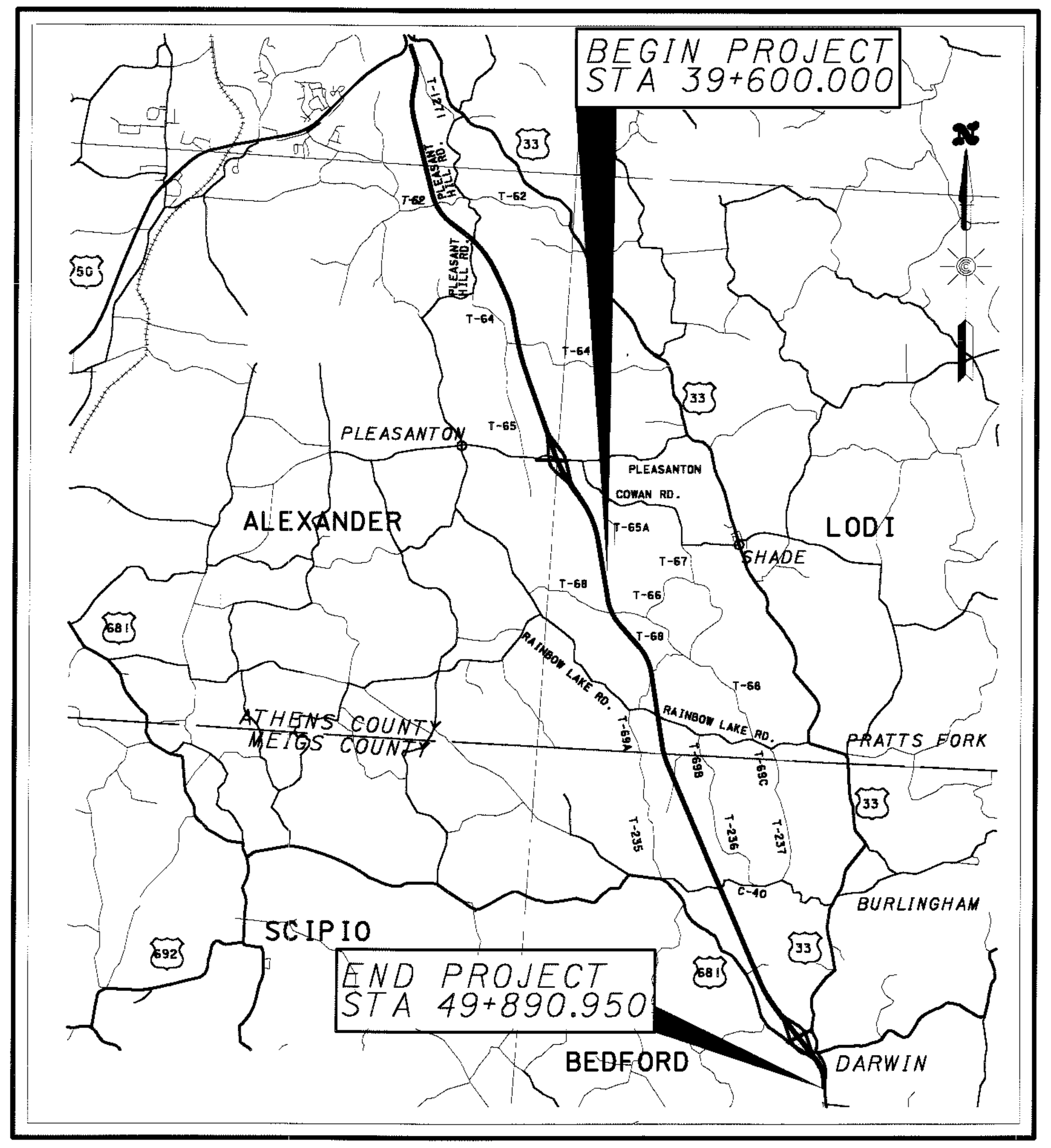

LOCATION MAP

LATITUDE: N40°00'11" LONGITUDE: W83°07'50"

SCALE IN KILOMETERS

0 5 10 15

PORTION TO BE IMPROVED

STATE & FEDERAL ROUTES

OTHER ROADS

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
ATH-33-40.981

LODI AND BEDFORD TOWNSHIPS

ATHENS AND MEIGS COUNTIES

metric units

PROJECT DESCRIPTION

CONSTRUCTION OF 10.291 KILOMETERS OF ROADWAY FOR THE RELOCATION OF US 33 TO AN EXISTING 4-LANE DIVIDED PORTION OF US 33, TO INCLUDE TWO AT-GRADE INTERSECTIONS, AND FOUR BRIDGES.

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 SET FORTH ON THE PLANS AND ESTIMATES.

INDEX OF SHEETS:

DESIGN DESIGNATION (MAINLINE)

CURRENT ADT (2001) ____ 4170
DESIGN YEAR ADT (2021) ____ 5740
DESIGN HOURLY VOLUME (2021) ____ 574
DIRECTIONAL DISTRIBUTION (2021) ____ 50%
TRUCKS (24 HOUR B & C) ____ 9%
DESIGN SPEED ____ 110 km/h
LEGAL SPEED ____ 90 km/h
DESIGN FUNCTIONAL CLASSIFICATION - RURAL EXPRESSWAY

FOR CROSS ROAD DESIGN DESIGNATIONS SEE SHEET 2
DESIGN EXCEPTIONS SEE SHEET 3

APPROVED George M Collins
DATE 2-22-01 DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

APPROVED Gordon Proctor Jr.
DATE 3-7-01 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. TE21-G010(172)

PID NO. 18288

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

ATH-33-40.981

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

PLAN PREPARED BY:

DODSON STILSON, INC.
6121 HUNTLEY ROAD
COLUMBUS, OHIO 43229-1003

ENGINEERS SEAL:

STATE OF OHIO MANOJ SETHI E-55201 REGISTERED PROFESSIONAL ENGINEER

SIGNED: Manoj Sethi
DATE 2/19/01

FOR STRUCTURE WITH A 20' OR GREATER SPAN, SEE SHEET

STANDARD CONSTRUCTION DRAWINGS

BP-1.1	7-28-00	GR-2.2M	10-21-97	CB-3.1	7-12-95	HL-30.21M	5-1-95	TC-65.11M	11-1-95
BP-2.1	7-28-00	GR-2.4M	10-21-97	CB-3.2M	7-12-95	HL-30.22M	3-31-95	TC-65.12M	11-1-95
BP-2.2	7-28-00	GR-3.1M	10-21-97	CB-3.3M	7-12-95	HL-40.10M	3-31-95	TC-71.10M	9-1-93
BP-2.3	7-28-00	GR-4.1M	11-30-94	HW-1.1M	7-12-95	HL-50.11M	3-31-95	PSID-1-99	9-7-99
BP-3.1	7-28-00	GR-4.2M	10-21-97	HW-2.1M	7-12-95	HL-60.11M	5-1-95	AS-1-81M	10-25-94
BP-4.1	7-28-00	GR-4.5	4-29-99	HW-2.2M	7-12-95	HL-60.12M	3-31-95	SCID-1-96	2-12-97
BP-8.1	7-28-00	GR-5.1M	4-21-95	DM-1.1M	10-21-97	HL-60.31M	3-31-95	IRJ-8-95	7-6-95
BP-9.1	7-28-00	GR-5.2M	11-30-94	DM-4.1M	6-30-95	TC-41.20M	7-1-94	BR-1M	1-6-99(R)
F-2.1	7-28-00	GR-5.3M	11-30-94	DM-4.2M	6-30-95	TC-41.50M	7-1-94	A-1-69M	3-20-95
F-3.1	7-28-00	GR-6.1M	1-3-96	DM-4.3	4-29-99	TC-42.10M	3-31-94	EXJ-6-95M	3-18-97(R)
F-3.3	7-28-00	RM-1.1	4-29-99	DM-4.4	4-29-99	TC-42.20M	3-31-94		
F-3.4	7-28-00	RM-4.2M	10-21-97	HL-10.11M	5-1-95	TC-51.11M	9-30-94		
GR-1.1M	10-21-97	RM-4.5M	10-21-97	HL-10.12M	5-1-95	TC-52.10M	7-29-94		
GR-1.2M	1-3-96	CB-1.1M	7-12-95	HL-10.13M	5-1-95	TC-52.20M	7-29-94		
GR-1.3M	11-30-94	CB-1.2M	7-12-95	HL-20.11M	3-31-95	TC-61.10M	3-31-94		
GR-2.1M	4-14-98	CB-2.2M	7-12-95	HL-30.11M	3-31-95	TC-65.10M	11-1-95		

SUPPLEMENTAL SPECIFICATIONS

806	9-9-97	906	5-5-98
814	6-2-98	907	10-21-98
821	4-13-99	908	3-28-00
828	7-28-98	932	10-2-96
839	6-14-95	841	10-12-99
840	7-17-95	846	9-9-97
842	1-6-99	954	9-9-97
844	1-6-99		
865	2-22-00		
870	8-10-99		
877	4-13-99		
878	5-11-99		
884	9-14-99		
894	10-12-99		
899	10-21-98		
905	4-1-98		

SPECIAL PROVISIONS

DESIGN DESIGNATIONS

TR 68	
CURRENT ADT (2000)	60
DESIGN YEAR ADT (2020)	80
DESIGN HOURLY VOLUME (2020)	8
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	0%
DESIGN SPEED	90 KM/H
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION	RURAL COLLECTOR

TR 67	
CURRENT ADT (2000)	80
DESIGN YEAR ADT (2020)	120
DESIGN HOURLY VOLUME (2020)	12
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	0%
DESIGN SPEED	90 KM/H
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION	RURAL COLLECTOR

CR 89	
CURRENT ADT (2000)	140
DESIGN YEAR ADT (2020)	200
DESIGN HOURLY VOLUME (2020)	20
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	0%
DESIGN SPEED	90 KM/H
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION	RURAL COLLECTOR

CR 40	
CURRENT ADT (2000)	80
DESIGN YEAR ADT (2020)	120
DESIGN HOURLY VOLUME (2020)	12
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	0%
DESIGN SPEED	90 KM/H
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION	RURAL COLLECTOR

TR 243	
CURRENT ADT (2000)	240
DESIGN YEAR ADT (2020)	300
DESIGN HOURLY VOLUME (2020)	30
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	0%
DESIGN SPEED	90 KM/H
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION	RURAL COLLECTOR

SR 681	
CURRENT ADT (2000)	810
DESIGN YEAR ADT (2020)	1110
DESIGN HOURLY VOLUME (2020)	111
DIRECTIONAL DISTRIBUTION	68%
TRUCKS (24 HOUR B&C)	11%
DESIGN SPEED	90 KM/H
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION	RURAL ARTERIAL

CALCULATED | CHECKED

DESIGN DESIGNATIONS

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DESIGN EXCEPTIONS

PROJECT DESIGN AREA	STATUS	APPROVAL DATE CATEGORIES						
		VERTICAL ALIGNMENT	HORIZONTAL ALIGNMENT	GRADES	SSD	SHOULDER WIDTH	LANE WIDTH	SUPERELEVATION
TR 68	ROAD CLOSED WITH CUL DE SAC-NO DESIGN EXCEPTIONS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TR 67	ROAD CLOSED WITH CUL DE SAC-NO DESIGN EXCEPTIONS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CR 89	ROADWAY DESIGN EXCEPTIONS	04-06-99	04-06-99	N/A	04-06-99	N/A	04-06-99	04-06-99
TR 412	NEED DESIGN EXCEPTIONS	N/A	02-14-01	N/A	02-14-01	N/A	02-14-01	02-14-01
TR243	ROAD CLOSED WITH CUL DE SAC-NO DESIGN EXCEPTIONS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SR 681 AT-GRADE	ROADWAY DESIGN EXCEPTIONS	04-06-99	04-06-99	N/A	04-06-99	N/A	04-06-99	04-06-99
OLD US 33	ROADWAY DESIGN EXCEPTIONS	04-19-99	04-19-99	04-19-99	04-19-99	N/A	04-19-99	04-19-99
SERVICE ROADS	DESIGN EXCEPTIONS TO COVER ONLY TO ROADWAYS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TYPICAL SECTIONS	NO DESIGN EXCEPTIONS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NEW US 33 MAINLINE	NO DESIGN EXCEPTIONS	N/A	N/A	N/A	N/A	N/A	N/A	N/A

CALCULATED

CHECKED

DESIGN EXCEPTIONS

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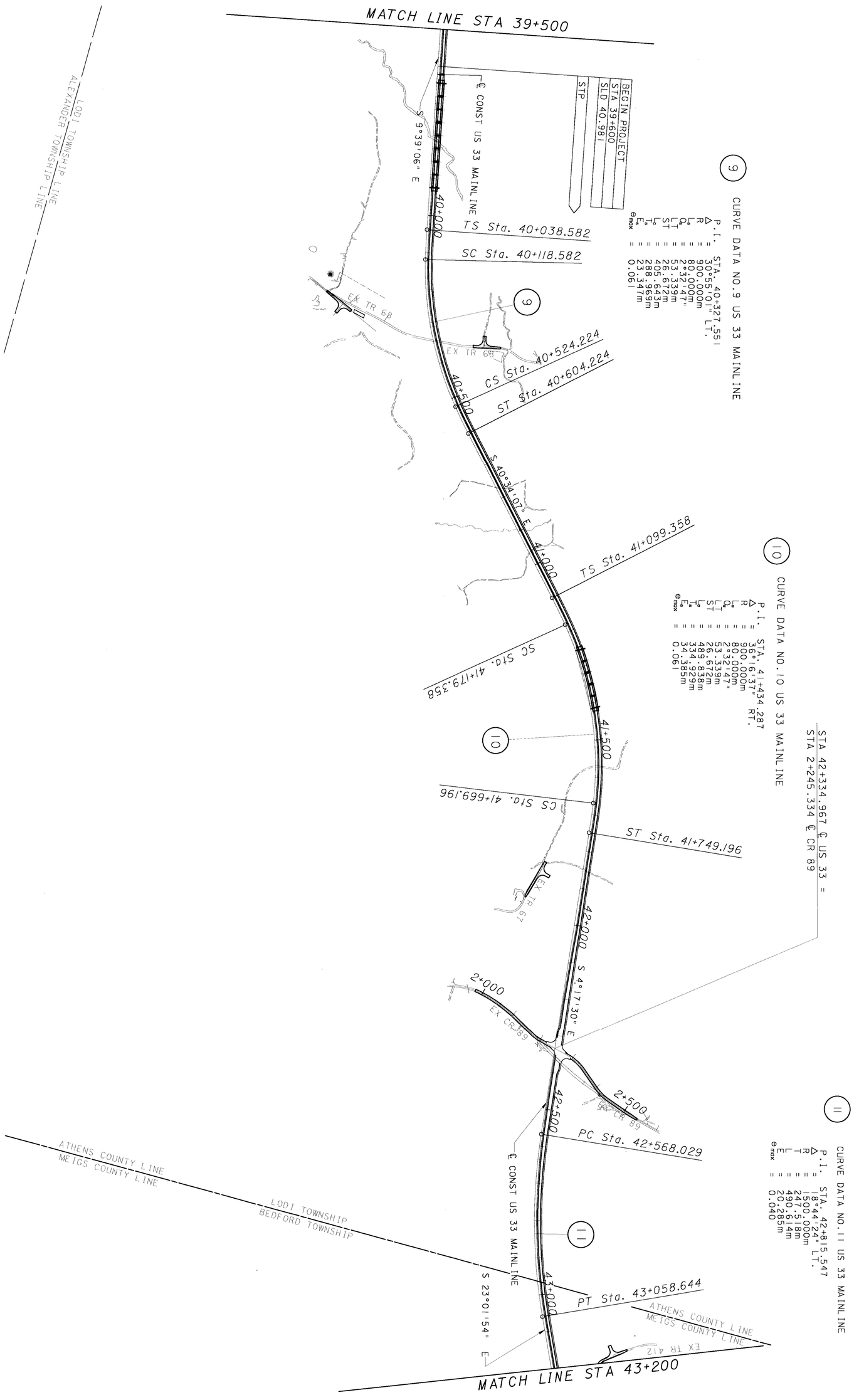

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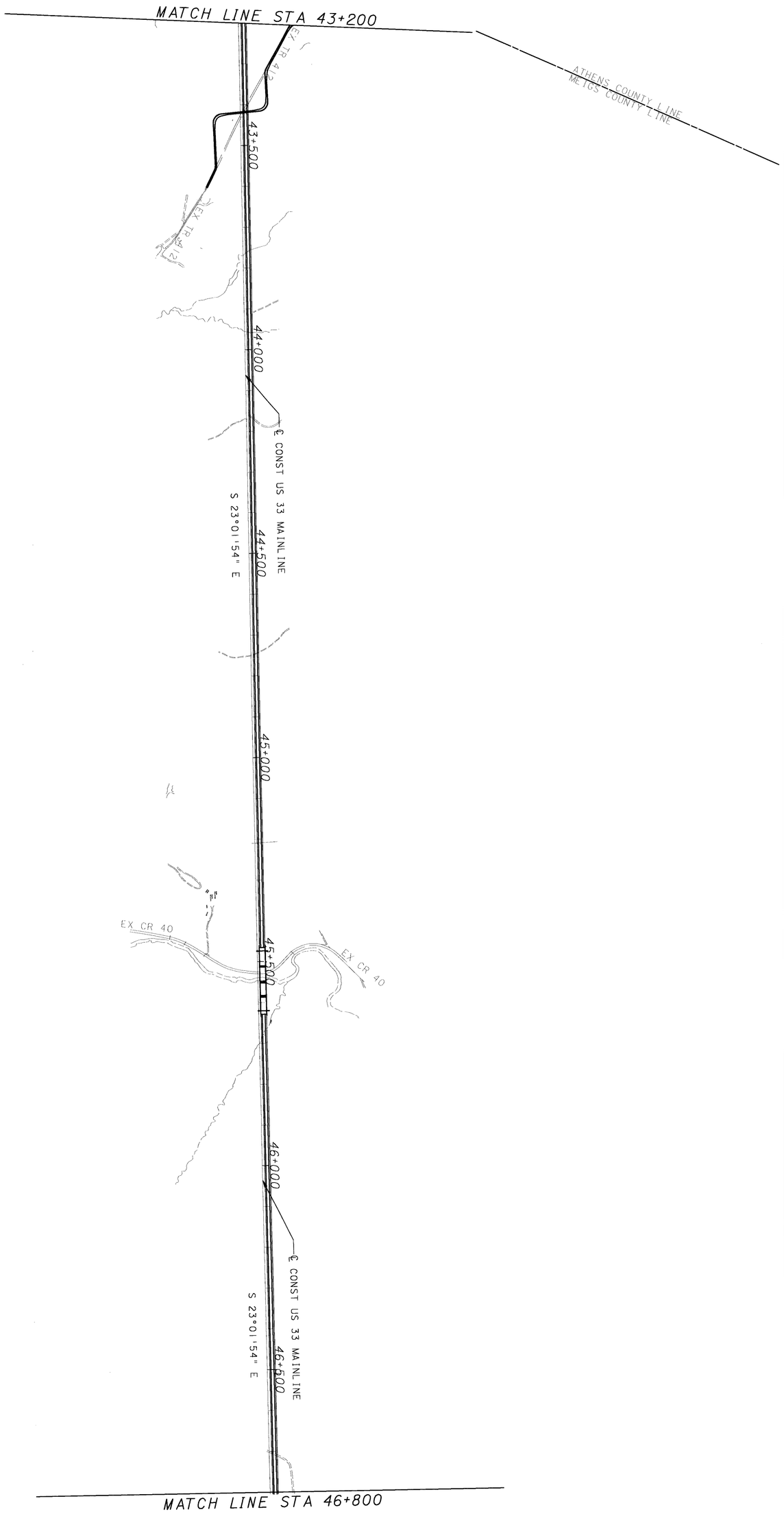
949

ATH-33-40.981

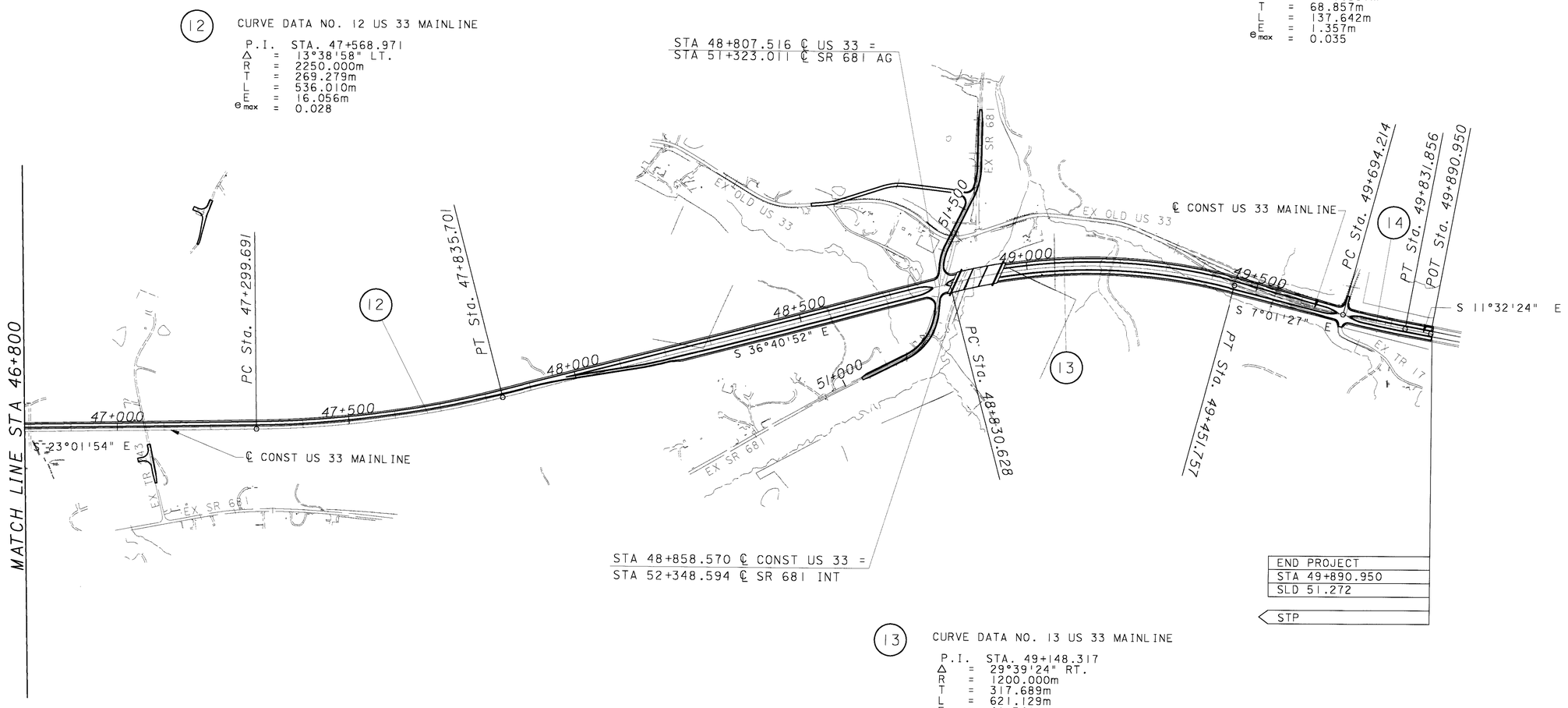
SCHEMATIC PLAN
STA 39+500 TO STA 43+200

0 200
SCALE 1:5,000
HORIZONTAL
SCALE IN METERS

N



5 / 949	ATH-33-40.981	SCHEMATIC PLAN STA 43+200 TO STA 46+800	0 200 SCALE 1:5,000 HORIZONTAL SCALE IN METERS



12 CURVE DATA NO. 12 US 33 MAINLINE

P.I. STA. 47+568.971
Δ = 13°38'58" LT.
R = 2250.000m
T = 269.279m
L = 536.010m
E = 16.056m
e_{max} = 0.028

14 CURVE DATA No.14 US 33 MAINLINE

P.I. STA. 49+763.070
Δ = 4°30'57" LT.
R = 1746.397m
T = 68.857m
L = 137.642m
E = 1.357m
e_{max} = 0.035

END PROJECT
STA 49+890.950
SLD 51.272
STP

13 CURVE DATA NO. 13 US 33 MAINLINE

P.I. STA. 49+148.317
Δ = 29°39'24" RT.
R = 1200.000m
T = 317.689m
L = 621.129m
E = 41.341m
e_{max} = 0.049

SCALE 1:5,000 HORIZONTAL
SCALE IN METERS
0 200

SCHEMATIC PLAN
STA 46+800 TO 49+890.950

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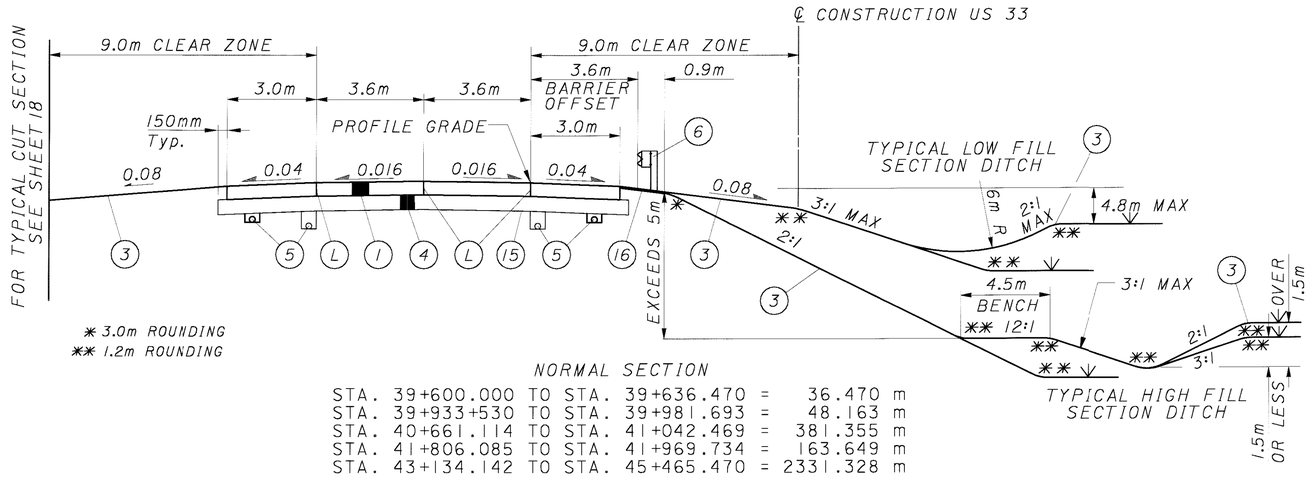
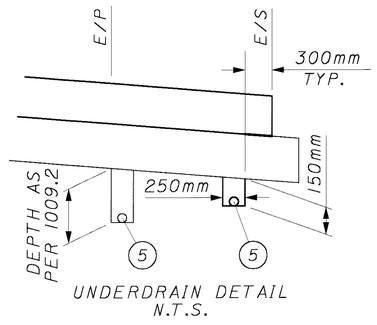


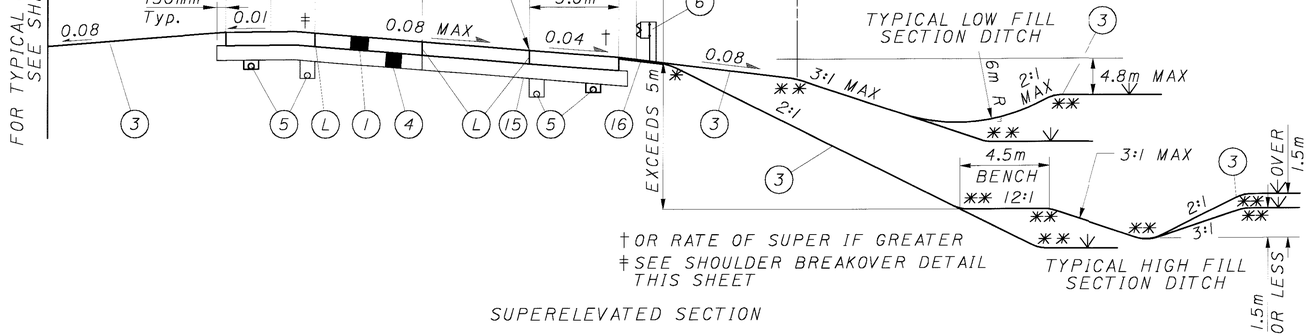
NOTE: 0.3m MIN. DITCH DEPTH

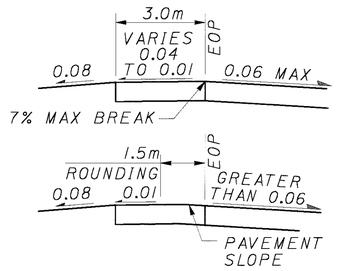
NORMAL SECTION

STA. 39+600.000	TO STA. 39+636.470	=	36.470 m
STA. 39+933+530	TO STA. 39+981.693	=	48.163 m
STA. 40+661.114	TO STA. 41+042.469	=	381.355 m
STA. 41+806.085	TO STA. 41+969.734	=	163.649 m
STA. 43+134.142	TO STA. 45+465.470	=	2331.328 m
STA. 45+628.530	TO STA. 47+238.374	=	1609.844 m
STA. 47+980.339	TO STA. 48+242.000	=	261.661 m
	TOTAL LENGTH	=	4832.470 m



UNDERDRAIN DETAIL
N.T.S.





SHOULDER BREAKOVER DETAILS

SUPERELEVATED SECTION

STA. 39+981.693	TO STA. 40+661.114	=	679.421 m
STA. 41+042.469	TO STA. 41+247.661	=	205.192 m
STA. 41+422.551	TO STA. 41+806.085	=	383.534 m
STA. 42+707.997	TO STA. 43+134.142	=	426.145 m
STA. 47+238.374	TO STA. 47+784.792	=	546.418 m
	TOTAL LENGTH	=	2240.71 m

(1) ITEM 884 - 225mm Plain Concrete Pavement
(2) ITEM 617 - 200mm Aggregate Base
(3) ITEM 870 - Seeding and Mulching
(4) ITEM 304 - 250mm Aggregate Base
(5) ITEM 605 - 100mm Shallow (or Deep) Pipe Underdrain
(6) ITEM 606 Guardrail, Type 5
(7) ITEM 448 - 32mm Asphalt Concrete Surface Course, Type 1 PG64-22
(8) ITEM 448 - 44mm Asphalt Concrete Intermediate Course, Type 2 PG64-22
(9) ITEM 448 - 70mm Asphalt Concrete Intermediate Course, Type 2 PG64-22
(10) ITEM 301 - 75mm Bituminous Aggregate Base
(11) ITEM 301 - 150mm Bituminous Aggregate Base, PG64-22
(12) ITEM 304 - 150mm Aggregate Base
(13) ITEM 605 - Aggregate Drains
(14) ITEM 611 - Reinforced Concrete Approach Slab (T= 380mm)
(15) ITEM 203 - Subgrade Compaction
(16) ITEM 448 - 50mm Asphalt Concrete Intermediate Course, Type 1, PG64-22 (Under Guardrail)
(17) ITEM 407 - Tack Coat (See General Notes)
(18) ITEM 407 - Tack Coat For Intermediate Coarse (See General Notes)
(19) ITEM 408 - Bituminous Prime Coat (Applied at a Rate of 1.8 L/m^2)
(20) ITEM 304 - 200mm Aggregate Base
(L) Standard Longitudinal Joint as per BP-2.1m

US 33 MAINLINE (2-LANE)

CALCULATED
CHECKED

TYPICAL SECTIONS - US 33 FULL DEPTH (2-LANE)

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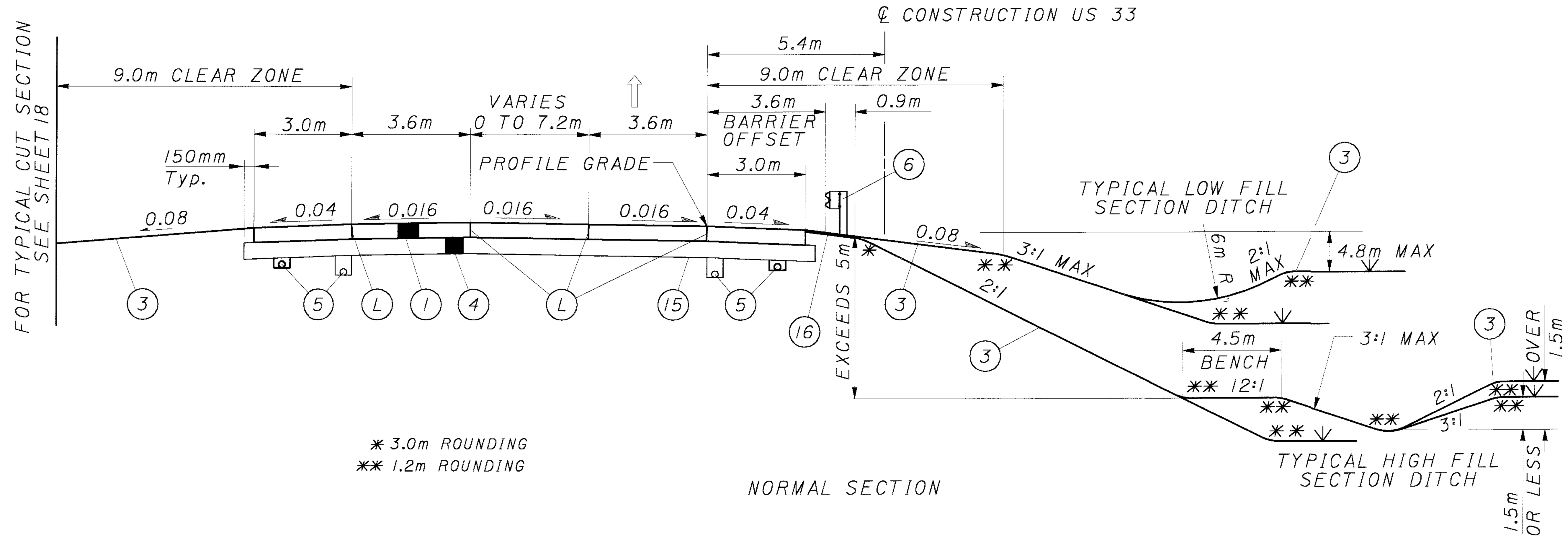
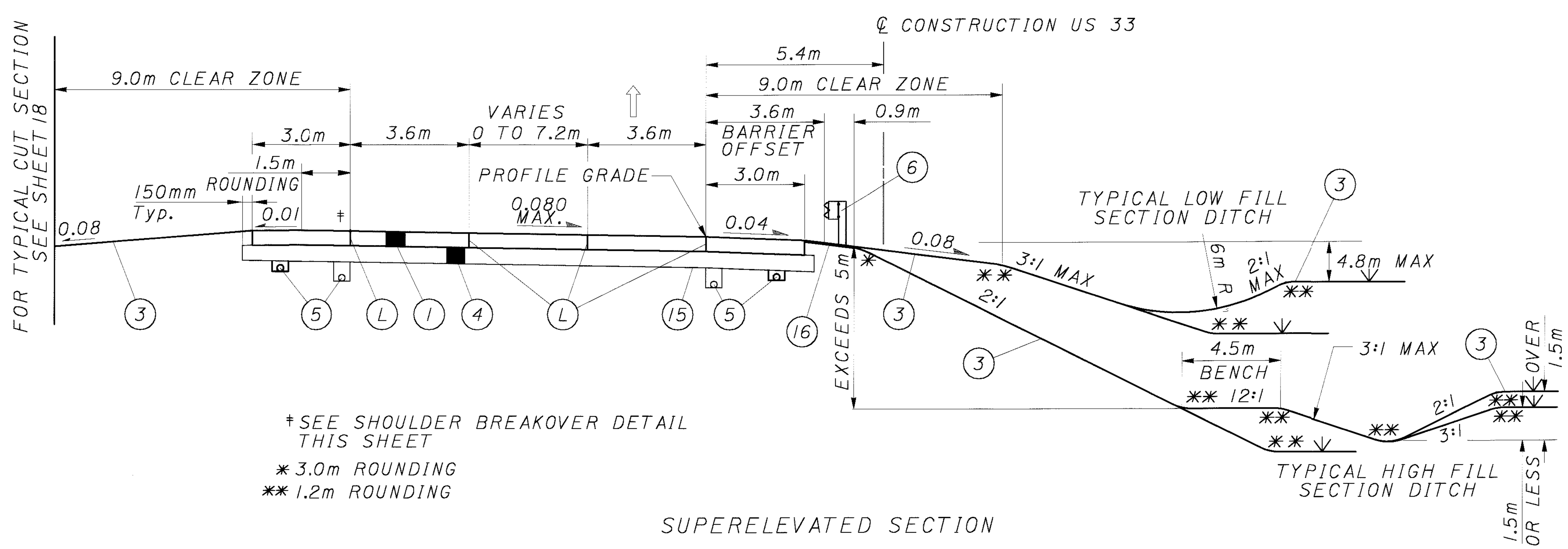


NORMAL SECTION

TWO LANE WITH THROUGH LANE IN MEDIAN

STA. 41+969.734 TO STA. 42+289.976 = 320.242 m
STA. 42+388.249 TO STA. 42+492.530 = 104.281 m
STA. 47+897.018 TO STA. 47+980.339 = 83.321 m
TOTAL LENGTH = 507.844 m

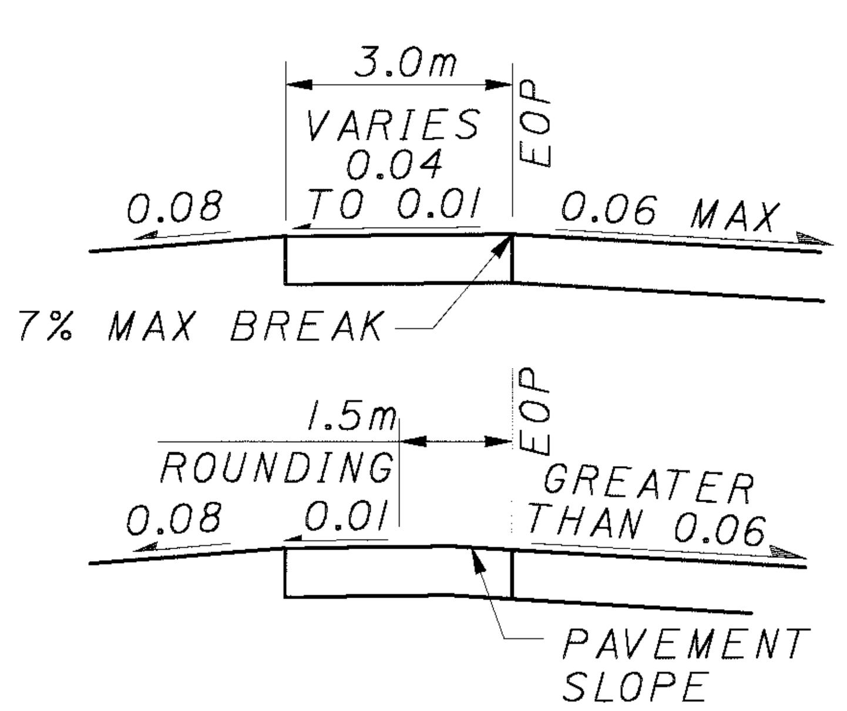
NOTE: 0.3m MIN. DITCH DEPTH



SUPERELEVATED SECTION

TWO LANE WITH THROUGH LANE IN MEDIAN

STA. 42+492.530 TO STA. 42+707.997 = 215.467 m
STA. 47+784.792 TO STA. 47+897.018 = 112.226 m
TOTAL LENGTH = 327.693 m



SHOULDER BREAKOVER DETAILS

US 33 MAINLINE INTERSECTION
(2-LANE W/ LEFT TURN LANE)

TYPICAL SECTIONS - US 33 TURN LANES

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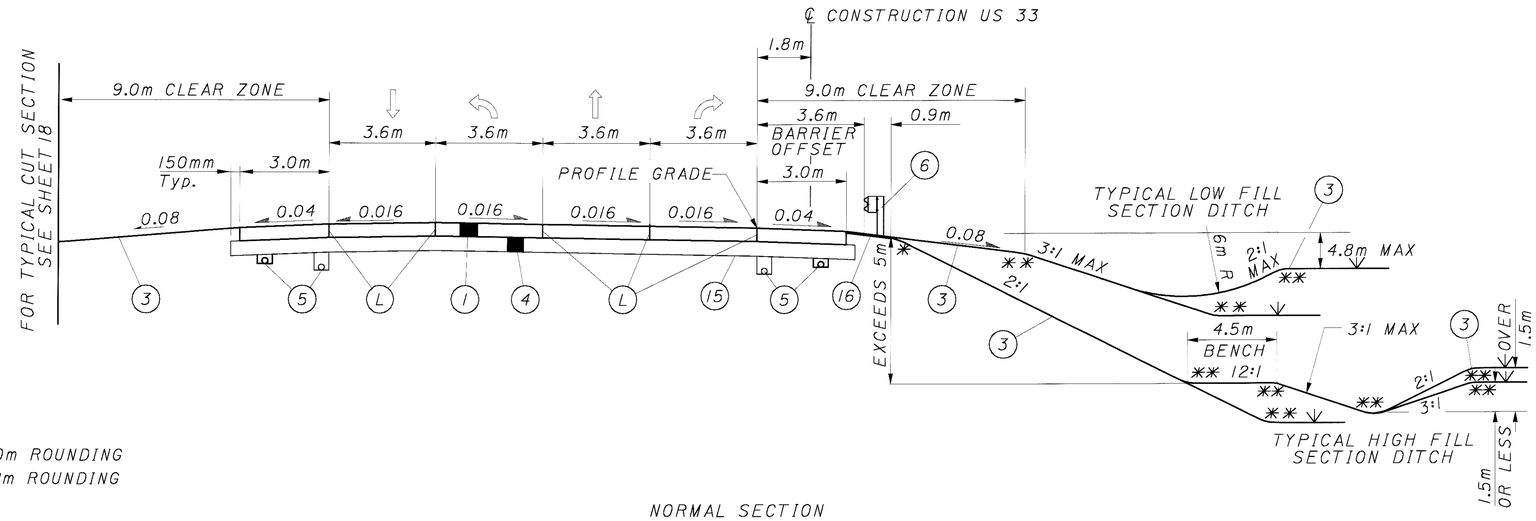
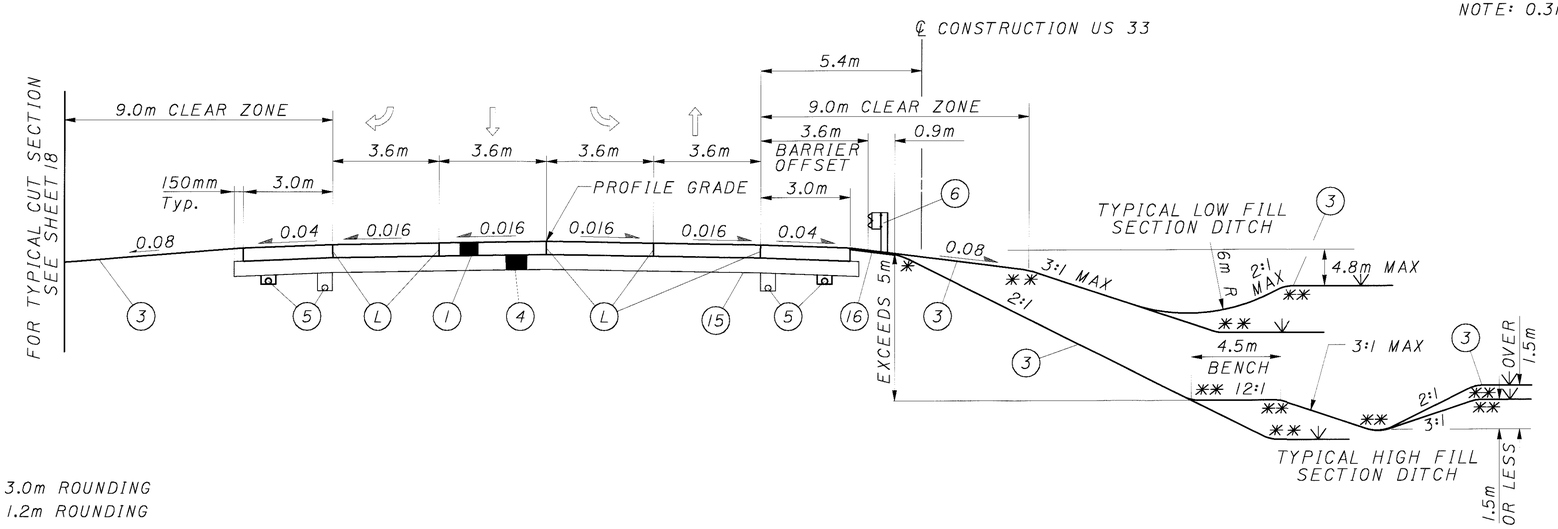


NORMAL SECTION
TWO LANE WITH A LEFT LANE AND OUTSIDE RIGHT TURN LANE
STA. 42+289.976 TO STA. 42+334.967 = 44.991 m

NOTE: 0.3m MIN. DITCH DEPTH



NORMAL SECTION
TWO LANE WITH THROUGH LANE AND RIGHT TURN LANE IN MEDIAN
STA. 42+334.967 TO STA. 42+388.249 = 53.282 m

TYPICAL SECTIONS - US 33 TURN LANES

CALCULATED
CHECKED

ATH-33-40.981

SUPER TWO INTERSECTIONS
US 33 MAINLINE

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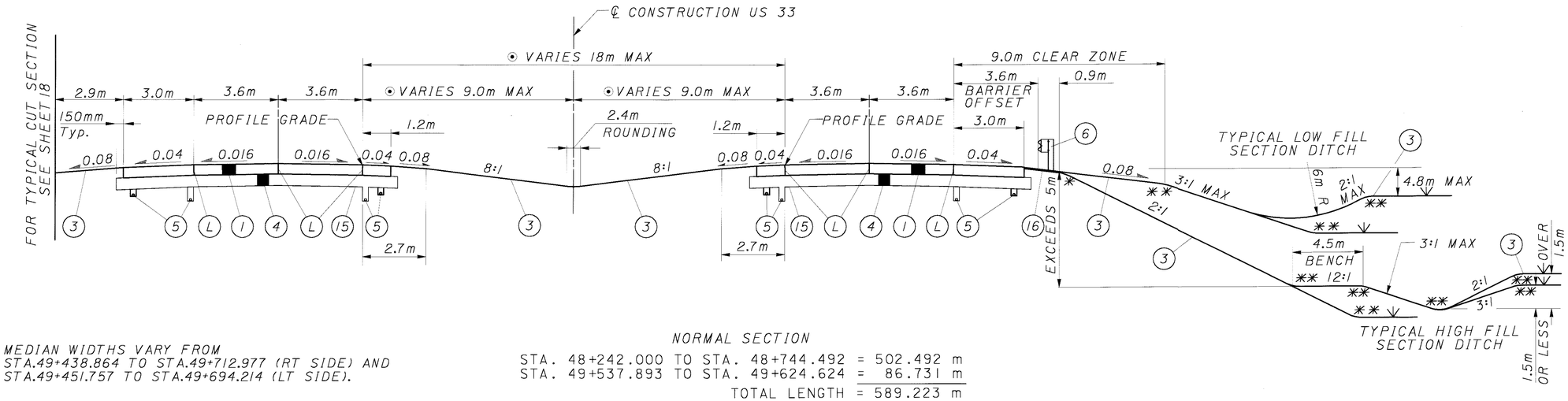


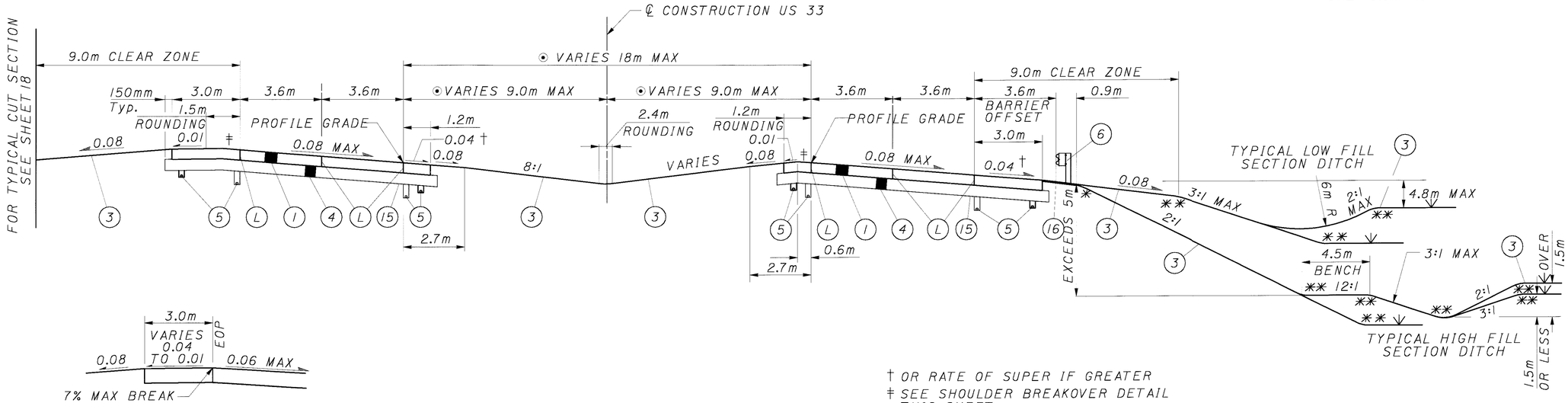
⊙ MEDIAN WIDTHS VARY FROM STA.49+438.864 TO STA.49+712.977 (RT SIDE) AND STA.49+451.757 TO STA.49+694.214 (LT SIDE).

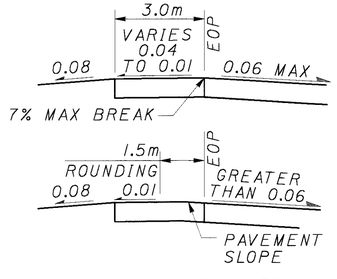
NORMAL SECTION

STA. 48+242.000 TO STA. 48+744.492 = 502.492 m
STA. 49+537.893 TO STA. 49+624.624 = 86.731 m
TOTAL LENGTH = 589.223 m

✱ 3.0m ROUNDING
✱✱ 1.2m ROUNDING

NOTE: 0.3m MIN. DITCH DEPTH





SHOULDER BREAKOVER DETAILS

† OR RATE OF SUPER IF GREATER
‡ SEE SHOULDER BREAKOVER DETAIL THIS SHEET

SUPERELEVATED SECTION

STA. 48+744.492 TO STA. 48+826.341 = 81.849 m (RT SIDE)
STA. 48+744.492 TO STA. 48+846.002 = 101.510 m (LT SIDE)
STA. 48+936.091 TO STA. 49+537.893 = 601.802 m (RT SIDE)
STA. 48+952.098 TO STA. 49+537.893 = 585.795 m (LT SIDE)
STA. 49+624.624 TO STA. 49+890.950 = 266.326 m
TOTAL LENGTH = 949.977 m (RT SIDE)
= 953.631 m (LT SIDE)

US 33 MAINLINE (4-LANE)

CALCULATED
CHECKED

TYPICAL SECTIONS - US 33 FULL DEPTH (4 - LANE)

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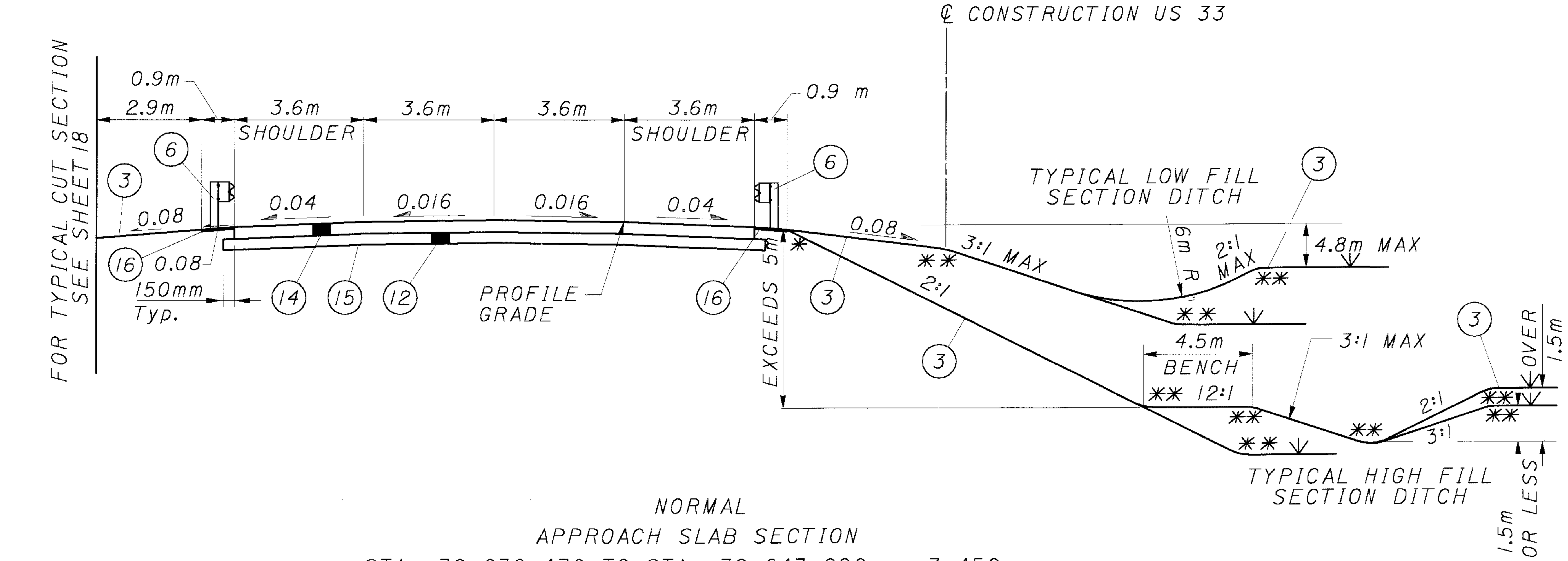
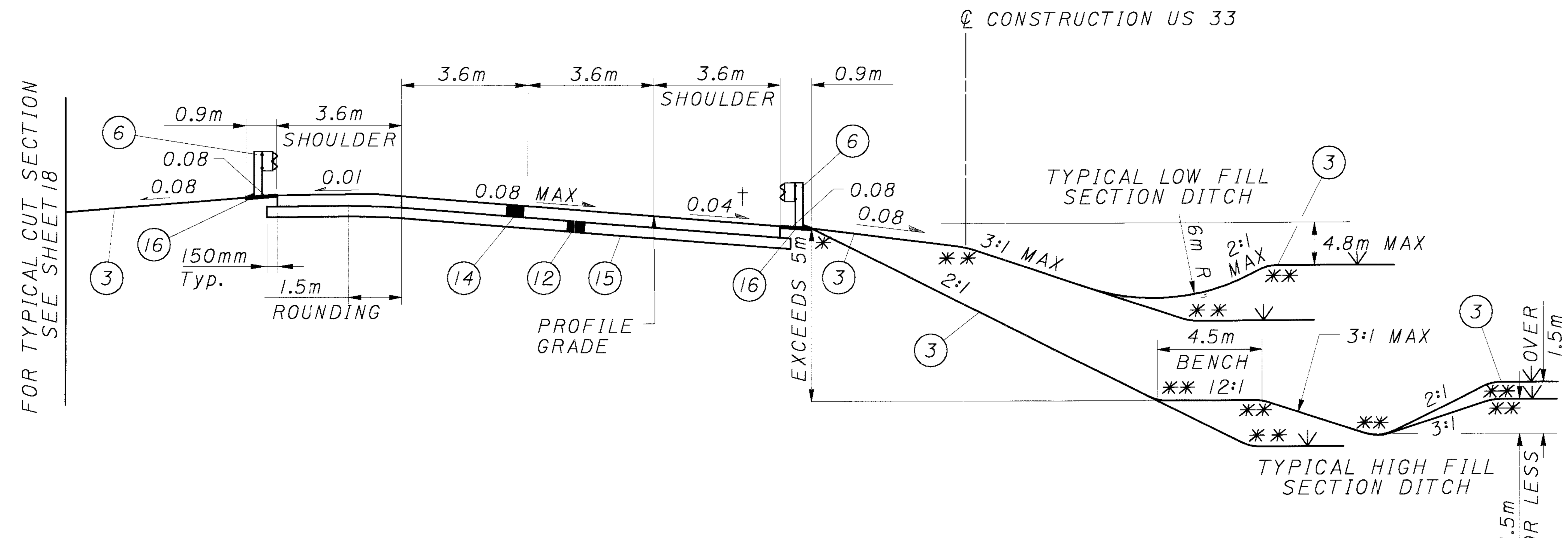
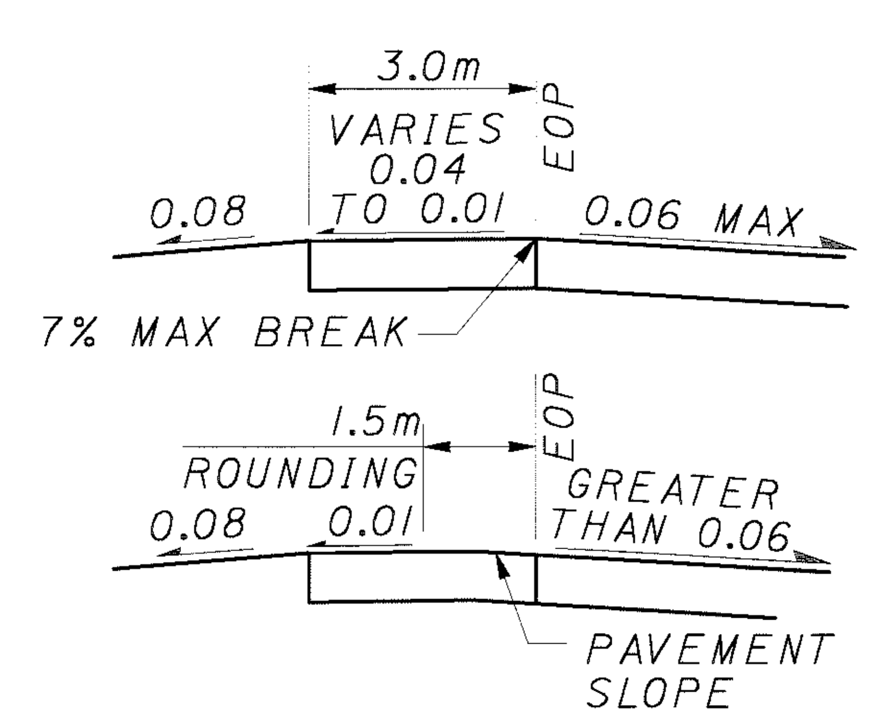


NORMAL
APPROACH SLAB SECTION

STA. 39+636.470 TO STA. 39+643.920 = 7.450 m
STA. 39+926.080 TO STA. 39+933.530 = 7.450 m
STA. 45+465.470 TO STA. 45+472.770 = 7.300 m
STA. 45+621.230 TO STA. 45+628.530 = 7.300 m
TOTAL LENGTH = 29.500 m

NOTE: 0.3m MIN. DITCH DEPTH





SHOULDER BREAKOVER DETAILS

†OR RATE OF SUPER IF GREATER

* 3.0m ROUNDING
** 1.2m ROUNDING

SUPERELEVATED
APPROACH SLAB SECTION

STA. 41+247.661 TO STA. 41+255.188 = 7.527 m
STA. 41+415.023 TO STA. 41+422.551 = 7.528 m
TOTAL LENGTH = 15.055 m

MAINLINE APPROACH SLAB SECTION(2 LANE)

TYPICAL SECTIONS - US 33 APPROACH SLABS (2 - LANES)

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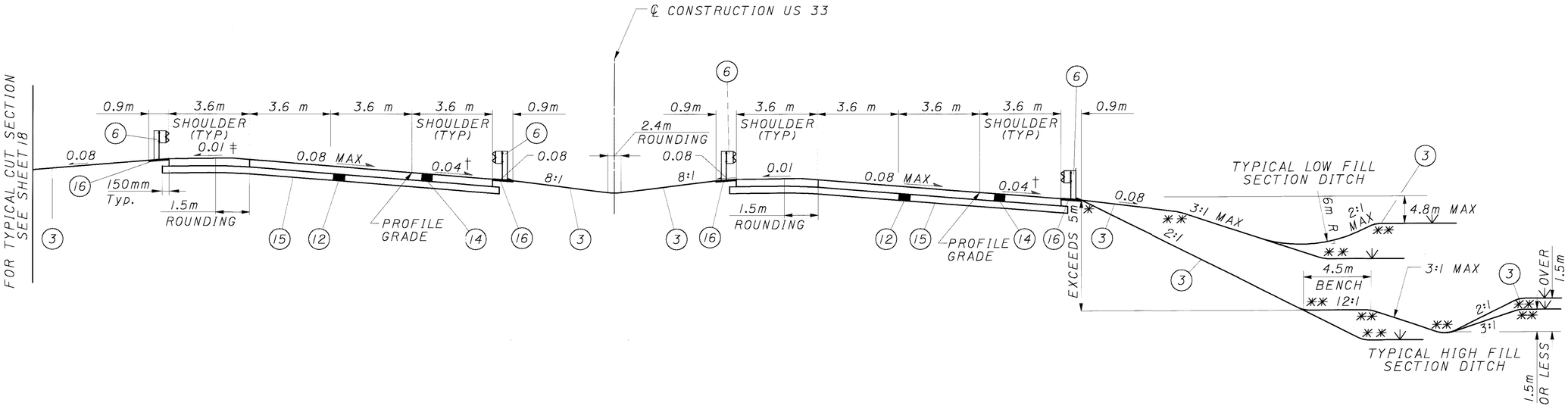

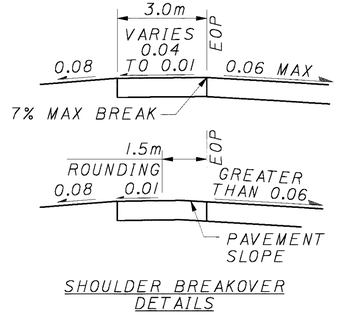

SHOULDER BREAKOVER DETAILS

NOTE: 0.3m MIN. DITCH DEPTH

SUPERELEVATED APPROACH SLAB SECTION

STA. 48+826.341	TO STA. 48+833.940	= 7.599 m	(RT SIDE)
STA. 48+846.002	TO STA. 48+853.275	= 7.273 m	(LT SIDE)
STA. 48+928.589	TO STA. 48+936.091	= 7.502 m	(RT SIDE)
STA. 48+944.818	TO STA. 48+952.098	= 7.280 m	(LT SIDE)
	TOTAL LENGTH	= 15.101 m	(RT SIDE)
		= 14.553 m	(LT SIDE)

† OR RATE OF SUPER IF GREATER

‡ SEE SHOULDER BREAKOVER DETAIL THIS SHEET

✳ 3.0m ROUNDING

✳✳ 1.2m ROUNDING

MAINLINE APPROACH SLAB SECTION(4 LANE)

TYPICAL SECTIONS - US 33 APPROACH SLAB (4 - LANES)

CALCULATED

CHECKED

ATH-33-40.981

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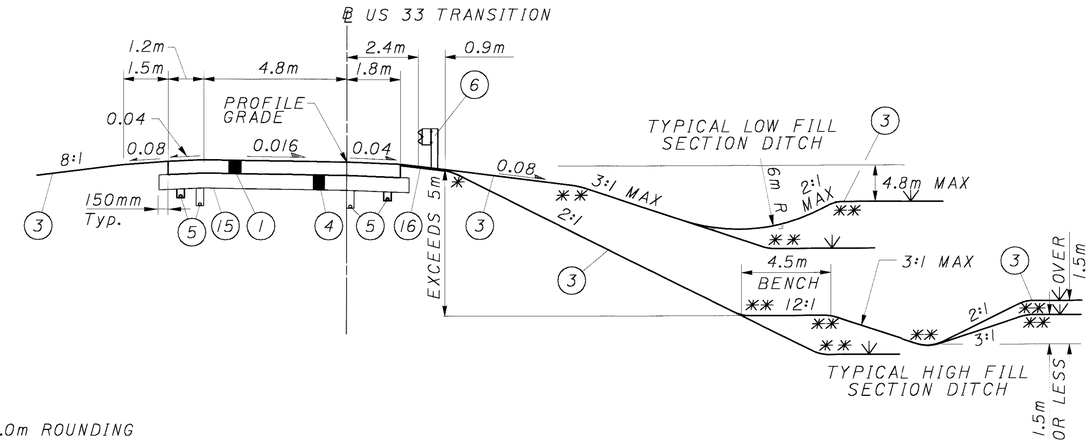
NOTES: 1. TRANSITION DOES NOT HAVE 1.2m SHOULDER FROM US 33 MAINLINE STATIONING 47+865.000 TO STA. 47+980.339

2. TRANSITION DOES NOT HAVE 1.8m SHOULDER FROM TRANSITION STATIONING 48+206.901 TO STA. 48+242.000

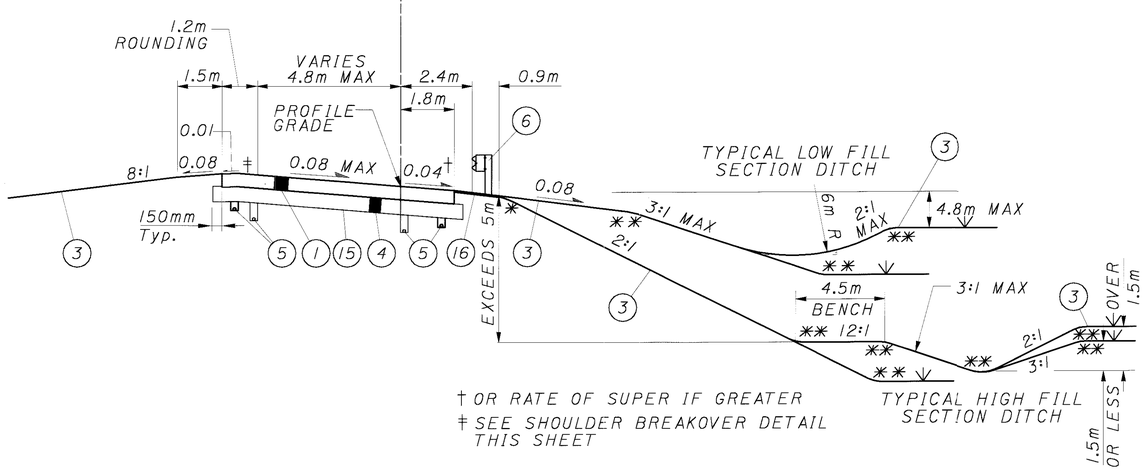
3. 0.3m MIN. DITCH DEPTH



✳ 3.0m ROUNDING

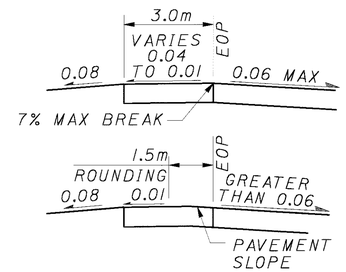
NORMAL SECTION

STA. 48+017.029 TO STA. 48+058.479 = 41.450 m



† OR RATE OF SUPER IF GREATER

‡ SEE SHOULDER BREAKOVER DETAIL THIS SHEET



SHOULDER BREAKOVER DETAILS

SUPERELEVATED SECTION

STA. 47+865.000 TO STA. 48+017.029 = 152.029 m
STA. 48+058.479 TO STA. 48+242.000 = 183.521 m
TOTAL LENGTH = 335.550 m

TYPICAL SECTIONS - US 33 TRANSITIONS

CALCULATED | CHECKED

ATH-33-40.981

2-LANE TO 4-LANE TRANSITION
US 33 MAINLINE (TRANSITIONS)

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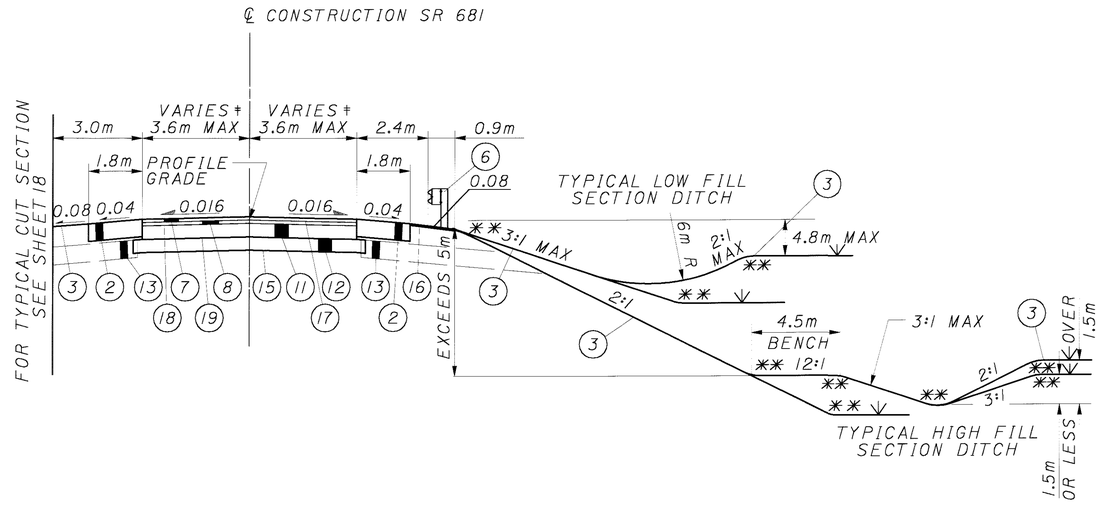


** 1.2m ROUNDING

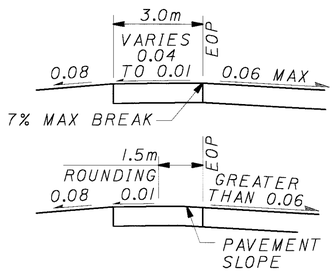
NORMAL SECTION

SR 681	STA. 51+040.000 TO STA. 51+052.500	=	12.500 m ǂ
SR 681	STA. 51+052.500 TO STA. 51+122.211	=	69.711 m
SR 681	STA. 51+460.522 TO STA. 51+489.962	=	29.440 m
SR 681	STA. 51+651.652 TO STA. 51+695.245	=	43.593 m
SR 681	STA. 51+695.245 TO STA. 51+721.735	=	26.490 m ǂ
	TOTAL LENGTH	=	181.734 m

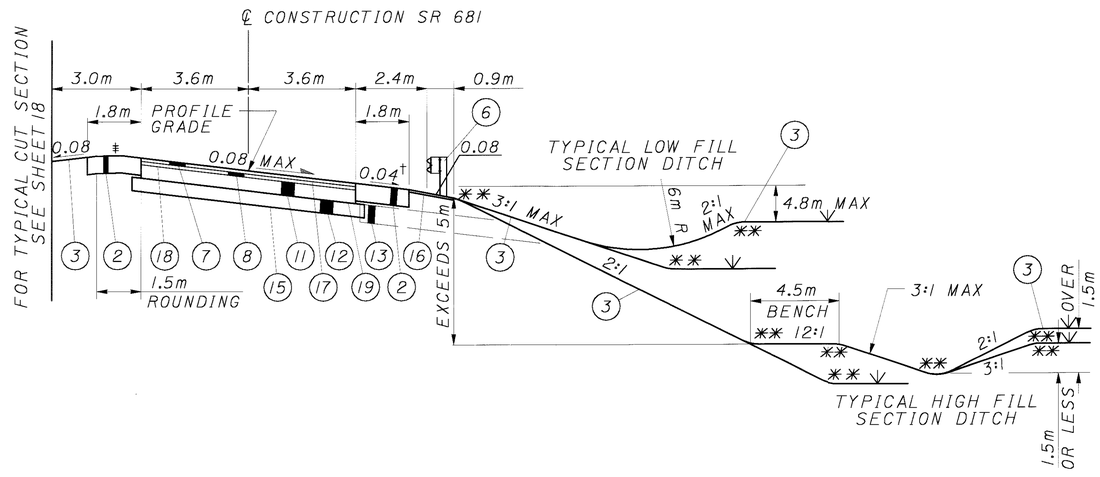
NOTE: 0.3m MIN. DITCH DEPTH

† OR RATE OF SUPER IF GREATER

ǂ SEE SHOULDER BREAKOVER DETAIL THIS SHEET



SHOULDER BREAKOVER DETAILS



SUPERELEVATED SECTION

SR 681	STA. 51+122.211 TO STA. 51+304.470	=	182.259 m
SR 681	STA. 51+341.552 TO STA. 51+460.552	=	119.000 m
SR 681	STA. 51+489.962 TO STA. 51+651.652	=	161.690 m
	TOTAL LENGTH	=	462.949 m

STATE ROUTE 681

TYPICAL SECTIONS - S.R. 681

CALCULATED

CHECKED

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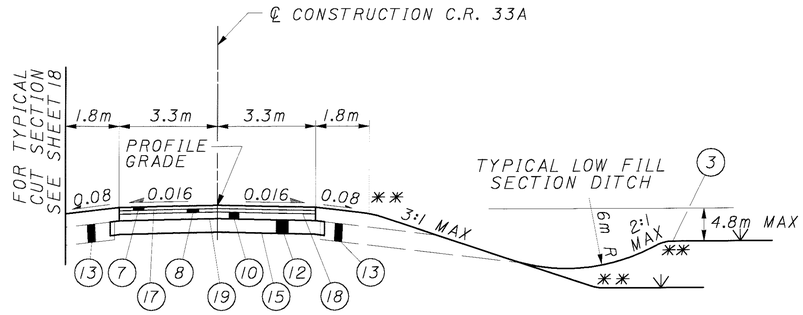
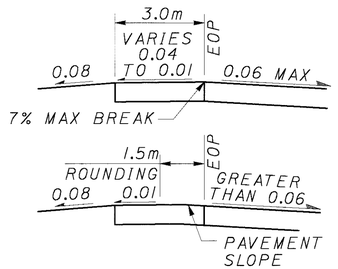


** 1.2m ROUNDING

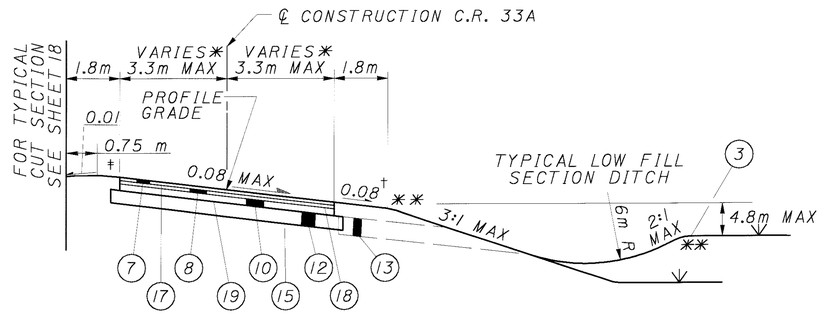
NORMAL SECTION

STA. 46+067.164 TO STA. 46+094.918 = 27.754 m
STA. 46+243.767 TO STA. 46+263.562 = 19.795 m
TOTAL LENGTH = 47.549 m

NOTE: 0.3m MIN. DITCH DEPTH



SHOULDER BREAKOVER DETAILS



† OR RATE OF SUPER IF GREATER

‡ SEE SHOULDER BREAKOVER DETAIL THIS SHEET

SUPERELEVATED SECTION

STA. 46+003.903 TO STA. 46+067.164 = 63.261 m
STA. 46+094.918 TO STA. 46+243.767 = 148.849 m
STA. 46+263.562 TO STA. 46+330.467 = 66.905 m
STA. 46+330.467 TO STA. 46+353.932 = 23.465 m*
TOTAL LENGTH = 302.480 m

OLD US 33 (SOUTH END)

CALCULATED
DIGGED

TYPICAL SECTIONS - C.R. 33A (OLD US 33)

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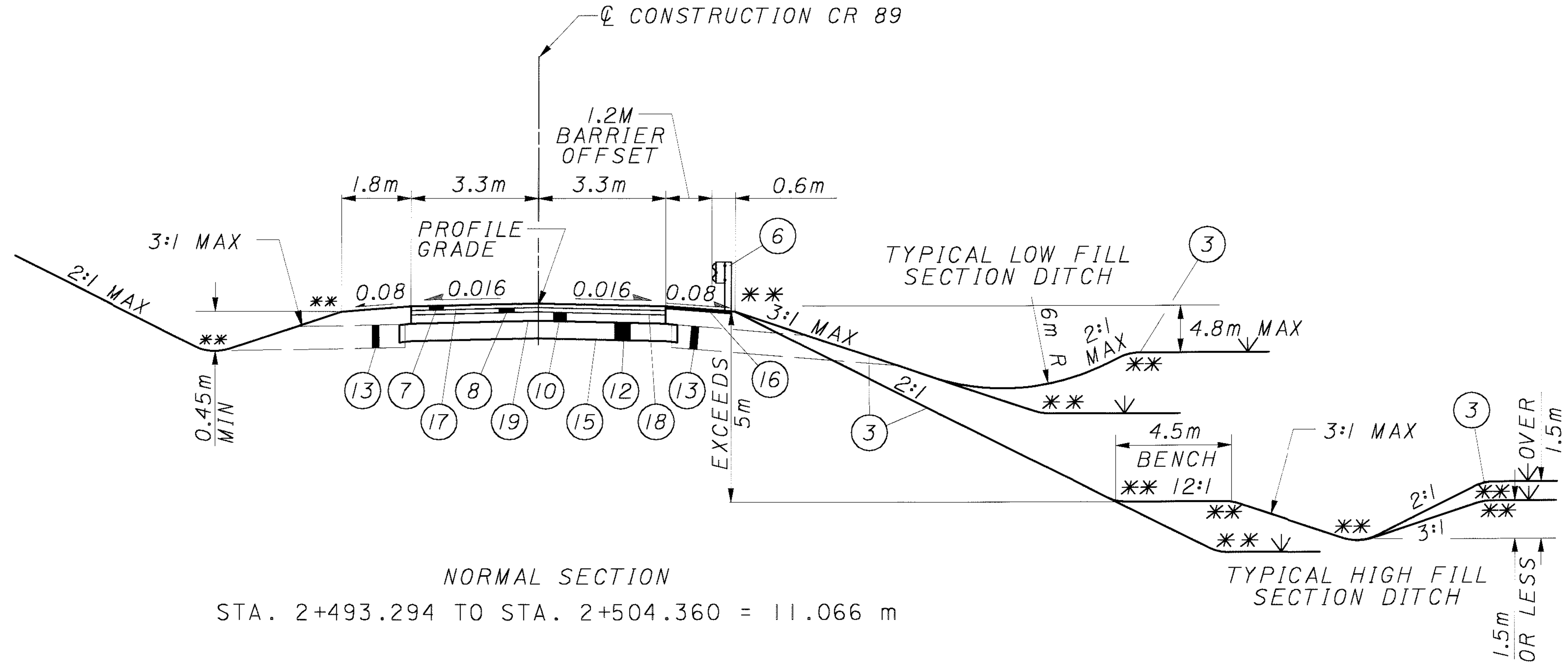
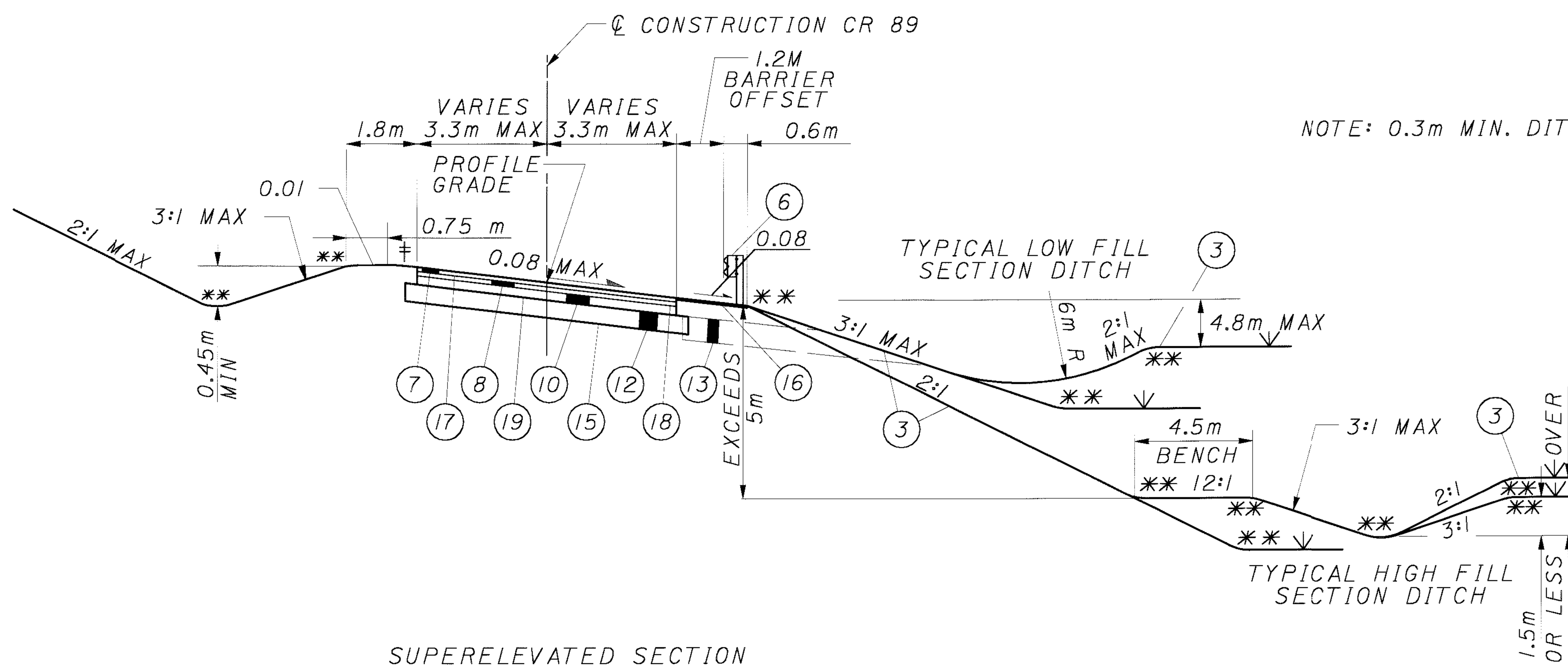


