

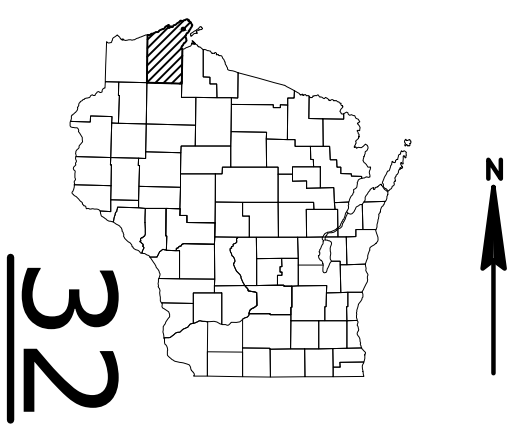
SUP  
PROJECT ID: 8510-02-76  
WITH:  
COUNTY: BAYFIELD

JANUARY 2018

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right of Way Plat
<del>Section No. 5</del>	<del>Plan and Profile</del>
Section No. 6	Standard Detail Drawings
<del>Section No. 7</del>	<del>Sign Plates</del>
<del>Section No. 8</del>	<del>Structure Plans</del>
Section No. 9	Computer Earthwork Data
Section No. 9	Cross Sections

TOTAL SHEETS = 40



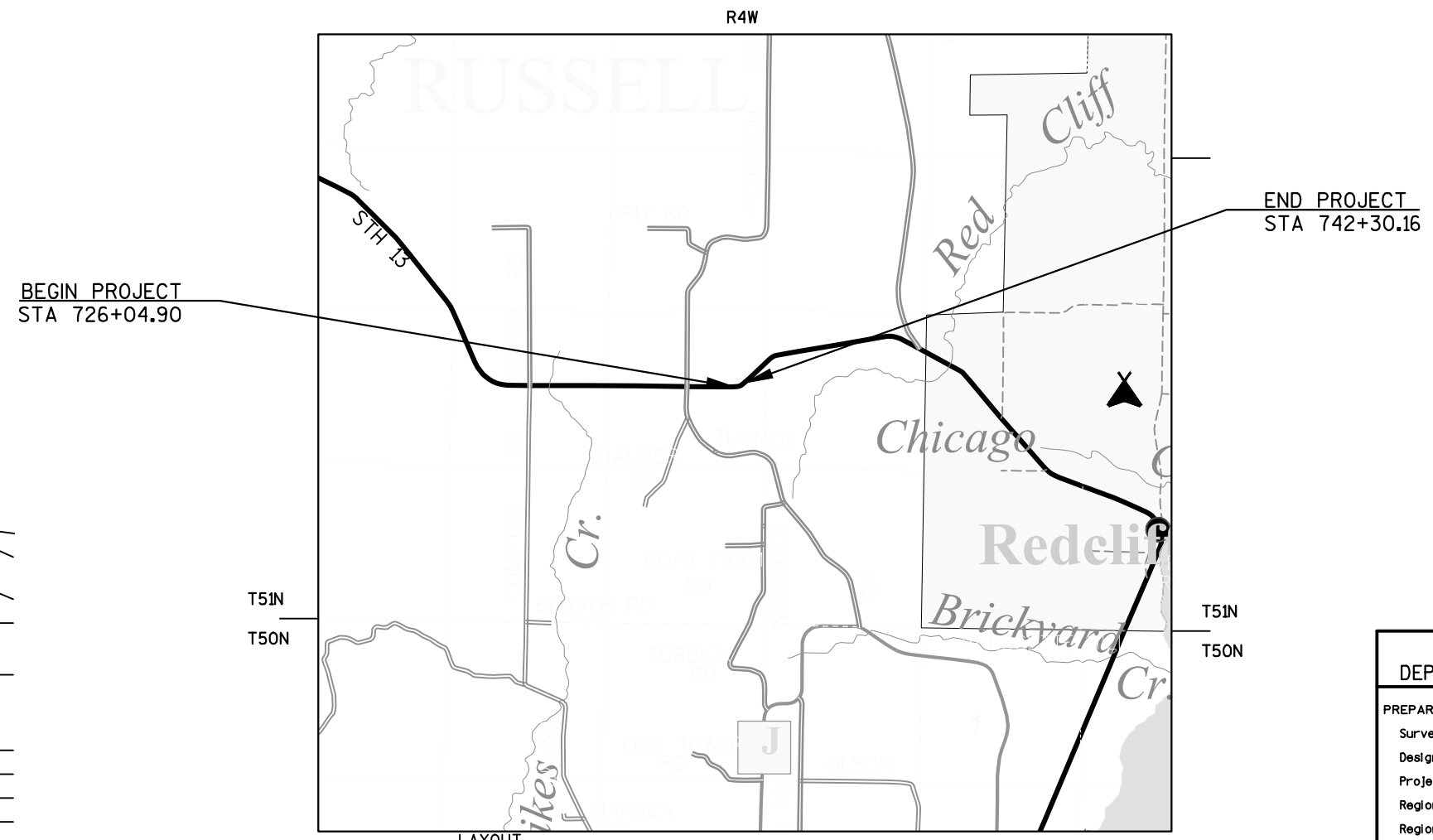
DESIGN DESIGNATION 8510-02-06

A.A.D.T.	2018	=	560
A.A.D.T.	2038	=	680
D.H.V.		=	135
D.D.		=	61/39
T.		=	21.2
DESIGN SPEED		=	60 MPH
ESALS		=	140,000

CONVENTIONAL SYMBOLS	
PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
	STORM SEWER
	TELEPHONE
	WATER
MARSH AREA	UTILITY PEDESTAL
	POWER POLE
WOODED OR SHRUB AREA	TELEPHONE POLE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
PLAN OF PROPOSED IMPROVEMENT  
**BAYFIELD - CORNUCOPIA**  
0.47 MI S TURNER RD - 0.15 MI S TURNER RD  
**STH 13**  
**BAYFIELD**

STATE PROJECT NUMBER
8510-02-76



LAYOUT  
SCALE 0 1 MILE  
TOTAL NET LENGTH OF CENTERLINE = 0.308 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, BAYFIELD COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.


STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8510-02-76	WISC 2018064	1

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	
Surveyor	COLEMAN ENGINEERING
Designer	TRAVIS JENSEN
Project Manager	PHIL KEPPERS
Regional Examiner	JENNIFER OLDENBURG
Regional Supervisor	DAVE OSTROWSKI
APPROVED FOR THE DEPARTMENT	
DATE: 11/1/2017	<i>Phil Keppers</i> (Signature)

COMMON ABBREVIATIONS

ABUT.	ABUTMENT
AGG.	AGGREGATE
AH.	AHEAD
APPROX.	APPROXIMATE
A.E.W.	APRON ENDWALL
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
AZ.	AZIMUTH
BK.	BACK
BEG.	BEGIN
B.M.	BENCH MARK
C/L	CENTER LINE
CONC.	CONCRETE
CONST.	CONSTRUCTION
CO.	COUNTY
C.T.H.	COUNTY TRUNK HIGHWAY
X-SEC.	CROSS SECTION
CR.	CRUSHED
CFS	CUBIC FEET/SECOND
C.Y., CU. YD.	CUBIC YARD
CULV.	CULVERT
C.P.	CULVERT PIPE
D.O.T.	DEPARTMENT OF TRANSPORTATION
D.H.V.	DESIGN HOUR VOLUME
DIA.	DIAMETER
D.	DIRECTIONAL DISTRIBUTION
DISCH. OR DIS.	DISCHARGE
EA.	EACH
ELECT.	ELECTRIC
EL. OR ELEV.	ELEVATION
EMB.	EMBANKMENT
E.B.S.	EXCAVATION BELOW SUBGRADE
EXIST.	EXISTING
FERT.	FERTILIZE
F.E.	FIELD ENTRANCE
FIN.	FINISHED
FT.	FOOT
F.L.	FLOW LINE
GA.	GAUGE
HORIZ.	HORIZONTAL
CWT.	HUNDREDWEIGHT
INL.	INLET
LT.	LEFT
L.H.F.	LEFT-HAND FORWARD
LIN.	LINEAR
LIN. FT.	LINEAR FOOT
L.S.	LUMP SUM
MAX.	MAXIMUM
MI.	MILE
MISC.	MISCELLANEOUS
N.E.	NORTH EAST
N.W.	NORTH WEST
PAV'T	PAVEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
P.O.T.	POINT ON TANGENT
LB.	POUND
P.E.	PRIVATE ENTRANCE
PROJ.	PROJECT
R.	RANGE
REQ'D	REQUIRED
RT.	RIGHT
R.H.F.	RIGHT-HAND FORWARD
R/W	RIGHT OF WAY
RD.	ROAD
SHR.	SHRINKAGE
SL.	SLOPE
STD.	STANDARD
S.D.D.	STANDARD DETAIL DRAWINGS
S.T.H.	STATE TRUNK HIGHWAY
STA.	STATION
S.P.P.A.	STRUCTURAL PLATE PIPE ARCH
STRUCT.	STRUCTURE
SURF.	SURFACE
TEL.	TELEPHONE
TN.	TOWN
T.	TRUCKS (PERCENT OF)
UNCL.	UNCLASSIFIED
U.G.	UNDERGROUND
V.	VELOCITY OR DESIGN SPEED
V.C.	VERTICAL CURVE



Dial  or (800)242-8511

www.DiggersHotline.com

WISDOT RR COORDINATOR  
WISDOT RAILROAD COORDINATOR  
1701 NORTH 4TH STREET  
SUPERIOR, WI 54880  
ATTN: ANNA DAVEY  
(715) 392-7960

DNR CONTACT  
WISCONSIN DEPARTMENT OF NATURAL RESOURCES  
NORTHWEST REGION  
810 WEST MAPLE STREET  
SPOONER, WI 54801  
ATTN: SHAWN HASELEU  
(715) 635-4228

DESIGN CONTACT  
WISCONSIN DEPARTMENT OF TRANSPORTATION  
NORTHWEST REGION  
1701 NORTH 4TH STREET  
SUPERIOR, WI 54880  
ATTN: TRAVIS JENSEN  
(715) 395-3025

REGION CONTACT  
WISCONSIN DEPARTMENT OF TRANSPORTATION  
NORTHWEST REGION  
1701 NORTH 4TH STREET  
SUPERIOR, WI 54880  
ATTN: PHIL KEPPERS  
(715) 395-3027

COUNTY CONTACT  
BAYFIELD COUNTY HIGHWAY DEPARTMENT  
311 S. FIRST AVE. E.  
P.O. BOX 428  
WASHBURN, WI 54891  
ATTN: THOMAS TOEPFER, HIGHWAY COMMISSIONER  
(715) 373-6115

SURVEY CONSULTANT CONTACT  
COLEMAN ENGINEERING COMPANY  
635 CIRCLE DRIVE  
IRON MOUNTAIN, MI 49801  
(906) 774-3440

UTILITIES				
	UTILITY OR MUNICIPALITY	ADDRESS	CONTACT	UTILITY TYPE
*	CENTURY LINK	P.O BOX 181, 9228 E EVERGREEN RD, SOLON SPRINGS, WI 54873	ALAN NICKELL (715) 378-2131 ALAN.NICKELL@CENTURYLINK.COM	COMMUNICATION LINE
*	BAYFIELD ELECTRIC COOPERATIVE	P.O. BOX 68, IRON RIVER, WI, 54847	GARY TARASEWICZ (715) 372-4287 GARY.TARASEWICZ@BAYFIELDELECTRIC.COM	ELECTRIC
*	MEMBER OF DIGGERS HOTLINE			

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT FOR AREAS WITHIN FINISHED SHOULDER POINT, SHALL BE FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER. SEED MIXTURE NO. 10 SHALL BE USED THROUGHOUT THE PROJECT.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION. THE LOCATION OF EBS SHALL BE DETERMINED BY THE ENGINEER.

THE LOCATIONS OF UTILITY FACILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

SILT FENCE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

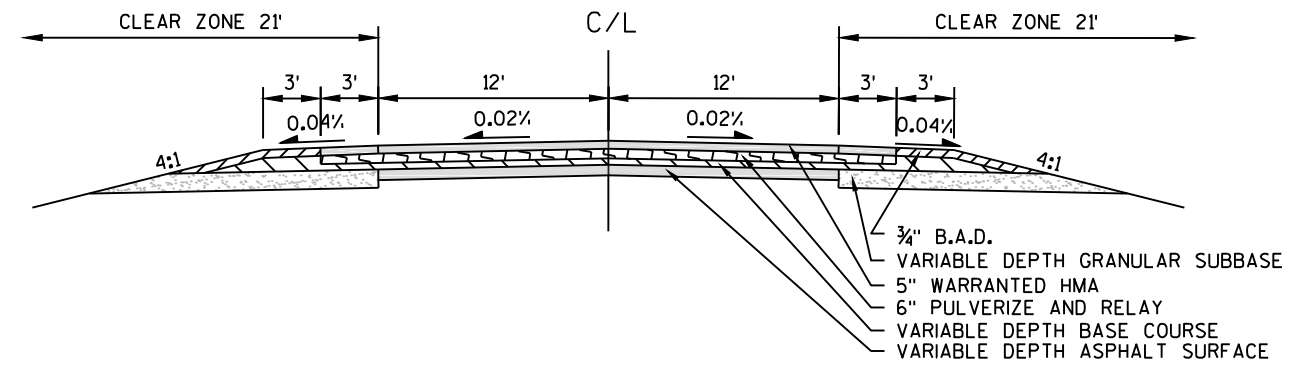
A SAWED JOINT WILL BE REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

DETAILS OF CONSTRUCTION NOT SHOWN SHALL BE IN ACCORDANCE WITH THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

OTHER WETLANDS MAY EXIST IN LOCATIONS THAT ARE NOT SHOWN ON THE PLANS. DO NOT STAGE IN OR DISTURB WETLAND AREAS.

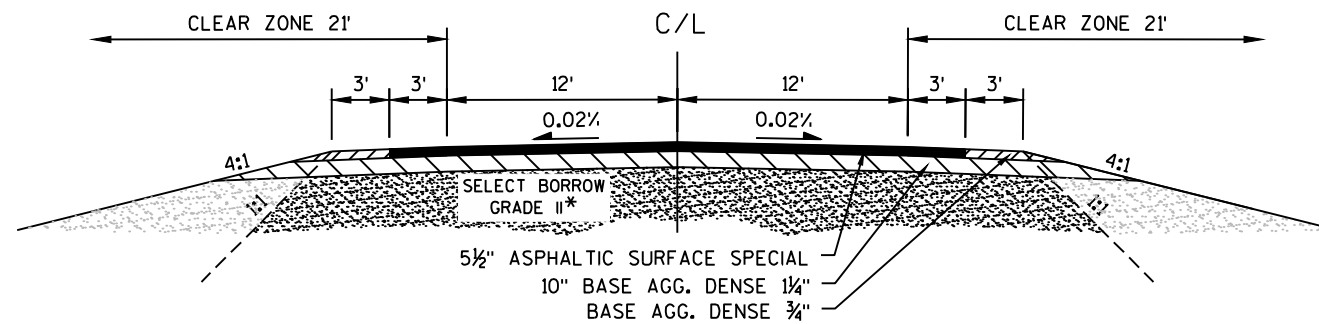
CONSTRUCTION PERMITS FOR DRIVEWAY CONSTRUCTION HAVE BEEN OBTAINED AND SUCH RIGHTS WILL BE EXTENDED TO THE CONTRACTOR.

VERTICAL DATUM ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO NGVD88(2012).



TYPICAL EXISTING SECTION STH 13

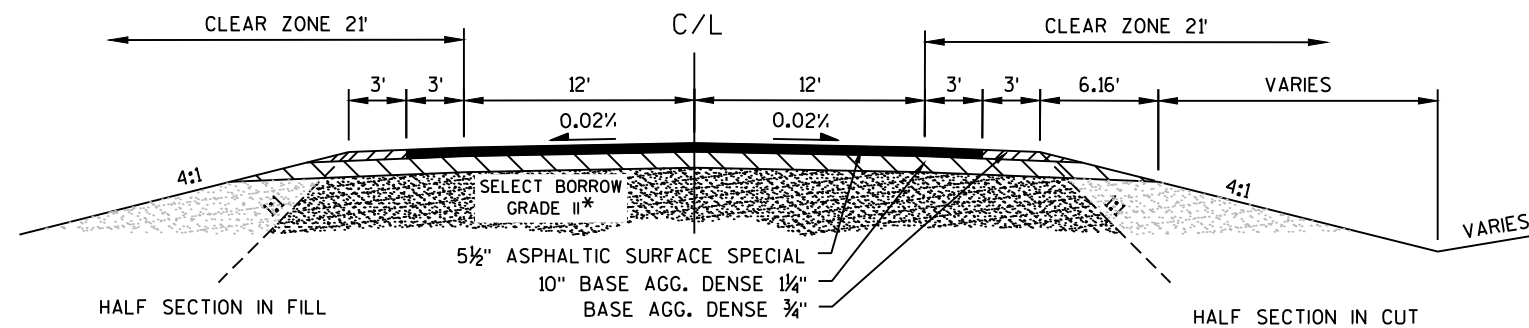
STA 727+17.21 TO STA 740+86.98



TYPICAL PROPOSED SECTION STH 13

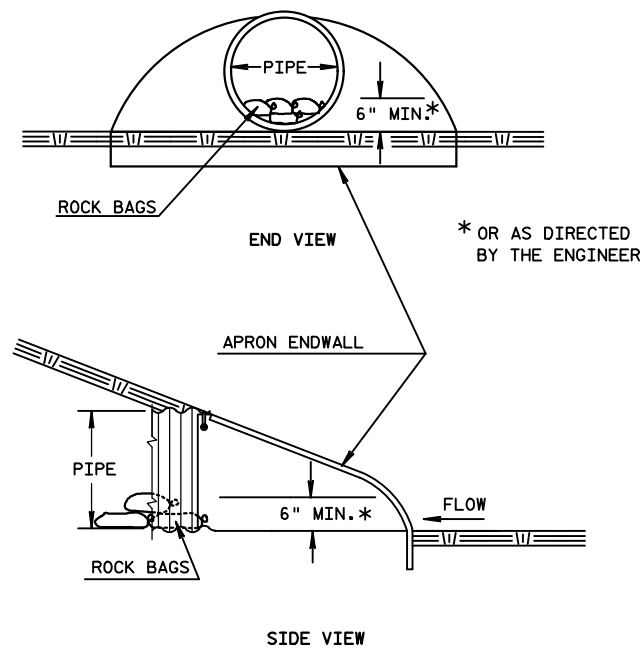
STA 726+04.90 TO STA 730+00.00  
STA 737+50.00 TO STA 742+30.16

\*EXCAVATED MATERIALS MAY BE PLACED OUTSIDE OF THE ROADBED 1:1. GRADE II SELECT BORROW SHALL BE PLACED WITHIN THE ROADBED 1:1. DURING CONSTRUCTION, CONTRACTOR AND ENGINEER SHALL DETERMINE WHETHER EXISTING MATERIAL MEETS GRADE II SELECT BORROW. IF EXISTING MATERIAL IS ACCEPTABLE, IT MAY BE PLACED WITHIN ROADBED 1:1



