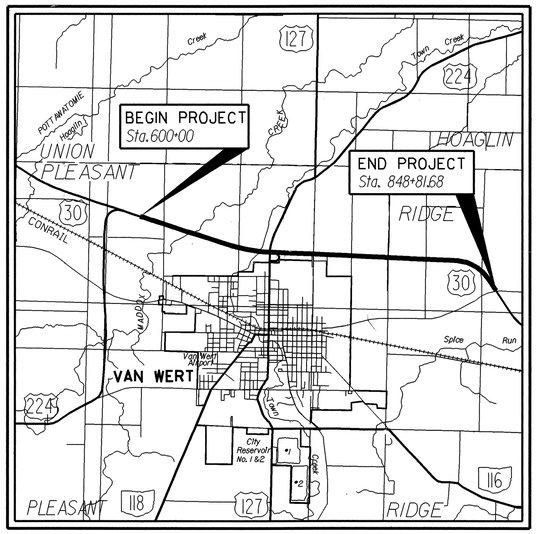
MICROFILMED
APR 1 1996

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

VAN-30-11.24

PLEASANT TOWNSHIP
RIDGE TOWNSHIP
VAN WERT COUNTY



LOCATION MAP

Longitude 84°-35'-00" Latitude 40°-53'-00"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

STATE & FEDERAL ROUTES

OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (1994)	6550
DESIGN YEAR ADT (4014)	10480
DESIGN HOURLY VOLUME (4014)	1048
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	24%
T_{24}	52%
DESIGN SPEED	70 mph
LEGAL SPEED	55 mph

DESIGN FUNCTIONAL CLASSIFICATION - FREEWAY (RURAL)

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATES	SEE SHEET NO.
STRUCTURAL CAPACITY		
STR. * VAN-30-1181 LT.	8-1-94	2
STR. * VAN-30-1276 RT.	8-1-94	2
HORIZONTAL CLEARANCE		
@ OVERHEAD, STR. * VAN-30-1581	8-1-94	2

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

PLAN PREPARED BY:

DISTRICT ONE
OHIO DEPARTMENT
OF TRANSPORTATION

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STANDARD CONSTRUCTION DRAWINGS

BP-2.1	02-21-92	GR-4.1	05-06-91	MT-95.30	10-10-88	TC-22.20	09-01-92				
BP-2.5	02-21-92	GR-4.2	05-06-91	MT-95.40	10-01-92	TC-35.10	08-29-84				
BP-3.1	02-21-92			MT-98.12	06-24-93	TC-41.10	08-29-84				
BP-5.1	02-21-92	GR-5.1	10-30-92	MT-98.13	06-24-93	TC-42.10	08-19-77				
		GR-5.3	10-30-92	MT-98.14	06-24-93	TC-51.10	01-20-84				
CB-4	11-10-83			MT-98.15	06-24-93	TC-51.11	01-20-84				
CB-8	11-10-83			MT-99.10	11-14-86	TC-61.10	04-05-82				
		GR-7.1	10-30-92	MT-101.60	07-01-92	TC-65.10	02-01-90				
GR-1.1	05-06-91	GR-8.1	01-31-94	MT-105.10	07-01-92	TC-65.11	02-01-90				
GR-1.2	10-30-92			MT-105.11	07-01-92	TC-65.12	02-01-90				
GR-1.3	02-21-92	HW-4.8	04-01-80			TC-72.20	02-26-82				
				PCB-91	04-24-92						
GR-2.1	05-06-91	MC-4	07-26-76								
GR-3.1	05-06-91	MC-9.2	05-06-91	TBR-91	04-24-92						
GR-3.3	05-06-91	MC-9.3	10-30-92								
GR-3.4	05-06-91	MC-11	08-01-78								

SUPPLEMENTAL SPECIFICATIONS

802	04-13-90
820	03-18-92
931	07-19-94
944	05-02-94
910	5-20-91
942	3-18-92

PROJECT DESCRIPTION

Plane off all asphalt. Provide 6" of Item 301, 1¾" of Item 446, Type 2, and 1¼" of Item 446, Type 1. Replace pavement at approaches to mainline structures with a flexible build-up. Widen mainline outside shoulders to 10' and ramp outside shoulders to 6'. The graded shoulder, foreslope, and backslope shall be re-graded. Miscellaneous items include micro-silica overlay on Str. * VAN-30-1181, edgedrains/underdrains, guardrail/concrete barrier and traffic control features.

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.

1995 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.

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

DISTRICT CERTIFIED PLAN

APPROVED _____
DATE 10/5/94 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE 10-21-94 ENGINEER, BUREAU OF BRIDGES AND STRUCTURAL DESIGN

APPROVED _____
DATE 12-9-94 DEPUTY DIRECTOR, DESIGN

APPROVED _____
DATE 12-9-94 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. NH-49 (76)
PID NO. 11710
CONSTRUCTION PROJECT NO. 454 8-11-95
RAILROAD INVOLVEMENT NONE
VAN-30-11.24
1 / 161

Rev. 6-20-95

DESIGN FILE : e:\dgn\v30\v30gt.dgn
USERNAME : rparsons
DATE : 05-OCT-1994
TIME : 10:41

SCHEMATIC PLAN

BEGIN WORK
STA. 596+87.50

BEGIN PROJECT
STA. 600+00.00
S.L.M. 11.24

NH-49 (76)

Sta. 611+57.47 ℄ U.S.R. 30
Sta. 50+00.00 ℄ T.R. 83

590 600 610 620 630 640 650 660 670 680 690 700 710 720 730

℄ John Brown Rd.
℄ Twp. Rd. 83

Maddox Creek

S71°-40'-07"E

P.C. 654+32.65

Dutch John Rd
℄ County Rd. 93

Str. No. VAN-30-1181 Lt. & Rt.
Design Exception
VAN-30-1181 Lt. HS-19.7 (NDC HS-20)

CURVE DATA
PI Sta. 674+05.05
△ = 15°-40'-50"
Dc = 00°-24'-00"
T = 1972.41'
L = 3920.14'
R = 14323.94'
E = 135.16'

Sta. 667+14.95 ℄ U.S.R. 30
Sta. 50+60.6 C.R. 93

5.55' Deep
Town Creek
16" F.M. Deep
16" San. Deep
6" Deep
U.S.R. 224

P.T. 693+27.8

Ramp A
Ramp B
Ramp C
Ramp D

Sta. 720+63.48 ℄ U.S.R. 30
Sta. 50+00.00 ℄ C.R. 13

Stopping Sight Distance meets or exceeds the 70 m.p.h. design speed

24" San.
Pleasent Twp.
Ridge Twp.

S87°-20'-57"E

Match Line Sta. 732+00

16" F. San. 28" Deep
12" S.M.P.
12" Sewer
6"
24" San.

Str. No. VAN-30-1276 Lt. & Rt.
Design Exception
VAN-30-1276 Rt. HS-19.0 (NDC HS-20)

Str. No. VAN-30-1292 Lt. & Rt.

U.S.R. 127

℄ County Rd. 13
℄ Marsh Rd.

Match Line Sta. 732+00

740 750 760 770 780 790 800 810 820 830 840 850 860

℄ County Rd. 101
℄ Stripe Rd.

Str. No. VAN-30-1403

Sta. 773+69.80 ℄ U.S.R. 30
Sta. 50+00.00 ℄ T.R. 103

℄ Twp. Rd. 103
℄ Mendon Rd.

S87°-20'-57"E

℄ Twp. Rd. 113
℄ Beroff Rd.

Sta. 800+13.55 ℄ U.S.R. 30
Sta. 50+00.00 ℄ T.R. 113

36" Deep

END WORK
STA. 852+56.68

END PROJECT
STA. 848+81.68
S.L.M. 15.97

NH-49 (76)

T.S. Sta. 820+25.95
S.C. Sta. 823+25.95

Str. No. VAN-30-1581
Design Exception
Horizontal Clearance
10' (NDC 11.5')

C.S. Sta. 846+60.73
P.T. 849+60.73

℄ Twp. Rd. 127
℄ Gilliland Rd.

S34°-39'-13"E

CURVE DATA
Main PI Sta. 835+95.42
△ = 52°-41'-44" Rt.

CURVE	SPIRAL
△c = 46°-41'-44" Rt.	△c = 3°-00'-00" Rt.
Dc = 2°-00'-00"	L.T. = 200.03'
R = 2864.79'	S.T. = 100.03'
T = 1236.61'	Ls = 300.00'
L = 2334.78'	Xc = 299.92'
E = 255.50'	Yc = 5.24'
	Ts = 1569.47'
	Es = 333.55'

HORIZONTAL SCALE IN FEET
0 500 1000

CALCULATED
CHECKED

SCHEMATIC PLAN

VAN-30-11.24

2
161

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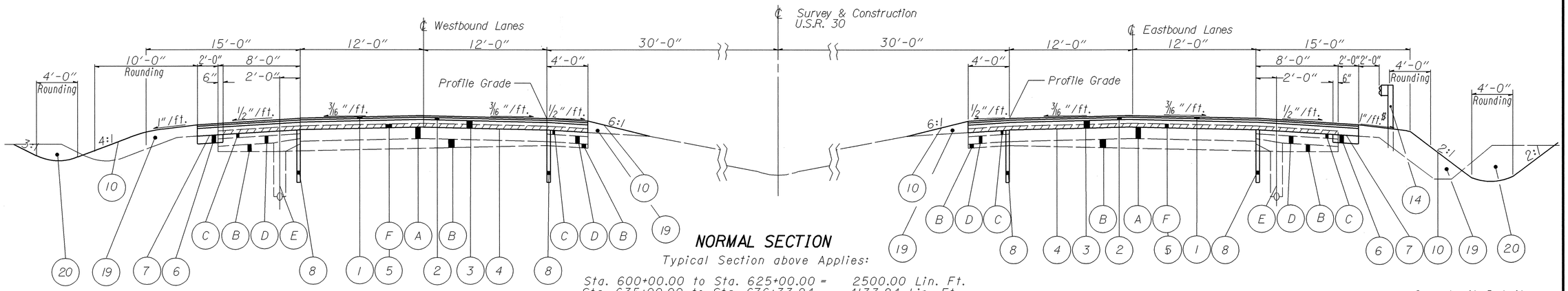
TYPICAL SECTIONS

TYPE 446



NORMAL SECTION

Typical Section above Applies:

Sta. 600+00.00 to Sta. 625+00.00	=	2500.00 Lin. Ft.
Sta. 635+00.00 to Sta. 676+33.24	=	4133.24 Lin. Ft.
Sta. 695+00.00 to Sta. 819+50.00	=	12450.00 Lin. Ft.
Total Length	=	19083.24 Lin. Ft.

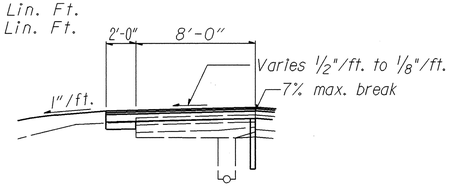
EXISTING LEGEND

- (A) 9" Reinforced Portland Cement Concrete Pavement
- (B) Subbase
- (C) Waterproofed Aggregate Base Course
- (D) Aggregate Base Course
- (E) 6" Pipe Underdrain
- (F) 2¾" ± Asphalt Concrete

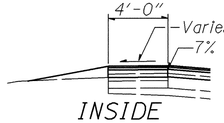
* Pavement Slope

PROPOSED LEGEND

- (1) Item 446 - 1¼" Asphalt Concrete Surface Course, Type 1, AC-20 (See Proposal Note)
- (2) Item 446 - 1¾" Asphalt Concrete Intermediate Course, Type 2, AC-20 (See Proposal Note)
- (3) Item 301 - 6" Bituminous Aggregate Base, AC-20
- (4) Item 407 - Tack Coat (See General Note)
- (5) Item 254 - Pavement Planing, Bituminous (Thickness 2¾" Nominal)
- (6) Item 304 - 6" Aggregate Base
- (7) Item 408 - Prime Coat applied at a rate of 0.40 gal./sq. yd.
- (8) Item 605 - Shallow Underdrains, as per plan (See Sheet 143)
- (10) Item 659 - Seeding & Mulching
- (14) Item 605 - Guardrail, Type 5
- (19) Item 203 - Embankment
- (20) Item 203 - Excavation, not including Embankment Construction
- (21) Item 606 - Curb, Type 1



OUTSIDE

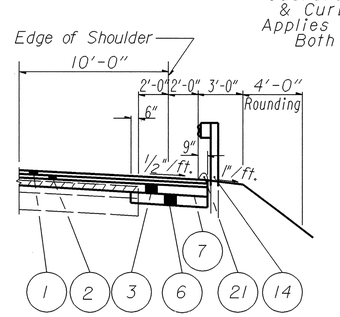


INSIDE

** SHOULDER DETAILS

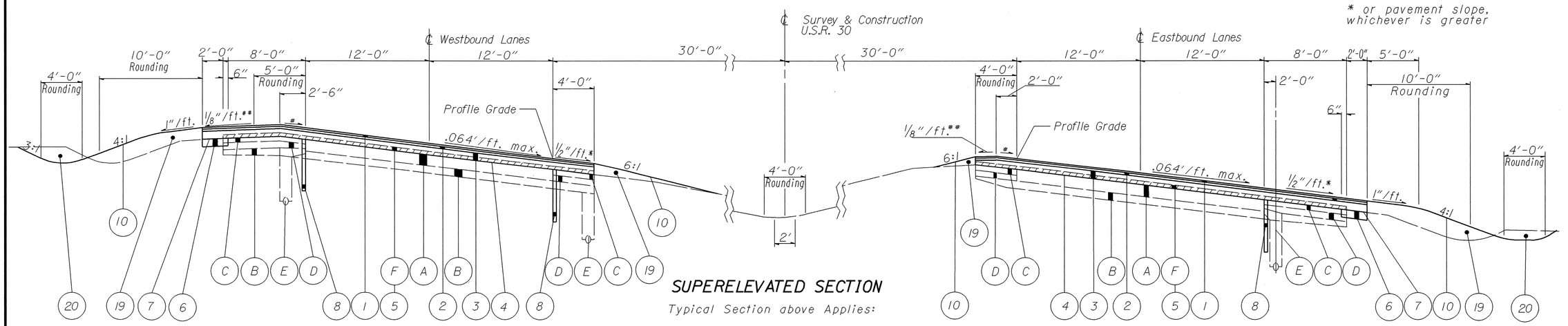
For pavement slopes less than or equal to 0.059% refer to the shoulder details above. For pavement Slopes > 0.059% , see Typical Section below.

Guardrail Detail & Curb Detail Applies Either or Both Sides



$ ASPHALT CURB DETAIL APPLIES:

Sta. 668+25 to Sta. 676+33.24 Rt.
Sta. 670+50 to Sta. 676+33.24 Lt.



SUPERELEVATED SECTION

Typical Section above Applies:

Sta. 819+50 to Sta. 848+81.68 = 2931.68 Lin. Ft.

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CALCULATED | CHECKED

TYPICAL SECTIONS

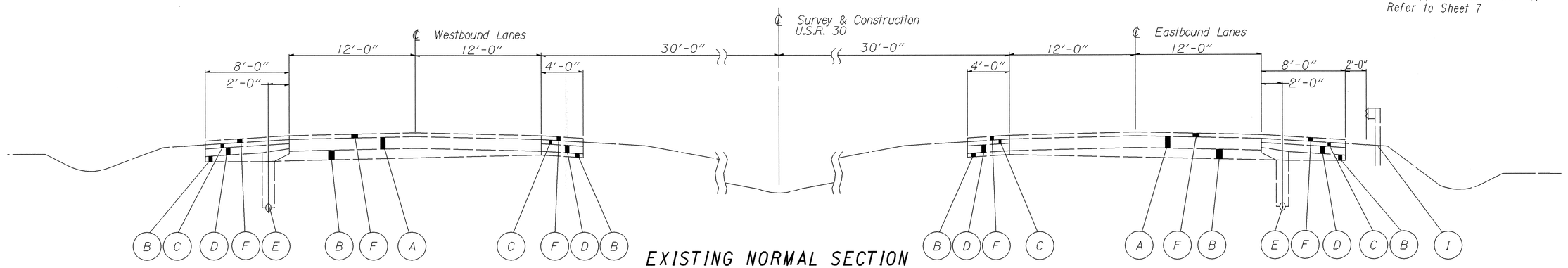
VAN-30-11.24

3
161

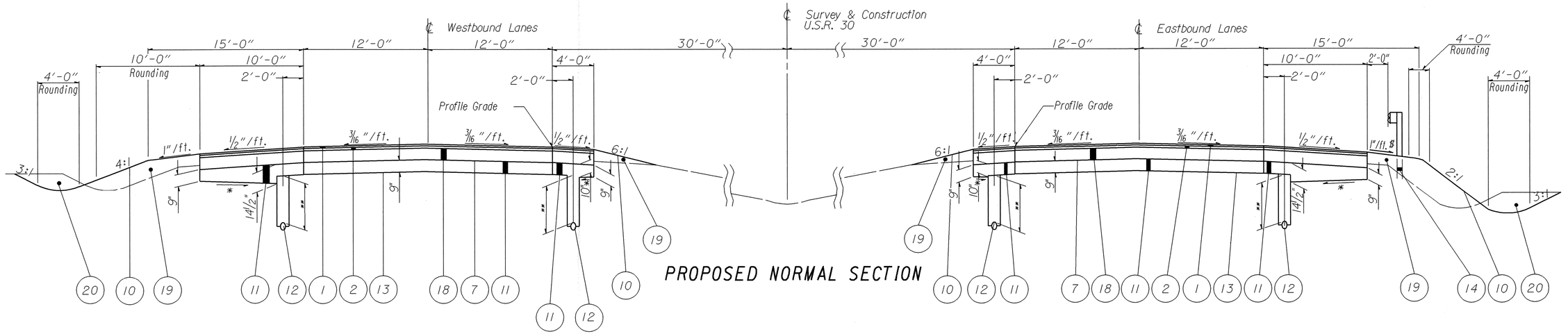
TYPICAL SECTIONS

TYPE 446

For Approach Slab Details, Refer to Sheet 7



EXISTING NORMAL SECTION



PROPOSED NORMAL SECTION

Typical Sections above Applies:

Sta. 625+00.00 to Sta. 635+00.00	=	1000.00 Lin. Ft.
Deduct for Structure No. VAN-30-1181 & Approach Slabs		
Sta. 629+89.88 to Sta. 631+26.12	=	- 136.24 Lin. Ft.
Sta. 676+33.24 to Sta. 695+00.00	=	1866.76 Lin. Ft.
Deduct for Structure No. VAN-30-1276 & Approach Slabs		
Sta. 680+33.24 to Sta. 683+23.26	=	- 290.02 Lin. Ft.
Deduct for Structure No. VAN-30-1292 & Approach Slabs		
Sta. 688+25.91 to Sta. 690+79.41	=	- 253.50 Lin. Ft.
Total Length	=	2187.00 Lin. Ft.

* - 1/4" per foot minimum
** - For Underdrain depths, See Shts 139-142.

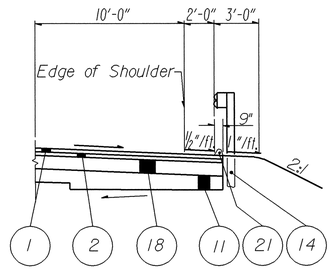
Guardrail Detail & Curb Detail Applies Either or Both Sides

PROPOSED LEGEND

1. Item 446 - 1 1/4" Asphalt Concrete Surface Course, Type 1, AC-20 (See Proposal Note)
2. Item 446 - 1 3/4" Asphalt Concrete Intermediate Course, Type 2, AC-20 (See Proposal Note)
7. Item 408 - Prime Coat, applied at a rate of 0.40 gal./sq. yd.
10. Item 659 - Seeding & Mulching
11. Item 304 - Aggregate Base (Thickness as shown)
12. Item 605 - 4" Shallow Pipe Underdrain
13. Item 203 - Subgrade Compaction
14. Item 606 - Guardrail, Type 5
18. Item 301 - 9" Bituminous Aggregate Base, AC-20
19. Item 203 - Embankment
20. Item 203 - Excavation, not including Embankment Construction
21. Item 609 - Curb, Type 1

EXISTING LEGEND

- A - 9" Reinforced Portland Cement Concrete Pavement
- B - Subbase
- C - Waterproofed Aggregate Base Course
- D - Aggregate Base Course
- E - 6" Pipe Underdrain
- F - 2 3/4"± Asphalt Concrete Pavement
- 1 - Subbase



$ ASPHALT CURB DETAIL APPLIES:
Sta. 676+33.24 to Sta. 680+33.24 Lt. & Rt.

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CALCULATED
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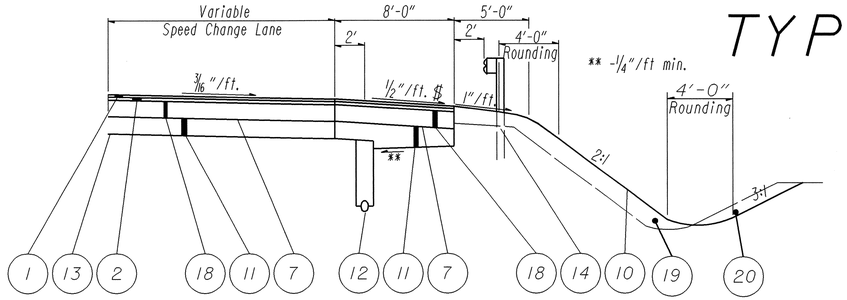
TYPICAL SECTIONS

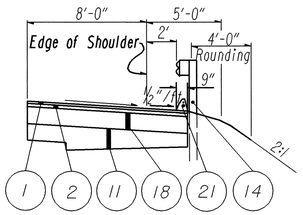
VAN-30-11.24

TYPICAL SECTIONS

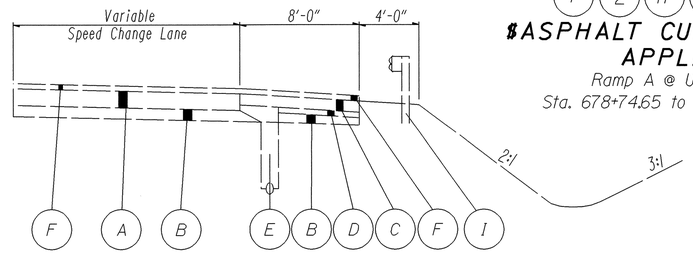
TYPE 446



PROPOSED SPEED CHANGE LANE



*ASPHALT CURB DETAIL APPLIES:
Ramp A @ U.S.R. 127
Sta. 678+74.65 to Sta. 680+58.24



EXISTING SPEED CHANGE LANE

Typical Sections above Apply:

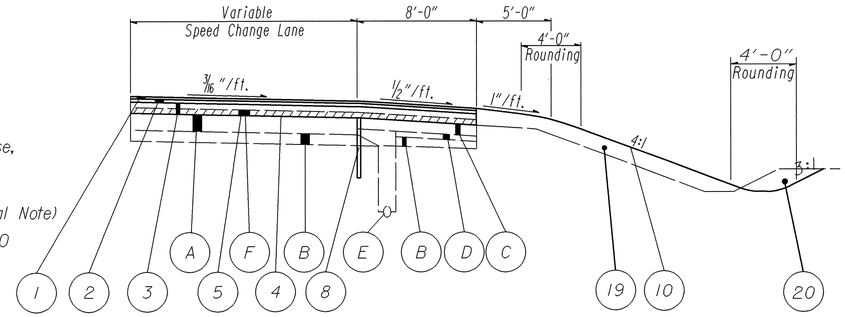
Ramp A @ U.S. 127	
Sta. 678+74.65 to Sta. 690+80.00	= 1205.35 Lin. Ft.
Deduct for Str. No. VAN-30-1276 & Approach Slab	
Sta. 680+33.24 to Sta. 683+23.26	= -290.02 Lin. Ft.
Deduct for Str. No. VAN-30-1292 & Approach Slab	
Sta. 688+25.91 to Sta. 690+79.41	= -253.50 Lin. Ft.
Ramp C @ U.S. 127	
Sta. 684+82.00 to Sta. 688+79.64	= 397.64 Lin. Ft.
Sta. 388+79.64 to Sta. 392+82.21 ℄ Ramp "C"	= 402.57 Lin. Ft.
Deduct for Str. No. VAN-30-1292 & Approach Slab	
Sta. 388+79.64 to Sta. 390+80.50 ℄ Ramp C	= -201.16 Lin. Ft.
Sta. 688+25.91 to Sta. 688+79.64	= -53.73 Lin. Ft.
	1207.15 Lin. Ft.

PROPOSED LEGEND

1. Item 446 - 1 1/4" Asphalt Concrete Surface Course, Type 1, AC-20 (See Proposal Note)
2. Item 446 - 1 3/4" Asphalt Concrete Intermediate Course, Type 2, AC-20 (See Proposal Note)
3. Item 301 - 6" Bituminous Aggregate Base, AC-20
4. Item 407 - Tack Coat (See General Note)
5. Item 254 - Pavement Planing, Bituminous (Thickness 2 3/4" Nominal)
7. Item 408 - Prime Coat, applied at a rate of 0.40 gal./sq. yd.
8. Item 605 - Shallow Underdrains, as per plan (See Sheet 143)
10. Item 659 - Seeding & Mulching
11. Item 304 - Aggregate Base (Thickness as Shown)
12. Item 605 - 4" Shallow Pipe Underdrain
13. Item 203 - Subgrade Compaction
14. Item 606 - Guardrail, Type 5
18. Item 301 - 9" Bituminous Aggregate Base, AC-20
19. Item 203 - Embankment
20. Item 203 - Excavation not including Embankment Construction
21. Item 609 - Curb, Type 1

EXISTING LEGEND

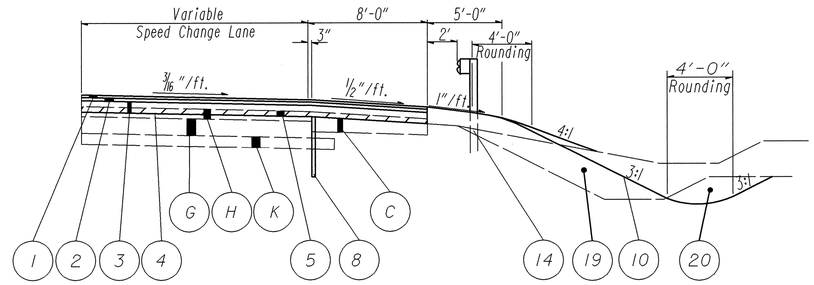
- A. 9" Reinforced Portland Cement Concrete Pavement
- B. Subbase
- C. Waterproofed Aggregate Base Course
- D. Aggregate Base Course
- E. 6" Pipe Underdrain
- F. 2 3/4" ± Asphalt Concrete
- G. 9" Portland Cement Concrete Base
- H. 4" ± Asphalt Concrete
- I. Guardrail
- K. Lime Stabilized Subgrade



SPEED CHANGE LANE

Typical Section above Applies:

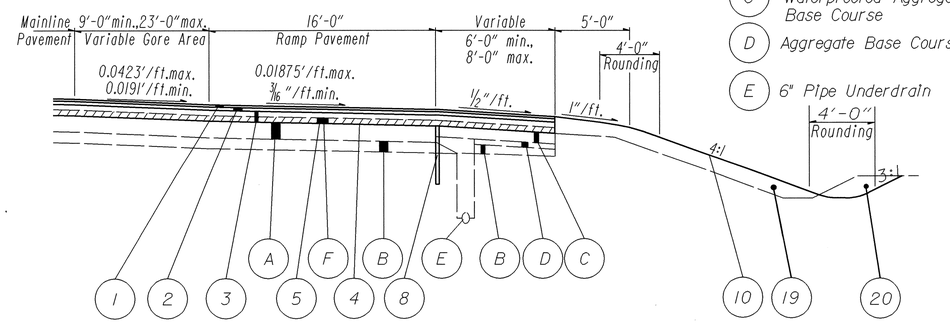
Ramp B @ U.S. 127	
Sta. 103+92.37 to Sta. 108+45.44 ℄ Ramp "B"	= 453.07 Lin. Ft.
Sta. 708+55.64 to Sta. 712+00.00	= 344.36 Lin. Ft.
Ramp D @ U.S. 127	
Sta. 706+52.45 to Sta. 718+52.45	= 1200.00 Lin. Ft.
	1997.43 Lin. Ft.



SPEED CHANGE LANE

Typical Section above Applies:

Ramp A @ C.R. 418	
Sta. 836+50.00 to Sta. 849+60.73	= 1310.73 Lin. Ft.
Ramp C @ C.R. 418	
Sta. 840+81.68 to Sta. 843+22.95	= 241.27 Lin. Ft.
Sta. 843+22.95 to Sta. 848+70.53	= 547.58 Lin. Ft.
	2099.58 Lin. Ft.

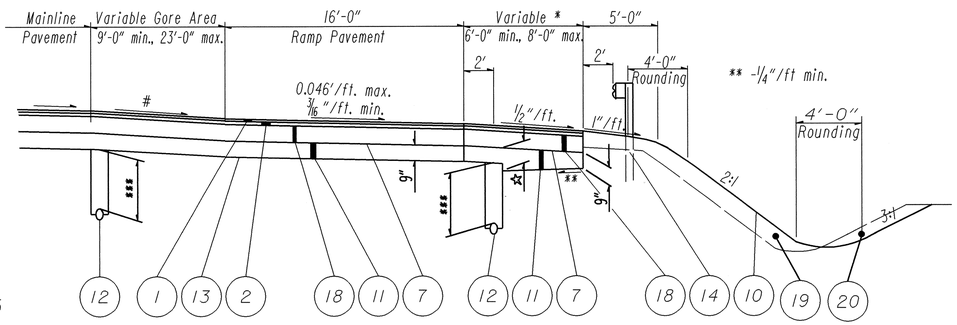


SPEED CHANGE LANE (GORE AREA)

Typical Section above Applies:

Ramp D @ U.S.R. 127
Sta. 702+25.00 to Sta. 706+52.45 = 408.00 Lin. Ft.

- # Refer to Ramp Terminal Details, Shts. 131 & 132.
- *- Shoulder width varies from 8' @ Sta. 193+74.65 to 6' @ Sta. 194+24.65
- ***- For Underdrain depths See Shts. 139-142
- ☆ Varies, - 13" @ 8' Shoulder
  - 11 1/2" @ 6' Shoulder



PROPOSED SPEED CHANGE LANE (GORE AREA)

Typical Section above Applies:

Ramp A @ U.S.R. 127
Sta. 190+74.65 to Sta. 194+90.00 = 415.35 Lin. Ft.

CALCULATED | CHECKED

TYPICAL SECTIONS

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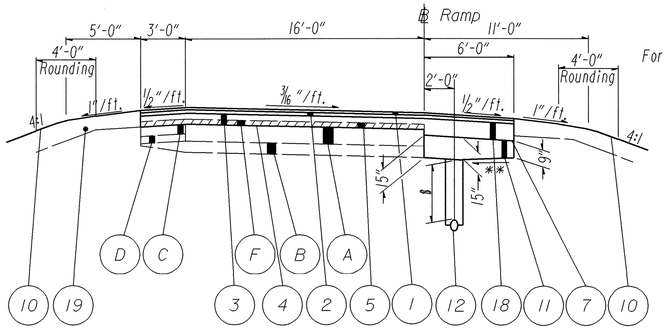
TYPICAL SECTIONS

TYPE 446

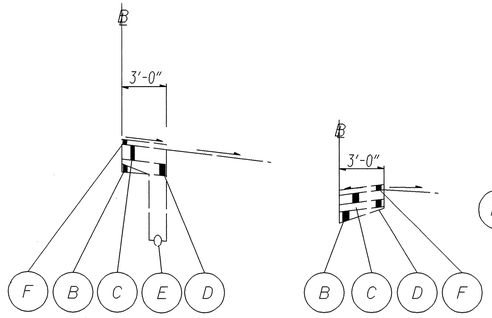


For Existing Shoulder See Detail A

ONE WAY NORMAL RAMP

Typical Section above Applies:

Ramp B @ U.S. 127
Sta. 95+77 to Sta. 98+02.49 = 225.49 Lin. Ft.
Ramp D @ U.S. 127
Sta. 594+58 to Sta. 596+36.91 = 178.91 Lin. Ft.
Total Length = 434.40 Lin. Ft.

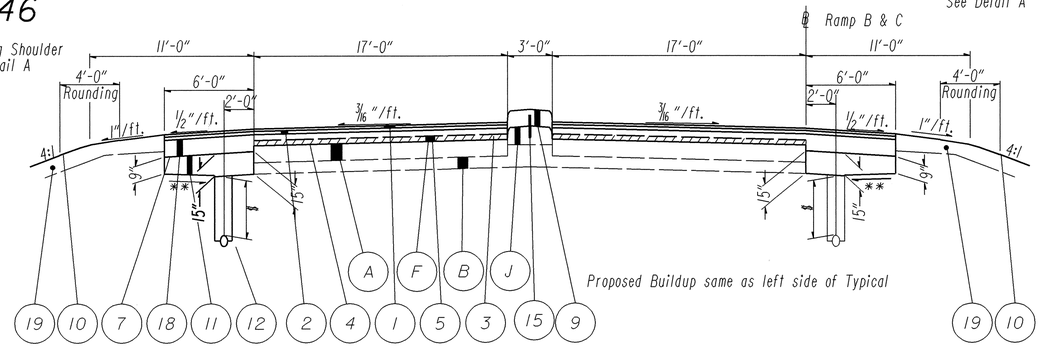


DETAIL A

DETAIL B

EXIST. OUTSIDE SHOULDER DETAILS

For Existing Shoulder See Detail A

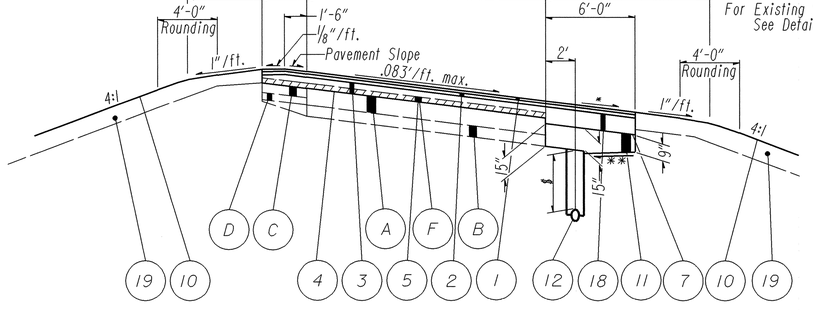


Proposed Buildup same as left side of Typical

TWO WAY NORMAL RAMP

Typical Section above Applies:

Ramp A & B @ U.S. 127 (Using Ramp B Stationing)
Sta. 89+24.70 to Sta. 91+12.15 = 187.45 Lin. Ft.
Ramp C & D @ U.S. 127 (Using Ramp C Stationing)
Sta. 401+16.02 to Sta. 403+97.79 = 281.77 Lin. Ft.
Total Length = 469.22 Lin. Ft.



For Existing Shoulder See Detail A

**-Pavement slope or ½"/ft., whichever is greater*

**-Pavement slope*

***-1/4" per foot min.*

ONE WAY SUPERELEVATED RAMP

Typical Section above Applies:

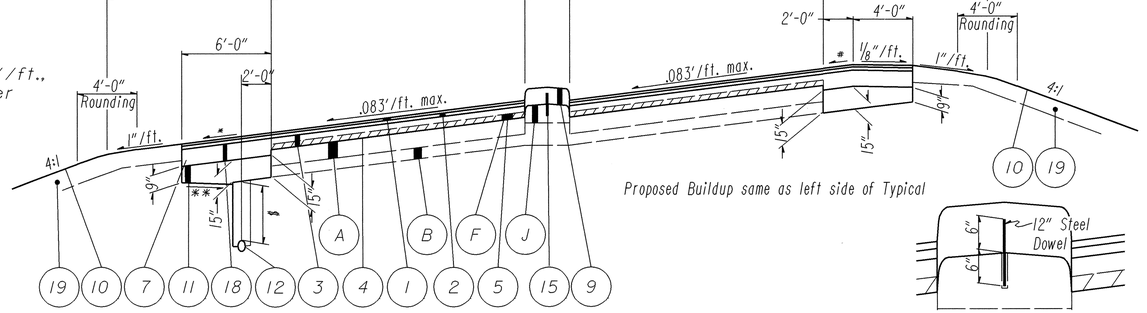
Ramp A @ U.S. 127
Sta. 194+90.00 to Sta. 208+49.20 — *Ramp A Stationing Length = 1359.20 Lin. Ft.*
Deduct Sta. 200+00 to Sta. 204+25.00 — *Ramp A Stationing Length = -425.00 Lin. Ft.*
Ramp B @ U.S. 127
Sta. 98+02.49 to Sta. 103+92.37 — *Ramp B Stationing Length = 589.88 Lin. Ft.*
Ramp C @ U.S. 127
Sta. 394+82.21 to Sta. 398+40.00 — *Ramp C Stationing Length = 357.79 Lin. Ft.*
Ramp D @ U.S. 127
Sta. 596+36.91 to Sta. 602+25.00 — *Ramp D Stationing Length = 588.09 Lin. Ft.*
Total Length = 2469.96 Lin. Ft.

$ - For Underdrain Depths see Shts. 139-142.

EXISTING LEGEND

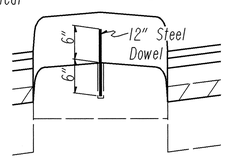
A	9" Reinforced Portland Cement Concrete Pavement	E	6" Pipe Underdrain
B	Subbase	F	2¾"± Asphalt Concrete Pavement
C	Waterproofed Aggregate Base Course	J	Portland Cement Concrete Median
D	Aggregate Base Course		

For Existing Shoulder See Detail A



For Existing Shoulder See Detail B

Proposed Buildup same as left side of Typical



STEEL DOWEL DETAIL

TWO WAY SUPERELEVATED RAMP

Typical Section above Applies:

Ramp A & B @ U.S. 127 (Using Ramp B Stationing)
Sta. 91+12.15 to Sta. 95+77.00 = 464.85 Lin. Ft.
Ramp C & D @ U.S. 127 (Using Ramp C Stationing)
Sta. 398+40.00 to Sta. 401+16.02 = 276.02 Lin. Ft.
Total Length = 740.87 Lin. Ft.

PROPOSED LEGEND

1	Item 446 - 1¼" Asphalt Concrete Surface Course, Type 1, AC-20 (See Proposal Note)	10	Item 659 - Seeding & Mulching
2	Item 446 - 1¾" Asphalt Concrete Intermediate Course, Type 2, AC-20 (See Proposal Note)	11	Item 304 - Aggregate Base, (Thickness as Shown)
3	Item 301 - 6" Bituminous Aggregate Base, AC-20	12	Item 605 - 4" Shallow Pipe Underdrain
4	Item 407 - Tack Coat (See General Notes)	15	Item 509 - Steel Dowel (Refer to Detail Above)
5	Item 254 - Pavement Planing, Bituminous (Thickness 2¾" Nominal)	18	Item 301 - 9" Bituminous Aggregate Base, AC-20
7	Item 408 - Prime Coat, applied at a rate of 0.40 gal./sq. yd.	19	Item 203 - Embankment
9	Item 612 - Concrete Median	20	Item 203 - Excavation Not including Embankment Construction

CALCULATED | CHECKED

TYPICAL SECTIONS

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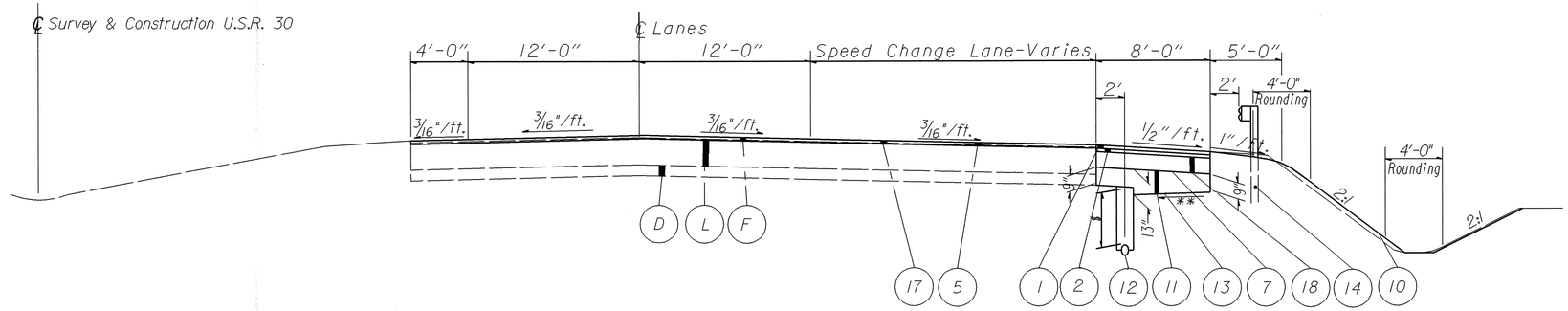
TYPICAL SECTIONS

TYPE 446

EXISTING LEGEND

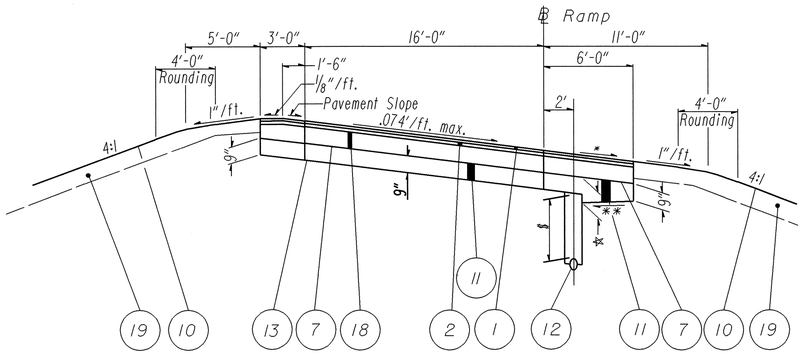
- (D) Aggregate Base Course
- (F) 2¾" ± Asphalt Concrete
- (L) Approach Slab



HALF SECTION AT APPROACH SLABS

Typical Section above Applies:

Sta. 680+33.24 to Sta. 680+58.24 (Lt. Only) = 25 Lin. Ft.
Sta. 682+98.26 to Sta. 683+23.26 (Lt. Only) = 25 Lin. Ft.
Sta. 688+25.91 to Sta. 688+50.91 = 25 Lin. Ft.
Sta. 690+54.41 to Sta. 690+79.41 = 25 Lin. Ft.

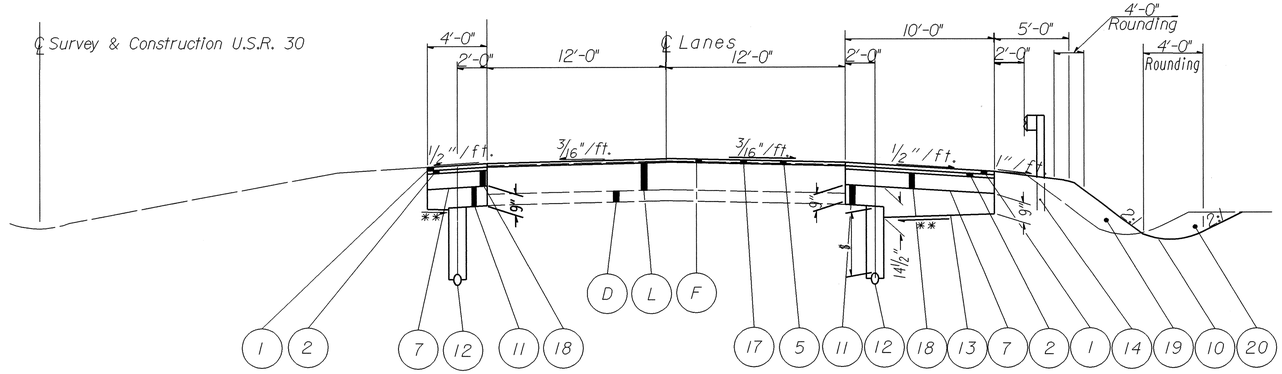


ONE WAY SUPERELEVATED RAMP

Typical Section above Applies:

Ramp C @ U.S. 127
Sta. 392+82.21 to Sta. 394+82.21

Ramp C Stationing Length = 200.00 Lin. Ft.
Total Length = 200.00 Lin. Ft.



HALF SECTION AT APPROACH SLABS

Typical Section above Applies:

Sta. 629+89.88 to Sta. 630+14.88 = 25 Lin. Ft.
Sta. 630+01.12 to Sta. 631+26.12 = 25 Lin. Ft.
Sta. 680+33.24 to Sta. 680+58.24 (Rt. Only) = 25 Lin. Ft.
Sta. 682+98.26 to Sta. 683+23.26 (Rt. Only) = 25 Lin. Ft.

*-Pavement slope or ½"/ft., whichever is greater

*-Pavement slope

** - ¼" per foot min.

✲ - Varies 13" @0.074 to 11½" @0.042

$ - For Underdrain depths see Shts. 139-142

PROPOSED LEGEND

(1) Item 446 - 1¼" Asphalt Concrete Surface Course, Type 1, AC-20(See Proposal Note)

(2) Item 446 - 1¾" Asphalt Concrete Intermediate Course, Type 2, AC-20(See Proposal Note)

(5) Item 254 - Pavement Planing, Bituminous (Thickness 2¾" Nominal)

(7) Item 408 - Prime Coat, applied at a rate of 0.40 gal./sq. yd.

(10) Item 659 - Seeding & Mulching

(11) Item 304 - Aggregate Base (Thickness as Shown)

(12) Item 605 - 4" Shallow Pipe Underdrain

(13) Item 203 - Subgrade Compaction

(14) Item 606 - Guardrail, Type 5

(17) Item Special - 1¼" Micro-Silica Modified Concrete Overlay with ¼" Scarification of existing Concrete (See General Note)

(18) Item 301 - 9" Bituminous Aggregate Base, AC-20

(19) Item 203 - Embankment

(20) Item 203 - Excavation, not including Embankment Construction

CALCULATED | CHECKED

TYPICAL SECTIONS

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GENERAL NOTES

ELEVATION DATUM

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

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:

ELECTRIC	OHIO POWER COMPANY 215 NORTH FRONT STREET COLUMBUS, OHIO 43215 (614)-464-7700
TELEPHONE	UNITED TELEPHONE COMPANY P.O. BOX 2001 122 SOUTH ELIZABETH STREET LIMA, OHIO 45801 (419)-266-6130
GAS	WEST OHIO GAS COMPANY 150 SOUTH JACKSON STREET LIMA, OHIO 45801 (419)-226-4700
SANITARY & WATER	CITY OF VAN WERT 515 EAST MAIN STREET VAN WERT, OHIO 45891 (419)-238-6940
LIGHTING	OHIO DEPARTMENT OF TRANSPORTATION DISTRICT ONE P.O. BOX 40 1885 N. MCCULLOUGH ST. LIMA, OHIO 45802 (419)-222-9055

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.

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.

AS PER PLAN ITEMS

ITEM 605	SHALLOW UNDERDRAIN, AS PER PLAN	SEE SHEET 142.
ITEM 620	DELINEATOR REMOVED AND RE-ERECTED, AS PER PLAN: CURB MOUNTED	SEE SHEET 8.

AIRWAY-HIGHWAY CLEARANCE

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT. THE CONTRACTOR IS REQUIRED TO COORDINATE WITH THE FEDERAL AVIATION ADMINISTRATION (FAA) AND TO FILE FAA FORM 7460-1 IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT PENETRATES THE NOTIFICATION SURFACE OF THE AIRPORT AS DEFINED IN PART 77 OF THE FEDERAL AVIATION REGULATIONS. IF FORM 7460-1 IS REQUIRED AS PER THE REGULATIONS, A COPY OF THE SUBMISSION AND FORM 7460-1 SHALL ALSO BE FORWARDED TO THE ODOT DIVISION OF AVIATION. NO EQUIPMENT SHALL BE MOVED TO THE JOB SITE NOR WORK COMMENCED UNTIL THE CONTRACTOR HAS: (1) ADVISED THE PROJECT ENGINEER IN WRITING THAT THROUGH COORDINATION WITH FAA IT HAS BEEN DETERMINED THAT IT WILL NOT BE NECESSARY TO FILE FORM 7460-1, OR (2) FURNISHED A COPY OF FAA'S APPROVAL AND ODOT'S DIVISION OF AVIATION PERMIT TO THE PROJECT ENGINEER.

THE CONTRACTOR IS ADVISED THAT FAA APPROVAL TYPICALLY TAKES 30 TO 90 DAYS. ALL SUBMISSIONS SHOULD BE DIRECTED TO THESE OFFICES:

THE FEDERAL AVIATION ADMINISTRATION
GREAT LAKES REGIONAL OFFICE
AIR TRAFFIC DIVISION AGL-530
2300 EAST DEVON AVENUE
DES PLAINES, ILLINOIS 60018
(708) 294-7458

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
(614) 793-5046

REMOVAL OF TREES OR STUMPS

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	NONE	NONE	NONE

ITEM 606, ANCHOR ASSEMBLY, TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING AN ET-2000, OPTION "B" GUARDRAIL END TERMINAL AS MANUFACTURED BY SYRO STEEL COMPANY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 216-545-4373).

THE LENGTH OF THE ET-2000 SYSTEM IS CONSIDERED TO BE 50', INCLUSIVE OF TWO 25' LONG RAIL ELEMENTS. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND AT THE LOCATIONS SHOWN IN THE PLANS.

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

ITEM SPECIAL, IMPACT ATTENUATOR, TYPE 1, BIDIRECTIONAL

THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING ONE OF THE FOLLOWING TYPES OF IMPACT ATTENUATOR SYSTEMS:

1. THE BREAKMASTER IMPACT ATTENUATING SYSTEM MANUFACTURED BY ENERGY-ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, ILLINIOS 60601 (TELEPHONE 312-467-6750)

2. THE C.A.T. IMPACT ATTENUATING SYSTEM MANUFACTURED BY SYRO STEEL COMPANY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE 216-545-4373).

THE ATTENUATOR SHALL BE DESIGNED FOR BIDIRECTIONAL IMPACTS AND SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND AT THE LOCATIONS SHOWN ON THE PLANS.

THE NOSE OF THE ATTENUATOR SHALL BE MARKED WITH THREE, EVENLY SPACED, FOUR (4) INCH WIDE HORIZONTAL STRIPES OF WHITE REFLECTIVE MATERIAL MEETING THE REQUIREMENTS OF CMS 730.19.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE CONTRACT PRICE FOR ITEM SPECIAL, EACH, IMPACT ATTENUATOR TYPE 1 BIDIRECTIONAL. THIS ITEM SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS ITEM IN PLACE, INCLUDING ALL RELATED HARDWARE, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM.

ITEM 620 DELINEATOR, REMOVED AND RE-ERECTED, AS PER PLAN; CURB MOUNTED

THE CONTRACTOR SHALL CAREFULLY REMOVE THE EXISTING CURB MOUNTED DELINEATORS BETWEEN THE TWO WAY RAMPS AT THE U.S.R. 30/U.S.R. 127 INTERCHANGE AND STORE THEM FOR RE-USE. THE DELINEATORS SHALL BE REMOVED IN SUCH A MANNER AS TO NOT DAMAGE THEM AND ANY DAMAGED DELINEATORS SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO THE STATE. THE EXISTING DELINEATORS ARE "SUPER DUCK CHANNELIZER" (SDC-2036) BY CARSONITE.

THE CONTRACTOR SHALL RE-ERECT THE CURB MOUNTED DELINEATORS REMOVED FOR RE-USE ON TOP OF THE PROPOSED CONCRETE CURB EXTENSION. THE DELINEATORS SHALL BE SPACED AT 50' ON CURVED ALIGNMENTS AND 100' ON TANGENT ALIGNMENTS. THE CONTRACTOR SHALL USE NEW MOUNTING BASES SPECIFICALLY FOR THE "SUPER DUCK CHANNELIZER" (SDC-2036) BY CARSONITE.

ALL WORK, INCLUDING LABOR, MATERIALS AND EQUIPMENT SHALL BE INCLUDED IN THE PRICE BID ITEM 620, DELINEATOR, REMOVED AND RE-ERECTED, AS PER PLAN; CURB MOUNTED AND ALL WORK SHALL BE AS DIRECTED BY THE ENGINEER.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATION 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.

WATERING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR THE PERMANENT SEEDED AREAS, AS PER 659.09:

659 WATER = 580 M GAL.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER, FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

207	TEMPORARY SEEDING AND MULCHING	= 53,048	SQ.YD.
207	STRAW OR HAY BALES	= 100	EACH
207	TEMPORARY SLOPE DRAINS	= 200	LIN.FT.
207	TEMPORARY BENCHES, DAMS AND SEDIMENT BASINS	= 200	CU.YD.
207	TEMPORARY DIKES	= 700	CU.YD.
207	FILTER FABRIC FENCE	= 12,100	LIN.FT.
601	ROCK CHANNEL PROTECTION, TYPE C (WITH FILTER)	= 100	CU.YD.
601	ROCK CHANNEL PROTECTION, TYPE C (WITHOUT FILTER)	= 50	CU.YD.
659	COMMERCIAL FERTILIZER	= 2.39	TON
659	REPAIR SEEDING AND MULCHING	= 13,262	SQ.YD.
659	WATER	= 120	M.GAL.

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GENERAL NOTES

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GENERAL NOTES

EROSION CONTROL

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

ITEM 659, SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR ITEM 659, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.

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

ITEM 659, SEEDING AND MULCHING 265,239 SQ. YD.

ITEM 207 TEMPORARY BENCHES, DAMS AND SEDIMENT BASINS

THE SEDIMENT BASIN QUANTITIES LISTED IN THE TEMPORARY SOIL EROSION AND SEDIMENT CONTROL NOTE 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.

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 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 THE ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERIAL 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 MC-4, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEM.

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

ITEM 603	6" CONDUIT, TYPE F	=200 LIN.FT.
ITEM 603	8" CONDUIT, TYPE F	= 50 LIN.FT.
ITEM 603	10" CONDUIT, TYPE F	=100 LIN.FT.
ITEM 603	12" CONDUIT, TYPE F	=100 LIN.FT.
ITEM 603	15" CONDUIT, TYPE F	=100 LIN.FT.
ITEM 603	18" CONDUIT, TYPE F	= 50 LIN.FT.
ITEM 601, ROCK CHANNEL PROTECTION, TYPE C (WITH FILTER)		= 10 CU.YD.

PROPOSED OUTLET CONNECTION

ALL PIPE CONNECTIONS SHALL BE MADE WITH A MASONRY COLLAR AS PER STANDARD DRAWING MC-4.

EXISTING UNDERDRAIN OUTLETS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER, FOR OUTLETTING EXISTING UNDERDRAIN OUTLETS EFFECTED BY EARTHWORK OPERATIONS:

ITEM 603	4" CONDUIT, TYPE F; 707.17 NONPERFORATED, ASTM D3034 SDR35, SS931 OR SS944	= 50 LIN.FT.
ITEM 603	6" CONDUIT, TYPE F; 707.17 NONPERFORATED, ASTM D3034 SDR35, SS931 OR SS944	= 50 LIN.FT.
ITEM SPECIAL	PRECAST REINFORCED CONCRETE OUTLET	= 5 EACH

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.

REVIEW OF DRAINAGE FACILITIES

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

ALL NEW CONDUITS, INLETS, CATCH BASINS AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN 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.

REMOVAL OF UNSUITABLE SUBGRADE

A CONTIGENCY QUANTITY OF 7500 CU. YD. OF ITEM 203 EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION AND 7500 CU. YD. OF ITEM 203 EMBANKMENT ARE PROVIDED FOR USE IN AREAS OF WET SUBGRADE. THE WET SUBGRADE MATERIAL SHOULD BE REMOVED ONE FOOT OUTSIDE OF THE RIGHT SHOULDER TO ONE FOOT OUTSIDE OF THE LEFT SHOULDER WITH AN UNDERCUT OF 2 (TWO) FEET BELOW THE TOP OF THE PROPOSED SUBGRADE. THE USE OF THESE MATERIALS SHALL BE AT LOCATIONS AS DIRECTED BY THE ENGINEER. THE PRICE BID FOR THESE ITEMS SHALL INCLUDE ALL ASSOCIATED LABOR, MATERIAL AND EQUIPMENT COSTS.

ITEM 203, PROOF ROLLING

AN ESTIMATED QUANTITY OF 4 HOURS FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

PART-WIDTH CONSTRUCTION

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

ITEM 407, TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.075 GALLONS PER SQUARE YARD OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

PROFILE AND ALIGNMENT FOR RESURFACING PROJECTS

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. THE PROPOSED ASPHALT CONCRETE OVERLAY SHALL BE AS SHOWN ON THE TYPICAL SECTIONS.

THE EXISTING VERTICAL ALIGNMENT HAS BEEN EXAMINED AND MEETS DESIGN SPEED CRITERIA.

CONSTRUCTION PLANS, SHOWING THE ORIGINAL ALIGNMENT AND PROFILE, ARE AVAILABLE FOR INSPECTION AT THE DISTRICT ONE OFFICE:

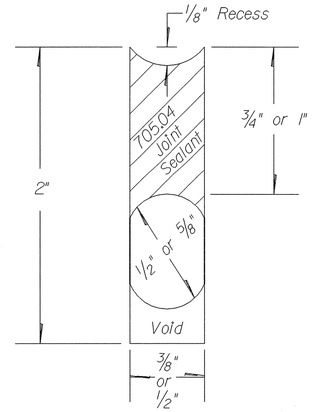
VAN-30-11.24
VAN-30-11.24, 766 (83)
VAN-30-16.01, 369 (86)
VAN-30-16.28, 339 (77)

ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C
ITEM 252 FULL DEPTH PAVEMENT SAWING

INTENT IS TO TREAT THIS PROJECT AS THOUGH IT IS A BREAK AND SEAT DESIGN WITHOUT BREAKING AND SEATING. THE QUANTITIES FOR FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C AND FULL DEPTH PAVEMENT SAWING ARE MINIMAL AND TO BE USED ONLY IN AREAS OF PAVEMENT FAILURE AS DIRECTED BY THE ENGINEER. FOR QUANTITIES, REFER TO SHEET 28.

ITEM SPECIAL SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, - 705.04

REFER TO DETAIL BELOW AND PROPOSAL NOTE.



JOINT SEALANT RESERVOIR DETAIL

Rev. 6-20-95

CALCULATED LAB CHECKED RLS

GENERAL NOTES

VAN-30-11.24

MAINTENANCE OF TRAFFIC NOTES

TRAFFIC MAINTENANCE

THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES IN ACCORDANCE WITH THE REQUIREMENTS OF SPEC. 614, THE MAINTENANCE OF TRAFFIC NOTES, THE MT STANDARD DRAWINGS AND DETAILS SHOWN IN THESE PLANS. TRAFFIC ON U.S.R 30 SHALL BE MAINTAINED IN ONE LANE AT ALL TIMES BY CLOSING THE LANE IN WHICH WORK IS TO BE PERFORMED WITH DRUMS IN ACCORDANCE WITH STD. DWG. MT-95.30. A MINIMUM OF ONE LANE SHALL REMAIN OPEN TO TRAFFIC ON EACH SIDE U.S.R. 30 AT ALL TIMES. ALL SIGNS, DRUMS AND OTHER DEVICES REQUIRED TO MAINTAIN TRAFFIC AS SHOWN BY THESE PLANS SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DESIGNATE TO THE ENGINEER, A PERSON RESPONSIBLE FOR MAINTAINANCE OF TRAFFIC CONTROL DURING NON-WORK HOURS WHO SHALL BE AVAILABLE WITHIN THIRTY (30) MINUTES AT ANY TIME AFTER NOTIFICATION.

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO DIRECTLY TRANSPORT OR OPERATE ANY EQUIPMENT ACROSS THE OPEN LANES OF U.S.R. 30. NO TRAFFIC WILL BE ALLOWED TO DRIVE ON PAVEMENT THAT HAS BEEN GROUND, AND NOT RESURFACED.

THERE SHALL NOT BE MORE THAN ONE PROPOSED COURSE PLACED ON EXISTING PAVEMENT OR SHOULDERS BEFORE ADJACENT COURSES ARE PLACED.

RAMPS MAY NOT BE CLOSED UNTIL WORK ON THE RAMP IS READY TO BEGIN AND WORK ON THE RAMP SHALL BE CONTINUOUS TO A POINT WHERE IT MAY ONCE AGAIN BE OPEN TO TRAFFIC.

THE CONTRACTOR WILL ALLOW ACCESS TO PRIVATE RESIDENCES AND FIELD DRIVES.

THE LUMP SUM BID ON THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO PERFORM THE WORK AS DESCRIBED.

ALTERNATE METHODS

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

ITEM 622 PORTABLE CONCRETE BARRIER, 32"

THIS STANDARD TYPE OF P.C.B. SHALL BE FURNISHED AND INSTALLED AS PER STD. DWG. MC-9.2. ALL BARRIERS SHALL USE CONNECTING PIN AND STEEL ROD CONNECTOR METHOD OF CONNECTING THE SECTIONS TOGETHER. NO TONGUE AND GROOVE CONNECTIONS SHALL BE PERMITTED.

ALL PCB SHALL BE PAID FOR BY THE LENGTH OF BARRIER FURNISHED, INSTALLED, MAINTAINED AND SUBSEQUENTLY REMOVED. ALL PCB SHALL BE IN GOOD SHAPE, FREE OF CRACKS, SPALLING OR ANY OTHER DAMAGE OR DETERIORATION.

IT IS ANTICIPATED THAT THE SAME BARRIER WILL BE USED IN VARIOUS PHASES OF CONSTRUCTION. MOVEMENT OF THE CONCRETE BARRIER BETWEEN PHASES SHALL BE ACCOMPLISHED IN ONE WORKING DAY. FLAGGERS SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL MOVEMENT OF THE BARRIER IS COMPLETE.

622 PORTABLE CONCRETE BARRIER, 32" = 15,440 LIN. FT.

PORTABLE CONCRETE BARRIER END TREATMENT

ALL TAPERED END SECTIONS SHOWN IN THESE PLANS AT THE APPROACH END OF P.C.B. RUNS SHALL BE LOCATED AT LEAST 30' FROM THE EDGE OF THE TRAVELLED LANE. THE CROSS SLOPE OF THE APPROACH EMBANKMENT SHALL BE A MAXIMIUM OF 10:1. THE PLACEMENT AND SUBSEQUENT REMOVAL OF ANY GRADING REQUIRED SHALL BE INCLUDED IN THE LUMP SUM BID ITEM 614 MAINTAINING TRAFFIC AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO PERFORM THE WORK DESCRIBED.

MOVEMENT OF DRUMS

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

AT-GRADE INTERSECTION CLOSING

EACH AT-GRADE INTERSECTION SHALL BE CLOSED DURING THE APPLICATION OF THE FINAL ITEM 301 AND 446 COURSES TO THE MAINLINE LANES. NO MORE THAN ONE AT-GRADE INTERSECTION MAY BE CLOSED AT A TIME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEPLOYMENT, IMPLEMENTATION AND SUBSEQUENT REMOVAL OF TRAFFIC CONTROL DEVICES REQUIRED TO CLOSE EACH AT-GRADE INTERSECTION. EACH AT-GRADE INTERSECTION MAY BE CLOSED FOR A PERIOD NOT TO EXCEED TEN CALENDAR DAYS WHILE PASSING LANES ARE BEING RESURFACED. ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRE FOR THE CLOSING OF EACH AT-GRADE INTERSECTION SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

DUST CONTROL

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

616 WATER	=	150 MGAL.
616 CALCIUM CHLORIDE	=	50 TONS

ITEM SPECIAL - REPLACEMENT SIGNS & DRUMS

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

SPECIAL REPLACEMENT SIGNS = 325 SQ. FT.

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

SPECIAL REPLACEMENT DRUMS = 160 EACH

HOLIDAY RESTRICTIONS

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS:

CHRISTMAS	NEW YEARS
MEMORIAL DAY	FOURTH OF JULY
LABOR DAY	THANKSGIVING
EASTER	

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF WEEK	TIME WHEN ALL LANES MUST BE OPEN TO TRAFFIC
EASTER SUNDAY	4:00 P.M. WEDNESDAY THROUGH 12:00 NOON MONDAY
HOLIDAY SUNDAY	12:00 NOON FRIDAY THROUGH 12:00 NOON MONDAY
MONDAY	12:00 NOON FRIDAY THROUGH 12:00 NOON TUESDAY
TUESDAY	12:00 NOON MONDAY THROUGH 12:00 NOON WEDNESDAY
WEDNESDAY	12:00 NOON TUESDAY THROUGH 12:00 NOON THURSDAY
THURSDAY	12:00 NOON WEDNESDAY THROUGH 12:00 NOON MONDAY
FRIDAY	12:00 NOON THURSDAY THROUGH 12:00 NOON MONDAY
SATURDAY	12:00 NOON FRIDAY THROUGH 12:00 NOON MONDAY

THERE SHALL BE NO EXTENITIONS DUE TO WEATHER OR MATERIAL DELAYS WHATSOEVER.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH SECTION 108.07 OF THE CMS.

614 WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND REMOVE WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS (R-10-48) (45 MPH) WITHIN THE WORK LIMITS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

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

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

THE CONTRACTOR SHALL ERECT A WORK ZONE SPEED LIMIT SIGN IN ADVANCE OF ANY LANE RESTRICTION WHICH IS ½MILE OR MORE IN LENGTH AND WHICH IS EXPECTED TO LAST AT LEAST 30 CONSECUTIVE CALENDAR DAYS OR AS DIRECTED BY THE ENGINEER. THE SIGNS SHALL BE MOUNTED ON BOTH SIDES OF DIVIDED HIGHWAYS, 500 FEET IN ADVANCE OF THE LANE REDUCTION TAPER. THE SIGN SHALL BE MOUNTED ON THE RIGHT SIDE, 250 FEET IN ADVANCE OF THE LANE REDUCTION TAPER ON UNDIVIDED HIGHWAYS. THE SIGN SHALL BE REPEATED, ON THE SIDE NEAREST TRAFFIC, EVERY 1 MILE FOR 55 MPH ZONES AND ½MILE FOR 45 MPH ZONES. THESE SIGNS SHALL ALSO BE ERECTED IMMEDIATELY AFTER EACH OPEN ENTRANCE RAMP WITHIN THE ZONE. A SIGN TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE. THIS SIGN SHALL BE AN R-8A.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED BUT GOOD CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF 703.9 AND U.S. DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION FOR TYPE III SHEETING, FP-85. WORK ZONE SPEED LIMIT SIGNS SHALL BE MOUNTED ON TWO (2) ITEM 630 GROUND MOUNTED SUPPORTS, NO. 4 POSTS.

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

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

614 WORK ZONE SPEED LIMIT SIGN = 40 EACH

SHOULDER MAINTENANCE

TRAFFIC CONTROL OPERATIONS REQUIRE THE PARTIAL UTILIZATION OF THE SHOULDERS FOR TRAFFIC LANES AT BRIDGES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT THE SHOULDERS ARE MAINTAINED IN ACCEPTABLE CONDITION TO ASSURE THEIR SAFE USE AS A TRAFFIC LANE. AN ADDITIONAL QUANTITY OF 10 CU. YDS. OF ITEM 301 HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ANY REQUIRED REPAIRS, TO BE USED AS DIRECTED BY THE ENGINEER.

301 BITUMINOUS AGGREGATE BASE = 10 CU.YD.

(QUANTITIES CARRIED TO GENERAL SUMMARY, SHEET 16)

SUMMARY OF QUANTITIES THIS SHEET

ITEM	QUANTITY	UNIT	DESCRIPTION
301	10	CU.YD.	BITUMINOUS AGGREGATE BASE, AC-20
614	40	EACH	WORK ZONE SPEED LIMIT SIGN
616	150	MGAL	WATER
616	50	TONS	CALCIUM CHLORIDE
622	15,440	LIN.FT.	PORTABLE CONCRETE BARRIER, 32"
SPECIAL	325	SQ.FT.	REPLACEMENT SIGN
SPECIAL	160	EACH	REPLACEMENT DRUMS

REVISED 6-20-95

CALCULATED BDS
CHECKED JMS

MAINTENANCE OF TRAFFIC NOTES

VAN-30-11.24

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MAINTENANCE OF TRAFFIC NOTES

PAVEMENT MARKING

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

RAMP DETOUR

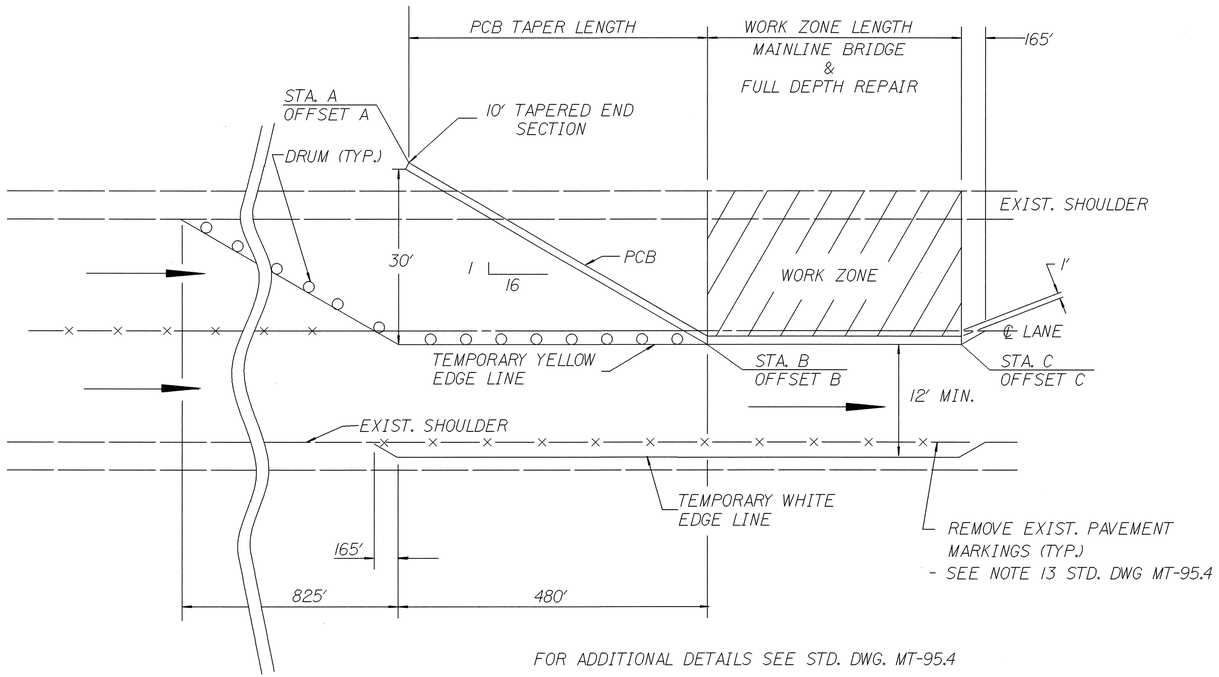
THE U.S.R.224 S.B. ENTRANCE RAMP "A" DETOUR AND U.S.R.127 N.B. EXIT RAMP "C" DETOUR DETAILED ON THIS SHEET IS INTENDED FOR RAMP TRAFFIC ONLY. AT NO TIME SHALL THROUGH MAINLINE U.S.R.30 TRAFFIC BE DETOURED UNLESS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL NOTIFY THE DISTRICT 1 TRAFFIC ENGINEER 10 DAYS IN ADVANCE OF CLOSING THE S.R.224 S.B. ENTRANCE RAMP OR U.S.R.127 N.B. EXIT RAMP TO ALLOW FOR THE DETOUR TO BE SET UP AND THE PUBLIC TO BE NOTIFIED.

DETOUR LIMITATION

DUE TO RESURFACING AND WIDENING OF RAMPS 'A'&'C' AT U.S.R.127 & U.S.R.224, EXIT TRAFFIC SHALL BE DETOURED AS SHOWN ON THE DETOUR MAPS ON THIS PAGE, FOR A MAXIMUM OF 10 CALENDAR DAYS FOR RAMP 'A' AND 10 CALENDAR DAYS FOR RAMP 'C'. STATE FORCES WILL COVER THE APPROPRIATE EXISTING SIGNS (OUTSIDE THE PROJECT WORK LIMITS) AT THE DETOUR LOCATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE APPROPRIATE DETOUR SIGNS, AS DETERMINED BY THE PROJECT ENGINEER, AT THE LOCATIONS SHOWN HERE. FAILURE TO MEET THESE REQUIREMENTS SHALL RESULT IN LIQUIDATED DAMAGES AS DESCRIBED IN SPEC. 108.07 OF THE CMS FOR EACH CALENDAR DAY THAT THE RAMPS REMAINED CLOSED TRAFFIC BEYOND THE SPECIFIED LIMIT.

PCB WORK ZONE PROTECTION



FOR ADDITIONAL DETAILS SEE STD. DWG. MT-95.4

NOTE : FOR TEMPORARY PAVEMENT MARKING QUANTITIES, SEE SHEET 12.

S.R. 224 & S.R. 127 RAMPS 'A' & 'C' DETOUR MAP

SCALE IN MILES

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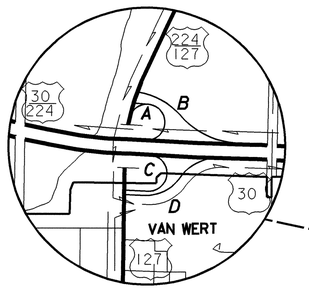
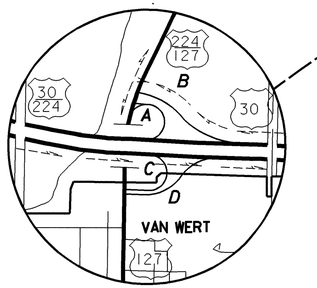
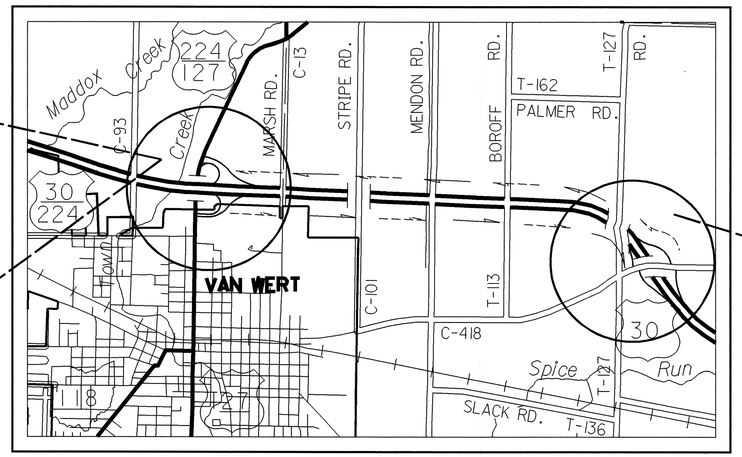
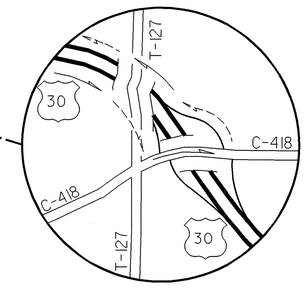


RAMP 'A' (ENTRANCE)



RAMP 'C' (EXIT)





DETOUR TURNAROUND

LEGEND

——— - RAMP 'A' (ACCELERATION)

- - - - - - RAMP 'C' (DECCELERATION)

PCB LAYOUT & QUANTITIES

Bridge No.	Side	Station			Offset			622 Portable Concrete Median Barrier
		A	B	C	A	B	C	Lin. Ft.
1181	Rt.	620+20	625+00	635+00	69	39	39	1480
	Rt.	620+20	625+00	635+00	15	45	45	1480
	Lt.	639+80	635+00	625+00	15	45	45	1480
	Lt.	639+80	635+00	625+00	69	39	39	1480
1276 & 1292	Rt.	671+20	676+00	695+00	69	39	39	2380
	Rt.	671+20	676+00	695+00	15	45	45	2380
	Lt.	699+80	695+00	676+00	15	45	45	2380
	Lt.	699+80	695+00	676+00	69	39	39	2380
							TOTAL	15,440

Total carried to Maintenance of Traffic Notes on Sheet 10.

CALCULATED BDS CHECKED JMS

MAINTENANCE OF TRAFFIC NOTES AND DETAILS

VAN-30-11.24

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MAINTENANCE OF TRAFFIC NOTES

ITEM 614 BARRIER REFLECTORS & OBJECT MARKERS

BARRIER REFLECTORS & OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE CONCRETE BARRIER USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO PROPOSAL NOTE 142-92 AND SHALL BE SPACED AT 25 FT. BASIS OF PAYMENT SHALL BE AT THE UNIT PRICE BID FOR THE APPROPRIATE 614 ITEMS AND SHALL INCLUDE ALL LABOR, EQUIPMENT, HARDWARE AND INCIDENTALS REQUIRED TO PERFORM THE WORK.

614 BARRIER REFLECTOR TYPE B = 625 EACH
614 OBJECT MARKER = 625 EACH

GUARDRAIL REPLACEMENT

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE THE EXISTING GUARDRAIL, PREPARE THE SITE, AND INSTALL NEW GUARDRAIL IN A CONTINOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON THE SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED UNTIL SUCH TIME AS THE ENGINEER IS ASSURED TO COMPLIANCE.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR)

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

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

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

OHIO STATE HIGHWAY PATROL
1230 OLD U.S.R. 30
VAN WERT, OH 45891
(419) 238-3055

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

SPECIAL 614 LAW ENFORCEMENT OFFICER WITH PATROL CAR = 800 HRS.

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

SEQUENCE OF OPERATIONS AT AT-GRADE INTERSECTIONS

THE DRIVING LANE AND AT-GRADE INTERSECTING ROADS WILL BE GROUND AND RESURFACED WITH 301 BITUMINOUS AGGREGATE BASE TO MEET THE EXISTING PAVEMENT IN THE PASSING LANE AND AT-GRADE ROADS. THE PASSING LANE WILL THEN BE GROUND AND RESURFACED TO MEET THE TOP OF THE 301 IN THE DRIVING LANE. THE INTERSECTION WILL BE CLOSED FOR NO MORE THAN 10 CALENDAR DAYS DURING WHICH TIME THE FINAL 301 AND 446 COURSES ARE LAID. THE AT-GRADE ROADS WILL BE GROUND SO THAT THE 446 SURFACE COURSES BUTT INTO THE EXISTING PAVEMENT.

ITEM 614 TEMPORARY PAVEMENT MARKING

WHITE LANE LINE

Location	Station	Linear Feet
U.S.R. 30 Eastbound	596+87 to 611+09	7,110
	612+33 to 625+00	6,335
	635+00 to 666+64	15,820
	667+89 to 676+33	4,220
	695+00 to 720+00	12,500
	721+25 to 773+05	25,900
	774+35 to 779+50	2,575
	800+75 to 852+57	25,910
U.S.R. 30 Westbound	596+87 to 610+80	6,965
	612+06 to 625+00	6,470
	635+00 to 666+43	15,715
	667+65 to 676+33	4,340
	695+00 to 720+00	12,500
	721+25 to 773+05	25,900
	774+35 to 779+50	2,575
	800+75 to 852+57	25,910
	Total Linear Feet	189,495
	Total Miles	35.89

NOTE: Temporary Lane Line, Channelizing Line & Gore Line Quantities are for a five course application.

8" CHANNELIZING LINE

Location	Station	Linear Feet
Ent. Ramp "D", U.S.R. 127, E.B.	706+52(M.L.) to 708+02(M.L.)	1,500
Ent. Ramp "A", U.S.R. 224, W.B.	689+30(M.L.) to 689+80(M.L.)	1,500
Ent. Ramp "A", C.R. 418, W.B.	846+50 to 848+00	1,500
	Total Linear Feet	4,500

GORE LINE - 2 @ 4"X50' CONTINUOUS

Location	Station	Linear Feet
Exit Ramp "C", C.R. 418, E.B.	846+42(M.L.) to 846+92(M.L.)	500
Exit Ramp "B", U.S.R. 224, W.B.	705+90M.L.) to 706+40(M.L.)	500
	Total Linear Feet	1,000

TEMPORARY EDGE LINE

Location	Station	Linear Feet	
		White	Yellow
U.S.R. 30 Eastbound	618+55 to 636+65	1,810	
	611+95 to 636+65	2,470	
	669+55 to 696+65	2,710	
	662+95 to 696+65	3,370	
	611+95 to 636+65		2,470
	618+55 to 636+65		1,810
	662+95 to 696+65		3,370
	669+55 to 696+65		2,710
U.S.R. 30 Westbound	623+35 to 641+45	1,810	
	623+35 to 648+05	2,470	
	674+35 to 701+45	2,710	
	674+35 to 708+05	3,370	
	623+35 to 648+05		2,470
	623+35 to 641+45		1,810
	674+35 to 708+05		3,370
	674+35 to 701+45		2,710
	Total Linear Feet	20,720	20,720
	Total Linear Feet	41,440	
	Total Miles	7.85	

SUMMARY OF QUANTITIES THIS SHEET

ITEM	QUANTITY	UNIT	DESCRIPTION
614	7.85	Miles	Temporary Edge Lines, Class I
614	35.89	Miles	Temporary Lane Lines, Class II
614	4,500	Lin. Ft.	Temporary Channelizing Lines, Class I
614	1,000	Lin. Ft.	Temporary Gore Markings, Class II
614	625	Each	Barrier Reflector, Type B
614	625	Each	Object Marker
SP 614	800	Hour	Law Enforcement Officer With Patrol Car

(Quantities carried to General Summary, Sheet 16)

Rev. 6-20-95

CALCULATED DJS
CHECKED NJV

MAINTENANCE OF TRAFFIC NOTES & TEMPORARY PAVEMENT MARKINGS

VAN-30-11.24

12
161

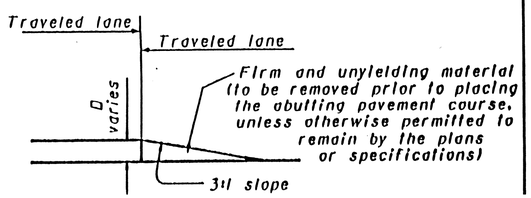
DESIGN FILE : e:\dgn\v30\v30mn.dgn
USERNAME : tbolenba
DATE : 05-OCT-1994
TIME : 11:21

GENERAL NOTES

1. It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified hereon, they shall be included for payment in the lump sum bid for Item 614 - Maintaining Traffic.
2. While the need for certain advisory signing is noted hereon, it is not intended that this be indicative of all signing that may be required to advise or warn motorists, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.
3. In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown hereon may be required.
4. The drop-off treatment selected for use at any given location shall be as appropriate for the prevailing conditions at the site.
5. Where concrete barrier is specified, it shall be in accordance with Standard Construction Drawing MC-9.2 and Item 622.
6. When drums are specified for a dropoff condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.
7. When OW-15I (Low Shoulder) signs or OW-17I (Uneven Lanes) and OWP-17I signs are required, they shall be placed 750' in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all intersecting roadways within the limits of the condition. When the dropoff condition extends more than one-half mile, additional signs should be erected at intervals of one mile or less.
8. For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate any difference in elevation between pavements, a 3:1 slope treatment similar to the Optional Wedge Treatment shall be provided.
9. Portable concrete barrier shall be placed on the same level as the traffic surface or an adjacent surface that is no more than 3" below the traffic surface, and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10', drums may be placed below the traffic surface provided the dropoff depth does not exceed 5" and approval is granted by the Project Engineer.
10. Pavement Repairs (or similar work):
    a. Lengths greater than 60 feet - utilize appropriate treatment from Condition I.
    b. Lengths of 60 feet or less - repairs shall be effected in accordance with 255.08. Drums may be used as a separator adjacent to the traveled lane.

OPTIONAL WEDGE TREATMENT
(MILLING OR RESURFACING)

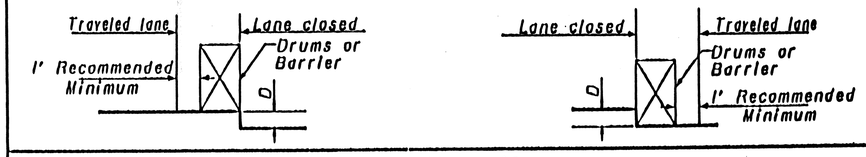
1. This treatment may be used when permitted for Condition I only.
2. OW-17I and OWP-17I signs required.



CONDITION I
DROPOFFS BETWEEN TRAVELED LANES

1. These treatments are to be used for resurfacing, pavement planing, excavation, etc. between or within traveled lanes.

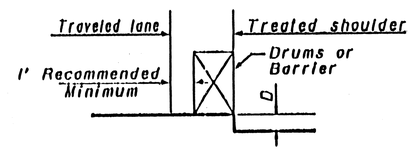
D (In.)	Treatment
< 1½	Erect OW-17I and OWP-17I signs.
>1½-3	1) Lane closure utilizing drums as shown below OR 2) Optional Wedge Treatment
>3-5	Lane closure utilizing drums as shown below.
>5	Lane closure utilizing portable concrete barrier as shown below.



CONDITION II
DROPOFFS WITHIN GRADED SHOULDER AREA

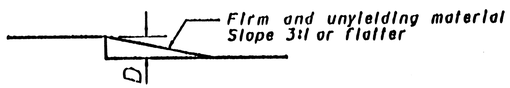
1. The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
2. The graded shoulder area is that flat or gradually sloping area between the edge of a normally traveled lane and the more steeply sloping ditch foreslope or embankment slope. Its surface may be soil or turf, and/or it may be inclusive of a "treated" area (improved with aggregates, asphaltic materials, or concrete). For the purposes herein, its maximum width shall be considered to be twelve (12) feet.

D (In.)	Treatment
< 1½	1) If edgelines are present, no treatment necessary OR 2) Erect OW-17I and OWP-17I signs.
>1½-5	1) If min. lane width requirements can be met, maintain lanes utilizing drums as shown below OR 2) If min. lane width requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment.
>5-12 Daylight only	If min. lane width requirements can be met, maintain lanes utilizing drums as shown below.
>5-24	1) If min. lane width requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If min. lane width requirements cannot be met, close adjacent lane utilizing drums.
>24	Lane closure utilizing portable concrete barrier as shown below.



OPTIONAL SHOULDER TREATMENT

1. This treatment may not be used within a bituminous shoulder where a hot longitudnal joint per 401.15 is required.
2. OW-15I signs required.

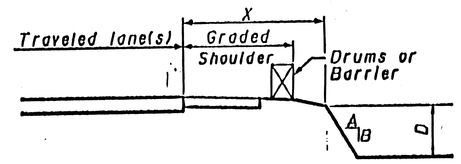


CONDITION III
DROPOFFS BEYOND GRADED SHOULDER OR BACK OF CURB

1. See Note 2 under Condition II.
2. Use Chart A or B below, as applicable.

CHART A

USE FOR: 1. Uncurbed Facilities.
2. Curbed Facilities, where:
   a. Curbs are less than 6" in height.
   b. Curbs are 6" or greater in height and the legal speed is greater than 40 mph.

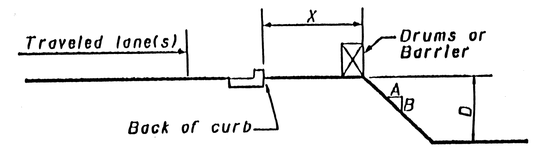


X (Ft.)	D (In.)	A/B	Treatment Required	
			Day	Night
0-4	Any	Any	(a)	(a)
4-30	Any	3:1 or Flatter	None	None
4-12	≤3	Steeper than 3:1	None	None
4-12	>3-≤12	Steeper than 3:1	Drums	Drums
4-12	>12	Steeper than 3:1	Drums	Barrier
>12-20	≤12	Steeper than 3:1	None	None
>12-20	>12-≤24	Steeper than 3:1	Drums	Drums
>12-20	>24	Steeper than 3:1	Drums	Barrier
>20-30	≤24	Steeper than 3:1	None	Drums
>20-30	>24	Steeper than 3:1	Drums	Barrier
>30	Any	Any	None	None

(a) Use treatment specified under Condition 2.

CHART B

USE FOR: Curbed facilities, where the curb is 6" or greater in height and the legal speed is 40 mph or less.