NORMAL SECTION

STA. 2+493.294 TO STA. 2+504.360 = 11.066 m

** 1.2m ROUNDING



NOTE: 0.3m MIN. DITCH DEPTH

SUPERELEVATED SECTION

STA. 1+980.000 TO STA. 2+214.000 = 234.000 m

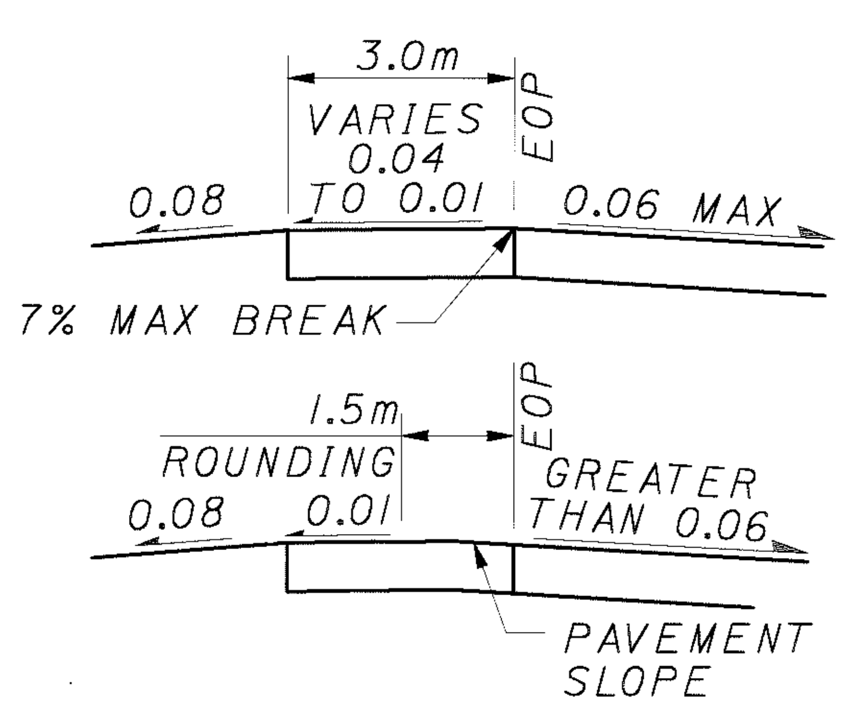
STA. 2+302.000 TO STA. 2+493.294 = 191.294 m

STA. 2+504.360 TO STA. 2+540.000 = 35.640 m

TOTAL LENGTH = 460.934 m

† OR RATE OF SUPER IF GREATER

‡ SEE SHOULDER BREAKOVER DETAIL SEE SHEET



SHOULDER BREAKOVER DETAILS

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COUNTY ROAD 89

TYPICAL SECTIONS - C.R. 89

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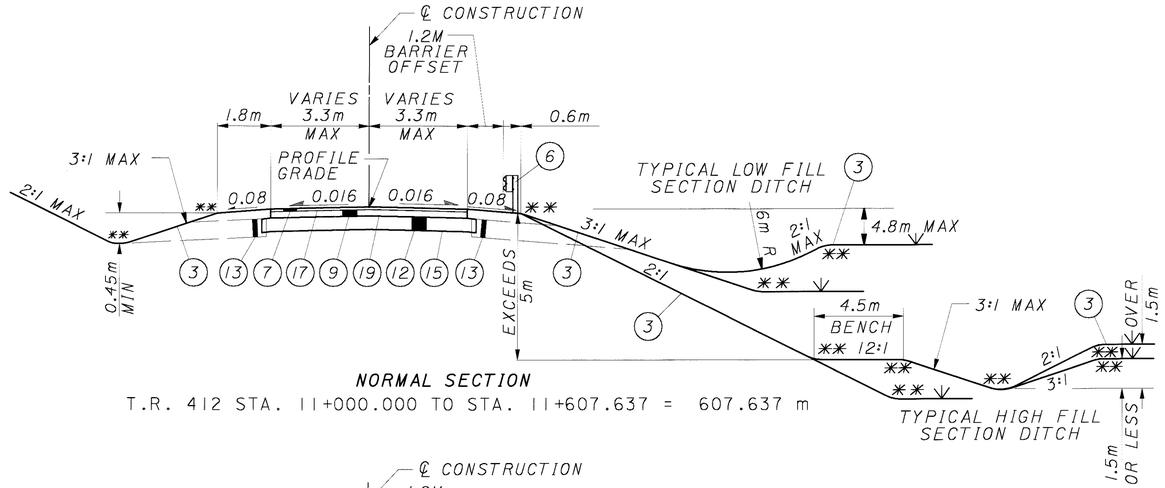
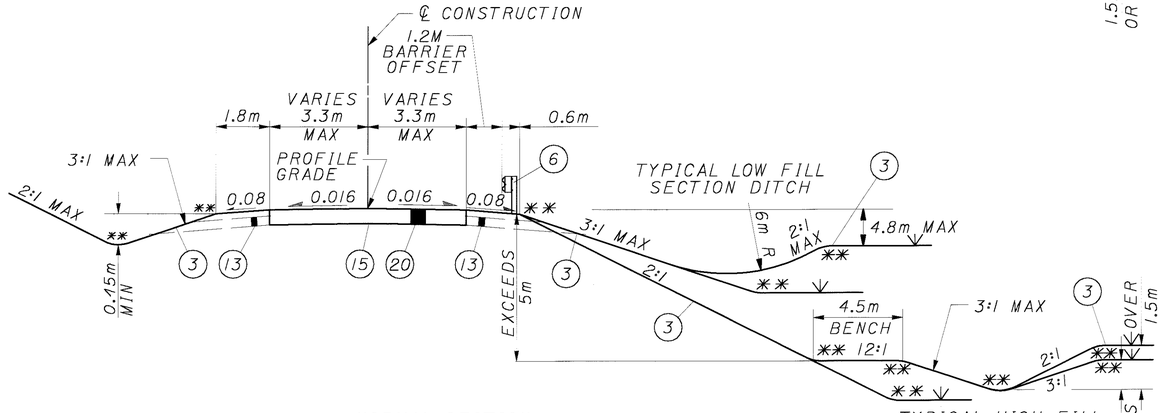


NORMAL SECTION

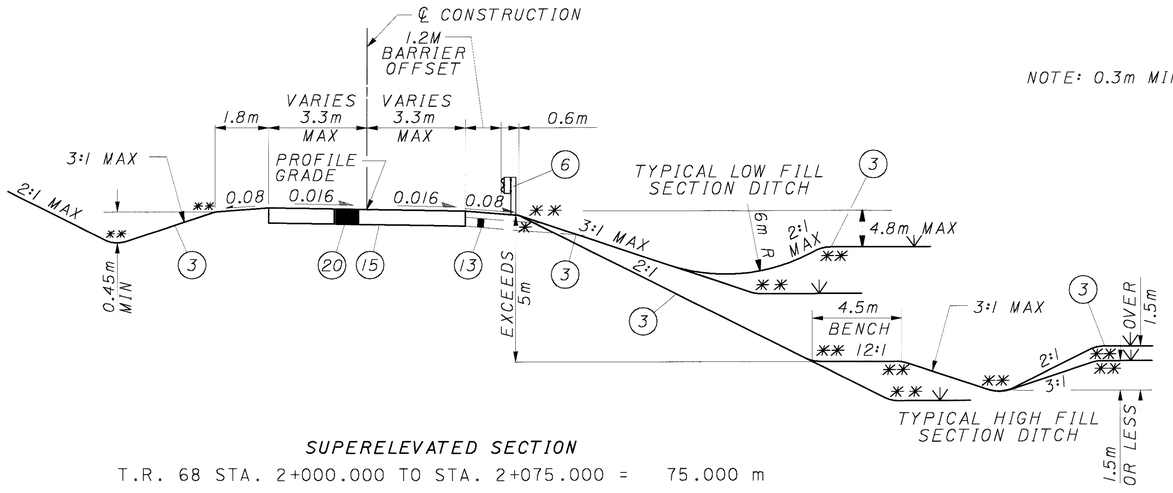
T.R. 412 STA. 11+000.000 TO STA. 11+607.637 = 607.637 m



NORMAL SECTION

T.R. 68 STA. 1+011.415 TO STA. 1+094.715 = 83.300 m
T.R. 67 STA. 1+010.000 TO STA. 1+117.963 = 107.963 m
T.R. 243 STA. 0+000.000 TO STA. 0+280.000 = 280.000 m
T.R. 243 STA. 0+077.500 TO STA. 0+162.000 = 84.500 m
TOTAL LENGTH = 555.763

* 3.0m ROUNDING
** 1.2m ROUNDING



SUPERELEVATED SECTION

T.R. 68 STA. 2+000.000 TO STA. 2+075.000 = 75.000 m

NOTE: 0.3m MIN. DITCH DEPTH

2-LANE TOWNSHIP ROAD

TYPICAL SECTIONS - T.R. 412, T.R. 68, T.R. 67 & T.R. 243

CALCULATED | CHECKED

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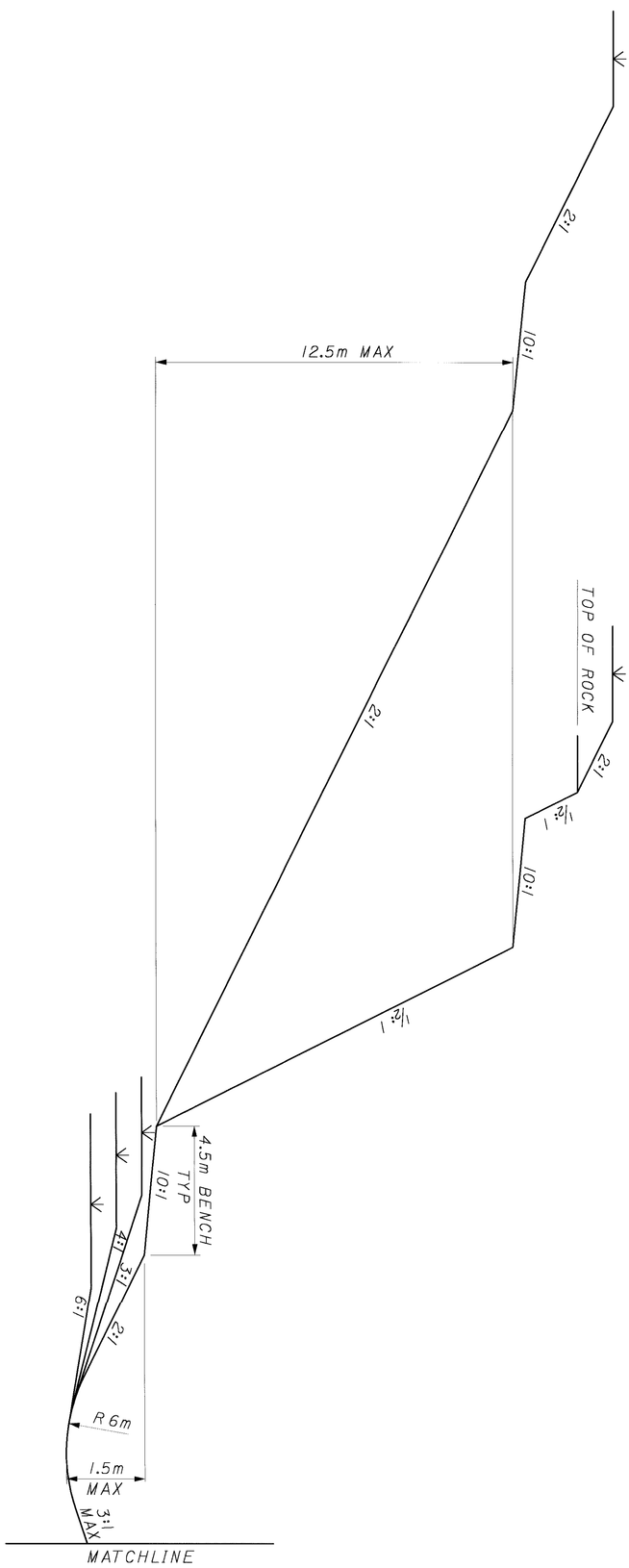


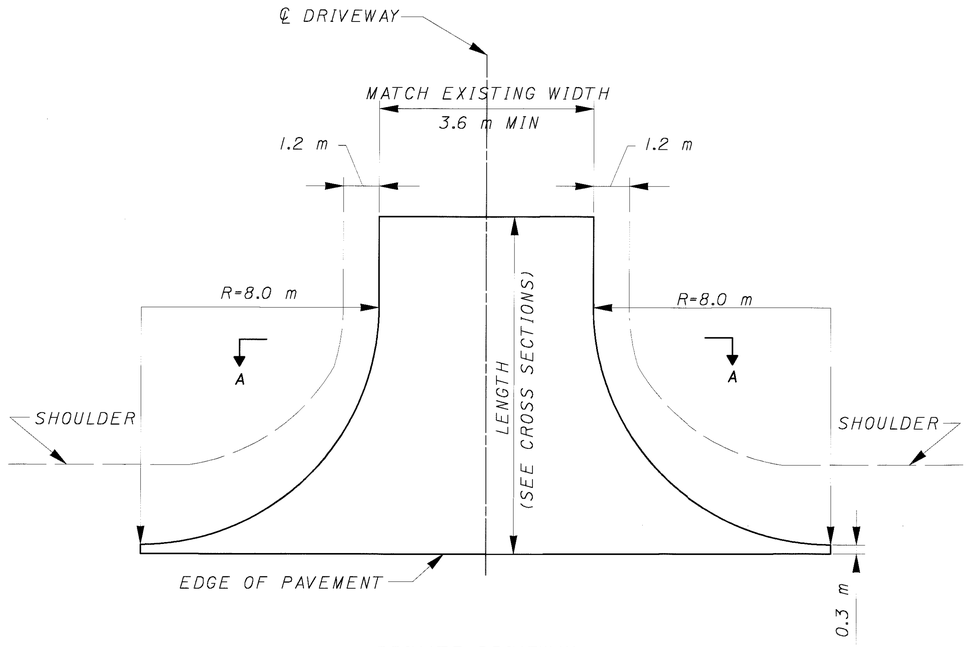
TYPICAL CUT SECTION
DITCH CONFIGURATION

ATH-33-40.981

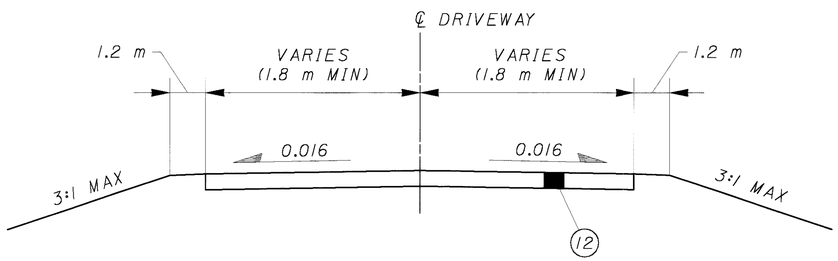
TYPICAL SECTIONS - CUT SECTION DETAILS

CALCULATED

CHECKED

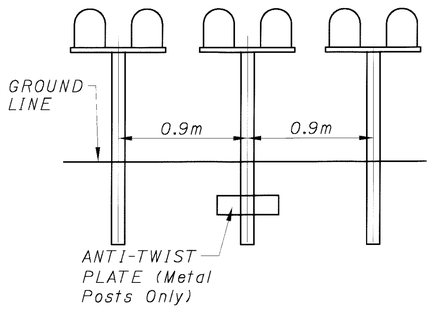


PRIVATE DRIVEWAY

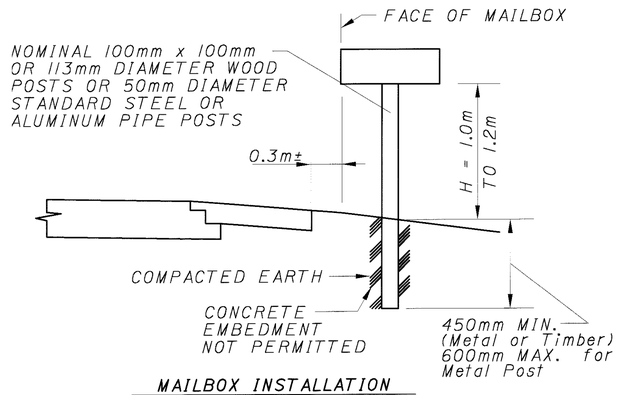


DRIVEWAY SECTION A-A

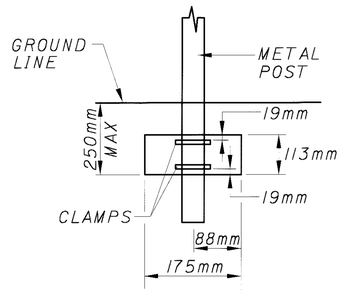
PRIVATE DRIVE / FIELD ENTRANCE



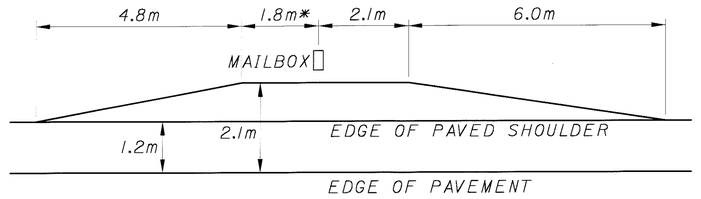
GROUPED MAILBOX INSTALLATION



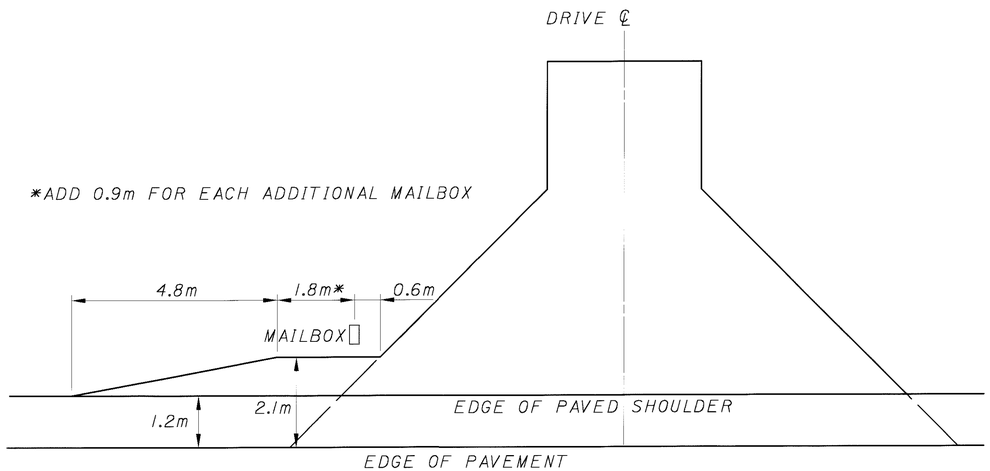
MAILBOX INSTALLATION



ANTI-TWIST PLATE



MAILBOX APPROACH



DRIVE WITH MAILBOX

NOTE:
SEE GENERAL NOTES FOR
DETAILS AND QUANTITIES

CALCULATED
CHECKED

TYPICAL SECTIONS - DRIVES AND MAILBOX DETAILS

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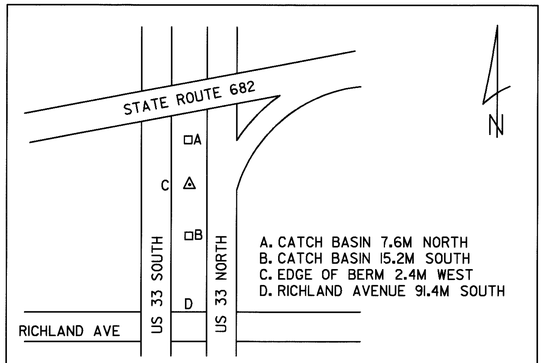
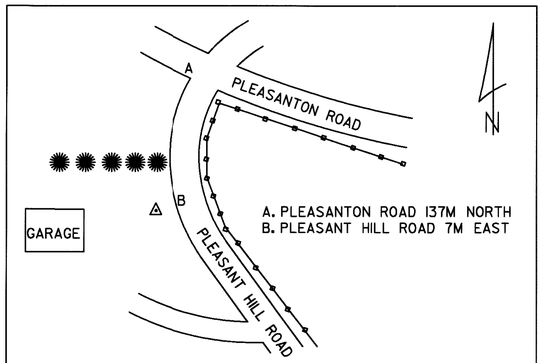


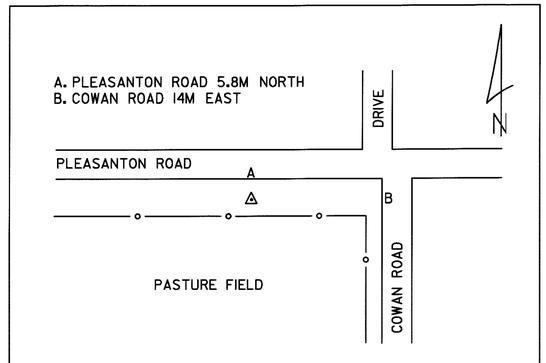
LOCATED IN THE MEDIAN OF US 33 BETWEEN THE STATE ROUTE 682 OVERPASS AND THE RICHLAND AVENUE UNDERPASS.

A 10 B



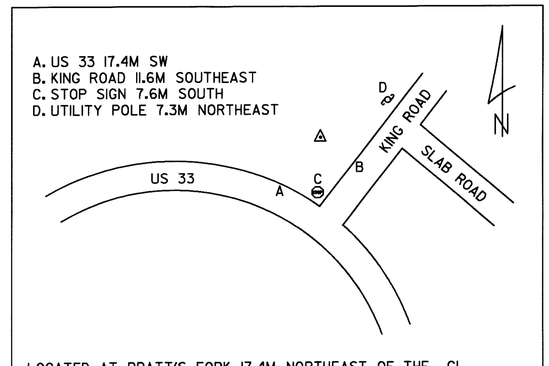
LOCATED 7M WEST OF PLEASANT HILL ROAD, AND 137M SOUTH OF THE INTERSECTION OF PLEASANT HILL AND PLEASANTON ROADS.

A 11 A



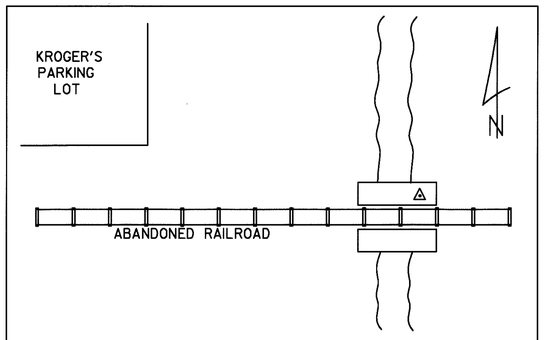
LOCATED 5.8M SOUTH OF PLEASANTON ROAD AND 14M WEST OF THE INTERSECTION OF PLEASANTON AND COWAN ROADS.

A 11 B



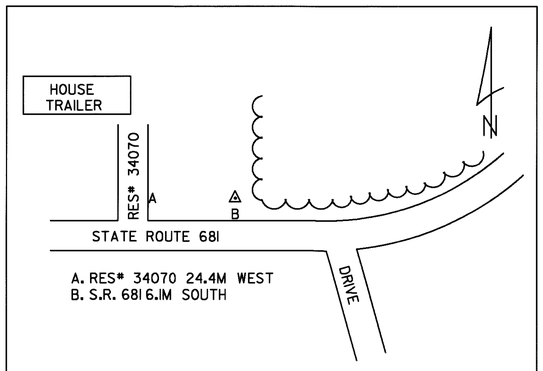
LOCATED AT PRATT'S FORK, 17.4M NORTHEAST OF THE CL OF US 33 AND 11.6M NORTHWEST OF THE CENTERLINE OF KING ROAD.

A 12 B



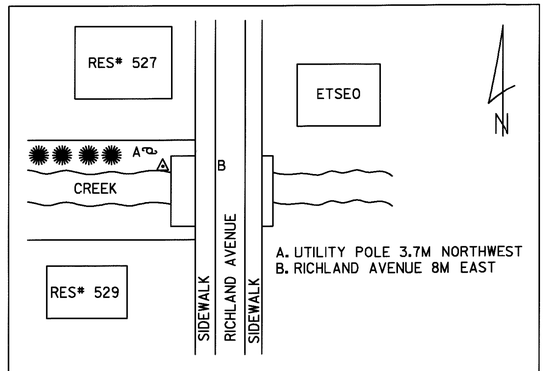
LOCATED ON THE R/R TRACKS THAT RUN PARALLEL BETWEEN THE HOCKING RIVER AND EAST STATE STREET IN ATHENS, ON THE HEADWALL OF A CULVERT, APPROXIMATELY 0.3 KM EAST OF KROGER'S PARKING LOT.

B 76



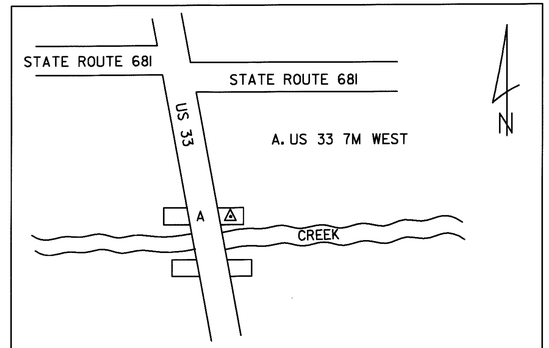
LOCATED ON ST. RT. 681, 24.4M EAST OF RESIDENCE DRIVE * 34070 AND 6.1M NORTH OF STATE ROUTE 681.

D 229



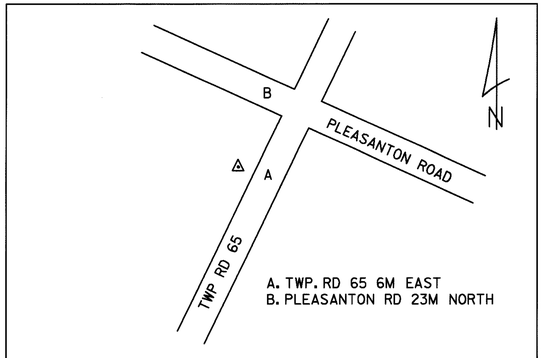
LOCATED ON THE NORTHWEST WINGWALL OF THE FIRST BRIDGE NORTH ON RICHLAND AVE. FROM THE INTERSECTION WITH US 33.

E 76 X



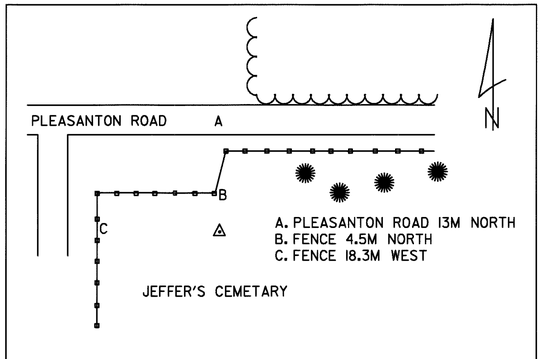
LOCATED 7M EAST OF THE CL OF EXISTING US 33, ON THE NORTHEAST WINGWALL OF THE FIRST BRIDGE SOUTH OF STATE ROUTE 681.

F 232 RESET



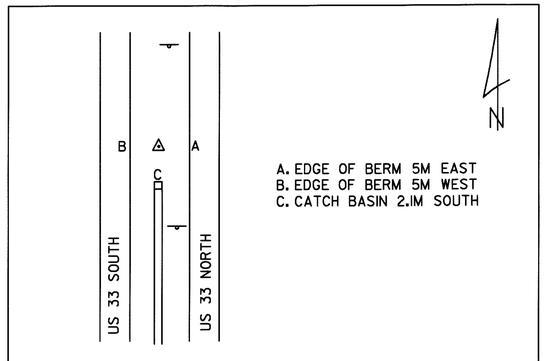
LOCATED 6M WEST OF ALEXANDER TOWNSHIP ROAD 65 AND 23M SOUTH OF PLEASANTON ROAD.

K 233



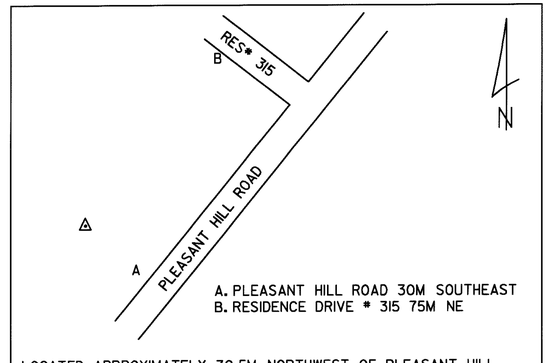
LOCATED 13M SOUTH OF PLEASANTON RD. IN JEFFER'S CEMETERY, 1.1 KM WEST OF US 33.

L 233



LOCATED IN THE MEDIAN OF US 33, JUST SOUTH OF THE TWO LANE TO FOUR LANE CONVERSION, ON THE CENTERLINE OF MEDIAN.

M II A



LOCATED APPROXIMATELY 30.5M NORTHWEST OF PLEASANT HILL ROAD AND APPROXIMATELY 76M SOUTHWEST OF RESIDENCE DRIVE * 315 ATOP THE SUMMIT OF A HILL.

TOWNSEND RESET

CALCULATED

PRIMARY HORIZONTAL CONTROL AND BENCHMARKS

ATH-33-40.981

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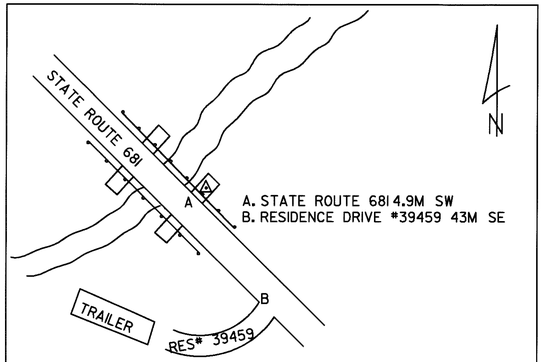
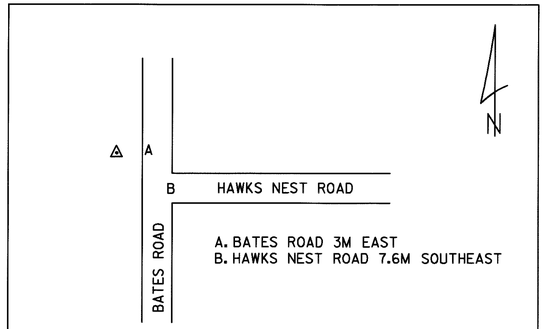


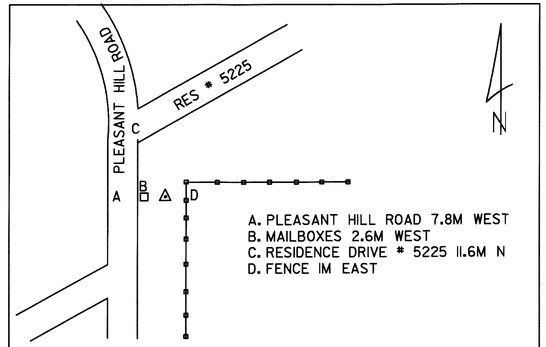
LOCATED 4.9M NORTHEAST OF STATE ROUTE 681 ON THE SE WINGWALL OF THE BRIDGE AT MILEMARKER MEG-681-0717.

1 JVC



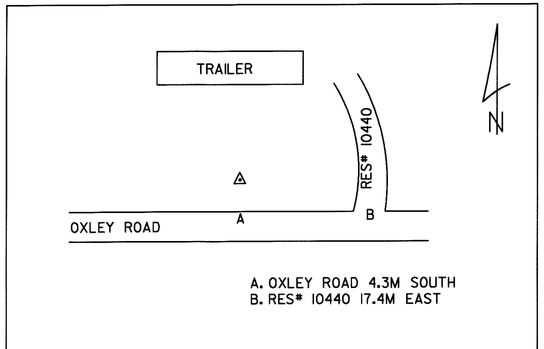
LOCATED WEST OF THE INTERSECTION OF BATES ROAD AND HAWKS NEST ROAD, 3M WEST OF BATES ROAD AND 7.6M NORTH OF HAWKS NEST ROAD.

33 A



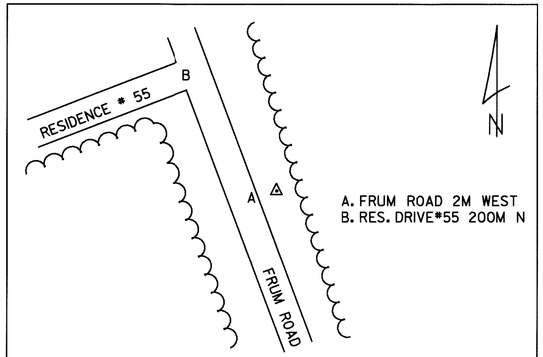
LOCATED 7.8M EAST OF PLEASANT HILL RD., 11.6M SOUTH OF THE DRIVE TO RESIDENCE * 5225, AND 2.6M EAST OF A GROUP OF MAILBOXES.

33 B



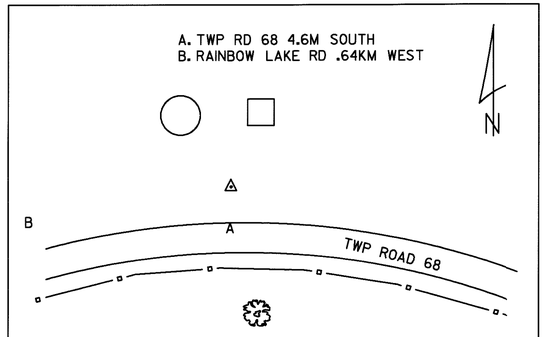
LOCATED 4.3M NORTH OF OXLEY ROAD AND 17.4M WEST OF RESIDENCE DRIVE * 10440

33 C



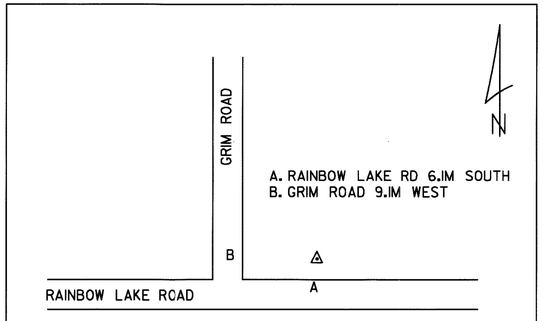
LOCATED 2M EAST OF FRUM ROAD AND 200M SOUTH OF RESIDENCE DRIVE * 55.

33 D



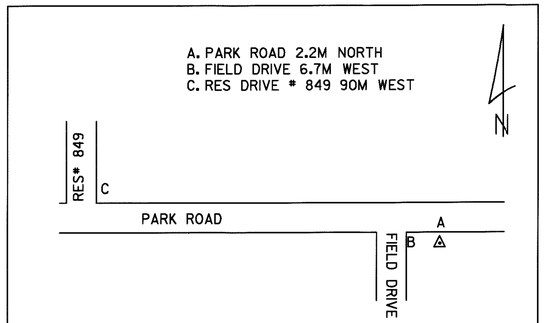
LOCATED 4.6M NORTH OF TWP ROAD 68 AND .64KM EAST OF RAINBOW LAKE ROAD

33 E



LOCATED 6.1M NORTH OF RAINBOW LAKE ROAD AND 9.1M EAST OF TWP ROAD 67.

33 F



LOCATED 2.2M SOUTH OF STATE ROUTE 243 AND 90M EAST OF RESIDENCE DRIVE * 849.

33 G

CALCULATED | CHECKED

PRIMARY HORIZONTAL CONTROL AND BENCHMARKS

ATH-33-40.981

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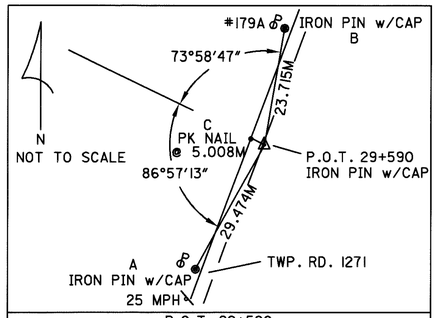
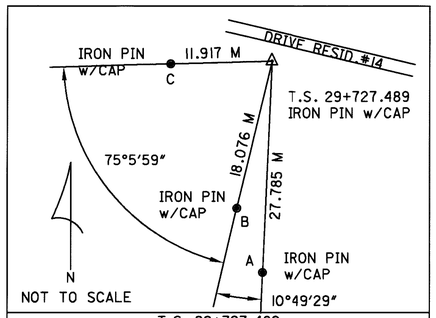
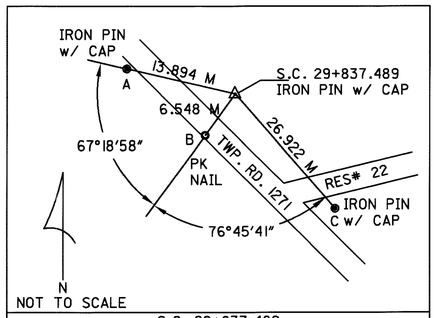


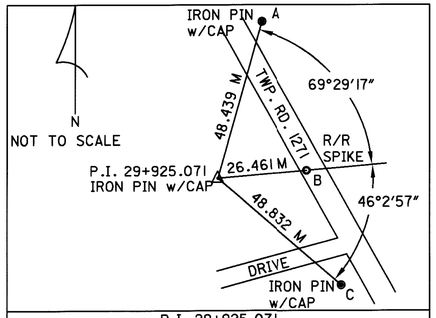
P.O.T. 29+590



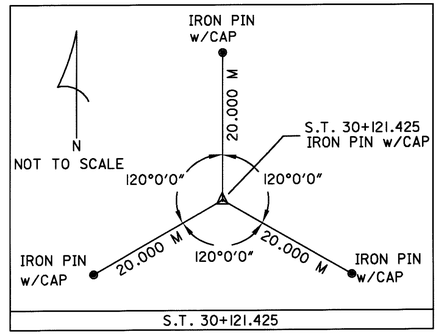
T.S. 29+727.489



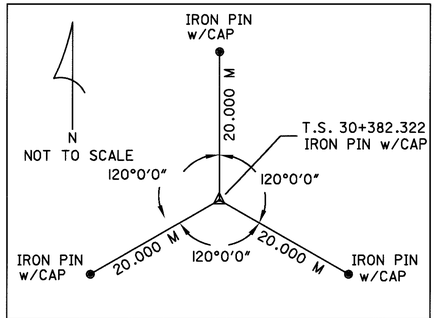
S.C. 29+837.489



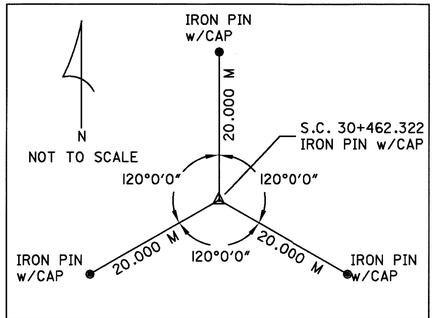
P.I. 29+925.071



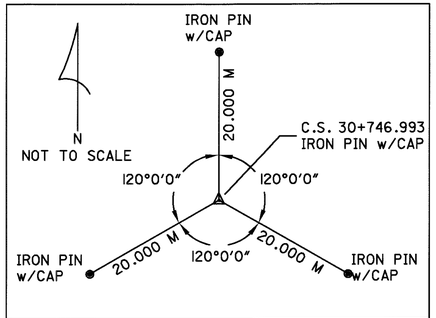
S.T. 30+121.425



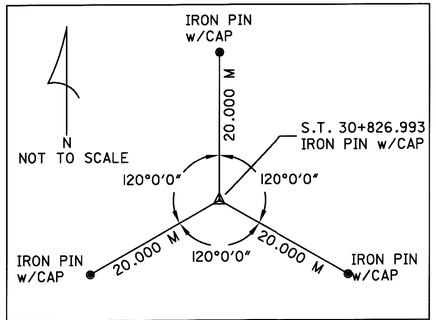
T.S. 30+382.322



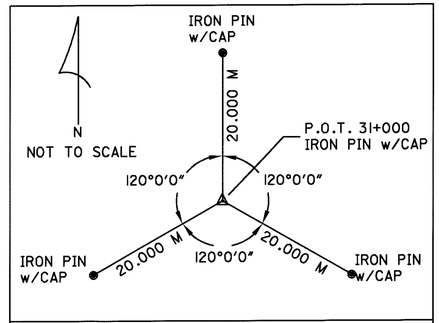
S.C. 30+462.322



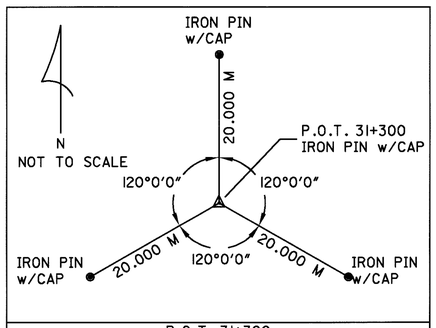
C.S. 30+746.993



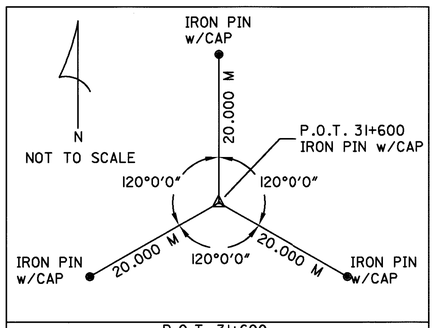
S.T. 30+826.993



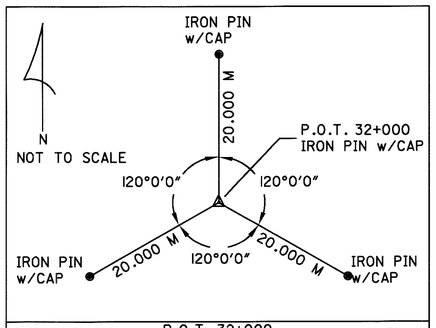
P.O.T. 31+000



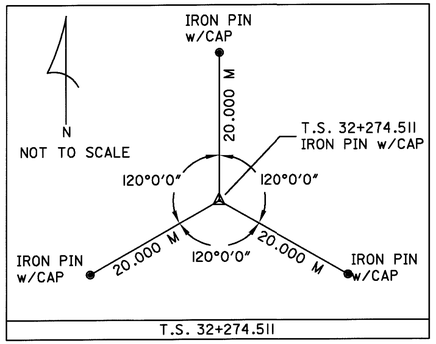
P.O.T. 31+300



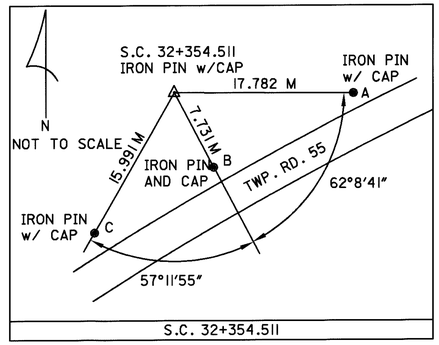
P.O.T. 31+600



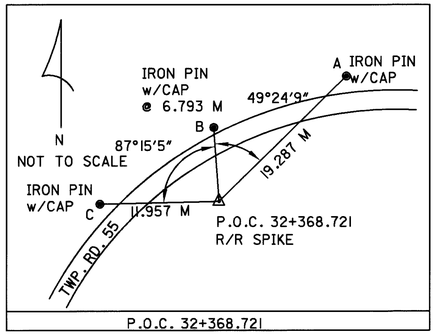
P.O.T. 32+000



T.S. 32+274.511

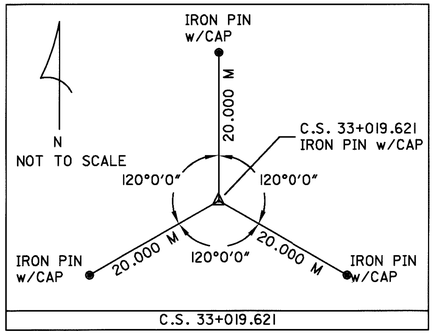


S.C. 32+354.511

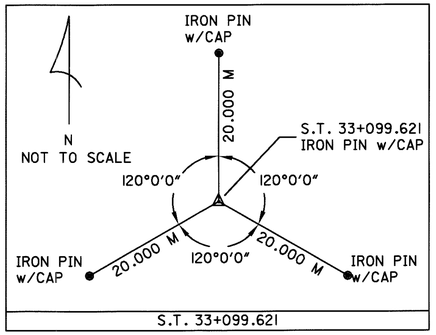


P.O.C. 32+368.721

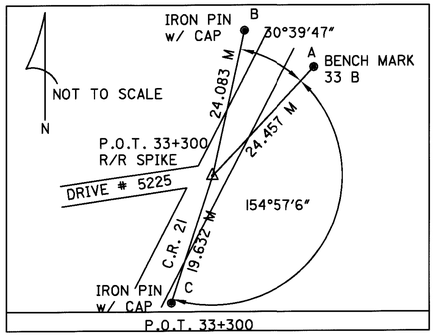
P.O.T. 48+261.775 TWP. RD. 55



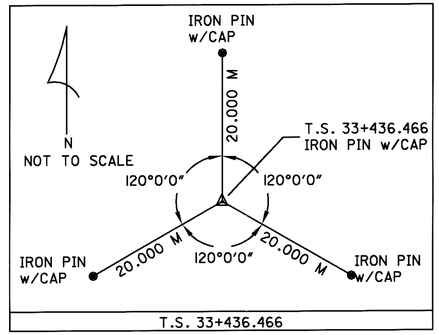
C.S. 33+019.621



S.T. 33+099.621



P.O.T. 33+300



T.S. 33+436.466

NOTE: SEE COORDINATE TABLE

CALCULATED | CHECKED

CENTERLINE REFERENCES

ATH-33-40.981

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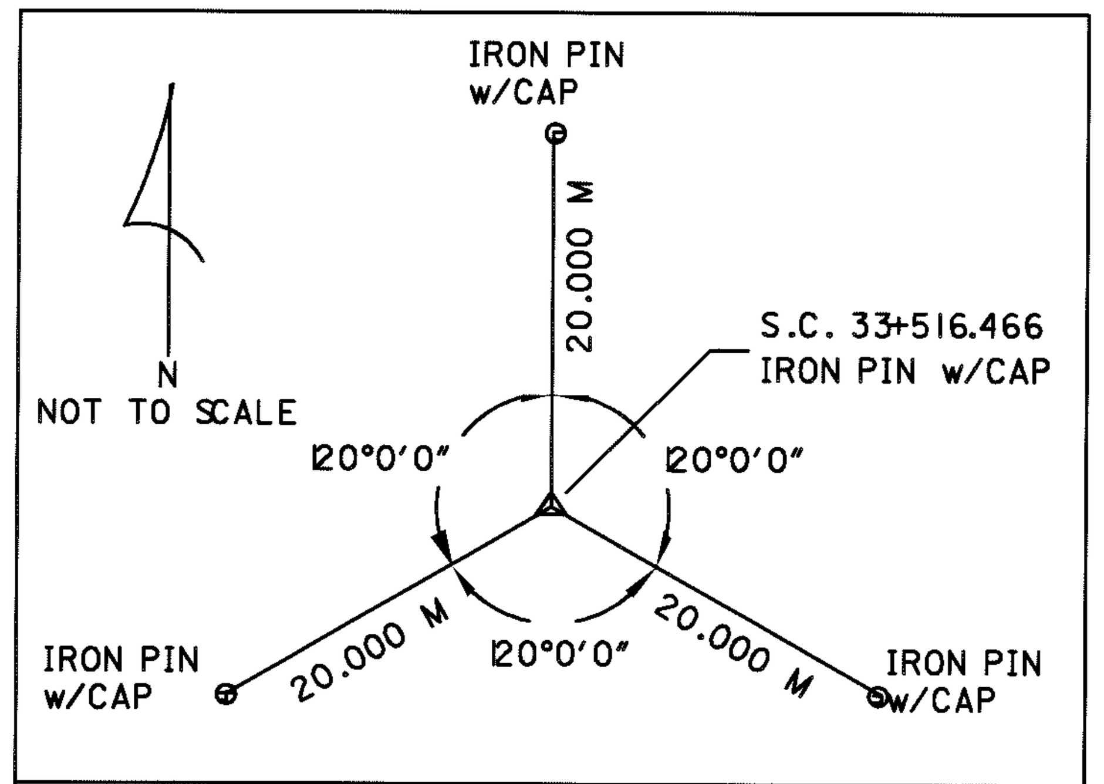
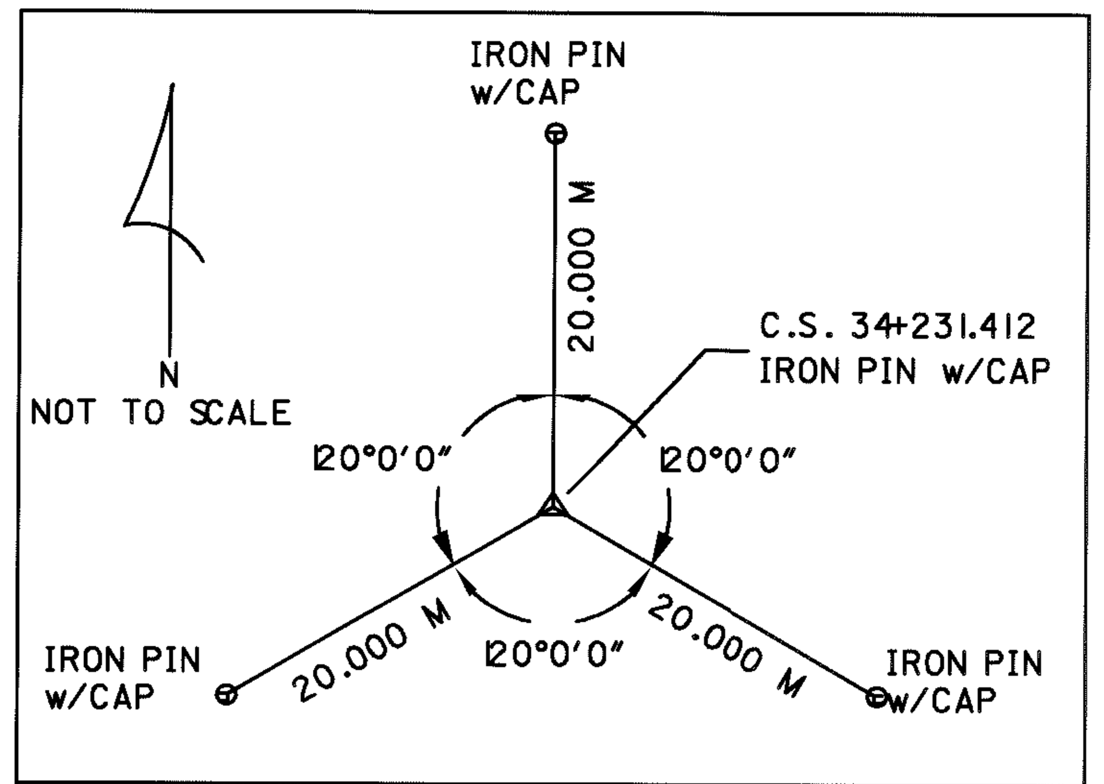
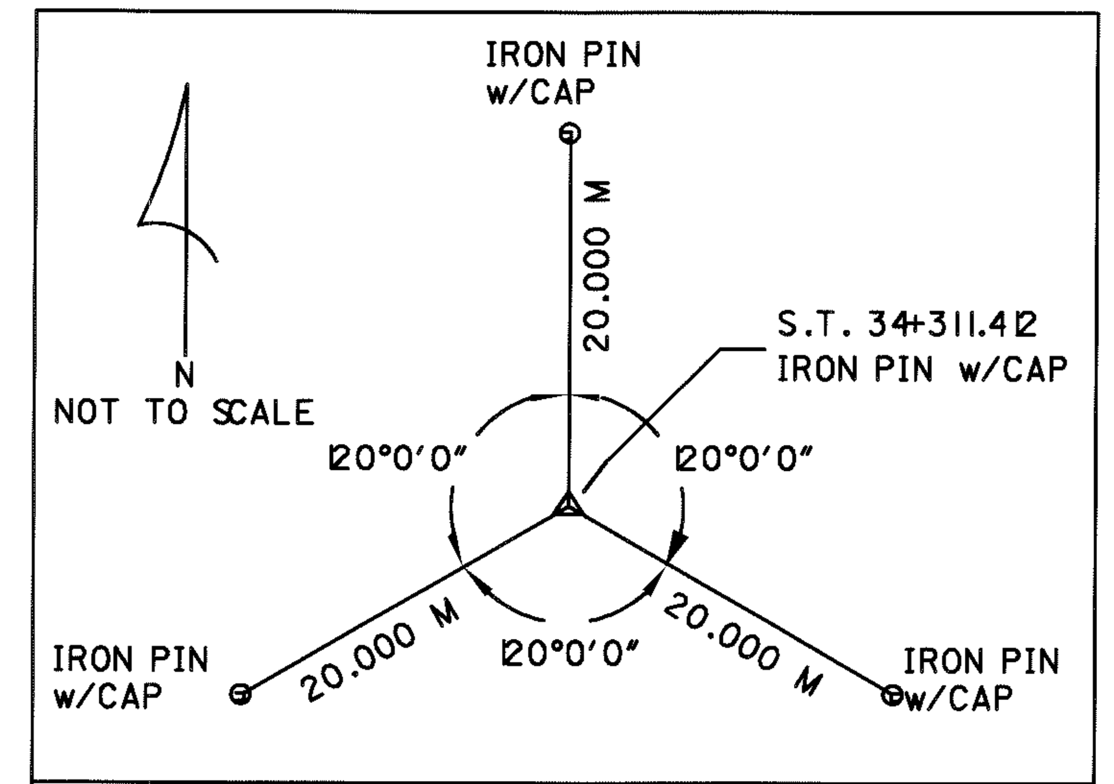