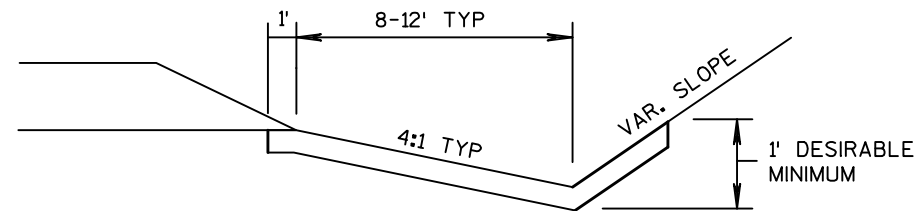
TYPICAL PROPOSED SECTION STH 13

STA 730+00.00 TO STA 737+50.00



CULVERT PIPE CHECK

STA: 730+30R  
730+35L  
733+80R



EROSION MAT DETAIL FOR DITCHES

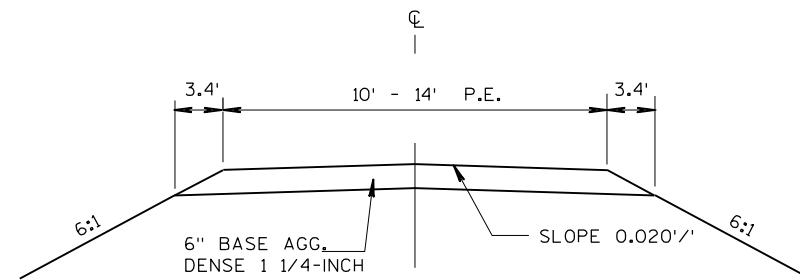
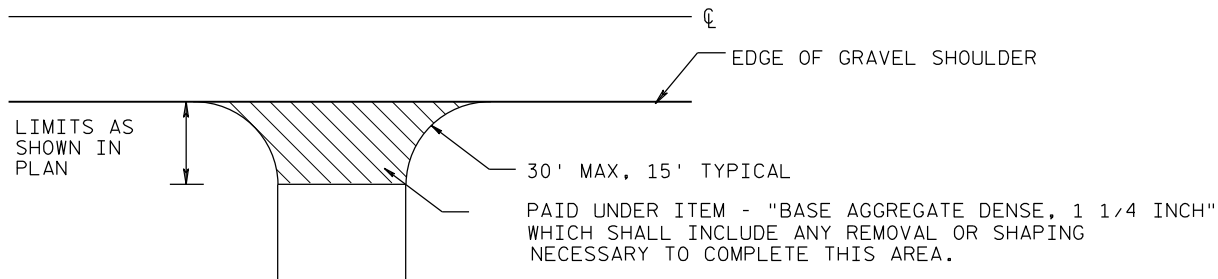
STA: 730+19.61L - 732+00.36L  
STA: 730+19.61R - 736+25.72R  
STA: 734+69.93L - 738+50.04L

RUNOFF COEFFICIENT TABLE

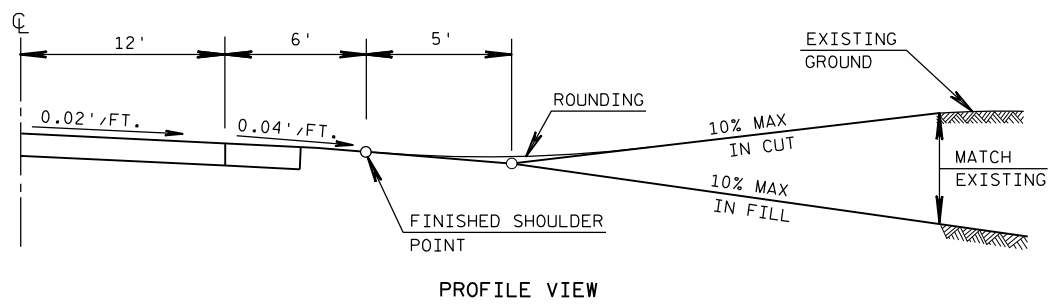
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP-TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE-TURF			.25			.27			.28			.30
			.32			.34			.36			.38
PAVEMENT:												
ASPHALT						.70 - .95						
CONCRETE						.80 - .95						
BRICK						.70 - .80						
DRIVES, WALKS						.75 - .85						
ROOFS						.75 - .95						
GRAVEL ROADS, SHOULDERS						.40 - .60						

TOTAL PROJECT AREA = 5 ACRES  
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 5 ACRES

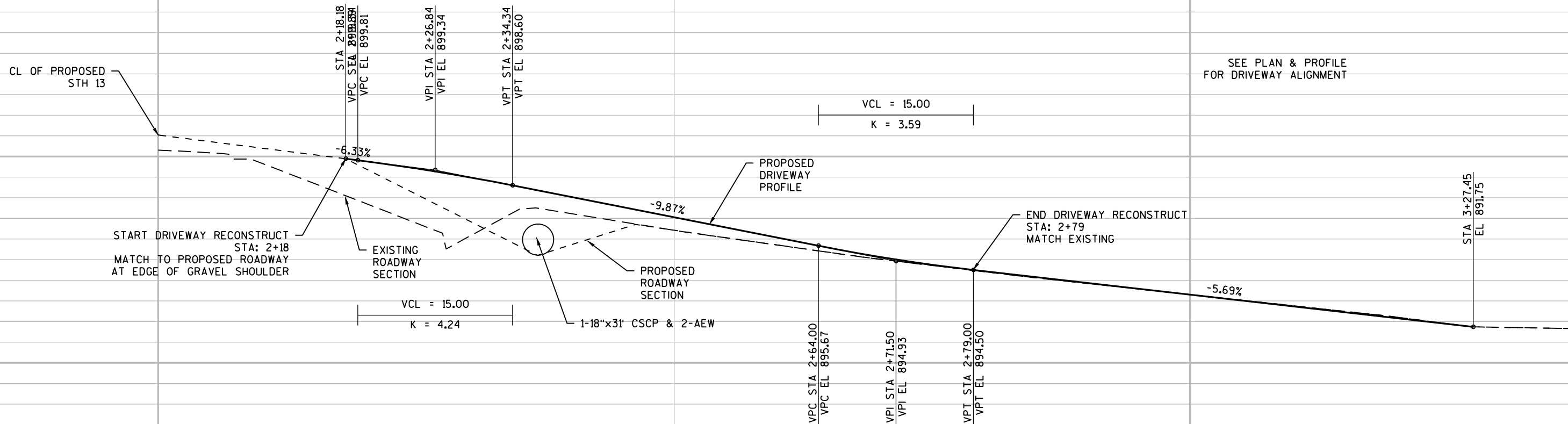
## RURAL DRIVEWAY DETAIL

TYPICAL SECTION FOR  
PRIVATE ENTRANCES

731+50R 731+50L 734+00R

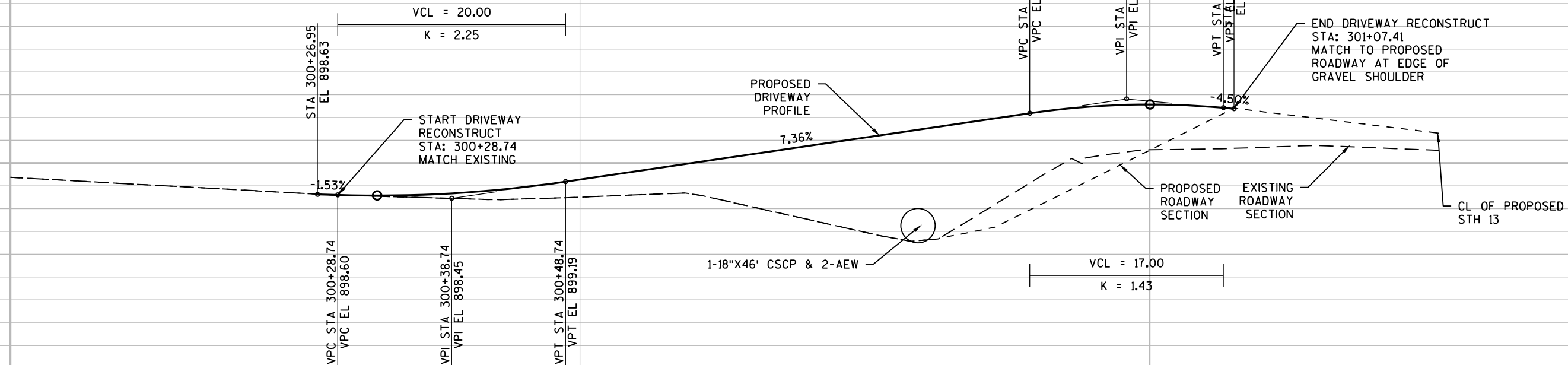


## DRIVEWAY 730+50L

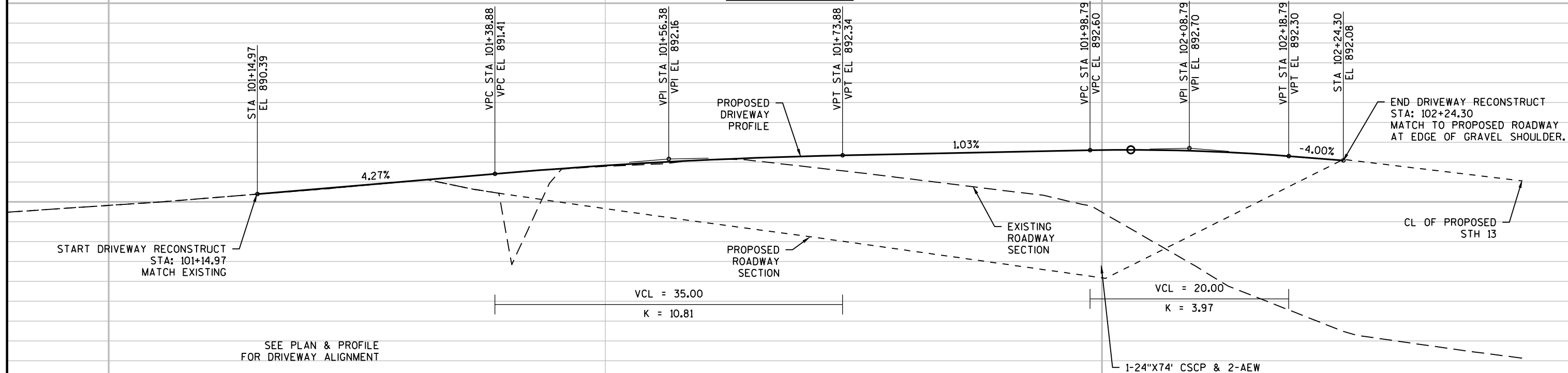
SEE PLAN & PROFILE  
FOR DRIVEWAY ALIGNMENT

SEE PLAN & PROFILE  
FOR DRIVEWAY ALIGNMENT

## DRIVEWAY 730+50R

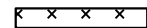
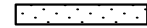
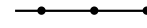



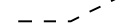



## DRIVEWAY 734+00R

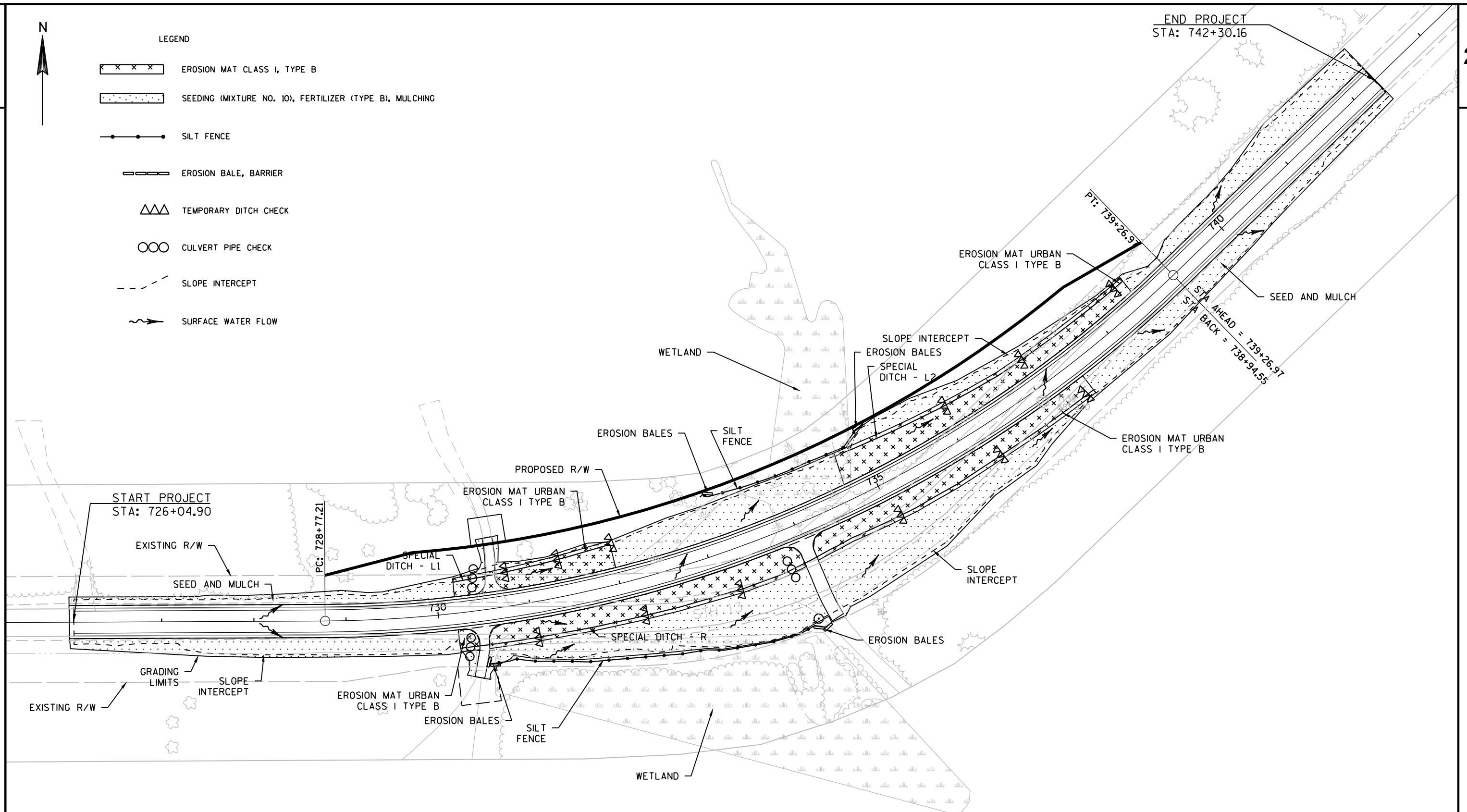




## LEGEND

-  EROSION MAT CLASS I, TYPE B
-  SEEDING (MIXTURE NO. 10), FERTILIZER (TYPE B), MULCHING
-  SILT FENCE
-  EROSION BALE, BARRIER
-  TEMPORARY DITCH CHECK
-  CULVERT PIPE CHECK
-  SLOPE INTERCEPT
-  SURFACE WATER FLOW

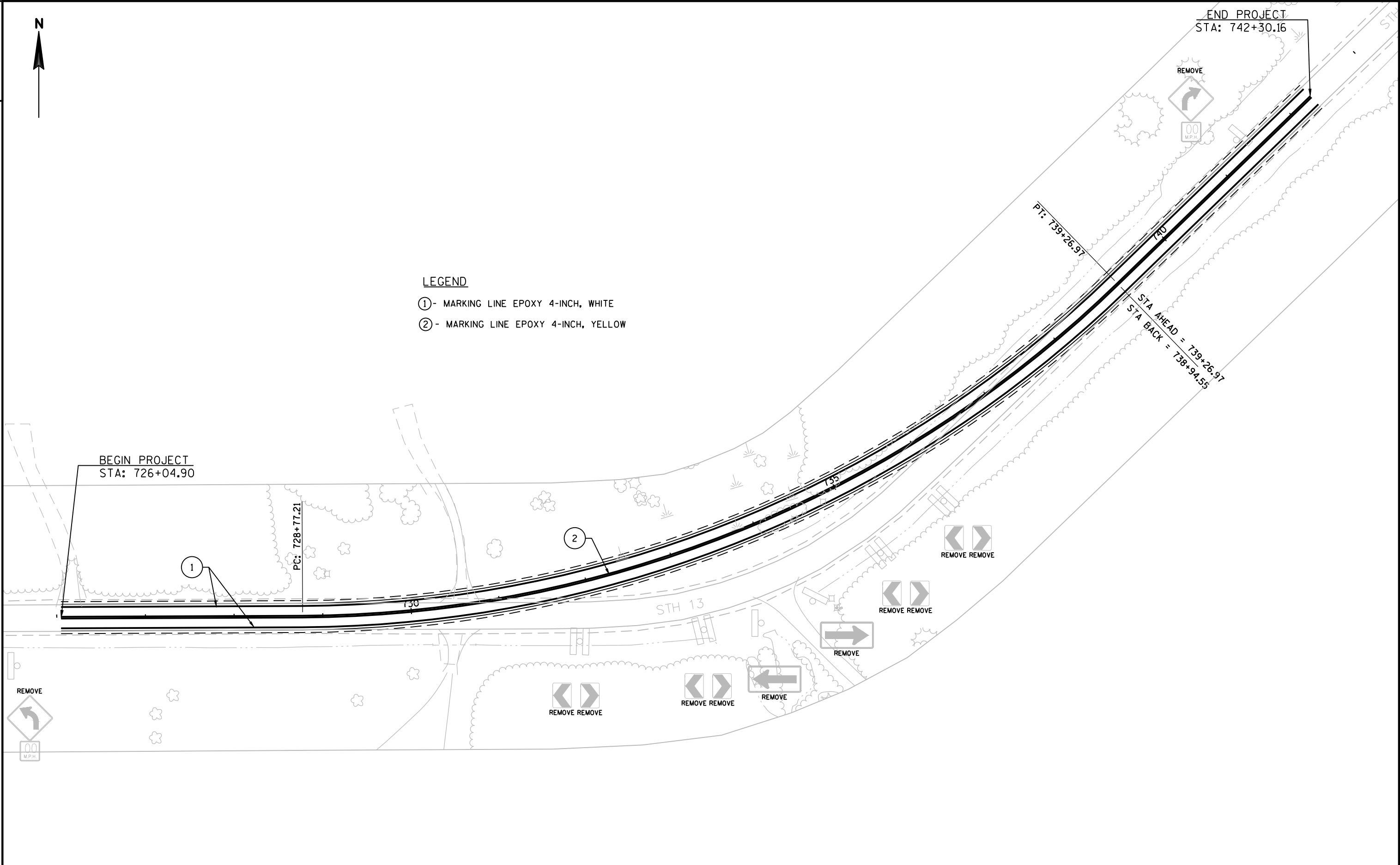
END PROJECT  
STA: 742+30.16





LEGEND

- ① - MARKING LINE EPOXY 4-INCH, WHITE
- ② - MARKING LINE EPOXY 4-INCH, YELLOW







**GENERAL TRAFFIC CONTROL NOTES:**  
ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD).

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ALL SIGNS SHALL BE 48" X 48" UNLESS NOTED BY THE ENGINEER.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND SHALL BE ORANGE.

DRUMS IN TAPERS SHALL BE EQUIPPED WITH TYPE C (STEADY BURN) TRAFFIC CONTROL WARNING LIGHTS.

**WORK:**  
CONSTRUCT STH 13 FROM STA 731+00 TO STA 737+00 UP TO GRAVEL. DO NOT REMOVE PAVEMENT ON EXISTING STH 13 UNTIL PHASE 2 / 3.

**TRAFFIC:**  
TRAFFIC WILL REMAIN ON EXISTING STH 13. ENSURE THAT TWO 12' LANES ARE OPEN FOR TRAFFIC AT THE END OF EACH WORK DAY ON STH 13. THE CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS DURING ALL PHASES.

ADVANCED WARNING  
PER SDD 15C12 (PAVING),  
SDD 15C4, AND SDD 15D28

END PROJECT  
742+30.16

PT: 739+26.97

STA AHEAD = 739+26.97  
STA BACK = 738+94.55

MAINTAIN ACCESS TO  
DRIVEWAY DURING  
ALL PHASES.

