

MAD

PROJECT ID: 1370-00-75

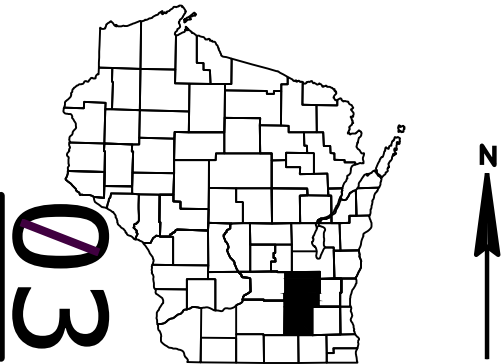
WITH: NA

COUNTY: DODGE & JEFFERSON

MARCH 2026
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
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 162



DESIGN DESIGNATION 1370-00-05

A.A.D.T.	2028	=	6500
A.A.D.T.	2048	=	7100
D.H.V.		=	852
D.D.		=	59/41
T.		=	20.1%
DESIGN SPEED		=	50 M.P.H
ESALS		=	2,400,000

CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE

GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

WATERTOWN - WAUKESHA

CTH L/BUS 26 TO E MAIN STREET

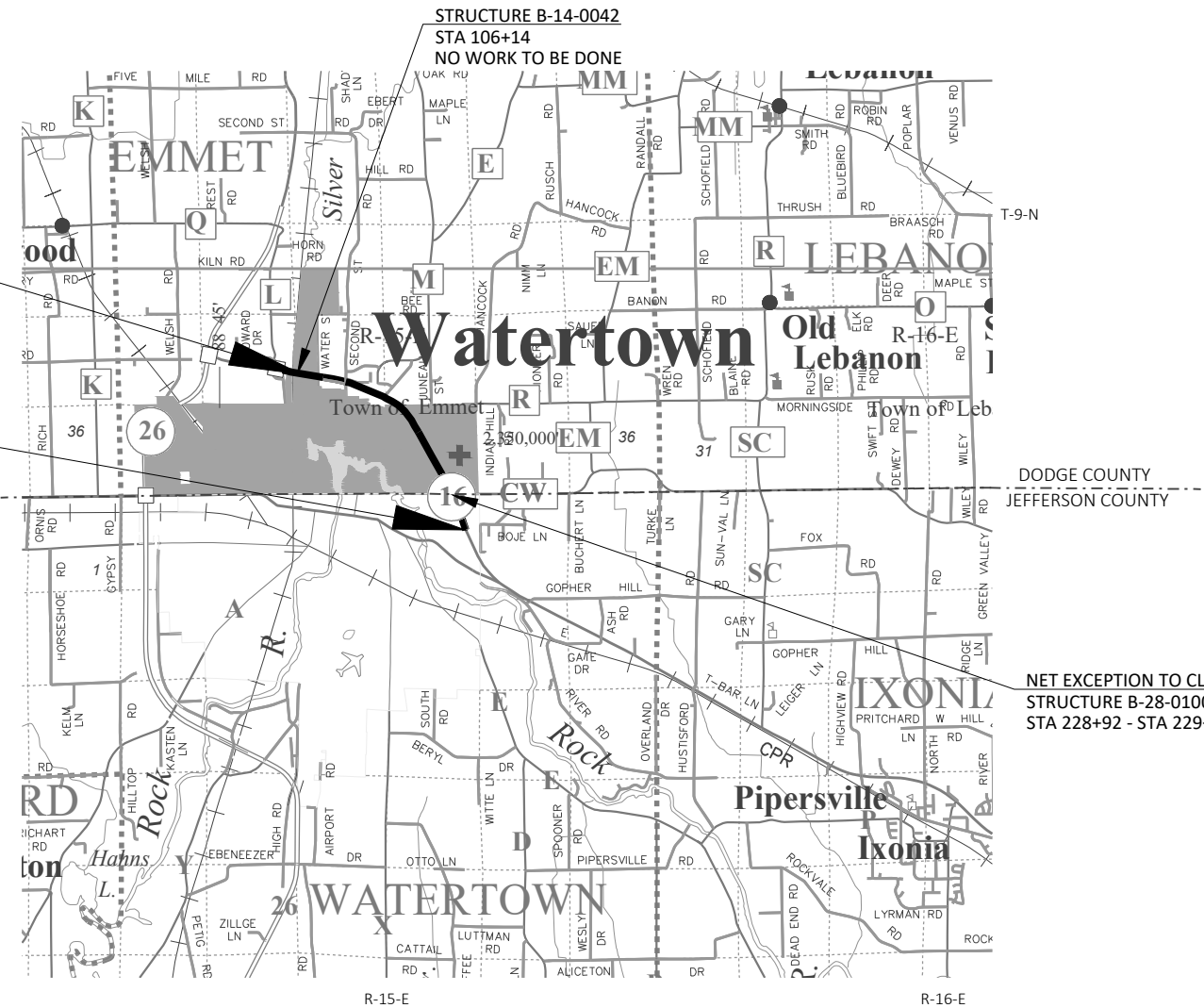
STH 16

DODGE & JEFFERSON COUNTIES

STATE PROJECT NUMBER
1370-00-75

BEGIN PROJECT
STA 104+21.94
Y=635873.347
X=875128.212

END PROJECT
STA 244+13.08
Y=627156.479
X=884668.484



NET EXCEPTION TO CL LENGTH
STRUCTURE B-28-0100
STA 228+92 - STA 229+92

LAYOUT
SCALE 0 2 MI
TOTAL NET LENGTH OF CENTERLINE = 2.631 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), DODGE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1370-00-75		

ORIGINAL PLANS PREPARED BY

Mead & Hunt



DATE: 01/16/2026
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	JT ENGINEERING
Surveyor	MEAD & HUNT
Designer	SARA SCHOENMANN
Project Manager	SW REGION
Regional Examiner	JUSTIN KUTSCHEUTER
Regional Supervisor	

APPROVED FOR THE DEPARTMENT
DATE: 1/16/2026
(Signature)

E

GENERAL NOTES

APPLY TACK COAT AT A RATE OF 0.07 GAL/SY TO MILLED SURFACES AND 0.05 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT WITHOUT DILUTION.

HMA WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.

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

WHEN THE QUANTITY OF THE ITEM OF BASE AGGREGATE DENSE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON. THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

PAVING LIMITS AT INTERSECTIONS ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

THE EXACT LOCATIONS AND LIMITS OF PRIVATE ENTRANCES, COMMERCIAL ENTRANCES, AND FIELD ENTRANCES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

FINAL RESTORATION SHALL BE COMPLETED WITHIN 10 CALENDAR DAYS OF GROUND DISTURBANCE. IF RESTORATION IS TO BE COMPLETED BEYOND 10 CALENDAR DAYS, TEMPORARY RESTORATION MEASURES SHALL BE COMPLETED WITHIN 72-HOURS OF ANY DISTURBANCE.

STANDARD ABBREVIATIONS

AADT	ANNUAL AVERAGE DAILY TRAFFIC	M/L	MAINLINE
ADT	AVERAGE DAILY TRAFFIC	NO	NUMBER
AGG	AGGREGATE	PE	PRIVATE ENTRANCE
ASPH	ASPHALTIC	PI	POINT OF INTERSECTION
BM	BENCH MARK	PL	PROPERTY LINE
BOC	BACK OF CURB	PP	POWER POLE
C&G	CURB AND GUTTER	QTY	QUANTITY
CE	COMMERCIAL ENTRANCE	RHF	RIGHT-HAND FORWARD
CL	CENTERLINE	RT	RIGHT
COR	CORNER	R/L	REFERENCE LINE
CWT	HUNDREDWEIGHT	R/W	RIGHT-OF-WAY
CY	CUBIC YARD	SF	SQUARE FOOT
DHV	DESIGN HOURLY VOLUME	SHLDR	SHOULDER
DWY	DRIVEWAY	SS	STORM SEWER
EL	ELEVATION	STA	STATION
EX	EXISTING	SY	SQUARE YARD
EXC	EXCAVATION	T	TRUCKS (PERCENT OF)
FT	FOOT	TEL	TELEPHONE
FTG	FOOTING	TLE	TEMPORARY LIMITED EASEMENT
HYD	HYDRANT	TYP	TYPICAL
INV	INVERT	UG	UNDERGROUND CABLE
LB	POUND	VAR	VARIABLE
LF	LINEAR FOOT	VC	VERTICAL CURVE
LHF	LEFT-HAND FORWARD	VPC	VERTICAL POINT OF CURVE
LS	LUMP SUM	VPI	VERTICAL POINT OF INTERSECTION
LT	LEFT	VPT	VERTICAL POINT OF TANGENCY
Mgal	MEGAGALLON		

UTILITIES

COMMUNICATIONS

AT&T LEGACY - COMMUNICATION LINE
KENNETH M. NINE
110 N. MAIN ST.
CULVER, IN 46511
PHONE: (574) 842-8830
EMAIL: knine@jmceainc.com

COMMUNICATIONS

AT&T WISCONSIN - COMMUNICATION LINE
TYLER FLECK
220 WISCONSIN AVENUE
WAUKESHA, WI 53186
PHONE: (414)248-6803
EMAIL: tf8394@att.com

COMMUNICATIONS

SPECTRUM - COMMUNICATION LINE
COREY LEWIS
N3760 COUNTY RD DJ
JUNEAU, WI 53039
PHONE: (920) 404-0575
EMAIL: corey.lewis@charter.com

WATER & SEWER

CITY OF WATERTOWN - WATER & SEWER
PETER HARTZ
800 HOFFMAN DRIVE
P.O. BOX 477
WATERTOWN, WI 53094
PHONE: (920) 262-4075
EMAIL: phartz@watertownwi.gov

GAS

WE ENERGIES - GAS/PETROLEUM
SCOTT HOLSTEIN
500 S 116TH STREET
WEST ALLIS, WI 53214
PHONE: (262) 763-1084
EMAIL: scott.holstein@we-energies.com

ELECTRIC

WE ENERGIES - ELECTRICITY
ERIC KICKHAVER
500 S 116TH STREET
WEST ALLIS, WI 53214
PHONE: (414) 944-5917
EMAIL: eric.kickhaver@we-energies.com

COMMUNICATIONS

US CELLULAR - COMMUNICATION TOWER
RANDY MILLER
4417 HELGESEN DRIVE
MADISON, WI 53718
PHONE: (715) 421-9653
EMAIL: randy.miller@uscellular.com

ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
BEAM GUARD DETAILS
PLAN DETAILS -CULVERT PIPE LINERS
CURB RAMP DETAILS
PAVEMENT MARKING
TRAFFIC CONTROL
DETOUR PLAN

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 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP- TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE- TURF			.25 .32			.27 .34			.28 .36			.30 .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 = 92.79 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 14.05 ACRES

WISCONSIN DNR

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
ATTN: ERIC HEGGELUND
PHONE: (608)228-7927
EMAIL: eric.heggelund@wisconsin.gov

DESIGN CONSULTANT



Mead and Hunt, Inc.
2440 DEMING WAY
MIDDLETON, WI. 53562
ATTN: BRIAN VEIT, P.E.
PHONE: (608)239-6467
EMAIL: brian.veit@meadhunt.com

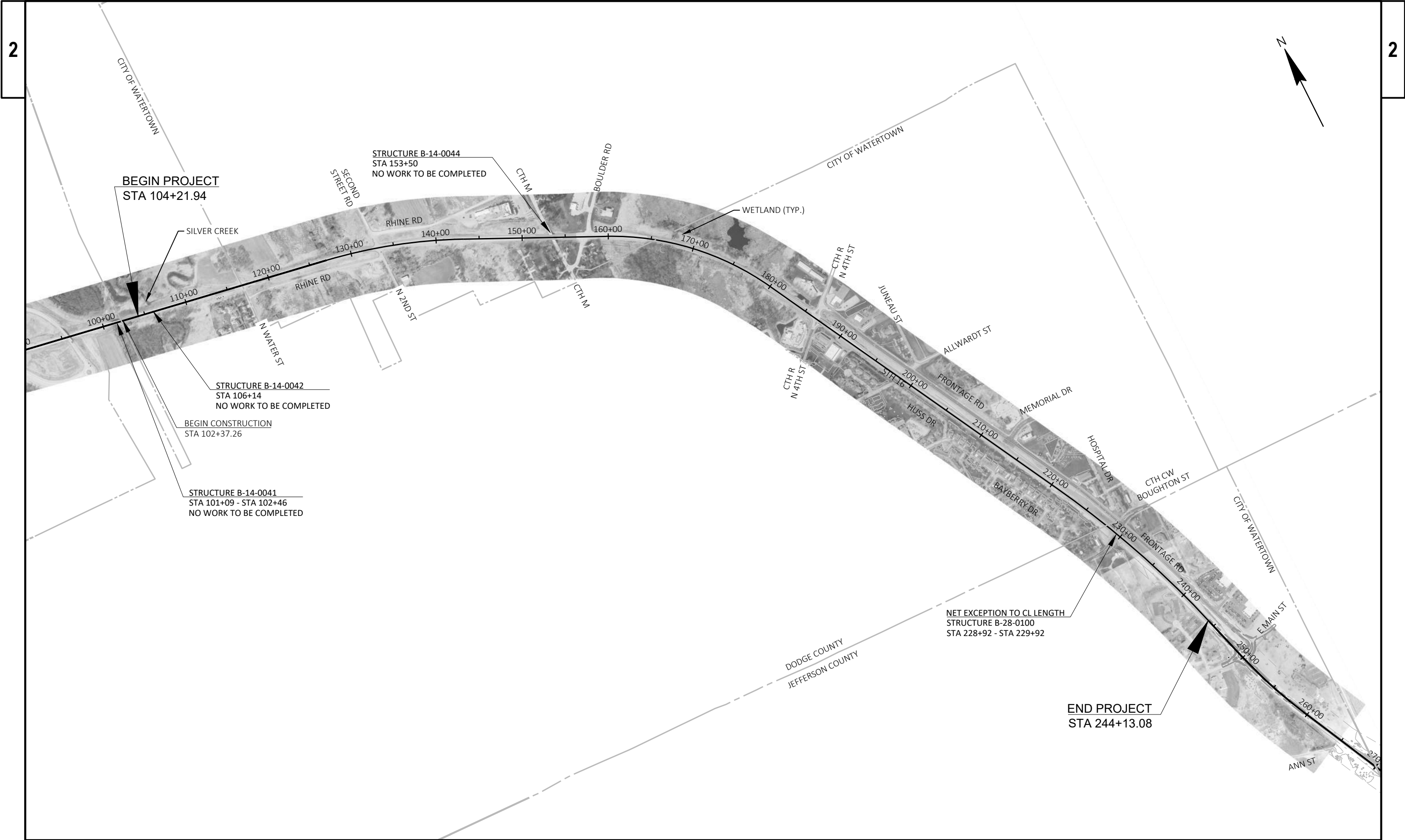
WISCONSIN DOT

WISCONSIN DEPARTMENT OF TRANSPORTATION
SOUTHWEST REGION
2101 WRIGHT STREET
MADISON, WI 53704
ATTN: SARA SCHOENMANN, P.E.
PHONE: (608)246-5361
EMAIL: sara.schoenmann@dot.wi.gov

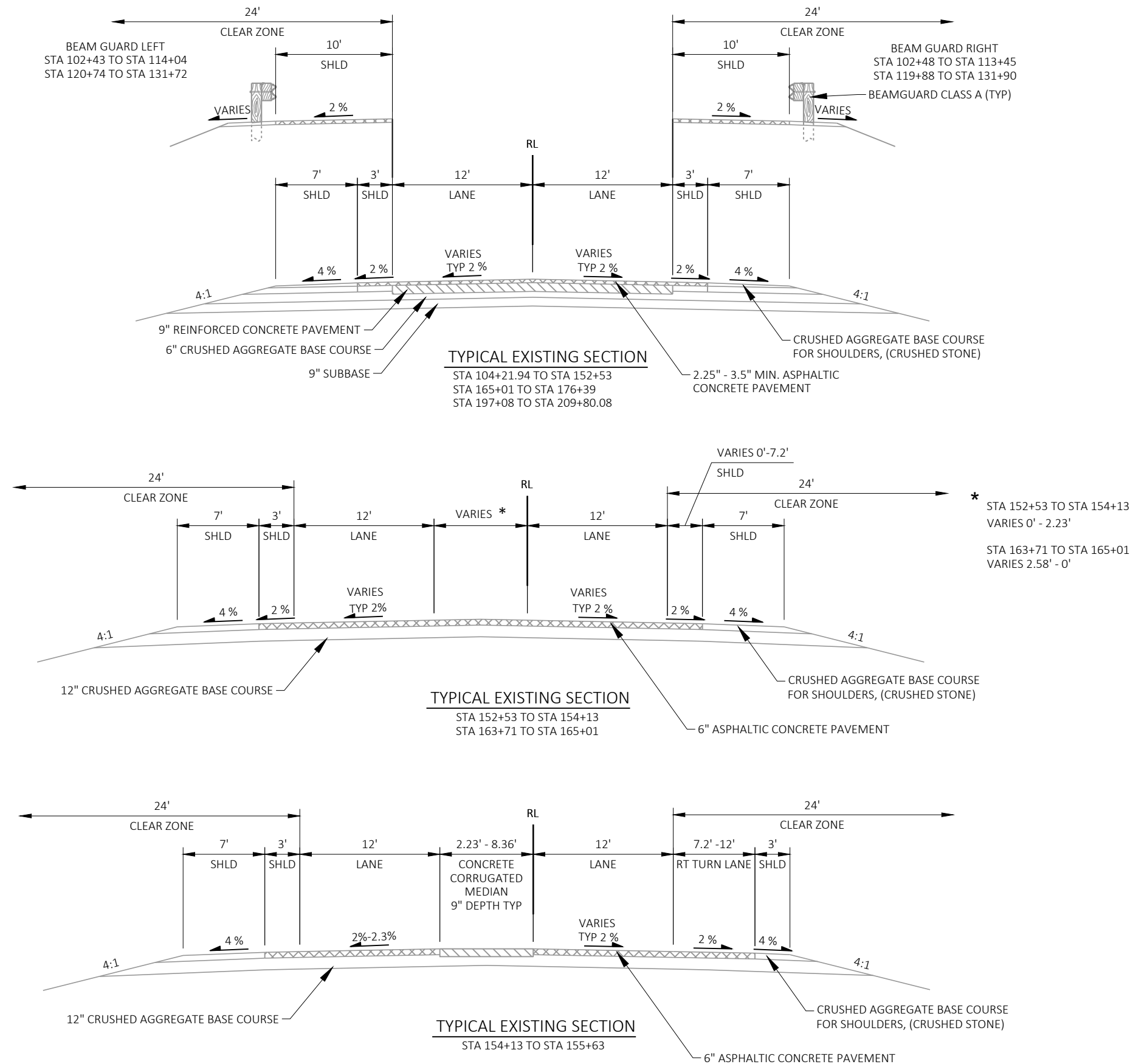


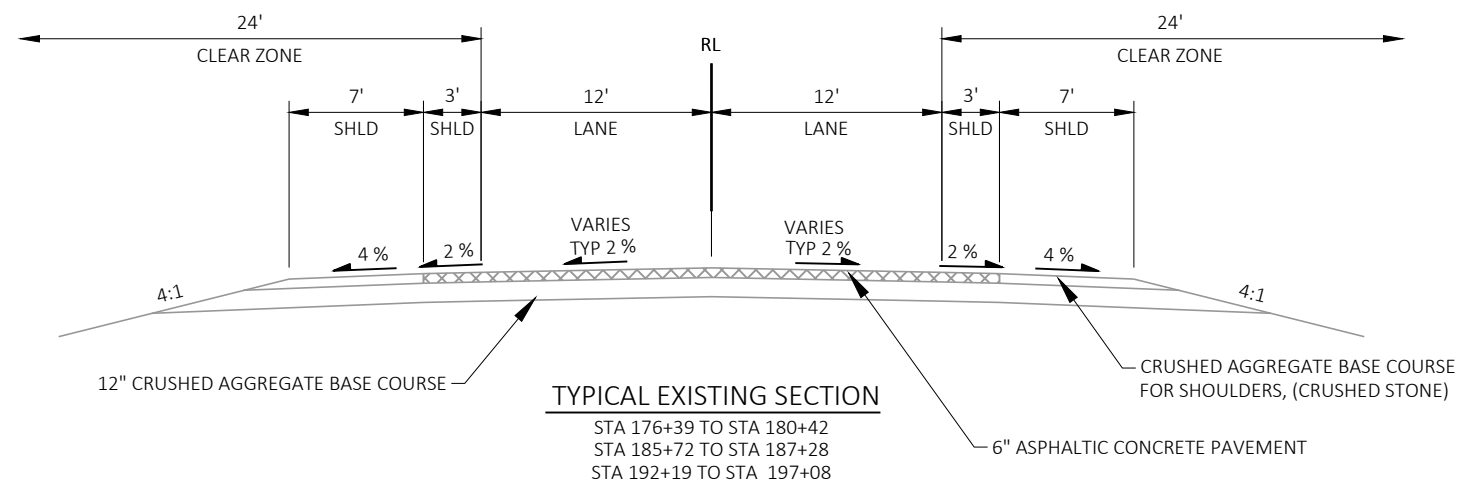
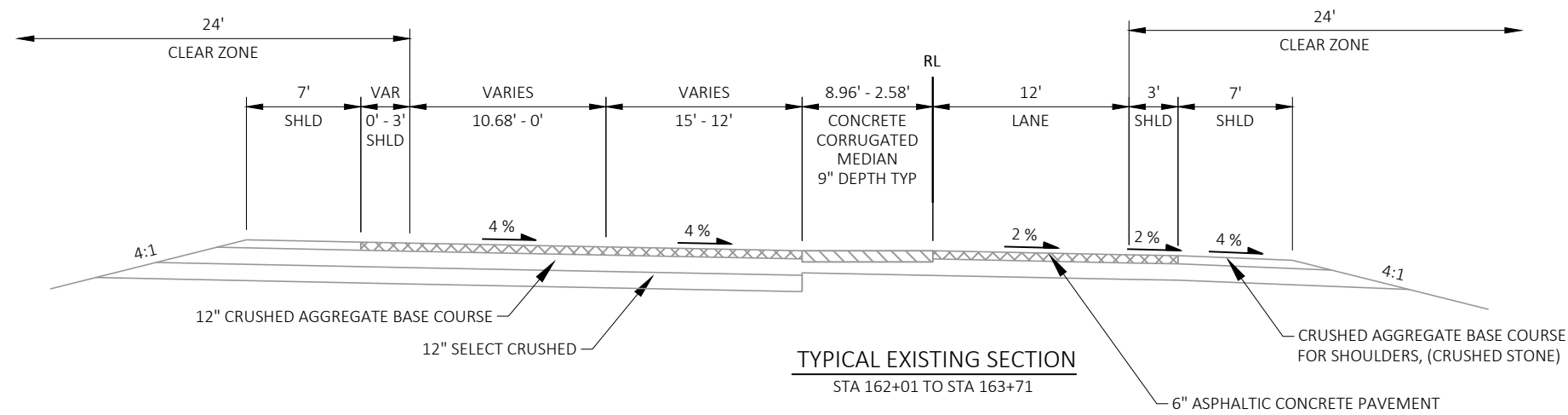
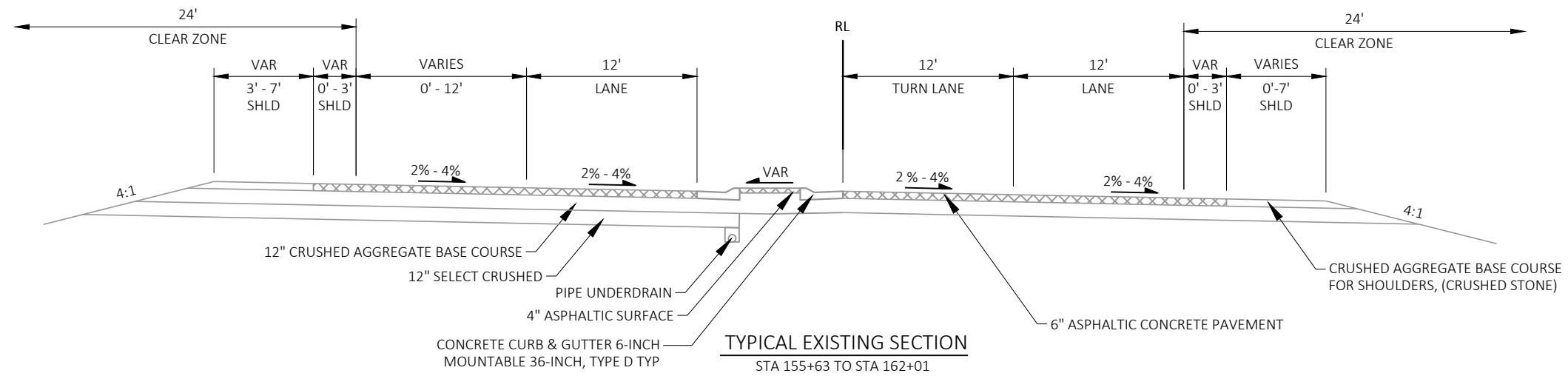
Dial 811 or (800)242-8511

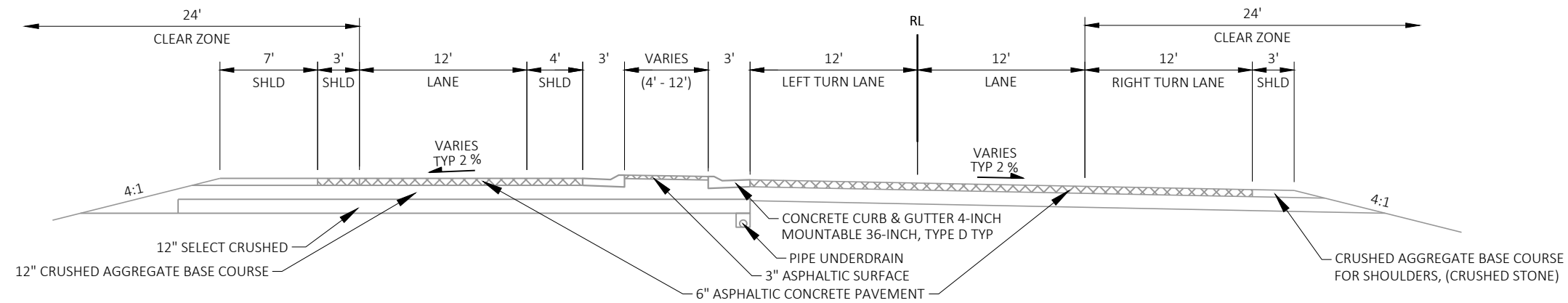
www.DiggersHotline.com



PROJECT NO: 1370-00-75	HWY: STH 16	COUNTY: DODGE & JEFFERSON	PROJECT OVERVIEW	SHEET 3	E
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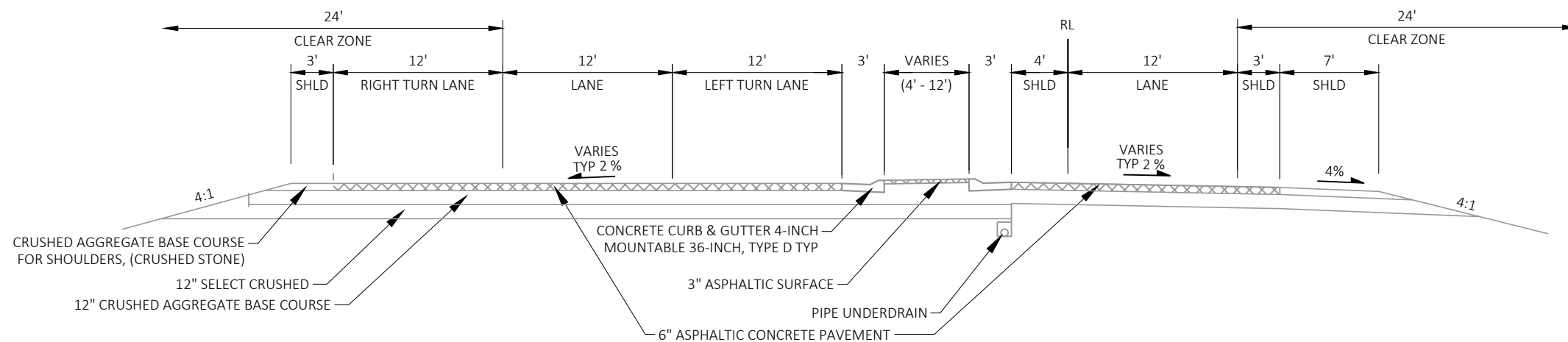






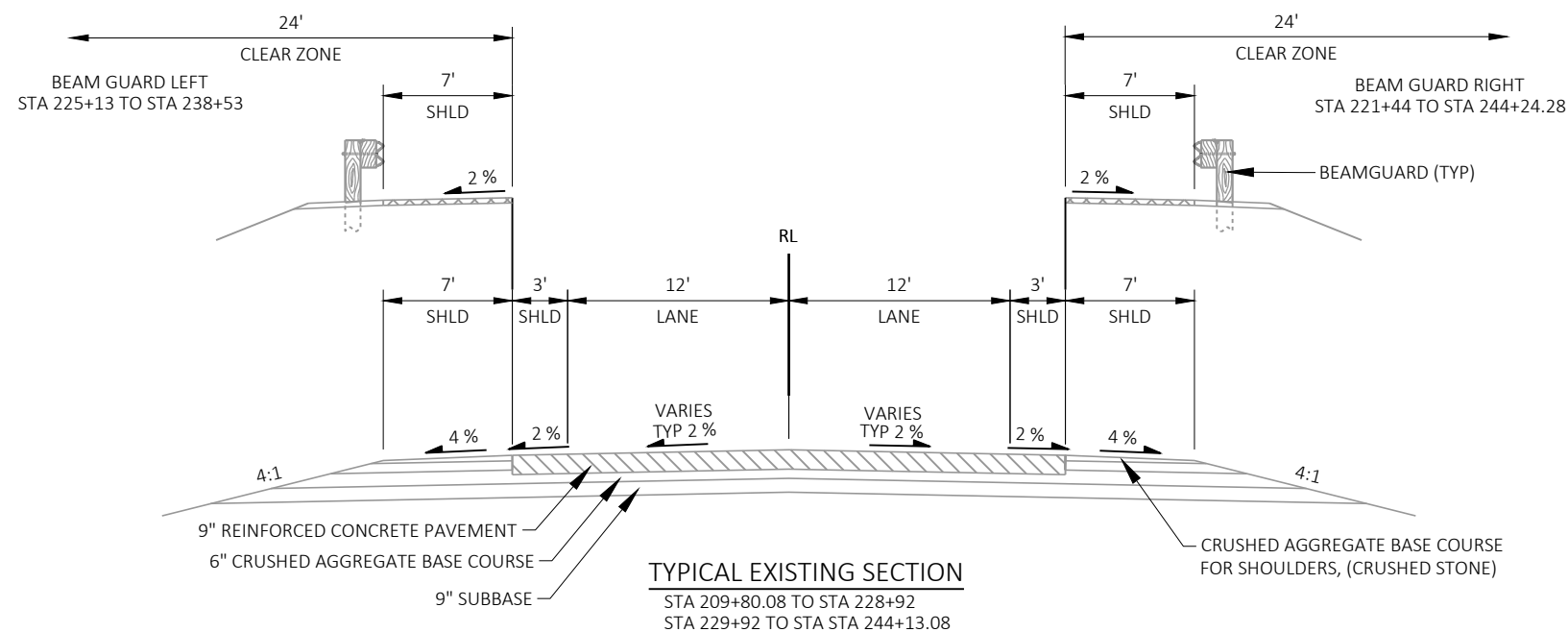
TYPICAL EXISTING SECTION

WEST LEG OF INTERSECTION
STA 180+42 TO STA 185+72



TYPICAL EXISTING SECTION

EAST LEG OF INTERSECTION
STA 187+28 TO STA 192+19

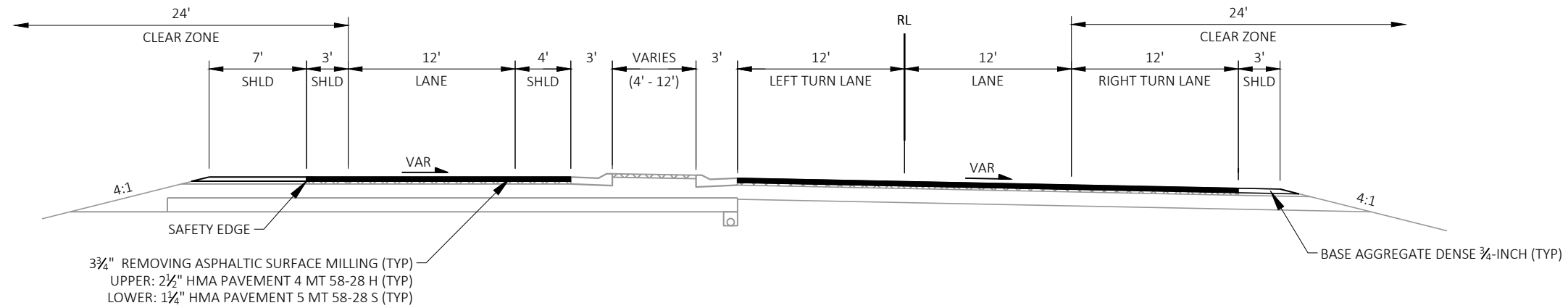


TYPICAL EXISTING SECTION

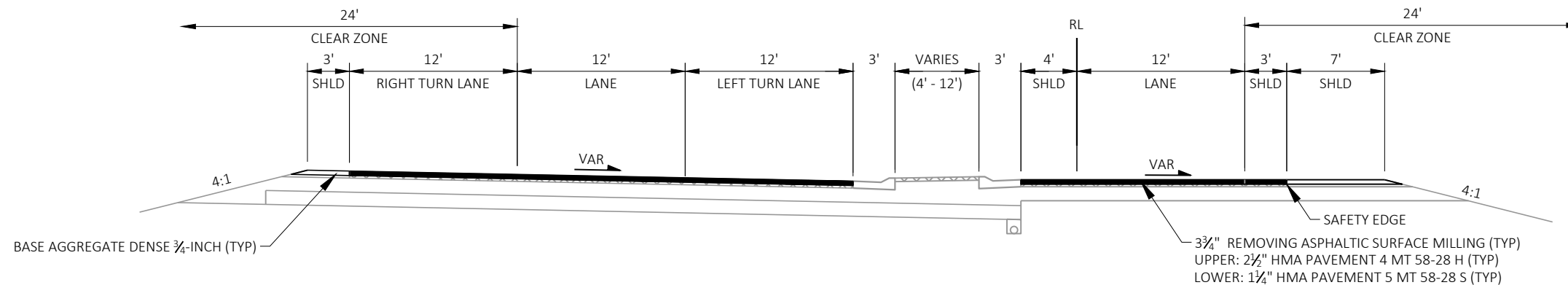
STA 209+80.08 TO STA 228+92
STA 229+92 TO STA 244+13.08

2

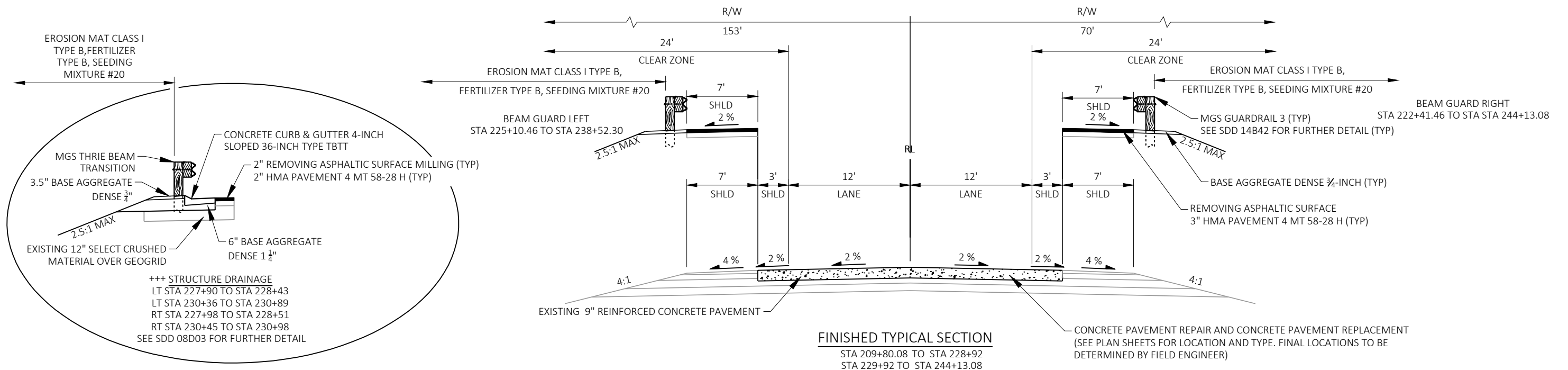


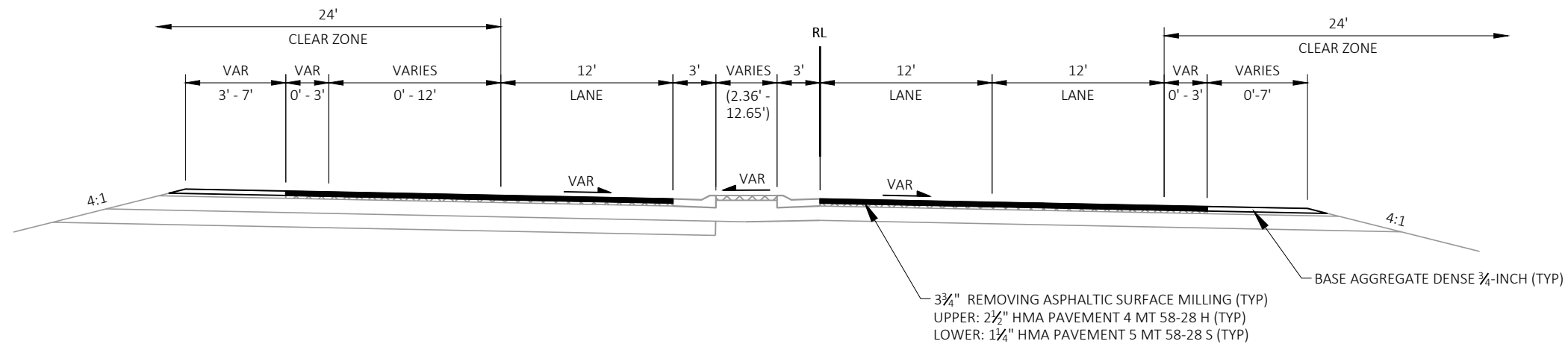
**FINISHED TYPICAL SECTION**

WEST LEG OF INTERSECTION
STA 180+42 TO STA 185+72

**FINISHED TYPICAL SECTION**

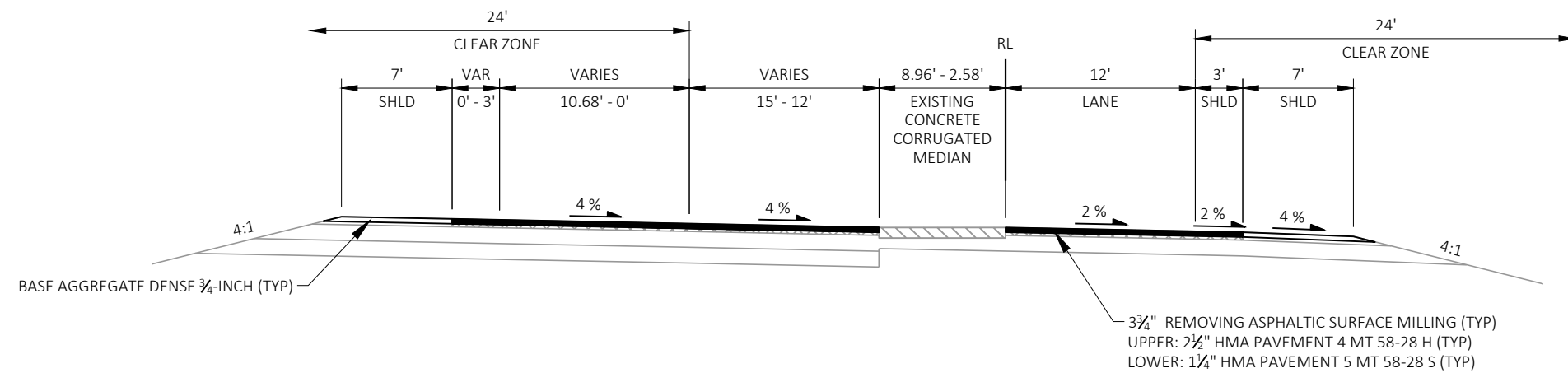
EAST LEG OF INTERSECTION
STA 187+28 TO STA 192+19





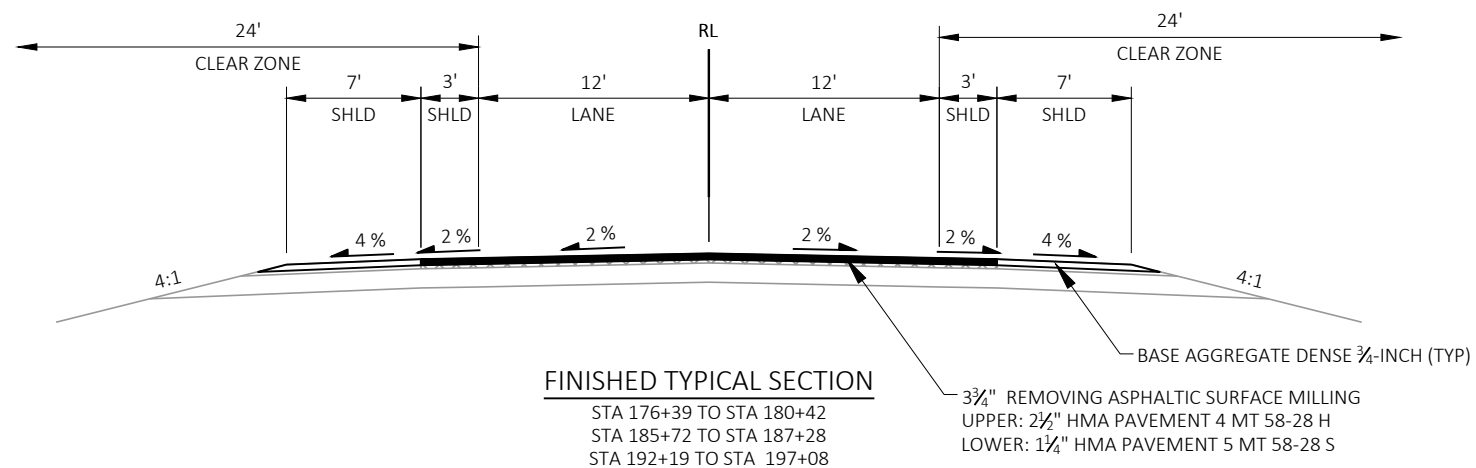
FINISHED TYPICAL SECTION

STA 155+63 TO STA 162+01



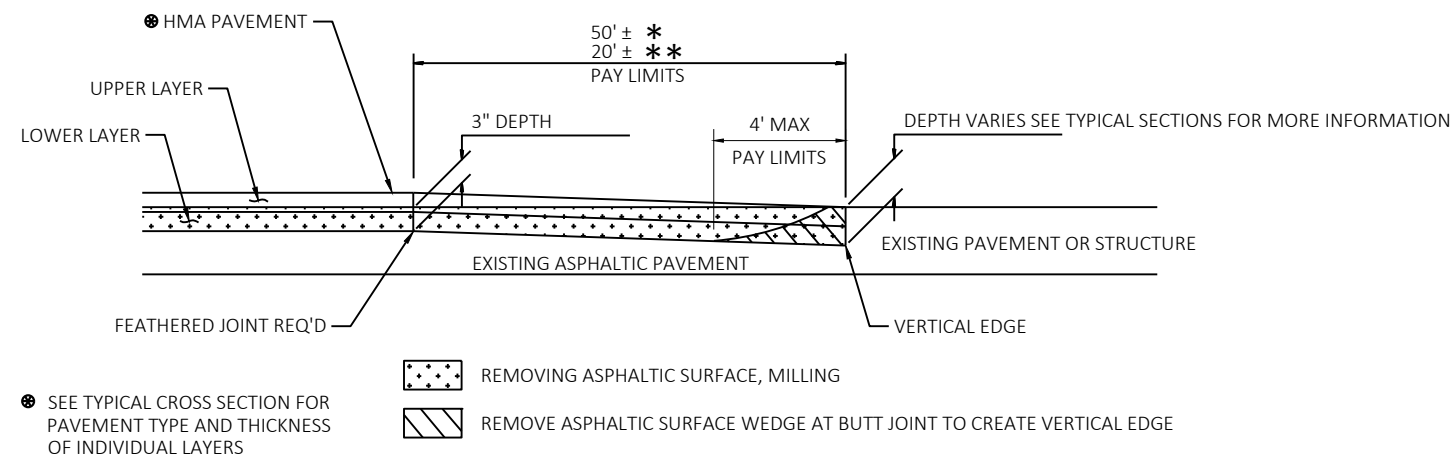
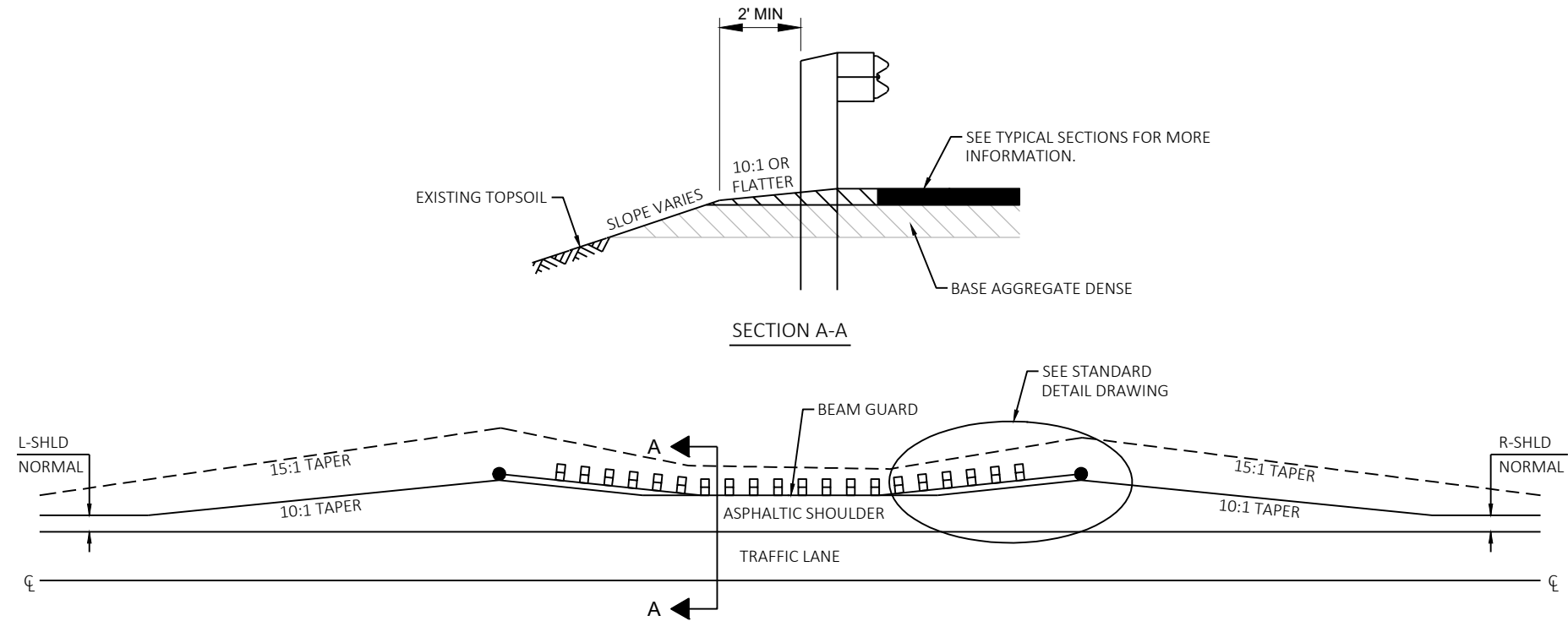
FINISHED TYPICAL SECTION

STA 162+01 TO STA 163+71



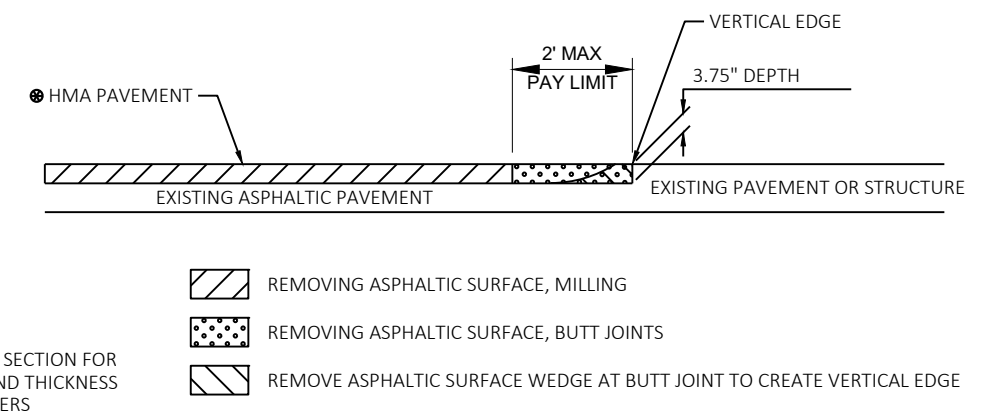
FINISHED TYPICAL SECTION

STA 176+39 TO STA 180+42
STA 185+72 TO STA 187+28
STA 192+19 TO STA 197+08

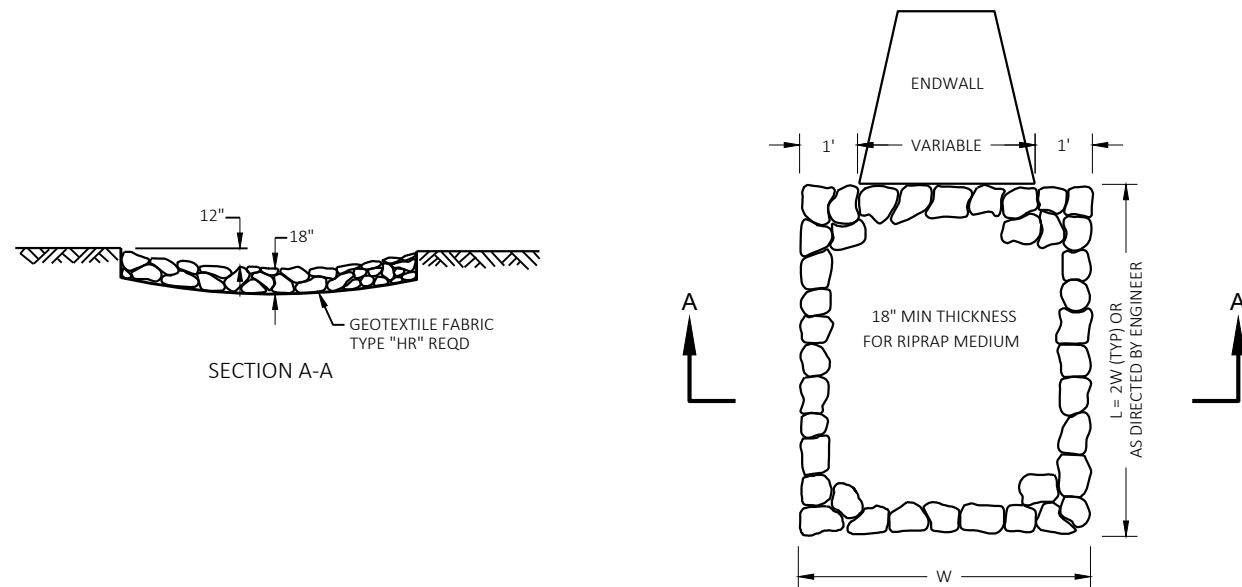


BUTT JOINT DETAIL FOR MILLED ASPHALTIC PAVEMENTS (PROFILE CHANGE)

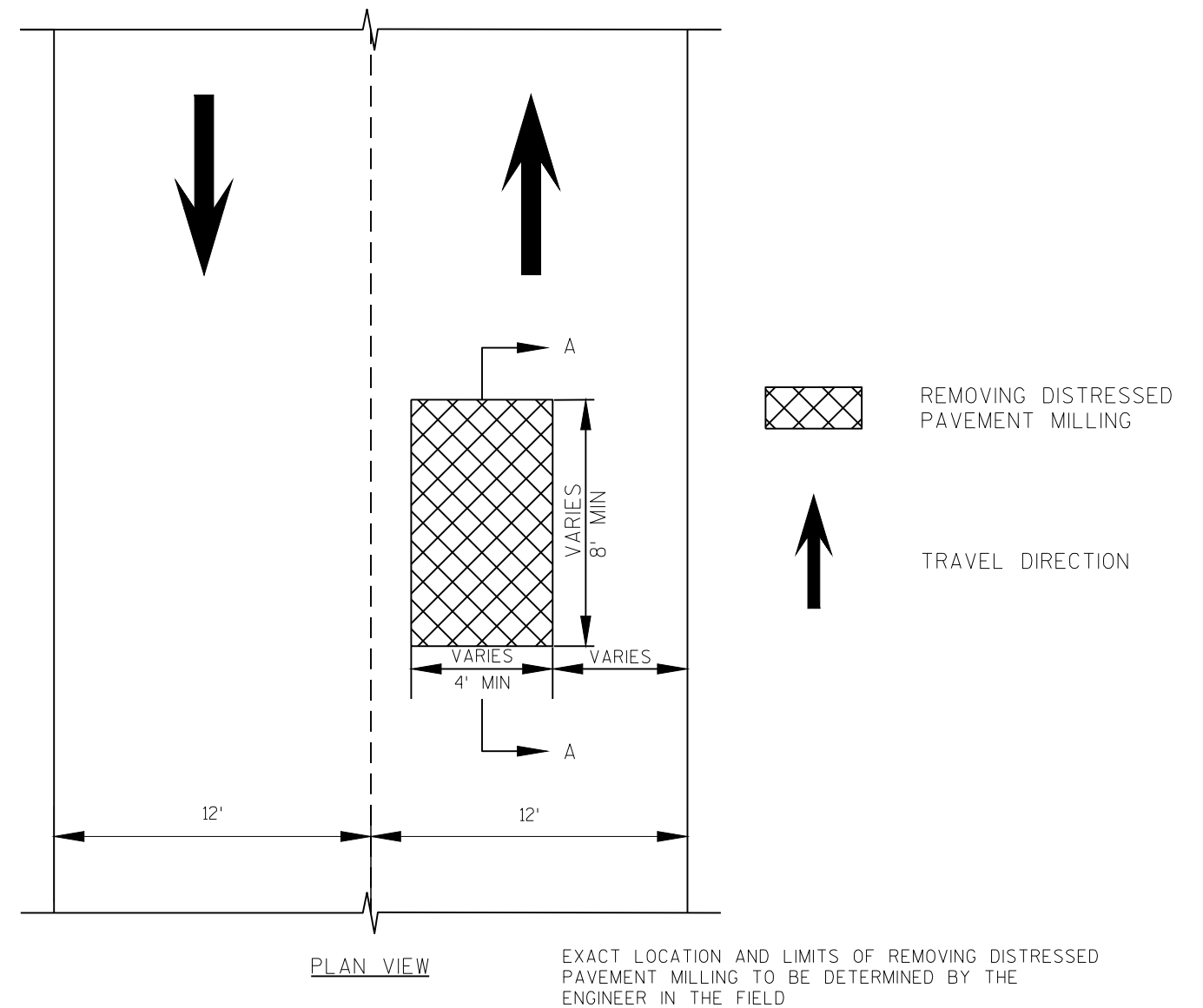
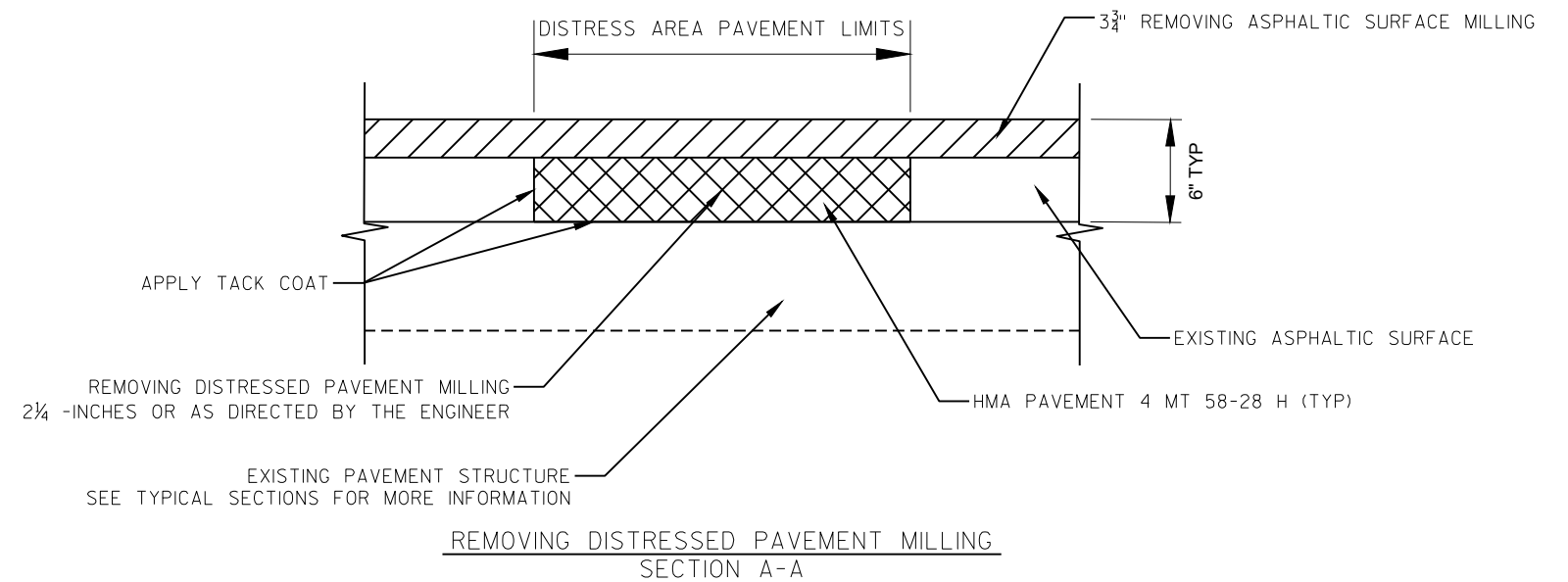
* MAINLINE
** SIDEROADS

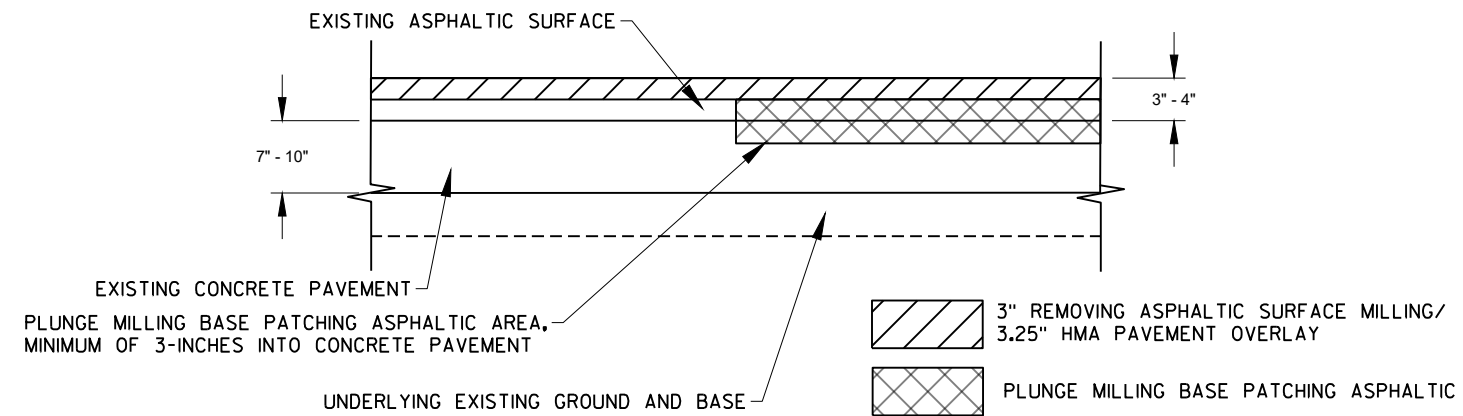


BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)



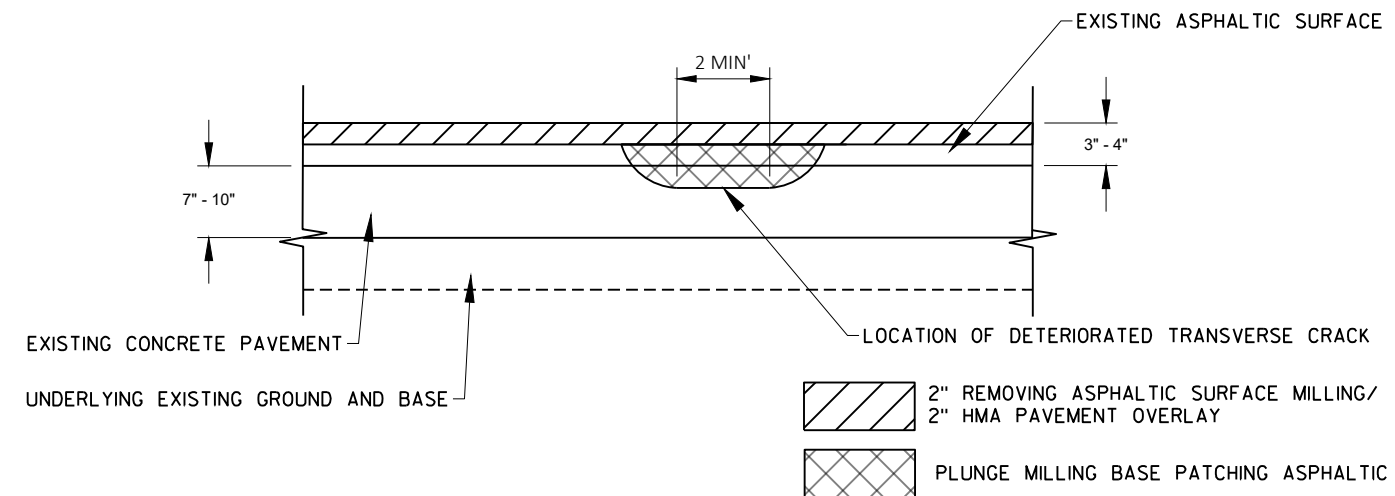
RIPRAP MEDIUM TREATMENT AT CULVERTS





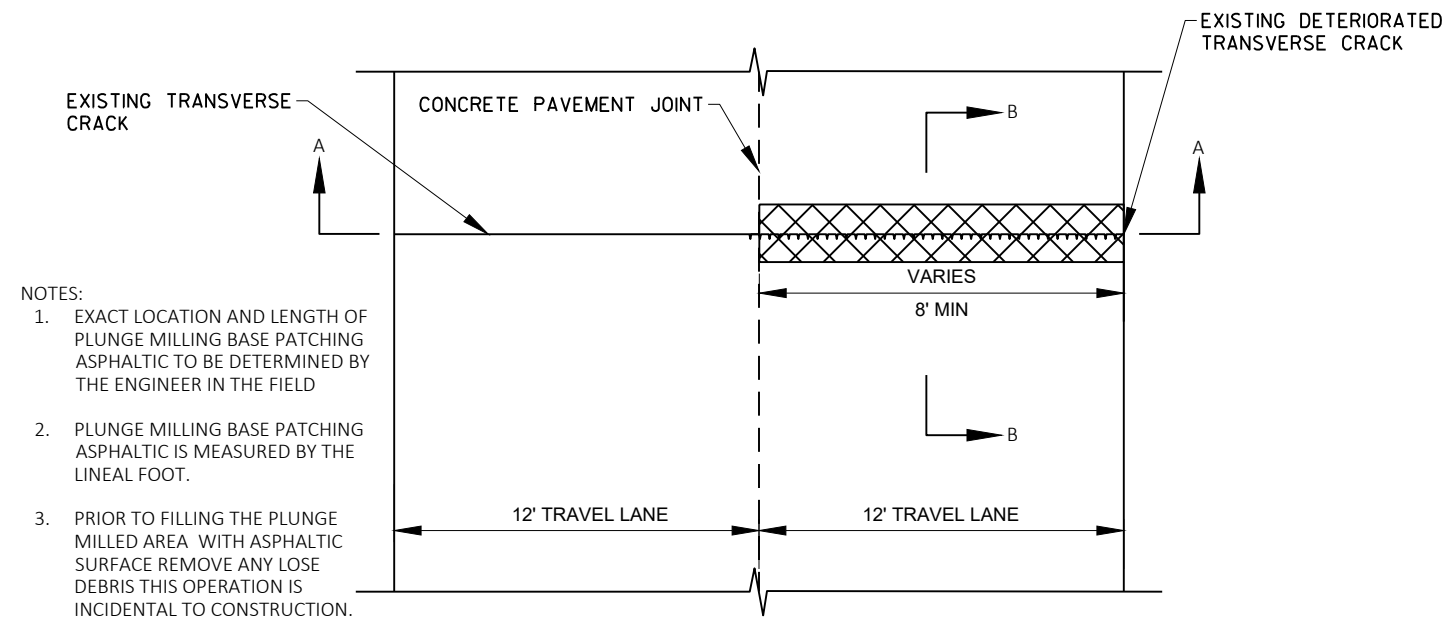
PLUNGE MILLING BASE PATCHING ASPHALTIC

SECTION A-A



PLUNGE MILLING BASE PATCHING ASPHALTIC

SECTION B-B

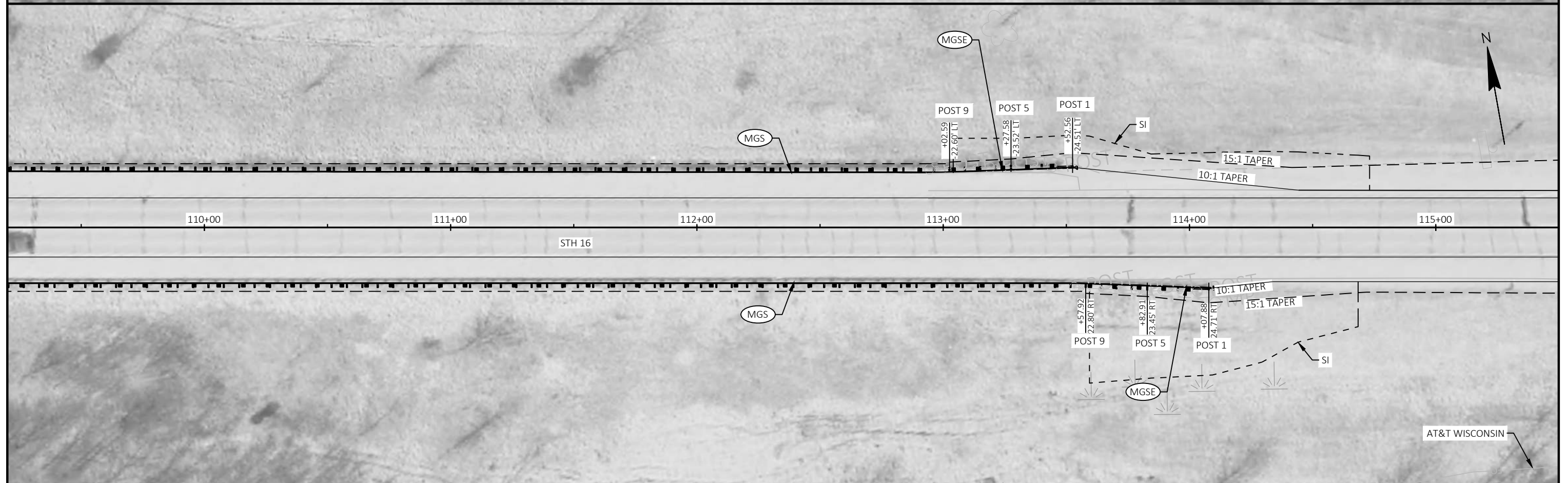


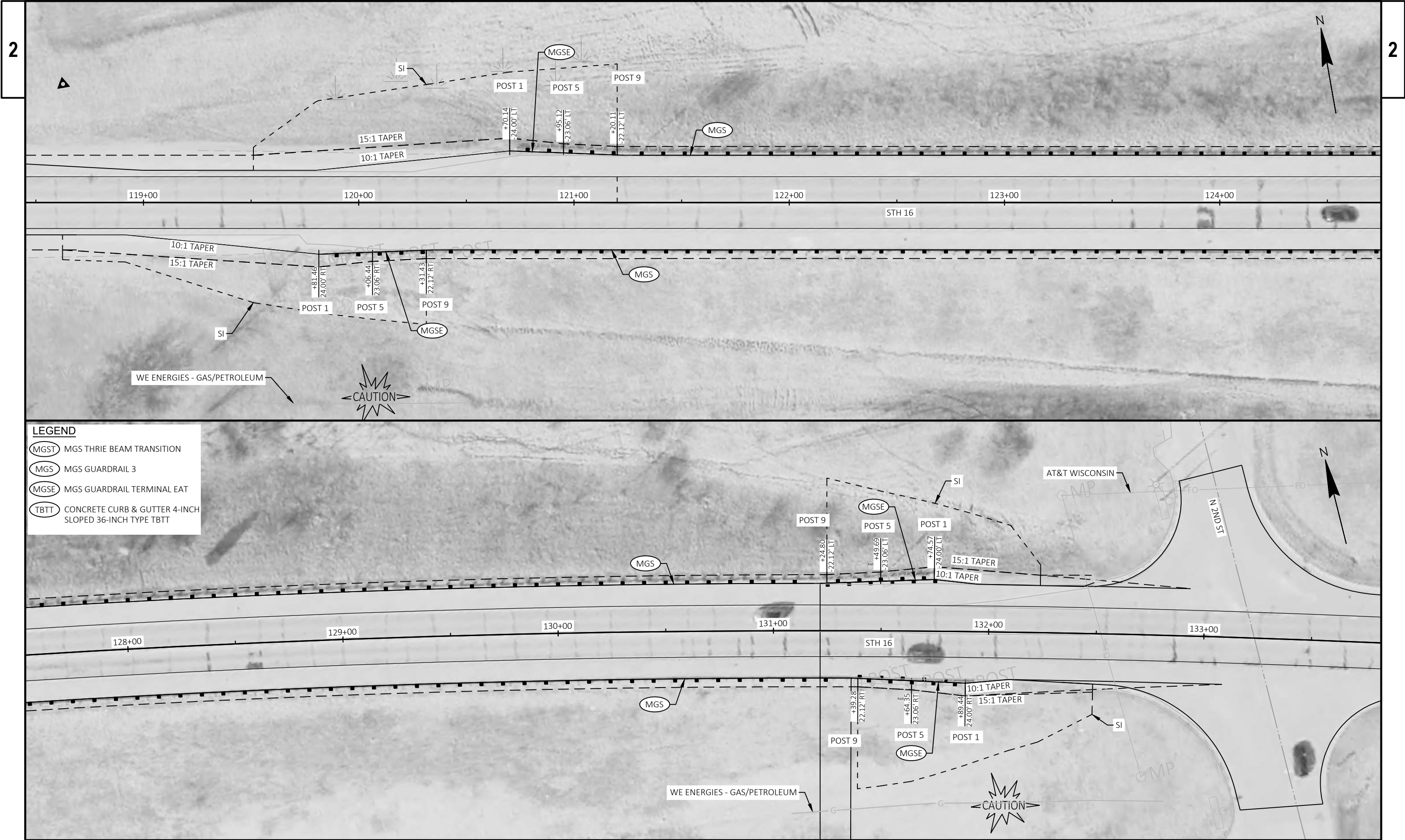
NOTES:

1. EXACT LOCATION AND LENGTH OF PLUNGE MILLING BASE PATCHING ASPHALTIC TO BE DETERMINED BY THE ENGINEER IN THE FIELD
2. PLUNGE MILLING BASE PATCHING ASPHALTIC IS MEASURED BY THE LINEAL FOOT.
3. PRIOR TO FILLING THE PLUNGE MILLED AREA WITH ASPHALTIC SURFACE REMOVE ANY LOSE DEBRIS THIS OPERATION IS INCIDENTAL TO CONSTRUCTION.