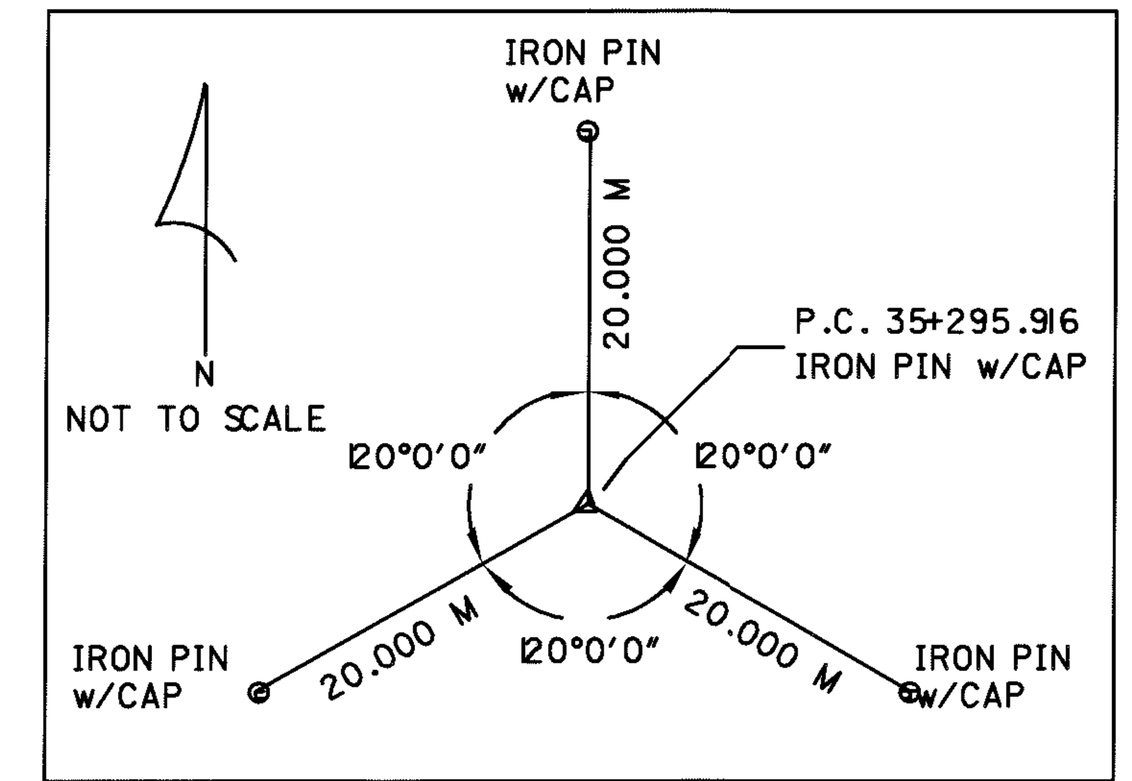
S.C. 33+516.466



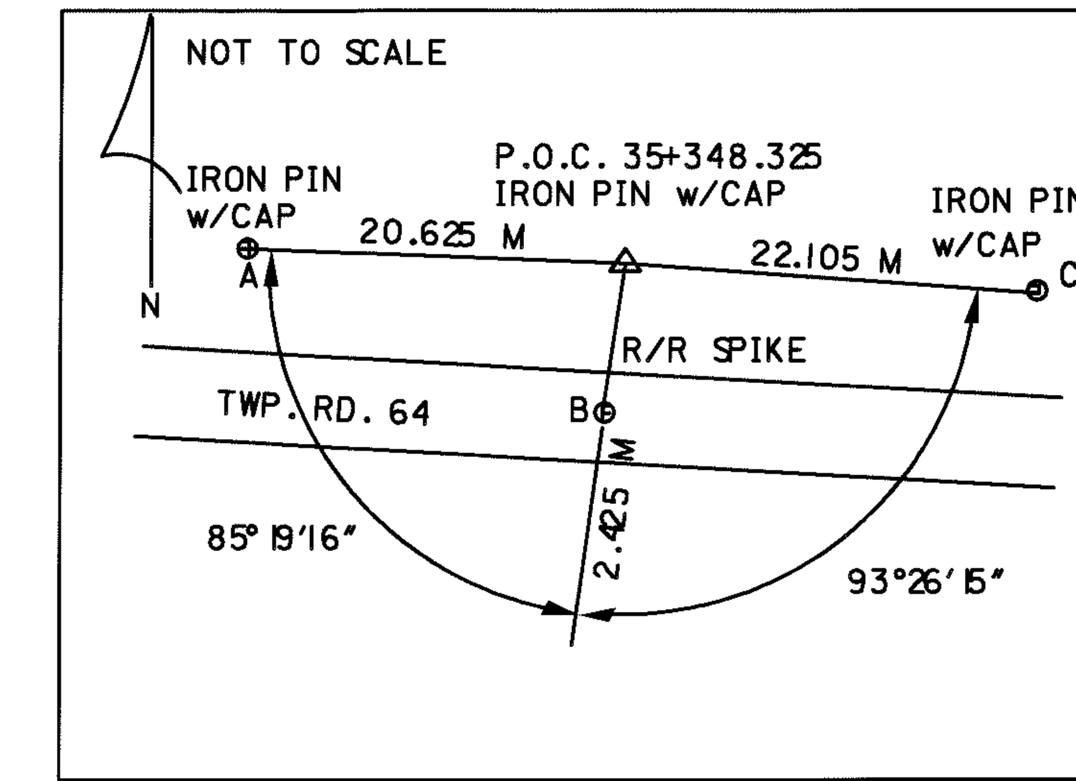
C.S. 34+231.412



S.T. 34+311.412

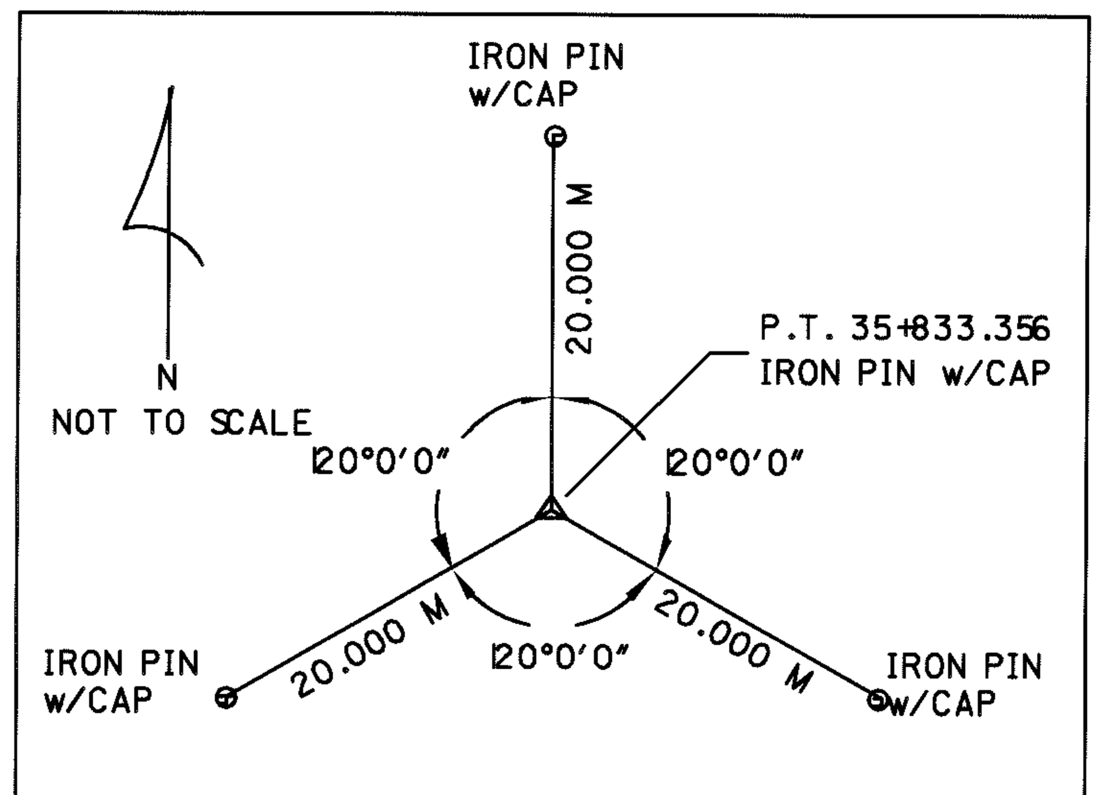


P.C. 35+295.916

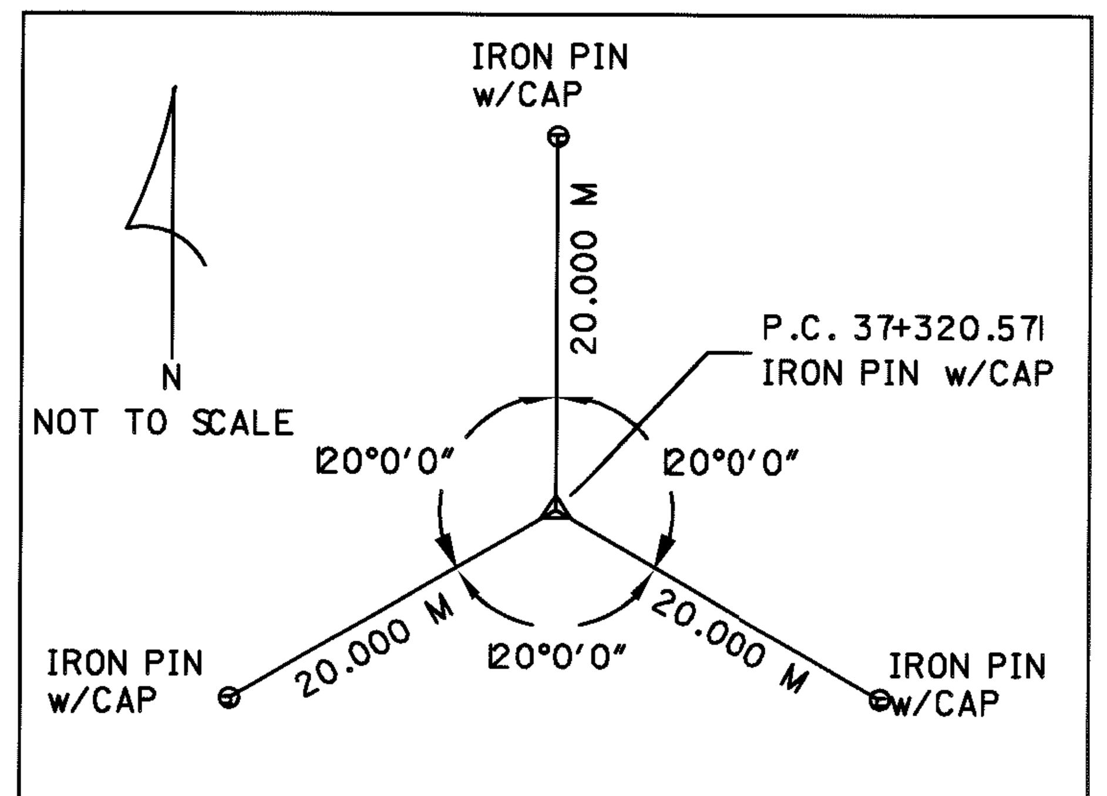


P.O.C. 35+348.325

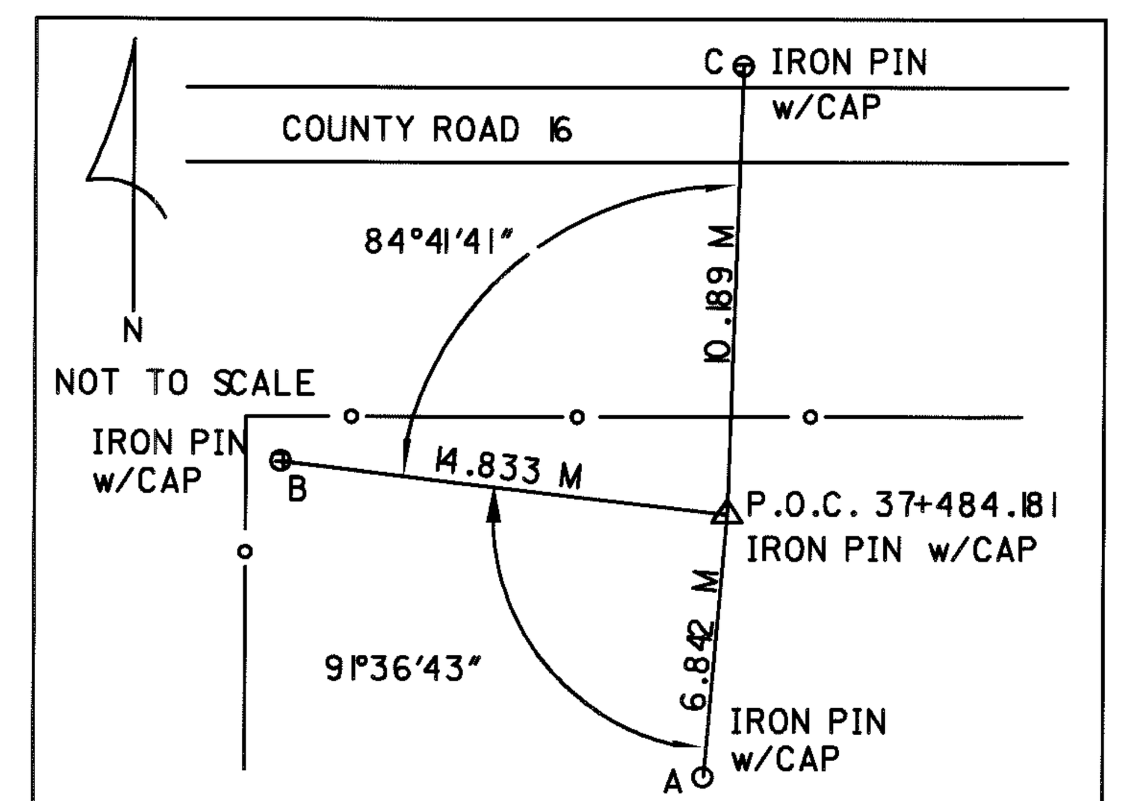
P.O.C. 49+216.905 TWP. RD. 64



P.T. 35+833.356

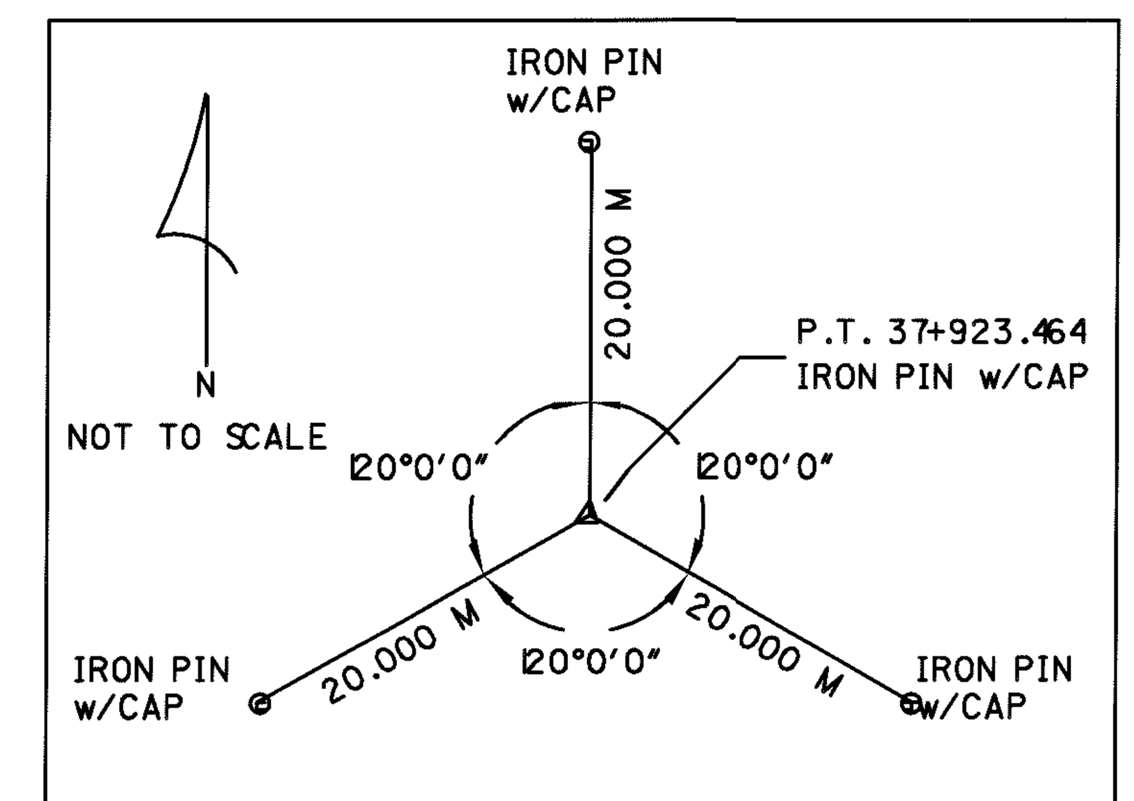


P.C. 37+320.571

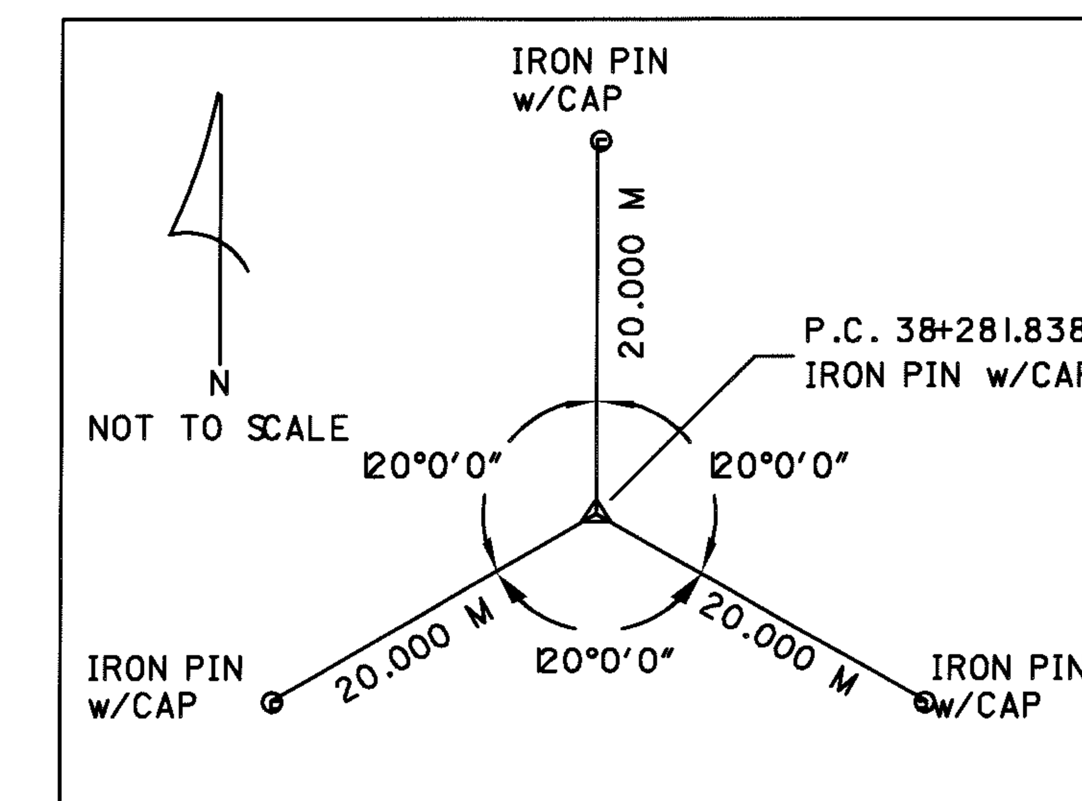


P.O.C. 37+484.181

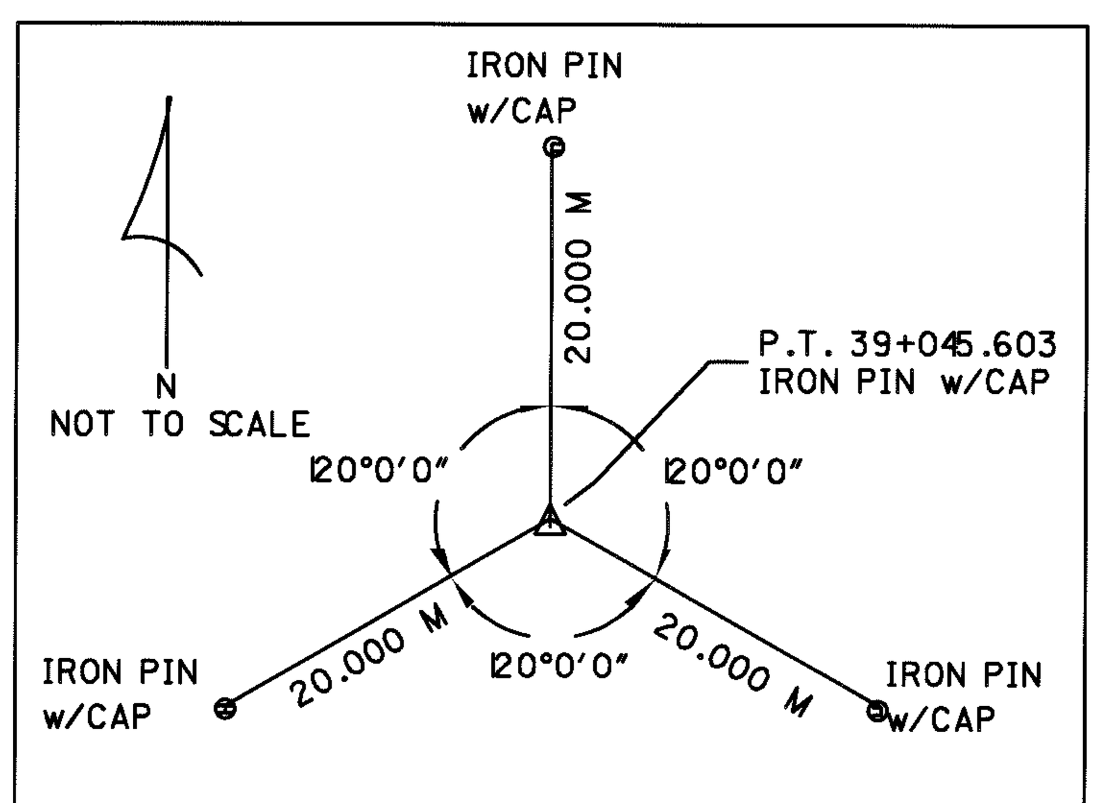
= P.O.T. 50+529.695 C.R. 16



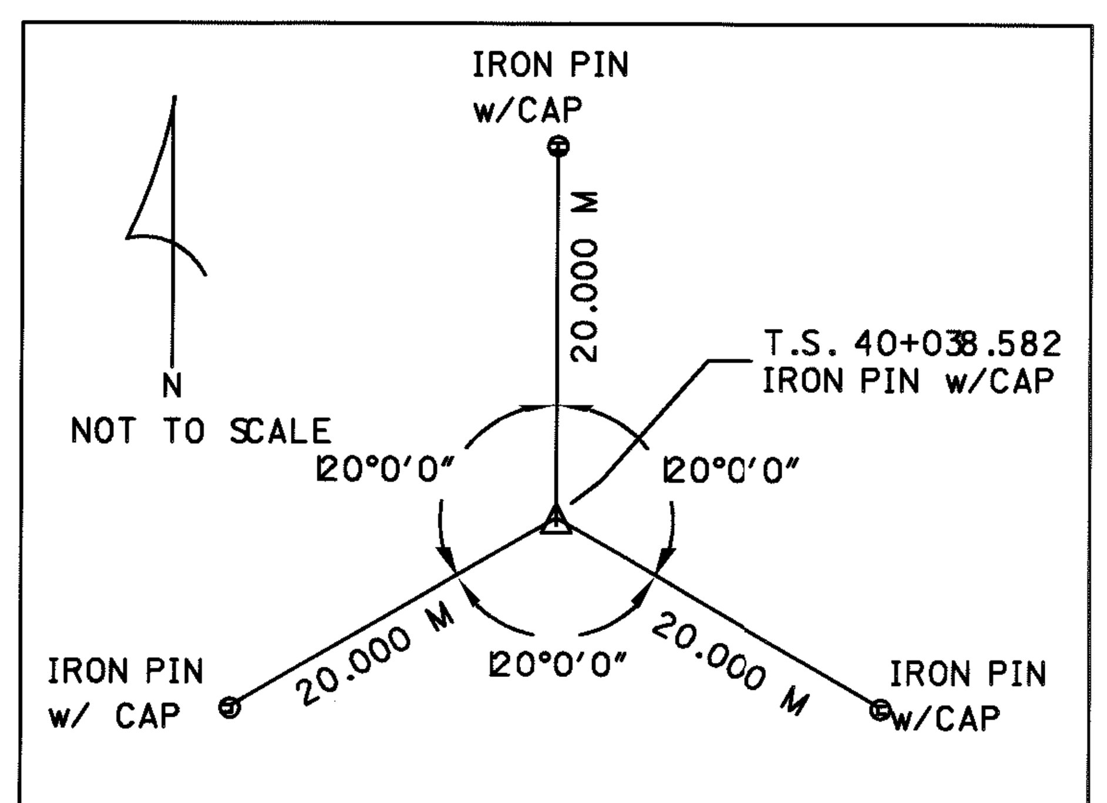
P.T. 37+923.464



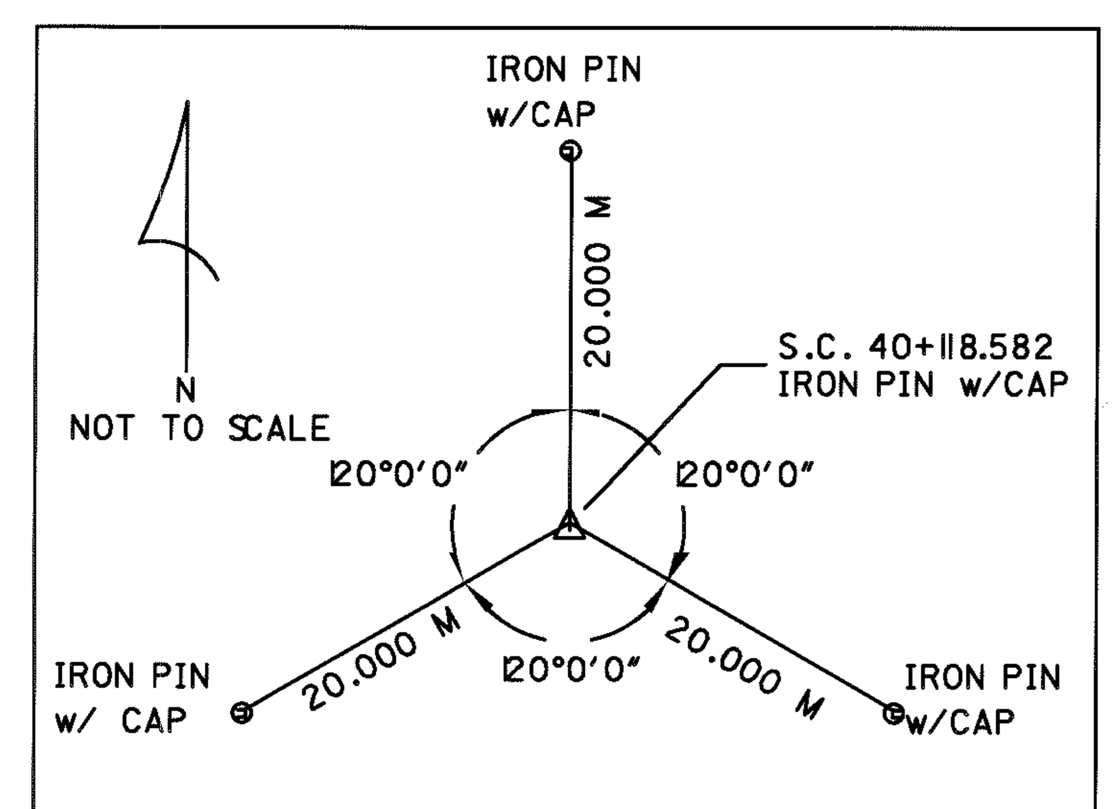
P.C. 38+281.838



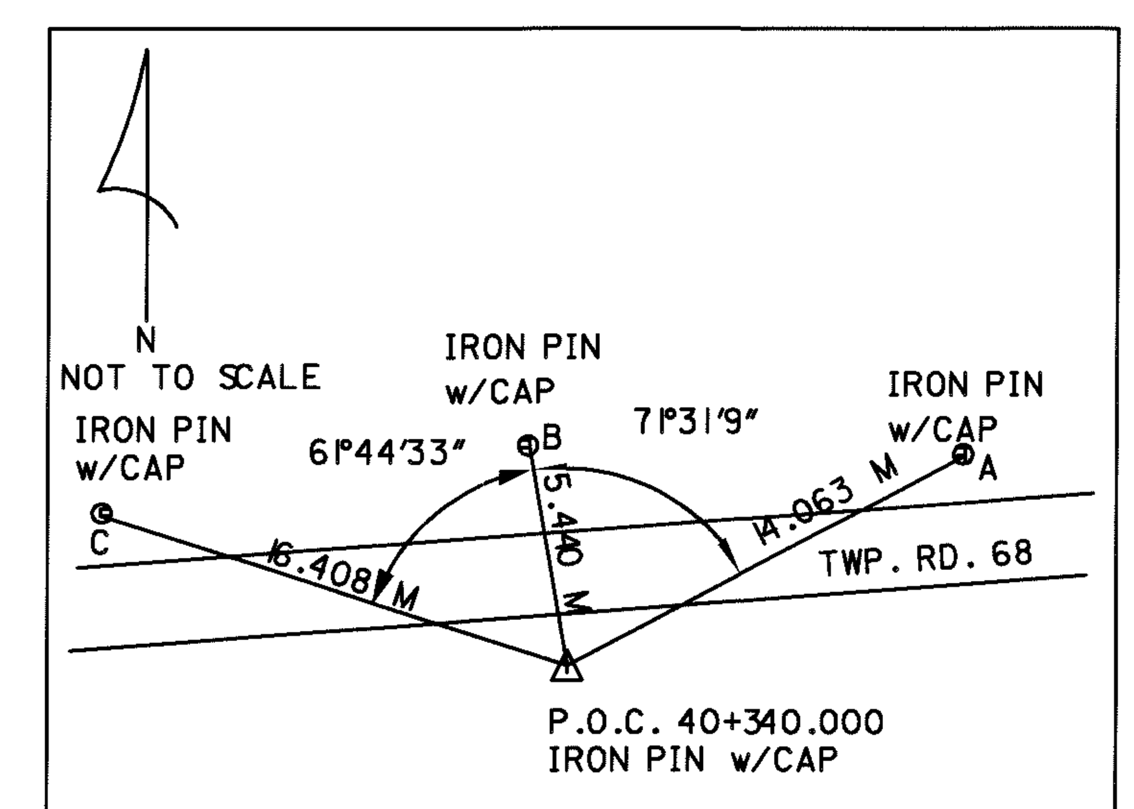
P.T. 39+045.603



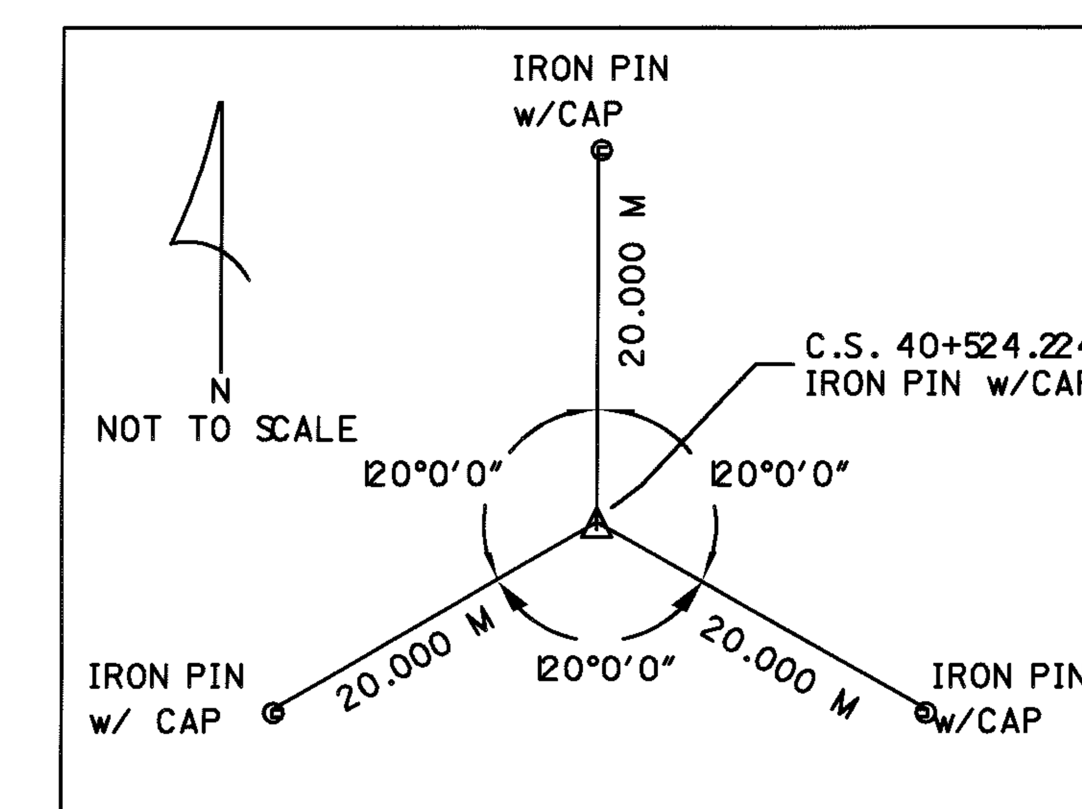
T.S. 40+038.582



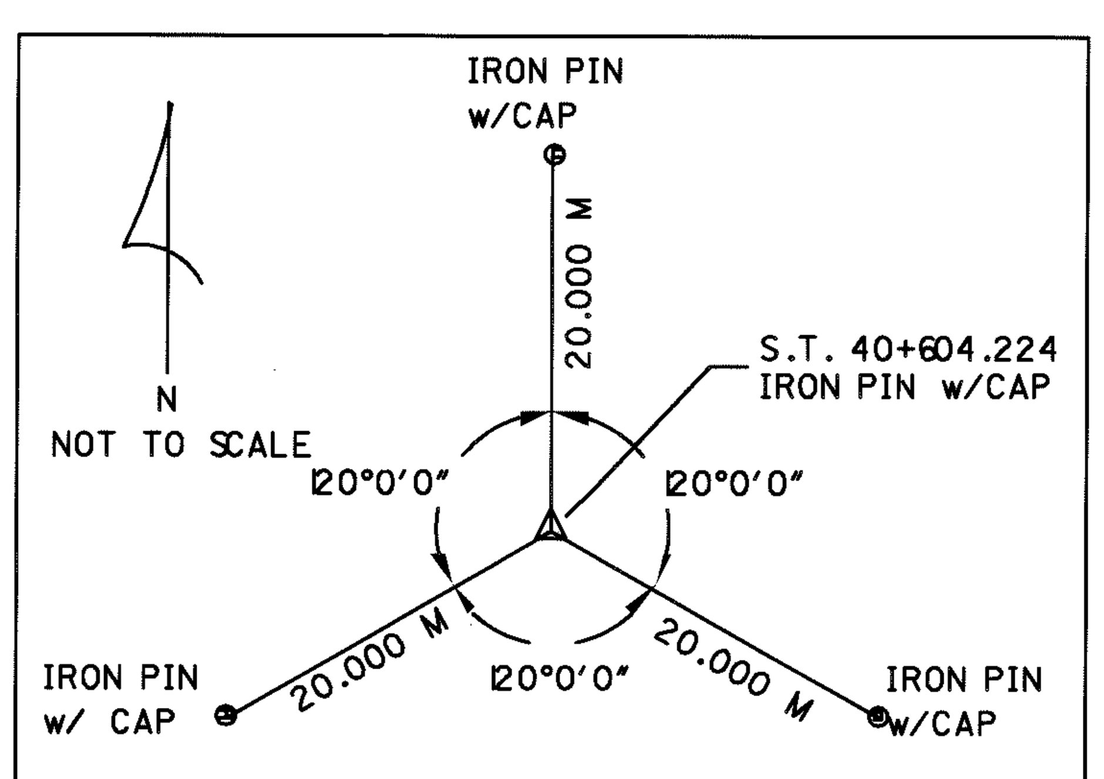
S.C. 40+118.582



P.O.C. 40+340.000



C.S. 40+524.224



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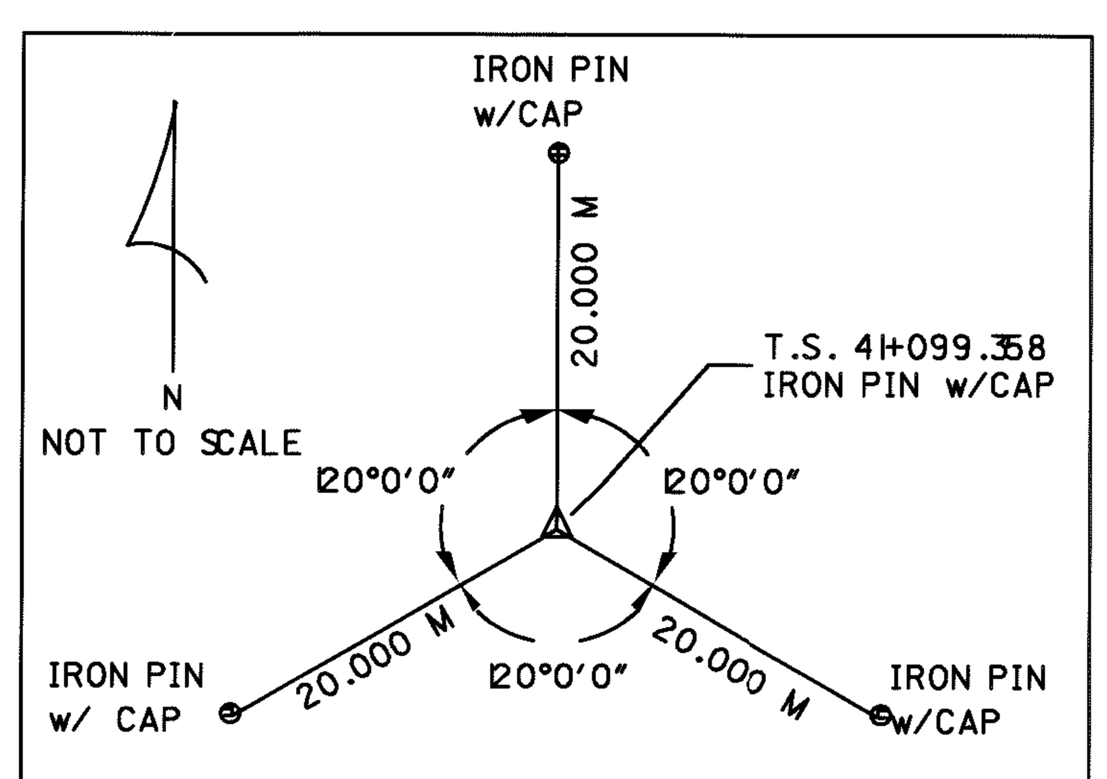
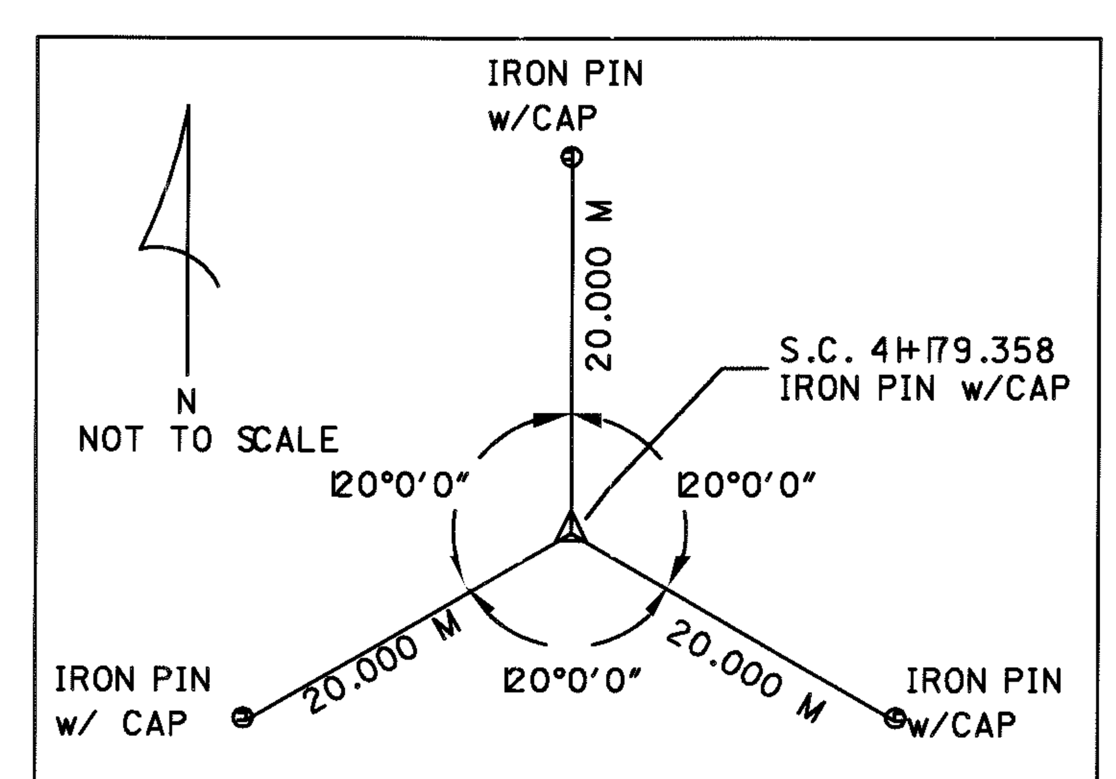
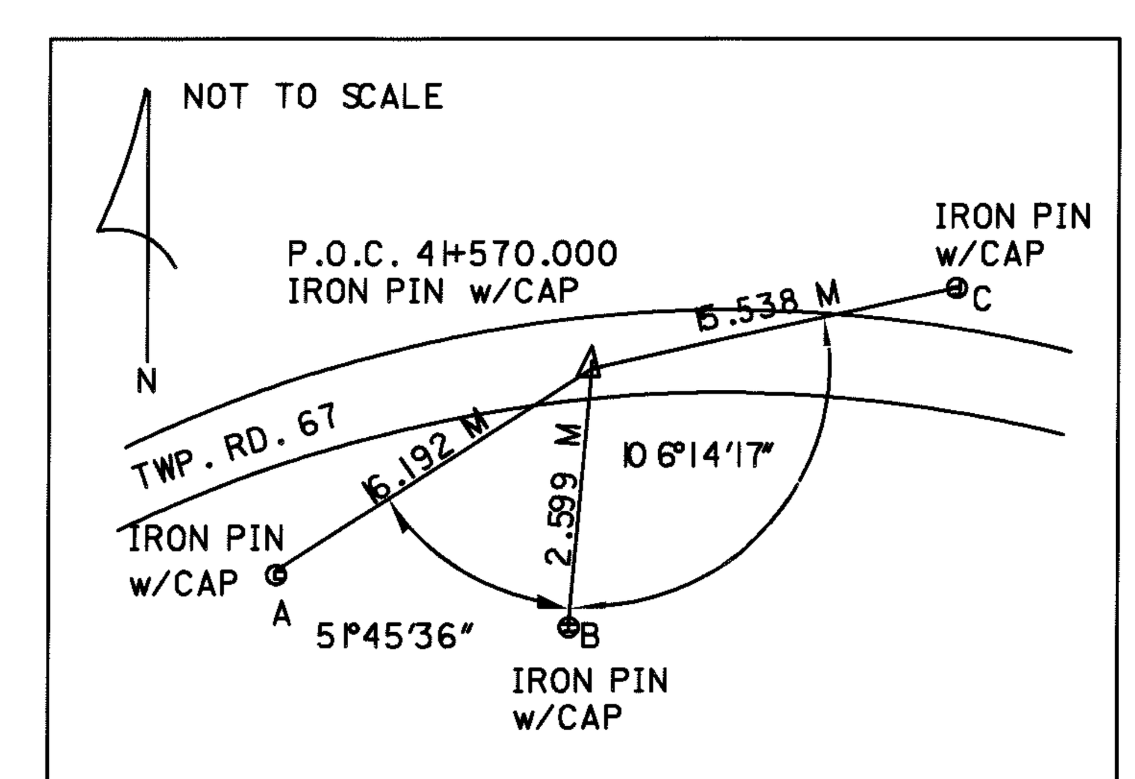


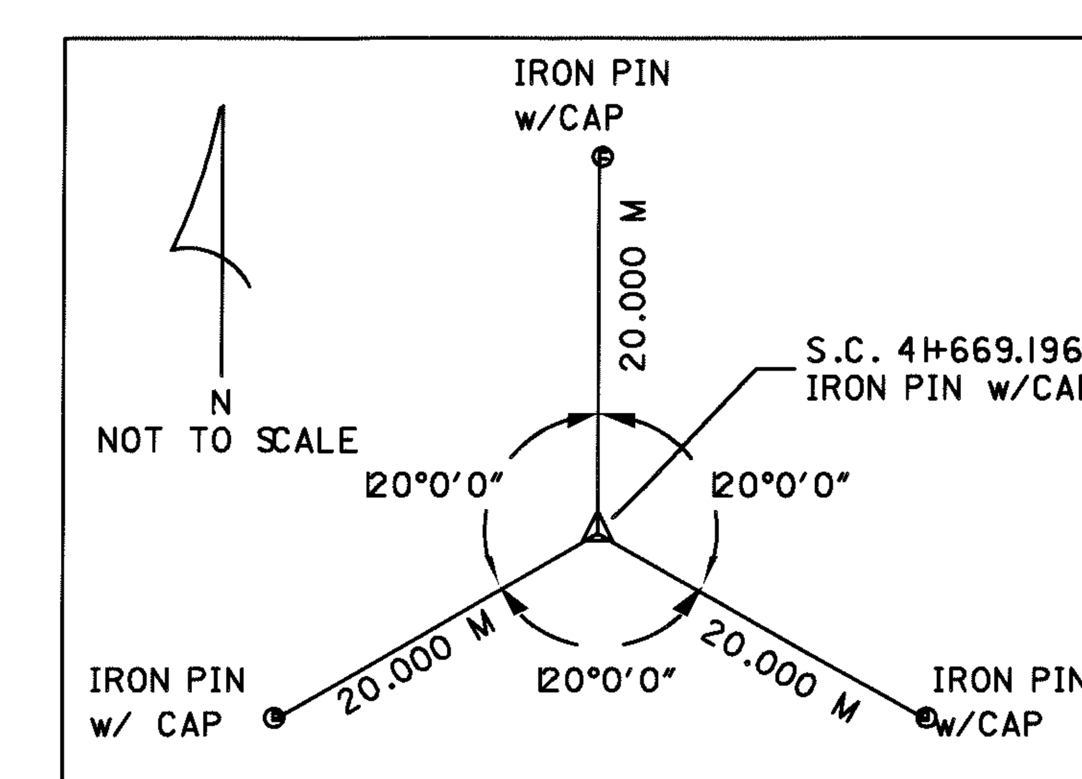
T.S. 41+099.358



S.C. 41+179.358



P.O.C. 41+570.000



C.S. 41+669.196

NOTE: SEE COORDINATE TABLE

CALCULATED

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CENTERLINE REFERENCES

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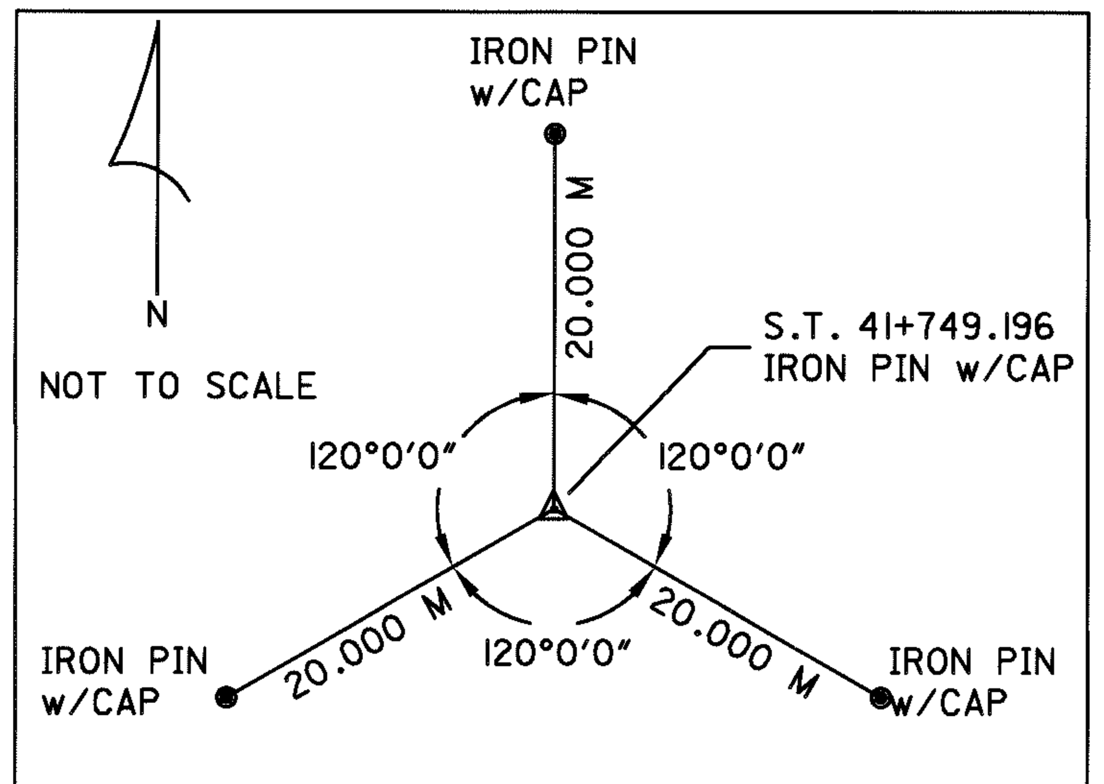
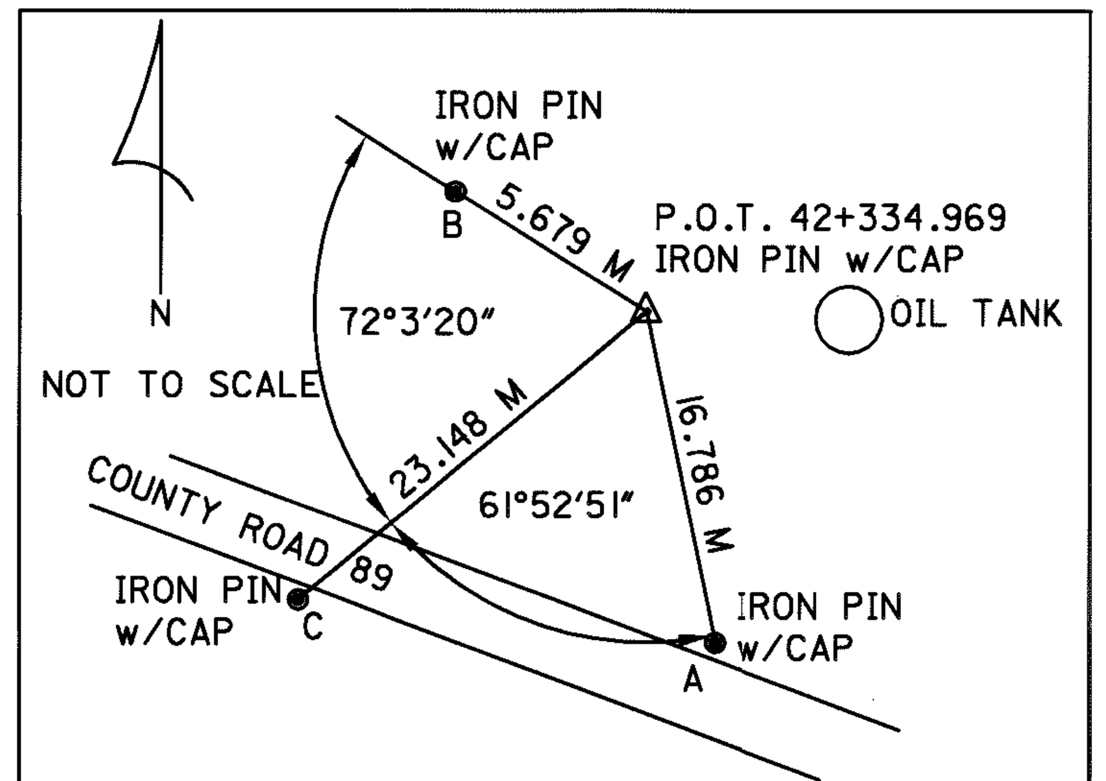
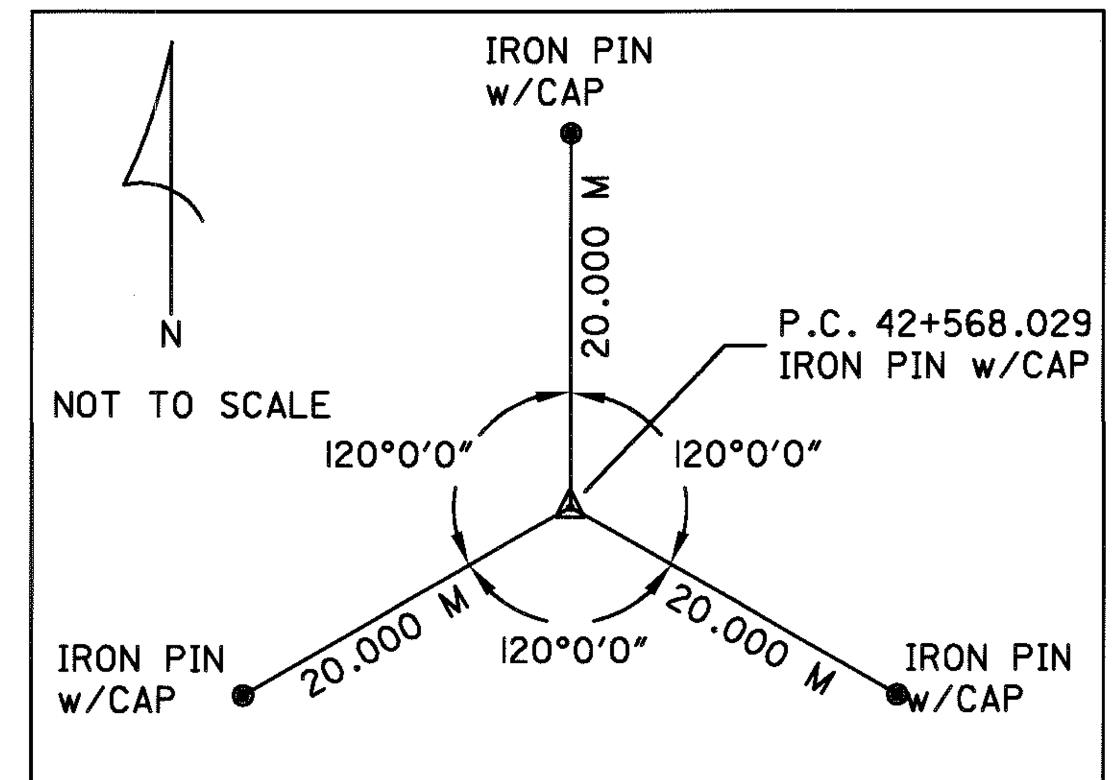


S.T. 41+749.196

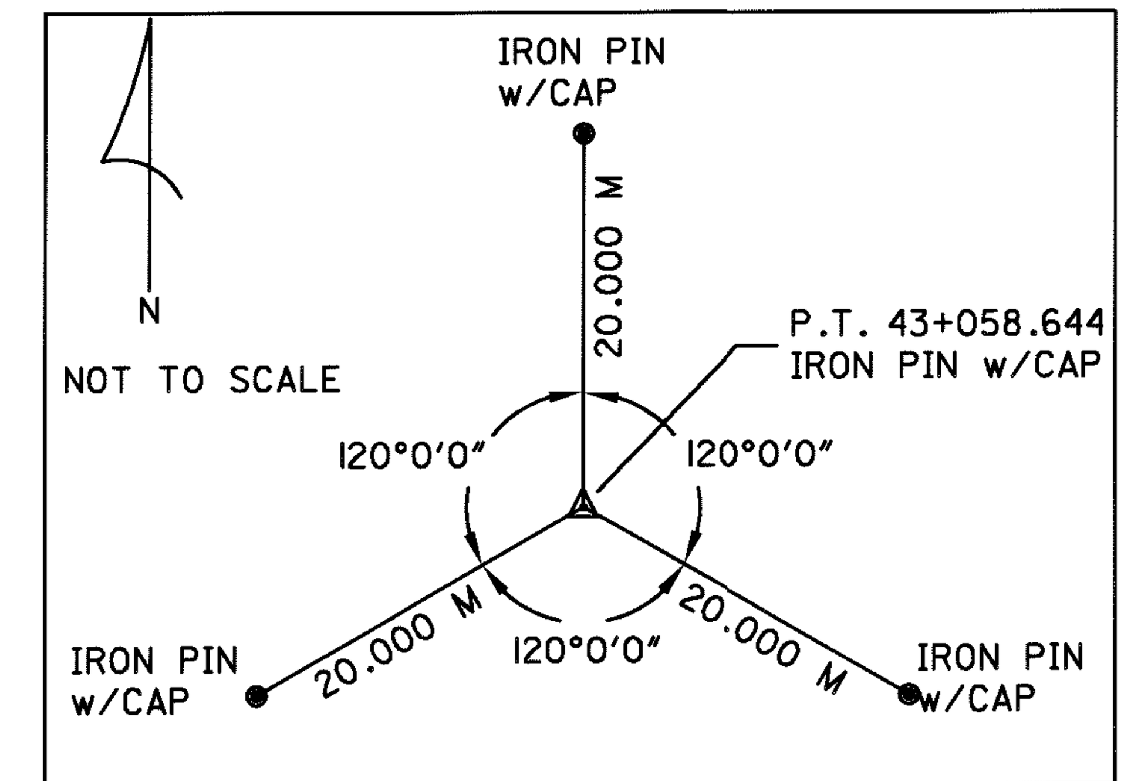


P.O.T. 42+334.969

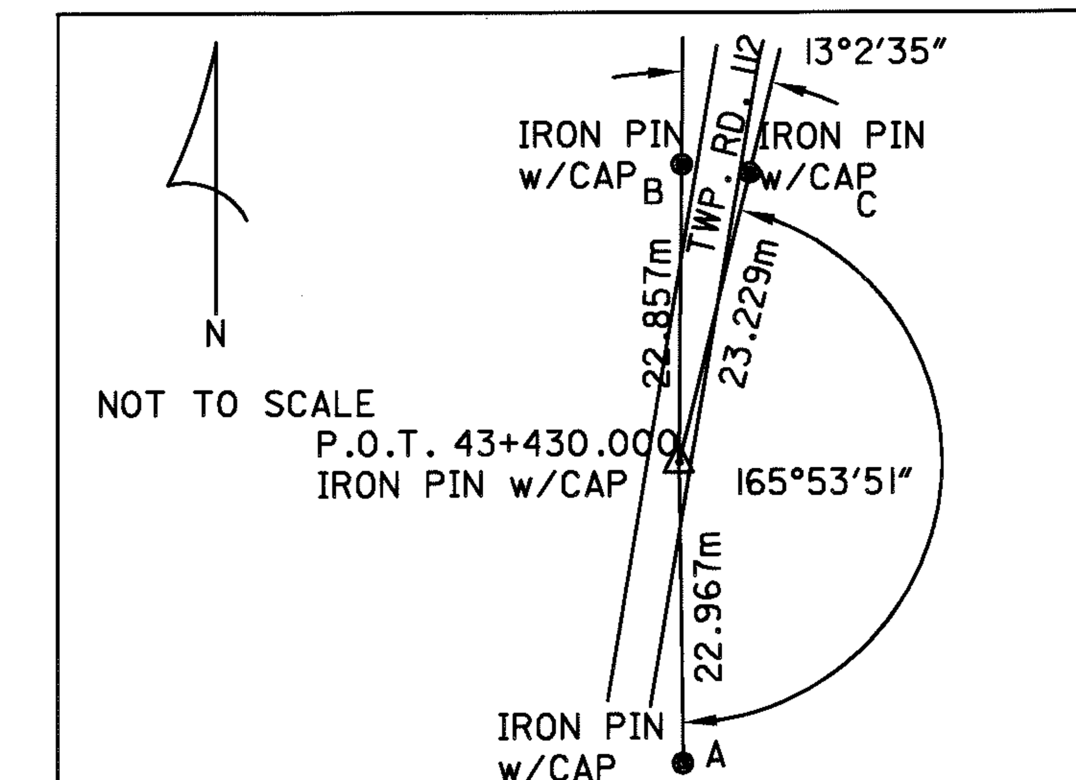
= P.O.T. 2+245.338 C.R. 89



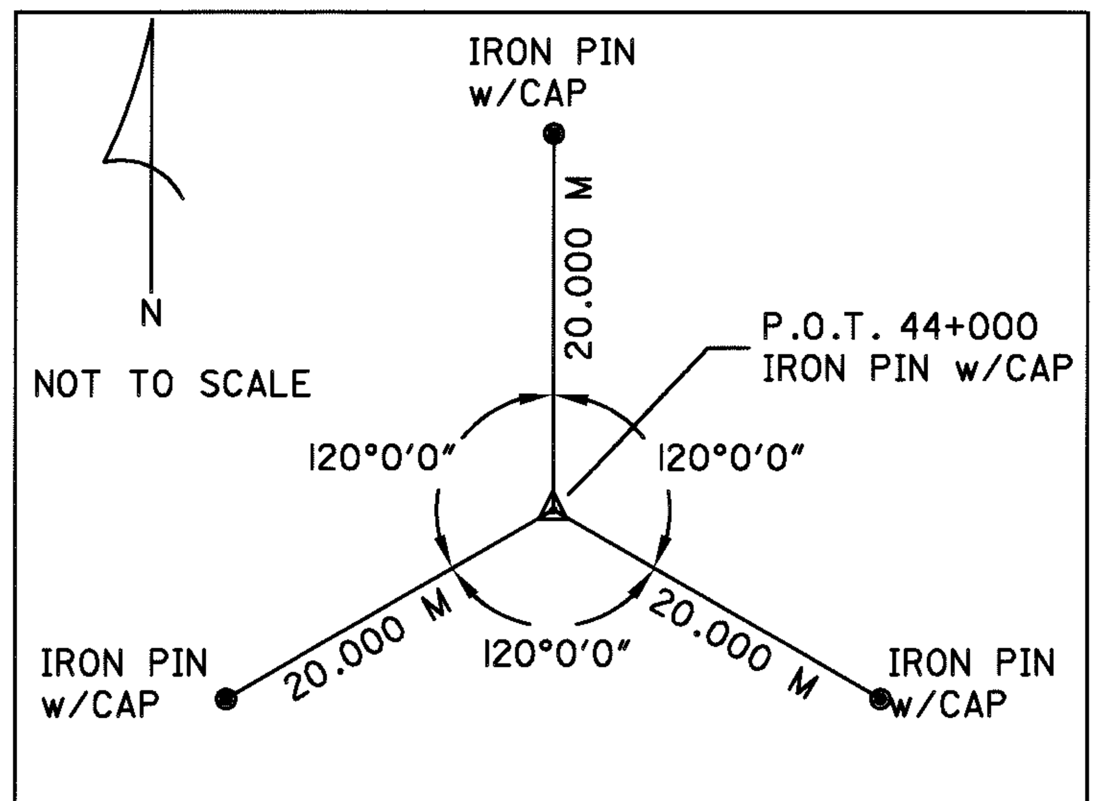
P.C. 42+568.029



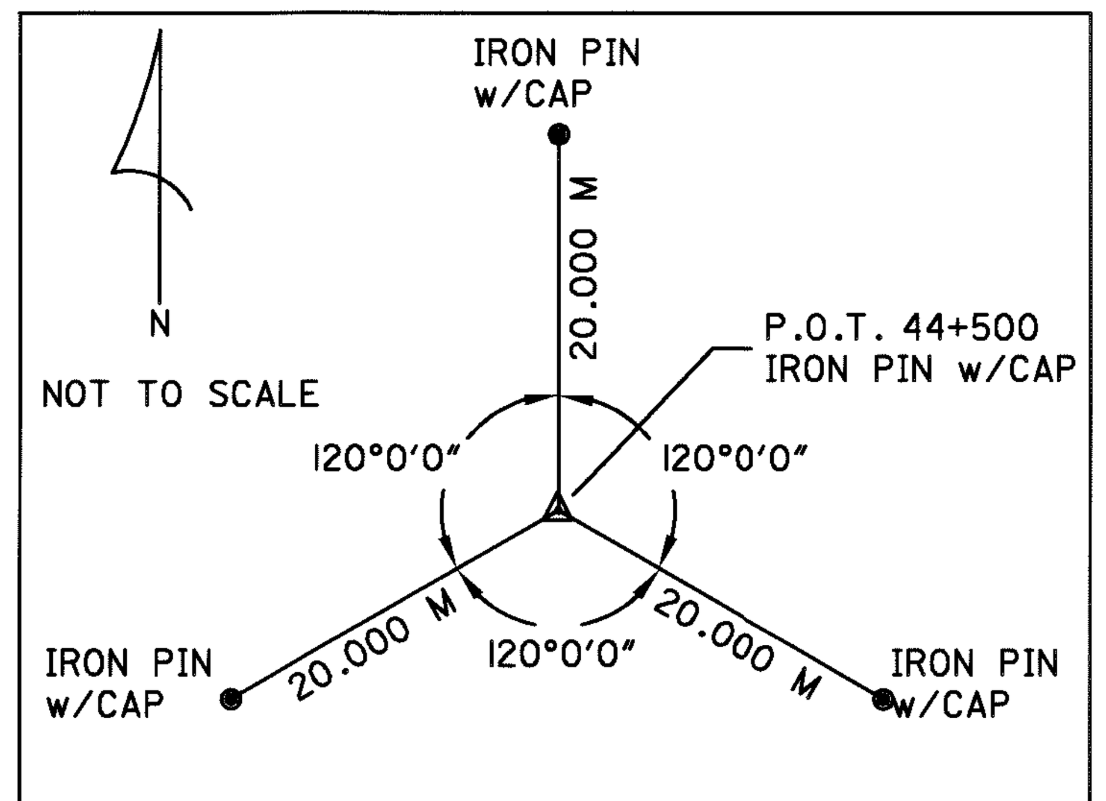
P.T. 43+058.644



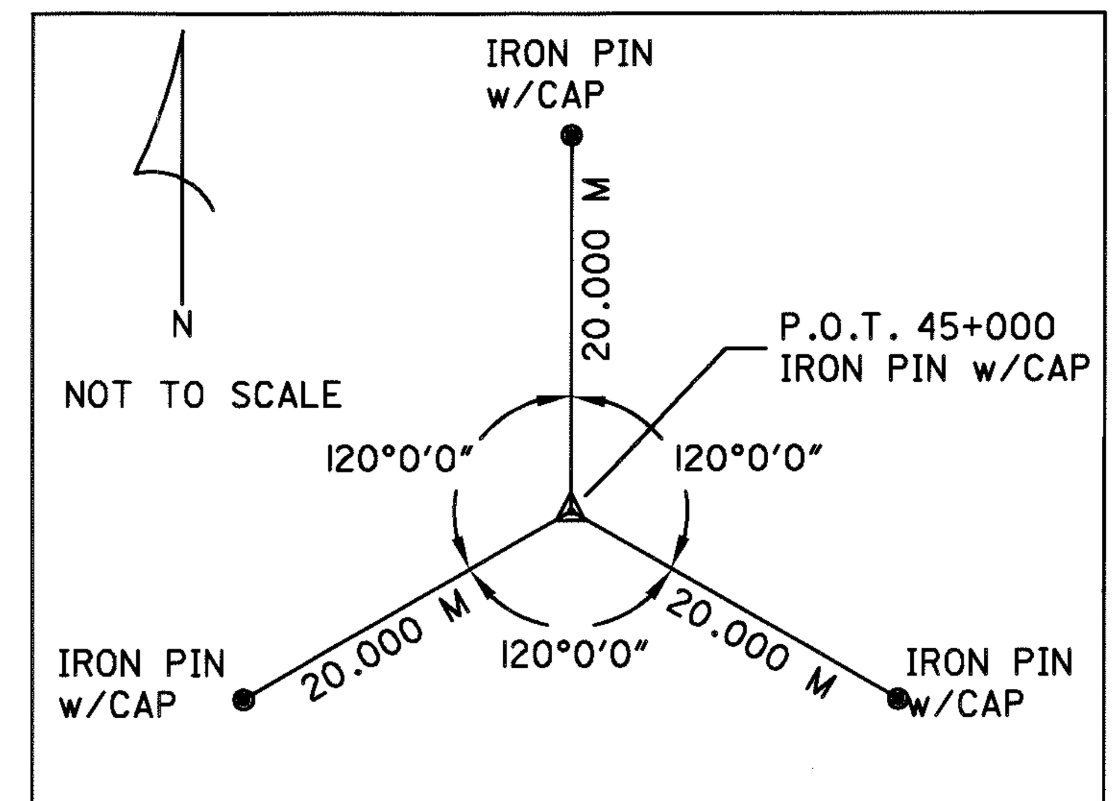
P.O.T. 43+430.000



P.O.T. 44+000



P.O.T. 44+500



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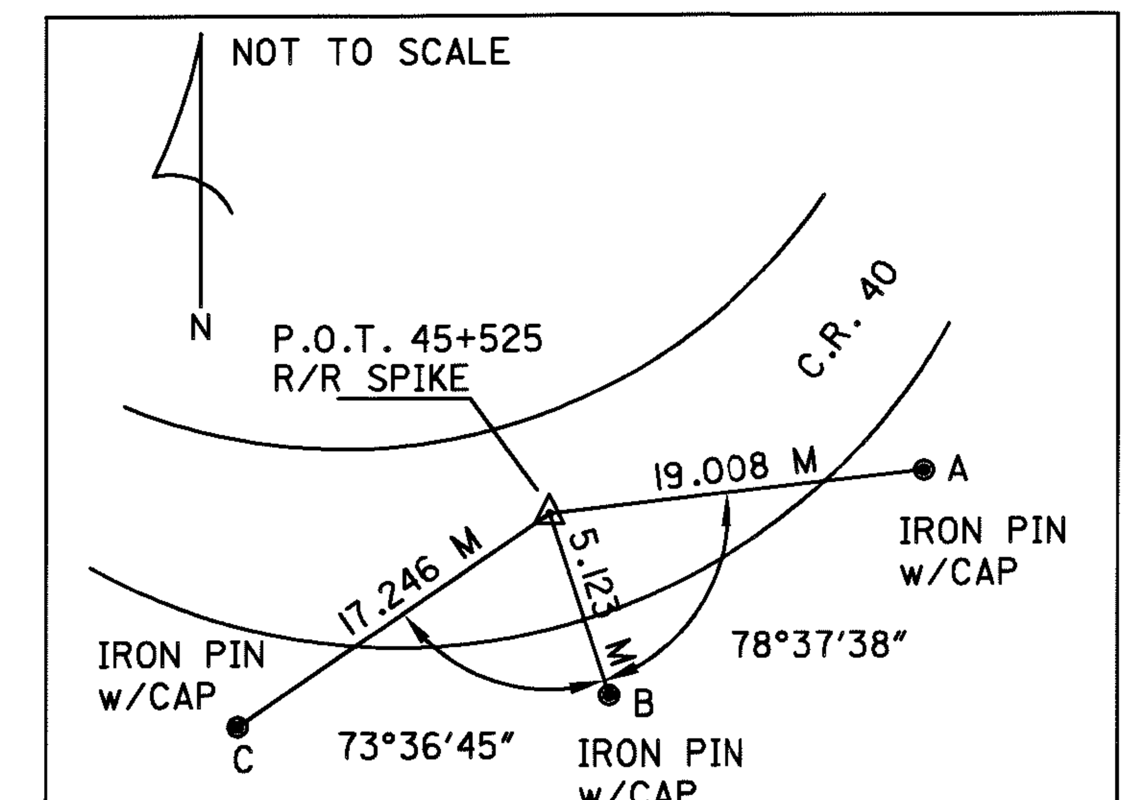
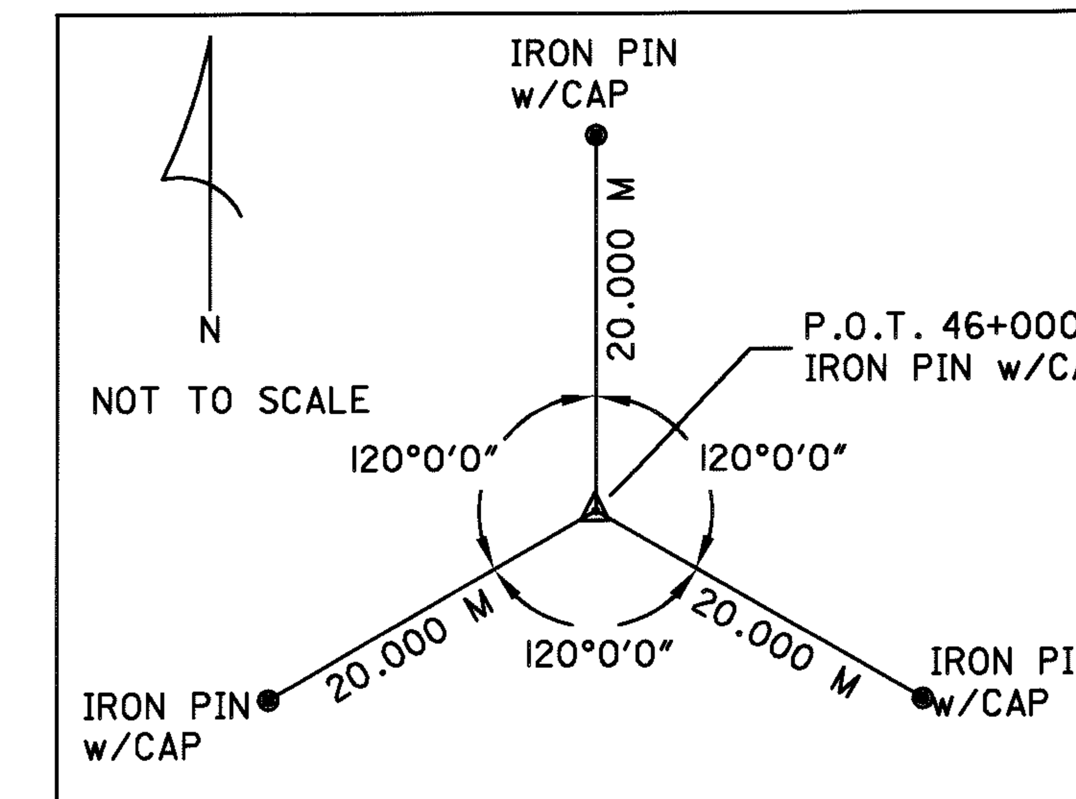
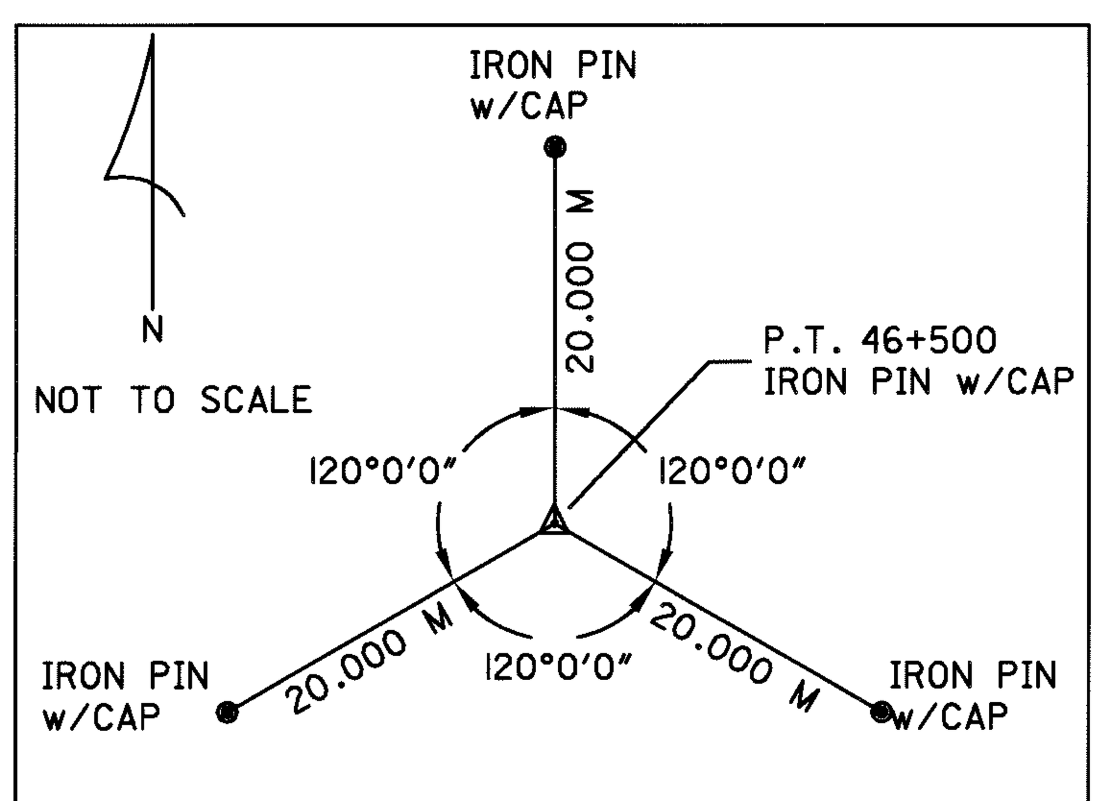


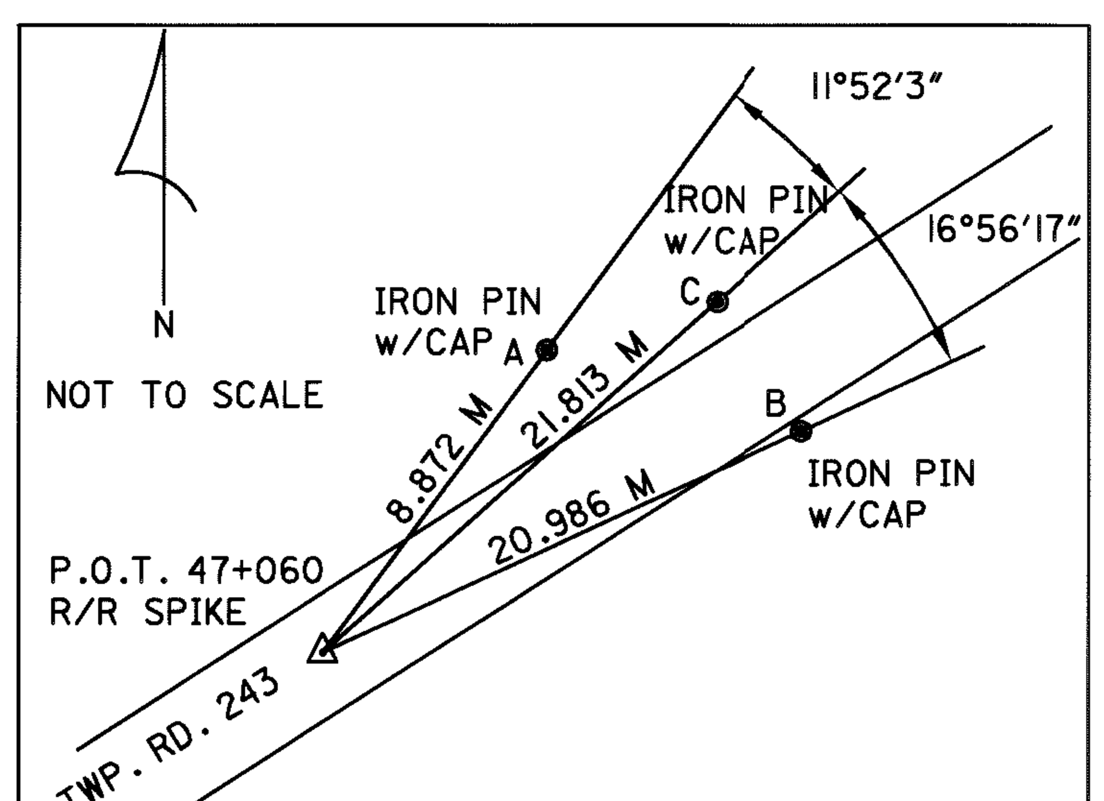
P.O.T. 45+525



P.O.T. 46+000



P.T. 46+500



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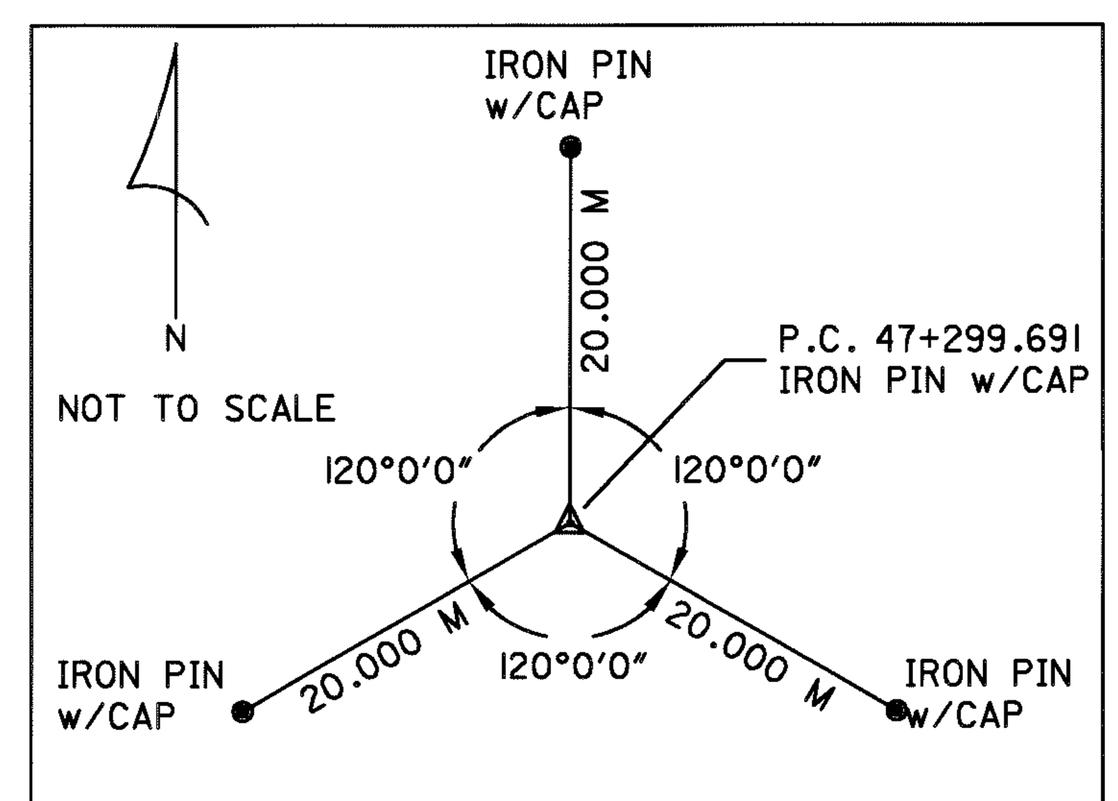
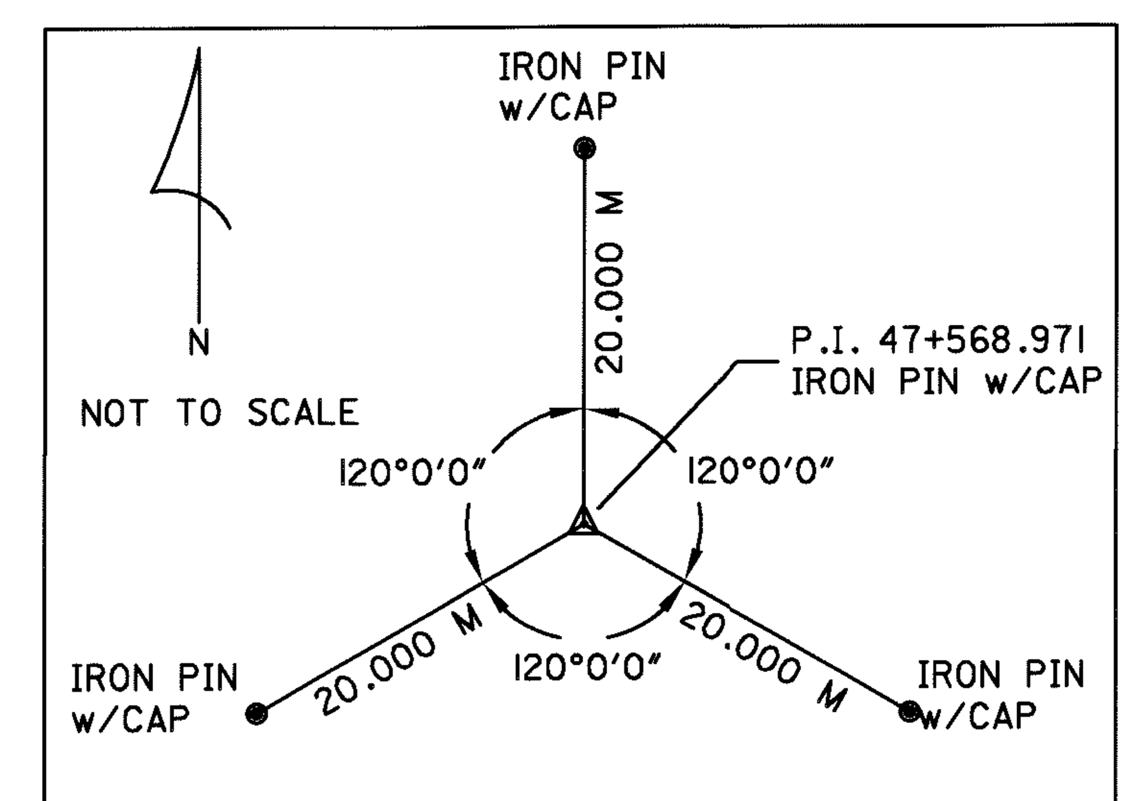


P.C. 47+299.691



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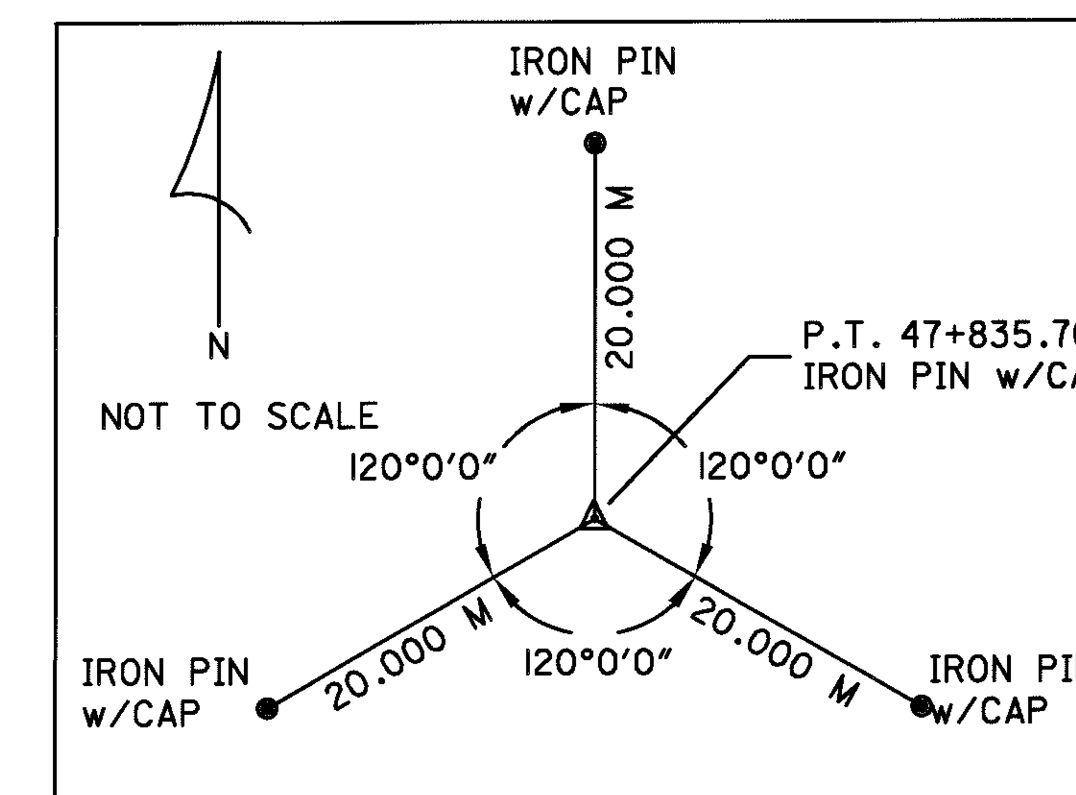

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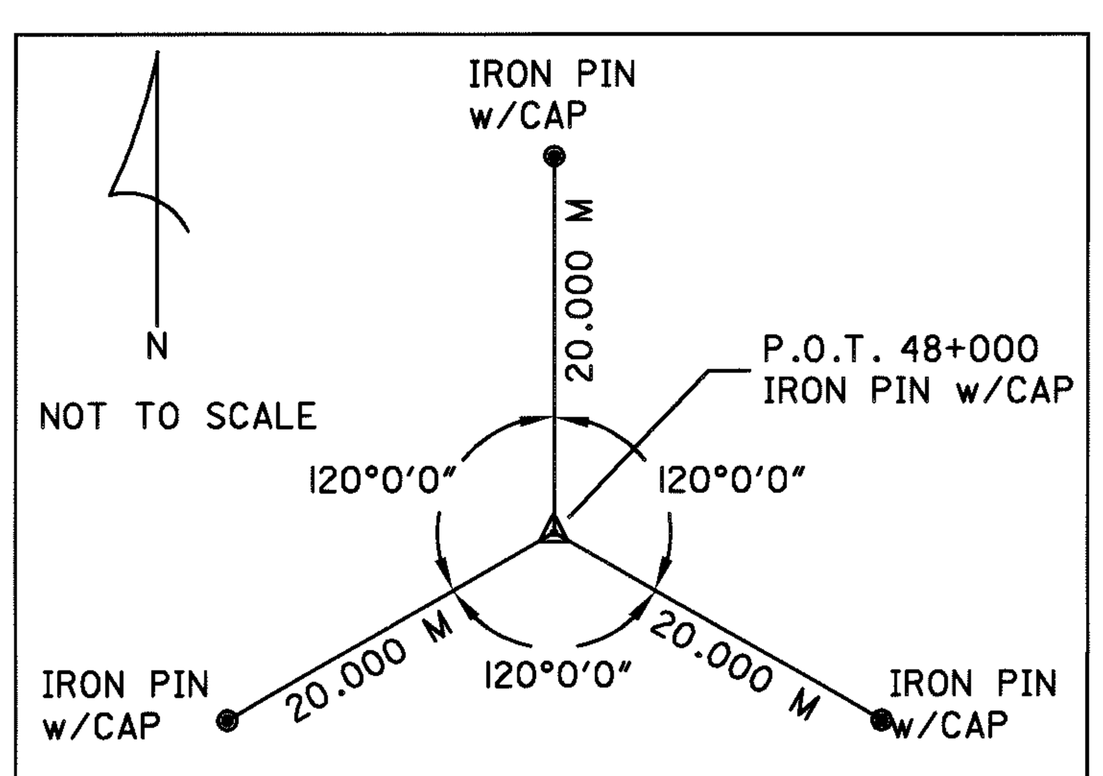

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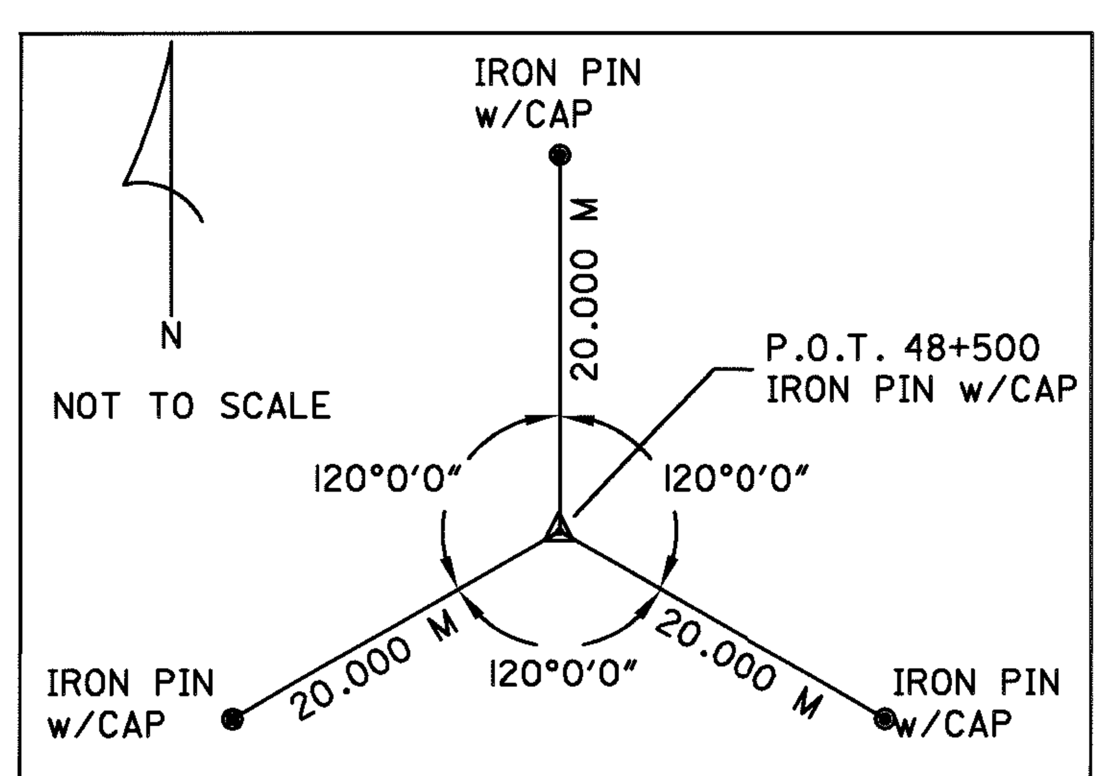

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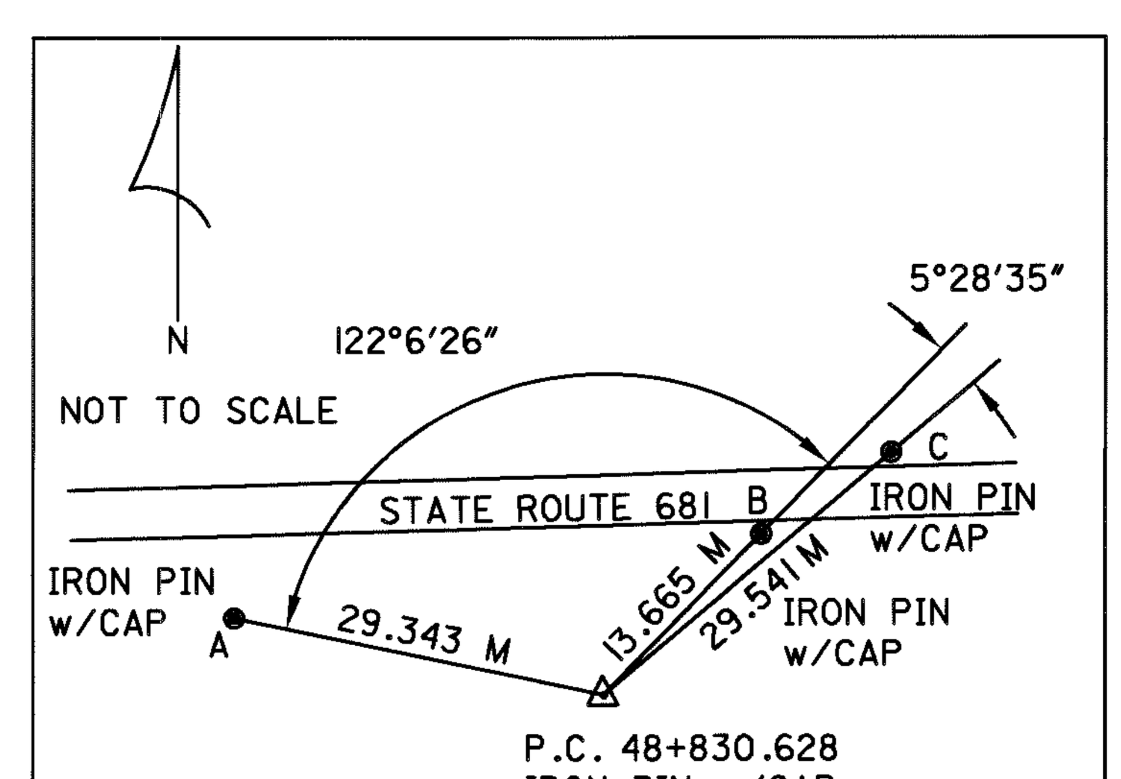

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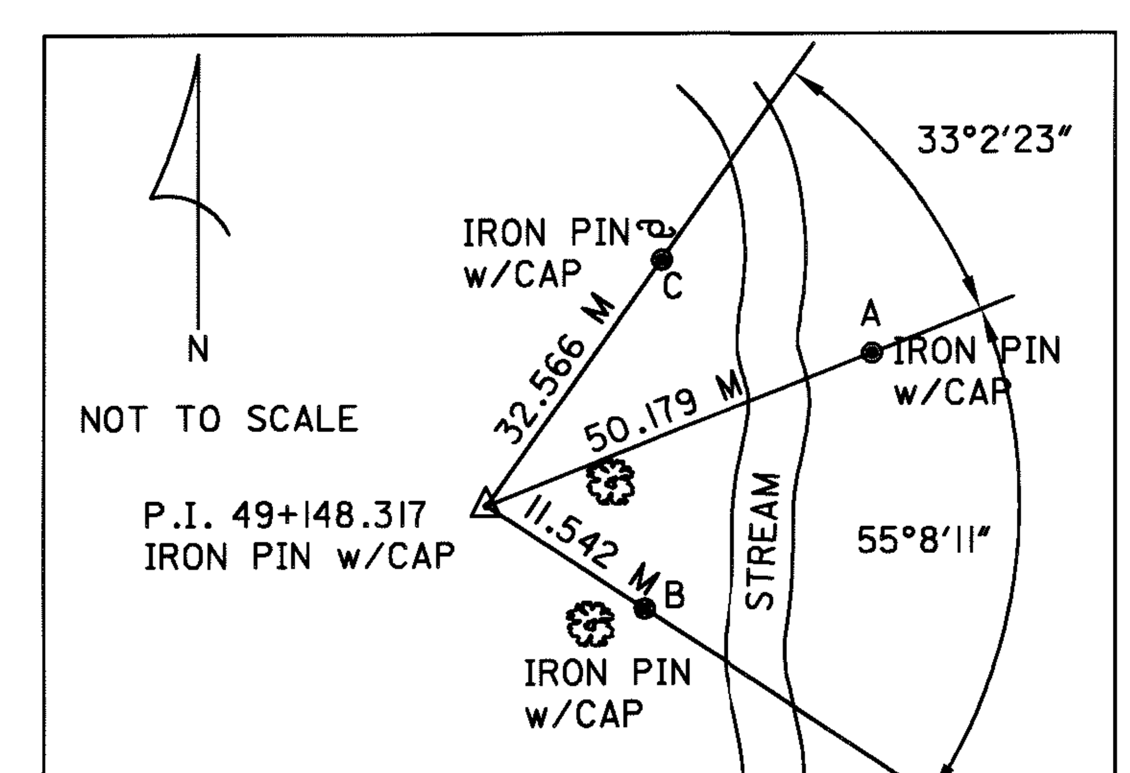

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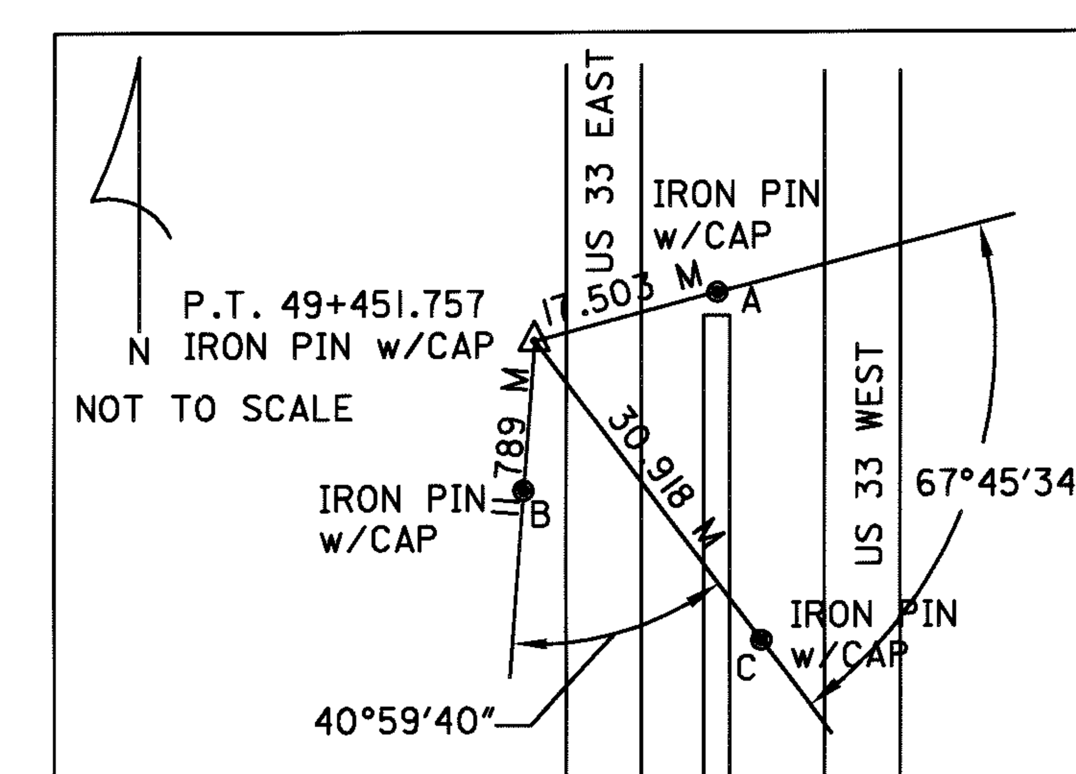

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NOTE: SEE COORDINATE TABLE

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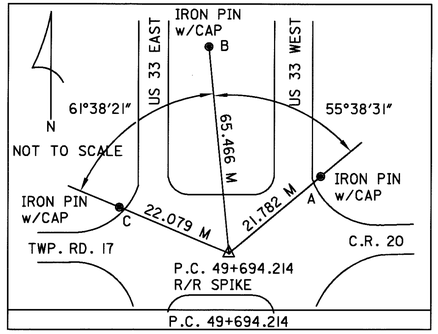