WORK AREA

BEGIN PROJECT  
726+04.90

PC: 728+77.21

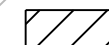
STH 13

ADVANCED WARNING  
PER SDD 15C12 (PAVING),  
SDD 15C4, AND SDD 15D28

MAINTAIN ACCESS TO  
DRIVEWAY DURING  
ALL PHASES.

MAINTAIN ACCESS TO  
DRIVEWAY DURING  
ALL PHASES.

#### LEGEND



WORK AREA



DIRECTION OF TRAFFIC



TRAFFIC CONTROL DRUM



TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT



**GENERAL TRAFFIC CONTROL NOTES:**  
ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD).

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ALL SIGNS SHALL BE 48" X 48" UNLESS NOTED BY THE ENGINEER.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND SHALL BE ORANGE.

PLACE "NO CENTER LINE" SIGNS 500 FEET IN ADVANCE OF WORK ZONE.

**WORK:**  
CONSTRUCT TIE IN AREAS.

**TRAFFIC:**  
SINGLE LANE TRAFFIC UNDER FLAGGING OPERATION WILL OCCUR WHILE CONSTRUCTING TIE IN AREAS. TRAFFIC WILL DRIVE ON EXISTING STH 13 WHILE FLAGGING OPERATION IS IN EFFECT. AT NIGHT, 2-12' LANES SHALL BE OPEN TO TRAFFIC WITH NO OBSTRUCTIONS.

ADVANCED WARNING  
PER SDD 15C12 (PAVING),  
SDD 15C4, AND SDD 15D28



W8-1  
30"X30"



W8-12  
36"X36"

END PROJECT  
STA: 742+30.16

CONSTRUCT TIE IN AREA

PT: 739+26.97

STA AHEAD = 739+26.97  
STA BACK = 738+94.55

SINGLE LANE, ONE-WAY TRAFFIC TO OCCUR  
WHILE CONSTRUCTING TIE INS

ADVANCED WARNING  
PER SDD 15C12 (PAVING),  
SDD 15C4, AND SDD 15D28

BEGIN PROJECT  
STA: 726+04.90

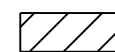
CONSTRUCT DRIVEWAYS

PC: 728+77.21

CONSTRUCT TIE IN AREA

MAINTAIN ACCESS  
TO DRIVEWAY DURING  
ALL PHASES.

#### LEGEND



WORK AREA



DIRECTION OF TRAFFIC



TRAFFIC CONTROL DRUM

STH 13

STH 13



W8-1  
30"X30"



W8-12  
36"X36"



**GENERAL TRAFFIC CONTROL NOTES:**  
ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD).

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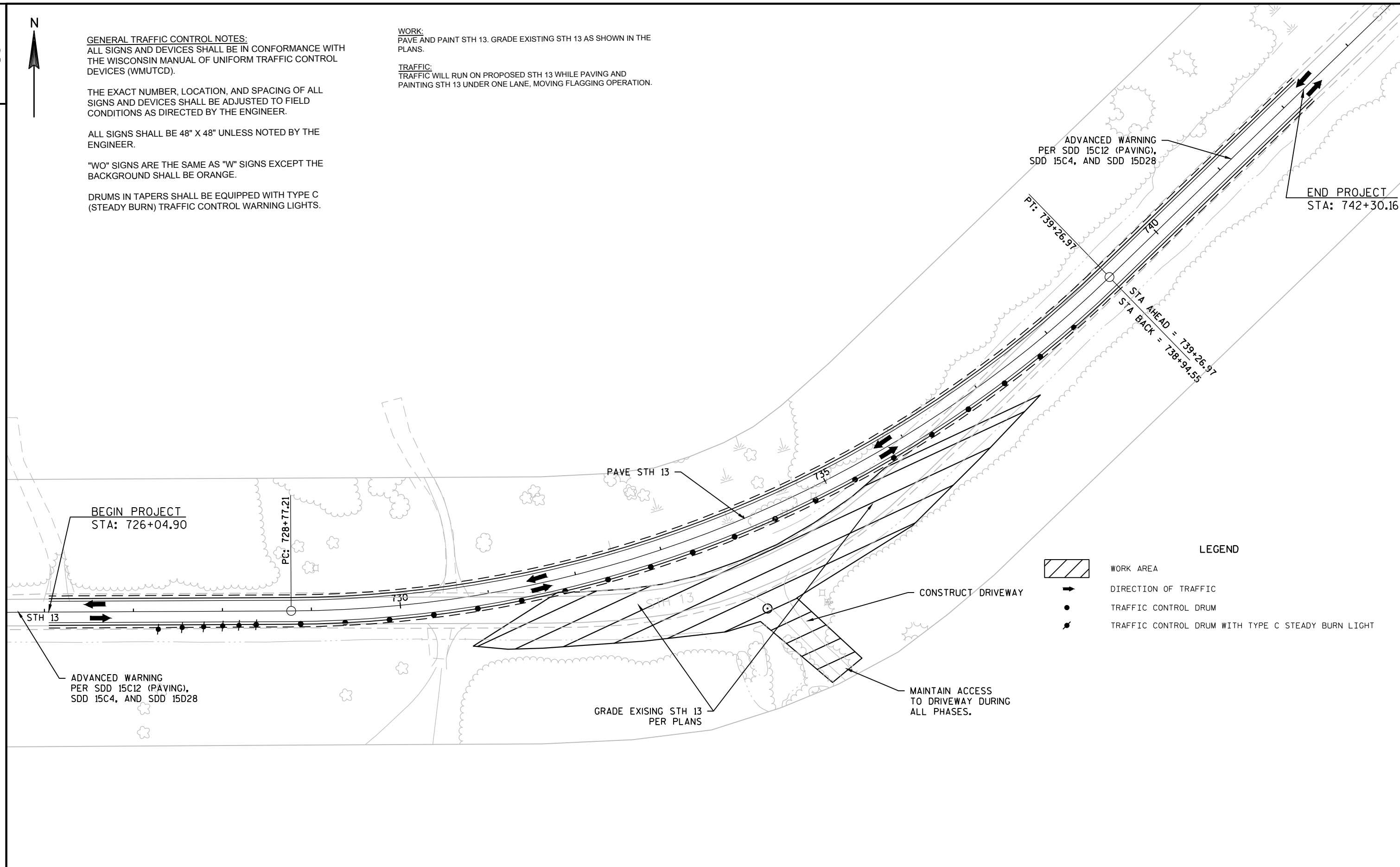
ALL SIGNS SHALL BE 48" X 48" UNLESS NOTED BY THE ENGINEER.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND SHALL BE ORANGE.

DRUMS IN TAPERS SHALL BE EQUIPPED WITH TYPE C (STEADY BURN) TRAFFIC CONTROL WARNING LIGHTS.

**WORK:**  
PAVE AND PAINT STH 13. GRADE EXISTING STH 13 AS SHOWN IN THE PLANS.

**TRAFFIC:**  
TRAFFIC WILL RUN ON PROPOSED STH 13 WHILE PAVING AND PAINTING STH 13 UNDER ONE LANE, MOVING FLAGGING OPERATION.



Estimate Of Quantities

8510-02-76

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	7.000	7.000
0004	201.0205	Grubbing	STA	7.000	7.000
0006	202.0105	Roadside Clearing	STA	3.000	3.000
0008	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0010	205.0100	Excavation Common	CY	5,451.000	5,451.000
0012	208.1100	Select Borrow	CY	6,682.000	6,682.000
0014	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 8510-02-76	LS	1.000	1.000
0016	213.0100	Finishing Roadway (project) 01. 8510-02-76	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	432.000	432.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	4,595.000	4,595.000
0022	455.0605	Tack Coat	GAL	650.000	650.000
0024	465.0105	Asphaltic Surface	TON	1,662.000	1,662.000
0026	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	4.000	4.000
0028	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	2.000	2.000
0030	520.3418	Culvert Pipe Class III-A Non-metal 18-Inch	LF	77.000	77.000
0032	520.3424	Culvert Pipe Class III-A Non-metal 24-Inch	LF	74.000	74.000
0034	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8510-02-76	EACH	1.000	1.000
0036	619.1000	Mobilization	EACH	1.000	1.000
0038	624.0100	Water	MGAL	56.000	56.000
0040	625.0500	Salvaged Topsoil	SY	11,381.000	11,381.000
0042	627.0200	Mulching	SY	10,273.000	10,273.000
0044	628.1104	Erosion Bales	EACH	33.000	33.000
0046	628.1504	Silt Fence	LF	658.000	658.000
0048	628.1520	Silt Fence Maintenance	LF	658.000	658.000
0050	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0052	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0054	628.2008	Erosion Mat Urban Class I Type B	SY	2,320.000	2,320.000
0056	628.7504	Temporary Ditch Checks	LF	240.000	240.000
0058	628.7555	Culvert Pipe Checks	EACH	3.000	3.000
0060	629.0210	Fertilizer Type B	CWT	7.000	7.000
0062	630.0110	Seeding Mixture No. 10	LB	154.000	154.000
0064	638.2602	Removing Signs Type II	EACH	14.000	14.000
0066	638.3000	Removing Small Sign Supports	EACH	8.000	8.000
0068	642.5001	Field Office Type B	EACH	1.000	1.000
0070	643.0300	Traffic Control Drums	DAY	1,552.000	1,552.000
0072	643.0310.S	Temporary Portable Rumble Strips	LS	1.000	1.000
0074	643.0715	Traffic Control Warning Lights Type C	DAY	160.000	160.000
0076	643.0900	Traffic Control Signs	DAY	952.000	952.000

Estimate Of Quantities

8510-02-76

Line	Item	Item Description	Unit	Total	Qty
0078	643.5000	Traffic Control	EACH	1.000	1.000
0080	646.1020	Marking Line Epoxy 4-Inch	LF	6,500.000	6,500.000
0082	650.4500	Construction Staking Subgrade	LF	1,626.000	1,626.000
0084	650.5000	Construction Staking Base	LF	1,626.000	1,626.000
0086	650.6000	Construction Staking Pipe Culverts	EACH	3.000	3.000
0088	650.9910	Construction Staking Supplemental Control (project) 01. 8510-02-76	LS	1.000	1.000
0090	690.0150	Sawing Asphalt	LF	60.000	60.000

ROADSIDE CLEARING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	CLEARING 201. 0105 STA	GRUBBING 201. 0205 STA	ROADSIDE CLEARING 202. 0105 STA
0010	724+81	-	726+03	ML - L			1
0010	726+30	-	728+63	ML - L			2
0010	730+94	-	731+15	ML - L	0	0	
0010	732+72	-	733+04	ML - L	0	0	
0010	734+00	-	740+34	ML - L	6	6	
0010	741+00	-	741+63	ML - L	1	1	
TOTAL 0010					7	7	3

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203. 0100 EACH	REMARKS
730+50	DRIVEWAY- R	1	15" CMCP
TOTAL 0010		1	

EARTHWORK SUMMARY TABLE

	(1) UNCLASSIFIED EXCAVATION CY	(2) EXCAVATION COMMON CY	(3) EXPANDED FILL CY	(4) USEABLE MATERIAL CY	(5) EXCAVATION BELOW SUBGRADE CY	(6) 208. 1100 SELECT BORROW CY
ROADWAY	5248	5451	7459	1137	203	6322
DRIVEWAYS	0	0	360	0	0	360
PROJECT TOTALS:	5248	5451	7819	1137	203	6682

- (1) UNCLASSIFIED EXCAVATION FROM C3D SURFACES
- (2) EXCAVATION COMMON = UNCLASSIFIED EXCAVATION + EBS
- (3) EXPANDED FILL = REQUIRED FILL MATERIAL = FILL + EBS FILL (VOLUMES ARE EXPANDED)
- (4) USEABLE MATERIAL IS EXCAVATED MATERIAL AVAILABLE AND SUITABLE FOR USE IN FILL.
- (5) EXCAVATION BELOW SUBGRADE IS NOT USED TO BALANCE EARTHWORK. QUANTITY IS INCLUDED AND PAID FOR IN THE ITEM OF COMMON EXCAVATION. IT IS USED FOR PREPARING ROADWAY FOUNDATION (REMOVING PAVEMENT WITHIN 2' OF FG THAT IS NOT REMOVED UNDER UNCLASSIFIED.)
- (6) SELECT BORROW = EXPANDED FILL - USEABLE MATERIAL

PREPARE FOUNDATION FOR ASPHALTIC PAVING (01. 8510-02-76)

STATION	TO	STATION	LOCATION	211. 0100 LS
726+04	-	742+30	MAINLINE	1
TOTAL 0010				1

FINISHING ROADWAY (01. 8510-02-76)

STATION	TO	STATION	LOCATION	213. 0100 EACH
726+04	-	742+30	MAINLINE	1
TOTAL 0010				1

BASE AGGREGATE DENSE 3/4-INCH

STATION	TO	STATION	LOCATION	305. 0110 TON
726+04	-	742+30	ML SHOULDERS L&R	432
			TOTAL 0010	432

TACK COAT

STATION	TO	STATION	LOCATION	455. 0605 GAL
726+04	-	742+30	MAINLINE	650
			TOTAL 0010	650

CULVERT SUMMARY

STATION	LOCATION	APRON ENDWALLS FOR CULVERT PIPE 18-INCH 520. 1018 EACH	APRON ENDWALLS FOR CULVERT PIPE 24-INCH 520. 1024 EACH	CULVERT PIPE CLASS III-A NON-METAL 18- INCH 520. 3418 LF	CULVERT PIPE CLASS III-A NON-METAL 24- INCH 520. 3424 LF
730+50	DRIVEWAY- R	2		46	
730+60	DRIVEWAY- L	2		31	
734+00	DRIVEWAY- R		2		74
TOTAL 0010		4	2	77	74

BASE AGGREGATE DENSE 1 1/4-INCH

STATION	TO	STATION	LOCATION	305. 0120 TON
726+04	-	742+30	MAINLINE	4450
2+18	-	2+79	DWY (ML STA 730+60L)	29
300+28	-	301+07	DWY (ML STA 730+50R)	38
101+14	-	102+24	DWY (ML STA 734+00R)	77
			TOTAL 0010	4595

ASPHALTIC SURFACE

STATION	TO	STATION	LOCATION	465. 0105 TON
726+04	-	742+30	MAINLINE	1662
			TOTAL 0010	1662

MAINTENANCE AND REPAIR OF HAUL ROADS (01. 8510-02-76)

STATION	TO	STATION	LOCATION	618. 0100 EACH
726+04	-	742+30	PROJECT	1
			TOTAL 0010	1

MOBILIZATION

LOCATION	619. 1000 EACH
PROJECT	1
TOTAL 0010	1

WATER

STATION	TO	STATION	LOCATION	624. 0100 MGAL
727+17	-	740+86	MAINLINE	56
			TOTAL 0010	56

MULCHING

STATION	TO	STATION	LOCATION	627. 0200 SY
727+17	-	740+86	DISTURBED AREAS	10273
			TOTAL 0010	10273

SILT FENCE SUMMARY

STATION	TO	STATION	LOCATION	SILT FENCE 628. 1504 LF	SILT FENCE MAINTENANCE 628. 1520 LF
730+60	-	733+90	ML - R	415	415
733+19	-	735+12	ML - L	243	243
			TOTAL 0010	658	658

MOBILIZATIONS EROSION CONTROL

STATION	TO	STATION	LOCATION	628. 1905 EACH
726+04	-	742+30	UNDISTRIBUTED	3
			TOTAL 0010	3

EROSION MAT URBAN CLASS I TYPE B

STATION	TO	STATION	LOCATION	628. 2008 SY	REMARKS
730+20	-	732+00	ML- L	320	DITCH
730+20	-	737+58	ML- R	1312	DITCH
734+67	-	738+54	ML- L	688	DITCH
			TOTAL 0010	2320	

SALVAGED TOPSOIL

STATION	TO	STATION	LOCATION	625. 0500 SY
726+04	-	742+30	DISTURBED AREAS	11381
			TOTAL 0010	11381

EROSION BALES

		628. 1104
STATION	LOCATION	EACH
730+55	R	9
733+12	L	9
733+83	R	8
735+15	L	7
TOTAL 0010		33

MOBILIZATIONS EMERGENCY EROSION CONTROL

STATION	TO	STATION	LOCATION	628. 1910 EACH
726+04	-	742+30	UNDISTRIBUTED	1
			TOTAL 0010	1

TEMPORARY DITCH CHECKS

STATION	TO	STATION	LOCATION	628. 7504 LF	REMARKS
730+10	-	732+00	ML - L	60	3 SETS
734+60	-	738+75	ML - L	60	3 SETS
730+00	-	737+50	ML - R	120	6 SETS
			TOTAL 0010	240	



CULVERT PIPE CHECKS

STATION	LOCATION	628. 7555 EACH
730+25	DRIVEWAY CULVERT- R	1
730+30	DRIVEWAY CULVERT- L	1
733+90	DRIVEWAY CULVERT- R	1
TOTAL 0010		3

FERTILIZER TYPE B

STATION	TO	STATION	LOCATION	629. 0210 CWT
726+04	-	742+30	DISTURBED AREAS	7
TOTAL 0010				7

SEEDING MIXTURE NO. 10

STATION	TO	STATION	LOCATION	630. 0110 LB
727+17	-	740+86	DISTURBED AREAS	154
TOTAL 0010				154

SIGNING SUMMARY

STATION	LOCATION	REMOVING SIGNS TYPE II 638. 2602 EACH	REMOVING SMALL SIGN SUPPORTS 638. 3000 EACH	REMARKS
725+50	R	2	1	CURVE AHEAD / ADVISORY SPEED
731+90	R	2	1	CHEVRON
733+00	R	2	1	CHEVRON
733+50	R	1	1	ARROW
734+15	R	1	1	ARROW
735+00	R	2	1	CHEVRON
736+00	R	2	1	CHEVRON
741+00	L	2	1	CURVE AHEAD / ADVISORY SPEED
TOTAL 0010		14	8	

FIELD OFFICE TYPE B

LOCATION	642. 5001 EACH
PROJECT	1
TOTAL 0010	1

TRAFFIC CONTROL SUMMARY

STATION	TO	STATION	LOCATION	TRAFFIC CONTROL DRUMS 643. 0300 DAY	TRAFFIC CONTROL SIGNS 643. 0900 DAY	REMARKS
726+04	-	742+30	ML	256	320	PHASE 1
726+04	-	742+30	ML	1040	312	PHASE 2
726+04	-	742+30	ML	256	320	PHASE 3
TOTAL 0010				1552	952	

TEMPORARY PORTABLE RUMBLE STRIPS

LOCATION	643. 0310. S LS
FLAGGING OPERATION	1
TOTAL 0010	1

TRAFFIC CONTROL WARNING LIGHTS TYPE C

STATION	TO	STATION	LOCATION	643. 0715 DAY	REMARKS
741+00	-	742+00	ML - L	80	PHASE 1
727+50	-	728+50	ML - R	80	PHASE 3
TOTAL 0010				160	