X (Ft.)	D (In.)	A/B	Treatment Required	
			Day	Night
0-10	≤12	Any	None	Drums
0-10	>12	Any	Drums	Drums
>10	Any	Any	None	None

DROPOFFS IN WORK ZONES

VAN-30-11.24

ITEM	SHEET NUMBER															ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	8	9	10	12		19	28	29	124	134	142	146	147								
																				DRAINAGE (CONTINUED)	
603										40						603	07400	40	LIN. FT.	18" CONDUIT, TYPE B: 706.02	
603		50								5						603	08200	55	LIN. FT.	18" CONDUIT, TYPE F	
603										64						603	10400	64	LIN. FT.	24" CONDUIT, TYPE B: 706.02	
603										12						603	10600	12	LIN. FT.	24" CONDUIT, TYPE C: 706.02	
603										95						603	13400	95	LIN. FT.	30" CONDUIT, TYPE B: 706.02	
603										12						603	16200	12	LIN. FT.	36" CONDUIT, TYPE A: 706.02	
603										27						603	16400	27	LIN. FT.	36" CONDUIT, TYPE B: 706.02	
603										24						603	19200	24	LIN. FT.	42" CONDUIT, TYPE A: 706.02	
603										18						603	20900	18	LIN. FT.	48" CONDUIT, TYPE B: 706.02	
603										48						603	22200	48	LIN. FT.	54" CONDUIT, TYPE A: 706.02	
604										1						604	01200	1	EACH	CATCH BASIN, NO. 4	
604										2						604	02800	2	EACH	CATCH BASIN, NO. 8	
604										2						604	09000	2	EACH	CATCH BASIN ADJUSTED TO GRADE	
604										1						604	34500	1	EACH	MANHOLE ADJUSTED TO GRADE	
SPECIAL		5								9	251					SPECIAL	60436600	265	EACH	PRECAST REINFORCED CONCRETE OUTLET	143
605											15,265					605	05100	15,265	LIN. FT.	4" SHALLOW PIPE UNDERDRAIN	
605											9880					605	05200	9880	LIN. FT.	4" UNCLASSIFIED PIPE UNDERDRAIN	
605											63,308					605	30001	63,308	LIN. FT.	SHALLOW UNDERDRAIN, AS PER PLAN	143
																				PAVEMENT	
252							1248									252	01500	1248	LIN. FT.	FULL DEPTH PAVEMENT SAWING	
254						207,769										254	01000	207,769	SQ. YD.	PAVEMENT PLANING, BITUMINOUS	
255							673									255	10000	673	SQ. YD.	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C	
301			10			41,976										301	10002	41,986	CU. YD.	BITUMINOUS AGGREGATE BASE, AC-20	
304						9020										304	20000	9020	CU. YD.	AGGREGATE BASE (SEE PROPOSAL NOTE)	
407						15,940										407	10000	15,940	GAL.	TACK COAT	
408						15,199										408	10000	15,199	GAL.	BITUMINOUS PRIME COAT	
446						12,299										446	01200	12,299	CU. YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, AC-20	
446						9542										446	01400	9542	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20	
SPECIAL							20,200									SPECIAL	45014000	20,200	LIN. FT.	SAWING & SEALING ASPHALT CONCRETE PAVEMENT JOINT, 705.04 (SEE PROPOSAL NOTE)	9
SPECIAL						44										SPECIAL	51922100	44	CU. YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) (SEE PROPOSAL NOTE)	
609						2242										609	10000	2242	LIN. FT.	ASPHALT CONCRETE CURB, AC-20, TYPE 1	
609							1384									609	98000	1384	LIN. FT.	CURB, MISC.: MEDIAN CURB 9" LIFT WITH ONE (1) FOOT DOWELS	6 & 28
																				TRAFFIC CONTROL	
620												166				620	10300	166	EACH	DELINEATOR, TYPE C, POST MOUNTED	
620												52				620	15300	52	EACH	DELINEATOR, TYPE D, POST MOUNTED	
620												33				620	31211	33	EACH	DELINEATOR REMOVED AND REERECTED, AS PER PLAN: CURB MOUNTED	8
630													33.1			630	00100	33.1	CU. YD.	CONCRETE FOR EMBEDDED FOUNDATION	
630													217			630	06400	217	LIN. FT.	GROUND MOUNTED SUPPORT, S4x7.7 BEAM	
630													48			630	07000	48	LIN. FT.	GROUND MOUNTED SUPPORT, W8x18 BEAM	
630													279			630	07500	279	LIN. FT.	GROUND MOUNTED SUPPORT, W10x22 BEAM	
630													300			630	07600	300	LIN. FT.	GROUND MOUNTED SUPPORT, W10x12 BEAM	
630													32			630	09000	32	EACH	BREAKAWAY BEAM CONNECTION	
630													6			630	75000	6	EACH	SIGN ATTACHMENT ASSEMBLY	
630													1537			630	80204	1537	SQ. FT.	SIGN, EXTRUSHEET, TYPE G	
630													12			630	85000	12	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	
630													17			630	85500	17	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND STORAGE	
630													42			630	86204	42	EACH	REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND STORAGE	
630													2			630	87000	2	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE	

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GENERAL SUMMARY

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ITEM	SHEET NUMBER															ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	8	9	10	12		19	28	29	124	134	142	146	147								
																				TRAFFIC CONTROL (CONTINUED)	
642												22.84				642	00090	22.84	MILE	EDGE LINE	
642												9.74				642	00190	9.74	MILE	LANE LINE	
642												0.31				642	00290	0.31	MILE	CENTER LINE	
642												2690				642	00390	2690	LIN. FT.	CHANNELIZING LINE	
642												407				642	00490	407	LIN. FT.	STOP LINE	
642												825				642	00690	825	LIN. FT.	TRANSVERSE LINE	
802									137							802	00100	137	EACH	BARRIER REFLECTOR, TYPE A	
802									8							802	00200	8	EACH	BARRIER REFLECTOR, TYPE B	
862												811				621	00100	811	EACH	RAISED PAVEMENT MARKER	
																				STRUCTURES OVER 20'	
																				FOR STR. # VAN-30-1181	157
																				FOR STR. # VAN-30-1276	159
																				FOR STR. # VAN-30-1292	161
																				MAINTENANCE OF TRAFFIC	
SPECIAL				800												SPECIAL 614	11100	800	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	12
614			40													614	12470	40	EACH	WORK ZONE SPEED LIMIT SIGN	
SPECIAL			325													SPECIAL	61412500	325	SQ.FT.	REPLACEMENT SIGN	10
SPECIAL			160													SPECIAL	61412600	160	EACH	REPLACEMENT DRUM	10
614				625												614	13300	625	EACH	BARRIER REFLECTOR, TYPE B	
614				625												614	13350	625	EACH	OBJECT MARKER (SEE PROPOSAL NOTE)	
614				35.89												614	20400	35.89	MILE	TEMPORARY LANE LINE, CLASS II	
614				7.85												614	22000	7.85	MILE	TEMPORARY EDGE LINE, CLASS I	
614				4500												614	23000	4500	LIN. FT.	TEMPORARY CHANNELIZING LINE, CLASS I	
614				1000												614	28000	1000	LIN. FT.	TEMPORARY GORE MARKING, CLASS II	
616			150													616	10000	150	M GAL.	WATER	
616			50													616	20000	50	TON	CALCIUM CHLORIDE	
622			15,440													622	40020	15,440	LIN. FT.	PORTABLE CONCRETE BARRIER, 32"	
614																614	11000	LUMP	LUMP	MAINTAINING TRAFFIC	
619																619	15020	LUMP	LUMP	FIELD OFFICE, TYPE C	
623																623	10000	LUMP	LUMP	CONSTRUCTION LAYOUT STAKES	
624																624	10000	LUMP	LUMP	MOBILIZATION	
																SPECIAL	61925020	LUMP	LUMP	COMPUTER EQUIPMENT FOR TYPE C OFFICE (SEE PROPOSAL NOTE)	

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GENERAL SUMMARY

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PAVEMENT TABLE

Station		Length		202 Pavement Removed		203 Excavation Not Including Embankment		203 Subgrade Compaction		254 Pavement Planing, Bituminous		301 Bituminous Aggregate Base, AC-20		304 Aggregate Base, as per Plan		407 Tack Coat		408 Bituminous Prime Coat		446 Asphalt Concrete Surface Course, Type 1		446 Asphalt Concrete Intermediate Course, Type 2		Special 1/4" Micro-Silica Concrete Overlay		609 Curb, Type 1	
From	To	Lin. Ft.		Sq. Yd.		Cu. Yd.		Sq. Yd.		Sq. Yd.		Cu. Yd.		Cu. Yd.		Gal.		Gal.		Cu. Yd.		Cu. Yd.		Cu. Yd.		Lin. Ft.	
U.S.R. 30																											
Sta. 596+87.50	Sta. 598+00	112.50																									
Mainline										600.00						45.00				20.83		43.75					
Shoulders						10.42				300.00				10.42		21.56		25.00		12.15		25.52					
Sta. 598+00	Sta. 600+00	200.00																									
Mainline										1066.67		118.52				80.00				37.04		51.85					
Shoulders						18.52				533.33		69.14		18.52		38.33		44.44		21.60		30.25					
Sta. 600+00.00	Sta. 625+00.00	2500.00																									
Mainline										13333.33		2222.22				1000.00				462.96		648.15					
Inside Shoulders										1790.16						134.26				62.16		87.02					
Outside Shoulders						221.25				4212.44		877.59		221.25		296.19		531.00		182.83		255.96					
Sta. 625+00	Sta. 629+89.88	489.88																									
Mainline				2612.69				2612.69				653.17		653.17				1045.08		90.72		127.01					
Shoulders								1524.07				381.02		445.65				609.63		52.92		74.09					
Sta. 629+89.88	Sta. 631+26.12	136.24																									
Str. No. VAN-30-1181																											
Approach Slabs										266.67														11.11			
Shoulders								155.56				38.89		45.49				62.22		5.40		7.56					
Sta. 631+26.12	Sta. 635+00	373.88																									
Mainline				1994.03				1994.03				498.51		498.51				797.61		69.24		96.93					
Shoulders								1163.18				290.80		340.13				465.27		40.39		56.54					
Sta. 635+00	Sta. 676+33.24	4133.24																									
Mainline										22043.94		3674.00				1653.30				765.42		1071.58					
Inside Shoulders										3244.41		540.73				243.33				112.65		157.71					
Outside Shoulders						441.79						1547.15		441.79		498.24		1060.31		322.32		451.25				1391.68	
Sta. 676+33.24	Sta. 680+33.24	400.00																									
Mainline				2133.33				2133.33				533.33		533.33				853.33		74.07		103.70					
Inside Shoulders								355.56				88.89		90.74				142.22		12.35		17.28					
Outside Shoulders								908.66				227.17		282.97				363.47		31.55		44.17				641.41	
Sta. 680+33.24	Sta. 683+23.26	290.02																									
Str. No. VAN-30-1276																											
Approach Slabs										266.67														11.11			
Shoulders								100.00				25.00		29.00				40.00		3.47		4.86				25.00	
Sta. 683+23.26	Sta. 688+25.91	502.65																									
Mainline				2680.80				2680.80				670.20		670.20				1072.32		93.08		130.32					
Inside Shoulders								446.80				111.70		114.03				178.72		15.51		21.72					
Outside Shoulders								173.76				43.44		53.39				69.50		6.03		8.45					
Sta. 688+25.91	Sta. 690+79.41	253.50																									
Str. No. VAN-30-1292																											
Approach Slabs										266.67														11.11			
Shoulders								44.44				11.11		11.34				17.78		1.54		2.16					
Sta. 690+79.41	Sta. 695+00	420.59																									
Mainline				2243.15				2243.15				560.79		560.79				897.26		77.89		109.04					
Inside Shoulders								373.86				93.46		95.41				149.54		12.98		18.17					
Outside Shoulders								244.84				61.21		75.24				97.94		8.50		11.90					
Sta. 695+00	Sta. 819+50.00	12450.00																									
Mainline										66400.00		11066.66				4980.00				2305.56		3227.78					
Inside Shoulders										9787.34		1631.22				734.05				339.84		475.77					
Outside Shoulders						1001.05				19220.25		4004.22		1001.05		1351.42		2402.53		834.21		1167.90					
Sta. 819+50	Sta. 848+81.68	2931.68																									
Mainline										15635.63		2605.94				1172.67				542.90		760.07					
Inside Shoulders										2605.94		434.32				195.46				90.486		126.68					
Outside Shoulders						175.08				3361.49		700.31		175.08		236.36		420.19		145.90		204.26					
Sub-Totals Sheet 1				11664.00		1868.11		17154.73		164934.94		33780.71		6367.50		12680.17		11345.36		6854.49		9619.40		33.33		2058.09	

CALCULATED TAB
CHECKED LAB

PAVEMENT TABLE

VAN-30-11.24

17
161

DESIGN FILE : e:\dgn\v30\v30ptab.dgn
USERNAME : tbolenba

DATE : 05-OCT-1994
TIME : 13:13

PAVEMENT TABLE

Station		Length	202 Pavement Removed	203 Excavation Not Including Embankment	203 Subgrade Compaction	254 Pavement Planing, Bituminous	301 Bituminous Aggregate Base, AC-20	304 Aggregate Base, as per Plan	407 Tack Coat	408 Bituminous Prime Coat	446 Asphalt Concrete Surface Course, Type 1	446 Asphalt Concrete Intermediate Course, Type 2	Special 1¼" Micro-Silica Concrete Overlay	609 Curb, Type 1
From	To	Lin. Ft.	Sq. Yd.	Cu. Yd.	Sq. Yd.	Sq. Yd.	Cu. Yd.	Cu. Yd.	Gal.	Gal.	Cu. Yd.	Cu. Yd.	Cu. Yd.	Lin. Ft.
Sta. 848+81.68	Sta. 850+81.68	200.00												
Mainline						1066.67	118.52		80.00		37.04	51.85		
Inside Shoulders						177.78	19.75		13.33		6.17	8.64		
Outside Shoulders						177.78	19.75		13.33		6.17	8.64		
Sta. 850+81.68	Sta. 851+94.18	112.50												
Mainline						600.00			45.00		20.83	43.75		
Shoulders						300.00			22.50		10.42	21.88		
Sta. 851+94.18	Sta. 852+56.68	62.50												
Mainline						333.33			25.00		19.68			
Shoulders						166.67			12.50		9.84			
John Brown Road														
At-Grade Intersections						1120.92	89.28		84.07		41.24	54.10		
Shoulders						135.11	20.64		10.13		4.69	6.57		
At-Grade Crossing						1100.00	183.33		82.50		38.19	53.47		
Shoulders						401.85	66.97		30.14		13.95	19.53		
Dutch John Road														
At-Grade Intersections						1292.89	100.44		96.97		47.79	61.17		
Shoulders						154.22	23.56		11.57		5.35	7.50		
At-Grade Crossing						1079.10	179.85		80.93		37.47	52.46		
Shoulders						401.85	66.97		30.14		13.95	19.53		
Marsh Road														
At-Grade Intersections						1342.22	97.28		100.67		50.08	64.44		
Shoulders						140.89	21.52		10.57		4.89	6.85		
At-Grade Crossing						1060.00	176.67		79.50		36.81	51.53		
Shoulders						401.85	66.97		30.14		13.95	19.53		
Mendon Road														
At-Grade Intersections						990.22	84.10		74.27		36.12	47.73		
Shoulders						163.11	24.92		12.23		5.66	7.93		
At-Grade Crossing						1057.40	176.23		79.31		17.36	51.40		
Shoulders						401.85	66.97		30.14		13.95	19.53		
Boroff Road														
At-Grade Intersections						1073.33	86.27		80.50		39.58	51.29		
Shoulders						152.89	23.36		11.47		5.31	7.43		
At-Grade Crossing						1058.80	176.47		79.40		36.76	51.47		
Shoulders						401.85	66.97		30.14		13.95	19.53		
Ramp A														
Speed Change Lane			2329.76		3422.29		855.57	898.12		1368.92	118.83	166.36	6.65	183.59
One Way Ramp					501.37	1650.59	400.44	149.71	123.79	200.55	74.72	104.61		
Two Way Ramp					334.78	977.39	246.59	99.97	73.30	133.91	45.56	209.62		
Connector Transition														
Pavement						315.04	20.00		23.63		11.99	16.13		
Inside Shoulder						59.94	3.81		59.94		2.28	3.07		
Outside Shoulder					99.53		24.88	27.30		39.81	3.46	4.84		
Ramp Intersection Transition														
Pavement						372.13	20.99		27.91		14.82	18.11		
Outside Shoulder					127.61		31.90	37.01		51.04	4.43	6.20		
Sub-Totals Sheet 2			2329.76		4485.58	20127.67	3560.97	1212.11	1565.02	1794.23	863.29	1336.69	6.65	183.59

CALCULATED TAB
CHECKED LAB

PAVEMENT TABLE

VAN-30-11.24

DESIGN FILE : e:\dgn\v30\v30ptab.dgn
USERNAME : tbolenba
DATE : 05-OCT-1994
TIME : 13:15

PAVEMENT TABLE

Station		Length	202 Pavement Removed	203 Excavation Not Including Embankment	203 Subgrade Compaction	254 Pavement Planing, Bituminous	301 Bituminous Aggregate Base, AC-20	304 Aggregate Base, as per Plan	407 Tack Coat	408 Bituminous Prime Coat	446 Asphalt Concrete Surface Course, Type 1	446 Asphalt Concrete Intermediate Course, Type 2	Special 1 1/4" Micro-Silica Concrete Overlay	609 Curb, Type 1
From	To	Lin. Ft.	Sq. Yd.	Cu. Yd.	Sq. Yd.	Sq. Yd.	Cu. Yd.	Cu. Yd.	Gal.	Gal.	Cu. Yd.	Cu. Yd.	Cu. Yd.	
Ramp B														
Speed Change Lane						2368.34	401.67	6.95	177.63	11.11	83.20	116.48		
One Way Ramp					542.27	1734.54	424.66	161.93	130.09	216.91	79.06	110.68		
Two Way Ramp					365.67	1018.06	261.09	109.19	76.35	146.27	48.05	67.26		
Ramp Intersection Transition														
Pavement						538.84	20.99		40.41		23.79	22.84		
Outside Shoulder					154.53		38.63	44.81		61.81	5.37	7.51		
Ramp C														
Speed Change Lane			1038.03		1579.36	82.86	394.84	410.93		631.74	54.84	76.77	3.74	
One Way Ramp			360.89		797.98	784.14	330.19	212.23	58.81	319.19	54.93	76.91		
Two Way Ramp					298.81	870.70	219.82	89.23	65.30	119.52	881.08	56.85		
Ramp Intersection Transition														
Pavement						466.85	20.99		35.01		20.47	19.51		
Outside Shoulder					155.29		38.82	45.03		62.12	5.39	7.55		
Ramp D														
Speed Change Lane				4.45	117.06	4504.62	780.04	33.39	337.85	46.82	160.48	224.67		
One Way Ramp					509.85	1634.04	399.80	152.25	122.55	203.94	74.44	104.22		
Two Way Ramp					327.18	908.67	233.24	97.70	68.15	130.87	42.91	60.08		
Ramp Intersection Transition														
Pavement						458.33	20.99		34.37		19.10	21.40		
Outside Shoulder					217.35		54.34	63.03		86.94	7.55	10.57		
Ramp A - C.R. 418														
Speed Change Lane				4.45		3034.11	512.35	6.67	227.56	10.67	106.28	148.79		
Transition														
Sta. 848+81.68	Sta. 850+81.68													
Pavement						744.00	82.67		55.80		25.83	36.17		
Outside Shoulder						177.78	19.75		13.33		6.17	8.64		
Sta. 850+81.68	Sta. 851+00.00													
Pavement						78.52			5.89		2.73	7.78		
Outside Shoulder						16.28			1.22		0.57	1.61		
Sta. 851+00.00	Sta. 851+94.18													
Pavement						168.84			12.66		5.86	11.44		
Inside Shoulder						31.97			2.40		1.11	2.17		
Outside Shoulder						65.19			4.89		2.26	4.42		
Sta. 851+94.18	Sta. 852+56.68													
Pavement						112.04			8.40		6.61			
Inside Shoulder						21.22			1.59		1.25			
Outside Shoulder						51.98			1.95		1.53			
Ramp C - C.R. 418														
Speed Change Lane				4.63		1888.38	321.68	6.95	141.63	11.11	66.53	93.15		
Transition														
Sta. 848+70.53	Sta. 850+70.53													
Pavement						356.73	39.64		26.75		12.39	17.34		
Inside Shoulder						67.15	7.46		5.04		2.33	3.26		
Outside Shoulder						94.20	10.47		7.06		3.27	4.58		
Sta. 850+70.53	Sta. 851+83.03													
Pavement						200.00			15.00		6.94	14.58		
Shoulders						75.00			5.63		2.60	5.47		
Sta. 851+83.03	Sta. 852+45.53													
Pavement						111.11			8.33		6.56			
Shoulders						41.67			3.13		2.46			
Sub-Totals Sheet 19			1398.92	13.53	5065.35	22706.16	4634.13	1440.29	1694.78	2059.02	1823.94	1342.70	3.74	
Sub-Totals Sheet 17			11664.00	1868.11	17154.73	64934.94	33780.71	6367.50	12680.17	11345.36	6854.49	9619.40	33.33	2058.09
Sub-Totals Sheet 18			2329.76		4485.58	20127.67	3560.97	1212.11	1565.02	1794.23	863.29	1336.69	6.65	183.59
Grand Totals			15,392.68	1881.64	26,705.66	207,768.77	41,975.81	9019.90	15,939.97	15,198.61	9541.72	12,298.79	43.72	2241.68

CALCULATED TAB
CHECKED LAB

PAVEMENT TABLE

VAN-30-11.24

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161

DESIGN FILE : e:\dgn\v30\v30pt-tb.dgn
USERNAME : dsiebene
DATE : 07-OCT-1994
TIME : 10:27

PAVEMENT CALCULATIONS

U.S.R. 30

Sta.596+87.5 to Sta.598+00 (Transition)- = 112.5 Lin. Ft.

Mainline:

254 Pavement Planing:
2x(112.5)(24)(1/9) = 600.00 Sq.Yd.

407 Tack Coat:
2x(112.5)(24)(0.075)(1/9) = 45.00 Gal.

446 1¼" Asphalt, Type 1:
2x(112.5)(24)(1.25/12)(1/27) = 20.83 Cu.Yd.

446 Var. Asphalt, Type 2:
2x(112.5)(24)[(3.75+1.5)/24](1/27) = 43.75 Cu.Yd.

Shoulders:

203 Excavation:
2x(112.5)(6/12)(2.5)(1/27) = 10.42 Cu.Yd.

254 2¾"Pavement Planing:
2x(112.5)(12)(1/9) = 300.00 Sq.Yd.

304 6"Aggregate Base:
2x(112.5)(6/12)(2.5)(1/27) = 10.42 Cu.Yd.

407 Tack Coat:
2x(112.5)(0.075)(11.5)(1/9) = 21.56 Gal.

408 Prime Coat:
2x(112.5)(0.40)(2.5)(1/9) = 25.00 Gal.

446 1¼" Asphalt, Type1:
2x(112.5)(1.25/12)(14)(1/27) = 12.15 Cu.Yd.

446 Var. Asphalt, Type2:
2x(112.5)[(3.75+1.5)/24](14)(1/27) = 25.52 Cu.Yd.

Sta.598+00 to Sta.600+00 = 200.00 Lin. Ft.
(Transition)

Mainline:

254 2¾" Pavement Planing:
2x(200)(24)(1/9) =1066.67 Sq.Yd.

301 Bituminous Aggregate Base:
2x(2+6)(1/2)(1/12)(200)(24)(1/27) = 118.52 Cu.Yd.

407 Tack Coat:
2x(0.075)(200)(24)(1/9) = 80.00 Gal.

446 1¼" Asphalt, Type 1:
2x(200)(1.25/12)(24)(1/27) = 37.04 Cu.Yd.

446 1¾" Asphalt, Type 2:
2x(200)(1.75/12)(24)(1/27) = 51.85 Cu.Yd.

Shoulders:

203 Excavation:
2x(200)(6/12)(2.5)(1/27) = 18.52 Cu.Yd.

254 2¾" Pavement Planing:
2x(200)(12)(1/9) = 533.33 Sq.Yd.

301 Bituminous Aggregate Base:
2x(2+6)(1/2)(1/12)(200)(14)(1/27) = 69.14 Cu.Yd.

304 6" Aggregate Base:
2x(200)(6/12)(2.5)(1/27) = 18.52 Cu.Yd.

407 Tack Coat:
2x(0.075)(200)(11.5)(1/9) = 38.33 Gal.

408 Prime Coat:
2x(0.4)(200)(2.5)(1/9) = 44.44 Gal.

446 1¼" Asphalt, Type1:
2x(200)(1.25/12)(14)(1/27) = 21.60 Cu.Yd.

446 1¾" Asphalt, Type2:
2x(200)(1.75/12)(14)(1/27) = 30.25 Cu.Yd.

Sta.600+00.00 to Sta.625+00.00 =2500.00 Lin. Ft.

Mainline:

254 2¾" Pavement Planing:
2x(2500)(24)(1/9) =13333.33 Sq.Yd.

301 6" Bituminous Aggregate Base:
2x(2500)(6/12)(24)(1/27) =2222.22 Cu.Yd.

407 Tack Coat:
2x(0.075)(2500)(24)(1/9) =1000.00 Gal.

446 1¼" Asphalt, Type1:
2x(2500)(1.25/12)(24)(1/27) = 462.96 Cu.Yd.

446 1¾" Asphalt, Type2:
2x(2500)(1.75/12)(24)(1/27) = 648.15 Cu.Yd.

Inside Shoulders:

Deductions for John Brown Rd. Intersection:
Sta.607+39.48 to Sta.612+25.64 Rt., Length = 486.16 Lin.Ft.
Sta.610+89.48 to Sta.615+75.46 Lt., Length = 485.98 Lin.Ft.

254 Pavement Planing:
(4)(4027.86)(1/9) =1790.16 Sq.Yd.

407 Tack Coat:
(0.075)(4027.86)((1/9)(4) = 134.26 Gal.

446 1¼" Asphalt, Type1:
(4)(4027.86)(1.25/12)(1/27) = 62.16 Cu.Yd.

446 1¾" Asphalt, Type2:
(4)(4027.86)(1.75/12)(1/27) = 87.02 Cu.Yd.

Outside Shoulders:

Deductions for John Brown Rd. Intersection:
Sta.611+08.62 to Sta.612+39.12 Rt., Length = 130.5 Lin.Ft.
Sta.610+75.82 to Sta.612+06.32 Lt., Length = 130.5 Lin.Ft.

203 Excavation:
(2.5)(4739)(.5)(1/27) = 221.25 Cu.Yd.

254 2¾" Pavement Planing:
(8)(4739)(1/9) =4212.44 Sq.Yd.

301 6" Bituminous Aggregate Base:
(4739)(6/12)(10)(1/27) = 877.59 Cu.Yd.

304 6" Aggregate Base:
(4739+40)(6/12)(2.5)(1/27) = 221.25 Cu.Yd.

407 Tack Coat:
(0.075)(4739)(7.5)(1/9) = 296.19 Gal.

408 Prime Coat:
(4739+40)(2.5)(0.40)(1/9) = 531.00 Gal.

446 1¼" Asphalt, Type1:
(10)(4739)(1.25/12)(1/27) = 182.83 Cu.Yd.

446 1¾" Asphalt, Type2:
(10)(4739)(1.75/12)(1/27) = 255.96 Cu.Yd.

Sta.625+00 to Sta.629+89.88 =489.88 Lin. Ft.

Mainline:

202 Pavement Removed:
2x(489.88)(24)(1/9) =2612.69 Sq.Yd.

203 Subgrade Compaction:
2x(24)(1/9)(489.88) =2612.69 Sq.Yd.

301 9" Bituminous Aggregate Base:
2x(9/12)(24)(1/27)(489.88) =653.17 Cu.Yd.

304 9" Aggregate Base:
2x(9/12)(24)(1/27)(489.88) =653.17 Cu.Yd.

408 Prime Coat:
2x(24)(0.40)(1/9)(489.88) =1045.08 Gal.

446 1¼" Asphalt, Type1:
2x(24)(1.25/12)(1/27)(489.88) = 90.72 Cu. Yd.

446 1¾" Asphalt, Type2:
2x(24)(1.75/12)(1/27)(489.88) = 127.01 Cu.Yd.

Shoulders:

203 Subgrade Compaction:
2x(489.88)(14)(1/9) =1524.07 Sq.Yd.

301 9" Bituminous Aggregate Base:
2x(489.88)(9/12)(14)(1/27) = 381.02 Cu.Yd.

304 Aggregate Base:
2x(489.88)(9/12)(14)(1/27)
+2x(489.88)(1/2)(5.5/12)(7.5)(1/27)
+2x(489.88)(1/2)(1/12)(1.5)(1/27) = 445.65 Cu.Yd.

408 Prime Coat:
2X(489.88)(14)(0.40)(1/9) = 609.63 Gal.

446 1¼" Asphalt, Type1:
2X(489.88)(14)(1.25/12)(1/27) = 52.92 Cu.Yd.

446 1¾" Asphalt, Type2:
2x(489.88)(14)(1.75/12)(1/27) = 74.09 Cu.Yd.

Sta.629+89.88 to Sta.631+26.12 =136.24 Lin. Ft.

Deduction for Structure No. VAN-30-1181:
Sta.630+14.88 to Sta.631+01.12 = 86.24 Lin. Ft.

Approach Slabs:

254 Pavement Planing:
2x(50)(24)(1/9) = 266.67 Sq.Yd.

Item Special - Micro-Silica Overlay:
2x(24)(1.25+1.75)(1/2)(1/12)(1/27)(50) = 11.11 Cu.Yd.

Shoulders:

301 9" Bituminous Aggregate Base:
2x(9/12)(14)(1/27)(50) = 38.89 Cu.Yd.

304 Aggregate Base:
2x(9/12)(14)(1/27)(50)
+2x(50)(1/2)(5.5/12)(7.5)(1/27)
+2x(50)(1/2)(1/12)(1.5)(1/27) = 45.49 Cu.Yd.

203 Subgrade Compaction:
(2)(14)(50)(1/9) = 155.56 Sq. Yd.

408 Prime Coat:
2x(14)(0.40)(1/9)(50) = 62.22 Gal.

446 1¼" Asphalt, Type1:
2x(14)(1.25/12)(1/27)(50) = 5.40 Cu. Yd.

446 1¾" Asphalt, Type2:
2x(14)(1.75/12)(1/27)(50) = 7.56 Cu.Yd.

DESIGN FILE : e:\dgn\v30\v30pcalc.dgn
USERNAME : tbolenba
DATE : 05-OCT-1994
TIME : 14:08

PAVEMENT CALCULATIONS

Sta.631+26.12 to Sta.635+00 **=373.88 Lin. Ft.**

Mainline:

202 Pavement Removed:
2x(373.88)(24)(1/9) =1994.03 Sq.Yd.

203 Subgrade Compaction:
2x(24)(1/9)(373.88) =1994.03 Sq.Yd.

301 9" Bituminous Aggregate Base:
2x(9/12)(24)(1/27)(373.88) =498.51 Cu.Yd.

304 9" Aggregate Base:
2x(9/12)(24)(1/27)(373.88) =498.51 Cu.Yd.

408 Prime Coat:
2x(24)(0.40)(1/9)(373.88) = 797.61 Gal.

446 1¼" Asphalt, Type1:
2x(24)(1.25/12)(1/27)(373.88) = 69.24 Cu. Yd.

446 1¾" Asphalt, Type2:
2x(24)(1.75/12)(1/27)(373.88) = 96.93 Cu.Yd.

Shoulders:

203 Subgrade Compaction:
2x(373.88)(14)(1/9) =1163.18 Sq.Yd.

301 9" Bituminous Aggregate Base:
2x(373.88)(9/12)(14)(1/27) = 290.80 Cu.Yd.

304 Aggregate Base:
2x(373.88)(9/12)(14)(1/27)
+2x(373.88)(1/2)(5.5/12)(7.5)(1/27)
+2x(373.88)(1/2)(1/12)(1.5)(1/27) = 340.13 Cu.Yd.

408 Prime Coat:
2X(373.88)(14)(0.40)(1/9) = 465.27 Gal.

446 1¼" Asphalt, Type1:
2X(373.88)(14)(1.25/12)(1/27) = 40.39 Cu.Yd.

446 1¾" Asphalt, Type2:
2x(373.88)(14)(1.75/12)(1/27) = 56.54 Cu.Yd.

Sta.635+00 to Sta.676+33.24 **=4133.24 Lin. Ft.**

Mainline:

254 2¾" Pavement Planing:
2x(4133.24)(24)(1/9) =22043.94 Sq.Yd.

301 6" Bituminous Aggregate Base:
2x(4133.24)(6/12)(24)(1/27) =3674.00 Cu.Yd.

407 Tack Coat:
2x(0.075)(4133.24)(24)(1/9) =1653.30 Gal.

446 1¼" Asphalt, Type1:
2x(4133.24)(1.25/12)(24)(1/27) = 765.42 Cu.Yd.

446 1¾" Asphalt, Type2:
2x(4133.24)(1.75/12)(24)(1/27) =1071.58 Cu.Yd.

Inside Shoulders:

Deductions for Dutch John Intersection Shoulders:
Sta.662+98.31 to Sta.667+81.59 Rt., Length = 483.28 Lin.Ft.
Sta.666+48.31 to Sta.671+31.59 Lt., Length = 483.28 Lin.Ft.

254 2¾" Pavement Planing:
(4)(7299.92)(1/9) =3244.41 Sq.Yd.

Sta.635+00 to Sta.676+33.24 - (Continued)

301 6" Aggregate Base,Bituminous:
(7299.92)(6/12)(4)(1/27) = 540.73 Cu.Yd.

407 Tack Coat:
(0.075)(7299.92)(4)(1/9) = 243.33 Gal.

446 1¼" Asphalt, Type1:
(4)(7299.92)(1.25/12)(1/27) = 112.65 Cu.Yd.

446 1¾" Asphalt, Type2:
(4)(7299.92)(1.75/12)(1/27) = 157.71 Cu.Yd.

Outside Shoulders:

Deductions for Dutch John Intersection Shoulders:
Sta.666+66.13 to Sta.668+12.17 Rt., Length = 146.04 Lin.Ft.
Sta.666+15.99 to Sta.667+64.53 Lt., Length = 148.54 Lin.Ft.

Curb:
Sta.668+25 to Sta.676+33.34 Rt., Length = 808.34 Lin.Ft.
Sta.670+50 to Sta.676+33.34 Lt., Length = 583.34 Lin.Ft.

203 Excavation:
(2.5)(7971.90+40-1391.68)(0.5)(1/27)
+(1391.68)(5.25)(6/12)(1/27) = 441.79 Cu. Yd.

301 6"Bituminous Aggregate Base:
(7971.90-1391.68)(6/12)(10)(1/27)
+(1391.68)(6/12)(12.75)(1/27) = 1547.15 Cu.Yd.

304 6" Aggregate Base:
(7971.90+40-1391.68)(6/12)(2.5)(1/27)
+(1391.68)(5.25)(6/12)(1/27) = 441.79 Cu. Yd.

407: Tack Coat:
(0.075)(7971.90)(7.5)(1/9) = 498.24 Gal.

408 Prime Coat:
(7971.90+40-1391.68)(2.5)(0.40)(1/9)
+(1391.68)(5.25)(0.40)(1/9) = 1060.31 Cu.Yd.

446 1¼" Asphalt, Type1:
(7971.90-1391.68)(10)(1.25/12)(1/27)
+(1391.68)(12.75)(1.25/12)(1/27) = 322.32 Cu.Yd.

446 1¾" Asphalt, Type2:
(7971.90-1391.68)(10)(1.75/12)(1/27)
+(1391.68)(12.75)(1.75/12)(1/27) = 451.25 Cu.Yd.

609 Curb, Type 1:
(808.34+583.34) = 1391.68 Lin. Ft.

Sta.676+33.24 to Sta.680+33.24 **=400.00 Lin. Ft.**

Mainline:

202 Pavement Removed:
(400)(24)X2(1/9) = 2133.33 Sq. Yd.

203 Subgrade Compaction:
2x(400)(24)(1/9) =2133.33 Sq.Yd.

301 9" Bituminous Aggregate Base:
2x(400)(9/12)(24)(1/27) = 533.33 Cu.Yd.

304 9" Aggregate Base:
2x(400)(9/12)(24)(1/27) = 533.33 Cu.Yd.

408 Prime Coat:
2x(400)(24)(0.40)(1/9) = 853.33 Gal.

446 1¼" Asphalt, Type1:
2x(400)(24)(1.25/12)(1/27) = 74.07 Cu.Yd.

446 1¾" Asphalt, Type2:
2x(400)(24)(1.75/12)(1/27) = 103.70 Cu.Yd.

Inside Shoulders:

203 Subgrade Compaction:
(800)(4)(1/9) = 355.56 Sq. Yd.

301 9" Aggregate Base,Bituminous:
(800)(9/12)(4)(1/27) = 88.89 Cu.Yd.

304 Aggregate Base:
(800)(4)(9/12)(1/27)+
1/2(800)(1.5)(1/12)(1/27) = 90.74 Cu.Yd.

408 Prime Coat:
(800)(4)(0.40)(1/9) = 142.22 Gal.

446 1¼" Asphalt, Type1:
(4)(800)(1.25/12)(1/27) = 12.35 Cu.Yd.

446 1¾" Asphalt, Type2:
(4)(800)(1.75/12)(1/27) = 17.28 Cu.Yd.

Outside Shoulders:

Deduction for Ramp A Speed Change Lane: =158.59 Lin Ft.
Sta. 678+74.65 to Sta. 680+33.24 Lt.

203 Subgrade Compaction:
(641.41)(12.75)(1/9) = 908.66 Sq.Yd.

301 9" Bituminous Aggregate Base:
(641.41)(9/12)(12.75)(1/27) = 227.17 Cu.Yd.

304 Aggregate Base:
(641.41)(9/12)(12.75)(1/27)+
1/2(641.41)(10.25)(5.5/12)(1/27) = 282.97 Cu.Yd.

408 Prime Coat:
(641.41)(12.75)(0.40)(1/9) = 363.47 Gal.

446 1¼" Asphalt, Type1:
(641.41)(12.75)(1.25/12)(1/27) = 31.55 Cu.Yd.

446 1¾" Asphalt, Type2:
(641.41)(12.75)(1.75/12)(1/27) = 44.17 Cu.Yd.

609 Curb, Type 1: 2(400)+158.59 = 641.41 Lin. Ft.

Sta.680+33.24 to Sta.683+23.26 **= 290.02 Lin. Ft.**

Deduction for Structure No. VAN-30-12.76:
Sta. 680+58.24 to Sta. 682+98.26 = 240.02 Lin. Ft.

Approach Slabs:

254 Pavement Planing:
2X(24)(50)(1/9) = 266.67 Sq.Yd.

Item Special-Micro-Silica Overlay:
2X(24)(50)(1.25+1.75)(1/2)(1/12)(1/27) = 11.11 Cu.Yd.

Shoulders:
Deduction for Ramp A Speed Change Lane Outside Shoulder:
Sta. 680+33.24 to Sta. 683+23.26 Lt.
Curb:
Sta. 680+33.24 to Sta. 680+58.24 Rt Length= 641.41 Lin. Ft.

301 9" Bituminous Aggregate Base:
[(50)(14)+(50)(4)](9/12)(1/27) = 25.00 Cu. Yd.

304 Aggregate Base:
[(50)(14)+(50)(4)](9/12)(1/27)
+2X(50)(1/2)(1/12)(1.5)(1/27)
+(25)(1/2)(5.5/12))(10.25)(1/27)
+(25)(1/2)(5.5/12)(7.5)(1/27) = 29.00 Cu. Yd.

203 Subgrade Compaction:
[(50)(14)+(50)(4)](1/9) = 100.00 Sq.Yd.

408 Prime Coat:
[(50)(14)+(50)(4)](0.40)(1/9) = 40.00 Gal.

446 1¼" Asphalt, Type1:
[(50)(14)+(50)(4)]
(1.25/12)(1/27) = 3.47 Cu.Yd.

446 1¾" Asphalt, Type2:
[(50)(14)+(50)(4)]
(1.75/12)(1/27) = 4.86 Cu.Yd.

609 Curb, Type 1: 25 = 25.00 Lin. Ft.

DESIGN FILE : e:\dgn\v30\v30pcalc.dgn
USERNAME : tbolenba
DATE : 06-OCT-1994
TIME : 10:16

CALC: BH
CHECKED: LAB

PAVEMENT CALCULATIONS

VAN-30-11.24

PAVEMENT CALCULATIONS

Sta.683+23.26 to Sta.688+25.91 = 502.65 Lin. Ft.

Mainline:

202 Pavement Removed:
2x(502.65)(24)(1/9) =2680.80 Sq.Yd.

203 Subgrade Compaction:
2x(502.65)(24)(1/9) =2680.80 Sq.Yd.

301 9" Bituminous Aggregate Base:
2x(502.65)(9/12)(24)(1/27) = 670.20 Cu.Yd.

304 9" Aggregate Base:
2x(502.65)(9/12)(24)(1/27) = 670.20 Cu.Yd.

408 Prime Coat:
2x(502.65)(24)(0.40)(1/9) =1072.32 Gal.

446 1¼" Asphalt, Type1:
2x(502.65)(24)(1.25/12)(1/27) = 93.08 Cu.Yd.

446 1¾" Asphalt, Type2:
2x(502.65)(24)(1.75/12)(1/27) = 130.32 Cu.Yd.

Inside Shoulders:

203 Subgrade Compaction:
2x(502.65)(4)(1/9) = 446.80 Sq.Yd.

301 9" Bituminous Aggregate Base:
(1005.30)(9/12)(4)(1/27) = 111.70 Cu.Yd.

304 Aggregate Base:
(1005.30)(4)(9/12)(1/27)+
(1/2)(1005.30)(1.5)(1/12)(1/27) = 114.03 Cu.Yd.

408 Prime Coat:
(1005.30)(4)(0.40)(1/9) = 178.72 Gal.

446 1¼" Asphalt, Type1:
(4)(1005.30)(1.25/12)(1/27) = 15.51 Cu.Yd.

446 1¾" Asphalt, Type2:
(4)(1005.30)(1.75/12)(1/27) = 21.72 Cu.Yd.

Outside Shoulders:
Deduction for Ramp A & Ramp C:
Sta. 683+23.26 to Sta. 688+25.91 Lt. Length = 502.65
Sta. 684+79.64 to Sta. 688+25.91 Rt. Length = 346.27

203 Subgrade Compaction:
(156.38)(10)(1/9) = 173.76 Sq.Yd.

301 9" Bituminous Aggregate Base:
(156.38)(9/12)(10)(1/27) = 43.44 Cu.Yd.

304 Aggregate Base:
(156.38)(9/12)(10)(1/27)+
1/2(156.38)(7.5)(5.5/12)(1/27) = 53.39 Cu.Yd.

408 Prime Coat:
(156.38)(10)(0.40)(1/9) = 69.50 Gal.

446 1¼" Asphalt, Type1:
(156.38)(10)(1.25/12)(1/27) = 6.03 Cu.Yd.

446 1¾" Asphalt, Type2:
(156.38)(10)(1.75/12)(1/27) = 8.45 Cu.Yd.

Sta.688+25.91 to Sta.690+79.41 = 253.50 Lin. Ft.

Deduction for Structure No. VAN-30-1292: = 203.50 Lin. Ft.
Sta. 688+50.91 to Sta. 690+54.41

Approach Slabs:

254 Pavement Planing:
2x(24)(50)(1/9) = 266.67 Sq.Yd.

Item Special - Micro-Silica Overlay:
2x(24)(50)(1.25+1.75)(1/2)(11/12)(1/27) = 11.11 Cu. Yd.

Shoulders:
Deduction for Ramps A & Ramp C Outside Shoulder:
Sta. 688+25.91 to Sta. 690+79.41 Lt. & Rt.

301 9" Bituminous Aggregate Base:
2x(50)(4)(9/12)(1/27) = 11.11 Cu. Yd.

304 Aggregate Base:
2x(50)(4)(9/12)(1/27)
+2x(1/2)(1/12)(1.5)(50)(1/27) = 11.34 Cu. Yd.

203 Subgrade Compaction:
2x(50)(4)(1+9) = 44.44 Sq. Yd.

408 Prime Coat:
2x(50)(4)(1/9)(0.40) = 17.78 Gal.

446 1¼" Asphalt, Type1:
2x(50)(4)(1.25/12)(1/27) = 1.54 Cu. Yd.

446 1¾" Asphalt, Type2:
2x(50)(4)(1.75/12)(1/27) = 2.16 Cu. Yd.

Sta.690+79.41 to Sta.695+00 = 420.59 Lin. Ft.

Mainline:

202 Pavement Removed:
2x(420.59)(24)(1/9) =2243.15 Sq.Yd.

203 Subgrade Compaction:
2x(420.59)(24)(1/9) =2243.15 Sq.Yd.

301 9" Bituminous Aggregate Base:
2x(420.59)(9/12)(24)(1/27) = 560.79 Cu.Yd.

304 9" Aggregate Base:
2x(420.59)(9/12)(24)(1/27) = 560.79 Cu.Yd.

408 Prime Coat:
2x(420.59)(24)(0.40)(1/9) = 897.26 Gal.

446 1¼" Asphalt, Type1:
2x(420.59)(24)(1.25/12)(1/27) = 77.89 Cu.Yd.

446 1¾" Asphalt, Type2:
2x(420.59)(24)(1.75/12)(1/27) = 109.04 Cu.Yd.

Inside Shoulders:

203 Subgrade Compaction:
2x(420.59)(4)(1/9) = 373.86 Sq.Yd.

301 9" Bituminous Aggregate Base:
(841.18)(9/12)(4)(1/27) = 93.46 Cu.Yd.

304 Aggregate Base:
(841.18)(4)(9/12)(1/27)+
(1/2)(841.18)(1.5)(1/12)(1/27) = 95.41 Cu.Yd.

408 Prime Coat:
(841.18)(4)(0.40)(1/9) = 149.54 Gal.

446 1¼" Asphalt, Type1:
(4)(841.18)(1.25/12)(1/27) = 12.98 Cu.Yd.

446 1¾" Asphalt, Type2:
(4)(841.18)(1.75/12)(1/27) = 18.17 Cu.Yd.

Outside Shoulders:

Deduction for Ramp A & Ramp C: = 620.82 Lin Ft.
Sta. 690+79.41 to Sta. 695+00
Sta. 690+79.41 to Sta. 692+79.64

203 Subgrade Compaction:
(220.36)(10)(1/9) = 244.84 Sq.Yd.

301 9" Bituminous Aggregate Base:
(220.36)(9/12)(10)(1/27) = 61.21 Cu.Yd.

304 Aggregate Base:
(220.36)(9/12)(10)(1/27)+
(1/2)(220.36)(7.5)(5.5/12)(1/27) = 75.24 Cu.Yd.

408 Prime Coat:
(220.36)(10)(0.40)(1/9) = 97.94 Gal.

446 1¼" Asphalt, Type1:
(220.36)(10)(1.25/12)(1/27) = 8.50 Cu.Yd.

446 1¾" Asphalt, Type2:
(220.36)(10)(1.75/12)(1/27) = 11.90 Cu.Yd.

Sta.695+00 to Sta.819+50 =12450.00 Lin. Ft.

Mainline:

254 2¾" Pavement Planing:
2x(12450)(24)(1/9) =66400.00 Sq.Yd.

301 6" Bituminous Aggregate Base:
2x(12450)(6/12)(24)(1/27) =11066.66 Cu.Yd.

407 Tack Coat:
2x(0.075)(12450)(24)(1/9) =4980.00 Gal.

446 1¼" Asphalt, Type1:
2x(12450)(1.25/12)(24)(1/27) =2305.56 Cu.Yd.

446 1¾" Asphalt, Type2:
2x(12450)(1.75/12)(24)(1/27) =3227.78 Cu.Yd.

Outside Shoulders:

Deductions for Ramp B & Ramp D:
Sta. 704+00 to Sta. 712+00 Lt. Length = 800 Lin. Ft.
Sta. 702+24 to Sta. 718+52.45 Rt. Length = 1628.45 Lin. Ft.

Deductions for Marsh,Mendon and Boroff Intersections:
Sta.719+88.24 to Sta.721+32.79 Lt., Length = 144.55 Lin.Ft.
Sta.719+94.67 to Sta.721+38.72 Rt., Length = 144.05 Lin.Ft.
Sta.773+02.01 to Sta.774+42.02 Rt., Length = 140.01 Lin.Ft.
Sta.772+97.57 to Sta.774+37.59 Lt., Length = 140.02 Lin.Ft.
Sta.799+39.70 to Sta.800+79.77 Rt., Length = 140.07 Lin.Ft.
Sta.799+47.33 to Sta.800+87.40 Lt., Length = 140.07 Lin.Ft.

203 Excavation:
(2.5)(21622.78)(.5)(1/27) =1001.05 Cu.Yd.

254 2¾" Pavement Planing:
(8)(21622.78)(1/9) =19220.25 Sq.Yd.

301 6" Bituminous Aggregate Base:
(21622.78)(6/12)(10)(1/27) =4004.22 Cu.Yd.

304 6" Aggregate Base:
(21622.78)(6/12)(2.5)(1/27) =1001.05 Cu.Yd.

407 Tack Coat:
(0.075)(21622.78)(7.5)(1/9) =1351.42 Gal.

408 Prime Coat:
(21622.78)(2.5)(0.40)(1/9) =2402.53 Gal.

446 1¼" Asphalt, Type1:
(10)(21622.78)(1.25/12)(1/27) = 834.21 Cu.Yd.

446 1¾" Asphalt, Type2:
(10)(21622.78)(1.75/12)(1/27) =1167.90 Cu.Yd.

Inside Shoulders:

Deductions for Marsh,Mendon and Boroff Intersections:
Sta.716+48.60 to Sta.721+28.36 Rt., Length = 479.76 Lin.Ft.
Sta.769+54.98 to Sta.774+34.62 Rt., Length = 479.64 Lin.Ft.
Sta.795+98.63 to Sta.800+78.47 Rt., Length = 479.84 Lin.Ft.
Sta.719+98.60 to Sta.724+78.36 Lt., Length = 479.76 Lin.Ft.
Sta.773+04.98 to Sta.777+84.62 Lt., Length = 479.64 Lin.Ft.
Sta.799+48.63 to Sta.804+28.47 Lt., Length = 479.84 Lin.Ft.

254 2¾" Pavement Planing:
(4)(22021.52)(1/9) =9787.34 Sq.Yd.

CALC. BH CHECKED: LAB

PAVEMENT CALCULATIONS

VAN-30-11.24

22
161

DESIGN FILE : e:\dgn\v30\v30pcalc.dgn
USERNAME : tbolenba

DATE : 05-OCT-1994
TIME : 14:08

PAVEMENT CALCULATIONS

Sta.695+00 to Sta.819+50-(Continued):

301 6"Bituminous Aggregate Base:
(22021.52)(6/12)(4)(1/27) =1631.22 Cu.Yd.

407 Tack Coat:
(0.075)(22021.52)(4)(1/9) = 734.05 Gal.

446 1¼" Asphalt, Type1:
(4)(22021.52)(1.25/12)(1/27) = 339.84 Cu.Yd.

446 1¾" Asphalt, Type2:
(4)(22021.52)(1.75/12)(1/27) = 475.77 Cu.Yd.

Sta.819+50 to Sta.848+81.68 =2931.68 Lin. Ft.

Mainline:

254 2¾" Pavement Planing:
2x(2931.68)(24)(1/9) =15635.63 Sq.Yd.

301 6"Bituminous Aggregate Base:
2x(2931.68)(6/12)(24)(1/27) =2605.94 Cu.Yd.

407 Tack Coat:
2x(0.075)(2931.68)(24)(1/9) =1172.67 Gal.

446 1¼" Asphalt, Type1:
2x(2931.68)(1.25/12)(24)(1/27) = 542.90 Cu.Yd.

446 1¾" Asphalt, Type2:
2x(2931.68)(1.75/12)(24)(1/27) = 760.07 Cu.Yd.

Outside Shoulders:
Deductions for Ramp A & Ramp C:
Sta. 836+00 for Sta. 848+81.68
Sta. 840+81.68 to Sta. 848+81.68

203 Excavation:
(2.5)(3781.68)(.5)(1/27) = 175.08 Cu.Yd.

254 2¾" Pavement Planing:
(8)(3781.68)(1/9) =3361.49 Sq.Yd.

301 6" Bituminous Aggregate Base:
(3781.68)(6/12)(10)(1/27) = 700.31 Cu.Yd.

304 6" Aggregate Base:
(3781.68)(6/12)(2.5)(1/27) = 175.08 Cu.Yd.

407 Tack Coat:
(0.075)(3781.68)(7.5)(1/9) = 236.36 Gal.

408 Prime Coat:
(3781.68)(2.5)(0.40)(1/9) = 420.19 Gal.

446 1¼" Asphalt, Type1:
(10)(3781.68)(1.25/12)(1/27) = 145.90 Cu.Yd.

446 1¾" Asphalt, Type2:
(10)(3781.68)(1.75/12)(1/27) = 204.26 Cu.Yd.

Inside Shoulders:

254 2¾" Pavement Planing:
2x(4)(2931.68)(1/9) = 2605.94 Sq.Yd.

301 6" Bituminous Aggregate Base:
2x(2931.68)(6/12)(4)(1/27) = 434.32 Cu.Yd.

407 Tack Coat:
2x(0.075)(2931.52)(4)(1/9) = 195.46 Gal.

446 1¼" Asphalt, Type1:
2x(4)(2931.68)(1.25/12)(1/27) = 90.48 Cu.Yd.

446 1¾" Asphalt, Type2:
2x(4)(2931.68)(1.75/12)(1/27) = 126.68 Cu.Yd.

Sta.848+81.68 to Sta.850+81.68 = 200.00 Lin. Ft.

Mainline:

254 2¾" Pavement Planing:
2x(200)(24)(1/9) =1066.67 Sq.Yd.

301 Bituminous Aggregate Base:
2x[(2+6)/2](1/12)(200)(24)(1/27) = 118.52 Cu.Yd.

407 Tack Coat:
2x(0.075)(200)(24)(1/9) = 80.00 Gal.

446 1¼" Asphalt, Type1:
2x(200)(1.25/12)(24)(1/27) = 37.04 Cu.Yd.

446 1¾" Asphalt, Type2:
2x(200)(1.75/12)(24)(1/27) = 51.85 Cu.Yd.

Inside Shoulder:

254 Pavement Planing:
(2)(200)(4)(1/9) = 177.78 Sq.Yd.

301 Bituminous Aggregate Base:
2x(2+6)(1/2)(1/12)(200)(4)(1/27) = 19.75 Cu.Yd.

407 Tack Coat:
2x(0.075)(200)(4)(1/9) = 13.33 Gal.

446 1¼" Asphalt, Type 1:
2x(200)(1.25/12)(4)(1/27) = 6.17 Cu. Yd.

446 1¾" Asphalt, Type 2:
2x(200)(1.75/12)(4)(1/27) = 8.64 Cu. Yd.

Sta. 848+81 to Sta. 850+81.68-(Continued):

Outside Shoulder:
Deduction for Ramp A:
Sta. 848+81.68 to Sta. 850+81.68, Lt.

254 Pavement Planing:
(200)(8)(1/9) = 177.78 Sq. Yd.

301 Bituminous Aggregate Base:
(2+6)(1/2)(1/12)(200)(8)(1/27) = 19.75 Cu. Yd.

407 Tack Coat:
(0.075)(200)(8)(1/9) = 13.33 Gal.

446 1¼" Asphalt, Type 1:
(200)(1.25/12)(8)(1/27) = 6.17 Cu. Yd.

446 1¾" Asphalt, Type 2:
(200)(1.75/12)(8)(1/27) = 8.64 Cu. Yd.

Sta.850+81.68 to Sta.851+94.18 = 112.50 Lin. Ft.

Mainline:

254 Pavement Planing:
2x(112.5)(24)(1/9) = 600.00 Sq.Yd.

407 Tack Coat:
2x(0.075)(112.5)(24)(1/9) = 45.00 Gal.

446 1¼" Asphalt, Type1:
2x(112.5)(1.25/12)(24)(1/27) = 20.83 Cu.Yd.

446 Asphalt, Type2:
2x(112.5)[(3.75+1.5)/2](1/12)(24)(1/27)=43.75 Cu.Yd.

Shoulders:

254 Pavement Planing:
2x(112.5)(12)(1/9) = 300.00 Sq. Yd.

407 Tack Coat:
2x(112.5)(12)(0.075)(1/9) = 22.5 Gal.

446 1¼"Asphalt, Type 1:
2x(112.5)(12)(1.25/12)(1/27) = 10.42 Cu. Yd.

446 Asphalt, Type 2:
2x(112.5)(3.75+1.5)(1/2)(1/12)(12)(1/27)= 21.88 Cu. Yd.

Sta.851+94.18 to Sta.852+56.68 = 62.50 Lin. Ft.

Mainline:

254 Pavement Planing:
2x(62.5)(24)(1/9) = 333.33 Sq.Yd.

407 Tack Coat:
2x(0.075)(62.5)(24)(1/9) = 25.00 Gal.

446 Asphalt, Type1:
2x(62.5)(1/12)[(2.75+1.5)/2](24)(1/27)=19.68 Cu.Yd.

Shoulders:

254 Pavement Planing:
2x(62.5)(12)(1/9) = 166.67 Sq. Yd.

407 Tack Coat:
2x(0.075)(62.5)(24)(1/9) = 12.50 Gal.

446 Asphalt, Type 1:
2x(62.5)(2.75+1.5)(1/2)(1/12)(12)(1/27)= 9.84 Cu. Yd.

John Brown Road:

At-Grade Intersections:

Pavement:

254 Pavement Planing:
[(7232)+(1856.25)+(1000)](1/9) =1120.92 Sq.Yd.

301 Bituminous Aggregate Base:
(7232)(1/12)[(6+2)/2](1/27) = 89.28 Cu.Yd.

407 Tack Coat:
[(7232)+(1856.25)+(1000)](1/9)(0.075) = 84.07 Gal.

446 Asphalt, Type1:
(7232+1856.25)(1.25/12)(1/27)
+(1000)(2.75+1.25)(1/2)(1/12)(1/27) = 41.24 Cu.Yd.

446 Asphalt, Type2:
(7232)(1.75/12)(1/27)
+(1856.25)(3.75+1.5)(1/2)(1/12)(1/27)= 54.10 Cu.Yd.

Shoulder:

254 Pavement Planing:
(1216)(1/9) = 135.11 Sq. Yd.

301 Bituminous Aggregate Base:
(1216)(6+5)(1/2)(1/12)(1/27) = 20.64 Cu. Yd.

407 Tack Coat:
(1216)(1/9)(0.075) = 10.13 Gal.

446 Asphalt, Type 1:
(1216)(1.25/12)(1/27) = 4.69 Cu. Yd.

446 Asphalt, Type 2:
(1216)(1.75/12)(1/27) = 6.57 Cu. Yd.

At-Grade Crossing:

Pavement:
Area of Pavement from Old Plans = 1100.00 Sq.Yd.

254 Pavement Planing:
(1100) = 1100.00 Sq.Yd.

At-Grade Crossing-(Continued):

Pavement:

301 6" Bituminous Aggregate Base:
(1100)(6/36) = 183.33 Cu.Yd.

407 Tack Coat:
(1100)(0.075) = 82.50 Gal.

446 1¼" Asphalt, Type1:
(1100)(1.25/36) = 38.19 Cu.Yd.

446 1¾" Asphalt, Type2:
(1100)(1.75/36) = 53.47 Cu.Yd.

Shoulders:
Length from Old Plans = 904.16 Lin. Ft.

254 Pavement Planing:
(904.16)(4)(1/9) = 401.85 Lin. Ft.

301 6" Bituminous Aggregate Base:
(904.16)(4)(6/12)(1/27) = 66.97 Cu. Yd.

407 Tack Coat:
(904.16)(4)(0.075)(1/9) = 30.14 Gal.

446 1¼" Asphalt, Type 1:
(904.16)(4)(1.25/12)(1/27) = 13.95 Cu. Yd.

446 1¾" Asphalt, Type 2:
(904.16)(4)(1.75/12)(1/27) = 19.53 Cu. Yd.

Dutch John Road:

At-Grade Intersections:

Pavement:

254 Pavement Planing:
[8136+2250.00+1250](1/9) =1292.89 Sq.Yd.

301 Bituminous Aggregate Base:
(8136)[(6+2)/(12(2))](1/27) = 100.44 Cu.Yd.

407 Tack Coat:
[8136+2250.00+1250](1/9)(0.075) = 96.97 Gal.

446 Asphalt, Type1:
(8136+2250.00)(1.25/12)(1/27)
+(1250)(2.75+1.25)(1/2)(1/12)(1/27) = 47.79 Cu.Yd.

446 Asphalt, Type2:
[(8136)(1.75/12)+(2250.00)[(3.75+1.5)/
(12(2))](1/27) = 62.17 Cu.Yd.

Shoulder:

254 Pavement Planing:
(1388)(1/9) = 154.22 Sq.Yd.

301 Bituminous Aggregate Base:
(1388)(6+5)(1/2)(1/12)(1/27) = 23.56 Cu.Yd.

407 Tack Coat
(1388)(0.075)(1/9) = 11.57 Gal.

446 Asphalt, Type1
(1388)(1.25/12)(1/27) = 5.35 Cu.Yd.

446 Asphalt, Type 2:
(1388)(1.75/12)(1/27) = 7.50 Cu.Yd.

At-Grade Crossing:

Pavement:
Area of Pavement from Old Plans = 1079.10 Sq.Yd.

254 Pavement Planing:
(1079.10) = 1079.10 Sq.Yd.

301 6" Bituminous Aggregate Base:
(1079.10)(6/36) = 179.85 Cu.Yd.

407 Tack Coat:
(1079.10)(0.075) = 80.93 Gal.

446 1¼" Asphalt, Type1:
(1079.10)(1.25/36) = 37.47 Cu.Yd.

446 1¾" Asphalt, Type2:
(1079.10)(1.75/36) = 52.46 Cu.Yd.

Shoulders:
Length of Shoulder from Old Plans = 904.16 Lin.Ft.

254 Pavement Planing:
(904.16)(4)(1/9) = 401.85 Sq.Yd.

301 6" Bituminous Aggregate Base:
(904.16)(4)(6/12)(1/27) = 66.97 Cu.Yd.

407 Tack Coat:
(904.16)(4)(0.075)(1/9) = 30.14 Gal.

446 1¼" Asphalt, Type 1:
(904.16)(4)(1.25/12)(1/27) = 13.95 Cu.Yd.

446 1¾" Asphalt, Type 2:
(904.16)(4)(1.75/12)(1/27) = 19.53 Cu.Yd.

Marsh Road:

At-Grade Intersections:

Pavement:

254 Pavement Planing:
[(7880)+(2700)+(1500)](1/9) =1342.22 Sq.Yd.

301 Bituminous Aggregate Base:
(7880)(1/12)((6+2)/2)(1/27) = 97.28 Cu.Yd.

407 Tack Coat:
[(7880)+(2700)+(1500)](1/9)(0.075) = 100.67 Gal.

446 Asphalt, Type1:
(7880+2700)(1.25/12)(1/27)
+(1500)(2.75+1.25)(1/2)(1/12)(1/27) = 50.08 Cu.Yd.

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PAVEMENT CALCULATIONS

Marsh Road-(Continued):

At-Grade Intersection:

Pavement:

446 Asphalt, Type2:
[(7880)(1.75/12)+(2700)(3.75+1.5)/(12(2))](1/27) = 64.44 Cu.Yd.

Shoulder:

254 Pavement Planing:
(1268)(1/9) = 140.89 Sq.Yd.

301 Bituminous Aggregate Base:
(1268)(6+5)(1/2)(1/12)(1/27) = 21.52 Cu.Yd.

407 Tack Coat:
(1268)(1/9)(0.075) = 10.57 Gal.

446 Asphalt, Type 1:
(1268)(1.25/12)(1/27) = 4.89 Cu.Yd.

446 Asphalt, Type 2:
(1268)(1.75/12)(1/27) = 6.85 Cu.Yd.

At-Grade Crossing (Marsh Rd.):

Pavement:

Area of Pavement from Old Plans = 1060 Sq.Yd.

254 Pavement Planing:
(1060)(1/9) = 1060.00 Sq.Yd.

301 6" Bituminous Aggregate Base:
(1060)(6/36) = 176.67 Cu.Yd.

407 Tack Coat:
(1060)(0.075) = 79.50 Gal.

446 1¼" Asphalt, Type1:
(1060)(1.25/36) = 36.81 Cu.Yd.

446 1¾" Asphalt, Type2:
(1060)(1.75/36) = 51.53 Cu.Yd.

Shoulders:

Length of shoulder from Old Plans = 904.16 Lin.Ft.

254 Pavement Planing:
(904.16)(4)(1/9) = 401.85 Sq.Yd.

301 6" Bituminous Aggregate Base:
(904.16)(4)(6/12)(1/27) = 66.97 Cu.Yd.

407 Tack Coat:
(904.16)(4)(0.075)(1/9) = 30.14 Gal.

446 1¼" Asphalt, Type 1:
(904.16)(4)(1.25/12)(1/27) = 13.95 Cu.Yd.

446 1¾" Asphalt, Type 2:
(904.16)(4)(1.75/12)(1/27) = 19.53 Cu.Yd.

Mendon Road:

At-Grade Intersection:

Pavement:

254 Pavement Planing:
[(6812)+(1350)+(750)](1/9) =990.22 Sq.Yd.

301 Bituminous Aggregate Base:
(6812)(1/12)((6+2)/2)(1/27) = 84.10 Cu.Yd.

407 Tack Coat:
[(6812)+(1350)+(750)](1/9)(0.075) = 74.27 Gal.

446 Asphalt, Type1:
(6812+1350)(1.25/12)(1/27) +(750)((2.75+1.25)(1/2)(1/12)(1/27) = 36.12 Cu.Yd.

446 Asphalt, Type2:
[(6812)(1.75/12)+(1350)((3.75+1.5)/12(2))](1/27) = 47.73 Cu.Yd.

Shoulder:

254 Pavement Planing:
(1468)(1/9) = 163.11 Sq.Yd.

301 Bituminous Aggregate Base:
(1468)(6+5)(1/2)(1/12)(1/27) = 24.92 Cu.Yd.

407 Tack Coat:
(1468)(1/9)(0.075) = 12.23 Gal.

446 Asphalt, Type 1:
(1468)(1.25/12)(1/27) = 5.66 Cu.Yd.

446 Asphalt, Type 2:
(1468)(1.75/12)(1/27) = 7.93 Cu.Yd.

At-Grade Crossing:

Pavement:

Area of Pavement from Old Plans = 1057.40 Sq.Yd.

254 Pavement Planing:
(1057.40) = 1057.40 Sq.Yd.

301 Bituminous Aggregate Base:
(1057.40)(6/36) = 176.23 Cu.Yd.

407 Tack Coat:
(1057.40)(0.075) = 79.31 Gal.

446 1¼" Asphalt, Type1:
(1057.40)(1.25/36) = 36.72 Cu.Yd.

446 1¾" Asphalt, Type2:
(1057.40)(1.75/36) = 51.40 Cu.Yd.

At-Grade Crossing:

Shoulders:

Length of Shoulders from Old Plans = 904.16 Lin.Ft.

254 Pavement Planing:
(904.16)(4)(1/9) = 401.85 Sq.Yd.

301 6" Bituminous Aggregate Base:
(904.16)(4)(6/12)(1/27) = 66.97 Cu.Yd.

407 Tack Coat:
(904.16)(4)(0.075)(1/9) = 30.14 Gal.

446 1¼" Asphalt, Type1:
(904.16)(4)(1.25/12)(1/27) = 13.95 Cu.Yd.

446 1¾" Asphalt, Type2:
(904.16)(1.75/12)(1/27) = 19.53 Cu.Yd.

Boroff Road:

At-Grade Intersection:

Pavement:

254 Pavement Planing:
[(6988)+(1672)+(1000)](1/9) =1073.33 Sq.Yd.

301 Bituminous Aggregate Base:
(6988)(1/12)((6+2)/2)(1/27) = 86.27 Cu.Yd.

407 Tack Coat:
[(6988)+(1672)+(1000)](1/9)(0.075) = 80.50 Gal.

446 Asphalt, Type1:
(6988+1672)(1.25/12)(1/27) +(1000)((2.75+1.25)(1/2)(1/12)(1/27)= 39.58 Cu.Yd.

446 Asphalt, Type2:
[(6988)(1.75/12)+(1672)((3.75+1.5)/12(2))](1/27) = 51.29 Cu.Yd.

Shoulder:

254 Pavement Planing:
(1376)(1/9) = 152.89 Sq.Yd.

301 Bituminous Aggregate Base:
(1376)(6+5)(1/2)(1/12)(1/27) = 23.36 Cu.Yd.

407 Tack Coat:
(1376)(1/9)(0.075) = 11.47 Gal.

446 Asphalt, Type 1:
(1376)(1.25/12)(1/27) = 5.31 Cu.Yd.

446 Asphalt, Type 2:
(1376)(1.75/12)(1/27) = 7.43 Cu.Yd.

At-Grade Crossing:

Pavement:

Area of Pavement from Old Plans = 1058.80 Sq.Yd.

254 Pavement Planing:
(1058.80) = 1058.80 Sq.Yd.

301 6" Bituminous Aggregate Base:
(1058.80)(6/36) = 176.47 Cu.Yd.

407 Tack Coat:
(1058.80)(0.075) = 79.40 Gal.

446 1¼" Asphalt, Type 1:
(1058.80)(1.25/36) = 36.76 Cu. Yd.

446 1¾" Asphalt, Type 2:
(1058.80)(1.75/36) = 51.47 Cu.Yd.

Shoulders:

Length of Shoulders from Old Plans = 904.16 Lin.Ft.

254 Pavement Planing:
(904.16)(4)(1/9) = 401.85 Sq.Yd.

301 6" Bituminous Aggregate Base:
(904.16)(4)(6/12)(1/27) = 66.97 Cu.Yd.

407 Tack Coat:
(904.16)(4)(0.075)(1/9) = 30.14 Gal.

446 1¼" Asphalt, Type 1:
(904.16)(4)(1.25/12)(1/27) = 13.95 Cu.Yd.

446 1¾" Asphalt, Type 2:
(904.16)(4)(1.75/12)(1/27) = 19.53 Cu.Yd.

Ramp "A" U.S.R. 127:

Speed Change Lane:

Area Summary:

Pavement Area = 2329.76 Sq.Yd.
Approach Slab Area = 159.64 Sq.Yd.
Shoulder Area = 1092.53 Sq.Yd.

Quantities:

202 Pavement Removed = 2329.76 Sq.Yd.

203 Subgrade Compaction:
2329.76+1092.53 = 3422.29 Sq.Yd.

301 Bituminous Aggregate Base:
(2329.76+1092.53)(9/12)(1/3) = 855.57 Cu.Yd.

Speed Change Lane-Continued:

Quantities:

304 Aggregate Base:
(2329.76+1092.53)(9/12)(1/3)
+(8.25+10.25)(1/2)(96)(4/12)(1/2)(1/27)
+(8.25)(62.59)(1/2)(4/12)(1/27)
+(8.25)(25)(4/12)(1/2)(1/27)
+(5.5)(25)(4/12)(1/2)(1/27)
+(1/2)(4/12)(5.5)(552.65)(1/27)
+[(300)(5.5)+(50)(5.5+3.5)(1/2)
+(65.35)(3.5)](4/12)(1/2)(1/27) = 898.12 Cu.Yd.

408 Prime Coat:
(2329.76+1092.53)(0.40) = 1368.92 Gal.

446 1¼"Asphalt, Type 1:
(2329.76+1092.53)(1.25/12)(1/3) = 118.83 Cu.Yd.

446 1¾" Asphalt, Type 2:
(2329.76+1092.53)(1.75/12)(1/3) = 166.36 Cu. Yd.

Item Special Micro-Silica Overlay:
(159.64)(1.25+1.75)(1/12)(1/2)(1/3) = 6.65 Cu.Yd.

609 Curb, Type1:
158.59+25 = 183.59 Lin.Ft.

One-Way Ramp:

Area Summary:

Pavement Area = 1383.61 Sq.Yd.
Inside Shoulder = 266.98 Sq.Yd.
Outside Shoulder Area = 501.37 Sq.Yd.

Quantities:

203 Subgrade Compaction:
501.37 = 501.37 Sq.Yd.

254 Pavement Planing:
(1383.61+266.98) = 1650.59 Sq.Yd.

301 Bituminous Aggregate Base::
(6/12)(1/3)(266.98+1383.61)
+(9/12)(1/3)(501.37) = 400.44 Cu.Yd.

304 Aggregate Base:
(9/12)(1/3)(501.37)
+(6/12)(1/2)(3.5)(504.66+247.40)(1/27)= 149.71 Cu.Yd.

407 Tack Coat:
(1383.61+266.98)(0.075) = 123.79 Gal.

408 Prime Coat:
(501.37)(0.40) = 200.55 Gal.

446 Asphalt, Type 1:
(1383.61+266.98+501.37)(1.25/12)(1/3)= 74.72 Cu.Yd.

446 Asphalt, Type 2:
(1383.61+266.98+501.37)(1.75/12)(1/3)=104.61 Cu.Yd.

Two-Way Ramp:

Area Summary:

Pavement = 977.39 Sq.Yd.
Outside Shoulder = 334.78 Sq.Yd.

Quantities:

203 Subgrade Compaction:
334.78 = 334.78 Sq.Yd.

254 Pavement Planing:
977.39 = 977.39 Sq.Yd.

301 Bituminous Aggregate Base:
(977.39)(6/12)(1/3)
+(334.78)(9/12)(1/3) = 246.59 Cu.Yd.

304 Aggregate Base:
(334.78)(9/12)(1/3)
+(3.5)(1/2)(6/12)(502.18)(1/27) = 99.97 Cu.Yd.

407 Tack Coat:
(977.39)(0.075) = 73.30 Gal.

408 Prime Coat:
(334.78)(0.40) = 133.91 Gal

446 1¼" Asphalt, Type 1:
(977.39+334.78)(1.25/12)(1/3) = 45.56 Cu.Yd.

446 1¾" Asphalt, Type 2:
(977.39+334.78)(1.75/12(1/3) = 209.62 Cu.Yd.

Connector Transition:
Sta. 206+74.20 to Sta. 208+49.20

Pavement:

254 Pavement Planing:
(16)(177.21)(1/9) = 315.04 Sq.Yd.

301 Bituminous Aggregate Base:
(16)(101.26)(6+2)(1/12)(1/2)(1/27) = 20.00 Cu.Yd.

407 Tack Coat:
(177.21)(16)(1/9)(0.075) = 23.63 Gal.

446 1¼" Asphalt, Type 1:
(101.26+56.96)(1.25/12)(16)(1/27)
+(2.75+2)(1/2)(1/12)(16)(18.99)(1/27)= 11.99 Cu.Yd.

446 1¾" Asphalt, Type 2:
(101.26)(16)(1.75/12)(1/27)
+(3.75+1.5)(1/2)(1/12)(16)(56.96)(1/27)= 16.13 Cu.Yd.

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PAVEMENT CALCULATIONS

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PAVEMENT CALCULATIONS

Connector Transition-(Continued):
Inside Shoulder:
254 Pavement Planing:
(3)(179.82)(1/9) = 59.94 Sq.Yd.
301 Bituminous Aggregate Base:
(3)(102.75)(6+2)(1/2)(1/12)(1/27) = 3.81 Cu.Yd.
407 Tack Coat:
(3)(179.82)(1/9) = 59.94 Gal.
446 1¼" Asphalt, Type I:
(3)(102.75+57.80)(1.25/12)(1/27)
+(3)(2.75+2)(1/2)(1/12)(19.27)(1/27)= 2.28 Cu.Yd.
446 1¾" Asphalt, Type 2:
(102.75)(3)(1.75/12)(1/27)
+(3.75+1.5)(1/2)(1/12)(3)(57.80)(1/27)= 3.07 Cu.Yd.
Outside Shoulder:
203 Subgrade Compaction:
(6)(74.65)(1/9)
+(6+3)(1/2)(99.52)(1/9) = 99.53 Sq.Yd.
301 Bituminous Aggregate Base:
(6)(9/12)(74.65)(1/27)
+(6+3)(1/2)(99.52)(9/12)(1/27) = 24.88 Cu.Yd.
304 Aggregate Base:
(6)(9/12)(74.65)(1/27)
+(6+3)(1/2)(99.52)(9/12)(1/27)
+(3.5)(6/12)(1/2)(74.65)(1/27) = 27.30 Cu.Yd.
408 Prime Coat:
[(6)(74.65)+(6+3)(1/2)(99.52)]
(1/9)(0.40) = 39.81 Gal.
446 1¼" Asphalt, Type I:
[(6)(74.65)+(6+3)(1/2)(99.52)]
(1.25/12)(1/27) = 3.46 Cu.Yd.
446 1¾" Asphalt, Type 2:
[(6)(74.65)+(6+3)(1/2)(99.52)]
(1.75/12)(1/27) = 4.84 Cu.Yd.

Ramp Intersection Transition:
Sta. 88+55.98 to Sta. 90+30.98 ℄ Ramp B
Pavement:
254 Pavement Planing:
372.13 = 372.13 Sq.Yd.
301 Bituminous Aggregate Base:
(188.89)(6+2)(1/12)(1/3)(1/2) = 20.99 Cu.Yd.
407 Tack Coat:
(372.13)(0.075) = 27.91 Gal.
446 1¼" Asphalt, Type I:
(188.89+122.38)(1.25/12)(1/3)
+(60.86)(2+2.75)(1/2)(1/12)(1/3) =14.82 Cu.Yd.
446 1¾" Asphalt, Type 2:
(188.89)(1.75/12)(1/3)
+(122.38)(3.75+1.5)(1/12)(1/2)(1/3) = 18.11 Cu.Yd.
Outside Shoulder:
203 Subgrade Compaction:
127.61 = 127.61 Sq.Yd.
301 Bituminous Aggregate Base:
(127.61)(9/12)(1/3) = 31.90 Cu.Yd.
304 Aggregate Base:
(127.61)(9/12)(1/3)(1.16) = 37.01 Cu.Yd.
408 Prime Coat:
(127.61)(0.40) = 51.04 Gal.
446 1¼" Asphalt, Type I:
(127.61)(1.25/12)(1/3) = 4.43 Cu.Yd.
446 1¾" Asphalt, Type 2:
(127.61)(1.75/12)(1/3) = 6.20 Cu. Yd.

Ramp B, U.S.R. 127:

Ramp Intersection Transition:
Sta. 88+55.98 to Sta. 90+30.98
Pavement:
254 Pavement Planing:
538.84 =538.84 Sq.Yd.
301 Bituminous Aggregate Base:
(188.89)(6+2)(1/12)(1/2)(1/3) = 20.99 Cu. Yd.
407 Tack Coat:
(538.84)(0.075) = 40.41 Gal.
446 Asphalt, Type I:
(188.89+187.25)(1.25/12)(1/3)
+(162.70)(2+2.75)(1/2)(1/12)(1/3) = 23.79 Cu.Yd.
446 Asphalt, Type 2:
(188.89)(1.75/12)(1/3)
+(187.25)(3.75+1.5)(1/2)(1/12)(1/3) = 22.84 Cu.Yd.
Outside Shoulder:
203 Subgrade Compaction:
154.53 = 154.53 Sq.Yd.
301 Bituminous Aggregate Base:
(154.53)(9/12)(1/3) = 38.63 Cu.Yd.
304 Aggregate Base:
(154.53)(9/12)(1/3)(1.16) = 44.81 Cu.Yd.

Ramp Intersection Transition-Ramp B:
Outside Shoulder:
408 Prime Coat:
(154.53)(0.40) = 61.81 Gal.
446 1¼" Asphalt, Type I:
(154.53)(1.25/12)(1/3) = 5.37 Cu.Yd.
446 1¾" Asphalt, Type 2:
(154.53)(1.75/12)(1/3) = 7.51 Cu.Yd.

Two-Way Ramp:
Area Summary:
Pavement = 1018.06 Sq.Yd.
Outside Shoulder = 365.67 Sq.Yd.
Quantities:
203 Subgrade Compaction:
365.67 = 365.67 Sq.Yd.
254 Pavement Planing:
1018.06 = 1018.06 Sq.Yd.
301 Bituminous Aggregate Base:
(1018.06)(6/12)(1/3)
+(365.67)(9/12)(1/3) = 261.09 Cu.Yd.
304 Aggregate Base:
(365.67)(9/12)(1/3)
+(1/2)(3.5)(6/12)(548.50)(1/27) = 109.19 Cu.Yd.
407 Tack Coat:
(1018.06)(0.075) = 76.35 Gal.
408 Prime Coat:
(365.67)(0.40) = 146.27 Gal.
446 1¼" Asphalt, Type I:
(1018.06+365.67)(1.25/12)(1/3) = 48.05 Cu.Yd.
446 1¾" Asphalt, Type 2:
(1018.06+365.67)(1.75/12)(1/3) = 67.26 Cu.Yd.

One-Way Ramp:
Area Summary:
Pavement = 1458.91 Sq.Yd.
Inside Shoulder = 275.63 Sq.Yd.
Outside Shoulder = 542.27 Sq.Yd.
Quantities:
203 Subgrade Compaction:
542.27 = 542.27 Sq.Yd.
254 Pavement Planing:
(1458.91+275.63) = 1734.54 Sq.Yd.
301 Bituminous Aggreagte Base:
(1458.91+275.63)(6/12)(1/3)
+(542.27)(9/12)(1/3) = 424.66 Cu.Yd.
304 Aggregate Base:
(542.27)(9/12)(1/3)
(1/2)(6/12)(3.5)(813.40)(1/27) = 161.93 Cu.Yd.
407 Tack Coat:
(1458.91+275.63)(0.075) = 130.09 Gal.
408 Prime Coat:
(542.27)(0.40) = 216.91 Gal.
446 1¼" Asphalt, Type I:
(1458.91+275.63+542.27)(1.25/12)(1/3)= 79.06 Cu.Yd.
446 1¾" Asphalt, Type 2:
(1458.91+275.63+542.27)(1.75/12)(1/3)= 110.68 Cu.Yd.

Speed Change Lane:
Area Summary:
Pavement = 1676.18 Sq.Yd.
Outside Shoulder = 719.94 Sq.Yd.
Quantities:
254 Pavement Planing:
(1676.18+719.94-27.78) = 2368.34 Sq.Yd.
301 Bituminous Aggregate Base:
(1676.18+719.94-27.78)(6/12)(1/3)
+(27.78)(9/12)(1/3) = 401.67 Cu.Yd.
304 Aggregate Base:
(27.78)(9/12)(1/3) = 6.95 Cu.Yd.
407 Tack Coat:
(1676.18+719.94-27.78)(0.075) = 177.63 Gal.
408 Prime Coat:
(27.78)(0.40) =11.11 Gal.
446 1¼" Asphalt, Type I:
(1676.18+719.94)(1.25/12)(1/3) = 83.20 Cu.Yd.
446 1¾" Asphalt, Type 2:
(1676.18+719.94)(1.75/12)(1/3) = 116.48 Cu.Yd.

Ramp C, U.S.R. 127:

Speed Change Lane:
Area Summary:
Pavement = 1038.03 Sq.Yd.
Approach Pavement = 82.86 Sq.Yd.
Outside Shoulder = 541.33 Sq.Yd.

Speed Change Lane, Ramp C-(Continued):
Quantities:
202 Pavement Removed = 1038.03 Sq.Yd.
203 Subgrade Compaction:
1038.03+541.33 = 1579.36 Sq.Yd.
254 Pavement Planing:
82.86 = 82.86 Sq.Yd.
301 Bituminous Aggregate Base:
(1038.03+541.33)(9/12)(1/3) = 394.84 Sq.Yd.
304 Aggregate Base:
(1038.03+541.33)(9/12)(1/3)
+(1/2)(3.5)(6/12)(496.50)(1/27) = 410.93 Cu.Yd.
408 Prime Coat:
(1038.03+541.33)(0.40) = 631.74 Gal.
446 1¼" Asphalt, Type I:
(1038.03+541.33)(1.25/12)(1/3) = 54.84 Cu.Yd.
446 1¾" Asphalt, Type 2:
(1038.03+541.33)(1.75/12)(1/3) = 76.77 Cu.Yd.
Item Special Micro-Silica Overlay:
(1.5+1.75)(1/2)(1/12)(82.86)(1/3) = 3.74 Cu.Yd.

One-Way Ramp:
Area Summary:
Pavement = 656.50 Sq.Yd.
Pavement (Full Depth) = 360.89 Sq.Yd.
Outside Shoulder = 235.65 Sq.Yd.
Outside Shoulder (Full Depth) = 132.58 Sq.Yd.
Inside Shoulder = 127.64 Sq.Yd.
Inside Shoulder (Full Depth) = 68.86 Sq.Yd.
Quantities:
202 Pavement Removed:
360.89 = 360.89 Sq.Yd.
203 Subgrade Compaction:
360.89+235.65+132.58+68.86 = 797.98 Sq.Yd.
254 Pavement Planing:
656.50+127.64 = 784.14 Sq.Yd.
301 Bituminous Aggregate Base:
(656.50+127.64)(6/12)(1/3)
+(360.89+235.65+132.58+68.86)
(9/12)(1/3) = 330.19 Cu.Yd.
304 Aggregate Base:
(360.89+235.65+132.58+68.86)(9/12)(1/3)
+(206.57+382.92)(4/12)(1/2)(3.5)(1/27)= 212.23 Cu.Yd.
408 Prime Coat:
(360.89+235.65+132.58+68.86)(0.40) = 319.19 Gal.
407 Tack Coat:
(656.50+127.64)(0.075) = 58.81 Gal.
446 1¼" Asphalt, Type I:
(1.25/12)(1/3)(656.50+360.89+235.65
+132.58+127.64+68.86) = 54.93 Cu.Yd.
446 1¾" Asphalt, Type 2:
(1.75/12)(1/3)(656.50+360.89+235.65+132.58
+127.64+68.86) = 76.91 Cu.Yd.

Two Way Ramp:
Area Summary:
Pavement = 870.70 Sq.Yd.
Outside Shoulder = 298.81 Sq.Yd.
Quantities:
203 Subgrade Compaction:
298.81 = 298.81 Sq.Yd.
254 Pavement Planing:
870.70 = 870.70 Sq.Yd.
301 Bituminous Aggregate Base:
(6/12)(1/3)(870.70)
+(9/12)(1/3)(298.81) = 219.82 Cu.Yd.
304 Aggregate Base:
(9/12)(1/3)(298.81)
+(1/2)(3.5)(6/12)(448.22)(1/27) = 89.23 Cu.Yd.
407 Tack Coat:
(870.70)(0.075) = 65.30 Gal.
408 Prime Coat:
(298.81)(0.40) = 119.52 Gal.
446 1¼" Asphalt, Type I:
(870.70+298.81)(1.25/12)(1/3) = 881.08 Cu.Yd.
446 1¾" Asphalt, Type 2:
(870.70+298.81)(1.75/12)(1/3) = 56.85 Cu.Yd.

CALC: LAB
CHECKED: BDS

PAVEMENT CALCULATIONS

VAN-30-11.24

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PAVEMENT CALCULATIONS

Ramp C (Continued):
Ramp Intersection Transition:
Sta. 402+91.54 to Sta. 404+66.54
Pavement:
254 Pavement Planing:
466.85 = 466.85 Sq.Yd.
301 Bituminous Aggregate Base:
(188.89)(6+2)(1/12)(1/2)(1/3) = 20.99 Cu.Yd.
407 Tack Coat:
(466.85)(0.075) = 35.01 Gal.
446 Asphalt, Type 1:
(188.89+141.66)(1.25/12)(1/3)
+(136.30)(2+2.75)(1/2)(1/12)(1/3) = 20.47 Cu.Yd.
446 Asphalt, Type 2:
(188.89)(1.75/12)(1/3)
+(141.66)(3.75+1.5)(1/2)(1/12)(1/3) = 19.51 Cu.Yd.
Outside Shoulder:
203 Subgrade Compaction:
155.29 = 155.29 Sq.Yd.
301 Bituminous Aggregate Base:
(155.29)(9/12)(1/3) = 38.82 Cu.Yd.
304 Aggregate Base:
(155.29)(9/12)(1/3)(1.16) = 45.03 Cu.Yd.
408 Prime Coat:
(155.29)(0.40) = 62.12 Gal.
446 1¼" Asphalt, Type 1:
(155.29)(1.25/12)(1/3) = 5.39 Cu.Yd.
446 1¾" Asphalt, Type 2:
(155.29)(1.75/12)(1/3) = 7.55 Cu.Yd.

Ramp D, U.S.R. 127:

Ramp Intersection Transition:
Sta. 402+91.54 to Sta. 404+66.54, ℄ Ramp D
Pavement:
254 Pavement Planing:
458.33 =458.33 Sq.Yd.
301 Bituminous Aggregate Base:
(188.89)(6+2)(1/12)(1/3)(1/2) = 20.99 Cu.Yd.
407 Tack Coat:
(458.33)(0.075) = 34.37 Gal.
446 Asphalt, Type 1:
(188.89+167.51)(1.25/12)(1/3)
+(101.93)(2+2.75)(1/2)(1/12)(1/3) = 19.10 Cu.Yd.
446 Asphalt, Type 2:
(188.89)(1.75/12)(1/3)
+(167.51)(3.75+1.5)(1/2)(1/12)(1/3) = 21.40 Cu.Yd.
Outside Shoulder:
203 Subgrade Compaction:
217.35 = 217.35 Sq.Yd.
301 Bituminous Aggregate Base:
(217.35)(9/12)(1/3) = 54.34 Cu.Yd.
304 Aggregate Base:
(217.35)(9/12)(1/3)(1.16) = 63.03 Cu.Yd.
408 Prime Coat:
(217.35)(0.40) = 86.94 Gal.
446 1¼" Asphalt, Type 1:
(217.35)(1.25/12)(1/3) = 7.55 Cu.Yd.
446 1¾" Asphalt, Type 2:
(217.35)(1.75/12)(1/3) = 10.57 Cu.Yd.

Two-Way Ramp:
Area Summary:
Pavement = 908.67 Sq.Yd.
Outside Shoulder = 327.18 Sq.Yd.
Quantities:
203 Subgrade Compaction:
327.18 = 327.18 Sq.Yd.
254 Pavement Planing:
908.67 = 908.67 Sq.Yd.
301 Bituminous Aggregate Base:
(908.67)(6/12)(1/3)
+(327.18)(9/12)(1/3) = 233.24 Cu.Yd.
304 Aggregate Base:
(327.18)(9/12)(1/3)
+(490.78)(1/2)(3.5)(6/12)(1/27) = 97.70 Cu.Yd.
407 Tack Coat:
(908.67)(0.075) = 68.15 Gal.
408 Prime Coat:
(327.18)(0.40) =130.87 Gal.