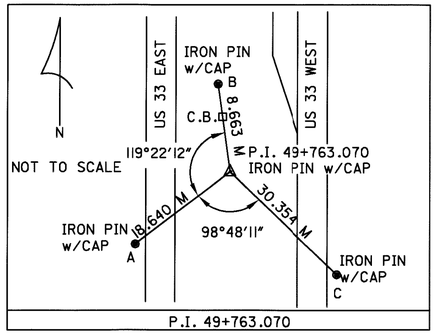

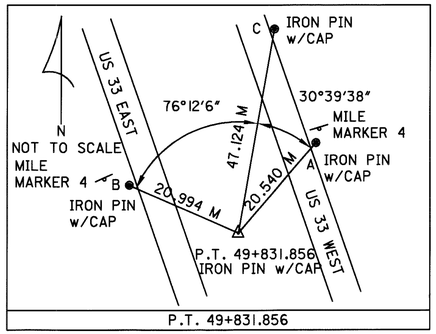

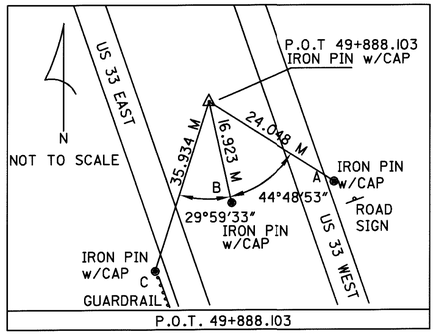

NOTE: SEE COORDINATE TABLE

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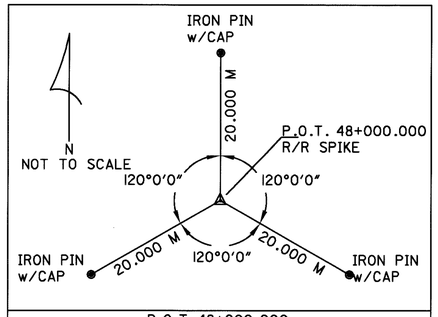

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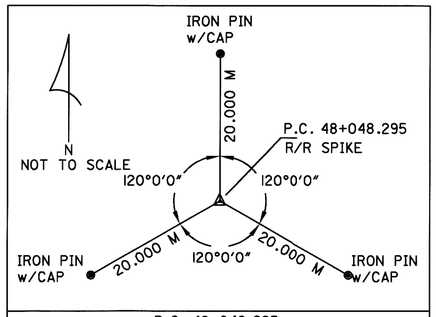
TWP. RD. 55



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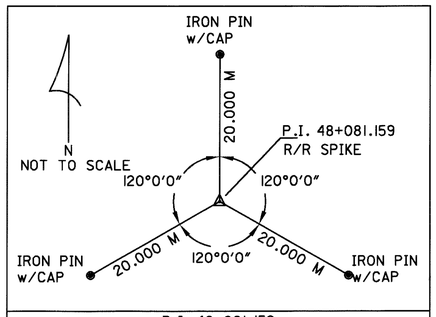

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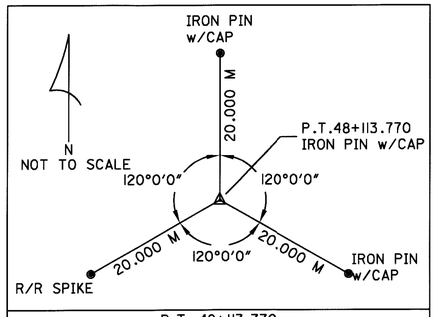

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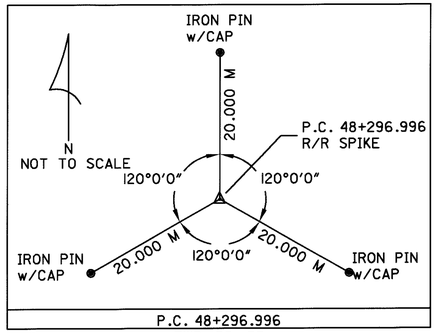

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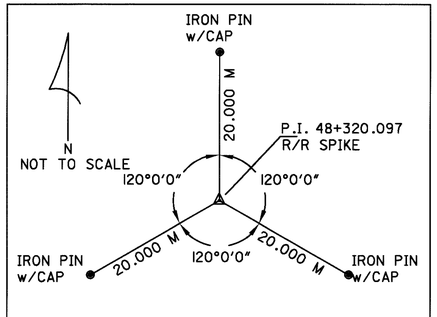

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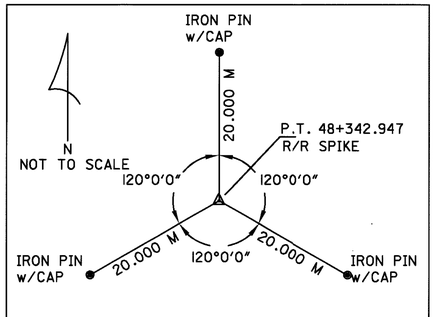

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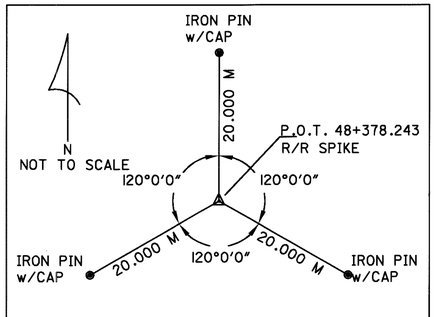

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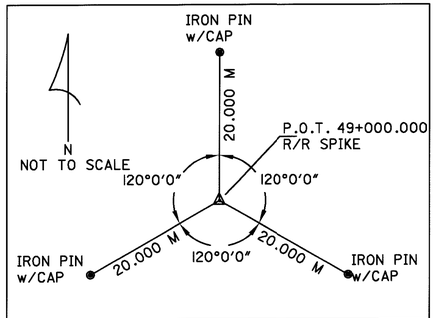

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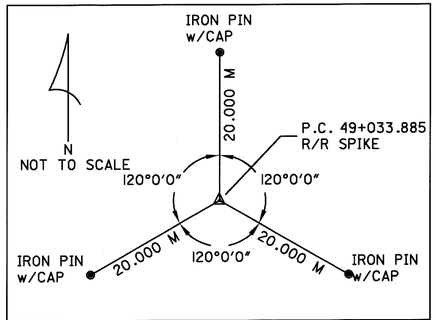

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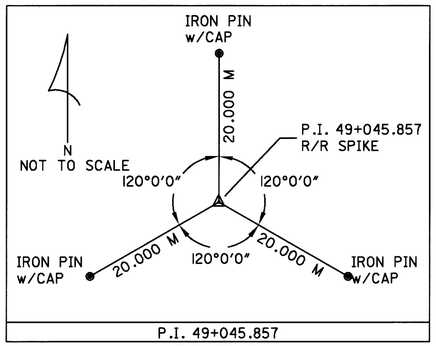

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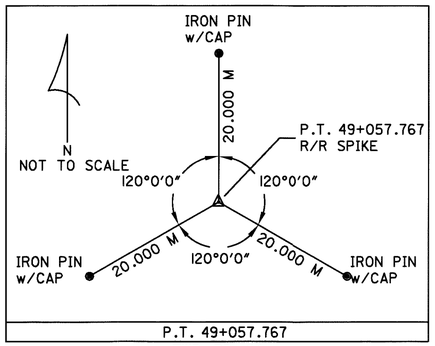

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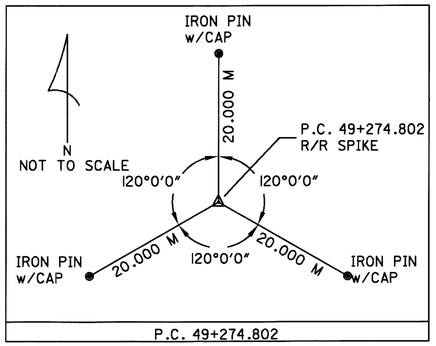

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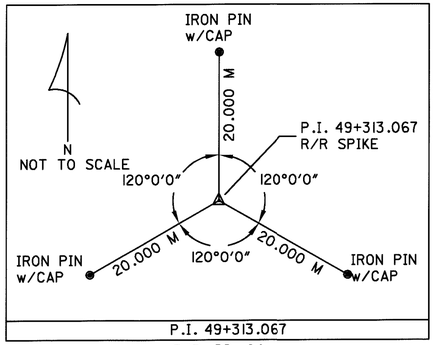

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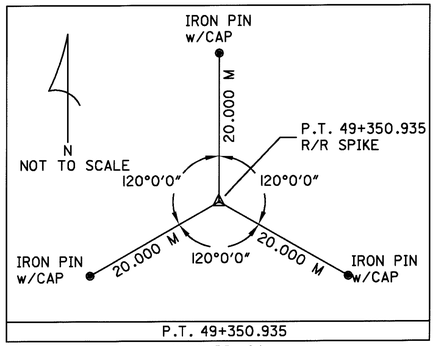

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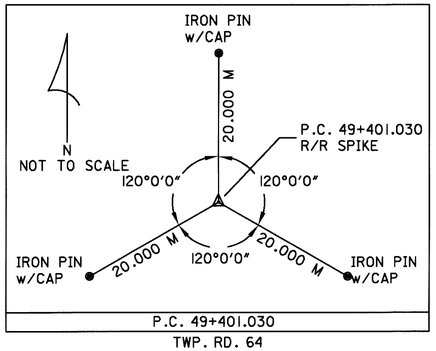

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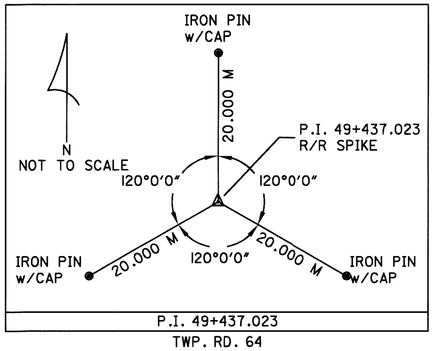

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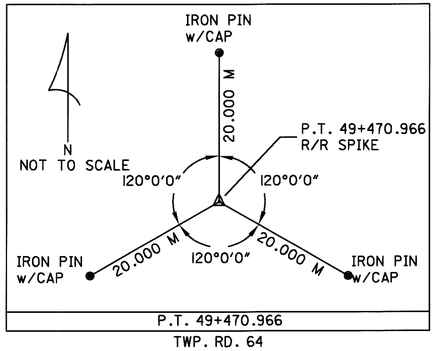

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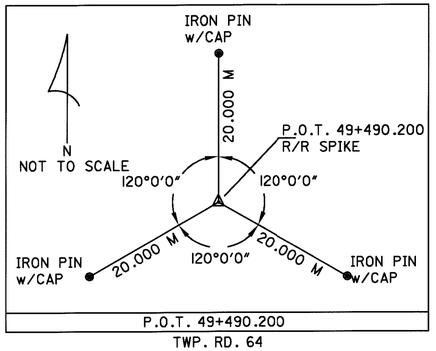

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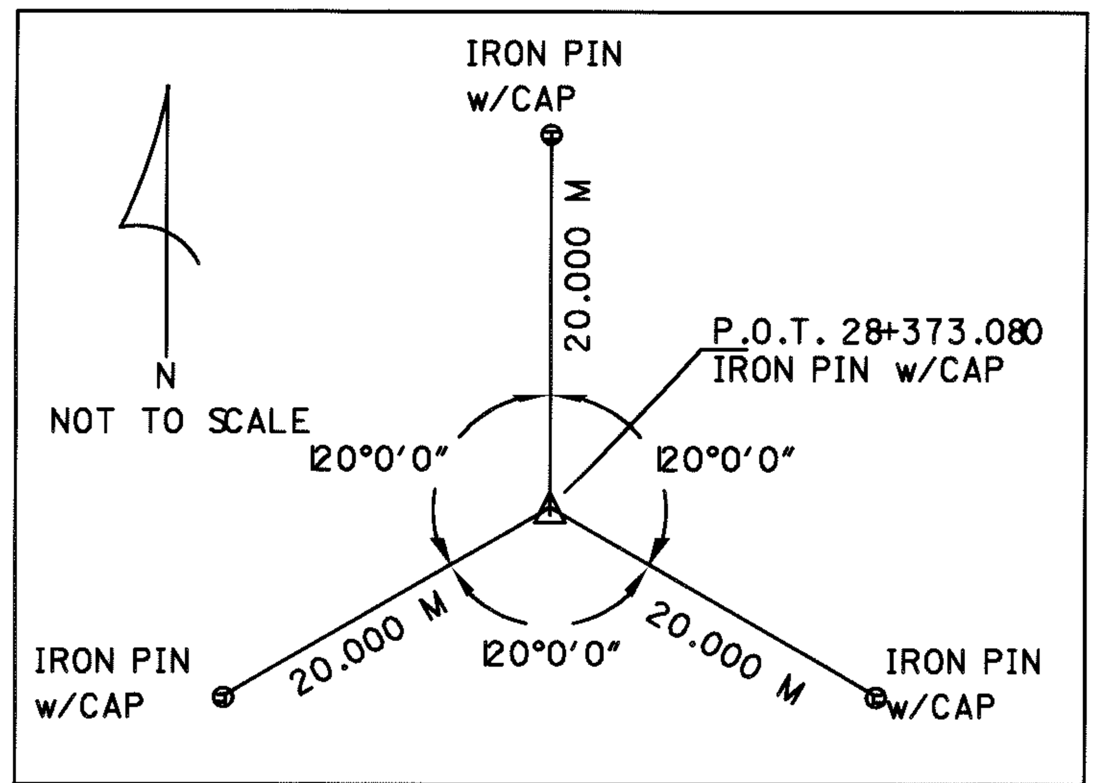

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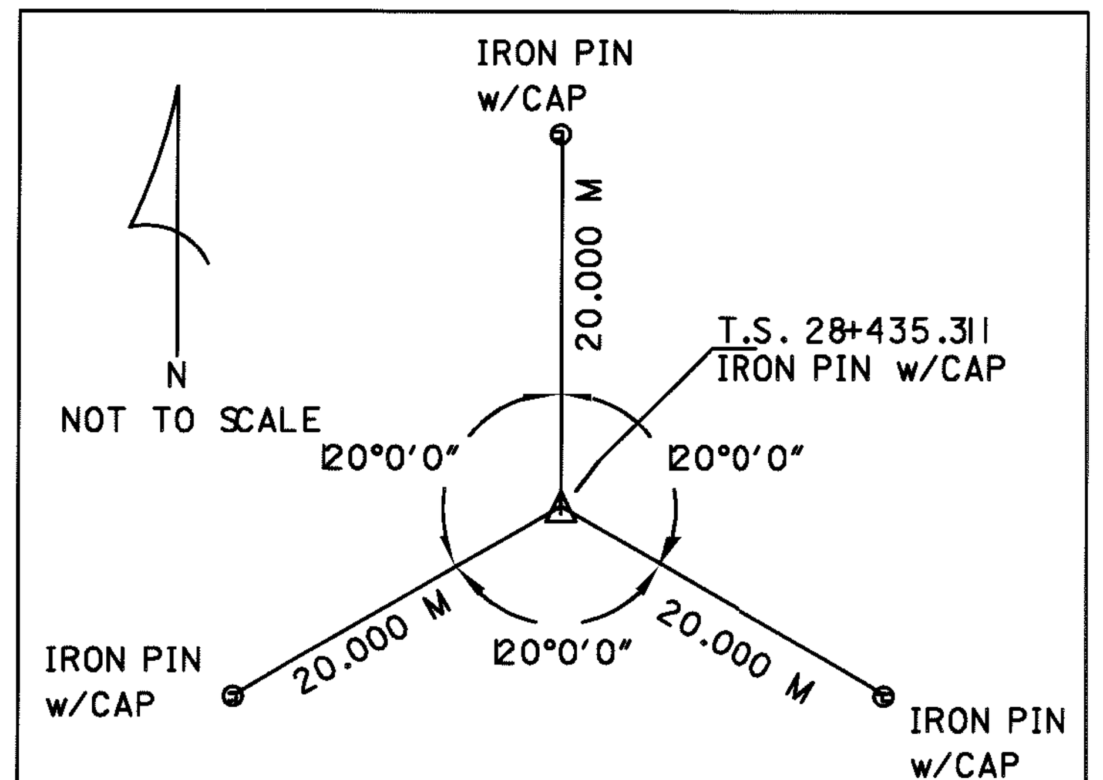

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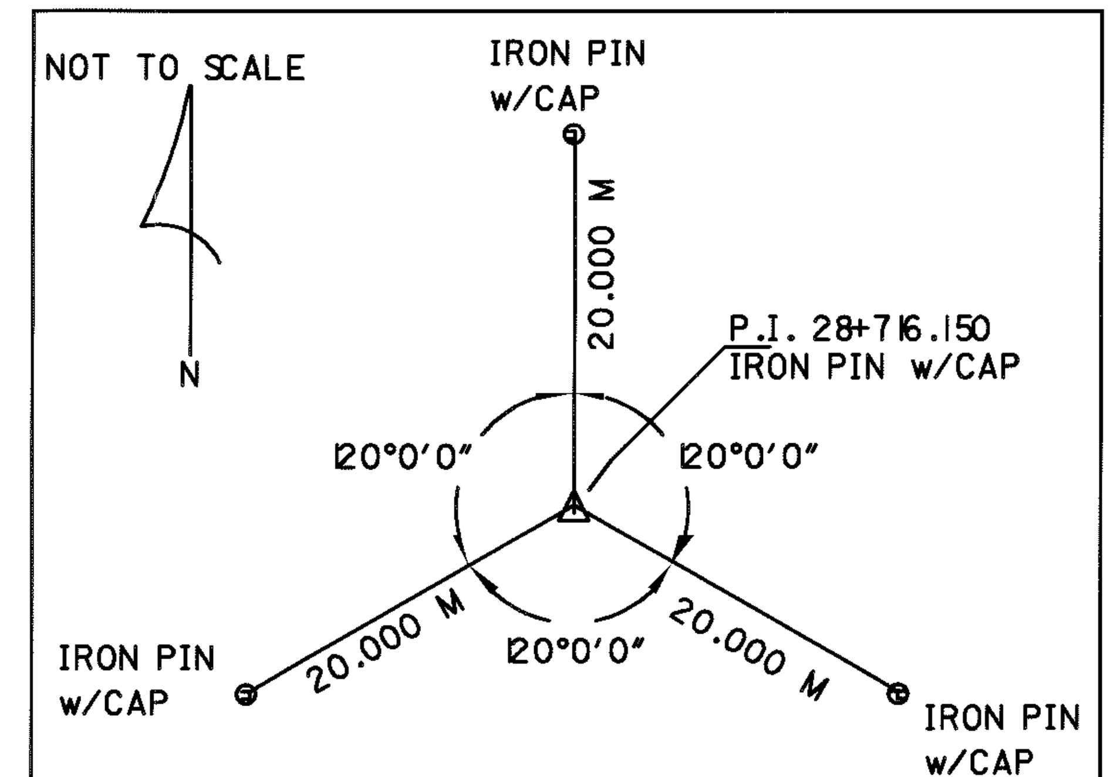

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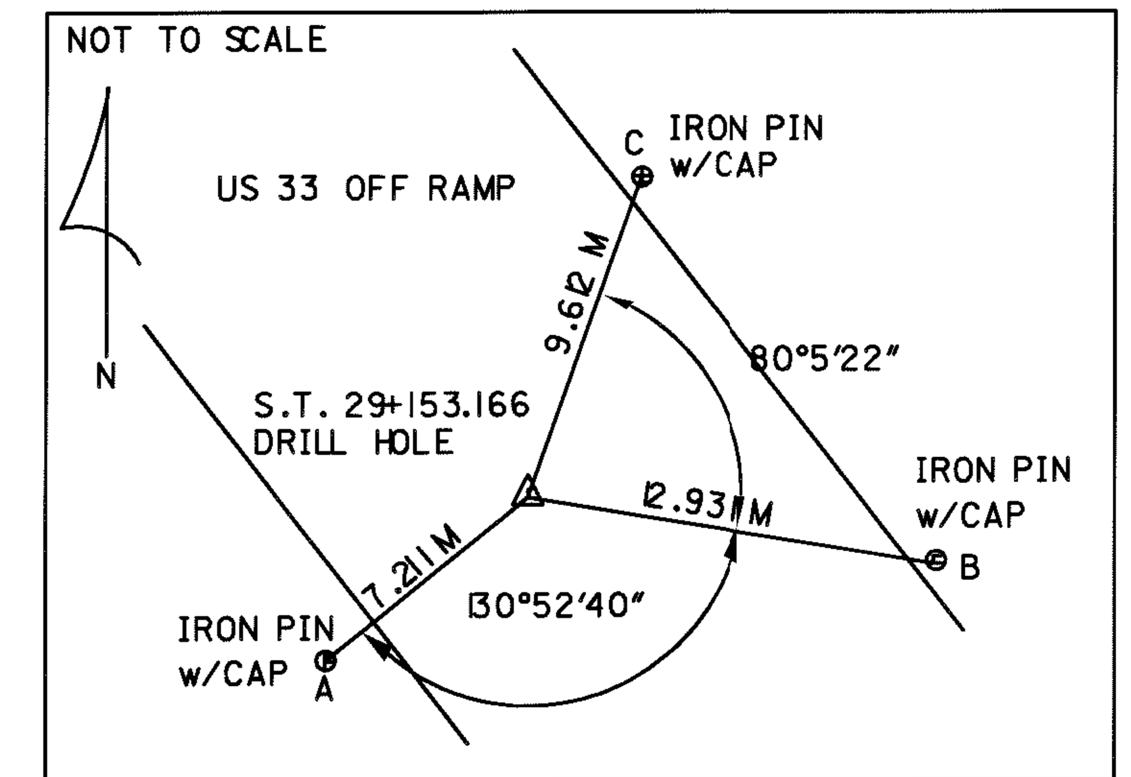

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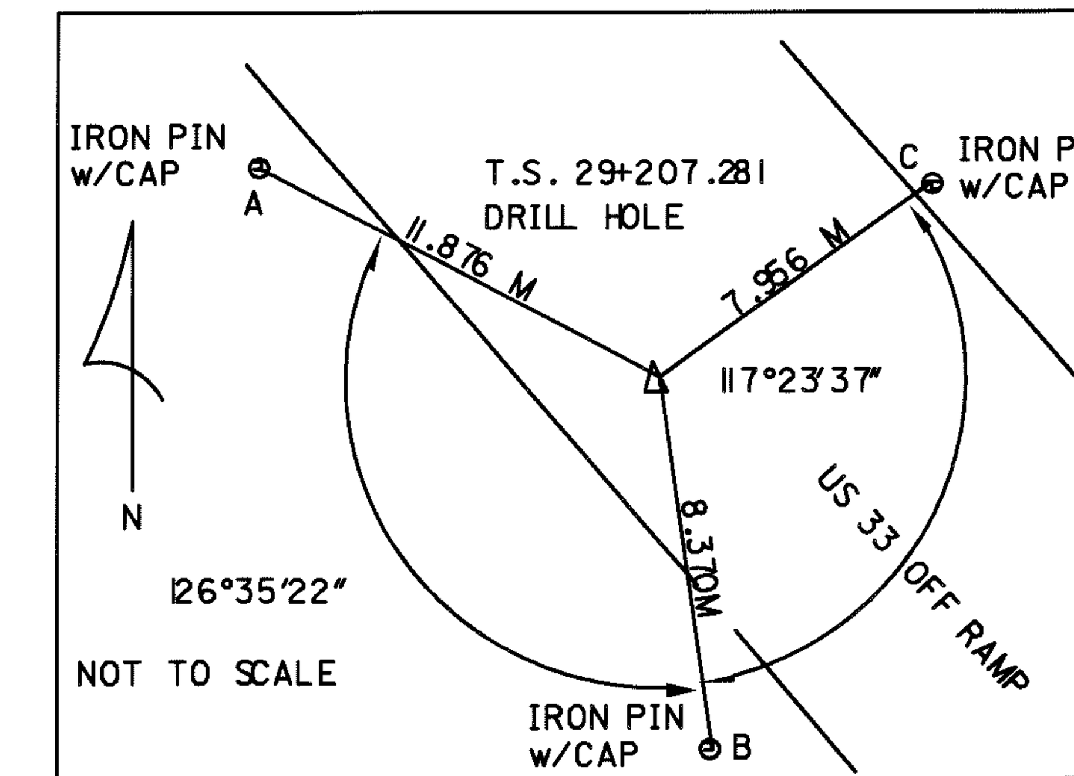

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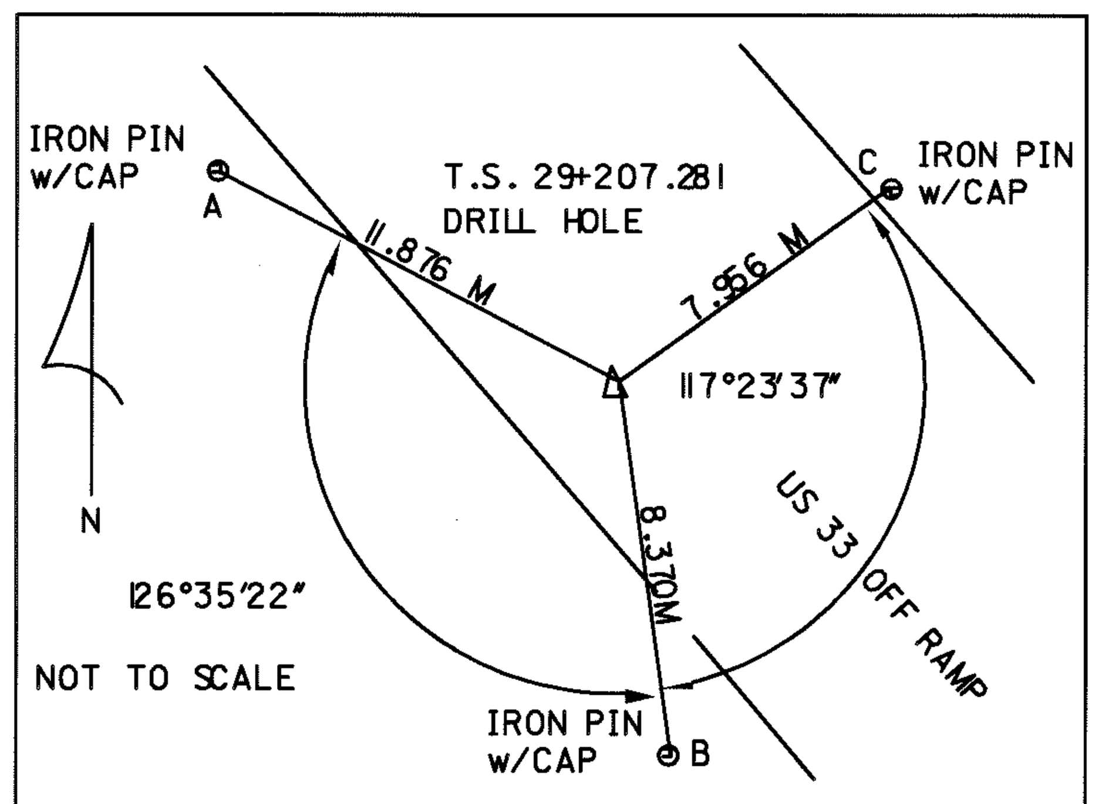

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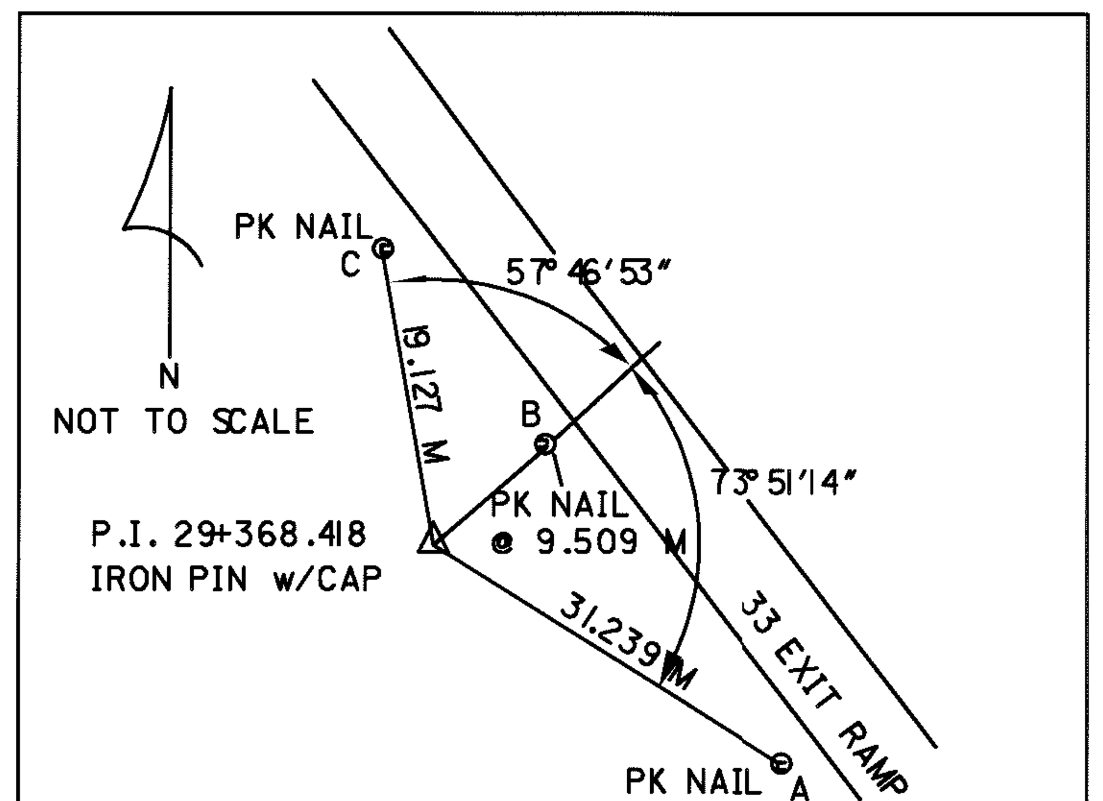

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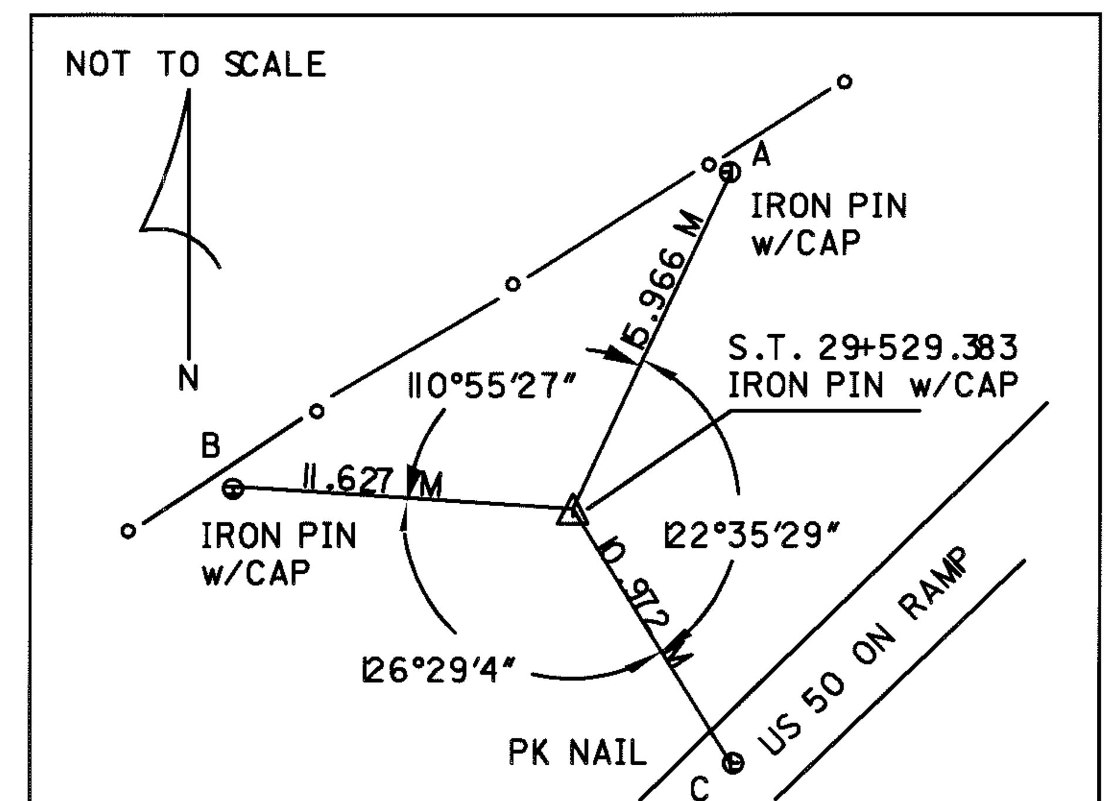

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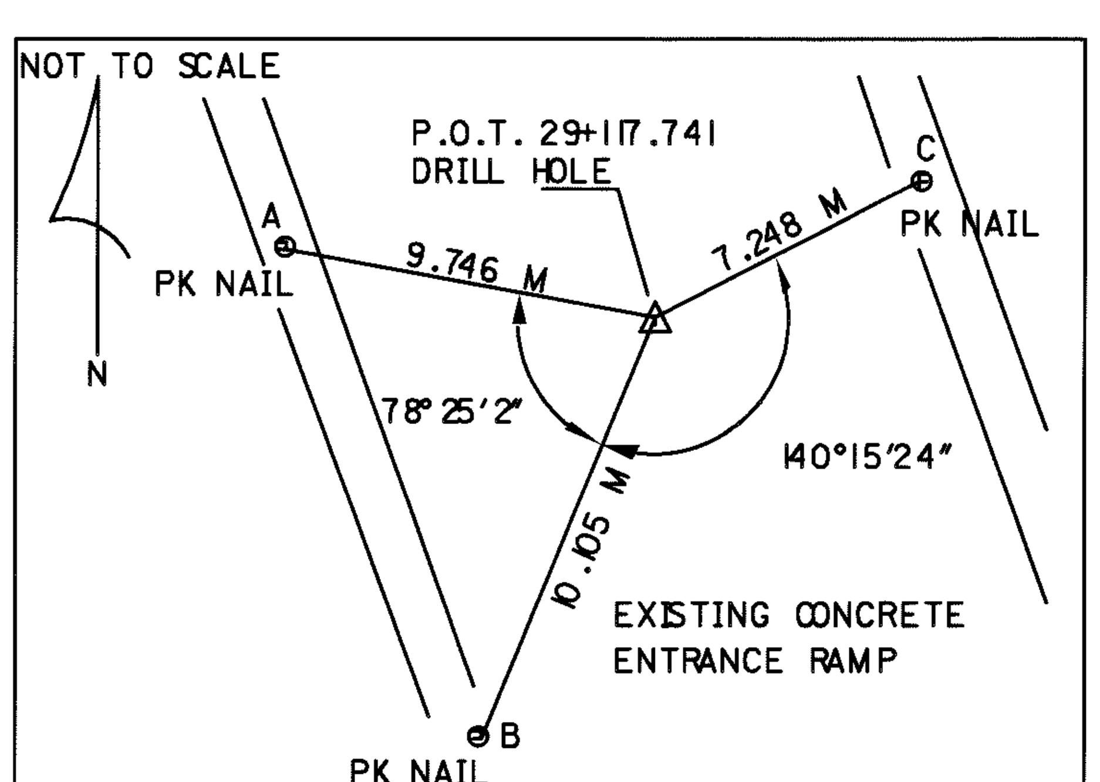

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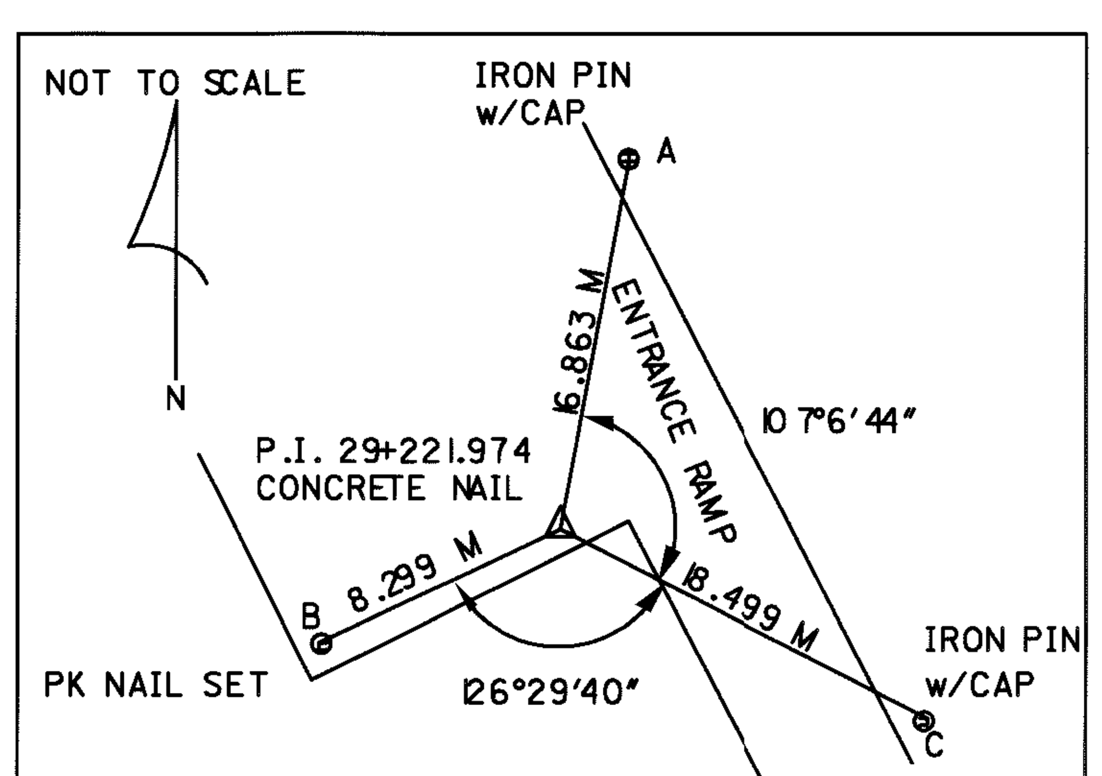

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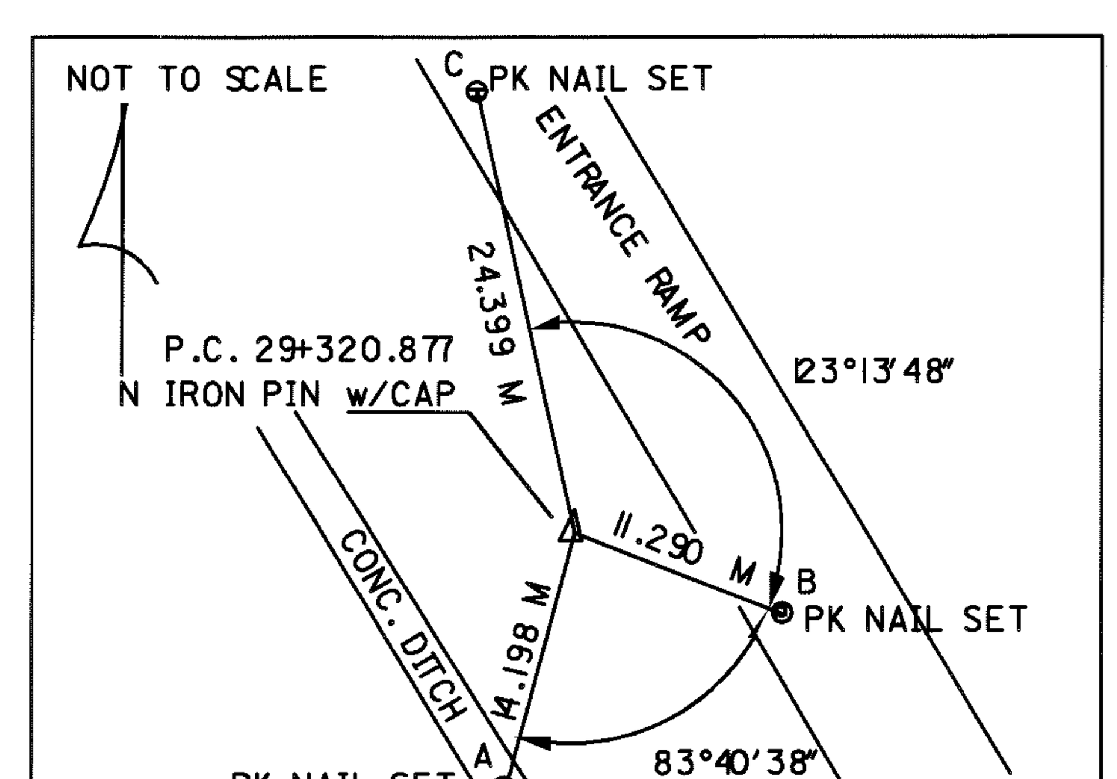

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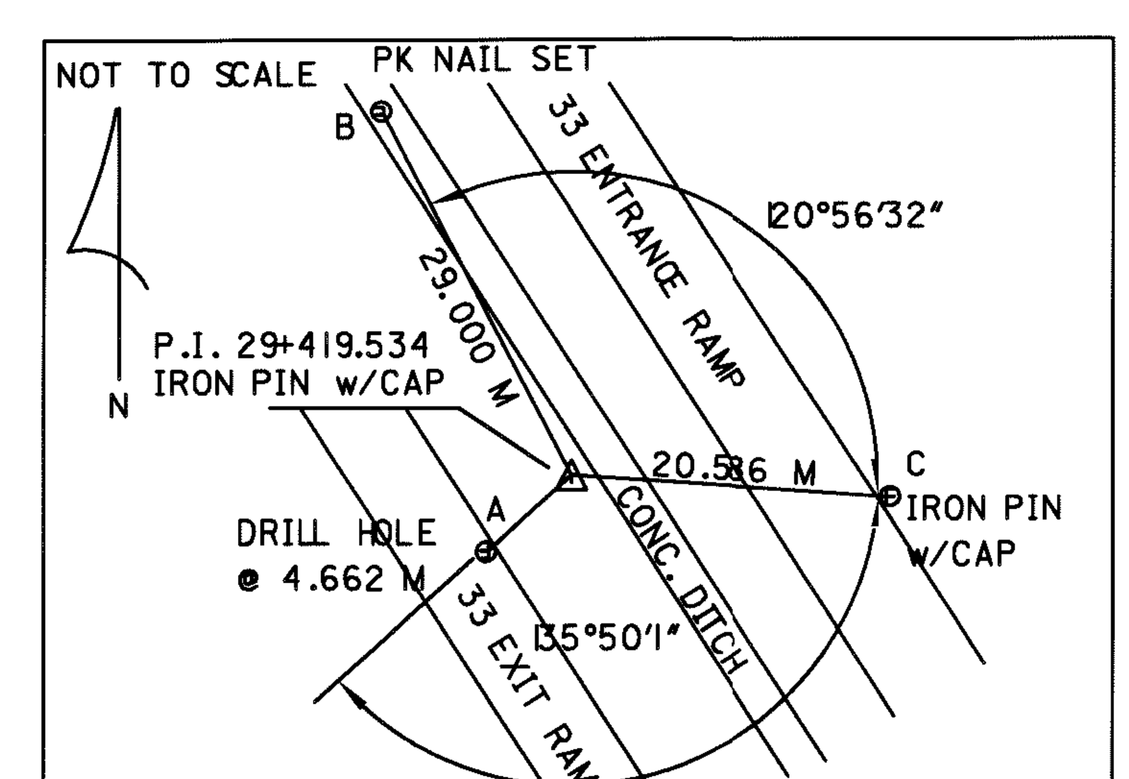

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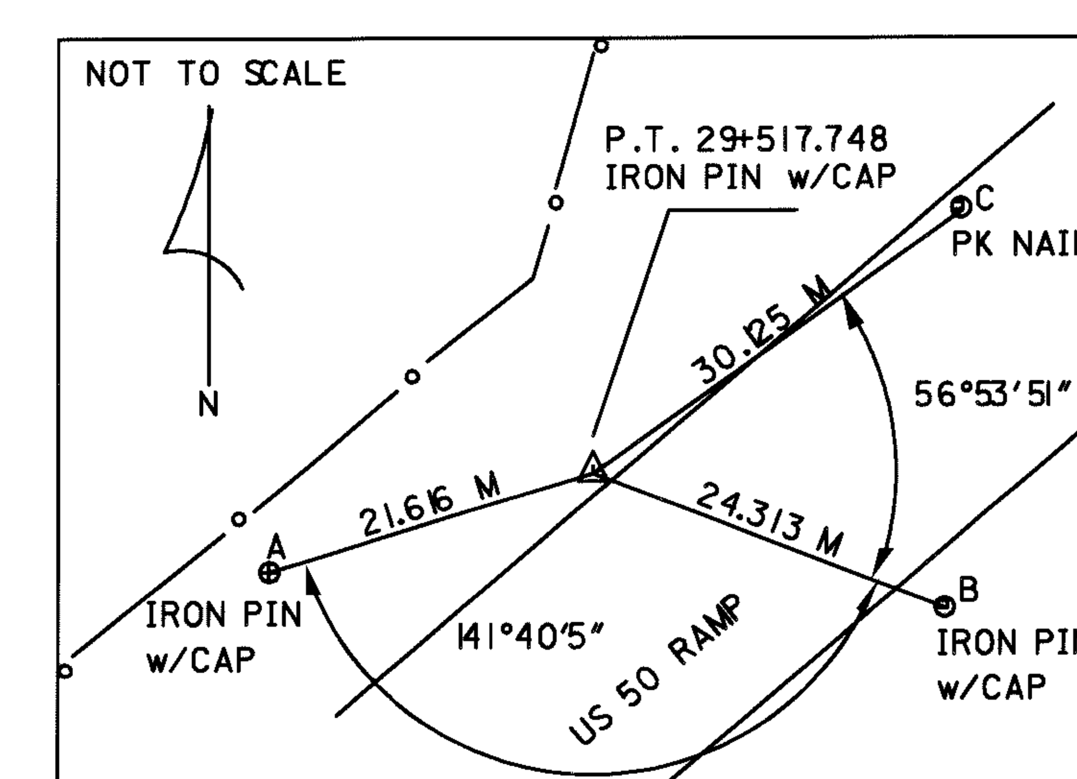

P.T. 29+517.748

33 NORTH BOUND RAMP

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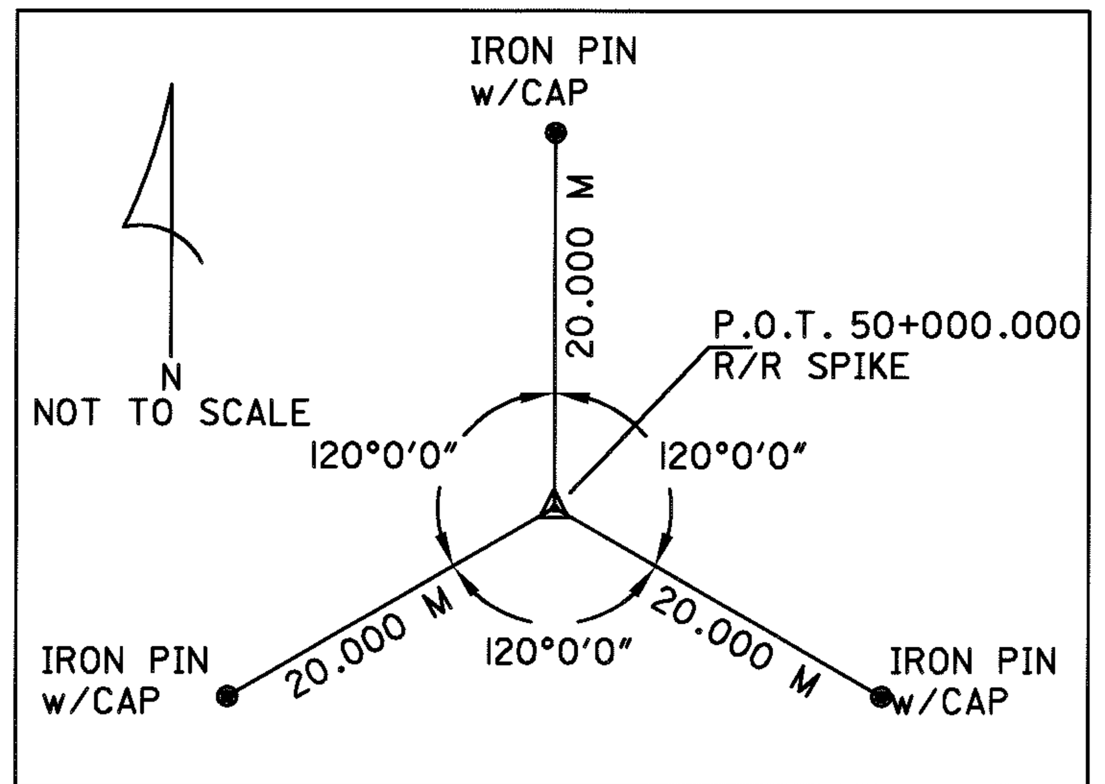

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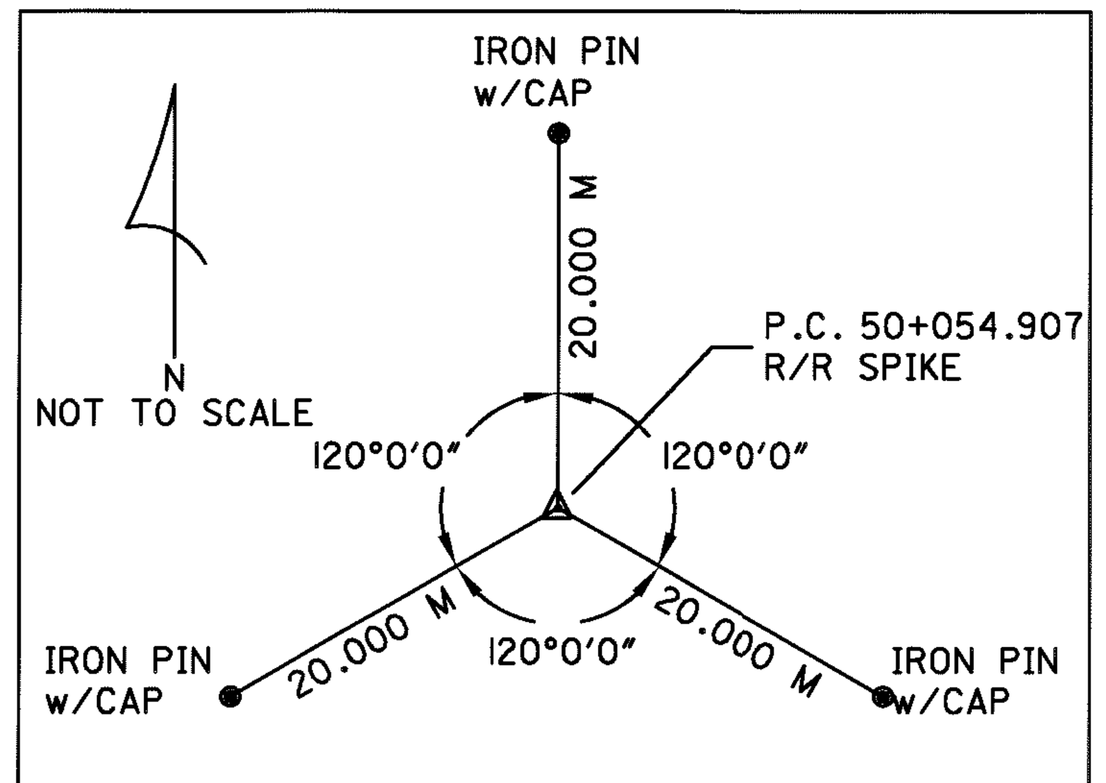

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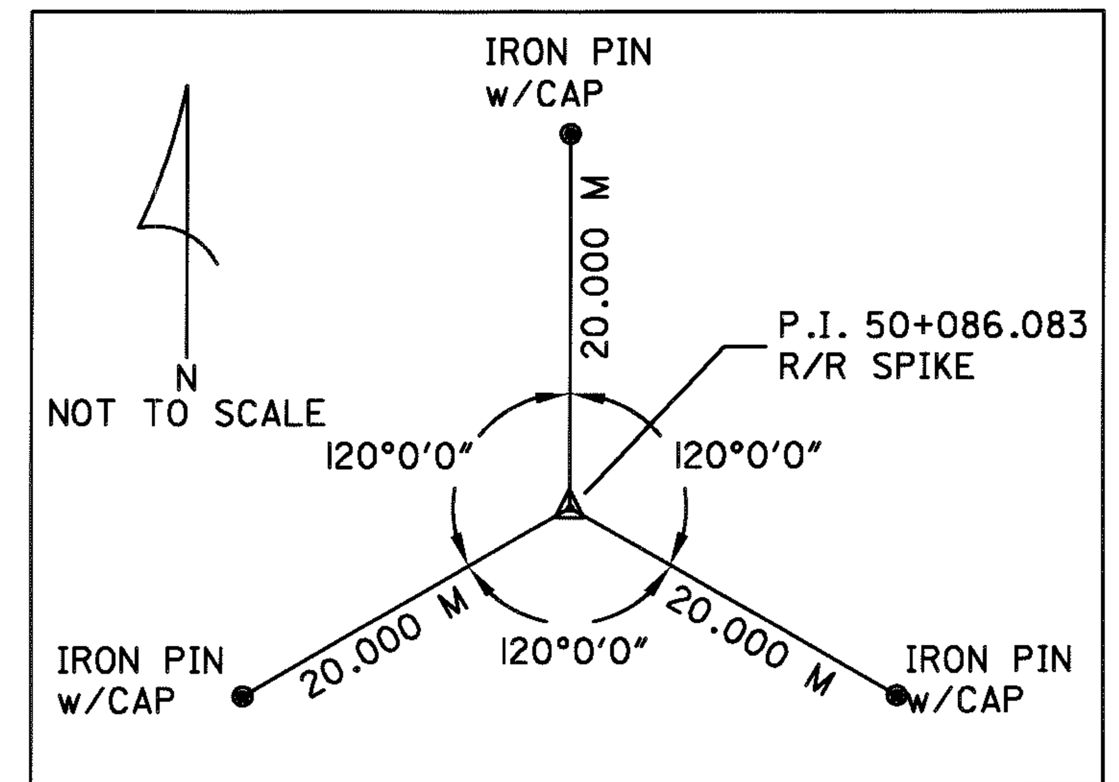

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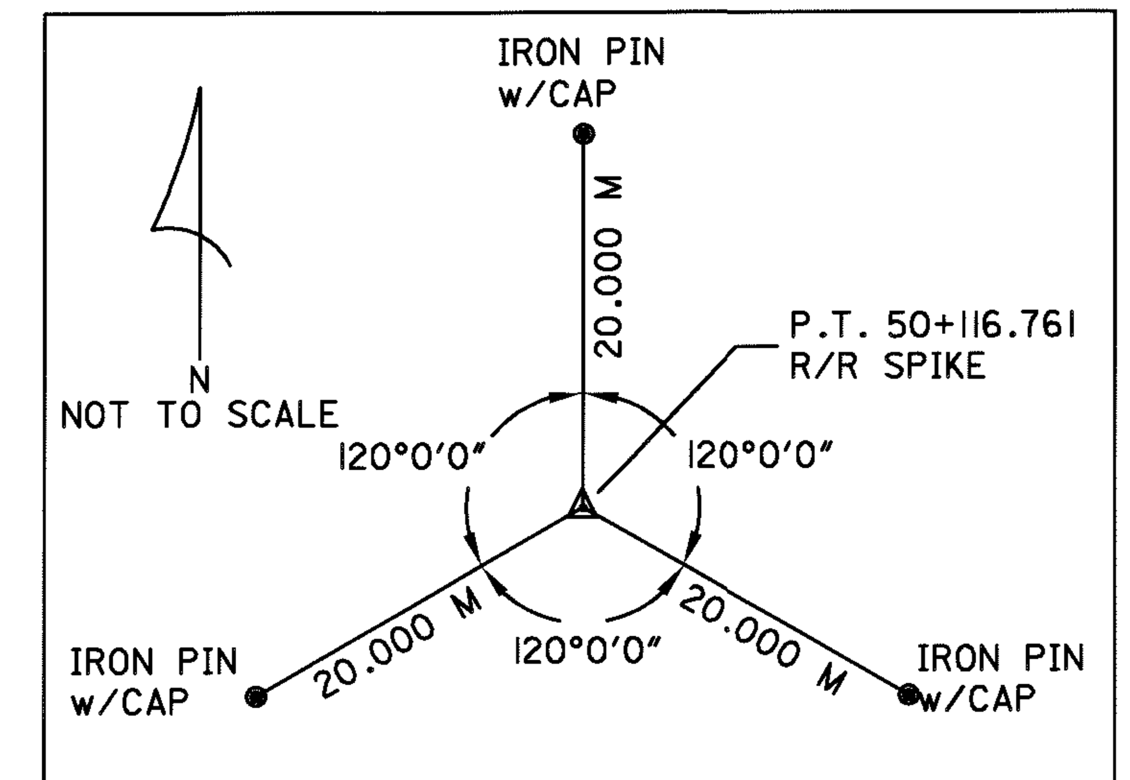

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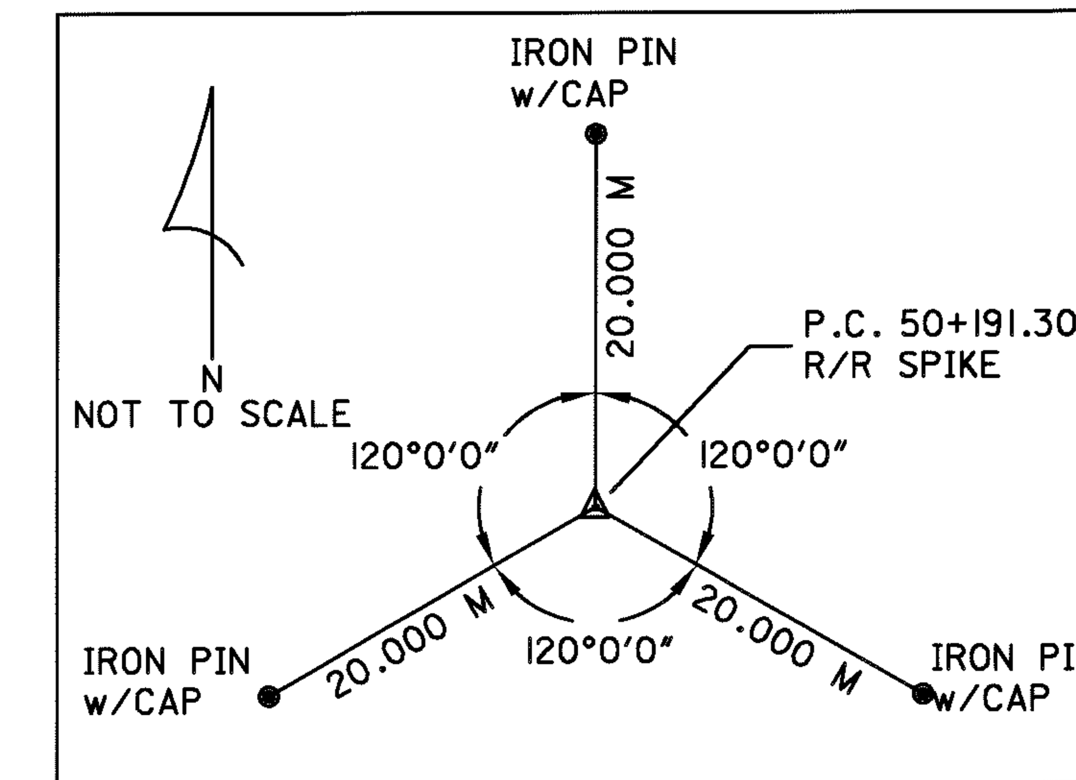

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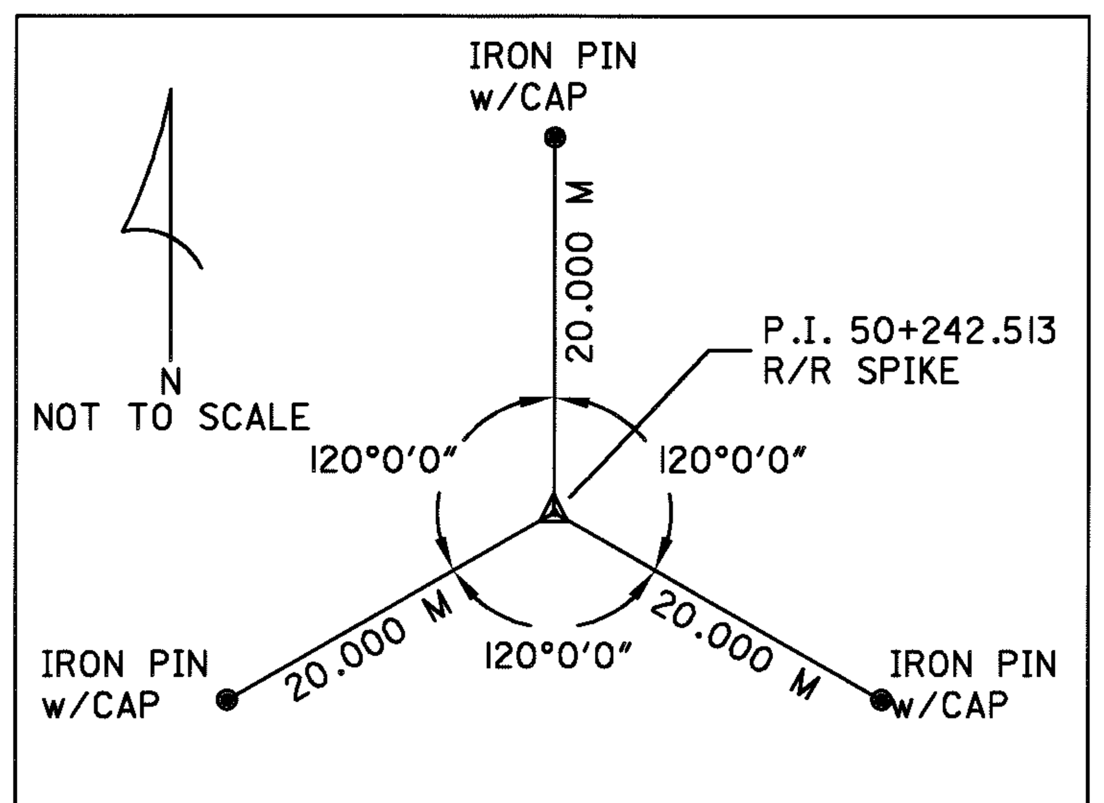

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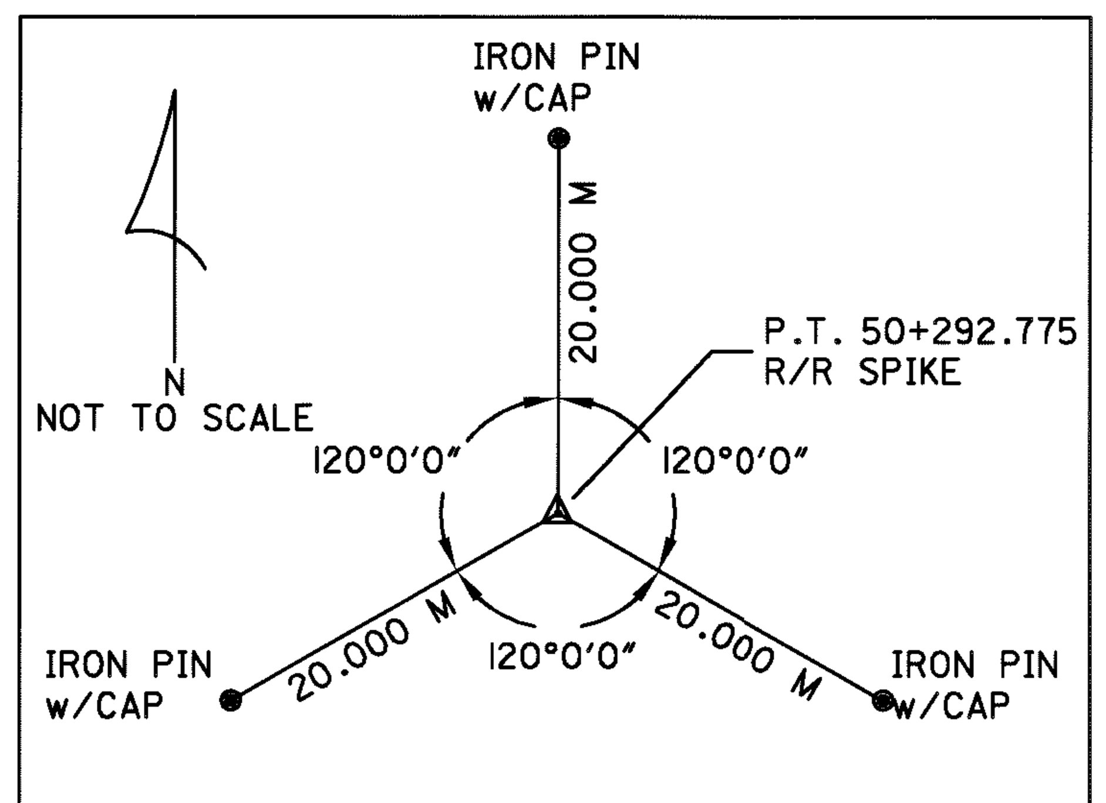

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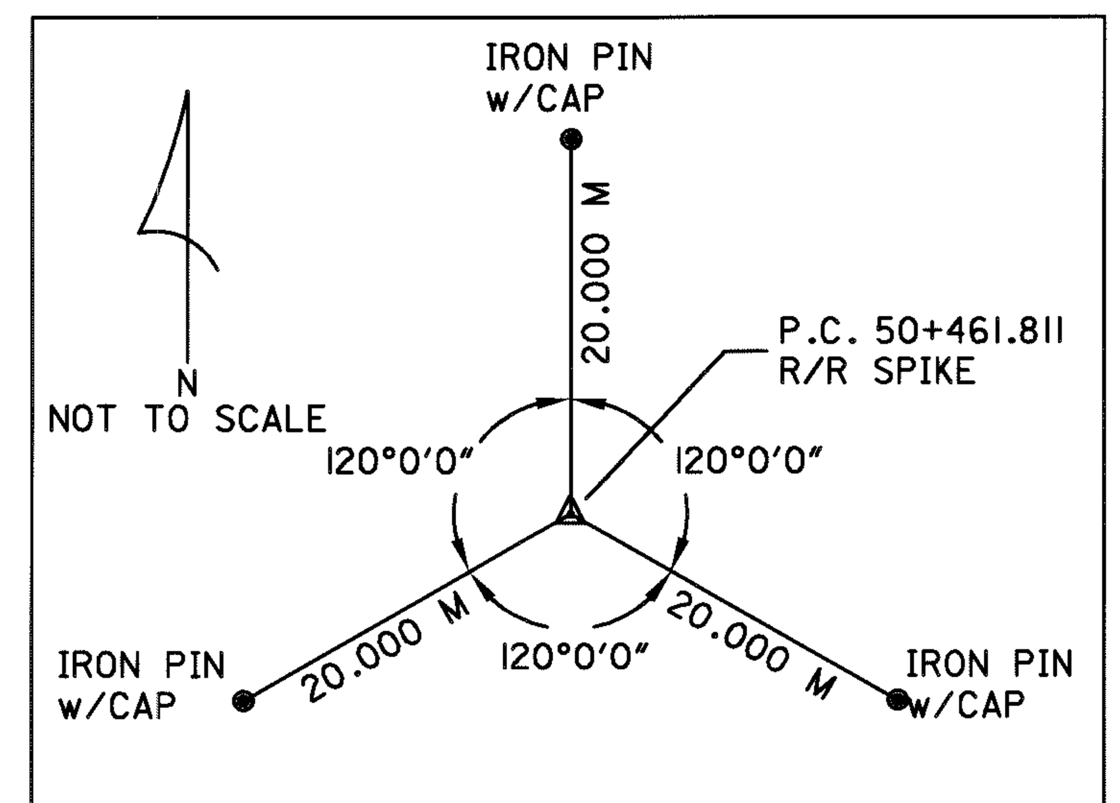

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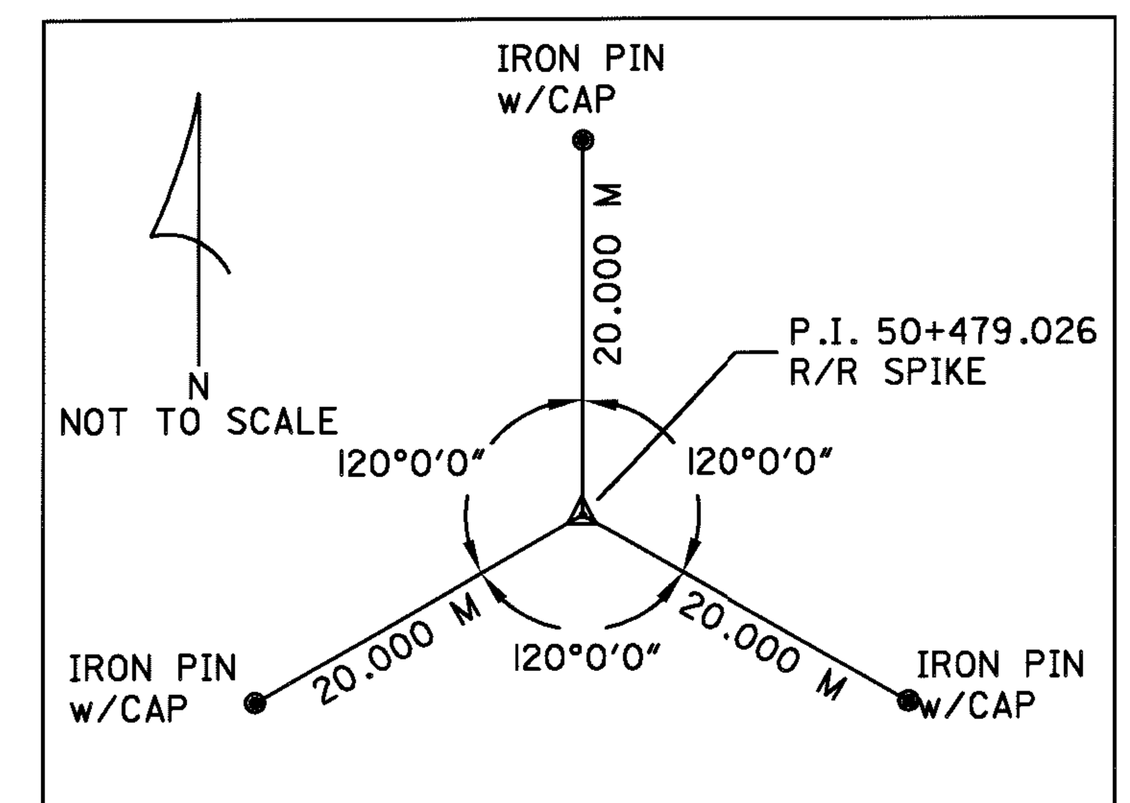

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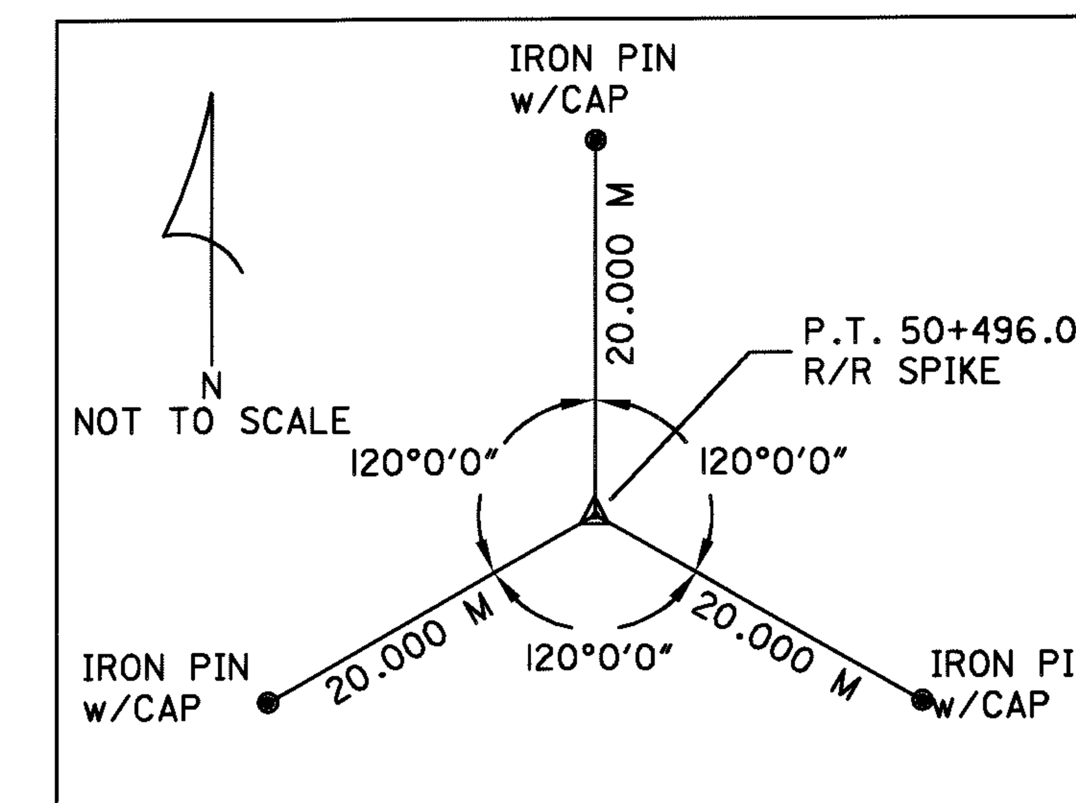

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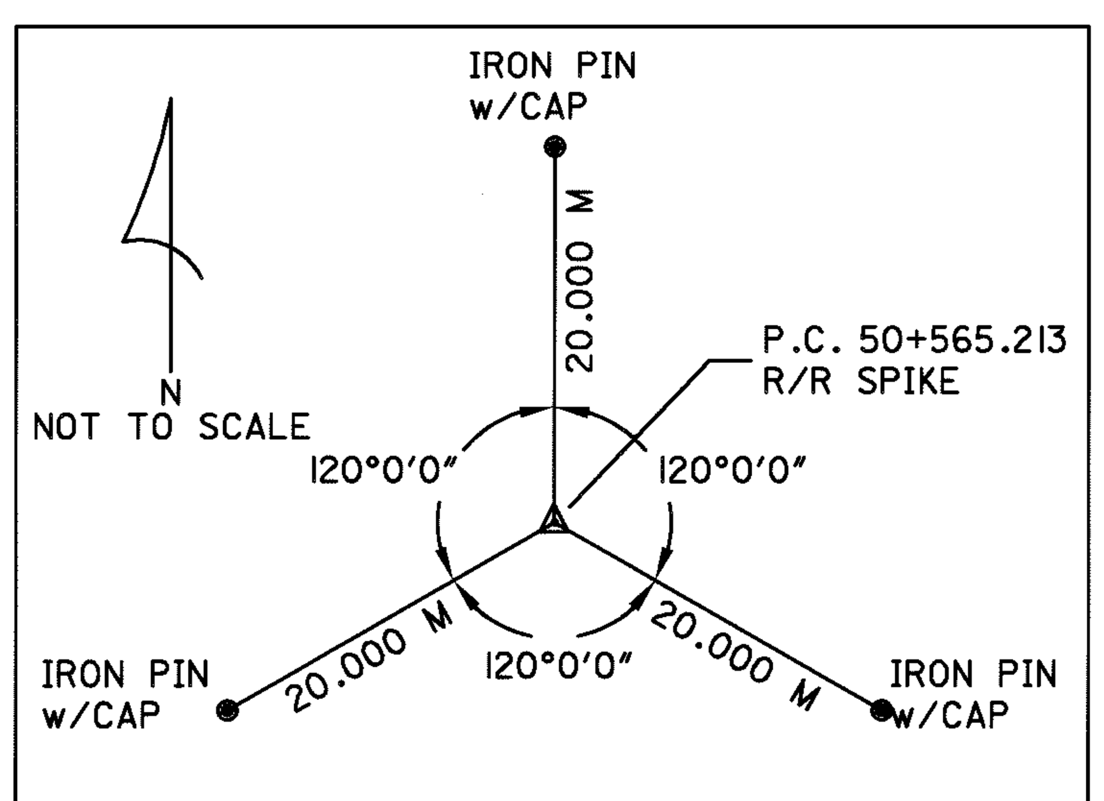

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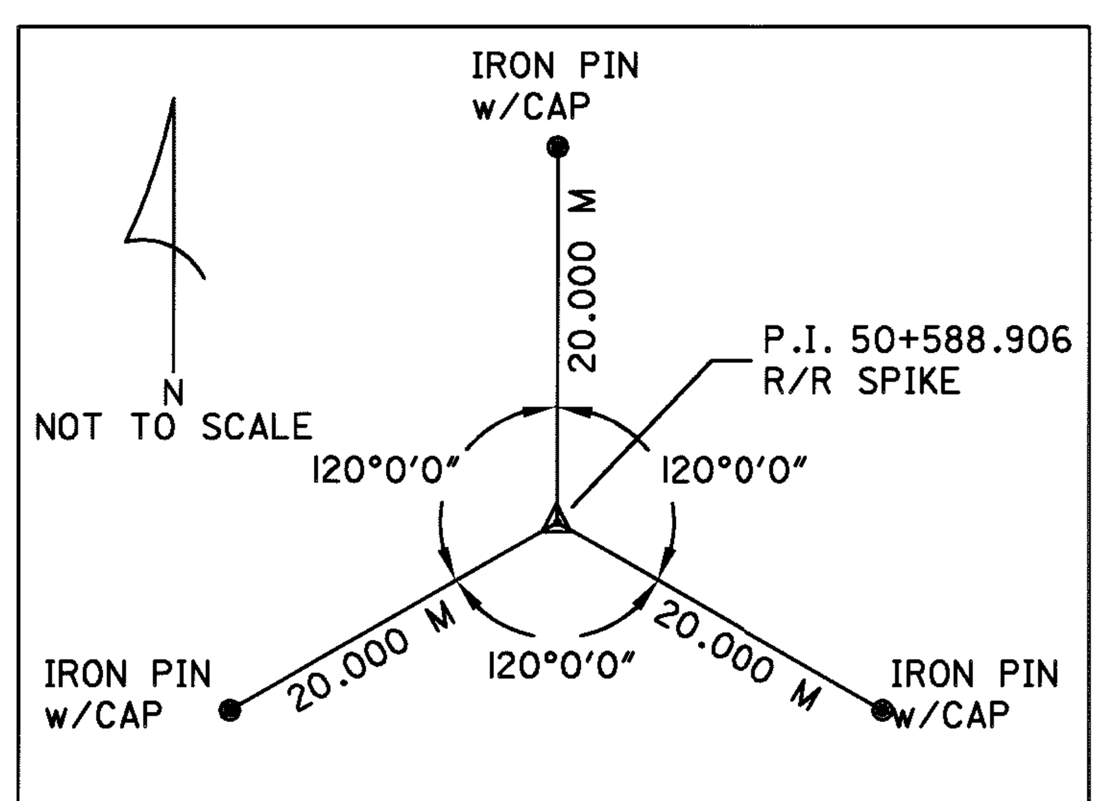

