	126872.5710	543173.9078	126861.1360	543124.9515
P.C. STA. 34+434.098		BASELINE	126870.1308	543499.8388	126858.6960	543450.8532
P.T. STA. 34+501.225		BASELINE	126845.7800	543560.7323	126834.3474	543511.7412

CM = CENTERLINE REFERENCE MONUMENT
ACM = ADJUSTABLE CENTERLINE MONUMENT

PROJECT COORDINATES ARE ON AN ADJUSTMENT FACTOR TO YIELD SURFACE MEASURED DISTANCES. TO CONVERT FROM PROJECT COORDINATES TO STATE PLANE NAD83 OHIO NORTH ZONE COORDINATES, MULTIPLY BY THE AVERAGE COMBINATION SCALE FACTOR OF 0.99990987.

STATION	TYPE	LOCATION	PROJECT COORDINATES ON ADJUSTMENT FACTOR		STATE PLANE NAD 83 OHIO NORTH ZONE	
			NORTH	EAST	NORTH	EAST
RAMP K						
P.C. STA. 33+316.395		BASELINE	126758.0086	546377.8881	126746.5839	546328.6360
C.S. STA. 37+437.053		BASELINE	126764.6794	546498.3438	126753.2541	546449.0879
S.T. STA. 37+497.053		BASELINE	126765.5889	546558.3363	126754.1635	546509.0750
P.C. STA. 37+568.011		BASELINE	126766.3098	546629.2900	126754.8844	546580.0223
P.T. STA. 37+658.632		BASELINE	126768.4033	546719.8850	126756.9777	546670.6091
RAMP L						
P.C. STA. 37+434.573		BASELINE	126817.5521	546489.8493	126806.1220	546440.5942
C.S. STA. 37+498.430		BASELINE	126833.9023	546551.4744	126822.4708	546502.2137
P.R.S. STA. 37+578.430		BASELINE	126867.7315	546623.9123	126856.2969	546574.6451
S.C. STA. 37+658.430		BASELINE	126900.2612	546696.8824	126888.8237	546647.6086
C.S. STA. 37+695.595		BASELINE	126908.4570	546733.0902	126897.0187	546683.8131
S.T. STA. 37+755.595		BASELINE	126911.7438	546792.9547	126900.3052	546743.6723
RAMP M						
T.S. STA. 38+037.957		BASELINE	126913.0096	547086.5545	126901.5709	547037.2456
S.C. STA. 38+097.957		BASELINE	126913.6920	547146.5491	126902.253	547097.2348
P.T. STA. 38+240.939		BASELINE	126925.7625	547288.9425	126914.3227	547239.6153
RAMP N						
T.S. STA. 37+796.583		BASELINE	126773.2101	546868.5054	126761.7840	546819.2161
S.C. STA. 37+856.583		BASELINE	126777.1820	546928.3284	126765.7556	546879.0338
C.S. STA. 37+886.756		BASELINE	126783.7281	546957.7606	126772.3011	546908.4633
P.R.S. STA. 37+966.756		BASELINE	126814.8694	547031.3339	126803.4396	546982.0300
S.C. STA. 38+046.756		BASELINE	126847.3200	547104.3996	126835.8873	547055.0891
P.T. STA. 38+104.360		BASELINE	126861.5460	547160.1439	126850.1120	547110.8284
RAMP O						
P.C. STA. 5+901.325		BASELINE	128975.4105	553928.8540	128963.7860	553878.9284
P.C.C. STA. 6+089.161		BASELINE	128967.8453	554116.3611	128956.2214	554066.4186
C.S. STA. 6+161.384		BASELINE	128951.7721	554186.6245	128940.1497	554136.6757
P.R.S. STA. 6+251.384		BASELINE	128914.6749	554268.5416	128903.0558	554218.5854
S.C. STA. 6+331.384		BASELINE	128888.3705	554343.4923	128876.7538	554293.5293
C.S.. STA. 6+389.017		BASELINE	128900.6351	554398.9923	128889.0173	554349.0243
S.T. STA. 6+449.017		BASELINE	128939.3950	554444.4782	128927.7737	554394.5061
RAMP P						
T.S.. STA. 5+911.486		BASELINE	129029.6926	553936.0403	129018.0632	553886.1140
S.C. STA. 5+991.486		BASELINE	129045.3724	554014.0865	129033.7415	553964.1532
P.C. STA. 6+014.601		BASELINE	129056.7785	554034.1512	129045.1466	553984.2161
S.T. STA. 6+074.601		BASELINE	129098.8554	554076.6904	129087.2197	554026.7515

PID NO. 10289

CENTERLINE PLAT
REFERENCE MONUMENT LOCATION

WYA/CRA-30-28.009/0.000

1978
2116

WYA/CRA-30-28.009/0.000
WYANDOT COUNTY
CRANE TOWNSHIP
SEC. 2&3, T.-3S, R.-14E
PITT TOWNSHIP
SEC. 10, T.-3S, R.-14E

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

SHEET 1 OF 7

CONVENTIONAL SIGNS

COUNTY LINE
TOWNSHIP LINE
SECTION LINE
CORPORATION LINE ____ or ////////////
FENCE LINE(existing) -x-x-x-x-x-
(proposed) -x-x-x-x-x-
30+000 30+100
CENTER LINE
RIGHT OF WAY (ONLY) ——R/W——
LIMITED ACCESS (ONLY) ——LA——
LIMITED ACCESS&RIGHT OF WAY —LA-R/W—
EXISTING RIGHT OF WAY ——EX. R/W——
PROPERTY LINE ℄ ℄ ℄
(in Ex. Fence) -x-℄-x-℄-x-
TREES STUMPS (to be removed)
Deciduous
Evergreen
UTILITY POLES: Telephone Power Light
RAILROAD: or
GUARDRAIL: (Exist.) (Prop.)
Distance Continues to Next Sheet (Typ.)

STRUCTURES KEY:

-RESIDENTIAL BUILDING
-COMMERCIAL BUILDING

SCALE IN METERS 1:4000 (0, 40, 80, 160)

PID NO. 10289

PROPERTY MAP
WYA/CRA-30-28.009/0.000 STA. 28+009.000 TO STA. 31+200.000

BEGIN WORK STA. 28+397.946
05-1995-0000
BEGIN PROJECT STA. 28+009.000 E.B. U.S. 30
BEGIN R/W ACQUISITION STA. 28+021.398 W.B. 30-STA. 14+312 U.S. 23
SECTION 34 SECTION 3
05-2010-0000
EX. LA-R/W
LA-R/W
14+000
28+500
8 MARTHA J. NEWELL(3/5), RONALD L. NEWELL, BEVERLY BATTON, BONNIE MENNINGEN, AND BETTY WALTON(2/5)
05-0625-0000
9 RONALD L. NEWELL
05-0585-0000
T.H. 55
R/W
WYANDOT COUNTY CRANE TOWNSHIP SECT. 3, T-3S, R-14E
05-0635-0000
05-0580-0000
Ex. R/W 15.240m (50.00') Typ.
℄ U.S. 30 W.B.
13+500
29+000
PERM. EASE.
SECTION 3 SECTION 2
Ex. R/W 12.192m (40.00') Typ.
T.H. 124
05-0565-0000
05-0555-0000
05-0520-0000
05-0515-0000
END R/W ACQUISITION STA. 1+225.000
05-0545-0000
FOR OWNERSHIP PERIPHERIES SEE SHEET NO. 15
7 MICHAEL R. GILLEN AND KAREN D. GILLEN
05-0620-0000
05-0605-0000
℄ US-30 E.B.
10 FREDERICK P. SMALLEY AND MIRIAM G. SMALLEY AKA MIRIAM SMALLEY
05-0590-0000
10 FREDERICK P. SMALLEY AND MIRIAM SMALLEY AKA MIRIAM G. SMALLEY
05-0545-0000
11 CLARENCE A. RACHETER AND MILDRED B. RACHETER
05-0535-0000
PERM. EASE.
30+500
31+000
℄ US-30
Bank of Rock Run
12 LEAH JEAN WOLFE
05-0540-0000
333.46'(1094.05') N 0°09'03" E
℄ RAMP B
℄ US-23
6 DONALD M. BASSLER AND CATHERINE L. BASSLER
05-0610-0000
66 MARJORIE A. HENDERSON, ETAL
05-0615-0000
BEGIN R/W ACQUISITION STA. 0+520.000
05-600-0000
HALF SECTION LINE
5 JAMES A. SMALLEY(1/2), FREDERICK P. SMALLEY, MIRIAM G. SMALLEY(1/2)
05-0595-0100
68 JAMES A. SMALLEY
05-0595-0000
END R/W ACQUISITION STA. 1+525.000
WYANDOT COUNTY CRANE TOWNSHIP SEC. 3, T-3S, R-14E
WYANDOT COUNTY CRANE TOWNSHIP SECT. 2, T-3S, R-14E
514.520 (1688.05') N 0°09'04" W
TEMP. EASE.
BEGIN R/W ACQUISITION STA. 0+510.000
0+500
12+500
℄ C.H. 56
C.H. 56
PITT TWP. SECTION 10
SECTION 2 SECTION 11
PITT TWP.
67 THIEL LIVING TRUST
26-1305-0000
65 FRANKLIN E. McCLAIN, ETUX.
26-1240-0000
65 26-1240-0000
69 THIEL LIVING TRUST, ETUX.
26-1235-0000
END R/W ACQUISITION STA. 12+290.000 U.S. 23
FOR OWNERSHIP PERIPHERIES SEE SHEET NO. 15
FOR UTILITY LIST AND NOTE SEE SHEET NO. 9

REV.	DATE	DESCRIPTION
REH	2/3/99	Revised Parcels-5,6,9,10,11,65,68 & 69
REH	6/21/99	Revised Parcels-10 & 68
REH	7/21/99	Name Change-Parcel 9
DATE OF COMPLETION		

9 / 146

1979 / 2116

WYA/CRA-30-28.009/0.000
WYANDOT COUNTY
CRANE TOWNSHIP
SEC. 1, T.-3S, R.-14E
ANTRIM TOWNSHIP
SEC. 6, T.-3S, R.-15E

metric units

SHEET 2 OF 7

SCALE IN METERS 1:4000

PID NO. 10289

PROPERTY MAP
WYA/CRA-30-28.009/0.000 STA. 31+200.000 TO STA. 34+200.000

T.H. 55

Ex. R/W 15.240m (50.00') Typ.

Ex. R/W 12.192m (40.00') Typ.

END R/W ACQUISITION STA. 1+520.000

BEGIN R/W ACQUISITION STA. 0+573.402

(71) L. MICHAEL WOLFE
07-0010-0000

07-0020-0000

07-0015-0000

(70) THOMAS R. EINGLE AND VIRGINIA E. EINGLE
05-0455-0000

TEMP. EASE.
PERM. EASE.

(73) CHARLES W. PENWELL AND LINDA L. PENWELL
02-0825-00
02-0820-02
02-0820-0300
02-0820-0100

C.H. 128 SECTION 6

02-0810-0000
02-0815-0000

(23) TERRY KOEHLER(1/4), DENNIS KOEHLER(1/4), JEFF KOEHLER(1/4), DEAN KOEHLER(1/4)
02-0775-0000

Branch of Rock Run
02-0805-0000

S 89°18'18" E 404.546 (1327.25')
S 89°25'55" E 401.72' (1318.00')

Wetland

PROPOSED REST AREA
34+000
34+000
℄ RAMP C
℄ RAMP I
34+000
℄ RAMP J
℄ RAMP E
PROPOSED REST AREA

LA-R/W
33+500 ℄ RAMP F
33+500
33+000
32+500
32+000
31+500

(13) RUSSELL E. SWINEHART
05-0470-0000

(15) STEVEN SWINEHART AND SABINE SWINEHART
05-0470

05-0485-0000

SECTION 2
SECTION 1

T.H. 127

(13) RUSSELL E. AND VERA I. SWINEHART
05-0465-0000

PERM. EASE.
07-0050-0000

(13) 05-0460-0000
PERM. EASE.

(17) JAMES J. GILLILAND AND JUDITH A. GILLILAND
07-0025-0000

ROCK RUN

(72) HENRY D. VENT
02-0800-0100
02-0800-0

(20) RUSSELL E. SWINEHART AND VERA I. SWINEHART
02-0800-0000

02-0790-0000

N0°06'43"W (121.033 (397.09'))
N0°21'52"E (182.698 (599.40'))
616.38'(2022.25') N 0°23'32" E

(17) JAMES J. GILLILAND AND JUDITH A. GILLILAND
PERM. EASE.
02-0795-0000

(21) MARYELLEN RULE
02-0790-0000

(22) HAROLD E. LARICK
02-0785-0000

PERM. EASE.

(12) DONALD E. WOLFE AND LEAH JEAN WOLFE, TRUSTEES OF THE DONALD E. WOLFE LIVING TRUST
05-0480-0000

333.46'(1094.05') N 0°09'03" E

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 1, T-3S, R-14E

05-0475-0000

SECTION 1

273.60'(897.65') N 0°08'21" E

(16) L. MICHAEL WOLFE
07-0045-0000

07-0040-0000

(18) DONALD E. WOLFE
07-0035-0000

(19) BETTY E. WOLFE(2/3), ROBERT L. WOLFE(1/6), DALE A. WOLFE(1/6)
07-0030-0000

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 6, T-3S, R-15E

SECTION 6
839.61'(2754.64')
S 89°23'57" E

C.H. 56
PITT TWP. SECTION 12
ANTRIM TWP. SECTION 7

Ex. R/W 12.192m (40.00') Typ.

UTILITIES

ELECTRIC:
OHIO POWER CO.
P.O. BOX 944
FINDLAY, OHIO 45839
(1-419 562-5015)

NORTH CENTRAL ELECTRIC
P.O. BOX 475
ATTICA, OHIO

TELEPHONE:
OHIO BELL TELEPHONE CO.
425 JEFFERSON ST.
TOLEDO, OHIO
(1-800 572-4000)

UNITED TELEPHONE
25 S. MULBERRY ST.
MANSFIELD, OHIO 44904
(1-800 624-0790)

GTE
550 LEADER ST.
MARION, OHIO 43302
(1-614 383-0537)

SPRINT
OSP ENGINEERING
175 ASHLAND RD.
MANSFIELD, OHIO 44904

GAS:
COLUMBIA GAS TRANSMISSION CORP.
3151 OLD LINCOLN RD.
WOOSTER, OHIO 44691
(1-330 287-6634)

COLUMBIA GAS OF OHIO
1800 N. BROAD STREET
FINDLAY, OHIO

CABLE TV:
CONTINENTAL CABLE
114 N. SANDUSKY ST.
UPPER SANDUSKY, OHIO 43351
(1-419 294-2334)

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 O.R.C.

REV.	DATE	DESCRIPTION
REH	2/3/99	Revised Parcel 15
REH	4/12/99	Removed "Landlocked" from Parcels 21 & 23
JDK	5/20/99	Revised names Parcels 13, 17 & 73
REH	5/24/99	Combine Parcel 14 with Parcel 12
REH	5/24/99	Name Change-Parcel 12
REH	7/21/99	Removed "Landlocked" from Parcel 17

DATE OF COMPLETION

10 / 146

1980 / 2116

WYA/CRA-30-28.009/0.000
WYANDOT COUNTY
ANTRIM TOWNSHIP
SEC. 4,5&6, T.-3S, R.-15E

STATE OF OHIO DEPARTMENT OF TRANSPORTATION — metric units

SHEET 3 OF 7

T.H. 55 | T.H. 55 | T.H. 55

Ex. R/W 15.240m (50.00') Typ.

WYANDOT COUNTY ANTRIM TOWNSHIP SECT. 6, T-3S, R-15E

SECTION 6 | SECTION 5

WYANDOT COUNTY ANTRIM TOWNSHIP SECT. 5, T-3S, R-15E

SECTION 5 | SECTION 4

WYANDOT COUNTY ANTRIM TOWNSHIP SECT. 4, T-3S, R-15E

WYANDOT COUNTY NEVADA CORP. LINE

NEVADA CORP. LINE WYANDOT COUNTY

Ex. R/W 15.240m (50.00') Typ.

S 89°25'55" E
204.002 (669.30')
197.725 (648.70')

PROPOSED REST AREA

Wetland

(23) TERRY KOEHLER(1/4), DENNIS KOEHLER(1/4), JEFF KOEHLER(1/4), DEAN KOEHLER(1/4)
02-0775-0000

N 0°11'28" E
297.412(975.76')

(24) DONNA MARIE FROST AND HAROLD E. LARICK
02-0925-0000

02-0905-0000

T.H. 133

(26) JERRY N. McCLAIN
02-0865-0000

(28) G/K WYANDOT LTD.
02-1005-0000

CREEK

(30) LEWIS L. KAISER AND ANNA L. KAISER, TRUSTEES or their successors in trust, under the LEWIS AND ANNA KAISER LIVING TRUST
02-0995-0000

(31) MARGARET I. MILLER
02-0970-0000

℄ RAMP G

34+500

LA-R/W

35+000

35+500

LA-R/W

36+000

℄ RAMP J

34+500

℄ RAMP E

℄ RAMP H

PROPOSED REST AREA

(23)

LA-R/W

PERM. EASE.

PERM. EASE.

R/W

R/W

02-0910-0000

02-0900-0000

(25) 02-0895-0000

GERALD A. VON STEIN AND GLADYS E. VON STEIN

Existing 20' Easement of ingress and egress as described in DB 141, Pg. 181

02-0890-0000

02-0855-0000

WYANDOT COUNTY COON HUNTERS ASSOCIATION, INC.
(27) 02-0880-0000

BROKEEN SWORD

(29) I/S/F INC.
02-1000-0000

LA-R/W

37+000

LA-R/W

PERM. EASE.
02-0995-0000

WYANDOT COUNTY ANTRIM TOWNSHIP SECT. 5, T-3S, R-15E

02-0920-0000

02-0915-0000

299.19 (981.36')
N 0°11'52" E

N 0°15'19" E
388.069 (1273.19')

WYANDOT COUNTY ANTRIM TOWNSHIP SECT. 4, T-3S, R-15E

SECTION 6 | SECTION 5 | SECTION 4

ANTRIM TWP. SECTION 7 | C.H. 56 | ANTRIM TWP. SECTION 8 | C.H. 56 | ANTRIM TWP. SECTION 9

Ex. R/W 12.192m (40.00') Typ.

REV.	DATE	DESCRIPTION
REH	11/17/98	Revised Parcel 31
REH	2/3/99	Revised Parcels-24,25 & 30
REH	4/12/99	Remove "Landlocked" from Parcels 23 & 29
JDK	5/20/99	Revised name Parcel 26
REH	3/15/00	Revised Parcel 23
DATE OF COMPLETION		

SCALE IN METERS 1:4000 (0 40 80 160)

PID NO. 10289

PROPERTY MAP
WYA/CRA-30-28.009/0.000
STA. 34+200.000 TO STA. 37+100.000

11 / 146

1981 / 2116

WYA/CRA-30-28.009/0.000
WYANDOT COUNTY
ANTRIM TOWNSHIP
SEC. 3&4, T.-3S, R.-15E
CRAWFORD COUNTY
TOD TOWNSHIP
SEC. 2, T.-3S, R.-15E

metric units

SHEET 4 OF 7

SCALE IN METERS 1:4000

PID NO. 10289

PROPERTY MAP
STA. 37+100.000 TO STA. 0+700.000

WYA/CRA-30-28.009/0.000

12/146

1982/2116

T.H. 55 — Ex. R/W 15.240m (50.00') Typ.

S.R. 231 — Ex. R/W 18.288m (60.00') Typ.

T.H. 10 — Ex. R/W 18.288m (60.00') Typ.

C. 18 — NEVADA-WYNFORD RD.

CONSOLIDATED RAIL CORPORATION — 37-00-61166-000 — (40)

(41) LARRY W. SAND — 37-00-10725-000

CRAWFORD COUNTY TOD TOWNSHIP SECT. 2, T-3S, R-15E

WYANDOT COUNTY ANTRIM TOWNSHIP SECT. 4, T-3S, R-15E

WYANDOT COUNTY ANTRIM TOWNSHIP SECT. 3, T-3S, R-15E

03-0010-0000

02-0010-0000

37-00-10675-000

37-00-10677-000

INDIAN RESERVATION LINE

NEVADA CORP. LINE

WYANDOT COUNTY

CRAWFORD COUNTY

SECTION 4

SECTION 3

SECTION 2

END R/W ACQUISITION STA. 1+315.000

END R/W ACQUISITION STA. 1+400.000

PERM. EASE.

T-11

R/W

LA-R/W

0+500

NEVADA CORP. LINE — WYANDOT COUNTY — N 89°20'30" E 267.195 (876.63')

N 0°02'25" E 329.690 (1081.66')

N 0°33'00" E 303.890 (997.01')

(82) MYRON V. KING — 02-0965-0000

(75) JUNIOR D. MILLER AND MARGARET I. MILLER — 02-0975-0000

(31) MARGARET I. MILLER — 02-0970-0000

TEMP. EASE.

(35) HARLEY LAVERNE WEATHERHOLTZ AND PRISCILLA ANN WEATHERHOLTZ, HARLEY LAVERNE WEATHERHOLTZ AND PRISCILLA ANN WEATHERHOLTZ, TRUSTEES — 02-0035-0000

TEMP. EASE. — 02-0050-0000

(37) DONALD E. ALBAN AND MARY JEAN ALBAN — 02-1085-0000

(38) CHARLES EDWIN McCLAIN, KAREN S. HOSTETLER AND LILLIAN I. McCLAIN (LIFE ESTATE) — 37-00-10676-001

(33) OSCAR HOWARD AND RAMONA F. HOWARD — 02-0980-0000

Lease to Ohio Fuel and Gas Lease Bk. 14, Pg. 259

PERM. EASE.

38+500

39+000

TEMP. EASE.

723.179 (2372.64') S 89°22'26" W

Branch of Broken Sword Creek

(30) 02-0995-0000

℄ RAMP M 38+000

℄ RAMP L 37+500

℄ RAMP N 38+000

℄ RAMP K 37+500

(64) CHARLES R. PRINCE AND LINDA L. PRINCE — 02-0025-0000

(77) MICHAEL V. STROUSE — 37-00-10727-000

(34) VIRGINIA SCHIFER — 02-0040-0000

(36) TERRY KOEHLER (1/4), DENNIS KOEHLER(1/4), JEFF KOEHLER(1/4), DEAN KOEHLER(1/4) — 02-0030-0000

(76) MITCHELL N. WELCH AND DYANA L. WELCH — 37-00-10780-000

PERM. EASE. LEWIS L. KAISER AND ANNA L. KAISER, TRUSTEES or their successors in trust, under the LEWIS AND ANNA KAISER LIVING TRUST

(30) SECTION 4

(32) TEMP. EASE. MARGARET I. MILLER WITH LIFE ESTATE TO RUSSELL KELTNER AND MARIE KELTNER — 02-0985-0000

(74) DANIEL J. CHRISTMAN AND SHEILA M. CHRISTMAN — 02-0990-0000

02-0035-0000

WYANDOT COUNTY ANTRIM TOWNSHIP SECT. 3, T-3S, R-15E

BEGIN R/W ACQUISITION STA. 0+620.000

BEGIN R/W ACQUISITION STA. 0+680.000

SECTION 3

T.H. 10

SECTION 2

CRAWFORD COUNTY TOD TOWNSHIP SECT. 2, T-3S, R-15E

BUCYRUS-NEVADA RD.

Ex. R/W 18.288m (60.00') Typ.

Ex. R/W 12.192m (40.00') Typ.

C.H. 56

T.H. 56

ANTRIM TWP. SECTION 9

ANTRIM TWP. SECTION 10

T. 2

FOR OWNERSHIP PERIPHERIES SEE SHEET NO. 15

REV.	DATE	DESCRIPTION
REH	11/17/98	Revised Parcels-31,32,33 & 82
REH	2/3/99	Revised Parcels-30,32,33 & 82
REH	4/12/99	Revised Parcel 33
REH	4/12/99	Remove "Landlocked" from Parcels 34,36 & 37
JDK	5/20/99	Revised name Parcel 35
REH	7/23/99	Delete Service Rd.,Add Temp.-Parcel 35

DATE OF COMPLETION

WYA/CRA-30-28.009/0.000
CRAWFORD COUNTY
TOD TOWNSHIP
SEC. 1&2, T.-3S, R.-15E
SEC. 36, T.-2S, R.-15E
HOLMES TOWNSHIP
SEC. 31, T.-2S, R.-16E

FOR OWNERSHIP PERIPHERIES SEE SHEET NO. 14

STATE OF OHIO DEPARTMENT OF TRANSPORTATION — metric units

SCALE IN METERS 1:4000 (0 40 80 160)

PID NO. 10289

PROPERTY MAP
STA. 0+700.000 TO STA. 3+900.000

WYA/CRA-30-28.009/0.000

SHEET 5 OF 7

T-111 SHROLL RD.

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 31,T-2S,R-16E

KNAUSS RD. T-21

END R/W ACQUISITION STA. 1+369.488

1+200 R/W

LA-R/W

3+500

3+000

2+500

2+000

1+500

1+000

0+800

R/W

(47) VERNON C. KENT AND SUZANNE R. KENT
37-00-10640-000

37-00-10641-000

(44) CARL R. WALTON AND IRENE M. WALTON
37-00-10783-000

(45) MICHAEL D. WILLIAMS AND CANDY S. WILLIAMS
37-00-10794-000

(46) HAROLD CLARENCE WILLIAMS, MICHAEL D. WILLIAMS AND CANDY WILLIAMS, L.E.

37-00-10793-000

(48) CHARLES A. SCOTT, PAUL E. SCOTT, KATHRYN E. BALL AND MYRTLE M. SCOTT (LIFE ESTATE)
21-00-04244-000

(78) GILBERT H. BUCHER AND SHIRLEY F. BUCHER
37-00-10516-000

TEMP. EASE.

PERM. EASE.

21-00-04365-000

(79) EDWARD L. WHEELER AND JUDY K. WHEELER

BEGIN R/W ACQUISITION STA. 0+562.790

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 36,T-2S,R-15E

(43) DALE W. HEISTAND
37-00-10614-000

37-00-10615-000

SECTION 35 SECTION 36 SECTION 31 SECTION 6 SECTION 1 SECTION 2

EXIST. R/W C-1 C-18

Ex. R/W 18.288m (60.00') Typ.

PERM. EASE.

293.410 (962.63')
S 89°35'19" E

NEVADA-WYNFORD RD.

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2,T-3S,R-15E

37-00-10725-000

(41) LARRY W. SAND
37-00-10726-000

(40) TEMP. EASE.

CONSOLIDATED RAIL CORPORATION
S 85°39'46" E 438.950 (1440.12')
37-00-61166-000

288.514 (946.57')
N 0°22'56" E

37-00-10675-000

(39) LEONARD E. CHANCE
37-00-10687-000

(38) CHARLES EDWIN McCLAIN, KAREN S. HOSTETLER AND LILLIAN I. McCLAIN (LIFE ESTATE)
37-00-10676-001

(42) CHARLES LINDEN BOWERS AND ESTELL LORETTA BOWERS
37-00-10515-000

(43) DALE W. HEISTAND
37-00-10616-000

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 1,T-3S,R-15E

CRAWFORD COUNTY
BUCYRUS TOWNSHIP
SECT. 6,T-3S,R-16E

MARION-MELMORE RD.

REV.	DATE	DESCRIPTION
REH	2/3/99	Revise Parcels-39,40,43 & 47
REH	4/12/99	Remove "Landlocked" from Parcel 39
REH	5/24/99	Name Change-Parcel 46

DATE OF COMPLETION

13 / 146

1983 / 2116

WYA/CRA-30-28.009/0.000
CRAWFORD COUNTY
HOLMES TOWNSHIP
SEC. 31&32, T.-2S, R.-16E

metric units

SHEET 6 OF 7

SCALE IN METERS 1:4000

PID NO. 10289

PROPERTY MAP STA. 3+900.000 TO STA. 7+000.000

WYA/CRA-30-28.009/0.000

14/146

1984/2116

QUAKER ROAD

SECTION 31 | SECTION 32 | SECTION 33

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 31,T-2S,R-16E

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 32,T-2S,R-16E

(81) OHIO POWER COMPANY
21-00-60233-000

(58) GERALD E. HATCHER AND JANE E. HATCHER(1/2), COLE. HATCHER(1/6), MARK D. HATCHER(1/6), TROY S. HATCHER(1/6)
21-00-03835-000

(80) DONALD E. KALB AND CHRISTINE T. KALB
21-00-03890-000
21-00-03889-000
21-00-04120-00

(52) ALLAN L. REINHARD AND JEAN A. REINHARD
21-00-04120-000

(50) CHARLES A. BOSWORTH AND SANDRA K. BOSWORTH
21-00-03931-001

21-00-03648-000

21-00-04232-000

(59) HAROLD W. KILLEN
21-00-03916-000

(61) ARTHUR J. BEALL, JR. AND MARJORIE J. BEALL
21-00-03626-000

(63) GERALD E. HATCHER AND JANE E. HATCHER
21-00-03826-000

(53) HARRY W. WALTON AND CAROLYN I. WALTON
21-00-03786-000

U.S. 30 | C-22 | BETHEL RD. | SHROLL RD. | T-111 | NEVADA-WYNFORD RD. | C-18 | JACK L. ADAMS | CREEK | RUN | GRASS | HALF SECTION LINE

END R/W ACQUISITION STA. 1+368.922

END PROJECT STA. 6+528.317

END WORK STA. 7+179.963

Ex. R/W 12.192m (40.00') Typ.

Ex. R/W 15.240m (50.00') Typ.

Ex. R/W 18.288m (60.00') Typ.

LA-R/W | RAMP P | RAMP Q | R/W | Ex. LA | Ex. R/W | 0+500 | 1+000 | 1+500 | 4+000 | 4+500 | 5+000 | 5+500 | 6+000 | 6+500 | 0+900

(56) JOHN A. HARIGLE AND PAMELA R. HARIGLE
21-00-03837-000
21-00-03837-003

57.701(189.31') N 0°04'16" W
53.340(175.00') N 89°47'58" E
56.863(186.56') S 0°04'16" E

PERM. EASE. | TEMP. EASE.

(60) DEANDRA D.. HATCHER
21-00-03836-003

21-00-03895-000

END R/W ACQUISITION STA. 6+442.613

(54) 21-00-03834-000

(57) GERALD E. HATCHER AND JANE E. HATCHER
21-00-03836-000

(62) CHARLES A. SCOTT, PAUL E. SCOTT, KATHRYN E. BALL AND MYRTLE M. SCOTT (LIFE ESTATE)
21-00-04246-000

(63) GERALD E. HATCHER AND JANE E. HATCHER
21-00-03826-000

21-00-03825-000

(48) CHARLES A. SCOTT, PAUL E. SCOTT, KATHRYN E. BALL AND MYRTLE M. SCOTT (LIFE ESTATE)
21-00-04244-000

(49) DOROTHY MILDRED BERKLEY AKA DOROTHY BERKLEY FKA DOROTHY MILDRED SCHIFER AND JANET L. SCHIEFER
21-00-04231-000

BEGIN R/W ACQUISITION STA. 0+513.000

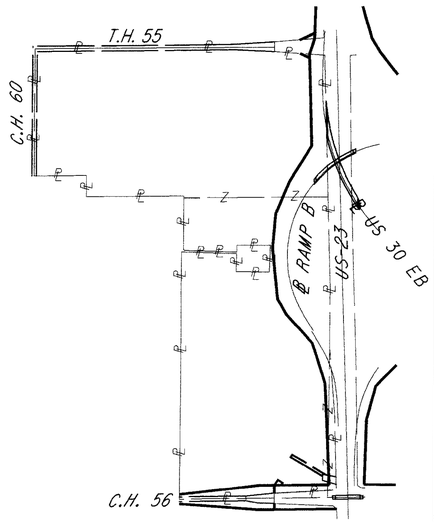
(51) RAY V. KOCHER AND ADALINE L.M. KOCHER, TRUSTEES
21-00-03931-000

(55) JERRY D. RINDFUSS AND DORIS A. RINDFUSS
21-00-03837-004

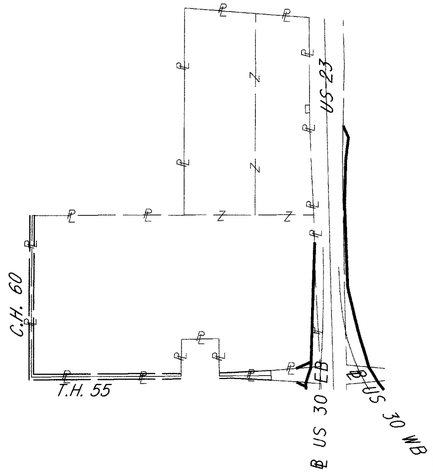
(79) EDWARD L. WHEELER AND JUDY K. WHEELER
21-00-04365-000

REV.	DATE	DESCRIPTION
REH	7/27/99	Add-Parcel 55E,Topo-Parcel 62
REH	10/6/99	Add Janet L. Schiefer-Parcel 49
DATE OF COMPLETION		

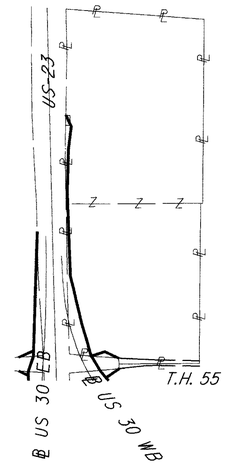
REV.	DATE	DESCRIPTION
REH	2/3/99	Name Change-Parcel 51
REH	2/3/99	Combine Parcel 55A with Parcel 56
REH	2/3/99	Parcel 55-Change Aud. Par. No.
REH	2/3/99	Revise Parcels-51,55 & 56
REH	5/17/99	Dist. and Bearings Parcel 60E
REH	5/24/99	Name Change-Parcel 49 & 53
DATE OF COMPLETION		



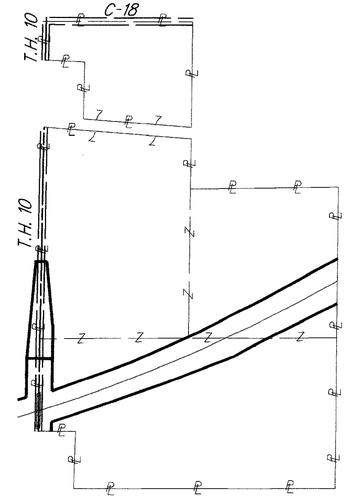
(6)
DONALD M. BASSLER AND
CATHERINE L. BASSLER



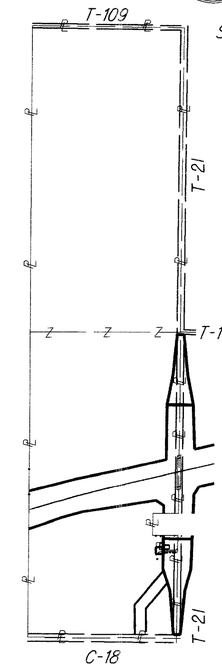
(8)
MARTHA J. NEWELL(3/5),
RONALD L. NEWELL,
BEVERLY BATTON,
BONNIE MENNINGEN,
AND BETTY WALTON(2/5)



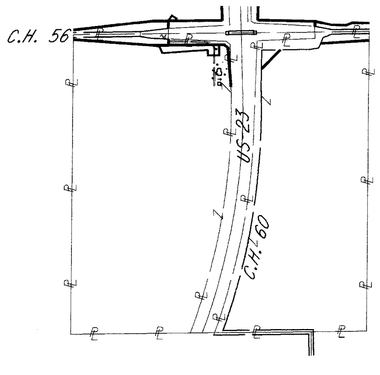
(9)
RONALD L. NEWELL
AND DEBRA J. NEWELL



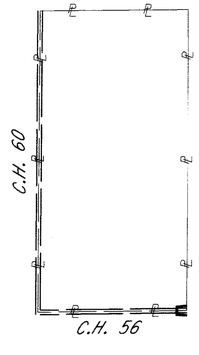
(38)
CHARLES EDWIN McCLAIN,
KAREN S. HOSTETLER AND
LILLIAN I. McCLAIN (LIFE ESTATE)



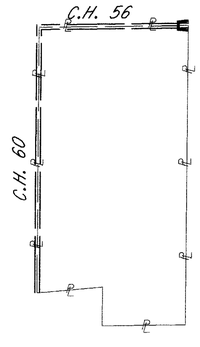
(47)
VERNON C. KENT AND
SUZANNE R. KENT



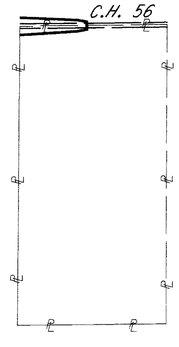
(65)
FRANKLIN E. McCLAIN, ETUX.



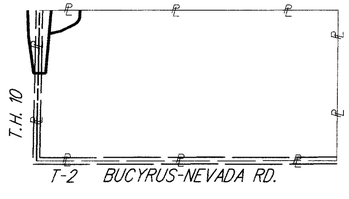
(66)
MARJORIE A.
HENDERSON, ETAL



(67)
THIEL LIVING TRUST



(69)
THIEL LIVING TRUST, ETUX.



(76)
MITCHELL N. WELCH AND
DYANA L. WELCH

REV.	DATE	DESCRIPTION
DATE OF COMPLETION		

metric units

SHEET 7 OF 7

SCALE IN METERS 1:8000

PID NO. 10289

PROPERTY MAP
OWNERSHIP PERIPHERIES

WYA / CRA-30-28.009 / 0.000

15 / 146

1985
2116

TOTAL NUMBER OF:
72 OWNERSHIPS
1 TOTAL TAKES
11 OWNERSHIPS WITH STRUCTURES INVOLVED
OWNERSHIPS WITH "P" ITEMS

NOTE: PARCEL NOS. 1 THRU 4 NOT USED

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
5WL	JAMES A. SMALLEY (1/2),	46,47,108	180	43	05-0595-0100	21.9547	0.0385	11.3429	0	11.3429	-			20%FED.			
	FREDERICK P. SMALLEY AND	112-114	180	47		(54.25)	(0.095)	(28.029)		(28.029)							
	MIRIAM G. SMALLEY (1/2)	121	180	52													
5WV					05-0595-0100			0.1456	0.0385	0.1071					To be acquired for Wyandot County		
								(0.360)	(0.095)	(0.265)							
	GRAND TOTAL					21.9547	0.0385	11.4885	0.0385	11.4500		-	10.4662				
						(54.25)	(0.095)	(28.389)	(0.095)	(28.294)			(25.861)				
6WL	DONALD M. BASSLER AND	44,45	123	248	05-0610-0000	31.2262	0.1846	5.7686	0	5.7686							
	CATHERINE L. BASSLER	109,110	145	95		(77.16)	(0.456)	(14.255)		(14.255)							
		112,116	193	838B	05-0635-0000	25.7345	0.7034	2.1839	0	2.1839							
		119,120				(63.59)	(1.738)	(5.396)		(5.396)							
			165	568	05-0600-0000	0.5018	0	0.5362	0	0.5362							
						(1.24)		(1.325)		(1.325)							
	TOTAL 6WL							8.4887	0	8.4887							
								(20.976)		(20.976)							
6WV			193	838B	05-0635-0000			0.0132	0	0.0132					To be acquired for Wyandot County		
								(0.033)		(0.033)							
6WV1			123	248	05-0610-0000			0.6562	0.1846	0.4716					To be acquired for Wyandot County		
			145	95				(1.621)	(0.456)	(1.165)							
					05-0640-0000	4.8563	0								Parcels 05-0640-0000 & 05-0635-0000 consolidated		
						(12.00)	0								under 05-0635-0000 in D.B.193 Pg.838B		
	GRAND TOTAL					62.3188	0.8880	9.1581	0.1846	8.9735		-	52.4573				
						(153.99)	(2.194)	(22.630)	(0.456)	(22.174)			(129.622)				
6X								0.0190	-	0.0190							
								(0.047)		(0.047)							
6X1								0.0808	-	0.0808							
								(0.200)		(0.200)							
7	MICHAEL R. GILLEN	109	164	304	05-0620-0000	0.7932									NOT REQUIRED		
						(1.96)											
8WL	MARTHA J. NEWELL (3/5)	43,44	184	577	05-0625-0000	27.183	0.6384	0.3933	0	0.3933	-				Parcels 05-0630-0000,05-0645-0100,05-0625-0000		
	RONALD L. NEWELL,	116-118				(67.17)	(1.577)	(0.972)		(0.972)					consolidated under 05-0625-0000 in D.B.208		
	BEVERLY BUTTON,		208	325	05-0630-0000	2.865									Pg. 325 & 752, and D.B.184 Pg.577.		
	BONNIE MENNINGEN, AND					(7.08)											
	BETTY WALTON (2/5)		208	752	05-0645-0000	1.849											
						(4.57)											
														80%STATE			
														20%FED.			

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS ACQUIRED FOR THE PURPOSE OF STRUCTURE REMOVAL TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR. UPON COMPLETION OF THE WORK REQUIRED FOR SUCH REMOVAL AND SUBSEQUENT RECLAMATION, THE EASEMENT SHALL BE VACATED IMMEDIATELY.

PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

NOTE: ALL TEMPORARY PARCELS TO BE OF 36 MONTHS DURATION

REV.	DATE	DESCRIPTION
REH	2/3/99	Add Parcel 6X1
REH	2/3/99	Delete Parcel 5X
JDK	3/29/99	Added temporary duration note.
REH	6/9/99	Parcel 6WV-To be acquired for Wyandot Co.
DATE OF COMPLETION		

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 5-8

WYA-CRA-30-28.009/0.000

1986 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
8WV	MARTHA J. NEWELL, ETAL.	43,44	208	325	05-0630-0000			0.0290	0	0.0290				20%FED.	To be acquired for Wyandot County		
		116-118						(0.072)		(0.072)							
	GRAND TOTAL					31.8970	0.6384	0.4223	0	0.4223		-	30.8363				
						(78.820)	(1.578)	(1.044)		(1.044)			(76.198)				
9WL	RONALD L. NEWELL	43,44,49	158	629	05-0585-0000	33.6706	0.2415	0.9765	0	0.9765	-						
		116-118	193	335		(83.200)	(0.597)	(2.413)		(2.413)							
9WV					05-0585-0000			0.0549	0	0.0549					To be acquired for Wyandot County		
								(0.136)		(0.136)							
	GRAND TOTAL					33.6706	0.2415	1.0314	0	1.0314		32.3977	-				
						(83.200)	(0.597)	(2.549)		(2.549)		(80.054)					
10WL	FREDERICK P. SMALLEY AND	45-55	123	150	05-0580-0000	30.0243	0.4498	12.3287	0	12.3287							
	MIRIAM SMALLEY	114-116				(74.19)	(1.112)	(30.465)		(30.465)							
	AKA MIRIAM G. SMALLEY	121-125	120	453	05-0590-0000	32.3756	0.2436	12.7672	0	12.7672							
			121	44		(80.00)	(0.602)	(31.549)		(31.549)							
			154	18	05-0605-0000	3.9053	0	3.8030	0	3.8030							
						(9.65)	0	(9.397)		(9.397)							
			126	186	05-0545-0000	80.9389	2.0281	11.8059	0.5608	11.2451							
						(200.00)	(5.012)	(29.173)	(1.386)	(27.787)							
			126	186	05-0555-0000	8.0939	0.0761	0	0	0							
						(20.00)	(1.188)										
			130	161	05-0565-0000	6.0704	0.3408	0	0	0							
						(15.00)	(0.8421)										
	TOTAL 10WL							40.7048	0.5608	40.1440							
								(100.584)	(1.386)	(99.198)							
10WV					05-0580-0000			0.0523	0	0.0523					To be acquired for Wyandot County		
								(0.129)		(0.129)							
10WV1					05-0545-0000			0.5000	0.1524	0.3476					To be acquired for Wyandot County		
								(1.236)	(0.377)	(0.859)							
10WV2					05-0590-0000			0.3242	0.1099	0.2143					To be acquired for Wyandot County		
								(0.801)	(0.272)	(0.529)							
10WV3					05-0545-0000			0.4930	0.1585	0.3345					To be acquired for Wyandot County		
								(1.218)	(0.392)	(0.826)							
	GRAND TOTAL					161.4084	3.1384	42.0143	0.9633	41.0510	YES	62.0788	55.1402		Wood barn		
						(398.84)	(7.7550)	(103.817)	(2.380)	(101.437)		(153.40)	(136.248)				
														80%STATE			
														20%FED.			

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PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
REH	2/3/99	Revise Take Parcel 9WL
REH	6/9/99	Parcels 8WV,9WV,10WV,10WV1,10WV3-
		To be acquired for Wyandot County
REH	7/21/99	Name & D.B.,Pg. No. Change-Parcel 9

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

WYA-CRA-30-28.009/0.000

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 8-10

1987 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

SHEET 3 OF 21

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
10X	FREDERICK P. SMALLEY AND	45-55						0.7398	-	0.7398				20%FED.			
	MIRIAM SMALLEY	114-116						(1.828)		(1.828)							
	AKA MIRIAM G. SMALLEY	121-125															
10X1								1.1706	-	1.1706							
								(2.893)		(2.893)							
10X2								0.0661	-	0.0661							
								(0.163)		(0.163)							
10X4								0.0469	-	0.0469							
								(0.116)		(0.116)							
10T1								0.0029	-	0.0029					Construct portion of a private drive		
								(0.007)		(0.007)							
10T2								0.0129	-	0.0129					Construct portion of a private drive		
								(0.032)		(0.032)							
11WL	CLARENCE A. RACHETER AND	55-57	150	53	05-0535-0000	48.5633	0.2507	4.5052	0	4.5052	-	29.3481	14.4593				
	MILDRED B. RACHETER					(120.00)	(0.619)	(11.133)		(11.133)		(72.521)	(35.727)				
12WL	DONALD E. WOLFE AND LEAH JEAN WOLFE,	56-60	134	633	05-0540-0000	16.1878	0.2507	2.9480	0	2.9480	-						
	TRUSTEES OF THE DONALD E. WOLFE		161	133		(40.00)	(0.619)	(7.285)		(7.285)							
	LIVING TRUST		216	204	05-0480-0000	16.1878	0.2435	2.9115	0	2.9115							
						(40.00)	(0.602)	(7.194)		(7.194)							
					05-0485-0000	16.1878	0	0.9295	0	0.9295							
						(40.00)		(2.297)		(2.297)							
12WL1					05-0475-0000	16.1878	0.3685	2.3376	0.0289	2.3087	-						
						(40.00)	(0.911)	(5.776)	(0.071)	(5.705)							
12WV					05-0485-0000			0.7209	0	0.7209					To be acquired for Wyandot County		
								(1.781)		(1.781)							
12WV1					05-0475-0000			0.1727	0.0500	0.1227					To be acquired for Wyandot County		
								(0.427)	(0.124)	(0.303)							
	GRAND TOTAL					64.7512	0.8627	10.0202	0.0789	9.9413		14.2746	39.6726	80%STATE			
						(160.00)	(2.132)	(24.760)	(0.195)	(24.565)		(35.273)	(98.030)	20%FED.			

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PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
REH	2/3/99	Delete Parcels 10X3 & 11X
REH	2/3/99	Revise Take-Parcels 10X,10X4 & 11WL
REH	5/24/99	Combine Parcel 14 with Parcel 12
REH	5/24/99	Name Change-Parcel 12

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCEL 10-12

WYA-CRA-30-28.009/0.000

1988 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
12X	DONALD E. WOLFE AND LEAH JEAN WOLFE,	56-59						0.0419	-	0.0419				20%FED.			
	TRUSTEES OF THE DONALD E. WOLFE							(0.104)		(0.104)							
	LIVING TRUST																
13WL	RUSSELL E. SWINEHART AND	59-61	116	548	05-0470-0000	15.3541	0.1573	1.6716	0.0309	1.6407	-						
	VERA I. SWINEHART	127,128	129	198		(37.94)	(0.389)	(4.131)	(0.076)	(4.055)							
13WLI			116	548	05-0460-0000	7.4140	0.0522	0.1630	0.0284	0.1346							
			129	198		(18.32)	(0.129)	(0.403)	(0.070)	(0.333)							
13WV			116	548	05-0465-0000	12.1408	0.1839	0.0516	0.0182	0.0334					To be acquired for Wyandot County		
			129	198		(30.00)	(0.455)	(0.127)	(0.045)	(0.082)							
			116	548	07-0015-0000	4.0469	0.0613										
			129	198		(10.00)	(0.152)										
					07-0020-0000	12.1408	0.4856										
						(30.00)	(1.200)										
13WV1					05-0460-0000			0.1273	0.0238	0.1035					To be acquired for Wyandot County		
								(0.315)	(0.059)	(0.256)							
13WV2					05-0470-0000			0.7322	0.0100	0.7222					To be acquired for Wyandot County		
								(1.809)	(0.025)	(1.784)							
13WV3					05-0460-0000			0.2153	0	0.2153					To be acquired for Wyandot County		
								(0.532)		(0.532)							
	GRAND TOTAL					51.0966	0.9403	2.9610	0.1113	2.8497		47.3066	-				
						(126.260)	(2.325)	(7.317)	(0.275)	(7.042)		(116.893)					
13X								0.1698	-	0.1698							
								(0.420)		(0.420)							
14	Not Used																
15WV	STEVEN SWINEHART AND	60	208	391	05-0470	0.8337	0.0474	0.0820	0.0308	0.0512	-	0.7351	-		To be acquired for Wyandot County		
	SABINE SWINEHART		208	393		(2.06)	(0.117)	(0.203)	(0.076)	(0.127)		(1.816)					
														80%STATE			
														20%FED.			

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1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
REH	2/3/99	Revise Take-Parcel 15WV
REH	5/24/99	Name Change-Parcel 12
REH	5/24/99	Combine Parcel 14 with Parcel 12
REH	6/9/99	Parcels 13WV,13WV2,15WV-To be acquired for Wyandot Co.

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 12-15

WYA-CRA-30-28.009/0.000

19/146

1989
2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
16WL	L. MICHAEL WOLFE	60-62	210	962	07-0045-0000	15.1760	0.5479	4.1558	0.0598	4.0960	-			20%FED.	Parcels 07-0040-0000, 07-0045-0000 & 07-0050-0000 have		
						(37.50)	(1.354)	(10.269)	(0.148)	(10.121)					been consolidated as 07-0045-0000 under D.B. 210-PG. 962.		
					07-0040-0000	6.2202	0.0278										
						(15.37)	(0.069)										
					07-0050-0000	1.0117	0										
						(2.50)											
16WV					07-0045-0000			0.1987	0.0306	0.1681					To be acquired for Wyandot County		
								(0.491)	(0.076)	(0.415)							
16WVI					07-0045-0000			0.1717	0.0502	0.1215					To be acquired for Wyandot County		
								(0.424)	(0.124)	(0.300)							
	GRAND TOTAL					22.4079	0.5757	4.5262	0.1406	4.3856		1.7381	15.7085				
						(55.37)	(1.423)	(11.184)	(0.348)	(10.836)		(4.295)	(38.816)				
16X								0.0463	-	0.0463							
								(0.114)		(0.114)							
17WL	JAMES J. GILLILAND AND	62,63	150	449	07-0025-0000	9.2796	0.1877	3.3903	0.1877	3.2026	-						
	JUDITH A. GILLILAND	126,127				(22.93)	(0.464)	(8.377)	(0.464)	(7.913)							
			150	449	02-0795-0000	19.2999	0.5083	1.1440	0.1165	1.0275							
						(47.69)	(1.256)	(2.827)	(0.288)	(2.539)							
	TOTAL 17WL							4.5343	0.3042	4.2301							
								(11.204)	(0.752)	(10.452)							
17WV					02-0795-0000			0.5677	0.1258	0.4419					To be acquired for Wyandot County		
								(1.403)	(0.311)	(1.092)							
	GRAND TOTAL					28.5795	0.696	5.1020	0.4300	4.6720		4.7795	18.4320				
						(70.62)	(1.720)	(12.607)	(1.0630)	(11.544)		(11.810)	(45.546)				
17X								0.0082	-	0.0082							
								(0.020)		(0.020)							
17X1								0.0578	-	0.0578							
								(0.143)		(0.143)							
17X2								0.0072	-	0.0072							
								(0.018)		(0.018)							
17E~~X~~								0.8598	0	0.8598					Area includes 0.0082 (0.020) overlap with Parcel 17X.		
								(2.125)		(2.125)							
18WL	DONALD E. WOLFE	62	161	133	07-0035-0000	6.3942	0.0963	0.5182	0	0.5182	-	-	5.7797				
						(15.80)	(0.238)	(1.280)		(1.280)			(14.282)	80%STATE			
														20%FED.			

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PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
REH	6/9/99	Parcels 16WV & 16WVI-To be acquired for Wyandot Co.
REH	7/21/99	Changed Parcel 17LL to 17E
~~PDB~~	~~2/4/00~~	~~REVISE PAR 17E To 17EA~~
DATE OF COMPLETION		

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 16-18

WYA-CRA-30-28.009/0.000

1990 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
19WL	BETTY E. WOLFE (2/3), ROBERT L.	62,63,126	174	11	07-0030-0000	6.4346	0.2982	0.3204	0.0522	0.2682	-			20%FED.			
	WOLFE (1/6) AND DALE A. WOLFE (1/6)		161	126		(15.90)	(0.737)	(0.792)	(0.129)	(0.663)							
19WV					07-0030-0000			0.5672	0.1258	0.4414					To be acquired for Wyandot County		
								(1.402)	(0.311)	(1.091)							
	GRAND TOTAL					6.4346	0.2982	0.8876	0.1780	0.7096		-	5.4268				
						(15.90)	(0.737)	(2.194)	(0.440)	(1.754)			(13.409)				
19X								0.0080	-	0.0080							
								(0.020)		(0.020)							
20WL	RUSSEL E. SWINEHART	63,64	151	19	02-0800-0000	10.7819	0.1700	4.5286	0.1517	4.3769	-						
	AND VERA I. SWINEHART	127,128				(26.642)	(0.420)	(11.190)	(0.375)	(10.815)							
20WV					02-0800-0000			0.0966	0.0183	0.0783					To be acquired for Wyandot County		
								(0.239)	(0.045)	(0.194)							
	GRAND TOTAL					10.7819	0.1700	4.6252	0.1700	4.4552		6.1567	-				
						(26.642)	(0.420)	(11.429)	(0.420)	(11.009)		(15.213)					
21WL	MARYELLEN RULE	64-66	185	204	02-0790-0000	32.3756	0.2458	4.9145	0	4.9145	-	11.1351	16.0802				
		131				(80.00)	(0.607)	(12.144)		(12.144)		(27.515)	(39.734)				
21E								11.1351	0	11.1351							
								(27.515)		(27.515)							
22WL	HAROLD E. LARICK	66,130	138	6	02-0785-0000	32.3756	0.2458	17.4777	0	17.4777	-	-	14.6521				
		131	201	184		(80.00)	(0.607)	(43.188)		(43.188)			(36.205)				
22X								0.0345	-	0.0345							
								(0.085)		(0.085)							
23WL	TERRY KOEHLER (1/4)	67,68	206	962	02-0775-0000	31.9709	0.2458	21.5104	0	21.5104	-	5.7644	4.6526		Parcels 02-0775-0000 & 02-0780-0000 are consolidated		
	DENNIS KOEHLER (1/4)	130,131				(79.00)	(0.607)	(53.153)		(53.153)		(14.244)	(11.497)		under D.B. 206-PG. 962.		
	JEFF KOEHLER (1/4)	131A			02-0780-0000	0.2023											
	DEAN KOEHLER (1/4)					(0.50)											
23E								5.7644	0	5.7644							
								(14.244)		(14.244)							
24WL	DONNA MARIE FROST AND	68-70	180	38	02-0925-0000	32.3756	0.2495	5.2464	0	5.2464	-						
	HAROLD E. LARICK	130				(80.00)	(0.616)	(12.964)		(12.964)							
			180	38	02-0905-0000	8.0939	0.1534	0	0	0							
						(20.00)	(0.379)	0	0	0							
	GRAND TOTAL					40.4695	0.4029	5.2464	0	5.2464		20.2683	14.5519	80%STATE			
						(100.00)	(0.995)	(12.964)		(12.964)		(50.084)	(35.957)	20%FED.			

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS ACQUIRED FOR THE PURPOSE OF STRUCTURE REMOVAL TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR. UPON COMPLETION OF THE WORK REQUIRED FOR SUCH REMOVAL AND SUBSEQUENT RECLAMATION, THE EASEMENT SHALL BE VACATED IMMEDIATELY.

PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
REH	4/12/99	Changed Parcel 21LL to 21E
REH	4/12/99	Changed Parcel 23LL to 23E
REH	3/15/00	Revised Parcels 23WL & 23E

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 19-24

WYA-CRA-30-28.009/0.000

1991
2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
24X								0.1160	-	0.1160				20%FED.			
								(0.287)		(0.287)							
25WL	GERALD A. VON STEIN &	70-73	126	78	02-0910-0000	8.0939	0.1534	4.0722	0.0742	3.9980	-						
	GLADYS E. VON STEIN					(20.00)	(0.379)	(10.063)	(0.183)	(9.880)							
25WV					02-0910-0000			0.2609	0.0630	0.1979					To be acquired for Wyandot County		
								(0.645)	(0.156)	(0.489)							
25WV1			126	78	02-0915-0000	8.0939	0.4269	0.2368	0.0789	0.1579					To be acquired for Wyandot County		
						(20.00)	(1.055)	(0.585)	(0.195)	(0.390)							
			130	29	02-0895-0000	7.9522	0.1488	0.1403	0.0529	0.0874							
						(19.65)	(0.368)	(0.347)	(0.131)	(0.216)							
			130	29	02-0900-0000	0.2428	0.0046	0.0167	0.0046	0.0121							
						(0.60)	(0.012)	(0.041)	(0.011)	(0.030)							
					02-0910-0000			0.0125	0.0034	0.0091							
								(0.031)	(0.008)	(0.023)							
	TOTAL 25WV1							0.4063	0.1398	0.2665							
								(1.004)	(0.346)	(0.658)							
			130	29	02-0855-0000	4.0672	0										
						(10.05)											
			126	78	02-0920-0000	8.0939	0.1247										
						(20.00)	(0.308)										
	GRAND TOTAL					36.5439	0.8584	4.7394	0.2770	4.4624		3.7006	27.5225				
						(90.30)	(2.122)	(11.712)	(0.684)	(11.028)		(9.144)	(68.006)				
25X								0.0648	-	0.0648							
								(0.160)		(0.160)							
26WL	JERRY N. McCLAIN	71-74	158	299	02-0865-0000	43.2214	0.4065	7.7375	0.0741	7.6634	-						
			187	31		(106.80)	(1.005)	(19.120)	(0.183)	(18.937)							
26WV					02-0865-0000			0.0120	0.0034	0.0086					To be acquired for Wyandot County		
								(0.030)	(0.008)	(0.022)							
	GRAND TOTAL					43.2214	0.4065	7.7495	0.0775	7.6720		-	35.1429				
						(106.80)	(1.005)	(19.150)	(0.191)	(18.959)			(86.836)				
27WL	WYANDOT COUNTY COON	73,74	141	181	02-0880-0000	3.8851	0	0.0657	0	0.0657	-	-	3.8194				
	HUNTERS ASSOCIATION					(9.60)		(0.162)		(0.162)			(9.438)				
28	G/K WYANDOT LTD	74,75	158	251	02-0860-0000	50.3116									NOT REQUIRED		
			198	872	02-1005-0000	(124.32)											
					02-1025-0000									80%STATE			
														20%FED.			

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PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
REH	2/3/99	Add Parcel 24X, Revise Take-25WV1
REH	6/9/99	Parcels 25WV, 25WV1 & 26WV-To be acquired for Wyandot Co.

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 24-28

WYA-CRA-30-28.009/0.000

22/146

1992/2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
29WL	I/S/F INC	74,75,146	198	563	02-1000-0000	19.8159	0.2042	3.9846	0	3.9846	-	1.8144	13.8127	20%FED.			
						(48.965)	(0.504)	(9.846)		(9.846)		(4.483)	(34.132)				
29E								1.8144	0	1.8144							
								(4.483)		(4.483)							
29EI								3.1164	0	3.1164							
								(7.701)		(7.701)							
30WL	LEWIS KAISER & ANNA L. KAISER or	75-78	209	849	02-0995-0000	48.2396	0.4561	8.0436	0	8.0436	-	19.1827	20.5572				
	their successors in trust, under the					(119.201)	(1.127)	(19.876)		(19.876)		(47.401)	(50.7970)				
	LEWIS AND ANNA KAISER LIVING TRUST																
30X								0.0499	-	0.0499							
								(0.123)		(0.123)							
31WL	MARGARET I. MILLER	79,134	186	193	02-0970-0000	23.1283	0.0133	0.2626	0	0.2626	-						
			204	380		(57.15)	(0.033)	(0.649)		(0.649)							
			204	420													
31WLI					02-0970-0000			0.0145	0.0133	0.0012							
								(0.036)	(0.033)	(0.003)							
31WD					02-0970-0000			0.5960	0	0.5960							
								(1.473)		(1.473)							
	GRAND TOTAL					23.1283	0.0133	0.8731	0.0133	0.8598		22.2552	-				
						(57.15)	(0.033)	(2.158)	(0.033)	(2.125)		(54.992)					
31T								0.0361	-	0.0361					Construct portion of a private drive		
								(0.089)		(0.089)							
31E								0.0309	-	0.0309							
								(0.076)		(0.076)							
32WL	MARGARET I. MILLER WITH LIFE ESTATE	78,79,133	171	280	02-0985-0000	15.6212	0.5614	5.9035	0.1552	5.7483	-						
	TO RUSSEL KELTNER AND MARIE KELTNER					(38.60)	(1.387)	(14.588)	(0.383)	(14.205)							
32WLI					02-0985-0000			0.1119	0.1023	0.0096							
								(0.277)	(0.253)	(0.024)							
32WD					02-0985-0000			0.4130	0.0393	0.3737							
								(1.020)	(0.097)	(0.923)							
32WDI					02-0985-0000			0.2866	0	0.2866							
								(0.708)		(0.708)							
	GRAND TOTAL					15.6212	0.5614	6.7150	0.2968	6.4182		0.2035	8.4381				
						(38.60)	(1.387)	(16.593)	(0.733)	(15.860)		(0.503)	(20.850)				
32E								0.2035	0	0.2035				80%STATE			
								(0.503)		(0.503)				20%FED.			

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PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
REH	11/17/98	Change 31WV to 31WD,32WV to 32WDI
		Delete-To be acquired for Wyandot County
REH	2/3/99	Add Parcel 30X,Revise Take-32WD
REH	4/12/99	Change Parcel 29LL to 29E
DATE OF COMPLETION		

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 29-32

WYA-CRA-30-28.009/0.000

1993 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
33WL	OSCAR HOWARD AND	79,133	175	907	02-0980-0000	0.8094	0.0736	0.7936	0.0736	0.7200	YES			20%FED.	TOTAL TAKE- 1-1/2 story frame residence (#12774),		
	RAMONA F. HOWARD	134				(2.00)	(0.182)	(1.961)	(0.182)	(1.779)					frame garage, 2 wood sheds and wood dog kennel.		
33WD					02-0980-0000			0.0180	0	0.0180							
								(0.044)		(0.044)							
	GRAND TOTAL					0.8094	0.0736	0.8116	0.0736	0.7380		-	-		Calculated Record Area = 2.005 Ac.		
						(2.00)	(0.182)	(2.005)	(0.182)	(1.823)							
34WL	VIRGINIA SCHIFER	79,80	184	943	02-0040-0000	24.4840	0.7512	8.5292	0.3740	8.1552	YES	1.3613	14.2163		2 story frame residence (#12867), frame garage, wood barn		
		132-134				(60.50)	(1.856)	(21.076)	(0.924)	(20.152)		(3.364)	(35.128)		and wood shed.		
34T								0.1620	-	0.1620					Building removal: 2 story frame residence, frame garage,		
								(0.400)		(0.400)					wood barn and wood shed.		
34E								1.3613	0	1.3613							
								(3.364)		(3.364)							
35WL	HARLEY LAVERNE WEATHERHOLTZ AND	134,80,81	196	898	02-0050-0000	17.1995	0.2980	0.1500	0.1372	0.0128	-						
	PRISCILLA ANN WEATHERHOLTZ,					(42.50)	(0.736)	(0.371)	(0.339)	(0.032)							
	HARLEY LAVERNE WEATHERHOLTZ AND				03-0010-0000	35.0789	0										
	PRISCILLA ANN WEATHERHOLTZ, TRUSTEES					(86.68)											
					03-0125-0000	2.4282	0										
						(6.00)											
					03-0390-0000	0.5692	0										
						(1.41)											
	GRAND TOTAL					55.2758	0.2980	0.1500	0.1372	0.0128		54.9650	-				
						(136.59)	(0.736)	(0.371)	(0.339)	(0.032)		(135.822)					
35T								0.0189	-	0.0189					Construct a portion of a private drive		
								(0.047)		(0.047)							
36WL	TERRY KOEHLER (1/4),	81-83	206	965	02-0035-0000	27.9239	0.1586	2.9612	0	2.9612	-						
	DENNIS KOEHLER (1/4),	135,136				(69.00)	(0.392)	(7.317)		(7.317)							
	JEFF KOEHLER (1/4),		206	962	02-0030-0000	24.2817	0.8415	0.0084	0	0.0084							
	DEAN KOEHLER (1/4)					(60.00)	(2.079)	(0.021)		(0.021)							
	TOTAL 36WL							2.9696	0	2.9696							
								(7.338)		(7.338)					To be acquired for Wyandot County		
36WV					02-0030-0000			0.4215	0.1547	0.2668							
								(1.042)	(0.382)	(0.660)							
	GRAND TOTAL					52.2056	1.0001	3.3911	0.1547	3.2364		8.4187	39.5504				
						(129.00)	(2.471)	(8.380)	(0.382)	(7.998)		(20.803)	(97.728)				
36E								8.4187	0	8.4187				80%STATE			
								(20.803)		(20.803)				20%FED.			

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PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
REH	11/17/98	Change 33WV to 33WD, delete-To be acquired for Wyandot County
REH	2/3/99	Add Parcels 33T & 33TI
REH	4/12/99	Revise Parcel 33WL & delete Parcels 33T & 33TI
DATE OF COMPLETION		

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 33-36

WYA-CRA-30-28.009/0.000

1994 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
37WL	DONALD E. ALBAN &	82-85	192	755	02-1085-0000	31.9709	0.3677	8.5920	0.2626	8.3294	-			20%FED.			
	MARY JEAN ALBAN	136-138	192	757		(79.00)	(0.908)	(21.231)	(0.649)	(20.582)							
37WV			192	755	02-1085-0000			0.1739	0.0485	0.1254					To be acquired for Wyandot County		
			192	757				(0.430)	(0.120)	(0.310)							
			192	692	02-0010-0000	32.3756	0.3669	0.4761	0.1892	0.2869							
						(80.00)	(0.907)	(1.176)	(0.468)	(0.708)							
	TOTAL 37WV							0.6500	0.2377	0.4123							
								(1.606)	(0.588)	(1.018)							
	GRAND TOTAL					64.3465	0.7346	9.2420	0.5003	8.7417		50.3257	4.5445				
						(159.00)	(1.815)	(22.837)	(1.237)	(21.600)		(124.355)	(11.230)				
37X								0.0371	-	0.0371							
								(0.092)		(0.092)							
37XI								0.1980	-	0.1980							
								(0.489)		(0.489)							
37ER								4.5445	0	4.5445							
								(11.230)		(11.230)							
38WL	CHARLES EDWIN MCCLAIN,	84-88	400	389	37-00-10675-000	16.1878	0	3.3952	0	3.3952							
	KAREN S. HOSTETLER AND	136-138				(40.00)	0	(8.390)	0	(8.390)							
	LILLIAN I. MCCLAIN (LIFE ESTATE)		400	389	37-00-10676-001	30.8531	0.2284	5.0595	0.1798	4.8797							
						(76.238)	(0.565)	(12.502)	(0.444)	(12.058)							
			400	389	37-00-10677-000	31.2546	0.5186	0.0025	0	0.0025							
			361	435		(77.230)	(1.281)	(0.006)	0	(0.006)							
	TOTAL 38WL							8.4572	0.1798	8.2774							
								(20.898)	(0.444)	(20.454)							
38WV					37-00-10676-001			0.1833	0.0486	0.1347					To be acquired for Crawford County		
								(0.453)	(0.120)	(0.333)							
					37-00-10677-000			0.5467	0.1891	0.3576							
								(1.351)	(0.467)	(0.884)							
	TOTAL 38WV							0.7300	0.2377	0.4923							
								(1.804)	(0.587)	(1.216)							
	GRAND TOTAL					78.2955	0.7470	9.1872	0.4175	8.7697		44.9213	23.8575"LL"				
						(193.468)	(1.846)	(22.702)	(1.032)	(21.670)		(111.000)	(58.952)				
														80%STATE			
														20%FED.			

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS ACQUIRED FOR THE PURPOSE OF STRUCTURE REMOVAL TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR. UPON COMPLETION OF THE WORK REQUIRED FOR SUCH REMOVAL AND SUBSEQUENT RECLAMATION, THE EASEMENT SHALL BE VACATED IMMEDIATELY.

PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
5	10/24/00	Rev. Par. 37E to 37ER
REH 1	4/12/99	Change Parcel 36LL to 36E
REH 2	4/12/99	Change Parcel 37LL to 37E
REH 3	6/9/99	Parcels 36WV & 37WV-To be acquired for Wyandot Co.
REH 4	6/9/99	Parcel 38WV-To be acquired for Crawford Co.
DATE OF COMPLETION		

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 36-38

WYA-CRA-30-28.009/0.000

25/146

1995 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
39WL	LEONARD E. CHANCE	88-90	439	938	37-00-10687-000	28.5188	0.1098	6.7758	0	6.7758		6.3737	15.2595	80%STATE			
			414	348		(70.47)	(0.271)	(16.743)	0	(16.743)		(15.750)	(37.706)	20%FED.			
39ER								6.3737	0	6.3737							
								(15.750)		(15.750)							
40	CONSOLIDATED RAIL CORP.	89,90,144	388	211	37-00-61166-000	N/A		0.0101		0.0101					Standard highway easement		
								(0.025)		(0.025)							
40-1					37-00-61166-000	N/A		0.0101		0.0101					Standard highway easement		
								(0.025)		(0.025)							
40-2					37-00-61166-000	N/A		0.1821		0.1821					Standard highway easement		
								(0.450)		(0.450)							
40R					37-00-61166-000	N/A		0.3039		0.3039							
								(0.751)		(0.751)							
40T					37-00-61166-000	N/A		0.3039		0.3039					Bridge and roadway construction		
								(0.751)		(0.751)							
41WL	LARRY W. SAND	89-91	309	587	37-00-10726-000	27.7782	1.0710	2.7052	0.1055	2.5997							
						(68.64)	(2.647)	(6.685)	(0.261)	(6.424)							
			290	556	37-00-10725-000	16.3857	0.3637	0	0	0							
						(40.489)	(0.899)	0	0	0							
	GRAND TOTAL					44.1639	1.4347	2.7052	0.1055	2.5997		39.6267	0.5028				
						(109.129)	(3.546)	(6.685)	(0.261)	(6.424)		(97.916)	(1.243)				
41E								0.5802	0.0774	0.5028							
								(1.434)	(0.191)	(1.243)							
42WL	CHARLES LINDEN BOWERS AND	91,92	381	685	37-00-10515-000	15.9854	0.7080	4.3300	0.2141	4.1159		2.1741	8.9874				
	ESTELL LORETTA BOWERS					(39.50)	(1.750)	(10.700)	(0.529)	(10.171)		(5.371)	(22.208)				
43WL	DALE W. HEISTAND	92-94	370	59	37-00-10616-000	16.1878	0.3698	0.2621	0.0839	0.1782	YES				Wood barn		
						(40.00)	(0.914)	(0.648)	(0.207)	(0.441)							
			371	598	37-00-10614-000	32.1328	0.3698	4.7463	0.1001	4.6462							
						(79.40)	(0.914)	(11.728)	(0.247)	(11.481)							
			266	392&394	37-00-10615-000	31.4448	1.1047	0.3602	0.0943	0.2659							
						(77.70)	(2.730)	(0.890)	(0.233)	(0.657)							
	TOTAL 43WL					79.7654	1.8443	5.3686	0.2783	5.0903		54.5231	18.3077				
						(197.100)	(4.558)	(13.266)	(0.687)	(12.578)		(134.725)	(45.239)				
43X								0.2286	-	0.2286							
								(0.565)		(0.565)				80%STATE			
														20%FED.			

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PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
5	10/24/00	Rev. Par. 39E to 39ER
REH 1	2/3/99	Add Parcel 43X
REH 2	2/3/99	Revise Take-Parcels 40,40-1 & 40-2
REH 3	2/3/99	Delete Parcel 39X & 40-3
REH 4	4/12/99	Change Parcel 39LL to 39E

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 39-43

WYA-CRA-30-28.009/0.000

1996 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
44WL	CARL R. WALTON AND	93,94	287	317	37-00-10783-000	15.8296	0.0930	2.4383	0	2.4383		11.1341	2.1642	20%FED.			
	IRENE M. WALTON					(39.115)	(0.230)	(6.025)		(6.025)		(27.513)	(5.348)				
45WL	MICHAEL D. WILLIAMS AND	94,95	439	295	37-00-10794-000	8.3327	0.0930	1.0877	0	1.0877							
	CANDY S. WILLIAMS					(20.59)	(0.230)	(2.688)		(2.688)							
45WV					37-00-10794-000			0.1920	0	0.1920					To be acquired for Crawford County		
								(0.474)		(0.474)							
	GRAND TOTAL					8.3327	0.0930	1.2797	0	1.2797		4.5983	2.3617				
						(20.59)	(0.230)	(3.162)		(3.162)		(11.362)	(5.836)				
46WL	HAROLD CLARENCE WILLIAMS,	95	444	735	37-00-10793-000	8.3327	0.0929	1.0269	0	1.0269							
	MICHAEL D. WILLIAMS AND		388	626		(20.59)	(0.230)	(2.537)		(2.537)							
	CANDY WILLIAMS, L.E.																
46WV					37-00-10793-000			0.1902	0	0.1902					To be acquired for Crawford County		
								(0.470)		(0.470)							
	GRAND TOTAL					8.3327	0.0929	1.2171	0	1.2171		4.2846	2.7381				
						(20.59)	(0.230)	(3.007)		(3.007)		(10.587)	(6.766)				
47WL	VERNON C. KENT AND	95,96	346	268	37-00-10640-000	31.8495	1.0580	4.5965	0.2665	4.3300							
	SUZANNE R. KENT	139,140				(78.70)	(2.614)	(11.358)	(0.659)	(10.699)							
47WL-1					37-00-10640-000			0.0372	0.0085	0.0287							
								(0.092)	(0.021)	(0.071)							
47WV					37-00-10640-000			0.3793	0.1729	0.2064					To be acquired for Crawford County		
								(0.937)	(0.427)	(0.510)							
47WV-1					37-00-10640-000			0.6708	0.2352	0.4356	YES				To be acquired for Crawford County		
								(1.658)	(0.581)	(1.077)					2 story frame residence		
47WV-2					37-00-10640-000			1.0294	0	1.0294					To be acquired for Crawford County		
								(2.544)		(2.544)							
			230	315	37-00-10641-000	32.3756	0.9902										
						(80.00)	(2.447)										
	GRAND TOTAL					64.2251	2.0482	6.7132	0.6831	6.0301		43.8878	12.2590				
						(158.70)	(5.061)	(16.589)	(1.688)	(14.901)		(108.445)	(30.293)				
47XV								0.5396		0.5396					To be acquired for Crawford County		
								(1.333)		(1.333)				80%STATE			
														20%FED.			

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PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
REH	2/3/99	Delete Parcel 47T
REH	2/3/99	Revise Takes-Parcels 47WV2 & 47X
REH	5/24/99	Name & D.B.,Pg. No. Change-Parcel 46
REH	6/9/99	Parcels 45WV,46WV,47WV,47WV1,47WV2-
		To be acquired for Crawford Co.

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 44-47

WYA-CRA-30-28.009/0.000

1997 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
48WL	CHARLES A. SCOTT,	96-99	155	531	21-00-04244-000	52.1004	1.1545	9.4848	0.3292	9.1556				20%FED.			
	PAUL E. SCOTT.	139,140	415	311&442		(128.74)	(2.853)	(23.438)	(0.813)	(22.625)							
	KATHRYN E. BALL AND		MISC BK2	599													
	MYRTLE M. SCOTT (LIFE ESTATE)																
48WV					21-00-04244-000			0.5014	0.1733	0.3281					To be acquired for Crawford County		
								(1.239)	(0.428)	(0.811)							
48WVI					21-00-04244-000			0.3795	0.1516	0.2279					To be acquired for Crawford County		
								(0.938)	(0.375)	(0.563)							
	GRAND TOTAL					52.1004	1.1545	10.3657	0.6541	9.7116		14.6664	26.5679				
						(128.741)	(2.853)	(25.615)	(1.616)	(23.999)		(36.238)	(65.651)				
48X								0.1000		0.1000							
								(0.247)		(0.247)							
49WL	DOROTHY MILDRED BERKLEY AKA	99-101	265	538	21-00-04231-000	31.1874	0.4997	2.0888	0	2.0888							
	DOROTHY BERKLEY FKA		365	109		(77.064)	(1.235)	(5.161)	0	(5.161)							
	DOROTHY MILDRED SCHIFER AND		461	556	21-00-04232-000	4.0469	0.1238	1.9186	0	1.9186							
	JANET L. SCHIEFER		466	567		(10.00)	(0.306)	(4.741)	0	(4.741)							
	TOTAL 49WL					35.2343	0.6235	4.0074	0	4.0074		3.1135	27.4899				
						(87.064)	(1.541)	(9.902)	0	(9.902)		(7.694)	(67.927)				
50WL	CHARLES A. BOSWORTH AND	101	373	691	21-00-03648-000	0.2671	0.0233	0.3033	0	0.3033	YES				TOTAL TAKE - Brick & frame tri-level residence (#1107) and		
	SANDRA K. BOSWORTH					(0.66)	(0.058)	(0.749)	0	(0.749)					garage		
			411	6	21-00-03931-001	0.4047	0.0316	0.0906	0	0.0906							
						(1.00)	(0.078)	(0.224)	0	(0.224)							
	TOTAL 50WL							0.3939	0	0.3939							
								(0.973)	0	(0.973)							
50WV					21-00-03648-000			0.0996	0.0233	0.0763					To be acquired for Crawford County		
								(0.246)	(0.058)	(0.188)							
					21-00-03931-001			0.1765	0.0316	0.1449							
								(0.436)	(0.078)	(0.358)							
	TOTAL 50WV							0.2761	0.0549	0.2212							
								(0.682)	(0.136)	(0.546)							
	GRAND TOTAL					0.6718	0.0549	0.6700	0.0549	0.6151		-	-				
						(1.660)	(0.136)	(1.656)	(0.136)	(1.520)							
														80%STATE			
														20%FED.			

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PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
REH	5/24/99	Name Change-Parcel 49
REH	6/9/99	Parcels 48WV,48WVI & 50WV-To be acquired for Crawford County
REH	10/6/99	Add Janet L. Schiefer-Parcel 49

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 48-50

WYA-CRA-30-28.009/0.000

1998 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
51WL	RAY V. KOCHER AND	101,102	471	938	21-00-03931-000	31.5793	1.5758	3.3128	0.2346	3.0782				20%FED.			
	ADALINE L. M. KOCHER, TRUSTEES OF	141				(78.03)	(3.894)	(8.186)	(0.580)	(7.606)							
	THE KOCHER TRUST																
51WV					21-00-03931-000			0.9914	0.2530	0.7384					To be acquired for Crawford County		
								(2.450)	(0.625)	(1.825)							
51WV1					21-00-03931-000			0.0152	0.0031	0.0121					To be acquired for Crawford County		
								(0.038)	(0.008)	(0.030)							
	GRAND TOTAL					31.5733	1.5758	4.3194	0.4907	3.8287		0.1259	26.0429				
						(78.03)	(3.894)	(10.674)	(1.213)	(9.461)		(0.311)	(64.363)				
51T								0.5007	0	0.5007					To construct a drive connection		
								(1.237)	0	(1.237)							
51ER								0.1704	0.0803	0.0901							
								(0.421)	(0.198)	(0.223)							
52WL	ALLAN L. REINHARD AND	101,102	361	097	21-00-04120-000	28.9632	0.7655	0.5566	0.1756	0.3810							
	JEAN A. REINHARD	142				(71.568)	(1.892)	(1.375)	(0.434)	(0.941)							
52WV					21-00-04120-000			0.1398	0.0474	0.0924					To be acquired for Crawford County		
								(0.345)	(0.117)	(0.228)							
52WV1					21-00-04120-000			0.4698	0.1414	0.3284					To be acquired for Crawford County		
								(1.161)	(0.349)	(0.812)							
	GRAND TOTAL					28.9632	0.7655	1.1662	0.3644	0.8018		27.3959	-				
						(71.568)	(1.892)	(2.881)	(0.900)	(1.981)		(67.695)					
53WL	HARRY W. WALTON AND CAROLYN I. WALTON	102-104	476	398	21-00-03786-000	20.2347	0.6857	3.3476	0.3847	2.9629							
		142				(50.00)	(1.694)	(8.272)	(0.951)	(7.321)							
53WV					21-00-03786-000			0.5152	0.1744	0.3408					To be acquired for Crawford County		
								(1.273)	(0.431)	(0.842)							
	GRAND TOTAL					20.2347	0.6857	3.8628	0.5591	3.3037		16.2453	-				
						(50.00)	(1.694)	(9.545)	(1.382)	(8.163)		(40.143)					
54WL	JACK L. ADAMS	102	468	920	21-00-03834-000	0.5573	0.1022	0.4525	0.1022	0.3503	YES	-	0.1048		1 story brick residence		
						(1.377)	(0.253)	(1.118)	(0.253)	(0.865)			(0.259)				
54ER								0.1055	-	0.1055				80%STATE	1 satellite dish, 54X overlaps 54E by 0.470 Ha (0.116 Ac)		
								(0.261)		(0.261)				20%FED.			

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PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV	DATE	DESCRIPTION
5	10/24/00	Revise Par 54E to 54ER
6	10/24/00	Revise Par 51E to 51ER

REV.	DATE	DESCRIPTION
REH 1	2/3/99	Name & D.B. Pg. No. Change-Par. 51
REH 2	2/3/99	Revise Takes-Parcels 51WL,51WV,51WV1,51E & 51T
REH 3	4/5/99	Name & D.B. Pg. No. Change-Par. 53
REH 4	5/24/99	Name Change-Parcel 51

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 51-54

WYA-CRA-30-28.009/0.000

1999 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
54X	JACK L. ADAMS	102						0.0470	-	0.0470				20%FED.			
								(0.116)		(0.116)							
54T								0.1055	-	0.1055					Structure Removal, 54X overlaps 54T by 0.470ha (0.116 Ac.)		
								(0.261)		(0.261)							
55WL	JERRY D. RINDFUSS AND	102,103	467	653	21-00-03837-004	28.9907	1.0630	0.6158	0.0808	0.5350							
	DORIS A. RINDFUSS	141				(71.636)	(2.627)	(1.522)	(0.200)	(1.322)							
55WL1					21-00-03837-004			0.5642	0.1096	0.4546							
								(1.394)	(0.271)	(1.123)							
55WL2					21-00-03837-004			0.2773	0.0604	0.2169							
								(0.685)	(0.149)	(0.536)							
55WV					21-00-03837-004			0.9399	0.2530	0.6869					To be acquired for Crawford County		
								(2.323)	(0.625)	(1.698)							
55WV1					21-00-03837-004			1.1777	0	1.1777					To be acquired for Crawford County		
								(2.910)		(2.910)							
55WV2					21-00-03837-004			0.2422	0	0.2422					To be acquired for Crawford County		
								(0.598)		(0.598)							
	GRAND TOTAL					28.9907	1.0630	3.8171	0.5038	3.3133		-	24.6144				
						(71.636)	(2.627)	(9.432)	(1.245)	(8.187)			(60.822)				
55X								0.3291	-	0.3291							
								(0.813)		(0.813)							
55E								0.3512	0	0.3512					54X overlaps 54E by 0.3291Ha (0.813 Ac.)		
								(0.868)		(0.868)							
														80%STATE			
														20%FED.			

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS ACQUIRED FOR THE PURPOSE OF STRUCTURE REMOVAL TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR. UPON COMPLETION OF THE WORK REQUIRED FOR SUCH REMOVAL AND SUBSEQUENT RECLAMATION, THE EASEMENT SHALL BE VACATED IMMEDIATELY.

PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
REH	2/3/99	Parcel 55-Aud. Par. No. Change
REH	2/3/99	Combine Parcel 55A with Parcel 56
REH	2/3/99	Revise Takes-Parcels 55WV & 55WV1
REH	4/12/99	Add Parcel 54T

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 54-55

WYA-CRA-30-28.009/0.000

30/146

2000 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

SHEET 16 OF 21

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
56WL	JOHN A. HARIGLE AND	103	462	901	21-00-03837-003	0.9106	0.0167	0.1157	0.0167	0.0990				20%FED.			
	PAMELA R. HARIGLE					(2.25)	(0.041)	(0.286)	(0.041)	(0.245)							
			472	582	21-00-03837-000	1.2133	0.0356	0.2326	0.0356	0.1970							
						(2.998)	(0.088)	(0.575)	(0.088)	(0.487)							
	TOTAL 56WL							0.3483	0.0523	0.2960							
								(0.861)	(0.129)	(0.732)							
56WV					21-00-03837-003			0.0498	0	0.0498					To be acquired for Crawford County		
								(0.123)		(0.123)							
					21-00-03837-000			0.1057	0	0.1057							
								(0.261)		(0.261)							
	TOTAL 56WV							0.1555	0	0.1555							
								(0.384)		(0.384)							
	GRAND TOTAL					2.1239	0.0523	0.5038	0.0523	0.4515		-	1.6201				
						(5.248)	(0.129)	(1.245)	(0.129)	(1.116)			(4.003)				
57WL	GERALD E. HATCHER AND	103,104	401	758	21-00-03836-000	18.1870	0.2118	0.7292	0.2118	0.5174							
	JANE E. HATCHER					(44.940)	(0.523)	(1.802)	(0.523)	(1.279)							
			401	762	21-00-03837-001	4.9373	0	0	0	0							
			362	615		(12.20)	0	0	0	0							
					21-00-033714-001	0.0971	0	0	0	0							
						(0.24)	0	0	0	0							
57WV					21-00-03836-000			0.6255	0	0.6255					To be acquired for Crawford County		
								(1.546)		(1.546)							
	GRAND TOTAL					23.2214	0.2118	1.3547	0.2118	1.1429		-	21.8667				
						(57.380)	(0.523)	(3.348)	(0.523)	(2.825)			(54.032)				
58WL	GERALD E. HATCHER AND	104	400	6	21-00-03835-000	2.2744	0	0.0567	0	0.0567		2.2177	-		Previously landlocked		
	JANE E. HATCHER (1/2),		435	996		(5.62)		(0.140)		(0.140)		(5.480)					
	COLE HATCHER (1/6),		465	87													
	MARK D. HATCHER (1/6),																
	TROY S. HATCHER (1/6)																
59WL	HAROLD W. KILLEN	104	218	1	21-00-03916-000	0.8741	0	0.0963	0	0.0963		0.7778	-		Previously landlocked		
						(2.16)		(0.238)		(0.238)		(1.922)					
60WL	DEANDRA D. HATCHER	104,105	460	567	21-00-03836-003	0.5204	0.0325	0.1187	0.0325	0.0862	YES				2 story frame residence and frame shed.		
						(1.286)	(0.080)	(0.293)	(0.080)	(0.213)							
60WV					21-00-03836-003			0.0960	0	0.0960					To be acquired for Crawford County		
								(0.237)		(0.237)							
	GRAND TOTAL					0.5204	0.0325	0.2147	0.0325	0.1822		-	0.3055		Record area calculates 0.5202 (1.285)		
						(1.286)	(0.080)	(0.530)	(0.080)	(0.450)			(0.755)				
60ER					21-00-03836-003			0.3055	0	0.3055							
								(0.755)		(0.755)				80%STATE			
														20%FED.			

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PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
REH 1	2/3/99	Combine Parcels 55A & 56
REH 2	2/3/99	Revise Takes-Parcels 56WL & 56WV
REH 3	5/17/99	Add Parcel 60E
4	10/24/00	Revise Par 60E to 60ER

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 56-60

WYA-CRA-30-28.009/0.000

31/146

2001/2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
61	ARTHUR J. BEALL, JR. AND	105,106	311	117	21-00-03626-000	21.8875								20%FED.	NOT REQUIRED		
	MARJORIE J. BEALL					(54.084)											
62WL	CHARLES A. SCOTT,	105,106	174	152	21-00-04246-000	29.8774	0.3697	0.9093	0	0.9093							
	PAUL E. SCOTT	143	415	305		(73.827)	(0.913)	(2.247)	0	(2.247)							
	KATHRYN E. BALL &		408	505	21-00-03895-000	0.8308		0.1731	0	0.1731	YES				2 frame sheds		
	MYRTLE M. SCOTT (LIFE ESTATE)					(2.053)		(0.428)	0	(0.428)							
	TOTAL 62WL					30.7082	0.3697	1.0824	0	1.0824		-	29.2561				
						(75.880)	(0.913)	(2.675)	0	(2.675)			(72.292)				
62T								0.3231	-	0.3231					Construct a private drive and remove two structures		
								(0.798)		(0.798)							
63	GERALD E. HATCHER &	106,107	254	454	21-00-03826-000	36.2420									NOT REQUIRED		
	JANE E. HATCHER	143				(89.554)											
			363	642	21-00-03825-000	2.0299											
						(5.016)											
64WL	CHARLES R. PRINCE &	136	206	653	02-0029-0000	0.4047	0.0582	0.0441	0.0117	0.0324	YES				Mobile home and wood deck		
	LINDA L. PRINCE					(1.00)	(0.144)	(0.109)	(0.029)	(0.080)							
64WV					02-0029-0000			0.1723	0.0464	0.1258					To be acquired for Wyandot County		
								(0.426)	(0.115)	(0.311)							
	GRAND TOTAL					0.4047	0.0582	0.2164	0.0581	0.1582		-	0.1883				
						(1.00)	(0.144)	(0.535)	(0.144)	(0.391)			(0.465)				
64ER								0.1882	0	0.1882					Metal shed		
								(0.465)		(0.465)							
64T								0.0670	-	0.0670					Construct portion of a private drive		
								(0.166)		(0.166)							
65WL	FRANKLIN E. McCLAIN & RUTH E.	119-121	186	989	26-1240-0000	58.8628	2.2943	0.2410	0	0.2410	-						
	McCLAIN	111,112				(145.45)	(5.669)	(0.596)		(0.596)							
65WV					26-1240-0000			1.0417	0.6678	0.3739					To be acquired for Wyandot County		
								(2.574)	(1.650)	(0.924)							
65WVI					26-1240-0000			0.5762	0.1928	0.3834					To be acquired for Wyandot County		
								(1.424)	(0.476)	(0.948)							
	GRAND TOTAL					58.8628	2.2943	1.8589	0.8606	0.9983		-	55.5702	80%STATE			
						(145.45)	(5.669)	(4.594)	(2.126)	(2.468)			(137.313)	20%FED.			

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PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
S	10/24/00	Revised Par. 64E to 64ER
REH 1	2/3/99	Revise Take-Parcel 65WL
JDK 2	3/24/99	Added purpose for Parcel 62T
REH 3	6/9/99	Parcel 64WV-To be acquired for Wyandot Co.
REH 4	7/8/99	Revise Take-Parcel 62WL

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 61-65

WYA-CRA-30-28.009/0.000

2002 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
65X	FRANKLIN E. McCLAIN & RUTH E.	119-121						0.0039	-	0.0039				20%FED.			
	McCLAIN	111,112						(0.010)		(0.010)							
65T								0.3311	-	0.3311					Construct portion of a private drive		
								(0.818)		(0.818)							
66WV	MARJORIE A. HENDERSON	119	205	587	05-0615-0000	32.3756	0.7336	0.0304	0.0162	0.0142	-	-	31.6278		To be acquired for Wyandot County		
	AND NANCY I. TAYLOR					(80.0)	(1.813)	(0.075)	(0.040)	(0.035)			(78.152)				
67WV	PAUL F. THIEL AND RUTH I. THIEL,	119	198	924	26-1305-0000	30.6475	0.6754	0.0294	0.0162	0.0132	-	-	29.9589		Parcels 26-1305-0000 and 26-1310-0000 consolidated as		
	TRUSTEES, OR THEIR SUCCESSORS IN				26-1310-0000	(75.73)	(1.669)	(0.073)	(0.040)	(0.033)			(74.028)		26-1305-0000 under D.B. 198 - P.G. 924		
	TRUST, UNDER THE THIEL LIVING TRUST														To be acquired for Wyandot County		
68WV	JAMES A. SWALLEY	121	186	200	05-0595-0000	0.4456	0.0755	0.1420	0.0718	0.0702	-	-	0.2601		To be acquired for Wyandot County		
						(1.101)	(0.186)	(0.351)	(0.177)	(0.174)			(0.643)				
68T								0.0027	-	0.0027					Construct portion of a private drive		
								(0.007)		(0.007)							
69WV	PAUL F. THIEL AND RUTH I. THIEL,	121,122	198	923	26-1235-0000	32.3756	0.2436	0.3277	0.1100	0.2177	-	-	31.9143		To be acquired for Wyandot County		
	TRUSTEES, OR THEIR SUCCESSORS					(80.0)	(0.602)	(0.810)	(0.272)	(0.538)			78.860				
	IN TRUST, UNDER THE THIEL LIVING TRUST																
70WV	THOMAS R. EINGLE AND	128	196	845	05-0455-0000	0.6799	0.0704	0.3466	0.0704	0.2762	-				To be acquired for Wyandot County		
	VIRGINIA E. EINGLE					(1.68)	(0.174)	(0.857)	(0.174)	(0.683)							
			196	845	02-0805-0000	1.2222	0.0704	0.2838	0.0704	0.2134							
						(3.02)	(0.174)	(0.701)	(0.174)	(0.527)							
			196	845	02-0800-0	0.0931	0.0055	0.0256	0.0055	0.0201							
						(0.23)	(0.014)	(0.063)	(0.014)	(0.049)							
	GRAND TOTAL					1.9952	0.1463	0.6560	0.1463	0.5097		1.3392	-				
						(4.93)	(0.362)	(1.621)	(0.362)	(1.259)		(3.309)					
70E								0.3345	-	0.3345							
								(0.826)		(0.826)							
71WV	L. MICHAEL WOLFE	128,129	210	962	07-0010-0000	15.7709	0.4600	0.3659	0.0887	0.2772	-	15.0337	-		To be acquired for Wyandot County		
						(38.97)	(1.136)	(0.904)	(0.219)	(0.685)		(37.149)					
71X								0.0099	-	0.0099							
								(0.024)		(0.024)							
71T								0.0314	-	0.0314					Construct Portion of a Private Drive		
								(0.078)		(0.078)				80%STATE			
														20%FED.			

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS ACQUIRED FOR THE PURPOSE OF STRUCTURE REMOVAL TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR. UPON COMPLETION OF THE WORK REQUIRED FOR SUCH REMOVAL AND SUBSEQUENT RECLAMATION, THE EASEMENT SHALL BE VACATED IMMEDIATELY.

PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
REH	2/3/99	Delete Parcels 68T & 69X
REH	2/3/99	Revise Take-Parcels 65T & 65X
REH	4/12/99	Add Parcel 71T
REH	6/21/99	Revise Parcel 68WV and add 68T

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

WYA-CRA-30-28.009/0.000

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 65-71

2003 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
72WV	HENRY D. VENT	128,131	207	444	02-0820-0100	5.9425	0.0907	0.3003	0.0732	0.2271	-			20%FED.	To be acquired for Wyandot County		
						(14.684)	(0.224)	(0.742)	(0.181)	(0.561)							
			117	569	02-0800-0100	4.0915	0										
						(10.11)											
			182	31	02-0820-02	6.7718	0.5082										
						(16.733)	(1.256)										
			183	701	02-0815-0000	5.9450	0.1344										
						(14.69)	(0.332)										
			149	599	02-0810-0000	9.1299	0.1729										
						(22.56)	(0.427)										
	GRAND TOTAL					31.8807	0.9062	0.3003	0.0732	0.2271		30.7474	-				
						(78.777)	(2.239)	(0.742)	(0.181)	(0.561)		(75.977)					
72X								0.0120	-	0.0120							
								(0.030)		(0.030)							
72T								0.0422	-	0.0422					Construct portion of a private drive		
								(0.104)		(0.104)							
73WV	CHARLES W. PENWELL AND	128,129	189	290	02-0825-00	0.5625	0.0381	0.0332	0.0155	0.0177	-				To be acquired for Wyandot County		
	LINDA L. PENWELL					(1.39)	(0.094)	(0.082)	(0.038)	(0.044)							
			189	290	02-0820-0300	0.5625	0										
						(1.39)											
	GRAND TOTAL					1.1250	0.0381	0.0332	0.0155	0.0177		1.0692	-				
						(2.780)	(0.094)	(0.082)	(0.038)	(0.044)		(2.642)					
74WL	DANIEL J. CHRISTMAN &	79,133	161	589	02-0990-0000	0.5666	0.0460	0.0503	0.0460	0.0043	-	-	0.5163				
	SHIELA M. CHRISTMAN					(1.40)	(0.114)	(0.124)	(0.114)	(0.010)			(1.276)				
74T								0.1129	-	0.1129					Construct portion of a private drive		
								(0.279)		(0.279)							
75WL	JUNIOR D. MILLER AND	134	117	496	02-0975-0000	0.7487	0.0975	0.1067	0.0975	0.0092	-	0.6420	-				
	MARGARET I. MILLER					(1.85)	(0.241)	(0.264)	(0.241)	(0.023)		(1.586)					
75T								0.0467	-	0.0467					Construct portion of a private drive		
								(0.115)		(0.115)							
76WV	MITCHELL N. WELCH AND	135,136	433	736	37-00-10780-000	32.3756	1.0988	0.4374	0.1549	0.2825					To be acquired for Crawford County		
	DYANA L. WELCH					(80.0)	(2.715)	(1.081)	(0.383)	(0.698)							
76WV1					37-00-10780-000			0.3891	0	0.3891					To be acquired for Crawford County		
								(0.961)		(0.961)							
	GRAND TOTAL					32.3756	1.0988	0.8265	0.1549	0.6716	-	-	30.6052	80%STATE			
						(80.0)	(2.715)	(2.042)	(0.383)	(1.659)			(75.626)	20%FED.			

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS ACQUIRED FOR THE PURPOSE OF STRUCTURE REMOVAL TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR. UPON COMPLETION OF THE WORK REQUIRED FOR SUCH REMOVAL AND SUBSEQUENT RECLAMATION, THE EASEMENT SHALL BE VACATED IMMEDIATELY.

PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
REH	4/12/99	Add Parcel 72T
REH	5/24/99	Name Change-Parcel 73
REH	6/9/99	Parcels 76WV & 76WV1-To be acquired for Crawford Co.

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 72-76

WYA-CRA-30-28.009/0.000

2004 2116

SUMMARY OF ADDITIONAL RIGHT OF WAY

metric units

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
														80%STATE			
77WL	MICHAEL V. STROUSE	84,85	465	717	37-00-10727-000	1.5225	0.1409	0.3624	0.0946	0.2678				20%FED.			
		136,137				(3.762)	(0.348)	(0.895)	(0.234)	(0.661)							
77WV					37-00-10727-000			0.1676	0.0463	0.1213					To be acquired for Crawford County		
								(0.414)	(0.114)	(0.300)							
	GRAND TOTAL					1.5225	0.1409	0.5300	0.1409	0.3891		-	0.9925				
						(3.762)	(0.348)	(1.309)	(0.348)	(0.961)			(2.453)				
77T								0.1951	-	0.1951					Construct portion of private drive		
								(0.482)		(0.482)							
78WL	GILBERT H. BUCHER AND	139	322	230	37-00-10516-000	0.4047	0.0542	0.2499	0.0542	0.1957	YES	0.1548	-		1 story frame residence		
	SHIRLEY F. BUCHER					(1.00)	(0.134)	(0.618)	(0.134)	(0.484)		(0.382)					
78ER					37-00-10516-000			0.1548	0	0.1548							
								(0.382)	0	(0.382)							
78T								0.1548	0	0.1548					Structure Removal		
								(0.382)	0	(0.382)							
79WV	EDWARD L. WHEELER AND	139	349	489	21-00-04365-000	4.3302	0.4641	0.1223	0.0836	0.0387		3.8274			To be acquired for Crawford County		
	JUDY K. WHEELER					(10.70)	(1.147)	(0.302)	(0.207)	(0.095)		(9.458)					
80WV	DONALD E. KALB AND	142	359	611	21-00-03889-000	0.2327	0.0331	0.0454	0.0331	0.0123					To be acquired for Crawford County		
	CHRISTINE T. KALB					(0.575)	(0.082)	(0.112)	(0.082)	(0.030)							
			359	455	21-00-03890	0.3023	0.0430	0	0	0							
						(0.747)	(0.106)	0	0	0							
			465	968	21-00-04120-00	0.4492	0.0401	0	0	0							
						(1.11)	(0.099)	0	0	0							
	GRAND TOTAL					0.9842	0.1162	0.0454	0.0331	0.0123		0.8557	-				
						(2.432)	(0.287)	(0.112)	(0.082)	(0.030)		(2.114)					
81	OHIO POWER COMPANY	-	402	568	21-00-60233-000										NOT REQUIRED		
82WL	MYRON V. KING AND ALICE L. KING	134	167	569	02-0965-0000	7.6892	0.1839	0.0254	0.0232	0.0022	-						
						(19.00)	(0.455)	(0.063)	(0.057)	(0.0060)							
82WD					02-0965-0000			0.2030	0.0302	0.1728							
								(0.502)	(0.075)	(0.427)							
	GRAND TOTAL					7.6892	0.1839	0.2284	0.0534	0.1750		7.3303	-				
						(19.00)	(0.455)	(0.564)	(0.132)	(0.432)		(18.113)					
82E								0.0686	-	0.0686							
								(0.170)		(0.170)							
82T								0.0337	-	0.0337				80%STATE	Construct portion of a private drive		
								(0.083)		(0.083)				20%FED.			

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS ACQUIRED FOR THE PURPOSE OF STRUCTURE REMOVAL TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR. UPON COMPLETION OF THE WORK REQUIRED FOR SUCH REMOVAL AND SUBSEQUENT RECLAMATION, THE EASEMENT SHALL BE VACATED IMMEDIATELY.

PARCEL RECORD AREAS SHOWN ARE TAX RECORD AREAS TAKEN FROM TAX MAPS.

NOTE: UNLESS SPECIFIED OTHERWISE, AREAS ARE STATED IN HECTARES WITH ENGLISH EQUIVALENTS IN (ACRES).

1 HECTARE = 2.471 ACRES

REV.	DATE	DESCRIPTION
5	10/24/00	Revised Parcel 78E to 78ER
REH 1	11/17/98	Change 82WV to 82WD, delete-To be acquired for Wyandot County
REH 2	2/3/99	Add Parcel 82E, Revise Parcel 77T
REH 3	4/12/99	Add Parcel 78T

DATE OF COMPLETION

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY PARCELS 77-82

WYA-CRA-30-28.009/0.000

2005 2116

SUMMARY SHEET PAGE NO. 9 OF 21

REV.	DATE	DESCRIPTION
REH	4/12/99	Changed Parcel 34LL to 34E
REH	5/17/99	Parcel 33-Added note to remarks column
JDK	5/20/99	Revised name Parcel 35
JDK	7/27/99	Delete Parcel 35WD,Add Parcel 35T

SUMMARY SHEET PAGE NO. 18 OF 21

REV.	DATE	DESCRIPTION
REH	9/28/99	Add Parcel 70E

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. 3 OF 21

REV.	DATE	DESCRIPTION
REH	6/9/99	Parcels 12WV & 12WVI- To be acquired for Wyandot Co.
REH	6/21/99	Delete Parcel 10T

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. 14 OF 21

REV.	DATE	DESCRIPTION
REH	6/9/99	Parcels 51WVI & 52WV- To be acquired for Crawford Co.

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. 20 OF 21

REV.	DATE	DESCRIPTION
REH	6/9/99	Parcels 77WV & 79WV- To be acquired for Crawford Co.

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. 8 OF 21

REV.	DATE	DESCRIPTION
REH	5/24/99	Add Parcel 29EI
REH	6/9/99	Add Parcel 32E

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. 11 OF 21

REV.	DATE	DESCRIPTION
REH	6/30/99	Add Parcel 41E

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. 15 OF 21

REV.	DATE	DESCRIPTION
REH	7/13/99	Revise Take-Parcel 55WVI
REH	7/13/99	Added Parcel 55E

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. 12 OF 21

REV.	DATE	DESCRIPTION
REH	9/14/99	Change Parcel 47X to 47XV, Add- To be acquired for Crawford Co.

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

SUMMARY SHEET PAGE NO. ___ OF ___

REV.	DATE	DESCRIPTION

REV.	DATE	SHT. NO.	DESCRIPTION

metric units

SHEET 21 OF 21

FEDERAL PROJECT NO. F 49(68)

PID NO. 10289

STATE JOB NO. 017600

SUMMARY OF ADDITIONAL RIGHT OF WAY REVISIONS

WYA-CRA-30-28.009/0.000

2006 2116

REV.	DATE	SHT. NO.	DESCRIPTION

WYA/CRA-30-28.009/0.000
WYANDOT COUNTY
CRANE TOWNSHIP
SEC. 2&3, T.-3S, R.-14E
PITT TOWNSHIP
SEC. 10, T.-3S, R.-14E

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
metric units

SHEET 1 OF 6

BEGIN PROJECT
STA. 28+009.000

SECTION 34
SECTION 3

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

WYANDOT COUNTY
CRANE TOWNSHIP
SEC. 3, T-3S, R-14E

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 2, T-3S, R-14E

HALF SECTION LINE

SECTION 3
SECTION 2
SECTION 10
SECTION 11
SECTION 1

T.H. 55
T.H. 124
℄ US-30
℄ US-30 E.B.
℄ US-30 W.B.
℄ US-23
℄ RAMP A
℄ RAMP B
℄ C.H. 56
C.H. 56

PITT TWP.

118 117 116 115 114 113 112 111 110 109 108 107 106 105 104 103 102 101 100 99 98 97 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 125 124 123 122 121 120 119

14+000 28+500 13+500 28+500 29+000 29+000 29+500 29+500 29+000 29+500 29+500 29+000 13+000 29+000 30+000 30+500 31+000 0+500 1+500 12+500 0+500

SCALE IN METERS
0 40 80 160
1:4000

PID NO. 10289

SCHEMATIC PLAN
WYA/CRA-30-28.009/0.000 STA. 28+009.000 TO STA. 31+200.000

37/146

2007
2116

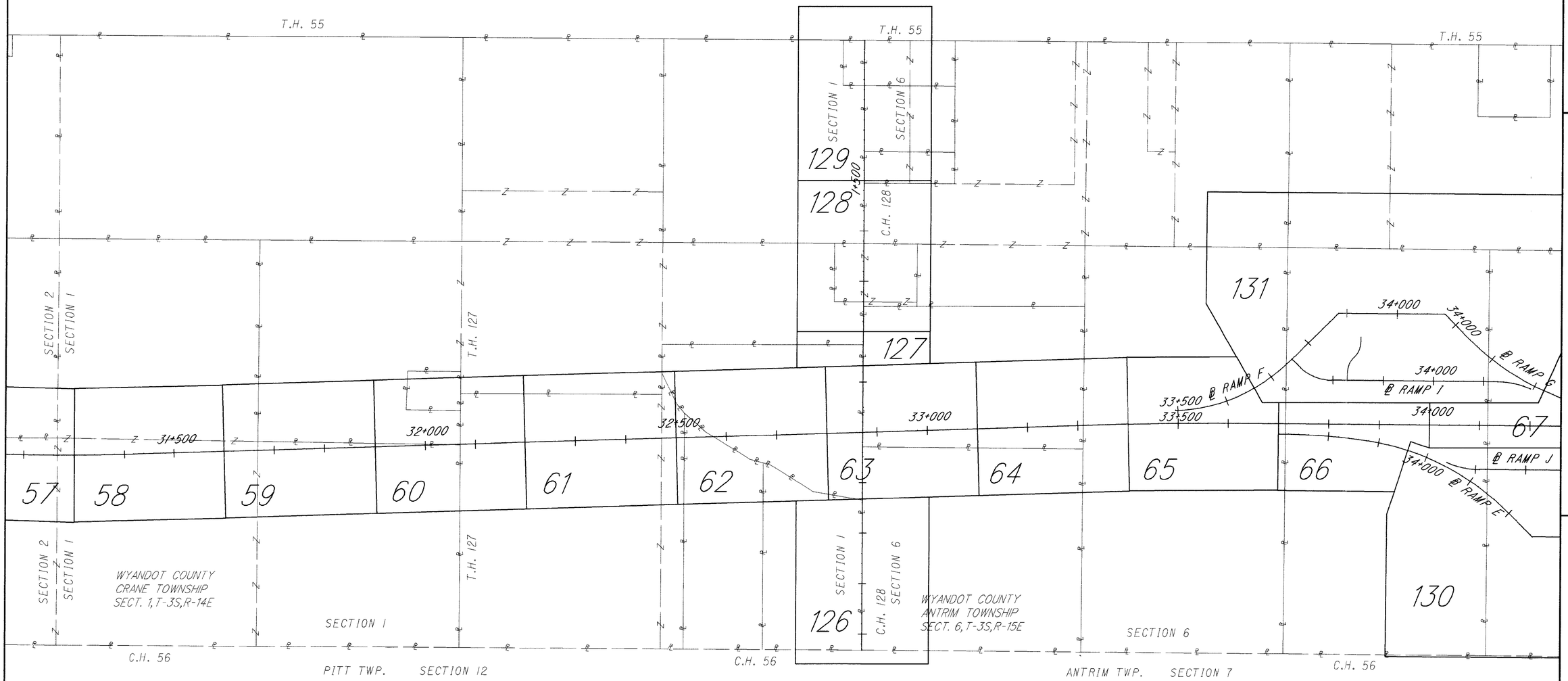
REV.	DATE	DESCRIPTION

DATE OF COMPLETION

WYA/CRA-30-28.009/0.000
WYANDOT COUNTY
CRANE TOWNSHIP
SEC. 1, T.-3S, R.-14E
ANTRIM TOWNSHIP
SEC. 6, T.-3S, R.-15E

metric units

SHEET 2 OF 6



REV.	DATE	DESCRIPTION

DATE OF COMPLETION

N

0 40 80 160
SCALE IN METERS
1:4000

PID NO. 10289

SCHEMATIC PLAN
WYA/CRA-30-28.009/0.000 STA. 31+200.000 TO STA. 34+200.000

38/146

2008
2116

WYA/CRA-30-28.009/0.000
WYANDOT COUNTY
ANTRIM TOWNSHIP
SEC. 4,5&6, T.-3S, R.-15E

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

SHEET 3 OF 6

T.H. 55 T.H. 55 T.H. 55

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 6, T-3S, R-15E

SECTION 6 SECTION 5

SECTION 5 SECTION 4

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 4, T-3S, R-15E

WYANDOT COUNTY
NEVADA CORP. LINE

NEVADA CORP. LINE WYANDOT COUNTY

T.H. 133

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 5, T-3S, R-15E

131

℄ RAMP G

68 69 70 71 72 73 74 75 76 77

67

34+500 34+500 35+000 35+500 36+000 36+500 37+000

℄ RAMP J

℄ RAMP E

℄ RAMP H

34+500 34+500

CREEK

BROKEN SWORD CREEK

130 146

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 5, T-3S, R-15E

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 4, T-3S, R-15E

SECTION 6 SECTION 5 SECTION 5 SECTION 4 SECTION 4

ANTRIM TWP. SECTION 7 C.H. 56 ANTRIM TWP. SECTION 8 C.H. 56 ANTRIM TWP. SECTION 9

REV.	DATE	DESCRIPTION
DATE OF COMPLETION		

SCALE IN METERS 1:4000

PID NO. 10289

SCHEMATIC PLAN
STA. 34+200.000 TO STA. 37+100.000

WYA/CRA-30-28.009/0.000

39/146

2009
2116

WYA/CRA-30-28.009/0.000
WYANDOT COUNTY
ANTRIM TOWNSHIP
SEC. 3&4, T.-3S, R.-15E
CRAWFORD COUNTY
TOD TOWNSHIP
SEC. 2, T.-3S, R.-15E

metric units

SHEET 4 OF 6

SCALE IN METERS 1:4000

NEVADA-WYNFORD RD. C. 18

Spike

T.H. 10

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2, T-3S, R-15E

T.H. 55

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 4, T-3S, R-15E

SECTION 4

SECTION 3

S.R. 231

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3, T-3S, R-15E

INDIAN RESERVATION LINE

NEVADA CORP. LINE
WYANDOT COUNTY

SECTION 3 WYANDOT COUNTY

SECTION 2 CRAWFORD COUNTY

T.H. 10

T. - 11

138

137

136

135

87

86

85

84

83

82

81

80

79

78

77

134

133

132

0+500

37+500

38+000

38+500

39+000

℄ RAMP L

℄ RAMP M

℄ RAMP N

℄ RAMP K

NEVADA CORP. LINE
WYANDOT COUNTY

NEVADA CORP. LINE
WYANDOT COUNTY

S.R. 231

S.R. 231

S.R. 231

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3, T-3S, R-15E

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2, T-3S, R-15E

T.H. 10 SECTION 3

SECTION 2

Spike

SECTION 4

SECTION 3

BUCYRUS-NEVADA RD.

C.H. 56

C.H. 56

T.H. 56

T.H. 56

T. 2

T. 2

ANTRIM TWP. SECTION 9

ANTRIM TWP. SECTION 10

REV.	DATE	DESCRIPTION
DATE OF COMPLETION		

SCHEMATIC PLAN
STA. 37+100.000 TO STA. 0+700.000

WYA/CRA-30-28.009/0.000

PID NO. 10289

40/146

2010
2116

WYA/CRA-30-28.009/0.000
CRAWFORD COUNTY
TOD TOWNSHIP
SEC. 1&2, T.-3S, R.-15E
SEC. 36, T.-2S, R.-15E
HOLMES TOWNSHIP
SEC. 31, T.-2S, R.-16E

metric units

SHEET 5 OF 6

SCALE IN METERS 1:4000

PID NO. 10289

SCHEMATIC PLAN
WYA/CRA-30-28.009/0.000
STA. 0+700.000 TO STA. 3+900.000

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 36,T-2S,R-15E

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 31,T-2S,R-16E

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2,T-3S,R-15E

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 1,T-3S,R-15E

CRAWFORD COUNTY
BUCYRUS TOWNSHIP
SECT. 6,T-3S,R-16E

NEVADA-WYNFORD RD.
MARION-MELMORE RD.
KNAUSS RD.
SHROLL RD.

SECTION 35 C. 18 SECTION 2
SECTION 36 C. 18 SECTION 1
SECTION 31 C. 18 SECTION 6
SECTION 35 C. 1 SECTION 2
SECTION 36 C. 1 SECTION 1
SECTION 31 C. 1 SECTION 6
SECTION 2 C. 1 SECTION 1
SECTION 36 T. 21 SECTION 31
SECTION 1 T. 21 SECTION 6

0+800 0+900 1+100 1+200 1+500 1+000 2+000 2+500 3+000 3+500

87 88 89 90 91 92 93 94 95 96 97 98 139 140 145

REV.	DATE	DESCRIPTION
		DATE OF COMPLETION

41 / 146

2011
2116

WYA/CRA-30-28.009/0.000
CRAWFORD COUNTY
HOLMES TOWNSHIP
SEC. 31&32, T.-2S, R.-16E

metric units

SHEET 6 OF 6

SCALE IN METERS 1:4000

PID NO. 10289

SCHEMATIC PLAN
STA. 3+900.000 TO STA. 7+000.000

WYA/CRA-30-28.009/0.000

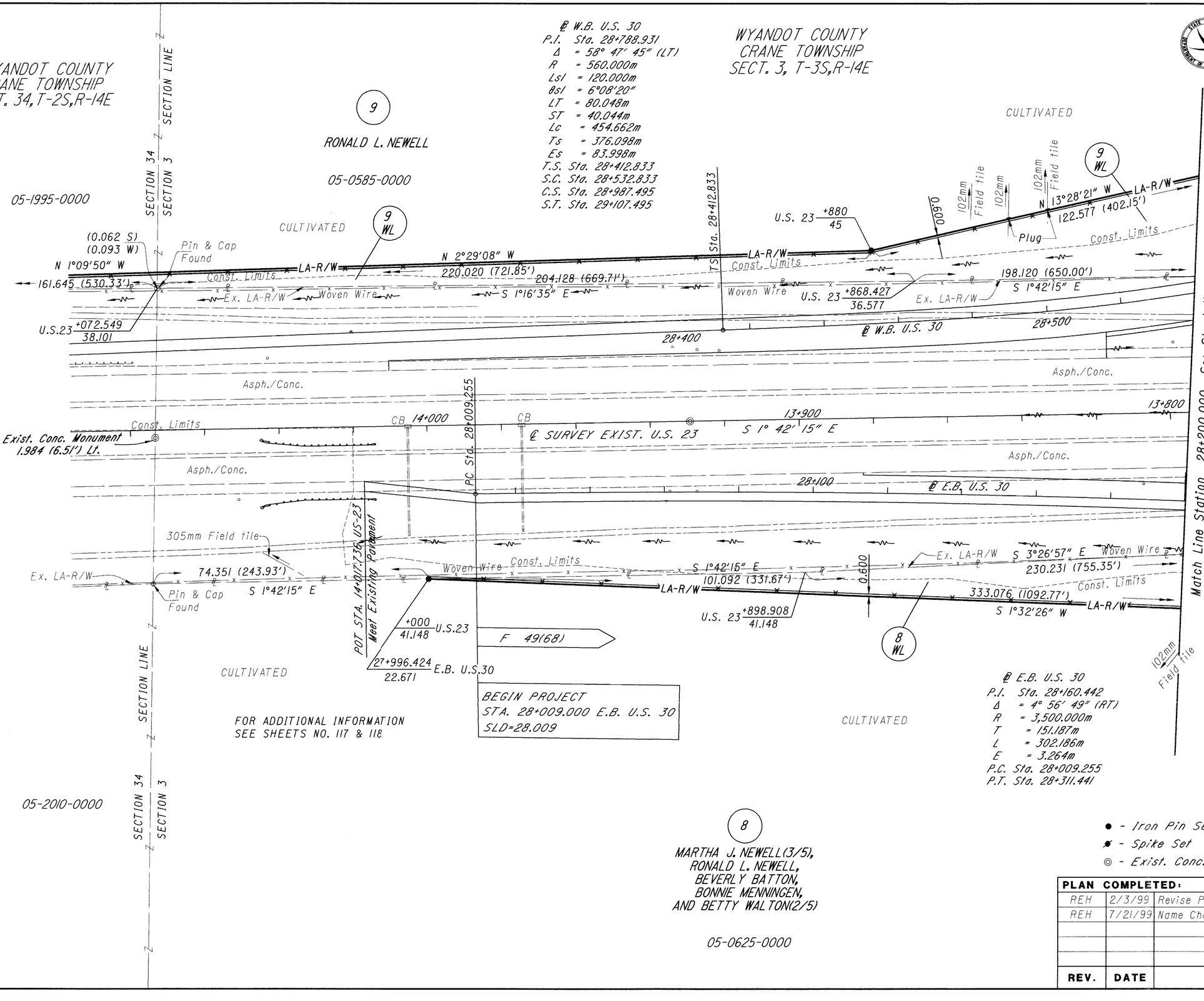
42/146

2012/2116

SECTION 31
CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 31,T-2S,R-16E
CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 32,T-2S,R-16E
SECTION 32
SECTION 31
SECTION 32
SECTION 33
U.S. 30
C. 22
BETHEL RD.
Ex. LA
Ex. 140
END PROJECT
STA. 6+528.317
142
103
102
141
106
107
RAMP P
RAMP O
143
104
105
T. 111
SHROLL RD.
HALF SECTION LINE
98
99
100
101
4+000
4+500
5+000
5+500
6+000
6+500
7+000
0+500
1+000
0+900
C. 330
Ex. R/W
(LANDLOCKED)
GRASS RUN CREEK
C. 18
NEVADA-WYNFORD RD.
SECTION 6

REV.	DATE	DESCRIPTION

DATE OF COMPLETION



metric units

PLAN COMPLETED:		
REH	2/3/99	Revise Parcel 9WL
REH	7/21/99	Name Change-Parcel 9
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - E.B. U.S. 30
STA. 28+009.000 TO 28+200.000

WYA/CRA-30-28.009/0.000

43/146

2013
2116

metric units

CULTIVATED

9 RONALD L. NEWELL

05-0585-0000

℄ W.B. U.S. 30
P.I. Sta. 28+788.931
Δ = 58° 47′ 45″ (LT)
R = 560.000m
Ls/ = 120.000m
θs/ = 6°08′20″
LT = 80.048m
ST = 40.044m
Lc = 454.662m
Ts = 376.098m
Es = 83.998m
T.S. Sta. 28+412.833
S.C. Sta. 28+532.833
C.S. Sta. 28+987.495
S.T. Sta. 29+107.495

102mm Field tile

+760
70 U.S. 23

0.600

S 16°15′05″ E
99.531 (326.55′)

LA-R/W

Const. Limits

Plug

S 13°22′16″ E
LA-R/W
163.375 (536.01′)

Const. Limits

Field tile

102mm Abndn.

9 WL

℄ W.B. U.S. 30

28+600

198.120 (650.00′)
S 1°42′15″ E

Woven Wire

Ex. LA-R/W

+670.306
36.577 U.S. 23

58.800 (192.9′)
N 85°12′48″ W

Ex. LA-R/W

Match Line Station 28+680.000 W.B. U.S. 30
See Sheet No. 49

102mm Abndn.
Field tile

Asphalt

T.H.-55

Asph./Conc.

13+500

CB 13+600

℄ SURVEY EXIST. US-23

S 1° 42′ 15″ E

13+700

Asph./Conc.

Asph./Conc.

381mm

+668.784
34.138 U.S.23

381mm

PT Sta. 28+350.978

SC Sta. 28+495.978

S 1°42′15″ E

Ex. LA-R/W

379.983 (1246.66′)

Woven Wire

28+300

S 3° 14′ 46″ W

28+400

Match Line Station 28+200.000 See Sheet No. 43

Match Line Station 28+500.000 See Sheet No. 45

Ex. LA-R/W S 3°26′57″ E
230.231 (755.35′)

Woven Wire

381mm

PT Sta. 28+311.441

8 WL

Abndn.

Const. Limits

Abndn.

Plug

LA-R/W

333.076 (1092.77′)
S 1°32′26″ W

102mm Field tile

152mm Field tile

0.600

U.S. 23 +682
59.176

CULTIVATED

8

MARTHA J. NEWELL(3/5),
RONALD L. NEWELL,
BEVERLY BATTON,
BONNIE MENNINGEN,
AND BETTY WALTON (2/5)

102mm Field tile

05-0625-0000

℄ E.B. U.S. 30
P.I. Sta. 28+160.442
Δ = 4° 56′ 49″ (RT)
R = 3,500.000m
T = 151.187m
L = 302.186m
E = 3.264m
P.C. Sta. 28+009.255
P.T. Sta. 28+311.441

LA Limits shallbe removed & existing R/W to remain from Sta. 13+625.550, 75 meters Lt. U.S. 23 to Sta. 13+634.530,167.876 meters Lt. U.S. 23 to Sta. 13+661.957, 167.337 meters Lt. U.S. 23 to Sta. 13+667.458, 60 meters Lt. U.S. 23. The existing LA Limits along U.S. 23 shallbe extended from Sta.13+625.550, 75 meters Lt. to Sta. 13+667.458, 60 meters Lt. U.S. 23.

14.565 (47.79′)

S 66°10′41″ W

40.053 (131.41′)

8 WV

+665.408
100 U.S. 23

N 85°21′42″ E

Ex. LA-R/W

Woven Wire

Const. Limits

T.H.-55

Asphalt

Const. Limits

Ex. LA-R/W

Woven Wire

S 86°10′54″ E

25.117 (82.40′)

+661.957
167.337

Exist. LA

+634.530
167.876

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

102mm Abndn.
Field tile

Abndn.

Ex. LA-R/W

N 84°52′00″ E
82.735 (271.44′)

+618.492
35.054 U.S. 23

Abndn.

Field tile

Woven Wire

379.466 (1244.97′)
S 1°00′49″ E

152mm

Field tile Abndn.

Ex. LA-R/W

10 WL

FREDERICK P. SMALLEY
AND MIRIAM SMALLEY

05-0580-0000

CULTIVATED

102mm Abndn. (Typ.)

102mm Field tile

CULTIVATED

Abndn. (Typ.)

102mm Field tile

305mm

6 WL

+621.540
33.528 U.S. 23

S 86°10′54″ E
41.666 (136.70′)

+625.550
75 U.S. 23

10.550 (34.61′)

Const. Limits

245.550 (805.61′)

Const. Limits

LA-R/W

S 1°42′15″ E

44.512 (146.04′)
N 17°50′22″ E

+615
75 U.S. 23

CULTIVATED

6

6 WV

28.163 (92.40′)
N 64°17′20″ W

R/W

+627.967
100 U.S. 23

DONALD M. BASSLER AND
CATHERINE L. BASSLER

05-0635-0000

℄ E.B. U.S. 30
P.I. Sta. 29+138.153
Δ = 102° 35′ 11″ (LT)
R = 571.200m
Ls = 145.000m
θs = 7° 16′ 20″
LT = 96.748m
ST = 48.408m
Lc = 877.717m
Ts = 787.175m
Es = 344.681m
T.S. Sta. 28+350.978
S.C. Sta. 28+495.978
C.S. Sta. 29+373.695
S.T. Sta. 29+518.695

Pavement to be Removed

● - Iron Pin Set With I.D. Cap
✱ - Spike Set
◎ - Exist. Conc. Monument

PLAN COMPLETED:		
REH	7/21/99	Name Change-Parcel 9
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN - E.B. U.S. 30
STA. 28+200.000 TO 28+500.000

WYA/CRA-30-28.009/0.000

44/146

2014
2116

metric units

℄ E.B. U.S. 30
P.I. Sta. 29+138.153
Δ = 102° 35' 11" (LT)
R = 571.200m
Ls = 145.000m
θs = 7° 16' 20"
LT = 96.748m
ST = 48.408m
Lc = 877.717m
Ts = 787.175m
Es = 344.681m
T.S. Sta. 28+350.978
S.C. Sta. 28+495.978
C.S. Sta. 29+373.695
S.T. Sta. 29+518.695

℄ RAMP B
P.I. Sta. 29+169.182
Δ = 142° 30' 25" (RT)
R = 305.000m
Ls = 82.000m
θs = 7° 42' 07"
LT = 54.719m
ST = 27.380m
Lc = 676.601m
Ts = 942.359m
Es = 646.882m
T.S. Sta. 28+226.822
S.C. Sta. 28+308.822
C.S. Sta. 28+985.423
S.T. Sta. 29+067.423

RAMP B
For Continuation See
Sheet No. 115, 50, 51 & 144

10 WL
FREDERICK P. SMALLEY
AND MIRIAM SMALLEY
05-0580-0000

6 WL
DONALD M. BASSLER AND
CATHERINE L. BASSLER
05-0635-0000

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

Match Line Station 28+500.000 See Sheet No. 44
Match Line Station 28+800.000 See Sheet No. 46

102mm Abndn. (Typ.) Field tile
152mm Field tile Abndn.
Woven Wire
Ex. LA-R/W
379.466 (1244.97')
S 1°00'49" E
Asph./Conc.
S 1° 42' 15" E
℄ SURVEY EXIST. U.S-23
13+400
152mm Abndn.
28+600
28+700
13+300
℄ E.B. U.S. 30
111.672 (366.38')
S 1°42'15" E
Ex. LA-R/W
Asph./Conc.
102mm Field tile
Const. Limits
LA-R/W
245.550 (805.61')
S 1°42'15" E
0.600
Field tile Abndn. 152mm
379.983 (1246.66')
S 1°42'15" E Ex. LA-R/W
28+700
13+200
38mm
Asph./Conc.
13.0m(42.65')
152mm (6") Conduit
Abndn.
100.5m(329.72')-152mm (6")
113.650 (372.87')
S 31°13'59" W
LA-R/W
Collector (By Others)
102mm
Field tile
Abndn. (Typ.)
Const. Limits
Abndn. (Typ.) 102mm
RAMP B
For Continuation See
Sheet No. 109, 110 & 113
28+600
U.S. 23 +380 / 75
U.S. 23 +239.054 / 30.481
U.S. 23 +241.558 / 33.528
CULTIVATED

● - Iron Pin Set With I.D. Cap
✖ - Spike Set
◎ - Exist. Conc. Monument

PLAN COMPLETED:

REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

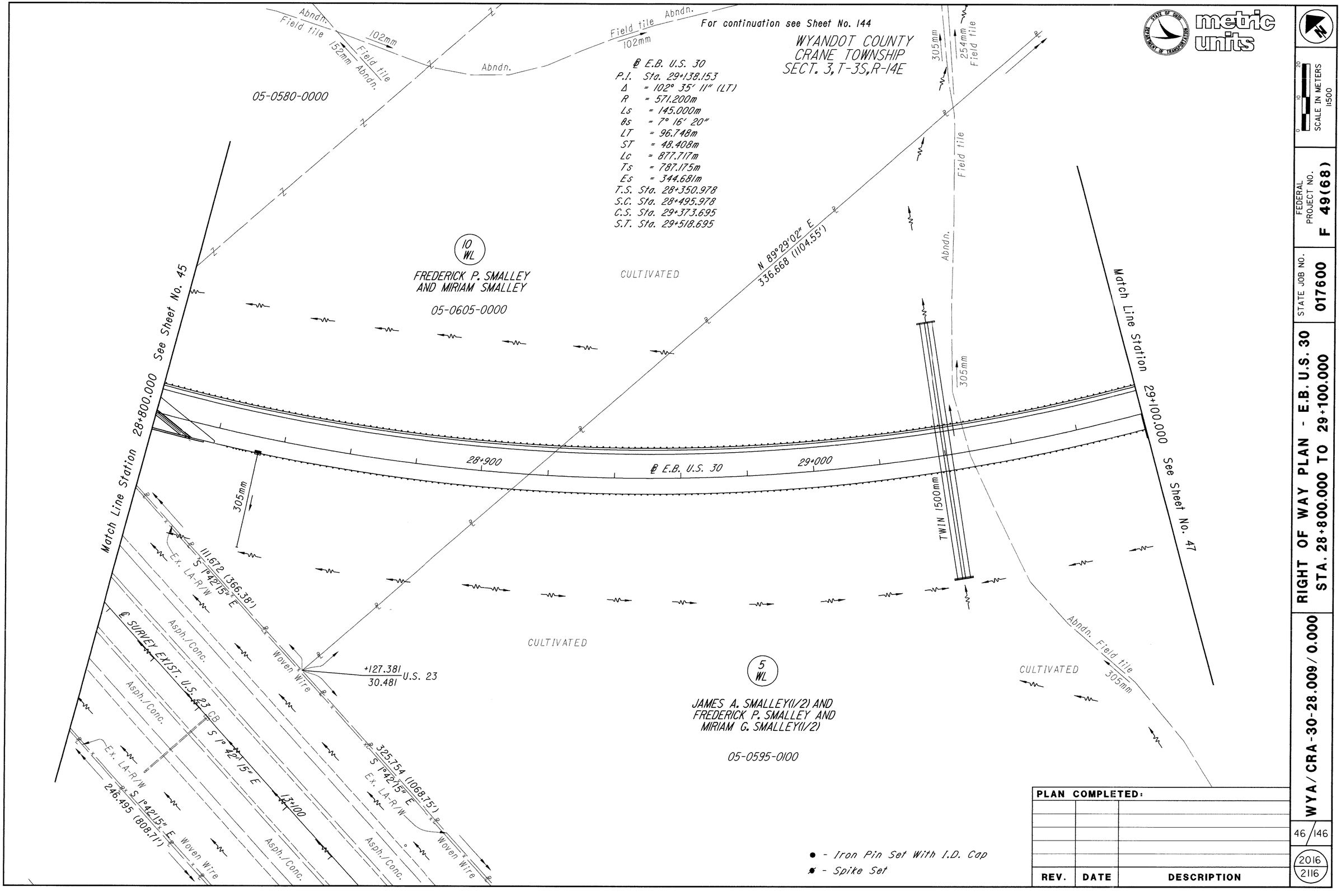
STATE JOB NO. 017600

PLAN - E.B. U.S. 30
RIGHT OF WAY
STA. 28+500.000 TO 28+800.000

WYA/CRA-30-28.009/0.000

45/146

2015
2116



metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - E.B. U.S. 30
STA. 28+800.000 TO 29+100.000

WYA/CRA-30-28.009/0.000

PLAN COMPLETED:

REV.	DATE	DESCRIPTION

46/146

2016
2116

metric units

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

℄ E.B. U.S. 30
P.I. Sta. 29+138.153
Δ = 102° 35' 11" (LT)
R = 571.200m
Ls = 145.000m
θs = 7° 16' 20"
LT = 96.748m
ST = 48.408m
Lc = 877.717m
Ts = 787.175m
Es = 344.681m
T.S. Sta. 28+350.978
S.C. Sta. 28+495.978
C.S. Sta. 29+373.695
S.T. Sta. 29+518.695

For Continuation see Sheet No. 144

N 89°29'02" E
336.668 (1104.55')

S 0°09'12" W
252.600 (828.74')

574.00m (1883.20')-381mm (15") Conduit

10
WL

FREDERICK P. SMALLEY
AND MIRIAM SMALLEY

05-0605-0000

CULTIVATED

CS Sta. 29+373.695

Watch Line Station 29+400.000 See Sheet No. 48

102mm Abdn. Field tile

Abdn. 102mm Field tile

1050mm R.C.P. or 1050mm C.M.P.

℄ E.B. U.S. 30

29+200

29+300

Match Line Station 29+100.000 See Sheet No. 46

305mm

℄ RAMP A

29+300

N 79°27'58" E

Const. Limits

LA-R/W

404.720 (1327.82')
N 78°49'54" E

0.600

Const. Limits

LA-R/W

Match Line Station 29+200.000 Ramp A See Sheet No. 108

5
WL

JAMES A. SMALLEY(1/2) AND
FREDERICK P. SMALLEY AND
MIRIAM C. SMALLEY(1/2)

05-0595-0100

CULTIVATED

CULTIVATED

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

PLAN COMPLETED:		
REH	2/3/99	Delete Parcel 10X3
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - E.B. U.S. 30
STA. 29+100.000 TO 29+400.000

WYA/CRA-30-28.009/0.000

47/146

2017
2116

℄ E.B. U.S. 30
P.I. Sta. 29+138.153
Δ = 102° 35' 11" (LT)
R = 571.200m
Ls = 145.000m
θs = 7° 16' 20"
LT = 96.748m
ST = 48.408m
Lc = 877.717m
Ts = 787.175m
Es = 344.681m
T.S. Sta. 28+350.978
S.C. Sta. 28+495.978
C.S. Sta. 29+373.695
S.T. Sta. 29+518.695

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3,T-3S,R-14E

For Continuation See Sheet No. 144

10
WL

FREDERICK P. SMALLEY
AND MIRIAM SMALLEY

05-0590-0000

CULTIVATED

102mm Field tile Abndn.

℄ R/W, Construction U.S.- 30

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 2,T-3S,R-14E

SECTION 3
SECTION 2

381mm Field tile Abndn.

462.80m(1518.37')-381mm (15") Conduit

05-0545-0000

CULTIVATED

102mm Field tile Abndn.

381mm

ST Sta. 29+518.695

243.853 (800.04')
SECTION LINE

TS Sta. 29+633.092

381mm Field tile Abndn.

Match Line Station 29+400.000 See Sheet No. 47

Match Line Station 29+680.000 See Sheet No. 52

℄ E.B. U.S. 30
CURVE NO. C-3
P.I. = Sta. 29+825.675
Δ = 26° 35' 42" (RT)
R = 560.000m
Ls = 120.000m
θs = 6° 08' 19.80"
LT = 80.048m
ST = 40.044m
Lc = 139.936m
Ts = 192.583m
Es = 16.528m
T.S. Sta. 29+633.092
S.C. Sta. 29+753.092
C.S. Sta. 29+893.028
S.T. Sta. 30+013.028

℄ E.B. U.S. 30 29+500 N 80° 39' 35" E 29+600

℄ RAMP A 29+500 N 79° 27' 58" E 29+600

2400mm

102mm

Const. Limits

Const. Limits

Const. Limits

404.720 (1327.82')
N 78°49'54" E

LA-R/W

196.893 (645.97')

0.600

LA-R/W

75.770 (248.59') N 78°49'54" E

180.819 (593.24')

LA-R/W

105.049 (344.65')

+594.524
42.300

+670.673
39.753

N 9°20'25" W
25.117 (82.41')
Abndn.

+670.947
64.869

235.299 (771.98')
S 88°45'47" W

10
X1

102mm Field tile Abndn.

CULTIVATED

10

FREDERICK P. SMALLEY
AND MIRIAM SMALLEY

05-0590-0000

CULTIVATED

SECTION 3
514.520 (1688.05') to a Copper Pin in a Conc. Monument at S.E. Corner Section 3
SECTION 2
N 0°09'04" W

For Continuation See Property Map Sheet No. 9

● - Iron Pin Set With I.D. Cap
✖ - Spike Set

PLAN COMPLETED:		
REH	2/3/99	Delete Parcel 10X3
REV.	DATE	DESCRIPTION

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - E.B. U.S. 30
STA. 29+400.000 TO 29+680.000

WYA/CRA-30-28.009/0.000

2018
2116

LA Limits shallbe removed & existing R/W to remain from Sta. 13+663.659, 95 meters Rt. U.S. 23 to Sta. 13+655.368, 167.879 meters Rt. U.S. 23 to Sta. 13+626.417, 167.310 meters Rt. U.S. 23 to Sta. 13+623.441, 117.641meters Rt. U.S. 23. The existing LA Limits along U.S. 23 shallbe extended from Sta. 13+663.659, 95 meters Rt. U.S. 23 to Sta. 13+623.441, 117.641meters Rt. U.S. 23.

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

metric units

℄ W.B. U.S. 30
P.I. Sta. 28+788.931
Δ = 58° 47′ 45″ (LT)
R = 560.000m
Ls/ = 120.000m
θs/ = 6°08′20″
LT = 80.048m
ST = 40.044m
Lc = 454.662m
Ts = 376.098m
Es = 83.998m
T.S. Sta. 28+412.833
S.C. Sta. 28+532.833
C.S. Sta. 28+987.495
S.T. Sta. 29+107.495

℄ RAMP B
P.I. Sta. 29+169.182
Δ = 142° 30′ 25″ (RT)
R = 305.000m
Ls = 82.000m
θs = 7° 42′ 07″
LT = 54.719m
ST = 27.380m
Lc = 676.601m
Ts = 942.359m
Es = 646.882m
T.S. Sta. 28+226.822
S.C. Sta. 28+308.822
C.S. Sta. 28+985.423
S.T. Sta. 29+067.423

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

Pavement to be Removed

PLAN COMPLETED:		
REH	7/21/99	Name Change-Parcel 9
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - W.B. U.S. 30
STA. 28+680.000 TO 28+980.000

WYA/CRA-30-28.009/0.000

49/146

2019/2116

℄ W.B. U.S. 30
P.I. Sta. 28+788.931
Δ = 58° 47' 45" (LT)
R = 560.000m
Ls/ = 120.000m
θs/ = 6°08'20"
LT = 80.048m
ST = 40.044m
Lc = 454.662m
Ts = 376.098m
Es = 83.998m
T.S. Sta. 28+412.833
S.C. Sta. 28+532.833
C.S. Sta. 28+987.495
S.T. Sta. 29+107.495

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

metric units

05-0580-0000

Match Line Station 28+980.000 See Sheet No. 49

+980.180
34.108

102mm Abndn. Field tile

CULTIVATED

Fr. Shed

Gravel

Grassy Lane

CULTIVATED

CS Sta. 28+987.495

Const. Limits

LA-R/W

S 62°02'17" E
175.548 (575.94')

0.600

ST Sta. 29+107.495

+140
40

S77°14'33"E
LA-R/W
51.623 (169.37')

Const. Limits

29+000

10
WL

℄ W.B. U.S. 30

29+100

PC Sta. 29+193.960 See Sheet No. 51

Match Line Station 28+860.000 Ramp B See Sheet No. 458/110

℄ Ramp B

28+900

29+000

S 61° 42' 11" E

254mm

102mm Abndn. Field tile

℄ RAMP B

29+100 S 70° 11' 12" E

CS Sta. 28+985.423

ST Sta. 29+067.423

152mm Abndn. Field tile

CULTIVATED

PC Sta. 29+135.020

Abndn. 102mm Field tile

CULTIVATED

Match Line Station 29+193.960

Abndn. 152mm

Abndn. 102mm Field tile

Abndn. Field tile

℄ RAMP B
P.I. Sta. 29+169.182
D = 142° 30' 25" (RT)
R = 305.000m
Ls = 82.000m
θs = 7° 42' 07"
LT = 54.719m
ST = 27.380m
Lc = 676.601m
Ts = 942.359m
Es = 646.882m
T.S. Sta. 28+226.822
S.C. Sta. 28+308.822
C.S. Sta. 28+985.423
S.T. Sta. 29+067.423

10

FREDERICK P. SMALLEY
AND MIRIAM SMALLEY

05-0580-0000

℄ RAMP B
P.I. Sta. 29+213.330
Δ = 7° 10' 10" (RT)
R = 1,250.000m
T = 78.310m
L = 156.416m
E = 2.451m
P.C. Sta. 29+135.020
P.T. Sta. 29+291.436

05-0590-0000

305mm Abndn. Field tile
254mm Abndn. Field tile
102mm Abndn.

05-0605-0000

For Continuation See Sheet No. 144

● - Iron Pin Set With I.D. Cap
✖ - Spike Set

PLAN COMPLETED:		
REH	6/21/99	Delete Parcel 10T
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

WYA/CRA-30-28.009/0.000
RIGHT OF WAY PLAN - W.B. U.S. 30
STA. 28+980.000 TO 29+193.960

2020
2116

Match Line 'A'

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3,T-3S,R-14E

metric units

19.237 (63.11')
N 6°20'21" E

+294
121

24.602 (80.71')
N 47°15'33" E

+325
115

10
X

254mm Field tile

N 33°18'24" E
53.309 (174.90')
Const. Limits

Const. Limits
48.455 (158.97')
N 32°21'35" E

10

FREDERICK P. SMALLEY
AND MIRIAM SMALLEY

05-0580-0000

℄ US-30
P.I. Sta. 30+333.210
Δ = 30° 00' 42" (LT)
R = 4,250.000m
T = 1,139.250m
L = 2,226.164m
E = 150.044m
P.C. Sta. 29+193.960
P.T. Sta. 31+420.124

CULTIVATED
05-0580-0000

+210
70

+288
68.015

+320
66.792

CULTIVATED

S 77°14'33" E
51.623 (169.37')

76.758 (251.83')

LA-R/W

31.516 (103.40')

S 60°57'48" E
345.540 (1133.66')

237.265 (778.43')

LA-R/W

0.600

Const. Limits

Const. Limits

10
WL

Abndn.

462.80m (1518.37')-381mm (15") Conduit

254mm

Abndn.

254mm

Abndn.

Field tile

Twin 1500mm C.M.P.

Match Line Station 29+193.960

See Sheet No. 50

29+200

℄ RAMP B

29+200

29+300

29+400

℄ R/W, Construction U.S.R. 30

Match Line Station 29+500.000

See Sheet No. 52

29+302
253

S 53°17'59" E
45.268 (148.52')

29+349.328
245

PT Sta. 29+291.436

CULTIVATED

574.00m (1883.20')-381mm (15") Conduit

Const. Limits

N 34°05'43" E
114.894 (376.95')

N 34°05'43" E
107.996 (354.32')

Const. Limits

102mm Field tile

Abndn.

CULTIVATED

10
WL

FREDERICK P. SMALLEY
AND MIRIAM SMALLEY

Abndn. 102mm

05-0590-0000

℄ RAMP B
P.I. Sta. 29+213.330
Δ = 7° 10' 10" (RT)
R = 1,250.000m
T = 78.310m
L = 156.416m
E = 2.451m
P.C. Sta. 29+135.020
P.T. Sta. 29+291.436

Abndn. 102mm Field tile

For Continuation See Sheet No. 144

10
X

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

Abndn.