Two-Way Ramp,Ramp D-(Continued):
Quantities:
446 1¼" Asphalt, Type 1:
(908.67+327.18)(1.25/12)(1/3) = 42.91 Cu.Yd.
446 1¾" Asphalt, Type 1:
(908.67+327.18)(1.75/12)(1/3) = 60.08 Cu.Yd.

One-Way Ramp:
Area Summary:
Pavement = 1374.06 Sq.Yd.
Inside Shoulder = 259.98 Sq.Yd.
Outside Shoulder = 509.85 Sq.Yd.
203 Subgrade Compaction:
509.85 = 509.85 Sq.Yd.
254 Pavement Planing:
1374.06+259.98 = 1634.04 Sq.Yd.
301 Bituminous Aggregate Base:
(509.85)(9/12)(1/3)
+(1374.06+259.98)(6/12)(1/3) = 399.80 Cu.Yd.
304 Aggregate Base:
(509.85)(9/12)(1/3)
+(1/2)(764.78)(3.5)(6/12)(1/27) = 152.25 Cu.Yd.
407 Tack Coat:
(1374.06+259.98)(0.075) = 122.55 Gal.
408 Prime Coat:
(509.85)(0.40) = 203.94 Gal.
446 1¼" Asphalt, Type 1:
(1374.06+259.98+509.85)(1.25/12)(1/3)= 74.44 Cu.Yd.
446 1¾" Asphalt, Type 2:
(1374.06+259.98+509.85)(1.75/12)(1/3)= 104.22 Cu.Yd.

Speed Change Lane:
Area Summary:
Pavement = 3187.29 Sq.Yd.
Outside Shoulder = 1317.33 Sq.Yd.
Outside Shoulder (Full Depth) = 117.06 Sq.Yd.
Quantities:
202 Excavation:
(26.67)(6/12)(1/3) = 4.45 Cu.Yd.
203 Subgrade Compaction:
117.06 = 117.06 Sq.Yd.
254 Pavement Planing:
(3187.29+1317.33) = 4504.62 Sq.Yd.
301 Bituminous Aggregate Base:
(6/12)(3187.29+1317.33)(1/3)
+(117.06)(9/12)(1/3) = 780.04 Cu.Yd.
304 Aggregate Base:
(9/12)(117.06)(1/3)
+(127.26)(3.5)(6/12)(1/2)(1/27) = 33.39 Cu.Yd.
407 Tack Coat:
(3187.29+1317.33)(0.075) = 337.85 Gal.
408 Prime Coat:
(117.06)(0.40) = 46.82 Gal.
446 1¼' Asphalt, Type 1:
(3187.29+1317.33+117.06)(1.25/12)(1/3)= 160.48 Cu.Yd.
446 1¾" Asphalt, Type 2:
(3187.29+1317.33+117.06)(1.75/12)(1/3)= 224.67 Cu.Yd.

Ramp A, C.R. 418

Speed Change Lane:
Area Summary:
Pavement = 1910.85 Sq.Yd.
Shoulder = 1123.26 Sq.Yd.
Shoulder Widening = 26.67 Sq.Yd.
Quantities:
202 Excavation:
(26.67)(6/12)(1/3) = 4.45 Cu.Yd.
254 Pavement Planing:
1123.26+1910.85 = 3034.11 Sq.Yd.
301 Bituminous Aggregate Base:
(6/12)(1910.85+1123.26)(1/3)
+(9/12)(26.67)(1/3) = 512.35 Cu.Yd.
304 Aggregate Base:
(26.67)(9/12)(1/3) = 6.67 Cu.Yd.
407 Tack Coat:
(1910.85+1123.26)(0.075) = 227.56 Gal.
408 Prime Coat:
(26.67)(0.40) = 10.67 Gal.

Speed Change Lane, Ramp A, C.R. 418-Continued):
Quantities:
446 1¼" Asphalt, Type 1:
(1910.85+1123.26+26.67)(1.25/12)(1/3)= 106.28 Cu.Yd.
446 1¾" Asphalt, Type 2:
(1910.95+1123.26+26.67)(1.75/12)(1/3)= 148.79 Cu.Yd.
Transition:
Sta. 848+81.68 to Sta. 850+81.68 Mainline Stationing:
Pavement:
254 Pavement Planing:
(16)(200)(1/9)
+(12.81+22.15)(1/2)(200)(1/9) = 744.00 Sq.Yd.
301 Bituminous Aggregate Base:
(2+6)(1/2)(1/12)(1/27)[(16)(200)
+(12.81+22.15)(1/2)(200)] = 82.67 Cu.Yd.
407 Tack Coat:
(0.075)(1/9)[(16)(200)
+(12.81+22.15)(1/2)(200)] = 55.80 Gal.
446 1¼" Asphalt, Type 1:
(1.25/12)(1/27)[(16)(200)
+(12.81+22.15)(1/2)(200)] = 25.83 Cu.Yd.
446 1¾" Asphalt, Type 2:
(1.75/12)(1/27)[(16)(200)
+(12.81+22.15)(1/2)(200)] = 36.17 Cu.Yd.
Outside Shoulder:
254 Pavement Planing:
(8)(200)(1/9) = 177.78 Sq.Yd.
301 Bituminous Aggregate Base:
(2+6)(1/2)(1/12)(1/27)(8)(200) = 19.75 Cu.Yd.
407 Tack Coat:
(8)(200)(1/9)(0.075) = 13.33 Gal.
446 1¼" Asphalt, Type 1:
(1.25/12)(8)(200)(1/27) = 6.17 Cu.Yd.
446 1¾" Asphalt, Type 2:
(1.75/12)(8)(200)(1/27) = 8.64 Cu.Yd.

Sta. 850+81.68 to Sta. 851+00.00, ℄ Ramp A
Pavement:
254 Pavement Planing:
[(16)(18.32)+(22.15+23)(1/2)(18.32)]
(1/9) = 78.52 Sq.Yd.
407 Tack Coat:
[(16)(18.32)+(22.15+23)(1/2)(18.32)]
(1/9)(0.075) = 5.89 Gal.
446 1¼" Asphalt, Type 1:
[(16)(18.32)+(22.15+23)(1/2)(18.32)]
(1.25/12)(1/27) = 2.73 Cu.Yd.
446 Asphalt, Type 2:
[(16)(18.32)+(22.15+23)(1/2)(18.32)]
(3.75+3.38)(1/2)(1/12)(1/27) = 7.78 Cu.Yd.
Shoulder:
254 Pavement Planing:
(18.32)(8)(1/9) = 16.28 Sq.Yd.
407 Tack Coat:
(18.32)(8)(1/9)(0.075) = 1.22 Gal.
446 1¼" Asphalt, Type 1:
(18.32)(8)(1/27)(1.25/12) = 0.57 Cu.Yd.
446 Asphalt, Type 2:
(18.32)(8)(1/27)(3.75+3.38)(1/2)(1/12)= 1.61 Cu.Yd.
Sta. 851+00.00 to Sta. 851+94.18
Pavement:
254 Pavement Planing:
(94.97)(16)(1/9) = 168.84 Sq.Yd.
407 Tack Coat:
(94.97)(16)(1/9)(0.075) = 12.66 Gal.
446 1¼" Asphalt, Type 1:
(94.97)(16)(1.25/12)(1/27) = 5.86 Cu.Yd.
446 Asphalt, Type 2:
(94.97)(16)(3.38+1.5)(1/12)(1/2)(1/27)= 11.44 Cu.Yd.
Outside Shoulder:
254 Pavement Planing:
(93.88)(8+4.5)(1/2)(1/9) = 65.19 Sq.Yd.
407 Tack Coat:
(93.88)(8+4.5)(1/2)(1/9)(0.075) = 4.89 Gal.
446 1¼" Asphalt, Type 1:
(93.88)(8+4.5)(1/2)(1.25/12)(1/27) = 2.26 Cu.Yd.
446 Asphalt, Type 2:
(93.88)(8+4.5)(1/2)(3.38+1.5)(1/12)
(1/2)(1/27) = 4.42 Cu.Yd.

CALC.: LAB CHECKED: BDS

PAVEMENT CALCULATIONS

VAN-30-11.24

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DATE : 05-OCT-1994
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PAVEMENT CALCULATIONS

Transition, Ramp D (Continued):
Sta.851+00.00 to Sta.851+94.18
Inside Shoulder:
254 Pavement Planing:
(95.91)(3)(1/9) = 31.97 Sq.Yd.
407 Tack Coat:
(95.91)(3)(1/9)(0.075) = 2.40 Gal.
446 1¼" Asphalt, Type 1:
(95.91)(3)(1.25/12)(1/27) = 1.11 Cu.Yd.
446 Asphalt, Type 2:
(95.91)(3)(3.38+1.5)(1/12)(1/2)(1/27) = 2.17 Cu.Yd.

Sta. 851+94.18 to Sta. 852+56.68
Pavement:
254 Pavement Planing:
(63.02)(16)(1/9) = 112.04 Sq.Yd.
407 Tack Coat:
(63.02)(16)(1/9)(0.075) = 8.40 Gal.
446 Asphalt, Type 1:
(63.02)(16)(2.75+1.5)(1/2)(1/12)(1/27) = 6.61 Cu.Yd.
Outside Shoulder:
254 Pavement Planing:
(62.37)(4.5+3)(1/2)(1/9) = 51.98 Sq.Yd.
407 Tack Coat:
(62.37)(4.5+3)(1/2)(1/9)(0.075) = 1.95 Gal.
446 Asphalt, Type 1:
(62.37)(4.5+3)(1/2)(2.75+1.5)(1/2)(1/12)(1/27) = 1.53 Cu.Yd.
Inside Shoulder:
254 Pavement Planing:
(63.65)(3)(1/9) = 21.22 Sq.Yd.
407 Tack Coat:
(63.65)(3)(1/9)(0.075) = 1.59 Gal.
446 Asphalt, Type 1:
(63.65)(3)(2.75+1.5)(1/2)(1/12)(1/27) = 1.25 Cu.Yd.

Ramp C, C.R. 418:

Speed Change Lane:
Area Summary:
Pavement = 1204.87 Sq.Yd.
Shoulder = 683.51 Sq.Yd.
Shoulder Widening = 27.78 Sq.Yd.

Quantities:

202 Excavation:
(27.78)(6/12)(1/3) = 4.63 Cu.Yd.

254 Pavement Planing:
1204.87+683.51 =1888.38 Sq.Yd.
301 Bituminous Aggregate Base:
(6/12)(1204.87+683.51)(1/3)
+(9/12)(27.78)(1/3) = 321.68 Cu.Yd.
304 Aggregate Base:
(9/12)(27.78)(1/3) = 6.95 Cu.Yd.
407 Tack Coat:
(1204.87+683.51)(0.075) = 141.63 Gal.
408 Prime Coat:
(27.78)(0.40) = 11.11 Gal.
446 1¼" Asphalt, Type 1:
(1204.87+683.51+27.78)(1.25/12)(1/3) = 66.53 Cu.Yd.
446 1¾" Asphalt, Type 2:
(1204.87+683.51+27.78)(1.75/12)(1/3) = 93.15 Cu.Yd.

Transition:
Sta. 848+70.53 to Sta. 850+70.53
Pavement:
254 Pavement Planing:
(16)(200.66)(1/9) = 356.73 Sq.Yd.
301 Bituminous Aggregate Base:
(2+6)(1/2)(1/12)(1/27)(16)(200.66) = 39.64 Cu.Yd.
407 Tack Coat:
(0.075)(16)(200.66)(1/9) = 26.75 Gal.
446 1¼" Asphalt, Type 1:
(1.25/12)(16)(200.66)(1/27) = 12.39 Cu.Yd.
446 1¾" Asphalt, Type 2:
(1.75/12)(16)(200.66)(1/27) = 17.34 Cu.Yd.
Outside Shoulder:
254 Pavement Planing:
[(99.69)(8+3)(1/2)+(99.82)(3)](1/9) = 94.20 Sq.Yd.
301 Bituminous Aggregate Base:
(2+6)(1/2)(1/12)(1/27)[(99.69)(8+3)(1/2)
+(99.82)(3)] = 10.47 Cu.Yd.

Transition, Ramp C - C.R.418
Sta.848+70.53 to Sta.850+70.53
Outside Shoulder-(Continued):
407 Tack Coat:
(0.075)(1/9)[(99.69)(8+3)(1/2)+(99.82)(3)] = 7.06 Gal.
446 1¼" Asphalt, Type 1:
(1.25/12)(1/27)[(99.69)(8+*)(1/2)+(99.82)(3)] = 3.27 Cu.Yd.
446 1¾" Asphalt, Type 2:
(1.75/12)(1/27)[(99.69)(8+3)(1/2)+(99.82)(3)] = 4.58 Cu.Yd.
Inside Shoulder:
254 Pavement Planing:
(201.44)(3)(1/9) = 67.15 Sq.Yd.
301 Bituminous Aggregate Base:
(201.44)(3)(2+6)(1/2)(1/12)(1/27) = 7.46 Cu.Yd.
407 Tack Coat:
(201.44)(3)(1/9)(0.075) = 5.04 Gal.
446 1¼" Asphalt, Type 1:
(1.25/12)(201.44)(3)(1/27) = 2.33 Cu.Yd.
446 1¾" Asphalt, Type 2:
(1.75/12)(201.44)(3)(1/27) = 3.26 Cu.Yd.

Sta. 850+70.53 to Sta. 851+83.03
Pavement:
254 Pavement Planing:
(16)(112.50)(1/9) = 200.00 Sq.Yd.
407 Tack Coat:
(16)(112.50)(1/9)(0.075) = 15.00 Gal.
446 1¼" Asphalt, Type 1:
(1.25/12)(16)(112.50)(1/27) = 6.94 Cu.Yd.
446 (Var.) Asphalt, Type 2:
(3.75+1.5)(1/2)(1/12)(16)(112.50)(1/27) = 14.58 Cu.Yd.
Shoulders:
254 Pavement Planing:
(3)(112.50)(1/9)x2 = 75.00 Sq.Yd.
407 Tack Coat:
(3)(112.50)(1/9)(0.075)x2 = 5.63 Gal.
446 1¼" Asphalt, Type 1:
(1.25/12)(3)(112.50)(1/27)x2 =2.60 Cu.Yd.
446 Asphalt, Type 2:
(3.75+1.5)(1/2)(1/12)(3)(112.50)(1/27)x2 = 5.47 Cu.Yd.

Sta. 851+83.03 to Sta. 852+45.53
Pavement:
254 Pavement Planing:
(16)(62.5)(1/9) = 111.11 Sq.Yd.
407 Tack Coat:
(16)(62.5)(1/9)(0.075) = 8.33 Gal.
446 Asphalt, Type 1:
(2.75+1.5)(1/2)(1/12)(16)(62.5)(1/27) = 6.56 Cu.Yd.
Shoulders:
254 Pavement Planing:
(3)(62.50)(1/9)x2 = 41.67 Sq.Yd.
407 Tack Coat:
(3)(62.50)(1/9)(0.075)x2 = 3.13 Gal.
446 Asphalt, Type 1:
(3)(2.75+1.50)(1/2)(1/12)(1/27)(62.50)x2 = 2.46 Cu.Yd.

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PAVEMENT CALCULATIONS

VAN-30-11.24

MISCELLANEOUS CALCULATIONS

SEEDING

659		659	
Sheet No.	Seeding & Mulching Sq. Yd.	Sheet No.	Seeding & Mulching Sq. Yd.
37	4905	81	3845
38	4050	82	3414
39	4089	83	4116
40	3709	84	3749
41	4650	85	2761
42	4728	86	2723
43	6927	87	3156
44	4658	88	3228
45	4640	89	4078
46	4588	90	2900
47	4189	91	3612
48	3578	92	3694
49	3534	93	3806
50	1825	94	2672
51	3517	95	1886
52	2939	96	3573
53	2522	97	4249
54	4734	98	5633
55	6356	99	5538
56	2834	100	4372
57	4716	101	3267
58	5313	102	1154
59	3622	103	1079
60	2468	104	333
61	2622	105	1176
62	4633	106	914
63	2716	107	934
64	2211	108	583
65	2422	109	589
66	2623	110	1175
67	2616	111	1337
68	2172	112	1123
69	3023	113	1354
70	3861	114	1016
71	4021	115	994
72	4012	116	836
73	3160	117	1019
74	3166	118	985
75	4516	119	1930
76	5361	120	1346
77	4206	121	408
78	3544	122	655
79	3022	123	978
80	4051		
		Total	265,239

SEEDING & MULCHING QUANTITIES CARRIED TO MISCELLANOUS CALCULATIONS ON SHEET 28.

EARTHWORK

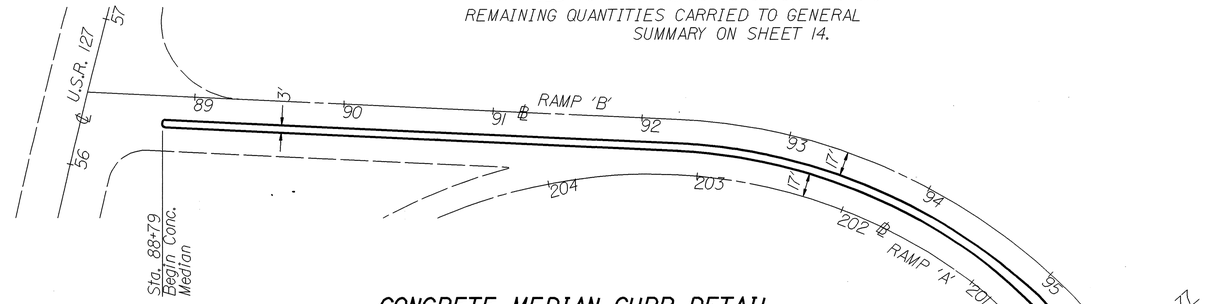
203			203		
Sheet No.	Excavation Cu. Yd.	Embankment Cu. Yd.	Sheet No.	Excavation Cu. Yd.	Embankment Cu. Yd.
37	242	700	81	128	680
38	297	679	82	224	689
39	432	699	83	485	635
40	490	372	84	192	540
41	734	601	85	133	398
42	811	488	86	111	387
43	2063	924	87	87	454
44	2038	586	88	101	446
45	576	802	89	308	562
46	285	626	90	228	467
47	115	595	91	125	521
48	28	654	92	136	582
49	54	580	93	64	636
50	29	233	94	31	507
51	22	533	95	38	336
52	2	514	96	91	543
53	71	310	97	318	542
54	1414	2029	98	386	877
55	3344	4871	99	434	1219
56	1683	2389	100	542	840
57	2746	3491	101	9	740
58	4639	4070	102	0	264
59	3161	2453	103	0	137
60	1335	1550	104	34	52
61	924	389	105	170	198
62	569	1023	106	116	185
63	55	354	107	89	215
64	35	233	108	43	96
65	35	268	109	94	84
66	24	276	110	147	218
67	54	344	111	179	334
68	127	348	112	132	246
69	146	577	113	138	251
70	272	747	114	87	200
71	196	706	115	96	154
72	217	729	116	126	168
73	154	489	117	120	148
74	252	568	118	115	205
75	211	1194	119	285	287
76	262	1372	120	235	107
77	214	605	121	50	52
78	112	493	122	69	116
79	60	511	123	103	223
80	155	623			
			Total	37,284	59,139

QUANTITIES CARRIED TO GENERAL SUMMARY ON SHEET 14.

MISCELLANEOUS CALCULATIONS

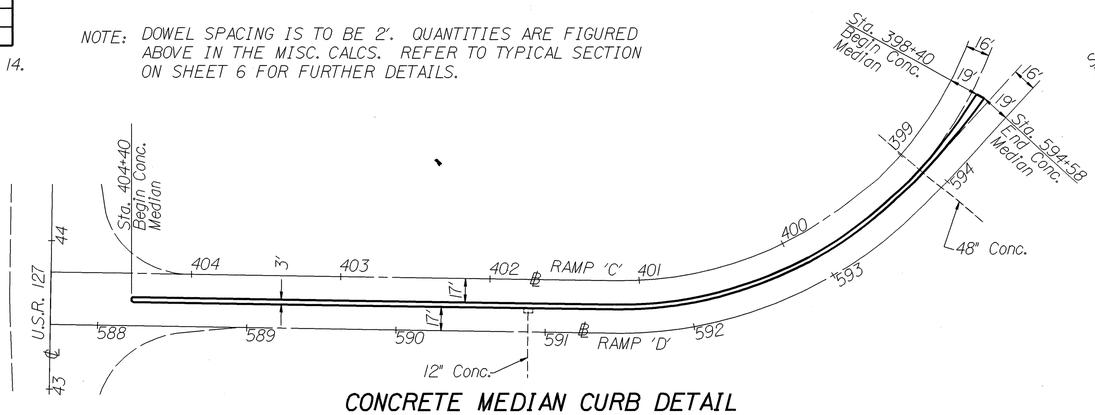
ITEM 202	RAISED PAVEMENT MARKER REMOVED FOR STORAGE	= 811 EACH
ITEM 255	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C (134652)(1/2 %)	= 673 SQ.YD.
ITEM 252	FULL DEPTH PAVEMENT SAWING (2)(12)(52)	= 1248 LIN.FT.
ITEM 609	CURB, MISC.: MEDIAN CURB, 9" LIFT WITH 1" DOWELS	
	℄ RAMP 'B', STA.88+79 to STA.96+27	= 748
	℄ RAMP 'C', STA.398+40 to STA.404+40	= 600
	TOTAL	= 1348 LIN.FT.
ITEM 659	SEEDING & MULCHING (FROM TABLE THIS SHEET)	= 265,239 SQ.YD. *
ITEM 659	WATER (240)(265239)(9)(1/1000)(1/1000)	≅ 580 M.GAL. *
ITEM 659	COMMERCIAL FERTILIZER (20/2000)(265239)(9)(1/1000)	= 23.87 TON
ITEM SPECIAL	SAWING & SEALING ASPHALT CONCRETE PAVEMENT JOINT, 705.04	= 20200 LIN.FT.

* - CARRIED TO GENERAL NOTES ON SHEETS 8-9
REMAINING QUANTITIES CARRIED TO GENERAL SUMMARY ON SHEET 14.



CONCRETE MEDIAN CURB DETAIL
@ Ramp 'A' & 'B', U.S.R. 127 Interchange

NOTE: DOWEL SPACING IS TO BE 2'. QUANTITIES ARE FIGURED ABOVE IN THE MISC. CALCS. REFER TO TYPICAL SECTION ON SHEET 6 FOR FURTHER DETAILS.



CONCRETE MEDIAN CURB DETAIL
@ Ramp 'C' & 'D', U.S.R. 127 Interchange

CALCULATED DJS
CHECKED LAB

MISCELLANEOUS CALCULATIONS

VAN-30-11.24

28
161

DESIGN FILE : /usr/odot/dgn/v30/v30gm.dgn
USERNAME : lbrinkma
DATE : 11-OCT-1994
TIME : 09:07

STORM WATER POLLUTION PREVENTION QUANTITIES

DITCH STABILIZATION

The Proposed Roadside Ditches and Side Slopes Shall be Stabilized Immediately following any channel construction. The Stabilization shall be either Seeding and or Erosion Control, whichever operation is applicable.

ESTIMATED QUANTITIES

Location	Side	207			601	
		Filter Fabric Fence	Straw or Hay Bales	Temporary Benches, Dams, & Sediment Basins	Rock Channel Protection, Type C, w/o Filter (18" Th.)	Rock Channel Protection, Type D, w/o Filter (18" Th.)
		Lin. Ft.	Each	Cu. Yd.	Cu. Yd.	Cu. Yd.
600+00 to 611+00	Rt.	1100				
613+00 to 629+50	Rt.	1650				
631+00 to 666+50	Rt.	3550				
668+00 to 680+00	Rt.	1200				
684+00 to 688+00	Rt.	2100				
706+00 to 720+00	Rt.	1400				
721+00 to 746+00	Rt.	2475				
748+25 to 772+50	Rt.	2425				
775+00 to 799+50	Rt.	2450				
801+50 to 841+00	Rt.	3950				
845+00 to 855+00	Rt.	1000				
Ditch Checks			375			
At Callouts along Ditch				1541		
All Side Ditches					142.22	
All Side Swales						13.33
Totals		23,300	375	1541	142.22	13.33

(Quantities Carried to General Summary on Sheet 14.)

SCOTT, OHIO QUADRANGLE
USGS CONTINENTAL QUADRANGLE
Longitude 84°-35'-00"
Latitude 40°-53'-00"

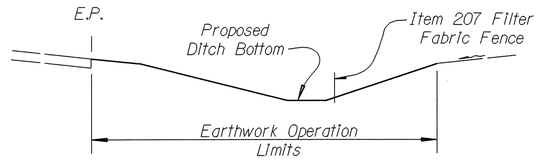
PROJECT DATA

Total Area of Project (Approx. Right of Way)	= 138 Acres
Total Area to Undergo Excavation, Embankment or Grading	= 44 Acres
Runoff Coefficient for Pre-Construction Site	= 0.5
Runoff Coefficient for Post-Construction Site	= 0.5
Soil Data	= Silt & Clay
Immediate /Subsequent Receiving Water	= Maddox Creek/Auglaize River = Town Creek/Auglaize River

NATURE OF WORK
The work on this project shall include regrading shoulders, foreslopes, and backslopes without any changes in flow direction and minimal changes in flowline elevations.

FOR FURTHER DETAILS, SEE Std. Dwg. MC-11.

FOR FURTHER NOTES AND QUANTITIES, SEE GENERAL NOTES ON SHEET 8.



TYPICAL DITCH SECTION

TYPICAL PLACEMENT OF FILTER FABRIC FENCE TO PREVENT SEDIMENTATION DITCH DURING CONSTRUCTION.

LEGEND

Rock Channel Protection, Type C, without Filter, for temporary erosion control.

Rock Channel Protection, Type D, without Filter, for temporary erosion control.

Temporary Benches, Dams Sediment Basins (@ 67 Cu. Yd. Each)

Straw or Hay Bale Inlet Filter

—FF— *Filter Fabric Fence*

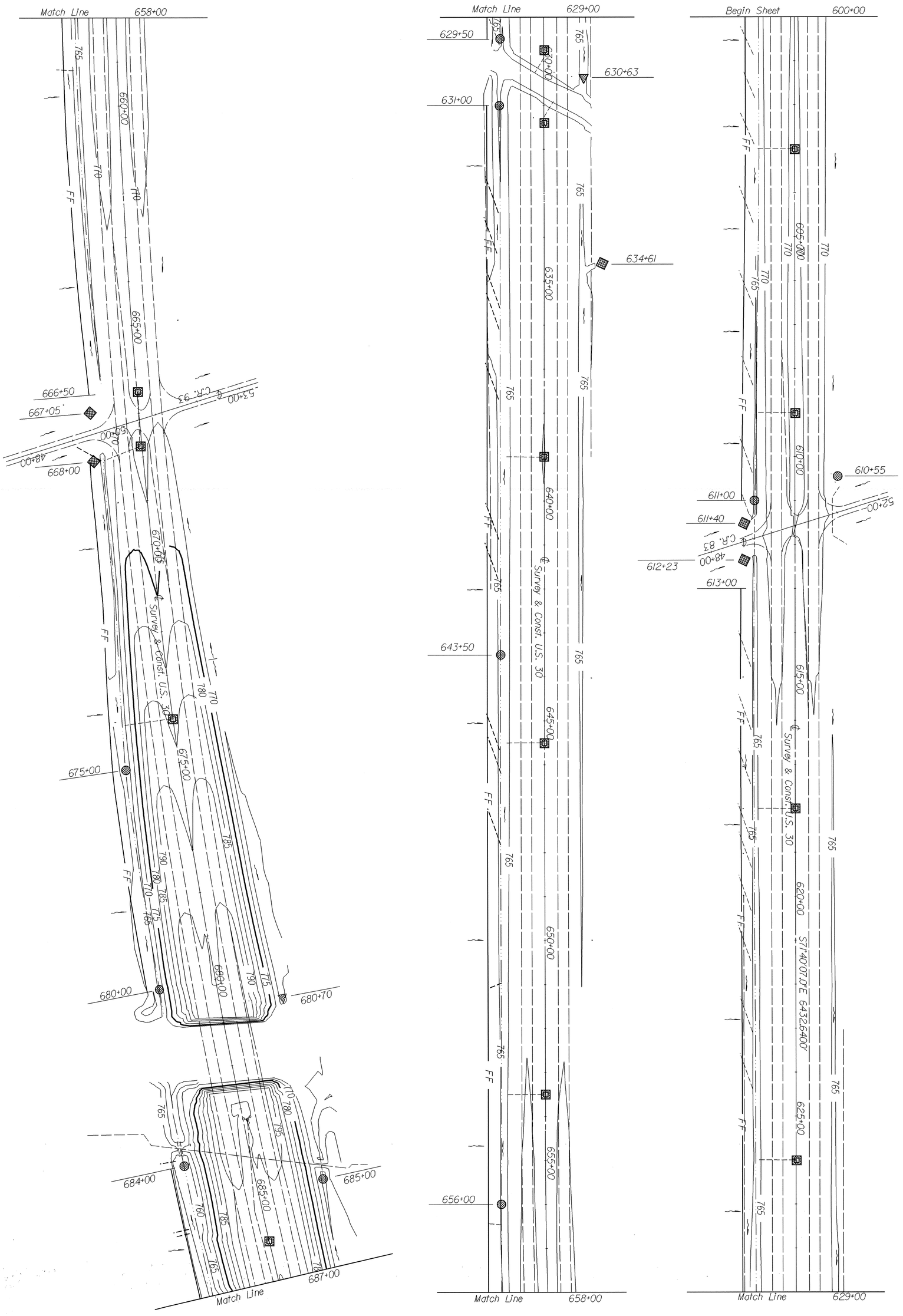
CALCULATED BDS
CHECKED RLS

STORM WATER POLLUTION PREVENTION QUANTITIES

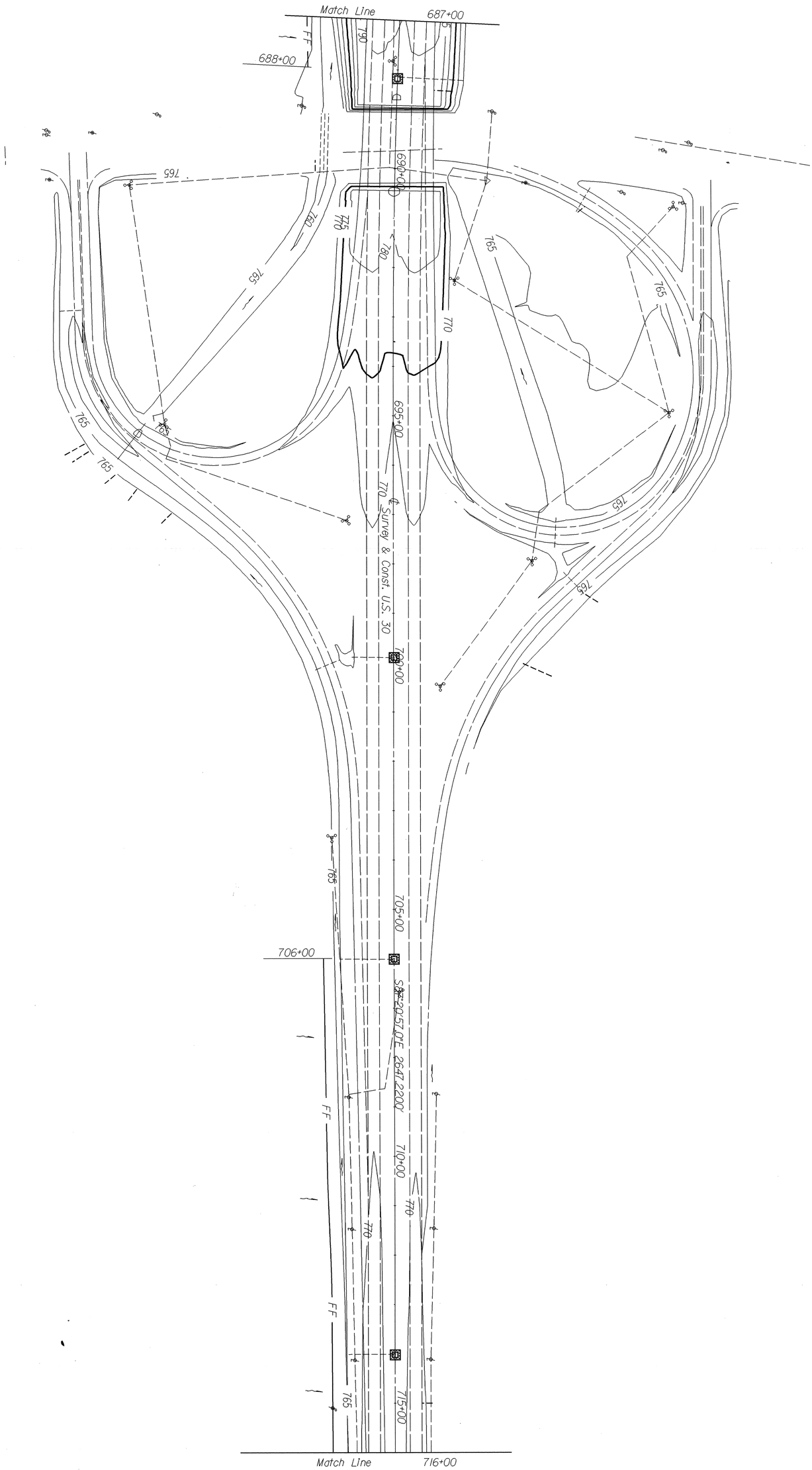
VAN-30-11.24

DATE : 06-OCT-1994
TIME : 09:57

DESIGN FILE : e:\dgn\v30\v30de.dgn
USERNAME : dsiebene



30 / 161	VAN-30-11.24	STORM WATER POLLUTION PREVENTION PLAN Sta. 600+00 to Sta. 687+00	Scale in Feet 0' 50' 100' 200'



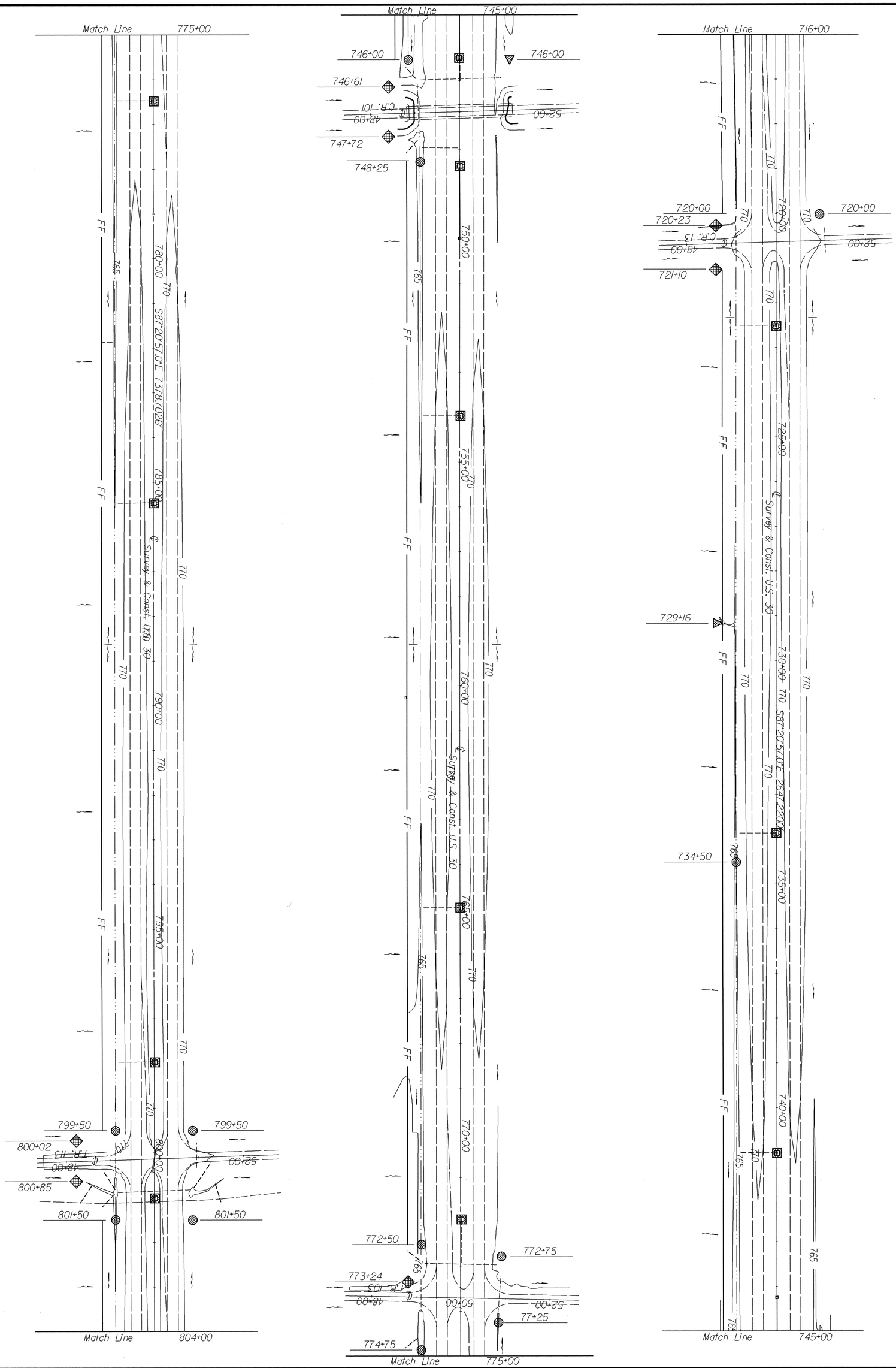
VAN-30-11.24

STORM WATER POLLUTION PREVENTION PLAN

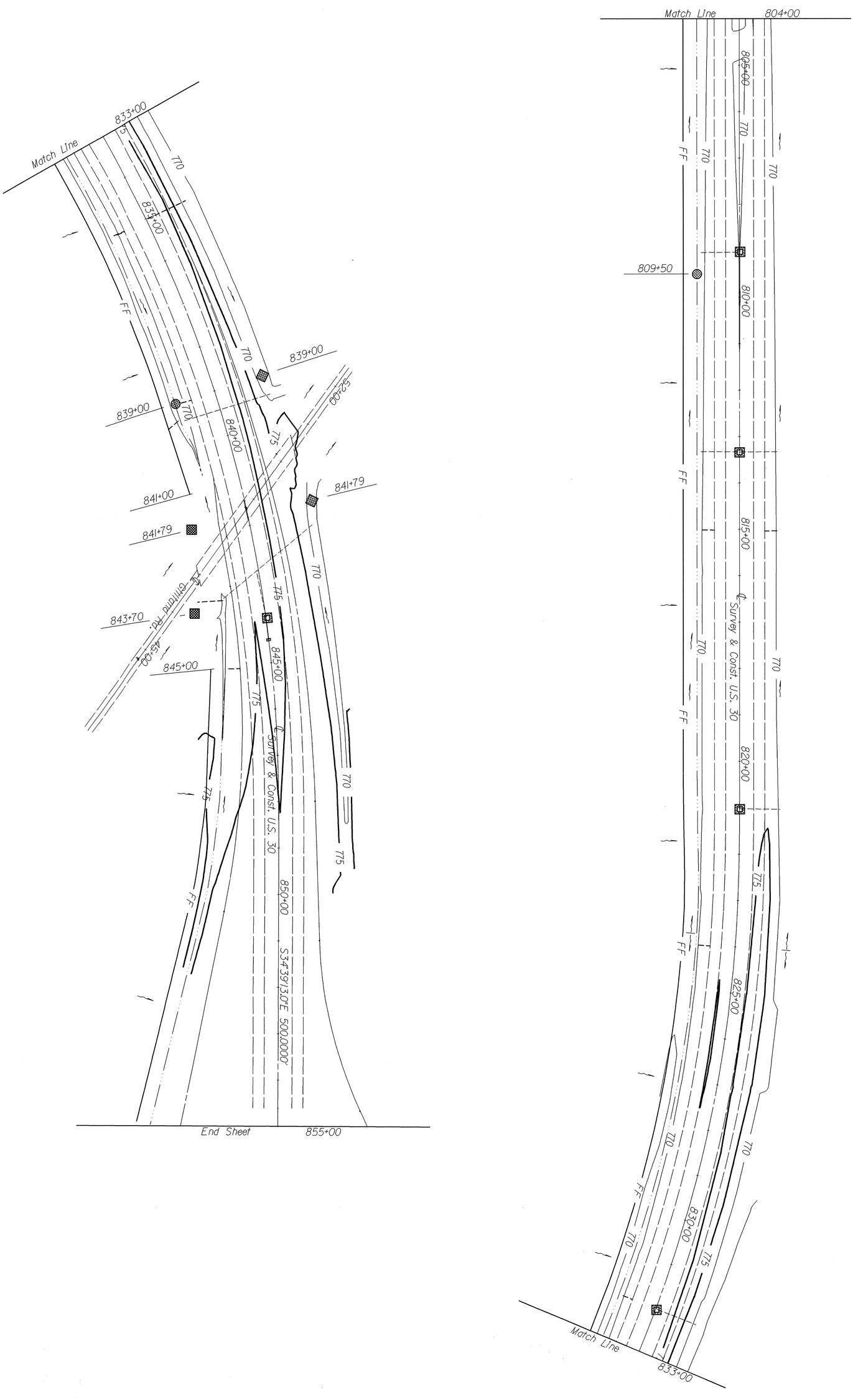
Sta. 687+00 to Sta. 716+00

Scale in Feet
0' 50' 100' 200'

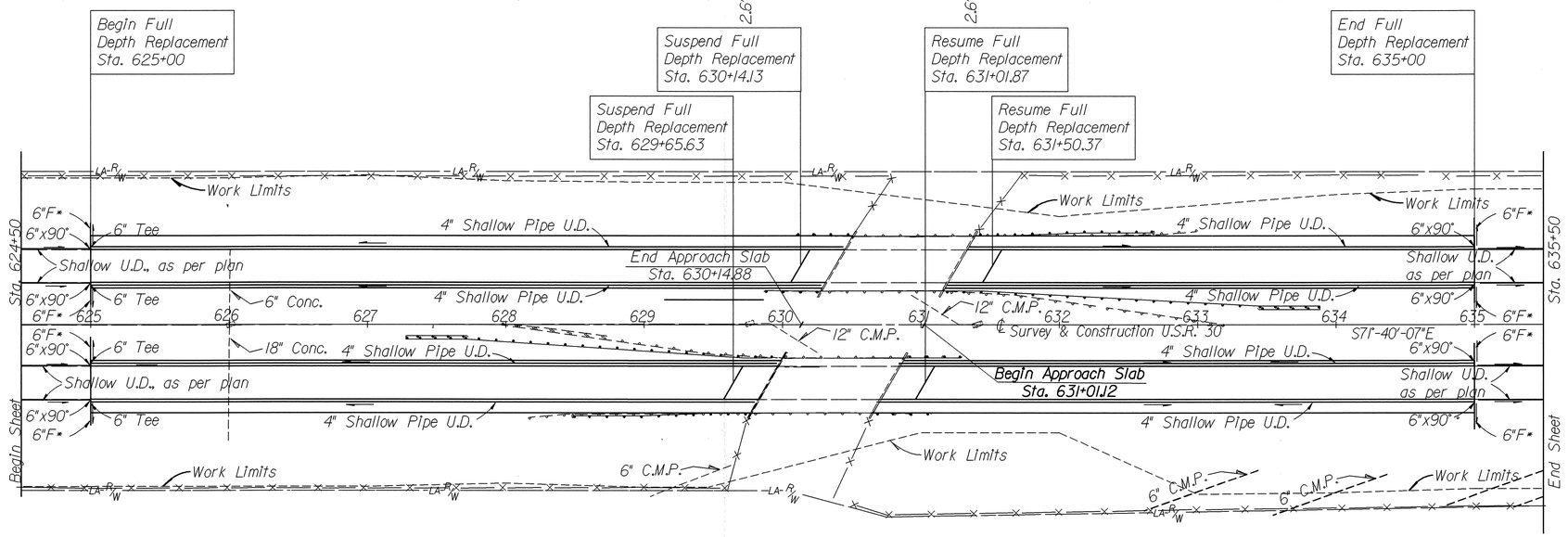
N



32 / 161	VAN-30-11.24	STORM WATER POLLUTION PREVENTION PLAN Sta. 716+00 to Sta. 804+00	Scale in Feet 0' 50' 100' 200'	N

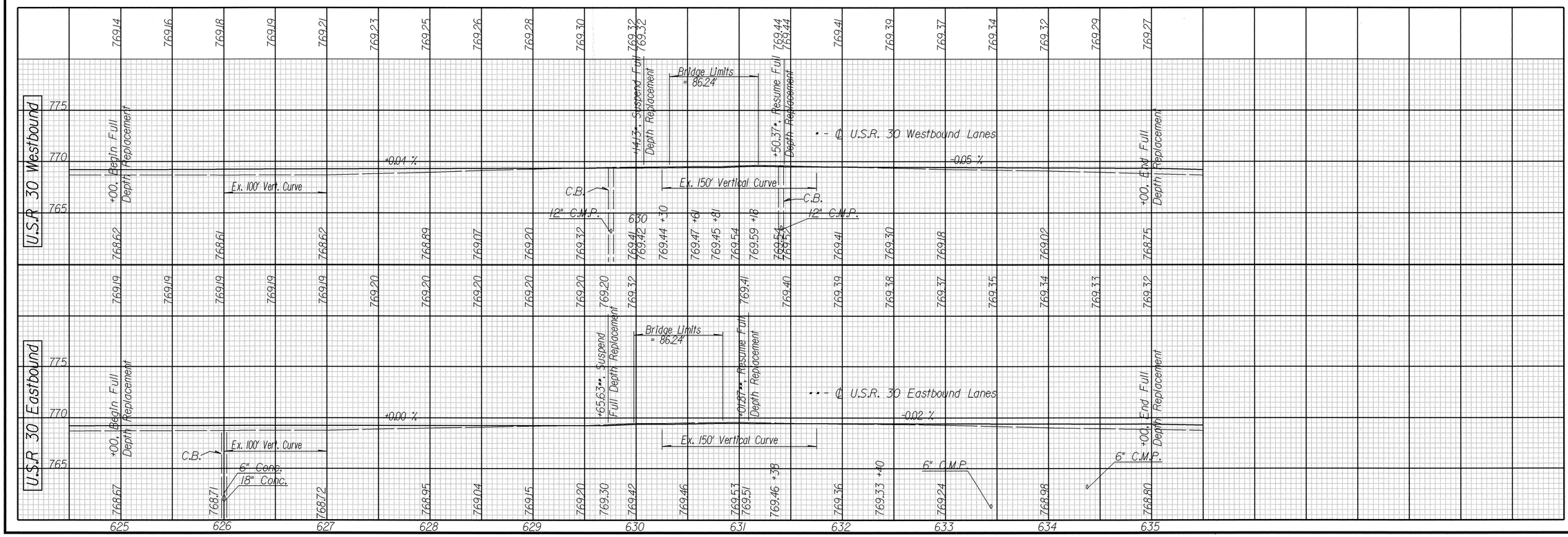


33/161	VAN-30-11.24	STORM WATER POLLUTION PREVENTION PLAN Sta. 804+00 to Sta. 855+00	Scale in Feet 0' 50' 100' 200'	N



* - 707.17 Nonperforated, ASTM D3034, SDR 35, SS931 or SS944

For Guardrail Details and Quantities, See Shts. 124 & 125.
For Underdrain Locations and Quantities, See Sht. 139.
For Drainage Details and Qunatities, See Shts. 134 & 135.



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED

CHECKED

PLAN AND PROFILE SHEET
STA. 624+50 to STA. 635+50

VAN-30-11.24

P.I. Sta. 674+05.05
△ = 15°-40'-50" Lt.
D = 00°-24'
R = 14,323.94'
T = 1,972.41'
L = 3,920.14'
E = 135.16

Begin Full Depth Replacement Sta. 676+33.24

Suspend Full Depth Replacement Sta. 680+33.24

Resume Full Depth Replacement Sta. 683+23.26

Begin Sheet

End Sheet

Sta. 675+00

Sta. 685+00

Work Limits

LA-R/W

6"F*

Shallow U.D.

6"x90°

4" Shallow Pipe U.D.

U.S.R. 30 W.B.

U.S.R. 30 E.B.

℄ Survey & Const. U.S.R. 30

676 677 678 679 680 681 682 683 684

End Approach Slab Sta. 680+58.24

Begin Approach Slab Sta. 682+98.26

4" Shallow Pipe U.D. @ 30"

4" Shallow Pipe U.D. @ 12"

Town Creek

15" Conc.

66" Conc.

48" Conc.

4" P.V.C.

SAW

For Guardrail Details and Quantities, See Shts. 124-126
For Underdrain Locations and Quantities, See Sht. 140.
For Drainage Details and Quantities, See Shts. 134-136.

* - 707.17 Nonperforated, ASTM D3034, SDR 35, SS931 or SS944

Refer to Sheets 131 -132 for elevations at the Ramp Terminals.

789.37 790.52 791.58 792.24 792.54 792.97 793.37 793.75 794.10 794.43 794.73 795.01 795.26 795.49 795.70 795.89 796.06 796.22 796.37 796.50 796.54 796.20 795.95 795.71 795.46 795.19 794.90 794.59 794.26

Graphic Grade

Bridge Limits = 240.02'

Graphic Grade

795

790

785

780

775

770

+33.24 Begin Full Depth Replacement

+33.24 Suspend Full Depth Replacement

+58.24

+98.26

+23.26 Resume Full Depth Replacement

Existing 1475' Vertical Curve

66" Conc.

2-48" Conc. Pipes Rt.

4" P.V.C.

15" Conc. Lt.

788.85 790.00 791.06 791.72 792.04 792.98 793.76 794.52 795.13 795.58 796.11 796.36 795.58 796.66 796.71 796.74 796.75 796.63 796.40 796.24 796.04 795.62 795.17 794.54

675 676 677 678 679 680 681 682 683 684 685

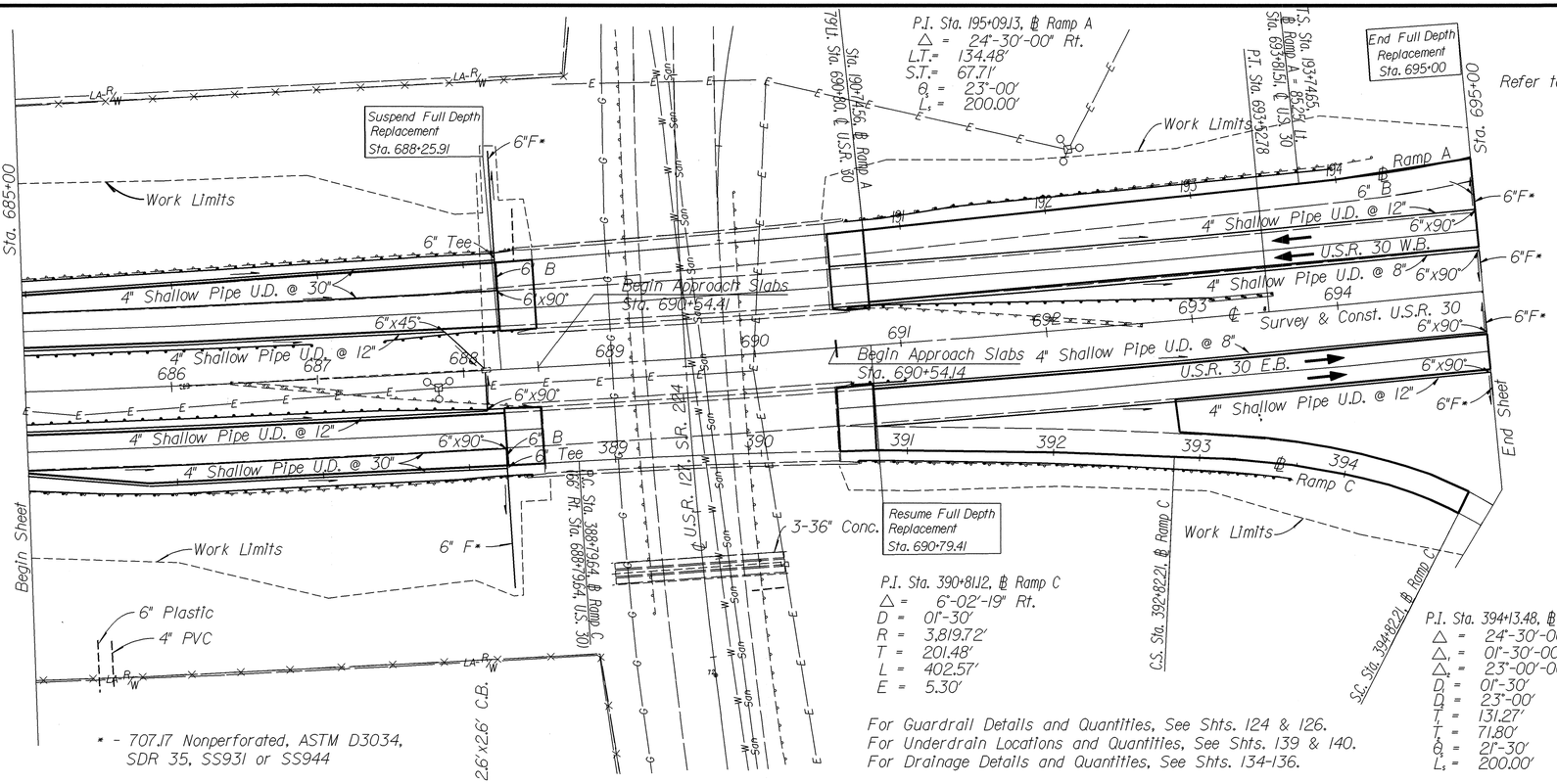
HORIZONTAL SCALE IN FEET
0 25 50 100

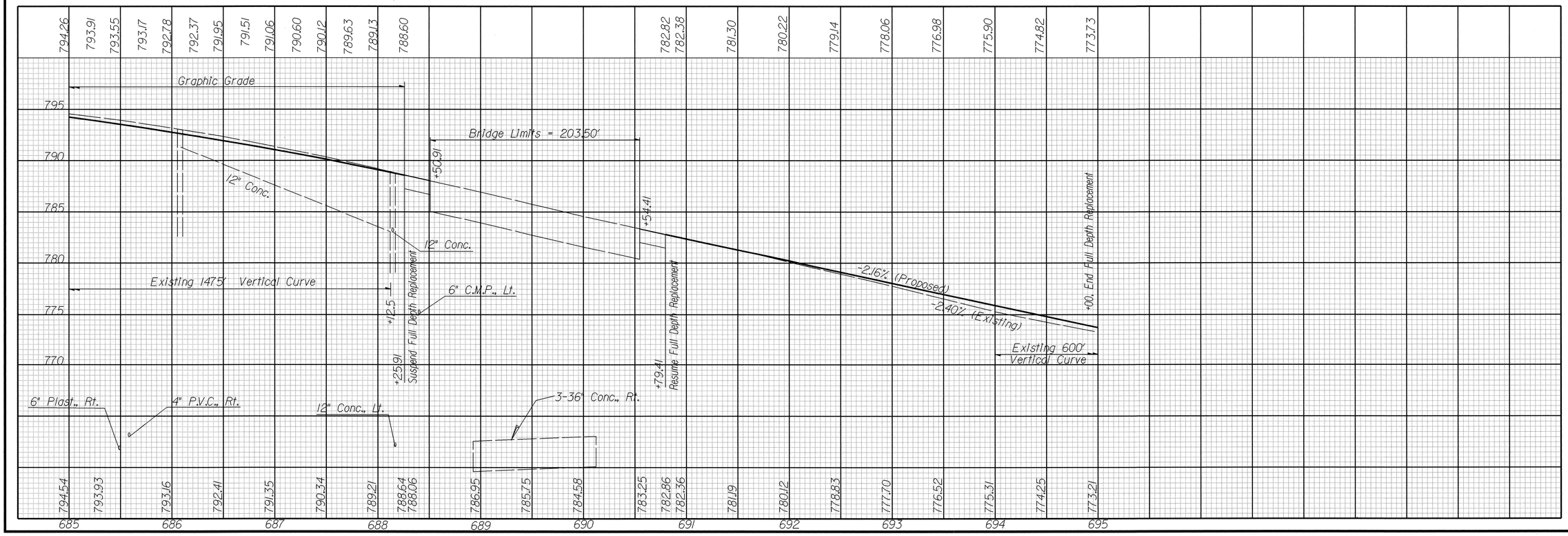
CALCULATED | CHECKED

PLAN AND PROFILE SHEET
STA. 675+00 to STA. 685+00

VAN-30-11.24

35
161





HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED | CHECKED

PLAN AND PROFILE SHEET
STA. 685+00 to STA. 695+00

VAN-30-11.24

36
161

SEEDING	
END WIDTH	SQ. YDS.
92	1022
88	1000
87	972
85	1911
4905	Sheet Total
SQ. YDS.	

EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
19	60	69	202
18	49		
15	44	61	172
15	44	56	163
0	0	56	163
		242	700
Sheet Total		CU. YDS.	
	SQ. FT.		

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

780 / 770 / 760

Sta. 603+00, ℄
Ex. 2.6'x2.6' C.B., Gr. Elev. 768.02

Sta. 603+00, 91.5' Rt.
℄ Elev. 765.22

3:1 4:1 766.10

6" Conc.

15" Conc.

Connnect to Existing

765.22

15" x 12' B

603+00
768.02

Sta. 602+89, 95.3' Rt.
℄ Elev. 765.60

Remove (603)

Connect to existing

3:1 4:1 766.23

765.34

6" Plastic F.T.

8" x 5' F

602+00
768.48

Sta. 601+83, 95.0' Rt.
℄ Elev. 764.96

Connect to existing

3:1 4:1 766.36

Remove (603)

765.46

6" C.M.P. F.T.

8" x 5' F

601+00
768.73

Sta. 600+85, 94.5' Rt.
℄ Elev. 765.52

Remove (603)

Connect to existing

3:1 4:1 766.48

765.58

6" Plastic F.T.

8" x 5' F

600+00
768.96

BEGIN EARTHWORK & SEEDING
Sta. 598+00

BEGIN WORK
Sta. 596+87.5

Ahd. Sta. 588+00

Sta. 598+00, Ahd.

Survey & Construction U.S. 30

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 600+00 to Sta. 603+00

VAN-30-11.24

37
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:12

SEEDING END WIDTH	SEEDING SQ. YDS.	STATION	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
		130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130				
93	1017	607+00 768.17	24	45	83	161
90	1000	606+00 768.42	21	42	72	157
90	1011	605+00 768.38	18	43	70	165
92	1022	604+00 768.40	20	46	72	196
92		Sta. 603+00	19	60		
4050	Sheet Total				297	679
SQ. YDS.				SQ. FT.		CU. YDS.

765.64 (3:1, 4:1) 764.76 (4:1, 3:1)

765.76 (3:1, 4:1) 764.88 (4:1, 3:1) — Connect to Exist. — 6" Plastic F.T. — 8" x 5' F — Remove (603) — Sta. 606+56.4, 96.0' Rt. ℄ Elev. 765.49

765.88 (3:1, 4:1) 764.98 (4:1, 3:1)

765.99 (3:1, 4:1) 765.10 (4:1, 3:1) — Connect to Exist. — 6" Plastic F.T. — 8" x 5' F — Remove (603) — Sta. 604+68, 96.4' Rt. ℄ Elev. 765.6

Survey & Construction U.S. 30

DESIGN FILE : /usr/odot/dgn/v30/v30xsl.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:12

CALCULATED BJD CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 604+00 to Sta. 607+00

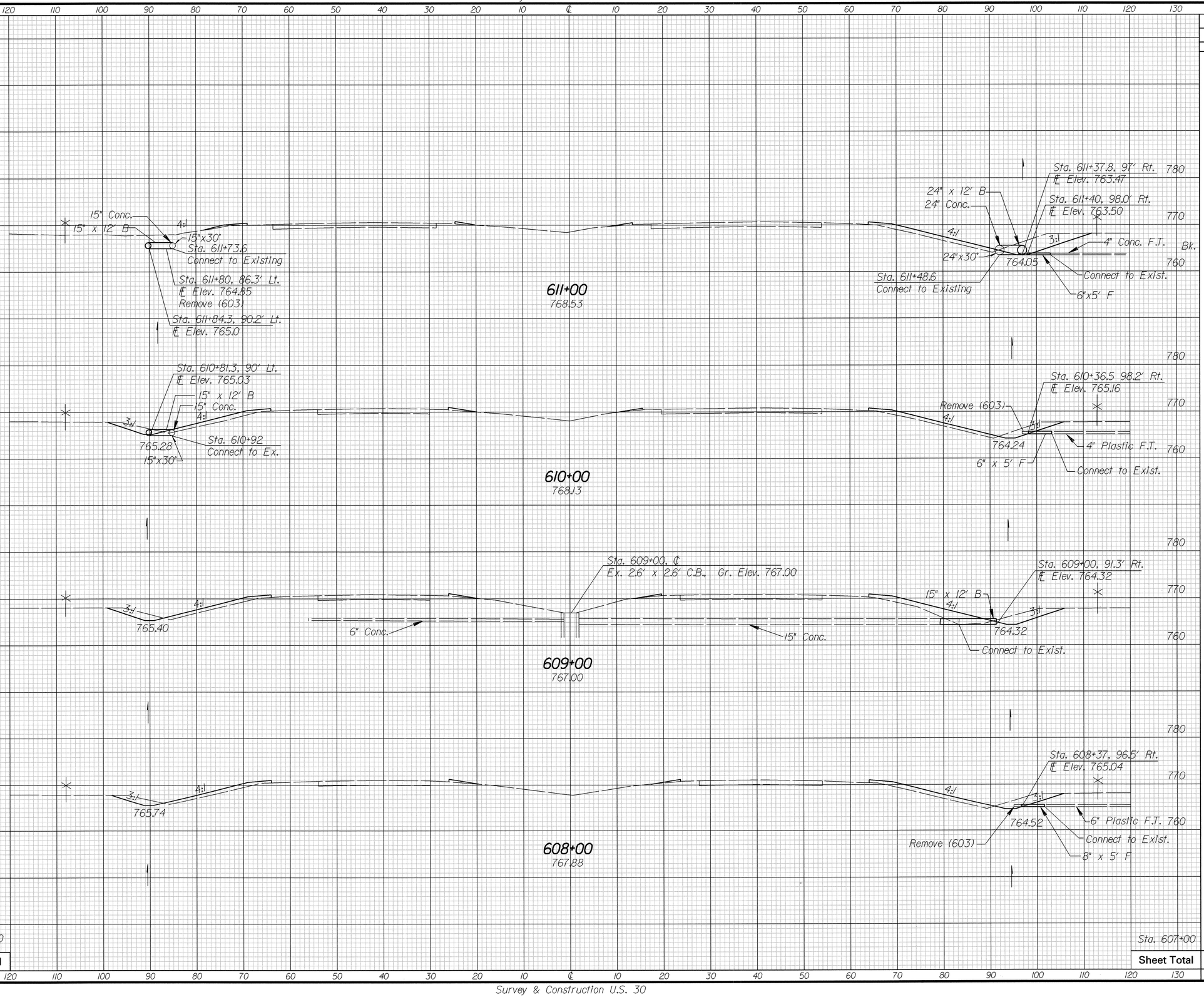
VAN-30-11.24

38 / 161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:12

SEEDING		EARTHWORK			
END WIDTH	SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
73	933	38	34	120	150
95		27	47		
95	1056	32	57	109	193
95	1056	27	45	109	189
93	1044	24	45	94	167
4089	Sheet Total			432	699
SQ. YDS.		SQ. FT.		CU. YDS.	



CALCULATED B.J.D
CHECKED N.J.V

CROSS SECTIONS - MAINLINE U.S. 30
Sta. 608+00 to Sta. 611+00

VAN-30-11.24

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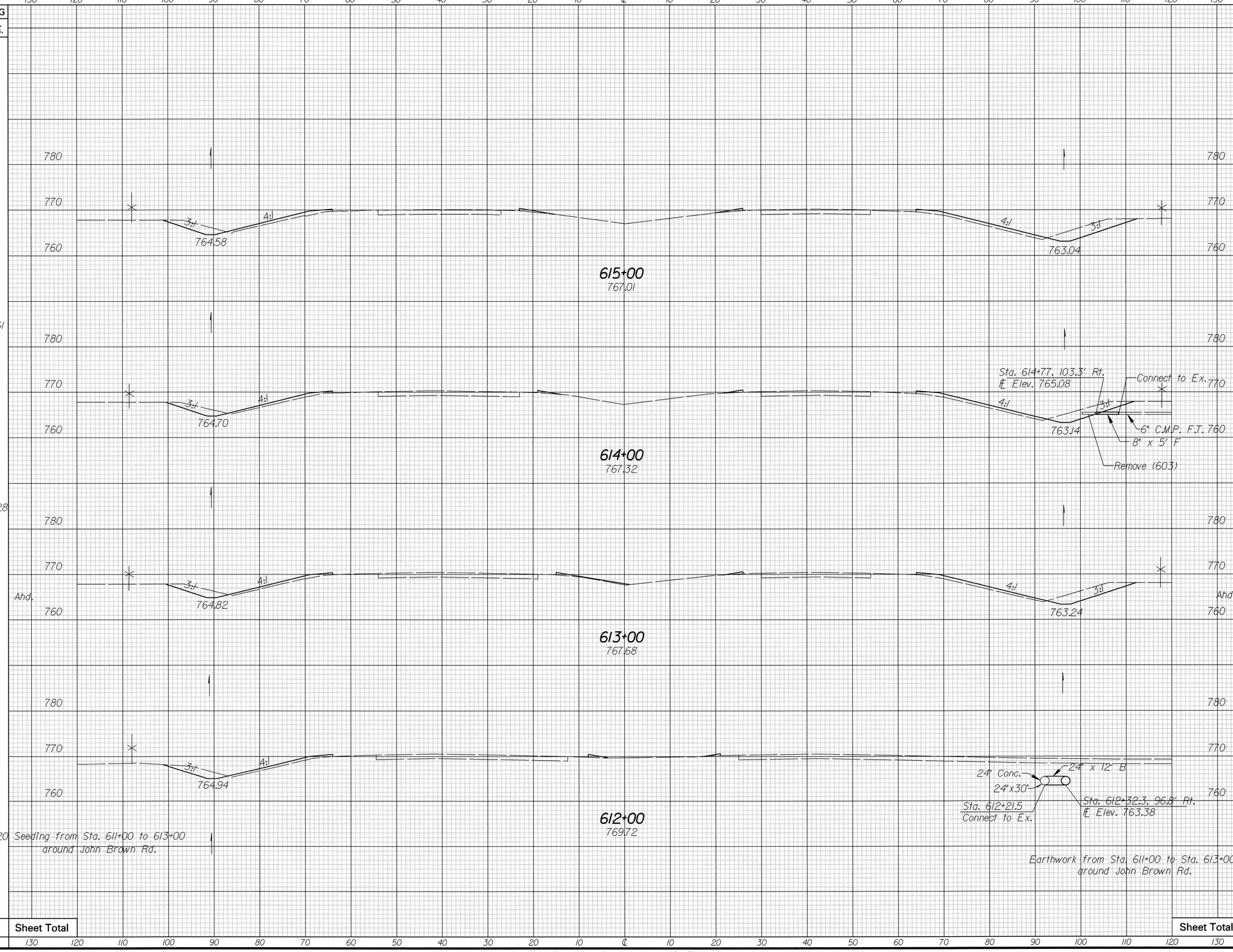
161

SEEDING END WIDTH	SEEDING SQ. YDS.
106	1161
103	
118	1228
Ahd.	
	1320

Seeding from Sta. 611+00 to 613+00 around John Brown Rd.



EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
48	38	167	128
42	31		
46	36	163	124
		160	120
Sheet Total		490	372
SQ. FT.		CU. YDS.	

3709	Sheet Total
SQ. YDS.	

CALCULATED BJD CHECKED NJV

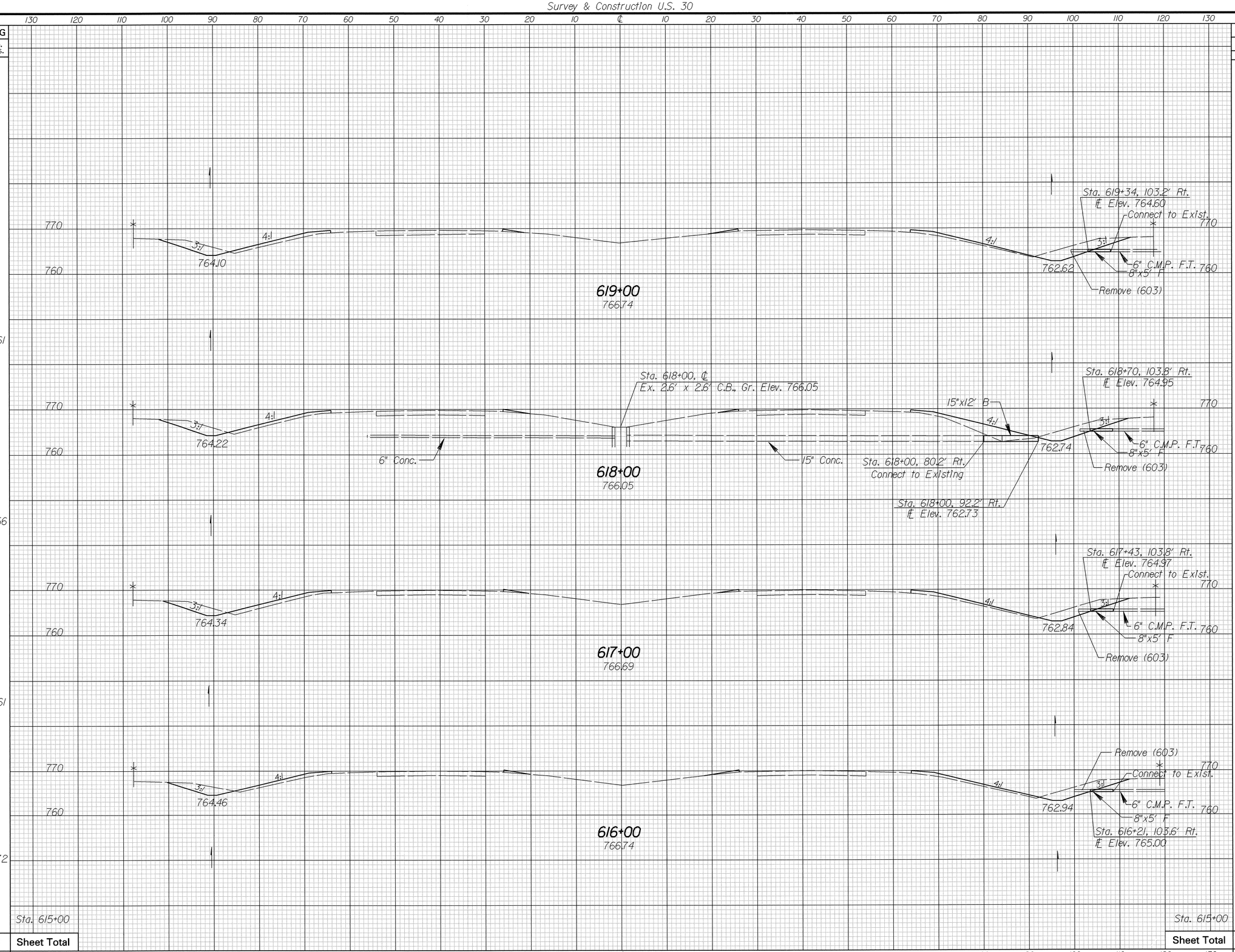
CROSS SECTIONS – MAINLINE U.S. 30
Sta. 612+00 to Sta. 615+00

VAN-30-11.24

40 / 161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:12

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
105	1161	56	30	196	164
104	1156	50	59	180	172
104	1161	47	34	178	133
105	1172	49	38	180	132
106		48	33		
4650	Sheet Total			734	601
SQ. YDS.			SQ. FT.	CU. YDS.	



DESIGN FILE : /usr/odot/dgn/v30/v30xs2.dgn
USERNAME : m.fox
DATE : 06-OCT-1994
TIME : 17:12

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 616+00 to Sta. 619+00

VAN-30-11.24

41
161

SEEDING END WIDTH	SEEDING SQ. YDS.	STATION	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
		130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130				
110		623+00	62	28		
	1200				217	111
106		622+00	55	32		
	1178				198	124
106		621+00	52	35		
	1178				194	131
106		620+00	53	36		
	1172				202	122
105		Sta. 619+00	56	30		
4728	Sheet Total	Sheet Total			811	488
SQ. YDS.				SQ. FT.	CU. YDS.	

623+00 — 766.09
- 770 / 760
- 3:1, 4:1
- 763.62
- 762.14
- Sta. 623+09, 101' Rt. ℄ Elev. 763.51
- Connect to Exist. 770
- 3:1
- 6" C.M.P. F.T. 760
- 8"x5' F
- Remove (603)

622+00 — 766.26
- 770 / 760
- 3:1, 4:1
- 763.74
- 762.26

621+00 — 766.36
- 770 / 760
- 3:1, 4:1
- 763.86
- 762.38
- Sta. 621+46, 103.4' Rt. ℄ Elev. 764.54
- Connect to Exist. 770
- 3:1
- 6" C.M.P. F.T. 760
- 8"x5' F
- Remove (603)

620+00 — 766.75
- 770 / 760
- 3:1, 4:1
- 763.98
- 762.50
- Sta. 620+32, 103.5' Rt. ℄ Elev. 764.65
- Connect to Exist. 770
- 3:1
- 6" C.M.P. F.T. 760
- 8"x5' F
- Remove (603)

DESIGN FILE : /usr/odot/dgn/v30/v30xs2.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:15

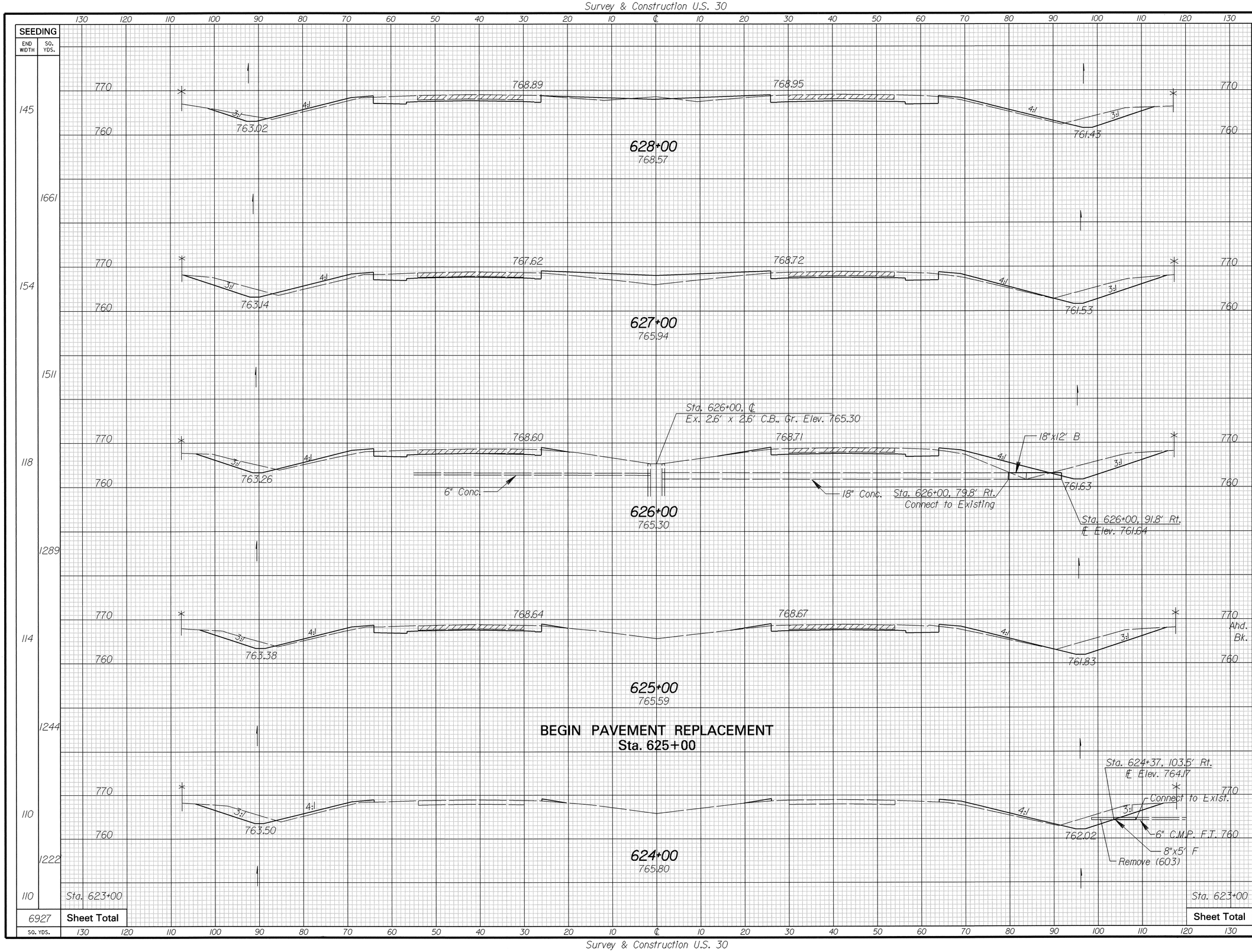
CALCULATED BJD
CHECKED NJV

CROSS SECTIONS - MAINLINE U.S. 30
Sta. 620+00 to Sta. 623+00

VAN-30-11.24

42
161

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
145	1661	160	47	522	263
154	1511	122	95	530	291
118	1289	164	62	526	161
114	1244	Ahd. 120 Bk. 68	25 25	248	102
110	1222	66	30	237	107
Sta. 623+00		Sta. 623+00			
6927	Sheet Total	Sheet Total		2063	924
SQ. YDS.		SQ. FT.		CU. YDS.	



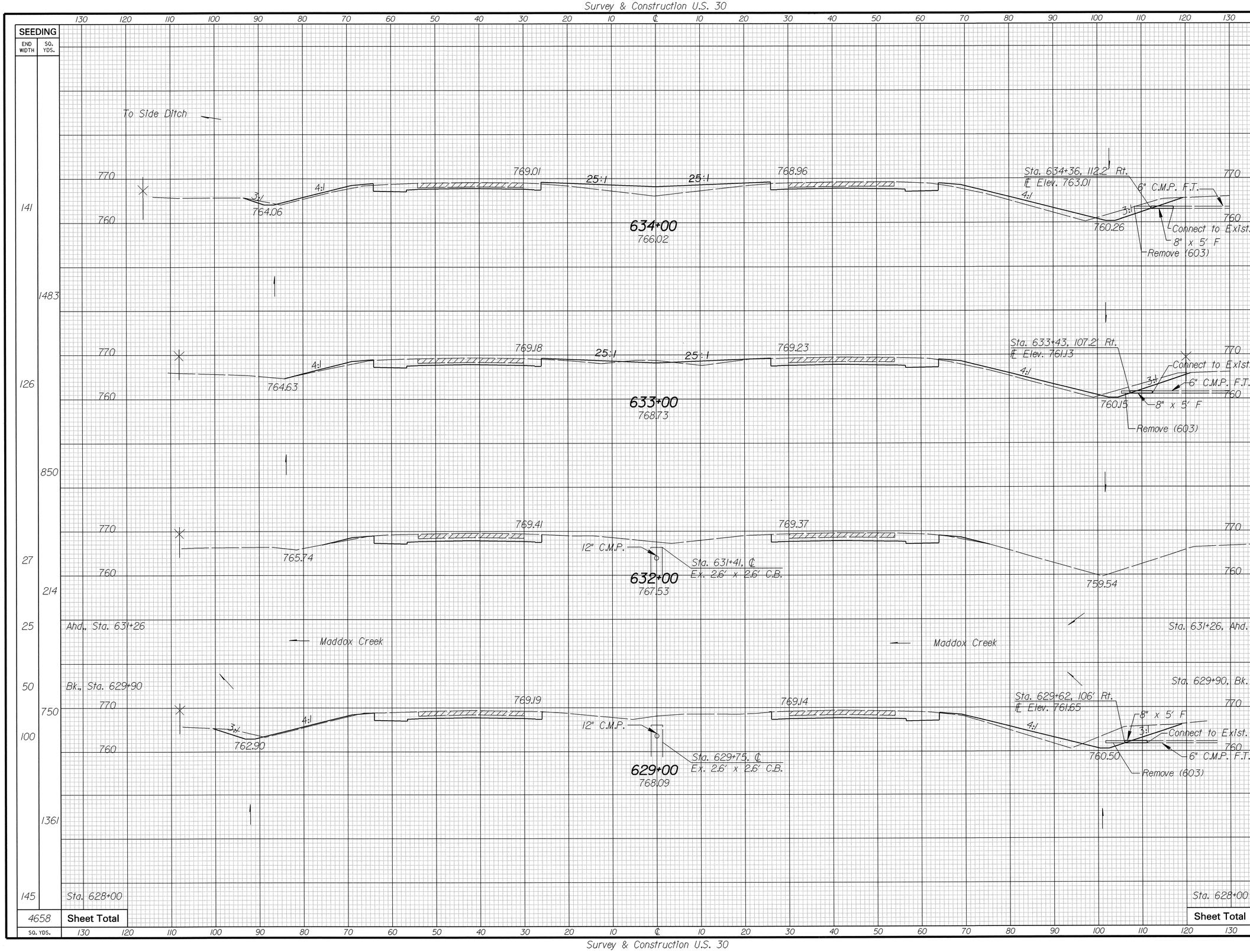
DESIGN FILE : /usr/odot/dgn/v30/v30xs2.dgn
USERNAME : lbrinkma
DATE : 07-OCT-1994
TIME : 14:48

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 624+00 to Sta. 628+00

VAN-30-11.24

43
161



SEEDING END WIDTH	SEEDING SQ. YDS.
141	1483
126	850
27	214
25	
50	750
100	1361
145	
	4658
	SQ. YDS.

Sheet Total

EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
92	102	433	280
142	49	424	98
87	4	236	5
85	0		
85	0	382	55
144	33	563	148
160	47		
		2038	586
	SQ. FT.	CU. YDS.	

Sheet Total

CALCULATED B.J.D. CHECKED N.V.

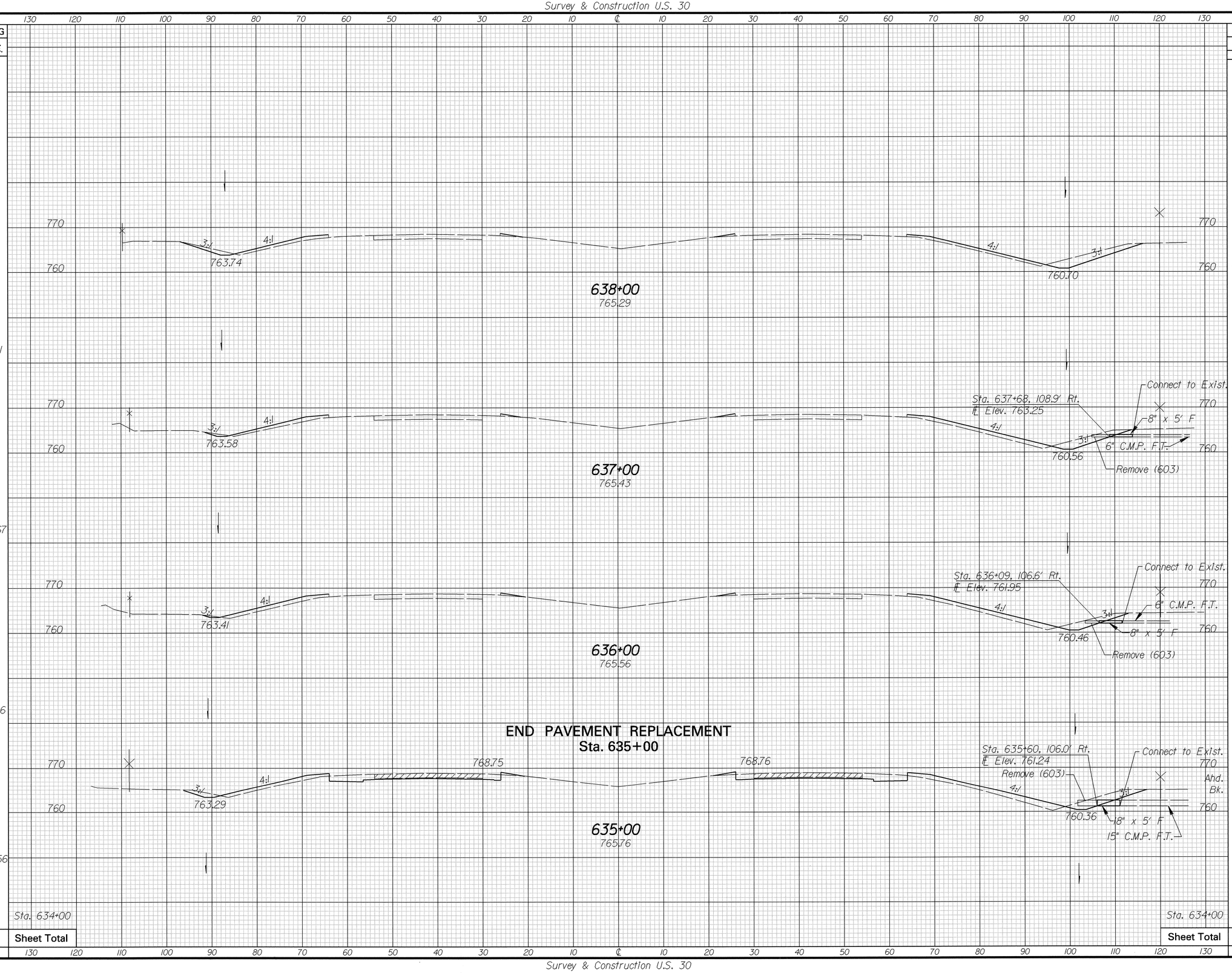
CROSS SECTIONS – MAINLINE U.S. 30
Sta. 629+00 to Sta. 634+00

VAN-30-11.24

44
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs3.dgn
USERNAME : lbrinkma
DATE : 06-OCT-1994
TIME : 17:47

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
104		34	35		
	1111			106	143
96		23	42		
	1067			74	170
96		17	50		
	1106			87	196
103		Ahd. 30 / Bk. 75	56 / 56		
	1356			309	293
141	Sta. 634+00	92	102		
4640	Sheet Total			576	802
SQ. YDS.			SQ. FT.		CU. YDS.



DESIGN FILE : /usr/odot/dgn/v30/v30xs3.dgn
USERNAME : lbrinkma

DATE : 06-OCT-1994
TIME : 17:48

CALCULATED BJD
CHECKED JVV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 636+00 to Sta. 638+00

VAN-30-11.24

45
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs3.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:15

SEEDING END WIDTH	SEEDING SQ. YDS.	Sta.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
96	1072	642+00	6	35	31	133
97		641+00	11	37		
98	1083	640+00	18	36	54	135
118	1200	639+00	28	61	85	180
104	1233	638+00	34	35	115	178
4588	Sheet Total				285	626
SQ. YDS.			SQ. FT.		CU. YDS.	