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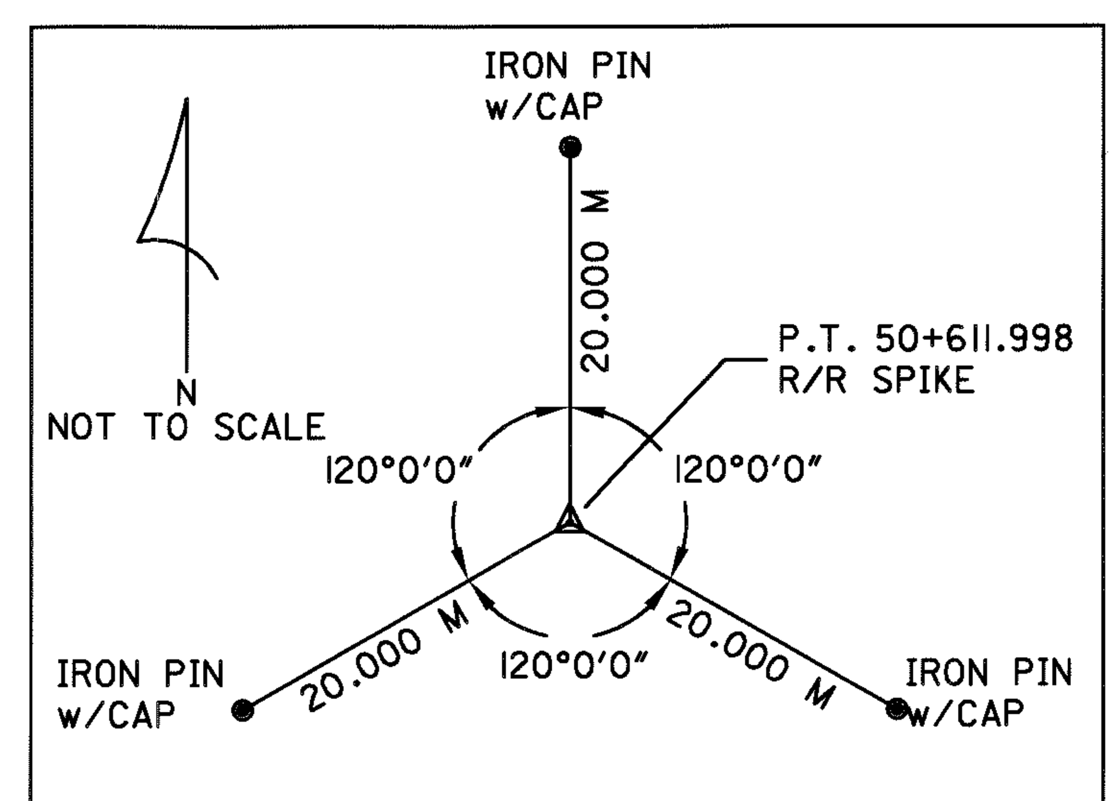

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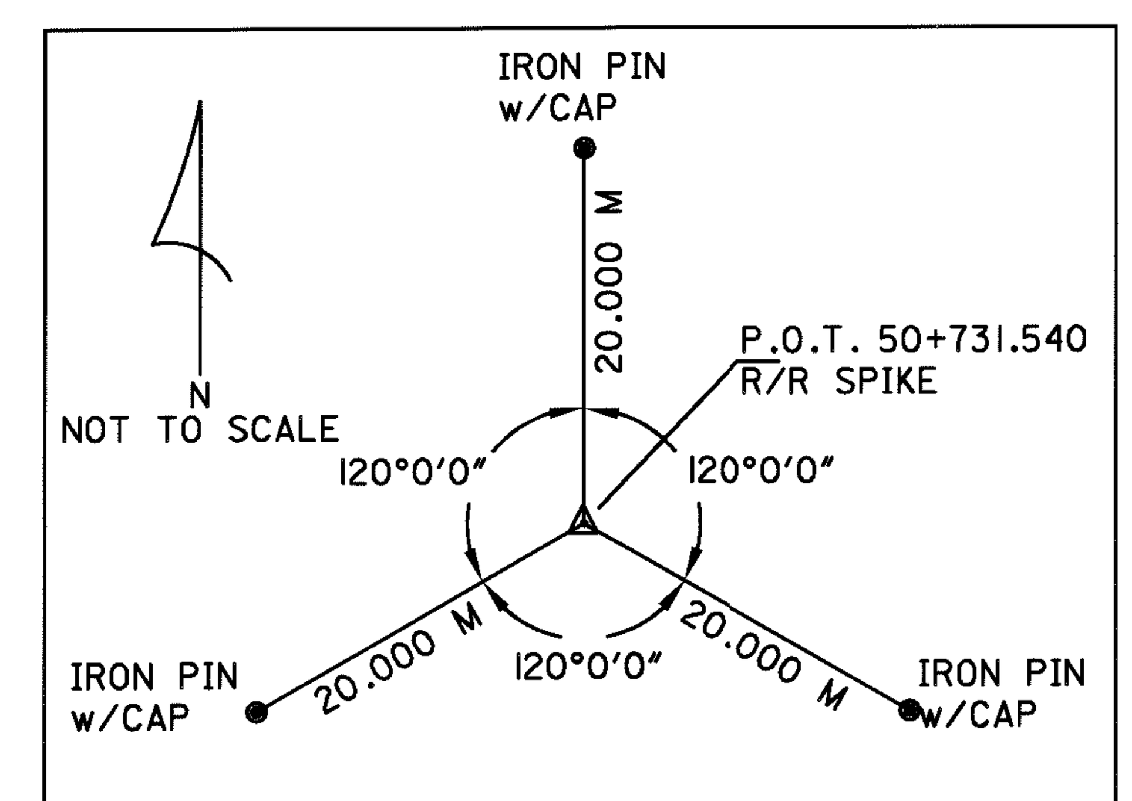

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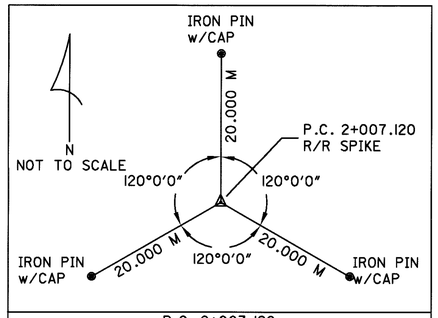

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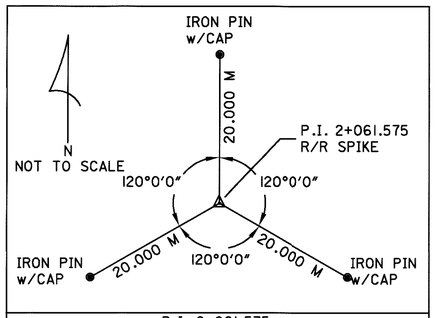

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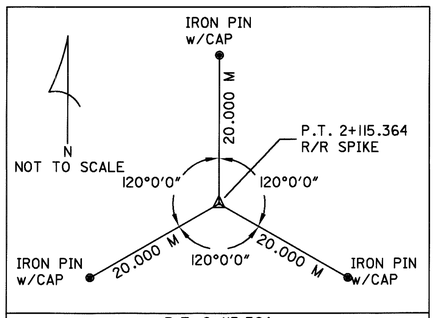

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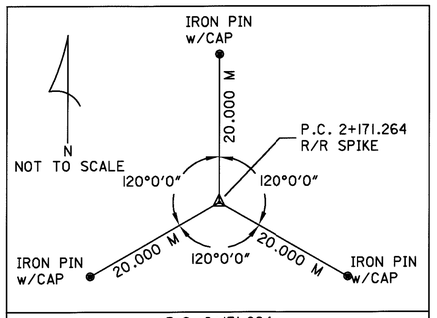
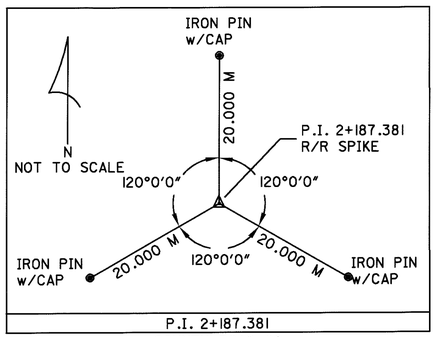
COUNTY ROAD 89



P.C. 2+171.264
COUNTY ROAD 89



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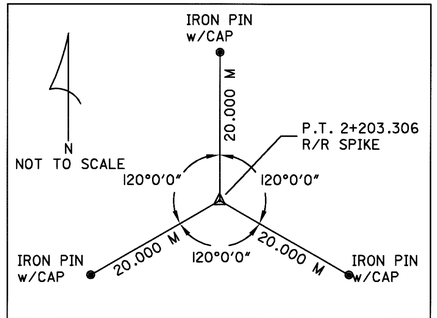
COUNTY ROAD 89



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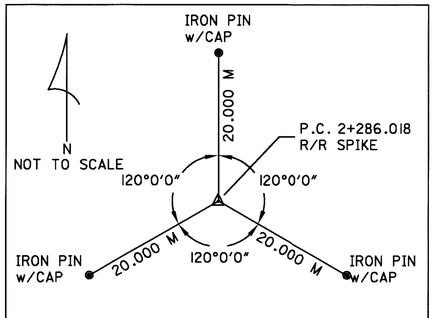
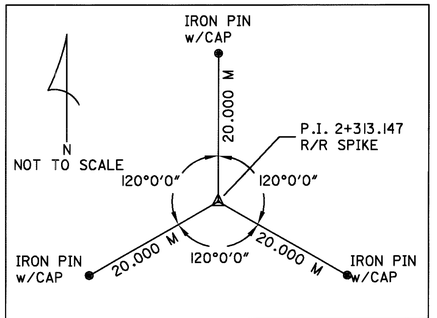


P.C. 2+286.018
COUNTY ROAD 89



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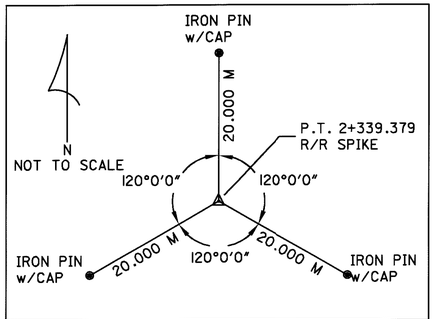
COUNTY ROAD 89



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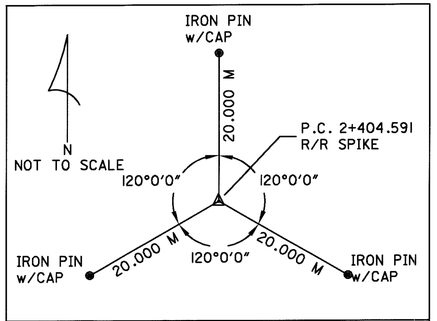

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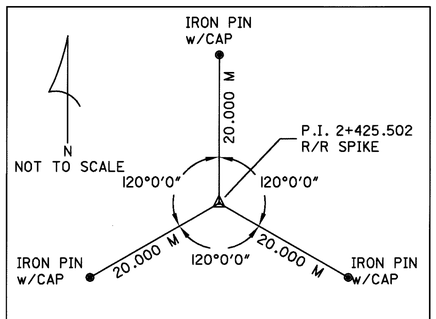

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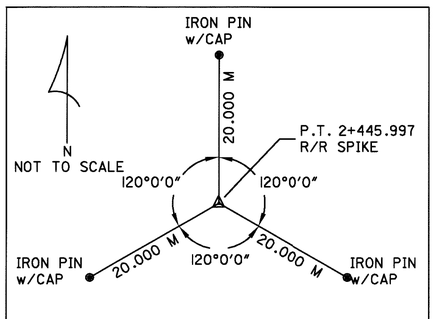

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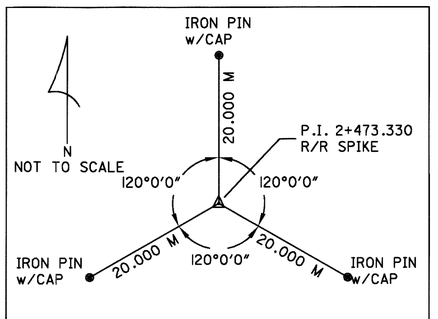
COUNTY ROAD 89



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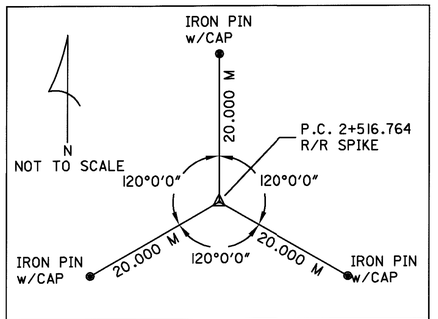

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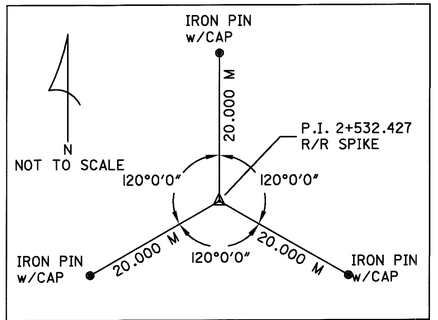

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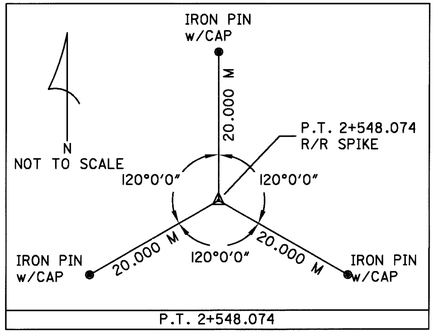
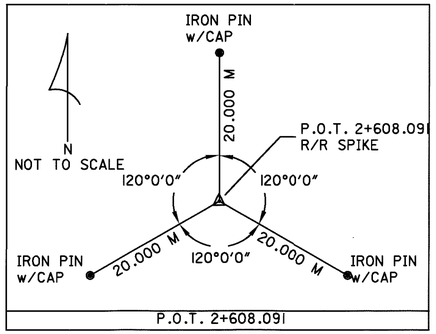
COUNTY ROAD 89



P.T. 2+548.074
COUNTY ROAD 89



P.O.T. 2+608.091
COUNTY ROAD 89

NOTE: SEE COORDINATE TABLE

CALCULATED | CHECKED

CENTERLINE REFERENCES

ATH-33-40.981

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A 10 B	145745.1970	634333.7563	202.75	BRASS TAB. IN CONC.
A 11 A	137681.9494	635136.4957	298.534	BRASS TAB. IN CONC.
A 11 B	137563.3787	637182.9008	293.675	BRASS TAB. IN CONC.
A 12 B	132478.9160	641744.2992	242.69	BRASS TAB. IN CONC.
B 76	148281.6535	637430.7401	193.750	BRASS TAB. IN CONC.
D 229	132508.7509	630094.0522	294.01	BRASS TAB. IN CONC.
E 76 X			205.451	BRASS TAB. IN CONC.
F 232 RESET	127225.9160	641335.4195	201.014	BRASS TAB. IN CONC.
K 233	137602.5703	636196.0682	265.070	BRASS TAB. IN CONC.
L 233	137650.6594	637827.7344	291.435	BRASS TAB. IN CONC.
M 11 A	126094.5612	641484.7955	232.07	BRASS TAB. IN CONC.
TOWNSEND RESET	143181.1271	634828.3600	313.525	BRASS TAB. IN CONC.
1 JVC	130057.6506	638877.9555	287.286	BRASS TAB. IN CONC.
33 A	139630.4006	635882.4270	290.100	BRASS TAB. IN CONC.
33 B	141393.8213	635318.9826	298.488	BRASS TAB. IN CONC.
33 C	141961.1867	634432.5684	285.254	BRASS TAB. IN CONC.
33 D	144192.6507	634455.3443	270.823	BRASS TAB. IN CONC.
33 E	135325.1491	636962.3021	274.048	BRASS TAB. IN CONC.
33 F	133279.5739	638194.4318	277.366	BRASS TAB. IN CONC.
33 G	128853.8502	640321.0074	248.572	BRASS TAB. IN CONC.
P.O.T 29+590.000	144729.078	634258.722	217.9	I.P. w/CAP
REF A	144703.245	634244.533	220.9	I.P. w/CAP
REF B	144752.454	634262.722	215.0	I.P. w/CAP
REF C	144731.253	634254.211	218.0	I.P. w/CAP
T.S. 29+727.489	144598.009	634300.244	244.5	I.P. w/CAP
REF A	144570.251	634299.031	244.6	I.P. w/CAP
REF B	144580.421	634296.078	245.1	I.P. w/CAP
REF C	144597.683	634288.332	243.7	I.P. w/CAP
S.C. 29+837.489	144492.218	634330.234	249.3	I.P. w/CAP
REF A	144495.384	634316.706	248.1	I.P. w/CAP
REF B	144486.911	634326.399	248.6	P.K. NAIL
REF C	144471.871	634347.864	250.4	I.P. w/CAP
P.I. 29+925.071	144406.655	634348.930	248.1	I.P. w/CAP
REF A	144453.718	634361.956	251.2	I.P. w/CAP
REF B	144419.273	634372.189	253.0	R/R SPIKE
REF C	144374.871	634385.483	257.4	I.P. w/CAP
S.T. 30+121.425	144210.372	634327.493		I.P. w/CAP
T.S. 30+382.322	143953.081	634284.271		I.P. w/CAP
S.C. 30+462.322	143874.005	634272.189		I.P. w/CAP
C.S. 30+746.993	143590.704	634282.438		I.P. w/CAP
S.T. 30+826.993	143512.709	634300.203		I.P. w/CAP
P.O.T. 31+000.000	143344.610	634341.118		I.P. w/CAP
P.O.T. 31+300.000	143053.120	634412.067		I.P. w/CAP
P.O.T. 31+600.000	142761.630	634483.015		I.P. w/CAP
P.O.T. 32+000.000	142372.977	634577.614		I.P. w/CAP
T.S. 32+274.511	142106.254	634642.534		I.P. w/CAP
S.C. 32+354.511	142028.819	634662.602	289.7	I.P. w/CAP
REF A	142028.763	634680.386	286.0	I.P. w/CAP
REF B	142021.974	634666.195	286.9	I.P. w/CAP
REF C	142014.909	634654.723	287.8	I.P. w/CAP
P.O.C. 32+368.721 =	142015.206	634666.680	286.8	R/R SPIKE
P.O.T 48+261.775 T55				
REF A	142028.776	634680.385	286.0	I.P. w/CAP
REF B	142021.981	634666.192	286.9	I.P. w/CAP
REF C	142014.920	634654.726	287.8	I.P. w/CAP
C.S. 33+019.621	141512.369	635057.420		I.P. w/CAP
S.T. 33+099.621	141472.695	635126.881		I.P. w/CAP
P.O.T. 33+300.000	141375.901	635302.331	298.0	R/R SPIKE
REF A	141393.809	635318.990	298.5	BRASS TAB. IN CONC.
REF B	141399.435	635307.449	297.7	I.P. w/CAP
REF C	141357.219	635296.303	297.6	I.P. w/CAP
T.S. 33+436.466	141309.981	635421.819		I.P. w/CAP
S.C. 33+516.466	141270.306	635491.280		I.P. w/CAP
C.S. 34+231.412	140705.645	635898.692		I.P. w/CAP
S.T. 34+311.412	140627.218	635914.443		I.P. w/CAP
P.C. 35+295.916	139659.221	636093.975		I.P. w/CAP
P.O.C. 35+348.325 =	139607.762	636103.918	288.9	I.P. w/CAP
P.O.C 49+216.905 T64				
REF A	139608.639	636083.310	287.1	I.P. w/CAP
REF B	139605.356	636103.616	289.0	R/R SPIKE
REF C	139606.346	636125.976	291.4	I.P. w/CAP
P.T. 35+833.356	139140.377	636232.087		I.P. w/CAP
P.C. 37+320.571	137736.786	636723.756		I.P. w/CAP

ELEVATIONS GIVEN FOR CENTERLINE REFERENCE MONUMENTS ARE ACCURATE TO NEAREST 0.1 M AND ARE INTENDED FOR SURVEYING

P.O.C. 37+484.181=	137584.469	636783.410	272.5	I.P. w/CAP
P.O.T.50+529.695 C16				
REF A	137577.657	636782.771	271.7	I.P. w/CAP
REF B	137586.269	636768.686	273.1	I.P. w/CAP
REF C	137594.654	636783.706	272.0	I.P. w/CAP
P.T. 37+923.464	137201.121	636996.471		I.P. w/CAP
P.C. 38+281.838	136906.335	637200.268		I.P. w/CAP
P.T. 39+045.603	136204.558	637486.008		I.P. w/CAP
T.S. 40+038.582	135225.635	637652.486		I.P. w/CAP
S.C. 40+118.582	135146.982	637667.064		I.P. w/CAP
P.O.C. 40+340.000	134938.478	637739.859	231.7	I.P. w/CAP
REF A	134945.130	637752.245	231.5	I.P. w/CAP
REF B	134943.838	637738.933	231.9	I.P. w/CAP
REF C	134943.685	637724.295	232.5	I.P. w/CAP
C.S. 40+524.224	134782.776	637837.749		I.P. w/CAP
S.T. 40+604.224	134721.247	637888.867		I.P. w/CAP
T.S. 41+099.358	134345.129	638210.881		I.P. w/CAP
S.C. 41+179.358	134283.600	638261.999		I.P. w/CAP
P.O.C. 41+570.000	133934.031	638429.396	282.8	I.P. w/CAP
REF A	133924.979	638415.968	282.3	I.P. w/CAP
REF B	133931.440	638429.201	282.8	I.P. w/CAP
REF C	133937.259	638444.592	282.4	I.P. w/CAP
C.S. 41+669.196	133836.388	638446.601		I.P. w/CAP
S.T. 41+749.196	133756.717	638453.768		I.P. w/CAP
P.O.T. 42+334.969 =	133172.590	638497.605	271.8	I.P. w/CAP
P.O.T. 2+245.338 C89				
REF A	133156.151	638501.003	268.9	I.P. w/CAP
REF B	133175.620	638492.803	271.8	I.P. w/CAP
REF C	133157.773	638479.821	269.0	I.P. w/CAP
P.C. 42+568.029	132940.179	638515.042		I.P. w/CAP
P.T. 43+058.644	132465.567	638630.403		I.P. w/CAP
P.O.T. 43+430.000	132123.812	638775.692	263.9	I.P. w/CAP
REF A	132100.846	638775.952	264.4	I.P. w/CAP
REF B	132146.668	638775.856	264.0	I.P. w/CAP
REF C	132146.404	638781.096	264.0	I.P. w/CAP
P.O.T. 44+000.000	131599.249	638998.698		I.P. w/CAP
P.O.T. 44+500.000	131139.104	639194.318		I.P. w/CAP
P.O.T. 45+000.000	130678.960	639389.937		I.P. w/CAP
P.O.T. 45+525.000	130195.807	639595.338	207.0	R/R SPIKE
REF A	130197.985	639614.221	206.6	I.P. w/CAP
REF B	130190.933	639596.917	207.0	I.P. w/CAP
REF C	130186.079	639581.098	207.0	I.P. w/CAP
P.O.T. 46+000.000	129758.671	639781.176		I.P. w/CAP
P.O.T. 46+500.000	129298.526	639976.796		I.P. w/CAP
P.O.T. 47+060.000	128783.163	640195.890	246.3	R/R SPIKE
REF A	128790.317	640201.140	247.3	I.P. w/CAP
REF B	128792.009	640214.923	247.8	I.P. w/CAP
REF C	128797.721	640212.137	248.0	I.P. w/CAP
P.C. 47+299.691	128562.578	640289.667		I.P. w/CAP
P.I. 47+568.971	128314.763	640395.019		I.P. w/CAP
P.T. 47+835.701	128098.808	640555.876		I.P. w/CAP
P.O.T. 48+000.000	127967.045	640654.021		I.P. w/CAP
P.O.T. 48+500.000	127566.058	640952.701		I.P. w/CAP
P.C. 48+830.628	127300.902	641150.205	204.3	I.P. w/CAP
REF A	127307.010	641121.505	207.1	I.P. w/CAP
REF B	127310.712	641159.719	206.4	I.P. w/CAP
REF C	127320.049	641172.701	206.4	I.P. w/CAP
P.I. 49+148.317	127046.124	641339.979	205.5	I.P. w/CAP
REF A	127064.656	641386.610	201.6	I.P. w/CAP
REF B	127039.760	641349.607	204.0	I.P. w/CAP
REF C	127072.707	641358.790	201.6	I.P. w/CAP
P.T. 49+451.757	126730.819	641378.829	208.2	I.P. w/CAP
REF A	126735.244	641395.762	207.6	I.P. w/CAP
REF B	126719.060	641377.983	208.3	I.P. w/CAP
REF C	126706.089	641397.385	208.4	I.P. w/CAP
P.C. 49+694.214	126490.182	641408.480	216.7	R/R SPIKE
REF A	126504.198	641425.153	215.8	I.P. w/CAP
REF B	126555.326	641401.986	213.4	I.P. w/CAP
REF C	126498.691	641388.106	216.4	I.P. w/CAP
P.I. 49+763.070	126421.842	641416.900	218.7	I.P. w/CAP
REF A	126410.548	641402.073	219.7	I.P. w/CAP
REF B	126430.423	641415.704	218.6	I.P. w/CAP
REF C	126400.798	641438.773	219.8	I.P. w/CAP
P.T. 49+831.856	126354.377	641430.675	221.3	I.P. w/CAP
REF A	126369.981	641444.030	221.2	I.P. w/CAP
REF B	126362.811	641411.451	221.7	I.P. w/CAP
REF C	126400.798	641438.773	219.8	I.P. w/CAP

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CENTERLINE REFERENCE COORDINATE TABLE

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CENTERLINE REFERENCES

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. 49+888.103	126299.267	641441.927	223.6	I.P. w/CAP
REF A	126286.287	641462.170	224.7	I.P. w/CAP
REF B	126282.747	641445.594	224.4	I.P. w/CAP
REF C	126264.992	641431.135	225.4	I.P. w/CAP

U.S. 33 SOUTHBOUND RAMP

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. 28+373.080	145722.440	634270.077		I.P. w/CAP
T.S.28+435.311	145689.890	634217.037		I.P. w/CAP
P.I. 28+969.622	145261.238	633943.990	221.5	I.P. w/CAP
REF A	145250.115	633947.752	221.5	I.P. w/CAP
REF B	145263.224	633956.763	221.1	R/R SPIKE
REF C	145281.018	633941.840	221.6	I.P. w/CAP
S.T. 29+153.166	145103.268	634037.063	217.7	DRILL HOLE
REF A	145098.664	634031.514	217.4	I.P. w/CAP
REF B	145101.149	634049.819	217.2	I.P. w/CAP
REF C	145112.337	634040.247	217.7	I.P. w/CAP
T.S. 29+207.281	145061.720	634071.736	215.9	DRILL HOLE
REF A	145067.367	634061.286	216.1	I.P. w/CAP
REF B	145053.438	634072.929	215.6	I.P. w/CAP
REF C	145066.354	634078.203	215.7	I.P. w/CAP
P.I. 29+368.418	144932.349	634167.520	209.9	I.P. w/CAP
REF A	144915.742	634193.981	209.6	P.K. NAIL
REF B	144938.679	634174.616	210.5	P.K. NAIL
REF C	144951.211	634164.356	211.1	P.K. NAIL
S.T. 29+529.383	144781.972	634224.972	209.4	I.P. w/CAP
REF A	144796.464	634231.677	208.6	I.P. w/CAP
REF B	144782.761	634213.376	208.7	I.P. w/CAP
REF C	144772.728	634230.885	209.6	P.K. NAIL

U.S. 33 NORTHBOUND RAMP

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. 29+117.741	145165.851	634085.643	219.5	DRILL HOLE
REF A	145167.747	634076.084	219.7	P.K. NAIL
REF B	145156.535	634081.727	219.3	P.K. NAIL
REF C	145169.193	634092.074	219.3	P.K. NAIL
P.I. 29+221.974	145072.960	634132.928	216.3	P.K. NAIL
REF A	145089.539	634136.008	216.4	I.P. w/CAP
REF B	145064.379	634149.316	215.4	I.P. w/CAP
REF C	145069.339	634125.460	216.1	P.K. NAIL
P.C. 29+320.877	144984.820	634177.790	211.9	I.P. w/CAP
REF A	144971.090	634174.177	210.0	P.K. NAIL
REF B	144980.762	634188.326	211.8	P.K. NAIL
REF C	145008.672	634172.648	213.2	P.K. NAIL
P.I. 29+419.534	144896.899	634222.550	208.3	I.P. w/CAP
REF A	144893.861	634219.014	208.7	DRILL HOLE
REF B	144922.635	634209.184	208.5	P.K. NAIL
REF C	144895.643	634243.098	207.8	I.P. w/CAP
P.T. 29+517.748	144802.849	634252.340	208.4	I.P. w/CAP
REF A	144796.472	634231.687	208.6	I.P. w/CAP
REF B	144794.068	634275.012	208.6	I.P. w/CAP
REF C	144820.439	634276.796	207.7	P.K. NAIL

TOWNSHIP ROAD 55

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. 48+000.000	141952.359	634413.551		R/R SPIKE
P.C. 48+048.295	141956.941	634461.620		R/R SPIKE
P.I. 48+081.159	141960.060	634494.340		R/R SPIKE
P.T. 48+113.770	141970.075	634525.640		I.P. w/CAP
P.C. 48+296.996	142025.916	634700.150		R/R SPIKE
P.I. 48+320.097	142032.957	634722.150		R/R SPIKE
P.T. 48+342.947	142034.213	634745.220		R/R SPIKE
P.O.T. 48+378.243	142036.133	634780.466		R/R SPIKE

TOWNSHIP ROAD 64

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. 49+000.000	139621.716	635887.964		R/R SPIKE
P.C. 49+033.885	139614.888	635921.150		R/R SPIKE
P.I. 49+045.857	139612.475	635932.880		R/R SPIKE
P.T. 49+057.767	139612.146	635944.840		R/R SPIKE
P.C. 49+274.802	139606.167	636161.790		R/R SPIKE
P.I. 49+313.067	139605.113	636200.050		R/R SPIKE
P.T. 49+350.935	139594.642	636236.850		R/R SPIKE
P.C. 49+401.030	139580.934	636285.030		R/R SPIKE
P.I. 49+437.023	139571.085	636319.650		R/R SPIKE
P.T. 49+470.966	139581.916	636353.980		R/R SPIKE
P.O.T. 49+490.200	139587.703	636372.324		R/R SPIKE

COUNTY ROAD 16

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.O.T. 50+000.000	137622.885	636262.499		R/R SPIKE
P.C. 50+054.907	137621.970	636317.390		R/R SPIKE
P.I. 50+086.083	137621.451	636348.570		R/R SPIKE
P.T. 50+116.761	137611.469	636378.100		R/R SPIKE
P.C. 50+191.304	137587.601	636448.720		R/R SPIKE
P.I. 50+242.513	137571.205	636497.230		R/R SPIKE
P.T. 50+292.775	137571.551	636548.440		R/R SPIKE
P.C. 50+461.811	137572.694	636717.470		R/R SPIKE
P.I. 50+479.026	137572.810	636734.690		R/R SPIKE
P.T. 50+496.091	137576.824	636751.430		R/R SPIKE
P.C. 50+565.213	137592.938	636818.640		R/R SPIKE
P.I. 50+588.906	137598.461	636841.680		R/R SPIKE
P.T. 50+611.998	137594.813	636865.090		R/R SPIKE
P.O.T. 50+731.540	137576.407	636983.216		R/R SPIKE

COUNTY ROAD 89

MONUMENT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P.C. 2+007.120	133268.036	638280.75		R/R SPIKE
P.I. 2+061.575	133253.482	638333.230		R/R SPIKE
P.T. 2+115.364	133225.429	638379.900		R/R SPIKE
P.C. 2+171.264	133196.633	638427.810		R/R SPIKE
P.I. 2+187.381	133188.330	638441.620		R/R SPIKE
P.T. 2+203.306	133183.967	638457.140		I.P. w/CAP
P.C. 2+286.018	133161.573	638536.760		R/R SPIKE
P.I. 2+313.147	133154.228	638562.880		R/R SPIKE
P.T. 2+339.379	133136.363	638583.290		R/R SPIKE
P.C. 2+404.591	133093.420	638632.370		R/R SPIKE
P.I. 2+425.502	133079.650	638468.110		I.P. w/CAP
P.T. 2+445.997	133072.015	638667.580		R/R SPIKE
P.I .2+ 473.330	133062.034	638693.025		R/R SPIKE
P.C. 2+516.764	133046.878	638733.720		R/R SPIKE
P.T. 2+548.074	133037.112	638763.460		R/R SPIKE
P.O.T. 2+608.091	133020.632	638821.178		R/R SPIKE

NOTE: ALL COORDINATES ARE PROJECT GROUND COORDINATES. TO OBTAIN OH-S (NAD83) STATE PLANE COORDINATES DIVIDE BOTH NORTHING AND EASTING BY P.A.F. P.A.F. = 1.00010239
PROJECT MEAN LATITUDE: 39-14-21, PROJECT MEAN ELEVATION: 264.4M

REFERENCE DATUMS: VERTICAL NAVD88 (NGS L233: 291.440M)
HORIZONTAL NAD83 (85) (NGS TOWNSEND RESET: 39-17-20.173620 N, 82-05-49.498020 W)

ELEVATIONS GIVEN FOR CENTERLINE REFERENCE MONUMENTS ARE ACCURATE TO NEAREST 0.1 M AND ARE INTENDED FOR SURVEYING OPERATIONS WHICH WOULD NOT REQUIRE MORE PRECISE VALUES.

CALCULATED | CHECKED

CENTERLINE REFERENCE COORDINATE TABLE

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BENCH MARK STATION	OFFSET	ELEVATION	DESCRIPTION
48+730	88m RT	739.499	WEST CORNER OF CONCRETE SLAB UNDER 2 FUEL TANKS
48+480	46m LT	768.391	RR SPIKE IN TRIPLE CHERRY TREE (4",6",8")
48+250	45m LT	752.014	RR SPIKE IN 10" OAK
47+935	53m LT	778.433	RR SPIKE IN 8" POPLAR
47+640	43m LT	764.841	RR SPIKE IN 8" CHERRY
47+265	43m LT	787.984	RR SPIKE IN 18" OAK
46+750	43m RT	791.268	RR SPIKE IN 10" MAPLE
46+560	51.5m RT	803.713	RR SPIKE IN T. POPLAR
46+310	65m RT	826.698	BENT RR SPIKE IN 8" OAK
45+990	41m RT	754.963	RR SPIKE IN 18" HICKORY
45+720	78m RT	683.183	RR SPIKE IN 14" SHAGBARK HICKORY
45+485	180m LT	673.945	RR SPIKE IN 24" SYCAMORE
45+325	50m LT	771.490	RR SPIKE IN 6" HICKORY
45+145	73m RT	843.430	RR SPIKE IN 12" MAPLE
44+880	15.5m LT	817.160	RR SPIKE IN 14" OAK
44+640	38m LT	844.740	RR SPIKE IN 18" OAK
44+390	61m LT	787.030	RR SPIKE IN 24" OAK
44+083	33m RT	858.450	RR SPIKE IN 12" HICKORY
43+800	103m RT	765.740	RR SPIKE IN 12" HICKORY
43+540	36m LT	858.105	RR SPIKE IN TRIPLE T. POPLAR
43+193	42m RT	872.135	RR SPIKE IN 12" OAK
42+976	64m LT	839.550	RR SPIKE IN 12" HICKORY
42+695	75m LT	847.645	RR SPIKE IN 12" OAK
42+475	57m RT	862.270	RR SPIKE IN 18" LOCUST
42+120	87m RT	856.831	RR SPIKE IN 14" LOCUST
41+850	112m RT	936.821	SHED
41+640	85m RT	933.941	RR SPIKE IN 8" WALNUT
41+445	55m LT	880.061	RR SPIKE IN 16" OAK
41+178	38m RT	839.211	IN 12" SHAGBARK HICKORY
40+910	115m LT	763.831	RR SPIKE IN 22" OAK
40+720	79m RT	880.156	RR SPIKE IN 12" T. POPLAR
40+380	85m LT	746.776	RR SPIKE IN 12" HICKORY
40+080	43m LT	828.126	RR SPIKE IN 8" T. POPLAR
39+840	62m LT	753.561	RR SPIKE IN 18" SYCAMORE
49+315	60m LT	674.533	NE CORNER CATCH BASIN
49+700	32m LT	703.338	RR SPIKE IN 6" ELM

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BENCH MARK INFORMATION TABLE

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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:

GATHERCO
6273 FRANK AVENUE NW
NORTH CANTON, OHIO 44726
PHONE: 330 498-9553

LEAX WATER COMPANY
P.O. BOX 97
THE PLAINS, OHIO 45780
PHONE: 740 594-0123

VERIZON NORTH
754 WEST UNION ST.
ATHENS, OHIO 45701
PHONE: 740 594-5318

BUCKEYE RURAL ELECTRIC COMPANY
4848 S.R. 325 SOUTH
P.O. BOX 200
RIO GRANDE, OHIO 45674
PHONE: 740 379-2025

STAR OIL & GAS
45421 EAGLE RIDGE ROAD
RACINE, OHIO 45771
PHONE: 740 992-2427

J. D. DRILLING COMPANY
P.O. BOX 587
RACINE, OHIO 45771
PHONE: 740 949-2512

TUPPER PLAINS-CHESTER WATER COMPANY
39561 BAR 30 ROAD
REEDSVILLE, OHIO 45771
PHONE: 740 985-3315

AMERICAN ELECTRIC POWER
95 EAST MAIN STREET
CHILLICOTHE, OHIO 45601
PHONE: 740 774-7129

COLUMBIA GAS TRANSMISSION
301 MAPLE STREET
SUGAR GROVE, OHIO 43155
PHONE: 740 746-2279

PETROQUEST, INC
P.O. BOX 268
3 WEST STIMSON AVENUE
ATHENS, OHIO 45701
PHONE: 740-554-5888

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.

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.

TEMPORARY STREAM CROSSING FORDS

WHERE STREAM CROSSING FORDS ARE REQUIRED FOR EQUIPMENT CROSSING, THE CROSSING SHALL CONSIST OF CLEAN NON-TOXIC GRANULAR OR ROCK MATERIAL, PROPERLY MAINTAINED TO PREVENT EROSION, WITH PROVISIONS FOR CONVEYANCE OF ANTICIPATED HIGH FLOWS, AND SHALL NOT IMPEDE THE MOVEMENT OF AQUATIC LIFE. ROCK OR GRANULAR MATERIAL SHALL BE ROCK AS PER 203.02 OR DUMP ROCK FILL TYPE A, B, C OR D AS PER 601.07, EXCEPT ALL MATERIALS SHALL BE RETAINED ON THE 12.5 mm SIEVE. CONSTRUCTION SHALL BE IN ACCORDANCE WITH PART 330, APPENDIX A, SPECIFIC CATEGORIES OF DISCHARGES-NATIONALLY PERMITTED, PARAGRAPH (A14), MINOR ROAD CROSSING FILLS - THE FEDERAL REGISTER -CORPS OF ENGINEERS FINAL REGULATIONS, CURRENT EDITION.

ELEVATION DATUM

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

MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 642

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. THE CONSTRUCTION OF THE LIMITED ACCESS FENCE SHALL BE DONE BY THE CONTRACTOR EVEN THOUGH IT IS OUTSIDE THE WORK LIMITS SHOWN ON THE PLANS.

CONVERSION OF STANDARD CONSTRUCTION DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.011 OF THE 1997 CONSTRUCTION AND MATERIALS SPECIFICATIONS. THE APPENDIX OF ASTM E 380 CHALL BE UTILIZED FOR ANY ADDITIONAL CONVERSION FACTORS REQUIRED. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN

AT THE TERMINATION OF THE PROJECT, THE CONTRACTOR SHALL SET ALL MISSING OR OBLITERATED IRON PINS SHOWN ON THE RIGHT OF WAY PLAN. THE PINS SHALL BE SET UNDER THE SUPERVISION OF A REGISTERED SURVEYOR HIRED BY THE CONTRACTOR. THE PINS SHALL BE 3/4" BY 36" REINFORCING ROD WITH AN ALUMINUM CAP STAMPED WITH THE SURVEYOR'S NAME AND REGISTRATION NUMBER.

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.

CHANNEL EMBANKMENTS

PORTIONS OF THE EXISTING CHANNEL SHALL BE FILLED AND SLOPED TO DRAIN AS SHOWN IN THESE PLANS. IN CHANNEL EMBANKMENT AREAS WHICH WILL NOT SUPPORT ANY PORTION OF THE NEW ROAD BED OR STRUCTURAL EMBANKMENTS, THE CONTRACTOR MAY UTILIZE EMBANKMENT METHODS MEETING THE FOLLOWING REQUIREMENTS.

AREAS WHERE CHANNEL EMBANKMENTS ARE TO BE PLACED SHALL BE CLEARED OF WEEDS AND BRUSH. THE REQUIREMENTS FOR MOISTURE, DENSITY CONTROL, BENCHING AND SUITABLE MATERIALS SHALL BE WAIVED. IN LIEU OF THE REQUIREMENTS OF ITEM 203, THE DEPTH OF LAYERS IN WHICH THE EMBANKMENTS ARE TO BE PLACED, AND THEIR COMPACTION, SHALL CONFORM WITH ACCEPTABLE CONSTRUCTION PRACTICES AS DETERMINED BY THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 203, EMBANKMENT.

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GENERAL NOTES

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GENERAL NOTES

WILDLIFE SEEDING AND TREE PLANTINGS

AT ALL STREAM CROSSINGS, WILDLIFE MIX WILL BE USED TO RESTORE AND STABILIZE DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS BOTH UPSTREAM AND DOWNSTREAM FROM THE BRIDGE OR CULVERT. IN ADDITION, AT THE DISCRETION OF THE ENGINEER, SYCAMORE AND OR WILLOW SEEDLINGS WILL BE PLANTED NEAR THE STREAM BANK/WATER INTERFACE TO FURTHER STABILIZE THE AREA.

STREAM RELOCATION

BEFORE INITIATING ANY CONSTRUCTION WORK ON THE PROPOSED STREAM RELOCATION CHANNEL BETWEEN STATIONS 45+450 AND 45+820, THE CONTRACTOR SHALL CONTACT MIKE AUSTIN OF ODOT, DISTRICT 10 AT 740-373-0212 (EXT. 704) TEN DAYS PRIOR TO THE START DATE.

THE PROPOSED STREAM CHANNEL RELOCATION BETWEEN STATIONS 45+540 TO 45+820 SHALL BE CONSTRUCTED PRIOR TO FILLING THE EXISTING CHANNEL. THE RELOCATION CHANNEL SHALL BE CONSTRUCTED AND STABILIZED WITH AT LEAST 70% VEGETATED COVER PRIOR TO DIVERTING FLOW FROM THE EXISTING CHANNEL.

BETWEEN STATIONS 45+540 AND 45+820, NO PRIMARY OR ANCILLARY CONSTRUCTION WORK, INCLUDING STAGING OR WASTING ACTIVITIES, SHALL OCCUR WITHIN THE CORRIDOR DESIGNATED FOR THE STREAM RELOCATION.

AFTER MULCHING AND SEEDING THE RELOCATION CHANNEL CORRIDOR WITH WILDLIFE MIX, WILLOW POSTINGS WILL BE PLANTED AT EACH OUTSIDE MEANDER BEND (50 POSTINGS PER OUTSIDE BEND) AT THE BANK/WATER INTERFACE.

ITEM 870 - SEEDING AND MULCHING

SEEDING AND MULCHING QUANTITY CALCULATIONS ARE BASED ON SEEDING AND MULCHING ALL AREAS OF EXPOSED SOIL FROM 10 FEET OUTSIDE THE CONSTRUCTION LIMITS (OR TO THE RIGHT-OF-WAY LINE IF IT IS LESS THAN 10 FEET FROM THE CONSTRUCTION LIMITS).

SEE SHEET 584 FOR AREAS THAT SHALL BE SEEDED WITH THE WILDLIFE MIXTURE.

THE CONTRACTOR SHALL MAINTAIN ALL SEEDED AREAS UNTIL THE PROJECT IS FINALIZED. THE REPAIRS SHALL BE MADE PRIOR TO COMPLETION OF THE PROJECT BY THE USE OF REPAIR SEEDING AND MULCHING AND INTER-SEEDING QUANTITIES. PERFORMANCE BY SUPPLEMENTAL AGREEMENT SHALL BE WAIVED.

WATERING AND MOWING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR PERMANENT SEEDED AREAS:

870, WATER	20,225 CU. METER
870, MOWING	207,535 SQ. METER

QUANTITIES CARRIED TO GENERAL SUMMARY

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	166,030 SQ. METER
877, TEMPORARY SLOPE DRAINS	975 METER
877, SEDIMENT REMOVAL	5,055 CU. METER
877, TEMPORARY PERIMETER FILTER FABRIC FENCE	6,300 METER
877, TEMPORARY DITCH CHECK FILTER FABRIC FENCE	195 METER
877, TEMPORARY INLET PROTECTION FILTER FABRIC FENCE	194 METER
877, TEMPORARY DIKES	4,685 CU. METER
870, COMMERCIAL FERTILIZER	39,020 Kg.
870, INTERSEEDING	41,510 SQ. METER
870, REPAIR SEEDING AND MULCHING	41,510 SQ. METER
870, WATER	1,660 CU. METER

QUANTITIES CARRIED TO GENERAL SUMMARY

EROSION CONTROL

ITEMS 601, 660, 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 670 OR 839. 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.

ITEM 877 - TEMPORARY BENCHES, DAMS AND SEDIMENT BASINS

THE SEDIMENT BASIN QUANTITIES LISTED ON THIS STORM WATER POLLUTION PREVENTION PLAN ARE THE STORAGE VOLUMES REQUIRED FOR THE SEDIMENT BASIN. THE PAY QUANTITY FOR EACH BASIN SHALL BE DETERMINED AS THE ACTUAL AMOUNT OF EXCAVATION OR EMBANKMENT REQUIRED TO PROVIDE THAT STORAGE VOLUME.

ITEM 607 - FENCE MISC.: SEDIMENT BASIN FENCE

THIS ITEM IS FOR ENCLOSING SEDIMENT PONDS NEAR RESIDENTIAL AREAS. THE FENCING MAY BE PLASTIC CONSTRUCTION FENCE, CHAIN LINK, OR WOVEN WIRE. THE HEIGHT OF THE FENCE SHALL BE AT LEAST 0.91 m TALL. POSTS SHALL BE SPACED CLOSE ENOUGH TO KEEP THE BOTTOM OF THE FENCE FROM BEING LIFTED UP. THIS ITEM SHALL BE USED WITH THE CONCURRENCE OF THE ENGINEER.

CLEARING AND GRUBBING, AS PER PLAN

TREES AND STUMPS INSIDE THE WORK LIMITS SHALL BE REMOVED IN ACCORDANCE WITH 201. A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, A.P.P.. 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, AS PER PLAN.

THE CONTRACTOR SHALL NOT CUT DOWN ANY INDIANA BAT HABITAT TREES FROM APRIL 15 THROUGH SEPTEMBER 15. TREES THAT HAVE BEEN CUT DOWN OUTSIDE OF THIS TIME LIMIT MAY BE LEFT ON THE GROUND DURING THIS TIME PERIOD AS LONG AS NO PART OF THE TREE IS MORE THAN 9 FEET ABOVE THE GROUND. CLEARING FOR FENCE BUILDING SHALL ALSO BE SUBJECT TO THIS REQUIREMENT.

BAT TREES HAVE A DIAMETER OF NINE INCHES OR GREATER AT 4 FEET ABOVE THE GROUND AND HAVE EXFOLIATED (SHAGGY) BARK AND/OR CAVITITES IN THE TRUNK.

THIS ITEM SHALL ALSO INCLUDE PAYMENT FOR FENCE REMOVAL. THE PROVISIONS OF ITEM 202 SHALL APPLY FOR FENCE REMOVAL EXCEPT THAT PAYMENT SHALL BE INCLUDED IN THE LUMP SUM FOR ITEM 201.

EARTHWORK FOR SLOUGHING, SLIDES, AND BREAKAGES

THE FOLLOWING QUANTITIES ARE FOR USE AS DIRECTED BY THE ENGINEER FOR REMEDIATION OF SLOUGHING, SLIDES, AND BREAKAGES AND ADDITIONAL UNDERCUTTING.

203, EXCAVATION NOT INCLUDING EMBANKMENT	100000 CU. METERS
203, EMBANKMENT	100000 CU. METERS

TOTALS CARRIED TO GENERAL SUMMARY

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT 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.

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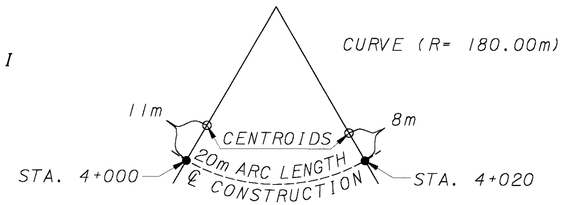
EARTHWORK CORRECTIONS FOR CURVATURE

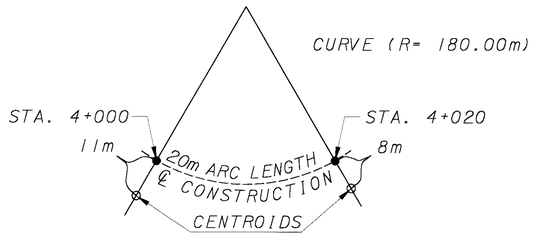
WHEN THE TRUE VOLUME OF CUT OR FILL, OR BOTH COMBINED, BASED ON THE CENTROIDAL ARC LENGTH DIFFERS BY ONE CUBIC YARD PER YARD OF DISTANCE BETWEEN ADJACENT CROSS SECTIONS FROM THE ESTIMATED VOLUMES BASED ON THE SURVEY LENGTH, A CORRECTION SHALL BE MADE IN THE VOLUMES AS SHOWN BELOW.

EXAMPLE 1



CORRECTED RADIUS = 180.00 - (11+8)/2 = 170.5
ALIGNMENT FACTOR = 170.50 / 180.00 = 0.94722
CORRECTED ARC LENGTH = 20 x 0.94722 = 18.94m

EXAMPLE 2



CORRECTED RADIUS = 180.00 + (11+8)/2 = 189.50
ALIGNUENT FACTOR = 189.50 / 180.00 = 1.05278
CORRECTED ARC LENGTH = 20 x 1.05278 = 21.06m

ITEM 626 - BARRIER REFLECTORS

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING BARRIER REFLECTORS IN ACCORDANCE WITH SECTION 626.03.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

SHEET REF.	REF. NO.	STA. TO STA.	LOC.	SIDE	SPACING METERS	BARRIER REFLECTOR TYPE A-2 WHITE EACH	BARRIER REFLECTOR TYPE B-2 WHITE EACH	BARRIER REFLECTOR TYPE A WHITE EACH	BARRIER REFLECTOR TYPE B WHITE EACH
153-155	1-G	39+595.135 TO 40+064.400	US 33	LT.	30	8	9		
153-155	2-G	39+524.650 TO 39+974.865	US 33	RT.	30	8	9		
157-166	1-G	40+266.005 TO 41+531.715	US 33	LT.	30	37	5		
157-159	2-G	40+303.810 TO 40+547.650	US 33	RT.	30	9			
164	2-G	41+205.675 TO 41+456.925	US 33	RT.	30	5	5		
168-170	1-G	42+028.080 TO 42+270.000	US 33	LT.	30	9			
170-182	1-G	42+477.250 TO 44+121.500	US 33	LT.	30	55			
173-177	2-G	42+557.620 TO 43+190.080	US 33	RT.	30	21			
179-182	2-G	43+640.000 TO 44+055.660	US 33	RT.	30	15			
184-186	1-G	44+319.000 TO 44+690.460	US 33	LT.	30	13			
184-186	2-G	44+289.060 TO 44+554.320	US 33	RT.	30	10			
186-195	1-G	44+851.620 TO 46+111.615	US 33	LT.	30	38	5		
186-189	2-G	44+870.000 TO 45+050.000	US 33	RT.	30	7			
191-195	2-G	45+250.990 TO 46+060.990	US 33	RT.	30	23	5		
198-200	1-G	46+504.530 TO 46+654.530	US 33	LT.	30	6			
204-207	1-G	47+470.980 TO 47+770.980	US 33	LT.	30	11			
209	1-G	48+103.320 TO 48+193.320	US 33	LT.	30			5	
214-216	1-G	51+431.000 TO 49+051.678	SR681/US33	LT.&RT.	30			9	3
214	2-G	51+288.000 TO 48+918.000	SR681/US33	RT.	30			3	3
219-221	1-G	49+527.620 TO 49+677.620	US 33	LT.	30			6	
219-221	2-G	49+340.490 TO 49+670.490	US 33	RT.	30			12	
473	1-G	1+973.500 TO 2+067.000	CR 89	RT.	30	4			
475	1-G	2+453.810 TO 2+543.810	CR 89	LT.	30	4			
TOTALS CARRIED TO GENERAL SUMMARY						283	38	35	6

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. ALL OTHER SLOPED EMBANKMENT AREAS SHALL BE BENCHED AS SET FORTH IN 203.09. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.09

UNSUITABLE SUBGRADE

DUE TO THE POSSIBILITY OF POOR SOILS ON THE PROJECT AN ESTIMATED QUANTITY OF ITEM 203 EXCAVATION AND ITEM 203 EMBANKMENT USING GRANULAR MATERIAL AS PER 203.02 HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

THE STATE OF OHIO RESERVES THE RIGHT TO NON-PERFORM 100% OF THESE ITEMS.

ITEM 203 EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION	20,000 CU. METERS
ITEM 203 EMBANKMENT USING GRANULAR MATERIAL	20,000 CU. METERS
ITEM 203 EMBANKMENT	10,000 CU. METERS

ITEM 203 - PROOF ROLLING

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

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 203 PROOF ROLLING	67 HOURS

BORROW AND WASTE AREAS

IN THE FUTURE, THIS HIGHWAY WILL BE WIDENED INTO A FOUR LANE, DIVIDED ROADWAY. THE LANES BEING CONSTRUCTED FOR THIS PROJECT WILL BECOME THE EAST BOUND LANES IN THE FUTURE. THE FUTURE LANES HAVE BEEN SHOWN IN THE CROSS SECTION SHEETS.

THE CONTRACTOR IS ALLOWED TO USE SOIL THAT WILL NEED TO BE EXCAVATED IN THE FUTURE FOR THE ADDITIONAL LANES AS BORROW MATERIAL FOR THIS PROJECT. ALSO, THE CONTRACTOR MAY DISPOSE OF WASTE MATERIAL BY PLACING IT IN AREAS WHERE EMBANKMENTS WILL BE BUILT IN THE FUTURE. ALL MATERIAL WASTED IN THIS WAY MUST MEET THE REQUIREMENTS OF ITEM 203, EMBANKMENT (INCLUDING COMPACTION).

NO SLOPES MAY BE LEFT STEEPER THAN THE LINES SHOWN ON THE CROSS SECTIONS. ALL BORROW AND WASTE AREAS ON THE RIGHT OF WAY SHALL BE SLOPED TO DRAIN AND SEEDED.

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ITEM 601 - DUMP ROCK FILL, AS PER PLAN

MATERIALS FURNISHED FOR THIS ITEM SHALL BE AS DEFINED IN 601.07, EXCEPT THAT THE PARTICLE SIZES SHOULD CONFORM TO THE AASHTO NUMBER TWO AND NUMBER FOUR AGGREGATE AS DEFINED IN SECTION 703.01.

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 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#	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 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#	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	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 0.45 m X 0.45 m.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 606, EACH, 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.

A DELINEATOR SHALL BE PLACED TO THE OUTSIDE OF THE HEAD OF EACH TYPE E-98.

ITEM 611 - REINFORCED CONCRETE APPROACH SLAB, T= 380mm, AS PER PLAN

CONCRETE FOR THIS ITEM SHALL BE SS 844, HIGH PERFORMANCE CONCRETE, MIX 3 OR 4. THE HIGH PERFORMANCE CONCRETE TRIAL MIX AND TESTING, AS DESCRIBED IN SS 844, SHALL BE WAIVED.

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 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#	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS444	SLOTTED RAIL TERMINAL POST LAYOUT AND ERECTION DETAILS SRT-350 (12.5, 8 POST)	7/12/99	8/27/99 REV. 1
SS425M	SLOTTED RAIL TERMINAL SRT-350 POST LAYOUT AND ERECTION DETAILS SRT-350 (12.5, 9 POST)	6/21/97	3/6/98 REV. 1

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 SYSTEM IS CONSIDERED TO BE 11.43 m, INCLUSIVE OF THREE 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#	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.

THE FACE OF THE TYPE B-98 IMPACT HEAD SHALL BE COVERED WITH A TYPE G REFLECTIVE SHEETING, PER CMS 730.19: APPROXIMATELY 0.91 m W X 0.30 m H FOR THE SRT-350 AND 0.36 m W X 0.51 m H FOR THE FLEAT.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 606, EACH, 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 SPECIAL - MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN 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.

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GENERAL NOTES

ITEM SPECIAL - MAILBOX SUPPORT CONT.

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.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM SPECIAL- MAILBOX SUPPORT 5 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.

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 mm.

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.

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.

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, 300 mm CONDUIT, TYPE C 65 METER

604, INSPECTION WELL 4 EACH

ITEM 202- RAISED PAVEMENT MARKER REMOVED FOR STORAGE

ALL EXISTING RAISED PAVEMENT UARKERS SHALL BE REMOVED FOR STORAGE. THE FOLLOWING IS AN ESTIMATED QUANTITY.

ITEM 202, RPM REMOVED FOR STORAGE: 270 EACH
QUANTITY CARRIED TO GENERAL SUMMARY

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.

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)(CONSTRUCTION) LIMITS BY ITEM 603 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE 300 mm ABOVE THE FLOWLINE ELEVATION OF THE DITCH. 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 ITEMS.

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

603 150 mm CONDUIT, TYPE B	100 METER
603 150 mm CONDUIT, TYPE E	100 METER
603 150 mm CONDUIT, TYPE F	100 METER
601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER	5 CU. METERS

ITEM 870 SEEDING AND MULCHING QUANTITY ADJUSTMENT

THE SEEDING AND MULCHING QUANTITIES CALCULATED ON THE CROSS SECTION SHEETS ARE BASED ON EXPOSED SOIL AREAS BETWEEN THE WORK LIMITS. THE FOLLOWING IS A CALCULATION TO ADJUST SEEDING TOTALS TO ACCOUNT FOR LIMITS 10 FEET OUTSIDE OF THE PROPOSED WORK LIMITS.

TR 68 STA. 1+050.000 TO STA. 1+147.032 = 97.032 m
TR 68 STA. 2+000.000 TO STA. 2+075.000 = 75.000 m
TR 67 STA. 1+010.000 TO STA. 1+117.963 = 107.963 m
CR 89 STA. 1+980.000 TO STA. 2+540.000= 560.000 m
TR 412 STA. 11+000.000 TO STA. 11+607.637= 607.637 m
TR 243 STA. 0+020.000 TO STA. 0+120.000 = 100.000 m
TR 243 STA. 0+077.500 TO STA. 0+163.000 = 85.500 m
SR 681 STA. 51+040.000 TO STA. 51+721.735 = 681.735 m
OLD US 33 STA. 46+000.000 TO STA. 46+353.932 = 353.932 m
US 33 STA. 39+600.000 TO STA. 39+643.920 = 43.920 m
US 33 STA. 39+926.080 TO STA. 41+255.188 = 1329.108 m
US 33 STA. 41+415.023 TO STA. 45+472.770 = 4057.747 m
US 33 STA. 45+621.230 TO STA. 48+853.275 = 232.045 m
US 33 STA. 48+928.589 TO STA. 49+890.950 = 962.361 m
TOTAL = 9293.980 m

2 SIDES X 3.0 m X 9293.980 = 55763.88 SQ.METERS

A QUANTITY OF 55764 Sq m HAS BEEN CARRIED TO THE GENERAL SUMMARY.

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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 APPURTENANCE 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.

ITEM SPECIAL -DRILLED WATER WELL ABANDONED

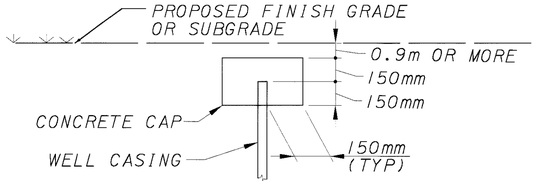
THE EXISTING CONCRETE OR STONE SLAB WELL COVER AND PUMPING EQUIPMENT SHALL BE REMOVED AND DISPOSED. THE CASING SHALL BE CUT OFF AT LEAST 42 INCHES BELOW THE PROPOSED FINISHED GRADE OUTSIDE PROPOSED PAVEMENT AREAS OR AT LEAST 42 INCHES BELOW THE PROPOSED SUBGRADE ELEVATION INSIDE PROPOSED PAVEMENT AREAS. THE WELL SHALL BE FILLED FROM BOTTOM TO TOP WITH BENTONITE SLURRY PELLETS, CHIPS OR CONCRETE MEETING ASTM C 150 TYPE I PORTLAND CEMENT WITH NO AIR ENTRAINMENT, AND THEN CAPPED IN ACCORDANCE WITH THE DETAIL SHOWN BELOW.

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



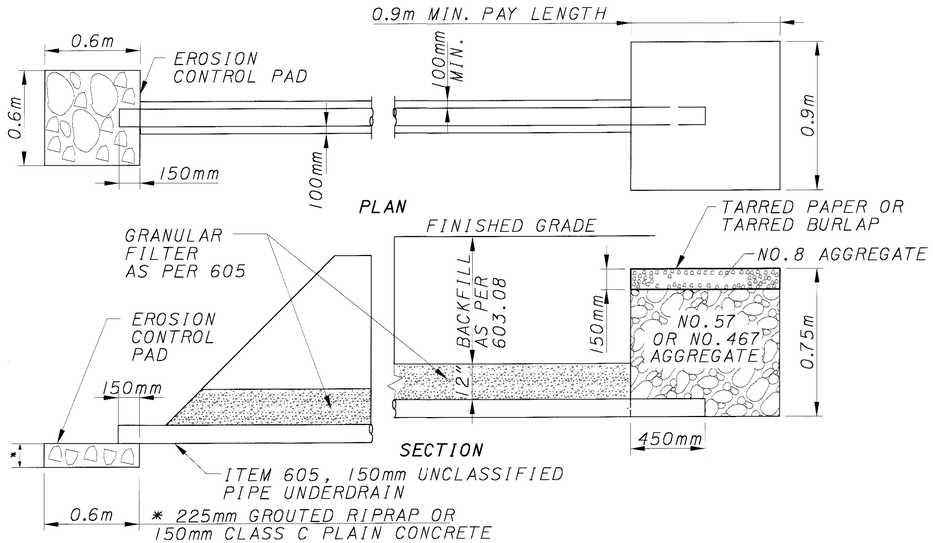
NOTE: THE CONTRACTOR MAY WELD A CAP ON THE CASING OR OTHER APPROVED METHOD IN LIEU OF USING THE CONCRETE CAP AS SHOWN.

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 BELOW AND PAID FOR AT THE CONTRACT PRICE FOR:

605, 150mm UNCLASSIFIED PIPE UNDERDRAIN. FOR SPRINGS: 150 METERS
605, AGGREGATE DRAIN, FOR SPRINGS: 300 METERS
QUANTITIES CARRIED TO GENERAL SUMMARY



AGGREGATES, TARRED PAPER OR TARRED BURLAP, EROSION CONTROL PAD, BACKFILL AND NECESSARY EXCAVATION FOR SPRING DRAINS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID PER FOOT FOR ITEM 605. AGGREGATE DRAINS FOR SPRINGS.

NOTE: A PRECAST REINFORCED CONCRETE OUTLET MAY BE USED FOR AN EROSION CONTROL PAD. IT WILL BE PAID FOR UNDER THE CONDUIT ITEM.

ITEM SPECIAL - PLUGGING AND VENTING OIL AND GAS WELLS

ALL OIL AND GAS WELLS LOCATED WITHIN THE LIMITS OF THE RIGHT OF WAY 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.

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ITEM SPECIAL - PLUGGING AND VENTING OIL AND GAS WELLS (CONT.)

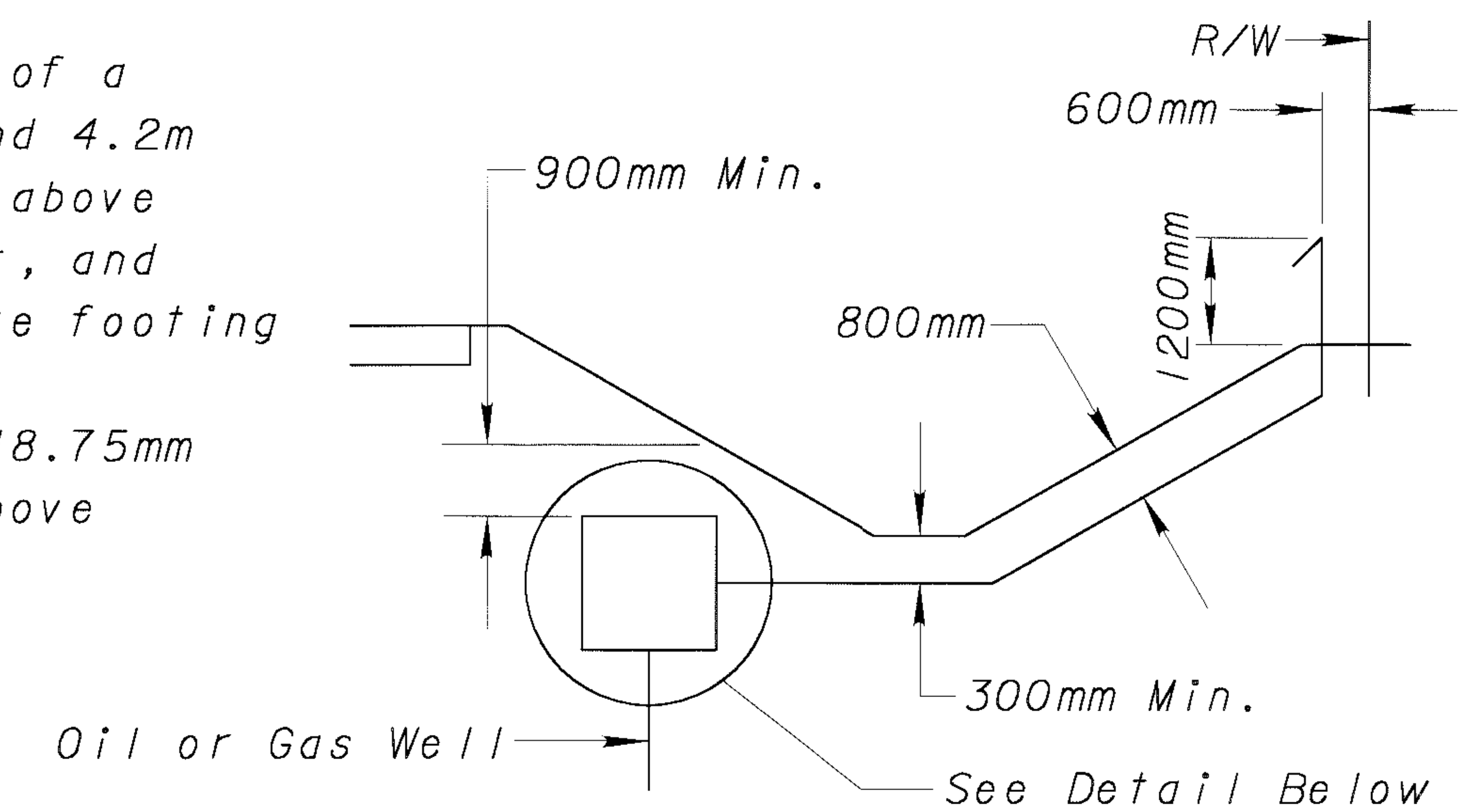
ALL OIL AND GAS WELLS LOCATED WITHIN THE RIGHT OF WAY, WHETHER PREVIOUSLY PLUGGED TO THE SATISFACTION OF THE DEPARTMENT OF NATURAL RESOURCES OR TO BE PLUGGED AS PART OF THIS PROJECT, SHALL BE VENTED AS DETAILED ON THIS SHEET.

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.

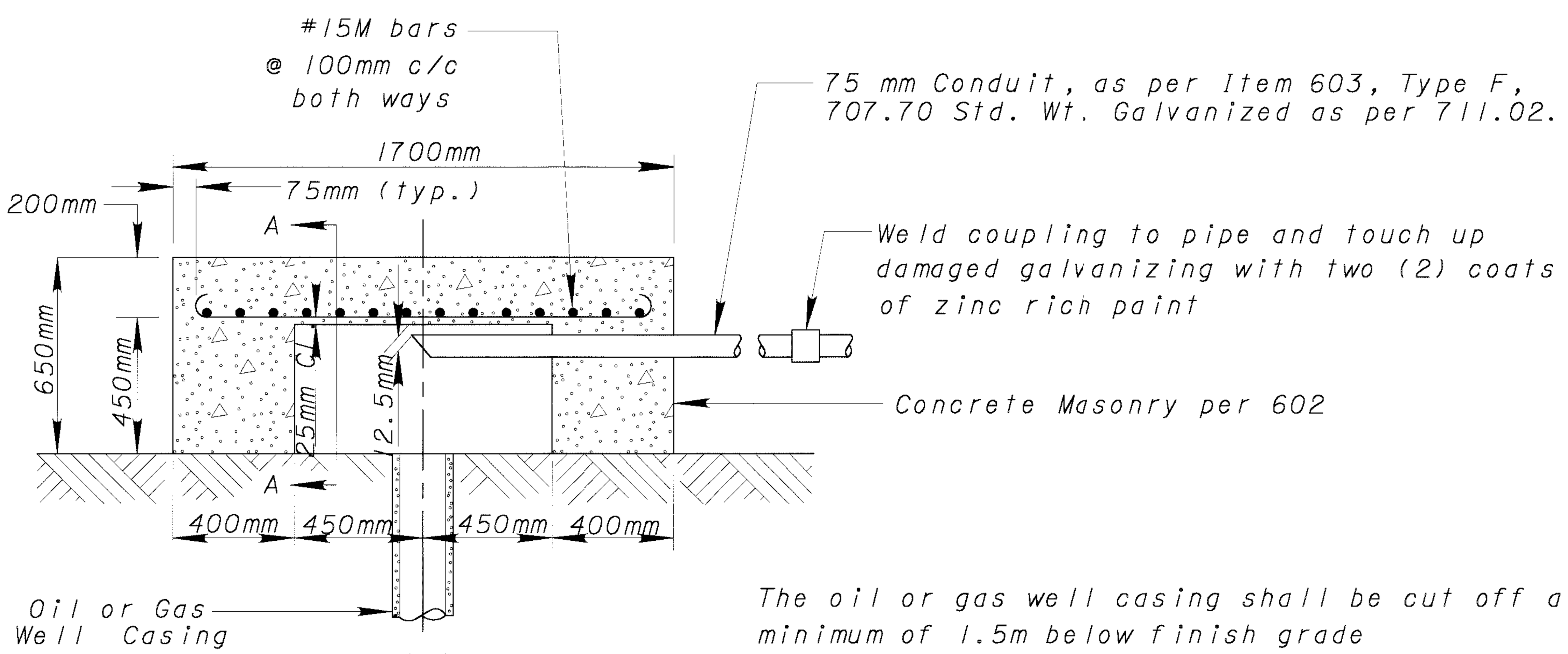
IN ADDITION TO WELLS SPECIFICALLY MARKED ON THE PLAN, THE FOLLOWING QUANTITY FOR THIS ITEM HAS BEEN CARRIED TO THE GENERAL SUMMARY, TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL, 4 EACH, PLUGGING AND VENTING GAS AND OIL WELL

If the vent pipe is within 6m of a building, the pipe shall extend 4.2m above the ground line or 0.6m above the peak, whichever is greater, and shall be anchored in a concrete footing 0.45m in diameter and 0.9m deep. The pipe shall have a 18.75mm threaded plug located 75 mm above the ground line.



The vent pipe opening shall be protected with a wire screen.

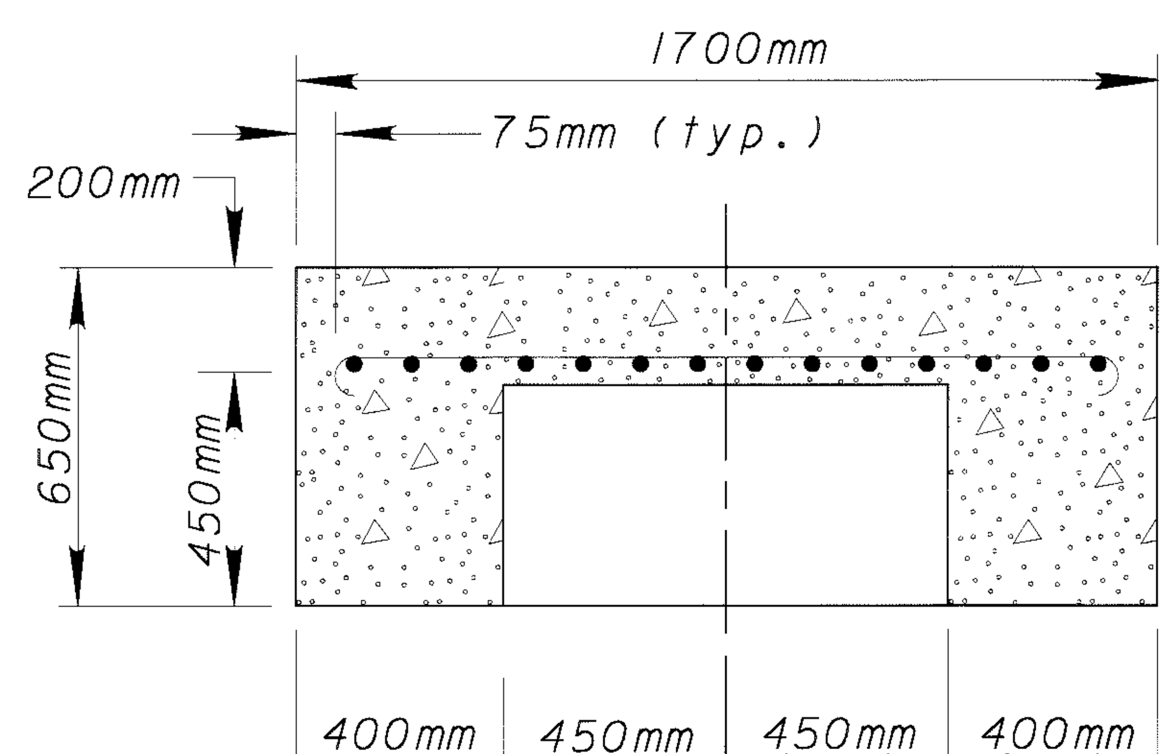


DETAIL

The oil or gas well casing shall be cut off a minimum of 1.5m below finish grade or bottom or subbase.

Payment for the work necessary to complete the above shall be included in: Item Special, Each, Plugging and Venting Gas (and/or) Oil Well

Designer Note:
Modification of this detail will be required for fills greater than 22m or where settlement of the existing ground of more than 375mm is anticipated.



SECTION A-A

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

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.

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 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG64-22 (UNDER GUARDRAIL)

PAVING UNDER THE GUARDRAIL SHALL CONSIST OF PLACING ITEM 448 TO THE DEPTH SPECIFIED USING THE FOLLOWING METHOD:

1) PLACE ITEM 448 (SEE TYPICAL SECTIONS)
2) BORE ASPHALT AT POST LOCATIONS
3) SET GUARDRAIL POSTS
4) PATCH AROUND POSTS

THE MATERIALS USED FOR PATCHING SHALL BE A BITUMINOUS CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 448, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE I, PG64-22 (UNDER GUARDRAIL).

ITEM 407 - TACK COAT AND ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. FOR ESTIMATING PURPOSES ONLY, THE PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF:

407, TACK COAT = 0.05 LITERS / SQ. METER
407, TACK COAT FOR INTERMEDIATE COURSE = 0.03 LITERS / SQ. METERS

ITEM 617 COMPACTED AGGREGATE, AS PER PLAN

ALL QUALITY REQUIREMENTS EXCEPT SHALE WILL BE WAIVED. GRADATION REQUIREMENTS WILL BE AS SPECIFIED EXCEPT THE PLASTICITY INDEX WILL BE WAIVED. MATERIAL WILL MEET THE APPROVAL OF THE TESTING ENGINEER.

CALCULATED BBD
CHECKED TDW

GENERAL NOTES

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ATH-33 40-981 Culvert Overexcation Recommendations Due to Soft, Very Loose, or Unsuitable Soils

Unless otherwise noted, the width of overexcavation is limited to the width of the pipe trench.

Culvert No.	Proposed ℄ Station	Boring No.	Elevation	Station	Offset	Recommendations (overexcavation below existing ground surface, as measured along pipe, L=left, R=right of ℄)
24	40+394.806	SB-53	226.64	40+457.61	71.05 m L	0.9 m, entire length of pipe
24	40+394.806	SB-52	229.91	40+344.43	84.67 m R	0.9 m, entire length of pipe
25	40+884.113	SB-51	239.03	40+884.10	CL	1.5 m, from 26 m right of CL to right end of pipe
28	42+116.376	B-99	256.00	42+086.97	4.97 m L	0.5 m, entire length of pipe
29a	42+768.328	SB-50	244.77	42+765.34	0.62 m L	none
30	43+039.346	SB-49	247.12	43+054.84	3.71 m L	none
31	43+776.488	SB-46	225.29	43+776.49	CL	2.4 m, entire length of pipe
48	43+940.776	SB-45	241.42	43+927.02	2.77 m L	none
32	44+415.818	SB-44	232.29	44+420.41	6.09 m R	none
33	44+939.506	SB-43	223.53	44+946.93	1.82 m R	none
34	45+305.668	SB-42	215.38	45+305.24	4.40 m R	overexcavate coal seam to elevation 212.0 between 10 m L and 37 m R
35	46+023.462	SB-41	220.91	46+020.87	CL	none
36	46+904.720	SB-40	238.84	46+898.31	4.16 m L	for embankment: 0.9 m between Sta. 46+880 and 46+920, as specified by ODOT for culvert: 0.9 m, entire length pipe"
37	47+140.528	SB-39	233.83	47+143.36	1.12 m R	none
38	47+608.921	SB-38	223.80	47+610.18	2.09 m R	none
47	47+748.890	SB-37	225.52	47+749.13	0.27 m L	none
40	48+142.751	B-149	216.10	48+159.60	23.78 m R	0.5 m, between left end pipe and 24 m R, below elevation 216.0 (width varies, see plan)
40	48+142.751	R-88	214.20	48+194.71	34.22 m R	for embankment: 0.9 m between Sta. 48+180 and 48+220, as specified by ODOT for culvert: 2.4 m, between 24 m R and right edge embankment, below elevations 214.0 to 216.0 (width varies, see plan)"
41	48+302.124	SB-36	221.33	48+302.40	CL	0.9 m, entire length of pipe
43	48+674.532	SB-35	207.93	48+676.95	CL	for embankment: 1.2 m between Sta. 48+640 and 48+700, as specified by ODOT for culvert: 1.7 m, entire length of pipe"
44	49+173.478	SB-34	212.31	49+180.00	CL	none

Please note that due to the variations in the existing grade, some excavation and fill is expected to construct the pipe, regardless of the above recommendations. All topsoil, generally less than 0.3 meters thick, should be stripped prior to placement of the pipe. Excavation in rock is generally anticipated below depths of 2.0 to 2.5m.

COAL SEAM BENCHING

A COAL SEAM IS LOCATED NEAR STA.49+180 TO STA.49+340. IT IS THE INTENT TO CONSTRUCT A 10:1 BENCH AT THE TOP OF THE COAL SEAM. THE CROSS SECTIONS SHOW A 10:1 BENCH LOCATED AT THE APPROXIMATE LOCATION OF THIS COAL SEAM. AS THE COAL SEAM IS UNCOVERED IN THE FIELD, THE LOCATION OF THIS BENCH WILL NEED TO BE FIELD ADJUSTED TO COINCIDE WITH THE TOP OF THE COAL SEAM. THE CONTRACTOR WILL FIELD ADJUST THIS LOCATION AS DIRECTED BY THE ENGINEER.