29+287
139

29+334
138

19.237 (63.11')
N 6°20'21" E

24.602 (80.71')
N 47°15'33" E

Match Line 'A'

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3,T-3S,R-14E

PLAN COMPLETED:		
REH	2/3/99	Revise Parcel 10X
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 29+193.960 TO 29+500.000

WYA/CRA-30-28.009/0.000

51/146

2021/2116

metric units

SECTION 2
SECTION 3
SECTION LINE

10
FREDERICK P. SMALLEY
AND MIRIAM SMALLEY
05-0545-0000

℄ US-30
P.I. Sta. 30+333.210
Δ = 30° 00' 42" (LT)
R = 4,250.000m
T = 1,139.250m
L = 2,226.164m
E = 150.044m
P.C. Sta. 29+193.960
P.T. Sta. 31+420.124

05-0580-0000

CULTIVATED

CULTIVATED

6.573 (21.56')
+560
50

237.265 (778.43')
S 60°57'48" E
345.540 (1133.66')

LA-R/W
Const. Limits
0.600
305mm

S 66°09'54" E
257.401 (844.49')

LA-R/W
Const. Limits

Match Line Station 29+500.000 See Sheet No. 51

Match Line Station 29+800.000 See Sheet No. 53

254mm
Abndn.
Field tile
254mm
+575.484
0
Abndn.
381mm

29+600
29+700
℄ R/W, Construction U.S.R. 30

℄ E.B. U.S. 30
CURVE NO. C-3
P.I. = Sta. 29+825.675
Δ = 26° 35' 42" (RT)
R = 560.000m
Ls = 120.000m
Θs = 6° 08' 19.80"
LT = 80.048m
ST = 40.044m
Lc = 139.936m
Ts = 192.583m
Es = 16.528m
T.S. Sta. 29+633.092
S.C. Sta. 29+753.092
C.S. Sta. 29+893.028
S.T. Sta. 30+013.028

N 0°09'04" W
243.853 (800.04')

10
WL
FREDERICK P. SMALLEY
AND MIRIAM SMALLEY
05-0590-0000

CULTIVATED

10
WL
FREDERICK P. SMALLEY
AND MIRIAM SMALLEY
05-0545-0000

CULTIVATED

SC. Sta. 29+753.092

Field tile
Abndn.
381mm

℄ E.B. U.S. 30

381mm Abndn.
Field tile

96.019 (315.02')
S 88°37'50" W

Abndn.
29+700
Const. Limits
180.819 (593.24')
105.049 (344.65')
+795.559
77.104

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3,T-3S,R-14E

462.80m(1518.37')-381mm (15") Conduit

SECTION 2
SECTION 3

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 2,T-3S,R-14E

Match Line Station 29+680.000 E.B. U.S. 30
See Sheet No. 48

2400mm
1012mm Abndn.
Field tile

10
XI

Const. Limits
LA-R/W
N 78°49'54" E

288.70m(947.18')-305mm (12") Conduit
(By Others)

235.299 (771.98')
N 88°45'47" E

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN
STA. 29+500.000 TO 29+800.000

WYA/CRA-30-28.009/0.000

52/146

2022
2116

℄ E.B. U.S. 30
CURVE NO. C-3
P.I. = Sta. 29+825.675
Δ = 26° 35′ 42″ (RT)
R = 560.000m
Ls = 120.000m
θs = 6° 08′ 19.80″
LT = 80.048m
ST = 40.044m
Lc = 139.936m
Ts = 192.583m
Es = 16.528m
T.S. Sta. 29+633.092
S.C. Sta. 29+753.092
C.S. Sta. 29+893.028
S.T. Sta. 30+013.028

℄ US-30
P.I. = Sta. 30+333.210
Δ = 30° 00′ 42″ (LT)
R = 4,250.000m
T = 1,139.250m
L = 2,226.164m
E = 150.044m
P.C. Sta. 29+193.960
P.T. Sta. 31+420.124

10
FREDERICK P. SMALLEY
AND MIRIAM SMALLEY
05-0545-0000

CULTIVATED

+820
40
S 66°09′54″ E
257.401 (844.49′)
LA-R/W
S 71°04′50″ E
137.790 (452.07′)
Const. Limits
0.600
10 WL
+959.106
40
N 6°14′40″ E
45.555 (149.46′)
Const. Limits
END LA +949.650
84.592
T.H. 124 1+100
35
MATCH LINE STATION 1+100.000
See Sheet No. 125
N 89°56′35″ E
55.000 (180.45′)
LA
+003.188 END LA
101.410
1+100
20 T.H. 124
+983.670
95.371
Ex. R/W
Gravel
S 15°54′17″ E
73.238 (240.28′)
LA-R/W
Const. Limits
1+054.720 T.H. 124
40
686mm or 762mm
102mm Field tile Abndn.
℄ R/W, Construction U.S.R. 30
℄ E.B. U.S. 30
CS Sta. 29+893.028
29+900
29+800
Match Line Station 29+800.000 See Sheet No. 52
Abndn.
381mm
Field tile
Const. Limits
96.019 (315.02′)
N 88°37′50″ E
LA-R/W
+883.980
42.755
0.600
103.569 (339.79′)
S 70°27′15″ E
+935
70
288.70m(947.18′)-305mm (12″) Conduit (By Others)
235.299 (771.98′)
N 88°45′47″ E
Const. Limits
82.831 (271.75′)
S 45°49′28″ E
10 X1
10
05-0545-0000
CULTIVATED
Sta. 30+014.086 U.S.R. 30-
Sta. 1+000.000 T.R. 124
305mm
10 WL
T.H. 124 0+965.420
40
+986.469
45
S 1°49′02″ E
325.574 (1068.16′)
65.451 (214.73′)
℄ Sta. 30+013.028
Gravel
Ex. R/W
℄ R.C.P. or C.M.P.
TWIN 1500mm
TWIN 1950mm
Ex. R/W
12.192
(40.00′)
Abndn.
102mm
Field tile
T.H. 124 0+940.791
40
Const. Limits
82.60m(271.00′)-381mm (15″) Conduit
91.743 (301.00′)
S 77°14′21″ E
+069.298
45
S 0°53′43″ W
300.833 (986.98′)
LA-R/W
145.70m(478.02′)-102mm (4″) Collector (By Others)
108.30m(355.31′)-305mm (12″) Collector (By Others)
CULTIVATED
05-0545-0000
10
FREDERICK P. SMALLEY
AND MIRIAM SMALLEY
05-0545-0000
CULTIVATED
+043.771
40
+100
40
S 73°32′19″ E
55.699 (182.74′)
Const. Limits
1+029.546 T.H. 124
40
10 WL
Match Line Station 30+100.000 See Sheet No. 54
For Continuation See Sheet No. 124

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 2,T-3S,R-14E

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 29+800.000 TO 30+100.000

WYA/CRA-30-28.009/0.000

53/146

2023
2116

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

10

FREDERICK P. SMALLEY
AND MIRIAM SMALLEY

05-0545-0000

CULTIVATED

℄ US-30
P.I. = Sta. 30+333.210
Δ = 30° 00′ 42″ (LT)
R = 4,250.000m
T = 1,139.250m
L = 2,226.164m
E = 150.044m
P.C. Sta. 29+193.960
P.T. Sta. 31+420.124

CULTIVATED

10 X2

15.000 (49.21′)
S 49°33′10″ E

+371.244
88.529

+384.744
81.461

N 40°26′50″ E
47.981 (157.42′)

N 40°26′50″ E
40.185 (131.84′)

16.905 (55.46′)
S 77°00′57″ E

+365.545
46.004

+348.455
46.112

+100
40

LA-R/W

245.979 (807.02′)

S 77°00′57″ E

325.980 (1069.49′)

0.600

Const. Limits

102mm Field tile

35.20m(115.49′)-102mm (4″) Collector By others

Abndn.

10 WL

Field tile

102mm Abndn. Field tile

152mm Abndn. Field tile

Abndn. 102mm Field tile

Abndn. Field tile

Abndn. 102mm Field tile

Abndn. Field tile

Abndn. 102mm Field tile

metric units

℄ US-30
CURVE NO. C61
P.I. = Sta. 30+333.210
Δ = 30° 00′ 42″ (LT)
R = 4,250.000m
T = 1,139.250m
L = 2,226.164m
E = 150.044m
P.C. Sta. 29+193.960
P.T. Sta. 31+420.124

10
FREDERICK P. SMALLEY
AND MIRIAM SMALLEY
05-0545-0000

CULTIVATED

Gravel/Dirt Dr.

+429.317
45

S 77°00′57″ E
325.980 (1069.49′)
LA-R/W

0.600

S 78°39′30″ E
228.403 (749.35′)

11
CLARENCE A. RACHETER AND
MILDRED B. RACHETER
05-0535-0000

CULTIVATED

+660
40

S 84°26′00″ E
257.404 (844.50′)
LA-R/W

10 WL
11 WL

Const. Limits

Match Line Station 30+400.000 See Sheet No. 54

Match Line Station 30+700.000 See Sheet No. 56

+438.557
0

30+500
30+600
℄ R/W, Construction U.S.R. 30

N 0°02′11″ E
90.115 (295.85′)

290.057 (951.63′)
S 75°59′52″ E

33.105 (108.61′)
S 75°59′52″ E

382.215 (1253.99′)
S 81°35′27″ E
LA-R/W

0.600

+447.275
43.370

+480
45

102mm
Field tile

152mm
Field tile

CULTIVATED

10
FREDERICK P. SMALLEY
AND MIRIAM SMALLEY
05-0545-0000

11
CLARENCE A. RACHETER AND
MILDRED B. RACHETER
05-0535-0000

CULTIVATED

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 2, T-3S, R-14E

PLAN COMPLETED:		
REH	2/3/99	Revised Parcel 11WL
REV.	DATE	DESCRIPTION

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN
STA. 30+400.000 TO 30+700.000

WYA/CRA-30-28.009/0.000

55/146

2025
2116

metric units

℄ US-30
P.I. = Sta. 30+333.210
Δ = 30° 00′ 42″ (LT)
R = 4,250.000m
T = 1,139.250m
L = 2,226.164m
E = 150.044m
P.C. Sta. 29+193.960
P.T. Sta. 31+420.124

CULTIVATED

II

CLARENCE A. RACHETER AND
MILDRED B. RACHETER

05-0535-0000

102mm Field tile

CULTIVATED

Creek

Match Line Station 30+700.000 See Sheet No. 55

LA-R/W

S 84°26′00″ E
257.404 (844.50′)

Const. Limits

0.600

+920
45.453

S 89°25′19″ E
118.846 (389.91′)

Const. Limits

II
WL

+852.132
14.131

S 89°33′32″ E
413.018 (1355.05′)

Branch of Rock Run

+853.630
0

381mm

30+800

30+900

℄ R/W, Construction U.S.R. 30

1950mm C.M.P. or 2250mm R.C.P.

Match Line Station 31+000.000 See Sheet No. 57

N 0°06′34″ W
59.458 (195.07′)

II
WL

12
WL

Const. Limits

LA-R/W

382.215 (1253.99′)
S 81°35′27″ E

0.600

102.739 (337.07′)
N 84°49′35″ W

LA-R/W

262.712 (861.92′)
N 87°15′52″ W

24.433 (80.33′)

+858.335
45

+960
45

+983.268
44.345

22.000 (72.18′)
N 66°42′23″ E

24.432 (80.16′)
S 23°17′37″ E

12
X

+994.365
66.037

CULTIVATED

12

CULTIVATED

DONALD E. WOLFE AND LEAH JEAN WOLFE,
TRUSTEES OF THE DONALD E. WOLFE
LIVING TRUST

05-0540-0000

II

CLARENCE A. RACHETER AND
MILDRED B. RACHETER

05-0535-0000

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 2, T-3S, R-14E

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

PLAN COMPLETED:		
REH	2/3/99	Revise Parcel IIWL & delete IIX
REH	5/24/99	Name Change-Parcel 12
REV.	DATE	DESCRIPTION

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN
STA. 30+700.000 TO 31+000.000

WYA/CRA-30-28.009/0.000

56/146

2026
2116

metric units

CLARENCE A. RACHETER AND
MILDRED B. RACHETER
05-0535-0000

CULTIVATED

Wooded

℄ US-30
P.I. = Sta. 30+333.210
Δ = 30° 00' 42" (LT)
R = 4,250.000m
T = 1,139.250m
L = 2,226.164m
E = 150.044m
P.C. Sta. 29+193.960
P.T. Sta. 31+420.124

SECTION 2
SECTION 1
N 0°09'03" E

+040
53
S 89°25'19" E
118.846 (389.91')
LA-R/W
Const. Limits
Dirt Dr.
S 86°56'17" E
224.449 (736.38')
0.600
+267.136
48.364
+267.073
66.370
N88°34'47"E
R/W
210.553(690.79')
102mm Field tile
18.007
(59.08')
Service Road No. 1
12 WV
N 88°34'47" E
211.093(692.56')
Plug
102mm
14.726 (48.32')
11 WL
S 89°33'32" E
413.018 (1355.05')
Abndn.
102mm Field tile
+267.187
33.637
Abndn.
102mm
Abndn.
381mm
+267.302
0
31+100
31+200
℄ R/W, Construction U.S.R. 30
77.692 (254.89')
Dirt Dr.

Match Line Station 31+000.000 See Sheet No. 56

Match Line Station 31+300.000 See Sheet No. 58

12 WL
102mm Abndn. Field Tile
102mm Abndn. Field tile
Plug
102mm
Const. Limits
LA-R/W
262.712 (861.92')
S 87°15'52" E
214.707 (704.42')
0.600
Plug
Const. Limits
LA-R/W
47.956 (157.34')
N 89°32'00" E
400.118 (1312.72')
N 89°32'00" E
24.483 (80.33')
+007.494
43.800
102mm
+220
45
+267.450
44.054
12 X
22.000 (72.18')
N 66°42'23" E
13.688 (44.91')
S 23°17'37" E
+013.657
55.985
Branch of Rock Run Creek

12

DONALD E. WOLFE AND LEAH JEAN WOLFE,
TRUSTEES OF THE DONALD E. WOLFE
LIVING TRUST
05-0540-0000

CULTIVATED

CULTIVATED

SECTION 2
333.467 (1094.05') to a Stone Found in Mon. Box at S.E. Section Corner
N 0°09'03" E
SECTION 1
Dirt Dr.

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 2, T-3S, R-14E

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 1, T-3S, R-14E

For Continuation See
Property Map Sheet
No. 9 or 10

● - Iron Pin Set With I.D. Cap
✖ - Spike Set

PLAN COMPLETED:		
REH	2/3/99	Revise Parcel 11WL
REH	5/24/99	Name Change-Parcel 12
REV.	DATE	DESCRIPTION

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN
STA. 31+000.000 TO 31+300.000

WYA/CRA-30-28.009/0.000

57/146

2027
2116

metric units

℄ US-30
P.I. = Sta. 30+333.210
Δ = 30° 00′ 42″ (LT)
R = 4,250.000m
T = 1,139.250m
L = 2,226.164m
E = 150.044m
P.C. Sta. 29+193.960
P.T. Sta. 31+420.124

12

DONALD E. WOLFE AND LEAH JEAN WOLFE,
TRUSTEES OF THE DONALD E. WOLFE
LIVING TRUST

05-0485-0000

CULTIVATED

12 WV

+480.046
68

CULTIVATED

R/W — N 88°34′47″ E — 210.553 (690.79′) — Const. Limits

R/W — N 88°17′07″ E — 189.945 (623.18′) — Const. Limits

Service Road No. 1

LA-R/W — N 88°34′47″ E — 211.093 (692.56′)

LA-R/W — N 88°17′07″ E — 189.371 (621.29′)

12 WL

+480
50

0.600

Abndn. 102mm Field tile

Abndn. 102mm Field tile

PT Sta. 31+420.124

Match Line Station 31+300.000 See Sheet No. 57

Match Line Station 31+600.000 See Sheet No. 59

31+400

31+500

℄ R/W, Construction U.S.R. 30

12 WL

Abndn. 102mm Field tile

Const. Limits

LA-R/W

0.600

400.118 (1312.72′)
N 89°32′00″ E

Const. Limits

LA-R/W

261.4m(857.61′)-102mm (4″)
Collector (By Others)

CULTIVATED

12

DONALD E. WOLFE AND LEAH JEAN WOLFE,
TRUSTEES OF THE DONALD E. WOLFE
LIVING TRUST

05-0480-0000

CULTIVATED

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 1, T-3S, R-14E

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
REH	5/24/99	Name Change-Parcel 12
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 31+300.000 TO 31+600.000

WYA/CRA-30-28.009/0.000

58/146

2028
2116

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 31+600.000 TO 31+900.000

WYA/CRA-30-28.009/0.000

59/146

2029/2116

12

DONALD E. WOLFE AND LEAH JEAN WOLFE, TRUSTEES OF THE DONALD E. WOLFE LIVING TRUST

05-0485-0000

CULTIVATED

13

RUSSELL E. AND VERA I. SWINEHART

05-0470-0000

CULTIVATED

CULTIVATED

12 WV

+669.991
68

N 88°17'07" E
189.945 (623.18')

R/W

51.20m(167.98')-305mm (12") Collector (By others)

13 WV2

305mm

N 88°17'07" E
293.443 (962.74')

R/W

Const. Limits

Const. Limits

Service Road No. 1

N 88°17'07" E
189.371 (621.29')

LA-R/W

18.011 (59.09')

N 88°17'07" E
402.268 (1319.78')

LA-R/W

0.600

102mm Abndn. Field tile

+669.371
50

N 0°15'34" E
32.234 (105.75')

12 WL

+668.260
17.785

381mm

305mm

305mm Abndn Field Tile

13 WL

1650mm C.M.P. or 1350mm R.C.P.

S 89°03'14" E
402.165 (1319.44')

102mm Abndn.

31+700

Field tile

102mm

381mm (15") Conduit

31+800

+667.647
0

℄ R/W, Construction U.S.R. 30

Match Line Station 31+600.000 See Sheet No. 58

Match Line Station 31+900.000 See Sheet No. 60

100.059 (328.28')
67.825 (222.52')

118.60m(389.11') 381mm (15") Conduit

Abndn.

Abndn. 102mm

Field tile

12 WL

305mm

12 WL1

Const. Limits

400.118 (1312.72')
N 89°32'00" E

LA-R/W

261.4m(857.61')-102mm (4") Collector (By Others)

254.076 (833.58')
N 88°17'07" E

Const. Limits

LA-R/W

26.8m(87.93')-102mm (4") Collector (By others)

0.600

+665.924
50

CULTIVATED

CULTIVATED

12

DONALD E. WOLFE AND LEAH JEAN WOLFE, TRUSTEES OF THE DONALD E. WOLFE LIVING TRUST

05-0480-0000

305mm

Field tile

102mm

05-0475-0000

12

DONALD E. WOLFE AND LEAH JEAN WOLFE, TRUSTEES OF THE DONALD E. WOLFE LIVING TRUST

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 1, T-3S, R-14E

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
REH	5/24/99	Combine Parcel 14 with Parcel 12
REH	5/24/99	Name Change-Parcel 12
REV.	DATE	DESCRIPTION

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

13
RUSSELL E. AND VERA I. SWINEHART
05-0470-0000

13
RUSSELL E. AND VERA I. SWINEHART
05-0465-0000

15 STEVEN SWINEHART AND SABINE SWINEHART
05-0470

16 L. MICHAEL WOLFE
07-0045-0000

12
DONALD E. WOLFE AND LEAH JEAN WOLFE, TRUSTEES OF THE DONALD E. WOLFE LIVING TRUST
05-0475-0000

16
L. MICHAEL WOLFE
07-0045-0000

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 1, T-3S, R-14E

Match Line Station 31+900.000 See Sheet No. 59

Match Line Station 32+200.000 See Sheet No. 61

Service Road No. 1

LA-R/W

R/W

Ex. R/W

℄ R/W, Construction U.S.R. 30

℄ T.H. 127

Const. Limits

CULTIVATED

Lawn

Gravel

Shed

Conc. Blk. Garage

2- Sty. Frame

Silo

Plug

Abndn. 102mm Field tile

Abndn. 254mm Field tile

100.40m(329.40')-381mm (15") Conduit

187.50m(615.16')-102mm (4") Collector (By Others)

900mm R.C.P. or 1050mm C.M.P.

- Concrete Monument Set by Contractor
- Iron Pin Set With I.D. Cap
- Spike Set

PLAN COMPLETED:		
REH	2/3/99	Revise Parcel 15WV
JDK	5/20/99	Revise name Parcel 13
REH	5/24/99	Combine Parcel 14 with Parcel 12
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 31+900.000 TO 32+200.000

WYA/CRA-30-28.009/0.000

60/146

2030/2116

metric units

13

RUSSELL E. AND VERA I. SWINEHART

05-0465-0000

16

L. MICHAEL WOLFE

07-0045-0000

CULTIVATED

CULTIVATED

07-0050-0000

Wooded

ROCK RUN CREEK

Wooded

254mm Field tile

102mm Field tile

LA-R/W

N 88°31'09" E

446.030 (1463.35')

LA-R/W

0.600

Plug

Const. Limits

Const. Limits

16 WL

254mm Abndn.

101.80m(334.00')-381mm (15") Conduit

381mm

32+300

32+400

℄ R/W, Construction U.S.R. 30

N 88° 17' 07" E

+470.841

0

Match Line Station 32+200.000 See Sheet No. 60

Match Line Station 32+500.000 See Sheet No. 62

16 WL

254mm Field tile Abndn.

Const. Limits

231.555 (759.69')

N 87°31'53" E

LA-R/W

0.600

187.50m(615.16')-102mm (4") Collector (By Others)

+300

45

80.156 (262.98')

N 84°42'32" E

+380

40

134.913 (442.63')

N 88°55'17" E

Const. Limits

LA-R/W

16

L. MICHAEL WOLFE

07-0045-0000

CULTIVATED

CULTIVATED

07-0040-0000

● - Iron Pin Set With I.D. Cap

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 1, T-3S, R-14E

PLAN COMPLETED:		
JDK	5/20/99	Revised name Parcel13
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 32+200.000 TO 32+500.000

WYA/CRA-30-28.009/0.000

61 / 146

2031 / 2116

metric units

Wooded

Wooded

Wooded

17 JAMES J. GILLILAND AND JUDITH A. GILLILAND

07-0025-0000

CULTIVATED

CULTIVATED

102mm Field tile

16

L. MICHAEL WOLFE

07-0050-0000

Wooded

+517.665

48.179

152mm

Plug

102mm

273.10m(896.00')-102mm (4") Collector (By Others)

N 88°31'09" E

446.030 (1463.35')

LA-R/W

152mm Abndn. Field tile

Abndn. 102mm Field tile

Const. Limits

S 89°36'29" E

222.485 (729.94')

+740

40

N 82°28'06" E

LA-R/W

98.670 (323.72')

Const. Limits

16 WL

57.607 (189.00')

S 49°09'47" E

ROCK RUN

+560.329

9.469

Abndn.

Field tile

102mm

381mm

17 WL

1500mm R.C.P. or 1950mm C.M.P.

32+600

32+700

N 88° 17' 01" E

℄ R/W, Construction U.S.R. 30

See Sheet No. 61 Match Line Station 32+500.000

N 00°02'54" E

89.719 (294.26')

381mm

18 WL

95.208 (312.36')

S 58°21'17" E

Wooded

76mm

Field tile

Abndn.

152mm

Abndn.

Field tile

Abndn.

Field tile

102mm

Match Line Station 32+800.000 See Sheet No. 63

134.913 (442.63')

N 88°55'17" E

Const. Limits

LA-R/W

124.952 (409.95')

N 88°55'17" E

55.10m(180.77')-76mm (3") Collector By Others

+514.905

41.498

+639.849

42.886

+645.172

46.390

6.373 (20.91')

42.008 (137.82')

N 74°57'06" W

11.7m(38.39')-152mm (6") Collector By Others

190.397 (624.66')

N 88°55'17" E

LA-R/W

Plug

Plug

Plug

0.600

17 E

CULTIVATED

CULTIVATED

+685.394

58.506

Wooded

ROCK RUN

100.584 (330.00')

N 57°57'06" W

Field tile

152mm

17 JAMES J. GILLILAND AND JUDITH A. GILLILAND

07-0025-0000

16

L. MICHAEL WOLFE

07-0040-0000

18

DONALD E. WOLFE

07-0035-0000

19

BETTY E. WOLFE(2/3), ROBERT L. WOLFE(1/6), DALE A. WOLFE(1/6)

07-0030-0000

For Continuation See Sheet No. 126

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 1, T-3S, R-14E

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
JDK	5/20/99	Revised name Parcel 17
REH	7/21/99	Remove "Landlocked"-Change 17LL to 17E
REV.	DATE	DESCRIPTION

N

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 32+500.000 TO 32+800.000

WYA/CRA-30-28.009/0.000

62/146

2032/2116

metric units

For Continuation See Sheet No. 127

17 JAMES J. GILLILAND AND JUDITH A. GILLILAND
07-0025-0000

20 RUSSELL E. SWINEHART AND VERA I. SWINEHART
02-0800-0000

CULTIVATED

273.10m(896.00')-102mm (4") Collector (By Others)
Field tile
102mm
N82°28'06"E
98.670 (323.72')
+838.162
50
Abndn. Const. Limits
Abndn.
102mm
Field tile
C.H. 128 1+048.946
35
17 WL
LA-R/W
N 0°02'54" E
124.468 (408.36')
Const. Limits
Ex. R/W
SECTION LINE
SECTION 1
SECTION 6
202.209 (663.41')
248.794 (816.25')
N 0°02'54" E
Ex. R/W
Const. Limits
20 WL
N 1°38'55" W
168.819 (553.87')
45.8m(150.26')-102mm (4") Collector (By Others)
44.0m(144.36')-102mm (4") Collector (By Others)
+913.197
50
1+051.255 C.H. 128
40
LA-R/W
N 88°17'07" E
146.803 (481.64')
+060
50
N 87°22'08" E
252.779 (829.33')
0.600
Const. Limits
Field tile
102mm
Abndn.
Sta. 32+871.639 U.S. 30=
Sta. 1+000.000 C.H. 128
32+900
33+000
503mm
Abndn. 102mm
Field tile
102mm Abndn.
750mm R.C.P. or 0.625cm C.M.P.
100.60m(330.05')-762mm (30") Conduit
N 88° 17' 07" E
℄ R/W, Construction U.S.R. 30
Wooded
Match Line Station 32+800.000 See Sheet No. 62
Match Line Station 33+100.000 See Sheet No. 64
1+000
Ex. R/W
Asphalt
℄ SURVEY C.H. 128
24.4mm Steel
Const. Limits
Abndn. 152mm
Field tile
381mm
+870.753
28.781
Const. Limits
17 WL
190.397 (624.66')
S 88°55'17" W
0+953.747 C.H. 128
40
+830.235
45
17 E
07-0025-0000
Ex. R/W
12.192
(40.00')
Wooded
0+951.516 C.H. 128
50
17 WL
119.876 (393.30')
LA-R/W
N 88°17'07" E
+920.124
50
0.600
438.701 (1439.31')
S 89°26'23" E
329.507 (1081.06')
Const. Limits
Abndn.
160.207 (525.61')
N 85°22'23" E
+040
50
103.6m(339.89')-381mm (15") Collector (By others)
381mm
Field tile
Abndn.
20 WL
LA-R/W
N 5°02'48" E
172.170 (564.86')
28.9m(94.82')-102mm (4") Collector (By Others)
Const. Limits
Abndn. 152mm
381mm
Field tile
Wooded
CULTIVATED

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 1, T-3S, R-14E

17 JAMES J. GILLILAND AND JUDITH A. GILLILAND

For Continuation See Sheet No. 126

17 JAMES J. GILLILAND AND JUDITH A. GILLILAND
02-0795-0000

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 6, T-3S, R-15E

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

PLAN COMPLETED:		
JDK	5/20/99	Revised name Parcel 17
REH	7/21/99	Remove "Landlocked"-Change 17LL to 17E
REV.	DATE	DESCRIPTION

SCALE IN METERS 0 10 20 1:500

FEDERAL PROJECT NO. F 49(68)

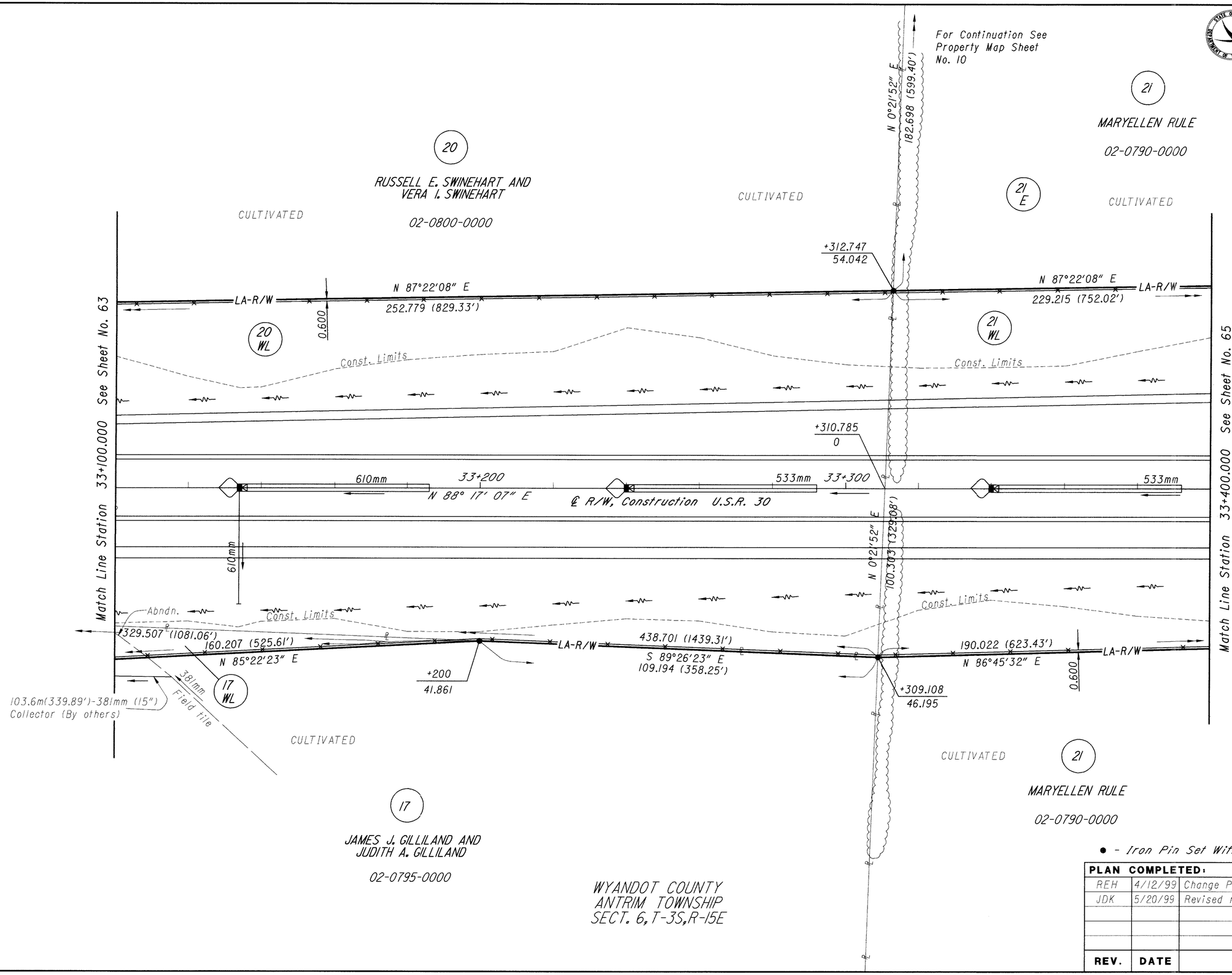
STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 32+800.000 TO 33+100.000

WYA/CRA-30-28.009/0.000

63/146

2033/2116



● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
REH	4/12/99	Change Parcel 21LL to 21E
JDK	5/20/99	Revised name Parcel 17
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 33+100.000 TO 33+400.000

WYA/CRA-30-28.009/0.000

64/146

2034
2116

metric units

℄ RAMP F
P.I. Sta. 33+450.022
Δ = 1° 11' 59" (RT)
R = 4,324.261m
T = 45.272m
L = 90.541m
E = 0.237m
P.C. Sta. 33+404.750
P.R.C. Sta. 33+495.291

21
MARYELLEN RULE
02-0790-0000

℄ RAMP F
P.I. Sta. 33+628.621
Δ = 43° 12' 07" (LT)
R = 333.000m
Ls2 = 90.000m
θs2 = 7° 44' 34"
LT2 = 60.057m
ST2 = 30.052m
Lc = 206.087m
T1 = 133.330m
T2 = 175.745m
Es = 25.700m
P.R.C. Sta. 33+495.291
C.S. Sta. 33+701.379
S.T. Sta. 33+791.379

21 E

CULTIVATED

N 87°22'08" E
229.215 (752.02')
LA-R/W
0.600
Const. Limits
PC Sta. 33+494.750
Grassy Lane
Tree Line
+540
60
N 69°53'49" E
85.713 (281.21')
+620
90
N 53°47'34" E
117.339 (384.97')
Match Line Station 33+660.000 See Sheet No. 131

21 WL

℄ RAMP F
33+600
33+500
102mm
Abndn.
Field tile
533mm
℄ R/W, Construction U.S.R. 30
S 89° 35' 00" E
457mm

Match Line Station 33+400.000 See Sheet No. 64
PC Sta. 33+401.350
PT Sta. 33+559.459
Match Line Station 33+700.000 See Sheet No. 66

Const. Limits
190.022 (623.43')
N 86°45'32" E
+500
40
99.900 (327.75')
S 84°04'33" E
114.262 (374.88')
S 89°35'00" E
+600
50
Barbed Wire / Woven Wire
Tree Line
Grassy Lane

CULTIVATED

℄ US-30
P.I. Sta. 33+480.414
Δ = 2° 07' 53" (RT)
R = 4,250.000m
T = 79.064m
L = 158.109m
E = 0.735m
P.C. Sta. 33+401.350
P.T. Sta. 33+559.459

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 6, T-3S, R-15E

21
MARYELLEN RULE
02-0790-0000

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
REH	4/12/99	Change Parcel 21LL to 21E
REV.	DATE	DESCRIPTION

SCALE IN METERS 0 10 20 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 33+400.000 TO 33+700.000

WYA/CRA-30-28.009/0.000

65/146

2035/2116

metric units

For W.B. Rest Area See Sheet No. 131

℄ RAMP F

℄ RAMP I

℄ Service Road

PC Sta. 33+729.786

PT Sta. 33+796.966

2250mm R.C.P.

102mm

Abndn. Field tile

Wooded

399.53 (1310.80')

N 0°23'32" E

210.000 (688.98')

℄ RAMP I
P.I. = Sta. 33+765.028
Δ = 42° 46' 05" (LT)
R = 90.000m
T = 35.242m
L = 67.180m
E = 6.654m
P.C. Sta. 33+729.786
P.T. Sta. 33+796.966

305mm

381mm

33+800

33+900

22 WL HAROLD E. LARICK
02-0785-0000

21 WL

Match Line Station 33+700.000 See Sheet No. 65

Match Line Station 34+000.000 See Sheet No. 67

PC Sta. 33+702.752

457mm

S 89° 35' 00" E

+714.241
0

℄ R/W, Construction U.S.R. 30

℄ RAMP E

Const. Limits

114.262 (374.88')
S 89°35'00" E

LA-R/W

+714.262
50

29.20m(95.80')-102mm (4") Conduit

0.600

257.491 (844.79')
S 82°53'34" E

PCC Sta. 33+875.734

13.40m(43.96')-102mm (4") Collector (By Others)

Match Line Station 33+960.000 Rest Area Ramp E See Sheet No. 130

℄ RAMP E
P.I. Sta. 34+044.095
Δ = 37° 07' 00" (RT)
R = 500.000m
Ls2 = 60.000m
θs2 = 3° 26' 16"
LT2 = 40.008m
ST2 = 20.007m
Lc = 293.904m
T1 = 168.361m
T2 = 197.464m
Es = 27.584m
P.C.C. Sta. 33+875.734
C.S. Sta.34+169.638
S.T. Sta. 34+229.638

MARYELLEN RULE
02-0790-0000
CULTIVATED

N 0°23'32" E
406.38' (1333.27')

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 6, T-3S, R-15E

22 HAROLD E. LARICK
02-0785-0000

● - Iron Pin Set With I.D. Cop

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 33+700.000 TO 34+000.000

WYA/CRA-30-28.009/0.000

66/146

2036
2116

metric units

Match Line Station 34+000.000 See Sheet No. 66

Match Line Station 34+300.000 See Sheet No. 68

34+000 ℄ RAMP I S 89° 35′ 00″ E 34+100

For W.B. Rest Area See Sheet No. 131,131A

Match Line Station 34+220.000 Rest Area Ramp G See Sheet No. 131

23 WL

Wooded

Const. Limits

152mm San.

℄ RAMP G

℄ RAMP G
P.I. Sta. 34+203.634
Δ = 37° 04′ 16″ (LT)
R = 500.000m
Ls2 = 60.000m
θs2 = 3° 26′ 16″
LT1 = 40.008m
ST1 = 20.007m
Lc = 293.506m
T1 = 197.242m
T2 = 168.140m
Es = 27.514m
T.S. Sta. 34+006.392
S.C. Sta. 34+066.392
P.C.C. Sta. 34+359.899

22 WL

HAROLD E. LARICK

02-0785-0000

102mm Abndn. Field tile

381mm

523.472 (1717.43′)

PC Sta. 34+127.460

34+100 S 89°35′00″ E

+116.580 / 0

34+200 ℄ R/W, Construction U.S.R. 30

Abndn.

23 WL

TERRY KOEHLER(1/4),
DENNIS KOEHLER(1/4),
JEFF KOEHLER(1/4),
DEAN KOEHLER(1/4)

02-0775-0000

102mm Abndn. Field tile

Abndn. 102mm Abndn. Field tile

For E.B. Rest Area See Sheet No. 130

℄ RAMP J
P.I. = Sta. 34+075.023
Δ = 24° 05′ 33″ (LT)
R = 160.000m
T = 34.144m
L = 67.279m
E = 3.603m
P.C. Sta.34+040.879
P.T. Sta.34+108.158

PC Sta. 34+040.879

PT Sta. 34+108.158

N 0°17′30″ E 510.001 (1673.23′)

℄ RAMP E
P.I. Sta. 34+044.095
Δ = 37° 07′ 00″ (RT)
R = 500.000m
Ls2 = 60.000m
θs2 = 3° 26′ 16″
LT2 = 40.008m
ST2 = 20.007m
Lc = 293.904m
T1 = 168.361m
T2 = 197.464m
Es = 27.584m
P.C.C. Sta. 33+875.734
C.S. Sta.34+169.638
S.T. Sta. 34+229.638

℄ RAMP J 34+100 34+200 ℄ RAMP J S 89° 34′ 16″ E 34+300

℄ RAMP E

34+100

Const. Limits

0.600

89.443 (293.45′) S 63°01′06″ E

+050 / 120

LA-R/W

86.653 (284.30′) S 50°11′05″ E

Const. Limits

22 X

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 6,T-3S,R-15E

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
REH	4/12/99	Change Parcel 23LL to 23E
REH	3/15/00	Revised Parcel 23WL
REV.	DATE	DESCRIPTION

N

SCALE IN METERS 1:500 (0, 10, 20)

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 34+000.000 TO 34+300.000

WYA/CRA-30-28.009/0.000

67/146

2037/2116

For Continuation-See Sheet 131A

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 6, T-3S, R-15E

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 5, T-3S, R-15E

metric units

℄ RAMP G
P.I. Sta. 34+203.634
Δ = 37° 04' 16" (LT)
R = 500.000m
Ls2 = 60.000m
θs2 = 3° 26' 16"
LT1 = 40.008m
ST1 = 20.007m
Lc = 293.506m
T1 = 197.242m
T2 = 168.140m
Es = 27.514m
T.S. Sta. 34+006.392
S.C. Sta. 34+066.392
P.C.C. Sta. 34+359.899

℄ RAMP G
P.I. Sta. 34+446.528
Δ = 7° 55' 44" (LT)
R = 1,250.000m
T = 86.629m
L = 172.982m
E = 2.998m
P.C.C. Sta. 34+359.899
P.T. Sta. 34+532.881

23 WL — Wooded

23 — CULTIVATED

23 E

24 DONNA MARIE FROST AND HAROLD E. LARICK
02-0925-0000
CULTIVATED

277.696 (911.07') N 0°17'30" E

+320.427
70.237

+350
60

S 70°29'23" E
31.295(102.67')

PCC Sta. 34+359.899

LA-R/W
S 86°11'29" E
169.013 (554.51')

Const. Limits

152mm San.

S 81° 39' 16" E 34+400

℄ RAMP G

34+500

102mm Abndn. Field tile

℄ R/W, Construction U.S.R. 30

34+400

S 89° 35' 00" E

297.412 (975.76') to owners' northeasterly property corner

SECTION 6 Wooded SECTION 5

N 0°11'28" E

+518.717
50

71.6m(234.91')-102mm (4") Collector (By others)

S 89°35'00" E
LA-R/W
409.457 (1343.36')

Const. Limits

102mm Abndn. Field tile

PT Sta. 34+532.88

S 89° 35' 38" E

Field tile Abndn. 102mm

114.90m(376.96')-381mm (15") Conduit Abndn.

Abndn. C.M.P.

102mm Field tile

+518.914
0

N 0°11'28" E

375mm (1246.73')

380.003

220.002 (721.79')

102mm

203mm Abndn.

1500mm R.C.P. or 1650mm

203mm Field tile

1200mm or 1500mm

64.00m(209.97')-381mm (15") Conduit Abndn.

℄ RAMP H
P.I. Sta. 34+618.363
Δ = 44° 03' 48" (RT)
R = 333.000m
Ls1 = 90.000m
θs1 = 7° 44' 34"
LT1 = 60.057m
ST1 = 30.052m
Lc = 211.093m
T1 = 178.681m
T2 = 136.211m
Es = 26.781m
T.S. Sta. 34+439.682
S.C. Sta. 34+529.682
P.T.Sta. 34+740.776

Match Line Station 34+300.000 See Sheet No. 67

Match Line Station 34+600.000 See Sheet No. 69

23 WL
TERRY KOEHLER(1/4),
DENNIS KOEHLER(1/4),
JEFF KOEHLER(1/4),
DEAN KOEHLER(1/4)
02-0775-0000

24 WL
DONNA MARIE FROST AND
HAROLD E. LARICK
02-0925-0000

CUL-DE-SAC DRIVE

381mm

PC Sta. 34+434.098

℄ RAMP J
P.I. Sta. 34+469.309
Δ = 42° 44' 04" (RT)
R = 90.000m
T = 35.211m
L = 67.127m
E = 6.643m
P.C. Sta. 34+434.098
P.T. Sta. 34+501.225

℄ RAMP J

305mm

34+400

152mm San.

SECTION 6 SECTION LINE SECTION 5

Wooded

34+500

℄ RAMP H

SC Sta. 34+529.682

Const. Limits

℄ Service Road

Abndn. 102mm

Abndn. Field tile

PT Sta. 34+501.225

34+500

For E.B. Rest Area See Sheet No. 130

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
REH	4/12/99	Change Parcel 23LL to 23E
REH	3/15/00	Revised Parcels 23WL & 23E
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 34+300.000 TO 34+600.000

WYA/CRA-30-28.009/0.000

68/146

2038/2116

metric units

24

DONNA MARIE FROST AND
HAROLD E. LARICK

02-0925-0000

CULTIVATED

Woven Wire / Barbed Wire

Grassy Lane

Woven Wire / Barbed Wire

CULTIVATED

Match Line Station 34+600.000 See Sheet No. 68

LA-R/W

S 89°35'00" E
409.457 (1343.36')

LA-R/W

0.600

24 WL

Const. Limits

Const. Limits

102mm Abndn. Field tile

34+700

S 89° 35' 00" E

34+800

381mm

℄ R/W, Construction U.S.R. 30

Match Line Station 34+900.000 See Sheet No. 70

34+700

℄ RAMP H

152mm San.

152mm San.

152mm San.

Const. Limits

Const. Limits

Match Line Station 34+640.000 See Sheet No. 130 Rest Ared Ramp H

24 WL

P.T. Sta. 34+740.745

268.944 (882.36')
N 87°13'10" E

LA-R/W

0.600

LA-R/W

+660
65

175.333 (575.24')
N 53°37'42" E

CULTIVATED

Woven Wire / Barbed Wire

Grassy Lane

Woven Wire / Barbed Wire

CULTIVATED

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 5, T-3S, R-15E

℄ RAMP H
P.I. Sta. 34+618.363
Δ = 44° 03' 48" (RT)
R = 333.000m
Lsl = 90.000m
θsl = 7° 44' 34"
LTl = 60.057m
STl = 30.052m
Lc = 211.093m
Tl = 178.681m
T2 = 136.211m
Es = 26.781m
T.S. Sta. 34+439.682
S.C. Sta. 34+529.682
P.T.Sta. 34+740.776

24

DONNA MARIE FROST AND
HAROLD E. LARICK

02-0925-0000

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN
STA. 34+600.000 TO 34+900.000

WYA/CRA-30-28.009/0.000

69/146

2039
2116

metric units

24

DONNA MARIE FROST AND
HAROLD E. LARICK

02-0925-0000

25

GERALD A. VON STEIN AND
GLADYS E. VON STEIN

02-0910-0000

Woven Wire / Barbed Wire

CULTIVATED

+928.174
50

S 89°35'00" E

409.457 (1343.36')

LA-R/W

S 89°35'00" E

271.826 (891.82')

CULTIVATED

28.50m(93.50')-102mm (4")
Collector (By Others)

+200
50

0.600

LA-R/W

Const. Limits

24
WL

25
WL

N 0°12'55" E

100.001 (328.09')

Const. Limits

254mm Abndn.
Field Tile

123.60m(405.51')-533mm
(21") Conduit

See Sheet No. 69
Match Line Station 34+900.000

457mm

35+000

533mm

35+100

S 89° 35' 00" E

℄ R/W, Construction U.S.R. 30

Match Line Station 35+200.000 See Sheet No. 71

+928.350
0

533mm

152mm San.

152mm San.

152mm San.

24
WL

Const. Limits

0.600

25
WL

Const. Limits

268.944 (882.36')

N 87°13'10" E

LA-R/W

409.118 (1342.25')

S 89°35'00" E

LA-R/W

102mm

Field tile

102mm

+928.525
50

Woven Wire / Barbed Wire

CULTIVATED

02-0920-0000

25

GERALD A. VON STEIN AND
GLADYS E. VON STEIN

02-0915-0000

CULTIVATED

● - Iron Pin Set With I.D. Cap

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 5, T-3S, R-15E

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN
STA. 34+900.000 TO 35+200.000

WYA/CRA-30-28.009/0.000

70/146

2040
2116

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN

STA. 35+200.000 TO 35+500.000

WYA/CRA-30-28.009/0.000

71 / 146

2041 2116

25 WV — GERALD A. VON STEIN AND GLADYS E. VON STEIN — 02-0910-0000

26 JERRY N. McCLAIN — 02-0865-0000

02-0900-0000

Existing 20' easement of ingress and egress as described in DB 141, Pg. 181

02-0895-0000

25 — GERALD A. VON STEIN AND GLADYS E. VON STEIN

02-0915-0000

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 5, T-3S, R-15E

Match Line Station 35+200.000 See Sheet No. 70

Match Line Station 35+500.000 See Sheet No. 72

Match Line 'A'

Line 'A'

Match

CULTIVATED

Gravel

Metal Barn

Metal Garage

1½ Sty. Frame #12661

Asphalt

Const. Limits

Ex. R/W

R/W

Abndn.

Field tile

Gravel Dr.

T.H. 133

LA-R/W

Collector (By Others)

Conduit

Sanitary Sewer

Manhole

Catch Basin

Fence

Utility Pole

Guy Anchor

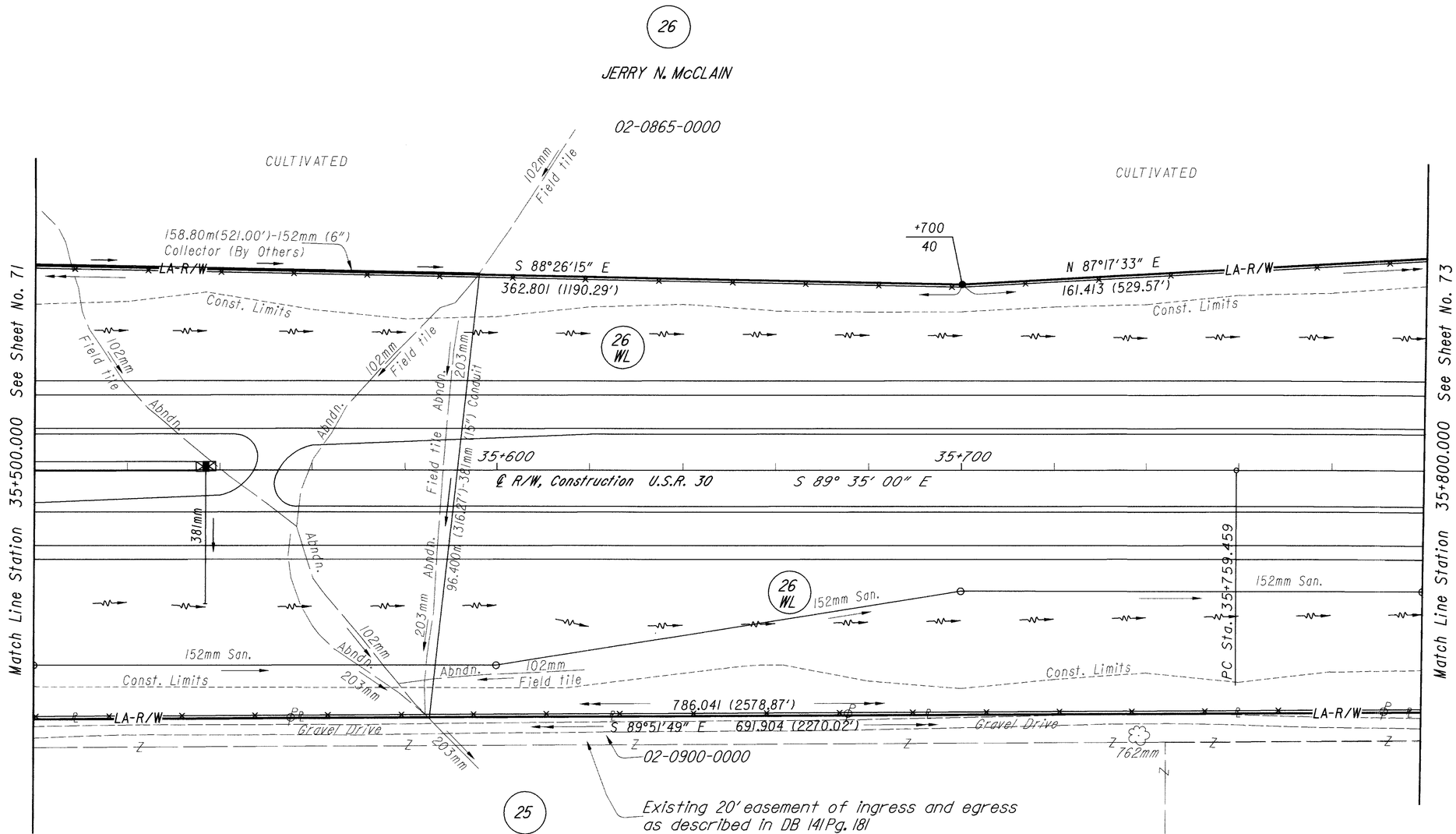
Iron Pin Set With I.D. Cap

Spike Set

℄ R/W, Construction U.S.R. 30

PLAN COMPLETED:		
REH	2/3/99	Revise Parcel 25WVI
JDK	5/20/99	Revise name Parcel 26
REV.	DATE	DESCRIPTION

metric units



WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 5, T-3S, R-15E

℄ US-30
P.I. Sta. 36+144.106
Δ = 10° 20' 35" (RT)
R = 4,250.000m
T = 384.647m
L = 767.203m
E = 17.371m
P.C. Sta. 35+759.459
P.T. Sta. 36+526.662

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

PLAN COMPLETED:		
JDK	5/20/99	Revised name Parcel 26
REV.	DATE	DESCRIPTION

SCALE IN METERS 0 10 20 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

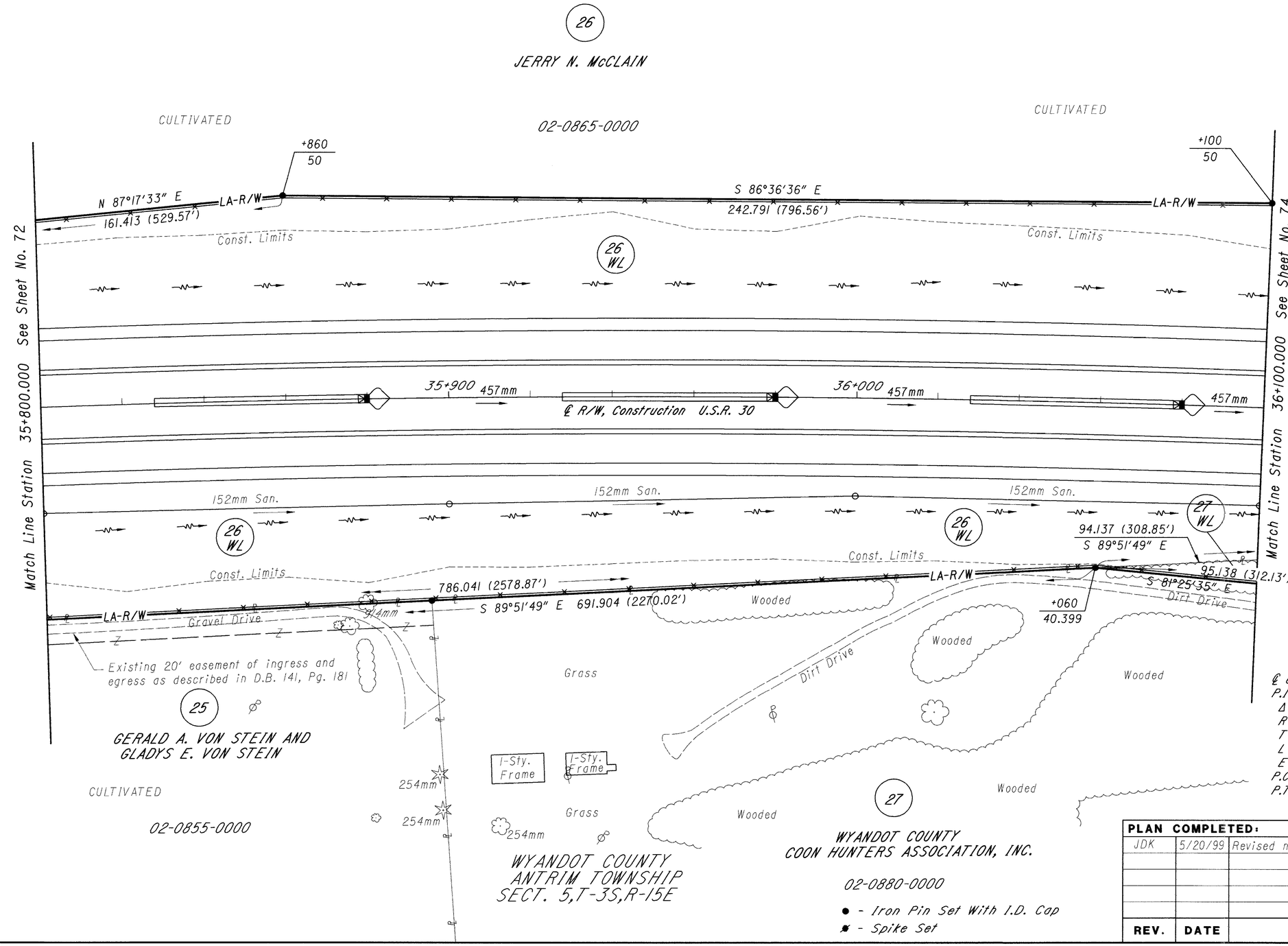
RIGHT OF WAY PLAN
STA. 35+500.000 TO 35+800.000

WYA/CRA-30-28.009/0.000

72/146

2042/2116

metric units



℄ US-30
P.I. = Sta. 36+144.106
Δ = 10° 20' 35" (RT)
R = 4,250.000m
T = 384.647m
L = 767.203m
E = 17.371m
P.C. Sta. 35+759.459
P.T. Sta. 36+526.662

PLAN COMPLETED:		
JDK	5/20/99	Revised name Parcel 26
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 35+800.000 TO 36+100.000

WYA/CRA-30-28.009/0.000

73/146

2043/2116

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 36+100.000 TO 36+440.000

WYA/CRA-30-28.009/0.000

74/146

2044/2116

26
JERRY N. McCLAIN
02-0865-0000

28
G/K WYANDOT LTD.
02-1005-0000

29
I/S/F INC.
02-1000-0000

29 E

29 EI

26 WL

27 WL

29 WL

27
WYANDOT COUNTY
COON HUNTERS ASSOCIATION, INC.
02-0880-0000

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 5,T-3S,R-15E

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 4,T-3S,R-15E

SECTION 5 / SECTION 4
SECTION LINE

Match Line Station 36+100.000 See Sheet No. 73

Match Line Station 36+440.000 See Sheet No. 75

CULTIVATED

Wooded

Wooded Limits

CREEK

Const. Limits

LA-R/W

℄ R/W, Construction U.S.R. 30

℄ US-30
P.I. = Sta. 36+144.106
Δ = 10° 20′ 35″ (RT)
R = 4,250.000m
T = 384.647m
L = 767.203m
E = 17.371m
P.C. Sta. 35+759.459
P.T. Sta. 36+526.662

+100 50
+145.096 68.197
+147.031 47.351
+151.496 0
+154.594 32.244
+155.943 46.139
+200 45
+400 55

S 81°29′15″ E 47.643 (156.31′)
S 81°29′15″ E 53.596 (175.84′)
S 85°07′29″ E 202.581 (664.64′)
S 89°58′38″ E 400.067 (1312.56′)
S 76°08′11″ E 149.318 (490.08′)
S 81°25′35″ E 404.498 (1327.09′)
S 81°25′35″ E 199.801 (655.52)
S 89°51′49″ E 94.137 (308.85′)
S 81°25′35″ E 95.138 (312.13′)
786.041 (2578.87′)
N 0°15′19″ E 20.938 (68.70′)
N 0°15′19″ E 79.954 (262.32′)
S 0°15′19″ W 93.914 (308.12′)
S 0°15′19″ W 388.069 (1273.19′) to Mon. Box at Section Corner
S 0°15′19″ W 189.644 (622.19′)
13.959 (45.80′)
0.600
16.817 (55.17′) N32°43′07″E
51.718 (169.68′) N 23°22′04″ E
BROKEN 22.169 (72.73′) N30°06′56″E

102mm Field tile
305mm
457mm
533mm
152mm San.
Abndn. 305mm
Abndn. 102mm
Abndn. 203mm
62.7m(205.71′)-203mm (8″) Collector (By Others)
203mm Field tile
Dirt Drive
Grassy Lane
SWORD
Const.
Wooded

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

FOR CONTINUATION SEE SHEET 146

PLAN COMPLETED:		
REH	4/12/99	Changed Parcel 29LL to 29E
JDK	5/20/99	Revised name Parcel 26
JDK	5/24/99	Add Parcel 29E-I
REV.	DATE	DESCRIPTION

28 G/K WYANDOT LTD.
02-1005-0000

S 89°58'38" E
400.067 (1312.56')

+532.557
125.338

81.723 (268.12') Tree Line S 0°11'48" W

Woven Wire /Barbed Wire

29
I/S/F INC.
02-1000-0000

29 E

CULTIVATED

30
LEWIS KAISER AND ANNA L. KAISER, TRUSTEES
or their successors in trust, under the
LEWIS AND ANNA L. KAISER LIVING TRUST

02-0995-0000

CULTIVATED

+547.538
45

LA-R/W S 76°08'11" E
149.378 (490.08')

0.600

Const. Limits

S 80°40'36" E
585.297 (1920.27')
LA-R/W

Tree Line

Woven Wire /Barbed Wire

Const. Limits

30 WL

+555.930
0

36+500

℄ R/W, Construction U.S.R. 30

533mm 36+600

S 79° 14' 25" E

457mm

102mm Abndn.

Match Line Station 36+440.000 See Sheet No. 74

PT Sta. 36+526.662

533mm

N 0°11'48" E
93.274 (306.02')

Woven Wire /Barbed Wire

102mm Abndn.
Field tile

29 WL

Const. Limits

404.498 (1327.09') Abndn.

LA-R/W S 81°25'35" E

102mm

Abndn.

102mm
Field tile

Abndn.

Const. Limits

175.491 (575.76')
S 81°25'35" E
LA-R/W

0.600

+564.637
46.694

Match Line Station 36+700.000 See Sheet No. 76

29
I/S/F INC.
02-1000-0000

CULTIVATED

327.922 (1075.86') to Owners Southwesterly Property Corner

30
LEWIS KAISER AND ANNA L. KAISER, TRUSTEES
or their successors in trust, under the
LEWIS AND ANNA L. KAISER LIVING TRUST

02-0995-0000

CULTIVATED

℄ US-30
P.I. = Sta. 36+144.106
Δ = 10° 20' 35" (RT)
R = 4,250.000m
T = 384.647m
L = 767.203m
E = 17.371m
P.C. Sta. 35+759.459
P.T. Sta. 36+526.662

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 4, T-3S, R-15E

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
REH	4/12/99	Changed Parcel 29LL to 29E
REV.	DATE	DESCRIPTION

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 36+440.000 TO 36+700.000

WYA/CRA-30-28.009/0.000

2045
2116

30

LEWIS KAISER AND ANNA L. KAISER, TRUSTEES
or their successors in trust, under the
LEWIS AND ANNA L. KAISER LIVING TRUST

02-0995-0000

31

MARGARET I. MILLER

02-0970-0000

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

Tree line

Woven Wire / Barbed Wire

CULTIVATED

02-0995-0000

℄ US-30
P.I. = Sta. 37+166.600
Δ = 18° 52′ 55″ (LT)
R = 1,400.000m
T = 232.796m
L = 461.371m
E = 19.223m
P.C. Sta. 36+933.804
P.T. Sta. 37+395.175

LA-R/W

S 80°40′36″ E
585.297 (1920.27′)

0.600

Const. Limits

30 WL

Abndn. 102mm

Field tile

24.1m(79.07′)-102mm (4″) Conduit

PC Sta. 36+933.804

Abndn.

+962.779
0

Match Line Station 36+700.000 See Sheet No. 75

457mm

36+800 457mm

36+900

℄ R/W, Construction U.S.R. 30

Match Line Station 37+000.000 See Sheet No. 77

102mm

Abndn. Field tile

Abndn. 102mm

13.9m(45.60′)-102mm (4″) Conduit

175.491 (575.76′)

S 81°25′35″ E

+740
40

39.1m(128.28′)-102mm (4″)
Collector (By Others)

140.357 (460.49′)
S 75°09′17″ E

+880
50

287.245 (942.41′)
S 83°59′49″ E

Plug

CULTIVATED

30

LEWIS KAISER AND ANNA L. KAISER, TRUSTEES
or their successors in trust, under the
LEWIS AND ANNA L. KAISER LIVING TRUST

02-0995-0000

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 4,T-3S,R-15E

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN
STA. 36+700.000 TO 37+000.000

WYA/CRA-30-28.009/0.000

76/146

2046
2116

31 MARGARET I. MILLER
02-0970-0000

Tree Line
Woven Wire / Barbed Wire
Woven Wire / Barbed Wire

℄ US-30
P.I. Sta. 37+166.600
Δ = 18° 52′ 55″ (LT)
R = 1,400.000m
T = 232.796m
L = 461.371m
E = 19.223m
P.C. Sta. 36+933.804
P.T. Sta. 37+395.175

30 LEWIS KAISER AND ANNA L. KAISER, TRUSTEES
or their successors in trust, under the
LEWIS AND ANNA L. KAISER LIVING TRUST

CULTIVATED
Woods
Woods
02-0995-0000
Woven Wire / Barbed Wire

LA-R/W
S 80°40′36″ E
585.297 (1920.27′)
+140
45
N 82°27′39″ E
225.809 (740.84′)
LA-R/W
0.600
Const. Limits
Const. Limits
30 WL
Woods
Sword Creek
Woods

Match Line Station 37+000.000 See Sheet No. 76
37+100
℄ R/W, Construction U.S.R. 30
37+200
Abndn. Field tile
102mm
Abndn.
381mm
1500mm R.C.P. or 1800mm C.M.P.
Match Line Station 37+300.000 See Sheet No. 78

Const. Limits
LA-R/W
0.600
287.245 (942.41′)
S 83°59′49″ E
+163
45.563
+160
45
3.148(10.33′)
20.437(67.05′)
N 1°22′47″ E
+163
66
49.657 (162.92′)
74.150 (243.27′)
S 78°15′45″ E
50.185 (164.65′)
N 78°07′18″ E
+210
55.311
+230
60
Const. Limits
LA-R/W
73.039 (239.63′)
N 83°16′52″ E
+300
55
30 WL
102mm
Field tile
Plug
102mm
Field tile
CULTIVATED
30
LEWIS KAISER AND ANNA L. KAISER, TRUSTEES
or their successors in trust, under the
LEWIS AND ANNA L. KAISER LIVING TRUST
02-0995-0000
Woven Wire / Barbed Wire
Branch of Broken
30 X
Woods
Woods

● - Iron Pin Set With I.D. Cap

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 4,T-3S,R-15E

PLAN COMPLETED:		
REH	2/3/99	Add Parcel 30X
REV.	DATE	DESCRIPTION

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 37+000.000 TO 37+300.000

WYA/CRA-30-28.009/0.000

77/146

2047
2116

metric units

℄ US-30
P.I. Sta. 37+166.600
Δ = 18° 52′ 55″ (LT)
R = 1,400.000m
T = 232.796m
L = 461.371m
E = 19.223m
P.C. Sta. 36+933.804
P.T. Sta. 37+395.175

℄ RAMP L
P.I. Sta. 37+489.543
Δ = 18° 01′ 55″ (LT)
R = 330.000m
Ls2 = 80.000m
θs2 = 6° 56′ 42″
LT2 = 53.374m
ST2 = 26.704m
Lc = 64.857m
T1 = 54.970m
T2 = 89.861m
Es = 4.547m
P.C. Sta. 37+434.573
C.S. Sta. 37+498.430
S.R.S. Sta. 37+578.430

℄ RAMP K
P.I. Sta. 37+613.324
Δ = 1° 29′ 01″ (LT)
R = 3500.000m
T = 45.313m
L = 90.622m
E = 0.293m
P.C. Sta. 37+568.011
P.T. Sta. 37+658.632

℄ RAMP K
P.I. Sta. 37+392.756
Δ = 4° 18′ 58″ (RT)
R = 2,000.000m
Ls2 = 60.000m
θs2 = 0° 51′ 34″
LT2 = 40.000m
ST2 = 20.000m
Lc = 120.659m
T1 = 76.361m
T2 = 104.371m
Es = 1.457m
P.C. Sta. 37+316.394
C.S. Sta. 37+437.053
S.T. Sta. 37+497.053

31 MARGARET I. MILLER
02-0970-0000

32 E — 02-0985-0000 — CULTIVATED

32 WD1

31 WD

31 WL

32 WL

30 WL

02-0995-0000

30 — LEWIS KAISER AND ANNA L. KAISER, TRUSTEES or their successors in trust, under the LEWIS AND ANNA L. KAISER LIVING TRUST
02-0995-0000

32 — MARGARET I. MILLER WITH LIFE ESTATE TO RUSSELL KELTNER AND MARIE KELTNER
02-0985-0000

Service Road No. 6
Sword Creek
Branch of Broken
Woven Wire/Barbed Wire
Wooded
CULTIVATED
Const. Limits
254mm Field tile Abndn.
102mm Field tile Abndn.
381mm
Match Line Station 37+300.000 See Sheet No. 77
Match Line Station 37+600.000 See Sheet No. 79
℄ R/W, Construction U.S.R. 30
℄ RAMP L
℄ RAMP K
PC Sta. 37+434.573
CS Sta. 37+498.430
SRS Sta. 37+578.430
PC Sta. 37+316.395
CS Sta. 37+437.053
ST Sta. 37+497.053
PT Sta. 37+395.175
PC Sta. 37+568.011
+380.977 111.053
+376.938 83.164
+374.399 65
+365.858 0
+300 55
+358.953 57.413
+487.618 87.915
+509.653 92.891
+559.700 85.739
+490 70
S 89°59′21″ E 128.846 (422.72′)
N 0°13′00″ E 28.141 (92.33′)
N 79°27′13″ E 109.694 (359.89′)
N 82°27′39″ E 225.809 (740.84′)
N 79°27′13″ E 114.738 (376.44′)
N 69°09′12″ E 71.455 (234.43′)
N 69°09′12″ E 165.823 (544.04′)
22.590 (74.11′)
50.556m (165.87′)
N 69°09′12″ E 87.447 (286.90′)
S 89°59′21″ E 121.463 (398.50′)
222.048 (728.50′)
18.342 (60.11′)
123.376 (404.78′)
61.363 (201.32′)
383.956 (1259.70′)
N 86°49′10″ E
N 81° 52′ 40″ E
0.600
37+300
37+400
37+500
37+600

● - Iron Pin Set With I.D. Cap

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 4,T-3S,R-15E

02-0985-0000

PLAN COMPLETED:		
REH	11/17/98	Change 32WV TO 32WD1,31WV TO 31WD
REH	6/9/99	Add Parcel 32E
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

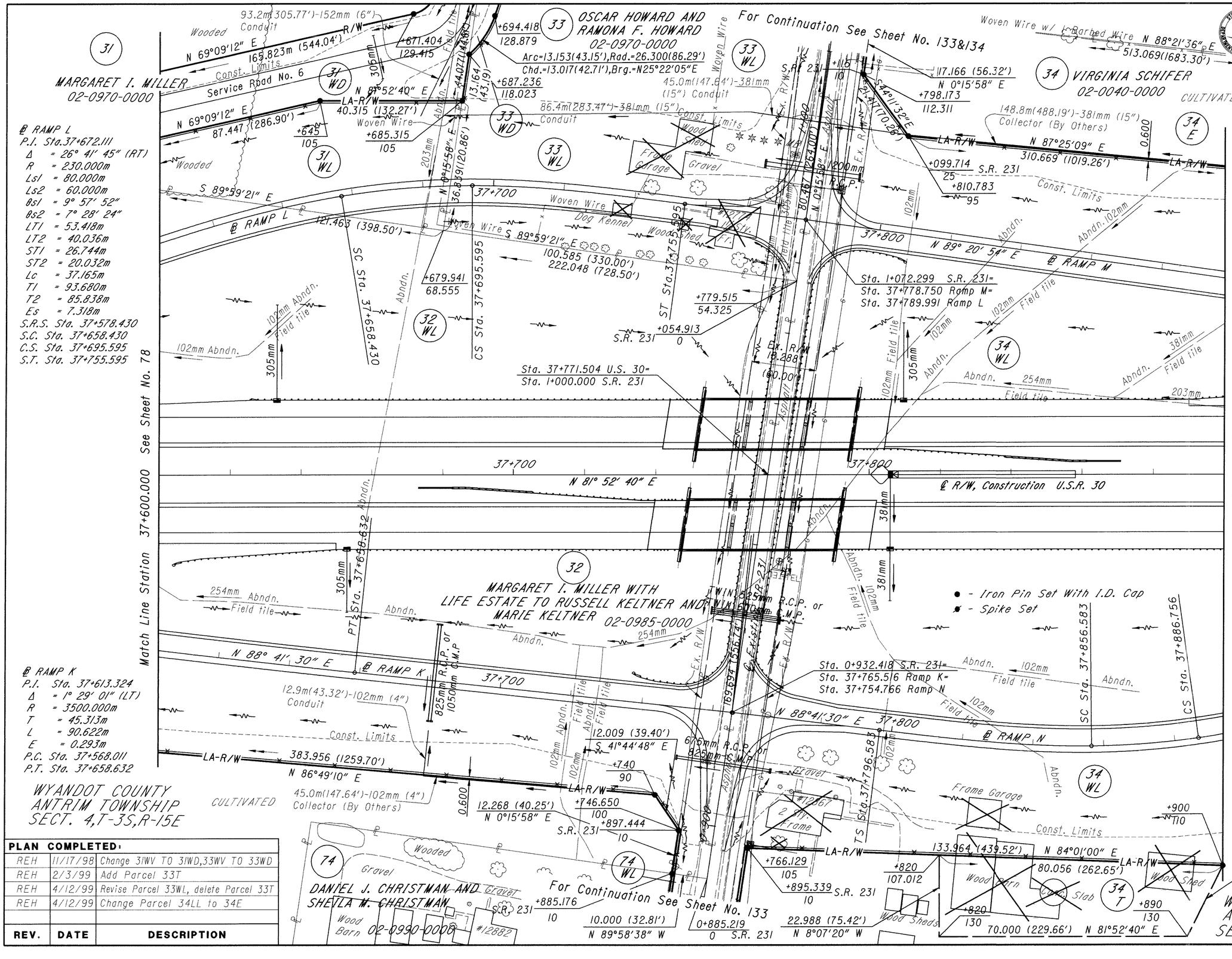
STATE JOB NO. 017600

WYA/CRA-30-28.009/0.000

RIGHT OF WAY PLAN
STA. 37+300.000 TO 37+600.000

78/146

2048/2116



PLAN COMPLETED:		
REH	11/17/98	Change 31WV TO 31WD,33WV TO 33WD
REH	2/3/99	Add Parcel 33T
REH	4/12/99	Revise Parcel 33WL, delete Parcel 33T
REH	4/12/99	Change Parcel 34LL to 34E
REV.	DATE	DESCRIPTION

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 37+600.000 TO 37+900.000

WYA/CRA-30-28.009/0.000

79 | 146

2049
2116

metric units

Match Line Station 37+900.000 See Sheet No. 79

Match Line Station 38+200.000 See Sheet No. 81

35 HARLEY LAVERNE WEATHERHOLTZ AND PRISCILLA ANN WEATHERHOLTZ, HARLEY LAVERNE WEATHERHOLTZ AND PRISCILLA ANN WEATHERHOLTZ TRUSTEES

02-0050-0000

CULTIVATED

381mm

N 88°21'36" E
513.069 (1683.30')

Woven Wire w/ 1 Barbed Wire

148.8m(488.19')-381mm (15") Collector (By Others)

Field tile

34 VIRGINIA SCHIFER

34E

LA-R/W

N 87°25'09" E
310.669 (1019.26')

Abndn.

Const. Limits

+120
65

102mm

Plug

N 83°46'04" E
188.762 (619.30')

S Sta. 38+037.957

SC Sta. 38+097.957

34WL

37+900

N 89° 20' 54" E

℄ RAMP M

38+000

38+100

203mm

Field tile

℄ R/W, Construction U.S.R. 30

N 81° 52' 40" E

SRS Sta. 37+966.756

℄ RAMP N

N 63°44'17" E 38+000

SC Sta. 38+046.756

PT Sta. 38+104.360

16.7m(54.79')-102mm (4") Conduit

185.540 (608.73')
N 67°50'30" E

0.600

Const. Limits

211.704 (694.57')
N 80°29'23" E

+080
65

76.2m(250.00')-102mm (4") Collector (By others)

34 VIRGINIA SCHIFER

02-0040-0000

+900
110

CULTIVATED

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3,T-3S,R-15E

℄ RAMP M
P.I. Sta. 38+153.723
Δ = 7° 55' 44" (LT)
R = 1250.000m
Lsl = 60.000m
θsl = 1° 22' 30"
LTl = 40.001m
STl = 20.001m
Lc = 142.979m
Tl = 115.766m
T2 = 87.498m
Es = 3.059m
T.S. Sta. 38+037.957
S.C. Sta. 38+097.957
P.T. Sta. 38+240.936

℄ RAMP N
P.I. Sta. 38+053.247
Δ = 16° 56' 47" (RT)
R = 330.000m
Lsl = 80.000m
θsl = 6° 56' 42"
LTl = 53.374m
STl = 26.704m
Lc = 57.604m
Tl = 86.491m
T2 = 51.932m
Es = 4.061m
S.R.S. Sta. 37+966.756
S.C. Sta. 38+046.756
P.T. Sta. 38+104.359

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
REH	4/12/99	Change Parcel 34LL to 34E
JDK	5/20/99	Revised name Parcel 35
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 37+900.000 TO 38+200.000

WYA/CRA-30-28.009/0.000

80/146

2050
2116

℄ RAMP M
P.I. Sta. 38+153.723
Δ = 7° 55′ 44″ (LT)
R = 1,250.000m
Ls1 = 60.000m
θs1 = 1° 22′ 30″
LT1 = 40.001m
ST1 = 20.001m
Lc = 142.982m
T1 = 115.766m
T2 = 87.498m
Es = 3.059m
T.S. Sta. 38+037.957
S.C. Sta. 38+097.957
P.T. Sta. 38+240.939

35

HARLEY LAVERNE WEATHERHOLTZ AND PRISCILLA ANN WEATHERHOLTZ, HARLEY LAVERNE WEATHERHOLTZ AND PRISCILLA ANN WEATHERHOLTZ TRUSTEES

02-0050-0000

For Continuation See Property Map Sheet No. 12

N 0°02′25″ E ℄ N.W. Property Corner

329.690 (1081.66′) to N.W. Property Corner

381mm

N 88°21′36″ E

513.069 (1683.30′) Woven Wire w/1 Barbed Wire

+310.466
71.371

02-0040-0000

34 E

CULTIVATED

+308.660
58.775

12.725 (41.75′)

N 83°46′04″ E

188.762 (619.30′)

LA-R/W

Const. Limits

Field tile

305mm Abndn.

152mm Abndn.

PT Sta. 38+240.939

34 WL

N 0°02′25″ E 393.24′

119.861

102mm Abndn.

℄ RAMP M

102mm Abndn.

Field tile

38+300

38+400

N 81° 52′ 40″ E

℄ R/W, Construction U.S.R. 30

Match Line Station 38+200.000 See Sheet No. 80

36 E

36

TERRY KOEHLER (1/4), DENNIS KOEHLER (1/4), JEFF KOEHLER (1/4), DEAN KOEHLER (1/4)

02-0035-0000

CULTIVATED

225.00m(738.19′)-305mm (12″) Collector (By Others)

N 83°46′04″ E

266.066 (872.92′)

LA-R/W

Const. Limits

305mm Abndn.

Field tile Abndn.

36 WL

Match Line Station 38+500.000 See Sheet No. 82

34 WL

36 WL

102mm Abndn.

Field tile

211.704 (694.57′)

N 80°29′23″ E

LA-R/W

300.522 (985.96′)

N 80°29′23″ E

LA-R/W

Const. Limits

102mm

Plug

0.600

+291.642
59.872

Dirt Drive

CULTIVATED

CULTIVATED

CULTIVATED

34

VIRGINIA SCHIFER

02-0040-0000

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3,T-3S,R-15E

36

TERRY KOEHLER (1/4), DENNIS KOEHLER (1/4), JEFF KOEHLER (1/4), DEAN KOEHLER (1/4)

02-0035-0000

● - Iron Pin Set With I.D. Cap
✖ - Spike Set

PLAN COMPLETED:		
REH	4/12/99	Changed Parcel 34LL to 34E
REH	4/12/99	Changed Parcel 36LL to 36E
JDK	5/20/99	Revised name Parcel 35
REV.	DATE	DESCRIPTION

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 38+200.000 TO 38+500.000

WYA/CRA-30-28.009/0.000

81/146

2051
2116

metric units

For Continuation See Property Map Sheet No. 12

36

TERRY KOEHLER (1/4), DENNIS KOEHLER (1/4), JEFF KOEHLER (1/4), DEAN KOEHLER (1/4)

02-0035-0000

37

DONALD E. ALBAN AND MARY JEAN ALBAN

Woods

303.890 (997.01') ℄ N 0°33'00" E

02-1085-0000

15.000 (49.21')
N 65°27'31" E

37 X

℄ US-30
P.I. Sta. 39+027.489
Δ = 9° 24' 24" (LT)
R = 4,250.000m
T = 349.663m
L = 697.753m
E = 14.360m
P.C. Sta. 38+677.827
P.T. Sta. 39+375.580

36 E

CULTIVATED

254mm

Field tile

305mm

102mm

+574.580
50

+639.806
72.880

+654.194
77.120

S 24°32'29" E
22.682 (74.41')
26.847 (88.08')

15.568 (51.08')
N 80°58'46" E

+646.217
51.123

+661.783
51.368

Plug

N 83°46'04" E
266.066 (872.92')

LA-R/W

71.645 (235.06')

N 80°58'46" E
303.003 (994.10')

215.790 (707.97')

Const. Limits

0.600

Abndn.

36 WL

37 WL

N 0°33'00" E
99.454 (326.29')

381mm

PC Sta. 38+677.827

1200mm R.C.P. at 1500mm C.M.P.

38+500.000 See Sheet No. 81

38+800.000 See Sheet No. 83

Match Line Station 38+500.000

Match Line Station 38+800.000

+566.954
0

38+600

N 81°52'40" E

38+700

℄ R/W, Construction U.S.R. 30

100.003m(327.77')-102mm (4") Conduit

17.000m(55.77')-102mm (4") Collector (By Others)

32.771 (107.51')
N 89°22'26" E

+559.585
48.317

300.522 (985.96')
N 80°29'23" E

270.091 (886.12')
N 80°29'23" E

+592.075
52.593

37 ER

690.409 (2265.12')
S 89°22'26" W

CULTIVATED

36

TERRY KOEHLER (1/4), DENNIS KOEHLER (1/4), JEFF KOEHLER (1/4), DEAN KOEHLER (1/4)

02-0030-0000

02-0035-0000

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3,T-3S,R-15E

For Continuation See Property Map Sheet No. 12

Woods

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
1 REH	4/12/99	Changed Parcel 36LL to 36E
2 REH	4/12/99	Changed Parcel 37LL to 37E
3	11/6/00	CHANGED PARCEL 37E TO 37ER
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 38+500.000 TO 38+800.000

WYA/CRA-30-28.009/0.000

82/146

2052
2116

metric units

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

WYA/CRA-30-28.009/0.000

RIGHT OF WAY PLAN
STA. 38+800.000 TO 39+100.000

Match Line Station 38+800.000 See Sheet No. 82

Match Line Station 39+100.000 See Sheet No. 84

102mm Field tile

102mm Field tile

254mm Field tile

102mm Field tile

℄ US-30
P.I. Sta. 39+027.489
Δ = 9° 24' 24" (LT)
R = 4,250.000m
T = 349.663m
L = 697.753m
E = 14.360m
P.C. Sta. 38+677.827
P.T. Sta. 39+375.580

37
DONALD E. ALBAN AND
MARY JEAN ALBAN
02-1085-0000

CULTIVATED

+880 / 50

N 80°58'46" E
215.790 (707.97')
303.003 (994.10')
0.600
Plug
Plug
Plug
LA-R/W
Const. Limits

N 78°05'43" E
296.628 (973.19')
Plug
Plug
Plug
LA-R/W
Const. Limits

195.000m(639.76')-102mm (4") Collector (By Others)

37 WL

305mm

381mm

Abndn.

Field tile

102mm

254mm

38+900

39+000

℄ R/W, Construction U.S.R. 30

129.900m(425.85')-381mm(15") Conduit

102mm Abndn.

254mm Abndn.

37 WL

305mm

270.091 (886.12')
N80°29'23"E
Const. Limits
LA-R/W
+860 / 50

242.791 (796.56')
N 77°48'15" E
Const. Limits
LA-R/W
0.600
+100 / 50

17.000m(55.77')-102mm (4") Collector (By Others)

307.000m(1007.22')-102mm (4") Collector (By Others)

CULTIVATED

37
DONALD E. ALBAN AND
MARY JEAN ALBAN
02-1085-0000

37 ER

Wooded

690.409 (2265.12')
S 89°22'26" W

36
TERRY KOEHLER (1/4),
DENNIS KOEHLER (1/4),
JEFF KOEHLER (1/4),
DEAN KOEHLER (1/4)
02-0030-0000

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3, T-3S, R-15E

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
1 REH	4/12/99	Changed Parcel 37LL to 37E
2	11/6/00	CHANGED PARCEL 37E TO 37ER
REV.	DATE	DESCRIPTION

metric units

For Continuation See Sheet No. 137

37

DONALD E. ALBAN AND
MARY JEAN ALBAN

02-1085-0000

℄ US-30
P.I. Sta. 39+027.489
Δ = 9° 24' 24" (LT)
R = 4,250.000m
T = 349.663m
L = 697.753m
E = 14.360m
P.C. Sta. 38+677.827
P.T. Sta. 39+375.580

℄ US-30
P.I. Sta. 0+457.247
Δ = 12° 16' 53" (LT)
R = 4,250.000m
T = 457.247m
L = 910.991m
E = 24.526m
P.C. Sta. 0+000.000
P.T. Sta. 0+910.991

CULTIVATED

102mm Field tile

195.000m(639.76')-102mm (4") Collector (By Others)

+180 / 45

N78°05'43"E 296.628 (973.19')

LA-R/W

Const. Limits

Abndn.

0.600

37 WL

N 73°56'20" E 171.575 (562.91')

+353.423 / 45

T.H. 10 1+035.857 / 35

N 0° 49' 59" E 104.143 (341.68')

381mm R.C.P. or 457mm C.M.P.

P.T. Sta. 39+375.580 BK U.S.30=
P.C. Sta. 0+000.000 AHD U.S.30=
P.O.T. Sta. 0+000.000 T.H. 10

Ex. R/W Asphalt

Match Line Station 39+100.000 See Sheet No. 83

Match Line Station 0+020.000 See Sheet No. 85

39+200

39+300

℄ R/W, Construction U.S.R. 30

457mm

152mm

38 WL

T.H. 10 0+939.707 / 40

381mm Conduit

CHARLES EDWIN McCLAIN,
KAREN S. HOSTETLER AND
LILLIAN I. McCLAIN (LIFE ESTATE)
37-00-10676-001

102mm Field tile

N 89°43'01" W 35.002 (114.83')

Gravel

25.841 (84.78') N 0°49'59" E

0+943.699 / 35

0+943.363 / 0

Ex. R/W 12.192 (40.00')

Ex. R/W Asphalt SECTION 3

SECTION LINE S 0°49'59" W 287.063 (941.81')

N 0°49'59" E 319.121

Const. Limits

203mm Asphalt SECTION 2

129.800m(425.85')-381mm (15") Conduit

307.000m(1007.22')-102mm (4") Collector (By Others)

+100 / 50

254mm

Plug

221.700 (727.36')

N 73°25'00" E

+319.219 / 45

0.600

N 2°02'16" W 87.788 (288.02')

77 WL

77

MICHAEL V. STROUSE
37-00-10727-000

S 0°49'59" W (340.22')

105.699

13.039 (42.78')±

#2935 Double Wide Mobile home

CULTIVATED

02-1085-0000

CULTIVATED

37 ER

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3,T-3S,R-15E

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2,T-3S,R-15E

For Continuation See Sheet No. 136

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

PLAN COMPLETED:		
1 REH	4/12/99	Changed Parcel 37LL to 37E
2	11/6/00	CHANGED PARCEL 37E TO 37ER
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 39+100.000 TO 0+020.000

WYA/CRA-30-28.009/0.000

84/146

2054/2116

37

DONALD E. ALBAN AND
MARY JEAN ALBAN
02-1085-0000

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3,T-3S,R-15E

38 WV

S 0°49'59" W
80.000 (262.47')

LA

(9.144 (30.00') EX. R/W)

WYANDOT COUNTY SECTION 4

CONST. LIMITS

℄ Survey TR-10

Asphalt

N 0°49'59" E
196.637 (645.14')

CRAWFORD COUNTY EXIST. R/W

SECTION 4

+140.000
35.000

S 89°10'01" E
35.000 (114.83')

LA-R/W

For Continuation See Sheet No. 137

85.921 (281.89')
N 0°49'59" E

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2,T-3S,R-15E

US-30
P.I. Sta. 0+457.247
Δ = 12° 16' 53" (LT)
R = 4,250.000m
T = 457.247m
L = 910.991m
E = 24.526m
P.C. Sta. 0+000.000
P.T. Sta. 0+910.991

38

CHARLES EDWIN McCLAIN,
KAREN S. HOSTETLER AND
LILLIAN I. McCLAIN (LIFE ESTATE)
37-00-10676-001

37-00-10677-000

38 WL

Cultivated

+050.732
US 30
40.000

+054.079
TR 10
40.000

0.600

+280.000
40.000

N 70°14'30" E
227.082 (745.02')

N 65°54'07" E
198.045 (649.75')

LA-R/W

CONST. LIMITS

16.60m(54.46')-102mm (4") Conduit

Field tile Abndn. 102mm

Match Line Station 0+020.000 See Sheet No. 84

Match Line Station 0+300.000 See Sheet No. 86

457mm

152mm

Abndn.

102mm

0+100

0+200

℄ R/W, Construction U.S.R. 30

Field tile

319.729 (1048.98')
N 70°55'01" E

72.9m(239.17')-102mm (4") Collector (By Others)

Plug

+023.402
US 30
40.000

47.50m(155.84')-102mm (4") Conduit

25.841 (84.78')
N 0°49'59" E

55.606
(182.43')±

Silo

Hog Pen

Wood Barn

Gravel

Gate

77

MICHAEL V. STROUSE
37-00-10727-000

Cultivated

38

CHARLES EDWIN McCLAIN,
KAREN S. HOSTETLER AND
LILLIAN I. McCLAIN (LIFE ESTATE)
37-00-10676-001

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2,T-3S,R-15E

● - Iron Pin Set with I.D. Cap

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 0+020.000 TO 0+300.000

WYA/CRA-30-28.009/0.000

85/146

2055
2116

metric units

38

CHARLES EDWIN McCLAIN,
KAREN S. HOSTETLER AND
LILLIAN I. McCLAIN (LIFE ESTATE)

37-00-10677-000

Woods

Cultivated

37-00-10675-000

Cultivated

+480.000
45.000

N 65°54'07" E
198.045 (649.75')

LA-R/W

CONST. LIMITS

N 63°12'03" E
217.574 (713.83')

38
WL

381mm

102mm Abndn. Field tile

0+400

0+500

℄ R/W, Construction U.S.R. 30

+539.547
0

Match Line Station 0+300.000 See Sheet No. 85

Match Line Station 0+600.000 See Sheet No. 87

Abndn. 102mm Field tile

Abndn.

Field tile

102mm Abndn.

305mm

38
WL

319.729 (1048.98')
N 70°55'01" E

CONST. LIMITS

141.647 (464.72')
N 68°57'59" E

LA-R/W

60.946 (199.95')
N 70°18'05" E

60.946 (199.95')
N 60°04'52" E

102mm +340.000
45.000

Plug

0.600

102mm

Field tile

Cultivated

Plug

+480.000
50.000

+540.000
55.000

+600.000
50.000

102mm Field tile

Cultivated

38

CHARLES EDWIN McCLAIN,
KAREN S. HOSTETLER AND
LILLIAN I. McCLAIN (LIFE ESTATE)
37-00-10676-001

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2,T-3S,R-15E

● - Iron Pin Set with I.D. Cap

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN
STA. 0+300.000 TO 0+600.000

WYA/CRA-30-28.009/0.000

86/146

2056
2116

metric units

US-30
P.I. Sta. 0+457.247
Δ = 12° 16′ 53″ (LT)
R = 4,250.000m
T = 457.247m
L = 910.991m
E = 24.526m
P.C. Sta. 0+000.000
P.T. Sta. 0+910.991

38

CHARLES EDWIN McCLAIN,
KAREN S. HOSTETLER AND
LILLIAN I. McCLAIN (LIFE ESTATE)

37-00-10675-000

Cultivated

Cultivated

+700.000
50.000

0.600

187.4m(614.83')-102mm (4")
Collector (By Others)

N 63°12'03" E
217.574 (713.83')

LA-R/W

N 61°04'06" E
206.038 (675.98')

CONST. LIMITS

CONST. LIMITS

Match Line Station 0+600.000 See Sheet No. 86

Match Line Station 0+900.000 See Sheet No. 88

305mm

38 WL

102mm Abndn.

102mm Field tile Abndn.

102mm Abndn.

102mm Field tile Abndn.

102mm Abndn.

102mm Field tile Abndn.

102mm Abndn.

102mm Field tile Abndn.

Abndn. 102mm Field tile

0+700

0+800

254mm Abndn.

℄ R/W, Construction U.S.R. 30

+878.391
0

Woods

254mm Field tile Abndn.

152mm Abndn.

254mm Abndn.

254mm Field tile Abndn.

1650mm R.C.P. or
1950mm C.M.P.

381mm

99.800m(327.43')-381mm (15") Conduit

38 WL

39 WL

Woods

CONST. LIMITS

LA-R/W

251.719 (825.85')

N 63°18'10" E

CONST. LIMITS

LA-R/W

120.528 (395.43')
N 0°22'51" E

51.965 (170.49')
N63°18'10"E

377.3m(1237.86')-457mm (18")
Collector (By others)

+600.000
50.000

+848.738
52.625

+900.000
55.000

Cultivated

38

Cultivated

39

Woods

Woven Wire/Barbed Wire Fence

CHARLES EDWIN McCLAIN,
KAREN S. HOSTETLER AND
LILLIAN I. McCLAIN (LIFE ESTATE)

37-00-10675-000

LEONARD E. CHANCE

37-00-10687-000

Cultivated

37-00-10676-001

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2,T-3S,R-15E

● - Iron Pin Set with I.D. Cap

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN
STA. 0+600.000 TO 0+900.000

WYA/CRA-30-28.009/0.000

87/146

2057
2116

metric units

38

CHARLES EDWIN McCLAIN,
KAREN S. HOSTETLER AND
LILLIAN I. McCLAIN (LIFE ESTATE)

37-00-10675-000

US-30
P.I. Sta. 0+457.247
Δ = 12° 16′ 53″ (LT)
R = 4,250.000m
T = 457.247m
L = 910.991m
E = 24.526m
P.C. Sta. 0+000.000
P.T. Sta. 0+910.991

N 0°22′51″ E
288.514 (946.57′)
to owner's northwesterly property corner.

39 ER

39

LEONARD E. CHANCE

37-00-10687-000

Cultivated

Cultivated

Woven Wire/Barbed Wire

Tree Line

℄

+908.551
52.015

+040.000
50.000

N 61°04′06″ E
206.038 (675.98′)

N 61°04′06″ E
131.434 (431.21′)

N 59°17′40″ E
320.039 (1050.00′)

LA-R/W

CONST. LIMITS

38 WL

120.528 (395.43′)
N 0°22′51″ E

39 WL

Abndn.

102mm

Field tile

102mm Abndn.

152mm

PT Sta. 0+910.991

Match Line Station 0+900.000 See Sheet No. 87

1+000

℄ R/W, Construction U.S.R. 30 N 60° 11′ 23″ E

1+100

381mm

Match Line Station 1+200.000 See Sheet No. 89

Abndn.

Woods

254mm

Field tile

102mm

Abndn.

Woven Wire/Barbed Wire

300.142 (984.72′)
N 60°11′33″ E

+900.000
55.000

377.3m(1237.86′)-457mm (18″)
Collector (By Others)

0.600

+200.000
55.000

254mm

Cultivated

Woods

Dirt Drive

Woven Wire/Barbed Wire

39

LEONARD E. CHANCE

37-00-10687-000

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2,T-3S,R-15E

● - Iron Pin Set with I.D. Cap

PLAN COMPLETED:		
1 REH	4/12/99	Changed Parcel 39LL to 39E
2 REH	10/6/99	Removed "Landlocked" Parcel 39E
3	11/6/00	CHANGED PARCEL 39E TO 39ER
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 0+900.000 TO 1+200.000

WYA/CRA-30-28.009/0.000

88/146

2058
2116

metric units

39
LEONARD E. CHANCE
37-00-10687-000

40
CONSOLIDATED RAIL CORPORATION
37-00-61166-000
℄ RR AS CONSTRUCTED

41
LARRY W. SAND
37-00-10726-000

S 85°39'46" E
439.950 (1440.12')
to owner's northwesterly property corner.

℄ R/W, Construction U.S.R. 30

Match Line Station 1+200.000 See Sheet No. 88

Match Line Station 1+500.000 See Sheet No. 90

Cultivated

102mm Field tile

Plug

136.4m(447.5l')-102mm (4") Collector (By others)

0.600

+360.000 55.000

N 59°17'40" E
320.039 (1050.00')

CONST. LIMITS

LA-R/W

Abndn.

Woven Wire/Barbed Wire

S 85°39'46" E

334+500

+416.944 55.000

N 60°11'23" E
56.944 (186.82')

71.60m(234.91')-457mm (18") Conduit

197.697(648.61')

+364.745 10.446

254mm Field tile

+450.656 26.030

+475.316 55.000

28.298(92.84') N61°04'05"W

334+400

+490 30.809

+364.755 6.837

N 60°11'23" E
84.684 (277.83')

6.59 (21.62')
2.854 (9.36')
1.524 (5.00')
(584.48')

N 60°11'23" E
58.373(191.51')

192.743(632.43')
50.430(165.45')
305mm

1+300

1+400

N 60° 11' 23" E

114.09m(374.02')-533mm (21") Conduit

+496.462 4.749

+498.480 7.741

+498.033 0.000

305mm

102mm

254mm

152mm

+200.000 55.000

300.042 (984.39')
N 61°08'40" E

+500.000 60.000

98.0m(321.52')-305mm (12") Collector (By others)

39 WL

39 ER

39 X

40 T

40 R

40-2

41 WL

1

2

Note: See RR Plat For Details In This Area

	BEARING	DISTANCE
1	N 4°11'22" E	2.976 (9.76')
2	N 85°48'38" W	135.570 (444.78')

● - Iron Pin Set with I.D. Cap

PLAN COMPLETED:		
1 REH	2/3/99	Delete Parcel 39X
2 REH	2/3/99	Revised Parcels 40 & 40-2
3 REH	4/12/99	Changed Parcel 39LL to 39E
4	11/6/00	CHANGED PARCEL 39E TO 39ER
REV.	DATE	DESCRIPTION

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2,T-3S,R-15E

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 1+200.000 TO 1+500.000

WYA/CRA-30-28.009/0.000

89/146

2059/2116

metric units

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2,T-3S,R-15E

37-00-10726-000

41

LARRY W. SAND

Cultivated

254mm Field tile

102mm Field tile

+560.000
55.000

N 60°11'23" E
84.684 (277.83')

LA-R/W

N 61°12'01" E
283.490 (930.09')

Plug

CONST. LIMITS

+518.028
26.030

58.373(191.51')
N 60°11'23" E

+516.997
4.749

40 T

40 R

40-2

+514.979
7.141

+556.406
0

1+600

92.745(304.28')

50.430(165.45')

40-1

1

3.105(10.19')

S85°48'38"E

27.395(91.85')

305mm Abndn.

102mm Abndn. Field tile

+536.411
26.030

+538.270
23.451

+540.289
20.459

39 WL

58.373 (191.51')
N 60°11'23" E

53.343 (175.01')

197.697 (648.61')

305mm Abndn. Field tile

CONST. LIMITS

80.657 (264.62')
N 57°19'38" E

LA-R/W

+500.000
60.000

98.0m(321.52')-305mm (12")
Collector (By others)

+580.556
55.972

Cultivated

39

LEONARD E. CHANCE

37-00-10687-000

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2,T-3S,R-15E

Note:
See RR Plat
FOR Details
In This Area

Match Line Station 1+500.000 See Sheet No. 89

Match Line Station 1+800.000 See Sheet No. 91

41 WL

+594.783
26.030

+622.752
45

178.750(584.48')

192.854(632.72')

20.359 (66.79')
N60°11'23"E

+602.393
45

+634.921
53.254

334+200

175.411 (575.50')
Woven Wire

S 85°39'46" E
129.531(424.97')
144.236(473.21')

RR Metal Bldg.

CONSOLIDATED RAIL CORPORATION

334+100

S 85°39'46" E

65.160 (213.78')
N 57°19'38" E

0.600

+700.000
50.000

85.863 (281.70')
N 60°11'23" E

+775.311
50.000

+785.863
50.000

115.394 (378.59')

466.096 (1529.19')
N 60°17'17" E

+796.414
50.000

CONST. LIMITS

EXIST. R/W

SECTION LINE

N 0°07'27" E Asphalt
87.657 (287.59')

SECTION 2

SECTION 1

MARION MELMORE ROAD

305mmCMP

Gravel

CHARLES LINDEN BOWERS AND
ESTELL LORETTA BOWERS

37-00-10515-000

42

42 WL

41 E

LARRY W. SAND

37-00-10726-000

40

37-00-6116G-000

+742.121
125.963

12.855 (107.79')
Asphalt

9.144 (30.00') Ex R/W

CRAWFORD COUNTY
TOD TOWNSHIP
SEC. 1,T-3S,R-15E

● - Iron Pin Set with I.D. Cap
✖ - Spike Set

	BEARING	DISTANCE
1	N 4°11'22" E	3.105 (10.19')

PLAN COMPLETED:		
REH	2/3/99	Revise Parcels 40-1 & 40-2
REH	6/30/99	Add Parcel 41E

REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

PLAN 1+800.000

RIGHT OF WAY PLAT
STA. 1+500.000 TO 1+800.000

WYA/CRA-30-28.009/0.000

90/146

2060/2116

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2,T-3S,R-15E

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 1,T-3S,R-15E

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

WYA/CRA-30-28.009/0.000

RIGHT OF WAY PLAN
STA. 1+800.000 TO 2+100.000

41
LARRY W. SAND
37-00-10726-000

42
CHARLES LINDEN BOWERS AND
ESTELL LORETTA BOWERS
37-00-10515-000

42
CHARLES LINDEN BOWERS AND
ESTELL LORETTA BOWERS
37-00-10515-000

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 1,T-3S,R-15E

Match Line Station 1+800.000 See Sheet No. 90

Match Line Station 2+100.000 See Sheet No. 92

EXIST. R/W

9.144m (30.00') EX. R/W

℄ CONST. LIMITS-TA.PK @ SECTION CORNER
℄ 170.62m(559.80')
N 0°01'12" E 1+100
TOP PK @ N.W. CORNER SECTION 1

℄ CONST. LIMITS-TA.PK @ 254mm C.M.P.
℄ 60.96m(200.00')
SECTION LINE

℄ CONST. LIMITS-TA.PK @ SECTION LINE
℄ 90.09m(295.57')
SECTION LINE

℄ CONST. LIMITS-TA.PK @ SECTION LINE
℄ 118.90m(390.09')-381mm (15") Conduit
SECTION LINE

℄ CONST. LIMITS-TA.PK @ SECTION LINE
℄ 90.09m(295.57')-381mm (15") Conduit
SECTION LINE

℄ R/W, Construction U.S.R. 30

NEVADA-WYNFORD RD. SECTION 1

S 89°35'19" E
SECTION LINE
SECTION 36

41 WL

42 WL

+843.445
50.000

+832.894
50.000

+853.997
50.000

+804.102
0.000

+825.206
0.000

+900

2+000

N 61°12'01" E
283.490 (930.09')

Plug

N 60°11'23" E
267.555 (907.33')

N 60° 11' 23" E

N 60°17'17" E
466.096 (1529.19')

LA-R/W

CONST. LIMITS

Abndn.

Field tile

Cultivated

254mm

305mm

381mm

203mm

152mm

102mm

0.600

1050mm R.C.P. or
1350mm C.M.P.

209.0m(685.69')-305mm (12")
Collector (By others)

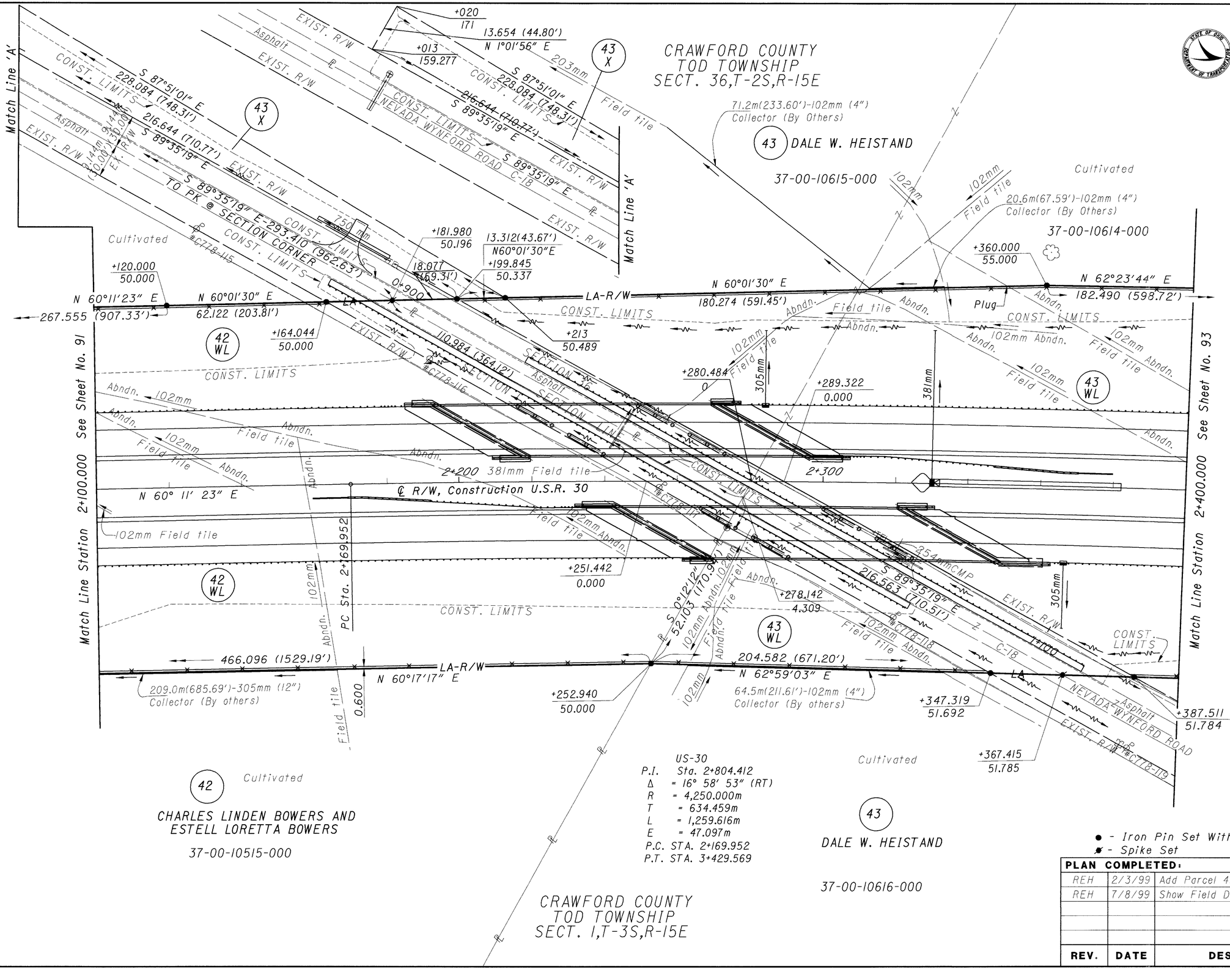
Gravel

● - Iron Pin Set with I.D. Cap
✱ - Spike Set

PLAN COMPLETED:		
REH	4/5/99	Change N.E. CORNER to N.W. CORNER
REV.	DATE	DESCRIPTION

91 / 146

2061
2116



● - Iron Pin Set With I.D. Cap
✱ - Spike Set

PLAN COMPLETED:		
REH	2/3/99	Add Parcel 43X
REH	7/8/99	Show Field Drive-Parcel 43
REV.	DATE	DESCRIPTION

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 2+100.000 TO 2+400.000

WYA/CRA-30-28.009/0.000

92/146

2062/2116

metric units

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 36,T-2S,R-15E

43
DALE W. HEISTAND
37-00-10614-000

Cultivated

+540.000
60.000

Plug

Plug

0.600

N 62°23'44" E
182.490 (598.72')

LA-R/W

CONST. LIMITS

N 66°55'52" E
215.551 (707.19')

LA-R/W

CONST. LIMITS

102mm Field tile

43 WL

Abndn.

Field tile

102mm

381mm

Abndn.

102mm

Field tile Abndn.

Abndn.

102mm

Field tile Abndn.

Abndn.

102mm

Field tile

Abndn.

102mm

Field tile

Abndn.

102mm

Field tile

metric units

Cultivated

43

DALE W. HEISTAND

37-00-10614-000

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 36,T-2S,R-15E

44

CARL R. WALTON AND
IRENE M. WALTON

37-00-10783-000

Cultivated

37-00-10794-000

45
WV

Service Access No. 17

CONST. LIMITS

LA-R/W

R/W

102mm Field tile

102mm Abndn. Field tile

102mm Abndn.

381mm

Plug

+800.000
60.000

+752.598
58.798

+970.142
69.647

+964.000
51.821

+945.837
0.000

+728.652
0

N 66°55'52" E
215.551 (707.19')

N 66°55'52" E
48.079 (157.74')

N 72°36'25" E
166.349 (545.76')

N72°36'25"E
106.637 (349.86')

N 72°36'25" E
106.643 (349.88')

18.883 (61.95')

N 0°11'50" E
111.165 (364.71')

43 WL

44 WL

45 WL

2+800

2+900

℄ R/W, Construction U.S.R. 30

Match Line Station 2+700.000 See Sheet No. 93

Match Line Station 3+000.000 See Sheet No. 95

N 0°10'51" E
127.177 (417.25')

142.022 (465.95')
N 66°42'49" E

134.222 (440.36')
N 66°42'49" E

85.711 (281.20')
N 68°25'37" E

109.495 (359.24')
N 68°25'37" E

+704.004
58.731

0.600

+840.000
55.000

+926.790
52.934

P.C. STA. 2+169.952
P.T. STA. 3+429.569

Cultivated

Cultivated

Cultivated

44

CARL R. WALTON AND
IRENE M. WALTON

37-00-10783-000

45

MICHAEL D. WILLIAMS
AND
CANDY S. WILLIAMS

37-00-10794-000

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
REH	11/16/98	Change Service Road to Access
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 2+700.000 TO 3+000.000

WYA/CRA-30-28.009/0.000

94/146

2064
2116

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

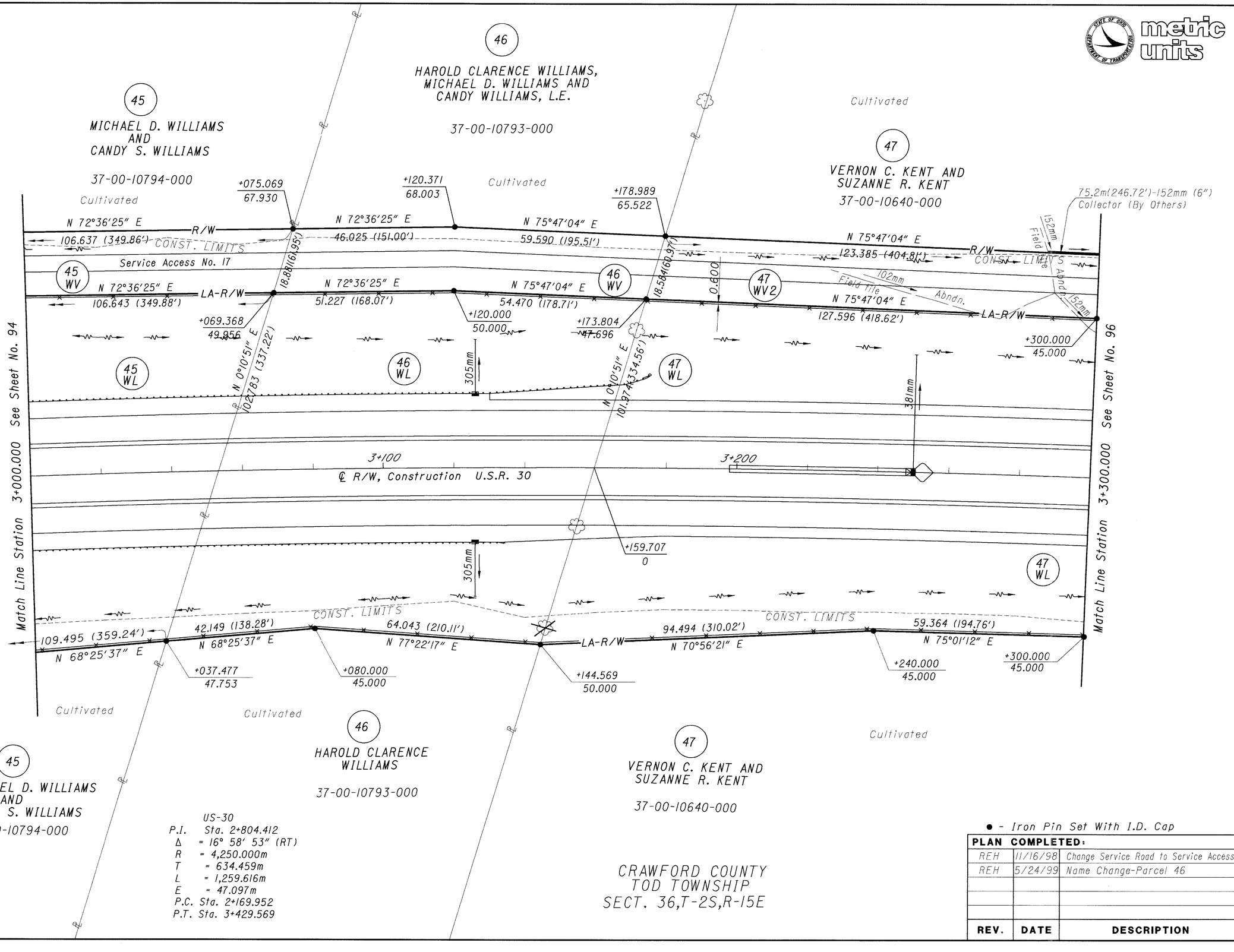
STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 3+000.000 TO 3+300.000

WYA/CRA-30-28.009/0.000

95/146

2065/2116



US-30
P.I. Sta. 2+804.412
Δ = 16° 58' 53" (RT)
R = 4,250.000m
T = 634.459m
L = 1,259.616m
E = 47.097m
P.C. Sta. 2+169.952
P.T. Sta. 3+429.569

● - Iron Pin Set With I.D. Cap

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 36,T-2S,R-15E

PLAN COMPLETED:

REV.	DATE	DESCRIPTION
REH	11/16/98	Change Service Road to Service Access
REH	5/24/99	Name Change-Parcel 46

metric units

47
VERNON C. KENT AND
SUZANNE R. KENT
37-00-10640-000

Cultivated

+300.515 / 62.997
75.2m(246.72')-152mm (6") Collector (By Others)
27.9m(91.54')-381mm (15") Conduit
N 78°23'19" E
CONST. LIMITS R/W
141.601 (464.57')
Service Access No. 17
+440.191 / 58
N 70°29'44" E
60.217 (197.56')
CONST. LIMITS
+500 / 65
N 80°59'07" E
R/W
30.067 (98.64')
+530 / 63
N 6°27'54" E
69.861(229.20')
47 WV2
Match Line Station 1+080.000 See Sheet No. 140
N 0°23'03" E
147.130 (482.71')
+550.691 / 40.000
+032.870 / 35.000 T-21
Abndn. 102mm Field tile
EXIST. R/W
Asphalt
102mm Field tile
EXIST. R/W
Section Line
ROAD T-21
Abndn.
Match Line Station 3+600.000 See Sheet No. 97

+300.000 / 45.000
Abndn. 152mm Field tile
47 WV2
N 78°23'19" E
141.384 (463.86')
LA-R/W
TWIN 600mm or 950mm
+440.000 / 40.000
N 77°10'16" E
110.691 (363.16')
47 WL
1050mm R.C.P. or 1350mm C.M.P.
3+400
3+500
Abndn.
Match Line Station 3+300.000 See Sheet No. 95
℄ R/W, Construction U.S.R. 30
N 77° 10' 16" E
152mm
Abndn.
PT Sta. 3+429.569
381mm
Field tile
Abndn.
SECTION 36
SECTION 31
TKNAUSS
ASPHALT
254&381mmCMP
48
CHARLES A. SCOTT,
PAUL E. SCOTT,
KATHRYN E. BALL AND
MYRTLE M. SCOTT (LIFE ESTATE)
21-00-04244-000
CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 31,T-2S,R-16E

CONST. LIMITS
79.263 (260.05')
N 79°34'48" E
+300.000 / 45.000
+380.000 / 50.000
99.416 (326.17')
N 77°00'23" E
0.600
+929.094 / 83.251 T-21
+480.000 / 50.000
42.749 (140.25')
N 63°05'10" W
+910.000 / 45.000 T-21
Abndn. 102mm EXIST. R/W
Abndn. Field Tile
254mm EXIST. R/W
CONST. LIMITS
305mm
CONST. LIMITS
102mm
21.587 (70.82')
N 2°47'44" E
N 0°23'03" E
360.000 (1181.10')
120.037 (393.82')
N 1°48'59" E
Match Line Station 0+900.000 See Sheet No. 139

Cultivated

US-30
P.I. Sta. 2+804.412
Δ = 16° 58' 53" (RT)
R = 4,250.000m
T = 634.459m
L = 1,259.616m
E = 47.097m
P.C. Sta. 2+169.952
P.T. Sta. 3+429.569

47
VERNON C. KENT AND
SUZANNE R. KENT
37-00-10640-000

Cultivated

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 36,T-2S,R-15E

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
REH	11/16/98	Change Service Road to Service Access
REH	2/3/99	Revise Parcel 47WV2
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 3+300.000 TO 3+600.000

WYA/CRA-30-28.009/0.000

96/146

2066/2116

metric units

Match Line Station 1+080.000 See Sheet No. 140

Match Line Station 3+600.000 See Sheet No. 96

Match Line Station 3+900.000 See Sheet No. 98

152mm Field tile

254mm Field tile

152mm

48

CHARLES A. SCOTT,
PAUL E. SCOTT,
KATHRYN E. BALL AND
MYRTLE M. SCOTT (LIFE ESTATE)

21-00-04244-000

Cultivated

Cultivated

229.3m(752.30')-102mm (4") Collector (By Others)

102mm

0.600

102mm

EXIST. R/W

102mm

T-21

+060.751
40.000

119.354 (391.58')
N 2°01'00" W

+630.078
50.000

LA-R/W

N 77°10'16" E
802.109 (2631.59')

LA-R/W

CONST. LIMITS

CONST. LIMITS

Abndn.

102mm

Field tile

254mm

Abndn.

102mm

Field tile

Conduit

3+700

3+800

102mm Field tile

102mm

Abndn.

℄ R/W, Construction U.S.R. 30

N 77°10'16" E

108.8m(356.95')-457mm (18") Conduit (By Others)

381mm

3000mm x 1500mm Box Culvert

48
WL

+961.095
53.046

T-21

CONST. LIMITS

220.000 (721.78')
N 77°10'16" E

LA-R/W

113.6m(372.70')-102mm (4") Collector (By Others)

Plug

LA-R/W

140.089 (459.61')
N79°12'59"E

+840.000
50.000

22.4m(73.49')-102mm (4") Collector (By Others)

+620.000
50.000

24.803 (81.37')
N 32°07'05" E

+940.000
40.000

T-21

120.037 (393.82')
N 1°48'59" E

132.0m(433.07')-457mm (18") Conduit (By Others)

Cultivated

Cultivated

48

CHARLES A. SCOTT,
PAUL E. SCOTT,
KATHRYN E. BALL AND
MYRTLE M. SCOTT (LIFE ESTATE)

21-00-04244-000

● - Iron Pin Set With I.D. Cap

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 31,T-2S,R-16E

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 3+600.000 TO 3+900.000

WYA/CRA-30-28.009/0.000

97/146

2067
2116

metric units

48

CHARLES A. SCOTT,
PAUL E. SCOTT,
KATHRYN E. BALL AND
MYRTLE M. SCOTT (LIFE ESTATE)

21-00-04244-000

Cultivated

102mm Field tile

104.8m(343.83')-102mm (4") Collector (By Others)

LA-R/W

N 77°10'16" E

802.109 (2631.59')

CONST. LIMITS

Abndn. 102mm Field tile

48 WL

305mm

381mm

102mm Abndn.

Match Line Station 3+900.000 See Sheet No. 97

Match Line Station 4+200.000 See Sheet No. 99

4+000

4+100

℄ R/W, Construction U.S.R. 30 N 77°10'16" E

Grassy Lane

Woven Wire

140.089 (459.61')
N 79°12'59" E

100.125 (328.49')
N 74°18'31" E

328.668 (1078.31')

180.000 (590.55') N 77°10'16" E

Plug

+980.000
55.000

+080.000
50.000

0.600

48

CHARLES A. SCOTT,
PAUL E. SCOTT,
KATHRYN E. BALL AND
MYRTLE M. SCOTT (LIFE ESTATE)

21-00-04244-000

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 31,T-2S,R-16E

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 3+900.000 TO 4+200.000

WYA/CRA-30-28.009/0.000

98/146

2068/2116

metric units

48

CHARLES A. SCOTT,
PAUL E. SCOTT,
KATHRYN E. BALL AND
MYRTLE M. SCOTT (LIFE ESTATE)

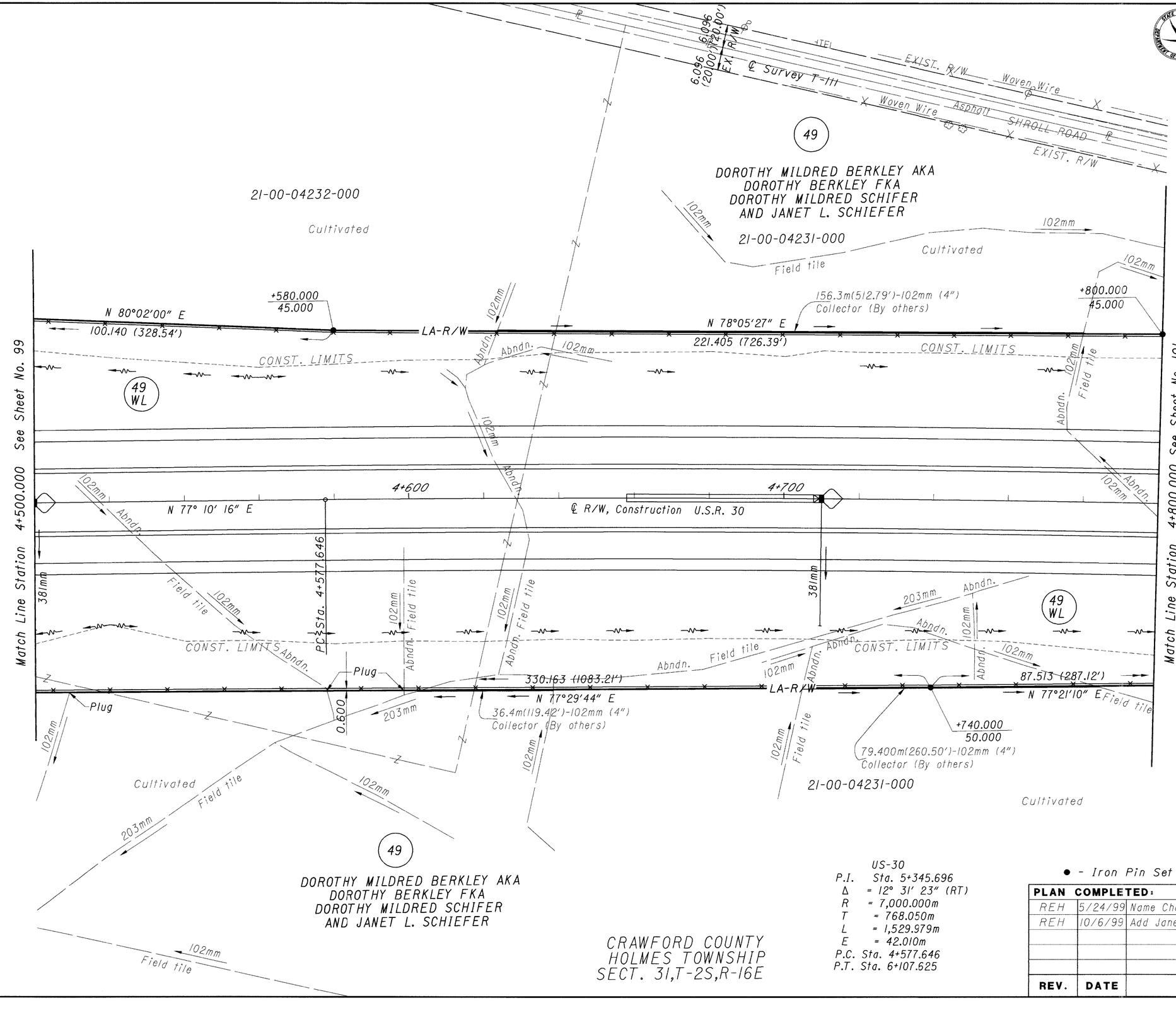
21-00-04244-000

49

21-00-04232-000

Cultivated

Gravel
Gravel
Silos
Greenhouse
Wood Shed
Wood Barn
Silo
Wood Shed
Grassy Lane
Woven Wire
Grassy Lane
Woven Wire
Woven Wire
Woven Wire
102mm Field tile
102mm
Field tile
102mm
102mm
102mm
102mm
Cultivated
39.9m(130.91')-102mm (4")
Collector (By Others)
31.640 (103.80')±
0.600
48.7m(159.78')-102mm (4")
Collector (By Others)
+432.188
50.000
+480.000
50.000
N 77°10'16" E
LA-R/W
802.109 (2631.59')
Plug
13.3m(43.64')-102mm
(4") Conduit
LA-R/W
47.812 (156.86')
N77°10'16"E
N 80°02'00" E
100.140 (328.54')
CONST. LIMITS
CONST. LIMITS
Abndn.
Field tile
Abndn.
Field tile
102mm
N 0°24'23" E
305mm
Abndn.
Field tile
102mm
Abndn. Field tile
Abndn.
Field tile
102mm
Abndn.
Field tile
102mm
Abndn.
Field tile
102mm
102mm
Abndn.
Field tile
102mm
Abndn.
Field tile
102mm
102mm
Abndn.
Field tile
102mm
Abndn.
Field tile
102mm
Abndn.
Field tile


metric units
SCALE IN METERS 1:500
FEDERAL PROJECT NO. F 49(68)
STATE JOB NO. 017600
RIGHT OF WAY PLAN STA. 4+500.000 TO 4+800.000
WYA/CRA-30-28.009/0.000
100/146
2070/2116
6.096 (20.00')
EX. R/W
℄ Survey T-III
EXIST. R/W
Woven Wire
Asphalt SHROLL ROAD
℄
49
DOROTHY MILDRED BERKLEY AKA
DOROTHY BERKLEY FKA
DOROTHY MILDRED SCHIFER
AND JANET L. SCHIEFER
21-00-04232-000
Cultivated
21-00-04231-000
Field tile
102mm
+580.000
45.000
+800.000
45.000
N 80°02'00" E
100.140 (328.54')
LA-R/W
N 78°05'27" E
221.405 (726.39')
156.3m(512.79')-102mm (4")
Collector (By others)
CONST. LIMITS
Abndn.
49 WL
Match Line Station 4+500.000 See Sheet No. 99
Match Line Station 4+800.000 See Sheet No. 101
4+600
4+700
N 77° 10' 16" E
℄ R/W, Construction U.S.R. 30
PC Sta. 4+577.646
381mm
203mm
Plug
0.600
330.163 (1083.21')
N 77°29'44" E
36.4m(119.42')-102mm (4")
Collector (By others)
87.513 (287.12')
N 77°21'10" E
+740.000
50.000
79.400m(260.50')-102mm (4")
Collector (By others)
US-30
P.I. Sta. 5+345.696
Δ = 12° 31' 23" (RT)
R = 7,000.000m
T = 768.050m
L = 1,529.979m
E = 42.010m
P.C. Sta. 4+577.646
P.T. Sta. 6+107.625
CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 31,T-2S,R-16E
DOROTHY MILDRED BERKLEY AKA
DOROTHY BERKLEY FKA
DOROTHY MILDRED SCHIFER
AND JANET L. SCHIEFER
● - Iron Pin Set With I.D. Cap
PLAN COMPLETED:
REH 5/24/99 Name Change-Parcel 49
REH 10/6/99 Add Janet L. Schiefer-Parcel 49
REV. DATE DESCRIPTION

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN

STA. 4+800.000 TO 5+100.000

WYA/CRA-30-28.009/0.000

101 / 146

2071 2116

Cultivated

N 0°39'27" E
6.101 (20.01')

+868.839
80.180

+852.928
83.358

+870.000
86.166

+920.000
95.000

N 80°02'05" E
15.204 (49.88')
+935.000
95.000

S 43°52'57" E
18.097 (59.37')

+945.000
80.000

S 9°49'20" E
14.488 (47.53')

+945.000
65.512

Woven Wire

Asphalt

S 89°20'33" E

Woven Wire

W 69°52'30" E
51.411 (168.67')

R/W

CONST. LIMITS

4.597 (15.08')

52
WV

+940.522
66.350

18.338 (257.01')

90.149 (295.77')

EXIST. R/W

DOROTHY MILDRED BERKLEY AKA
DOROTHY BERKLEY FKA
DOROTHY MILDRED SCHIFER
AND JANET L. SCHIEFER

49

21-00-04231-000

N 0°04'39" E
39.216 (128.66')

21-00-03648-000

Wood Fence

50
WV

71.1m(233.27')-102mm (4")
Collector (By Others)

102mm

+845.724
44.822

54.624 (179.21')
N 79°24'01" E

+800.000
45.000

N 79°24'01" E

Brk. & #1107 Frame & Cover

Ig. Rec.

23.310 (76.48')
S 0°39'27" W

51
WV-1

S 9°49'20" E
22.427 (73.58')

36.557 (119.94')

51
ER

N 82°24'56" E
95.613 (313.69')

46.018 (150.98')

CONST. LIMITS

102mm

Gravel Path

+900.000
45.000

CONST. LIMITS

+945.000
43.085

8.767 (28.76')
S 82°24'56" W

N 82°24'56" E
104.380 (342.45')

LA-R/W

49
WL

Conc. Gate

CHARLES A. BOSWORTH AND
SANDRA K. BOSWORTH

21-00-03931-001

+936.294
43.433

+040.000
40.000

159.750 (524.12')
S 89°20'33" E

Play House

102mm

Abndn.

35.427 (116.23')

+839.149
10.015

Abndn.

102mm

S 89°20'33" E

4+900

5+000

+837.244
0.000

℄ R/W, Construction U.S.R. 30

89.394 (293.29')

+926.885
7.023

Abndn.

102mm

381mm

N 0°39'27" E
51.329 (168.40')

Match Line Station 4+800.000 See Sheet No. 100

Match Line Station 5+100.000 See Sheet No. 102

52

ALLAN L. REINHARD AND
JEAN A. REINHARD

21-00-04120-000

Cultivated

N 81°41'09" E
14.433 (47.35')

+054.351
39.831

+093.220
39.521

203mmCMP

EXIST. R/W

Woven Wire

Asphalt

SHROLL ROAD

151.574 (497.29')
S 89°20'33" E

N 81°41'09" E
53.524 (175.60')

N 81°41'09" E
125.969 (418.28')

CONST. LIMITS

N 0°04'39" E
94.182 (309.00')
58.755 (192.77')

CONST. LIMITS

71.476 (234.50')
N 77°21'10" E

87.513 (287.12')
N 77°21'10" E

LA-R/W

+900.000
45.000

159.104 (521.99')
N 78°39'49" E

0.600

LA-R/W

142.260 (466.73')
N 81°42'17" E

+060.000
40.000

102mm

+828.098
47.697

Field tile

102mm

254mm

Field tile

102mm

92.10m

382.16m (1504')

1200mm R.C.P. or
1350mm C.M.P.

Abndn.

102mm

Field tile

102mm

102mm

Field tile

102mm

49

DOROTHY MILDRED BERKLEY AKA
DOROTHY BERKLEY FKA
DOROTHY MILDRED SCHIFER
AND JANET L. SCHIEFER

21-00-04231-000

Cultivated

51
WL

Cultivated

51

RAY V. KOCHER AND
ADALINE L.M. KOCHER,
TRUSTEES

21-00-03931-000

US-30
P.I. Sta. 5+345.696
D = 12° 31' 23" (RT)
R = 7,000.000m
T = 768.050m
L = 1,529.979m
E = 42.010m
P.C. Sta. 4+577.646
P.T. Sta. 6+107.625

Sta.o

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 31, T-2S, R-16E

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

PLAN COMPLETED:		
1 REH	2/3/99	Name Change-Parcel 49
2 REH	10/6/99	Add Janet L. Schiefer-Parcel 49
3	11/6/00	CHANGED PARCEL 51E TO 51ER
REV.	DATE	DESCRIPTION

metric units

MATCH LINE STA. 1+100.000 SEE SHEET NO. 142

52

ALLAN L. REINHARD AND
JEAN A. REINHARD

21-00-04120-000

Cultivated

52 WL

N 0°16'15" W
104.098 (341.53')

CONST. LIMITS

EXIST. R/W

℄ Survey C-22 (Bethel Rd.)

Asphalt ℄

N 0°16'15" W
124.312 (407.85')

EXIST. R/W

CONST. LIMITS

95.471 (313.23')
N 0°16'15" W

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 32,T-2S.R-16E

53

HARRY W. WALTON AND
CAROLYN I. WALTON

Cultivated

21-00-03786-000

+400.000
50.000

+288.607
40.000

N 78°20'57" E
112.553 (369.27')

LA-R/W

+044.529
C-22
35.000

CONST. LIMITS

53 WL

+310.968
8.274

+132.091
39.429

+218.478
40.000

N 81°41'09" E
125.969 (413.28')

LA-R/W

+035.902
JC-22
35.000

Asphalt ℄

CONST. LIMITS

EXIST. R/W

℄ Survey T-III (Shroll Rd.)

S 89°20'33" E 159.750 (524.12')

+250.549
15.569

EXIST. R/W

6.096 (20.00')

EXIST. R/W

STA. 5+385.621 U.S. 30=
STA. 1+000 T-III

EXIST. R/W

60.960 (200.00')

Asphalt ℄

N 89°47'58" E 483.310 (1585.66')
120.436 (395.13')

EXIST. R/W

5+200

5+300

℄ R/W, Construction U.S.R. 30

675mm C.M.P.

Grass

Asphalt

Grass

JACK L. ADAMS
21-00-03834-000

℄ SECTION LINE

Asphalt

Split Rail Fence

+963.966
C-22
35.000

54

0°20'40" E
50.226 (164.78')

+305.264
41.629

#3385

Grass

R.R.

26.063(85.51')

N86°36'09"E

+279.099
40.000

54 WL

+303.494
56.970

54 T

54 ER

28.672(94.07')

120.30m(394.68')-381mm (15")

254mm

Abandn. Field tile

55 WL

120.028(393.79)

N 86°36'09" E
75.546 (247.85')

LA-R/W

+334.062
43.308

55 E

55 X

33.282 (109.19')

N 59°00'10" E
99.240 (325.00')

41.274 (135.22')

N 0°16'15" W
39.761 (130.45')

N 0°16'15" W
33.66')

EXIST. R/W

℄ SECTION 31

EXIST. R/W

Buried Propane tank

254mm

TWIN 2100mm R.C.P.

102mm

Match Line Station 5+100.000 See Sheet No. 101

Match Line Station 5+400.000 See Sheet No. 103

51 WL

Abandn. Field tile

CONST. LIMITS

142.260 (466.73')

N 81°42'17" E

LA-R/W

Plug

102mm

51

RAY V. KOCHER AND
ADALINE L.M. KOCHER,
TRUSTEES

21-00-03931-000

Cultivated

N 1°49'10" E
109.660 (359.78')

CONST. LIMITS

C-22
+924.248
0.000

N 89°47'58" W
35.000 (114.83')

C-22
+924.205
35.000

N 0°16'15" W
170.688 (560.00')

N 0°16'15" W
99.248 (260.00')

Conduit

254mm

S 0°20'40" E
25.773 (84.56')

+934.466
35.000 C-22

26.078(85.56')
N89°47'58"E

151.332 (496.50')
S 59°00'10" W

Service Access No. 20

CONST. LIMITS

Cultivated

55

JERRY D. RINDFUSS AND
DORIS A. RINDFUSS

21-00-03837-004

+924.173
61.078 C-22

96.565 (316.81')
N 59°00'10" E

R/W

R/W

30.455(99.92')

N 0°16'15" W

79.205 (259.86')

N 0°16'15" W

48.750
(159.94')

+893.750
35.000 C-22

479mm
750mm
or

+320
107.742

55 WV1

CONST. LIMITS

25.518(83.72')

N43°35'23"E

+300
124

243.977(800.45')
N 0°17'00" E

55 WL2

Branch of Grass Run Creek

86.20m(282.81')-533mm

TWIN 1500mm R.C.P.
TWIN 2250mm C.M.P.

102mm

Field tile

102mm

102mm

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 31,T-2S,R-16E

MATCH LINE STA. 0+880.000 SEE SHEET NO. 141

US-30
P.I. Sta. 5+345.696
Δ = 12° 31' 23" (RT)
R = 7,000.000m
T = 768.050m
L = 1,529.979m
E = 42.010m
P.C. Sta. 4+577.646
P.T. Sta. 6+107.625

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
1 REH	11/16/98	Change Service Road to Service Access
2 REH	2/3/99	Revise Parcels 51WL,55WV1
3 REH	2/3/99	Name Change Parcel 51
4 REH	2/3/99	Parcel 55-Change Aud. Par. No.
5 REH	4/5/99	Name Change Parcel 53
6 REH	4/12/99	Add Parcel 54T
7 REH	7/27/99	Revised R/W line-Service Access 20,Add Parcel 55E
8	11/6/00	CHANGED PARCEL 54E TO 54ER
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN
STA. 5+100.000 TO 5+400.000

WYA/CRA-30-28.009/0.000

102/146

2072
2116

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 5+400.000 TO 5+700.000

WYA/CRA-30-28.009/0.000

103/146

2073/2116

Match Line Station 5+400.000 See Sheet No. 102

Match Line Station 5+700.000 See Sheet No. 104

+400.000 50.000

+680.000 60.000

LA-R/W

N 83°01'08" E 282.358 (926.37')

N 65°09'29" E 64.065 (210.19')

0.600

CONST. LIMITS

Abndn.

Field tile

Cultivated

53

HARRY W. WALTON AND CAROLYN I. WALTON

21-00-03786-000

70.9m(232.61')-102mm (4") Collector (By others)

55.0m(180.45')-102mm (4") Collector (By Others)

102mm

254mm

53 WL

120.30m(394.68')-381mm (15") conduit

152mm

2100mm R.C.P.'s

TWIN

+430.684 4.600

+516.282 12.525

5+500

5+600

℄ R/W, Construction U.S.R. 30

118.60m(389.11')-381mm (15") Conduit

120.436(395.13')

Asphalt

EXIST. R/W

S 89°47'58" W 483.310 (1585.66')

85.859 (281.69')

TEL(2)

254mmCMP

381mm

SHROL ROAD T-III N 89°47'58" E 133.486 (437.94')

347.383 (1139.71')

203mmCMP

N 0°10'13" W 25.076 (82.27')

+649.173 22.765

+410.000 47.169

+425.902 47.873

43.535 (142.83')

305mm

35.705(117.14')

+512.798 48.061

46.988 (154.16')

87.463 (286.95')

150.949 (495.24')

N 87°23'44" E

+560.000 45.000

+648.003 47.783

151.195 (496.05')

120.028(393.79')

75.546 (247.85')

53.761(176.38')

32.626 (107.04')

+480.000 50.000

15.810 (51.87')

+423.903 65.804

80.568 (100.29')

48.981 (160.50')

85.737 (281.29')

+560.277 63.024

+646.767 65.758

+480.195 68.018

+511.005 66.205

55 X

55 WV1

56 WV

55 WV2

57 WV

55 WL

56 WL

55 WLI

57 WL

Service Access No. 20

CONST. LIMITS

Field tile

Abndn.

LA-R/W

N 86°36'09" E

N 81°17'01" E

N 87°23'44" E

151.332 (496.50') S 59°00'10" W

96.565(316.81') N 59°00'10" E

+408.908 67.530

Arc=10.116(33.19'),Rad.=21.000(68.90')
Chd.=10.018(32.87'),Brg.=N72°48'09"E

+418.830 65.582

5.031 (16.51')

N 0°24'59" E

Gravel Drive

res.

51.7m(169.62')-102mm (4") Collertor (By others)

US-30
P.I. = Sta. 5+345.696
Δ = 12° 31' 23" (RT)
R = 7,000.000m
T = 768.050m
L = 1,529.979m
E = 42.010m
P.C. STA. 4+577.646
P.T. STA. 6+107.625

55 Cultivated

JERRY D. RINDFUSS AND DORIS A. RINDFUSS

21-00-03837-004

56

JOHN A. HARIGLE AND PAMELA R. HARIGLE

21-00-03837-003

55 Cultivated

JERRY D. RINDFUSS AND DORIS A. RINDFUSS

21-00-03837-004

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 32,T-2S,R-16E

57 Cultivated

GERALD E. HATCHER AND JANE E. HATCHER

21-00-03836-000

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
REH	11/16/98	Added Service Access No. 20
REH	2/3/99	Combine Parcel 55A with Parcel 56
REH	2/3/99	Parcel 55-Aud. Parcel No. Change
REH	4/5/99	Name Change Parcel 53
REV.	DATE	DESCRIPTION

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 5+700.000 TO 6+000.000
WYA/CRA-30-28.009/0.000

104/146

2074/2116

53
HARRY W. WALTON AND
CAROLYN I. WALTON
21-00-03786-000

GERALD E. HATCHER AND
JANE E. HATCHER (1/2),
COLE HATCHER (1/6),
MARK D. HATCHER (1/6),
TROY S. HATCHER (1/6)

58
21-00-03835-000

59
HAROLD W. KILLEN
21-00-03916-000

RAMP P
P.I. Sta. 5+999.907
Δ = 44° 27′ 34″ (LT)
R = 120.000m
Ls1 = 80.000m
Ls2 = 60.000m
θs1 = 19° 05′ 55″
θs2 = 14° 19′ 26″
LT1 = 53.647m
LT2 = 40.132m
ST1 = 26.952m
ST2 = 20.120m
Lc = 23.116m
T1 = 88.421m
T2 = 80.871m
Es = 11.511m
T.S. Sta. 5+911.486
S.C. Sta. 5+991.486
C.S. Sta. 6+014.601
S.T. Sta. 6+074.601

Match Line Station 5+700.000 See Sheet No. 103

Match Line Station 6+000.000 See Sheet No. 105

Transmission Tower

Woods

Plug

102mm Field tile

Dirt Dr.

Stone Ruin

Woven Wire

EXIST. LA

+739.093
83.249

N 65°09′29″ E
64.065 (210.19′)

Abndn. Field tile

Abndn. 102mm Field tile

Abndn.

102mm Field tile

Abndn.

N 0°05′31″ E - 111.277 (365.08′)

LA-R/W

S 82°46′30″ E
149.658 (491.00′)

EXIST. LA-R/W

℄ EXIST. R/W

CONST. LIMITS

EASEMENT

+885.438
65.000

S 85°41′22″ E
149.014 (488.89′)

58 WL

TS Sta. 5+911.486

S 0°55′10″ W
7.623 (25.01′)

N 81°01′52″ E
80.155 (262.98′)

LA-R/W

+964.180
75.000

SC Sta. 5+991.486

59 WL

S 5°42′24″ W
17.175 (56.35′)

CONST. LIMITS

EXIST. LA-R/W

N 87°46′38″ E
77.773 (255.16′)

Woven Wire

+962.172
57.945

6+000

+885.037
57.388

14 WL
Acquired Under
CRA-19/30N-16.86/4.00

13 WL2

53 WL

5+900

5+800

℄ RAMP P

13 WL1

5+800

5+900

℄ R/W, Construction U.S.R. 30

+734.116
0.000

Woods

+881.982
0

+955.276
0

℄ RAMP O

EXIST. R/W

483.310 (1585.66′)

318.155 (1043.81′) TO STONE @ CENTER OF SECTION

Asphalt

N 89°47′58″ E - 347.383 (1139.71′)

Exist. SHROLL ROAD T-III

Asphalt

Dirt Dr.

Woven Wire

N 89°47′58″ E
53.340 (175.00′)

+732.425
27.827

+TEL

57 WL

203mmCMP EXIST. R/W

PC Sta. 5+901.325

+998.321
37.477

21.833 (71.63′)

60 WL

150.949 (495.24′)

N 87°23′44″ E

LA-R/W

196.556 (644.87′)

S 89°18′02″ E

LA-R/W

57 WV

Service Access No. 20

+800.000
50.000

+997.887
59.306

151.195 (496.05′)

CONST. LIMITS

R/W

N 87°23′44″ E

196.279 (643.96′)

S 89°18′02″ E

CONST. LIMITS

R/W

53.345 (175.02′)
S 89°18′02″ E

60 WV

53.345(175.02′)

+799.406
67.998

57

GERALD E. HATCHER AND
JANE E. HATCHER

21-00-03836-000

Cultivated

Existing 45'R/W
Easement D.B. 307, Pg. 473

Cultivated

+997.527
77.304

60 ER

60

DEANDRA D.. HATCHER
21-00-03836-003

US-30
P.I. Sta. 5+345.696
Δ = 12° 31′ 23″ (RT)
R = 7,000.000m
T = 768.050m
L = 1,529.979m
E = 42.010m
P.C. Sta. 4+577.646
P.T. Sta. 6+107.625

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 32,T-2S,R-16E

RAMP O
P.I. Sta. 5+995.420
Δ = 8° 36′ 35″ (RT)
R = 1,250.000m
T = 94.095m
L = 187.836m
E = 3.537m
P.C. Sta. 5+901.325
P.C.C. Sta. 6+089.161

N 0°04′16″ W
57.701(189.31′)

53.340(175.00′)
N89°47′58″E

+996.360
134.994

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
1 REH	11/16/98	Change Service Road to Service Access
2 REH	4/5/99	Name Change Parcel 53
3 REH	5/17/99	Add Parcel 60E
4 REH	6/30/99	Show Entire Parcel-Parcel 60E
5	11/6/00	CHANGED PARCEL 60E TO 60ER
REV.	DATE	DESCRIPTION

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 32,T-2S,R-16E

61

ARTHUR J. BEALL, JR. AND
MARJORIE J. BEALL
21-00-03626-000

℄ RAMP P
P.I. Sta. 5+999.907
Δ = 44° 27′ 34″ (LT)
R = 120.000m
Ls1 = 80.000m
Ls2 = 60.000m
θs1 = 19° 05′ 55″
θs2 = 14° 19′ 26″
LT1 = 53.647m
LT2 = 40.132m
ST1 = 26.952m
ST2 = 20.120m
Lc = 23.116m
T1 = 88.421m
T2 = 80.871m
Es = 11.511m
T.S. Sta. 5+911.486
S.C. Sta. 5+991.486
C.S. Sta. 6+014.601
S.T. Sta. 6+074.601

℄ RAMP O
P.I. Sta. 6+151.335
Δ = 20° 21′ 09″ (RT)
R = 330.000m
Ls2 = 90.000m
θs2 = 7° 48′ 47″
LT2 = 60.059m
ST2 = 30.053m
Lc = 72.223m
T1 = 62.174m
T2 = 101.452m
Es = 5.806m
P.C.C. Sta. 6+089.161
C.S. Sta. 6+161.384
P.R.S. Sta. 6+251.384

US-30
P.I. Sta. 5+345.696
D = 12° 31′ 23″ (RT)
R = 7,000.000m
T = 768.050m
L = 1,529.979m
E = 42.010m
P.C. Sta. 4+577.646
P.T. Sta. 6+107.625

℄ RAMP O
P.I. Sta. 5+995.420
D = 8° 36′ 35″ (RT)
R = 1,250.000m
T = 94.095m
L = 187.836m
E = 3.537m
P.C. Sta. 5+901.325
P.C.C. Sta. 6+089.161

● - Iron Pin Set With I.D. Cap
Ⓜ - Exist. Monument Box

Match Line Station 6+000.000 See Sheet No. 104

Match Line Station 6+300.000 See Sheet No. 106

MATCH LINE STA. 6+260.000 RAMP O
SEE SHEET NO. 143

CONST. LIMITS
ST Sta. 6+074.601
6+100
0+700
℄ Ex. CR 330
675mm R.C.P. or 825mm C.M.P.
℄ RAMP P
CS Sta. 6+014.601
381mm
POT Sta. 6+108.580 P =
POT Sta. 0+695.632 CR-330
Exist. Ramp A
Asphalt
Exist. Ramp B
Woven Wire
EXIST. L/A
0+800
0+900
Exist. Ramp C
305mm
PT Sta. 6+107.625
Wooded
℄ R/W, Construction U.S.R. 30
N 89°41′39″ E
6+200
PCC Sta. 6+089.161
CS Sta. 6+161.384
PRS Sta. 6+251.384
HALF SECTION LINE
STONE FOUND
+051.946
38.204
S 0°04′16″ E
22.671 (74.38′)
N 89°47′58″ E
53.340 (175.00′)
8.722 (28.62′)
Asphalt
Exist. SHROLL ROAD T-III
+051.840
46.925
Conc. Well cover
+051.670
60.873
#1393
2 STY. to Res.
FRAME
Gravel
60 WL
53.345 (175.02′)
S 89°18′02″ E
13.949 (45.76′)
S 79°51′03″ E
116.428 (381.98′)
EXIST. R/W
Woven Wire
EXIST. LA-R/W
+175.575
16.609
Ramp 0
Service Access No. 20
CONST. LIMITS
53.345 (175.02′)
S 89°18′02″ E
8.002(59.06′)
14.001 (45.94′)
97.776 (320.79′)
S 78°39′06″ E
20.153(66.12′)
S89°18′02″E
+161.384
35.000
Ramp 0
S 78°22′28″ E
144.502 (474.09′)
℄ RAMP O
60 WV
6.831
(22.41′)±
Wood Shed
Conc. Pad
+051.499
74.873
+071.864
75.359
74.052 (242.95′)
S 78°39′06″ E
62 T
Cultivated
+161.641
45.063
Ramp 0
CONST. LIMITS
85.158 (279.39′)
S 65°33′47″ E
117.134 (384.30′)
S 65°33′47″ E
+251.384
35.000
Ramp 0
62 WL
103.420(339.31′)
S 75°02′52″ E
87.523(287.15′)
60
DEANDRA D. HATCHER
21-00-03836-003
60 ER
56.863(186.56′)
N 0°04′16″ W
+050.747
135.732
N89°47′58″E 53.340(175.00′)
62
CHARLES A. SCOTT,
PAUL E. SCOTT,
KATHRYN E. BALL AND
MYRTLE M. SCOTT (LIFE ESTATE)
21-00-04246-000

PLAN COMPLETED:		
1 REH	11/16/98	Change Service Road to Service Access
2 REH	5/17/99	Add Parcel 60E
3 REH	6/30/99	Show Entire Parcel-Parcel 60E
4 REH	7/23/99	Revise Take-Parcel 62WL
5	11/6/00	CHANGED PARCEL 60E TO 60ER
REV.	DATE	DESCRIPTION

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 6+000.000 TO 6+300.000

WYA/CRA-30-28.009/0.000

105/146

2075/2116

CRAWFORD COUNTY
HOLMES TOWNSHIP
SEC. 32,T. 2S,RA.16E

metric units

61

ARTHUR J. BEALL, JR. AND
MARJORIE J. BEALL

21-00-03626-000

Cultivated

END PROJECT
STA. 6+528.317
SLD= 6.528

F 49(68)

63

GERALD E. HATCHER AND
JANE E. HATCHER

21-00-03826-000

Pond

Wood Shed

Gravel

EXIST. L/A

Woven Wire

Asphalt

Ex. Ramp C

Exist. Ramp B

CONST. LIMITS

305mm

CB

Match Line Station 6+300.000 See Sheet No. 105

6+400

6+500

N 89° 41' 39" E

℄ R/W, Construction U.S.R. 30

Match Line Station 6+600.000 See Sheet No. 107

Guardrail

ST Sta. 6+449.017

300mm

POT Sta. 1+097.018 CR-330 =
POT Sta. 6+479.100 Ramp O

HALF SECTION LINE

END R/W ACQUISITION
STA. 6+442.613 US 30

675mm R.C.P. or
825mm C.M.P.