TRAFFIC CONTROL

LOCATION	643. 5000 EACH
8510- 02- 76	1
TOTAL 0010	1

MARKING LINE EPOXY 4-INCH

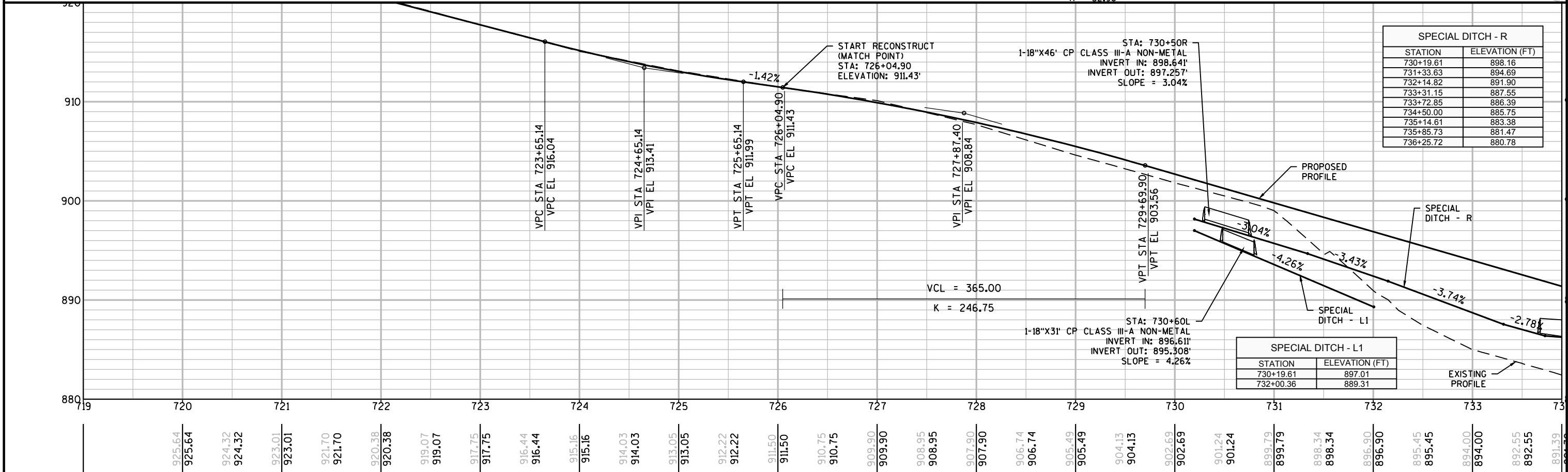
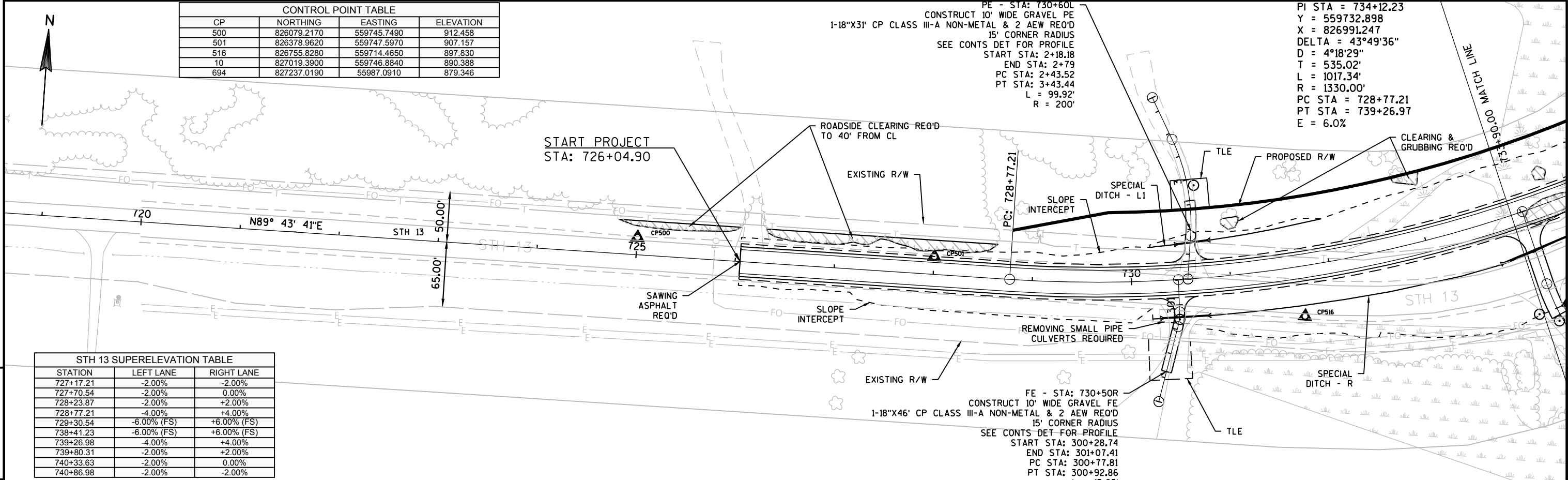
STATION	TO	STATION	LOCATION	646. 1020 LF	REMARKS
726+04	-	742+30	EDGE LINES (R&L)	3250	WHITE
726+04	-	742+30	DOUBLE CENTER STRIPE	3250	YELLOW
TOTAL 0010				6500	

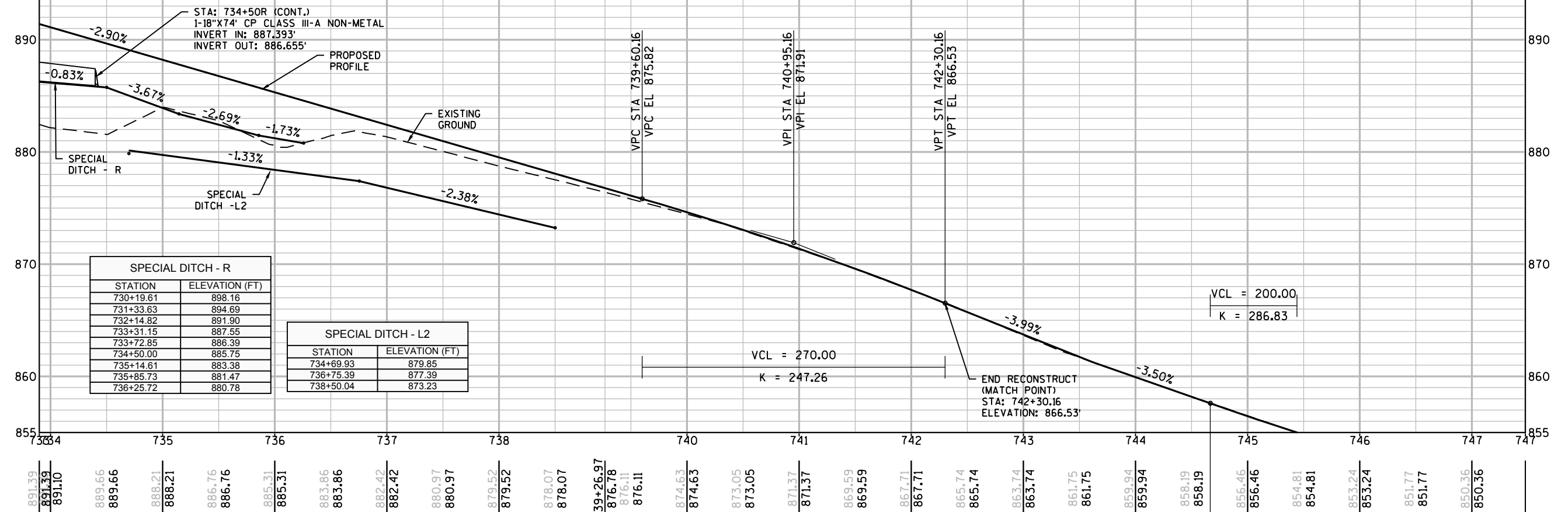
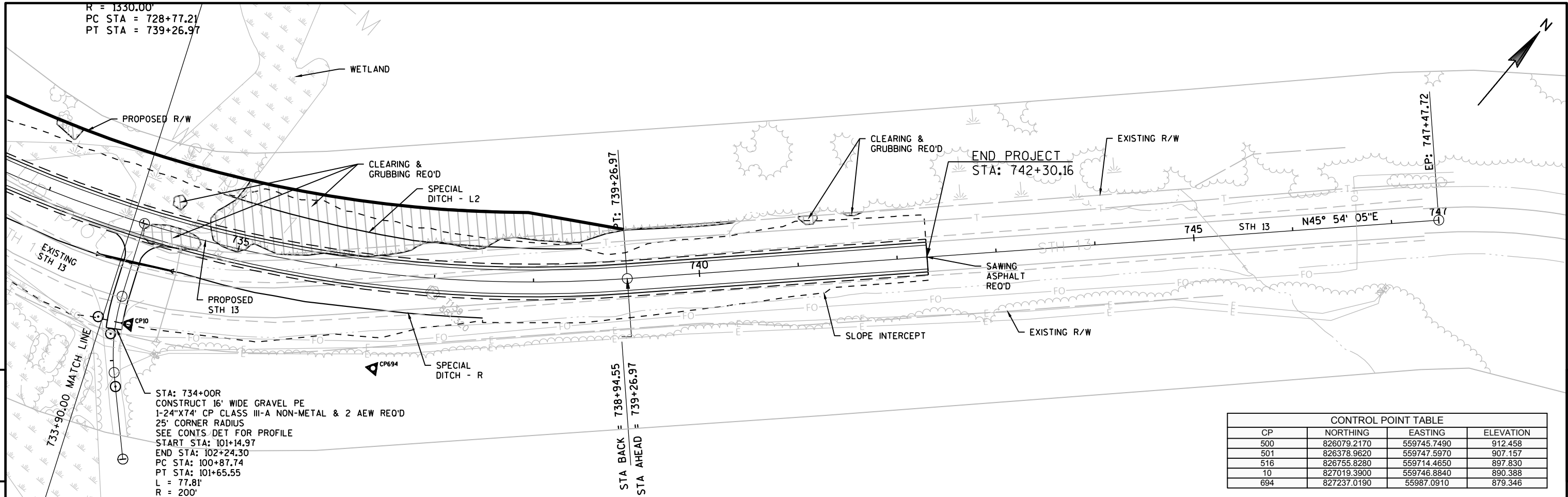
CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	CONSTRUCTION STAKING SUBGRADE 650. 4500 LF	CONSTRUCTION STAKING BASE 650. 5000 LF	CONSTRUCTION STAKING PIPE CULVERTS 650. 6000 EACH	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (01. 8510- 02- 76) 650. 9910 LS
726+04	-	742+30	ML	1626	1626		1
		730+50	DRIVEWAY- R			1	
		730+60	DRIVEWAY- L			1	
		734+00	DRIVEWAY- R			1	
TOTAL 0010				1626	1626	3	1

SAWING ASPHALT

STATION	LOCATION	690. 0150 LF
726+04	START OF PROJECT	30
742+30	END OF PROJECT	30
TOTAL 0010		60

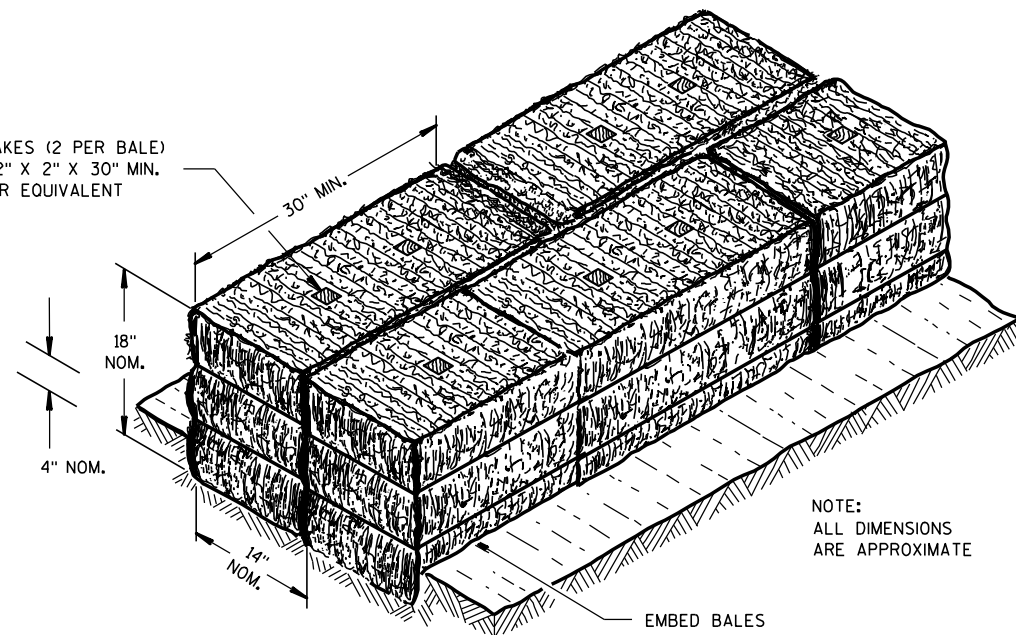




Standard Detail Drawing List

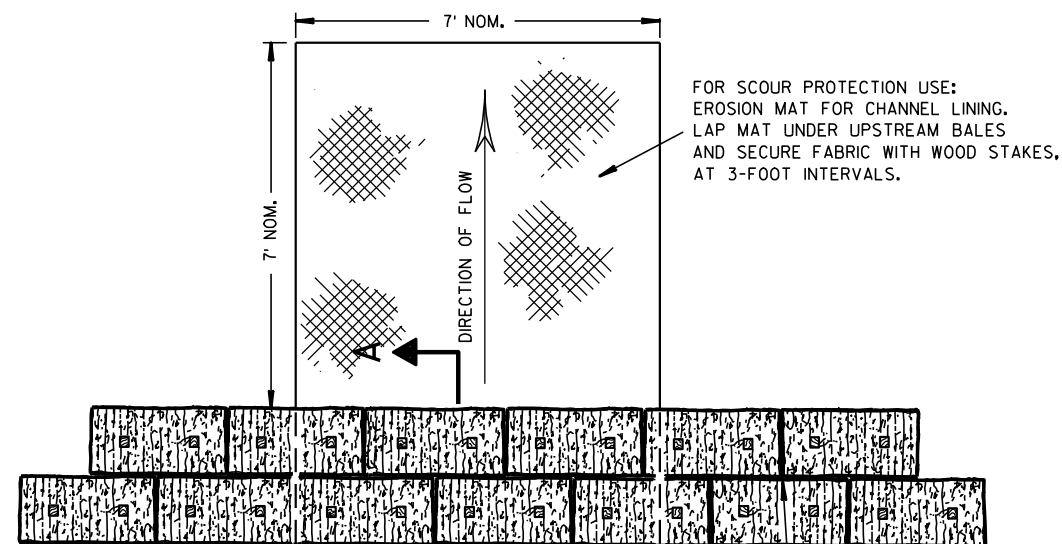
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-04A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS

WOOD STAKES (2 PER BALE)  
NOMINAL 2" X 2" X 30" MIN.  
LENGTH OR EQUIVALENT



SECTION A-A

NOTE:  
ALL DIMENSIONS  
ARE APPROXIMATE

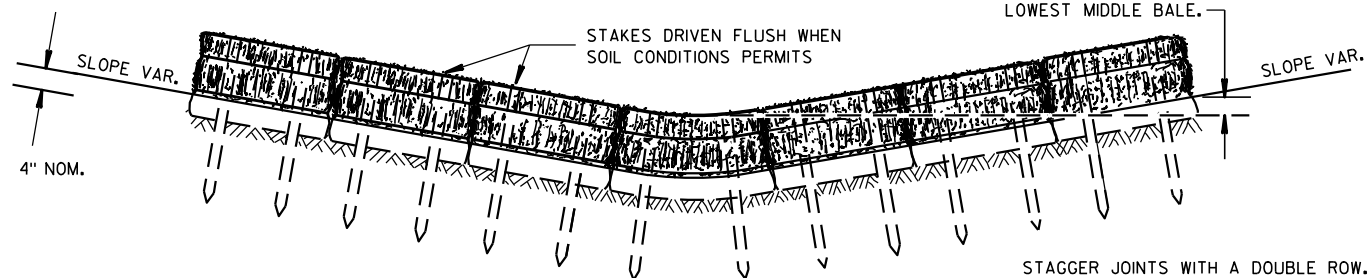


PLAN VIEW

FOR SCOUR PROTECTION USE:  
EROSION MAT FOR CHANNEL LINING.  
LAP MAT UNDER UPSTREAM BALES  
AND SECURE FABRIC WITH WOOD STAKES,  
AT 3-FOOT INTERVALS.

STAGGER JOINTS BETWEEN ADJACENT  
ROWS OF BALES.

BOTTOM ELEVATION OF END BALE SHALL  
BE EQUAL TO OR GREATER THAN TOP OF  
LOWEST MIDDLE BALE.



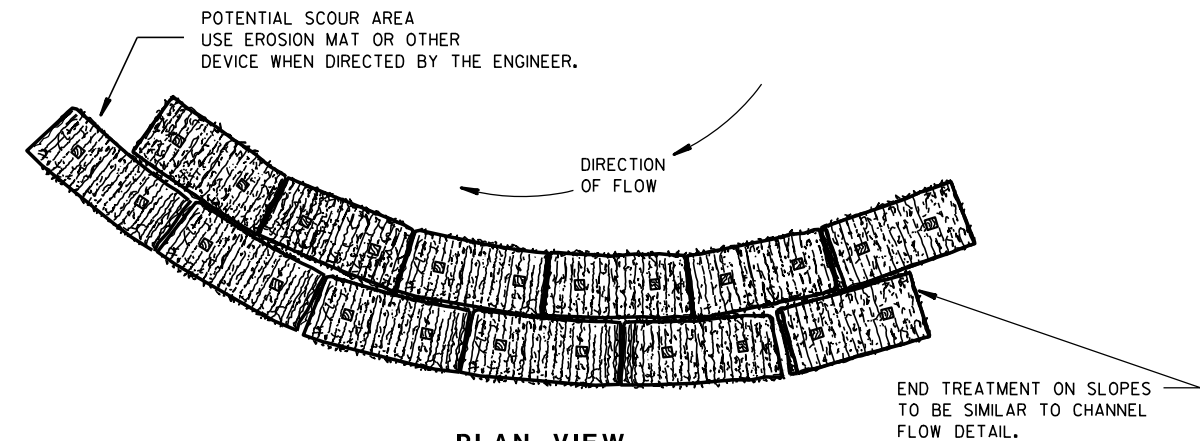
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

## GENERAL NOTES

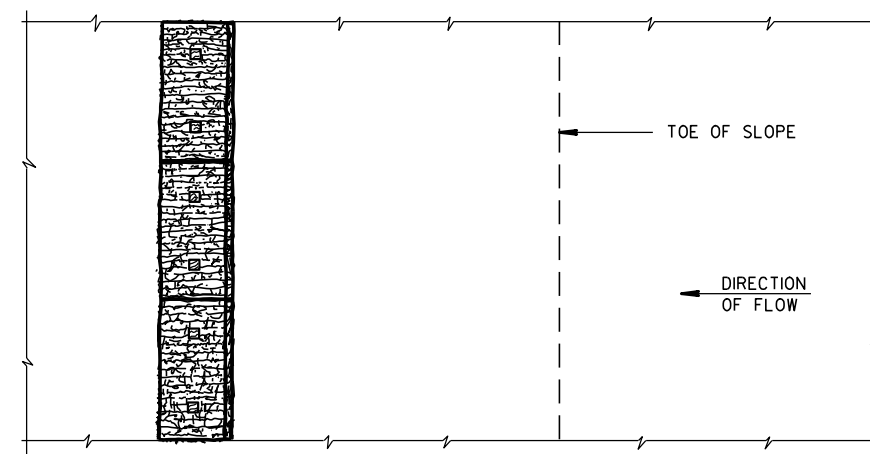
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

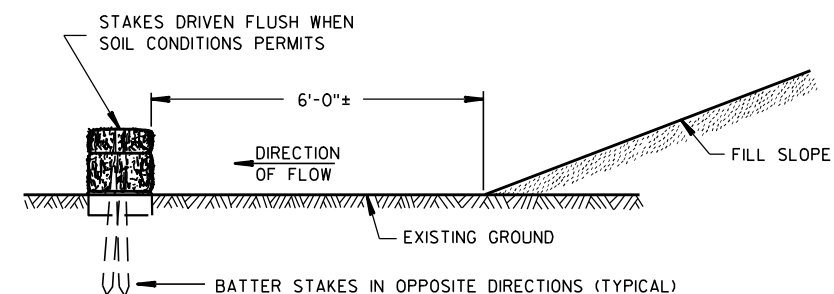


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF  
EROSION BALES / TEMPORARY  
DITCH CHECKS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