642+00
765.46
764.20
761.54

641+00
765.34
764.00
761.42
Connect to Exist. 770
6" C.M.P. F.T.
8" x 5' F
Sta. 641+78, 106.4' Rt.
℄ Elev. 764.18

640+00
765.36
763.98
761.30
Sta. 640+87, 105.6' Rt.
℄ Elev. 763.92
Connect to Exist. 770
6" C.M.P. F.T.
8" x 5' F
Remove (603)

639+00
764.37
763.86
761.18
Sta. 639+00, ℄
Ex. 2.6' x 2.6' C.B. Gr. Elev. 764.37
6" Conc.
18" Conc.
Sta. 639+00, 82.1' Rt.
Connect to Ex.
18" x 12' B
Sta. 639+00, 94.1' Rt.
℄ Elev. 761.28

770
760
3:1
4:1

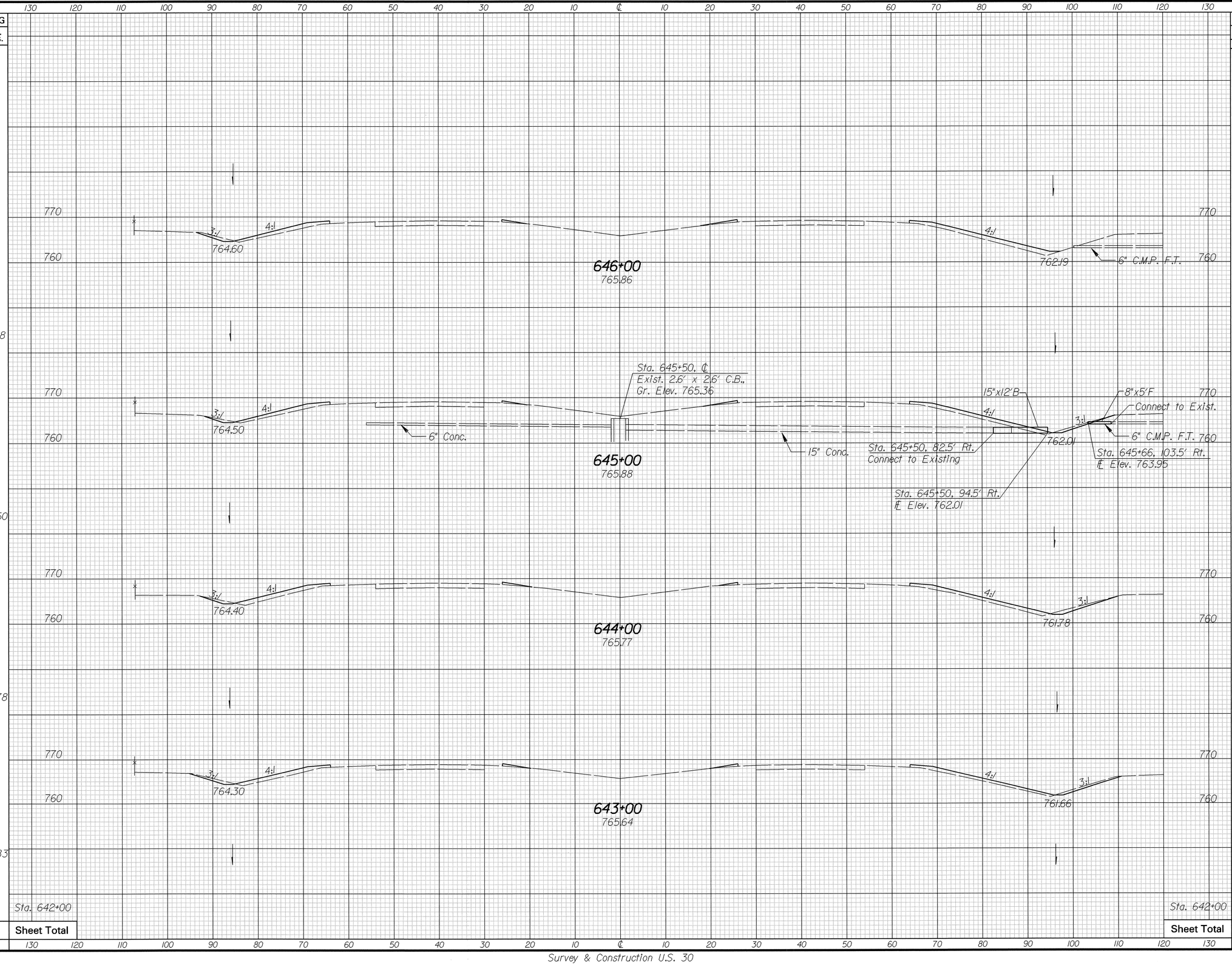
CALCULATED BJD
CHECKED NJV

CROSS SECTIONS - MAINLINE U.S. 30
Sta. 639+00 to Sta. 642+00

VAN-30-11.24

46
161

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
82	978	4	28	20	135
94	1050	7	45	30	163
95	1078	9	43	35	156
99	1083	10	41	30	141
96		6	35		
4189	Sheet Total			115	595
SQ. YDS.			SQ. FT.		CU. YDS.



DESIGN FILE : /usr/odot/dgn/v30/v30xs4.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:15

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS - MAINLINE U.S. 30
Sta. 643+00 to Sta. 646+00

VAN-30-11.24

47
161

SEEDING END WIDTH	SEEDING SQ. YDS.	STATION	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
80	889	650+00	1	41	4	159
80	889	649+00	1	45	4	176
80	894	648+00	1	50	7	180
81	906	647+00	3	47	13	139
82		Sta. 646+00	4	28		
3578	Sheet Total				28	654
SQ. YDS.				SQ. FT.	CU. YDS.	

650+00
766.56
765.02
762.82
12" C.M.P.

649+00
766.38
764.90
762.66

648+00
766.15
764.80
762.49

647+00
765.95
764.70
762.33
6" C.M.P.

CALCULATED BJD
CHECKED N.V

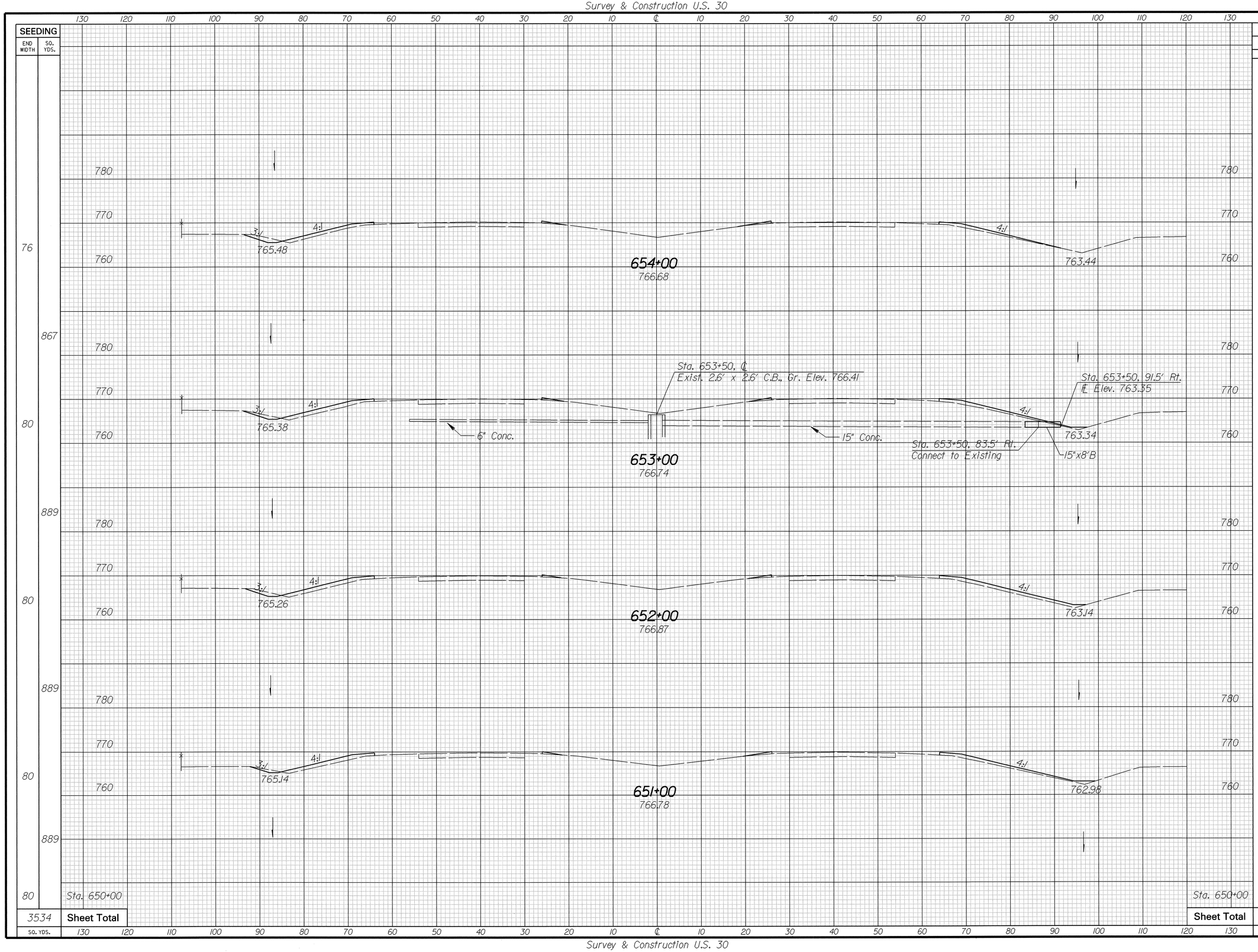
CROSS SECTIONS – MAINLINE U.S. 30
Sta. 647+00 to Sta. 650+00

VAN-30-11.24

48
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs4.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:15

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
76	867	6	30	19	130
80	889	4	40	15	152
80	889	4	42	13	150
80	889	3	39	7	148
80	Sta. 650+00	1	41		
3534	Sheet Total			54	580
SQ. YDS.			SQ. FT.	CU. YDS.	



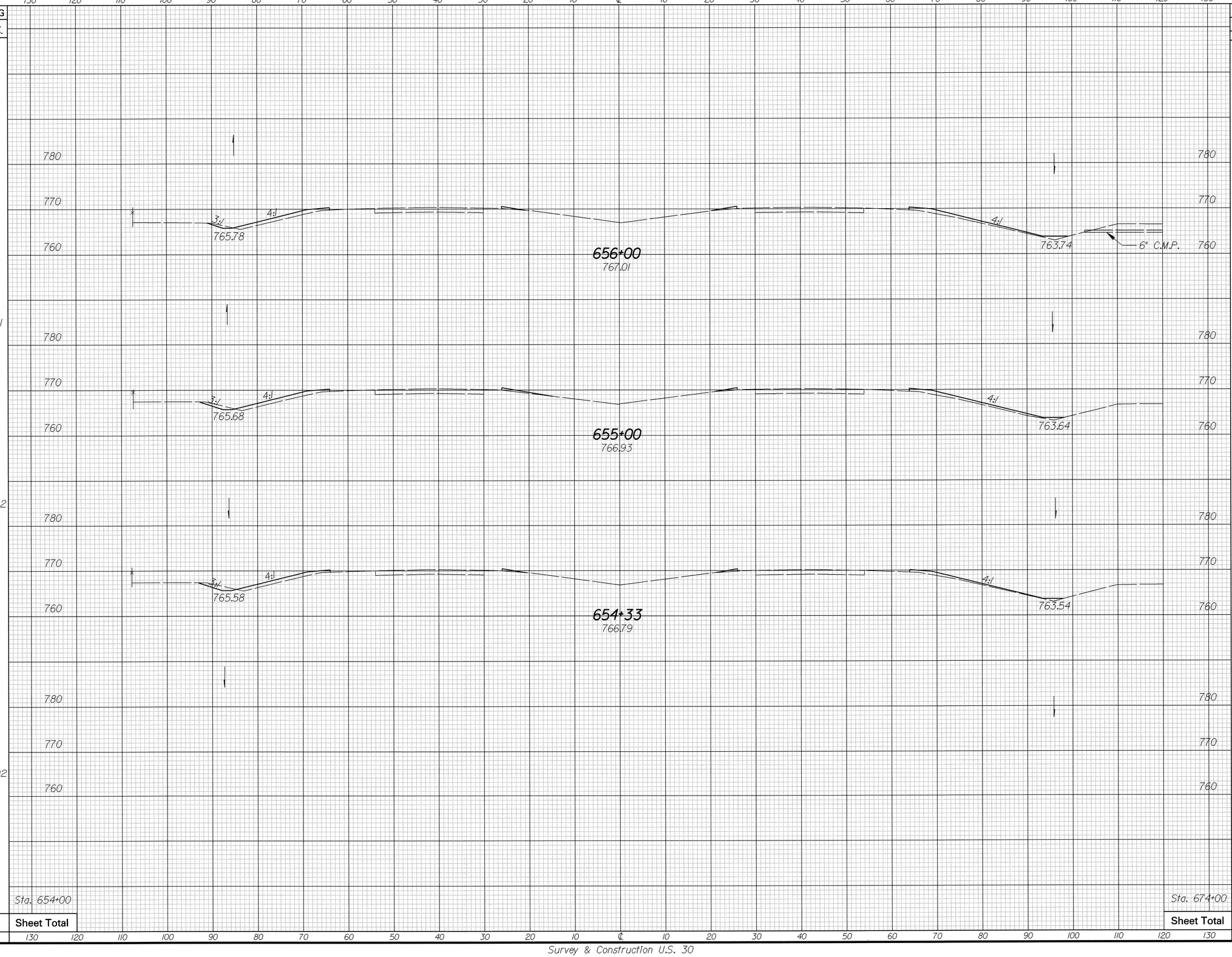
DESIGN FILE : /usr/odot/dgn/v30/v30xs4.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:15

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 651+00 to Sta. 654+00

VAN-30-11.24

SEEDING END WIDTH	SEEDING SQ. YDS.
80	911
84	622
83	292
76	
1825 SQ. YDS.	Sheet Total



Sta. 654+00 — Sta. 674+00

EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
2	34		
		11	124
4	33		
		11	74
5	27		
		7	35
6	30		
		29	233
SQ. FT.		CU. YDS.	

Sheet Total

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 654+33 to Sta. 656+00

VAN-30-11.24

50
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs4.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:15

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
75	856	0	38	2	131
79		1	33		
80	883	2	40	6	135
80	889	2	35	7	139
80	889	2	34	7	128
3517 Sheet Total				22	533
SQ. YDS.				CU. YDS.	

660+00
767.73
770
760
3:1
4:1
766.18
4:1
764.14

659+00
767.55
770
760
3:1
4:1
766.08
4:1
764.04
6" Plastic F.J.

658+00
767.55
770
760
3:1
4:1
765.98
4:1
763.94

657+00
767.23
770
760
3:1
4:1
765.88
4:1
763.84

Sta. 656+00

Sta. 656+00

Sheet Total

SQ. FT.

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 657+00 to Sta. 660+00

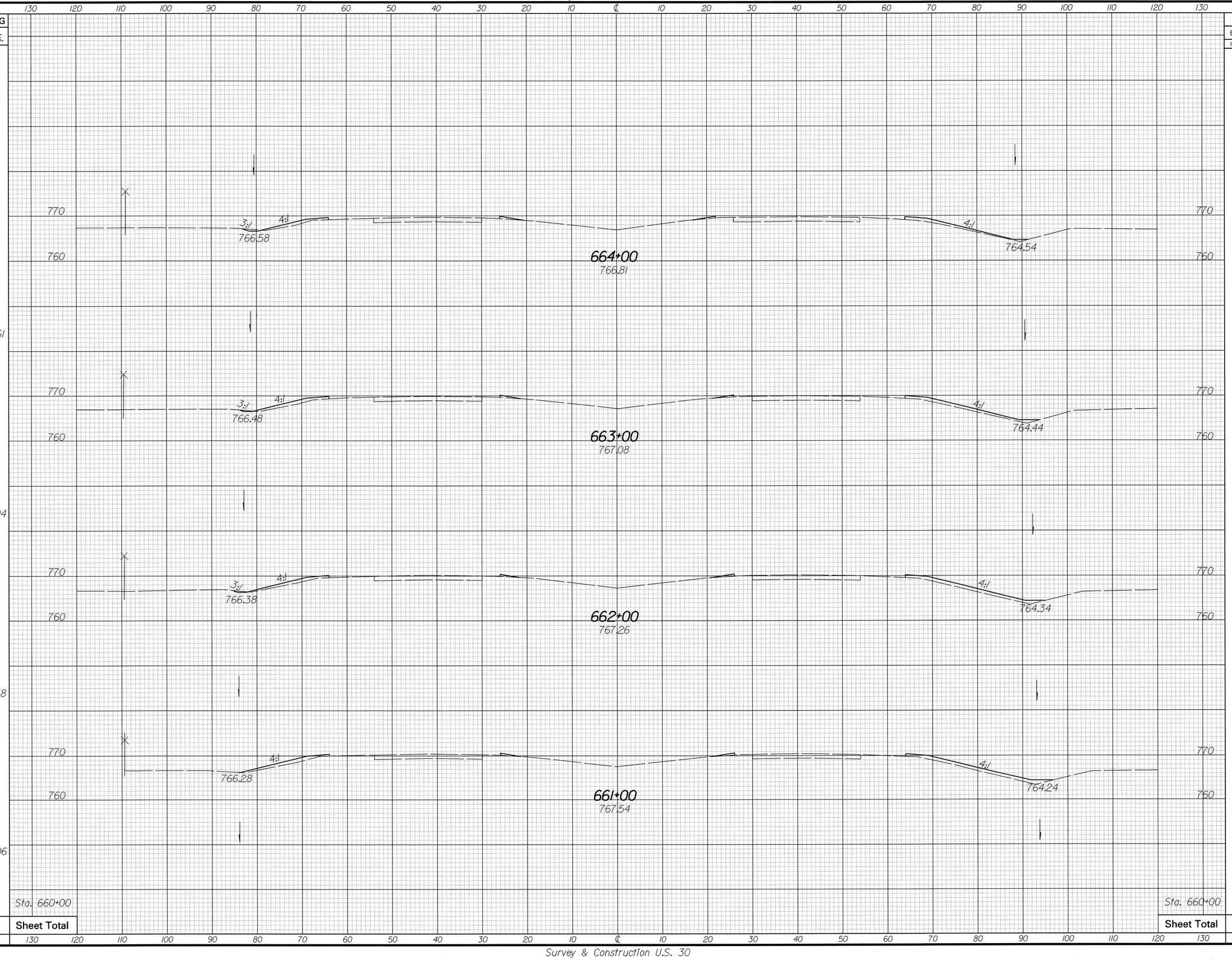
VAN-30-11.24

51
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs5.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:15

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
64	661	1	26	2	111
55	694	0	34	0	131
70	778	0	37	0	135
70	806	0	36	0	137
75	Sta. 660+00	0	38		
2939	Sheet Total			2	514
SQ. YDS.			SQ. FT.		CU. YDS.



DESIGN FILE : /usr/odot/dgn/v30/v30xs5.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:15

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 661+00 to Sta. 664+00

VAN-30-11.24

52
161

SEEDING END WIDTH	SEEDING SQ. YDS.
104	
	1050
73	
	761
64	
	711
64	
2522	Sheet Total
SQ. YDS.	

Ahd.

Seeding from Sta. 666+00 to Sta. 668+00 around Dutch John Rd.

Bk.

Sta. 664+00

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

770 / 760

3:1 4:1 766.89

668+00
767.93

Sta. 668+00, 97' Rt.
℄ Elev. 763.12
15"x12" B
4:1
763.11
Sta. 670+00, 100.7' Rt.
℄ Elev. 763.20
8"x5" F
5:1
6" C.M.P. F.I.
Connect to Exist.
15" Conc.
Sta. 668+00, 85' Rt.
Connect to Exist.
Remove (603)

Sta. 667+76, 4.2' Rt.
Ex. 2.6' x 2.6' C.B. Gr. Elev. 766.91
15" Conc.
15" Conc.
4:1

667+00
769.50

Earthwork from Sta. 666+00 to Sta. 668+00 around Dutch John Rd.

Sta. 666+52, 2.4' Lt.
Ex. 2.6' x 2.6' C.B. Gr. Elev. 766.39
3:1 4:1 766.38
6" Conc.
15" Conc.
4:1 3:1 764.74

666+00
766.48

3:1 4:1 766.48
4:1 3:1 764.84

665+00
766.68

EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
	24	52	
		50	110
	8	30	
		17	104
	1	26	
		4	96
	1	26	
	Sheet Total	71	310
	SQ. FT.	CU. YDS.	

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 665+00 to Sta. 668+00

VAN-30-11.24

53
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs5.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:16

DESIGN FILE : /usr/odot/dgn/v30/v30xs5.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:16

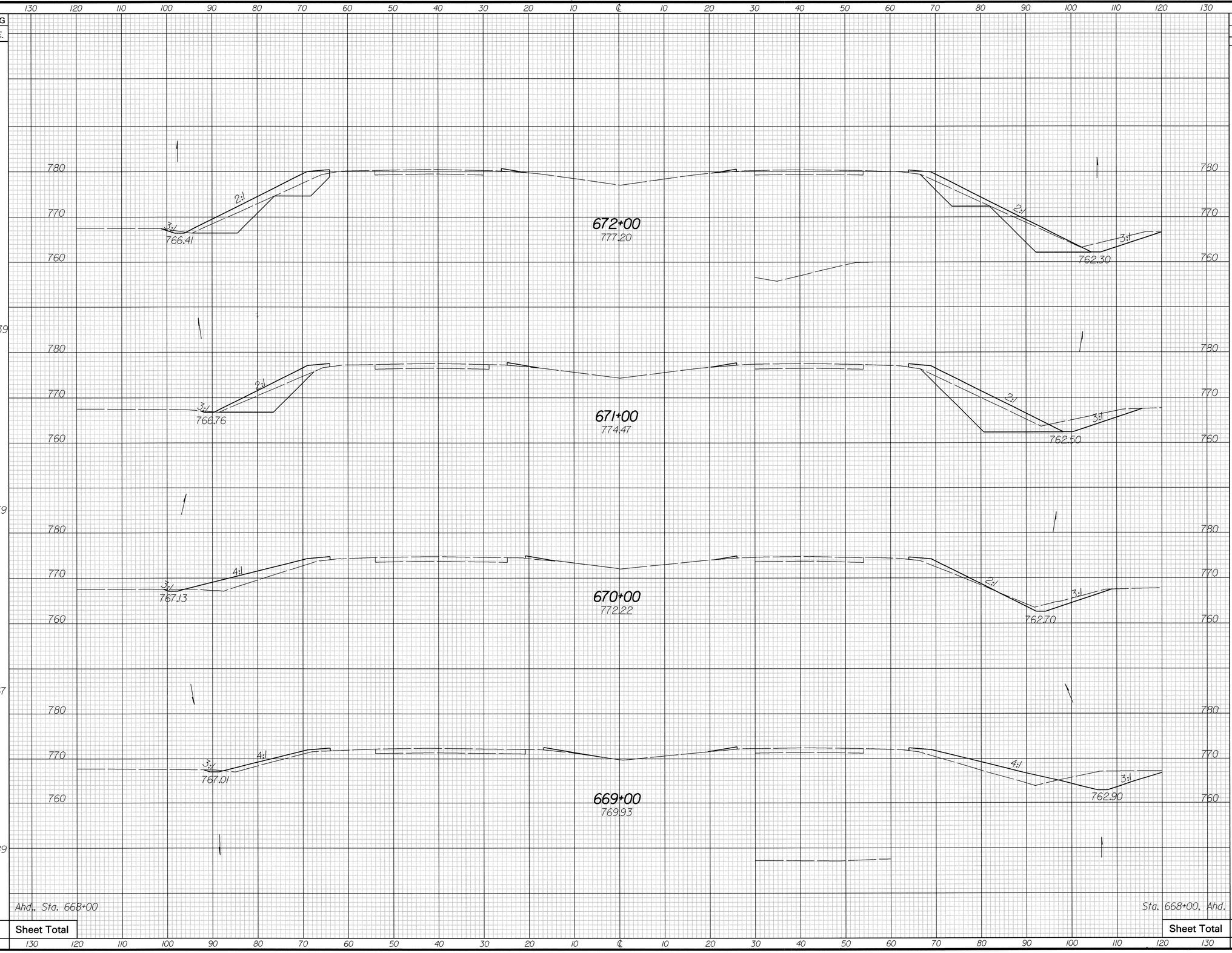
CALCULATED B.D
CHECKED N.V

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 669+00 to Sta. 672+00

VAN-30-11.24

54 / 161

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
118	1239	185	252	713	919
105	1139	200	244	406	585
100	1167	19	72	143	281
110	1189	58	80	152	244
104	Ahd., Sta. 668+00	24	52	Sta. 668+00, Ahd.	
47.34	Sheet Total			1414	2029
SQ. YDS.				CU. YDS.	



SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
172	1828	304	393	1067	1433
157	1661	272	381	806	1270
142	1500	163	305	715	1133
128	1367	223	307	756	1035
118	Sta. 672+00	185	252		
6356	Sheet Total			3344	4871
SQ. YDS.		SQ. FT.		CU. YDS.	

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

780 770 760

676+00
788.17
2:1
764.02
2:1

150 140 130 120 120 130 140 150

675+00
786.19
2:1
764.67
2:1
761.71

150 140 130 120 120 130 140 150

Sta. 674+00, ℄
Exist. 2.6' x 2.6' C.B., Gr. Elev. 783.42
15" Conc.

674+00
783.42
2:1
3:1
765.24
2:1
Sta. 674+00, 116.4 Rt.
Fl. Elev. 761.91
3:1
761.91
Sta. 674+00, 108.4' Rt.
Connect to Existing
15"x8" B

120 130 140 150

673+00
780.50
2:1
3:1
765.78
2:1
3:1
762.10

120 130 140 150

DESIGN FILE : /usr/odot/dgn/v30/v30xs6.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:16

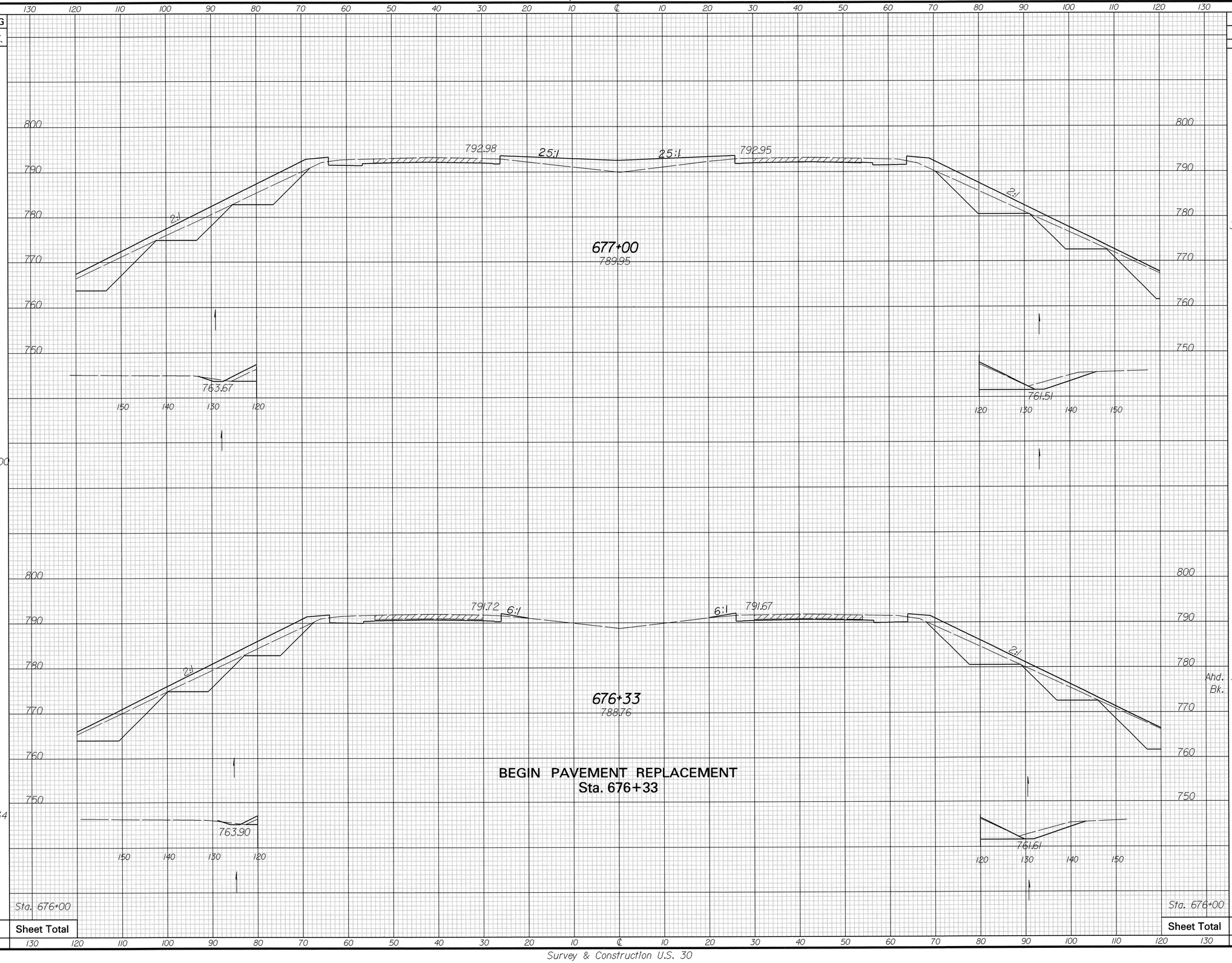
CALCULATED B/D
CHECKED NJV

CROSS SECTIONS - MAINLINE U.S. 30
Sta. 673+00 to Sta. 676+00

VAN-30-11.24

55
161

SEEDING	
END WIDTH	SQ. YDS.
222	
	2200
174	
	634
172	
Sta. 676+00	
2834	Sheet Total
SQ. YDS.	



EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
350	582		
		1307	1883
Ahd. 356	435		
Bk. 311	435		
		376	506
Sta. 676+00	304	393	
Sheet Total		1683	2389
SQ. FT.		CU. YDS.	

CALCULATED B.J.D. CHECKED N.J.V.

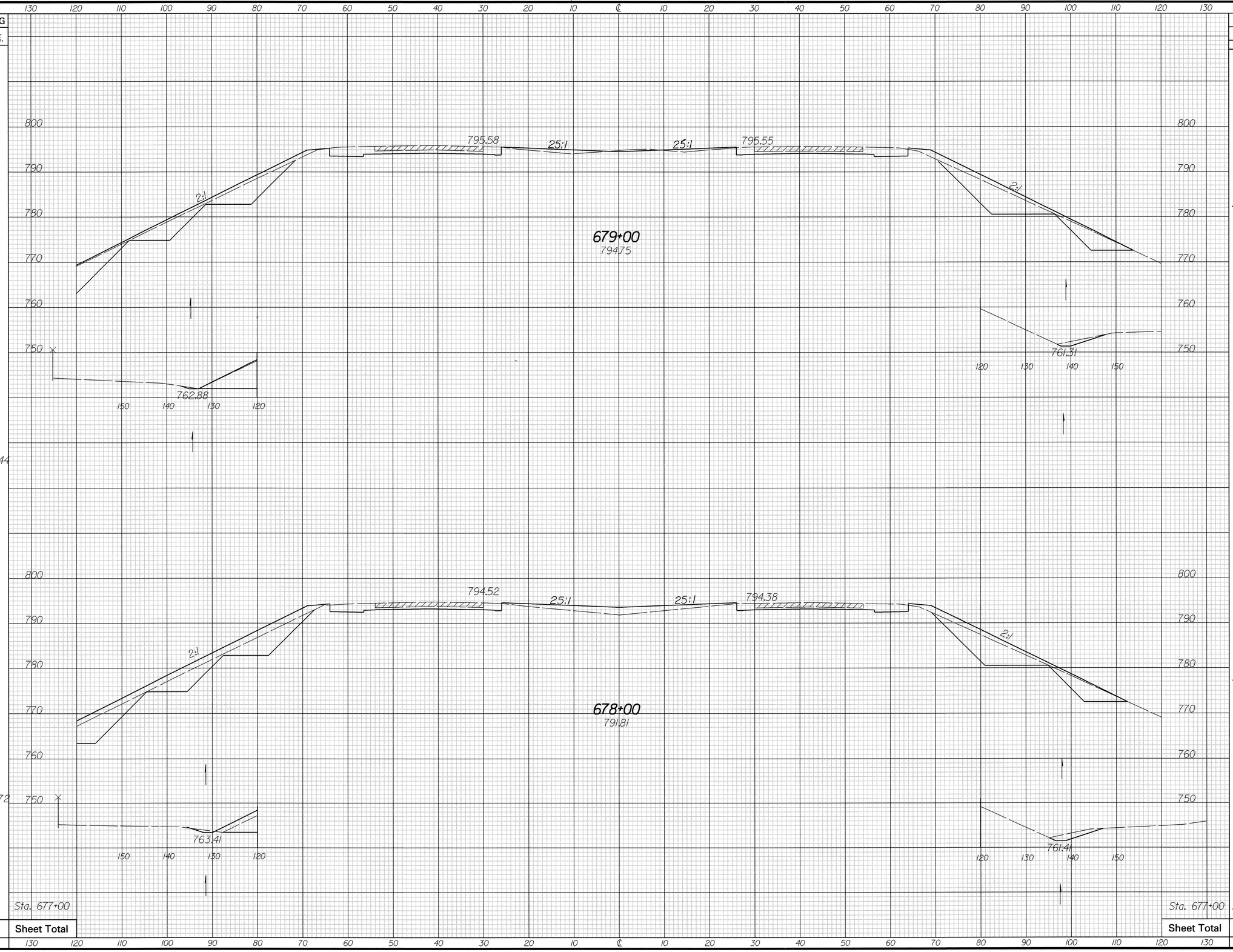
CROSS SECTIONS - MAINLINE U.S. 30
Sta. 676+33 to Sta. 677+00

VAN-30-11.24

56
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs6.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:16

SEEDING END WIDTH	SEEDING SQ. YDS.	Sta.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
		130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130				
217		679+00	409	395		
	2344				1427	1572
205		678+00	362	454		
	2372				1319	1919
222		Sta. 677+00	350	582		
4716	Sheet Total	Sheet Total			2746	3491
SQ. YDS.				SQ. FT.	CU. YDS.	



CALCULATED BJD
CHECKED NJV

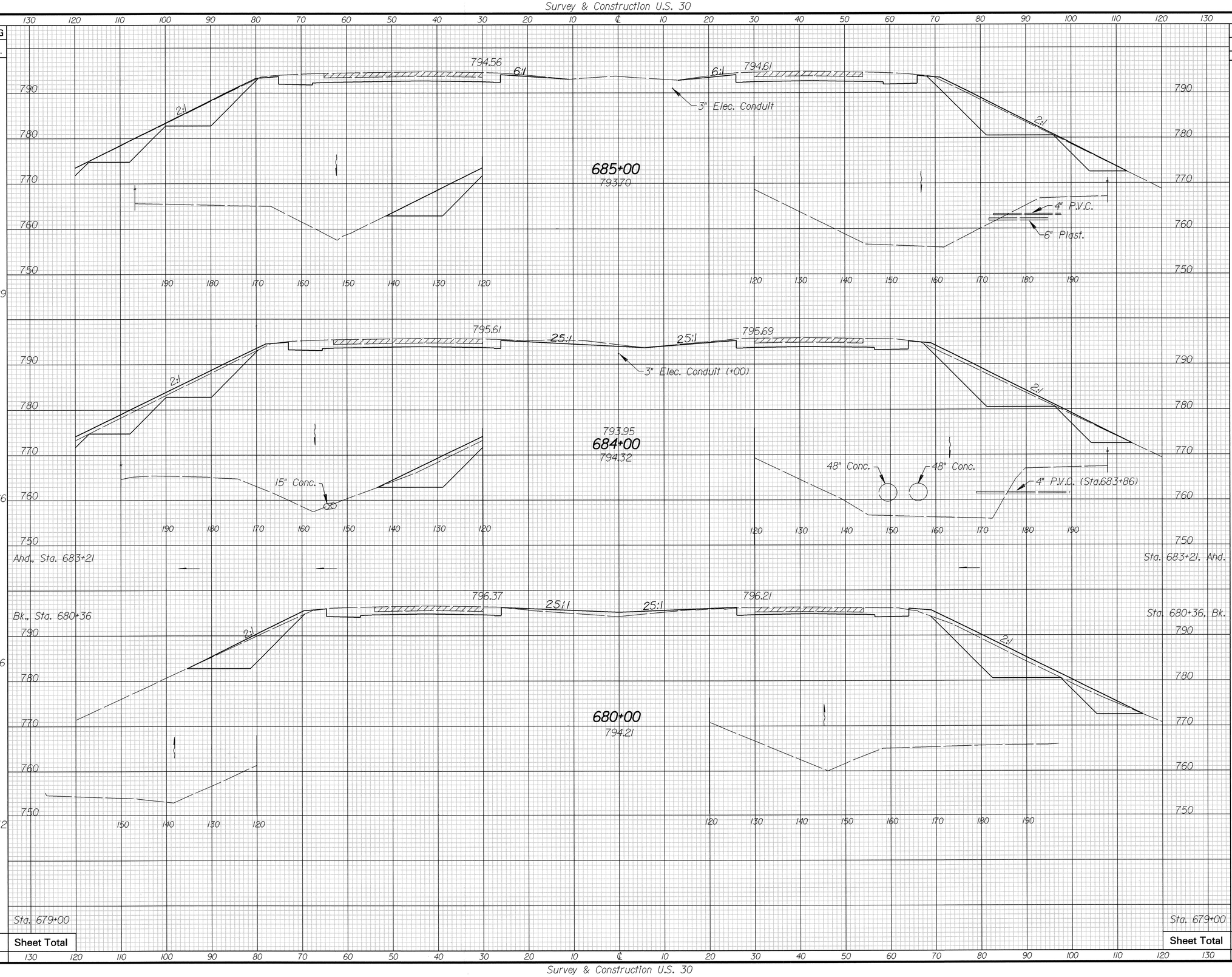
CROSS SECTIONS – MAINLINE U.S. 30
Sta. 678+00 to Sta. 679+00

VAN-30-11.24

57
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs6.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:17

SEEDING	
END WIDTH	SQ. YDS.
156	1889
184	1466
150	Ahd., Sta. 683+21
100	Bk., Sta. 680+36
143	486
217	1472
	Sta. 679+00
	5313 Sheet Total



EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
455	335		
		1657	1339
440	388		
		1265	1109
Sta. 683+21, Ahd.	425	370	
		441	394
Sta. 680+36, Bk.	300	275	
	362	316	
		1276	1228
Sta. 679+00	409	395	
Sheet Total		4639	4070
SQ. FT.		CU. YDS.	

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 680+00 Sta. 685+00

VAN-30-11.24

58
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs7.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:17

Survey & Construction U.S. 30

SEEDING	
END WIDTH	SQ. YDS.
152	1800
172	1822
156	3622

Sta. 685+00

Sheet Total

SQ. YDS.

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

800 790 780 770 760 750

190 180 170 160 150 140 130 120

120 130 140 150 160 170 180 190

2:1

791.35

12" Conc.

791.26

3" Elec. Conduit

687+00
790.44

793.17

12" Conc.

Sta. 686+08, ℄
Ex. 2.6' x 2.6' C.B., Gr. Elev. 789.89

793.10

3" Elec. Conduit

790.13
686+00
790.13

EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
422	424		
415	283		
Sta. 685+00	455	335	
Sheet Total		3161	2453
SQ. FT.		CU. YDS.	
		1550	1309
		1611	1144

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 686+00 to Sta. 687+00

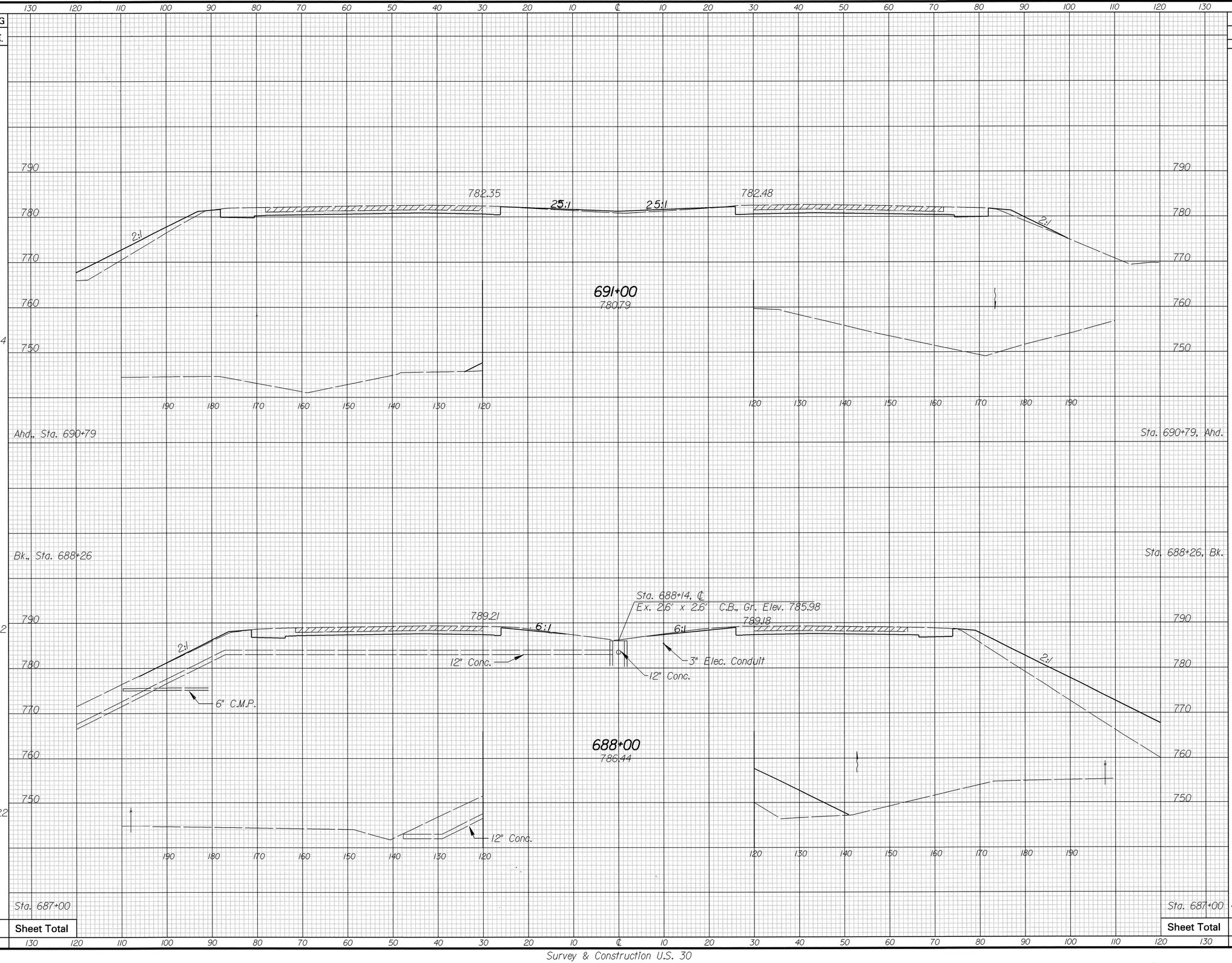
VAN-30-11.24

59
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs7.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:17

Survey & Construction U.S. 30

SEEDING		EARTHWORK			
END WIDTH	SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
160	344	197	74	123	29
135		120	0		
120	402	110	0	131	152
158		162	315		
152	1722	422	424	1081	1369
2468	Sheet Total	Sheet Total		1335	1550
SQ. YDS.			SQ. FT.	CU. YDS.	



DESIGN FILE : /usr/odot/dgn/v30/v30xs8.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:18

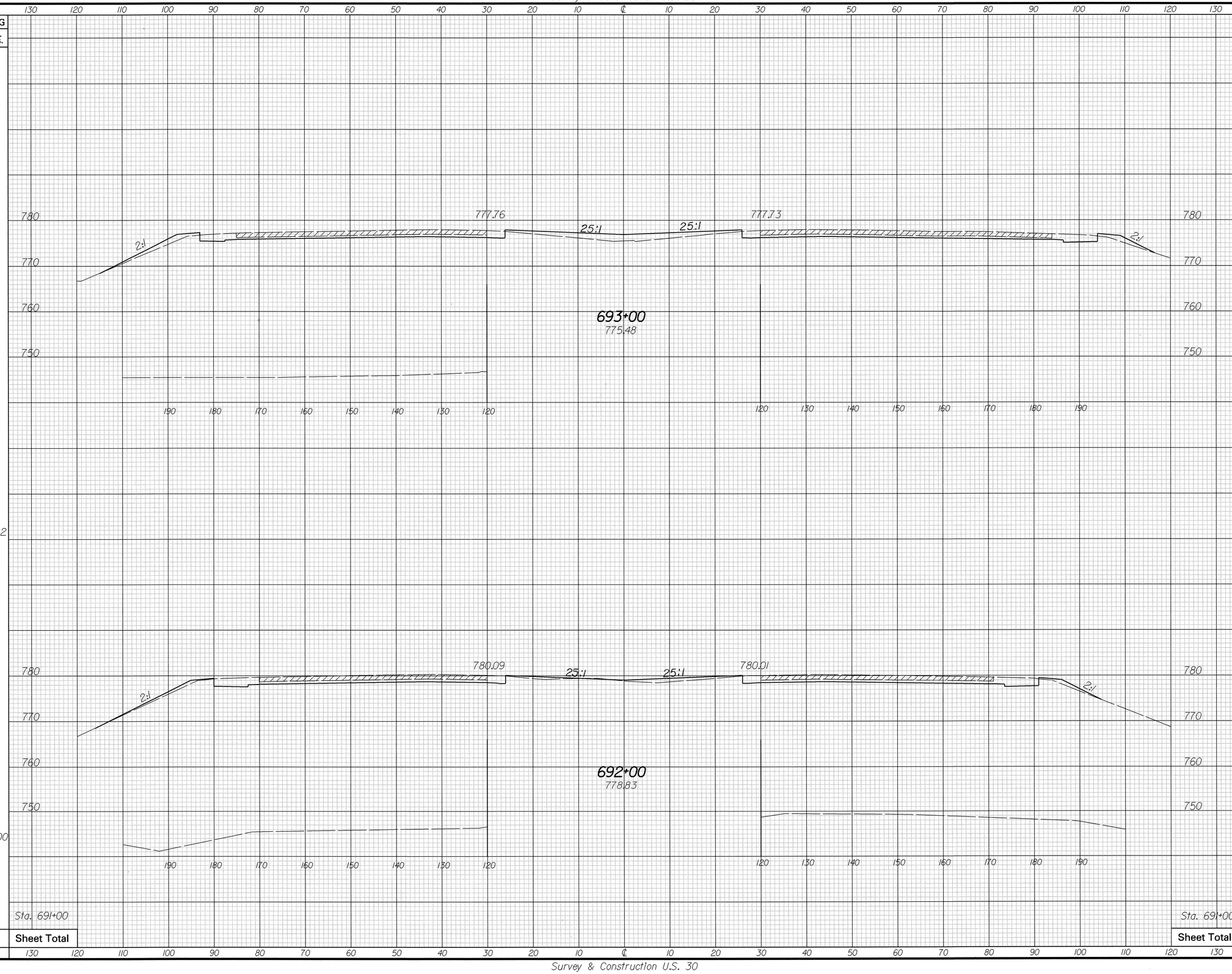
CALCULATED BJD
CHECKED NJV

CROSS SECTIONS - MAINLINE U.S. 30
Sta. 688+00 to Sta. 691+00

VAN-30-11.24

60
161

SEEDING	
END WIDTH	SQ. YDS.
92	
	1122
110	
	1500
160	
Sta. 691+00	2622
Sheet Total	2622
	SQ. YDS.



EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
98	72		
102	32	370	193
197	74	554	196
Sheet Total		924	389
Sta. 691+00		CU. YDS.	
SQ. FT.			

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 692+00 Sta. 693+00

VAN-30-11.24

61
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs8.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:18

Survey & Construction U.S. 30

DESIGN FILE : /usr/odot/dgn/v30/v30xs9.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:18

SEEDING END WIDTH	SEEDING SQ. YDS.
70	806
75	861
80	706
47 / 63	944
107 / 145	1316
92	4633

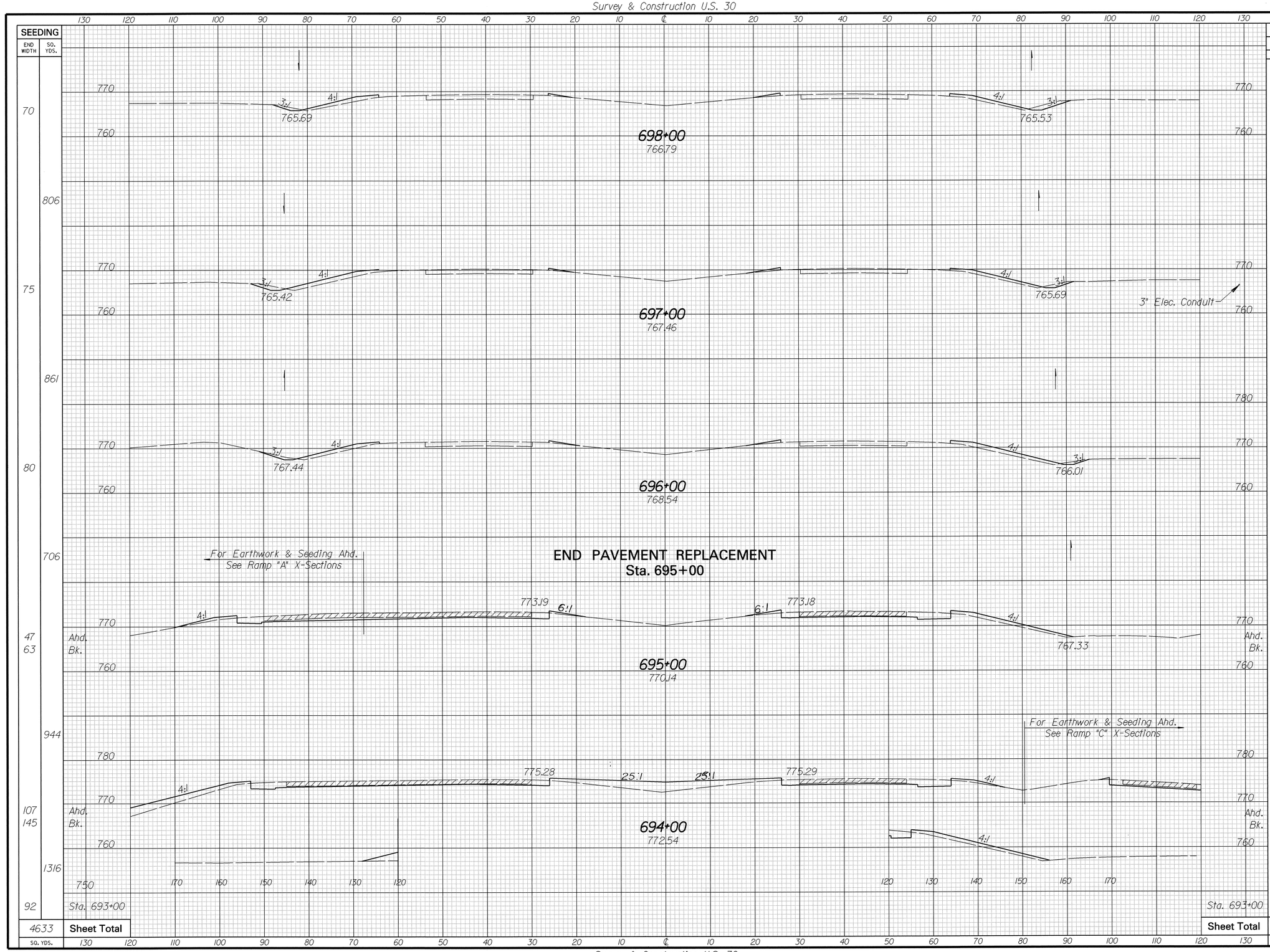
EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
8	25		
		30	109
8	34		
		26	128
6	35		
		11	109
0 / 58	24 / 30		
		200	281
50 / 65	122 / 142		
		302	396
98	72		
		569	1023

CALCULATED B.V.D
CHECKED N.V

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 694+00 to Sta. 698+00

VAN-30-11.24

62
161



SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
48		0	18		
	711			0	96
80		Ahd. 0	34		
41		Bk. 0	16		
	550			4	78
58		2	26		
	694			20	91
67		9	23		
	761			31	89
70		8	25		
2716 SQ. YDS.	Sheet Total	Sheet Total SQ. FT.		55 CU. YDS.	354

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

For Earthwork & Seeding
See Ramp "B" X-Sections

770
760
4:1
766.81

702+00
765.73

768.10
4:1
4:1
770
760

For Earthwork & Seeding Bk.
See Ramp "D" X-Sections

770
760
4:1
766.70

701+00
765.70

4:1
766.66
770
760

Sta. 699+90, ℄
Ex. 2.6' x 2.6' C.B. IEElev. 765.51

770
760
3:1
4:1
766.15

6" Conc.

Sta. 699+90, 1' Lt.
IEElev. 763.27

700+00
765.61

Sta. 699+90, 1' Rt.
IEElev. 762.42

15" Conc.

15"x8' B

Sta. 699+89, 80.1' Rt.
Connect to Exist.

764.30

4:1
2.4" Conc.
770
760

Sta. 699+89, 88.1' Rt.
IEElev. 762.37

770
760
3:1
4:1
765.79

699+00
766.09

4:1
3:1
765.02
770
760

Sta. 698+00

Sta. 698+00

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

Survey & Construction U.S. 30

DESIGN FILE : /usr/odot/dgn/v30/v30xs9.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:18

CALCULATED BJD
CHECKED MJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 699+00 Sta. 702+00

VAN-30-11.24

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
75		19	30		
	650			35	81
42		0	14		
	489			0	52
46		0	14		
	594			0	54
61		0	15		
38		Ahd. 0	7		
	478			0	46
48		Sta. 702+00	0	18	
2211 SQ. YDS.	Sheet Total	Sheet Total		35 CU. YDS.	233

Sta. 706+00, ℄
Ex. 2.6' x 2.6' C.B., ℄Elev. 765.47

706+00
765.47

Sta. 706+01, 1.7' Rt.
℄Elev. 762.78

15" Conc.

Sta. 706+00, 105.3' Rt.
Connect to Exist.

3" Elec. Conduit

15"x8" B

Sta. 706+00, 113.3' Rt.
℄Elev. 762.76

705+00
765.87

765.69 765.59 763.57 3" Elec. Conduit

704+00
766.24

765.50 763.28 3" Elec. Conduit

For Earthwork & Seeding Bk.
See Ramp "B" X-Sections

703+00
765.96

767.54 763.27

770 760 4:1 3:1

DESIGN FILE : /usr/odot/dgn/v30/v30xs9.dgn
USERNAME : m.fox
DATE : 06-OCT-1994
TIME : 17:18

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 703+00 to Sta. 706+00

VAN-30-11.24

64
161

Survey & Construction U.S. 30

DESIGN FILE : /usr/odot/dgn/v30/v30xsl0.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:09

SEEDING			EARTHWORK				
END WIDTH	SQ. YDS.		END AREA		VOLUME		
			CUT	FILL	CUT	FILL	
57		770 4:1 766.88 3" Elec. Conduit	0	15			
		760 **710+00** 766.67					
	589				0	57	
49		770 4:1 766.73 3" Elec. Conduit	0	16			
		760 **709+00** 766.42					
	550				0	59	
50		770 4:1 766.42 3" Elec. Conduit	0	16			
		760 **708+00** 766.30					
	572				0	63	
53		770 4:1 766.12 3" Elec. Conduit (+34)	0	18			
		760 **707+00** 766.18					
	711				35	89	
75	Sta. 706+00		Sta. 706+00	19	30		
2422	Sheet Total		Sheet Total			35	268
SQ. YDS.				SQ. FT.		CU. YDS.	

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

Survey & Construction U.S. 30

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 707+00 to Sta. 710+00

VAN-30-11.24

65
161

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
55	667	3	20	11	76
65		3	21		
700		9	70		
61	639	2	17	4	67
54	617	0	19	0	63
57		0	15		
2623	Sheet Total			24	276
SQ. YDS.			SQ. FT.	CU. YDS.	

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

780 770 760

Sta. 714+00, ℄
Ex. 2.6' x 2.6' C.B., Gr. Elev. 766.43

3:1 4:1 766.92 3" Elec. Conduit

15" Conc.

3" Elec. Conduit 4:1 764.77

714+00
766.43

3:1 4:1 767.09 3" Elec. Conduit

3" Elec. Conduit 4:1 764.64

713+00
766.98

3:1 4:1 767.24 3" Elec. Conduit

3" Elec. Conduit 4:1 764.37

712+00
766.95

4:1 767.03 3" Elec. Conduit

3" Elec. Conduit 4:1 764.11

711+00
766.92

Sta. 710+00 Sta. 710+00

DESIGN FILE : /usr/odot/dgn/v30/v30xsl0.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:09

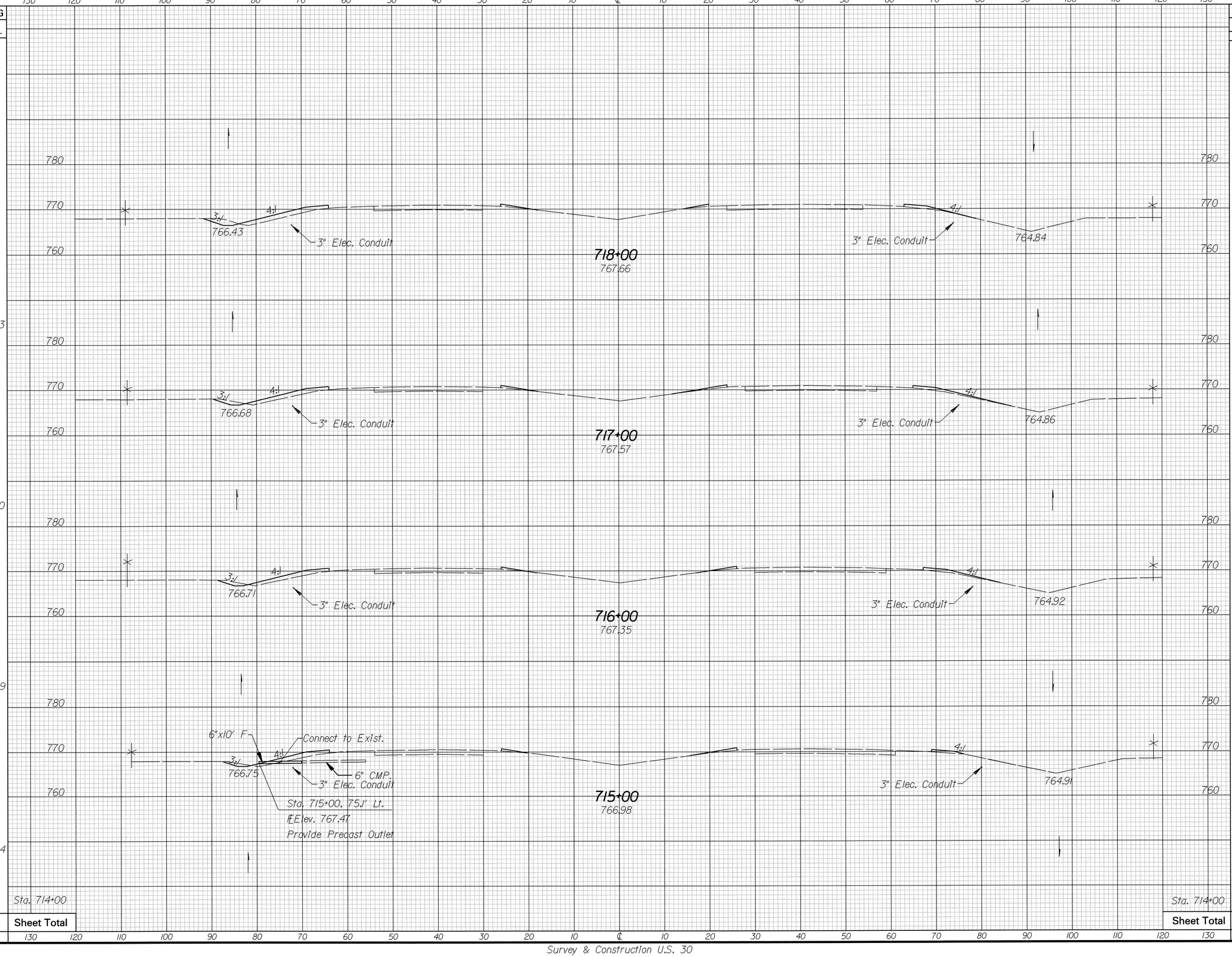
CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 711+00 to Sta. 714+00

VAN-30-11.24

66
161

SEEDING END WIDTH	SEEDING SQ. YDS.
60	683
63	700
63	639
52	594
55	
2616	Sheet Total
SQ. YDS.	



EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
6	28	19	98
4	25	13	89
3	25	11	81
3	21	11	76
3	20		
Sheet Total		54	344
	SQ. FT.	CU. YDS.	

CALCULATED BJD CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 715+00 Sta. 718+00

VAN-30-11.24

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DESIGN FILE : /usr/odot/dgn/v30/v30xsl0.dgn
USERNAME : mfox

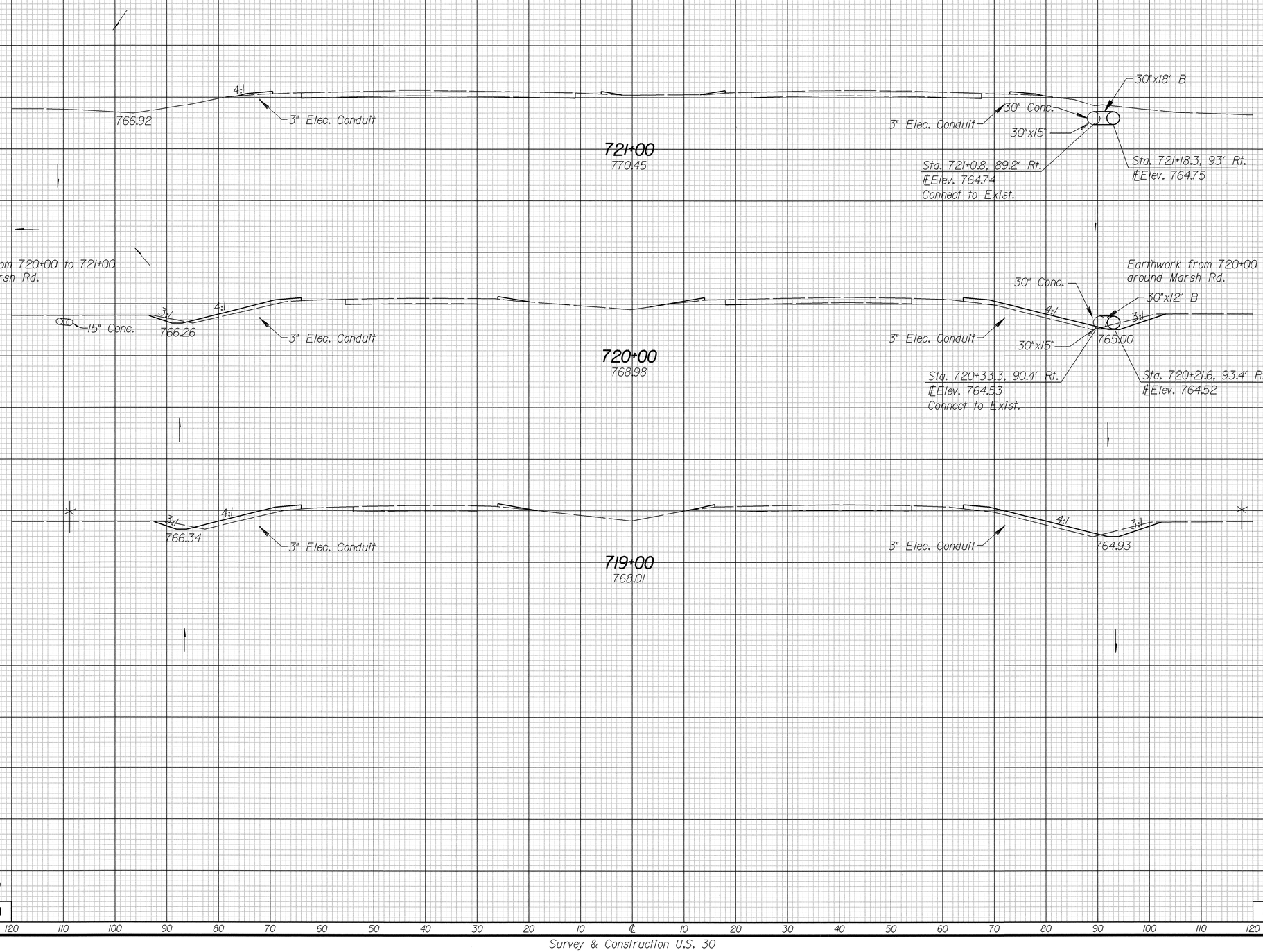
DATE : 06-OCT-1994
TIME : 17:09

Survey & Construction U.S. 30

DESIGN FILE : /usr/odot/dgn/v30/v30xsl0.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:09

SEEDING		EARTHWORK			
END WIDTH	SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
31		Ahd.	0	10	
	450	Bk.	24	40	20 60
92					
	928		70	155	
86			14	44	
	794				37 133
60		Sta. 718+00	6	28	
2172	Sheet Total	Sheet Total			127 348
SQ. YDS.			SQ. FT.		CU. YDS.



CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 719+00 to Sta. 721+00

VAN-30-11.24

68
161

Survey & Construction U.S. 30

SEEDING	
END WIDTH	SQ. YDS.
81	872
76	
71	817
69	778
31	556
3023	Sheet Total
SQ. YDS.	

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

780 / 770 / 760

3:1 4:1 767.06

725+00
768.36

4:1 3:1 765.02

780 / 770 / 760

3:1 4:1 767.22

724+00
768.27

4:1 3:1 765.10

780 / 770 / 760

3:1 4:1 767.39

723+00
768.30

4:1 3:1 765.17

780 / 770 / 760

Sta. 722+50, ℄
Ex. 2.6' x 2.6' C.B., Gr. Elev. 767.64

Sta. 722+50, 90.5' Rt.
℄ Elev. 765.25

4:1 767.75

3" Elec. Conduit

3" Elec. Conduit
15" Conc.

Sta. 722+50, 78.5' Rt.
Connect to Exist.

4:1 3:1 765.25

15"x12" B

722+00
768.48

Ahd., Sta. 721+00

Sta. 721+00, Ahd.

EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
13	52		
		46	183
12	47		
		41	169
10	44		
		39	144
11	34		
		20	81
0	10		
Sheet Total		146	577
SQ. FT.		CU. YDS.	

CALCULATED BJD
CHECKED NJV

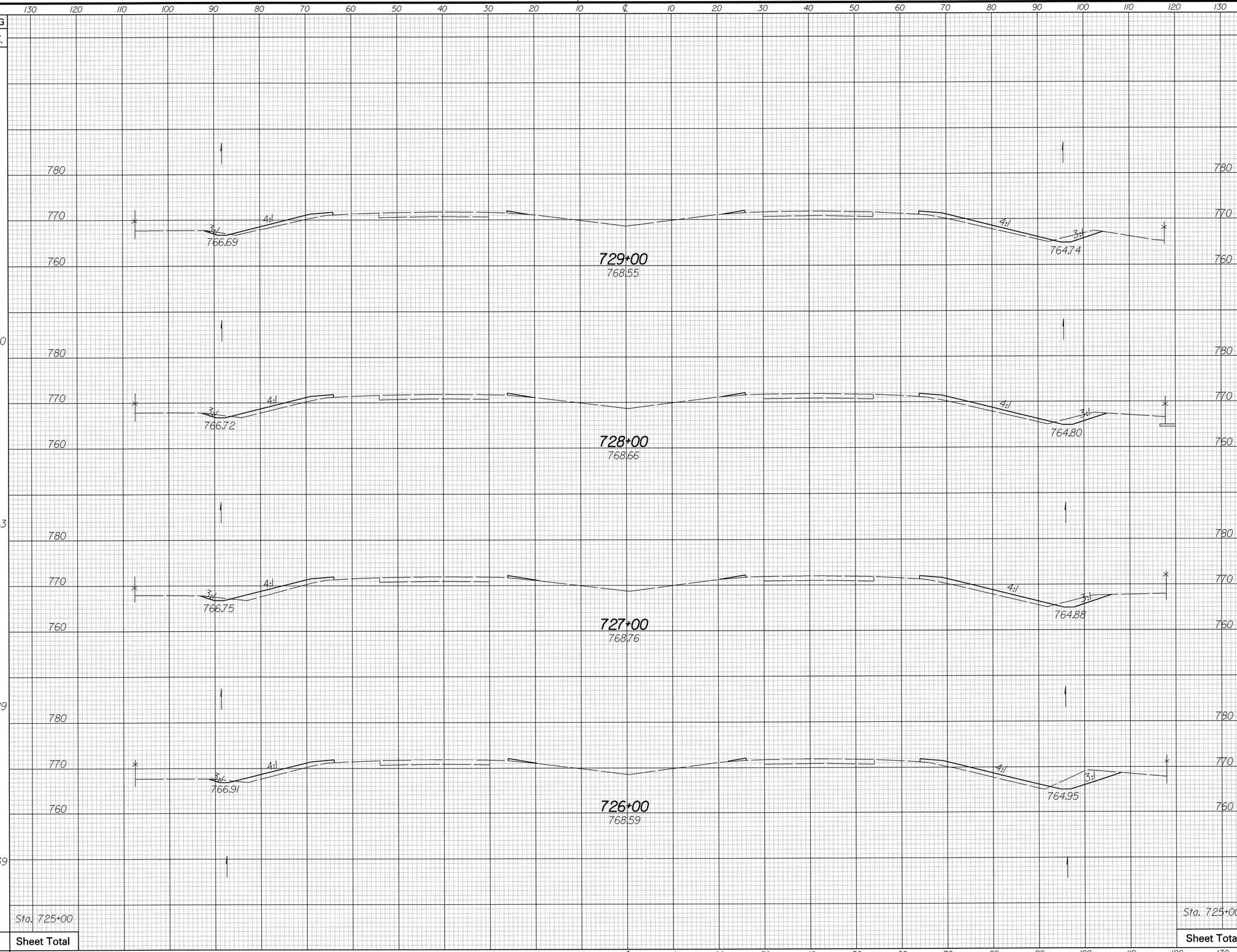
CROSS SECTIONS – MAINLINE U.S. 30
Sta. 722+00 to Sta. 725+00

VAN-30-11.24

69
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsll.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:09

SEEDING	
END WIDTH	SQ. YDS.
84	950
87	983
90	989
88	939
81	
3861	Sheet Total
SQ. YDS.	



EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
12	43		
		48	176
14	52		
		56	193
16	52		
		87	189
31	50		
		81	189
13	52		
Sheet Total		272	747
SQ. FT.		CU. YDS.	

CALCULATED B.J.D
CHECKED N.J.V

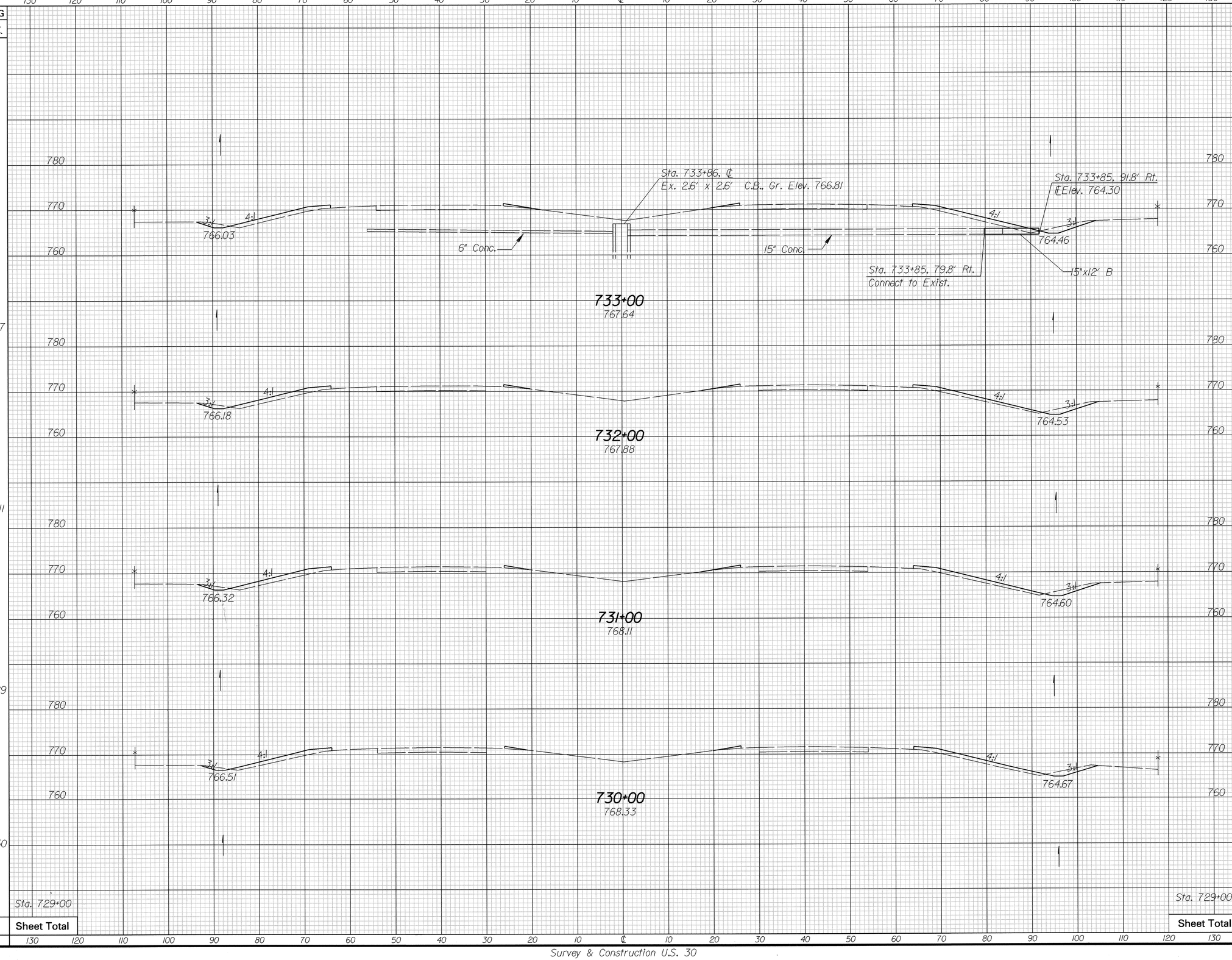
CROSS SECTIONS - MAINLINE U.S. 30
Sta. 726+00 to Sta. 729+00

VAN-30-11.24

70
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsll.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:09

SEEDING	
END WIDTH	SQ. YDS.
92	1017
91	1011
91	989
87	950
84	
	4021
	SQ. YDS.



EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
14	53	52	181
14	45	52	170
14	47	48	181
12	51	44	174
12	43	196	706
Sta. 729+00			
Sheet Total			
SQ. FT.		CU. YDS.	

CALCULATED B.J.D
CHECKED N.V.

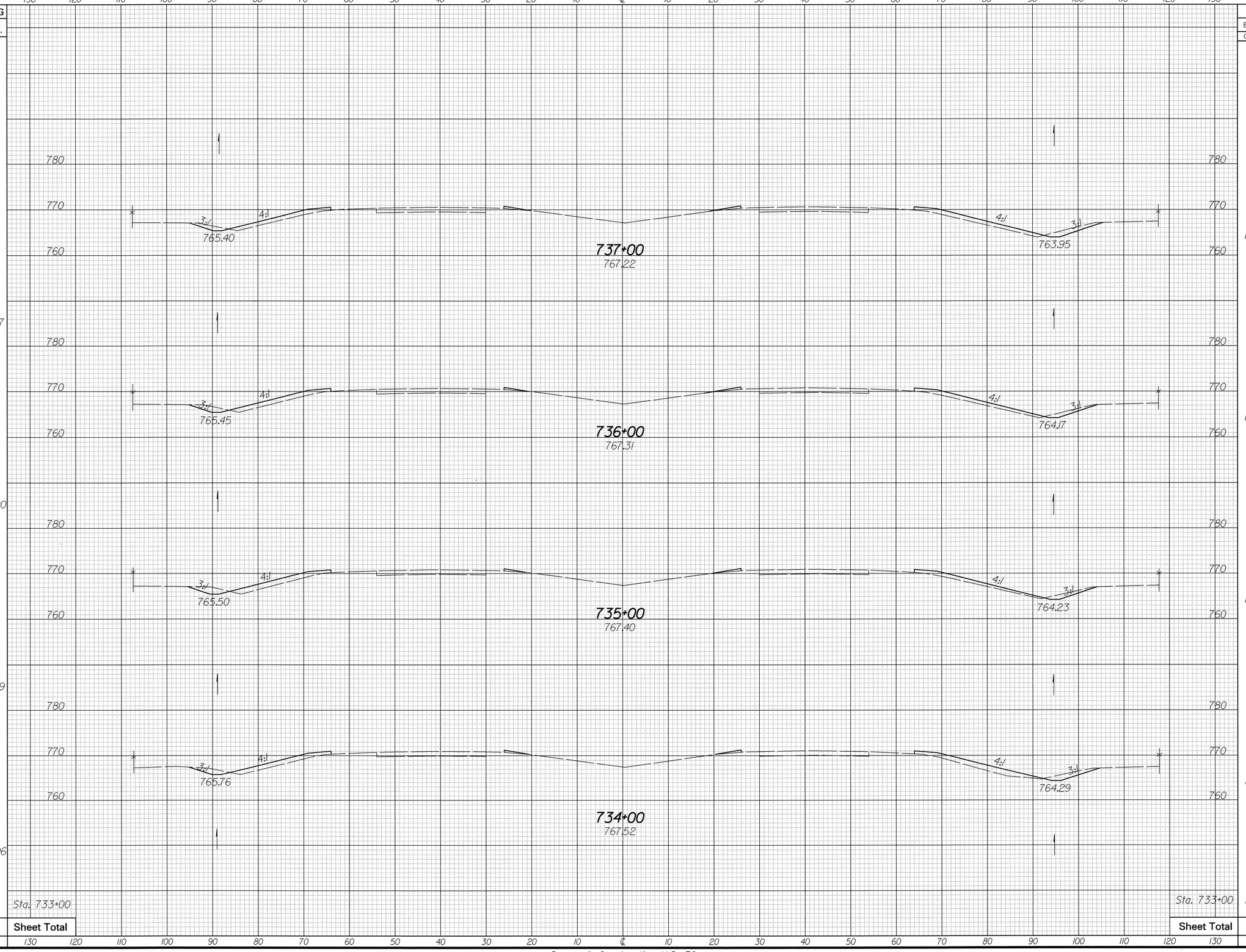
CROSS SECTIONS - MAINLINE U.S. 30
Sta. 730+00 Sta. 733+00

VAN-30-11.24

71
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsll.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:09

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
92	1017	15	47	52	174
91		13	47		
89	1000	15	45	52	170
89	989			57	185
89		16	55		
92	1006	14	53	56	200
	4012 Sheet Total			217	729
	SQ. YDS.		SQ. FT.		CU. YDS.



CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 734+00 to Sta. 737+00

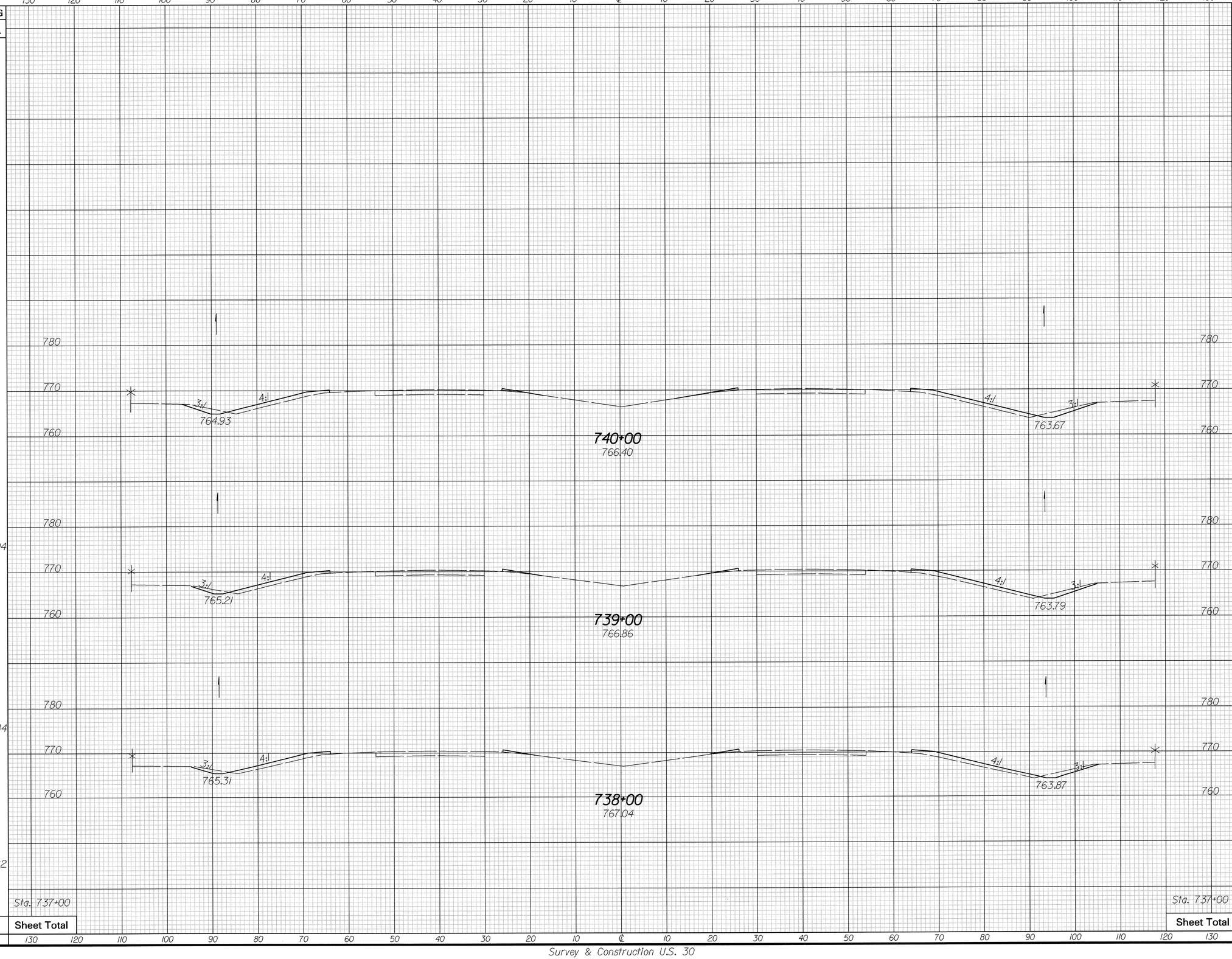
VAN-30-11.24

72
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsll.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:09

SEEDING	
END WIDTH	SQ. YDS.
101	
	1094
96	
	1044
92	
	1022
92	
Sta. 737+00	
3160	Sheet Total
SQ. YDS.	



EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
16	45		
		52	163
12	43		
		48	159
14	43		
		54	167
15	47		
Sta. 737+00			
Sheet Total		154	489
SQ. FT.		CU. YDS.	

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 738+00 to Sta. 740+00

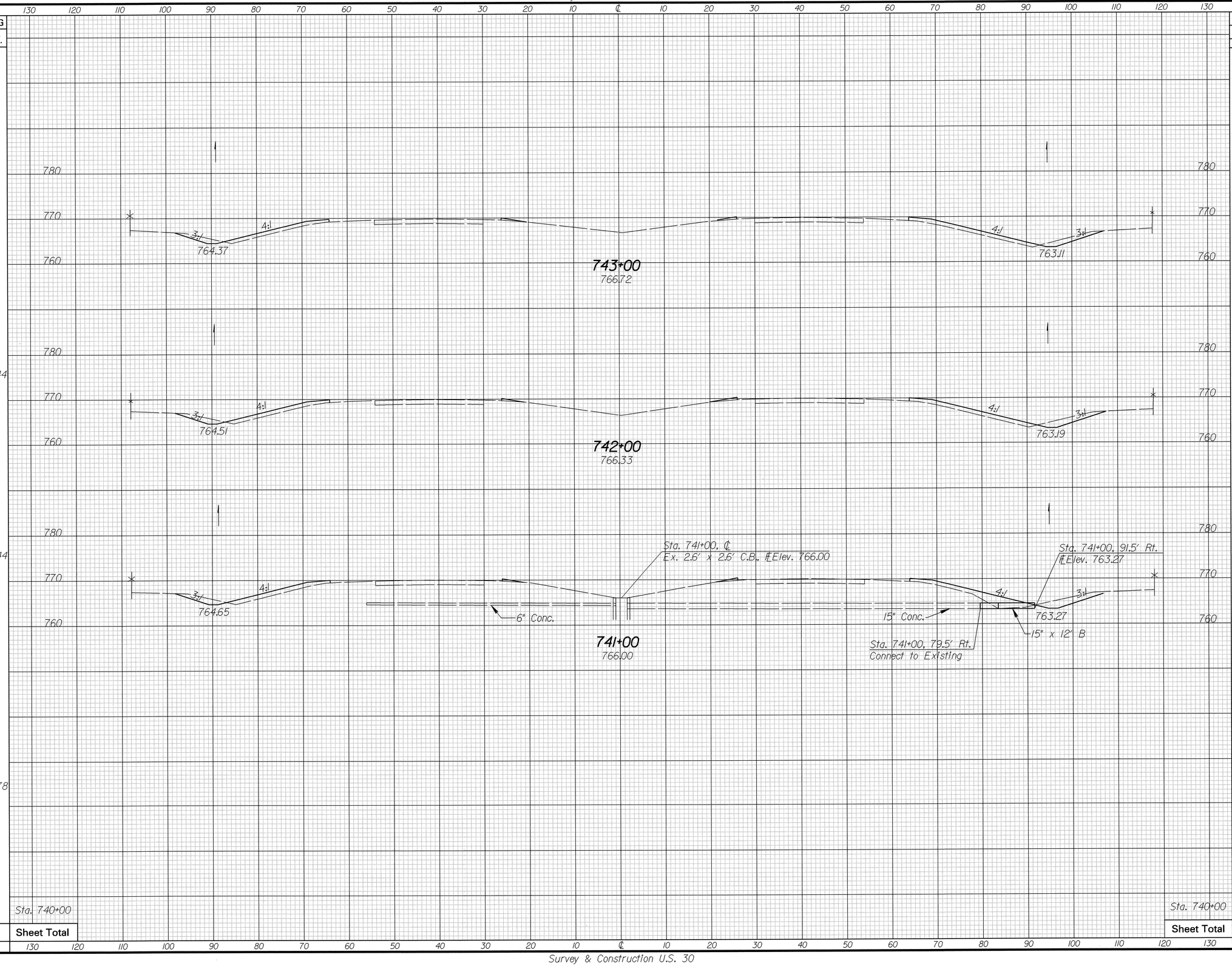
VAN-30-11.24

73
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl2.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:09

SEEDING	
END WIDTH	SQ. YDS.
93	1044
95	1044
93	1078
101	
3166	Sheet Total
SQ. YDS.	

EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
20	46	81	174
24	48	93	200
26	60	78	194
16	45		
		252	568
SQ. FT.		CU. YDS.	



DESIGN FILE : /usr/odot/dgn/v30/v30xsl2.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:09

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 741+00 to Sta. 743+00

VAN-30-11.24

74
161

Survey & Construction U.S. 30

SEEDING	
END WIDTH	SQ. YDS.
130	
	689
134	
	1500
136	
	1283
95	
	1044
93	
4516	Sheet Total
SQ. YDS.	

EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	110		
		19	225
22	149		
		65	496
13	119		
		57	304
18	45		
		70	169
20	46		
		211	1194
SQ. FT.		CU. YDS.	

Sta. 743+00

Sheet Total

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

54"x12' A
4:1
759.24
Sta. 746+40. 83' Lt.
Connect to Ex.
Sta. 746+40. 95' Lt.
℄Elev. 759.23
15" Conc.
769.79
746+47
769.01
54" Conc.
36" Conc.
4:1
759.46
Sta. 746+44. 82.2' Rt.
Connect to Existing
54" x 12' A
36" x 12' B
Sta. 746+46.1. 97.4' Rt.
℄Elev. 759.79
36" x 15"
Sta. 746+57.8
Connect to Existing
Sta. 746+44 94.2, ℄
℄Elev. 759.46

Sta. 745+94, ℄
Ex. 2.6' x 2.6' C.B., Gr. Elev. 765.62
Abandon, Connect thru 15" C
4:1
762.99
15" Conc.
769.89
746+00
765.90
Sta. 745+95.3, ℄
℄Elev. 761.06
Connect to Ex.
4:1
3:1
762.23

4:1
763.19
15" C
769.90
745+00
766.38
4:1
3:1
762.77

Sta. 744+25, ℄
Std. No. 8 C.B., Gr. Elev. 766.38
3:1
4:1
764.36
15" C
744+00
766.55
Sta. 744+26.3, ℄
℄Elev. 762.00
4:1
3:1
762.93

CALCULATED EJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 744+00 Sta. 746+47

VAN-30-11.24

75
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl2.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:09

Survey & Construction U.S. 30

Survey & Construction U.S. 30

SEEDING	
END WIDTH	SQ. YDS.
127	1428
130	1478
136	1244
88	1211
130	
Sheet Total	5361
SQ. YDS.	

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

780 770 760

765.00

Sta. 750+00, ℄
Sta. No. 8 C.B.
Grate Elev. 766.57

15' C

Sta. 749+98.7, ℄
IE Elev. 764.00

766.57
750+00
766.55

4:1 3:1 763.55

764.91 770.03
749+00
766.72

764.82 769.89
748+00
768.50

Sta. 748+36, ℄
Gr. Elev. 767.40, 2.6' x 2.6' C.B.
Abandon, Connect 15" thru

15" Conc.
15' C

Sta. 748+34.7, ℄
IE Elev. 763.51
Connect thru to Ex.

15" Conc.

Sta. 747+96, 79.9' Rt.
Connect to Existing

15" x 12' B

762.39

Sta. 747+96, 91.9' Rt.
IE Elev. 762.96

Pier Columns Str. No. VAN-30-1403

764.78 769.76
747+00
769.20

767.30
36"x12'B

36" Conc.
36"x 30"

Sta. 747+67.4
Connect to Exist.

Remove (603)
Sta. 747+80, 98.4' Rt.
IE Elev. 760.5
12"x5' F

10" C.M.P.

Connect to Exist.

Sta. 747+83.4, 96.9' Rt.
IE Elev. 759.9

Sta. 746+47

EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
20	45		
		67	309
16	122		
		111	437
44	114		
		83	317
1	57		
		1	309
0	110		
Sheet Total		262	1372
SQ. FT.		CU. YDS.	