+452.218
4.735

S 69°04'06" E
18.743 (61.49')

+442.613
71.479

℄ Ramp O

T- III Asphalt

EXIST. R/W

CONST. LIMITS

LINCOLN HIGHWAY

℄ EX. CR-330

S 65°51'23" E

MATCH LINE STA. 6+420.000 RAMP O
SEE SHEET NO. 143

78.858 (258.72')

N 45°30'42" E

62
WL

21-00-03895-000

62

CHARLES A. SCOTT,
PAUL E. SCOTT,
KATHRYN E. BALL AND
MYRTLE M. SCOTT (LIFE ESTATE)

Woods

EXIST. L/A

63

GERALD E. HATCHER AND
JANE E. HATCHER

21-00-03826-000

RAMP O
P.I. Sta. 6+366.099
Δ = 73° 07' 43" (LT)
R = 100.000m
Lsl = 80.000m
Ls2 = 60.000m
θsl = 22° 55' 06"
θs2 = 17° 11' 19"
LTI = 53.787m
LT2 = 40.190m
STI = 27.080m
ST2 = 20.173m
Lc = 57.633m
TI = 114.716m
T2 = 106.397m
Es = 27.089m
P.R.S. Sta. 6+251.384
S.C. Sta. 6+331.384
C.S. Sta. 6+389.017
S.T. Sta. 6+449.017

RIGHT OF WAY CURVE DATA

CURVE	RADIUS	LENGTH	CHORD LENGTH	CHORD BEARING
(A)	122.865 (403.10')	127.367 (417.87')	121.740 (399.41')	N 73°44'30" E

● - Iron Pin Set With I.D. Cap
Ⓜ - Exist. Monument Box

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
STA. 6+300.000 TO 6+600.000

WYA/CRA-30-28.009/0.000

106/146

2076/2116

CRAWFORD COUNTY
HOLMES TOWNSHIP
SEC. 32,T. 2S,RA.16E

metric units

63

GERALD E. HATCHER AND
JANE E. HATCHER

21-00-03826-000

Gravel
Silos
Gravel
Silos
Metal Shed
Gravel
Wood Barn
Water Tank
Gravel
Silos
Conc. Slab
Metal Pole Barn
Gravel
Silo

END WORK
STA. 7+179.963

GRASS
RUN
CREEK
EXIST. L/A
Woven Wire
EXIST. L/A
Woven Wire
Woven Wire
CONST. LIMITS
CONST. LIMITS
Asphalt
Exist. Ramp B
Asphalt
Asphalt
305mm
6+700
610mm
6+800
533mm
CB
6+900
305mm
CB
381mm
N 89°41'39" E
CB
533mm
CB
℄ R/W, Construction U.S.R. 30
Asphalt
Asphalt
CONST. LIMITS
Woven Wire
CREEK
Woven Wire
CONST. LIMITS
Woven Wire
RUN
GRASS
Woven Wire
℄ Existing CR-330
LINCOLN HIGHWAY

Match Line Station 6+600.000 See Sheet No. 106

Ⓜ - Exist. Monument Box

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN
STA. 6+600.000 TO 6+900.000

WYA/CRA-30-28.009-0.000

107/146

2077
2116

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

Asph./Conc. EXIST. U.S. 23

Woven Wire

Ex. LA-R/W

N 1°42'15" W
325.754m (1068.75')

℄ E.B. U.S. 30
P.I. Sta. 29+138.153
Δ = 102° 35' 11" (LT)
R = 571.200m
Ls = 145.000m
θs = 7° 16' 20"
LT = 96.748m
ST = 48.408m
Lc = 877.717m
Ts = 787.175m
Es = 344.681m
T.S. Sta. 28+350.978
S.C. Sta. 28+495.978
C.S. Sta. 29+373.695
S.T. Sta. 29+518.695

5
WL

Abndn. 305mm

Field tile

305mm

29+100

℄ E.B. U.S. 30

574.00m (1883.20') - 381mm (15") Conduit

305mm

Match Line Station 28+900.000 See Sheet No. 113

29+000

℄ RAMP A

3000mm R.C.P.

29+100

℄ RAMP A

N 79° 27' 58" E

Const. Limits

71.443 (234.39')
N 64°31'52" E

LA-R/W

CS Sta. 29+086.030

ST Sta. 29+156.030

Const. Limits

127.771 (419.20')
N 44°15'34" E

LA-R/W

+980.589
29.361

+060.399
34.326

0.600

121.542 (398.76')
N 78°49'54" E

LA-R/W

Const. Limits

N 0°09'12" E
252.600 (828.74')

Match Line Station 29+200.000 See Sheet No. 47

Abndn.

Field tile 305mm

5

JAMES A. SMALLEY(1/2),
FREDERICK P. SMALLEY AND
MIRIAM G. SMALLEY(1/2)

05-0595-0100

CULTIVATED

CULTIVATED

10
WL

+189.126
38.980

404.720 (1327.82')
N 78°49'54" E

10

FREDERICK P. SMALLEY AND
MIRIAM SMALLEY

05-0590-0100

℄ RAMP A
P.I. Sta. 28+958.499
Δ = 73° 16' 05" (RT)
R = 305.000m
Ls2 = 70.000m
θs2 = 6°34'30"
LT2 = 46.699m
ST2 = 23.363m
Lc = 355.024m
Ts1 = 227.493m
Ts2 = 261.577m
Es = 75.497m
P.C.C. Sta. 28+731.006
C.S. Sta. 29+086.030
S.T. Sta. 29+156.030

● - Iron Pin Set With I.D. Cap
✖ - Spike Set

PLAN COMPLETED:		
REH	2/3/99	Delete Parcel 5X
REV.	DATE	DESCRIPTION

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

N

SCALE IN METERS 0 10 20 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - RAMP A
STA. 28+900.000 TO 29+200.000

WYA/CRA-30-28.009/0.000

108/146

2078
2116

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

6

DONALD M. BASSLER AND
CATHERINE L. BASSLER

05-0610-0000

CULTIVATED

152mm

+340
45

+300
40

N 29°08'30" W
45.752 (150.11')

N 42°03'15" W
105.600 (346.46')

LA-R/W

Const. Limits

Abndn.

Plug

102mm

Match Line Station 28+250.000 See Sheet No. 113

Shed
Wood Shed
Grass
Gravel
Grass
Grape Arbor
203mm
Woods
7
MICHAEL R. GILLEN AND
KAREN D. GILLEN
254mm
305mm
Grass
Bush
Woods
Woven Wire
Conc. Walk
05-0620-0000
305mm
2 Sty. Fr.
152mm
Woods
Woods
Woven Wire
21.018(68.96')±

CULTIVATED

N 3°42'15" W
135.220m (443.63')

0.600

+460
35

LA-R/W

N 1°37'46" E
92.095m (302.15')

Const. Limits

+540
50

Match Line Station 28+540.000 See Sheet No. 110

28+400

℄ Ramp B

28+300

28+500

℄ RAMP B

SC Sta. 28+308.822

102mm Abndn.

6
WL

℄ RAMP B
P.I. Sta. 29+169.182
Δ = 142° 30' 25" (RT)
R = 305.000m
Ls = 82.000m
θs = 7° 42' 07"
LT = 54.719m
ST = 27.380m
Lc = 676.601m
Ts = 942.359m
Es = 646.882m
T.S. Sta. 28+226.822
S.C. Sta. 28+308.822
C.S. Sta. 28+985.423
S.T. Sta. 29+067.423

Abndn. 102mm Abndn.
Field tile

159.124 (522.06')
℄ Woven Wire
N 0°29'29" E
Ex. LA-R/W

+995.062
33.528
U.S. 23

246.495 (808.71')
N 1°42'15" W
Ex. LA-R/W
Woven Wire

Asph./Conc.

13+000
℄ SURVEY EXIST. U.S. 23

Asph./Conc.

Asph./Conc.

● - Iron Pin Set With I.D. Cap
✖ - Spike Set

PLAN COMPLETED:		
REH	6/30/99	Added Field Tile
REV.	DATE	DESCRIPTION

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - RAMP B
STA. 28+250.000 TO 28+540.000

WYA/CRA-30-28.009/0.000

109/146

2079/2116

metric units

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

6
DONALD M. BASSLER AND
CATHERINE L. BASSLER
05-0635-0000

CULTIVATED

U.S. 23 +380/75
N 1°42'15" W
LA-R/W
245.550 (805.61')

102mm Field tile
102mm Abndn.
Const. Limits
Abndn. 152mm Field tile
Ex. LA-R/W
Asph./Conc.
N 1° 42' 03" W
CB
152mm Abndn.
Field tile Abndn. 102mm

100.5m(329.72')-152mm (6") Collector (By Others)
N 31°13'59" E
113.650 (372.87')
+620/55
0.600
LA-R/W
Const. Limits
Abndn.
Field tile
13.0m(42.65')
152mm (6") Conduit
28+600
CB
Woven Wire
FOR CONTINUATION
SEE SHEET NO. 115

CULTIVATED
N 22°54'57" E
93.633 (307.20')
+540/50
LA-R/W
Const. Limits
6 WL
379.983 (1246.66')
N 1°42'15" W
Woven Wire
Abndn. 152mm
℄ SURVEY EXIST. U.S. 23
13+400
N 1°00'49" W
379.466 (1244.91')
10 WL

05-0610-0000

28+700
28+600
℄ Ramp B
28+800
℄ Ramp B

Match Line Station 28+540.000 See Sheet No. 109

Match Line Station 28+860.000 See Sheet No. 50

Abndn. 102mm Field tile
U.S. 23 +241.558/33.528
381mm
246.495 (808.71')
N 1°42'15" W
Ex. LA-R/W
Woven Wire
Asph./Conc.
13+200
Asph./Conc.
Ex. LA-R/W
N 1°42'15" W
111.672 (366.38')

℄ E.B. U.S. 30
13+100
28+100
28+800
+239.054
30.481
U.S. 23

05-0605-0000

10 WL
FREDERICK P. SMALLEY
AND MIRIAM SMALLEY
05-0580-0000

Abndn. 102mm Field tile
152mm Abndn.

℄ RAMP B
P.I. Sta. 29+169.182
D = 142° 30' 25" (RT)
R = 305.000m
Lsl = 82.000m
Θsl = 7° 42' 07"
LTl = 54.719m
STl = 27.380m
Lc = 676.601m
Ts = 942.359m
Es = 646.882m
T.S. Sta. 28+226.822
S.C. Sta. 28+308.822
C.S. Sta. 28+985.423
S.T. Sta. 29+067.423

℄ E.B. U.S. 30
P.I. Sta. 29+138.153
Δ = 102° 35' 11" (LT)
R = 571.200m
Ls = 145.000m
Θs = 7° 16' 20"
LT = 96.748m
ST = 48.408m
Lc = 877.717m
Ts = 787.175m
Es = 344.681m
T.S. Sta. 28+350.978
S.C. Sta. 28+495.978
C.S. Sta. 29+373.695
S.T. Sta. 29+518.695

● - Iron Pin Set With I.D. Cap
✖ - Spike Set

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

WYA/CRA-30-28.009/0.000

RIGHT OF WAY PLAN - RAMP B
STA. 28+540.000 TO 28+860.000

110/146

2080/2116

WYANDOT COUNTY
PITT TOWNSHIP
SECT. 10, T-3S, R-14E

metric units

SCALE IN METERS 1:500

CULTIVATED

65
FRANKLIN E. McCLAIN AND
RUTH E. McCLAIN
26-1240-0000

BEGIN WORK
STA. 12+240.000

12+274.470 P.O.T.

+390.063
90.790

N 86°06'51" E
125.196 (410.75')
Const. Limits

Prop. Drive

15.000 (49.21')
N 0°40'50" W

+375.066
91.058

65 T

N 89°19'10" E
30.000 (98.43')

Gravel

Grass

Frame Garage

#6489
2-1/2 Sty.
Frame

Gravel

Const. Limits

+374.530
61.062

30.000 (98.43')
N 0°40'50" W

Grass

13.645 (44.77')
N 48°49'59" W

+395
37

65 WL

+290
30.802

N 5°04'57" W
105.183(345.09')

LA-R/W

LA-R/W

114.526(375.74')

Ex. LA-R/W

Const. Limits

102mm

Woven Wire

N 1°34'50" W

203mm
Abndn. Field tile

Ex. LA-R/W

Asph./Conc.

Const. Limits

Asph./Conc.

12+300
℄ SURVEY EXIST. U.S. 23

N 1° 42' 15" W

305mm

Asph./Conc.

Const. Limits

Asph./Conc.

Match Line Station 12+400.000 See Sheet No. 112

BEGIN R/W ACQUISITION
STA. 12+290.000

Ex. LA-R/W

Woven Wire

Const. Limits

+337.065
37.977

Ex. LA-R/W

N 1°50'37" E
75.124 (246.47')

Asphalt

Asphalt

C.R. 60
N 1° 16' 07" E

Ex. R/W

Ex. R/W

N 88°09'23" W
14.677 (48.15')

65 WV

+336.157
52.626

R/W

71.339 (234.05')
N 45°13'57" E

R/W

Const. Limits

Ex. R/W

+384.867
104.747

S 89°43'16" W
77.285 (253.56')

CULTIVATED

65
FRANKLIN E. McCLAIN AND
RUTH E. McCLAIN
26-1240-0000

CULTIVATED

● - Iron Pin Set With I.D. Cap
✱ - Spike Set
◎ - Exist. Conc. Monument

PLAN COMPLETED:		
REH	2/3/99	Revise Parcels 65WL & 65T
REV.	DATE	DESCRIPTION

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

WYA/CRA-30-28.009/0.000

RIGHT OF WAY PLAN - U.S. 23
STA. 12+100.000 TO 12+400.000

111/146

2081
2116

WYANDOT COUNTY
PITT TOWNSHIP
SECT. 10, T-3S, R-14E

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

FOR CONTINUATION SEE SHEET NO. 120

65
FRANKLIN E. McCLAIN AND RUTH E. McCLAIN
26-1240-0000

6
DONALD M. BASSLER AND CATHERINE L. BASSLER
05-0610-0000

6 XI

65 T

65 WL

65 WV

95 X

94 X

6 WL

5 WL

5
JAMES A. SMALLEY(I/2) AND FREDERICK P. SMALLEY AND MIRIAM G. SMALLEY(I/2)
05-0595-0100

05-0600-0000

CULTIVATED

Gravel

Asphalt

Asph./Conc.

Woven Wire

Field Tile

Abndn.

Const. Limits

Half Section Line

Ex. LA-R/W

LA-R/W

0.600

160.346 (526.07') N 89°19'10" E

159.051 (521.82') N 87°41'57" W

151.660 (497.57') N 0°40'50" W

30.000 (98.43')

+404.525 60.526

13.645 (44.77') N 48°49'59" W

+412.165 39.682

+404.283 47

114.526 (375.74') N 1°34'50" W

11.902 (39.05') N 51°46'30" W

+404.526 30.555

Copper Pin (Fnd.)

C.C.H. 56

N 89°19'10" E

S 86°52'05" W

167.427 (549.30')

147.498 (483.92') S 89°19'10" W

5.175 (16.98') N 1°42'15" W

+491.656 67.085

+496.831 67.085

10.202 (33.47') S 79°56'09" E

+494.750 57.097

+469.347 50

+454.873 30.480

Exist. Perm. Drainage Easement D.B. 136-Pg. 209

102mm Abndn.

N 59°00'07" W

100.923 (331.11')

107.656 (353.20')

194.352 (637.64') N 1°42'15" W

N 2°45'45" W

270.699 (888.12')

+649.226 30.480

187.053 (613.69') N 4°30'22" W

PC Sta. 28+027.321

℄ Ramp B

℄ RAMP B
P.I. Sta. 28+110.253
Δ = 29° 46' 31" (LT)
R = 305.000m
Ls2 = 82.000m
θs2 = 7° 42' 07"
LT2 = 54.719m
ST2 = 27.380m
Lc = 117.501m
T1 = 82.932m
T2 = 120.455m
Es = 11.074m
P.C. Sta. 28+027.321
C.S. Sta. 28+144.822
S.T. Sta. 28+226.822

Match Line Station 12+400.000 See Sheet No. 111

Match Line Station 12+700.000 See Sheet No. 113

12+400.000

12+500

12+600

12+700.000

℄ SURVEY EXIST. U.S. 23 N 1° 42' 15" W

Sta. 12+433.448 U.S. 23 = Sta. 1+000.000 C.R. 56

600mm Extend Ex. 950mm C.P.

305mm

+412.045 42.626

N 1°50'37" E 75.124 (246.47')

C.R. 60 Asphalt

155.168 (509.08') S 87°53'19" W

153.785 (504.54')

162.346 (532.63') N 86°42'09" W

PC Sta. 28+558.024

N 88°49'02" W

+465.451 27.425

11.051 (36.25') N 57°53'26" W

+459.301 36.606

+467.650 45

N 1°11'00" W 336.190 (1102.99')

28+600

28+700

℄ Ramp A

PCC Sta. 28+731.006

172.640 (566.40') N 1°36'59" E

94.223m (309.13') N 14°47'47" E

+640 55

℄ RAMP A
P.I. Sta. 28+644.654
Δ = 7° 55' 44" (RT)
R = 1,250.000m
T = 86.629m
L = 172.982m
E = 2.998m
P.C. Sta. 28+558.024
P.C.C. Sta. 28+731.006

℄ RAMP A
P.I. Sta. 28+958.499
Δ = 73° 16' 04.82" (RT)
R = 305.000 m
Ls2 = 70.000 m
θs2 = 6° 34' 29.73"
LT2 = 46.699 m
ST2 = 23.363 m
Lc = 355.024 m
Ts1 = 227.493 m
Ts2 = 261.577 m
Es = 75.497 m
P.C.C. Sta. 28+731.006
C.S. Sta. 29+086.030
S.T. Sta. 29+156.030

FOR CONTINUATION SEE SHEET NO. 121

● - Iron Pin Set With I.D. Cap
✱ - Spike Set
◎ - Exist. Conc. Monument

PLAN COMPLETED:		
REH	2/3/99	Revise Parcel 65WL & Add 6XI
REV.	DATE	DESCRIPTION

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - U.S. 23
STA. 12+400.000 TO 12+700.000

WYA/CRA-30-28.009/0.000

112/146

2082/2116

metric units

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

℄ RAMP B
P.I. Sta. 28+110.253
Δ = 29° 46' 31" (LT)
R = 305.000m
Ls2 = 82.000m
θs2 = 7° 42' 07"
LT2 = 54.719m
ST2 = 27.380m
Lc = 117.501m
T1 = 82.932m
T2 = 120.455m
Es = 11.074m
P.C. Sta. 28+027.321
C.S. Sta. 28+144.822
S.T. Sta. 28+226.822

6
DONALD M. BASSLER AND
CATHERINE L. BASSLER
05-0610-0000

CULTIVATED

102mm

Ramp B +199.996
19.986

LA-R/W N 42°03'15" W
346.46' (105.600)

ST Sta. 28+226.822

Match Line Sta. 28+250.000 Ramp B
See Sheet No. 109

℄ RAMP B
P.I. Sta. 29+169.182
Δ = 142° 30' 25" (RT)
R = 305.000m
Ls1 = 82.000m
θs1 = 7° 42' 07"
LT1 = 54.719m
ST1 = 27.380m
Lc = 676.601m
Ts = 942.359m
Es = 646.882m
T.S. Sta. 28+226.822
S.C. Sta. 28+308.822
C.S. Sta. 28+985.423
S.T. Sta. 29+067.423

Plug
0.600
Abndn.
Const. Limits
CS Sta. 28+144.822
TS Sta. 28+226.822
28+200

+740
55
N 17°43'56" W
115.839 (380.05')
LA-R/W
N 2°45'45" W
270.699 (888.12')

6
WL

Half Section Line
05-0600-0000
Const. Limits
℄ Ramp B
381mm
187.053 (613.69')
N 4°30'22" W
Ex. LA-R/W
Woven Wire
28+100
457mm
381mm
+836.055
39.624
159.124 (522.06')
N 0°29'29" E
Ex. LA-R/W
Half Section Line
Woven Wire
626.478 (2055.37')
N 1°42'15" W
+995.062
33.528

Asphalt
CB
12+800
12+900
℄ SURVEY EXIST. U.S. 23
N 1° 42' 15" W
Asphalt

Match Line Station 12+700.000 See Sheet No. 112

Ex. LA-R/W
Woven Wire
N 1°11'00" W
336.190 (1102.99')
+801.627
30.481
Ex. LA-R/W
Woven Wire
N 1°42'15" W
325.754 (1068.75')

Match Line Station 13+000.000 See Sheet No. 114

5
WL

28+800
Const. Limits
94.223 (309.13')
LA-R/W
N 14°47'47" E
℄ Ramp A
Ramp A +840.859
19.523
0.600
Const. Limits
127.771 (419.20')
N 44°15'34" E
LA-R/W
Match Line Sta. 28+900.000 Ramp A
See Sheet No. 108

℄ RAMP A
P.I. Sta. 28+958.499
Δ = 73° 16' 04.82" (RT)
R = 305.000 m
Ls2 = 70.000 m
θs2 = 6° 34' 29.73"
LT2 = 46.699 m
ST2 = 23.363 m
Lc = 355.024 m
Ts1 = 227.493 m
Ts2 = 261.577 m
Es = 75.497 m
P.C.C. Sta. 28+731.006
C.S. Sta. 29+086.030
S.T. Sta. 29+156.030

5
WL

JAMES A. SMALLEY(1/2) AND
FREDERICK P. SMALLEY AND
MIRIAM G. SMALLEY(1/2)

05-0595-0100

● - Iron Pin Set With I.D. Cap
✱ - Spike Set
◎ - Exist. Conc. Monument

PLAN COMPLETED:		
REH	6/30/99	Added Field Tile
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN - U.S. 23
STA. 12+700.000 TO 13+000.000

WYA/CRA-30-28.009/0.000

113/146

2083
2116

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

For Ramp B See Sheet No. 110

℄ RAMP B
P.I. Sta. 29+169.182
Δ = 142° 30' 25" (RT)
R = 305.000m
Ls1 = 82.000m
θs1 = 7° 42' 07"
LT1 = 54.719m
ST1 = 27.380m
Lc = 676.601m
Ts = 942.359m
Es = 646.882m
T.S. Sta. 28+226.822
S.C. Sta. 28+308.822
C.S. Sta. 28+985.423
S.T. Sta. 29+067.423

6 WL
DONALD M. BASSLER AND CATHERINE L. BASSLER
05-0610-0000

Abndn. 102mm
Field tile
Abndn. 102mm
Abndn. 102mm
Abndn.
Const. Limits
28+600
℄ Ramp B
05-0635-0000

Match Line Station 13+000.000 See Sheet No. 113

℄ Half Section Line
Ex. LA-R/W
Woven Wire
626.478 (2055.37')
N 1°42'15" W
Ex. LA-R/W
Woven Wire
Half Section Line

Asph./Conc.
381mm
Asph./Conc.
13+100
CB ℄ SURVEY EXIST. U.S. 23
13+200
N 1° 42' 15" W
Asph./Conc.
Asph./Conc.

Woven Wire
N 1°42'15" W
325.754 (1068.75')
Ex. LA-R/W
N 1°42'15" W
111.672 (366.38')
+239.054
30.481
Ex. LA-R/W
Woven Wire
N 1°00'49" W
379.466 (1244.97')
+127.381
30.481
305mm
28+800
336.668 (1104.55')
S 89°29'02" W
℄ E.B. U.S. 30
28+900

Match Line Station 13+300.000 See Sheet No. 115

05-0580-0000

5 WL
JAMES A. SMALLEY (1/2) AND FREDERICK P. SMALLEY AND MIRIAM G. SMALLEY (1/2)
05-0595-0100

10 WL
FREDERICK P. SMALLEY AND MIRIAM SMALLEY
05-0605-0000

For E.B. U.S. 30 See Sheet No. 46

● - Iron Pin Set With I.D. Cap
✖ - Spike Set
◎ - Exist. Conc. Monument

℄ E.B. U.S. 30
P.I. Sta. 29+138.153
Δ = 102° 35' 11" (LT)
R = 571.200m
Ls = 145.000m
θs = 7° 16' 20"
LT = 96.748m
ST = 48.408m
Lc = 877.717m
Ts = 787.175m
Es = 344.681m
T.S. Sta. 28+350.978
S.C. Sta. 28+495.978
C.S. Sta. 29+373.695
S.T. Sta. 29+518.695

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
metric units

N

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

WYA/CRA-30-28.009/0.000

RIGHT OF WAY PLAN - U.S. 23
STA. 13+000.000 TO 13+300.000

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

metric units

6
DONALD M. BASSLER AND
CATHERINE L. BASSLER
05-0635-0000

CULTIVATED

100.5m(329.72')-152mm (6") Collector (By Others)
N 31°13'59" E
113.650 (372.87')
LA-R/W
Abndn.
Const. Limits
102mm
+380
75
Field tile
13.0m(42.65')
152mm (6") Conduit
N 1°42'15" W
245.550 (805.6')
0.600
SC Sta. 28+495.978
305mm
For E.B. U.S. 30 See Sheet Nos. 44,45
6
WL
152mm
626.478 (2055.37')
N 1°42'15" W
Woven Wire
Ex. LA-R/W
28+600
28+500
℄ E.B. U.S. 30
Prop. MSE Wall
Asph./Conc.
Abndn. 152mm
13+400
13+500
CB
N 1° 42' 15" W
℄ SURVEY EXIST. U.S. 23
28+700
28+800
℄ Ramp B
N 1°00'49" W
379.466 (1244.97')
10
WL
FREDERICK P. SMALLEY
AND MIRIAM SMALLEY
05-0580-0000
For Ramp B See Sheet No. 50
For W.B. U.S. 30 See Sheet No. 49
Field tile
102mm

Match Line Station 13+300.000 See Sheet No. 114

Match Line Station 13+600.000 See Sheet No. 116

℄ RAMP B
P.I. Sta. 29+169.182
Δ = 142° 30' 25" (RT)
R = 305.000m
Lsl = 82.000m
θsl = 7° 42' 07"
LTl = 54.719m
STl = 27.380m
Lc = 676.601m
Ts = 942.359m
Es = 646.882m
T.S. Sta. 28+226.822
S.C. Sta. 28+308.822
C.S. Sta. 28+985.423
S.T. Sta. 29+067.423

℄ E.B. U.S. 30
P.I. = Sta. 29+138.153
Δ = 102° 35' 11" (LT)
R = 571.200m
Ls = 145.000m
θs = 7° 16' 20"
LT = 96.748m
ST = 48.408m
Lc = 877.717m
Ts = 787.175m
Es = 344.681m
T.S. Sta. 28+350.978
S.C. Sta. 28+495.978
C.S. Sta. 29+373.695
S.T. Sta. 29+518.695

℄ W.B. U.S. 30
P.I. Sta. 28+788.931
Δ = 58° 47' 45" (LT)
R = 560.000m
Lsl = 120.000m
θsl = 6°08'20"
LT = 80.048m
ST = 40.044m
Lc = 454.662m
Ts = 376.098m
Es = 83.998m
T.S. Sta. 28+412.833
S.C. Sta. 28+532.833
C.S. Sta. 28+987.495
S.T. Sta. 29+107.495

● - Iron Pin Set With I.D. Cap
✱ - Spike Set
◎ - Exist. Conc. Monument

PLAN COMPLETED:		
REH	6/30/99	Added Field Tile
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - U.S. 23
STA. 13+300.000 TO 13+600.000

WYA/CRA-30-28.009/0.000

115/146

2085/2116

metric units

FOR CONTINUATION SEE SHEET NO. 44

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

℄ E.B. U.S. 30
P.I. Sta. 29+138.153
Δ = 102° 35' 11" (LT)
R = 571.200m
Ls = 145.000m
θs = 7° 16' 20"
LT = 96.748m
ST = 48.408m
Lc = 877.717m
Ts = 787.175m
Es = 344.681m
T.S. Sta. 28+350.978
S.C. Sta. 28+495.978
C.S. Sta. 29+373.695
S.T. Sta. 29+518.695

℄ E.B. U.S. 30
P.I. Sta. 28+160.442
Δ = 4° 56' 49" (RT)
R = 3,500.000m
T = 151.187m
L = 302.186m
E = 3.264m
P.C. Sta. 28+009.255
P.T. Sta. 28+311.441

6
DONALD M. BASSLER AND CATHERINE L. BASSLER
05-0635-0000

8
MARTHA J. NEWELL(3/5), RONALD L. NEWELL, BEVERLY BATTON, BONNIE MENNINGEN, AND BETTY WALTON(2/5)
05-0625-0000

9
RONALD L. NEWELL
05-0585-0000

10 WL
FREDERICK P. SMALLEY AND MIRIAM SMALLEY
05-0580-0000

LA Limits shall be removed & existing R/W to remain from Sta. 13+663.659, 95 meters Rt. U.S. 23 to Sta. 13+655.368, 167.879 meters Rt. U.S. 23 to Sta. 13+626.417, 167.310 meters Rt. U.S. 23 to Sta. 13+623.441, 117.641 meters Rt. U.S. 23. The existing LA Limits along U.S. 23 shall be extended from Sta. 13+663.659, 95 meters Rt. U.S. 23 to Sta. 13+623.441, 117.641 meters Rt. U.S. 23.

FOR CONTINUATION SEE SHEET NO. 49

℄ W.B. U.S. 30
P.I. Sta. 28+788.931
Δ = 58° 47' 45" (LT)
R = 560.000m
Ls = 120.000m
θs = 6°08'20"
LT = 80.048m
ST = 40.044m
Lc = 454.662m
Ts = 376.098m
Es = 83.998m
T.S. Sta. 28+412.833
S.C. Sta. 28+532.833
C.S. Sta. 28+987.495
S.T. Sta. 29+107.495

Pavement to be Removed

● - Iron Pin Set With I.D. Cap
✖ - Spike Set
◎ - Exist. Conc. Monument

PLAN COMPLETED:		
REH	2/3/99	Revise Parcel 9WL
REH	7/21/99	Name Change-Parcel 9
REV.	DATE	DESCRIPTION

SCALE IN METERS 0 10 20 I:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - U.S. 23
STA. 13+600.000 TO 13+900.000

WYA/CRA-30-28.009/0.000

116/146

2086/2116

℄ E.B. U.S. 30
P.I. Sta. 28+160.442
Δ = 4° 56′ 49″ (RT)
R = 3,500.000m
T = 151.187m
L = 302.186m
E = 3.264m
P.C. Sta. 28+009.225
P.T. Sta. 28+311.440

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 34, T-2S, R-14E

metric units

SCALE IN METERS 1:500

8

MARTHA J. NEWELL(3/5),
RONALD L. NEWELL,
BEVERLY BATTON,
BONNIE MENNINGEN,
AND BETTY WALTON(2/5)

05-0625-0000

05-2010-0000

BEGIN PROJECT
Sta. 28+009.000 E.B. U.S.- 30
SLD=28.009

SECTION 3 | SECTION 34

CULTIVATED

F 49(68)

E.B. +996.424
U.S. 30 22.671
+000
41.148

8 WL

N 1°32′26″ E
333.076 (1092.77′)
LA-R/W
℄ Consk. Limits
Ex. LA-R/W
0.600
101.092 (331.67′) N1°42′15″W
PC Sta. 28+009.255
POT STA. 14+017.736 US-23
Meet Existing Pavement
Const. Limits
Half Section Line
74.351 (243.93′)
Field tile
305mm
Pin & Cap
(Found)
Woven Wire
Ex. LA-R/W
Woven Wire

Match Line Station 13+900.000 See Sheet No. 116

℄ E.B. U.S. 30
Asph./Conc.
14+000
CB N 1° 42′ 15″ W CB
Const. Limits
Exist. Conc. Monument
1.984 (6.5′) Lt.
℄ SURVEY EXIST. U.S. 23
14+100
Asph./Conc.
Const. Limits

ST Sta. 28+412.833

℄ W.B. U.S. 30 28+400

0.227(0.75′)
N1°16′42″W
Asph./Conc.

+072.322
38.099
+072.549
38.101
Woven Wire
Ex. LA-R/W
N 1°16′35″ W
203.901 (668.97′)
Const. Limits
220.020 (721.85′)
N 2°29′08″ W
LA-R/W
0.600
Pin & Cap
(Found)
(0.093 W)
(0.062 S)
+100
42
Woven Wire
Ex. LA-R/W
N 1°09′50″ W
161.645 (530.33′)
Const. Limits
120.150 (394.19′)
LA-R/W
N 1°09′30″ E

Match Line Station 14+200.000 See Sheet No. 118

9 WL

CULTIVATED

CULTIVATED

℄ W.B. U.S. 30
P.I. Sta. 28+788.931
Δ = 58° 47′ 45″ (LT)
R = 560.000m
Lsl = 120.000m
θsl = 6°08′20″
LT = 80.048m
ST = 40.044m
Lc = 454.662m
Ts = 376.098m
Es = 83.998m
T.S. Sta. 28+412.833
S.C. Sta. 28+532.833
C.S. Sta. 28+987.495
S.T. Sta. 29+107.495

9

RONALD L. NEWELL

05-0585-0000

SECTION 3 | SECTION 34

SECTION LINE

05-1995-0000

● - Iron Pin Set With I.D. Cap
✱ - Spike Set
◎ - Exist. Conc. Monument

PLAN COMPLETED:		
REH	2/3/99	Revise Parcel 9WL
REH	7/21/99	Name Change-Parcel 9
REV.	DATE	DESCRIPTION

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - U.S. 23
STA. 13+900.000 TO 14+200.000

WYA/CRA-30-28.009/0.000

117/146

2087
2116

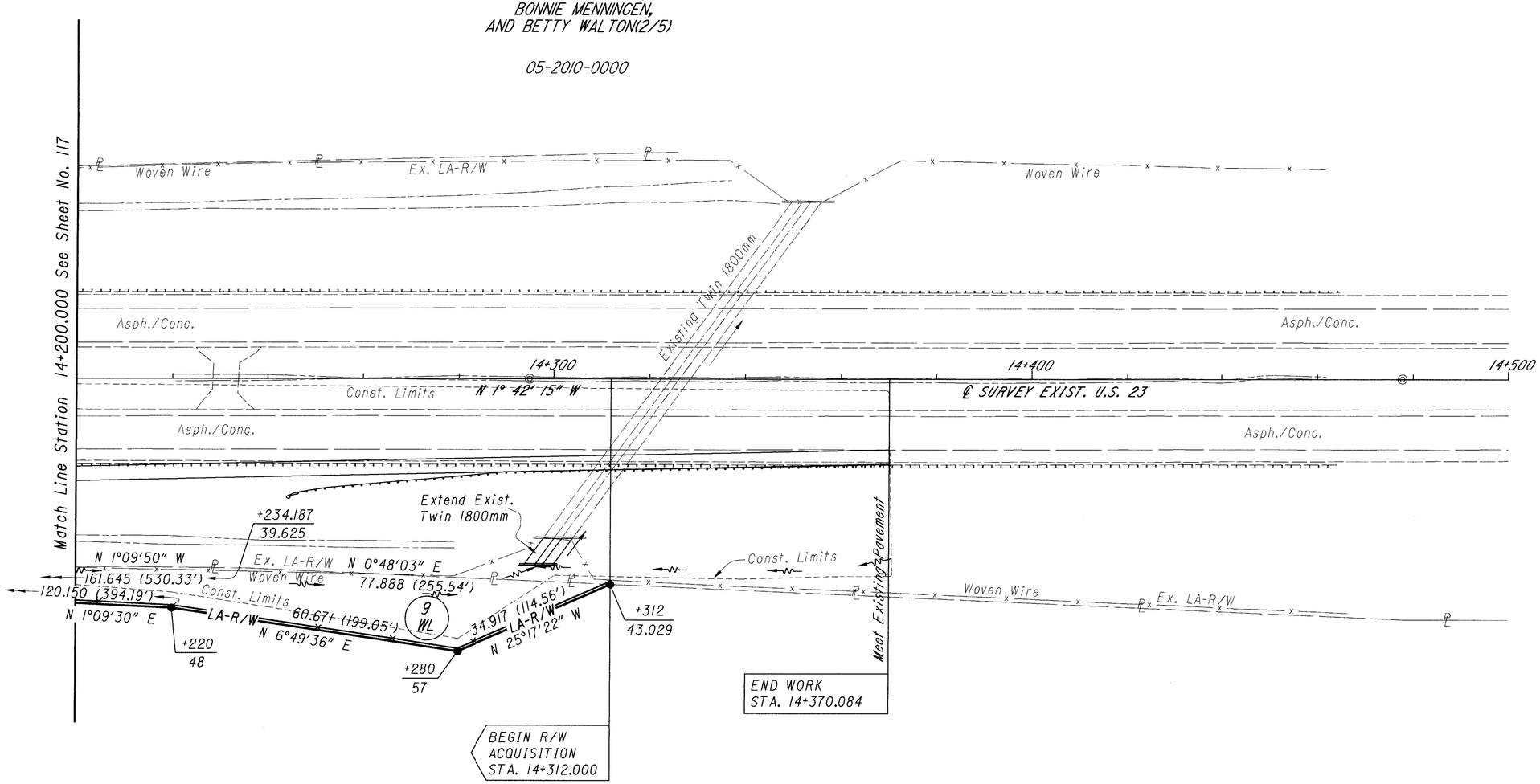
WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 34, T-2S, R-14E

metric units

8

MARTHA J. NEWELL(3/5),
RONALD L. NEWELL,
BEVERLY BATTON,
BONNIE MENNINGEN,
AND BETTY WALTON(2/5)

05-2010-0000



9

RONALD L. NEWELL

05-1995-0000

● - Iron Pin Set With I.D. Cap
◎ - Exist. Conc. Monument

PLAN COMPLETED:		
REH	2/3/99	Revise Parcel 9WL
REH	7/21/99	Name Change-Parcel 9
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN - U.S. 23
STA. 14+200.000 TO 14+500.000

WYA/CRA-30-28.009/0.000

118/146

2088
2116

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

metric units

66

MARJORIE A. HENDERSON

05-0615-0000

6

DONALD M. BASSLER AND
CATHERINE L. BASSLER

05-0610-0000

CULTIVATED

CULTIVATED

BEGIN R/W
ACQUISITION
STA. 0+520.000 CH 56

66
WV

N 0°11'39" E

+546.778
12.789

12.791 (41.96')

+520
10

10.000 (32.81')
N 0°40'50" W

+520
0

R/W

26.923 (88.33')

+546.583
0

N 83°22'21" E
214.376 (703.33')

Const. Limits

+760
35

N 89°19'10" E
R/W
41.869 (137.36')

Const. Limits

6
WVI

Ex. R/W

Asphalt

0+500

373.742 (1226.19') to
S.W. Corner Section 3

SECTION 3

0+600

SECTION LINE

℄ SURVEY C.H. 56

N 89°19'10" E
255.286 (837.55')

0+700

Asphalt

Ex. R/W

Ø254mmCMP

Ex. R/W

1050mm R.C.P.
1500mm C.M.P.

Ø254mmCPP

Ex. R/W

Ex. R/W

26.495 (86.93')

SECTION 10

Ex. R/W
12.192
(40.00')

Ex. R/W

65
WVI

10.000 (32.81')
N 0°40'50" W

+520
10

R/W

Const. Limits

214.336 (703.20')
S 85°55'01" E

R/W

Const. Limits

+760
30

+779.654
30

533mm

Prop. Drive

41.869 (137.36')
R/W

N 89°19'10" E

160.546 (526.07')

Match Line Station 0+800.000
See Sheet No. 120

19.654 (64.48')
N 89°19'10" E

17.464 (57.30')
S 77°26'24" E

+777
34

65
T

4.801 (15.75')
N 32°53'12" E

25.196 (410.75')
N 86°06'51" E

65
X

19.698(64.63')
S 24°38'35" E

+785
52

CULTIVATED

67
WV

+546.404
12.200

N 0°09'32" E

CULTIVATED

CULTIVATED

65

FRANKLIN E. McCLAIN AND
RUTH E. McCLAIN

26-1240-0000

67

PAUL F. THIEL AND RUTH I. THIEL, TRUSTEES,
or their successors in trust, under the
THIEL LIVING TRUST

26-1305-0000

WYANDOT COUNTY
PITT TOWNSHIP
SECT. 10, T-3S, R-14E

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

PLAN COMPLETED:		
REH	2/3/99	Revise Parcels 65T & 65X
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN - C.H. 56
STA. 0+456.541 TO 0+800.000

WYA/CRA-30-28.009/0.000

119/146

2089
2116

FOR CONTINUATION SEE SHEET NO. 112

metric units

℄ RAMP A
P.I. Sta. 28+644.654
D = 7° 55' 44" (RT)
R = 1,250.000m
T = 86.629m
L = 172.982m
E = 2.998m
P.C. Sta. 28+558.024
P.C.C. Sta. 28+731.006

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

DONALD M. BASSLER AND
CATHERINE L. BASSLER
05-0610-0000

JAMES A. SMALLEY(I/2) AND
FREDERICK P. SMALLEY AND
MIRIAM G. SMALLEY(I/2)
05-0595-0100

FRANKLIN E. McCLAIN AND
RUTH E. McCLAIN
26-1240-0000

WYANDOT COUNTY
PITT TOWNSHIP
SECT. 10, T-3S, R-14E

- Iron Pin Set With I.D. Cap
- Spike Set

FOR CONTINUATION SEE SHEET NO. 111

PLAN COMPLETED:

REV.	DATE	DESCRIPTION
REH	2/3/99	Revise Parcels 65WL, 65T & Add 6XI

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

WYA/CRA-30-28.009/0.000

RIGHT OF WAY PLAN - C.H. 56
STA. 0+800.000 TO 1+100.000

120/146

2090/2116

metric units

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

5
JAMES A. SMALLEY(I/2), FREDERICK P. SMALLEY AND MIRIAM G. SMALLEY(I/2)
05-0595-0100

68 T
+250 20 — N 89°19'10" E 9.000(29.53') — +259 20
3.000(9.84') S0°40'50"E
9.000(29.53') — R/W — N 89°19'10" E
+250 17 — DETAIL "A" Ratio=1:200 — +259 17

CULTIVATED

END LA +198.086 30
14.760 (48.43') N 0°42'35" W
LA-R/W S 88°49'02" E 153.785 (504.54') LA-R/W
0.600
5 WL
162.346 (532.63') S 86°42'09" E
Ex. LA-R/W
Const. Limits
Ex. LA-R/W
+198.093 15.240
15.240 (50.00')
Abndn. 102mm SECTION 3 Field tile Abndn.
Asphalt
SECTION LINE ℄ SURVEY C.H. 56
SECTION 10
16.764 (55.00') N 0°44'57" W
Ex. LA-R/W N 87°53'19" E 155.168 (509.08')
Const. Limits
END LA +198.121 16.764
65 WV

Wood Barn 9.109m(29.89')±
68
SEP TNK Wood Shed
JAMES A. SMALLEY 05-0595-0000
+198.092 17
102mm
Gravel ℄ 68 T Gravel Conc.
2 Sty. Fr. #6310
2.207 (7.24')±
Plug See Detail "A"
N 89°19'10" E
R/W 83.530 (274.05')
22.622(74.22')
17.000 (55.77')
Ex. R/W
68 WV
+198.101 0
N 89°19'10" E 83.521 (274.02')
Ex. R/W 12.192 (40.00')
65 WV
+213.015 30
14.473 (47.48') N 22°43'54" E
Ex. R/W
77.285 (253.56') N 89°43'16" E
24.704 (81.05') N 80°05'22" E
+105.598 46.702
+182.881 47.244
+207.265 43.281
71.339 (234.05') N 45°13'57" E

CULTIVATED

20.043 (65.76') N 65°47'43" E
+281.623 17
+300 25
+344.985 22.751
S 87°49'05" E 45.041 (147.77') R/W
Wood Fence 17.000 (55.77') N 0°40'50" W
5 WV
Ex. R/W
+281.623 0
Ex. R/W
1+300 305mmCMP
N 89°19'10" E 63.031 (206.80')
Asphalt
+344.654 0
Abndn.
Const. Limits
+344.334 23.136
102mm Field Tile
45.075m(147.88')-102mm (4") Collector (By Others)
23.139 (75.91') N 0°06'41" E

CULTIVATED

203mm Field tile
10
FREDERICK P. SMALLEY AND MIRIAM SMALLEY
05-0590-0000
CULTIVATED
16.000 (52.49') N 89°19'10" E
10 X4
+378 50
+394 50
29.700 (97.44') N 0°40'50" W
28.900 (94.82') N 0°40'50" W
16.020 (52.56')
+378 21.100
+394 20.300
33.057 (108.45') S 87°49'05" E
Plug
155.209 (509.22')
22.753m (74.65') N 0°09'12" E
203mm
10 WV2
Const. Limits
Ex. R/W
203mm
Asphalt
N 89°19'10" E 180.346 (591.69')
Abndn. 102mm
Ex. R/W
82.4mm W.C.P.
203mm Abndn.
69 WV
Abndn.
155.879 (511.41') N 86°19'39" E
131.498 (431.42') N 86°19'39" E R/W
42.4m(139.11')-381mm (15") Conduit
116.70m(382.87')-203mm (8") Collector (By Others)
152mm Field Tile
16.40m(53.81')-152mm (6") Collector (By Others)

Match Line Station 1+100.000 See Sheet No. 120
Match Line Station 1+400.000 See Sheet No. 122

69
PAUL F. THIEL AND RUTH I. THIEL, TRUSTEES, or their successors in trust, under the THIEL LIVING TRUST
CULTIVATED
26-1235-0000

CULTIVATED
65
FRANKLIN E. McCLAIN AND RUTH E. McCLAIN
26-1240-0000

WYANDOT COUNTY
PITT TOWNSHIP
SECT. 10, T-3S, R-14E

● - Iron Pin Set With I.D. Cap
✱ - Spike Set
☼ - Spike (Found)

PLAN COMPLETED:		
REH	2/3/99	Delete Parcels 68T & 69X
REH	2/3/99	Revise Parcel 10X4
REH	6/21/99	Revise Parcel 68WV & Add 68T
REV.	DATE	DESCRIPTION

N

SCALE IN METERS 0 10 20 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY STA. 1+100.000 TO 1+400.000

WYA/CRA-30-28.009/0.000

121 / 146

2091 / 2116

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 3, T-3S, R-14E

10

FREDERICK P. SMALLEY
AND MIRIAM SMALLEY

05-0590-0000

CULTIVATED

203mm

Field tile

203mm

29.70m(97.44')-102mm (4") Conduit

Silo

17.292(56.73')±

Frame Garage

Grass

18.549(60.86')±

Fuel Tanks(3)

Grass

Metal Garage

Silo

TANK

Silo

TANK

Metal Barn

Gravel

Tank

Gravel

Gravel

CULTIVATED

254mm

Concrete Pad

Metal Barn

Gravel

#6132
2 Sty Fr.

Grass

Sat. Dish

345mm

Gravel

Grass

203mm

Gravel

10
WV2

Plug

+500
15

R/W

S 87°49'05" E
155.209 (509.22')

Const. Limits

Const. Limits

R/W

S 79°22'14" E
25.495 (83.65')

+525
10

Ex. R/W

Abndn.

203mm Field tile

1+500

Asphalt

Field tile

Ex. R/W

SECTION 3

Ex. R/W

1+7

℄ SURVEY C.H. 56

180.346 (591.69')

N 89°19'10" E ℄ & ℄

1+600

Asphalt

SECTION LINE

Abndn.

203mm Field tile

Abndn.

Ex. R/W

Abndn.

219.273(719.40') to Copper Pin in Concrete Monument at S.E. Corner Sec. 3

SECTION 10

Ex. R/W

Const. Limits

Const. Limits

155.879 (511.41')
N 86°19'39" E

R/W

R/W

25.495 (83.65')
N 78°00'34" E

+525
0

PROPOSED DRIVE

10.000 (32.81')
N 0°40'50" W

Ex. R/W
12.192
(40.00')

Ex. R/W

Match Line Station 1+400.000 See Sheet No. 121

69
WV

116.70m(382.87')-203mm (8")
Collector (By Others)

+500
15

+525
10

END R/W
ACQUISITION
STA. 1+525.000 CH 56

CULTIVATED

CULTIVATED

69

PAUL F. THIEL AND RUTH I. THIEL, TRUSTEES,
or their successors in trust, under the
THIEL LIVING TRUST

26-1235-0000

WYANDOT COUNTY
PITT TOWNSHIP
SECT. 10, T-3S, R-14E

● - Iron Pin Set With I.D. Cap
✖ - Spike Set

PLAN COMPLETED:		
1	10-25-00	Added Drive to Par. 69 @ 1+541
REV.	DATE	DESCRIPTION

metric units

SCALE IN METERS
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

WYA/CRA-30-28.009/0.000

RIGHT OF WAY PLAN
STA. 1+400.000 TO 1+700.000

122/146

2092
2116

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 2, T-3S, R-14E

metric units

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

N

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - T.H. 124
STA. 0+444.052 TO 0+800.000

WYA/CRA-30-28.009/0.000

123/146

2093/2116

C.R. 56

N 89° 25' 17" W 410.71 (1345.70') to Southwest Corner of Section 2

102mm Ex. R/W

102mm Field tile

℄ SURVEY T.H. 124

BEGIN R/W ACQUISITION STA. 1+510.000 TH 124

10.000 (32.81') S 89°56'35" W

+510 0

+510 10

9.355(30.69')±

2 Sty. Frame #12950

914mm

Conc. Walk

Fr. Garage

40.246 (132.04')

10 T1

SEE DETAIL "A"

N 6°23'50" W 45.277 (148.55')

R/W

N 10°03'54" W 86.313 (283.18')

Const. Limits

3.021(9.91')±

+555 15

+640 BEGIN LA 30

LA-R/W

N 1°49'02" W 325.574 (1068.16')

0.600

Ex. R/W

65.949 (216.37')

0+500

Asphalt

N 0° 3' 25" W

0+600 Gravel

0+700

Gravel

N 0° 3' 25" W

5.948(19.5Hi)±

55.716 (182.80') N 9°08'20" E

6.096 (20.00')

+510 6.096

6.078 (19.94')

Gravel

10 T2

SEE DETAIL "B"

Metal Barn

+565 15

2.619(8.59')±

77.621 (254.66') N 14°52'28" E

Const. Limits

BEGIN LA +640 35

10 WV3

10 WL

LA

S 89°56'35" W 65.000 (213.25')

Ex. R/W 12.192 (40.00')

Const. Limits

300.833 (986.98') N 0°53'43" E

305mm Field tile 305mm

Conc. Wall

Match Line Station 0+800.000 See Sheet No. 124

CULTIVATED

10

FREDERICK P. SMALLEY
AND MIRIAM SMALLEY

05-0545-0000

10.000 (32.81') N 0°03'25" W

+550 18

+560 18

2.118 (6.95') S 89°56'35" W

3.556 (11.67') S 89°56'35" W

N 10°03'54" W R/W

N 6°23'50" W

+550 14.444

+560 15.882

5.031 (16.51')

+555 15

5.077 (16.66')

DETAIL "A"
SAME SCALE

19.247 (63.15') N 9°08'20" E

+535 10.143

+516 7.067

8.933 (29.31') S 89°56'35" W

7.092 (23.27') N 55°43'30" W

+531 16

+516 16

15.000 (49.21') N 0°03'25" W

DETAIL "B"
SAME SCALE

● - Iron Pin Set With I.D. Cap
✖ - Spike Set

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

FOR CONTINUATION SEE SHEET NO. 53

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 2, T-3S, R-14E

metric units

SCALE IN METERS 1:500

℄ US-30
P.I. = Sta. 30+333.210
Δ = 30° 00' 42" (LT)
R = 4,250.000m
T = 1,139.250m
L = 2,226.164m
E = 150.044m
P.C. Sta. 29+193.960
P.T. Sta. 31+420.124

Match Line Station 0+800.000 See Sheet No. 123

Match Line Station 1+100.000 See Sheet No. 125

10
FREDERICK P. SMALLEY
AND MIRIAM SMALLEY
05-0545-0000
CULTIVATED

10 XI

10 WL

+935 / 70

N 88°45'47" E
235.299 (771.98')

288.70m(947.18')-305mm (12") Conduit (By Others)

Const. Limits

S 45°49'28" E
82.831 (271.75')

+900 / 37.990

N 1°49'02" W
65.451 (214.73')

+986.469 U.S. 30 / 45

+965.420 / 40

LA-R/W

Const. Limits 325.574(1068.16')

0.600

℄ E.B. U.S. 30 Field tile 29+900

℄ R/W Construction U.S.R. 30

381mm Abndn.

N 70°27'15" W
103.569 (339.79')

S 71°04'50" E
137.790 (452.07')

CULTIVATED

U.S. 30 +949.650 / 84.592

+959.106 / 40 U.S. 30 END LA +100 / 35

+054.720 / 40

N 6°14'40" E
45.555 (149.46')

+100 / 0

U.S. 30 +983.670 / 95.371

55.000 (180.45')

S 89°56'35" W

E.x R/W

Gravel

305mmCMP

℄ SURVEY T.H. 124

0+900

℄ N 0°03'25" W

Ex. R/W 12.192 (40.00')

305mm Field tile Abndn.

Abndn. 102mm

TWIN 1500mm
TWIN 1950mm C.M.P. or R.C.P.

Field tile

Sta. 1+000.000 T.R. 124 =
Sta. 30+014.086 U.S.R. 30

Const. Limits

Abndn.

LA-R/W

300.833 (986.98')
N 0°53'43" E

108.3m(355.31')-305mm (12")
Collector (By Others)

305mm

U.S. 30 +069.298 / 45

+940.791 / 40

CULTIVATED

10
FREDERICK P. SMALLEY
AND MIRIAM SMALLEY
05-0545-0000

145.70m(478.02')-102mm (4") Collector (By Others)

N 77°14'21" W
91.743 (301.00')

Field tile

Abndn. 102mm

Abndn. 152mm

Abndn. 102mm

Field tile

Abndn. 102mm

Field tile

Abndn. 102mm

381mm

Const. Limits

20.000 (65.62')

0.600

73.238 (240.28')
N 15°54'17" W

U.S. 30 +003.188 / 101.410

+043.771 / 40 U.S. 30 END LA +100 / 20

+029.546 / 40

CULTIVATED

55.699 (182.74')
N 73°32'19" W

325.980m (1069.49')
N 77°00'57" W

+100 / 40 U.S. 30

● - Iron Pin Set With I.D. Cap
✖ - Spike Set

FOR CONTINUATION SEE SHEET NO. 54

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

RIGHT OF WAY PLAN - T.H. 124
STA. 0+800.000 TO 1+100.000

STATE JOB NO. 017600

FEDERAL PROJECT NO. F 49(68)

WYA/CRA-30-28.009/0.000

124/146

2094
2116

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 2, T-3S, R-14E

metric units

10

FREDERICK P. SMALLEY
AND MIRIAM SMALLEY

05-0545-0000

CULTIVATED

END R/W
ACQUISITION
STA. 1+225.000 TH 124

CULTIVATED

+100 END LA
35

R/W

N 9°02'00" E
126.590m (415.32')

Const. Limits

+225
15

25.000 (82.02')
S 89°56'35" W

10
WVI

55.000 (180.45')
S 89°56'35" W
LA

Match Line Station 1+100.000 See Sheet No. 124 & 53

UTEL

Ex. R/W

203mm Field tile

Gravel

1+200

1+300

1+400

+100
0

N 0° 03' 25" W

℄ SURVEY T.H. 124

20.000 (65.62')

Ex. R/W

Const. Limits

Const. Limits

125.399m (411.42')
N 4°37'51" W

R/W

+225
10

Ex. R/W
12.192
(40.00')

10
WVI

+100 END LA
20

CULTIVATED

CULTIVATED

10

FREDERICK P. SMALLEY
AND MIRIAM SMALLEY

05-0545-0000

05-0555-0000

● - Iron Pin Set With I.D. Cap
✖ - Spike Set

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN - T.H. 124
STA. 1+100.000 TO 1+400.000

WYA/CRA-30-28.009/0.000

125/146

2095
2116

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 1, T-3S, R-14E

metric units

For Continuation See Sheet No. 62

SCALE IN METERS 1:500

19
BETTY E. WOLFE(2/3),
ROBERT L. WOLFE(1/6),
DALE A. WOLFE(1/6)
07-0030-0000

CULTIVATED

P.O.T. 0+567.730
℄ C.H. 56
Ex. R/W

+573.927
20
20.007 (65.64')
N 88°26'50" W

R/W
N 4°06'53" W
206.618 (677.88')
R/W

+573.402
0
5.672
(18.61')
20.002 (65.62')
N 89°18'11" E

+573.662
20
R/W
206.882 (678.75')
N 4°12'23" E
R/W

BEGIN R/W
ACQUISITION
STA. 0+573.402 CH 128

Ex. R/W
Ex. R/W

Asphalt
SECTION LINE 206.598 (677.81') ℄ SURVEY C.H. 128
SECTION 1
SECTION 6
0+600
0+700
Ex. R/W
12.192
(40.00')

19 WV
17 WV

19 X
17 X

6.001m (19.69')
+873.561
48.417
8.999m (29.52')
N 16°12'33" E
+867.796
50.088
+882.204
45.912
13.188m (43.27')
N 73°47'27" W
8.369m (27.46')
N 73°47'27" W
LA-R/W
+830.070
127.121
7.537m (24.73')
+871.660
37.638
N 79°57'06" W
10.946m (35.91')
+879.874
37.874
8.218m (26.96')
N 1°36'00" W

DETAIL "A"
SAME SCALE

CULTIVATED

BEGIN LA +780
35
+780
0
N 89°57'06" W
35.000 (114.83')
LA
0.600
N 1°36'00" W
91.698 (300.85')
LA-R/W

+765.506
33.946
14.533 (47.68')
28.536 (93.62')
S 87°54'24" W
+766.572
62.463
15.000 (49.21')
N7°59'52"E

+790.473
35.916
10.513 (34.49')
30.017 (98.48')
N 72°24'49" W
+781.428
64.537

17
JAMES J. GILLILAND AND
JUDITH A. GILLILAND
02-0795-0000

17 XI

CREEK
ROCK
RUN

CULTIVATED

+882.490
99.056
W57°57'06"W
100.584
(330.00')
CREEK
ROCK
RUN
17 E
152mm
Field Tile
62.366 (204.61')
N 79°57'06" W

19 X
17 X
+873.561
48.417
SEE DETAIL "A"
+867.796
50.088
+882.204
45.912
+864.126
37.421
Plug
N 1°36'00" W
82.121 (269.43')
+871.660
37.638
+879.874
37.874
N 1°36'00" W
LA-R/W

19 WL
17 WL
0.600
382.8 (1125.39')
N 79°57'06" W
152mm
Abndn.
Woven Wire
Const. Limits
EX. R/W
+865.023
0
305mmCMP
Extend Exist. 1500mm RCP
106.183 (348.37')
N 0°02'54" E
Asphalt
ROCK
RUN
Ex. R/W
Field Tile 381mm (15") Conduit
41.0m(134.51')-381mm (15") Conduit
Abndn.
152mm
102mm
Field tile
29.4m (96.46')-152mm(6")Conc.
172.170 (564.86')
LA-R/W
N 5°02'48" E
0.600
74.0m(242.78')-152mm (6")
Collector (By Others)

Match Line Station 0+900.000 See Sheet No. 127

- ● - Iron Pin Set With I.D. Cap
- ✱ - Spike Set
- Ⓜ - Exist. Monument Box

PLAN COMPLETED:		
JDK	5/20/99	Revised name Parcel 17
REH	6/30/99	Added Field Tile
REH	7/21/99	Change Parcel 17LL to 17E
REV.	DATE	DESCRIPTION

FEDERAL PROJECT NO. F 49(68)
STATE JOB NO. 017600
WYA - C.H. 128 - 0.000 TO 900.000
RIGHT OF WAY PLAN - C.H. 128
STA. 0+567.730 TO 0+900.000
WYA/CRA-30-28.009/0.000
126/146
2096
2116

FOR CONTINUATION SEE SHEET NO. 62

ROCK RUN

152mm Field tile

Plug

Plug

102mm Abndn.

102mm Field tile

Const. Limits

Ex. R/W

17 E

CULTIVATED

S 88°55'17" W LA-R/W 190.397 (624.66')

0.600

U.S. 30 +830.235 / 45

+953.747 / 40

N 1°36'00" W LA-R/W 82.121 (269.43')

17 WL

32.000 ℄ R/W, Construction U.S.R. 30

98.670 (323.72') LA-R/W N 82°28'06" E

0.600

+838.162 / 50 U.S. 30

+048.946 / 35

N 0°02'54" E LA-R/W 124.468 (408.36')

17 WL

17

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 1, T-3S, R-14E

JAMES J. GILLILAND AND
JUDITH A. GILLILAND

07-0025-0000

CULTIVATED

Match Line

13 RUSSELL E. SWINEHART
05-0460-0000

N 8°42'11" W 102.263 (335.51')

112.947 (370.56') N 8°42'11" W

N 6°17'49" E 15.000m (49.21')

+199.455 / 171.184

+184.545 / 172.816

+173.414 / 71.161

13 X

+173.414 / 58.908

+187.162 / 58.908

12.253 (40.20')

13.748 (45.11') N0°02'54"E

17 X2

13 WV3

3.959 (12.99')

36.377 (119.44')

86.007 (282.18') R/W

305mm

Service Road No. 3

23.908 (78.44')

+169.455 / 35

N 0°02'54" E

+173.414 / 35

46.586 (152.84')

Match Line

17 WL

Const. Limits

U.S. 30 +870.753 / 28.781

Ex. R/W

SECTION 1

Const. Limits

Ex. R/W

305mm CPP

+173.414 / 0

13 WL1

N 89°57'06" W 35.000 (114.83')

Match Line Station 0+900.000 See Sheet No. 126

1+000

1+100

106.183 (348.37') Asphalt

SECTION LINE 202.209 (663.41')

Asphalt

℄ SURVEY C.H. 128

N 0°02'54" E 248.794 (816.25')

N 0°02'54" E 46.586 (152.84')

Match Line Station 1+200.000 See Sheet No. 128

Ex. R/W

254mm Steel

SECTION 6

Ex. R/W 12.192 (40.00')

Const. Limits

Ex. R/W

Wooded

Const. Limits

Wooded

Abndn. 152mm Field tile

Sta. 1+000.000 C.H. 128 =
Sta. 32+871.639 U.S.R. 30

20 WL

172.170 (564.86') LA-R/W N 5°02'48" E

168.819 (553.87') LA-R/W N 1°38'55" W

381mm

+951.516 / 50

+920.124 / 50 U.S. 30

0.600

+051.255 / 40

+913.197 / 50 U.S. 30

0.600

CULTIVATED

28.9m(94.82')-102mm (4") Collector (By Others)

17 WL

Wooded

LA-R/W

Const. Limits

Abndn. Field tile 152mm

102mm Abndn.

Field tile Abndn.

Const. Limits

102mm

100.60m(330.05') 381mm (15") Conduit

17

JAMES J. GILLILAND AND
JUDITH A. GILLILAND

02-0795-0000

N 88°17'07" E 119.876 (393.30')

381mm

N 89°26'23" W 329.507 (1081.06')

℄ 329.507 (1081.06')

750mm R.C.P. or 825mm C.M.P. 102mm Abndn.

146.803 (481.64') N 88°17'07" E

45.8m(150.26')-102mm (4") Collector (By Others)

44.0m(144.36')-102mm (4") Collector (By Others)

20 WL

Wooded

Abndn. 102mm

Field tile

20

RUSSELL E. SWINEHART AND
VERA I. SWINEHART

02-0800-0000

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 6, T-3S, R-15E

FOR CONTINUATION SEE SHEET NO. 63

● - Iron Pin Set With I.D. Cap

✱ - Spike Set

PLAN COMPLETED:		
JDK	5/20/99	Revised name Parcel 17
REH	7/21/99	Changed Parcel 17LL to 17E
REV.	DATE	DESCRIPTION

metric units

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

N

SCALE IN METERS 0 10 20 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - C.H. 128
STA. 0+900.000 TO 1+200.000

WYA/CRA-30-28.009/0.000

127/146

2097
2116

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 1,T-3S,R-14E

13
RUSSELL E. SWINEHART
05-0460-0000

71
L. MICHAEL WOLFE
07-0010-0000

DETAIL "A"
Same Scale

+430 / 39
71 X
37.000 (121.39') N 0°02'54" E
71 T
+467 / 39
9.849(32.31') N 65°59'21" W
15.017(49.27') N 78°31'29" E
R/W
N0°02'54"E
+426 / 30
16.397(53.79')
13.252(43.48')
N15°59'38"E
+470
24.286
R/W

See Sheet No. 127

1+200.000

+259.422 / 58.908
N 0°02'54" E
R/W
86.007 (282.18')
13 WV3
Service Road No. 3
+220 END LA / 35
N 7°18'27" E
39.571 (129.83')
N 0°02'54" E
LA-R/W
46.586 (152.84')
13 WL1
13 WV1
N 89°57'06" W
35.000 (114.83')
+220 / 0
(0.052 S)
(0.077 W)
305mm 305mmCI
N 0°02'54" E
46.586 (152.84')
248.794 (816.25')
30.008 (98.45')
N 89°59'15" W
29.370 (96.36')
+250.027 / 29.370
END LA +220 / 35
20 WL
20 WV
20
RUSSELL E. SWINEHART AND
VERA I. SWINEHART
02-0800-0000
Match Line Station
CULTIVATED
02-0800-0
Dirt Drive
Wooded
Dish
+259.254 / 30
28.909 (94.84')
+259.079 / 0
(0.078 E)
1+300
Asphalt
9.071 (29.76')
305mmCI
Do not disturb with this project
+300 / 20
Wooded
50.844 (166.81')
N 10°34'16" W
30.550 (100.23')
R/W
N 10°34'16" W
LA-R/W
N 1°38'55" W
168.819 (553.87')
Grave
10.905(35.78')±
#1215
2 Sty. Brick
Fr. Garage
Fr. Shed
305mm
Swing Set
70
THOMAS R. EINGLE AND
VIRGINIA E. EINGLE
02-0805-0000
(0.024 S)
(0.000 W)
02-0800-0100
WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 6,T-3S,R-15E
CULTIVATED
+375.203 / 58.908
N 0°02'54" E
115.781 (379.86')
Wooded
05-0455-0000
70 E
Wooded
+259.254 / 30
N 0°02'54" E
115.621 (379.33')
R/W
70 WV
Wooded
Wooded
Do not disturb with this project
Ex. R/W
+259.079 / 0
(0.078 E)
1+300
Asphalt
124.526 (408.55')
305mmCI
Ex. R/W
381mm
457mm Tele. Ped.
Do not disturb with this project
70 WV
Ex. R/W
12.192 (40.00')
(0.052 N)
(0.083 E)
28.910(94.85')
30.004(96.86')
30.002(98.43')
N89°18'06"W
30.002 (98.43')
+374.875 / 30
See DETAIL "A"
N 0°02'54" E
51.125 (167.73')
75.125 (246.47')
R/W
+374.534 / 0
305mmCI
1+400
SECTION LINE
℄ SURVEY C.H. 128
120.046 (393.85')
SECTION 6
152mm Abndn.
102mm
203mmCPP
152mm
+374.194 / 30
72 WV
CULTIVATED
02-0820-0100
HENRY D. VENT
02-0820-0300
ROCK RUN CREEK
BRANCH OF
71 X
+443.602 / 37.233
7.333 (24.06') N 80°29'21" W
71 T
+458.398 / 34.767
6.935 (22.75') N 80°29'21" W
+442.397 / 30
7.603 (24.95')
102mm Abndn.
+450 / 30
7.548 (24.76')
Abndn.
71 WV
SECTION 1
153mmVIT
Ex. R/W
305mmCI
+457.258 / 27.926
+494.581 / 0
15.000 (49.21') N 9°30'39" E
72.801 (238.85') N15°59'38"E R/W
145.466 (477.25')
305mm
Wood Fence
153mmCI
+454.054 / 23.359
+471 / 21.950
+438.946 / 24.615
N4°42'19"W
N.987 (39.33')
15.160 (49.74')
17.005 (55.79')
+494.444 / 20
12.418(40.74') S75°58'18"E
+468 / 34
9.126(29.94') N86°22'51"W
+453.485 / 32.467
15.000 (49.21') N 3°37'09" E
+427 / 25.609
120.665 (395.88')
52.988(173.85')
14.701(48.23') S78°16'24"W
6.931(22.74') N86°22'51"W
+430 / 40
+438.515 / 31.533
38.471 (126.22') N 8°55'27" W
72 X
72 T
20.000 (65.62')
N 89°33'40" W
Woven Wire
Match Line Station
73 WV
73
CHARLES W. PENWELL
AND LINDA L. PENWELL
02-0825-00
02-0820-0300
N 0°02'54" E
25.419 (83.40')
29.093 (95.45') N 28°30'02" W

See Sheet No. 129

1+500.000

◎ - Iron Pipe (Found)
● - Iron Pin Set With I.D. Cap
✖ - Spike Set
○ - RR Spike (Found)
⌀ - Spike (Found)

PLAN COMPLETED:		
REH	4/12/99	Add Parcels 71T & 72T
REH	5/24/99	Name Change-Parcel 73
REH	6/30/99	Add-Do Not Disturb-Parcel 70
REH	9/28/99	Add Parcel 70E
REV.	DATE	DESCRIPTION

metric units

N

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - C.H. 128
STA. 1+200.000 TO 1+500.000

WYA/CRA-30-28.009/0.000

128/146

2098/2116

metric units

WYANDOT COUNTY
CRANE TOWNSHIP
SECT. 1, T-3S, R-14E

71

L. MICHAEL WOLFE

07-0010-0000

CULTIVATED

CULTIVATED

1+500.000 See Sheet No. 128

END R/W
ACQUISITION
STA. 1+520.000 CH 128

+520
10

10.000 (32.81')
N 89°57'06" W

+520
0

6.096 (20.00')

71
WV

N 15°59'38" E
72.801 (238.85') R/W

145.466 (477.25')

25.419 (83.40')

73
WV

29.093 (95.45') R/W
N 28°30'08" W

Ex. R/W

1+600

SECTION 1

Ex. R/W

1+700

Asphalt

℄

N 0°02'54" E

℄ SURVEY C.H. 128

SECTION LINE

381mm

Wood Fence

Flower Bed

381mm

Ex. R/W

SECTION 6

Ex. R/W

Dish

+520

20.936 (68.69')±

6.096

Grass

12382
2 Sty.
Fr.

Septic
Tank

Gravel

381mm

102mm

Wood Fence

305mm

Grass

Fr.
Gar.

Woven Wire

Gravel

Woven Wire

Fr.
Barn

457mm

Fr.
Gar.

Woven Wire

Ex. R/W
12.192
(40.00')

POND

LAWN

Match Line Station

73

CHARLES W. PENWELL
AND LINDA L. PENWELL

02-0825-00

02-0820-0300

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 6, T-3S, R-15E

● - Iron Pin Set With I.D. Cap

✱ - Spike Set

PLAN COMPLETED:		
REH	5/24/99	Name Change-Parcel 73
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN - C.H. 128
STA. 1+500.000 TO 1+778.150

WYA/CRA-30-28.009/0.000

129/146

2099
2116

metric units

SCALE IN METERS 1:1000

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
E.B. REST AREA STA. 33+960.000
RAMP E TO 34+640.000 RAMP H

WYA/CRA-30-28.009/0.000

130/146

2100/2116

Match Line Station 33+960.000 Rest Area Ramp E See Sheet No. 66

Match Line Station 34+640.000 Rest Area Ramp H See Sheet No. 69

FOR CONTINUATION SEE SHEET NOS. 67,131 & 131A

℄ R/W, Construction U.S.R. 30

S 89°35'00" E

℄ RAMP J
P.I. = Sta. 34+075.023
D = 24° 05' 33" (LT)
R = 160.000m
T = 34.144m
L = 67.279m
E = 3.603m
P.C. Sta. 34+040.879
P.T. Sta. 34+108.158

℄ RAMP J
P.I. = Sta. 34+469.309
D = 42° 44' 04" (RT)
R = 90.000m
T = 35.211m
L = 67.127m
E = 6.643m
P.C. Sta. 34+434.098
P.T. Sta. 34+501.225

℄ RAMP E
P.I. Sta. 34+044.095
Δ = 37° 07' 00" (RT)
R = 500.000m
Ls2 = 60.000m
Bs2 = 3° 26' 16"
LT2 = 40.008m
ST2 = 20.007m
Lc = 293.904m
T1 = 168.361m
T2 = 197.464m
Es = 27.584m
P.C.C. Sta. 33+875.734
C.S. Sta. 34+169.638
S.T. Sta. 34+229.638

℄ RAMP H
P.I. Sta. 34+618.363
D = 44° 03' 48" (RT)
R = 333.000m
Ls1 = 90.000m
Bs1 = 7° 44' 34"
LT1 = 60.057m
ST1 = 30.052m
Lc = 211.093m
T1 = 178.681m
T2 = 136.211m
Es = 26.781m
T.S. Sta. 34+439.682
S.C. Sta. 34+529.682
P.T. Sta. 34+740.776

22 HAROLD E. LARICK
02-0785-0000

23 TERRY KOEHLER(1/4), DENNIS KOEHLER(1/4), JEFF KOEHLER(1/4), DEAN KOEHLER(1/4)
02-0775-0000

24 DONNA MARIE FROST AND HAROLD E. LARICK
02-0925-0000

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 6, T-3S, R-15E

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 5, T-3S, R-15E

CULTIVATED

Wooded

Dirt Drive

C.H. 56

Ex. R/W

- Iron Pin Set With I.D. Cap
- Spike Set

PLAN COMPLETED:		
REH	2/3/99	Add Parcel 24X
REH	3/15/00	Revise Parcel 23WL
REV.	DATE	DESCRIPTION

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 6, T-3S, R-15E

metric units

72 HENRY D. VENT
02-0810-0000

CULTIVATED

For Continuation See Property Map Sheet No. 10

U.S. 30 +714.092 / 349.532

N 0°23'32" E

℄ RAMP F
P.I. Sta. 33+628.621
D = 43° 12' 07" (LT)
R = 333.000m
Ls2 = 90.000m
Bs2 = 7° 44' 34"
LT2 = 60.057m
ST2 = 30.052m
Lc = 206.087m
T1 = 133.330m
T2 = 175.745m
Es = 25.700m
P.R.C. Sta. 33+495.291
C.S. Sta. 33+701.379
S.T. Sta. 33+791.379

21 E

Wooded

BRANCH OF ROCK RUN CREEK

203mm Field tile

℄ LA-R/W

S 89°18'19" E
404.546 (1327.25')

203mm 203mm

S 89°25'55" E
401.729 (1318.01')

℄ LA-R/W

+115.820 / 348.471 U.S. 30

For Continuation See Sheet 131A

23 E

S 89°25'55" E
204.002 (669.30')

℄ LA-R/W

U.S. 30 +319.821 / 347.932

℄ RAMP G
P.I. Sta. 34+203.634
D = 37° 04' 16" (LT)
R = 500.000m
Ls1 = 60.000m
Bs1 = 3° 26' 16"
LT1 = 40.008m
ST1 = 20.007m
Lc = 293.506m
T1 = 197.242m
T2 = 168.140m
Es = 27.514m
T.S. Sta. 34+006.392
S.C. Sta. 34+066.392
P.C.C. Sta. 34+359.899

277.696 (911.07') N 0°17'30" E

22 WL HAROLD E. LARICK
02-0785-0000

POT Sta. 33+095.508

POT Sta. 33+882.968

Const. Limits

POT Sta. 33+969.947

S 44°35'00" E

TS Sta. 34+006.392

33+900

℄ RAMP F

34+000

S 89°35'00" E

Abndn. 203mm Field Tile

Const. Limits

189.532 (621.82')

399.532 (1310.80')

℄ LA-R/W

21 E

Wooded

Wooded

21 MARYELLEN RULE
02-0790-0000

0.600

ST Sta. 33+700.838

N 43°08'56" E

Abndn. Field tile

102mm

Abndn.

1650mm R.C.P.

+714.173 / 160 U.S. 30

CULTIVATED

CS Sta. N 53°47'34" E 1117.339 (384.97')

33+700

℄ RAMP F

Const. Limits

℄ LA-R/W

33+729.786

PC Sta. 33+729.786

102mm

S 46°47'26" E

PT Sta. 33+796.966

33+900

152mm San.

152mm San.

152mm San.

SC Sta. 34+066.392

℄ RAMP G

34+100

Const. Limits

152mm San.

Wooded

Wooded

523.472 (1717.43')

N 0°17'30" E

678.472 (2225.96')

PC Sta. 34+127.460

PT Sta. 34+194.744

23 WL

Wetland

Wooded

23 TERRY KOEHLER(1/4), DENNIS KOEHLER(1/4), JEFF KOEHLER(1/4), DEAN KOEHLER(1/4)
02-0775-0000

℄ LA-R/W

Match Line Station 33+660.000 See Sheet No. 65

21 WL

℄ RAMP I
P.I. = Sta. 33+765.028
D = 42° 46' 05" (LT)
R = 90.000m
T = 35.242m
L = 67.180m
E = 6.654m
P.C. Sta. 33+729.786
P.T. Sta. 33+796.966

℄ RAMP I
P.I. = Sta. 34+161.607
D = 24° 05' 39" (RT)
R = 160.000m
T = 34.146m
L = 67.283m
E = 3.603m
P.C. Sta. 34+127.460
P.T. Sta. 34+194.744

23 WL

Match Line Station 34+220.000 Rest Area Ramp G See Sheet No. 67

210.000 (688.98') N 0°23'32" E

102mm Field tile

Abndn.

102mm

Abndn. Field Tile

102mm

PCC Sta. 33+875.734

Abndn. Field Tile

102mm

33+700

33+800

33+900

℄ RAMP I S 89°34'16" E

34+000

34+100

34+200

S 89°35'00" E

℄ R/W, Construction U.S.R. 30

℄ Ramp E 33+800

Abndn. Field Tile

102mm

Abndn.

102mm

Abndn.

102mm

Abndn. Field Tile

102mm

Abndn. Field Tile

102mm

Const. Limits

257.491 (844.79')

S 82°53'34" E

℄ LA-R/W

22 WL

FOR CONTINUATION SEE SHEET NOS. 66,67&130

● - Iron Pin Set With I.D. Cap
✖ - Spike Set

PLAN COMPLETED:		
REH	4/12/99	Changed Parcel 21LL to 21E
REH	4/12/99	Changed Parcel 23LL to 23E
REH	3/15/00	Revised Parcels 23WL & 23E
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:1000

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
W.B. REST AREA STA. 33+660.000
RAMP F TO 34+220.000 RAMP G

WYA/CRA-30-28.009/0.000

131/146

2101
2116

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 6,T-3S,R-15E

metric units

CULTIVATED

+115.820
348.471 U.S. 30

LA-R/W ℄ S 89°25'55" E 401.729 (1318.01') ℄ LA-R/W ℄ S 89°25'55" E 204.002 (669.30') ℄ S 89°25'55" E 197.725 (648.70') ℄

SECTION 6 | SECTION 5

U.S. 30 +319.821 / 347.932

U.S. 30 +517.546 / 347.409

22 WL
HAROLD E. LARICK
02-0785-0000

23 WL

23 E

℄ RAMP G
P.I. Sta. 34+203.634
D = 37° 04' 16" (LT)
R = 500.000m
Lsl = 60.000m
θsl = 3° 26' 16"
LTl = 40.008m
STl = 20.007m
Lc = 293.506m
T1 = 197.242m
T2 = 168.140m
Es = 27.514m
T.S. Sta. 34+006.392
S.C. Sta. 34+066.392
P.C.C. Sta. 34+359.899

24 DONNA MARIE FROST AND
HAROLD E. LARICK
02-0925-0000

POT Sta. 34+095.508
POT Sta. 33+969.947
TS Sta. 34+006.392
34+000
℄ RAMP G
Const. Limits
523.472 (1717.43') N 0°17'30" E
Wooded
Wetland
Wooded
Wooded
277.696 (911.07') N 0°17'30" E
297.412 (975.76') N 0°11'28" E

23
TERRY KOEHLER(1/4),
DENNIS KOEHLER(1/4),
JEFF KOEHLER(1/4),
DEAN KOEHLER(1/4)
02-0775-0000

152mm San.
SC Sta. 34+066.392
34+100
152mm San.
Wooded
34+100
S 89°34'16" E
℄ RAMP I
P.I. = Sta. 34+161.607
D = 24° 05' 39" (RT)
R = 160.000m
T = 34.146m
L = 67.283m
E = 3.603m
P.C. Sta. 34+127.460
P.T. Sta. 34+194.744
N 0°17'30" E 678.472 (2225.96') PC Sta. 34+127.460
PT Sta. 34+194.744
34+200
34+300
34+400
℄ RAMP G
Abndn.
34+500
34+600
34+700
S 89°35'00" E
℄ R/W, Construction U.S.R. 30

+320.427
70.237

+350
60
PCC Sta. 34+359.899

S70°29'23"E
31.295(102.67')

LA-R/W ℄ S 86°11'29" E 169.013 (554.51') ℄ LA-R/W ℄ S 89°35'00" E 409.457 (1343.36') ℄

+518.717
50

CULTIVATED

102mm Abndn. Field Tile
1450mm (57") R.C.P.
102mm Field Tile Abndn.
S 89°35'38" E 5.56'
38mm (1½") Abndn. Conduit
1500mm or 1650mm C.M.P.
203mm Field Tile
1200mm or 1500mm R.C.P.
6.000m (19.97') 38mm (1½") Conduit
152mm San.

Const. Limits

FOR CONTINUATION SEE SHEET
NOS. 66,67&130

22 WL

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

℄ RAMP E
34+100 PT Sta. 34+108.158
℄ RAMP J
34+200
34+300
S 89° 34' 16" E
381mm
02-0775-0000
34+400

SECTION 6 380.003 (1246.73') ℄ SECTION 5 220.002 (721.79')

24 WL

PLAN COMPLETED:

REV.	DATE	DESCRIPTION
REH	3/14/00	Created Sheet

SCALE IN METERS 1:1000

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
Parcel 23E

WYA/CRA-30-28.009/0.000

131A/146

2101A/2116

metric units

32

MARGARET I. MILLER WITH
LIFE ESTATE TO RUSSELL
KELTNER AND MARIE KELTNER

02-0985-0000

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 4,T-3S,R-15E

CULTIVATED

Arc=36.621 (120.15'), Radius=27.300 (89.57')
Chd.=33.937 (111.34'), Brg.=N 27°07'36" W

+729.085
44.702

N 11°18'10" E
107.731 (353.45')
R/W

+698.954
29.088

Const. Limits

32 WD

32 WL1

Twin 550mm x 850mm
E.C.P.Type D

254mm

P.O.T. 0+652.046

C.R. 56

Ex. R/W

+680
9.144

N 46°11'31" W
27.514(90.27')
R/W

BEGIN LA

+723
10

305mm

N 0°15'58" E
Ex. R/W

9.144 (30.00')
N 89°44'02" W

+680
0

0+700

LA R/W

111.884 (367.07')
Const. Limits SECTION 4

℄ SURVEY S.R. 231
SECTION LINE

Asphalt

℄

℄

0.600

111.927 (367.21')N 0°15'58" E
408.833 (1341.32')
SECTION 3

+723
0

Ex. R/W

LA

203mm

152mm

172.339 (565.42')

LA R/W

N 0°15'58" E

43.000 (141.08')
N 0°15'58" E

27.954 (91.71')

10.000 (32.81')
N 89°44'02" W

Ex. R/W
18.288
(60.00')

+723 BEGIN LA
10

0.600

34 WL

BEGIN R/W
ACQUISITION
STA. 0+680.000 SR 231

Ex. R/W

Match Line Station 0+800.000 See Sheet No. 133

CULTIVATED

34

VIRGINIA SCHIFER

02-0040-0000

CULTIVATED

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3,T-3S,R-15E

● - Iron Pin Set With I.D. Cap
✖ - Spike Set
Ⓜ - Exist Monument Box

PLAN COMPLETED:		
REH	2/3/99	Revise Parcel 32WD
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN - S.R. 231
STA. 0+652.047 TO 0+800.000

WYA/CRA-30-28.009/0.000

132/146

2102
2116

FOR CONTINUATION SEE SHEET NO. 79

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 4,T-3S,R-15E

32
MARGARET I. MILLER WITH LIFE ESTATE TO RUSSELL KELTNER AND MARIE KELTNER
02-0985-0000

CULTIVATED

74
DANIEL J. CHRISTMAN AND SHEILA M. CHRISTMAN
02-0990-0000

Wood Barn
Wood Shed
Conc. Slab
Fr. Garage
Well
Gravel
2 Sty. Frame #2282

See Sheet No. 132

N 89°58'38" W
+834.824
24.078
+834.778
35
+880
35
14.078 (46.19')
N 11°18'10" E
R/W
107.731 (353.45')
+834.884
10
N 0°15'58" E
45.222 (148.37')
25.000(82.02')
N 89°44'02" W
45.116 (148.02')
LA-R/W
111.884 (367.07')
Const. Limits Field tile
152mm
Abndn.102mm
50.292 (165.00')
+880
10
111.927 (367.21')
N 0°15'58" E
Asphalt
50.292 (165.00')
10.000 (32.81')
10.000(32.81')
172.339 (565.42')
LA-R/W
N 0°15'58" E
+885.219
0
0.600
+834.927
0
34 WL

Match Line Station 0+800.000

CULTIVATED

U.S. 30 +766.129
105
+895.339
10
0.600
9.829 (32.25')±
LA-R/W
Wood Sheds
+820
107.012
22.988 (75.42')
N 8°07'20" W
+820
130

34
VIRGINIA SCHIFER
02-0040-0000

℄ RAMP N
P.I. Sta. 37+878.804
Δ = 24° 57' 15" (LT)
R = 230.000m
Ls1 = 60.000m
Ls2 = 80.000m
θs1 = 7° 28' 24"
θs2 = 9° 57' 52"
LT1 = 40.036m
LT2 = 53.418m
ST1 = 20.032m
ST2 = 26.744m
Lc = 30.173m
T1 = 82.221m
T2 = 89.909m
Es = 6.493m
T.S. Sta. 37+796.583
S.C. Sta. 37+856.583
C.S. Sta. 37+886.756
S.R.S. Sta. 37+966.756

34 T
Wood Barn
Fr. Garage
Conc.
Const. Limits
S 81°52'40" W
70.000 (229.66')
S 84°01'00" W 80.056 (262.65')
133.964 (439.52')
Abndn.

CULTIVATED

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3,T-3S,R-15E

FOR CONTINUATION SEE SHEET NO. 80

PT Sta. 37+658.632
℄ RAMP K
825mm R.C.P. or 1050mm C.M.P.
45.0m(147.64')-102mm (4") Collector (By Others)
N 86°49'10" E (1259.70')
383.956
0.600
LA-R/W
12.9m(43.32')-102mm (4") Conduit
Const. Limits
37+700
℄ R/W Construction U.S.R. 30
Field tile
Abndn.
254mm
+746.650
100
+897.444
10
U.S. 30
Abndn. 102mm
Field tile
102mm
+740
90
U.S. 30
+906.367
18.038
+744.860
112.137
+885.176
10
12.009 (39.40')
S 41°44'48" E
32 WL
32 WD
32 WLI
32 T
12.268 (40.25')
0.900
152mm R.C.P. or 600mm C.M.P.
℄ SURVEY EXIST. SR-231
408.833 (1341.32')
Twin 1200mm C.M.P.
Ex. R/W 18.288 (60.00')
Sta. 0+932.418 S.R. 231=
Sta. 37+765.516 K=
Sta. 37+754.766 N
TS Sta. 37+796.583
37+800
N 88°41'30" E
SC Sta. 37+856.583
℄ RAMP N
Abndn. 102mm
Field tile
Const. Limits
37+900

℄ RAMP L
P.I. Sta. 37+672.111
Δ = 26° 41' 45" (RT)
R = 230.000m
Ls1 = 80.000m
Ls2 = 60.000m
θs1 = 9° 57' 52"
θs2 = 7° 28' 24"
LT1 = 53.418m
LT2 = 40.036m
ST1 = 26.744m
ST2 = 20.032m
Lc = 37.164m
T1 = 93.680m
T2 = 85.938m
Es = 7.318m
S.R.S. Sta. 37+578.431
S.C. Sta. 37+658.431
C.S. Sta. 37+695.595
S.T. Sta. 37+755.595

Sta. 1+000.000 S.R. 231=
Sta. 37+771.504 U.S.R. 30

U.S.30 +779.515
54.325
SECTION 4
169.694 (556.74')
N 0°15'58" E
SECTION LINE
SECTION 3
+054.913
0
Sta. 1+072.299 S.R. 231=
Sta. 37+778.750 M=
Sta. 37+789.991 L
℄ RAMP M
37+800
Abndn.
Field tile
102mm
254mm
Const. Limits
Iron Pin Set With I.D. Cap
Spike Set

+679.941
68.555
203mm
N 0°15'58" E
36.839(120.86')
+685.315
105
21.463 (398.50')
Woven Wire
222.048 (728.50')
S 89°59'21" E
100.585 (330.00')
Fr. #12274
Wood Shed
Dog Kennel
Gravel
Fr. Garage
Wood Shed
Const. Limits
N 89°20'53" E
40.315 (132.27')
N 81°52'40" E
31 WL
33 WL
33 WL
34 WL

31
MARGARET I. MILLER
02-0970-0000
44.077(144.61')
S 0°15'58" W
Field Tile
CS Sta. 37+695.595

33
OSCAR HOWARD AND RAMONA F. HOWARD
02-0980-0000
86.4m(283.46')-381mm (15") Conduit

ST Sta. 37+755.595

See Sheet No. 134

Match Line Station 1+100.000

PLAN COMPLETED:		
REH	2/3/99	Add Parcel 33T
REH	4/12/99	Revise Parcel 33WL, delete Parcel 33T
REV.	DATE	DESCRIPTION

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - S.R. 231
STA. 0+800.000 TO 1+100.000

WYA/CRA-30-28.009/0.000

133/146

2103
2116

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 4,T-3S,R-15E

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

PLAN - S.R. 231
RIGHT OF WAY PLAN
STA. 1+100.000 TO 1+400.000

WYA/CRA-30-28.009/0.000

134/146

2104
2116

See Sheet No. 133 & 79
Match Line Station 1+100.000

31 MARGARET I. MILLER
02-0970-0000

82 MYRON V. KING AND
ALICE L. KING
02-0965-0000

33 OSCAR HOWARD AND
RAMONA F. HOWARD
02-0980-0000

75 JUNIOR D. MILLER AND
MARGARET I. MILLER
02-0975-0000

34 VIRGINIA SCHIFER
02-0040-0000

35 HARLEY LAVERNE WEATHERHOLTZ AND
PRISCILLA ANN WEATHERHOLTZ,
HARLEY LAVERNE WEATHERHOLTZ AND
PRISCILLA ANN WEATHERHOLTZ TRUSTEES
02-0050-0000

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3,T-3S,R-15E

Arc=8.418(27.62'),Rad.=8.300(27.23')
Chd.=8.062(26.45'),Brg.=N40°05'49"E

Abndn. 203mm Woven Wire Field tile

93.20m(305.77')-152mm(6") Conduit

Service Road No. 6 Const. Limits R/W

Abndn. Const. Limits 121.800 (399.6')

N 11°02'25" E 102.332 (335.73')

Arc=6.557(21.51'),Rad.=21.000(68.90')
Chd.=6.530(21.42'),Brg.=N19°50'56"W

Arc=13.153(43.15'),Rad.=26.300(86.29')
Chd.=13.017(42.71'),Brg.=N25°22'05"E

CULTIVATED

Conc. Blk. Garage

Woven Wire

Lawn

1 Sty. Fr. #12704 Conc.

SEPTIC TNK

Gravel & Dirt

Const. Limits

N 46°48'19" E 65.912 (216.25') R/W

N 89°44'02" W 1322.288 (4339.00')

SECTION 4

SECTION 3

L SURVEY EXIST. S.R. 231 N 0°15'58" E SECTION LINE

Ex. R/W

LA-R/W

Asphalt

203mmCMP

305mmField tile

152mmCPP

Gas Regulator Facility
50' x 100' Lease
Lease Bk. Vol. 14,Pg. 259

END R/W ACQUISITION
STA. 1+315.000 SR 231

CULTIVATED

Woven Wire w/1 Barbed Wire

● - Iron Pin Set With I.D. Cap
✖ - Spike Set

PLAN COMPLETED:		
REH	11/16/98	Change 31WV to 31WD,33WV to 33WD,82WV to 82WD
REH	2/3/99	Add Parcel 33TI & 82E
REH	4/12/99	Revise Parcel 33WL, delete Parcel 33TI
REH	4/12/99	Change Parcel 34LL to 34E
REH	5/24/99	Name Change-Parcel 35
REH	7/23/99	Delete Parcel 35WD,Add Parcel 35T
REH	7/27/99	Show drive-Parcel 35,Septic-Parcel 75
REV.	DATE	DESCRIPTION

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3, T-3S, R-15E

36

TERRY KOEHLER (1/4),
DENNIS KOEHLER(1/4),
JEFF KOEHLER(1/4),
DEAN KOEHLER(1/4)

02-0030-0000

CULTIVATED

CULTIVATED

P.O.T. 0+385.489

Ex. R/W

Ex. R/W

Ex. R/W

0+400

WYANDOT COUNTY SECTION 3

234.51m (769.39')

N 0°49'59" E

SECTION LINE

CRAWFORD COUNTY SECTION 2

18.288m (60.00') Ex. R/W

0+500

℄ SURVEY T.H. 10

℄ SURVEY T-11

Asphalt

Asphalt

Elec. Fence

Ex. R/W

Ex. R/W

Match Line Station 0+600.000 See Sheet No. 136

CULTIVATED

CULTIVATED

76

MITCHELL N. WELCH AND
DYANA L. WELCH

37-00-10780-000

Ex. R/W

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2, T-3S, R-15E

● - Iron Pin Set With I.D. Cap
✖ - Spike Set
⊘ - Spike (Found)

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

metric units

N

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN - T.H. 10
STA. 0+385.489 TO 0+600.000

WYA/CRA-30-28.009/0.000

135/146

2105
2116

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3, T-3S, R-15E

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

WYA/CRA-30-28.009/0.000

RIGHT OF WAY PLAN - T.H. 10
STA. 0+600.000 TO 0+900.000

136/146

2106/2116

For Continuation See Property Map Sheet No. 12

Match Line Station 0+600.000 See Sheet No. 135

Match Line Station 0+900.000 See Sheet No. 137

DETAIL "A"
SAME SCALE

+810 62
12.000 (39.37') N 89°10'01" W
N 0°49'59" E 30.000 (98.43')
+840 62
+810 50
+820 50
27.000 (88.58') N 89°10'01" W
10.000 (32.81') N 0°49'59" E
64 T
DETAIL "A"
16.003 (52.50') N 89°10'01" W
R/W
LA-R/W
+820 33.997
LA
+840 35
20.025 (65.70') N 2°02'16" W

36
TERRY KOEHLER (1/4), DENNIS KOEHLER(1/4), JEFF KOEHLER(1/4), DEAN KOEHLER(1/4)
02-0030-0000

CULTIVATED

37
DONALD E. ALBAN AND MARY JEAN ALBAN
02-1085-0000

37 ER

SEE DETAIL "A" THIS SHEET

64
CHARLES R. PRINCE AND LINDA L. PRINCE

+787.703 63.594
+810 62
+840 62
+851.317 63.594
N 0°49'59" E 63.614 (208.71')
S 89°22'26" W 690.409 (2265.12')
CULTIVATED
Metal Shed
Gravel
102mm
64 ER
S 89°22'26" W 31.187 (102.32')
21.377 (70.13')±
Field Tile
+810 50
Propane Tank
64
N 89°10'01" W 28.000 (91.86')
S 89°22'26" W
BEGIN LA
+852.030 35.603
0.600
+788.497 32.417
N 2°02'16" W
LA-R/W
87.788 (288.02')
12.045 (39.52')
51.568 (169.19')
Wood Deck
Antenna
Mobile Home #12736
+840 35
64 WV
02-0029-0000
64 WL
37 WL
+852.937 0
+330.727 139.820 U.S.30
N 89°10'01" W 35.000 (114.83')
35.615 (116.85')±
Gravel
Ex. R/W
Const. Limits
287.063 (941.81')
103.363 (339.12')
Const. Limits
52mmkn.

234.511 (769.39')
13.000 (42.65') N 89°10'01" W
+620 13
N 8°14'50" W 101.269 (332.25')
R/W
+720 28.982
N 2°02'16" W 68.583 (225.01')
R/W
36 WV
+789.323 0
Ex. R/W
SECTION 3
305mmCPP
WYANDOT COUNTY
℄ SURVEY T.H. 10 0+700
169.323 (555.52')
N 0°49'59" E
Abndn. SECTION LINE
℄ SURVEY T-11
Asphalt
102mm
Field tile
CRAWFORD COUNTY
Elec. Fence
Ex. R/W 18.288 (60.00')
+620 0
SECTION 2
76 WV
305mm
152mmCPP 12.937 (42.44')
0+800
50.677 (166.26')
Asphalt
+840 0
10.032 (W)
102mm
N 0°49'59" E
Const. Limits
Abndn.
EXIST. R/W
Elec. Fence
32.428 (106.39')
S 89°36'59" W 31.598 (103.67')
77 WV
77 WL
Wooded
N 89°10'01" W
LA
35.000 (114.83')
0.600
203mm Field tile
Gravel
+620.000 20
20.000 (65.62') N 89°10'01 W
R/W
170.388 (559.02') S 4°44'01" W
63.140 (207.15')
R/W
+789.994 31.590
50.122 (164.44') S 4°44'01" W
103.699 (340.22')
LA R/W
S 0°49'59" W
13.639 (42.78')±
+727 27.295
33.669 (110.46') N 77°05'15" E
+735 60
40.320 (132.28') N 62°51'50" E
+753.910 95.610
Arc=28.453(93.35'), Rad.=26.300(86.29')
Chd.=27.085(88.86'), Brg.=N 31°52'15" E
14.477 (47.50')
N0°52'41"E
+777.117 109.576
+791.595 109.587
S89°53'49"W
+791.410 98.286
11.302 (37.08')
+840.000 35
BEGIN LA
#2935 Double Wide Mobile Home
Wood Deck
Elec. Fence
Do not Disturb Garage
+895.984 70.000
13.000(42.65') N1°48'40"W
Frame Garage
Gravel
2.840(9.32') S88°11'20"W
+896.115 72.837
10.250(33.63') N1°48'40"W
+885.876 73.310
8.101(26.58') N88°29'01"W
+885.780 81.411
Sat. Dish
40.316(132.27') N 4°10'47" W

BEGIN R/W ACQUISITION STA. 0+620.000 TH 10

76
MITCHELL N. WELCH AND DYANA L. WELCH
37-00-10780-000
CULTIVATED

76 WVI
CULTIVATED
Service Access No. 14
Const. Limits

77
MICHAEL V. STROUSE
37-00-10727-000
Wooded
Elec. Fence
66.711 (218.87')
S 89°36'59" W
+791.028 80.281
N 1°30'59" E 94.759 (310.89')
Wooded
Const. Limits
77 T
18.010 (59.09')
Prop. Drive
+882.000 99.367
Const. Limits
90.596 (297.23') N 1°30'59" E
Elec. Fence
37-00-10676-001

● - Iron Pin Set With I.D. Cap
✖ - Spike Set
⊗ - Spike Found

PLAN COMPLETED:		
1 REH	11/23/98	Changed Service Road to Service Access
2 REH	2/3/99	Revise Bearing-Parcels 76WV & 77WV
3 REH	2/3/99	Revise Parcel 77T
4 REH	4/12/99	Changed Parcel 37LL to 37E
5	11/16/00	CHANGED PARCELS 37E TO 37ER & 64E TO 64ER
REV.	DATE	DESCRIPTION

FOR CONTINUATION SEE SHEET NO. 84

metric units

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3, T-3S, R-15E

37
DONALD E. ALBAN AND
MARY JEAN ALBAN
02-1085-0000
CULTIVATED

37 ER
37 WL
37 WV
37 WL
77 WL
77 T
38 WV
38

0.600
LA-R/W
N 73°25'00" E
221.700 (727.36')
Const. Limits
102mm Abndn. Field tile
152mm Abndn. Field tile
℄ R/W Construction U.S.R. 30
39+700
+939.707
U.S. 30 +319.219
45
N 2°02'16" W
LA-R/W
87.788 (288.02')
P.T. Sta. 39+375.580 BK U.S.R. 30=
P.C. Sta. 0+000.000 AHD U.S.R. 30=
P.O.T. Sta. 1+000.000 T.H. 10
Ex. R/W
Const. Limits
70.023 (229.74')
Asphalt
103.363m (339.12')
152mmVit. 203mmSteel
Ex. R/W
102mm Field tile
+943.363
0.000
N 89°43'01" W
35.002 (114.83')
103.699 (340.22')
LA-R/W
S 0°49'59" W
25.841 (84.78')
+943.699
35
US 30 +023.402
40
Gravel
Const. Limits
MICHAEL V. STROUSE
37-00-10727-000
13.000(42.65')
N1°48'40"W
+908.970
69.400
Silo
Gravel
Const. Limits
Hog Pen
Wood Barn
CULTIVATED
40.316(132.27')
S47°10'47"E
Gate
Do not Disturb
Elec. Fence
0.600
47.50m(155.84')-102mm (4") Conduit
LA-R/W
N 70°55'01" E
319.729 (1048.98')
Const. Limits
102mm Abndn. Field tile
152mm Field tile Abndn.
102mm Abndn.
Field tile Abndn.
Match Line Station 0+900.000 See Sheet No. 136

CULTIVATED
0.600
LA-R/W
N 73°56'20" E
171.575 (562.91')
+035.857
35
+353.423
45
U.S. 30
02-1085-0000
CULTIVATED
U.S. 30 +386.465
143.898
+140.000 END LA
35
N 0°49'59" E
104.143 (341.68')
LA-R/W
R/W
N 5°13'54" E
260.768 (855.54')
WYANDOT COUNTY
SECTION 3
287.063m (941.81')
N 0°49'59" E
196.637 (645.14')
SECTION 2
CRAWFORD COUNTY
U.S. 30 +419.683
132.872
+140.000
0
Ex. R/W
℄ SURVEY T.H. 10
260.000 (853.02')
SECTION LINE
℄ SURVEY T-11 ℄ 203mmCMP
Ex. R/W
Const. Limits
Asphalt
Ex. R/W
18.288 (60.00')
35.000 (114.83') N 89°10'01" W
35.000m (114.83') S 89°10'01" E LA
Match Line Station 1+200.000 See Sheet No. 138

16.6m(54.46')-102mm (4") Conduit
85.921 (281.89')
S 0°49'59" W
LA-RW
80.000 (262.47')
R/W
S 0°49'59" W
+140.000 END LA
35
+050.732
40
US 30
+054.079
40
TR 10
CULTIVATED
0.600
LA-R/W
N 70°14'30" E
227.082 (745.02')
Const. Limits
102mm Abndn. Field tile
152mm Field tile Abndn.
102mm Abndn.
Field tile Abndn.
0+700

38
CHARLES EDWIN McCLAIN,
KAREN S. HOSTETLER AND
LILLIAN I. McCLAIN (LIFE ESTATE)
37-00-10676-001

CRAWFORD COUNTY
TOD TOWNSHIP
SECT, 2, T-3S, R-15E

● - Iron Pin Set With I.D. Cap
✱ - Spike Set
✲ - Spike Found

FOR CONTINUATION SEE SHEET NO. 85

PLAN COMPLETED:		
1 REH	2/3/99	Revise Parcel 77T
2 REH	4/12/99	Changed Parcel 37LL to 37E
3	11/6/00	CHANGED PARCEL 37E TO 37ER
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - T.H. 10
STA. 0+900.000 TO 1+200.000

WYA/CRA-30-28.009/0.000

137/146

2107
2116

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 3, T-3S, R-15E

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2, T-3S, R-15E

Match Line Station 1+200.000 See Sheet No. 137

Fr. Shed
Fr. Shed
Fr. Shed
Fr. Shed
Fr. Shed
Gravel
Gravel
Gravel

37
DONALD E. ALBAN AND
MARY JEAN ALBAN
02-0010-0000

CULTIVATED

1&2 Sty. Fr.
#12432
4.057(13.31')±
SEP TNK

Conc. Blk. & Fr. Barn
17.753 (58.24')±
102mm

37 WV
R/W
N 5°13'54" E
260.768 (855.54')

SECTION 3 Ex. R/W ℄ SURVEY T.H. 10
SECTION 2 Ex. R/W ℄ SURVEY T-11
203mmCMP
+300
Ex. R/W
152mm Field tile
260.000 (853.02')
N 0°49'59" E
Asphalt

MATCH LINE
N 8°06'36" W
132.475 (434.63')
131.516 (431.48')
N 8°06'36" W
37 XI

15.000 (49.21')
N8°53'24"E
+394.074
148.051
+408.926
145.949
N 8°06'36" W
132.475 (434.63')
131.516 (431.48')
N 8°06'36" W
37 XI
MATCH LINE

CULTIVATED

15.031 (49.31')
N 5°13'54" E
+375.507
16.884
+390.493
15.731
9.535 (31.28')
N 5°13'54" E
+400
15
15.000 (49.21')
N 89°10'01" W
+400
0
1+400
Asphalt

SECTION 3
WYANDOT COUNTY Ex. R/W
SECTION LINE
CRAWFORD COUNTY Ex. R/W
SECTION 2
Ex. R/W 18.288 (60.00')
1+500

38 WV
181.108 (594.19')
N 5°30'26" W
R/W
80.000 (262.47')
R/W
S 0°49'59" W
+220.000
35.000
+400
15
15.000 (49.21')
N 89°10'01" W
END R/W
ACQUISITION
STA. 1+400.000 TH 10

CULTIVATED

38
CHARLES EDWIN McCLAIN,
KAREN S. HOSTETLER AND
LILLIAN I. McCLAIN (LIFE ESTATE)

37-00-10677-000

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

PLAN COMPLETED:		
REV.	DATE	DESCRIPTION

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - T.H. 10
STA. 1+200.000 TO 1+500.000

WYA/CRA-30-28.009/0.000

138/146

2108/2116

metric units

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 36,T-2S,R-15E

47
VERNON C. KENT AND
SUZANNE R. KENT
37-00-10640-000

Cultivated

78
GILBERT H. BUCHER AND
SHIRLEY F. BUCHER
37-00-10516-000

SECTION 1
EXIST. R/W
N 89°46'43" W
30.008 (98.45')
+562.484
112.665
N 1°06'00" W
79.303 (260.18')
+641.761
114.719
457mm
Field tile
68.906 (226.07')
N 1°06'00" W
+631.452
84.442
+562.570
82.657
47 XV
N 39°28'25" E
120.850 (396.49')
457mm
Field tile
90.666 (297.46')
N 39°28'25" E
+735.560
38.520
+740.000
40.000
N0°23'03"E
80.000 (262.47')
+701.824
27.275
35.561 (116.67')
63.246 (207.50')
+680.000
20.000
23.004 (75.47')
N 18°03'03" W
127.30m(417.65')-457mm (18")
Conduit
Abndn.
Prop. 457mm
Const. Limits
EXIST. R/W
47 WV-1
+562.778
9.144
N 4°54'25" W
117.723 (386.23')
+654.229
0.000
℄ Survey T-21
SECTION 36
SECTION 31
0+600
0+700
NO°23'03"E-91.439(300.00')
(KNAUSS ROAD) T-21
NO°23'03"E 165.771(543.87')
257.210 (843.86')
Asphalt
Woven Wire
R/W
91.844 (301.33')
N 5°40'35" E
79 WV
+562.790
0.000
END R/W ACQUISITION
STA. 0+562.790 T-21
+654.255
17.615
17.615 (57.79')
25.855(84.83')
N 5°40'35" E
61.847 (202.91')
N 14°25'14" E
+680.000
20.000
+740.000
35.000
80.025 (262.55')
N 1°48'59" E
48 WV
Woven Wire/Barbed Wire
S 89°41'59" E
EXIST. R/W
Const. Limits
Abndn.
102mm
Field tile
48 WL
LA-R/W
+820.000
37.000
BEGIN LA
120.037 (393.82')
N 1°48'59" E
132.00m(433.07')-457mm (18")
Collector (By Others)
Match Line Station 0+900.000 See Sheet No. 96

Barn
9.186 (30.14')
N 2°47'44" E
+820.000
40.000
Block Bldg.
BEGIN LA
Wood Sheds
0.762
(Do not disturb)
1/2 Sty. Brick
Ant.
Cistern
#3248
2 Sty. Frame
Clothesline Poles
47 WL-1
R/W
+829.172
40.510
LA-R/W
S 89°46'35" E
40.510 (132.91')
To Grade
+820.000
40.000
9.285 (30.46')
0+800
Asphalt
457mm Abndn.
+820.000
0.000
+829.285
0.000
LA
37.000 (121.39')
N 89°36'57" W
Const. Limits
Field tile
EXIST. R/W
Abndn.
102mm
Field tile
Gravel
Sty. Frame
N 89°46'35" W
27.766 (91.09')
N 0°23'03" E
59.284 (194.50')
Weathervane
(Do not Disturb)
78 ER
78 T
+888.378
68.275
24.473 (80.29')
S 89°46'35" E
+888.446
43.803
N 2°47'44" W
21.587 (70.82')
N 2°47'44" E
59.366 (194.77')
#3266
78 WL
47 WL
N 89°46'35" W
43.803 (143.71')
Const. Limits
Abndn.
102mm
Field tile
59.284 (194.50')
360.000 (1181.10')
+888.569
0.000
457mm Abndn.
291.431 (956.14')
N 0°23'03" E
Const. Limits
48 WL

N 0°23'03" E
9.45 (30.00')
N 89°41'28" W
9.144 (30.00')
SECTION 6
NEVADA WYNFORD ROAD
C-18
Asphalt
+562.802
9.144
Woven Wire
EXIST. R/W
Res.
Cultivated
79
EDWARD L. WHEELER AND
JUDY K. WHEELER
21-00-04365-000

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 31,T-2S,R-16E

48
CHARLES A. SCOTT,
PAUL E. SCOTT,
KATHRYN E. BALL AND
MYRTLE M. SCOTT (LIFE ESTATE)
21-00-04244-000

Cultivated

● - Iron Pin Set With I.D. Cap
✱ - Spike Set
☼ - Spike (Found)

PLAN COMPLETED:		
1 REH	2/3/99	Delete Parcel 47T, Revise 47X
2 REH	3/19/99	Added Field Drive to Parcel 48WV
3 REH	4/12/99	Added Parcel 78T
4 REH	5/17/99	Added Note-Parcel 78
5 REH	8/13/99	Add Drive Pipe-Parcel 47
6 REH	8/13/99	Change Parcel 47X to 47XV, Pipe Sizes
7	11/6/00	CHANGED PARCEL 78E TO 78 ER
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
0 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN - T-21
STA. 0+553.645 TO 0+900.000

WYA/CRA-30-28.009/0.000

139/146

2109
2116

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 36,T-2S,R-15E

metric units

Cultivated

47
WV2

+120
53

+181.784
53

Arc=38.237(125.45'),Rad.=26.300(86.29')
Chord=34.957(114.69'),Brg.=N42°02'05"E

N 6°27'54" E
69.861 (229.20')

Const. Limits

N 0°23'03" E
R/W
61.784 (202.70')

Service Access No. 17

47

VERNON C. KENT AND
SUZANNE R. KENT

37-00-10640-000

Cultivated

+207.905
29.768

N 0°23'03" E
147.130 (482.71')

LA-R/W

28.391 (93.15')
R/W

N 11°00'14" E
81.394 (267.04')

+260.000
20.000

END LA +180.000
35.000

47
WL

S 89°36'57" E
35.000 (114.83')

LA

47
WV

+369.488
9.102

+369.488
0.000

S 89°36'57" E
9.102 (29.86')

N 6°04'06" E
110.029 (360.99')

R/W

EXIST. R/W

300mm

SECTION 36

1+100

291.431 (956.14')

N 0°23'03" E 360.000 (1181.10')

SECTION 31

1+200

Asphalt

℄ Survey T-21

9.144
(30.00')
EX. R/W
(60.00')

9.144
(30.00')
EX. R/W

102mm Field tile

1+300

189.488 (621.68')

N 0°23'03" E - 189.488 (621.68')

Asphalt

1+400

(KNAUSS ROAD) T-21

Asphalt

S 89°36'57" E
9.144 (30.00')

EXIST. R/W

Const. Limits

EXIST. R/W

Const. Limits

S 89°36'57" E
35.000 (114.83')

+180.000
0.000

48
WV-1

110.025 (360.97')
N 5°16'42" W

R/W

+369.488
9.144

48
WL

81.394 (267.04')
N 10°14'08" W

R/W

+260.000
20.000

END R/W ACQUISITION
STA. 1+369.488 T-21

119.354 (391.58')
N 2°01'00" W

LA-R/W

END LA +180.000
35.000

Match Line Station 1+080.000 See Sheet No. 96

48

CHARLES A. SCOTT,
PAUL E. SCOTT,
KATHRYN E. BALL AND
MYRTLE M. SCOTT (LIFE ESTATE)

21-00-04244-000

Cultivated

Cultivated

457mm
Field tile

457mm

152mm

152mm
Field tile

EXIST. R/W

T-111 Asphalt

SHROLL ROAD

EXIST. R/W

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 31,T-2S,R-16E

● - Iron Pin Set With I.D. Cap
✖ - Spike Set

PLAN COMPLETED:		
REH	11/16/98	Change Service Road to Service Access
REH	2/3/99	Revise Parcel 47WV2
REV.	DATE	DESCRIPTION

N

SCALE IN METERS
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN - T-21
STA. 1+080.000 TO 1+400.000

WYA/CRA-30-28.009/0.000

140/146

2110/2116

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 31,T-2S,R-16E

51
RAY V. KOCHER AND
ADALINE L.M. KOCHER,
TRUSTEES
21-00-03931-000

Cultivated

+617
50.000

N 1°45' 18" W
193.065 (633.41')

N 46°21'37" W
38.931(127.73')

+590
21.953

30.422 (99.81')

+620
27

N 4°35'30" W
225.641 (740.29')

R/W

Const. Limits

457mm

+513
9

9.000(29.53')
S 89°43'45" W

+513
0

N 9°49'12" W
108.503 (355.98')

Const. Limits

R/W

51
WV

EXIST. R/W

750mm or 900mm C.M.P.

0+600

0+700

0+800

℄ Survey C-22

SECTION 31
SECTION 32

℄ Asphalt

7.620
(25.00')
EX. R/W

332.000 (1089.24')
N 0°16'15" W
(BETHEL ROAD) C-22

EXIST. R/W

ITEL

+810.000
75.000

+810.000
55.000

N 0°16'15" W
35.000 (114.83')

S 89°43'45" W
20.000(65.62')

51
T

Gravel

+845.000
75.000

102mm
Field tile

+845
44

BEGIN LA

GRASS RUN
BRANCH OF
CRAWFORD CREEK

N 89°43'45" E
31.000 (101.71')

N 1°49'10" E
LA-R/W

109.660
(359.78')

R/W

51
WL

S 89°43'45" W
44.000 (144.36')

LA

86.20m(282.81')-
533mm (21")
Conduit

Gravel

S 0°16'15" E
170.688 (560.00')
79.248 (260.00')

+845.000
0.000

N 89°43'45" E
35.000 (114.83')

55
WL2

BEGIN LA +845.000
35.000

79.205 (259.86')
LA-R/W
N 0°16'15" W
48.750 (159.94')

MATCH LINE STA. 0+880.000 SEE SHEET NO. 102

+513
9

9.000(29.53')
S 89°43'45" W

BEGIN R/W ACQUISITION
STA. 0+513.000 C-22

Const. Limits
109.041 (357.75')
N 10°49'59" E

+597
25.486

30.333
N 76°23'12" E
(99.52')

23.439
(76.90)

+620
30

55
WVI

750mm or 900mm

+604
55

35.903 (117.79')
N 12°36'15" E

+639
63

Cultivated

Const. Limits

55
WVI

Service Access No. 20

243.977 (800.45')
N 0°17'00" E

R/W

55
WVI

Const. Limits

55

JERRY D. RINDFUSS AND
DORIS A. RINDFUSS

21-00-03837-000

Cultivated

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 32,T-2S,R-16E

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

PLAN COMPLETED:		
REH	11/16/98	Change Service Road to Service Access
REH	2/3/99	Revise Parcels 51WL,51WV,51T,55WV & 55WVI
REH	2/3/99	Name Change Parcel 51
REH	4/5/99	Changed bearing south line of 51T
REH	7/13/99	Revised R/W line-Service Access 20
REV.	DATE	DESCRIPTION

metric units

N

SCALE IN METERS
0 10 20
1:500

FEDERAL PROJECT NO.
F 49(68)

STATE JOB NO.
017600

RIGHT OF WAY PLAN - C-22
STA. 0+520.000 TO 0+880.000

WYA/CRA-30-28.009/0.000

141/146

2111
2116

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 31,T-2S,R-16E

52

ALLAN L. REINHARD AND
JEAN A. REINHARD

21-00-04120-000

80

DONALD E. KALB AND
CHRISTINE T. KALB

21-00-04120-00

Wood Barn

21-00-03889-000

21-00-03890-000

Well

Fr. Garage

Asphalt

Aban. Well

#3496 2 Sty. Brick

to Res.

MATCH LINE STA. 1+100.000 SEE SHEET NO. 102

END LA +140.000
35.000

N 0°16'15" W
20.000 (65.62')

+160.000
35.000

N 0°16'15" W
LA-R/W
104.098 (341.53')

R/W

N 7°11'44" E
166.945 (547.72')

76mm Field tile

Plug

Abndn. 76mm

52 WL

52 WV-1

LA

Const. Limits

N 89°43'45" E
35.000 (114.83')

EXIST. R/W

Asphalt
124.312 (407.85')

℄ Survey C-22

SECTION 31
SECTION 32

1+200

N 0°16'15" W
185.503 (608.61')
228.906 (751.01')

1+300

(BETHEL ROAD) C-22

Asphalt

43.404 (142.40')

1+400

Asphalt

+TEL

EXIST. R/W

EX. R/W 7.620 (25.00')

+325.530
13.307

N 89°50'45" E
13.307(43.66')

+368.891
7.620

80 WV

N 7°11'44" E
43.763 (143.58')

N 89°50'45" E
7.620 (25.00')

53 WL

+140.000
0.000

Const. Limits

N 89°43'45" E
35.000 (114.83')

53 WV

Abndn. 102mm

210.678 (691.20')
N 7°44'18" W

Plug

+325.503
0.000

+368.906
0.000

N 89°50'45" E
7.620 (25.00')

+368.922
7.620

95.471 (313.23')
LA-R/W
N 0°16'15" W

END LA +140.000
35.000

+160.000
35.000

S 0°16'15" E
20.000 (65.62')

102mm Field tile

END R/W ACQUISITION
STA. 1+368.922 C-22

Cultivated

53

HARRY W. WALTON AND
CAROLYN I. WALTON

21-00-03786-000

Cultivated

CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 32,T-2S,R-16E

● - Iron Pin Set With I.D. Cap
✗ - Spike Set

PLAN COMPLETED:		
REH	4/5/99	Name Change Parcel 53
REV.	DATE	DESCRIPTION

metric units

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - C-22
STA. 1+100.000 TO 1+400.000

WYA/CRA-30-28.009/0.000

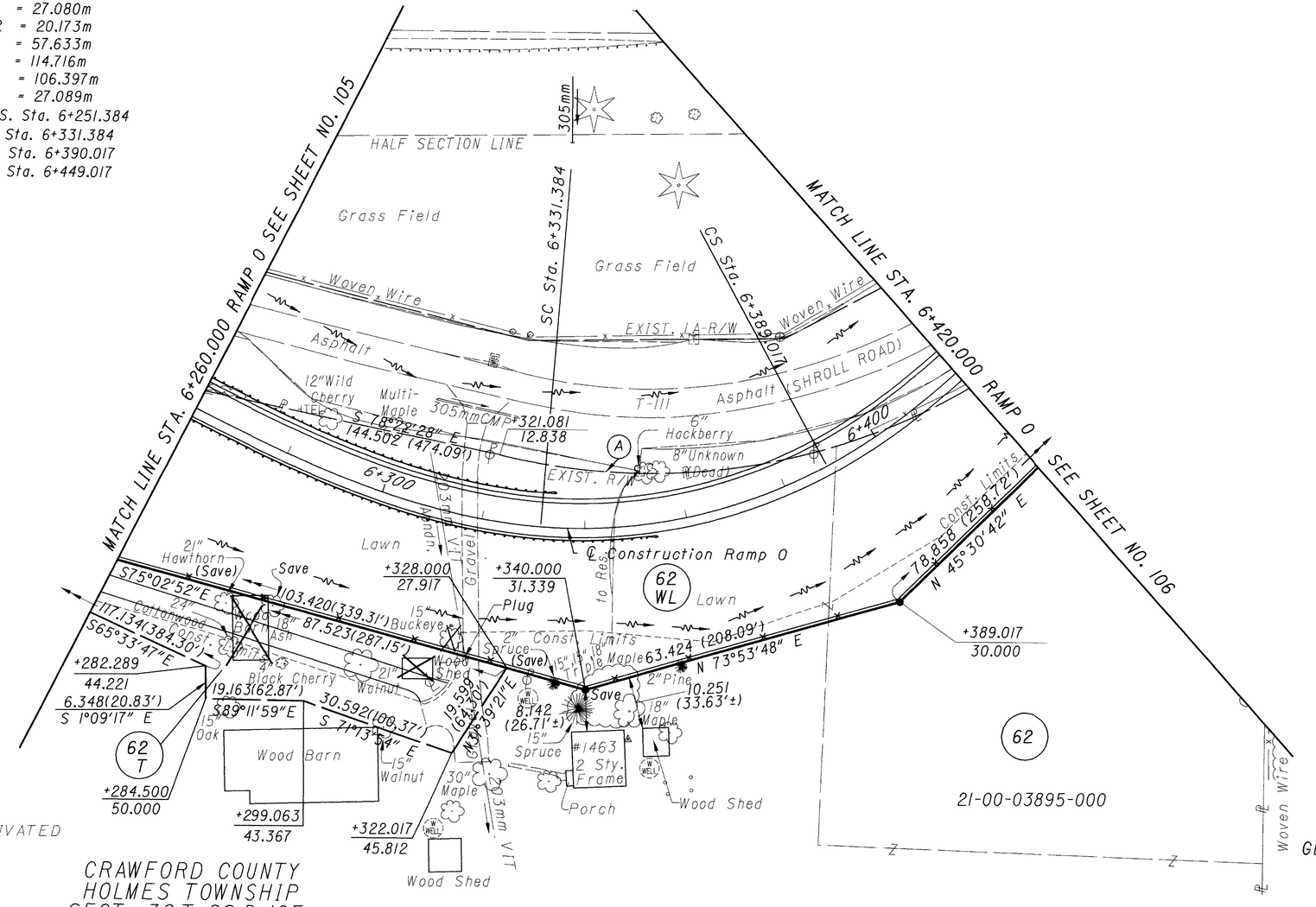
142/146

2112/2116

metric units

RAMP O
P.I. Sta. 6+366.099
Δ = 73° 07′ 43″ (LT)
R = 100.000m
Ls1 = 80.000m
Ls2 = 60.000m
θs1 = 22° 55′ 06″
θs2 = 17° 11′ 19″
LT1 = 53.787m
LT2 = 40.190m
ST1 = 27.080m
ST2 = 20.173m
Lc = 57.633m
T1 = 114.716m
T2 = 106.397m
Es = 27.089m
P.R.S. Sta. 6+251.384
S.C. Sta. 6+331.384
C.S. Sta. 6+390.017
S.T. Sta. 6+449.017

61
ARTHUR J. BEALL, JR. AND
MARJORIE J. BEALL
21-00-03626-000



CRAWFORD COUNTY
HOLMES TOWNSHIP
SECT. 32,T-2S,R-16E

62
CHARLES A. SCOTT,
PAUL E. SCOTT,
KATHRYN E. BALL AND
MYRTLE M. SCOTT (LIFE ESTATE)
21-00-04246-000

EXISTING RIGHT OF WAY CURVE DATA

CURVE	RADIUS	LENGTH	CHORD LENGTH	CHORD BEARING
(A)	122.865 (403.10′)	127.367 (417.87′)	121.740 (399.41′)	N 73°44′30″ E

● - Iron Pin Set With I.D. Cap

PLAN COMPLETED:		
REH	7/23/99	Revise Takes-Parcels 62WL & 62T
REH	7/27/99	Update Topo-Show Field Tile
REV.	DATE	DESCRIPTION

N

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN - RAMP O
STA. 6+280.000 TO 6+420.000

WYA/CRA-30-28.009/0.000

143/146

2113/2116

metric units

SCALE IN METERS 1:1000

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN INFIELD AREA U.S. 23 INTERCHANGE

WYA/CRA-30-28.009/0.000

144/146

2114/2116

For Continuation of Parcel 10X See Sheet 5I

S 48°34'51" E 112.341m (368.57')

+980.180 34.108

+860.302 34.310

CS Sta. 28+987.495

LA-R/W

S 62°02'17" E 175.548 (575.94')

CS Sta. 29+107.495

+210 70

+160 40

S77°14'33"E 51.623 (169.37')

76.758 (251.83') LA-R/W

53.309(174.90') N 33°18'24" E

48.455(158.97') N 32°21'35" E

31.516(103.40')

10 X

FREDERICK P. SMALLEY AND MIRIAM SMALLEY 05-0580-0000

10

S 60°57'48" E 237.265 (778.43')

345.540 (1133.66') LA-R/W

6.573 (21.56')

+560 50

+288 68.015

+320 66.792

10 WL

Const. Limits

0.600

305mm

CULTIVATED

SECTION LINE

SECTION 2 SECTION 3

℄ W.B. U.S. 30
P.I. Sta. 28+788.931
Δ = 58° 47' 45" (LT)
R = 560.000m
Ls = 120.000m
θs = 6°08'20"
LT = 80.048m
ST = 40.044m
Lc = 454.662m
Ts = 376.098m
Es = 83.998m
T.S. Sta. 28+412.833
S.C. Sta. 28+532.833
C.S. Sta. 28+987.495
S.T. Sta. 29+107.495

℄ W.B. U.S. 30 29+000 29+100 29+200 29+300 29+400

S 61°42'11"E

254mm Abndn. Field tile

102mm Field tile

℄ RAMP B

TWIN 1500mm C.M.P.

℄ R/W, Construction. U.S.R. 30

462.80m(1518.3')-381mm (15") Conduit

381mm Field tile

℄ W.B. U.S. 30

05-0580-0000

CS Sta. 28+985.423

28+900

℄ Ramp B

℄ RAMP B
P.I. Sta. 29+169.182
Δ = 142° 30' 25" (RT)
R = 305.000m
Ls = 82.000m
θs = 7° 42' 07"
LT = 54.719m
ST = 27.380m
Lc = 676.601m
Ts = 942.359m
Es = 646.882m
T.S. Sta. 28+226.822
S.C. Sta. 28+308.822
C.S. Sta. 28+985.423
S.T. Sta. 29+067.423

ST Sta. 29+067.423

S 70° 11' 12" E

PC Sta. 29+135.020

PC Sta. 29+193.960

℄ RAMP B
P.I. Sta. 29+213.330
Δ = 7° 10' 10" (RT)
R = 1,250.000m
T = 78.310m
L = 156.416m
E = 2.451m
P.C. Sta. 29+135.020
P.T. Sta. 29+291.436

PT Sta. 29+291.436

152mm Abndn. Field tile

102mm Field tile Abndn.

Abndn. Field tile

305mm

E.B. U.S.30 29+151.566 135.851

℄ E.B. U.S. 30
P.I. Sta. 29+138.153
Δ = 102° 35' 11" (LT)
R = 571.200m
Ls = 145.000m
θs = 7° 16' 20"
LT = 96.748m
ST = 48.408m
Lc = 877.717m
Ts = 787.175m
Es = 344.681m
T.S. Sta. 28+350.978
S.C. Sta. 28+495.978
C.S. Sta. 29+373.695
S.T. Sta. 29+518.695

574.00m (1883.20')-381mm (15") Conduit

FREDERICK P. SMALLEY AND MIRIAM SMALLEY 05-0590-0000

CULTIVATED

ST Sta. 29+518.695

N 80°39'35" E

N 79°27'58" E

CS Sta. 29+373.695

℄ E.B. U.S. 30 29+500

℄ RAMP A

1050mm R.C.P. or (1060mm C.M.P.)

Const. Limits

LA-R/W

0.600

404.720 (1327.82')

N 78°49'54" E

Ramp A +189.126 38.980

10 WL

05-0605-0000

N 89°29'02" E 336.668 (1104.55')

℄ SURVEY EXIST. U.S. 23

S 1°42'15" E 325.754 (1068.75')

Ex. LA-R/W

S 1°42'15" E 246.495(808.71')

+127.381 30.481 U.S. 23

111.672 (366.38') Woven Wire

Asph./Conc.

13+100

TWIN 1500mm C.M.P.

5 WL

JAMES A. SMALLEY (1/2) AND FREDERICK P. SMALLEY AND MIRIAM G. SMALLEY (1/2) 05-0595-0100

WYANDOT COUNTY CRANE TOWNSHIP SECT. 3, T-3S, R-14E

● - Iron Pin Set With I.D. Cap
✱ - Spike Set

PLAN COMPLETED:		
REH	2/3/99	Revise Parcel 10X & Delete 10X3
REV.	DATE	DESCRIPTION

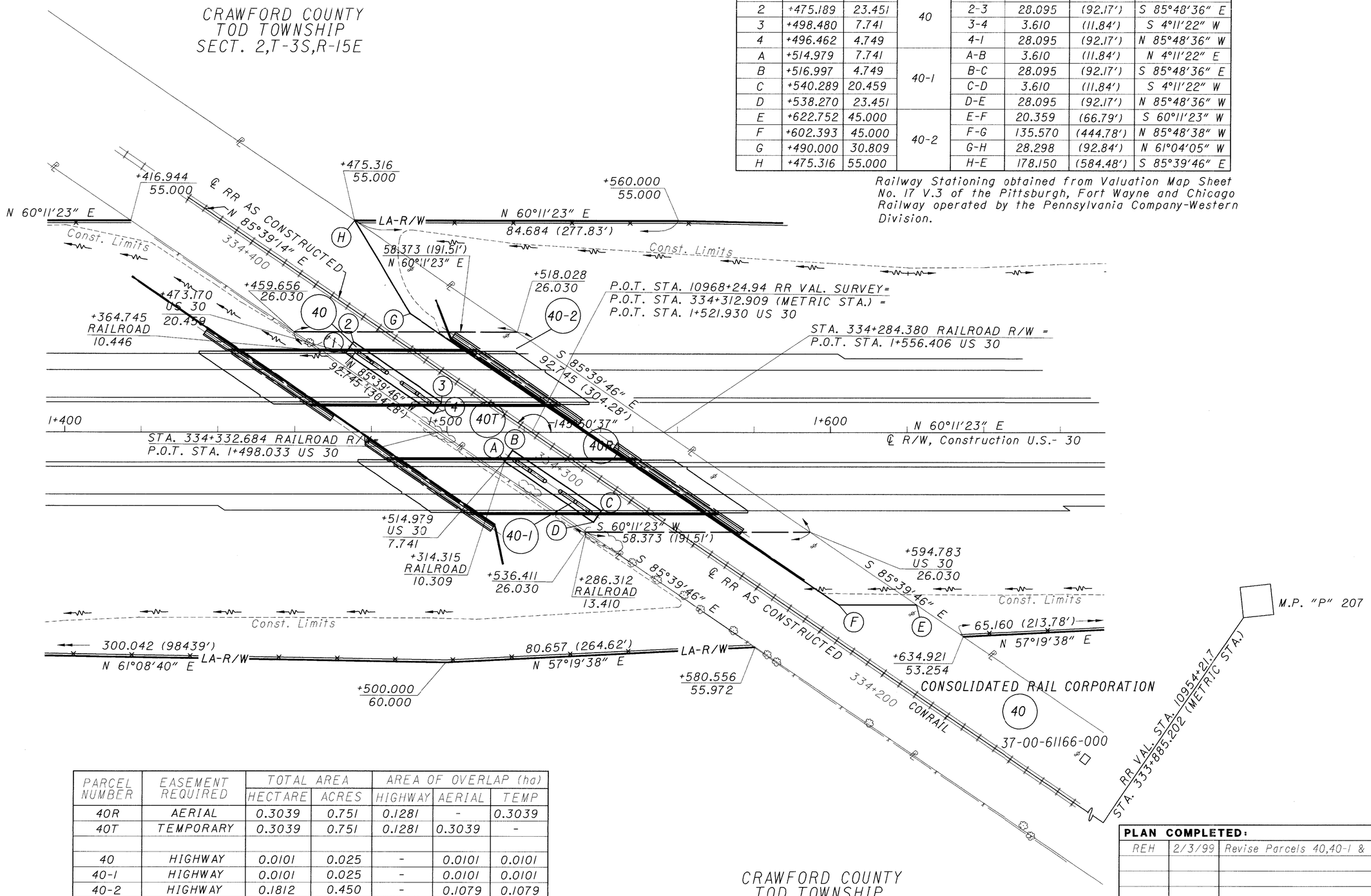
CONSOLIDATED RAIL CORPORATION PLAT

metric units

	ROADWAY		PERMANENT EASEMENTS FOR PIER FOOTERS & ABUTMENT				
POINT	STATION	OFFSET	PARCEL	COURSE	DISTANCE		BEARING
1	+473.170	20.459	40	1-2	3.610	(11.84')	N 4°11'22" E
2	+475.189	23.451		2-3	28.095	(92.17')	S 85°48'36" E
3	+498.480	7.741		3-4	3.610	(11.84')	S 4°11'22" W
4	+496.462	4.749		4-1	28.095	(92.17')	N 85°48'36" W
A	+514.979	7.741	40-1	A-B	3.610	(11.84')	N 4°11'22" E
B	+516.997	4.749		B-C	28.095	(92.17')	S 85°48'36" E
C	+540.289	20.459		C-D	3.610	(11.84')	S 4°11'22" W
D	+538.270	23.451		D-E	28.095	(92.17')	N 85°48'36" W
E	+622.752	45.000	40-2	E-F	20.359	(66.79')	S 60°11'23" W
F	+602.393	45.000		F-G	135.570	(444.78')	N 85°48'38" W
G	+490.000	30.809		G-H	28.298	(92.84')	N 61°04'05" W
H	+475.316	55.000		H-E	178.150	(584.48')	S 85°39'46" E

Railway Stationing obtained from Valuation Map Sheet No. 17 V.3 of the Pittsburgh, Fort Wayne and Chicago Railway operated by the Pennsylvania Company-Western Division.

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2,T-3S,R-15E



PARCEL NUMBER	EASEMENT REQUIRED	TOTAL AREA		AREA OF OVERLAP (ha)		
		HECTARE	ACRES	HIGHWAY	AERIAL	TEMP
40R	AERIAL	0.3039	0.751	0.1281	-	0.3039
40T	TEMPORARY	0.3039	0.751	0.1281	0.3039	-
40	HIGHWAY	0.0101	0.025	-	0.0101	0.0101
40-1	HIGHWAY	0.0101	0.025	-	0.0101	0.0101
40-2	HIGHWAY	0.1812	0.450	-	0.1079	0.1079

CRAWFORD COUNTY
TOD TOWNSHIP
SECT. 2,T-3S,R-15E

PLAN COMPLETED:

REV.	DATE	DESCRIPTION
REH	2/3/99	Revise Parcels 40,40-1 & 40-2

SCALE IN METERS 0 10 20 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RAILROAD PLAT

WYA/CRA-30-28.009/0.000

145/146

2115
2116

FOR CONTINUATION SEE SHEET NO. 74

metric units

Wooded

LA-R/W

Const. Limits

+155.943
46.139

29
WL

S 81°25'35" E
199.801 (655.52)

0.600

Const. Limits

LA-R/W

CULTIVATED

Dirt Drive

Mon. Box at Section Corner

29

I/S/F INC.
02-1000-0000

388.069 (1273.19')

189.644 (622.19')

SECTION 5

SECTION 4

S 0°15'19" W

29
E1

Wooded

22.169 (72.73')
N 30°06'56" E
CREEK

Wooded

Grassy Lane

Wooded

51.718 (169.68')
N 23°22'04" E
SWORD

16.817 (55.17')
N 32°43'07" E

CULTIVATED

BROKEN

92.632 (303.91')
S 29°15'10" W

CULTIVATED

33.528 (110.00')
S 32°44'41" E

24.384 (80.00')
S 41°44'41" E

23.774 (78.00')
N 88°15'19" E

67.280 (220.73')
N 51°15'19" E

WYANDOT COUNTY
ANTRIM TOWNSHIP
SECT. 4,T-3S,R-15E

● - Iron Pin Set With I.D. Cap
Ⓜ - Exist. Monument Box

PLAN COMPLETED:		
REH	6/30/99	Created Sheet
REV.	DATE	DESCRIPTION

SCALE IN METERS 1:500

FEDERAL PROJECT NO. F 49(68)

STATE JOB NO. 017600

RIGHT OF WAY PLAN
PARCEL 29E1

WYA/CRA-30-28.009/0.000

146/146

2116
2116

SPECIAL PROVISIONS

(MSE WALL)
REINFORCED EARTH WALLS

CO-RT-SEC

WYA/CRA-30-18.009/0.000
PID: 10289

DATE: 9/10/99

RECEIVED
SEP 10 1999

REINFORCED EARTH WALLS

1.0 Description

This work consists of the ~~design and~~ construction of Reinforced Earth Retaining Walls in accordance with this specification. ~~See Section 7.0 for Reinforced Earth Retaining Wall Design requirements. The design submittal shall include detailed design calculations and a set of drawings describing the proposed retaining wall. The contractor submittal will include a site plan, an elevation drawing of the full length of the retaining wall and representative cross-sections at each design change. Drainage details are to be included as well as detailed construction specifications.~~

2.0 Materials

The Contractor shall make arrangements to acquire the reinforced concrete face panels, galvanized steel reinforcing strips, fasteners, joint materials and all necessary incidentals from the Reinforced Earth Company, 760 Pasquinelli Drive, Suite 344, Westmont, Illinois 60559 (Telephone: 630-655-0044) or at 8614 Westwood Center Drive, Suite 1100, Vienna, Virginia 22182 (703-821-1175).

The Contractor shall provide certification of the Reinforced Earth wall components as per CMS 101.061. Certification shall also be provided for the concrete, reinforcing steel and tie strips which are components of the Reinforced Earth wall. (Refer to the section of the proposal concerning steel produced in the United States.)

2.1 Reinforced Concrete Face Panels

Material used in concrete for face panels shall conform to the requirements of CMS Item 499.02 except as stated in this document. Cement shall be Types I, II, or III and shall conform to the requirements of AASHTO M 85-96. Concrete shall have a compressive strength at 28 days in accordance with Section 2.1.7 Compressive Strength. Concrete shall contain 6 $\pm$ 2 percent air. Air entraining admixture shall conform to AASHTO M 154-89. Retarding agents, accelerating agents or any additive containing chloride shall not be used without approval from the Engineer.

Reinforcing steel, tie strips, 19 mm (3/4 inch) dowels, PVC pipe, and lifting inserts shall be set in place to the dimensions and tolerances shown on the plans prior to casting.

2.1.1. Testing and Inspection

Acceptability of the concrete for the precast panels will be determined on the basis of compression tests, certifications and visual inspection. The concrete strength requirements for the precast panels shall be considered attained regardless of curing age when compression test results indicate that strengths conform to 28-day specifications.

The Supplier shall furnish facilities and perform all necessary sampling and testing in an expeditious and satisfactory manner. Panels utilizing Type I or II cement shall be considered acceptable for placement in the wall when 7-day initial strengths exceed 85 percent of 28-day requirements. Panels utilizing Type III cement shall be considered acceptable for placement in the wall prior to 28 days only when compressive strength test results indicate that the strength exceeds the 28 day specification.

2.1.2. Casting

The panels shall be cast on a flat area with the front face down. Tie strip guides shall be set on the backside. The concrete in each panel shall be placed without interruption and shall be consolidated by the use of a concrete vibrator, supplemented by such hand-tamping as may be necessary to force the concrete into the corners of the forms and prevent the formation of stone pockets, air bubbles or cleavage planes. Clear form oil of the same manufacture shall be used throughout the casting operation and shall be approved by the Reinforced Earth Engineer.

Special care shall be given to the tie strips. The tie strips shall be positioned to within 25 mm (1 inch) of their specified locations. No concrete or debris shall be permitted between the projecting tabs of the tie strips which could interfere with the installation and bolting of the reinforcing strips.

2.1.3. Curing

The curing method will be dependent on the concrete precaster's capabilities and shall be as per instructions by the Reinforced Earth Company. The reinforced concrete panels shall be cured for a sufficient length of time so that the concrete will develop the specified compressive strength.

Any production lot which does not conform to the strength requirements of Section 2.1.7-Compressive Strength, shall be rejected.

2.1.4. Removal of Forms

The forms shall remain in place until they can be removed without damage to the panel.

2.1.5. Concrete Finish and Tolerances

The front face of the reinforced concrete panels shall have an architectural surface finish treatment as shown on the plans. The backside of the reinforced concrete panels shall have an unformed surface finish and shall be rough screeded to eliminate open pockets of aggregate and surface distortions in excess of 6 mm (1/4 inch). All panels, barriers and coping shall be sealed with an epoxy sealer in conformance with Item Special "Sealing of Concrete Surfaces, Epoxy", unless special sealers have been called for on the plans.

2.1.6. Tolerances

All panels shall be manufactured within the following tolerances:

a. Panel Dimensions

Lateral position of tie strips within 25 mm (1 inch). All other dimensions within 5 mm (0.2 inch).

b. Panel Squareness

Squareness as determined by the difference between the two diagonals shall not exceed 13 mm (1/2 inch).

c. Panel Surface Finish

Surface defects on smooth formed surfaces measured on a length of 1500 mm (5 feet) shall not exceed 3 mm (0.12 inch). Surface defects on textured finished surfaces measured on a length of 1500 mm (5 feet) shall not exceed 8 mm (0.312 inch).

2.1.7. Compressive Strength

Acceptance of the concrete panels with respect to compressive strength will be determined on the basis of production lots. A production lot is defined as a group of panels that will be represented by a single compressive strength sample and will consist of either 40 panels or a single day's production, whichever is less.

During the production of the concrete panels, the manufacturer will randomly sample the concrete in accordance with AASHTO T 141-93. A single compressive strength sample, consisting of a minimum of four test cylinders, will be randomly selected for every production lot.

Cylinders for compressive strength tests shall be 150 mm (6 inch) by 300 mm (12 inch) specimens prepared in accordance with AASHTO T 23-93. For every compressive strength sample, a minimum of two cylinders will be cured in the same manner as the panels and tested at approximately 7 days. The average compressive strength of these cylinders, when tested in accordance with AASHTO T 22-92, will provide a test result which will determine the initial strength of the concrete. In addition, two cylinders shall be cured in accordance with AASHTO T 23-93 and tested at 28 days. The average compressive strength of these two cylinders, when tested in accordance with AASHTO T 22-92, will provide a compressive strength test result which will determine the compressive strength of the production lot.

If the initial strength test results indicate a compressive strength in excess of 27.5 MPa (4000 psi), then these test results will be utilized as the compressive strength test result for that production lot and the requirement for testing at 28 days will be waived for that particular production lot.

Acceptance of a production lot will be made if the compressive strength test result is greater than or equal to 27.5 MPa (4000 psi). If the compressive strength test result is less than 27.5 MPa (4000 psi), the acceptance of the production lot will be based on its meeting the following acceptance criteria in its entirety:

a. 90% of the compressive strength test results for the overall production shall exceed 27.5 MPa (4000 psi).

b. The average of any six consecutive compressive strength test results shall exceed 27.5 MPa (4000 psi).

c. No individual compressive strength test result shall fall below 24.8 MPa (3600 psi).

In the event that a production lot fails to meet the specified compressive strength requirements, the production lot shall be rejected. Such rejection shall prevail unless the Manufacturer, at his own expense, obtains and submits evidence acceptable to the Engineer that the strength and quality of the concrete placed within the panels of the production lot is acceptable. If such evidence consists of tests made on cores taken from the panels within the production lot, the cores shall be obtained and tested in accordance with the specifications of AASHTO T 24-93.

2.1.8. Rejection

Panels shall be subject to rejection because of failure to meet any of the requirements specified above. In addition, any or all of the following defects may be sufficient cause for rejection:

a. Defects that indicate imperfect molding.

b. Defects indicating honeycombed or open textured concrete.

c. Defects in the physical characteristics of the concrete, such as broken or chipped concrete.

d. Stained form face, due to excess form oil or other contaminations.

e. Signs of aggregate segregation.

f. Broken or cracked corners.

g. Tie strips bent or damaged.

h. Lifting inserts not usable.

i. Exposed reinforcing steel.

j. Cracks at the PVC pipe or pin.

k. Insufficient concrete compressive strength.

l. Panel thickness in excess of 5 mm (3/16 inch) plus or minus from that shown on the plans.