PLUNGE MILLING BASE PATCHING ASPHALTIC

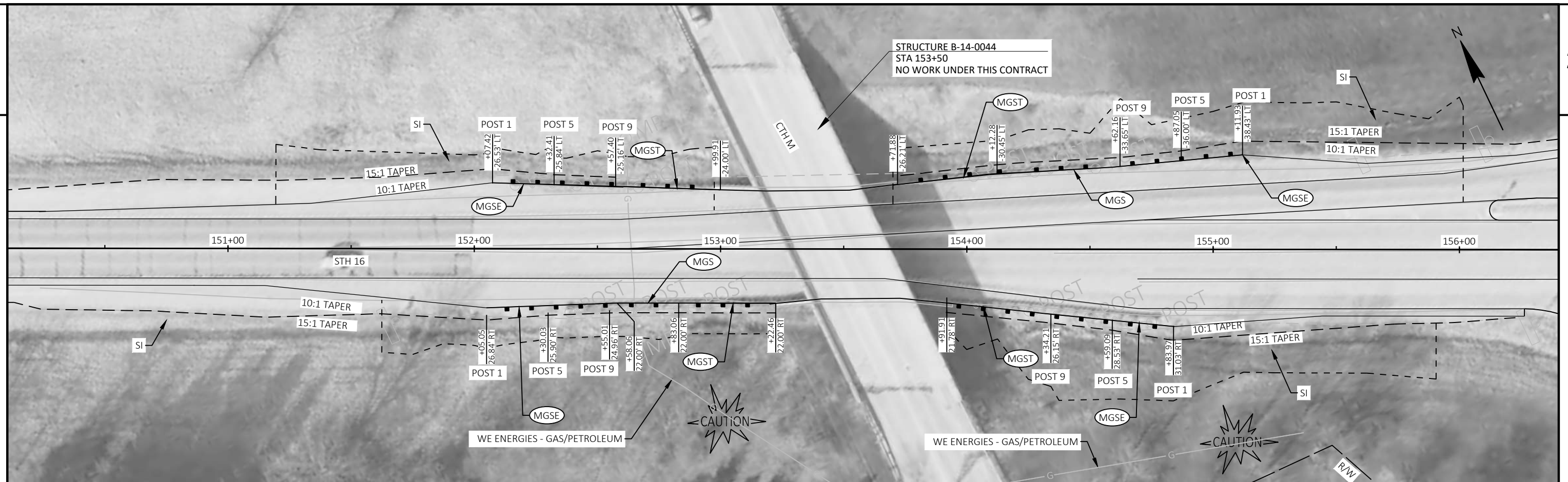
PLAN VIEW





LEGEND

- (MGST) MGS THRIE BEAM TRANSITION
- (MGS) MGS GUARDRAIL 3
- (MGSE) MGS GUARDRAIL TERMINAL EAT
- (TBTT) CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT

**LEGEND**

- MGST MGS THRIE BEAM TRANSITION
- MGS MGS GUARDRAIL 3
- MGSE MGS GUARDRAIL TERMINAL EAT
- TBTT CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT



PROJECT NO: 1370-00-75

HWY: STH 16

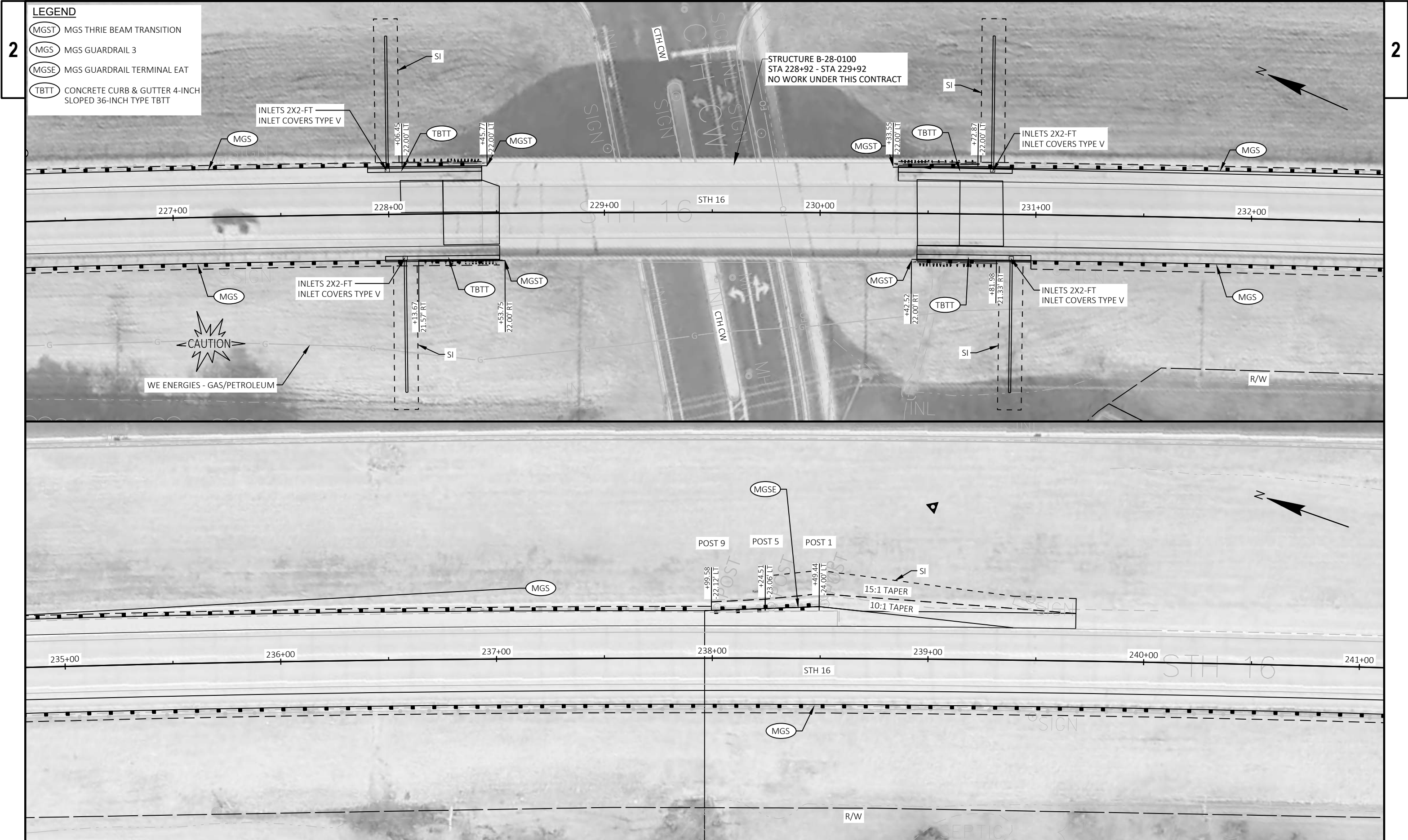
COUNTY: DODGE & JEFFERSON

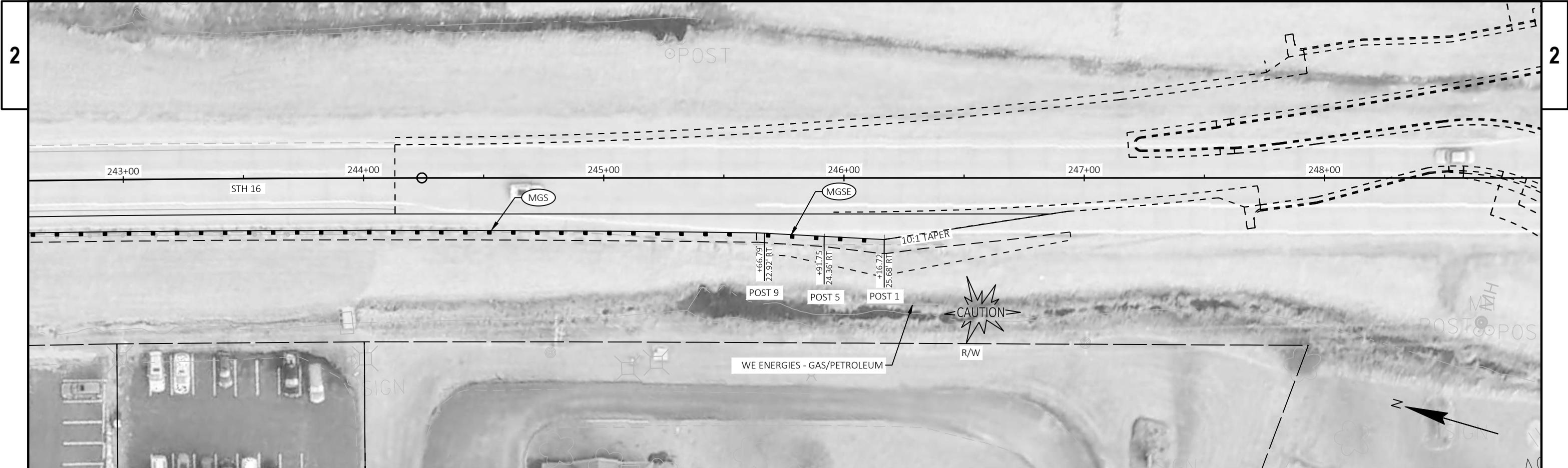
CONSTRUCTION DETAILS - BEAMGUARD

SHEET

15

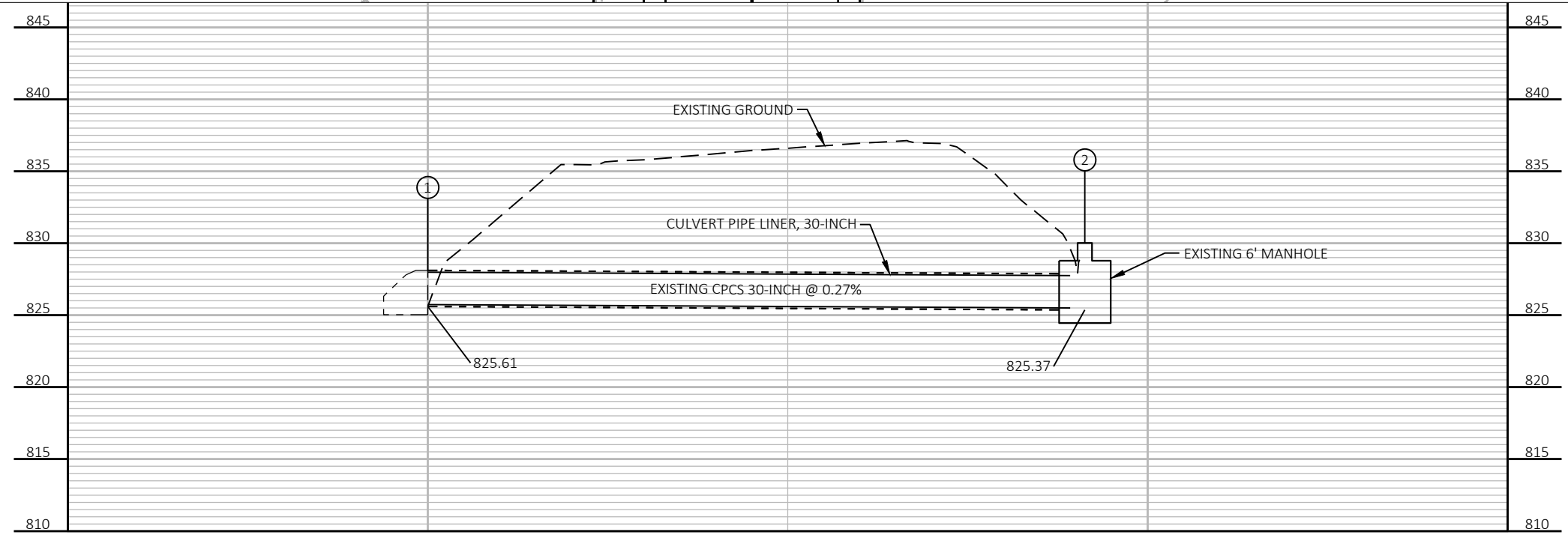
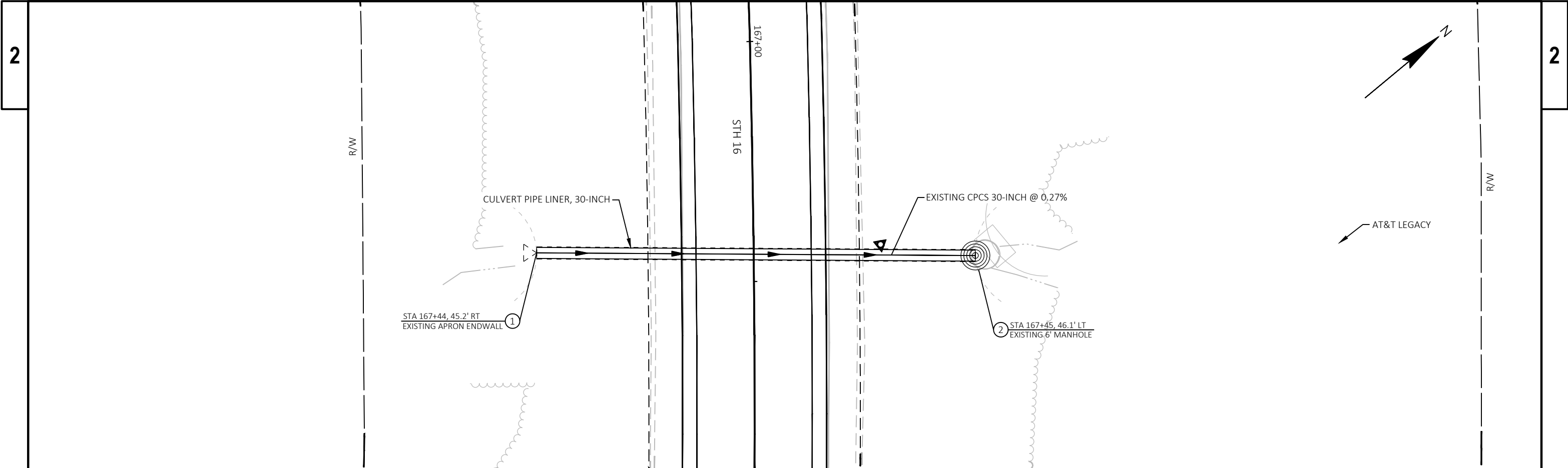
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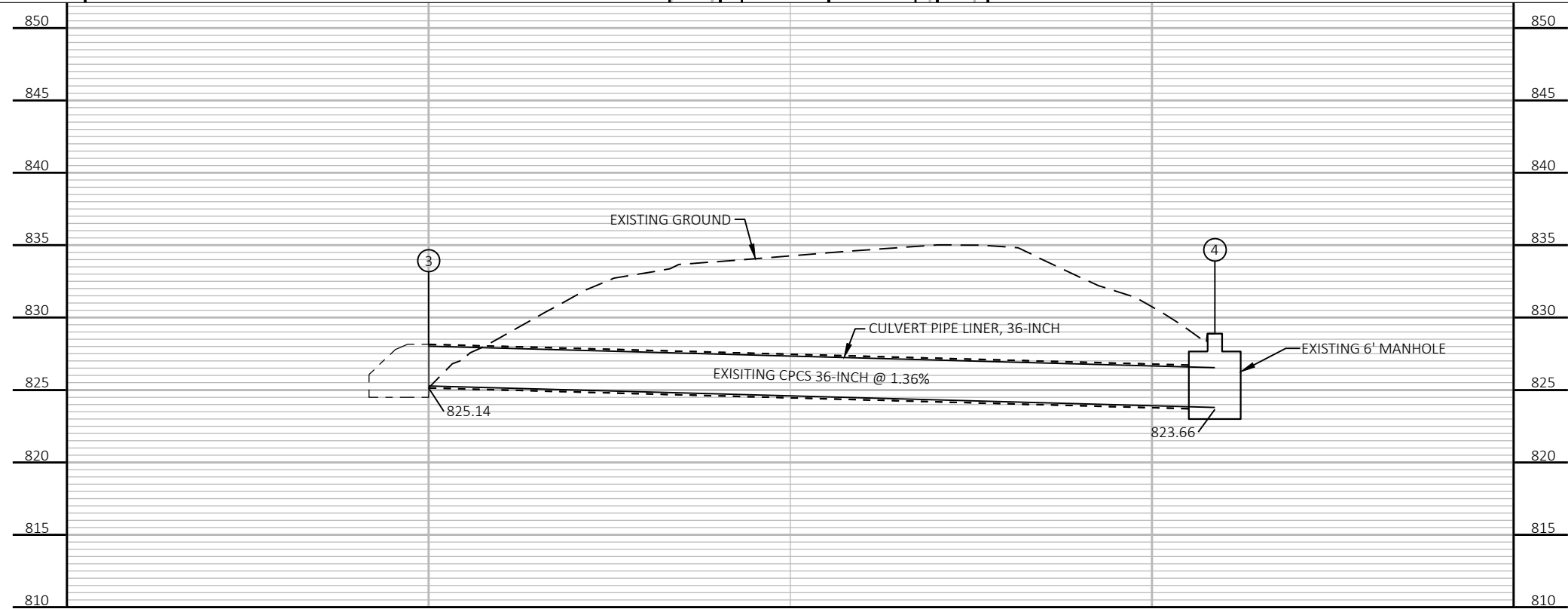
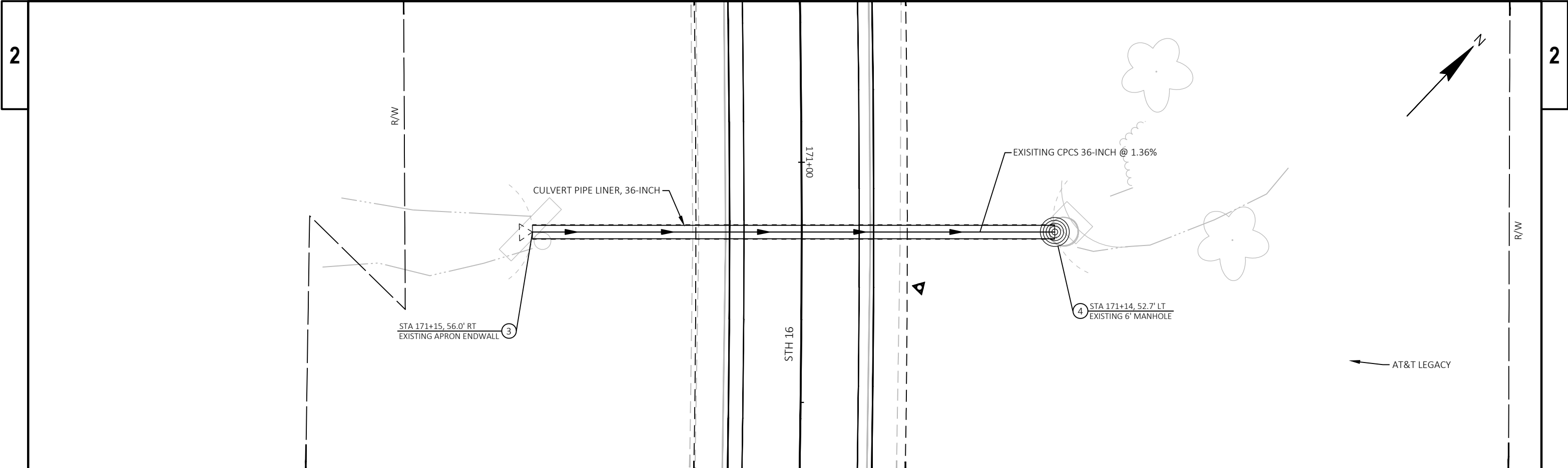


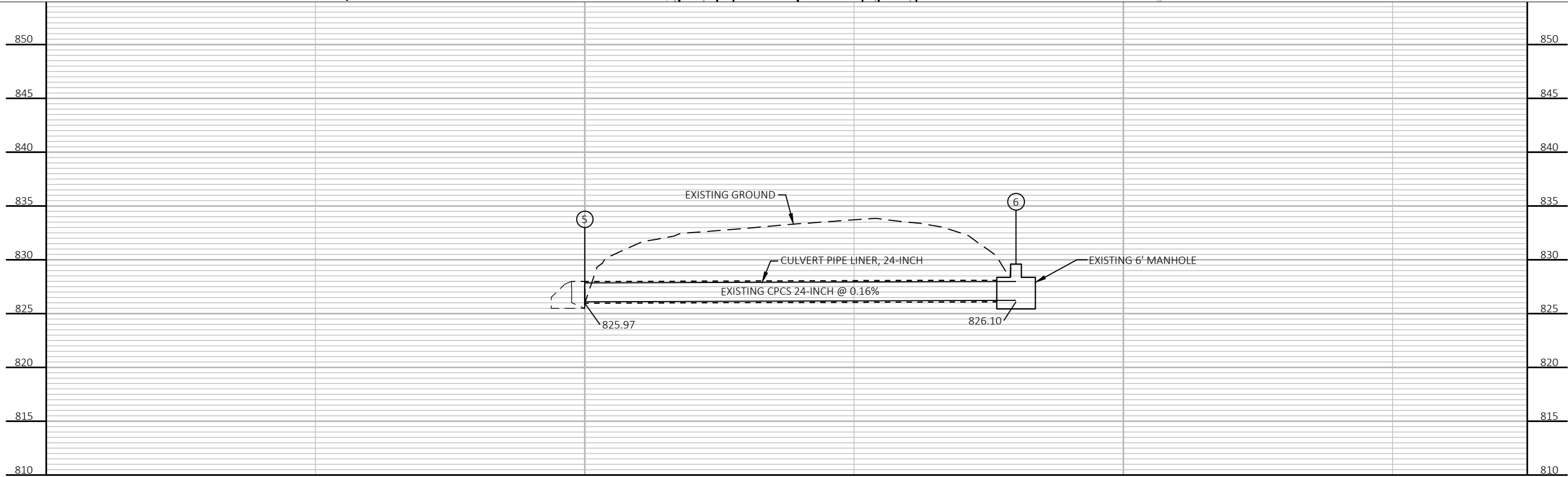
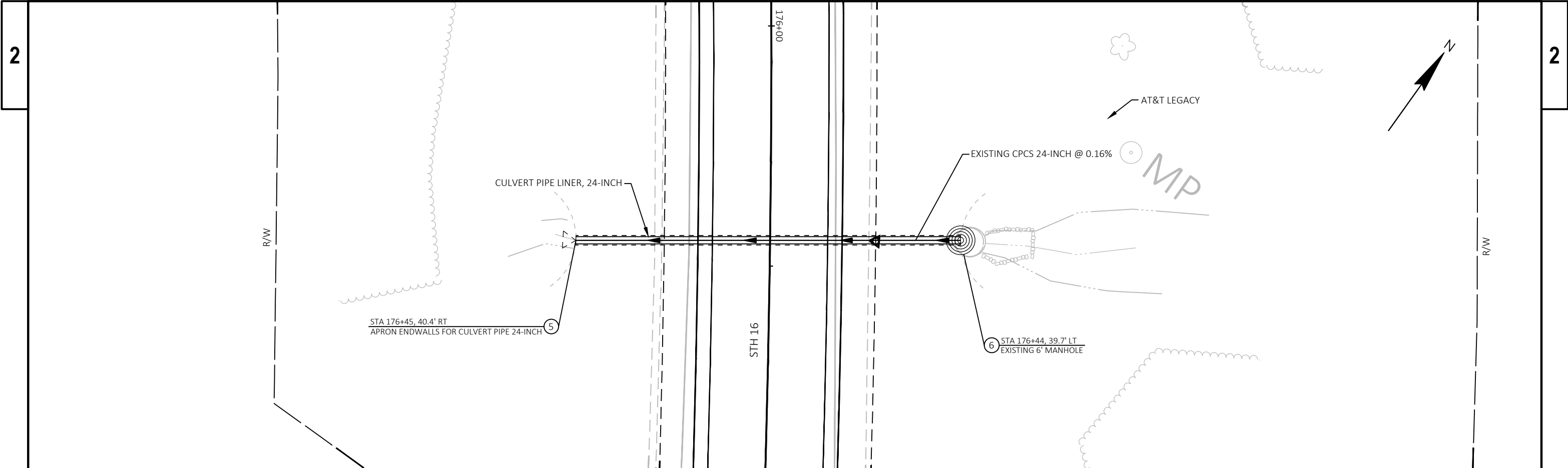


LEGEND

- MGST** MGS THRIE BEAM TRANSITION
- MGS** MGS GUARDRAIL 3
- MGSE** MGS GUARDRAIL TERMINAL EAT
- TBTT** CONCRETE CURB & GUTTER 4-INCH
SLOPED 36-INCH TYPE TBTT







MEF PROWAG 406.3.2 SIDE REACH - DEPTH OF THE OBSTRUCTION IS GREATER THAN 10 INCHES.

WE ENERGIES - ELECTRIC

CR-4th-S					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1301	187+70.69	24.89' RT	834.96	632212.07	882191.68
1302	187+55.39	26.54' RT	834.83	632224.75	882182.96
1303	187+49.32	28.35' RT	834.75	632229.23	882178.49
1304	187+47.36	29.08' RT	834.64	632230.61	882176.91
1305	187+56.10	29.45' RT	835.25	632222.75	882180.73
1306	187+50.33	31.17' RT	835.17	632227.01	882176.48
1307	187+50.50	31.61' RT	835.18	632226.65	882176.18
1308	187+58.09	34.62' RT	835.34	632218.54	882177.13
1309	187+52.49	36.78' RT	835.26	632222.44	882172.57
1310	187+59.89	39.29' RT	835.41	632214.74	882173.87
1311	187+54.22	41.47' RT	835.34	632218.70	882169.26
1312	187+52.02	36.96' RT	835.26	632222.77	882172.19
1313	187+43.42	42.05' RT	835.08	632227.93	882163.63
1314	187+45.99	46.37' RT	835.13	632223.61	882161.04

PEDESTRIAN CURB

MEF PROWAG 406.3.2 SIDE REACH RANGE LIMITS

BOULDER MEDIAN					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1101	187+34.90	9.76' LT	835.57	632260.01	882205.18
1102	187+35.40	9.66' LT	835.21	632259.53	882205.34
1103	187+34.97	13.71' LT	836.01	632261.83	882208.69
1104	187+35.47	13.71' LT	835.57	632261.39	882208.94
1105	187+43.14	13.75' LT	835.61	632254.66	882212.61
1106	187+43.62	13.72' LT	836.01	632254.22	882212.81
1107	187+42.66	8.34' LT	835.63	632252.51	882207.62
1108	187+42.15	8.33' LT	835.22	632252.95	882207.37

AT&T WISCONSIN

GRADED NON-TRAVERSABLE FLARE

PAVED TRAVERSABLE FLARE

PEDESTRIAN CURB

SIGNAL TO REMAIN

CR-4th-E					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1201	187+52.47	52.73' LT	836.06	632264.94	882251.35
1202	187+37.32	52.72' LT	836.01	632278.28	882244.15
1203	187+31.32	52.72' LT	836.00	632283.55	882241.30
1204	187+44.60	55.73' LT	835.97	632273.29	882250.25
1205	187+37.31	55.72' LT	835.95	632279.70	882246.79
1206	187+44.88	65.92' LT	836.12	632277.88	882259.36
1207	187+37.30	65.82' LT	836.10	632284.50	882255.67
1208	187+37.34	60.82' LT	836.02	632282.10	882251.29
1209	187+31.32	55.72' LT	836.42	632284.98	882243.94
1210	187+25.95	60.79' LT	836.27	632292.11	882245.86
1211	187+26.04	65.70' LT	836.22	632294.36	882250.22
1212	187+31.37	60.78' LT	836.15	632287.33	882248.42
1213	187+31.33	65.76' LT	836.16	632289.74	882252.79

LEGEND

- DIRECTION OF SLOPE
- SAWING CONCRETE
- DETECTABLE WARNING FIELD NATURAL PATINA
- GUTTER PAN SLOPE TRANSITION (SLOPE DENOTED)
- CONCRETE SIDEWALK 5-INCH
- LEVEL LANDING
- POINT NUMBER & ELEVATION

LEGEND

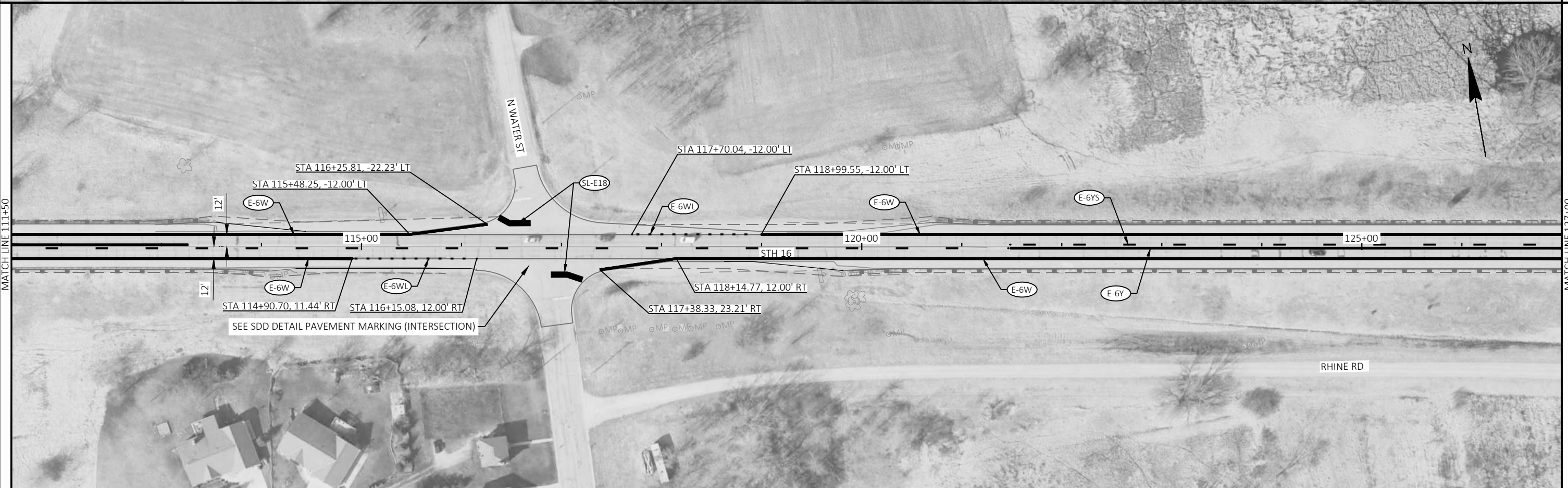
(E-6W)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
(E-6Y)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
(E-8W)	MARKING LINE GROOVED WET REF EPOXY 8-INCH (WHITE)
(E-10W)	MARKING LINE EPOXY 10-INCH (WHITE)
(E-6YS)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW, 12.5' SEG., 37.5' GAP)
(E-6WS)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE, 12.5' SEG., 37.5' GAP)
(A-E)	MARKING ARROW EPOXY
(W-E)	MARKING WORD EPOXY
(SL-E18)	MARKING STOP LINE EPOXY 18-INCH
(E-12Y)	MARKING DIAGONAL EPOXY 12-INCH (YELLOW, 25' C-C)
(E-6YD)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW, DOUBLE)
(E-10WS)	MARKING LINE EPOXY 10-INCH (WHITE, 3' SEG., 9' GAP)
(E-C)	MARKING CURB EPOXY (YELLOW)
(E-CM)	MARKING CORRUGATED MEDIAN EPOXY (YELLOW)

BEGIN PROJECT
STA 104+21.94
Y=635873.347
X=875128.212
MATCH EXISTING

STRUCTURE B-14-0041
STA 101+09 - STA 102+46

MATCH LINE 111+50

MATCH LINE 127+00



PROJECT NO: 1370-00-75

HWY: STH 16

COUNTY: DODGE & JEFFERSON

PAVEMENT MARKING

SHEET

22

E





LEGEND	
(E-6W)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
(E-6Y)	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
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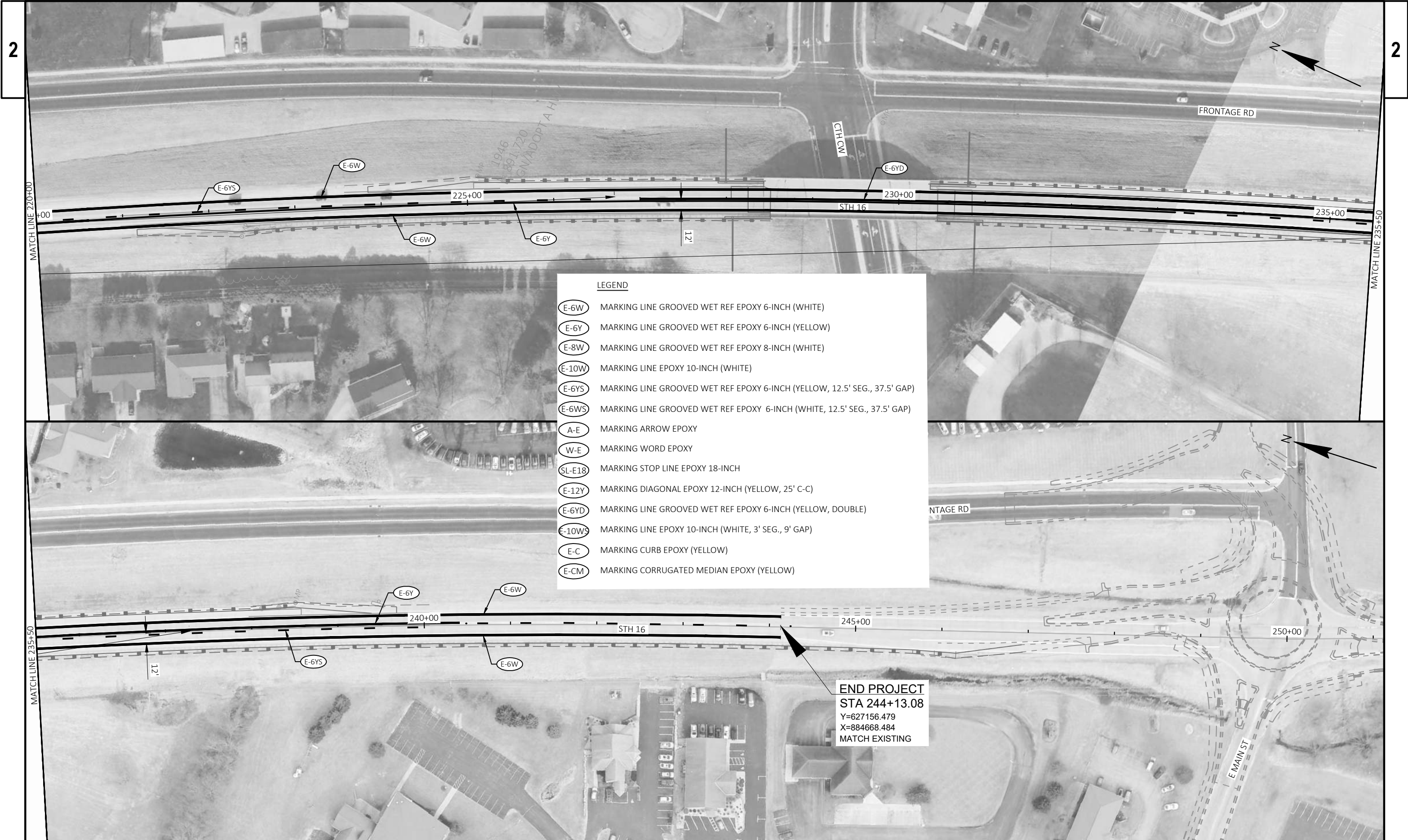
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2 |

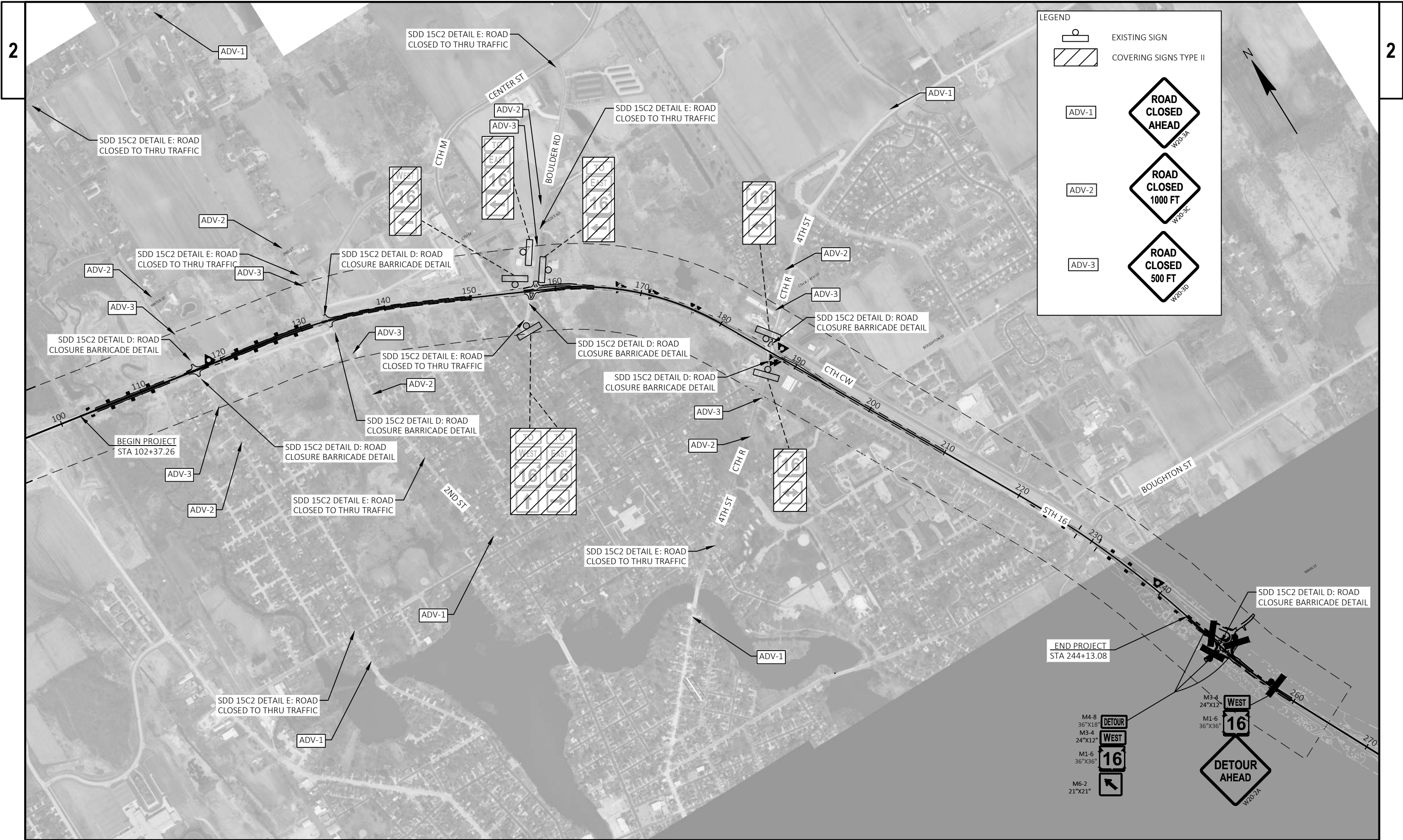


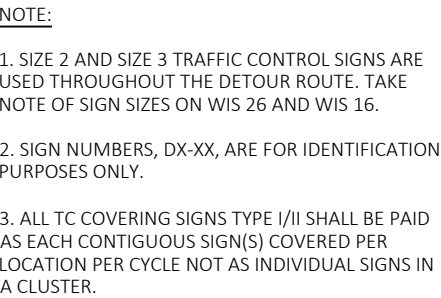
PROJECT NO: 1370-00-75	HWY: STH 16	COUNTY: DODGE & JEFFERSON	PAVEMENT MARKING	SHEET 25	E
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FILE NAME :	X:\3230900\210021.01\TECH\CAD\13700005\SHEETSP\PLAN\024501_PM.DWG	PLOT DATE :	1/16/2026 12:38 PM	PLOT BY :	BROCK BEHNKE	PLOT NAME :		PLOT SCALE :	1 IN:100 FT	WISDOT/CADDs SHEET 44
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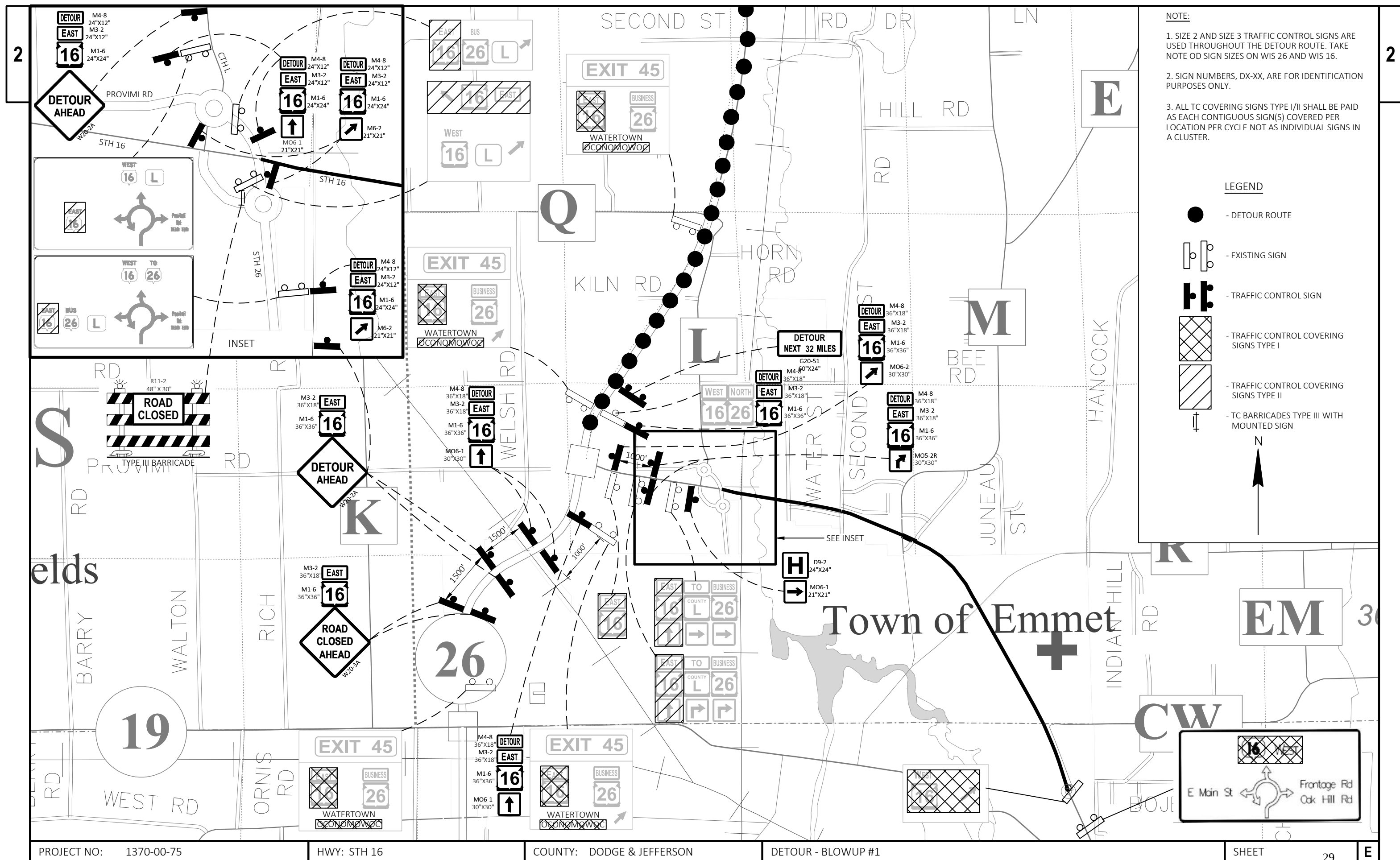
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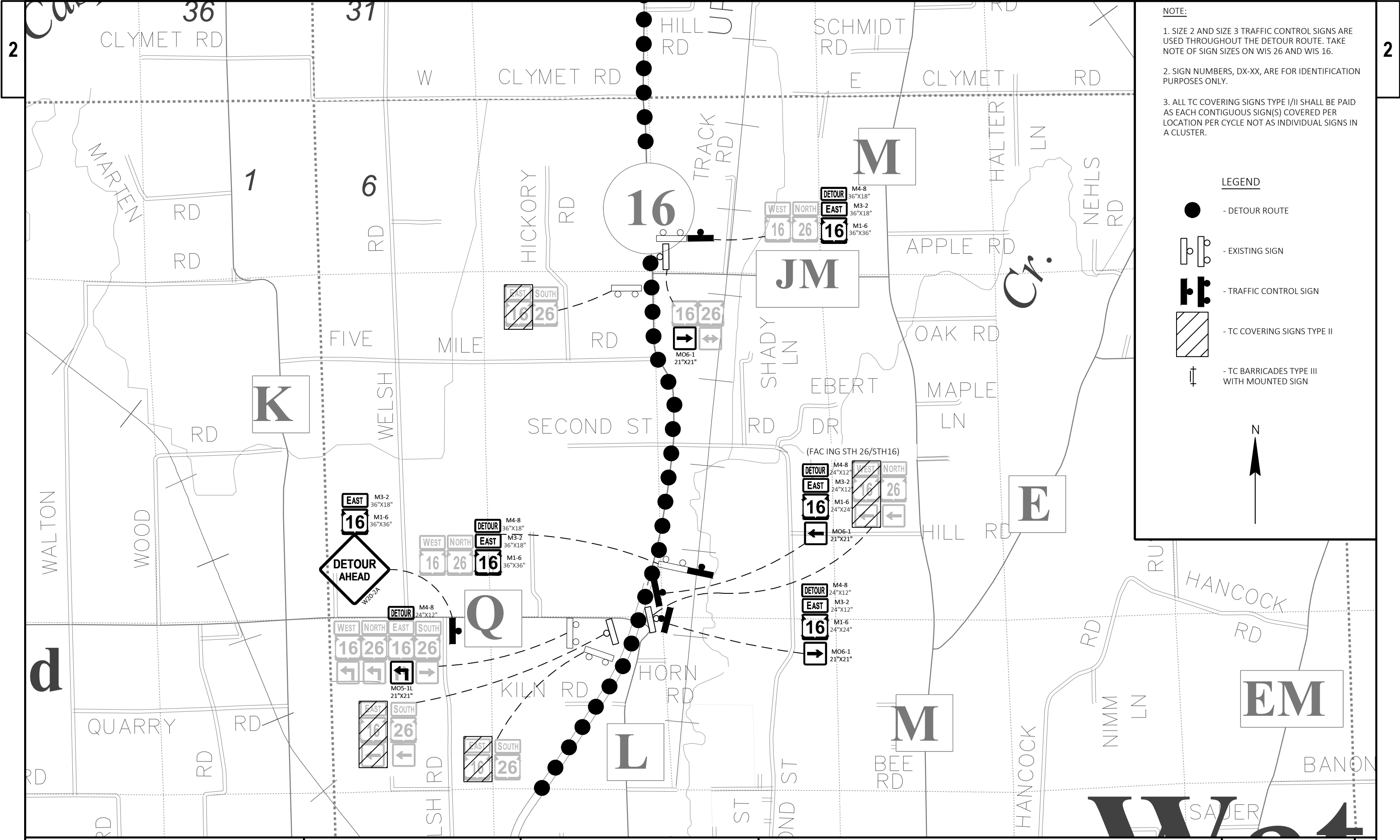




- - DETOUR ROUTE
- - EXISTING SIGN
- - TRAFFIC CONTROL SIGN
- - TC COVERING SIGNS TYPE I
- - TC BARRICADES TYPE III WITH MOUNTED SIGN







NOTE:

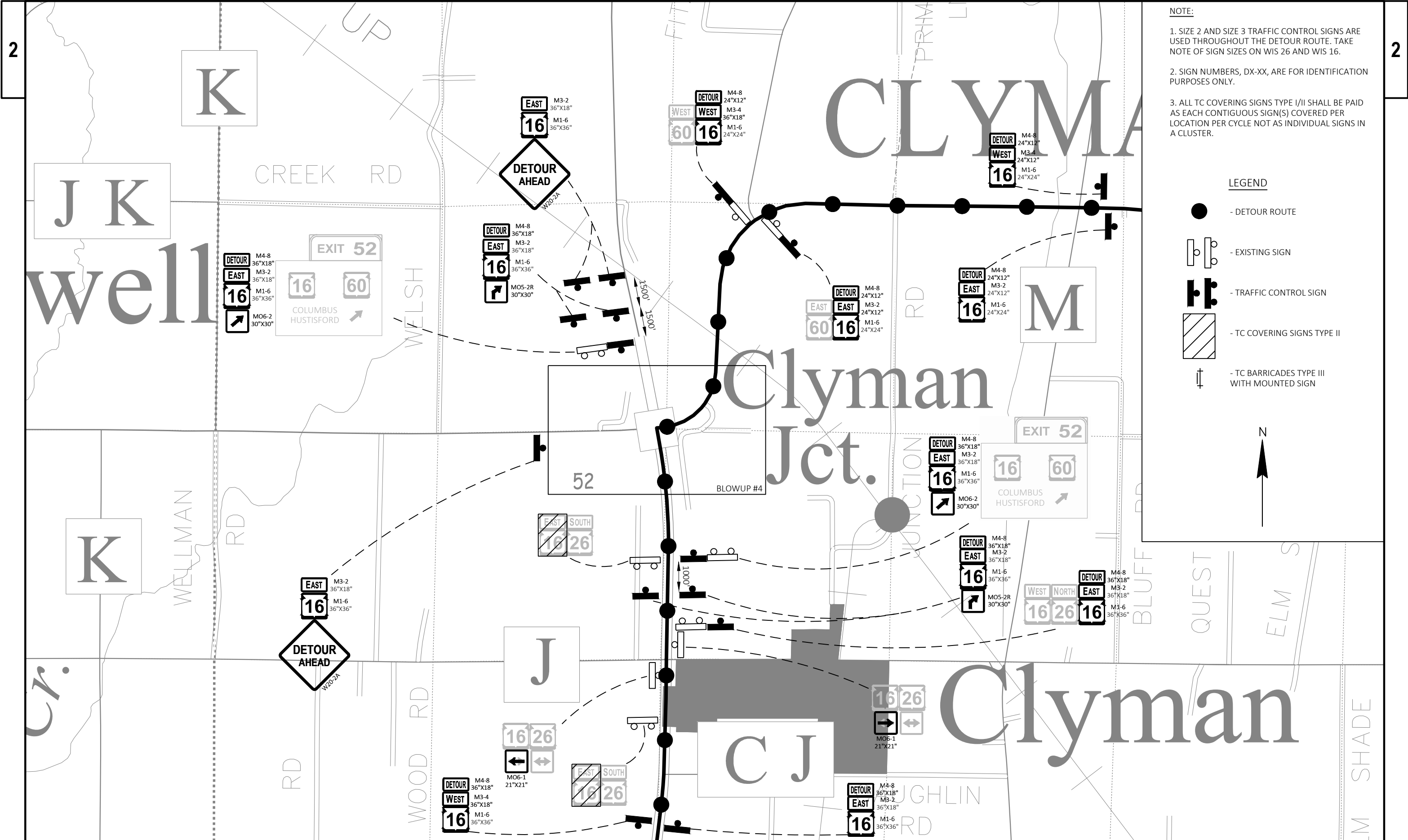
1. SIZE 2 AND SIZE 3 TRAFFIC CONTROL SIGNS ARE USED THROUGHOUT THE DETOUR ROUTE. TAKE NOTE OF SIGN SIZES ON WIS 26 AND WIS 16.

2. SIGN NUMBERS, DX-XX, ARE FOR IDENTIFICATION PURPOSES ONLY.

3. ALL TC COVERING SIGNS TYPE I/II SHALL BE PAID AS EACH CONTIGUOUS SIGN(S) COVERED PER LOCATION PER CYCLE NOT AS INDIVIDUAL SIGNS IN A CLUSTER.

- LEGEND
- DETOUR ROUTE
 - EXISTING SIGN
 - TRAFFIC CONTROL SIGN
 - TC COVERING SIGNS TYPE II
 - TC BARRICADES TYPE III WITH MOUNTED SIGN





NOTE:

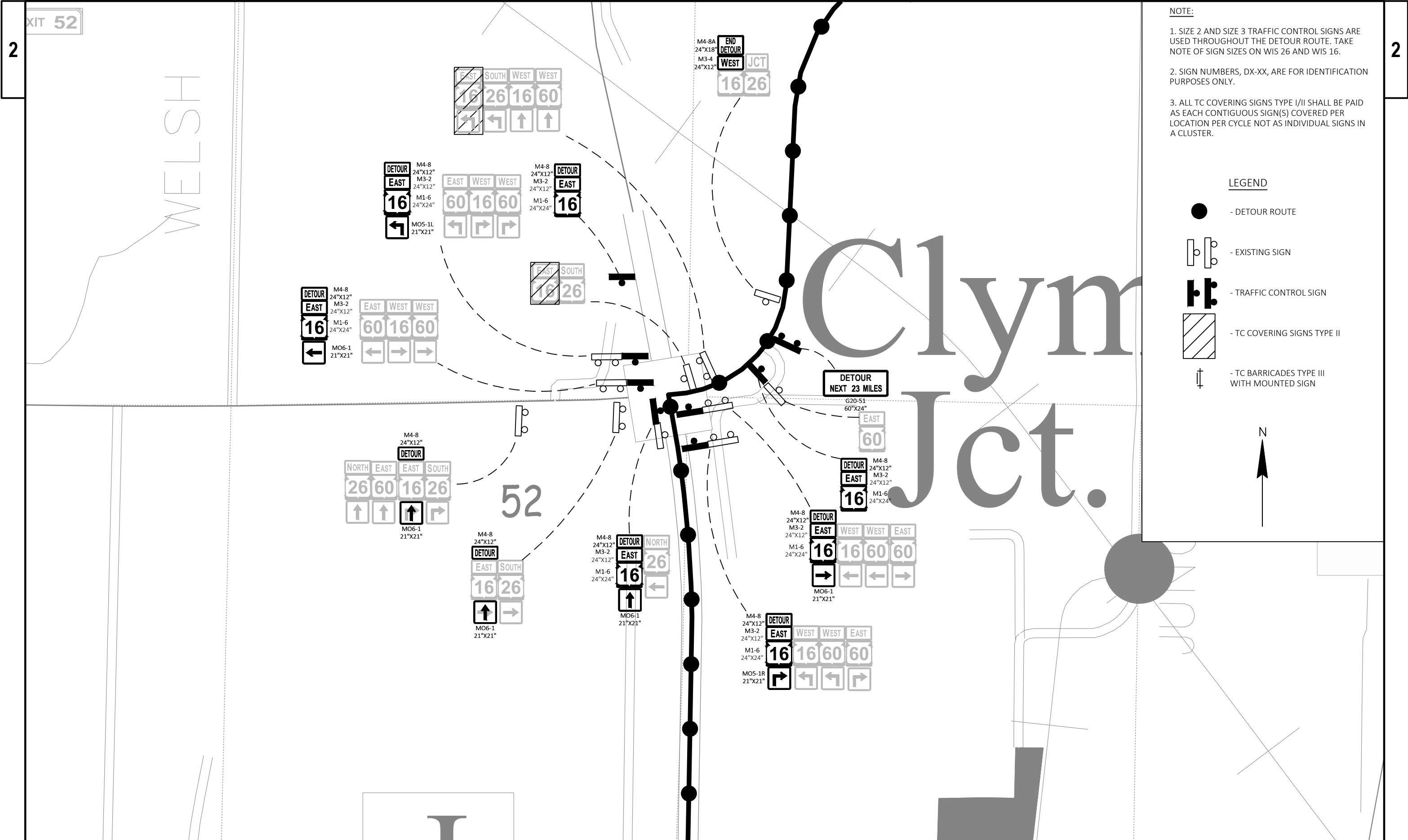
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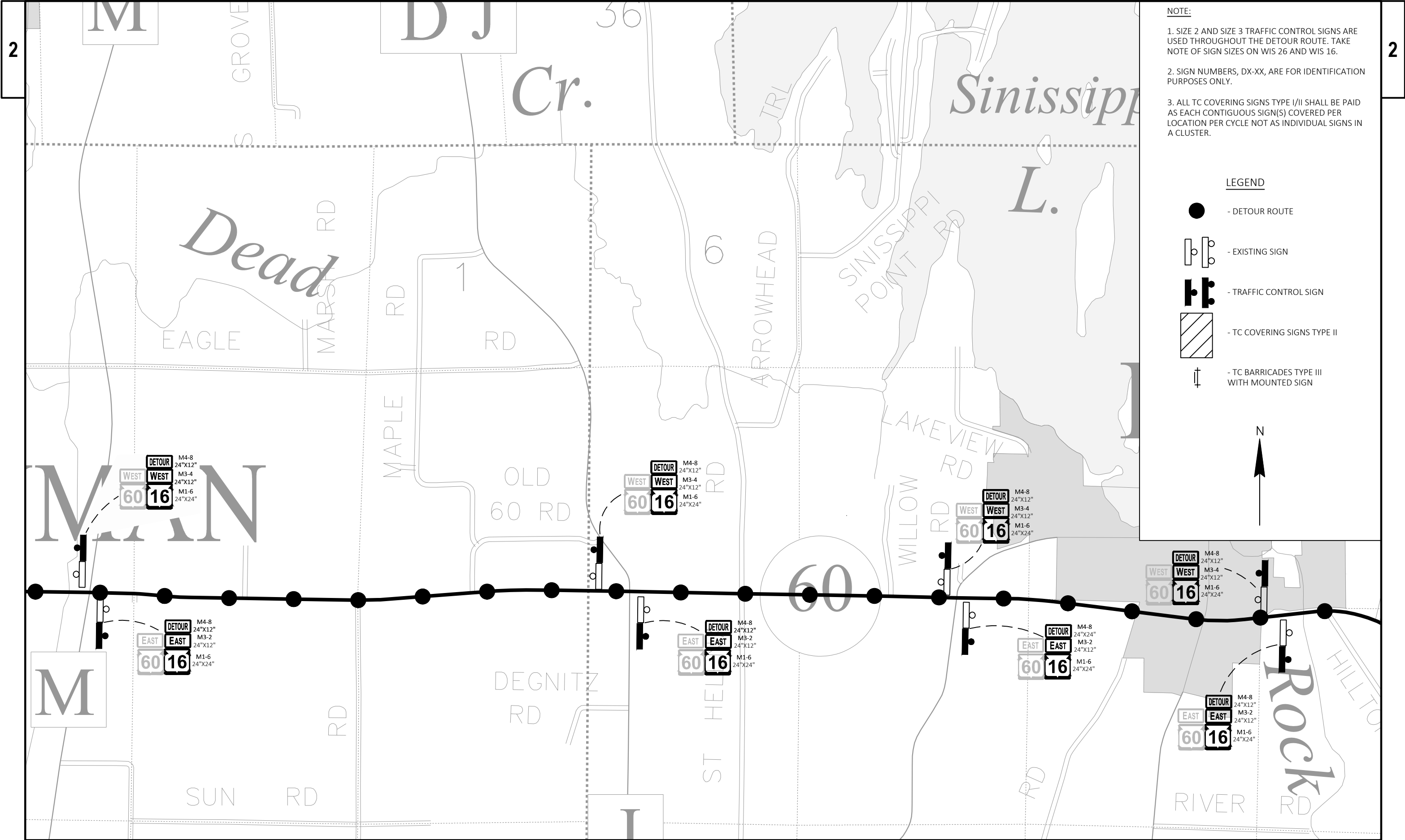


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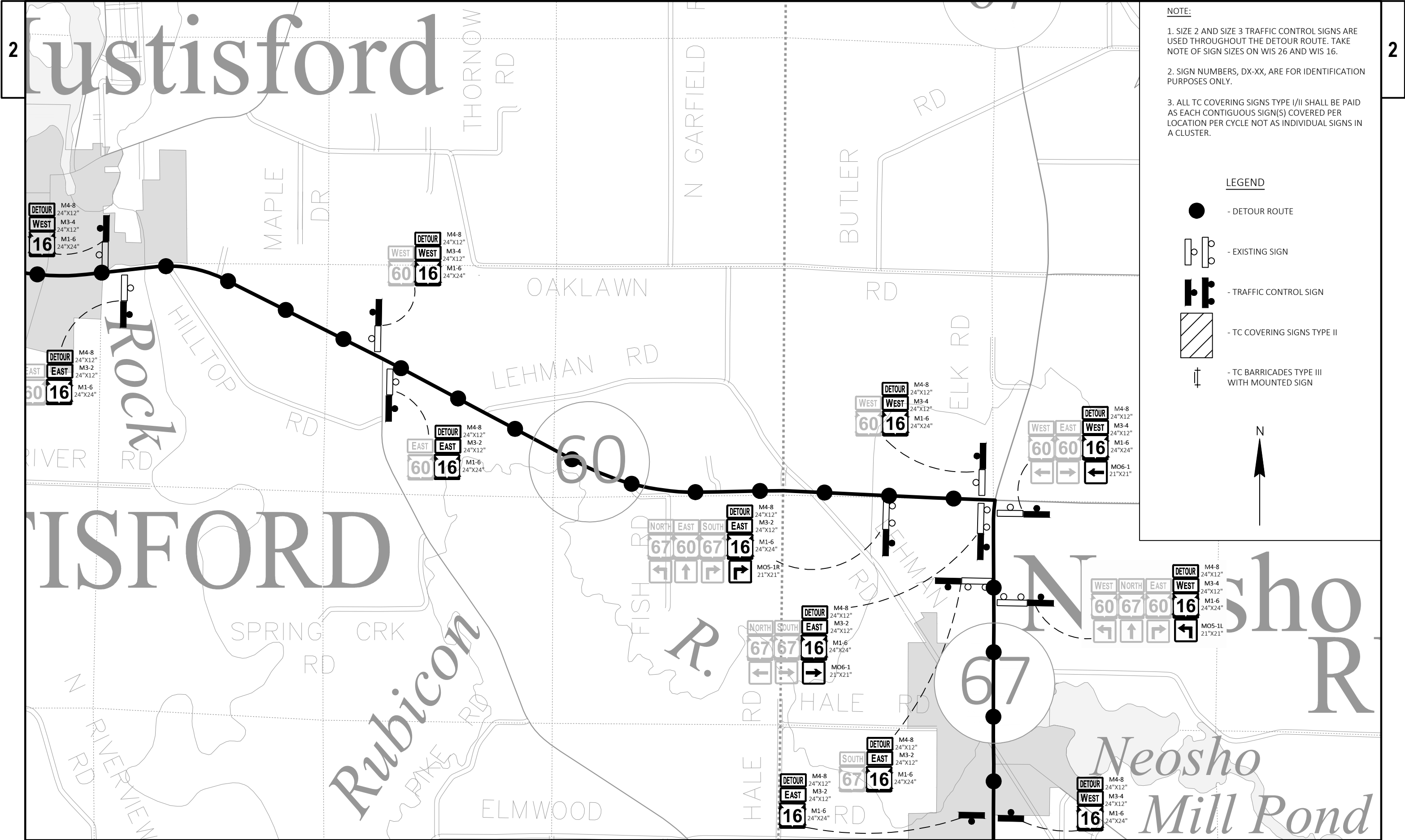
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NOTE:

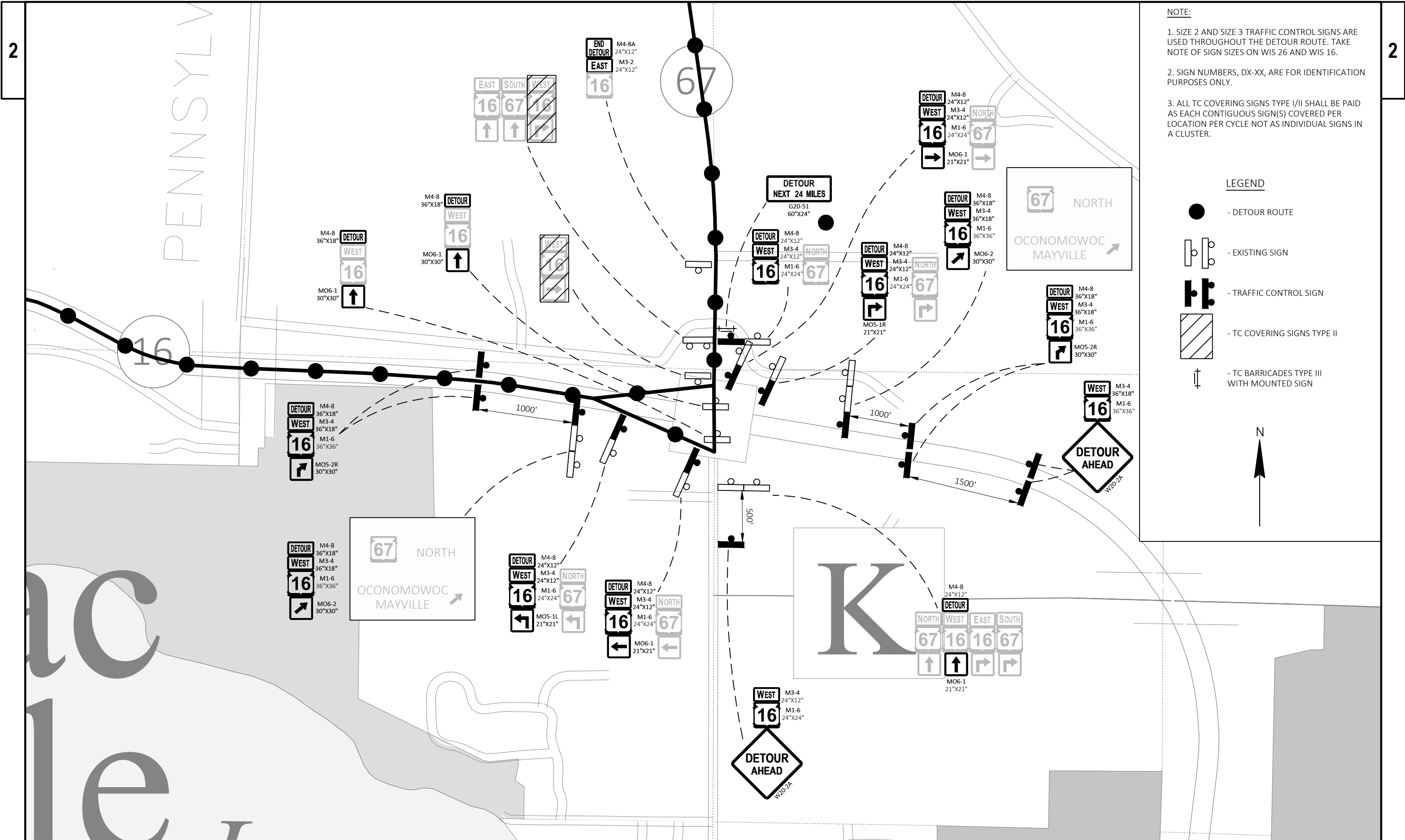
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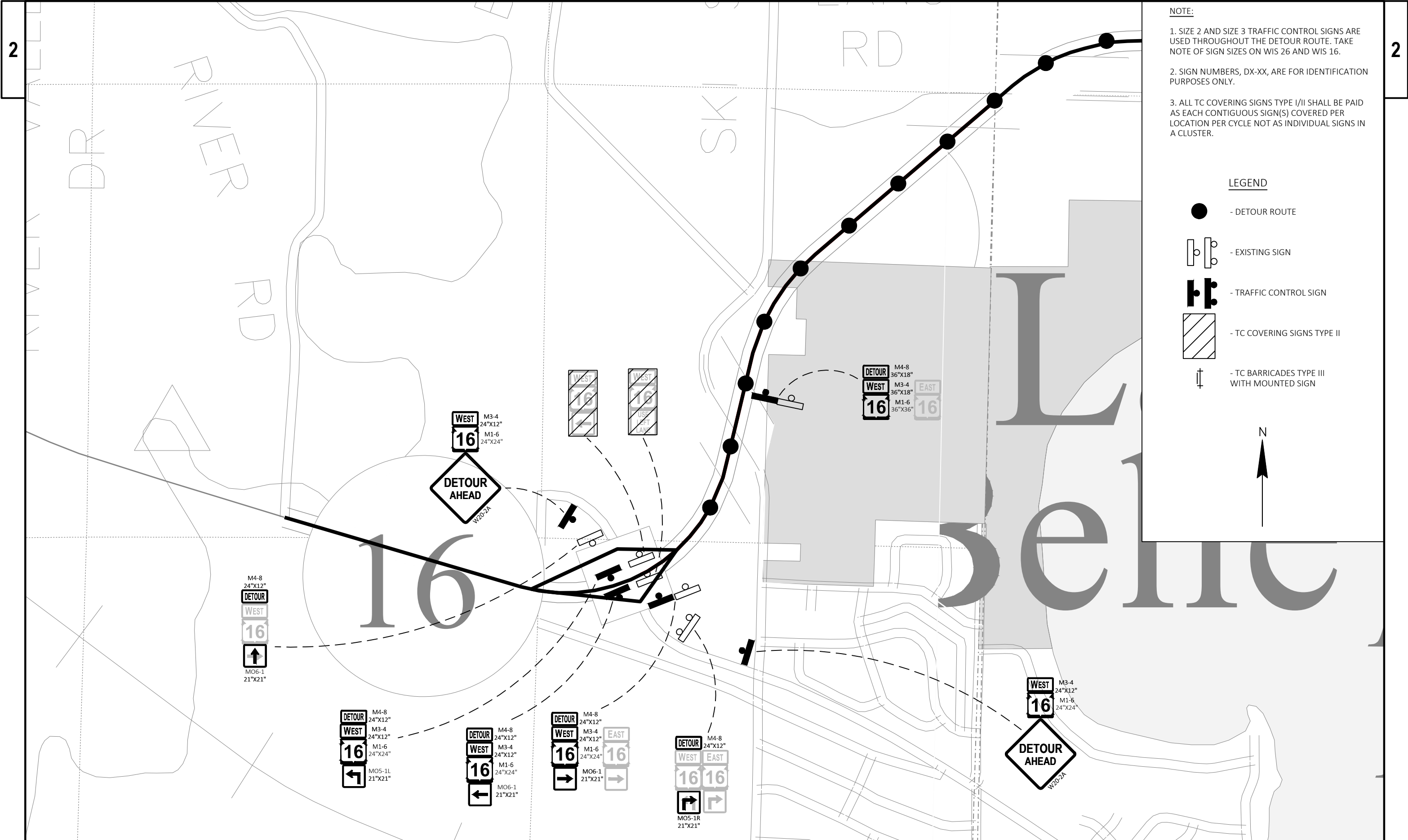
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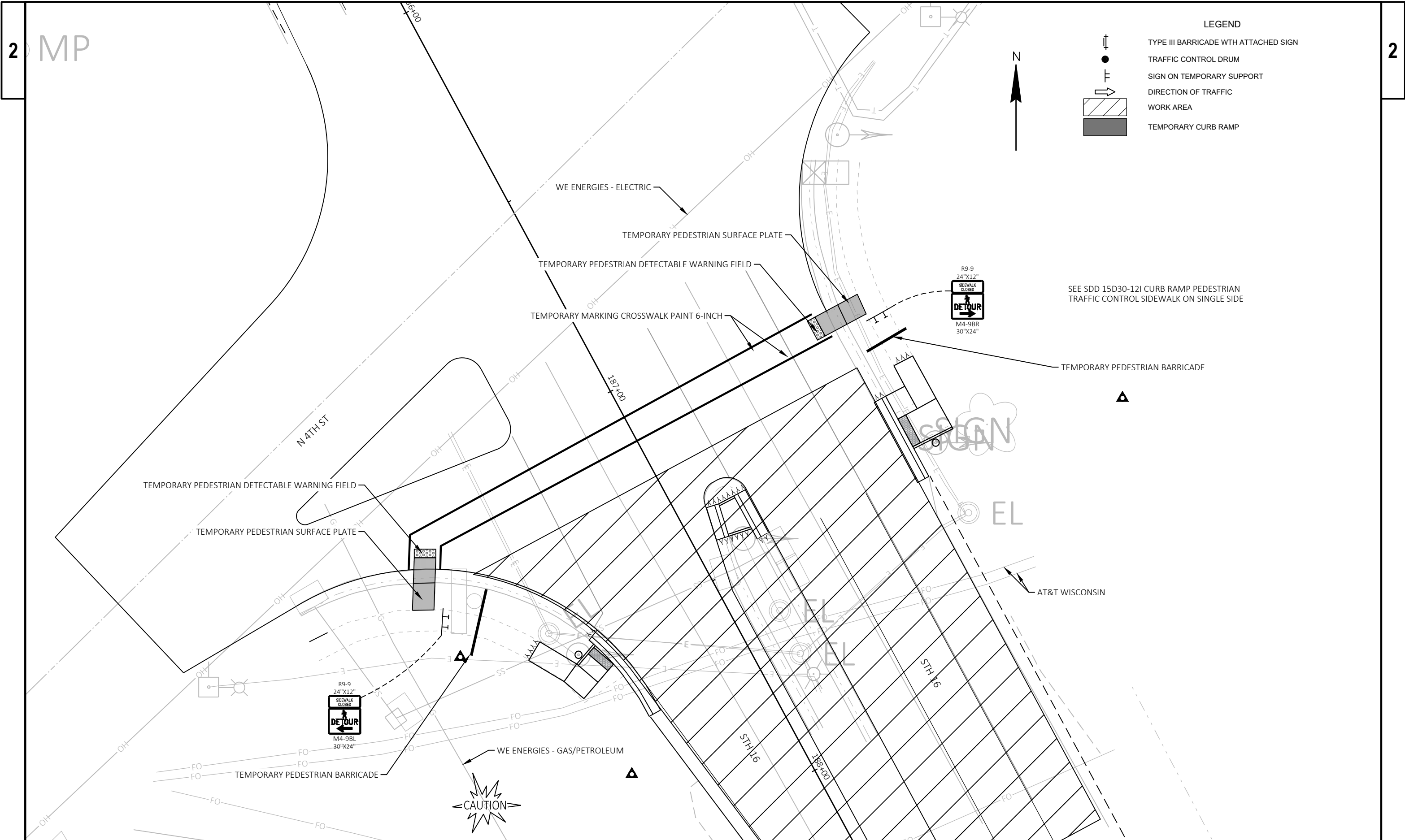
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[illegible][illegible]

20

WISDOT/CADDS SHEET 42



Estimate Of Quantities

1370-00-75

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	3.000	3.000
0004	204.0100	Removing Concrete Pavement	SY	282.000	282.000
0006	204.0110	Removing Asphaltic Surface	SY	3,784.000	3,784.000
0008	204.0115	Removing Asphaltic Surface Butt Joints	SY	180.000	180.000
0010	204.0120	Removing Asphaltic Surface Milling	SY	48,762.000	48,762.000
0012	204.0150	Removing Curb & Gutter	LF	60.000	60.000
0014	204.0155	Removing Concrete Sidewalk	SY	36.000	36.000
0016	204.0165	Removing Guardrail	LF	8,241.000	8,241.000
0018	204.0190	Removing Surface Drains	EACH	1.000	1.000
0020	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1370-00-75	EACH	1.000	1.000
0022	213.0100	Finishing Roadway (project) 01. 1370-00-75	EACH	1.000	1.000
0024	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,616.000	2,616.000
0026	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	156.000	156.000
0028	390.0100	Removing Pavement for Base Patching	CY	250.000	250.000
0030	390.0305	Base Patching Concrete HES	CY	250.000	250.000
0032	415.0080	Concrete Pavement 8-Inch	SY	110.000	110.000
0034	416.0610	Drilled Tie Bars	EACH	240.000	240.000
0036	416.0620	Drilled Dowel Bars	EACH	160.000	160.000
0038	416.1710	Concrete Pavement Repair	SY	20.000	20.000
0040	416.1720	Concrete Pavement Replacement	SY	250.000	250.000
0042	455.0605	Tack Coat	GAL	7,591.000	7,591.000
0044	460.2000	Incentive Density HMA Pavement	DOL	6,670.000	6,670.000
0046	460.4210.S	HMA Pavement Interlayer	TON	1,909.000	1,909.000
0048	460.6225	HMA Pavement 5 MT 58-28 S	TON	1,395.000	1,395.000
0050	460.6424	HMA Pavement 4 MT 58-28 H	TON	7,846.000	7,846.000
0052	520.9700.S	Culvert Pipe Liners (size) 01. 24-Inch	LF	80.000	80.000
0054	520.9700.S	Culvert Pipe Liners (size) 02. 30-inch	LF	91.000	91.000
0056	520.9700.S	Culvert Pipe Liners (size) 03. 36-inch	LF	108.000	108.000
0058	520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH	3.000	3.000
0060	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	4.000	4.000
0062	530.0112	Culvert Pipe Corrugated Polyethylene 12-Inch	LF	242.000	242.000
0064	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	60.000	60.000
0066	601.0590	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT	LF	276.000	276.000
0068	601.0600	Concrete Curb Pedestrian	LF	27.000	27.000
0070	602.0410	Concrete Sidewalk 5-Inch	SF	314.000	314.000
0072	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	27.000	27.000
0074	606.0200	Riprap Medium	CY	8.000	8.000
0076	611.0430	Reconstructing Inlets	EACH	2.000	2.000
0078	611.0654	Inlet Covers Type V	EACH	4.000	4.000
0080	611.3220	Inlets 2x2-FT	EACH	4.000	4.000
0082	614.0010	Barrier System Grading Shaping Finishing	EACH	14.000	14.000
0084	614.2300	MGS Guardrail 3	LF	7,287.500	7,287.500
0086	614.2500	MGS Thrie Beam Transition	LF	394.000	394.000
0088	614.2610	MGS Guardrail Terminal EAT	EACH	14.000	14.000
0090	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1370-00-75	EACH	1.000	1.000
0092	619.1000	Mobilization	EACH	1.000	1.000
0094	624.0100	Water	MGAL	55.000	55.000
0096	625.0100	Topsoil	SY	317.000	317.000
0098	628.1504	Silt Fence	LF	1,748.000	1,748.000

Estimate Of Quantities

1370-00-75

Line	Item	Item Description	Unit	Total	Qty
0100	628.1520	Silt Fence Maintenance	LF	1,748.000	1,748.000
0102	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0104	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0106	628.2008	Erosion Mat Urban Class I Type B	SY	317.000	317.000
0108	628.7005	Inlet Protection Type A	EACH	4.000	4.000
0110	628.7015	Inlet Protection Type C	EACH	21.000	21.000
0112	628.7504	Temporary Ditch Checks	LF	120.000	120.000
0114	628.7560	Tracking Pads	EACH	6.000	6.000
0116	629.0210	Fertilizer Type B	CWT	1.000	1.000
0118	630.0120	Seeding Mixture No. 20	LB	15.000	15.000
0120	630.0200	Seeding Temporary	LB	9.000	9.000
0122	630.0500	Seed Water	MGAL	8.000	8.000
0124	633.5200	Markers Culvert End	EACH	4.000	4.000
0126	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	9.000	9.000
0128	638.2102	Moving Signs Type II	EACH	9.000	9.000
0130	642.5001	Field Office Type B	EACH	1.000	1.000
0132	643.0300	Traffic Control Drums	DAY	4,500.000	4,500.000
0134	643.0420	Traffic Control Barricades Type III	DAY	4,198.000	4,198.000
0136	643.0705	Traffic Control Warning Lights Type A	DAY	5,990.000	5,990.000
0138	643.0900	Traffic Control Signs	DAY	28,284.000	28,284.000
0140	643.0910	Traffic Control Covering Signs Type I	EACH	10.000	10.000
0142	643.0920	Traffic Control Covering Signs Type II	EACH	29.000	29.000
0144	643.1050	Traffic Control Signs PCMS	DAY	38.000	38.000
0146	643.3305	Temporary Marking Crosswalk Paint 6-inch	LF	350.000	350.000
0148	643.5000	Traffic Control	EACH	1.000	1.000
0150	644.1430	Temporary Pedestrian Surface Plate	SF	80.000	80.000
0152	644.1601	Temporary Pedestrian Curb Ramp	DAY	15.000	15.000
0154	644.1605	Temporary Pedestrian Detectable Warning Field	SF	20.000	20.000
0156	644.1810	Temporary Pedestrian Barricade	LF	28.000	28.000
0158	644.1900.S	Temporary Audible Message Devices	DAY	15.000	15.000
0160	645.0120	Geotextile Type HR	SY	26.000	26.000
0162	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	46,823.000	46,823.000
0164	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	110.000	110.000
0166	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	2,067.000	2,067.000
0168	646.5020	Marking Arrow Epoxy	EACH	15.000	15.000
0170	646.5120	Marking Word Epoxy	EACH	4.000	4.000
0172	646.5220	Marking Symbol Epoxy	EACH	1.000	1.000
0174	646.6120	Marking Stop Line Epoxy 18-Inch	LF	372.000	372.000
0176	646.7120	Marking Diagonal Epoxy 12-Inch	LF	56.000	56.000
0178	646.8020	Marking Corrugated Median Epoxy	SF	3,335.000	3,335.000
0180	646.8120	Marking Curb Epoxy	LF	235.000	235.000
0182	650.4000	Construction Staking Storm Sewer	EACH	8.000	8.000
0184	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	70.000	70.000
0186	650.8000	Construction Staking Resurfacing Reference	LF	13,991.000	13,991.000
0188	650.9000	Construction Staking Curb Ramps	EACH	3.000	3.000
0190	650.9911	Construction Staking Supplemental Control (project) 01. 1370-00-75	EACH	1.000	1.000
0192	690.0150	Sawing Asphalt	LF	292.000	292.000
0194	690.0250	Sawing Concrete	LF	256.000	256.000
0196	740.0440	Incentive IRI Ride	DOL	5,450.000	5,450.000

Estimate Of Quantities

1370-00-75					
Line	Item	Item Description	Unit	Total	Qty
0198	999.2100.S	Installing and Maintaining Climbing Turtle Exclusion Fence	LF	500.000	500.000
0200	SPV.0060	Special 01. Utility Line Opening (ULO)	EACH	2.000	2.000
0202	SPV.0090	Special 01. Joint and Crack Plunge Milling and Patching	LF	1,164.000	1,164.000
0204	SPV.0180	Special 01. Remove Distressed Pavement Milling	SY	1,485.000	1,485.000

3

REMOVALS

					204.0110 REMOVING ASPHALTIC SURFACE	690.0150 SAWING ASPHALT
STATION	TO	STATION	LOCATION		SY	LF
102+67	-	104+17	LT	STH 16 CL	101	-
102+74	-	104+18	RT	STH 16 CL	102	-
221+45	-	228+51	RT	STH 16 CL	592	3
224+14	-	228+43	LT	STH 16 CL	296	3
230+36	-	238+58	LT	STH 16 CL	530	7
230+45	-	244+01	RT	STH 16 CL	2,163	279
TOTAL 0010					3,784	292

					204.0120 REMOVING ASPHALTIC SURFACE MILLING
STATION	TO	STATION	LOCATION		SY
104+17	-	152+53	STH 16 CL		21938
152+53	-	165+01	STH 16 CL		7078
165+01	-	176+39	STH 16 CL		3824
176+39	-	197+08	STH 16 CL		11696
197+08	-	209+80	STH 16 CL		4226
TOTAL 0010					48,762

					204.0165 REMOVING GUARDRAIL
STATION	TO	STATION	LOCATION		LF
102+37	-	113+44	LT	STH 16 CL	1,108
102+42	-	114+03	RT	STH 16 CL	1,162
119+88	-	131+89	RT	STH 16 CL	1,200
120+74	-	131+72	LT	STH 16 CL	1,100
152+17	-	152+97	LT	STH 16 CL	81
152+39	-	153+20	RT	STH 16 CL	82
153+80	-	154+52	LT	STH 16 CL	73
153+94	-	154+75	RT	STH 16 CL	81
222+44	-	228+51	RT	STH 16 CL	606
225+11	-	228+43	LT	STH 16 CL	333
230+36	-	238+53	LT	STH 16 CL	820
230+45	-	241+34	RT	STH 16 CL	1,087
241+34	-	246+42	RT	STH 16 CL	508
TOTAL 0010					8,241

					SPV.0180.01 SPECIAL (01. REMOVE DISTRESSED PAVEMENT MILLING))	REMARKS
STATION	TO	STATION	LOCATION		SY	
104+22	-	209+80	STH 16 CL		1,485	PROJECT
TOTAL 0010					1,485	

					204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS	REMARKS
STATION	TO	STATION	LOCATION		SY	
104+17	-	104+22	LT/RT	STH 16 CL	20	BOP
116+51	-	117+15	LT	STH 16 CL	27	N WATER ST
132+86	-	133+58	LT	STH 16 CL	31	N SECOND ST
156+75	-	158+00	RT	STH 16 CL	42	BOULDER RD
185+83	-	187+10	LT	STH 16 CL	46	N 4TH ST
209+76	-	209+80	LT/RT	STH 16 CL	14	EOP
TOTAL 0010					180	

					204.0190 REMOVING SURFACE DRAINS
STATION	TO	LOCATION			EACH
230+56	RT	STH 16 CL		1	
TOTAL 0010					1

					201.0105 CLEARING STA
STATION	TO	STATION	LOCATION		
167+00	-	168+00	LT		1
167+00	-	168+00	RT		1
176+00	-	177+00	RT		1
TOTAL 0000					3

					204.0150 REMOVING CURB & GUTTER	204.0155 REMOVING CONCRETE SIDEWALK	690.0250 SAWING CONCRETE	REMARKS
STATION	TO	STATION	LOCATION		LF	SY	LF	
187+31	-	187+45	LT	STH 16 CL	18	12	8	S CURB RAMP
187+35	-	187+44	LT	STH 16 CL	20	5	22	MEDIAN CURB RAMP
187+43	-	187+61	RT	STH 16 CL	22	19	8	E CURB RAMP
TOTAL 0010					60	36	38	

					* 455.0605 TACK COAT	* 460.6424 HMA PAVEMENT 4 MT 58-28 H	SPV.0090.01 SPECIAL (01. JOINT AND CRACK PLUNGE MILLING AND PATCHING)
STATION	TO	STATION	LOCATION		GAL	TON	LF
104+75	-	104+76	STH 16 CL		0.8	4	24
105+91	-	105+92	STH 16 CL		0.8	4	24
106+42	-	106+43	STH 16 CL		0.8	4	24
109+32	-	109+33	STH 16 CL		0.8	4	24
109+77	-	109+78	STH 16 CL		0.8	4	24
112+27	-	112+27	STH 16 CL		0.8	4	24
113+78	-	113+78	STH 16 CL		0.8	4	24
114+20	-	114+20	STH 16 CL		0.4	2	12
114+36	-	114+36	STH 16 CL		0.8	4	24
114+39	-	114+39	STH 16 CL		0.4	2	12
115+38	-	115+38	STH 16 CL		0.8	4	24
116+18	-	116+19	STH 16 CL		0.8	4	24
117+23	-	117+23	STH 16 CL		0.8	4	24
117+33	-	117+35	STH 16 CL		0.8	4	24
117+97	-	117+97	STH 16 CL		0.8	4	24
118+15	-	118+15	STH 16 CL		0.4	2	12
118+32	-	118+32	STH 16 CL		0.4	2	12
119+76	-	119+77	STH 16 CL		0.8	4	24
120+66	-	120+67	STH 16 CL		0.8	4	24
123+98	-	123+99	STH 16 CL		0.8	4	24
124+20	-	124+21	STH 16 CL		0.8	4	24
128+64	-	128+64	STH 16 CL		0.8	4	24
131+11	-	131+12	STH 16 CL		0.8	4	24
131+24	-	131+24	STH 16 CL		0.4	2	12
131+77	-	131+77	STH 16 CL		0.4	2	12
131+79	-	131+80	STH 16 CL		0.4	2	12
132+87	-	132+88	STH 16 CL		0.8	4	24
133+02	-	133+03	STH 16 CL		0.8	4	24
135+53	-	135+53	STH 16 CL		0.8	4	24
137+65	-	137+66	STH 16 CL		0.8	4	24
142+05	-	142+06	STH 16 CL		0.8	4	24
143+92	-	143+92	STH 16 CL		0.8	4	24
147+47	-	147+48	STH 16 CL		0.8	4	24
165+16	-	165+17	STH 16 CL		0.8	4	24
165+39	-	165+40	STH 16 CL		0.4	2	12
165+60	-	165+61	STH 16 CL		0.8	4	24
166+25	-	166+25	STH 16 CL		0.8	4	24
168+04	-	168+05	STH 16 CL		0.8	4	24
168+21	-	168+22	STH 16 CL		0.8	4	24
168+63	-	168+63	STH 16 CL		0.4	2	12
169+02	-	169+03	STH 16 CL		0.8	4	24
172+72	-	172+74	STH 16 CL		0.8	4	24
175+63	-	175+64	STH 16 CL		0.8	4	24
175+99	-	176+00	STH 16 CL		0.8	4	24
176+26	-	176+27	STH 16 CL		0.8	4	24
198+58	-	198+59	STH 16 CL		0.8	4	24
198+88	-	198+88	STH 16 CL		0.8	4	24
199+68	-	199+69	STH 16 CL		0.4	2	12
200+49	-	200+49	STH 16 CL		0.4	2	12
201+12	-	201+14	STH 16 CL		0.8	4	24
202+75	-	202+77	STH 16 CL		0.8	4	24
208+67	-	208+67	STH 16 CL		0.8	4	24
209+55	-	209+56	STH 16 CL		0.8	4	24
209+69	-	209+69	STH 16 CL		1.0	4	24
TOTAL 0010					39.0	194	1,164

* DENOTES QUANTITIES SHOWN ELSEWHERE ON THE PLAN

PROJECT NO: 1370-00-75

HWY: STH 16

COUNTY: DODGE & JEFFERSON

MISCELLANEOUS QUANTITIES

SHEET

E

PAVEMENT

					*			*			*			
					204.0100	305.0120	390.0100	390.0305	415.0080	416.0610	416.1710	601.0590	690.0250	
					REMOVING CONCRETE	BASE AGGREGATE	PAVEMENT FOR BASE	BASE PATCHING	CONCRETE PAVEMENT	DRILLED TIE BARS	CONCRETE PAVEMENT	CONCRETE CURB & GUTTER	SAWING CONCRETE	
STATION	TO	STATION		LOCATION	PAVEMENT	DENSE 1 1/4-INCH	PATCHING	CONCRETE HES	8-INCH	EACH	REPAIR	4-INCH SLOPED 36-INCH	LF	REMARKS
					SY	TON	CY	CY	SY		SY	TYPE TBTT		
102+37	-	102+68	LT	STH 16 CL	15	7	-	-	5	20	-	31	39	RR BRIDGE APPROACH
102+42	-	102+75	RT	STH 16 CL	16	8	-	-	6	20	-	33	41	RR BRIDGE APPROACH
228+05	-	228+51	LT/RT	STH 16 CL	116	-	-	-	-	-	-	-	77	CTH CW APPROACH SLAB
227+90	-	228+43	LT	STH 16 CL	-	18	-	-	24	30	-	53	-	BEAMGUARD IMPROVEMENTS
227+98	-	228+51	RT	STH 16 CL	-	20	-	-	29	30	-	53	-	BEAMGUARD IMPROVEMENTS
230+45	-	230+85	LT/RT	STH 16 CL	135	-	-	-	-	-	-	-	61	CTH CW APPROACH SLAB
230+36	-	230+89	LT	STH 16 CL	-	17	-	-	21	30	-	53	-	BEAMGUARD IMPROVEMENTS
230+45	-	230+98	RT	STH 16 CL	-	18	-	-	25	30	-	53	-	BEAMGUARD IMPROVEMENTS
209+80	-	249+10	LT/RT	STH 16 CL	-	-	250	250	-	-	20	-	-	PROJECT
TOTAL 0010					282	88	250	250	110	160	20	276	218	

CURB RAMP

				416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	416.1720 CONCRETE PAVEMENT REPLACEMENT SY											
STATION	TO	STATION	LOCATION	EACH	EACH	SY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	601.0553 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D LF	601.0600 CONCRETE CURB PEDESTRIAN LF	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF	REMARKS
228+05	-	228+51	STH 16 CL	40	80	115	187+43	-	187+61	RT	7	4	18	6	116	12	S CURB RAMP
230+45	-	230+87	STH 16 CL	40	80	135	187+35	-	187+44	LT	2	4	20	10	35	-	MEDIAN CURB RAMP
			TOTAL 0010	80	160	250	187+31	-	187+46	LT	9	5	22	11	163	15	E CURB RAMP
							TOTAL 0010				18	13	60	27	314	27	

PROJECT TOTALS

				305.0110 BASE AGGREGATE DENSE 3/4-INCH	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	624.0100 WATER	
STATION	TO	STATION	LOCATION	TON	TON	MGAL	REMARKS
			PROJECT	-	88	1.8	SEE PAVEMENT TABLE
			PROJECT	18	13	0.4	SEE CURB RAMP TABLE
154+25	-	155+62	RT STH 16 CL	20	25	0.4	SHOULDER WIDENING
154+40	-	155+60	LT STH 16 CL	25	30	0.5	SHOULDER WIDENING
			PROJECT	2553	-	51.9	SHOULDER
TOTAL 0010				2,616	156	55.0	