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 747+00 to Sta. 750+00

VAN-30-11.24

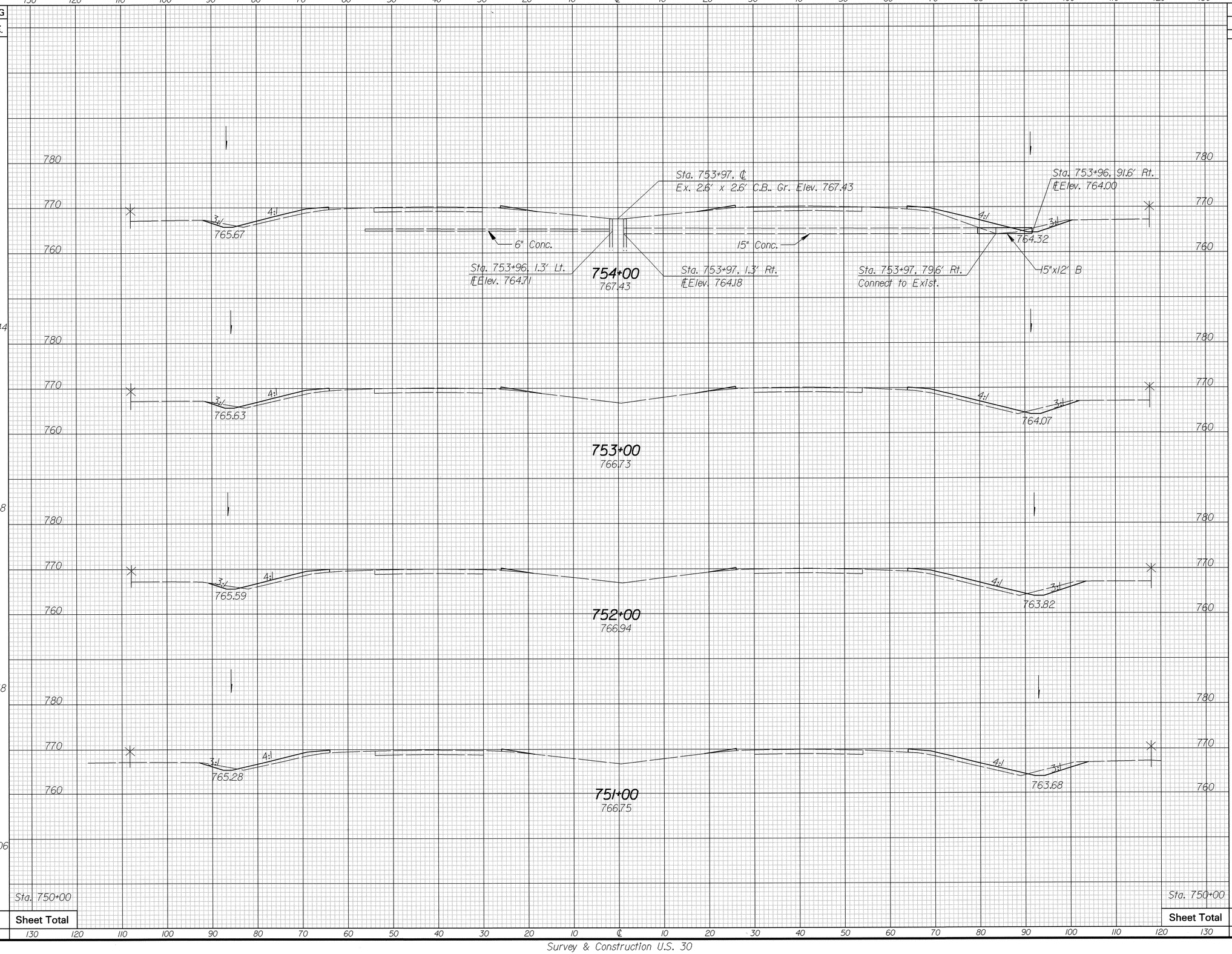
76
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl2.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:10

Survey & Construction U.S. 30

SEEDING		EARTHWORK			
END WIDTH	SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
98		10	36		
	1044			41	137
90		12	38		
	978			46	144
86		13	40		
	978			57	157
90		18	45		
	1206			70	167
127		20	45		
4206	Sheet Total	Sheet Total		214	605
SQ. YDS.			SQ. FT.	CU. YDS.	



DESIGN FILE : /usr/odot/dgn/v30/v30xsl3.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:10

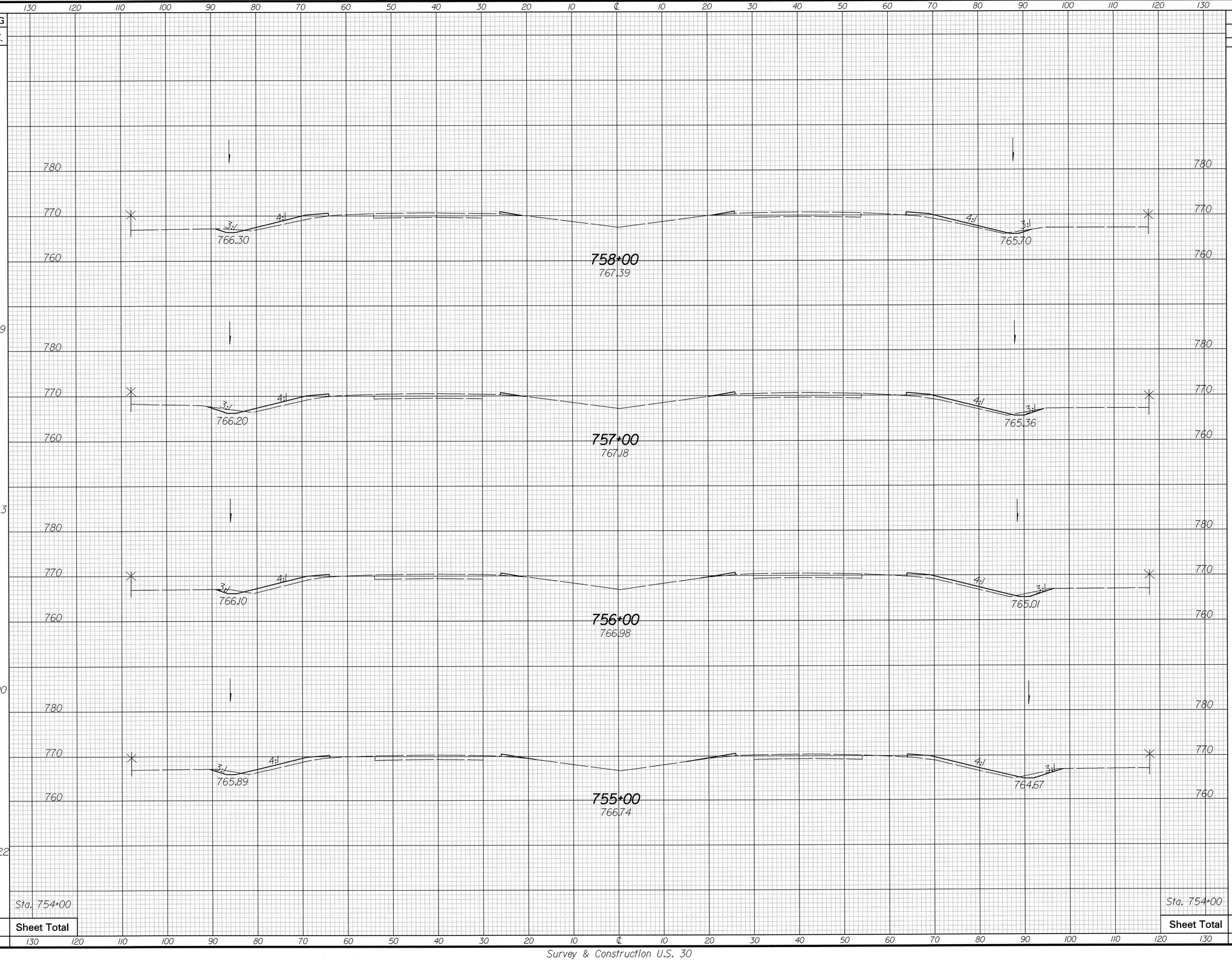
CALCULATED B.J.D
CHECKED N.J.V

CROSS SECTIONS - MAINLINE U.S. 30
Sta. 751+00 to Sta. 754+00

VAN-30-11.24

77
161

SEEDING END WIDTH	SEEDING SQ. YDS.
68	789
74	833
76	900
86	1022
98	
3544	Sheet Total
SQ. YDS.	



EARTHWORK	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	5	30		
			20	117
	6	33		
			26	122
	8	33		
			31	124
	9	34		
			35	130
	10	36		
Sheet Total			112	493
	SQ. FT.		CU. YDS.	

CALCULATED B.J.D. CHECKED N.J.V.

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 755+00 to Sta. 758+00

VAN-30-11.24

78
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl3.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:10

DESIGN FILE : /usr/odot/dgn/v30/v30xsl3.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:10

SEEDING		EARTHWORK			
END WIDTH	SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
72		5	36		
	783			17	133
69		4	36		
	744			13	133
65		3	36		
	739			13	128
68		4	33		
	756			17	117
68		5	30		
3022	Sheet Total			60	511
SQ. YDS.				SQ. FT.	CU. YDS.

762+00
767.50
3:1 766.52
4:1
4:1
3:1 765.46

761+00
767.65
3:1 766.58
4:1
4:1
3:1 765.90

760+00
767.79
3:1 766.64
4:1
4:1
3:1 766.34

759+00
767.59
3:1 766.40
4:1
4:1
3:1 766.02

Sta. 758+00

Sta. 758+00

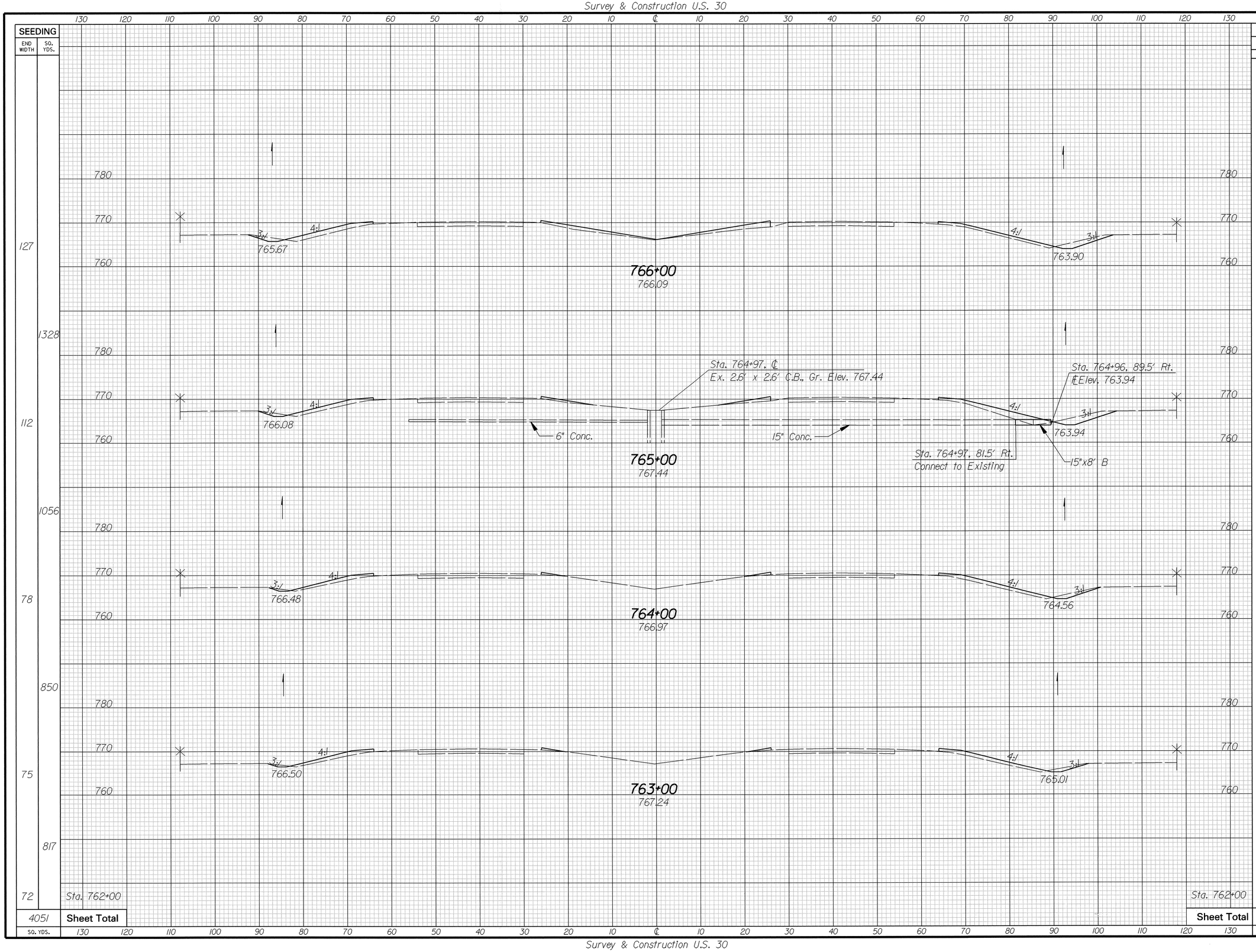
CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 759+00 Sta. 762+00

VAN-30-11.24

79
161

SEEDING	
END WIDTH	SQ. YDS.
127	1328
112	1056
78	850
75	817
72	
	4051
	SQ. YDS.



EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
15	62		
		61	206
18	49		
		48	156
8	35		
		26	130
6	35		
		20	131
5	36		
Sheet Total		155	623
SQ. FT.		CU. YDS.	

CALCULATED B.J.D
CHECKED N.J.V

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 763+00 to Sta. 766+00

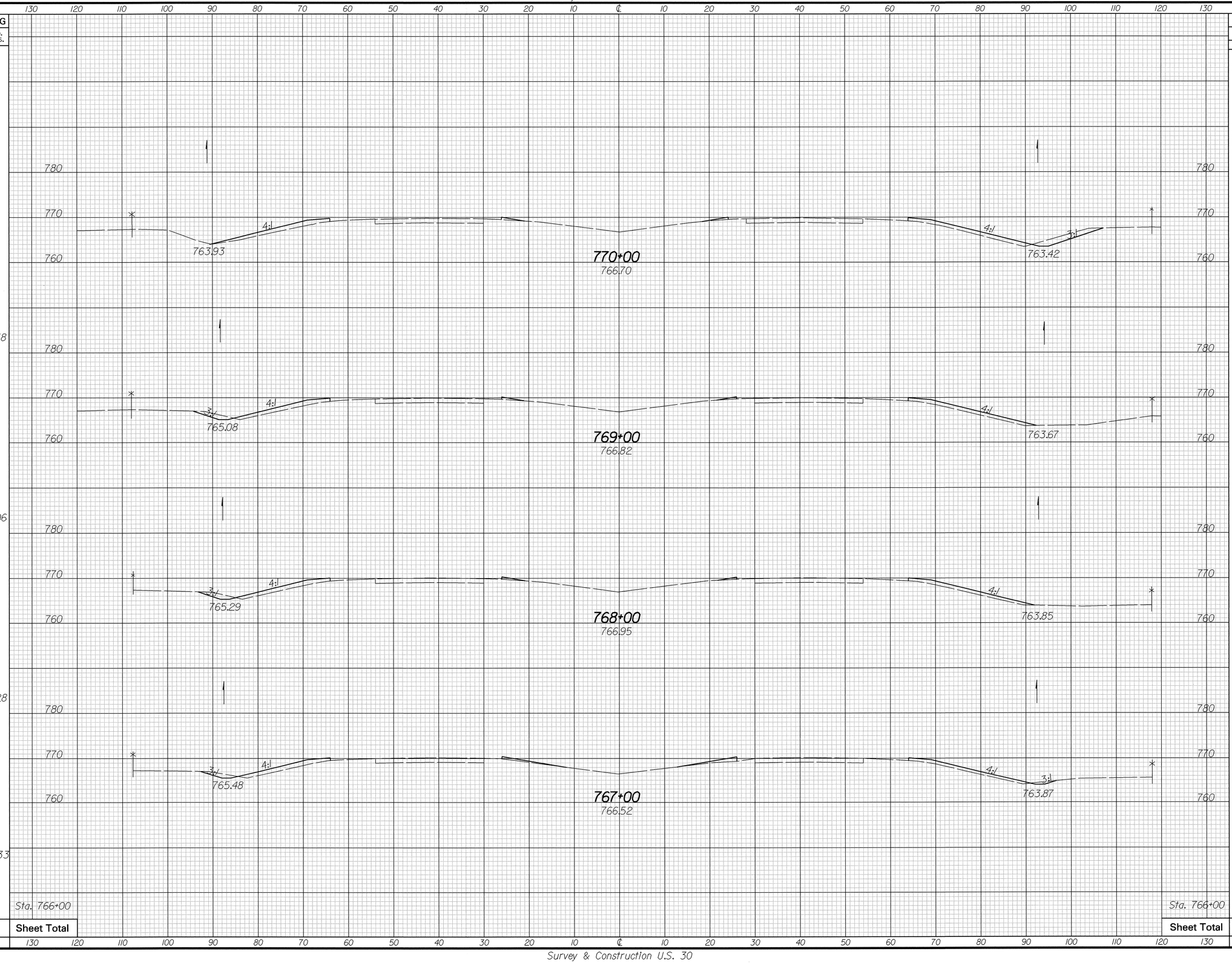
VAN-30-11.24

80
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl3.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:10

SEEDING END WIDTH	SEEDING SQ. YDS.	Station	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
85	878	770+00	16	45	41	165
73		769+00	6	44		
72	806	768+00	6	40	22	156
95	928	767+00	7	46	24	159
127	1233	Sta. 766+00	15	62	41	200
3845	Sheet Total	Sheet Total			128	680
SQ. YDS.				SQ. FT.	CU. YDS.	



CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 767+00 to Sta. 770+00

VAN-30-11.24

81
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl4.dgn
USERNAME : m:fox
DATE : 06-OCT-1994
TIME : 17:10

Survey & Construction U.S. 30

DESIGN FILE : /usr/odot/dgn/v30/v30xsl4.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:10

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 771+00 to Sta. 774+00

VAN-30-11.24

82 / 161

SEEDING END WIDTH	SEEDING SQ. YDS.		EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
50		Ahd.	11	53		
	625	Seeding from 773+00 to 774+00 around Mendon Rd.			40	100
85		Bk.	29	87		
	939				78	248
84			13	47		
	922				50	172
82			14	46		
	928				56	169
85		Sta. 770+00	16	45		
3414 SQ. YDS.	Sheet Total		Sheet Total		224 CU. YDS.	689

774+00
768.68

18"x16' B
4:1
766.04
18" Conc.
Sta. 774+16.8, 86.3' Lt.
℄Elev. 764.38
Sta. 774+01.3
Connect to Existing

30" Conc.
6:1
30"x12' B
15"x5' F
12" CMP.
30"x30"
762.99
Sta. 773+95.1
Connect to Existing
Sta. 774+60, 98' Rt.
℄Elev. 763.7
Remove (603)
Sta. 774+05.9, 94.6' Rt.
℄Elev. 763.0

Earthwork from 773+00 to 774+00 around Mendon Rd.

773+00
767.63

18" Conc.
54"x12' A
4:1
761.68
Sta. 772+95, 74.4' Lt.
Connect to Existing
Sta. 772+95, 86.4' Lt.
℄Elev. 761.6

15" Conc.
52" Conc.

54"x12' A
4:1
30" Conc.
3:1
762.88
Sta. 772+93, 72.5' Rt.
Connect to Existing
Sta. 772+93, 84.5' Rt.
℄Elev. 762.00

772+00
766.63

4:1
763.40
15" Conc.

Sta. 772+83, 95' Rt.
℄Elev. 763.33
15"x5' F
3:1
763.27
12" CMP.
Sta. 772+84, 92.1' Rt.
℄Elev. 763.33
Remove (603)

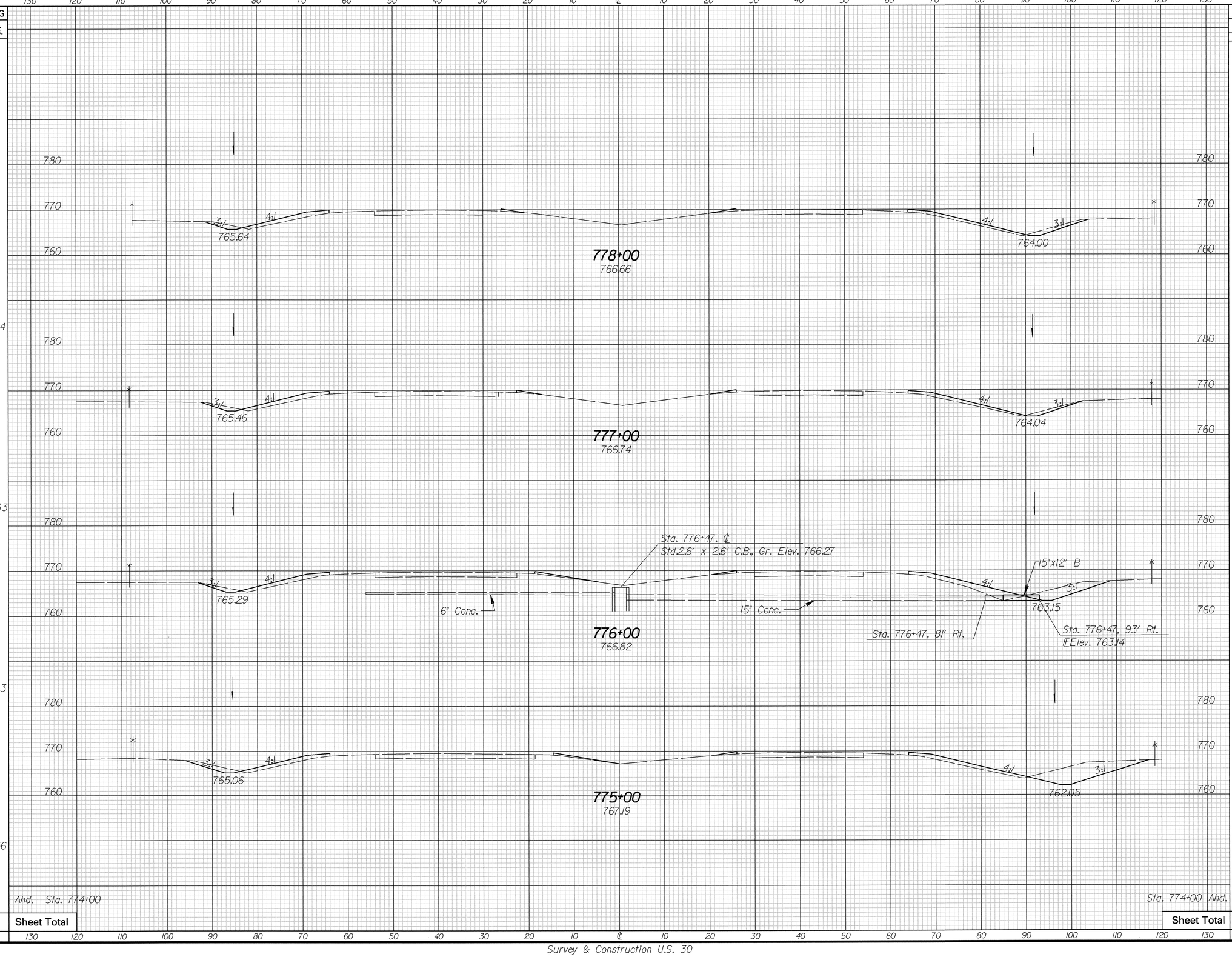
771+00
766.64

Sta. 771+93, 1.9' Lt.
Ex. 2.6' x 2.6' C.B., Gr. Elev. 767.01
15" Conc.
Sta. 771+93, 2.1' Lt.
℄Elev. 763.90

4:1
763.42
4:1
763.35
3:1

Survey & Construction U.S. 30

SEEDING END WIDTH	SEEDING SQ. YDS.
85	944
85	1033
101	1183
112	956
50	
4116	Sheet Total
SQ. YDS.	



EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
13	38	43	141
10	38	81	163
34	50	202	174
75	44	159	157
11	53		
Sheet Total		485	635
SQ. FT.		CU. YDS.	

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 775+00 Sta. 778+00

VAN-30-11.24

83
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl4.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:10

SEEDING		EARTHWORK			
END WIDTH	SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
86	944	13	36	48	137
84		13	38		
85	939	14	37	50	139
83	933	12	34	48	131
85	933	13	38	46	133
3749 SQ. YDS.	Sheet Total		Sheet Total	192 SQ. FT.	540 CU. YDS.

782+00
767.01
766.36
764.50

781+00
766.94
766.32
764.33
Connect to Exist.
12" Plast. F.T.
15"x5' F
Sta. 781+87, 95.3' Rt.
℄Elev. 765.0

780+00
766.87
766.23
764.17

779+00
766.81
765.94
764.12

Sta. 778+00

Sta. 778+00

DESIGN FILE : /usr/odot/dgn/v30/v30xsl4.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:10

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 779+00 to Sta. 782+00

VAN-30-11.24

84
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl5.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:10

SEEDING		EARTHWORK			
END WIDTH	SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
83		11	43		
	911			41	141
81		11	33		
	911			44	126
83		13	35		
	939			48	131
86	Sta. 782+00	13	36		
2761	Sheet Total			133	398
SQ. YDS.			SQ. FT.	CU. YDS.	

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

780 / 770 / 760

Sta. 785+45, ℄
Ex. 2.6' x 2.6' C.B., Gr. Elev. 766.94
15"x8" B
3:1 4:1
767.04
6" Conc.
15" Conc.
764.86
Sta. 785+47, 81.5' Rt.
Connect to Existing
Sta. 785+47, 89.5' Rt.
℄Elev. 764.47

785+00
767.28

784+00
767.36

766.93
764.62

783+00
767.19

766.64
764.58

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 783+00 to Sta. 785+00

VAN-30-11.24

85
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl5.dgn
USERNAME : m:fox
DATE : 06-OCT-1994
TIME : 17:10

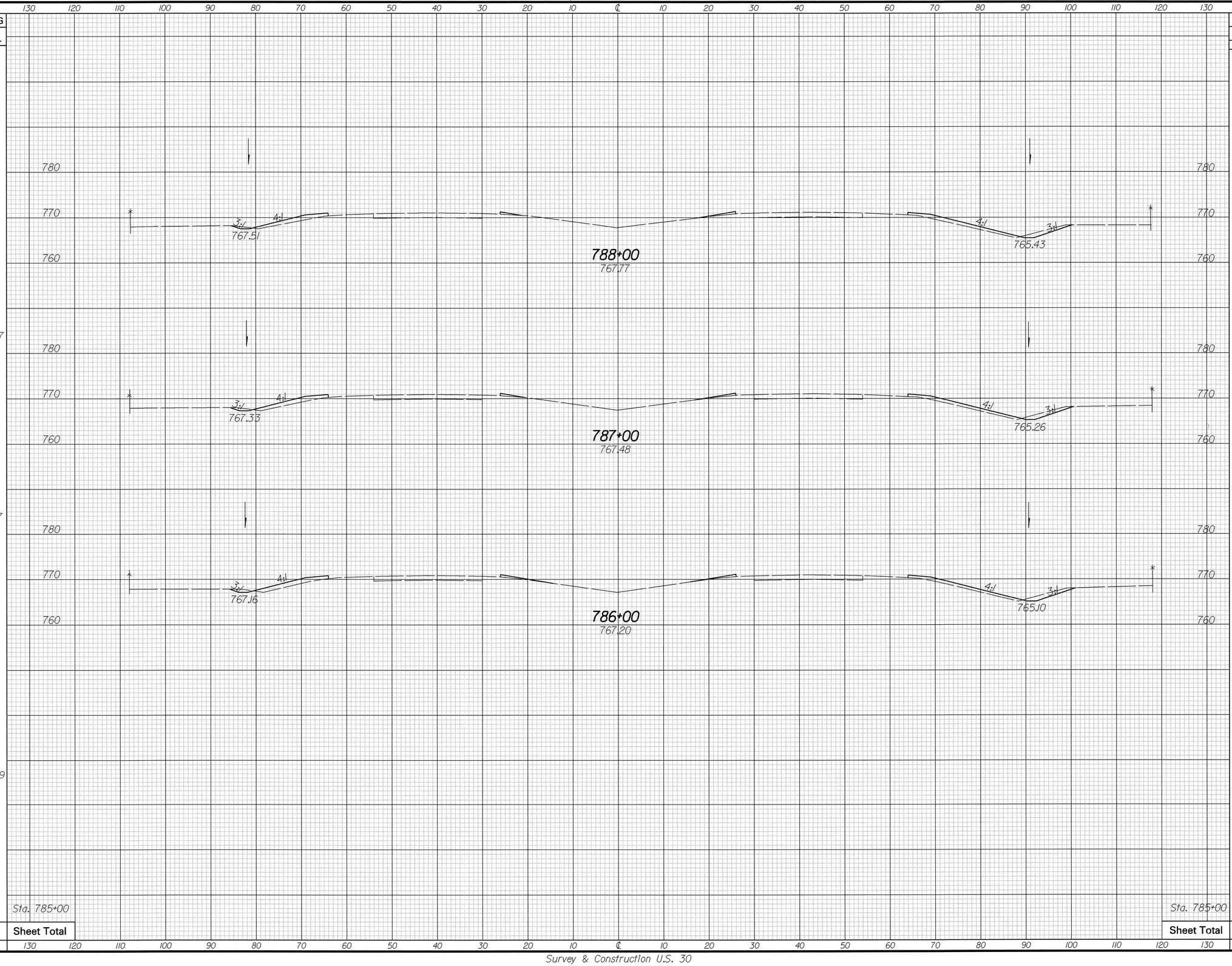
CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 786+00 to Sta. 788+00

VAN-30-11.24

86
161

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
77	867	9	32	35	120
79	917	10	33	37	124
86	939	10	34	39	143
83	Sta. 785+00	11	43		
2723	Sheet Total			111	387
SQ. YDS.		SQ. FT.		CU. YDS.	



Survey & Construction U.S. 30

SEEDING		EARTHWORK			
END WIDTH	SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
65	739	6	29	20	111
68	772	5	31	17	113
71	806	4	30	20	113
74	839	7	31	30	117
77		9	32		
3156	Sheet Total			87	454
SQ. YDS.			SQ. FT.	CU. YDS.	

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

780 / 770 / 760

4:1 768.26

792+00
768.45

4:1 3:1 766.45

4:1 768.06

791+00
768.28

4:1 3:1 766.24

3:1 4:1 767.71

790+00
767.99

4:1 3:1 766.03

3:1 4:1 767.61

789+00
767.88

4:1 3:1 765.73

Sta. 788+00

Sta. 788+00

Survey & Construction U.S. 30

DESIGN FILE : e:\dgn\v30\v30xsl5.dgn
USERNAME : dslebene

DATE : 07-OCT-1994
TIME : 09:06

CALCULATED B.J.D
CHECKED N.J.V

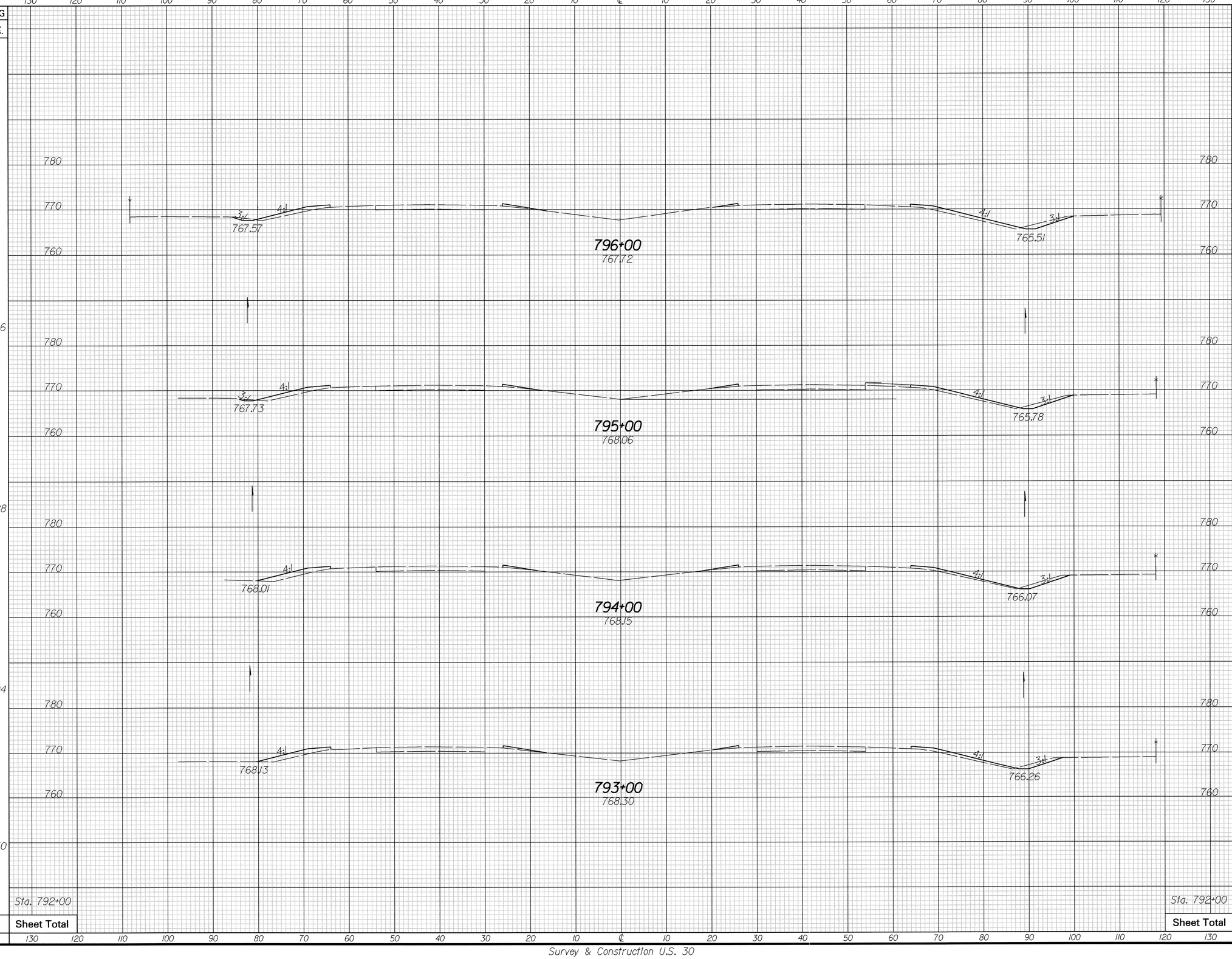
CROSS SECTIONS – MAINLINE U.S. 30
Sta. 789+00 Sta. 792+00

VAN-30-11.24

87
161

SEEDING	
END WIDTH	SQ. YDS.
78	856
76	828
73	794
70	750
65	3228

Sta. 792+00 — Sheet Total



EARTHWORK				
END AREA		VOLUME		
CUT	FILL	CUT	FILL	
9	32			
		31	115	
8	30			
		26	111	
6	30			
		22	111	
6	32			
		22	109	
6	29			
Sta. 792+00				
Sheet Total		101	446	
	SQ. FT.	CU. YDS.		

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 793+00 to Sta. 796+00

VAN-30-11.24

88
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl5.dgn
USERNAME : m:fox
DATE : 06-OCT-1994
TIME : 17:10

SEEDING END WIDTH	SEEDING SQ. YDS.	
	1350	Seeding from Sta. 799+00 to Sta. 801+00 around Boroff Rd.
	961	
90	917	
75	850	
78		Sta. 796+00
	4078	Sheet Total
	SQ. YDS.	

EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL	
		80	150	Earthwork from Sta. 799+00 to Sta. 801+00 around Boroff Rd.
		115	152	
32	46			
		78	143	
10	31			
		35	117	
9	32			Sta. 796+00
		308	562	Sheet Total
	SQ. FT.	CU. YDS.		

83 Bk. — 30 Bk. 30 36

24"x6' C
15" Conc.
Remove (603)
42"x12' A
24" Conc.
Sta. 800+78
Connect to Existing
Sta. 800+78.9, 92.2' Lt.
℄Elev. 763.1
Sta. 800+83, 75.7' Lt.
Connect to Existing
Sta. 800+83, 87.7' Lt.
℄Elev. 762.54
15" Conc.
42" Conc.
800+00
770.02
30" Conc.
42"x12' B
Sta. 800+44.6
Connect to Existing
30"x15' B
30"x30"
Sta. 800+58, 95.5' Rt.
℄Elev. 763.80
Sta. 800+89, 77.6' Rt.
Connect to Existing
Sta. 800+89, 89.6' Rt.
℄Elev. 762.93
15" Conc.
3:1
4:1
767.07
799+00
768.02
30"x15' B
30"x30"
764.17
Sta. 799+83.1
Connect to Existing
Sta. 799+69.7, 94.7' Rt.
℄Elev. 763.94
Sta. 797+97, ℄
Ex. 2.6' x 2.6' C.B., Gr. Elev. 767.14
767.08
798+00
767.22
15" Conc.
Sta. 797+97, 84.4' Rt.
Connect to Exist.
15"x12" B
764.41
Sta. 797+97, 92.4' Rt.
℄Elev. 764.40
767.32
797+00
767.47
765.39

CALCULATED B.J.D
CHECKED N.J.V

CROSS SECTIONS - MAINLINE U.S. 30
Sta. 797+00 to Sta. 800+00

VAN-30-11.24

89
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl6.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:11

DESIGN FILE : /usr/odot/dgn/v30/v30xs16.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:11

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 801+00 to Sta. 804+00

VAN-30-11.24

90
161

SEEDING		EARTHWORK			
END WIDTH	SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
80	894	8	38	43	143
81	950	15	39	81	139
90	1056	29	36	104	185
100	Ahd.	Ahd.	27	64	
2900	Sheet Total	Sheet Total		228	467
SQ. YDS.			SQ. FT.	CU. YDS.	

804+00
768.30
766.96
765.37

803+00
768.03
766.75
764.97

802+00
767.96
765.88
764.80

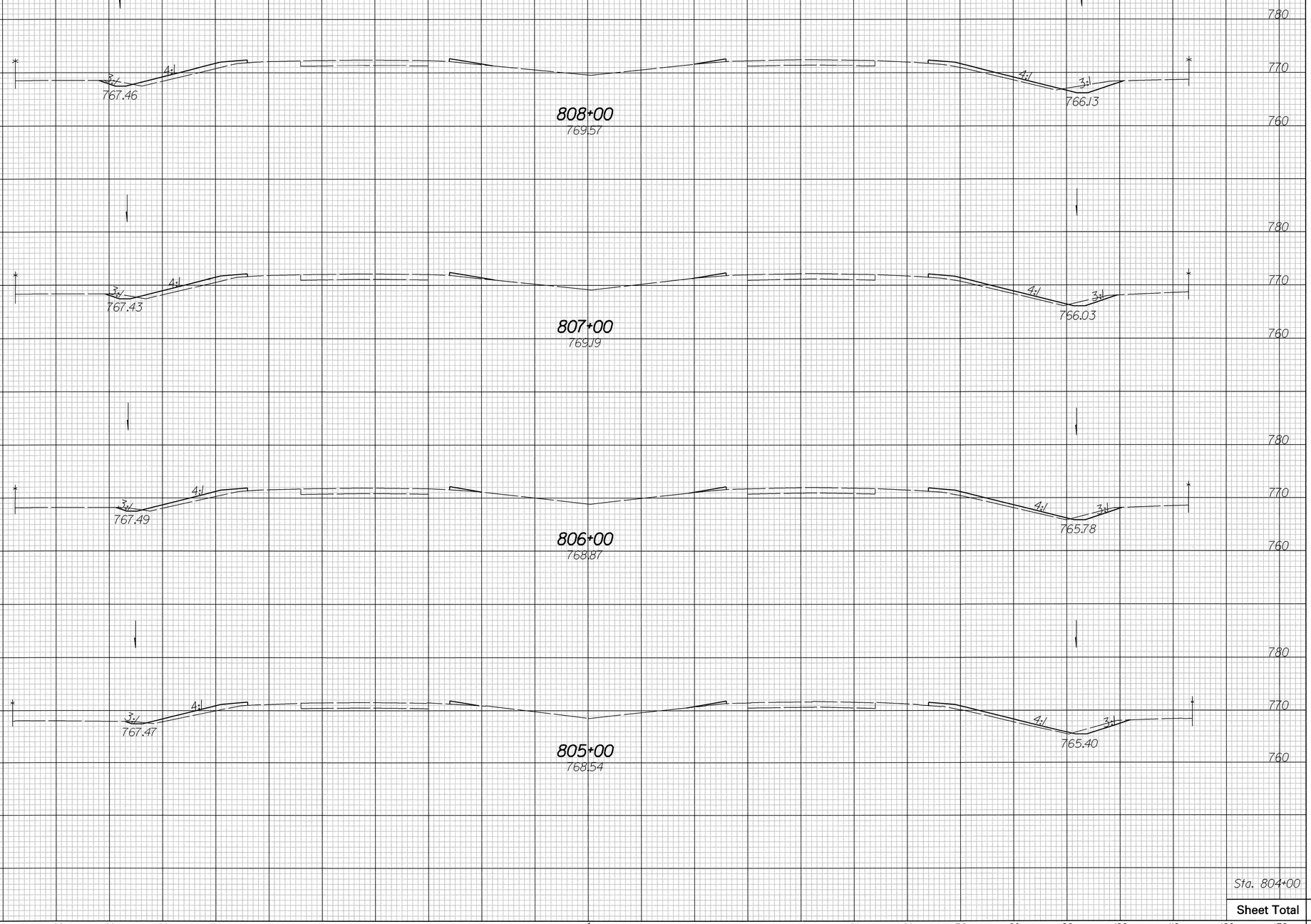
801+00
767.64
765.02
765.89

Sta. 801+08, ℄
Ex. 2.6' x 2.6' C.B., Gr. Elev. 767.57
15" Conc.
2" Tel. Conduit (+10)

Sta. 800+92, 98.4' Rt.
℄Elev. 764.2
Remove (603)
Sta. 800+82, 96.9' Rt.
℄Elev. 762.92

Sta. 800+92
Connect to Exist.
8"x5' F
6" CMP.
24" Conc.
Sta. 800+81
Connect to Exist.
24"x6' C

SEEDING END WIDTH	SEEDING SQ. YDS.	STATION	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
		130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130				
84	928	808+00	13	35	39	130
83		807+00	8	35		
80	906	806+00	7	33	28	126
80	889	805+00	8	36	28	128
80		Sta. 804+00	8	38	30	137
3612	Sheet Total		Sheet Total		125	521
SQ. YDS.				SQ. FT.	CU. YDS.	



CALCULATED BJD
CHECKED NJV

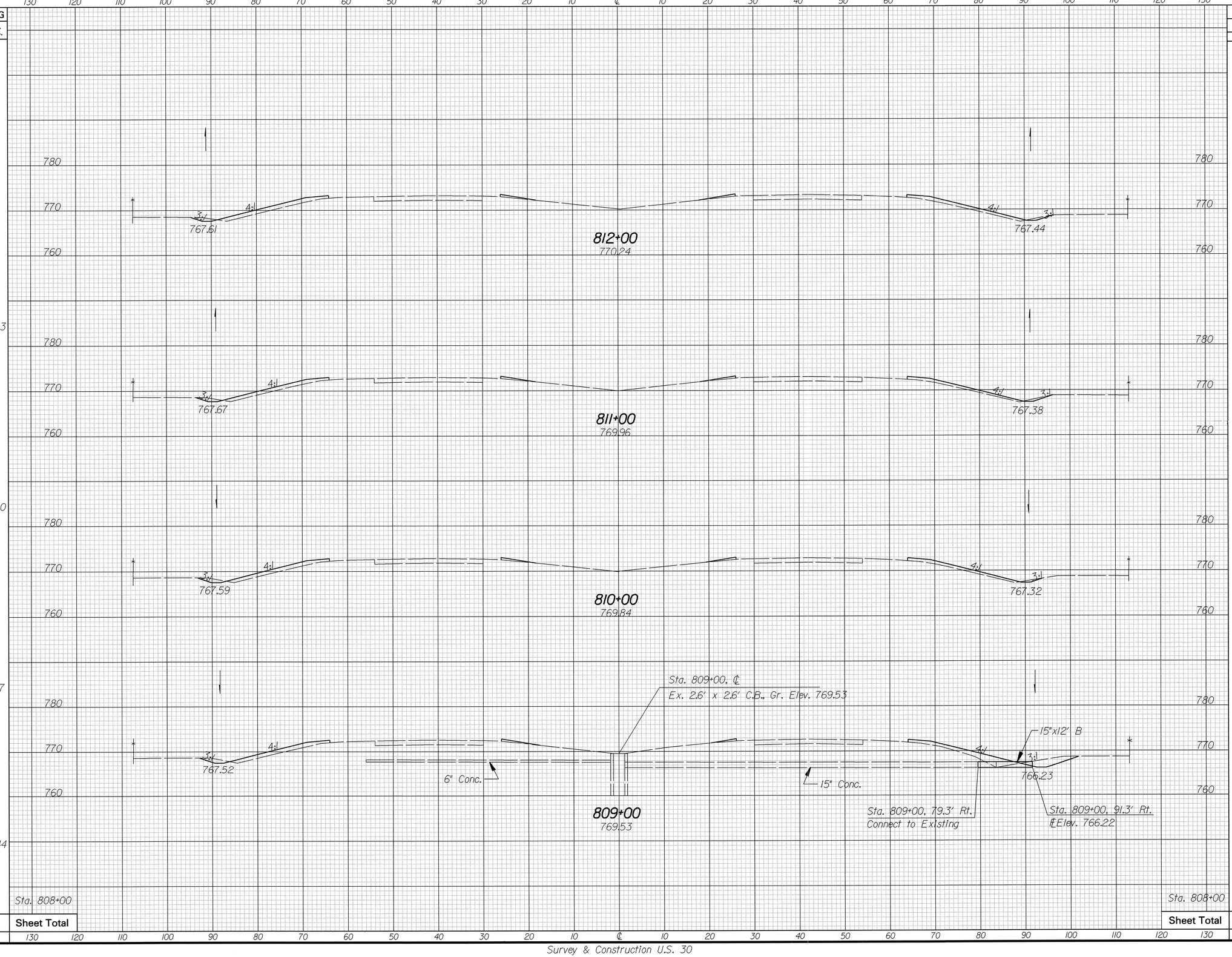
CROSS SECTIONS – MAINLINE U.S. 30
Sta. 805+00 Sta. 808+00

VAN-30-11.24

91
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl6.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:11

SEEDING	
END WIDTH	SQ. YDS.
85	933
83	900
79	917
86	944
84	
	3694
	SQ. YDS.



EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
4	41	17	143
5	36	17	133
4	36	43	154
19	47	59	152
13	35	136	582
		SQ. FT.	CU. YDS.

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS - MAINLINE U.S. 30
Sta. 809+00 to Sta. 812+00

VAN-30-11.24

92
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl6.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:11

SEEDING END WIDTH	SEEDING SQ. YDS.
82	928
85	944
85	967
89	967
85	
	3806

SQ. YDS.

Sheet Total

Sta. 812+00

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

780 770 760

816+00
770.65

3:1 768.53 4:1

4:1 3:1 767.61

Sta. 815+04, 86.5' Lt.
℄E Elev. 768.90

6"x10' F

3:1 768.45 4:1

6" Conc.

Sta. 815+04, 76.5' Lt.
Connect to Exist.

815+00
770.57

6"x5' F

4:1 3:1 767.57

6" Conc.

Sta. 815+01,
Connect to Exist.

Sta. 815+01, 84.5' Rt.
℄E Elev. 769.43

814+00
770.58

3:1 768.00 4:1

4:1 3:1 767.53

Sta. 813+33, ℄
Ex. 2.6' x 2.6' C.B., Gr. Elev. 769.68

15"x10' A

3:1 767.22 4:1

15" Conc.

Sta. 813+33, 89.9' Lt.
℄E Elev. 767.21

Sta. 813+33, 79.9' Lt.
Connect to Exisitng

813+00
770.54

15"x8' A

4:1 3:1 767.50

15" Conc.

Sta. 813+33, 81.3' Rt.
Connect to Existing

Sta. 813+33, 89.3' Rt.
℄E Elev. 767.50

Sta. 812+00

Sheet Total

EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
3	40		
3	41	11	150
4	42	13	154
7	48	20	167
4	41	20	165
		64	636

SQ. FT. CU. YDS.

CALCULATED B.J.D. CHECKED N.J.V.

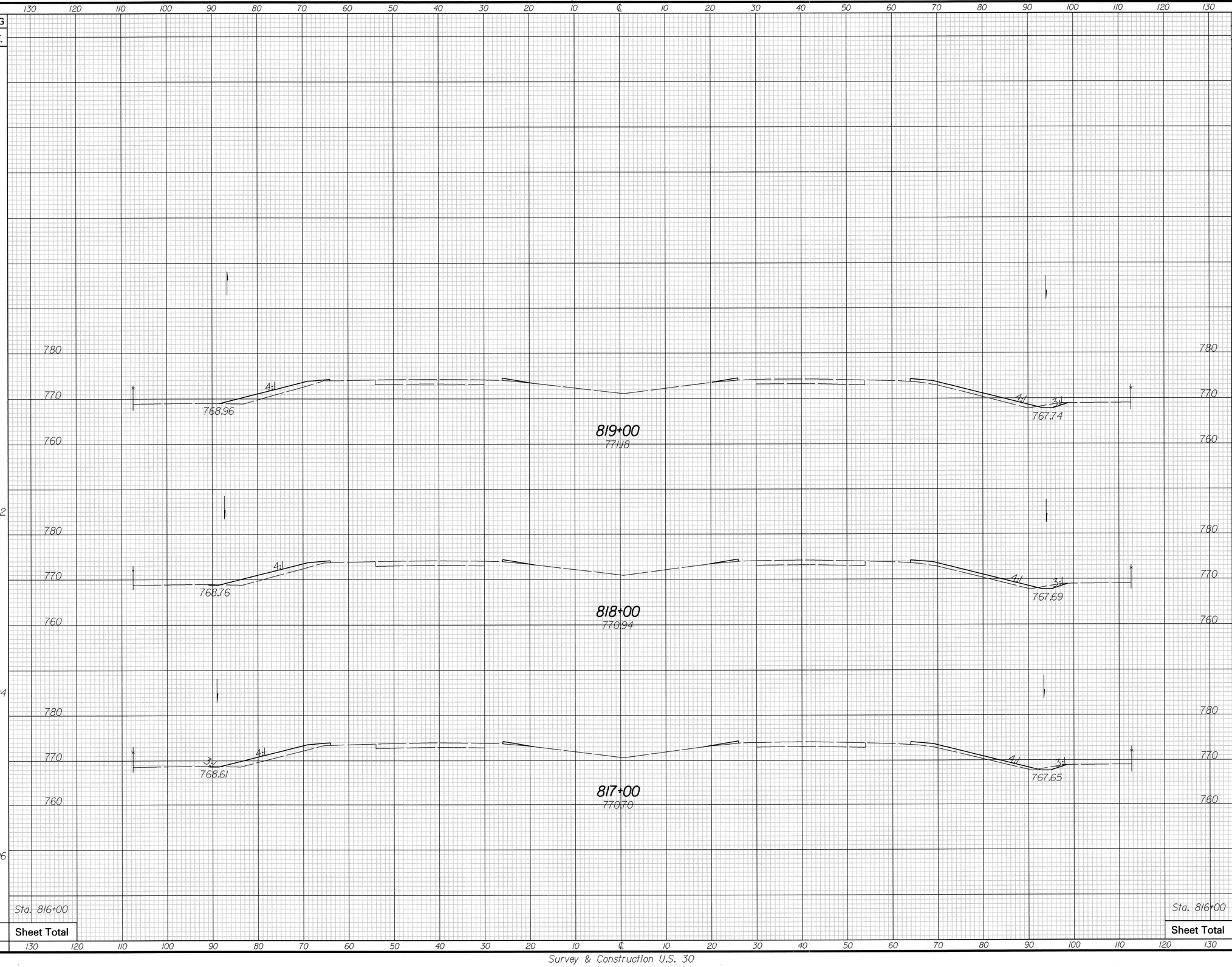
CROSS SECTIONS - MAINLINE U.S. 30
Sta. 813+00 to Sta. 816+00

VAN-30-11.24

93
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl1.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:11

SEEDING		EARTHWORK			
END WIDTH	SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
77		4	48		
	872	3	47	13	176
80					
	894	2	46	9	172
81					
	906	3	40	9	159
82					
Sta. 816+00		Sta. 816+00			
2672	Sheet Total	Sheet Total		31	507
SQ. YDS.			SQ. FT.	CU. YDS.	



DESIGN FILE : /usr/odot/dgn/v30/v30xsl7.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:11

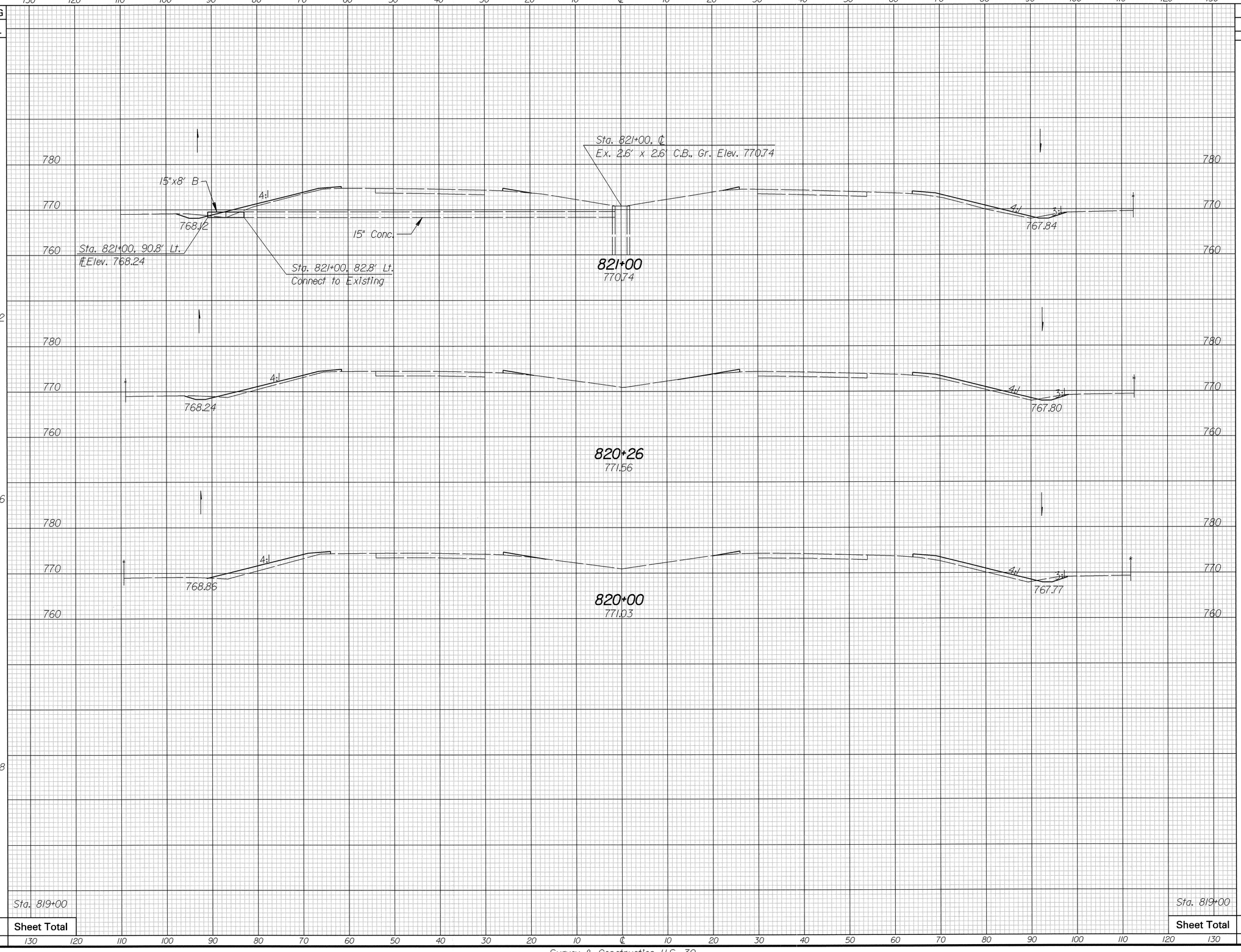
CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 817+00 to Sta. 819+00

VAN-30-11.24

94
161

SEEDING	
END WIDTH	SQ. YDS.
87	752
96	256
81	878
77	
1886	Sheet Total
	SQ. YDS.



EARTHWORK				
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	7	42		
			18	110
	6	38		
			5	43
	4	51		
			15	183
Sta. 819+00	4	48		
Sheet Total			38	336
			SQ. FT.	CU. YDS.

CALCULATED B.J.D
CHECKED N.J.V

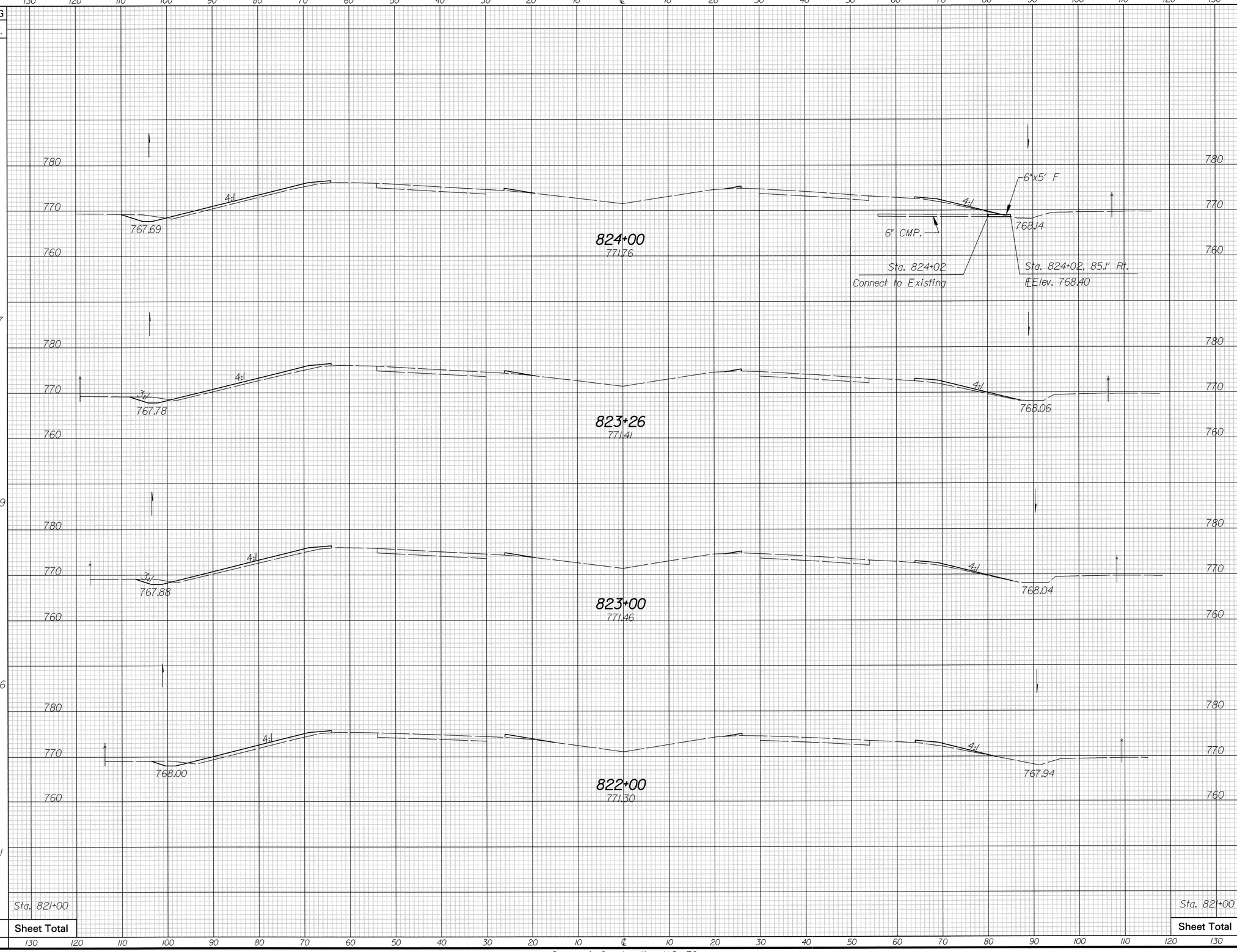
CROSS SECTIONS – MAINLINE U.S. 30
Sta. 820+00 Sta. 821+00

VAN-30-11.24

95
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl7.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:11

SEEDING END WIDTH	SEEDING SQ. YDS.
82	917
83	889
77	856
77	911
87	
Sta. 821+00	3573
	SQ. YDS.



EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
8	35		
		28	135
7	38		
		22	137
5	36		
		19	130
5	34		
		22	141
7	42		
Sheet Total		91	543
SQ. FT.		CU. YDS.	

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 822+00 to Sta. 824+00

VAN-30-11.24

96
161

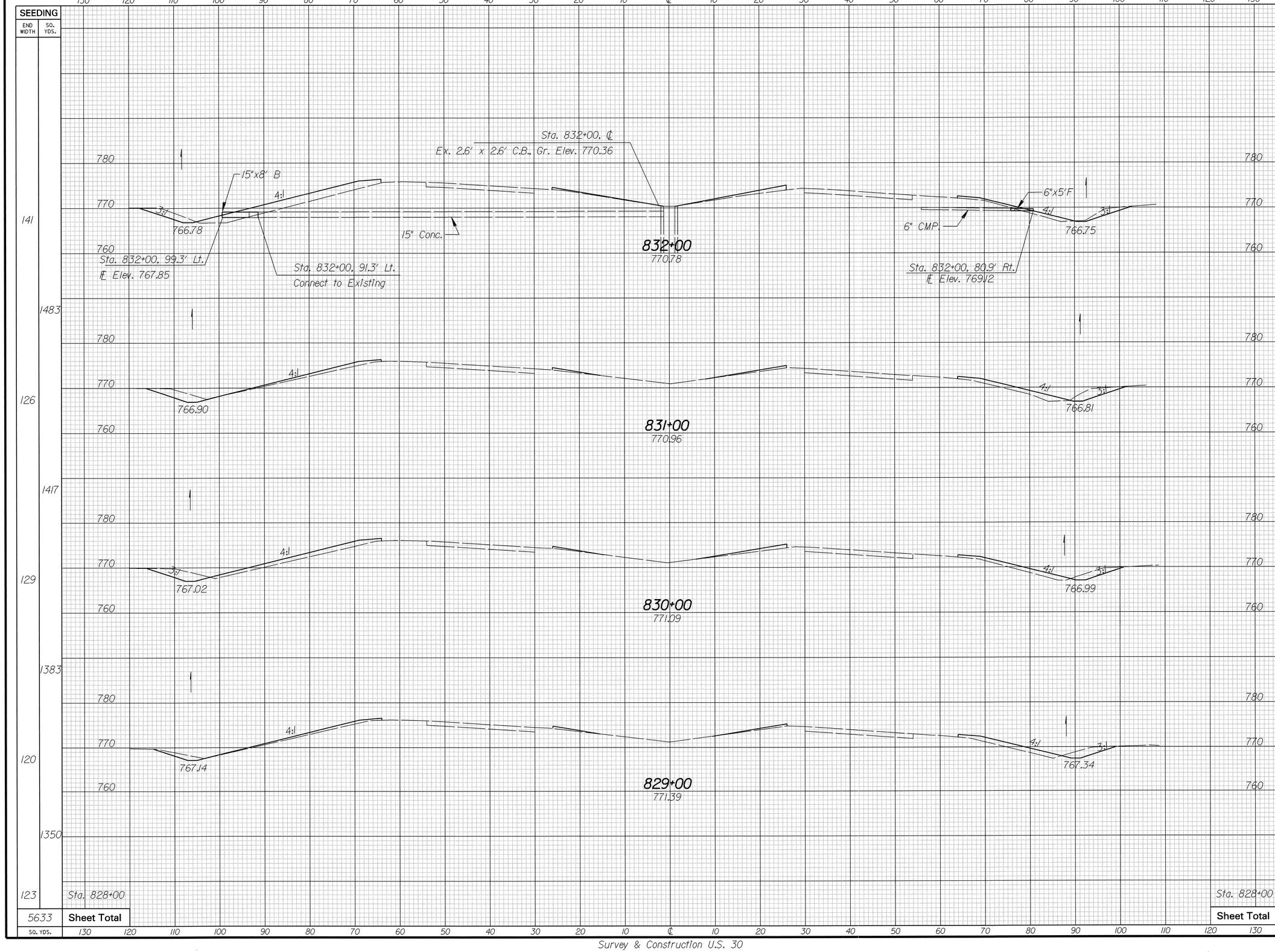
DESIGN FILE : /usr/odot/dgn/v30/v30xs17.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:11

Survey & Construction U.S. 30

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

EB

SEEDING END WIDTH	SEEDING SQ. YDS.
141	1483
126	1417
129	1383
120	1350
123	
	5633
	SQ. YDS.



EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
22	100	102	272
33	47	117	207
30	65	93	200
20	43	74	198
20	64	386	877
	SQ. FT.	CU. YDS.	

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 829+00 to Sta. 832+00

VAN-30-11.24

98
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl8.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:11

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
132	1422	48	86	143	341
124	1344	29	98	106	315
118	1322	28	72	98	256
120	1450	25	66	87	307
141	5538	22	100	434	1219
	Sheet Total			Sheet Total	
	SQ. YDS.		SQ. FT.		CU. YDS.

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

780 / 770 / 760

836+00
771.21

766.05 (3:1 / 4:1)

766.10 (4:1 / 3:1)

Sta. 835+00, ℄
Ex. 2.6' x 2.6' C.B., Gr. Elev. 771.02

Sta. 835+03
Connect to Existing

Sta. 835+03, 78.3' Rt.
℄ Elev. 769.0

6" x 10' F

6" x 10' F

15"x8' B

766.25 (3:1 / 4:1)

15" Conc.

6" CMP.

766.30 (4:1 / 3:1)

Sta. 835+00, 98.6' Lt.
℄ Elev. 767.35

Sta. 835+00, 90.6' Lt.
Connect to Existing

835+00
771.02

Sta. 835+02
Connect to Existing

Sta. 835+02, 87.7' Rt.
℄ Elev. 766.9

766.35 (3:1 / 4:1)

766.50 (4:1 / 3:1)

834+00
771.05

766.55 (3:1 / 4:1)

766.69 (4:1 / 3:1)

833+00
770.83

Sta. 832+00

Sta. 832+00

Survey & Construction U.S. 30

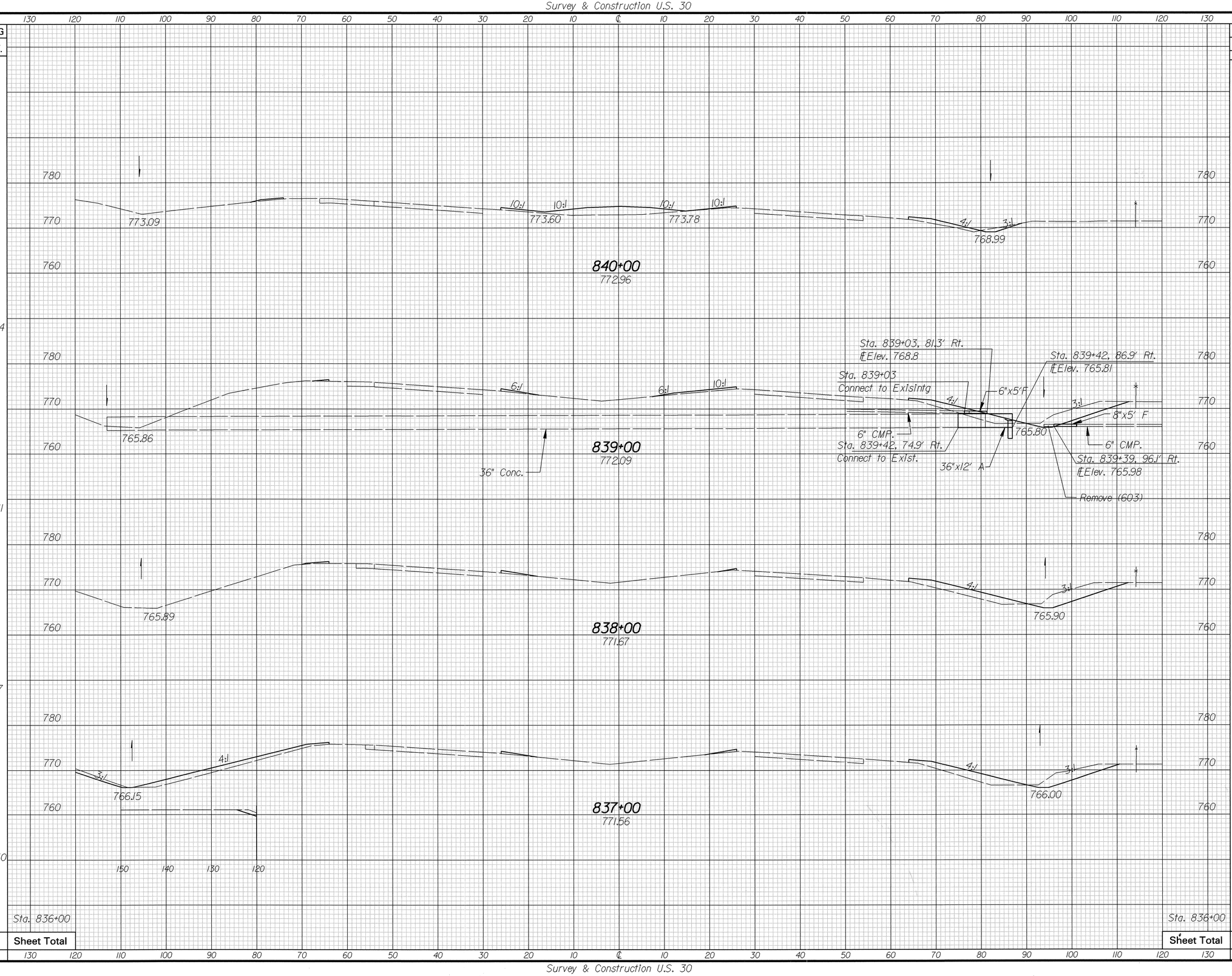
DESIGN FILE : /usr/odot/dgn/v30/v30xsl8.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:11

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 833+00 Sta. 836+00

VAN-30-11.24

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
87		5	62		
	944			81	187
83		39	39		
861				146	146
72		40	40		
1117				150	211
129		41	74		
1450				165	296
132		48	86		
4372	Sheet Total			542	840
SQ. YDS.				CU. YDS.	



DESIGN FILE : /usr/odot/dgn/v30/v30xsl8.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:12

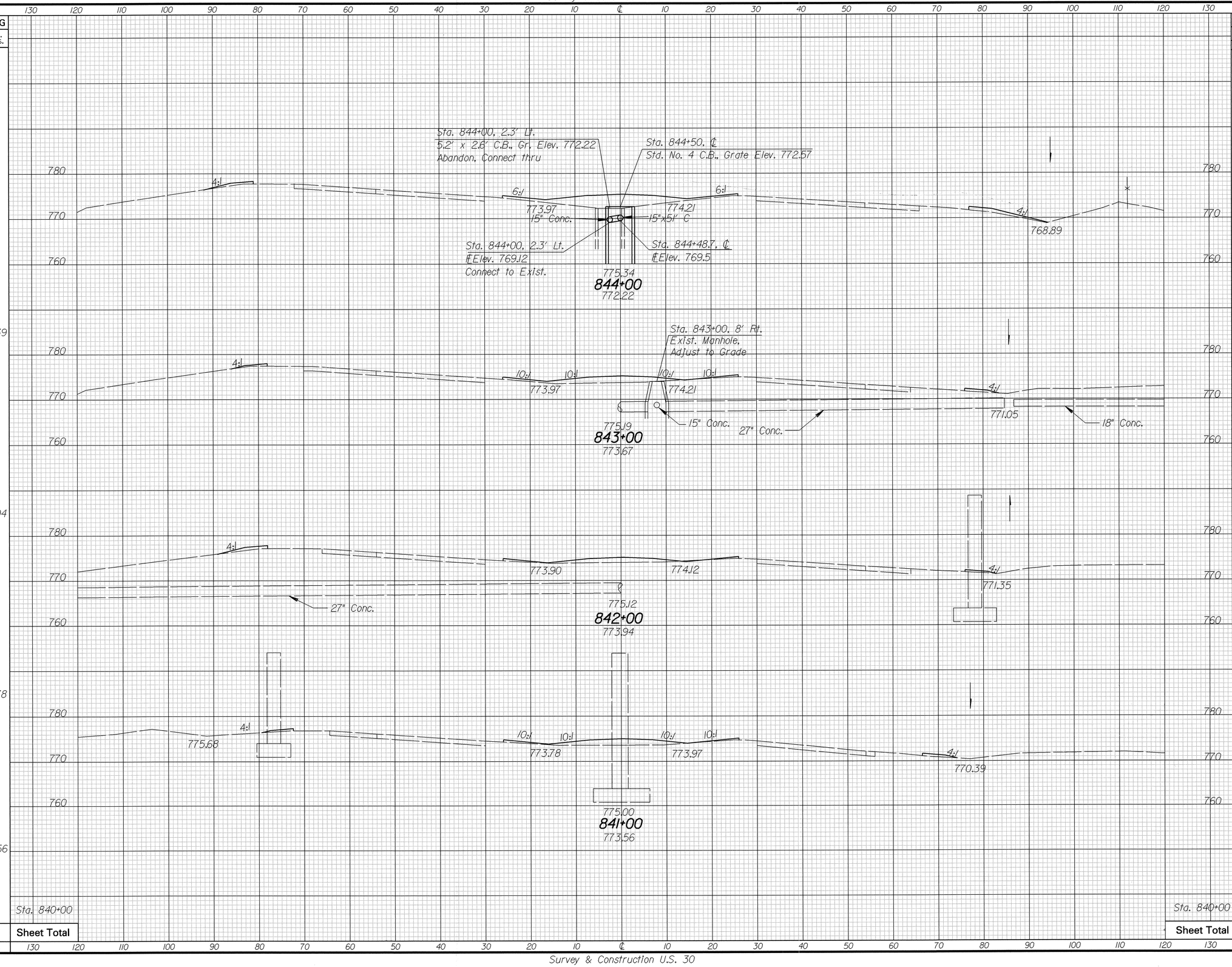
CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 837+00 to Sta. 840+00

VAN-30-11.24

100
161

SEEDING END WIDTH	SEEDING SQ. YDS.
81	839
70	
73	794
67	778
87	856
Sta. 840+00	3267 Sheet Total



EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
0	93		
		0	256
0	45		
		0	152
0	37		
		0	143
0	40		
		9	189
5	62		
Sta. 840+00			
Sheet Total		9	740
SQ. FT.		CU. YDS.	

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 841+00 to Sta. 844+00

VAN-30-11.24

101
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl9.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:12

SEEDING END WIDTH	SEEDING SQ. YDS.	Station	Elevation	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
		130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130					
27	111	847+00	774.37	0	10	0	14
24		846+61	774.16	0	9		
	166					0	20
25		846+00	773.65	0	9		
	283					0	37
26		845+00	773.01	0	11		
	594					0	193
81		Sta. 844+00		0	93		
1154	Sheet Total					0	264
SQ. YDS.					SQ. FT.	CU. YDS.	

Survey & Construction U.S. 30

CALCULATED B.J.D
CHECKED N.J.V

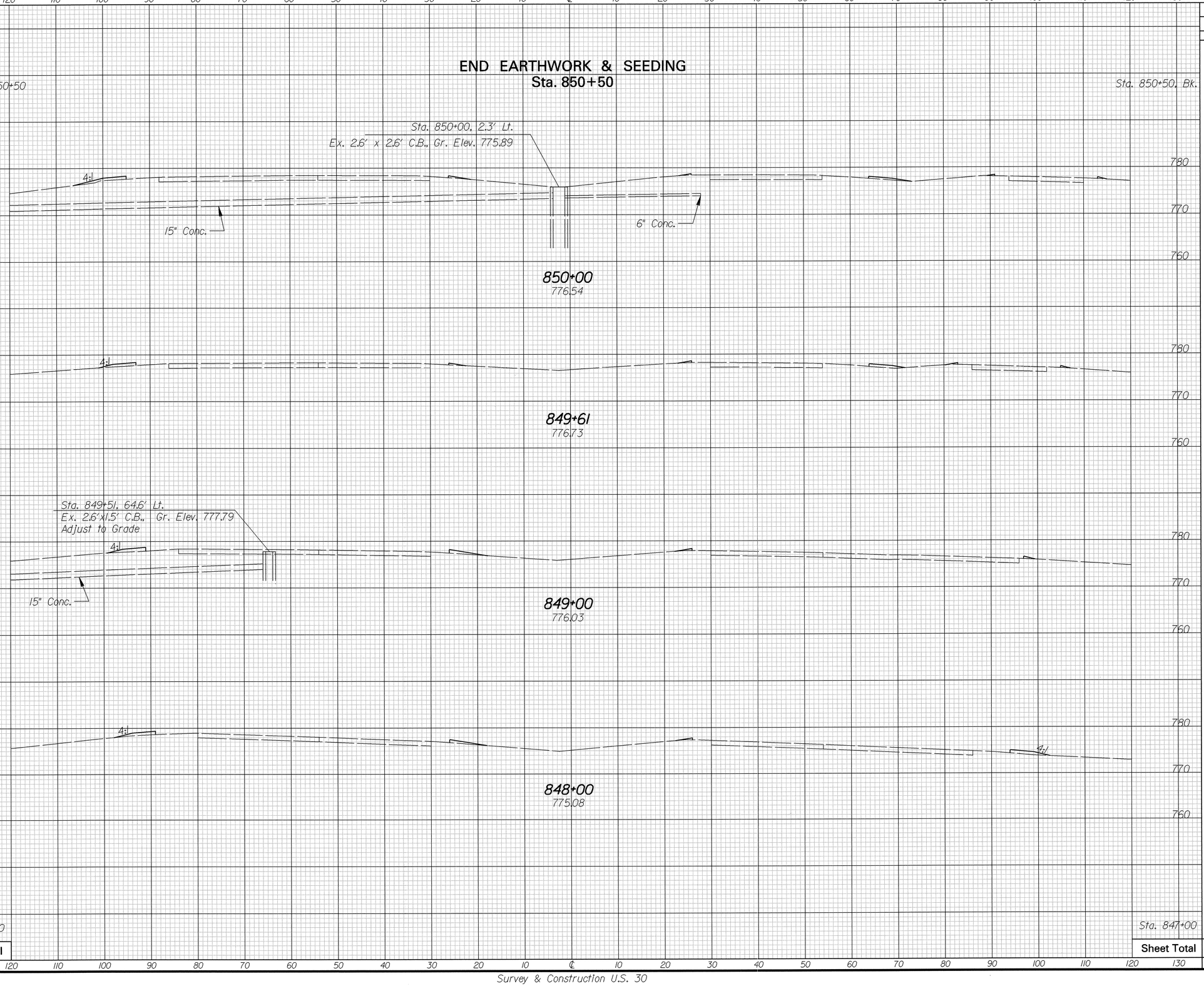
CROSS SECTIONS – MAINLINE U.S. 30
Sta. 845+00 to Sta. 847+00

VAN-30-11.24

102
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl9.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:12

END EARTHWORK & SEEDING
Sta. 850+50



SEEDING END WIDTH	SEEDING SQ. YDS.
30	175
33	130
27	163
21	289
31	322
27	
Sheet Total	1079
	SQ. YDS.

EARTHWORK	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
Sta. 850+50, Bk.	0	0		
			0	13
	0	14		
			0	19
	0	12		
			0	23
	0	8		
			0	39
	0	13		
			0	43
Sta. 847+00	0	10		
Sheet Total			0	137
	SQ. FT.		CU. YDS.	

CALCULATED B.J.D. CHECKED N.J.V.

CROSS SECTIONS – MAINLINE U.S. 30
Sta. 848+00 Sta. 850+00

VAN-30-11.24

103
161

DESIGN FILE : /usr/odot/dgn/v30/v30xsl9.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:12

Survey & Construction Ramp "A"

DESIGN FILE : /usr/odot/dgn/v30/v30xs25.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:13

SEEDING		EARTHWORK			
END WIDTH	SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
39		9	15		
	186			17	27
28		9	14		
	147			17	25
25	Ahd.	Ahd.	9	13	
	333 Sheet Total	Sheet Total		34	52
	SQ. YDS.		SQ. FT.		CU. YDS.

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

780 770 760

4:1 766.62

196+00
769.78

4:1 766.39

780 770 760

4:1 767.37

195+50
770.87

4:1 769.62

780 770 760

4:1 767.69

195+00
772.04

4:1 772.44

For Earthwork and Seeding Back
See Mainline Cross Sections

Survey & Construction Ramp "A"

CALCULATED BJD
CHECKED NJV

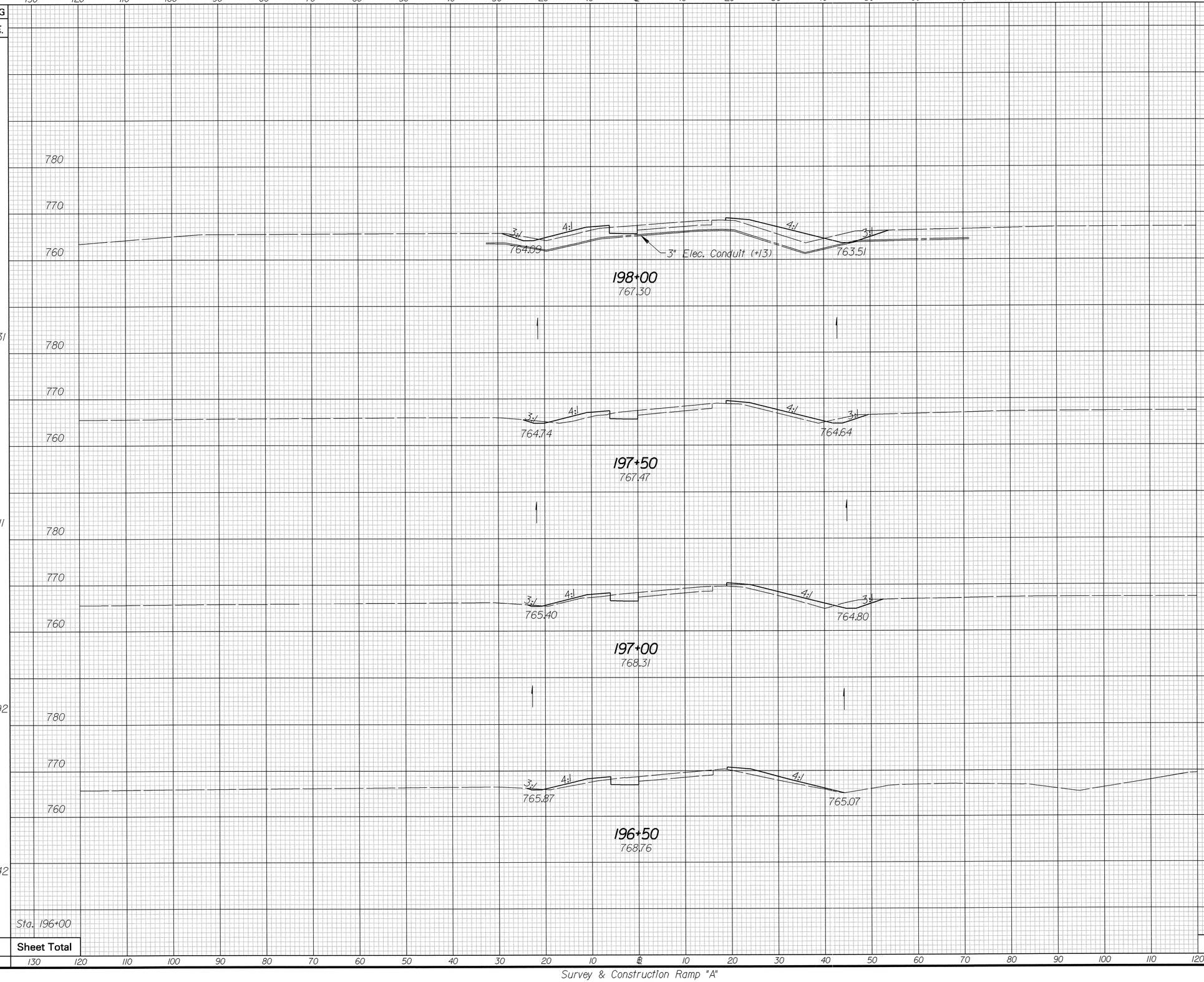
CROSS SECTIONS - RAMP "A"
Sta. 195+00 to Sta. 196+00

VAN-30-11.24

104
161

Survey & Construction Ramp "A"

SEEDING	
END WIDTH	SQ. YDS.
64	331
55	311
57	292
48	242
39	
Sta. 196+00	1176
	Sheet Total
	SQ. YDS.



EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
31	37		
		57	59
31	27		
		57	51
31	28		
		38	50
10	26		
		18	38
9	15		
Sta. 196+00			
Sheet Total		170	198
	SQ. FT.	CU. YDS.	

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – RAMP "A"
Sta. 196+50 to Sta. 198+00

VAN-30-11.24

105
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs25.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:13

Survey & Construction Ramp "A"

Survey & Construction Ramp "A"

SEEDING		EARTHWORK			
		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
18	9	9	10		
37	12	12	15		
57	25	25	23		
261	34	34	35		
317	38	38	69		
57	16	16	51		
336	44	44	81		
64	31	Sta. 198+00	37		
914	Sheet Total	Sheet Total		116	185
SQ. YDS.		SQ. FT.		CU. YDS.	

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

780 / 770 / 760

Ahead

℄ Ramp "B"

4:1

767.51

763.42

3" Elec. Conduit

205+00
767.20

For Earthwork and Seeding Between
Sta. 199+50 and Sta. 205+00
See Ramp "B" Cross Sections

For Earthwork & Seeding
See Ramp B Cross Sections

Back

3:1

763.17

766.27

199+50
766.38

For Earthwork & Seeding
See Ramp B Cross Sections

762.41

764.68

199+00
766.68

Sta. 198+50, 47.6' Rt.
℄ Elev. 761.17

30"x10' B

Sta. 198+50, 23.3' Lt.
℄ Elev. 760.98

762.02

761.17

Sta. 198+50, 13.3' Lt.
Connect to Exist.

30" Conc.

Sta. 198+50, 35.6' Rt.
Connect to Exist.

198+50
766.42

CALCULATED B.J.D
CHECKED N.J.V

CROSS SECTIONS - RAMP "A"
Sta. 198+50 to Sta. 205+00

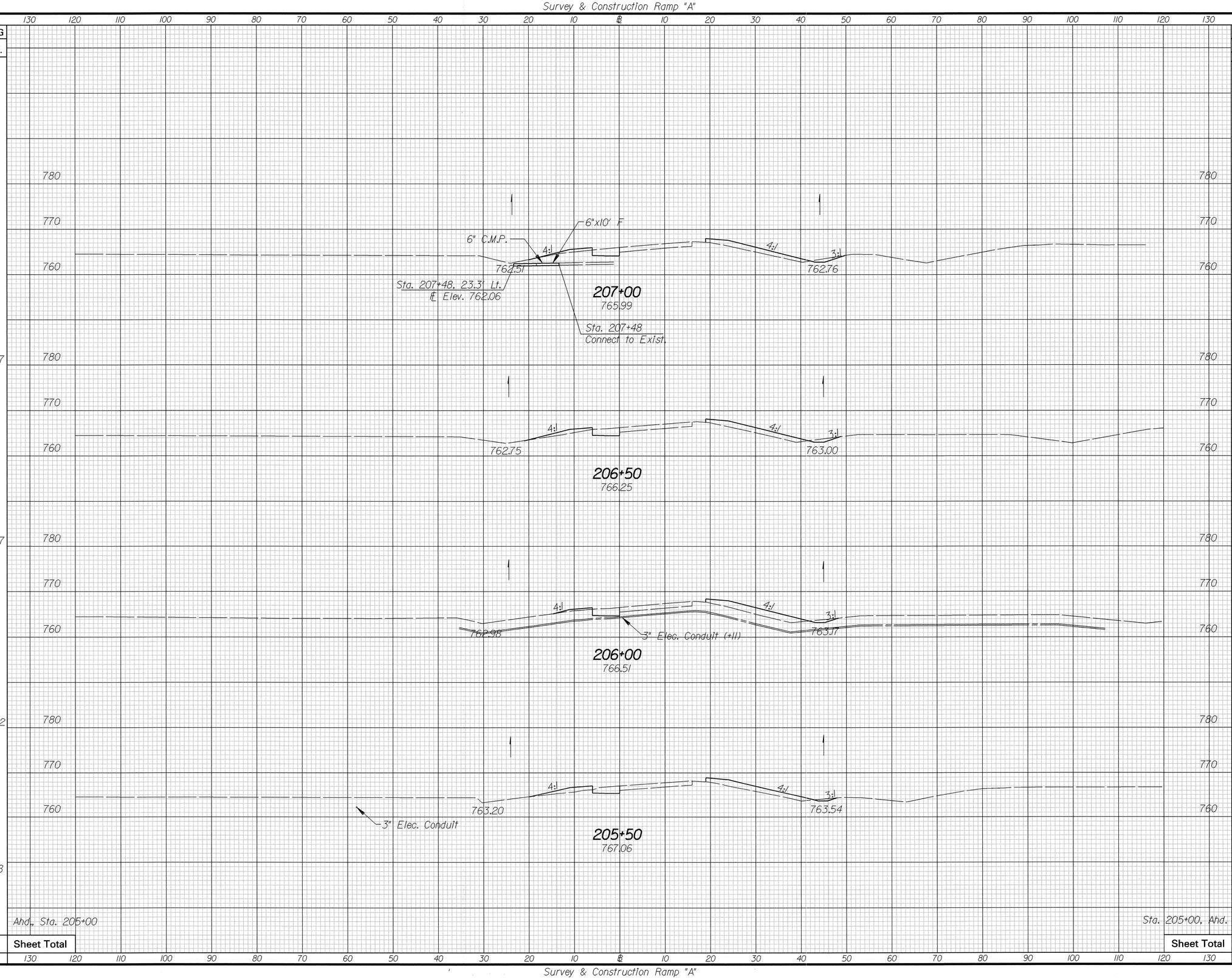
VAN-30-11.24

106
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs25.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:13

Survey & Construction Ramp "A"

SEEDING END WIDTH	SEEDING SQ. YDS.
48	267
48	247
41	242
46	178
18	
	934 Sheet Total
	SQ. YDS.



EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
13	26		
		24	52
13	30		
		24	56
13	31		
		22	63
11	37		
		19	44
9	10		
	Sheet Total	89	215
	SQ. FT.	CU. YDS.	

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – RAMP "A"
Sta. 205+50 to Sta. 207+00

VAN-30-11.24

107
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs25.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:13

Survey & Construction Ramp "A"

Survey & Construction Ramp "A"

SEEDING	
END WIDTH	SQ. YDS.
18	
Back	
100	
18	
200	
54	
283	
48	
Sta. 207+00	
583	Sheet Total
SQ. YDS.	

EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
Back	9	0	
	9	10	17 9
	3	29	11 36
Sta. 207+00	13	26	15 51
Sheet Total			43 96
	SQ. FT.		CU. YDS.

END WORK
END EARTHWORK & SEEDING
Sta. 208+50

780
770
760
780
770
760

4:1
762.03
208+00
765.74

12"x8' B
4:1
Sta. 207+51, 22.5' Lt.
℄ Elev. 761.86
207+50
765.81
Sta. 207+51
Connect to Exist.
12" Conc.
Sta. 207+51
Connect to Exist.
4:1
12"x6' B
Sta. 207+51, 39.8' Rt.
℄ Elev. 762.30

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

Survey & Construction Ramp "A"

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS - RAMP "A"
Sta. 207+50 to Sta. 208+00

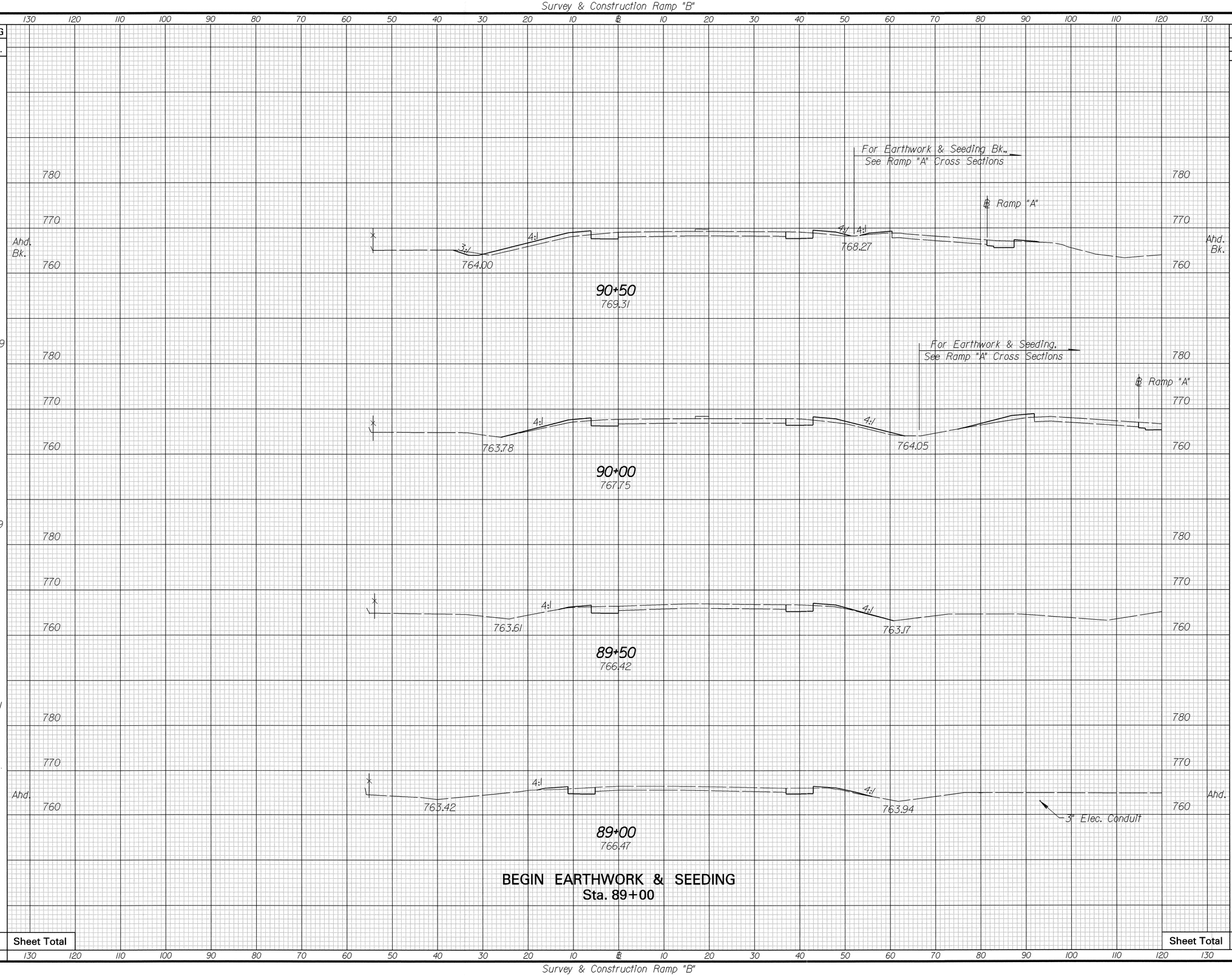
VAN-30-11.24

108
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs25.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:13

Survey & Construction Ramp "B"

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
39		19	23		
55		18	31		
	269			31	46
42		16	19		
	189			31	24
26		17	7		
	131			32	14
21		18	8		
589	Sheet Total			94	84
SQ. YDS.			SQ. FT.	CU. YDS.	



Survey & Construction Ramp "B"

DESIGN FILE : /usr/odot/dgn/v30/v30xs26.dgn
USERNAME : lbrinkma
DATE : 07-OCT-1994
TIME : 15:03

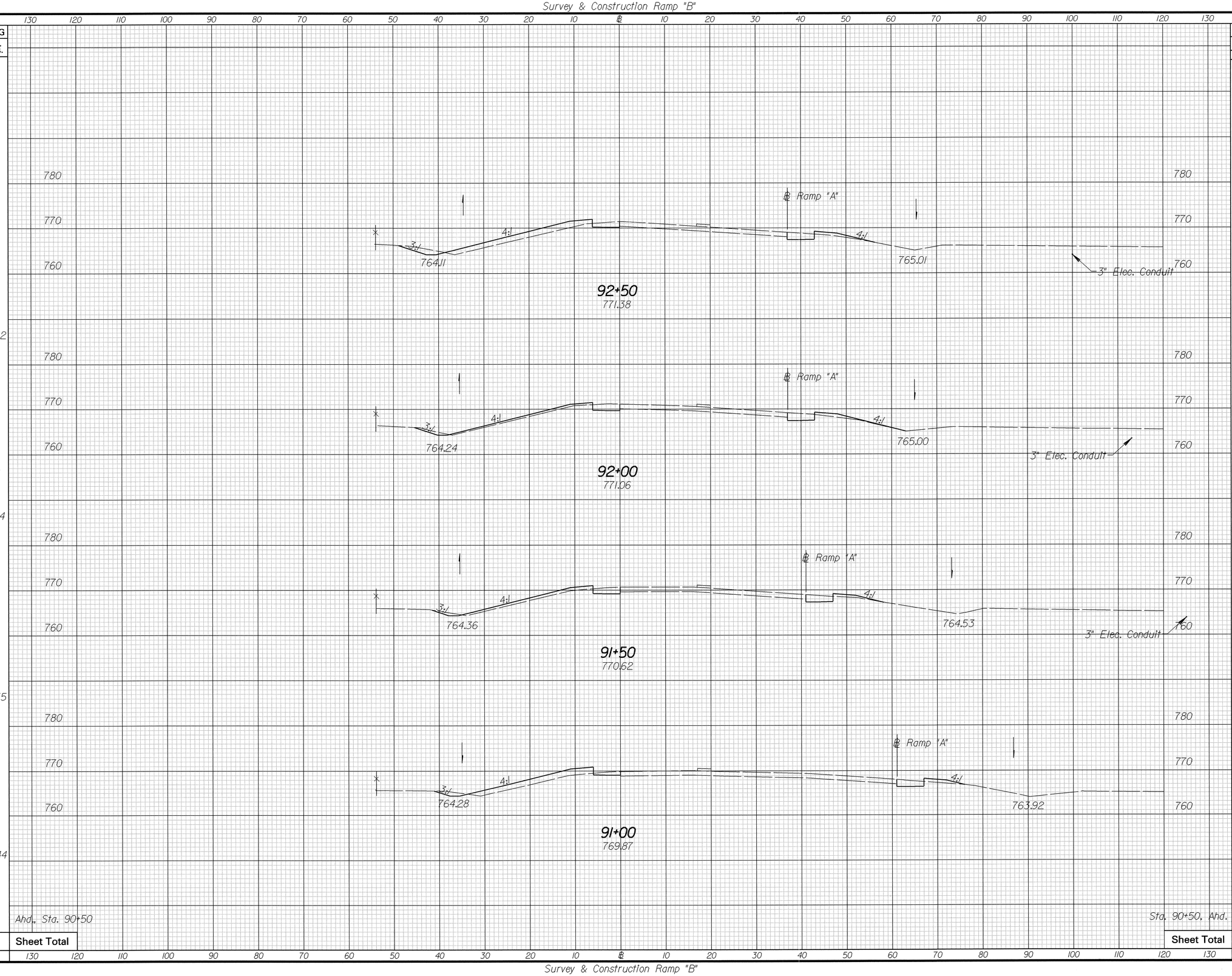
CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – RAMP "B"
Sta. 89+00 to Sta. 90+50

VAN-30-11.24

Survey & Construction Ramp "B"

SEEDING		EARTHWORK			
		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
60	342	24	45	42	60
63	314	21	20	38	38
50	275	20	21	34	59
49	244	17	43	33	61
39	Ahd., Sta. 90+50	19	23		
1175	Sheet Total			147	218
SQ. YDS.		SQ. FT.		CU. YDS.	



Survey & Construction Ramp "B"

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – RAMP "B"
Sta. 91+00 to Sta. 92+50

VAN-30-11.24

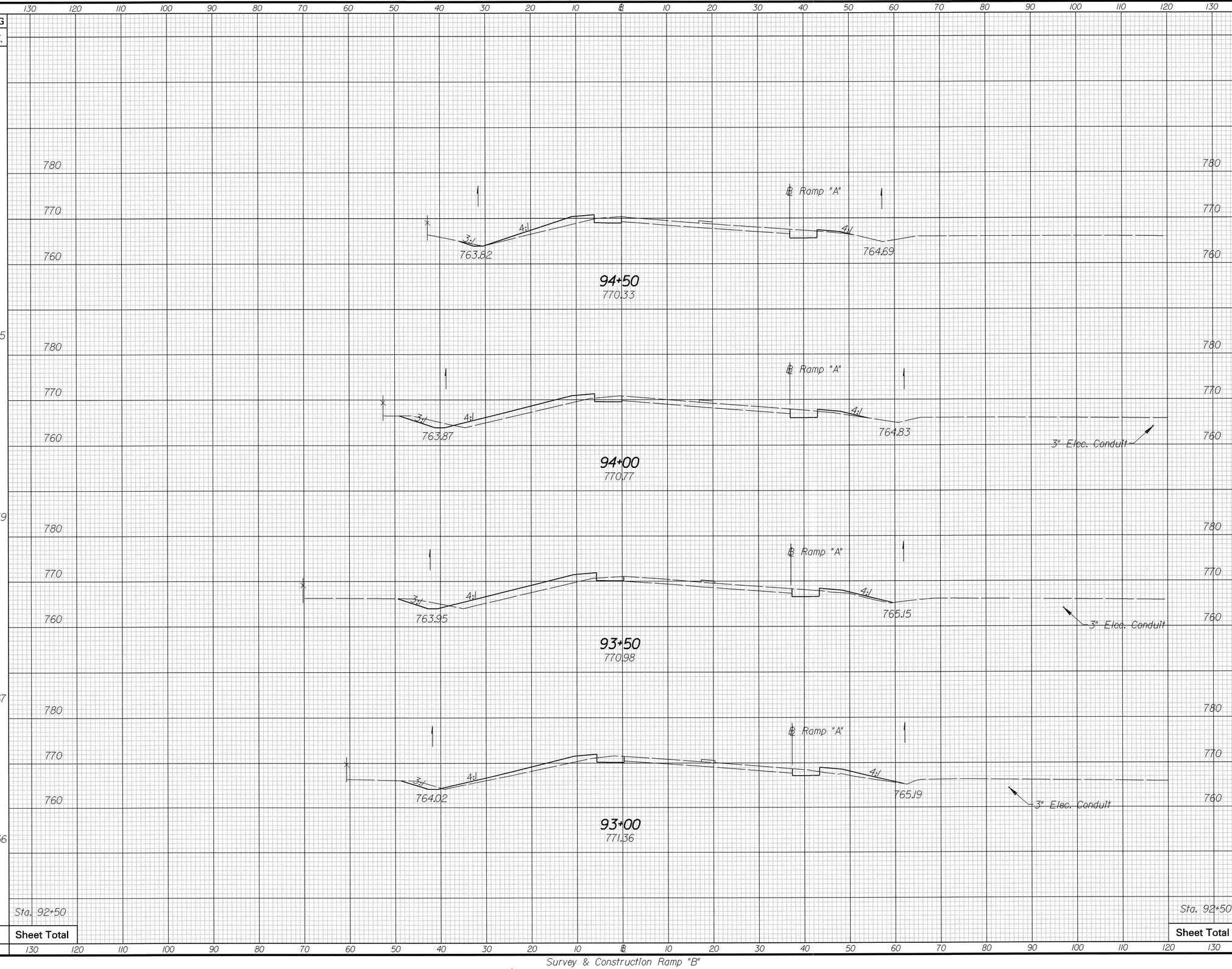
110
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs26.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:13

Survey & Construction Ramp "B"

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
41	275	18	26	43	64
58	339	28	43	48	93
64	367	24	57	44	94
68	356	23	45	44	83
60	Sta. 92+50	24	45		
1337	Sheet Total			179	334
SQ. YDS.				SQ. FT.	CU. YDS.



Survey & Construction Ramp "B"

CALCULATED B.J.D
CHECKED N.J.V

CROSS SECTIONS - RAMP "B"
Sta. 93+00 to Sta. 94+50

VAN-30-11.24

111
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs26.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:13

Survey & Construction Ramp "B"

SEEDING END WIDTH	SEEDING SQ. YDS.		EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
		780				
		770				
44		Ahead	10	20		
59		Back	18	28		
		760				
		96+50 767.42				
	331				34	49
		780				
		770				
60			19	25		
		760				
		96+00 767.99				
	314				34	71
		780				
		770				
53			18	52		
		760				
		95+50 768.87				
	256				32	75
		780				
		770				
39			17	29		
		760				
		95+00 769.73				
	222				32	51
41		Sta. 94+50	18	26		
1123 SQ. YDS.		Sheet Total		SQ. FT.	132 CU. YDS.	246

Ramp "A" ℄ — 4:1 — 763.40 — 4:1 — 763.50 — 4:1 — 763.46 — 4:1 — 762.40

For Earthwork & Seeding Ahd., See Ramp "A" Cross Sections

Ramp "A" ℄ — 4:1 — 763.60 — 3:1 — 4:1 — 763.92

Ramp "A" ℄ — 4:1 — 763.77 — 3:1 — 4:1 — 764.39

Survey & Construction Ramp "B"

DESIGN FILE : /usr/odot/dgn/v30/v30xs26.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:13

CALCULATED BJD
CHECKED N.V

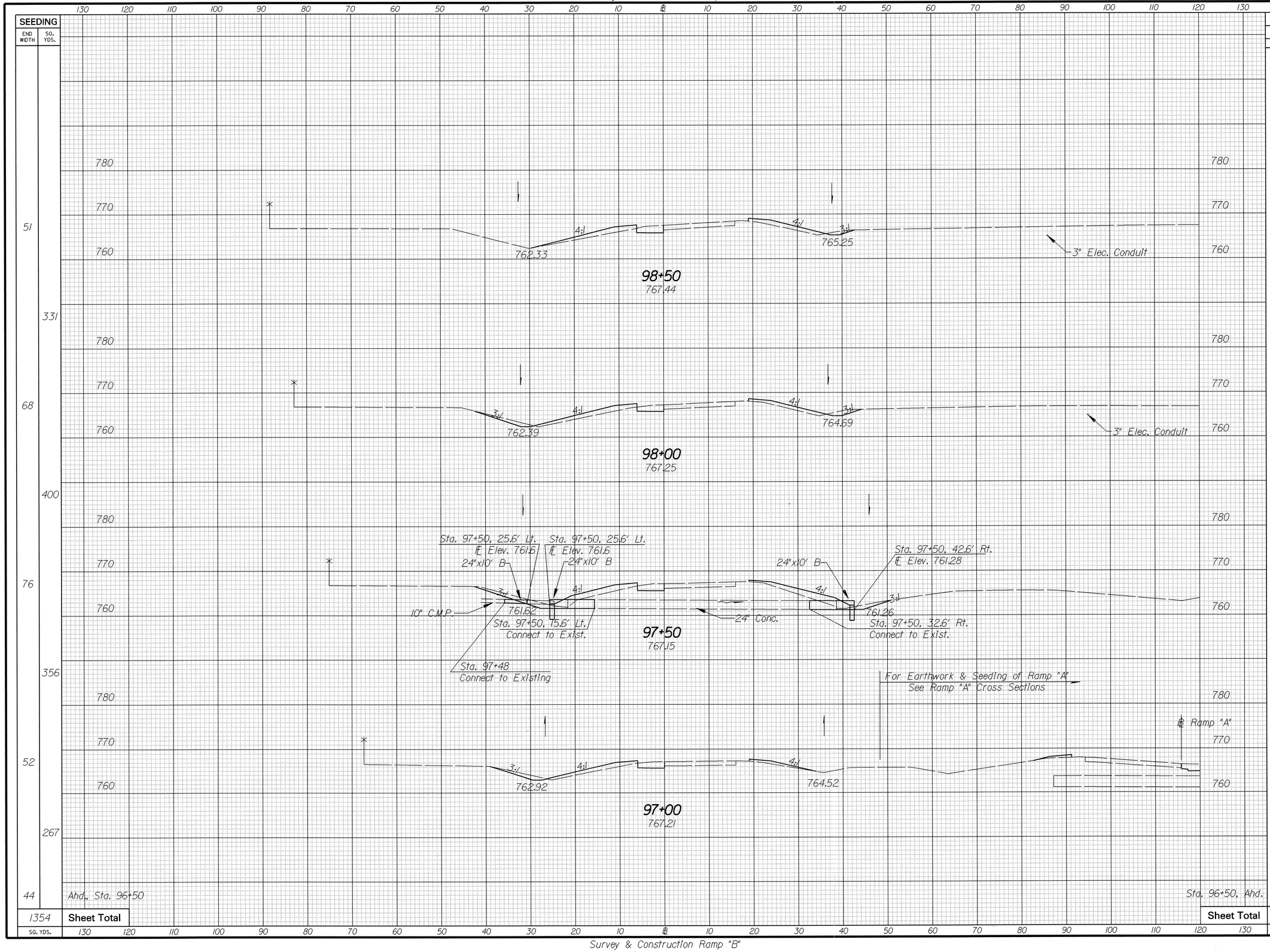
CROSS SECTIONS – RAMP "B"
Sta. 95+00 to Sta. 96+50

VAN-30-11.24

112
161

Survey & Construction Ramp "B"

SEEDING END WIDTH	SEEDING SQ. YDS.
51	331
68	400
76	356
52	267
44	
	1354 Sheet Total
	SQ. YDS.



EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
12	33		
		30	61
20	33		
		44	78
27	51		
		40	70
16	25		
		24	42
10	20		
	Sheet Total	138	251
	SQ. FT.	CU. YDS.	

DESIGN FILE : /usr/odot/dgn/v30/v30xs27.dgn
USERNAME : lbrinkma
DATE : 07-OCT-1994
TIME : 15:07

CALCULATED B.J.D
CHECKED N.J.V

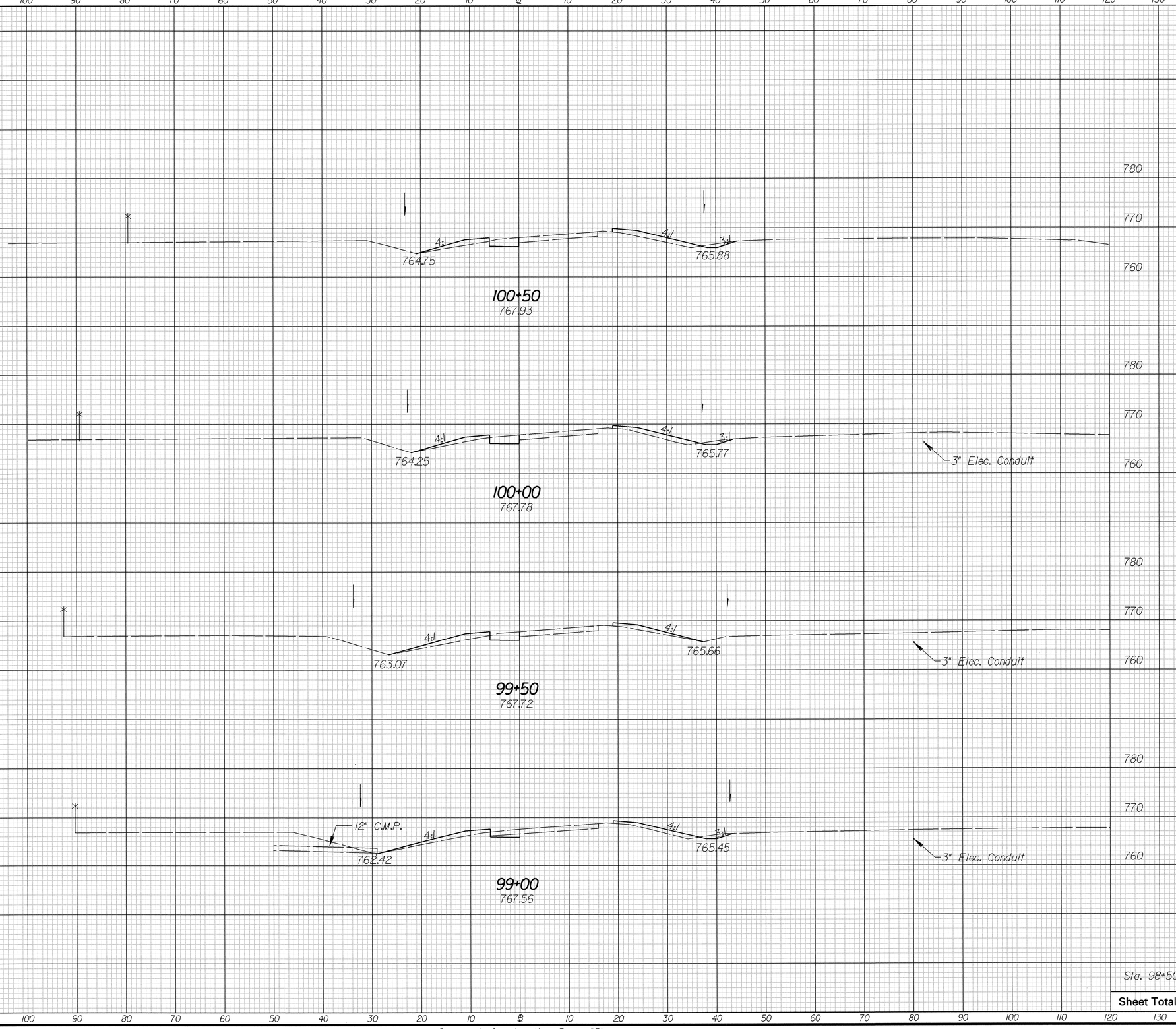
CROSS SECTIONS - RAMP "B"
Sta. 97+00 to Sta. 98+50

VAN-30-11.24

113
161

Survey & Construction Ramp "B"

SEEDING		EARTHWORK			
END WIDTH	SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
45	247	13	28	24	47
44		13	23		
40	233	9	27	20	46
51	253	13	28	20	51
51	283	12	33	23	56
	Sta. 98+50				
1016	Sheet Total			87	200
SQ. YDS.			SQ. FT.	CU. YDS.	



CALCULATED BJD
CHECKED NJV

CROSS SECTIONS - RAMP "B"
Sta. 99+00 to Sta. 100+50

VAN-30-11.24

114
161

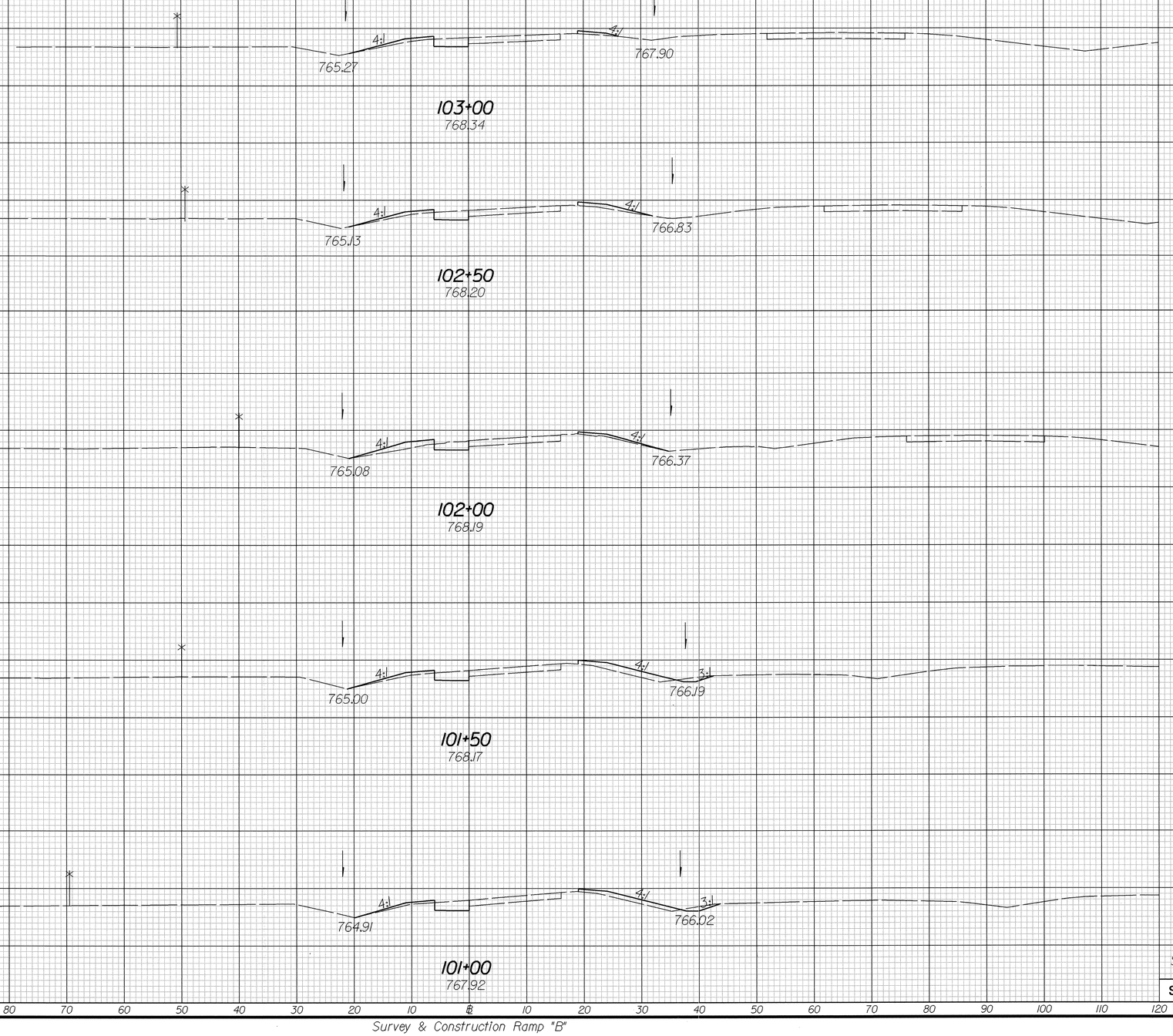
DESIGN FILE : /usr/odot/dgn/v30/v30xs27.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:14

Survey & Construction Ramp "B"

SEEDING END WIDTH	SEEDING SQ. YDS.		EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
		Back, Sta. 103+00				
23			8	8		
	144	103+00			16	19
29			9	12		
	169	102+50			16	26
32			8	16		
	206	102+00			19	34
42			12	21		
	233	101+50			22	34
42			12	16		
	242	101+00			23	41
45		Sta. 100+50	13	28		
994	Sheet Total				96	154
SQ. YDS.				SQ. FT.	CU. YDS.	

For Earthwork and Seeding Ahead
See Mainline Cross Sections

Sta. 103+00, Back



Sta. 100+50

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS - RAMP "B"
Sta. 101+00 to Sta. 103+00

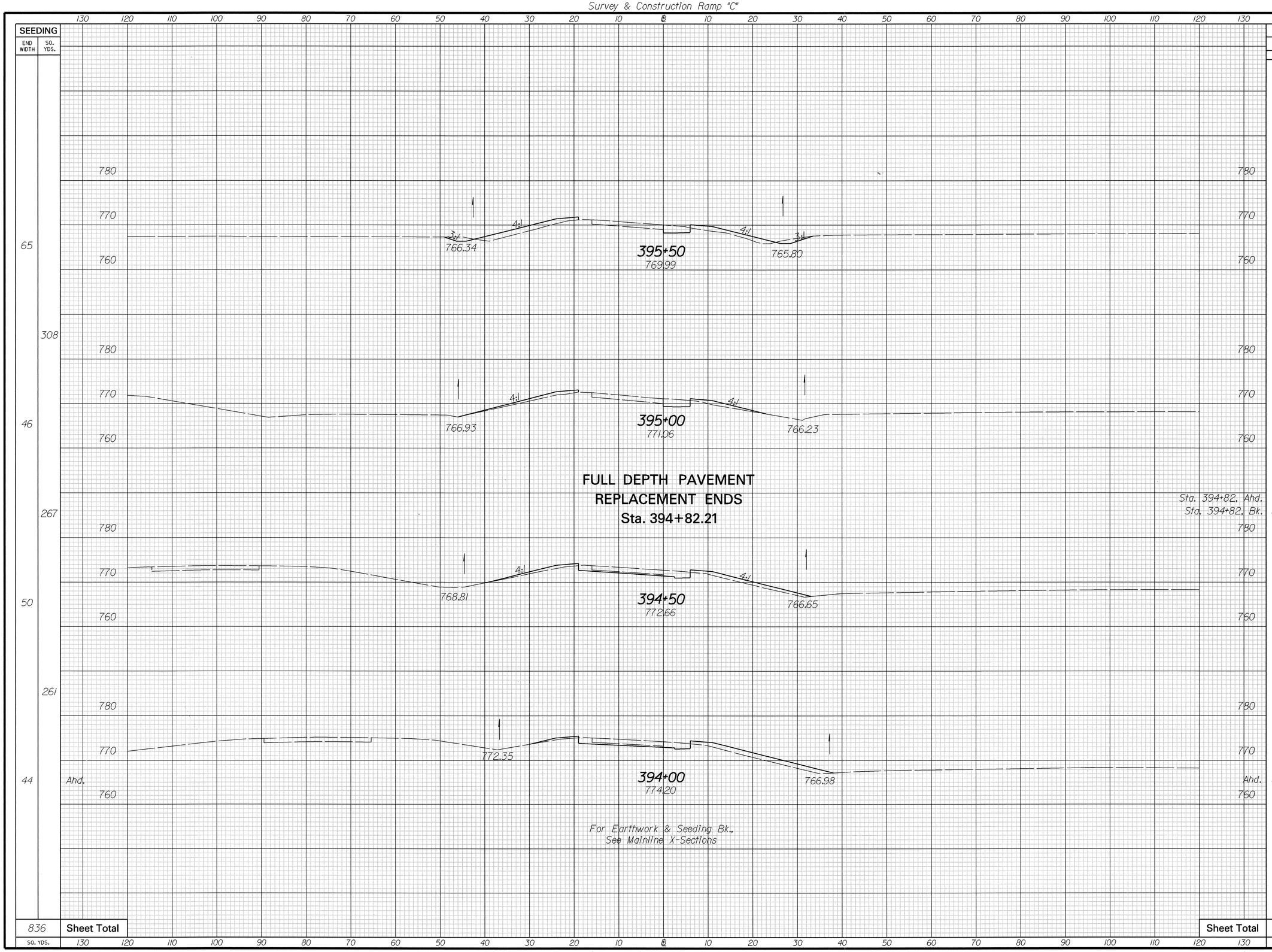
VAN-30-11.24

115
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs27.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:14

Survey & Construction Ramp "B"

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
65	308	18	40	27	59
46		11	24	7	17
	267	Sta. 394+82, Ahd. 12	27	36	33
		Sta. 394+82, Bk. 30	27		
50		31	29		
	261			56	59
44	Ahd.	Ahd. 29	35		
836	Sheet Total	Sheet Total		126	168
SQ. YDS.				CU. YDS.	



For Earthwork & Seeding Bk., See Mainline X-Sections

DESIGN FILE : /usr/odot/dgn/v30/v30xs28.dgn
USERNAME : ibrinkma
DATE : 07-OCT-1994
TIME : 15:08

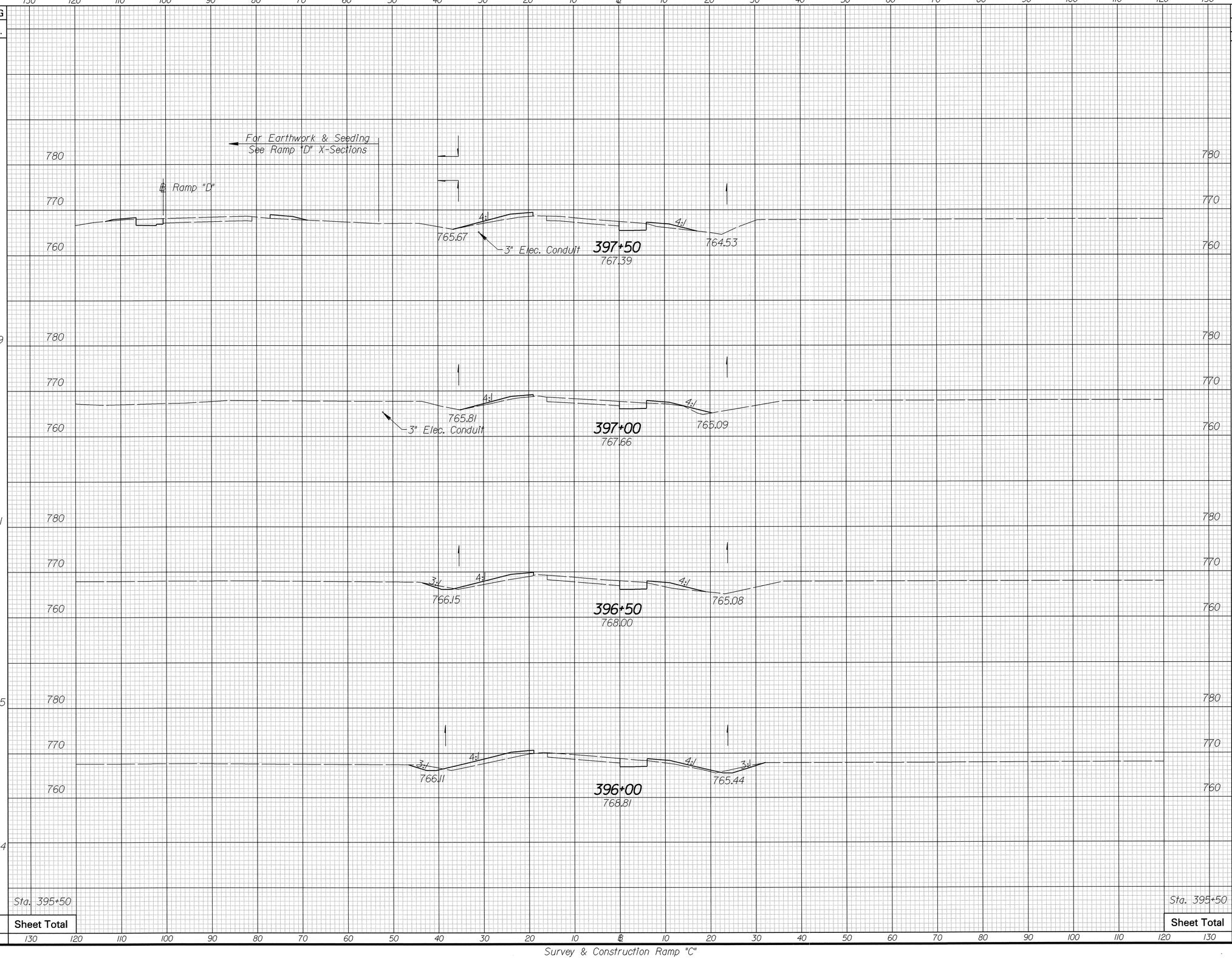
CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – RAMP "C"
Sta. 394+00 to Sta. 395+50

VAN-30-11.24

116
161

SEEDING END WIDTH	SEEDING SQ. YDS.
32	189
36	211
40	275
59	344
65	Sta. 395+50
1019	Sheet Total
	SQ. YDS.



EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
11	17		
		19	26
9	11		
13	20		
		20	29
		38	37
28	20		
		43	56
18	40		
	Sheet Total	120	148
	SQ. FT.	CU. YDS.	

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – RAMP "C"
Sta. 396+00 to Sta. 397+50

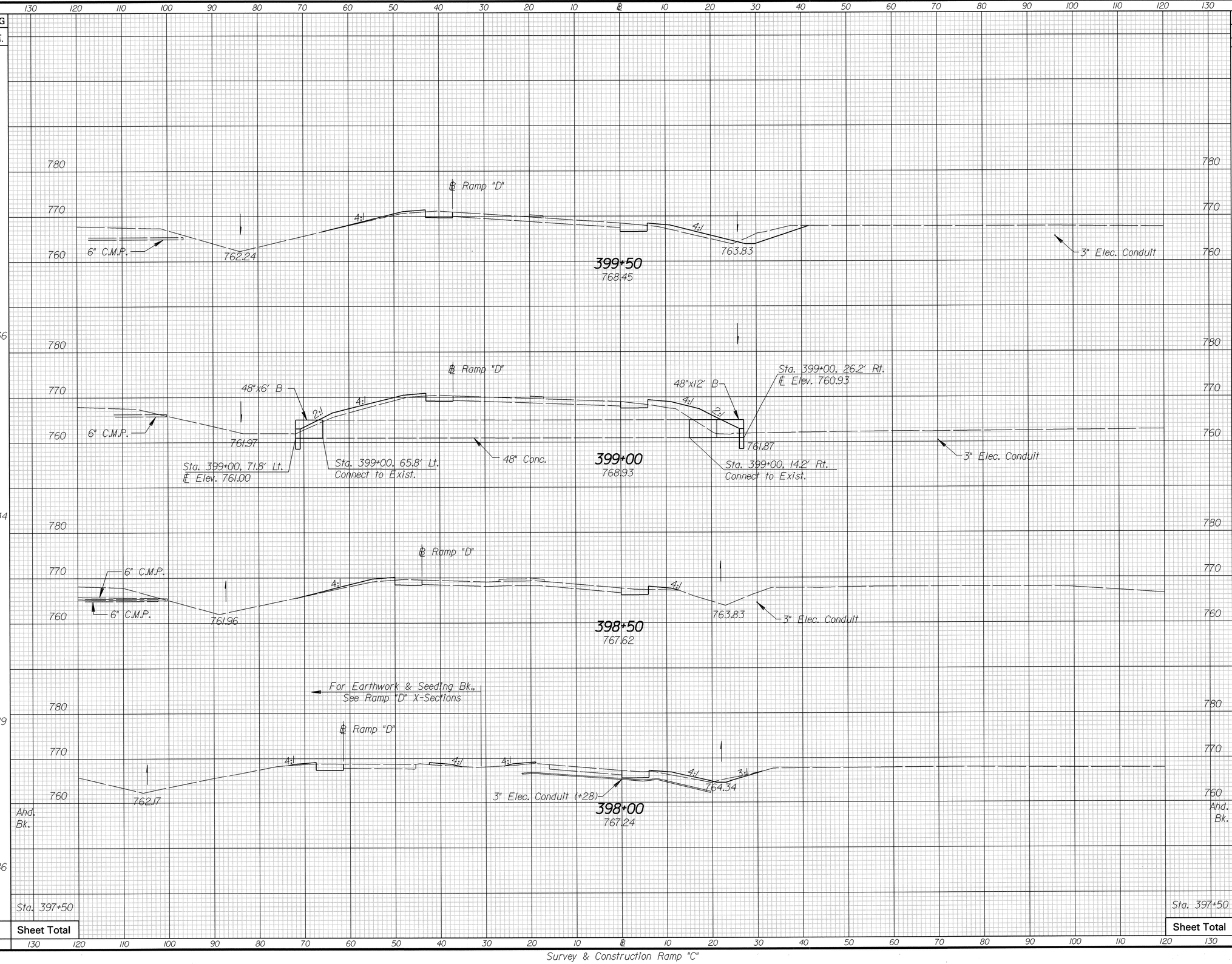
VAN-30-11.24

117
161

DESIGN FILE : e:\dgn\V30\V30xs28.dgn
USERNAME : dslebene
DATE : 07-OCT-1994
TIME : 09:00

Survey & Construction Ramp "C"

SEEDING	
END WIDTH	SQ. YDS.
63	336
58	244
30	219
49 / 35	Ahd. Bk.
	186
32	Sta. 397+50
985	Sheet Total
SQ. YDS.	



EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
18	22	30	85
14	70	26	76
14	12	35	22
Ahd. Bk.	24 15	12 7	
	11	17	24 22
Sheet Total		115	205
SQ. FT.		CU. YDS.	

CALCULATED B.V.D. CHECKED N.J.V.

CROSS SECTIONS - RAMP "C"
Sta. 398+00 to Sta. 399+50

VAN-30-11.24

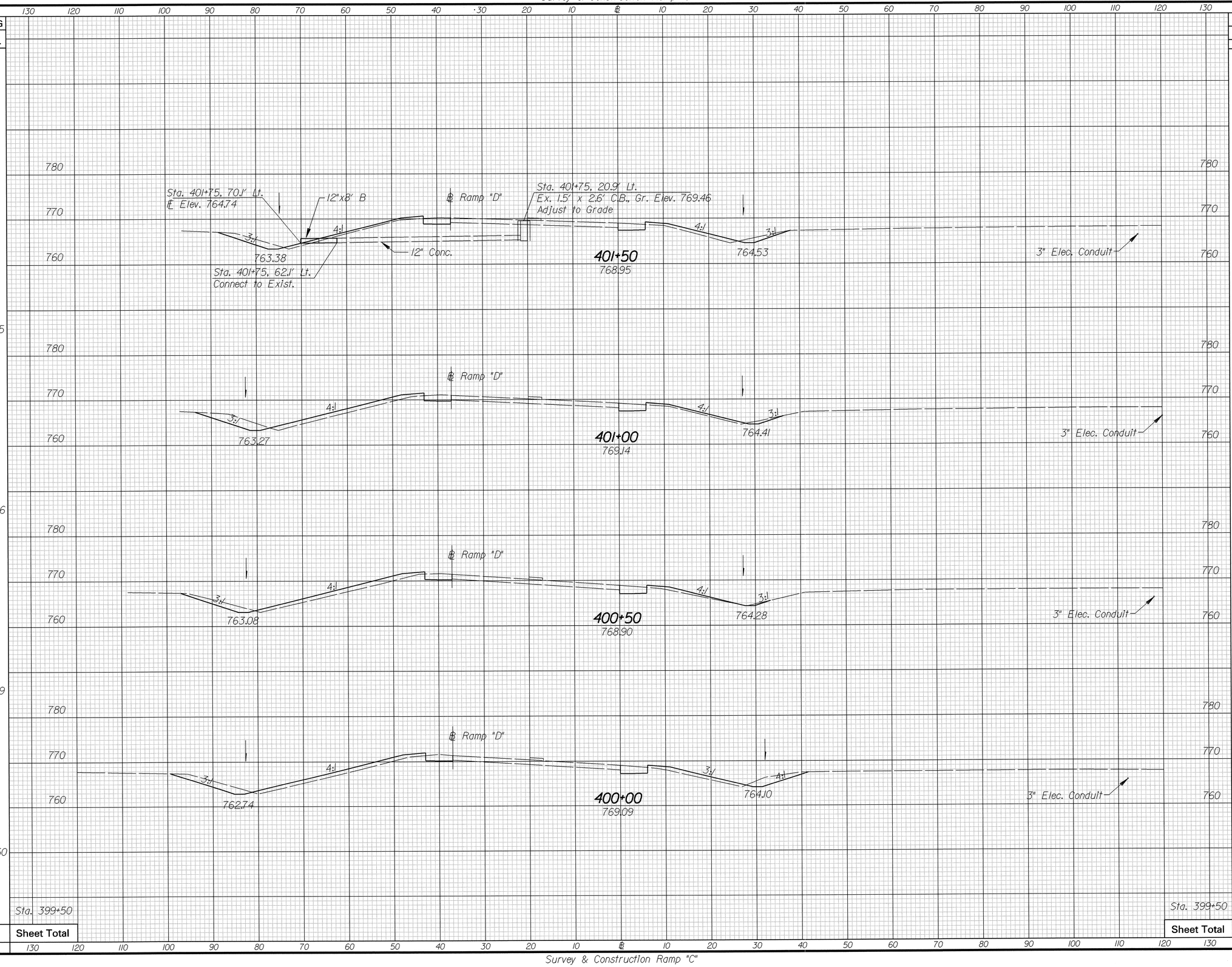
118
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs28.dgn
USERNAME : m.fox
DATE : 06-OCT-1994
TIME : 17:14

Survey & Construction Ramp "C"

Survey & Construction Ramp "C"

SEEDING END WIDTH	SEEDING SQ. YDS.
84	475
87	
88	519
99	450
63	
1930	Sheet Total
SQ. YDS.	



EARTHWORK	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
	37	29	74	66
	43	42	69	77
	31	41	77	81
	52	46	65	63
Sta. 399+50	18	22		
Sheet Total			285	287
	SQ. FT.		CU. YDS.	

CALCULATED B.J.D. CHECKED N.V.

CROSS SECTIONS – RAMP "C"
Sta. 400+00 to Sta. 401+50

VAN-30-11.24

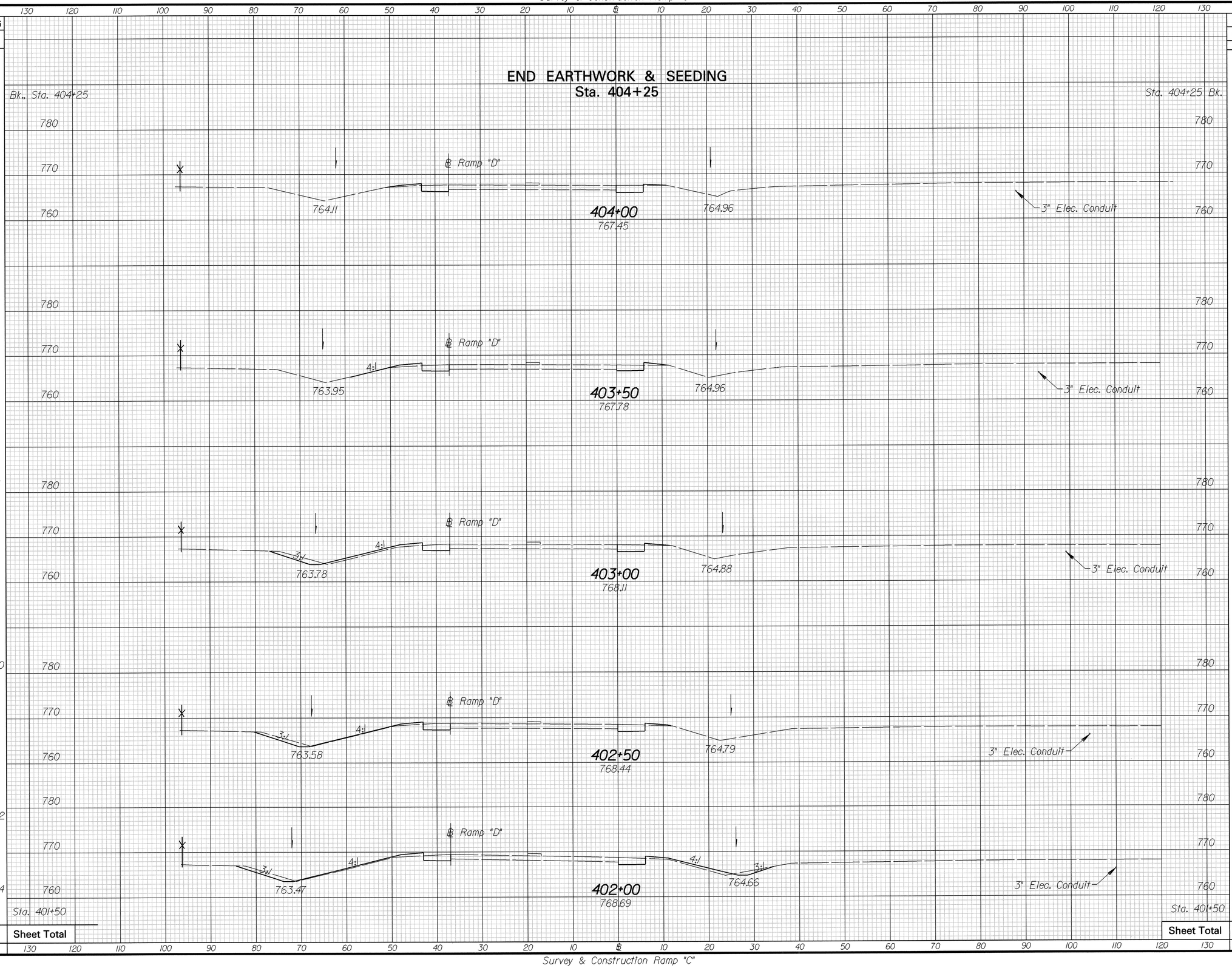
119
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs28.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:14

Survey & Construction Ramp "C"

END EARTHWORK & SEEDING
Sta. 404+25

SEEDING END WIDTH	SEEDING SQ. YDS.	Station	Elevation	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	VOLUME CUT	VOLUME FILL
10		Bk., Sta. 404+25	780	0	0		
	32		770			8	1
13			760	18	3		
	97		780			31	8
			770				
22			760	15	6		
	181		780			38	16
			770				
43			760	26	11		
	250		780			47	17
			770				
47			760	25	7		
	342		780			50	22
			770				
76			760	29	17		
	444		780			61	43
84		Sta. 401+50	770	37	29		
1346	Sheet Total			Sheet Total		235	107
SQ. YDS.					SQ. FT.		CU. YDS.



CALCULATED BJD
CHECKED NJV

CROSS SECTIONS - RAMP "C"
Sta. 402+00 to Sta. 404+00

VAN-30-11.24

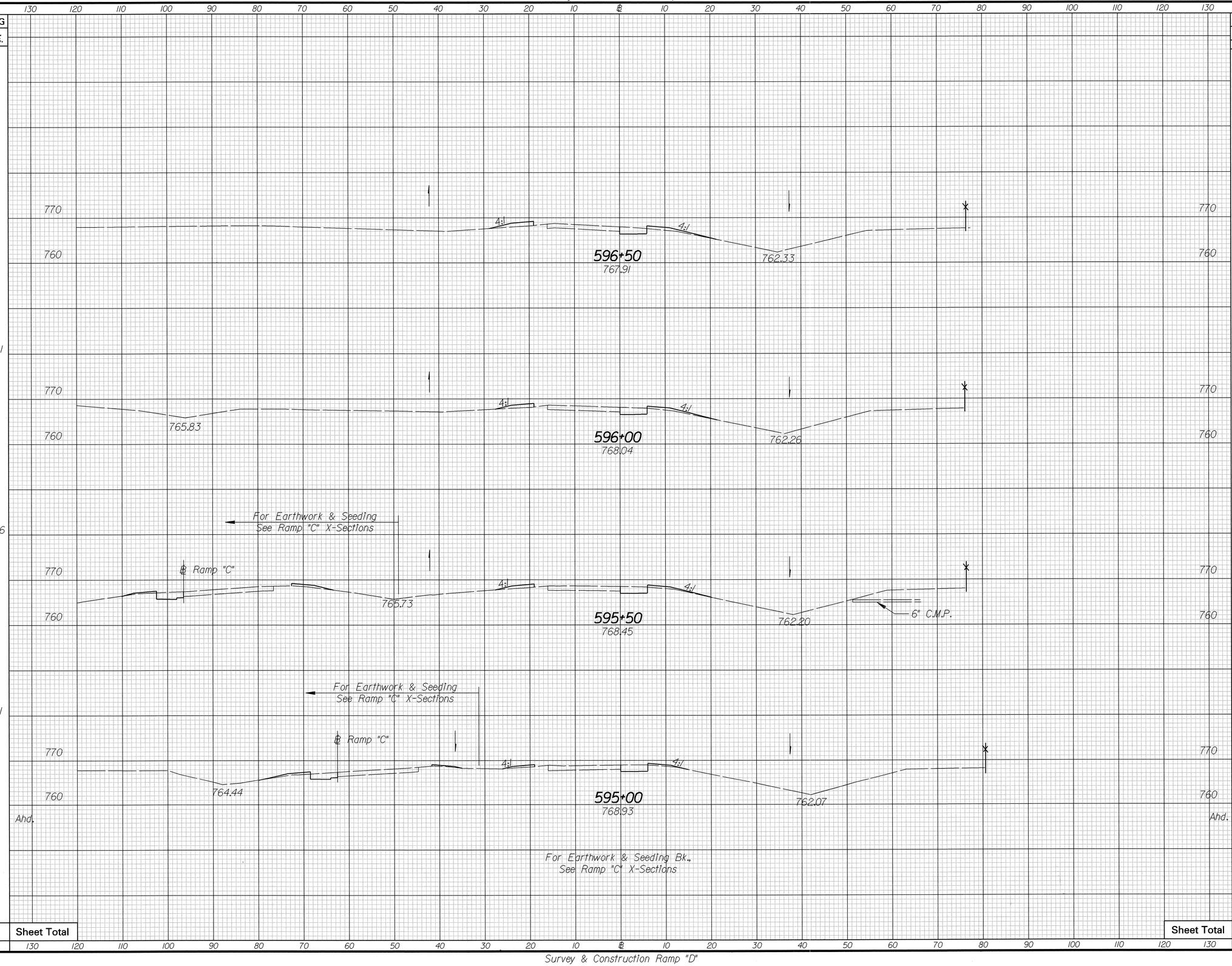
120
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs29.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:14

Survey & Construction Ramp "D"

SEEDING	
END WIDTH	SQ. YDS.
33	161
25	
24	136
	111
16	Ahd.
	408
	SQ. YDS.

EARTHWORK			
END AREA		VOLUME	
CUT	FILL	CUT	FILL
8	13	16	21
9	10		
		17	18
9	9		
		17	13
9	5		
Sheet Total		50	52
	SQ. FT.	CU. YDS.	



DESIGN FILE : /usr/odot/dgn/v30/v30xs30.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:15

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS - RAMP "D"
Sta. 595+00 to Sta. 596+50

VAN-30-11.24

121
161

Survey & Construction Ramp "D"

SEEDING			EARTHWORK			
END WIDTH	SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
31	161	598+50 767.68 762.86	9	17	18	30
27		598+00 767.61 762.75	10	15		
30	158	597+50 767.80 762.63	9	17	18	30
29	164	597+00 767.73 762.48	9	15	17	30
33	172	Sta. 596+50	8	13	16	26
	655	Sheet Total			69	116
	SQ. YDS.			SQ. FT.	CU. YDS.	

770 / 760 elevation lines; 4:1 slopes; 130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

Survey & Construction Ramp "D"

DESIGN FILE : /usr/odot/dgn/v30/v30xs30.dgn
USERNAME : mfox
DATE : 06-OCT-1994
TIME : 17:15

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS - RAMP "D"
Sta. 597+00 to Sta. 598+50

VAN-30-11.24

122
161

SEEDING END WIDTH	SEEDING SQ. YDS.	EARTHWORK END AREA CUT	EARTHWORK END AREA FILL	EARTHWORK VOLUME CUT	EARTHWORK VOLUME FILL
33		9	18		
	189			18	35
35		10	20		
	247			25	69
54		17	55		
	228			24	65
28		9	15		
	153			18	26
27		10	13		
	161			18	28
31		9	17		
978	Sheet Total			103	223
SQ. YDS.			SQ. FT.	CU. YDS.	

For Earthwork & Seeding Ahead
See Mainline X-Sections

770 / 760 — Bk.

4:1 — 766.68

601+00
767.45

4:1 — 763.23

770 / 760

189

770 / 760

4:1 — 765.63

600+50
767.36

4:1 — 763.19

770 / 760

For Earthwork & Seeding
See Mainline Cross Sections

Sta. 600+00, 40.4' Lt.
℄ Elev. 762.4

247

770 / 760

24"x12' B

4:1 — 763.40

Sta. 600+00, 28.4' Lt.
Connect to Exist.

24" Conc.

600+00
767.35

Sta. 600+00, 15.6' Rt.
Connect to Exist.

4:1 — 24"x8' B — 763.06

Sta. 600+00, 23.6' Rt.
℄ Elev. 762.25

770 / 760

228

770 / 760

4:1 — 764.92

599+50
767.56

4:1 — 763.09

770 / 760

153

770 / 760

4:1 — 765.24

599+00
767.50

4:1 — 762.98

770 / 760

Sta. 598+50 — Sta. 598+50

Sheet Total — Sheet Total

130 120 110 100 90 80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80 90 100 110 120 130

Survey & Construction Ramp "D"

CALCULATED BJD
CHECKED NJV

CROSS SECTIONS – RAMP "D"
Sta. 599+00 to Sta. 601+00

VAN-30-11.24

123
161

DESIGN FILE : /usr/odot/dgn/v30/v30xs30.dgn
USERNAME : mfox

DATE : 06-OCT-1994
TIME : 17:15

GUARDRAIL TABLE

Reference	Station From	Station To	Side	202 Guardrail Removed Barrier Design Lin. Ft.	202 Guardrail Removed Lin. Ft.	606 Guardrail Type 5 Lin. Ft.	606 Guardrail Type 5A Lin. Ft.	606 Guardrail Barrier Design Type 5 Lin. Ft.	606 Anchor Assembly Type A, Barrier Design Each	606 Anchor Assembly Type E Each	606 Anchor Assembly Type T Each	606 Bridge Terminal Assembly Type 1 Each	606 Bridge Terminal Assembly Type 3 Each	606 Bridge Terminal Assembly Type 4 Each	Special Impact Attenuator Type I Bidirectional Each	622 Concrete Barrier Type D Lin. Ft.	802 Barrier Reflector Type A Each	802 Barrier Reflector Type B Each
1-G	628 + 16.31	629 + 74.16	Rt.		200	75				1				1			1	
2-G	627 + 28.71	629 + 97.27	Rt.	75.00	150	225		12.50						1	1		5	
3-G	629 + 87.49	630 + 24.99	Lt.		25	25					1			1			1	
4-G	630 + 10.58	630 + 48.08	Lt.		25	25					1			1			2	
5-G	630 + 67.93	631 + 05.43	Rt.		25	25					1			1			2	
6-G	630 + 91.02	631 + 28.52	Rt.		25	25					1			1			1	
7-G	631 + 18.74	633 + 87.30	Lt.	75.00	150	225		12.50						1	1		5	
8-G	631 + 41.83	632 + 99.65	Lt.		200	75				1				1			1	
9-G	667 + 99.65	680 + 56.22	Rt.		1175	1212.5				1			1				13	
10-G	677 + 66.09	680 + 59.59	Rt.	75.00	150	250		12.50					1		1		5	
11-G	680 + 26.84	680 + 64.34	Lt.		25	25					1		1				1	
12-G	669 + 87.35	680 + 68.97	Lt.		1075	1025					1		1				11	
13-G	682 + 87.86	688 + 42.84	Rt.		550	558.32							2				10	
14-G	682 + 91.81	688 + 41.47	Rt.	75.00	125	550.61							2				10	
15-G	682 + 97.36	688 + 40.05	Lt.	75.00	125	425				1	1		2				10	
16-G	683 + 07.71	688 + 38.38	Lt.		534.36	530.79							2				10	
17-G	390 + 66.86 ℅	393 + 66.86 ℅	Rt.		287.5	287.5					1		1				3	
18-G	690 + 63.84	691 + 01.34	Rt.			25					1		1				1	
19-G	690 + 65.27	693 + 58.77	Lt.	75.00	125	250		12.50					1		1		5	
20-G	190 + 62.05 #	194 + 26.50 #	Lt.		362.5	287.5				1			1				3	
21-G	705 + 42.81	708 + 49.07	Lt.		125	100					1						2	
22-G	105 + 28.77 $	107 + 18.75 $	Lt.		187.5	87.5	12.5			1	1						5	
23-G	745 + 09.70	747 + 53.11	Rt.		200	131.25				1		1				43	1	2
24-G	744 + 78.39	747 + 84.10	Rt.		300	37.5		187.5	1		1						6	
25-G	746 + 88.41	749 + 50.43	Lt.			37.5		187.5	1		1						6	
26-G	746 + 70.86	749 + 23.15	Lt.		200	131.25				1		1				43	1	2
27-G	840 + 48.00	843 + 57.84	Rt.		275	175				1	1	2				58	2	2
28-G	839 + 21.87	843 + 20.64	Rt.	50.00	500	50		187.5	1		1						6	
29-G	841 + 32.87	844 + 07.25	Lt.			50		187.5	1		1						6	
30-G	838 + 70.46	842 + 55.64	Lt.		200	237.5				1	1	2				53	2	2
Totals				500.00	7321.86	7164.72	12.5	800.00	4	10	17	6	16	8	4	197	137	8

(Quantities carried to General Summary, Sheet 14)

\# ℄ Ramp 'A'

$ ℄ Ramp 'B'

℅ ℄ Ramp 'C'

CALCULATED BH
CHECKED RLS

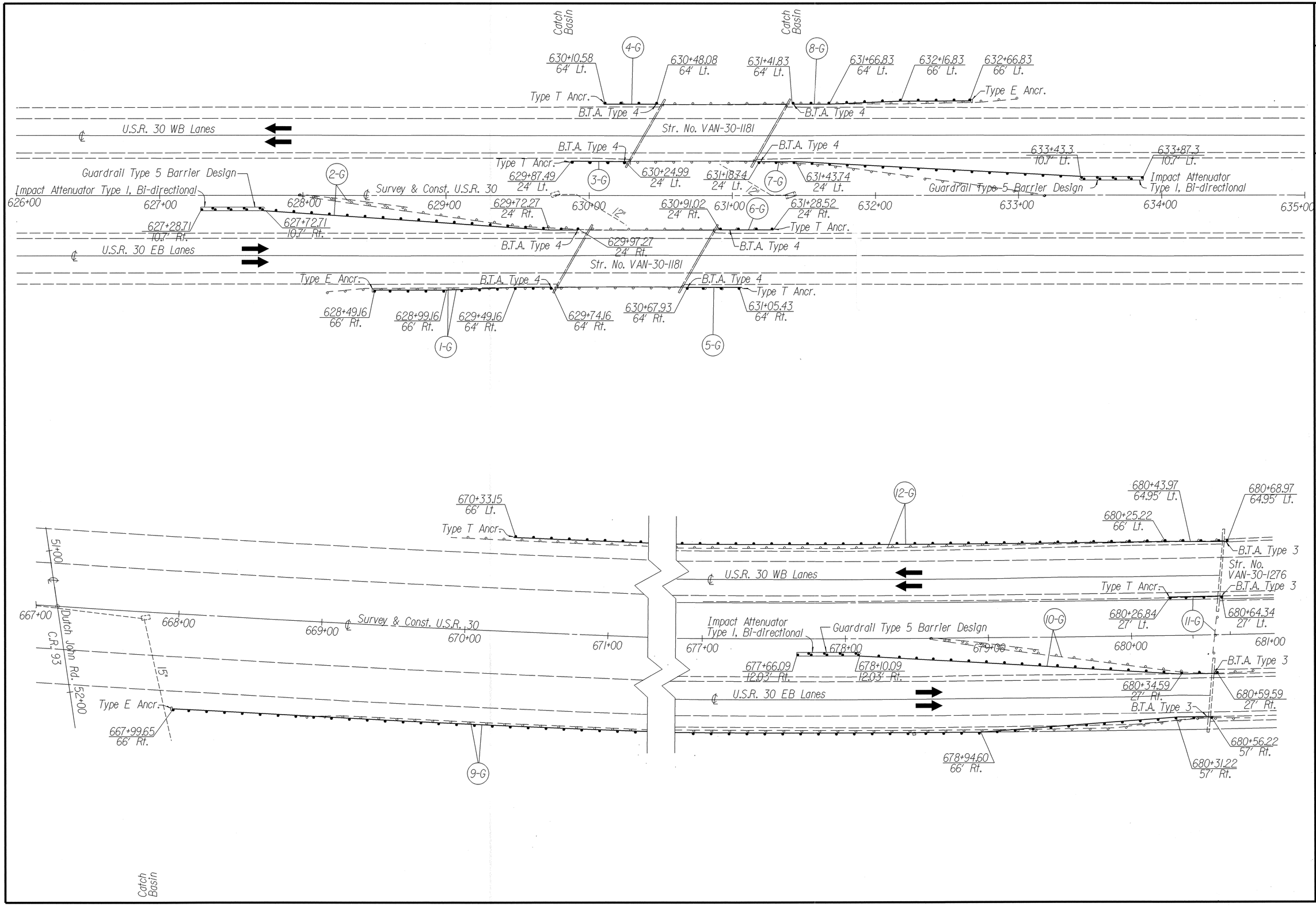
GUARDRAIL TABLE

VAN-30-11.24

124
161

DESIGN FILE : e:\dgn\v30\v30gr.dgn
USERNAME : dsfebene

DATE : 06-OCT-1994
TIME : 10:21



DESIGN FILE : /usr/odot/dgn/v30/v30grl.dgn
USERNAME : lbrinkma
DATE : 06-OCT-1994
TIME : 16:17

DESIGN FILE : /usr/odot/dgn/v30/v30gr1.dgn
USERNAME : lbrinkma

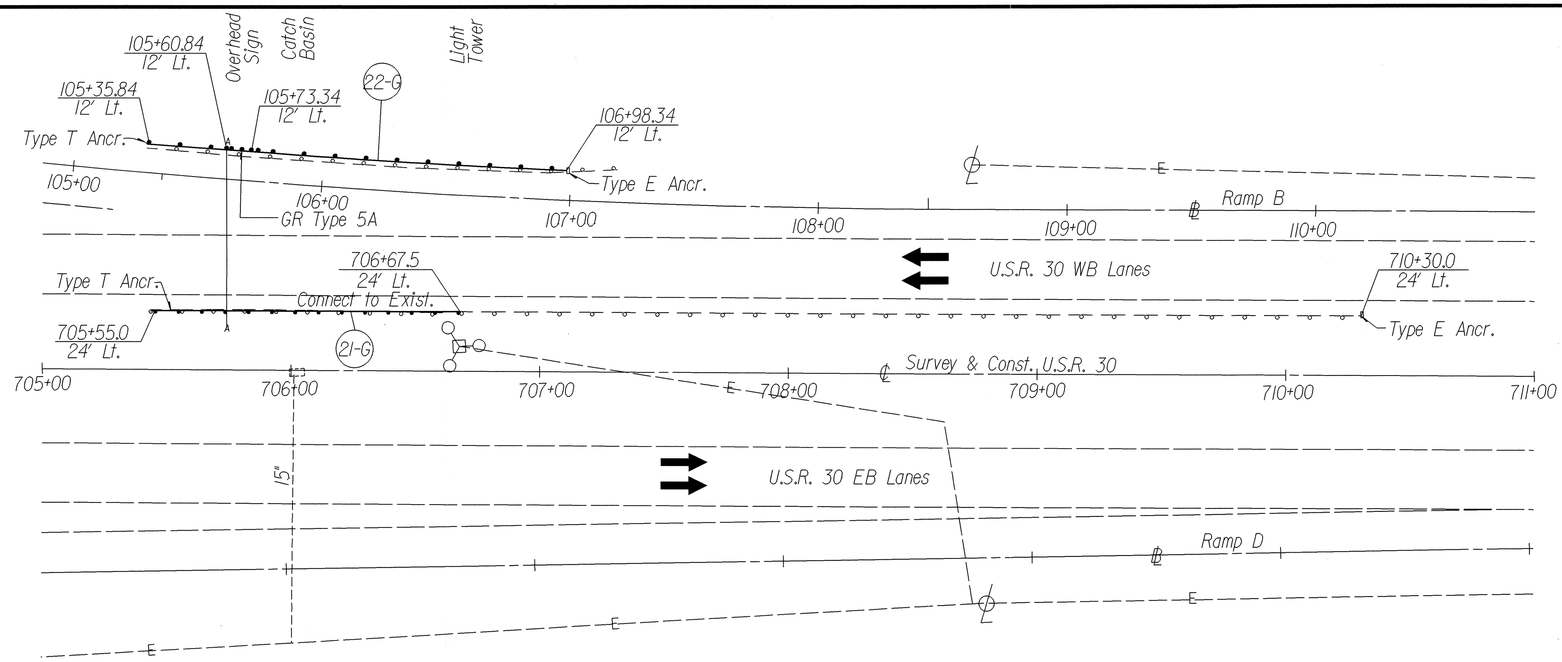
DATE : 06-OCT-1994
TIME : 16:18

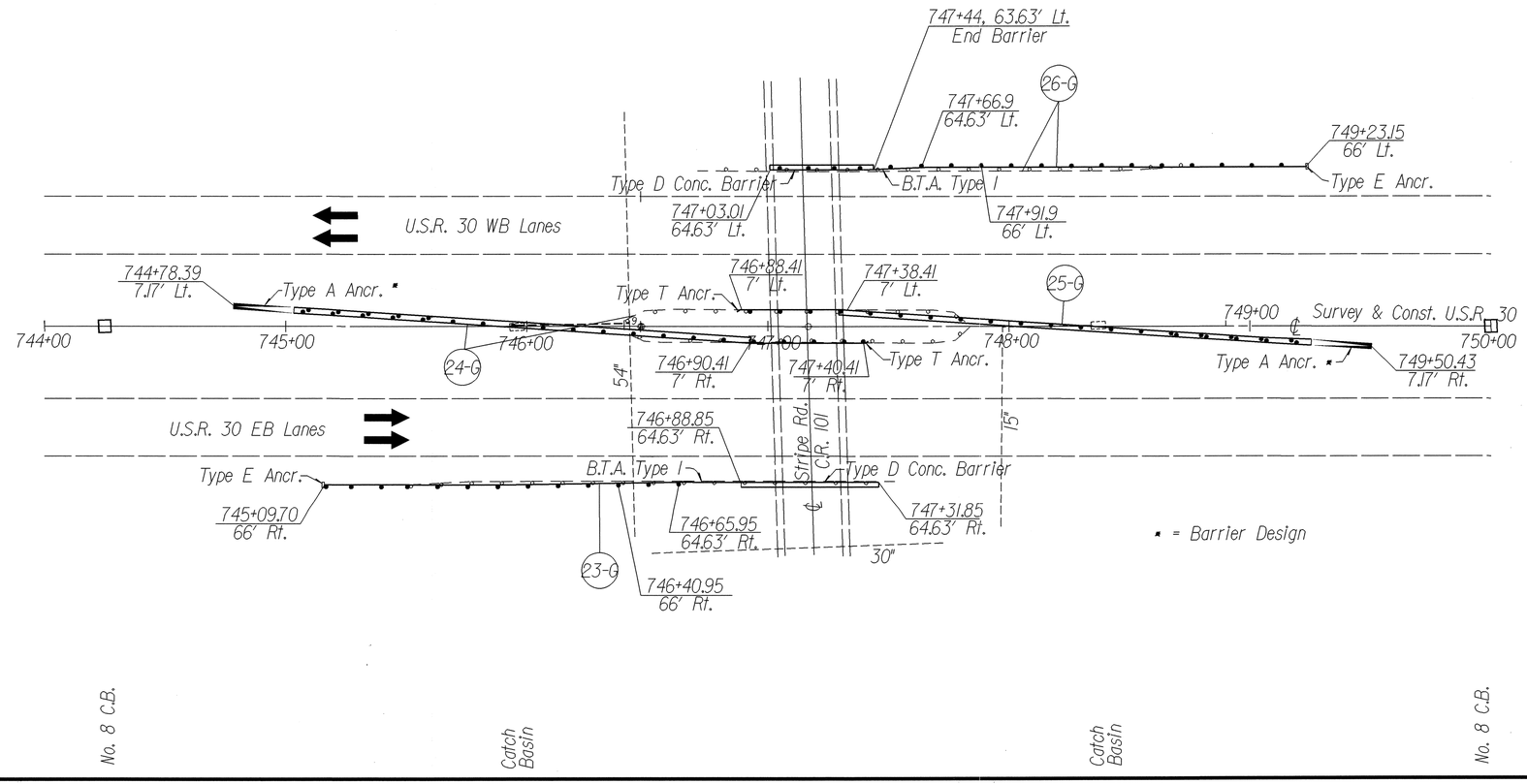
Scale in Feet
0' 10' 20' 30' 60'

GUARDRAIL DETAILS
Sta. 682+00 to Sta. 695+00

VAN-30-11.24

126
161





DESIGN FILE : /usr/odot/dgn/v30/v30grl.dgn
USERNAME : lbrinkma
DATE : 06-OCT-1994
TIME : 16:18

Scale in Feet
0' 10' 20' 30' 60'

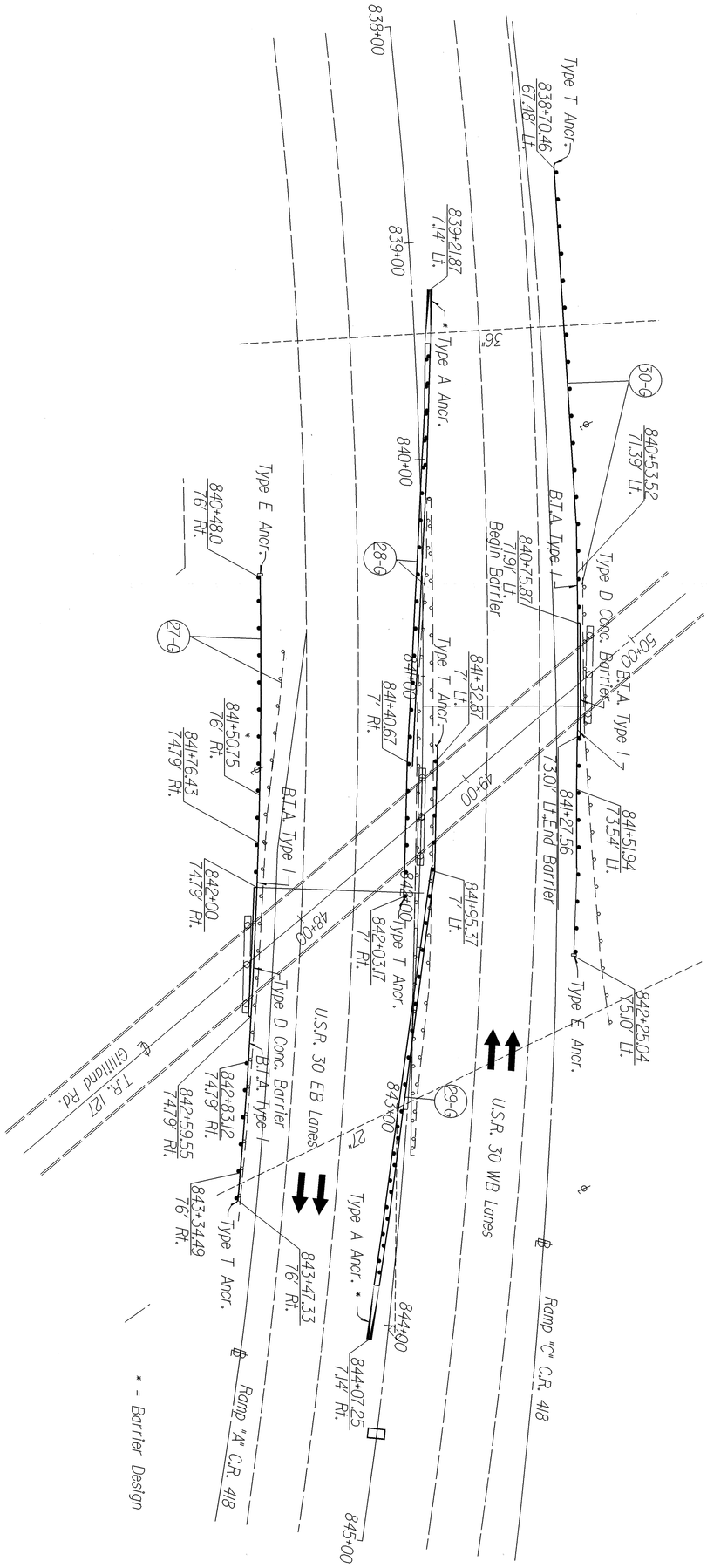
GUARDRAIL DETAILS
Sta. 705+00 to Sta. 750+00

VAN-30-11.24

127
161

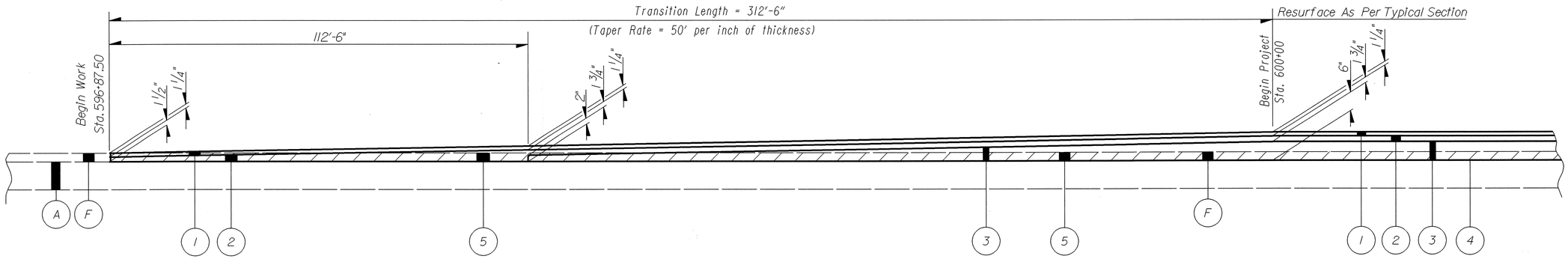
DATE : 06-OCT-1994
TIME : 16:19

DESIGN FILE : /usr/odot/dgn/v30/v30grl.dgn
USERNAME : lbrinkma

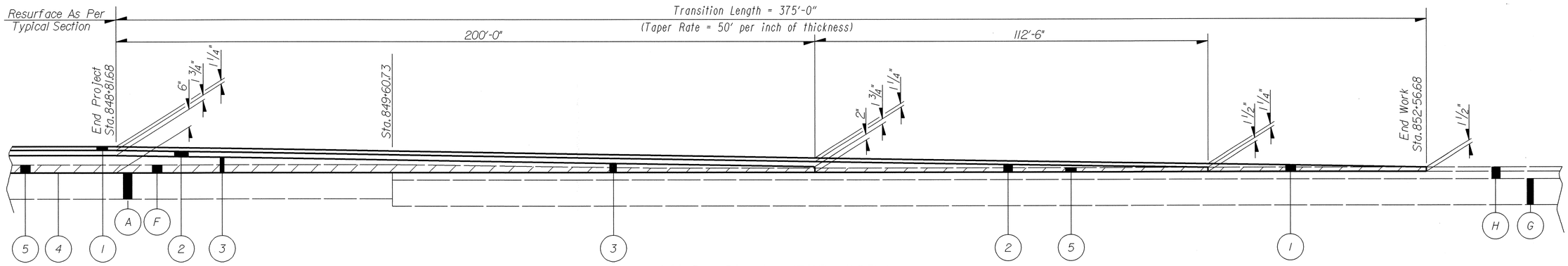


128/161	VAN-30-11.24	GUARDRAIL DETAILS Sta. 839+00 to Sta. 844+00	Scale in Feet 0' 10' 20' 30' 60'

PAVEMENT TRANSITION DETAILS



TRANSITION AT BEGIN WORK



TRANSITION AT END WORK

PROPOSED LEGEND

(1) ITEM 446 1¼" Asphalt Concrete Surface Course, Type 1, AC-20 (See Proposal Note)

(2) ITEM 446 1¾" Asphalt Concrete Intermediate Course, Type 2, AC-20 (See Proposal Note)

(3) ITEM 301 - 6" Bituminous Aggregate Base, AC-20

(4) ITEM 407 - Tack Coat (See General Note)

(5) ITEM 254 - Pavement Planing, Bituminous (Thickness 2¾" Nominal)

~ Remove existing asphalt, Item 254 Pavement Planing, Bituminous

EXISTING LEGEND

(A) 9" Reinforced Portland Cement Concrete Pavement

(F) 2¾" ± Asphalt Concrete

(G) 9" Portland Cement Concrete Base

(H) 4" ± Asphalt Concrete

CALCULATED | CHECKED

PAVEMENT TRANSITION DETAILS

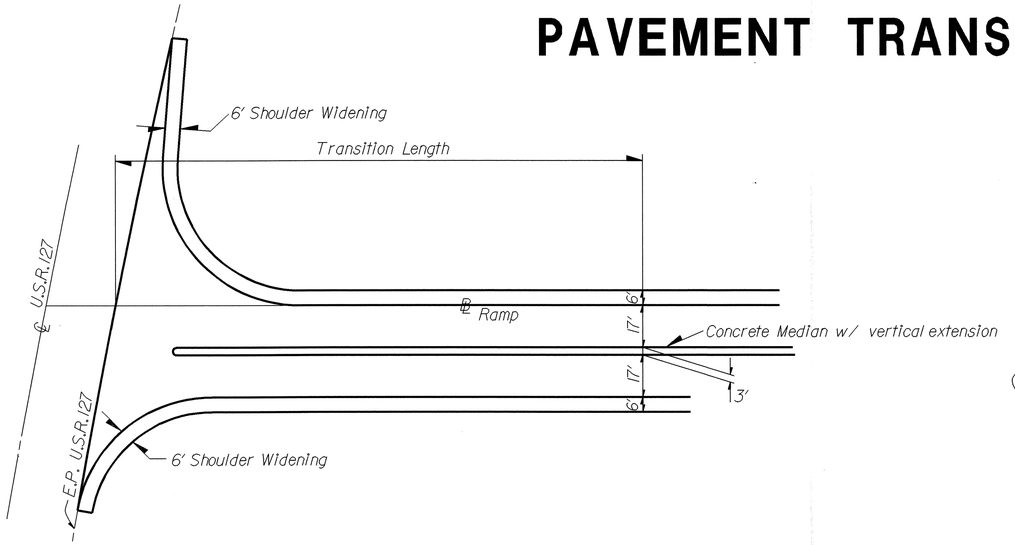
VAN-30-11.24

129
161

DESIGN FILE : e:\dgn\v30\v30tdl.dgn
USERNAME : dslebene

DATE : 06-OCT-1994
TIME : 16:34

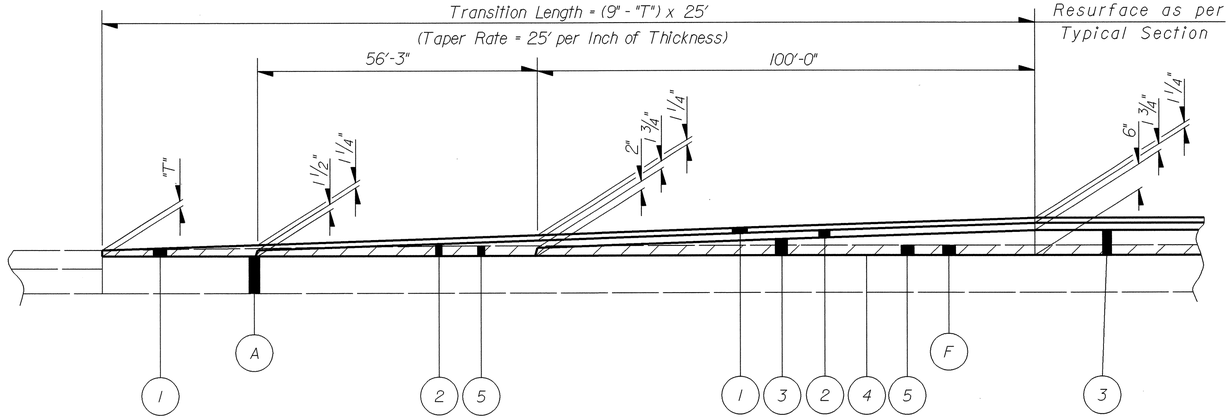
PAVEMENT TRANSITION DETAILS



TRANSITION AT RAMP/CROSSROAD INTERSECTION

PLAN VIEW

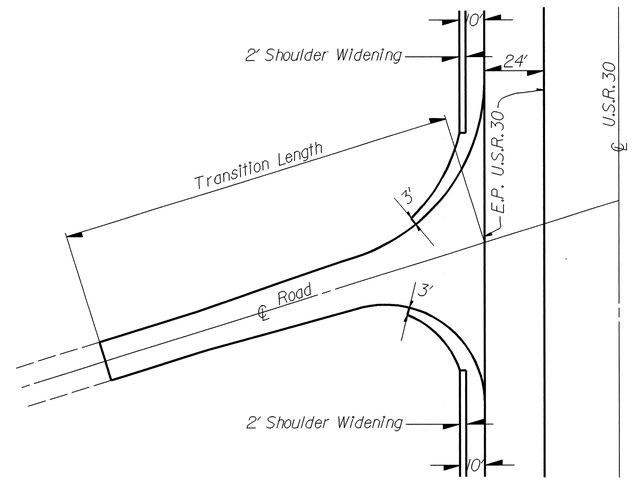
Applies at :
U.S.R.127 Ramps A,B,C,D (T=2")*



TRANSITION DETAIL

EXISTING LEGEND

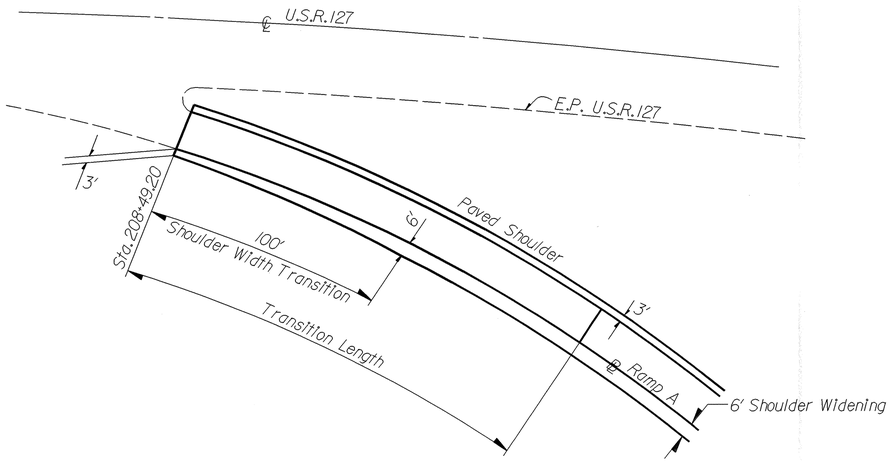
- (A) 9" Reinforced Portland Cement Concrete Pavement
- (F) 2¾" ± Asphalt Concrete



PROPOSED LEGEND

- (1) ITEM 446 1¼" Asphalt Concrete Surface Course, Type 1, AC-20 (See Proposal Note)
- (2) ITEM 446 1¾" Asphalt Concrete Intermediate Course, Type 2, AC-20 (See Proposal Note)
- (3) ITEM 301 - 6" Bituminous Aggregate Base, AC-20
- (4) ITEM 407 - Tack Coat (See General Note)
- (5) ITEM 254 - Pavement Planing, Bituminous (Thickness 2¾" Nominal)