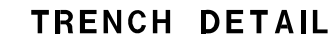
6/04/02  
DATE

FHWA

/S/ Beth Canestra  
CHIEF ROADWAY DEVELOPMENT ENGINEER



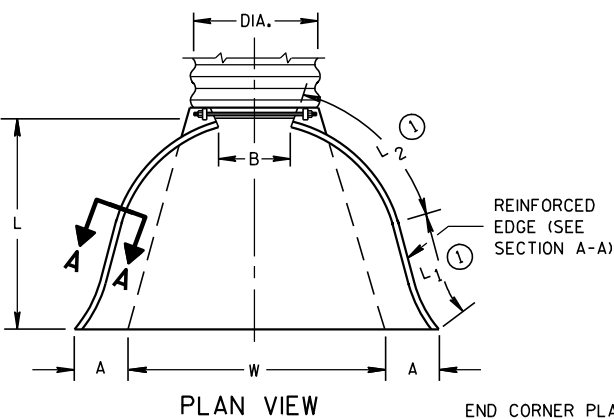
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



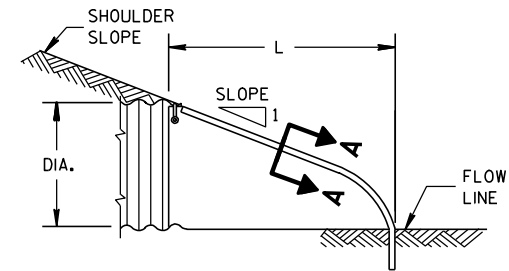
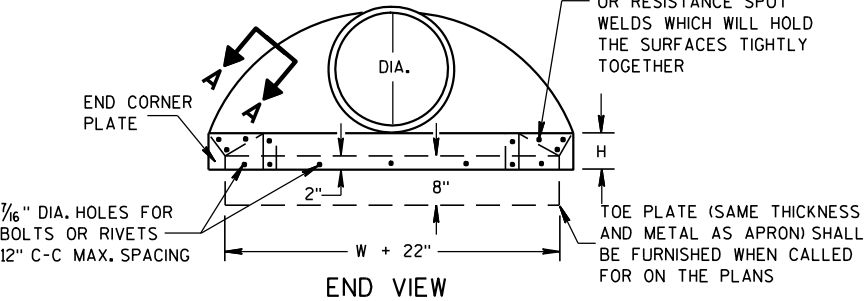
<p style="text-align: center;"><b>SILT FENCE</b></p>	
<p style="text-align: center;"><b>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</b></p>	
<p><b>APPROVED</b></p> <p><u>4-29-05</u></p> <p><u>DATE</u></p>	<p><u>/S/ Beth Canestra</u></p> <p><b>CHIEF ROADWAY DEVELOPMENT ENGINEER</b></p>

METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE		BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1		1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1		1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1		1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1		1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1		1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1		1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1		2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1		2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1		3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1		3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1		3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1		3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1		3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1		3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1		3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1		3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1		3 Pc.

\* EXCEPT CENTER PANEL  
SEE GENERAL NOTES



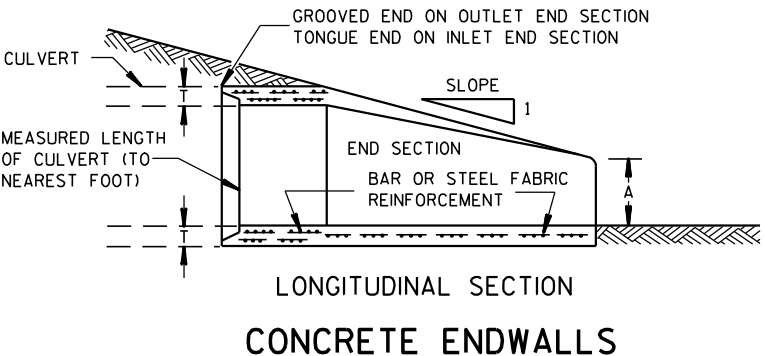
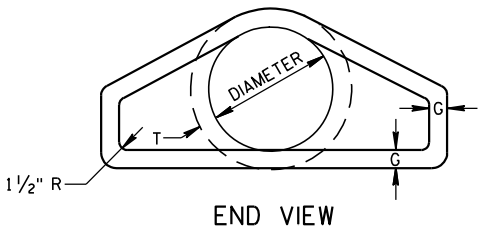
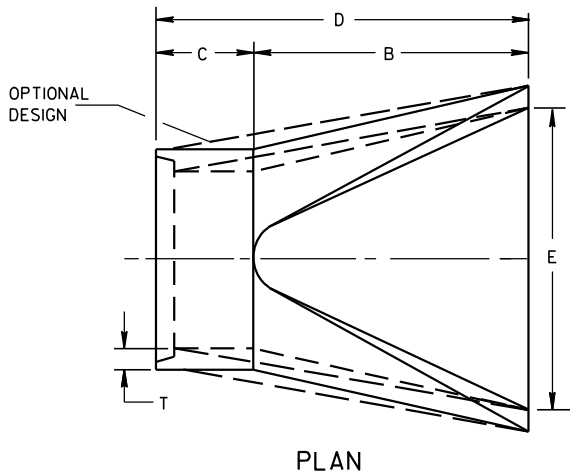
END CORNER PLATES MAY  
BE FASTENED TO APRON  
PROPER BY BOLTS, RIVETS,  
OR RESISTANCE SPOT  
WELDS WHICH WILL HOLD  
THE SURFACES TIGHTLY  
TOGETHER



SIDE ELEVATION  
METAL ENDWALLS

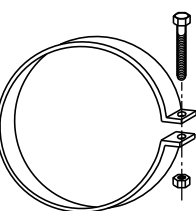
REINFORCED CONCRETE APRON ENDWALLS												
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE				
	T	A	B	C	D	E	G					
12	2	4	24	48 7/8	72 7/8	24	2	3 to 1				
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1				
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1				
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1				
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1				
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1				
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1				
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1				
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1				
48	5	24	72	26	98	84	5	3 to 1				
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 2/5 to 1				
60	6	30-35	60	39	99	96	5	2 to 1				
66	6 1/2	24-30	72-78	21-27	99	102	5 1/2	2 to 1				
72	7	24-36	78	21	99	108	6	2 to 1				
78	7 1/2	24-36	78	21	99	114	6 1/2	2 to 1				
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1				
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1				

\* MINIMUM  
\*\* MAXIMUM

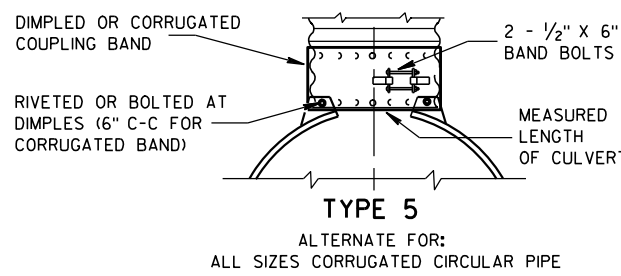
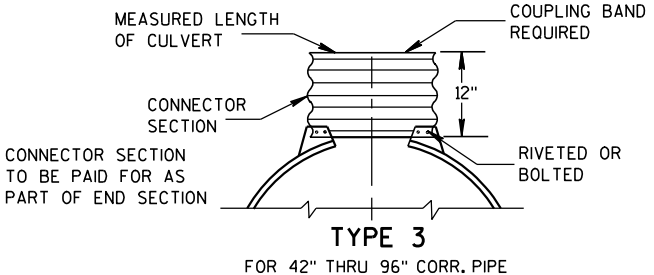
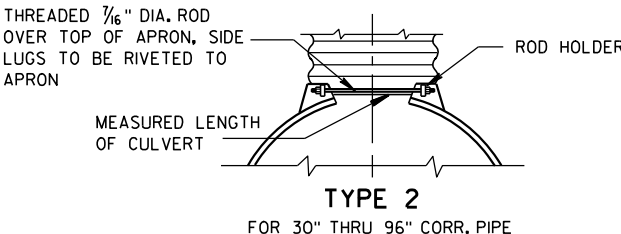
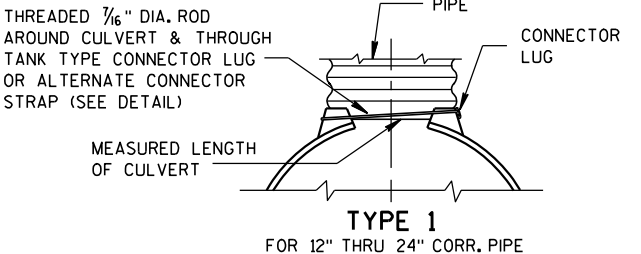


LONGITUDINAL SECTION  
CONCRETE ENDWALLS

1" WIDE, 12 GA. (0.109"  
THICK) GALVANIZED STRAP  
WITH STANDARD 6" X 1/2"  
BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION  
END SECTION CONNECTOR STRAP



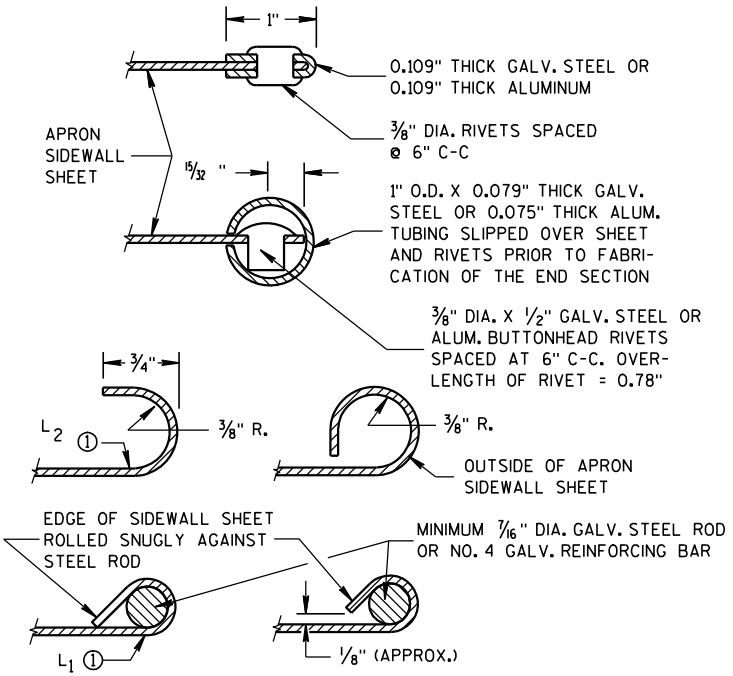
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,  
AND CORRUGATED BAND FITS INSIDE ENDWALL.  
DIMPLED BAND MAY BE USED WITH HELICALLY  
CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE  
ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5  
AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL  
CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO  
CIRCUMFERENTIAL CORRUGATIONS AT EACH END  
USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON  
THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE  
STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL  
OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR  
ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE  
OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND  
LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL  
THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND  
LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH  
OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE  
PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS  
FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS.  
FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED  
EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH  
GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE  
ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM  
NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT  
TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT  
TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

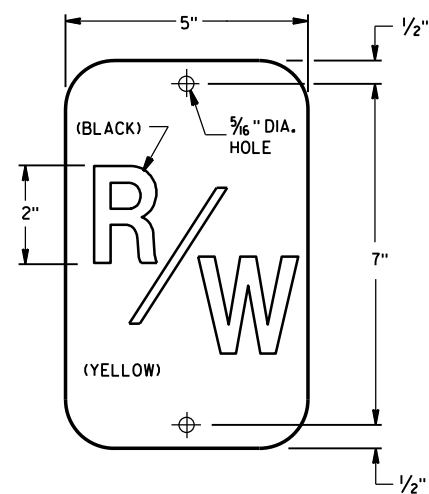
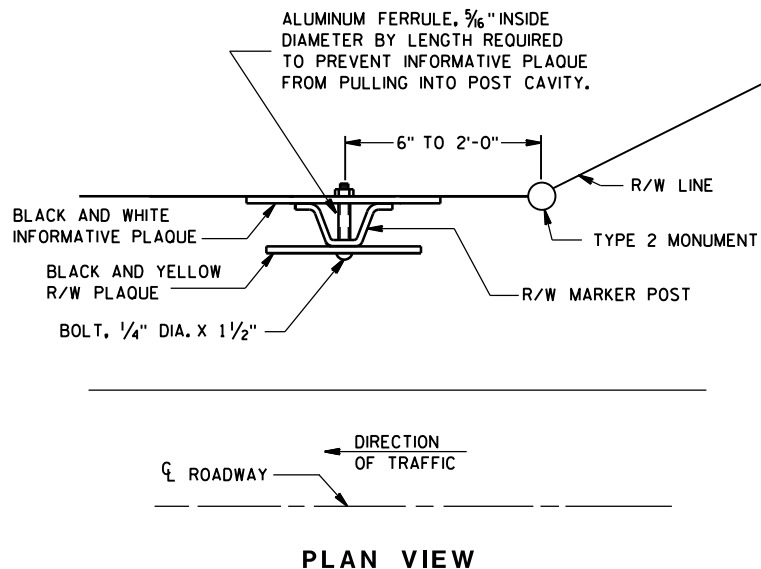
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED  
INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR  
CULVERT PIPE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

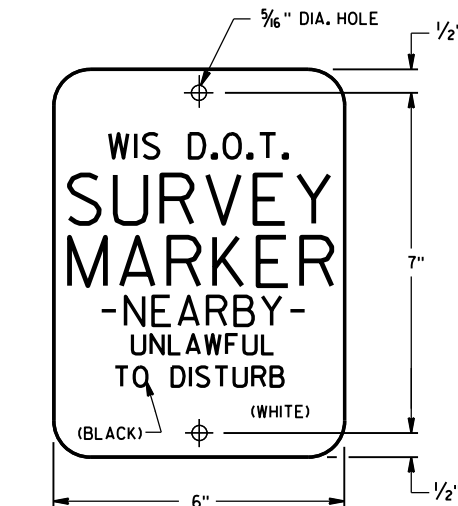
APPROVED  
11/30/94  
DATE  
/S/ Rory L. Rhinesmith  
CHIEF ROADWAY DEVELOPMENT ENGINEER  
FHWA





**R/W PLAQUE**

THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.



**INFORMATIVE PLAQUE**

**GENERAL NOTES**

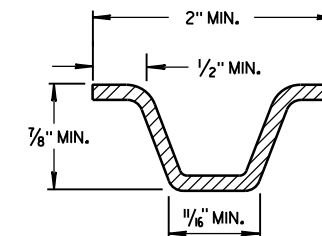
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

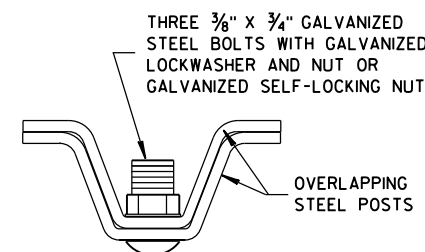
THE 'R/W' PLAQUE SHALL FACE THE ROADWAY AND THE INFORMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. R/W AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE DEPARTMENT OF TRANSPORTATION.

STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

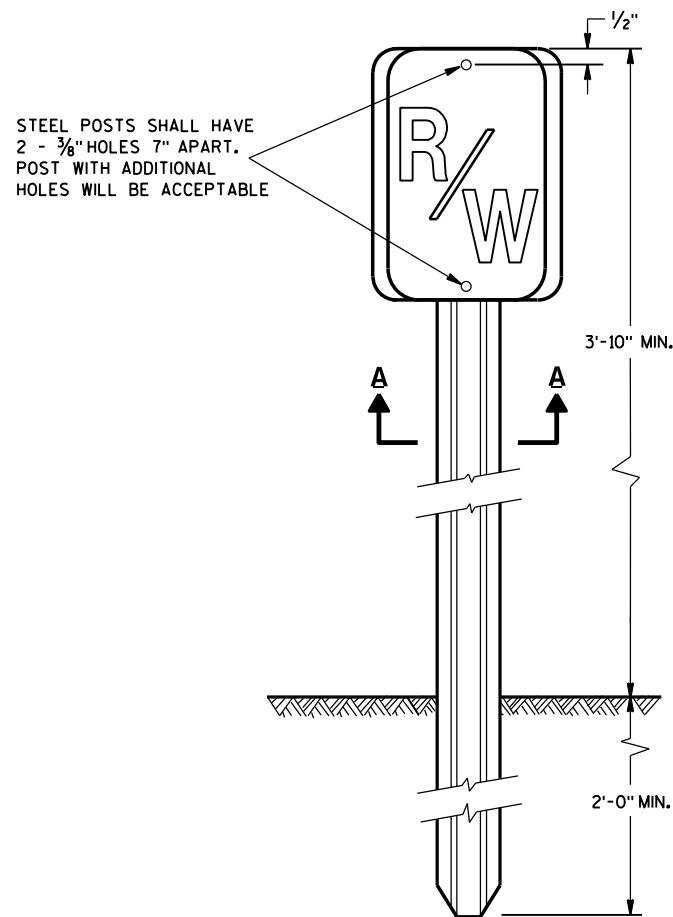
- ① IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3' 10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR. FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



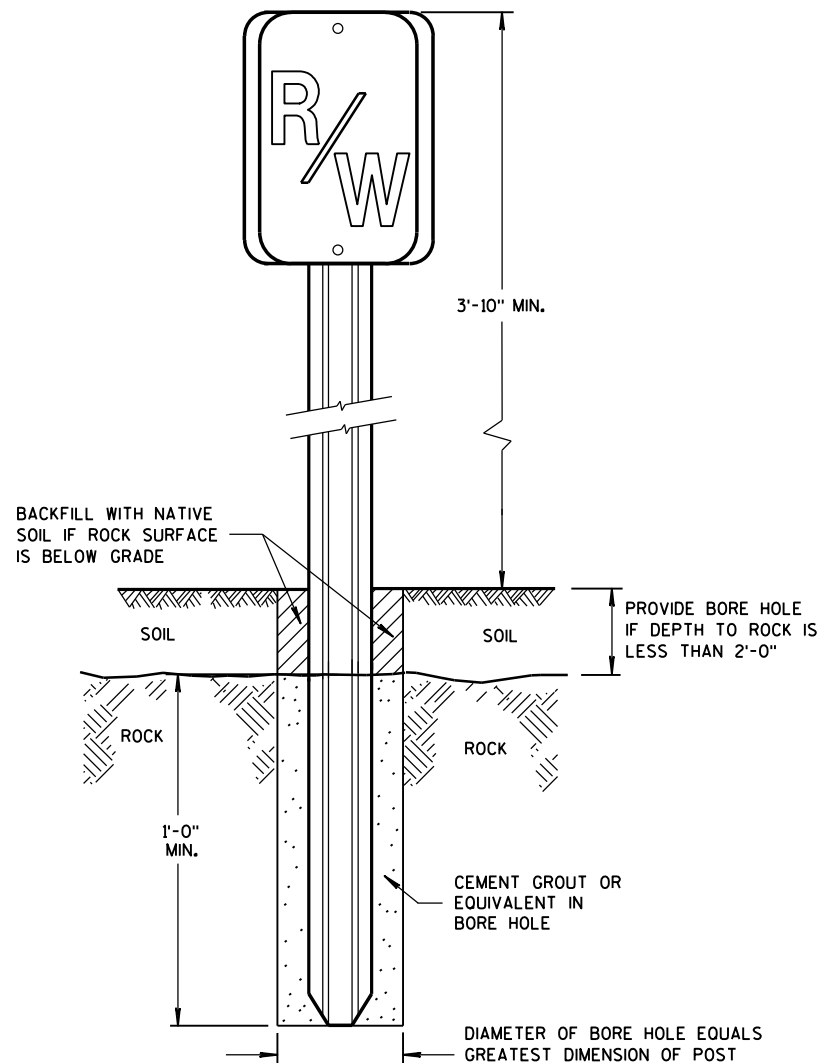
MIN. WEIGHT 1.12 LB./FT.  
**SECTION A-A**