The Engineer will decide if an attempt may be made to repair a defective panel. The contractor or supplier shall make the repairs at his own expense. If the repairs are made to the Engineer's satisfaction, the panel will be acceptable.

2.1.9. Marking

The date of manufacture, the production lot number and the piece mark shall be clearly scribed on the back surface of each panel.

2.1.10. Handling, Storage and Shipping

All panels shall be handled, stored, and shipped in such a manner as to avoid chipping, cracking,fracturing, and excessive bending stresses. To avoid bending the tie strips the panels in storage shall be supported on firm blocking located immediately adjacent to the strips.

2.1.11. Reinforcing Steel

The reinforcing steel shall be Grade 420 (Grade 60) epoxy coated and shall satisfy all applicable requirements of CMS 509, reinforcing steel.

2.2 Reinforcing Strips and Tie Strips

Tie strips shall be shop-fabricated from hot rolled steel conforming to the requirements of ASTM A 570M, Grade 345 (Grade 50) or equivalent.

Reinforcing strips shall be hot rolled from bars to the required shape and dimensions. The physical and mechanical properties of the reinforcing strips shall conform to ASTM A 572M Grade 450 (Grade 65) or equivalent.

Reinforcing strips and tie strips shall be galvanized in conformance with ASTM A 123.

All reinforcing strips and tie strips shall be carefully inspected to ensure they are true to size and free from defects that may impair their strength and durability.

2.3 Fasteners

Fasteners shall be 13 mm (1/2 inch) diameter, hexagonal cap screw bolts and nuts, which are galvanized and conform to ASTM A325M.

2.4 Joint Materials

2.4.1. Bearing Pads

Rubber bearing pads shall be a type and grade recommended by the Reinforced Earth Company, such as "Bearing Blok" or equivalent.

2.4.2. Inclined, Vertical and Horizontal Joints

The material to be attached to the rear side of the facing panels covering the vertical and horizontal joints between facing panels, shall be a polypropylene filter fabric, such as Q-Trans 80, or equal as approved by the Engineer. The adhesive used to attach the fabric material to the rear of the facing panel shall be Pliobond 5001, as manufactured by Goodyear Rubber Company, or equal as approved by the Reinforced Earth Engineer.

2.5 Dowels

The 19 mm (3/4 inch) dowel bars shall be made of a material that is specified by the Reinforced Earth Company.

2.6 Select Granular Embankment Material

The select granular embankment material used in the reinforced structure volume shall be Item 304 Aggregate Base or Item 703.11, Granular Material Type 2; deviations from these are as follows:

1) No slag shall be allowed.

2) The total percent passing the 0.075 mm (number 200) sieve shall be 0 to 7 percent prior to the placement operation. The acceptance samples shall be taken from the stockpile. The Contractor shall transport and handle the material to minimize the segregation of the material prior to the placement.

The select granular embankment material shall also conform to the requirements listed below:

1) AASHTO T 289-91 The pH range of the material shall be between 5.0 and 10.0.

2) AASHTO T 288-91 The resistivity of the material shall be greater than 3,000 ohm-cm. If the resistivity is found to be greater than 5,000 ohm-cm, then AASHTO Test T 290-95 and T 291-94 may be waived.

3) AASHTO T 291-94 The chloride levels of the material shall be less than 100 ppm.

4) AASHTO T 290-95 The sulfate levels of the material shall be less than 200 ppm.

The Contractor or supplier, as his agent, shall furnish the Engineer a Certificate of Compliance from an independent Testing Laboratory, certifying that the above materials comply with the applicable contract specifications. A copy of all test results performed by the contractor or his supplier necessary to assure contract compliance shall also be furnished to the Engineer.

Acceptance will be based on a letter of certification that the material to be utilized is within the parameters of the applicable contract notes and specifications. This letter shall be submitted along with the accompanying test reports to the Project Engineer. The Engineer shall provide written acceptance of material upon review of accompanying test reports, and visual inspection of the material by the Engineer.

2.7 Leveling Pad Concrete

The leveling pad concrete shall be a maximum 150 mm (6 inch) thick, having a compressive strength not less than 17.2 MPa (2500 psi) and be of sufficient strength to adequately support the panels at the bottom of the wall in a level position during installation. The leveling pad may be constructed of precast concrete. Precast concrete leveling pads are advantageous to use when many short segment leveling pad steps are required.

2.8 Filter Fabric and Porous Backfill

As per Item 518, a 150 mm (6 inch) perforated plastic pipe shall be placed below the bottom row of reinforcing strips. One drain pipe shall be located behind the leveling pad and the other shall be at opposite end of the reinforcing strips. The pipe shall be continuous and be placed in the bottom portion of the reinforced fill. Positive gravity flow of the drainpipe shall be provided. Perforations in the pipe shall be smaller than the surrounding porous backfill. Filter fabric shall be installed at the required plan locations and shall satisfy the requirements of CMS Item 712.09, Type B.

3.0 Construction Requirements

3.1 Wall Excavation

Unclassified excavation shall be in accordance with ODOT Item 503 except that the limits of excavation shall be as shown in the plans.

3.2 Foundation Preparation

The foundation for support of the reinforced select granular embankment volume shall be graded level for a width equal to or exceeding the length of reinforcing strips. Prior to wall construction, the foundation soil shall be leveled, rolled with a smooth wheel vibratory roller and the exposed soil compacted to at least 95% Standard Proctor density. Any foundation soils found to be unsuitable shall be removed and replaced, as directed by the Engineer.

The unreinforced concrete leveling pad shall be provided as shown on the plans. The leveling pad shall be cured a minimum of 12 hours before placement of the wall facing panels.

3.3 Wall Erection

Precast panels are handled by means of a lifting device connected to the lifting insert which is cast into the upper edge of the panels. Panels shall be installed in successive horizontal lifts in the sequence shown on the plans as embankment placement proceeds. As embankment material is placed behind panels, the panels shall be maintained in vertical position by means of temporary wooden wedges placed in the panel joints on the external side of the wall. External bracing may be required for the initial lift. Vertical tolerance (plumbness) and horizontal alignment tolerance shall not exceed 20 mm (3/4 inch) when measured along a 3000 mm (10 feet) straight edge. The maximum allowable offset in any panel joint shall be 20 mm (3/4 inch). The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed 13 mm (1/2 inch) per 3000 mm (10 feet) of wall height.

Reinforcing strips shall be placed normal to the face of the wall, unless otherwise shown on the plans or directed by the Engineer. Prior to placement of the reinforcing strips, embankment shall be compacted in accordance with Section 3.4.

3.4 Select Granular Embankment Material Placement

Select granular embankment material placement shall closely follow the erection of each lift of panels. At each reinforcing strip level, the select granular embankment material should be roughly leveled before placing and bolting the reinforcing strips. Reinforcing strips shall be placed normal to the face of the wall unless the plans show that the reinforcing strips must avoid an obstruction. The maximum select granular embankment lift thickness shall not exceed 200 mm (8 inch) loose and shall closely follow panel erection. The Contractor shall decrease the select granular embankment lift thickness if necessary to obtain the specified density.

At the end of each day's operations, the Contractor shall shape the last level of embankment to rapidly direct rain water runoff away from the wall face. The contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

Compaction of the select granular embankment material shall be in accordance with all pertinent requirements of Item 203.12. The moisture content of the select granular embankment material prior to and during compaction shall be uniformly distributed throughout each layer and shall conform to requirements of Item 203.11.

Embankment compaction shall be accomplished without disturbance or distortion of reinforcing strips and panels. Compaction within 1 000 mm (3 feet) of the backside of the wall panels shall be achieved by at least 3 passes of a light mechanical tamper. The select granular embankment placed within 1 000 mm (3 feet) of the backside of the wall panels does not have to satisfy density test requirements, but must be placed in 150 mm (6 inch) to 200 mm (8 inch) thick lifts which are uniformly compacted per above.

4.0 Inspection

The Reinforced Earth Company shall provide a company representative who shall monitor the precast operation sufficiently to ensure that the operation complies with all the above requirements and the representative shall submit documentation to this effect to the Engineer.

Documentation shall be furnished by the company representative for any panel which he deems acceptable but which is subject to rejection under 2.1.8.

The Reinforced Earth Company shall provide sufficient on-site technical assistance by a company representative to ensure that the Contractor and the Engineer fully understand the proper construction procedures and operations of the Reinforced Earth Wall System.

The Contractor shall provide a soils consultant who shall, through the Engineer, be responsible for inspection and field testing to confirm that the select granular embankment material requirements, placement and compaction requirements are in compliance with these special provisions.

The soils consultant shall provide the Engineer with two copies of all inspection reports which contain the testing results, all pertinent measurements and the soils consultant's conclusions.

The soils consultant's field representative shall be a Registered Professional Engineer or work under the direction of an Ohio Registered Professional Engineer. The final inspection report s shall be signed by an Ohio Registered Professional Engineer.

The Engineer will monitor erection of the structure and placement of select granular embankment material with technical assistance from the soils consultant and The Reinforced Earth Company. Any work not satisfying the requirements of these special provisions are subject to rejection by the Engineer.

5.0 Coping and Traffic Barrier

A cast-in-place coping and traffic barrier shall be provided on top of the wall as shown in the plans. Concrete shall be Class C and shall conform to CMS Item 511. Reinforcing steel shall be epoxy coated and shall conform to CMS Item 509.

6.0 Pile Sleeves

When piles are required, sleeves shall be used to form a void in the select granular embankment so that the proposed piles can be installed after the wall construction is completed. The sleeves shall be made of a material that does not promote corrosion within the select granular embankment and the sleeve material shall be satisfactory to the Reinforced Earth Company. Consider using segments of plastic pipe strong enough to maintain the required void. A bentonite slurry shall be placed in the void located between the pile and the sleeve. The slurry shall consist of the following materials with volume ratios of: one part cement, one part bentonite, and ten parts water. The cost of the above described work shall be considered incidental to Item Special "Reinforced Earth Walls."

7.0 Design Requirements for MSE Panel Walls

The design of the Reinforced Earth Wall shall be in strict conformance with the 1996 edition of 'AASHTO Standard Specifications for Highway Bridges', including the 1997 and 1998 Interims, except as modified in this document, the latest edition of the Ohio Bridge Design Manual, except as modified in this document, and the design requirements listed below:

1. The design shall meet all plan requirements. The recommendations of the wall system suppliers shall not override the minimum performance requirements shown herein. Other systems offered by the approved supplier shall not be submitted in lieu of the system which is called for in the plans.

2. Where walls or wall sections intersect with an included angle of 130 degrees or less, a vertical corner element separate from the standard panel face shall abut and interact with the opposing standard panels. The corner element shall have steel reinforcing strips connected specifically to that panel and shall be designed to preclude lateral spread of the intersecting panels.

3. One hundred percent of the steel reinforcing strips which are designed and placed in the reinforced earth volume shall extend to and be connected to the facing element through the use of tie strips or another acceptable method. No field cutting of steel reinforcing strips to avoid obstacles, such as abutment piles, shall be allowed. Also, steel reinforcing strips shall not be bent around such obstacles.

4. Under service loads, the minimum factor of safety at the connection between the face panel and the steel reinforcing strips shall be 1.5. The minimum factor of safety against reinforcement pullout shall be 1.5 at 13 mm (1/2 inch) deformation. The maximum allowable reinforcement tension shall not exceed two-thirds of the connection strength determined at 13 mm (1/2 inch) deformation.

5. The coefficient of lateral earth pressure k_a and the application of the lateral forces to the reinforced soil mass for external stability analysis shall be computed using the Coulomb method, but assuming no wall friction.

6. All walls shall be designed with a coping or traffic barrier as specified in the plans.

7. Soil parameters for use in design are as follows:

Fill Zone	Type of Soil	Soil Unit Weight	Friction Angle	Cohesion
Reinforced Zone	Compacted Select Granular Embankment Material with less than 7% P200 Material	18.9 kN/m³ (120 lbs/ft³)	34°	0

Fill Zone	Type of Soil	Soil Unit Weight	Friction Angle	Cohesion
Retained Soil	On-site soil varying from sandy lean clay to silty sand	18.9 kN/m³ (120 lbs/ft³)	30°	0
Foundation Soil	Variable - ranging from existing uncontrolled fill to natural silty sand	18.9 kN/m³ (120 lbs/ft³)	**	**

** Refer to ODOT Bridge Design Manual 3.3.4.1.1

8. The allowable reinforcement tension of steel (inextensible) reinforcement elements for structural design and connection (pullout) design shall be based on the thickness of the elements at the end of the structure's design life. In essence, the minimum thickness of the reinforcement elements shall be that thickness which will provide for the structural requirement plus the sacrificed thickness at the end of the design life.

9. The design life of the reinforced earth retaining walls shall be 100 years.

10. The minimum depth of embedment, measured from the finished ground line to the top of leveling pad shall be at least 1065 mm (3.5 feet) as shown on plan.

11. The internal stability, including definition of failure plane and lateral earth pressure coefficient, for Reinforced Earth walls shall be computed according to AASHTO Section 5.8.4.1, including the 1998 interims which permit the use of the Coherent Gravity Method for design.

12. The maximum thickness of the concrete leveling pad shall be 150 mm (6 inch).

13. The connections of the reinforcing strips to the panels shall be in two elevations for standard panels and the connections shall be no more than 760 mm (2.5 feet) apart vertically.

14. The wall height for design purposes shall be measured from the top of the leveling pad to the top of the coping. When the wall is retaining a sloping surcharge then the wall height shall be defined as the equivalent design height (h) as shown in AASHTO Figure 5.8.2B. The minimum reinforcing strip length shall be 70 percent of the wall height, as appropriately defined for either a level or sloping backfill, but no less than 2440 mm (8 feet).

15. The minimum thickness of the precast reinforced concrete face panels shall be 140 mm (5 1/2 inch).

16. The yield stress for the metallic soil reinforcement shall not exceed 450 MPa (65 ksi).

17. The wall system, regardless of the size of panels, shall accommodate up to one percent differential settlement in the longitudinal direction.

18. The vertical stress at each reinforcement level shall be computed by considering local equilibrium of all the forces acting above the level under investigation. The vertical stress (bearing pressure) at each reinforcement level may be computed using the Meyerhof method in the same manner as the bearing pressure computed for the base of the wall.

19. Design shall include a dynamic horizontal thrust using an acceleration, A, of 0.06 to simulate earthquake loading in Cincinnati, Ohio.

8.0 Method of Measurement

The Mechanically Stabilized Earth Wall quantity to be paid for shall be the actual number of square meter (feet) of facial area of approved Reinforced Earth wall panels complete in place. The total quantity is the completed and accepted front face wall area within the limits of the beginning and ending wall stations and from the top of the wall leveling pad to the top of the coping or barrier.

Item 503 Unclassified Excavation is defined in section 3.1.

8.1 Basis of Payment

Item Special "Reinforced Earth Walls" will be paid for at the contract unit price per square meter (foot). This work shall include the fabrication, furnishing, and erection of the Reinforced Earth walls, including the reinforced concrete face panels, reinforcing strips, fasteners, joint material, concrete leveling pad, ~~concrete coping~~ cast in place concrete deflector parapet with sleeper slab, reinforcing steel, filter fabric, and all incidentals, labor, and equipment necessary to complete this item.

Item 203 "Select Granular Embankment, as per plan" will be paid for at the contract unit price per cubic meter (yard). Payment for the soils consultant's work shall be included with this item.

~~Item 203 "Embankment, as per plan" will be paid for at the contract unit price per cubic meter (yard).~~

~~Item 304 "Aggregate Base" will be paid for at the contract unit price per cubic meter (yard).~~

Item 503 "Unclassified Excavation, as per plan" will be paid for at the contract unit price per cubic meter (yard).

Item 518 "150 mm (6 inch) Perforated Corrugated Plastic Pipe" will be paid for at the contract unit price per linear meter (foot).

Item 518 "150 mm (6 inch) Non-perforated Corrugated Plastic Pipe, including specials" will be paid for at the contract unit price per linear meter (foot).

Item Special "Sealing of Concrete Surfaces, Epoxy ~~Urethane~~" will be paid for at the contract unit price per square meter (yard).

LEGEND FOR PROJECT AVERAGE RESULTS OF TEST 802 SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG.	% C.SAND	% F.SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
SILT AND CLAY	A-6 (9)	A-6a (9)	3	10	11	39	38	31	13	18	288
SILTY CLAY	A-6 (11)	A-6b (11)	2	8	11	37	43	37	18	21	74
CLAY	A-7-6(14)	A-7-6(14)	2	5	7	38	49	44	23	25	102
SILT	A-4b(8)	A-4b(8)	1	3	8	64	24	27	8	21	84
GRAVEL AND/OR STONE FRAGMENTS	A-1-a	A-1-a	34	45	7	11	4	NON-PLASTIC		12	2
GRAVEL AND/OR STONE FRAGMENTS W/SAND	A-1-b	A-1-b	17	51	24	7	3	NON-PLASTIC		17	3
GRAVEL AND/OR STONE FRAGMENTS W/SAND, SILT, AND CLAY	A-2-4	A-2-4	31	30	10	18	11	22	5	12	3
GRAVEL AND/OR STONE FRAGMENTS W/SAND, SILT, AND CLAY	A-2-6(1)	A-2-6(1)	15	21	38	10	16	28	12	17	5
GRAVEL AND/OR STONE FRAGMENTS W/SAND, SILT, AND CLAY	A-2-7(1)	A-2-7(1)	55	12	8	17	8	31	14	18	2
FS FINE SAND	A-3	A-3	0	8	75	14	3	NON-PLASTIC		22	4
COARSE AND FINE SAND	A-3a	A-3a	4	27	46	15	9	23	10	18	17
SANDY SILT	A-4a(6)	A-4a(6)	4	13	15	37	31	25	8	15	218
ELASTIC CLAY	A-7-5(15)	A-7-5(15)	0	1	2	25	71	53	25	28	3

RANDOM FILL	VISUAL CLASSIFICATION
CRUSHED STONE	VISUAL CLASSIFICATION
ASPHALT	VISUAL CLASSIFICATION
DOLOMITE	VISUAL CLASSIFICATION
SOIL AND/OR TOPSOIL	VISUAL CLASSIFICATION
LIMESTONE	VISUAL CLASSIFICATION
SHALE	VISUAL CLASSIFICATION
WEATHERED SHALE	VISUAL CLASSIFICATION

DRIVE SAMPLE AND/OR CORE BORING PLOTTED TO VERTICAL SCALE ONLY

NR – NO RECOVERY
W – FREE WATER
▼ – STATIC WATER

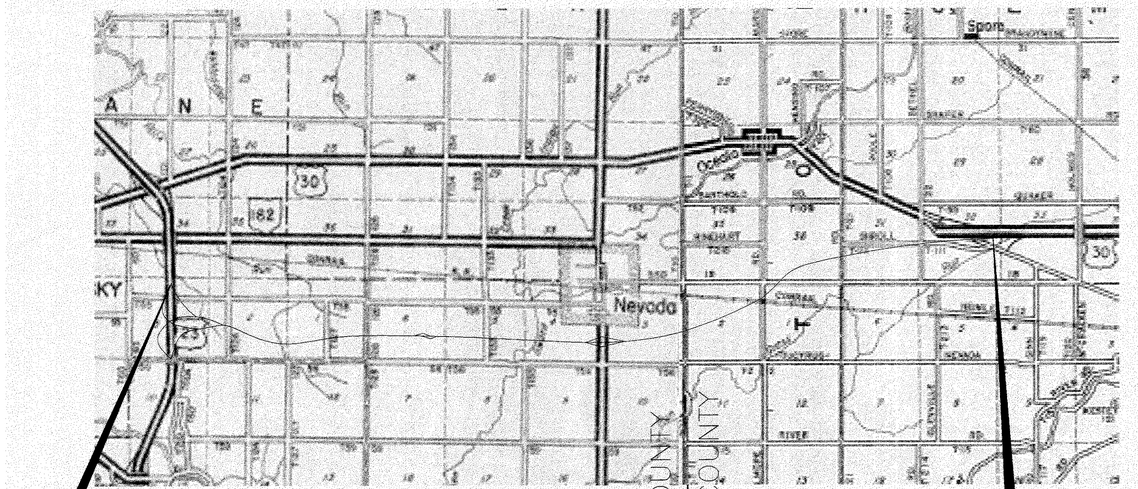
X / Y / Z — NUMBERS OF BLOWS FOR 'STANDARD PENETRATION' TEST.
X = NUMBERS OF BLOWS FOR FIRST 150 MILLIMETERS
Y = NUMBER OF BLOWS FOR SECOND 150 MILLIMETERS
Z = NUMBER OF BLOWS FOR THIRD 150 MILLIMETERS

DRIVE SAMPLE AND/OR CORE BORING – PLAN VIEW

NOTE:

1. EXPLORATORY BORINGS WERE DRILLED ON FEBRUARY 10 THROUGH MAY 16, 1997 USING SOLID & HOLLOW STEM AUGERS, ROCK CORING, AND HAND SAMPLING TECHNIQUES.
2. BORING LOCATIONS AND ELEVATIONS WERE ESTABLISHED AND MARKED BY BALICE ENGINEERS.
3. DRIVE SAMPLE AND/OR CORE BORINGS PLOTTED TO VERTICAL SCALE ONLY.
4. FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PERCENT e.g. 15
5. ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE FOUNDATION INVESTIGATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE INVESTIGATION, SOIL TESTS, AND BEDROCK BORINGS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN DISTRICT ONE, THE OFFICE OF MATERIAL MANAGEMENT AT 1600 WEST BROAD STREET, THE PAVEMENT AND SOILS SECTION OF THE OFFICE OF ROADWAY ENGINEERING OR IN THE OFFICE OF STRUCTURAL ENGINEERING AT 25 SOUTH FRONT STREET.
6. INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

WYA/CRA-30-23.914/0.000(14.86/0.00)



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TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: B.J.C.
DATE: 8-11-99
DRAWING NO. COVER 30
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

WYA/CRA-30-23.914/0.000(14.86/0.00)

SITE GEOLOGY

THE SITE OF THE PROPOSED ROADWAY IS LOCATED IN WYANDOT AND CRAWFORD COUNTIES NORTH-CENTRAL OHIO. THE SOIL DEPOSITS CONSIST OF WISCONSIN-AGE END MORAINES AND GROUND MORAINES. THE SOIL DEPOSITS GENERALLY CONSIST OF BLOUNT-PEWAMO, GLYNWOOD-BLOUNT-NAPPANEE, AND LURAY-TIRO SILTY CLAY LOAM TO SILT LOAM, TUSCOLA-FITCHVILLE-GLENFORD FINE SANDY LOAM TO SILT LOAM, OSHTEMO-BELMORE LOAM, GLYNWOOD-SHOALS-GENESSE AND GLENWOOD-LOBDELL SILT LOAM. THE BEDROCK UNDERLYING THIS SITE PREDOMINANT CONSISTS OF COLUMBUS AND DELAWARE LIMESTONE AND SHALE AND MONROE LIMESTONE ASSOCIATED WITH THE SILURIAN TO DEVONIAN AGE.

SUBSURFACE EXPLORATION

TWO HUNDRED NINETY TEST BORINGS HAVE BEEN MADE AS PART OF THIS INVESTIGATION. THE TEST BORINGS WERE DRILLED ON FEBRUARY 10 THROUGH MAY 16, 1997 THE LOCATIONS OF THE TEST BORINGS WERE DETERMINED IN THE FIELD BY BALKE ENGINEER'S PERSONNEL. THE TEST BORINGS LOCATIONS ARE SHOWN ON THE ATTACHED PLAN AND SOIL PROFILES.

THE MAJORITY OF THE TEST BORINGS WERE DRILLED WITH A TRUCK MOUNTED OR ALL TERRAIN DRILLING RIG UTILIZING 57, 95 OR 108 MILLIMETER INSIDE DIAMETER HOLLOW STEM AUGERS AND ROCK CORING TECHNIQUES TO DEPTHS OF 1.5 TO 23.7 METERS BELOW THE EXISTING SURFACE.

WITHIN THE TEST BORINGS, SOIL SAMPLES WERE GENERALLY OBTAINED AT 0.75 M INTERVALS. THE SOIL SAMPLES WERE SECURED BY DRIVING A FIFTY MILLIMETER OUTSIDE DIAMETER SPLIT-SPOON SAMPLER INTO THE SOILS USING A 63.5-KILOGRAM WEIGHT FALLING FREELY THROUGH A DISTANCE OF 0.75 M. THE NUMBER OF BLOWS REQUIRED TO DRIVE THE SAMPLER FOR EACH OF THREE SUCCESSIVE 150 MILLIMETER INCREMENTS WAS RECORDED AND IS PRESENTED ON THE INDIVIDUAL LOGS OF TEST BORING. THE NUMBER OF BLOWS REQUIRED TO ADVANCE THE SAMPLER FOR THE LAST 300 MILLIMETERS IS TERMED THE STANDARD PENETRATION RESISTANCE (N). SOIL SAMPLES RECOVERED ARE DESIGNATED AS "SS" ON THE TABULATION OF TEST DATA SHEETS. THE SAMPLES WERE SEALED IN JAR CONTAINERS AND TRANSPORTED TO OUR LABORATORY FOR FURTHER CLASSIFICATION AND TESTING.

SOME OF THE TEST BORINGS PERFORMED IN THIS INVESTIGATION WERE HAND AUGURED UTILIZING MANUALLY OPERATED DRILLING AND SAMPLING EQUIPMENT TO AUGER REFUSAL DEPTHS OF 3.0 TO 4.6 METERS BELOW GROUND SURFACE.

SOIL SAMPLES WERE GENERALLY TAKEN AT 0.75 INTERVALS. SAMPLES WERE OBTAINED BY THE STANDARD PENETRATION TEST METHOD (ASTM D 1586) WHICH CONSISTS OF DRIVING A TWO INCH OUTSIDE DIAMETER SPLIT-BARREL SAMPLER INTO THE SOIL WITH A 14.1-KILOGRAM WEIGHT FALLING FREELY THROUGH A DISTANCE OF 0.75 M. THE SAMPLER IS DRIVEN IN THREE SUCCESSIVE 150 MILLIMETER INCREMENTS WITH THE NUMBER OF BLOWS PER EACH INCREMENT BEING RECORDED. THE NUMBER OF BLOWS REQUIRED TO ADVANCE THE SAMPLER THE LAST 300 MILLIMETERS IS TERMED THE STANDARD PENETRATION RESISTANCE (N) AND IS PRESENTED ON THE INDIVIDUAL LOGS OF TEST BORING. THESE VALUES WERE THEN CONVERTED INTO TERZAGHI EQUIVALENT BLOW COUNTS FOR A 63.5-KILOGRAM HAMMER FALLING OVER THE SAME DISTANCE. THE SAMPLES WERE SEALED IN JAR CONTAINERS AND TRANSPORTED TO OUR LABORATORY FOR FURTHER CLASSIFICATION AND

A REPRESENTATIVE SAMPLE OF THE SUBSURFACE ROCK AT THE SITE WAS OBTAINED USING A DIAMOND CORE BARREL. THE CORING OPERATIONS WERE PERFORMED IN A 0.8 TO 1.5 METER RUN. RECOVERY OF THE SAMPLES ARE EXPRESSED AS THE PERCENTAGE RATIO OF THE SAMPLE RECOVERED TO THE TOTAL LENGTH OF THE RUN. THE ROCK QUALITY DESIGNATION (RQD) IS THE PERCENTAGE RATIO OF THE LENGTH OF ROCK PIECES GREATER THAN 100 MILLIMETERS LONG TO THE TOTAL LENGTH OF THE RUN. THE ROCK CORE SAMPLES ARE DESIGNATED AS "RC" ON THE TABULATION OF TEST DATA SHEET.

SELECTED SAMPLES WERE TESTED FOR NATURAL MOISTURE CONTENT, IN PLACE DRY DENSITY, PARTICLE SIZE ANALYSIS AND ATTERBERG LIMITS (LIQUID AND PLASTIC LIMITS) TESTS WERE CONDUCTED ON REPRESENTATIVE SAMPLES. THE SHELBY TUBE SAMPLES WERE TESTED FOR UNCONFINED COMPRESSIVE STRENGTH. THE RESULTS OF THE LABORATORY TESTS ARE INDICATED ON THE CORRESPONDING LOGS OF TEST BORINGS. IN ADDITION, THE BORING LOGS PRESENT INFORMATION RELATING TO SAMPLE DATA, STANDARD PENETRATION TEST RESULTS, WATER CONDITIONS OBSERVED IN THE BORING, PERSONNEL INVOLVED, AND OTHER PERTINENT DATA.

INVESTIGATION AND FINDINGS

MAINLINE FROM US 23 TO STATE ROUTE 231

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT THIS LOCATION WERE FOUND TO BE FAIRLY VARIABLE.

TOPSOIL FORMS THE SURFACE COVER AT ALL OF THE BORINGS, EXCEPT BORING M-P19 AND M-P24, EXTENDING FROM 127 TO 610 MM. THE SURFACE COVER AT M-P19 IS MEDIUM STIFF SILTY CLAY AND AT M-P24 IS STIFF CLAY.

THE SURFACE MATERIALS ARE UNDERLAIN BY MEDIUM STIFF TO HARD SILTY CLAY TO SILT AND CLAY, STIFF CLAY, MEDIUM DENSE SANDY SILT TO LOOSE TO MEDIUM DENSE SILT TO VARYING DEPTHS. THE UPPER PROFILE SOILS ARE UNDERLAIN BY INTERLACED LAYERS OF VERY LOOSE TO DENSE SANDY SILT, LOOSE TO DENSE SILT, LOOSE SAND, STIFF TO HARD SILT AND CLAY, MEDIUM STIFF TO VERY STIFF SILTY CLAY AND MEDIUM STIFF TO HARD CLAY TO BORING TERMINATION.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT MOST OF THE PAVEMENT BORINGS FROM 0.0 TO 2.7 METERS DURING THE DRILLING OPERATIONS. BORINGS M-P11 THROUGH M-P15, M-P17, M-P21 THROUGH M-P24, M-P26, M-P29 THROUGH M-P34 AND M-P38 THROUGH M-P40 WERE DRY DURING DRILLING AND AT COMPLETION OF THE DRILLING OPERATION. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS IN THE REST OF THE BORINGS FROM 0.8 TO 2.8 METERS, EXCEPT AT M-P6, M-P16 AND M-P37. M-P6, M-P16 AND M-P37 WERE DRY AT COMPLETION.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT ALL OF THE EMBANKMENT BORINGS FROM 0.2 TO 4.0 METERS DURING THE DRILLING OPERATIONS. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS IN THE BORINGS FROM 1.7 TO 3.5 METERS.

PROPOSED US 30 MAINLINE FROM STATE ROUTE 231 TO BUCYRUS BYPASS

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS WERE FOUND TO BE SOMEWHAT VARIABLE OVER THIS POTION OF THE PROJECT.

TOPSOIL FORMS THE SURFACE COVER AT ALL OF THE PAVEMENT BORINGS EXTENDING FROM 203 TO 610 MM.

THE TOPSOIL IS UNDERLAIN BY MEDIUM STIFF TO VERY STIFF SILT AND CLAY, MEDIUM STIFF TO VERY STIFF CLAY, MEDIUM STIFF SILTY CLAY AND MEDIUM DENSE SANDY SILT TO VARYING DEPTHS. THE UPPER PROFILE SOILS ARE UNDERLAIN BY INTERBEDDED LAYERS OF MEDIUM DENSE TO VERY DENSE SANDY SILT, MEDIUM DENSE SAND, STIFF TO VERY STIFF SILT AND CLAY, STIFF SILTY CLAY AND STIFF CLAY TO BORING TERMINATION.

TOPSOIL FORMS THE SURFACE COVER AT ALL OF THE EMBANKMENT BORINGS, EXCEPT M-E46 AND M-E47, EXTENDING FROM 254 TO 508 MM. THE SURFACE COVER AT M-E46 CONSISTS OF 51 MM OF ASPHALT OVER 381 MM OF CRUSHED STONE. AT M-E47, A 432 MM LAYER OF CRUSHED STONE FORMS THE SURFACE COVER. THE SURFACE MATERIALS ARE UNDERLAIN BY STIFF TO VERY STIFF SILTY CLAY TO SILT AND CLAY, MEDIUM STIFF TO VERY STIFF CLAY OR MEDIUM DENSE SILT TO VARYING DEPTHS. THE UPPER PROFILE SOILS ARE UNDERLAIN BY INTERBEDDED LAYERS OF MEDIUM STIFF TO VERY HARD SILT AND CLAY, STIFF TO VERY HARD SILTY CLAY, MEDIUM STIFF TO VERY STIFF CLAY, LOOSE TO MEDIUM DENSE SANDY SILT AND/OR SAND, MEDIUM DENSE SILT, LOOSE SAND, DENSE GRAVEL, AND OR VERY DENSE ROCK FRAGMENTS TO BORING TERMINATION.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT MOST OF THE PAVEMENT BORINGS FROM 1.2 TO 2.4 METERS DURING THE DRILLING OPERATIONS. BORINGS M-P58, M-P59, M-P67, M-P69, M-P70, M-P72, AND M-P73 WERE DRY DURING DRILLING AND AT COMPLETION OF THE DRILLING OPERATION. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS IN THE REST OF THE BORINGS FROM 0.9 TO 2.4 METERS, EXCEPT AT M-P68. M-P68 WAS DRY AT COMPLETION.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT MOST OF THE EMBANKMENT BORINGS FROM 0.9 TO 6.8 METERS DURING THE DRILLING OPERATIONS. BORINGS M-E9, M-E11, M-E16, M-E18, M-E19, M-E24, M-E25, M-E27, M-E30, M-E33, M-E34, M-E36, M-E37 AND M-E40 WERE DRY DURING DRILLING AND AT COMPLETION OF THE DRILLING OPERATIONS. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS IN THE REMAINING BORINGS FROM 0.9 TO 6.4 METERS, EXCEPT AT M-E10, M-E23, M-E26 AND M-E31. M-E10, M-E23, M-E26 AND M-E31 WERE DRY AT COMPLETION OF THE DRILLING OPERATIONS.

PROPOSED MAINLINE CULVERTS WEST OF STATE ROUTE 231

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS WERE FOUND TO BE SOMEWHAT VARIABLE AT EACH CULVERT LOCATION.

TOPSOIL, 254 TO 356 MM THICK, FORMS THE SURFACE COVER AT EACH OF THE BORING LOCATIONS. THE UPPER PROFILE SOILS UNDERLYING THE TOPSOIL GENERALLY INCLUDES STIFF TO VERY STIFF SILTY CLAY, STIFF SILT AND CLAY, AND STIFF CLAY. THE UPPER PROFILE SOILS ARE GENERALLY INTER-BEDDED WITH MEDIUM STIFF TO HARD SILTY CLAY, STIFF CLAY, HARD SILT AND CLAY, VERY STIFF ELASTIC CLAY, MEDIUM DENSE SAND, SANDY SILT AND/OR SILT TO BORING TERMINATION.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT ALL OF THE BORINGS FROM 0.9 TO 2.4 METERS. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS IN THE BORINGS FROM 2.7 TO 3.2 METERS.

PROPOSED MAINLINE CULVERTS EAST OF STATE ROUTE 231

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT EACH CULVERT LOCATION ARE FAIRLY CONSISTENT.

TOPSOIL, 254 TO 610 MM THICK, FORMS THE SURFACE COVER AT EACH OF THE BORING LOCATIONS. THE UPPER PROFILE SOILS UNDERLYING THE TOPSOIL GENERALLY INCLUDES MEDIUM STIFF TO VERY STIFF SILT AND CLAY, MEDIUM STIFF TO STIFF SILTY CLAY, SOFT TO STIFF CLAY AND LOOSE SANDY SILT. THE UPPER PROFILE SOILS ARE GENERALLY INTER-BEDDED WITH STIFF TO HARD SILT AND CLAY TO SILTY CLAY, MEDIUM DENSE SAND TO SILTY SAND, LOOSE TO VERY DENSE SANDY SILT, AND VERY DENSE STONE FRAGMENTS, GRAVEL AND ROCK FRAGMENTS TO BORING TERMINATION EXCEPT AT M-C9. AT M-C9 THE BORING TERMINATED AT AUGER REFUSAL AT 5.2 METERS.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT ALL OF THE BORINGS EXCEPT M-C11, M-C17 THROUGH M-C19, FROM 1.1 TO 12.1 METERS. BORINGS M-C11, M-C17 THROUGH M-C19 WERE DRY DURING DRILLING AND AT COMPLETION OF THE DRILLING OPERATION. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS IN THE REST OF THE BORINGS FROM 4.0 TO 11.6 METERS, EXCEPT AT M-C14. BORING M-C14 WAS DRY AT COMPLETION OF THE DRILLING OPERATIONS.

PROPOSED COUNTY ROAD 56 OVERPASS

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT THIS LOCATION WERE FOUND TO BE SOMEWHAT VARIABLE.

FILL CONSISTING OF CLAY AND SANDS AND/OR CRUSHED STONE FORMED THE SURFACE COVER AT BORINGS CR56-E1, CR56-E2 AND CR56-P1 THROUGH CR56-P5 EXTENDING TO APPROXIMATELY 127 TO 457 MM. THE TOPSOIL COVER AT CR56-S1 THROUGH CR56-S3 IS NEARLY 76 TO 350 MM THICK.

THE SURFACE MATERIALS AT CR56-S1 THROUGH CR56-S3 ARE GENERALLY UNDERLAIN BY INTERBEDDED LAYERS OF MEDIUM STIFF TO HARD SILTY CLAY, VERY STIFF SILT AND CLAY, VERY LOOSE TO MEDIUM DENSE SANDY SILT AND/OR LOOSE SILT, MEDIUM DENSE SILTY SAND AND VERY DENSE SAND AND GRAVEL TO AUGER REFUSAL FROM 17.1 TO 18.0 METERS. THE BEDROCK AT CR56-S1 AND CR56-S2 CONSISTED OF FRACTURED DOLOMITE WITH TOTAL CORE RECOVERIES OF 100 PERCENT AND 19 TO 21 PERCENT RQD. THE BEDROCK AT CR56-S3 CONSISTED OF BROKEN GREY SHALE WITH A TOTAL CORE RECOVERY OF 100 PERCENT AND 0 PERCENT RQD.
THE SURFACE MATERIALS AT CR56-E1, CR56-P1 AND CR56-P5 GENERALLY CONSISTED OF SOFT TO STIFF SILTY CLAY TO SILT AND CLAY TO NEARLY 1 METER AT CR56-P1 AND 2.5 METERS AT CR56-E1. BORING CR56-P5 TERMINATED IN THE MATERIAL AT 3 METERS. LOOSE TO MEDIUM DENSE SILT EXTENDED FROM NEARLY 1 METER TO 4 METERS AND BORING CR56-P1 TERMINATED IN STIFF SILTY CLAY AND CR56-E1 TERMINATED IN LOOSE TO MEDIUM DENSE SANDY SILT AT 3.0 METERS.

MEDIUM STIFF TO STIFF CLAY UNDERLIES THE SURFACE MATERIALS AT CR56-E2 AND CR56-P2 TO NEARLY 1 TO 1.8 METERS. BORING CR56-E2 EXTENDED THROUGH LOOSE TO MEDIUM DENSE SILT AT NEARLY 4 METERS AND VERY STIFF SILTY CLAY AT 4.9 METERS. THE BORING TERMINATED IN STIFF SILT AND CLAY AT 6.1 METERS. BORING CR56-P2 EXTENDED THROUGH MEDIUM STIFF SILT AND CLAY AT NEARLY 2.6 METERS AND TERMINATED IN LOOSE SANDY SILT AT 3.0 METERS.

LOOSE TO MEDIUM DENSE SILT UNDERLIES THE SURFACE SOILS AT BORING CR56-P3 TO BORING TERMINATION AT 3.0 METERS. VERY LOOSE SILT UNDERLIES THE SURFACE SOILS AT CR56-P4 TO NEARLY 0.9 METERS UNDERLAIN BY MEDIUM STIFF SILTY CLAY TO NEARLY 2.5 METERS. THE BORING TERMINATED IN VERY LOOSE SANDY SILT AT 3.0 METERS.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT ALL OF THE BORINGS FROM 1.8 TO 4.0 METERS EXCEPT AT BORINGS CR56-P1 AND CR56-P3. BORINGS CR56-P1 AND CR56-P3 WERE DRY DURING AND AT COMPLETION OF THE DRILLING OPERATIONS. GROUNDWATER WAS MEASURED IN THE REMAINING BORINGS FROM 0.9 TO 3.7 METERS.

IOLIESI, INC
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: S.M.D.
DATE: 11-17-97
DRAWING NO. COVER 30
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

WYA/CRA-30-23.914/0.000(14.86/0.00)

PROPOSED TOWNSHIP ROAD 124 OVERPASS

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT THIS LOCATION WERE FOUND TO BE FAIRLY CONSISTENT.

FILL CONSISTING OF CLAY AND SANDS OR CRUSHED STONE AND SILTY CLAY FORMED THE SURFACE COVER AT BORINGS TR124-S1, TR124-S3 AND TR124-P2 EXTENDING TO APPROXIMATELY 0.3 METERS. THE SURFACE COVER AT TR124-E2 IS SILTY CLAY TO SILT AT TR124-E1, EXTENDING TO NEARLY 1.0 METER. THE SILT SURFACE COVER AT TR124-P1 EXTENDS TO BORING TERMINATION AT 3.0 METERS. TOPSOIL WITH CRUSHED STONE FORMS THE SURFACE COVER AT TR124-S2.

THE SURFACE MATERIALS ARE GENERALLY UNDERLAIN BY MEDIUM STIFF TO STIFF SILT AND CLAY TO LOOSE SANDY SILT TO BORING TERMINATION AT TR124-P2 AND TR124-E1 AND TO NEARLY 4.5 TO 6.0 METERS AT TR124-E2, TR124-S1 AND TR124-S2. MEDIUM DENSE SAND TO SILTY SAND EXTENDS TO NEARLY 10.0 METERS TO 11.5 METERS AT TR124-S1 AND TR124-S2 AND TO TERMINATION AT 7.6 METERS AT TR124-E2. MEDIUM STIFF TO VERY HARD SILTY CLAY UNDERLIES THE GRANULAR MATERIAL TO BEDROCK AT APPROXIMATELY 12.8 TO 13.5 METERS.

THE FILL SURFACE COVER AT TR124-S3 IS UNDERLAIN BY MEDIUM DENSE SANDY SILT TO NEARLY 1.0 METER. VERY STIFF CLAY TO MEDIUM STIFF SILT AND CLAY EXTENDS TO NEARLY 3.2 METERS, UNDERLAIN BY LOOSE TO VERY LOOSE GRAVEL TO NEARLY 4.7 METERS. LOOSE TO DENSE SAND EXTENDS TO NEARLY 10.0 METERS UNDERLAIN BY STIFF TO HARD SILTY CLAY TO BEDROCK AT NEARLY 12.2 METERS.

THE BEDROCK AT TR124-S1 THROUGH TR124-S3 CONSISTS OF BROKEN DOLOMITE GENERALLY WITH SHALE SEAMS. THE RECOVERY OF 1.5 M ROCK CORES RANGED FROM 89 TO 95 PERCENT AND THE RQD RANGE FROM 0 TO 9 PERCENT.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT ALL OF THE BORINGS FROM 2.1 TO 4.9 METERS. GROUNDWATER WAS MEASURED IN ALL OF THE BORINGS FROM 1.4 TO 6.1 METERS EXCEPT AT TR124-E2 AND TR124-S1, WHICH WERE DRY, AT COMPLETION.

PROPOSED US 30 OVER BROKEN SWORD CREEK BRIDGE

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT THIS LOCATION ARE FAIRLY CONSISTENT.

TOPSOIL FORMS THE SURFACE COVER AT THE BORINGS AND EXTENDS FROM 76 TO 610 MM. THE TOPSOIL IS UNDERLAIN BY MEDIUM STIFF SILT AND CLAY, MEDIUM DENSE SILT OR LOOSE SANDY SILT. THE UPPER PROFILE SOILS ARE UNDERLAIN BY INTERBEDDED STRATA OF LOOSE TO DENSE SANDY SILT, MEDIUM DENSE SILT, VERY LOOSE SAND, STIFF SILT AND CLAY, LOOSE TO DENSE GRAVEL OR WEATHERED DOLOMITE TO AUGER REFUSAL.

THE BEDROCK AT THE BORINGS CONSISTS OF BROKEN TO SOME FRACTURED DOLOMITE. THE RECOVERY OF THE 1.3 TO 2.0 M ROCK CORES RANGED FROM 14 TO 100 PERCENT AND THE RQD RANGE FROM 0 TO 37 PERCENT.

GROUNDWATER SEEPAGE WAS ENCOUNTERED IN ALL OF THE BORINGS, AT DEPTHS RANGING FROM 1.5 TO 2.2 METERS DURING THE DRILLING OPERATIONS. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS IN THE BORINGS AT DEPTHS RANGING FROM 1.1 TO 1.7 METERS.

PROPOSED US 30 BRIDGE OVER STATE ROUTE 231

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT THIS LOCATION WERE FOUND TO BE FAIRLY CONSISTENT.

ASPHALT, 229 TO 305 MM THICK, OVERLIES 102 TO 254 MM OF CRUSHED STONE AT BORINGS M-S6 THROUGH M-S8. TOPSOIL FORMS THE SURFACE COVER AT BORING M-S5 AND EXTENDS FROM TO 457 MM. THE SURFACE MATERIALS ARE UNDERLAIN BY MEDIUM STIFF SILT AND CLAY TO SILTY CLAY OR LOOSE SILT. THE UPPER PROFILE SOILS ARE UNDERLAIN BY INTERBEDDED LAYERS OF LOOSE TO VERY DENSE SANDY SILT, LOOSE SILT, LOOSE TO VERY DENSE SAND, MEDIUM STIFF TO VERY STIFF SILTY CLAY, STIFF TO HARD SILT AND CLAY, LOOSE GRAVEL AND STONE FRAGMENTS OR WEATHERED DOLOMITE TO AUGER REFUSAL.

THE BEDROCK AT THE BORINGS CONSISTS OF BROKEN TO SOME FRACTURED DOLOMITE. THE RECOVERY OF THE 1.5 M ROCK CORES RANGED FROM 65 TO 100 PERCENT AND THE RQD RANGE FROM 0 TO 39 PERCENT.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT ALL OF THE BORINGS FROM 4.4 TO 9.8 METERS DURING THE DRILLING OPERATIONS. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS IN THE BORINGS FROM 0.0 TO 9.5 METERS.

PROPOSED US 30 OVER CONRAIL

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT THIS LOCATION WERE FOUND TO BE FAIRLY CONSISTENT.

THE SURFACE COVER AT M-S9 AND M-S11 CONSISTS OF 381 TO 457 MM OF TOPSOIL. LOOSE SAND FILL AND MEDIUM STIFF SILTY CLAY FILL FORMS THE SURFACE COVER AT M-S10 AND M-S12, RESPECTIVELY, EXTENDING TO 0.8 METERS.

THE SURFACE MATERIALS ARE GENERALLY UNDERLAIN BY INTERBEDDED LAYERS OF SOFT TO VERY STIFF CLAY, MEDIUM STIFF TO HARD SILT AND CLAY, LOOSE TO VERY DENSE SANDY SILT AND MEDIUM DENSE SAND TO AUGER REFUSAL, EXCEPT AT M-S11 AND M-S12. AUGER REFUSAL IN M-S11 AND M-S12 OCCURRED APPROXIMATELY 0.3 TO 1.2 METERS IN THE BEDROCK.

THE BEDROCK AT THE BORINGS CONSISTS OF BROKEN TO SOME FRACTURED LIMESTONE. THE RECOVERY OF THE 1.5 M ROCK CORES AT M-S9 THROUGH M-S11 RANGED FROM 97 TO 100 PERCENT AND THE RQD RANGED FROM 0 TO 28 PERCENT. THE RECOVERY 0.9 AND 0.8 METER ROCK CORES AT M-S12 RANGED FROM 94 TO 100 PERCENT AND HAD AN RQD OF 0 PERCENT.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT ALL OF THE BORINGS FROM 3.5 TO 5.0 METERS DURING THE DRILLING OPERATIONS. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS IN THE BORINGS FROM 1.2 TO 3.7 METERS.

PROPOSED US 30 OVER MARION-MELMORE ROAD

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT THIS LOCATION WERE FOUND TO BE FAIRLY CONSISTENT.

THE SURFACE COVER AT THE BORINGS CONSISTS OF 76 TO 254 MM OF ASPHALT OVERLYING 203 TO 432 MM OF CRUSHED STONE.

THE SURFACE MATERIALS ARE GENERALLY UNDERLAIN BY INTERBEDDED LAYERS OF MEDIUM STIFF TO STIFF CLAY, MEDIUM STIFF TO STIFF SILTY CLAY, MEDIUM STIFF TO VERY HARD SILT AND CLAY, LOOSE TO MEDIUM DENSE SANDY SILT AND LOOSE SILTY SAND OR GRAVEL TO AUGER REFUSAL.

THE BEDROCK AT THE BORINGS CONSISTS OF BROKEN TO SOME FRACTURED LIMESTONE. THE RECOVERY OF THE 1.5 M ROCK CORES IN THE BORINGS RANGED FROM 97 TO 100 PERCENT AND THE RQD RANGED FROM 0 TO 7 PERCENT.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT ALL OF THE BORINGS FROM 2.6 TO 6.1 METERS DURING THE DRILLING OPERATIONS. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS IN THE BORINGS FROM 3.3 TO 6.8 METERS.

PROPOSED US 30 OVER NEVADA-WYNFORD ROAD (COUNTY ROAD 18)

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT THIS LOCATION WERE FOUND TO BE FAIRLY CONSISTENT.

THE SURFACE COVER AT M-S17 THROUGH M-S19 CONSISTS OF 254 TO 304 MM OF CRUSHED STONE. TOPSOIL FORMS THE SURFACE COVER AT M-S20, EXTENDING TO 254 MM.

THE SURFACE MATERIALS ARE UNDERLAIN BY INTERBEDDED LAYERS OF SOFT TO VERY HARD SILT AND CLAY, MEDIUM STIFF TO STIFF SILTY CLAY, STIFF CLAY, LOOSE TO MEDIUM DENSE SANDY SILT, LOOSE TO MEDIUM DENSE SILT, MEDIUM DENSE GRAVEL AND WEATHERED LIMESTONE TO AUGER REFUSAL.

THE BEDROCK AT THE BORINGS CONSISTS OF BROKEN LIMESTONE. THE RECOVERY OF THE 1.5 M ROCK CORES RANGED FROM 94 TO 100 PERCENT AND THE RQD RANGED FROM 7 TO 20 PERCENT.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT ALL OF THE BORINGS FROM 4.8 TO 11.8 METERS DURING THE DRILLING OPERATIONS. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS IN THE BORINGS FROM 0.0 TO 7.2 METERS.

PROPOSED COUNTY ROAD 22 OVERPASS

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT THIS LOCATION WERE FOUND TO BE FAIRLY CONSISTENT.

CRUSHED STONE FORMS THE SURFACE COVER AT BORINGS CR22-P1 THROUGH CR22-P3, CR22-E1 AND CR22-E2 EXTENDING UP TO 457 MM. THE SURFACE COVER AT THE REST OF THE BORINGS FOR COUNTY ROAD 22 INCLUDES 76 TO 102 MM OF ASPHALT OVER 152 TO 432 MM OF CRUSHED STONE.

THE PAVEMENT MATERIAL AT CR22-S1 IS UNDERLAIN BY SAND AND CLAY FILL TO NEARLY 0.6 METERS UNDERLAIN BY MEDIUM DENSE SANDY SILT TO NEARLY 1 METER. LOOSE SILT UNDERLIES THE PAVEMENT MATERIALS AT CR22-S3 TO NEARLY 1 METER UNDERLAIN BY STIFF CLAY TO APPROXIMATELY 1.6 METERS. MEDIUM STIFF TO VERY STIFF CLAY UNDERLIES THE CRUSHED STONE AT CR22-E2 AND CR22-P3 TO NEARLY 2.6 METERS. THE PAVEMENT MATERIALS AT CR22-C2 ARE UNDERLAIN BY LOOSE TO MEDIUM DENSE SANDY SILT FILL TO APPROXIMATELY 4.8 METERS. THE SURFACE MATERIALS AT CR22-P1, CR22-P2, CR22-S2 AND CR22-C1 ARE UNDERLAIN BY MEDIUM STIFF TO STIFF SILTY CLAY TO SILT AND CLAY TO VARYING DEPTHS. THE UPPER PROFILE SOILS ARE UNDERLAIN BY INNER-LAYERED DEPOSITS OF MEDIUM DENSE SANDY SILT, MEDIUM DENSE SAND AND STIFF TO VERY STIFF SILT AND CLAY TO SILTY CLAY TO BORING TERMINATION OR AUGER REFUSAL, AT THE STRUCTURE BORINGS.

THE BEDROCK AT CR22-S1 THROUGH CR22-S3 CONSISTS OF FRACTURED LIMESTONE. THE RECOVERY OF THE 1.5 M ROCK CORES RANGED FROM 92 TO 100 PERCENT AND THE RQD RANGE FROM 29 TO 39 PERCENT.

NATURAL GAS WAS ENCOUNTERED DURING DRILLING AT 9.3 METERS IN BORING CR22-C2.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT ALL OF THE BORINGS EXCEPT CR22-E1, CR22-E2, CR22-P2 AND CR22-P3, FROM 1.8 TO 8.4 METERS DURING THE DRILLING OPERATIONS. BORINGS CR22-E1, CR22-E2, CR22-P2 AND CR22-P3 WERE DRY DURING DRILLING AND AT COMPLETION OF THE DRILLING OPERATION EXCEPT AT CR22-E2. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS IN THE REST OF THE BORINGS FROM 0.6 TO 6.7 METERS.

PROPOSED US 30 OVER LINCOLN HIGHWAY (COUNTY ROAD 330)

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT THIS LOCATION WERE FOUND TO BE FAIRLY CONSISTENT.

THE SURFACE COVER AT M-S21 AND M-S23 CONSISTS OF 152 TO 304 MM OF CRUSHED STONE. TOPSOIL FORMS THE SURFACE COVER AT M-S24, EXTENDING TO 152 MM. AT M-S22, 288 MM OF ASPHALT FORMS THE SURFACE COVER.

THE SURFACE MATERIALS ARE UNDERLAIN BY INTERBEDDED LAYERS OF MEDIUM STIFF TO HARD SILT AND CLAY, STIFF TO HARD SILTY CLAY, STIFF CLAY, LOOSE TO MEDIUM DENSE SANDY SILT, AND MEDIUM DENSE SAND TO AUGER REFUSAL.

THE BEDROCK AT THE BORINGS CONSISTS OF BROKEN TO FRACTURED LIMESTONE. THE RECOVERY OF THE 1.5 M ROCK CORES RANGED FROM 87 TO 98 PERCENT AND THE RQD RANGED FROM 7 TO 14 PERCENT.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT ALL OF THE BORINGS FROM 3.8 TO 19.2 METERS DURING THE DRILLING OPERATIONS. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS IN THE BORINGS FROM 0.0 TO 13.2 METERS.

EXISTING US 30 OVER GRASS RUN CREEK BRIDGE

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT THIS LOCATION WERE FOUND TO BE SOMEWHAT VARIABLE.

THE SURFACE COVER AT M-S25 CONSISTS OF 254 MM OF ASPHALT OVER 254 MM OF CRUSHED STONE. AT M-S26, 0.9 METERS OF CRUSHED STONE FORMS THE SURFACE COVER. CRUSHED STONE OVERLIES SILTY CLAY TO SILT AND CLAY FILL AT M-S26 AND M-S28 TO NEARLY 4.9 AND 1.0 METERS, RESPECTIVELY.

THE SURFACE MATERIALS ARE UNDERLAIN BY INTERBEDDED LAYERS OF VERY SOFT TO VERY HARD SILTY CLAY, SOFT TO MEDIUM STIFF CLAY, MEDIUM STIFF TO STIFF SILT AND CLAY, LOOSE TO VERY DENSE SANDY SILT, VERY LOOSE TO LOOSE SAND, LOOSE TO MEDIUM DENSE GRAVEL OR DENSE STONE FRAGMENTS TO AUGER REFUSAL.

THE BEDROCK AT THE BORINGS CONSISTS OF BROKEN LIMESTONE. THE RECOVERY OF THE 1.5 TO 2.4 M ROCK CORES RANGED FROM 93 TO 100 PERCENT AND THE RQD RANGED FROM 0 TO 10 PERCENT.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT ALL OF THE BORINGS FROM 3.9 TO 8.8 METERS DURING THE DRILLING OPERATIONS. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS IN THE BORINGS FROM 1.4 TO 6.7 METERS.

TOLEDO ENGINEERING INC
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: S.M.D.
DATE: 11-17-97
DRAWING NO. COVER 30
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

US 23 AND PROPOSED US 30 INTERCHANGE RAMPS A, B, C, D AND B-D

THE BORINGS ARE DESIGNATED IN THIS SECTION WITH AN "A" FOR RAMP A, "B" FOR RAMP B, "C" FOR RAMP US - 30 EB, "D" FOR RAMP US - 30 WB AND "BD" FOR RAMP B AND US - 30 WB.

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, IT APPEARS THE SUBSOIL CONDITIONS AT THIS LOCATION ARE FAIRLY CONSISTENT.

AT THE STRUCTURE BORINGS, CRUSHED STONE FORMS THE SURFACE COVER AT BORINGS B-S2, B-S3, C-S1, C-S2 AND C-S4 EXTENDING TO 102 TO 254 MM. THE SURFACE COVER AT BORINGS B-S1, B-S4, C-S3 AND C-S5 IS TOPSOIL EXTENDING TO 330 TO 457 MM. THE SURFACE MATERIALS AT THE STRUCTURES ARE GENERALLY UNDERLAIN BY MEDIUM STIFF TO VERY STIFF SILT AND CLAY, SILTY CLAY OR CLAY EXCEPT AT BORING B-S3. LOOSE SILT UNDERLIES THE CRUSHED STONE SURFACE AT B-S3. THE UPPER PROFILE SOILS ARE GENERALLY UNDERLAIN BY MEDIUM STIFF TO VERY STIFF COHESIVE SOILS TO NEARLY 6.5 TO 11.3 METERS. A MEDIUM DENSE SILT LAYER WAS ENCOUNTERED FROM APPROXIMATELY 2.0 TO 4.0 METERS IN B-S3, B-S4 AND C-S3 AND FROM 4.0 TO 5.1 METERS IN C-S4. THE COHESIVE SOILS ARE GENERALLY UNDERLAIN BY INTERBEDDED LAYERS OF LOOSE TO DENSE SANDS, HARD SILT AND CLAY, MEDIUM DENSE TO DENSE SANDY SILT, AND OCCASIONALLY MEDIUM DENSE TO VERY DENSE GRAVEL OVER WEATHERED ROCK. ROCK CORES TAKEN AT EACH OF THE STRUCTURE LOCATIONS REVEALED SHALE AT C-S1 AND C-S2 WITH 100 PERCENT RECOVERY AND 0 TO 7 PERCENT RQD AND DOLOMITE AT THE REST OF THE STRUCTURES WITH 83 TO 100 PERCENT RECOVERY AND 0 TO 28 PERCENT RQD.

TOPSOIL, 279 TO 457 MM THICK, FORMS THE SURFACE COVER ALL OF THE EMBANKMENT BORINGS, EXCEPT C-E1. THE SURFACE COVER AT C-E1 IS A 305 MM THICK LAYER OF CRUSHED STONE. THE UPPER PROFILE SOILS UNDERLYING THE SURFACE MATERIALS AT THE EMBANKMENT BORINGS GENERALLY INCLUDE MEDIUM STIFF TO STIFF SILTY CLAY, CLAY AND/OR SILT AND CLAY EXCEPT AT BORINGS B-E2, C-E2 AND D-E1. THE TOPSOIL IS UNDERLAIN BY VERY LOOSE TO LOOSE SILT AT C-E2 AND D-E1 AND VERY LOOSE SANDY SILT AT B-E2. THE UPPER PROFILE SOILS ARE GENERALLY UNDERLAIN BY INTERBEDDED LAYERS OF VERY LOOSE TO DENSE SILT, LOOSE TO MEDIUM DENSE SAND, SILTY SAND AND/OR SILTY SAND TO BORING TERMINATION BETWEEN 4.5 AND 11.0 METERS.

THE SURFACE MATERIALS AT THE PAVEMENT BORINGS INCLUDED MEDIUM STIFF CLAY AT A-P1, CRUSHED STONE EXTENDING TO 254 MM AT D-P1 AND D-P2, 152 MM OF TOPSOIL OVER 152 MM OF CRUSHED STONE AT C-P3 AND 102 TO 457 MM OF TOPSOIL AT THE REMAINING PAVEMENT BORINGS. THE SURFACE MATERIALS ARE GENERALLY UNDERLAIN BY MEDIUM STIFF TO STIFF SILTY CLAY TO SILT AND CLAY AND MEDIUM STIFF CLAY. THE UPPER PROFILE SOILS ARE UNDERLAIN BY INTERBEDDED LAYERS OF MEDIUM STIFF TO VERY STIFF SILTY CLAY AND SILT AND CLAY, STIFF CLAY TO ELASTIC CLAY AND/OR LOOSE TO MEDIUM DENSE SANDY SILT TO BORING TERMINATION.

THE SURFACE MATERIALS AT THE HIGH MAST BASES INCLUDES 305 TO 406 MM OF TOPSOIL. THE UNDERLYING SOILS INCLUDE INTERBEDDED LAYERS OF LOOSE TO MEDIUM DENSE SANDY SILT, MEDIUM STIFF TO STIFF SILT AND CLAY TO SILTY CLAY AND MEDIUM DENSE SILT OVERLYING WEATHERED ROCK TO AUGER REFUSAL FROM 14.5 TO 16.5 METERS EXCEPT AT US23-HM4. NO WEATHERED ROCK WAS ENCOUNTERED PRIOR TO AUGER REFUSAL AT 14.3 METERS AT US23-HM4.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT ALL OF THE STRUCTURE BORINGS FROM 2.4 TO 10.1 METERS DURING THE DRILLING OPERATIONS. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS FOR THE STRUCTURE BORINGS FROM 1.2 TO 11.9 METERS.

EMBANKMENT BORINGS C-E1, C-E8, D-E3 AND D-E4 WERE DRY DURING DRILLING AND AT COMPLETION OF THE DRILLING OPERATIONS. GROUNDWATER SEEPAGE WAS ENCOUNTERED IN THE REMAINING EMBANKMENT BORINGS FROM 0.6 TO 8.8 METERS AND MEASURED FROM 1.2 TO 7.2 METERS AT COMPLETION OF THE DRILLING OPERATIONS EXCEPT AT BORINGS B-E4, B-E5, C-E2, C-E3 AND C-E4. BORINGS B-E4, B-E5, C-E2, C-E3 AND C-E4 WERE DRY AT COMPLETION OF THE DRILLING OPERATIONS.

PAVEMENT BORINGS A-P2, B-P2, C-P1, C-P4, D-P2 AND D-P3 WERE DRY DURING AND AT COMPLETION THE DRILLING OPERATIONS. GROUNDWATER SEEPAGE WAS ENCOUNTERED IN THE REST OF THE PAVEMENT BORINGS FROM 1.5 TO 8.5 METERS DURING DRILLING AND FROM 2.1 TO 7.3 AT COMPLETION EXCEPT AT C-P2. BORING C-P2 WAS DRY AT COMPLETION OF THE DRILLING OPERATIONS.

GROUNDWATER WAS ENCOUNTERED IN ALL OF THE HIGH MAST BORINGS DURING THE DRILLING OPERATION FROM 1.3 TO 13.4 METERS. GROUNDWATER WAS MEASURED IN THE HIGH MAST BORINGS AT COMPLETION OF THE DRILLING OPERATIONS FROM 1.8 TO 10.5 METERS.

PROPOSED US 30 AND STATE ROUTE 231 INTERCHANGE RAMPS K, L, M, AND N

THE BORINGS ARE DESIGNATED IN THIS SECTION WITH AN "K" FOR RAMP K, "L" FOR RAMP L, "M" FOR RAMP M AND "N" FOR RAMP N.

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, IT APPEARS THE SUBSURFACE CONDITIONS AT THIS LOCATION WERE FOUND TO BE FAIRLY CONSISTENT.

TOPSOIL, 356 TO 457 MM THICK, FORMS THE SURFACE COVER IN ALL OF THE EMBANKMENT BORINGS. THE UPPER PROFILE SOILS UNDERLYING THE TOPSOIL AT THE EMBANKMENT BORINGS GENERALLY INCLUDES STIFF SILTY CLAY TO CLAY. THE UPPER PROFILE SOILS ARE GENERALLY UNDERLAIN BY INTERBEDDED LAYERS OF LOOSE TO DENSE SANDY SILT AND/OR STIFF TO HARD SILT AND CLAY TO BORING TERMINATION.

TOPSOIL FORMED THE SURFACE COVER AT THE PAVEMENT BORINGS, EXTENDING FROM 229 TO 305 MM. THE TOPSOIL IS GENERALLY UNDERLAIN BY STIFF SILTY CLAY, SILT AND CLAY TO CLAY. THE UPPER PROFILE SOILS ARE UNDERLAIN BY INTERBEDDED LAYERS OF STIFF TO HARD SILT AND CLAY, STIFF TO VERY STIFF SILTY CLAY, MEDIUM DENSE SANDY SILT AND SILT TO BORING TERMINATION.

THE SURFACE MATERIALS AT THE HIGH MAST BASES INCLUDES 254 TO 356 MM OF TOPSOIL. THE UNDERLYING SOILS INCLUDE INTERBEDDED LAYERS OF LOOSE TO VERY DENSE SANDY SILT, MEDIUM STIFF TO VERY STIFF SILT AND CLAY TO SILTY CLAY, STIFF CLAY, MEDIUM DENSE SAND, DENSE TO VERY DENSE GRAVEL AND VERY DENSE ROCK FRAGMENTS TO AUGER REFUSAL.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT ALL OF THE EMBANKMENT BORINGS FROM 3.2 TO 3.5 METERS DURING THE DRILLING OPERATION, EXCEPT AT MR-E1 AND MR-E2. MR-E1 AND MR-E2 WERE DRY DURING DRILLING AND AT COMPLETION OF THE DRILLING OPERATIONS. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS FOR THE REMAINING EMBANKMENT BORINGS FROM 4.0 TO 5.3 METERS.

GROUNDWATER SEEPAGE WAS ENCOUNTERED IN THE PAVEMENT BORINGS FROM 1.5 TO 3.2 METERS DURING DRILLING AND FROM 2.4 TO 4.0 AT COMPLETION EXCEPT AT K-P1. BORING K-P1 WAS DRY AT COMPLETION OF THE DRILLING OPERATIONS.

GROUNDWATER WAS ENCOUNTERED IN ALL OF THE HIGH MAST BORINGS DURING THE DRILLING OPERATION FROM 3.5 TO 6.6 METERS. GROUNDWATER WAS MEASURED IN THE HIGH MAST BORINGS AT COMPLETION OF THE DRILLING OPERATIONS FROM 4.3 TO 9.1 METERS.

PROPOSED US 30 AND COUNTY ROAD 330 INTERCHANGE RAMPS O AND P

THE BORINGS ARE DESIGNATED IN THIS SECTION WITH AN "O" FOR RAMP O AND "P" FOR RAMP P. THE HIGH MAST LIGHTS ARE DESIGNATED AS CR330HM1 THROUGH CR330HM3.

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT THIS LOCATION WERE FOUND TO BE SOMEWHAT VARIABLE.

THE SURFACE COVER AT O-E1 CONSISTS OF 50 MM OF ASPHALT OVERLYING 457 MM OF CRUSHED STONE. TOPSOIL, 228 TO 304 MM THICK, FORMS THE SURFACE COVER AT THE REMAINING EMBANKMENT BORINGS. THE UPPER PROFILE SOILS UNDERLYING THE TOPSOIL AT THE EMBANKMENT BORINGS GENERALLY INCLUDES STIFF SILTY CLAY, VERY STIFF CLAY AND LOOSE SANDY SILT. THE UPPER PROFILE SOILS ARE GENERALLY UNDERLAIN BY INTERBEDDED LAYERS OF LOOSE TO VERY DENSE SANDY SILT, MEDIUM STIFF TO HARD SILT AND CLAY AND VERY STIFF SILTY CLAY TO BORING TERMINATION.

TOPSOIL FORMED THE SURFACE COVER AT BORING P-P1 EXTENDING 254 MM. THE SURFACE COVER AT O-P1 IS CRUSHED STONE EXTENDING TO 304 MM. THE SURFACE MATERIALS ARE GENERALLY UNDERLAIN BY STIFF TO VERY STIFF SILTY CLAY. THE UPPER PROFILE SOIL IS UNDERLAIN BY INTERBEDDED LAYERS OF MEDIUM DENSE SANDY SILT AND STIFF SILTY CLAY TO BORING TERMINATION.

THE SURFACE MATERIALS AT THE HIGH MAST BASES INCLUDES 203 TO 304 MM OF TOPSOIL. THE TOPSOIL AT BORING CR330HM2 IS UNDERLAIN BY 228 MM OF CRUSHED STONE. THE SOILS UNDERLYING THE SURFACE MATERIALS GENERALLY INCLUDE INTERBEDDED LAYERS OF MEDIUM STIFF TO VERY STIFF SILTY CLAY, LOOSE TO VERY DENSE SANDY SILT, STIFF TO VERY STIFF SILT AND CLAY AND WEATHERED ROCK TO AUGER REFUSAL BETWEEN 15.8 AND 16.2 METERS.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT EMBANKMENT BORINGS O-E2 AND P-E1 FROM 1.2 TO 3.0 METERS DURING THE DRILLING OPERATION. BORINGS O-E1 AND P-E2 WERE DRY DURING DRILLING AND AT COMPLETION OF THE DRILLING OPERATIONS. GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS FOR THE REMAINING EMBANKMENT BORINGS FROM 0.3 TO 3.1 METERS.

GROUNDWATER SEEPAGE WAS ENCOUNTERED IN PAVEMENT BORING O-P1 AT 3.0 METERS DURING DRILLING AND AT 3.0 COMPLETION. BORING P-P1 WAS DRY DURING AND AT COMPLETION OF THE DRILLING OPERATIONS.

GROUNDWATER WAS ENCOUNTERED IN ALL OF THE HIGH MAST BORINGS DURING THE DRILLING OPERATION FROM 2.5 TO 11.8 METERS. GROUNDWATER WAS MEASURED BORING CR330HM2 AT COMPLETION OF THE DRILLING OPERATIONS AT 9.1 METERS. BORINGS CR330HM1 AND CR330HM3 WERE DRY AT COMPLETION OF THE DRILLING OPERATIONS.

PROPOSED US 30 WEST BOUND REST AREA

THE BORINGS ARE DESIGNATED IN THIS SECTION WITH AN "B" FOR BUILDING BORINGS, WBRA-B1 AND WBRA-B2, AND "P" FOR PAVEMENT BORINGS, WBRA-P1 THROUGH WBRA-P3. THE HIGH MAST LIGHT IS DESIGNATED AS WBRA-HM1.

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT THIS LOCATION WERE FOUND TO BE FAIRLY CONSISTENT.

THE SURFACE COVER AT THE BUILDING BORINGS INCLUDES 279 TO 304 MM OF TOPSOIL. THE TOPSOIL IS UNDERLAIN BY STIFF CLAY TO SILT AND CLAY EXTENDING TO 1.8 TO 3.3 METERS OVERLYING MEDIUM DENSE TO DENSE SANDY SILT TO BORING TERMINATION.

THE SURFACE AT THE PAVEMENT BORINGS CONSISTS OF 254 TO 279 MM OF TOPSOIL. THE TOPSOIL IS GENERALLY UNDERLAIN BY STIFF TO VERY STIFF SILTY CLAY OR STIFF CLAY. THE UPPER PROFILE SOIL IS UNDERLAIN BY INTERBEDDED LAYERS OF MEDIUM DENSE SILT AND SANDY SILT TO BORING TERMINATION.

THE SURFACE MATERIAL AT THE HIGH MAST BASE IS 279 MM OF TOPSOIL. THE TOPSOIL IS GENERALLY UNDERLAIN BY INTERBEDDED LAYERS OF STIFF CLAY, MEDIUM DENSE SILT, VERY STIFF SILT AND CLAY, VERY DENSE SAND AND SANDY SILT TO BORING TERMINATION.

NO GROUNDWATER SEEPAGE WAS ENCOUNTERED AT THE BUILDING AND PAVEMENT BORINGS DURING DRILLING AND THE BORINGS WERE DRY AT COMPLETION OF THE DRILLING OPERATIONS. GROUNDWATER SEEPAGE WAS MEASURED IN THE HIGH MAST BORING AT 3.3 METERS DURING DRILLING AND GROUNDWATER WAS MEASURED AT COMPLETION OF THE DRILLING OPERATIONS AT 6.7 METERS.

PROPOSED US 30 EAST BOUND REST AREA

THE BORINGS ARE DESIGNATED IN THIS SECTION WITH A "B" FOR BUILDING BORINGS, EBRA-B1 THROUGH EBRA-B4, AND "P" FOR PAVEMENT BORINGS, EBRA-P1 THROUGH EBRA-P3. THE HIGH MAST LIGHT IS DESIGNATED AS EBRA-HM1.

BASED ON THE INFORMATION DEVELOPED DURING THE COURSE OF THIS INVESTIGATION, THE SUBSURFACE CONDITIONS AT THIS LOCATION WERE FOUND TO BE SOMEWHAT VARIABLE.

THE SURFACE COVER AT THE BUILDING BORINGS EBRA-B1 AND EBRA-B2 INCLUDES 254 MM OF TOPSOIL. THE TOPSOIL IS UNDERLAIN BY STIFF CLAY TO SILTY CLAY EXTENDING TO 1.0 TO 1.8 METERS OVERLYING VERY STIFF TO HARD SILT AND CLAY, MEDIUM DENSE SANDY SILT TO MEDIUM DENSE TO DENSE SILT TO BORING TERMINATION.

THE SURFACE COVER AT THE BUILDING BORINGS EBRA-B3 AND EBRA-B4 INCLUDES 304 MM OF TOPSOIL. THE TOPSOIL IS UNDERLAIN BY VERY LOOSE SILT TO 1.0 METERS AT EBRA-B3 AND MEDIUM STIFF SILT AND CLAY TO 1.8 METERS AT EBRA-B4. THE UPPER PROFILE SOILS ARE UNDERLAIN BY MEDIUM STIFF TO VERY STIFF SILTY CLAY TO SILT AND CLAY TO MEDIUM DENSE SILT TO BORING TERMINATION.

THE SURFACE AT THE PAVEMENT BORINGS CONSISTS OF 254 TO 279 MM OF TOPSOIL. THE TOPSOIL IS GENERALLY UNDERLAIN BY MEDIUM STIFF SILTY CLAY TO MEDIUM STIFF TO STIFF SILT AND CLAY. THE UPPER PROFILE SOILS ARE UNDERLAIN BY INTERBEDDED LAYERS OF STIFF TO VERY STIFF SILT AND CLAY, VERY STIFF SILTY CLAY AND MEDIUM DENSE TO DENSE SILT TO BORING TERMINATION.

THE SURFACE MATERIAL AT THE HIGH MAST BASE IS 304 MM OF TOPSOIL. THE TOPSOIL IS GENERALLY UNDERLAIN BY INTERBEDDED LAYERS OF MEDIUM STIFF TO VERY STIFF SILT AND CLAY TO LOOSE TO MEDIUM DENSE SILT TO BORING TERMINATION.

GROUNDWATER SEEPAGE WAS ENCOUNTERED AT BORINGS EBRA-B3, EBRA-P1 AND EBRA-HM1 DURING DRILLING AT 2.6, 1.8, AND 14.4 METERS, RESPECTIVELY. ALL OF THE BORINGS WERE DRY AT COMPLETION OF THE DRILLING OPERATIONS EXCEPT AT EBRA-B3. GROUNDWATER SEEPAGE WAS MEASURED IN EBRA-B3 AT 2.1 AT COMPLETION OF THE DRILLING OPERATIONS.

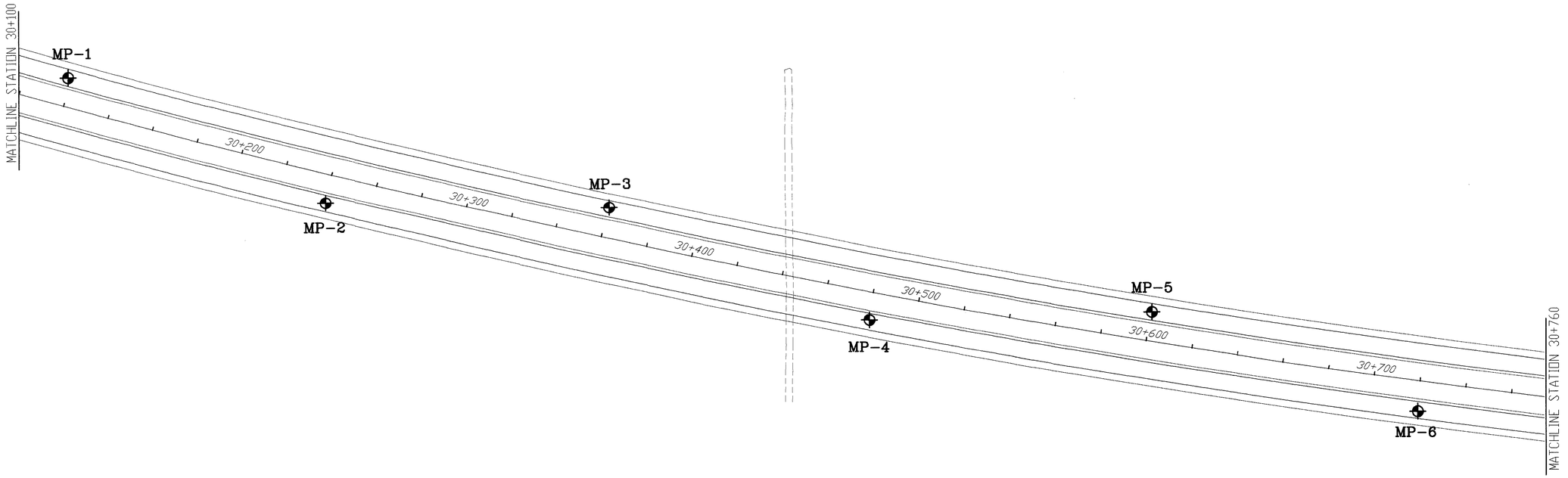
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

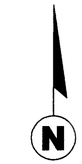
DRAWN BY: S.M.D.
DATE: 11-17-97

DRAWING NO. COVER 30
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)





TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL
SCALE IN METER

DRAWN BY: B.J.G.
DATE: 6-14-99
DRAWING NO. ML 1-1.DGN
PROJECT NO. 33644.01

PROFILE

SOIL PROFILE

MP-1
STA 30+120
LT 13.0m
ELEV 267.502m
TOPSOIL 229mm

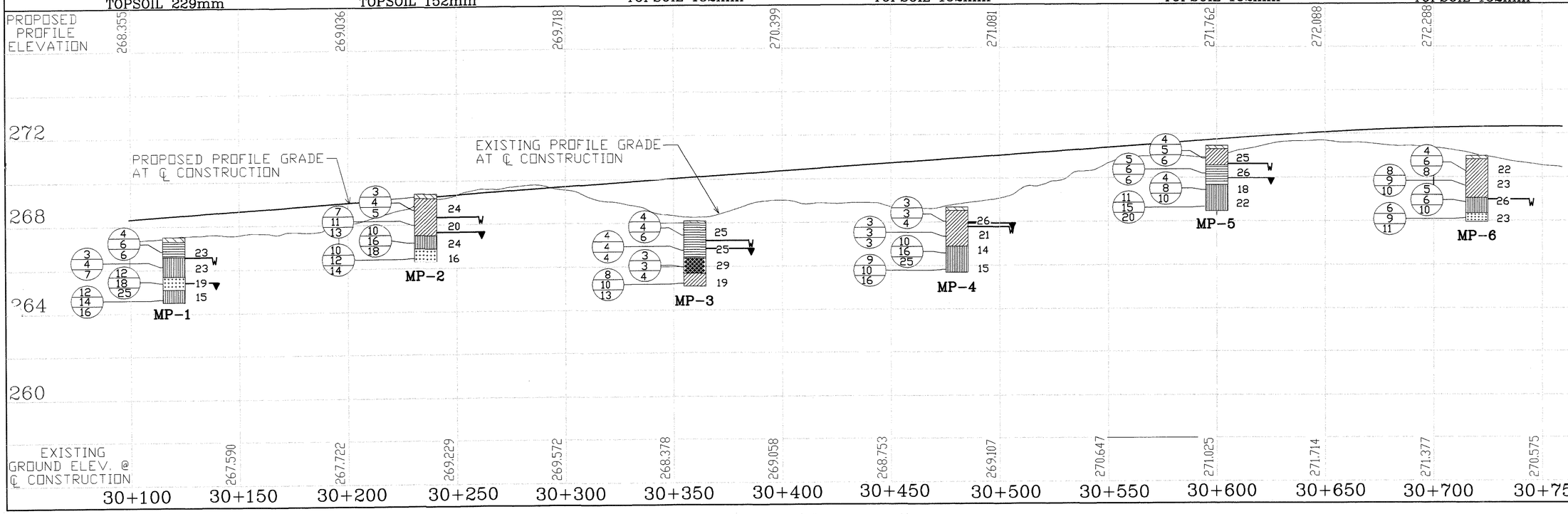
MP-2
STA 30+240
RT 12.0m
ELEV 269.353m
TOPSOIL 152mm

MP-3
STA 30+360
LT 12.0m
ELEV 268.103m
TOPSOIL 152mm

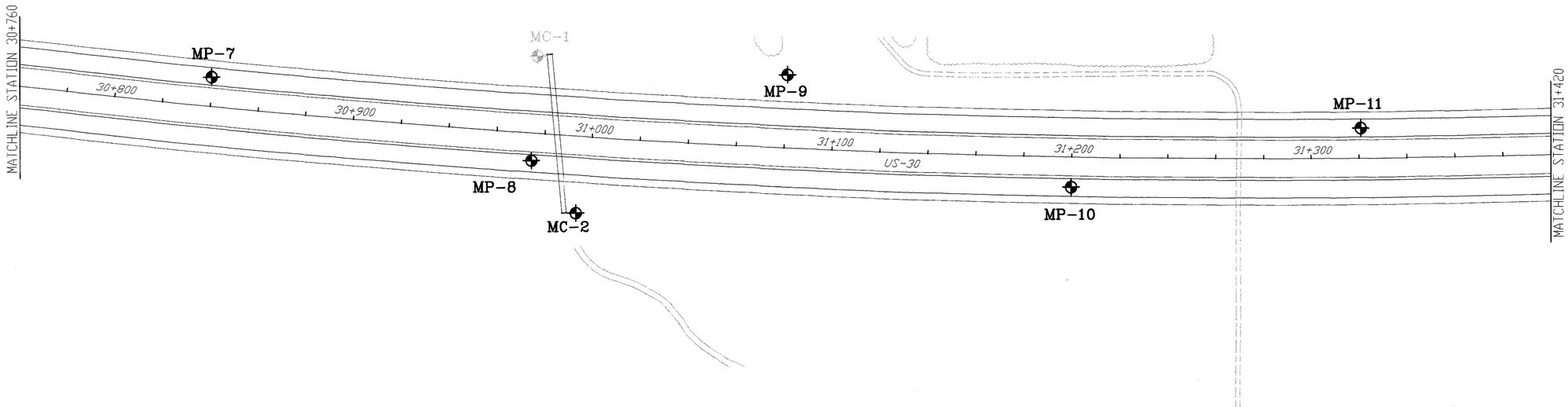
MP-4
STA 30+480
RT 13.0m
ELEV 268.722m
TOPSOIL 152mm

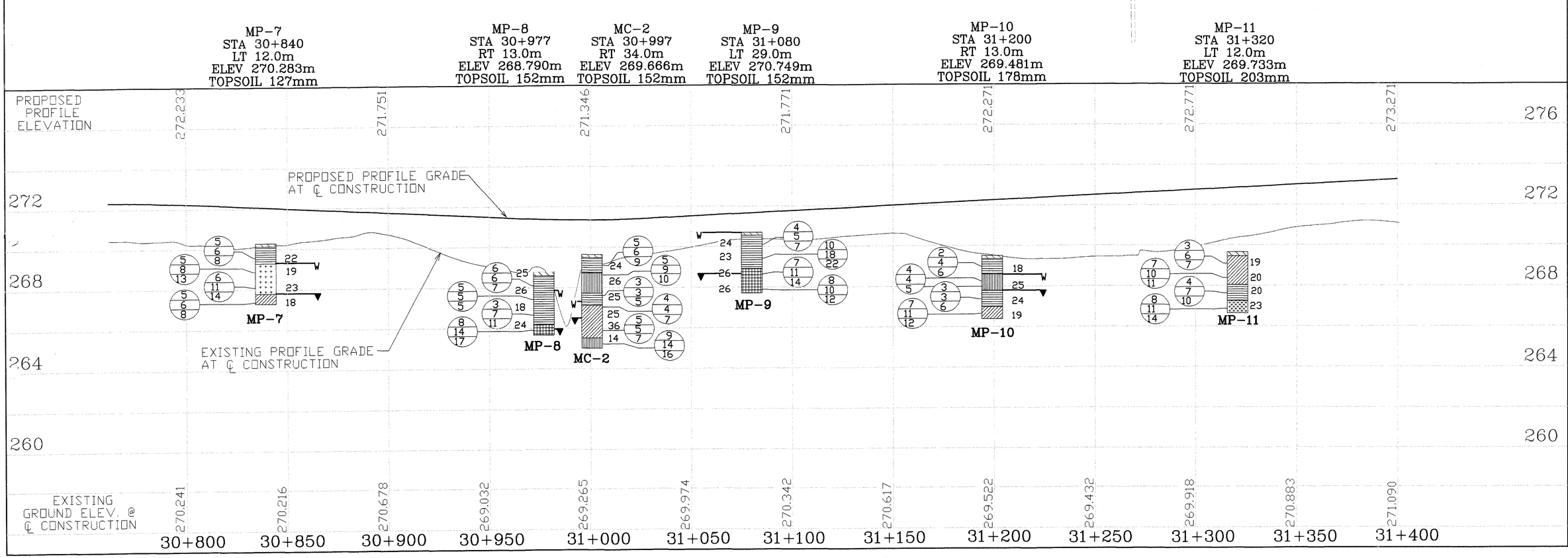
MP-5
STA 30+600
LT 12.0m
ELEV 271.620m
TOPSOIL 152mm

MP-6
STA 30+720
RT 12.0m
ELEV 271.007m
TOPSOIL 152mm



WYA/CRA-30-23.914/0.000(14.86/0.00)





TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

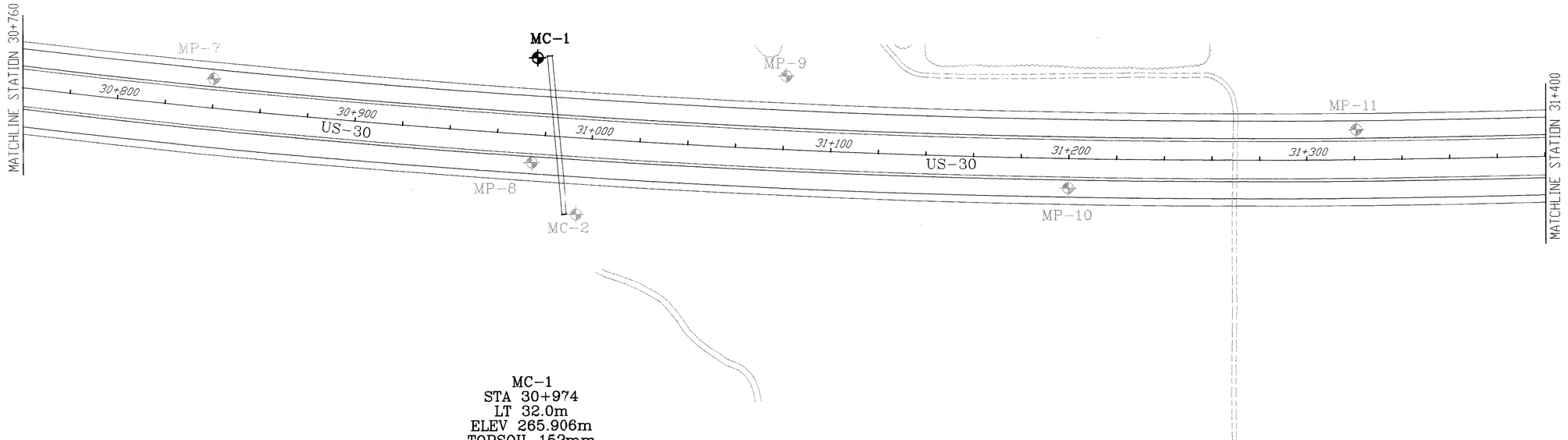
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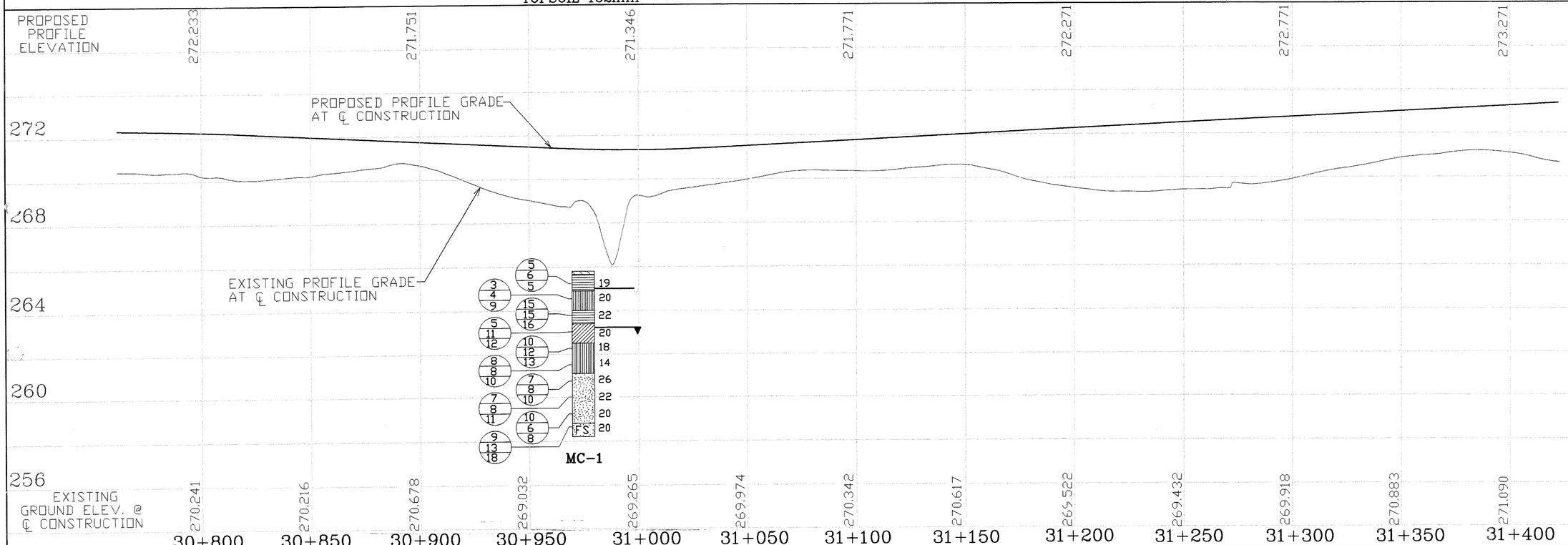
DRAWN BY: B.J.G.
DATE: 6-14-99
DRAWING NO. ML1-2.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



MC-1
STA 30+974
LT 32.0m
ELEV 265.906m
TOPSOIL 152mm



TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

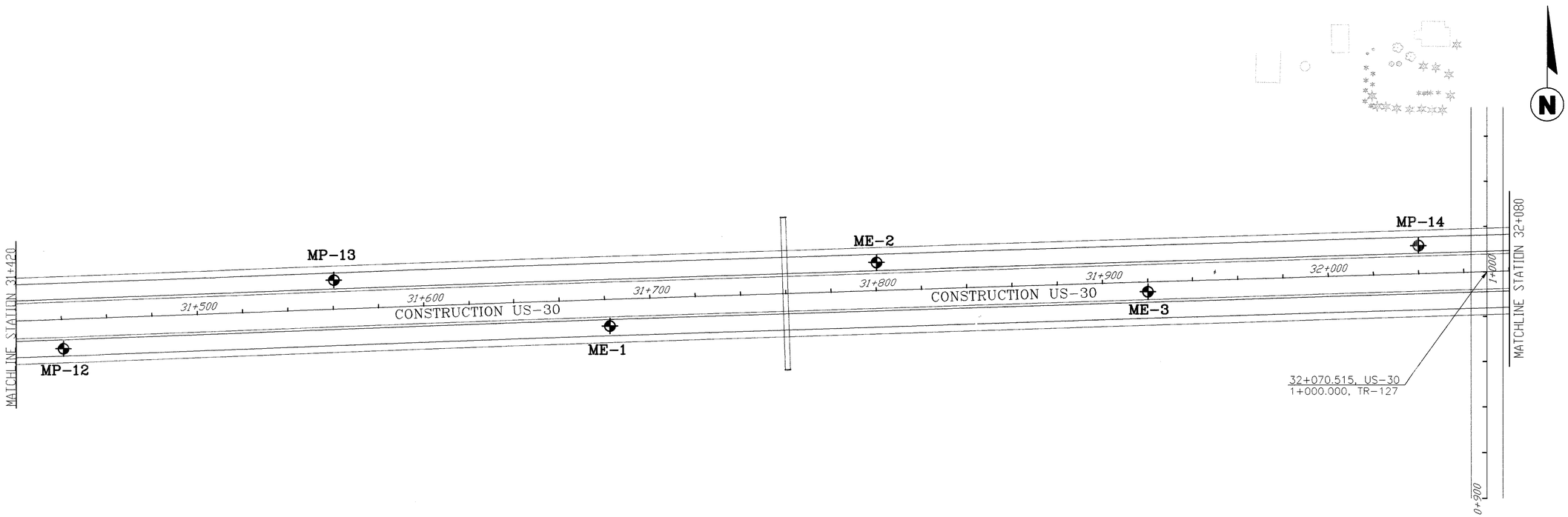
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HORIZONTAL SCALE IN METER

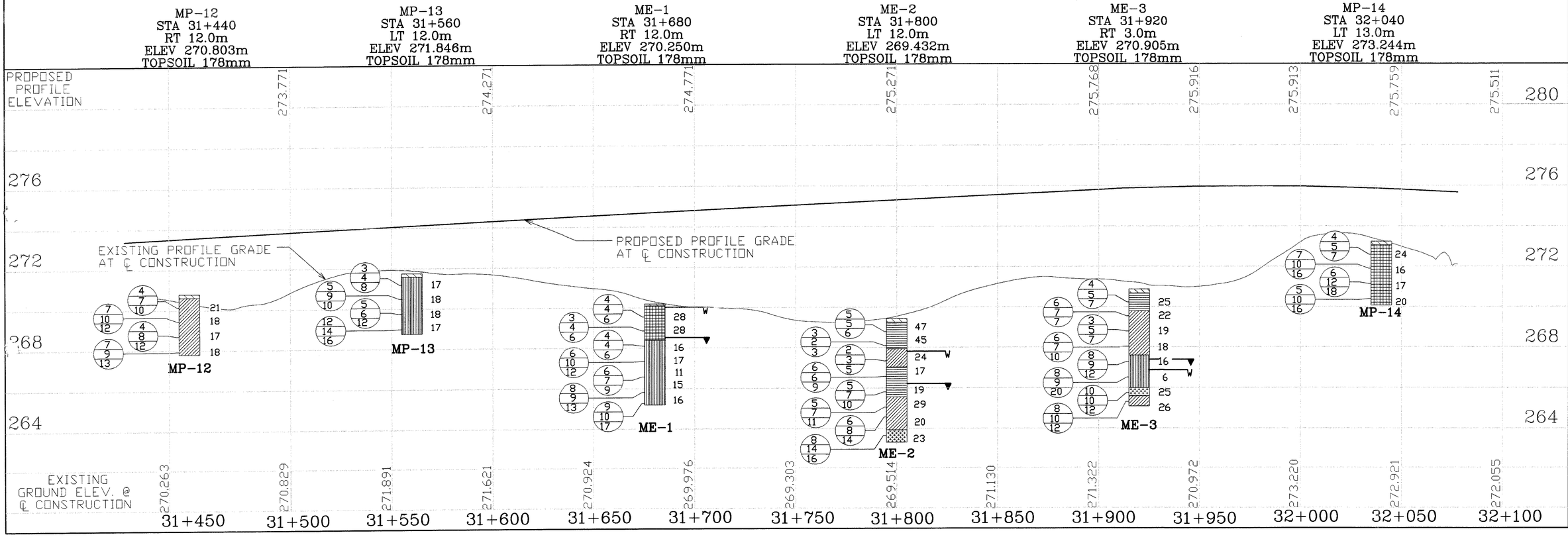
DRAWN BY: B.J.G.
DATE: 6-14-99
DRAWING NO. ML1-3.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

8
130





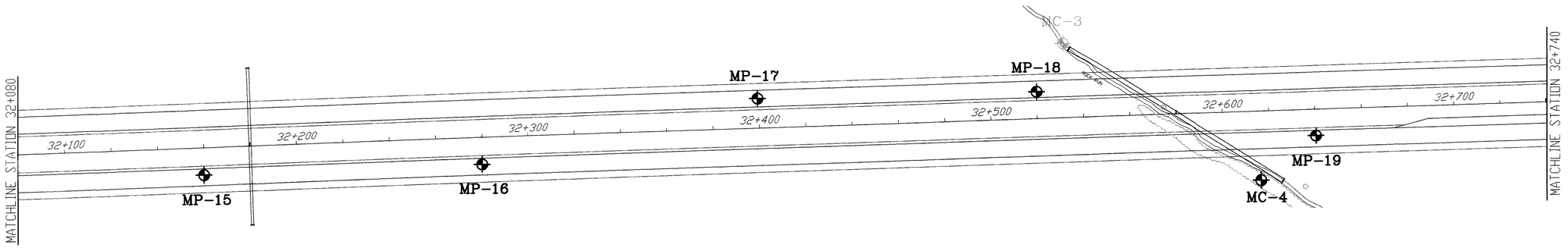
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL
SCALE IN METER

DRAWN BY: B.J.C.
DATE: 6-14-99
DRAWING NO. ML 1-4.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



MP-15
STA 32+160
RT 13.0m
ELEV 271.869m
TOPSOIL 178mm

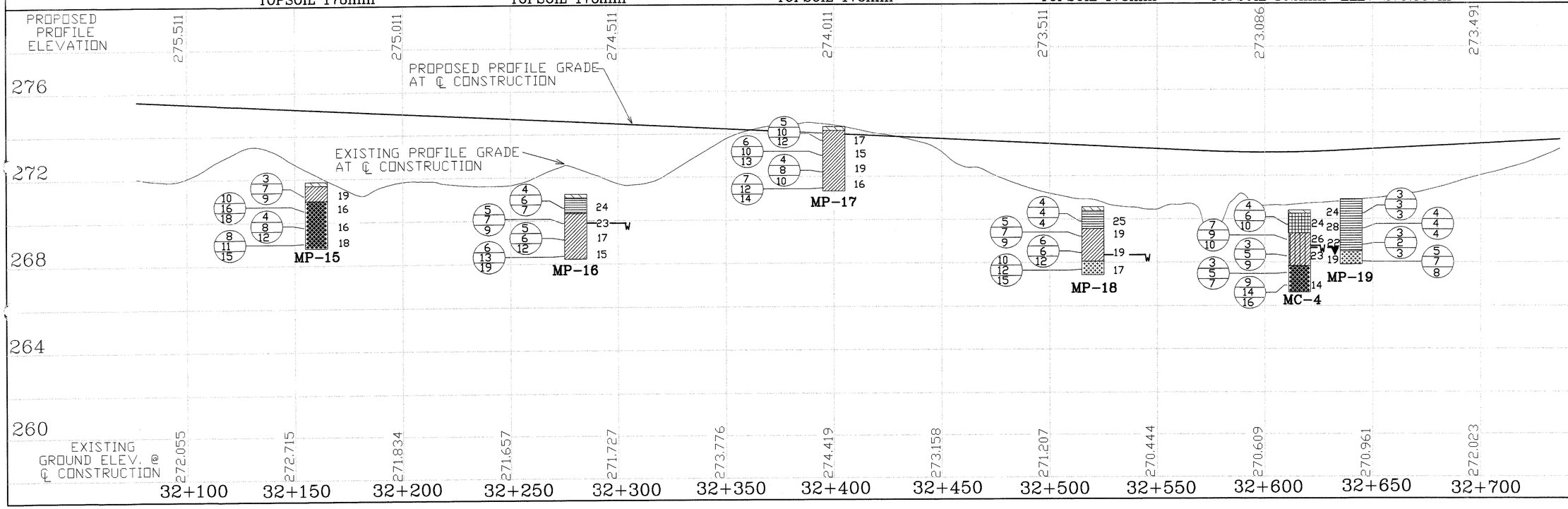
MP-16
STA 32+280
RT 12.0m
ELEV 271.230m
TOPSOIL 178mm

MP-17
STA 32+400
LT 12.0m
ELEV 274.330m
TOPSOIL 178mm

MP-18
STA 32+520
LT 12.0m
ELEV 270.551m
TOPSOIL 178mm

MC-4
STA 32+616
RT 30.0m
ELEV 270.389m
TOPSOIL 152mm

MP-19
STA 32+640
RT 12.0m
ELEV 270.907m



TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

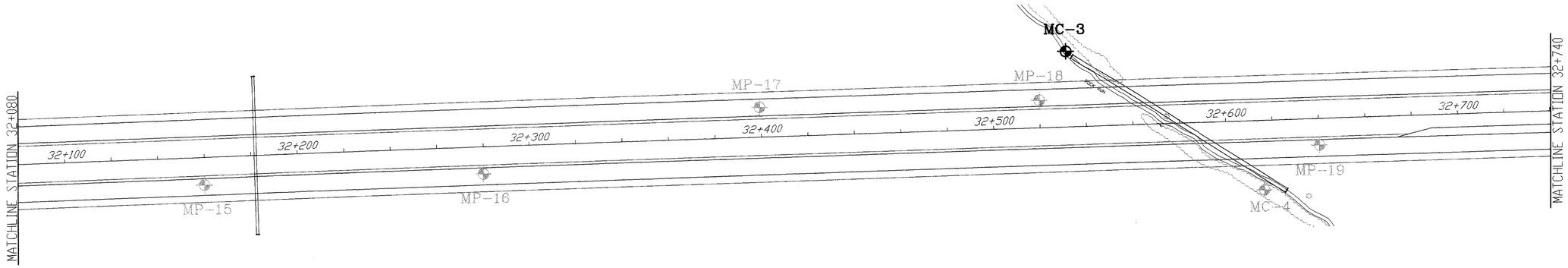
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SCALE IN METER

DRAWN BY: B.J.C.
DATE: 6-14-99
DRAWING NO. ML 1-5.DGN
PROJECT NO. 33644.01

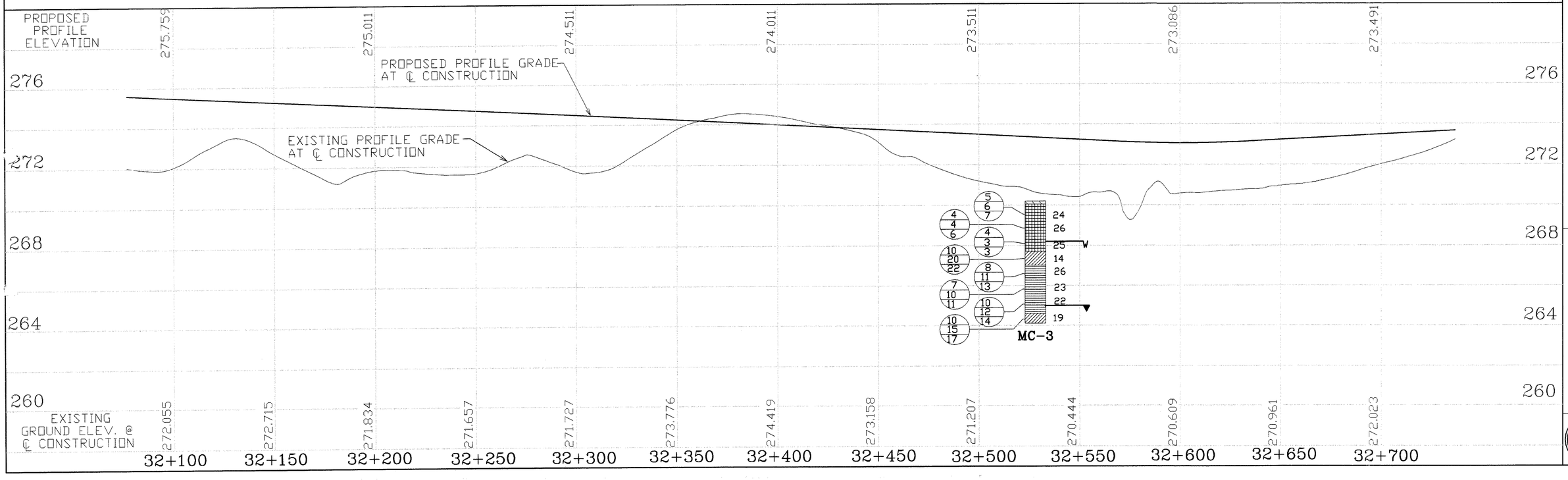
SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

10/30



MC-3
STA 32+528
LT 31.0m
ELEV 270.207m
TOPSOIL 152mm



TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

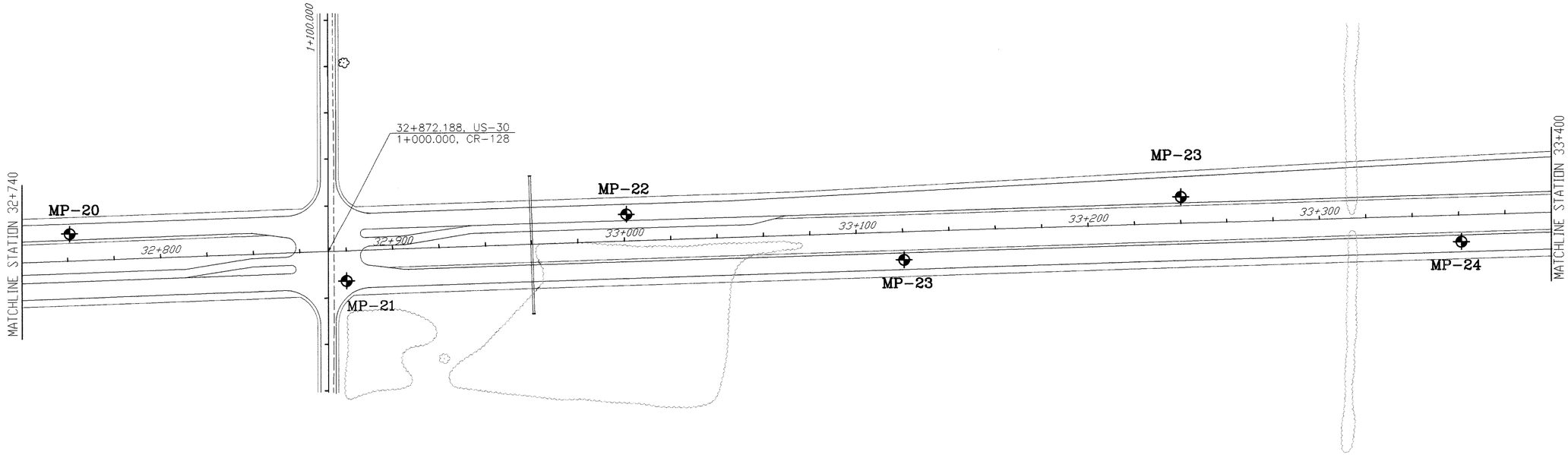
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HORIZONTAL SCALE IN METER

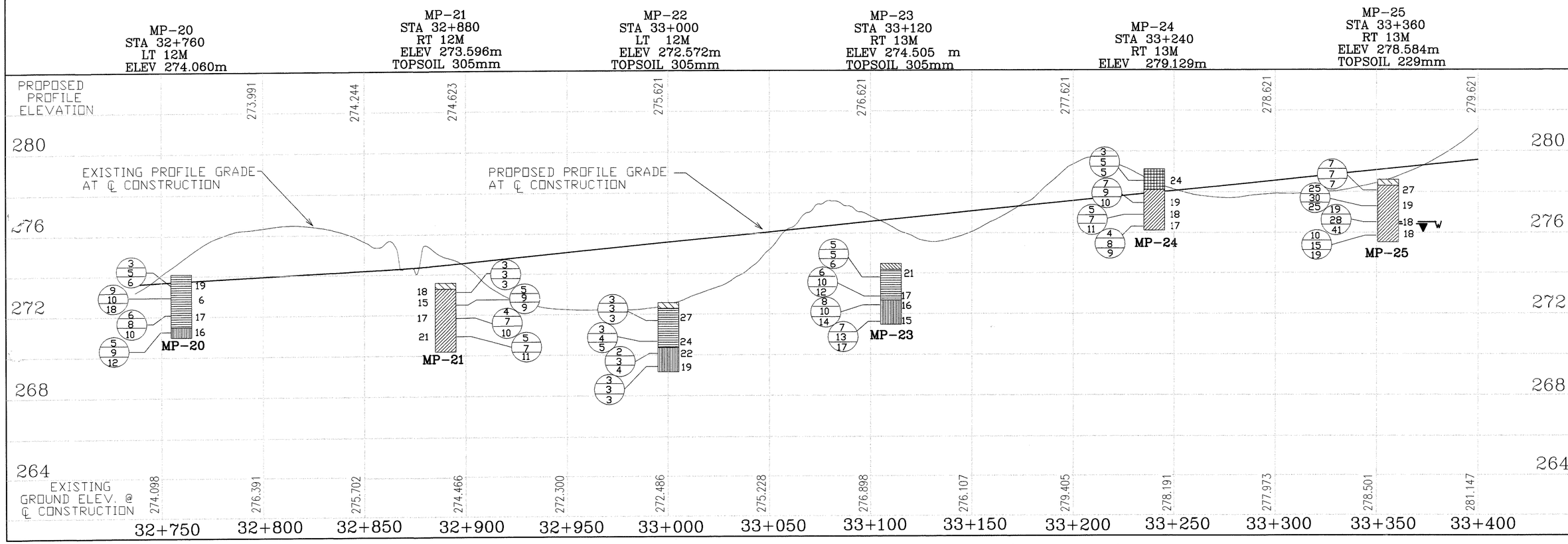
DRAWN BY: B.J.G.
DATE: 6-14-99
DRAWING NO. ML-1-6.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

11/130





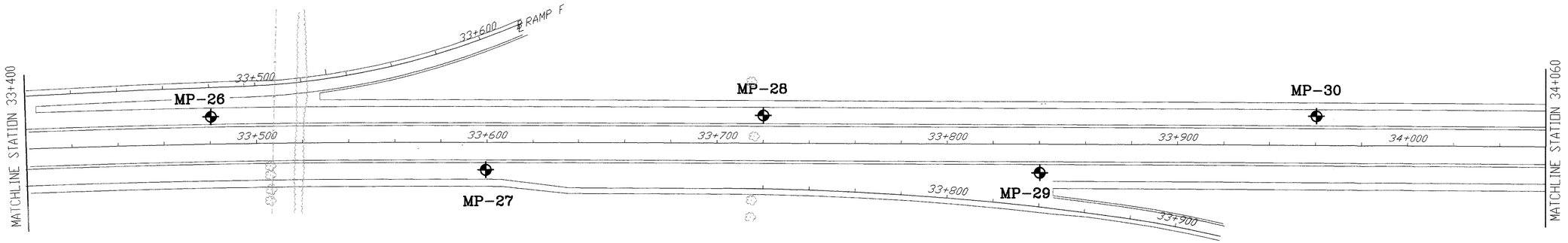
IOLIES INC
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL
SCALE IN METER

DRAWN BY: B.J.G.
DATE: 6-14-99
DRAWING NO. WL 1-7.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

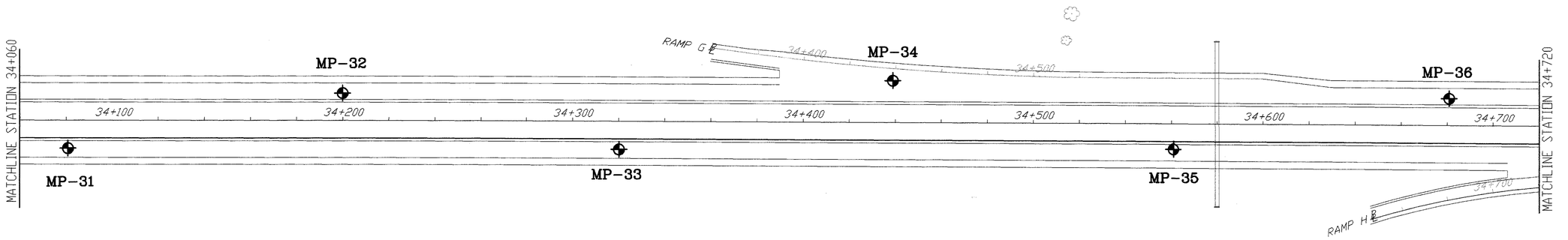
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HORIZONTAL
SCALE IN METER

DRAWN BY: M. BURRIOLA
DATE: 6-16-99
DRAWING NO. ML 2-1.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

13
130



TOLLES INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL SCALE IN METER

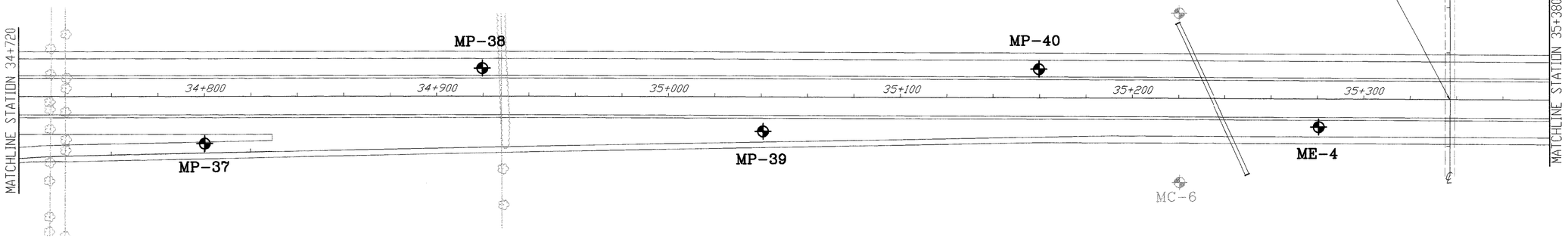
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DATE: 6-16-99
DRAWING NO. MI. 2-2.DGN
PROJECT NO. 33644.01

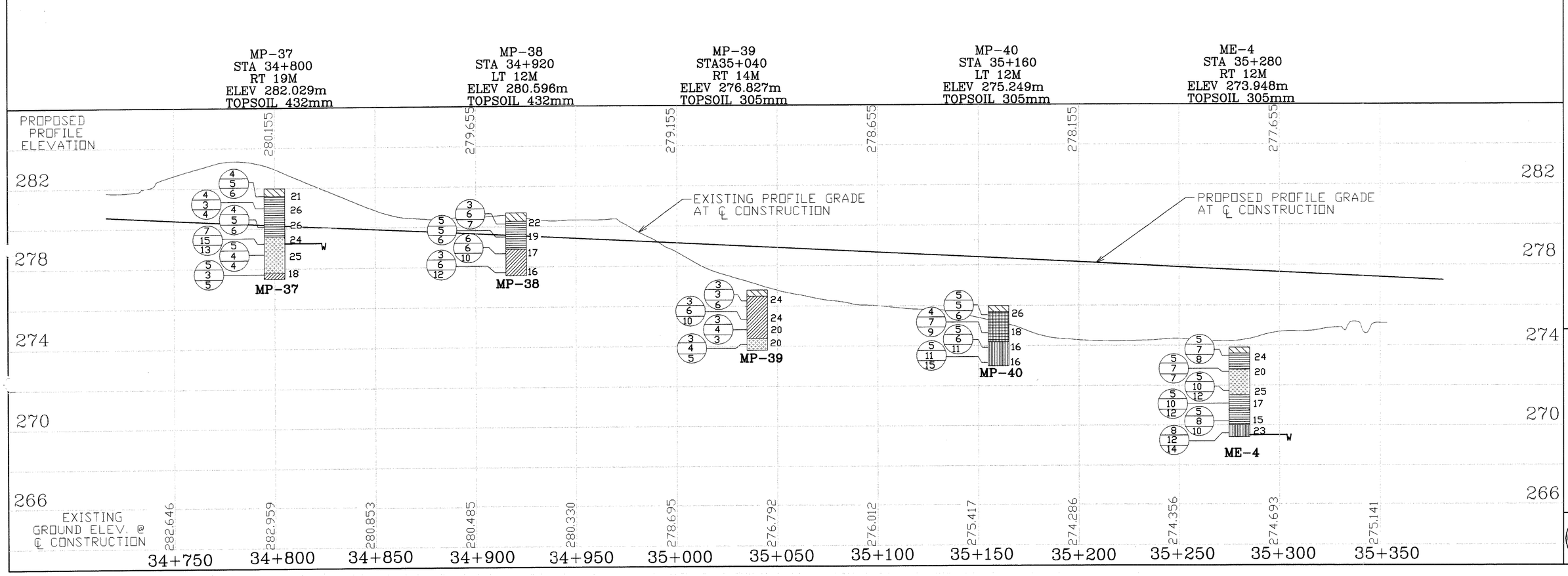
FILE

SOIL PROF

WYA/CRA-30-23.914/0.000(14.86/0.00)

14/130





N

HORIZONTAL SCALE IN METER
0 25 50

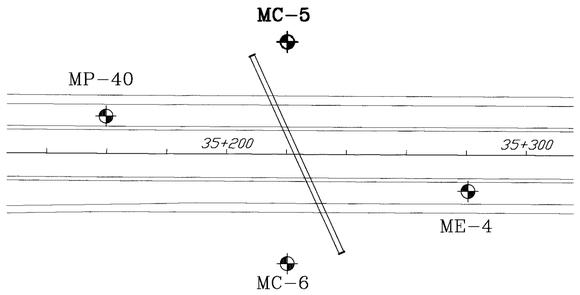
PROFILE

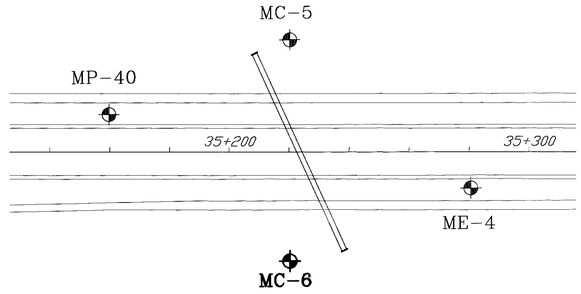
SOIL PROFILES

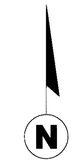
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DRAWN BY: M. BURRIOLA
DATE: 6-16-99
DRAWING NO. ML 2-3.DGN
PROJECT NO. 33644.01

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624







TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

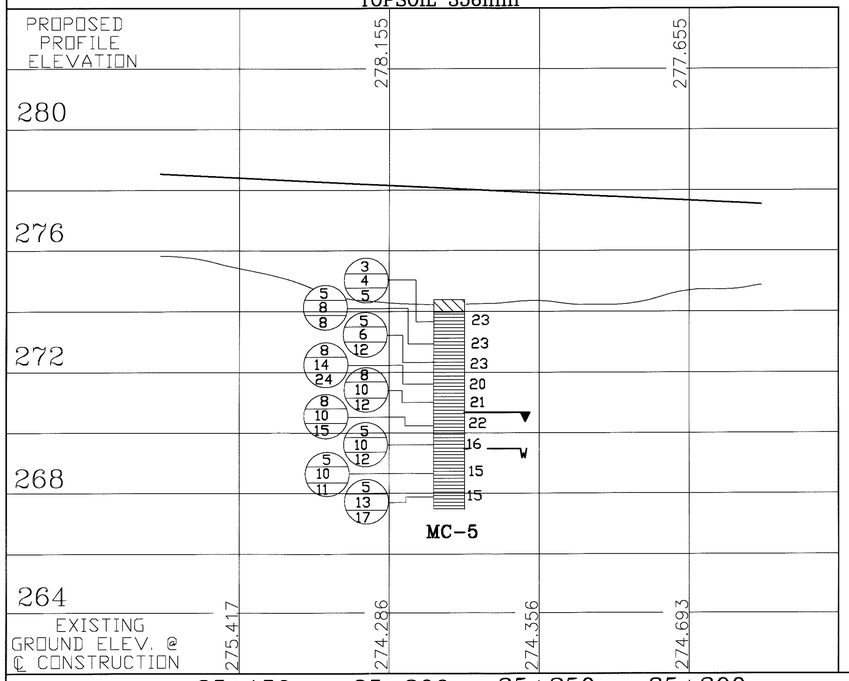
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DATE: 6-16-99
DRAWING NO. ML 2-4.DGN
PROJECT NO. 33644.01

PROFILE

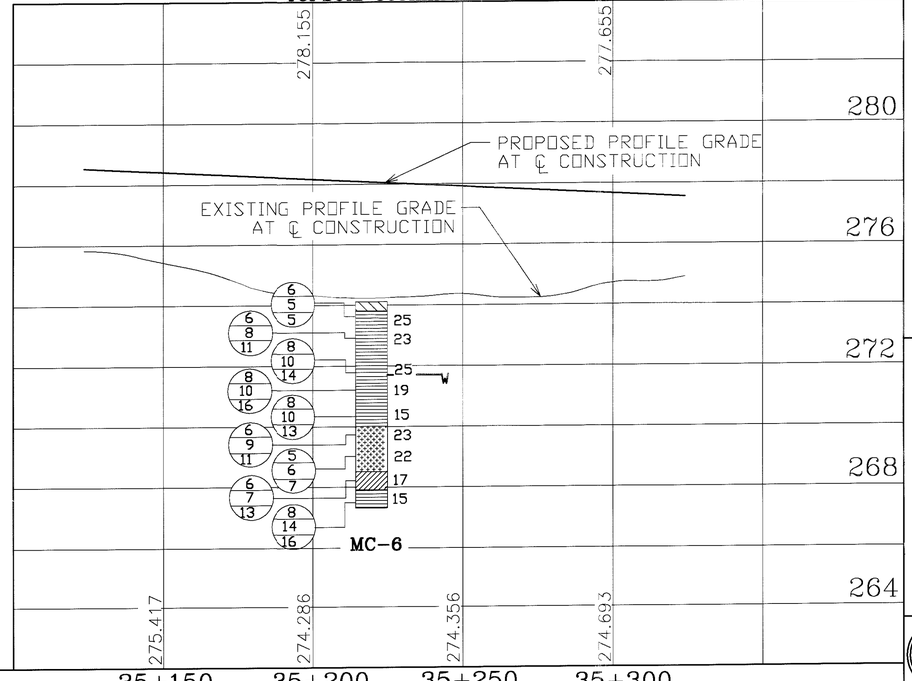
SOIL PROFILES

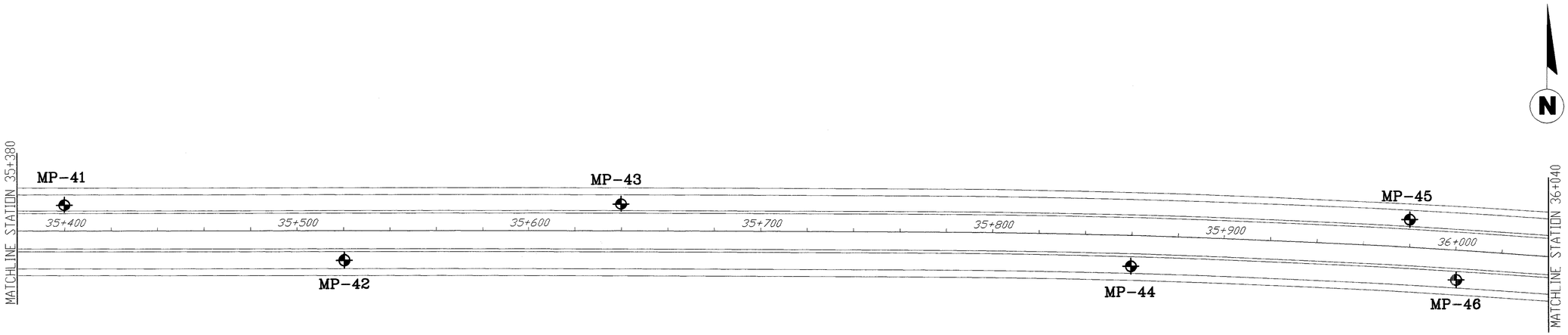
WYA/CRA -30-23.914/0.000(14.86/0.00)

MC-5
STA 35+220
LT 37M
ELEV 274.287m
TOPSOIL 356mm



MC-6
STA 35+220
RT 35M
ELEV 274.123m
TOPSOIL 305mm





MP-41
STA 35+400
LT 12M
ELEV 275.471m
TOPSOIL 254mm

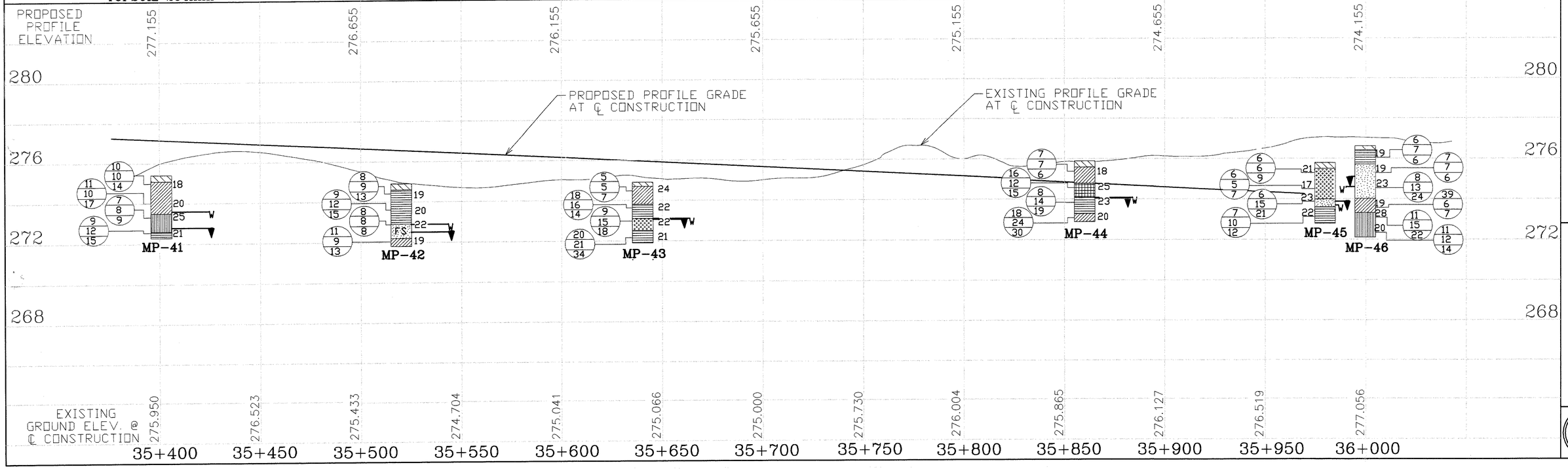
MP-42
STA 35+520
RT 13M
ELEV 274.854m
TOPSOIL 279mm

MP-43
STA 35+640
LT 12M
ELEV 274.908m
TOPSOIL 254mm

MP-44
STA 35+860
RT 13M
ELEV 275.901m
TOPSOIL 279mm

MP-45
STA 35+980
LT 12M
ELEV 275.845m
TOPSOIL 305mm

MP-46
STA 36+000
RT 12M
ELEV 276.734m
TOPSOIL 279mm



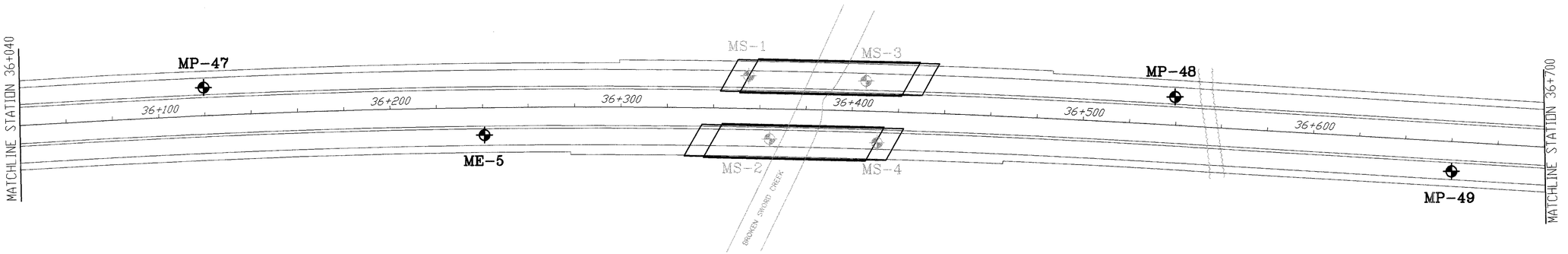
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL
SCALE IN METER

DRAWN BY: M. BURRIOLA
DATE: 6-16-99
DRAWING NO. ML 2-5.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

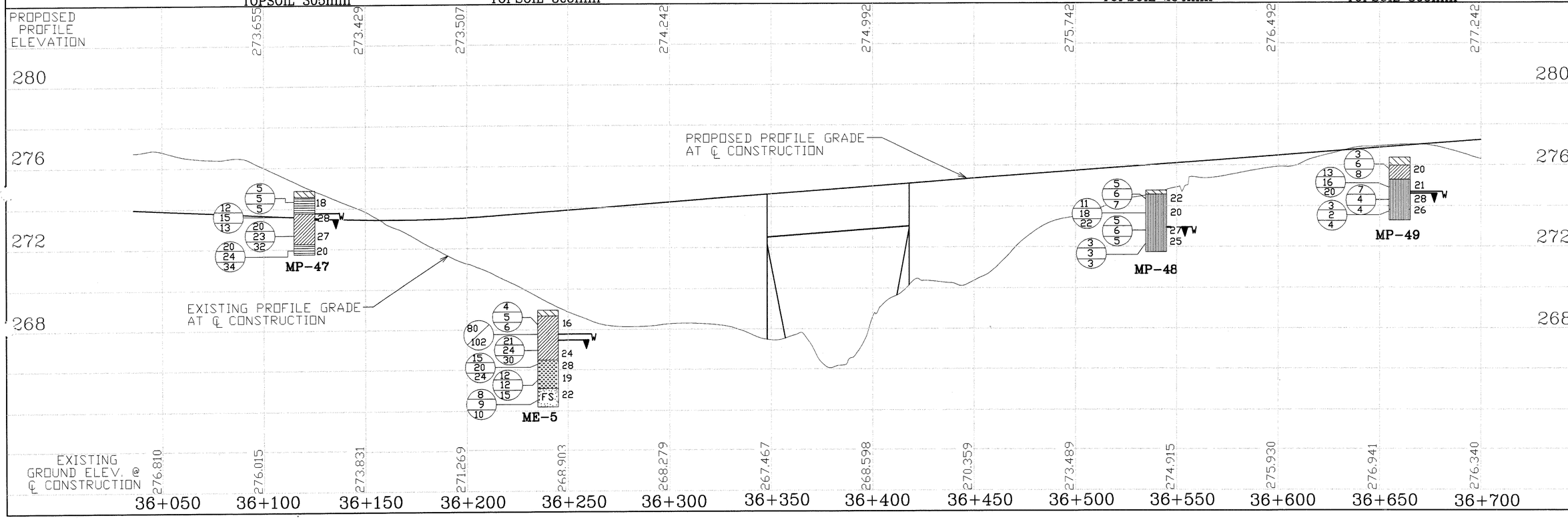


MP-47
STA36+120
LT 12M
ELEV 274.892m
TOPSOIL 305mm

ME-5
STA 36+240
RT 12M
ELEV 269.044m
TOPSOIL 305mm

MP-48
STA 36+540
LT 12M
ELEV 274.735m
TOPSOIL 254mm

MP-49
STA 36+660
RT 13M
ELEV 276.350m
TOPSOIL 305mm



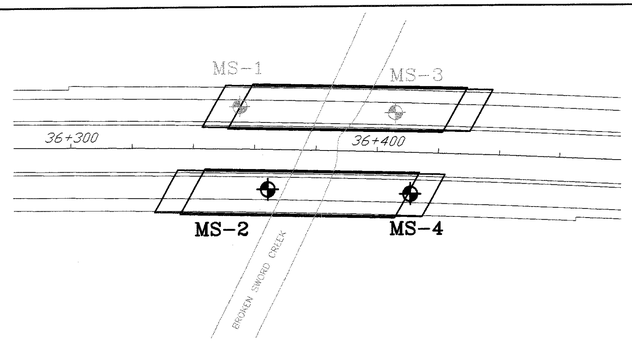
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

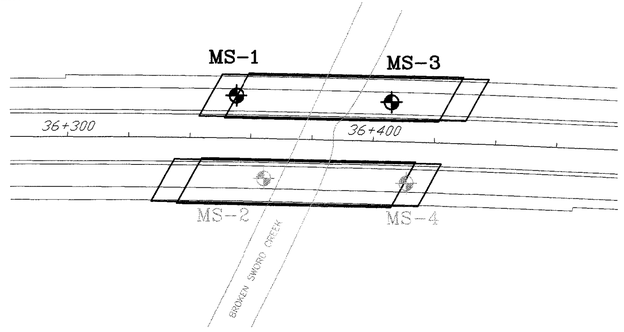
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HORIZONTAL SCALE IN METER

DRAWN BY: M. BURRIOLA
DATE: 6-17-99
DRAWING NO. ML 2-6.DGN
PROJECT NO. 33644.01

FILE OF SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

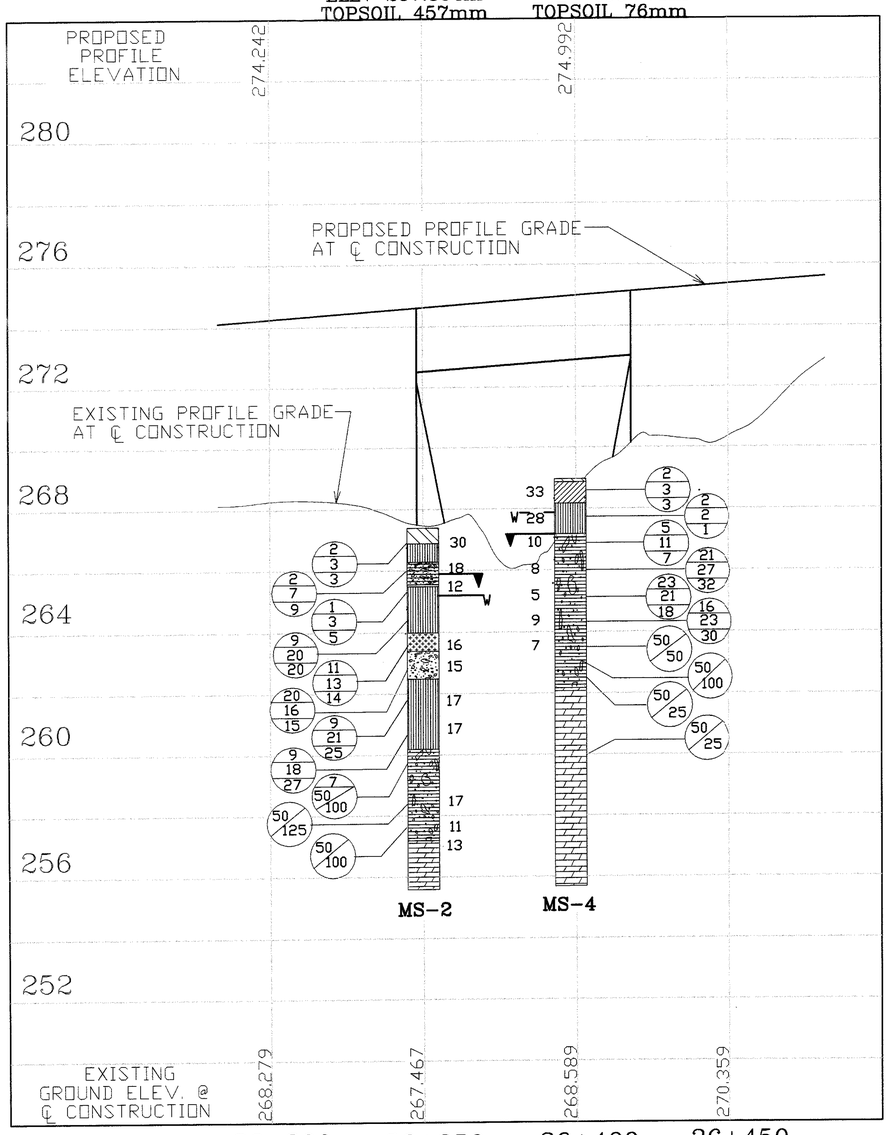




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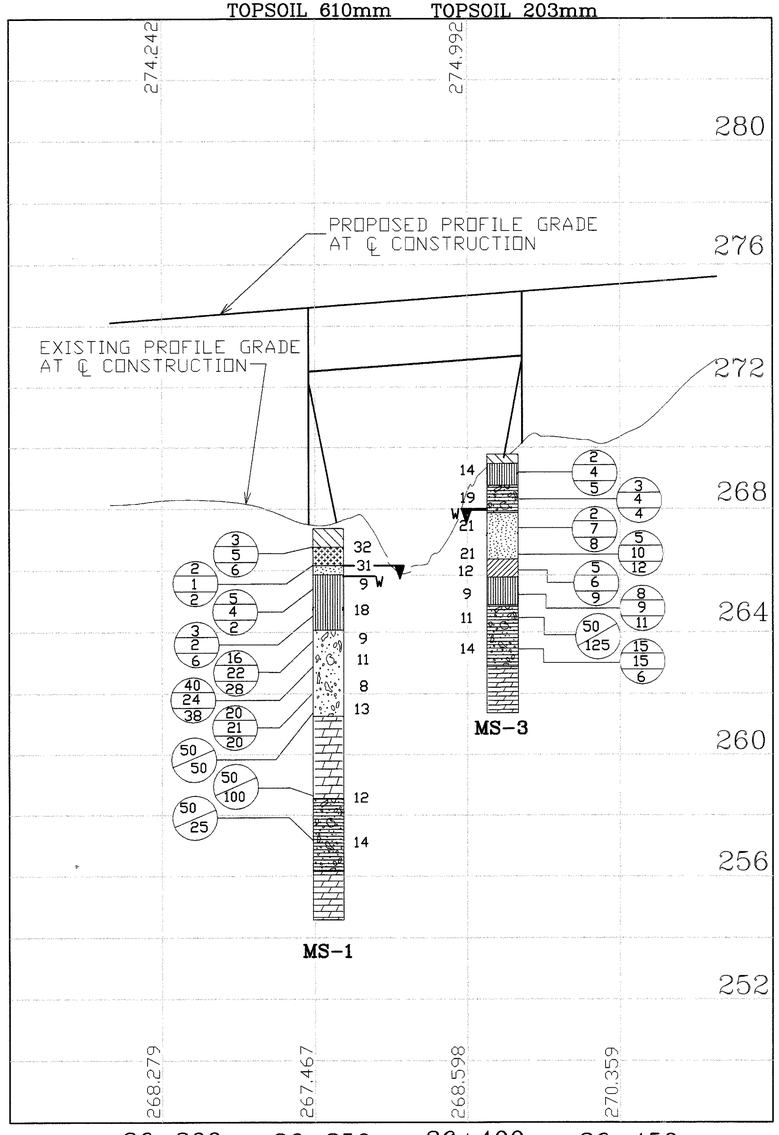
MS-2
STA 36+358.1
RT 14.6M
ELEV 267.364m
TOPSOIL 457mm

MS-4
STA 36+398
RT 16.5M
ELEV 268.973m
TOPSOIL 76mm



MS-1
STA 36+355
LT 11.3M
ELEV 267.437m
TOPSOIL 610mm

MS-3
STA 36+411
LT 13M
ELEV 269.756m
TOPSOIL 203mm



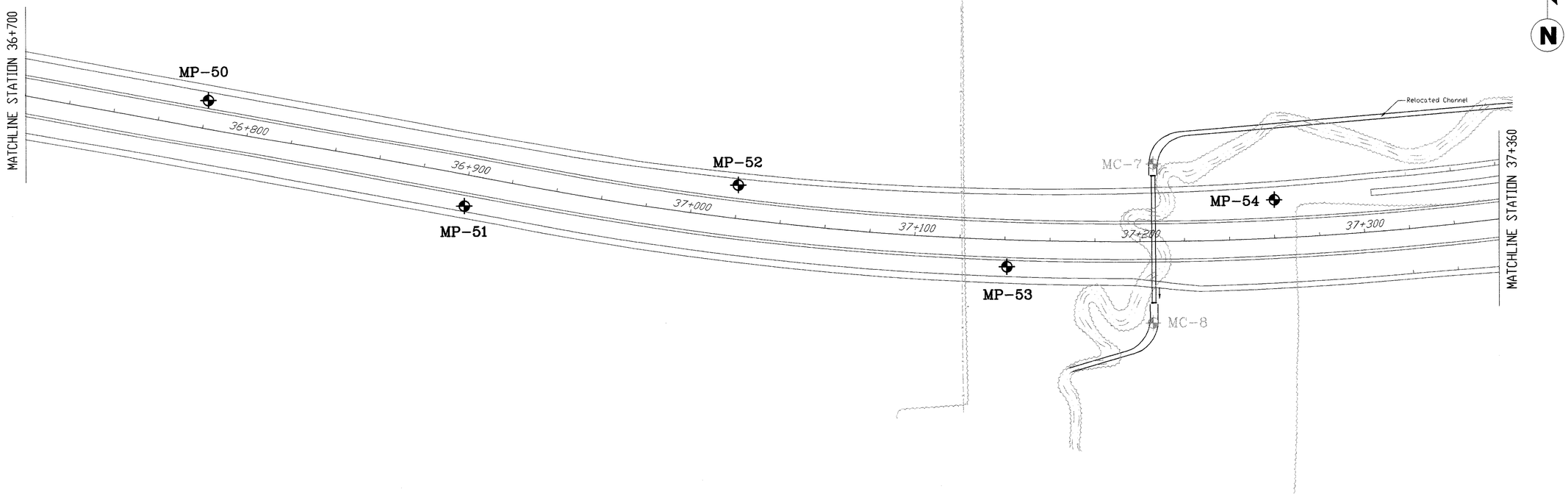
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

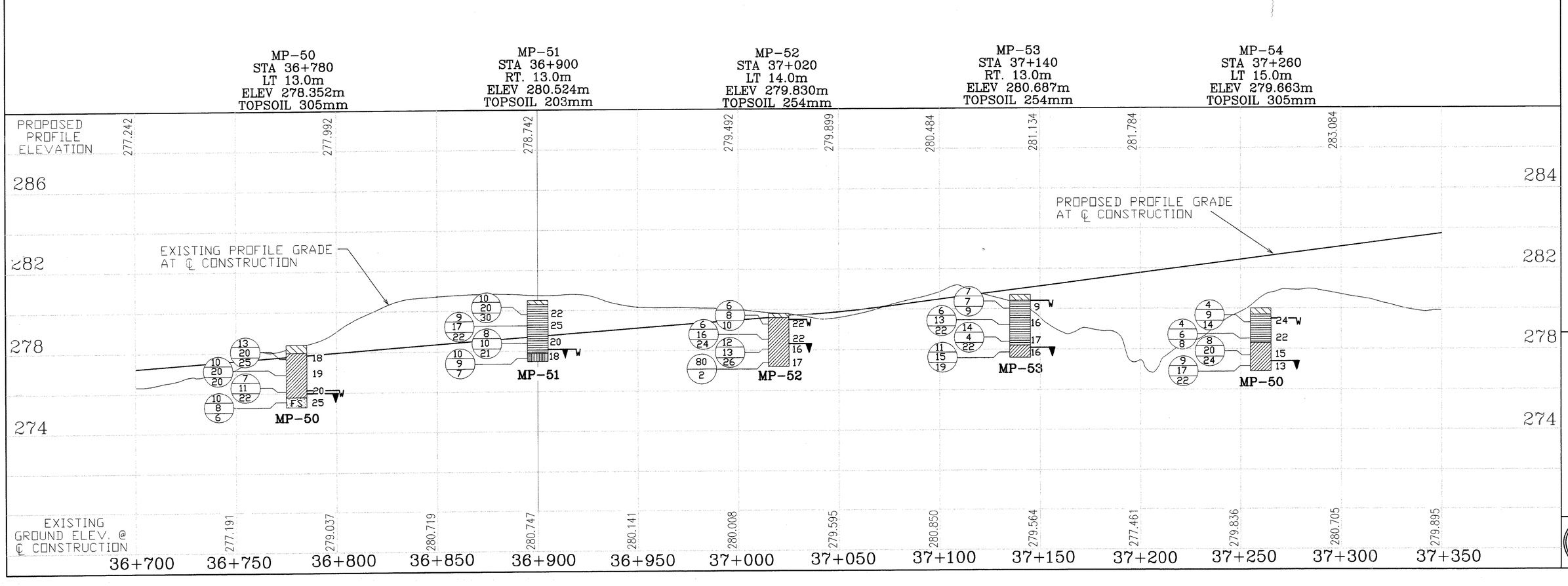
0 25 50
HORIZONTAL
SCALE IN METER

DRAWN BY: M. BURRIOLA
DATE: 6-17-99
DRAWING NO. ML 2-7.00N
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)





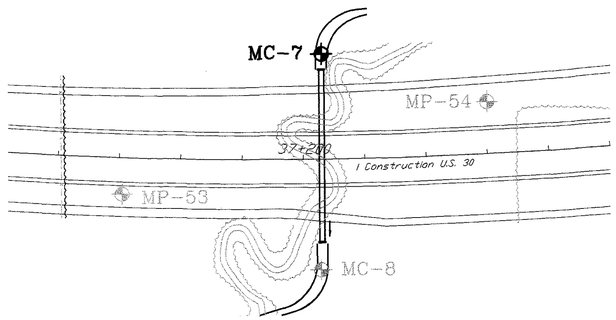
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

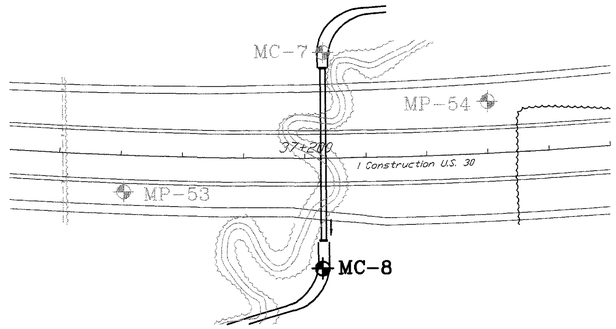
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HORIZONTAL SCALE IN METER