FIELD PAVING OF PIPE

THE FIELD PAVING SHALL NOT BE STARTED UNTIL A MINIMUM OF 80 PERCENT OF THE REQUIRED FILL HAS BEEN PLACED.

ITEM 603 CONDUIT TYPE A, AS PER PLAN

THESE PIPES SHALL BE OF LOCK-SEAM OR WELDED SEAM FABRICATION ONLY.

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.

ITEM 605 - AGGREGATE DRAINS (CONT.)

	STA. TO STA.		
S.R. 681	51+025 TO 51+275	@ 5 M INTERVALS 51 EA. x 3.2 M	= 163.2 M
	51+375 TO 51+675	@ 5 M INTERVALS 57 EA. x 3.2 M	= 182.4 M
OLD U.S. 33	46+020 TO 46+350	@ 5 M INTERVALS 67 EA. x 3.5 M	= 234.5 M
T.R. 68	1+055 TO 1+130	@ 5 M INTERVALS 16 EA. x 3.3 M	= 52.8 M
	2+005 TO 2+070	@ 5 M INTERVALS 7 EA. x 3.0 M	= 21.0 M
T.R. 67	1+015 TO 1+115	@ 5 M INTERVALS 21 EA. x 3.3 M	= 69.3 M
C.R. 89	1+985 TO 2+210	@ 5 M INTERVALS 46 EA. x 3.5 M	= 161.0 M
	2+305 TO 2+535	@ 5 M INTERVALS 40 EA. x 3.0 M	= 120.0 M
		7 EA. x 10.0M	= 70.0 M
T.R. 243	0+020 TO 0+120	@ 5 M INTERVALS 20 EA. x 3.5 M	= 70.0 M
	0+080 TO 0+160	@ 5 M INTERVALS 17 EA. x 3.5 M	= 59.5 M
T.R. 412	11+005 TO 11+605	@ 5 M INTERVALS 111 EA. x 3.5M	= 388.5 M
		TOTAL	= 1592.2 M

A QUANTITY OF 1593m OF ITEM 605 AGGREGATE DRAINS HAS BEEN CARRIED TO THE GENERAL SUMMARY.

CALCULATED BBD
CHECKED TDW

GENERAL NOTES

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NOTICE:

BEFORE WORK IS STARTED ON THIS PROJECT, THE CONTRACTOR SHALL HIRE A CONSULTANT THAT IS AT LEAST PREQUALIFIED TO PREPARE NON COMPLEX ROADWAY PLANS. THIS CONSULTANTSHALL PREPARE A DETAILED MAINTENANCE OF TRAFFIC (MOT) PLAN AND SCHEDULE OF OPERATIONS FOR MAINTENANCE OF TRAFFIC. SECTION 1306.2 OF THE OHIO DEPARTMENT OF TRANSPORTATION'S LOCATION AND DESIGN MANUAL, VOLUME THREE, HIGHWAY PLANS, LISTS SEVERAL SOURCES OF INFORMATION AVAILABLE TO THE DESIGNER TO ASSIST IN THE PREPARATION OF THE DETAILED MAINTENANCE OF TRAFFIC PLAN. PRIOR TO IMPLEMENTING ANY MAINTENANCE OF TRAFFIC PLAN, APPROVAL SHALL BE OBTAINED FROM THE DISTRICT 10 PRODUCTION AND CONSTRUCTION DEPARTMENTS. THIS PLAN SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.

CONCEPTUAL SEQUENCE OF CONSTRUCTION

THE FOLLOWING IS A LIST OF GENERAL PROVISIONS FOR THE CONCEPTUAL SEQUENCE OF CONSTRUCTION FOR THE MAJOR PORTIONS OF THIS PROJECT. THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT A DETAILED SEQUENCE OF CONSTRUCTION PLAN AND SCHEDULE OF OPERATIONS FOR THE MAINTENANCE OF TRAFFIC, FOLLOWING THE INTENT OF THESE PROVISIONS, TO INSURE THE SAFETY AND MINIMUM INCONVENIENCE TO THE TRAVELING PUBLIC. NO PLAN SHALL BE PLACED INTO EFFECT UNTIL SUCH PLAN HAS BEEN REVIEWED AND APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE DIRECTOR.

DUE TO THE ALIGNMENT OF MAINLINE U.S. 33 BEING RELOCATED, TRAFFIC ON THE MAINLINE SHALL BE MAINTAINED ON EXISTING U.S. 33 FOR THE MAJORITY OF THE CONSTRUCTION PERIOD. TIE BACK TO THE EXISTING ROAD PAVEMENT AT THE SOUTHERN TERMINI WILL REQUIRE STAGED CONSTRUCTION TO MINIMIZE THE DISRUPTION OF TRAFFIC. ONE LANE OF TRAFFIC IN EACH DIRECTION MUST BE MAINTAINED AT ALL TIMES.

IT IS THE INTENT OF THESE PLANS THAT C.R. 89 AND S.R. 681 REALIGNMENTS BE CONSTRUCTED CONCURRENTLY WITH THE CONSTRUCTION OF THE U.S. 33 MAINLINE.

T.R. 68 (POSSUM HOLLOW RD.)

THE CONSTRUCTION OF U.S. 33 MAINLINE RELOCATION PERMANENTLY CLOSES EXISTING T.R. 68.

CONSTRUCT CUL-DE-SACS ON THE EAST AND WEST SIDES OF THE MAINLINE U.S.33 RELOCATION AT THE CLOSURE POINTS.

UPON CLOSING EXISTING T.R. 68 TO THROUGH TRAFFIC, CONSTRUCT THE CUL-DE-SACS BEHIND A BARRIER OR BARRICADES. LOCAL ACCESS TO ANY RESIDENCES WITH DRIVEWAYS CONNECTING TO THE CUL-DE-SACS SHALL BE MAINTAINED DURING CONSTRUCTION.

C.R. 89 (RAINBOW LAKE RD.)

TWO LANE, TWO-WAY TRAFFIC ON C.R. 89 SHALL BE MAINTAINED USING A COMBINATION OF THE EXISTING PAVEMENT, TEMPORARY ROADS OR TEMPORARY WIDENING AND NEWLY CONSTRUCTED C.R. 89 PAVEMENT. ALL TEMPORARY ROADS SHALL BE DESIGNED AT A MINIMUM DESIGN SPEED OF 25 MPH (METRIC EQ.).

PHASE-1 (SEE SHEET NO. 50)

MAINTAIN TRAFFIC ON THE EXISTING C.R. 89 PAVEMENT, CONSTRUCT THE TEMPORARY ROADWAY AND CONSTRUCT PORTION OF C.R. 89 REALIGNMENT PAVEMENT. CONSTRUCTION OF U.S. 33 MAINLINE SHALL CONTINUE DURING THESE OPERATIONS.

PHASE-2 (SEE SHEET NO. 51)

DIVERT TRAFFIC FROM THE EXISTING PAVEMENT ALIGNMENT TO THE TEMPORARY ROADWAY.

REMOVE THE EXISTING C.R. 89 PAVEMENT WHERE INDICATED. (OR REQUIRED IF NOT SHOWN ON PLANS)

FINISH CONSTRUCTION OF C.R. 89 REALIGNMENT PAVEMENT.

CONSTRUCTION OF US 33 MAINLINE SHALL CONTINUE DURING THESE OPERATIONS.

PHASE-3 (SEE SHEET NO. 52)

UPON COMPLETION OF PHASE-2, DIVERT TRAFFIC TO THE NEWLY CONSTRUCTED C.R 89 REALIGNMENT.

REMOVE THE EXISTING TEMPORARY ROADWAY PAVEMENT.

CONTINUE TO CONSTRUCT PROPOSED U.S. 33 MAINLINE AS INDICATED.

T.R. 412 (GRUESER ROAD)

WORK ON T.R. 412 SHALL BE COORDINATED WITH THE CONSTRUCTION OF MAINLINE U.S. 33 TO MAINTAIN ACCESS TO THE GRUESER FARM AND RESIDENCE AT ALL TIMES.

CONSTRUCT A TEMPORARY ROAD TO MAINTAIN ACCESS TO THE GRUESER FARM. THE TEMPORARY ROAD SHALL BE LOCATED SO THAT IT DOES NOT INTERFERE WITH THE EXCAVATION AND INSTALLATION OF THE THREE-SIDED STRUCTURE. SWITCH ALL TRAFFIC TO THE TEMPORARY ROAD. CONSTRUCT THE PROPOSED T.R. 412, INCLUDING THE CUL-DE-SAC AND THE THREE SIDED STRUCTURE UNDER U.S. 33.

WHEN TRAFFIC IS SWITCHED BACK TO T.R. 412, THE TEMPORARY ROAD CAN BE REMOVED AND WORK ON U.S. 33 OVER T.R. 412 CAN BE COMPLETED.

C. R. 40 (BURLINGTON ROAD)

PRECAUTIONS SHALL BE TAKEN DURING CONSTRUCTION OF THE PROPOSED U.S. 33 STRUCTURE OVER EXISTING C.R. 40 TO PROTECT THE TRAVELING PUBLIC.

TEMPORARY CLOSURES OF ONE LANE ON EXISTING C.R. 40 MAY BE PROVIDED DURING PERIODS OF OVERHEAD CONSTRUCTION, SUCH AS BEAM PLACEMENT OR OTHER SUPERSTRUCTURE CONSTRUCTION.

T.R. 243 (PARK ROAD)

CONSTRUCT PROPOSED CUL-DE-SAC AT EXISTING T.R.243 EAST OF U.S. 33 RELOCATION.

CONSTRUCT DRIVEWAY FROM THE CUL-DE-SAC, WEST, TO SERVE AN EXISTING RESIDENCE. CURRENTLY ACCESS TO THE RESIDENCE IS VIA THE WESTERN PORTION OF T.R. 243 FROM EXISTING S.R. 681.

ACCESS TO THE RESIDENCE SHALL BE MAINTAINED ON THE EXISTING T.R. 243 PAVEMENT WHILE THE NEW DRIVEWAY AND CUL-DE-SAC ARE CONSTRUCTED.

T.R. 67 (GRIM ROAD)

CONSTRUCT PROPOSED CUL-DE-SAC AT EXISTING T.R. 67 WEST OF U.S. 33 RELOCATION.

ACCESS TO THE EXISTING RESIDENCE SHALL BE MAINTAINED ON AT ALL TIMES AT THE DISCRETION OF THE CONTRACTOR.

TEMPORARY ROAD

ALL TEMPORARY ROADS SHALL BE CONSTRUCTED USING CLASS B TEMPORARY PAVEMENT AS PER SECTION 615.05 OF ODOT'S CMS. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR INFORMATION ONLY AND ARE BASED ON THE TEMPORARY ROADS AS SHOWN IN THE CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN.

TEMPORARY EARTHWORK EXCAVATION	24,675 C.M.
TEMPORARY EARTHWORK EMBANKMENT	91,082 C.M.
TEMPORARY PAVEMENT, CLASS B	12,234 Sq.M.

CALCULATED | CHECKED

CONCEPTUAL MAINTENANCE OF TRAFFIC
GENERAL NOTES

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S.R. 681 & OLD U.S. 33

CONSTRUCTION OF THE AT-GRADE INTERSECTION OF S.R. 681 REALIGNMENT AND U.S. 33 MAINLINE RELOCATION SHALL BE ACCOMPLISHED USING PHASED CONSTRUCTION. ALL TEMPORARY ROADS SHALL BE DESIGNED AT A MINIMUM DESIGN SPEED OF 25 MPH (METRIC EQ.).

PHASE-I (SEE SHEET NO. 43)

MAINTAIN TRAFFIC ON EXISTING TRAFFIC PATTERNS DURING THIS PHASE OF CONSTRUCTION.

CONSTRUCT TEMPORARY S.R. 681 ROADWAY PAVEMENT AS WELL AS THE PROPOSED RELOCATION OF OLD U.S. 33.

CONSTRUCT TEMPORARY U.S. 33 ROADWAY PAVEMENT FROM APPROXIMATELY STA. 45+974 , SOUTH TO EXISTING U.S. 33 PAVEMENT TIE-IN, AS INDICATED.

CONSTRUCTION OF U.S. 33 MAINLINE SHALL CONTINUE DURING THESE OPERATIONS.

PHASE- IA (SEE SHEET NO. 44)

RE-ROUTE S.R. 681 TRAFFIC TO THE NEWLY CONSTRUCTED TEMPORARY ROADWAY PAVEMENT.

CONTINUE TO MAINTAIN U.S. 33 TRAFFIC ON EXISTING U.S. 33 PAVEMENT.

CONSTRUCT THE REMAINING PORTION OF U.S. 33 TEMPORARY CONNECTION PAVEMENT FROM STA.45+974 TO STA.45+996, INTERSECTION WITH PROPOSED S.R. 681 RELOCATION, AS INDICATED.

CONSTRUCTION ON THE U.S. 33 MAINLINE RELOCATION SHALL CONTINUE AS WILL CONSTRUCTION OF PROPOSED S.R. 681 ALIGNMENT.

CONSTRUCTION OF U.S. 33 MAINLINE SHALL CONTINUE DURING THESE OPERATIONS.

PHASE-2 (SEE SHEET NO. 45)

UPON COMPLETION OF PHASE-IA, RE-ROUTE U.S. 33 TRAFFIC TO THE NEWLY CONSTRUCTED U.S. 33 RELOCATION PAVEMENT AND THE TEMPORARY U.S.33 CONNECTION PAVEMENT.

THE RELOCATED S.R. 681 ALIGNMENT, INCLUDING THE INTERSECTION OF U.S. 33 MAINLINE AND S.R. 681, SHALL BE COMPLETED IN THIS PHASE.

CONSTRUCTION OF U.S. 33 MAINLINE SHALL CONTINUE DURING THESE OPERATIONS.

PHASE-3 (SEE SHEET NO. 46)

UPON COMPLETION OF PHASE-2, RE-ROUTE S.R. 681 TRAFFIC TO THE NEWLY CONSTRUCTED S.R. 681 RELOCATED ALIGNMENT.

CONTINUE TO MAINTAIN U.S. 33 TRAFFIC ON THE U.S. 33 RELOCATION AND THE TEMPORARY U.S. 33 CONNECTION PAVEMENT.

CONTINUE CONSTRUCTION OF U.S. 33 MAINLINE FOUR-LANE SECTION TO STA. 49+460.

CONSTRUCT U.S 33 MAINLINE BRIDGES OVER A TRIBUTARY TO THE WEST BRANCH OF THE SHADE RIVER.

CONSTRUCTION OF U.S. 33 MAINLINE SHALL CONTINUE DURING THESE OPERATIONS.

PHASE-4 (SEE SHEET NO. 47)

INCLUDES THE SHIFTING OF TRAFFIC TO THE NEWLY CONSTRUCTED U.S. 33 MAINLINE. UPON OPENING THE MAINLINE TO TRAFFIC THE TEMPORARY U.S. 33 CONNECTOR AND THE REMAINING PORTIONS OF OLD U.S. 33 SOUTH OF S.R.681 SHALL BE REMOVED.

MAINLINE U.S. 33

THE U.S. 33 MAINLINE TIE BACK TO THE EXISTING 4-LANE ROADWAY AT THE SOUTHERN TERMINI WILL REQUIRE PHASED CONSTRUCTION TO MINIMIZE DISRUPTION OF TRAFFIC.

PHASE-I (SEE SHEET NO. 48)

CONSTRUCT TEMPORARY MEDIAN CROSSOVER AT STA. 49+985, AS PER STD. CONSTRUCTION DRWG. MT-95.70M, TO MAINTAIN ONE LANE OF SOUTHBOUND U.S. 33 TRAFFIC.

CLOSE THE EXISTING SOUTHBOUND U.S. 33 LANES AT THE NORTHBOUND AND SOUTHBOUND SPLIT LEFT OF STA. 49+330.

SHIFT SOUTHBOUND U.S. 33 TRAFFIC AND MAINTAIN TWO LANE TWO-WAY TRAFFIC ON THE EXISTING NORTHBOUND U.S. 33 PAVEMENT.

CONSTRUCT PROPOSED U.S. 33 MAINLINE SOUTHBOUND LANES ONLY FROM STA. 49+460 TO STA. 49+890.950, TYING TO EXISTING PAVEMENT.

PHASE-2 (SEE SHEET NO. 49)

CONSTRUCT TEMPORARY CROSSOVERS AT APPROXIMATELY STA. 49+400 AND STA. 49+985 FOR MAINTAINING ONE-LANE NORTHBOUND U.S. 33 TRAFFIC. AS PER STD. CONSTRUCTION DRWG. MT-95.70M.

UPON COMPLETION OF U.S. 33 MAINLINE CONSTRUCTION AND PLACEMENT OF ALL PERMANENT TRAFFIC CONTROL DEVICES HAVE BEEN ACCOMPLISHED, DIVERT EXISTING NORTHBOUND U.S. 33 TRAFFIC VIA THE CROSSOVER AT STA. 49+985, MAINTAINING TWO-WAY NORTHBOUND AND SOUTHBOUND TRAFFIC ON THE NEWLY CONSTRUCTED SOUTHBOUND U.S. 33 LANES FROM STA. 49+420 TO STA. 49+890.950, AND THE CROSSOVER AT STA. 49+400 TO THE NEWLY CONSTRUCTED U.S. 33 MAINLINE NORTHBOUND LANES.

CONSTRUCT THE REMAINING PORTION OF THE PROPOSED NORTHBOUND U.S. 33 MAINLINE PAVEMENT FROM STA. 49+460 TO STA. 49+890.950, TYING TO THE EXISTING PAVEMENT.

UPON OPENING U.S. 33 MAINLINE TO TRAFFIC THE TEMPORARY U.S. 33 CONNECTOR AND THE REMAINING PORTIONS OF EXISTING "OLD" U.S. 33 PAVEMENTS SOUTH OF S.R. 681 SHALL BE REMOVED.

MAINLINE OPENING

UPON COMPLETION OF RELOCATED U.S. 33 MAINLINE AS SHOWN IN THESE PLANS, ALL TRAFFIC CAN BE TRANSFERRED TO THE NEW RELOCATED U.S. 33 MAINLINE IF THE CONNECTION AT THE NORTH END IS READY. THIS INCLUDES THE CONNECTION TO EXISTING U.S. 33 / 50 AT RICHLAND AVENUE IN ATHENS, OHIO (ATHENS COUNTY) AND THE RELOCATED U.S. 33 MAINLINE FROM STA. 29+013 THROUGH STA. 39+600.

MAINTAINING TRAFFIC, AS PER PLAN

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, TEMPORARY PAVEMENT, AND TEMPORARY ROADS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, AND PREPARATION OF THE DETAILED MAINTENANCE OF TRAFFIC PLAN SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, AS PER PLAN.

CALCULATED | CHECKED

CONCEPTUAL MAINTENANCE OF TRAFFIC GENERAL NOTES

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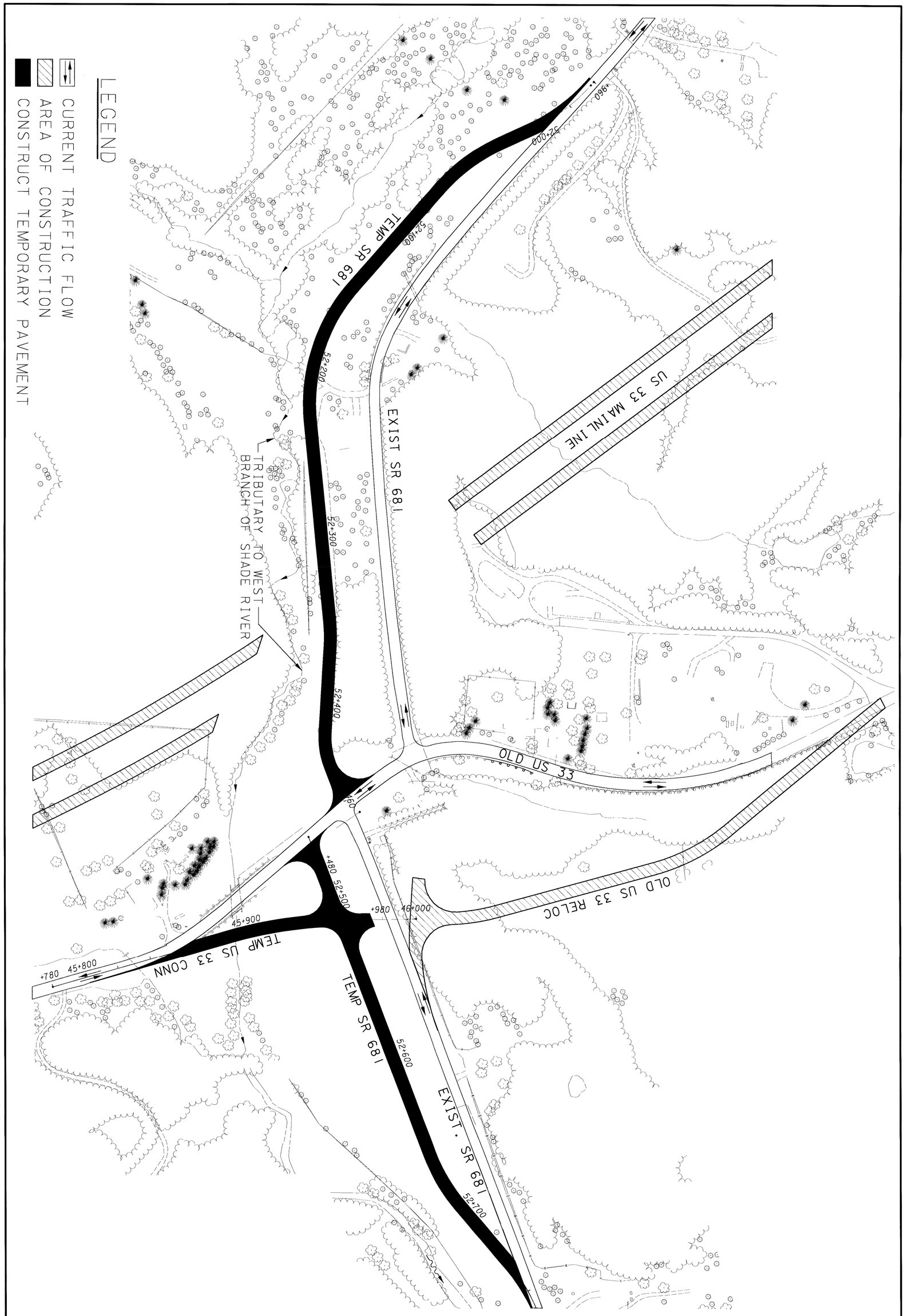

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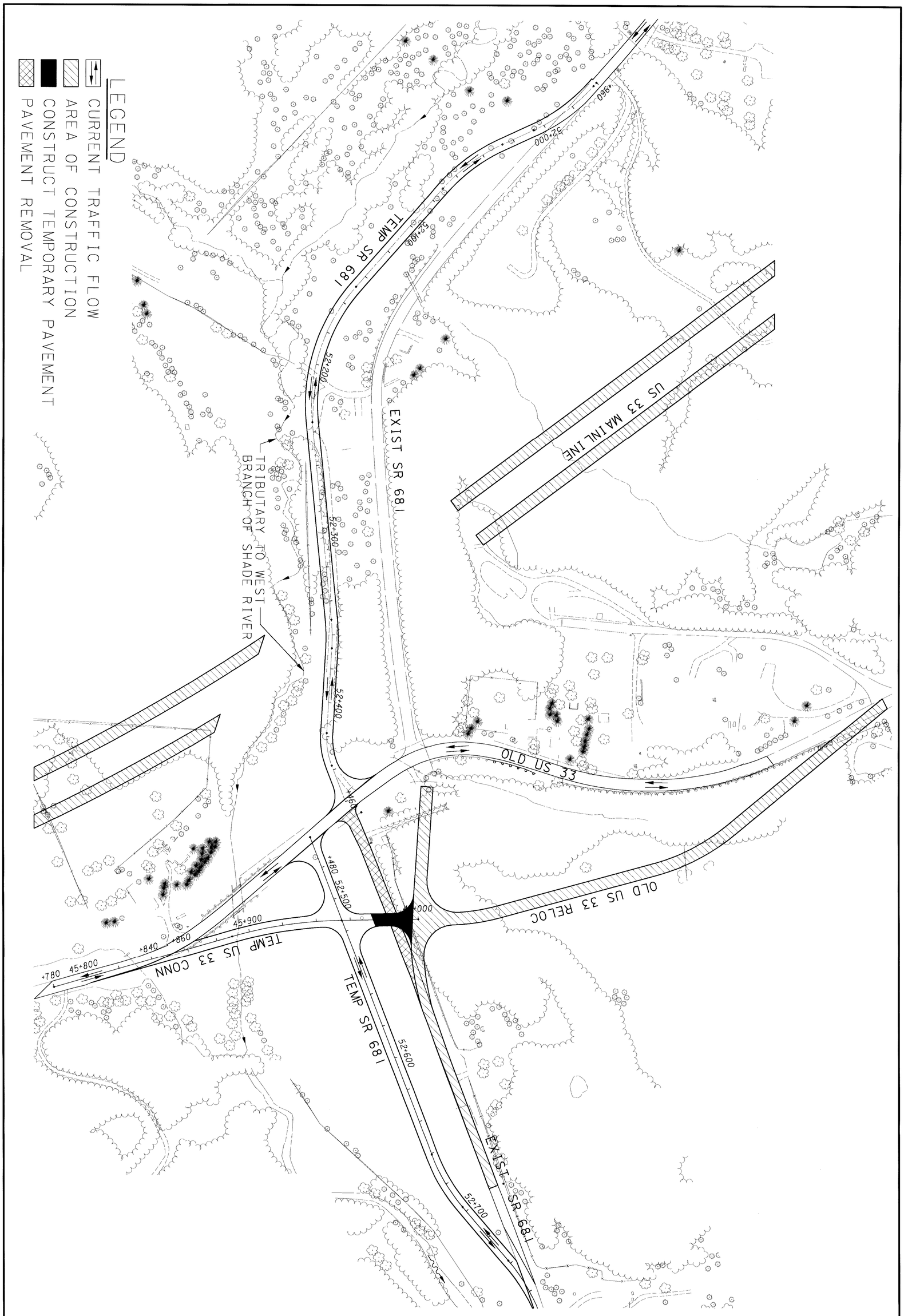

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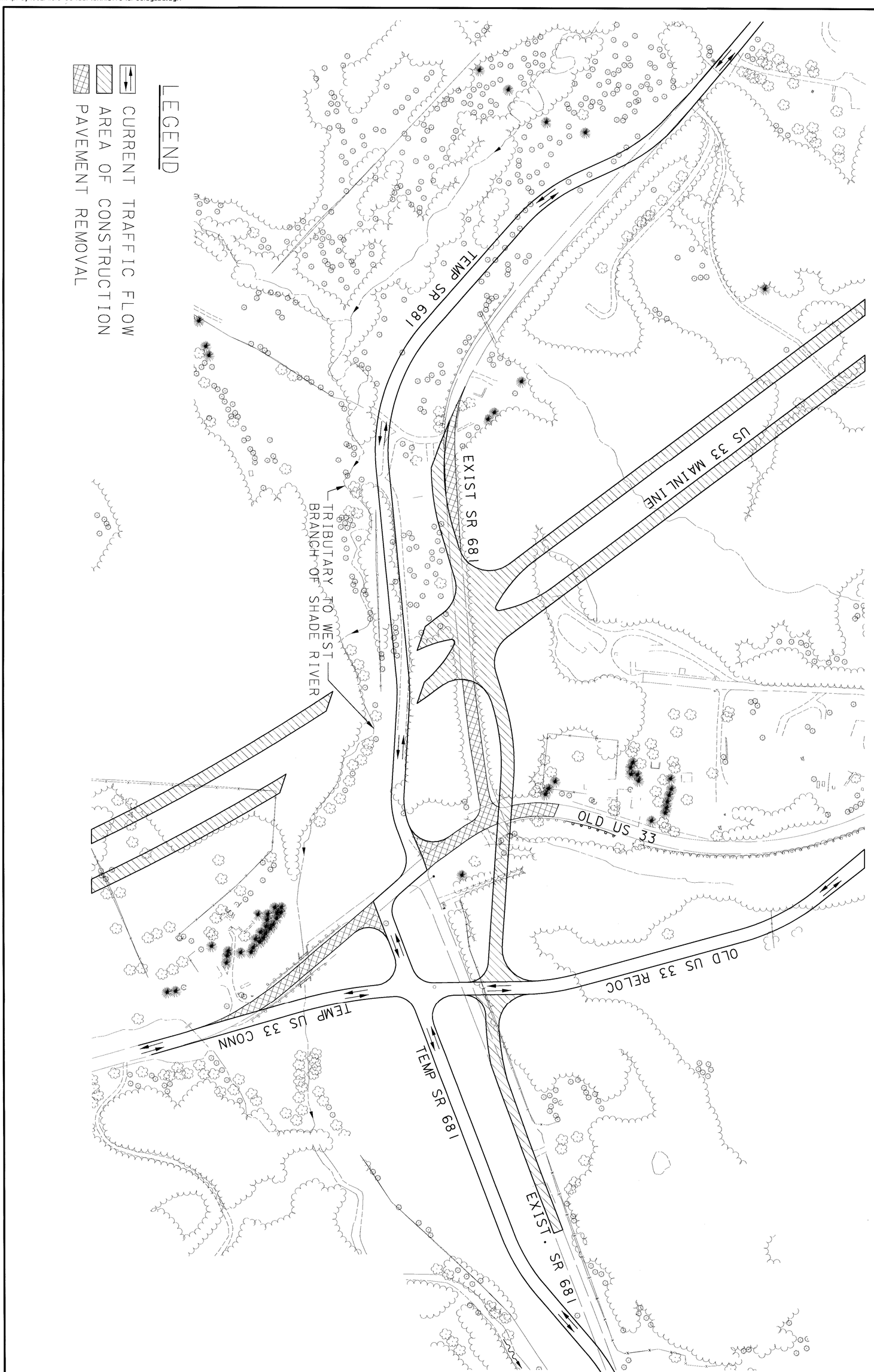

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SR 681 CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN - PHASE 2

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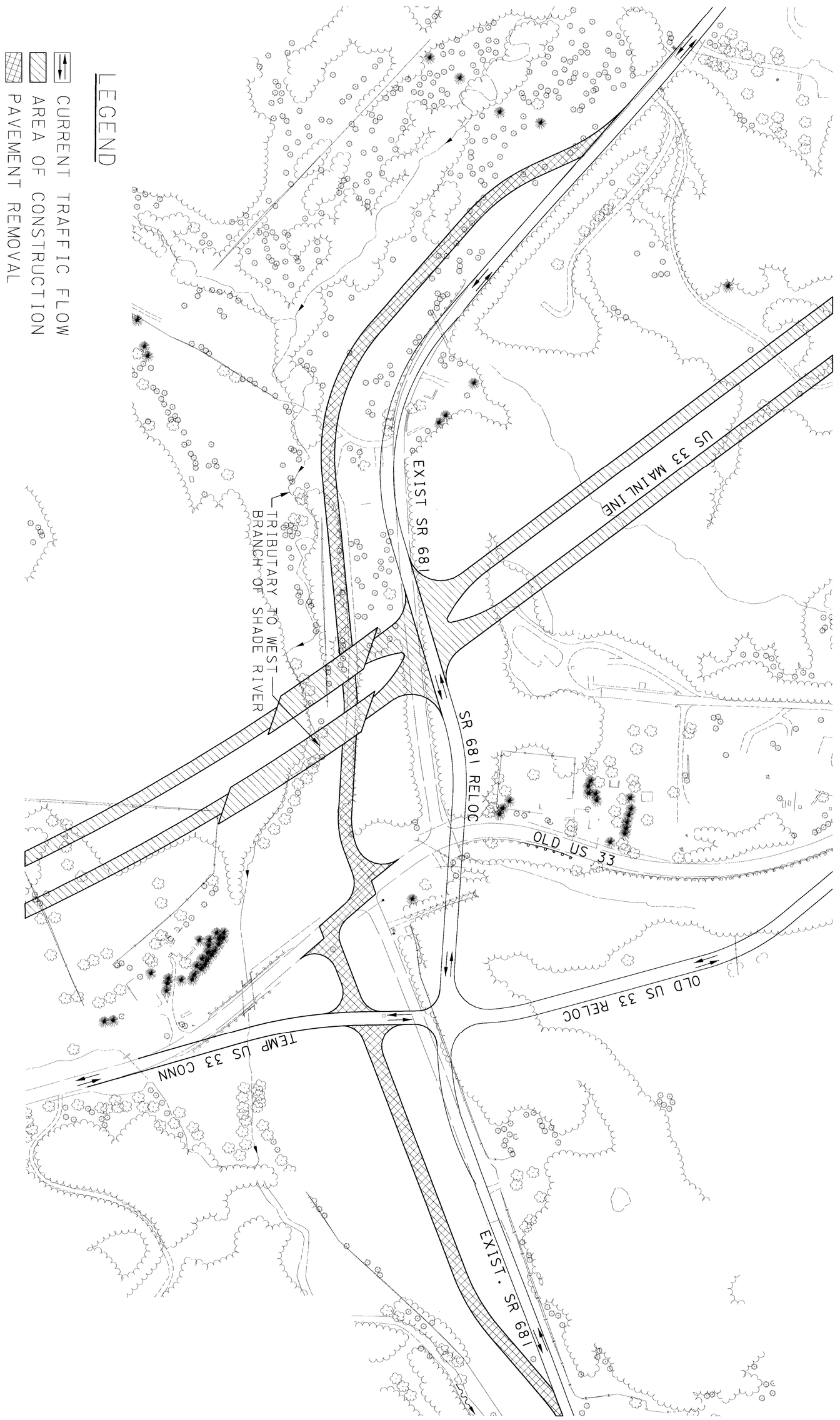

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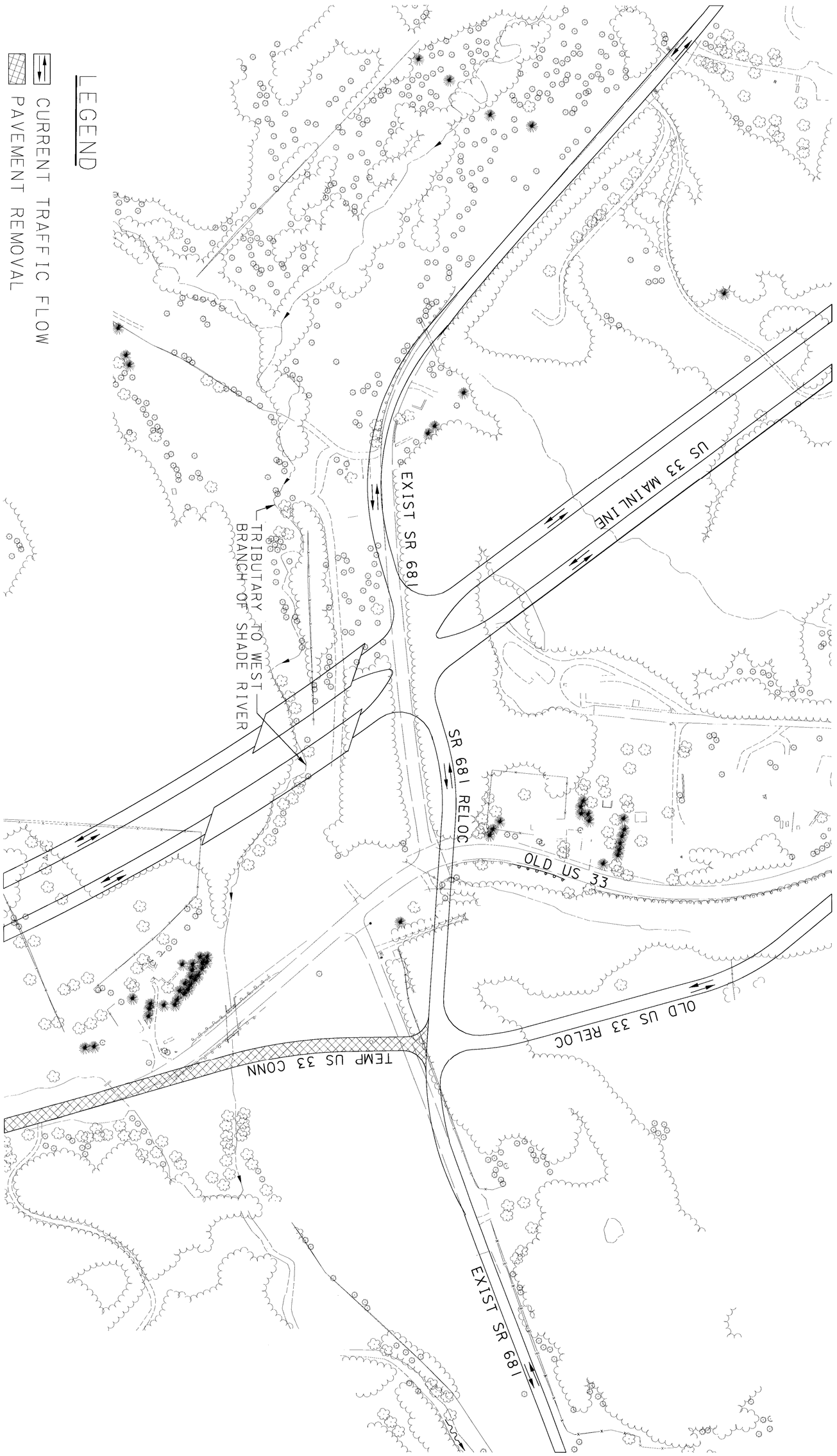

47 / 949	ATH-33-40.981	SR 681 CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN - PHASE 4	CALCULATED / CHECKED	0 20 40 HORIZONTAL SCALE IN METERS

02/07/01
04:43:25 PM
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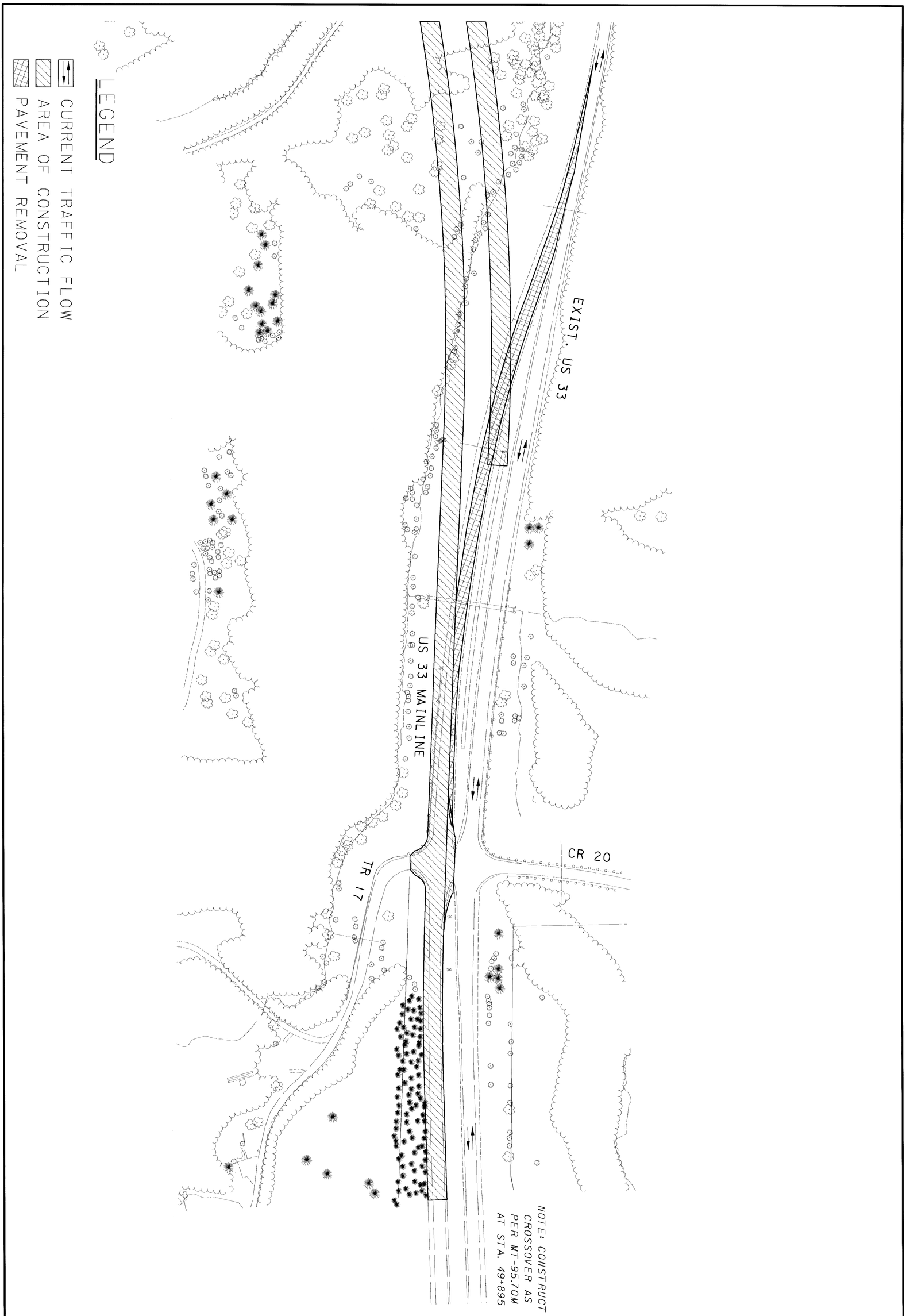

48 / 949	ATH-33-40.981	US 33 CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN - PHASE 1	CALCULATED / CHECKED	0 20 40 HORIZONTAL SCALE IN METERS

02/07/01
04:43:27 PM
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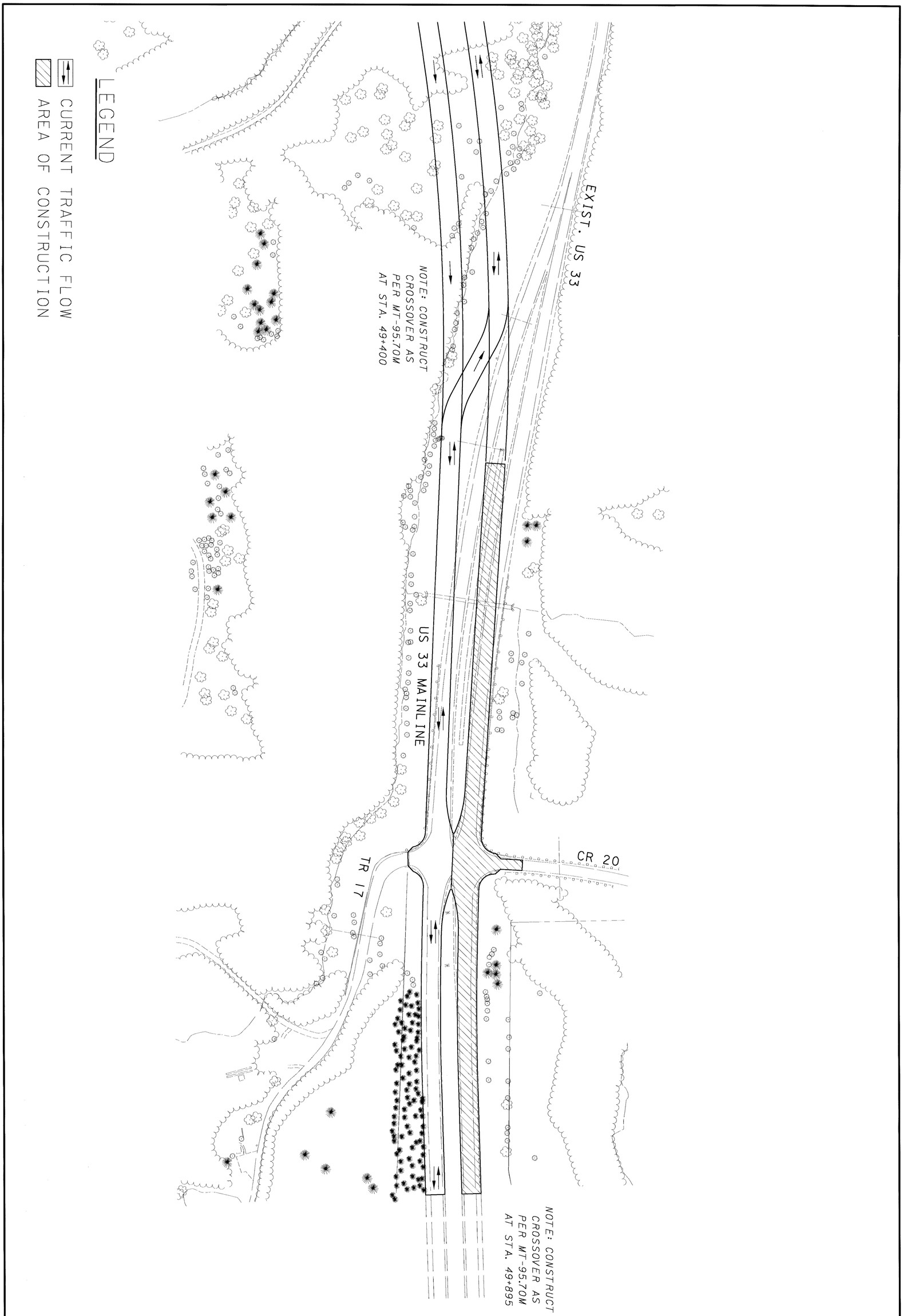

49 of 949	ATH-33-40.981	US 33 CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN - PHASE 2	CALCULATED / CHECKED	0 20 40 HORIZONTAL SCALE IN METERS

02/07/01
04:43:30 PM
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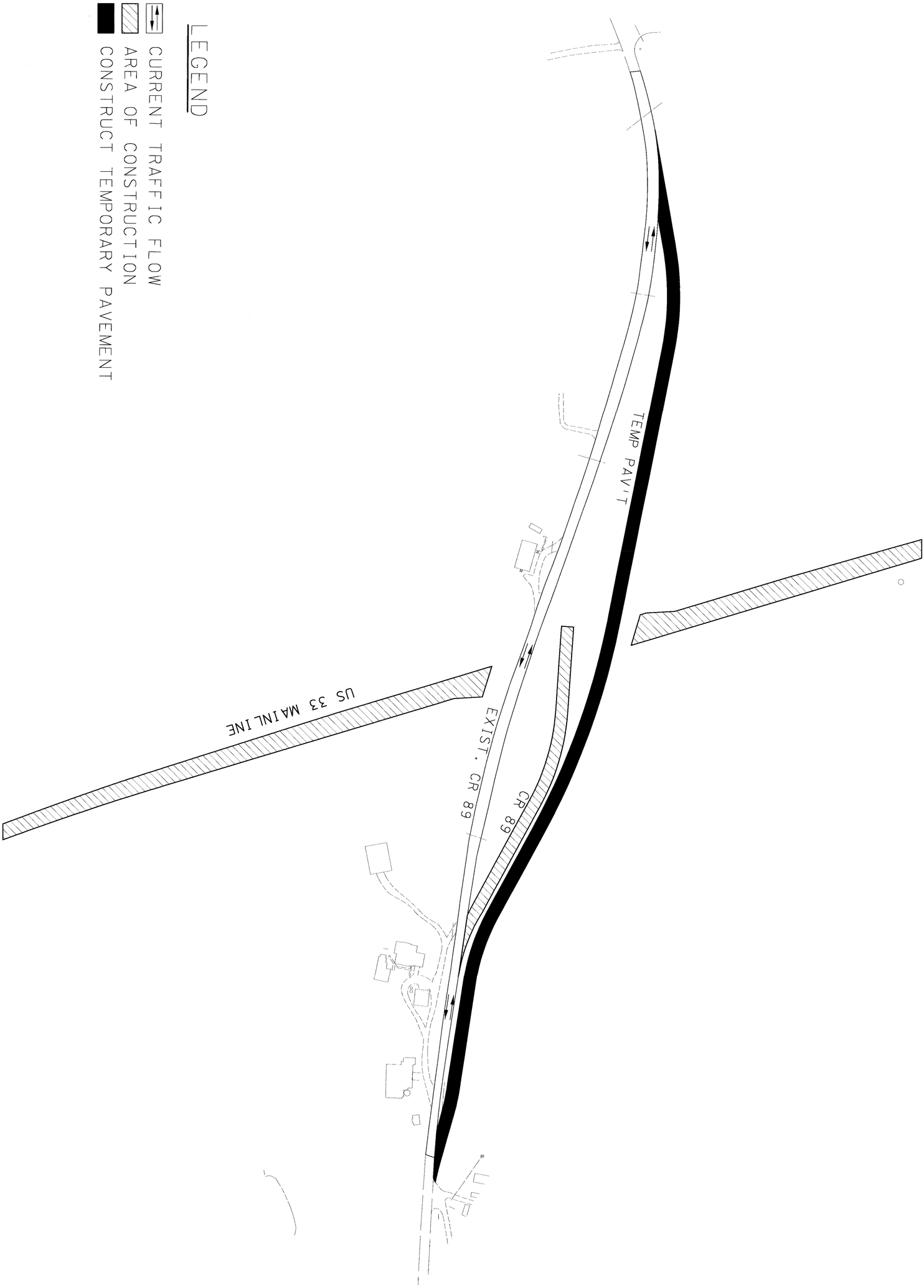

50 / 949	ATH-33-40.981	CR 89 CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN - PHASE 1	CALCULATED / CHECKED	0 20 40 HORIZONTAL SCALE IN METERS

02/07/01
04:43:31 PM
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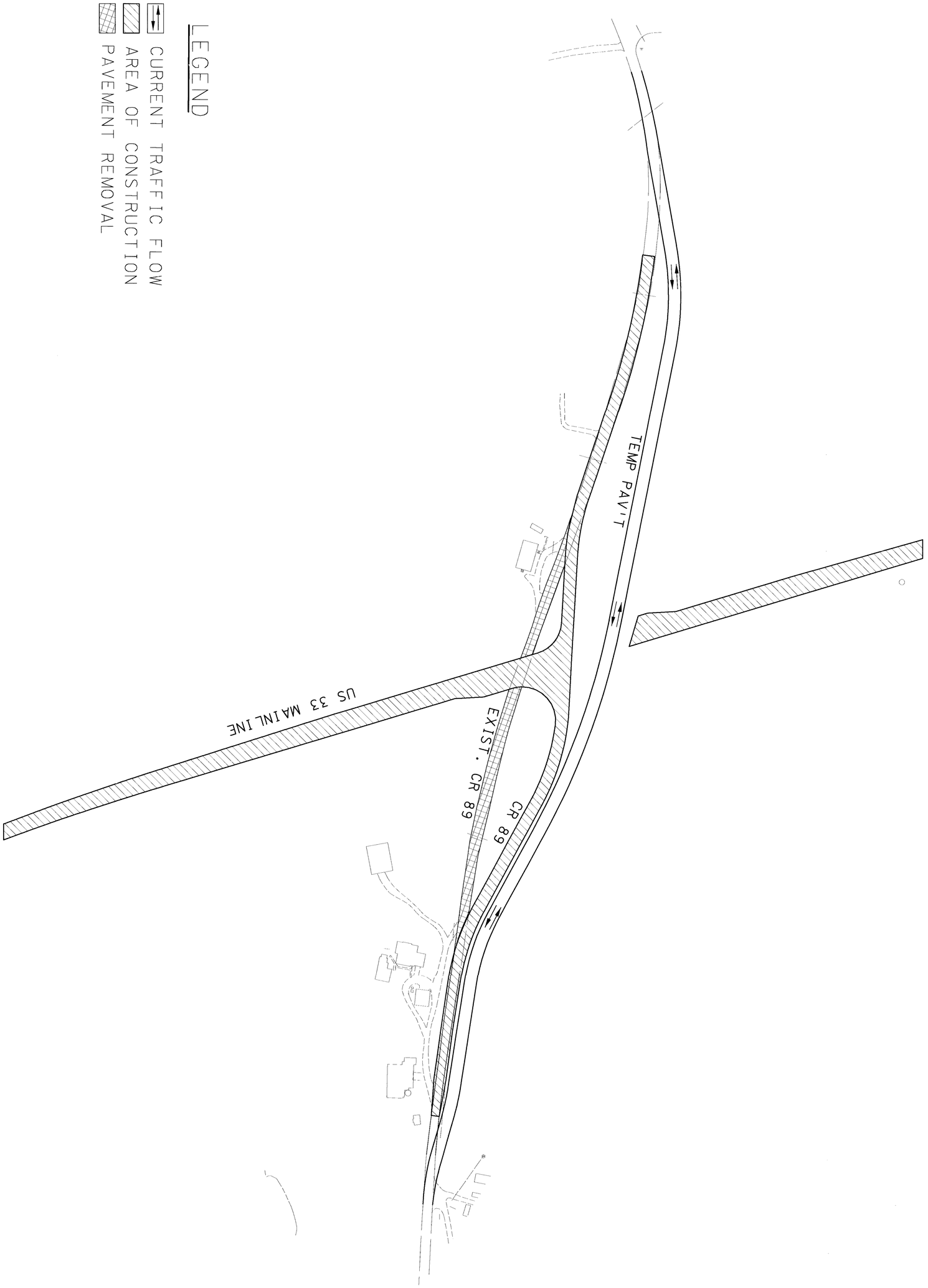

51 / 646	ATH-33-40.981	CR 89 CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN - PHASE 2	CALCULATED / CHECKED	0 20 40 HORIZONTAL SCALE IN METERS

02/07/01
04:43:32 PM
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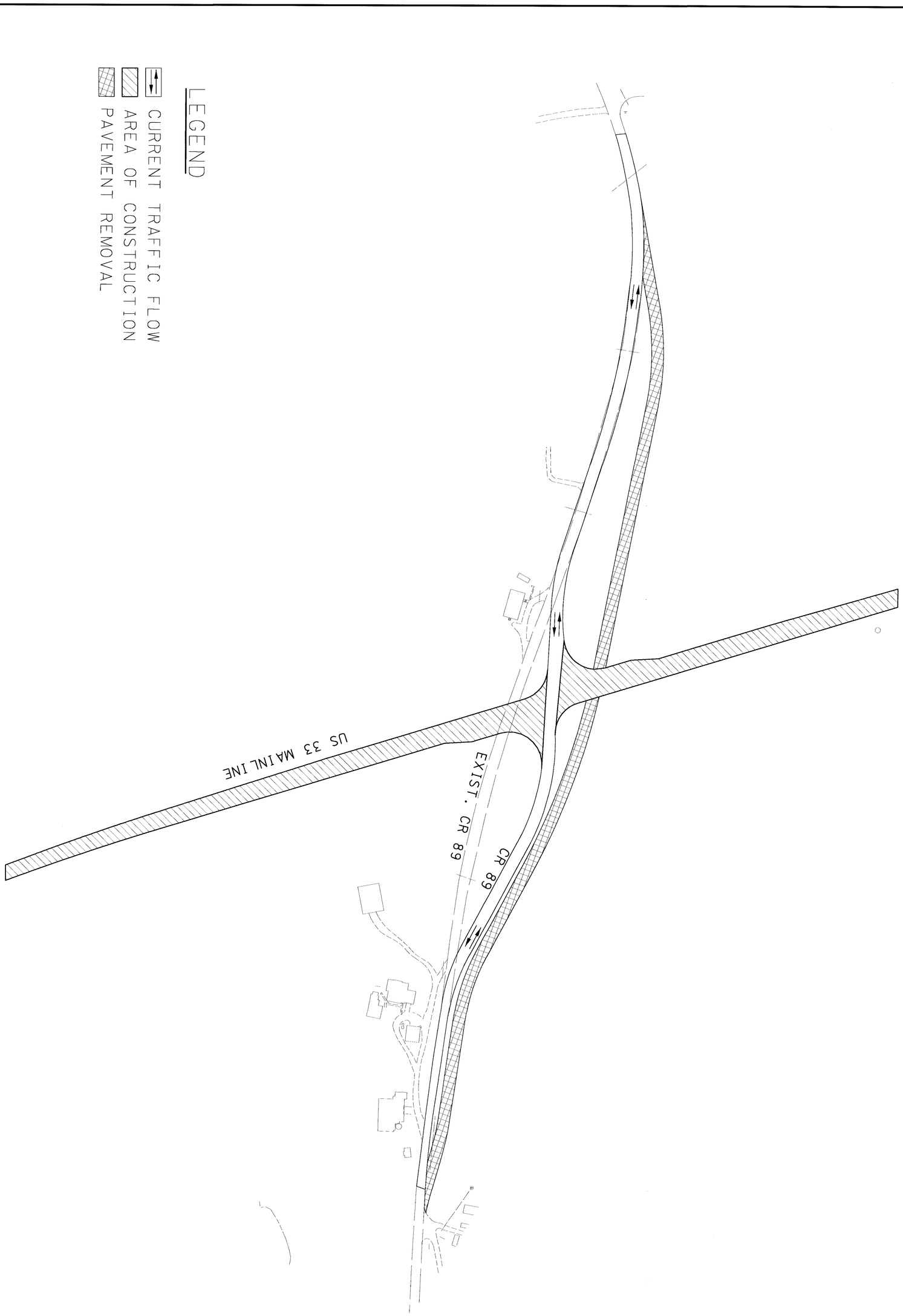
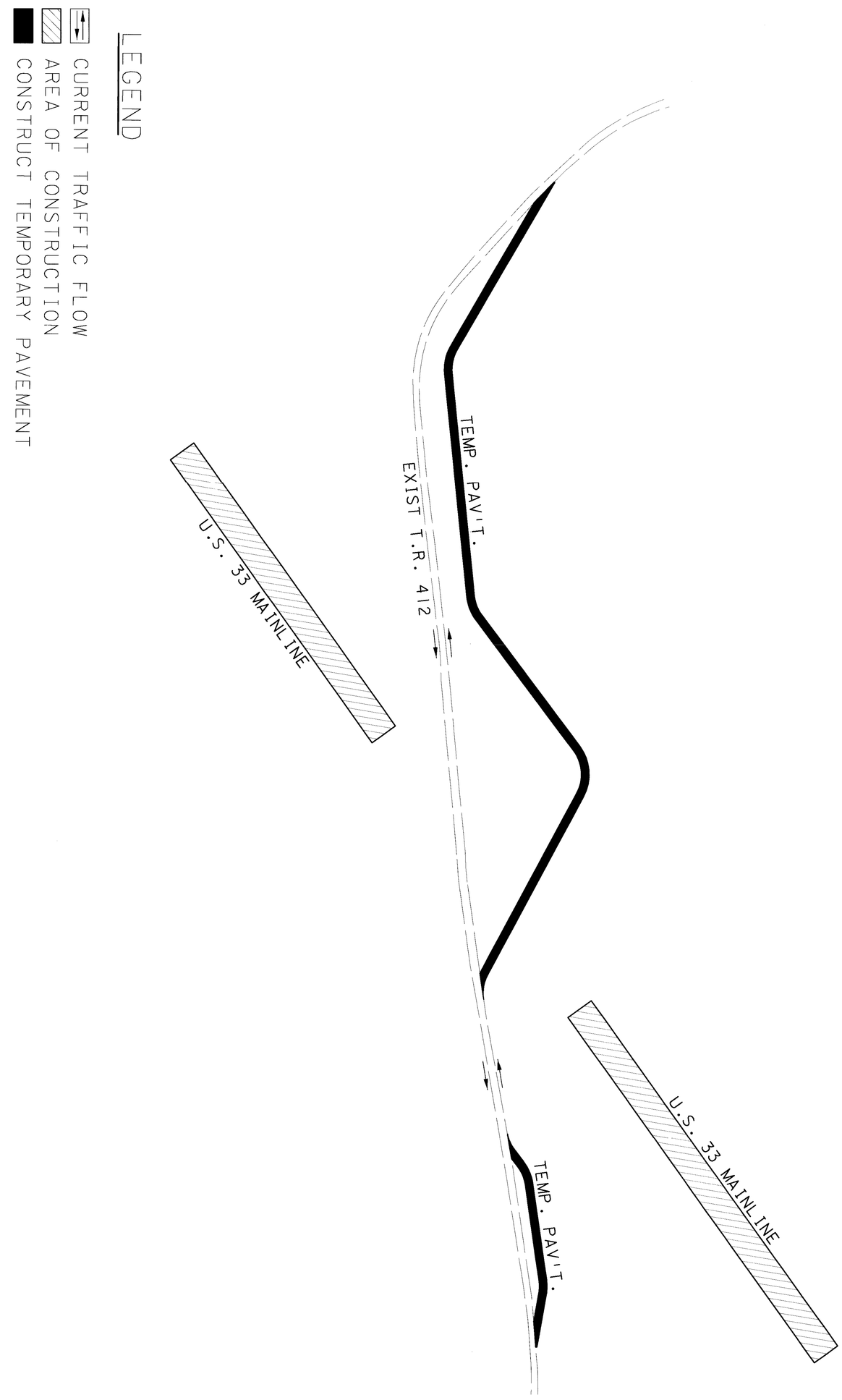


52 649	ATH-33-40.981	CR 89 CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN - PHASE 3	CALCULATED / CHECKED	0 20 40 HORIZONTAL SCALE IN METERS

02/07/01
04:43:34 PM
m:\proj\9821\1016-00\dsl\exhibits\tr412_1.dgn



53 949	ATH-33-40.981	TR 412 CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN - PHASE 1	CALCULATED / CHECKED	0 20 40 HORIZONTAL SCALE IN METERS

02/07/01
04:43:35 PM
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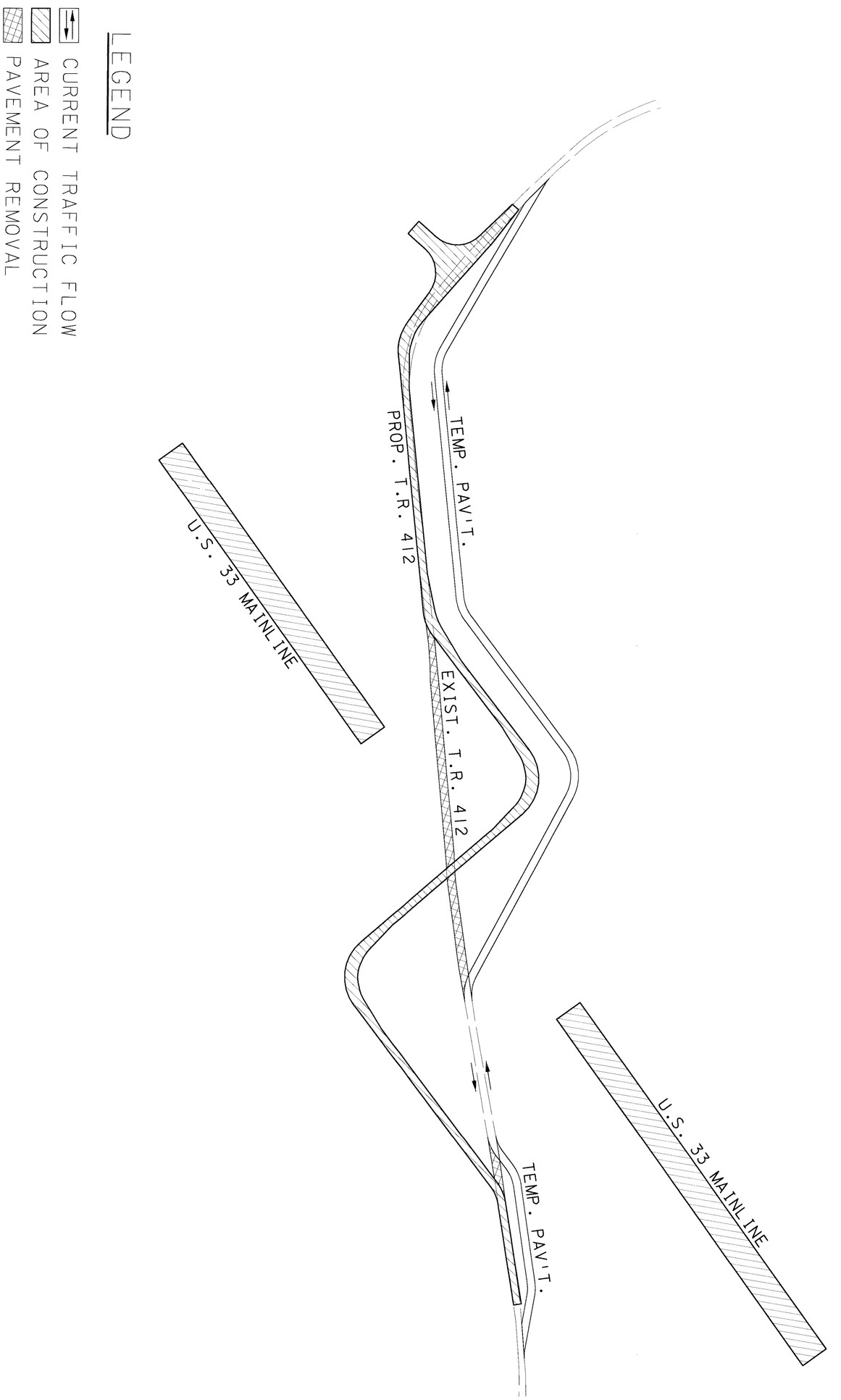


54
949

ATH-33-40.981

TR 412 CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN - PHASE 2

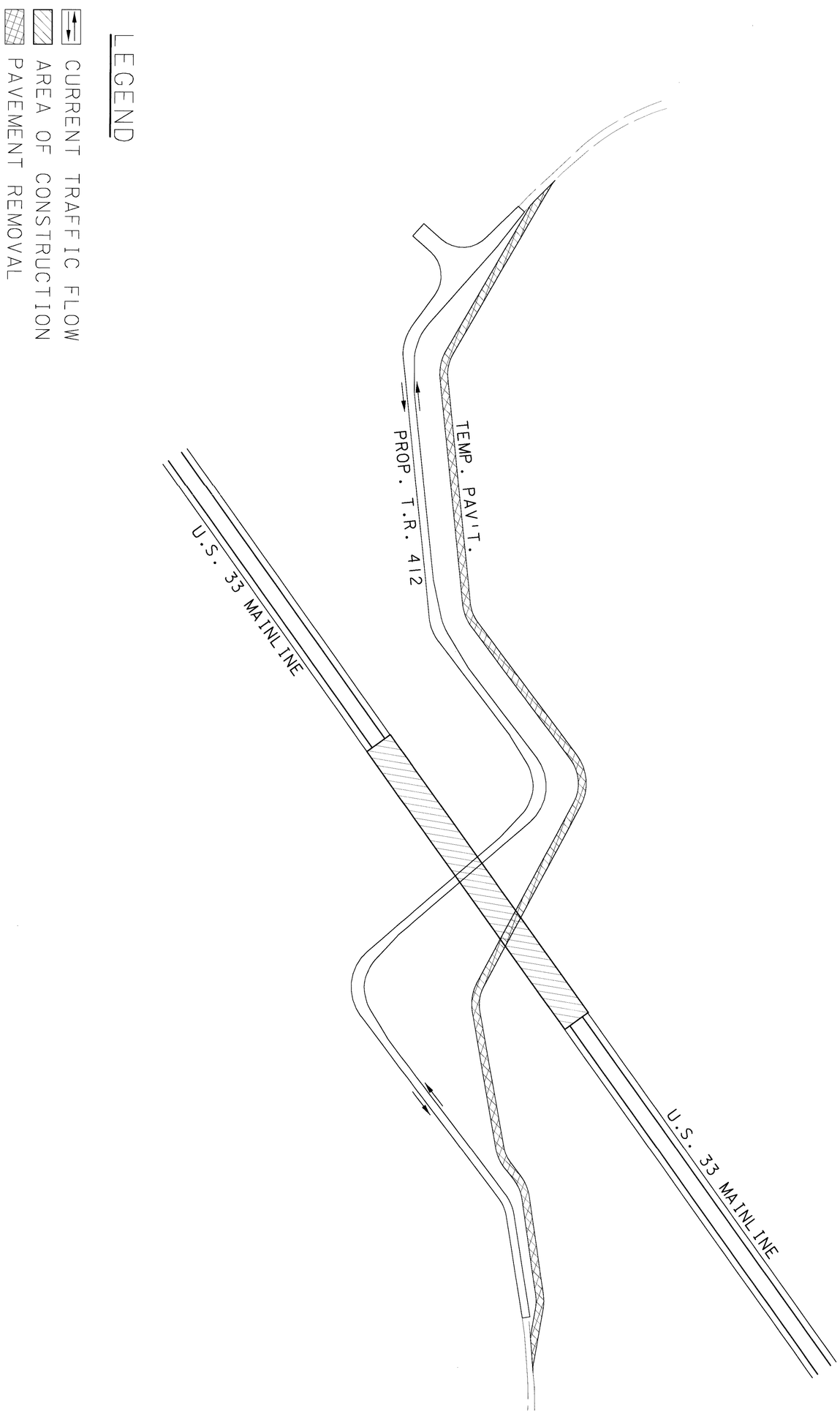
CALCULATED

CHECKED

0 20 40
HORIZONTAL SCALE IN METERS

N

02/07/01
04:43:36 PM
m:\proj\9821\1016-00\dsl\exhibits\tr412_3.dgn



55 / 546	ATH-33-40.981	TR 412 CONCEPTUAL MAINTENANCE OF TRAFFIC PLAN - PHASE 3	CALCULATED / CHECKED	0 20 40 HORIZONTAL SCALE IN METERS

TEMPORARY ROAD AT SR 681
PLAN & PROFILE

HORIZONTAL SCALE IN METERS
1:500
0 20

CALCULATED
CHECKED

P.I. Sta. = 52+678.904
D = 19° 38′ 03″ (LT)
R = 105.000 m
T = 18.169 m
L = 35.981 m
E = 1.560 m

P.I. Sta. = 52+758.957
D = 22° 30′ 01″ (RT)
R = 105.000 m
T = 20.886 m
L = 41.234 m
E = 2.057 m

NOTE:
INTERSECTION RADII= 12m (TYP.)

V.P.I. Sta. 52+506.467
Elev. = 204.593
6 m V.C.

V.P.I. Sta. 52+516.6
Elev. = 204.349

V.P.I. Sta. 52+467.487
Elev. = 201.475
6 m V.C.

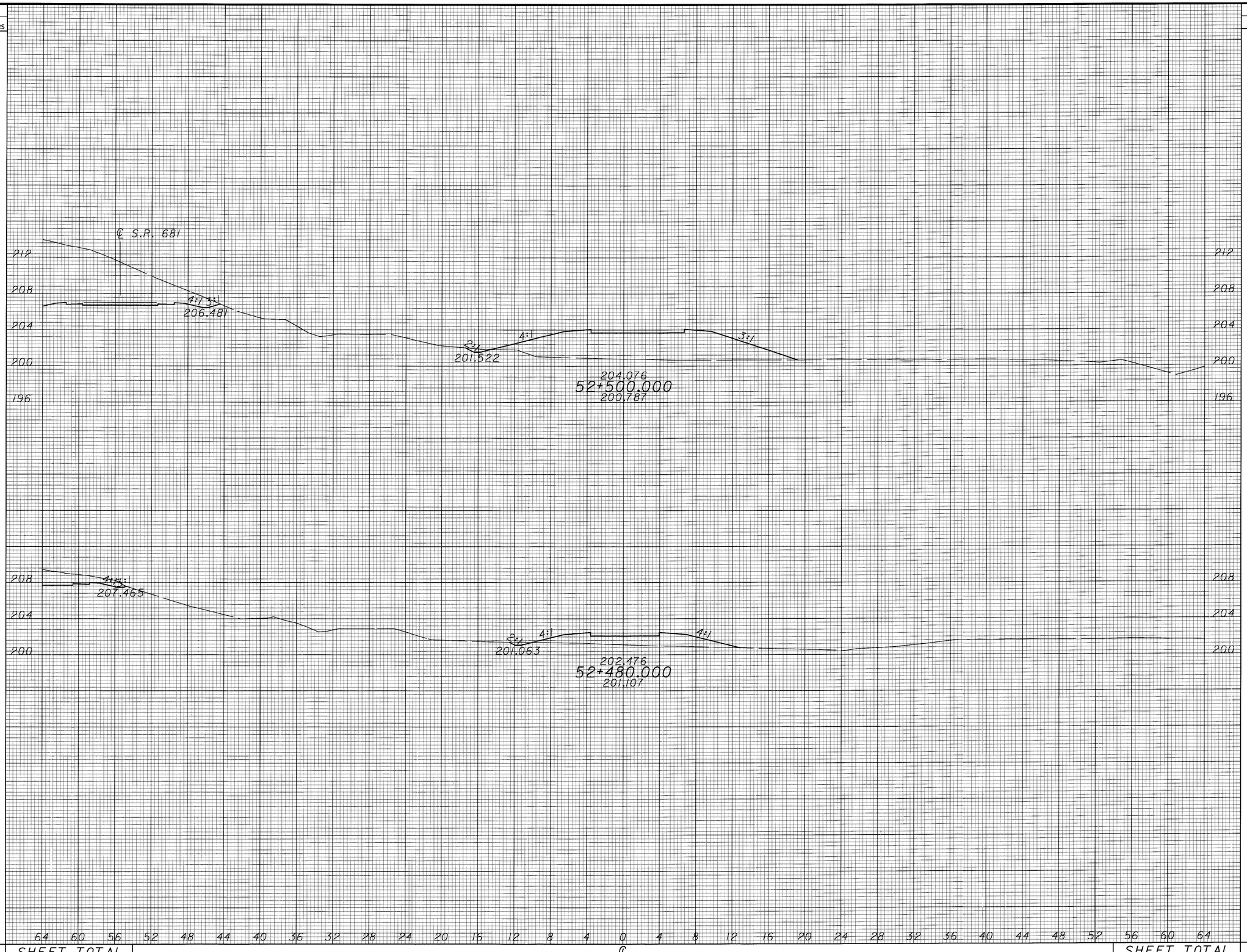
V.P.I. Sta. 52+680.000
Elev. = 201.555
30 m V.C.