					*					*
					455.0605	460.4210.S	460.6225	460.6424		
					TACK COAT	HMA PAVEMENT	HMA PAVEMENT 5 MT	HMA PAVEMENT 4 MT		
STATION	TO	STATION	LOCATION		GAL	INTERLAYER	58-28 S	58-28 H	REMARKS	
102+68	-	104+22	LT	STH 16 CL	15	6	-	15	SHOULDER	
102+75	-	104+22	RT	STH 16 CL	13	6	-	13	SHOULDER	
104+22	-	152+53		STH 16 CL	3,110	1,244	-	3,110	MAINLINE & INTERSECTIONS	
152+53	-	165+01		STH 16 CL	1,161	-	581	1,161	MAINLINE & BOULDER INTERSECTION	
165+01	-	176+39		STH 16 CL	531	213	-	531	MAINLINE	
176+39	-	197+08		STH 16 CL	1,627	-	814	1,627	MAINLINE & N 4TH INTERSECTION	
197+08	-	209+80		STH 16 CL	594	238	-	594	MAINLINE	
221+45	-	227+98	RT	STH 16 CL	69	28	-	83	SHOULDER	
224+14	-	227+90	LT	STH 16 CL	43	17	-	51	SHOULDER	
230+89	-	239+39	LT	STH 16 CL	86	35	-	103	SHOULDER	
230+98	-	244+01	RT	STH 16 CL	303	122	-	364	SHOULDER	
					-	-	-	-		
TOTAL 0010					7,552	1,909	1,395	7,652		

211.0101.01
PREPARE FOUNDATION FOR
ASPHALTIC PAVING (PROJECT) (01.
1370-00-75)

LOCATION	EACH
PROJECT	1
TOTAL 0010	1

* DENOTES QUANTITIES SHOWN ELSEWHERE ON THE PLAN

EROSION CONTROL

			625.0100	628.2008	629.0210	630.0120	630.0200	630.0500
			TOPSOIL	EROSION MAT URBAN	FERTILIZER TYPE B	SEEDING MIXTURE	SEEDING TEMPORARY	SEED WATER
			SY	CLASS I TYPE B	CWT	NO. 20	LB	MGAL
STATION			LOCATION	SY				
228+00	LT	STH 16 CL	72	72	0.1	3.3	2.0	1.7
228+07	RT	STH 16 CL	72	72	0.1	3.3	2.0	1.7
230+80	LT	STH 16 CL	72	72	0.1	3.3	2.0	1.7
230+89	RT	STH 16 CL	72	72	0.1	3.3	2.0	1.7
UNDISTRIBUTED			29	29	0.6	1.8	1.0	1.2
TOTAL 0010			317	317	1.0	15.0	9.0	8.0

628.1905	628.1910
MOBILIZATIONS	MOBILIZATIONS
EROSION CONTROL	EMERGENCY EROSION
EACH	CONTROL
EACH	EACH
PRIOR TO EARTHWORK OPERATIONS	1
FINAL RESTORATION	1
UNDISTRIBUTED	3
TOTAL 0010	2
	3

			628.7504
			TEMPORARY DITCH
			CHECKS
STATION		LOCATION	LF
120+38	RT	STH 16 CL	20
131+08	LT	STH 16 CL	20
153+27	RT	STH 16 CL	20
153+27	LT	STH 16 CL	20
155+98	RT	STH 16 CL	20
155+98	LT	STH 16 CL	20
TOTAL 0010			120

STATION	TO	STATION	LOCATION	628.1504	628.1520
				SILT FENCE	SILT FENCE
				LF	MAINTENANCE
				LF	LF
112+86	-	114+89	LT	209	209
113+32	-	114+85	RT	181	181
118+47	-	120+62	RT	237	237
119+40	-	121+57	LT	241	241
130+68	-	132+28	LT	192	192
130+95	-	132+63	RT	205	205
155+98	-	156+06	RT	31	31
156+24	-	156+32	LT	32	32
223+63	-	225+72	LT	222	222
238+05	-	239+93	LT	198	198
TOTAL 0010				1,748	1,748

STATION		LOCATION		628.7005	628.7015
				INLET PROTECTION	INLET PROTECTION
				TYPE A	TYPE C
				EACH	EACH
102+60	LT	STH 16 CL	-		1
102+65	RT	STH 16 CL	-		1
157+32	LT	STH 16 CL	-		1
158+12	LT	STH 16 CL	-		1
160+00	LT	STH 16 CL	-		1
161+00	LT	STH 16 CL	-		1
162+00	LT	STH 16 CL	-		1
182+50	LT	STH 16 CL	-		1
182+63	LT	STH 16 CL	-		1
182+77	LT	STH 16 CL	-		1
186+60	RT	STH 16 CL	-		2
186+94	LT	STH 16 CL	-		1
187+10	RT	STH 16 CL	-		1
187+46	LT	STH 16 CL	-		1
187+50	LT	STH 16 CL	-		1
187+61	LT	STH 16 CL	-		1
228+00	LT	STH 16 CL	1		1
228+07	RT	STH 16 CL	1		1
230+80	LT	STH 16 CL	1		1
230+89	RT	STH 16 CL	1		1
TOTAL 0010				4	21

STORM SEWER & CULVERTS

611.0430				606.0200		645.0120	
RECONSTRUCTING				RIPRAP		GEOTEXTILE TYPE	
INLETS				MEDIUM		HR	
EACH				CY		SY	
STATION	TO	LOCATION		STATION	TO	LOCATION	
102+60	18' LT	STH 16 CL	1	230+80	LT	STH 16 CL	13
102+66	16' RT	STH 16 CL	1	230+88	RT	STH 16 CL	13
TOTAL 0010			2	TOTAL 0010			26

521.1012		530.0112	611.0654	611.3220	633.5200	650.4000
APRON ENDWALLS		CULVERT PIPE	INLET		MARKERS	CONSTRUCTION
FOR CULVERT PIPE		CORRUGATED	COVERS	INLETS	CULVERT	STAKING STORM
STEEL 12-INCH		POLYETHYLENE	TYPE V	2X2-FT	END	SEWER
EACH		12-INCH	EACH	EACH	EACH	EACH
STATION	OFFSET	LOCATION				
227+99	19.5' LT	STH 16 CL	1	61	1	1
228+07	19.5' RT	STH 16 CL	1	61	1	1
230+80	19.5' LT	STH 16 CL	1	59	1	1
230+88	19.5' RT	STH 16 CL	1	61	1	1
TOTAL 0010				4	242	4

520.9700.S.01		520.9700.S.02	520.9700.S.03	520.9750.S	628.7560
CULVERT PIPE LINERS		CULVERT PIPE LINERS	CULVERT PIPE LINERS	CLEANING CULVERT	TRACKING PADS
(SIZE) (01. 24 - INCH)		(SIZE) (02. 30 - INCH)	(SIZE) (03. 36 - INCH))	PIPES FOR LINER	EACH
LF		LF	LF	VERIFICATION	EACH
167+44	STH 16 CL	91		1	2
171+15	STH 16 CL		108	1	2
176+45	STH 16 CL	80		1	2
TOTAL 0010		80	91	108	3

* DENOTES QUANTITIES SHOWN ELSEWHERE ON THE PLAN

3

* WHITE 646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH						
STATION	TO	STATION	LOCATION	LF	REMARKS	
104+22	-	116+26	LT STH 16 CL	1,205	SOLID	
104+22	-	114+91	RT STH 16 CL	1,069	SOLID	
114+91	-	116+15	RT STH 16 CL	42	3' LINE 9' GAP	
117+38	-	132+49	RT STH 16 CL	1,511	SOLID	
117+70	-	119+00	LT STH 16 CL	44	3' LINE 9' GAP	
119+00	-	132+49	LT STH 16 CL	1,351	SOLID	
133+76	-	135+61	LT STH 16 CL	62	3' LINE 9' GAP	
133+80	-	156+26	RT STH 16 CL	2,247	SOLID	
135+61	-	153+85	LT STH 16 CL	2,151	SOLID	
157+87	-	186+00	RT STH 16 CL	2,806	SOLID	
158+43	-	177+00	LT STH 16 CL	1,868	SOLID	
177+00	-	185+19	LT STH 16 CL	823	SOLID	
179+14	-	180+64	LT STH 16 CL	314	SOLID	
186+48	-	186+72	RT STH 16 CL	74	SOLID (S. 4TH ST)	
187+49	-	244+13	LT STH 16 CL	5,669	SOLID	
187+60	-	244+13	RT STH 16 CL	5,652	SOLID	
TOTAL 0010				26,888		

646.6120 MARKING STOP LINE EPOXY 18-INCH					
STATION	TO	STATION	LOCATION	LF	
116+49	-	116+70	LT STH 16 CL	34	
116+92	-	117+12	RT STH 16 CL	34	
132+82	-	132+97	LT STH 16 CL	36	
132+97	-	133+09	LT STH 16 CL	40	
133+37	-	133+57	RT STH 16 CL	20	
157+37	-	157+54	RT STH 16 CL	19	
157+40	-	157+60	LT STH 16 CL	24	
163+82	-	163+82	LT STH 16 CL	1	
185+66	-	185+67	LT STH 16 CL	12	
185+69	-	185+98	LT STH 16 CL	33	
185+94	-	185+96	RT STH 16 CL	26	
186+25	-	186+37	LT STH 16 CL	12	
186+64	-	186+78	RT STH 16 CL	14	
186+99	-	187+26	RT STH 16 CL	31	
187+49	-	187+49	LT STH 16 CL	36	
TOTAL 0010				372	

646.8120 MARKING CURB EPOXY					
STATION	TO	STATION	LOCATION	LF	
156+12	-	156+21	LT STH 16 CL	23	
156+98	-	157+10	RT STH 16 CL	23	
157+39	-	157+47	LT STH 16 CL	20	
157+69	-	157+82	LT STH 16 CL	21	
185+62	-	185+73	LT STH 16 CL	29	
185+98	-	186+26	LT STH 16 CL	49	
186+03	-	186+12	LT STH 16 CL	21	
187+30	-	187+59	LT STH 16 CL	49	
TOTAL 0010				235	

* YELLOW 646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH						
STATION	TO	STATION	LOCATION	LF	REMARKS	
104+22	-	113+27	LT STH 16 CL	905	SOLID	
104+22	-	121+46	RT STH 16 CL	575	12.5' LINE 37.5' GAP	
121+48	-	133+25	LT STH 16 CL	393	12.5' LINE 37.5' GAP	
121+49	-	136+00	RT STH 16 CL	1,451	SOLID	
133+00	-	157+39	LT STH 16 CL	2,440	SOLID	
136+00	-	146+25	RT STH 16 CL	342	12.5' LINE 37.5' GAP	
146+25	-	157+39	STH 16 CL	1,116	SOLID	
156+97	-	156+98	RT STH 16 CL	40	DOUBLE SOLID (S. BOULDER RD)	
157+53	-	185+67	STH 16 CL	2,813	SOLID	
157+71	-	157+76	LT STH 16 CL	81	DOUBLE SOLID (N. BOULDER RD)	
158+08	-	185+67	LT STH 16 CL	2,763	SOLID	
163+58	-	164+00	LT STH 16 CL	87	DOUBLE SOLID (N. 4TH ST)	
186+63	-	186+87	RT STH 16 CL	177	DOUBLE SOLID (S. 4TH ST)	
187+44	-	201+11	STH 16 CL	1,368	SOLID	
187+49	-	193+60	LT STH 16 CL	612	SOLID	
193+60	-	201+11	LT STH 16 CL	752	SOLID	
201+11	-	227+00	LT STH 16 CL	863	12.5' LINE 37.5' GAP	
218+73	-	233+20	RT STH 16 CL	1,448	SOLID	
227+00	-	240+41	LT STH 16 CL	1,342	12.5' LINE 37.5' GAP	
233+20	-	240+41	RT STH 16 CL	241	12.5' LINE 37.5' GAP	
240+49	-	244+24	LT STH 16 CL	126	12.5' LINE 37.5' GAP	
TOTAL 0010				19,935		

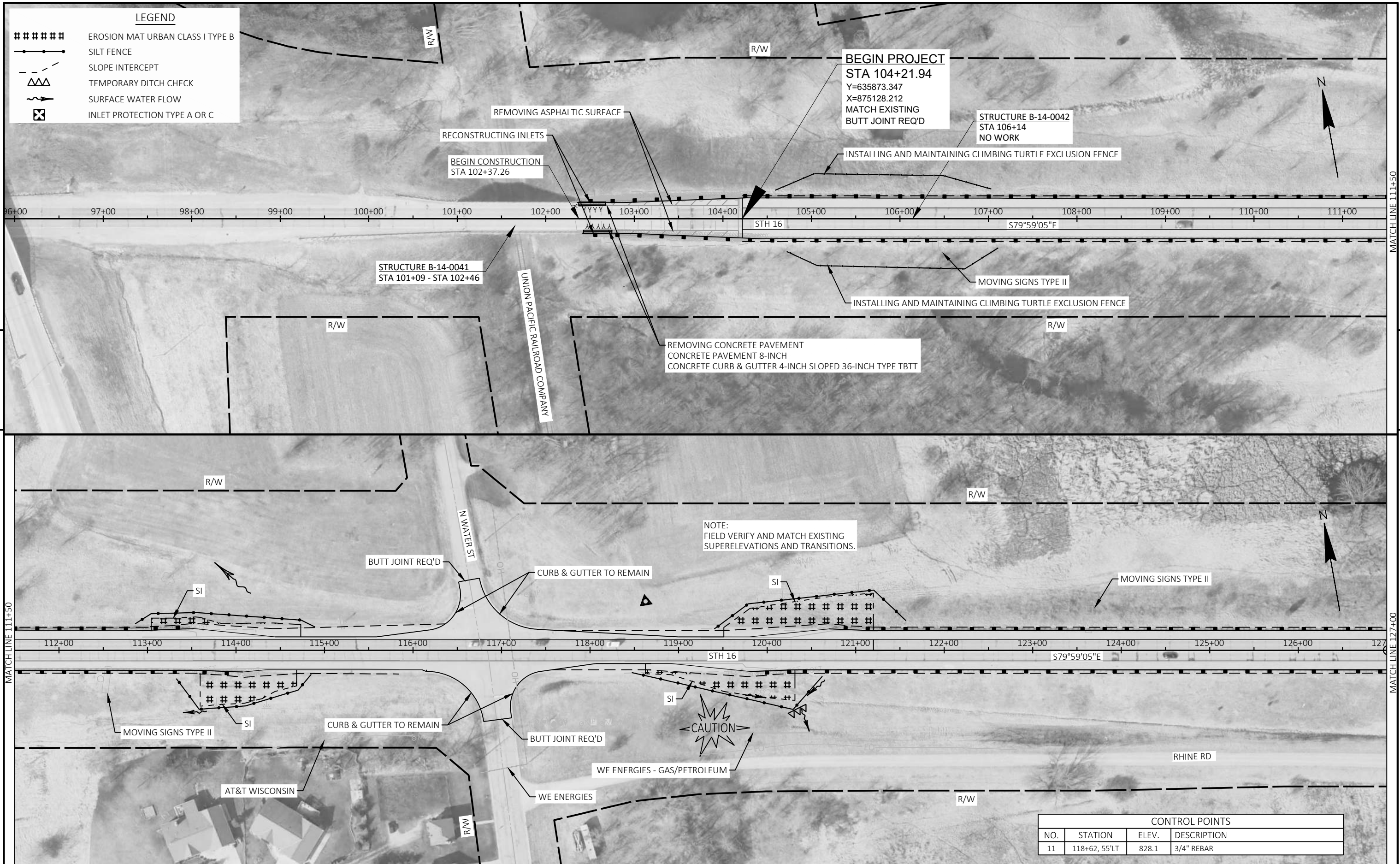
646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH						
STATION	TO	STATION	LOCATION	LF	REMARKS	
153+67	-	154+75	RT STH 16 CL	37	3' LINE 9' GAP	
154+69	-	157+53	RT STH 16 CL	285	SOLID	
154+70	-	157+53	RT STH 16 CL	284	SOLID	
156+87	-	156+95	RT STH 16 CL	18	SOLID	
158+09	-	161+79	LT STH 16 CL	372	SOLID	
161+79	-	165+32	LT STH 16 CL	119	3' LINE 9' GAP	
180+39	-	182+29	RT STH 16 CL	64	3' LINE 9' GAP	
182+29	-	185+95	RT STH 16 CL	367	SOLID	
184+46	-	185+66	LT STH 16 CL	120	SOLID	
187+49	-	190+49	LT STH 16 CL	301	SOLID	
187+49	-	188+49	LT STH 16 CL	100	SOLID	
TOTAL 0010				2,067		

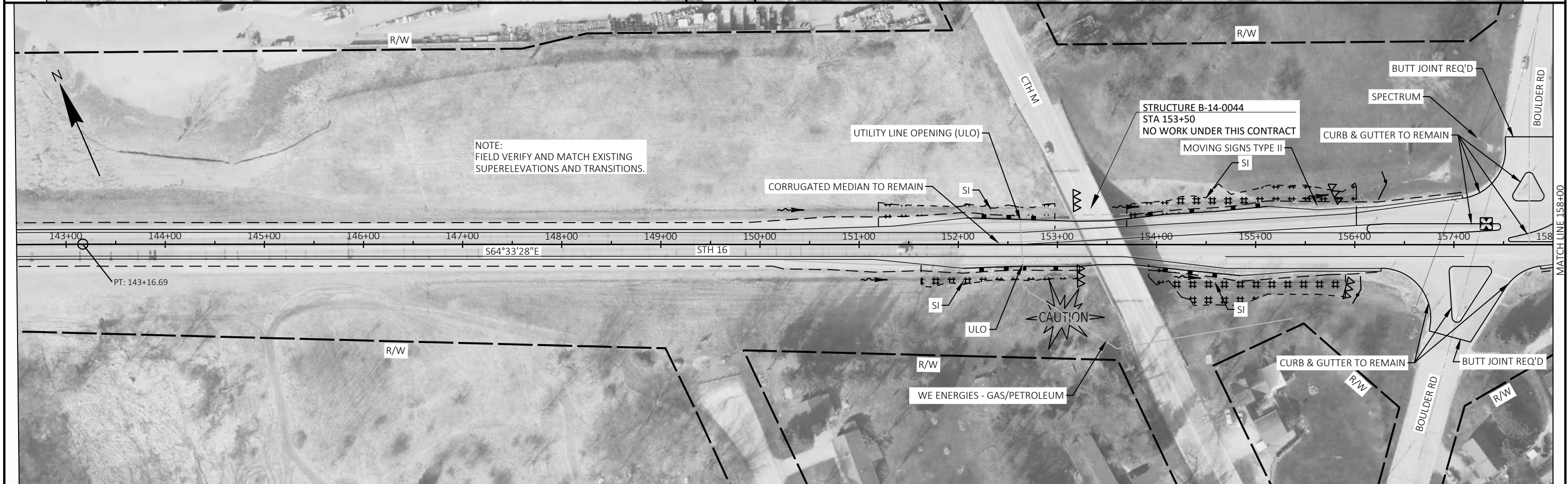
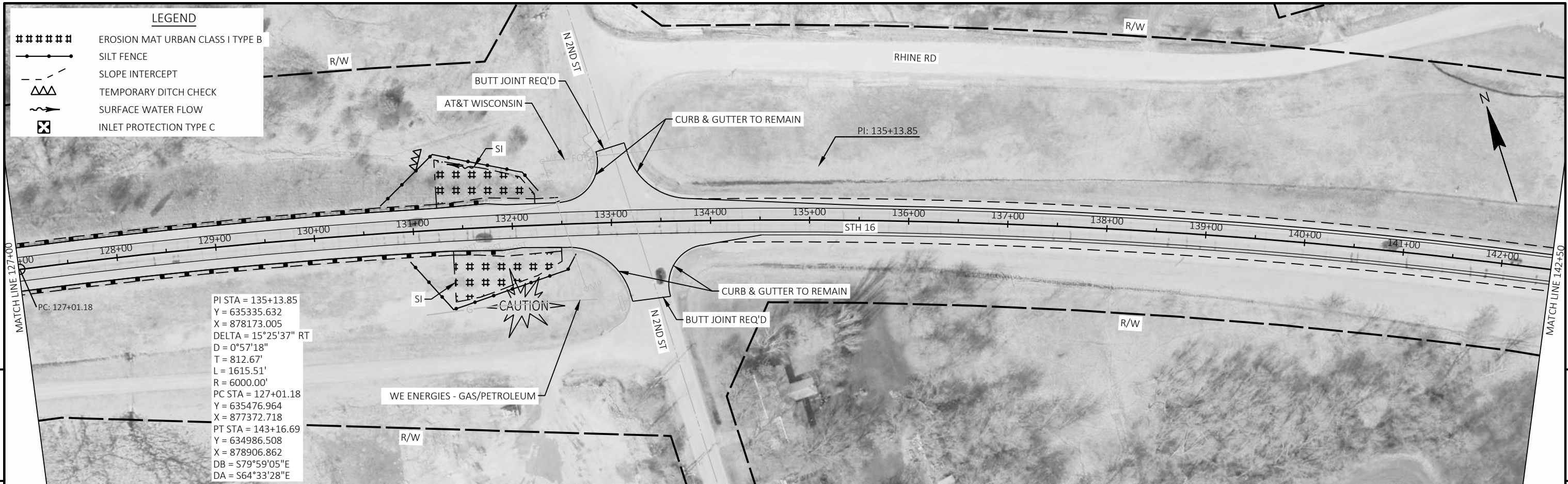
	646.5020 MARKING ARROW EPOXY EACH	646.5120 MARKING WORD EPOXY EACH	646.5220 MARKING SYMBOL EPOXY EACH	ARROW TYPE	WORD	SYMBOL TYPE	REMARKS
STH 16 & BOULDER RD	2	-	-	2	-	-	EB RIGHT TURN
STH 16 & BOULDER RD	2	1	-	2	ONLY	-	EB LEFT TURN
STH 16 & BOULDER RD	2	1	-	2	ONLY	-	WB RIGHT TURN
STH 16 & N 4TH ST	2	1	-	2	ONLY	-	EB RIGHT TURN
STH 16 & N 4TH ST	2	-	-	2	-	-	EB LEFT TURN
STH 16 & SOUTH N 4TH ST	1	-	1	BIKE LANE	-	BIKE LANE	
STH 16 & N 4TH ST	2	-	-	2	-	-	WB LEFT TURN
STH 16 & N 4TH ST	2	1	-	2	ONLY	-	
TOTAL 0010	15	4	1				

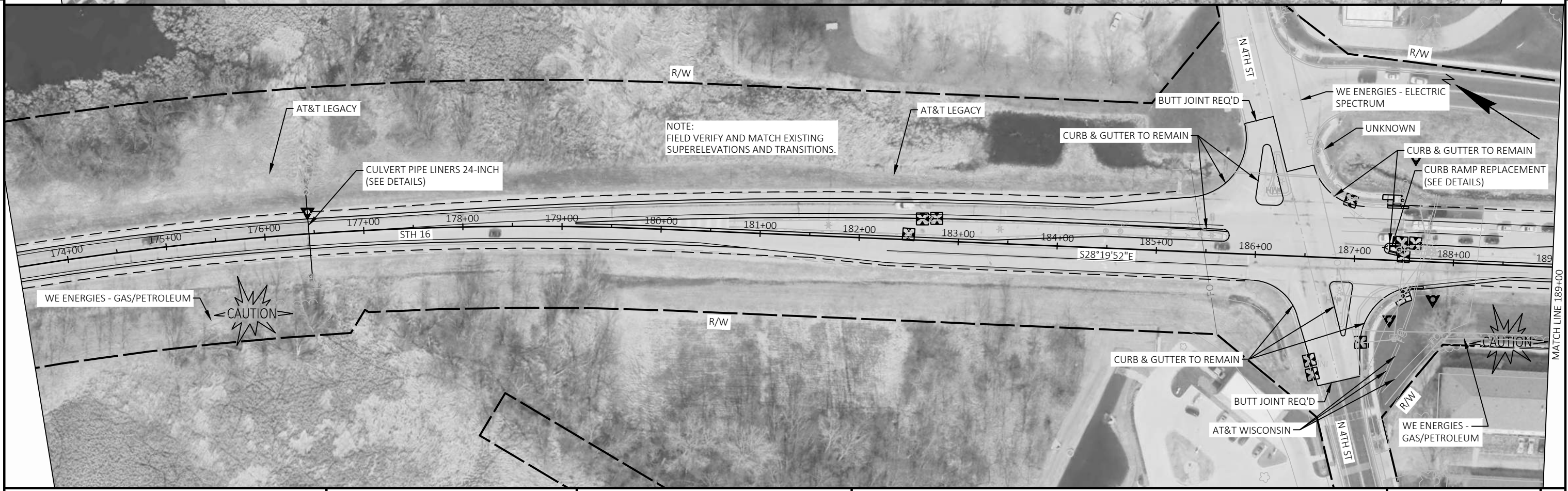
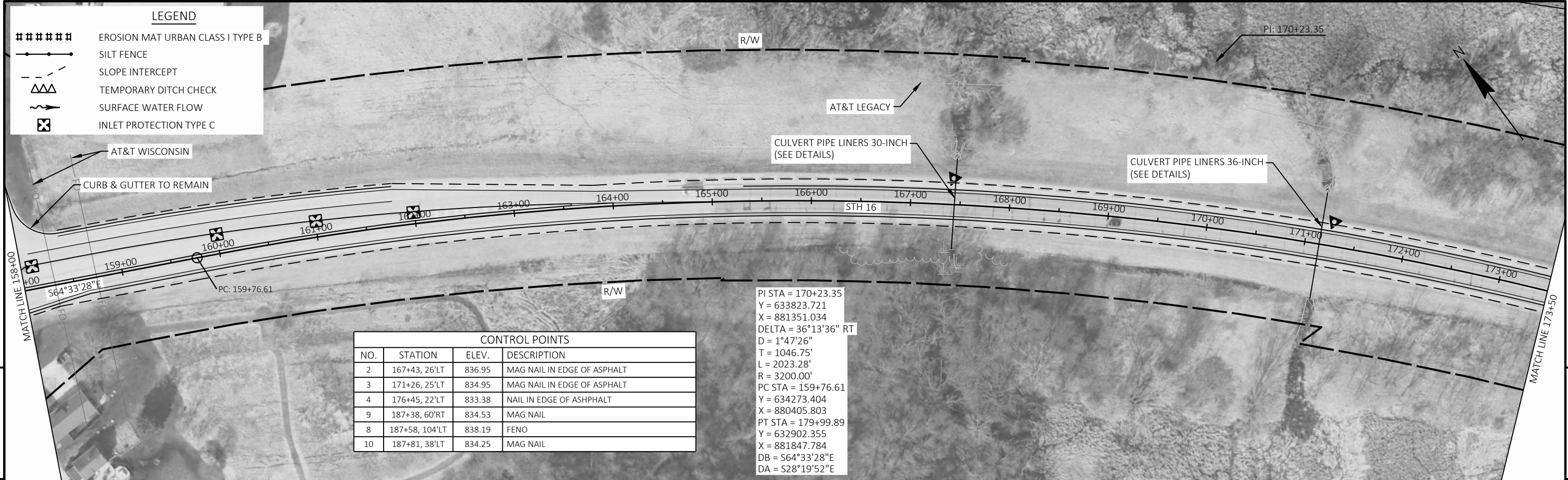
PROJECT TOTALS					
* 646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH					
LOCATION				LF	REMARKS
PROJECT				19,935	YELLOW
PROJECT				26,888	WHITE
TOTAL 0010				46,823	
646.7120 MARKING DIAGONAL EPOXY 12-INCH					
STATION	TO	STATION	LOCATION		LF
155+02	-	156+09	LT	STH 16 CL	56
TOTAL 0010					56
646.8020 MARKING CORRUGATED MEDIAN EPOXY					
STATION	TO	STATION	LOCATION		SF
151+22	-	154+01		STH 16 CL	622
162+09	-	164+21	LT	STH 16 CL	1,002
179+14	-	180+64	LT	STH 16 CL	904
193+60	-	195+26	LT	STH 16 CL	807
TOTAL 0010					3,335
646.3040 MARKING LINE GROOVED WET REF EPOXY 8-INCH					
STATION	TO	STATION	LOCATION		LF
186+02	-	186+11	LT	STH 16 CL	59
186+90	-	186+96	RT	STH 16 CL	26
186+94	-	186+96	RT	STH 16 CL	25
TOTAL 0010					110

* DENOTES QUANTITIES SHOWN ELSEWHERE ON THE PLAN

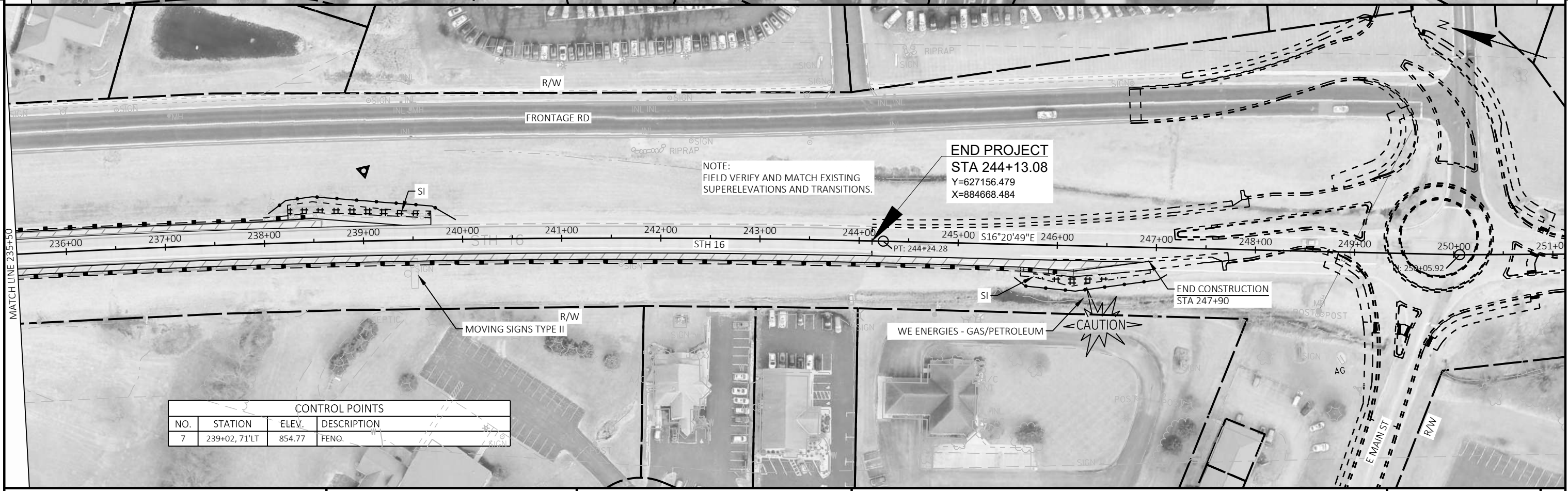
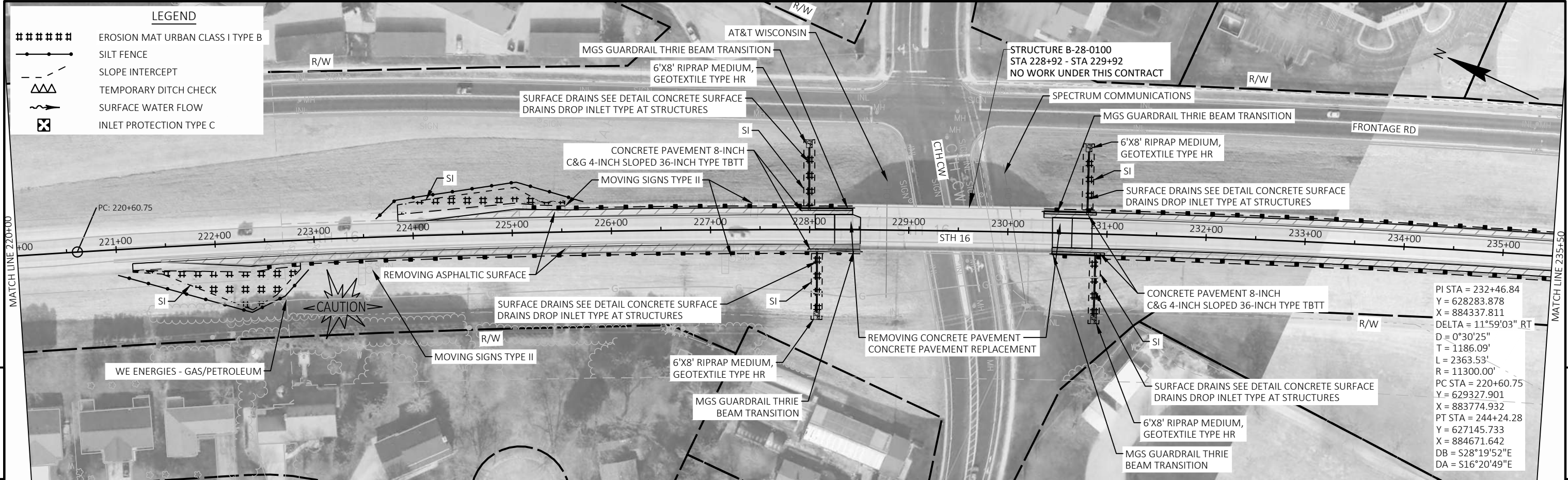
3











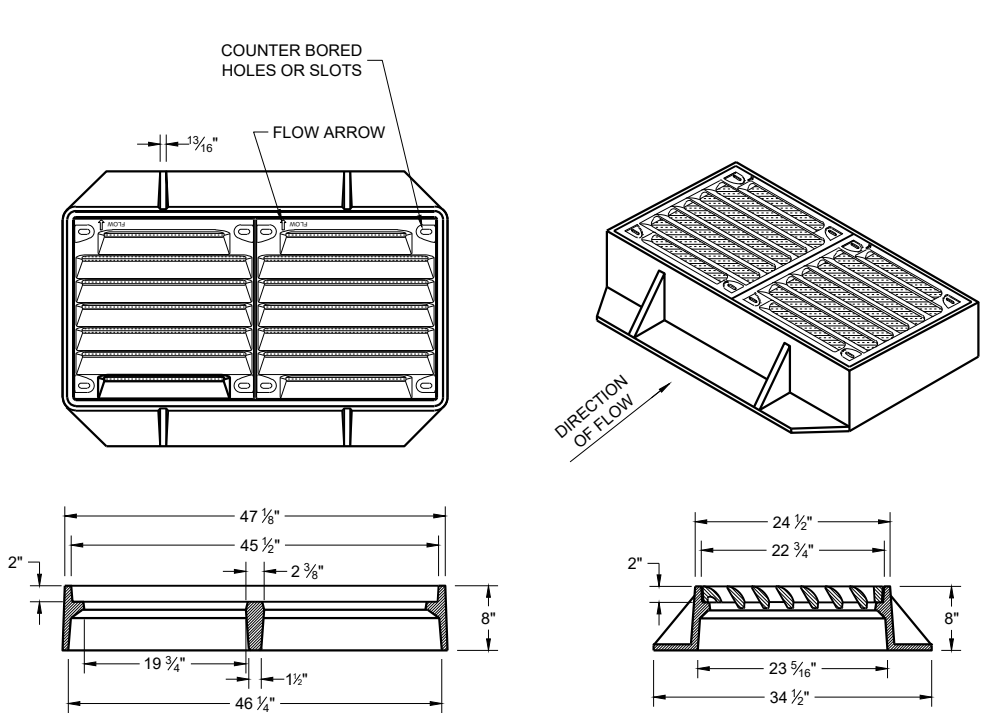
Standard Detail Drawing List

08A05-22D	INLET COVERS TYPE V, V-B, & VV-B
08C07-03	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT
08D01-24A	CONCRETE CURB & GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D03-09A	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D03-09B	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D05-22B	CURB RAMPS TYPES 2 AND 3
08D05-22C	CURB RAMPS TYPES 4A AND 4A1
08D05-22D	CURB RAMPS TYPES 4B AND 4B1
08D05-22E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-22F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-22G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
13C09-17A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-17C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C14-07A	BASE PATCHING CONCRETE
13C14-07B	BASE PATCHING CONCRETE
13C14-07C	BASE PATCHING CONCRETE
13C19-03	HMA LONGITUDINAL JOINTS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14D01-01	TURTLE EXCLUSION FENCE CLIMBING TURTLE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C02-09H	MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-16A	PAVEMENT MARKING SYMBOLS
15C07-16B	PAVEMENT MARKING WORDS
15C07-16C	PAVEMENT MARKING ARROWS
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24C	PAVEMENT MARKING (TURN LANES)
15C08-24D	PAVEMENT MARKING (TURN LANES)
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D30-11C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11I	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

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.

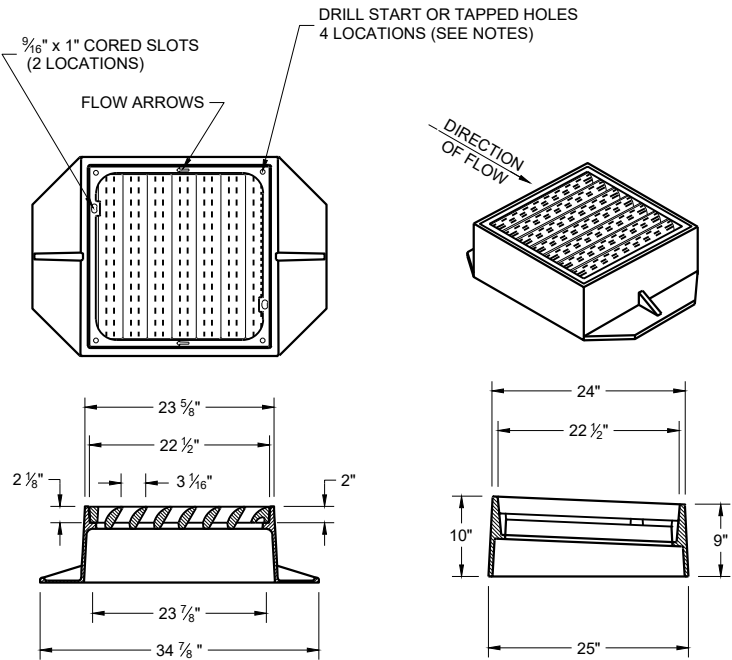
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



TYPE "VV-B"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER
ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

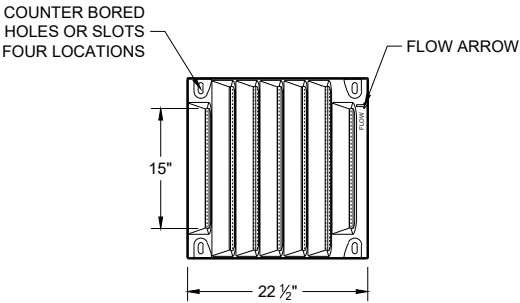
TYPE V
FRAME - CAST GRAY IRON ASTM A48 CLASS 35B
3/8" DIA. X 1/16" DRILL START IN 8 LOCATIONS
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



TYPE "V"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

TYPE V
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A
3/8" DIA. X 1/16" DRILL START IN 4 LOCATIONS
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



BOLT DOWN GRATE FOR
TYPE "V" AND "VV-B" COVER

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER
NOTED AS TYPE "V-B" OR "VV-B" (FOR DOUBLE GRATE) ON DRAINAGE TABLE

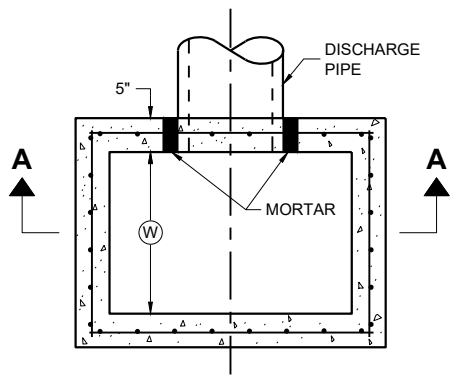
TAP 1/2" -13 HOLES IN FOUR LOCATIONS PER GRATE IN FRAME TO BOLT GRATE(S).
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A

GRATE - CAST DUCTILE IRON ASTM A536, 55+KSI YIELD
BOLTS - 1/2" -13 STAINLESS STEEL BOLTS WITH WASHERS
TORQUE BOLTS TO MANUFACTURER SPECIFICATION DO NOT OVERTIGHTEN.

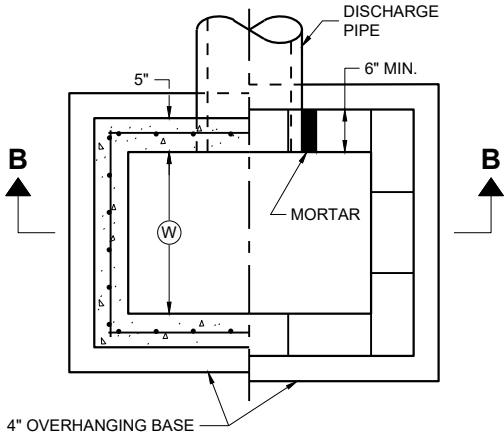
INLET COVERS
TYPES V, V-B, AND VV-B

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

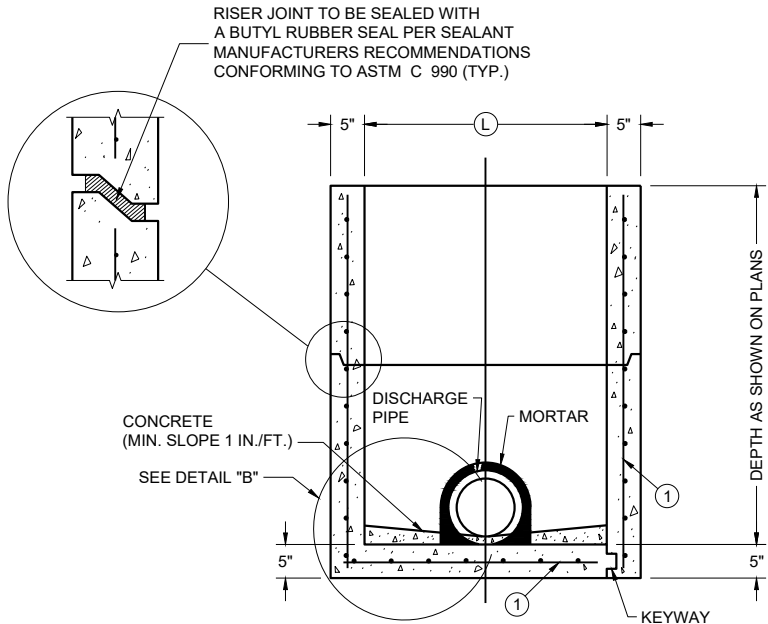
APPROVED
February 2025 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



PLAN VIEW



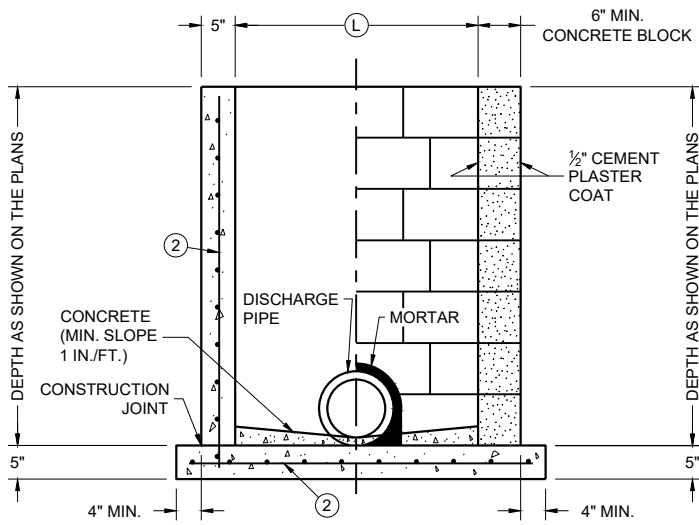
PLAN VIEW



PRECAST REINFORCED
CONCRETE WITH
MONOLITHIC BASE

PRECAST REINFORCED
CONCRETE WITH
INTEGRAL BASE

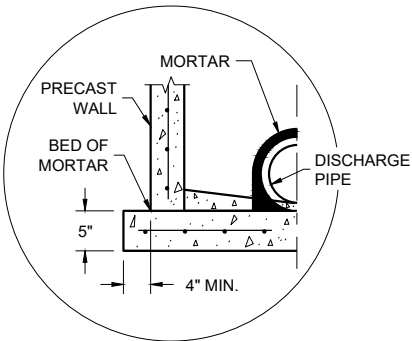
SECTION A - A



CAST IN PLACE
REINFORCED
CONCRETE

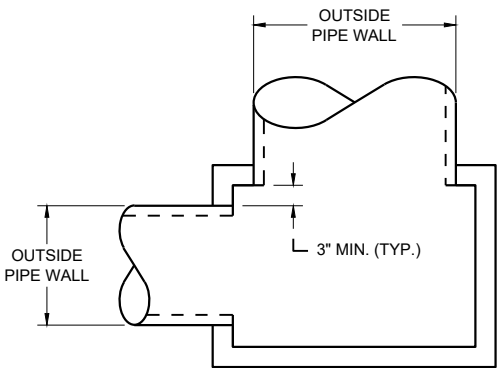
CONCRETE BLOCK WITH
CAST IN PLACE OR
PRECAST REINFORCED
CONCRETE BASE ①

SECTION B - B



SEPARATE PRECAST REINFORCED
CONCRETE BASE OPTION

DETAIL "B"



DETAIL "A"

INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2X3.5-FT

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

- ① FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

CATCH BASIN COVER MATRIX

INLET SIZE	WIDTH (W) (FT.)	LENGTH (L) (FT.)	INLET COVER TYPE									
			ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM	V V-B
2 X 2-FT	2	2	X	X				X				
2 X 2.5-FT	2	2.5			X			X	X	X	X	
2 X 3-FT	2	3					X					
2.5 X 3-FT	2.5	3				X						
2 X 3.5-FT	2	3.5										X

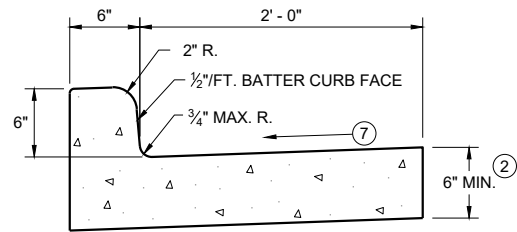
PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2 X 2-FT	12	12
2 X 2.5-FT	12	18
2 X 3-FT	12	24
2.5 X 3-FT	18	24
2 X 3.5-FT	12	30

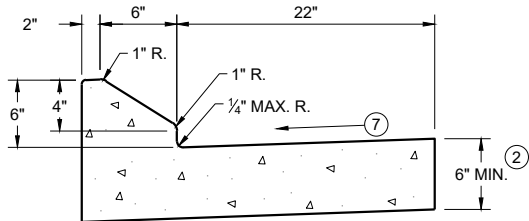
INLETS 2 X 2-FT, 2 X 2.5-FT,
2 X 3-FT, 2.5 X 3-FT
AND 2 X 3.5-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

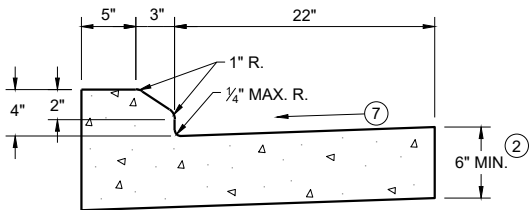
APPROVED
December 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



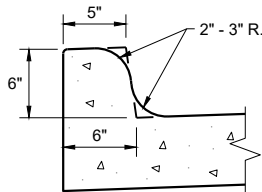
TYPES A^① & D



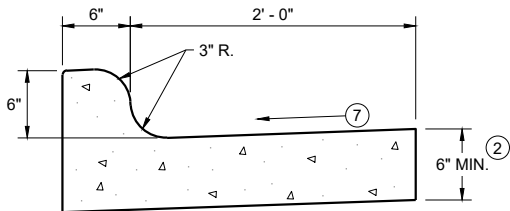
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

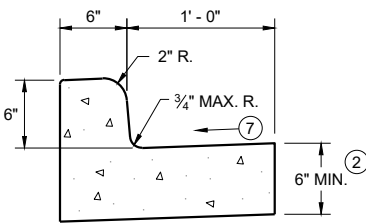


TYPES K^① & L
(OPTIONAL CURB SHAPE)



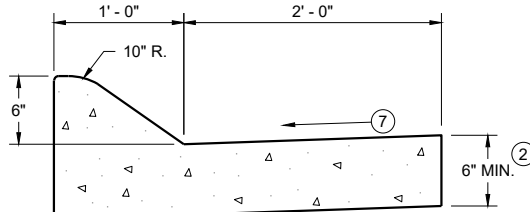
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

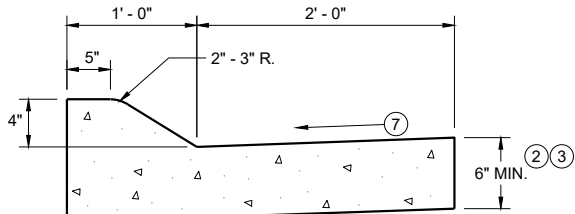


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

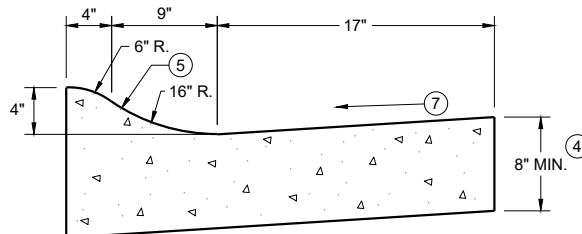


6" SLOPED CURB TYPES A^① & D



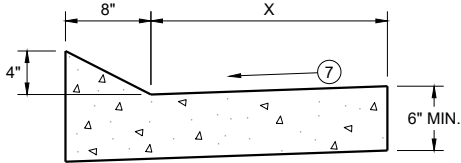
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T
CONCRETE CURB AND GUTTER 30"

TBT & TBTT	X
30"	22"
36"	28"

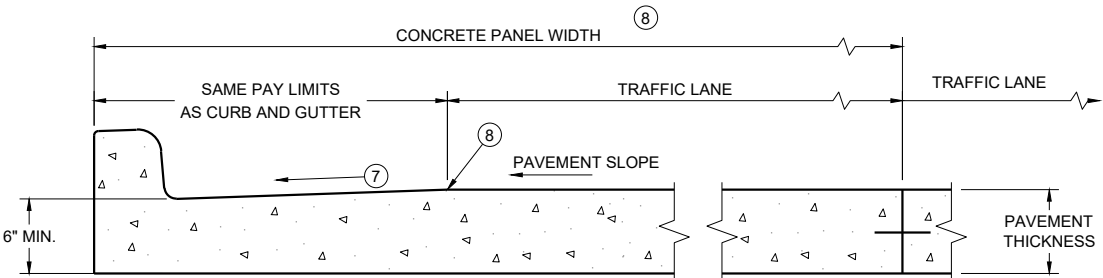


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

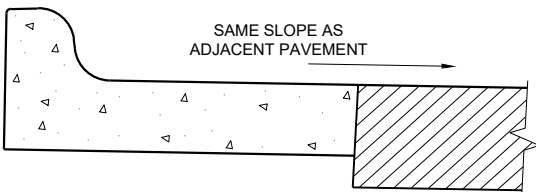
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'

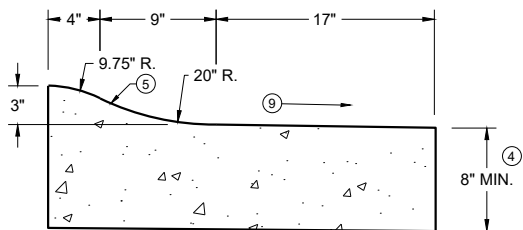


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER^⑥
(TYPICAL FOR ALL CURB & GUTTER TYPES)



3" SLOPED CURB TYPES R^① & T

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

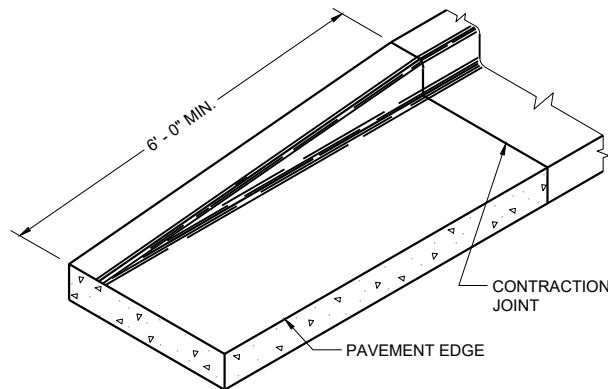
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

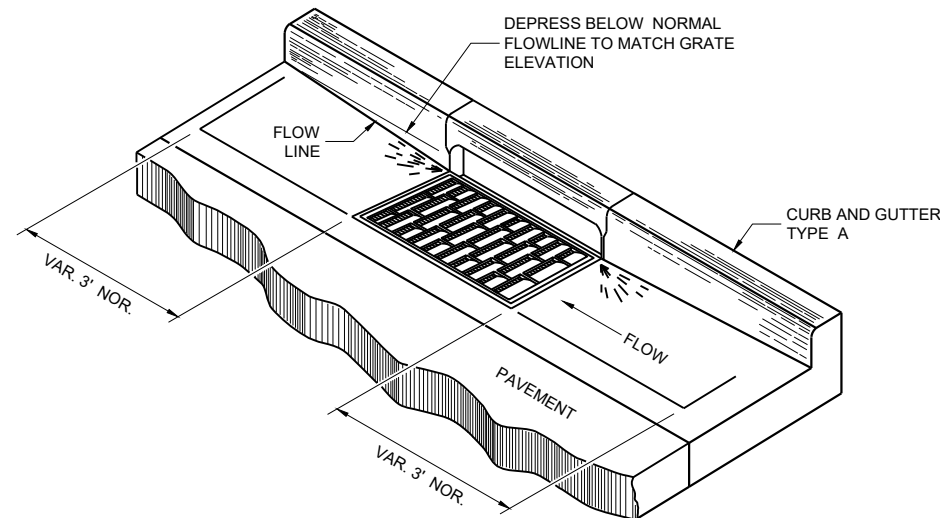
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY

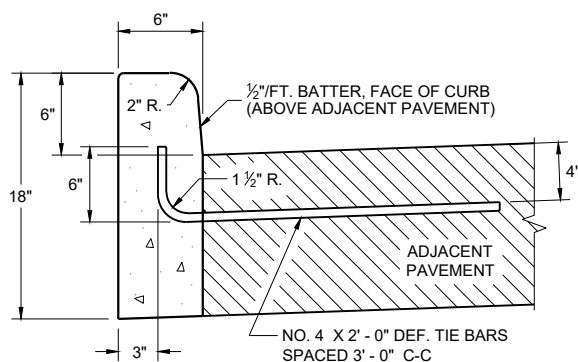


END SECTION CURB AND GUTTER

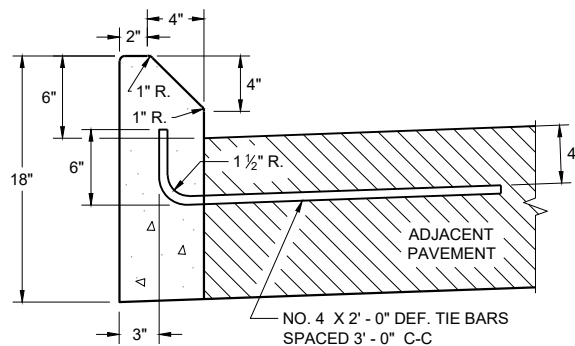


DETAIL OF CURB AND GUTTER AT INLETS

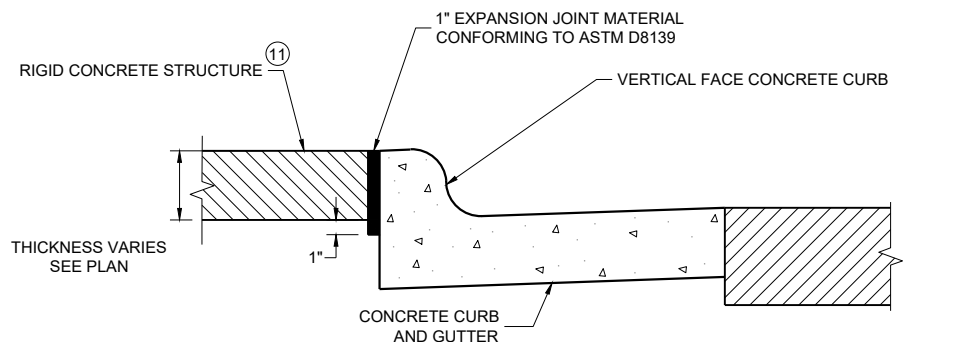
(TYPICAL H INLET COVER SHOWN)



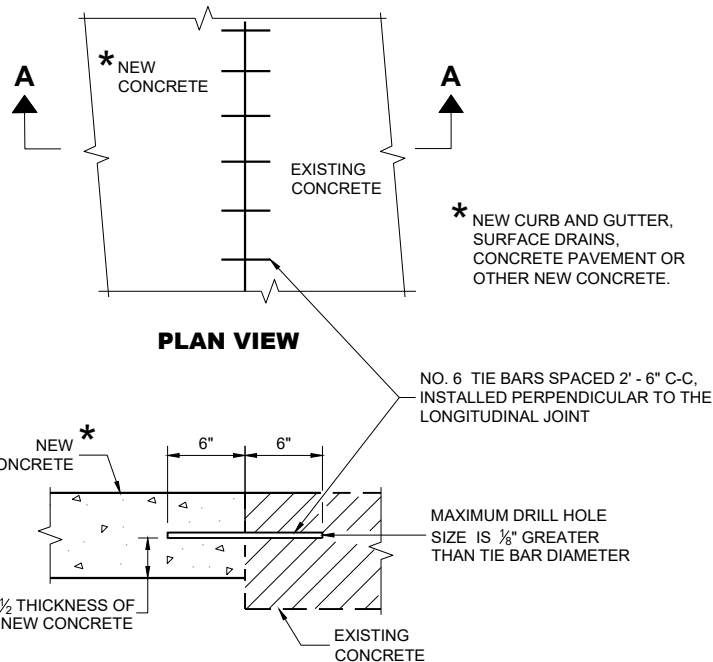
TYPES A^① & D



TYPES G^① & J
CONCRETE CURB



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE^⑪



SECTION A - A
TIE BARS DRILLED INTO EXISTING PAVEMENT

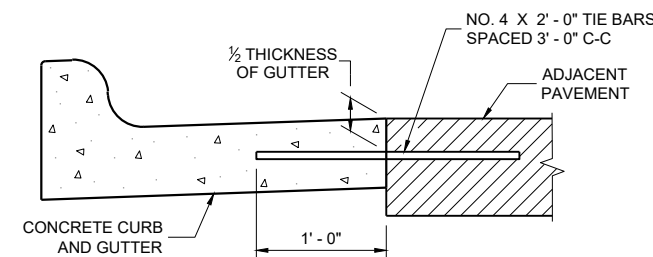
GENERAL NOTES

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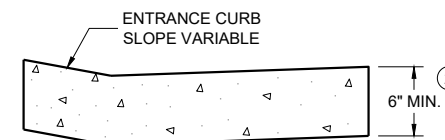
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑩
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES
AND CURB AND GUTTER
APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

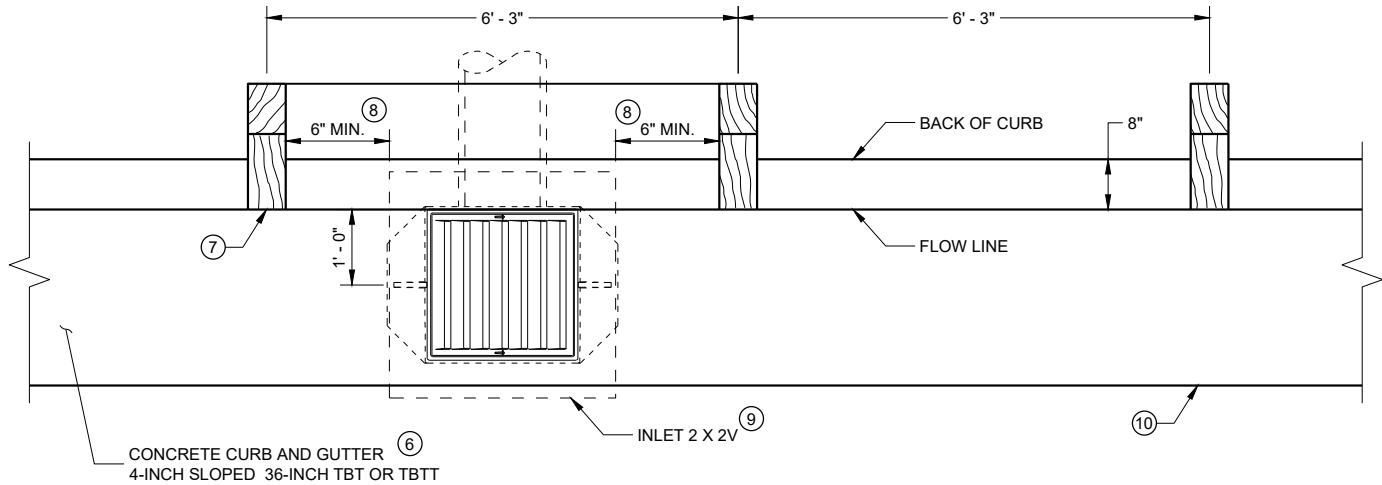
APPROVED
February 2025
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA

GENERAL NOTES

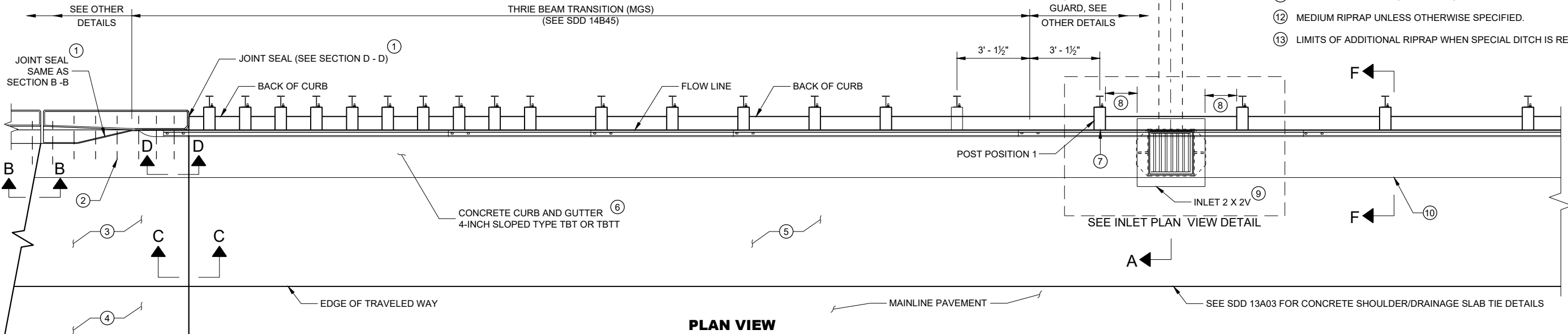
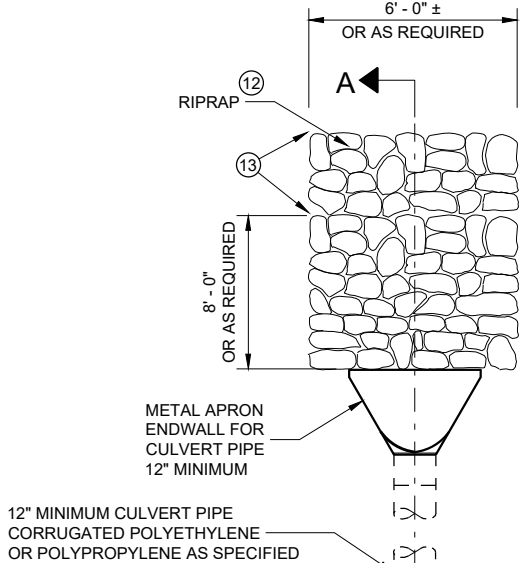
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

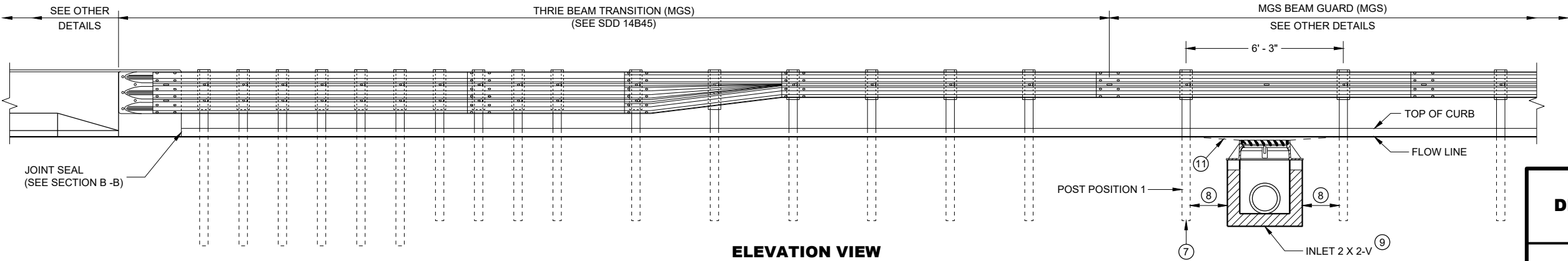
- 1 USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- 2 NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- 3 PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- 4 CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.
- 5 PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- 6 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- 7 PLACE DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- 8 CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.
- 9 SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.
- 10 START CURB AND GUTTER TRANSITION OR END SECTION.
- 11 DEPRESS FLOW LINE (SEE DETAIL)
- 12 MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- 13 LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.



INLET PLAN VIEW
(NOTE: RAIL NOT SHOWN FOR CLARITY)



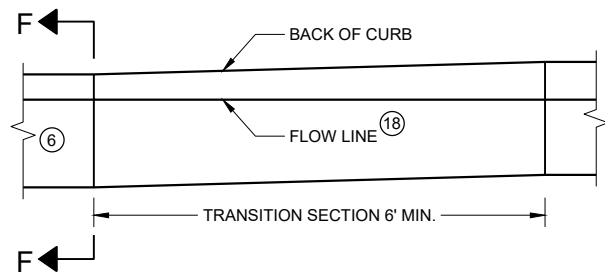
PLAN VIEW



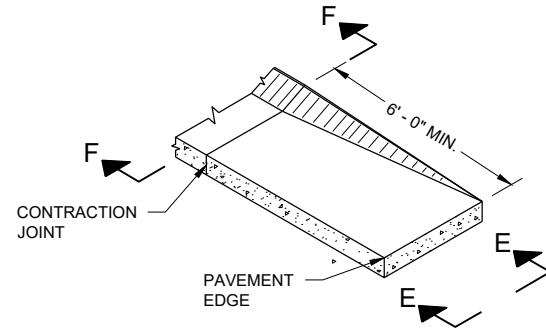
ELEVATION VIEW

CONCRETE SURFACE
DRAINS DROP INLET TYPE
AT STRUCTURES

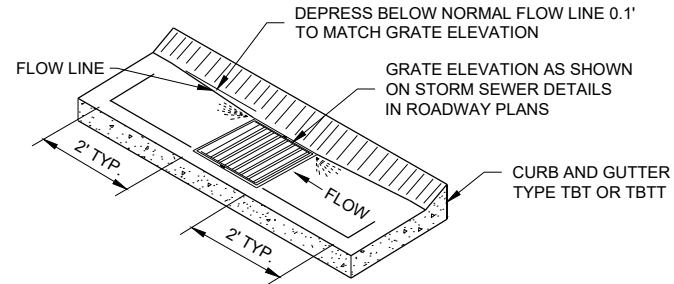
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



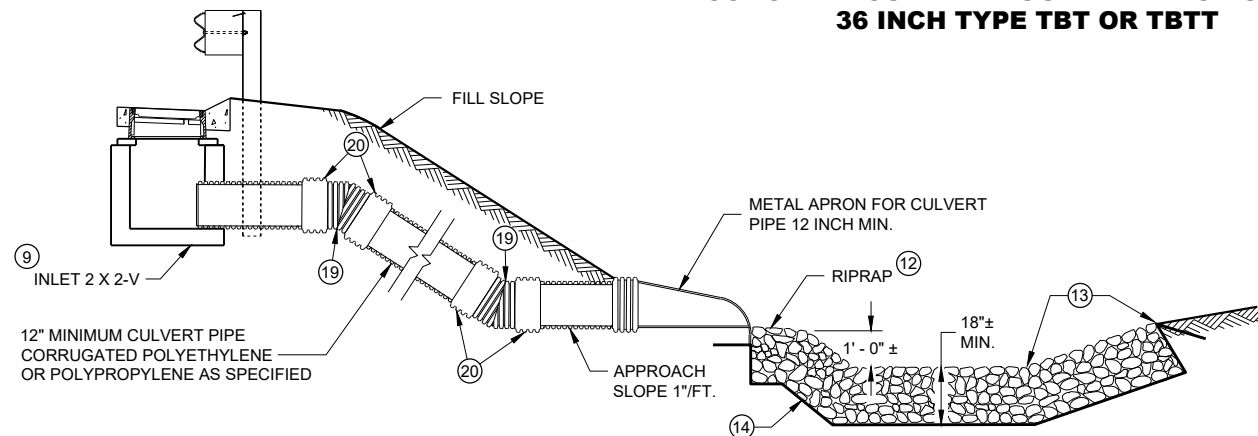
**CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBT**



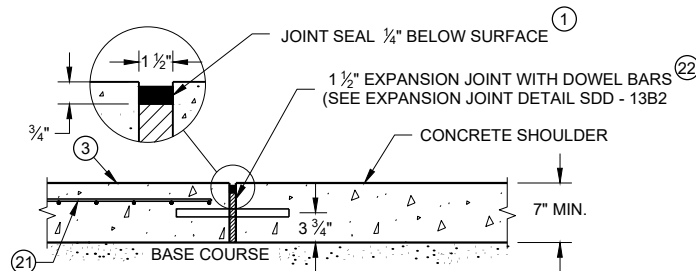
**CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBT**



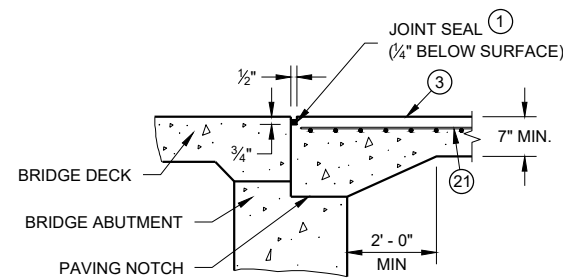
**CURB AND GUTTER FLOW LINE DEPRESSION
AT INLETS CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBT**



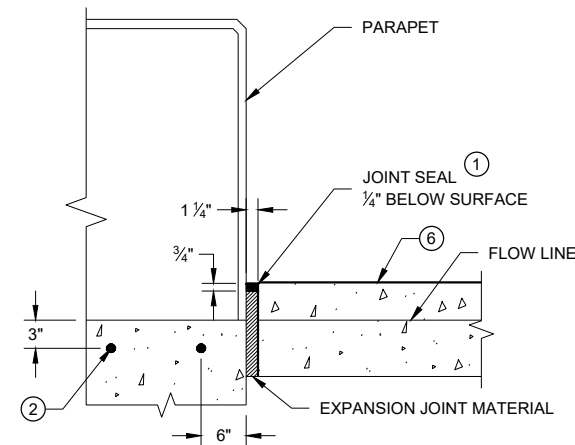
SECTION A - A



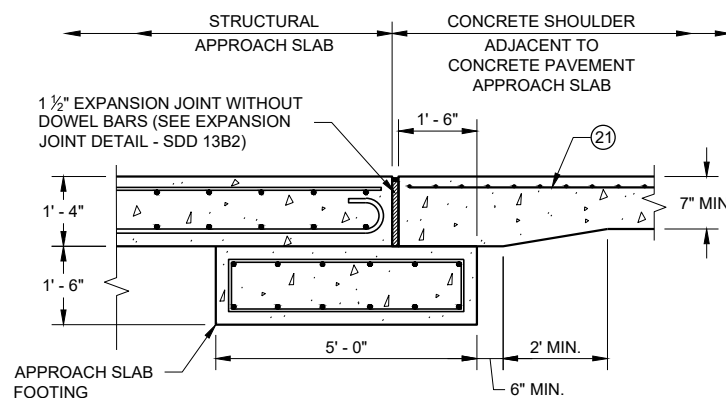
**SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH
WITH CONCRETE SHOULDERS**



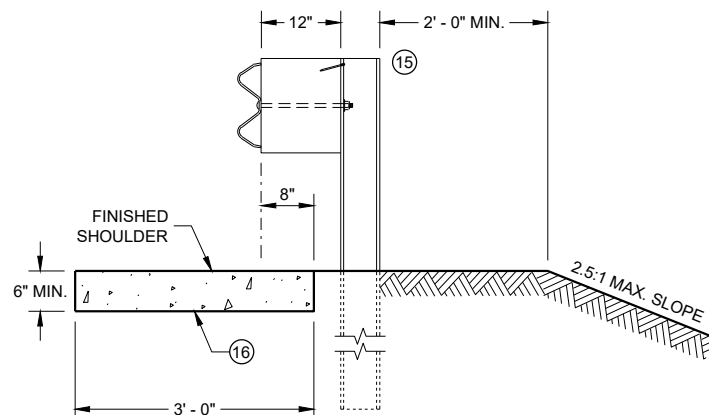
SECTION B-B



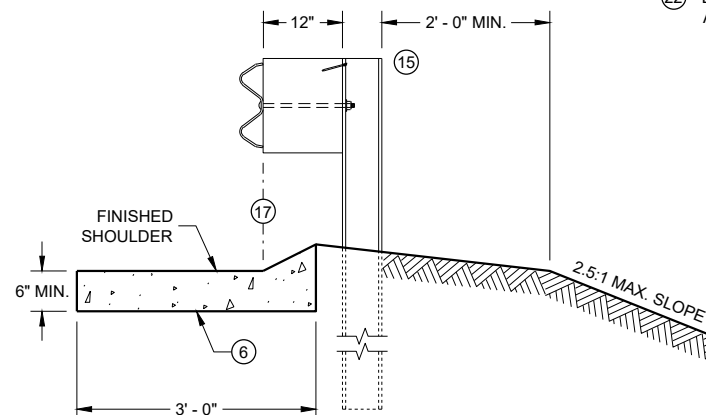
SECTION D - D



**SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL
APPROACH SLAB AND CONCRETE APPROACH SLAB**



SECTION E - E



SECTION F - F

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.

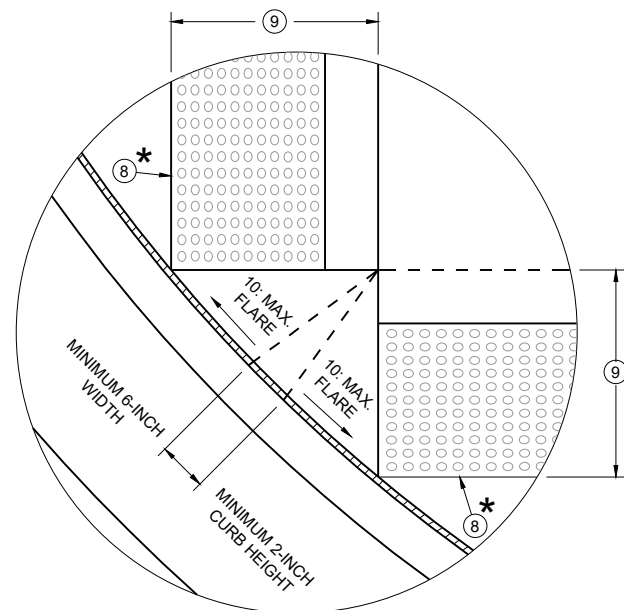
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBT. USE TYPE TBT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- ⑦ PLACE DRAINAGE STRUCTURE BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.
- ⑨ SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.
- ⑩ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑪ DEPRESS FLOW LINE (SEE DETAIL)
- ⑫ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑬ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- ⑭ GEOTEXTILE TYPE HR.
- ⑮ MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.
- ⑯ MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBT CURB. SEE NOTE 6 FOR TIE BAR SPACING.
- ⑰ ALIGN FACE OF POST BLOCK WITH FLOW LINE.
- ⑱ MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.
- ⑲ MANUFACTURER SUPPLIED BEND.
- ⑳ MANUFACTURER SUPPLIED EXTERNAL MECHANICAL COUPLING OR A MANUFACTURER RECOMMENDED COUPLING WITH A MASTIC IMPREGNATED GEOTEXTILE WRAP AND MECHANICAL FASTENING BANDS.
- ㉑ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ㉒ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.