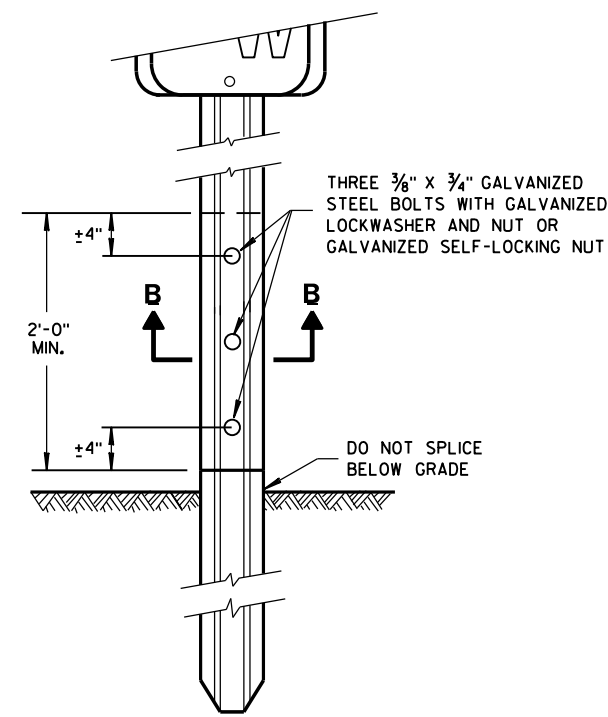
**SECTION B-B**



**FRONT VIEW  
STEEL MARKER POST**



**FRONT VIEW  
ROCK INSTALLATION** ①

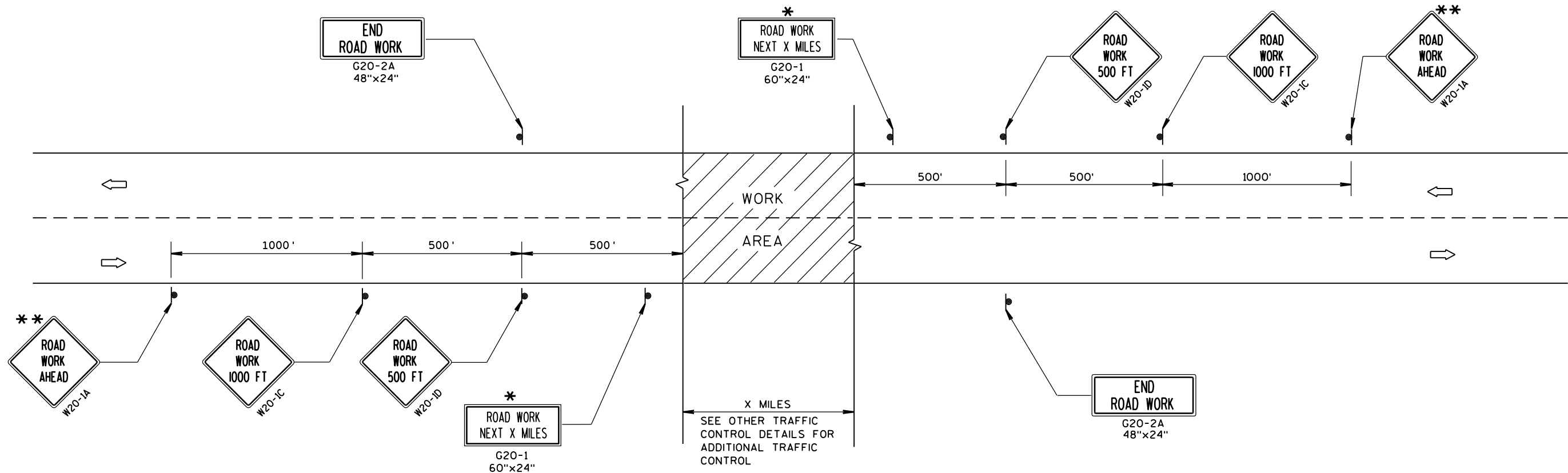


**FRONT VIEW  
SPLICE DETAIL**

**MARKER POST  
FOR RIGHT-OF-WAY**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
2/18/2016 /S/ Ray Kumapayi  
DATE CHIEF SURVEYING AND MAPPING ENGINEER  
FHWA



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

## GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

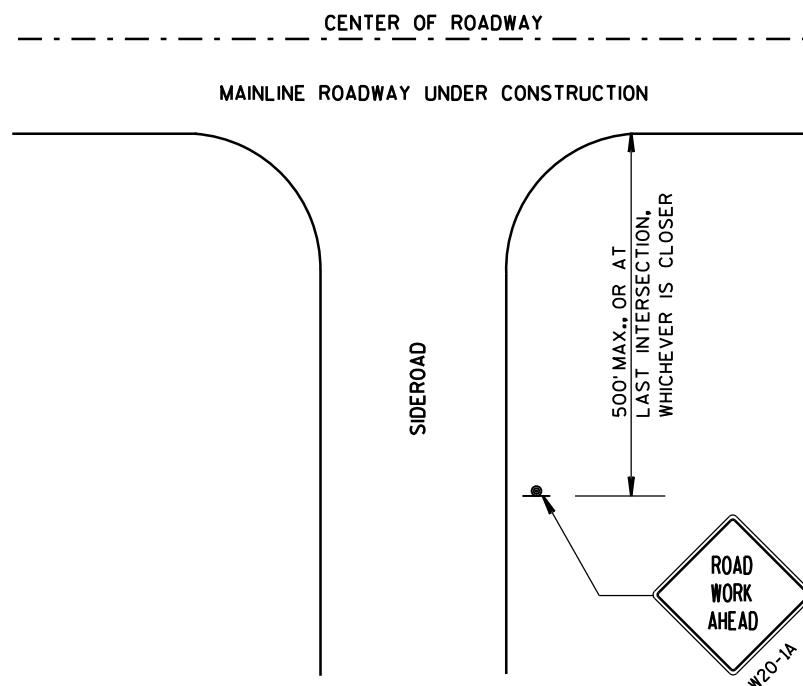
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

\* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

\*\* PLACE ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



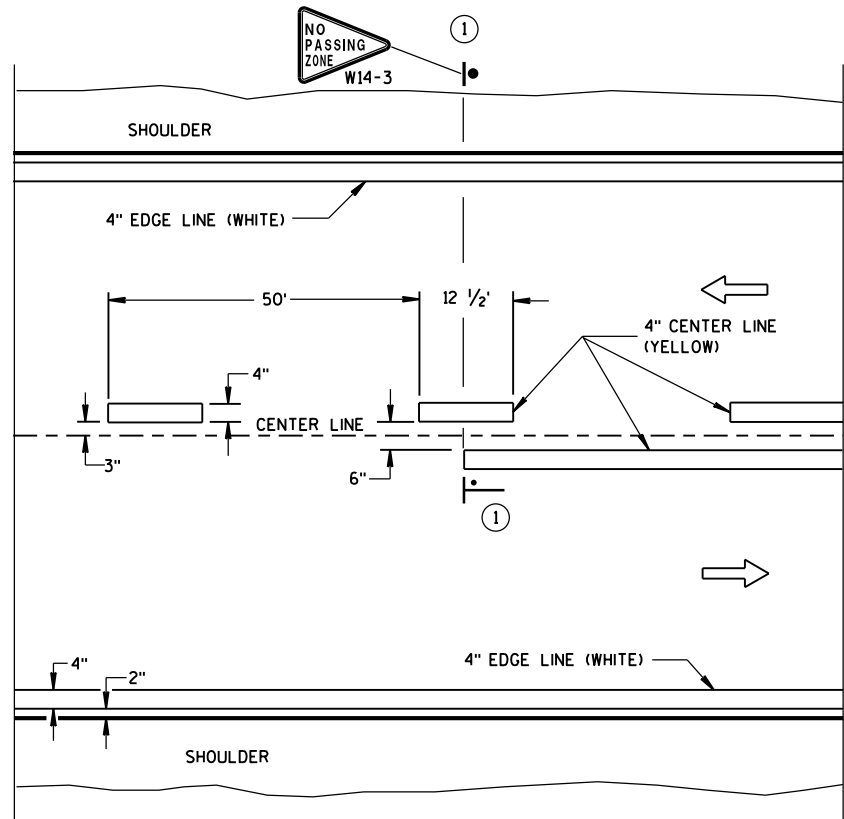
## LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

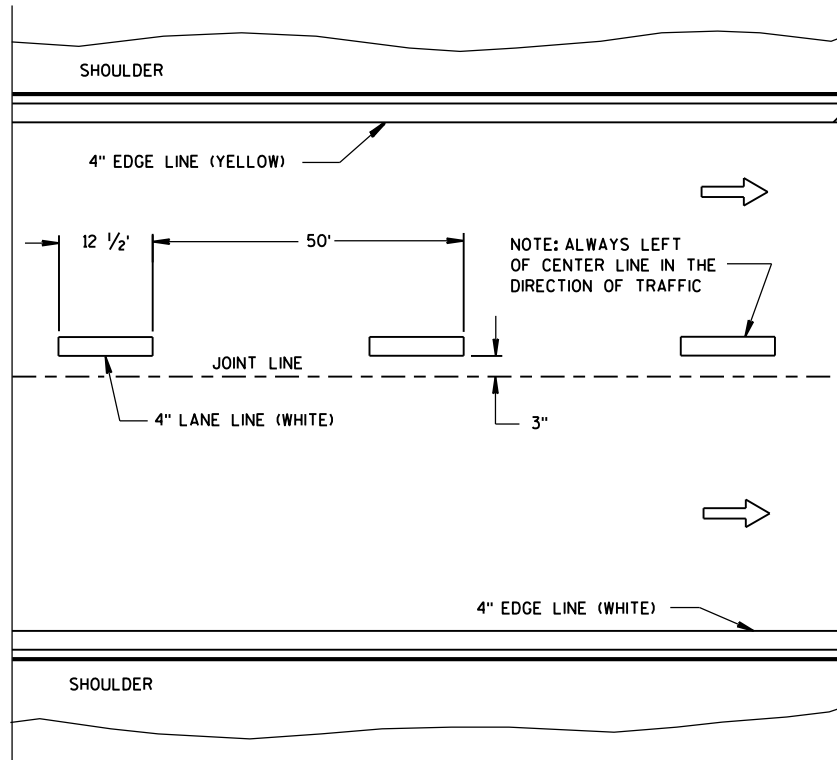
TRAFFIC CONTROL, ADVANCE  
WARNING SIGNS 45 M.P.H.  
OR GREATER TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
Sept. 2015 /S/ Peter Amokobe Atepe  
DATE STATEWIDE WORK ZONE TRAFFIC  
FHWA SAFETY ENGINEER

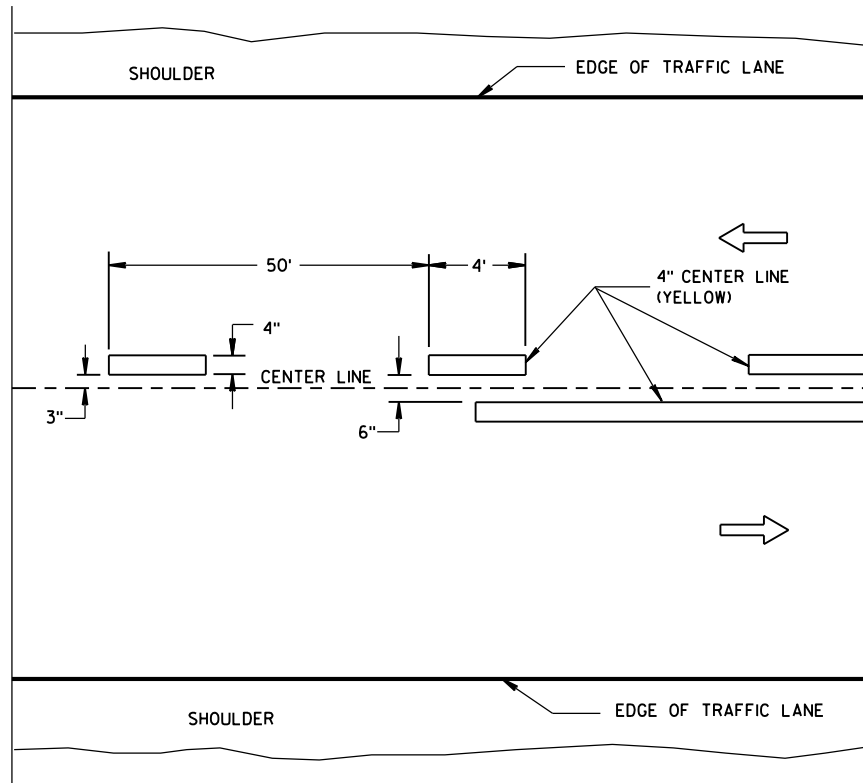


TWO WAY TRAFFIC

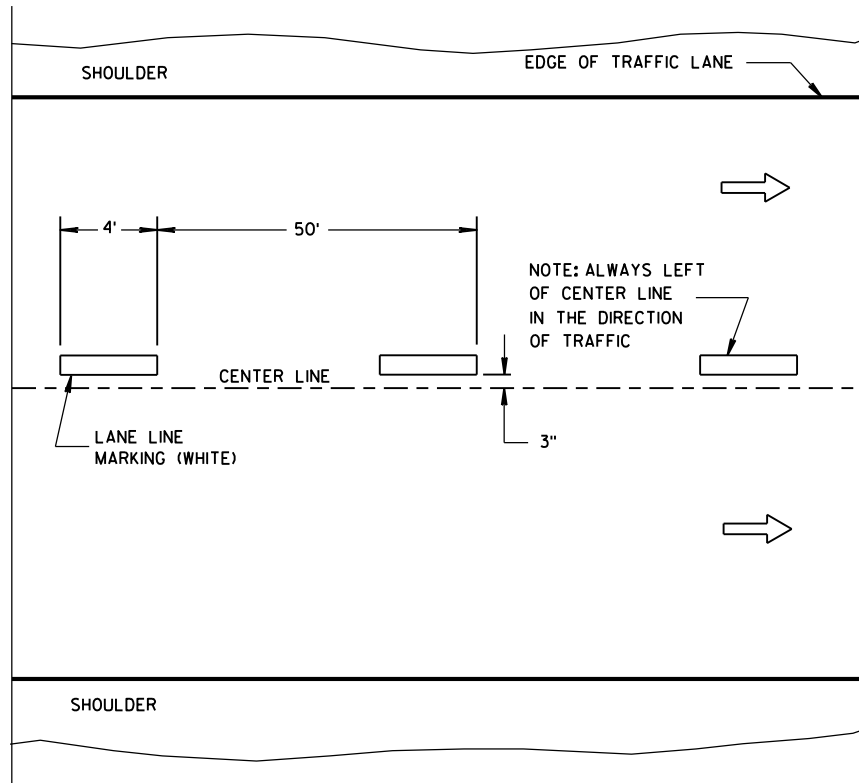


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

① NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL ( → ) SHOWS DIRECTION OF TRAVEL

LEGEND

—●— "T" MARKING

● POST MOUNTED SIGN

LONGITUDINAL MARKING  
(MAINLINE)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
Sept., 2016 /S/ Matthew R. Rauch  
DATE STATE SIGNING AND MARKING ENGINEER  
FHWA

LEGEND

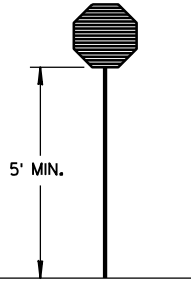
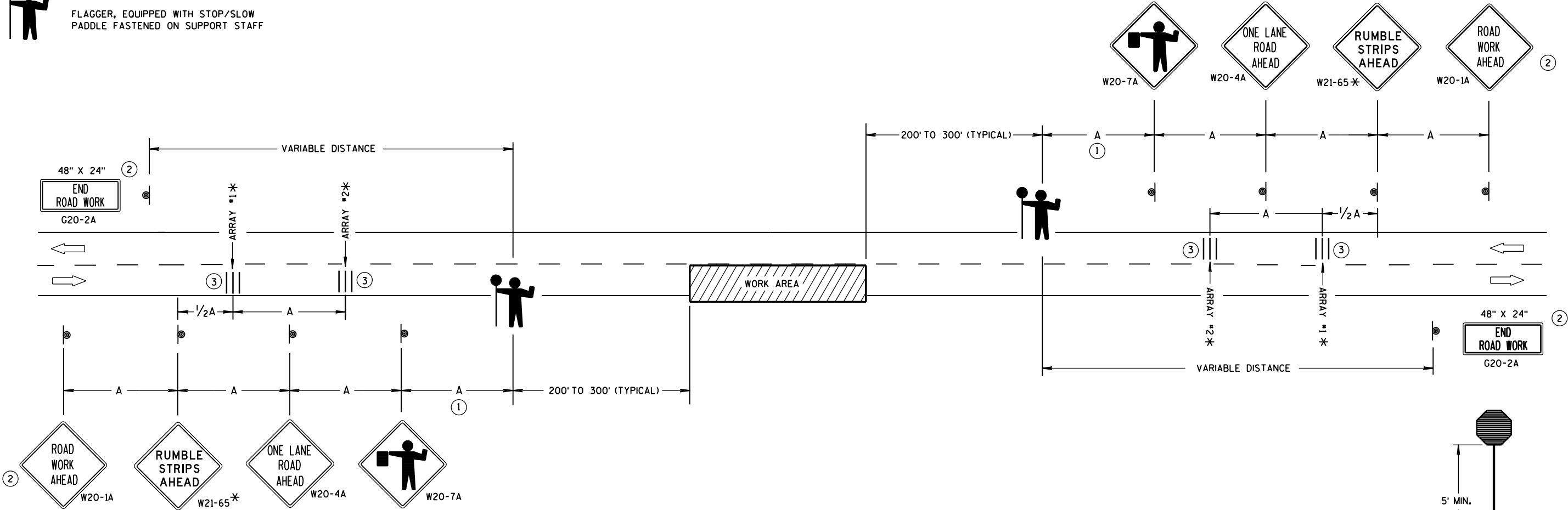
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING A
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING A.



STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE LOCATION OF ALL FLAGGERS) SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

"W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS. PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

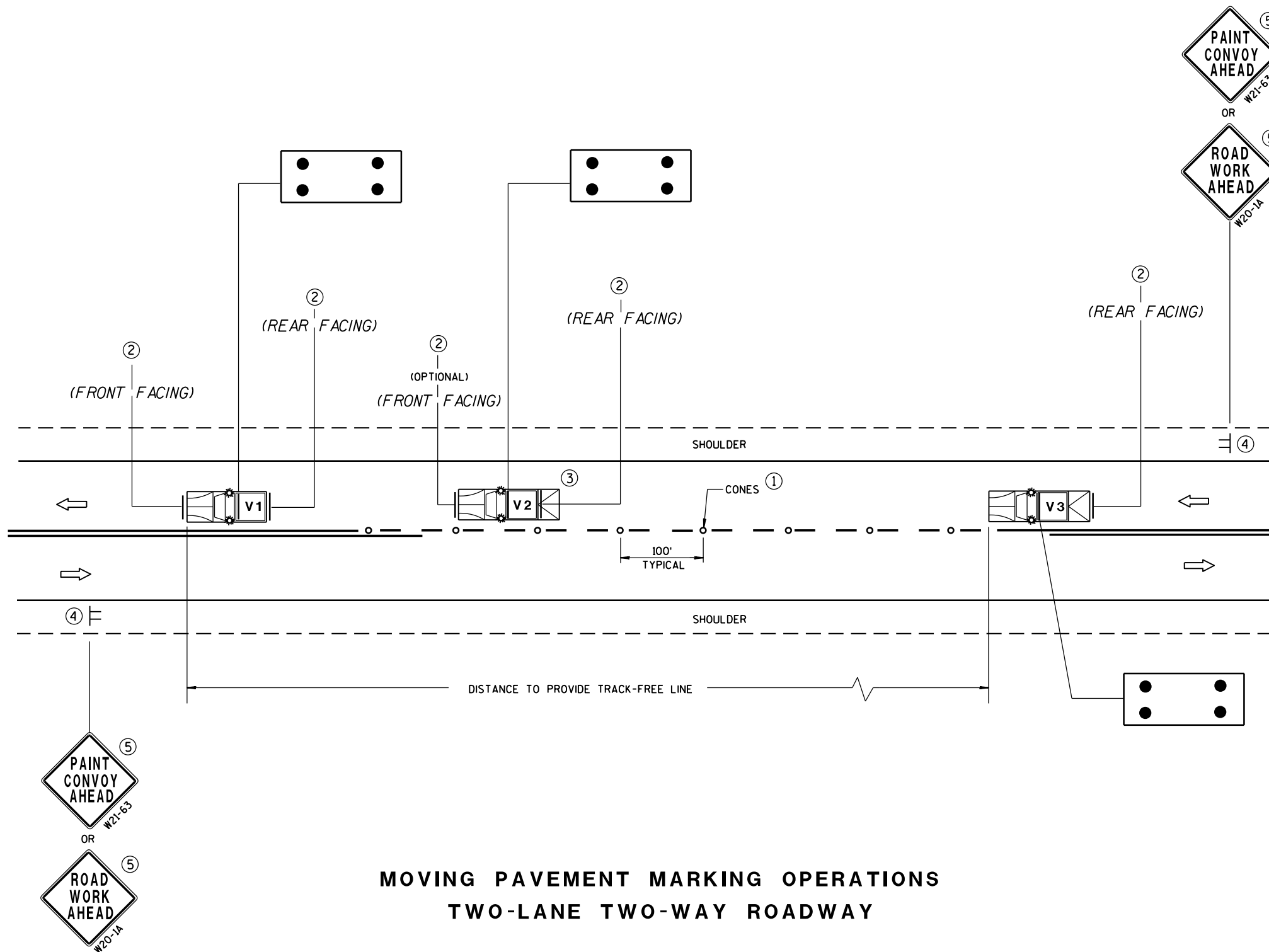
\* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

- FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2017 /S/ Andrew Heldtke  
DATE WORK ZONE ENGINEER  
FHWA



MOVING PAVEMENT MARKING OPERATIONS  
TWO-LANE TWO-WAY ROADWAY

## GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

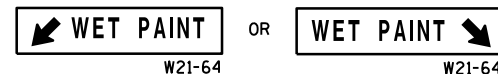
THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.



③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

## LEGEND

V1 LEAD VEHICLE

V2 SHADOW VEHICLE

V3 TRAIL VEHICLE WITH TMA

TMA TRUCK-MOUNTED ATTENUATOR

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

CONES

FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING  
OPERATION  
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2016  
DATE  
FHWA

/S/ Peter Amakobe Atepe  
STATEWIDE WORK ZONE TRAFFIC  
SAFETY ENGINEER

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

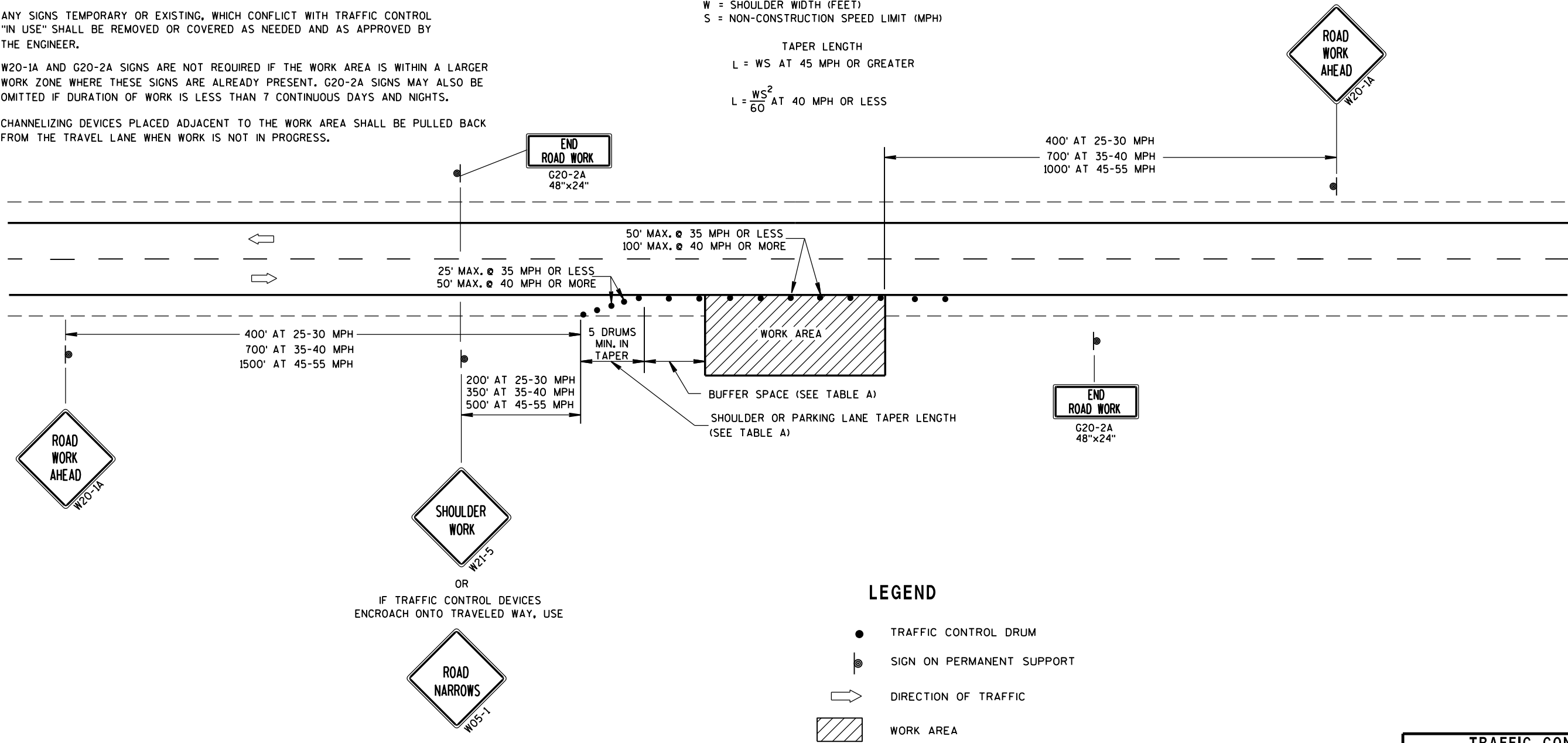
SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

W = SHOULDER WIDTH (FEET)  
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH  
L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$  AT 40 MPH OR LESS

SHOULDER TAPER LENGTH =  $\frac{1}{3}L$



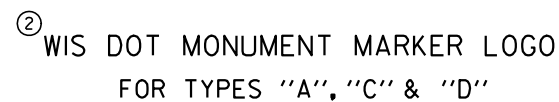
LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED July 14, 2015 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



**S.D.D. 16 A 1-6**

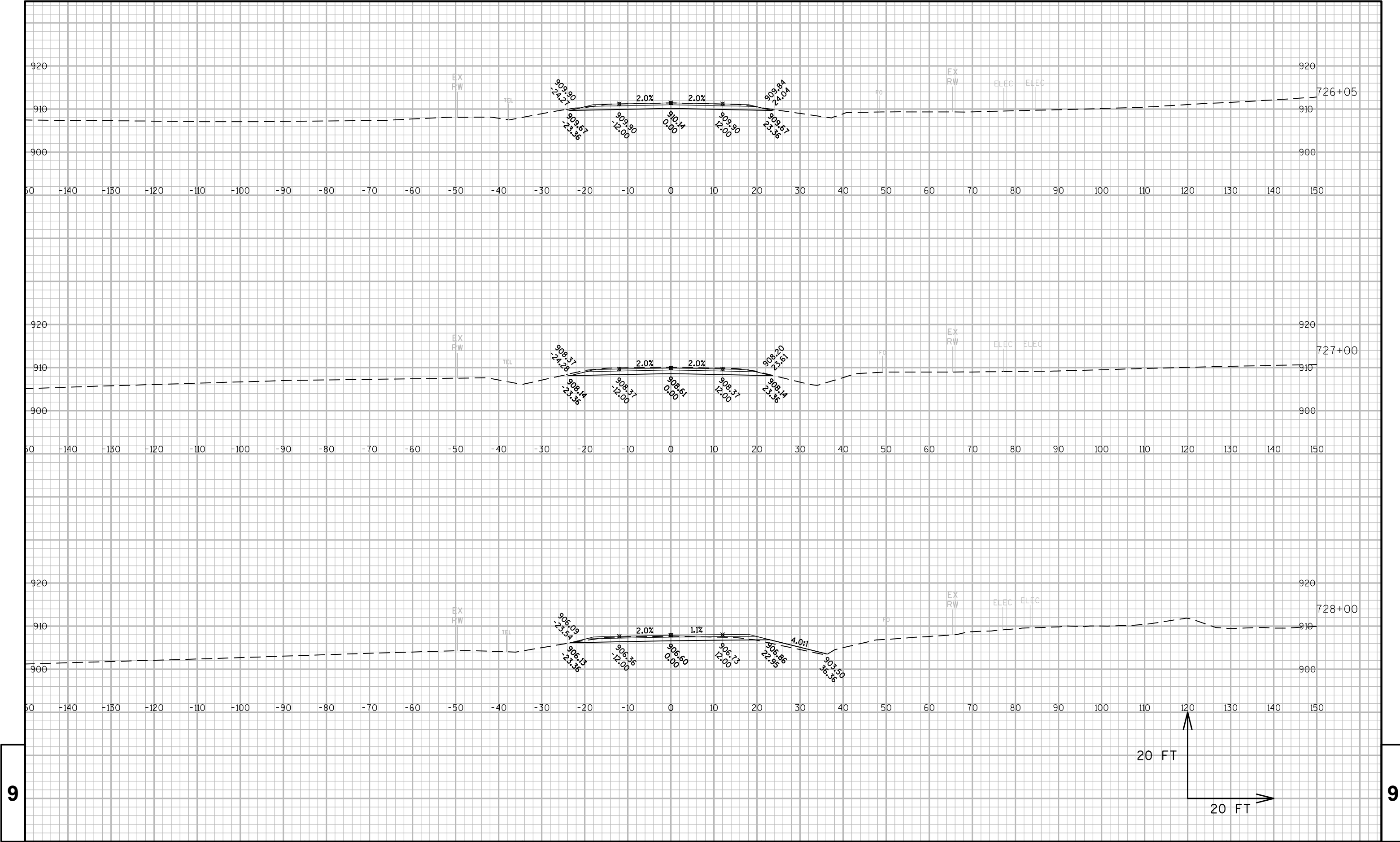


APPROVED  
9/22/1999 /S/ Rory L. Rhinesmith  
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER  
FHWA

EARTHWORK DATA - STH 13													
STATION	AREA				VOLUME								
	UNCLASS. SF	(1) EBS SF	MARSH SF	FILL SF	UNCLASS. CY	EBS CUT CY	EXPANDED EBS FILL CY	MARSH CUT CY	(2) EXPANDED MARSH FILL CY	EXPANDED FILL CY	MASS HAUL CY	(3) USEABLE UNCLASSIFIED MATERIAL CY	(4) TOTAL USEABLE MATERIAL CY
726+05	51.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
727+00	62.39	0.00	0.00	0.00	199.94	0.00	0.00	0.00	0.00	0.00	199.94	199.94	199.94
728+00	34.74	0.00	0.00	8.66	179.87	0.00	0.00	0.00	0.00	18.92	360.89	179.87	179.87
728+77	15.63	4.65	0.00	29.01	71.82	6.63	7.82	0.00	0.00	63.38	368.13	71.82	78.45
729+00	13.90	6.42	0.00	34.96	12.58	4.72	5.56	0.00	0.00	32.15	347.71	12.58	17.29
730+00	13.02	9.46	0.00	24.04	49.85	29.41	34.70	0.00	0.00	128.93	263.34	49.85	79.26
731+00	73.88	8.89	0.00	28.38	160.93	33.98	40.10	0.00	0.00	114.55	303.61	24.11	58.09
732+00	138.27	0.00	0.00	217.61	392.87	16.46	19.43	0.00	0.00	537.53	155.98	0.00	16.46
733+00	268.22	0.00	0.00	468.48	752.76	0.00	0.00	0.00	0.00	1499.23	-590.50	0.00	0.00
733+86	250.04	0.00	0.00	498.87	825.38	0.00	0.00	0.00	0.00	1817.90	-1583.02	0.00	0.00
734+00	198.51	0.00	0.00	498.29	116.29	0.00	0.00	0.00	0.00	305.06	-1771.79	0.00	0.00
735+00	214.99	0.00	0.00	191.43	765.74	0.00	0.00	0.00	0.00	1507.17	-2513.21	0.00	0.00
736+00	141.09	5.88	0.00	98.21	659.41	10.89	12.85	0.00	0.00	632.92	-2488.68	0.00	10.89
737+00	44.56	15.50	0.00	37.23	343.80	39.59	46.72	0.00	0.00	295.96	-2447.97	0.00	39.59
738+00	18.69	7.06	0.00	38.78	117.13	41.78	49.30	0.00	0.00	166.10	-2504.46	34.61	76.39
739+27	29.92	1.17	0.00	25.24	114.32	19.36	22.84	0.00	0.00	177.67	-2571.29	114.32	133.68
740+00	36.06	0.00	0.00	13.34	89.20	1.58	1.87	0.00	0.00	61.54	-2543.92	89.20	90.78
741+00	48.26	0.00	0.00	7.98	156.15	0.00	0.00	0.00	0.00	46.59	-2434.36	156.15	156.15
742+00	50.31	0.00	0.00	10.49	182.54	0.00	0.00	0.00	0.00	40.36	-2292.18	182.54	182.54
742+30	52.37	0.00	0.00	9.03	57.35	0.00	0.00	0.00	0.00	12.86	-2247.70	57.35	57.35
TOTAL	1755.99	59.03	0.00	2240.03	5247.91	202.81	239.32	0.00	0.00	7458.82	-2247.70	932.45	1136.85

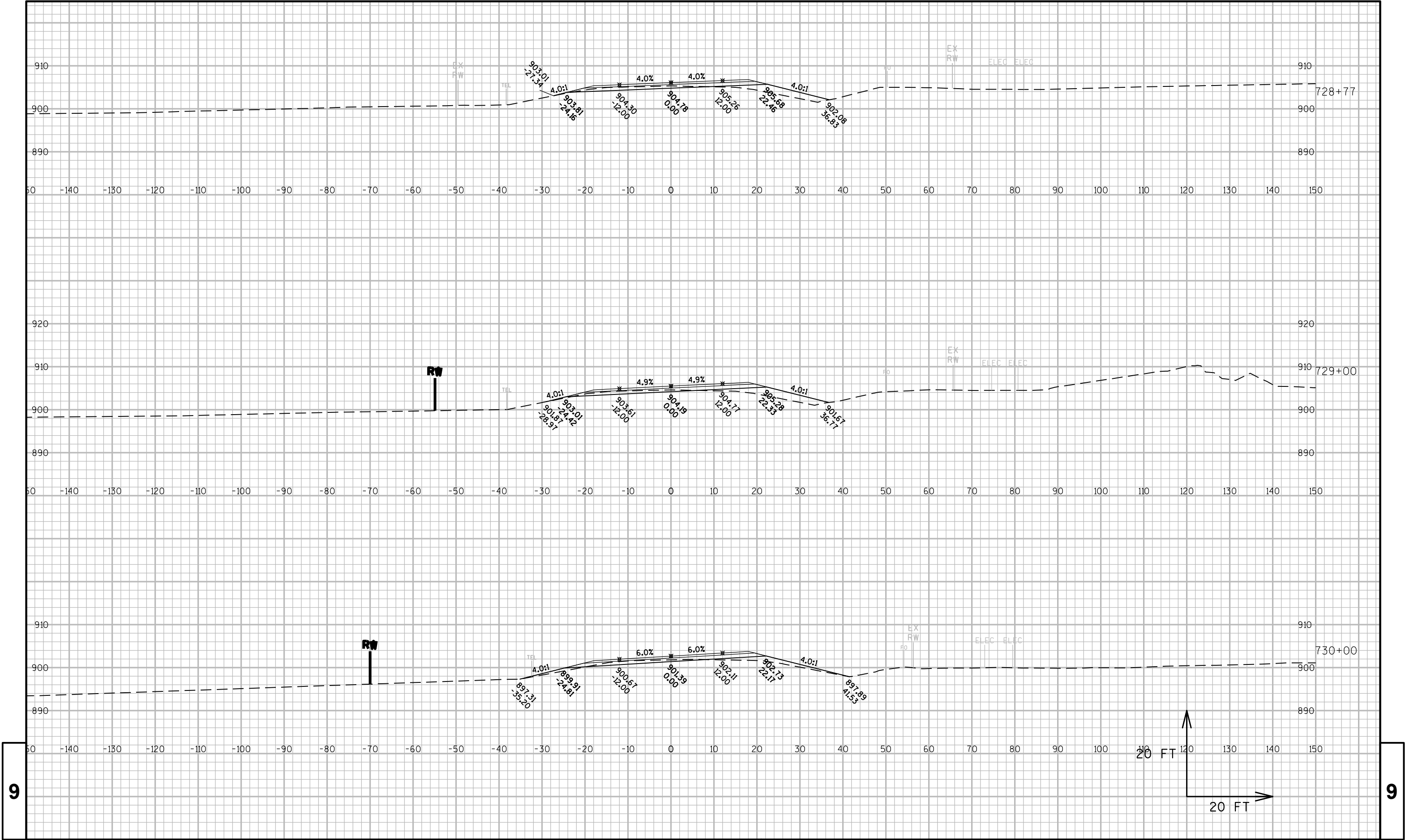
FILL QUANTITIES ARE EXPANDED, NATIVE & SELECT BORROW FILL EXPANSION FACTOR = 1.25 & 1.18 RESPECTIVELY  
MARSH EXPANSION FACTOR = 1.50, MARSH TO BE FILLED WITH SELECT BORROW  
(1) EBS IS FOR PREPARING ROADWAY FOUNDATION (REMOVING PAVEMENT WITHIN 2' OF FG THAT ISN'T REMOVED UNDER UNCLASSIFIED)  
(2) EXPANDED MARSH FILL IS AMOUNT OF SELECT GRANULAR REQUIRED TO FILL THE VOID LEFT IN THE MARSH AFTER EXCAVATION  
(3) USEABLE UNCLASSIFIED MATERIAL REPRESENTS UNCLASSIFIED MATERIAL AVAILABLE FOR USE IN CONSTRUCTION OF THE ROADBED.  
(4) TOTAL USEABLE MATERIAL = USEABLE UNCLASSIFIED MATERIAL+(MARSH CUT\*0.60)+EBS CUT  
NOTE: NO DWY QUANTITIES ARE INCLUDED ON THIS SHEET. SEE EARTHWORK SUMMARY FOR DWY QUANTITIES.