ATH-33-40.981

56
949

02/07/01
04:43:49 PM
m:\proj\982\016-001\ds1\sr68log\mot\gp68mt2.dgn

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
		1	76		
				11	965
		1	21		
				0	0
				11	965



CALCULATED

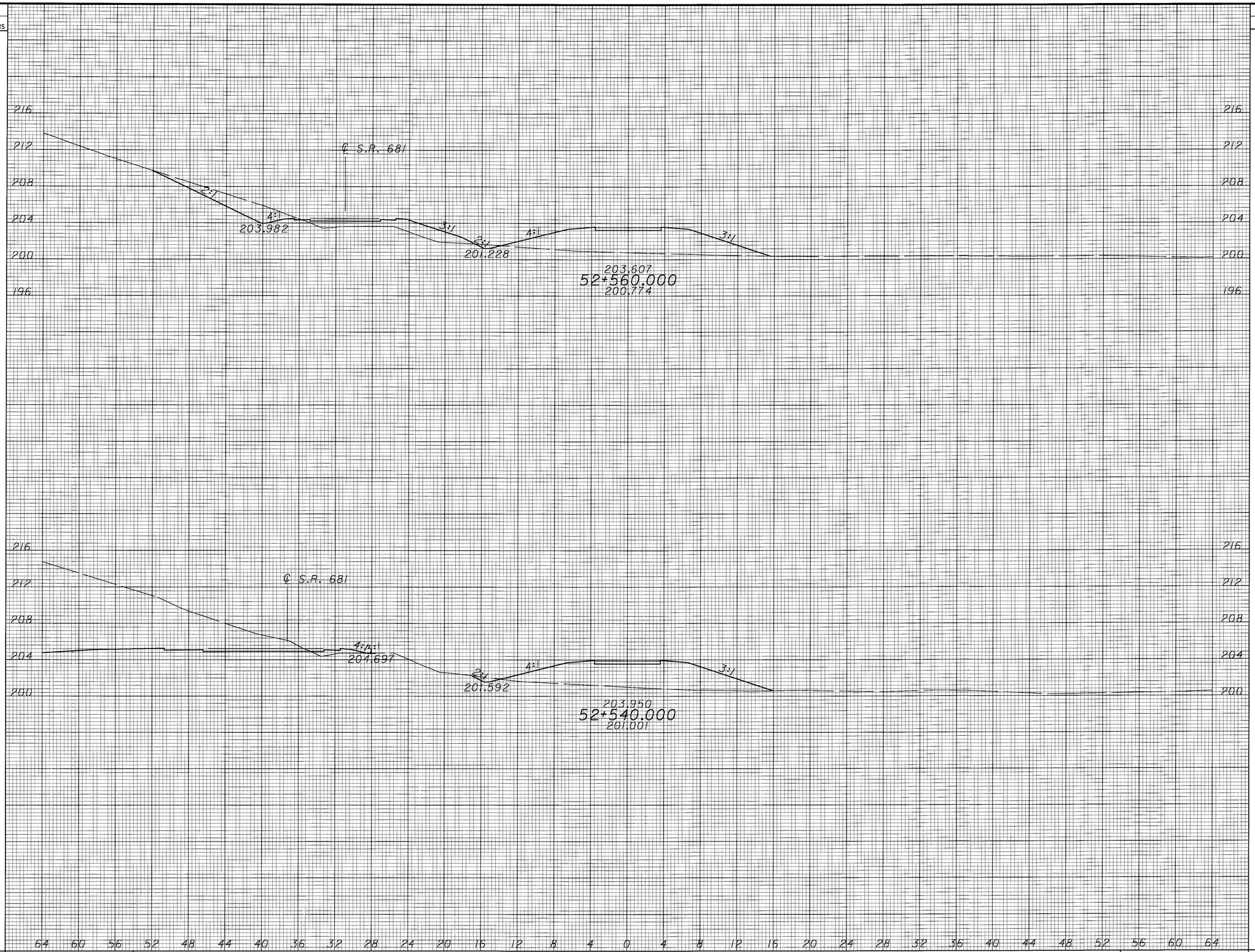
CHECKED

TEMPORARY ROAD AT SR 681
CROSS SECTIONS

ATH-33-40.981

02/07/01
04:43:50 PM
m:\proj\982\l016-00\dsl\sr681dg\mot\681mot3xsht.dgn

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	55		
		9	1137
1	58		
		30	2690
		39	3827

CALCULATED

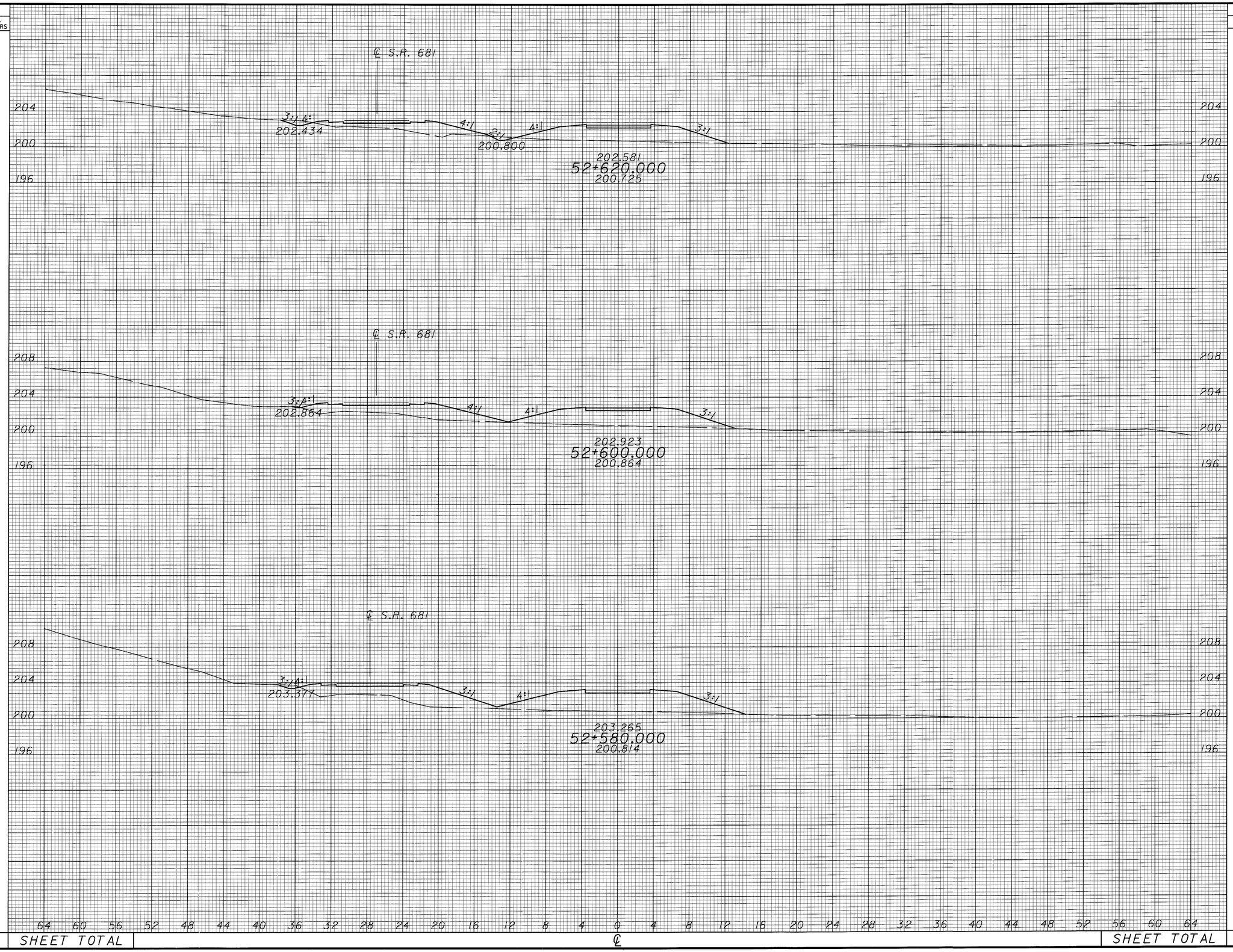
CHECKED

TEMPORARY ROAD AT SR 681
CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:05:05 PM
M:\PROJ\982\N106-00\DSN\sr681cg\mot\681mot13xsnt.dgn

SEEDING	
END WIDTH	SQ. METERS



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	0	30		
			0	650
	0	35		
			0	809
	0	46		
			0	1010
SHEET TOTAL			0	2469
SHEET TOTAL				

CALCULATED

CHECKED

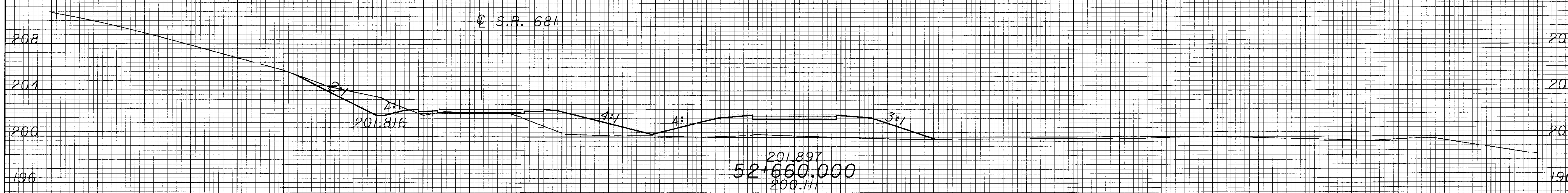
TEMPORARY ROAD AT SR 681
CROSS SECTIONS

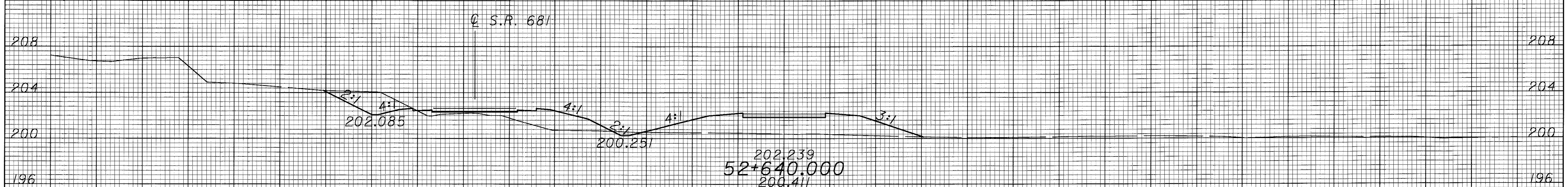
ATH-33-40.981

59
949

02/07/2001
06:05:05 PM
M:\PROJ\1982\1016-00\DS\sr68qg\mot\68mot3xsht.dgn

SEEDING	
END WIDTH	SQ. METERS





64 60 56 52 48 44 40 36 32 28 24 20 16 12 8 4 0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64

SHEET TOTAL ℄ SHEET TOTAL

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	31		
		0	605
0	30		
		0	596
SHEET TOTAL		0	1201

CALCULATED | CHECKED

TEMPORARY ROAD AT SR 681
CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:05:05 PM
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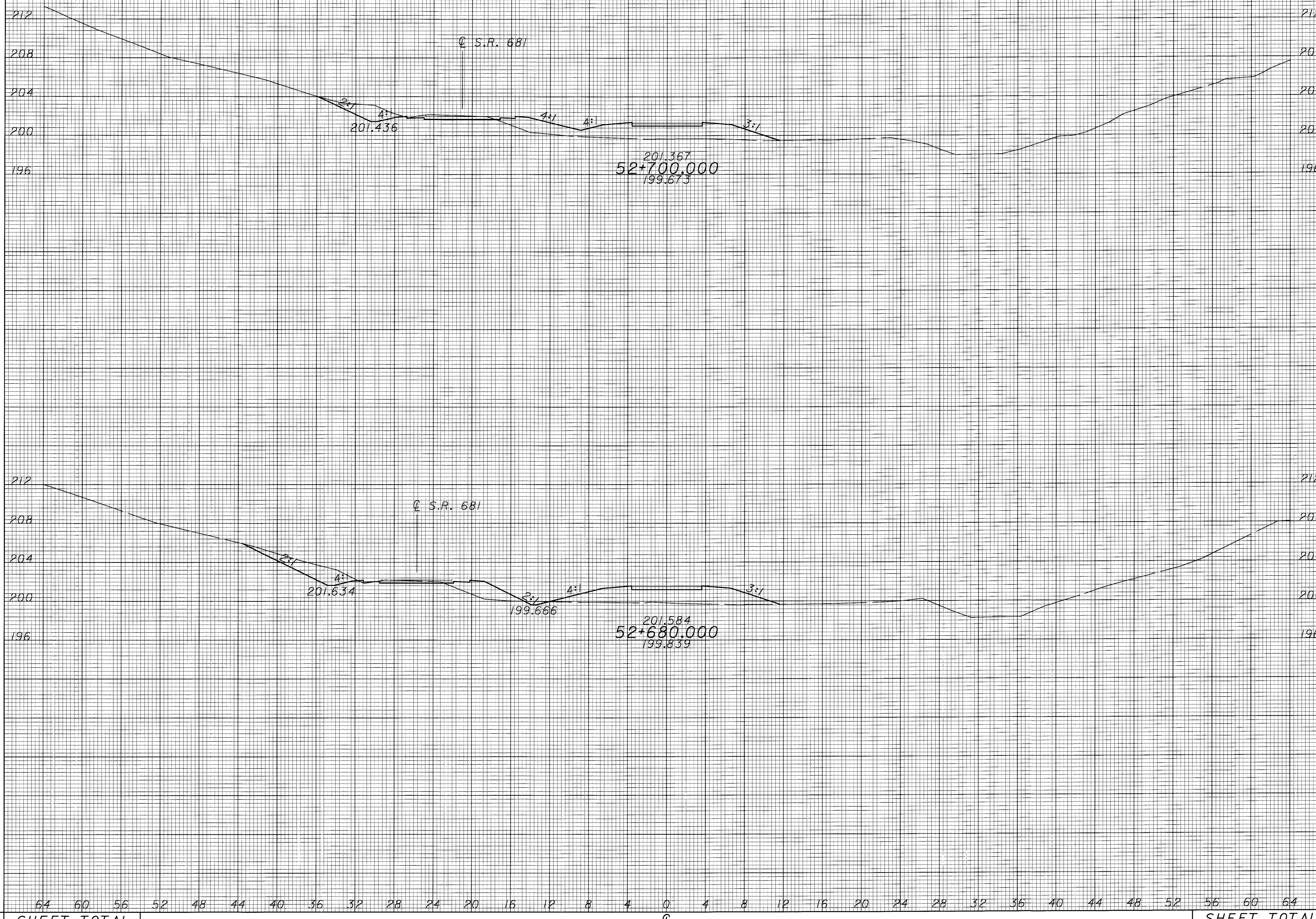
SEEDING	
END WIDTH	SQ. METERS



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	25		
		0	534
0	28		
		0	593

SHEET TOTAL ℄ SHEET TOTAL 0 1127

CALCULATED CHECKED

TEMPORARY ROAD AT SR 681 CROSS SECTIONS

ATH-33-40.981

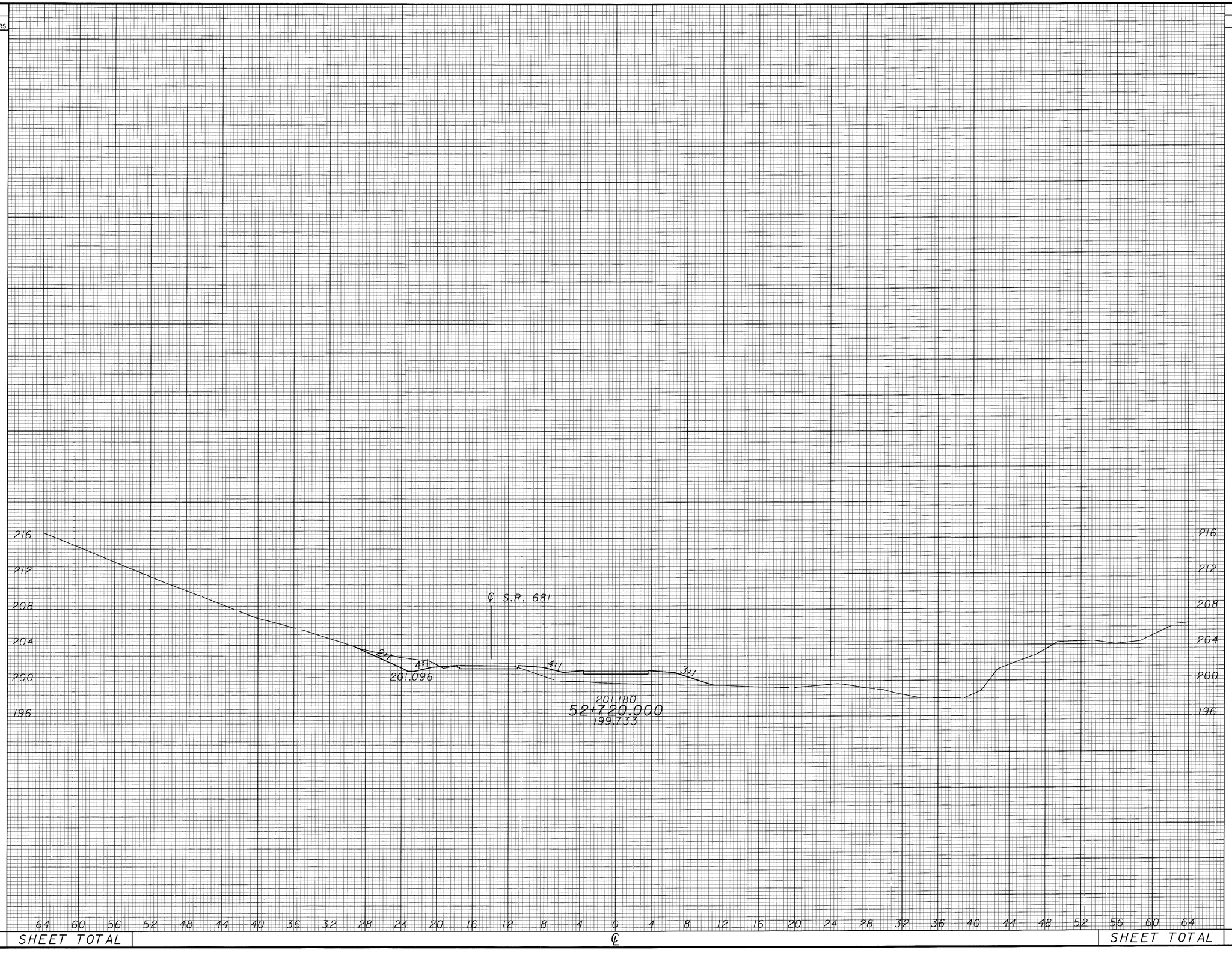
02/07/2001 06:05:05 PM M:\PROJ\982\016-00\DSI\sr681ag\mot\681mot3xsht.dgn

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	18		
		0	426
SHEET TOTAL		0	426

CALCULATED

CHECKED



TEMPORARY ROAD AT SR 681
CROSS SECTIONS

ATH-33-40.981

62
949

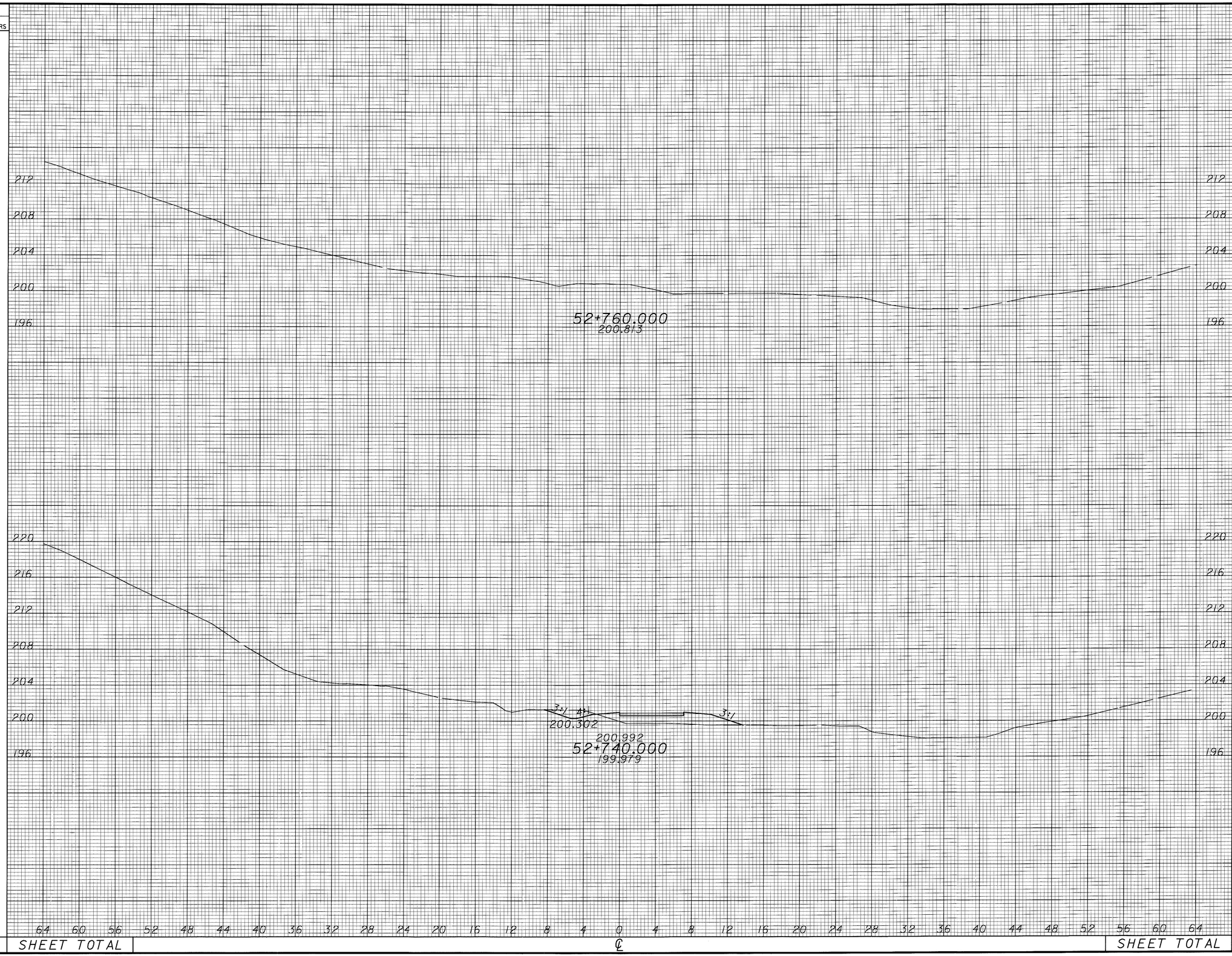
02/07/2001
06:05:05 PM
M:\PROJ\982\1016-00\DS\sr681agg\mot\681mot13xsht.dgn

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED

CHECKED



SHEET TOTAL			
SHEET TOTAL	3	13	31 310
			31 310

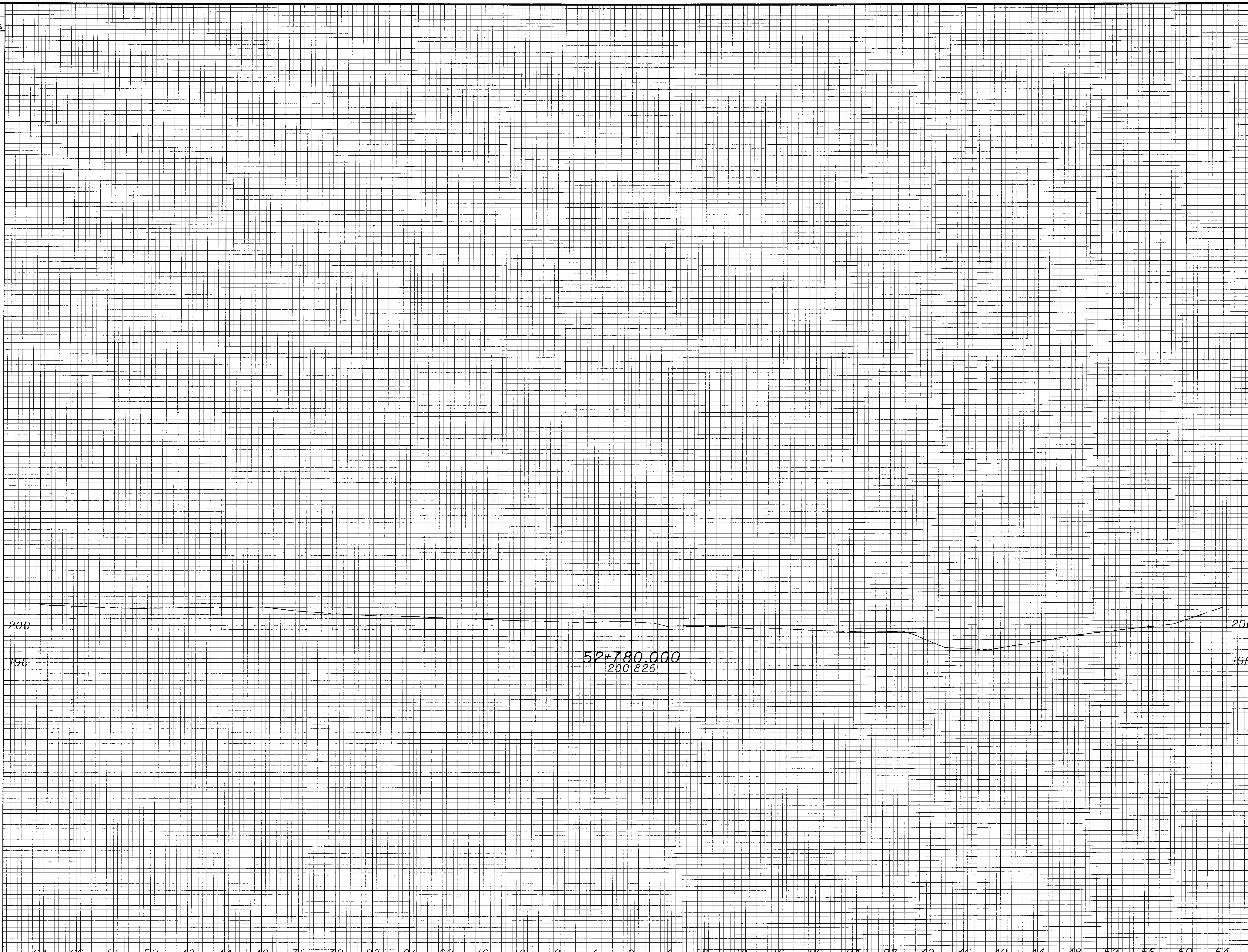
TEMPORARY ROAD AT SR 681
CROSS SECTIONS

ATH-33-40.981

63
949

02/07/2001
06:05:05 PM
M:\PROJ\982\016-00\DS\sr68ag\mot\68imot3xsnt.dgn

SEEDING	
END WIDTH	SQ. METERS



SHEET TOTAL ℄ SHEET TOTAL

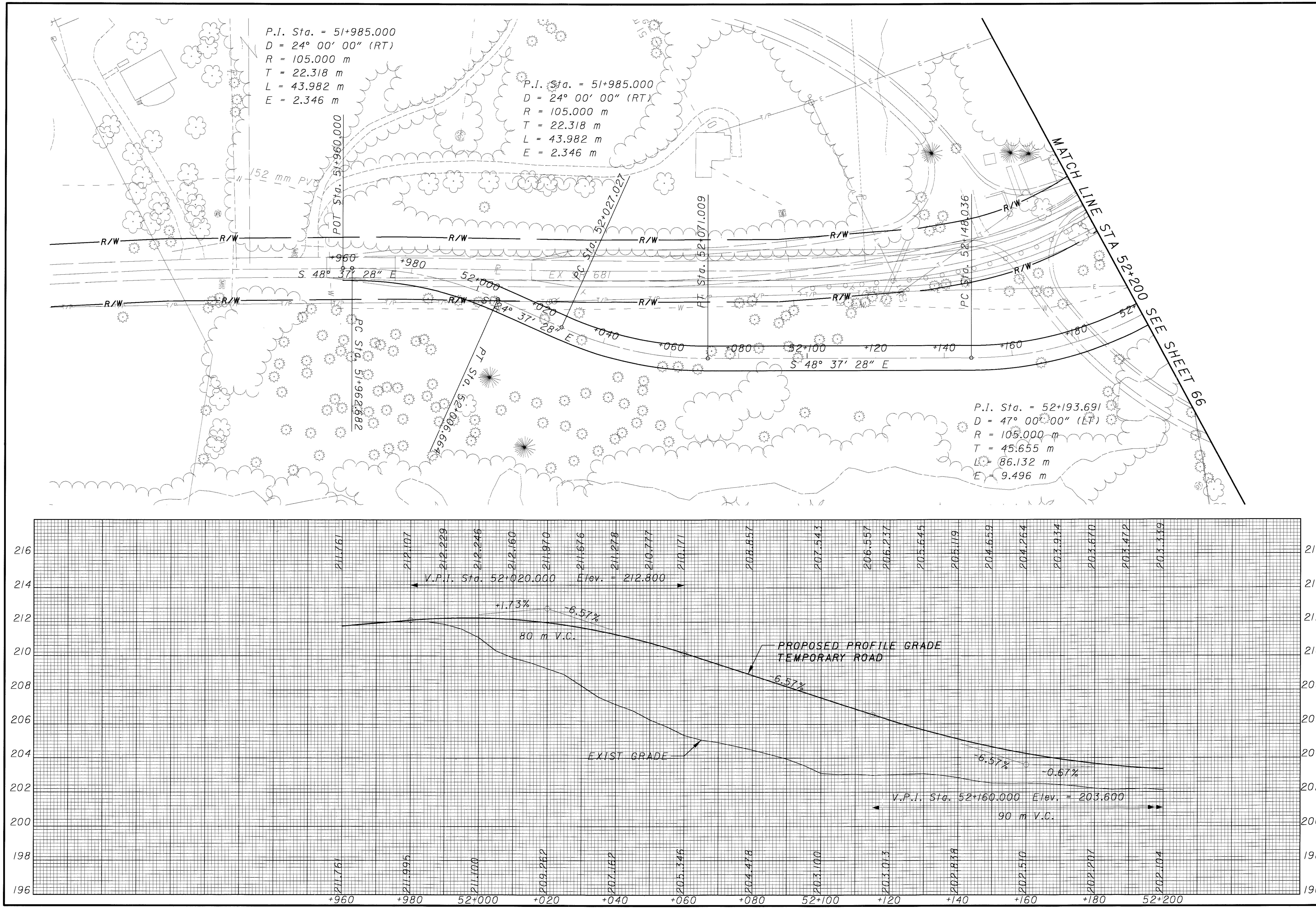
END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED CHECKED

TEMPORARY ROAD AT SR 681 CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:05:05 PM
M:\PROJ\9821\016-00\DS\sr681ag\mot\681mot3xsht.dgn



P.I. Sta. = 51+985.000
D = 24° 00' 00" (RT)
R = 105.000 m
T = 22.318 m
L = 43.982 m
E = 2.346 m
P.I. Sta. = 51+985.000
D = 24° 00' 00" (RT)
R = 105.000 m
T = 22.318 m
L = 43.982 m
E = 2.346 m
152 mm PVC
POT Sta. 51+960.000
PC Sta. 52+027.027
PT Sta. 52+071.009
PC Sta. 52+146.036
PC Sta. 51+962.682
PT Sta. 52+006.664
R/W
EX 681
S 48° 37' 28" E
S 24° 37' 28" E
S 48° 37' 28" E
+960
+980
52+000
+020
+040
+060
+080
52+100
+120
+140
+160
+180
MATCH LINE STA 52+200 SEE SHEET 66
P.I. Sta. = 52+193.691
D = 47° 00' 00" (LT)
R = 105.000 m
T = 45.655 m
L = 86.132 m
E = 9.496 m
211.761
212.107
212.229
212.246
212.160
211.970
211.676
211.278
210.777
210.171
208.857
207.543
206.557
206.237
205.645
205.119
204.659
204.264
203.934
203.670
203.472
203.339
V.P.I. Sta. 52+020.000 Elev. = 212.800
+1.73%
-6.57%
80 m V.C.
PROPOSED PROFILE GRADE
TEMPORARY ROAD
-6.57%
EXIST GRADE
-6.57%
-0.67%
V.P.I. Sta. 52+160.000 Elev. = 203.600
90 m V.C.
211.761
211.995
211.100
209.262
207.162
205.346
204.478
203.100
203.013
202.838
202.510
202.207
202.104
216
214
212
210
208
206
204
202
200
198
196
+960
+980
52+000
+020
+040
+060
+080
52+100
+120
+140
+160
+180
52+200

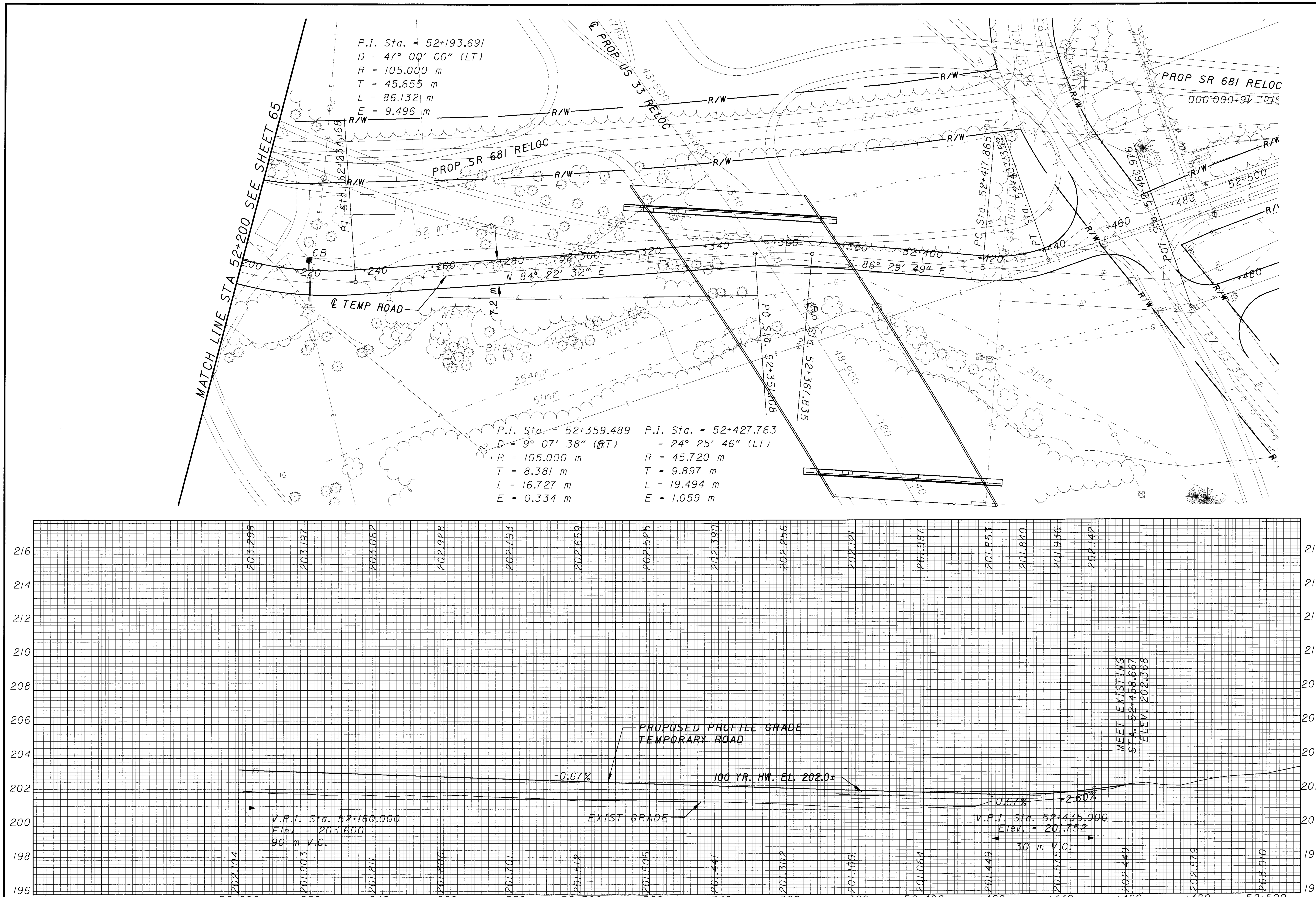
0 10 20
1:500
HORIZONTAL
SCALE IN METERS

CALCULATED BBD
CHECKED TDW

TEMPORARY ROAD AT SR 681
PLAN & PROFILE

ATH-33-40.981

02/07/01
04:44:02 PM
m:\proj\982\1016-00\dsl\er681og\mot\gp681mt1a.dgn


P.I. Sta. = 52+193.691
D = 47° 00' 00" (LT)
R = 105.000 m
T = 45.655 m
L = 86.132 m
E = 9.496 m
P.I. Sta. = 52+359.489
D = 9° 07' 38" (RT)
R = 105.000 m
T = 8.381 m
L = 16.727 m
E = 0.334 m
P.I. Sta. = 52+427.763
= 24° 25' 46" (LT)
R = 45.720 m
T = 9.897 m
L = 19.494 m
E = 1.059 m
MATCH LINE STA 52+200 SEE SHEET 65
℄ PROP US 33 RELOC
PROP SR 681 RELOC
EX SR 681
℄ TEMP ROAD
N 84° 22' 32" E
S 86° 29' 49" E
WEST BRANCH SHADE RIVER
PT Sta. 52+234.168
PC Sta. 52+351.408
PT Sta. 52+367.835
PC Sta. 52+417.865
PT Sta. 52+437.359
POT Sta. 52+460.976
7.2 m
CB
152 mm PVC
254mm
51mm
PROPOSED PROFILE GRADE
TEMPORARY ROAD
0.67%
100 YR. HW. EL. 202.0±
EXIST GRADE
V.P.I. Sta. 52+160.000
Elev. = 203.600
90 m V.C.
V.P.I. Sta. 52+435.000
Elev. = 201.752
30 m V.C.
2.60%
MEET EXISTING
STA. 52+458.667
ELEV. 202.368
52+200 +220 +240 +260 +280 52+300 +320 +340 +360 +380 52+400 +420 +440 +460 +480 52+500
196 198 200 202 204 206 208 210 212 214 216

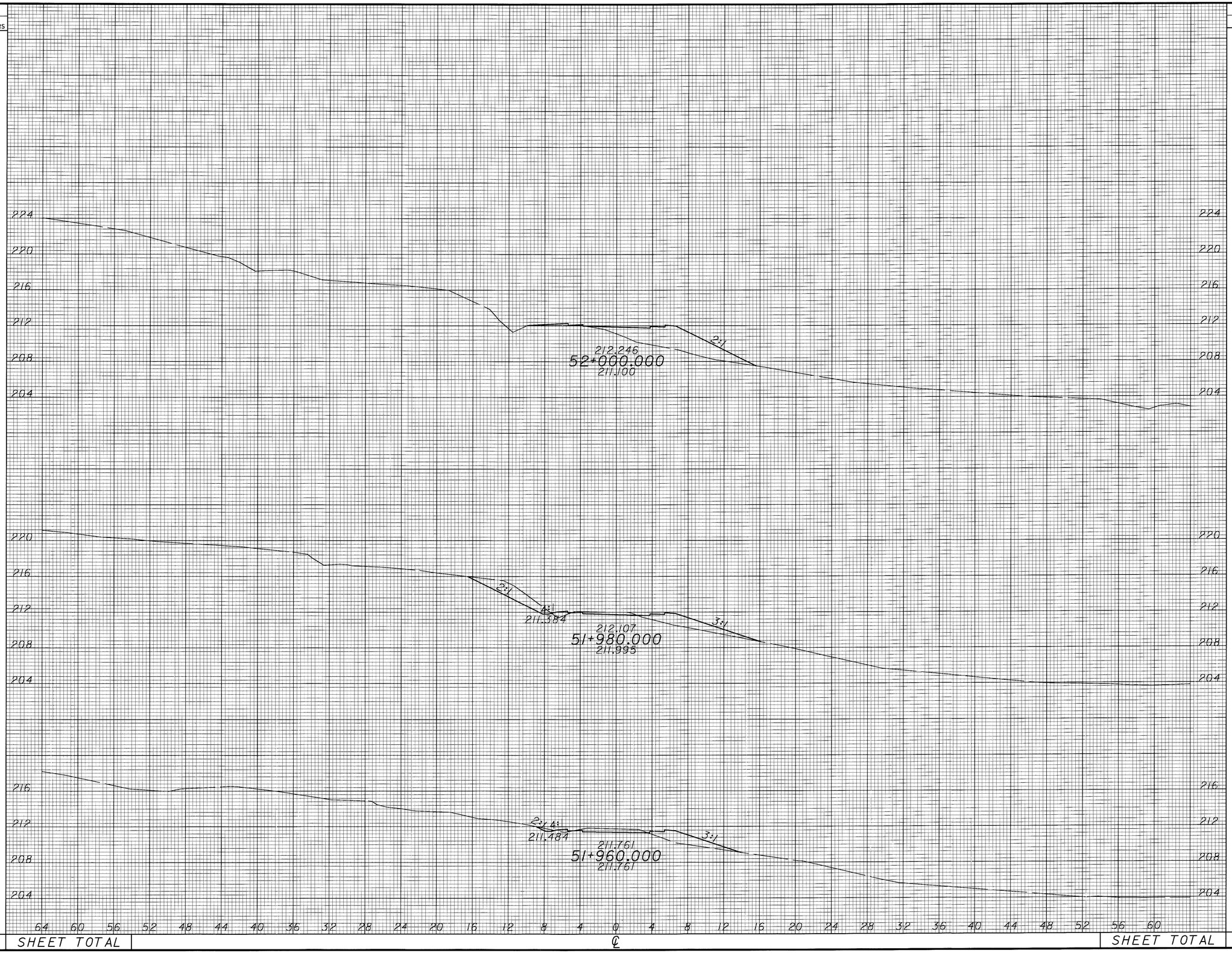
TEMPORARY ROAD AT SR 681
PLAN & PROFILE

ATH-33-40.981

HORIZONTAL SCALE IN METERS 1:500

CALCULATED BBD
CHECKED TDW

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	27		
		107	368
11	10		
		136	178
3	8		
		243	546

SHEET TOTAL

SHEET TOTAL

CALCULATED

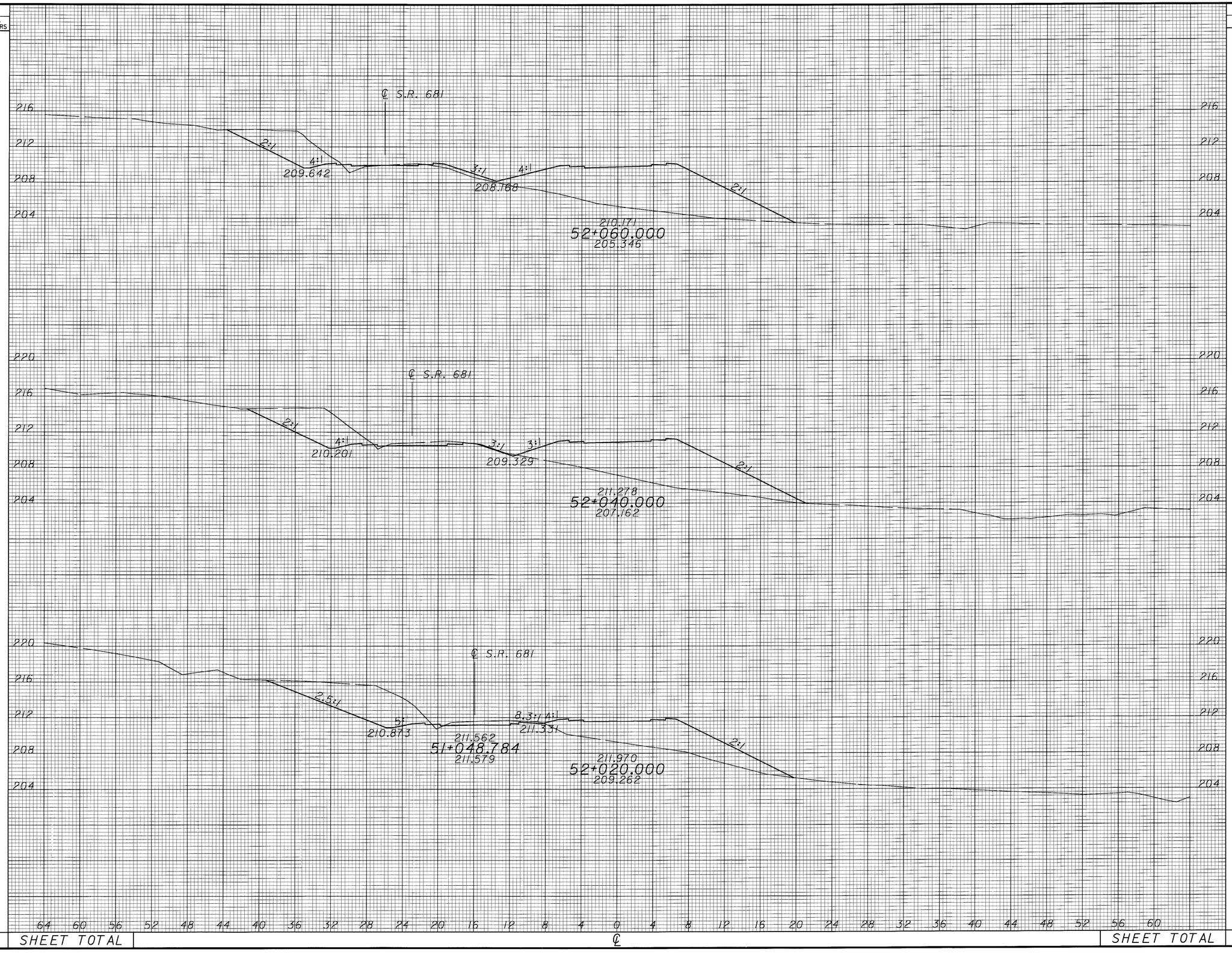
CHECKED

TEMPORARY ROAD AT SR 681
CROSS SECTIONS

ATH-33-40.981

02/07/01
04:44:12 PM
m:\proj\982i\016-00\dsl\sr681dg\mot\14mtxsht.dgn

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
25	112		
		586	2076
33	96		
		808	1536
48	58		
		475	846
		1869	4458

SHEET TOTAL

SHEET TOTAL

CALCULATED

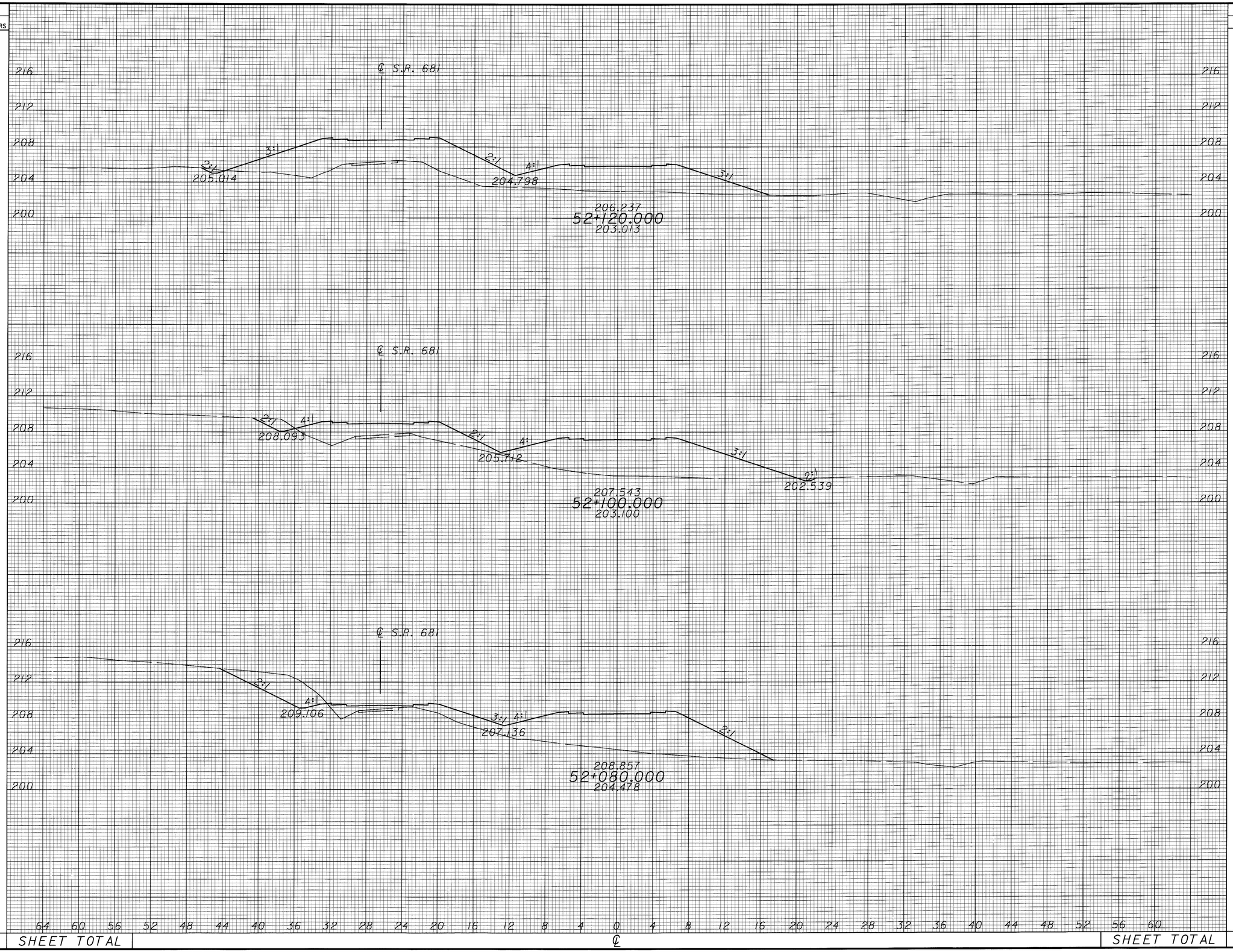
CHECKED

TEMPORARY ROAD AT SR 681
CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:13:14 PM
M:\PROJ\982\1016-00\DS\sr681qg\mot\14mtxsnt.dgn

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1	148		
		45	2749
4	127		
		247	2376
21	110		
		462	2223
		754	7348

64 60 56 52 48 44 40 36 32 28 24 20 16 12 8 4 0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60

SHEET TOTAL ℄ SHEET TOTAL

CALCULATED | CHECKED

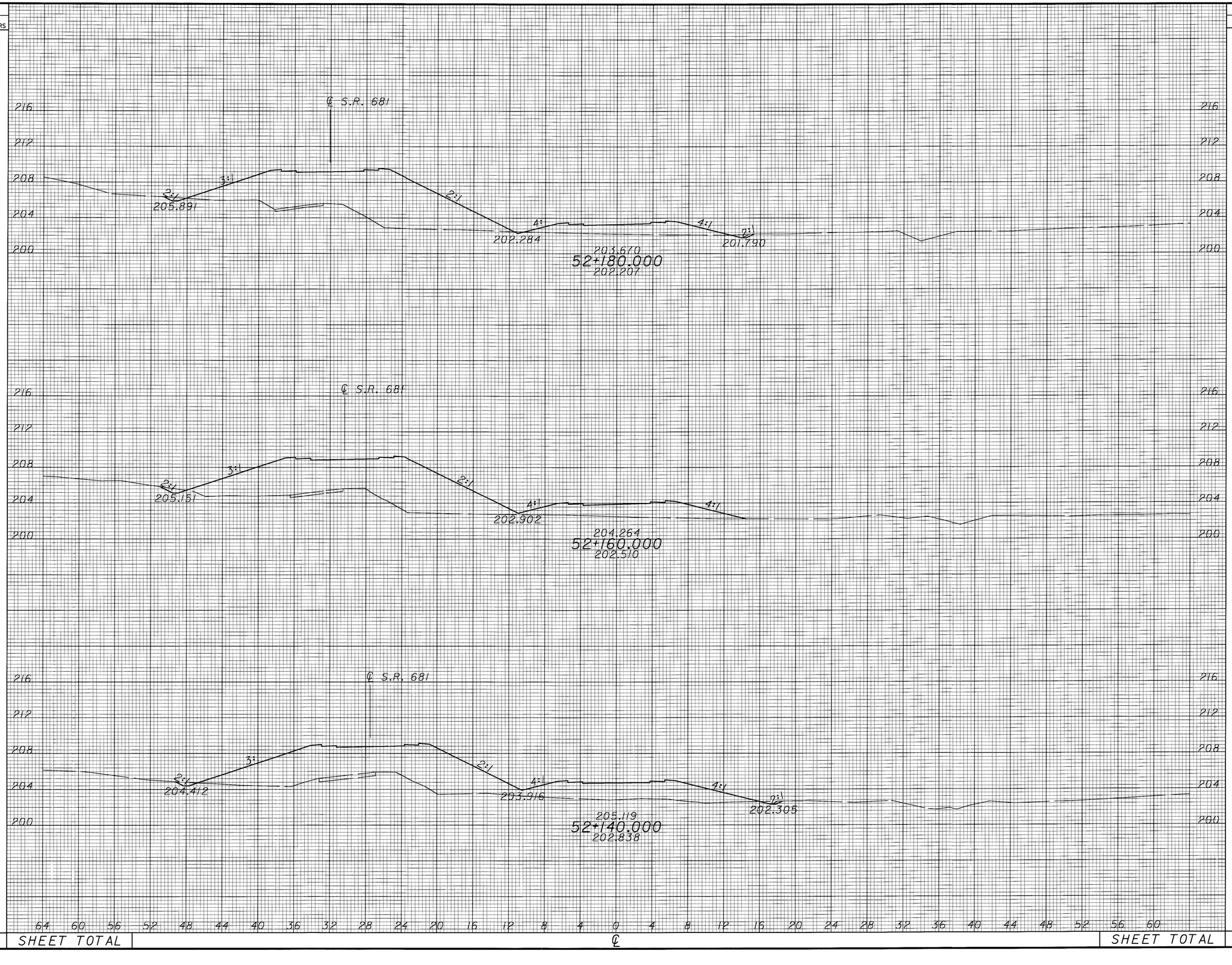
TEMPORARY ROAD AT SR 681
CROSS SECTIONS

ATH-33-40.981

69
949

02/07/2001
06:34 PM
M:\PROJ\982\\016-00\DSN\sr68lgg\mor1\14mtxsht.dgn

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
1	143		
		21	2926
1	150		
		19	2964
1	147		
		17	2943
		57	8833

CALCULATED

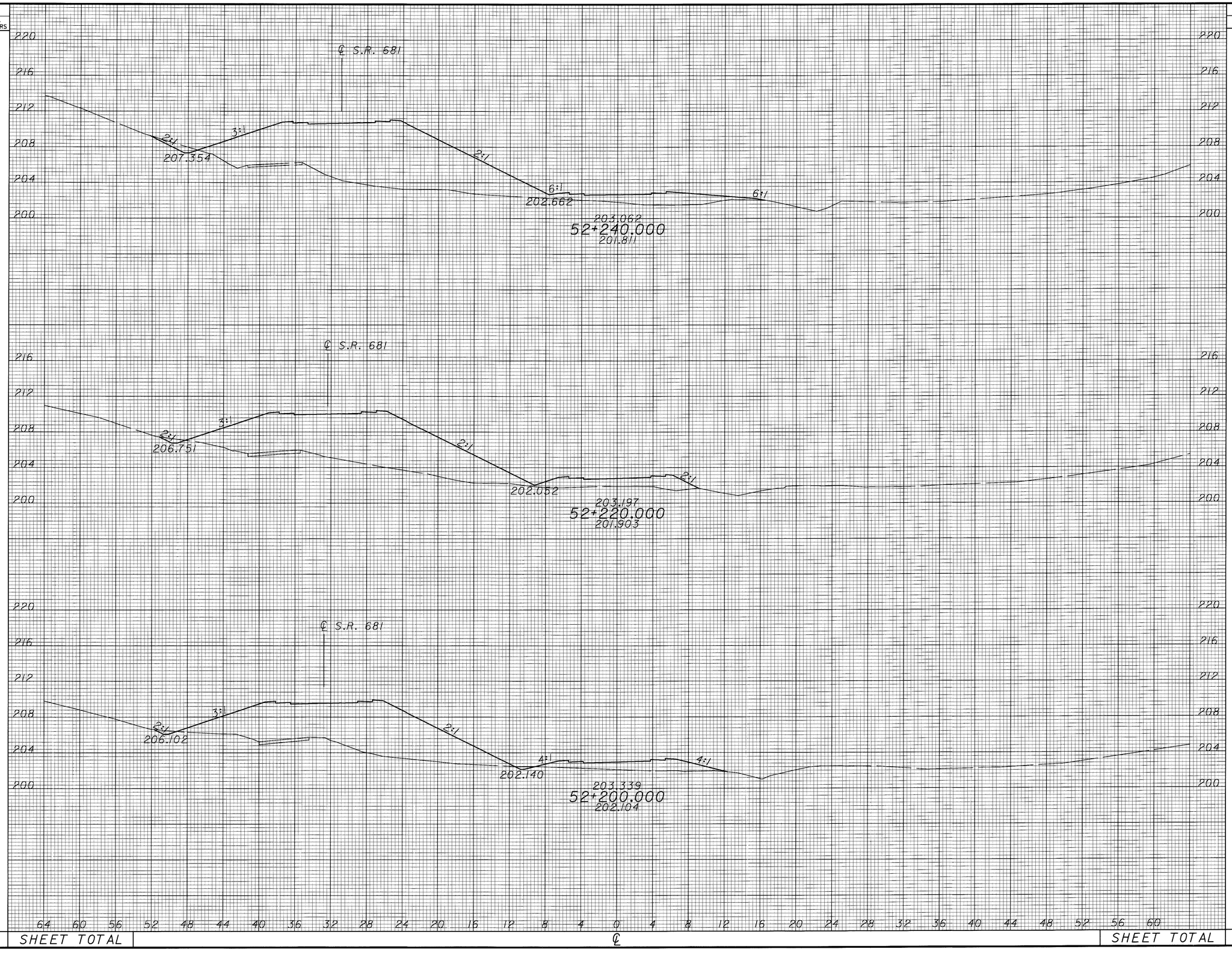
CHECKED

TEMPORARY ROAD AT SR 681 CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:13:14 PM
M:\PROJ\982N\016-00\DS\sr-681qg\nar1\14mtxsht.dgn

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
		2	194		
				29	3562
		1	162		
				19	3063
		1	145		
				23	2874
SHEET TOTAL				71	9499
		SHEET TOTAL			



CALCULATED

CHECKED

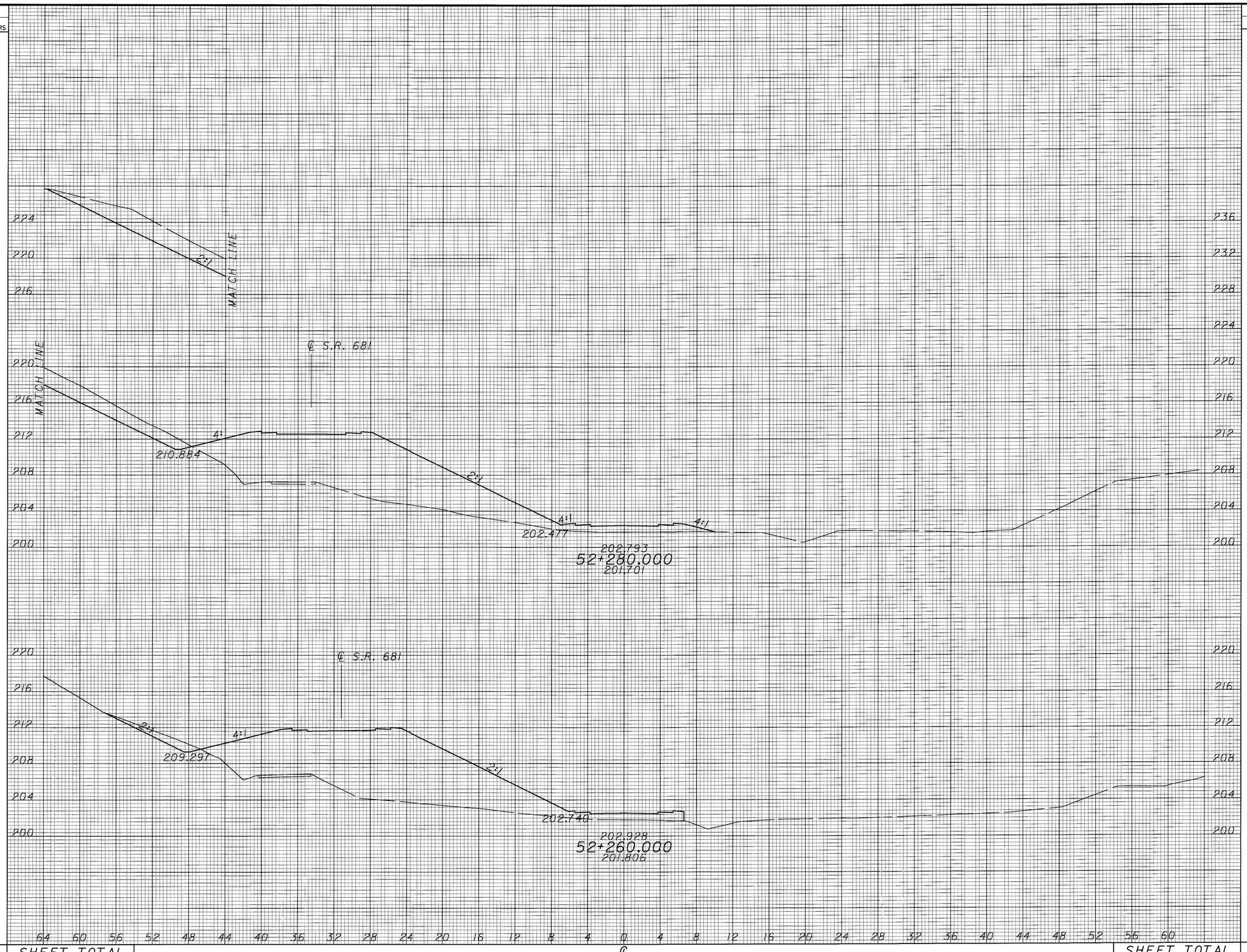
TEMPORARY ROAD AT SR 681
CROSS SECTIONS

ATH-33-40.981

71
949

02/07/2001
06:13:14 PM
M:\PROJ\3821\016-00\DSI\sr-681dg\mot\14mtxsht.dgn

SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
57	190		
		634	3953
6	205		
		80	3994
SHEET TOTAL		714	7947

CALCULATED

CHECKED

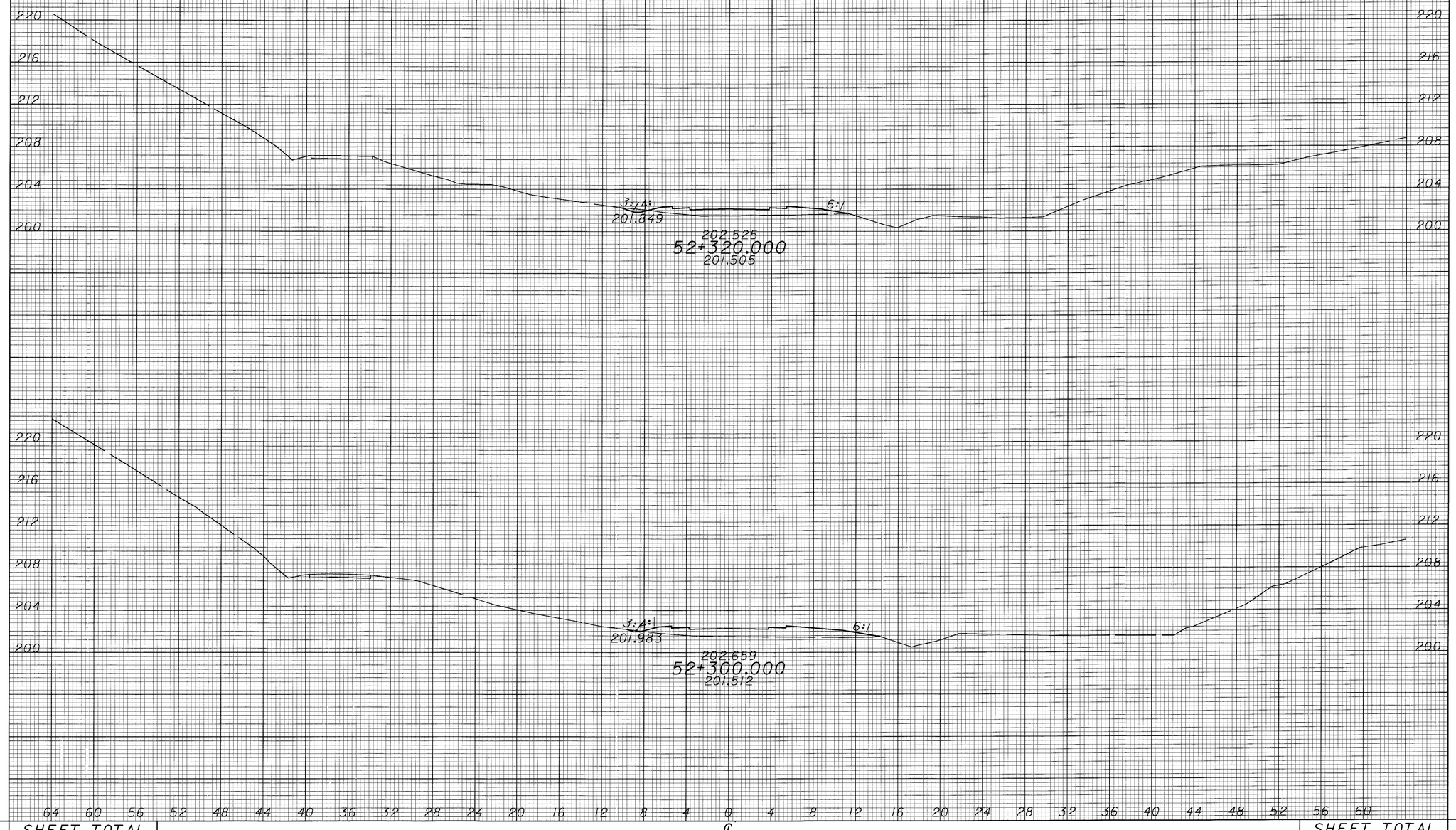
TEMPORARY ROAD AT SR 681
CROSS SECTIONS

ATH-33-40.981

72
949

02/07/2001
06:33:14 PM
M:\PROJ\3821\016-00\DS\sr681qg\mat\1\fmtxsht.dgn

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
		0	10		
				5	257
		0	15		
				575	2058
				580	2315



CALCULATED

CHECKED

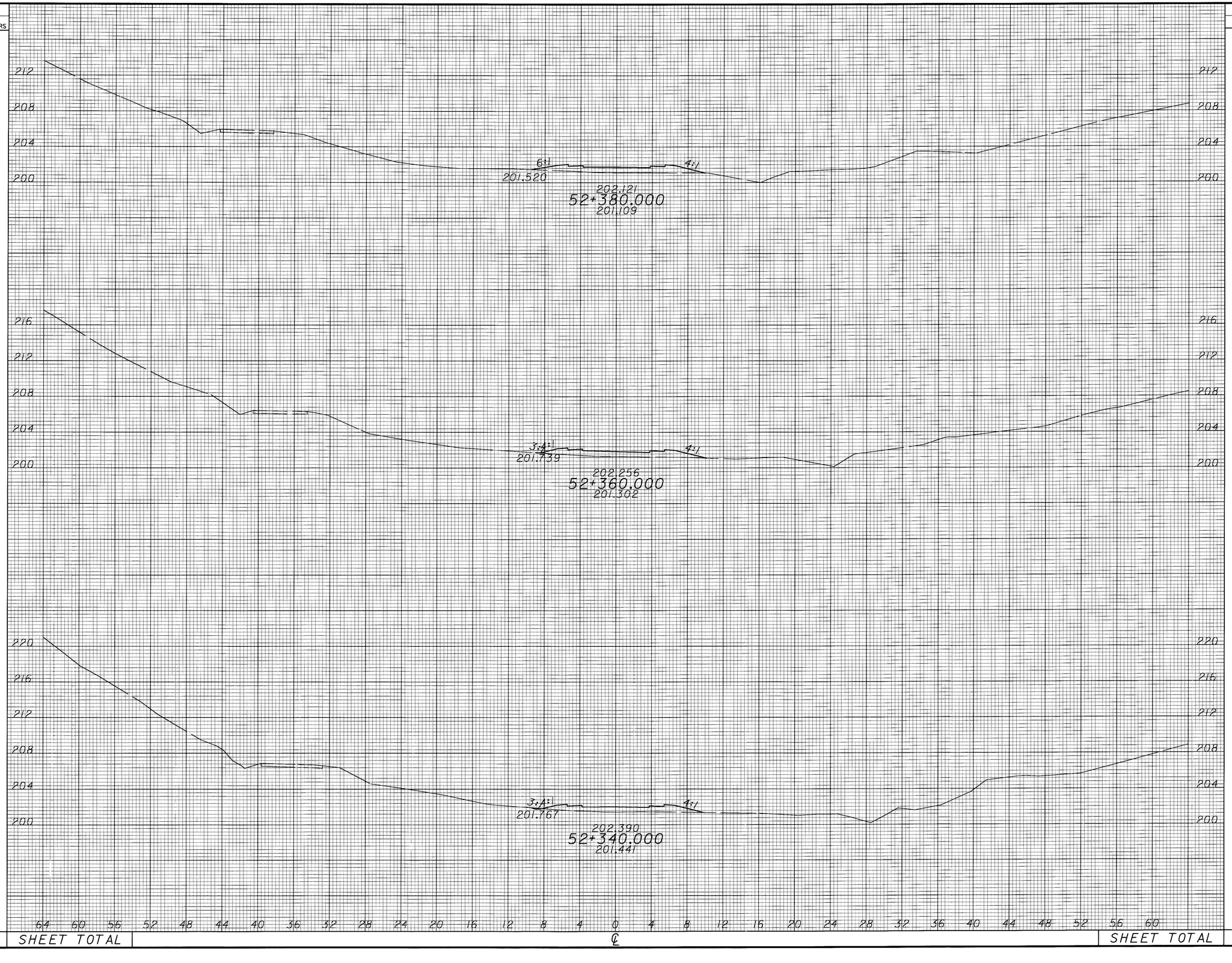
TEMPORARY ROAD AT SR 681
CROSS SECTIONS

ATH-33-40.981

73
949

02/07/2001
06:13:14 PM
M:\PROJ\1982\1016-00\DS\sr681dgn\mot\14mtxsnt.dgn

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
		1	11		
				7	210
		0	10		
				1	196
		0	9		
				5	196
SHEET TOTAL				13	602



CALCULATED

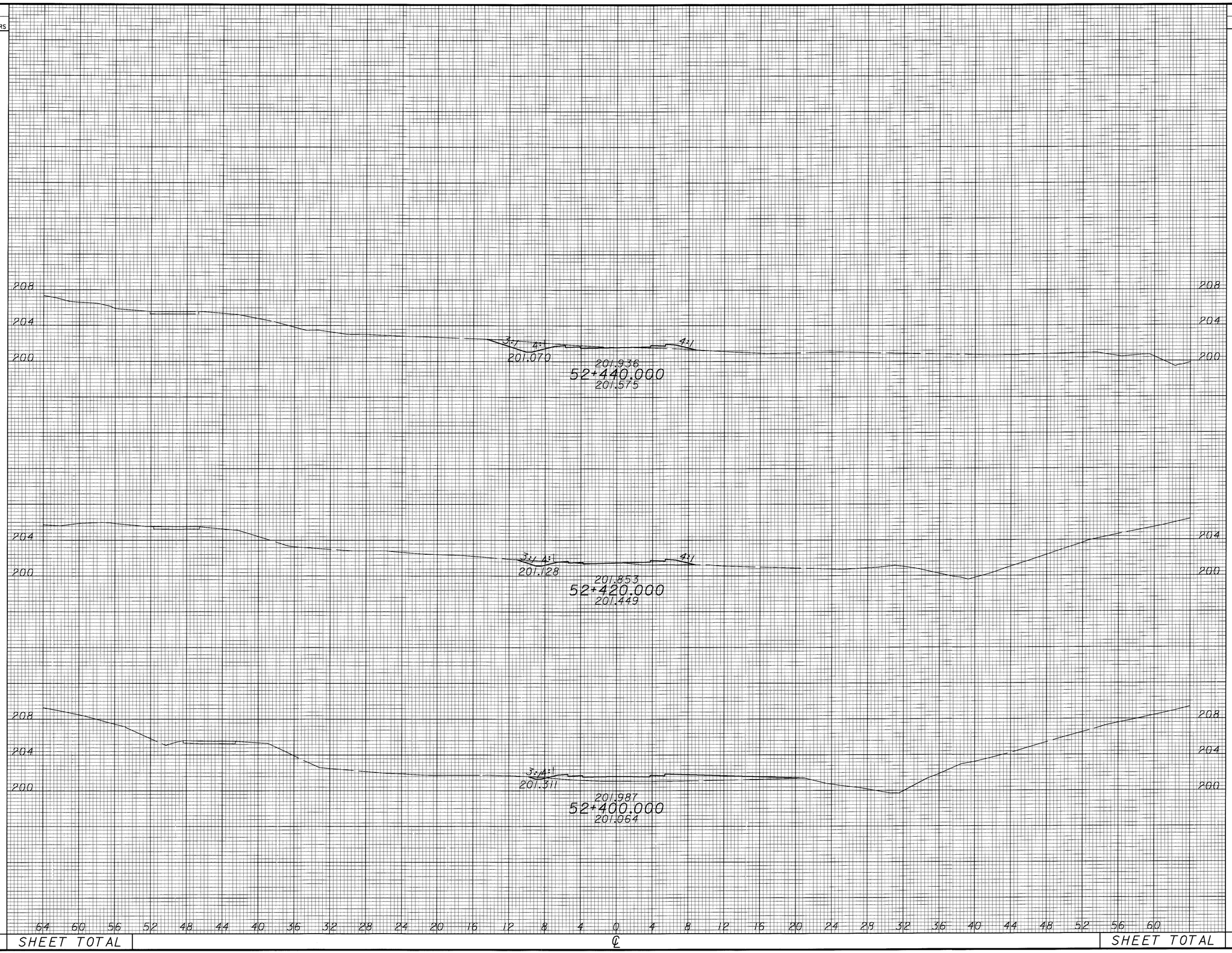
CHECKED

TEMPORARY ROAD AT SR 681
CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:13:14 PM
M:\PROJ\982\1016-00\05\sr681qq\mo1\14mtxsht.dgn

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
		7	1		
				85	42
		2	3		
				18	161
		0	13		
				10	241
				113	444



CALCULATED

CHECKED

TEMPORARY ROAD AT SR 681
CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:34 PM
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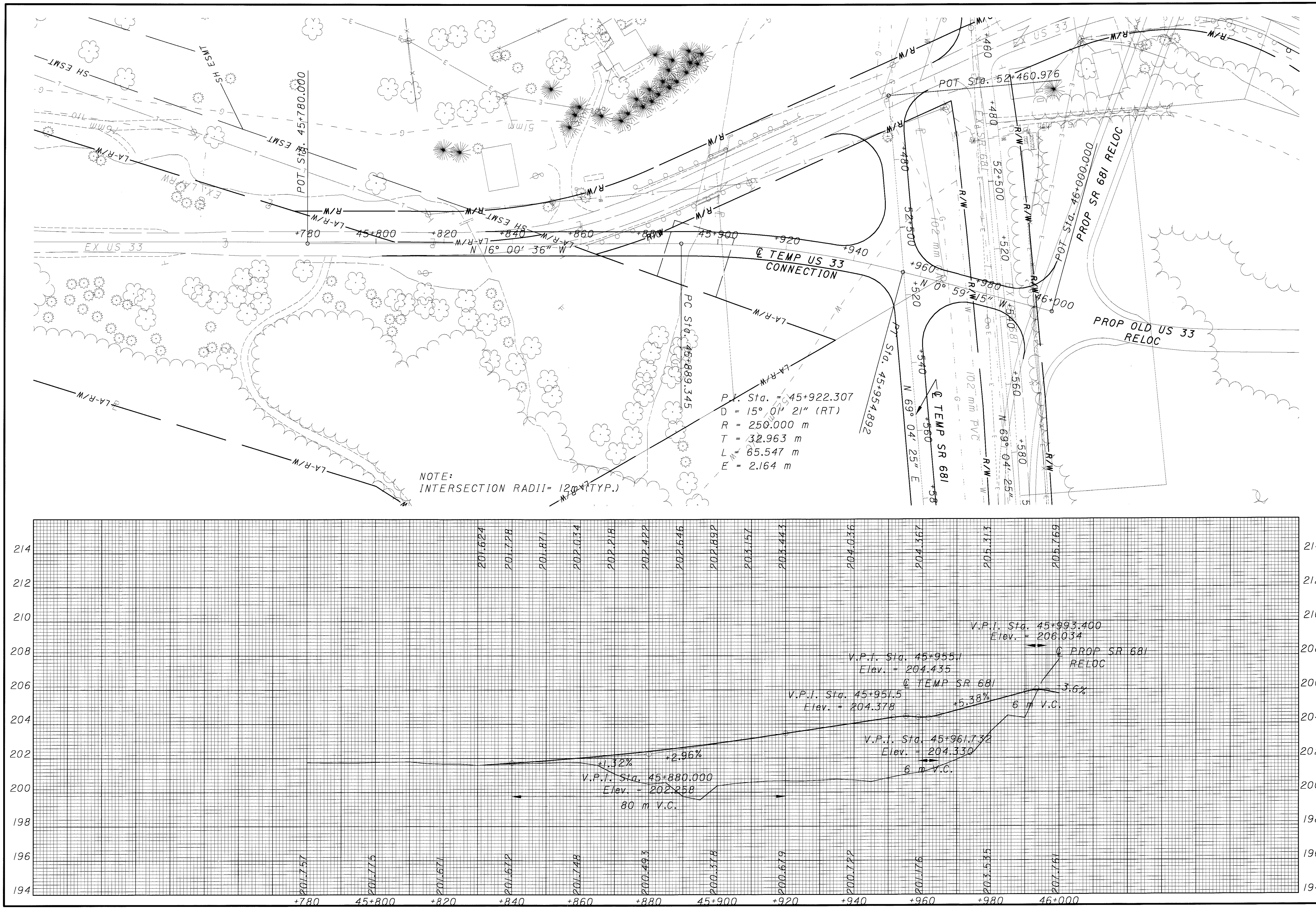


CALCULATED

CHECKED

TEMPORARY US 33 CONNECTION PLAN & PROFILE

ATH-33-40.981

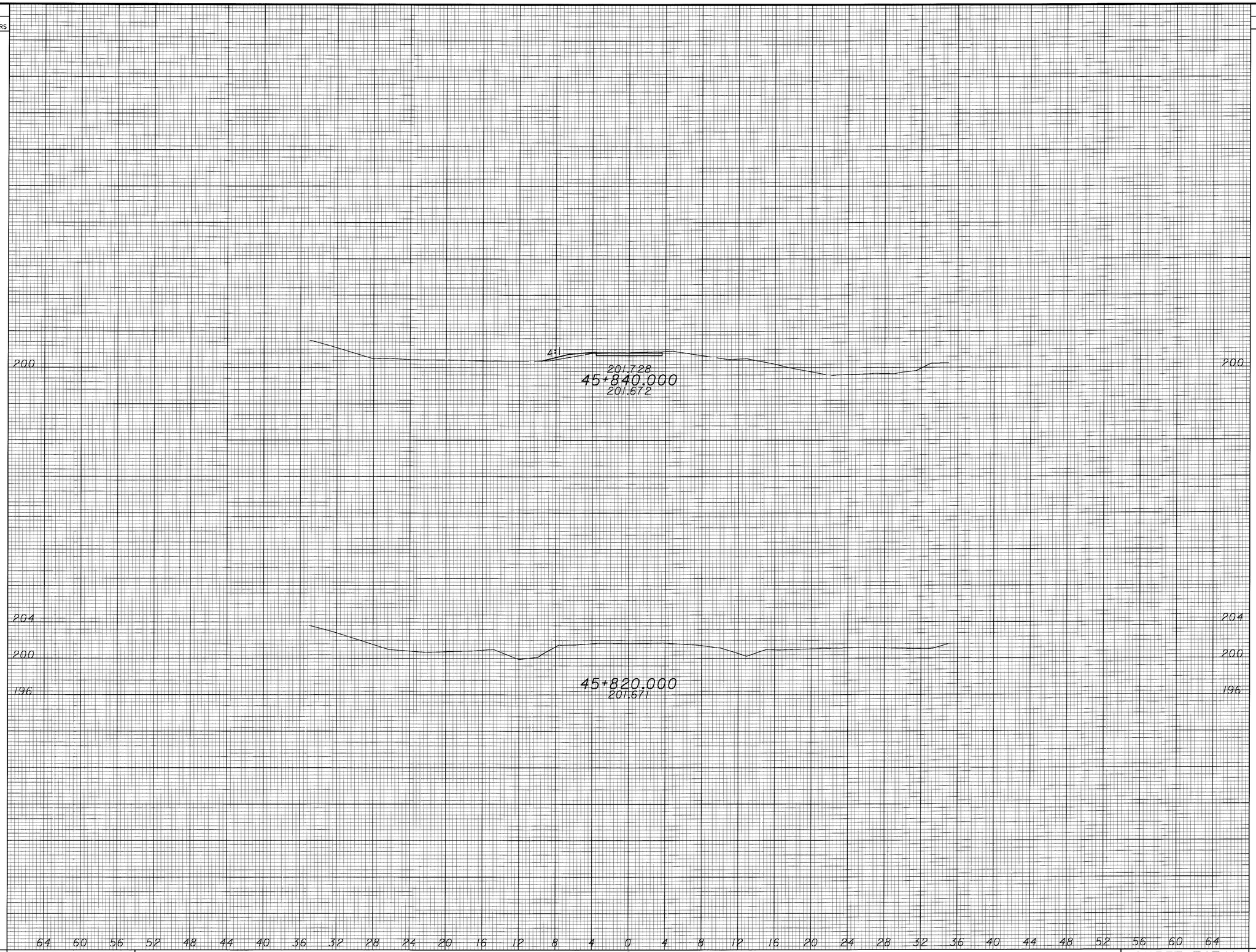
02/07/01
04:44:24 PM
m:\proj\9821\016-00\dsl\sr681cg\mot\gp681mt3.dgn

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED

CHECKED

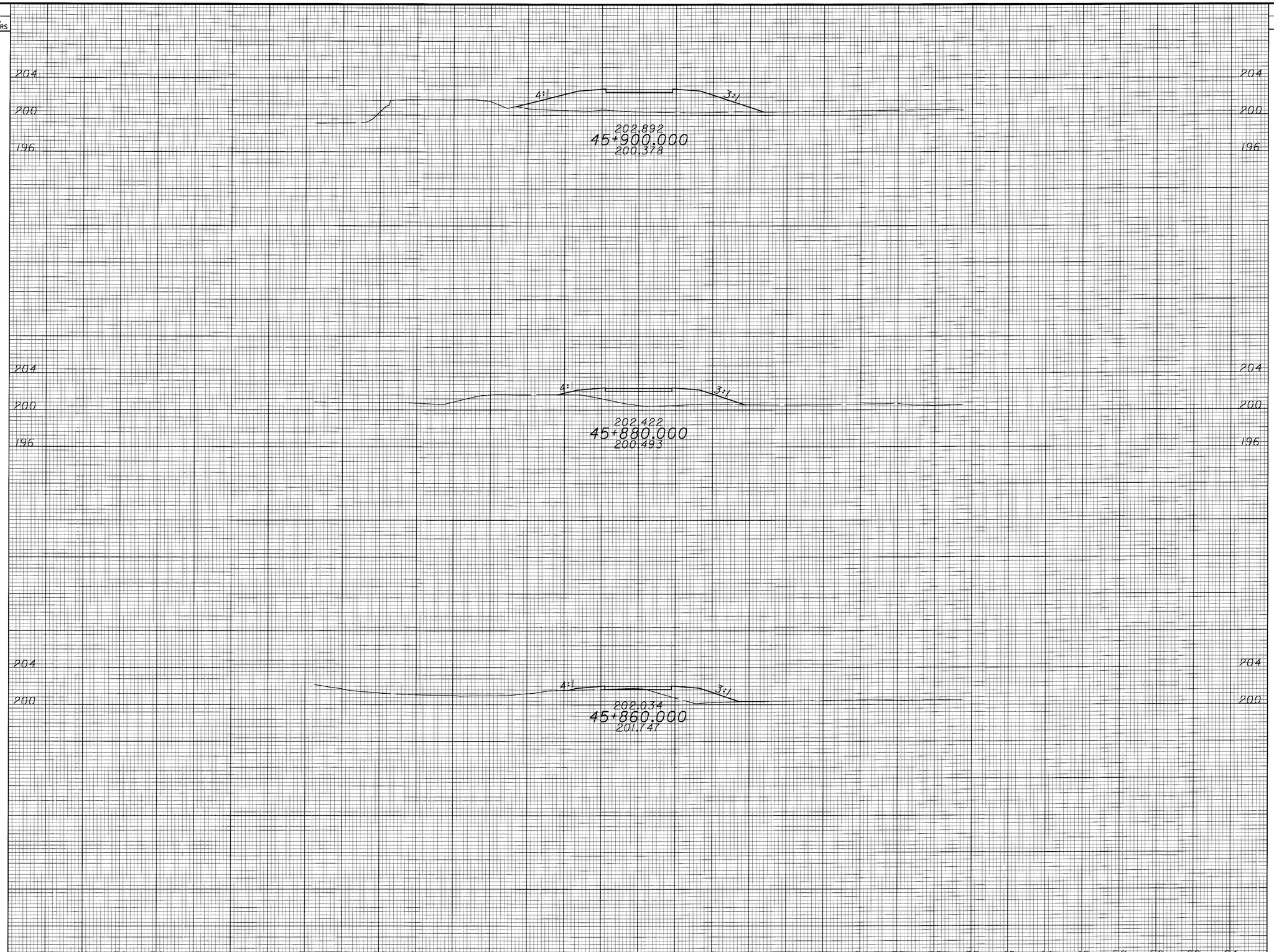


TEMPORARY US 33 CONNECTION CROSS SECTIONS

ATH-33-40.981

02/07/01
04:44:25 PM
m:\proj\1982\l016-00\dsl\sr68log\mot\68mot12xsht.dgn

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
		0	45		
				0	679
				3	329
		0	10		
				0	0
SHEET TOTAL				3	1008