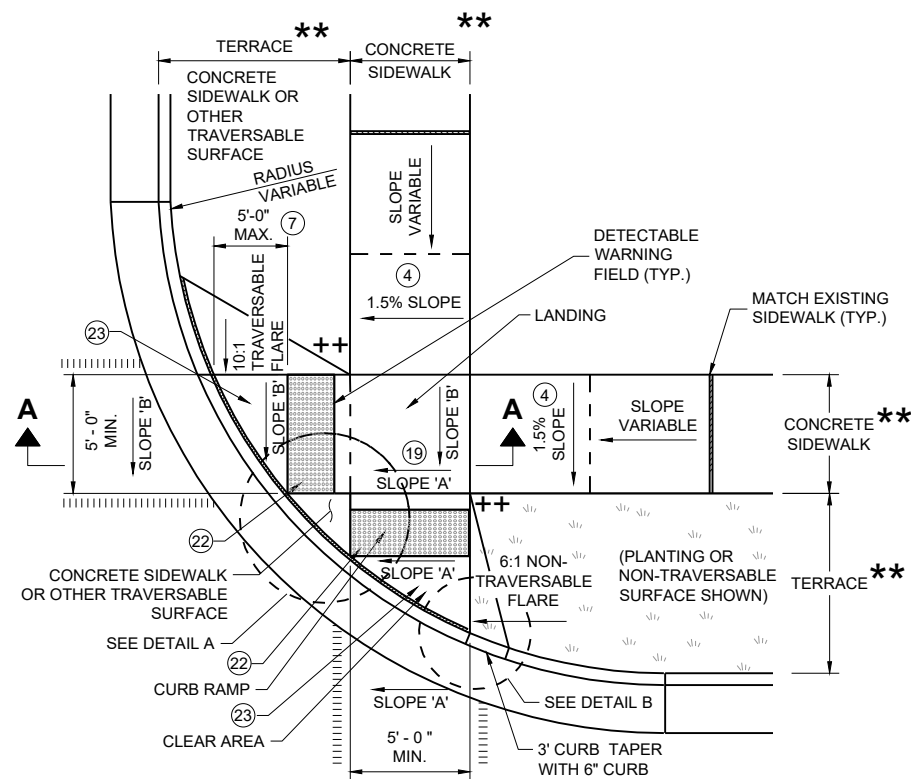
CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

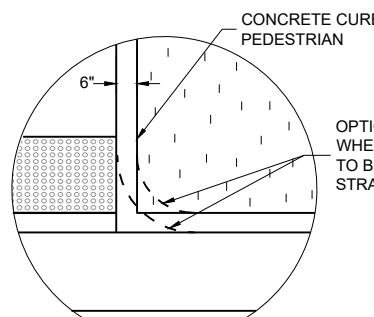
APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 59
FHWA



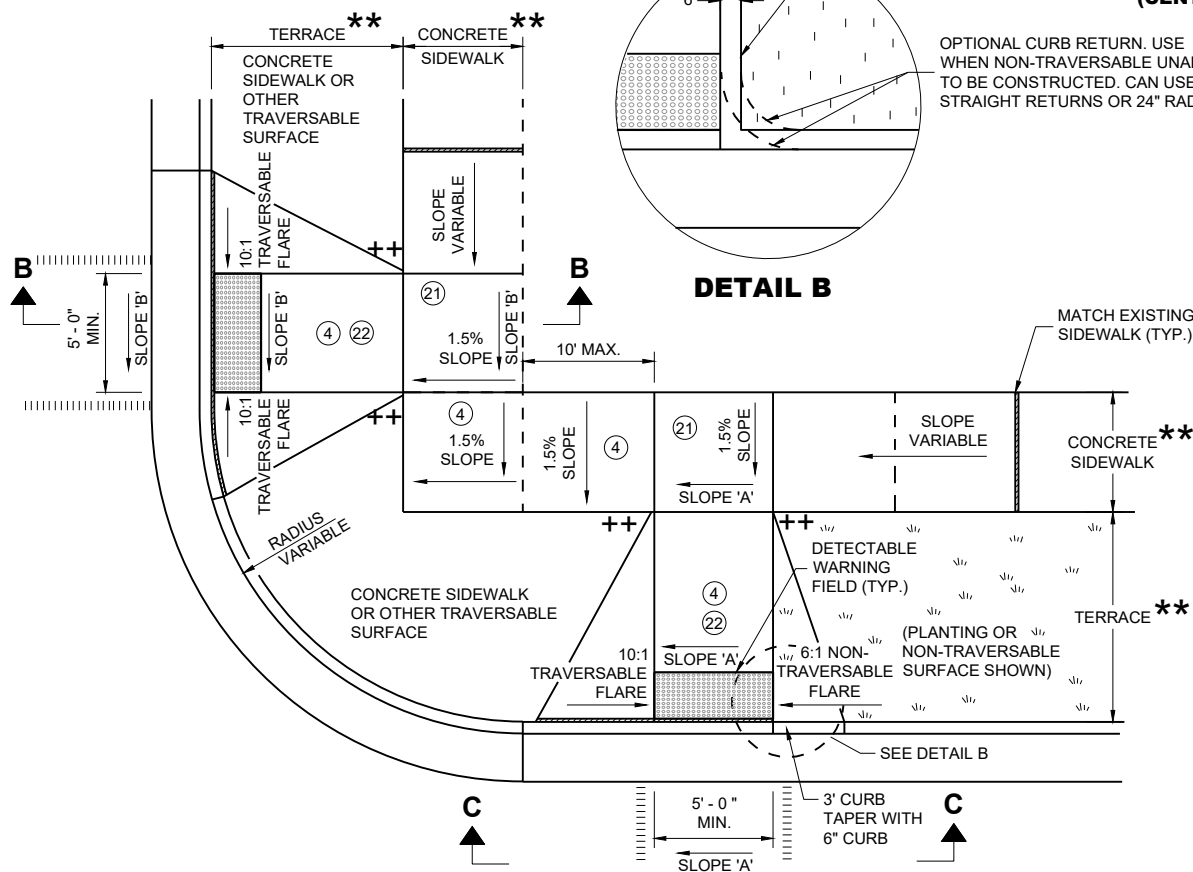
DETAIL A



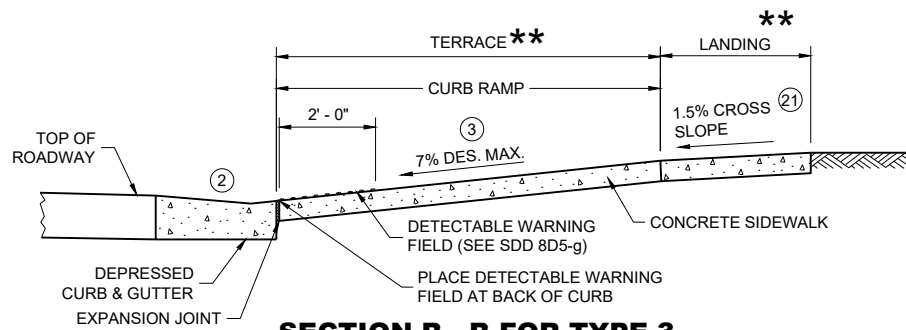
**PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)**



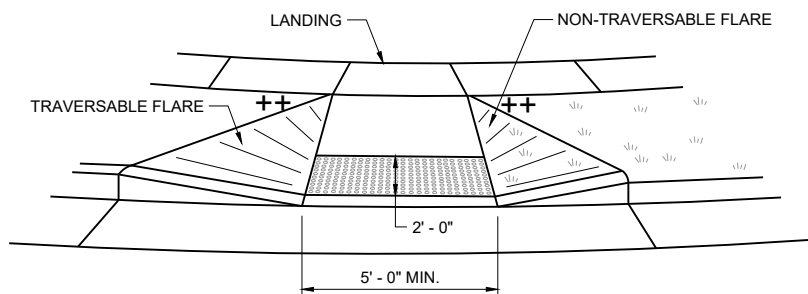
DETAIL B



**PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)**



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

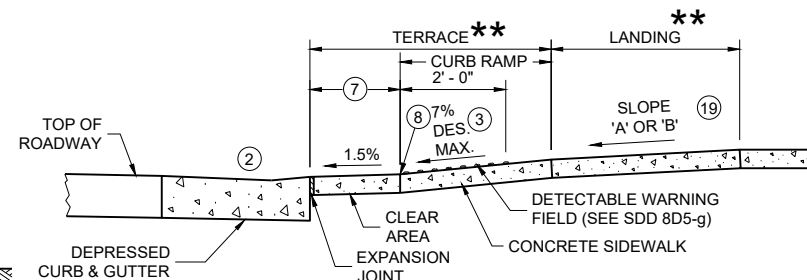
GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% DESIGN MAXIMUM SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% DESIGN MAXIMUM SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.
- ⑪ A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑫ WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.
- ⑬ PROVIDE A LANDING WITH A SLOPE PARALLEL TO ROADWAY THAT MATCHES SLOPE AT THE BOTTOM OF THE ADJACENT RAMP. SLOPE PERPENDICULAR TO ROADWAY SHALL BE 2.1% MAXIMUM. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑭ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- ⑮ THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



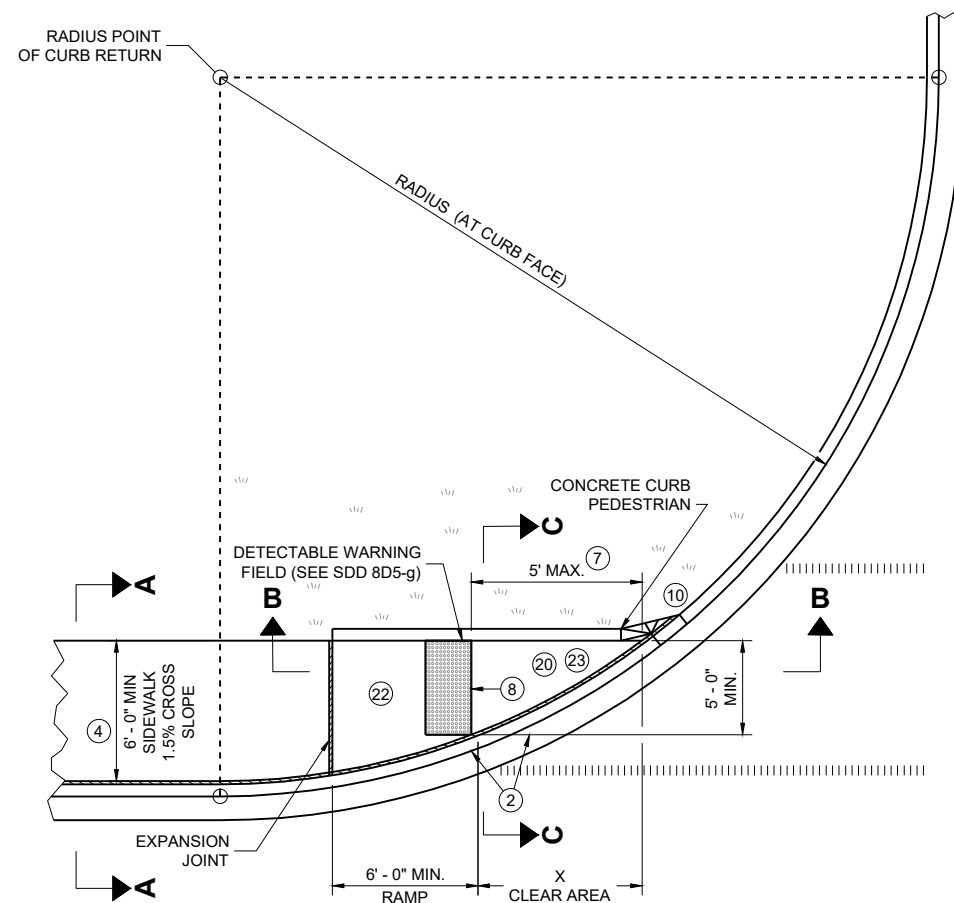
SECTION A - A FOR TYPE 2

LEGEND

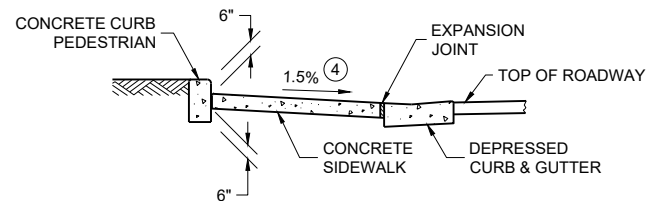
- 1/2" EXPANSION JOINT SIDEWALK
- - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

**CURB RAMPS
TYPE 2 AND 3**

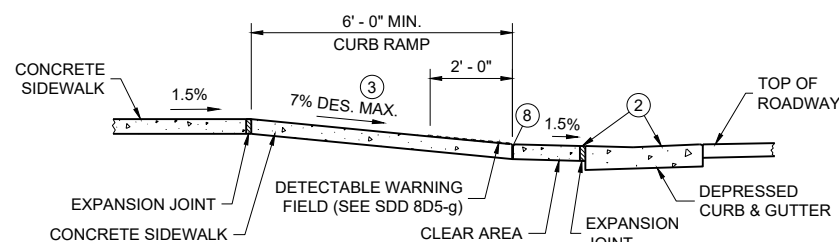
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**PLAN VIEW
CURB RAMP TYPE 4A**



SECTION C - C FOR TYPE 4A



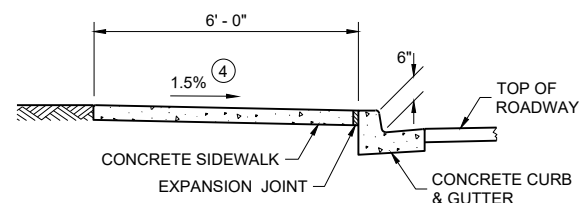
**SECTION B - B FOR
TYPE 4A AND TYPE 4A1**

LEGEND

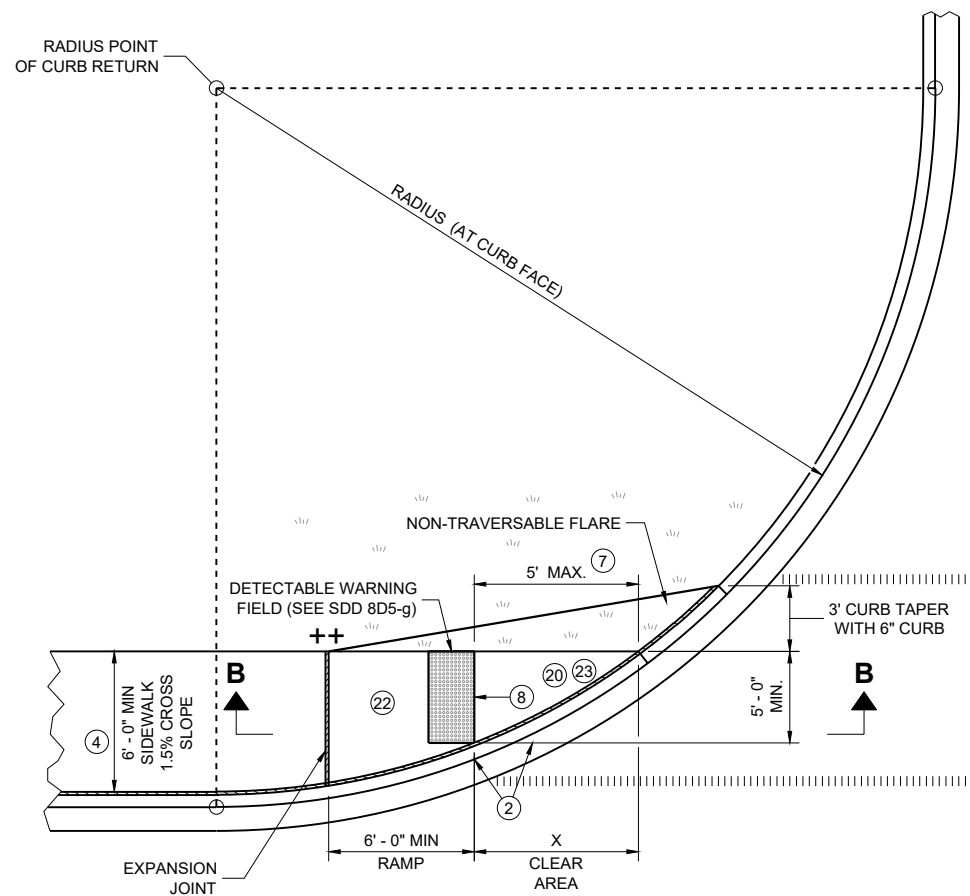
- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)
- CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"

INTERMEDIATE RADII CAN BE INTERPOLATED



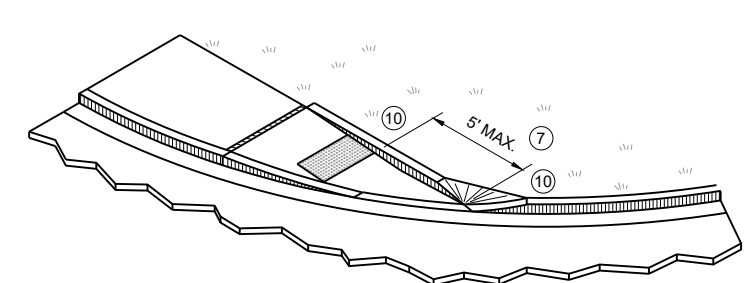
SECTION A - A FOR TYPE 4A



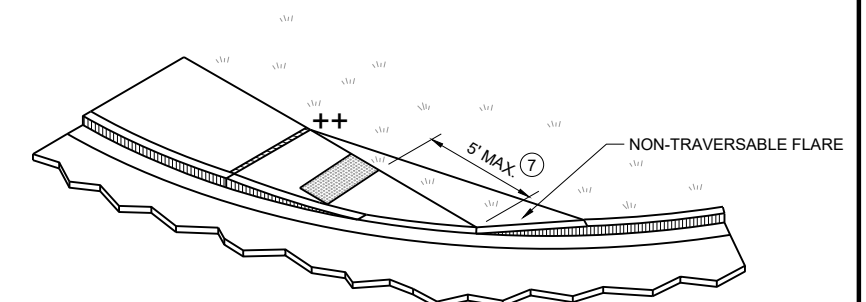
**PLAN VIEW
CURB RAMP TYPE 4A1**

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.
- 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.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

**CURB RAMPS
TYPE 4A AND 4A1**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



INTERMEDIATE RADII CAN BE INTERPOLATED
 DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
 DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



LEGEND

- | | |
|---|--|
|  | 1/2" EXPANSION JOINT SIDEWALK |
|  | CONTRACTION JOINT SIDEWALK |
|  | PAVEMENT MARKING
CROSSWALK (WHITE) |
|  | MAXIMUM 2.1% SLOPE IN ALL
DIRECTIONS IF FRONT OF GRADE
BREAK |
|  | CONSTRUCT 6" WEDGE TO AVOID
CONCRETE BREAKAGE |

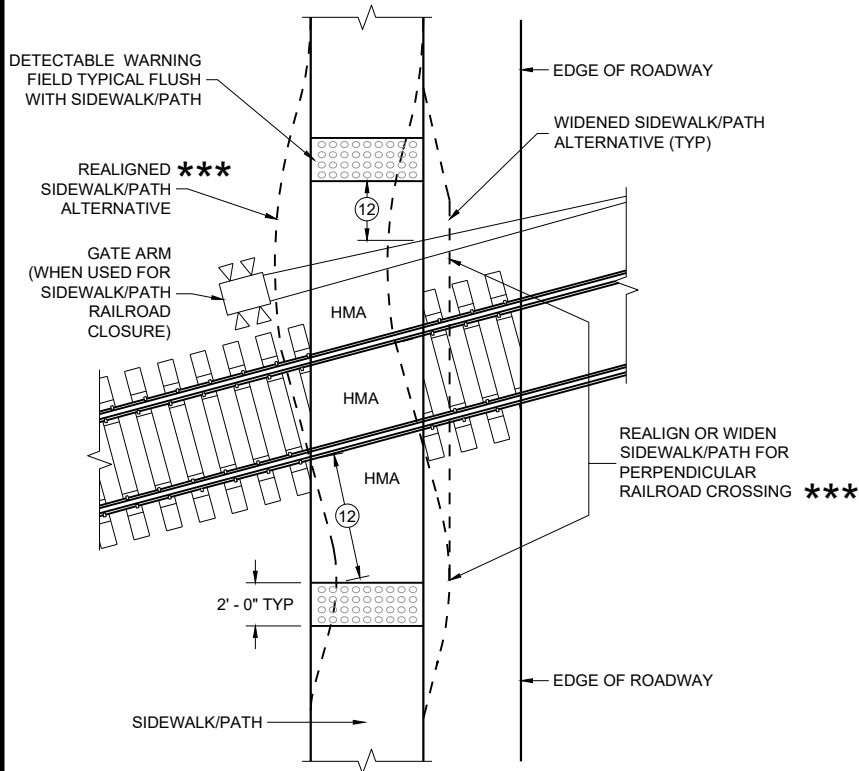
GENERAL NOTES

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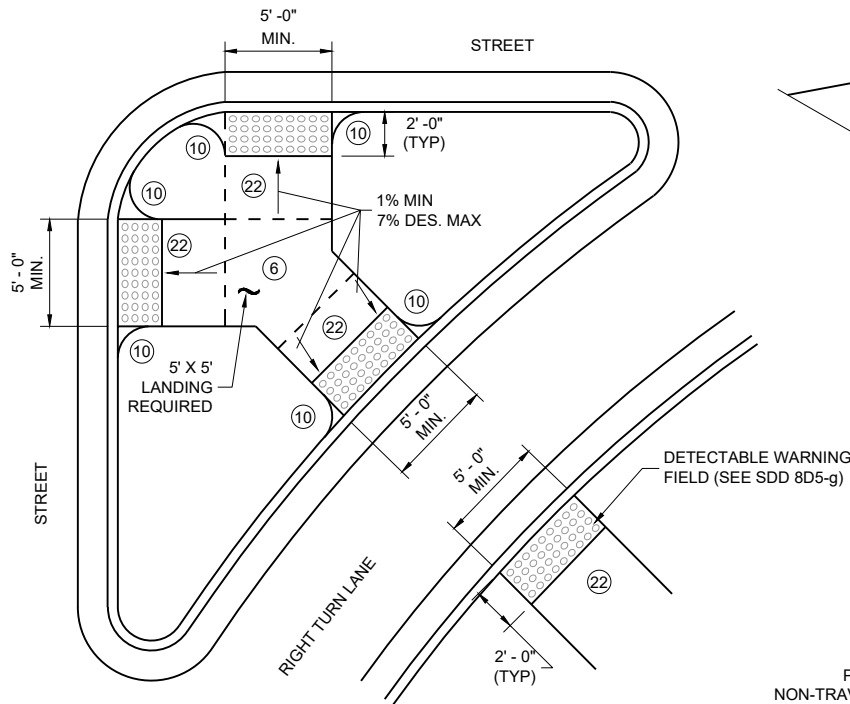
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- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑫ MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- ⑫ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- ⑫ THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

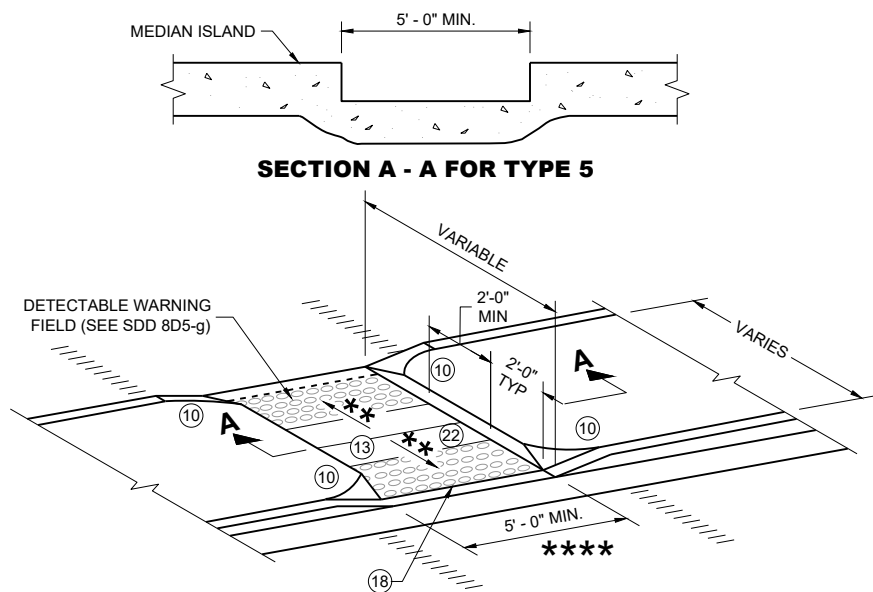


CURB RAMP TYPE 8
DETECTABLE WARNINGS
FOR SIDEWALKS OR SHARED USE PATHS
AT RAILROAD CROSSINGS

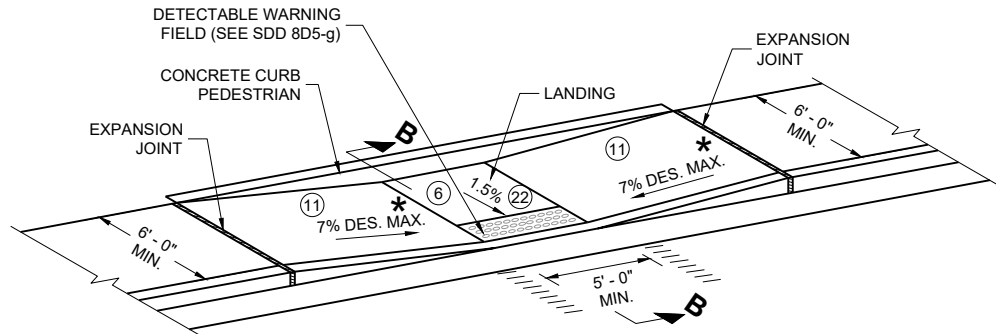


CURB RAMP TYPE 6
DETECTABLE WARNING AT ISLANDS

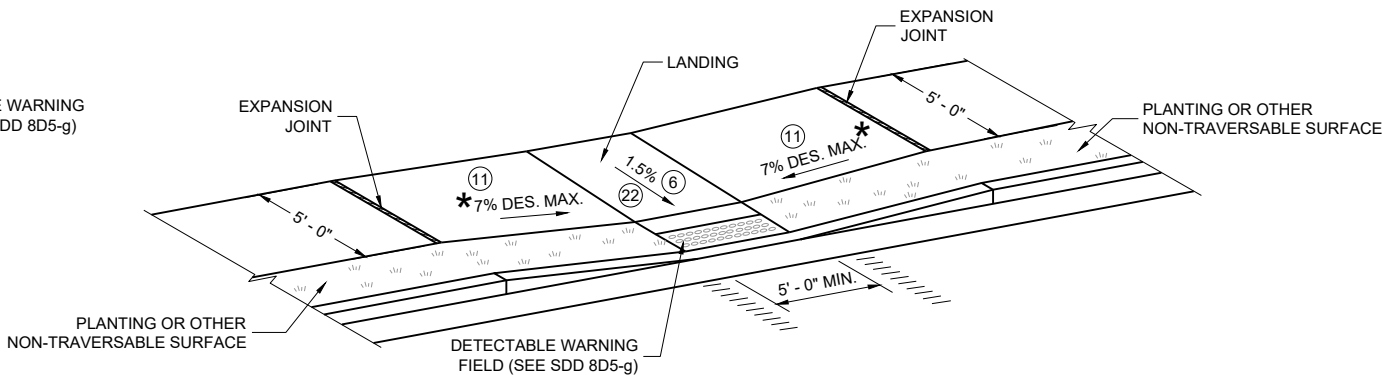
REFER TO GENERAL NOTES (2) AND (3)
FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 5
MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING



CURB RAMP TYPE 7A
FOR INTERSECTIONS AND
MID BLOCK CROSSINGS



CURB RAMP TYPE 7B
FOR INTERSECTIONS AND
MID BLOCK CROSSINGS

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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.

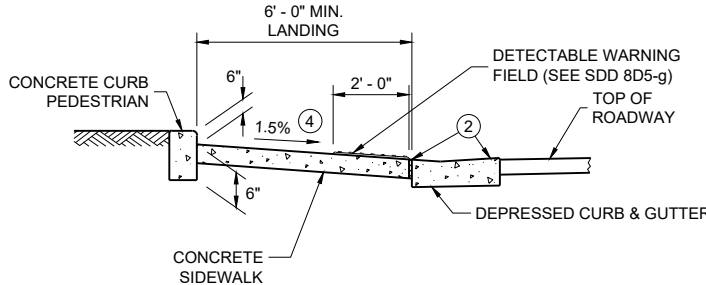
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- (2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- (3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- (10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- (11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- (12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.
- (13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.
- (17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- (18) WHEN THE DISTANCE BETWEEN THE BACK OF CURBS IS LESS THAN 6 FEET BUT THE FACE OF CURB TO FACE OF CURB DISTANCE IS 6 FEET OR GREATER THEN THE DETECTABLE WARNING FIELDS MAY BE MOVED SO THAT THE EDGE OF THE WARNING FIELD IS PLACED AT THE GUTTER FLOWLINE. MAINTAIN A MINIMUM OF TWO FEET BETWEEN DETECTABLE WARNING FIELD PANELS.
- (22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- MAXIMUM 8.3%
- 1% MINIMUM (PROVIDE DRAINAGE)
- DETAILS TO BE DETERMINED BY ENGINEER
- FOR SHARED USE PATHS, WIDTH MUST BE AS WIDE AS THE CROSSWALK

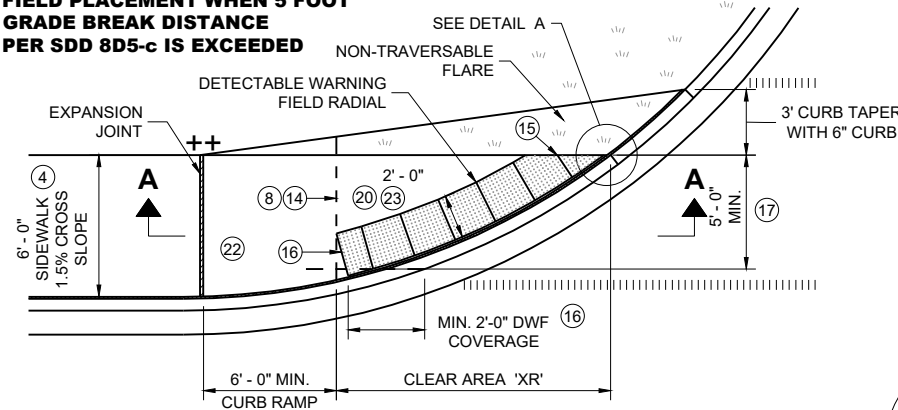


SECTION B - B FOR TYPE 7A

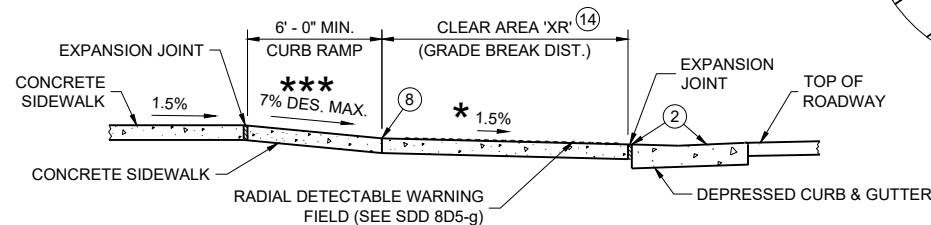
CURB RAMPS
TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

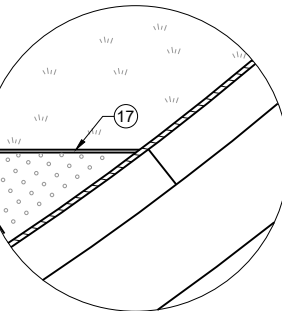
**RADIAL DETECTABLE WARNING
FIELD PLACEMENT WHEN 5 FOOT
GRADE BREAK DISTANCE
PER SDD 8D5-c IS EXCEEDED**



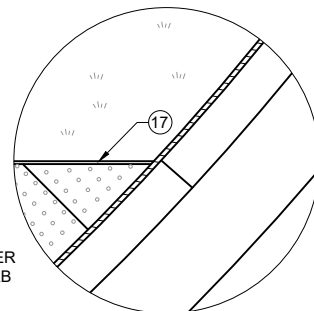
PLAN VIEW
CURB RAMP TYPE 4A1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



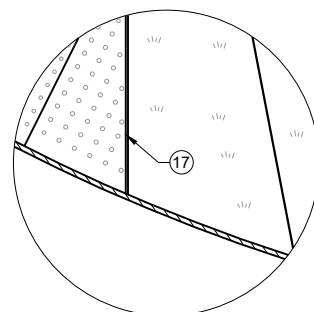
SECTION A - A FOR TYPE 4A1



DETAIL A

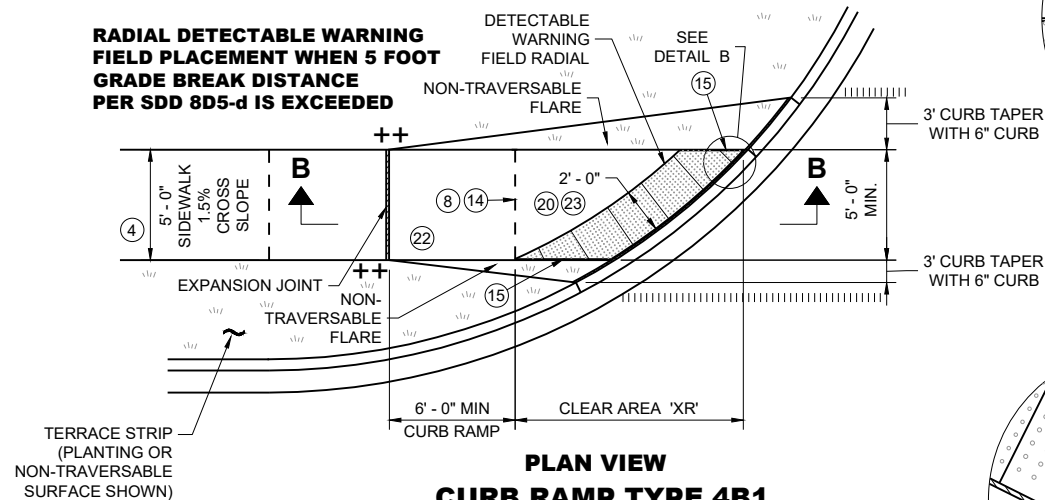


DETAIL B

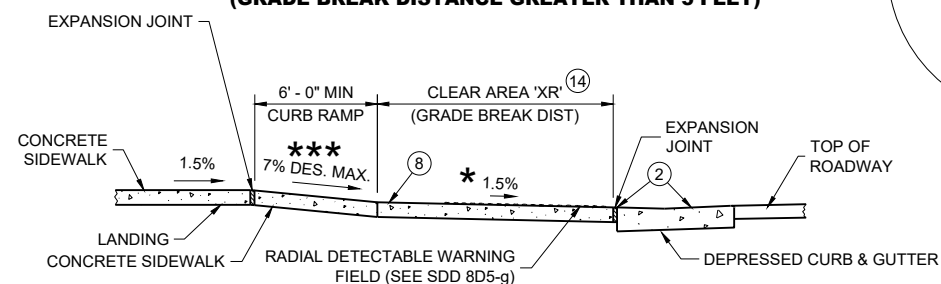


DETAIL C

**RADIAL DETECTABLE WARNING
FIELD PLACEMENT WHEN 5 FOOT
GRADE BREAK DISTANCE
PER SDD 8D5-d IS EXCEEDED**



PLAN VIEW
CURB RAMP TYPE 4B1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



SECTION B - B FOR TYPE 4B1

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

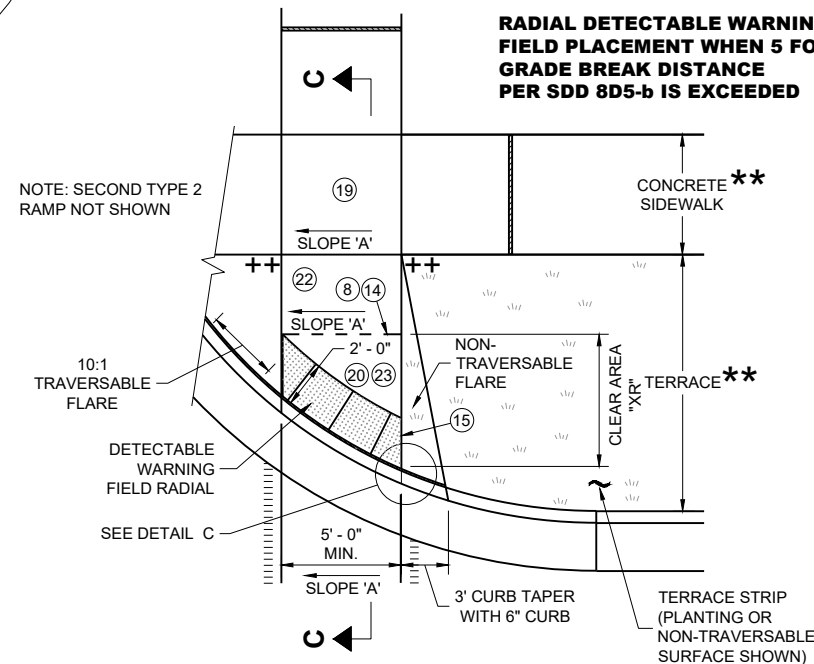
REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

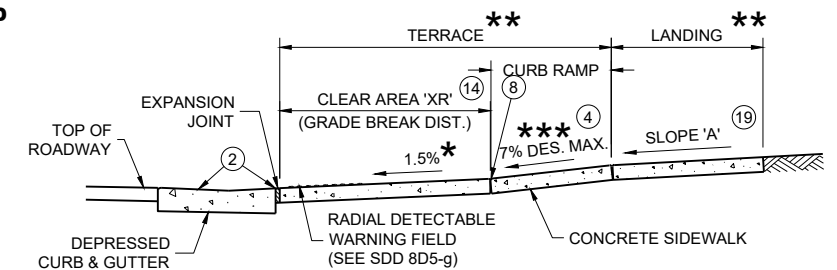
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

- ② GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑭ CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- ⑮ FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN $\frac{1}{8}$ " DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- ⑮ USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- ⑰ A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑰ WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.
- ⑳ MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- ㉒ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- ㉓ THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED



PLAN VIEW
CURB RAMP TYPE 2
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)



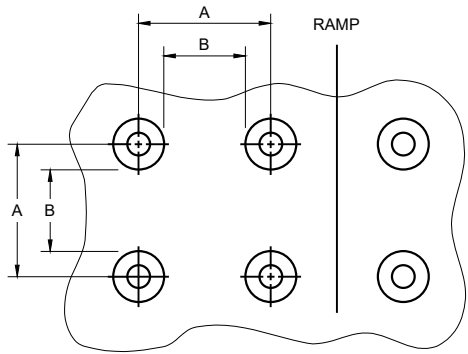
SECTION C - C FOR TYPE 2

CURB RAMPS
RADIAL DETECTABLE WARNING

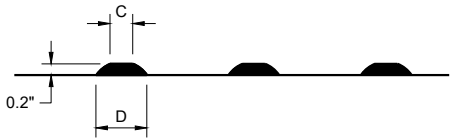
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

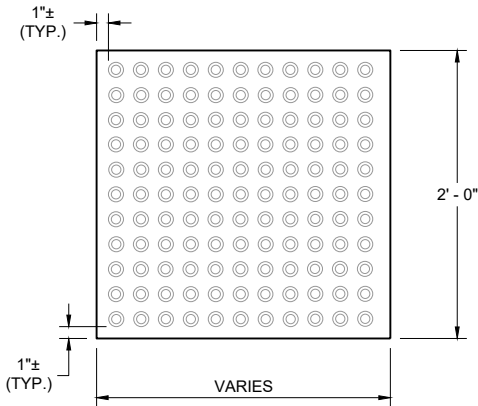


PLAN VIEW

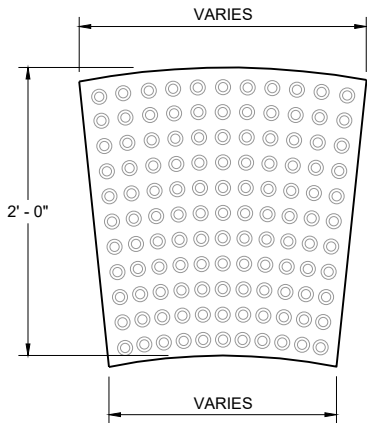


ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

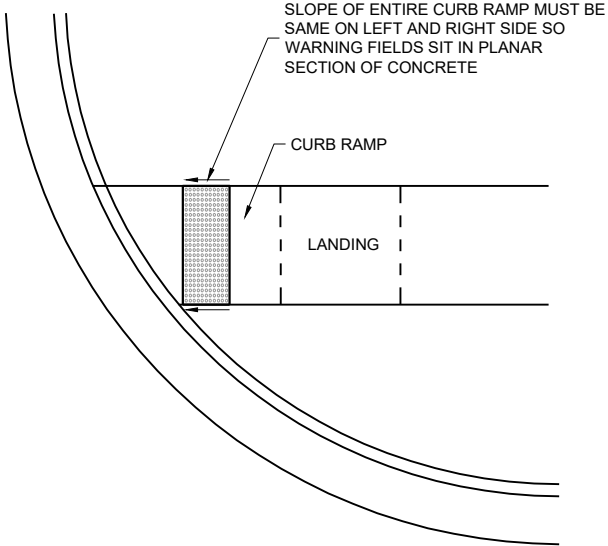


RECTANGULAR
PLATES

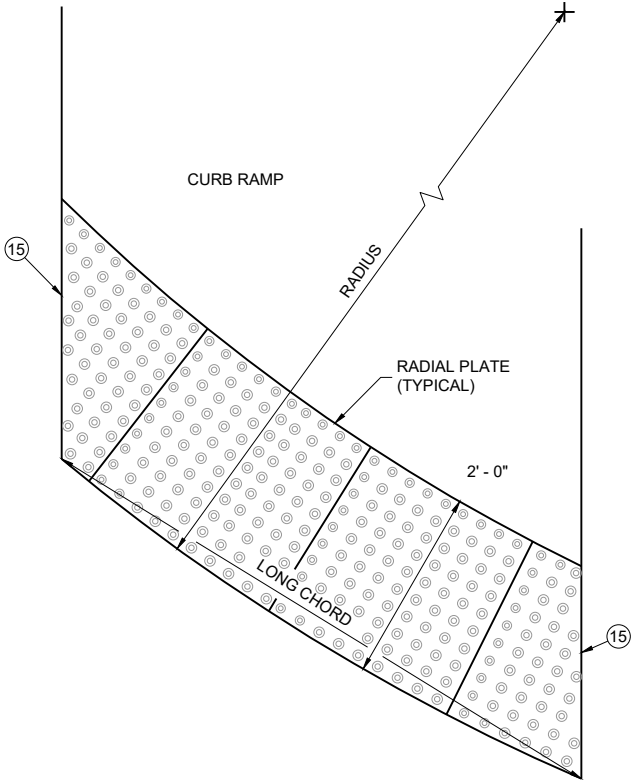


RADIAL
PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



DETECTABLE WARNING FIELD
PLANAR INSTALLATION



PLAN VIEW
RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

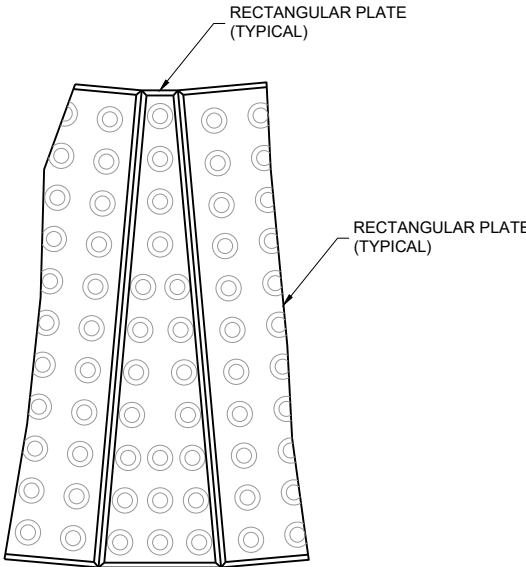
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

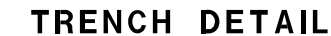
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 /S/ Rodney Taylor
DATE <position>

FHWA



- 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.

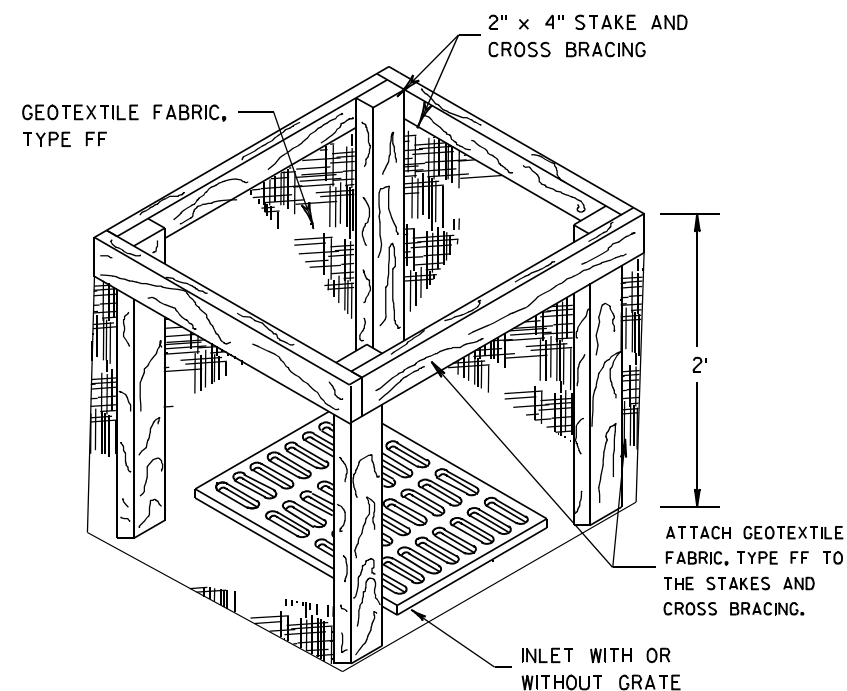
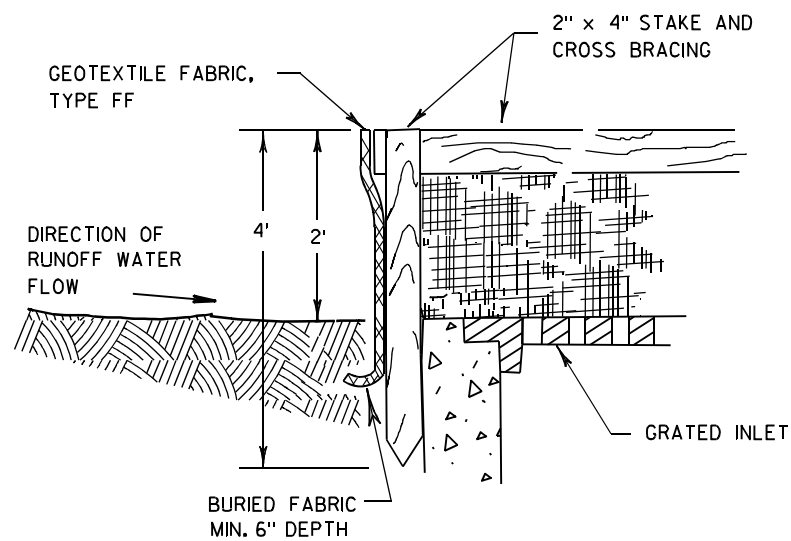


SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05
DATE /S/ Beth Connolly
CHIEF ROADWAY DEVELOPMENT **66** ENGINEER

FHWA



INLET PROTECTION, TYPE A

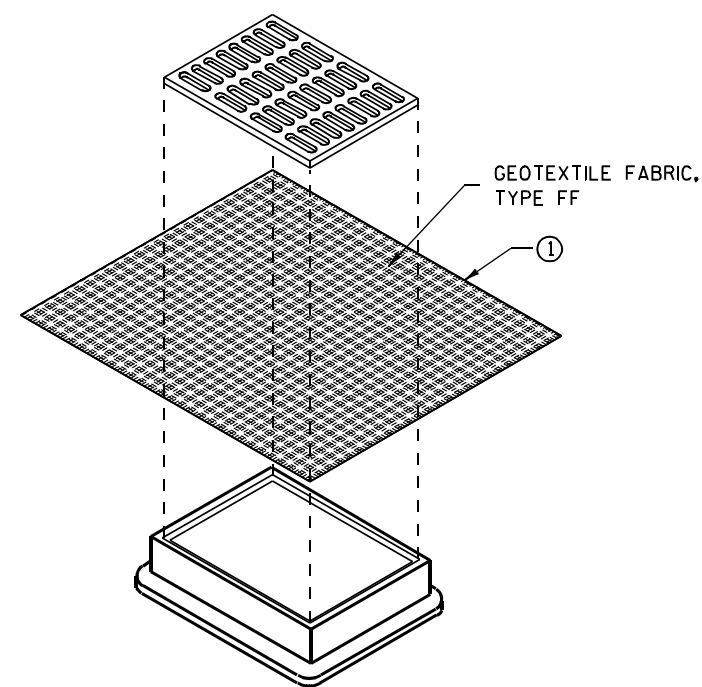
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

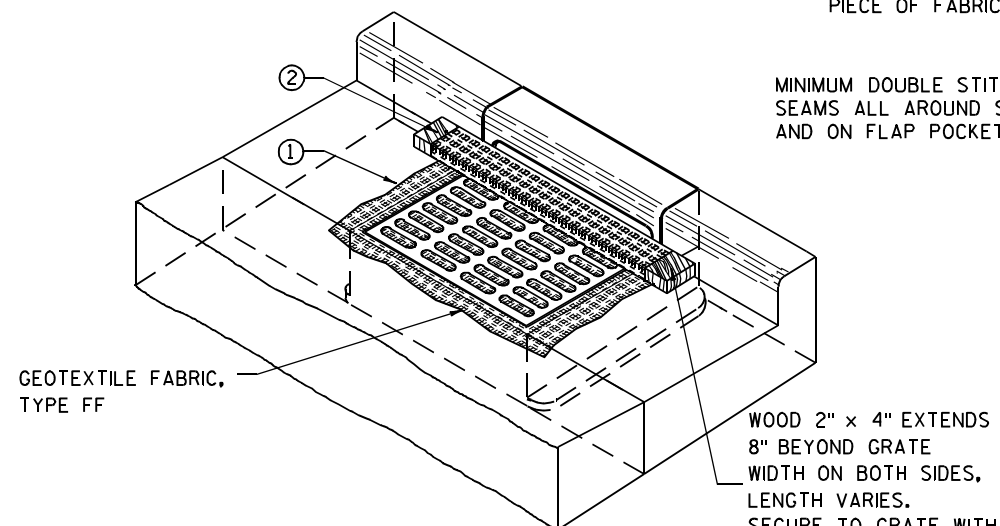
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

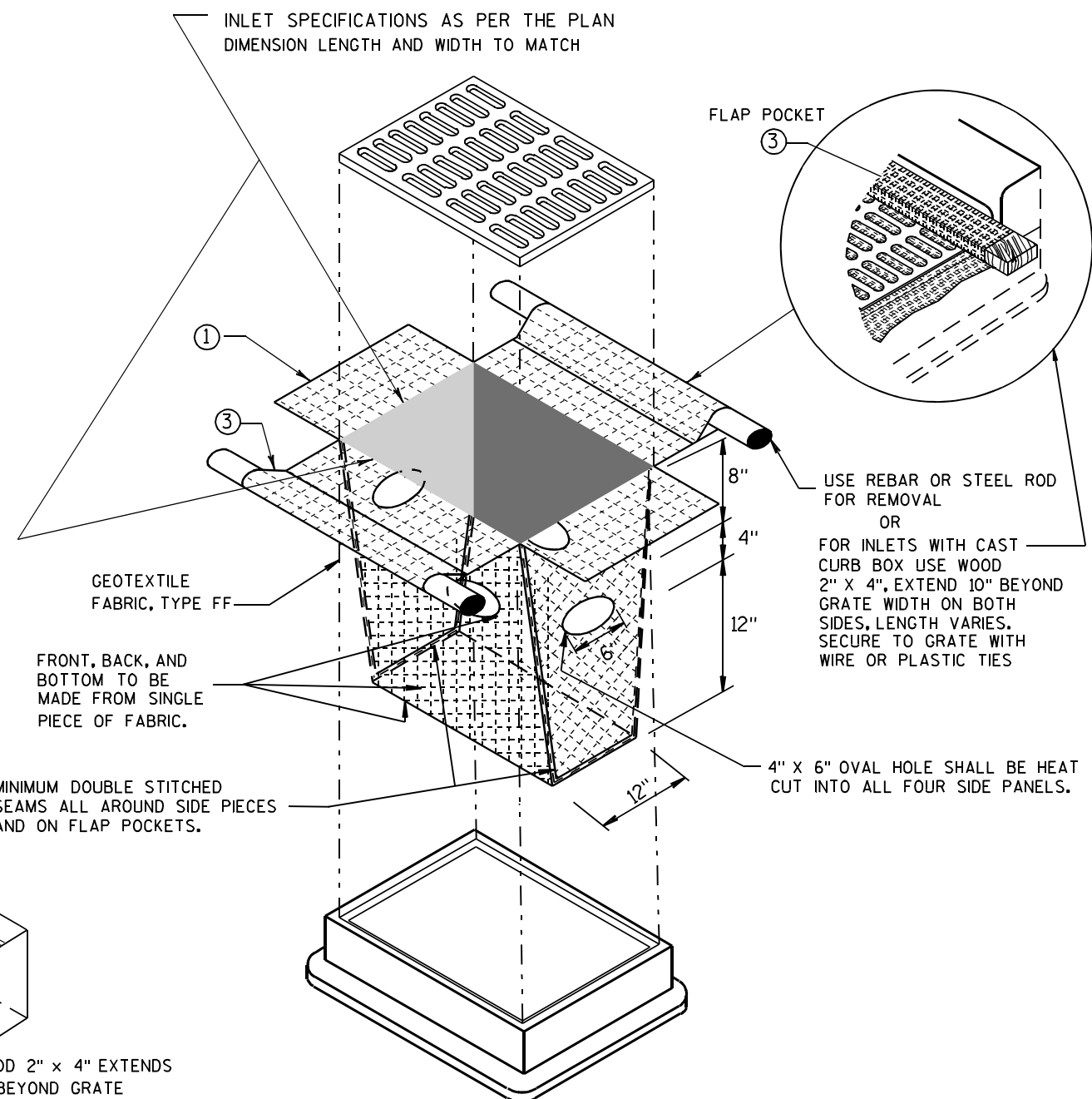
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLower THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



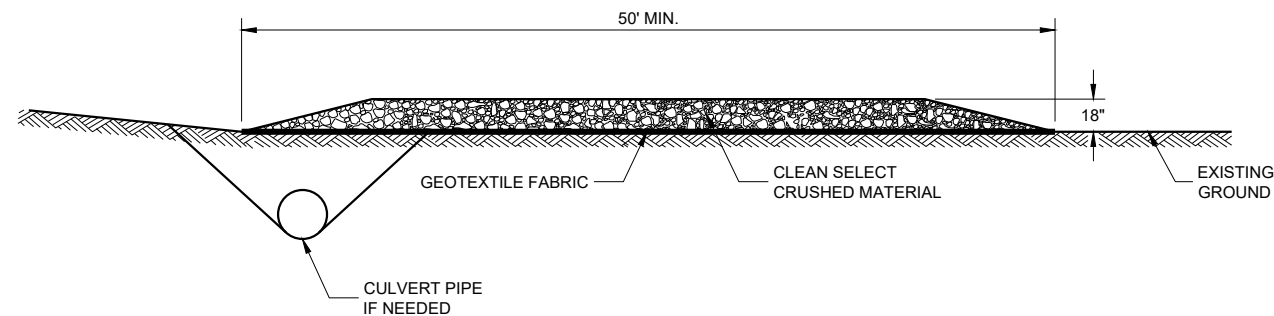
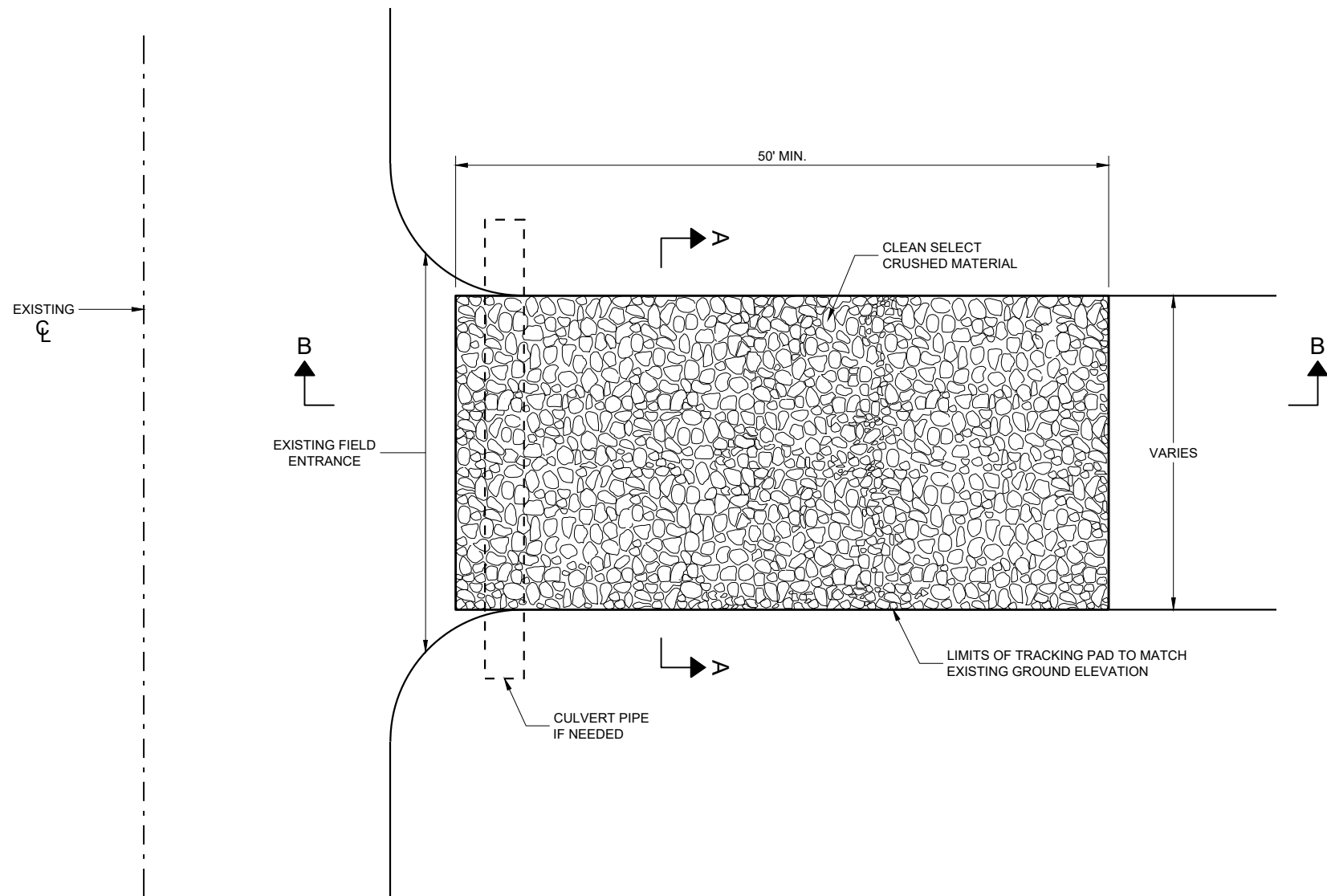
INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Connolly
DATE 67
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



SECTION B - B

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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

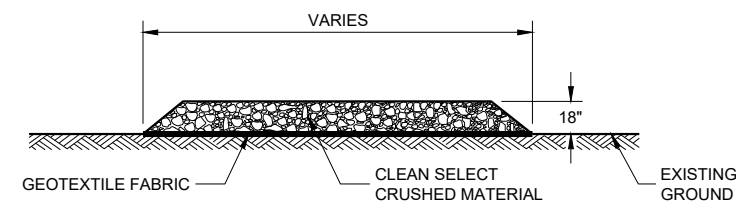
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A - A

TRACKING PAD

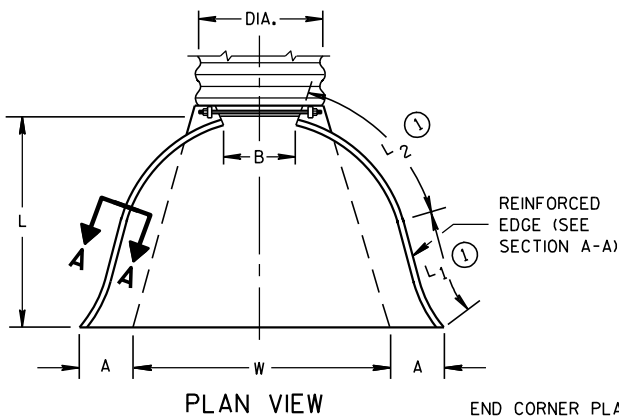
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

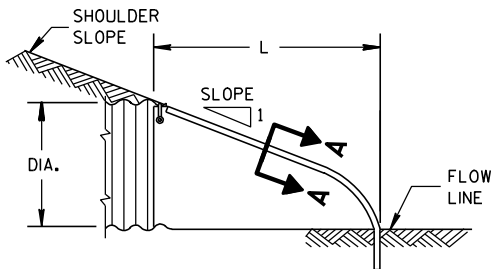
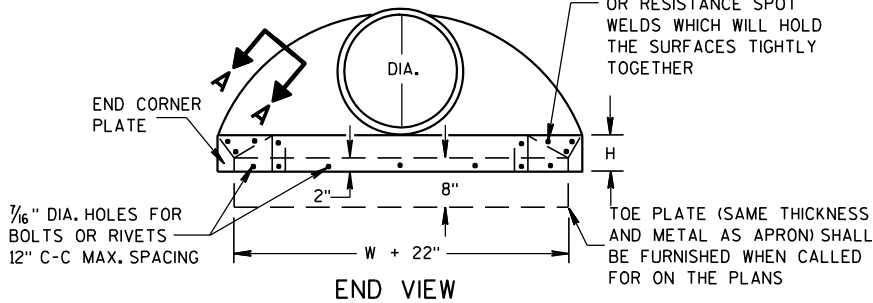
METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE		BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1	1 Pc.
18	.064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

* EXCEPT CENTER PANEL
SEE GENERAL NOTES



REINFORCED
EDGE (SEE
SECTION A-A)

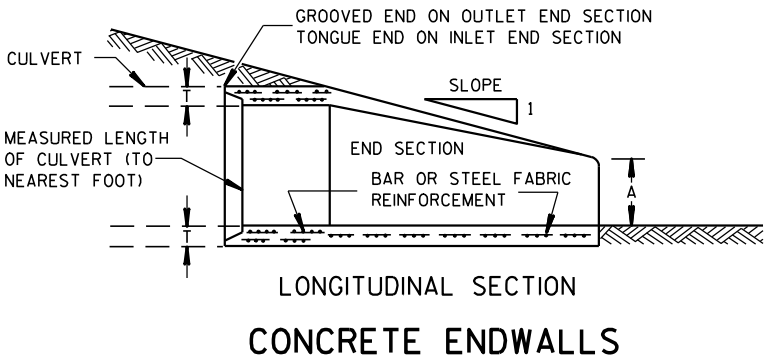
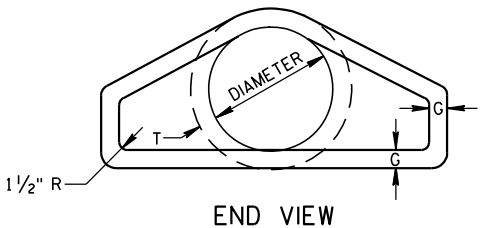
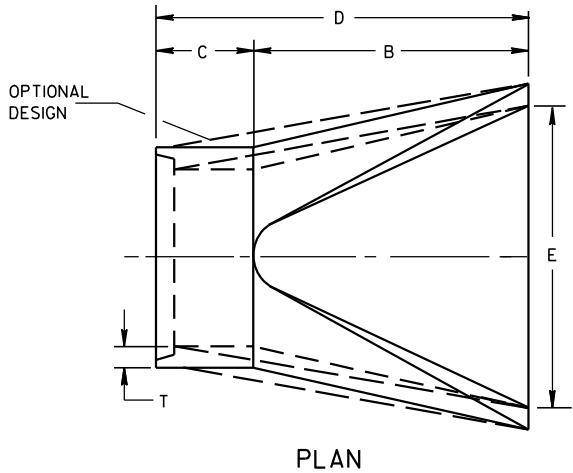
END CORNER PLATES MAY
BE FASTENED TO APRON
PROPER BY BOLTS, RIVETS,
OR RESISTANCE SPOT
WELDS WHICH WILL HOLD
THE SURFACES TIGHTLY
TOGETHER



SIDE ELEVATION
METAL ENDWALLS

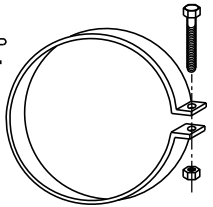
REINFORCED CONCRETE APRON ENDWALLS												
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE				
	T	A	B	C	D	E	G					
12	2	4	24	48 7/8	72 7/8	24	2	3 to 1				
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1				
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1				
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1				
24	3	9 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 1/2 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

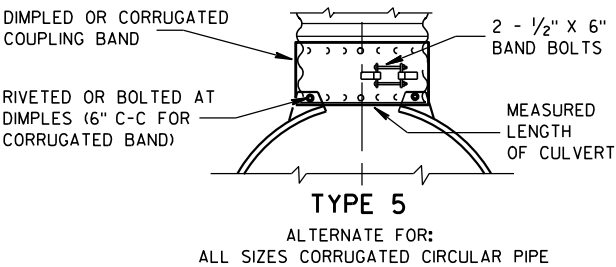
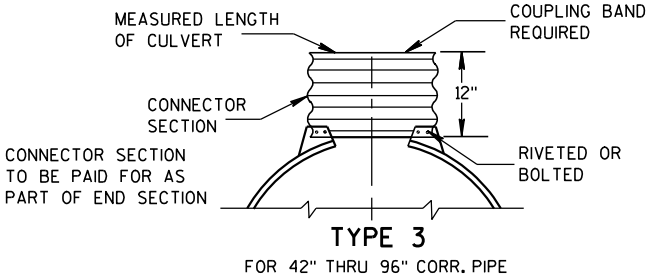
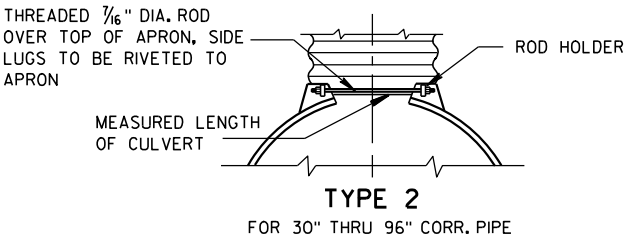
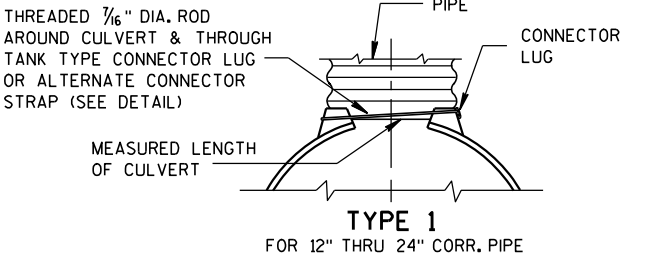


LONGITUDINAL SECTION
CONCRETE ENDWALLS

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



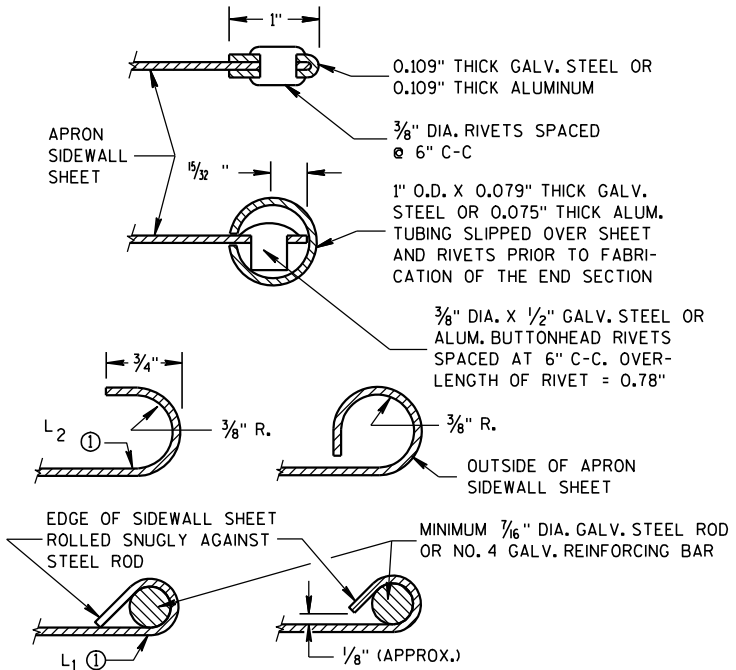
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.
DIMPLED BAND MAY BE USED WITH HELICALLY
CORRUGATED PIPE.

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.

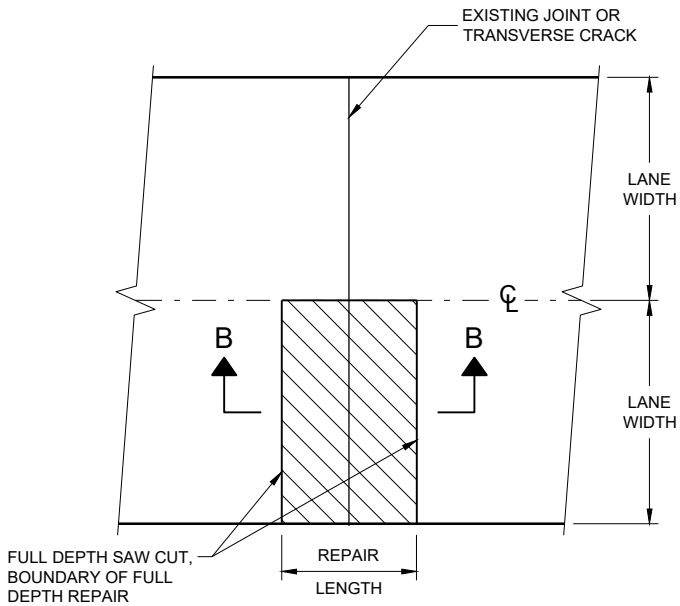
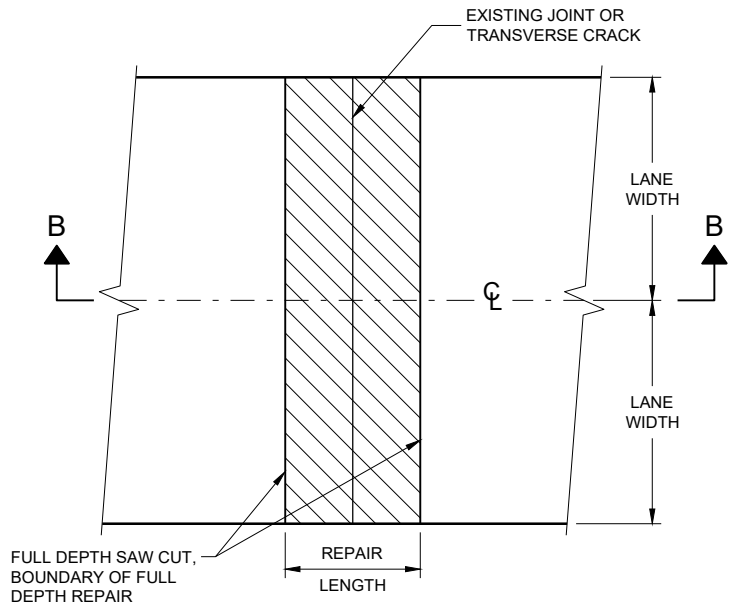
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL
THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH
OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

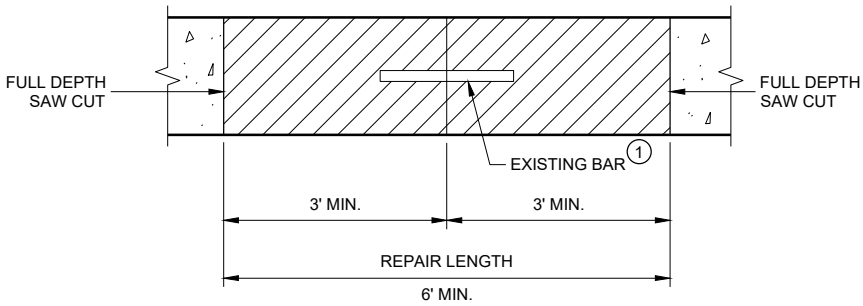
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT
TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT
TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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	/S/ Rory L. Rhinehart	NEER
DATE		CHIEF ROADWAY DEVELOP 69	
FHWA			



FULL DEPTH CONCRETE PAVEMENT REMOVAL



CONCRETE REMOVAL

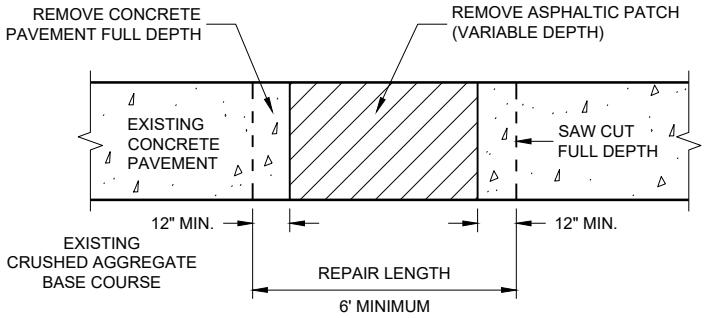
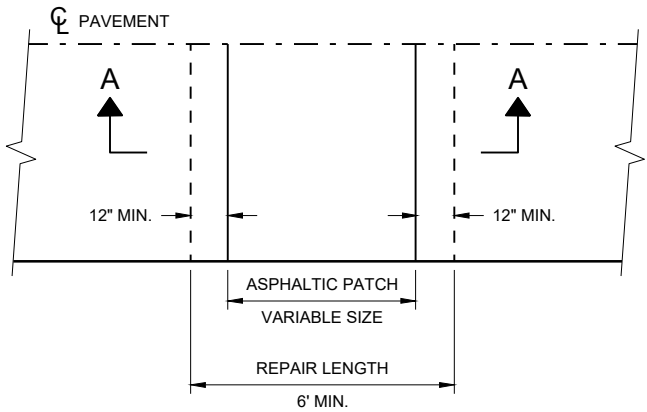
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

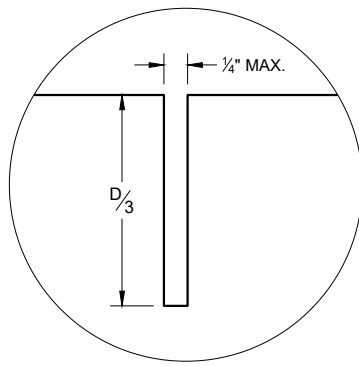
① DOWEL BARS MAY NOT BE PRESENT.



HMA PATCH REMOVAL

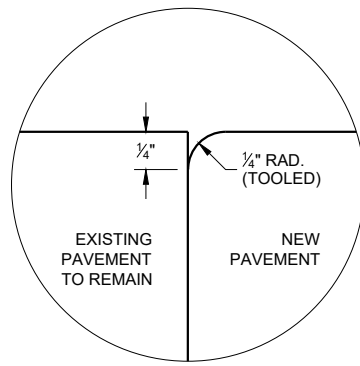
CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

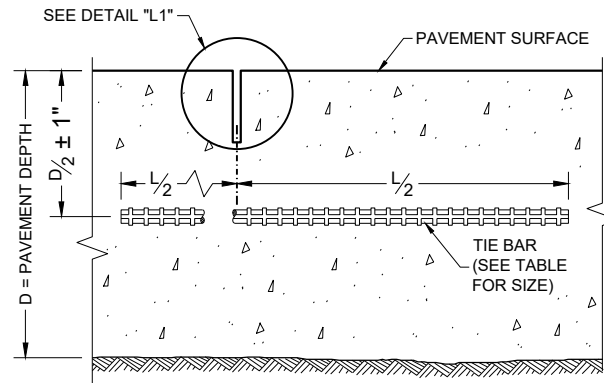


C1

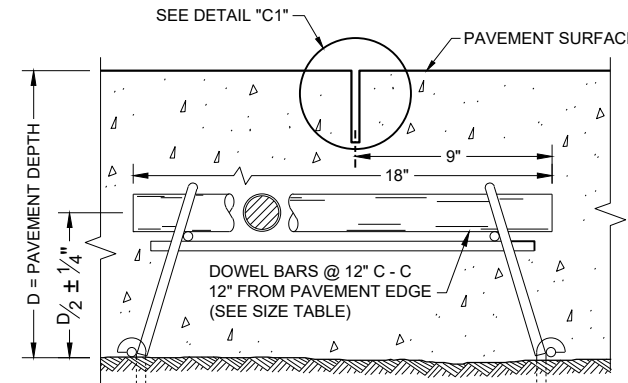
TRANSVERSE JOINTS



C2



SECTION C - C
SAWED LONGITUDINAL JOINT



SECTION F - F
DOWELED CONTRACTION JOINT

GENERAL NOTES

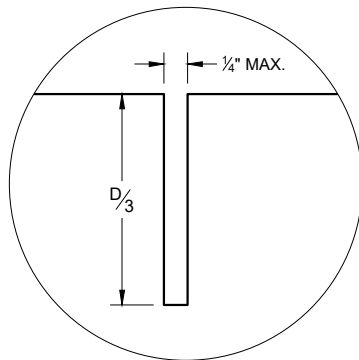
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

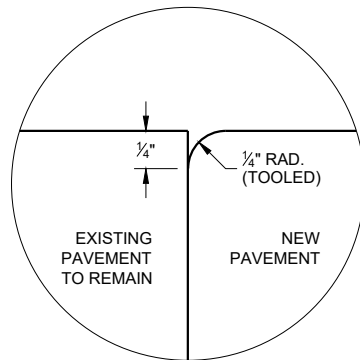
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

- ① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

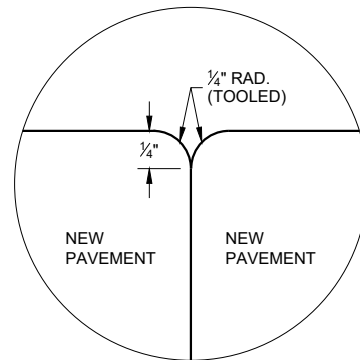


L1

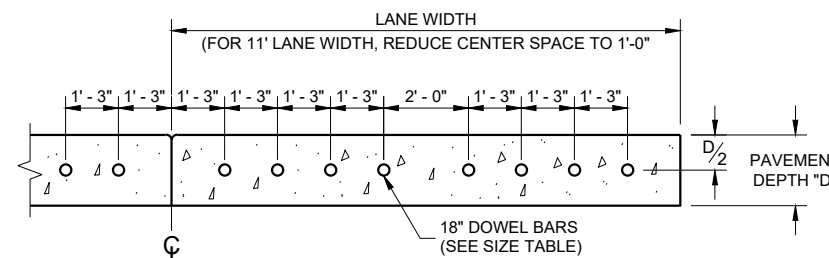


L2

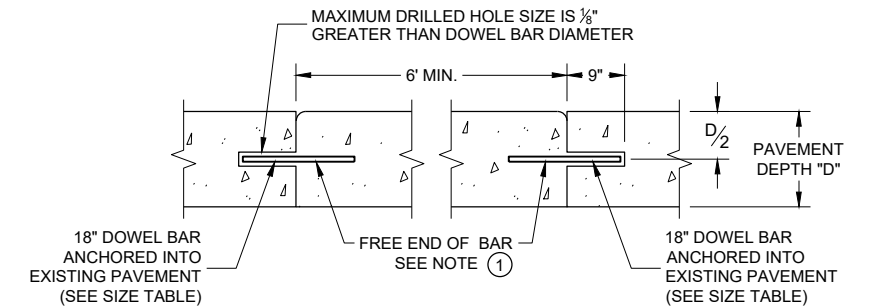
LONGITUDINAL JOINTS



L3



SECTION E - E
DRILLED DOWEL BAR CONSTRUCTION JOINT



SECTION D - D

TIE BAR TABLE

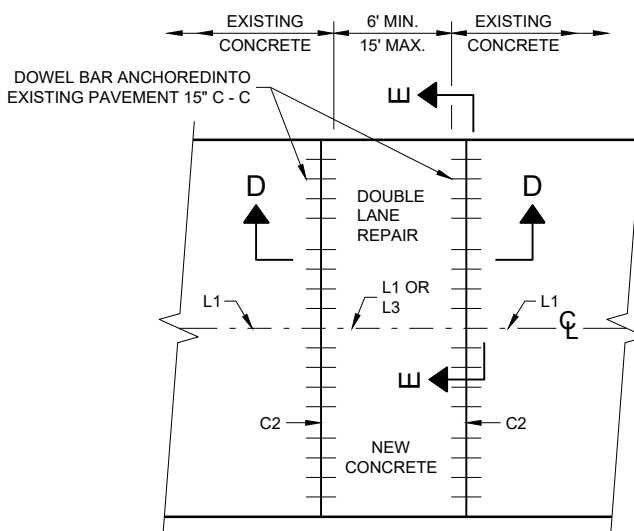
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

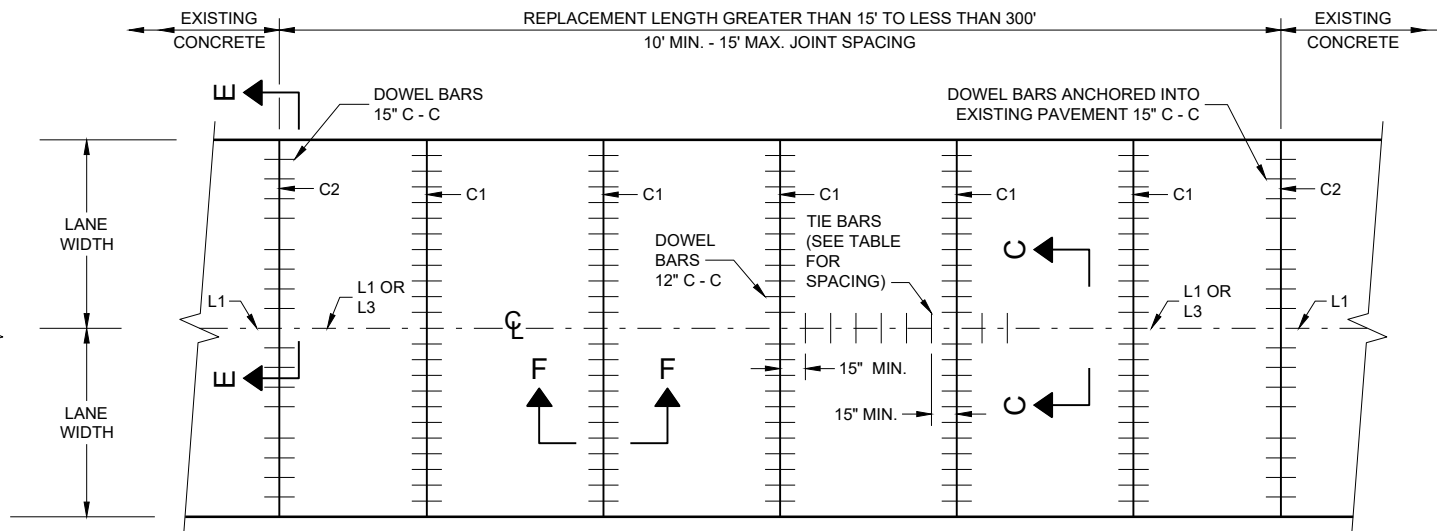
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 1/2"	NONE	NONE	12'
7", 7 1/2"	1"	1"	14'
8" & ABOVE	1 1/4"	1 1/4"	15'



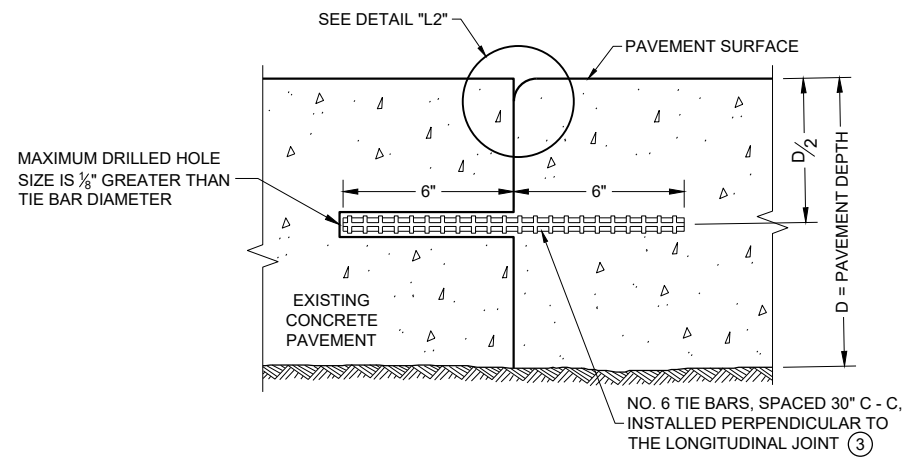
PLAN VIEW
MULTILANE CONCRETE PAVEMENT REPAIR



PLAN VIEW
MULTILANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

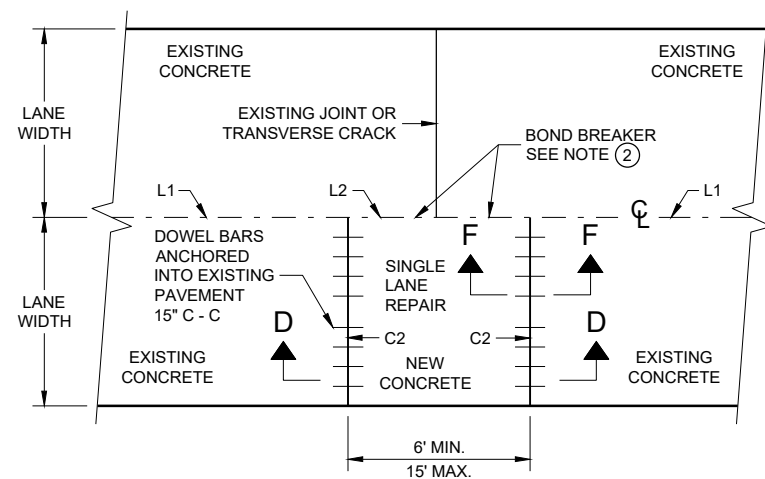
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



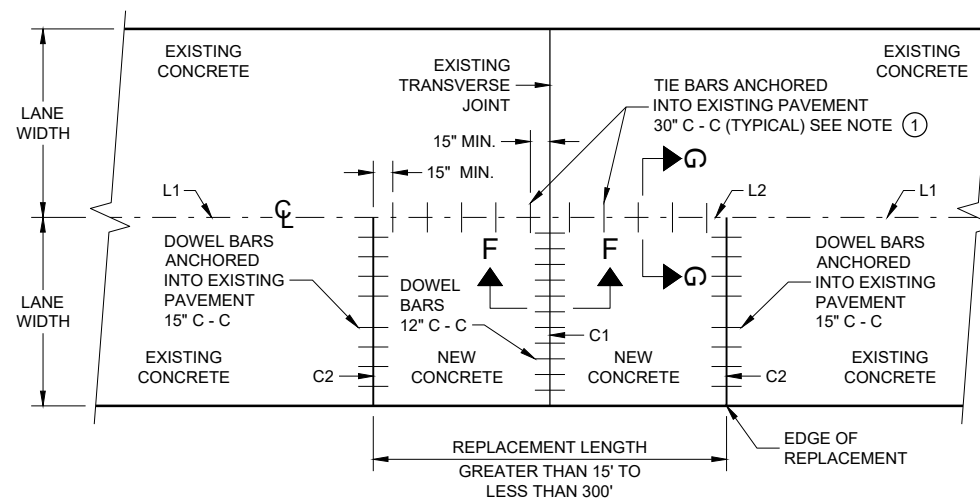
SECTION G - G
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

- ① WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ② USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ③ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW
SINGLE LANE CONCRETE PAVEMENT REPAIR

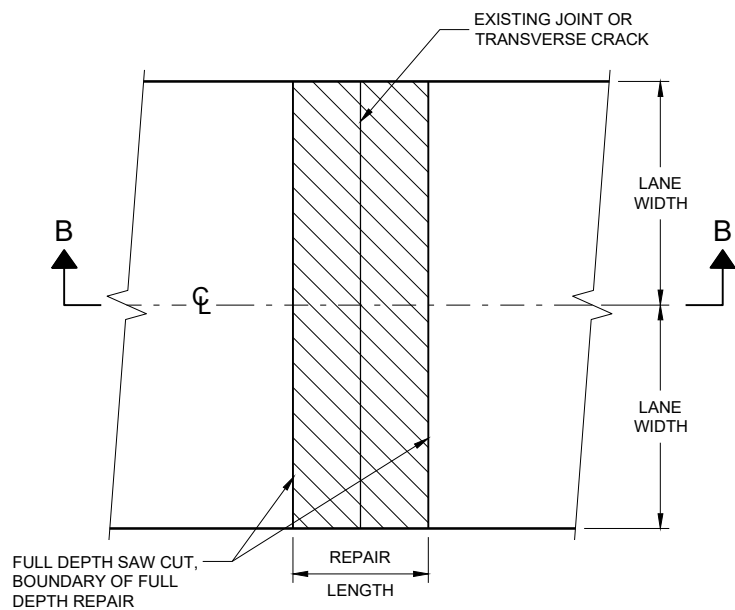


PLAN VIEW
SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

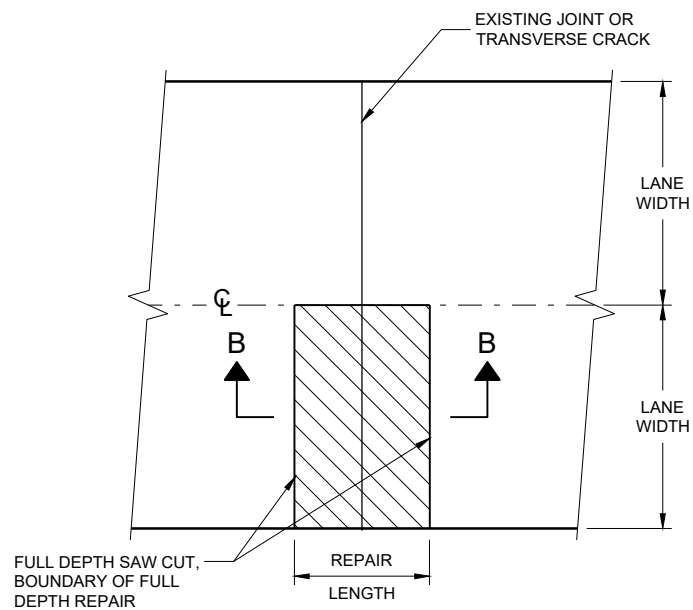
CONCRETE REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Peter Kemp P.E.
DATE PAVEMENT SUPERVISOR 72
FHWA

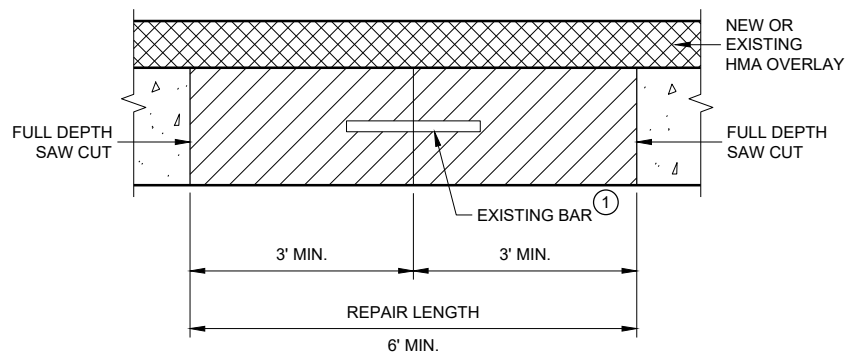


**PLAN VIEW
DOUBLE LANE REPAIR**



**PLAN VIEW
SINGLE LANE REPAIR**

FULL DEPTH CONCRETE PAVEMENT REMOVAL



**SECTION B - B
CONCRETE REMOVAL**

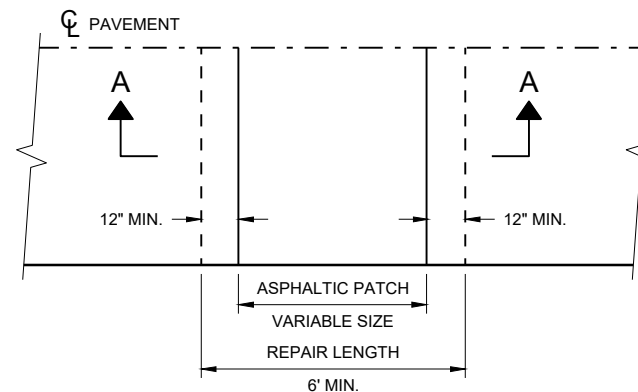
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

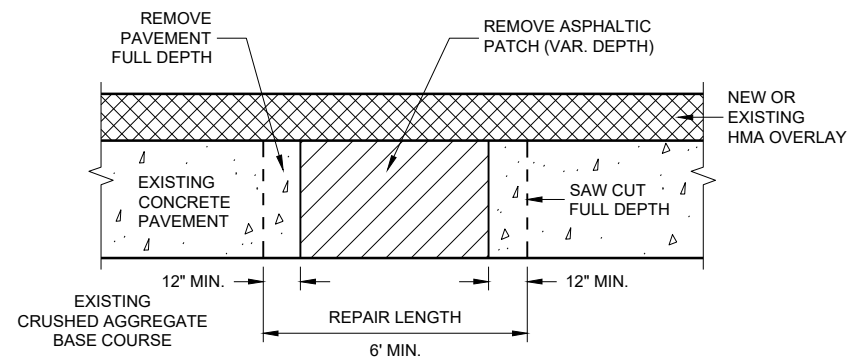
PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

① DOWEL BARS MAY NOT BE PRESENT.