DRAWN BY: M. BURRIOLA
DATE: 6-15-99
DRAWING NO. ML 3-1.DGN
PROJECT NO. 33644.01

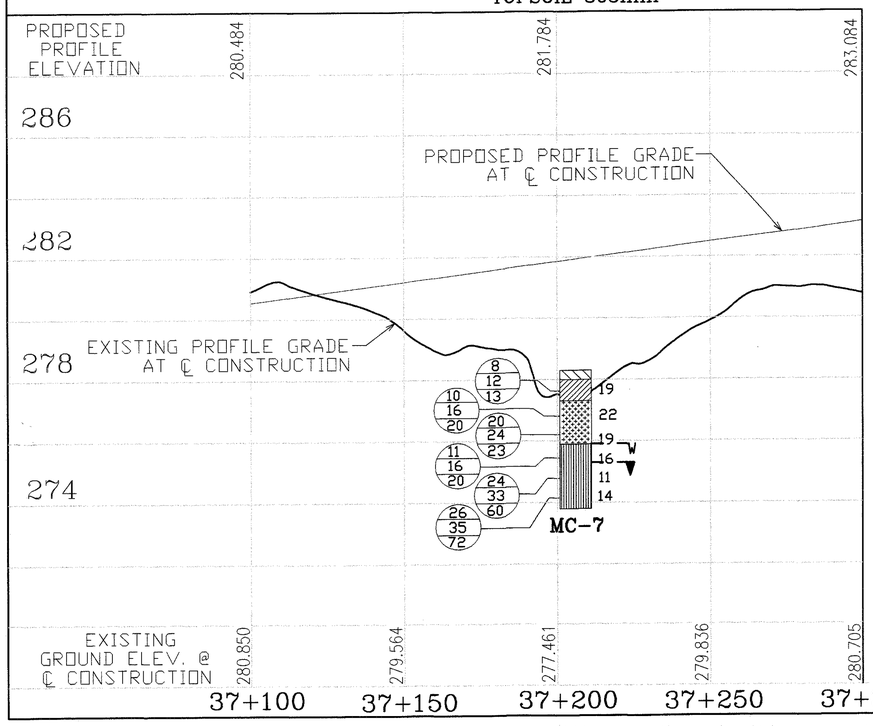
SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

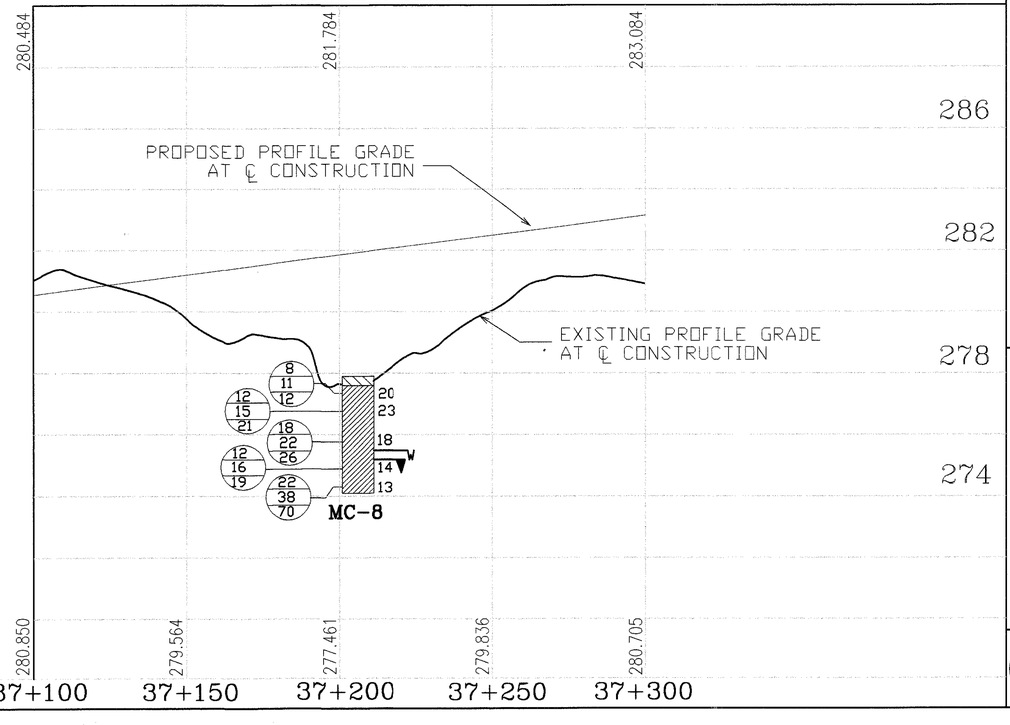




MC-7
STA 37+206
LT 33.0m
ELEV 278.338m
TOPSOIL 305mm



MC-8
STA 37+206
LT 33.0m
ELEV 277.882m
TOPSOIL 279mm



N

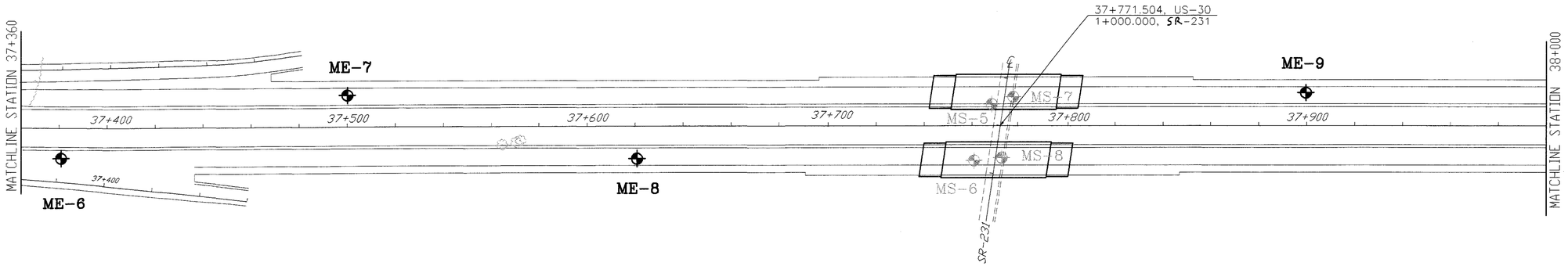
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL
SCALE IN METER

DRAWN BY: M. BURRIOLA
DATE: 6-16-99
DRAWING NO. ML 3-2.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

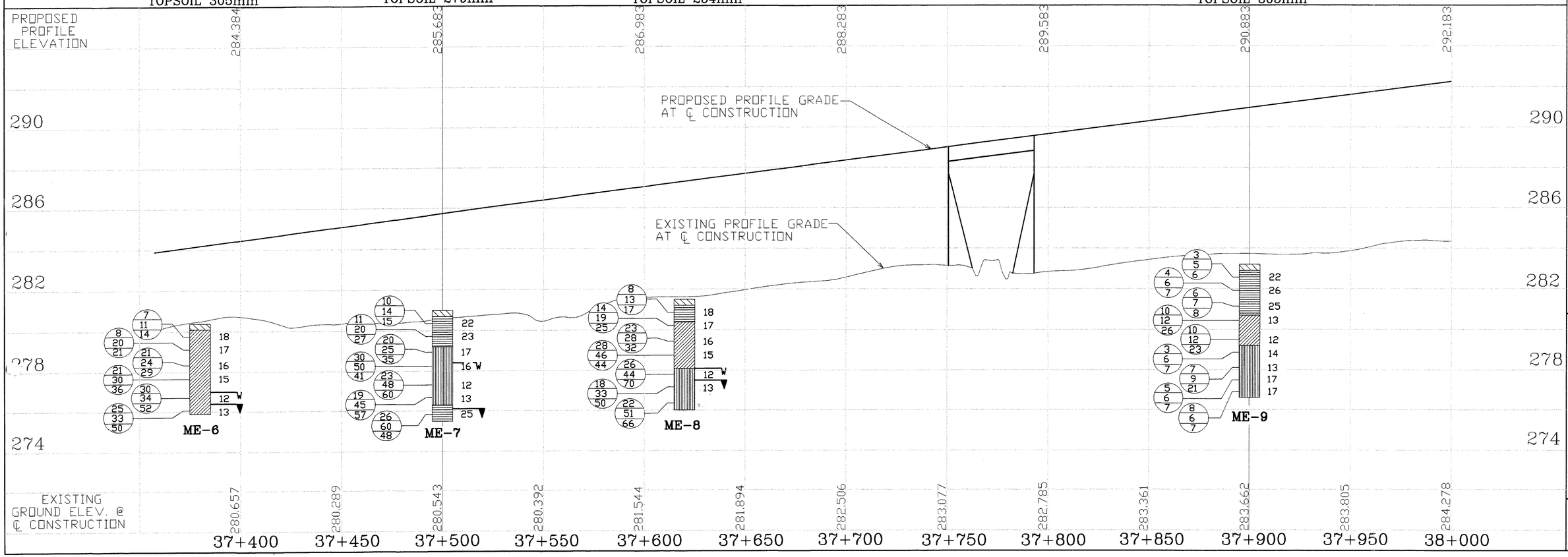


ME-6
STA 37+380
RT 13.0m
ELEV 280.429m
TOPSOIL 305mm

ME-7
STA 37+500
LT 12.0m
ELEV 280.987m
TOPSOIL 279mm

ME-8
STA 37+620
RT. 13.0m
ELEV 281.556m
TOPSOIL 254mm

ME-9
STA 37+900
LT 13.0m
ELEV 283.186m
TOPSOIL 305mm



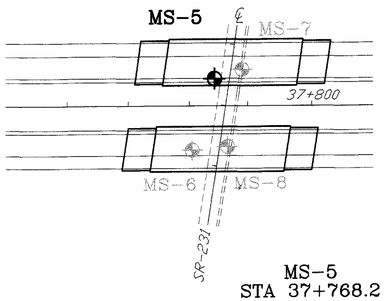
TOLEDO ENGINEERING INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL SCALE IN METER

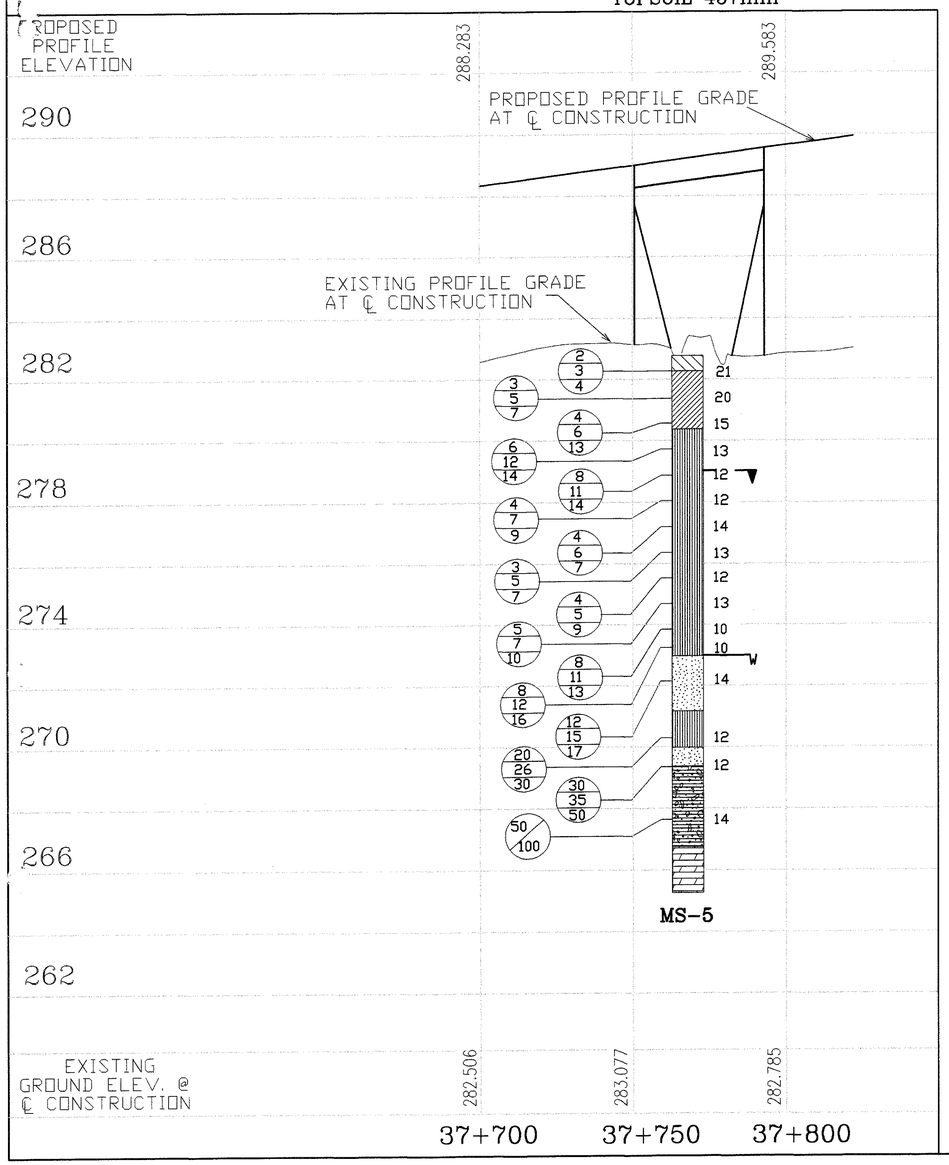
DRAWN BY: M. BURKHOLA
DATE: 6-16-99
DRAWING NO. ML 3-3.DGN
PROJECT NO. 33644.01

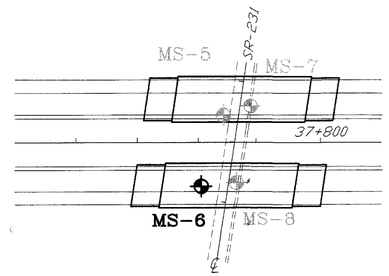
SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

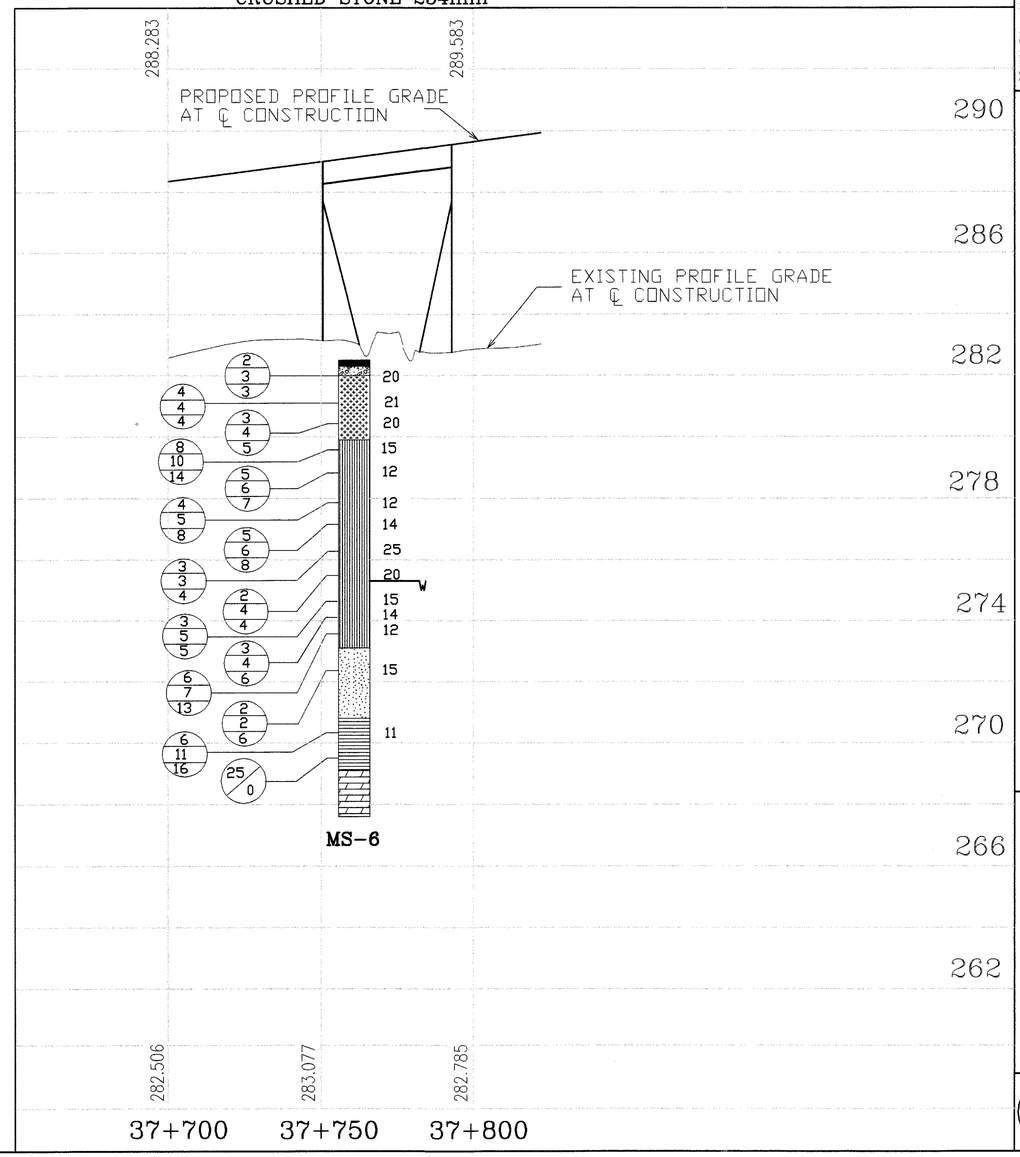


MS-5
STA 37+768.2
LT 8.8m
ELEV 282.788m
TOPSOIL 457mm





MS-6
STA 37+760.8
RT 14.8m
ELEV 282.537m
ASPHALT 254mm
CRUSHED STONE 254mm



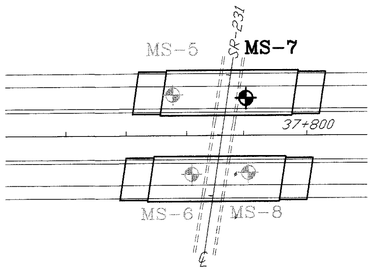
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

HORIZONTAL SCALE IN METER
0 25 50

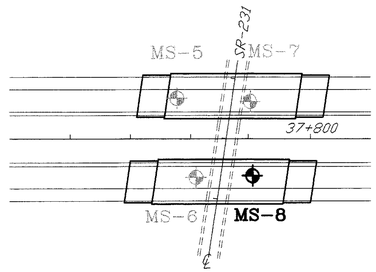
DRAWN BY: M. BURRIOLA
DATE: 6-16-99
DRAWING NO. ML 3-4.DGN
PROJECT NO. 33644.01

SOIL PROFILE

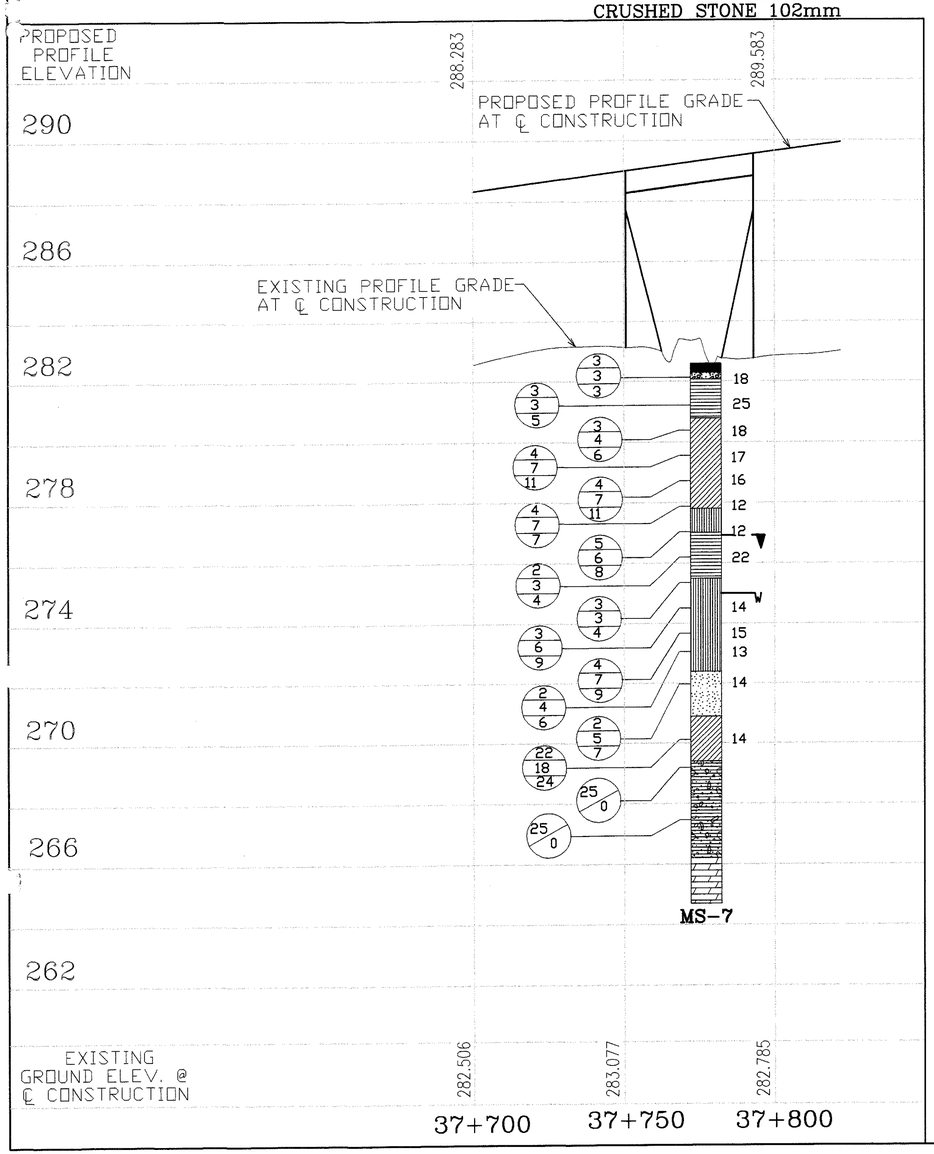
WYA/CRA-30-23.914/0.000(14.86/0.00)

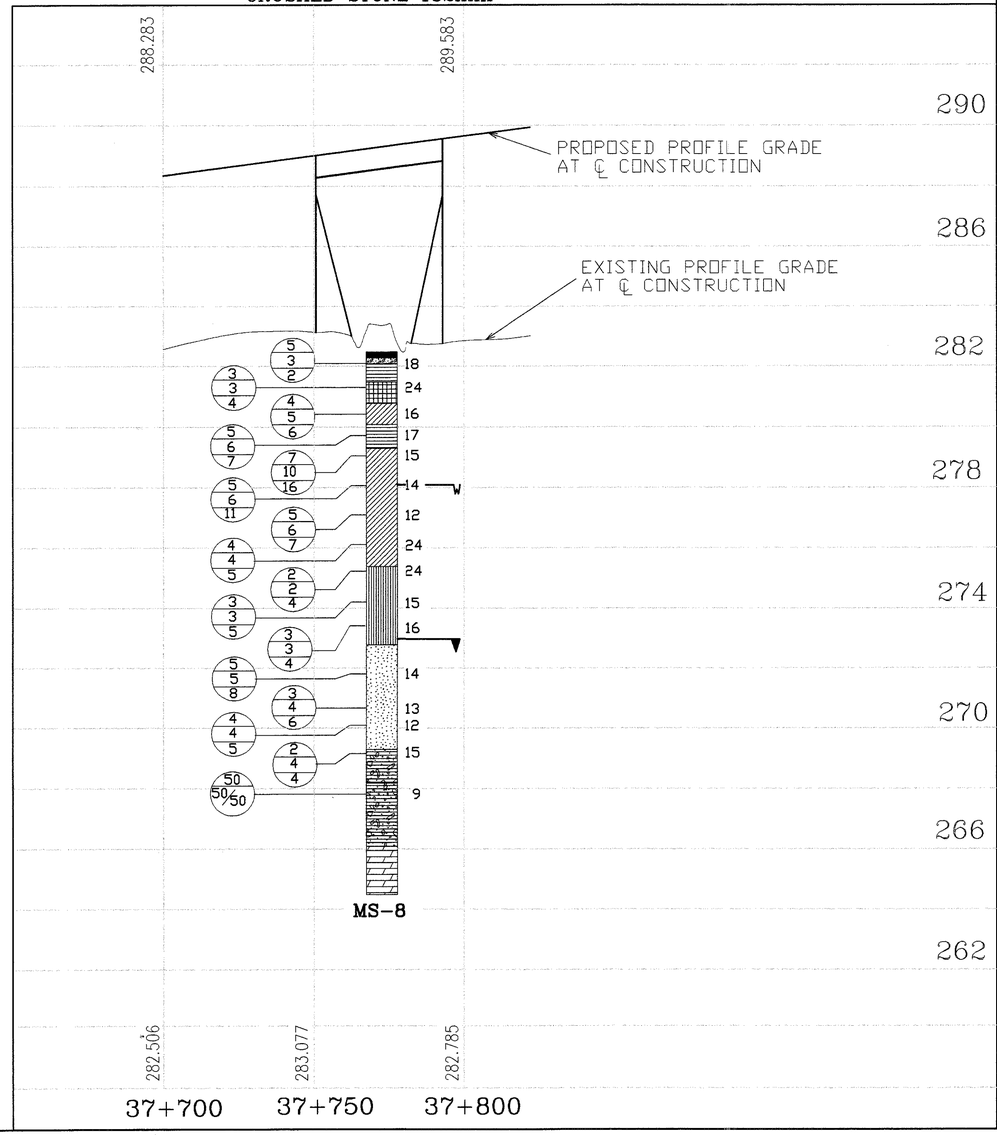


MS-7
STA 37+777.2
LT 12.0m
ELEV 282.641m
ASPHALT 305mm
CRUSHED STONE 102mm



MS-8
STA 37+772.5
RT 13.5m
ELEV 282.617m
ASPHALT 229mm
CRUSHED STONE 152mm





N

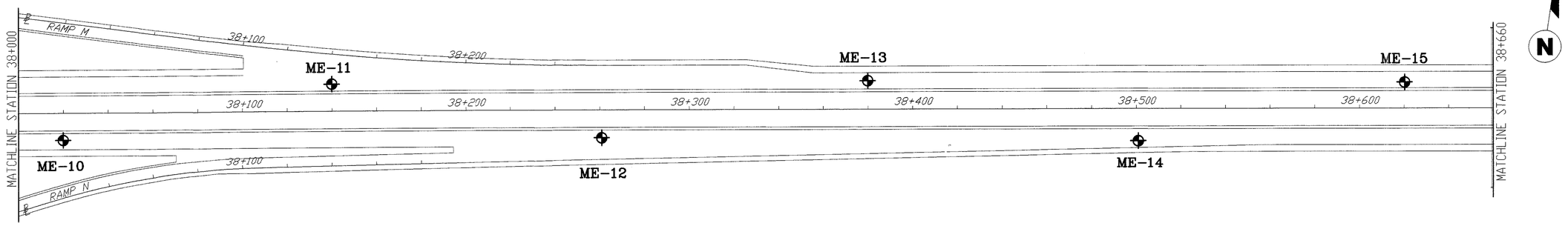
TOLEDO INC
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: M. BURRIOLA
DATE: 6-16-99
DRAWING NO. ML 3-5.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYIA/CRA-30-23.914/0.000(14.86/0.00)



ME-10
STA 38+020
RT 13.0m
ELEV 284.292m
TOPSOIL 432mm

ME-11
STA 38+140
LT 12.0m
ELEV 285.116m
TOPSOIL 356mm

ME-12
STA 38+260
RT 13.0m
ELEV 286.355m
TOPSOIL 381mm

ME-13
STA 38+380
LT 13m
ELEV 285.644m
TOPSOIL 305mm

ME-14
STA 38+500
LT 13.0m
ELEV 287.953m
TOPSOIL 356mm

ME-15
STA 38+621
LT 11.0m
ELEV 288.017m
TOPSOIL 305mm

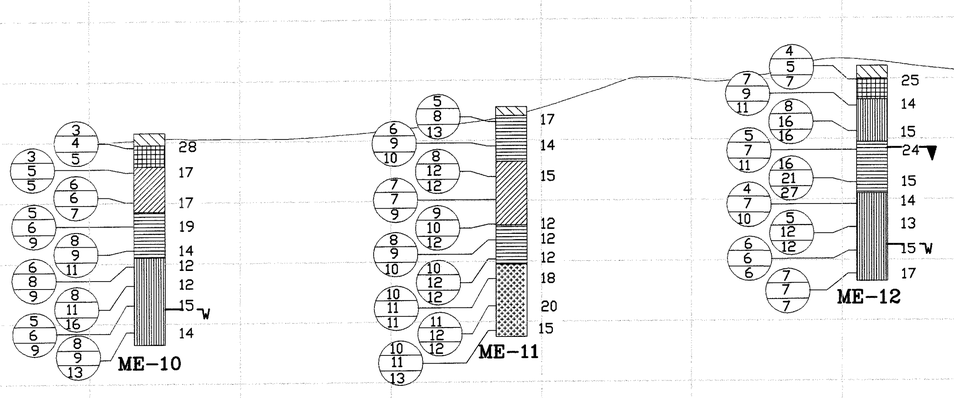
PROPOSED PROFILE ELEVATION

292.183 | 293.483 | 294.732 | 295.184 | 295.483 | 295.634 | 295.632 | 295.282 | 294.882

294 | 290 | 286 | 282 | 278 | 274 | 270

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION



EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

284.278 | 284.103 | 284.350 | 285.053 | 286.013 | 286.652 | 286.256 | 286.441 | 285.974 | 286.440 | 287.816 | 288.844 | 288.296 | 288.078

38+000 | 38+050 | 38+100 | 38+150 | 38+200 | 38+250 | 38+300 | 38+350 | 38+400 | 38+450 | 38+500 | 38+550 | 38+600 | 38+650

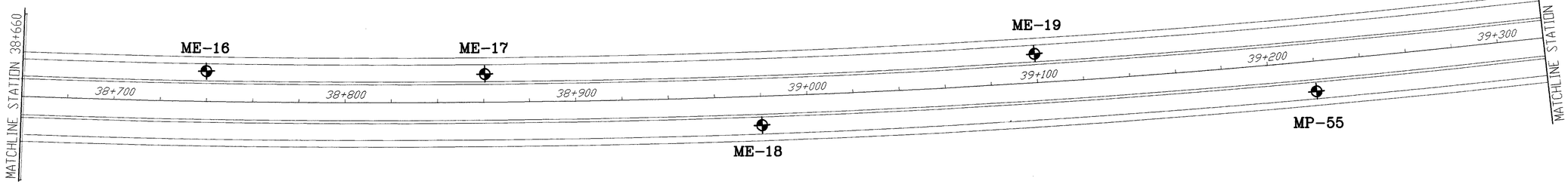
IOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: M. BURRIOLA
DATE: 6-16-99
DRAWING NO. ML 3-6.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)





TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL
SCALE IN METER

DRAWN BY: M. BURRIOLA
DATE: 6-16-99
DRAWING NO. ML 3-7.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

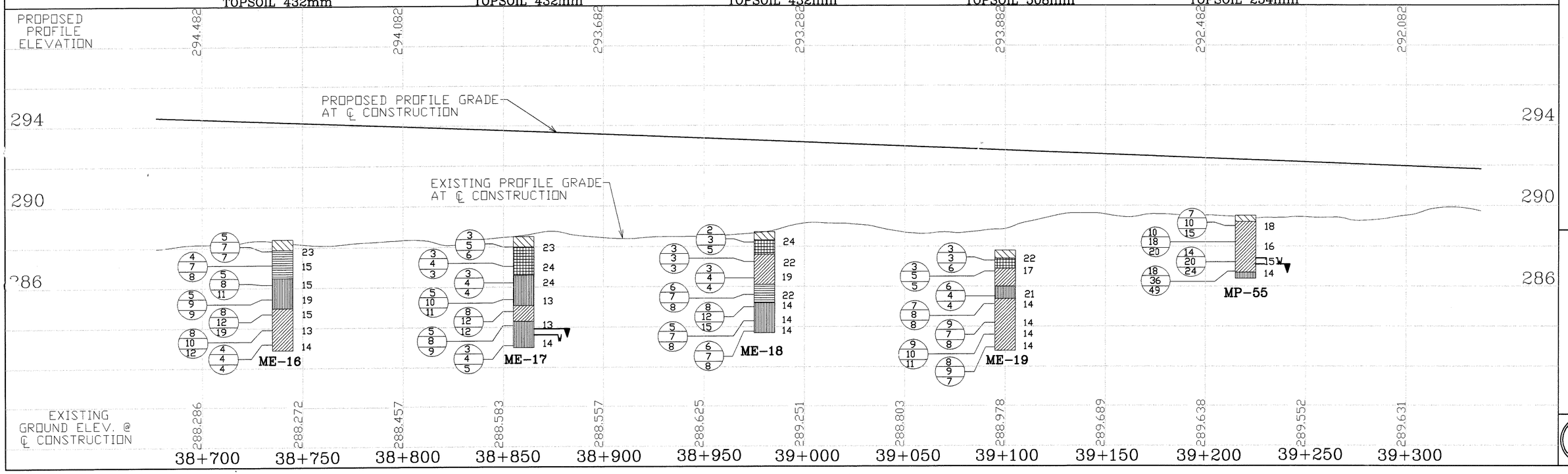
ME-16
STA 38+740
RT 13.0m
ELEV 288.373m
TOPSOIL 432mm

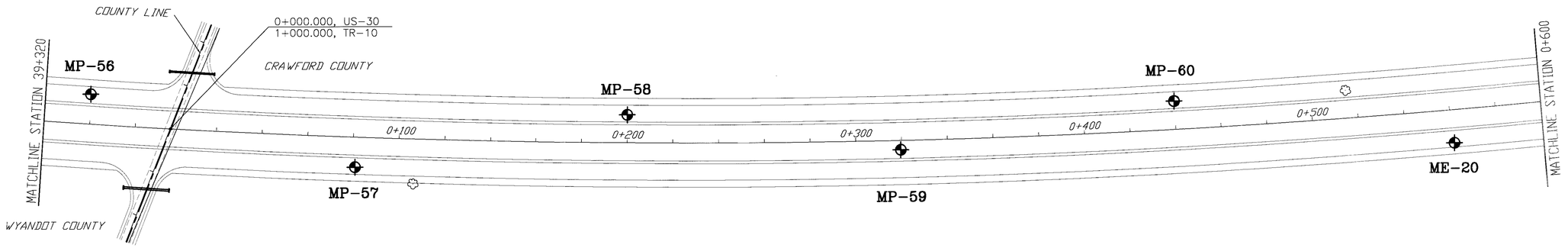
ME-17
STA 38+860
LT 13.0m
ELEV 288.451m
TOPSOIL 432mm

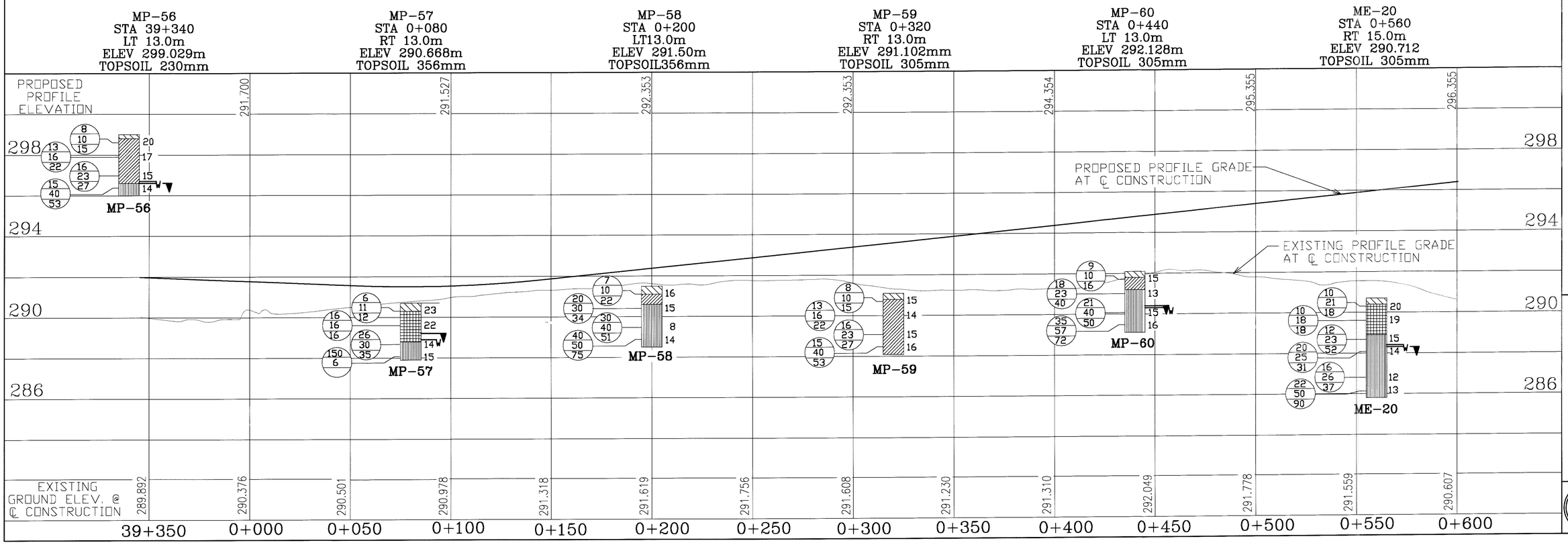
ME-18
STA 38+980
RT 13.0m
ELEV 288.686m
TOPSOIL 432mm

ME-19
STA 39+100
LT 13.0m
ELEV 287.793m
TOPSOIL 508mm

MP-55
STA 39+220
RT 13.0m
ELEV 289.474m
TOPSOIL 254mm







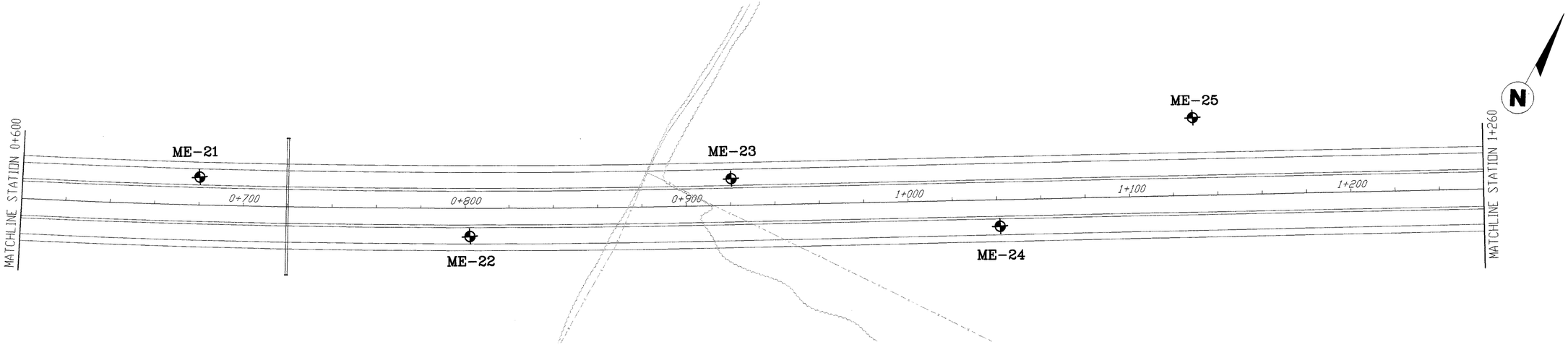
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: M. BURRIOLA
DATE: 7-15-97
DRAWING NO. ML 3-8.DGN
PROJECT NO. 33644.01

PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



ME-21
STA 0+680
LT 13.0m
ELEV 289.774m
TOPSOIL 356mm

ME-22
STA 0+800
RT 13.0m
ELEV 290.062m
TOPSOIL 356mm

ME-23
STA 0+920
LT 13.0m
ELEV 291.666m
TOPSOIL 356mm

ME-24
STA 1+040
RT 13.0m
ELEV 293.114m
TOPSOIL 356mm

ME-25
STA 1+123
LT 21m
ELEV 294.010m
TOPSOIL 356mm

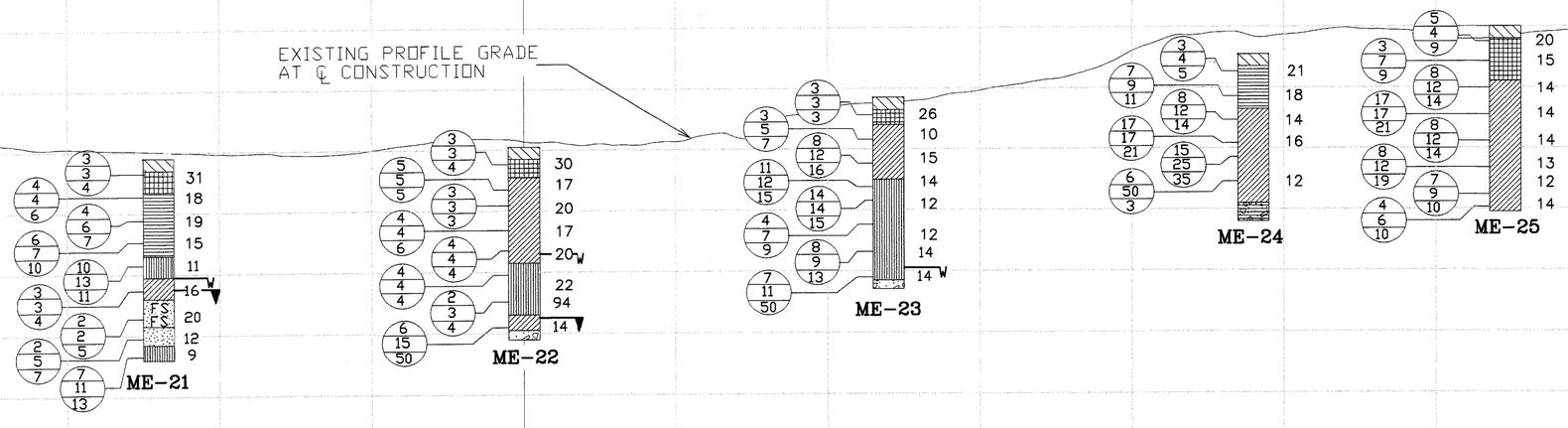
PROPOSED PROFILE ELEVATION

297.356 297.856 298.357 299.357 299.758 300.358 301.359 302.347 302.750

304 300 296 292 288 284

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION



EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

290.115 289.922 290.008 290.286 290.271 291.334 291.923 293.221 293.750 293.676 293.917 294.182 293.462

0+650 0+700 0+750 0+800 0+850 0+900 0+950 1+000 1+050 1+100 1+150 1+200 1+250

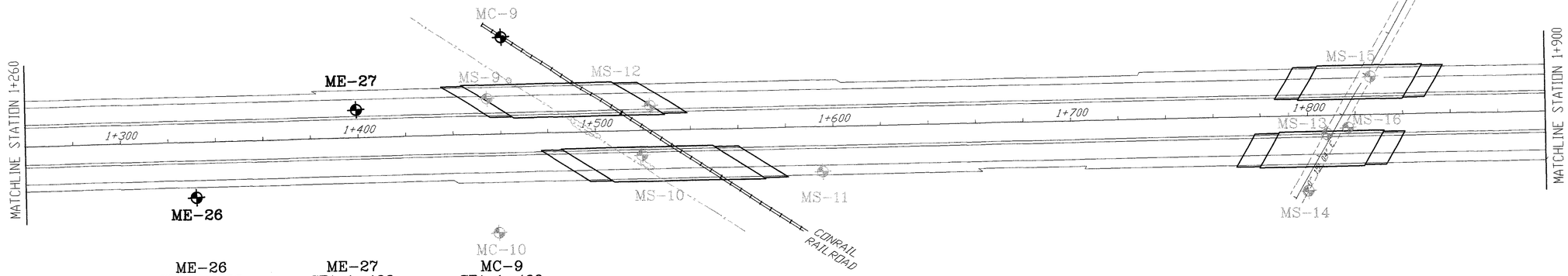
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: B.J.G.
DATE: 6-15-99
DRAWING NO. ML 4-1.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



ME-26
STA 1+332
RT 24.0m
ELEV 293.840m
TOPSOIL 457mm

ME-27
STA 1+400
LT 12.0m
ELEV 293.574m
TOPSOIL 381mm

MC-9
STA 1+460
LT 42.0m
ELEV 292.859m
TOPSOIL 356mm

PROPOSED PROFILE ELEVATION

303.057 303.266 303.378 303.393 303.311 303.132 302.856 302.483 302.013 301.446 300.782 299.222

304 300 296 292 288 284 280

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION

ME-26 ME-27 MC-9

EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

294.496 294.512 293.832 293.072 294.230 294.303 294.501 295.070 294.485 293.904 293.772 294.225 294.320

1+300 1+350 1+400 1+450 1+500 1+550 1+600 1+650 1+700 1+750 1+800 1+850 1+900

N

HORIZONTAL SCALE IN METER
0 25 50

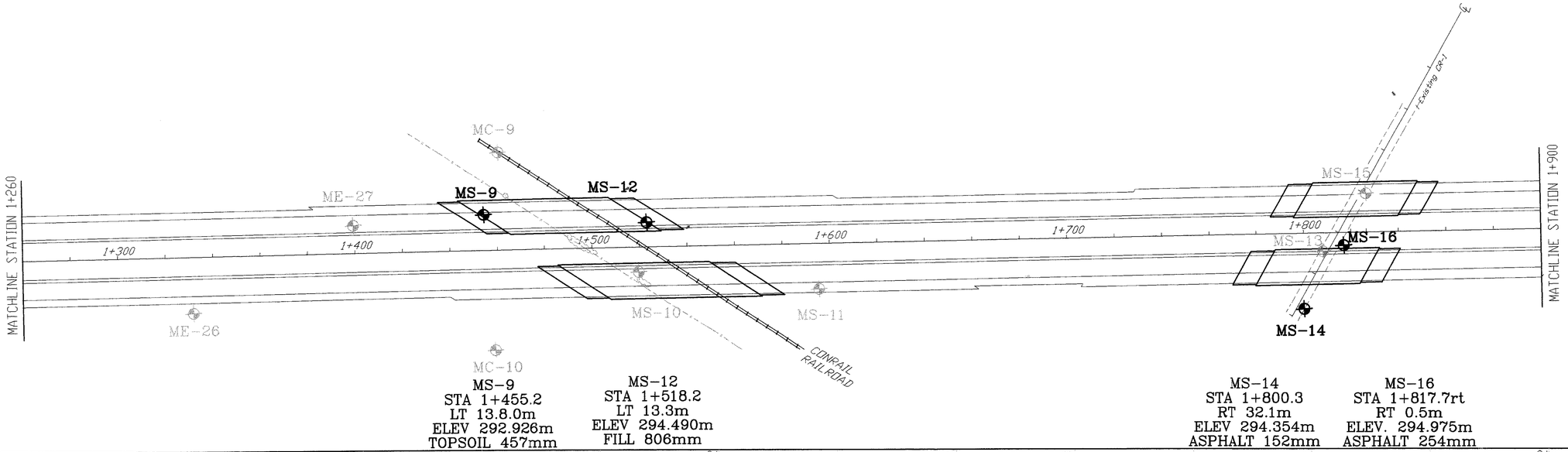
DRAWN BY: B.J.C.
DATE: 6-15-99
DRAWING NO. ML 4-2.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

29/30

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624



MS-9
STA 1+455.2
LT 13.8.0m
ELEV 292.926m
TOPSOIL 457mm

MS-12
STA 1+518.2
LT 13.3m
ELEV 294.490m
FILL 806mm

MS-14
STA 1+800.3
RT 32.1m
ELEV 294.354m
ASPHALT 152mm

MS-16
STA 1+817.7rt
RT 0.5m
ELEV. 294.975m
ASPHALT 254mm

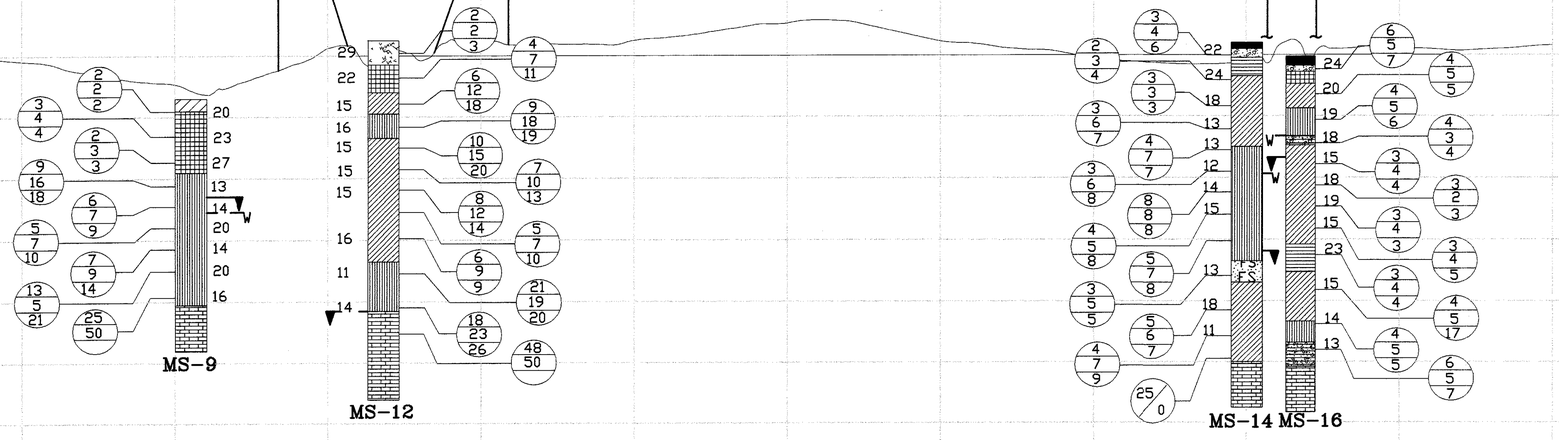
PROPOSED PROFILE ELEVATION

303.057 303.266 303.378 303.393 303.311 303.132 302.856 302.483 302.013 301.446 300.782 299.222

304 300 296 292 288 284 280

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION



EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

294.496 294.512 293.832 293.072 294.230 294.303 294.501 295.070 294.465 293.904 293.772 294.225 294.320

1+300 1+350 1+400 1+450 1+500 1+550 1+600 1+650 1+700 1+750 1+800 1+850 1+900

SOIL PROFILE

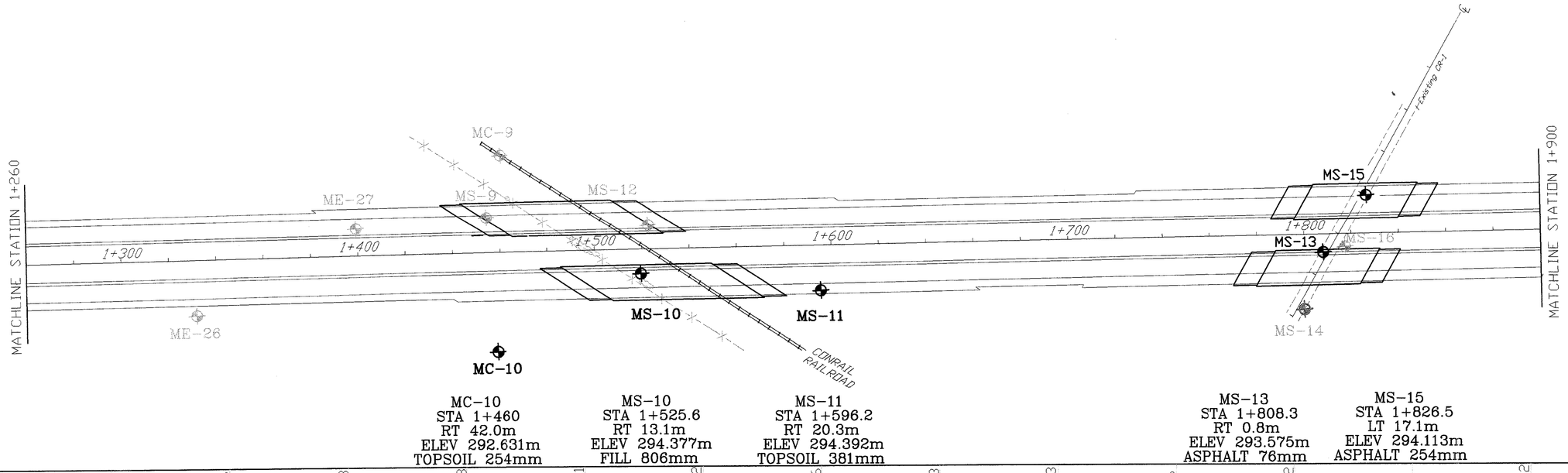
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

HORIZONTAL SCALE IN METER
0 25 50

DRAWN BY: B.J.G.
DATE: 6-15-99
DRAWING NO. ML 4-3.00N
PROJECT NO. 33644.01

WYA/CRA-30-23.914/0.000(14.86/0.00)

30/130



MC-10
STA 1+460
RT 42.0m
ELEV 292.631m
TOPSOIL 254mm

MS-10
STA 1+525.6
RT 13.1m
ELEV 294.377m
FILL 806mm

MS-11
STA 1+596.2
RT 20.3m
ELEV 294.392m
TOPSOIL 381mm

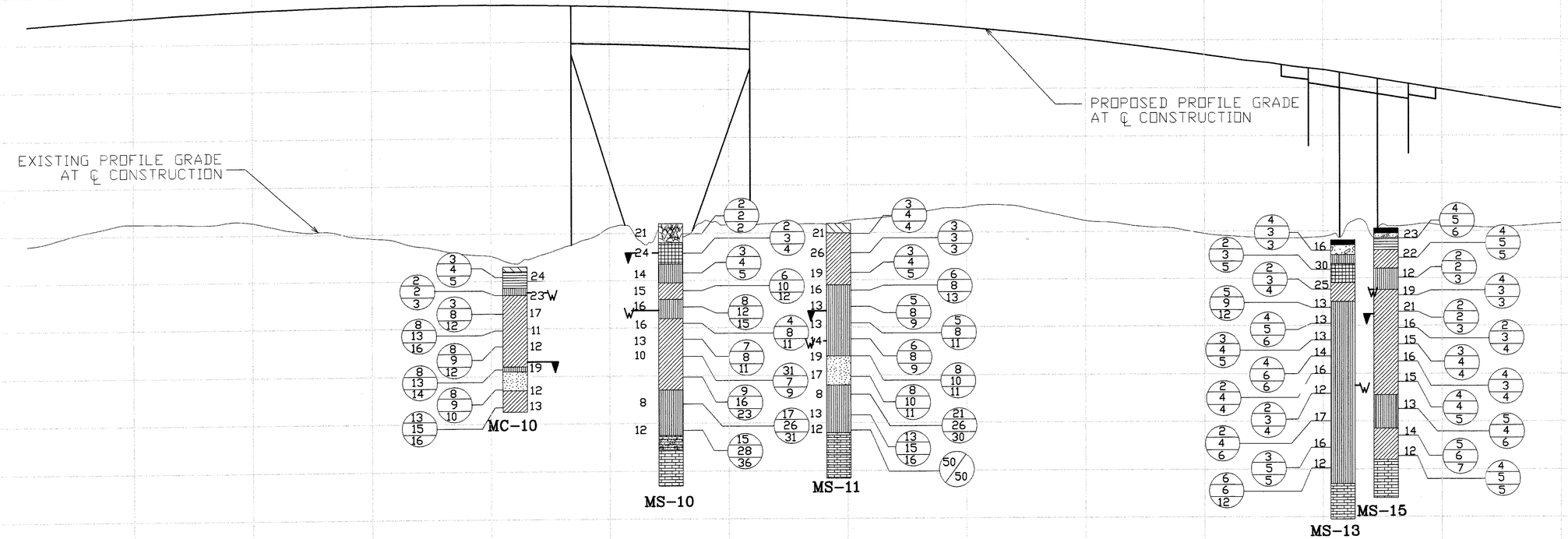
MS-13
STA 1+808.3
RT 0.8m
ELEV 293.575m
ASPHALT 76mm

MS-15
STA 1+826.5
LT 17.1m
ELEV 294.113m
ASPHALT 254mm

PROPOSED PROFILE ELEVATION

303.057 303.266 303.378 303.393 303.311 303.132 302.856 302.483 302.013 301.446 300.782 299.222

304 300 296 292 288 284 280



EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

294.496 294.512 293.832 293.072 294.230 294.303 294.501 295.070 294.465 293.904 293.772 294.225 294.320

1+300 1+350 1+400 1+450 1+500 1+550 1+600 1+650 1+700 1+750 1+800 1+850 1+900

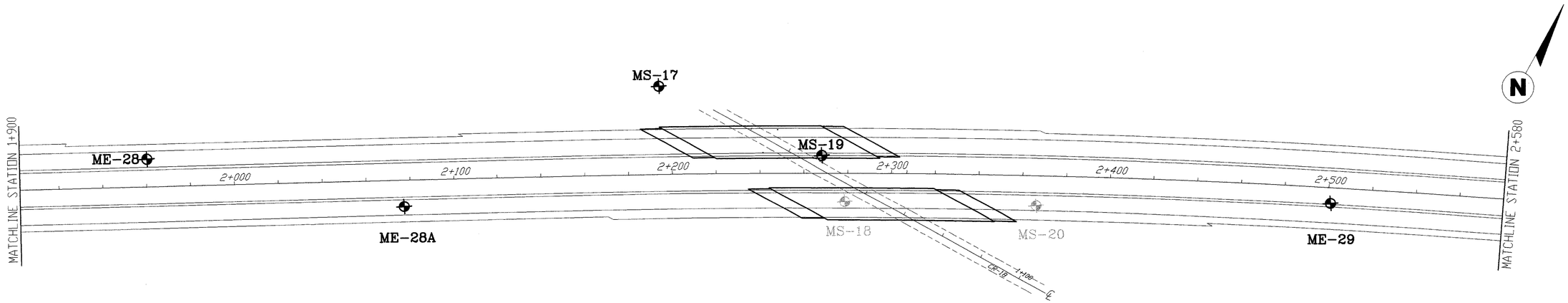
IOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

HORIZONTAL SCALE IN METER
0 25 50

DRAWN BY: B.J.G.
DATE: 6-15-99
DRAWING NO. ML 4-4.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



ME-28
STA 1+960
LT 12.0m
ELEV 293.715m
TOPSOIL 305mm

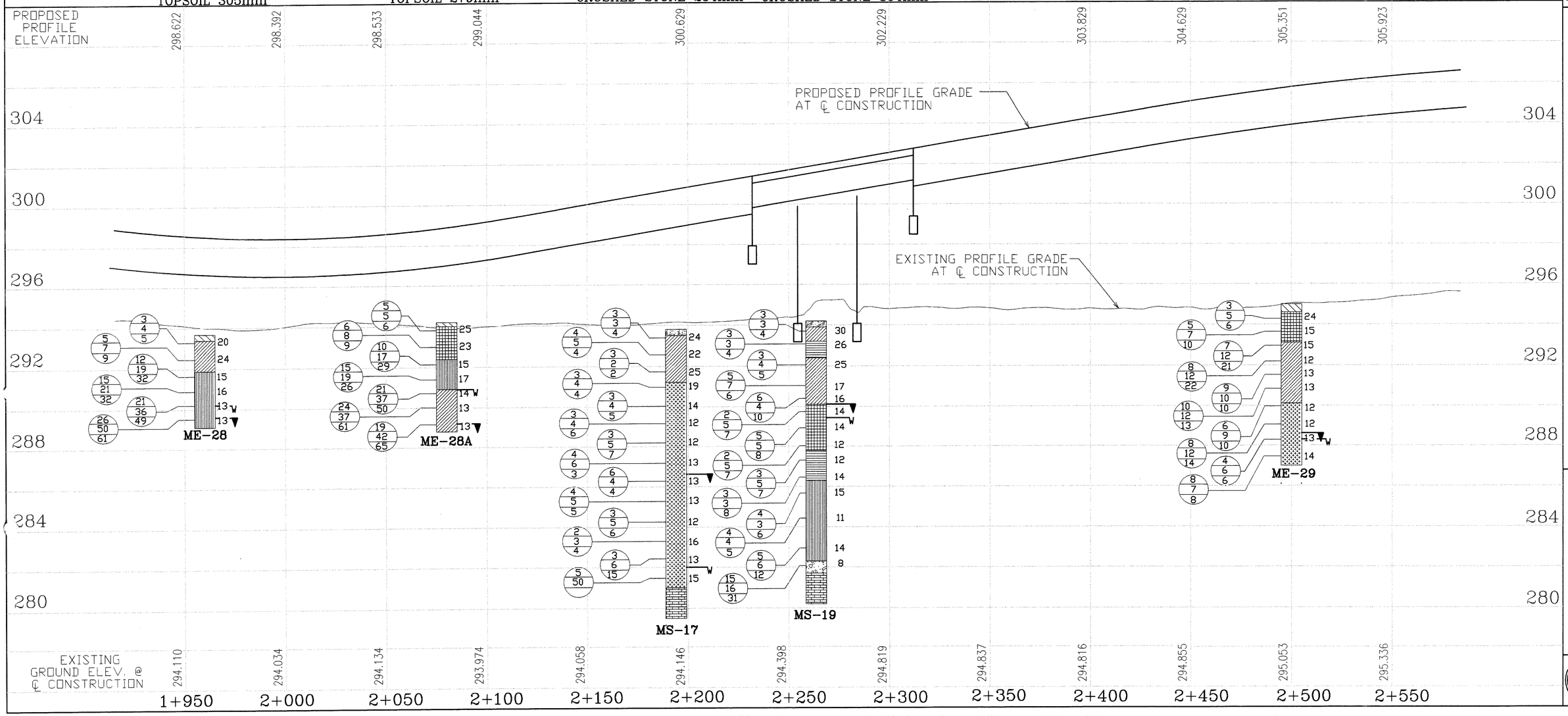
ME-28A
STA 2+080
RT 12.0m
ELEV 294.250m
TOPSOIL 279mm

MS-17
STA 2+194.0
LT 40.2m
ELEV 293.783m
CRUSHED STONE 254mm

MS-19
STA 2+263.6
LT 8.0m
ELEV 294.226m
CRUSHED STONE 304mm

ME-29
STA 2+500
RT 7.0m
ELEV 294.952m
TOPSOIL 254mm

PROPOSED PROFILE ELEVATION: 298.622 | 298.392 | 298.533 | 299.044 | 300.629 | 302.229 | 303.829 | 304.629 | 305.351 | 305.923



EXISTING GROUND ELEV. @ ℄ CONSTRUCTION: 294.110 | 294.034 | 294.134 | 293.974 | 294.058 | 294.146 | 294.398 | 294.819 | 294.837 | 294.816 | 294.855 | 295.053 | 295.336

1+950 | 2+000 | 2+050 | 2+100 | 2+150 | 2+200 | 2+250 | 2+300 | 2+350 | 2+400 | 2+450 | 2+500 | 2+550

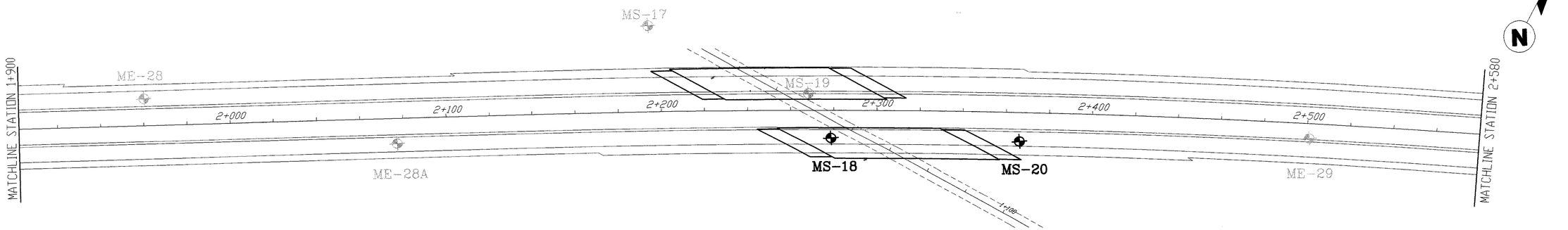
SOIL PROFILE

HORIZONTAL SCALE IN METER: 0 25 50

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

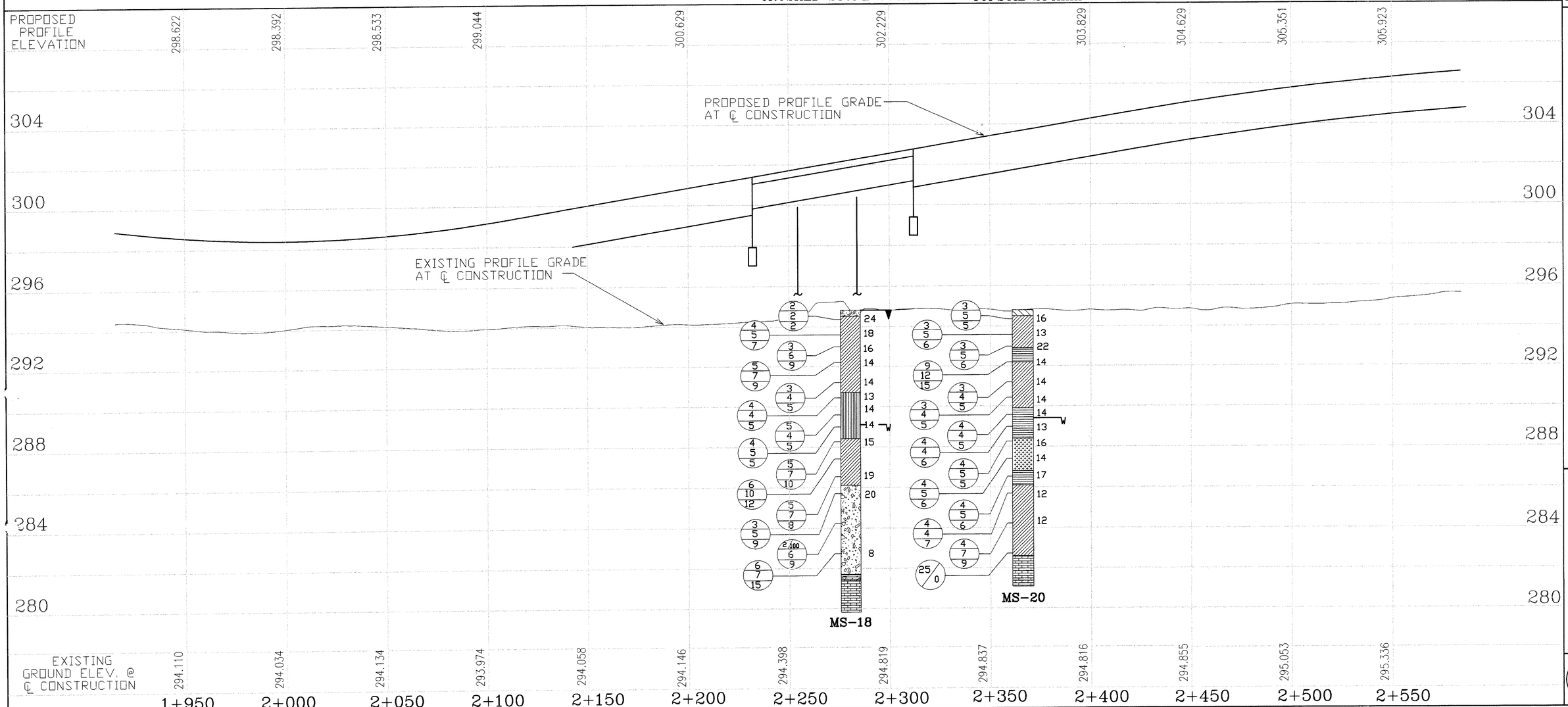
DRAWN BY: B.J.G.
DATE: 6-15-99
DRAWING NO. ML 4-5.DGN
PROJECT NO. 33644.01

WYA/CRA-30-23.914/0.000(14.86/0.00)



MS-18
STA 2+279.7
RT 9.2m
ELEV 294.866m
CRUSHED STONE 304mm

MS-20
STA 2+365.9
RT 12.6m
ELEV 294.766m
TOPSOIL 254mm



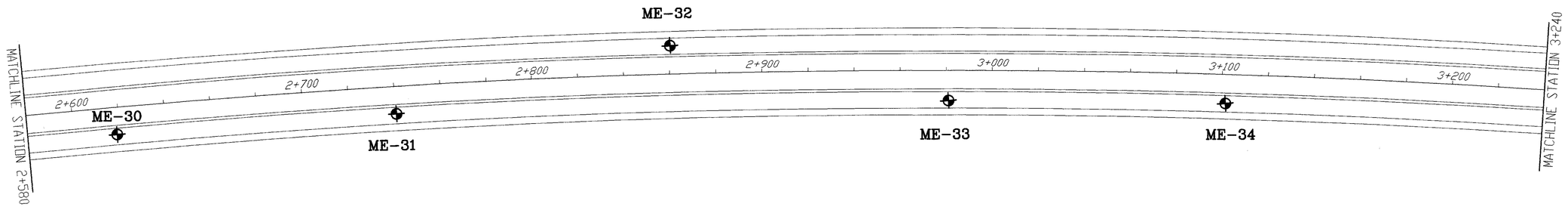
SOIL PROFILE

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

HORIZONTAL SCALE IN METER
0 25 50

DRAWN BY: B.J.G.
DATE: 6-15-99
DRAWING NO. ML 4-6.DGN
PROJECT NO. 33644.01

WYA/CRA-30-23.914/0.000(14.86/0.00)





ME-30
STA 2+620
RT 12.0m
ELEV 295.671m
TOPSOIL 304mm

ME-31
STA 2+740
RT 12.0m
ELEV 295.676m
TOPSOIL 355mm

ME-32
STA 2+860
LT 13.0m
ELEV 296.643m
TOPSOIL 355mm

ME-33
STA 2+980
RT 13m
ELEV 297.294m
TOPSOIL 355mm

ME-34
STA 3+100
RT 12.0m
ELEV 297.117m
TOPSOIL 304mm

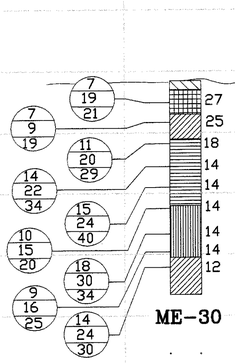
PROPOSED PROFILE ELEVATION

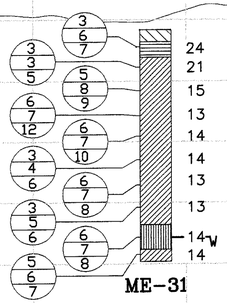
306.344 306.616 306.737 306.708 306.529 306.200 305.720 305.090 304.311 302.517 300.717

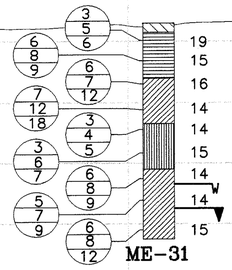
304 300 296 292 288 284

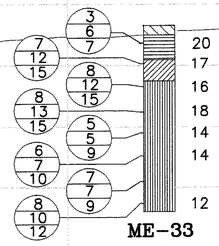
PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

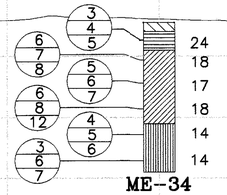
EXISTING PROFILE GRADE AT ℄ CONSTRUCTION











EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

295.655 295.674 296.112 296.327 296.318 296.517 296.621 297.069 297.186 297.175 297.217 297.153 297.196

2+600 2+650 2+700 2+750 2+800 2+850 2+900 2+950 3+000 3+050 3+100 3+150 3+200

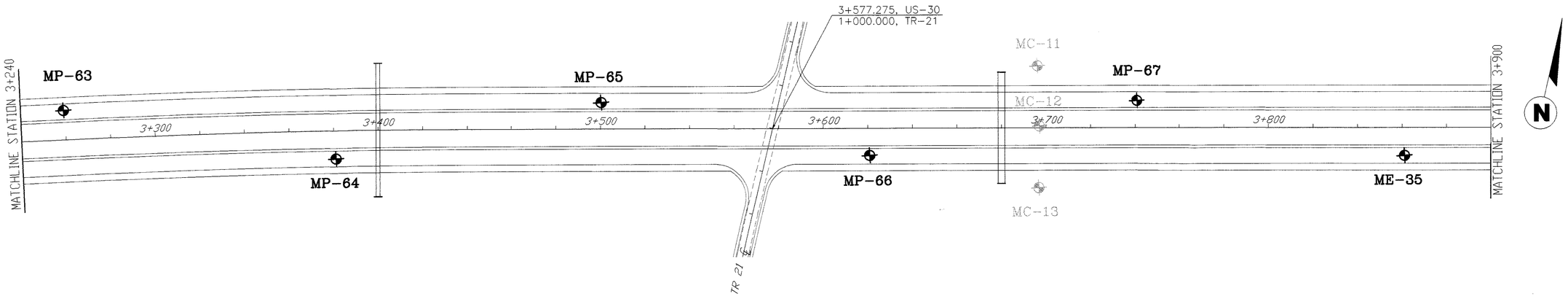
HORIZONTAL SCALE IN METER
0 25 50

DRAWN BY: B.J.C.
DATE: 6-15-99
DRAWING NO. ML 4-7.DGN
PROJECT NO. 33644.01

WYA/CRA-30-23.914/0.000(14.86/0.00)

34/130

SOIL PROFILE



MP-63
STA 3+260
LT 12.0m
ELEV. 296.483m
TOPSOIL 355mm

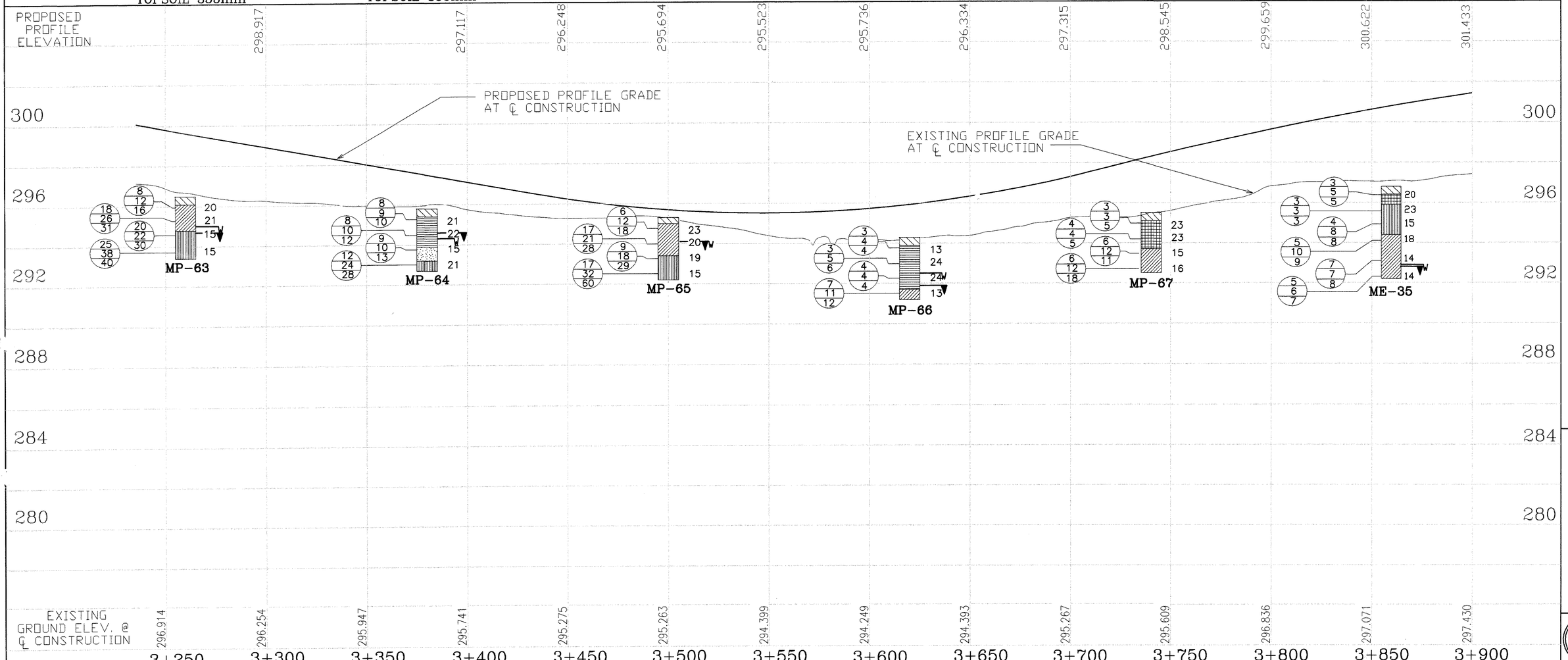
MP-64
STA 3+380
RT 12.0m
ELEV 295.755m
TOPSOIL 355mm

MP-65
STA 3+500
LT 13.0m
ELEV. 295.274m
TOPSOIL 304mm

MP-66
STA 3+620
RT 12.0m
ELEV. 294.280m
TOPSOIL 406mm

MP-67
STA 3+740
LT 13.0m
ELEV. 295.499m
TOPSOIL 406mm

ME-35
STA 3+860
RT 12.0m
ELEV. 296.807m
TOPSOIL 406mm



TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

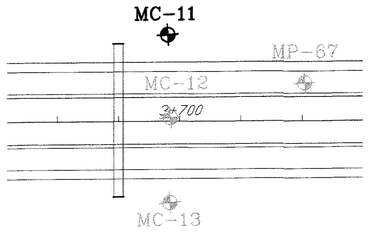
HORIZONTAL SCALE IN METER
0 25 50

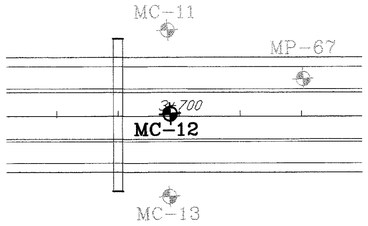
DRAWN BY: B.J.G.
DATE: 6-15-99
DRAWING NO. ML 4-8.DGN
PROJECT NO. 33844.01

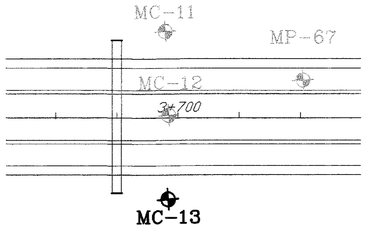
SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

35/130





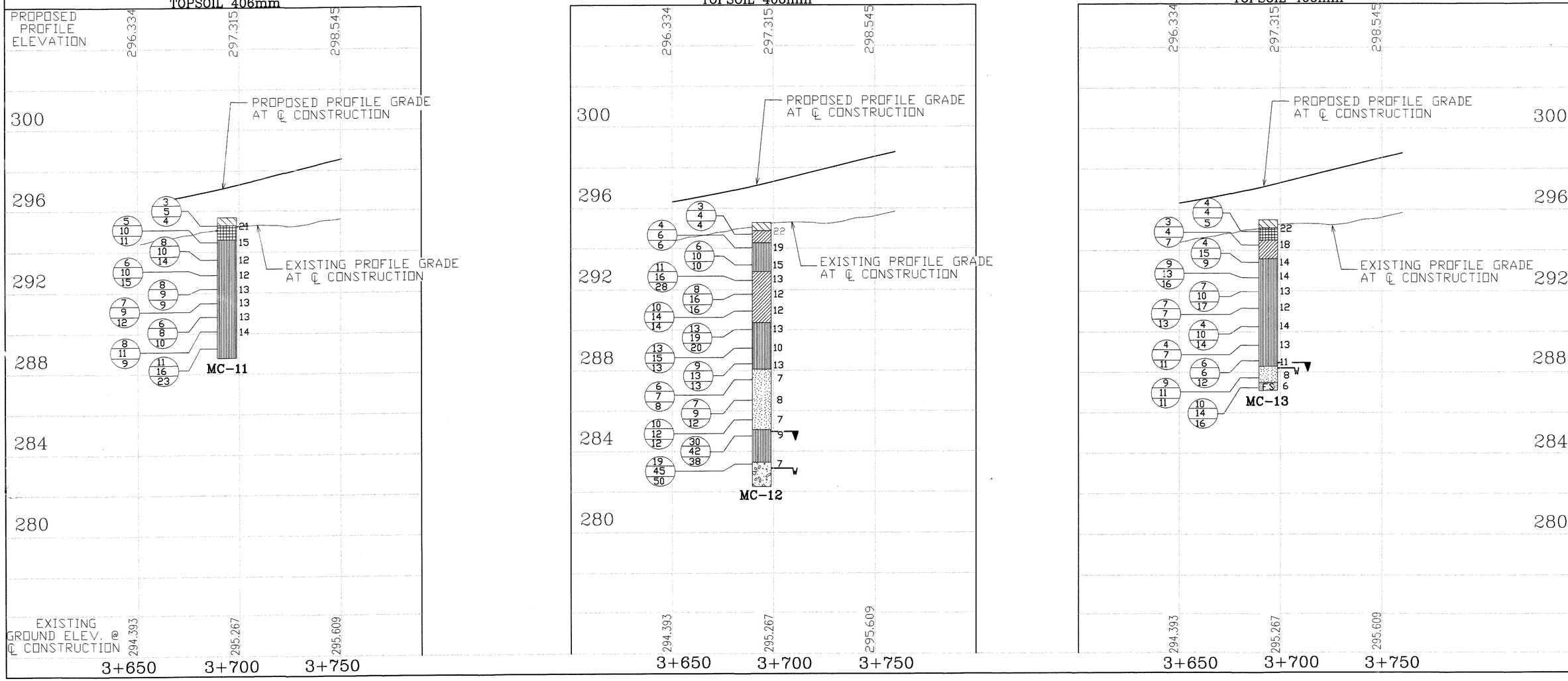




MC-11
STA 3+694
LT 27.0m
ELEV. 295.686m
TOPSOIL 406mm

MC-12
STA 3+694
CL 0.0m
ELEV. 295.290m
TOPSOIL 406mm

MC-13
STA 3+694
RT 27.0m
ELEV. 295.463m
TOPSOIL 406mm



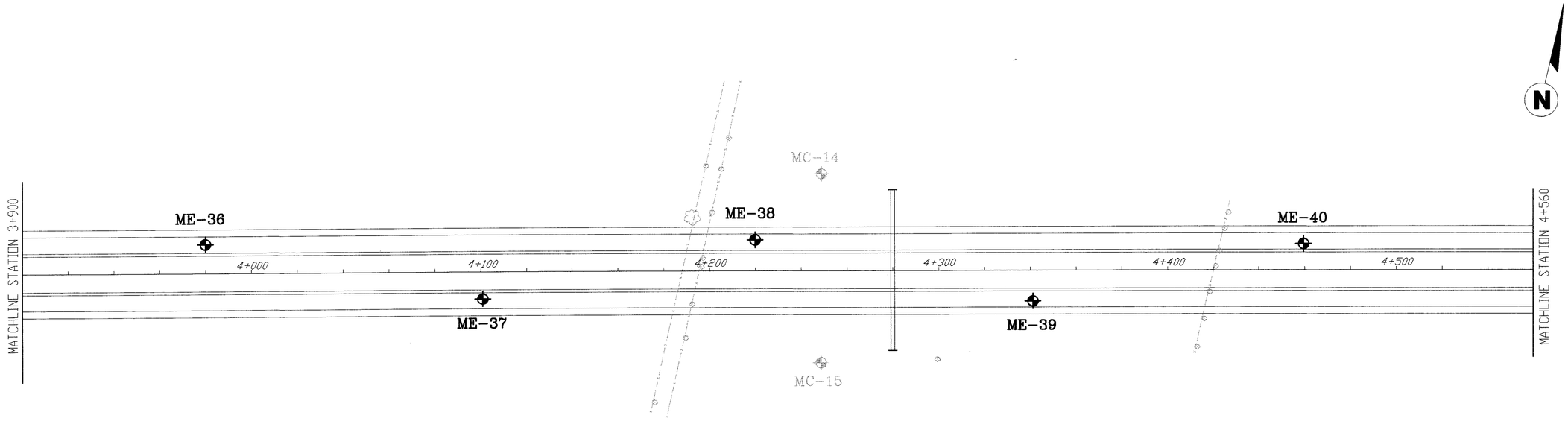
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

HORIZONTAL SCALE IN METER
0 2.5 5

DRAWN BY: S.M.D.
DATE: 7-18-97
DRAWING NO. ML 4-9.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



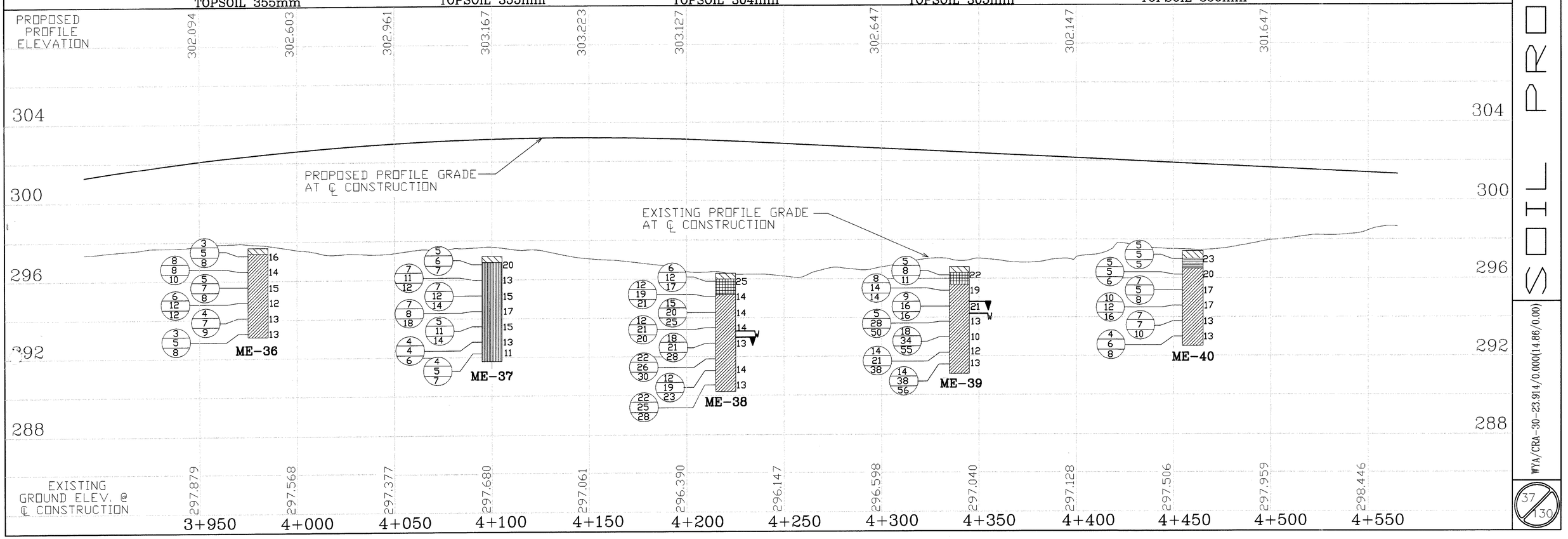
ME-36
STA 3+980
LT 3.0m
ELEV 297.702m
TOPSOIL 355mm

ME-37
STA 4+100
RT 12.0m
ELEV 297.248m
TOPSOIL 355mm

ME-38
STA 4+220
RT 13.0m
ELEV 296.288m
TOPSOIL 304mm

ME-39
STA 4+340
RT 12.0m
ELEV 296.631m
TOPSOIL 305mm

ME-40
STA 4+460
LT 12.0m
ELEV 297.379m
TOPSOIL 356mm



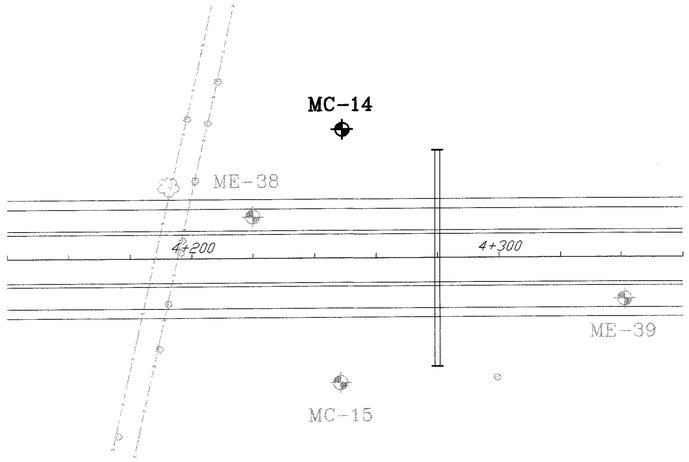
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL SCALE IN METER

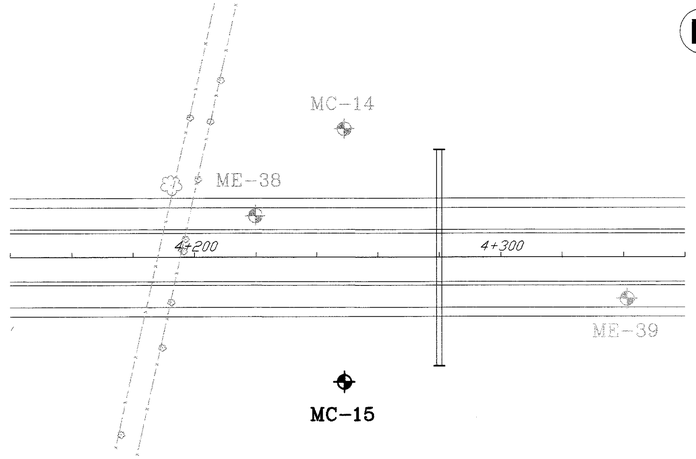
DRAWN BY: B.J.C.
DATE: 6-16-99
DRAWING NO. ML 5-1.DGN
PROJECT NO. 33644.01

PROFILE / SOIL

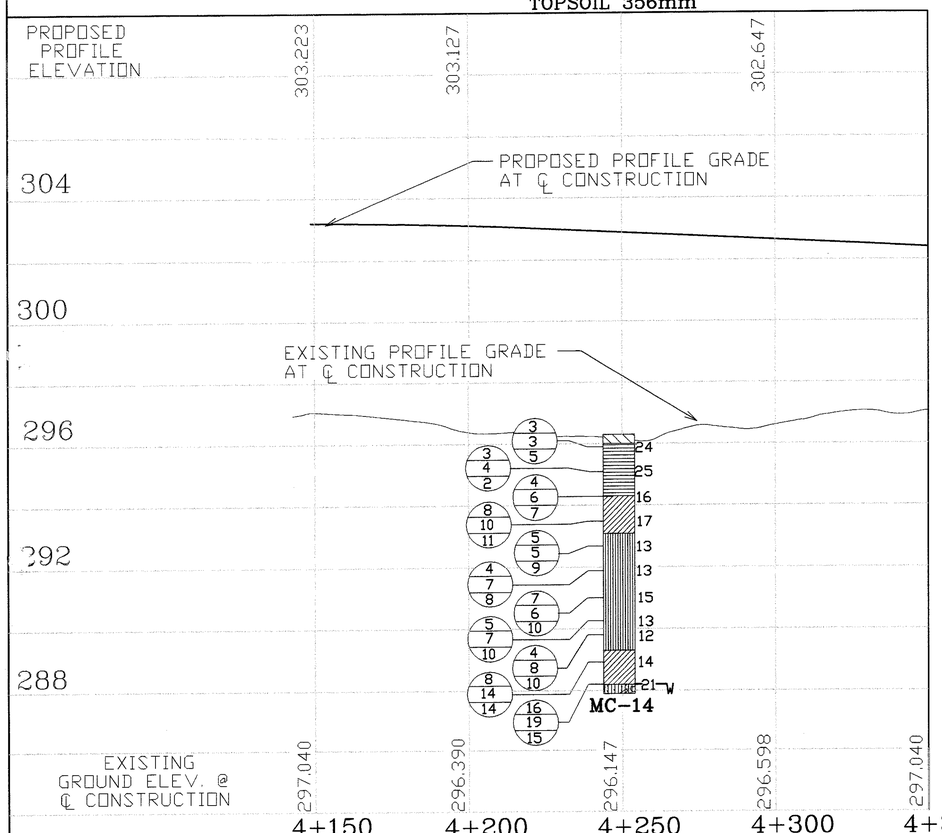
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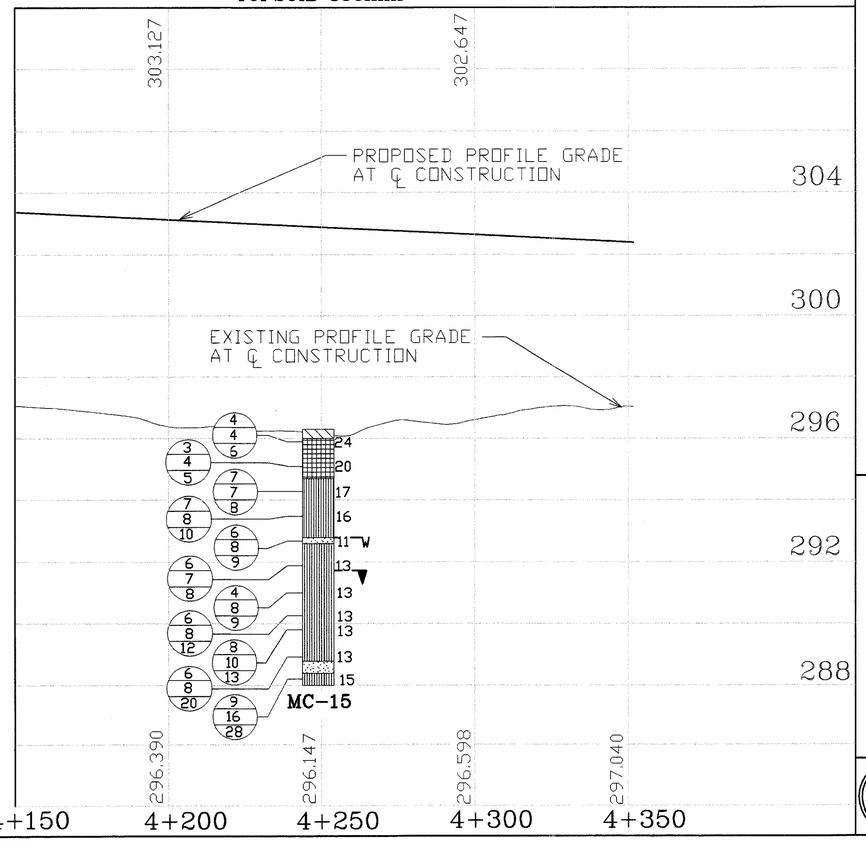


MC-14
STA 4+249
LT 40.0m
ELEV 296.322m
TOPSOIL 356mm



MC-15
STA 4+249
RT 41.0m
ELEV 295.737m
TOPSOIL 356mm





TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

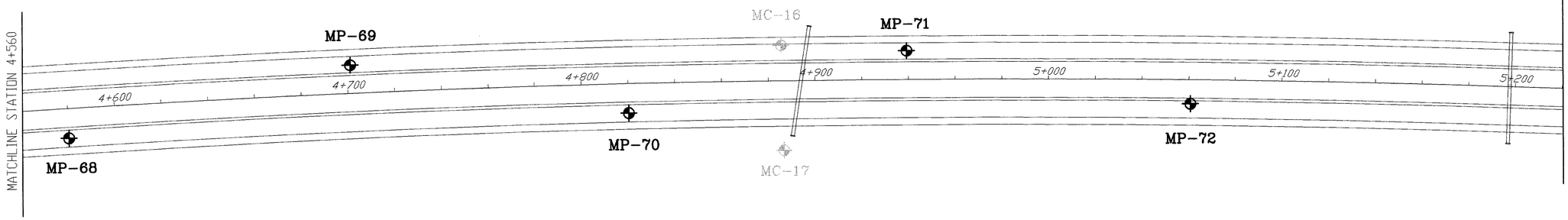
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0 25 50
HORIZONTAL
SCALE IN METER

DRAWN BY: S.M.D.
DATE: 7-15-97
DRAWING NO. ML 5-1A.DGN
PROJECT NO. 33644.01

PROFILE
SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



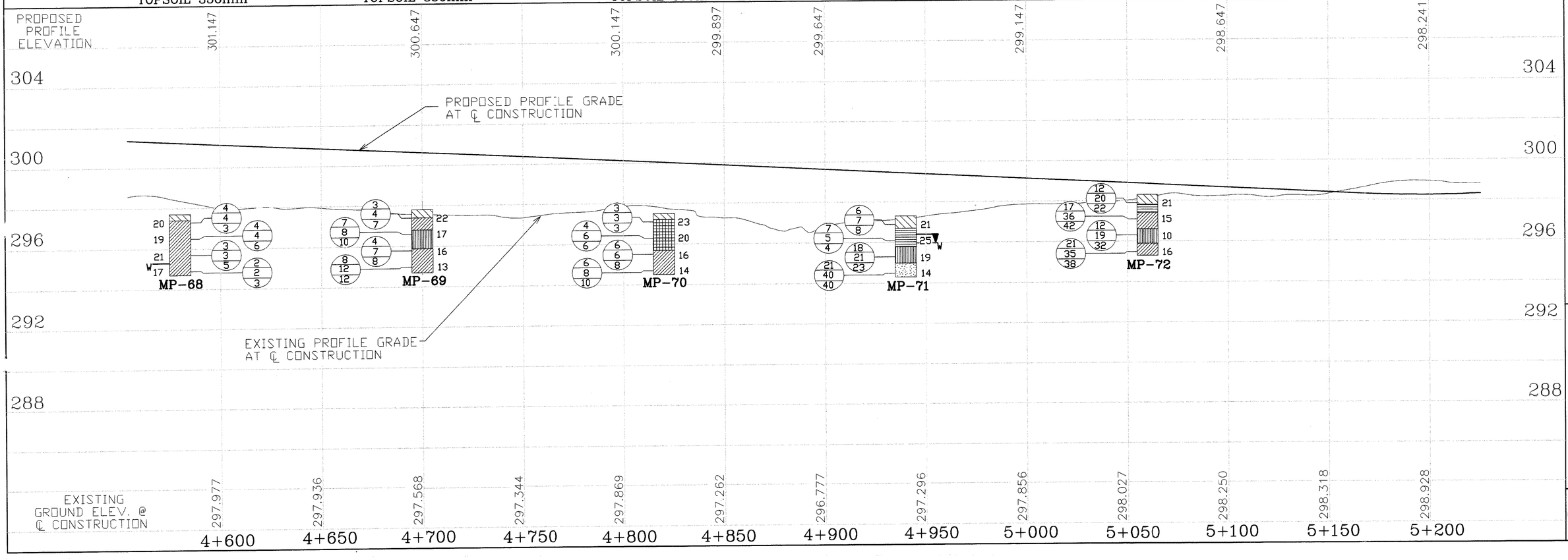
MP-68
STA 4+580
RT 13.0m
ELEV 297.724m
TOPSOIL 356mm

MP-69
STA 4+700
LT 12.0m
ELEV 297.757m
TOPSOIL 356mm

MP-70
STA 4+820
RT 13.0m
ELEV 297.540m
TOPSOIL 356mm

MP-71
STA 4+940
LT 12.0m
ELEV 297.327m
TOPSOIL 610m

MP-72
STA 5+060
RT 12.0m
ELEV 298.313m
TOPSOIL 508mm



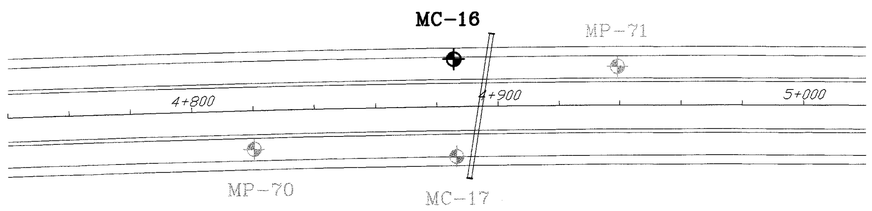
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

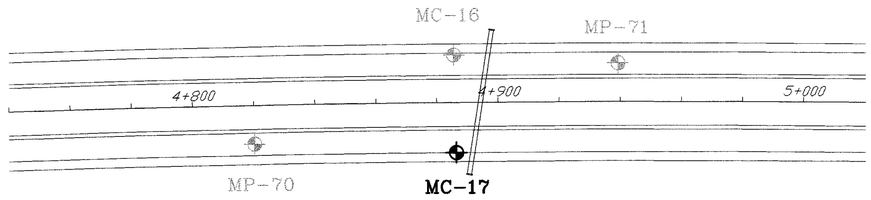
0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: B.J.G.
DATE: 6-16-99
DRAWING NO. ML 5-2.DGN
PROJECT NO. 33644.01

SOIL PROFILE

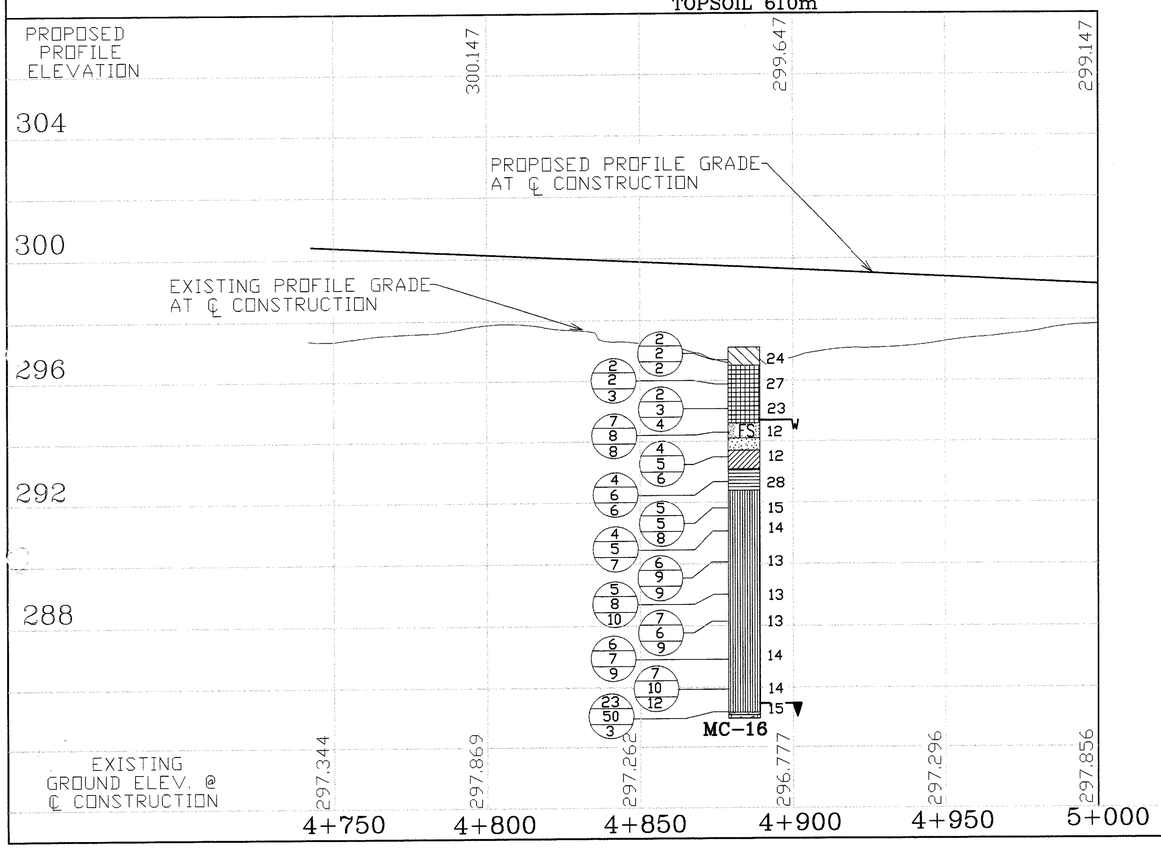
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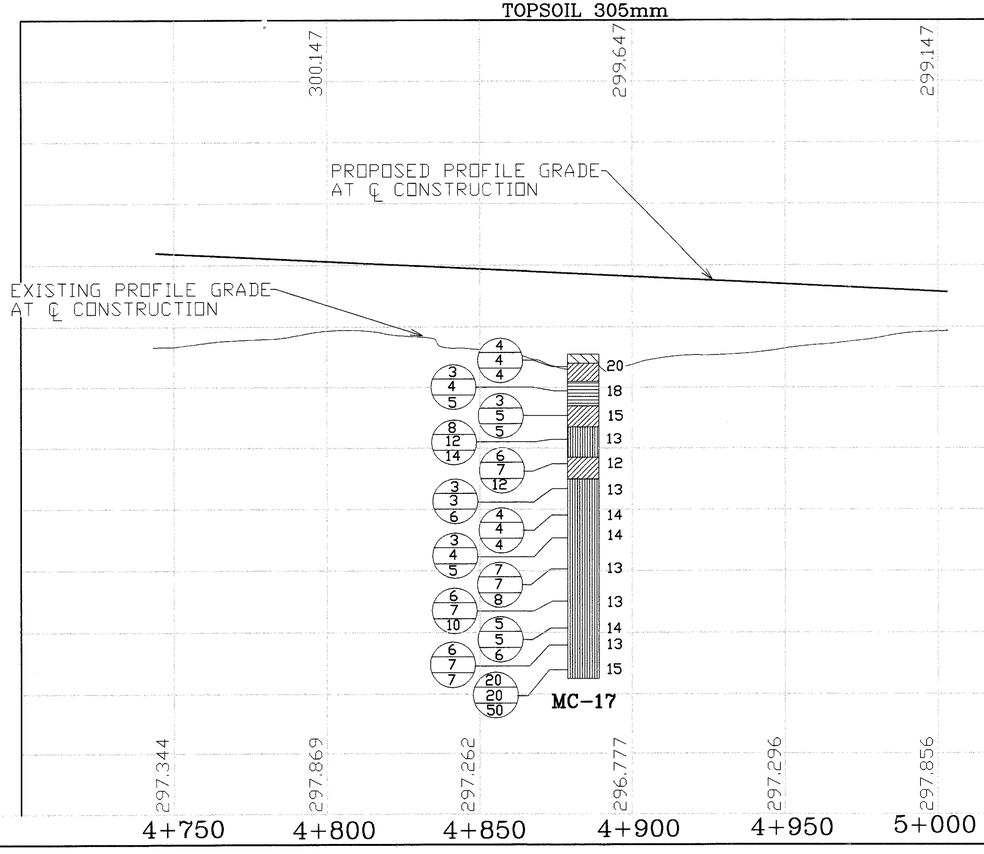




MC-16
STA 4+884
LT 16.0m
ELEV 297.082m
TOPSOIL 610m

MC-17
STA 4+884
RT 16.0m
ELEV 296.994m
TOPSOIL 305mm





TOLLES INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

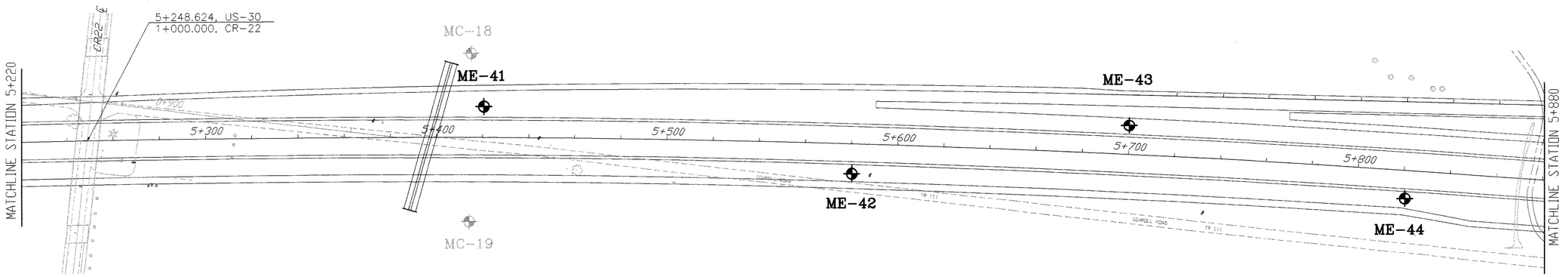
0 25 50
HORIZONTAL
SCALE IN METER

DRAWN BY: B.J.G.
DATE: 6-16-99
DRAWING NO. ML 5-2A.DGN
PROJECT NO. 33644.01

PROFILE
SOIL PR

WYA/CRA-30-23.914/0.000(14.86/0.00)

40/30

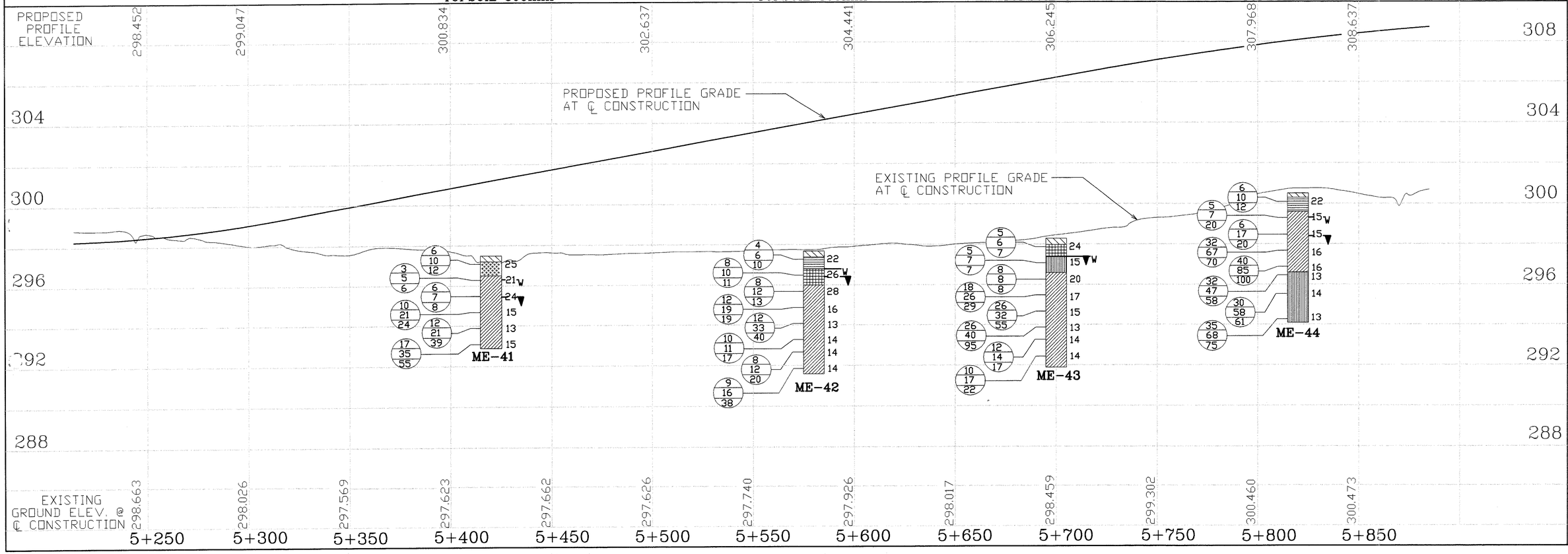


ME-41
STA 5+420
LT 13.0m
ELEV 297.459m
TOPSOIL 305mm

ME-42
STA 5+580m
RT 12m
ELEV 297.805m
TOPSOIL 305mm

ME-43
STA 5+700
LT 13.0m
ELEV 298.283m
TOPSOIL 305mm

ME-44
STA 5+820
RT 12m
ELEV 300.527m
TOPSOIL 254mm



IOLIESI, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

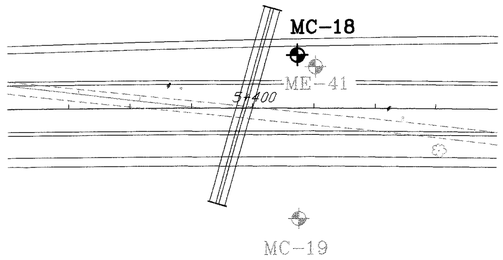
0 25 50
HORIZONTAL
SCALE IN METER

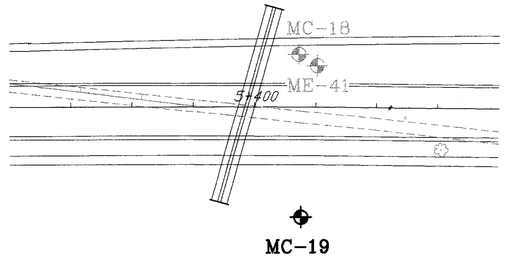
DRAWN BY: B.J.G.
DATE: 6-16-99
DRAWING NO. ML 5-30GN
PROJECT NO. 33644.01

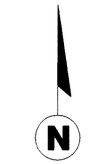
SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

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TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624



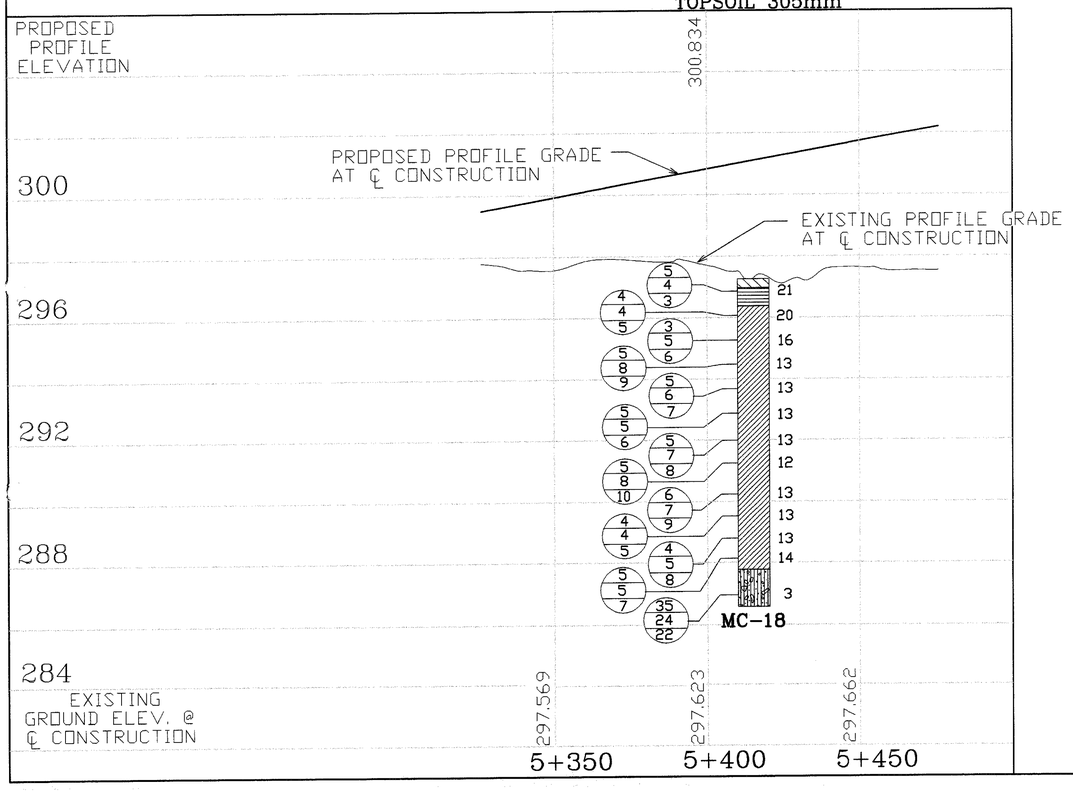
DRAWN BY: B.J.G.
DATE: 6-16-99
DRAWING NO. ML 5-3A.DGN
PROJECT NO. 33644.01

FILE

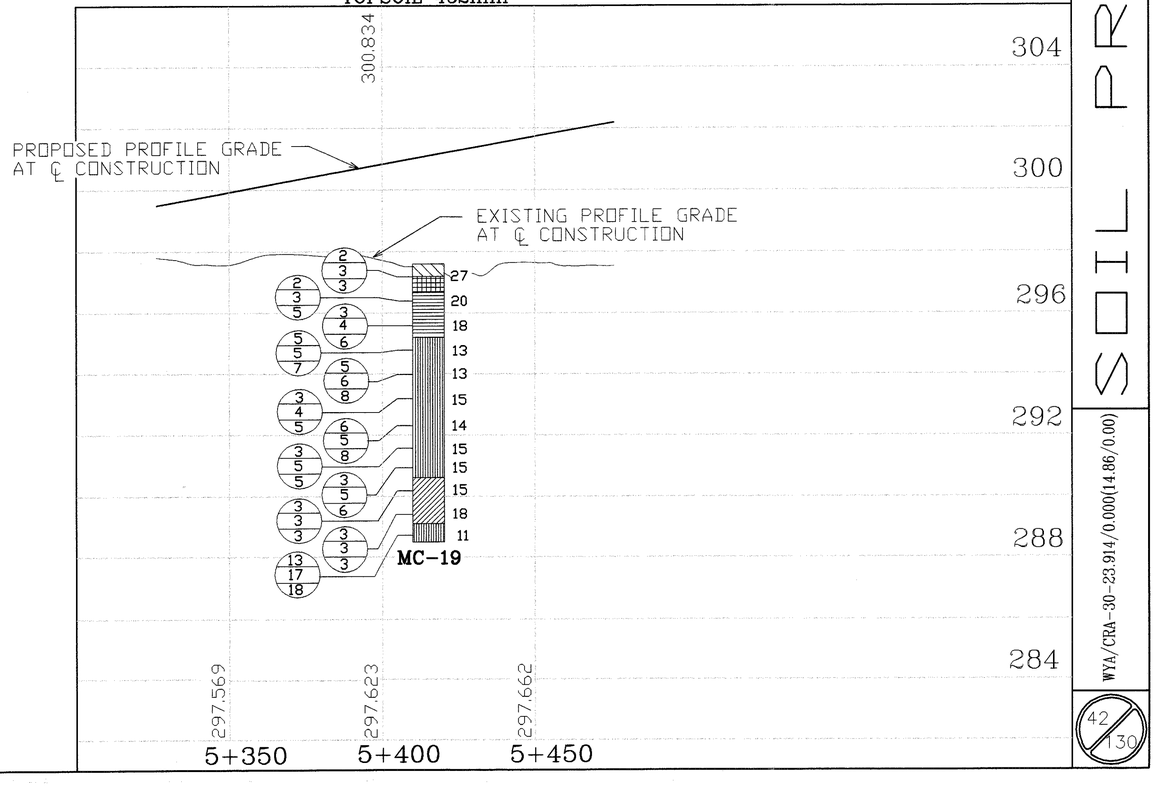
SOIL PROF

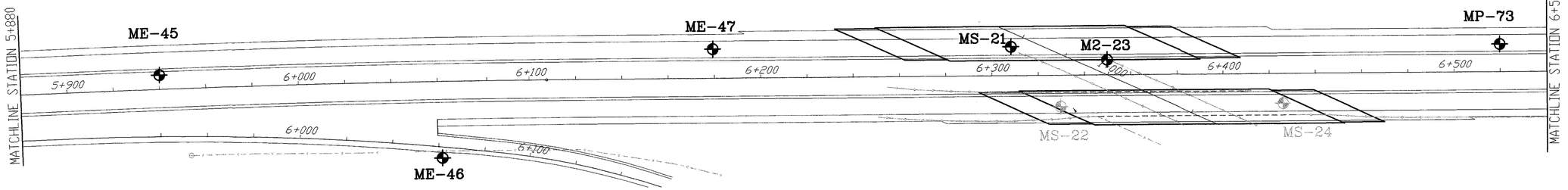
WYA/CRA-30-23.914/0.000(14.86/0.00)

MC-18
STA 5+415
LT 17.0m
ELEV 297.294m
TOPSOIL 305mm



MC-19
STA 5+415
RT 36.0m
ELEV 297.608m
TOPSOIL 432mm





ME-45
STA 5+940
LT 4.0m
ELEV 300.438m
TOPSOIL 305mm

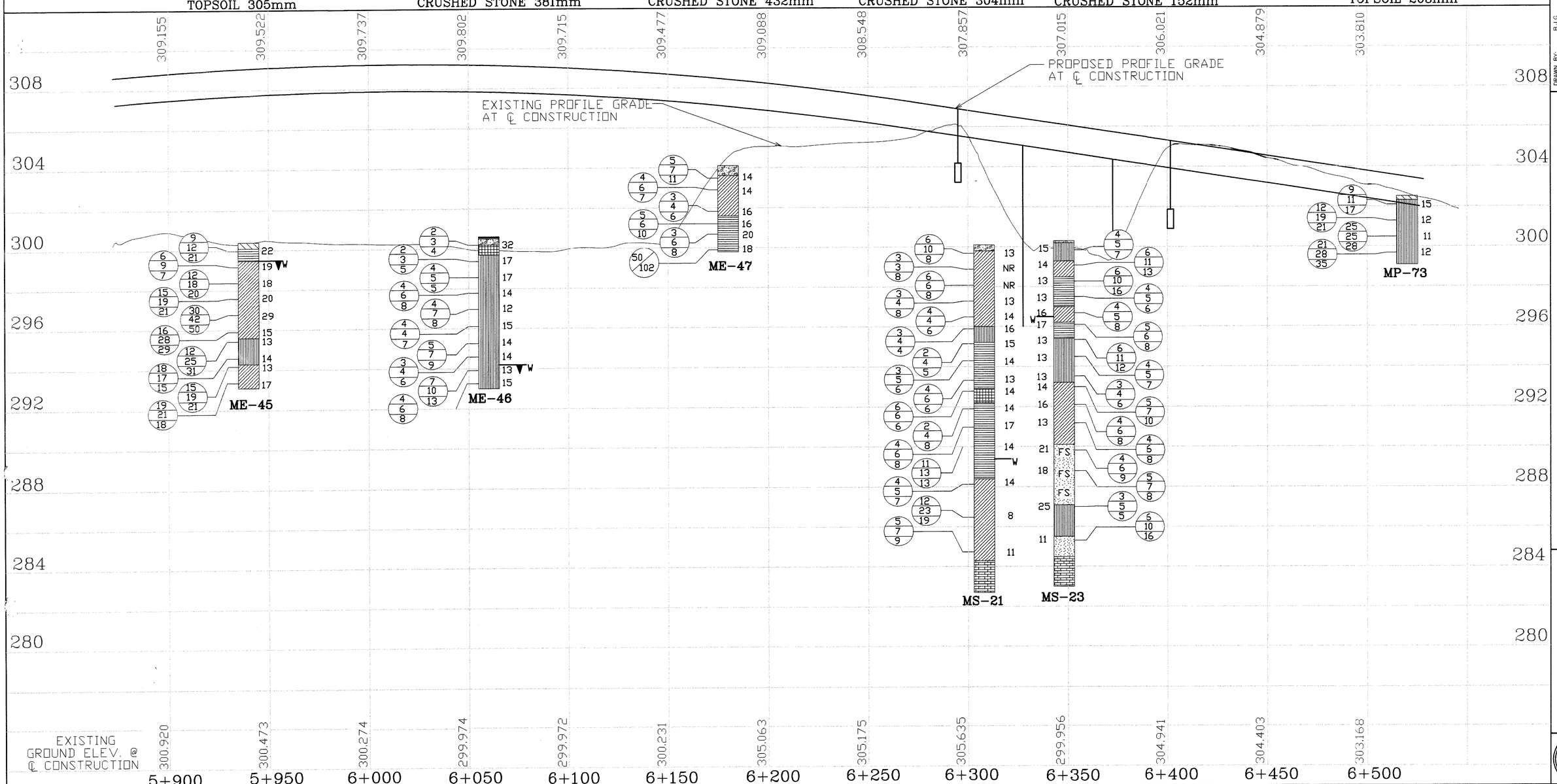
ME-46
STA 6+060
RT 31.0m
ELEV 300.61m
ASPHALT 51mm
CRUSHED STONE 381mm

ME-47
STA 6+180
LT 12.0m
ELEV 304.061m
CRUSHED STONE 432mm

MS-21
STA 6+308.2
LT 12.6m
ELEV 300.106m
CRUSHED STONE 304mm

MS-23
STA 6+348.4
LT 6.9m
ELEV 300.326m
CRUSHED STONE 152mm

MP-73
STA 6+520
LT 12.0m
ELEV 302.494m
TOPSOIL 203mm



TOLLES INC
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL
SCALE IN METER

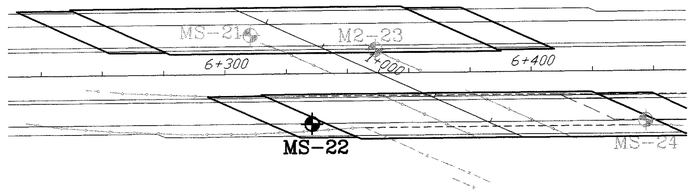
DRAWN BY: B.J.G.
DATE: 6-16-99
DRAWING NO. ML 5-7.DGN
PROJECT NO. 33644.01

FILE

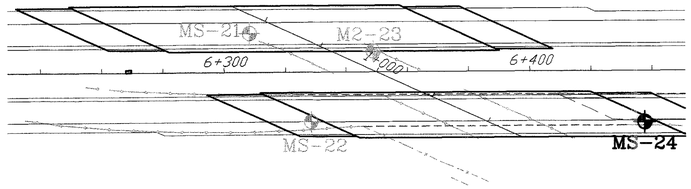
SOIL PROF

WYA/CRA-30-23.914/0.000(14.86/0.00)

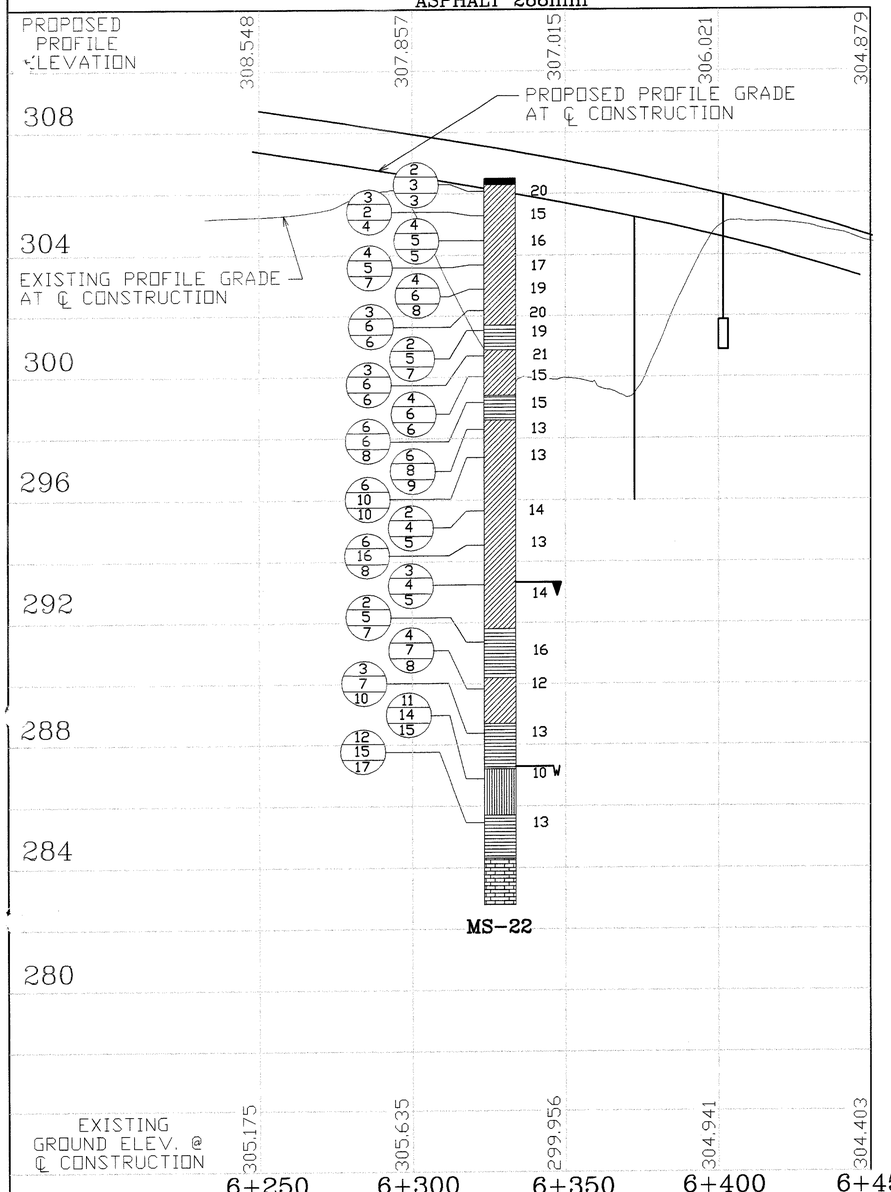
43/130

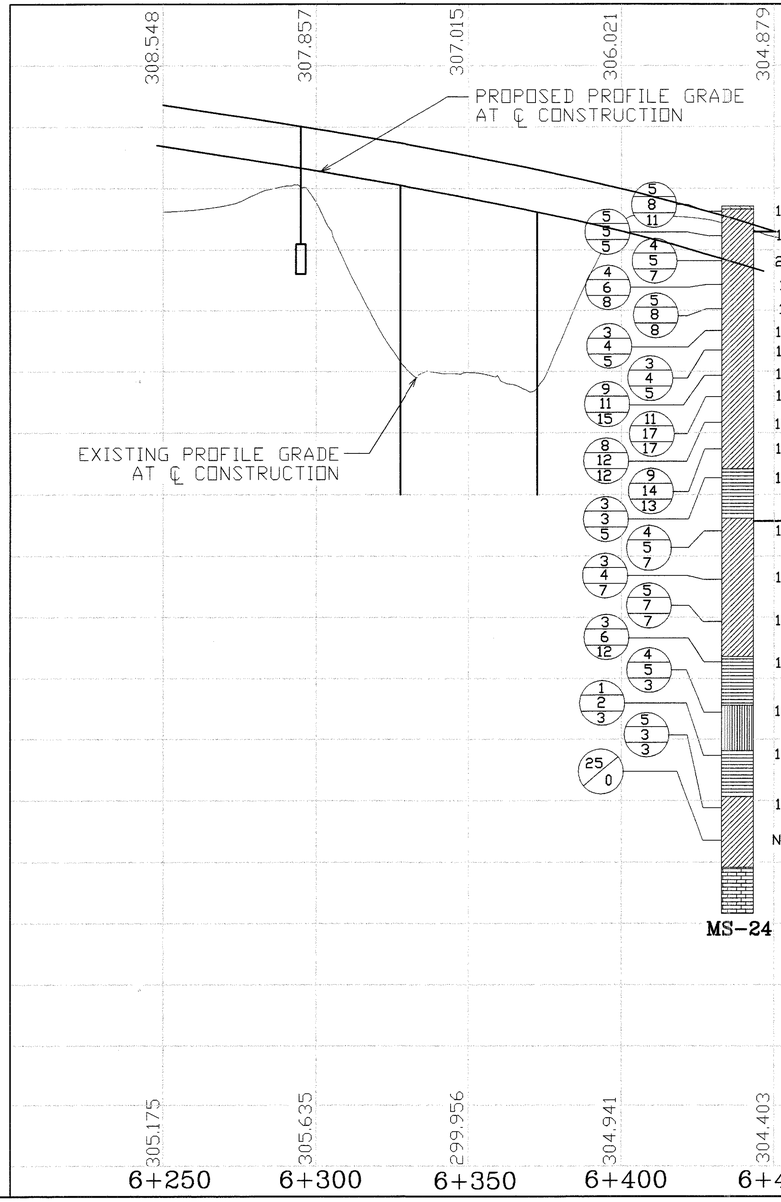


MS-22
STA 6+328.6
RT 16.7m
ELEV 306.543m
ASPHALT 288mm



MS-24
STA 6+437.7
RT 13.2m
ELEV 305.543m
TOPSOIL 152mm





IOLIESI INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

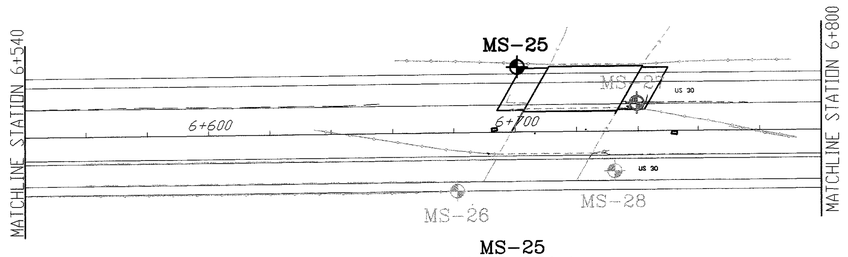
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HORIZONTAL SCALE IN METER

DRAWN BY: B.J.G.
DATE: 6-16-99
DRAWING NO. ML 5-8.00N
PROJECT NO. 33644.01

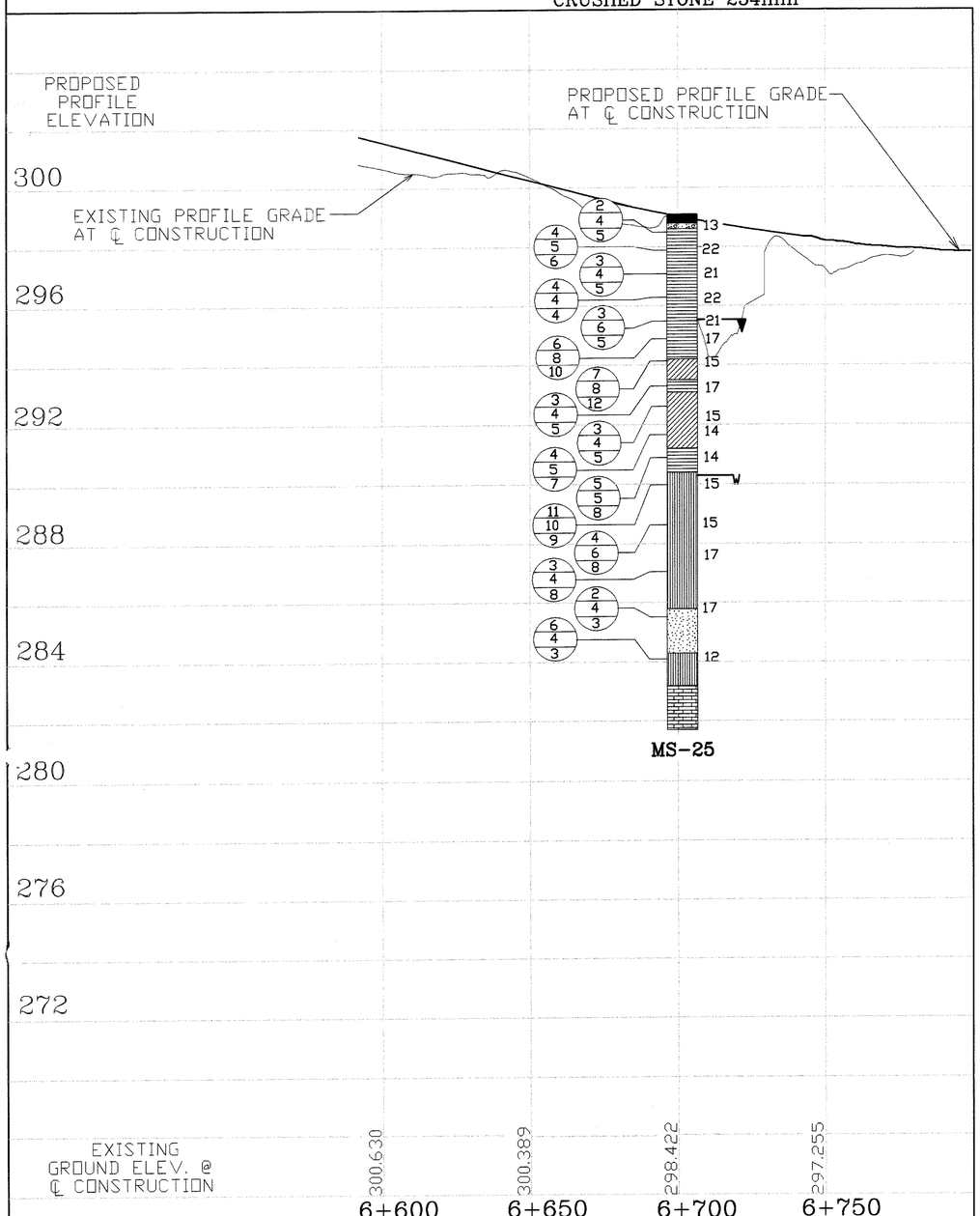
SOIL PROFILE

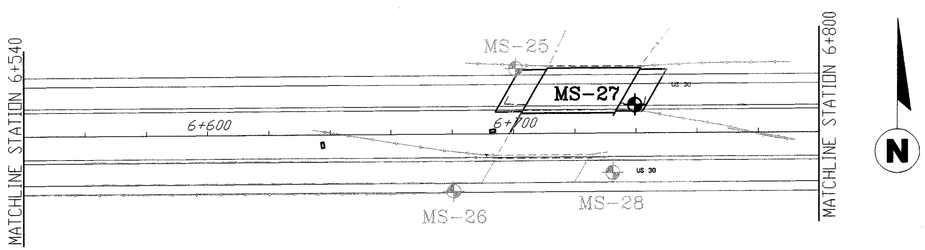
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44/130

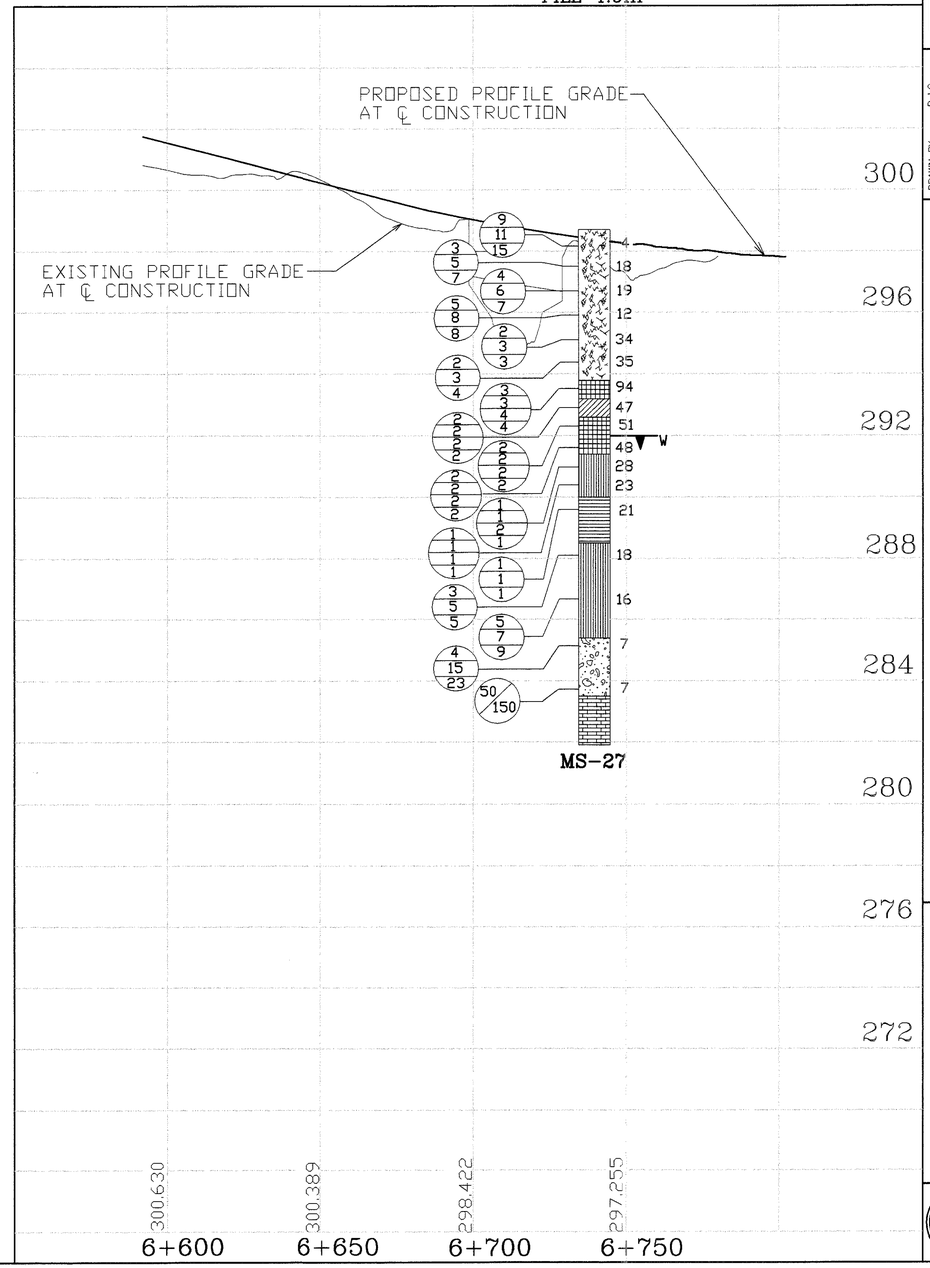


MS-25
STA 6+701.4
LT 20.7m
ELEV 299.090m
ASPHALT 254mm
CRUSHED STONE 254mm





MS-27
STA 6+739.6
LT 9.2m
ELEV 298.698m
FILL 4.9m



IOLIES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

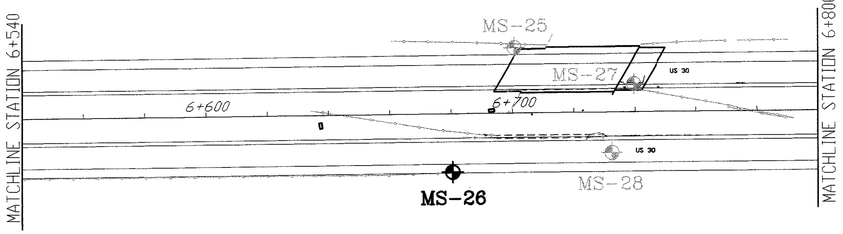
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HORIZONTAL SCALE IN METER

DRAWN BY: B.J.G.
DATE: 6-16-99
DRAWING NO. ML 5-9.DGN
PROJECT NO. 33644.01

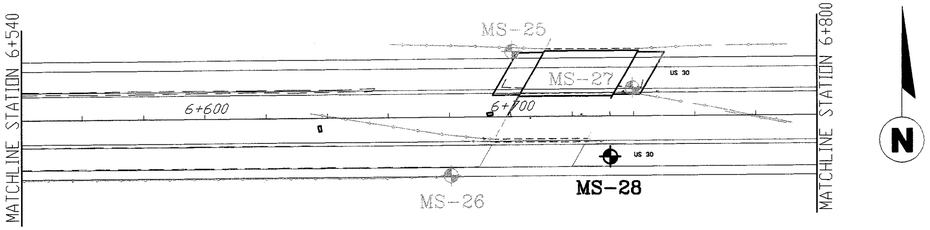
SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