* - For Estimation Purposes



TRANSITION AT RAMP END

PLAN VIEW

Applies at :
U.S.R.127 Ramp A (T=2")*

TRANSITION AT AT-GRADE INTERSECTIONS

PLAN VIEW

Applies at :
John Brown Rd. (T=1½")*
Dutch John Rd. (T=1½")*
Marsh Rd. (T=1½")*
Mendon Rd. (T=1½")*
Boroff Rd. (T=1½")*

CALCULATED | CHECKED

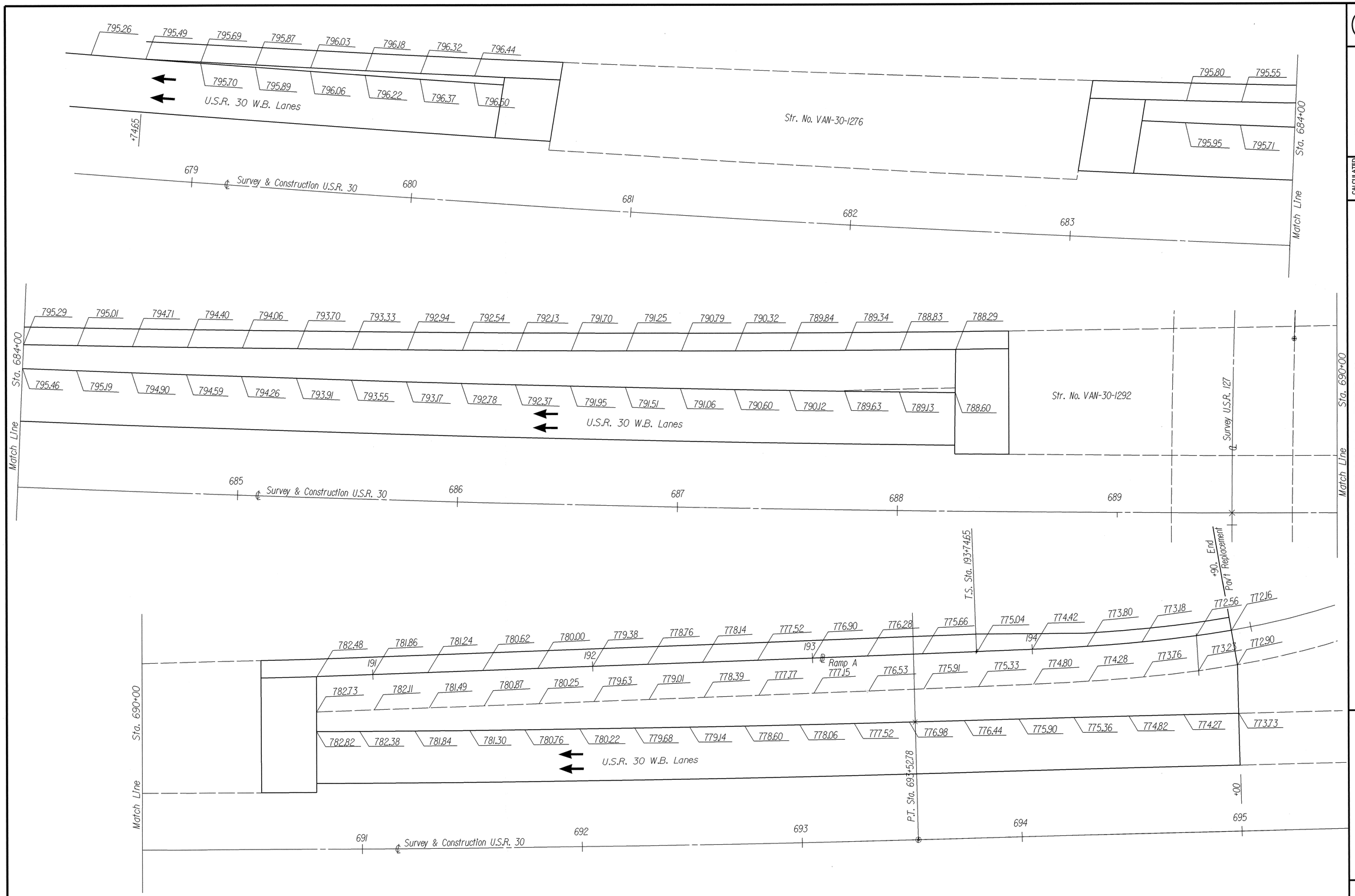
PAVEMENT TRANSITION DETAILS

VAN-30-11.24

130
161

DESIGN FILE : e:\dgn\v30\v30tdl.dgn
USERNAME : dslebene

DATE : 06-OCT-1994
TIME : 16:36



DESIGN FILE : e:\dgn\v30\v30gml.dgn
USERNAME : tbolemba

DATE : 06-OCT-1994
TIME : 16:11

Scale in Feet
0' 10' 20' 40'

CALCULATED LAB
CHECKED KM

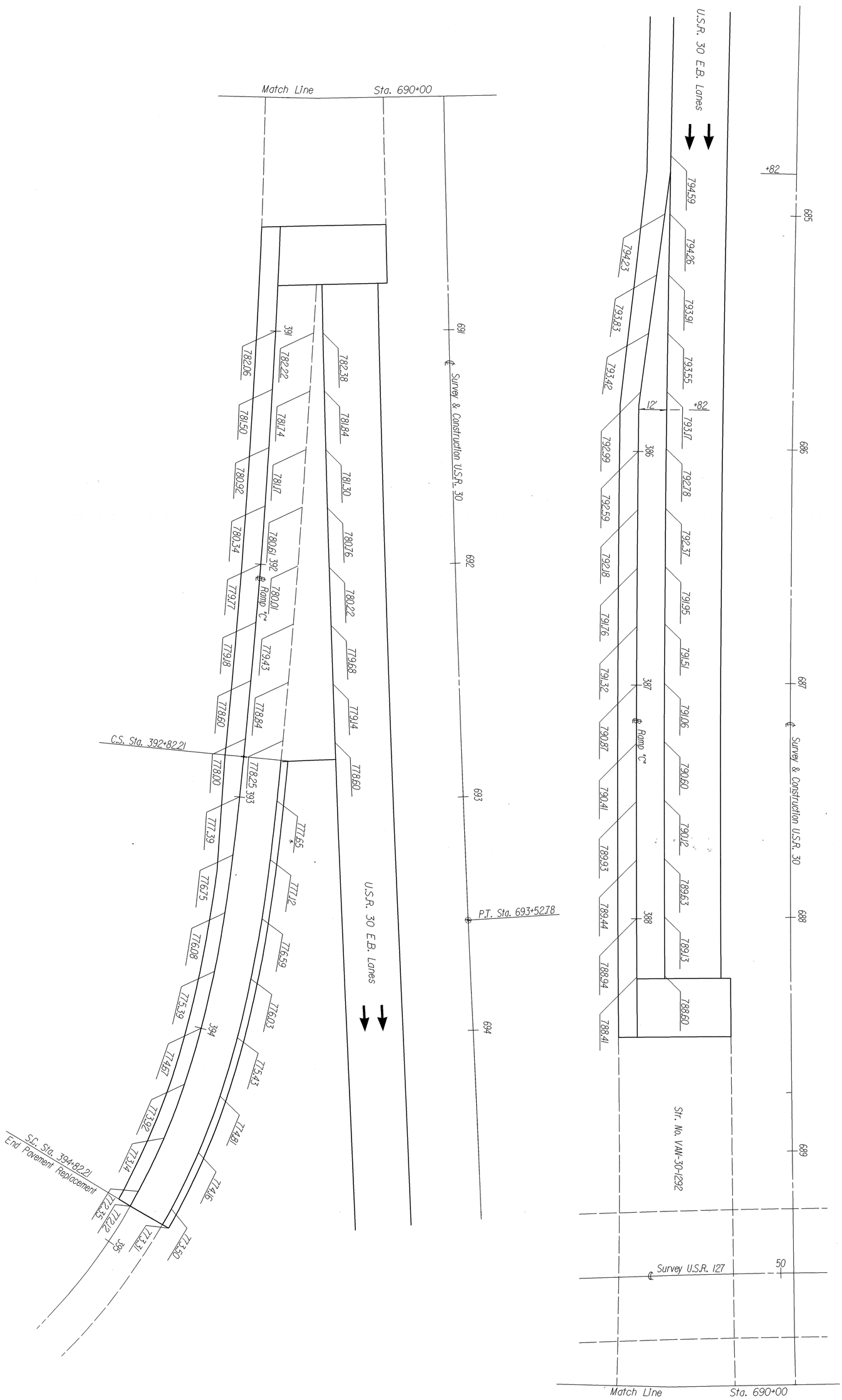
RAMP TERMINAL DETAIL
RAMP A, U.S.R. 127 INTERCHANGE

VAN-30-11.24

131
161

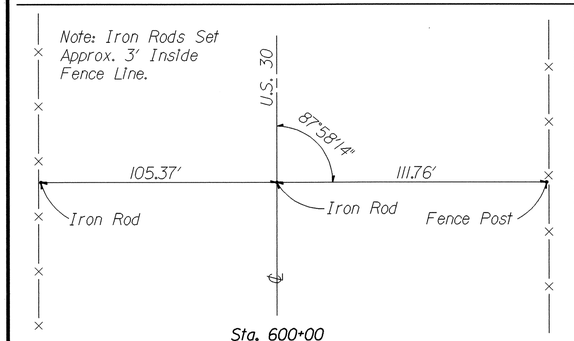
DATE : 06-OCT-1994
TIME : 16:12

DESIGN FILE : e:\dgn\v30\v30gml.dgn
USERNAME : tbolenba

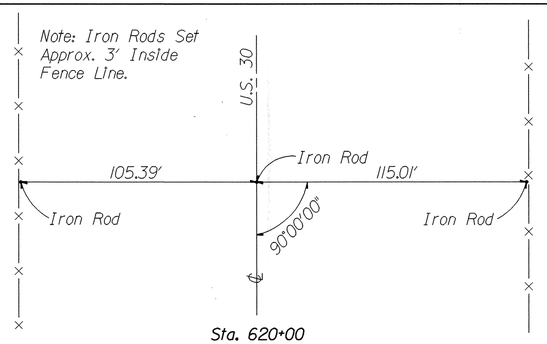


132/161	VAN-30-11.24	RAMP TERMINAL DETAIL RAMP C, U.S.R. 127 INTERCHANGE	CALCULATED LAB CHECKED KM	Scale in Feet 0' 10' 20' 40'

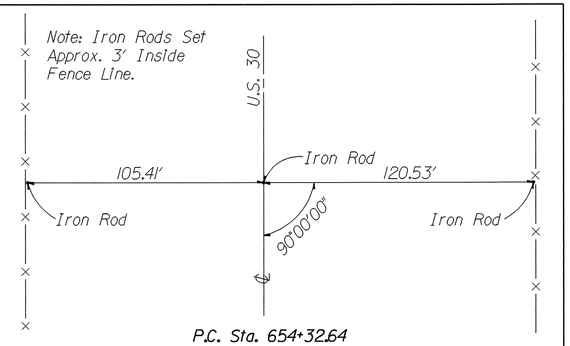
CENTERLINE REFERENCES



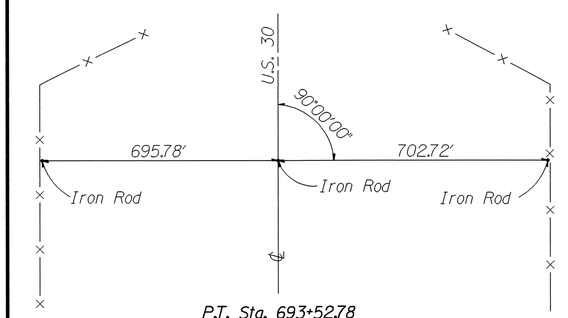
Sta. 600+00



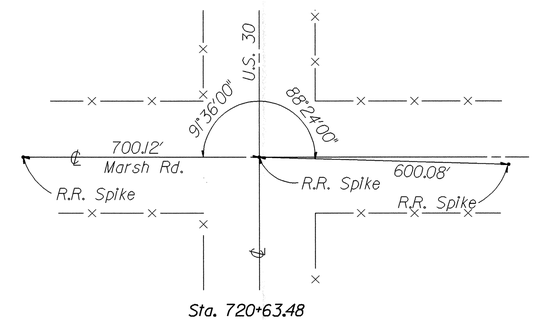
Sta. 620+00



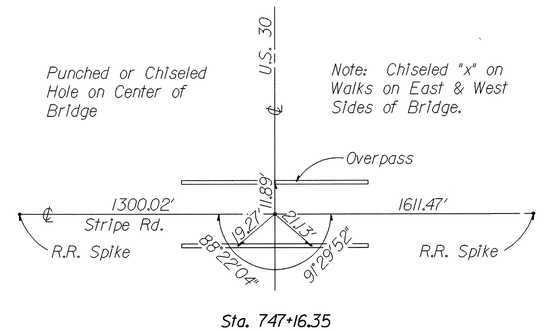
P.C. Sta. 654+32.64



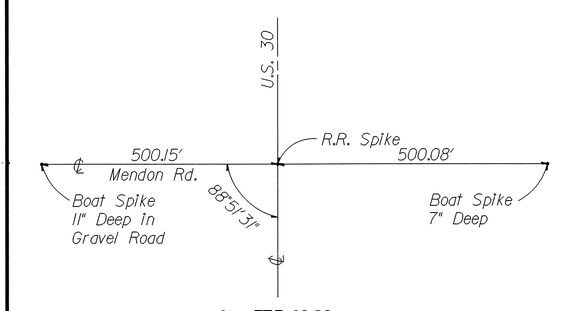
P.T. Sta. 693+52.78



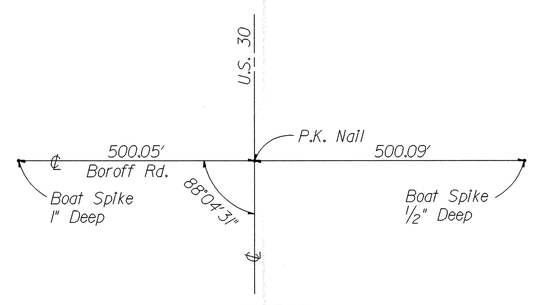
Sta. 720+63.48



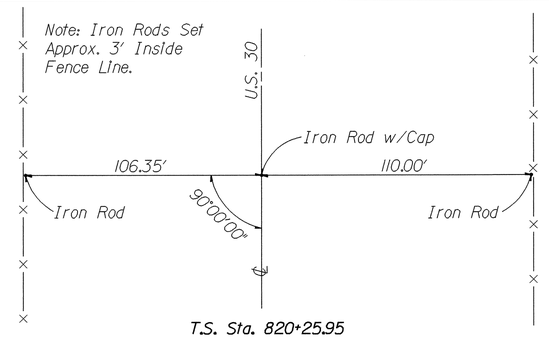
Sta. 747+16.35



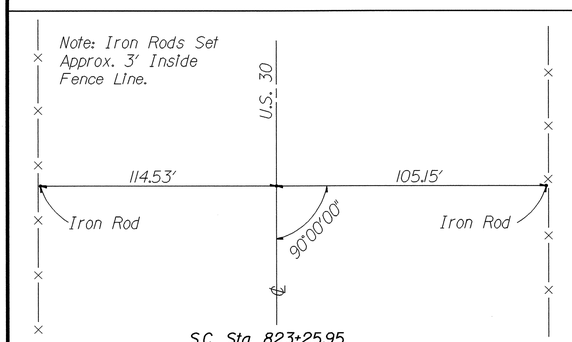
Sta. 773+69.80



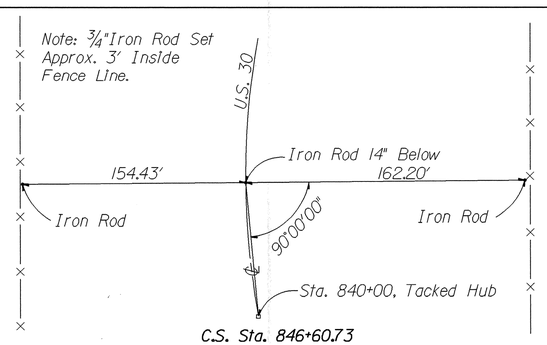
Sta. 800+13.55



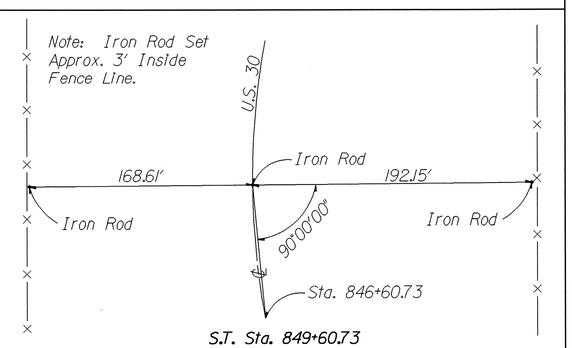
T.S. Sta. 820+25.95



S.C. Sta. 823+25.95



C.S. Sta. 846+60.73



S.T. Sta. 849+60.73

EXISTING ℄ MONUMENTS AND BENCHMARKS*

CTRL. PNT.	STATION	B.M. ELEV.
P.O.T.	600+00	769.40
P.O.T.	605+00	768.62
P.O.T.	610+00	768.13
P.O.T.	615+00	767.08
P.O.T.	620+00	766.97
P.O.T.	625+00	765.79
P.O.T.	630+00	768.73
P.O.T.	635+00	765.85
P.O.T.	640+00	765.33
P.O.T.	645+00	766.20
P.O.T.	650+00	766.75
P.C.	654+32.65	766.80
P.O.C.	660+00	767.87
P.O.C.	665+00	766.68
P.O.C.	667+14.95	769.69
P.O.C.	675+00	786.19
P.O.C.	680+00	794.67
P.O.C.	685+00	794.61
P.T.	693+52.79	774.08
P.O.T.	695+00	770.47
P.O.T.	700+00	765.81
P.O.T.	705+00	766.29
P.O.T.	710+00	766.92
P.O.T.	715+00	767.25
P.O.T.	725+00	768.65
P.O.T.	730+00	768.59
P.O.T.	735+00	767.87
P.O.T.	740+00	766.87
P.O.T.	745+00	766.62
P.O.T.	747+15.01	788.35
P.O.T.	750+00	767.75
P.O.T.	755+00	767.02
P.O.T.	760+00	768.35
P.O.T.	765+00	766.75
P.O.T.	775+00	767.36
P.O.T.	780+00	767.21
P.O.T.	785+00	767.70
P.O.T.	790+00	768.33
P.O.T.	795+00	768.06
P.O.T.	805+00	768.69
P.O.T.	810+00	770.06
P.O.T.	815+00	770.57
T.S.	820+25.97	771.57
S.C.	823+25.97	771.63
P.O.C.	825+00	771.94
P.O.C.	830+00	771.37
P.O.C.	835+00	771.37
P.O.C.	840+00	773.93
P.O.C.	845+00	773.12
C.S.	846+60.75	774.28
P.T.	849+60.75	776.54

*- IRON PINS

CALCULATED

CHECKED AAA

CENTERLINE REFERENCES & MONUMENTATION

VAN-30-11.24

133
161

DESIGN FILE : e:\dgn\v30\v30gm.dgn
USERNAME : dsiebene

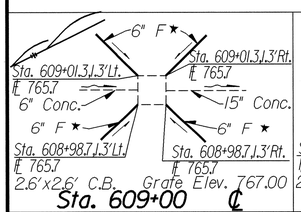
DATE : 07-OCT-1994
TIME : 14:43

REFERENCE NO.	LOCATION FROM STATION	LOCATION FROM SIDE	LOCATION TO STATION	LOCATION TO SIDE	202 CATCH BASIN ABANDONED EACH	602 CONCRETE MASONRY CU. YD.	604 CATCH BASIN ADJUSTED TO GRADE EACH	604 CATCH BASIN NO. 8 EACH	604 CATCH BASIN NO. 4 EACH	604 MANHOLE ADJUSTED TO GRADE EACH	603 CONDUITS, LIN. FT. TYPE A ** 15"	A ** 36"	A ** 42"	A ** 54"	B ** 12"	B ** 15"	B ** 18"	B ** 24"	B ** 30"	B ** 36"	B ** 48"	C ** 15"	C ** 24"	F 6"★	F 6"	F 8"	F 12"	F 15"	F 18"	SPECIAL PRECAST REINFORCED CONCRETE OUTLET EACH	BENDS AND BRANCHES	REMARKS
																																Ramp Stationing Used ★ - Ramp "A" ⊖ - Ramp "B" Δ - Ramp "C" ◇ - Ramp "D"
1-D	600+86	Rt.	604+69	Rt.		.25										12										20						
2-D	606+57	Rt.	611+41	Rt.		.25										12									10	10						Masonry Collars as per MC-4
3-D	610+90	Lt.	611+80	Lt.		.50										24															2	15"X30" Bends
4-D	611+43	Rt.	612+27	Rt.		.86												24													2	24"X30" Bends
5-D	614+78	Rt.	619+35	Rt.		.25										12										25						Masonry Collars as per MC-4
6-D	620+33	Rt.	626+00	Rt.		.31											12									20						Masonry Collars as per MC-4
7-D	629+63	Rt.	636+90	Rt.																						20				5		Masonry Collars as per MC-4
8-D	637+69	Rt.	641+78	Rt.		.31											12									15						Masonry Collars as per MC-4
9-D	645+50	Rt.	647+82	Rt.		.25										12										5						Masonry Collars as per MC-4
10-D	653+48	Rt.	653+50	Rt.		.25										8																
11-D	667+75	Rt.	668+00	Rt.		.25										12										5						Masonry Collars as per MC-4
12-D	673+99	Rt.	674+01	Rt.		.25										8																
14-D	207+47	★	207+51	★		.20									14									10							1	Masonry Collar as per MC-4
15-D	699+89	Rt.	700+15	Rt.		1.11										8		20														
16-D	705+99	Rt.	706+01	Rt.		.25										8																
17-D	715+00	Lt.	715+01	Lt.																				10							1	Masonry Collar as per MC-4
18-D	198+50	★	198+00	★		1.12													20													
19-D	97+47	⊖	97+50	⊖		.86												20									5					Masonry Collar as per MC-4
20-D	399+00	Δ	401+75	Δ		1.58	1								8						18											
21-D	720+32	Lt.&Rt.	722+50	Lt.&Rt.		1.37										12			33												2	30"x15" Bend
22-D	733+86	Rt.	741+00	Rt.		.50										24																
23-D	744+25	Lt.&Rt.	746+52	Lt.&Rt.	1	3.33		1						24						12		170									1	36"x15" Bend
24-D	754+00	Rt.	765+00	Rt.		.50										20																
25-D	772+95	Lt.&Rt.	774+05	Lt.&Rt.		3.51								24			16		12									10			2	30"x30" Bend, 18"x15" Bend, Masonry Collar as per MC-4
26-D	776+50	Rt.	785+50	Rt.		.50										24												5				Masonry Collar as per MC-4
27-D	797+97	Rt.	800+89	Rt.		2.54							12			12			30				6			5					2	30"x30" Bend, Masonry Collar as per MC-4
28-D	800+00	Lt.	800+83	Lt.		1.27							12										6									
29-D	747+73	Rt.	750+00	Rt.	1	.94		1								12				15		165					5				1	36" x30" Bend, Masonry Collar as per MC-4
30-D	809+03	Lt.&Rt.	813+33	Lt.&Rt.		.75					18					12								15						2		Masonry Collars as per MC-4
31-D	821+02	Lt.	832+03	Lt.&Rt.		.50										16								10						2		Masonry Collars as per MC-4
32-D	835+02	Lt.&Rt.	839+42	Lt.&Rt.		.94				1		12				8								25		5				3		Masonry Collars as per MC-4
33-D	844+00	℄	844+50	℄	1				1													51										
34-D	849+51		849+52	Lt.			1																									
Totals					3	25.50	2	2	1	1	18	12	24	48	22	256	40	64	95	27	18	386	12	70	10	130	10	15	5	9		

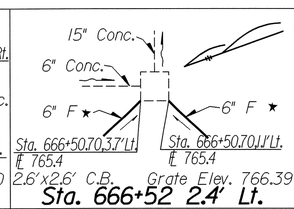
** - 706.02

★ - Type F Non-Perforated ASTM D 3034 SDR 35, SS931 or SS944

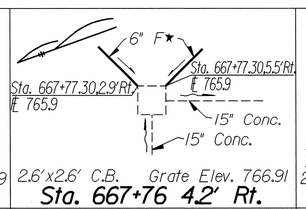
CATCH BASIN DETAILS



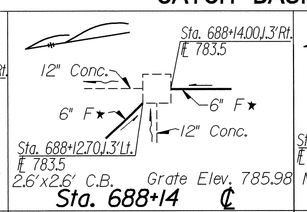
2.6'x2.6' C.B. Grate Elev. 767.00
Sta. 609+00 ℄



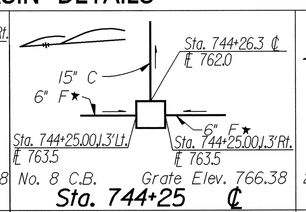
2.6'x2.6' C.B. Grate Elev. 766.39
Sta. 666+52 2.4' Lt.



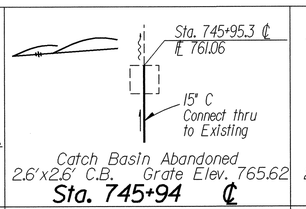
2.6'x2.6' C.B. Grate Elev. 766.91
Sta. 667+76 4.2' Rt.



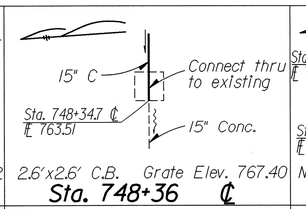
2.6'x2.6' C.B. Grate Elev. 785.98
Sta. 688+14 ℄



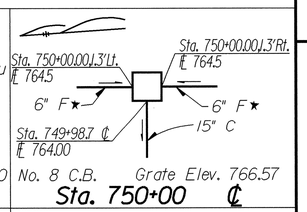
No. 8 C.B. Grate Elev. 766.38
Sta. 744+25 ℄



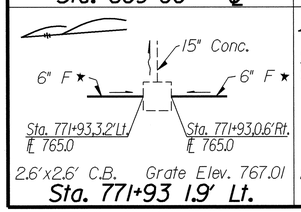
Catch Basin Abandoned
2.6'x2.6' C.B. Grate Elev. 765.62
Sta. 745+94 ℄



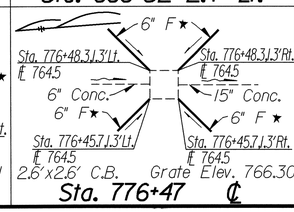
2.6'x2.6' C.B. Grate Elev. 767.40
Sta. 748+36 ℄



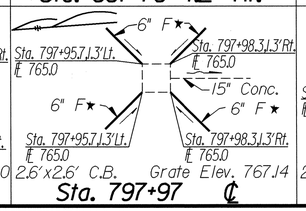
No. 8 C.B. Grate Elev. 766.57
Sta. 750+00 ℄



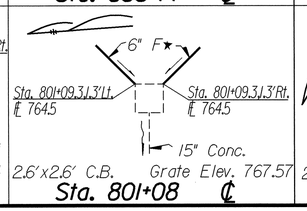
2.6'x2.6' C.B. Grate Elev. 767.01
Sta. 771+93 1.9' Lt.



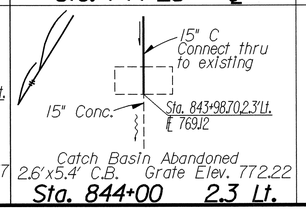
2.6'x2.6' C.B. Grate Elev. 766.30
Sta. 776+47 ℄



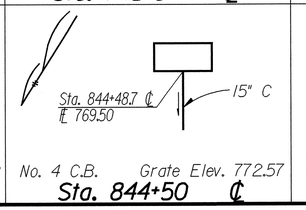
2.6'x2.6' C.B. Grate Elev. 767.14
Sta. 797+97 ℄



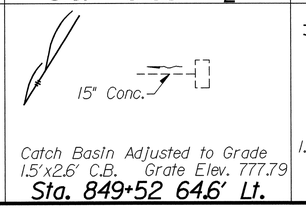
2.6'x2.6' C.B. Grate Elev. 767.57
Sta. 801+08 ℄



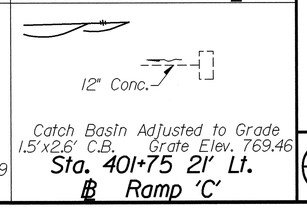
Catch Basin Abandoned
2.6'x5.4' C.B. Grate Elev. 772.22
Sta. 844+00 2.3 Lt.



No. 4 C.B. Grate Elev. 772.57
Sta. 844+50 ℄



Catch Basin Adjusted to Grade
1.5'x2.6' C.B. Grate Elev. 777.79
Sta. 849+52 64.6' Lt.



Catch Basin Adjusted to Grade
1.5'x2.6' C.B. Grate Elev. 769.46
Sta. 401+75 21' Lt.
℄ Ramp 'C'

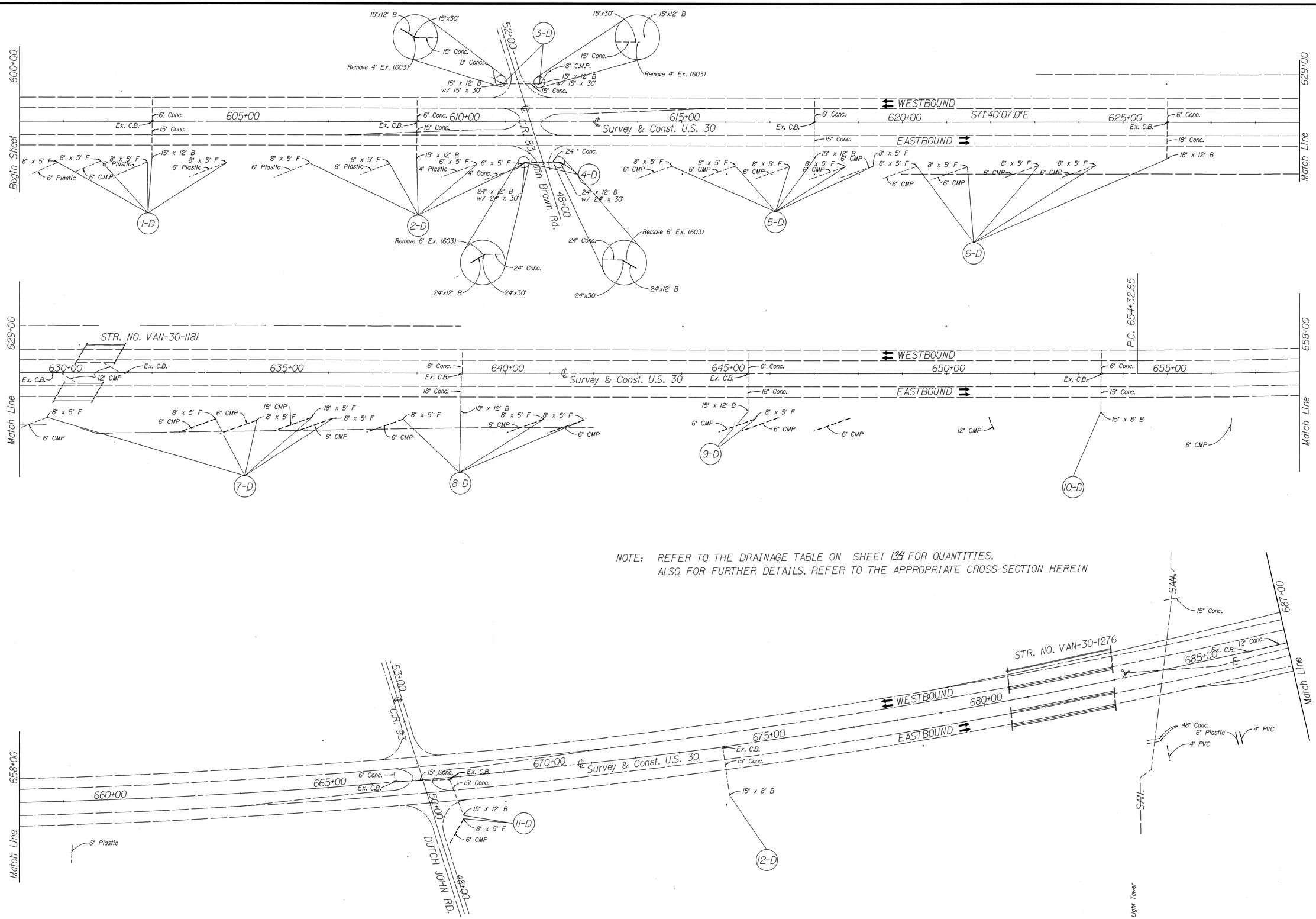
CALCULATED LAB CHECKED KMS

DRAINAGE TABLE & CATCH BASIN DETAILS

VAN-30-11.24

134
161

DESIGN FILE : e:\dgn\v30\v30dsi.dgn
USERNAME : tbolenbo
DATE : 06-OCT-1994
TIME : 16:21



Scale in Feet
0' 50' 100' 200'

DRAINAGE DETAILS
Sta. 600+00 to Sta. 687+00

VAN-30-11.24

135
161

DESIGN FILE : e:\dgn\v30\v30ddl.dgn
USERNAME : tgrapner
DATE : 11-OCT-1994
TIME : 16:25

DESIGN FILE : e:\dgn\v30\v30ddl dc
USERNAME : tgropner

DATE : 11-OCT-1994
TIME : 16:28

Light Tower

RAMP 'B'

SAW W

G

W

E

14-D

12" x 8' B

6" CMP

6" x 10' F w/ Precast Outlet

12" x 6' B

12" Conc.

19-D

10" CMP

12" x 5' F

30" Conc.

24" x 10' B

30" x 10' B

24" x 10' B

24" Conc.

30" x 10' B

12" CMP

18-D

P.T. 693+52.78

17-D

6" x 10' F

6" CMP

12" Conc.

6" CMP

STR. NO. VAN-30-1292

RAMP 'A'

687+00

690+00

695+00

Survey & Const. U.S. 30

700+00

705+00

710+00

715+00

716+00

WESTBOUND

EASTBOUND

12" Conc.

Ex. C.B.

6" Conc.

Ex. C.B.

15" Conc.

15" x 8' B

24" x 12' B

24" Conc.

24" x 8' B

15-D

15" x 8' B

16-D

Match Line

RAMP 'C'

36" Conc.

8" CMP

RAMP 'D'

U.S.R. 127

20-D

48" x 12' B

48" Conc.

48" x 6' B

6" CMP

Ex. C.B.

12" Conc.

12" x 8' B

NOTE: REFER TO THE DRAINAGE TABLE ON SHEET 134 FOR QUANTITIES,
ALSO FOR FURTHER DETAILS, REFER TO THE APPROPRIATE CROSS-SECTION HEREIN

N

Scale in Feet
0' 50' 100' 200'

DRAINAGE DETAILS
Sta. 687+00 to Sta. 716+00

VAN-30-11.24

136
161

DESIGN FILE : e:\dgn\v30\v30ddl dc
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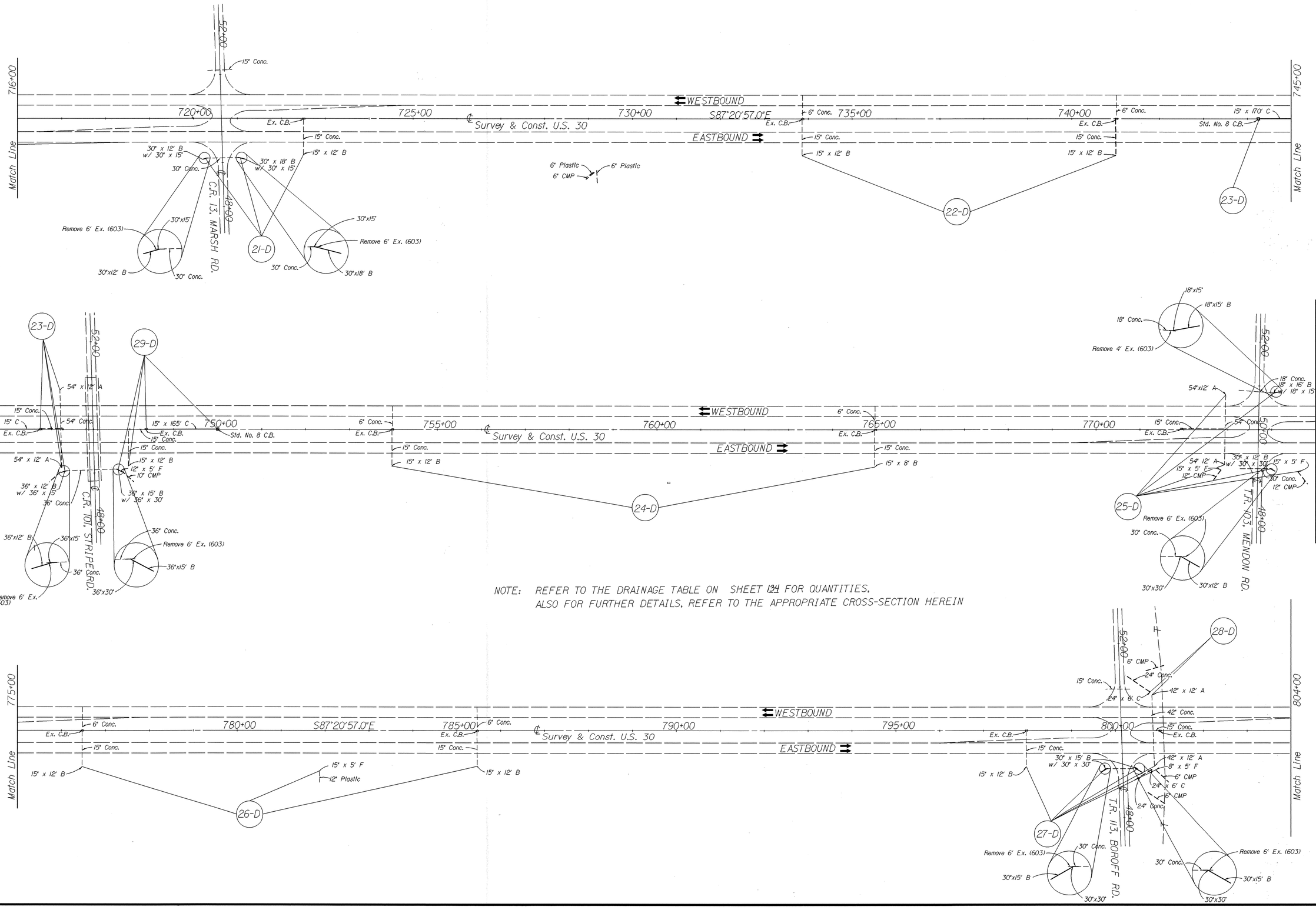

NOTE: REFER TO THE DRAINAGE TABLE ON SHEET 134 FOR QUANTITIES,
ALSO FOR FURTHER DETAILS, REFER TO THE APPROPRIATE CROSS-SECTION HEREIN

Scale in Feet
0' 50' 100' 200'

DRAINAGE DETAILS
Sta. 804+00 to Sta. 716+00

VAN-30-11.24

DESIGN FILE : e:\dgn\v30\v30dc
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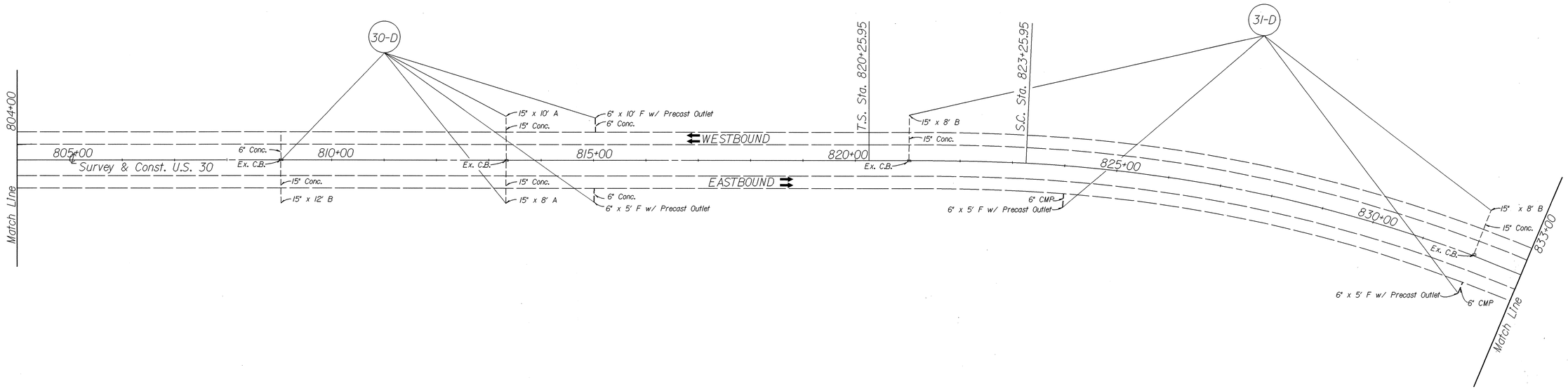

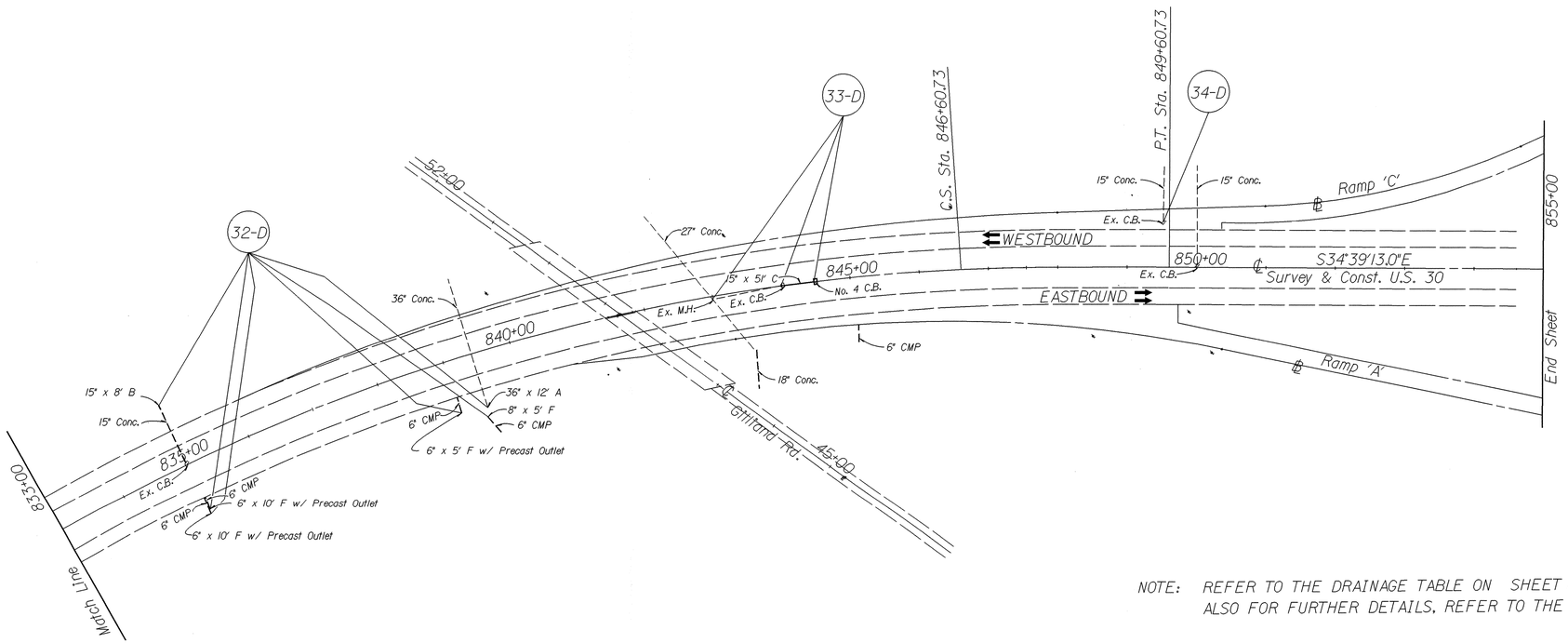

NOTE: REFER TO THE DRAINAGE TABLE ON SHEET 134 FOR QUANTITIES,
ALSO FOR FURTHER DETAILS, REFER TO THE APPROPRIATE CROSS-SECTION HEREIN

Scale in Feet
0' 50' 100' 200'

DRAINAGE DETAILS
Sta. 804+00 to Sta. 855+00

VAN-30-11.24

ITEM 605 UNDERDRAIN OUTLET LOCATIONS AND QUANTITIES

CALCULATED KMS CHECKED BDS

Underdrain Limits From/To Station	Westbound Lanes: Outside Edge of Pavement: Underdrain Flowline Elev.	Outside Edge of Pavement: F Conduit Inlet Elev.	Outside Edge of Pavement: F Conduit Outlet Elev.	Outside Edge of Pavement: Outlet Offset	Outside Edge of Pavement: Outlet Length Lin. Ft.	Inside Edge of Pavement: Underdrain Flowline Elev.	Inside Edge of Pavement: F Conduit Inlet Elev.	Inside Edge of Pavement: F Conduit Outlet Elev.	Inside Edge of Pavement: Outlet Offset Left	Inside Edge of Pavement: Outlet Length Lin. Ft.	Bends and Branches Each	Eastbound Lanes: Inside Edge of Pavement: Underdrain Flowline Elev.	Inside Edge of Pavement: F Conduit Inlet Elev.	Inside Edge of Pavement: F Conduit Outlet Elev.	Inside Edge of Pavement: Outlet Offset Right	Inside Edge of Pavement: Outlet Length Lin. Ft.	Outside Edge of Pavement: Underdrain Flowline Elev.	Outside Edge of Pavement: F Conduit Inlet Elev.	Outside Edge of Pavement: F Conduit Outlet Elev.	Outside Edge of Pavement: Outlet Offset Right	Outside Edge of Pavement: Outlet Length Lin. Ft.	Bends and Branches Each	Quantities: Special: Precast Reinforced Concrete Outlet Each	603: 6" Conduit Type B Lin. Ft.	603: 6" Conduit Type F* Lin. Ft.	605: Shallow Underdrain AP-P Lin. Ft.	605: 4" Pipe Underdrain Lin. Ft.	605: 4" Uncl. Pipe Underdrain Lin. Ft.
Mainline																												
600+00	769.6					769.6						769.6					769.4									800		
602+00	769.3	769.3	769.1	74	20	769.4	769.4	769.1	5	25	2-6" Tees	769.4	769.4	769.1	6	24	769.2	769.2	768.9	78	24	2-6" Tees	4		93	1200		
605+00	768.9	768.9	768.7	78	24	769.0	769.0	768.7	3	27	2-6" Tees	768.9	768.9	768.6	3	27	768.7	768.7	768.4	79	25	2-6" Tees	4		103	600		
608+00	768.6	768.6	768.3	78	24						1-6" Tee						768.6	768.6	768.3	78	24	1-6" Tee	2		48	276		
610+76	768.2	768.2	768.0	78	24						1-6"x90°												1		24	308		
611+08																	768.2	768.2	768.0	78	24	1-6"x90°	1		24	746		
609+00						768.5	768.5	765.7 Into C.B.	℄	43	1-6"x45° Wye	768.5	768.5	765.7 Into C.B.	℄	34						1-6"x45° Wye			77			
609+00						768.5	768.5	765.7 Into C.B.	℄	43	1-6"x45° Wye	768.5	768.5	765.7 Into C.B.	℄	34						1-6"x45° Wye			77			
610+90						768.9						768.7															326	
John Brown Rd.																												
612+06	768.1																											
612+25						767.7						768.1																
612+40																	768.0											
616+00	767.6	767.6	767.4	78	24	767.6	767.6	767.4	5	25	2-6" Tees	767.6	767.6	767.3	5	25	767.5	767.5	767.3	78	24	2-6" Tees	4		98	394		
619+00	767.2	767.2	767.0	78	24	767.3	767.3	767.0	2	28	2-6" Tees	767.3	767.3	767.0	2	28	767.2	767.2	767.0	78	24	2-6" Tees	4		104	750		
622+00	766.8	766.8	766.5	78	24	766.8	766.8	766.6	3	27	2-6" Tees	766.8	766.8	766.6	3	27	766.8	766.8	766.5	78	24	2-6" Tees	4		102	360		
625+00	766.3	766.3	766.1	78	24	766.3	766.3	766.1	4	26	2-6"x90°, 2-6" Tees	766.4	766.4	766.2	5	25	766.4	766.4	766.2	77	23	2-6"X90°,2-6" Tees	4		97	1200		
630+44	766.9																									1200		
630+28						766.9																					544@8"	
629+96												766.8															528@8"	
629+80																	766.8									496@8"	
Str. No. VAN-30-1181																										480@8"	
630+68																	766.4											
630+84												766.5															432@12"	
631+19						766.5																					416@12"	
631+35	766.8																										381@12"	
635+00	766.4	766.4	766.2	78	22	766.4	766.4	766.2	4	24	2-6"X90°	766.5@8"	766.5	766.2	4	24	766.5	766.5	766.3	78	22	2-6"x90°	4		92		365@8"	
635+05	766.5					766.6						766.6					766.6											
638+00	766.0	766.0	765.7	78	24	766.1	766.1	765.8	4	26	2-6" Tees	766.0	766.0	765.8	5	25	766.0	766.0	765.8	78	24	2-6" Tees	4		99	1180		
641+00	766.2	766.2	765.9	78	24	766.3	766.3	766.0	6	24	2-6" Tees	766.2	766.2	766.0	5	25	766.2	766.2	765.9	78	24	2-6" Tees	4		97	1200		
644+00	766.6	766.6	766.3	78	24	766.6	766.6	766.4	5	25	2-6" Tees	766.5	766.5	766.3	4	26	766.5	766.5	766.3	78	24	2-6" Tees	4		99	1200		
647+00	766.8	766.8	766.6	78	24	767.0	767.0	766.7	6	24	2-6" Tees	767.0	767.0	766.7	6	24	766.9	766.9	766.6	78	24	2-6" Tees	4		96	1200		
650+00	767.2	767.2	767.0	78	24	767.4	767.4	767.1	4	26	2-6" Tees	767.4	767.4	767.1	6	24	767.3	767.3	767.1	78	24	2-6" Tees	4		98	1200		
653+00	767.6	767.6	767.3	78	24	767.7	767.7	767.4	5	25	2-6" Tees	767.7	767.7	767.4	7	23	767.6	767.6	767.4	78	24	2-6" Tees	4		96	1200		
656+00	767.9	767.9	767.7	78	24	768.0	768.0	767.7	5	25	2-6" Tees	768.0	768.0	767.7	6	24	767.9	767.9	767.6	78	24	2-6" Tees	4		97	1200		
659+50	768.2					768.3						768.3					768.3								100	1400		
663+00	767.5	767.5	767.2	78	24	767.5	767.5	767.2	1	29	2-6" Tees	767.6	767.6	767.3	2	28	767.5	767.5	767.3	78	24	2-6" Tees	4		105	1400		
666+16	766.9	766.9	766.7	78	24						1-6"x90°												1		24	316		
666+23						766.9	766.9	765.4 Into C.B.	3	38	1-6"x45° Wye														38	323		
666+29												766.9	766.9	765.4 Into C.B.	-3	30						1-6"x45° Wye			30	329		
666+66																	767.0	767.0	766.8	78	24	1-6"x90°	1		24	366		
Dutch John Rd.																												
667+65	768.4	768.4	768.2	78	24						1-6"x90°												1		24			
667+96						768.3	768.3	765.9 Into C.B.	-3	30	1-6"x45° Wye														30	335		
668+02												768.6	768.6	765.9 Into C.B.	3	38						1-6"x45° Wye			38	304		
668+12																	768.5	768.5	768.2	78	24	1-6"x90°	1		24	298		
671+00	775.2	775.2	767.9	88	36	775.2	775.2	775.0	4	26	2-6" Tees	775.3	775.3	775.0	5	25	775.3	775.3	763.5	96	46	2-6" Tees	4		89	288		
673+00	781.1	781.1	766.2	102	51	781.1	781.1	780.8	3	27	2-6"Tees,2-6"x30°	781.2	781.2	780.9	4	26	781.1	781.1	763.1	109	60	2-6"Tees,2-6"x30°	4		91	1332		
676+33	789.5					789.5						789.4					789.4											
676+33	789.4	789.4	764.9	123	73	789.4	789.4	784.2	3	25	2-6"90°,2-6"x30°	789.4	789.4	789.2	4	24	789.4	789.4	762.6	127	79	2-6"90°,2-6"x30°	4		200			
680+52																	793.8										419@8"	
680+55												793.7															422@8"	
680+61						793.7																					428@8"	
680+64	793.7																										431@8"	
Str. No. VAN-30-1289																												
682+92*																	791.7											
688+26*																	784.3	784.3	758.4	141	80	1-6"Tee	1		80		534@30"	
684+85																	790.8											
688+26																	784.5	784.5	784.3	68	12	1-6"x90°		12			341@30"	
682+95												793.1																
																						SHEET TOTALS	81	12	2518	24105	6217	326

* 707.17 Nonperforated, ASTM D3034 SDR35, SS931 or SS944.

* Ramp "C" Underdrain

VAN-30-11.24

139
161

DESIGN FILE : e:\dgn\v30\v30ds.dgn
USERNAME : rparsons

DATE : 06-OCT-1994
TIME : 13:06

Underdrain Limits From/To Station	Westbound Lanes: Outside Edge of Pavement: Underdrain Flowline Elev.	Outside Edge of Pavement: F Conduit Inlet Elev.	Outside Edge of Pavement: F Conduit Outlet Elev.	Outside Edge of Pavement: Outlet Offset Left	Outside Edge of Pavement: Outlet Length Lin. Ft.	Inside Edge of Pavement: Underdrain Flowline Elev.	Inside Edge of Pavement: F Conduit Inlet Elev.	Inside Edge of Pavement: F Conduit Outlet Elev.	Inside Edge of Pavement: Outlet Offset Left	Inside Edge of Pavement: Outlet Length Lin. Ft.	Bends and Branches Each	Eastbound Lanes: Inside Edge of Pavement: Underdrain Flowline Elev.	Inside Edge of Pavement: F Conduit Inlet Elev.	Inside Edge of Pavement: F Conduit Outlet Elev.	Inside Edge of Pavement: Outlet Offset Right	Inside Edge of Pavement: Outlet Length Lin. Ft.	Outside Edge of Pavement: Underdrain Flowline Elev.	Outside Edge of Pavement: F Conduit Inlet Elev.	Outside Edge of Pavement: F Conduit Outlet Elev.	Outside Edge of Pavement: Outlet Offset Right	Outside Edge of Pavement: Outlet Length Lin. Ft.	Bends and Branches Each	Quantities: Special: Precast Reinforced Concrete Outlet Each	603: 6" Conduit Type B Lin. Ft.	603: 6" Conduit Type F* Lin. Ft.	605: Shallow Underdrain A.P.P. Lin. Ft.	605: 4" Pipe Underdrain Lin. Ft.	605: 4" Uncl. Pipe Underdrain Lin. Ft.
Mainline																												
Str. No. VAN-30-1289 (Continued)																												
688+15												786.0	786.0	783.5 into C.B.	℄	28						1-6"x90°			28		520@12"	
683+01						793.1																					514@12"	
688+15						786.6	786.6	783.5 into C.B.	℄	40	1-6"X45° Wye														40			
683+29	791.3																										522@30"	
688+26	786.0	786.0	785.7	74	18						1-6"x90°														18			
683+05**	791.1																										521@30"	
688+26**	785.7	785.7	762.7	139	71						1-6" Tee													1		71		
690+79	779.3					779.5						779.5					779.4										842@8"	
695+00	770.3	770.3	769.5	92	18	770.8	770.8	770.5	3	25	2-6"x90°	770.8	770.8	770.5	3	25	770.5	770.5	770.3	79	23	2-6"x90°	3	18	73		842@12"	
695+00	770.9					771.0						770.9					770.9									800		
697+00	767.8	767.8	767.6	78	24	767.8	767.8	767.6	1	29	2-6" Tees	767.8	767.8	767.6	2	28	767.9	767.9	767.6	78	24	2-6" Tees	4		105	1000		
699+50	766.4	766.4	766.2	78	24	766.5	766.5	766.2	1	29	2-6" Tees	766.5	766.5	766.2	3	27	766.4	766.4	766.2	78	24	2-6" Tees	4		104	1000		
702+00	766.6					766.6	766.6	766.3	5	25	1-6" Tee	766.7	766.7	766.5	6	24	766.6					1-6" Tee	2		49	90		
702+90	766.8																									600		
705+00						767.0	767.0	766.8	7	23	1-6" Tee	767.1	767.1	766.9	7	23						1-6" Tee	2		46	150		
706+50																	766.7	766.7	766.4	102	22	1-6" Tee	1		22	750		
708+00						767.3	767.3	767.1	6	24	1-6" Tee	767.4	767.4	767.2	7	23	767.0	767.0	766.7	98	22	1-6" Tee	3		69	245		
708+55	767.0	767.0	766.8	89	22						1-6" Tee															900		
711+00	767.4	767.4	767.2	87	21	767.8	767.8	767.5	5	25	2-6" Tees	767.8	767.8	767.6	6	24	767.4	767.4	767.2	92	23	2-6" Tees	4		93	800		
713+00	767.8	767.8	767.6	78	22	767.8	767.8	767.6	5	25	2-6" Tees	768.0	768.0	767.8	7	23	767.7	767.7	767.5	87	22	2-6" Tees	4		92	1200		
716+00	768.2	768.2	768.0	78	22	768.3	768.3	768.1	6	24	2-6" Tees	768.4	768.4	768.2	6	24	768.2	768.2	768.0	81	22	2-6" Tees	4		92	800		
718+00	768.4	768.4	768.2	78	22	768.6	768.6	768.3	6	24	2-6" Tees	768.5	768.5	768.3	4	20	768.6	768.6	768.4	77	23	2-6" Tees	4		95	188		
719+88	768.5																									195		
719+95																	768.7									396		
719+98						768.7						768.6																
Marsh Road																												
721+28						768.6						768.8																
721+32	768.6																										144	
721+39																	768.6										68	
722+00	768.5	768.5	768.3	80	26	768.5	768.5	768.3	2	19	2-6" Tees	768.7	768.7	768.5	3	27	768.5	768.5	768.2	80	26	2-6" Tees	4		98		61	
724+00	769.2	769.2	768.9	78	24	769.2	769.2	769.0	5	25	2-6" Tees	769.3	769.3	769.0	6	24	769.2	769.2	769.0	78	24	2-6" Tees	4		97		800	
727+00	769.5					769.6						769.6					769.6									1200		
730+00	769.1	769.1	768.9	78	24	769.2	769.2	769.0	5	25	2-6" Tees	769.2	769.2	769.0	5	25	769.1	769.1	768.9	78	24	2-6" Tees	4		98	1200		
733+00	768.8	768.8	768.6	78	24	768.9	768.9	768.7	6	24	2-6" Tees	768.9	768.9	768.7	7	23	768.9	768.9	768.8	78	24	2-6" Tees	4		95	1200		
736+00	768.2	768.2	768.0	78	24	768.3	768.3	768.1	6	24	2-6" Tees	768.4	768.4	768.2	7	23	768.3	768.3	768.1	78	24	2-6" Tees	4		95	1200		
739+00	767.9	767.9	767.6	78	24	767.9	767.9	767.7	7	23	2-6" Tees	768.0	768.0	767.8	8	22	767.9	767.9	767.7	78	24	2-6" Tees	4		93	1200		
742+00	767.5	767.5	767.2	78	24	767.6	767.6	767.3	7	23	2-6" Tees	767.7	767.7	767.4	8	22	767.6	767.6	767.3	78	24	2-6" Tees	4		93	1200		
744+25	766.7	766.7	766.5	80	26	766.8	766.8	763.5 into C.B.	℄	30		766.9	766.9	763.5 into C.B.	℄	30	766.8	766.8	766.6	80	26	2-6" Tees	2		108		900	
747+00	767.0					767.0						767.1					767.0										1100	
750+00	766.5	766.5	766.3	81	27	766.6	766.6	764.5 into C.B.	℄	30	2-6" Tees	766.7	766.7	764.5 into C.B.	℄	30	766.7	766.7	766.3	81	27	2-6" Tees	2		114		1200	
753+00	767.7	767.7	767.4	78	24	767.7	767.7	767.5	6	24	2-6" Tees	767.8	767.8	767.5	7	23	767.7	767.7	767.7	78	24	2-6" Tees	4		95		1200	
756+00	768.0	768.0	767.8	78	24	768.1	768.1	767.8	6	24	2-6" Tees	768.1	768.1	767.9	7	23	768.0	768.0	768.0	78	24	2-6" Tees	4		95	1200		
758+00	768.2	768.2	768.0	78	24	768.3	768.3	768.0	5	25	2-6" Tees	768.3	768.3	768.1	6	24	768.2	768.2	768.2	78	24	2-6" Tees	4		97	800		
760+00	768.5					768.5						768.6					768.5									800		
763+00	768.2	768.2	767.9	78	24	768.3	768.3	768.0	6	24	2-6" Tees	768.3	768.3	768.0	6	24	768.2	768.2	768.0	78	24	2-6" Tees	4		96	1200		
766+00	767.8	767.8	767.6	78	24	767.9	767.9	767.7	9	21	2-6" Tees	767.9	767.9	767.7	10	20	767.8	767.8	767.6	78	24	2-6" Tees	4		89	1200		
769+00	767.5	767.5	767.3	78	24	767.6	767.6	767.3	4	26	2-6" Tees	767.6	767.6	767.3	4	26	767.5	767.5	767.3	78	24	2-6" Tees	4		100	1200		
772+00	766.9	766.9	766.6	79	25	766.9	766.9	765.0 into C.B.	℄	30	2-6" Tees	766.8	766.8	765.0 into C.B.	℄	20	766.9	766.9	766.7	79	25	2-6" Tees	2		100		1200	
772+98																	767.1										98	
773+02	767.0																										102	
773+05						767.0							767.0														210	
Mendon Road																												
774+35						766.8							767.0															
774+38																	766.9										385	
774+42	766.8																										162	
776+00	766.6	766.6	766.3	81	27						1-6" Tee						766.7	766.7	766.4	81	27	1-6" Tee	2		54		158	
776+50						766.5	766.5	764.5 into C.B.	℄	35	1-6"x45°	766.7	766.7	764.5 into C.B.	℄	42						1-6"x45°			77			
776+50						767.4	767.4	764.5 into C.B.	℄	38	1-6"x45°	767.5	767.5	764.5 into C.B.	℄	42						1-6"x45°			80			
779+00	767.6	767.6	767.4	78	24	767.7	767.7	767.5	5	25	2-6" Tees	767.7	767.7	767.5	6	24	767.7	767.7	767.5	78	24	2-6" Tees	4		97	443		600
782+00	768.0	768.0	767.7	78	24	768.0	768.0	767.8	7	23	2-6" Tees	768.1	768.1	767.8	7	23	768.0	768.0	767.8	78	24	2-6" Tees	4		94	1200		
785+00	768.3	768.3	768.0	78	24	768.3	768.3	768.1	7	23	2-6" Tees	768.4	768.4	768.2	7	23	768.4	768.4	768.2	78	24	2-6" Tees	4		94	1200		
788+00	768.6	768.6	768.4	78	24	768.7	768.7	768.4	5	25	2-6" Tees	768.8	768.8	768.5	6	24	768.7	768.7	768.5	78	24	2-6" Tees	4		97	1200		
																						SHEET TOTALS	112	36	3135	26757	3761	8388

** - Ramp "A" Underdrain

* 707.17 Nonperforated, ASTM D3034 SDR35, SS931 or SS944

DESIGN FILE : e:\dgn\v30\v30ds.dgn
USERNAME : rparsons
DATE : 06-OCT-1994
TIME : 13:10

CALCULATED KMS
CHECKED BDS

ITEM 605 UNDERDRAIN OUTLET LOCATIONS AND QUANTITIES

VAN-30-11.24

140
161

Underdrain Limits From/To Station	Westbound Lanes: Outside Edge of Pavement: Underdrain Flowline Elev.	Outside Edge of Pavement: F Conduit Inlet Elev.	Outside Edge of Pavement: F Conduit Outlet Elev.	Outside Edge of Pavement: Outlet Offset	Outside Edge of Pavement: Outlet Length Lin. Ft.	Inside Edge of Pavement: Underdrain Flowline Elev.	Inside Edge of Pavement: F Conduit Inlet Elev.	Inside Edge of Pavement: F Conduit Outlet Elev.	Inside Edge of Pavement: Outlet Offset Left	Inside Edge of Pavement: Outlet Length Lin. Ft.	Bends and Branches Each	Eastbound Lanes: Inside Edge of Pavement: Underdrain Flowline Elev.	Inside Edge of Pavement: F Conduit Inlet Elev.	Inside Edge of Pavement: F Conduit Outlet Elev.	Inside Edge of Pavement: Outlet Offset Right	Inside Edge of Pavement: Outlet Length Lin. Ft.	Outside Edge of Pavement: Underdrain Flowline Elev.	Outside Edge of Pavement: F Conduit Inlet Elev.	Outside Edge of Pavement: F Conduit Outlet Elev.	Outside Edge of Pavement: Outlet Offset Right	Outside Edge of Pavement: Outlet Length Lin. Ft.	Bends and Branches Each	Quantities: Special: Precast Reinforced Concrete Outlet Each	603: 6" Conduit Type B Lin. Ft.	603: 6" Conduit Type F* Lin. Ft.	605: Shallow Underdrain A.P.P. Lin. Ft.	605: 4" Pipe Underdrain Lin. Ft.	605: 4" Uncl. Pipe Underdrain Lin. Ft.
Mainline																											
Mendon Road																											
790+00	768.9	768.9	768.6	78	24	768.9	768.9	768.6	5	25	2-6" Tees	768.9	768.9	768.7	5	25	768.9	768.9	768.7	78	24	2-6" Tees	4		98	800		
792+00	769.1					769.2						769.2					769.2											
795+00	768.8	768.8	768.5	78	24	768.8	768.8	768.6	5	25	2-6" Tees	768.9	768.9	768.6	5	25	768.8	768.8	768.6	78	24	2-6" Tees	4		98	1200		
797+00	768.5	768.5	768.3	78	24						1-6" Tee						768.6	768.6	768.3	78	24	1-6" Tee	2		48	400		
798+00						768.5	768.5	765.0 Into C.B.	℄	42	1-6"x45°	768.4	768.4	765.0 Into C.B.	℄	30						1-6"x45°			72	549		
798+00						768.2	768.2	765.0 Into C.B.	℄	42	1-6"x45°	768.2	768.2	765.0 Into C.B.	℄	28						1-6"x45°			70	400		248
799+00	708.2	768.2	768.0	78	24						1-6"Tee						768.3	768.3	768.1	78	24	1-6"Tee	2		48			40
799+40	768.3																											47
799+47																	768.4											
799+49						768.3						768.3																
Boroff Road																											
801+00	768.2	768.2	768.0	78	24	768.0	768.0	764.5 Into C.B.	℄	25	1-6" Tee, 1-6"x45°	768.3	768.3	764.5 Into C.B.	℄	42	768.3	768.3	768.1	78	24	1-6" Tee, 1-6"x45°	2					
804+00	768.7	768.7	768.7	78	24	768.6	768.6	768.5	2	28	2-6" Tees	768.7	768.7	768.4	5	25	768.7	768.7	768.4	78	24	2-6" Tees	4		101	1152		
807+00	769.7	769.7	769.7	78	24	769.8	769.8	769.5	3	27	2-6" Tees	69.7	69.7	769.4	3	27	769.7	769.7	769.5	78	24	2-6" Tees	4		102	1200		
810+00	770.4	770.4	770.4	78	24	770.4	770.4	770.2	3	27	2-6" Tees	770.5	770.5	770.2	3	27	770.4	770.4	770.2	78	24	2-6" Tees	4		102	1200		
813+00	771.0	771.0	770.8	78	24	771.1	771.1	770.9	3	27	2-6" Tees	771.2	771.2	771.0	5	25	771.2	771.2	770.9	78	24	2-6" Tees	4		100	1200		
815+00	771.2					771.4	771.4	771.2	5	25	1-6" Tee	771.5	771.5	771.2	5	25	771.4					1-6" Tee	2		50	800		
817+00						771.6	771.6	771.3	5	25	1-6" Tee	771.7	771.7	771.5	7	23						1-6" Tee	2		48	400		
819+50						772.0	772.0	771.7	4	26	1-6"x90°	772.0	772.0	771.8	5	25						1-6"x90°	2		51	500		
820+25	772.2	772.2	771.9	79	25						1-6"x90°												1		25			
823+00	773.3	773.3	773.1	80	26						1-6" Tee												1		26	275		
826+00	724.2																											
828+00	774.0	774.0	773.7	80	26						1-6" Tee												1		26	200		
831+00	773.7	773.7	773.5	80	26						1-6" Tee												1		26	300		
834+00	773.0	773.0	772.8	80	26						1-6" Tee												1		26			300
836+00	773.2	773.2	773.0	80	26						1-6" Tee												1		26			200
839+40	773.7																											
834+40	773.7	773.7	765.9 into 3' Conc	54	8						1-6"x45°														8	340		
843+00	774.8	774.8	774.5	100	46						1-6" Tee												1		46	352		
846+00	776.7	776.7	776.4	104	50						1-6"x90°												1		50	300		
848+81	776.9																											281
Ramps																											
Ramp A $																											
190+55	778.2																											
194+90		768.1	767.8	28	26						1-6"x90°												1		26		435@24"	
194+90	769.6																											
199+25	763.7	763.7	763.5	21	19						1-6" Tee												1		19		435@6"	
203+15	768.8																										390@6"	
208+00	763.3	763.3	763.1	19	17						1-6" Tee												1		17		485@6"	
208+50	763.5																											50
Ramp B $																											
89+30	764.4	764.4	764.3	57	18	764.0	764.0	763.8	23	21	1-6"x90°																364@6"	
91+12	766.7					766.9																						
95+77	766.2																										148@12"	
97+25	764.3	764.3	764.1	23	21						1-6" Tee												1		21		375@12"	
101+00	764.8																											
101+00	765.3	765.3	765.1	19	17						1-6"x90°												1		17		292@6"	
103+92	765.8																											
103+92	766.2	766.2	766.0	22	22						1-6"x90°												1		22			
106+00	766.7	766.7	766.5	22	22						1-6" Tee												1		22	208		
108+45/108+55	767.0																									245		
Ramp C $																											
390+55																	779.0											
394+00																	770.5	770.5	770.3	24	22	1-6"x90°	1		24		345@12"	
394+00																	771.3											
397+50																	764.9	764.9	764.7	21	19	1-6" Tee	1		21		350@2"	
401+50																	766.9										400@2"	
403+98																	765.3	765.3	765.1	21	19	1-6"x90°	1		21		248@2"	
																						SHEET TOTALS	54		1457	12021	4267	1166

$ - All Underdrains on Ramps located along Baseline

*707.17 Nonperforated, ASTM D3034 SDR 35, SS931 or SS944

DESIGN FILE : e:\dgn\v30\v30ds.dgn
USERNAME : rparsons

DATE : 06-OCT-1994
TIME : 13:13

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CHECKED BDS

ITEM 605 UNDERDRAIN OUTLET LOCATIONS AND QUANTITIES

VAN-30-11.24

Underdrain Limits From/To Station	Westbound Lanes											Eastbound Lanes											Quantities					
	Outside Edge of Pavement					Inside Edge of Pavement						Inside Edge of Pavement					Outside Edge of Pavement						Special	603		605		
	Underdrain Flowline Elev.	F Conduit Inlet Elev.	F Conduit Outlet Elev.	Outlet Offset	Outlet Length	Underdrain Flowline Elev.	F Conduit Inlet Elev.	F Conduit Outlet Elev.	Outlet Offset Left	Outlet Length	Bends and Branches	Underdrain Flowline Elev.	F Conduit Inlet Elev.	F Conduit Outlet Elev.	Outlet Offset Right	Outlet Length	Underdrain Flowline Elev.	F Conduit Inlet Elev.	F Conduit Outlet Elev.	Outlet Offset Right	Outlet Length	Bends and Branches	Precast Reinforced Concrete Outlet	6" Conduit Type B	6" Conduit Type F*	Shallow Underdrain AP	4" Pipe Underdrain	4" Uncl. Pipe Underdrain
					Lin. Ft.					Lin. Ft.	Each					Lin. Ft.					Lin. Ft.	Each	Each	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.
Ramps																												
Ramp D $																												
588+92																	765.6	765.6	765.4	21	19	1-6"x90°	1		21			
591+45																	769.2										253@2"	
594+58																												
599+75																	764.4	764.4	764.2	25	23	1-6" Tee	1		25		517@12"	
602+25																	764.3										250@12"	
602+25																	765.4	765.4	765.2	22	22	1-6"x90°	1		22			
604+00																	766.0	766.0	765.8	22	22	1-6" Tee	1		22	175		
606+50/706+50																	766.7									250		
																							4		90	425	1020	
TOTALS SHT. 140																							81	12	2518	24105	6217	326
TOTALS SHT. 141																							112	36	3135	26757	3761	8388
TOTALS SHT. 142																							54		1457	12021	4267	1166
TOTALS SHT. 143																							4		90	425	1020	
GRAND TOTALS																							251	48	7200	63308	15265	9880

$ - All Underdrains on Ramps located along Baseline

*707.17 Nonperforated, ASTM D3034 SDR 35, SS931 or SS944

CARRIED TO GENERAL SUMMARY SHEETS 14 & 15

CALCULATED KMS CHECKED BDS

UNDERDRAIN OUTLET LOCATIONS AND QUANTITIES

ITEM 605 UNDERDRAIN

VAN-30-11.24

142
161

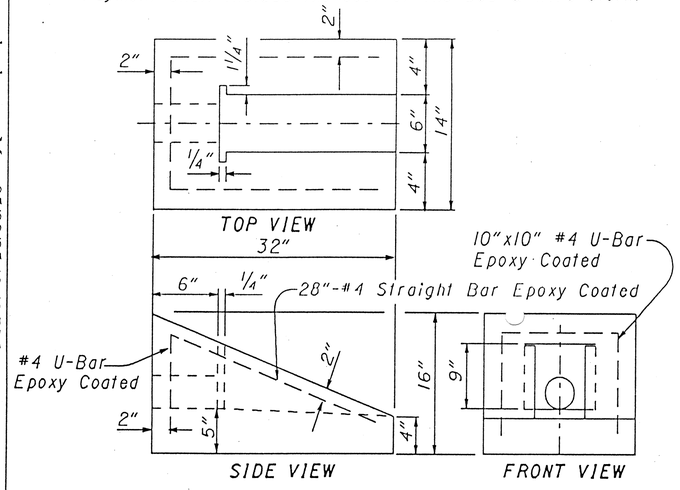
DESIGN FILE : e:\dgn\v30\v30ds.dgn
USERNAME : rparsons

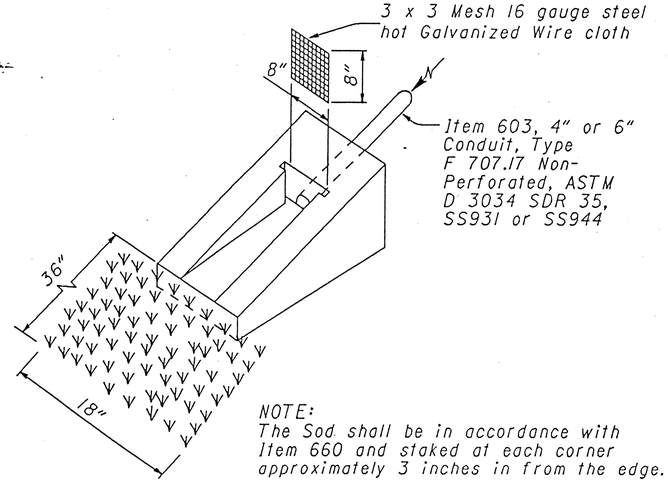
DATE : 06-OCT-1994
TIME : 13:16

dfocke@ldpc5 - underdrn.m - Mon 05/08/95 12:43 PM

ITEM SPECIAL - PRECAST REINFORCED CONCRETE OUTLET

The Concrete outlet shall meet the requirements of CMS 604. Payment shall be made on an Each basis. Payment shall include the cost of the Sod & Wire Cloth.

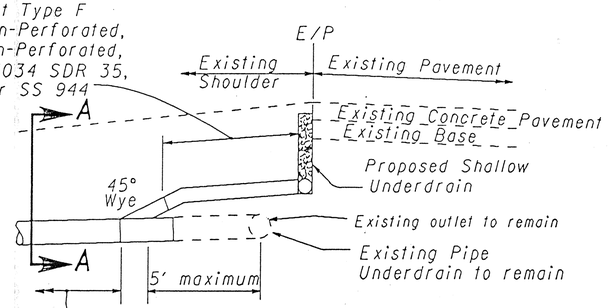




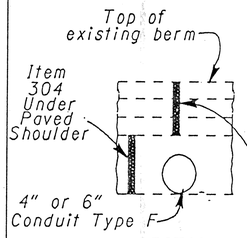
NOTE:
The Sod shall be in accordance with Item 660 and staked at each corner approximately 3 inches in from the edge.

OUTLET DETAILS

4" Conduit Type F 707.15 Non-Perforated, 707.17 Non-Perforated, ASTM D 3034 SDR 35, SS 931, or SS 944

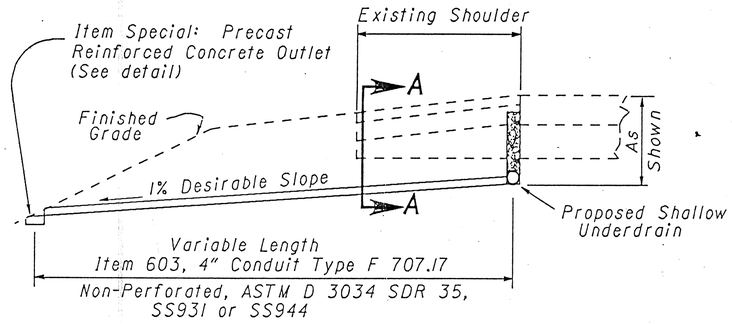


6" Conduit Type F 707.17 Non-Perforated, ASTM D 3034 SDR 35, SS931 or SS944 (outlet into catch basin or precast reinforced concrete outlet)



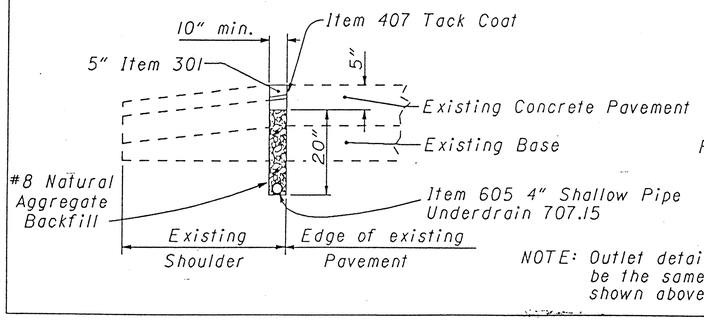
SECTION A-A

NOTE:
The cost of the 4" conduit Type F and necessary pipe bends and branches needed to connect the existing and proposed underdrains shall be included with the cost of the 6" conduit Type F beyond the existing underdrain.



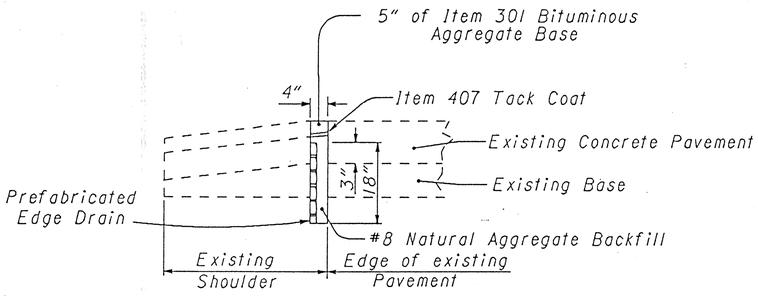
NOTE: For underdrain outlets into catch basins the above Type F Conduit shall be used entirely between the underdrain & catch basin.

PIPE UNDERDRAIN SYSTEM
(Alternate to Prefabricated Edge Drain System)



NOTE: Outlet details to be the same as shown above.

PREFABRICATED EDGE DRAIN SYSTEM



DESCRIPTION: This item shall consist of furnishing and installing either a pipe underdrain system or a prefabricated edge drain system in accordance with the specifications and with the details, as shown on the plans, and as directed by the Engineer.

MATERIALS: The underdrain shall either be a pipe underdrain system per Item 605 or a prefabricated edge drain system meeting the following requirements. The prefabricated edge drain shall consist of a polymeric core with a minimum thickness of one inch wrapped in fabric meeting CMS 712.09 Type A. The drain shall be flexible, rectangular in shape and of hollow construction. The core material shall be resistant to petroleum based chemicals, naturally occuring soil chemicals, and road de-icing agents.

The core material shall have sufficient flexiblity to withstand installation bending and handling without damage. The core shall provide a minimum of 100 square inches unobstructed (one side only) drainage area per foot of width. Side walls of the core shall provide at least 5% open area to permit unobstructed flow through the filter and wall to the core.

The prefabricated edge drain shall have a minimum compressive strength of 6000 pounds per square foot with a maximum 20% compression in a parallel plate compression test (ASTM D 695). The minimum (single side) core flow capacity shall be 10 gallons per minute per foor of width for a 0.1 gradient at 10 pounds per square inch bladder load per ASTM D 4716.

The prefabricated edge drain manufacturer's certified test results shall be furnished in accordance with CMS 101.061.

CONSTRUCTION: The prefabricated edge drain shall be installed against the outside wall of the trench as shown and backfilled adjacent to the pavement with No. 8 natural aggregate. The No. 8 aggregate shall be placed in one (1) or more lifts with a vibratory compactor run over the final lift to consolidate the aggregate prior to placing the asphalt plug. The first layer of the backfill material shall be placed simultaneously with the trenching operation to hold the edge drain flush against the trench wall.

The prefabricated edge drain shall be spliced as required prior to placement in the trench, using material furnished by the manufacturer and in accordance with the manufacturer's directions. All material required for the splices will be supplied by the manufacturer, but any equipment required shall be furnished by the Contractor. Splices shall prevent separation of adjoining sections of the prefabricated edge drain panels.

The underdrain outlets shall be placed in accordance with Item 603 using outlet fittings. The manufacturer shall supply outlet fittings which will make the transition between the prefabricated edge drain and the outlet pipe.

The outlets for both underdrain systems shall be constructed as soon as possible after placement of the underdrain. The underdrain and outlets on crack & seat projects shall be in place and functional prior to cracking and seating the existing pavement.

METHOD OF MEASUREMENT: Completed and accepted underdrains will be measured by the linear foot in place.

BASIS OF PAYMENT FOR PIPE UNDERDRAIN SYSTEM: Work completed, accepted and measured under this item shall be paid for at the contract unit price bid for **Item 605 - 4" Shallow Pipe Underdrain 707.15, As Per Plan.** The price shall be full compensation for excavation and backfill; for furnishing materials, including materials for outlet fittings; and for all labor, tools, equipment and incidentals necessary to complete the work.

BASIS OF PAYMENT FOR PREFABRICATED EDGE DRAIN SYSTEM: Work completed, accepted and measured under this item shall be paid for at the contract unit price bid for **Item 605 - Shallow Underdrain, As Per Plan.** The price shall be full compensation for excavation and backfill; for removing and disposing of all surplus excavation in accordance with CMS 203; for furnishing materials, including materials for splices, outlet fittings, and Item 301; and for all labor, tools, equipment and incidentals necessary to complete the work. The price shall also include all costs associated with pipe underdrains, as specified above, which are installed as alternates to the prefabricated edge drain system.

ITEM 605 - SHALLOW UNDERDRAIN, AS PER PLAN
DATE 5-8-95

VAN-30-11.24

Rev. 6-20-95

ITEM 642 TRAFFIC ZONE PAVEMENT MARKING

4" EDGE LINE

Location	Station	Linear Feet	
		White	Yellow
U.S.R. 30 Eastbound	596+87 to 611+09	1,422	
	612+39 to 666+66	5,427	
	668+12 to 684+82	1,670	
	693+82 to 708+02	1,420	
	718+52 to 719+95	143	
	721+39 to 772+98	5,159	
	774+38 to 799+47	2,509	
	800+87 to 840+82	3,995	
	849+82 to 852+57	275	
	596+87 to 607+40		1053
	607+40 to 611+35		410*
	611+80 to 612+25		60*
	612+25 to 662+98		5,073
	662+98 to 666+93		410*
	667+37 to 667+82		60*
	667+82 to 716+49		4,867
	716+49 to 720+44		410*
	720+83 to 721+28		60*
	721+28 to 769+55		4,827
	769+55 to 773+50		410*
	773+90 to 774+35		60*
	774+35 to 795+99		2,164
	795+99 to 799+94		410*
	800+33 to 800+78		60*
	800+78 to 852+57		5,179
U.S.R. 30 Westbound	596+87 to 610+76	1,389	
	612+06 to 666+16	5,410	
	667+65 to 678+75	1,110	
	689+29 to 703+00	1,371	
	712+00 to 719+88	788	
	721+32 to 773+02	5,170	
	774+42 to 799+40	2,498	
	800+80 to 836+00	3,520	
	846+50 to 852+57	607	
	596+87 to 610+90		1,403
	610+90 to 611+35		60*
	611+80 to 615+75		410*
	615+75 to 666+48		5,073
	666+48 to 666+93		60*
	667+37 to 671+32		410*
	671+32 to 719+99		4,867
	719+99 to 720+44		60*
	720+83 to 724+78		410*
	724+78 to 773+05		4,827
	773+05 to 773+50		60*
	773+90 to 777+85		410*
	777+85 to 799+49		2,164
	799+49 to 799+94		60*
	800+33 to 804+28		410*
	804+28 to 852+57		4,829
Exit Ramp "C", U.S.R. 127, E.B.	684+82(M.L.) to 688+80(M.L.)(Bk.)=	398	
	388+80(Ahd.) to 404+05	1,525	
	404+05 to 44+76(U.S.R. 127)	130*	
	392+82 to 404+53		1,171
Ent. Ramp "D", U.S.R. 127, E.B.	42+50(U.S.R. 127) to 588+93	155*	
	588+93 to 606+52(Bk.)=	1,759	
	706+52(M.L.)(Ahd.) to 718+52	1,200	
	588+09 to 606+52		1,843
Exit Ramp "C", C.R. 418, E.B.	840+82 to 852+57	1,175	
	848+82 to 852+57		375
	(Continued)		

*Estimated length along pavement between given stations.

4" EDGE LINE (Continued)

Location	Station	Linear Feet	
		White	Yellow
Ent. Ramp "A", U.S.R. 224, W.B.	678+75(M.L.) to 690+80(M.L.)(Bk.)=	1,205	
	190+75(Ahd.) to 208+49	1,774	
	55+96(USR224) to 88+69(Ramp.B)	35*	
	88+69(Ramp.B) to 91+27(Ramp.B)	258	
	190+75 to 203+15(Bk.)=		1,240
	88+73(Rp.B) to92+25(Rp.B)(Ahd.)		352
	204+10 to 208+49		439
Exit Ramp "B", U.S.R. 224, W.B.	57+65(U.S.R. 224) to 89+30	135*	
	89+30 to 108+45(Bk.)=	1,915	
	708+56(M.L.)(Ahd.) to 712+00(M.L.)	344	
	88+73 to 103+92		1,519
Ent. Ramp "A", C.R. 418, W.B.	836+00 to 852+57	1,657	
	846+50 to 852+57		607
John Brown Rd. Lt.	47+55 to 48+91	136	
	48+91 to 611+09(M.L.)	95*	
Rt.	47+55 to 48+86	131	
	48+86 to 612+39(M.L.)	75*	
Lt.	610+76(M.L.) to 51+14	80*	
	51+14 to 52+45	131	
Rt.	612+09(M.L.) to 51+09	95*	
	51+09 to 52+45	136	
Dutch John Rd. Lt.	48+17 to 49+60	143	
	49+60 to 666+66(M.L.)	80*	
Rt.	48+17 to 49+29	112	
	49+29 to 668+12(M.L.)	110*	
Lt.	666+16(M.L.) to 51+93	110*	
	51+93 to 53+04	111	
Rt.	667+65(M.L.) to 51+62	80*	
	51+62 to 53+04	142	
Marsh Rd. Lt.	47+58 to 48+88	130	
	48+88 to 719+95(M.L.)	100*	
Rt.	47+58 to 48+84	126	
	48+84 to 721+39(M.L.)	95*	
Lt.	719+88(M.L.) to 51+16	95*	
	51+16 to 52+42	126	
Rt.	721+28(M.L.) to 51+16	100*	
	51+16 to 52+42	126	
Mendon Rd. Lt.	47+58 to 48+85	127	
	48+85 to 772+98(M.L.)	95*	
Rt.	47+58 to 48+86	128	
	48+86 to 774+38(M.L.)	100*	
Lt.	773+02(M.L.) to 51+14	100*	
	51+14 to 52+42	128	
Rt.	774+42(M.L.) to 51+15	95*	
	51+15 to 52+42	127	
Boroff Rd. Lt.	47+58 to 48+88	130	
	48+88 to 779+47(M.L.)	95*	
Rt.	47+58 to 48+84	126	
	48+84 to 800+87(M.L.)	96*	
Lt.	779+40(M.L.) to 51+16	96*	
	51+16 to 52+42	126	
Rt.	800+80(M.L.) to 51+11	95*	
	51+11 to 52+42	131	
	Total Linear Feet	62,008	58,572
	Total Linear Feet	120,580	
	Total Miles	22.84	

LANE LINES

Location	Station	Linear Feet
U.S.R. 30 Eastbound	596+87 to 611+09	1,422
	612+33 to 666+64	5,431
	667+89 to 720+00	5,211
	721+25 to 773+05	5,180
	774+35 to 799+50	2,515
	800+75 to 852+57	5,182
U.S.R. 30 Westbound	596+87 to 610+80	1,393
	612+06 to 666+43	5,437
	667+65 to 720+00	5,235
	721+25 to 773+05	5,180
	774+35 to 799+50	2,515
	800+75 to 852+57	5,182
Exit Ramp "C", U.S.R. 127, E.B.	688+12 to 690+42	230
Ent Ramp "D", U.S.R. 127, E.B.	708+02(M.L.) to 710+82(M.L.)	280
Exit Ramp "C", C.R. 418, E.B.	844+12 to 846+42	230
Ent Ramp "A", U.S.R. 224, W.B.	686+50(M.L.) to 689+30(M.L.)	280
Exit Ramp "B", U.S.R. 224, W.B.	706+40(M.L.) to 708+70(M.L.)	230
Ent Ramp "A", C.R. 418, W.B.	843+70 to 846+50	280
	Total Linear Feet	51,413
	Total Miles	9.74

8" CHANNELIZING LINE

Location	Station	Linear Feet
U.S.R. 30 Eastbound	610+39 to 610+89	50
	665+98 to 666+48	50
	719+49 to 719+99	50
	772+55 to 773+05	50
	798+99 to 799+49	50
U.S.R. 30 Westbound	612+25 to 612+75	50
	667+82 to 668+32	50
	721+28 to 721+78	50
	774+35 to 774+85	50
	800+78 to 801+28	50
Exit Ramp "C", U.S.R. 127, E.B.	690+42(M.L.) to 392+82	240*
	690+42(M.L.) to 693+82(M.L.)	340
Ent. Ramp "D", U.S.R. 127, E.B.	706+52(M.L.) to 708+02(M.L.)	150
Exit Ramp "C", C.R. 418, E.B.	846+42(M.L.) to 848+82	240*
	846+42(M.L.) to 849+82(M.L.)	340
Ent. Ramp "A", U.S.R. 224, W.B.	689+30(M.L.) to 689+80(M.L.)	150
Exit Ramp "B", U.S.R. 224, W.B.	103+00 to 706+40(M.L.)	240*
	703+00(M.L.) to 706+40(M.L.)	340
Ent. Ramp "A", C.R. 418, W.B.	846+50 to 848+00	150
	Total Linear Feet	2,690

*Estimated length along pavement between given stations.