PLAN VIEW

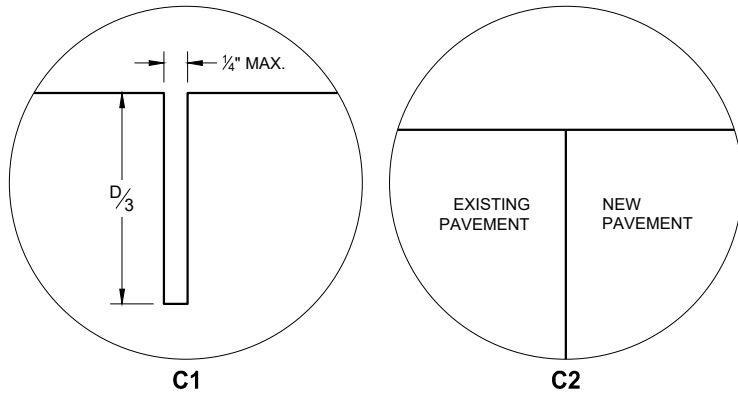


SECTION A - A

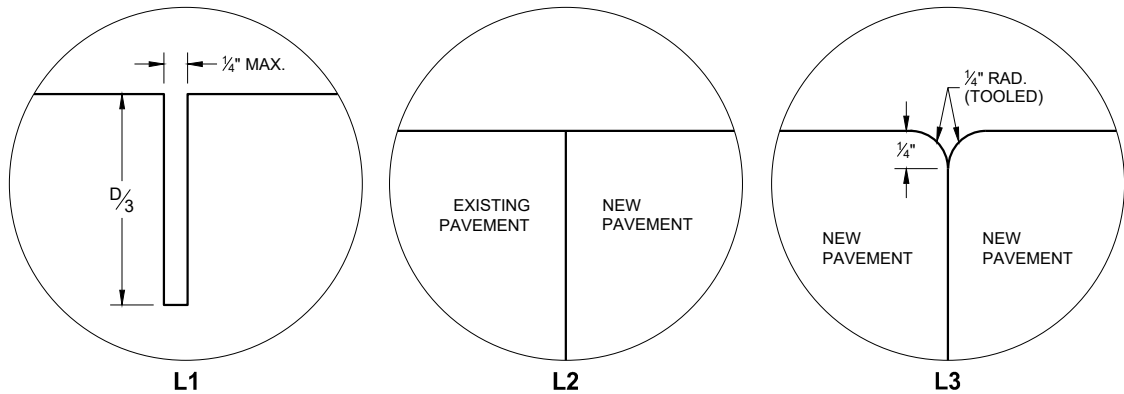
HMA PATCH REMOVAL

BASE PATCHING CONCRETE

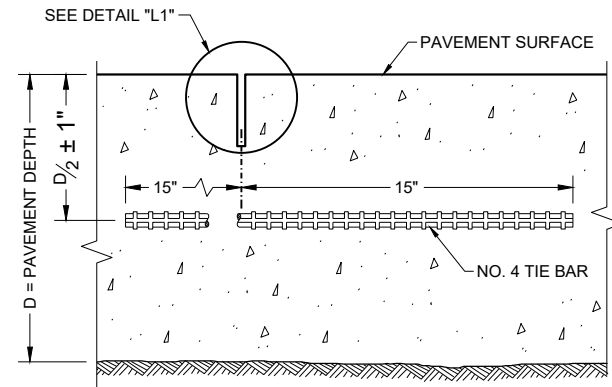
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



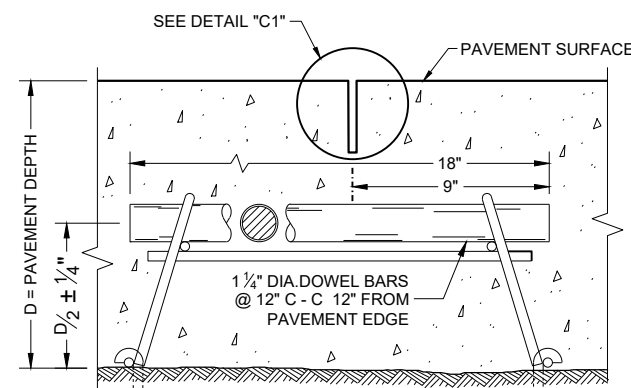
TRANSVERSE JOINTS



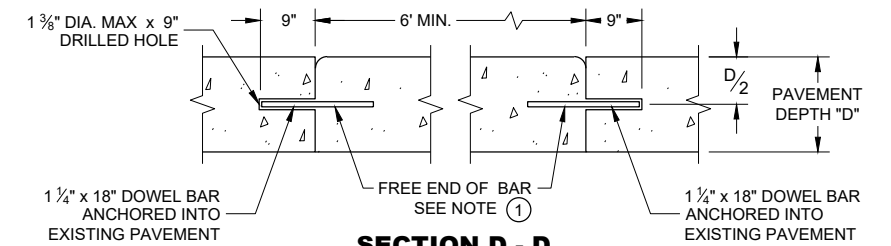
LONGITUDINAL JOINTS



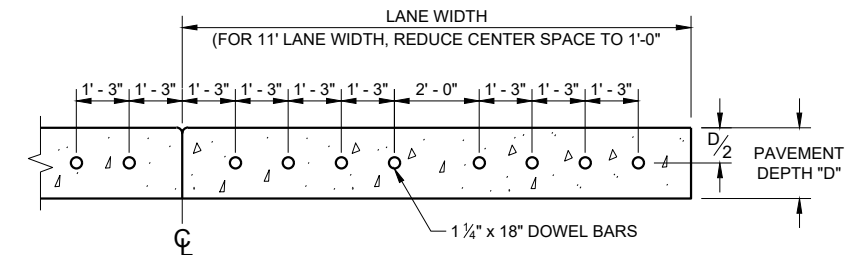
**SECTION C - C
SAWED LONGITUDINAL JOINT**



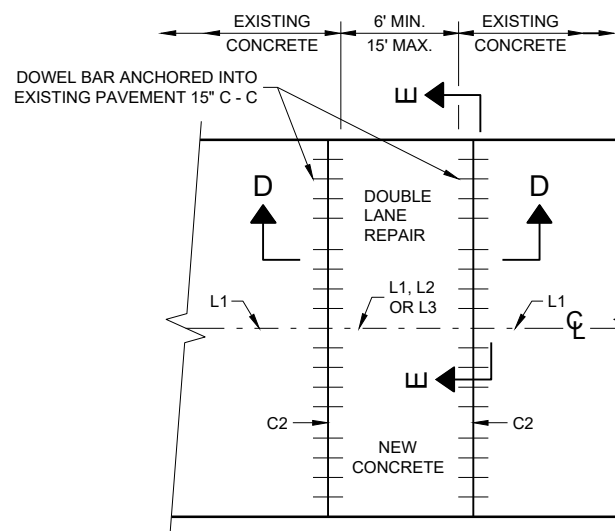
**SECTION F - F
CONTRACTION JOINT**



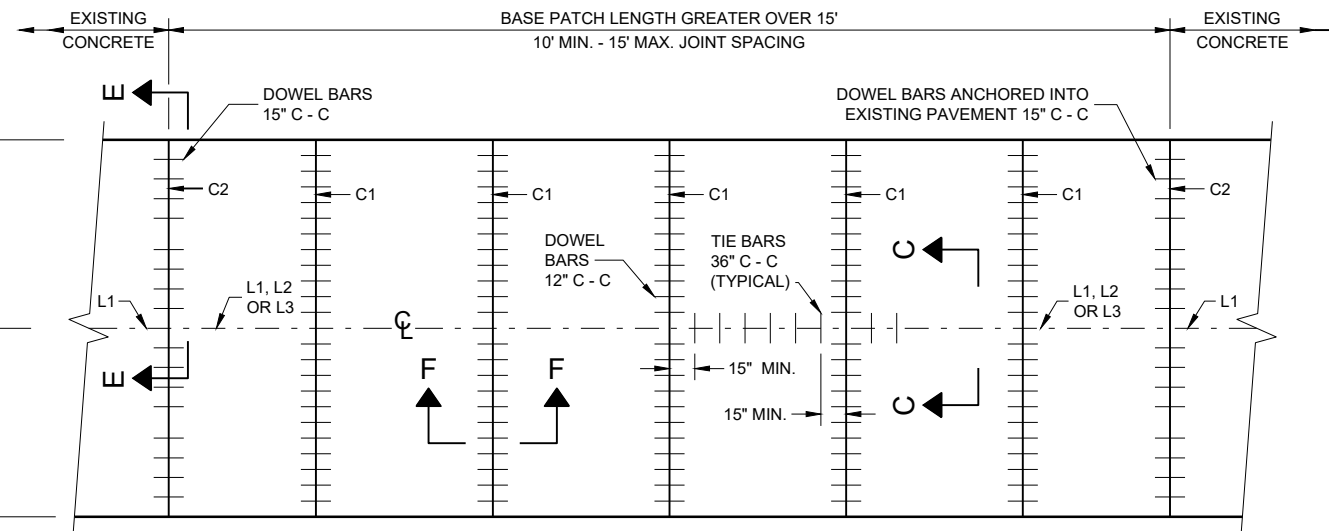
SECTION D - D



**SECTION E - E
SPACING OF DOWEL BARS
ANCHORED INTO EXISTING PAVEMENT**



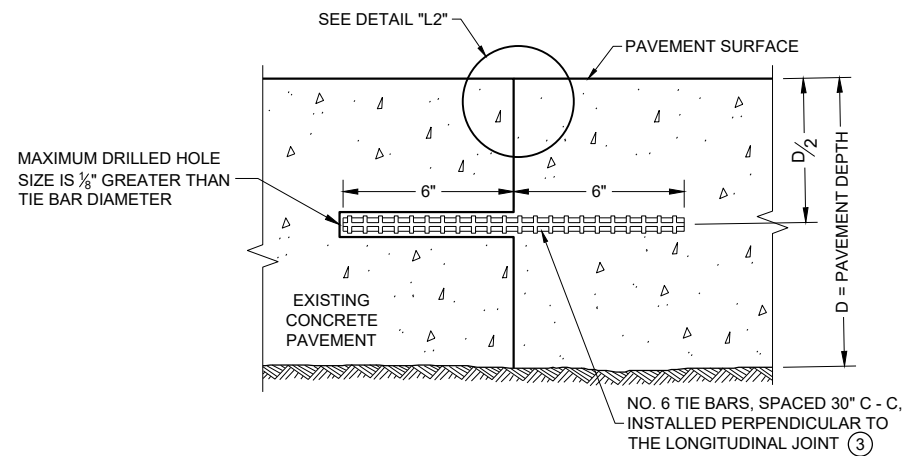
**PLAN VIEW
MULTILANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH**



**PLAN VIEW
MULTILANE CONCRETE BASE PATCH
GREATER THAN 15' IN LENGTH**

BASE PATCHING CONCRETE

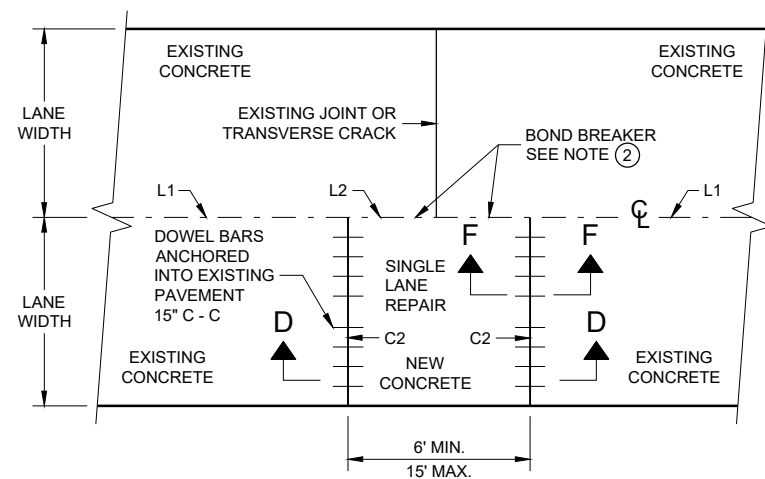
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



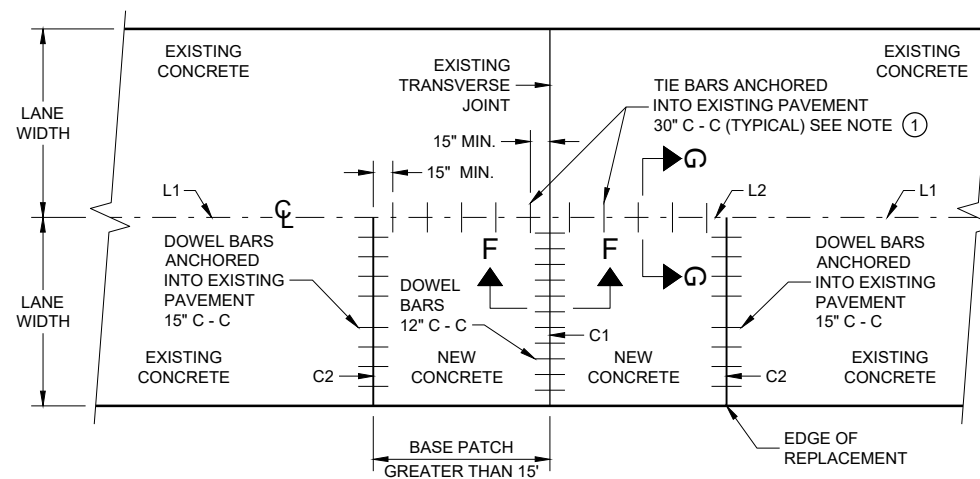
SECTION G - G
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

- ① WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ② USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ③ ANCHOR TIE BARS INTO DRILLED HOES WITH AN EPOXY.



PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH



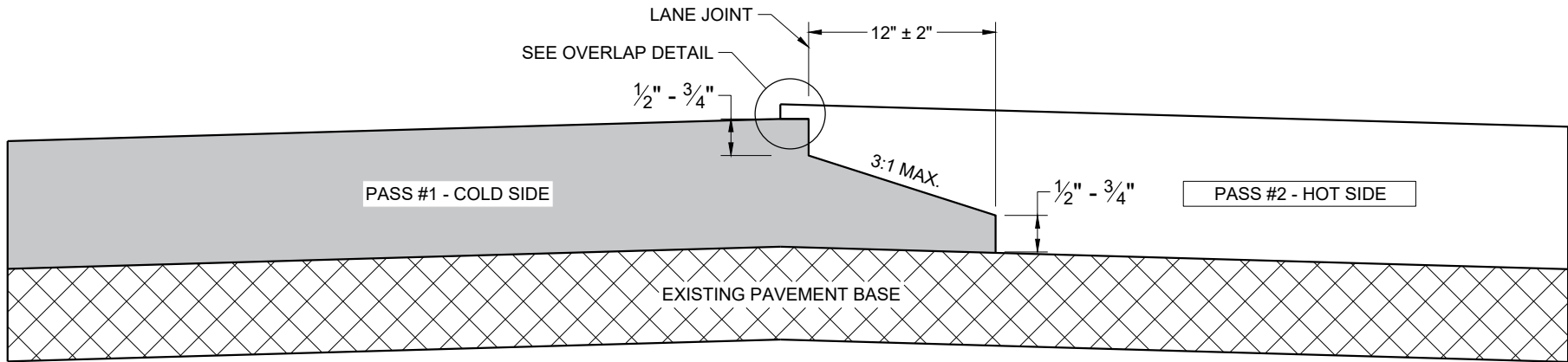
PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
GREATER THAN 15' LENGTH

BASE PATCHING CONCRETE

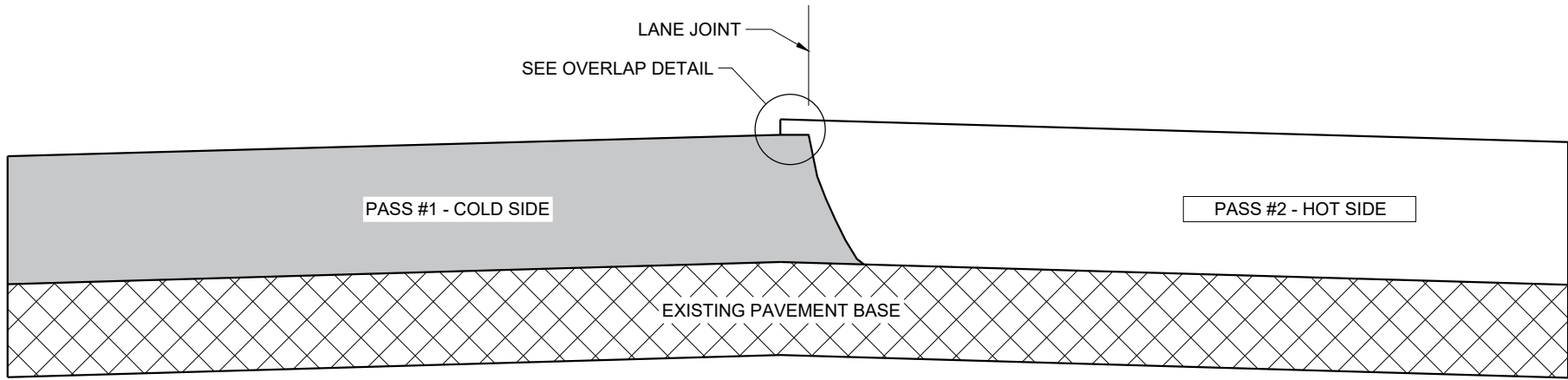
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR 75

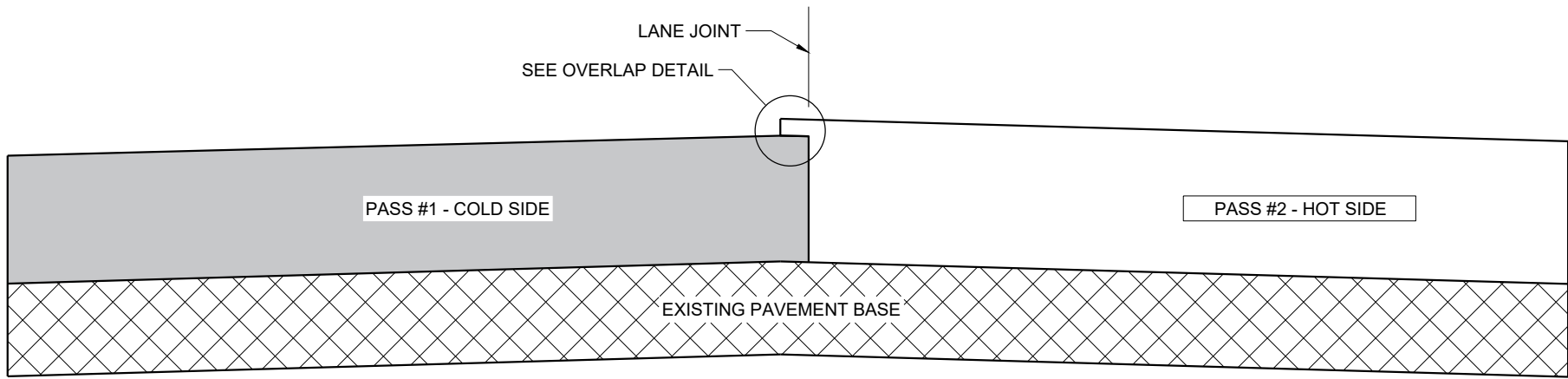
FHWA



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

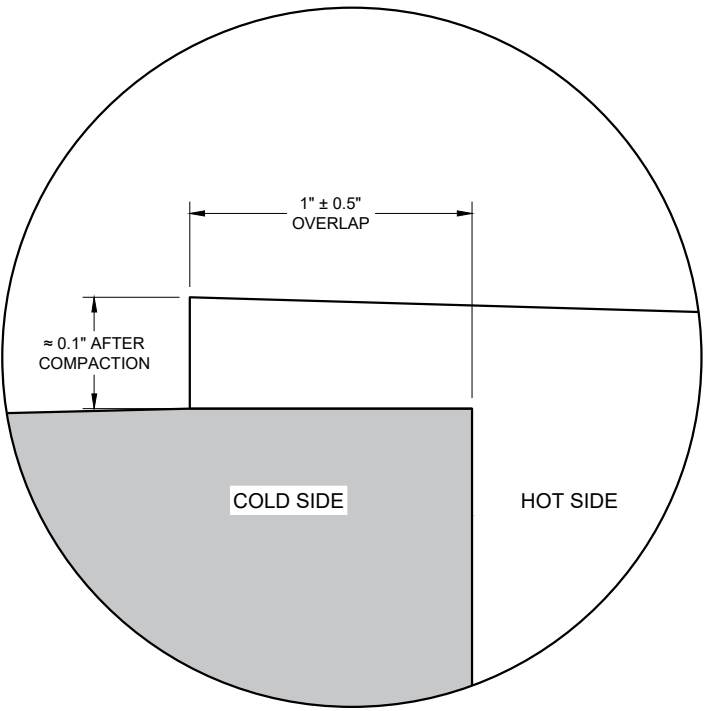
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY $1" \pm 0.5"$ AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



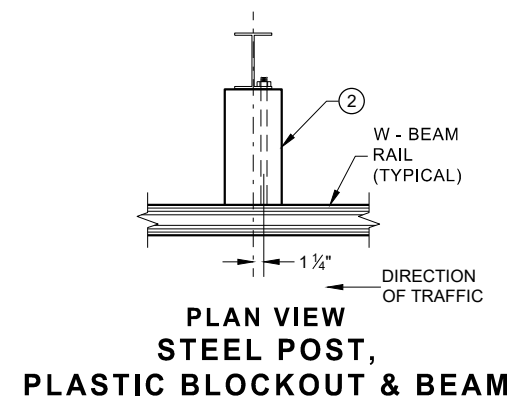
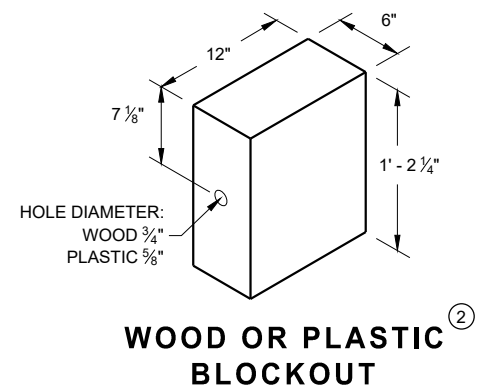
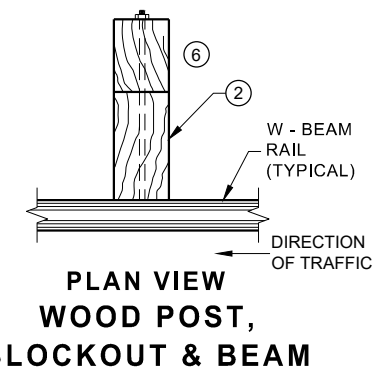
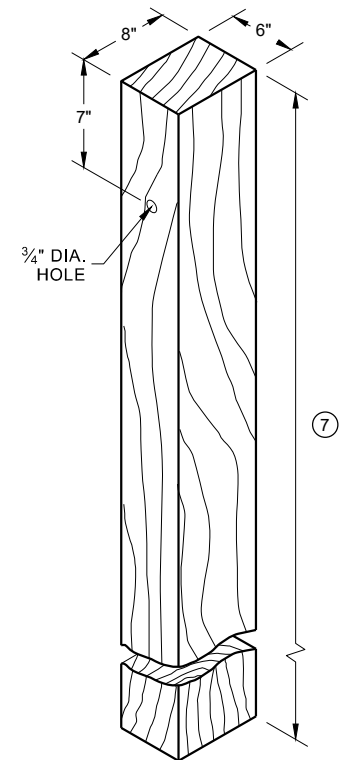
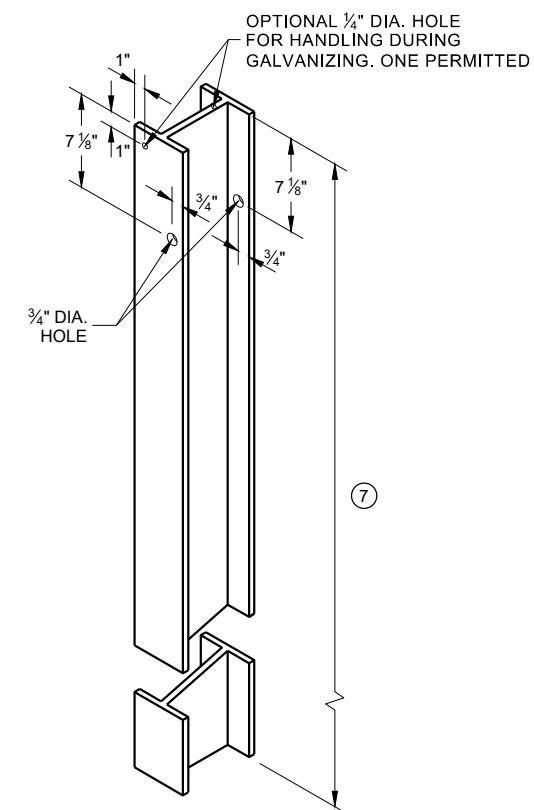
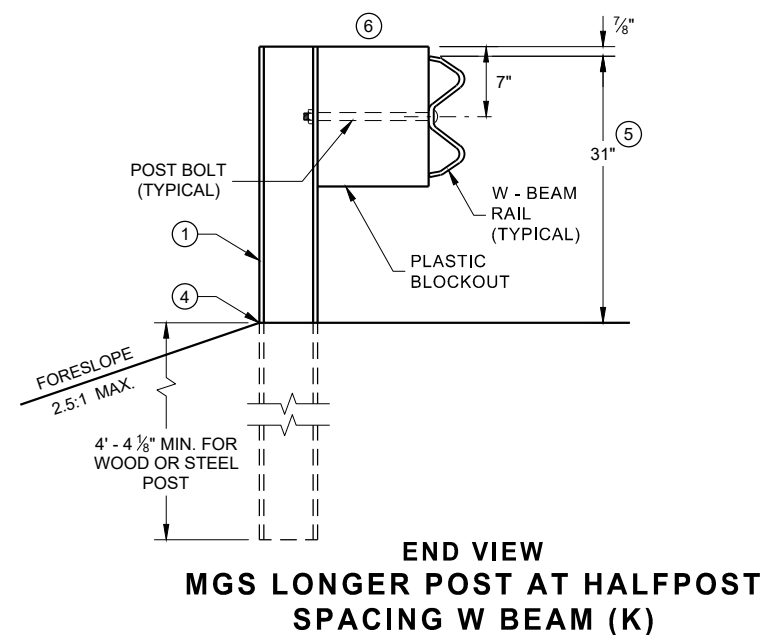
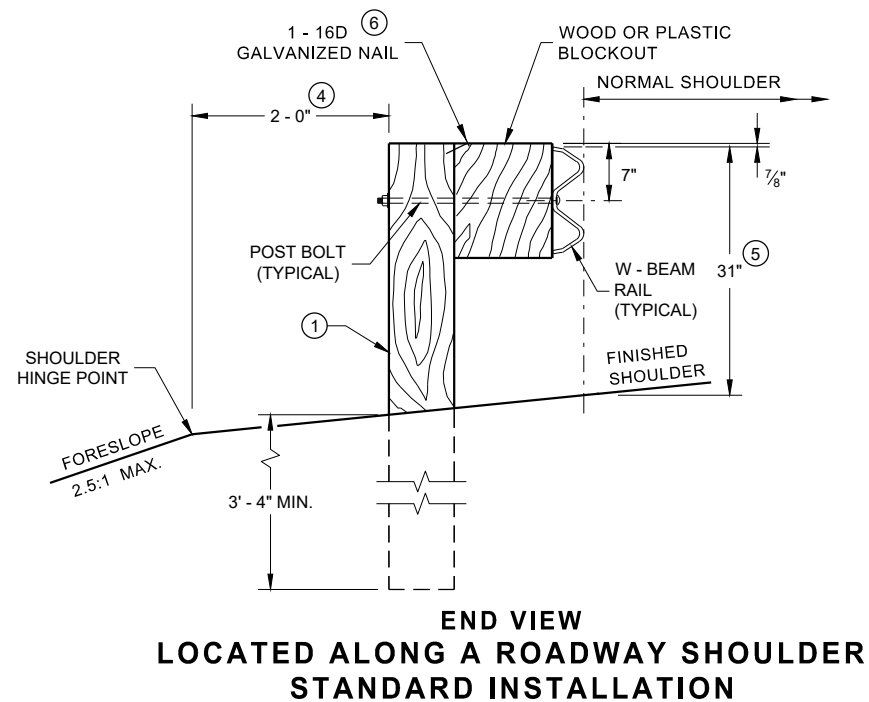
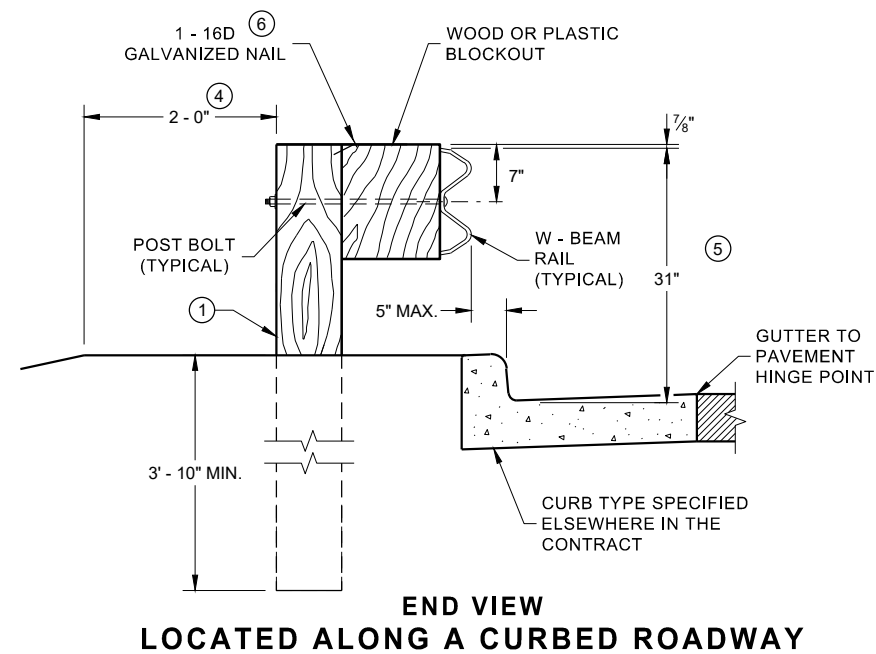
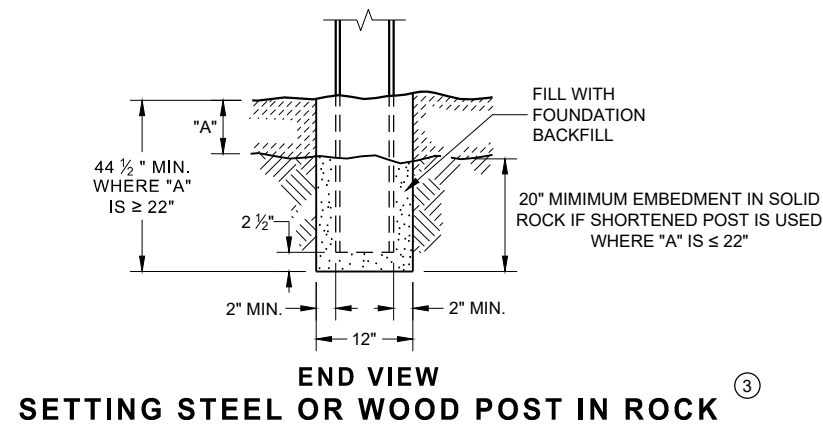
OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

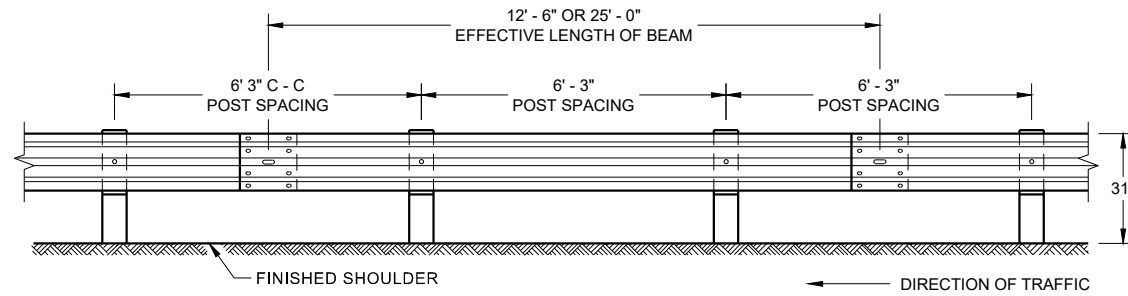
APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGIN 76
FHWA

- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ⑦ TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".

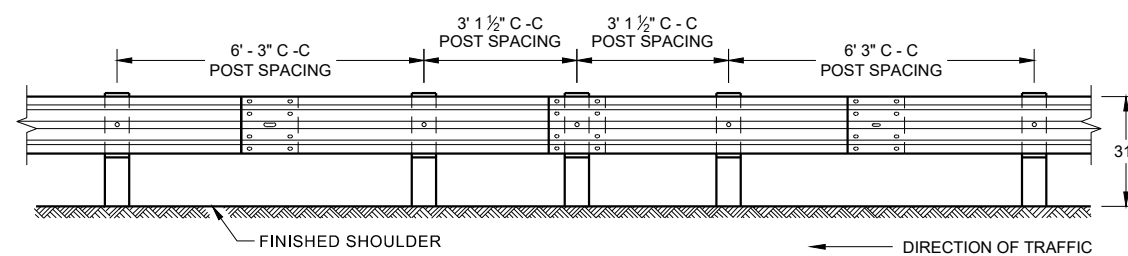


MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

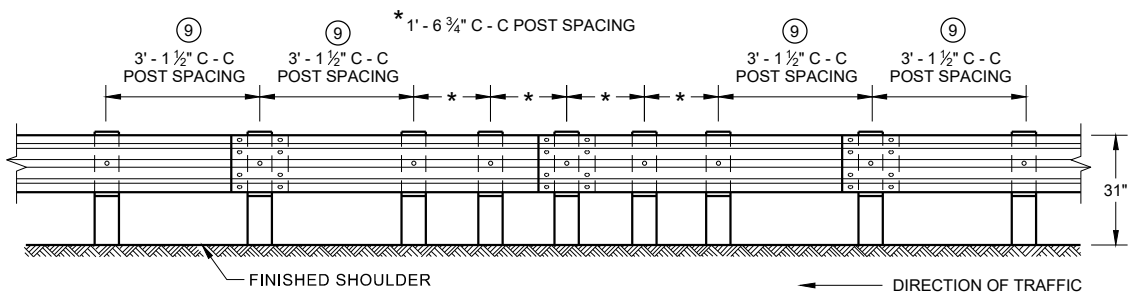
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 77



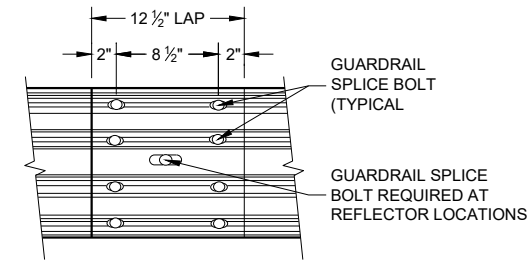
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



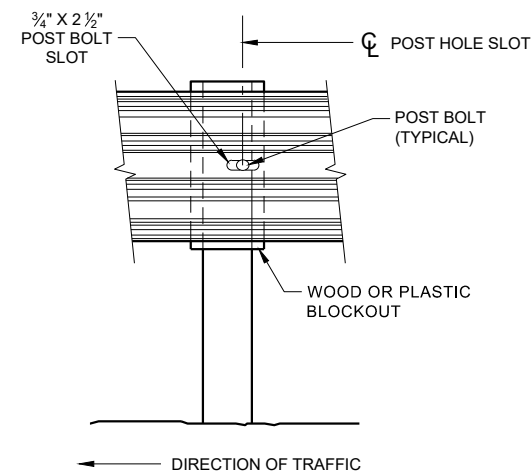
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



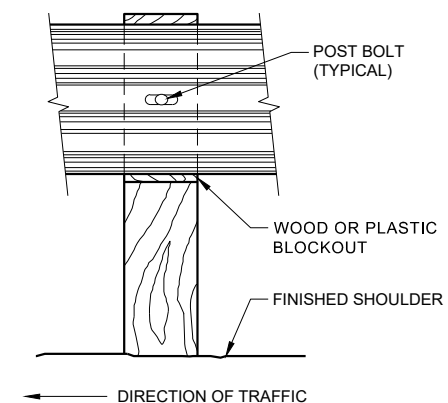
**FRONT VIEW
QUARTER POST SPACING (QS)**



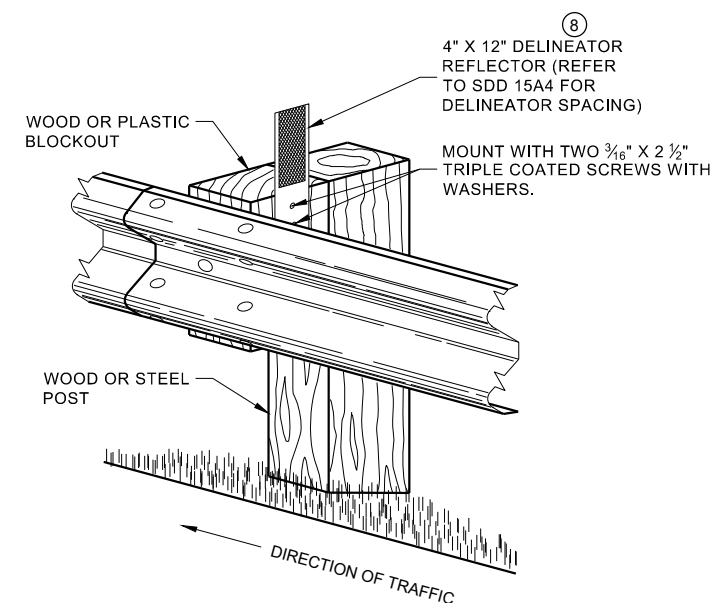
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



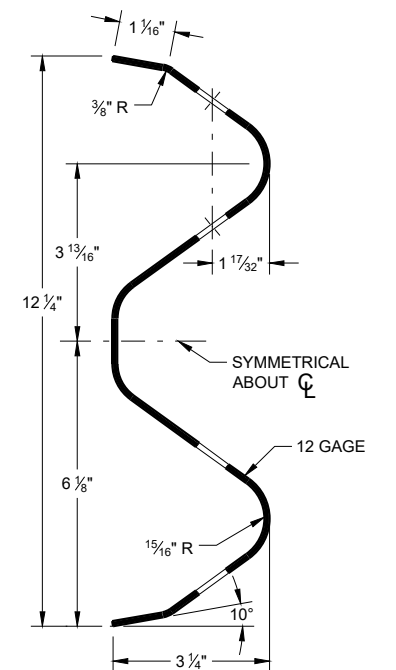
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

GENERAL NOTES

- 8 DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- 9 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

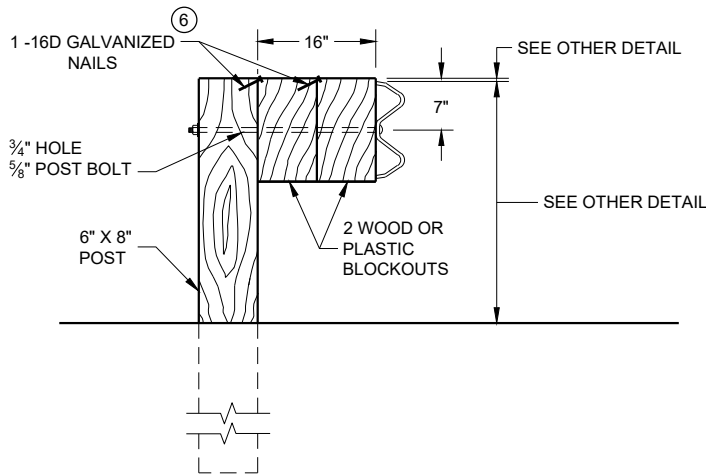
GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

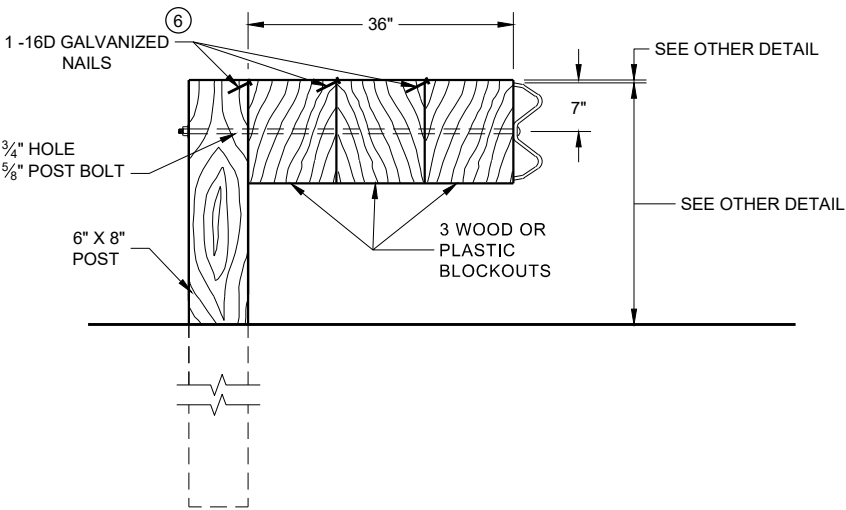
**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 78



DETAIL FOR 16" BLOCKOUT DEPTH

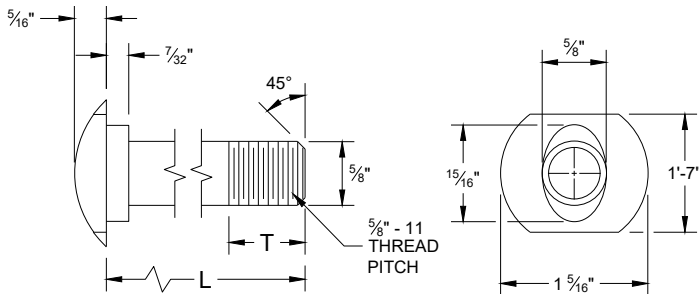
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



DETAIL FOR 36" BLOCKOUT DEPTH

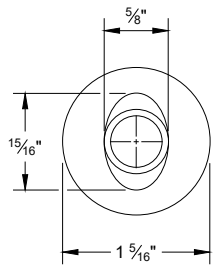
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

- NOTE:
- 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
 - 2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

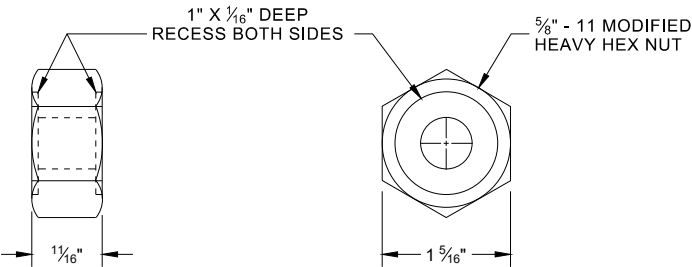


POST BOLT TABLE

L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"

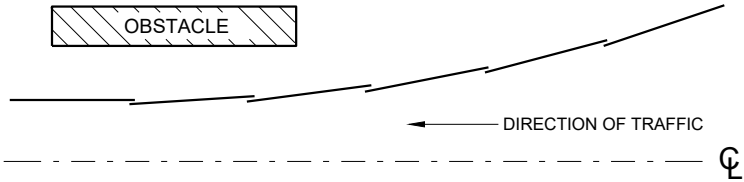


ALTERNATE BOLT HEAD

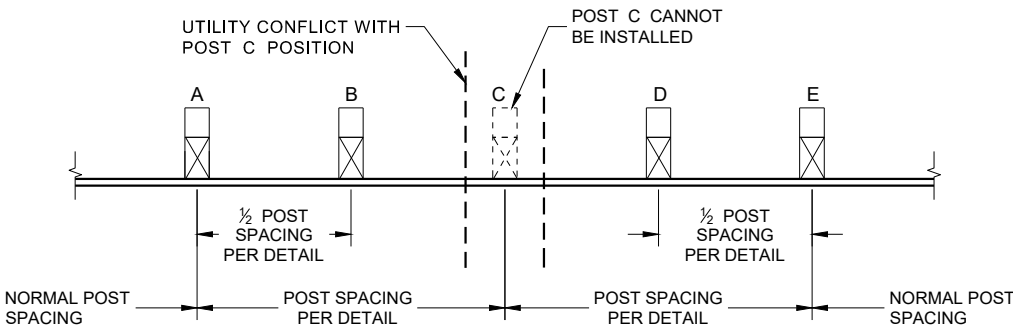


POST BOLT, SPLICE BOLT AND RECESS NUT

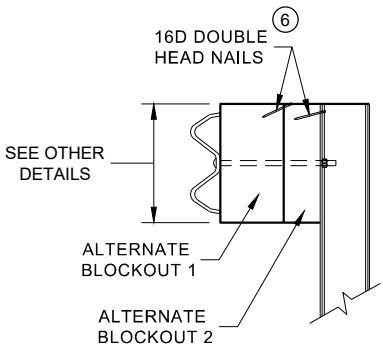
- 6 WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



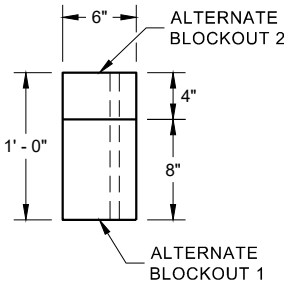
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW

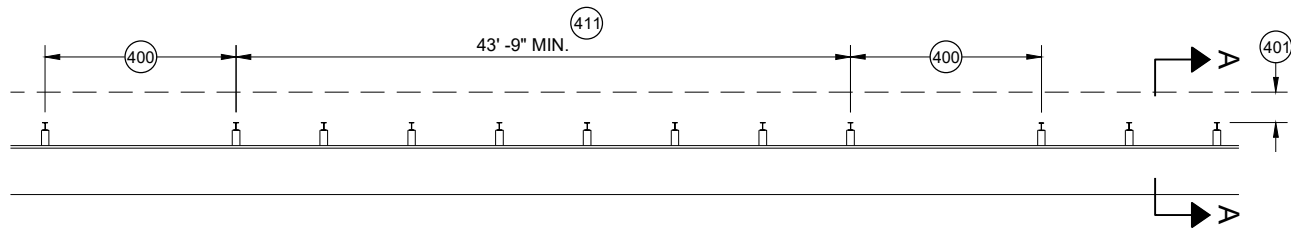


PLAN VIEW

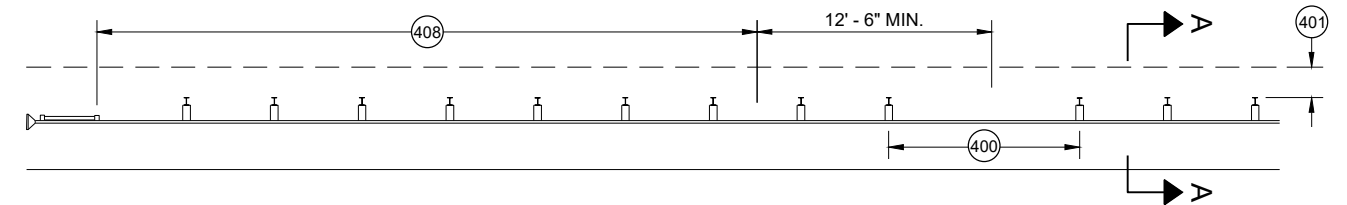
ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

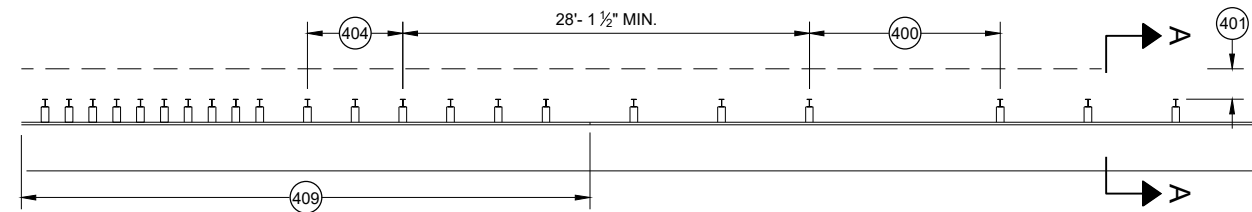
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 79



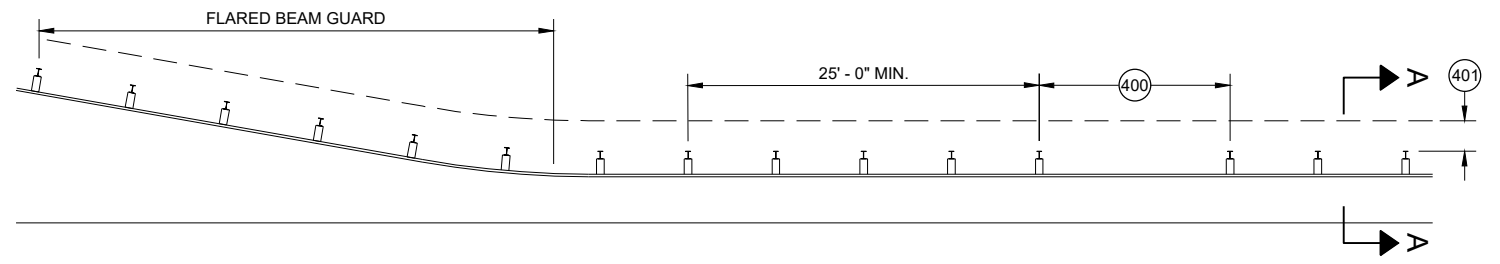
MISSING POST IN MGS GUARDRAIL



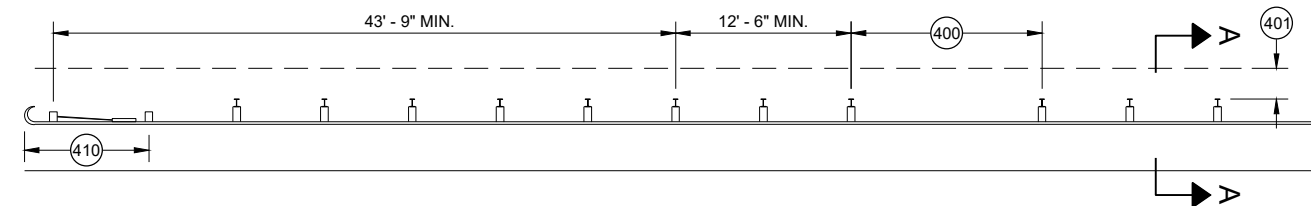
MISSING POST IN MGS GUARDRAIL NEAR EAT



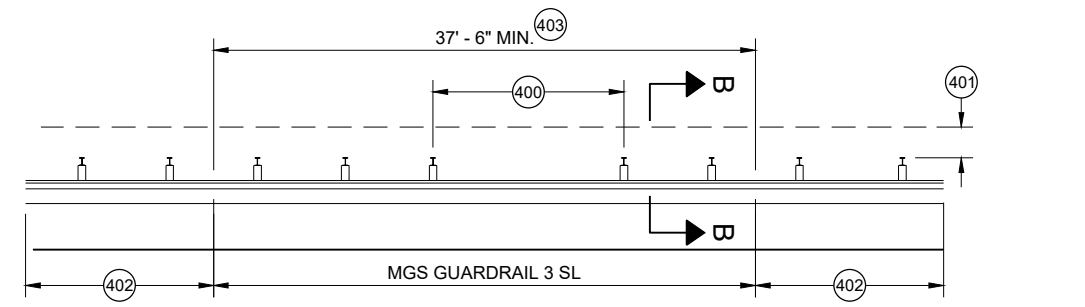
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

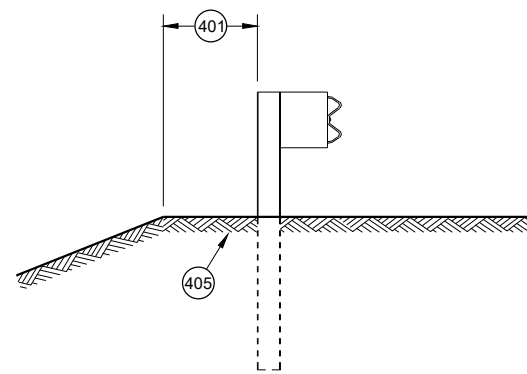


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

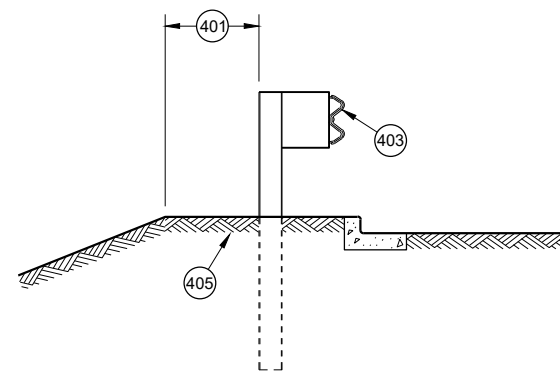


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- (400) MAX SPAN 12' - 6"
- (401) 2' MIN.
- (402) MGS GUARDRAIL 3
- (403) NESTING BEAM GUARD
- (404) ASYMMETRIC TRANSITION
- (405) SOIL WELL DRAINED AND COMPACTED
- (406) SEE OTHER DRAWINGS IN THIS SDD
- (407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- (408) SEE SDD 14B44
- (409) SEE SDD 14B45
- (410) SEE SDD 14B47
- (411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



SECTION B - B

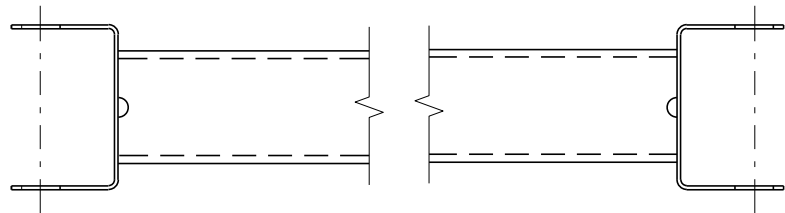
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA 80	

- A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
- D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
- E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

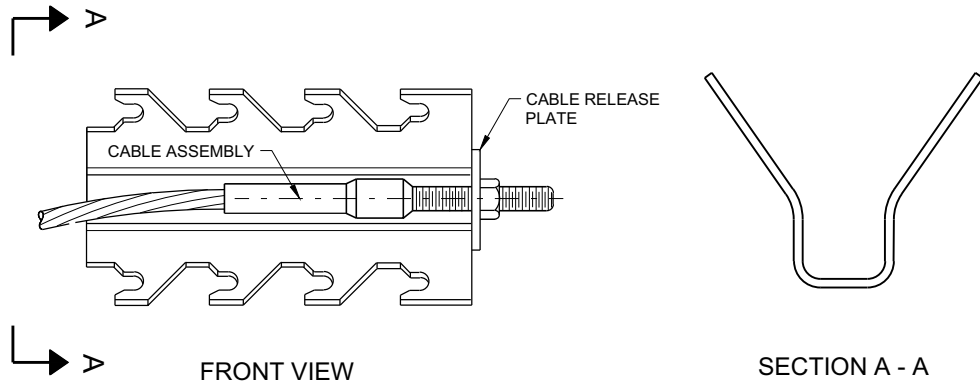
THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

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DEPARTMENT OF TRANSPORTATION 81

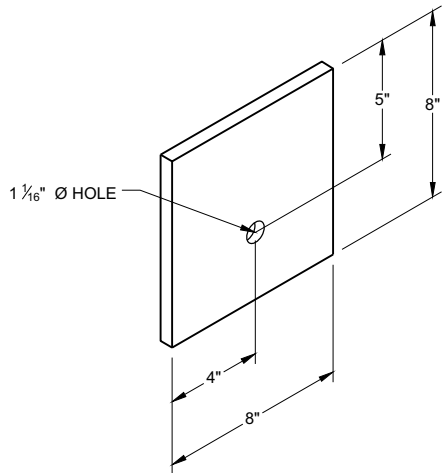


GENERIC GROUND STRUT⁹ ^E

BILL OF MATERIALS	
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



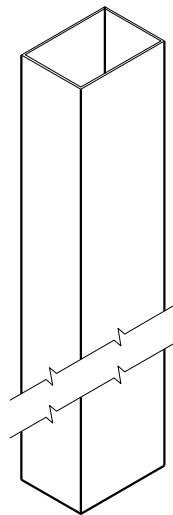
GENERIC ANCHOR CABLE BOX⁹ ^E



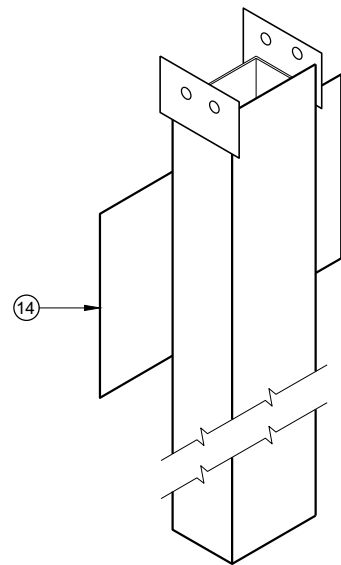
BEARING PLATE⁶ ^E

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

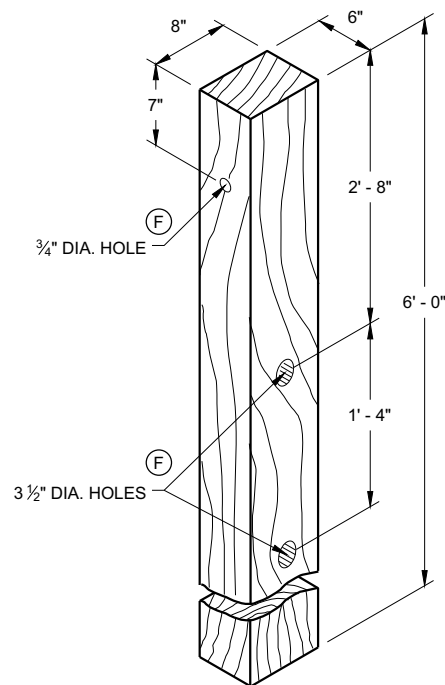
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



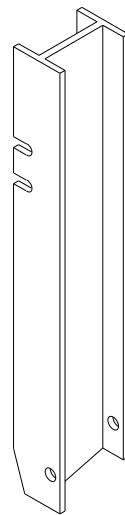
UPPER POST NO. 1 ⁽¹⁾ (E)



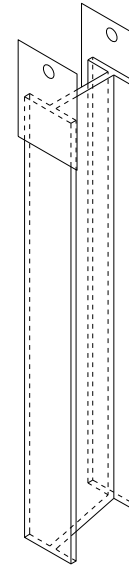
LOWER POST NO. 1 ⁽²⁾ (E)



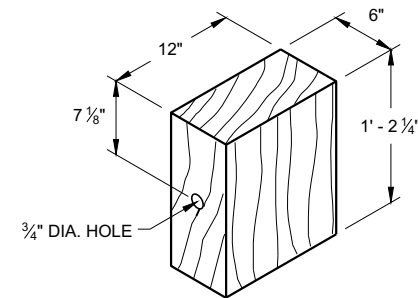
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



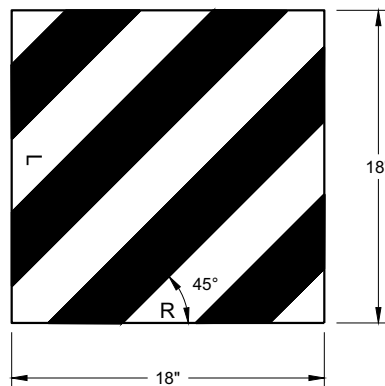
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



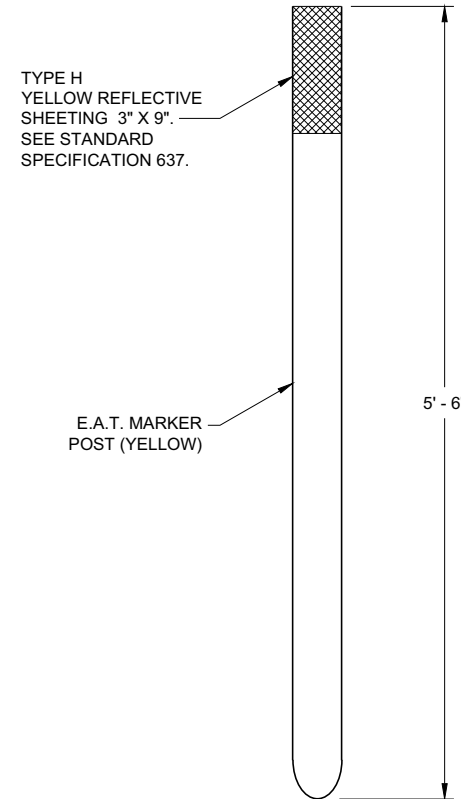
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



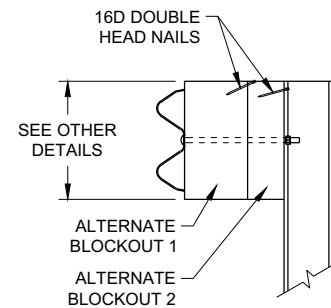
W5 - 59
REFLECTIVE SHEETING DETAIL ^(E)



FRONT VIEW
E.A.T. MARKER POST ⁽¹³⁾

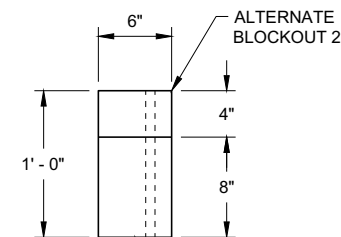


SIDE VIEW



SIDE VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

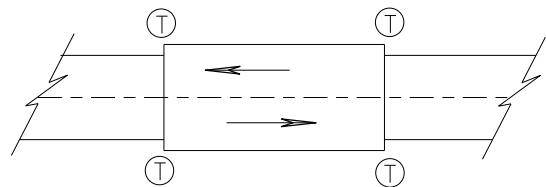


TOP VIEW

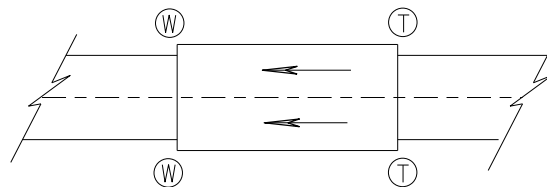
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
83
FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

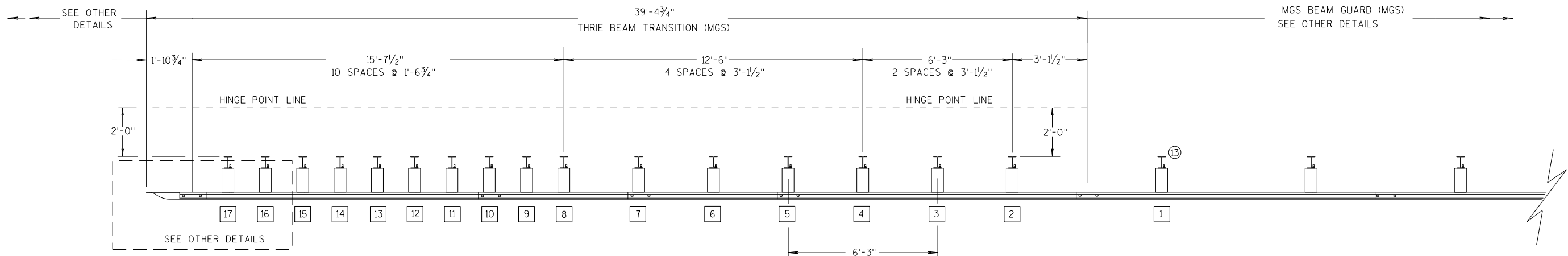
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

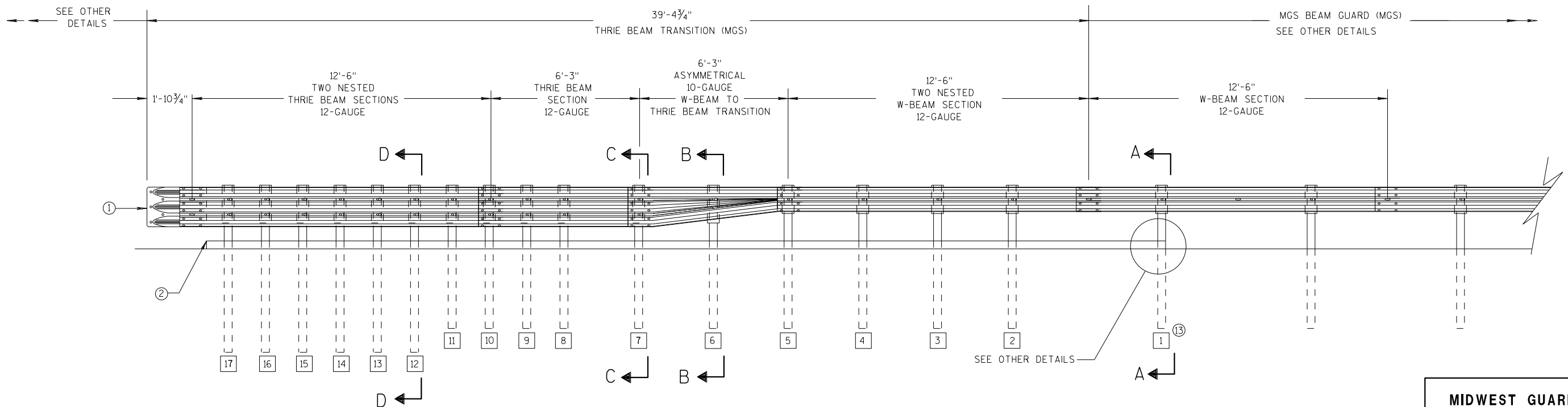
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

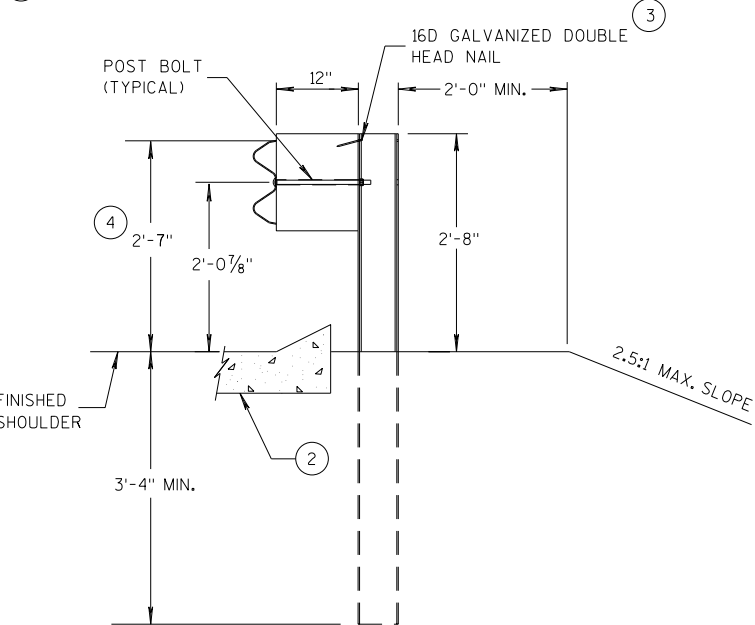
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

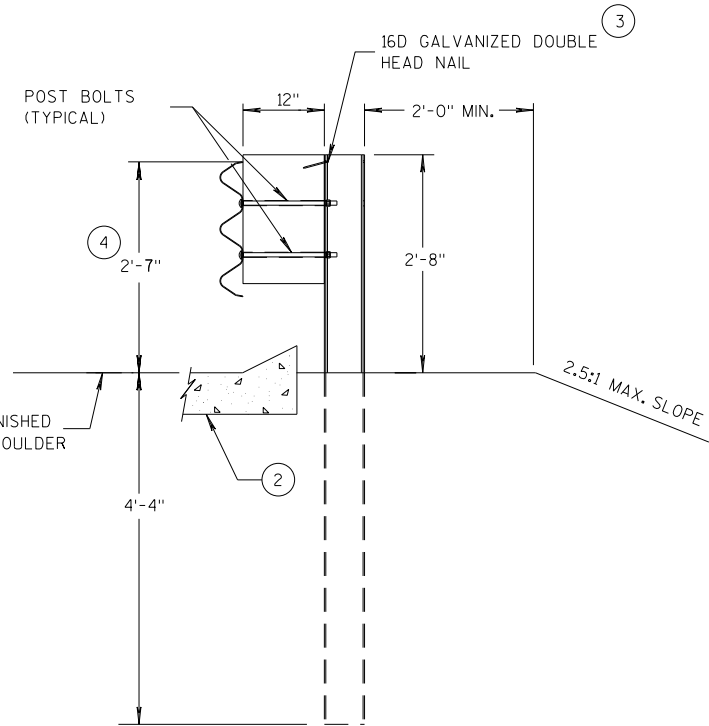
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

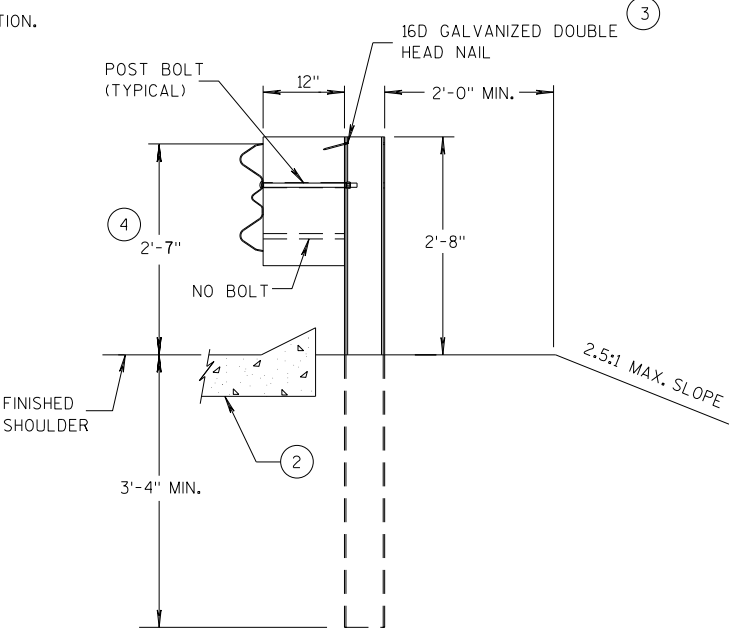
- 2 OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- 3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- 4 TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.
- 13 STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



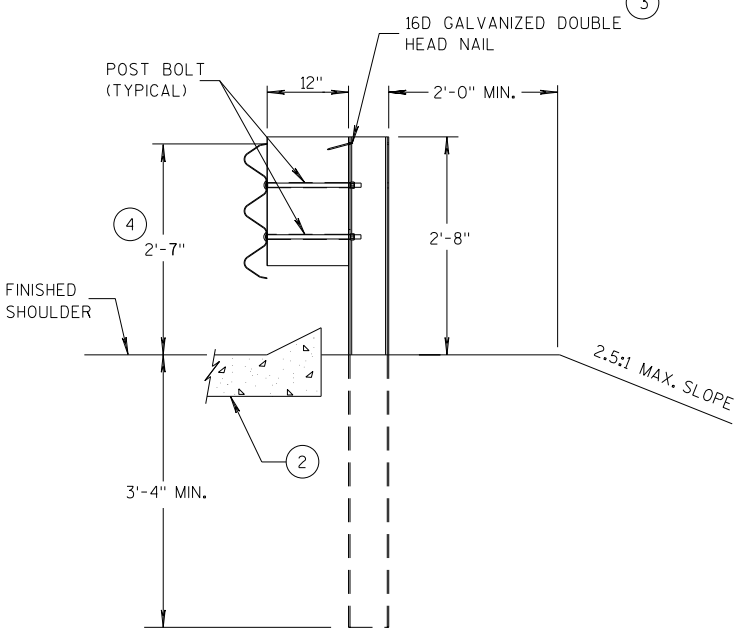
SECTION A-A
POSTS 1-5



SECTION D-D
POSTS 12-17



SECTION B-B
POST 6



SECTION C-C
POSTS 7-11

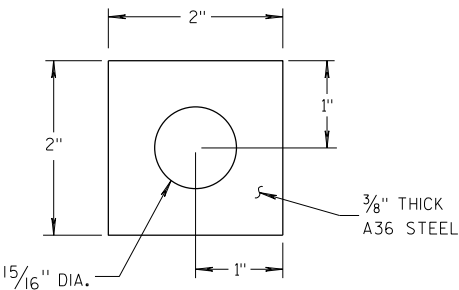
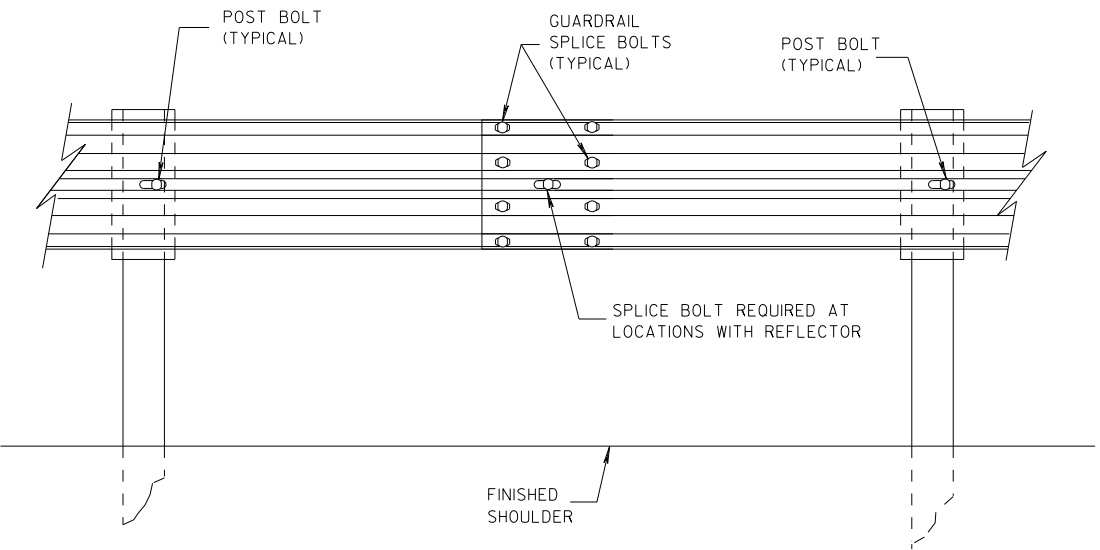
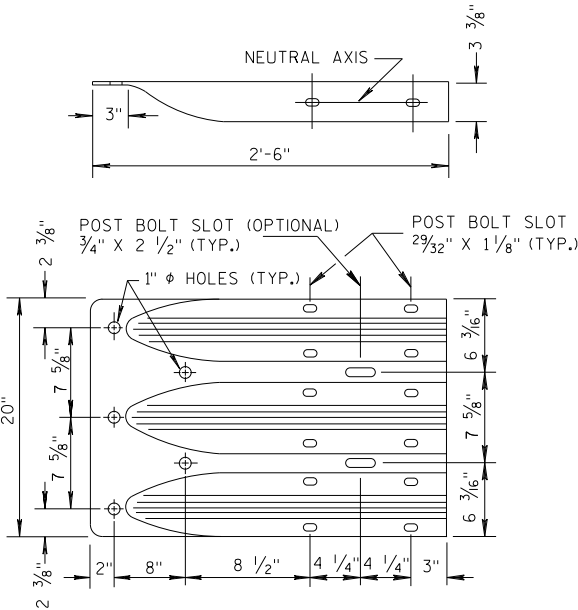