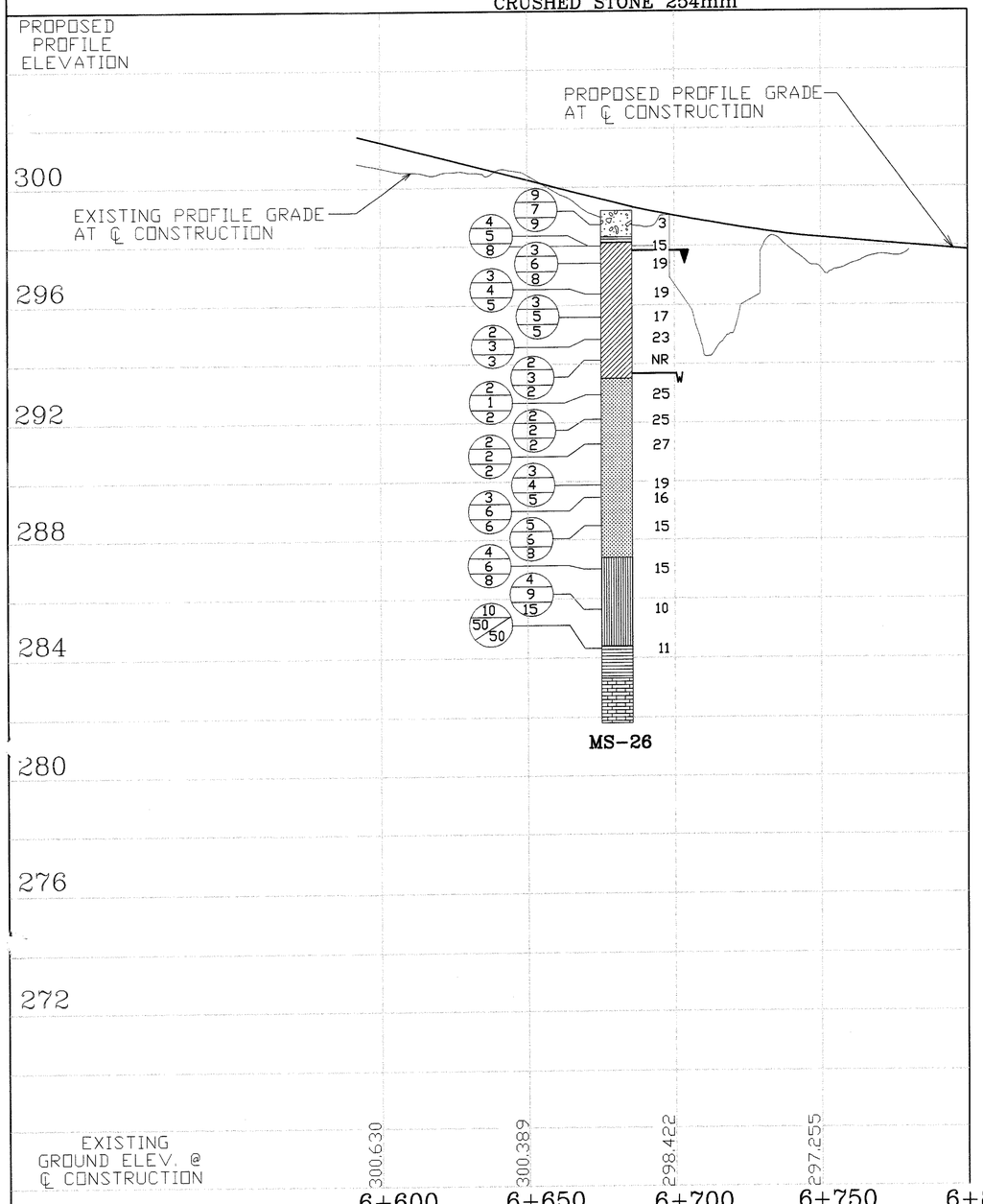
45
130

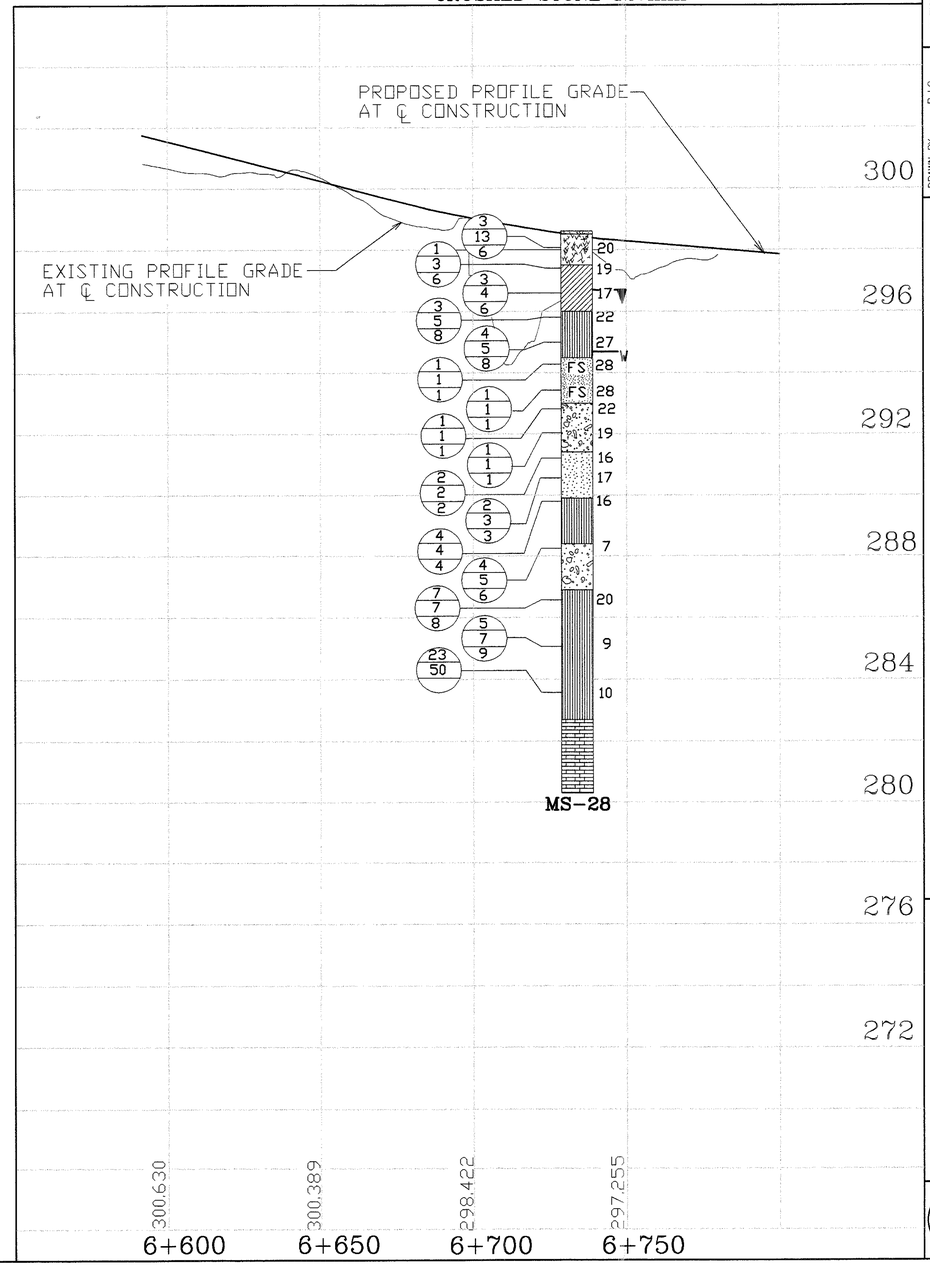


MS-26
STA 6+680.4
RT 21.4m
ELEV 299.180m
CRUSHED STONE 254mm



MS-28
STA 6+732.3
RT 12.9m
ELEV 298.591m
CRUSHED STONE 127mm





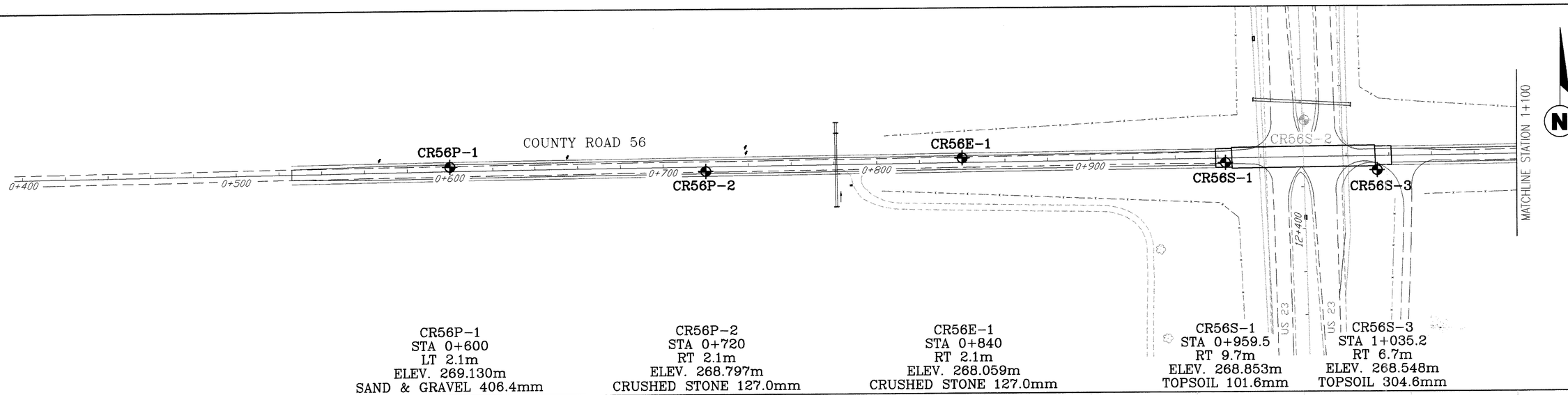
TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: B.J.G.
DATE: 6-16-99
DRAWING NO. ML 5-5A.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



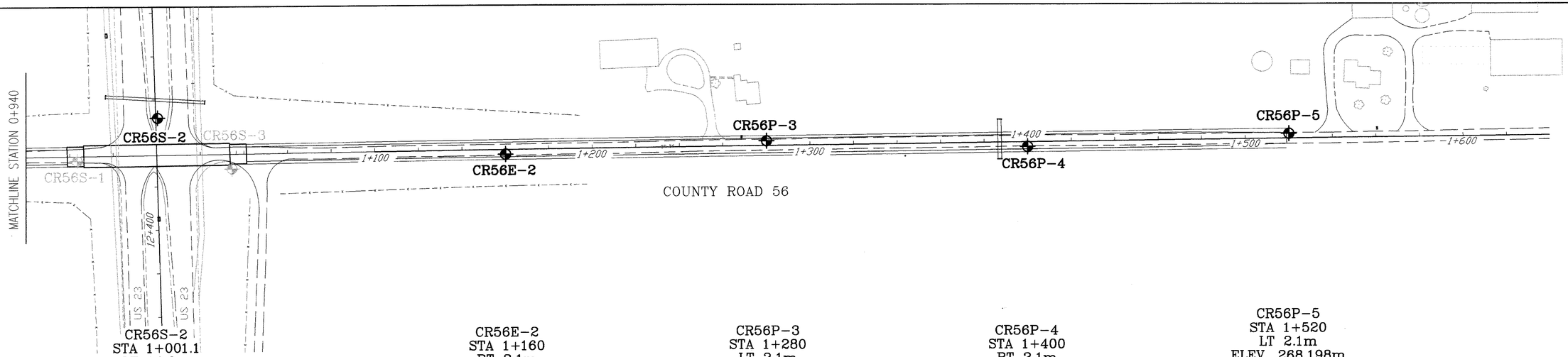
TOLLES INC
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: M. BURRIOLA
DATE: 6-22-99
DRAWING NO. 33644.01GN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



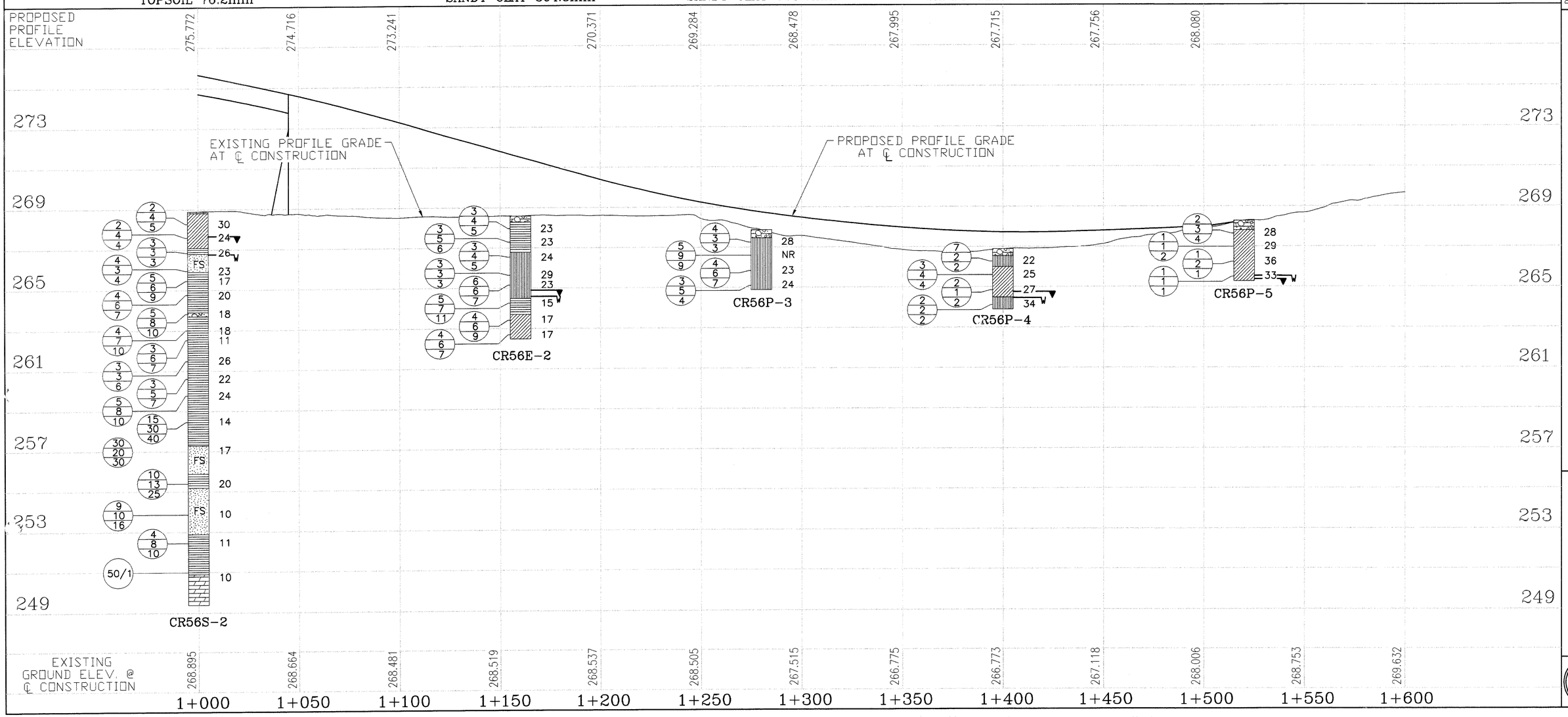
CR56S-2
STA 1+001.1
LT 14.6m
ELEV. 268.640m
TOPSOIL 76.2mm

CR56E-2
STA 1+160
RT 2.1m
ELEV. 268.646m
SANDY CLAY 304.8mm

CR56P-3
STA 1+280
LT 2.1m
ELEV. 268.209m
SANDY CLAY 355.6mm

CR56P-4
STA 1+400
RT 2.1m
ELEV. 266.744m
SANDY CLAY 355.6mm

CR56P-5
STA 1+520
LT 2.1m
ELEV. 268.198m
CRUSHED STONE AND
SANDY CLAY 457.2mm



TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

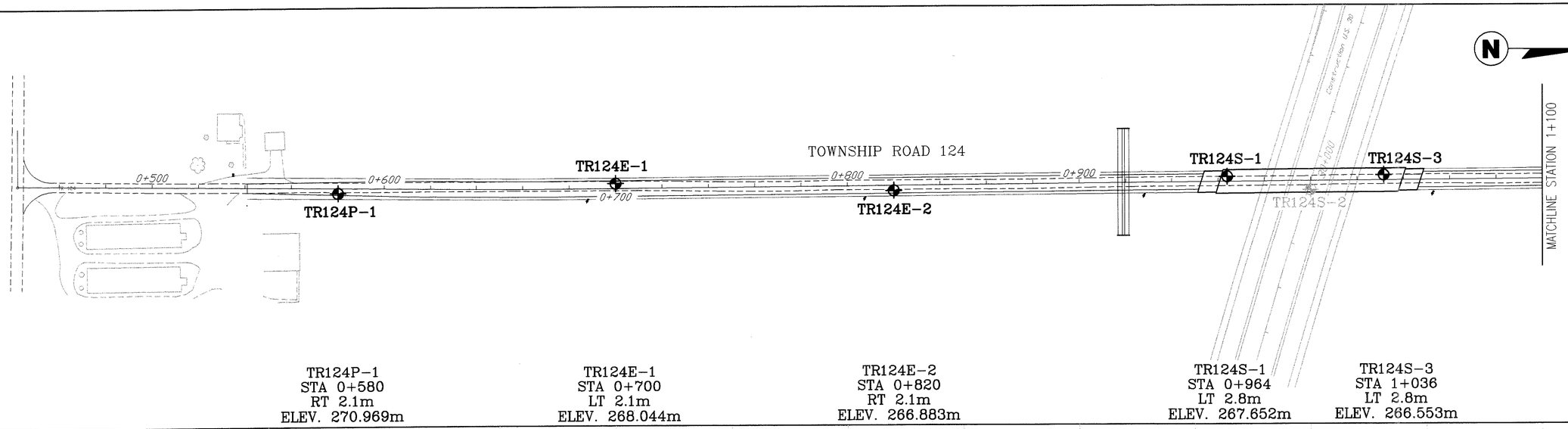
HORIZONTAL SCALE IN METER
0 25 50

DRAWN BY: B.A.L.
DATE: 1-16-97
DRAWING NO. 336441.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

48/130



TR124P-1
STA 0+580
RT 2.1m
ELEV. 270.969m

TR124E-1
STA 0+700
LT 2.1m
ELEV. 268.044m

TR124E-2
STA 0+820
RT 2.1m
ELEV. 266.883m

TR124S-1
STA 0+964
LT 2.8m
ELEV. 267.652m

TR124S-3
STA 1+036
LT 2.8m
ELEV. 266.553m

PROPOSED PROFILE ELEVATION

272.353 273.446 274.269 274.822 275.374 275.817 275.645 275.065 274.075 272.763

275 271 267 263 259 255 251

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION

TR124P-1 TR124E-1 TR124E-2 TR124S-1 TR124S-3

EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

270.531 271.147 272.414 270.179 268.799 268.022 267.417 267.105 266.710 266.463 266.465 266.687 267.770 269.610

0+450 0+500 0+550 0+600 0+650 0+700 0+750 0+800 0+850 0+900 0+950 1+000 1+050 1+100

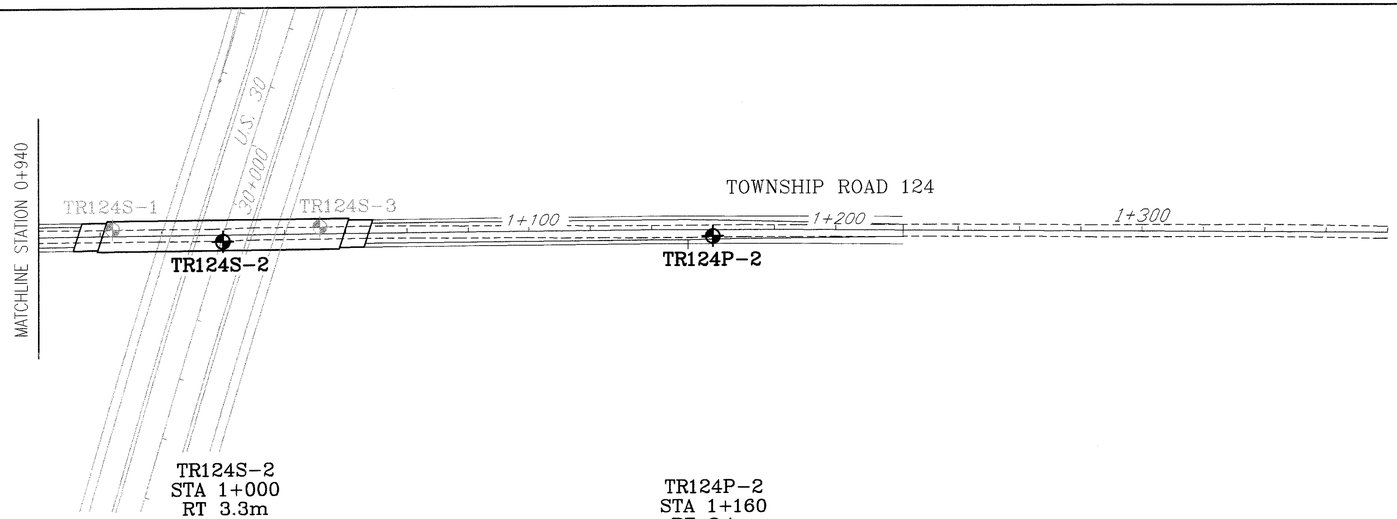
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: M. BURRICILA
DATE: 6-23-99
DRAWING NO. 336442-1.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



TR124S-2
STA 1+000
RT 3.3m
ELEV. 266.829m
TOPSOIL 609.6mm

TR124P-2
STA 1+160
RT 2.1m
ELEV. 269.895m

PROPOSED PROFILE ELEVATION

275.645 | 275.063 | 274.075 | 272.763 | 270.088

275
271
267
263
259
255
251

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION

TR124P-2: 27, 22, 23, 14

TR124S-2: 21, 19, 17, 16, 19, 13, FS 22, 23, FS 24, 27, 22, FS 20, 19, 19

EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

266.465 | 266.687 | 267.770 | 269.610 | 270.054 | 269.885

0+950 | 1+000 | 1+050 | 1+100 | 1+150 | 1+200 | 1+250 | 1+300 | 1+350 | 1+400 | 1+450

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

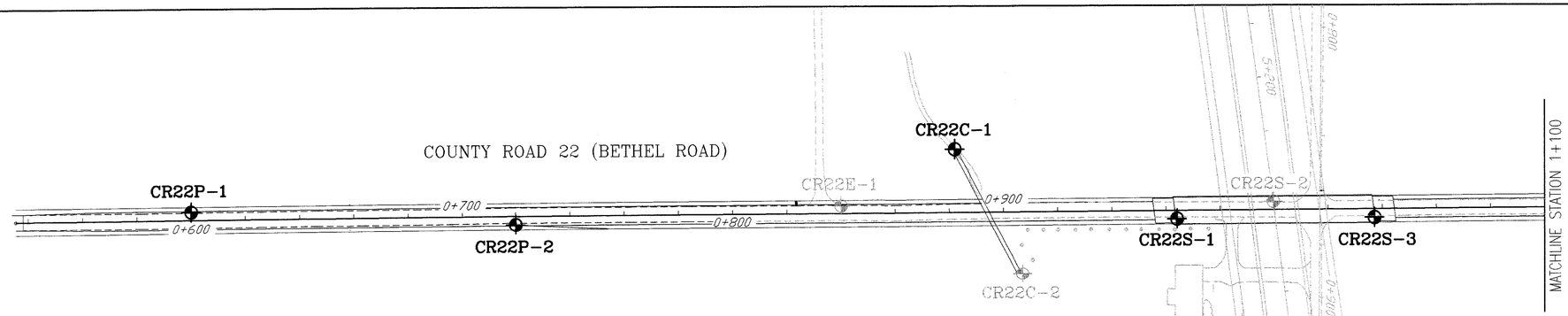
0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: M. BURRIOLA
DATE: 6-23-99
DRAWING NO. 336441-2.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

50/130



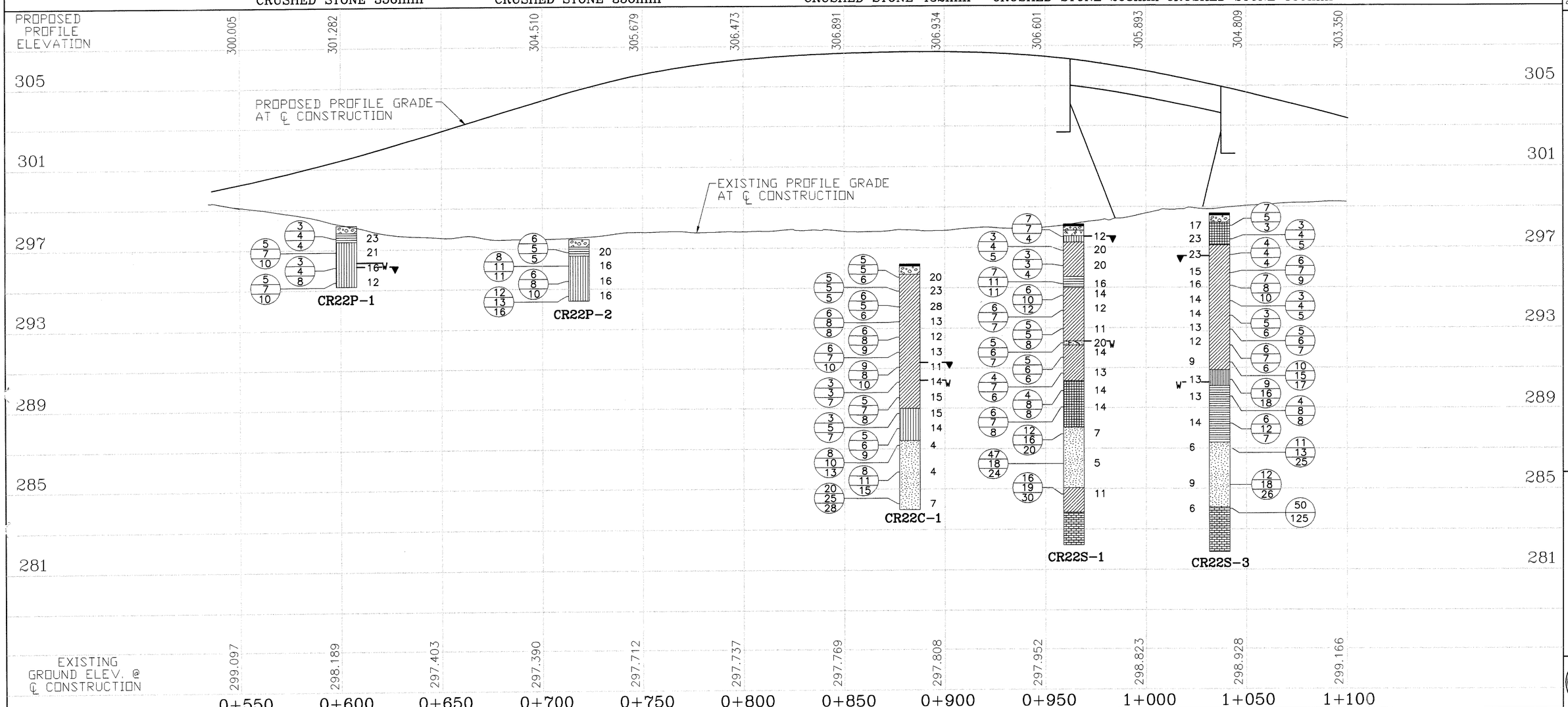
CR22P-1
STA 0+600
LT 3.0m
ELEV. 298.142m
CRUSHED STONE 356mm

CR22P-2
STA 0+720
RT 3.0m
ELEV 297.565m
CRUSHED STONE 356mm

CR22C-1
STA 0+882
LT 23.2m
ELEV. 296.000m
ASPHALT 76mm
CRUSHED STONE 432mm

CD22S-1
STA 0+964
RT 1.3m
ELEV. 298.090m
ASPHALT 102mm
CRUSHED STONE 203mm

CR22S-3
STA 1+035.5
RT 4.2m
ELEV. 298.480m
ASPHALT 102mm
CRUSHED STONE 356mm



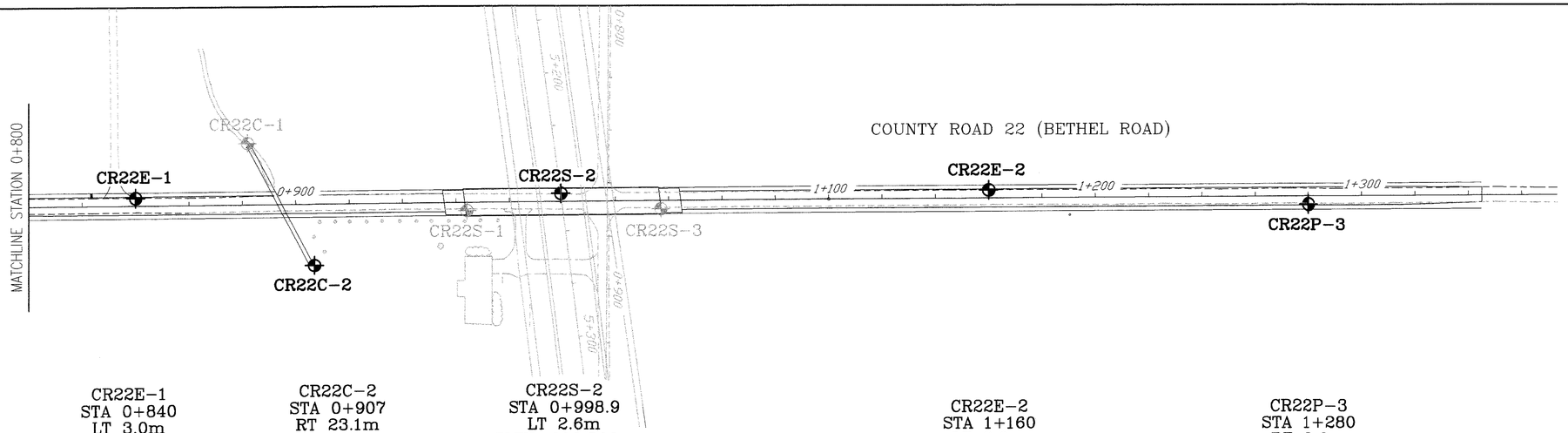
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

HORIZONTAL SCALE IN METER
0 25 50

DRAWN BY: WB ROBERTS
DATE: 6-23-99
DRAWING NO. 33643-1.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



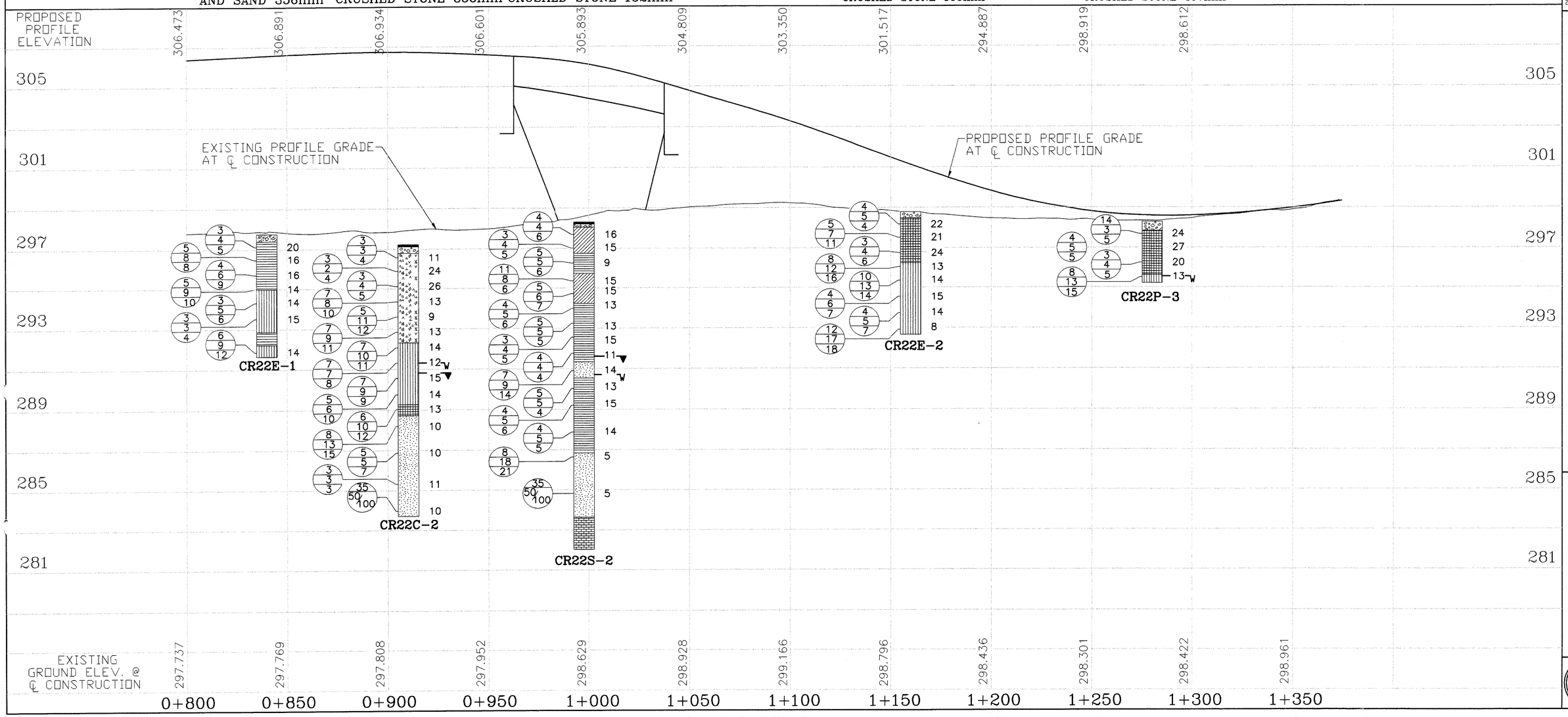
CR22E-1
STA 0+840
LT 3.0m
ELEV. 297.616m
CRUSHED STONE
AND SAND 356mm

CR22C-2
STA 0+907
RT 23.1m
ELEV. 297.120m
ASPHALT 76mm
CRUSHED STONE 356mm

CR22S-2
STA 0+998.9
LT 2.6m
ELEV. 298.566m
ASPHALT 102mm
CRUSHED STONE 152mm

CR22E-2
STA 1+160
LT 3.0m
ELEV. 298.630m
CRUSHED STONE 305mm

CR22P-3
STA 1+280
RT 3.0m
ELEV. 298.077m
CRUSHED STONE 457mm



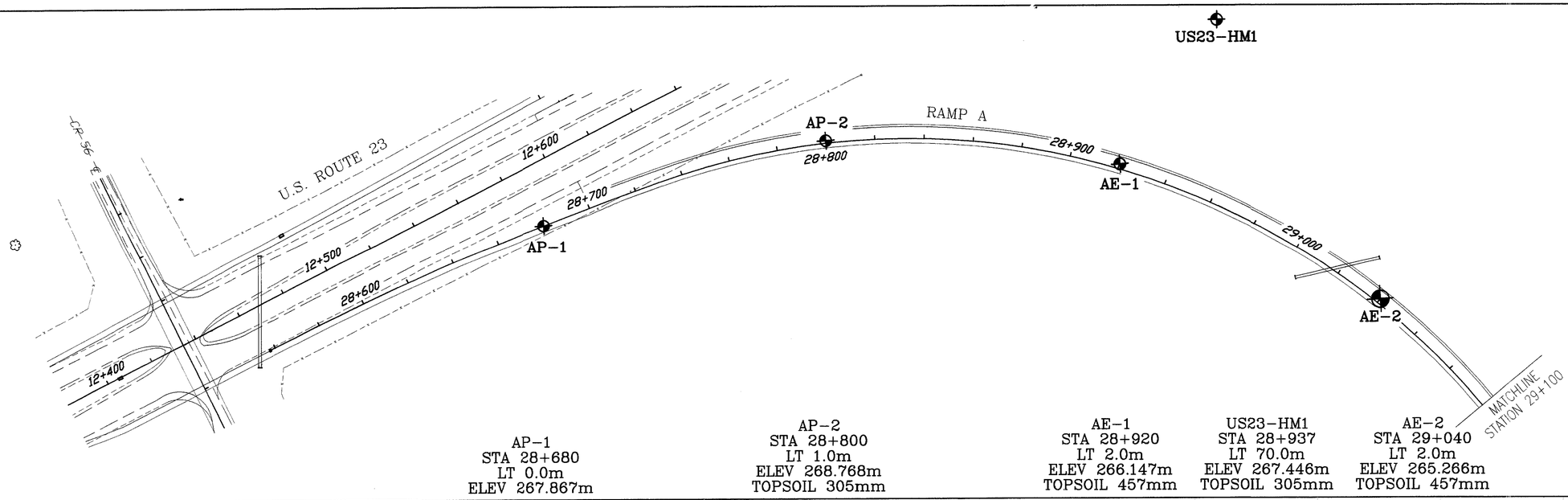
TOLEDO INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: WB ROBERTS
DATE: 6-23-99
DRAWING NO. 33643-2.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WVA/CRA-30-23.914/0.000(14.86/0.00)



TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

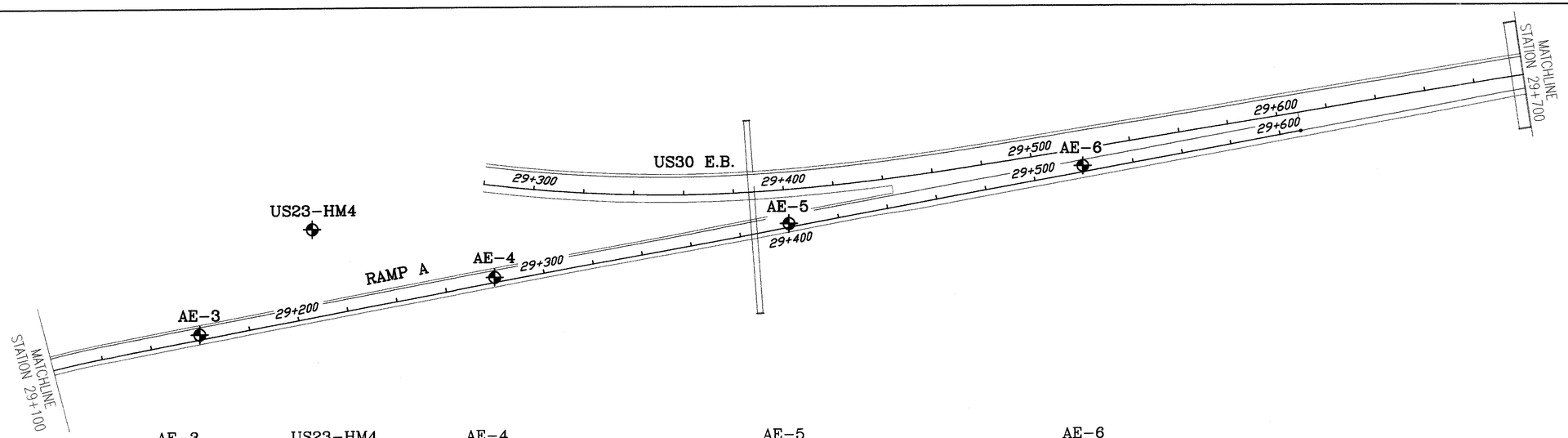
HORIZONTAL SCALE IN METER
0 25 50

DRAWN BY: WB ROBETS
DATE: 6-22-99
DRAWING NO. 33644S.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

53/130



AE-3
STA 29+160
LT 2.0m
ELEV. 266.931m
TOPSOIL 279mm

US23-HM4
STA 29+212
LT 35.0m
ELEV 267.995m
TOPSOIL 406mm

AE-4
STA 29+280
LT 2.0m
ELEV. 268.510m
TOPSOIL 381mm

AE-5
STA 29+400
LT 1.5m
ELEV. 266.822m
TOPSOIL 406mm

AE-6
STA 29+520
LT 2.5m
ELEV. 267.940m
TOPSOIL 406mm

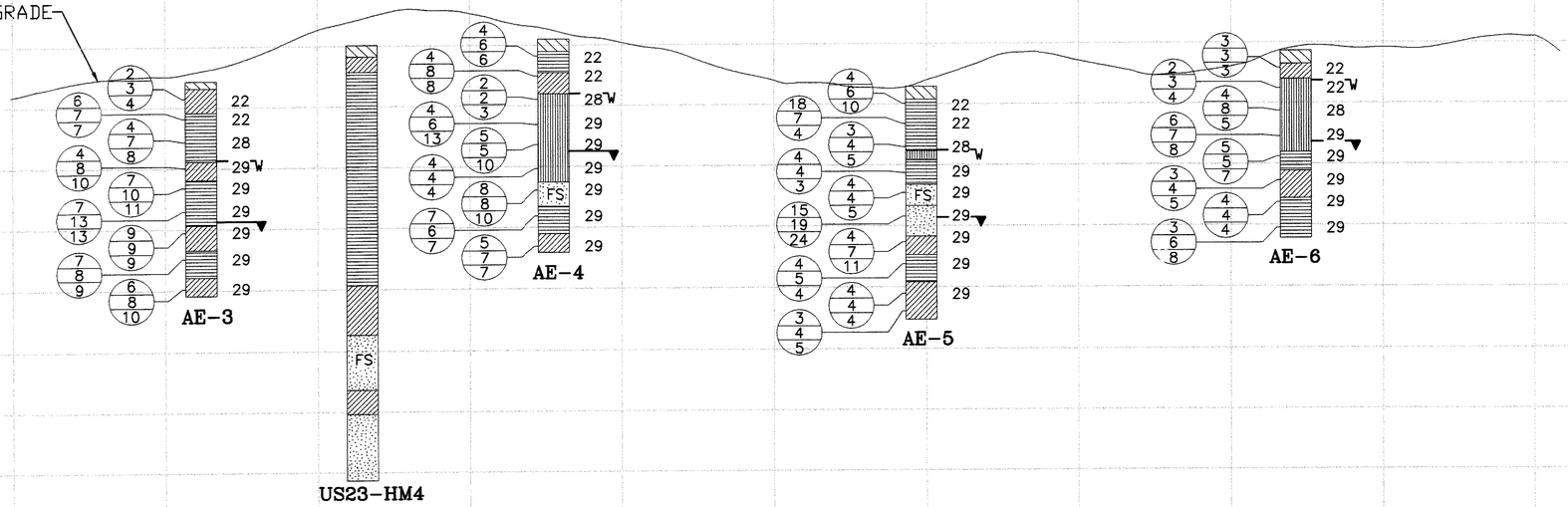
PROPOSED PROFILE ELEVATION

276.733 277.268 277.564 277.622 277.440 277.020 276.361 275.462 274.330 273.213 272.028

276 272 268 264 260 256 252

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION



EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

268.388 267.029 268.515 269.046 268.075 266.795 266.780 267.420 267.231 267.591 268.180

29+100 29+150 29+200 29+250 29+300 29+350 29+400 29+450 29+500 29+550 29+600

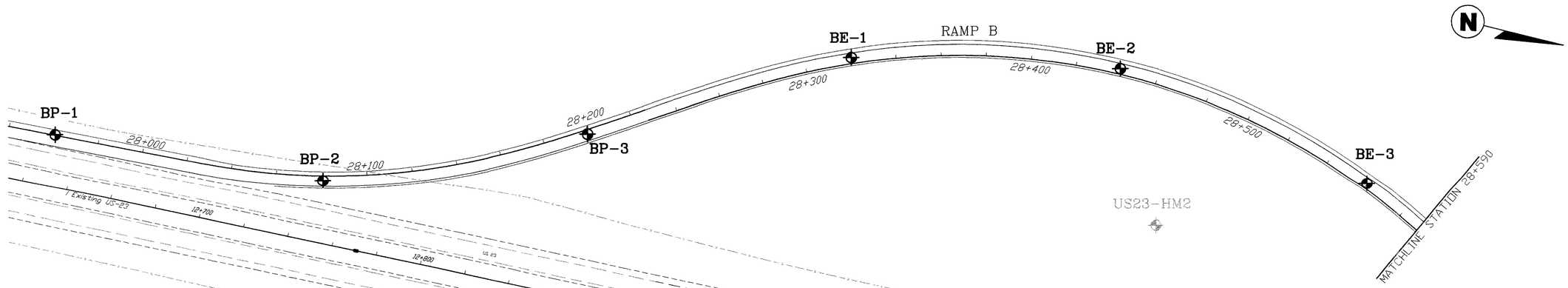
IQUEST, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

HORIZONTAL SCALE IN METER
0 25 50

DRAWN BY: WB ROBERTS
DATE: 6-22-99
DRAWING NO. 336444.DGN
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



BP-1
STA. 27+960
RT. 2.0M
ELEV. 268.216m
TOPSOIL 305mm

BP-2
STA. 28+081
RT. 2.0M
ELEV. 267.164m
TOPSOIL 356mm

BP-3
STA. 28+200
RT. 2.0M
ELEV. 267.8m
TOPSOIL 102mm

BE-1
STA. 28+320
LT. 2.0M
ELEV. 267.321m
TOPSOIL 305mm

BE-2
STA. 28+440
LT. 2.0M
ELEV. 266.997m
TOPSOIL 305mm

BE-3
STA. 28+560
LT. 2.0M
ELEV. 265.365m
TOPSOIL 305mm

PROPOSED PROFILE ELEVATION

267.306 | 266.236 | 267.639 | 268.515 | 271.156 | 273.856 | 276.556 | 278.727

276 … 272 … 268 … 264 … 260 … 256 … 252

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

BP-1 | BP-2 | BP-3 | BE-1 | BE-2 | BE-3

EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

267.815 | 267.589 | 267.321 | 267.690 | 267.830 | 267.795 | 267.225 | 267.368 | 268.061 | 268.007 | 266.848 | 265.740 | 265.415 | 264.681

27+950 | 28+000 | 28+050 | 28+100 | 28+150 | 28+200 | 28+250 | 28+300 | 28+350 | 28+400 | 28+450 | 28+500 | 28+550 | 28+600

US23-HM2

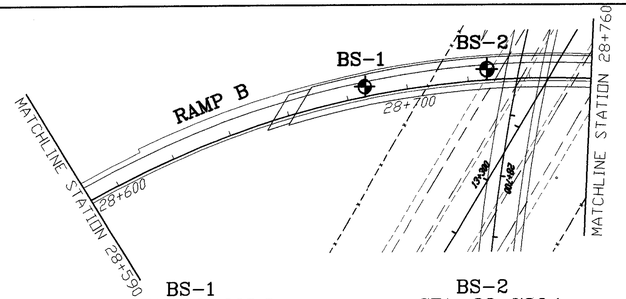
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

HORIZONTAL SCALE IN METER
0 25 50

DRAWN BY: M. BURRIOLA
DATE: 6-17-99
DRAWING NO. RAMP B-1
PROJECT NO. 33844.01

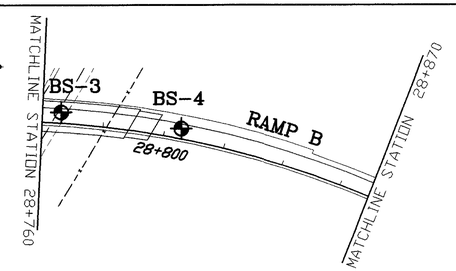
SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



BS-1
STA. 28+665.8
LT. 3.6
ELEV. 264.375m
TOPSOIL 356mm

BS-2
STA. 28+726.1
LT. 2M
ELEV. 264.786m
CRUSHED STONE 102mm



BS-3
STA. 28+776.5
LT. 2.2M
ELEV. 264.879m
CRUSHED STONE 152mm

BS-4
STA. 28+805.4
LT. 3.5M
ELEV. 264.341m
TOPSOIL 330mm

PROPOSED PROFILE ELEVATION

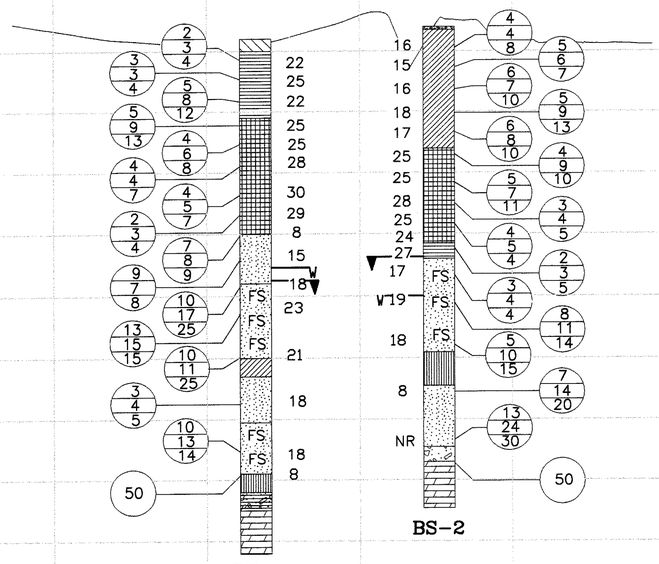
280
276
272
268
264
260
256
252
248

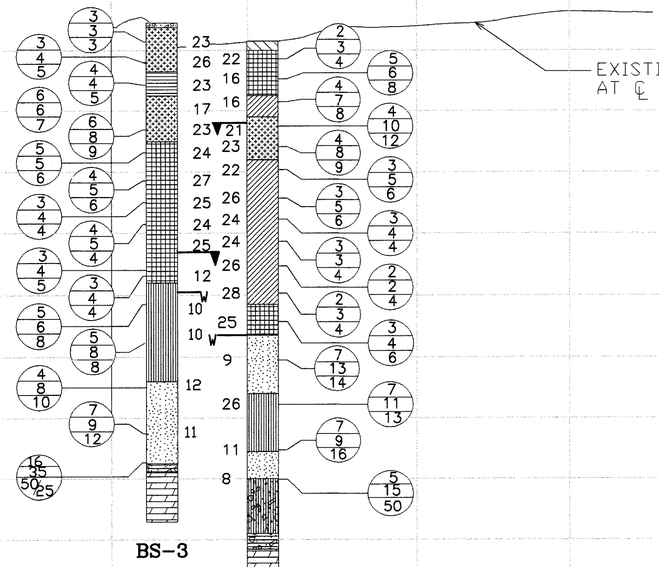
279.227 280.277 281.000 281.397

281.467 281.211 280.628

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION





EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

264.681 264.198 265.157 264.549

264.248 264.793 265.263

28+600 28+650 28+700 28+750

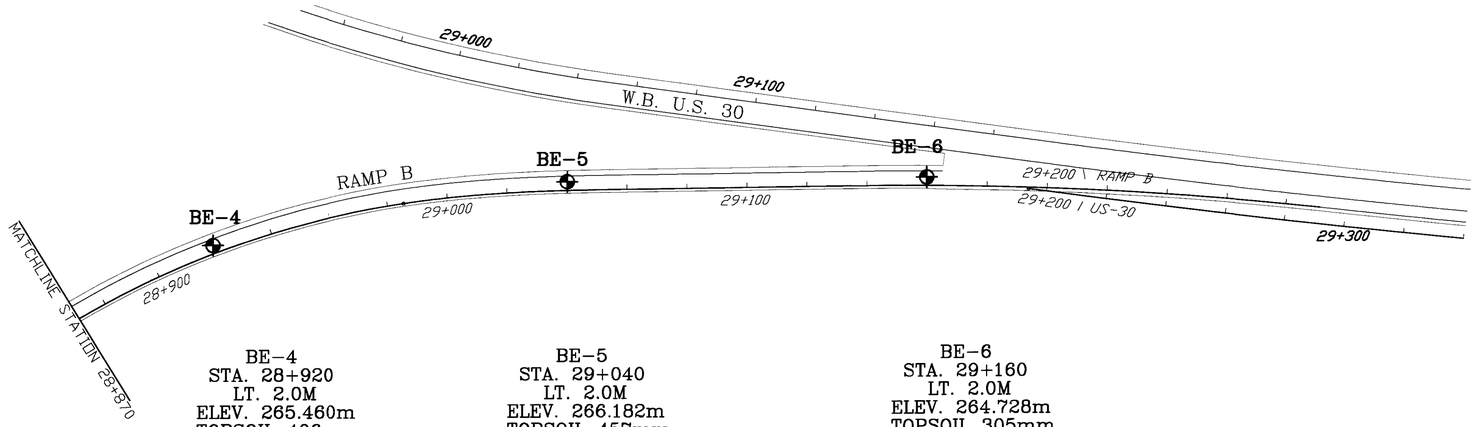
28+800 28+850 28+900

HORIZONTAL SCALE IN METER
0 25 50

DRAWN BY: M. BURRIOLA
DATE: 6-17-99
DRAWING NO. RAMP B-2
PROJECT NO. 33644.01

WYA/CRA-30-23.914/0.000(14.86/0.00)

SOIL PROFILE



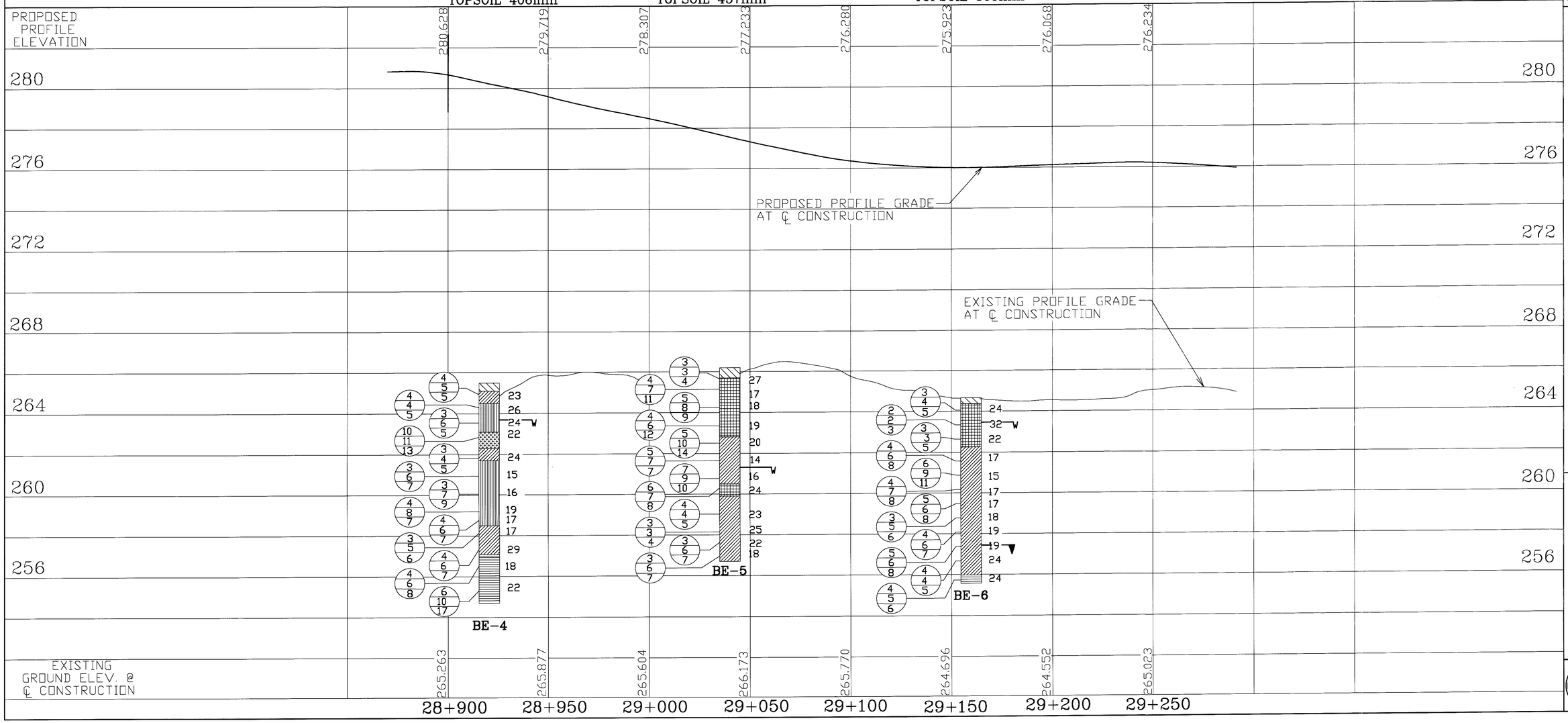




BE-4
STA. 28+920
LT. 2.0M
ELEV. 265.460m
TOPSOIL 406mm

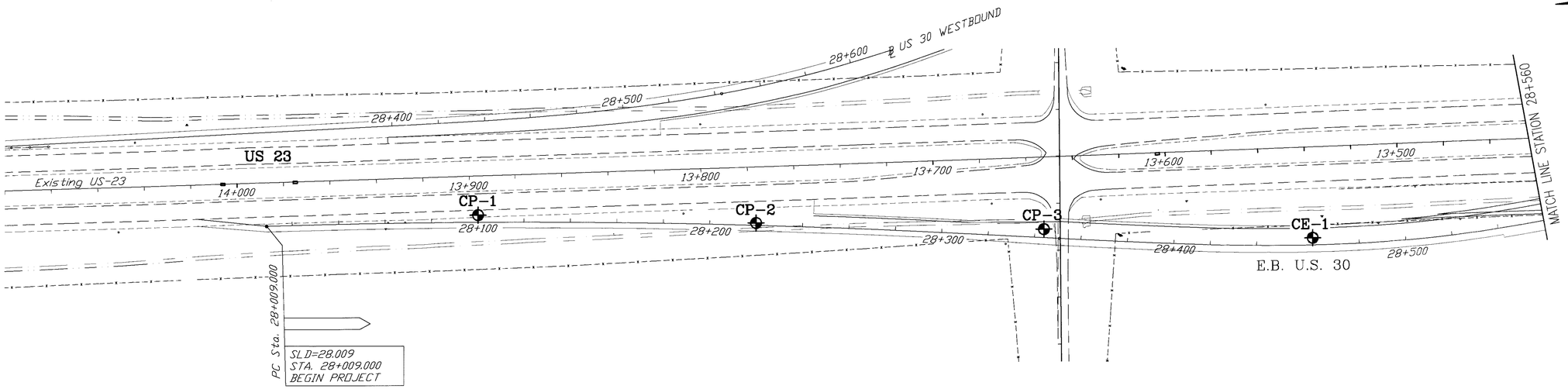
BE-5
STA. 29+040
LT. 2.0M
ELEV. 266.182m
TOPSOIL 457mm

BE-6
STA. 29+160
LT. 2.0M
ELEV. 264.728m
TOPSOIL 305mm



DRAWN BY: M. BURRIOLA
DATE: 6-17-99
DRAWING NO. RAMP B-3
PROJECT NO. 33644.01

WYA/CRA-30-23.914/0.000(14.86/0.00)

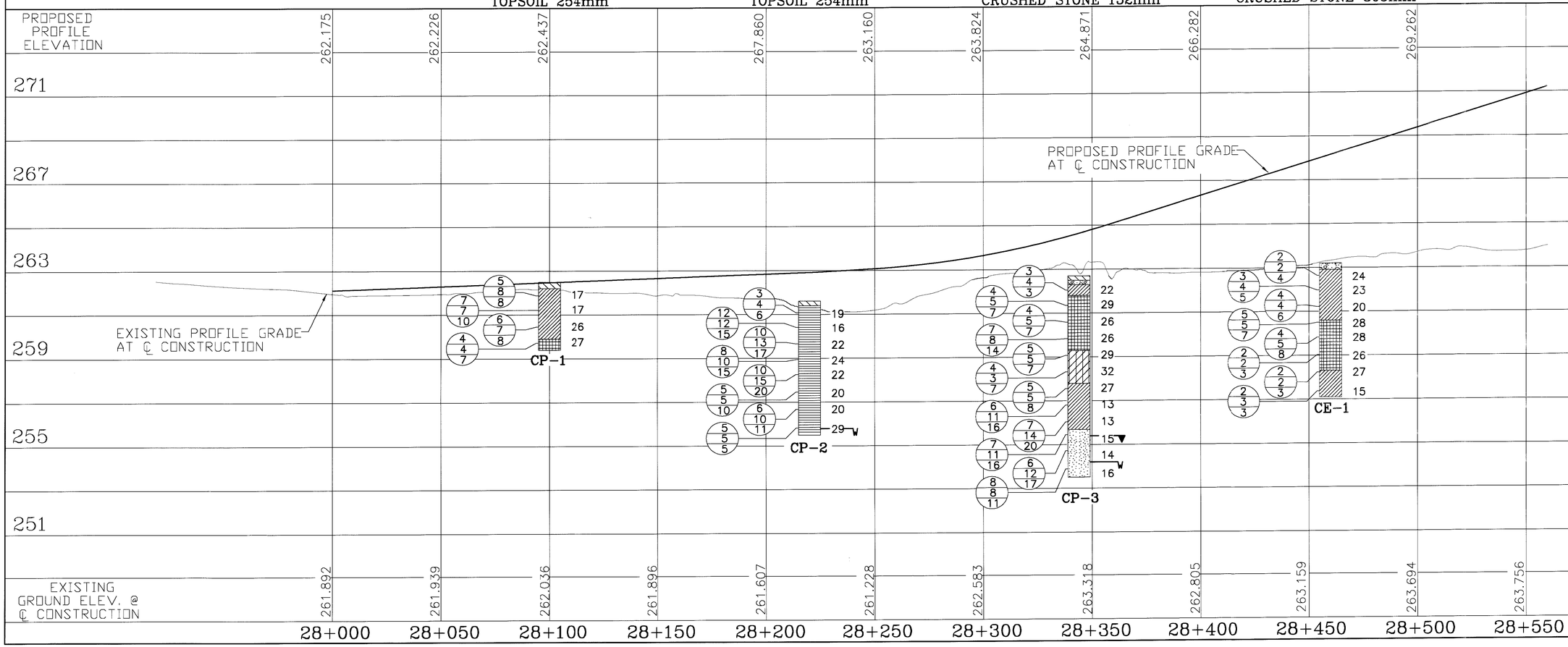


CP-1
STA 28+100
LT 3.0m
ELEV 262.481m
TOPSOIL 254mm

CP-2
STA 28+220
LT 1.0m
ELEV 261.645m
TOPSOIL 254mm

CP-3
STA 28+344
LT 3.0m
ELEV 262.689m
TOPSOIL 152mm
CRUSHED STONE 152mm

CE-1
STA 28+460
LT 3.0m
ELEV 263.221m
CRUSHED STONE 305mm



TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

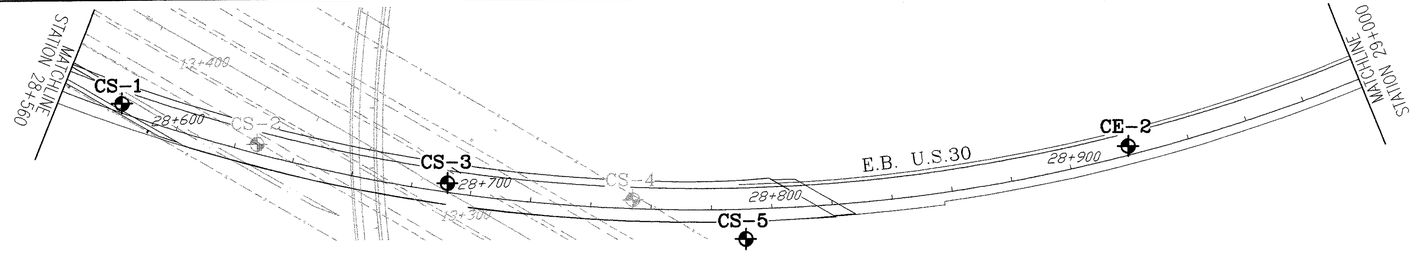
0 25 50
HORIZONTAL
SCALE IN METER

DRAWN BY:	B.J.G.
DATE:	6-18-99
DRAWING NO.	RAMP C-1
PROJECT NO.	33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

58
130



CS-1
STA. 28+579.4
LT 3.3m
ELEV. 263.422m
CRUSHED STONE 102mm

CS-3
STA. 28+692
LT 2.8m
ELEV. 264.427m
TOPSOIL 350mm

CS-5
STA 28+790.6
RT 9.5m
ELEV. 265.466m
TOPSOIL 457mm

CE-2
STA 28+920
LT 3.0m
ELEV. 265.786m
TOPSOIL 330mm

PROPOSED PROFILE ELEVATION

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

28+600	28+650	28+700	28+750	28+800	28+850	28+900	28+950	29+000
263.187	264.909	264.669	264.935	265.334	266.191	265.930	265.502	265.103
272.281	273.683	274.934	276.033	276.982	277.779	278.425	278.920	279.264

279 275 271 267 263 259 255 251 247

CS-1 CS-3 CS-5 CE-2

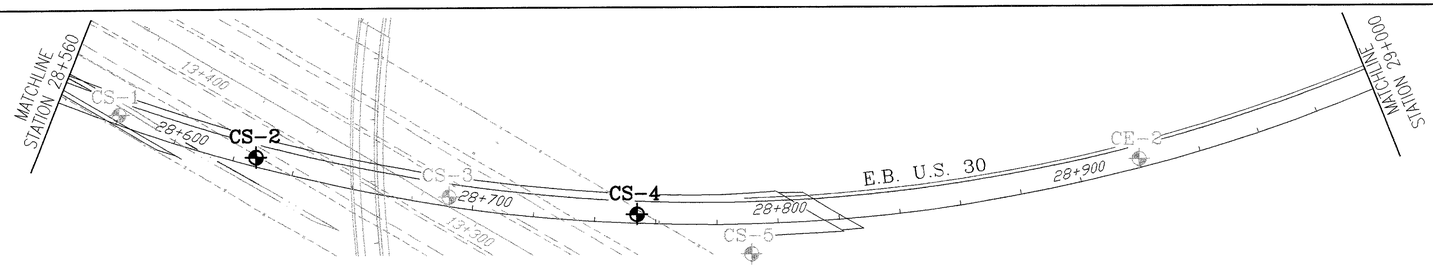
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

HORIZONTAL SCALE IN METER
0 25 50

DRAWN BY: B.J.G.
DATE: 6-18-99
DRAWING NO. RAMP C-2
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



CS-2
STA. 28+626.3
LT 3.6m
ELEV. 264.682m
CRUSHED STONE 254mm

CS-4
STA 28+734.2
LT. 3.5m
ELEV. 264.584m
CRUSHED STONE 254mm

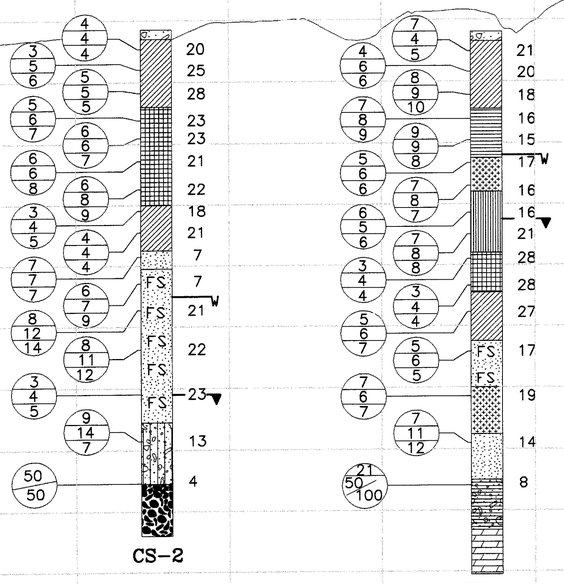
PROPOSED PROFILE ELEVATION

272.281 273.683 274.934 276.033 276.982 277.779 278.425 278.920 279.264

279
275
271
267
263
259
255
251
247

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION



263.187 264.909 264.669 264.935 265.334 266.191 265.930 265.502 265.103

EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

28+600 28+650 28+700 28+750 28+800 28+850 28+900 28+950 29+000

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

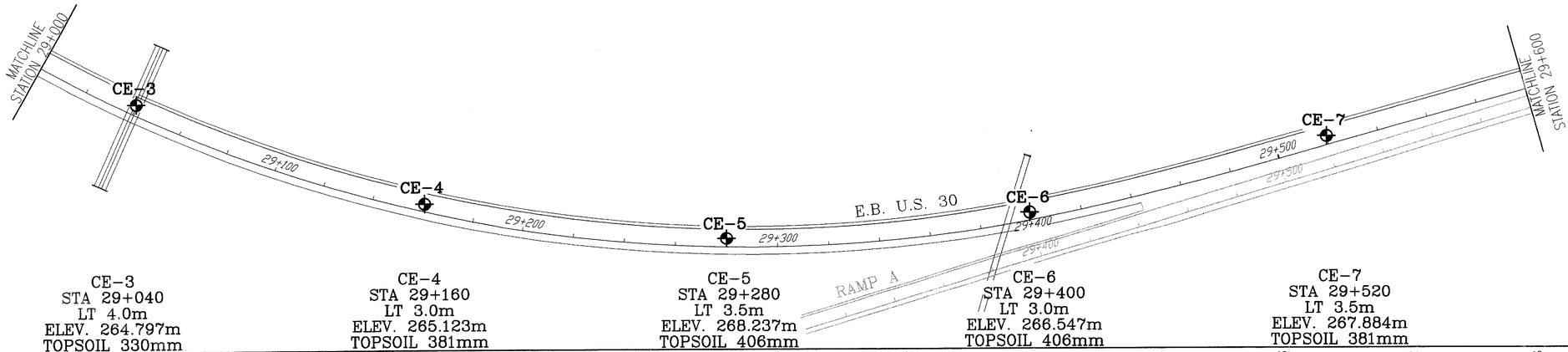
0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: B.J.G.
DATE: 6-18-99
DRAWING NO. RAMP C-3
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

60/130



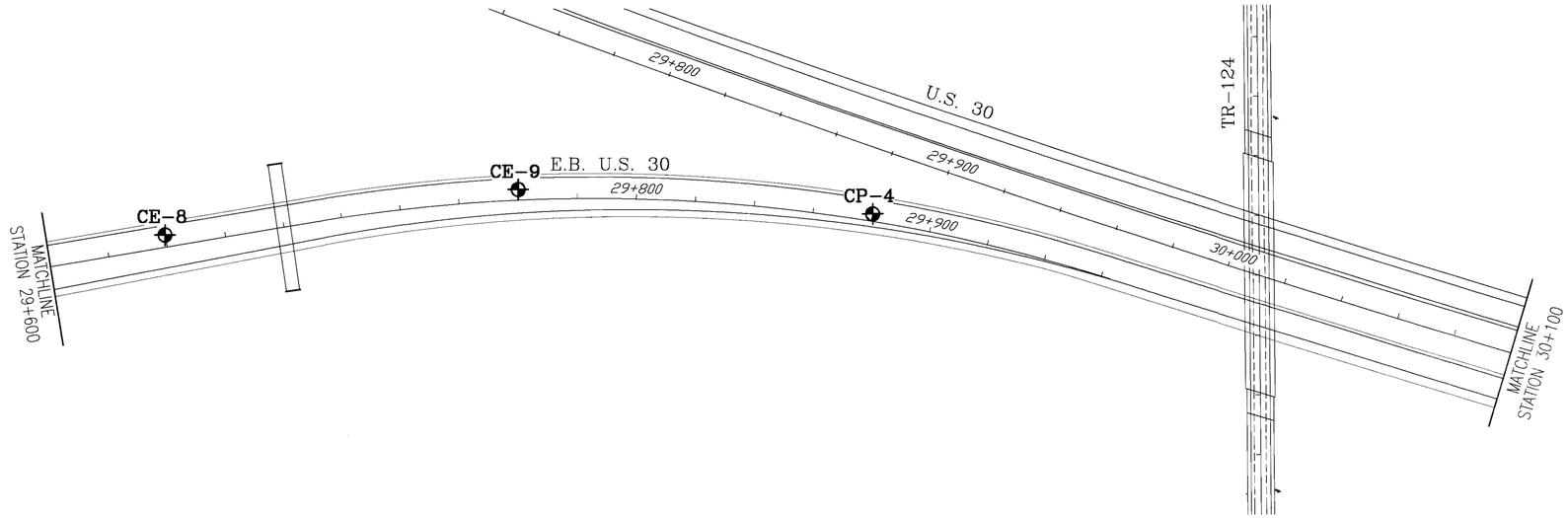
TOLLES INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: B.J.G.
DATE: 6-18-99
DRAWING NO. RAMP C-4
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



CE-8
STA 29+640
LT 4.0m
ELEV. 266.062m
TOPSOIL 432mm

CE-9
STA 29+762
LT 3.5m
ELEV. 265.510m
TOPSOIL 356mm

CP-4
STA 29+880
LT 2.5m
ELEV. 265.696m
TOPSOIL 431mm

PROPOSED PROFILE ELEVATION: 272.028 | 270.843 | 269.658 | 268.530 | 267.716 | 267.246 | 267.119

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION

CE-8: 6 8 9 / 9 10 11 — 20 / 18

CE-9: 12 20 21 / 12 12 24 / 18 21 28 / 21 25 33 / 11 19 23 / 12 22 28 — 20 / 18 / 19 / 14 / 14 W / 14

CP-4: 8 7 8 / 9 8 9 / 12 28 31 / 18 29 38 — 25 / 24 / 16 / 15

EXISTING GROUND ELEV. @ ℄ CONSTRUCTION: 268.180 | 265.762 | 265.168 | 265.423 | 265.738 | 265.794 | 265.840 | 266.379 | 266.379

275 271 267 263 259 255

29+600 29+650 29+700 29+750 29+800 29+850 29+900 29+950 30+100

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

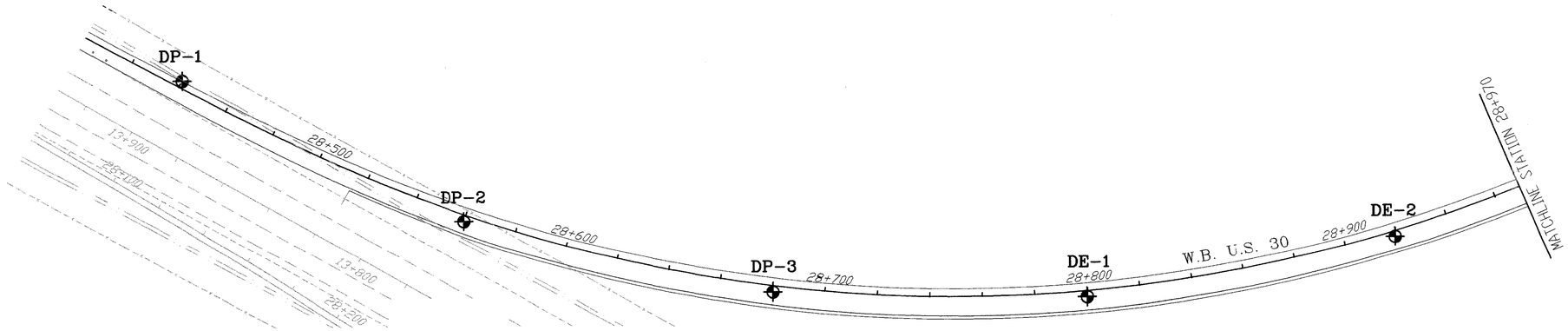
HORIZONTAL SCALE IN METER
0 25 50

DRAWN BY: B.J.G.
DATE: 6-18-99
DRAWING NO. RAMP C-5
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

62/130



DP-1
STA 28+440
LT 2.0m
ELEV 260.917m
CRUSHED STONE 254mm

DP-2
STA 28+560
LT 2.0m
ELEV 263.387m
CRUSHED STONE 254mm

DP-3
STA 28+680
RT. 2.0m
ELEV 262.946m
TOPSOIL 457mm

DE-1
STA 28+800
RT. 2.0m
ELEV 264.849m
TOPSOIL 457mm

DE-2
STA 28+920
RT. 2.0m
ELEV 265.747m
TOPSOIL 457mm

PROPOSED PROFILE ELEVATION: 262.370 | 262.692 | 263.420 | 264.556 | 266.099 | 267.856 | 269.476 | 270.924 | 272.200 | 273.305 | 275.004

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION

DP-1 DP-2 DP-3 DE-1 DE-2 US23-HM3

EXISTING GROUND ELEV. @ ℄ CONSTRUCTION: 261.240 | 261.235 | 261.253 | 264.296 | 263.623 | 263.376 | 263.295 | 264.085 | 264.847 | 266.166 | 265.963 | 265.925 | 266.471

276 274 270 266 262 258 254 250

28+400 28+450 28+500 28+550 28+600 28+650 28+700 28+750 28+800 28+850 28+900 28+950 29+000

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

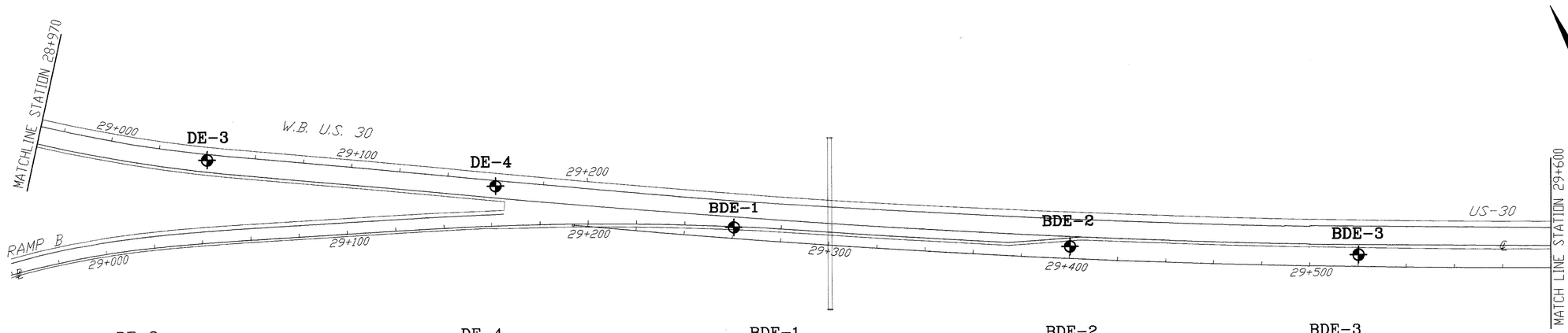
0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: B.J.G.
DATE: 6-18-99
DRAWING NO. RAMP D-1
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

63
130



DE-3
STA 29+040
RT. 2.0m
ELEV 266.769m
TOPSOIL 305mm

DE-4
STA 29+160
RT. 2.0m
ELEV 264.862m
TOPSOIL 457mm

BDE-1
STA 29+280
RT 2.0m
ELEV 265.044m
TOPSOIL 457mm

BDE-2
STA 29+400
LT. 4.0m
ELEV 264.377m
TOPSOIL 406mm

BDE-3
STA 29+520
LT. 5.0m
ELEV 264.804m
TOPSOIL 406mm

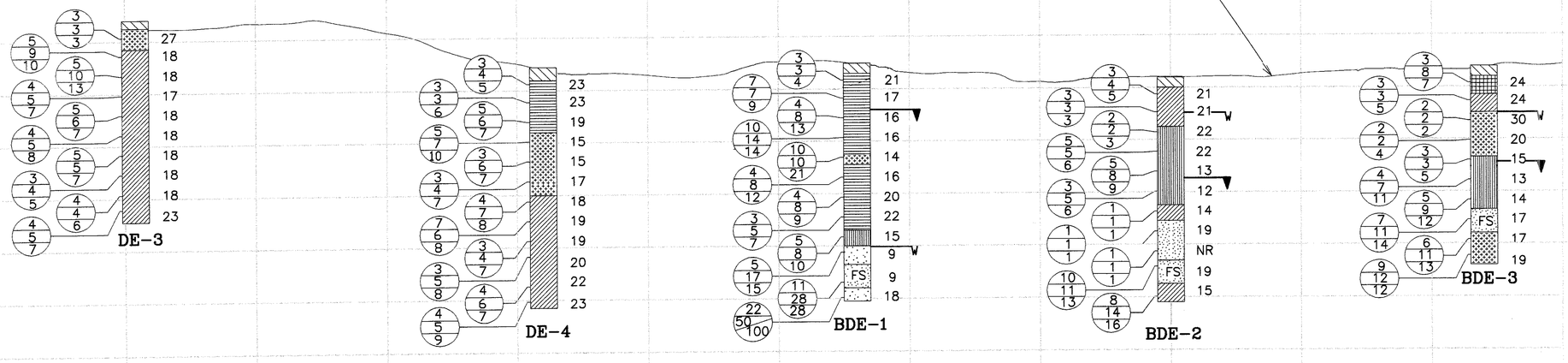
PROPOSED PROFILE ELEVATION

274.238 274.998 275.587 276.004 276.250 276.323 275.225 275.954 275.512 274.898 274.113 273.155

280 276 272 268 264 260 256 252

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION



EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

266.454 266.595 266.236 265.049 264.565 265.956 264.911 264.459 264.369 264.573 264.738 264.857

29+000 29+050 29+100 29+150 29+200 29+250 29+300 29+350 29+400 29+450 29+500 29+550

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

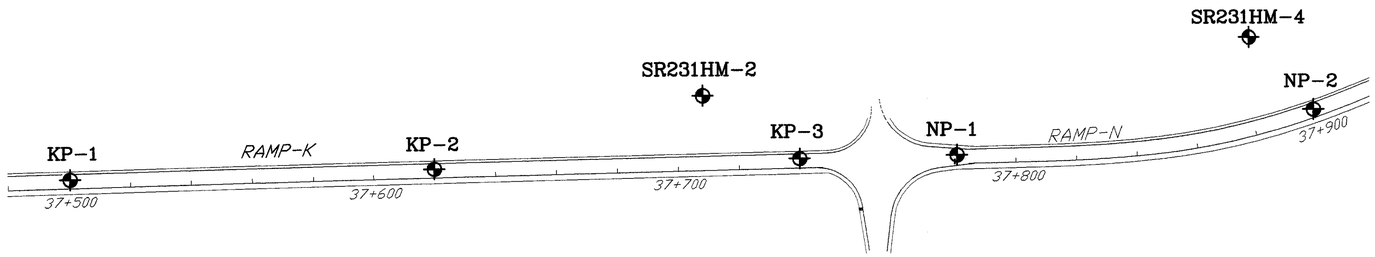
0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: B.J.G.
DATE: 6-18-99
DRAWING NO. RAMP D-2
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

64/130



KP-1
STA 37+502
LT 3.0m
ELEV 281.669m
TOPSOIL 305mm

KP-2
STA 37+620
LT 3.0m
ELEV 281.299m
TOPSOIL 254mm

KP-3
STA 37+740
LT 3.0m
ELEV 281.990m
TOPSOIL 279mm

NP-1
STA 37+780
LT 3.0m
ELEV 283.299m
TOPSOIL 254mm

NP-2
STA 37+900
LT 3.0m
ELEV 284.777m
TOPSOIL 305mm

PROPOSED PROFILE ELEVATION: 284.599 | 284.761 | 284.615 | 283.983 | 283.916 | 283.434 | 283.212 | 283.321 | 284.535 | 286.302 | 287.480 | 290.425

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION

KP-1 | KP-2 | KP-3 | NP-1 | NP-2 | SR231HM-2 | SR231HM-4

EXISTING GROUND ELEV. @ ℄ CONSTRUCTION: 280.592 | 281.331 | 281.787 | 282.464 | 281.525 | 281.479 | 281.545 | 282.353 | 283.692 | 284.175 | 284.836 | 285.048 | 284.913

292 288 284 280 276 272 268 264

37+400 37+450 37+500 37+550 37+600 37+650 37+700 37+750 37+800 37+850 37+900 37+950 38+000

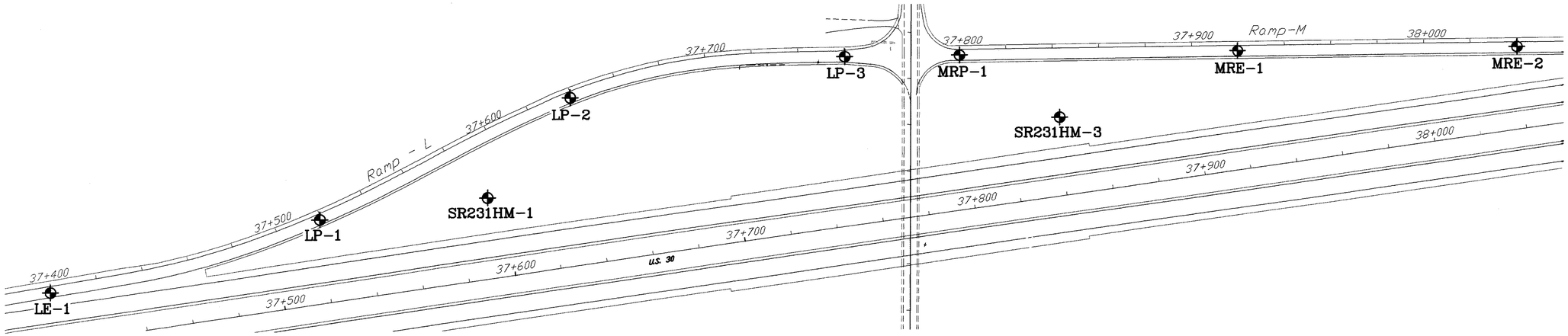
IQUEST INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

HORIZONTAL SCALE IN METER
0 25 50

DRAWN BY: B.J.G.
DATE: 6-18-99
DRAWING NO. RAMP K-N-2
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)



LE-1
STA 37+400
RT 2.8m
ELEV 280.526m
TOPSOIL 275mm

LP-1
STA 37+520
RT 2.6m
ELEV 281.306m
TOPSOIL 229mm

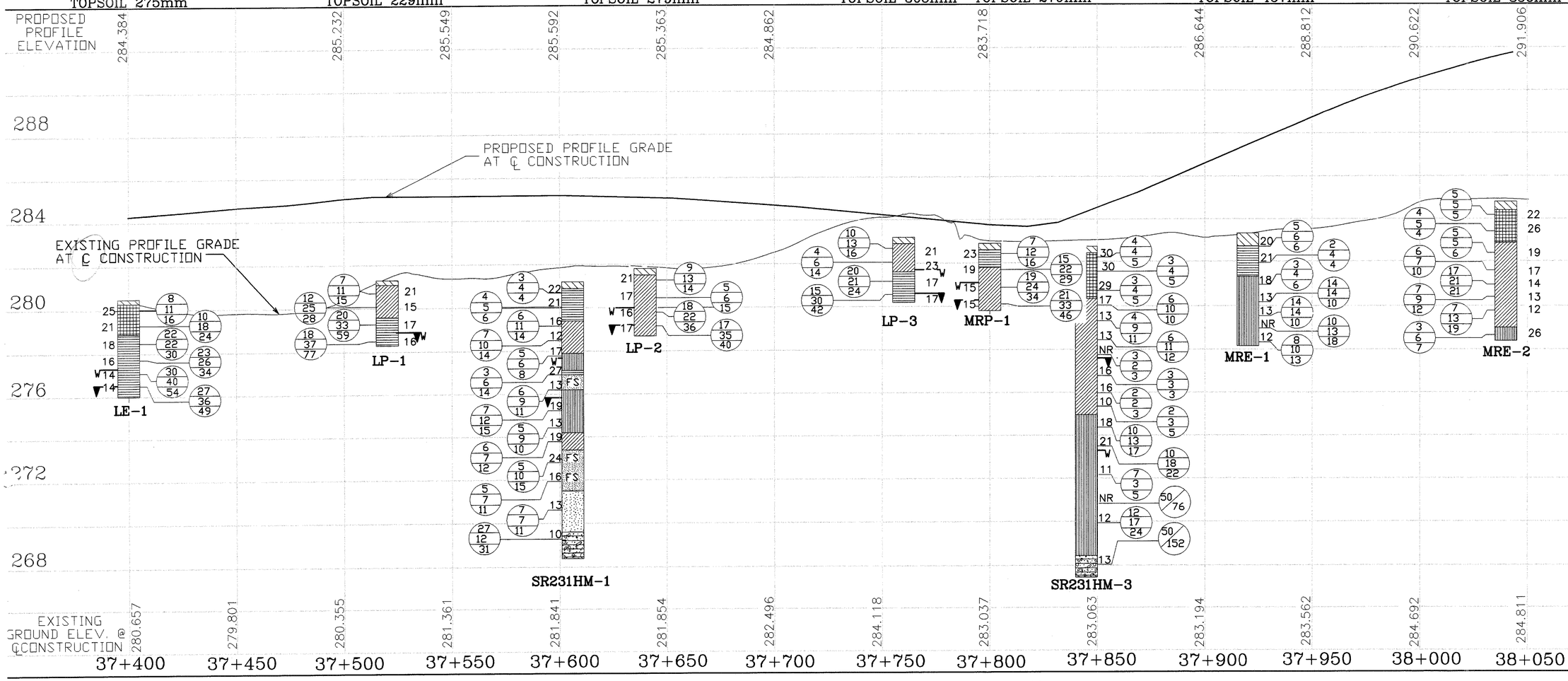
LP-2
STA 37+640
RT 2.5m
ELEV 281.792m
TOPSOIL 279mm

LP-3
STA 37+760
RT 2.5m
ELEV 283.247m
TOPSOIL 305mm

MRP-1
STA 37+800
RT 2.5m
ELEV 282.886m
TOPSOIL 279mm

MRE-1
STA 37+920
RT 2.3m
ELEV 283.345m
TOPSOIL 457mm

MRE-2
STA 38+040
RT 2.1m
ELEV 284.774m
TOPSOIL 356mm



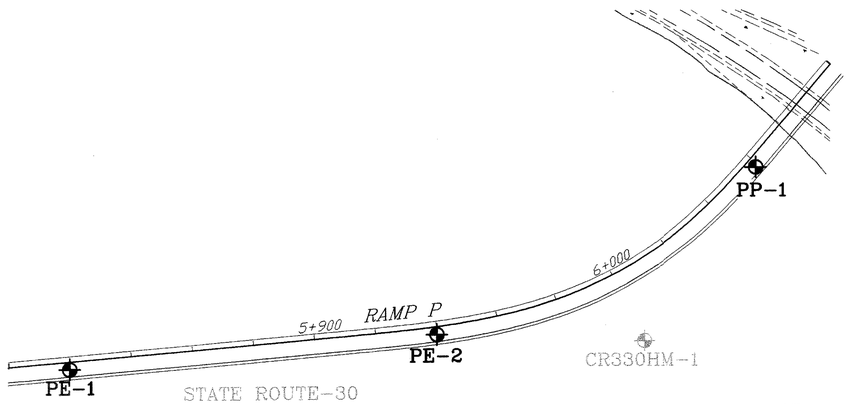
TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

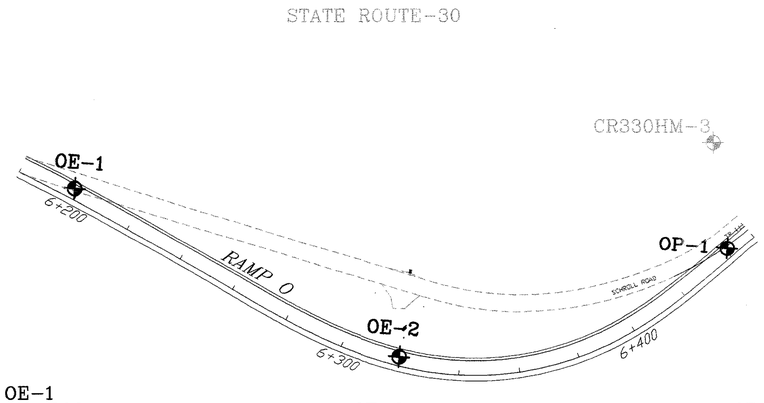
HORIZONTAL SCALE IN METER
0 25 50

DRAWN BY: B.J.G.
DATE: 6-18-99
DRAWING NO. RAMP K-N-1
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)





PE-1
STA 5+820
RT 3.0m
ELEV 299.714m
TOPSOIL 304mm

PE-1
STA5+943
RT 3.0m
ELEV300.686m
TOPSOIL 304mm

PP-1
STA 6+060
RT 3.0m
ELEV 299.875m
TOPSOIL 254mm

OE-1
STA 6+200
LT 6.0m
ELEV 299.202m
ASPHALT 50mm
CRUSHED STONE 457mm

OE-2
STA 6+320
LT 3.0m
ELEV 298.854m
TOPSOIL 228mm

OE-2
STA 6+320
LT 3.0m
ELEV 298.854m
TOPSOIL 228mm

PROPOSED PROFILE ELEVATION

307.560 307.847 306.845 305.635 303.826 300.179 308.004 306.721 305.071 301.371

310 306 302 298 294 290 286

PROPOSED PROFILE GRADE AT ℄ CONSTRUCTION

EXISTING PROFILE GRADE AT ℄ CONSTRUCTION

PE-1 PE-2 PP-1 CR330HM1 CR330HM2 OE-1 OE-2 OP-1 CR330HM-3

EXISTING GROUND ELEV. @ ℄ CONSTRUCTION

299.424 299.868 300.332 300.587 300.632 299.945 299.710 299.939 299.319 299.953 298.883 298.762 299.613 298.384

5+800 5+850 5+900 5+950 6+000 6+050 6+100 6+150 6+200 6+250 6+300 6+350 6+400 6+450

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

0 25 50
HORIZONTAL SCALE IN METER

DRAWN BY: S.M.D.
DATE: 11-19-97
DRAWING NO. RAMP O-P
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. M-C1
DATE: 3/18/97
JOB #: 33644.01
ELEV.: 265.906
DRILLERS: CW/SW
COMPLETION (m): 2.7
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 30+974, 32 M LT
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 0.9
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	265.9	TOPSOIL – 152 mm																
	265.8	Moist Stiff Brown–Grey SILTY CLAY w/Little Sand and Trace Organics (Root)			5/150 6/150 5/150	SS-1	11	1568	19									
1	265.0	Moist Medium Dense Brown SANDY SILT w/Clay and Trace Grave, A-4a (8)			3/150 4/150 9/150	SS-2	13	1717	20	1	4	6	46	43	26	18	8	A-4a(8)
2	264.1	Moist Hard Brown SILTY CLAY w/Trace Sand			15/150 15/150 16/150	SS-3	31	1501	22									
	263.5	Moist Very Stiff Brown SILT and CLAY w/Little Sand			5/150 11/150 12/150	SS-4	23	1647	20									
3																		
4	262.6	Medium Dense Brown SANDY SILT w/Clay, A-4a (8)			10/150 12/150 13/150	SS-5	25	1773	18	0	5	8	37	50	26	17	9	A-4a(8)
		– w/Little Sand			8/150 8/150 10/150	SS-6	18	2014	14									
5	261.2	Wet Medium Dense Grey COARSE to FINE SAND w/Trace Silt			7/150 8/150 10/150	SS-7	18		26									
6		– w/Little Clay and Trace Silt, A-3a(0)			7/150 8/150 11/150	SS-8	19		22	0	0	74	9	17	NON-PLASTIC			A-3a(0)
					10/150 6/150 8/150	SS-9	14		20									
7	258.9	Wet Dense Grey SILTY SAND w/Some Clay		FS	9/150 13/150 18/150	SS-10	31		20									
	258.3	End of Borehole																

NOTES: BORING OFFSET 6.1 METERS WEST OF STAKE.
ELEVATION APPROXIMATE DUE TO BORING RELOCATION.

LOG OF TEST BORING

BORING NO. M-C2
DATE: 3/18/97
JOB #: 33644.01
ELEV.: 269.666
DRILLERS: CW/SW
COMPLETION (m): 3.2
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 30+997, 34 M RT
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 2.4
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	269.7	TOPSOIL – 152 mm																
	269.5	Moist Very Stiff Brown–Grey SILTY CLAY w/Little Sand			5/150 8/150 10/150	SS-1	15	1499	24									
1	268.8	Wet Medium Dense Grey Brown SANDY SILT w/Clay, A-4a(8)			5/150 8/150 10/150	SS-2	19	1507	26	0	2	7	47	44	23	20	3	A-4a(8)
2	267.8	Moist Medium Stiff Brown–Grey SILTY CLAY w/Little Sand			3/150 5/150 5/150	SS-3	8	1475	25									
	267.2	Moist Stiff Brown SILT and CLAY w/Trace Sand and Trace Organics (Root), A-6a(9)			4/150 4/150 7/150	SS-4	11	1636	25	0	3	6	64	27	32	20	12	A-6a(9)
3																		
		– Wet w/Trace Organics (Root)			5/150 5/150 7/150	SS-5	12	1402	36									
4	265.6	Moist Medium Dense Brown SANDY SILT w/Little Clay and Trace Grave, A-4a(9)			9/150 14/150 16/150	SS-6	30	1951	14	3	9	14	49	25	21	16	5	A-4a(9)
	265.1	End of Borehole																

NOTES: BORING OFFSET 24.4 METERS NORTH AND 7.3 METERS EAST OF STAKE.
ELEVATION APPROXIMATE DUE TO BORING OFFSET.

LOG OF TEST BORING

BORING NO. M-E1
DATE: 3/19/97
JOB #: 33644.01
ELEV.: 270.250
DRILLERS: CW/SW
COMPLETION (m): 1.7
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 31+680, 12 M RT
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 0.2
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	270.2	TOPSOIL – 178 mm																
	270.1	Moist Stiff Grey–Brown CLAY w/Little Silt, Little Sand			4/150 4/150 6/150	SS-1	10	1608	28									
1		– Brown w/Trace Sand, A-7-6(11)			3/150 4/150 6/150	SS-2	10	1469	28	0	0	1	42	57	42	25	17	A-7-6(11)
2	268.4	Moist Loose Brown SANDY SILT w/Clay, Trace Gravel			4/150 4/150 6/150	SS-3	10	1581	16									
		– Medium Dense Brown–Grey, A-4a(8)			6/150 10/150 12/150	SS-4	22	1900	17	0	5	10	46	39	24	15	9	A-4a(8)
3					6/150 7/150 9/150	SS-5	16	1917	11									
4					8/150 9/150 13/150	SS-6	22	1916	15									
					9/150 10/150 17/150	SS-7	27	1876	18									
5	265.2	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E2
DATE: 3/19/97
JOB #: 33644.01
ELEV.: 269.432
DRILLERS: CW/SW
COMPLETION (m): 3.2
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 31+800, 12 M LT
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 1.6
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	268.4	TOPSOIL – 178 mm																
	269.2	Very Wet Stiff Brown–Grey SILTY CLAY w/Some Sand and "Rust–like" Iron Seams			5/150 6/150 7/150	SS-1	11	1052	47									
1		– Medium Stiff Grey w/Little Sand and Trace Organics (Root)			3/150 2/150 3/150	SS-2	5		45									
2	267.9	Medium Stiff Grey SILT and CLAY w/Some Sand, Trace Grave, A-6c(9)			2/150 3/150 5/150	SS-3	8	1652	24	3	11	11	36	39	32	19	13	A-6a(9)
	267.0	Damp Stiff Grey SILTY CLAY w/Little Sand			6/150 8/150 9/150	SS-4	15	1836	17									
3		– Very Stiff w/Some Sand, Trace Gravel			5/150 7/150 10/150	SS-5	17	1756	19									
4	265.5	Very Moist Very Stiff Grey SILT and CLAY w/Trace Sand, and Gravel, A-6a(8)			5/150 7/150 11/150	SS-6	18	1506	29	0	0	1	49	50	34	23	11	A-6a(8)
5		– Moist, A-6c(9)			6/150 8/150 12/150	SS-7	22	1744	20	1	5	7	46	41	30	18	12	A-6a(9)
6	263.9	Moist Medium Dense Stiff Grey SILT w/Some Clay and Trace Sand, A-4b(8)			8/150 14/150 16/150	SS-8	30	1817	23	0	2	5	71	22	26	16	10	A-4b(8)
	263.3	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. V-E3
DATE: 3/19/97
JOB #: 33644.01
ELEV.: 270.905
DRILLERS: CW/SW
COMPLETION (m): 3.5
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 31+920, 3 M RT
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 4.0
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	270.9	TOPSOIL – 178 mm																
	270.7	Moist Stiff Grey–Brown SILTY CLAY w/Trace Sand, A-6a(11)			4/150 5/150 7/150	SS-1	12	1634	25	0	1	3	63	33	36	19	17	A-6b(11)
1	269.8	Moist Stiff Brown SILT and CLAY w/Little Sand, A-6a(10)			6/150 7/150 7/150	SS-2	14	1671	22	0	4	13	46	37	32	18	14	A-6a(10)
2		– Grey–Brown			3/150 5/150 7/150	SS-3	12	1712	19									
3		– Brown w/Little Sand and Trace Gravel, A-6a (9)			6/150 7/150 10/150	SS-4	17	1640	18	1	6	9	44	41	27	14	13	A-6a(9)
	267.6	Moist Medium Dense Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(8),			8/150 9/150 12/150	SS-5	21	1812	16	11	11	12	42	24	25	18	7	A-4c(8)
4		– Damp			8/150 12/150 20/150	SS-6	29	1874	25									
5	266.0	Moist Medium Dense Brown SILT w/Some Clay, A-4b(8)			10/150 10/150 12/150	SS-7	22	1706	25	0	0	0	69	31	29	19	10	A-4b(8)
	265.6	Moist Very Stiff Brown–Grey SILT and CLAY w/Trace Sand			8/150 10/150 12/150	SS-8	22	1616	26									
6	265.1	End of Borehole																

NOTES:

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/AMB
DATE: 8-2-99
DRAWING NO. 33644-73
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. M-C3
DATE: 3/20/97
JOB #: 33644.01
ELEV.: 270.207
DRILLERS: CW/SW
COMPLETION (m): 5.2
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 32+528, 31 M LT
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 2.0
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	270.2	TOPSOIL – 152 mm															
	270.1	Moist Stiff Dark Brown–Grey CLAY w/Silt, Little Sand, A–7–6(13)			5/150 6/150 7/150	SS–1	13	1583	24	0	4	9	35	52	45	25	20	A–7–6(13)
1		– Brown and Grey w/Sand Lenses			4/150 4/150 6/150	SS–2	10	1522	26									
2		– Medium Stiff w/Some Sand			4/150 4/150 3/150	SS–3	6	1624	25									
3	267.7	Damp Hard Grey SILT and CLAY w/Trace Sand, A–6a (9)			10/150 20/150 22/150	SS–4	42	1900	14	0	5	6	43	46	27	16	11	A–6a(9)
4	267.0	Moist Very Stiff Grey SILTY CLAY w/Trace Sand			8/150 11/150 13/150	SS–5	24	1618	26									
5		– w/Trace Sand and Gravel			7/150 10/150 11/150	SS–6	21	1664	23									
					10/150 12/150 14/150	SS–7	26	1626	22									
6	264.6	Very Damp Hard Grey SILT and CLAY w/Some Sand and Trace Gravel, A–6a(9)			10/150 15/150 17/150	SS–8	32	1704	19	7	17	8	28	40	31	20	11	A–6a(9)
	264.	End of Borehole																

NOTES: BORING OFFSET 3.7 METERS WEST OF STAKE.
ELEVATION APPROXIMATE DUE TO BORING OFFSET.

LOG OF TEST BORING

BORING NO. M-C4
DATE: 3/20/97
JOB #: 33644.01
ELEV.: 270.389
DRILLERS: CW/SW
COMPLETION (m): 1.8
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 32+616, 30 M RT
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 1.7
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	270.4	TOPSOIL – 152 mm															
	270.2	Moist Stiff Yellow–Brown and Grey CLAY w/Some Silt, Trace Sand			4/150 6/150 10/150	SS–1	16	1498	24									
1	269.3	Moist Very Stiff Yellow, Brown and Grey ELASTIC CLAY w/Silt, Trace Sand, A–7–5(15)			7/150 9/150 10/150	SS–2	19	1519	26	0	2	4	45	49	52	20	22	A–7–5(15)
2		– Stiff			3/5/9 5/150 9/150	SS–3	14		23									
3	267.8	Damp Medium Dense Grey SILT w/Some Clay, Little Sand			3/150 5/150 7/150	SS–4	12		NR									
		– 50mm Sand Seam, A–4a(8)			9/150 14/150 16/150	SS–5	30	1953	14	1	5	10	54	30	23	14	9	A–4b(8)
4	266.6	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-C5
DATE: 3/24/97
JOB #: 33644.01
ELEV.: 274.287
DRILLERS: CW/JL
COMPLETION (m): 3.7
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 MAINLINE
LOCATION: STATE ROUTE 30, MAINLINE STA 35+220, 37 M LT
DRILL METHOD: 102 MM SOLID STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 4.9
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	274.3	TOPSOIL – 356 mm																
	273.9	Moist Stiff Grey–Brown SILTY CLAY w/Little Sand			3/150 4/150 5/150	SS–1	9	1701										
1		– w/Some Sand			5/150 8/150 8/150	SS–2	13	1615										
2		– w/Little Sand			5/150 6/150 12/150	SS–3	18	1808										
3		– Hard Brown w/Little Sand, Trace Gravel			8/50 14/150 24/150	SS–4	38	1772										
4		– Very Stiff Brown–Grey w/"Rust–like" nor Seam			8/150 10/150 12/150	SS–5	22	1730										
					8/150 10/150 15/150	SS–6	25	1698										
5		– Very Damp Grey–Brown			5/50 6/150 12/150	SS–7	22	1892										
6					5/50 6/150 1/150	SS–8	21	1815										
		– w/Some Sand, Trace Gravel			5/150 13/150 17/150	SS–9	30	1957										
7	267.4	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-C6
DATE: 3/25/97
JOB #: 33644.01
ELEV.: 274.123
DRILLERS: CW/JL
COMPLETION (m): DRY
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 MAINLINE
LOCATION: STATE ROUTE 30, MAINLINE STA 35+220, 35 M RT
DRILL METHOD: SOLID STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 2.4
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	274.1	TOPSOIL – 305 mm																
	273.8	Moist Stiff Grey–Brown SILTY CLAY w/Little Sand			6/150 5/150 5/150	SS–1	10	1559										
1		– Very Stiff			6/150 8/150 11/150	SS–2	19	1626										
2		– w/Trace Sand			8/150 10/150 14/150	SS–3	24	1579										
		– Very Damp Brown w/Some Sand			8/150 10/150 16/150	SS–4	26	1815										
3		– w/Trace Gravel			8/150 10/150 13/150	SS–5	23	1877										
4	270.0	Moist Medium Dense Grey SILT w/Little Clay, A–4b(0)			6/150 9/150 11/150	SS–6	20			0	0	4	81	15	NON–PLASTIC			A–4b(0)
5					5/150 6/150 7/150	SS–7	13											
6	268.5	Very Damp Very Stiff Brown–Grey SILT and CLAY w/Little Sand, Trace Gravel			9/150 7/150 13/150	SS–8	20	1794										
	267.9	Very Damp Very Stiff Brown–Grey SILTY CLAY w/Little Sand, Trace Grave			8/150 14/150 16/150	SS–9	30	1935										
7	267.3	End of Borehole																

NOTES: MOVED BORING 1.8 METERS SOUTH DUE TO CLAY TILE. BORING ELEVATION APPROXIMATE DUE TO RELOCATION.

TOLEDO ENGINEERING INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/AMB
DATE: 8-2-99
DRAWING NO. 33644-74
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

74/130

LOG OF TEST BORING

BORING NO. M-E4
DATE: 3/25/97
PROJECT: ODOT STATE ROUTE 30 MAINLINE
LOCATION: STATE ROUTE 30, MAINLINE STA 35+280, 12 M RT
JOB #: 33644.01
ELEV.: 273.948
DRILL METHOD: 102 MM SOLID STEM AUGERS
DRILLERS: CW/JL
ENCOUNTERED WATER DEPTH (m): 4.4
COMPLETION (m): DRY
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	273.8	TOPSOIL – 305 mm																
	273.6	Moist; Stiff Grey-Brown SILTY CLAY w/Little Sand			5/150 7/150 8/150	SS-1	15	1634										
1		– Medium Stiff Brown																
	272.8	Moist Medium Dense Brown SILT w/Little Sand, Trace Clay and Gravel, A-4a(8)			5/150 7/150 7/150	SS-2	14	1865										
2		– w/Trace Clay			5/150 10/150 12/150	SS-3	22	1669	1	1	20	68	10	23	21	2	A-4b(8)	
	271.5	Very Damp Very Stiff Brown-Grey SILTY CLAY w/Some Sand, Trace Gravel			5/150 10/150 12/150	SS-4	22	1592										
3					5/150 8/150 10/150	SS-5	18	1833										
4	270.0	Moist; Medium Dense Grey-Brown SANDY SILT w/Little Clay			8/150 12/150 14/150	SS-6	26											
	269.4	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E5
DATE: 3/21/97
PROJECT: ODOT STATE ROUTE 30 MAINLINE
LOCATION: STATE ROUTE 30, MAINLINE STA 36+240, 12 M RT
JOB #: 33644.01
ELEV.: 269.044
DRILL METHOD: HAND AUGERS & 4-AND HOUSAL SAMPLER
DRILLERS: BG/TV
ENCOUNTERED WATER DEPTH (m): 1.2
COMPLETION (m): 1.5
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	269.0	TOPSOIL – 305 mm																
	268.7	Very Damp Medium Stiff Brown SILT and CLAY w/Sand, Little Gravel, A-6a(4)			4/150 5/150 6/150	SS-1	6			18	13	24	26	19	31	16	15	A-6a(4)
1					80/102	SS-2	26+											
2		– Moist Very Stiff w/Little Sand			21/150 24/150 30/150	SS-3	20	1631										
	266.5	Wet Dense Brown SILT w/Little Sand and Clay, A-4b(0)			15/150 20/150 24/150	SS-4	20			0	1	14	70	15	NON-PLASTIC			A-4b(0)
3		– Moist w/Trace Clay			12/150 12/150 15/150	SS-5	14											
4	265.1	Wet Medium Dense Grey FINE SAND w/Trace Silt	FS		8/150 9/150 10/150	SS-6	11											
5	264.2	End of Borehole	FS															

NOTES: SAMPLES WERE TAKEN WITH A HAND -OUSAL SAMPLER AND BLOW COUNTS WERE CONVERTED USING "TERZAGHI STANDARD" NUMBERS.

LOG OF TEST BORING

BORING NO. M-S1
DATE: 4/30/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, VAINLINE STA 36+355.3,11.3M LT
JOB #: 33633.01
ELEV.: 267.437
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
DRILLERS: TB/TM
ENCOUNTERED WATER DEPTH (m): 1.5
COMPLETION (m): 1.
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	267.4	TOPSOIL – 610 mm																
	266.8	Very Moist; Medium Dense Dark Brown SILT w/Trace Sand and Gravel, A-4b(8)			3/150 5/150 6/150	SS-1	11	1290		1	1	11	69	18	35	26	10	A-4b(8)
1					2/150 1/150 2/150	SS-2	3	1594		0	2	67	24	7	NON-PLASTIC			A-3a(0)
	265.9	Wet Very Loose Grey COARSE to FINE SAND w/Some Silt, Trace Clay and Organics A-3a(0)																
2		Damp Loose Grey SANDY SILT w/Little Gravel and Clay, A-4a(2)			5/150 4/150 2/150	SS-3	6			19	15	19	31	16	19	15	4	A-4a(2)
		– Moist			3/150 2/150 6/150	SS-4	8											
3																		
4	264.1	Moist Dense Grey COARSE GRAVEL w/Some Sand, Trace Silt			16/150 22/150 28/150	SS-5	50											
		– Very Dense			40/150 24/150 35/150	SS-6	62											
5		– Dense			20/150 21/150 20/150	SS-7	41											
6					50/50	SS-8	100+											
	261.3	Broken Grey DOLOMITE 2.7 M RUN 76% RECOVERY 4% RQD																
7																		
8																		
						RC-1												
9	258.6	Very Dense Weathered Grey DOLOMITE			50/100	SS-9	100+											
10					50/25	SS-10	100+											
11																		
	256.2	Some Fractured Grey DOLOMITE w/Shale Seams (12.2 – 12.8 M) 1.5 M RUN 100% RECOVERY 32% RQD																
12						RC-2												
	254.6	End of Borehole																

NOTES: Auger refusal encountered at 6.1 m. A rock core was taken from 6.1 to 8.8 m. Augers were advanced after the rock core. Auger refusa at 11.3 m. A 1.5 m rock core was taken at this depth.

TOLEDO, OHIO 43624
1915 N. 12th STREET
TOLEDO, INC.

SOIL PROFILE

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-75
PROJECT NO. 33644.01

WYA/CRA-30-23.914/0.000(14.86/0.00)

75/130

LOG OF TEST BORING

BORING NO. M-S2
DATE: 4/29/97
JOB #: 33633.01
ELEV.: 267.364
DRILLERS: TB/TM
COMPLETION (m): 1.5
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, VAINLINE STA 36+358.1,14.6M RT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 2.2
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	267.4	TOPSOIL – 457 mm																
1	266.9	Very Moist Loose Grey-Brown SANDY SILT w/Some Clay, A-4a(8)			2/150 3/150 3/150	SS-1	6	1357		0	1	23	49	27	32	28	4	A-4a(8)
	266.3	Wet Medium Dense Grey Brown GRAVEL w/Little Sand and Silt, Trace Clay, A-2-7(1)			2/150 7/150 9/150	SS-2	16			55	12	8	17	8	31	17	14	A-2-7(1)
2	265.5	Damp Loose Grey SANDY SILT w/Little Clay, Trace Gravel, A-4a(0)			1/150 3/150 5/150	SS-3	8	1825		6	26	20	32	16	NON-PLASTIC			A-4a(0)
3					9/150 20/150 20/150	SS-4	40											
	264.0	Moist Medium Dense Grey SILT w/Little Sand, Trace Gravel and Clay, A-4b(0)			11/150 13/150 14/150	SS-5	27			6	6	14	70	4	NON-PLASTIC			A-4b(0)
4	263.4	Moist Dense Grey GRAVEL and/or STONE FRAGMENTS w/Trace Silt			20/150 16/150 15/150	SS-6	31											
5	262.5	Wet Dense Grey SANDY SILT w/Some Stone Fragments, Trace Clay			9/150 21/150 25/150	SS-7	46											
6					9/50 18/150 27/50	SS-8	45											
7	260.2	Wet Very Dense Weathered Grey DOLOMITE			7/150 50/100	SS-9	100+											
8					50/125	SS-10	100+											
9		– w/Silt and Clay			50/100	SS-11	100+	1768										
10	257.2	Some Fractured Grey DOLOMITE w/Shale Seams 11.0 to 11.7 M 1.5 M RUN 100% RECOVERY 37% RQD				RC-1												
11	255.6	End of Borehole																

NOTES: Auger refusal encountered at 10.2 m. A 1.5 m rock core was taken at this depth. Boring moved 6 m west of staked location. Elevation approximate due to relocation.

LOG OF TEST BORING

BORING NO. M-S3
DATE: 4/28/97
JOB #: 33633.01
ELEV.: 269.756
DRILLERS: TB/TM
COMPLETION (m): 1.7
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 36+411.5,13.9M LT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 1.8
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	269.8	TOPSOIL – 203 mm																
1	269.5	Moist Loose Red-Brown SANDY SILT w/Little Clay, Trace Gravel, A-4a(0)			2/150 4/150 5/150	SS-1	9	1496		9	31	23	17	20	23	17	6	A-4A(0)
	268.8	Very Moist Loose Red-Brown GRAVEL w/Sand, Little Clay, Trace Silt, A-2-6(0)			3/150 4/150 4/150	SS-2	8	1551		7	53	16	6	18	33	20	13	A-2-6(0)
2	267.9	Moist Medium Dense Grey-Brown COARSE to FINE SAND w/Little Silt, Clay and Gravel, A-3a(0)			2/150 7/150 8/150	SS-3	15			14	39	23	16	7	NON-PLASTIC			A-3a(0)
3		– Grey			5/150 10/150 12/150	SS-4	22											
	266.4	Moist Stiff Grey SILT and CLAY w/Some SAND, A-6a(10)			5/150 6/150 9/150	SS-5	15			0	11	15	35	39	33	19	14	A-6a(10)
4	265.8	Damp Medium Dense Grey SANDY SILT w/Trace Gravel			8/150 9/150 11/150	SS-6	20	1982										
5	264.9	Moist Dense Grey Weathered DOLOMITE w/Little Sand, Trace Silt			50/125	SS-7	100+											
6		– Medium Dense			15/150 15/150 6/150	SS-8	21											
7	262.9	Broken Grey DOLOMITE w/Seams of Shale (7.6 – 8.4 M) 1.5 M RUN 100% RECOVERY 8% RQD				RC-1												
8	261.4	End of Borehole																

NOTES: Auger refusal encountered at 6.9 m. A 1.5 m rock core was taken at this depth. Boring moved 8 m east and 1 m south of staked location. Elevation approximate due to relocation.

LOG OF TEST BORING

BORING NO. M-S4
DATE: 4/30/97
JOB #: 33633.01
ELEV.: 268.973
DRILLERS: TB/TM
COMPLETION (m): 1.1
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 36+398.0 16.5M RT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 1.8
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT (INCREMENT)	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	269.0	TOPSOIL – 76 mm																
1	268.9	Very Moist Medium Stiff Grey-Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(8)			2/150 3/150 3/150	SS-1	6	1214		1	15	16	34	34	40	26	14	A-6a(8)
	268.1	Wet Very Loose Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(5)			2/150 2/150 1/150	SS-2	3			2	17	21	35	25	26	16	10	A-4a(5)
2	267.1	Damp Medium Dense Grey GRAVEL w/Sand, Little Silt and Clay, A-2-4(0)			5/150 11/150 7/50	SS-3	18	1972		35	24	10	16	15	20	15	5	A-2-4(0)
3		– Very Dense			21/150 27/150 32/150	SS-4	59											
4		– Dense and/or STONE FRAGMENTS			23/150 21/50 18/50	SS-5	39											
		– Very Dense			16/50 23/50 30/50	SS-6	53											
5					50/50	SS-7	100+											
6					50/100	SS-8	100+											
7	262.1	Broken Grey Dolomite w/Sand and Gravel			50/25	SS-9	100+											
8		– 1.3 M RUN 14% RECOVERY 0% RQD				RC-1												
9																		
10																		
11					50/25	SS-10	100+											
12		– w/Shale Seams (12.2 to 13.4M) 2.0 M RUN 100% RECOVERY 10% RQD				RC-2												
13	255.6	End of Borehole																

NOTES: Roller bit refusal at 8.2M. A 1.3M rock core taken. Augers advanced to 11.4M. A 2M rock core taken. Boring moved 15.0M west and 1.0M south of staked section. Elevation approximate due to relocation.

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-76
PROJECT NO. 33644.01

SOIL PROFILE

WTA/CRA-30-23.914/0.000(14.86/0.00)

76/130

LOG OF TEST BORING

BORING NO. M-C7
DATE: 3/25/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 37+206, 33 M LT
JOB #: 33633.01
DRILL METHOD: HAND AUGERS & HAND HOUSAL SAMPLER
ELEV.: 278.338
ENCOUNTERED WATER DEPTH (m): 2.4
DRILLERS: BG/TM/CM
DEPTH TO – WATER (m): CAVING:
COMPLETION (m): 3.0
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	278.3	TOPSOIL – 305 mm															
	278.0	Very Damp Stiff Brown SILT and CLAY w/Some Sand, Trace Gravel and Organics, A-6b(10)			8/150 12/150 13/150	SS-1	13	1595		1	7	19	33	40	35	20	15	A-6a(10)
1	277.3	Moist Medium Dense Grey/Brown SILT w/Trace Sand, Gravel, Calcite and Organics, A-4b(8)			10/150 16/150 20/150	SS-2	17	1546		1	3	4	63	29	27	17	10	A-4b(8)
2		– Very Damp w/Some Sand, Trace Grave			20/150 24/150 23/150	SS-3	22	1770										
3	275.9	Damp Medium Dense Brown/Grey SANDY SILT w/Some CLAY, Trace Gravel			11/150 16/150 20/150	SS-4	17	1776										
					24/150 33/150 60/150	SS-5	26											
4					26/150 35/150 72/150	SS-6	28	1857										
	273.8	End of Borehole																

NOTES: Samples were taken with a Hand Housal Samper and blow counts were converted using "Terzaghi Standard" numbers.

LOG OF TEST BORING

BORING NO. M-C8
DATE: 3/25/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 37+206, 33 M LT
JOB #: 33633.01
DRILL METHOD: HAND AUGERS & HAND HOUSAL SAMPLER
ELEV.: 277.882
ENCOUNTERED WATER DEPTH (m): 2.4
DRILLERS: BG/TM/CM
DEPTH TO – WATER (m): CAVING:
COMPLETION (m): 2.7
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC INDEX %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	277.9	TOPSOIL – 279 mm																
	277.6	Moist Stiff Grey/Brown SILT and CLAY w/Some Sand, Trace Gravel and Organics (Roots, Leaves), A-6a(8)			8/150 11/150 12/150	SS-1	12	1732		2	8	19	33	38	29	18	11	A-6a(8)
1		– Very Stiff Brown (No Organics), Little Sand, A-6a(9)			12/150 15/150 21/150	SS-2	17	1570		1	5	13	49	32	33	21	12	A-6a(9)
2					18/150 22/150 26/150	SS-3	20	1717										
3		– Very Damp			12/150 16/150 19/150	SS-4	16	1897										
					22/150 38/150 70/150	SS-5	28	1853										
4	274.1	End of Borehole																

NOTES: Samples were taken with a Hand Housal Sampler and blow counts were converted using "Terzaghi Standard" numbers.

LOG OF TEST BORING

BORING NO. M-E6
DATE: 3/25/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 37+380, 13 M RT
JOB #: 33633.01
DRILL METHOD: HAND AUGERS & HAND HOUSAL SAMPLER
ELEV.: 280.429
ENCOUNTERED WATER DEPTH (m): 3.4
DRILLERS: BG/TM/CM
DEPTH TO – WATER (m): CAVING:
COMPLETION (m): 4.0
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	280.4	TOPSOIL – 305 mm																
	280.1	Very Damp Stiff Grey/Brown SILT and CLAY w/Little Sand, Trace Grave, A-6a(10)			7/150 11/150 14/150	SS-1	13	1581		2	10	8	32	48	31	16	15	A-6a(10)
1		– Very Stiff w/Trace Calcite, Sand and Gravel, A-6a(9)			8/150 20/150 27/150	SS-2	17	1760		1	4	1	48	46	35	22	13	A-6a(9)
2					21/150 24/150 29/150	SS-3	20	1743										
3		– Brown			21/150 30/150 36/150	SS-4	23	1829										
		– Brown/Grey			30/150 34/150 52/150	SS-5	28	1911										
4					25/150 33/150 50/150	SS-6	28	1813										
	275.9	End of Borehole																

NOTES: Samples were taken with a Hand Housal Sampler and blow counts were converted using "Terzaghi Standard" numbers.

LOG OF TEST BORING

BORING NO. M-E7
DATE: 3/27/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 37+500, 12 M LT
JOB #: 33633.01
DRILL METHOD: HAND AUGERS & HAND HOUSAL SAMPLER
ELEV.: 280.987
ENCOUNTERED WATER DEPTH (m): 2.6
DRILLERS: BG/TM/CM
DEPTH TO – WATER (m): CAVING:
COMPLETION (m): 4.9
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	281.0	TOPSOIL – 279 mm																
	280.7	Moist Stiff Yellow Brown and Grey SILTY CLAY w/Little Sand			10/150 14/150 15/150	SS-1	14	1578										
1		– Very Stiff Yellow-Brown and Grey, A-6b(11)			17/150 20/150 27/150	SS-2	19	1573		0	7	10	26	57	40	23	17	A-6b(11)
2	279.2	Moist Medium Dense Brown SANDY SILT w/Clay, Trace Gravel			20/150 25/150 35/150	SS-3	22	1746										
3		– Grey-Brown, A-4a(8)			30/150 50/150 41/150	SS-4	25	1751		4	12	11	27	46	27	17	10	A-4a(8)
		– Grey			23/150 48/150 60/150	SS-5	28	1986										
4		– A-4a(8)			19/150 45/150 57/150	SS-6	28	1871		1	9	13	35	42	23	15	8	A-4a(8)
5	276.3	Moist Very Stiff Grey SILTY CLAY w/Trace Sand			28/150 62/150 48/150	SS-7	28	1560										
	275.5	End of Borehole																

NOTES: Samples were taken with a Hand Housal Sampler and blow counts were converted using "Terzaghi Standard" numbers.

LOG OF TEST BORING

BORING NO. M-E8
DATE: 3/27/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 37+620, 13 M RT
JOB #: 33633.01
DRILL METHOD: HAND AUGERS & HAND HOUSAL SAMPLER
ELEV.: 281.556
ENCOUNTERED WATER DEPTH (m): 2.4
DRILLERS: BG/TM/CM
DEPTH TO – WATER (m): CAVING:
COMPLETION (m): 5.0
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	281.6	TOPSOIL – 254 mm																
	281.3	Very Damp Stiff Grey-Brown SILTY CLAY w/Little Sand, A-6a(12)			8/150 13/150 17/150	SS-1	14	1677		0	6	15	23	56	38	19	19	A-6b(12)
1	280.5	Very Damp Very Stiff Yellow-Brown and Grey SILT and CLAY w/Little Sand, Trace Gravel			14/150 19/150 25/150	SS-2	18	1704										
2		– A-6a(9)			23/150 28/150 32/150	SS-3	22	1786		3	11	17	25	50	31	18	13	A-6a(9)
3		– Grey-Brown			28/150 46/150 44/150	SS-4	26	1817										
	278.2	Very Damp Medium Dense Grey SANDY SILT w/Clay and Trace GRAVEL, A-4a(7)			26/150 44/150 70/150	SS-5	28	1983		5	12	14	28	41	23	16	7	A-4a(7)
4					18/150 33/150 50/150	SS-6	26	1973										
5					22/150 51/150 66/150	SS-7	28	1914										
	276.1	End of Borehole																

NOTES: Samples were taken with a Hand Housal Sampler and blow counts were converted using "Terzaghi Standard" numbers.

TOLEDO ENGINEERING CO., INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/AMB
DATE: 8-2-99
DRAWING NO. 33644-77
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. M-S5
DATE: 5/1/97
JOB #: 33633.01
ELEV.: 282.783
DRILLERS: TB/TV
COMPLETION (m): 3.8
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, VAINLINE STA 37+768.2, 8.8M LT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 9.8
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	UNCONFINED COMPRESSIVE STRENGTH (kPa)	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	282.8	TOPSOIL – 457 mm																	
1	282.3	Moist Medium Stiff Brown/Grey SILT and CLAY w/Some Sand, Trace Grave, A-6a(8) – Stiff Grey/Brown			2/150 3/150 4/150	SS-1	7	1570			1	10	20	29	40	32	20	12	A-6a(8)
2					3/150 5/150 7/150	SS-2	12	1605											
3		– Very Damp Very Stiff Brown			4/150 6/150 13/150	SS-3	19	1776											
4	280.4	Damp Medium Dense Brown SANDY SILT w/Some Clay, Trace Gravel, A-4c(0)			6/150 12/150 12/150	SS-4	26	1844			3	13	12	40	32	27	17	10	A-4a(7)
5		– Grey			8/150 11/150 14/150	SS-5	25	1860											
6					4/150 7/150 9/150	SS-6	16	1919											
7		– Grey w/Clay, Trace Gravel, A-4a(8)			4/150 6/150 7/150	SS-7	13	1938			2	10	12	41	35	23	15	8	A-4a(8)
8					3/150 5/150 7/150	SS-8	12	1857											
9					4/150 5/150 9/150	SS-9	14	1855											
10					5/150 7/150 10/150	SS-10	17	1895											
11		– w/Some Clay, A-4a(4)			8/150 11/150 13/150	SS-11	24	1999			5	18	20	39	18	17	14	3	A-4c(4)
12					9/150 12/150 16/150	SS-12	28												
13	273.0	Damp Dense Grey COARSE to FINE SAND w/Little Gravel, Trace Silt			12/150 15/150 17/150	SS-13	32												
14	271.2	Very Damp Very Dense Grey/Brown SANDY SILT w/Some Clay, Trace Gravel, A-4a(5)			20/150 25/150 30/150	SS-14	58	2009			6	16	16	36	26	22	16	6	A-a(5)
15	270.0	Moist Very Dense Brown COARSE to FINE SAND w/Little Rock Fragments, Trace Silt			30/150 35/150 50/25	SS-15	100+												
16	269.4	Moist Very Dense Grey Weathered Dolomite			50/00	SS-16	100+												
17	266.8	Some Fractured Grey DOLOMITE 1.5 M RUN 100% RECOVERY 33% RQD				RC-1													
	265.3	End of Borehole																	

NOTES: Auger refusal encountered at 13.4 m. A 1.5 m rock core was taken at 16.0 m depth. Boring moved 15.0 m east of staked location. Elevation approximate due to relocation.

LOG OF TEST BORING

BORING NO. M-S6
DATE: 3/21/97
JOB #: 33633.01
ELEV.: 282.537
DRILLERS: NW/GM
COMPLETION (m): 0.0
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 37+760.8,14.8M RT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 7.2
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	282.5	ASPHALT – 254 mm																
	282.3	CRUSHED STONE – 254 mm			2/150 3/150 3/150	SS-1	6	1623		5	6	14	50	25	27	18	9	A-4b(8)
1	282.0	Moist Loose Brown SILT w/Some Clay, Little Sand, Trace Gravel, A-4b(5) – w/Little Clay, A-4c(0)			4/150 4/150 4/150	SS-2	8	1568		0	4	25	56	15	NON-PLASTIC			A-4b(0)
2		– Grey/Brown			3/150 4/150 5/150	SS-3	9	1652										
3	279.9	Moist Medium Dense Grey/Brown SANDY SILT w/Clay, Trace Gravel			8/150 10/150 14/150	SS-4	24	1815										
4		– Grey			5/150 6/150 7/150	SS-5	13	1866										
5		– A-4a(7)			4/150 5/150 8/150	SS-6	13	1890		5	13	13	29	40	23	15	8	A-4a(7)
6					5/150 6/150 8/150	SS-7	14	1825										
7		– Wet Loose			3/150 3/150 4/150	SS-8	7	1608										
8		– Moist			2/150 4/150 4/150	SS-9	8	1844										
9					3/150 5/150 5/150	SS-10	10	1866										
10		– Medium Dense, A-4a(7)			3/150 4/150 6/150	SS-11	10	1917										
11	273.1	Moist Loose Grey COARSE to FINE SAND w/Little Gravel, Trace Silt			6/150 7/150 13/150	SS-12	20	1916		6	9	16	32	37	23	16	7	A-4c(7)
12	270.8	Very Damp Very Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			2/150 2/150 6/150	SS-13	8											
13					6/150 11/150 16/150	SS-14	27	1852										
14	269.1	Broken Grey DOLOMITE w/c 76mm K Feldspar Granite seam at 13.4 M 1.5 M RUN 65% RECOVERY 0% RQD			25/0	SS-15	100+											
						RC-1												
15	267.6	End of Borehole																

NOTES: Auger refusal encountered at 13.4 m. A 1.5 m rock core was taken at this depth.

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-78
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. M-S7
DATE: 3/21/97
JOB #: 33633.01
ELEV.: 282.641
DRILLERS: NW/GM
COMPLETION (m): 5.7
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 37+777.2,12.0M LT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 1.6
DEPTH TO WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	282.6	ASPHALT - 305 mm															
	282.3	CRUSHED STONE - 102 mm			3/150 3/150 3/150	SS-1	6	1716		2	17	15	31	35	34	17	A-6b(9)
1	282.2	Very Damp Medium Stiff Brown SILTY CLAY w/Sand, Trace Gravel, A-6b(9)															
		- Moist Yellow Brown and Grey			3/150 3/150 5/150	SS-2	8	1506									
2	280.8	Very Damp Stiff Brown and Grey SILT and CLAY w/Some Sand, Trace Gravel			3/150 4/150 6/150	SS-3	10	1725									
		- A-6a(9)			4/150 7/150 11/150	SS-4	18	1732		2	12	12	34	40	32	21	11	A-6b(9)
3		- Grey			4/150 7/150 11/150	SS-5	18	1743									
4		Stiff			4/150 7/150 7/150	SS-6	14	1985									
5	277.8	Moist Medium Dense Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(6)			5/150 6/150 8/150	SS-7	14	1921		5	15	13	38	29	24	14	10	A-4a(6)
6	277.0	Moist Loose Grey SILT w/Clay, Trace Sand			2/150 3/150 4/150	SS-8	7	1730									
		A 4b(8)			3/150 3/150 4/150	SS-9	7	1873		0	2	6	51	41	24	17	7	A-4b(8)
7	275.5	Moist Medium Dense SANDY SILT w/Some Clay, Little Gravel			3/150 6/150 9/150	SS-10	15	1895									
8					4/150 7/150 9/150	SS-11	16	1916									
9		- Loose, A-4a(5)			2/150 4/150 6/150	SS-12	10	1975		14	12	17	29	23	20	14	6	A-4a(5)
10	272.4	Moist Medium Dense Grey COURSE to FINE SAND w/Little Gravel, Trace Silt			2/150 5/150 7/150	SS-13	12										
11																	
12	270.9	Very Damp Hard Grey SILT and CLAY w/Little Sand, Trace Gravel			22/150 18/150 24/150	SS-14	42	1865									
13	269.4	Very Dense Weathered DOLOMITE			25/0	SS-15	100+										
14																	
15					25/0	SS-16	100+										
16																	
17	266.2	Some Fractured Grey DOLOMITE w/Trace Shale Seams (17.4 to 18.0 M) 1.5 M RUN 100% RECOVERY 39% RQD				RC-1											
18	264.7	End of Borehole															

NOTES: Auger refusal encountered at 16.5 m. A 1.5 m rock core was taken at this depth. Boring moved 2.5 m west of staked location. Elevation approximate due to relocation.

LOG OF TEST BORING

BORING NO. M-S8
DATE: 5/15/97
JOB #: 33633.01
ELEV.: 282.617
DRILLERS: NW/GM
COMPLETION (m): 9.5
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 37+772.5,13.5M RT
DRILL METHOD: 108 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 4.4
DEPTH TO WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	282.6	ASPHALT - 229 mm															
	282.4	CRUSHED STONE - 152 mm			5/150 3/150 2/150	SS-1	5	1698									
1	282.2	Very Damp Medium Stiff Grey-Brown SILTY CLAY w/Trace to Little Sand, Trace Gravel															
	281.6	Moist Medium Stiff Yellow Brown and Grey CLAY w/Silt Little Sand, Trace Gravel, A-7-6(17)			3/150 3/150 4/150	SS-2	7	1531		1	6	11	40	42	48	19	29	A-7-6(17)
2	280.9	Very Damp Stiff Red-Brown SILT and CLAY w/Little Sand, Trace Gravel			4/150 5/150 6/150	SS-3	11	1680									
	280.2	Very Damp Stiff Grey-Brown SILTY CLAY w/Trace Sand and Gravel			5/150 6/150 7/150	SS-4	13	1719									
3	279.4	Very Damp Very Stiff Grey-Brown SILT and CLAY w/Trace Sand and Gravel			7/150 10/150 16/150	SS-5	26	1714									
4					5/150 6/150 11/150	SS-6	17	1900									
		- w/Some Sand, Trace Gravel, A-6a(7)			5/150 6/150 7/150	SS-7	13	1920		1	16	13	27	37	24	13	11	A-6a(7)
5		- Stiff, A-6a(6)			4/150 4/150 5/150	SS-8	9	1583									
6		- Medium Stiff			2/150 2/150 4/150	SS-9	6	1648		1	24	14	27	37	24	13	11	A-6a(7)
7	275.5	Moist Loose Grey SANDY SILT w/Some Clay, Trace Gravel			3/150 3/150 5/150	SS-10	8	1845									
8		- A-4a(7)			3/150 3/150 4/150	SS-11	7	1903		1	15	12	39	33	25	18	7	A-6a(7)
9		- Medium Dense			5/150 5/150 8/150	SS-12	13	1982									
10	272.9	Moist Loose Grey COARSE to FINE SAND w/Little Gravel, Trace Silt			3/150 4/150 6/150	SS-13	10										
11																	
12					4/150 4/150 5/150	SS-14	9										
13	269.4	Moist Loose GRAVEL and STONE FRAGMENTS w/Trace Silt, Sand and Clay, A-1a(0)			2/150 4/150 4/150	SS-15	8			8	69	8	11	4	NON-PLASTIC		A-1-A(0)
14	268.3	Very Dense Grey Weathered DOLOMITE															
15					50/150 50/50	SS-16	100+										
16																	
17	266.2	Some Fractured Brown/Grey DOLOMITE w/Little Calcite Nodules (16.5 to 17.1 M) 1.5 M RUN 97% RECOVERY 27% RQD				RC-1											
18	264.6	End of Borehole															

NOTES: Auger refusal encountered at 16.4 m. A 1.5 m rock core was taken at this depth. Boring moved 16.8 m west of staked location. Elevation approximate due to relocation.

IQUEST, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

LOG OF TEST BORING

BORING NO. M-I-9
DATE: 3/25/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33633.01
LOCATION: STATE ROUTE 30, MAINLINE STA 37+900, 13 M LT
ELEV.: 283.186
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: CW/JL
ENCOUNTERED WATER DEPTH (m): NONE
COMPLETION (m): NONE
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	283.2	TOPSOIL – 305 mm																
	282.9	Moist Stiff Grey/Brown SILTY CLAY w/Little Sand, Gravel, A-6b(12)			3/150 5/150 6/150	SS-1	11	1661		1	5	8	39	47	39	19	20	A-6b(12)
1					4/150 6/150 7/150	SS-2	13	1512										
2		– A-6b(12)			6/150 7/150 8/150	SS-3	15	1523		1	5	8	38	48	40	19	21	A-6b(12)
3	280.7	Very Damp Hard Grey SILT and CLAY w/Some Sand, Trace Gravel			10/150 12/150 26/150	SS-4	38	1996										
					10/150 12/150 23/150	SS-5	35	1973										
4	279.7	Moist Medium Dense SANDY SILT w/Some Clay, Trace Gravel			3/150 6/150 7/150	SS-6	13	2041										
5					7/150 9/150 21/150	SS-7	30	272										
6		– Brown/Grey, A-4a(8)			5/150 6/150 7/150	SS-8	13	1866		4	14	9	44	29	29	19	10	A-4a(8)
					8/150 6/150 7/150	SS-9	13	1836										
	276.6	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E10
DATE: 3/25/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33633.01
LOCATION: STATE ROUTE 30, MAINLINE STA 38+020, 13 M RT
ELEV.: 284.292
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: CW/JL
ENCOUNTERED WATER DEPTH (m): 5.8
COMPLETION (m): NONE
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	284.3	TOPSOIL – 432 mm																
	283.9	Very Moist Stiff Brown/Grey CLAY w/Silt, Trace Sand, A-7-6(19)			3/150 4/150 5/150	SS-1	9	1487		0	2	7	44	47	53	23	30	A-7-6 (19)
1	283.2	Very Damp Stiff Brown Grey Silt and CLAY w/Some Sand, A-6a(9)			3/150 5/150 5/150	SS-2	10	1767		2	12	12	42	33	29	17	12	A-6a(9)
2		– w/Trace Gravel			6/150 6/150 7/150	SS-3	13	1722										
3	281.7	Moist Stiff Grey SILTY CLAY w/Some Sand, Trace Gravel, A-6b(12)			5/150 6/150 9/150	SS 4	15	1789		2	8	10	42	38	36	16	20	A-6b(12)
		– Very Stiff			8/150 9/150 11/150	SS-5	20	1877										
4	280.2	Damp Medium Dense Grey SANDY SILT w/Some Clay, Trace Gravel			6/150 8/150 9/150	SS-6	17	1914										
5		– A-4a(7)			8/150 11/150 16/150	SS 7	27	1921		4	14	13	41	28	23	17	6	A-4a(7)
6					5/150 6/150 9/150	SS-8	15	1849										
7					8/150 9/150 13/150	SS-9	22	2026										
	277.3	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-I-11
DATE: 3/26/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33633.01
LOCATION: STATE ROUTE 30, MAINLINE STA 38+140, 12 M LT
ELEV.: 285.116
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: CW/JL
ENCOUNTERED WATER DEPTH (m): NONE
COMPLETION (m): NONE
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	285.1	TOPSOIL – 356 mm																
	284.8	Very Damp Very Stiff Grey and Brown SILTY CLAY w/Little Sand, Trace Gravel, A-6b(15)			5/150 8/150 13/150	SS-1	21	1768		2	11	10	31	46	34	17	27	A-6b(15)
1		– Brown			6/150 9/150 10/150	SS-2	19	1818										
2	283.3	Very Damp Very Stiff Grey-Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(8)			8/150 12/150 12/150	SS-3	24	1807		4	13	11	34	38	29	17	2	A-6a(8)
3		– Grey			7/150 7/150 9/150	SS 4	16											
					9/150 10/150 12/150	SS-5	22	1890										
4	281.2	Very Damp Very Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			8/150 9/150 10/150	SS-6	19	1927										
5		– w/Sand, Trace Gravel			10/150 12/150 12/150	SS 7	24	1954										
	279.9	– 50mm Coarse to Fine Sand Seam																
6		Moist Medium Dense Grey SILT w/Clay, Trace Sand			10/150 11/150 11/150	SS-8	22	1948										
7		– Trace Gravel, A-4b(8)			11/150 12/150 12/150	SS-9	24	1861		1	2	5	67	25	27	19	8	A-4b(8)
					10/150 11/150 13/150	SS-10	24	1916										
	277.5	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E12
DATE: 3/26/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33633.01
LOCATION: STATE ROUTE 30, MAINLINE STA 38+260, 13 M RT
ELEV.: 286.355
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: CW/JL
ENCOUNTERED WATER DEPTH (m): 5.9
COMPLETION (m): 2.7
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	286.4	TOPSOIL – 381 mm																
	286.0	Moist Stiff Grey-Brown CLAY w/Some SILT and Trace SAND, A-7-6 (16)			4/150 5/150 7/150	SS-1	12	1523		0	5	8	30	57	45	18	27	A-7-6(16)
1	285.3	Moist Medium Dense Brown SANDY SILT w/Clay, Trace Gravel, A-4a(8)			7/150 9/150 11/150	SS-2	20	1860		1	13	11	41	34	29	20	9	A-4a(8)
2					8/150 16/150 16/150	SS-3	32	1837										
3	283.9	Very Stiff Red-Brown and Grey SILTY CLAY w/Little Sand, Trace Gravel, A-6b(11)			5/150 7/150 11/150	SS-4	18	1573		3	9	9	42	37	37	20	17	A-6b(11)
		Hard Grey Brown			16/150 21/150 27/150	SS 5	48	1778										
4	282.2	Moist Medium Dense Grey SANDY SILT w/Little Clay, Trace Gravel, A-4a(7)			4/150 7/150 10/150	SS-6	17	1962		7	14	11	42	26	26	17	9	A-4a(7)
5					5/150 12/150 12/150	SS-7	24	1913										
6					6/150 6/150 6/150	SS-8	12	1876										
7					7/150 7/150 7/150	SS-9	14	1854										
	279.3	End of Borehole																

NOTES:

TOLEDO TESTING, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

LOG OF TEST BORING

BORING NO. M-E13
DATE: 3/26/97
PROJECT: ODOT STATE ROUTE 30 — JOB #: 33633.01
LOCATION: STATE ROUTE 30, MAINLINE STA 38+380, 13 M LT — ELEV.: 286.644
DRILL METHOD: 57 MM HOLLOW STEM AUGERS — DRILLERS: CW/JL
ENCOUNTERED WATER DEPTH (m): 5.5 — COMPLETION (m): 2.7
DEPTH TO – WATER (m): — CAVING: — DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	285.6	TOPSOIL – 305 mm															
	285.3	Wet Stiff Dark Grey SILTY CLAY w/Some Gravel and Sand, A-6b(11)			0/150 5/150 5/150	SS-1	10	1217	40	26	20	2	30	22	40	28	16 A-6b(11)
1	284.9	Moist Stiff Brown and Grey SILT and CLAY w/Some Sand, Trace Gravel			3/150 5/150 4/150	SS-2	9	1636	20								
2		– Very Damp Grey–Brown, A-6a(8)			5/150 4/150 6/150	SS-3	10	1752	17	3	14	11	45	27	30	19	11 A-6a(8)
3		– Very Stiff			6/150 9/150 9/150	SS-4	16	1797	14								
4					8/150 9/150 12/150	SS-5	21	1826	15								
	281.5	Moist Medium Dense Stiff Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(7)			4/150 5/150 8/150	SS-6	13	2001	12	5	14	13	42	26	25	16	9 A-4a(7)
5					10/150 12/150 12/150	SS-7	22	1970	11								
6	280.0	Wet Loose Grey COARSE to FINE SAND w/Little Gravel, Trace Silt			5/150 4/150 5/150	SS-8	9		19								
7	278.9	Moist Medium Dense Grey SANDY SILT w/Clay, Trace Gravel – A-4a(7)			8/150 9/150 4/150	SS-9	13		25								
					4/150 5/150 7/150	SS-10	12	1817	19	2	16	9	29	43	29	20	9 A-4a(7)
	278.0	End of Borehole															

NOTES:

LOG OF TEST BORING

BORING NO. M-E14
DATE: 3/26/97
PROJECT: ODOT STATE ROUTE 30 — JOB #: 33633.01
LOCATION: STATE ROUTE 30, MAINLINE STA 38+500, 13 M LT — ELEV.: 287.953
DRILL METHOD: 57 MM HOLLOW STEM AUGERS — DRILLERS: CW/JL
ENCOUNTERED WATER DEPTH (m): 3.7 — COMPLETION (m): 4.3
DEPTH TO – WATER (m): — CAVING: — DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	288.0	TOPSOIL – 356 mm																
	287.6	Moist Stiff Grey–Brown SILTY CLAY w/Little Sand, Trace Gravel, A-6b(11)			5/150 7/150 12/150	SS-1	19	1575	21	1	8	10	28	53	39	21	18	A-6b(11)
1		– Very Damp Brown and Grey			7/150 7/150 8/150	SS-2	15	1781	16									
2		– Very Stiff			7/150 10/150 12/150	SS-3	22	1807	16									
	285.5	Moist Very Stiff Grey–Brown CLAY w/Silt, Little Sand			7/150 9/150 11/150	SS-4	20	1549	23	0	9	10	24	57	42	22	20	A-7-6(12)
3	284.8	Very Damp Hard Grey–Brown SILT and CLAY w/Some Sand, Trace Gravel			7/150 19/150 21/150	SS-5	40	1794	16									
4		– Very Stiff, A-6a(8)			11/150 12/150 13/150	SS-6	25	1800	15	3	12	10	28	47	31	19	12	A-6a(9)
5		– Boulder to 4.9 M			10/150 10/150 10/150	SS-7	20											
6		– Hard			19/150 20/150 23/150	SS-8	43	1877	14									
	281.6	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E15
DATE: 4/ /97
PROJECT: ODOT STATE ROUTE 30 — JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 38+621, 11 M LT — ELEV.: 288.017
DRILL METHOD: HAND AUGERS & HAND HOUSAL SAMPLER — DRILLERS: JL/CW/TM
ENCOUNTERED WATER DEPTH (m): 1.8 — COMPLETION (m): 2.3
DEPTH TO – WATER (m): — CAVING: — DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	288.0	TOPSOIL – 305 mm																
	287.7	Very Damp Very Stiff Brown SILT and CLAY w/Some Sand, A-6a(9)			10/150 17/150 20/150	SS-1	17		18	0	10	10	43	36	32	20	12	A-6a(9)
1		– Voids w/Trace Gravel			8/150 21/150 26/150	SS-2	19	1458	23									
2		– Very Damp Grey–Brown, A-6a(9)			16/150 20/150 21/150	SS-3	17	1733	17	1	13	11	42	33	39	29	17	A-6c(9)
	285.4	Moist Medium Dense Brown SANDY SILT w/Some Clay, Trace Gravel			15/150 22/150 26/150	SS-4	20	1784	17									
3		– Grey, A-4a(8)			18/150 19/150 21/150	SS-5	17	1953	15	4	11	11	44	30	24	16	8	A-4a(8)
4					20/150 16/150 21/150	SS-6	17	1988	15									
5					21/150 38/150 48/150	SS-7	25	1877	14									
6					22/150 35/150 60/150	SS-8	27	1841	14									
	281.9	End of Borehole																

NOTES: Samples were taken with a hand housal sampler and blow counts were converted using "Terzagh Standard" numbers. Boring moved 1.5 meters south east of stake. Elevation approximate due to relocation.