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PROJECT NO: 8510-02-76

HWY: STH 13

COUNTY: BAYFIELD

CROSS SECTIONS: STH 13

SHEET

E

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LAYOUT NAME - 13- (2)

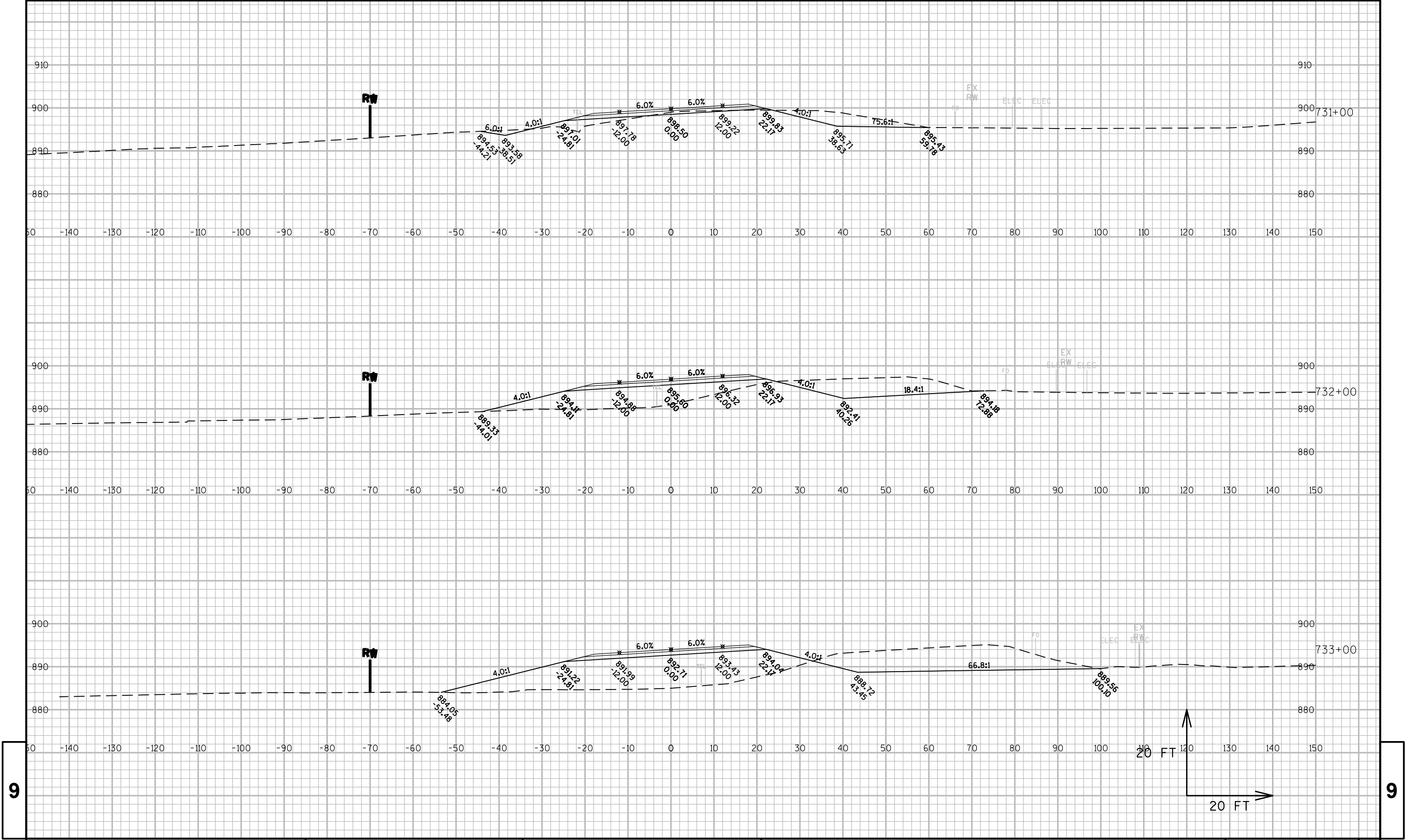
PLOT DATE : 7/10/2017 9:11 AM

PLOT BY : JENSEN, TRAVIS G

PLOT NAME :

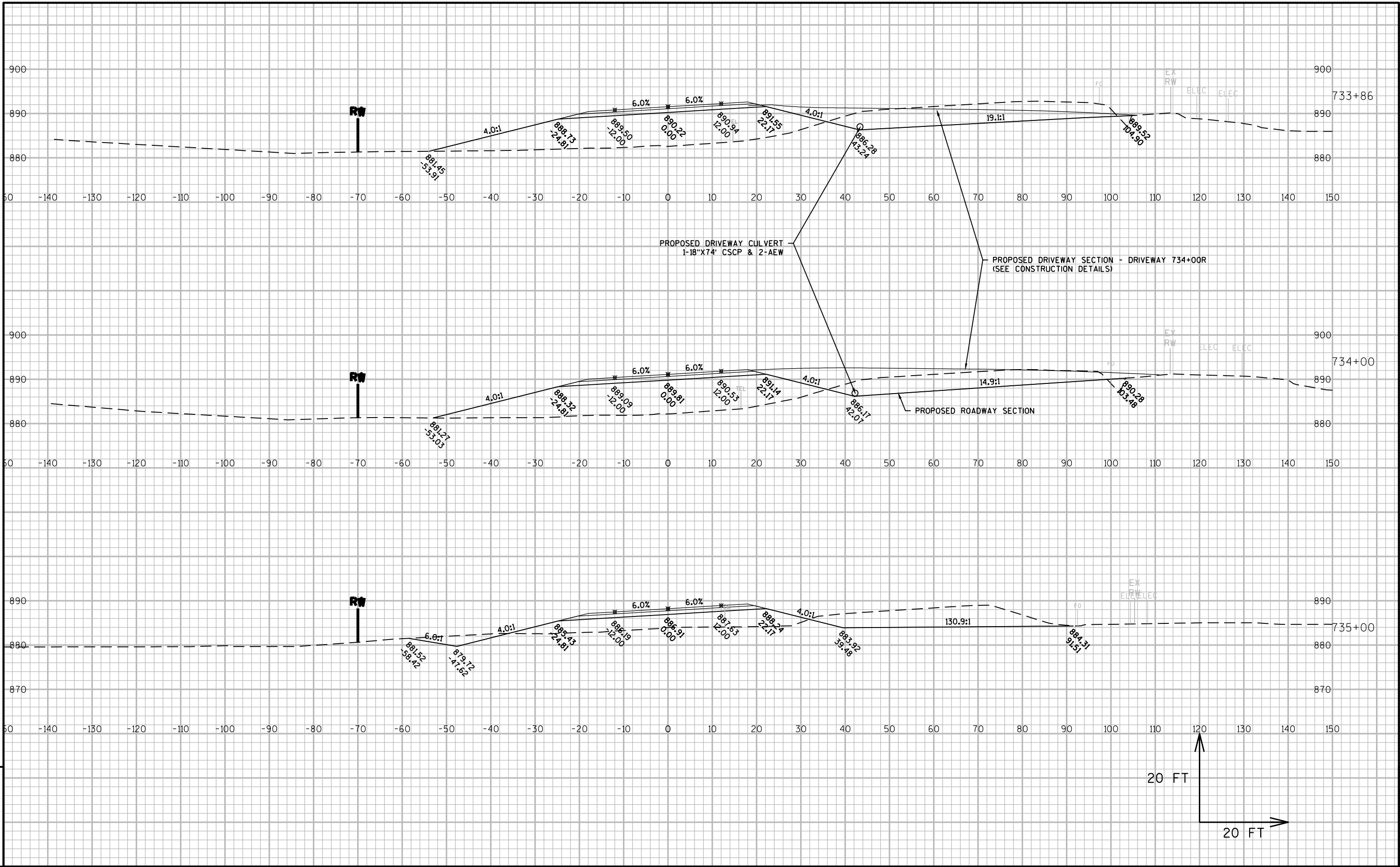
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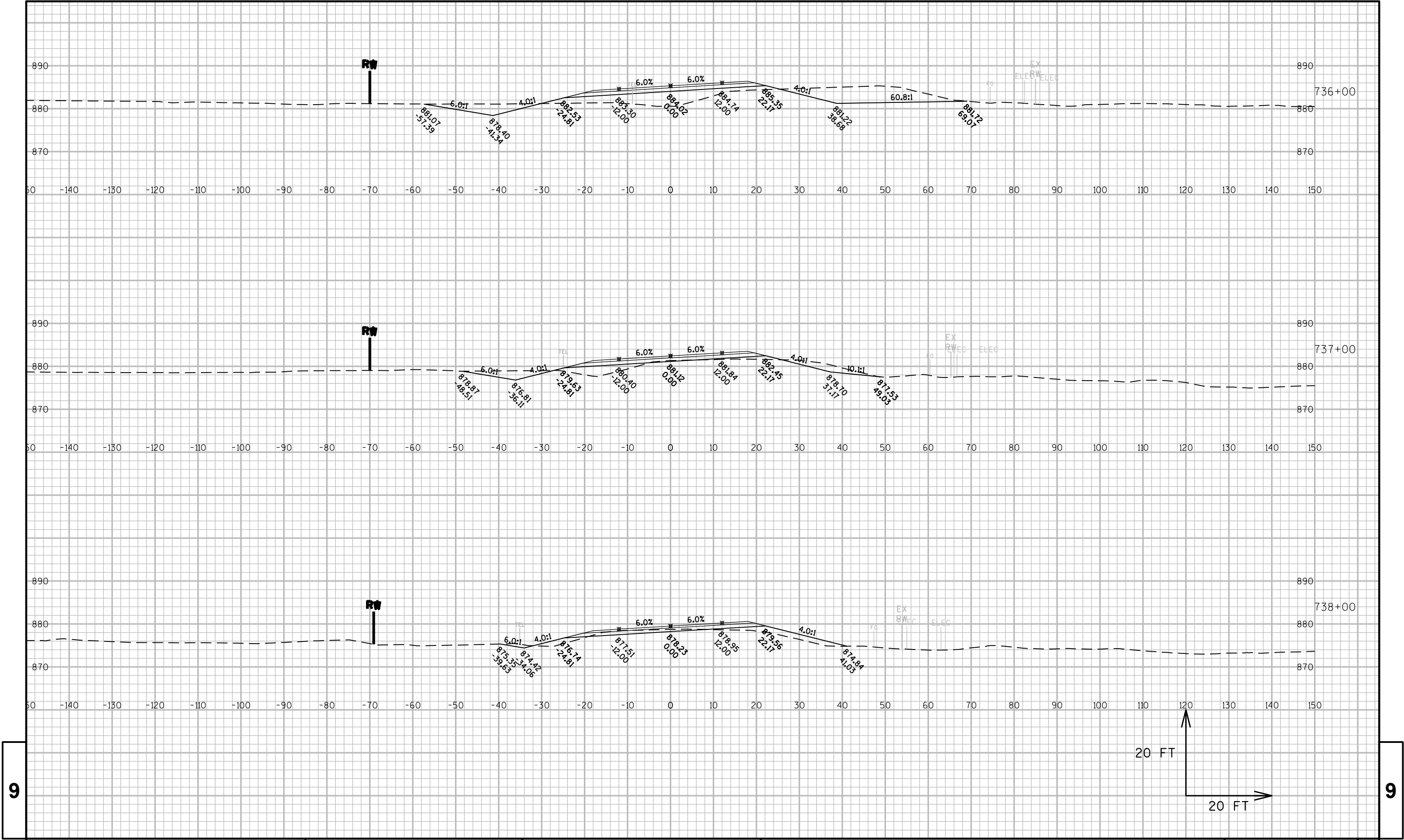
WISDOT/CADDs SHEET 49



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PROJECT NO: 8510-02-76

HWY: STH 13

COUNTY: BAYFIELD

CROSS SECTIONS: STH 13

SHEET

E

FILE NAME : N:\PDS\C3D\85100206\SHEETS\PLAN\85100206\_XS.DWG  
LAYOUT NAME - 13- (5)

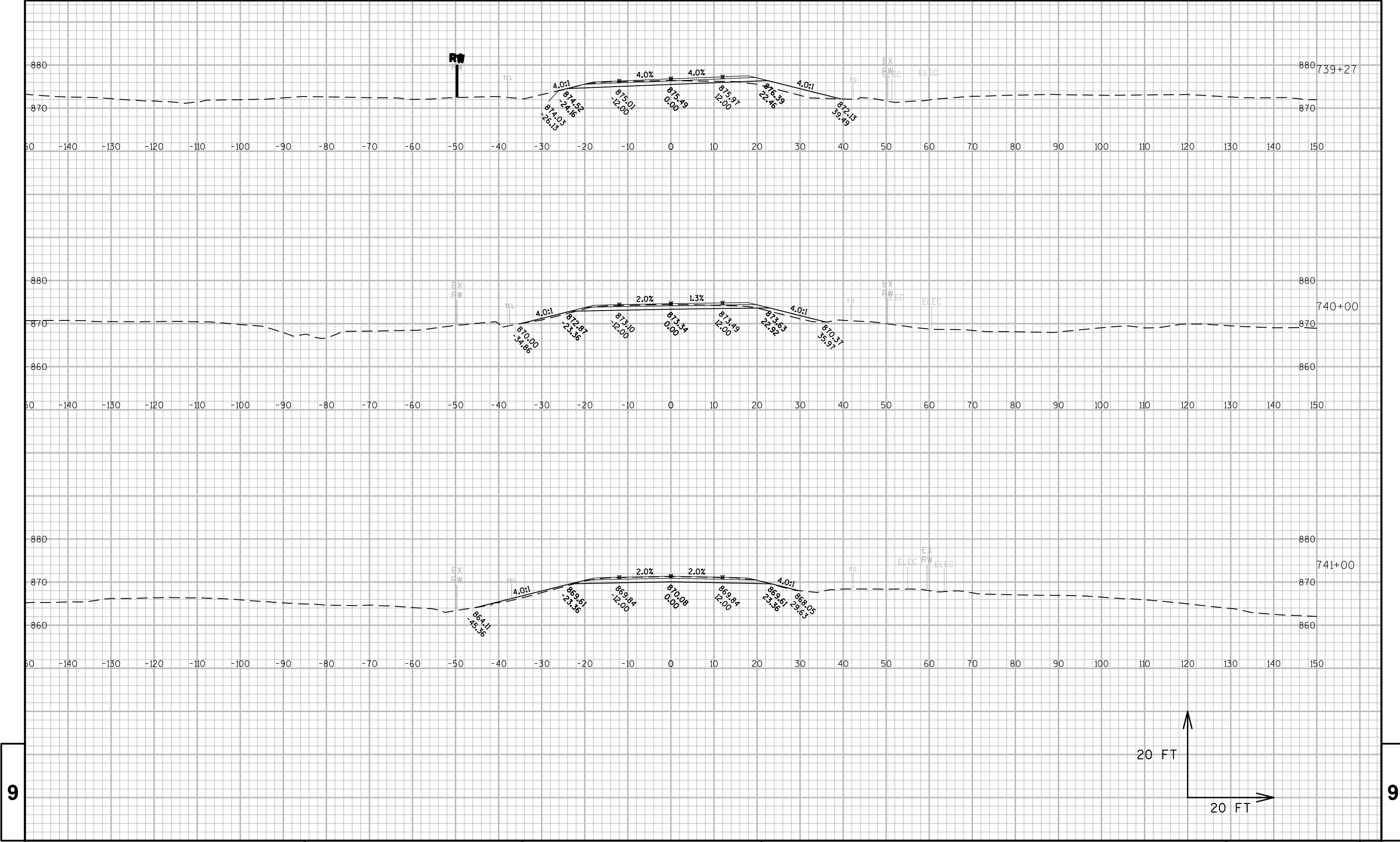
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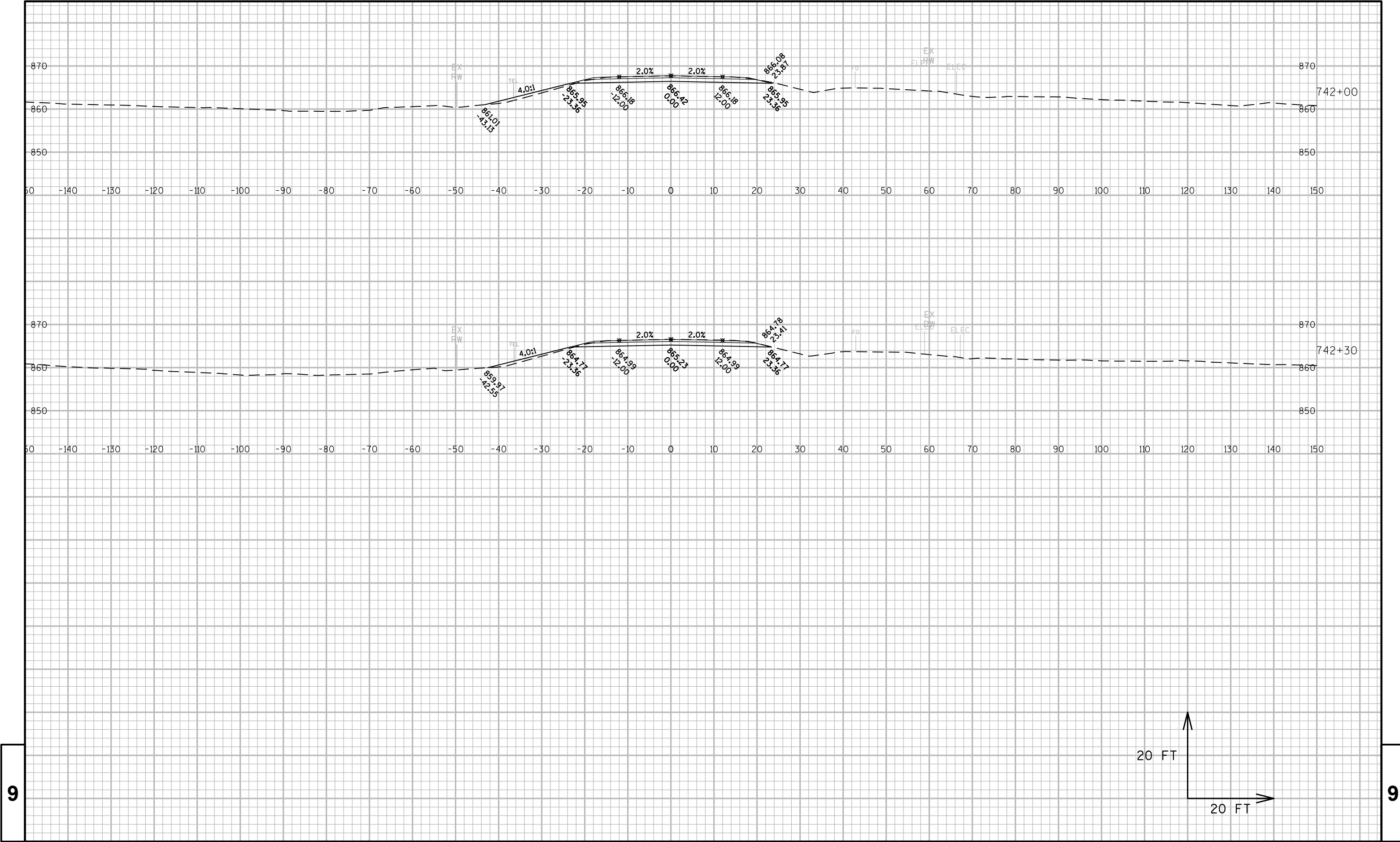
PLOT BY : JENSEN, TRAVIS G

PLOT NAME :

PLOT SCALE : 1 IN:20 FT

WISDOT/CADDs SHEET 49





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