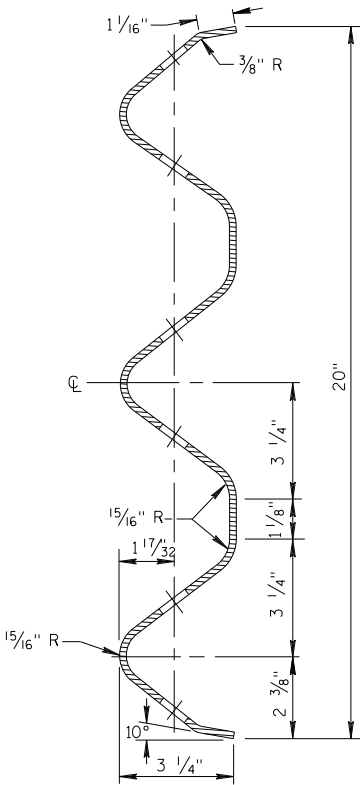
PLATE WASHER DETAIL



SPLICE DETAIL



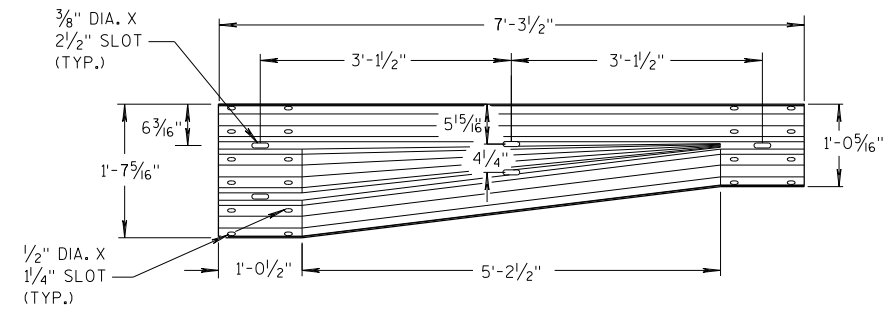
THRIE BEAM
TERMINAL CONNECTOR



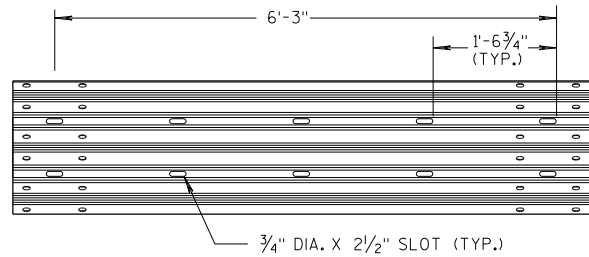
SECTION THRU THRIE
BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

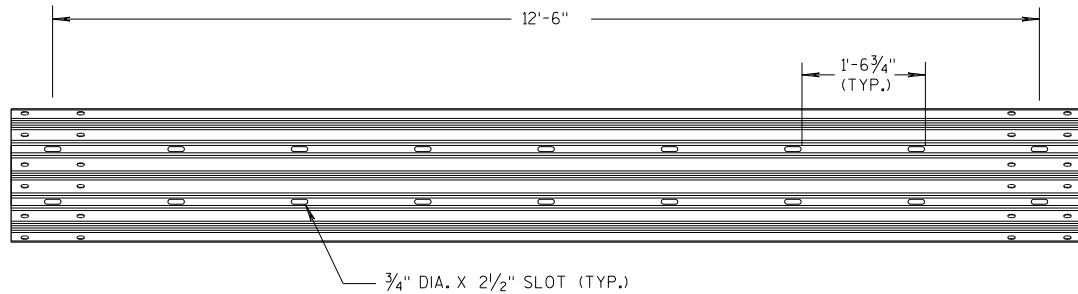
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



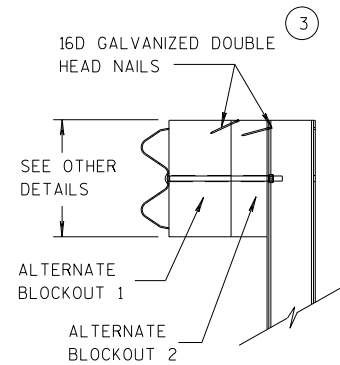
W-BEAM TO THRIE BEAM TRANSITION SECTION



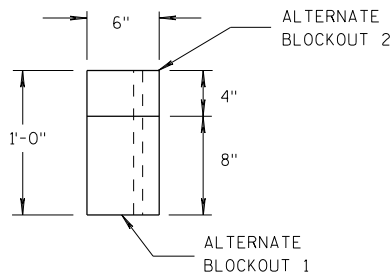
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

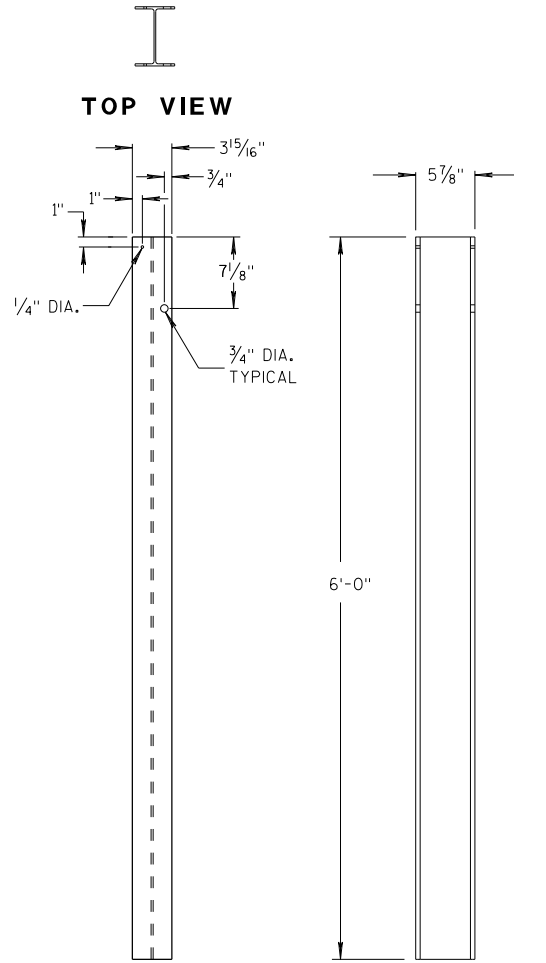


SIDE VIEW



TOP VIEW

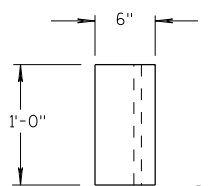
ALTERNATE WOOD BLOCKOUT DETAIL



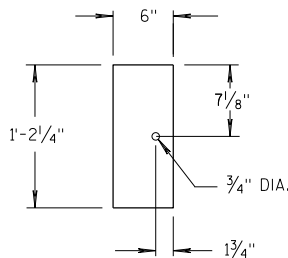
FRONT VIEW

SIDE VIEW

STEEL POSTS 1-5

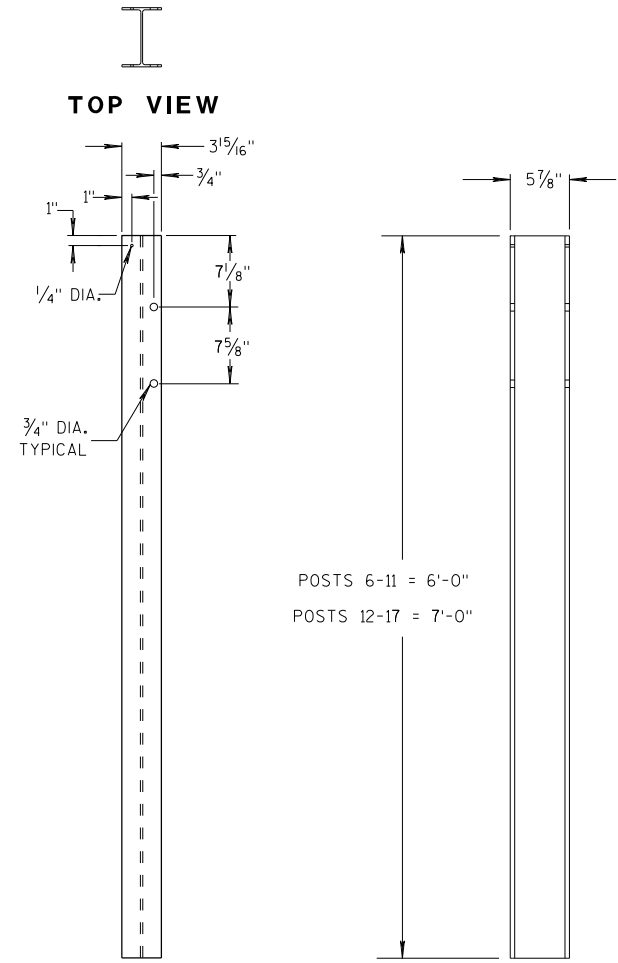


TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 1-5

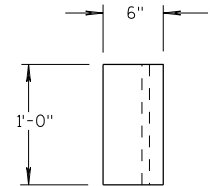


FRONT VIEW

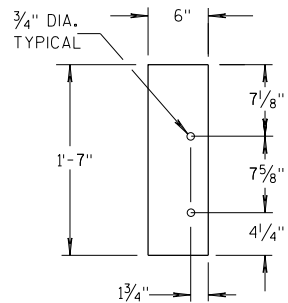
SIDE VIEW

STEEL POSTS 6-17

POSTS 6-11 = 6'-0"
POSTS 12-17 = 7'-0"



TOP VIEW



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

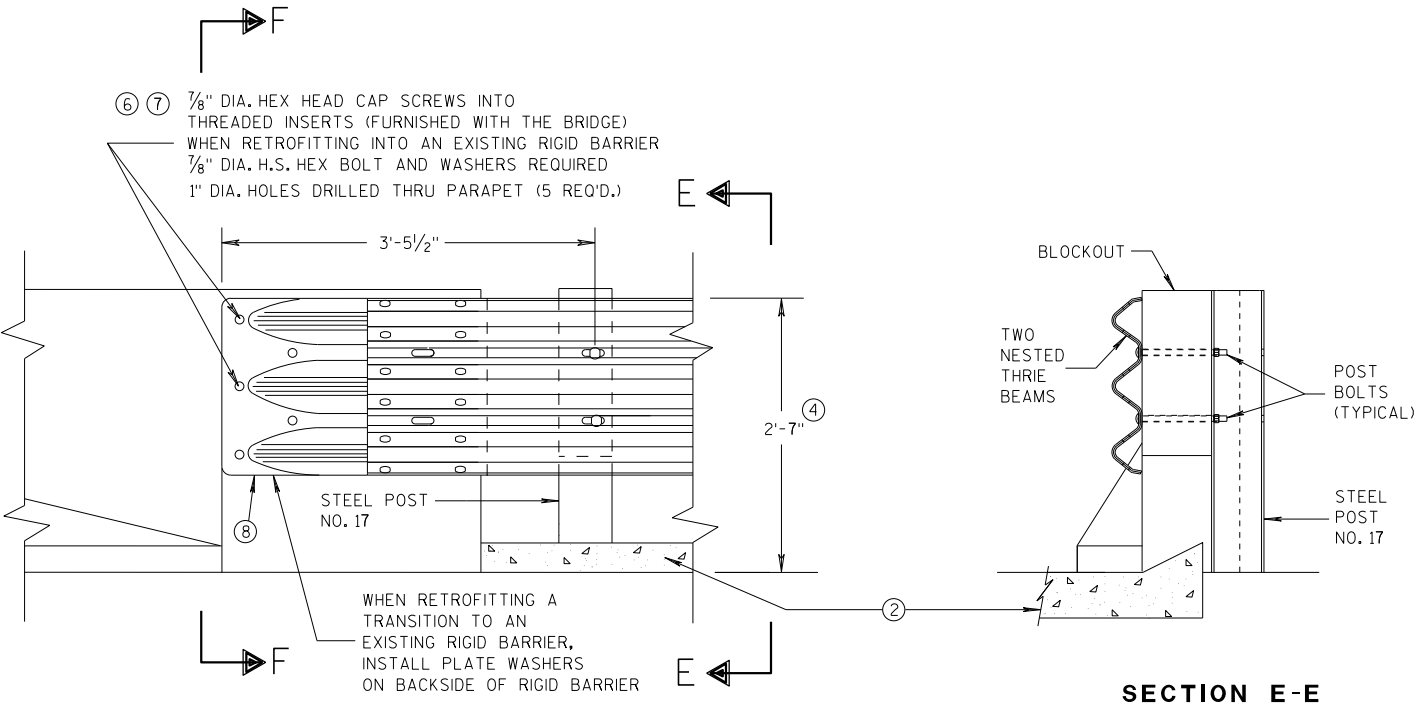
③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

⑤ WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

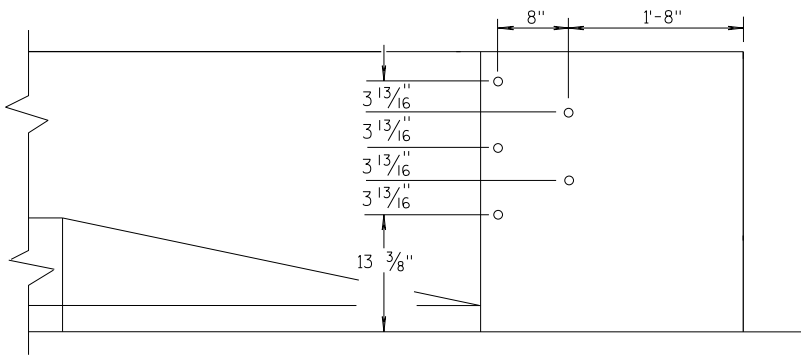
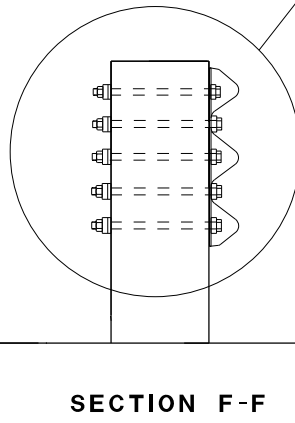
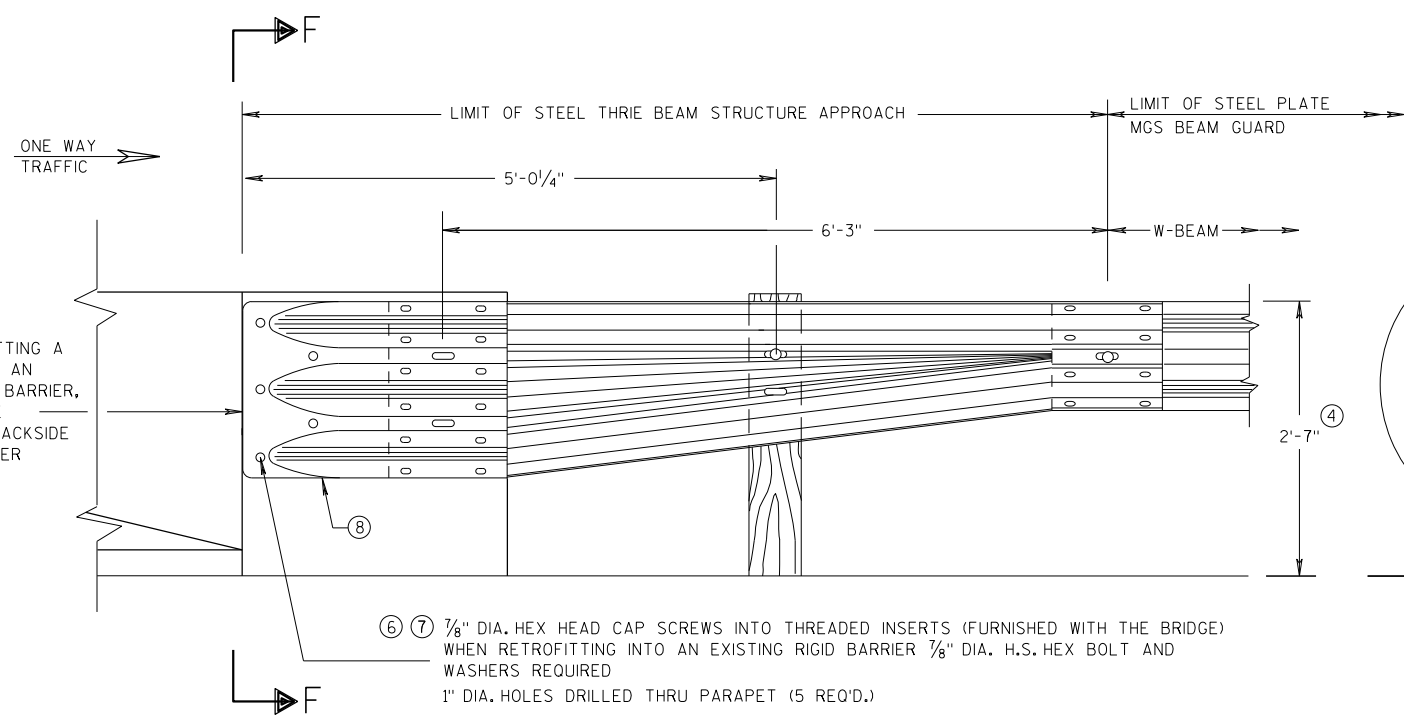
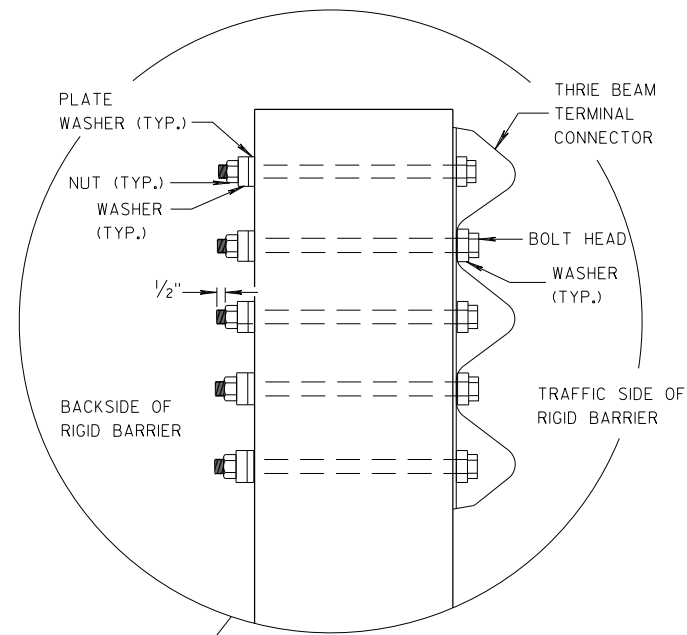
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

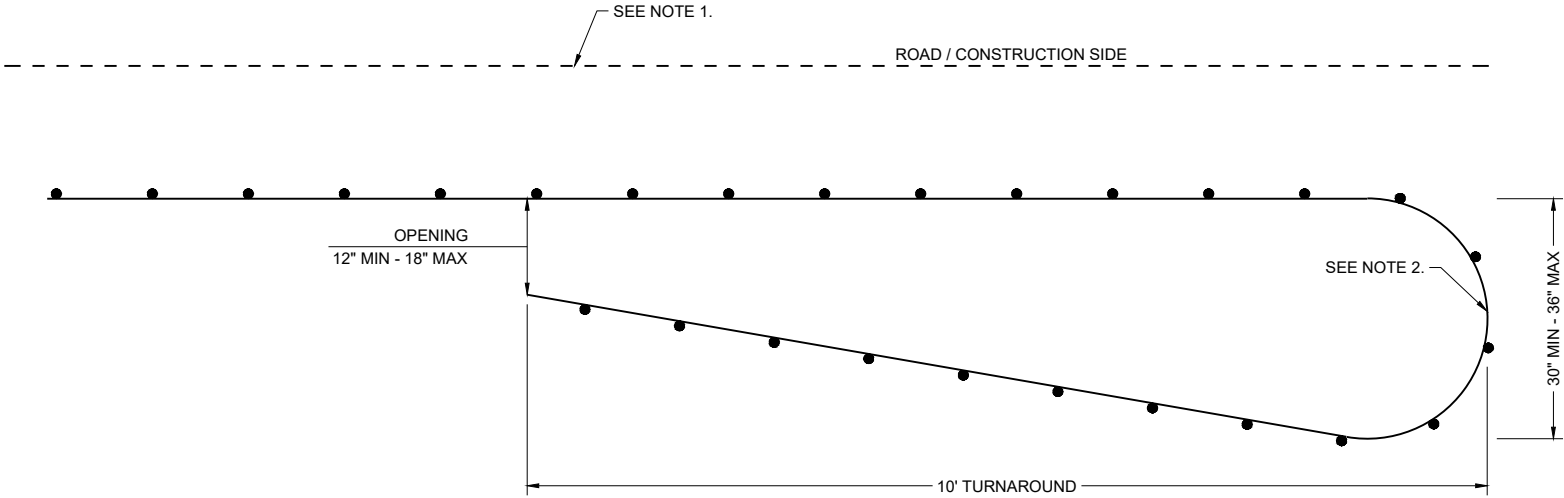
- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".



MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED 07/2018	/S/ Rodney Taylor		
DATE	ROADWAY STANDARDS	87	NT
FHWA	UNIT SUPERVISOR		

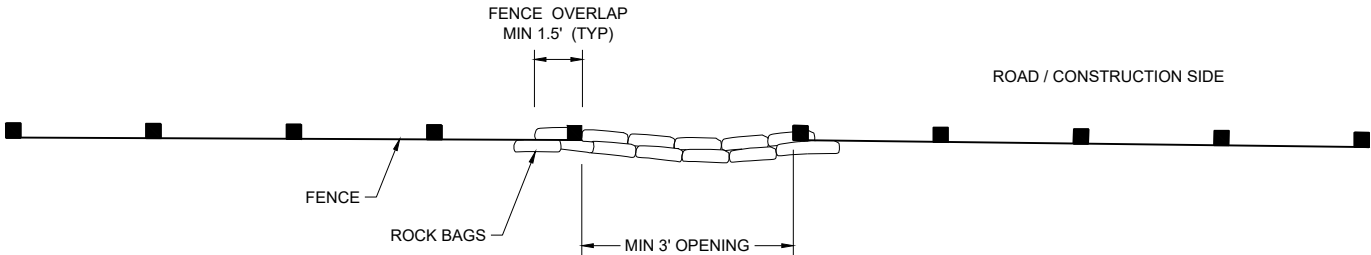
GENERAL NOTES:

1. WHERE SILT FENCE IS REQUIRED, IT SHALL BE PLACED ON THE CONSTRUCTION SIDE OF THE EXCLUSION FENCING, OR COMBINED WITH THE EXCLUSION FENCING AS ALLOWED IN THE SPECIFICATIONS. STAKES ON THIS DETAIL ARE OPPOSITE OF STANDARD SILT FENCE FOR SEDIMENT CONTROL.
2. PLACE TURNAROUNDS AT ALL TERMINI ENDS OF THE EXCLUSION FENCING.
3. IF TEMPORARY ACCESS POINTS ARE NEEDED DURING CONSTRUCTION THAT REQUIRE OPENINGS IN THE EXCLUSION FENCING, ACCESS OPENINGS SHOULD BE TIGHTLY SECURED WITH BALES OF HAY OR STRAW WHENEVER CONSTRUCTION RELATED ACTIVITIES ARE NOT OCCURRING. REINSTALL EXCLUSION FENCING WHEN THE WORK REQUIRING THE TEMPORARY ACCESS OPENING IS COMPLETED.
4. THE FENCE CAP MAY BE A 6" UNDER DRAIN PIPE, SLIT DOWN THE CENTER AND PLACED OVER THE FENCE. COMMERCIALLY AVAILABLE SAFETY CAPS WITH A LIP MAY BE USED. OTHER DNR APPROVED METHODS TO PREVENT TURTLES FROM PASSING OVER THE TOP OF THE FENCE MAY BE USED.
- SECURELY FASTEN THE CAP TO PREVENT IT FROM BEING DISLODGED.

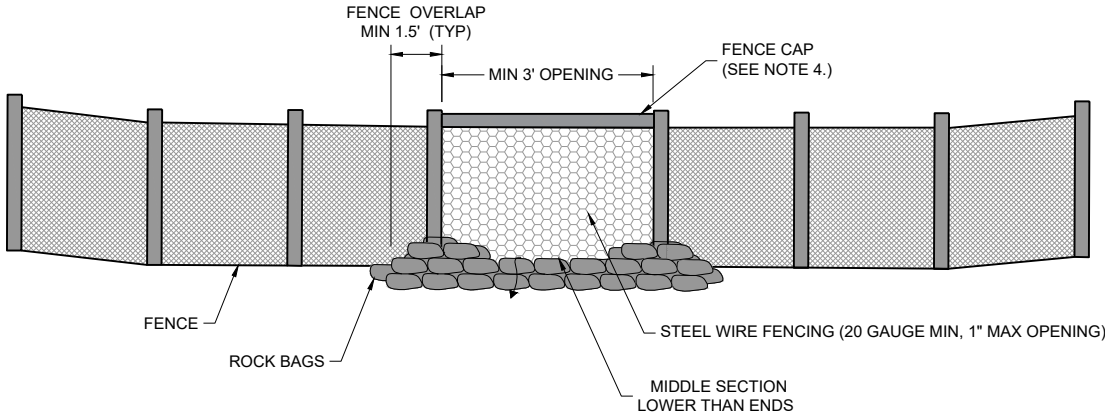


PLAN VIEW

CLIMBING TURTLE EXCLUSION FENCE DETAIL



PLAN VIEW



FRONT VIEW

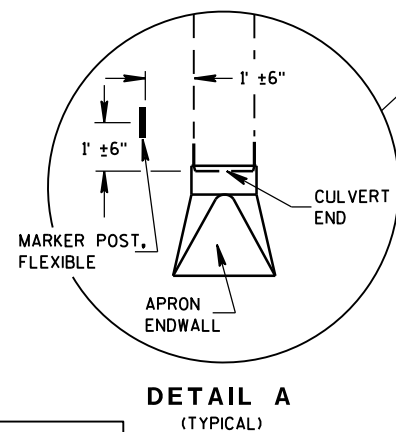
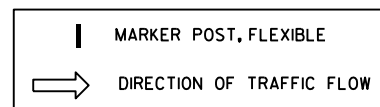
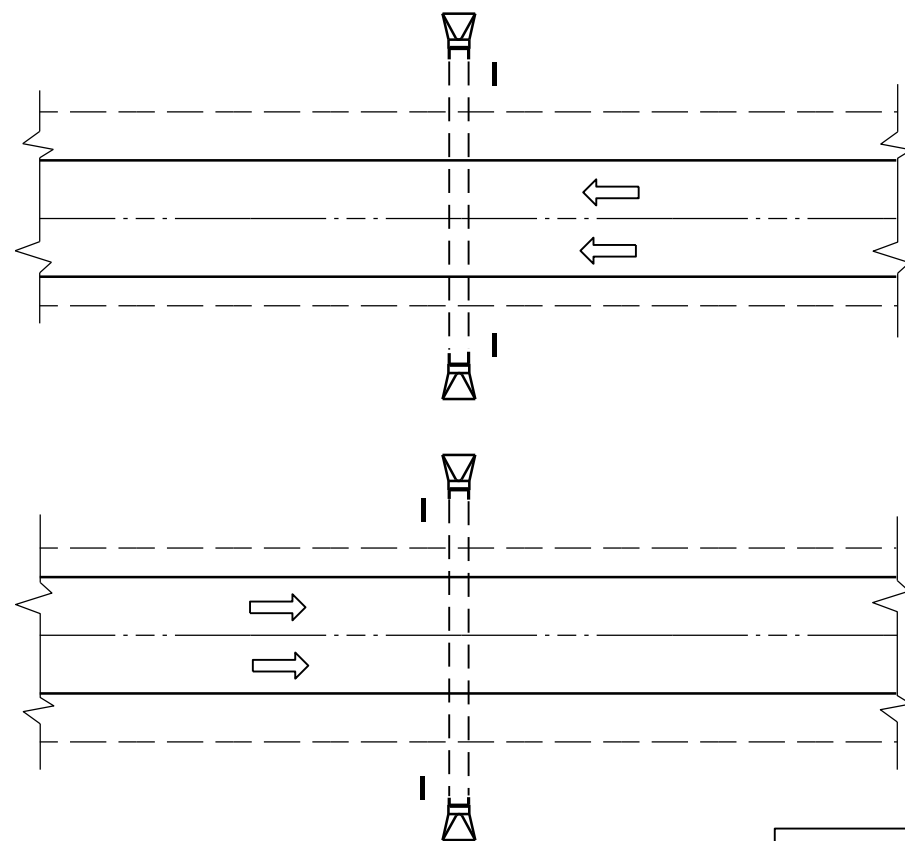
CLIMBING TURTLE FENCE RELIEF DETAIL

TURTLE EXCLUSION FENCE
CLIMBING TURTLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

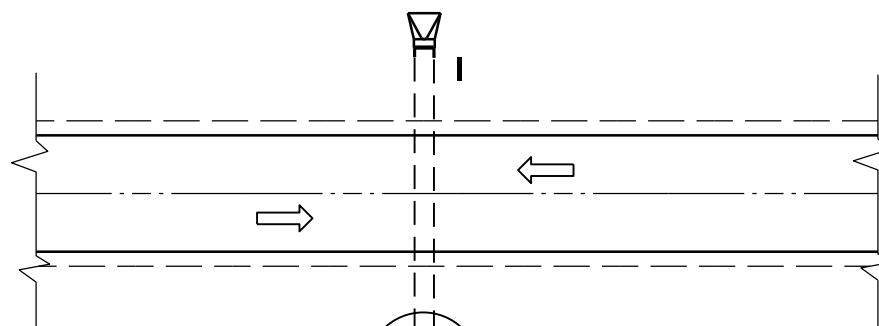
APPROVED
AUGUST 2025 /S/ ALYSSA BARRETTE
DATE CHIEF STATEWIDE ENVIRONMENTAL SERVICES
FHWA BUREAU OF TECHNICAL SER

PLAN VIEW
DIVIDED HIGHWAY

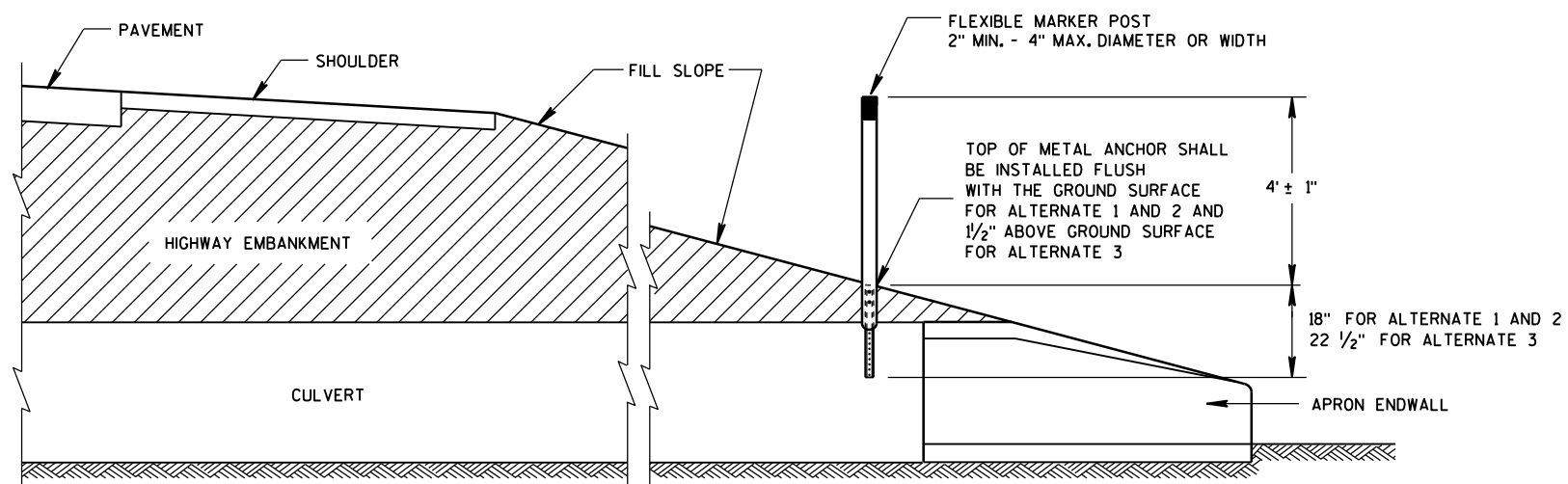


DETAIL A
(TYPICAL)

PLAN VIEW
UNDIVIDED HIGHWAY



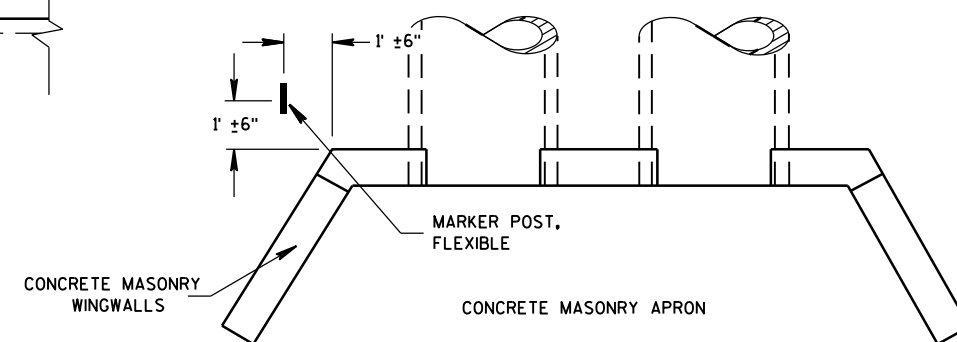
FLEXIBLE MARKER POST LOCATION



CROSS SECTION
FLEXIBLE MARKER POST

GENERAL NOTES

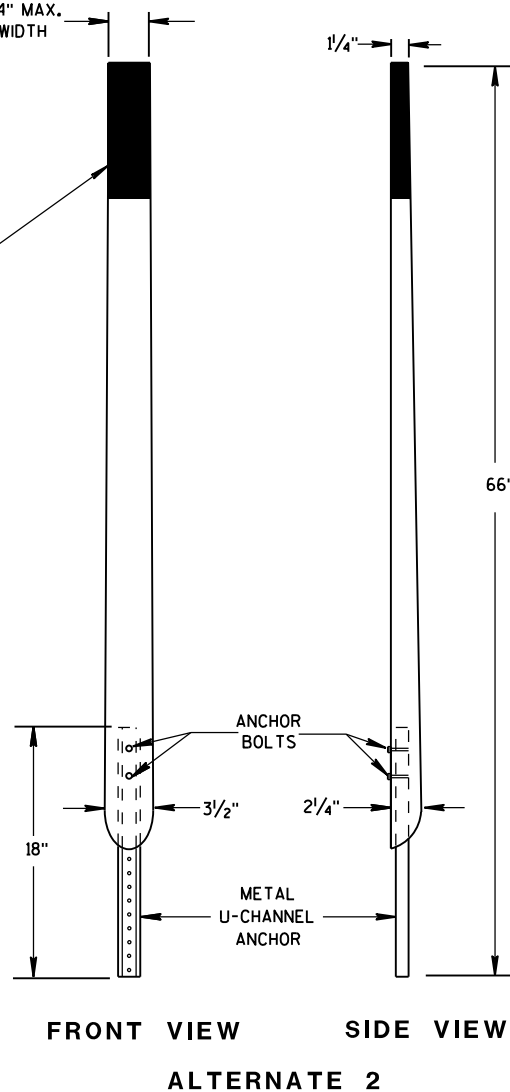
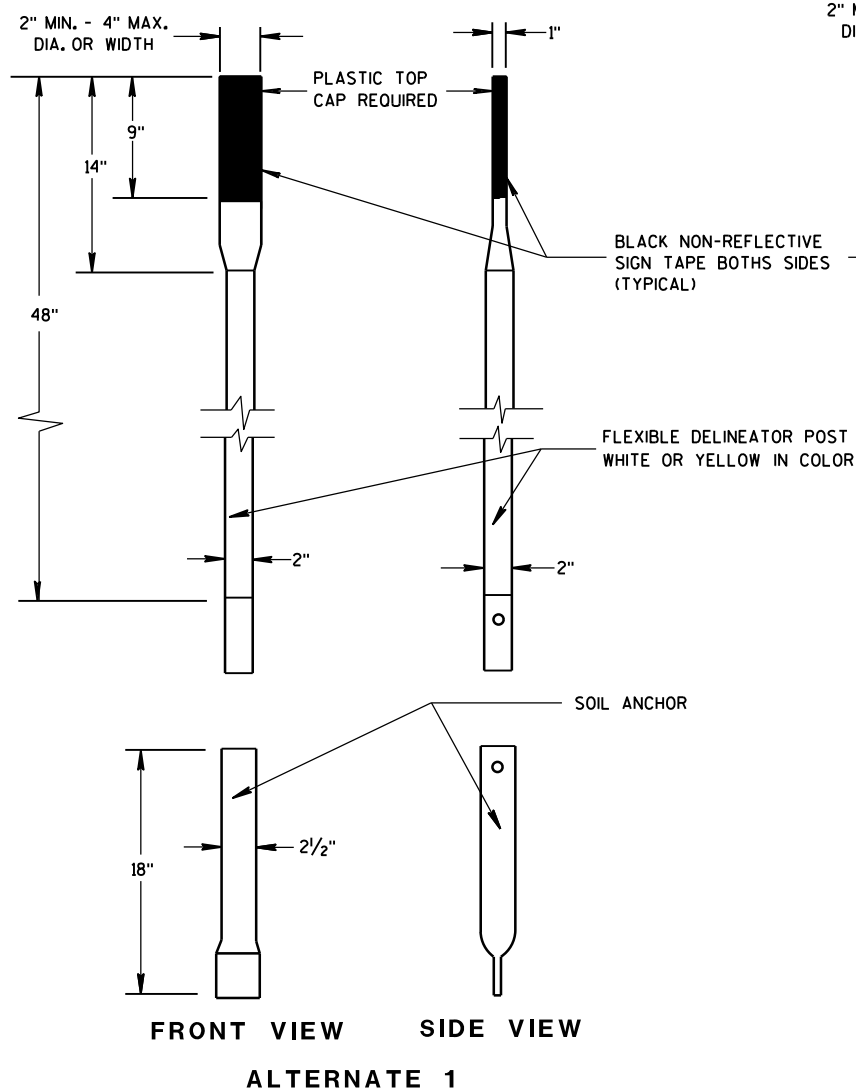
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



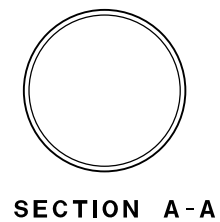
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST
FOR CULVERT END

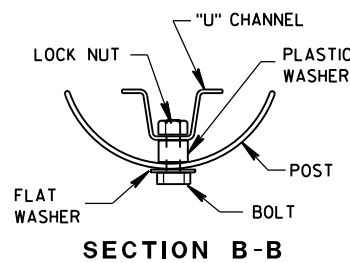
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



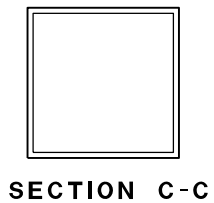
FLEXIBLE MARKER POSTS



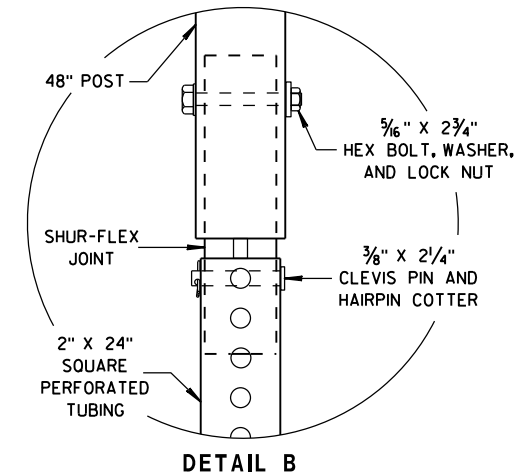
SECTION A-A



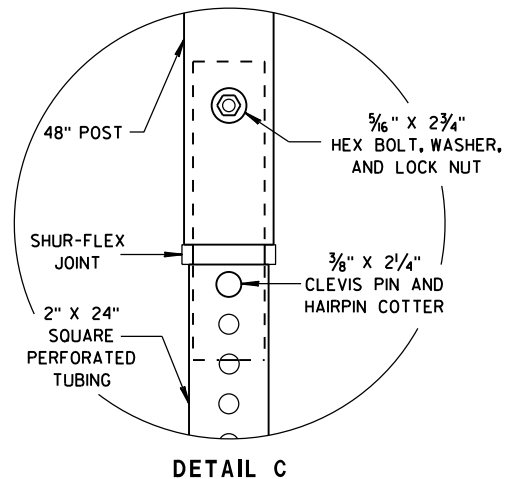
SECTION B-B



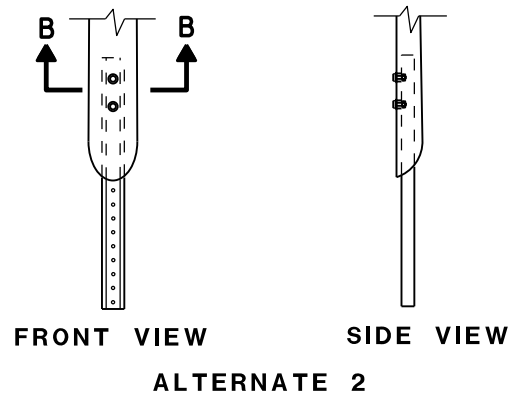
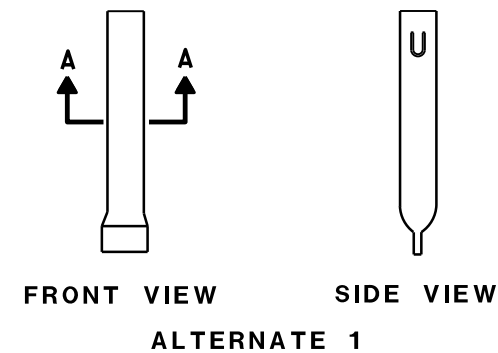
SECTION C-C



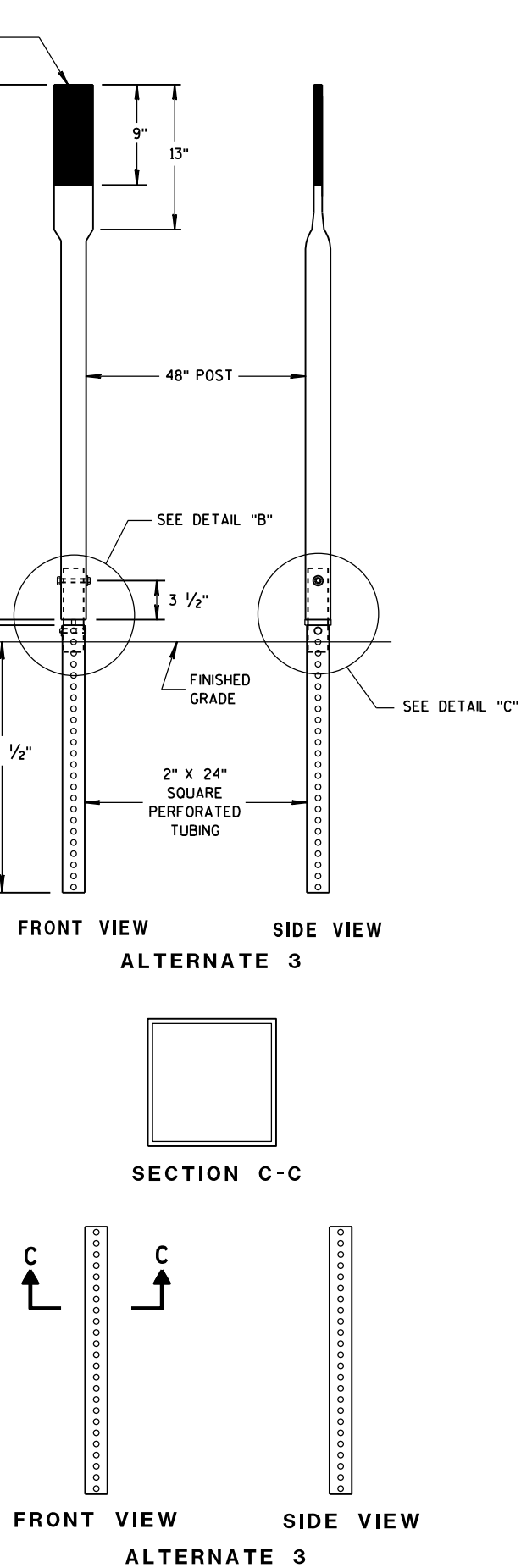
DETAIL B



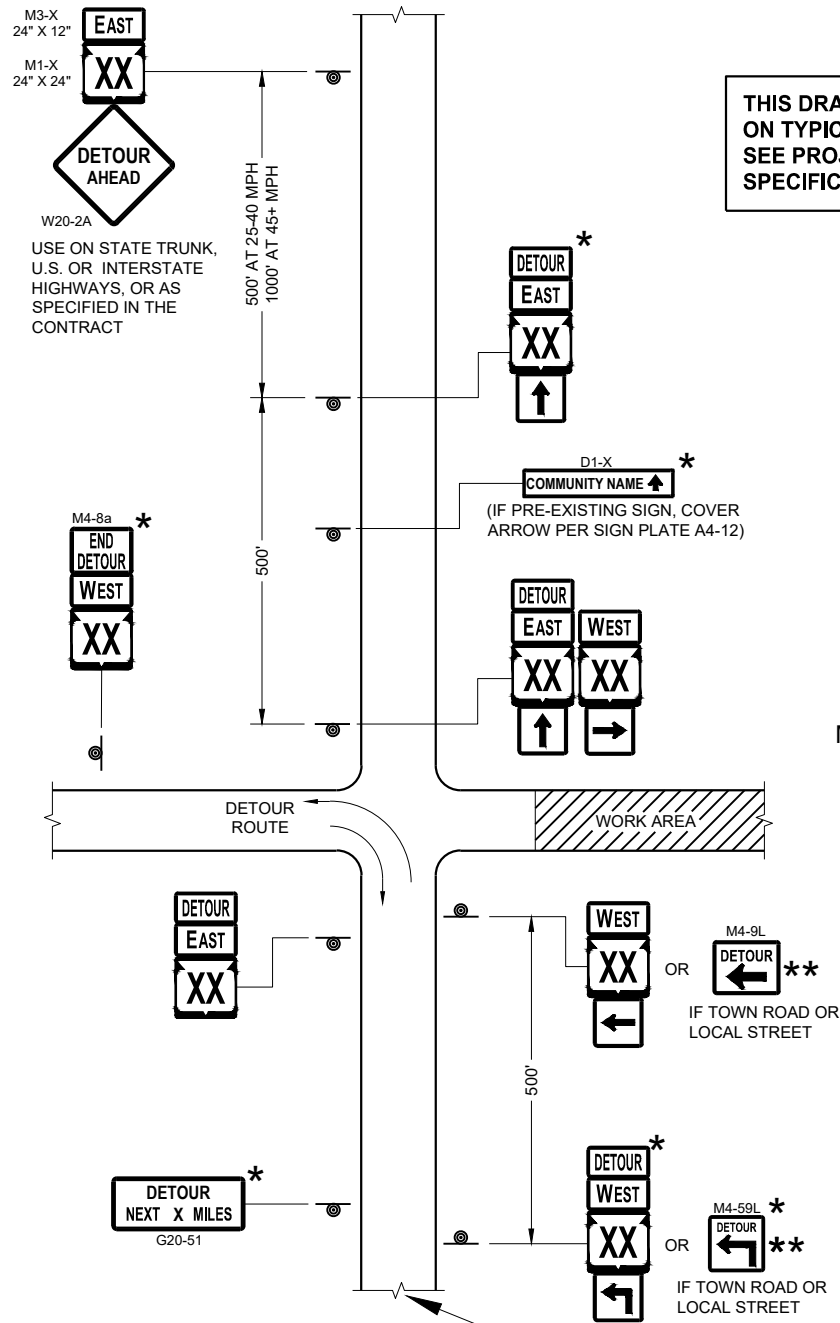
DETAIL C



FLEXIBLE MARKER POST ANCHORS



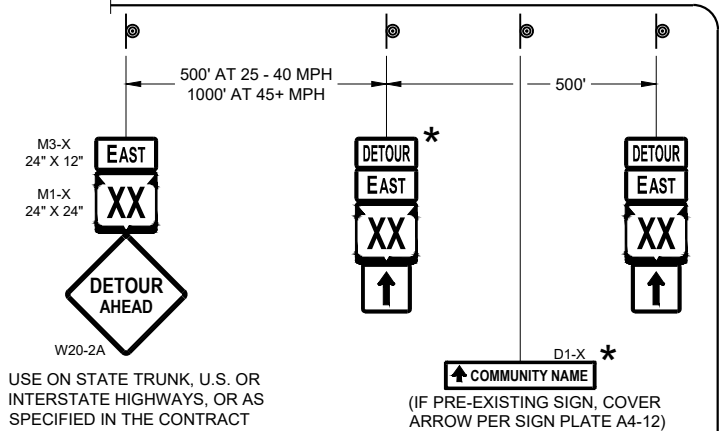
FLEXIBLE MARKER POST FOR CULVERT END	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/1/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER 90 IGN
FHWA	



SEE SPECIFIC PROJECT DETOUR
SIGNING DETAIL SHEETS AND
DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

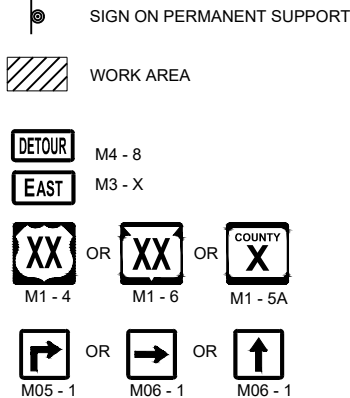
THIS DRAWING PROVIDES GENERAL GUIDANCE
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.
SEE PROJECT DETOUR SIGNING SHEETS FOR
SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT



DETAIL F
DETOUR SIGNING

LEGEND



GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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.

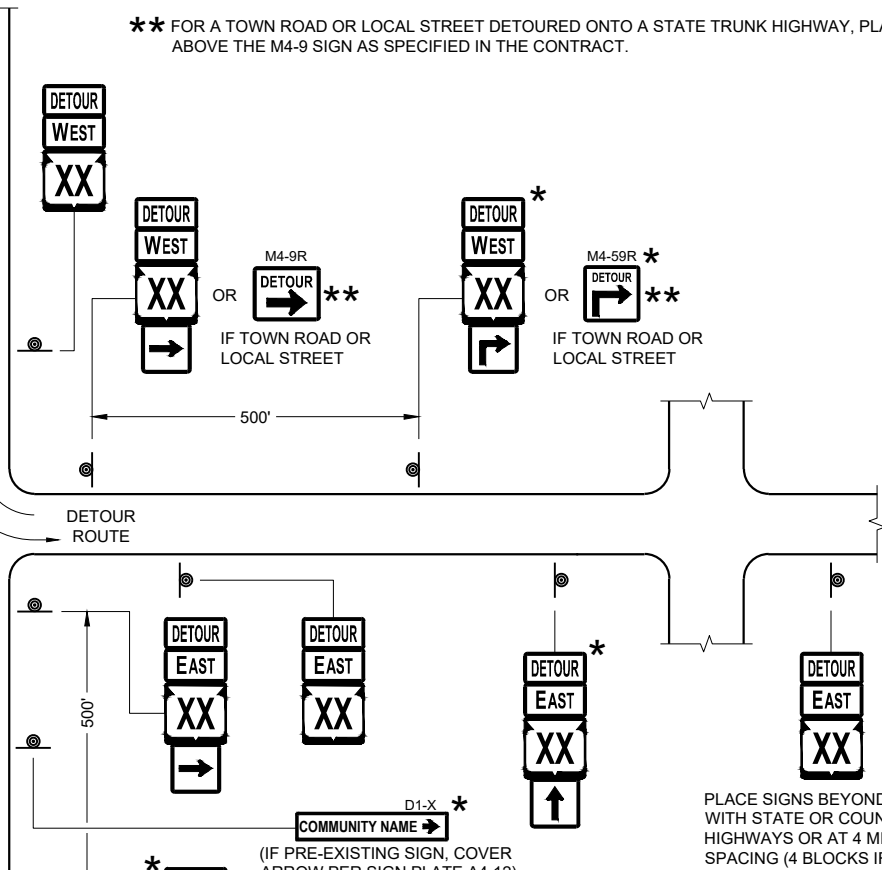
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

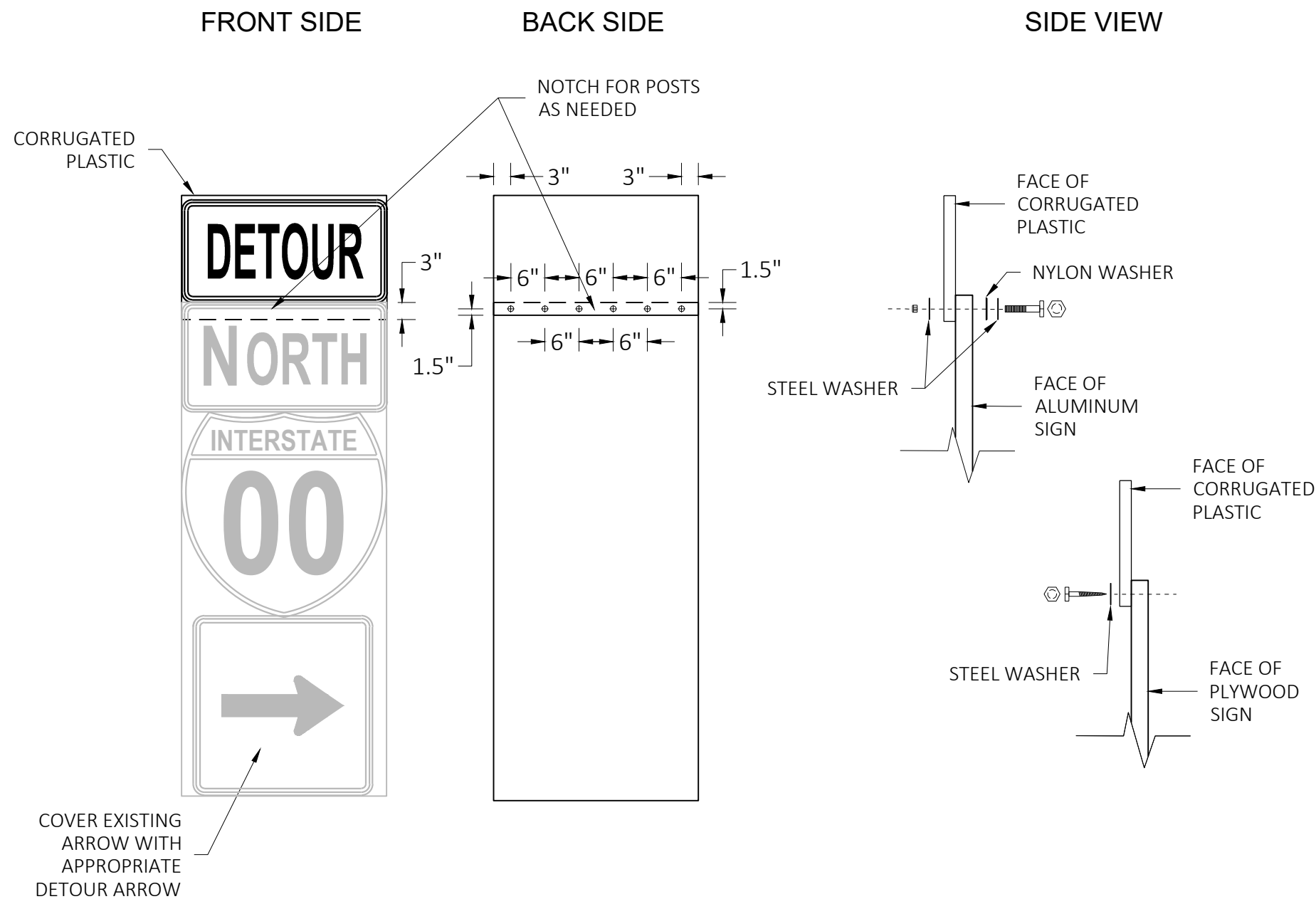


PLACE SIGNS BEYOND INTERSECTIONS
WITH STATE OR COUNTY TRUNK
HIGHWAYS OR AT 4 MILE MAXIMUM
SPACING (4 BLOCKS IF URBAN AREA)

DETOUR SIGNING
FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 91
FHWA



GENERAL NOTES

CELLS OF CORRUGATED PLASTIC SHALL BE VERTICALLY ORIENTED.

PROVIDE A 0.4-INCH THICK BASE CORRUGATED PLASTIC WITH A 0.035-INCH WALL THICKNESS AND 0.4-INCH CELL SIZE.

FOR 36" WIDE SIGNS: USE 6 FASTENERS AS SHOWN.

FOR 24" WIDE SIGNS: USE 4 FASTENERS WITH EDGE SPACING AS SHOWN AND 6" SPACING BETWEEN FASTENERS.

METAL WASHERS, NUTS, BOLTS AND LAGS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3.
- ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

PLYWOOD SIGNS:

LAG SCREWS - 5/16" x 1"

ALUMINUM SIGNS:

MACHINE BOLTS - 5/16" x 1-1/4" LENGTH W/NUTS

WASHERS:

1-1/4" O.D. x 3/8" I.D. x 1/16" STEEL

1-1/4" O.D. x 3/8" I.D. x .080 NYLON

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING

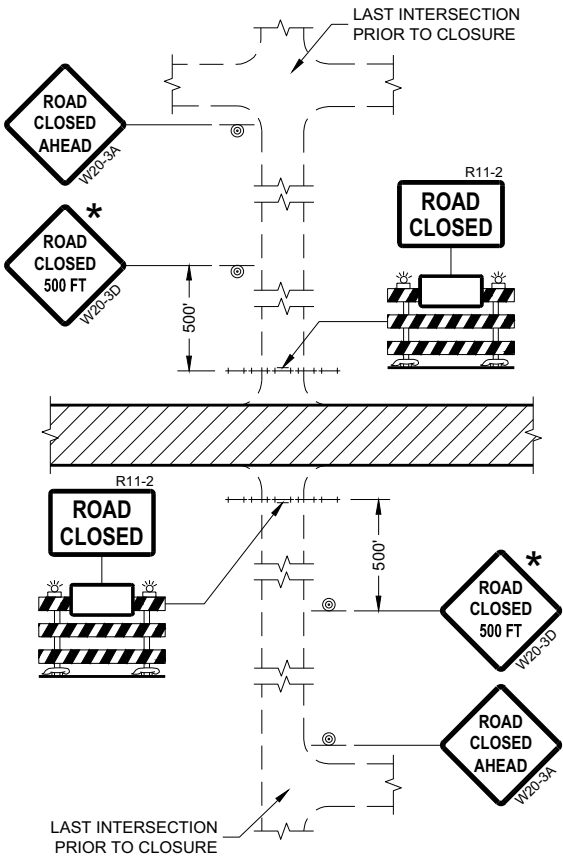
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

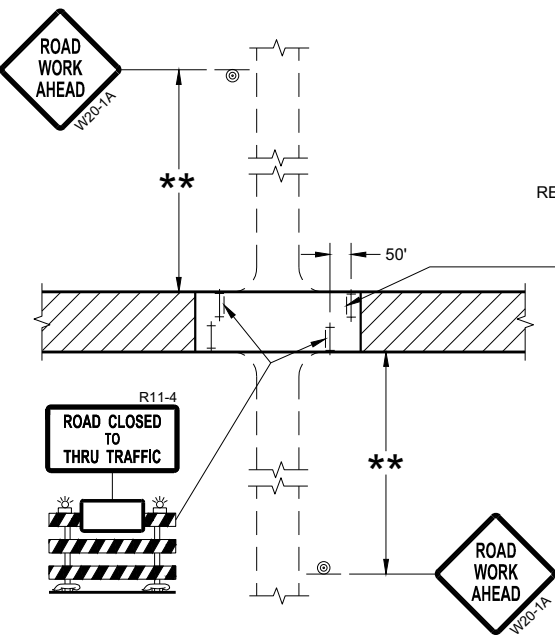
May 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

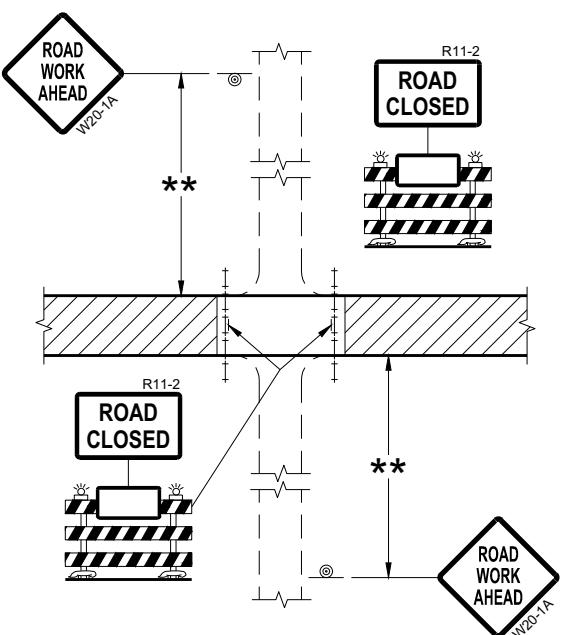
FHWA



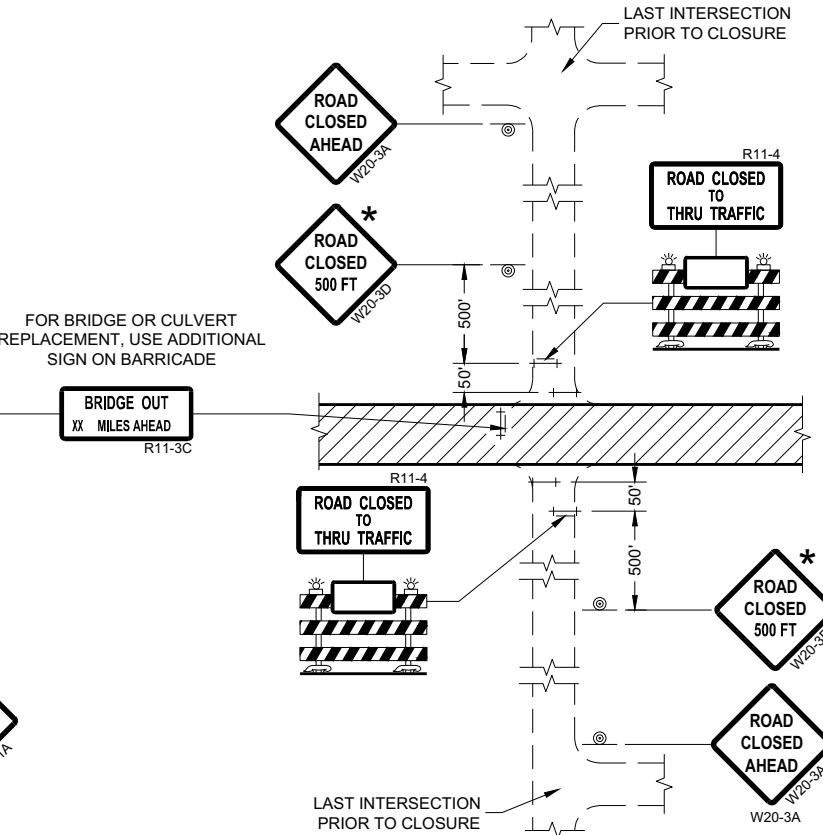
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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.

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

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 REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

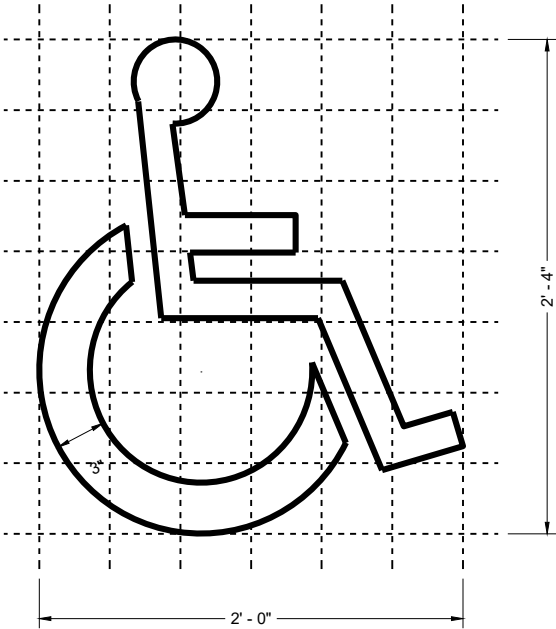
LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

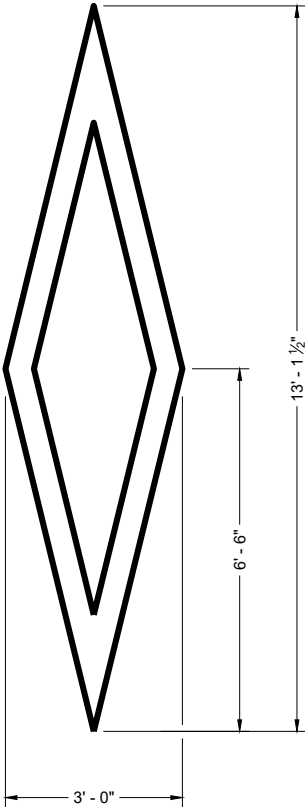
**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 93
FHWA



HANDICAP SYMBOL

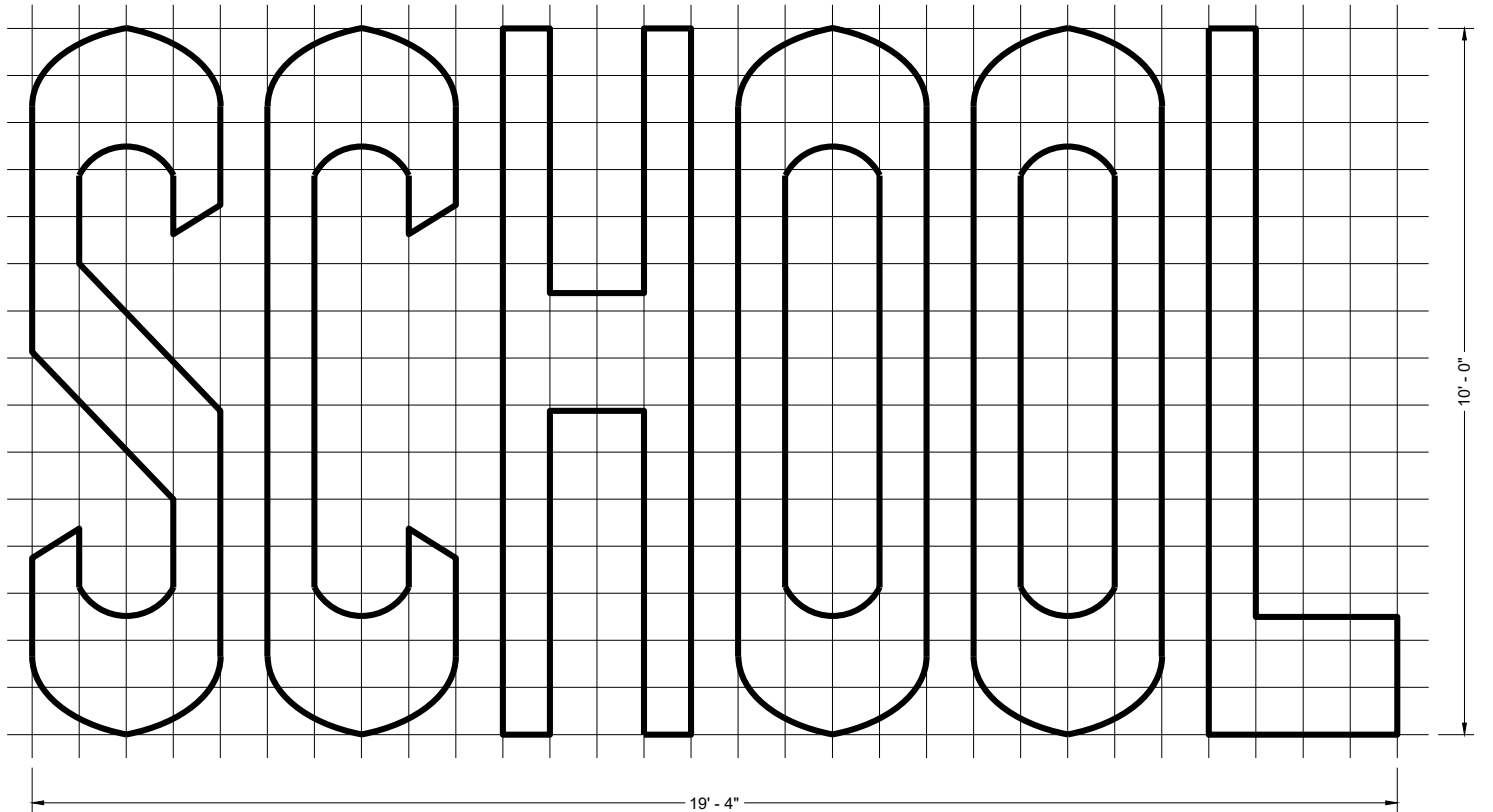
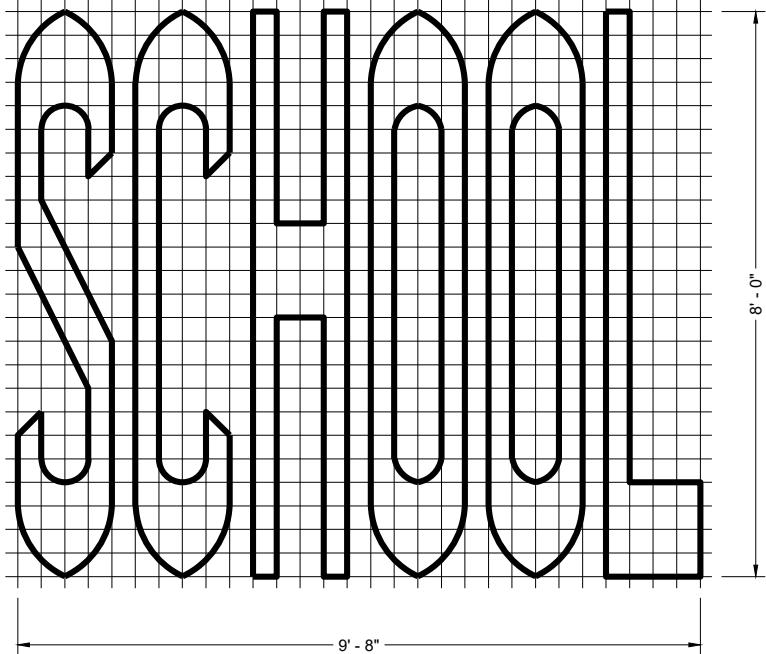
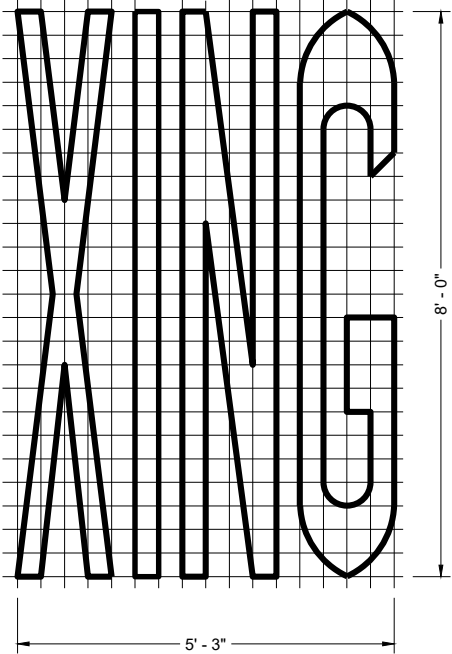
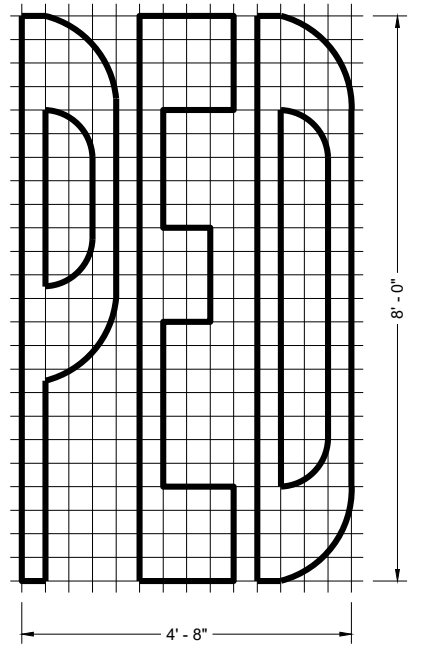
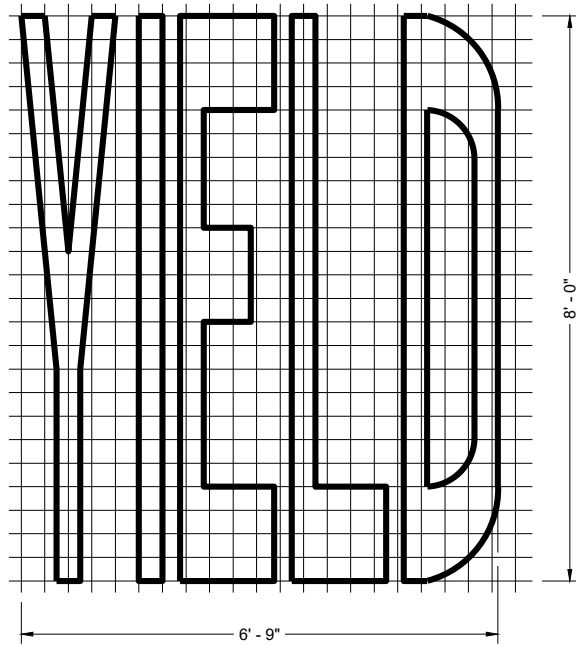
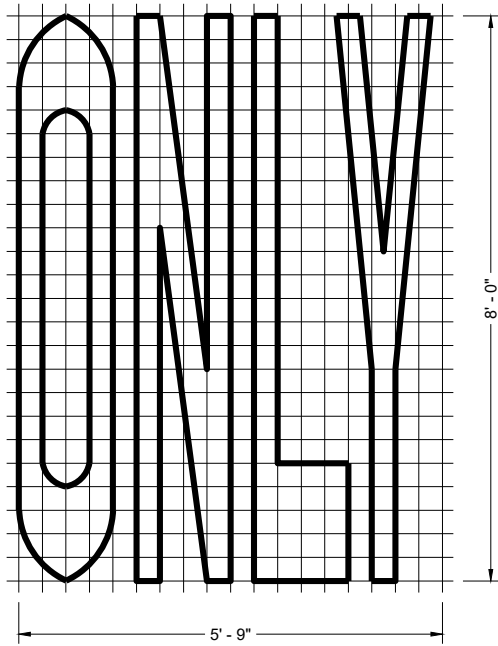
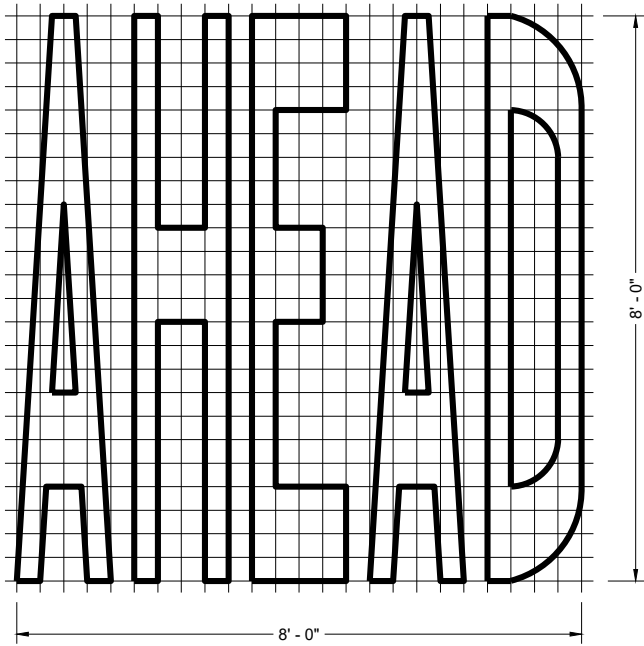
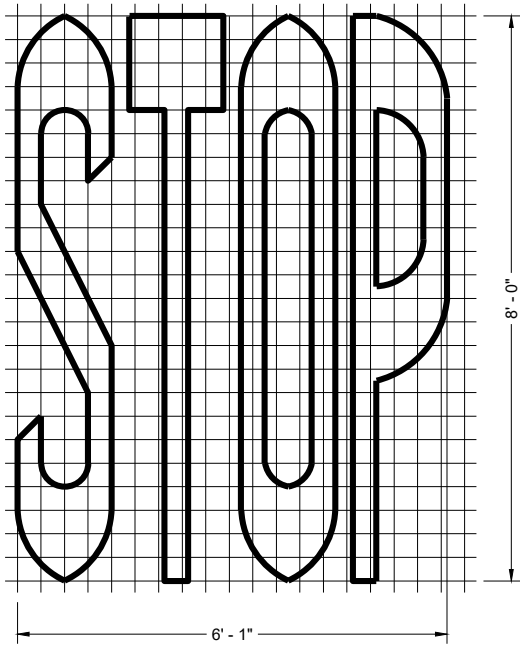


PREFERENTIAL
LANE SYMBOL

GENERAL NOTES

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

PAVEMENT MARKING SYMBOLS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2024 DATE	/S/ Jeannie Silver STATE SIGNING AND MARKING ENGINEER
FHWA	



SINGLE LANE

TWO - LANE

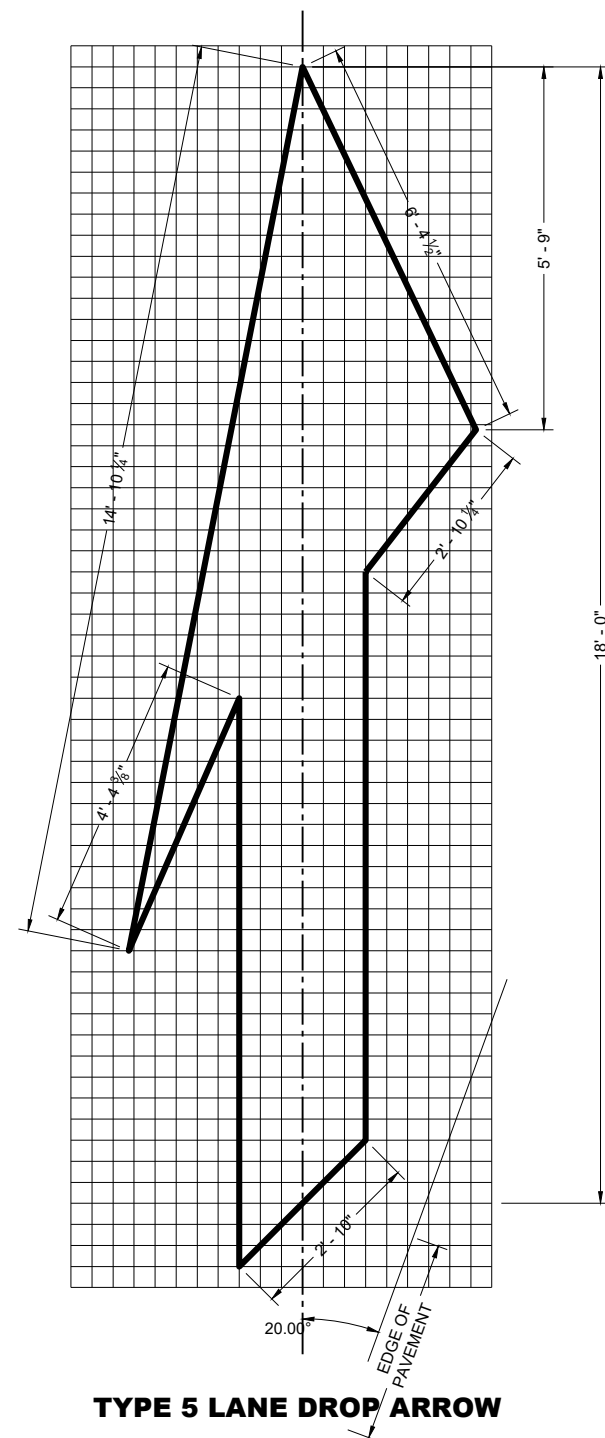
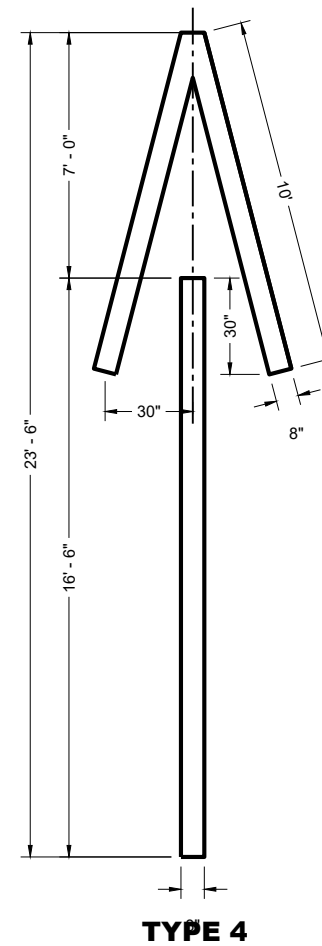
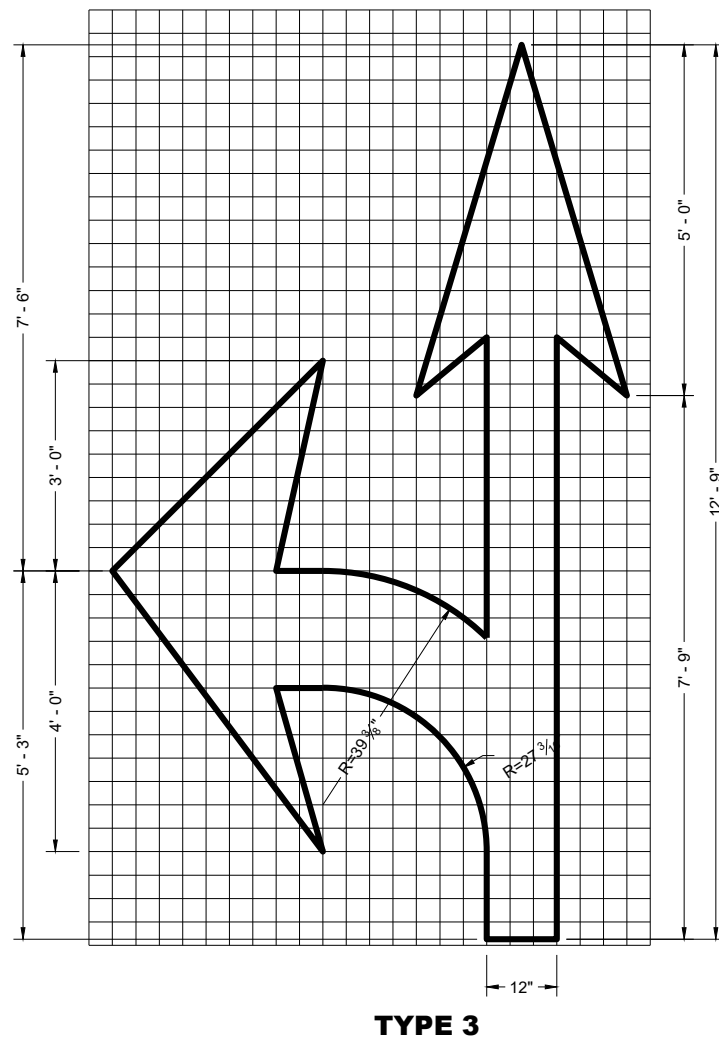
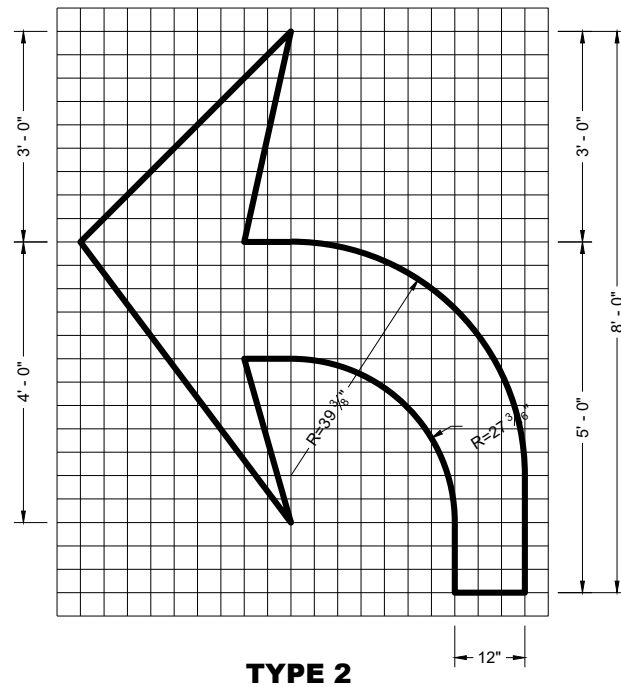
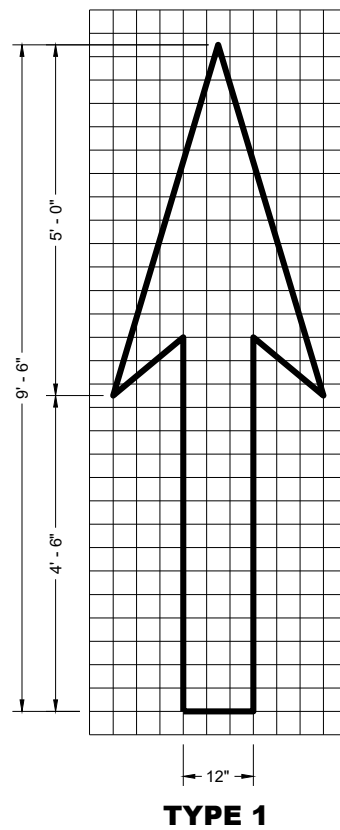
GENERAL NOTES