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-81
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

81/130

LOG OF TEST BORING

BORING NO. M-E16
DATE: 3/28/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 38+740, 13 M RT
ELEV.: 288.373
DRILL METHOD: 57 VM HOLLOW STEM AUGERS
DRILLERS: CW/JL
ENCOUNTERED WATER DEPTH (m): NONE
COMPLETION (m): NONE
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC INDEX %	GROUP DESIGNATION INDEX
0	288.4	TOPSOIL – 432 mm															
1	287.9	Moist Stiff Brown SILTY CLAY w/Little Sand, Trace Gravel, A-6b(**)			5/150 7/150 7/150	SS-1	14	1703	23	1	7	8	28	56	39	22	17	A-6b(11)
		– Very Damp w/Little Sand, Trace Grave			4/150 7/150 8/150	SS-2	15	1770	15									
2	286.5	Moist Medium Dense Brown Grey SANDY SILT w/Clay, Trace Gravel, A-4a(8)			5/150 8/150 11/150	SS-3	19	1869	15	1	11	12	28	48	27	19	8	A-4a(8)
3		– Stiff			5/150 8/150 9/150	SS-4	18	1784	19									
4	285.0	Very Damp Hard Brown-Grey SILT and CLAY w/Some Sand, Trace Gravel, A-6a(8)			8/150 12/150 19/150	SS-5	31	1921	15	6	13	11	27	43	30	19	11	A-6a(8)
		– Very Stiff Grey			8/150 10/150 12/150	SS-6	22		13									
5		– Medium Stiff			4/150 4/150 4/150	SS-7	8	1933	14									
6	282.9	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E17
DATE: 3/28/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 38+860, 13 M LT
ELEV.: 288.451
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: CW/JL
ENCOUNTERED WATER DEPTH (m): 4.9
COMPLETION (m): 4.6
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	288.5	TOPSOIL – 432 mm																
1	288.0	Moist Stiff Brown CLAY w/Some Silt, Little Sand, A-7-6(**5)			3/150 5/150 6/150	SS-1	11	1684	23	0	4	18	33	45	46	22	24	A-7-6(15)
		– Medium Stiff			3/150 4/150 3/150	SS-2	7	1514	24									
2	286.6	Moist Loose Brown-Grey SANDY SILT w/Little Clay, Trace Gravel, A-4a(8)			3/150 4/150 4/150	SS-3	8	1648	24	1	10	23	45	21	26	18	8	A-4c(8)
3		– Very Damp Medium Dense Grey			5/150 10/150 11/150	SS-4	21	1834	13									
4	285.1	Very Damp Very Stiff Grey SILT and CLAY w/Some Sand, Trace Gravel, A-6a(8)			8/150 12/150 12/150	SS-5	24	2017	13	3	12	12	42	31	26	14	12	A-6a(8)
5	284.3	Moist Medium Dense Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(8)			5/150 8/150 9/150	SS-6	17	1959	14									
		– Loose			3/150 4/150 5/150	SS-7	9	1901	12	2	13	12	43	30	25	16	9	A-4a(8)
6	283.0	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E18
DATE: 3/28/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 38+980, 13 M RT
ELEV.: 288.686
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: CW/JL
ENCOUNTERED WATER DEPTH (m): NONE
COMPLETION (m): NONE
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	288.7	TOPSOIL – 432 mm																
1	288.3	Moist Medium Stiff Brown CLAY w/Silt, Little Sand, Gravel, A-7-6(16)			2/150 3/150 5/150	SS-1	8	1631	24	1	6	12	42	39	41	17	24	A-7-6(16)
	287.6	Moist Medium Stiff Brown/Grey SILT and CLAY w/Little Sand, Trace Gravel A-6a(9)			3/150 3/150 3/150	SS-2	6	1577	22	3	11	11	43	32	34	21	13	A-6a(9)
2		– Very Damp, Grey			3/150 4/150 4/150	SS-3	8	1746	19									
3	286.1	Moist Stiff Brown SILTY CLAY w/Little Sand, Trace Gravel, A-6b(11)			6/150 7/150 8/150	SS-4	15	1664	22	1	10	12	44	33	39	21	18	A-6b(11)
4	285.2	Moist Medium Dense Brown/Grey SANDY SILT w/Little Clay, Trace Gravel			8/150 12/150 15/150	SS-5	27	1905	14									
		– A-4a(7)			5/150 7/150 8/150	SS-6	15	1938	14	3	16	12	43	26	25	16	9	A-4a(7)
5		– Grey			6/150 7/150 8/150	SS-7	15	1906	14									
	283.7	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E19
DATE: 3/28/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 39+100, 13 M LT
ELEV.: 287.793
DRILL METHOD: 57 VM HOLLOW STEM AUGERS
DRILLERS: CW/JL
ENCOUNTERED WATER DEPTH (m): NONE
COMPLETION (m): NONE
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	287.8	TOPSOIL – 508 mm																
1	287.4	Moist Stiff Grey/Brown CLAY w/Silt, Little Sand, Trace Gravel, A-7-6(12)			3/150 5/150 6/150	SS-1	9	1661	22	1	5	8	47	39	42	23	19	A-7-6(12)
	286.9	Very Damp Stiff Brown SILT and CLAY w/Little Sand			3/150 5/150 5/150	SS-2	10	1833	17									
2	286.0	Moist Loose Brown SANDY SILT w/Clay, Trace Gravel, A-4a(8)			6/150 4/150 4/150	SS-3	8	1776	21	3	8	11	50	28	29	20	9	A-4a(8)
3	285.4	Very Damp Stiff Brown SILT and CLAY w/Little Sand and Gravel, A-6a(6)			7/150 8/150 8/150	SS-4	16	1933	14	14	12	10	35	29	25	14	11	A-6a(6)
					9/150 7/150 8/150	SS-5	15	1990	14									
4		– Very Stiff Brown/Grey w/Trace Gravel, A-6a(9)			9/150 10/150 11/150	SS-6	21	2028	14	2	8	8	35	47	26	15	11	A-6a(9)
5		– Stiff Grey			8/150 9/150 7/150	SS-7	16	1929	14									
	282.8	End of Borehole																

NOTES:

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

SOIL PROFILE

DRAWN BY: DHR/AMB
DATE: 8-2-99
DRAWING NO. 33644-32
PROJECT NO. 33644.01

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, VAN LINE STA 0-560, 15 M RT
DRILL METHOD: HAND AUGERS & -AND HOUSA_ SAMPLER
ENCOUNTERED WATER DEPTH (m): 1.8
DEPTH TO – WATER (m): _____ CAVING: _____

BORING NO. M-E20
DATE: 4/1/97
JOB #: 33644.01
ELEV.: 290.712
DRILLERS: JL/CM/TM
COMPLETION (m): 2.1
DATE CHECKED: _____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	290.7	TOPSOIL – 305 mm																
	290.4	Moist Very Stiff Grey-Brown CLAY w/Some Silt, Little Sand and Gravel, A-7-6(6)			10/150 21/150 18/150	SS-1	17	1594	20	22	24	8	17	29	42	19	23	A-7-6(6)
1		– Red-Brown and Grey			10/150 18/150 18/150	SS-2	17	1631	19									
2	288.9	Very Damp Medium Dense Grey-Brown SANDY SILT w/Some Clay, Trace Gravel, A-4a(8)			12/150 23/150 32/150	SS-3	26	1676	15	4	12	41	43	30	26	17	9	A-4a(8)
		– Grey			20/150 25/150 31/150	SS-4	21	1849	14									
3		– w/Some Gravel and Little Clay, A-4a(1)			16/150 26/150 37/150	SS-5	23	2015	12	25	23	11	21	19	22	15	7	A-4a(4)
4		– Dense			22/50 50/50 90/50	SS-6	31	1782	13									
5	285.8	End of Borehole																

NOTES: Samples were taken with a hand housal sampler and blow counts were converted using "Terzaghi Standard" numbers. Boring moved 1.5 meters south of stake. Elevation approximate due to relocation.

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 0+680, 13 M LT
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 3.9
DEPTH TO – WATER (m): _____ CAVING: _____

BORING NO. V-E21
DATE: 4/2/97
JOB #: 33644.01
ELEV.: 289.774
DRILLERS: BG/CW
COMPLETION (m): 4.3
DATE CHECKED: _____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	289.8	TOPSOIL – 356 mm																
	289.4	Very Moist Medium Stiff Dark Grey-Brown CLAY w/Silt, Little Sand, A-7-6(12)			3/150 5/150 4/150	SS-1	7	1315	31	0	7	15	39	39	42	23	16	A-7-6(12)
1	288.7	Very Damp Stiff Yellow-Brown and Grey SILTY CLAY w/Some Sand, Trace Gravel, A-6b(10)			4/150 4/150 6/150	SS-2	10	1695	18	1	8	14	37	40	36	20	16	A-6b(10)
		– Grey-Brown			4/6/7 6/150 7/150	SS-3	13	1690	19									
2		– Very Stiff, Yellow Brown and Grey			6/150 7/150 10/150	SS-4	17	1845	15									
3	286.6	Damp Medium Dense Grey and Brown SANDY SILT w/Clay, Trace Gravel, A-4a(7)			10/150 13/150 11/150	SS-5	24	1869	11	4	12	15	37	32	26	17	9	A-4a(7)
4	285.9	Very Damp Medium Stiff Grey and Brown SILT and CLAY w/Some Sand, Trace Gravel			3/50 3/150 4/50	SS-6	7	1800	16									
	285.2	Wet Loose Grey-Brown FINE SAND w/Trace Silt and Gravel	FS		2/50 2/50 5/50	SS-7	7		20	4	34	36	20	6	NON-PLASTIC			A-3a(0)
5	284.3	Moist Medium Dense Grey COARSE and FINE SAND w/Little Silt, Trace Clay and Gravel, A-3a(0)	FS		2/50 7/50 7/50	SS-8	12	1776	12									
6	283.7	Damp Medium Dense Grey SANDY SILT w/Little Clay and Gravel, A-4a (0)			7/50 11/150 13/150	SS-9	24		9	18	26	22	21	15	NON-PLASTIC			A-4a(0)
	283.2	– w/Rock Fragments 6.4 to 6.6 meters																
7		End of Borehole																

NOTES:

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, VAN LINE STA 0-800, 13 M RT
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 3.5
DEPTH TO – WATER (m): _____ CAVING: _____

BORING NO. V-E22
DATE: 4/2/97
JOB #: 33644.01
ELEV.: 290.062
DRILLERS: BG/CW
COMPLETION (m): 5.6
DATE CHECKED: _____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N. VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	290.1	TOPSOIL – 356 mm																
	289.7	Very Moist Medium Stiff Dark Grey-Brown CLAY w/Little Sand, Trace Gravel, A-7-6(12)			3/150 3/150 4/150	SS-1	7	1374	30	2	4	13	32	49	42	22	20	A-7-6(12)
1	289.1	Very Damp Stiff Grey-Brown SILT and CLAY w/Little Sand, Trace Gravel			5/150 5/150 5/150	SS-2	10	1422	17									
2		– Medium Stiff, A-6a(10)			3/150 3/150 3/150	SS-3	6	1669	20	1	11	12	36	40	32	18	14	A-6a(10)
3		– Stiff			4/150 4/150 6/150	SS-4	10	1797	17									
	287.2	– Medium Stiff Grey w/Some Sand, Trace Gravel			4/150 4/150 4/150	SS-5	8	1636	20									
4	286.3	Wet Loose Grey SANDY SILT w/Clay, Trace Gravel			4/150 4/150 4/150	SS-6	8	1667	22									
5					2/150 3/150 4/150	SS-7	7	1501		10	11	22	31	26	22	9	13	A-6a(6)
	284.6	Very Damp Very Hard Brown and Grey SILT and CLAY w/Some Sand, Trace Rock Fragments, A-6a(6)			6/50 5/150 50/0	SS-8	100+	1925	14									
6	284.1																	
	283.8	Very Dense GRAVEL and/or ROCK FRAGMENTS																
		End of Borehole																

NOTES: Auger refusal was encountered at 6.2 meters.

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-83
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

83/130

LOG OF TEST BORING

BORING NO. M-E23
DATE: 4/2/97
JOB #: 33644.01
ELEV.: 291.666
DRILLERS: BG/CW
COMPLETION (m): NONE
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLNE STA 0+920, 13 M LT
DRILL METHOD: 57 VM HOLLOW STEV AUGERS
ENCOUNTERED WATER DEPTH (m): 5.6
DEPTH TO – WATER (m): CAVING: 5.8V

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	291.7	TOPSOIL – 356 mm																
	291.3	Moist Medium Stiff Brown CLAY w/Silt, Trace Sand, A-7-6(17)			3/150 3/150 3/150	SS-1	6	1466	26	0	4	6	38	52	47	17	30	A-7-6(17)
1	290.8	Damp Stiff Brown SILT and CLAY w/Some Sand, Trace Gravel			3/150 5/150 7/150	SS-2	12	1853	10									
2		– Very Damp Very Stiff, A-6a(7)			8/150 12/150 16/150	SS-3	28	1746	15	6	12	13	37	32	29	18	11	A-6a(7)
3	289.0	Damp Medium Dense Brown SANDY SILT w/Little Clay, Trace Gravel, A-4a(2)			11/150 12/150 15/150	SS-4	27	1780	14									
					14/150 14/150 15/150	SS-5	29	1884	12									
4		– Grey			4/150 7/150 9/150	SS-6	16	1925	12									
5		– A-4a(2)			8/150 9/150 13/50	SS-7	22	1711	14	6	35	16	27	16	26	20	6	A-4a(2)
6	285.7	– Very Dense			7/150 11/150 50/75	SS-8	100+		14									
	285.4	Very Dense GRAVEL and/or ROCK FRAGMENTS End of Borehole																

NOTES: Auger refusal was encountered at 6.2 meters.

LOG OF TEST BORING

BORING NO. M-E24
DATE: 4/2/97
JOB #: 33644.01
ELEV.: 293.114
DRILLERS: BG/CW
COMPLETION (m): NONE
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 1+040, 13 M RT
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): NONE
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	293.1	TOPSOIL – 356 mm																
	292.7	Moist Stiff Grey-Brown SILTY CLAY w/Little Sand, Trace Gravel, A-6b(11)			3/150 4/150 5/150	SS-1	13	1639	21	2	7	12	40	39	39	22	17	A-6b(11)
1		– Very Damp Very Stiff Brown and Grey			7/150 9/150 11/150	SS-2	16	1748	18									
2	291.3	Very Damp Very Stiff Grey-Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(8)			8/150 12/150 14/150	SS-3	27	1863	14	4	13	12	42	29	29	18	11	A-6a(8)
		– Brown and Grey, A-6a(9)																
3					17/150 17/150 21/150	SS-4	29		16	5	13	12	27	43	31	17	14	A-6a(9)
4		– Hard			15/150 25/150 35/150	SS-5	60											
		– Very Hard Brown-Grey			6/150 50/150 3/150	SS-6	100+	1857	12									
5	288.2	WEATHERED ROCK																
	287.6	End of Borehole																

NOTES: Auger refusal was encountered at 5.5 meters.

LOG OF TEST BORING

BORING NO. M-E25
DATE: 4/2/97
JOB #: 33644.01
ELEV.: 294.010
DRILLERS: BG/CW
COMPLETION (m): NONE
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 1+123, 21 M LT
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): NONE
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	294.0	TOPSOIL – 356 mm																
	293.6	Moist Stiff Grey-Brown CLAY w/Some Silt, Little Sand, Trace Gravel, A-7-6(13)			5/150 4/150 9/150	SS-1	9	1594	20	1	7	10	24	58	41	18	23	A-7-6(13)
1		– Very Damp Very Stiff Yellow- Brown and Grey			3/150 7/150 9/150	SS-2	20	1738	15									
2	292.2	Very Damp Very Stiff Grey-Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(8)			8/150 12/150 14/150	SS-3	26	1863	14	2	13	13	28	44	29	18	11	A-6a(8)
		– Brown and Grey																
3					17/150 17/150 21/150	SS-4	38											
		– A-6a(7)			8/150 12/150 14/150	SS-5	26	1953	14	6	13	11	27	43	28	16	12	A-6a (7)
4		– Hard Grey and Brown			8/150 12/150 19/150	SS-6	31	1852	13									
5		– Very Stiff Grey, A-6a(8)			7/150 9/150 10/150	SS-7	19	1917	12	3	14	12	30	41	26	15	11	A-6a(8)
		– Stiff			4/150 6/150 10/150	SS-8	16	1820	14									
6	287.9	End of Borehole																

NOTES: Auger refusal was encountered at 6.6 meters. Boring relocated 42.1 meters west due to wheat field. Elevation approximate due to relocation.

LOG OF TEST BORING

BORING NO. M-E26
DATE: 4/2/97
JOB #: 33644.01
ELEV.: 293.840
DRILLERS: BG/CW
COMPLETION (m): NONE
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLNE STA 1+332, 24 M RT
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 3.4
DEPTH TO – WATER (m): CAVING: 5.5

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	293.8	TOPSOIL – 457 mm																
	293.4	Very Damp Stiff Grey-Brown SILTY CLAY w/Little Sand, Trace Gravel, A-6b(11)			5/150 5/150 4/150	SS-1	9	1685	19	1	7	12	36	44	40	24	16	A-6b(11)
1		– Medium Stiff Brown w/Some Sand			3/150 3/150 3/150	SS-2	6	1778	18									
2		– Moist w/Little Sand, Trace Gravel			4/150 4/150 4/150	SS-3	8	1652	21									
3		– Stiff Grey, A-6a(12)			4/150 6/150 7/150	SS-4	13	1695	20	1	9	11	38	41	36	13	20	A-6b(12)
					4/150 5/150 6/150	SS-5	14	1709	21									
4	289.9	Moist Medium Stiff Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(8)			3/150 3/150 5/150	SS-6	8	1730	20	3	11	16	34	36	30	17	13	A-6a(8)
5					2/150 2/150 2/150	SS-7	4	1597	19									
		– Very Hard			6/150 27/150 50/0	SS-8	100+											
6	287.9	Very Dense Grey ROCK FRAGMENTS w/Some Sand, Trace Clay																
	287.4	End of Borehole																

NOTES: Auger refusal was encountered at 6.4 meters.

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-B4
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

84/130

LOG OF TEST BORING

BORING NO. M-E27
DATE: 4/2/97
JOB #: 33644.01
ELEV.: 293.574
DRILLERS: BG/CW
COMPLETION (m): NONE
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 1+400, 12 M LT
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): NONE
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	293.6	TOPSOIL – 381 mm																
	293.2	Moist Medium Stiff CLAY w/Silt, Trace Sand, A-7-6(13)			3/150 4/150 4/150	SS-1	8	1533	23	0	3	8	36	53	46	26	20	A-7-6(13)
1	292.7	Very Damp Very Stiff Brown SILT and CLAY w/Little Sand, Trace Gravel			8/150 12/150 14/150	SS-2	26	1744	16									
2		– A-6a(9)			8/150 12/150 18/150	SS-3	30	1764	15	5	11	11	35	38	30	18	12	A-6a(9)
3					8/150 12/150 13/150	SS-4	27											
		– Stiff w/Sand, Trace Grave			4/150 5/150 7/150	SS-5	12	1895	16									
4																		
	289.5	Moist Medium Dense Grey SANDY SILT w/Some Clay, A-4a(8)			5/150 7/150 7/150	SS-6	14	2052	12	0	11	15	45	29	27	17	10	A-4a(8)
5		– w/Trace Gravel, A-4a(8)			8/150 9/150 13/150	SS-7	22	2004	13	4	11	8	49	28	23	14	9	A-4c(8)
					50/0	SS-8	100+											
6	287.8	End of Borehole																

NOTES: Auger refusal was encountered at 5.8 meters.

LOG OF TEST BORING

BORING NO. M-C9
DATE: 4/14/97
JOB #: 33644.01
ELEV.: 292.859
DRILLERS: TB/CW
COMPLETION (m): 4.9
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 1+460, 42 M LT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 4.9
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	292.9	TOPSOIL – 356 mm																
	292.5	Moist Medium Stiff Brown/Grey SILT and CLAY w/Some Sand, Trace Gravel			3/150 3/150 4/150	SS-1	7	1583	23									
1		– Stiff Grey/Brown w/Little Sand, Trace Gravel, A-6a(10)			4/150 6/150 8/150	SS-2	10	1679	23	5	7	11	29	48	36	21	15	A-6a(10)
2		– Very Damp Very Stiff Brown w/Sand, A-6a(9)			4/150 8/150 13/150	SS-3	21	1744	16	0	23	16	33	28	28	17	11	A-6c(9)
3					8/150 8/150 13/150	SS-4	21	2065	11									
		– w/Some Sand, Trace Gravel, A-6a(9)			7/150 10/150 13/150	SS-5	23	2057	11	5	19	10	31	35	26	14	12	A-6a(9)
4																		
		– Brown/Grey			7/150 7/150 22/150	SS-6	29	1815	14									
	288.4	Moist Dense Brown/Grey SANDY SILT w/Some Clay, Trace Grave and Rock Fragments – Very Dense			30/150 50/150 3/150	SS-7	100+		13									
5	287.6	End of Borehole																

NOTES: Auger refusal was encountered at 5.2 meters.

LOG OF TEST BORING

BORING NO. V-C10
DATE: 4/14/97
JOB #: 33644.01
ELEV.: 292.631
DRILLERS: TB/CW
COMPLETION (m): 4.0
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 1+460, 42 M RT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m):
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	292.8	TOPSOIL – 254 mm																
	292.4	Moist Stiff Grey/Brown SILTY CLAY w/Little Sand, Trace Gravel			3/150 4/150 5/150	SS-1	9	1475	24									
1	291.7	Moist Loose Brown SANDY SILT w/Some Clay			2/150 2/150 3/150	SS-2	5		23									
	291.4	Very Damp Very Stiff Grey/Brown SILT and CLAY w/Little Sand, Trace Gravel and "Rust-Like" Iron Seam																
2					4/150 8/150 12/150	SS-3	20	1845	17	7	15	13	39	26	26	13	13	A-6c(7)
3		– w/Some Sand, Trace Gravel, A-6a(7)			8/150 13/150 16/150	SS-4	29	2025	11									
		– Brown/Grey			8/150 9/150 12/150	SS-5	21	2066	12									
4																		
	288.4	Moist Medium Dense Grey SANDY SILT w/Trace Clay, Trace Gravel, A-4a(0)			8/150 9/150 12/150	SS-6	27		19	3	31	22	37	7				A-4a(0)
5	288.2	Moist Medium Dense Grey COARSE and FINE SAND w/Trace Silt and Clay			8/150 9/150 10/150	SS-7	19		12									
	287.4	Very Damp Hard Brown/Grey SILT and CLAY w/Some Sand, Trace Gravel																
6		– w/Some Rock Fragments			13/150 15/150 16/150	SS-8	31	1906	13									
	286.5	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-S9
DATE: 5/20/97
JOB #: 33644.01
ELEV.: 292.926
DRILLERS: BG/CW
COMPLETION (m): 3.2
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 1+455.2, 13.8M LT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 3.7
DEPTH TO – WATER (m): CAVING: 5.6

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	292.9	TOPSOIL – 457 mm																
	292.5	Moist Soft Brown and Grey CLAY w/Some Silt and Sand, Trace Gravel			2/150 2/150	SS-1	4	1573	20									
1		– Medium Stiff, A / 6(12)			3/150 4/150 4/150	SS-2	8	1600	23	2	21	10	34	33	41	17	24	A-7-6(12)
2		– Yellow-Brown and Grey			2/150 3/150 3/150	SS-3	6	1583	27									
	290.5	Damp Dense Grey SANDY SILT w/Little Clay, Trace Gravel			9/150 16/150 18/150	SS-4	34	1919	13									
3		– Medium Dense			6/150 7/150 9/150	SS-5	16	1725	14									
4		– Sand Seam																
		– Wet w/Little Clay and Gravel, A-4a(5)			5/150 7/150 16/150	SS-6	17		20	15	16	8	46	15	23	14	9	A-4a(5)
5					7/150 9/150 14/150	SS-7	23	1900	14									
6					13/150 17/150 27/150	SS-8	26		20									
		– Very Dense w/Rock Fragments			25/150 25/150	SS-9	100+		16	13	22	12	26	27	27	19	8	A-4a(4)
7	286.2	Broken Light Grey LIMESTONE 1.5M RUN 97% RECOVERY 0% RQD				RC-1												
8	284.7	End of Borehole																

NOTES: Auger refusal was encountered at 6.7 meters. A 1.5 M rock core sample was taken starting at this depth.

LOG OF TEST BORING

BORING NO. M-S10
DATE: 5/6/97
JOB #: 33644.01
ELEV.: 294.377
DRILLERS: BG/TM
COMPLETION (m): 1.2
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 1+525.6, 13.1M RT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m):
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	294.4	FILL – Wet Very Loose Dark Brown SILTY CLAY and SAND w/Little Silt and Cinders			2/150 2/150 2/150	SS-1	4		21									
1	293.6	Moist Medium Stiff Yellow-Brown and Grey CLAY w/Silt, Little Sand, Trace Gravel, A-6(13)			3/150 3/150 4/150	SS-2	7	1536	24	1	10	11	40	38	42	19	23	A-7-6(13)
2	292.7	Moist Loose Grey-Brown SANDY SILT w/Little Clay, Trace Gravel, A-4a(6)			3/150 4/150 5/150	SS-3	9	1893	14	2	14	21	43	20	21	16	5	A-4a(6)
3	291.9	Very Damp Very Stiff Grey-Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(8)			6/150 10/150 12/150	SS-4	22	1647	15	2	17	11	30	40	30	18	12	A-6a(8)
4	291.2	Moist Medium Dense Grey Brown SANDY SILT w/Clay, Trace Gravel, A-4a(7)			8/150 12/150 15/150	SS-5	28	1772	16	5	16	12	32	37	26	18	8	A-4a(7)
	290.4	Very Damp Very Stiff Grey Silty CLAY w/Some Sand, Trace Gravel			4/150 8/150 11/150	SS-6	19	1842	16									
5					7/150 8/150 11/150	SS-7	19	1849	13									
6		– Stiff			31/150 7/150 9/150	SS-8	16											
7	287.4	Damp Very Dense Grey SANDY SILT w/Some Clay, Trace Gravel and Rock Fragments			9/150 16/150 21/150	SS-9	37											
		– Very Stiff			11/150 26/150 31/150	SS-10	57											
8					15/150 28/150 46/150	SS-11	64											
9	285.5	WEATHERED LIMESTONE																
10	284.9	Some Fractured Grey LIMESTONE 1.5M RUN 98% RECOVERY 28% RQD				RC-1												
11	283.4	End of Borehole																

NOTES: Auger refusal was encountered at 9.4 meters. A 1.5 M rock core sample was taken starting at this depth.

TOLEDO ENGINEERING CO., INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/AMB
DATE: 8-2-99
DRAWING NO. 33644-05
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. M-S11
DATE: 3/13/97
JOB #: 33644.01
ELEV.: 294.392
DRILLERS: BG/TB
COMPLETION (m): 3.7
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 1+596.2, 20.3M RT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 5.0
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	294.4	TOPSOIL – 381 mm																
	294.0	Moist Medium Stiff Brown SILT and CLAY w/Little Sand and Trace Gravel, A-6a(9)			3/50 3/50 4/50	SS-1	8	1533	21	1	6	9	38	46	32	21	11	A-6c(9)
1					3/150 3/150 3/150	SS-2	6	1496	26									
2					3/150 4/150 5/150	SS-3	9	1672	19									
3	291.8	Moist Medium Dense Brown SANDY SILT w/Clay, Trace Gravel, A-4a(8)			6/150 8/150 13/150	SS-4	21	1784	16	2	13	14	30	42	28	20	8	A-4a(8)
4		– Grey			5/150 8/150 9/150	SS-5	17	1953	13									
		– A-4c(7)			5/150 8/150 11/150	SS-6	19	1874	13	6	14	12	28	40	25	15	10	A-4c(7)
5					6/150 8/150 9/150	SS-7	17	1900	14									
6	288.8	Wet Medium Dense Grey COARSE to FINE SAND w/Little Silt, Trace Clay and Gravel			8/150 10/150 11/150	SS-8	21											
7	287.6	Damp Very Dense Grey SANDY SILT w/Some Clay, Trace Gravel and Rock Fragments – w/Occasional Cobbles			8/150 10/150 11/150	SS-9	21		17									
					21/150 26/150 30/150	SS-10	56	2007	8									
8		– Dense A-4a(5)			13/150 15/150 16/150	SS-11	31	1778	13	4	16	17	31	32	22	15	7	A-4a(5)
9		–Very Dense			50/50	SS-12	100+		12									
	285.6	Some Fractured Grey LIMESTONE 1.5M RUN 100% RECOVERY 0% RQD				RC-1												
10																		
11	283.7	End of Borehole																

NOTES: Auger refusal was encountered at 8.8 meters. Roller bit refusal at 9.2 meters. A 1.5 M rock core sample was taken starting at this depth.

LOG OF TEST BORING

BORING NO. M-S12
DATE: 5/8/97
JOB #: 33644.01
ELEV.: 294.490
DRILLERS: BG/TB
COMPLETION (m): 8.8
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 1+518.2, 13.3M LT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): NONE
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	294.5	FILL – Very Moist Medium Stiff Brown SILTY CLAY w/Trace Sand and Gravel			2/150 2/150 3/150	SS-1	5		29									
1	293.7	Moist Very Stiff Brown CLAY w/Some Silt, Little Sand, Trace Gravel, A-7-6(13)			4/150 7/150 11/150	SS-2	18	1600	22	1	9	10	25	55	42	20	22	A-7-6(13)
2	292.8	Very Damp Very Stiff Brown and Grey SILT and CLAY w/Little Sand, Trace Gravel, A-6a(10)			6/150 12/150 18/150	SS-3	30	1754	15	1	11	11	27	50	33	18	15	A-6a(10)
3	292.1	Moist Dense Yellow Brown and Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a (7)			9/150 18/150 19/150	SS-4	37	1732	16	2	15	13	30	40	27	18	9	A-4a(7)
4	291.3	Very Damp Hard Grey-Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(8)			10/150 15/150 20/150	SS-5	35		15	1	15	14	32	33	28	17	11	A-6c(8)
		– Very Stiff Brown			7/50 10/50 13/50	SS-6	23	1748	15									
5		– Grey-Brown			8/50 12/50 14/50	SS-7	26	1767	15									
6					5/50 7/50 10/50	SS-8	17											
		– Grey			6/150 9/150 9/150	SS-9	18	1876	16									
7	287.3	Some Dense Grey SANDY SILT w/Some Clay, Trace Gravel			21/150 19/150 20/150	SS-10	39	1672	11									
8					18/150 23/150 26/150	SS-11	49	1800	14									
9	285.7	– w/Little Clay and Rock Fragments			48/150 50/50	SS-12	100+											
		Broken Grey LIMESTONE																
10		0.9M RUN 94% RECOVERY 0% RQD				RC-1												
11		0.8M RUN 100% RECOVERY 0% RQD				RC-2												
12	282.8	End of Borehole																

NOTES: Auger refusal was encountered at 10.0 meters. A 0.9 and 0.8 M rock core samples were taken starting at this depth.

LOG OF TEST BORING

BORING NO. V-S13
DATE: 5/14/97
JOB #: 33644.01
ELEV.: 293.575
DRILLERS: NW/CM
COMPLETION (m): N/A
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 1+808.3, 0.8M RT
DRILL METHOD: 108 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 6.1
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	293.6	ASPHALT – 76 mm																
	293.5	CRUSHED STONE – 432 mm			4/50 3/50 3/50	SS-1	6	1751	16	3	13	7	34	33	24	18	6	A-4c(6)
1	293.1	Moist Loose Grey-Brown SANDY SILT w/Clay, Trace Gravel, A-4c(6)																
	292.7	Very Moist Medium Stiff Dark Grey and Grey CLAY w/Some Silt and Sand, Trace Gravel, A-7-6(15)			2/150 3/150 5/150	SS-2	8	1397	30	9	15	4	29	43	48	19	29	A-7-6(15)
2	291.9	Moist Medium Stiff Grey-Brown SILT and CLAY w/Some Sand, Trace Grave, A-6c(9)			2/150 3/150 4/150	SS-3	7	1527	25	2	12	14	31	41	35	21	14	A-6a(9)
3	291.1	Moist Medium Dense Yellow Brown and Grey SANDY SILT w/Clay, Trace Gravel, A-4a(6)			5/150 6/150 12/150	SS-4	21	1925	13	5	15	13	33	34	25	18	7	A-4c(6)
					4/50 5/50 6/50	SS-5	11	1919	13									
4		– Loose Grey			3/50 4/50 5/50	SS-6	9	1919	13									
5		– Medium Dense			4/50 6/50 6/50	SS-7	12	1897	14									
6		– Loose			2/150 4/150 4/150	SS-8	8	1885	16									
7					2/150 3/150 4/150	SS-9	7		21									
					2/150 4/150 6/150	SS-10	10	1851	17									
8					3/150 5/150 5/150	SS-11	10	1746	16									
9		– Medium Dense			6/150 6/150 12/150	SS-12	18	1970	12									
10	283.5	Broken Grey LIMESTONE 1.5M RUN 100% RECOVERY 0% RQD				RC-1												
11		– Lost Water Return at 11.1M																
12	282.0	End of Borehole																

NOTES: Auger refusal was encountered at 10.0 meters. A 1.5 M rock core sample was taken starting at this depth. Boring moved 27.4 meters east of stake. Elevation approximate due to relocation.

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-86
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

86/130

LOG OF TEST BORING

BORING NO. M-S14
DATE: 3/17/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 1+800.3, 32.1M RT
ELEV.: 294.354
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
DRILLERS: NW/CM
ENCOUNTERED WATER DEPTH (m): 4.3
COMPLETION (m): 6.8
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	294.4	ASPHALT – 152 mm																
	294.2	CRUSHED STONE – 305 mm			3/150 4/150 6/150													
1	293.9	Moist Stiff Grey SILTY CLAY w/Some Sand, Trace Gravel																
	293.3	Moist Medium Stiff Brown SILT and CLAY w/Trace Sand and Gravel, A-6a(10)			2/150 3/150 4/150	SS-2	7	1552	24	4	12	11	39	34	36	21	15	A-6a(10)
2		– Very Damp			3/150 3/150 3/150	SS-3	6	1746	18									
		– Stiff Brown/Grey w/Some Sand			3/150 6/150 7/150	SS-4	13		13									
3																		
4	291.0	Moist Medium Dense Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(7)			4/150 7/150 7/150	SS-5	14	1885	13	4	13	12	39	32	23	16	7	A-4a(7)
					3/150 6/150 8/150	SS-6	14		12									
5		– A-4a(7)			8/150 8/150 8/150	SS-7	16	1985	14	3	13	12	40	32	23	16	7	A-4a(7)
6					4/150 5/150 8/150	SS-8	13	1919	15									
					5/150 7/150 8/150	SS-9	15		11									
7	287.3	Moist Loose Grey SILTY SAND w/Little Clay, Trace Gravel	FS		3/150 5/150 5/150	SS-10	10		13									
	286.6	Very Damp Stiff Grey SILT and CLAY w/Some Sand, Trace Gravel, A-6a(9)	FS		5/150 6/150 7/150	SS-11	13	1879	18	4	12	9	38	37	29	17	12	A-6a(9)
8																		
9		– Very Stiff			4/150 7/150 9/150	SS-12	16	1929	11									
10		– Very Hard			25/0	SS-13	100+											
	284.0	Broken Grey LIMESTONE 1.5M RUN 100% RECOVERY 73% RQD				RC-1												
11																		
12	282.5	End of Borehole																

NOTES: Auger refusal was encountered at 10.4 meters. A 1.5 M rock core sample was taken starting at this depth. Boring Moved 6.1 M east of stake. Elevation Approximate due to relocation.

LOG OF TEST BORING

BORING NO. M-S15
DATE: 5/16/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 1+826.5, 17.1M LT
ELEV.: 294.113
DRILL METHOD: 108 MM HOLLOW STEM AUGERS
DRILLERS: NW/CV
ENCOUNTERED WATER DEPTH (m): 2.6
COMPLETION (m): 3.6
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	294.1	ASPHALT – 254 mm																
	293.9	CRUSHED STONE – 203 mm			4/150 5/150 6/150	SS-1	11	1552	23	2	11	15	36	36	39	18	21	A-6b(12)
1	293.7	Moist Stiff Grey-Brown SILTY CLAY w/Some Sand, Trace Gravel A-6b(12)																
	293.2	Moist Stiff Yellow-Brown and Grey SILT and CLAY w/Sand, Trace Gravel, A-6a(4)			4/150 5/150 5/150	SS-2	10	1573	22	2	12	33	23	29	28	17	11	A-6a(4)
2	292.4	Moist Medium Stiff Grey-Brown SILTY CLAY w/Sand, Trace Gravel, A-6b(6)			2/150 2/150 3/150	SS-3	5	1674	12	7	26	24	18	25	33	16	17	A-6b(6)
	291.5	Moist Medium Stiff Brown SAND and SILT and CLAY w/Sand, Trace Gravel, A-6a(2)			4/150 3/150 3/150	SS-4	6	1603	19	1	47	14	20	18	32	19	13	A-6a(2)
3																		
4		– Grey			2/150 2/150 3/150	SS-5	5		21	15								
		– Very Moist SILT and CLAY w/Some Sand, Trace Gravel			2/150 3/150 4/150	SS-6	7	1901	16									
5					3/150 4/150 4/150	SS-7	8	1900	15									
6		– Stiff			4/150 3/150 4/150	SS-8	7		16									
					4/150 4/150 5/150	SS-9	9	1849	15									
7	287.1	Moist Loose Grey SANDY SILT w/Little Clay, Trace Gravel			5/150 4/150 6/150	SS-10	10	1991	13									
		– Medium Dense			5/50 6/50 7/50	SS-11	13	1879	14									
8	285.7	Very Damp Stiff Grey SILT and CLAY w/Sand, Trace Gravel			4/150 5/150 5/150	SS-12	10	1927	12									
9																		
10	284.4	Broken Grey LIMESTONE 1.5M RUN 100% RECOVERY 0% RQD				RC-1												
11																		
	282.8	End of Borehole																

NOTES: Auger refusal was encountered at 9.8 meters. A 1.5 M rock core sample was taken starting at this depth. Boring moved 10.5 meters west of staked location. Elevation approximate due to relocation.

LOG OF TEST BORING

BORING NO. M-S16
DATE: 5/15/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 1+817.7, 0.5M RT
ELEV.: 293.975
DRILL METHOD: 108 MM HOLLOW STEM AUGERS
DRILLERS: NW/CV
ENCOUNTERED WATER DEPTH (m): 2.6
COMPLETION (m): 3.3
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	TEST RESULTS SILT %	TEST RESULTS CLAY %	TEST RESULTS LIQUID LIMIT %	TEST RESULTS PLASTIC LIMIT %	TEST RESULTS PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	294.0	ASPHALT – 254 mm																
	293.7	CRUSHED STONE – 203 mm			6/150 5/150 7/150	SS-1	12	1563	24	18	4	7	29	42	47	17	30	A-7-6(15)
1	293.5	Moist Stiff Brown and Grey CLAY w/Some Silt, Little Sand and Gravel, A-7-6(15)																
	293.1	Moist Stiff Yellow-Brown and Grey SILT and CLAY w/Little Sand, A-6a(9)			4/150 5/150 5/150	SS-2	10	1693	20	0	7	7	39	47	33	21	12	A-6a(9)
2	292.3	Moist Medium Dense Grey-Brown SANDY SILT w/Some Clay, A-4a(5)			4/150 5/150 6/150	SS-3	11	1736	18	0	17	19	34	28	23	16	7	A-4a(5)
	291.4	Moist Loose Grey-Brown GRAVEL w/Sand, Little Silt and Clay, A-2-4(0)			4/150 3/150 4/150	SS-4	7	1754	18	10	43	12	20	15	27	19	8	A-2-4(0)
3	291.1	Very Damp Medium Stiff Grey-Brown SILT and CLAY w/Some Sand, Trace Gravel																
					3/150 4/150 4/150	SS-5	8	1906	15									
4																		
					3/150 2/150 3/150	SS-6	5	1752	18									
5					3/150 4/150 3/150	SS-7	7		19									
6		– Stiff			3/150 4/150 5/150	SS-8	9	1922	15									
	287.9	Moist Medium Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			3/150 4/150 4/150	SS-9	8		23									
7	287.0	Very Damp Very Stiff Grey SILT and CLAY w/Some Sand, Trace Gravel			4/150 5/150 17/150	SS-10	22	1857	15									
		– Stiff			4/150 5/150 5/150	SS-11	10	1781	14									
8	285.4	Very Damp Medium Dense Grey SANDY SILT w/Some Clay, Trace Gravel			6/150 5/150 7/150	SS-12	12	1993	13									
9	284.7	WEATHERED LIMESTONE																
10	283.9	Broken Grey LIMESTONE 1.5M RUN 97% RECOVERY 0% RQD				RC-1												
11																		
12	282.4	End of Borehole																

NOTES: Auger refusal was encountered at 10.0 meters. A 1.5 M rock core sample was taken starting at this depth. Boring moved 30.5 meters west of staked section. Elevation approximate due to relocation.

TOLEDO ENGINEERING CO., INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

SOIL PROFILE

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-87
PROJECT NO. 33644.01

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. M-E28
DATE: 5/7/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 1+960.12 M LT
JOB #: 33644.01
DRILL METHOD: HAND AUGERS & HAND HOUSAL SAMPLER
ELEV.: 293.715
DRILLERS: BG/TM
ENCOUNTERED WATER DEPTH (m): 3.5
COMPLETION (m): 4.1
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	293.7	TOPSOIL – 305 mm																
	293.4	Moist Medium Stiff Brown SILT and CLAY w/Little Sand			3/150 4/150 5/150	SS-1	5											
1		– Stiff Grey Brown w/Little Sand and Trace Gravel, A-6a(8)			5/150 7/150 9/150	SS-2	9	1490		0	4	9	41	46	38	27	11	A-6a(8)
2	291.9	Moist Medium Dense Brown SANDY SILT w/Clay, Little Gravel			12/150 19/150 32/150	SS-3	20											
		– A-4a(5)			15/150 21/150 32/150	SS-4	20	1788		17	12	11	23	37	25	17	8	A-4a(5)
3		– Grey			21/150 35/150 49/150	SS-5	26	2042										
4		– w/Trace Gravel, A-4a(7)			26/150 50/150 61/150	SS-6	28	1933		5	12	14	33	36	23	5	8	
	289.1	End of Borehole																
5																		

NOTES: SAMPLES WERE TAKEN WITH A HAND HOUSAL SAMPLER AND BLOW COUNTS WERE CONVERTED USING "TERZAGHI STANDARD" NUMBERS.

LOG OF TEST BORING

BORING NO. M-E28A
DATE: 5/7/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 2+080 12 M RT
JOB #: 33644.01
DRILL METHOD: HAND AUGERS & HAND HOUSAL SAMPLER
ELEV.: 294.250
DRILLERS: BG/TM
ENCOUNTERED WATER DEPTH (m): 3.3
COMPLETION (m): 5.0
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	294.2	TOPSOIL – 279 mm																
	294.0	Moist Medium Stiff Brown/Grey CLAY w/Silt, Little Sand, Trace Gravel, A-7-6(13)			5/150 5/150 6/150	SS-1	6	1531		1	2	10	37	50	41	18	23	A-7-6(13)
1		– Grey/Brown			6/150 8/150 9/150	SS-2	10	1475										
2	292.4	Moist Medium Dense Grey/Brown SANDY SILT w/Clay, Trace Gravel, A-4a(7)			10/150 17/150 29/150	SS-3	19	1764		3	13	12	27	44	26	18	8	A-4a(7)
		– Brown			15/150 19/150 26/150	SS-4	21											
3	290.9	Very Damp Very Stiff Brown–Grey SILT and CLAY w/Some Sand, Trace Gravel, A-6a(8)			21/150 37/150 50/150	SS-5	28	1821		2	14	12	29	43	25	14	11	A-6a(8)
4					24/150 37/150 51/150	SS-6	27	1863										
5		– Grey			19/150 42/150 55/150	SS-7	27	1849					-	-				
	288.8	End of Borehole																

NOTES: SAMPLES WERE TAKEN WITH A HAND HOUSAL SAMPLER AND BLOW COUNTS WERE CONVERTED USING "TERZAGHI STANDARD" NUMBERS.

LOG OF TEST BORING

BORING NO. M-S17
DATE: 5/16/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 2+194.0, 40.2M LT
JOB #: 33644.01
DRILL METHOD: 108mm HOLLOW STEM AUGER
ELEV.: 295.000
DRILLERS: NW/CM
ENCOUNTERED WATER DEPTH (m): 11.8
COMPLETION (m): 7.2
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	293.8	CRUSHED STONE – 254mm																
	293.5	Moist Medium Stiff Brown/Grey SILT and CLAY w/ Little Sand Trace Gravel, A-6a(9)			3/150 3/150 4/150	SS-1	7	1520		2	8	12	35	43	28	16	12	A-6a(9)
1		– Stiff Some Sand w/Trace Gravel, A-6a(8)			4/150 5/150 4/150	SS-2	9	1557		3	15	13	36	33	31	17	14	A-6a(8)
2		– Soft w/Little Sand, Trace Gravel (Black weathered Shale), A-6a(9)			3/150 2/150 2/150	SS-3	4	1507		4	17	12	31	42	31	19	12	A-6a(9)
	291.2	Damp Loose Brown SILT w/Little Sand, Trace Gravel, A-4a(8)			3/150 4/150 4/150	SS-4	8	1668		2	9	11	51	27	27	17	10	A-4a(8)
3					3/150 4/150 5/150	SS-5	9	1802										
4					3/150 4/150 6/150	SS-6	10	1914										
5		– Medium Dense			5/150 6/150 7/150	SS-7	12	1914										
6		– Loose Grey			4/150 6/150 3/150	SS-8	9	1951										
					6/150 4/150 4/150	SS-9	8	1962										
7					4/150 5/150 5/150	SS-10	10	1949										
8		– Medium Dense			3/150 5/150 6/150	SS-11	11	1949										
9		– Loose			2/150 3/150 4/150	SS-12	7	1813										
10		– Medium Dense Grey			3/150 6/150 15/150	SS-13	21											
11																		
12		– Very Dense			5/150 50/50	SS-14	100+	1903										
13	281.0	BROKEN GREY LIMESTONE 1.5M RUN 94% RECOVERY 8% RQD				RC-1												
14	279.5	End of Borehole																

NOTES: Boring moved 30.5M north of staked location. Boring elevation approximate due to relocation. Auger refusal encountered at 12.8M. A 1.5M rock core was taken.

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-88
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

88/130

LOG OF TEST BORING

BORING NO. M-S18
DATE: 5/1/97
JOB #: 33644.01
ELEV.: 295.100
DRILLERS: NW/CM
COMPLETION (m): 0.0
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 2+279.7, 9.2M RT
DRILL METHOD: 108mm HOLLOW STEM AUGER
ENCOUNTERED WATER DEPTH (m): 5.7
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	294.9	CRUSHED STONE 304mm																
	294.8	Moist: Soft Grey SILT and CLAY w/Little Sand, A-6a(9)			2/2/2	SS-1	4	1531	24	0	5	13	41	41	32	19	12	A-6a(9)
1		– Stiff Yellow Brown/Grey w/Trace Sand			4/5/7	SS-2	12	1741	18									
2		– Grey/Brown w/Some Sand, Trace Grave			3/6/9	SS-3	15	1762	16									
		– A-6a(9)			5/7/9	SS-4	16	1850	14	4	13	13	38	32	29	15	14	A-6a(9)
3		– Medium Stiff Grey			3/4/5	SS-5	9	1927	14									
4	290.8	Moist Loose Grey SANDY SILT w/Trace Gravel			4/4/5	SS-6	9	2017	13									
		– A-4a(6)			5/4/5	SS-7	9	1953	14	4	18	12	28	38	25	16	9	A-4a(6)
5					4/5/5	SS-8	10		14									
6	288.5	Moist Very Stiff Grey SILT and CLAY w/Some Sand, Trace Grave, A-6a(6)			5/7/10	SS-9	17	1941	15	6	19	11	28	36	27	16	11	A-6a(6)
7		– Very Stiff			6/10/12	SS-10	22											
8		– Stiff			5/7/8	SS-11	15	1800	19									
9	286.2	Wet Medium Dense Grey GRAVEL and/or STONE FRAGMENTS w/ Sand, Little Clay and Silt, A-2-6(11)			3/5/9	SS-12	14	1704	20	29	25	11	13	22	25	14	11	A-2-6(1)
10					2/50 6/50 9/50	SS-13	15											
11																		
12					6/7/15	SS-14	22		8									
13	281.8	WEATHERED LIMESTONE																
	281.5	Broken Grey LIMESTONE 1.5M RUN 100% RECOVERY 7% RQD				RC-1												
14																		
15	279.9	End of Borehole																

NOTES: Boring moved 6.7M north of staked location. Elevation approximate due to relocation. Auger refusal encountered at 13.4M. A 1.5M rock core was taken.

LOG OF TEST BORING

BORING NO. M-S19
DATE: 4/30/97
JOB #: 33644.01
ELEV.: 295.000
DRILLERS: NW/CM
COMPLETION (m): 4.7
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 2+263.6, 8.0M LT
DRILL METHOD: 108mm HOLLOW STEM AUGER
ENCOUNTERED WATER DEPTH (m): 4.8
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	294.2	CRUSHED STONE – 304mm																
	293.9	Very Moist Medium Stiff Grey/Brown SILT and CLAY w/Trace Sand			3/150 3/150 4/150	SS-1	7	1426	30									
1	293.2	Moist: Medium Stiff Yellow Brown/Grey SILTY CLAY w/Trace Sand, A-6a(12)			3/150 3/150 4/150	SS-2	7	1482	26	0	5	4	43	48	40	21	19	A-6b(12)
2	292.4	Moist: Stiff Yellow Brown/ Grey SILT and CLAY w/ Little Sand, Trace Gravel			3/150 4/150 5/150	SS-3	9	1419	25									
3					5/150 7/150 6/150	SS-4	13	1725	17									
4					6/150 4/150 10/150	SS-5	14		16									
	290.1	Damp Stiff Grey CLAY w/Silt, Little Sand, Trace Gravel, A-7-6(20)			2/50 5/50 7/50	SS-6	12	1921	14	2	4	10	52	32	62	23	39	A-7-6(20)
5					5/50 5/50 8/50	SS-7	13	1858	14									
6					2/50 5/50 7/50	SS-8	12	1905	12									
7	287.8	Damp Stiff Grey Silty Clay w/Little Sand, Trace Gravel			3/150 5/150 7/150	SS-9	12	1956	12									
					3/150 3/150 8/150	SS-10	11	1837	14									
8	286.3	Damp Loose Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(8)			4/150 3/150 6/150	SS-11	9	1881	14	3	12	7	46	32	26	16	10	A-4a(8)
9					4/150 4/150 5/150	SS-12	9		11									
10		– Medium Dense, A-4a(8)			5/150 6/150 12/150	SS-13	18	2030	14	4	12	7	49	28	26	17	9	A-4a(8)
11																		
12	282.3	Dense Grey STONE FRAGMENTS w/ Little Sand and Silt			15/150 16/150 31/150	SS-14	47		8									
13	281.7	Broken Grey LIMESTONE 1.5M RUN 93% RECOVERY 7% RQD				RC-1												
14	280.2	End of Borehole																

NOTES: Boring moved 6.7M south of standard location. Elevation approximate due to relocation. Auger refusal at 12.5M. A 1.5M rock core was taken.

LOG OF TEST BORING

BORING NO. M-S20
DATE: 4/30/97
JOB #: 33644.01
ELEV.: 295.000
DRILLERS: NW/CM
COMPLETION (m): N/A
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 2+365.9, 12.6M RT
DRILL METHOD: 108mm HOLLOW STEM AUGER
ENCOUNTERED WATER DEPTH (m): 5.2
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	294.8	TOPSOIL – 254mm																
	294.5	Damp Stiff Grey/Brown SILT and CLAY w/Trace Sand, Gravel			4/50 5/50 5/50	SS-1	10	1751	16									
1					3/150 6/150 6/150	SS-2	11	1820	13									
2	292.9	Damp Stiff Yellow Brown SILTY CLAY w/Trace Sand, Gravel			3/150 5/150 6/150	SS-3	11	1613	22									
3	292.2	Damp Very Stiff Brown/Grey SILT and CLAY w/Sand, Trace Gravel, A-6a(6)			9/150 12/150 15/150	SS-4	27	1882	14	4	25	10	36	25	29	18	11	A-6a(6)
		– Stiff			4/50 5/50 5/50	SS-5	9	1925	14									
4					3/50 4/50 5/50	SS-6	9	1917	14									
5	289.9	Damp Stiff Grey SILTY CLAY w/Trace Sand and Grave			4/50 4/50 6/50	SS-7	9	1893	14	1	9	4	42	44	26	14	12	A-6a(9)
		– Red/Brown			4/150 5/150 6/150	SS-8	10	1818	12									
6	288.4	Damp Medium Dense Grey SILT w/Some Clay Little Sand, Trace Gravel, A-4b(8)			4/150 5/150 5/150	SS-9	10	1765	15	3	7	6	64	20	24	16	8	A-4b(8)
7					4/150 5/150 6/150	SS-10	11	1977	14									
8	286.8	Damp Stiff Grey SILTY CLAY w/ Trace Sand, Grave			4/50 5/50 6/50	SS-11	11	1820	17									
9	286.1	Damp Stiff Grey SILT and CLAY w/Trace Sand, Grave			4/50 4/50 7/50	SS-12	11	1996	12									
10																		
11					4/50 7/50 9/50	SS-13	16		12									
12		– Very Hard			25/0	SS-14												
13	282.6	Fractured LIMESTONE 1.5M RUN 100% RECOVERY 20% RQD				RC-1												
14	281.1	End of Borehole																

NOTES: Auger refusal at 12.2M. A 1.5M rock core was taken.

TOLEDO ENGINEERING CO., INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-89
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. M-E29
DATE: 4/30/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 2+500, 7 M RT
ELEV.: 294.952
DRILL METHOD: 57mm HOLLOW STEM AUGER
DRILLERS: BG/JL
ENCOUNTERED WATER DEPTH (m): 6.7
COMPLETION (m): 6.4
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	295.0	TOPSOIL – 254mm																
	294.6	Moist Stiff Brown Grey CLAY w/Silt, Trace Sand and Organics, A-7-6(16)			3/150 5/150 9/150	SS-1	11	1533	24	0	3	7	49	41	47	20	27	A-7-6(16)
1		– w/Trace Gravel			5/150 7/150 10/150	SS-2	17	1834	15									
2	293.1	Moist Hard Brown/Grey SILT and CLAY w/Some Sand, Trace Gravel A-6c(7)			7/150 14/150 21/150	SS-3	33	1829	15	9	13	11	40	27	28	16	12	A-6c(7)
3		– w/Little Sand – Very Stiff			8/150 12/150 22/150	SS-4	34	1998	12									
					9/150 10/150 10/150	SS-5	20	2049	13									
4					10/150 12/150 13/150	SS-6	25	1983	13									
5	290.1	Moist Medium Dense Brown/Grey SILT w/Some Sand, Little Clay, Trace Gravel			6/1500 9/150 10/150	SS-7	19	2007	12									
6		– A-4b(7)			8/150 12/150 14/150	SS-8	26	2006	12	2	13	17	52	16	18	12	6	A-4b(7)
7					4/150 6/150 6/150	SS-9	12	1792	13									
					8/150 7/150 8/150	SS-10	15		14									
8	287.0	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E30
DATE: 4/29/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 2+620 12M RT
ELEV.: 295.671
DRILL METHOD: HAND AUGERS AND HAND HOUSAL SAMPLER
DRILLERS: BG/JL
ENCOUNTERED WATER DEPTH (m): DRY
COMPLETION (m): DRY
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	295.7	TOPSOIL – 304mm																
	295.4	Moist Stiff Brown Grey CLAY w/Silt, Little Sand, Trace Grave, A-7-6(16)			7/150 19/150 21/150	SS-1	17	1491	27	1	5	12	38	44	47	20	27	A-7-6(16)
1	294.6	Moist Stiff Grey/Brown SILT and CLAY w/Some Sand, A-6a(9)			7/1509 9/150 19/150	SS-2	14	1549	25	0	11	12	41	36	28	17	11	A-6a(9)
2	293.6	Damp Very Stiff Grey/Brown SILTY CLAY w/Little Sand, Trace Gravel, A-6b(10)			11/150 20/150 29/150	SS-3	20	1676	18	2	8	8	37	45	34	18	16	A-6b(10)
3					14/150 22/150 34/150	SS-4	21	1917	14									
4					15/150 24/150 40/150	SS-5	22	1736	14									
	291.6	Damp Medium Dense Grey SANDY SILT w/CLAY, Trace Grave, A-4a(7)			10/150 15/150 20/150	SS-6	16	1773	14	4	13	14	37	32	20	14	6	A-4c(7)
5					18/150 30/150 34/150	SS-7	22	1945	14									
6	289.9	Damp Very Stiff Grey SILT and CLAY w/Some Sand, Trace Gravel – A-6a(9)			9/150 16/150 25/150	SS-8	17		14									
7					14/150 24/150 30/150	SS-9	20	1943	12	19	10	11	34	26	31	16	15	A-6a(7)
	288.7	End of Borehole																

NOTES: Samples were taken with a Hand Housel Sampler and blow counts were corvertec using "TERZAGHI STANDARD" numbers.

LOG OF TEST BORING

BORING NO. M-E31
DATE: 4/29/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 2+740 12M RT
ELEV.: 295.676
DRILL METHOD: 57mm –OLLOW STEM AUGER
DRILLERS: BG/JL
ENCOUNTERED WATER DEPTH (m): 6.8
COMPLETION (m): DRY
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	295.7	TOPSOIL – 355mm																
	295.3	Moist Stiff Brown/Grey SILTY CLAY w/Little Sand			3/150 8/150 7/150	SS-1	13	1570	24									
1	294.8	Moist Medium Stiff Brown/Grey SILT and CLAY w/Little Sand, Trace Grave, A-6a(10)			3/150 5/150 5/150	SS-2	8	1650	21	5	10	12	34	39	32	17	15	A-6a(10)
2		– Very Stiff w/Little Sand, Trace Grave, Calcite			8/150 8/150 9/150	SS-3	17	1791	15									
					6/150 7/150 12/150	SS-4	19	1986	13									
3		– w/Some Sand, A-6a(9)			6/150 7/150 10/150	SS-5	17	1983	14	4	13	14	36	33	32	18	14	A-6c(8)
4		– Stiff			3/150 4/150 6/150	SS-6	10	1961	13									
5					6/150 7/150 8/150	SS-7	15	1885	13									
6		– w/Trace Sand and Grave, A-6a(9)			3/150 5/150 6/150	SS-8	11	1977	13	6	7	0	22	65	29	16	13	A-6a(9)
7	289.3	Moist Medium Dense Grey SANDY SILT w/Trace Clay			6/150 7/150 8/150	SS-9	15	1823	14									
	288.5	Damp Stiff Grey SILT and CLAY w/Little Sand			5/150 6/150 7/150	SS-10	13	1932	14									
	288.1	End of Borehole																

NOTES:

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-90
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

90/130

LOG OF TEST BORING

BORING NO. M-E32
DATE: 4/29/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 2+860 13M LT
ELEV.: 296.643
DRILL METHOD: 57mm HOLLOW STEM AUGER
DRILLERS: BG/JL
ENCOUNTERED WATER DEPTH (m): 5.3
COMPLETION (m): 6.1
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	296.6	TOPSOIL – 355mm																
1	296.3	Damp Stiff Brown/Grey SILTY CLAY w/Little Sand, Trace Gravel, A-6b(11)			3/150 5/150 6/150	SS-1	11	1698	19	1	11	10	34	44	36	18	18	A-6b(11)
		– Very Stiff, A-6b(10)			6/150 8/150 9/150	SS-2	17	1871	15	4	8	12	43	33	35	19	16	A-6b(10)
2	294.8	Damp Very Stiff Brown/Grey SILT and CLAY w/Some Sand, Trace Grave, A-6c(8)			6/150 7/150 12/150	SS-3	19	1764	16	3	16	14	34	33	32	19	13	A-6c(8)
3					7/150 12/150 18/150	SS-4	30	1882	14									
4	293.3	Damp Loose Grey SANDY SILT w/Clay, Trace Gravel			3/150 4/150 5/150	SS-5	9	1979	14									
		– Medium Dense, A-4c(7)			3/150 6/150 7/150	SS-6	13	1953	15	3	13	13	32	39	25	15	10	A-4a(7)
5	291.8	Damp Very Stiff SILT and CLAY w/Little Sand, Trace Gravel			6/150 8/150 9/150	SS-7	17	1855	14									
6					5/150 7/150 9/150	SS-8	16	1857	14									
7					6/150 8/150 12/150	SS-9	20	1881	15									
	289.5	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E33
DATE: 4/29/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 2+980 13M RT
ELEV.: 297.294
DRILL METHOD: 57mm HOLLOW STEM AUGER
DRILLERS: BG/JL
ENCOUNTERED WATER DEPTH (m): DRY
COMPLETION (m): DRY
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	297.3	TOPSOIL – 355mm																
1	297.0	Moist Stiff Grey/Brown SILTY CLAY w/Little Sand, A-6b(11)			3/150 6/150 7/150	SS-1	13	1684	20	0	9	13	32	46	37	20	17	A-6b(11)
	296.2	Very Damp Very Stiff Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(9)			7/150 12/150 15/150	SS-2	27	1770	17	2	11	13	39	35	28	16	12	A-6a(9)
2	295.5	Damp Medium Dense SANDY SILT w/Some Clay, Trace Gravel, A-4a(6)			8/150 12/150 15/150	SS-3	27	1788	16	5	13	12	42	28	25	18	7	A-4a(6)
3					8/150 13/150 15/150	SS-4	28	1565	18									
4		– w/Clay, A-4a(7)			5/150 5/150 9/150	SS-5	14	1930	14									
					6/150 7/150 10/150	SS-6	17		14	2	15	13	31	39	24	15	9	A-4a(7)
5					7/150 7/150 9/150	SS-7	16											
6					8/150 10/150 12/150	SS-8	22	1881	12									
	291.2	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E34
DATE: 4/29/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 3+100 12M RT
ELEV.: 297.117
DRILL METHOD: 57mm HOLLOW STEM AUGER
DRILLERS: BG/JL
ENCOUNTERED WATER DEPTH (m): DRY
COMPLETION (m): DRY
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	297.1	TOPSOIL – 304mm																
1	296.8	Moist Stiff Yellow Brown/Grey SILTY CLAY w/Little Sand, Trace Gravel, A-6b(13)			3/150 4/150 5/150	SS-1	9	1533	24	2	8	13	33	44	39	17	22	A-6b(13)
	296.2	Damp Stiff Yellow Brown/Grey SILT and CLAY w/Some Sand, Trace Gravel A-6a(8)			6/150 7/150 8/150	SS-2	15	1820	18	1	14	14	38	33	30	19	11	A-6a(8)
2		– w/Sand, A-4a(4)			5/150 5/150 7/150	SS-3	13	1728	17	8	34	12	19	27	28	13	15	A-6a(4)
3		– Very Stiff w/Trace Sand			6/150 8/150 12/150	SS-4	20	1749	18									
	293.8	Damp Medium Dense Grey SANDY SILT w/Clay, Trace Gravel, A-4a(7)			4/150 5/150 6/150	SS-5	11	1932	14	6	14	13	30	37	24	17	7	A-4a(7)
4																		
5					3/150 5/150 7/150	SS-6	13	1900	14									
	292.2	End of Borehole																

NOTES:

IOLIES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/AMB
DATE: 8-2-99
DRAWING NO. 33644-91
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

91/130

LOG OF TEST BORING

BORING NO. M-C11
DATE: 4/1/97
JOB #: 33644.01
ELEV.: 295.686
DRILLERS: BG/CW
COMPLETION (m): DRY
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 3+694 27M LT
DRILL METHOD: 57mm HOLLOW STEM AUGER
ENCOUNTERED WATER DEPTH (m): DRY
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	295.7	TOPSOIL – 406mm																
1	295.3	Moist Stiff Yellow Brown/Grey CLAY w/Some Sand, Little Silt and Trace Gravel, A-7-6(13)			3/150 5/150 4/150	SS-1	9	1624	21	3	2	7	21	48	47	25	22	A-7-6(13)
	294.6	Moist Medium Dense Grey–Brown SANDY SILT w/Clay, Trace Gravel,			5/150 10/150 11/150	SS-2	21	1858	15									
2					8/150 10/150 14/150	SS-3	24	1841	12									
3					6/150 10/150 15/150	SS-4	25	1986	12									
		– A-4a(7)			8/50 9/50 9/50	SS-5	18	1932	13	3	13	13	26	45	25	17	8	A-4a(7)
4					7/50 9/50 12/150	SS-6	21	1869	13									
5					6/50 8/50 10/150	SS-7	18	1953	13									
		– A-4a(6)			8/50 11/150 9/150	SS-8	20	1882	14	5	15	14	25	41	24	15	9	A-4a(6)
6					11/150 16/150 23/150	SS-9	39											
7	288.8	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-C12
DATE: 4/1/97
JOB #: 33644.01
ELEV.: 295.290
DRILLERS: BG/CW
COMPLETION (m): 10.3
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 3+694
DRILL METHOD: 57mm HOLLOW STEM AUGER
ENCOUNTERED WATER DEPTH (m): 12.1
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	295.3	TOPSOIL – 406mm																
1	294.9	Moist Medium Stiff Brown/Grey SILT and CLAY w/Trace Sand, Gravel			3/150 4/150 4/150	SS-1	8	1584	21									
	294.3	Moist Medium Dense Yellow Brown SANDY SILT w/Clay, Trace Gravel			4/150 6/150 6/150	SS-2	12	1658	19									
2		– Medium Dense, A-4a(7)			6/150 10/150 10/150	SS-3	20	1808	15	4	14	12	26	44	28	19	9	A-4a(7)
3	292.9	Damp Hard Brown/Grey SILT and CLAY w/Some Sand, Trace Gravel, A-6a(9)			11/150 16/150 28/150	SS-4	44	1903	13	4	13	12	39	32	28	15	13	A-6a(9)
		– Very Stiff Grey			8/150 16/150 16/150	SS-5	32	1954	12									
4					10/150 14/150 14/150	SS-6	28	1949	12									
5	290.4	Damp Medium Dense Grey SANDY SILT w/Little Clay, Trace Gravel			13/150 19/150 20/150	SS-7	39	1815	13									
		– Yellow/Brown/Grey, A-4c(1)			13/150 15/150 13/150	SS-8	28		10	7	37	17	23	16	23	17	6	A-4c(1)
6					9/150 13/150 13/150	SS-9	26	1746	13									
7	288.1	Moist Medium Dense Grey/Brown COARSE to FINE SAND w/Little Silt, Trace Clay and Gravel			6/150 7/150 8/150	SS-10	15		7									
8					7/150 9/150 12/150	SS-11	21		8									
9		– A-3a(0)			10/150 12/150 12/150	SS-12	24		7	1	30	47	17	5	NON-PLASTIC			A-3a(0)
10	285.1	Moist Very Dense Grey SANDY SILT w/Little Clay,Trace Gravel, A-4a(6)			39/150 42/150 38/150	SS-13	80	1996	9	5	17	14	41	23	22	14	8	A-4a(6)
11																		
12	283.5	Very Dense Grey STONE FRAGMENTS			19/150 45/150 50/50	SS-14	100+		7									
13	282.3	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-C13
DATE: 4/3/97
JOB #: 33644.01
ELEV.: 295.463
DRILLERS: BG/CW
COMPLETION (m): 7.0
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 3+694
DRILL METHOD: 57mm HOLLOW STEM AUGER
ENCOUNTERED WATER DEPTH (m): 7.3
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	295.5	TOPSOIL – 406mm																
1	295.1	Moist Stiff Brown/Grey CLAY w/Silt, Little Sand Trace Gravel, A-7-6(19)			4/150 6/150 5/150	SS-1	9	1599	22	1	7	13	41	38	55	18	37	A-7-6(19)
	294.5	Moist Stiff Brown/Grey SILT and CLAY w/Trace Sand			3/150 4/150 7/150	SS-2	11	1768	18									
2	293.6	Damp Medium Dense Grey SANDY SILT w/Some Clay Trace Gravel, A-4c(6)			4/150 5/150 9/150	SS-3	24	1900	14	4	17	12	37	30	27	18	9	A-4a(6)
3					9/150 13/150 16/150	SS-4	29	1825	14									
					7/150 10/150 17/150	SS-5	27		12									
4					7/150 7/150 13/150	SS-6	20	1983	12									
5		– w/Clay, Trace Grave, A-4c(7)			4/150 10/150 12/150	SS-7	24	1893	14	5	13	12	34	36	25	16	9	A-4a(7)
6					4/150 7/150 11/150	SS-8	18	1775	13									
7					6/150 8/150 12/150	SS-9	18	1940	11									
	288.3	Moist Medium Dense Grey/Brown COARSE to FINE SAND w/Little Silt, Trace Gravel			9/150 11/150 11/150	SS-10	22		8									
8	287.5	Moist Medium Dense Grey/Brown COARSE and FINE SAND w/Little Silt and Trace Clay, A-3a(0)	FS		10/150 12/150 16/150	SS-11	30		8	0	6	68	15	11	NON-PLASTIC			A-3a(0)
	287.1	End of Borehole																

NOTES:

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-92
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. M-E35
DATE: 4/1/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 3+860 12M RT
ELEV.: 296.807
DRILL METHOD: 57mm HOLLOW STEM AUGER
DRILLERS: BG/CW
ENCOUNTERED WATER DEPTH (m): 3.9
COMPLETION (m): 4.0
DEPTH TO – WATER (m): ____ CAVING: ____
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	296.8	TOP SOIL - 406mm																
	296.4	Moist Stiff Grey/Brown CLAY w/Little Sand, Trace Gravel, A-7-6(14)			3/150 5/150 5/150	SS-1	10	1623	20	1	7	9	36	47	43	20	23	A-7-6(14)
1	295.9	Moist Loose Brown SANDY SILT w/Clay, Trace Gravel			3/150 3/150 3/150	SS-2	6	1703	23									
2		– Medium Dense, A-4a(7)			4/150 8/150 8/150	SS-3	16	1780	15	4	13	14	29	40	23	18	5	A-4c(7)
3	294.4	Damp Very Stiff Brown SILT and CLAY w/Gravel, Little Sand, A-6a(4)			5/150 6/150 9/150	SS-4	19	1757	18	37	12	6	20	25	32	17	15	A-6c(4)
		– Stiff Brown/Grey w/Trace Gravel			7/150 7/150 8/150	SS-5	15	1865	14									
4		– w/Some Sand, A-6a(8)			5/150 6/150 7/150	SS-6	13	1858	14	4	15	17	32	38	26	15	11	A-6a(9)
	292.2	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E36
DATE: 4/1/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 3+980 13M LT
ELEV.: 297.702
DRILL METHOD: 57mm HOLLOW STEM AUGER
DRILLERS: BG/CW
ENCOUNTERED WATER DEPTH (m): DRY
COMPLETION (m): DRY
DEPTH TO – WATER (m): ____ CAVING: ____
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	297.7	TOPSOIL - 355mm																
	297.4	Damp Stiff Grey-Brown SILT and CLAY w/Some Sand, A-6a(10)			3/150 5/150 8/150	SS-1	13	1863	15	0	12	12	32	44	33	18	15	A-6c(10)
1		– Very Stiff			8/150 8/150 10/150	SS-2	18	1954	14									
2		– Stiff w/Trace Gravel, A-6a(9)			5/150 7/150 8/150	SS-3	15	1853	15	1	14	13	40	42	28	16	12	A-6a(9)
		– Very Stiff			6/150 12/150 12/150	SS-4	24	1901	12									
3		– Grey, A-6c(8)			4/150 7/150 9/150	SS-5	16	1999	13	3	13	13	30	41	24	13	11	A-6c(8)
4					3/150 5/150 8/150	SS-6	13	1983	13									
	293.1	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E37
DATE: 4/3/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 4+100 12M RT
ELEV.: 297.248
DRILL METHOD: 57mm HOLLOW STEM AUGER
DRILLERS: BG/CW
ENCOUNTERED WATER DEPTH (m): DRY
COMPLETION (m): DRY
DEPTH TO – WATER (m): ____ CAVING: ____
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	297.2	TOPSOIL - 355mm																
	296.9	Moist Medium Dense Grey-Brown SANDY SILT w/Some Clay, Trace Gravel			5/150 6/150 7/150	SS-1	13	1621	20									
1		– A-4a(7)			7/150 11/150 12/150	SS-2	23	1909	13	4	13	12	37	34	29	20	9	A-4a(7)
2					7/150 12/150 14/150	SS-3	26	1804	14									
		– A-4a(7)			7/150 8/150 18/150	SS-4	26	1788	17	3	12	12	40	33	31	21	10	A-4c(7)
3					5/150 11/150 14/150	SS-5	25	1757	15									
4		– Loose, A-4a(7)			4/150 4/150 6/150	SS-6	10	1749	13	5	13	12	39	31	24	16	8	A-4a(7)
5		– Medium Dense			4/150 5/150 7/150	SS-7	12	2033	11									
	291.8	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E38
DATE: 4/4/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 4+220 13M LT
ELEV.: 296.288
DRILL METHOD: HAND AUGERS AND HAND HOUSAL SAMPLER
DRILLERS: BG/CW
ENCOUNTERED WATER DEPTH (m): 3.0
COMPLETION (m): 3.3
DEPTH TO – WATER (m): ____ CAVING: ____
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	296.3	TOPSOIL - 304mm																
	296.0	Moist Very Stiff Grey-Brown CLAY w/Silt, Little Sand and Gravel, A-7-6(12)			6/150 12/150 17/150	SS-1	14	1496	25	16	11	7	27	39	46	23	23	A-7-6(12)
1	295.2	Damp Very Stiff Grey SILT and CLAY w/Some Sand, Trace Gravel, A-6c(8)			12/150 19/150 21/150	SS-2	17	1837	14	4	13	12	40	31	30	18	12	A-6a(8)
2		– Brown, A-6a(7)			15/150 20/150 25/150	SS-3	19	1887	14	3	14	15	39	29	29	18	11	A-6a(7)
3					12/150 21/150 20/150	SS-4	17	1833	14									
		– Brown/Grey "Rust Like" Iron Seams			18/150 21/150 28/150	SS-5	20	1943	13									
4					22/150 26/150 30/150	SS-6	21											
5					12/150 19/150 23/150	SS-7	18	1982	14									
		– Grey																
6					22/150 25/150 28/150	SS-8	20	1925	13									
	290.2	End of Borehole																

NOTES: SAMPLES WERE TAKEN WITH A HAND HOUSAL SAMPLER AND BLOW COUNTS WERE CONVERTED USING "TERZAGHI STANDARD" NUMBERS.

LOG OF TEST BORING

BORING NO. M-C14
DATE: 4/3/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 4+249, 40 M LT
ELEV.: 296.322
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: BG/CW
ENCOUNTERED WATER DEPTH (m): 8.1
COMPLETION (m): NONE
DEPTH TO WATER (m): ____ CAVING: ____
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	296.3	TOPSOIL - 356 mm																
	296.0	Moist Medium Stiff Yellow-Brown and Grey SILTY CLAY w/Trace Sand and Gravel			3/150 3/150 3/150	SS-1	8	1509	24									A-6a(10)
1		– Brown-Grey w/Little Sand, Trace Gravel, A-6a(10)			3/150 3/150 3/150	SS-2	7	1464	25	2	8	12	32	46	37	18	19	
	294.5	Very Damp Stiff Grey-Brown SILT and CLAY w/Little Sand, Trace Gravel			4/150 6/150 7/150	SS-3	15	1934	16									
2		– Very Stiff Grey-Brown			8/150 10/150 11/150	SS-4	21	1692	17									
3	293.1	Moist Medium Dense SANDY SILT w/Trace Gravel and Some Clay – A-4a(8)			5/150 5/150 9/150	SS-5	14	1906	13	7	17	17	34	35	26	17	9	A-4a(8)
4					4/150 7/150 8/150	SS-6	15	1895	13									
5		A-4a(8)			7/150 6/150 10/150	SS-7	16	1828	15	4	13	9	40	34	29	20	9	A-4a(8)
6					5/150 8/150 10/150	SS-8	17	1917	13									
7	289.3	Very Damp Very Stiff Grey SILTY CLAY w/Trace Gravel and Little Sand, A-6a(9)			4/150 8/150 10/150	SS-9	18	1916	12									
8	288.2	Hard w/Sand, Little Gravel			8/150 14/150 14/150	SS 10	28	1869	14	9	10	8	35	38	31	19	12	A-6a(9)
	287.9	Wet Dense Grey GRAVEL w/Sand, Silt and Clay End of Borehole			16/150 19/150 20/150	SS 11	34	1759	21									

NOTES:

TOLLIES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-93
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

93/130

LOG OF TEST BORING

BORING NO. M-C15
DATE: 4/3/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 4+249, 41 V RT
JOB #: 33644.01
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ELEV.: 295.737
DRILLERS: BG/CW
ENCOUNTERED WATER DEPTH (m): 3.5
COMPLETION (m): 4.6
DEPTH TO - WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	295.7	TOPSOIL - 356 mm																
	295.4	Moist Stiff Yellow-Brown and Grey CLAY w/Some Silt Little Sand Trace Gravel, A-7-6(12)			4/150 4/150 6/150	SS-1	10	1520	24	1	5	8	41	45	44	26	18	A-7-6(12)
1					3/150 4/150 5/150	SS-2	9	1644	20									
2	294.1	Very Damp Medium Dense Brown and Grey SANDY SILT w/Some Clay, Trace Grave			7/150 7/150 8/150	SS-3	15	1825	16									
		-A-4a(8)																
3					7/150 8/150 16/150	SS-4	18	1863	16	4	13	12	38	33	30	22	8	A-4a(8)
	292.2																	
4	292.0	Moist Medium Dense Grey and Brown COARSE and FINE SAND w/Trace Silt and Clay			5/150 8/150 9/150	SS-5	17	1946	11									
		Very Damp Medium Dense SANDY SILT w/Some Clay, Trace Gravel																
5					9/150 7/150 8/150	SS-6	16	1652	13									
					4/150 8/150 9/150	SS-7	17	1895	13									
6		- A-4a(8)			6/150 8/150 12/150	SS-8	20	1985	13	2	15	11	42	30	26	18	8	A-4a(8)
					8/150 10/150 13/150	SS-9	23	2009	13									
7																		
					6/150 8/150 20/150	SS-10	28		13									
8	288.2	Moist Medium Dense Grey COARSE and FINE SAND w/Trace Silt and Clay																
	287.8	Very Damp Dense Grey SANDY SILT w/Some Clay, w/Trace Grave			9/150 16/150 28/150	SS-11	44	1990	14	4	14	12	43	27	26	17	9	A-4a(7)
	287.4	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E39
DATE: 4/4/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 4+340, 12 M RT
JOB #: 33644.01
DRILL METHOD: HAND AUGERS AND HAND HOUSA_ SAMPLER
ELEV.: 296.631
DRILLERS: JL/NW/TM
ENCOUNTERED WATER DEPTH (m): 2.4
COMPLETION (m): 2.8
DEPTH TO - WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	296.6	TOPSOIL - 305 mm																
	296.3	Moist Stiff CLAY w/Silt, Little Sand, Trace Grave, A-7-6(13)			5/150 8/150 11/150	SS-1	11	1575	22	7	9	13	39	32	42	16	26	A-7-6(13)
1	295.7	Moist Stiff Grey/Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(9)			8/150 14/150 14/150	SS-2	14	1676	19	3	12	13	35	37	35	22	13	A-6a(9)
		- w/Little Sand, Trace Gravel, A-6a(10)			9/150 16/150 16/150	SS-3	16	1587	21	1	6	11	39	43	36	21	15	A-6a(10)
2																		
		- Very Damp Very Stiff Brown and Grey w/Some Sand, Trace Gravel			5/150 28/150 50/150	SS-4	25	1986	13									
3																		
		- A-6a(8)			18/150 34/150 55/150	SS-5	26	2025	10	1	14	12	43	30	25	14	11	A-6a(8)
4																		
					14/150 21/150 38/150	SS-6	22	1965	12									
5																		
					14/150 38/150 56/150	SS-7	26	1775	13									
	291.1	End of Borehole																

NOTES: Samples were taken with a Hand Housel Sampler and blow counts were converted using "Terzaghi Standard" numbers.

LOG OF TEST BORING

BORING NO. M-E40
DATE: 4/10/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 4+460, 12 M LT
JOB #: 33644.01
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ELEV.: 297.379
DRILLERS: BG/CW
ENCOUNTERED WATER DEPTH (m): NONE
COMPLETION (m): NONE
DEPTH TO - WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	297.4	TOPSOIL - 356 mm																
	297.0	Moist Stiff Grey and Brown SILTY CLAY w/Little Sand, A-6b(11)			5/150 6/150 9/150	SS-1	10	1575	23	0	8	10	36	46	39	21	18	A-6b(11)
1	296.5	Very Damp Stiff Yellow Brown and Grey SILT and CLAY w/Little Sand, Trace Grave, A-6a(10)			5/150 6/150 8/150	SS-2	11	1650	23	4	12	10	31	43	36	22	14	A-6a(10)
		- Grey-Brown			7/150 8/150 8/150	SS-3	13	1839	17									
2																		
		- Very Stiff Grey w/Some Sand, A-6a(8)			12/150 15/150 16/150	SS-4	28	1898	17	2	14	12	40	32	24	13	11	A-6a(8)
3																		
					7/150 7/150 10/150	SS-5	17	2033	13									
4																		
					4/150 6/150 8/150	SS-6	14	1921	13									
5	292.5	End of Borehole																

NOTES:

IOWA DOT PROJECT
SOIL PROFILE
WYA/CRA-30-23.914/0.000(14.86/0.00)

TOLLESI, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-94
PROJECT NO. 33644.01

LOG OF TEST BORING

BORING NO. M-C16
DATE: 4/10/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 4+884, 16 M LT
JOB #: 33644.01
ELEV.: 297.082
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: BG/CW
ENCOUNTERED WATER DEPT- (m): 2.4
COMPLETION (m): 11.6
DEPT- TO - WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	297.1	TOPSOIL - 610 mm																
	296.5	Moist Soft Yellow-Brown and Grey CLAY w/Trace Sand and Gravel, A-7-6(15)			2/150 2/150 2/150													
1		- Medium Stiff Brown and Grey			2/150 2/150 3/150	SS-1	4	1535	24	0	4	7	42	47	47	22	25	A-7-6(15)
						SS-2	5	1487	27									
2		- Yellow-Brown and Grey			2/150 3/150 4/150	SS-3	7	1599	23									
	294.6	Moist Medium Dense Grey SILTY SAND w/Little Clay, Trace Gravel, A-4a (0)	FS		7/150 8/150 8/150	SS-4	16	2143	12	3	26	25	30	16	NON-PLASTIC			A-4a(0)
3	294.1	Moist Medium Dense Grey COARSE and FINE SAND w/Some Gravel, Trace Silt and Clay			4/150 5/150 6/150	SS-5	11	2006	12									
	293.7	Very Damp Stiff Grey SILT and CLAY w/Trace Sand and Gravel																
4	293.1	Moist Stiff Grey SILTY CLAY w/Trace Sand and Grave			4/150 6/150 8/150	SS-6	12	1547	28									
	292.4	Very Damp Medium Dense SANDY SILT w/Some Clay Trace Gravel, A-4a(8)			5/150 5/150 8/150	SS-7	13	1906	15	3	12	12	45	28	22	15	7	A-4a(8)
5																		
6					4/150 5/150 7/150	SS-8	12	1796	14									
					6/50 9/50 9/150	SS-9	18	1860	13									
7		-A-4a(7)																
					5/150 8/150 10/150	SS-10	18	1885	13	3	13	12	38	32	24	15	9	A-4a(7)
8																		
					7/150 6/150 9/150	SS-11	15	2007	13									
9		- A-4a(7)																
					6/150 7/150 9/150	SS-12	16	1927	14	5	13	13	42	27	25	16	9	A-4a(7)
10																		
					7/150 10/150 12/150	SS-13	22	1975	14									
11																		"
12	285.2	Moist Very Dense GRAVEL and ROCK FRAGMENTS w/Sand, Trace Silt, A-1b (0)			23/150 50/150	SS-14	100+		15	37	44	12	7	0	NON-PLASTIC			A-1b(0)
	285.0	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-C17
DATE: 4/10/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 4+884, 16 M RT
JOB #: 33644.01
ELEV.: 296.994
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: BG/CW
ENCOUNTERED WATER DEPTH (m): NONE
COMPLETION (m): NONE
DEPTH TO - WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	297.0	TOPSOIL - 305 mm																
	296.7	Very Damp Medium Stiff SILT and CLAY w/Little Sand, A-6a(10)			4/150 4/150 4/150	SS-1	8	1696	20	0	10	12	35	43	38	23	15	A-6a(10)
1	296.1	Very Damp Stiff Yellow Brown and Grey SILTY CLAY w/Some Sand, Trace Gravel, A-6b(10)			3/150 4/150 5/150	SS-2	9	1652	18	3	14	10	35	38	36	19	17	A-6b(10)
	295.3	Very Damp Stiff Brown and Grey SILT and CLAY w/Little Sand, Trace Gravel			3/150 5/150 5/150	SS-3	10	1852	15									
2																		
	294.6	Moist Medium Dense Grey SILTY SAND w/Little Clay, Trace Gravel			8/150 12/150 14/150	SS-4	26	1893	13									
3																		
	293.6	Very Damp Very Stiff Grey SILT and CLAY w/Trace Sand and Grave			6/150 7/150 12/150	SS-5	19	1943	12									
4																		
	292.9	Moist Loose Grey SANDY SILT w/Some Clay, Trace Gravel			3/150 3/150 6/150	SS-6	9	1889	13									
5		- A-4a(7)			4/150 4/150 4/150	SS-7	8	1901	14	5	13	12	43	27	25	17	8	A-4a(7)
6					3/150 4/150 5/150	SS-8	9	1860	14									
		- Medium Dense			7/150 7/150 8/150	SS-9	15	1905	13									
7																		
					6/150 7/150 10/150	SS-10	17	1916	13									
8																		
					5/150 5/150 6/150	SS-11	11	1945	14									
9		- A-4a(7)																
					6/150 7/150 7/150	SS-12	14	1938	13	4	15	13	44	24	24	16	8	A-4a(7)
10		- Very Dense w/Little Clay			20/150 20/150 50/127	SS-13	100+	1858	15									
	286.4	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-C18
DATE: 5/19/97
PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, VAINLINE STA 5+415, 17 M LT
JOB #: 33644.01
ELEV.: 297.294
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
DRILLERS: BG/TB
ENCOUNTERED WATER DEPT- (m): NONE
COMPLETION (m): NONE
DEPT- TO - WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	297.3	TOPSOIL - 305 mm																
	297.0	Moist Medium Stiff SILTY CLAY w/Little Sand, Trace Gravel, A-6b(11)			5/150 4/150 3/50	SS-1	7	1602	21	2	6	9	42	31	36	18	18	A-6b(11)
1	296.4	Very Damp Stiff Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(8)			4/150 4/150 5/150	SS-2	9	1515	20	1	11	13	32	43	32	21	11	A-6a(8)
		- A-6a(9)			3/150 5/150 8/150	SS-3	11	1764	15	1	13	13	32	41	29	17	12	A-6a(9)
2																		
		- A-6a(7)			5/150 8/150 9/150	SS-4	17	1897	13	4	13	13	31	39	27	16	11	A-6a(7)
3																		
					5/150 6/150 7/150	SS-5	13	1921	13									
4		- Grey			5/150 5/150 6/150	SS-6	11	1952	13									
5					5/150 7/150 8/150	SS-7	15	1929	13									
		- Very Stiff			5/150 8/150 10/150	SS-8	18		12									
6																		
		- Stiff			6/150 7/150 9/150	SS-9	14	1877	12									
7																		
					4/150 4/150 5/150	SS-10	9	1857	13									
8																		
					4/150 5/150 8/150	SS-11	13	1951	13									
9																		
					5/150 5/150 7/150	SS-12	12	1889	14									
10	287.8	Damp Dense Grey GRAVEL and ROCK FRAGMENTS w/Sand and Silt																
					35/150 24/150 22/150	SS-13	46											
11	286.8	End of Borehole																

NOTES: Boring moved 5.2 meters south. Elevation approximate due to relocation.

IOWES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-3-99
DRAWING NO. 33644-95
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. M-C19
DATE: 4/22/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAIN_NE STA 5+415, 36 M RT
ELEV.: 297.608
DRILL METHOD: 95 MV HOLLOW STEV AUGERS
DRILLERS: JL/TM
ENCOUNTERED WATER DEPTH (m): NONE
COMPLETION (m): NONE
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	297.6	TOPSOIL – 432 mm																
	297.2	Moist Medium Stiff Brown and Grey CLAY w/Silt, Little Sand, Trace Gravel, A-7-6(14)			2/150 3/150 3/150	SS-1	6	1408	27	3	6	9	41	41	49	28	21	A-7-6(14)
1	296.7	Very Damp Medium Stiff Brown and Grey SILT and CLAY w/Little Sand, Trace Gravel			2/150 3/150 5/150	SS-2	8	1650	20									
2		– Stiff Grey-Brown			3/150 4/150 6/150	SS-3	10	1744	18									
	295.2	Moist Medium Dense Grey-Brown SANDY SILT w/Some Clay, Trace Gravel, A-4a(7)			5/150 5/150 7/150	SS-4	13	1903	13	2	15	13	40	30	24	15	9	A-4a(7)
3		– Grey			5/150 6/150 8/150	SS-5	14	1905	13									
4		– Loose			3/150 4/150 5/150	SS-6	9	1881	14									
5		– Medium Dense			6/150 5/150 8/150	SS-7	13	1909	14									
6		– Loose, A-4a(7)			3/150 5/150 5/150	SS-8	10		18	4	14	12	40	30	25	15	10	A-4a(7)
7		– Medium Dense			3/150 5/150 6/150	SS-9	11	1818	15									
8	290.6	Very Damp Medium Stiff Grey SILT and CLAY w/Little Sand, Trace Gravel			3/150 3/150 3/150	SS-10	6	1841	15									
		– A-6a(9)			3/150 3/150 3/150	SS-11	6	1913	18	3	9	12	40	36	27	16	11	A-6a(9)
9	289.1	Moist Dense Grey SANDY SILT w/Some Clay, Trace Gravel			13/150 17/150 18/150	SS-12	35	1973	11									
	288.5	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. M-E41
DATE: 4/3/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 5+420, 13 M LT
ELEV.: 297.459
DRILL METHOD: HAND AUGERS AND HAND HOUSAL SAMPLER
DRILLERS: JL/NW/TM
ENCOUNTERED WATER DEPTH (m): 1.2
COMPLETION (m): 2.1
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	297.5	TOPSOIL – 305 mm																
	297.2	Moist Medium Dense SILT w/Some Clay and Sand, Trace Gravel, A-4b(8)			6/150 10/150 12/150	SS-1	11	1446	25	2	15	9	50	24	36	25	10	A-4b(8)
1	296.5	Moist Stiff Grey-Brown SILT and CLAY w/Sand, Trace Gravel, A-6a(6)			3/150 4/150 6/150	SS-2	6	1618	21	3	21	13	35	32	20	12	12	A-6a(6)
2		– Yellow-Brown and Grey			6/150 7/150 8/150	SS-3	8	1477	24									
3		– Very Damp Very Stiff Brown-Grey			10/150 21/150 24/150	SS-4	19	1837	15									
		– Grey w/Some Sand A-6a(8)			12/150 21/150 39/150	SS-5	22	1932	13	7	11	12	36	34	25	13	12	A-6a(8)
4					17/150 35/150 55/150	SS-6	26		14									
	292.3	End of Borehole																

NOTES: Samples were taken with a Hand Housal Sampler and blow counts were converted using "Terzaghi Standard" numbers.

LOG OF TEST BORING

BORING NO. M-E42
DATE: 4/2/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 5+580, 12 M RT
ELEV.: 297.805
DRILL METHOD: HAND AUGERS AND HAND HOUSAL SAMPLER
DRILLERS: JL/NW/TM
ENCOUNTERED WATER DEPTH (m): 0.9
COMPLETION (m): 1.3
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	297.8	TOPSOIL – 305 mm																
	297.5	Moist Stiff Brown and Grey SILTY CLAY w/Little Sand, Trace Gravel, A-6b(11)			4/150 6/150 10/150	SS-1	19	1541	22	5	7	9	42	37	40	23	17	A-6b(11)
1	296.9	Moist Medium Stiff Brown and Grey CLAY w/Trace Sand and Gravel, A-7-6(12)			8/150 10/150 11/150	SS-2	11	1527	26	3	8	10	44	35	44	25	19	A-7-6(12)
2	296.1	Moist Stiff Yellow-Brown and Grey SILT and CLAY w/Some Sand, Trace Gravel, A-6a(9)			8/150 12/150 13/150	SS-3	13	1530	28	1	11	14	39	35	34	20	14	A-6a(9)
3		– Very Damp Very Stiff			12/150 19/150 19/150	SS-4	17	1709	16									
		– Grey, A-6a(6)			12/150 33/150 40/150	SS-5	24	1908	13	7	15	12	33	33	26	15	11	A-6a(6)
4					10/150 11/150 17/150	SS-6	14	1933	14									
5					8/150 12/150 20/150	SS-7	17	1970	14									
6					9/150 16/150 38/150	SS-8	20	1977	14									
	291.7	End of Borehole																

NOTES: Samples were taker with a Hand Housal Sampler and blow counts were converted using "Terzaghi Standard" numbers.

LOG OF TEST BORING

BORING NO. V-E43
DATE: 4/2/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAIN_NE STA 5+700, 13 M LT
ELEV.: 298.283
DRILL METHOD: HAND AUGERS AND HAND HOUSAL SAMPLER
DRILLERS: JL/NW/TM
ENCOUNTERED WATER DEPTH (m): 0.9
COMPLETION (m): 0.9
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	298.3	TOPSOIL – 305 mm																
	298.0	Moist Medium Stiff Grey-Brown CLAY w/Little Sand, Trace Gravel, A-7-6(14)			5/150 7/150 7/150	SS-1	7	1501	24	7	4	6	40	33	43	18	25	A-7-6(14)
1	297.4	Moist Loose Grey-Brown SANDY SILT w/Little Clay and Gravel, A-4a(2)			5/150 5/150 7/150	SS-2	8	1804	15	12	20	22	34	12	25	15	10	A-4a(2)
2	296.6	Moist Stiff Grey-Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(7)			8/150 8/150 8/150	SS-3	9	1616	20	2	14	17	39	28	29	17	12	A-6a(7)
3		– Very Damp very Stiff Brown			18/150 26/150 29/150	SS-4	21	1805	17									
		– Grey and Brown			26/150 32/150 55/150	SS-5	28	1796	15									
4		– Grey, A-6a(7)			26/150 40/150 95/150	SS-6	30	1922	13	6	14	12	37	31	27	16	11	A-6a(7)
5		– Stiff			12/150 14/150 17/150	SS-7	16	1985	14									
6					10/150 17/150 22/150	SS-8	17	1948	14									
	291.9	End of Borehole																

NOTES: Samples were taken with a Hand Housal Sampler and blow counts were converted using "Terzaghi Standard" numbers.

TOLLES INC
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-96
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

96/130

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 5+820, 12 M RT
DRILL METHOD: HAND AUGERS AND HAND HOUSAL SAMPLER
ENCOUNTERED WATER DEPTH (m): 1.2
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO.: M-E44
DATE: 4/3/97
JOB #: 33644.01
ELEV.: 300.527
DRILLERS: JL/TM/CW
COMPLETION (m): 2.1
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	300.5	TOPSOIL – 254 mm															
	300.3	Moist Stiff Red-Brown and Grey SILTY CLAY w/Some, Trace Gravel			6/150 10/150 12/150	SS-1	11	1611	23								
1	299.6	Very Damp Very Stiff Yellow-Brown and Grey SILT and CLAY w/Some Sand, Trace Gravel, A-6a(8)			5/150 7/150 20/150	SS-2	17	1794	15	4	10	4	39	33	29	18	11	A-6a(8)
2		– Grey-Brown			6/150 17/150 20/150	SS-3	17	1842	15									
3		– Grey			32/150 67/150 70/150	SS-4	30	1780	16									
		– Very Hard Grey, A-6a(9)			40/150 65/150 100/127	SS-5	60+	1850	16	4	14	13	38	31	31	17	14	A-6a(9)
4	296.6	Moist Medium Dense Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(7)			32/150 47/150 58/150	SS-6	28	1887	13	2	14	13	38	32	25	16	9	A-4a(7)
5					30/150 58/150 61/150	SS-7	28	1956	14									
6		– Dense			35/150 68/150 75/150	SS-8	31	1957	13									
	294.1	End of Borehole																

NOTES: Samples were taken with a Hand Housal Sampler and blow counts were converted using "Terzaghi Standard" numbers.

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 5+940, 4 M LT
DRILL METHOD: HAND AUGERS AND HAND HOUSAL SAMPLER
ENCOUNTERED WATER DEPTH (m): 0.9
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO.: M-E45
DATE: 4/11/97
JOB #: 33644.01
ELEV.: 300.438
DRILLERS: JL/TM
COMPLETION (m): 0.9
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	300.4	TOPSOIL – 305 mm															
	300.1	Moist Stiff Grey-Brown SILTY CLAY w/Some Sand, Trace Gravel, A-6b(10)			9/150 12/150 21/150	SS-1	16	1557	22	2	11	14	23	40	34	13	21	A-6b(10)
1	299.5	Very Damp Very Stiff Brown and Grey SILT and CLAY w/Some Sand, Trace Gravel			6/150 9/150 7/150	SS-2	9	1696	19									
2		– Brown-Grey			12/150 18/150 20/150	SS-3	17	1823	18									
3		– Grey			15/150 19/150 21/150	SS-4	17	1650	20									
		– Moist Brown and Grey, A-6a(8)			30/150 42/150 50/150	SS-5	28		29	1	16	16	39	28	27	16	11	A-6a(8)
4		– Very Damp Grey, A-6a(7)			16/150 28/150 29/150	SS-6	22	1914	15	4	13	14	29	40	23	25	14	A-6a(7)
5	295.6	Very Damp Medium Dense Brown/Grey SANDY SILT w/Clay, Trace Gravel, A-4a(7)			12/150 25/150 31/150	SS-7	21	1921	13	5	14	13	37	31	23	16	7	A-4a(7)
		– Grey			18/150 17/150 15/150	SS-8	16	1868	14									
6	294.3	Very Damp Stiff Grey SILT and CLAY w/Sand, Little Gravel, A-6a(11)			15/150 19/150 21/150	SS-9	17		13	17	36	9	15	25	23	12	11	A-6a(11)
7		– Very Stiff w/Some Sand, Trace Gravel			19/150 21/150 18/150	SS-10	20	1839	7									
	293.1	End of Borehole																

NOTES: Samples were taken with a Hand Housal Sampler and blow counts were converted using "Terzaghi Standard" numbers. Boring moves 7.6 M south of plan due to water. Elevation approximate due to relocation.

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 6+060, 31 M RT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 6.4
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO.: M-E46
DATE: 4/9/97
JOB #: 33644.01
ELEV.: 300.61
DRILLERS: JL/TM
COMPLETION (m): 6.4
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	300.6	ASPHALT – 51 mm																
	300.5	CRUSHED STONE – 381 mm																
	300.2	Very Moist Medium Stiff Brown and Grey CLAY w/Little Sand, Trace Gravel, A-7-6(18)			2/150 3/150 4/150	SS-1	7	1318	32	1	4	8	28	59	51	22	29	A-7-6(18)
1	299.7	Moist Loose Brown SANDY SILT w/Some Clay, Trace Gravel, A-4a(5)			2/150 3/150 5/150	SS-2	8	1799	17	3	12	13	42	30	27	18	9	A-4a(7)
2		– Grey-Brown			4/150 5/150 5/150	SS-3	10	1768	17									
		– Medium Dense, A-4a(5)			4/150 5/150 8/150	SS-4	14	1852	14	10	16	12	30	32	25	16	9	A-4a(5)
3		– Grey			6/150 7/150 8/150	SS-5	15	1921	12									
4		– w/Clay, A-4a(7)			4/150 4/150 7/150	SS-6	12	1844	15	4	14	11	37	34	25	17	8	A-4a(7)
5					5/150 7/150 9/150	SS-7	16	1717	14									
6		– Loose			3/150 4/150 5/150	SS-8	10	1852	14									
		– Medium Dense w/Some Clay, A-4a(6)			7/150 10/150 13/150	SS-9	23	1990	13	6	14	14	42	24	23	14	9	A-4a(6)
7					4/150 6/150 8/150	SS-10	14	1967	14									
	293.0	End of Borehole																

NOTES: Boring moved 15.2 meters south due to soft conditions. Elevation approximate due to relocation.

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 6+180, 12 M LT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): NONE
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO.: M-E47
DATE: 4/10/97
JOB #: 33644.01
ELEV.: 304.06
DRILLERS: JL/TM
COMPLETION (m): NONE
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	304.1	CRUSHED STONE – 432 mm																
	303.6	Very Damp Very Stiff Grey and Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(8)			5/150 7/150 11/150	SS-1	18	1823	14	4	11	13	40	32	29	16	13	A-6a(8)
1		– Stiff Brown and Grey			4/150 6/150 7/150	SS-2	14	1796	14									
2		– Brown-Grey			3/150 5/150 6/150	SS-3	10	1730	16									
	301.6	Very Damp Stiff Grey SILTY CLAY w/Some Sand, Trace Gravel, A-6a(11)			5/150 6/150 10/150	SS-4	16	1749	16	1	10	14	37	38	34	17	17	A-6b(11)
3					3/150 6/150 8/150	SS-5	14	1605	20									
4		– Very Hard			50/102	SS-6	100+	1544	18									
	299.8	End of Borehole																

NOTES:

TOLEDO, OHIO 43624
1915 N. 12th STREET
TOLEDO, OHIO

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-97
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. M-S21
DATE: 4/24/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 6+308.2, 12.6M LT
ELEV.: 300.106
DRILL METHOD: 108mm HOLLOW STEM AUGER
DRILLERS: NW/CM
ENCOUNTERED WATER DEPTH (m): 10.7
COMPLETION (m): 0.0
DEPTH TO – WATER (m): ____ CAVING: ____
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	300.1	CRUSHED STONE – 304mm																
	299.8	Damp, Very Stiff, Grey/Brown SILT and CLAY w/Some Sand, Trace Gravel, A 6a(7)		SS	6/150 10/150 8/150	SS-1	18	1741	13	4	15	14	37	30	28	17	11	A-6a(7)
1				SS	3/150 3/150 8/150	SS-2	11											
2				SS	6/150 6/150 8/150	SS-3	14											
3		– Stiff, A-6a(7)		SS	3/150 4/150 8/150	SS-4	12	1858	13	3	17	13	40	27	25	14	11	A-6a(7)
		w/Little Sand		SS	4/150 4/150 6/150	SS-5	10	1776	14									
4	296.0	Damp Loose Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(5)		SS	3/150 4/150 4/150	SS-6	8	1917	16	5	27	11	31	26	25	15	10	A-4a(5)
5	295.2	Damp Stiff Grey SILTY CLAY w/Little Sand		SS	2/150 4/150 5/150	SS-7	9	1807	15									
		– Trace Gravel		SS	3/150 5/150 6/150	SS-8	11	1783	14									
6				SS	4/150 6/150 6/150	SS-9	12	1869	13									
7	292.9	Damp Stiff Grey CLAY w/Some Sand, Trace Gravel, A-7-6(14)		SS	6/150 6/150 6/150	SS-10	12	1887	14	3	14	11	45	27	41	16	25	A-7-6(14)
8	292.2	Damp Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel		SS	2/150 4/150 8/150	SS-11	12	1823	14									
9				SS	4/150 6/150 8/150	SS-12	14	1757	17									
10		– Very Stiff		SS	11/150 13/150 13/150	SS-13	26	1794	14									
11																		
12	288.4	Damp Stiff Grey SILT and CLAY w/Some Sand, Trace Gravel		SS	4/150 5/150 7/150	SS-14	12	1914	14									
13		– Hard w/Some Sand		SS	12/150 23/150 19/150	SS-15	42		8									
14																		
15		– Very Stiff, A-6a(6)		SS	5/150 7/150 9/150	SS-16	16	1901	11	9	17	12	41	21	26	15	11	A-6a(6)
16	284.3	Broken Grey LIMESTONE 1.5M RUN 87% RECOVERY 8% RQD		RC		RC-1												
17																		
	282.7	End of Borehole																

NOTES: Auger refusal encountered at 15.8M. A 1.5M rock core was taken.

LOG OF TEST BORING

BORING NO. M-S22
DATE: 4/28/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 6+328.6, 16.7M RT
ELEV.: 306.543
DRILL METHOD: 108mm HOLLOW STEM AUGER
DRILLERS: NW/CM
ENCOUNTERED WATER DEPTH (m): 19.2
COMPLETION (m): 13.2
DEPTH TO – WATER (m): ____ CAVING: ____
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	306.5	ASPHALT – 288mm																
	306.3	Moist Medium Stiff Grey/Brown SILTY and CLAY w/Some Sand, Trace Gravel – A-6a(9)		SS	2/150 3/150 3/150	SS-1	6	1517	20	1	10	21	26	42	31	16	15	A-6a(9)
1		– Damp, A-6a(6)		SS	3/150 2/150 4/150	SS-2	6	1727	15	5	18	14	34	29	28	16	12	A-6a(6)
2		Stiff, A 6a(9)		SS	4/150 5/150 5/150	SS-3	10	1552	16	2	10	15	36	37	30	16	14	A-6a(9)
3		– A-6a(9)		SS	4/150 5/150 7/150	SS-4	12	1788	17	3	13	12	37	35	32	19	13	A-6a(9)
		w/Little Sand, A 6a(9)		SS	4/150 6/150 8/150	SS-5	14	1557	19	4	5	13	42	36	33	20	13	A-6a(9)
4		– Moist, A-6a(8)		SS	3/150 6/150 6/150	SS-6	12	1594	20	6	15	12	34	33	36	22	14	A 6a(8)
5	301.7	Damp Stiff Grey/Brown SILTY CLAY w/Little Sand, Trace Gravel, A-6b(11)		SS	2/150 5/150 7/150	SS-7	12	1658	19	1	11	12	37	39	37	20	17	A-6b(11)
6	300.9	Moist Stiff Brown/Grey SILT and CLAY w/Trace Sand, Gravel		SS	3/150 6/150 6/150	SS-8	12	1607	21									
				SS	4/150 6/150 6/150	SS-9	12	1834	15									
7	299.4	Damp Stiff Grey/Brown SILTY CLAY w/Trace Sand, Gravel		SS	6/150 6/150 8/150	SS-10	14	1868	15									
8	298.6	Damp Stiff Brown/Grey SILT and CLAY w/Trace Sand and Gravel		SS	6/150 8/150 9/150	SS-11	17	1805	13									
9		Very Stiff w/Little Sand		SS	6/150 10/150 10/150	SS-12	20	1764	13									
10		– Stiff		SS	2/150 4/150 5/150	SS-13	9	1909	14									
11																		
12		– Very Stiff Grey		SS	6/1508 16/150 8/150	SS-14	24	1911	13									
13		– Stiff w/Trace Sand		SS	3/150 4/150 5/150	SS-15	9	1901	14									
14																		
15	291.8	Damp Stiff Grey SILTY CLAY w/Trace Sand, Gravel, A-6a(6)		SS	2/150 5/150 7/150	SS-16	12	1796	16									
16	290.2	Damp Stiff Grey SILT and CLAY w/Trace Sand, Gravel		SS	4/150 7/150 8/150	SS-17	15	1892	12									
17																		
18	288.7	Damp Very Stiff Grey SILTY CLAY w/Trace Sand and Gravel		SS	3/1500 7/150 10/150	SS-18	17		13									
19																		
20	287.2	Damp Medium Dense SANDY SILT w/Little Clay, Trace Gravel		SS	11/150 14/150 15/150	SS-19	29		10									
21	285.7	Damp Hard Grey SILTY CLAY w/Sand, Trace Gravel		SS	12/150 15/150 17/150	SS-20	32	1853	13									
22																		
23	284.3	Fractured Grey LIMESTONE 1.5M RUN 95% RECOVERY 14% RQD		RC		RC-1												
	282.8	End of Borehole																

NOTES: Boring moved 4.3M south and 4.6M west of staked location. Auger refusal encountered at 22.2M. A 1.5M rock core was taken.

WYA/CRA-30-23.914/0.000(14.86/0.00)

SOIL PROFILE

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-98
PROJECT NO. 33644.01

TOLEDO INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 6+348.4, 6.9M LT
DRILL METHOD: 108mm HOLLOW STEM AUGER
ENCOUNTERED WATER DEPTH (m): 3.8
DEPTH TO → WATER (m): ____ CAVING: ____

BORING NO. M-S23
DATE: 4/16/97
JOB #: 33644.01
ELEV.: 300.326
DRILLERS: NW/TM
COMPLETION (m): 0.0
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	300.3	CRUSHED STONE - 152mm																
	300.2	Moist Medium Dense Brown SANDY SILT w/Clay, Trace Gravel, A-4a(8)			4/150 5/150 7/150	SS-1	12	1764	15	3	11	9	41	36	27	19	8	A-4a(8)
1	299.3	Moist Very Stiff Brown SILT and CLAY w/Little Sand, Trace Gravel, A-6a(9)			6/150 11/150 13/150	SS-2	24		14	3	15	9	38	37	28	17	11	A-6a(9)
2	298.5	Damp Very Stiff Grey/Brown SILTY CLAY w/Little Sand, "Rust Like" Iron Seams, Trace Gravel			6/150 10/150 16/150	SS-3	26											
3		- Grey			4/150 5/150 6/150	SS-4	11	1866	13									
4	297.0	Damp Stiff Brown/Grey SILT and CLAY w/Some Sand, Trace Gravel			4/150 5/150 8/150	SS-5	13	1857	13									
	296.2	Damp Stiff Brown/Grey SILTY CLAY w/Little Sand, Trace Gravel			5/150 6/150 8/150	SS-6	14	1945	16									
5	295.4	Damp Medium Dense Grey SANDY SILT w/Clay, Trace Gravel, A-4a(8)			6/150 11/150 17/150	SS-7	28	1876	17	2	11	7	44	36	27	18	9	A-4a(8)
6					4/150 5/150 7/150	SS-8	12	1983	13									
		- Loose			3/150 4/150 6/150	SS-9	10	1850	13									
7	293.2	Damp Very Stiff Grey SILT and CLAY w/Little Sand, Trace Gravel, A-6a(9)			5/150 7/150 10/150	SS-10	17	1831	14	8	8	6	31	47	30	18	12	A-6a(9)
8		- Stiff Brown/Grey			4/150 6/150 8/150	SS-11	14	1820	16									
9		- Grey			4/150 6/150 8/150	SS-12	14	1890	13									
10	290.1	Very Moist Medium Dense Brown/Grey FINE SAND w/Trace Silt	FS		4/150 6/150 9/150	SS-13	15											
11			FS															
12			FS		5/150 7/150 8/150	SS-14	15											
13			FS															
	287.1	Moist Medium Dense SANDY SILT w/Clay, Trace Gravel, A-4a(6)			3/150 5/150 5/150	SS-15	10	1708	26	9	11	14	34	32	19	13	6	A-4a(6)
14																		
15	285.5	Moist Medium Dense COARSE to FINE SAND w/Trace Silt, Gravel			8/150 10/150 16/150	SS-16	26											
16	284.5	Broken Grey LIMESTONE 1.5M RUN 95% RECOVERY 7% RQD				RC-1												
17																		
	283.0	End of Borehole																

NOTES: Auger refusal encountered at 15.8M. A 1.5M rock core was taken. Boring moved 5.5M south of staked location. Elevation approximate due to relocation.

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 61437.7, 13.2M RT
DRILL METHOD: 108mm HOLLOW STEM AUGER
ENCOUNTERED WATER DEPTH (m): 10.3
DEPTH TO → WATER (m): ____ CAVING: ____

BORING NO. M-S24
DATE: 4/25/97
JOB #: 33644.01
ELEV.: 305.543
DRILLERS: NW/GM
COMPLETION (m): 0.9
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	305.5	TOPSOIL - 152mm																
	305.4	Damp Very Stiff Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(6)			5/150 8/150 11/150	SS-1	19	1919	12	9	15	14	25	37	31	19	12	A-6a(6)
1		- Stiff, A-6a(8)			5/150 5/150 5/150	SS-2	10	1817	14	3	13	13	29	42	30	18	12	A-6a(8)
2		- Moist, A-6a(9)			4/150 5/150 7/150	SS-3	12	1682	20	0	7	15	32	46	31	19	12	A-6a(9)
3		- Damp, A-6a(7)			4/150 6/150 8/150	SS-4	14		11	4	14	13	31	38	28	17	11	A-6a(7)
4		A-6a(7)			5/150 8/150 8/150	SS-5	16	1898	11	5	14	13	38	30	28	17	11	A-6a(7)
		- w/Sand, A-6a(9)			3/150 4/150 5/150	SS-6	9	1712	16	1	23	15	27	34	29	18	11	A-6a(9)
5		- w/Little Sand, A-6a(9)			3/150 4/150 5/150	SS-7	9	1832	15	1	6	9	52	32	31	19	12	A-6a(9)
6		- Very Stiff			9/150 11/150 15/150	SS-8	26	1805	14									
7		- Hard			11/150 17/150 17/150	SS-9	34	1757	14									
		- Very Stiff Grey			8/150 12/150 12/150	SS-10	24	1898	13									
8		- w/Trace Sand			9/150 14/150 13/150	SS-11	27	1935	12									
9	296.9	Damp Medium Stiff Grey SILTY CLAY w/Trace Sand and Gravel			3/150 3/150 5/150	SS-12	8	1879	14									
10	295.3	Damp Stiff Grey SILT and CLAY w/Trace Sand, Gravel			4/150 5/150 7/150	SS-13	12	1881	13									
11																		
12					3/150 4/150 7/150	SS-14	11	1925	14									
13																		
					5/150 7/150 7/150	SS-15	14	1860	14									
14																		
15	290.8	Damp Very Stiff Grey SILTY CLAY w/Sand			3/150 6/150 12/150	SS-16	18	1600	18									
16																		
	289.2	Very Moist Loose Grey SANDY SILT			4/150 5/150 3/150	SS-17	8		17									
17																		
18	287.7	Damp Medium Stiff Grey SILTY CLAY w/Some Sand, Trace Gravel			1/150 2/150 3/150	SS-18	5		17									
19																		
	286.2	Damp Medium Stiff Grey SILT and CLAY w/Little Sand, Trace Gravel			5/150 3/150 3/150	SS-19	6	1868	13									
20																		
21					25/0	SS 20												
22	283.9	Broken Grey LIMESTONE 1.5M RUN 98% RECOVERY 7% RQD				RC-1												
23																		
	282.4	End of Borehole																

NOTES: Boring moved 7.6M east of staked location. Elevation approximate due to relocation. Auger refusal encountered at 21.6M. A 1.5M rock core was taken.

IQUEST, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

LOG OF TEST BORING

BORING NO. M-S25
DATE: 3/20/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 6+701.4, 20.7M LT
ELEV.: 299.090
DRILL METHOD: 95mm HOLLOW STEM AUGER
DRILLERS: NW/GM
ENCOUNTERED WATER DEPTH (m): 8.8
COMPLETION (m): 3.6
DEPTH TO - WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	299.1	ASPHALT - 254mm																
	298.8	CRUSHED STONE 254mm																
1	298.6	Damp Stiff Brown SILTY CLAY w/Little Sand, Trace Gravel			2/150 4/150 5/150	SS-1	9	1857	13									
					4/150 5/150 6/150	SS-2	11	1842	22									
2					3/150 4/150 5/150	SS-3	9	1655	21									
3		- Medium Stiff Brown/Grey, A-6b(12)			4/150 4/150 4/150	SS-4	8	1677	22	1	4	10	33	52	39	20	19	A-6b(12)
		- Moist Stiff w/Lenses Coarse Sand			3/150 6/150 5/150	SS-5	11	1634	21									
4		- Very Stiff			6/150 8/150 10/150	SS-6	18	1768	17									
5	294.2	Damp Very Stiff Grey/Brown SILT and Clay w/Trace Sand Gravel			7/150 8/150 12/150	SS-7	20	1863	15									
6	293.5	Damp Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			3/150 4/150 5/150	SS-8	9	1791	17									
	293.1	Damp Stiff Grey SILT and CLAY w/Little Sand, Trace Gravel																
		- w/Some Sand, A-6a(8)			3/150 4/150 5/150	SS-9	9	1860	15	3	16	12	31	38	28	17	11	A-6a(8)
7					4/150 5/150 7/150	SS-10	12	1977	14									
8	291.2	Damp Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			5/150 5/150 8/150	SS-11	13	1913	14									
9	290.4	Damp Medium Dense Grey SANDY SILT w/Clay, Trace Gravel, A-4a(8)			11/150 10/150 9/150	SS-12	19	1903	15	1	8	11	37	43	27	17	10	A 4a(8)
10					4/150 6/150 8/150	SS-13	14	1828	15									
11																		
12					3/150 4/150 8/150	SS-14	12	1849	17									
13	285.8	Wet Loose Grey COARSE to FINE SAND W/Little Silt and Clay, Trace Gravel, A-3a(0)			2/150 4/150 3/150	SS-15	7		17	10	51	11	13	15	17	13	4	A-3a(0)
14																		
15	284.3	Damp Loose Grey SANDY SILT w/Trace Gravel			6/150 4/150 3/150	SS 16	7	1879	12									
16	283.2	Broken Grey LIMESTONE 1.5M RUN 100% RECOVERY 0% ROD				RC-1												
17																		
	281.7	End of Borehole																

NOTES: Auger refusal encountered at 15.8M. A 1.5M rock core was taken.

LOG OF TEST BORING

BORING NO. M-S26
DATE: 4/25/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 6+680.4, 21.4M RT
ELEV.: 299.180
DRILL METHOD: 108mm HOLLOW STEM AUGER
DRILLERS: NW/GM
ENCOUNTERED WATER DEPTH (m): 5.6
COMPLETION (m): 1.4
DEPTH TO - WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	299.2	Medium Dense Grey CRUSHED STONE w/Trace Sand			9/150 7/150 9/150	SS-1	16		3									
1	298.3	Damp Stiff Grey/Brown SILTY CLAY w/Some Sand, Trace Rock Fragments			4/150 5/150 8/150	SS-2	13	1696	15	13	14	12	31	30	34	19	15	A-6a(7)
	298.1	Damp Stiff Grey/Brown SILT and CLAY w/Some Sand, Little Gravel, A-6a(7)																
2					3/150 8/150 8/150	SS-3	14	1584	19									
3		- Trace Gravel, A-6a(7)			3/150 4/150 5/150	SS 4	9		19	6	14	13	39	28	33	21	12	A-6a(7)
		- Brown-Green/Grey			3/150 5/150 5/150	SS-5	10	1674	17									
4		- Medium Stiff Grey/Brown			7/150 3/150 3/150	SS 6	6	1536	23									
5					2/150 3/150 2/150	SS-7	5											
6	293.5	Moist Very Loose Soft Brown/Grey SILT w/Some Clay, Trace Sand, A 4b(8)			2/150 1/150 2/150	SS 8	3		25	0	0	4	64	32	24	17	7	A-4b(8)
					2/150 3/150 2/150	SS-9	4	1573	25									
7					2/150 2/150 2/150	SS-10	4	1560	27									
8		- Loose Brown-Grey w/Some Clay, Trace Sand and Gravel, A 4b(8)			3/150 4/150 5/150	SS-11	9	1844	19	0	3	6	60	31	24	16	8	A 4b(8)
9		- Medium Dense			3/150 6/150 6/150	SS-12	12	1930	16									
10																		
11					5/150 6/150 8/150	SS-13	14	1781	15									
12	287.4	Moist Medium Dense Grey SANDY SILT w/Some Clay, A-4a(8)			4/150 6/150 8/150	SS-14	14	1908	15	4	11	12	44	29	24	15	9	A-4a(8)
13		- w/Little Rock Fragments			4/150 9/150 15/150	SS-15	24	1879	10									
14																		
15	284.4	Damp Very Hard Brown/Grey SILTY CLAY w/Some Sand, Little Rock Fragments			10/150 50/50	SS 16	100+	1807	11									
16	283.3	Broken Grey LIMESTONE 1.5M RUN 93% RECOVERY 0% ROD				RC-1												
17																		
	281.8	End of Borehole																

NOTES: Boring moved 22.9M west and 9.1M south of staked location. Elevation approximate due to relocation. Auger refusal encountered at 15.8M. A 1.5M rock core was taken.

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 6+739.6, 9.2M LT
DRILL METHOD: 108mm HOLLOW STEM AUGER
ENCOUNTERED WATER DEPTH (m): 6.7
DEPTH TO WATER (m): ____ CAVING: ____

BORING NO. M-S27
DATE: 5/2/97
JOB #: 33644.01
ELEV.: 298.698
DRILLERS: NW/GM
COMPLETION (m): 6.7
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	298.7	FILL: CRUSHED STONE and SAND			9/150 11/150 15/150	SS-1	76		4									
1		– Damp Stiff Grey/Brown SILTY CLAY w/Some Sand, Trace Gravel, A-6b(10)			3/150 5/150 7/150	SS-2	12	1706	18	1	10	17	31	41	33	16	17	A-6b(10)
2		Damp Stiff Brown/Grey SILT and CLAY w/Some Sand, Trace Gravel, Organics(Root), A-6a(7)			4/150 6/150 7/150	SS-3	13	1674	19									
3		– w/Little Sand, Trace Grave			5/150 8/150 8/150	SS-4	16	1869	12	6	14	11	27	42	28	17	11	A-6a(7)
4		– Very Moist Medium Stiff Brown/Grey SILT and CLAY w/Little Sand, Trace Organics (Root)			2/150 3/150 3/150	SS-5	6	1248	34									
					3/150 3/150 4/150	SS-6	7	1293	35									
5	293.8	Very Wet Medium Stiff Brown/Grey CLAY w/Sand, Organics (Root), Trace Sand A-7-6(10)			3/150 3/150 4/150 4/150	SS-7	8	740	44	0	1	2	62	35	43	29	14	A-7-6(10)
6	293.2	Very Moist Soft Grey SILT and CLAY w/Little Sand, Organics (Root)			2/150 2/150 2/150 2/150	SS-8	4	1121	47									
	292.6	Wet Soft Brown/Grey CLAY w/Silt, Trace Sand and Gravel, A-7-6(13)			2/150 2/150 2/150 2/150	SS-9	4	1118	51	7	3	3	63	24	44	22	22	A-7-6(13)
7		– Grey, A-7-6(11)			2/150 2/150 2/150 2/150	SS-10	4	1165	4/8	0	1	6	70	23	45	28	15	A-7-6(11)
	291.4	Moist Very Loose Grey SANDY SILT w/Some Clay, A-4a(7)			1/150 1/150 2/150 1/150	SS-11	3		28	0	8	21	47	24	22	15	7	A-4a(7)
8		– w/Little Clay, A-4a(3)			1/150 1/150 1/150 1/150	SS-12	2		23	0	19	33	33	15	19	14	5	A-4a(3)
9	290.0	Moist Very Soft Grey SILTY CLAY w/Seams of Sand			1/150 1/150 1/150	SS-13	2	1775	21									
10																		
	288.5	Very Moist Loose Grey SANDY SILT w/Trace Clay and Gravel, A-4a(0)			5/150 5/150 5/150	SS-14	10			4	38	12	43	3	NON	PLASTIC		A-4a(0)
11																		
12		– Medium Dense w/Clay, A-4a(7)			5/150 7/150 9/150	SS-15	16			2	12	14	41	31	23	16	7	A-4a(7)
13																		
	285.4	Damp Dense Grey STONE FRAGMENTS w/Trace Sand			4/150 25/150 23/150	SS-16	38											
14																		
15		– Very Dense			50/150	SS-17												
	283.5	Broken Grey LIMESTONE 1.5M RUN 9.5% RECOVERY 1% RQD																
16																		
17	281.9	End of Borehole																

NOTES: Boring moved 13.4M east and 4.0M south of staked location. Elevation approximate due to relocation. Auger refusal encountered at 15.2M. A 1.5M rock core was taken.

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: STATE ROUTE 30, MAINLINE STA 6+732.3, 12.9M RT
DRILL METHOD: 95mm HOLLOW STEM AUGER
ENCOUNTERED WATER DEPTH (m): 3.9
DEPTH TO WATER (m): ____ CAVING: ____

BORING NO. M-S28
DATE: 3/20/97
JOB #: 33644.01
ELEV.: 298.591
DRILLERS: NW/GM
COMPLETION (m): 1.9
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	298.6	CRUSHED STONE – 12/mm																
	298.5	Fill: Moist Very Stiff Grey/Brown SILTY CLAY w/Trace Sand and Seams of Rotted Wood			3/150 13/150 6/150	SS-1	19	1647	20									
1																		
	297.5	Moist Stiff Grey/Brown SILT and CLAY w/Little Sand, Trace Gravel, A-6a(10)			1/150 3/150 6/150	SS-2	9	1714	19	2	8	14	41	35	34	20	14	A-6a(10)
2					3/150 4/150 6/150	SS-3	10	1810	17									
	296.0	Moist Medium Dense Grey SANDY SILT w/Clay, Trace Gravel, A-4a(8)			3/150 5/150 8/150	SS-4	13	1599	22	2	7	9	43	39	29	22	7	A-4a(8)
3		– A-6a(9)			4/150 5/150 8/150	SS-5	13	1539	27	1	5	18	44	32	35	22	13	A-6a(9)
4	294.5	Wet Very Loose Grey FINE SAND w/Trace Silt	FS		1/150 1/150 1/150	SS-6	2		28									
5			FS		1/150 1/150 1/150	SS-7	2		28									
	293.0	Very Loose GRAVEL and/or STONE w/Sand, Trace Silt and Clay, A-1b(0)	FS		1/150 1/150 1/150	SS-8	2		22	1	66	20	12	1	NON-PLASTIC			A-1-b(0)
6		– w/Trace Silt and Gravel			1/150 1/150 1/150	SS-9	2		19									
	291.4	Wet Very Loose Grey COARSE SAND			2/150 2/150 2/150	SS-10	4		16									
7		– w/little Silt, A-3a(0)			2/150 3/150 3/150	SS-11	6		17	1	25	57	17	0	NON-PLASTIC			A-3a(0)
8	289.9	Damp Loose Grey SANDY SILT w/Little Clay, Trace Gravel			4/150 4/150 4/150	SS-12	8		16									
9																		
	288.4	Damp Medium Dense Grey GRAVEL w/Little Sand			4/150 5/150 6/150	SS-13	11		7									
10																		
	286.9	Wet Medium Dense Grey SANDY SILT, A-4a(0)			7/150 7/150 8/150	SS-14	15		20	0	2	49	49	0	NON-PLASTIC			A-4a(0)
11																		
12		-Damp Very Dense w/Little Clay, Trace Stone Fragments, A-4a(0)			5/150 7/150 9/150	SS-15	42											
13																		
		-w/Some Gravel, Trace Clay, A-4a(0)			23/150 50/150	SS-16	100+	1982	10	26	21	18	31	4	NON-PLASTIC			A-4a(0)
14																		
15																		
	282.7	Broken Grey LIMESTONE 2.4M RUN 100% RECOVERY 10% RQD				RC-1												
16																		
17																		
18	280.3	End of Borehole																

NOTES: Auger refusal was encountered at 15.8M. A 2.4M rock core was taken.

TOLEDO TEST, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

LOG OF TEST BORING

BORING NO. CR56-E1
DATE: 2/13/97
JOB #: 33644.01
ELEV.: 268.059
DRILLERS: TB/BG
COMPLETION (m): 1.8
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ COUNTY ROAD 56
LOCATION: COUNTY ROAD 56 STA 0+840
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 1.8
DEPTH TO — WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	268.059	CRUSHED STONE w/Sand and Trace Organics (Root) – 127 mm			5/150 5/150 4/150	SS 1	9		27	9	11	3	61	16	41	25	16	A-6b (11)
	267.932	Moist Stiff Dark Brown SILTY CLAY w/Little Sand, Trace Gravel, and Organics(Root) A-6b(11)																
1		–Medium Stiff Brown			3/150 3/150 3/150	SS 2	6	1298										
2		–Soft w/Trace Sand			2/150 1/150 2/150	SS-3	3											
3	265.459	Moist Loose Grey SILT w/Clay and Trace Sand A-4a(8)			2/150 3/150 5/150	SS 4	8	1868	22	0	0	0	66	34	27	19	8	A-4b (8)
		–Medium Dense w/Trace Gravel																
4					5/150 8/150 11/150	SS-5	19	1866										
	263.959	Moist Loose Grey SANDY SILT w/Clay, Trace Gravel A-4a(8)			5/150 5/150 5/150	SS-6	10	1852	17	1	6	7	48	38	27	19	8	A 4a (8)
5		–Medium Dense			5/150 8/150 10/150	SS-7	18	1714										
6					4/150 5/150 7/150	SS-8	12	1829										
	261.959	End of Borehole																
7																		

NOTES:

LOG OF TEST BORING

BORING NO. CR56-S1
DATE: 2/14/97
JOB #: 33644.01
ELEV.: 268.853
DRILLERS: TB/BG
COMPLETION (m): 0.9
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ COUNTY ROAD 56
LOCATION: COUNTY ROAD 56 STA 0+959.5 9.7 M RT.
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 1.8
DEPTH TO — WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	268.9	TOPSOIL – 102 mm																
	268.8	Very Moist Medium Stiff Brown SILTY CLAY w/Trace Sand, Gravel,and Organics (Root)			3/150 3/150 4/150	SS-1	7	1490										
1																		
	267.8	Wet Very Loose Brown SANDY SILT w/Clay A-4a(8)			2/150 2/150 2/150	SS 2	4	1597	31	0	1	5	59	35	29	24	5	A-4a (8)
2		–Moist Medium Dense w/Little Gravel			4/150 6/150 7/150	SS-3	13	1658										
3		–Grey w/Trace Gravel			6/150 8/150 9/150	SS-4	17	1828										
4					4/150 5/150 6/150	SS-5	11	1933										
		–A-4a(8)			5/150 6/150 8/150	SS-6	14	1919	16	3	7	7	33	50	27	19	8	A-4a (8)
5		–Very Damp			6/150 6/150 5/150	SS-7	11	2006										
	263.8 263.7	Moist Medium Dense GRAVEL and SAND SEAM																
6		Moist Medium Dense Grey SILT w/ Clay, Trace Sand –A-4b(8)			4/150 6/150 8/150	SS-8	14	1807	19	0	0	0	51	49	29	21	8	A-4b (8)
7		–Loose w/Trace Gravel			3/150 3/150 6/150	SS-9	9	1660										
		Medium Dense w/Trace Sand			4/150 8/150 9/150	SS-10	17	1615										
8					6/150 8/150 9/150	SS-11	17	1531										
9		–w/Trace Gravel			5/150 6/150 7/150	SS-12	13	1810										
10																		
	258.6	Damp Medium Dense Grey SILTY SAND w/Trace Gravel	FS		9/150 11/150 13/150	SS-13	24											
11			FS															
	257.4	Damp Hard Grey SILTY CLAY w/Little Sand and Trace Gravel			12/150 18/150 19/150	SS 14	37	1938										
12																		
13																		
	255.6	Damp Medium Dense Grey SILT w/Clay and Trace Sand A 4b(8)			6/150 9/150 11/150	SS-15	20	1834	19	0	0	0	54	46	26	19	7	A-4b (8)
14																		
	254.5	Moist Very Dense SAND and GRAVEL																
15	254.1	Damp Very Hard Grey SILTY CLAY w/Some Sand and Trace Gravel			6/150 9/150 50/3	SS 16	100+	1762										
16																		
	252.5	Damp Medium Dense Grey SANDY SILT w/Some Clay and Trace Gravel A-4a(3)			7/150 9/150 13/150	SS-17	22	1932	11	10	18	13	30	29	17	11	6	A 4a (3)
17																		
	251.5	Damp WEATHERED SHALE			50/1	SS-18	100+											
18	250.9	Fractured Grey DOLOMITE w/Trace Shale Seams (18.5 – 18.6 M) and Calcite Nodules (18.1 – 18.4 M). 1.5 M RUN 100% RECOVERY 19% RQD																
19						RC 1												
	249.3	End of Borehole																
20																		

NOTES: Auger refusal was encountered at a depth of 18.0 M. A 1.5 M rock core sample was taken starting at this depth.

LOG OF TEST BORING

BORING NO. CR56-E2
DATE: 2/12/97
JOB #: 33644.01
ELEV.: 0.0
DRILLERS: TB/BG
COMPLETION (m): 3.7
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ COUNTY ROAD 56
LOCATION: COUNTY ROAD 56 STA 11+160
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 4.0
DEPTH TO — WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	0.0	SANDY CLAY w/Gravel and Organics (Root) – 305 mm																
	–0.3	Moist Stiff Brown CLAY w/Trace Sand, A / 6(12)			3/150 4/150 5/150	SS-1	9	1623	23	0	2	1	55	42	41	21	20	A-7-6(12)
1	1.1	Wet Medium Dense Grey/Brown SILT w/Little Clay, Trace Sand and Gravel, A-4b(8)			3/150 5/150 6/150	SS 2	11	1631	23	7	4	7	67	25	32	23	9	A 4b (8)
2		Loose Brown w/Trace Sand and Clay A-4b(8)			3/150 4/150 5/150	SS-3	9	1576	24	0	1	3	85	11	29	25	4	A-4b (8)
		–w/Little Clay			3/150 3/150 3/150	SS-4	6											
3		–w/Trace Clay A 4b(0)			6/150 6/150 7/150	SS-5	13	1555	23	0	0	2	93	5	NON-PLASTIC			A-4b (0)
4	–4.1	Moist Very Stiff Brown/Grey SILTY CLAY w/Some Sand			5/150 7/150 11/150	SS-6	18	1874										
5	4.9	Moist Stiff Grey SILT and CLAY w/Little Sand			4/150 6/150 9/150	SS-7	15	1869										
6					4/150 6/150 7/150	SS-8	13	1757										
	6.1	End of Borehole																
7																		

NOTES:

TOUEST, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

LOG OF TEST BORING

BORING NO. CR56 S2
DATE: 2/1//97
JOB #: 33644.01
ELEV.: 268.640
DRILLERS: TB/BG
COMPLETION (m): 1.2
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ COUNTY ROAD 56
LOCATION: COUNTY ROAD 56 STA 1+001.1 14.6 M LT.
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 2.1
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	268.6	TOPSOIL – 76.2mm																
	268.6	Wet Loose Dark Brown SILT w/ Some Clay,Trace Sand,and Organics(Root) A-4b(8)			2/150 4/150 5/150	SS 1	9	1325	30	0	1	5	65	29	34	24	10	A-4b (8)
1		–Very Moist			2/150 4/150 4/150	SS-2	8	1624										
2	266.8	Moist Medium Stiff Brown SILTY CLAY w/Little Sand and Gravel			3/150 3/150 3/150	SS-3	6	1568										
	266.5	Moist Loose Brown SANDY SILT w/Little Clay and Trace Gravel A-4a(4)			4/150 3/150 4/150	SS-4	7		23	2	12	31	35	20	23	14	9	A 4a (4)
3	265.6	Moist Stiff Grey SILTY CLAY w/Trace Sand			5/150 6/150 9/150	SS-5	15	1978										
4					4/150 6/150 7/150	SS-6	13	1829										
5		–Very Stiff w/Trace Gravel			5/150 8/150 10/150	SS-7	18	1889										
	263.8 263.5	Moist Medium Dense GRAVEL and SAND SEAM																
6		Moist Very Stiff Grey SILT and CLAY, w/Little Sand, Trace Gravel A-6a(10)			4/150 7/150 10/150	SS-8	17	1932	18	3	10	10	43	34	27	13	14	A-6a (10)
		–Damp Stiff w/Some Sand			3/150 6/150 7/150	SS-9	13	2130										
7		Moist w/Trace Sand			3/150 3/150 6/150	SS-10	9	1672										
8		w/Trace Gravel			3/150 5/150 7/150	SS-11	12	1765										
9	260.0	Moist Very Stiff Grey SILTY CLAY w/Little Sand A-6b(10)			9/150 8/150 10/150	SS-12	18	1828	24	0	6	6	31	57	38	22	16	A-6b (10)
10		–Very Hard			15/150 30/150 40/150	SS-13	70	1866										
11																		
12	257.1	Moist Dense SILTY SAND w/Trace Clay	FS		30/150 20/150 30/150	SS 14	50											
13	255.7	Moist Hard Grey SILT and CLAY –A-6a(10)	FS		10/150 13/150 25/150	SS 15	38	1756	20	0	0	0	61	39	99	15	14	A 6a (10)
14	255.0	Damp Medium Dense Dark Grey SILTY SAND w/Some Gravel	FS															
15			FS		9/150 10/150 16/150	SS-16	26											
16	253.6	Damp Medium Dense Grey SANDY SILT w/Little Clay and Gravel A-4a(3)			4/150 8/150 10/150	SS-17	18	1961	11	13	70	16	35	16	18	11	7	A-4a (3)
17																		
18	250.7	Fractured Grey DOLOMITE w/Shale Seams (Throughout Core) and Calcite Nodules (18.6 – 18.9 M) 1.5 M RUN 100% RECOVERY 21% RQD			50/25	SS-18	100+											
						RC-1												
19																		
20	249.1	End of Borehole																

NOTES: Auger refusal was encountered at a depth of 18.0 M. A 1.5 M rock core sample was taken starting at this depth.

LOG OF TEST BORING

BORING NO. CR56 S3
DATE: 2/13/97
JOB #: 33644.01
ELEV.: 268.548
DRILLERS: TB/BG
COMPLETION (m): 3.5
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ COUNTY ROAD 56
LOCATION: COUNTY ROAD 56 STA 1+035.2 6.7 M RT.
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 3.4
DEPTH TO WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	268.5	TOPSOIL – 304.6mm																
	268.2	Wet Loose Grey/Brown SANDY SILT w/Little Clay and Trace Organics(Root) A-4a(5)			3/150 10/150 5/150	SS-1	10		28	0	40	2	41	17	37	29	8	A-4a (5)
1					4/150 5/150 5/150	SS-2	10	1501										
2					3/150 3/150 3/150	SS-3	6	1422										
	266.0	Very Moist Loose Brown SILT w/Some Clay, Trace Sand A-4b(8)			2/150 3/150 3/150	SS-4	6	1559	26	0	2	4	65	29	30	23	7	A-4b (8)
3					3/150 3/150 3/150	SS-5	6	1573										
4	264.6	Wet Loose Brown SANDY SILT w/Trace Clay			3/150 4/150 5/150	SS-6	9											
5		–Grey w/Little Clay			3/150 3/150 5/150	SS-7	8											
6	262.9	Moist Medium Stiff Grey SILTY CLAY w/Some Sand			4/150 4/150 4/150	SS-8	8	1544										
		–w/Little Sand			3/150 4/150 3/150	SS-9	7	1704										
7		–w/Trace Sand			2/150 3/150 3/150	SS-10	6	1768										
8		–Stiff A-6b(11)			3/150 4/150 5/150	SS-11	9	1560	25	0	1	3	27	69	38	21	7	A-6b (11)
9	259.9	Moist Very Stiff Grey SILT and Clay w/Trace Sand and Gravel, A-6a(9)			4/150 6/150 10/150	SS-12	16	1664	20	1	3	4	44	48	31	20	11	A-6a (9)
10		–w/Little Sand			7/150 9/150 15/150	SS-13	24	1743										
11																		
12	256.8	Damp Hard Grey SILTY CLAY w/Little Sand and Trace Gravel			9/150 13/150 18/150	SS-14	31	1965										
13	255.7	Moist Medium Dense Brown SANDY SILT w/Little Clay –A-4a(0)			5/150 7/150 8/150	SS-15	15		22	0	1	35	44	20	NON-PLASTIC			A 4a (0)
14																		
15	253.8	Moist Medium Dense Grey SILTY SAND w/Trace Gravel	FS		5/150 13/150 6/150	SS-16	19											
			FS															
16	252.7	Damp Very Dense Grey SANDY SILT w/Little Clay and Gravel A-4a(4)			50/125	SS-17	100+		10	13	17	13	42	15	19	14	5	A-4a (4)
17	252.1	Very Dense Grey WEATHERED SHALE																
18	251.5	Broken Dark Grey SHALE w/ Dolomite Seams (Throughout Core) 1.5 M RUN 100% RECOVERY 0% RQD				RC-1												
19	250.0	End of Borehole																
20																		

NOTES: Auger refusal was encountered at a depth of 17.1 M. A 1.5 M rock core sample was taken starting at this depth.

TOUEST, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

LOG OF TEST BORING

BORING NO. C-P3
DATE: 2/19/97
JOB #: 33644.01
ELEV.: 262.689
DRILLERS: JL/CM
COMPLETION (m): 7.3
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP C
LOCATION: STATE ROUTE 30, RAMP C STA 28+344
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 8.5
DEPTH TO ∇ WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	262.7	TOPSOIL – 152 mm																
	262.5	CRUSHED STONE – 152 mm																
	262.4	Moist Medium Stiff Brown-Grey SILT and CLAY w/Little Sand, Trace Gravel			3/150 4/150 3/150	SS-1	7	1701	22									
1	261.8	Very Moist Stiff Brown/Grey CLAY w/Silt, Trace Sand, A-7-6(13)			4/150 5/150 7/150	SS-2	12	1519	29	0	1	4	51	43	44	20	24	A-7-6(13)
2		– Moist			4/150 5/150 7/150	SS-3	12	1515	26									
3		– Very Stiff Grey-Brown			7/150 8/150 14/150	SS-4	22	1578	26									
4	259.3	Very Moist Stiff Brown/Grey ELASTIC CLAY w/Little Silt, Trace Sand, A-7-5(15)			5/150 5/150 7/150	SS-5	12	1456	29	0	0	2	18	80	53	31	22	A-7-5(15)
					4/150 5/150 7/150	SS-6	10		32									
5	257.8	Very Moist Medium Dense Grey SILT and CLAY w/Trace Gravel and Sand, A-6a(10)			5/150 5/150 8/150	SS-7	13	1397	27	9	2	2	16	71	39	24	15	A-6-a(10)
6		– Very Damp Very Stiff			6/150 11/150 16/150	SS-8	27	1962	13									
		– Hard			7/150 14/150 20/150	SS-9	34	1962	13									
7	255.7	Moist Medium Dense Grey COURSE to FINE SAND w/Trace Silt and Clay			7/150 11/150 16/150	SS-10	27		13									
8		– A-3a(0)			6/150 12/150 17/150	SS-11	29		14	0	35	47	12	6	26	23	3	A3-a(0)
9					8/150 8/150 11/150	SS-12	19		16									
	253.5	End of Borehole																

NOTES: BORING MOVED 4.6 METERS SOUTH DUE TO SOFT CONDITIONS. ELEVATION APPROXIMATE DUE TO BORING RELOCATION.

LOG OF TEST BORING

BORING NO. C-S1
DATE: 2/20/97
JOB #: 33644.01
ELEV.: 263.422
DRILLERS: NW/BG
COMPLETION (m): 10.7
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP C
LOCATION: STATE ROUTE 30, RAMP C STA 28+579.4, 3.3 M LT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 10.1
DEPTH TO ∇ WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	263.4	CRUSHED STONE – 102 mm															
	263.3	Very Damp Stiff Brown/Grey SILT and CLAY w/Trace Sand and Gravel, A-6a(10)			5/150 7/150 8/150	SS-1	15	19	2	3	4	40	51	38	23	15	A-6a (10)
1		– Very Stiff w/Little Sand A-6a(10)			5/150 8/150 9/150	SS-2	17	18	0	7	7	40	46	36	21	15	A-6a (10)
2		– A-6a(9)			6/150 6/150 10/150	SS-3	16	16	3	7	8	37	45	33	20	13	A-6a (9)
3	260.8	Moist Very Stiff Brown CLAY w/Trace Sand, A-7-6(13)			5/150 8/150 9/150	SS-4	17	24	0	0	1	18	81	43	24	19	A-7-6(13)
		– Stiff Grey/Brown w/Trace Calcite, A-7-6(13)			6/150 7/150 8/150	SS-5	15	26	0	1	2	19	78	44	25	19	A-7-6(13)
4					5/150 6/150 8/150	SS-6	14	22									
5	258.5	Moist Stiff Grey SILTY CLAY w/Trace Sand and Calcite			5/150 8/150 8/150	SS-7	16	22									
6					5/150 7/150 8/150	SS-8	15	20									
	257.3	Moist Stiff Grey-Brown SILT and CLAY w/Trace to Little Sand			5/150 6/150 7/150	SS-9	13	21									
7	256.4	Moist Medium Dense Grey FINE SAND w/Trace Silt	FS		6/150 6/150 7/150	SS-10	13	7									
8			FS		7/150 9/150 12/150	SS-11	21	10									
9		– Wet Grey-Brown w/Some Silt	FS		9/150 13/150 15/150	SS-12	28	20									
10	253.4	Moist Very Stiff SANDY SILT w/Some Clay	FS		5/150 9/150 11/150	SS-13	20	17									
11	252.4	Wet Medium Dense Brown-Grey FINE SAND w/Some Silt	FS														
12			FS		6/150 11/150 14/150	SS-14	25	22									
13			FS														
14			FS		8/150 12/150 12/150	SS-15	24	22									
15	248.9	WEATHERED SHALE	FS														
	248.6	Broken Dark Grey SHALE 1.5M RUN 100% RECOVERY 7% RQD				RC-1											
16	247.1	End of Borehole															

NOTES: GROUNDWATER READING AT COMPLETION BEFORE WATER INDUCED FOR CORING. AUGER REFUSAL WAS ENCOUNTERED AT 14.8 M. A 1.5 M ROCK CORE SAMPLE WAS TAKEN STARTING AT THIS DEPTH.

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

SOIL PROFILE

DRAWN BY: M. BURRIOLA
DATE: 9-8-99
DRAWING NO. 33644-104
PROJECT NO. 33644.01

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ TOWNSHIP ROAD 124
LOCATION: TOWNSHIP ROAD 124 STA. 0+700
DRILL METHOD: 57mm HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 3.7
DEPTH TO – WATER (m): CAVING:

BORING NO. TR124-F1
DATE: 2/12/97
JOB #: 33644.01
ELEV.: 268.044
DRILLERS: TB/BG
COMPLETION (m): 1.4
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	268.0	Moist Stiff Brown–Grey SILT w/Little Sand, Trace Gravel and Organics, A-4b (8)			4/150 5/150 6/150	SS-1	11	1483	24	1	3	12	65	19	31	23	8	A-4b (8)
1	267.1	Moist Medium Stiff Brown/Grey SILT and CLAY w/Some Sand A-6c (9)			2/150 3/150 3/150	SS-2	6	1627	24	0	3	23	45	29	30	18	12	A-6a (9)
2		– A-6a (9)			3/150 3/150 3/150	SS-3	6	1696	24	0	2	17	52	29	31	19	12	A-6a (9)
3		– Trace Sand			2/150 2/150 3/150	SS-4	5	1744										
4		– Stiff Brown, Some Sand, Trace Gravel			5/150 7/150 5/150	SS-5	12		16	6	22	8	37	27	30	16	14	A-6a (7)
5		– Brown–Grey, Trace Sand			2/150 5/150 6/150	SS-6	10	1921										
6		– Very Stiff			4/150 6/150 10/150	SS-7	16	1679										
7	261.9	– Grey			4/150 8/150 10/150	SS-8	18	1608										
		End of Borehole																

NOTES:

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ TOWNSHIP ROAD 124
LOCATION: TOWNSHIP ROAD 124 STA. 0+820
DRILL METHOD: 57mm HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 4.6
DEPTH TO – WATER (m): CAVING:

BORING NO. TR124-E2
DATE: 2/12/97
JOB #: 33644.01
ELEV.: 266.883
DRILLERS: TB/BG
COMPLETION (m): 3.5
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	266.9	Moist Stiff Grey–Brown SILTY CLAY w/Little Sand, Trace Organics (Root), A-6b (11)			3/150 5/150 6/150	SS-1	11		19	0	5	12	38	45	39	21	18	A-6b (11)
1	266.0	Moist Stiff Brown SILT and CLAY w/Little Sand, Trace Gravel, A-6c (10)			4/150 5/150 5/150	SS-2	10	1722	18	1	9	9	41	40	37	23	14	A-6c (10)
2		– A-6a (10)			3/150 4/150 5/150	SS-3	9	1776	18	1	5	8	44	42	34	21	13	A-6c (9)
3		– Brown–Grey, Trace Sand			5/150 5/150 4/150	SS-4	9	1855										
4						ST-1												
		– Medium Stiff Grey, Little Sand			4/150 3/150 4/150	SS-5	7	1977	15	2	12	14	44	28	24	15	9	A-4a (7)
5	262.3	Wet Medium Dense Grey COARSE to FINE SAND			5/150 7/150 9/150	SS-6	16											
6					3/150 6/150 8/150	SS-7	14											
7					4/150 9/150 11/150	SS-8	20											
	259.3	End of Borehole			5/150 6/150 7/150	SS-9	13											

NOTES:

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ TOWNSHIP ROAD 124
LOCATION: TOWNSHIP ROAD 124 STA. 0+964
DRILL METHOD: 95mm HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 2.3
DEPTH TO – WATER (m): CAVING:

BORING NO. TR124-S1
DATE: 2/11/97
JOB #: 33644.01
ELEV.: 267.652
DRILLERS: TB/BG
COMPLETION (m): NONE
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	267.7	FILL – Moist Stiff Brown CLAY and SAND w/Crushed Stone and Organics (Root)			2–2–3													
	267.6	Moist Loose Brown SILT w/Little Sand and Clay, A-4b (8)				SS-1	5		26	0	2	19	59	20	28	20	8	A-4b (8)
1		– A-4b (8)			2–3–4	SS-2	7	1552	25	0	1	14	56	19	28	25	3	A-4b (8)
2	265.6	Moist Loose Grey Brown COARSE to FINE SAND w/Little Silt and Clay, A-3a (0)			3–3–3	SS-3	6		24	0	9	58	17	16				A-3a (0)
	265.2	Moist Stiff Brown and Grey SILT and CLAY w/Sand, A-6a (7)			3–5–8	SS-4	13	1655	21	2	33	1	27	37	26	14	12	A-6a (7)
3	264.7	Wet Medium Dense Grey SANDY SILT w/Little Clay, A-4a (0)			5–8–9	SS-5	17	1922	18	0	10	37	37	16				A-4a (0)
4	263.7	Moist Stiff Grey SILT and CLAY w/Trace Sand and Gravel			4–6–7	SS-6	13	1842										
5	263.2	Moist Stiff Grey SILTY CLAY w/Trace Sand			4–5–6	SS-7	11	1563										
		– Very Moist																
6		– Very Stiff, Little Sand			3–6–10	SS-8	16	1760										
	261.7	Wet Medium Dense Grey FINE SAND w/Trace Sand	FS		7–12–14	SS-9	25											
7			FS		5–7–10	SS-10	17											
8			FS		4–8–10	SS-11	18											
9			FS		10–13–15	SS-12	28											
10			FS															
			FS		6–8–8	SS-13	16											
11			FS															
12	256.2	Moist Stiff Grey SILTY CLAY w/Trace Sand	FS		5–8–8	SS-14	16	1259										
13		– Very Hard, Little Sand, Trace Gravel	FS		2–19–50/3	SS-15	100+	1744										
14	254.1	Broken Grey DOLOMITE 1524 mm RUN 95% RECOVERY 0% RQD				RC-1												
15	252.8	End of Borehole																

NOTES: AUGER REFUSAL AT 13.6 METERS. A 1524 MM ROCK CORE WAS EXTRACTED FROM 13.6 TO 15.1 METERS.