CALCULATED

CHECKED

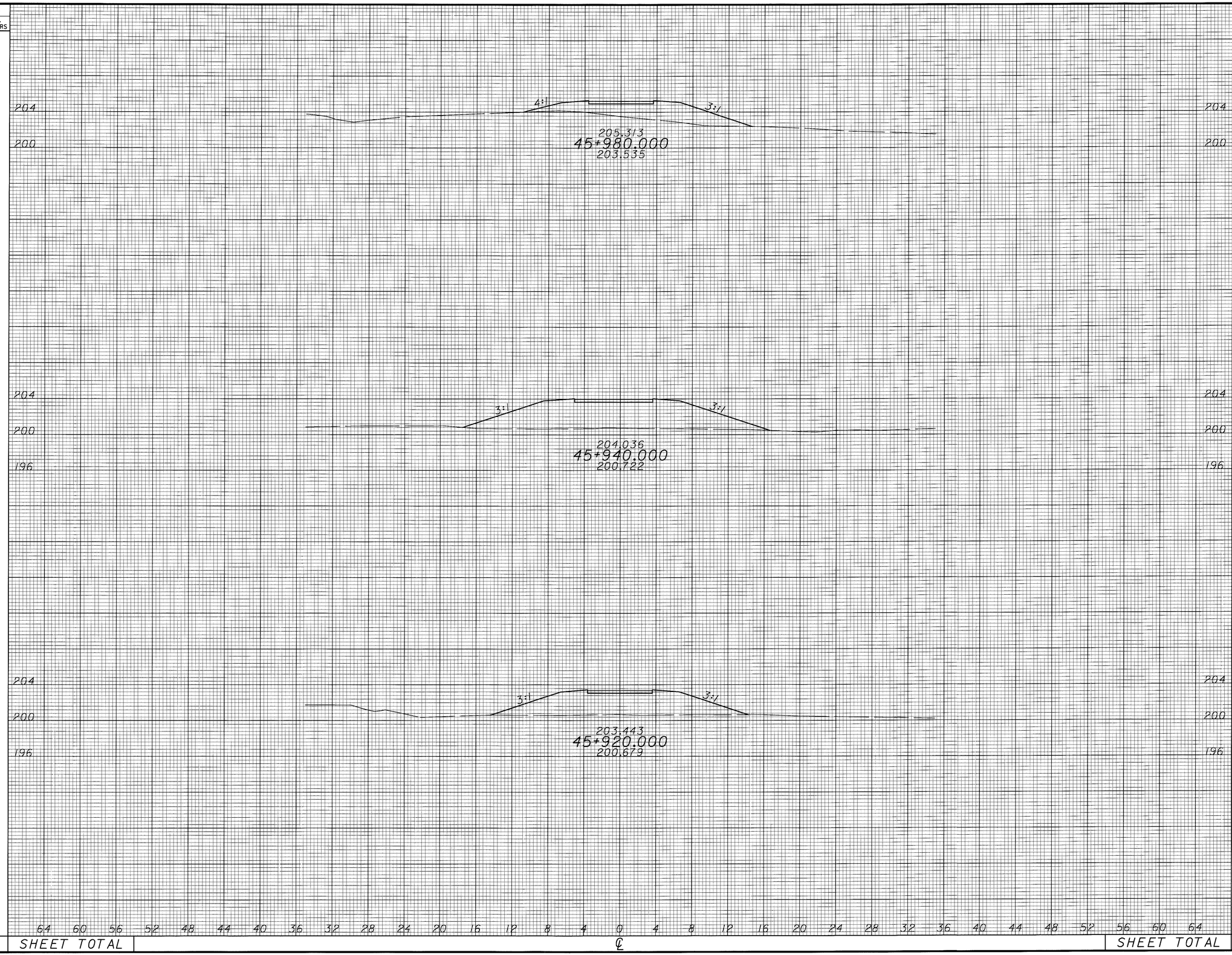
TEMPORARY US 33 CONNECTION CROSS SECTIONS

ATH-33-40.981

78
949

02/07/2001
06:19:32 PM
M:\PROJ\382\1016-00\DS\sr68iog\mor\68imor12xsht.dgn

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
		0	32		
				0	2165
		0	77		
				0	1305
		0	54		
				0	990
SHEET TOTAL				SHEET TOTAL	
				0	4460



CALCULATED

CHECKED

TEMPORARY US 33 CONNECTION CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:19:56 PM
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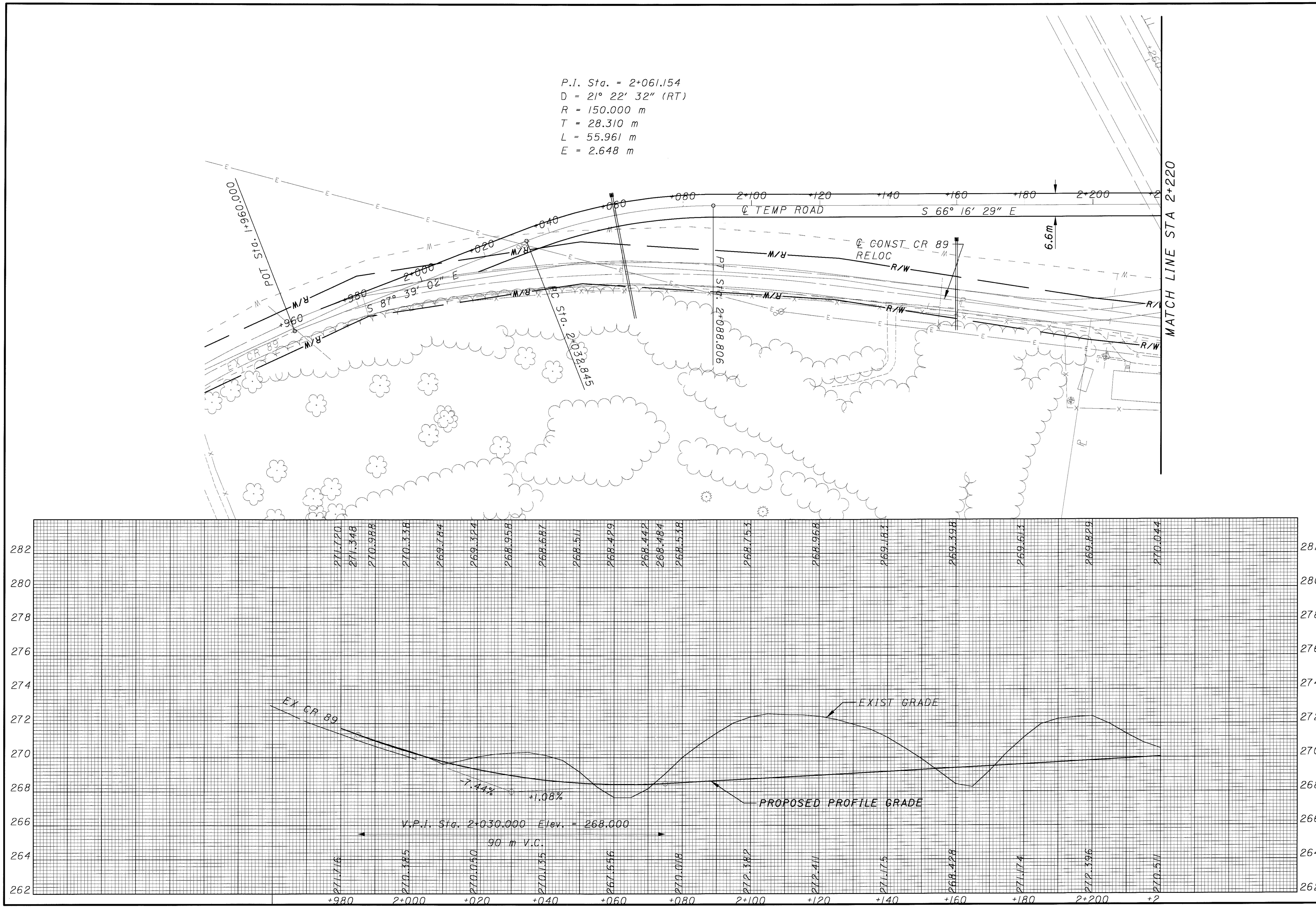


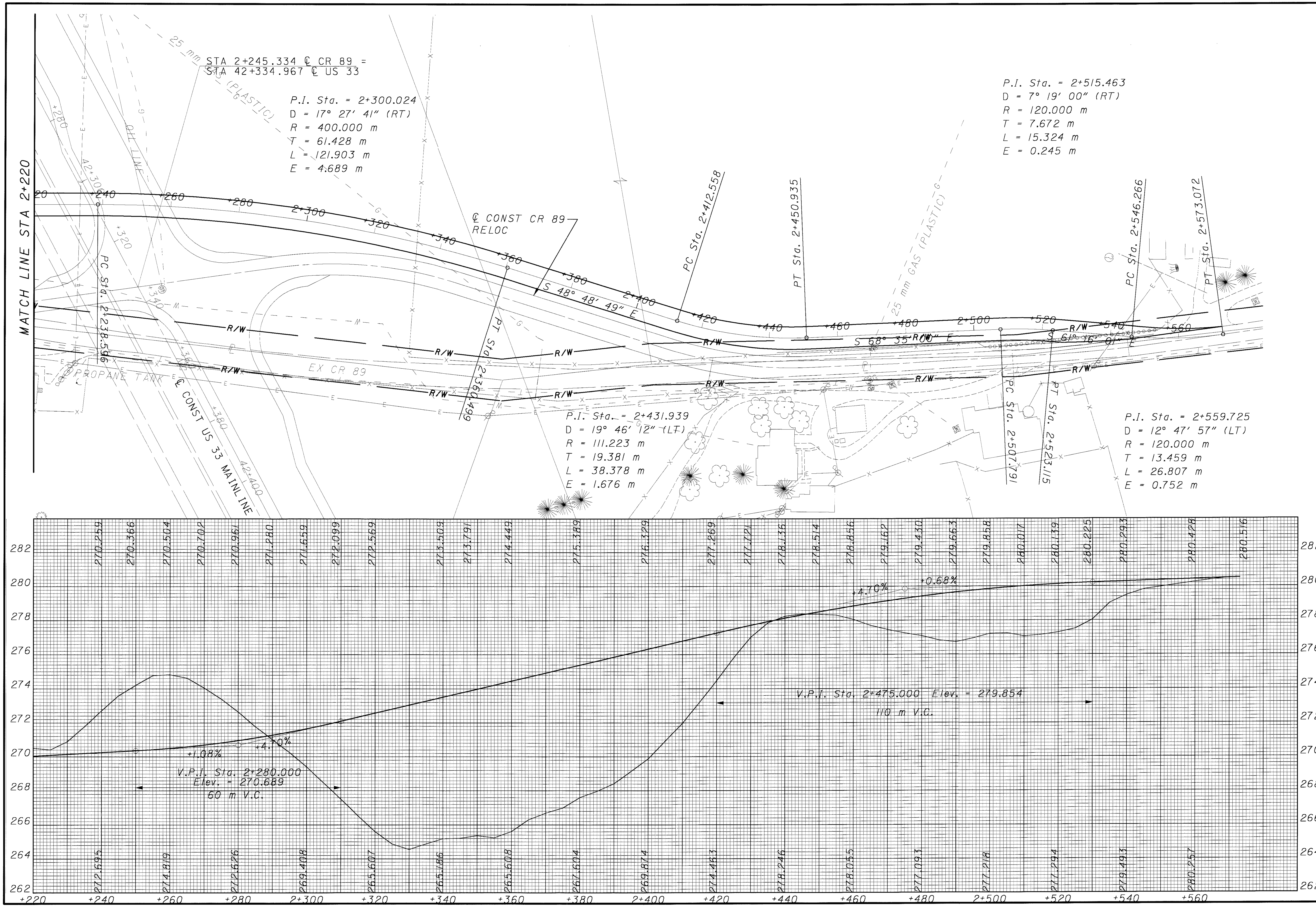
TEMPORARY ROAD AT CR 89
PLAN & PROFILE

HORIZONTAL SCALE IN METERS 1:500

CALCULATED

CHECKED

ATH-33-40.981



MATCH LINE STA 2+220
STA 2+245.334 ℄ CR 89 =
STA 42+334.967 ℄ US 33
P.I. Sta. = 2+300.024
D = 17° 27' 41" (RT)
R = 400.000 m
T = 61.428 m
L = 121.903 m
E = 4.689 m
P.I. Sta. = 2+515.463
D = 7° 19' 00" (RT)
R = 120.000 m
T = 7.672 m
L = 15.324 m
E = 0.245 m
℄ CONST CR 89 RELOC
S 48° 48' 49" E
S 68° 35' 00" E
PC Sta. 2+238.596
PT Sta. 2+350.499
PC Sta. 2+412.558
PT Sta. 2+450.935
PC Sta. 2+507.791
PT Sta. 2+523.115
PC Sta. 2+546.266
PT Sta. 2+573.072
25 mm GAS (PLASTIC)
PROPANE TANK
EX CR 89
℄ CONST US 33 MAINLINE
R/W
P.I. Sta. = 2+431.939
D = 19° 46' 12" (LT)
R = 111.223 m
T = 19.381 m
L = 38.378 m
E = 1.676 m
P.I. Sta. = 2+559.725
D = 12° 47' 57" (LT)
R = 120.000 m
T = 13.459 m
L = 26.807 m
E = 0.752 m
V.P.I. Sta. 2+280.000
Elev. = 270.689
60 m V.C.
+1.08%
+4.70%
V.P.I. Sta. 2+475.000 Elev. = 279.854
110 m V.C.
+0.68%
270.259 270.366 270.504 270.702 270.961 271.280 271.659 272.099 272.569 273.509 273.791 274.449 275.389 276.329 277.269 277.721 278.136 278.514 278.856 279.162 279.430 279.663 279.858 280.017 280.139 280.225 280.293 280.428 280.516
272.695 274.819 272.626 269.408 265.607 265.186 265.608 267.604 269.874 274.463 278.246 278.055 277.093 277.218 277.294 279.493 280.257
+220 +240 +260 +280 2+300 +320 +340 +360 +380 2+400 +420 +440 +460 +480 2+500 +520 +540 +560
262 264 266 268 270 272 274 276 278 280 282

HORIZONTAL SCALE IN METERS

CALCULATED

CHECKED

TEMPORARY ROAD AT CR 89 PLAN & PROFILE

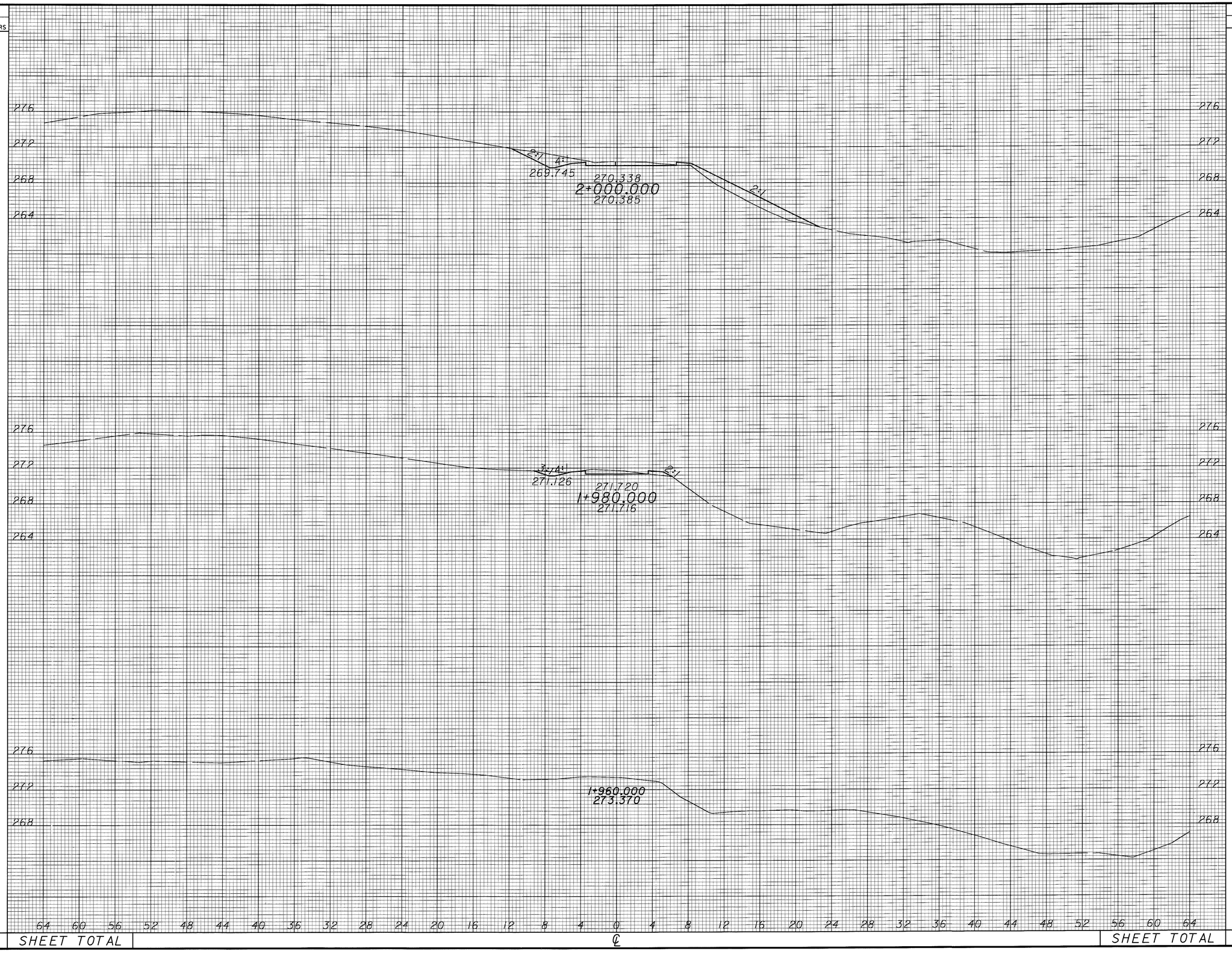
ATH-33-40.981

81/949

02/07/01
04:44:43 PM
m:\proj\1982\1016-00\dsl\cr89\mot\gp89-mot2.dgn

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL
8	0		
		0	0
SHEET TOTAL		0	0



CALCULATED

CHECKED

TEMPORARY ROAD AT CR 89
CROSS SECTIONS

ATH-33-40.981

02/07/01
04:44:44 PM
m:\proj\982N\016-00\dsh\cr89\mor1\10mor1xssht0.dgn

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL
38	0		
		651	0
27	0		
		351	0
		1002	0

CALCULATED

CHECKED

276
272
268
264
260

2:1
4:
2:1
268.093
268.687
267.865
2+040.000
270.135

276
272
268
264
260

2:1
4:
2:1
268.730
269.324
2+020.000
270.050

64 60 56 52 48 44 40 36 32 28 24 20 16 12 8 4 0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64

SHEET TOTAL

℄

SHEET TOTAL

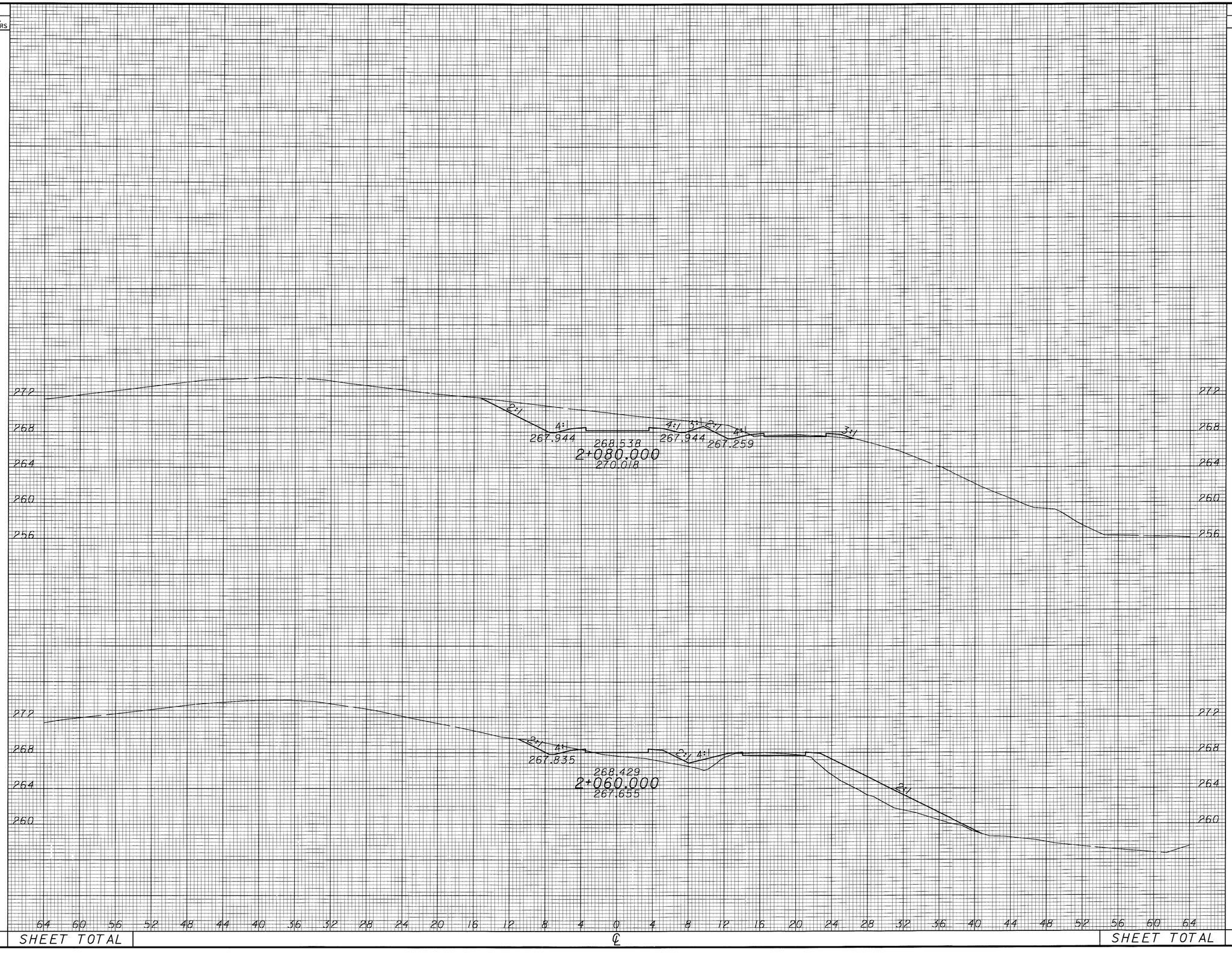
TEMPORARY ROAD AT CR 89
CROSS SECTIONS

ATH-33-40.981

83
949

02/01/2001
06:23:07 PM
M:\PROJ\1982\1016-00\DS\CR89\mot\10mot*xsht10.dgn

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
		40	0		
				447	70
		4	7		
				421	70
SHEET TOTAL				868	140



CALCULATED

CHECKED

TEMPORARY ROAD AT CR 89
CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:23:07 PM
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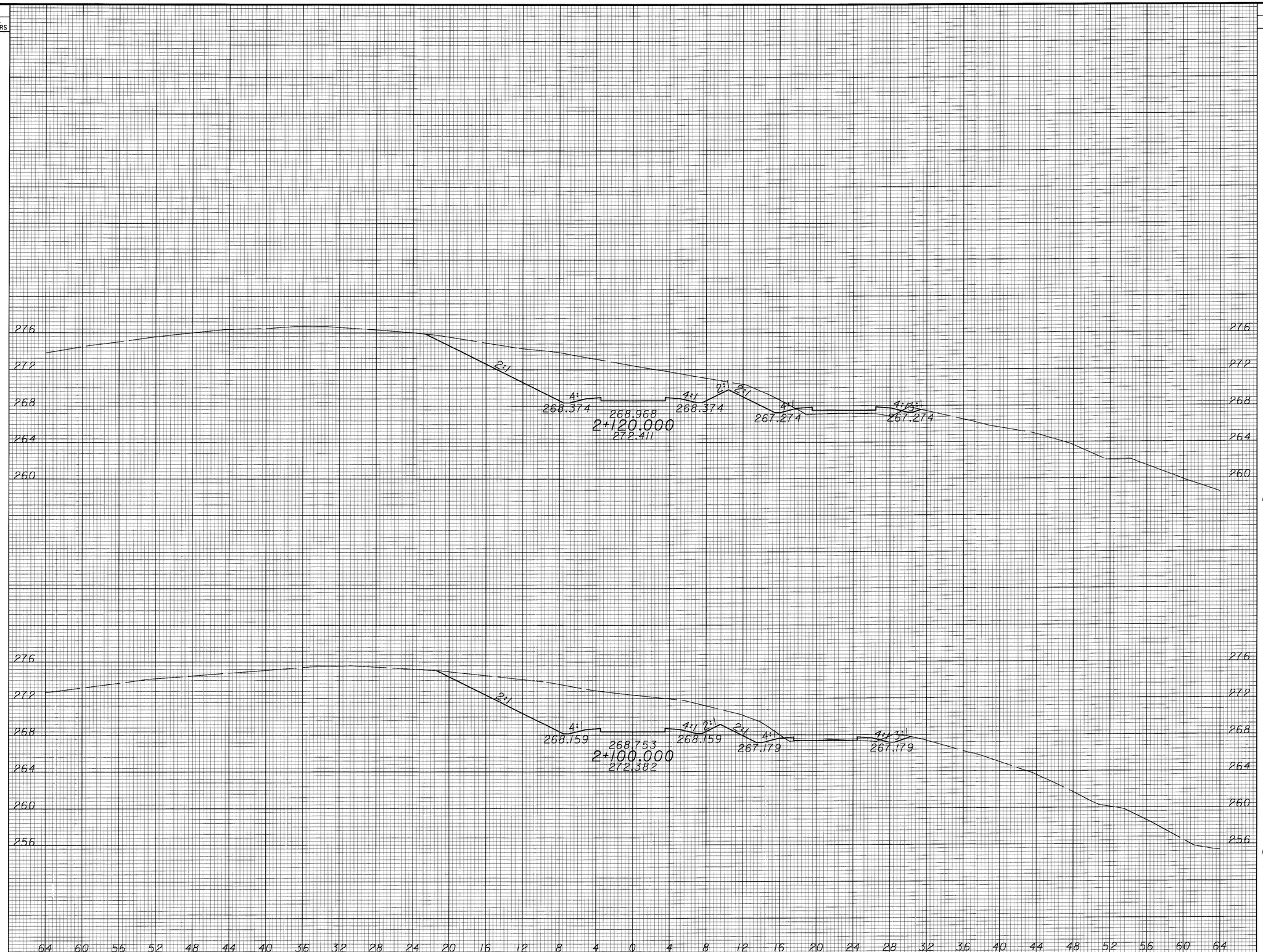
SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
102	0		
		2044	0
102	0		
		1427	0
		3471	0

SHEET TOTAL ℄ SHEET TOTAL

CALCULATED

CHECKED

TEMPORARY ROAD AT CR 89
CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:23:07 PM
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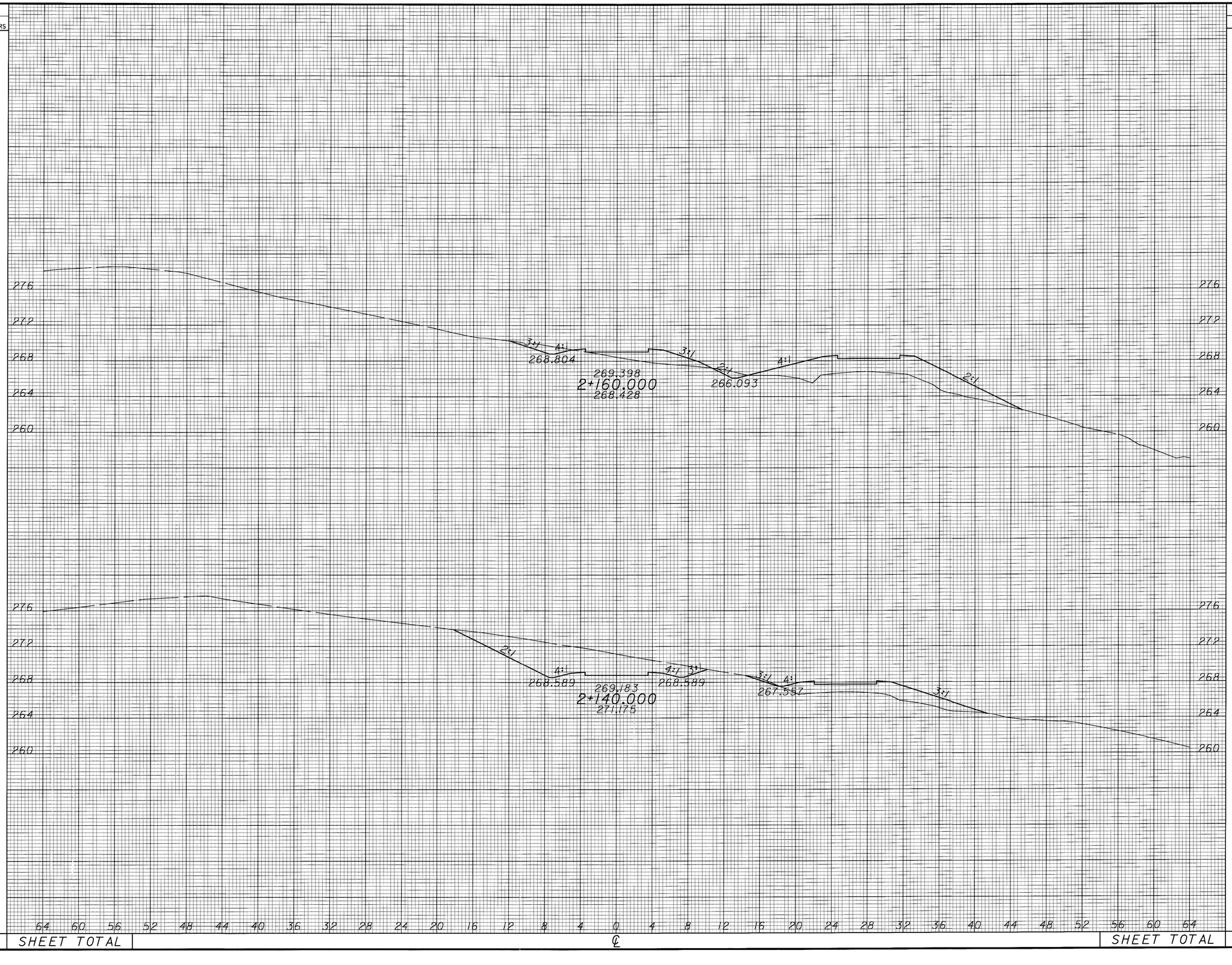
SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
3	12		
		611	116
58	0		
		1598	0
SHEET TOTAL		2209	116

CALCULATED

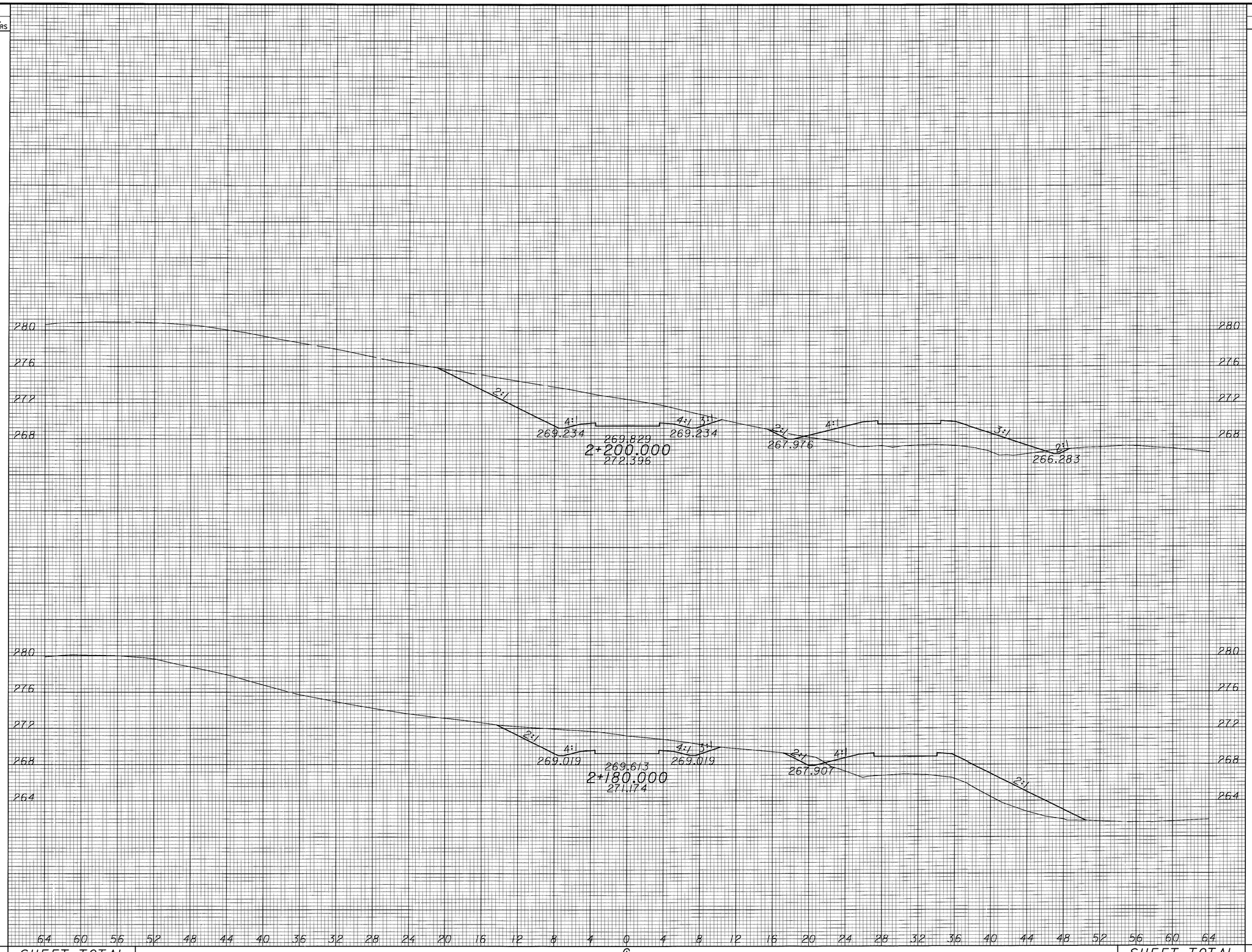
CHECKED

TEMPORARY ROAD AT CR 89
CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:23:07 PM
M:\PROJ\982\1016-00\DS\CR89\mot\10mot+xssht0.dgn

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
		75	0		
				1155	0
		40	0		
				436	116
SHEET TOTAL				1591	116
				SHEET TOTAL	



CALCULATED

CHECKED

TEMPORARY ROAD AT CR 89
CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:23:07 PM
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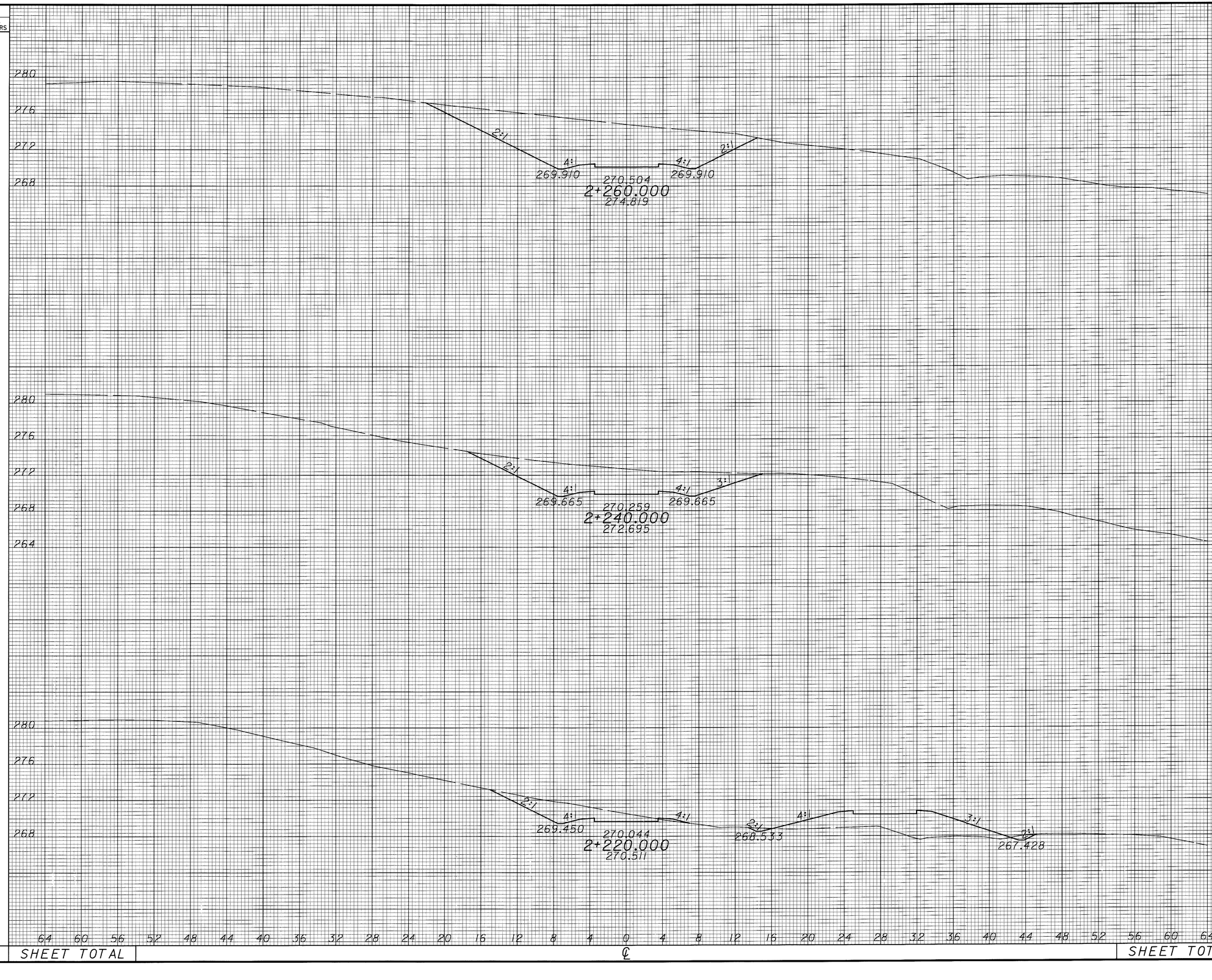
SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
127	0		
		1977	0
70	0		
		918	5
21	1		
		966	5
		3861	10

SHEET TOTAL

SHEET TOTAL

CALCULATED

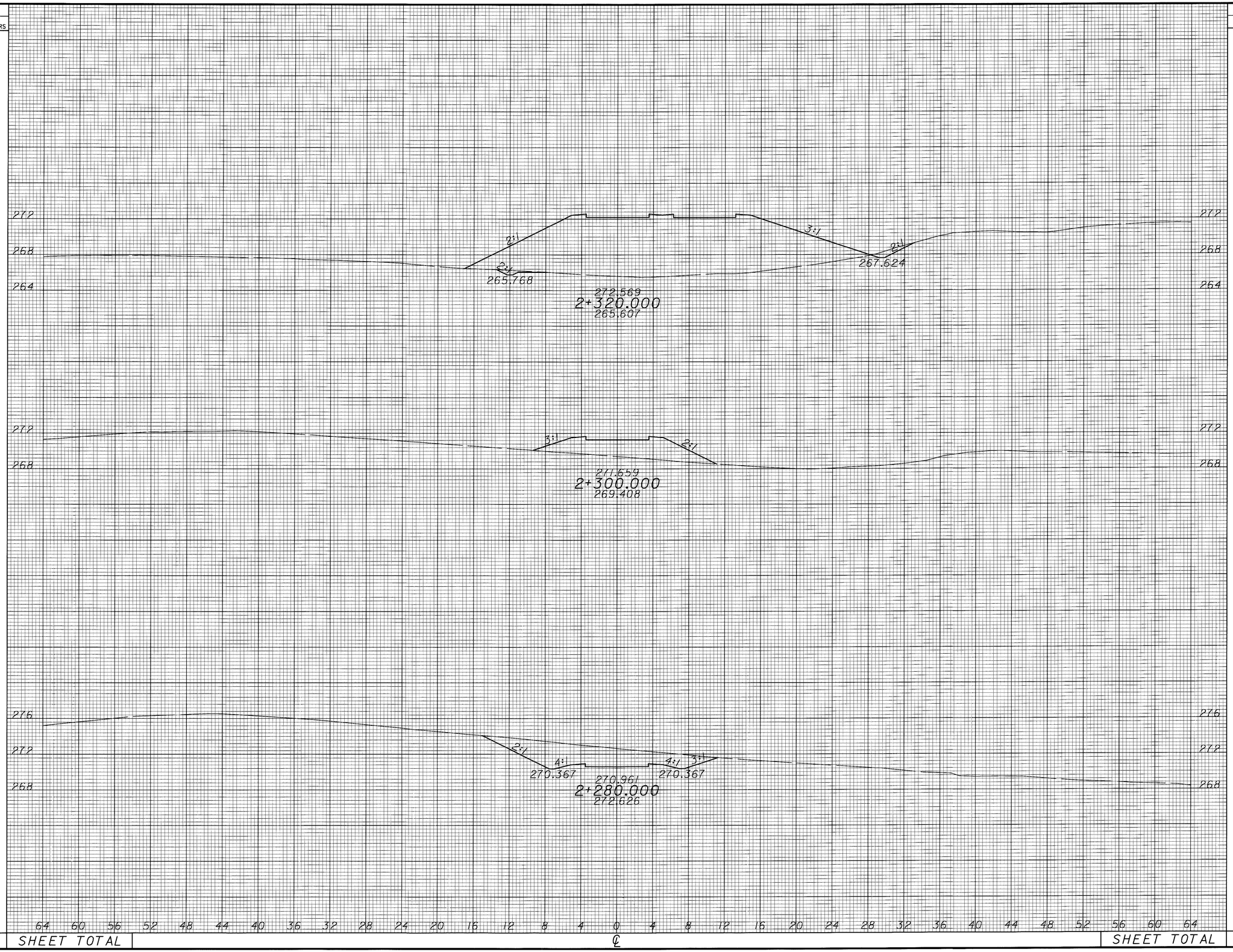
CHECKED

TEMPORARY ROAD AT CR 89
CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:23:07 PM
M:\PROJ\982\1016-00\DS\CR89\mot\10mot×ssh+0.dgn

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. METERS	CUT	FILL	CUT	FILL
		0	106		
				0	1379
		0	32		
				447	316
		45	0		
				1719	0
SHEET TOTAL				2166	1695
				SHEET TOTAL	



CALCULATED

CHECKED

TEMPORARY ROAD AT CR 89
CROSS SECTIONS

ATH-33-40.981

89
949

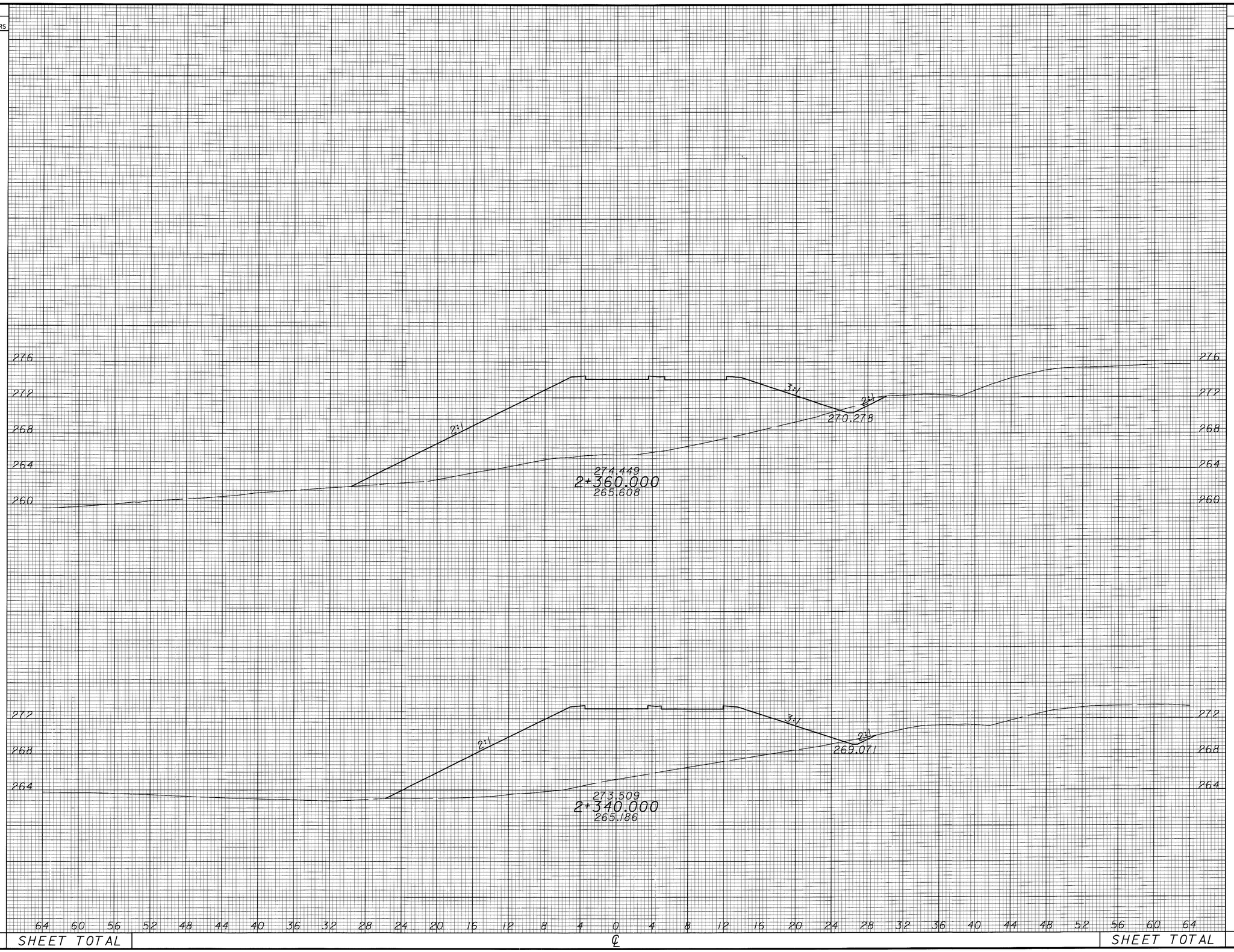
02/07/2001
06:23:07 PM
M:\PROJ\982\016-00\DSI\CR89\mot\10mot*xssh10.dgn

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	200		
		0	3788
0	179		
		0	2848
		0	6636

CALCULATED

CHECKED



TEMPORARY ROAD AT CR 89
CROSS SECTIONS

ATH-33-40.981

02/07/2001
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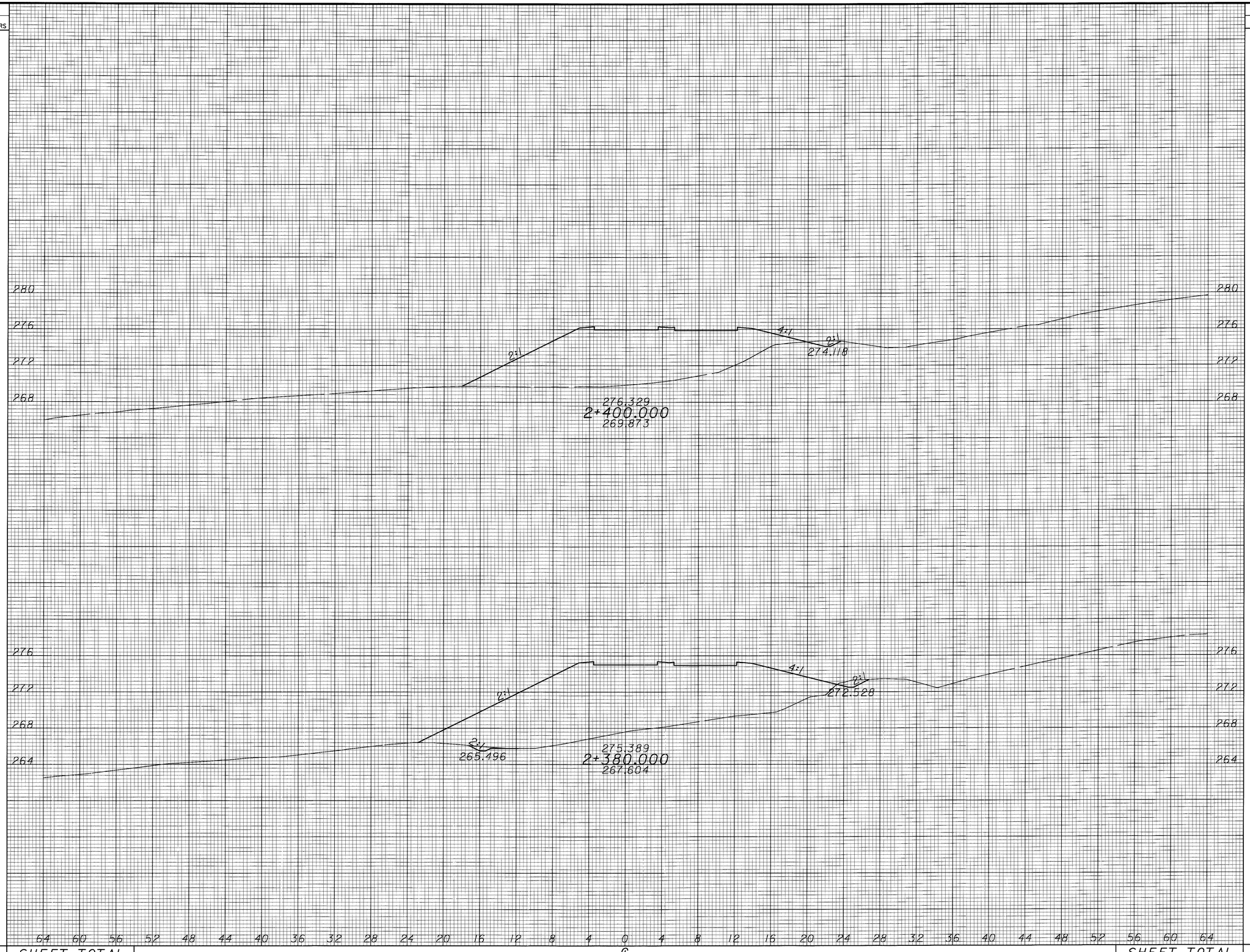
SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	104		
		0	2630
0	160		
		0	3597
		0	6227

SHEET TOTAL

SHEET TOTAL

CALCULATED

CHECKED

TEMPORARY ROAD AT CR 89
CROSS SECTIONS

ATH-33-40.981

02/07/2001
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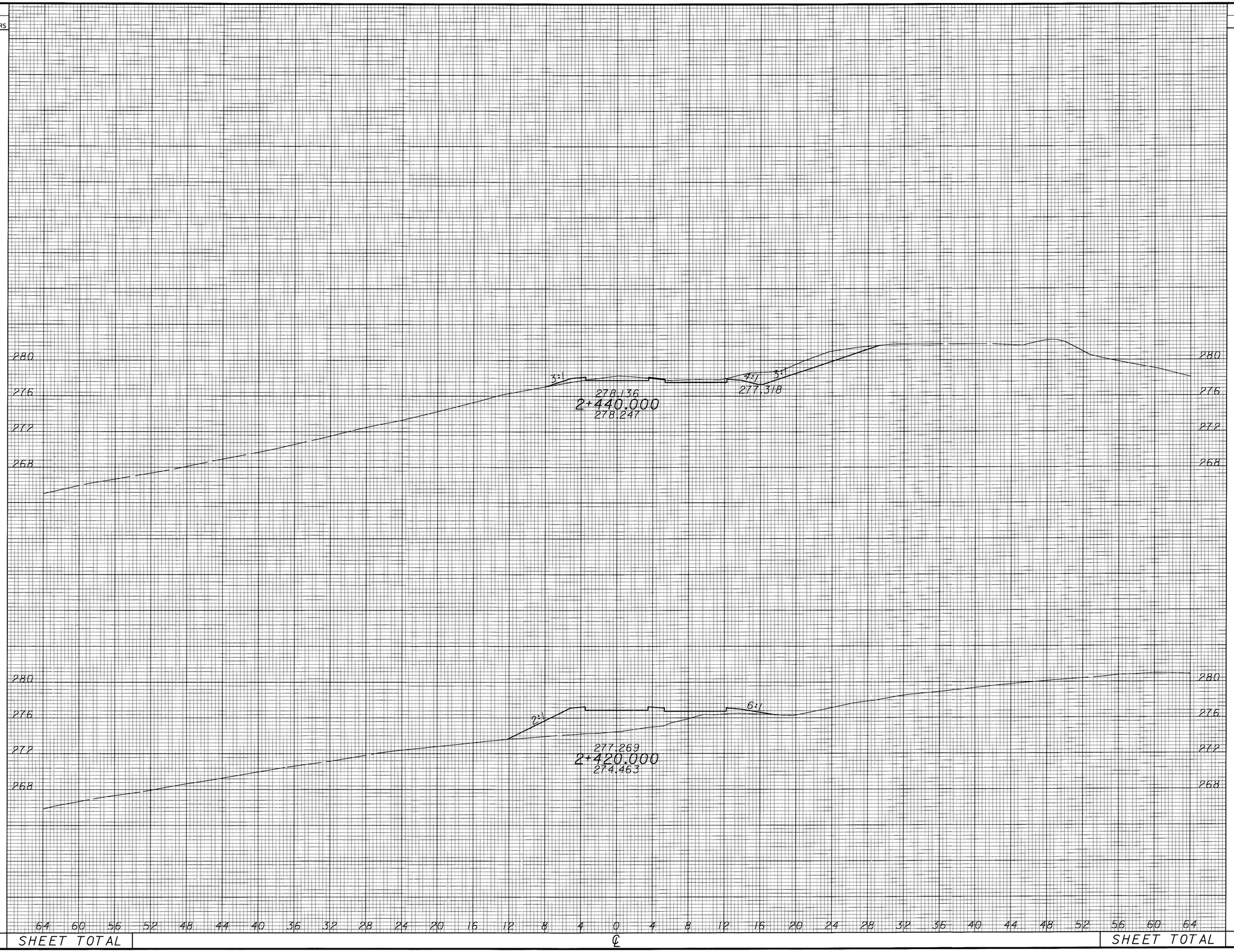
SEEDING	
END WIDTH	SQ. METERS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2	1		
		23	377
0	36		
		0	1397
SHEET TOTAL		23	1774

CALCULATED

CHECKED

TEMPORARY ROAD AT CR 89
CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:23:07 PM
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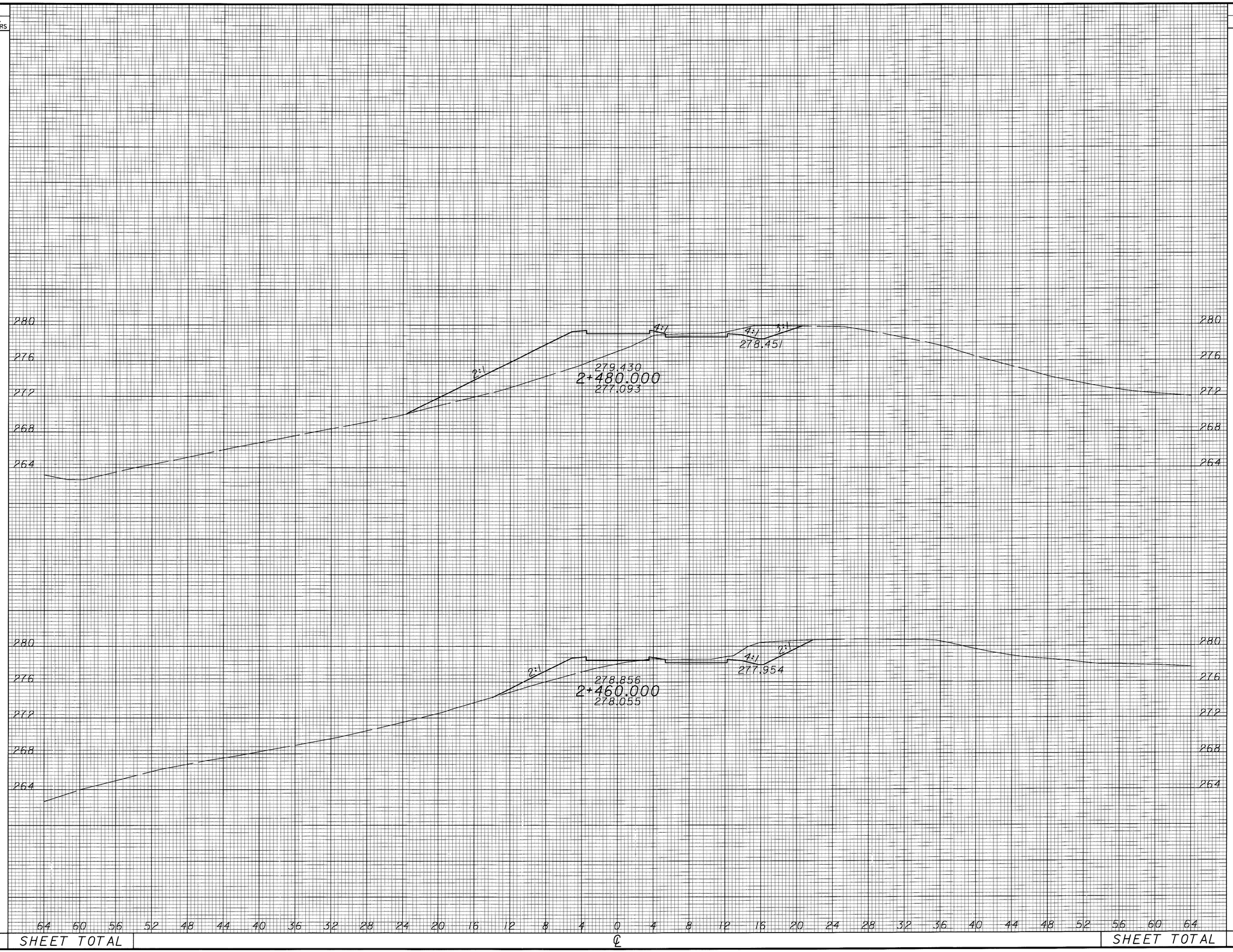
SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	61		
		0	758
0	14		
		24	159
		24	917



SHEET TOTAL

SHEET TOTAL

CALCULATED

CHECKED

TEMPORARY ROAD AT CR 89
CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:23:07 PM
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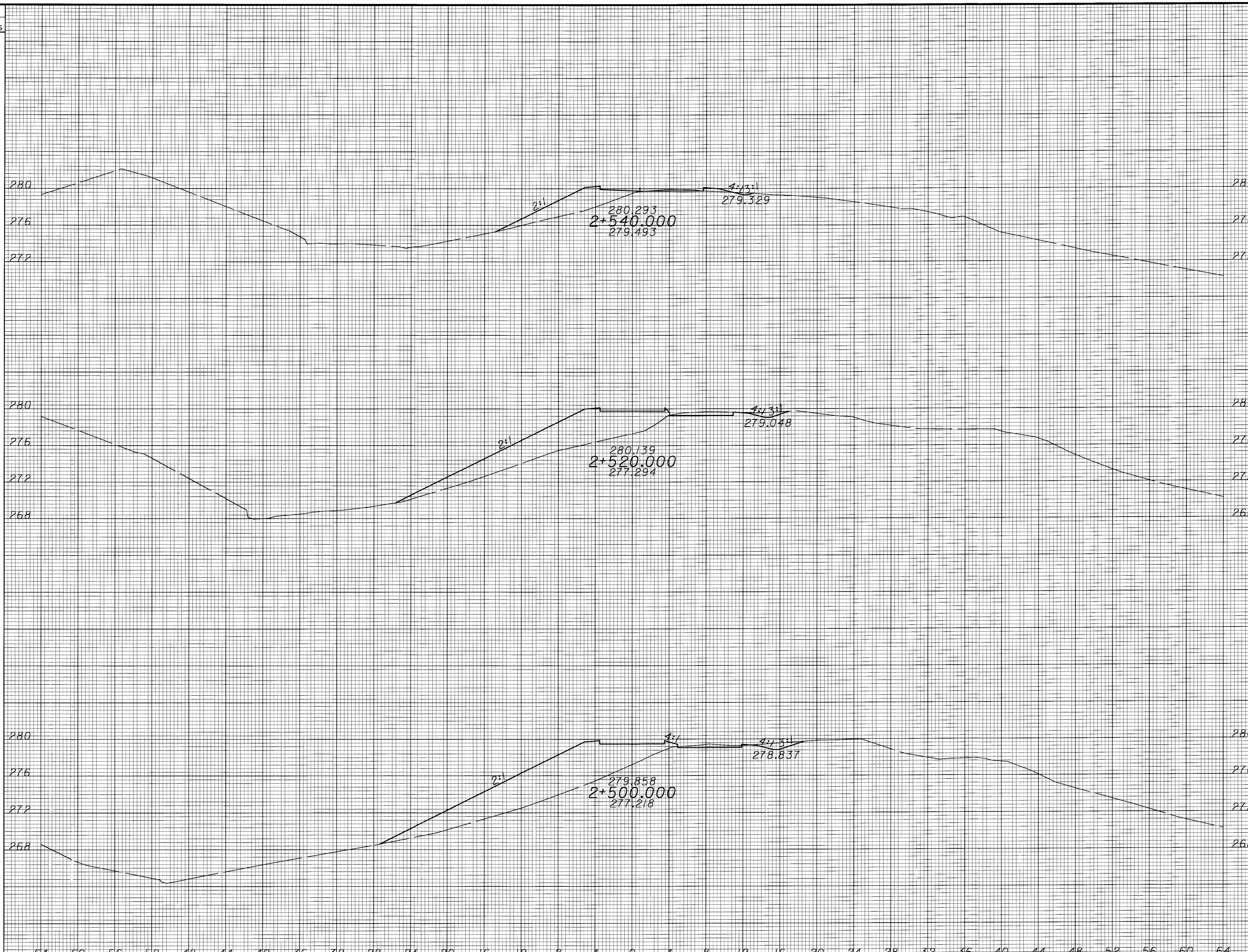
SEEDING	
END WIDTH	SQ. METERS



SHEET TOTAL ℄ SHEET TOTAL

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	20		
		0	829
0	63		
		0	1484
0	85		
		0	1464
		0	3777

CALCULATED CHECKED

TEMPORARY ROAD AT CR 89 CROSS SECTIONS

ATH-33-40.981

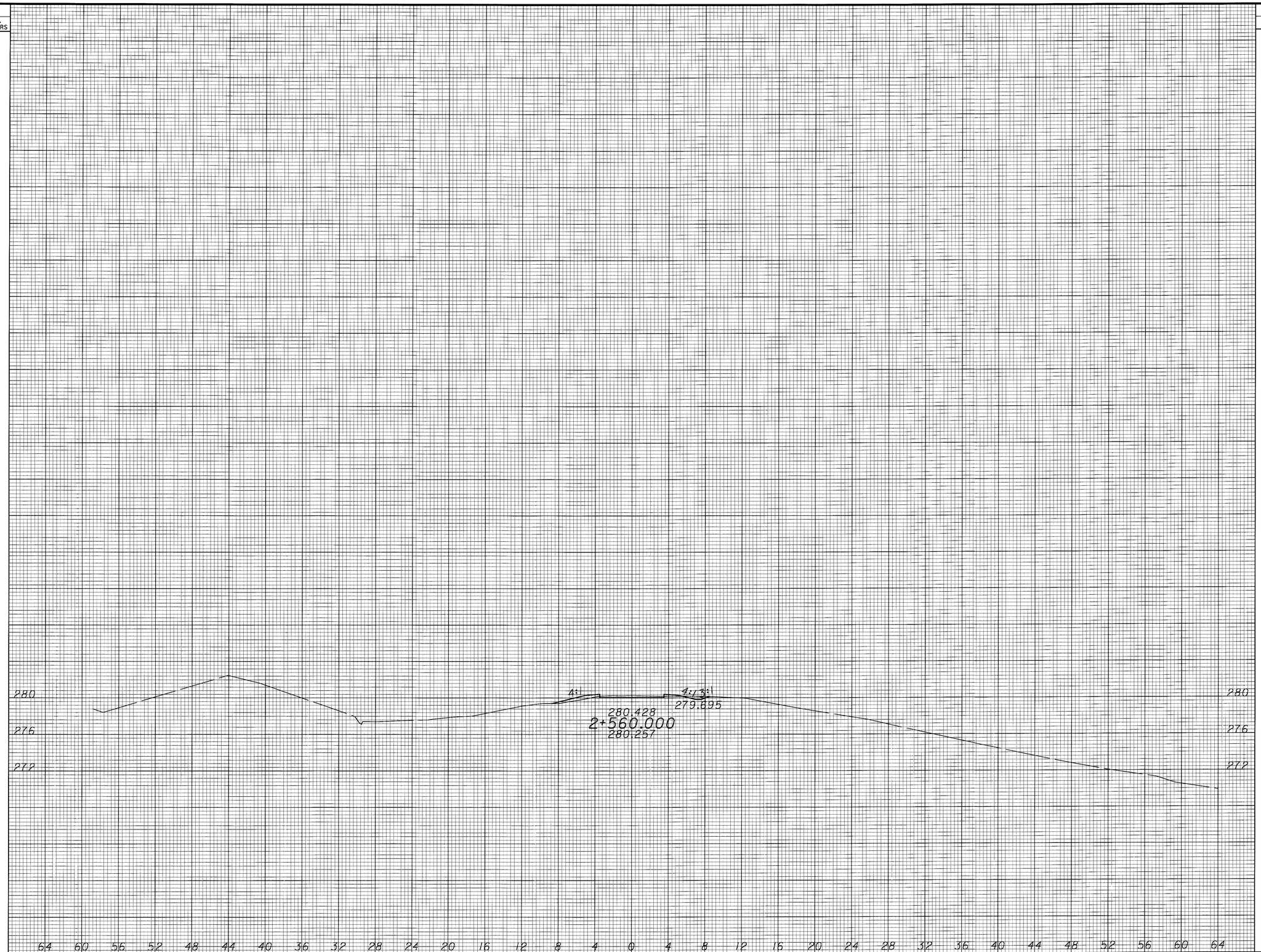
02/07/2001 06:23:07 PM M:\PROJ\9821\0106-00\DS\CR89\mot\0motxssht0.dgn

SEEDING	
END WIDTH	SQ. METERS

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED

CHECKED



TEMPORARY ROAD AT CR 89
CROSS SECTIONS

ATH-33-40.981

02/07/2001
06:23:08 PM
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02/07/01
04:44:52 PM
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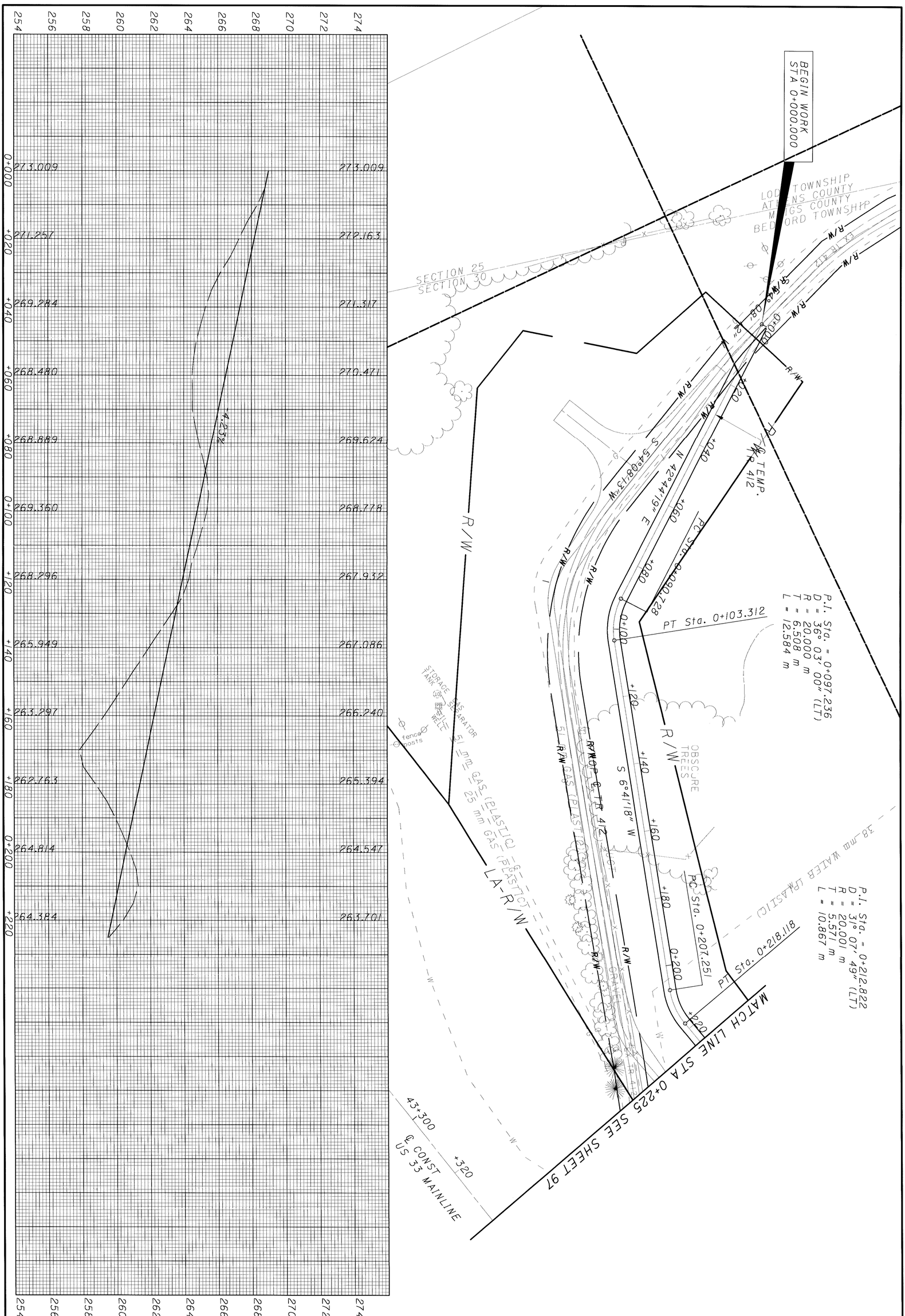
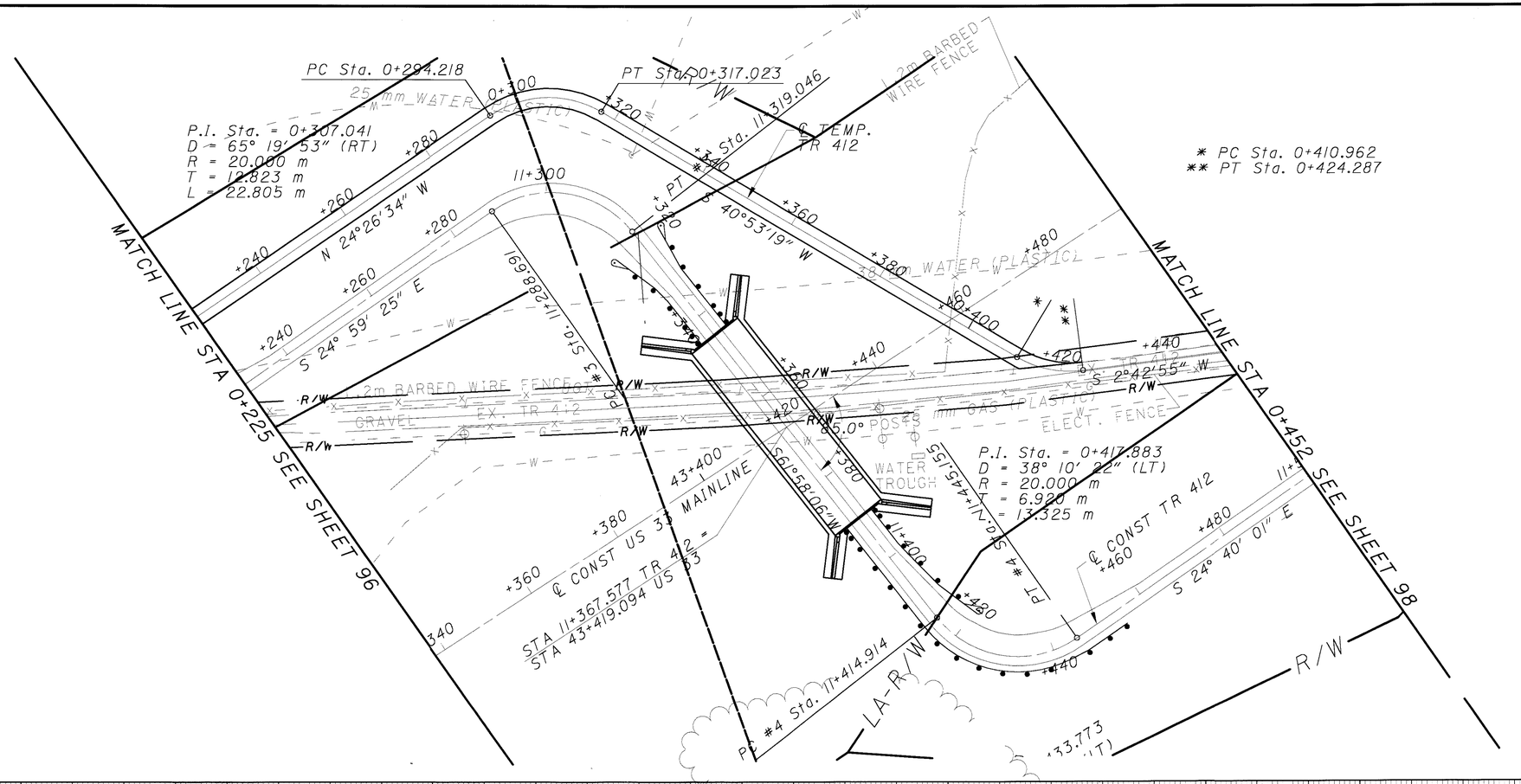
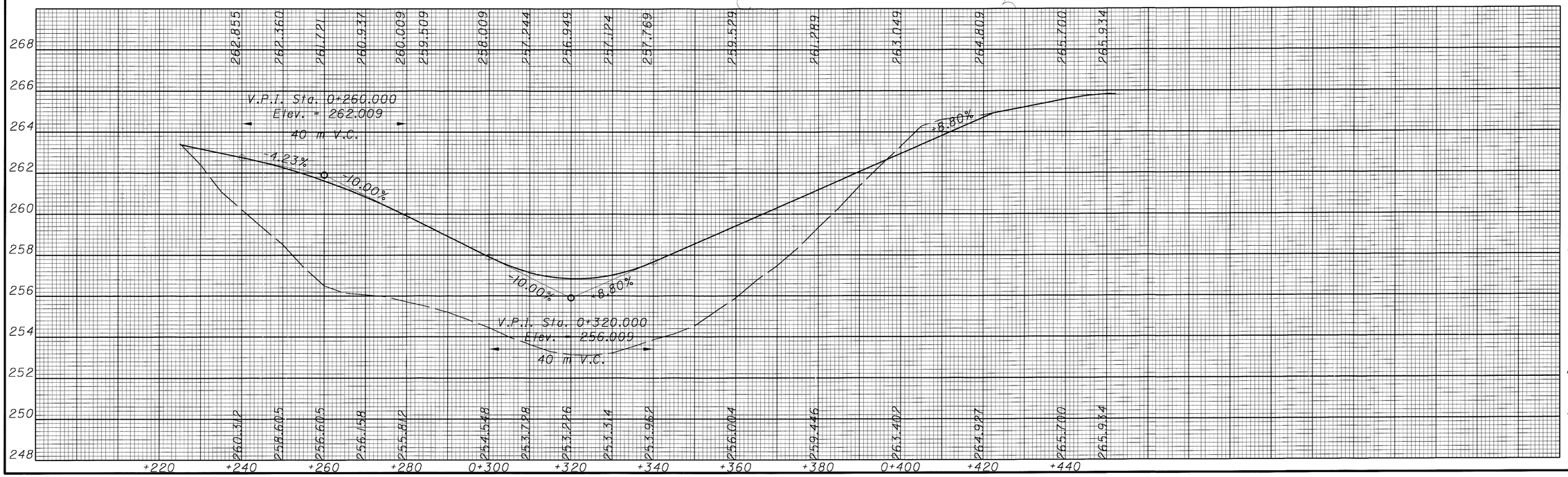


96 / 949	ATH-33-40.981	TEMPORARY ROAD AT TR 412 STA 0+000 TO STA 0+225	CALCULATED BBD CHECKED TDW	0 20 1:500 HORIZONTAL SCALE IN METERS





02/07/01
04:44:55 PM
m:\proj\982\l016-00\dsl\tr412\gp1412mo1_2.dgn

TEMPORARY ROAD AT TR 412
STA 0+225 TO STA 0+452

ATH-33-40.981

CALCULATED BBD
CHECKED TDW

0 20
1:500
HORIZONTAL
SCALE IN METERS


1.2m BARBED WIRE FENCE
+500
+520
+540
+560
℄ CONST US 33 MAINLINE
PASTURE
25 mm WATER (PLASTIC)
FEEDER
PT Sta. 0+497.173
PC Sta. 0+504.058
PT Sta. 0+514.189
℄ TEMP TR 412
PC Sta. 0+559.077
PT Sta. 0+565.477
POT Sta. 0+590.782
LA-R/W
R/W
BARN
GRAVEL
GAS MARKER
PC Sta. 0+487.685
S 2°42'55" W
N 24°27'54" W
S 4°33'26" W
S 3° 54' 04" W
S 22°53'35" W
EX. TR 412
POSTS
POOL
MATCH LINE STA 0+452 SEE SHEET 97
END WORK
STA 0+590.782
℄ CONST TR 412
P.I. Sta. = 0+509.235
D = 29° 01' 21" (RT)
R = 20.000 m
T = 5.176 m
L = 10.131 m
P.I. Sta. = 0+562.304
D = 18° 20' 02" (RT)
R = 20.002 m
T = 3.228 m
L = 6.400 m
P.I. Sta. = 0+492.520
D = 27° 10' 47" (LT)
R = 20.000 m
T = 4.835 m
L = 9.487 m
265.851
265.486
265.122
264.757
264.785
264.812
264.840
-1.82%
-1.82%
+0.14%
V.P.I. Sta. 0+520.00
Elev. - 264.757
265.851
265.484
265.720
266.515
265.882
264.959
264.840
264.966
274
272
270
268
266
264
262
260
258
256
254
+460
+480
0+500
+520
+540
+560
+580
0+600
HORIZONTAL SCALE IN METERS
0
20
1:500
CALCULATED BBD
CHECKED TDW

TEMPORARY ROAD AT TR 412
STA 0+452 TO STA 0+590.782

ATH-33-40.981

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SEEDING	
END WIDTH	SQ. METERS
SHEET TOTAL	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	11		
		0	0
		0	839

CALCULATED BBD

CHECKED TDW

TEMPORARY ROAD AT TR 412
CROSS SECTIONS

ATH-33-40.981

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