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

PAVEMENT MARKING WORDS

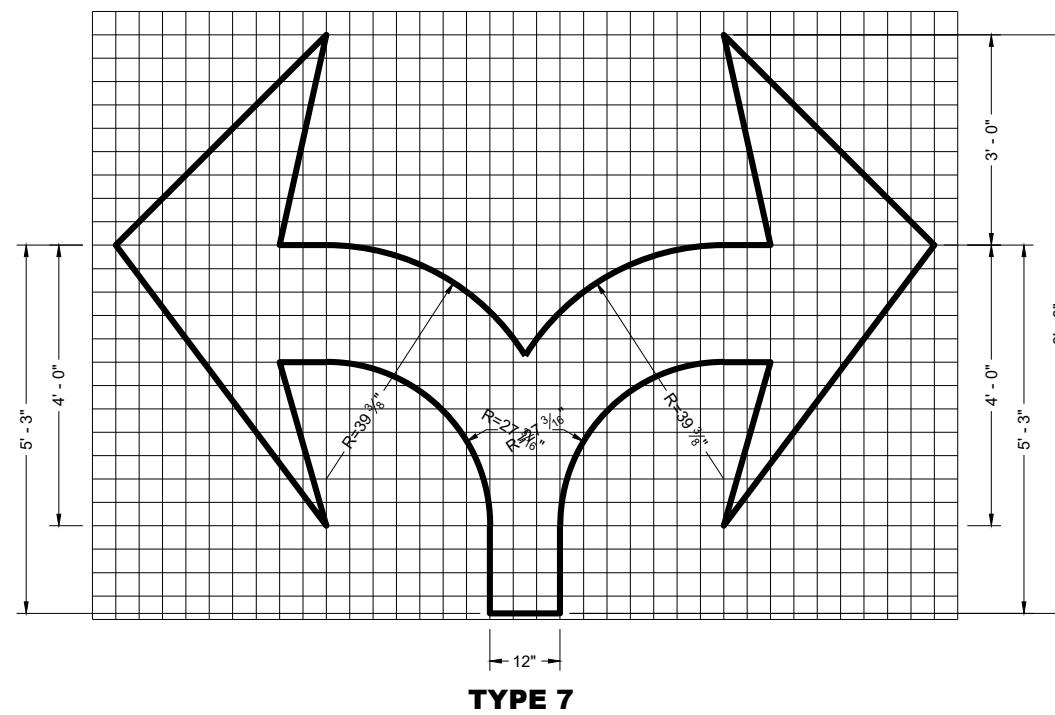
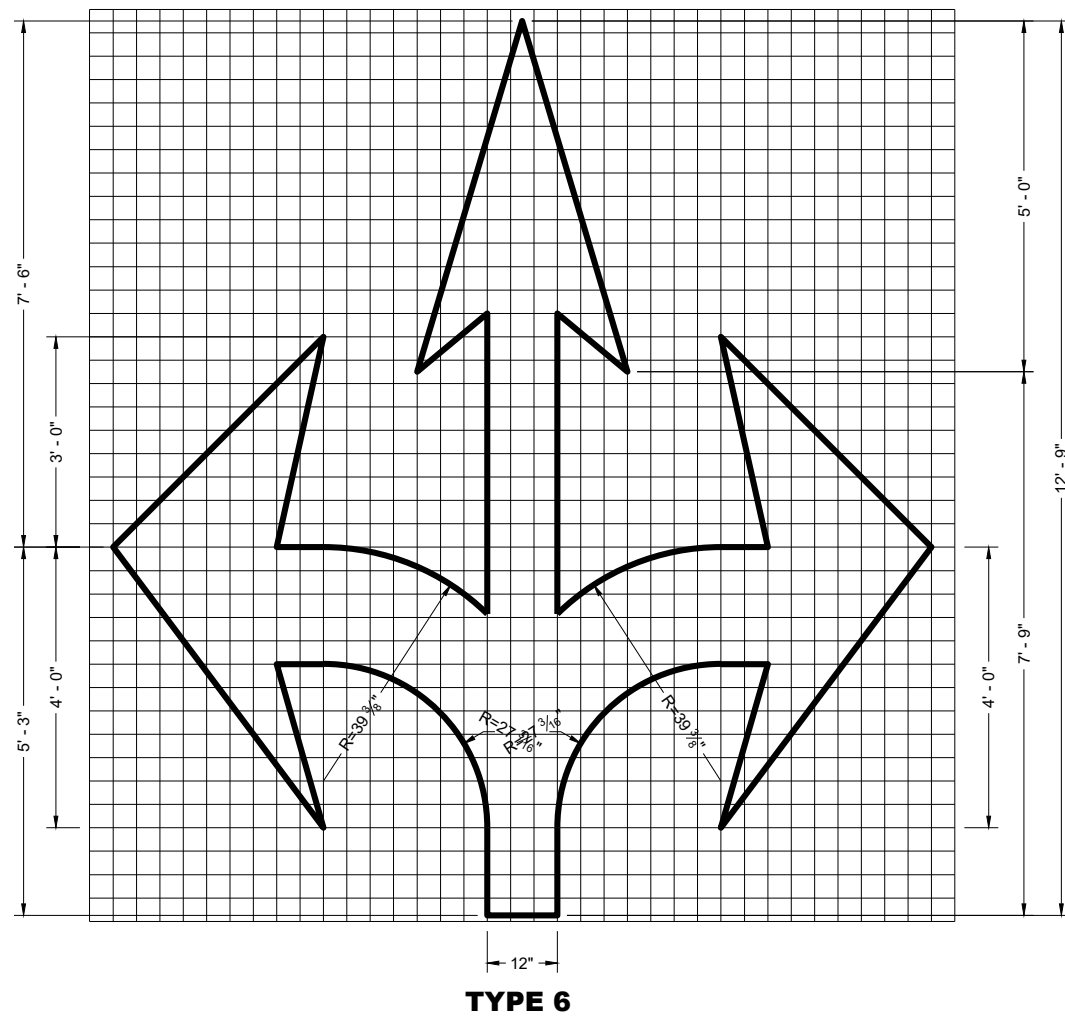
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 /S/ Jeannie Silver
DATE STATE SIGNING AND MARKING ENGINEER



GENERAL NOTES

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



SDD 15C08-24a



PERMANENT PAVEMENT MARKING

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

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

-  "T" MARKING
 SIGN ON PERMANENT SUPPORT
 DIRECTION OF TRAFFIC

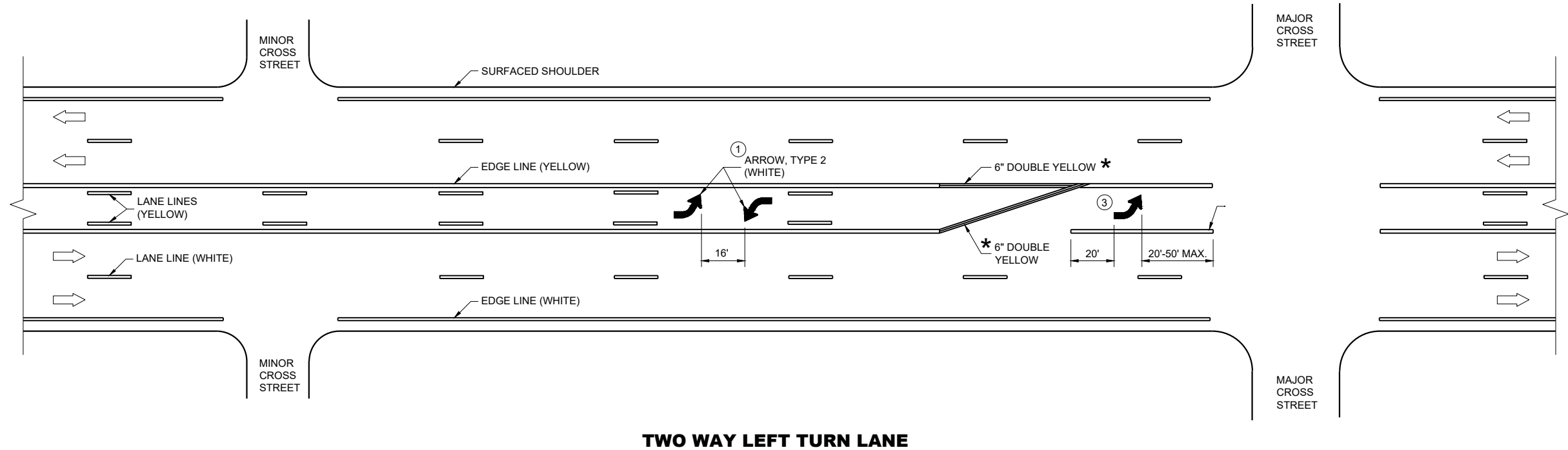
PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

000 15000 01

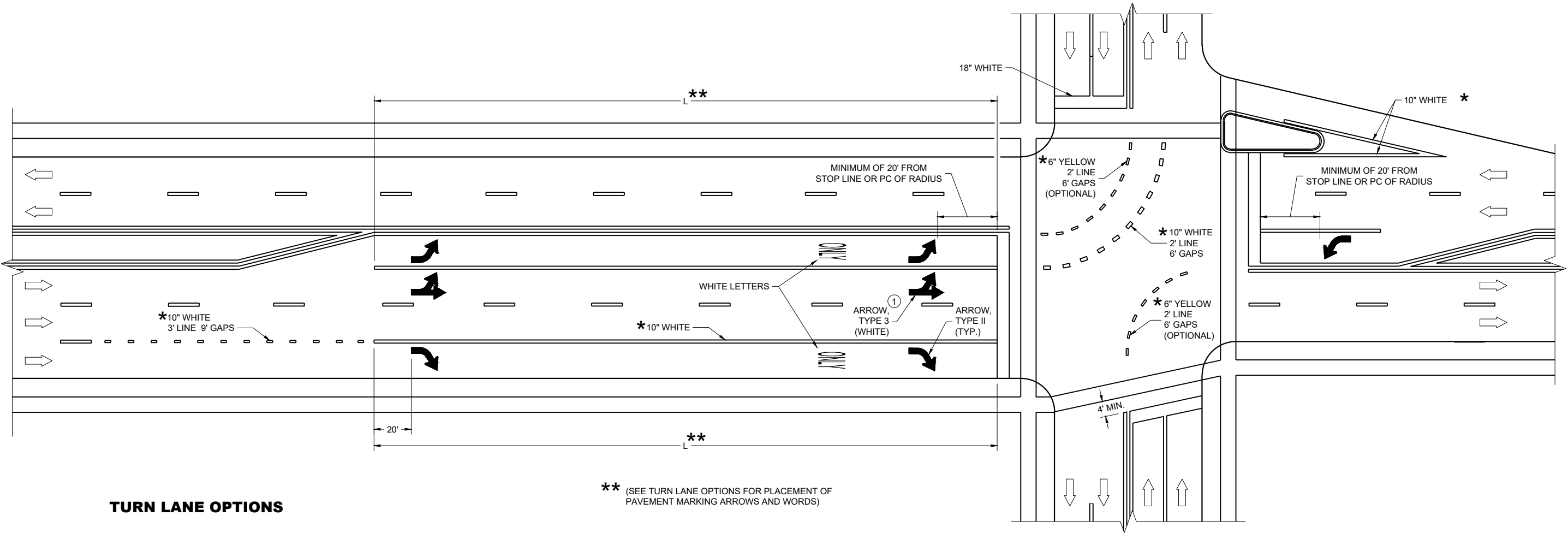


GENERAL NOTES

- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 10" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

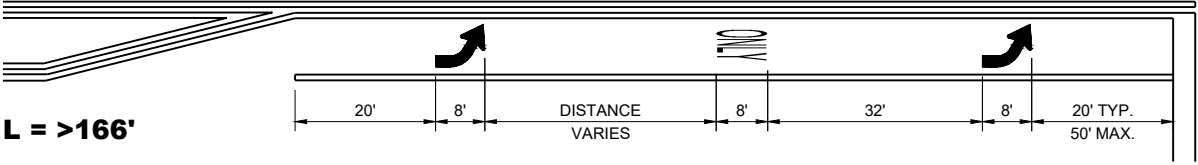
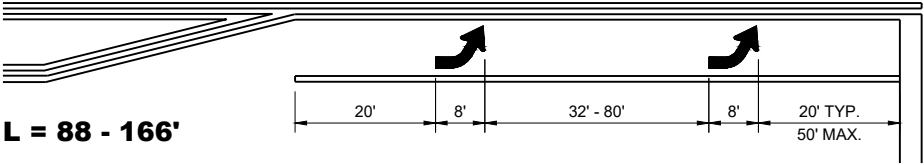
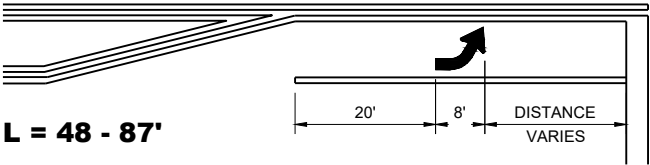
➡ DIRECTION OF TRAFFIC

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TURN LANE OPTIONS

LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

① QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

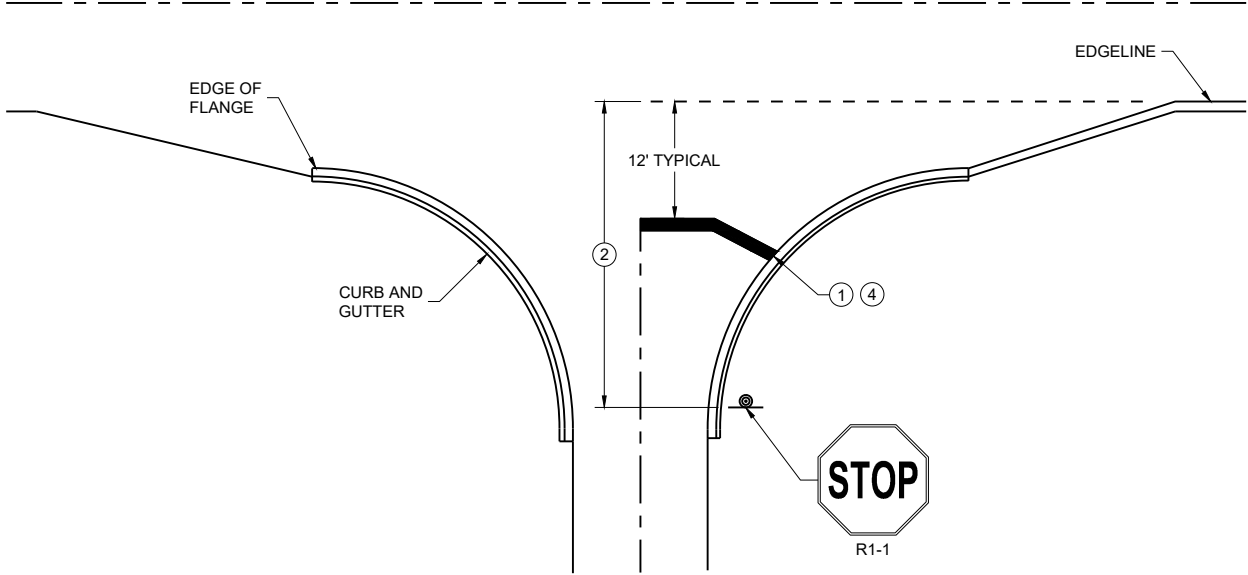
➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

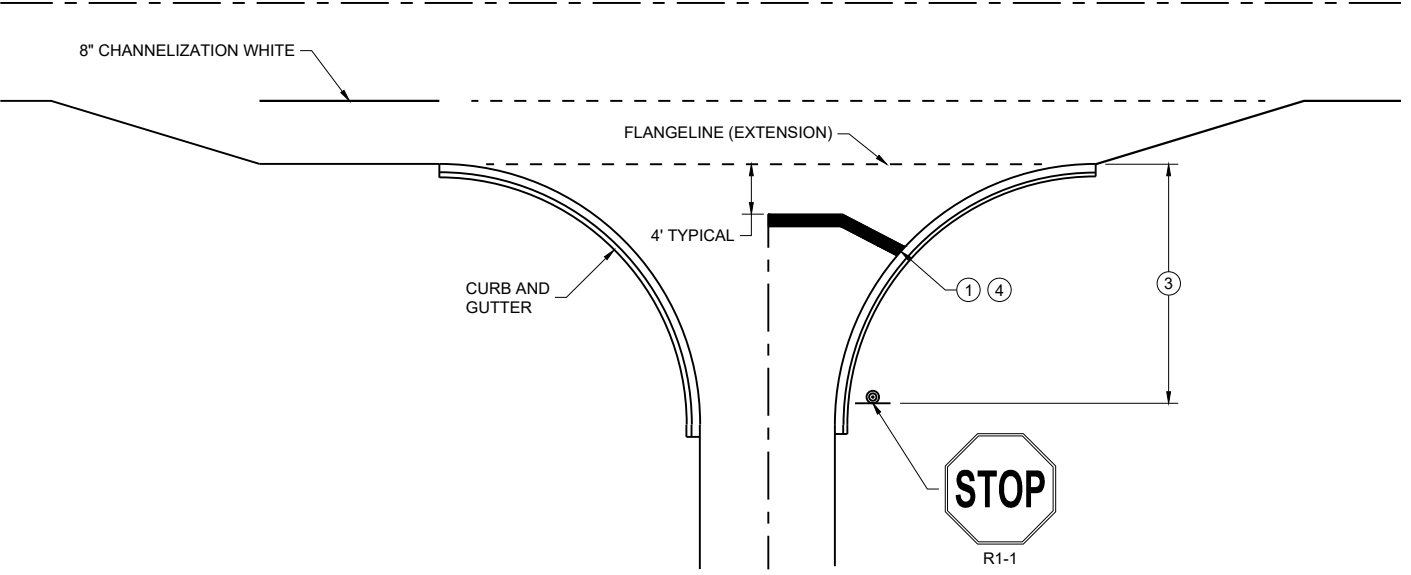
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING
(TURN LANES)

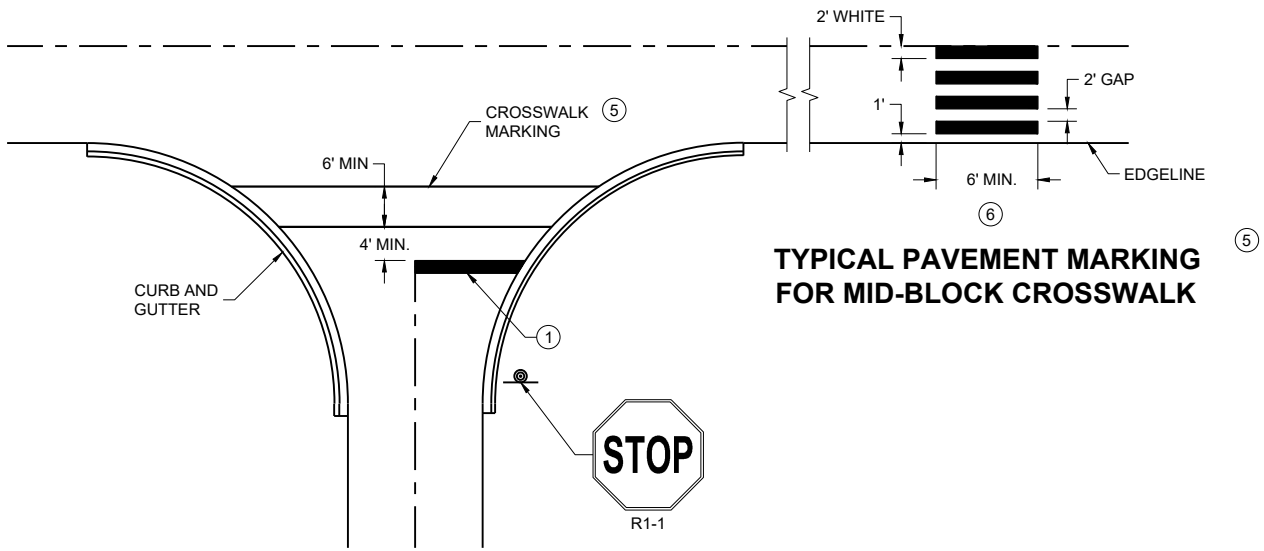
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



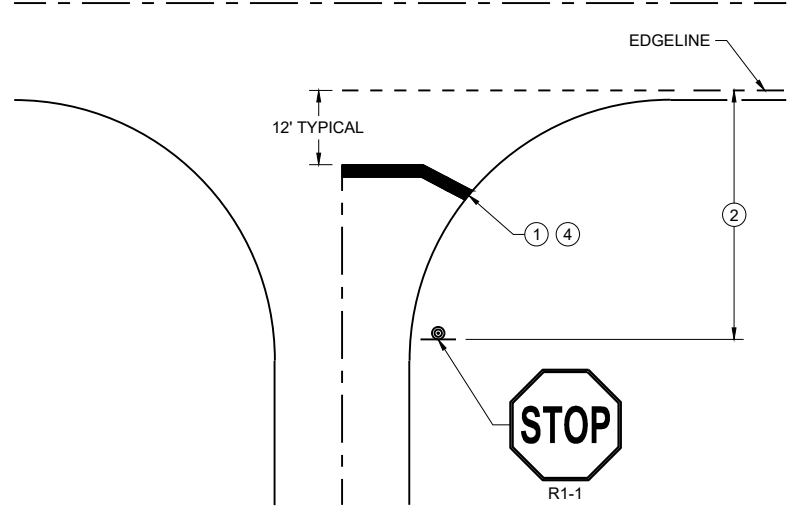
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- 3 NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE EXTENSION.
- 4 MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- 5 LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES.
- 6 POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS

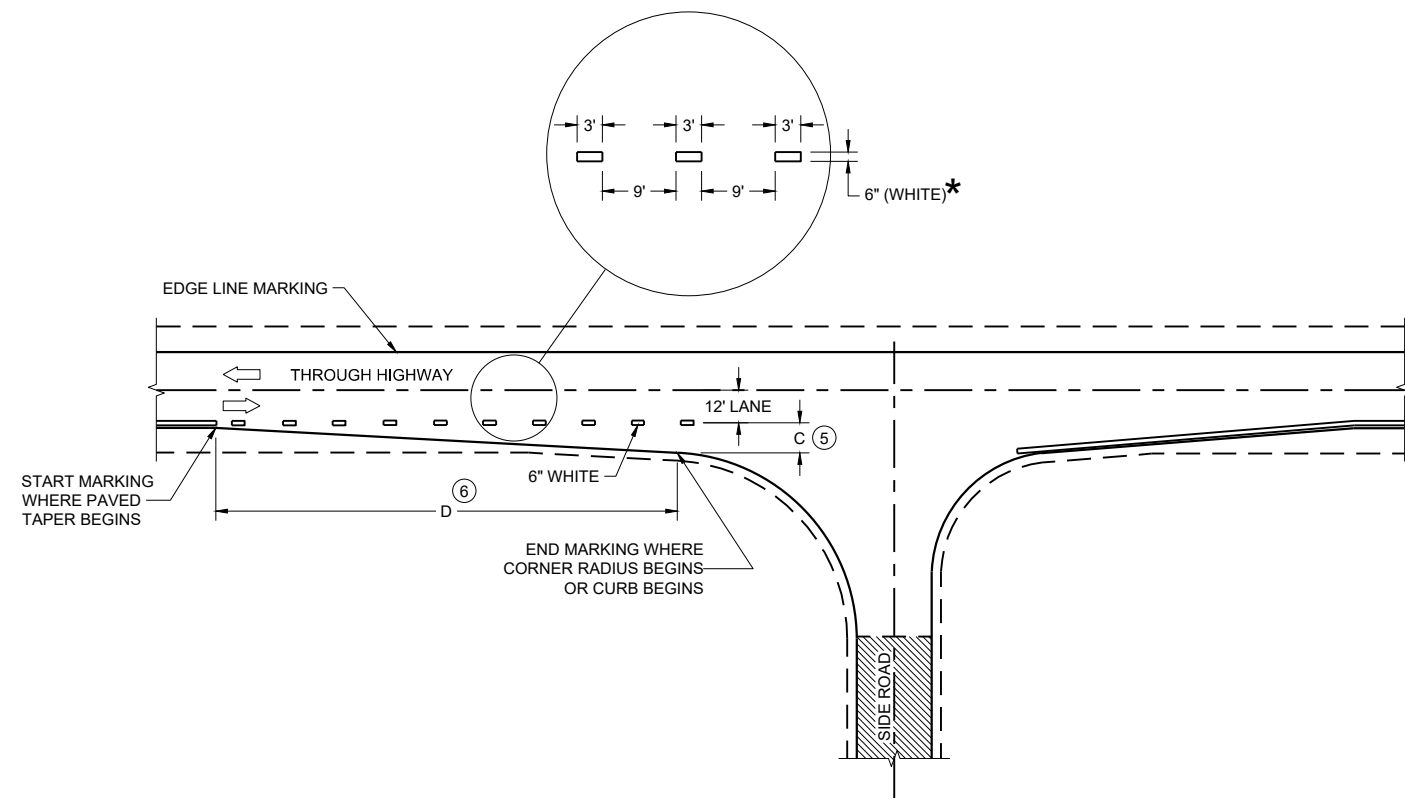
STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

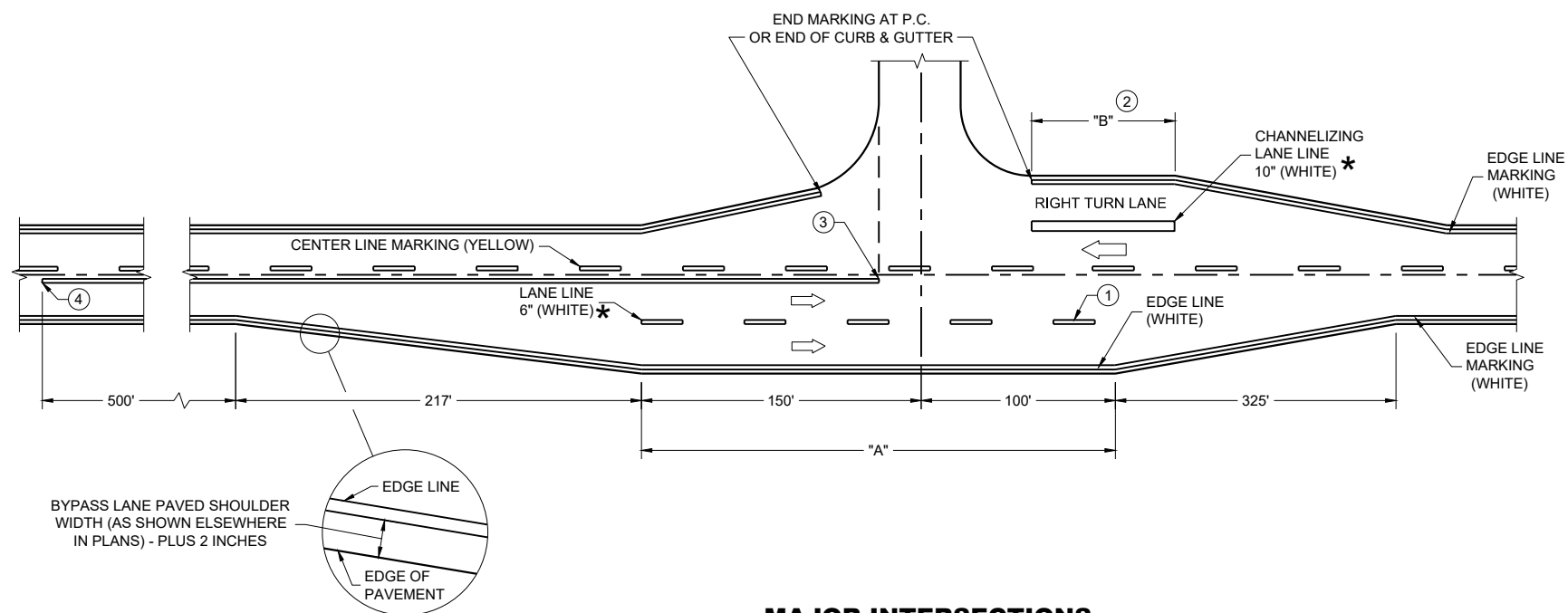
APPROVED
March 2024
DATE

/S/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER

FHWA



MINOR INTERSECTION



MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

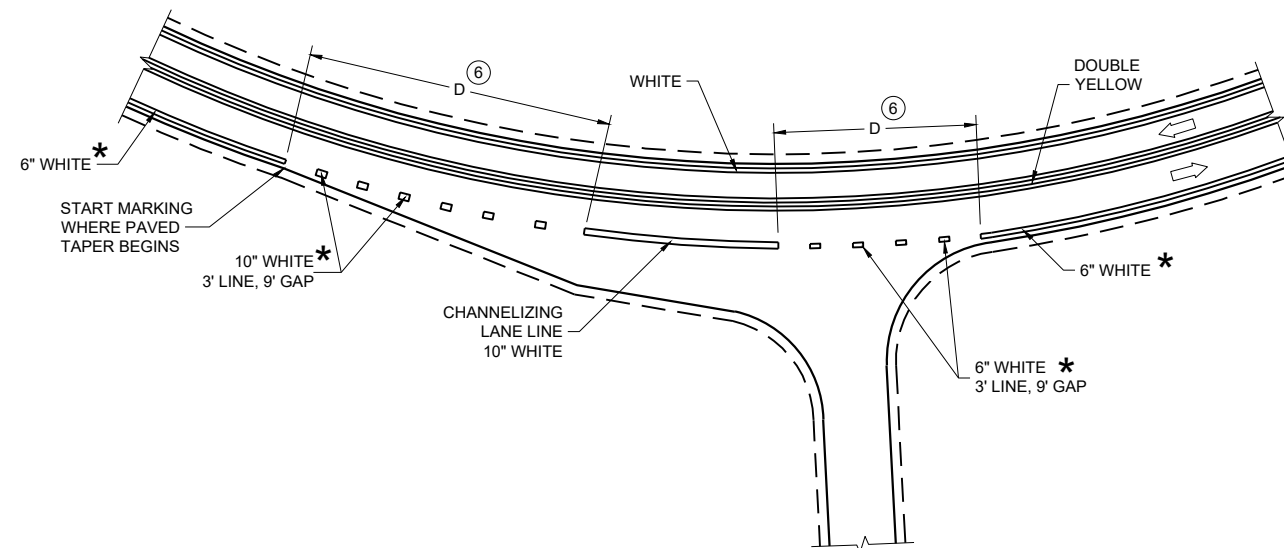
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

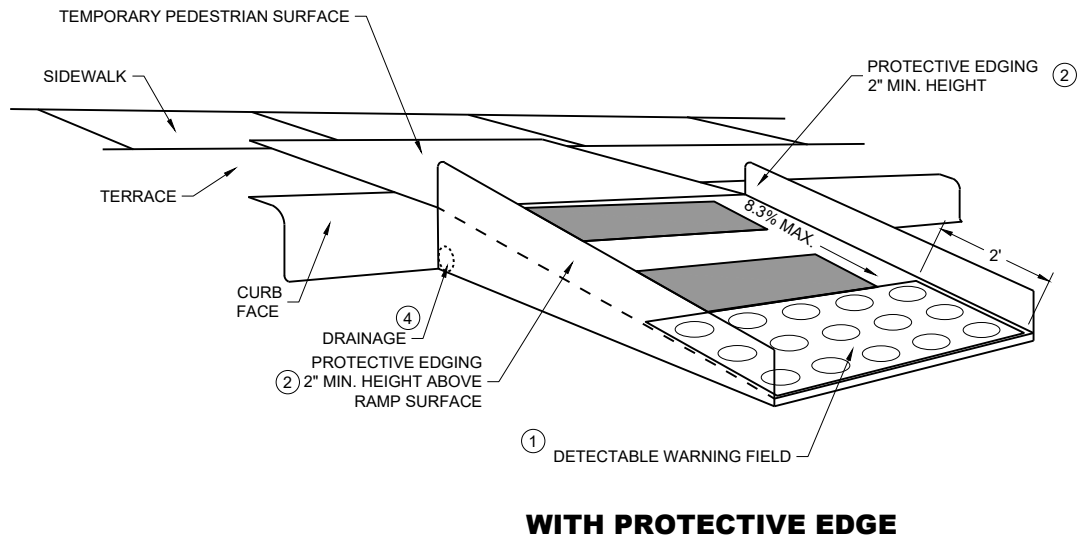
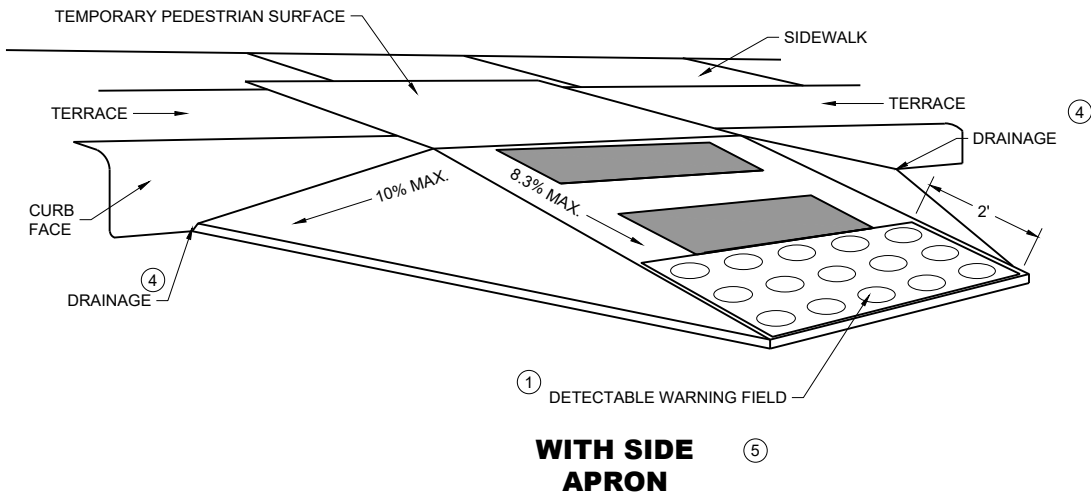
➡ DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

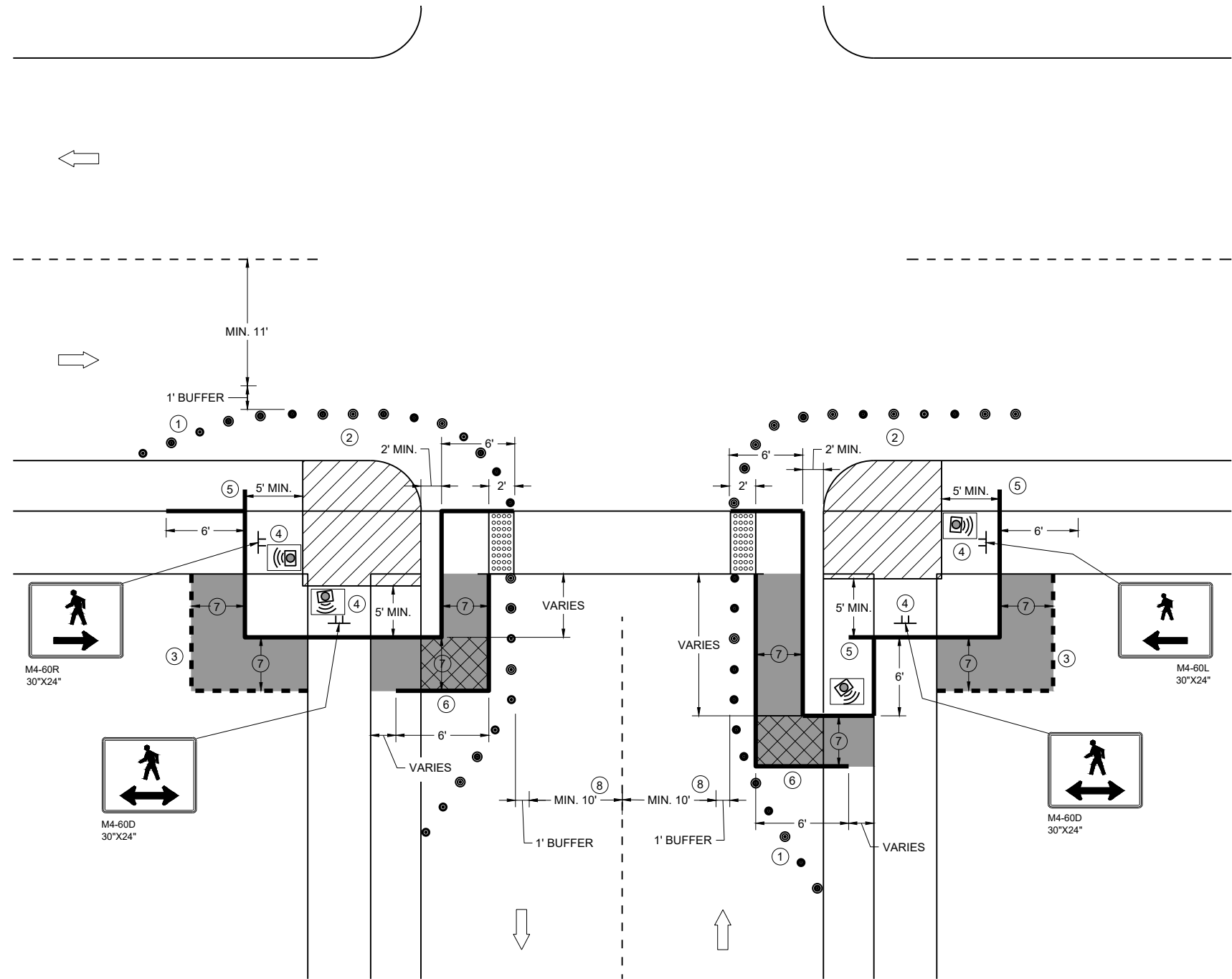


TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

- CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.
- ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.
- CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.
- CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
- LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.
- CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.



CURB RAMP PEDESTRIAN TRAFFIC CONTROL
SIDEWALK ON SINGLE SIDE

GENERAL NOTES

- IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.
- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG
- WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.
- 1 SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
 - 2 PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
 - 3 USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
 - 4 MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
 - 5 PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
 - 6 IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
 - 7 4 FEET MINIMUM, 5 FEET DESIRABLE
 - 8 IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

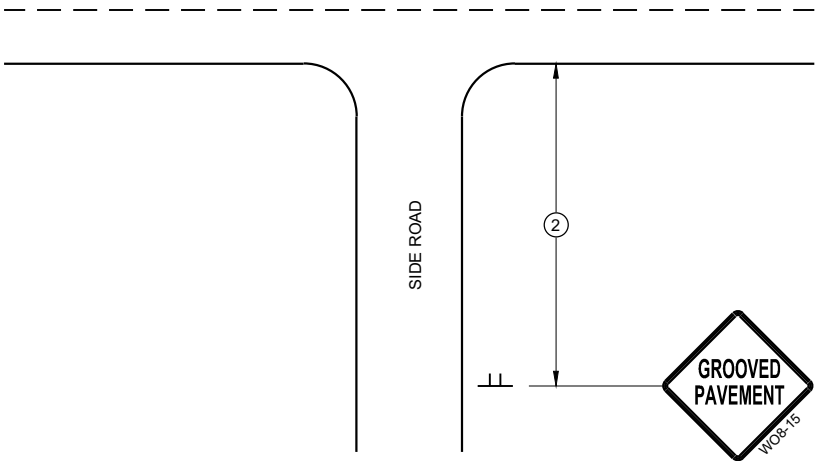
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

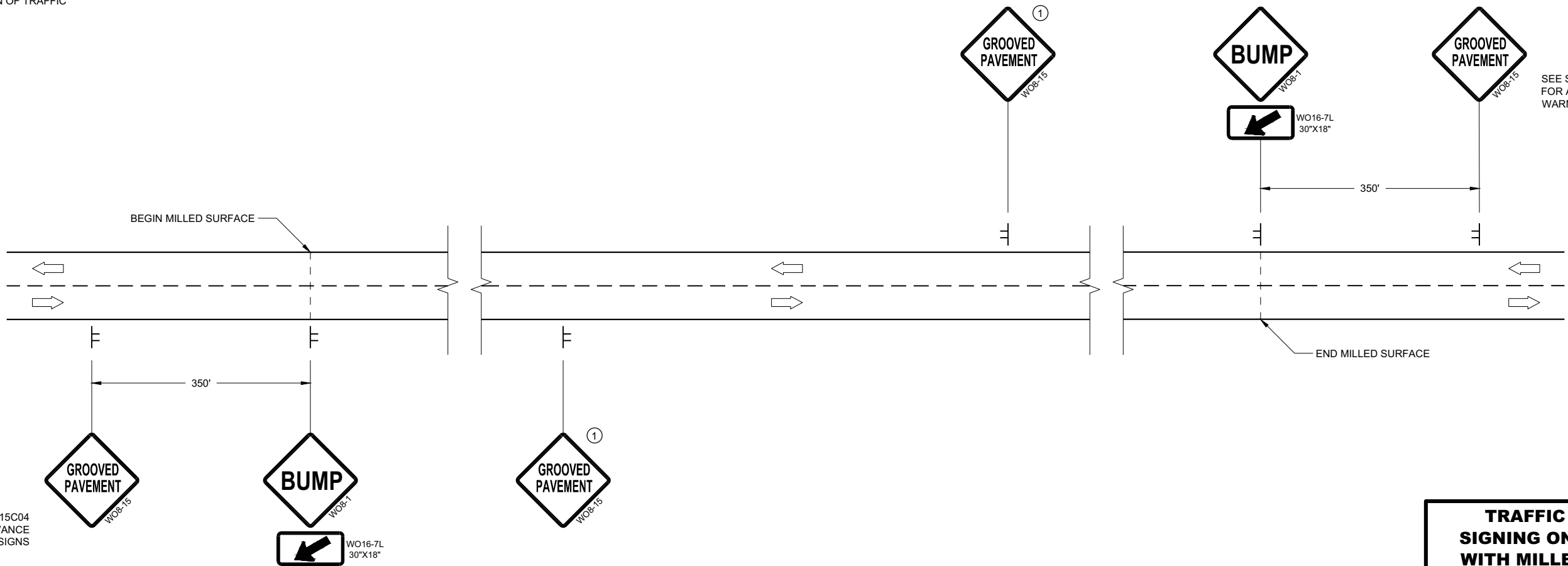
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

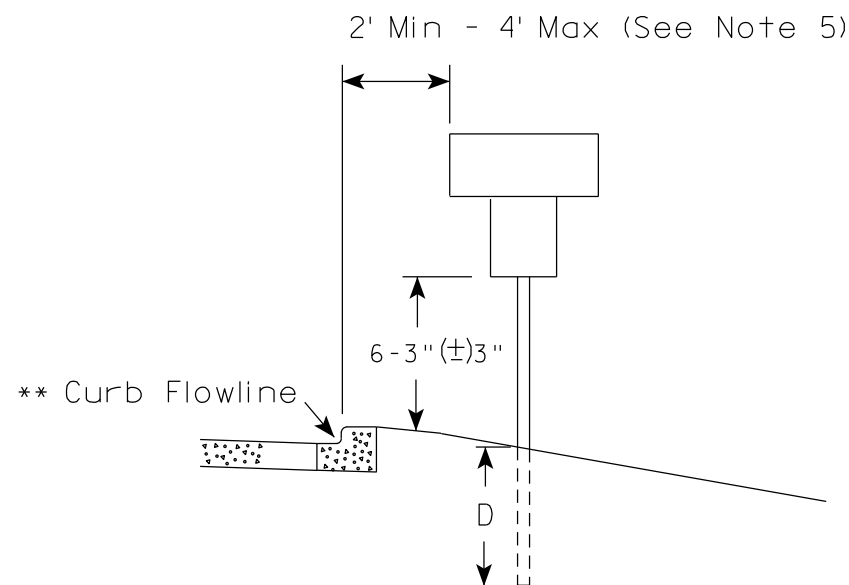
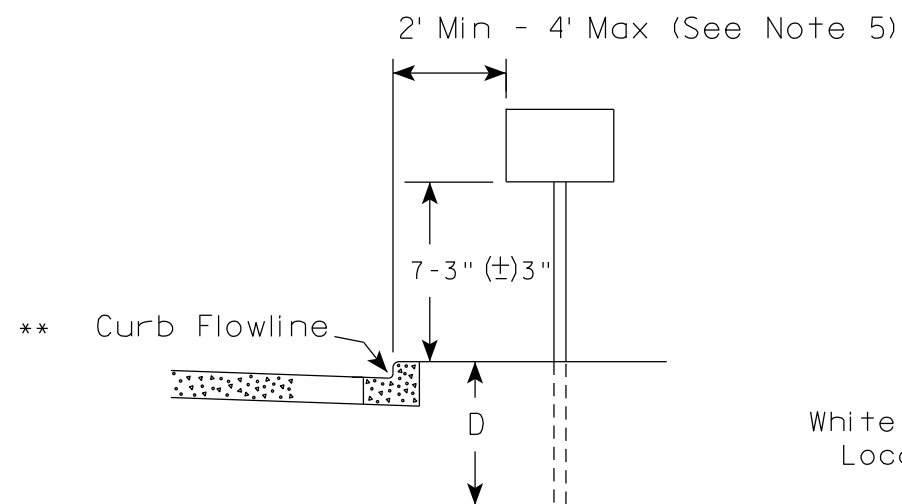
TRAFFIC CONTROL,
SIGNING ON ROADWAYS
WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 104

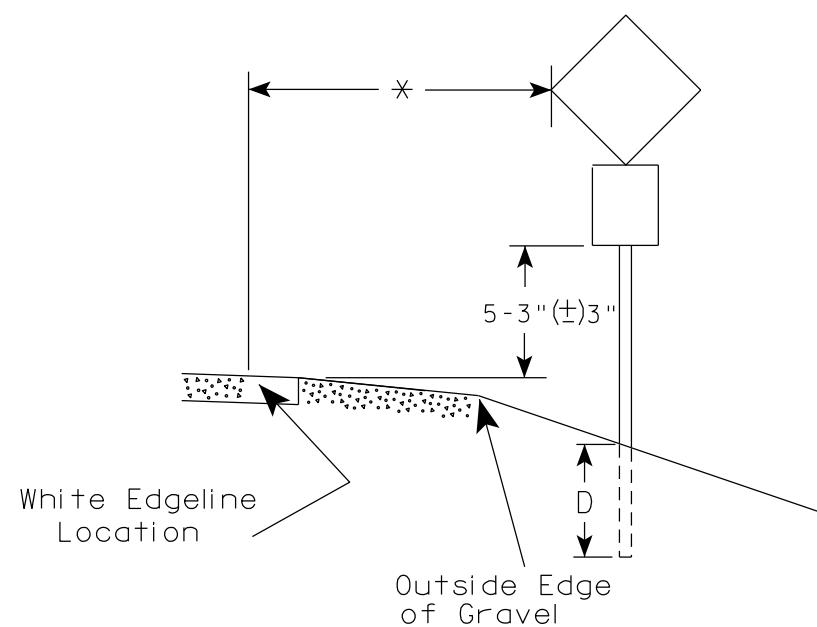
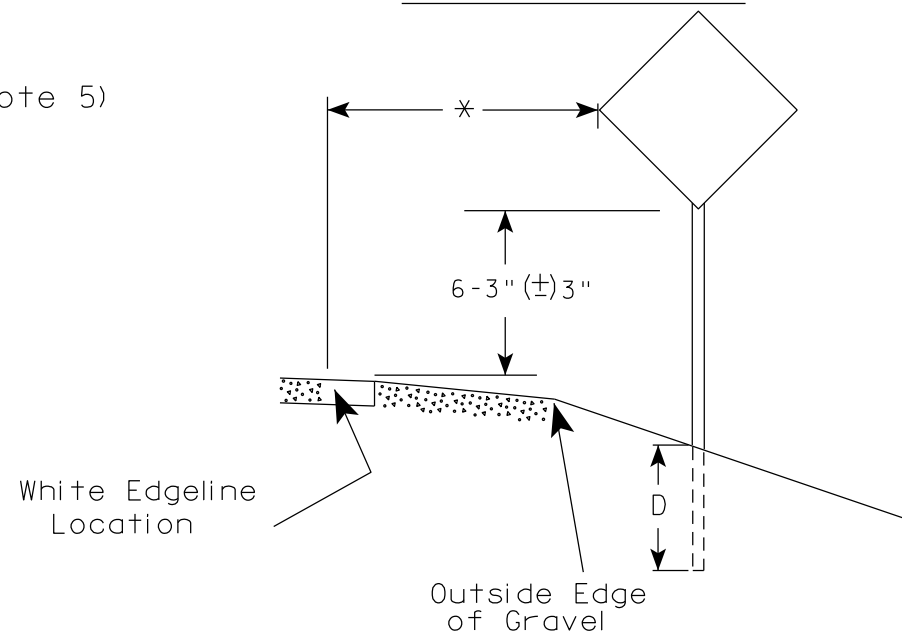
FHWA

URBAN AREA



* * The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

RURAL AREA (See Note 2)



* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

- Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".
- For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
- Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the Engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 12/6/23

PLATE NO. A4-3.23

PROJECT NO:

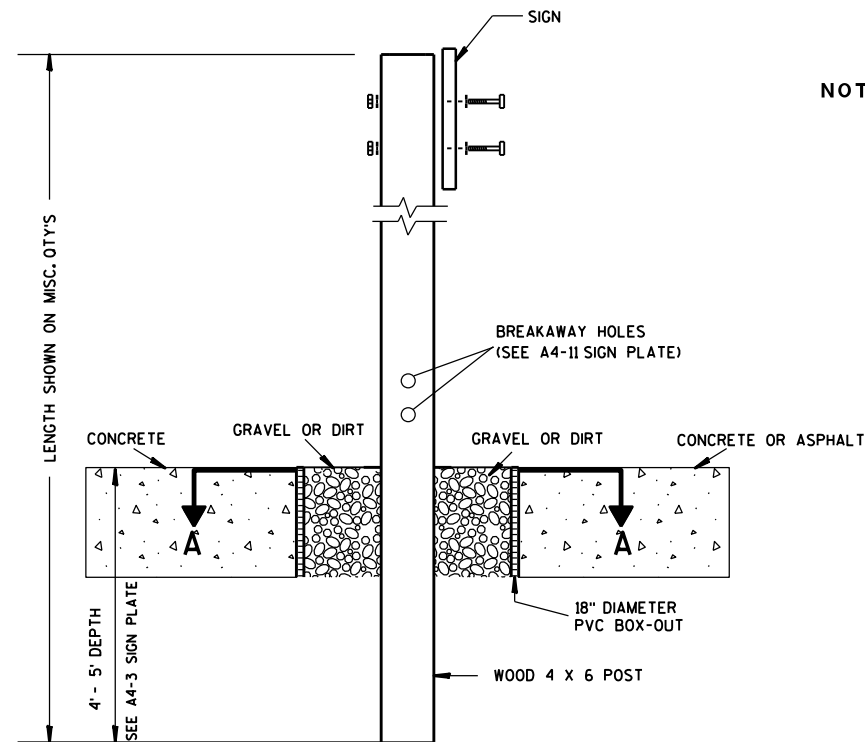
HWY:

COUNTY:

SHEET NO:

105

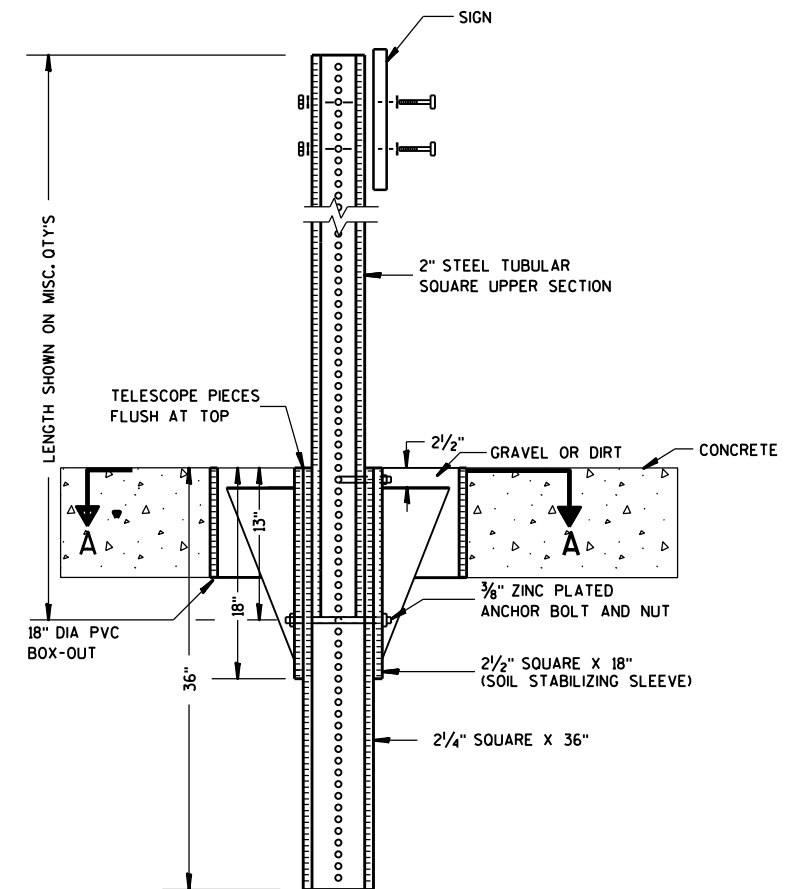
E



ELEVATION VIEW

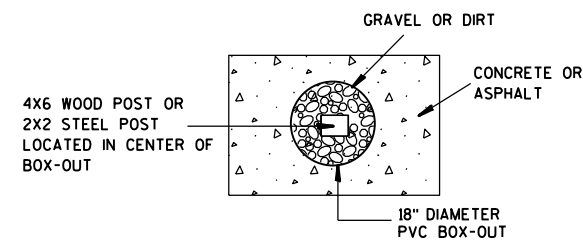
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES: 1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLAT 106 A4-3B.1

PROJECT NO:

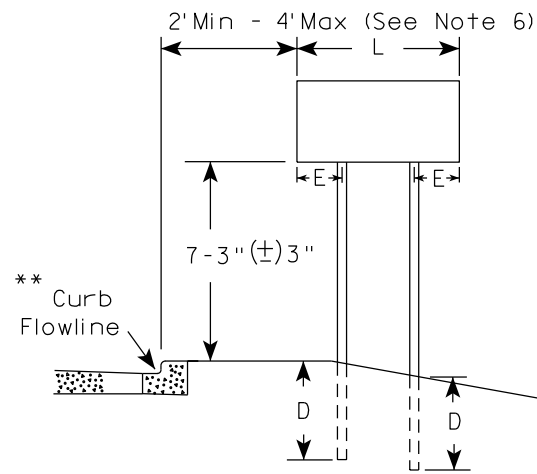
HWY:

COUNTY:

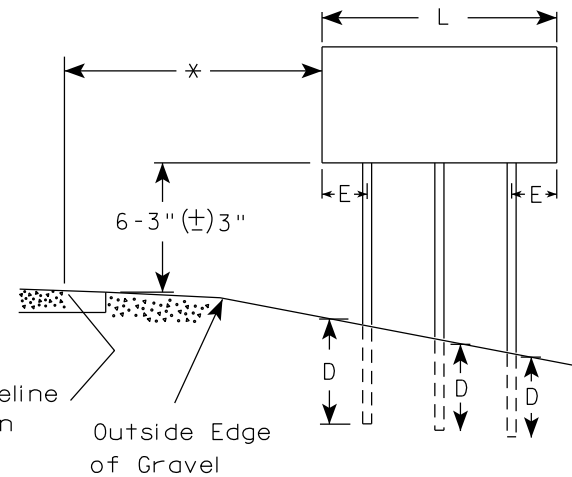
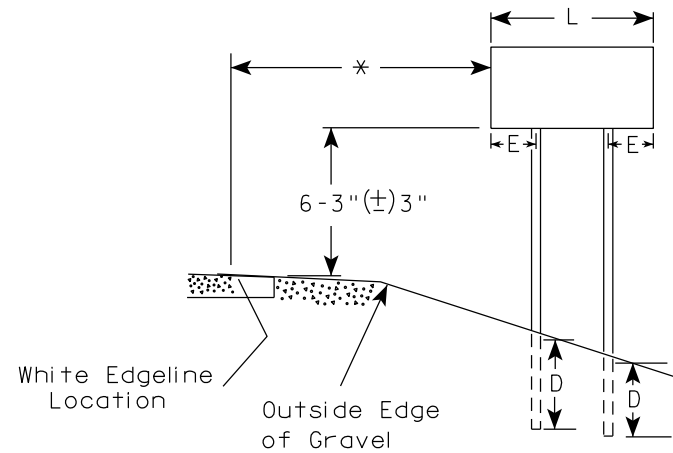
SHEET NO:

E

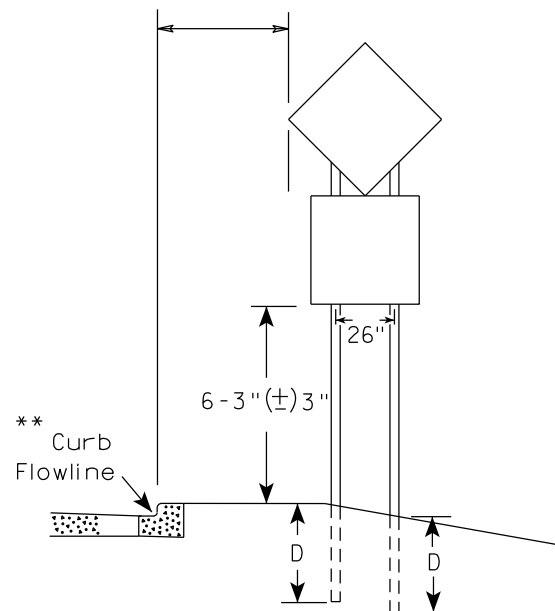
URBAN AREA



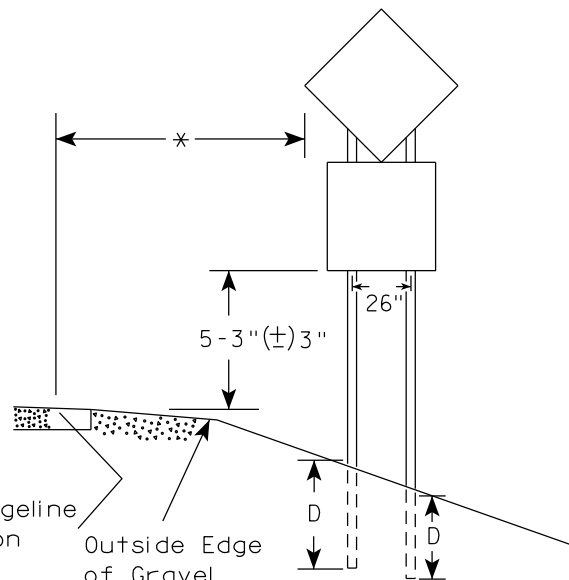
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

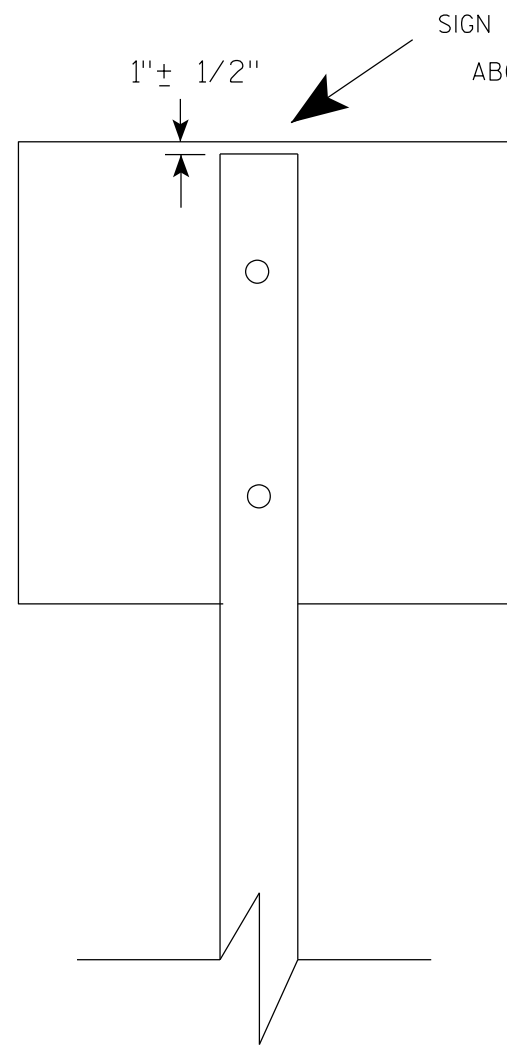
PROJECT NO:

HWY:

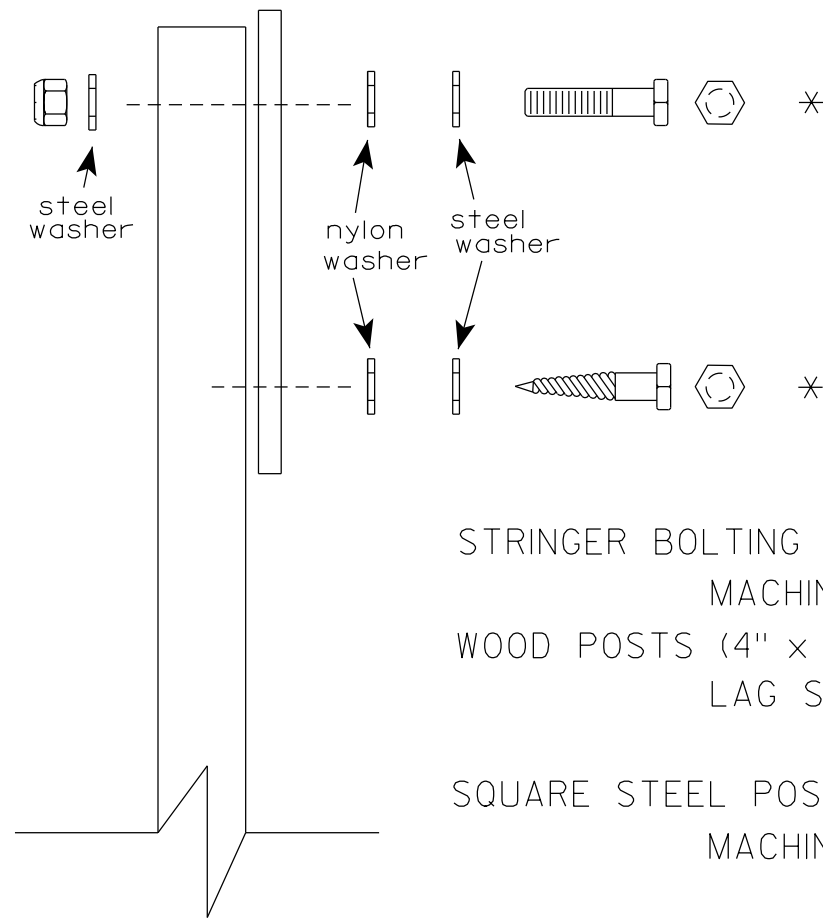
COUNTY:

SHEET NO: 107

E



SIGN SHALL BE MOUNTED TO PROJECT
ABOVE THE TOP OF THE POST



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

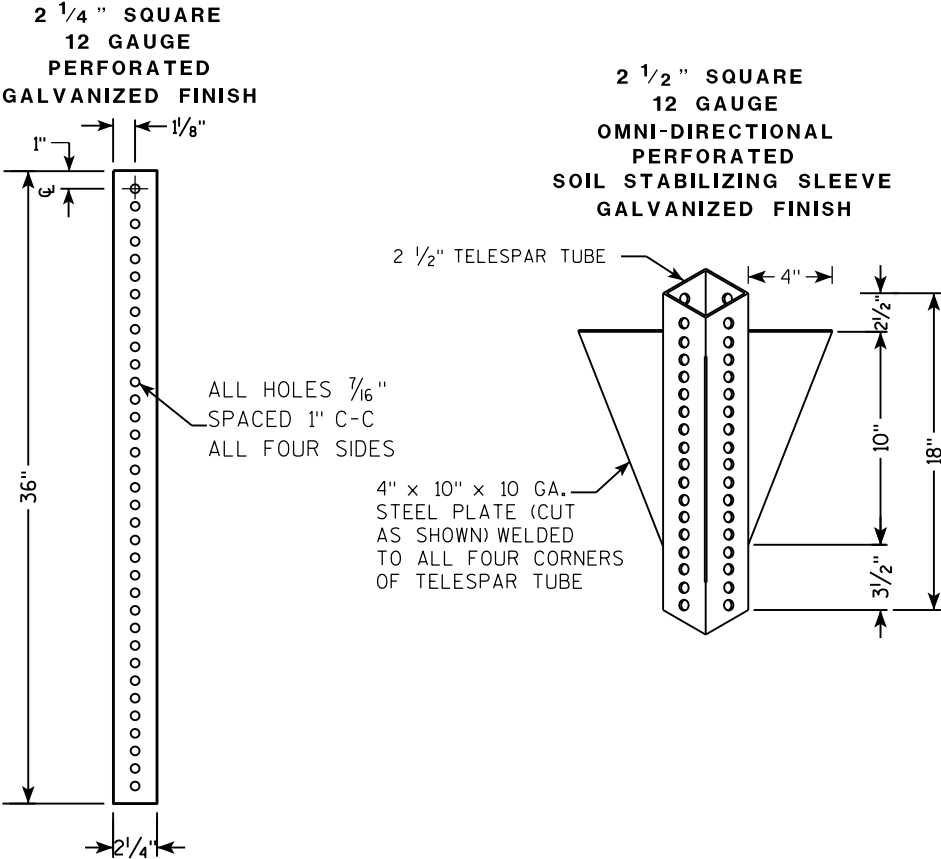
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

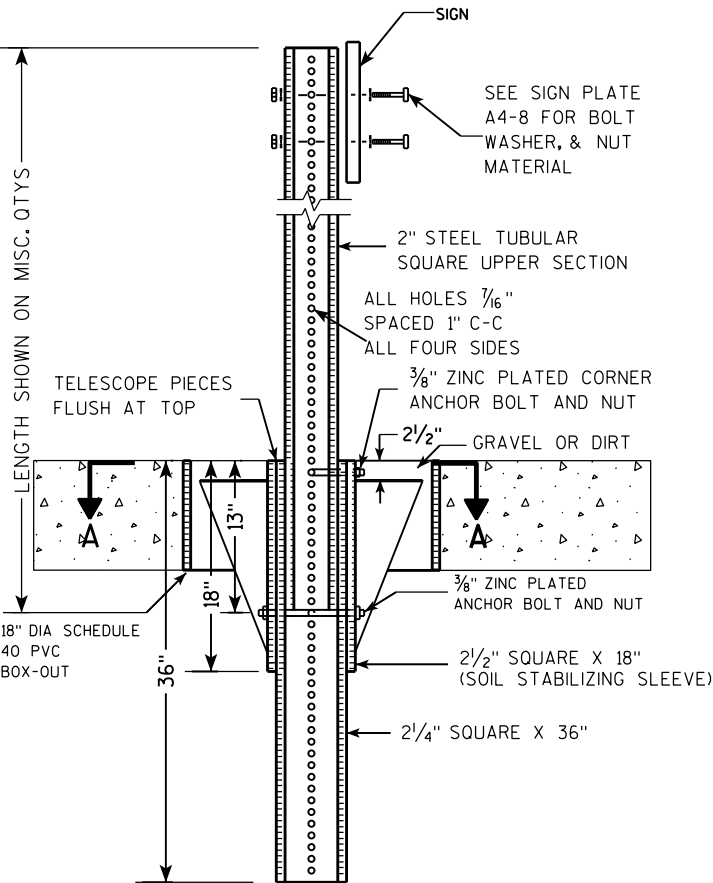
APPROVED Matthew R. Rauch
For State Traffic Engineer

DATE 4/1/2020 PLATE NO. A4-8.9

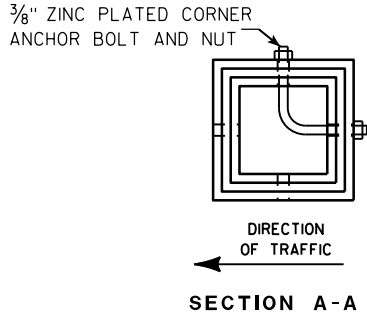
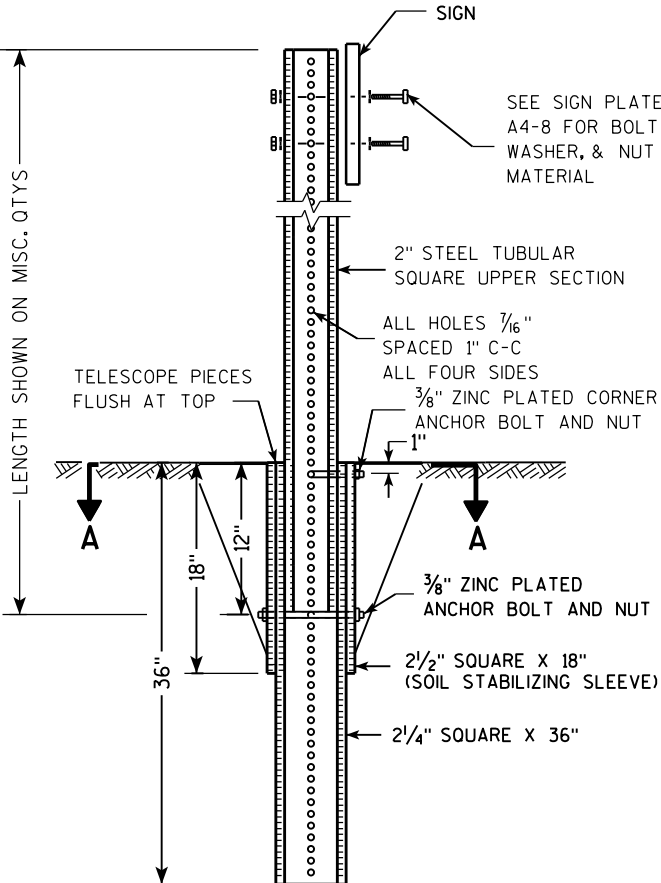
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

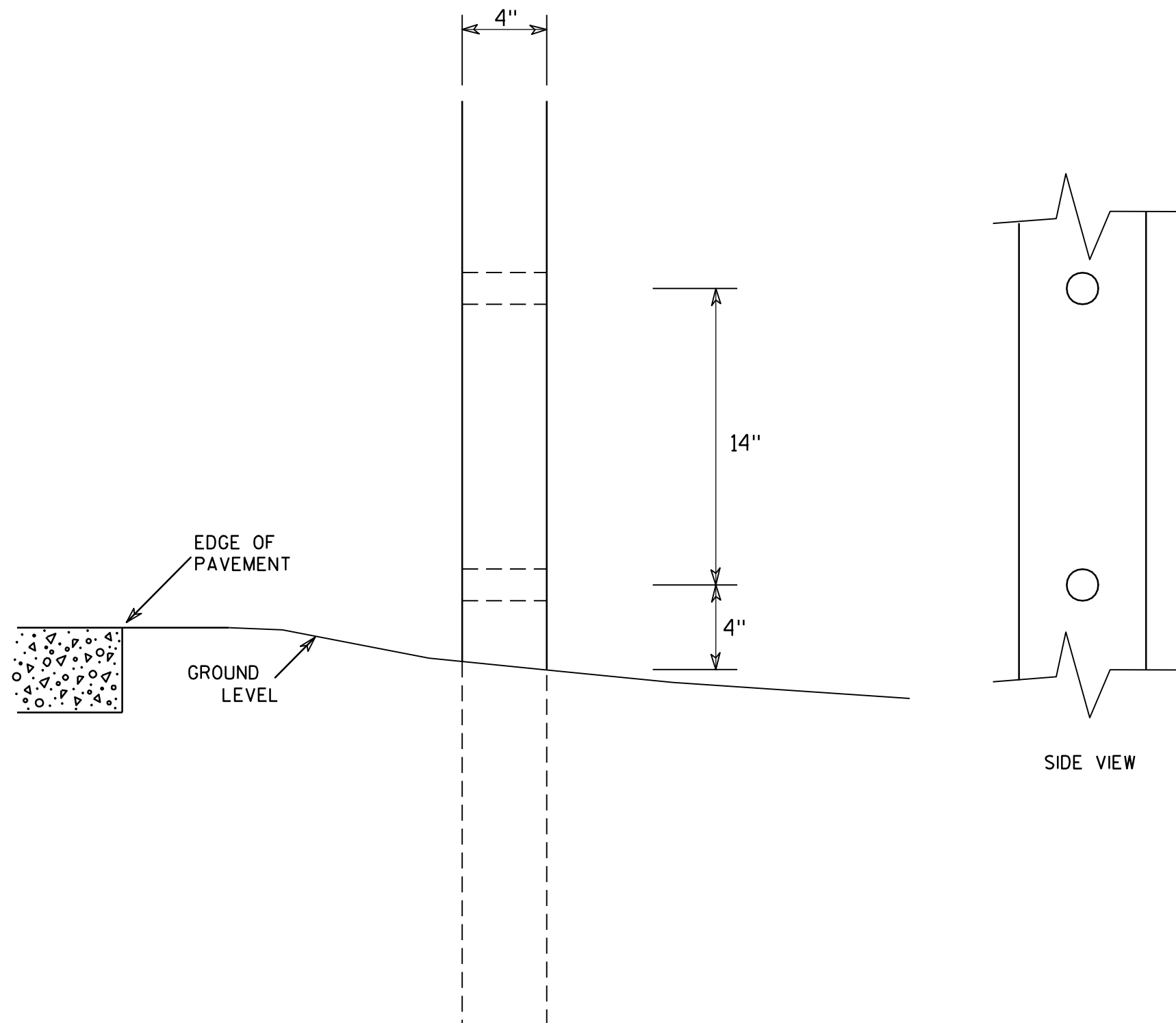
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLAT 109 14-9.9

7



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

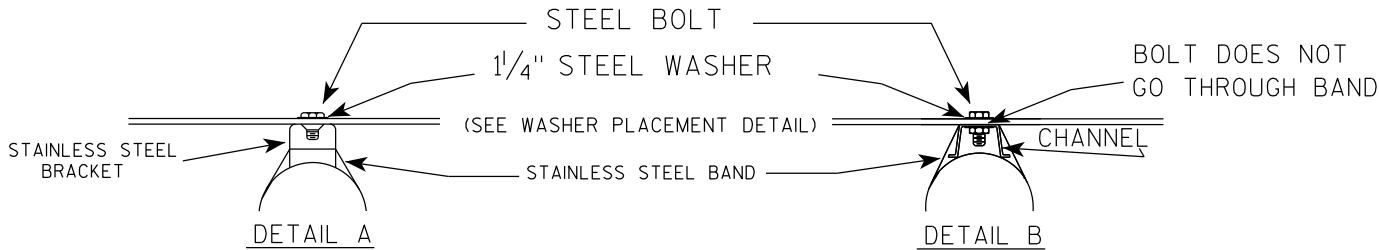
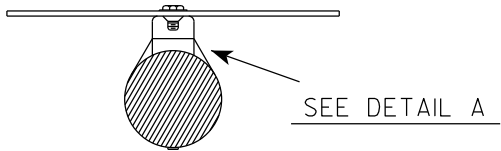
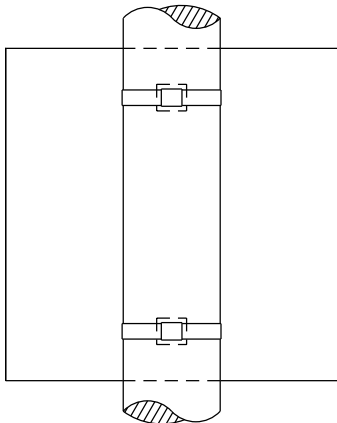
COUNTY:

SHEET NO: 110

E

BANDING

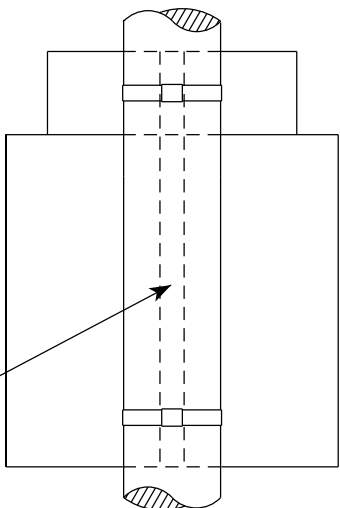
SINGLE SIGN



GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be $\frac{3}{4}$ " in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

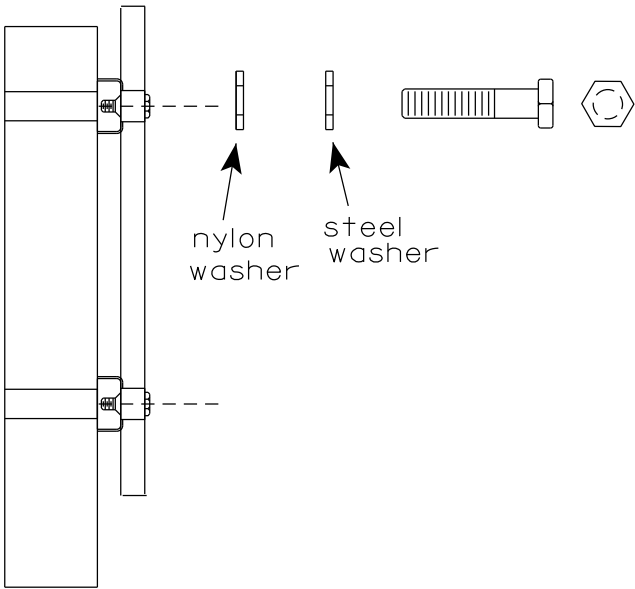
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