CALCULATED DJS CHECKED NJV

ITEM 642 TRAFFIC ZONE PAVEMENT MARKING

VAN-30-11.24

ITEM 642 TRAFFIC ZONE PAVEMENT MARKING (Cont.)

24" STOP LINE		
Location	Station	Linear Feet
Exit Ramp "C", U.S.R. 127, E.B.	404+55	52
Ent. Ramp "B", U.S.R. 224, W.B.	88+71	65
John Brown Rd.	49+22	26
	50+78	26
Dutch John Rd.	49+84	38
	51+38	38
Marsh Rd.	49+25	28
	50+75	28
Mendon Rd.	49+25	25
	50+75	25
Boroff Rd.	49+25	28
	50+75	28
	Total Linear Feet	407

DOUBLE CENTER, SOLID & BROKEN		
Location	Station	Linear Feet
John Brown Rd.	47+55 to 49+20	165
	50+80 to 52+45	165
Dutch John Rd.	48+17 to 49+82	165
	51+39 to 53+04	165
Marsh Rd.	47+58 to 49+23	165
	50+77 to 52+42	165
Mendon Rd.	47+58 to 49+23	165
	50+77 to 52+42	165
Boroff Rd.	47+58 to 49+23	165
	50+77 to 52+42	165
	Total Linear Feet	1,650
	Total Miles	.31

24" TRANSVERSE LINES (WHITE)		
Location	Station	Linear Feet
Exit Ramp "C", U.S.R. 127, E.B.	690+42(M.L.) to 692+82(M.L.)	275
Exit Ramp "C", C.R. 1418, E.B.	846+42(M.L.) to 848+82(M.L.)	275
Ent. Ramp "B", U.S.R. 224, W.B.	704+00(M.L.) to 706+40(M.L.)	275
	Total Linear Feet	825

ITEM 620 DELINEATORS

DELINEATORS						
Location	Station	Delineator				Spacing
		Type C	Type D	*	Type C	Lin.Ft.
		Each	Each	Each	Each	
U.S.R. 30, Eastbound	600+00 to 608+00				3	400
	613+00 to 677+00				17	400
	680+00				1	—
	691+00 to 707+00				5	400
	723+00 to 839+00				30	400
U.S.R. 30, Westbound	600+00 to 608+00				3	400
	613+00 to 673+00				16	400
	691+00 to 703+00				4	400
	717+00				1	—
	722+00 to 770+00				13	400
	775+00 to 831+00				15	400
Exit Ramp "C", U.S.R. 127, E.B.	684+80(M.L.) to 688+80(M.L.)(Bk.)= 388+80(Ahd.) to 392+80	5				200
	393+50	1				—
	395+50 to 398+30		13			40
	398+40 to 401+15			12		25
	401+40 to 404+40			5		75
Ent Ramp "D", U.S.R. 127, E.B.	591+50 to 593+90	7				40
	601+52 to 603+52		8			75
	601+75	1				—
	602+50 to 606+52(Bk.)= 706+52(M.L.)(Ahd.) to 718+50(M.L.)	8				200
Exit Ramp "C", C.R. 418, E.B.	840+80 to 848+80	5				200
	848+80 to 851+80		3			150
Ent Ramp "A", U.S.R. 224, W.B.	678+75(M.L.) to 680+00(M.L.)	2				125
	683+50(M.L.) to 688+00(M.L.)	4				150
	191+00 to 195+00	3				200
	195+00 to 199+80		13			40
	204+80 to 206+00		3			40
	206+70 to 208+10		3			70
Exit Ramp "B", U.S.R. 224, W.B.	92+25 to 95+55	7				55
	98+00 to 103+25		8			75
	103+25	1				—
	103+90 to 108+45(Bk.)= 708+56(Ahd.)(M.L.) to 712+00(M.L.)	5				200
	88+80 to 91+80			5		75
	92+25 to 95+75			11		35
Ent Ramp "A", C.R. 418, W.B.	836+00 to 852+00	9				200
	851+00		1			—
	Totals	58	52	33	108	

* Delineators Removed and ReErected, As per plan; Curb Mounted.

Rev. 6-20-95

CALCULATED DJS CHECKED NJV

ITEMS 642 TRAFFIC ZONE PAVEMENT MARKING & 620 DELINEATORS

VAN-30-11.24

145/161

DESIGN FILE : e:\dgn\v30\v30pm.dgn
USERNAME : dsiebene
DATE : 6-JUN-1995
TIME : 13:09

RAISED PAVEMENT MARKERS

Location	Station	@ LANE LINES			@ EDGE LINES			© CHANNELIZING LINES	
		1-WAY	2-WAY		1-WAY			1-WAY	
		@ 80' Spa.	@ 80' Spa.		@ 40' Spa.			@ 20' Spa.	@ 40' Spa.
		White	Wh./Red		White	Yellow		White	White
		Each	Each		Each	Each		Each	Each
U.S.R. 30 Eastbound	597+00 to 610+60		18						
	612+80 to 650+40	48							
	651+08 to 666+20		20						
	667+80 to 676+60	12							
	677+40 to 692+60		20						
	693+40 to 703+80	14							
	704+60 to 719+80		20						
	721+60 to 756+80	45							
	757+60 to 772+80		20						
	774+50 to 783+30	12							
	784+10 to 799+30		20						
	801+20 to 832+40	40							
	833+20 to 848+40		20						
	849+20 to 852+40	5							
U.S.R. 30 Westbound	596+90 to 610+50	18							
	612+60 to 627+80		20						
	628+40 to 666+00	48							
	667+80 to 683+00		20						
	683+80 to 703+80	26							
	704+60 to 719+80		20						
	721+60 to 736+80		20						
	737+60 to 772+80	45							
	774+50 to 789+70		20						
	790+50 to 799+30	12							
	801+20 to 816+40		20						
	817+20 to 852+40	45							
Exit Ramp "C", S.R. 127, E.B.	690+42(M.L.) to 392+82							13	
	393+22 to 393+62					2			
	690+62(M.L.) to 692+82							12	
	693+22(M.L.) to 693+62(M.L.)				2				
Ent. Ramp "D", S.R. 127, E.B.	601+62 to 606+42					13			
	706+82(M.L.) to 708+02(M.L.)								4
	701+62(M.L.) to 708+02(M.L.)				17				
Exit Ramp "A", C.R. 418, E.B.	846+42(M.L.) to 848+82							13	
	849+22 to 849+62					2			
	846+62(M.L.) to 848+82(M.L.)							12	
	849+22(M.L.) to 849+62(M.L.)				2				
Ent. Ramp "A", U.S.R. 224, W.B.	689+30(M.L.) to 690+50(M.L.)								4
	190+90(Ahd.) to 195+70					13			
	689+30(M.L.) to 695+70(M.L.)				17				
Exit Ramp "B", U.S.R. 224, W.B.	703+20(M.L.) to 703+60(M.L.)				2				
	704+00(M.L.) to 706+40(M.L.)							13	
	103+12 to 103+52					2			
	103+92 to 106+12							12	
Ent. Ramp "A", C.R. 418, W.B.	846+50(M.L.) to 851+70(M.L.)				14				
	846+50 to 847+70								4
	848+10 to 851+70					10			
	Subtotals	370	258		54	42		75	12
	Total	811							

PAVEMENT MARKING SUMMARY

ITEM	SHEET No.					ITEM	TOTAL	UNIT	DESCRIPTION
		143	144	145					
620			108			620	108	Each	Delineator, Type C, Flexible Post Mounted
620			58			620	58	Each	Delineator, Type C, Flexible Post Mounted
620			52			620	52	Each	Delineator, Type D, Flexible Post Mounted
620			33			620	33	Each	Delineators Removed and ReErected, As per plan; Curb Mounted.
642		22.84				642	22.84	Miles	Edge Lines
642		9.74				642	9.74	Miles	Lane Lines
642		2,690				642	2,690	Lin. Ft.	Channelizing Lines
642			407			642	407	Lin. Ft.	Stop Lines
642			825			642	825	Lin. Ft.	Transverse Lines
642			.31			642	.31	Miles	Center Lines
621				811		862	811	Each	Raised Pavement Marker

(QUANTITIES CARRIED TO GENERAL SUMMARY)

CALCULATED DJS CHECKED NJV

RAISED PAVEMENT MARKERS & PAVEMENT MARKING SUMMARY

VAN-30-11.24

146
161

Rev. 6-20-95

DESIGN FILE : e:\dgn\v30\v30pm.dgn
USERNAME : debbene

DATE : 6-JUN-1995
TIME : 13:12

TRAFFIC CONTROL QUANTITIES

SIGN SUPPORTS

630

REF. NO.	ROADWAY	SIDE	STATION	CODE	SIZE	Level	SIGN		SIGN SUPPORTS														
							FLAT SHEET TYPE "G"	EXTRU SHEET TYPE "G"	SIGN ATTACHMENT ASSEMBLY		S4x7.7		W10x12	W8x18	W10x22	CONCRETE FOR EMBEDDED FOUNDATION	BREAKAWAY BEAM CONNECTION	REMOVAL OF GRD. MTD. SIGN AND STORAGE	REMOVAL OF OVER HEAD MTD. SIGN AND STORAGE	REMOVAL OF GRD. MTD. MAJOR SIGN AND STORAGE	REMOVAL OF GRD. MTD. BEAM SUPPORT AND STORAGE		
							SQ.FT.	SQ.FT.	EACH		LIN.FT.		LIN.FT.	LIN.FT.	LIN.FT.	CU.YD.	EACH	EACH	EACH	EACH	EACH		EACH
1	U.S. 30	Lt.	602+30	GSC	96x36			24			16.5/17.0					.27/.27	2	1			2		
2	U.S. 30	Lt.	612+60	GB	156x96	2		80						23.5/24.0		1.10/1.10	2			1	2		
3	U.S. 30	Lt.	626+00	GB																1	2		
4	U.S. 30	Lt.	639+00	GB	132x96	2		80					21.0/23.0			1.10/1.10	2			1	2		
5	U.S. 30	Rt.	640+00	GB	132x120	2		110							26.5/28.5	1.23/1.23	2			1	2		
6	U.S. 30	Rt.	655+00	GB																1	2		
7	U.S. 30	Rt.	665+00	GB	156x138	2		110							28.0/28.0	1.23/1.23	2			1	2		
8	U.S. 30	Rt.	672+50	GSS-A	96x48			32			22.5/24.5					.27/.27		3			2		
9	U.S. 30	Rt.	680+00	GB	132x138	2		110							27.5/30.5	1.23/1.23		1		1	2		
10	U.S. 30	Rt.	693+40	GF	72x60			30			17.5/17.5					.27/.27	2	5			2		
11	U.S. 30	Rt.	697+40	GB	108x84	3		77					22.5/21.5			1.10/1.10	2			1	2		
12	U.S. 30	Lt.	705+75	GB	198x138	1		184	3										2				
				GB	168x114	2		133	3														
13	U.S. 30	Lt.	715+80	GSH	96x36			24			16.0/16.0					.27/.27	2			1	2		
14	U.S. 30	Lt.	718+00	GB	156x138	2		110							26.5/27.5	1.23/1.23	2	1		1	2		
15	U.S. 30	Lt.	723+28	GSS-A	96x48			32			17.0/17.0					.27/.27	2	1			2		
16	U.S. 30	Lt.	734+35	GB	108x84	3		63					22.0/21.0			1.10/1.10	2			1	2		
17	U.S. 30	Lt.	756+95	GB	132x138	2		110							28.0/28.0	1.23/1.23	2			1	2		
18	U.S. 30	Rt.	795+15	GB	132x60	2		55					21.5/21.0			1.10/1.10	2			1	2		
19	U.S. 30	Rt.	815+98	GS-96	96x66			44					20.5/22.0			1.10/1.10	2			1	2		
20	U.S. 30	Rt.	821+00	GB	132x60	2		55					21.0/22.5			1.10/1.10	2			1	2		
21	U.S. 30	Rt.	831+00	GSP	96x36			24			17.0/18.0					.27/.27	2			1	2		
22	U.S. 30	Rt.	841+28	GE	132x60	2		50					19.5/21.0			1.10/1.10				1	2		
	Totals							1537	6		216.5		300	47.5	27.9	33.14	32	12	2	17	42		

(Quantities carried to General Summary, Sheet 15)

GROUND MOUNTED SIGN QUANTITIES

CALCULATED GLW
CHECKED REH

SIGNING

VAN-30-11.24

147
161

DESIGN FILE : e:\dgn\v30\v30si.dgn
USERNAME : dstiebene
DATE : 06-OCT-1994
TIME : 10:56

SIGNING

SIGN LEGEND

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

SCALE IN FEET 0 5' 10'

CALCULATED GLW
CHECKED REH

SIGNING

VAN-30-11.24

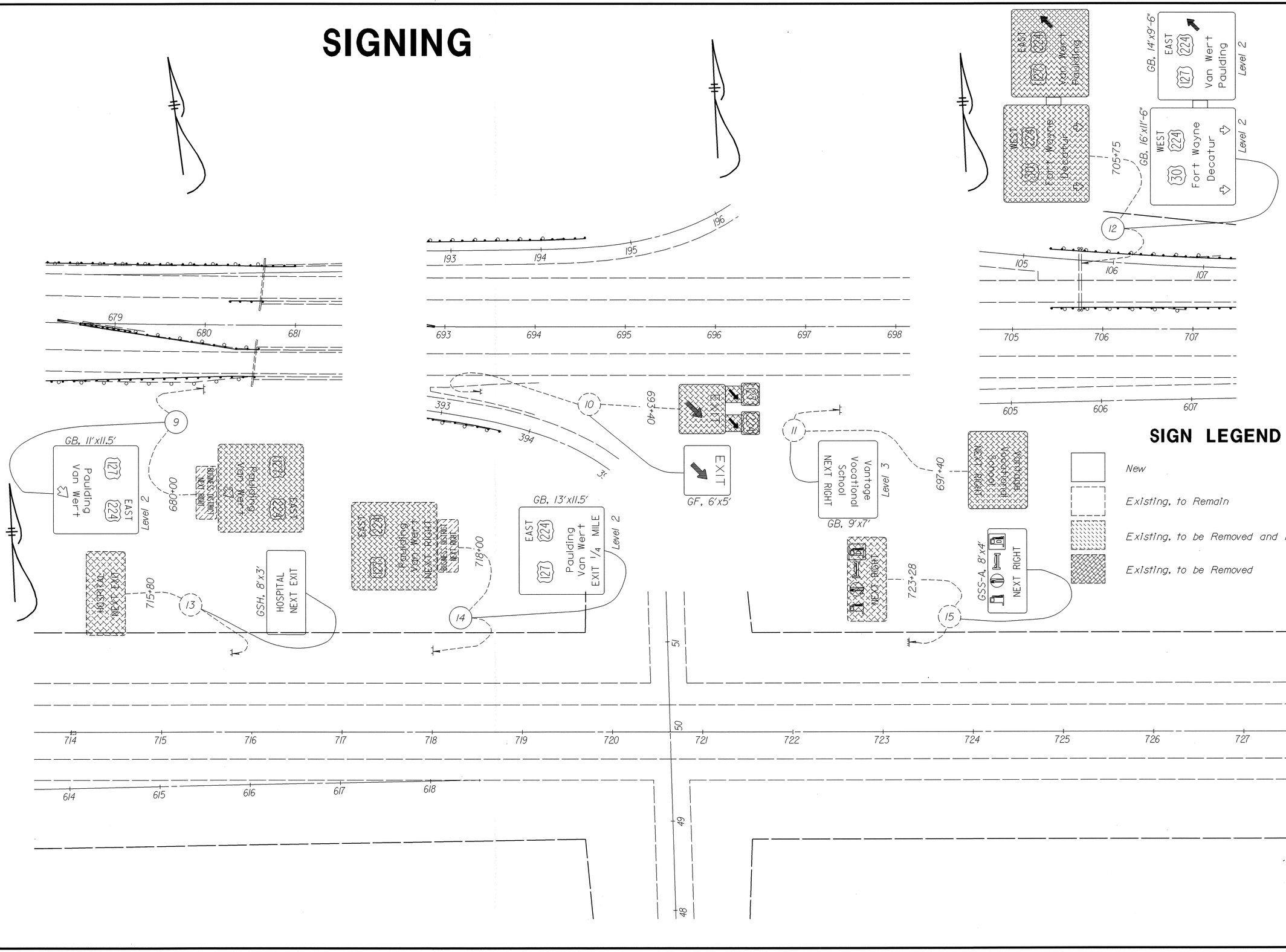
148
161

SIGNING

DESIGN FILE : e:\dgn\v30\v30si.dgn
USERNAME : dslebene

DATE : 06-OCT-1994
TIME : 11:21

SIGNING



SIGN LEGEND

Sign	Bracket Spacing	No. of Brackets	Height
14'x9'-6"	85⅛", 75⅜", 85⅛"	3	9'-6"
16'x11'-6"	85⅛", 75⅜", 99⅜", 85⅛"	3	11'-6"

- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

SCALE IN FEET 0 5' 10'

CALCULATED GLW
CHECKED REH

SIGNING

VAN-30-11.24

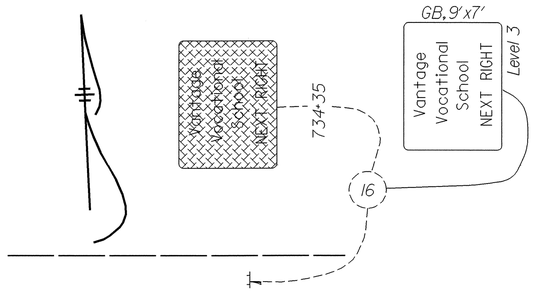
149
161

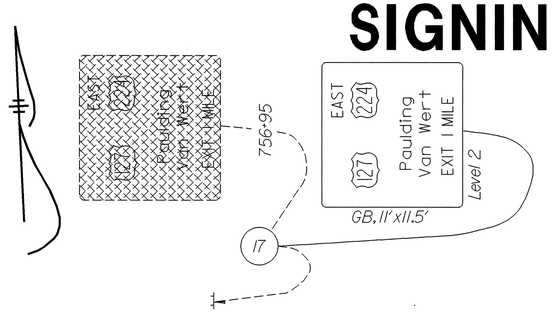
SIGNING

DESIGN FILE : e:\dgn\v30\v30si.dgn
USERNAME : dslebene

DATE : 06-OCT-1994
TIME : 11:28

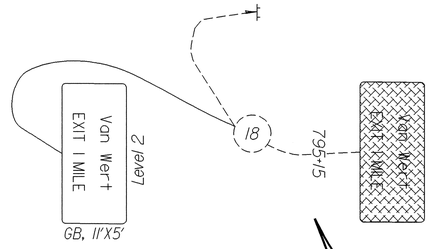
SIGNING

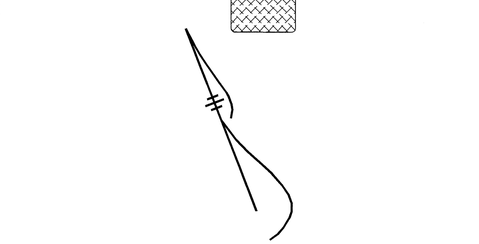


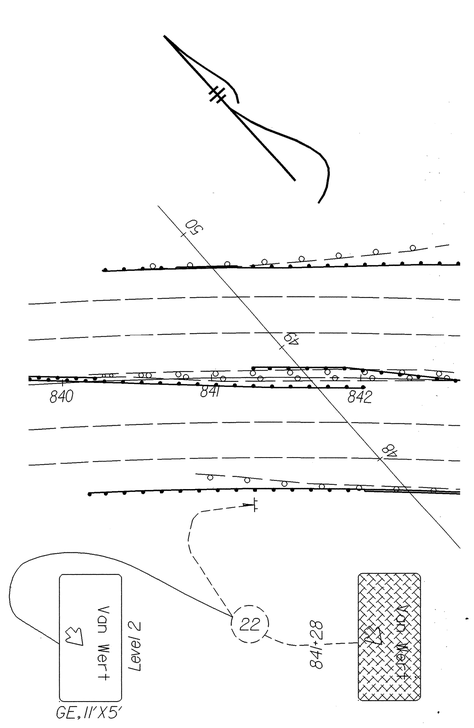


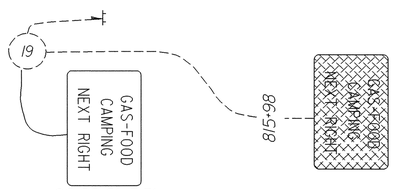
SIGN LEGEND

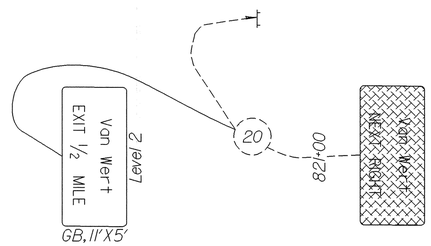
- New
- Existing, to Remain
- Existing, to be Removed and Reerected
- Existing, to be Removed

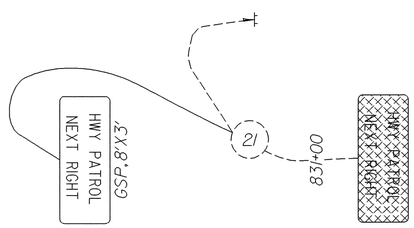












SCALE IN FEET 0 5' 10'

CALCULATED | CHECKED

SIGNING

VAN-30-11.24

150/161

DESIGN FILE : e:\dgn\v30\v30si.dgn
USERNAME : dsiebene

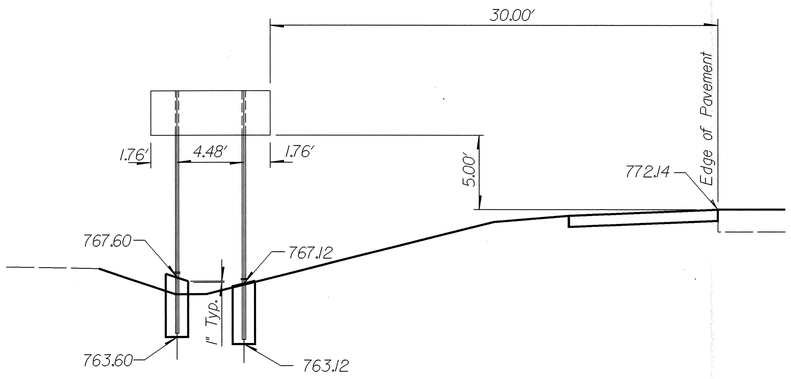
DATE : 06-OCT-1994
TIME : 12:07

SIGNING

SIGN #1

STA. 602+30, 84' Lt.
SIGN AREA - 8'x3' = 24 Sq. Ft.

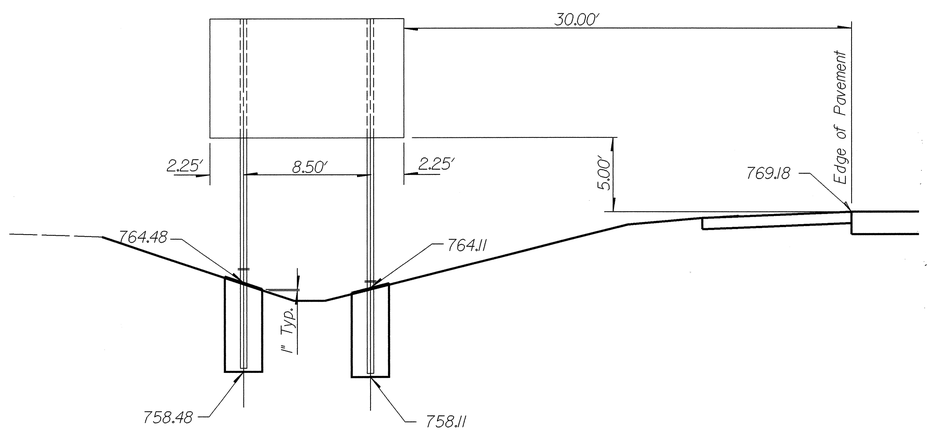
BREAKAWAY SUPPORTS
2 - S4x7.7



SIGN #2

STA. 626+00, 84' Lt.
SIGN AREA - 13'x8' = 104 Sq. Ft.

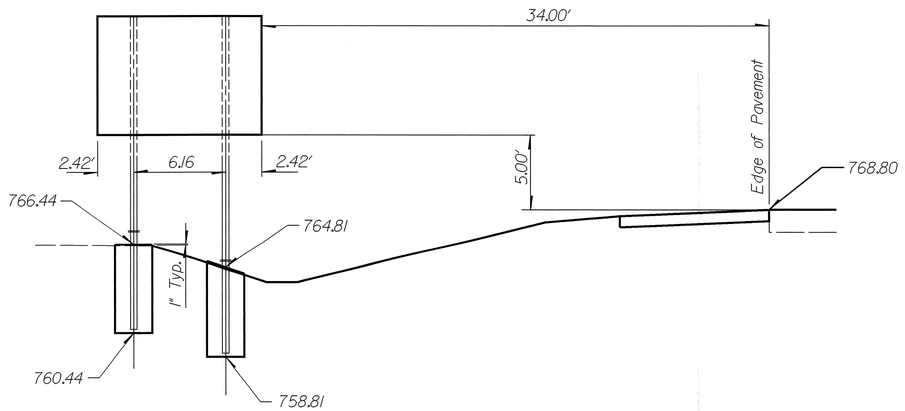
BREAKAWAY SUPPORTS
2 - W8x18



SIGN #4

STA. 639+00, 88' Lt.
SIGN AREA - 11x8' = 88 Sq. Ft.

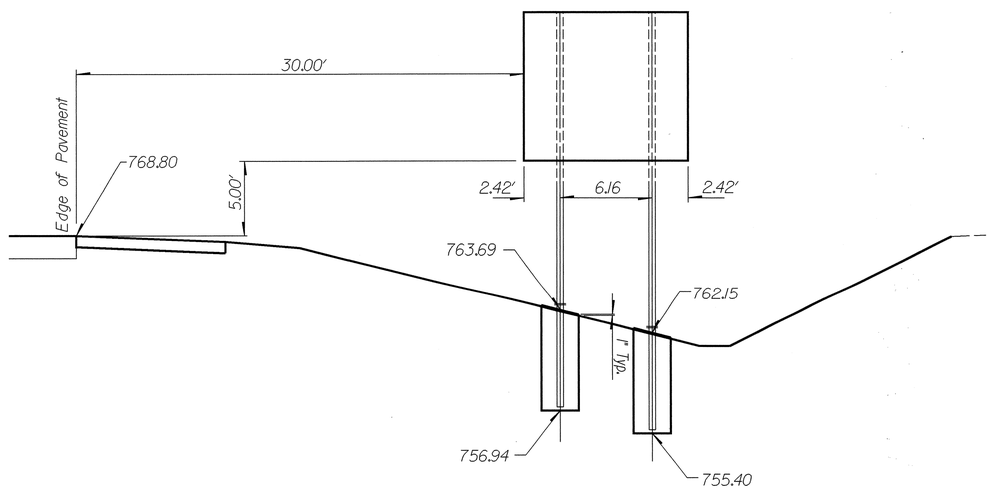
BREAKAWAY SUPPORTS
2 - W10x12



SIGN #5

STA. 640+00, 70' Rt.
SIGN AREA - 11'x10' = 110 Sq. Ft.

BREAKAWAY SUPPORTS
2 - W10x22



SCALE IN FEET
0 5' 10'

CALCULATED GLW
CHECKED REH

SIGNING

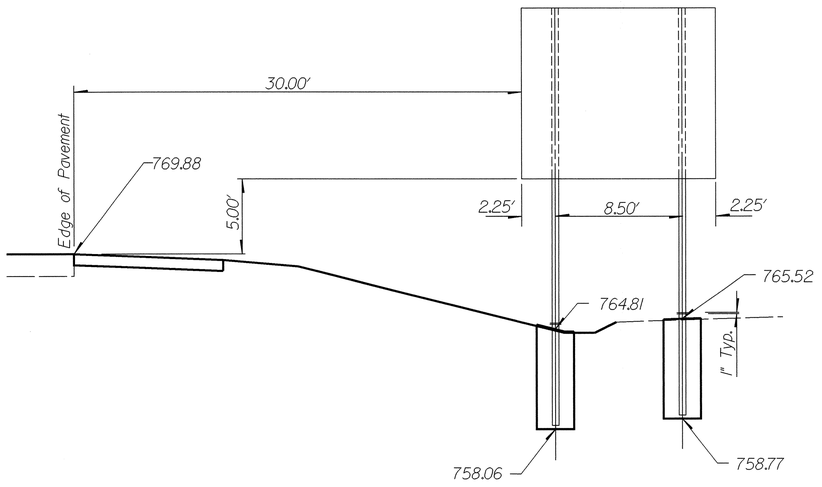
VAN-30-11.24

151
161

SIGN #7

STA. 665+00, 70' Rt.
SIGN AREA - 13'x11.5' = 149.5 Sq. Ft.

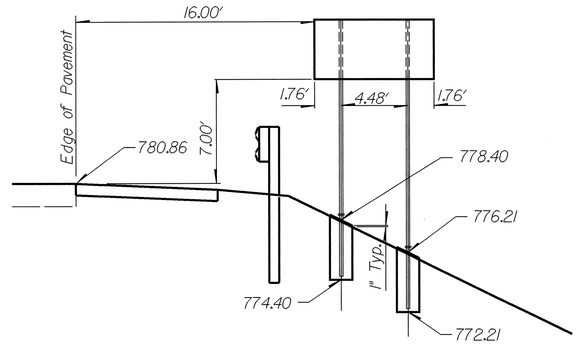
BREAKAWAY SUPPORTS
2 - W10x22



SIGN #8

STA. 772+50, 84' Lt.
SIGN AREA - 8'x4' = 32 Sq. Ft.

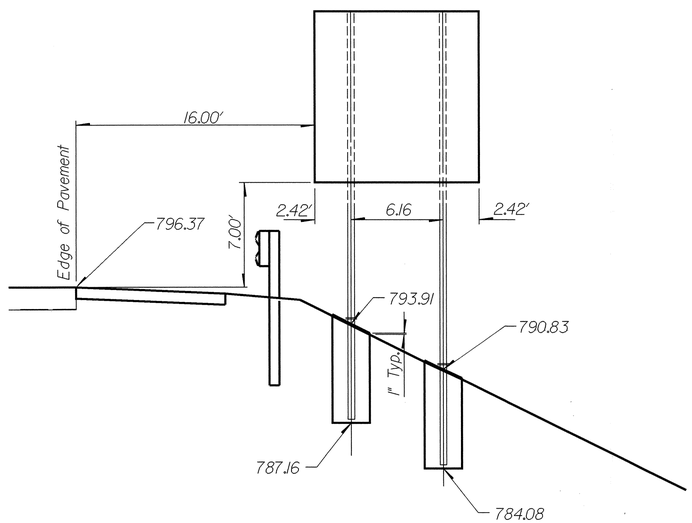
BEAM SUPPORTS
2 - S4x7.7



SIGN #9

STA. 680+00, 70' Rt.
SIGN AREA - 11'x11.5' = 126.5 Sq. Ft.

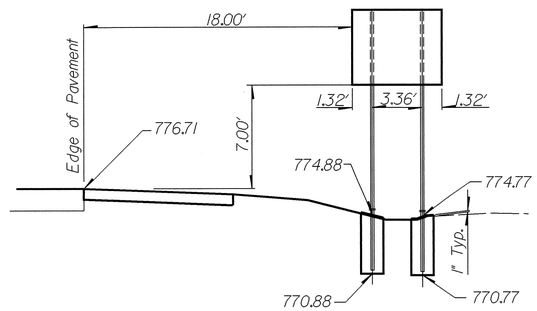
BEAM SUPPORTS
2 - W10x22



SIGN #10

STA. 693+40, 72' Rt.
SIGN AREA - 6'x5' = 30 Sq. Ft.

BREAKAWAY SUPPORTS
2 - S4x7.7



SCALE IN FEET
0 5' 10'

CALCULATED GLW
CHECKED REH

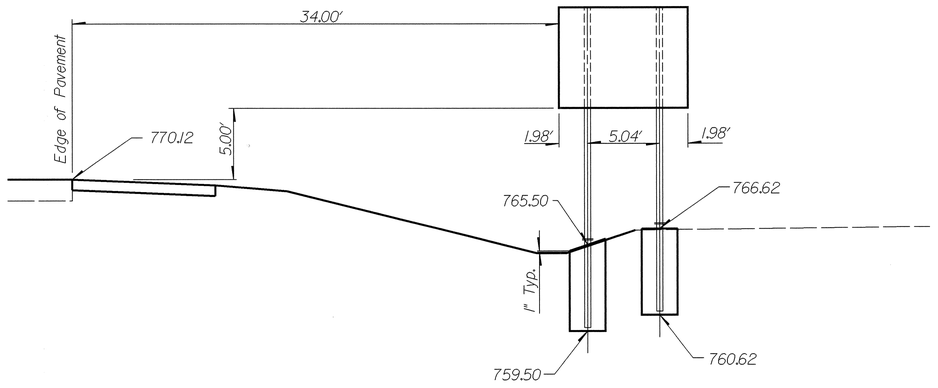
SIGNING

VAN-30-11.24

SIGN #11

STA. 697+40, 70' Rt.
SIGN AREA - 9'x7' = 63 Sq. Ft.

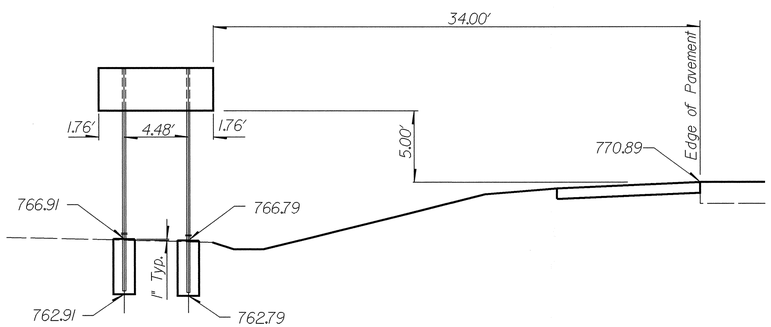
BREAKAWAY SUPPORTS
2 - W10x12



SIGN #13

STA. 715+80, 88' Lt.
SIGN AREA - 8'x3' = 24 Sq. Ft.

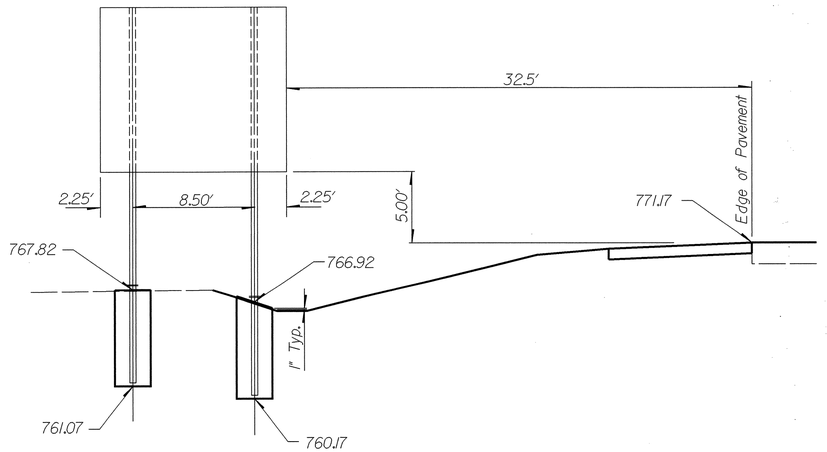
BREAKAWAY SUPPORTS
2 - S4x7.7



SIGN #14

STA. 718+00, 86.5' Lt.
SIGN AREA - 13'x11.5' = 149.5 Sq. Ft.

BREAKAWAY SUPPORTS
2 - W10x22



SCALE IN FEET
0 5' 10'

CALCULATED GLW
CHECKED REH

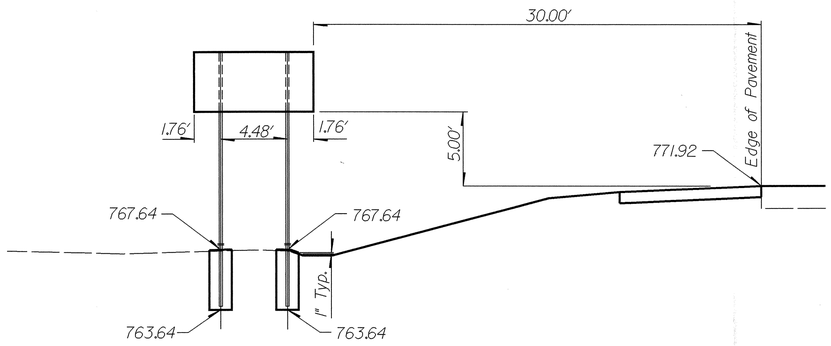
SIGNING

VAN-30-11.24

SIGN #15

STA. 723+28, 84' Lt.
SIGN AREA - 8'x4' = 32 Sq. Ft.

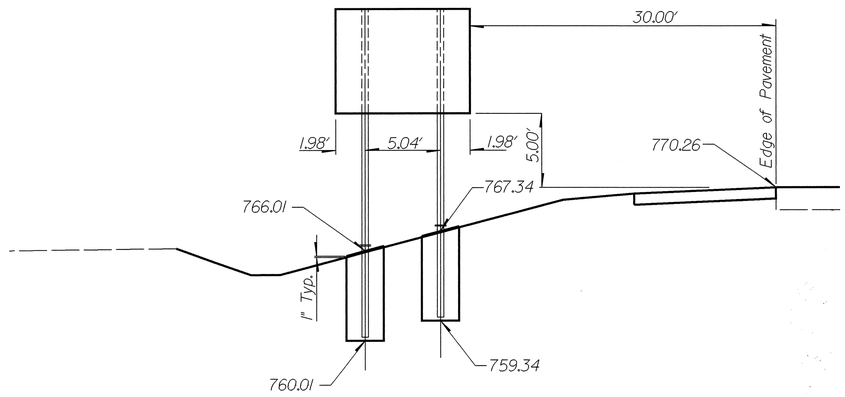
BREAKAWAY SUPPORTS
2 - S4x7.7



SIGN #16

STA. 734+35, 84' Lt.
SIGN AREA - 9'x7' = 63 Sq. Ft.

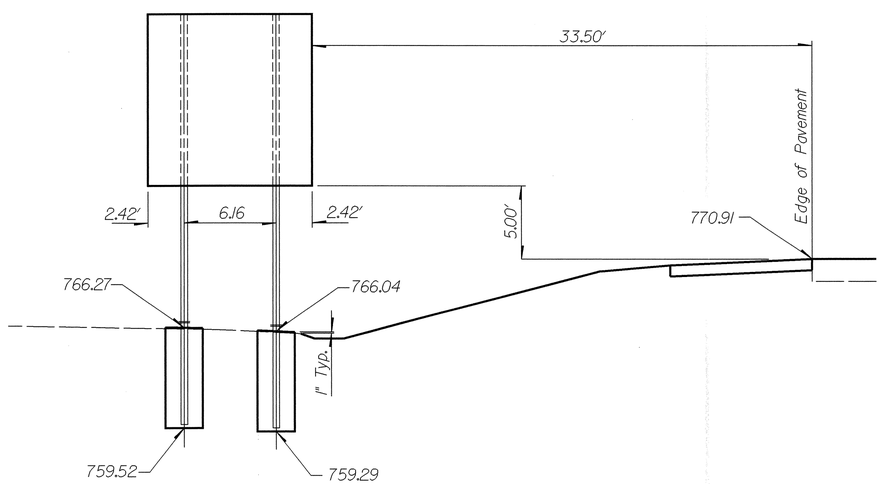
BREAKAWAY SUPPORTS
2 - W10x12



SIGN #17

STA. 756+95, 87.5' Lt.
SIGN AREA - 11'x11.5' = 126.5 Sq. Ft.

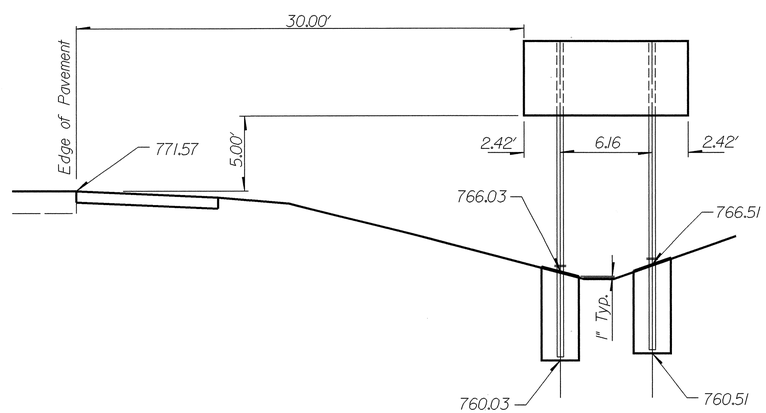
BREAKAWAY SUPPORTS
2 - W10x22



SIGN #18

STA. 795+15, 68' Rt.
SIGN AREA - 11'x5' = 55 Sq. Ft.

BREAKAWAY SUPPORTS
2 - W10x12



SCALE IN FEET
0 5' 10'

CALCULATED GLW
CHECKED REH

SIGNING

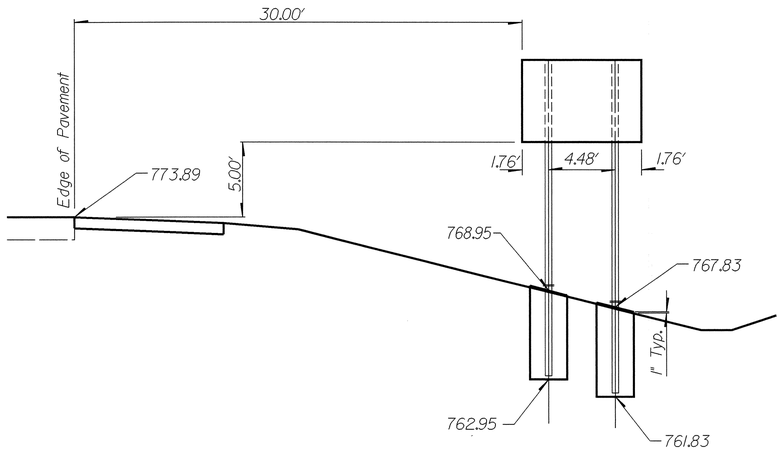
VAN-30-11.24

154
161

SIGN #19

STA. 815+98, 70' Rt.
SIGN AREA - 8'x5.5' = 44 Sq. Ft.

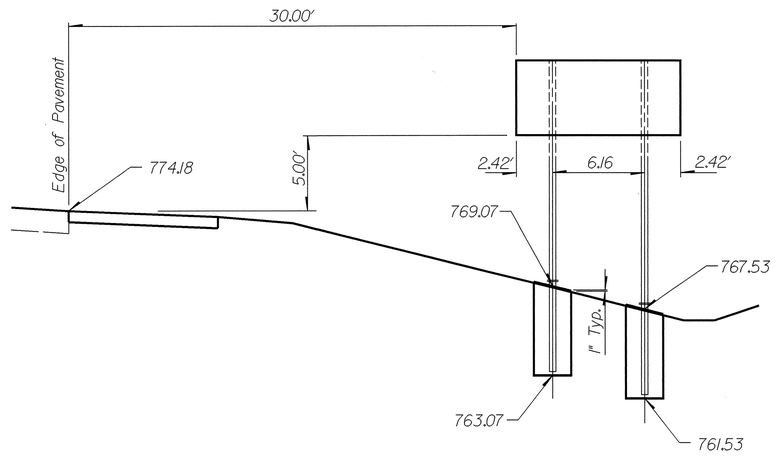
BREAKAWAY SUPPORTS
2 - W10x12



SIGN #20

STA. 821+00, 84' Rt.
SIGN AREA - 11'x5' = 55 Sq. Ft.

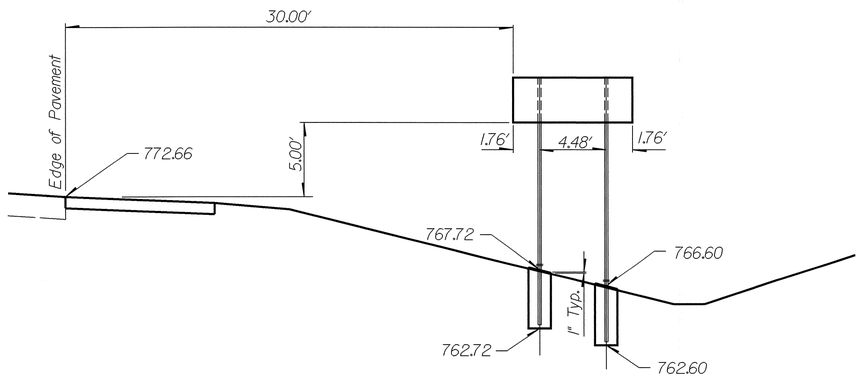
BREAKAWAY SUPPORTS
2 - W10x12



SIGN #21

STA. 831+00, 84' Rt.
SIGN AREA - 8x3' = 24 Sq. Ft.

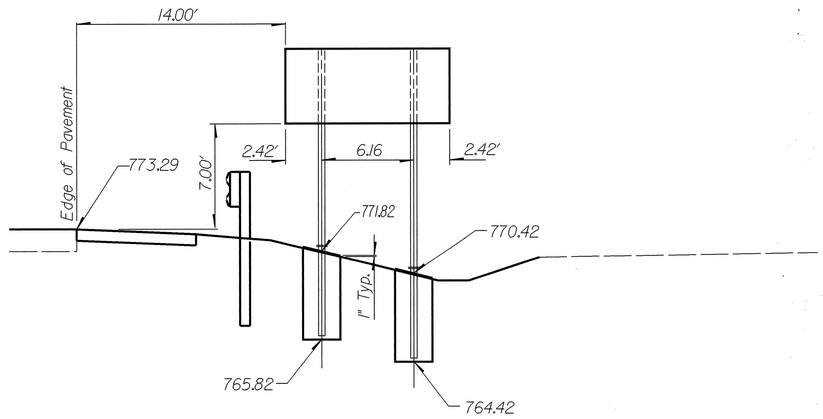
BREAKAWAY SUPPORTS
2 - S4x7.7



SIGN #22

STA. 841+28, 68' Rt.
SIGN AREA - 11'x5' = 55 Sq. Ft.

BEAM SUPPORTS
2 - W10x12



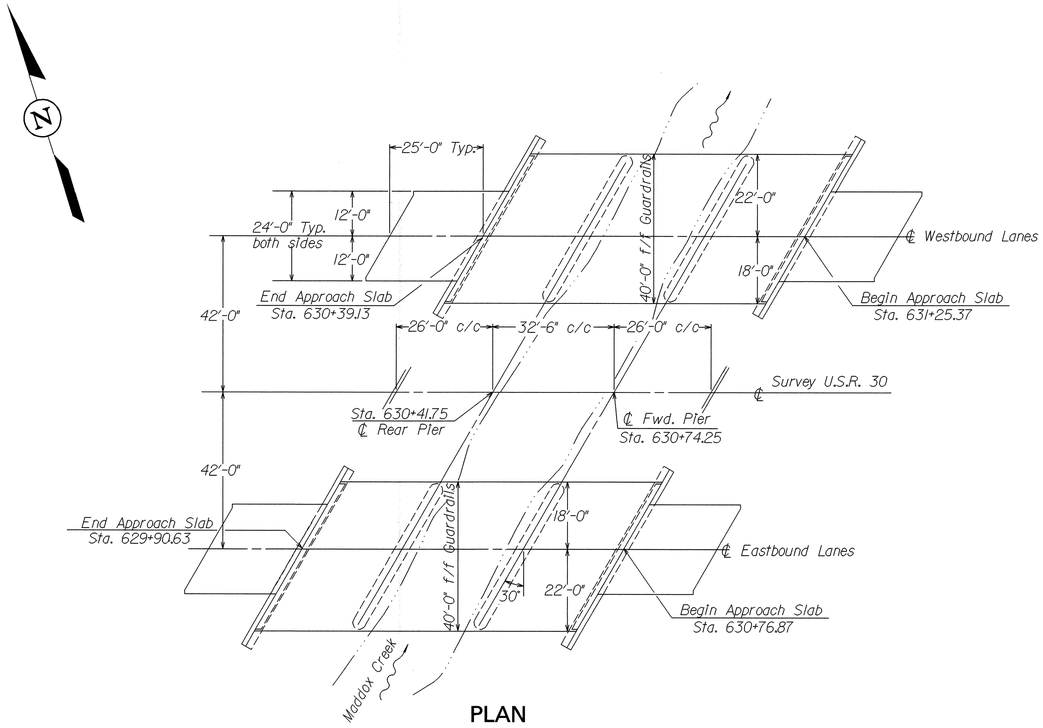
SCALE IN FEET
0 5' 10'

CALCULATED GLW
CHECKED REH

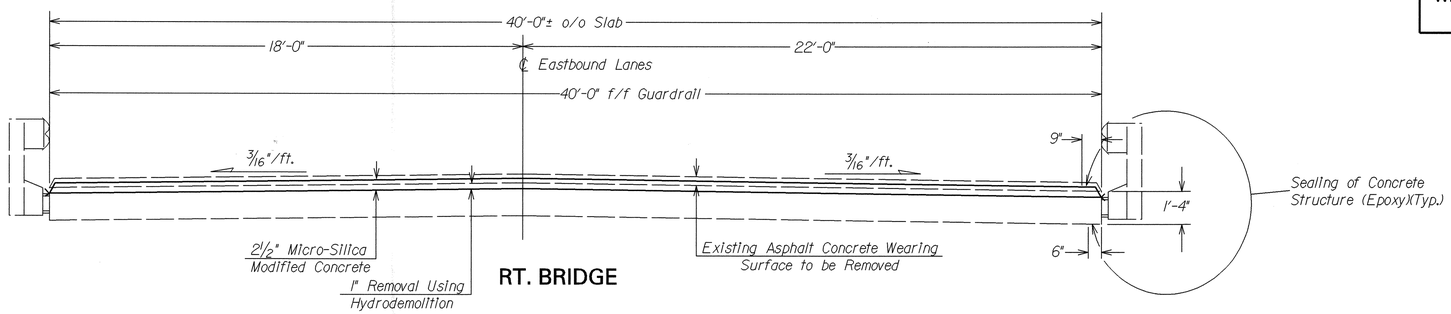
SIGNING

VAN-30-11.24

155
161



PLAN



TRANSVERSE SECTIONS

PROPOSED WORK

1) Remove Existing Asphalt Wearing surface
2) Prepare Deck using hydrodemolition
3) Install Steel Drip Strips
4) Patch Structure
5) Overlay Deck With 2 1/2" Micro-Silica Modified Concrete
6) Seal Concrete Structure (Epoxy)
7) Paint Steel Piers (System EEU)

EXISTING STRUCTURES

TYPE: Continuous Reinf. Concrete Slab with capped pile substructure
SPANS: 26'-32.5'-26'-c/c brgs.
ROADWAY WIDTH: 40'-0" f/f of guardrail
OVERALL WIDTH: 40'-0"
SKEW: 30°-00' L.F.
ALIGNMENT: Tangent
LOADING: HS20-44 & Alternate Military Loading
DATE BUILT: 1965
WEARING SURFACE: Bituminous Asphalt

PROPOSED STRUCTURES

TYPE: Continuous Reinf. Concrete Slab with capped pile substructure
SPANS: 26'-32.5'-26'-c/c brgs.
ROADWAY WIDTH: 40'-0" f/f of guardrail
OVERALL WIDTH: 40'-0"
SKEW: 30°-00' L.F.
ALIGNMENT: Tangent
LOADING: HS20-44 & Alternate Military Loading
WEARING SURFACE: 2 1/2" Micro-Silica Modified Concrete

DESIGN AGENCY
DISTRICT ONE PLANNING & DESIGN DEPARTMENT

REVIEWED KMS DATE 10/5/94
STRUCTURE FILE No. 8100469 & 8100519

DRAWN JRC
REVISED JRC
DESIGNED JRC
CHECKED LAB

VAN WERT COUNTY
Sta. 630+14.88
Sta. 631+01.12

SITE PLAN
Bridge No. VAN-30-1181 L.&R.
over Maddox Creek

VAN-30-11.24

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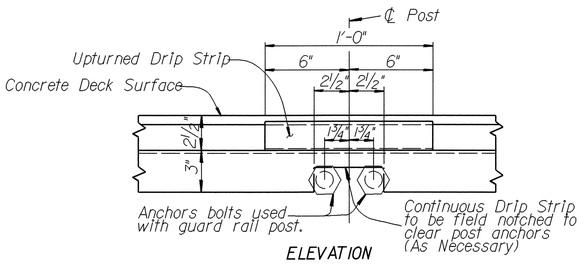
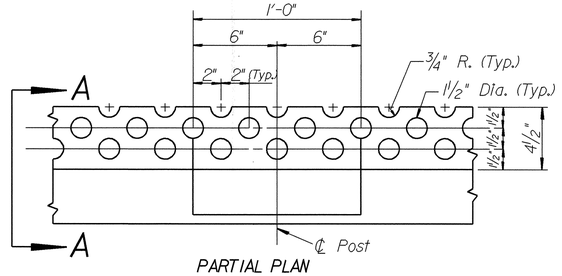
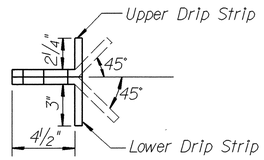
DRIP STRIP DETAIL



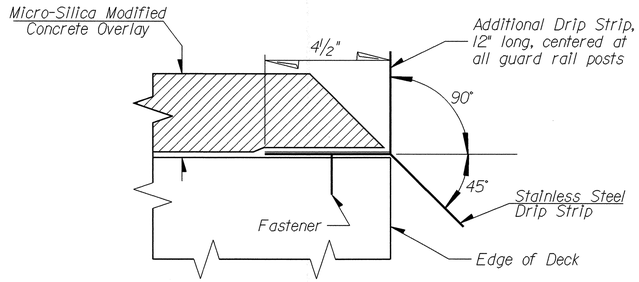
ELEVATION



PARTIAL PLAN



SECTION A-A



GENERAL NOTES

EXISTING STRUCTURE VERIFICATION

Details and dimensions shown on these plans pertaining to the existing structure have been obtained from plans of the existing structure and from field observations and measurements. Consequently, they are indicative of the existing structure and the proposed work but they shall be considered tentative and approximate. The contractor is referred to CMS Sections 102.05 and 105.02.

Contract bid prices shall be based upon a recognition of the uncertainties described above and upon a prebid examination of the existing structure by the contractor. However, all project work shall be based upon actual details and dimensions which have been verified by the contractor in the field.

Copies of the existing bridge plans are on file at the District 1 Office of the Ohio Department of Transportation.

ITEM 202 - WEARING COURSE REMOVED,AS PER PLAN

Payment for this item shall include the removal of the existing steel drip strips and any waterproofing encountered while removing the existing asphalt wearing surface, shall be included under Item 202 - Wearing Course Removed, as per plan.

FIELD PAINTING OF EXISTING STEEL, USING EPOXY AND URETHANE (EEU)

The work to be performed on this item shall consist of the painting of 32 exposed HP12x53 piles. All the piles to be painted are approx. 10'-0" long. Payment for this Item will be in Sq. Ft. and include all necessary labor & materials to complete the item. See Proposal Note.

ITEM SPECIAL - MICRO-SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION

The work to be performed on this item shall consist of removing 1" of the existing concrete deck using hydro-demolition, after the asphalt wearing surface has been removed. Payment for this Item will be in Sq. Ft. and include all necessary labor & materials to complete the item. See Proposal Note for procedures and applications

ITEM SPECIAL - STEEL DRIP STRIP

A bent drip strip shall be installed along the edges of the deck as per plan. The strips shall be fastened at 1'-6" c/c maximum with power driven pins or NO. 10 galvanized screws and expansion anchors, subject to the approval of the engineer. The strips shall be placed the full length of the deck, ending at the face of the abutment wingwall or steel end dam angle. Drip strip panels shall be butted together. The drip strip shall be stainless steel 22 gauge ASTM A167, Type 304, mill finish. Payment shall be at the contract price bid for Item Special, Lin. Ft., Steel Drip Strip, which includes all materials, labor, tools and incidentals necessary to complete the Item. The final pay quantity shall be the actual overall length of the drip strip. Additional strips at posts shall not be measured for payment.

ITEM SPECIAL - PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR

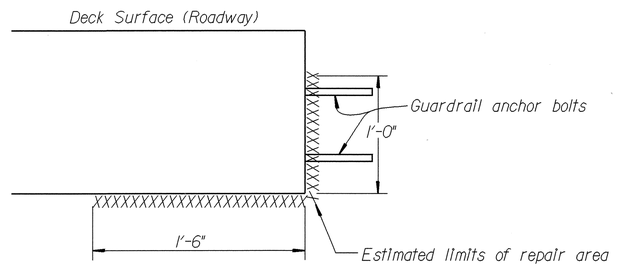
A quantity of 430 Sq. Ft. per structure is included in the estimated quantities for Item Special, Patching Concrete Structure with trowelable mortar. The areas to be patched are the deck edge and bottom of the deck. This area is detailed below. Also included in this item will be a quantity of 20 Sq. Ft. per structure for incidentals and should be used at the engineers discretion. It should also be noted that a large portion of this item will be performed on the horizontal underside of the decks.

ITEM SPECIAL - SEALING CONCRETE SURFACES (EPOXY)

Work to be performed on this Item is to follow the completion of Item 519, Patching of Concrete Structures. The areas to be sealed are as follows: The exposed areas of the wingwalls and abutments also include the sides of the pier caps (leave bottom of pier cap unsealed). Also seal bridge deck edge. See Proposal Note for procedures and applications.

ESTIMATED QUANTITIES RT. & LT. STRUCTURE

ITEM	ABUTMENTS	SUPER-STRUCTURE	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
202		767	202	23501	767	SQ.YD.	WEARING COURSE REMOVED,AS PER PLAN
SPECIAL	295	99	SPECIAL	51267502	394	SQ.YD.	SEALING of CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)
SPECIAL		218	SPECIAL	51425600	218	SQ.FT.	SURFACE PREPARATION (EEU) (SEE PROPOSAL NOTE)
SPECIAL		218	SPECIAL	51425606	218	SQ.FT.	SPOT PRIME [redacted] (EPOXY) (SEE PROPOSAL NOTE)
SPECIAL		218	SPECIAL	51425610	218	SQ.FT.	FULL PRIME [redacted] (EPOXY) (SEE PROPOSAL NOTE)
SPECIAL		218	SPECIAL	51425616	218	SQ.FT.	COMPLETE COAT FINISH (URETHANE) (SEE PROPOSAL NOTE)
SPECIAL		345	SPECIAL	51822300	345	LIN.FT.	STEEL DRIP STRIP
SPECIAL		900	SPECIAL	51911502	900	SQ.FT.	PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR
SPECIAL		767	SPECIAL	51922020	767	SQ.YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY, USING HYDRODEMOLITION (MIN. 2½" THICK) (SEE PROPOSAL NOTE)
SPECIAL		42	SPECIAL	51922100	42	CU.YD.	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VAR. THICKNESS) (SEE PROPOSAL NOTE)
SPECIAL		4	SPECIAL	51922200	4	CU.YD.	FULL-DEPTH REPAIR (SEE PROPOSAL NOTE)
SPECIAL		LUMP	SPECIAL	51922300	LUMP	LUMP	TEST SLAB (SEE PROPOSAL NOTE)



PATCHING DETAIL

DESIGN AGENCY
DISTRICT ONE PLANNING & DESIGN DEPARTMENT

DESIGNED	DRAWN	REVIEWED	DATE	STRUCTURE FILE No.
JRC	JRC	KMS	10/5/94	8100489 & 8100519
CHECKED	REVISED			
LAB	JRC			

GENERAL NOTES & EST. QUANTITIES
Bridge No. VAN-30-1181 L&R.
over Maddox Creek

VAN-30-11.24

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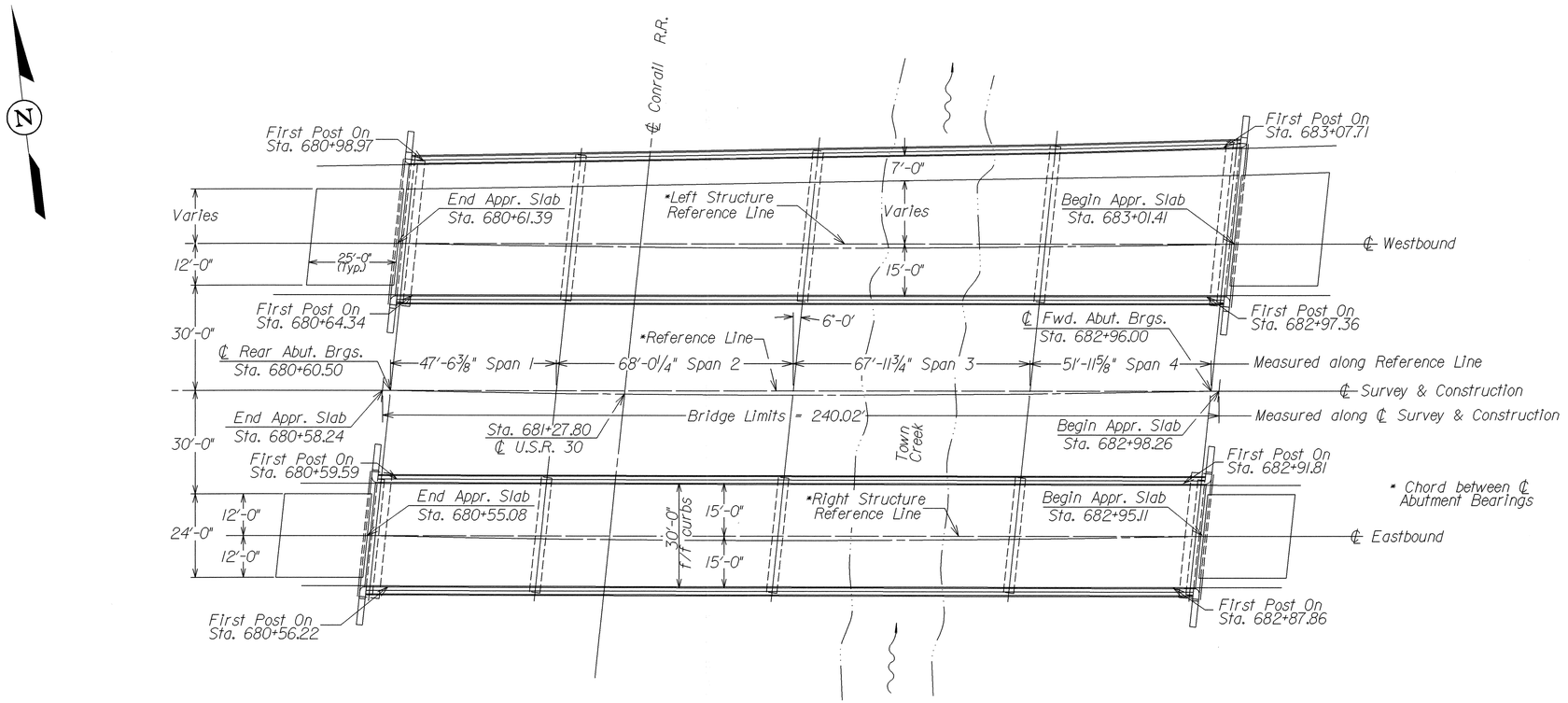
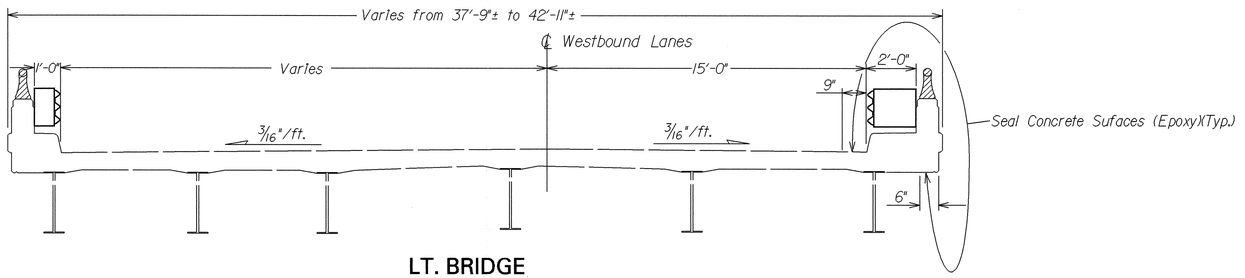
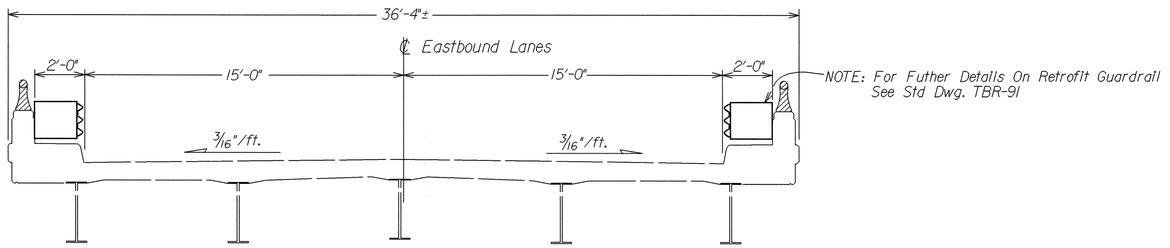




LT. BRIDGE



RT. BRIDGE

TRANSVERSE SECTIONS

PROPOSED WORK

1) Remove Existing Bridge railing
2) Seal Concrete Structure (Epoxy)
3) Install Retrofit Thrie Beam Guardrail To Parapets
4) Paint Structural Steel (System OZEU)
5) Remove existing Joint Sealer
6) Install New Joint Sealer

CURVE DATA

PI STA. 674 + 05.05
Δ_C= 15°-40'-50" Lt.
Dc = 00°-24'
R = 14,323.9'
T = 1,972.4'
L = 3,920.1'
E = 135.16'

EXISTING STRUCTURE

TYPE: Continuous steel beams with Reinf. Conc. deck and substructure
SPANS: 47.5'-68'-68'-52' c/c brgs.
ROADWAY WIDTH: Rt. 30'-0" f/f 2'-0" Curb Lt. Varies
OVERALL WIDTH: Rt. 36'-0" Lt. Varies
SKEW: 6"-0' L.F.
ALIGNMENT: 0"-24' Curve Left
DATE BUILT: 1965
WEARING SURFACE: 1¼" Latex Modified Conc.
LOADING: HS20-44 & Alternate Military Loading
APPROACH SLAB: AS-1-54 (25' Long)
SUPERELEVATION: None

PROPOSED STRUCTURE

TYPE: Continuous steel beams with Reinf. Conc. deck and substructure
SPANS: 47.5'-68'-68'-52' c/c brgs.
ROADWAY WIDTH: Rt. 30'-0" f/f 2'-0" Curb Lt. Varies
OVERALL WIDTH: Rt. 36'-0" Lt. Varies
SKEW: 6"-0' L.F.
ALIGNMENT: 0"-24' Curve Left
DATE BUILT: 1965
WEARING SURFACE: 1¼" Latex Modified Conc.
LOADING: HS20-44 & Alternate Military Loading
APPROACH SLAB: AS-1-54 (25' Long)
SUPERELEVATION: None

Item 202 - Bridge Railing Removed For Storage

DESIGN AGENCY
DISTRICT ONE PLANNING & DESIGN DEPARTMENT

DESIGNED	DRAWN	REVIEWED	DATE
JRC	JRC	KMS	10/5/94
CHECKED	REVISED	STRUCTURE FILE No.	
LAB	JRC	8100543 & 8100578	

VAN WERT COUNTY
Sta. 680+58.24
Sta. 682+98.26

SITE PLAN

Bridge No. VAN-30-1276 L&R. over Conrail R.R. & Town Creek

VAN-30-11.24

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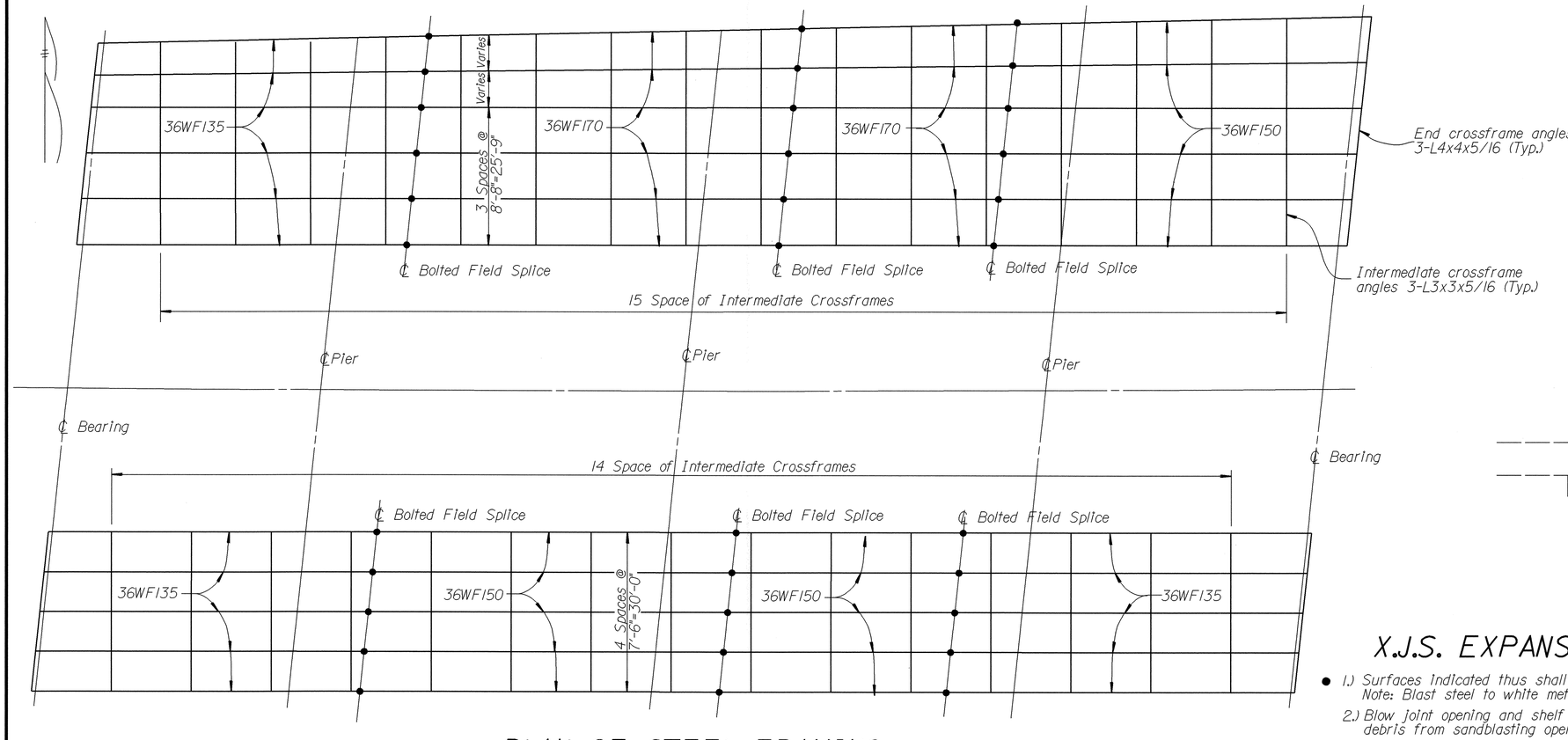
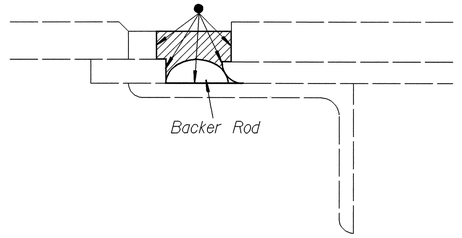


PLAN OF STEEL FRAMING



X.J.S. EXPANSION JOINT SEAL DETAIL

- 1.) Surfaces indicated thus shall be sandblasted to remove all surface Contamination. Note: Blast steel to white metal.
- 2.) Blow joint opening and shelf with oil-free compressed air to remove laitance and debris from sandblasting operation.
- 3.) Prime faces of joint with a light coating of DOW CORNING 1205 Primer and allow to dry.
- 4.) Place an appropriatly sized backer rod to the correct depth (1 to 1¼") in the joint opening.
- 5.) Mix and place DOW CORNING 902 RCS Joint Sealant per manufacturer's directions in joint opening.

Cost of removing existing joint sealer, cleaning the steel, furnishing and placing the new joint sealer shall all be included in the cost of Item Special, Joint Sealer, Misc. (X.J.S. Expansion Joint System)

* 100% State Funds ESTIMATED QUANTITIES RT. & LT. STRUCTURE

ITEM	ABUTMENTS	SUPER-STRUCTURE	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
202		943	202	38600	943	LIN.FT.	BRIDGE RAILING REMOVED FOR STORAGE
SPECIAL	189	1042	SPECIAL	51267502	1231	SQ.YD.	SEALING of CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)
SPECIAL		28033	SPECIAL	51400050	28033	SQ.FT.	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU (SEE PROPOSAL NOTE)
SPECIAL		28033	SPECIAL	51400056	28033	SQ.FT.	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
SPECIAL		28033	SPECIAL	51400060	28033	SQ.FT.	FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
SPECIAL		28033	SPECIAL	51400066	28033	SQ.FT.	FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU (SEE PROPOSAL NOTE)
SPECIAL	142*		SPECIAL	51614600	142*	LIN.FT.	JOINT SEALER, MISC. (X.J.S. EXPANSION JOINT SYSTEM)
517		931	517	73008	931	LIN.FT.	RAILING (THRIE BEAM RAIL), MISC.

GENERAL NOTES

EXISTING STRUCTURE VERIFICATION

Details and dimensions shown on these plans pertaining to the existing structure have been obtained from plans of the existing structure and from field observations and measurements. Consequently, they are indicative of the existing structure and the proposed work but they shall be considered tentative and approximate. The contractor is referred to CMS Sections 102.05, 105.02 and 513.02.

Contract bid prices shall be based upon a recognition of the uncertainties described above and upon a prebid examination of the existing structure by the contractor. However, all project work shall be based upon actual details and dimensions which have been verified by the contractor in the field.

Copies of the existing bridge plans are on file at the District 1 Office of the Ohio Department of Transportation.

STANDARD DRAWINGS:

TBR-91 DATED 4-24-92

ITEM SPECIAL - SEALING CONCRETE SURFACES (EPOXY)

Work to be performed on this item is to follow the completion of Item 519, Patching of Concrete Structures. The areas to be sealed are as follows: The exposed areas of the wingwalls and abutments also include the sides of the pier caps (leave bottom of pier cap unsealed). Also seal edge of bridge deck and parapets. See Proposal Note for procedures and applications.

ITEM SPECIAL - JOINT SEALER, MISC. (X.J.S. EXPANSION JOINT SYSTEM)

The work involved in the placement of this joint system shall follow the manufacturer's specifications and recommendations. The material and specifications for this joint system may be obtained from ALL STATE Caulking Supply Company, 1086 Ridge Street, Columbus, OH. 43215 (614)486-6449.

DESIGN AGENCY
DISTRICT ONE PLANNING & DESIGN DEPARTMENT

DESIGNED	DRAWN	REVIEWED	DATE
JRC	JRC	KMS	10/5/94
CHECKED	REVISED	STRUCTURE FILE No.	
LAB	JRC	800489 & 800519	

GENERAL NOTES & EST. QUANTITIES
Bridge No. VAN-30-1289 L&R.
over Conrail R.R. & Town Creek

VAN-30-11.24

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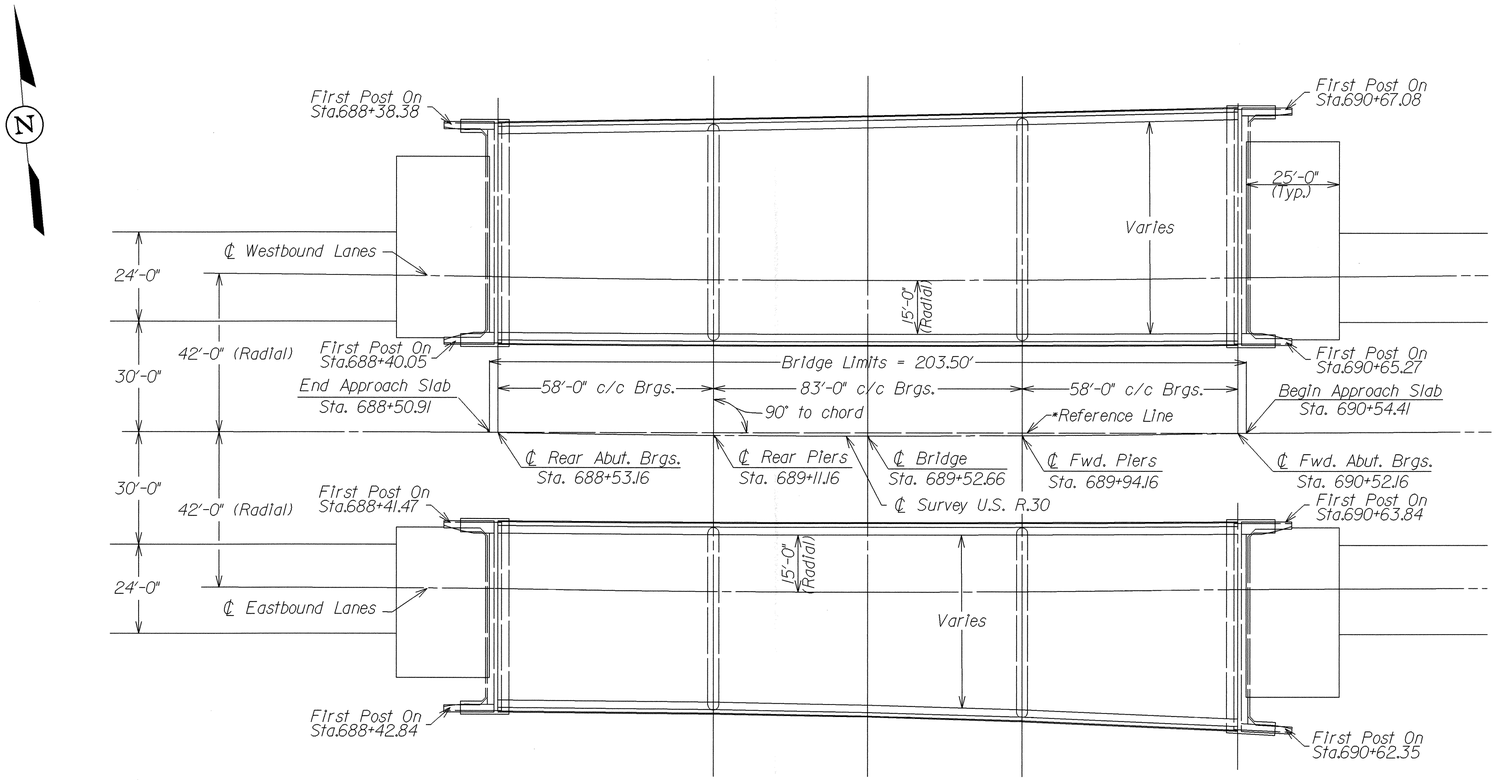
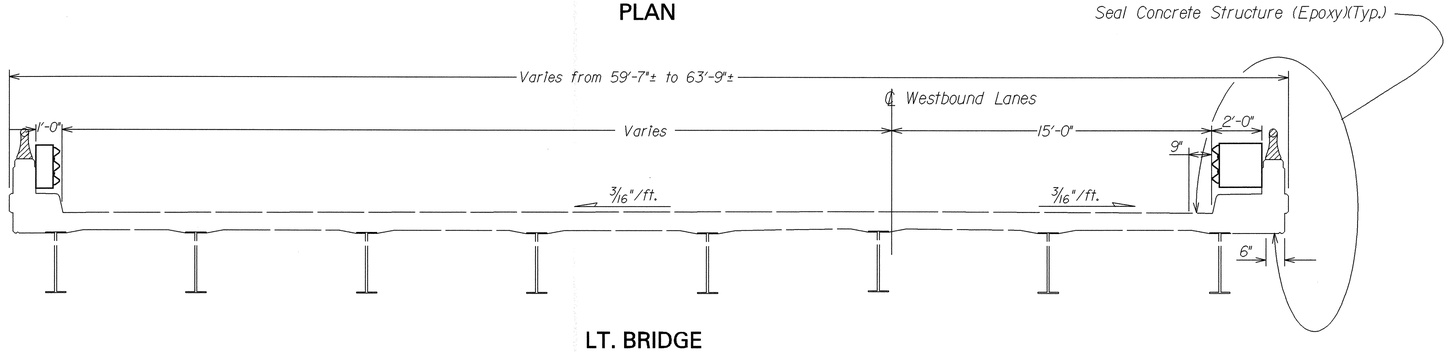
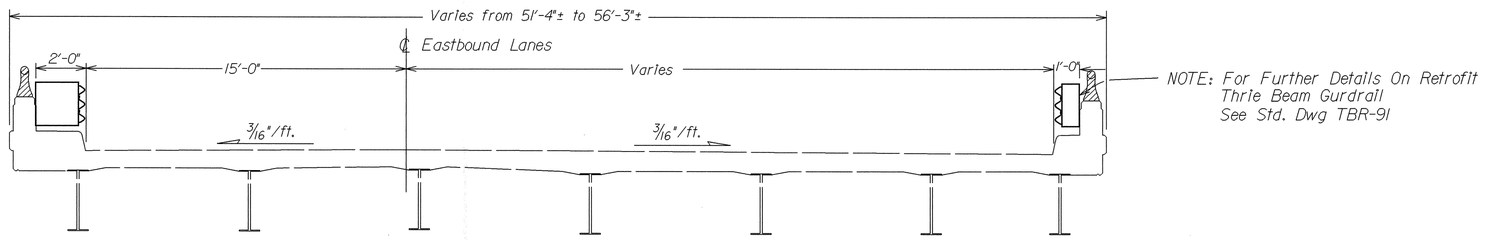


PLAN



LT. BRIDGE



NOTE: For Further Details On Retrofit Thrie Beam Gurdrail See Std. Dwg TBR-91

RT. BRIDGE

TRANSVERSE SECTIONS

PROPOSED WORK

1) Remove Bridge Railing
2) Seal Concrete Structure (Epoxy)
3) Install Retrofit Thrie Beam Guardrail To Parapets
4) Remove Existing Joint Sealer
5) Install New Joint Sealer

CURVE DATA

PI STA. 674 + 05.05
Δ_C= 15°-40'-50 " Lt.
Dc = 00°-24'
R = 14,323.9'
T = 1,972.4'
L = 3,920.1'
E = 135.16'

EXISTING STRUCTURE

TYPE: Continuous steel beams with Reinf. Conc. deck and substructure
SPANS: 58'-83'-58' c/c brgs.
ROADWAY WIDTH: Rt. & Lt. Varies
OVERALL WIDTH: Rt. & Lt. Varies
SKEW: None
ALIGNMENT: 0°-24' Curve Left
DATE BUILT: 1965
WEARING SURFACE: 1 1/4" Latex Modified Conc.
LOADING: HS20-44 & Alternate Military Loading
APPROACH SLAB: AS-1-54 (25' Long)
SUPERELEVATION: None

PROPOSED STRUCTURE

TYPE: Continuous steel beams with Reinf. Conc. deck and substructure
SPANS: 58'-83'-58' c/c brgs.
ROADWAY WIDTH: Rt. & Lt. Varies
OVERALL WIDTH: Rt. & Lt. Varies
SKEW: None
ALIGNMENT: 0°-24' Curve Left
DATE BUILT: 1965
WEARING SURFACE: 1 1/4" Latex Modified Conc.
LOADING: HS20-44 & Alternate Military Loading
APPROACH SLAB: AS-1-54 (25' Long)
SUPERELEVATION: None

Item 202 - Bridge Railing remved For Storage

DESIGN AGENCY
DISTRICT ONE PLANNING & DESIGN DEPARTMENT

DESIGNED	DRAWN	REVIEWED	DATE
JRC	JRC	KMS	10/5/94
CHECKED	REVISED	STRUCTURE FILE No.	
LAB	JRC	8100608 & 8100632	

VAN WERT COUNTY
Sta. 688+50.91
Sta. 690+52.16

SITE PLAN

Bridge No. VAN-30-1292 L&R. over U.S. R. 127

VAN-30-11.24

GENERAL NOTES

EXISTING STRUCTURE VERIFICATION

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ITEM SPECIAL - JOINT SEALER, MISC. (X.J.S. EXPANSION JOINT SYSTEM)

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ITEM SPECIAL - SEALING CONCRETE SURFACES (EPOXY)

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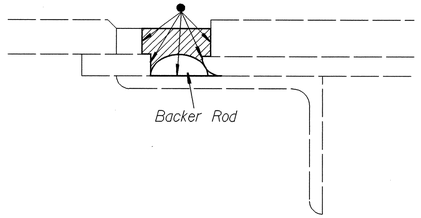
STANDARD DRAWINGS:

TBR-91 DATED 4-24-92



X.J.S. EXPANSION JOINT SEAL DETAIL

- 1.) Surfaces indicated thus shall be sandblasted to remove all surface Contamination. Note: Blast steel to white metal.
- 2.) Blow joint opening and shelf with oil-free compressed air to remove laitance and debris from sandblasting operation.
- 3.) Prime faces of joint with a light coating of DOW CORNING 1205 Primer and allow to dry.
- 4.) Place an appropriatly sized backer rod to the correct depth (1 to 1¼") in the joint opening.
- 5.) Mix and place DOW CORNING 902 RCS Joint Sealant per manufacturer's directions in joint opening.

Cost of removing existing joint sealer, cleaning the steel, furnishing and placing the new joint sealer shall all be included in the cost of Item Special, Joint Sealer, Misc. (X.J.S. Expansion Joint System)

* 100% State Funds

ESTIMATED QUANTITIES RT. & LT. STRUCTURE

ITEM	ABUTMENTS	SUPER-STRUCTURE	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
202		900	202	38600	900	LIN.FT.	BRIDGE RAILING REMOVED FOR STORAGE
SPECIAL	72	829	SPECIAL	51267502	901	SQ.YD.	SEALING of CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE)
SPECIAL	210*		SPECIAL	51614600	210*	LIN.FT.	JOINT SEALER, MISC. (X.J.S. EXPANSION JOINT SYSTEM)
517		893	517	73008	893	LIN.FT.	RAILING (THRIE BEAM RAIL) MISC.

DESIGN AGENCY
DISTRICT ONE PLANNING & DESIGN DEPARTMENT

DESIGNED	DRAWN	REVIEWED	DATE
JRC	JRC	KMS	10/5/94
CHECKED	REVISED	STRUCTURE FILE No.	
LAB	JRC	8100608 & 8100632	

GENERAL NOTES & EST. QUANTITIES
Bridge No. VAN-30-1292 L&R.
over U.S.R. 127

VAN-30-11.24

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