TTL INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: BAL/MMB
DATE: 8-2-99
DRAWING NO. 33644-105
PROJECT NO. 33644.01

SOIL PROFILE

WTA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ TOWNSHIP ROAD 124
LOCATION: TOWNSHIP ROAD 124 STA. 1+000
DRILL METHOD: 95mm HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 4.9
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO. TR124-S2
DATE: 2/10/97
JOB #: 33644.01
ELEV.: 266.829
DRILLERS: TB/BG
COMPLETION (m): 6.1
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	266.8	TOPSOIL – 609.6 mm w/Crushed Stone – No Crushed Stone			3-4-5	SS-1	9	1451	21	9	8	23	41	19	34	22	12	A-6a (6)
1	266.2	Moist Stiff Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a (6)																
		–Medium Stiff Yellow Brown and Gray, A-6a (7)			2-3-4	SS-2	7	1760	19	4	17	14	33	32	32	21	11	A-6a (7)
	265.2	Moist Stiff Gray-Brown Silty Clay, Trace Sand and Gravel																
2	265.2	Moist Stiff Gey-Brown SILTY CLAY, Trace Sand and Gravel			3-4-6	SS-3	10	1842	17	2	12	20	46	20	26	19	7	A-4a (6)
	264.7	Moist Very Stiff Gray SILT and CLAY w/Trace Sand and Gravel																
		– A-6a (10)			6-9-11	SS-4	20	1884	16	1	4	6	51	38	32	19	13	A-6a (10)
3		– w/Trace Sand, A-6a (10)			5-8-9	SS-5	17	1738	19	0	2	1	55	42	32	19	13	A-6a (10)
4	262.9	Moist Very Stiff Grey SILTY CLAY w/Little Sand			4-8-9	SS-6	17	1946										
	262.4	Dense Medium Dense Grey FINE SAND w/Trace Silt	FS															
5		– Wet	FS		8-15-15	SS-7	30											
6			FS		4-6-9	SS-8	15											
7			FS		5-9-11	SS-9	20											
	259.7	Dense Very Loose Grey COARSE to FINE SAND w/Trace Silt	FS		1-0-0	SS-10	0											
8			FS		1-1-1	SS-11	2											
	258.3	Wet Medium Dense Gray SILTY SAND	FS		6-7-8	SS-12	15											
9			FS															
10			FS															
	256.8	Moist Stiff Grey SILTY CLAY w/Trace Sand			3-4-5	SS-13	9	1757										
11																		
		– Trace Gravel			3-3-4	SS-14	7											
12																		
13	254.0	Weathered Grey DOLOMITE.																
	253.7	Broken Grey DOLOMITE w/Trace Shale Seams From 13.4 to 13.7 M 1524 mm RUN 92% RECOVERY 9% RQD				RC-1												
14																		
15	252.2	End of Borehole																

NOTES: AUGER REFUSAL AT 13.1 METERS. A 1524 MM ROCK CORE WAS EXTRACTED FROM 13.1 TO 14.6 METERS.

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ TOWNSHIP ROAD 124
LOCATION: TOWNSHIP ROAD 124 STA. 1+036
DRILL METHOD: 95mm HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 3.7
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO. TR124-S3
DATE: 2/11/97
JOB #: 33644.01
ELEV.: 266.553
DRILLERS: TB/BG
COMPLETION (m): 4.1
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	266.6	FILL – Moist Brown CRUSHED STONE and SILTY CLAY w/Some Sand and Organics			8-7-5	SS-1	12	1294	22	1	4	28	49	13	24	20	4	A-4a (6)
1	266.2	Moist Medium Dense Grey-Brown SANDY SILT w/Little Clay, A-4a (6)																
	265.6	Moist Very Stiff Yellow-Brown and Grey CLAY w/Little Sand and Gravel, A-7-6 (12)			5-8-9	SS-2	17	1631	24	11	12	11	32	34	43	21	22	A-7-6(12)
2		– Stiff, A-7-6 (11)			4-5-7	SS-3	12	1528	25	13	10	11	30	36	47	20	21	A-7-6(11)
	264.1	Moist Medium Stiff Yellow-Brown and Grey SILTY CLAY w/Sand, Trace Gravel, A-6b (8)			1-2-3	SS-4	5	1584	26	2	18	21	30	29	35	18	17	A-6b (8)
3	263.4	Wet Loose Brown and Grey Gravel w/Sand, Silt and Clay, A-2-7 (1)			2-2-3	SS-5	5	1490	27	9	50	9	18	14	41	25	16	A-2-7(11)
		– Very Loose Brown-Grey			2-1-1	SS-6	2											
4	261.8	Wet Dense Grey-Brown COURSE to FINE SAND w/Little Silt and Clay, Trace Gravel			1-19-22	SS-7	41											
5	260.8	Wet Loose Grey FINE SAND w/Little Silt	FS		2-3-5	SS-8	8											
		– Medium Dense	FS		5-6-8	SS-9	14											
6		– w/Trace Silt	FS		4-5-7	SS-10	12											
7		– Loose	FS		4-4-5	SS-11	9											
8		– Medium Dense w/Little Silt	FS		4-7-7	SS-12	14											
9			FS															
10	256.5	Moist Stiff Grey SILTY CLAY w/Trace Sand			2-3-6	SS-13	9	1717										
11																		
		– Hard w/Little Sand, Trace Gravel			6-6-36	SS-14	42	1608										
12																		
13	254.4	Broken Grey DOLOMITE w/Trace Shale Seams From 13.4 to 13.7 M 1524 mm RUN 89% RECOVERY 7% RQD				RC-1												
14	252.8	End of Borehole																
15																		

NOTES: AUGER REFUSALAT 12.2 VETERS. A 1524 VM ROCK CORE WAS EXTRACTED FROM 12.2 TO 13.7 METERS.

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ COUNTY ROAD 22
LOCATION: COUNTY ROAD 22 STA 0-840
DRILL METHOD: 102 MM SOLID STEM AUGERS
ENCOUNTERED WATER DEPTH (m): NONE
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO. CR22-E1
DATE: 2/18/97
JOB #: 33644.01
ELEV.: 297.616
DRILLERS: TB/SW
COMPLETION (m): NONE
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	297.6	CRUSHED STONE and SAND – 356 mm																
	297.2	Moist Stiff Brown SILTY CLAY w/Trace Sand			3/4/5	SS-1	9	1648										
1		– Very Damp Very Stiff			5/8/8	SS-2	16	1797										
2		– Stiff			4/6/9	SS-3	15	1751										
		– Very Stiff			5/9/10	SS-4	19	1893										
3		– Stiff Grey			3/5/6	SS-5	11	1991										
4		– Medium Stiff			3/3/4	SS-6	7	1863										
5						ST-1												
		– Very Stiff			6/9/12	SS-7	21	1921										
6	291.5	End of Borehole																
7																		

NOTES:

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: BAL/AMB
DATE: 8-2-99
DRAWING NO. 33644-106
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

106/130

LOG OF TEST BORING

BORING NO. CR22-S2
DATE: 2/19/97
JOB #: 33644.01
ELEV.: 298.566
DRILLERS: NW/BG
COMPLETION (m): 6.7
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ COUNTY ROAD 22
LOCATION: COUNTY ROAD 22 STA 1+000
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 7.6
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	298.6	ASPHALT – 102 mm																
	298.5	CRUSHED STONE – 152 mm																
	298.3	Very Damp Stiff Yellow-Brown and Grey SILT and CLAY w/Little Sand, Trace Gravel			4–4–6	SS–1	10	1792										
1	297.7	Very Damp Stiff Grey-Brown SILTY CLAY w/Little Sand, Trace Gravel			3–4–5	SS–2	9	1833										
2					5–5–6	SS–3	11	1837										
3	296.0	Very Damp Stiff Brown Grey SILT and CLAY w/Trace to Little Sand, Trace Gravel			7–8–6	SS–4	14	1799										
					5–6–7	SS–5	13	1821										
4	294.5	Very Damp Stiff Grey SILTY CLAY w/Trace to Little Sand, Trace Gravel			4–5–6	SS–6	11	1938										
5					5–5–5	SS–7	10	1921										
6					3–4–5	SS–8	9	1887										
		– Medium Stiff			4–4–4	SS–9	8	1970										
7	291.6	Very Damp Medium Dense Grey COURSE to FINE SAND w/Little Silt			7–9–14	SS–10	23											
	290.8	Very Damp Stiff Grey SILTY CLAY w/Trace to Little Sand, Trace Gravel			5–5–4	SS–11	9	1993										
8					4–5–6	SS–12	11	1906										
9																		
10																		
11					4–5–5	SS–13	10	1970										
12	287.1	Damp Dense Grey COURSE to FINE SAND w/Trace Gravel			8–18–21	SS–14	39											
13		– Very Dense			35–50/2	SS–15	100–											
14																		
15	283.9	Some Fracured Grey LIMESTONE 1524 mm RUN 100% RECOVERY 39% RQD				RC–1												
16																		
	282.3	End of Borehole																

NOTES: AUGER REFUSAL WAS ENCOUNTERED AT 14.6 METERS. A 1.5 METER ROCK CORE SAMPLE WAS TAKEN STARTING AT THIS DEPTH.

LOG OF TEST BORING

BORING NO. CR22-S3
DATE: 2/17/97
JOB #: 33644.01
ELEV.: 298.480
DRILLERS: NW/BG
COMPLETION (m): 2.1
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ COUNTY ROAD 22
LOCATION: COUNTY ROAD 22 STA 1–037
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 8.4
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N–VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	298.5	ASPHALT – 102 mm																
	298.4	CRUSHED STONE – 356 mm																
	298.0	Very Damp Medium Stiff Brown SILTY CLAY w/Trace to Little Sand			7–5–3	SS–1	8	1754										
1		– Moist			3–4–5	SS–2	9	1592										
2					4–4–4	SS–3	8	1584										
3		– Very Damp			6–7–9	SS–4	16	1914										
		– Very Stiff Grey-Brown			7–8–10	SS–5	18	2004										
4		– Stiff Grey			3–4–5	SS–6	9	1813										
5		– Brown-Grey			3–5–6	SS–7	9	1869										
6		– Grey			5–6–7	SS–8	13	1946										
					6–7–6	SS–9	13	2076										
7		– Damp Hard w/Some Sand			10–15–17	SS–10	32	1909										
	290.7	Damp Dense Grey SANDY SILT w/Little Clay			9–16–18	SS–11	34	2014										
8	289.9	Very Damp Very Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			4–8–8	SS–12	16	1993										
9																		
10		– w/Some Sand			6–12–7	SS–13	19	1932										
11																		
12	287.1	Damp Dense Grey COURSE to FINE SAND w/Little Gravel			11–13–25	SS–14	38											
13					12–18–26	SS–15	44											
14																		
15	283.9	Damp Very Dense Grey Fractured LIMESTONE w/Little Sand			50/5	SS–16	100–											
	283.2	Some Fractured Grey LIMESTONE 1524 mm RUN 100% RECOVERY 29% RQD				RC–1												
16																		
17	281.7	End of Borehole																

NOTES: AUGER REFUSAL WAS ENCOUNTERED AT 15.2 METERS. A 1.5 METER ROCK CORE SAMPLE WAS TAKEN STARTING AT THIS DEPTH.

LOG OF TEST BORING

BORING NO. CR22-E2
DATE: 2/18/97
JOB #: 33644.01
ELEV.: 298.630
DRILLERS: TB/SW
COMPLETION (m): 5.5
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ COUNTY ROAD 22
LOCATION: COUNTY ROAD 22 STA 1–160
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): NONE
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	298.6	CRUSHED STONE – 305 mm																
	298.3	Moist Stiff Brown SILTY CLAY w/Trace Sand			4–5–4	SS–1	9	1589										
1		– Very Stiff			5–7–1	SS–2	18	1679										
2		– Stiff Brown-Grey			3–4–6	SS–3	10	1429										
3		– Very Damp Very Stiff Grey w/Little Sand			9–12–16	SS–4	28	1847										
		– w/Trace Sand			10–13–14	SS–5	27	1932										
4		– Stiff			4–6–7	SS–6	13	1857										
5					4–5–7	SS–7	12	1975										
6		– Damp Hard w/Little Sand			12–17–18	SS–8	35	1954										
	292.5	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. A–E1
DATE: 4/17/97
JOB #: 33644.01
ELEV.: 266.147
DRILLERS: BG/CW
COMPLETION (m): 1.2
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP A
LOCATION: STATE ROUTE 30, RAMP A STA 28–920
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 0.9
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N–VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	266.1	TOPSOIL – 457 mm			3/150													
	265.7	Moist Medium Stiff Grey-Brown SILT and CLAY w/Little Sand			3/150 4/150	SS–1	7	1568										
1	265.2	Wet Loose Brown SILT w/Some Clay, Trace Sand and Gravel, A–4c(0)			3/150 5/150 5/150	SS–2	10	1578	28	0	0	2	77	21	NON–PLASTIC			A–4b (0)
2					4/150 5/150 5/150	SS–3	10											
3	263.7	Very Damp Stiff Brown SILTY CLAY w/Some Sand, Trace Gravel			4/150 6/150 8/150	SS–4	14	1613										
4	262.8	Very Damp Stiff Brown SILT and CLAY w/Some Sand – Very Stiff Grey w/Little Sand, Trace Gravel, A–6a(9)			4/150 5/150 6/150	SS–5	11											
					8/150 12/150 11/150	SS–6	23	1874	16	1	6	8	49	36	29	17	12	A–6a (9)
5	261.3	End of Borehole																

NOTES:

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: BAL/MMB
DATE: 8–2–99
DRAWING NO. 33644–107
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA–30–23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. A-E2
DATE: 4/17/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP A
JOB #: 33644.01
LOCATION: STATE ROUTE 30, RAMP A STA 29+040
ELEV.: 265.266
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: BG/CW
ENCOUNTERED WATER DEPTH (m): 1.8
COMPLETION (m): 4.6
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	265.3	TOPSOIL – 457 mm															
	264.8	Moist Stiff Brown–Grey CLAY w/Silt, Trace Sand and Gravel, A–7–6(17)			4/150 5/150 5/150	SS–1	10	1515	25	0	1	4	49	46	51	23	28	A–7–6(17)
1		– Medium Stiff Grey–Brown			3/150 4/150 4/150	SS–2	8	1575									
2	263.4	Wet Very Loose Grey–Brown SILT w/Little Clay, Trace Sand, A–4b(8)			2/150 2/150 2/150	SS–3	4	1477	30	0	1	6	75	18	30	23	7	A–4b (8)
3	262.8	Moist Stiff Brown SILTY CLAY w/Some Sand, Trace Grave			4/150 5/150 5/150	SS–4	10	1571									
4	261.9	Wet Loose Grey FINE SAND w/Silt, Trace Clay	FS		3/150 4/150 5/150	SS–5	9										
	261.2	Moist Medium Dense Grey SANDY SILT w/Clay, Trace Gravel, A–4c(8)	FS		5/150 6/150 6/150	SS–6	12	1817	15	1	5	7	42	45	27	21	6	A–4a (8)
5		– Loose			3/150 3/150 5/150	SS–7	8	1687									
6		– Medium Dense, A–4a(8)			5/150 6/150 8/150	SS–8	14	1636	17	2	5	7	50	36	28	19	9	A–4a (8)
	258.9	End of Borehole															

NOTES:

LOG OF TEST BORING

BORING NO. A-E3
DATE: 4/16/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP A
JOB #: 33644.01
LOCATION: STATE ROUTE 30, RAMP A STA 29+160
ELEV.: 266.931
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: BG/CW
ENCOUNTERED WATER DEPTH (m): 2.6
COMPLETION (m): 4.6
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	266.9	TOPSOIL – 279 mm																
	266.7	Moist Medium Stiff Grey–Brown SILT and CLAY w/Some Sand			2/150 3/150 4/150	SS–1	7	1515										
1	265.9	Moist Stiff Brown SILTY CLAY w/Little Sand, Trace Calcite			6/150 7/150 7/150	SS–2	14	1637										
2		– Very Damp w/Little Sand, Trace Gravel			4/150 7/150 8/150	SS–3	15	1877										
3	264.3	Very Damp Very Stiff Grey SILT and CLAY w/Little Sand, Trace Gravel			4/150 8/150 10/150	SS–4	18	1877										
	263.7	Very Damp Very Stiff Brown–Grey SILTY CLAY w/Little Sand, Trace Gravel			7/150 10/150 11/150	SS–5	21	1866										
4					7/150 13/150 13/150	SS–6	26	1828										
5	262.2	Very Damp Very Stiff Brown–Grey SILT and CLAY w/Little Sand			9/150 9/150 9/150	SS–7	18	1690										
6	261.4	Very Damp Very Stiff Brown–Grey SILTY CLAY w/Little Sand			7/150 8/150 8/150	SS–8	17	1728										
7	260.5	Very Damp Very Stiff Brown–Grey SILT and CLAY w/Little Sand			6/150 8/150 10/150	SS–9	18	1758										
	259.9	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. A-E4
DATE: 4/8/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP A
JOB #: 33644.01
LOCATION: STATE ROUTE 30, RAMP A STA 29+280
ELEV.: 268.510
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: BG/CW
ENCOUNTERED WATER DEPTH (m): 1.8
COMPLETION (m): 3.7
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	268.5	TOPSOIL – 381 mm																
	268.1	Moist Stiff Brown CLAY w/ SILT, Trace Sand and Calcite, A–7–6(14)			4/150 6/150 6/150	SS–1	12	1512	25	0	2	5	50	43	48	25	23	A–7–6(14)
1	267.4	Moist Very Stiff Brown SILT and CLAY w/Some Sand			4/150 8/150 8/150	SS–2	16	1768										
2	266.7	Wet Loose Brown SANDY SILT			2/150 2/150 3/150	SS–3	5											
3	265.9	Moist Medium Dense Brown SILT w/Trace Clay and Sand, A–4b(0)			4/150 6/150 13/150	SS–4	19		26	0	0	4	86	10	NON–PLASTIC			A–4b (0)
		– Grey			6/150 9/150 12/150	SS–5	15											
4		– Loose			4/150 4/150 4/150	SS–6	8											
5	263.8	Moist Medium Dense Grey SILTY SAND	FS		8/150 8/150 10/150	SS–7	18											
	263.0	Moist Stiff Grey SILTY CLAY w/Trace Sand, A–6b(12)	FS		7/150 6/150 7/150	SS–8	13	1676	22	0	0	2	29	69	40	23	17	A–6b (12)
6	262.1	Moist Stiff Grey SILT and CLAY w/Trace Sand			5/150 7/150 7/150	SS–9	14	1442										
7	261.5	End of Borehole																

TOLEDO ENGINEERING CO., INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: BAL/MMB
DATE: 8-2-99
DRAWING NO. 33644-108
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

108/130

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ RAMP A
LOCATION: STATE ROUTE 30, RAMP A STA 29+400
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 2.1
DEPTH TO – WATER (m): CAVING:

BORING NO. A-E5
DATE: 4/8/97
JOB #: 33644.01
ELEV.: 266.822
DRILLERS: BG/CW
COMPLETION (m): 4.3
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	266.8	TOPSOIL – 406 mm			4/150 6/150 10/150	SS-1	16	1587	19	2	9	9	43	37	33	17	16	A-6b (10)
1	266.4	Moist Very Stiff Brown SILTY CLAY w/Little Sand, A-6b(10) – w/Gravel and Cobbles			18/150 7/150 4/150	SS-2	11											
2	264.7	Wet Loose Grey-Brown SILT w/Little Clay, Trace Sand, A-4b(8)			3/150 4/150 5/150	SS-3	9		23	0	0	2	80	18	24	21	3	A-4b (8)
3	264.4	Moist Medium Stiff Brown SILTY CLAY w/Little Sand, Trace Gravel			4/150 4/150 5/150	SS-4	7	1605										
4	263.6	Wet Loose Brown-Grey FINE SAND	FS		4/150 4/150 5/150	SS-5	9											
5	262.9	Wet Dense Brown-Grey COURSE to FINE SAND w/Trace Gravel	FS		15/150 19/150 24/150	SS-6	43											
6	261.9	Very Moist, Very Stiff Grey SILT and CLAY w/Trace Sand A-6a(9)			4/150 7/150 11/150	SS-7	18	1687	29	0	1	7	46	52	35	22	13	A-6a (9)
7	261.3	Moist Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			4/150 5/150 4/150	SS-8	9	1733										
	260.4	Moist Stiff Grey SILT and CLAY w/Little Sand, Trace Gravel – A-6a(8) – Brown-Grey			4/150 4/150 4/150	SS-9	8	1578	21	1	7	7	48	37	28	17	11	A-6a (8)
					3/150 4/150 5/150	SS-10	9	1789										
	259.2	End of Borehole																

NOTES:

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ RAMP A
LOCATION: STATE ROUTE 30, RAMP A STA 29+520
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 1.0
DEPTH TO – WATER (m): CAVING:

BORING NO. A-E6
DATE: 4/8/97
JOB #: 33644.01
ELEV.: 267.940
DRILLERS: BG/CW
COMPLETION (m): 3.0
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	267.9	TOPSOIL – 406 mm			3/150 3/150 3/150	SS-1	6	1587	20	0	0	0	79	21	28	16	12	A-6a (9)
1	267.5	Moist Medium Stiff Brown-Grey SILT and CLAY w/Trace Sand, A-6a(9)			2/150 3/150 4/150	SS-2	7											
2	267.0	Wet Loose Brown SANDY SILT w/Trace Clay	FS		4/150 8/150 5/150	SS-3	13		26	0	4	57	31	8	NON-PLASTIC			A-3 (0)
3	265.1	Wet Medium Dense Brown FINE SAND w/Some Silt, Trace Clay and Course Sand, A-3(0) – Orange-Brown	FS		6/150 7/150 8/150	SS-4	15	1789										
4	264.6	Very Damp Stiff Brown-Grey SILTY CLAY w/Some Sand	FS		5/150 5/150 7/150	SS-5	12	2041										
5	264.0	Moist Stiff Grey SILT and CLAY w/Little Sand			3/150 4/150 5/150	SS-6	9	1583										
6	263.1	Very Damp Loose Brown/Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(8)			4/150 4/150 4/150	SS-7	8	1921	14	3	10	15	44	28	25	15	10	A-4a (8)
7	261.8	End of Borehole			3/150 6/150 8/150	SS-8	14	1991										

NOTES:

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ RAMP B
LOCATION: STATE ROUTE 30, RAMP B STA 28+320
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 0.9
DEPTH TO – WATER (m): CAVING:

BORING NO. B-E1
DATE: 4/16/97
JOB #: 33644.01
ELEV.: 267.321
DRILLERS: TB/CM
COMPLETION (m): 3.2
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	267.3	TOPSOIL – 305 mm																
	267.0	Moist Stiff Grey-Brown SILT and CLAY w/Trace Sand, A-6a(9)			3/150 4/150 5/150	SS-1	9	1640	27	0	1	4	61	34	37	25	12	A-6a (9)
1	266.4	Wet Medium Dense Grey-Brown SANDY SILT w/Trace Clay			4/150 5/150 5/150	SS-2	11											
2	265.5	Very Damp Very Stiff Brown SILTY and CLAY w/Little Sand and "Rust like" Iron Seams Gravel			5/150 7/150 10/150	SS-3	17	1722										
		– Stiff Brown-Grey w/Trace Sand and Gravel, A-6a(9)			4/150 5/150 8/150	SS-4	13	1828	16	1	3	4	42	50	29	18	11	A-6a (9)
3	264.0	Wet, Medium Dense Grey SANDY SILT w/Trace Clay			4/150 6/150 9/150	SS-5	15	1789										
4	263.4	Very Damp Stiff Brown SILTY CLAY w/Little Sand, Trace Gravel			3/150 7/150 7/150	SS-6	14	1828										
5	262.4	End of Borehole																
6																		

TOLEDO ENGINEERING CO., INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: BAL/MMB
DATE: 8-2-99
DRAWING NO. 33644-109
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. B-E2
DATE: 5/2/97
JOB #: 33644.01
ELEV.: 266.997
DRILLERS: RG/JL
COMPLETION (m): 1.2
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP B
LOCATION: STATE ROUTE 30, RAMP B STA 28+440
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 0.6
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	267.0	TOPSOIL – 305 mm																
	266.7	Wet Very Loose Brown SANDY SILT w/Clay			2/150 2/150 2/150	SS-1	4	1712										
1	266.1	Wet Loose Brown SILT w/Little Clay, Trace Sand, A-4b(8)			2/150 3/150 3/150	SS-2	6	1318	39	0	4	3	72	21	34	25	9	A-4b (8)
2		– Medium Dense			6/150 6/150 7/150	SS-3	13											
3	264.4	Moist Medium Dense Brown-Grey SANDY SILT w/Clay, Trace Gravel, A-4a(8)			7/150 8/150 8/150	SS-4	16	1808	20	1	4	7	48	40	27	18	9	A-4a (8)
4					4/150 6/150 7/150	SS-5	13	1684										
	262.9	Moist Stiff Brown/Grey SILT and CLAY w/Little Sand, Trace Gravel, A-6a(10)			4/150 9/150 7/150	SS-6	12	1664	20	2	5	7	45	41	33	18	15	A-6a (10)
5		– Very Stiff			7/150 9/150 9/150	SS-7	18	1746										
6					8/150 10/150 11/150	SS-8	21											
	260.9	End of Borehole																

NOTES: LOST HEAD ON SPLIT SPOON SAMPLER FOR SS-8. NOT ABLE TO RECOVER SPOON AND SAMPLE.

LOG OF TEST BORING

BORING NO. B-E3
DATE: 4/16/97
JOB #: 33644.01
ELEV.: 265.365
DRILLERS: B/CM
COMPLETION (m): 6.4
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP B
LOCATION: STATE ROUTE 30, RAMP B STA 28+560
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 4.0
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	265.4	TOPSOIL – 305 mm																
	265.1	Very Moist Medium Stiff Grey-Brown SILTY CLAY w/Sand			2/150 2/150 3/150	SS-1	5	1512										
1	264.5	Very Damp Very Stiff Grey-Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(7)			5/150 7/150 10/150	SS-2	17	1796	16	5	22	9	25	39	31	18	13	A-6a (7)
2		– Stiff Grey, w/Trace Sand			4/150 9/150 13/150	SS-3	22											
3		– w/Little Sand, A-6a(9)			4/150 6/150 8/150	SS-4	14	1791	17	0	7	8	36	49	29	16	13	A-6a (9)
	262.0	Moist Very Stiff Grey CLAY w/Some Silt, A-7-6(14)			6/150 8/150 9/150	SS-5	17	1522	25	0	0	0	24	76	46	23	23	A-7-6(14)
4		– Very Moist, Medium Stiff			2/150 2/150 4/150	SS-6	8	1495										
5		– w/ Little Silt, A-7-6(14)			2/150 3/150 4/150	SS-7	7	1512	29	0	0	0	17	83	43	22	21	A-7-6(14)
6		– Moist			3/150 3/150 4/150	SS-8	7	1603										
		– Very Damp Hard			10/150 17/150 27/150	SS-9	44	1983										
7	258.4	Damp Dense Grey FINE SAND w/Trace Silt		FS	10/150 19/150 21/150	SS-10	36											
8		– Medium Dense		FS FS	13/150 13/150 13/150	SS-11	26											
9		– Wet		FS	13/150 13/150 15/150	SS-12	28											
10				FS FS	12/150 12/150 18/150	SS-13	30											
	255.0	End of Borehole																

NOTES:

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

SOIL PROFILE

DRAWN BY: BAL/AMB
DATE: 8-2-99
DRAWING NO. 33644-110
PROJECT NO. 33644.01

WYA/CRA-30-23.914/0.000(14.86/0.00)

110/130

LOG OF TEST BORING

BORING NO. B-S1
DATE: 4/16/97
JOB #: 33644.01
ELEV.: 264.375
DRILLERS: TB/CM
COMPLETION (m): 7.5
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP B
LOCATION: STATE ROUTE 30, RAMP B STA 28+665.8, 3.6 M LT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 7.9
DEPTH TO - WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	264.4	TOPSOIL - 356 mm																
	264.0	Moist Medium Stiff Yellow-Brown and Grey SILTY CLAY w/Little Sand, Trace Gravel, A-6b(13)			2/150 3/150 4/150	SS-1	7	1610	22	7	5	7	30	51	40	19	21	A-6b (13)
1					3/150 3/150 4/150	SS-2	7	1466										
2		- Very Stiff Grey-Brown			5/150 8/150 12/150	SS-3	20	1599										
3	261.8	Moist Stiff Grey/Brown CLAY w/Little Silt, Trace Sand, A-7-6(14)			5/150 9/150 13/150	SS-4	12	1511	25	0	0	1	16	83	46	23	23	A-7-6(14)
		- Grey			4/150 6/150 8/150	SS-5	14	1530										
4					4/150 4/150 7/150	SS-6	11											
5		- Very Moist			4/150 5/150 7/150	SS-7	12	1435										
6		- A-7-6(13)			2/150 3/150 4/150	SS-8	7	1488	29	0	1	1	15	83	44	23	21	A-7-6(13)
	258.0	Damp Medium Dense Grey-Brown COURSE to FINE SAND w/Little Silt			7/150 8/150 9/150	SS-9	17											
7		- Wet w/Trace Silt			9/150 8/150	SS-10	15											
8	256.4	Moist Dense Grey/Brown FINE SAND w/Trace Silt and Clay, A-3(0)		FS	10/150 17/150 25/150	SS-11	42		18	0	1	84	5	10	NON-PLASTIC			A-3 (0)
		- Medium Dense		FS	13/150 15/150 15/150	SS-12	30											
9				FS														
10				FS														
	254.0	Moist Hard Grey SILT and CLAY w/Little Sand			10/150 11/150 25/150	SS-13	36	1626										
11	253.4	Wet Loose Grey COURSE to FINE SAND w/Little Silt, Trace Gravel																
12					3/150 4/150 5/150	SS-14	9											
13	251.9	Wet Medium Dense Grey FINE SAND w/Little Clay, Trace Silt, A-3(0)		FS														
				FS	10/150 13/150 14/150	SS-15	27		18	0	7	74	5	14	NON-PLASTIC			A-3 (0)
14				FS														
	250.2	Damp Dense Grey SANDY SILT w/Trace Gravel and Clay			50/150	SS-16	100+											
15	249.6	Weathered Dolomite																
	249.1	Fractured Grey Dolomite w/Seams of Shale 1.5M RUN 100% RECOVERY 14% RQD				RC-1												
16																		
17	247.6	End of Borehole																

NOTES: AUGER REFUSAL WAS ENCOUNTERED AT A DEPTH OF 15.2 METERS AND A 1.5 METER ROCK CORE WAS TAKEN.

LOG OF TEST BORING

BORING NO. B-S2
DATE: 2/24/97
JOB #: 33644.01
ELEV.: 264.786
DRILLERS: NW/BG
COMPLETION (m): 7.5
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP B
LOCATION: STATE ROUTE 30, RAMP B STA 28+726.1, 2.0 M LT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 8.8
DEPTH TO - WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	264.8	CRUSHED STONE - 102 mm																
	264.7	Very Damp Stiff Brown/Grey SILT and CLAY w/Some Sand, A-6a(10)			4/150 4/150 8/150	SS-1	12	1719	16	0	7	11	46	36	34	23	11	A-6a (10)
1					5/150 6/150 7/150	SS-2	13	1624										
2		- Very Stiff			6/150 7/150 10/150	SS-3	17	1684										
3		- w/Little Sand, Trace Gravel, A-6a(9)			5/150 9/150 13/150	SS-4	22	1631	18	1	6	7	47	39	32	21	11	A-6a (9)
					6/150 8/150 10/150	SS-5	18	1676										
4	260.7	Moist Very Stiff Grey CLAY w/Some Silt, Trace Sand			4/150 9/150 10/150	SS-6	19	1567										
5		- A-7-6(12)			5/150 7/150 11/150	SS-7	18	1579	25	0	1	1	27	71	45	28	17	A-7-6(12)
6		- Stiff			3/150 4/150 5/150	SS-8	9	1480										
					4/150 5/150 4/150	SS-9	9	1509										
7	257.6	Moist Medium Stiff Grey SILTY CLAY w/Trace Sand and Gravel, A-6b(12)			2/150 3/150 5/150	SS-10	8	1597	24	1	3	4	29	63	40	20	20	A-6b (12)
8					3/150 4/150 4/150	SS-11	8	1525										
	256.1	Wet Medium Dense Grey FINE SAND w/Trace Silt		FS	8/150 11/150 14/150	SS-12	25											
9				FS														
10		- w/Trace Silt and Clay		FS	5/150 10/150 15/150	SS-13	25											
11				FS														
12	253.1	Moist Dense Grey SANDY SILT w/Trace Clay, A-4a(0)			7/150 14/150 20/150	SS-14	34		18	0	2	56	34	8	NON-PLASTIC			A-4a (0)
13	252.0	Damp Very Dense Grey-Brown COARSE to FINE SAND w/Gravel, Trace Silt			13/150 24/150 30/150	SS-15	54											
14																		
15	250.0	WEATHERED SHALE			50/50	SS-16	100+											
	249.5	Broken Grey SHALE w/Dolomite Seams 1.5M RUN 100% RECOVERY 0% RQD				RC-1												
16																		
17	248.0	End of Borehole																

NOTES: AUGER REFUSAL WAS ENCOUNTERED AT A DEPTH OF 15.2 METERS AND A 1.5 METER ROCK CORE WAS TAKEN.

LOG OF TEST BORING

BORING NO. B-S3
DATE: 2/25/97
JOB #: 33644.01
ELEV.: 264.879
DRILLERS: NW/BG
COMPLETION (m): 7.5
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAVP B
LOCATION: STATE ROUTE 30, RAVP B STA 28+766.5, 2.2 M LT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 8.8
DEPTH TO - WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	264.9	CRUSHED STONE - 152 mm																
	264.7	Very Moist Loose Brown/Grey SILT w/Little Clay, Trace Sand, A-4b(8)			3/150 3/150 3/150	SS-1	6	1603	23	1	2	6	68	23	30	21	9	A-4b (8)
1		- Medium Dense Brown/Grey			3/150 4/150 5/150	SS-2	9	1538										
2	263.1	Moist Medium Stiff Brown/Grey SILTY CLAY w/Trace Sand, A-6b(11)			4/150 4/150 5/150	SS-3	9	1568	23	0	2	8	59	31	39	22	17	A-6b (11)
3	262.3	Very Damp Medium Dense Grey-Brown SILT w/Clay Trace Sand, A-4a(8)			6/150 6/150 7/150	SS-4	13	1639	18	0	1	0	60	39	32	23	9	A-4b (8)
					6/150 8/150 9/150	SS-5	17	1647										
4	260.8	Moist Medium Stiff Grey CLAY w/Silt, Trace Sand, A-7-6(11)			5/150 5/150 6/150	SS-6	11	1608	23	0	2	3	41	54	41	24	17	A-7-6(11)
5					4/150 5/150 6/150	SS-7	11	1727										
6		- Medium Stiff			3/150 4/150 4/150	SS-8	8	1483										
					4/150 5/150 4/150	SS-9	9	1509										
7		- Stiff			3/150 4/150 5/150	SS-10	9	1607										
8		- Medium Stiff w/Some Silt, A-7-6(11)			3/150 4/150 4/150	SS-11	8	1587	25	0	0	0	26	74	43	25	18	A-7-6(11)
	256.2	Very Damp Medium Dense Grey SANDY SILT w/Little Clay, Trace Gravel, A-4a(8)			5/150 6/150 8/150	SS-12	14	1901	12	1	13	22	48	16	21	15	6	A-4a (6)
9																		
10		- A-4a(5)			5/150 8/150 9/150	SS-13	16	1988	10	3	14	28	41	14	20	14	6	A-4a (5)
11																		
12	253.0	Damp Medium Dense Grey-Brown COARSE to FINE SAND w/Little Silt, Clay and Grave			4/150 5/150 10/150	SS-14	18											
13		- w/Little Silt and Gravel			7/150 9/150 12/150	SS-15	21											
14																		
15		- Very Dense			16/150 35/150 50/25	SS-16	100+											
	249.3	WEATHERED DOLOMITE																
16	249.0	Fractured Grey DOLOMITE w/Shale Seams (17.2 to 17.5 M) 1.7M RUN 97% RECOVERY 20% RQD				RC-1												
17	247.4	End of Borehole																

NOTES: AUGER REFUSAL WAS ENCOUNTERED AT A DEPTH OF 15.8 METERS AND A 1.7 METER ROCK CORE WAS TAKEN.

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

SOIL PROFILE

DRAWN BY: BAL/AMB
DATE: 8-2-99
DRAWING NO. 33644-111
PROJECT NO. 33644.01

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. B-S4
DATE: 4/15/97
JOB #: 33644.01
ELEV.: 264.341
DRILLERS: TB/CM
COMPLETION (m): 2.1
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP B
LOCATION: STATE ROUTE 30, RAMP B STA 28+805.4, 3.5 M LT.
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 9.6
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	264.3	TOPSOIL – 330 mm																
1	264.0	Moist Medium Stiff Grey CLAY w/Trace Sand, A-7-6(15)			2/150 3/150 4/150	SS 1	7	1600	22	0	2	5	41	52	45	20	25	A-7-6(15)
		– Very Damp Stiff Grey-Brown			5/150 6/150 8/150	SS 2	14	1815										
2	262.5	Very Damp Stiff Grey/Brown SILT and CLAY w/Little Sand, Trace Gravel, A-6a(9)			4/150 7/150 8/150	SS-3	15	1789	16	1	8	14	33	44	30	17	13	A-6a (9)
3	261.8	Moist Medium Dense Grey/Brown SILT w/Clay, A-4b(8)			4/150 10/150 12/150	SS-4	22	1671	21	0	0	0	61	39	26	20	6	A-4b (8)
					4/150 8/150 9/150	SS-5	17	1600										
4	260.4	Moist Stiff Grey SILT and CLAY w/Trace Sand			3/150 5/150 6/150	SS-6	11	1720										
5		w/Trace Gravel,			3/150 5/150 6/150	SS-7	11	1530										
6		– Medium Stiff, A-6a(10)			3/150 4/150 4/150	SS-8	8	1645	24	0	4	6	24	66	34	19	15	A-6a (10)
7					3/150 3/150 4/150	SS-9	7	1571										
8					2/150 2/150 4/150	SS-10	6	1485										
					2/150 3/150 4/150	SS 11	7	1517										
9	255.7	Moist Stiff Grey CLAY w/Little Silt, Trace Sand, A-7-6(12)			3/150 4/150 6/150	SS-12	10	1525	25	0	2	6	19	73	42	22	20	A-7-6(12)
10	254.7	Damp Dense Grey COURSE to FINE SAND w/Little Gravel			7/150 13/150 14/150	SS-13	27											
11																		
12	252.8	Wet Medium Dense Grey SANDY SILT			7/150 11/150 13/150	SS-14	24											
13																		
14	250.9	Damp Medium Dense Grey COURSE to FINE SAND w/Little Gravel, Trace Silt			7/150 9/150 16/150	SS-15	15											
	250.0	Damp Very Dense Grey GRAVEL and STONE FRAGMENTS w/Little Sand and Silt, A-2-4(0)																
15					9/150 15/150 50/125	SS 16	100+		8	49	23	7	17	4	18	15	3	A-2-4(0)
16																		
	248.2	WEATHERED DOLOMITE																
17	247.1	Some Fractured Grey DOLOMITE w/Seams 1.5M RUN 83% RECOVERY 28% RQD				RC-1												
18	246.2	End of Borehole																

NOTES: AUGER REFUSAL WAS ENCOUNTERED AT A DEPTH OF 16.6 METERS AND A 1.5 METER ROCK CORE WAS TAKEN.

LOG OF TEST BORING

BORING NO. B-E4
DATE: 4/7/97
JOB #: 33644.01
ELEV.: 265.460
DRILLERS: BG/CW
COMPLETION (m): DRY
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP B
LOCATION: STATE ROUTE 30, RAMP B STA 28+920
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 1.8
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	265.5	TOPSOIL – 406 mm																
	265.1	Moist Stiff Grey Brown SILT and CLAY w/Trace Sand, A-6a(10)			4/150 5/150 5/150	SS-1	10	1603	23	0	1	4	66	29	34	19	15	A-6a (10)
1	264.5	Wet Loose Grey-Brown SANDY SILT w/Some Clay			4/150 4/150 5/150	SS-2	9	1671										
2		– Medium Dense w/Trace Clay			3/150 6/150 5/150	SS-3	11		24	0	0	4	88	8	NON-PLASTIC			A-4b (0)
3	262.9	Very Moist Medium Dense Grey/Brown SILT w/Trace Clay and Sand, A-4b(0)			10/150 11/150 13/150	SS-4	24	1730										
	262.1	Moist Stiff Grey SILT and CLAY w/Some Sand			3/150 4/150 5/150	SS-5	9											
4	261.5	Moist Medium Dense Brown/Grey SANDY SILT w/Trace Clay and Gravel, A-4a(8)			3/150 6/150 7/150	SS-6	13	1802	15	3	6	10	41	40	25	17	9	A-4a (8)
5		– Grey, A-4a(8)			3/150 7/150 9/150	SS-7	16	1751	16	3	5	5	47	40	27	19	8	A-4a (8)
6					4/150 8/150 7/150	SS-8	15	1663										
7					4/150 6/150 7/150	SS-9	13	1823										
	258.3	Very Damp Stiff Grey SILT and CLAY w/Little Sand, Trace Gravel, A-6a(9)			3/150 5/150 6/150	SS-10	11	1885	17	1	9	8	45	37	28	16	12	A-6a (9)
8		– Very Moist w/Trace Sand			4/150 6/150 7/150	SS-11	13	1522										
9	256.9	Very Damp Stiff Grey SILTY CLAY w/Trace Sand			4/150 6/150 8/150	SS 12	14	1842										
10																		
11		– Very Stiff			6/150 10/150 17/150	SS-13	27	1684										
	254.5	End of Borehole																
12																		

NOTES:

LOG OF TEST BORING

BORING NO. B-E5
DATE: 3/18/97
JOB #: 33644.01
ELEV.: 266.182
DRILLERS: BG/TB
COMPLETION (m): DRY
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP B
LOCATION: STATE ROUTE 30, RAMP B STA 29+040
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 4.9
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	266.2	TOPSOIL – 457 mm																
1	265.7	Moist Medium Stiff Brown CLAY w/Silt, Trace Sand and Gravel, A-7-6(13)			3/150 3/150 4/150	SS-1	7	1520	27	0	2	4	62	32	44	25	19	A-7-6(13)
		– Very Damp Very Stiff			6/150 7/150 11/150	SS-2	18	1807										
2					5/150 8/150 9/150	SS-3	17	1592										
3					4/150 6/150 12/150	SS-4	18	1608										
4	262.8	Moist Very Stiff Grey SILT and CLAY w/Some Sand, Trace Gravel, A-6a(9)			5/150 10/150 14/150	SS-5	24	1684	20	1	15	9	46	29	35	23	12	A-6a (9)
		– Stiff			5/50 7/50 7/50	SS-6	14	2014										
5		– Very Stiff w/Little Sand, Trace Gravel			7/50 9/50 10/150	SS-7	19	1951										
6	260.5	Very Damp Stiff Grey CLAY w/Silt, Trace Sand and Grave, A-7-6(13)			6/150 7/150 8/150	SS-8	15	1618	24	0	1	0	45	54	42	20	22	A-7-6(13)
	259.9	Moist Stiff Brown–Grey SILT and CLAY w/Trace Sand			4/150 4/150 5/150	SS-9	9	1597										
7		– Medium Stiff, A-6a(10)			3/150 3/150 4/150	SS-10	7	1863	25	1	1	2	50	46	32	18	14	A-6a (10)
8		– w/Trace Sand and Gravel,			3/150 6/150 7/150	SS-11	13	1857										
9		– Very Damp Stiff			3/150 6/150 7/150	SS-12	13	1927										
10	256.7	End of Borehole																
11																		
12																		

NOTES:

LOG OF TEST BORING

BORING NO. B-E6
DATE: 3/17/97
JOB #: 33644.01
ELEV.: 264.728
DRILLERS: TB/SW
COMPLETION (m): 7.2
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP B
LOCATION: STATE ROUTE 30, RAMP B STA 29+160
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 1.2
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	264.7	TOPSOIL – 305 mm																
1	264.4	Moist Stiff Brown/Grey CLAY w/Silt, Trace Sand, A-7-6(13)			3/150 4/150 5/150	SS-1	9	1552	24	0	1	4	55	40	42	21	21	A-7-6(13)
		– Very Moist, Medium Stiff, A- 7-6(13)			2/150 2/150 3/150	SS-2	5	1392	32	0	1	5	41	53	41	19	22	A-7-6(13)
2		– Moist			3/150 3/150 5/150	SS-3	8	1589										
3	262.3	Very Damp Stiff Grey SILT and CLAY w/Little Sand, Trace Gravel, A-6a(9)			4/150 6/150 8/150	SS-4	14	1751	17	1	5	8	50	36	29	17	12	A-6a (9)
4		– w/Trace Sand			6/150 9/150 11/150	SS-5	20	1924										
5					4/150 7/150 8/150	SS-6	15	1831										
					5/50 6/150 8/150	SS-7	14	1821										
6		– A-6a(9)			3/150 5/150 6/150	SS-8	11	1794	18	1	5	6	51	37	29	17	12	A-6a (9)
7					4/150 6/150 7/150	SS-9	13	1842										
		A-6a(10)			5/150 6/150 8/150	SS-10	14	1791	19	1	4	6	34	55	30	18	12	A-6a (9)
8		– Moist			4/150 4/150 5/150	SS-11	9	1735										
9	256.0	Moist Stiff Grey SILTY CLAY A-6b(10)			4/150 5/150 6/150	SS-12	11	1704	24	0	0	0	39	61	37	21	16	A-6b (10)
	255.6	End of Borehole																
10																		
11																		
12																		

NOTES:

LOG OF TEST BORING

BORING NO. C-E1
DATE: 4/29/97
JOB #: 33644.01
ELEV.: 263.221
DRILLERS: NM/CV
COMPLETION (m): DRY
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP C
LOCATION: STATE ROUTE 30, RAMP C STA 28+460
DRILL METHOD: 108 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): DRY
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	263.2	CRUSHED STONE – 305 mm																
1	262.9	Moist Medium Stiff Brown and Grey SILT and CLAY w/Some Sand			2/150 4/150 4/150	SS-1	6		24									
		– Stiff Grey w/Little Sand, Trace Grave, A-6a(9)			3/150 5/150 5/150	SS-2	9	1485	23	2	5	7	35	51	32	20	12	A-6a(9)
2					4/150 6/150 6/150	SS-3	10	1549	20									
3	260.6	Very Moist Stiff Grey CLAY w/Some Silt, Trace Sand A-7-6(14)			3/150 3/150 5/150	SS-4	12	1416	28	0	1	2	27	70	43	21	22	A-7-6(14)
		– Grey and Brown			4/150 3/150 3/150	SS-5	13	1464	28									
4		– Mois: Medium Stiff Grey			2/150 2/150 3/150	SS-6	5	1541	26									
5	258.3	Moist Medium Stiff Grey SILT and CLAY w/Little Sand, A-6a(10)			2/150 3/150 3/150	SS-7	6	1600	27	0	8	10	33	44	35	21	14	A-6a(10)
6					2/150 3/150 3/150	SS-8	6	1756	15									
	257.1	End of Borehole																
7																		

NOTES:

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: BAL/MMB
DATE: 8-2-99
DRAWING NO. 33644-113
PROJECT NO. 33644.01

SOIL PROFILE

WTA/CRA-30-23.914/0.000(14.86/0.00)

113/130

LOG OF TEST BORING

BORING NO. C S1
DATE: 2/20/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP C
JOB #: 33644.01
LOCATION: STATE ROUTE 30, RAMP C STA 28+579.4, 3.3 M LT
ELEV.: 263.422
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
DRILLERS: NW/BG
ENCOUNTERED WATER DEPTH (m): 10.1
COMPLETION (m): 10.7
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	263.4	CRUSHED STONE – 102 mm																
	263.3	Very Damp Stiff Brown/Grey SILT and CLAY w/Trace Sand and Gravel, A-6a(10)			5/150 7/150 8/150	SS-1	15	1712	19	2	3	4	40	51	38	23	15	A 6a(10)
1		Very Stiff w/Little Sand A-6a(10)			5/150 8/150 9/150	SS-2	17	1751	18	0	7	7	40	46	38	21	15	A-6a(10)
2		– A-6a(9)			6/150 8/15 10/150	SS-3	16	1805	16	3	7	8	37	45	33	20	13	A 6a(9)
3	260.8	Moist Very Stiff Brown CLAY w/Trace Sand, A-7-6(13)			5/150 8/150 9/150	SS 4	17	1570	24	0	0	1	18	81	43	24	19	A-7-6(13)
		Stiff Grey/Brown w/Trace Calcite, A-7-6(13)			6/150 7/150 8/150	SS-5	15	1559	26	0	1	2	19	78	44	25	19	A-7-6(13)
4					5/150 6/150 8/150	SS 6	14	1619	22									
5	258.5	Moist Stiff Grey SILTY CLAY w/Trace Sand and Calcite			5/150 8/150 8/150	SS 7	16	1621	22									
6					5/150 7/150 8/150	SS-8	15	1738	20									
	257.3	Moist Stiff Grey-Brown SILT and CLAY w/Trace to Little Sand			5/150 6/150 7/150	SS-9	13	1728	21									
7	256.4	Moist Medium Dense Grey FINE SAND w/Trace Silt		FS	6/150 6/150 7/150	SS-10	13		7									
8				FS														
				FS	7/150 9/150 12/150	SS-11	21		10									
9		– Wet Grey-Brown w/Some Silt		FS	9/150 13/150 15/150	SS-12	28		20									
				FS														
10				FS														
	253.4	Moist Very Stiff SANDY SILT w/Some Clay			5/150 9/150 11/150	SS-13	20	1941	17									
11	252.4	Wet Medium Dense Brown Grey FINE SAND w/Some Silt		FS														
12				FS	6/150 11/150 14/150	SS-14	25		22									
				FS														
13				FS														
					8/150 12/150 12/150	SS-15	24		22									
14				FS														
	248.9	WEATHERED SHALE		FS														
15	248.6	Broken Dark Grey SHALE 1.5M RUN 100% RECOVERY /% RQD				RC-1												
16																		
	247.1	End of Borehole																

NOTES: GROUNDWATER READING AT COMPLETION BEFORE WATER INDUCED FOR CORING. AUGER REFUSAL WAS ENCOUNTERED AT 14.8 M. A 1.5 M ROCK CORE SAMPLE WAS TAKEN STARTING AT THIS DEPTH.

LOG OF TEST BORING

BORING NO. C-S2
DATE: 2/20/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP C
JOB #: 33644.01
LOCATION: STATE ROUTE 30, RAMP C STA 28+626.3, 3.6 M LT
ELEV.: 264.682
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
DRILLERS: NW/BG
ENCOUNTERED WATER DEPTH (m): 8.7
COMPLETION (m): 11.9
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	264.7	CRUSHED STONE – 254 mm																
	264.4	Moist Medium Stiff Grey/Brown SILT and CLAY w/Little Sand, A-6a(10)			4/150 4/150 4/150	SS-1	8	1733	20	0	3	9	54	34	34	19	15	A 6a(10)
1		– Stiff Grey/Yellow			3/150 5/150 6/150	SS-2	11	1515	25									
2		– Yellow-Brown and Grey			5/150 5/150 5/150	SS-3	10	1466	28									
	262.2	Moist Stiff Yellow-Brown/Grey CLAY w/Some Silt, Trace Sand and Gravel, A-7-6(14)			5/150 6/150 7/150	SS-4	13	1546	23	1	2	1	26	70	46	24	22	A-7-6(14)
3					6/150 6/150 7/150	SS-5	13	1551	23									
4					6/150 6/150 8/150	SS-6	14	1693	21									
5		Very Stiff			6/150 8/150 9/150	SS 7	17	1599	22									
	259.0	Very Damp Stiff Grey SILT and CLAY w/Little Sand and Gravel A-6a(8)			3/150 4/150 5/150	SS 8	9	1759	18	14	13	5	29	39	34	22	12	A-6a(8)
6		Moist Medium Stiff			4/150 4/150 4/150	SS-9	8	1692	21									
7	257.5	Damp Medium Dense Brown-Grey COARSE and FINE SAND w/Little Silt, Trace Clay			7/150 7/150 7/150	SS-10	14		7									
8	256.9	Damp Medium Dense FINE SAND w/Trace Silt A-3a(0)		FS	6/150 7/150 9/150	SS-11	16		7	0	16	68	14	2	NON-PLASTIC			A-3a(0)
9				FS	8/150 12/150 14/150	SS-12	26		21									
10		– A-3(0)		FS	8/150 11/150 12/150	SS 13	23		22	0	3	87	10	0	NON-PLASTIC			A-3(0)
11		– Loose w/Little Silt, Trace Clay		FS														
12				FS	3/150 4/150 5/150	SS 14	9		23									
13	251.9	Moist Medium Dense Grey-Brown COURSE to FINE GRAVEL w/Little Silty Sand			9/150 14/150 /150	SS 15	21		13									
14																		
15	249.9	WEATHERED SHALE			50/50	SS-16	100+		4									
	249.7	Broken Dark Grey SHALE 1.5M RUN 100% RECOVERY 0% RQD				RC 1												
16																		
	248.2	End of Borehole																

NOTES: GROUNDWATER READING AT COMPLETION BEFORE WATER INDUCED FOR CORING. AUGER REFUSAL WAS ENCOUNTERED AT 14.9 M. A 1.5 M ROCK CORE SAMPLE WAS TAKEN STARTING AT THIS DEPTH.

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

LOG OF TEST BORING

BORING NO. C-S3
DATE: 3/6/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP C
JOB #: 33644.01
LOCATION: STATE ROUTE 30, RAMP C STA 28+692, 2.8 M LT
ELEV.: 264.427
DRILL METHOD: 95 MM HOLLOW STEM AUCERS
DRILLERS: HB/SW
ENCOUNTERED WATER DEPTH (m): 3.2
COMPLETION (m): 6.5
DEPTH TO WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	264.4	TOPSOIL 350 mm																
	264.1	Very Damp Very Stiff Grey-Brown SILT and CLAY w/Little Sand, Trace Gravel			7/150 8/150 10/150	SS 1	18	1697	19									
1	263.5	Very Damp Hard Grey Brown SILTY CLAY w/Trace to Little Sand, Trace Gravel			7/150 12/150 12/150	SS-2	34	1804	18									
2	262.6	Very Damp Very Stiff Grey-Brown SILT and CLAY w/Little Sand, A-6a(9)			7/150 12/150 17/150	SS-3	29	1825	16	0	7	7	13	73	30	19	11	A-6a(9)
3	261.5	Wet Medium Dense Grey Brown COARSE to FINE SAND w/Trace Silty Clay and Gravel	FS		6/150 13/150 17/150	SS-4	30		16									
	261.2	Moist Medium Dense Grey SILT w/Some Clay, Trace Sand			6/150 8/150 11/150	SS-5	19	1642	23									
4	260.5	Moist Stiff Grey CLAY w/Little Silt, A-7-6(12)			4/150 6/150 8/150	SS-6	14	1661	24	0	0	0	13	87	41	21	20	A-7-6(12)
5	259.6	Moist Stiff Grey SILT and CLAY w/Trace Sand, A-6a(10)			3/150 6/150 7/150	SS-7	13	1679	24	0	0	2	41	57	39	24	15	A-6a(10)
6		w/Little Sand, A-6a(9)			3/150 6/150 9/150	SS-8	15	1549	26	0	7	7	8	78	30	19	11	A-6a(9)
7					5/150 6/150 6/150	SS-9	12	1562	27									
		w/Trace Sand, A-6a(10)			5/150 5/150 6/150	SS-10	11	1562	27	0	1	3	37	59	40	26	14	A-6(10)
8					6/150 7/150 7/150	SS-11	14	1547	28									
9	255.9	Moist Medium Dense Grey SANDY SILT w/Little Clay, Trace Gravel			6/150 10/150 15/150	SS-12	25	2031	12									
10		- A-4a(5)			10/150 10/150 14/150	SS 13	24	1908	12	2	13	28	41	16	18	12	6	A-4a(5)
11																		
12					10/150 15/150 19/150	SS 14	34	1738	11									
13	251.6	Moist Dense Grey COARSE to FINE GRAVEL w/Sand, Trace Silt			12/150 16/150 24/150	SS-15	40		10									
14	250.1	WEATHERED DOLOMITE																
15	249.5	Broken Grey DOLOMITE w/Shale Seams from 15.8 -16.5 M 1.5M RUN 100% RECOVERY 7% RQD				RC-1												
16																		
	248.0	End of Borehole																

NOTES: AUGER REFUSAL WAS ENCOUNTERED AT 14.9 M. A 1.5 M ROCK CORE SAMPLE WAS TAKEN STARTING AT THIS DEPTH.

LOG OF TEST BORING

BORING NO. C-S4
DATE: 2/20/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP C
JOB #: 33644.01
LOCATION: STATE ROUTE 30, RAMP C STA 28+734.2, 3.5 M LT
ELEV.: 264.584
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
DRILLERS: JL/CM
ENCOUNTERED WATER DEPTH (m): 4.0
COMPLETION (m): 6.1
DEPTH TO WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	264.6	CRUSHED STONE 254 mm																
	264.3	Moist Stiff Grey-Brown SILT and CLAY w/Little Sand, A-6a(10)			7/150 4/150 5/150	SS-1	9	1584	21	0	4	12	56	28	35	20	15	A-6a(10)
1		Very Damp			4/150 6/150 6/150	SS-2	12		20									
2		- Very Stiff			8/150 9/150 10/150	SS-3	19		18									
	262.1	Very Damp Very Stiff Grey SILTY CLAY w/Trace to Little Sand, Trace Gravel			7/150 8/150 9/150	SS-4	17	1831	16									
3					9/150 9/150 8/150	SS-5	17	1913	15									
4	260.5	Moist Medium Dense Grey SILT w/Some Clay, Little Sand, A-6a(8)			5/150 6/150 6/150	SS-6	12	1865	17	0	5	15	55	25	21	15	6	A-4b(8)
5		- Grey w/Seams of Sand to 5.2 M			7/150 8/150 7/150	SS-7	15	1708	16									
	259.4	Moist Medium Dense Grey SANDY SILT w/Clay, Trace Gravel																
6		- A-4a(8)			5/150 5/150 6/150	SS-8	11	1972	16	2	6	11	41	40	21	16	5	A-4a(8)
7		- Very Moist			7/150 8/150 8/150	SS-9	16	1717	21									
	257.4	Moist Medium Stiff Grey CLAY w/Little Silt			3/150 4/150 4/150	SS-10	8	1573	28									
8		- A-7-6(12)			3/150 4/150 4/150	SS-11	8	1479	28	1	1	1	12	85	43	25	18	A-7-6(12)
9	256.1	Moist Stiff Grey SILT and CLAY w/Trace Sand			5/150 6/150 7/150	SS-12	13	1488	27									
10	254.5	Wet Medium Dense Grey FINE SAND w/Trace Silt	FS		5/150 6/150 5/150	SS 13	11		17									
11			FS															
12	253.0	Wet Medium Dense Grey SILT w/Little Clay and Sand, A-4b(0)	FS		7/150 6/150 7/150	SS-14	13		19	0	1	12	65	22	NON-PLASTIC			A-4b(0)
13	251.5	Moist Dense Grey COARSE to FINE SAND w/Gravel, Trace Silt			7/150 11/150 12/150	SS-15	23											
14																		
15	250.0	WEATHERED DOLOMITE			21/150 50/100	SS-16	100+											
16	248.4	Broken Grey DOLOMITE 1.5M RUN 90% RECOVERY 7% RQD				RC-1												
17																		
18	246.9	End of Borehole																

NOTES: AUGER REFUSAL WAS ENCOUNTERED AT 16.2 M. A 1.5 M ROCK CORE SAMPLE WAS TAKEN STARTING AT THIS DEPTH.

115/139

WYA/CRA-30-23.914/0.000(14.86/0.00)

SOIL PROFILE

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-115
PROJECT NO. 33644.01

TOLEDO TESTING, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ RAMP C
LOCATION: STATE ROUTE 30, RAMP C STA 28+790.6, 9.5 M RT
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 2.4
DEPTH TO – WATER (m): CAVING:

BORING NO. C-S5
DATE: 3/5/97
JOB #: 33644.01
ELEV.: 265.466
DRILLERS: TB/SW
COMPLETION (m): 17.2
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	265.5	TOPSOIL – 457 mm																
	265.0	Moist Stiff Grey-Brown CLAY w/Little Sand, Trace Gravel, A-7-6(14)			3/150 3/150 6/150	SS-1	9	1620	25	4	9	4	47	36	44	21	23	A-7-6(14)
1		– Medium Stiff Grey-Brown and Dark Grey			2/150 3/150 4/150	SS-2	7	1522	28									
2		– Grey-Brown			2/150 2/150 3/150	SS-3	5	1576	25									
	262.9	Very Damp Stiff Grey/Brown SILT and CLAY w/Trace Sand, A-6a(9)			3/150 4/150 7/150	SS-4	11	1695	19	0	4	6	42	48	33	22	11	A-6a(9)
3		– Very Stiff Grey			4/150 8/150 12/150	SS-5	20	1863	17									
4		– w/Little Sand, Trace Gravel, A-6a(9)			8/150 12/150 14/150	SS-6	26	1941	17	1	5	8	39	47	27	16	11	A-6a(9)
5		– Moist			6/150 9/150 11/150	SS-7	20	1595	26									
6		– No Sand or Gravel, A-6a(9)			5/150 5/150 10/150	SS-8	19	1642	26	0	0	0	40	60	34	21	13	A-6a(9)
7		– Very Moist Stiff			5/150 4/150 5/150	SS-9	9	1546	32									
		– Moist			4/150 4/150 5/150	SS-10	9	1557	29									
8					4/150 5/150 5/150	SS-11	10	1496	28									
9		– Very Moist			3/150 3/150 5/150	SS-12	8	1512	31									
10																		
11		– Very Damp Very Stiff w/ Sand, Trace Gravel			5/150 8/150 10/150	SS-13	18	2074	13									
	254.2	Wet Medium Dense Grey COARSE to FINE SAND w/Gravel, Trace Silt			9/150 9/150 16/150	SS-14	25		20									
12		– Cobbles from 12.5 – 13.0 M																
13	252.5	Very Damp Loose Grey SILT w/Trace Sand																
	252.1	Wet Dense Grey GRAVEL and STONE FRAGMENTS w/SAND, A-1-b(0)			20/150 20/150 22/150	SS-15	42		14									
14	251.4	WEATHERED DOLOMITE																
15					50/125	SS-16	100+		9									
	249.9	Fractured Grey DOLOMITE w/Shale Seams																
16		1.5M RUN 100% RECOVERY 74% RQD				RC-1												
17	248.4	End of Borehole																

NOTES: AUGER REFUSAL WAS ENCOUNTERED AT 15.5 M. A 1.5 M ROCK CORE SAMPLE WAS TAKEN STARTING AT THIS DEPTH. BORING RELOCATED 15.2 M WEST. ELEVATION APPROXIMATE DUE TO RELOCATION.

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ RAMP C
LOCATION: STATE ROUTE 30, RAMP C STA 28+920
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 8.8
DEPTH TO – WATER (m): CAVING:

BORING NO. C-E2
DATE: 4/16/97
JOB #: 33644.01
ELEV.: 265.786
DRILLERS: BG/CW
COMPLETION (m): DRY
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	265.8	TOPSOIL – 330 mm																
	265.5	Very Moist Loose Brown/Grey SILT w/Little Sand, Trace Gravel, A-4a(7)			2/150 3/150 4/150	SS-1	7	1576	25	5	13	10	59	13	26	20	6	A-4-b(7)
1		Moist Brown w/Trace Sand, A-4b(8)			3/150 3/150 3/150	SS-2	6	1671	23	0	1	3	58	38	37	29	8	A-4-b(8)
2	264.0	Very Damp Very Stiff Brown CLAY w/Silt, Trace Sand and Gravel, A-7-6(15)			6/150 12/150 12/150	SS-3	24	1810	18	1	1	3	30	65	46	22	24	A-7-6(15)
		– Grey-Brown			9/150 12/150 12/150	SS-4	24	1626	17									
3																		
		– Grey w/Occasional Cobbles to 4.9 M			6/150 7/150 8/150	SS-5	15	1940	16									
4		– Very Stiff			5/150 9/150 9/150	SS-6	18		16									
5	260.9	Very Damp Stiff Grey SILTY CLAY w/Trace Sand, A-6b(9)			5/150 5/150 5/150	SS-7	10	1804	18	0	3	0	31	66	28	16	12	A-6b(9)
	260.3	Moist Medium Dense Grey/Brown COURSE and FINE SAND w/Little Silt, Trace Clay			3/150 5/150 6/150	SS-8	11	1895	18									
6																		
	259.4	Very Moist Very Stiff Grey/ Brown SILT and CLAY w/Little Sand, Trace Gravel, A-6a(10)			5/150 9/150 9/150	SS-9	18	1574	16	6	9	9	33	43	31	16	15	A-6a(10)
7					5/150 5/150 13/150	SS-10	19	1847	17									
8	257.9	Moist Very Stiff Grey SILTY CLAY w/Little Sand, A-6b(12)			7/150 9/150 10/150	SS-11	19	1627	26	0	5	8	40	47	37	18	19	A-6b(12)
9		– w/Some Sand, Little Gravel			9/150 9/150 11/150	SS-12	20	1771	20									
	256.3	End of Borehole																

NOTES:

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ RAMP C
LOCATION: STATE ROUTE 30, RAMP C STA 29+040
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 0.9
DEPTH TO – WATER (m): CAVING:

BORING NO. C-E3
DATE: 4/16/97
JOB #: 33644.01
ELEV.: 264.797
DRILLERS: BG/CW
COMPLETION (m): DRY
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	264.8	TOPSOIL – 330 mm																
	264.5	Moist Medium Stiff Dark Grey SILTY CLAY w/Some Sand			2/150 3/150 4/150	SS-1	7	1512	25									
1	263.9	Moist Medium Stiff Brown SILT and CLAY w/Trace Sand, A-6a(8)			3/150 2/150 3/150	SS-2	5	1583	28	0	1	3	80	16	28	17	11	A-6a(8)
2		– Very Damp Stiff Grey/Brown w/Trace Gravel, A-6a(10)			3/150 3/150 4/150	SS-3	7	1866	18	5	6	2	40	47	32	18	14	A-6a(10)
		– Very Stiff w/Some Sand			4/150 8/150 8/150	SS-4	16	1789	16									
3																		
		– w/Little Sand			7/150 9/150 9/150	SS-5	18	1863	18									
4		– A-6a(9)			7/150 8/150 11/150	SS-6	19	1882	17	5	6	2	40	47	32	18	14	A-6a(10)
		– Grey			5/150 6/150 7/150	SS-7	13	1735	19									
5																		
		– A-6a(9)			6/150 8/150 8/150	SS-8	12	1644	19	5	6	2	40	47	32	18	14	A-6a(10)
6																		
		– Very Moist Very Stiff			7/150 8/150 7/150	SS-9	17	1507	30									
	258.2	Moist Very Stiff Grey SILTY CLAY w/Trace Sand																
7					6/150 10/150 10/150	SS-10	20	1688	23									
8	256.9	Moist Very Stiff Grey CLAY w/Trace Sand and Gravel, A-7-6(12)			6/150 9/150 11/150	SS-11	19	1591	22	2	8	0	15	75	41	22	19	A-7-6(12)
9					10/150 10/150 10/150	SS-12	20	1563	27									
10					8/150 10/150 12/150	SS-13	22	1599	24									
	254.4	End of Borehole																

NOTES:

TOLEDO, OHIO 43624
1915 N. 12th STREET
TOLEDO EDISON INC.

DRAWN BY: DVR/MMB
DATE: 8-2-99
DRAWING NO. 33644-116
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. C-E4
DATE: 4/16/97
JOB #: 33644.01
ELEV.: 265.123
DRILLERS: BG/CW
COMPLETION (m): DRY
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP C
LOCATION: STATE ROUTE 30, RAMP C STA 29+160
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 1.8
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	265.1	TOPSOIL – 381 mm																
	264.7	Moist, Medium Stiff Grey-Brown SILT and CLAY w/Some Sand			3/150 5/150 3/150	SS-1	8	1520	25									
1	264.2	Wet Loose Brown SANDY SILT w/Trace to Little Clay			2/150 3/150 2/150	SS-2	5	1568	27									
2	263.3	Very Moist Loose Brown SILT w/Trace Clay and Sand, A-4a(0)			2/150 3/150 4/150	SS-3	7		27	0	0	5	87	8	NON-PLASTIC			A-4a(0)
3					4/150 5/150 8/150	SS-4	14	1583	22									
	261.8	Moist Medium Dense Brown-Grey SANDY SILT w/Some Clay, Trace Gravel			5/150 7/150 9/150	SS-5	16	1813	19									
4		– A-4a(8)			4/150 6/150 10/150	SS-6	16	1932	15	1	5	14	48	32	27	20	7	A-4a(8)
5					4/150 7/150 7/150	SS-7	14	1825	18									
6					4/150 6/150 9/150	SS-8	15	1640	18									
	258.7	Very Damp Stiff Brown/Grey SILT AND CLAY w/Trace Sand and Gravel, A-6a(9)			5/150 6/150 7/150	SS-9	14	1833	17	2	4	8	46	40	28	16	12	A-6a(9)
7		– Grey			3/150 5/150 8/150	SS-10	14	1709	19									
8					6/150 7/150 6/150	SS-11	13	1858	18									
	256.6	– Grey w/Trace Sand, A-6a(10)			4/150 4/150 6/150	SS-12	10	1836	19	0	5	6	44	45	31	17	14	A-6a(10)
9																		
10					5/150 7/150 8/150	SS-13	15	1794	19									
	255.1	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. C-E5
DATE: 4/8/97
JOB #: 33644.01
ELEV.: 268.237
DRILLERS: BG/CW
COMPLETION (m): 4.2
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP C
LOCATION: STATE ROUTE 30, RAMP C STA 29+280
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 0.9
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	268.2	TOPSOIL – 406 mm																
	267.8	Moist Stiff Grey-Brown SILT and CLAY w/Trace Sand, A-6a(9)			3/150 5/150 5/150	SS-1	11	1573	24	0	2	4	71	23	35	23	12	A-6a(9)
1	267.3	Wet Loose Brown SILT w/Some Sand, Little Clay			3/150 3/150 3/150	SS-2	6		28									
2		– Medium Dense w/Trace Sand, Silt and Clay, A-4a(0)			4/150 6/150 7/150	SS-3	13	1618	26	0	1	5	87	7	NON-PLASTIC			A-4a(0)
3					6/150 7/150 8/150	SS-4	15		28									
		– Very Moist Grey w/Little Sand			4/150 6/150 6/150	SS-5	14		21									
4		– Moist w/Little Clay and Sand, Trace Gravel, A-4a(8)			4/150 6/150 11/150	SS-6	17	1922	15	1	5	13	55	26	24	17	7	A-4a(8)
5		– Medium Dense w/Some Sand			6/150 11/150 17/150	SS-7	28	1794	16									
6		– Brown w/Clay, Trace Sand and Gravel, A-4b(0)			6/150 8/150 13/150	SS-8	21	1786	14	4	3	4	54	35	NON-PLASTIC			A-4b(0)
		– Grey, w/Trace Sand, A-4b(5)			6/150 9/150 13/150	SS-9	22	1818	20	0	2	3	54	41	30	22	8	A-4b(8)
7	261.2	Very Moist Stiff Grey SILT and CLAY w/Trace Sand			5/150 6/150 8/150	SS-10	14	1485	28									
	260.3	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. C-E6
DATE: 4/8/97
JOB #: 33644.01
ELEV.: 266.547
DRILLERS: BG/CW
COMPLETION (m): 3.7
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP C
LOCATION: STATE ROUTE 30, RAMP C STA 29+400
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 1.8
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	266.5	TOPSOIL – 406 mm																
	266.2	Very Damp Stiff Brown SILT w/Little Clay and Sand, Trace Gravel, A-4b(8)			4/150 4/150 5/150	SS-1	10	1696	19	5	5	6	66	17	28	18	10	A-4b(8)
1	265.6	Moist Stiff Grey-Brown SILT and CLAY w/Some Sand			3/150 4/150 5/150	SS-2	9	1506	24									
2	265.0	Wet Loose Grey SILT w/Little Sand, Trace Clay			4/150 5/150 5/150	SS-3	10		20									
		– Medium Dense, A-4b(8)			8/150 8/150 10/150	SS-4	18		19	0	2	11	80	7	21	17	4	A-4b(8)
3																		
	263.2	Wet Medium Dense Brown FINE SAND w/Little SILT		FS	4/50 7/50 11/150	SS-5	18		9									
4		– Moist Very Dense		FS	13/150 26/150 30/150	SS-6	56		13									
				FS														
5	261.7	Moist Stiff Grey SILT and CLAY w/Trace to Little Sand			4/150 4/150 5/150	SS-7	9	1621	26									
		– Very Damp Medium Stiff Brown-Grey			4/150 4/150 4/150	SS-8	8	1784	19									
6	260.1	Very Damp Stiff Grey CLAY w/Some Sand,Trace Gravel, A-7-6(16)			3/150 4/150 5/150	SS-9	9	1895	16	2	4	11	41	32	45	16	29	A-7-6(16)
7		– Medium Stiff			5/150 4/150 4/150	SS-10	14	1485	12									
8	258.6	End of Borehole																

NOTES:

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-117
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. C-E7
DATE: 4/8/97
JOB #: 33644.01
ELEV.: 267.884
DRILLERS: BG/CW
COMPLETION (m): 3.7
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP C
LOCATION: STATE ROUTE 30, RAMP C STA 29+520
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 0.9
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	267.9	TOPSOIL – 381 mm																
	267.5	Moist Medium Stiff Brown SILT and CLAY w/Some Sand, A-6a(9)			3/150 4/150 4/150	SS-1	8	1509	22	0	1	28	51	20	30	16	14	A-6a(9)
1	267.0	Wet Loose Brown SILT w/Sand			2/150 3/150 3/150	SS-2	6		21									
2	265.1	Wet Medium Dense Brown FINE SAND w/Trace Silt	FS		3/150 6/150 7/150	SS-3	15		15									
	265.4	Wet Medium Dense Brown SILT w/Little Sand, Trace Clay, A-4a(8)			6/150 8/150 6/150	SS-4	14		18	0	0	16	79	5	20	19	1	A-4a(8)
3	264.5	Very Damp Stiff Brown-Grey SILTY CLAY w/Some Sand, Trace Grave			4/150 5/150 8/150	SS-5	13	1885	15									
4		– Brown			2/150 4/150 6/150	SS-6	10	1900	13									
5		– Very Stiff Grey			3/150 6/150 10/150	SS-7	16	1762	14									
6	262.2	Very Damp Medium Dense Brown/Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(6)			5/150 6/150 8/150	SS-8	14	1941	14	5	14	14	41	26	24	15	9	A-4a(6)
	261.8	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. C-E8
DATE: 4/9/97
JOB #: 33644.01
ELEV.: 266.062
DRILLERS: JL/TM
COMPLETION (m): DRY
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP C
LOCATION: STATE ROUTE 30, RAMP C STA 29+640
DRILL METHOD: HAND AUGERS & HAND HOUSAL SAMPLER
ENCOUNTERED WATER DEPTH (m): DRY
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	266.1	TOPSOIL – 432 mm																
	265.6	Moist Stiff Grey-Brown SILT and CLAY w/Little Sand			8/150 9/150 9/150	SS-1	10	1661	20									
1	265.0	Very Damp Stiff Grey/Brown SILTY w/Clay, Little Sand, A-4b(8)			9/150 10/150 11/150	SS-2	11	1807	18	0	4	11	52	33	28	19	9	A-4b(8)
2	264.2	End of Borehole																
3																		
4																		
5																		
6																		
7																		

NOTES: CONVERTED USING "TERZAGHI STANDARD" NUMBERS. ODOT TERMINATED THE DRILLING PROCESS DUE TO NO PERMISSION TO BE IN WHEAT FIELD.

LOG OF TEST BORING

BORING NO. C-E9
DATE: 4/9/97
JOB #: 33644.01
ELEV.: 265.510
DRILLERS: JL/TM
COMPLETION (m): 3.7
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP C
LOCATION: STATE ROUTE 30, RAMP C STA 29+762
DRILL METHOD: HAND AUGERS & HAND HOUSAL SAMPLER
ENCOUNTERED WATER DEPTH (m): 3.0
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	265.5	TOPSOIL – 356 mm																
	265.1	Moist Very Stiff Brown SILT and CLAY w/Trace Sand, A-6a(10)			12/150 20/150 27/150	SS-1	17	1677	20	0	3	7	38	52	39	24	15	A-6a(10)
1		– Very Damp Grey-Brown			12/150 22/150 24/150	SS-2	17	1744	18									
2		– Brown			18/150 21/150 28/150	SS-3	20	1653	19									
3		– Grey-Brown			21/150 25/150 33/150	SS-4	22	1946	14									
4	262.2	Moist Medium Dense Grey-Brown SANDY SILT w/Clay, Trace Grave, A-4a(6)			11/150 19/150 23/150	SS-5	18	1748	14	5	13	14	33	35	25	17	8	A-4a(6)
		– Grey			12/150 22/150 28/150	SS-6	20	1981	14									
5	260.9	End of Borehole																
6																		
7																		

NOTES: SAMPLES WERE TAKEN WITH A HAND HOUSAL SAMPLER AND BLOW COUNTS WERE CONVERTED USING "TERZAGHI STANDARD" NUMBERS. BORING MOVED 1.5 M NORTHEAST. ELEVATION APPROXIMATE DUE TO RELOCATION.

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-118
PROJECT NO. 33644.01

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. D-E1
DATE: 3/17/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP D AND BD — JOB #: 33644.01
LOCATION: STATE ROUTE 30, RAMP D STA 28+800 — ELEV.: 264.849
DRILL METHOD: 95 MM HOLLOW STEM AUGERS — DRILLERS: BG/TB
ENCOUNTERED WATER DEPTH (m): 2.4 — COMPLETION (m): 1.4
DEPTH TO – WATER (m): — CAVING: — DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	264.8	TOPSOIL – 457 mm			3/150 3/150 4/150													
	264.4	Moist Loose Red–Brown SILT w/Little Clay, Trace Sand, A–4b(0)				SS–1	7	1440	27	0	1	3	80	16	NON–PLASTIC			A4–b(0)
1	263.9	Moist Medium Dense Brown SANDY SILT			3/150 4/150 7/150	SS–2	11	1525	28									
	263.2	Moist, Medium Dense Grey and Brown SILT w/Little Clay, Trace Sand, A–4b(8)			7/150 8/150 9/150	SS–3	17	1748	22	0	2	5	75	18	25	20	5	A–4b(8)
2	262.4	Moist Medium Dense Brown SILTY SAND	FS															
	262.1	Moist, Very Stiff Grey SILT and CLAY w/Little to Some Sand, Trace Gravel			8/150 8/150 10/150	SS–4	18	1953	16									
3		– A–6a(10)			5/150 8/150 9/150	SS–5	17	1772	20	0	0	0	53	47	34	20	14	A–6a(10)
4																		
		–Stiff			5/150 5/150 7/150	SS–6	13	1589	26									
5	260.0	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. D-E2
DATE: 3/17/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP D AND BD — JOB #: 33644.01
LOCATION: STATE ROUTE 30, RAMP D STA 28+920 — ELEV.: 265.747
DRILL METHOD: 95 MM HOLLOW STEM AUGERS — DRILLERS: BG/TB
ENCOUNTERED WATER DEPTH (m): 3.7 — COMPLETION (m): 5.2
DEPTH TO – WATER (m): — CAVING: — DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	265.7	TOPSOIL – 457 mm			3/150 3/150 4/150													
	265.3	Moist Medium Stiff Grey–Brown CLAY w/Some Silt, Trace Sand and Gravel, A–7–6(13)				SS–1	7	1514	26	2	1	6	64	27	39	17	22	A–7–6(13)
1	264.8	Moist Medium Stiff Grey Brown SILT and CLAY w/Trace Sand			2/150 2/150 3/150	SS–2	5	1579	27									
2	263.9	Moist Medium Dense Brown SANDY SILT w/Clay, Trace Sand and Gravel			5/150 6/150 8/150	SS–3	14	1706	20									
		– Brown/Grey, A–4a(8)			5/150 7/150 15/150	SS–4	26		18	1	6	9	48	36	28	22	6	A–4a(8)
3					5/150 10/150 15/150	SS–5	25	2026	16									
	262.1	Moist Very Stiff Grey–Reddish Brown SILT and CLAY w/Little Sand																
4	261.8	Moist Stiff Grey SILTY CLAY w/Trace Sand and Gravel			4/150 5/150 8/150	SS–6	13	1727	17									
5	260.9	Moist Medium Dense Grey SILT w/Clay, Little Sand, Trace Gravel, A–4a(8)			4/150 6/150 9/150	SS–7	15	1837	17	1	5	5	66	34	26	18	8	A–4b(8)
6		– 51.0 mm Sand Seam			5/150 7/150 9/150	SS–8	16	1812	17									
	259.3	End of Borehole																
7																		

NOTES:

LOG OF TEST BORING

BORING NO. D-E3
DATE: 3/17/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP D AND BD — JOB #: 33644.01
LOCATION: STATE ROUTE 30, RAMP D STA 29+040 — ELEV.: 266.769
DRILL METHOD: 95 MM HOLLOW STEM AUGERS — DRILLERS: TB/SW
ENCOUNTERED WATER DEPTH (m): NONE — COMPLETION (m): NONE
DEPTH TO – WATER (m): — CAVING: — DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	266.8	TOPSOIL – 305 mm																
	266.5	Wet Loose Red–Brown and Grey SILT w/Some Clay, Little Sand A–4a(8)			3/150 3/150 3/150	SS–1	6	1530	27	0	3	14	55	28	30	22	8	A–4b(8)
1	265.7	Moist, Very Stiff Grey–Brown SILT and CLAY w/Little Sand, Trace Gravel, A–6a(9)			5/150 9/150 10/150	SS–2	19	1671	18	4	8	9	52	27	29	17	2	A–6a(9)
2		– Stiff Grey w/Trace Sand and Gravel, A–6a(9)			5/150 10/150 13/150	SS–3	23	1778	18									
3					4/150 5/150 7/150	SS–4	12	1674	17	2	5	7	56	30	28	16	12	A–6a(9)
					5/150 8/150 7/150	SS–5	13	1784	18									
4		–A–6a (8)			4/150 5/150 8/150	SS–6	13	1818	18	2	5	7	45	41	28	17	11	A–6a(8)
5					5/150 5/150 7/150	SS–7	12	1315	18									
6					3/150 4/150 5/150	SS–8	9	1953	18									
		– Little Sand, A–6a(8)			4/150 4/150 6/150	SS–9	10	1791	18	1	7	8	45	39	27	16	11	A–6a(8)
7					4/150 5/150 7/150	SS–10	12	1773	23									
	259.1	End of Borehole																

NOTES:

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-119
PROJECT NO. 33644.01

SOIL PROFILE

WTA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ RAMP D AND BD
LOCATION: STATE ROUTE 30, RAMP D STA 29+160
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): NONE
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO. D-E4
DATE: 3/17/97
JOB #: 33644.01
ELEV.: 264.862
DRILLERS: TB/SW
COMPLETION (m): NONE
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	264.9	TOPSOIL – 457 mm															
	264.4	Moist Stiff Yellow Brown and Grey SILTY CLAY w/Trace Sand			3/150 4/150 5/150	SS-1	9	1589	23								
1	263.8	Moist Stiff Brown/Grey CLAY w/Silt, Little Sand, Trace Gravel, A-7-6(11)			3/150 5/150 6/150	SS-2	9	1656	23	1	14	9	47	39	36	19	17	A-7-6(11)
2		– Brown			5/150 6/150 7/150	SS-3	13	1765	19									
3	262.4	Moist Medium Dense Grey SILT w/Some Clay, Trace Sand			5/150 7/150 10/150	SS-4	17	1850	15									
		– Trace Gravel, A-4a(8)			3/150 5/150 7/150	SS-5	13	1922	15	1	5	7	56	31	25	17	8	A-4b(8)
4					3/150 4/150 7/150	SS-6	11	1863	17									
5	260.0	Very Damp Stiff Grey SILT and CLAY w/Trace Sand and Gravel, A-6a(10)			4/150 7/150 8/150	SS-7	15	1810	18	3	4	5	47	41	24	15	14	A-6a(10)
6					7/150 8/150 8/150	SS-8	14	1804	19									
7		– A-6a(10)			3/150 4/150 7/150	SS-9	11	1760	19									
					3/150 5/150 8/150	SS-10	13	1740	20	0	2	3	48	47	32	18	14	A-6a(10)
8					4/150 6/150 7/150	SS-11	13	1704	22									
9		– Moist			4/150 5/150 9/150	SS-12	14	1688	23									
	255.7	End of Borehole																

NOTES:

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ RAMP D AND BD
LOCATION: STATE ROUTE 30, RAMP BD, MAINLINE STA 29+280
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 7.0
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO. BD-E1
DATE: 4/7/97
JOB #: 33644.01
ELEV.: 265.044
DRILLERS: BG/CW
COMPLETION (m): 1.8
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	265.0	TOPSOIL – 457 mm															
	264.6	Moist Medium Stiff Brown SILTY CLAY w/Sand, A-6a(7)			3/150 3/150 4/150	SS-1	7	1660	21	0	5	36	29	31	32	18	14	A-6a(7)
1		– Very Damp Very Stiff w/Little Sand			7/150 7/150 9/150	SS-2	16	1876	17									
2		– Little Sand, A-6a(9)			4/150 8/150 13/150	SS-3	21	1841	16	0	6	8	42	44	31	18	13	A-6a(9)
3		– Grey-Brown w/Little Sand, Trace Gravel and "Rustlike" Iron Seam			10/150 14/150 14/150	SS-4	28		16									
	261.5	Damp Dense Grey SILT w/Little Clay and Sand, A-4a(0)			10/150 10/150 21/150	SS-5	31		14	1	2	11	68	17	NON-PLASTIC		A-4b(0)
4	261.1	Very Damp Very Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			4/150 8/150 12/150	SS-6	20	1900	16									
5		– w/Trace Sand			4/150 8/150 9/150	SS-7	17	1724	20									
6		– Moist Stiff w/Little Sand			3/150 5/150 7/150	SS-8	12	1725	22									
	258.6	Moist Medium Dense Grey SANDY SILT w/Clay, Trace Gravel, A-4a(8)			5/150 8/150 10/150	SS-9	18	1860	15	3	12	11	34	40	26	20	6	A-4a(8)
7	258.0	Damp Dense Grey COURSE to FINE SAND w/Some Clay, Trace Gravel			5/150 17/150 15/150	SS-10	32		9									
8	257.3	Damp Very Dense Grey SILTY SAND w/Little Clay	FS	FS	17/150 28/150 28/150	SS-11	56		9									
9	256.4	Wet Very Dense Grey COARSE to FINE SAND w/Trace Silt	FS		22/150 50/100	SS-12	100+		18									
	255.3	End of Borehole																

NOTES:

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ RAMP D AND BD
LOCATION: STATE ROUTE 30, RAMP BD, MAINLINE STA 29+400
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 1.4
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO. BD-E2
DATE: 4/7/97
JOB #: 33644.01
ELEV.: 264.377
DRILLERS: BG/CW
COMPLETION (m): 3.9
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	264.4	TOPSOIL – 406 mm															
	264.0	Moist Stiff Grey-Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(10)			3/50 4/50 5/50	SS-1	9	1701	21	1	8	25	38	28	32	18	14	A-6a(10)
1		– Medium Stiff			3/150 3/150 3/150	SS-2	6	1653	21									
2	262.5	Moist Loose Grey/Brown SANDY SILT w/Some Clay, A-4a(6)			2/50 2/50 3/50	SS-3	5	1698	22	2	13	20	43	24	27	18	9	A-4a(9)
3		– Medium Dense			5/50 5/50 6/150	SS-4	11		22									
		– Very Damp			5/150 8/150 9/150	SS-5	17	1863	13									
4		– w/Clay, Trace Gravel, A-4a(7)			3/50 5/50 8/50	SS-6	11	1959	12	2	16	13	27	42	23	15	8	A-4a(7)
5	259.5	Very Damp Very Soft Grey SILT and CLAY w/Some Sand, Trace Gravel			1/150 1/150 1/150	SS-7	2	1791	14									
6	258.9	Wet Very Loose Grey COURSE and FINE SAND w/Some Silt, A-3a(2)			1/150 1/150 1/150	SS-8	2		19	0	1	68	31	0	NON-PLASTIC		A-3a(6)
					1/150 1/150 1/150	SS-9	2											
7	257.4	Wet Medium Dense Grey SILTY SAND	FS	FS	13/150 11/150 13/150	SS-10	34		19									
8	256.5	Very Damp Very Stiff Grey SILT and CLAY w/Sand, Trace Gravel	FS		8/150 12/150 16/150	SS-11	30	1743	15									
	255.8	End of Borehole																

NOTES:

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-120
PROJECT NO. 33644.01

FILE

SOIL PROFILE

WYA/CRA-30-23.914/0.000(14.86/0.00)

120/130

LOG OF TEST BORING

BORING NO. ED-E3
DATE: 4/8/97
JOB #: 33644.01
ELEV.: 264.804
DRILLERS: BG/CW
COMPLETION (m): 3.7
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP D AND BD
LOCATION: STATE ROUTE 30, RAMP BD, MAINLINE STA 29+520
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 1.8
DEPTH TO - WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	264.8	TOPSOIL - 406 mm																
1	264.4	Moist Stiff Grey CLAY w/Silt, Little Sand, Trace Gravel and Organics(Root), A-7-6(13)			3/150 8/150 7/150	SS-1	15		24	1	3	10	47	39	43	22	21	A-7-6(13)
	263.7	Moist Medium Stiff Grey SILT and CLAY w/Some Sand			3/150 3/150 5/150	SS-2	8		24									
2	263.0	Wet Very Loose Brown SILT w/Little Clay, Trace Sand, A-4a(8)			2/150 2/150 2/150	SS-3	4	1398	30	0	0	11	76	13	29	23	6	A-4b(8)
		- Moist w/Little Clay, Trace Organics (Root)			2/150 2/150 4/150	SS-4	6		20									
3																		
4	261.3	Very Damp Loose Brown/Grey SANDY SILT w/Some Clay, Trace Gravel			3/150 3/150 5/150	SS-5	8	1658	15									
		- A-4a(6)			4/150 7/150 11/150	SS-6	18	2026	13	5	16	14	39	26	24	14	10	A-4a(6)
5		- w/Some Sand, Trace Gravel			5/150 9/150 12/150	SS-7	21	1924	14									
6	259.3	Wet Medium Dense Grey SILTY SAND w/Trace Silt:	FS		7/50 11/150 14/150	SS-8	25		7									
			FS															
7	258.4	Moist Medium Dense Grey SILT w/Some Sand, Trace Clay, A-4a(0)			6/150 11/150 13/150	SS-9	24		17	0	0	24	74	2	NON-PLASTIC			A-4b(0)
					9/150 12/150 12/150	SS-10	24		19									
	257.2	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. L-E1
DATE: 3/26/97
JOB #: 33644.01
ELEV.: 280.526
DRILLERS: TM/CM/RG
COMPLETION (m): 4.0
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP L
LOCATION: ROUTE 30 & STATE ROUTE 231, RAMP L STA 37+400
DRILL METHOD: HAND AUGERS & HAND HOUSAL SAVPLER
ENCOUNTERED WATER DEPTH (m): 3.2
DEPTH TO - WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	280.5	TOPSOIL - 275 mm																
	280.3	Moist Stiff Grey/Brown CLAY w/Trace Sand and Grave, A-7-6(12)			8/150 11/150 16/150	SS-1	14	1535	25	5	6	5	39	45	42	23	19	A-7-6(12)
1		- w/Little Sand, A-7-6(13)			10/150 18/150 24/150	SS-2	18	1624	21	0	6	9	44	41	42	21	21	A-7-6(13)
2	278.9	Very Damp Very Stiff Grey/Brown SILTY CLAY w/ Little Sand, Trace Gravel			22/150 22/150 30/150	SS-3	20	1740	18									
3					23/150 26/150 34/150	SS-4	22	1845	16									
4		- Brown/Grey			30/150 40/150 54/150	SS-5	26	1849	14									
					27/150 36/150 49/150	SS-6	26	1873	14									
	276.0	End of Borehole																

NOTES: Samples were taken with a Hand Housel Sampler and blow counts were convertec using "Terzaghi Standard" numbers.

LOG OF TEST BORING

BORING NO. MR-E1
DATE: 3/26/97
JOB #: 33644.01
ELEV.: 283.345
DRILLERS: CW/JL
COMPLETION (m): NONE
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP M
LOCATION: STATE ROUTE 231 & RAVP M, RAMP M STA 37-920
DRILL METHOD: 57 VM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): NONE
DEPTH TO - WATER (m): CAVNG:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	283.3	TOPSOIL - 457 mm																
	282.9	Moist Stiff Yellow Brown and Grey SILTY CLAY w/Little Sand, Trace Gravel			5/150 9/150 8/150	SS-1	12	1626	20									
1		- Medium Stiff, A-6b(10)			2/150 4/150 4/150	SS-2	8	1613	21	0	8	10	35	47	36	20	16	A-6b(10)
2	281.5	Moist Loose Grey-Brown SANDY SILT w/Clay, Trace Gravel, A-4a(7)			3/150 4/150 6/150	SS-3	10	1656	18	3	12	15	30	40	22	15	7	A-4a(7)
		- Damp Medium Dense Grey			14/150 12/150 10/150	SS-4	24	1909	13									
3		- A-4a(7)			14/150 14/150 10/150	SS-5	24	1857	13	2	13	13	35	37	26	18	8	A-4a(7)
4		- Dense			10/150 13/150 18/150	SS-6	31											
		- Medium Dense w/Some Clay, Trace Gravel, A-4a(6)			8/150 10/150 13/150	SS-7	23	1834	12	5	14	14	29	28	25	17	8	A-4c(6)
5	278.3	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. MR-E2
DATE: 3/26/97
JOB #: 33644.01
ELEV.: 284.774
DRILLERS: CW/JL
COMPLETION (m): NONE
DATE CHECKED:

PROJECT: ODOT STATE ROUTE 30 @ RAMP V
LOCATION: STATE ROUTE 231 & RAMP M, RAMP M STA 38+040
DRILL METHOD: 57 MM -OLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): NONE
DEPTH TO - WATER (m): CAVNG:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	284.8	TOPSOIL - 356 mm																
	284.4	Moist Stiff Grey-Brown CLAY w/Some Silt, Little Sand			5/150 5/150 5/150	SS-1	10	1624	22									
1		- A-7-6(16)			4/150 5/150 4/150	SS-2	9	1424	28	0	9	7	28	56	45	22	23	A-7-6(16)
2	282.9	Very Damp Stiff Yellow-Brown and Grey SILT and CLAY w/Little Sand, Trace Gravel			5/150 5/150 6/150	SS-3	11	1712	19									
		- Very Stiff Grey-Brown, A-6c(9)			6/150 7/150 10/150	SS-4	17	1815	17	1	10	10	34	44	33	20	13	A-6a(9)
3		- Hard Red-Brown and Grey			17/150 21/150 21/150	SS-5	42	1876	14									
4		- Very Stiff			7/150 9/150 12/150	SS-6	21	1940	13									
5		- Hard Grey			7/150 13/150 19/150	SS-7	32	1985	12									
6	279.0	Very Moist Medium Dense Grey SANDY SILT w/ Clay, Trace Grave A-4a(8)			3/150 6/150 7/150	SS-8	13	1911	26	4	4	12	41	34	23	16	7	A-4c(8)
	278.4	End of Borehole																

NOTES:

TOLLES, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-121
PROJECT NO. 33644.01

SOIL PROFILE

WIA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

BORING NO. O-E1
DATE: 4/9/97
PROJECT: ODOT STATE ROUTE 30 MAINLINE
JOB #: 33466.01
LOCATION: RAMP "O" STA 6+200, 6M LT
ELEV.: 299.202
DRILL METHOD: 95mm HOLLOW STEM AUGER
DRILLERS: JL/TM
ENCOUNTERED WATER DEPTH (m): DRY
COMPLETION (m): DRY
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	299.2	ASPHALT – 50mm																
	299.1	CRUSHED STONE – 457mm																
	298.7	Moist, Loose Brown SANDY SILT w/Clay			3/150 4/150 4/150	SS-1	8		19									
1		– Damp Medium Dense Grey w/Trace Gravel, A-4a(7)			3/150 5/150 6/150	SS-2	11	1905	13	3	14	12	35	36	24	16	8	A-4a(7)
2					8/150 7/150 9/150	SS-3	16		12									
		– w/Some Clay, Trace Gravel, A-4c(6)			5/150 6/150 6/150	SS-4	12	1941	12	4	15	14	37	30	24	16	8	A-4c(6)
3																		
		– Loose			4/150 5/150 5/150	SS-5	10	1831	14									
4																		
					3/150 4/150 5/150	SS-6	9	1930	15									
5																		
					3/150 4/150 4/150	SS-7	8	1973	13									
		– A-4a(8)																
6					3/150 4/150 6/150	SS-8	10	1845	15	2	13	10	44	31	26	17	9	A-4a(8)
					6/150 5/150 5/150	SS-9	10	1905	13									
7																		
	292.0	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. O-E2
DATE: 4/3/97
PROJECT: ODOT STATE ROUTE 30 MAINLINE
JOB #: 33466.01
LOCATION: RAMP "O" STA 6+320, 3M LT
ELEV.: 298.854
DRILL METHOD: HAND AUGERS AND HAND HOUSAL SAVPLER
DRILLERS: JL/TM
ENCOUNTERED WATER DEPTH (m): 3.0
COMPLETION (m): 3.1
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	298.9	TOPSOIL – 228mm																
	298.4	Moist Very Stiff Grey/Brown CLAY w/Silt, Little Sand, Trace Gravel, A-7-6(16)			6/150 10/150 10/150	SS-1	20	1578	24	1	7	7	40	45	46	18	28	A-7-6(16)
1	297.8	Moist Very Stiff Yellow Brown SILT and CLAY w/Little Sand, Trace Gravel, A-6a(10)			9/150 14/150 10/150	SS-2	24	1644	22	1	6	10	38	45	36	22	14	A-6a(10)
		– Grey/Brown			12/150 12/150 13/150	SS-3	25	1629	21									
2																		
3	296.3	Damp Very Dense Grey/Brown SANDY SILT w/Some Clay, Trace Gravel			20/150 28/150 40/150	SS-4	68	1865	16									
					23/150 36/150 44/150	SS-5	80	1972	14									
4		– Medium Dense, A-4c(5)			8/150 9/150 10/150	SS-6	19	1924	15	6	17	15	35	27	24	15	9	A-4a(5)
5					10/150 10/150 10/150	SS-7	20	1934	14									
	293.4	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. P-E1
DATE: 4/3/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: RAMP "P" STA 5+820 3M RT
ELEV.: 299.714
DRILL METHOD: HAND AUGER AND HAND HOUSAL SAMPLER
DRILLERS: JL/NW/TM
ENCOUNTERED WATER DEPTH (m): 1.2
COMPLETION (m): 0.3
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	299.7	TOPSOIL – 304mm																
	299.4	Moist Stiff Grey/Brown SILTY CLAY w/Little Sand, A-6a(12)			9/150 10/150 11/150	SS-1	11	1504	26	0	7	16	38	39	37	17	20	A-6b(12)
1	298.8	Damp Very Stiff Grey/Brown SILT and CLAY w/Trace Sand, Gravel			12/150 22/150 26/150	SS-2	20	1871	14									
2					14/150 23/150 30/150	SS-3	20	1813	14									
		– more w/Little Sand, A-6a(4)			32/150 71/150 82/150	SS-4	31	1648	15	17	17	13	28	25	27	16	11	A-6a(4)
3																		
					45/150 80/150 120/150	SS-5	44	1808	15									
4	295.6	Damp Medium Dense Grey SANDY SILT w/Some Clay, Little Gravel, A-4a(9)			32/150 37/150 75/150	SS-6	28	1879	14	14	13	11	33	29	25	15	10	A-4a(9)
5	294.8	Damp Very Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			22/150 37/150 41/150	SS-7	25	1847	12									
6					32/150 42/150 52/150	SS-8	27	1906	13									
	293.3	End of Borehole																
7																		

NOTES: SAMPLES WERE TAKEN WITH A HAND HOUSAL SAMPLER AND BLOW COUNTS WERE CONVERTED USING "TERZAGHI STANDARD" NUMBERS.

TOLEDO ENGINEERING INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

SOIL PROFILE

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-122
PROJECT NO. 33644.01

WTA/CRA-30-23.914/0.000(14.98/0.00)

LOG OF TEST BORING

BORING NO. P-E2
DATE: 4/3/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: RAMP "P" STA 5+943 3M RT
ELEV.: 300.666
DRILL METHOD: HAND AUGER AND HAND HOUSAL SAMPLER
DRILLERS: JL/NW/TM
ENCOUNTERED WATER DEPTH (m): NONE
COMPLETION (m): NONE
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	300.7	TOPSOIL – 304mm																
	300.4	Moist Stiff Grey/Brown SILTY CLAY w/Little Sand, Trace Gravel, Organics (Root)			7/150 14/150 27/150	SS-1	17	1720	14									
1	299.6	Damp Stiff Grey/Brown SILT and CLAY w/Little Sand, Trace Gravel, A-6a(9)			10/150 18/150 19/150	SS-2	17	1791	13	1	10	8	52	29	30	7	13	A-6a(9)
2	298.9	Damp Stiff Brown SILTY CLAY w/Little Sand, Trace Gravel			12/150 20/150 24/150	SS-3	18	1786	15									
3					20/150 27/150 39/150	SS-4	23	1804	18									
	297.3	Damp Stiff Brown/Grey SILT and CLAY w/Some Sand, Trace Gravel, A-6a(7)			22/150 35/150 55/150	SS-5	26	1909	14	6	20	7	43	24	26	15	11	A-6a(7)
4	296.6	Damp Stiff Brown/Grey SILTY CLAY w/Little Sand, Trace Gravel			12/150 16/150 31/150	SS-6	19	1810	14									
5					16/150 30/150 38/150	SS-7	23	1736	17									
	295.2	End of Borehole																

NOTES: SAMPLES WERE TAKEN WITH A HAND HOUSAL SAMPLER AND BLOW COUNTS WERE CONVERTED USING "TERZAGHI STANDARD" NUMBERS. BORING MOVED 3.0M EAST ELEVATION APPROXIMATE.

LOG OF TEST BORING

BORING NO. EBRA-B1
DATE: 4/24/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: ODOT STATE ROUTE 30 MAINLINE STA 34+293 134M R
ELEV.: 284.223
DRILL METHOD: 108mm HOLLOW STEM AUGER
DRILLERS: BG/CM
ENCOUNTERED WATER DEPTH (m): DRY
COMPLETION (m): DRY
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	284.2	TOPSOIL – 254mm																
	284.0	Moist Stiff Brown/Grey CLAY w/Some Silt, Little Sand, Trace Gravel, A-7-6(13)			3/150 4/150 5/150	SS-1	9	1453	26	3	12	9	33	43	45	24	21	A-7-6(13)
1					4/150 5/150 9/150	SS-2	14	1438	28									
2	282.4	Damp Very Stiff Brown SILT and CLAY w/Little Sand, Trace Gravel, A-6a(9) – Grey/Brown			7/150 9/150 9/150	SS-3	18	1908	13									
3					9/150 12/150 15/150	SS-4	27	1772	19	1	8	10	46	35	32	20	21	A-6a(9)
4					9/150 14/150 14/150	SS-5	28	1759	17									
	280.1	Moist Medium Dense Grey/Brown SANDY SILT w/Clay, Trace Gravel, A-4a(8)			9/150 13/150 16/150	SS-6	28	1823	14	2	6	9	49	34	23	17	6	A-4a(8)
	279.7	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. EBRA-B2
DATE: 4/24/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: ODOT STATE ROUTE 30 MAINLINE STA 34+334 134M R
ELEV.: 283.928
DRILL METHOD: 108mm HOLLOW STEM AUGER
DRILLERS: BG/CM
ENCOUNTERED WATER DEPTH (m): DRY
COMPLETION (m): DRY
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	283.9	TOPSOIL – 254mm																
	283.7	Damp Stiff Brown SILTY CLAY w/Little Sand			3/150 5/150 5/150	SS-1	10	1890	15									
1	282.9	Moist Medium Dense Brown SANDY SILT w/Clay, Trace Gravel, A-4a(8)			5/150 9/150 13/50	SS-2	22	1909	15	1	8	11	46	34	28	18	10	A-4a(8)
2	282.1	Very Damp Very Stiff Brown SILT and CLAY w/Little Sand, Trace Gravel, A-6a(9) – Hard			7/150 9/150 17/150	SS-3	25	1733	17	1	6	8	44	41	32	19	13	A-6a(9)
3					8/50 16/150 19/150	SS-4	35	1863	16									
	280.6	Moist Medium Dense Brown SILT w/Clay, Little Sand, Trace Gravel, A-4b(8)			9/150 15/150 14/150	SS-5	29	1868	16	1	6	9	51	33	27	18	13	A-4b(8)
4		– Dense			9/150 16/50 16/50	SS-6	32		16									
	279.4	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. EBRA-B3
DATE: 4/24/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: ODOT STATE ROUTE 30 MAINLINE STA 34+482 147M R
ELEV.: 278.67'
DRILL METHOD: 108mm HOLLOW STEM AUGER
DRILLERS: BG/CV
ENCOUNTERED WATER DEPTH (m): 2.6
COMPLETION (m): 2.'
DEPTH TO – WATER (m): CAVING:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	278.7	TOPSOIL – 304mm																
	278.4	Very Moist Very Loose Brown SILT w/Some Clay, Trace Sand and Gravel, A-4b(8)			2/150 2/150 2/150	SS-1	4	1451	22	2	2	7	65	24	29	20	9	A-4a(8)
1	277.5	Moist Medium Stiff Grey/Brown SILTY CLAY w/little Sand			2/150 4/150 3/150	SS-2	7	1450	21									
2	276.8	Moist Stiff Brown SILT and CLAY w/Little Sand			4/150 5/150 9/150	SS-3	14	1472	25									
3	276.1	Moist Very Stiff Grey/Brown SILTY CLAY w/Some Sand			5/150 8/150 13/50	SS-4	21	1576	23									
4	275.3	Moist Stiff Brown/Grey SILTY and CLAY w/Little Sand – Very Stiff Brown			4/150 5/150 8/150	SS-5	13	1868	23									
					5/150 8/150 9/150	SS-6	17	1800	23									
	274.1	End of Borehole																

NOTES:

LOG OF TEST BORING

BORING NO. EBRA-B4
DATE: 4/24/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: ODOT STATE ROUTE 30 MAINLINE STA 34+535 103M R
ELEV.: 278.879
DRILL METHOD: 108mm HOLLOW STEM AUGER
DRILLERS: BG/CM
ENCOUNTERED WATER DEPTH (m): DRY
COMPLETION (m): DRY
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	278.9	TOPSOIL – 304mm																
	278.6	Moist Medium Stiff Brown SILT and Clay w/Trace Sand and Gravel – Very Stiff, A-6a(8)			3/150 4/150 4/150	SS-1	8	1488	24	3	7	1	63	26	35	24	11	A-6a(8)
1					4/150 7/150 10/150	SS-2	17	1522	25									
2	277.1	Moist Very Stiff Brown/Grey SILTY CLAY w/Little Sand			6/150 7/150 9/150	SS-3	16	1627	21									
3					6/150 9/150 12/150	SS-4	21	1700	20									
4	275.5	Moist Medium Dense Grey SILT w/Some Clay, Little Sand			7/150 9/150 10/150	SS-5	19	1741	20									
					10/150 10/150 10/150	SS-6	20	1597	22									
	274.3	End of Borehole																

NOTES:

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

SOIL PROFILE

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-123
PROJECT NO. 33644.01

WTA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: ODOT STATE ROUTE 30 MAINLINE STA 34+276 /AM RT
DRILL METHOD: 108mm HOLLOW STEM AUGER
ENCOUNTERED WATER DEPTH (m): 14.4
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO. EBRA-HM1
DATE: 4/28/97
JOB #: 33644.01
ELEV.: 285.046
DRILLERS: BG/JL
COMPLETION (m): DRY
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	285.0	TOPSOIL – 304mm																
	284.7	Moist Medium, Stiff Brown SILT and CLAY w/Trace Sand, A-6a(10)																
1		– Stiff			3/150 3/150 4/150	SS-1	7	1464	25	0	2	6	42	50	32	18	14	A-6a(10)
2					6/150 7/150 8/150	SS-2	15	1797	20		7	9	44	39	29	17	12	A-6a(9)
3		– Very Stiff w/Little Sand, Trace Gravel, A-6a(9)			6/150 8/150 9/150	SS-3	16	1714	16									
4		– Stiff Grey			8/150 12/150 15/150	SS-4	27	1841	17	1	7	9	44	39	29	17	12	A-6a(9)
5		– Stiff Grey, A-6a(9)			6/150 10/150 11/150	SS-5	21	18//	15									
6	279.4	Damp Medium Dense Grey SILT w/Clay, Little Sand, Trace Gravel			6/150 9/150 8/150	SS 6	15	1932	15									
7		– Loose			6/150 7/150 9/150	SS-7	13	1778	15	1	8	9	41	41	28	17	11	A-6a(9)
8		– A-4b(8)			6/150 9/150 16/150	SS-8	25	1965	14									
9					3/150 3/150 4/150	SS-9	7	1869	16									
10					6/150 4/150 4/150	SS-10	8	1730	15	4	7	8	50	31	26	18	8	A-4b(8)
11					4/150 5/150 4/150	SS-11	9	1744	15									
12					3/150 4/150 5/150	SS-12	9	1883	17									
13					3/150 5/150 5/150	SS-13	10	1998	15									
14		– Medium Dense			3/150 5/150 7/150	SS-14	12	1983	15									
15		– w/Some Clay, A-4b(8)			3/150 6/150 7/150	SS-15	13	1929	15	2	6	9	55	28	26	16	10	A-4b(8)
16					6/150 8/150 11/150	SS-16	19	1881	16									
17		– A-4b(8)			6/150 7/150 10/150	SS-17	17	1865	23	0	0	0	72	28	31	21	10	A-4b(8)
18					9/150 7/150 10/150	SS-18	17	1797	22									
19					4/150 7/150 10/150	SS 19	17	1642	16									
20	265.2	End of Borehole																

NOTES:

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: ODOT STATE ROUTE 30 MAINLINE STA 33+909 139m L
DRILL METHOD: 108mm HOLLOW STEM AUGER
ENCOUNTERED WATER DEPTH (m): DRY
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO. WBRA-B1
DATE: 4/23/97
JOB #: 33644.01
ELEV.: 285.406
DRILLERS: BG/CM
COMPLETION (m): DRY
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	285.4	TOPSOIL – 304mm																
	285.1	Damp Stiff Grey/Brown SILT and CLAY w/Little Sand, Trace Gravel and "Rust-Like" Iron Seams			2/150 4/150 6/150	SS-1	10	1842	19									
1		– Very Stiff Brown, A-6a(10)			7/150 9/150 14/150	SS-2	23	1829	19	1	5	9	52	33	30	16	14	A-6a(10)
2		– Grey/Brown w/Some Sand			7/150 10/150 16/150	SS-3	26	1911	11									
3		– Moist Brown			9/150 10/150 19/150	SS-4	29	1752	23									
	282.1	Moist Medium Dense Brown SANDY SILT w/Clay, Trace Gravel			7/150 16/150 19/150	SS-5	29	1866	16									
4		– Dense, A-4a(8)			14/150 25/150 24/150	SS-6	49	1833	16	1	7	9	48	35	27	20	7	A-4a(8)
	280.8	End of Borehole																

NOTES:

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: ODOT STATE ROUTE 30 MAINLINE STA 33+950 139m L
DRILL METHOD: 108mm HOLLOW STEM AUGER
ENCOUNTERED WATER DEPTH (m): DRY
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO. WBRA-B2
DATE: 4/23/97
JOB #: 33644.01
ELEV.: 285.625
DRILLERS: BG/CM
COMPLETION (m): DRY
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	285.6	TOPSOIL – 279mm																
	285.3	Damp Stiff Grey/Brown Clay w/Little Sand and Silt, Trace Gravel and Organics (Root), A-7-6(12)			4/150 4/150 8/150	SS-1	12	1570	26	1	7	12	15	65	42	22	20	A-7-6(12)
1		– Brown			4/150 5/150 7/150	SS-2	12	1768	20									
2	283.8	Moist Medium Dense Grey/Brown SANDY SILT w/Clay, Trace Gravel			7/150 10/150 20/150	SS-3	30	1911	14									
3		– Dense Brown w/"Rust-Like" Iron Seams			9/150 18/150 23/150	SS-4	41	1959	17									
		– Medium Dense, A-4a(8)			9/150 17/150 18/150	SS-5	29	1799	17	0	5	8	39	48	27	19	8	A-4a(8)
4					7/150 12/150 16/150	SS-6	28	1850	17									
	281.1	End of Borehole																

NOTES:

SOIL PROFILE

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-124
PROJECT NO. 33644.01

TOLEDO ENGINEERING CO., INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

WTA/CRA-30-23.914/0.000(14.86/0.00)

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30 @ RAMP A
LOCATION: STATE ROUTE 30, RAMP A STA 28+9.37
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
ENCOUNTERED WATER DEPTH (m): 13.4
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO. US23-HM1
DATE: 4/22/97
JOB #: 33644.01
ELEV.: 267.446
DRILLERS: TB/GM
COMPLETION (m): 10.5
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	267.4	TOPSOIL – 305 mm																
	267.1	Wet Loose Grey-Brown SANDY SILT w/Little Clay, Trace Gravel, A-4a(8)			2/150 3/150 4/150	SS-1	7	1443	27	3	12	2	67	16	33	23	10	A-4b(8)
1		– Brown w/trace Clay			2/150 2/150 4/150	SS-2	6		32									
2		– Medium Dense			4/150 8/150 8/150	SS-3	16	1732	26									
	265.0	Moist Medium Stiff Grey SILT and CLAY w/Some Sand			3/150 5/150 4/150	SS-4	9		23									
3					3/150 3/150 5/150	SS-5	8	1850	17									
4	263.3	Very Damp Medium Dense Grey SANDY SILT w/Some Clay and Gravel, A-4a(7)			3/4/5 4/150 5/150	SS-6	9	1908	14	20	6	5	45	24	24	16	8	A-4a(7)
5					4/150 5/150 8/150	SS-7	13	1885	15									
6	262.0	Very Damp Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			3/150 3/150 6/150	SS-8	9	1751	18									
7		– Moist			4/150 5/150 6/150	SS-9	11	1768	16	3	14	7	44	32	28	16	12	A-6a(9)
					3/150 5/150 7/150	SS-10	12	1692	20									
8	259.7	Very Damp Stiff Grey SILT and CLAY w/Little Sand, Trace Gravel			3/150 3/150 5/150	SS-11	9	1740	19									
9	258.9	Very Damp Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			3/150 4/150 6/150	SS-12	10		18									
10		– Moist Very Stiff			3/150 7/150 10/150	SS-13	17	1687	23									
11																		
12	256.2	Very Moist Medium Dense Grey SILT w/Some Clay, trace Sand, A-4b(8)			6/150 7/150 9/150	SS-14	16	1666	21	0	0	1	74	25	25	21	4	A-4b(8)
13	254.6	Moist Medium Dense Grey SANDY SILT w/Trace Clay			4/150 8/150 8/150	SS-15	11		13									
14		– Wet, A-4a(0)																
15					10/150 12/150 11/150	SS-16	29		21	0	3	52	35	10	NON-PLASTIC			A-4a(0)
16	251.6	WEATHERED ROCK			50/75	SS-17	100/		10									
	251.0	End of Borehole																

NOTES: Auger refusal encountered at 16.5 m.

LOG OF TEST BORING

PROJECT: ODOT STATE ROUTE 30
LOCATION: ODOT STATE ROUTE 30 MAINLINE STA 33+963.70m LT
DRILL METHOD: 108mm HOLLOW STEM AUGER
ENCOUNTERED WATER DEPTH (m): 3.3
DEPTH TO – WATER (m): ____ CAVING: ____

BORING NO. WBRA-HM1
DATE: 4/23/97
JOB #: 33644.01
ELEV.: 283.958
DRILLERS: BG/CM
COMPLETION (m): 6.7
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	284.0	TOPSOIL – 279mm																
	283.7	Moist Stiff Grey/Brown CLAY w/Silt, Trace Sand, A-7-6(12)			2/150 4/150 5/150	SS-1	9	1547	26	0	1	5	48	46	42	22	20	A-7-6(12)
1		Moist Very Stiff Brown			3/150 5/150 6/150	SS-2	11	1512	25									
2	282.1	Moist Medium Dense Brown SILT w/Some Clay, Little Sand, Trace Gravel A-4b(8)			3/150 8/150 10/150	SS-3	18	1805	17	2	7	8	58	25	30	22	8	A-4b(8)
		– Grey/Brown			4/150 9/150 12/150	SS-4	21	1821	16									
3					7/150 10/150 13/150	SS-5	23	1887	13									
4		– Grey			7/150 12/150 14/150	SS-6	26	1789	14									
5		– Brown/Grey			6/150 9/150 15/150	SS-7	24	1967	14									
6		– A-4b(8)			5/150 10/150 17/150	SS-8	17	1776	13	1	6	9	59	25	24	18	6	A-4b(8)
7					6/150 9/150 11/150	SS-9	20	1916	16									
					5/150 8/150 13/150	SS-10	21	1925	14									
8	276.0	Very Damp Very Stiff Grey SILT and CLAY w/Little Sand, Trace Gravel A-6a(9)			5/150 8/150 15/150	SS-11	23		14	1	7	9	59	24	24	12	12	A-6a(9)
9		– Brown/Grey			5/150 9/150 15/150	SS-12	24	2015	15									
10		– Grey w/Some Sand			6/150 10/150 12/150	SS-13	22	1796	14									
11																		
12	272.4	Damp Medium Dense Grey SILT w/Some Sand, Little Clay, Trace Gravel A-4b(7)			7/150 10/150 13/150	SS-14	23	2042	13	5	13	13	50	19	22	20	2	A-4b(7)
13					8/150 12/150 15/150	SS-15	27	1973	14									
14																		
15		– Moist			5/150 10/150 13/150	SS-16	23	1903	21									
16					7/150 10/150 14/150	SS-17	24	1621	17									
17																		
18		– Wet w/Clay			5/150 5/150 8/150	SS-18	13	1551	29									
19																		
20		– Moist w/Some Clay, Trace Sand and Gravel, A-4b(8)			4/150 5/150 9/150	SS-19	14	1738	15	1	3	4	67	25	25	15	10	A-4b(8)
	263.7	Moist Very Dense Grey FINE SAND w/Some Silt and Clay		FS														
21				FS	12/150 18/150 35/150	SS-20	53		17									
22				FS														
	261.6	Moist Very Dense Grey SANDY SILT w/Trace Clay		FS	14/150 20/150 32/150	SS-21	52		16									
23																		
24		w/Some Clay and Rock Fragments			12/150 20/150 26/150	SS-22	49	1961	11									
	259.6	End of Borehole																

NOTES:

TOLEDO TESTING, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

LOG OF TEST BORING

BORING NO. US23-HM3
DATE: 4/15/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP D AND BD
JOB #: 33644.01
LOCATION: STATE ROUTE 30, RAMP D STA 28+779, 2.0m RT
ELEV.: 263.582
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
DRILLERS: BB/CM
ENCOUNTERED WATER DEPTH (m): 7.9
COMPLETION (m): 8.2
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	263.6	TOPSOIL – 356 mm																
	263.2	Moist Medium Stiff Grey Brown SILT and CLAY w/Some Sand			2/150 3/150 4/150	SS-1	7	1488	26									
1		w/Little Sand, A-6a(10)			3/150 3/150 4/150	SS-2	7	1605	21	0	5	10	58	27	31	17	14	A 6a(10)
2		– Very Stiff			6/150 9/150 9/150	SS-3	18	1724	20									
3		– Stiff Brown			4/150 5/150 8/150	SS 4	13	1563	25									
	260.2	Moist Stiff Grey CLAY w/Trace Sand, A-7-6(12)			5/150 5/150 8/150	SS-5	14	1533	25	0	2	2	23	73	42	24	18	A-7-6(12)
4					5/150 6/150 5/150	SS-6	11	1506	28									
5		– Medium Stiff, w/Silt, Little Sand, Trace Gravel			3/150 3/150 4/150	SS-7	7	1640	24									
6		– Very Moist, Trace Sand A-7-6(14)			2/150 3/150 2/150	SS-8	5	1471	29	0	0	2	34	64	45	22	23	A-7-6(14)
7					2/150 2/150 4/150	SS-9	6	1567	29									
		– Very Damp Stiff Brown w/Some Sand, Trace Gravel			3/150 6/150 8/150	SS-10	14	1881	14									
8		– A-7-6(18)			5/150 6/150 9/150	SS-11	15		14	1	6	18	53	22	53	13	40	A-7-6(18)
9		– Very Stiff			8/150 10/150 11/150	SS-12	21	1876	11									
10																		
	253.2	Wet Loose Grey MEDIUM to FINE SAND w/Trace Silt	FS		2/150 3/150 4/150	SS-13	7		21									
11			FS															
12	251.8	Moist Loose Grey SANDY SILT w/Little Clay, Trace Gravel, A-4a(0)	FS		2/150 3/150 3/150	SS 14	6		19	1	7	42	36	14	NON PLASTIC			A-4a(0)
	251.2	WEATHERED ROCK, w/Trace Sand			50/127	SS 15	100+		5									
13																		
14																		
15	248.6	End of Borehole			50/50	SS-16	100+											

NOTES: Auger refusal at 14.9 meters.

LOG OF TEST BORING

BORING NO. US23-HM2
DATE: 5/2/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP B
JOB #: 33644.01
LOCATION: STATE ROUTE 30, RAMP B STA 28+456, 62 M R
ELEV.: 265.755
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: BG/JL
ENCOUNTERED WATER DEPTH (m): 1.3
COMPLETION (m): 1.8
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	BLOW COUNTS	NUMBER	N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	265.8	TOPSOIL – 305 mm																
	265.4	Moist Medium Stiff Brown SILT w/Little Clay, Trace Sand, A-4b(8)			2/150 3/150 2/150	SS-1	5	1487	26	0	1	3	76	20	29	23	6	A-4b(8)
1	264.8	Wet Loose Brown SANDY SILT w/Some Clay			2/150 3/150 3/150	SS-2	6		29									
2	263.7	Very Damp Very Stiff Brown-Grey SILTY CLAY w/Little Sand, Trace Gravel			6/150 8/150 9/150	SS-3	17	1792	18									
		– Grey			5/150 10/150 10/150	SS 4	20	1873	16									
3	262.4	Moist Stiff Grey CLAY w/Some Silt, Trace Sand, A-7-6(13)			4/150 7/150 8/150	SS-5	15	1571	26	0	0	1	22	77	46	26	20	A-7-6 (13)
4		Very Stiff			5/150 8/150 9/150	SS-6	17	1487	27	2	5	7	19	67	26	18	8	A-4a(8)
	261.2	Moist Medium Stiff Grey SILT and CLAY w/Trace Sand			2/150 3/150 2/150	SS-7	5	1435	27									
5		– w/Trace Gravel, A-6a(10)			2/150 3/150 3/150	SS-8	6	1445	29									
6		– Soft			2/150 2/150 2/150	SS-9	4		29	0	0	1	17	82	41	22	19	A-7-6(12)
7		– Medium Stiff			3/150 3/150 3/150	SS-10	6	1536	32									
8	257.8	Moist Very Dense Brown-Grey FINE SAND w/Trace Silt	FS		27/150 50/150 6/150	SS-11	100+		12	1	2	3	27	67	35	21	14	A-6a(10)
9			FS		50/152	SS-12	100+		11									
10			FS															
		– Wet Medium Dense w/Trace Silt and Clay, A-3(0)	FS		7/150 12/150 15/150	SS-13	27		22	0	9	81	9	1	NON PLASTIC			A-3(0)
11			FS															
12		– Moist	FS		10/150 12/150 13/150	SS-14	25		16									
13			FS		12/150 17/150 19/150	SS-15	36		17									
14			FS															
15		– A-3(0)	FS		13/150 17/150 50/0	SS-16	100+		16	0	15	76	6	3	NON PLASTIC			A-3(0)
	250.5	Weathered Rock																
	250.2	End of Borehole																

NOTES: AUGER REFUSAL WAS ENCOUNTERED AT A DEPTH OF 15.5 METERS.

LOG OF TEST BORING

BORING NO. SR231HM1
DATE: 5/20/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP L
JOB #: 33644.01
LOCATION: ROUTE 30 & STATE ROUTE 231, RAMP L STA 36+606
ELEV.: 281.216
DRILL METHOD: 95 MM HOLLOW STEM AUGERS
DRILLERS: BG/TB
ENCOUNTERED WATER DEPTH (m): 3.5
COMPLETION (m): 5.5
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	281.2	TOPSOIL – 305 mm															
	280.9	Moist Medium Stiff Brown and Grey SILTY CLAY w/Some Sand, Little Gravel, A-6b(9)			3/150 4/150 4/150	SS-1	8	1727	22	14	19	11	27	29	38	16	22	A-6b(9)
1		– Stiff Grey and Red-Brown			4/150 5/150 6/150	SS-2	11	1567	21									
2	279.4	Very Damp Very Stiff Grey-Brown SILT and CLAY w/Little to Some Sand, Trace Gravel			6/150 11/150 14/150	SS-3	25	1810	16									
3		– Grey, A-6a(7)			7/150 10/150 14/150	SS-4	24	1889	12	8	12	11	39	30	27	16	11	A-6a(7)
	277.9	Moist Medium Dense Grey SANDY SILT w/Trace Clay Wet Sand Seam @ 3.5 M			5/150 6/150 8/150	SS-5	14	1695	17									
4	277.1	Moist Very Stiff Grey SILTY CLAY w/Trace Sand and Gravel	FS		3/150 6/150 14/150	SS-6	20	1520	27									
	276.9	Wet Medium Dense Grey FINE SAND w/Trace Silt	FS		6/150 9/150 11/150	SS-7	20	1938	13	5	16	10	36	33	25	18	7	A-4a(7)
5	276.2	Moist Medium Dense Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(7)			7/150 12/150 15/150	SS-8	27		19									
6					5/150 9/150 10/150	SS-9	19	1895	15									
7	274.2	Very Damp Very Stiff Grey SILT and CLAY w/Some Sand, Trace Gravel – A-6a(9)			6/150 7/150 12/150	SS-10	19	1708	19	2	15	9	34	40	29	17	12	A-6a(9)
8	273.4	Wet Medium Dense Grey FINE SAND w/Little Silt	FS		5/150 10/150 15/150	SS-11	25		24									
9			FS		5/150 7/150 11/150	SS-12	18		16									
10	271.5	Moist Medium Dense Grey COARSE and FINE SAND w/Little Silt and Clay, Trace Gravel – A-3a(0)	FS		7/150 7/150 11/150	SS-13	18		13	4	79	35	14	18	18	15	3	A-3a(0)
11																		
12	269.6	Moist Dense Grey GRAVEL and STONE FRAGMENTS w/Sand, Silt and Clay			27/150 12/150 31/150	SS-14	43		10									
13	268.4	End of Borehole																

NOTES: Auger refusal encountered at 12.8 meters.

LOG OF TEST BORING

BORING NO. US23-HM4
DATE: 4/18/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP A
JOB #: 33644.01
LOCATION: STATE ROUTE 30, RAMP A STA 29+212
ELEV.: 267.995
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: BG/CW
ENCOUNTERED WATER DEPTH (m): 7.9
COMPLETION (m): 10.0
DEPTH TO – WATER (m): CAVING:
DATE CHECKED:

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	268.0	TOPSOIL – 406 mm																
	267.6	Moist Medium Stiff Brown SILT and CLAY w/Little Sand			4/150 3/150 3/150	SS-1	6	1533	27									
1		– Very Damp Very Stiff w/ Trace Gravel, A-6a(9)			7/150 11/150 11/150	SS-2	22	1881	18	1	5	7	49	38	34	21	13	A-6a(9)
2					7/150 11/150 17/150	SS-3	28	1865	17									
	265.4	Moist Medium Dense Brown–Grey SILT w/Clay, Trace Sand and Gravel, A-4b(8)			7/150 11/150 17/150	SS-4	23	1804	16	1	5	7	51	36	26	17	9	A-4b(8)
3					6/150 6/150 6/150	SS-5	12	1882	16									
4	263.9	Moist Medium Dense Brown/Grey SANDY SILT w/Clay, Trace Gravel, A-4a(8)			6/150 7/150 6/150	SS-6	13	1949	15	2	5	7	19	67	26	18	8	A-4a(8)
5					5/150 7/150 7/150	SS-7	14	1796	18									
					6/150 6/150 6/150	SS-8	12	1810	18									
6	261.6	Very Damp Stiff Grey CLAY w/ Little Silt, Trace Sand, A-7-6(12)			3/150 6/150 5/150	SS-9	12	1783	15	0	0	1	17	82	41	22	19	A-7-6(12)
7		– Moist			6/150 7/150 8/150	SS-10	15	1658	25									
8	260.1	Moist Medium Stiff Grey SILT and CLAY w/Some Sand			4/150 4/150 4/150	SS-11	8	1833	22									
9		– Stiff w/Trace Sand, A-6a(11)			3/150 4/150 5/150	SS-12	9	1422	27	0	0	1	18	81	37	23	14	A-6a(11)
	258.5	Moist Medium Dense Grey FINE SAND w/Trace Silt and Gravel	FS															
10			FS		4/150 5/150 8/150	SS-13	9		16									
11			FS															
	256.7	Moist Very Stiff Grey SILT and CLAY w/Some Gravel, Little Sand, A-6a(6)			4/150 5/150 13/150	SS-14	16	1796	21	29	7	6	16	42	32	20	12	A-6a(6)
12	255.9	Moist Dense Grey COURSE to FINE SAND w/Trace Silt and Clay																
13					8/150 22/150 12/150	SS-15	34		11									
14																		
	253.7	End of Borehole																

NOTES: Auger refusal encountered at 14.3 m.

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

LOG OF TEST BORING

BORING NO. SR231HM3
DATE: 4/29/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP M
JOB #: 33644.01
LOCATION: STATE ROUTE 231 & RAMP M, RAMP M STA 37+845
ELEV.: 282.690
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: RC/JL
ENCOUNTERED WATER DEPTH (m): 5.2
COMPLETION (m): 4.3
DEPTH TO -- WATER (m): ____ CAVING: ____
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m^3)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	282.7	TOPSOIL 305																
	282.4	Very Moist Stiff Brown/Grey CLAY w/Little Sand			4/150 4/150 5/150	SS-1	9	1589	30									
1		- w/Some Sand, Little Gravel, A-7-6(11)			3/150 4/150 5/150	SS-2	9	1427	30	19	25	3	19	26	50	23	27	A-7-6(11)
2					3/150 4/150 5/150	SS-3	9	1472	29									
	280.3	Very Damp Very Stiff Brown/Grey SILT and CLAY w/Some Sand, Trace Gravel - A-6a(9)			6/150 10/150 10/150	SS-4	20	1791	17	2	7	18	29	44	32	19	13	A-6a(9)
3		- A-6a(8)			4/150 9/150 11/150	SS-5	20	1975	13									
4					6/150 11/150 12/150	SS-6	23	1938	13	3	13	12	27	45	26	15	11	A-6a(8)
5		- Medium Stiff			3/150 2/150 3/150	SS-7	5											
6					3/150 3/150 3/150	SS-8	6	1879	16									
		- Grey			2/150 2/150 3/150	SS-9	5	1780	16									
7					2/150 3/150 5/150	SS-10	8		11									
8	274.9	Damp Dense Grey SANDY SILT w/Clay, Trace Gravel, A-4a(6)			10/150 13/150 17/150	SS-11	30	1741	18	4	11	21	30	34	21	15	6	A-4a(6)
9					10/150 18/150 22/150	SS-12	40											
10		- Loose			7/150 3/150 5/150	SS-13	8											
11																		
12		- Very Dense			50/76	SS-14	100+											
13																		
		Dense w/Some Clay and Gravel, A-4a(2)			12/150 17/150 24/150	SS-15	42	1991		22	23	10	20	25	23	14	9	A-4a(2)
14	268.4	- Damp Very Dense Grey GRAVEL and STONE FRAGMENTS w/Sand			50/152	SS-16	100+											
15	267.4	End of Borehole																

NOTES: Auger refusal was encountered at 15.2 meters.

LOG OF TEST BORING

BORING NO. SR231HM2
DATE: 4/22/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP K
JOB #: 33644.01
LOCATION: ROUTE 30 & STATE ROUTE 231, RAMP K STA 37+707
ELEV.: 281.940
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: BG/CM
ENCOUNTERED WATER DEPTH (m): 6.6
COMPLETION (m): 9.1
DEPTH TO -- WATER (m): ____ CAVING: ____
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m^3)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	281.9	TOPSOIL - 254 mm																
	281.7	Moist Stiff Grey-Brown SILTY CLAY w/Little Sand, Trace Gravel and Calcite			4/150 5/150 6/150	SS-1	11	1696	19									
1	280.9	Very Damp Very Stiff Grey-Brown SILT and CLAY w/Some Sand, Trace Gravel A-6a(8)			5/150 10/150 10/150	SS-2	20	1849	19	2	13	11	34	40	28	17	11	A-6a(8)
2		- Stiff			5/150 7/150 7/150	SS-3	14	1833	17									
		Very Stiff w/"Rust-like" Iron Seam			6/150 7/150 11/150	SS-4	18	1781	19									
3		A-6a(8)			7/150 11/150 15/150	SS-5	26	1828	15	3	13	13	36	35	32	19	13	A-6a(8)
4					8/150 10/150 15/150	SS-6	25	1823	14									
5		- Stiff Grey			4/150 6/150 6/150	SS-7	12	1973	13									
6					5/150 5/150 8/150	SS-8	13	1973	13									
					5/150 5/150 5/150	SS-9	10	1815	12									
7	274.9	Moist Medium Dense Brown/Grey SANDY SILT w/Some Clay, Trace Gravel			3/150 6/150 6/150	SS-10	12	1921	13									
8		A-4a(7)			8/150 16/150 19/150	SS-11	35	1938	13	4	15	12	43	26	23	15	8	A-4a(7)
9		Dense Grey w/Some Clay and Gravel, A-4a(3)			8/150 19/150 24/150	SS-12	43	1866	11	21	15	12	38	14	19	14	5	A-4a(3)
10		- Medium Dense			6/150 10/150 15/150	SS-13	25	2007	11									
11																		
12		Dense			12/150 24/150 30/150	SS-14	54	1935	12									
13	268.7	Moist Very Dense WEATHERED ROCK FRAGMENTS w/Little Sand, Trace Silt and Clay, A-1-a(0)			40/150 50/150 4/150	SS-15	100+		9	60	20	5	11	4	NON-PLASTIC			A-1-a(0)
14	267.6	End of Borehole																

NOTES: Auger refusal was encountered at 14.3 meters.

LOG OF TEST BORING

BORING NO. CR330HM1
DATE: 4/14/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: RAMP "P" STA 5+987
ELEV.: 300.561
DRILL METHOD: 5/MM HOLLOW STEM AUGERS
DRILLERS: BG/CW
ENCOUNTERED WATER DEPTH (m): 2.5
COMPLETION (m): DRY
DEPTH TO – WATER (m): ____ CAVING: ____
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	300.6	TOPSOIL – 304mm															
	300.3	Moist Stiff Brown SILTY CLAY w/Little Sand, A-6b(11)			4/150 5/150 5/150	SS-1	10	1487	24	0	7	10	37	46	40	23	A-6b(11)
1		– Damp			5/150 5/150 5/150	SS-2	10	1592	20								
2		– Very Stiff w/"Rust-Like" Iron Seams, Trace Gravel			7/150 13/150 11/150	SS-3	30	1833	14								
3		– Brown/Grey			7/150 11/150 15/150	SS-4	26	1922	12								
4		– Stiff Grey			5/150 7/150 7/150	SS-5	14	2004	12								
	296.4	Moist Medium Dense Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(5)			5/150 6/150 8/150	SS-6	14	1961	14	10	13	20	28	29	24	16	8	A-4a(5)
5	295.7	Damp Medium Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			4/150 4/150 4/150	SS-7	8	1879	13								
6	294.9	Damp Stiff Grey SILT and CLAY w/Little Sand, Trace Gravel			5/150 3/150 6/150	SS-8	9	1866	13								
	294.2	Damp Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			4/150 6/150 6/150	SS-9	12	1855	14								
7	293.4	Moist Medium Dense Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(7)			4/150 5/150 7/150	SS-10	12	1977	13	8	14	10	37	31	26	18	8	A-4a(7)
8	292.6	Damp Very Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			5/150 6/150 6/150	SS-11	12	1855	14								
9	291.9	Damp Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel, A-6a(9)			4/150 6/150 7/150	SS-12	13	1817	15	1	8	9	33	45	30	17	13	A-6a(9)
10		– Medium Stiff			2/150 3/150 4/150	SS-13	7	1794	15								
11																	
12	288.8	Damp Very Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			7/150 7/150 14/150	SS-14	21	1930	12								
13	287.3	Damp Dense Brown SANDY SILT w/Little Clay, Trace Gravel, A-4a(2)			11/150 12/150 23/150	SS-15	35	2169	10	10	24	18	33	15	18	15	3	A-4a(2)
14																	
15	285.8	Damp Very Stiff Brown/Grey SILTY CLAY w/Little Sand, Trace Gravel			17/150 13/150 14/150	SS-16	27	2022	12								
	285.3	End of Borehole															

NOTES: AUGER REFUSAL AT 15.8M

LOG OF TEST BORING

BORING NO. SR231HM4
DATE: 5/1/97
PROJECT: ODOT STATE ROUTE 30 @ RAMP N
JOB #: 33644.01
LOCATION: STAE ROUTE 231 & RAMP N, RAMP N STA 37+877
ELEV.: 284.455
DRILL METHOD: 57 MM HOLLOW STEM AUGERS
DRILLERS: BG/JL
ENCOUNTERED WATER DEPTH (m): 6.4
COMPLETION (m): 5.2
DEPTH TO – WATER (m): ____ CAVING: ____
DATE CHECKED: ____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	284.5	TOPSOIL – 356 mm															
	284.1	Very Damp Stiff Brown SILT and CLAY w/Some Sand, Trace Gravel, A-6a(10)			6/150 6/150 9/150	SS-1	15	1849	14	1	11	12	31	45	31	18	13	A-6a(10)
1		– Very Stiff			7/150 12/150 17/150	SS-2	29	1863	15								
2					7/150 9/150 11/150	SS-3	20	1645	22								
3					7/150 11/150 15/150	SS-4	26	1821	14								
		– Grey/Brown			7/150 7/150 11/150	SS-5	18	1636	15								
4		– Brown A-6a(9)			7/150 12/150 15/150	SS-6	27	1841	15	3	9	19	38	31	30	19	11	A 6a(9)
5		– Stiff Grey			4/150 5/150 6/150	SS-7	11	2014	13								
	279.0	Moist Medium Dense Grey SANDY SILT w/Some Clay, Trace Gravel, A-4a(8)			4/150 6/150 8/150	SS-8	14	1757	14	6	8	11	47	28	23	16	7	A-4a(8)
6		– A-4a(5)			4/150 7/150 7/150	SS-9	14	2018	14	5	25	8	34	28	26	18	8	A-4a(5)
7					4/150 7/150 8/150	SS-10	15	1935	14								
8		– Dense			6/150 12/150 21/150	SS-11	33		18								
9		– Very Dense			14/150 24/150 30/150	SS-12	54	1905	16								
10																	
		– w/Little Clay and Gravel, A-4a(1)			25/150 28/150 31/150	SS-13	59		16	19	20	21	28	12	21	16	5	A-4a(1)
11																	
12					32/150 50/150 6/150	SS-14	100+	1913	13								
13		–Damp w/Little Clay and Rock Fragments			50/127	SS-15	100+		7								
14																	
15																	
	269.2	End of Borehole															

NOTES: Auger refusal was encountered at 15.2 meters.

129
130

WYA/CRA-30-23.914/0.000(14.86/0.00)

SOIL PROFILE

DRAWN BY: DHR/MMB
DATE: 8-2-99
DRAWING NO. 33644-129
PROJECT NO. 33644.01

TOLEDO, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

LOG OF TEST BORING

BORING NO. CR330HM2
DATE: 4/10/97
PROJECT: ODOT STATE ROUE 30 MAINLINE
JOB #: 33466.01
LOCATION: RAMP O, STA 61+50 30M LT
ELEV.: 300.076
DRILL METHOD: 95mm HOLLOW STEM AUGER
DRILLERS: JL/TM
ENCOUNTERED WATER DEPTH (m): 11.8
COMPLETION (m): 9.1
DEPTH TO – WATER (m): _____ CAVING: _____
DATE CHECKED: _____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	300.1	TOPSOIL – 203mm															
	299.9	CRUSHED STONE – 228mm															
1	299.6	Moist Loose Grey/Brown SANDY SILT w/Some Clay, Trace Gravel, A-4a(8)			3/150 5/150 5/150	SS-1	10	1748	17	5	12	13	43	27	30	20	A-4a(8)
		– Medium Dense			4/150 5/150 6/150	SS-2	11	1780	16								
2	298.2	Very Damp Stiff Grey/Brown SILT and CLAY w/Little Sand, Trace Gravel, A-6a(8)			4/150 7/150 8/150	SS-3	15	1818	14	9	11	9	43	28	29	18	11 A-6a(8)
3	297.6	Moist Medium Dense Grey SANDY SILT w/Clay, Trace Gravel			5/150 6/150 7/150	SS-4	13	1895	13								
4					4/150 5/150 7/150	SS-5	12	1914	13								
					4/150 5/150 6/150	SS-6	11	1914	14								
5		– Loose, A-4a(7)			4/150 5/150 5/150	SS-7	10	1901	14	5	15	12	36	34	24	15	9 A-4a(7)
6		– Medium Dense			3/150 5/150 7/150	SS-8	12	1917	14								
7					5/150 6/150 8/150	SS-9	14	1881	13								
					5/150 7/150 8/150	SS-10	15	1861	13								
8		– A-4a(7)			6/150 8/150 11/150	SS-11	19	1887	13	6	13	10	35	36	27	17	19 A-4a(7)
9		– Wet			8/150 9/150 10/150	SS-12	19	1650	24								
10		– Brown/Grey			5/150 9/150 7/150	SS-13	16	1684	34								
11																	
12		Damp, A-4a(8)			8/150 9/150 11/150	SS-14	20	2103	10	4	9	12	40	35	25	17	8 A-4a(8)
13																	
		– Very Dense Grey w/Rock Fragments			50/125	SS-15	100+		7								
14																	
15		– Dense			8/150 32/150 15/150	SS-16	47	1857	11								
	284.8	End of Borehole															

NOTES: AUGER REFUSAL AT 16.1M. Boring moved 9.1M south. Elevation approximate due to relocation.

LOG OF TEST BORING

BORING NO. CR330HM3
DATE: 4/15/97
PROJECT: ODOT STATE ROUTE 30
JOB #: 33644.01
LOCATION: STATE ROUTE 30, MAINLINE STA 6+432, 43M LT
ELEV.: 300.241
DRILL METHOD: 57mm HOLLOW STEM AUGER
DRILLERS: BG/CW
ENCOUNTERED WATER DEPTH (m): 10.0
COMPLETION (m): DRY
DEPTH TO – WATER (m): _____ CAVING: _____
DATE CHECKED: _____

DEPTH (m)	ELEVATION	SOIL DESCRIPTION	STRATA PLOT	SAMPLES TYPE	SAMPLES BLOW COUNTS	SAMPLES NUMBER	SAMPLES N-VALUE	DENSITY (kg/m³)	MOISTURE CONTENT %	GRAVEL %	C. SAND %	F. SAND %	SILT %	CLAY %	LIQUID LIMIT %	PLASTICITY INDEX %	GROUP DESIGNATION INDEX
0	300.2	TOPSOIL – 304mm															
	299.9	Damp Very Stiff Grey/Brown SILT and CLAY w/Little Sand, Trace Gravel, A-6a(9)			7/150 9/150 11/150	SS-1	20	1841	13	2	11	12	37	38	30	19	11 A-6a(9)
1	299.3	Damp Stiff Brown SILTY CLAY w/Little Sand, Trace Gravel			3/150 4/150 5/150	SS-2	9	1844	14								
2					5/150 5/150 7/150	SS-3	12	1797	15								
		– Grey															
3					5/150 5/150 7/150	SS-4	11	1972	12								
	296.9	Damp Loose Grey SANDY SILT w/Clay, Trace Gravel A-4a(7)			4/150 5/150 5/150	SS-5	10	1943	13	5	14	13	34	36	23	16	7 A-4a(7)
4	296.1	Damp Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			4/150 6/150 7/150	SS-6	13	1916	12								
5					5/150 6/150 7/150	SS-7	13	1967	13								
					5/150 5/150 5/150	SS-8	10	1919	14								
6	293.8	Damp Stiff Grey SILT and CLAY w/Little Sand, Trace Gravel, A-6a(8)			4/150 5/150 6/150	SS-9	11	1876	13	7	14	9	31	39	27	16	11 A-6a(8)
7	293.1	Damp Stiff Grey SILTY CLAY w/Little Sand, Trace Gravel			5/150 5/150 6/150	SS-10	11	1916	13								
8					5/150 6/150 8/150	SS-11	14	1897	13								
		A-6b(11)															
9					5/150 5/150 8/150	SS-12	13	1845	16	5	12	9	24	50	35	18	17 A-6b(11)
10	290.0	Wet Medium Dense Brown FINE SAND w/Little Clay, Silt	FS		6/150 8/150 12/150	SS-13	20		18								
11			FS														
12		– Dense	FS		12/150 16/150 19/150	SS-14	35		17								
			FS														
13			FS														
	287.0	Moist Medium Dense SANDY SILT w/Little Clay, Trace Gravel, A-4a(1)			8/150 12/150 17/150	SS-15	29		17	2	13	44	26	15	27	17	10 A-4a(1)
14																	
15					7/150+ 7/150 14/150	SS-16	21		18								
16	284.2	Weathered ROCK															
	284.1	End of Borehole															

NOTES: Auger refusal encountered at 16.2 meters.

TOLEDO TESTING, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624