WASHER PLACEMENT

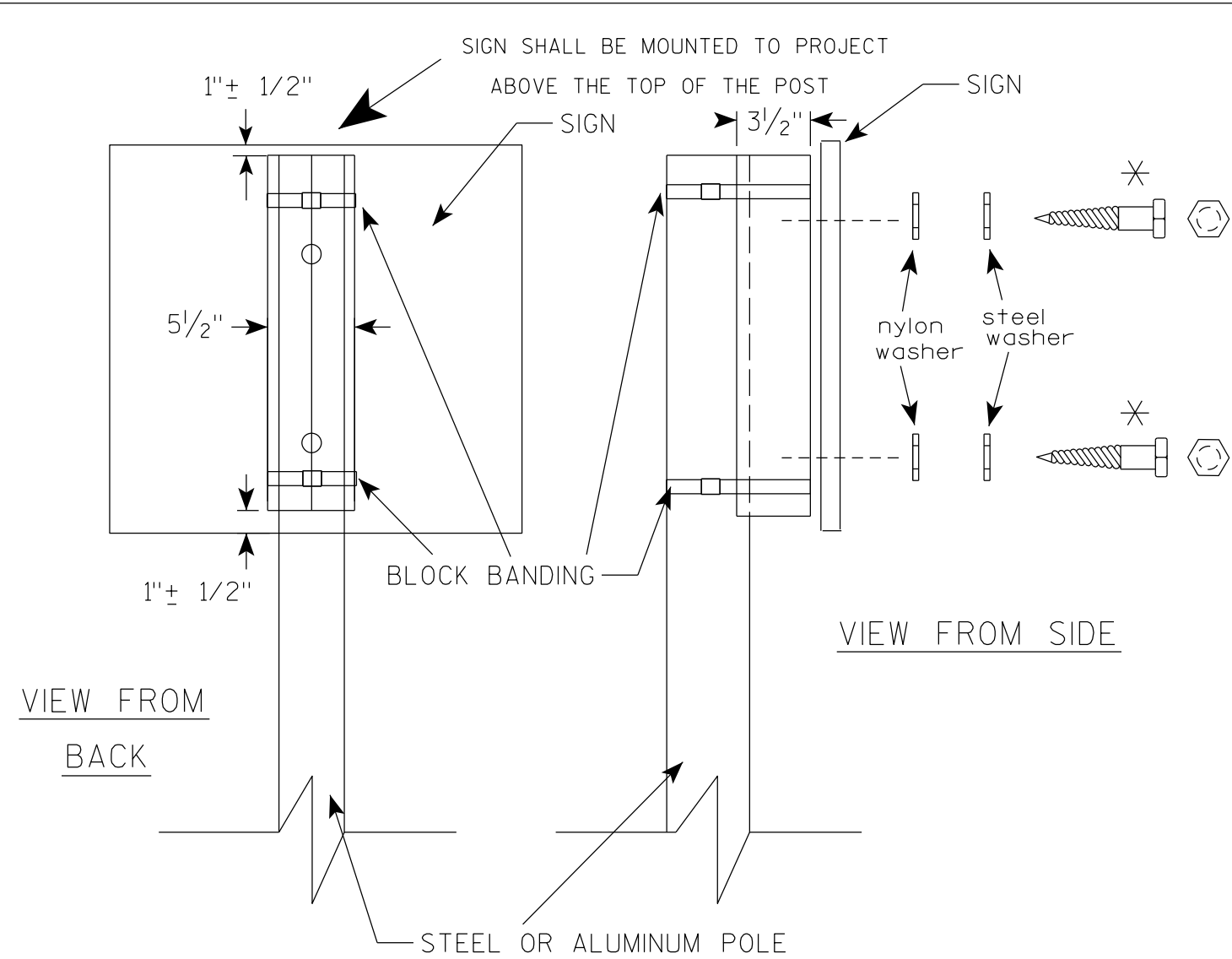


WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

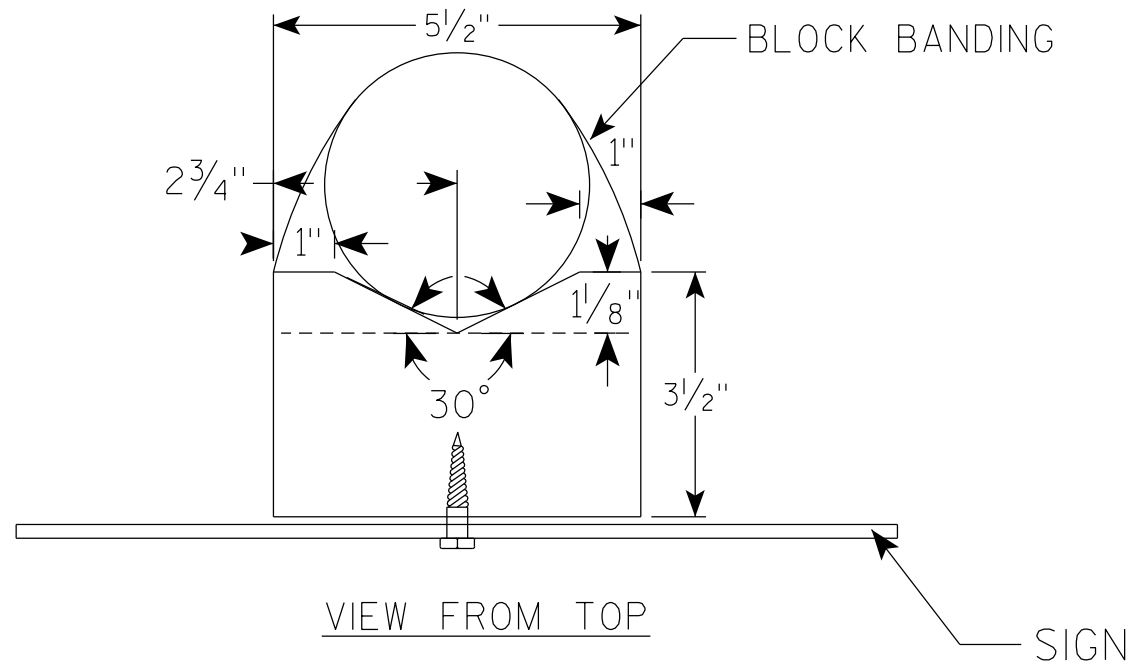
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4



VIEW FROM
BACK

VIEW FROM SIDE



GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 112

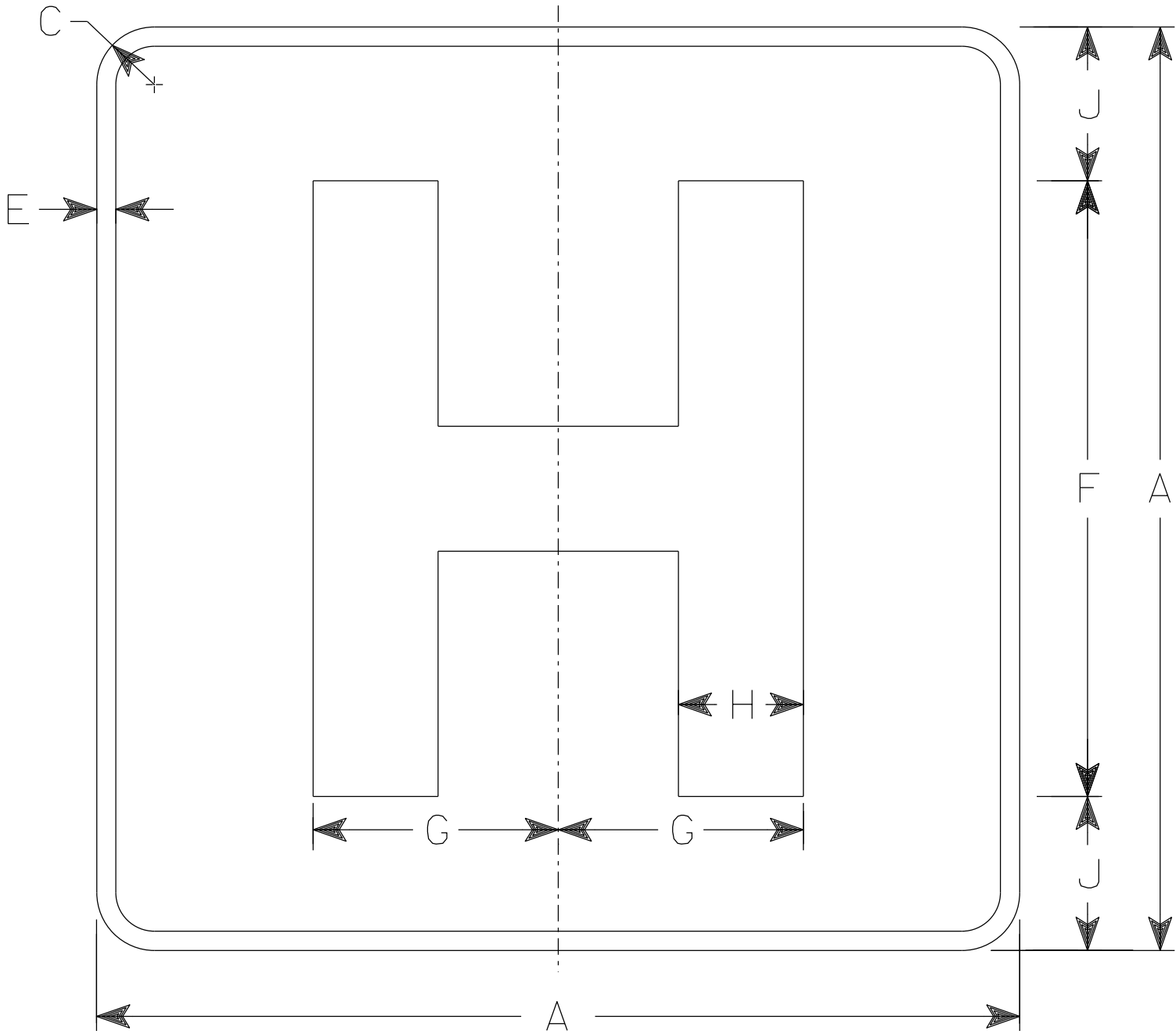
E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - Blue

Message - White
3. Message Series - E Modified
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



D9-2

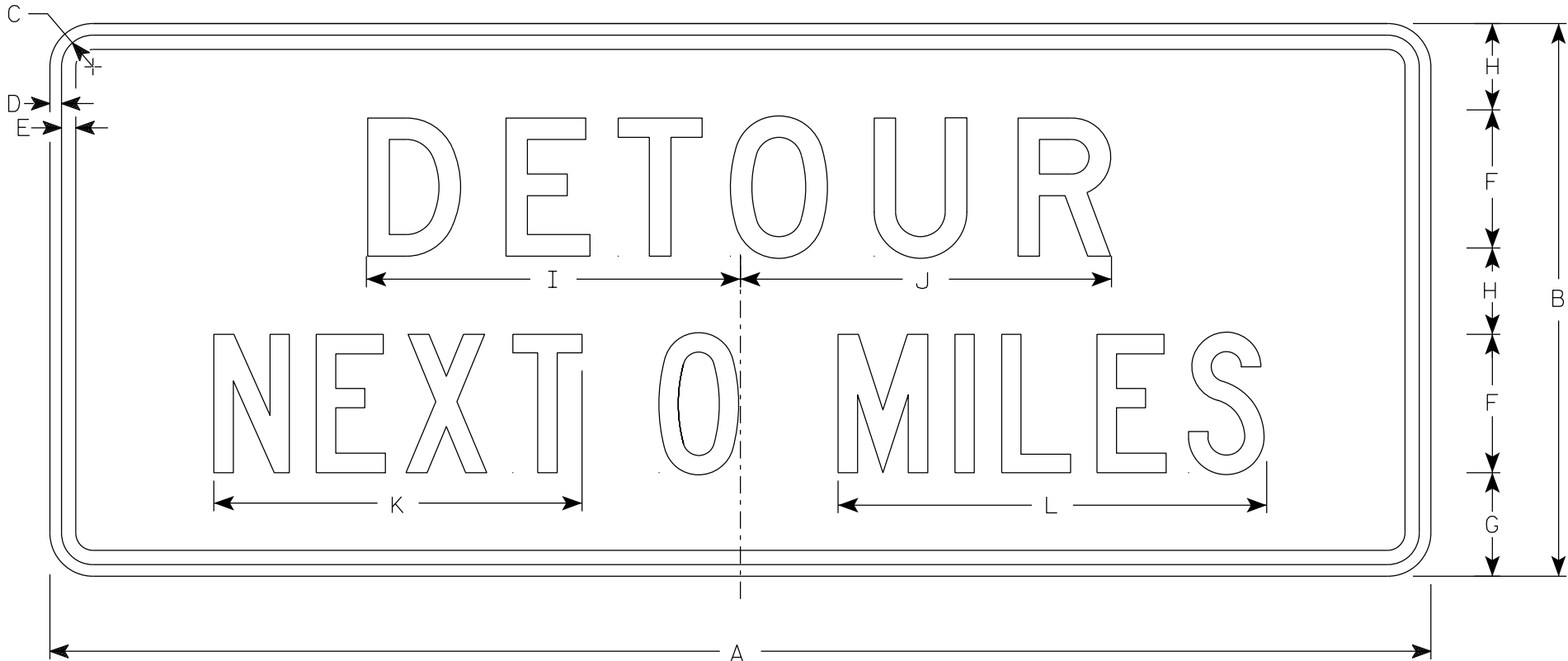
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/2		1/2	12	4 3/4	2 3/8		3																	2.25
2S	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
2M	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
3	36		2 1/4		3/4	24	9 1/2	4 7/8		6																	9.0
4																											
5																											

7

7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - Line 1 is D and Line 2 is C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance



G20-51

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	60	24	1 7⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4	16 1⁄4	16 1⁄8	16	18 5⁄8															10.0
2M	60	24	1 7⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4	16 1⁄4	16 1⁄8	16	18 5⁄8															10.0
3	60	24	1 7⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4	16 1⁄4	16 1⁄8	16	18 5⁄8															10.0
4	60	24	1 7⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4	16 1⁄4	16 1⁄8	16	18 5⁄8															10.0
5	60	24	1 7⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4	16 1⁄4	16 1⁄8	16	18 5⁄8															10.0

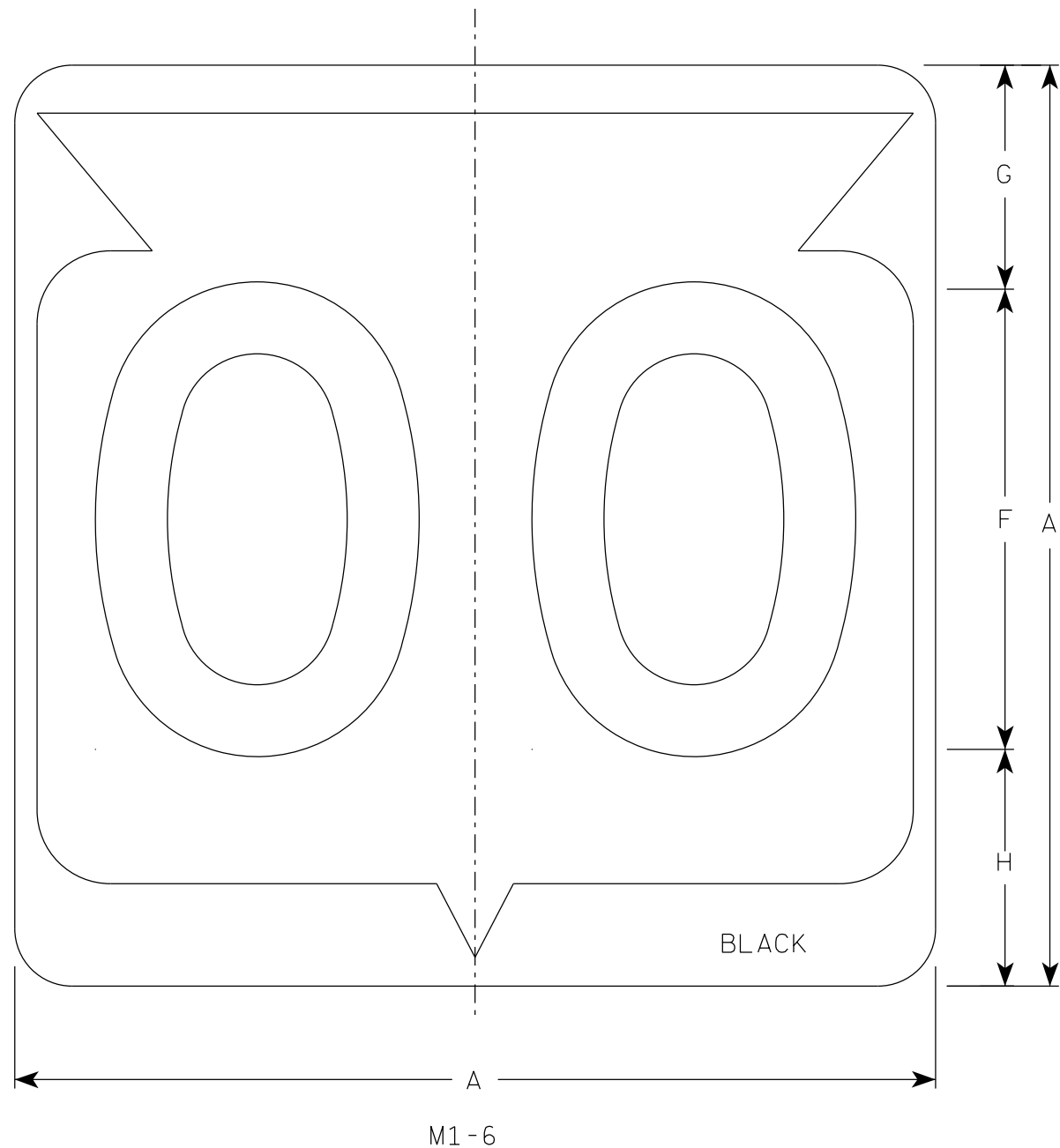
STANDARD SIGN
G20-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
State Traffic Engineer

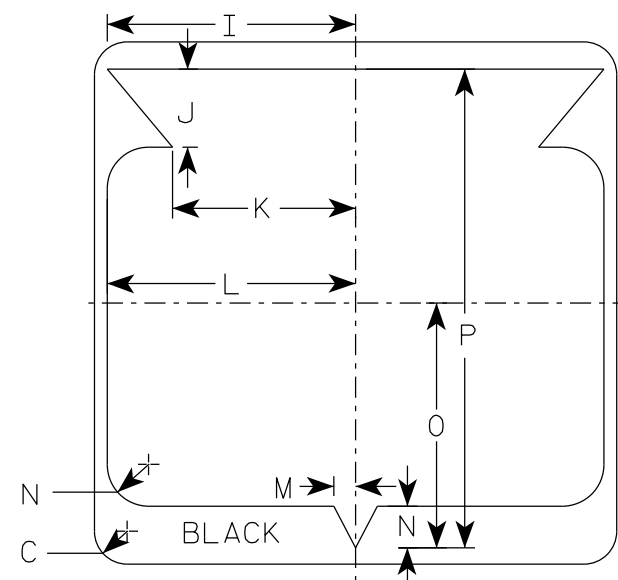
DATE 1/26/2023 PLATE NO. G20-51.3

7



NOTES

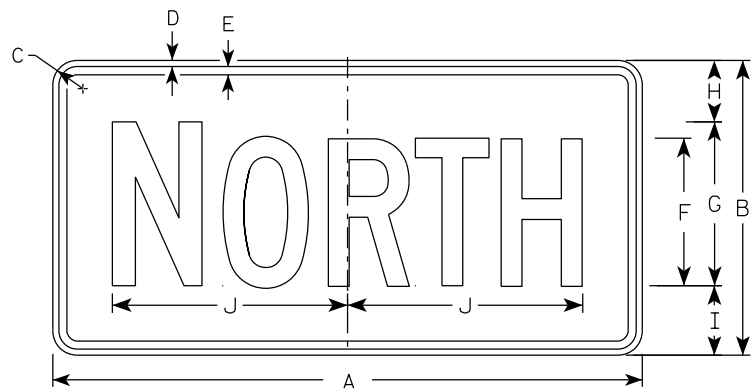
1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D except 3 number signs Series C



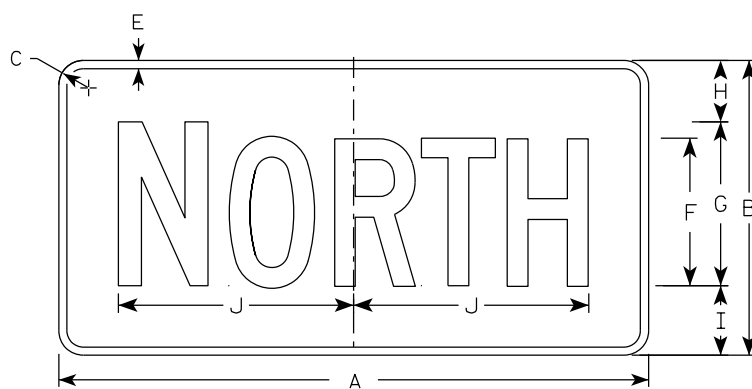
7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
2M	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

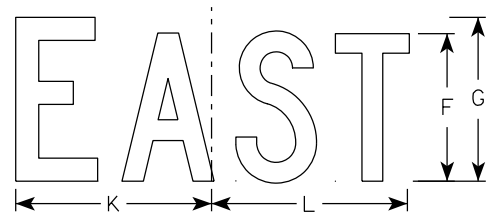
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 11/8/2022	PLATE NO. M1-6.11



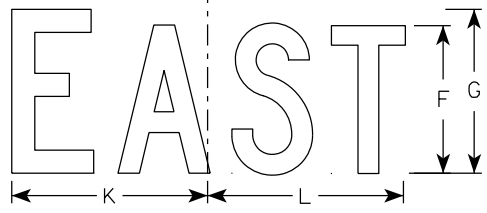
M3-1
MM3-1
MP3-1



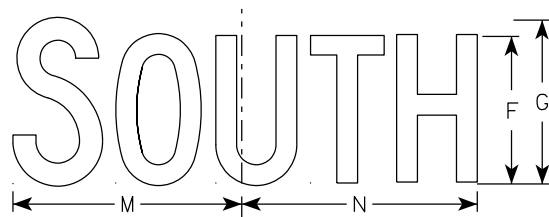
MB3-1
MK3-1
MN3-1



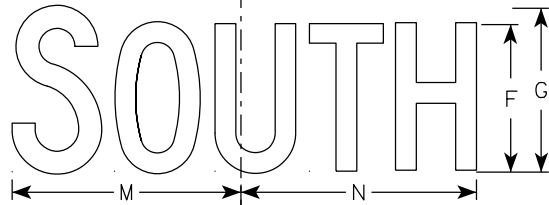
M3-2
MM3-2
MP3-2



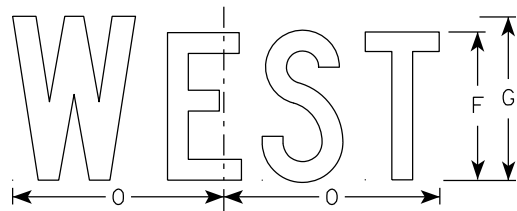
MB3-2
MK3-2
MN3-2



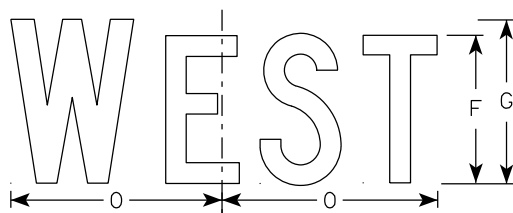
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

- All Signs Type II - Type H Reflective
- Color:
 - Background - See note 5
 - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4												2.00
2M	24	12	1 1/2	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4												2.00
3	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
4	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
5	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5

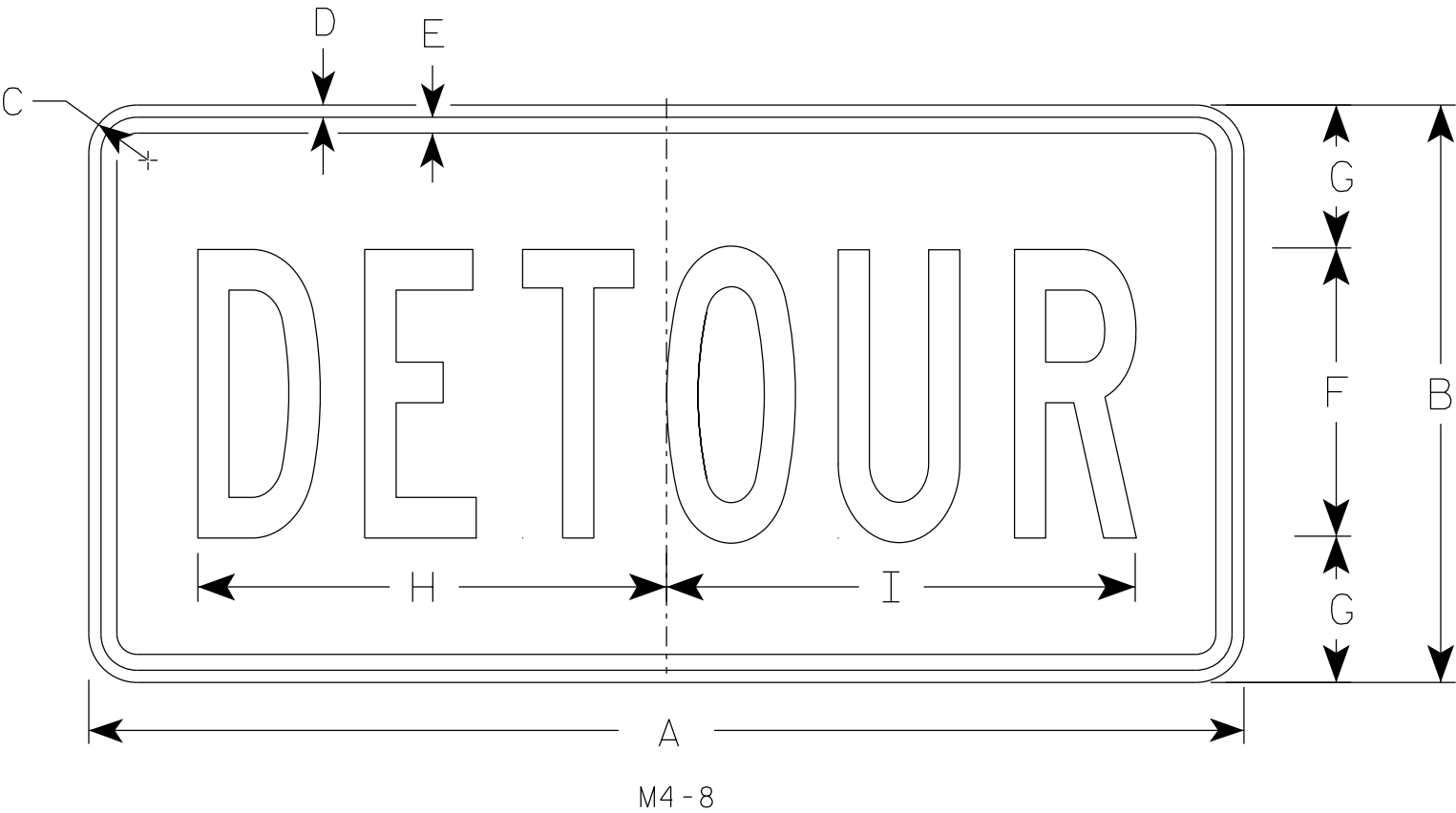
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 116	E
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7

7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - B
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
2M	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5

STANDARD SIGN

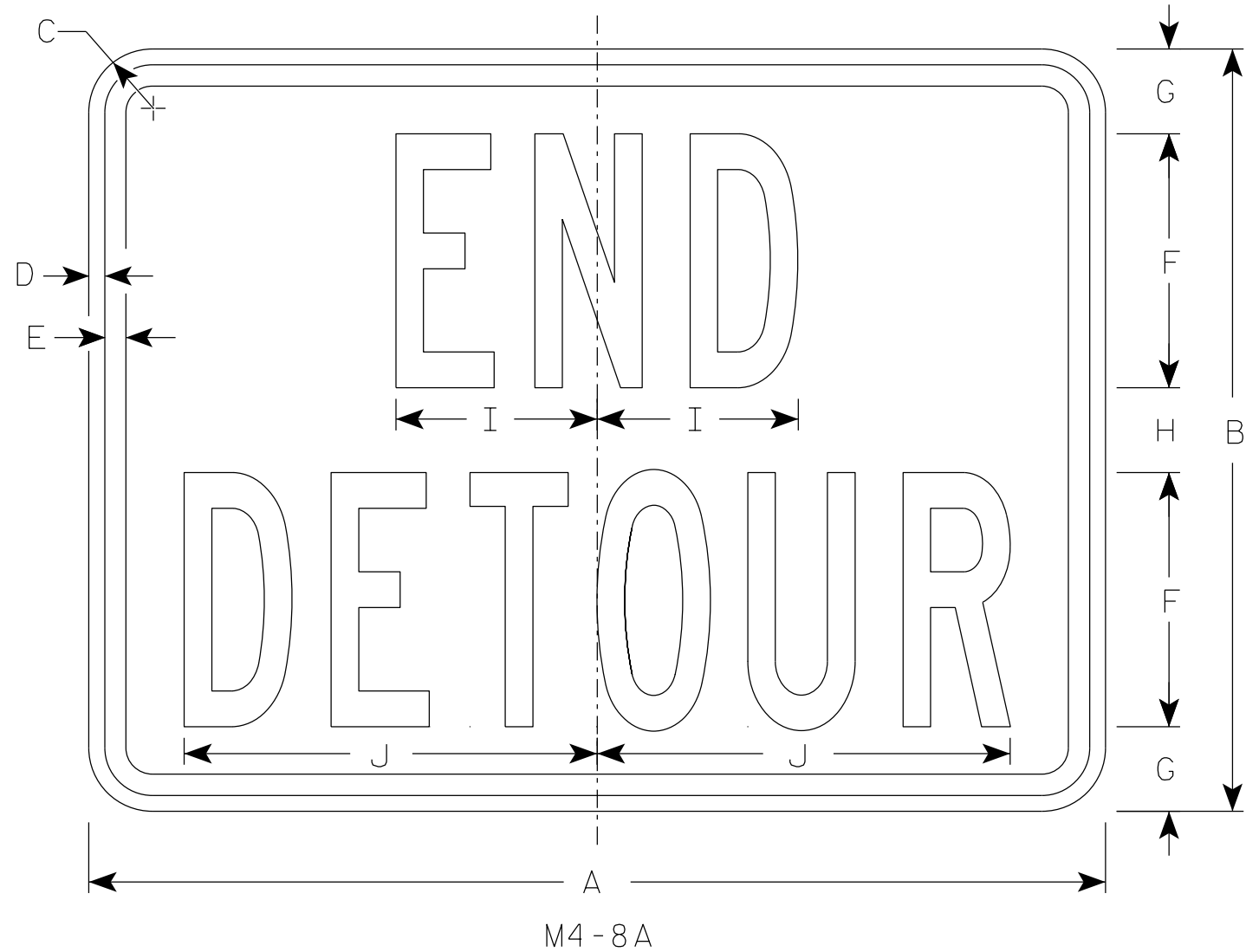
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8.4

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - B
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/2	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
2M	24	18	1 1/2	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
5	30	24	1 1/2	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0

STANDARD SIGN

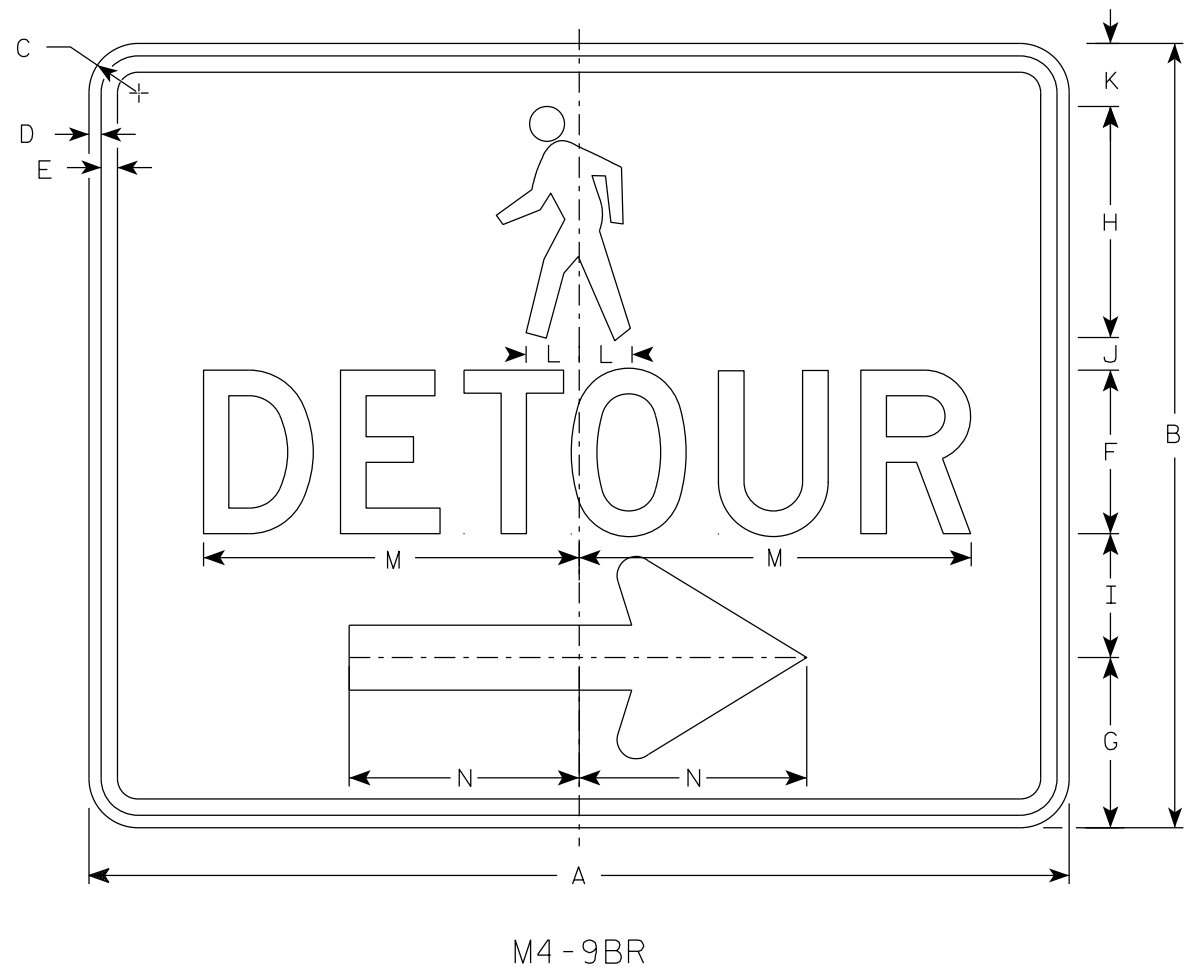
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

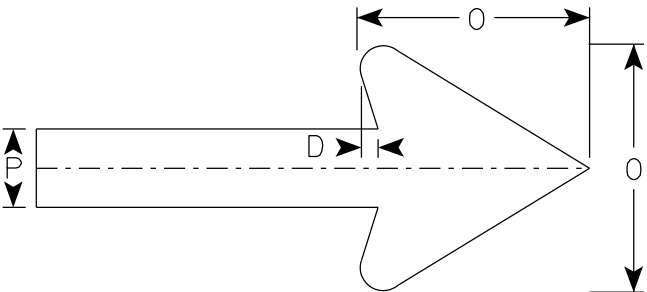
DATE 2/9/2023 PLATE NO. M4-8A.4

7



M4-9BR

- NOTES
1. Sign is Type II-Type F Reflective
 2. Color:
Background - Orange
Message - Black
 3. Message Series - D
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 5. M4-9BL is the same as M4-9BR except the arrow is reversed.



Arrow Detail

7

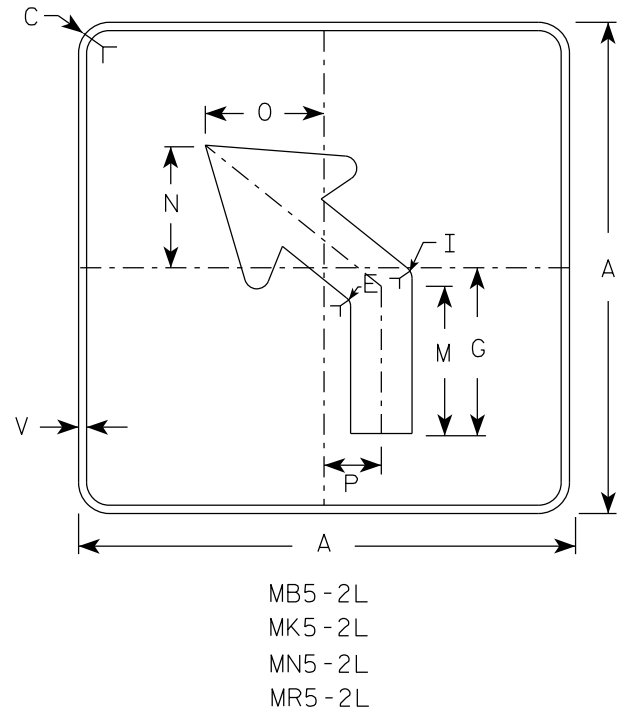
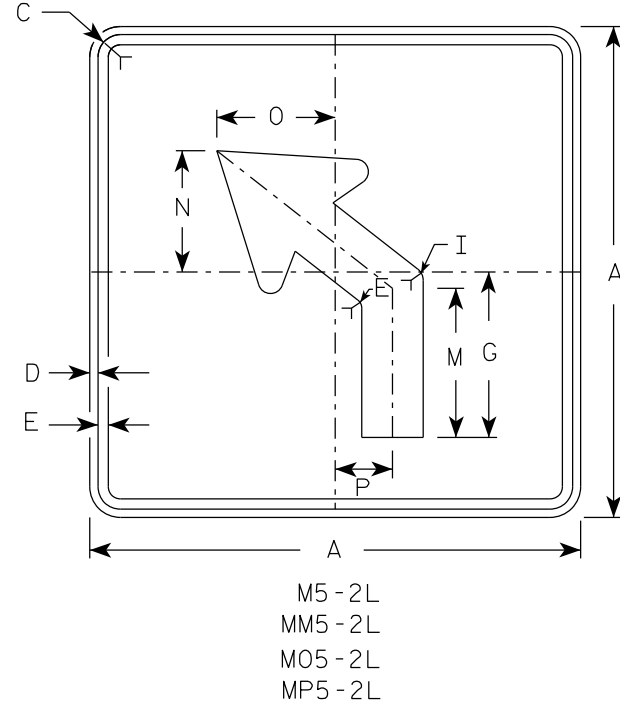
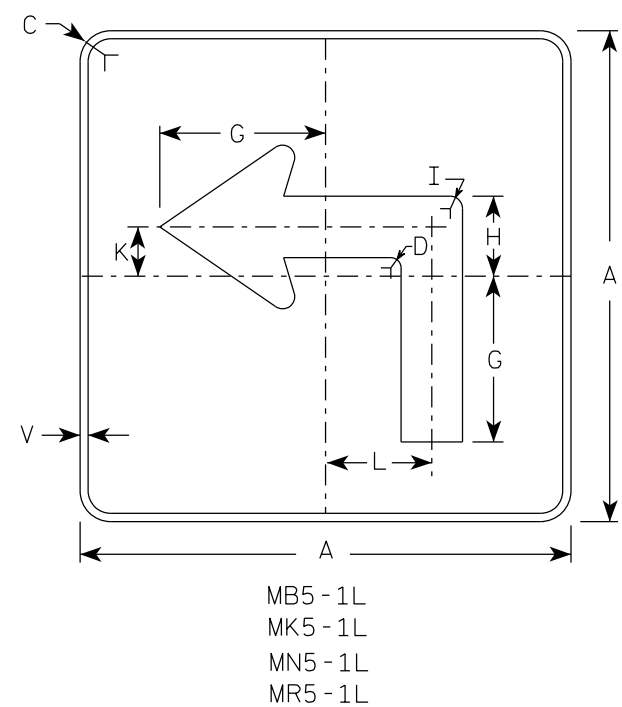
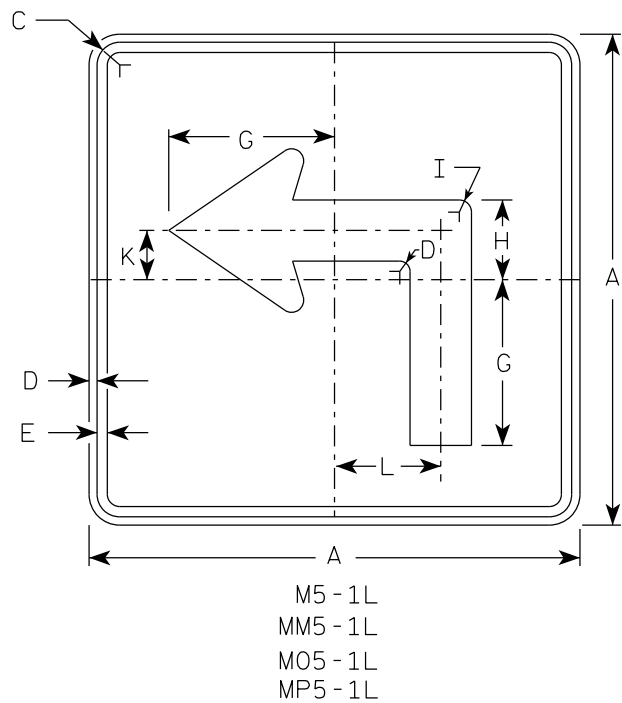
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 1/2	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.0
2M	30	24	1 1/2	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.0
3																											
4																											
5																											

STANDARD SIGN
M4-9B L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

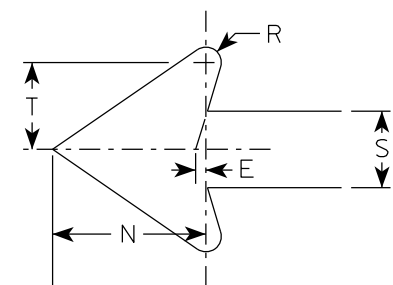
DATE 2/9/2023 PLATE NO. M4-9B.4



NOTES

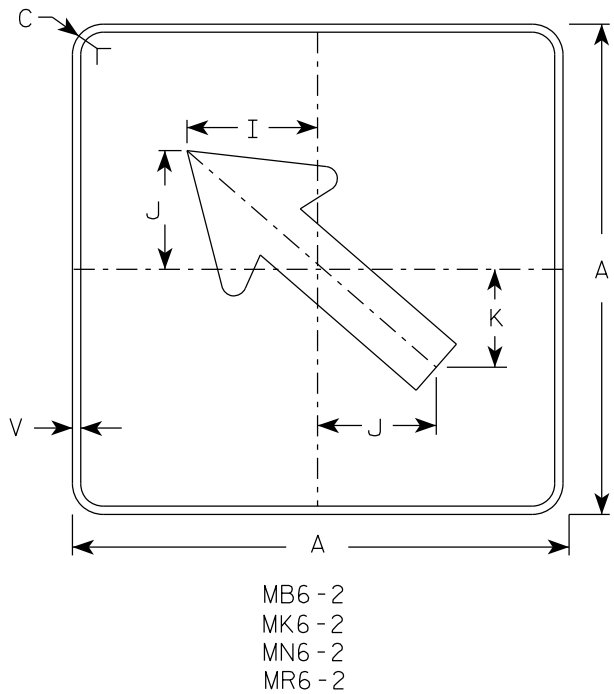
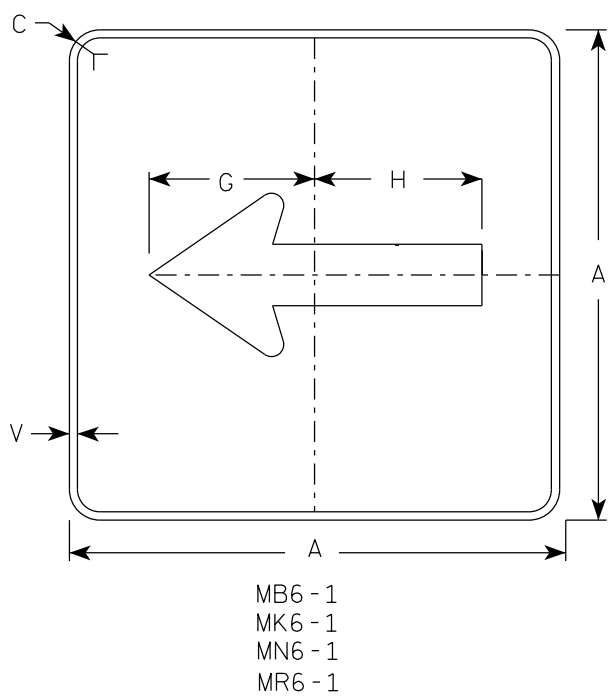
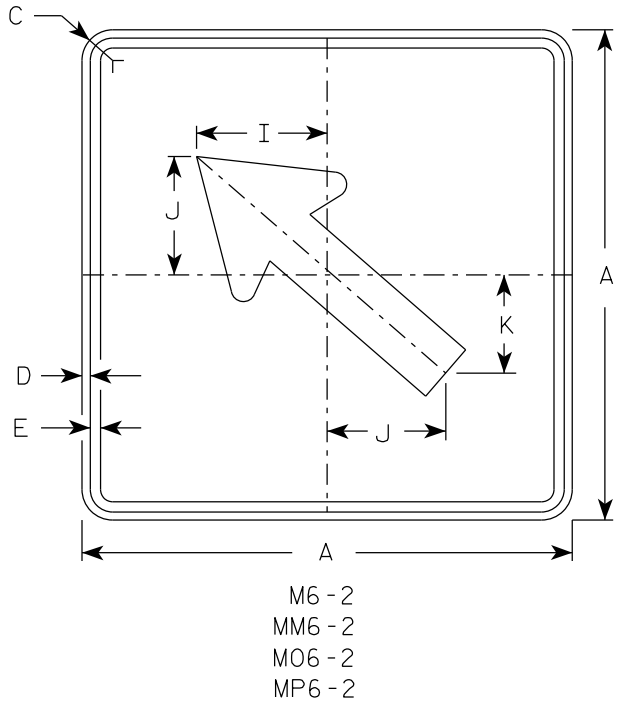
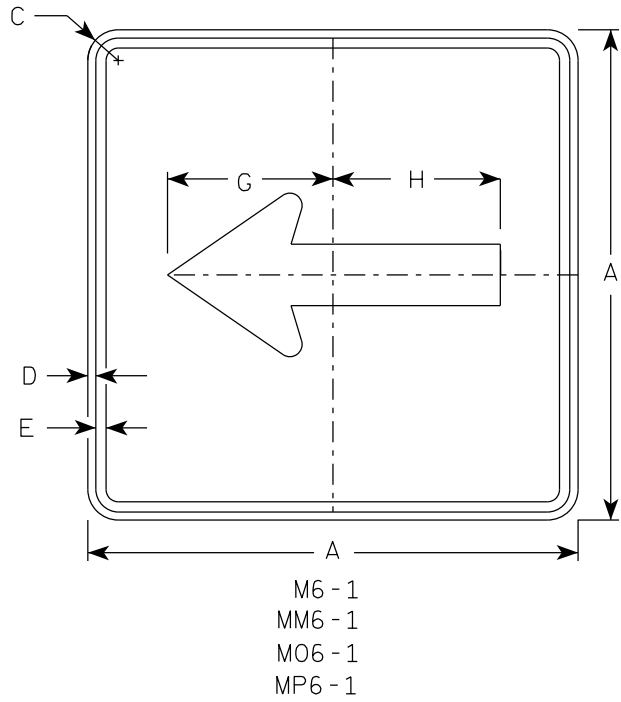
- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- | | | |
|-----------|-------|---|
| M5-1 and | M5-2 | Background - White |
| | | Message - Black |
| MB5-1 and | MB5-2 | Background - Blue |
| | | Message - White |
| MK5-1 and | MK5-2 | Background - Green |
| | | Message - White |
| MM5-1 and | MM5-2 | Background - White |
| | | Message - Green |
| MN5-1 and | MN5-2 | Background - Brown |
| | | Message - White |
| M05-1 and | M05-2 | Background - Orange - Type F Reflective |
| | | Message - Black |
| MP5-1 and | MP5-2 | Background - White |
| | | Message - Blue |
| MR5-1 and | MR5-2 | Background - Brown |
| | | Message - Yellow |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

ARROW DETAIL

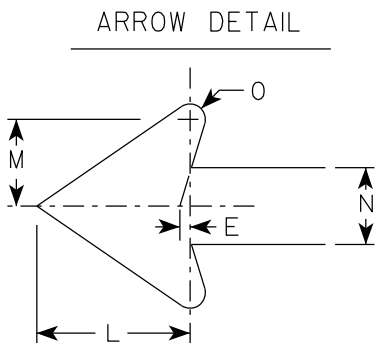


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25
4	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25
5	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25

PROJECT NO:		HWY:		COUNTY:		SHEET NO: 120		E
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- NOTES
- Signs are Type II - Type H Reflective except as Shown
 - Color:
Background - See note 4
Message - See note 4
 - Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 - M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	
1																												
2S	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2						3.06
2M	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2						3.06
3	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2						6.25
4	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2						6.25
5	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2						6.25

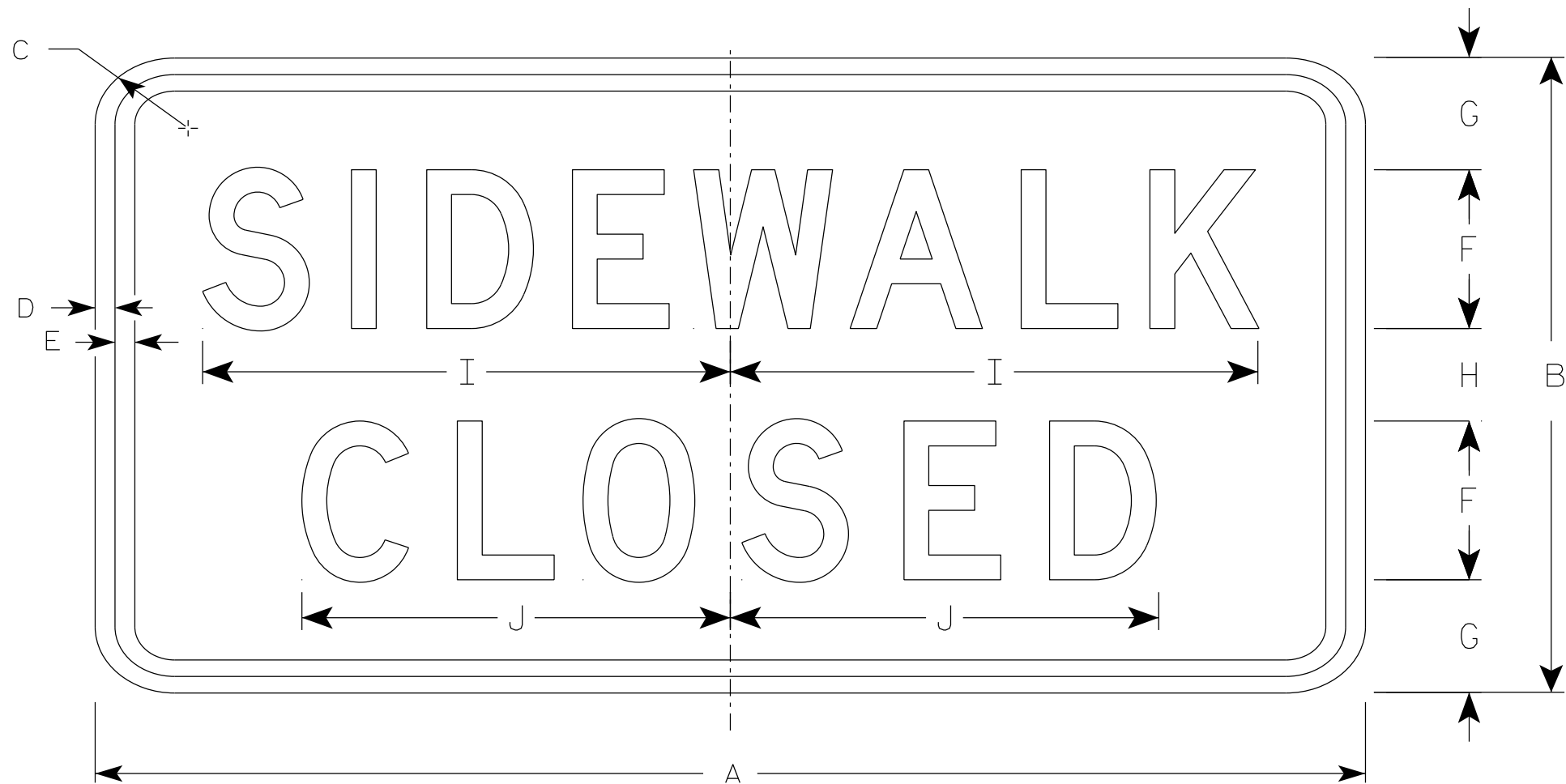
STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M6-1.16

7



R9-9

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - C
- 4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 1/2	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 1/2	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 122

E

STANDARD SIGN

R9-9

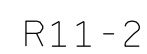
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

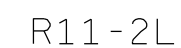
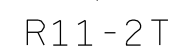
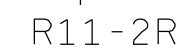
For State Traffic Engineer

DATE 1/24/24

PLATE NO. R9-9.7

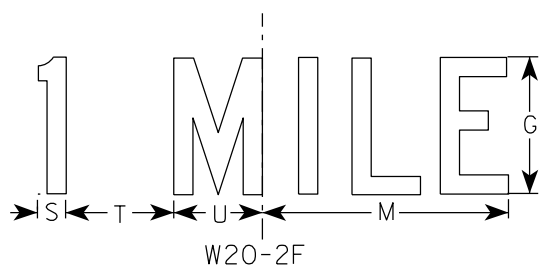
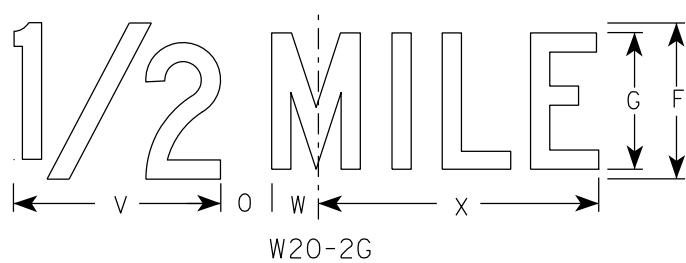
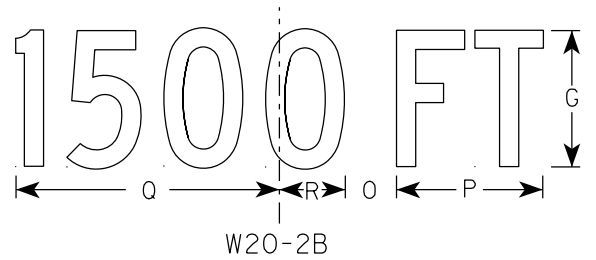
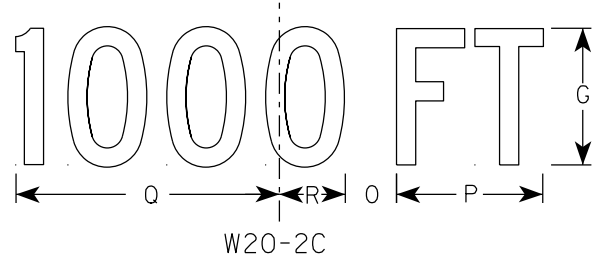
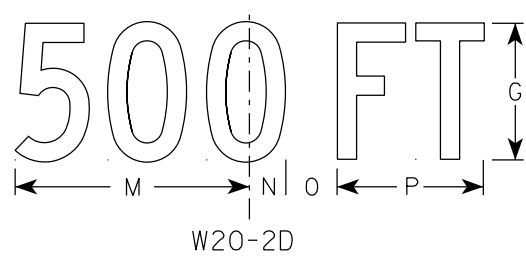
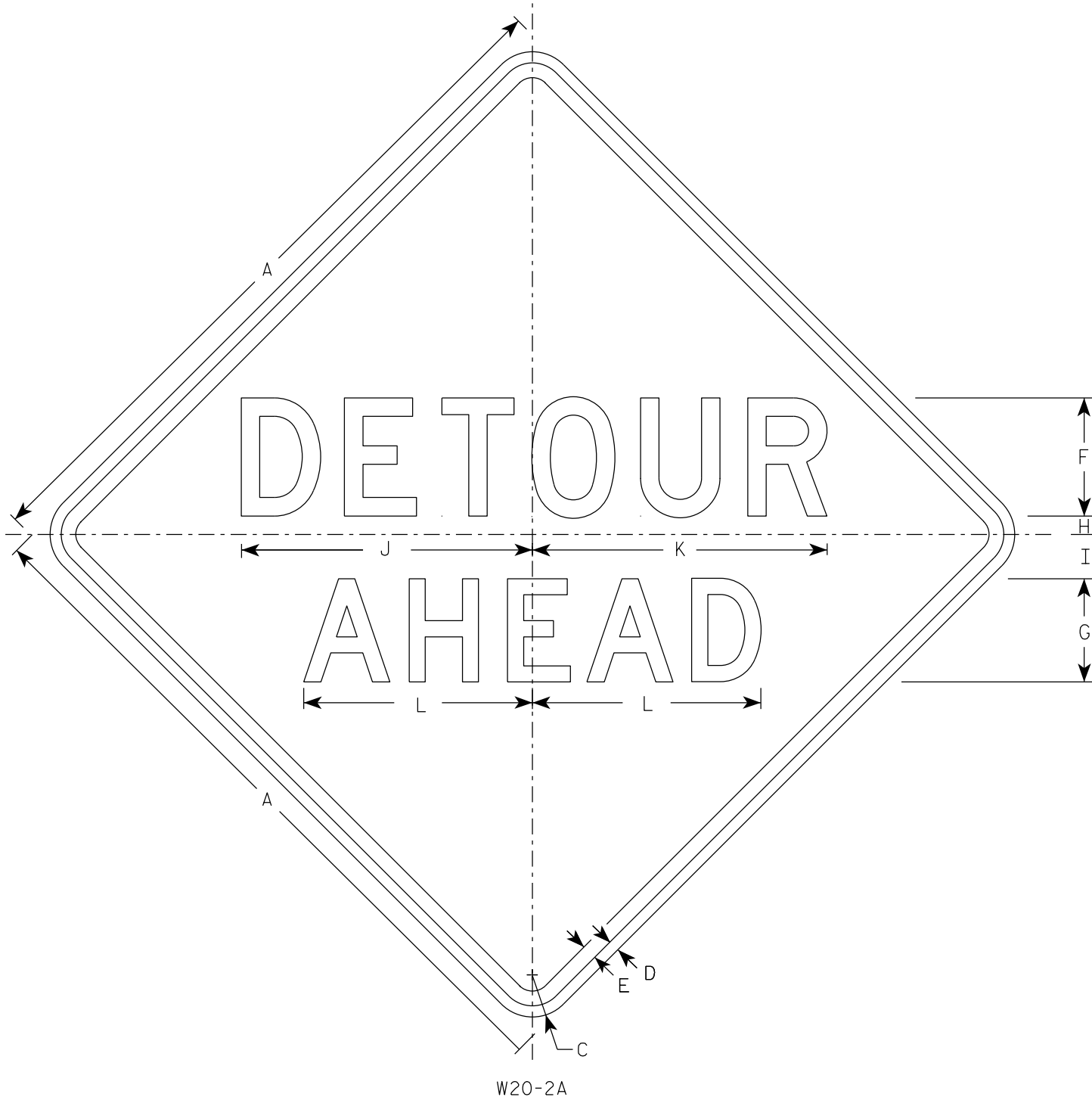


1. Sign is Type II - Type H Reflective
2. Color:
 - Background - White
 - Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



STANDARD SIGN	
R11-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Matthew P Rauch</u> for State Traffic Engineer
DATE <u>2/5/24</u>	PLATE NO. <u>R11-212</u>

FILE NAME : C:\Users\N\PROJECTS\tr_stdplate\R112.dgn	PLOT DATE : 5-FEB 2024 2:10	PLOT BY : msc,j9h	PLOT NAME :	PLOT SCALE : \$\$.....plot*scale.....\$\$
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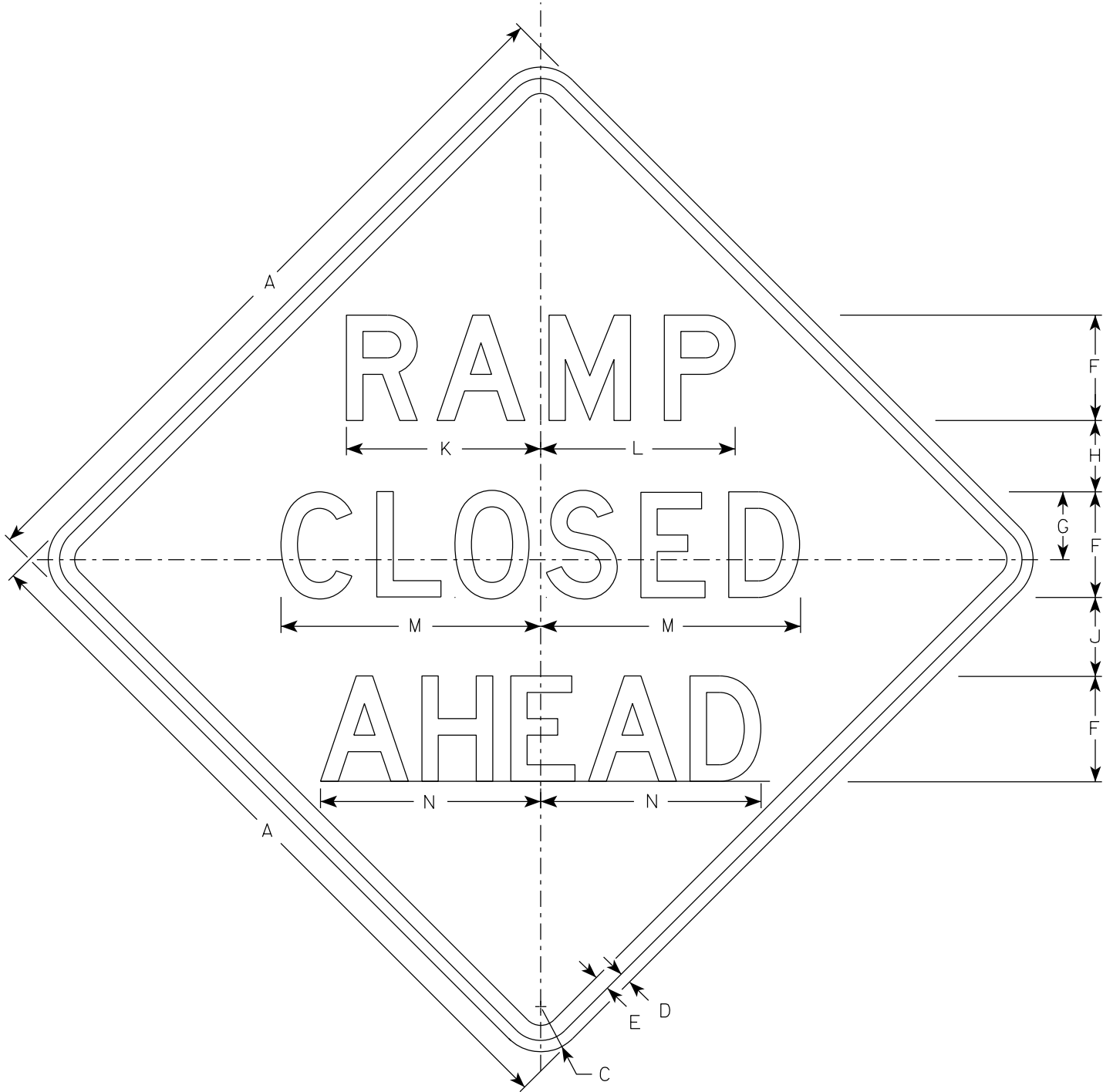
NOTES

- Sign is Type II - Type F Reflective
- Color:
Background - Orange
Message - Black
- Message Series - See note 5
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

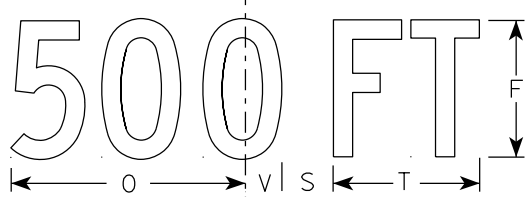
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	w	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN W20-2A,B,C,D,F & G	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 1/10/2024	PLATE NO. W20-2.7

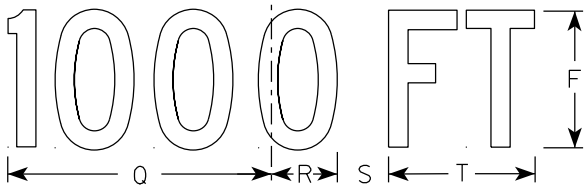
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 124	E
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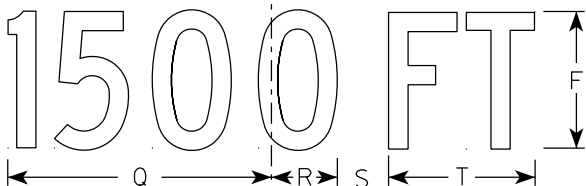
W20-53A



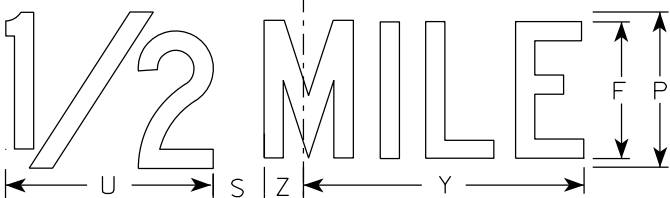
W20-53D



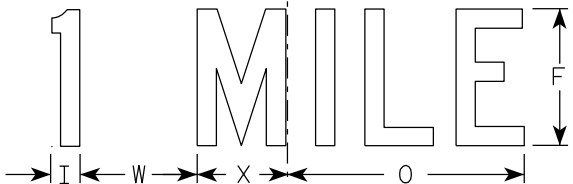
W20-53C



W20-53B



W20-53G



W20-53F

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - see note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Lines 1 and 2 are Series D.
Line 3 is Series D for AHEAD and Series C for all other distances.

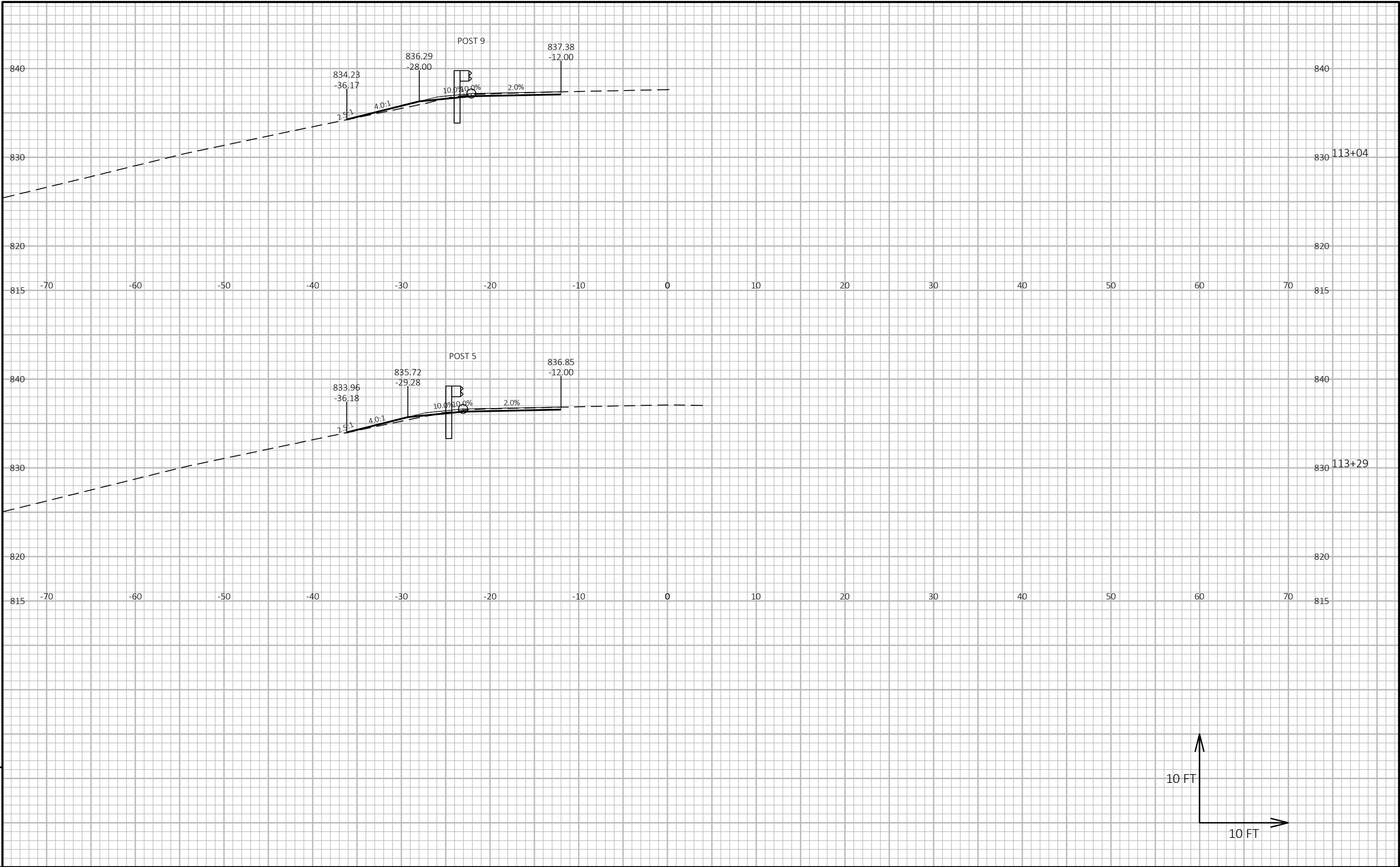
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	9 1/4	9 1/4	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

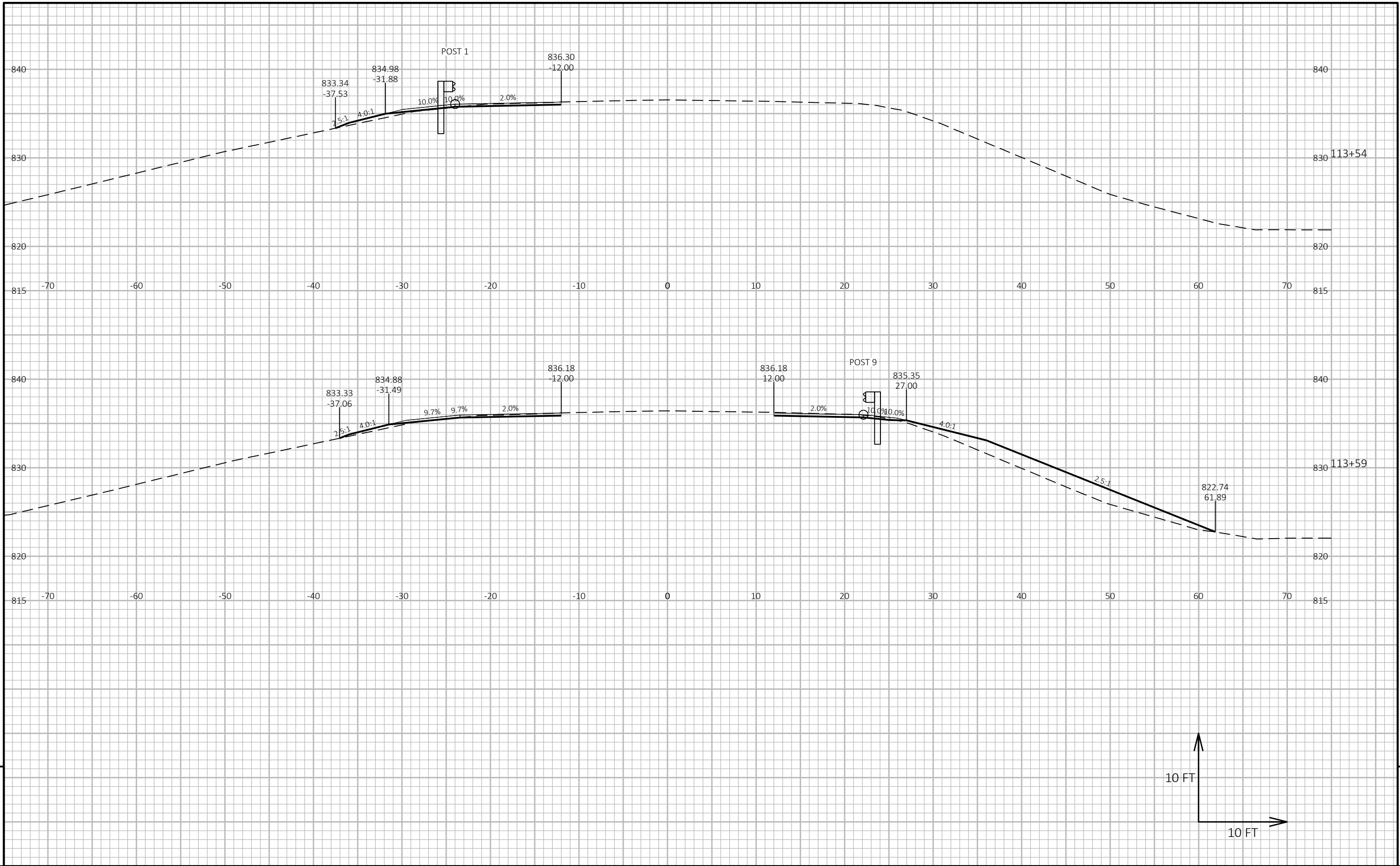
STANDARD SIGN
W20-53A,B,C,D,F,G

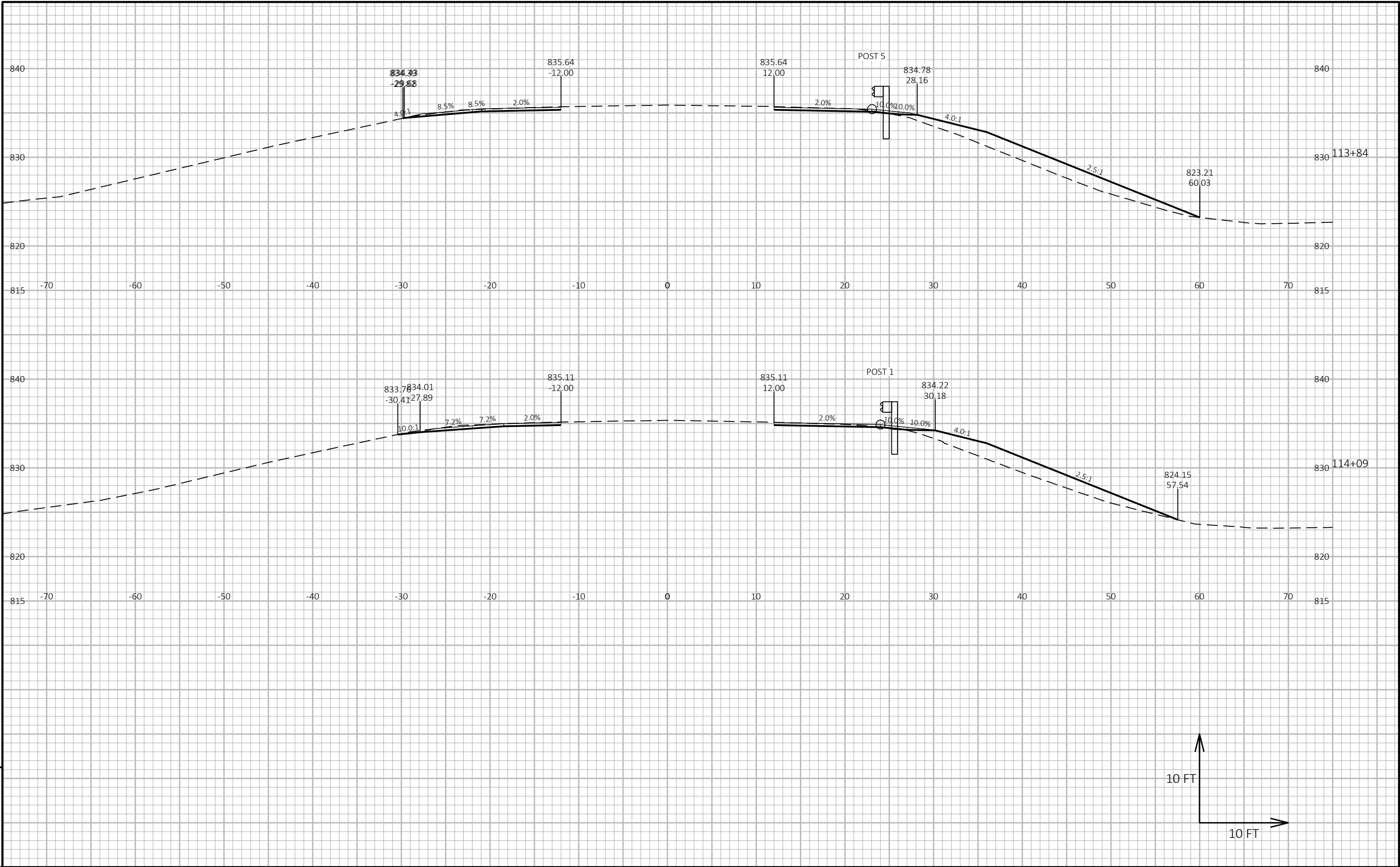
WISCONSIN DEPT OF TRANSPORTATION

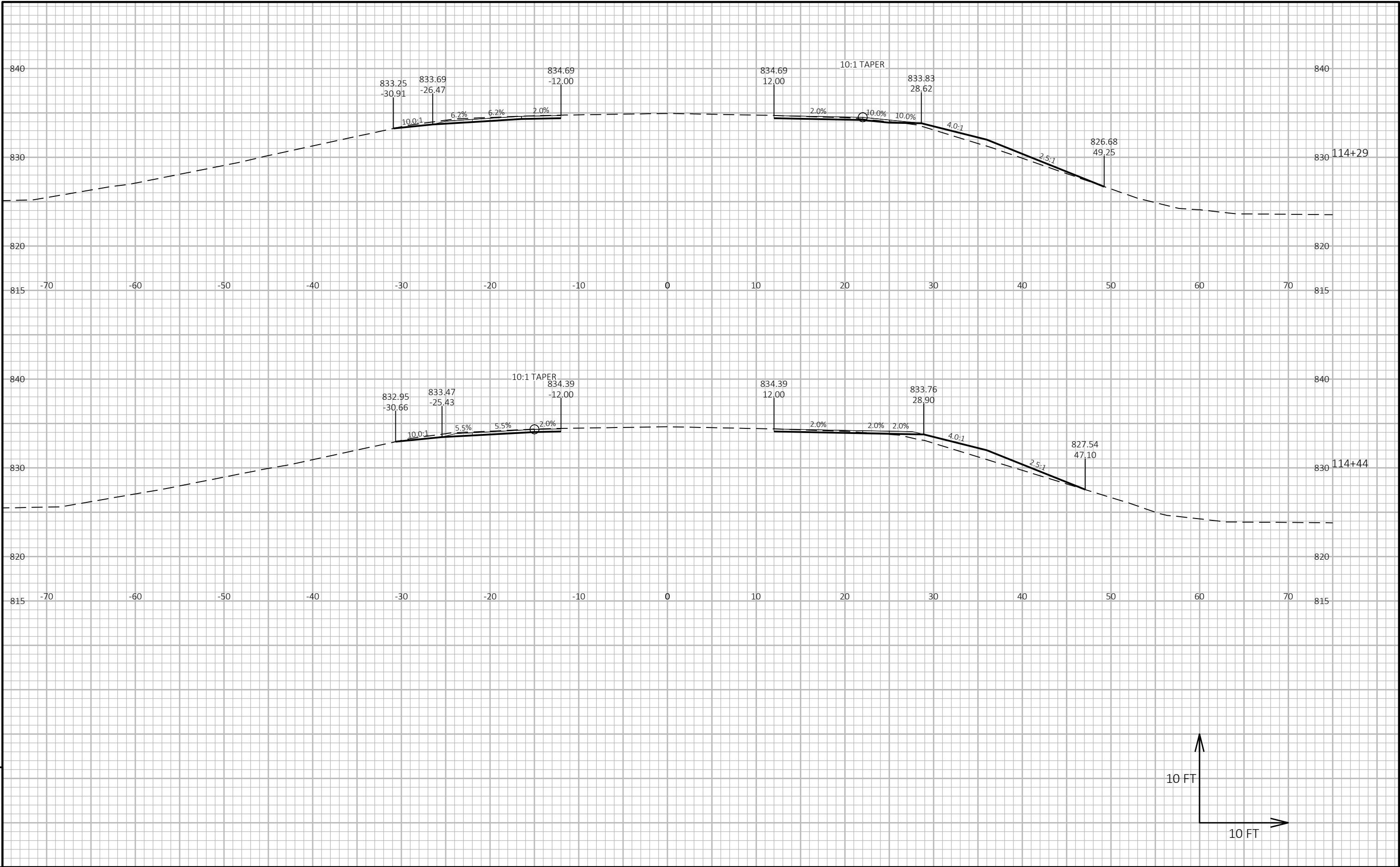
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

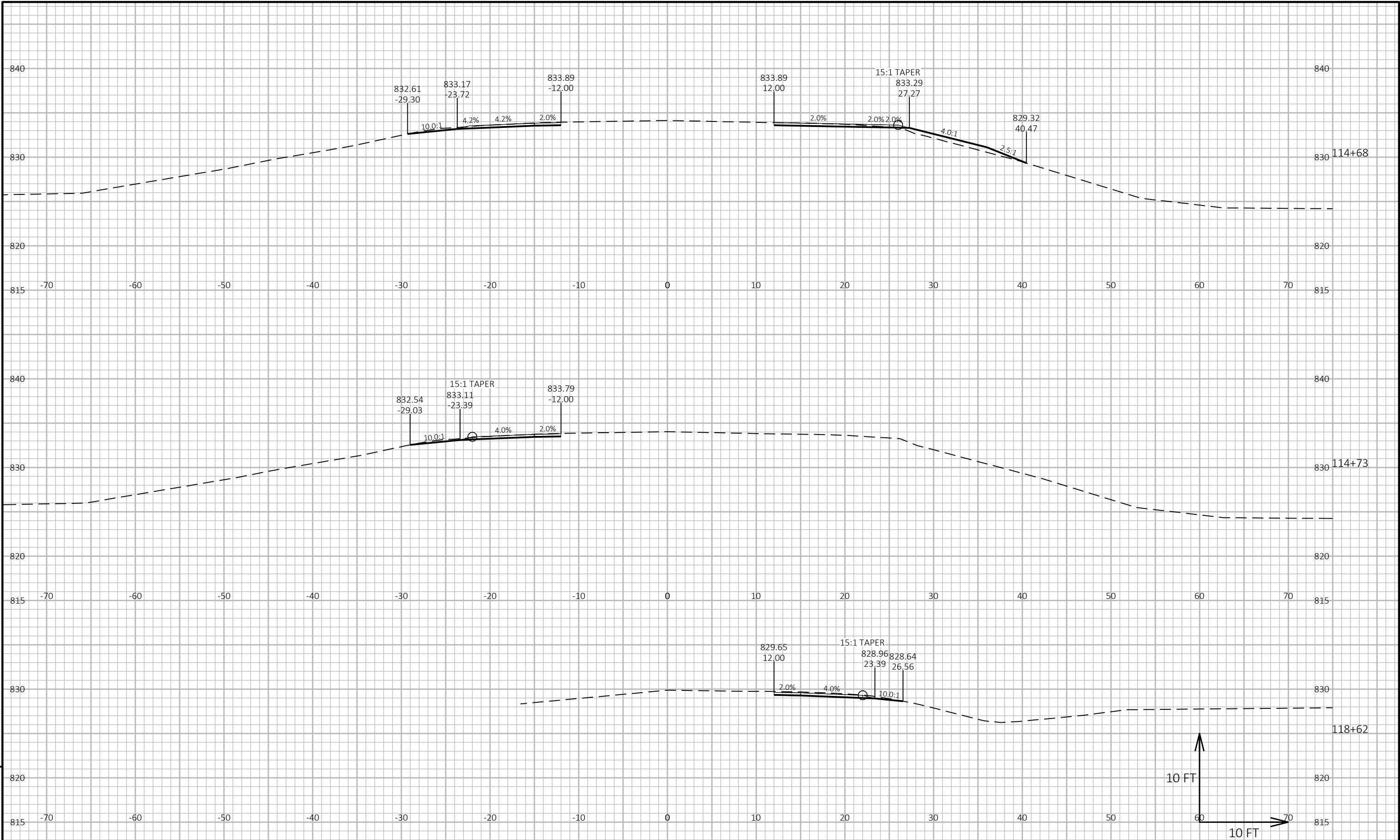
DATE 1/10/2024 PLATE NO. W20-53.2

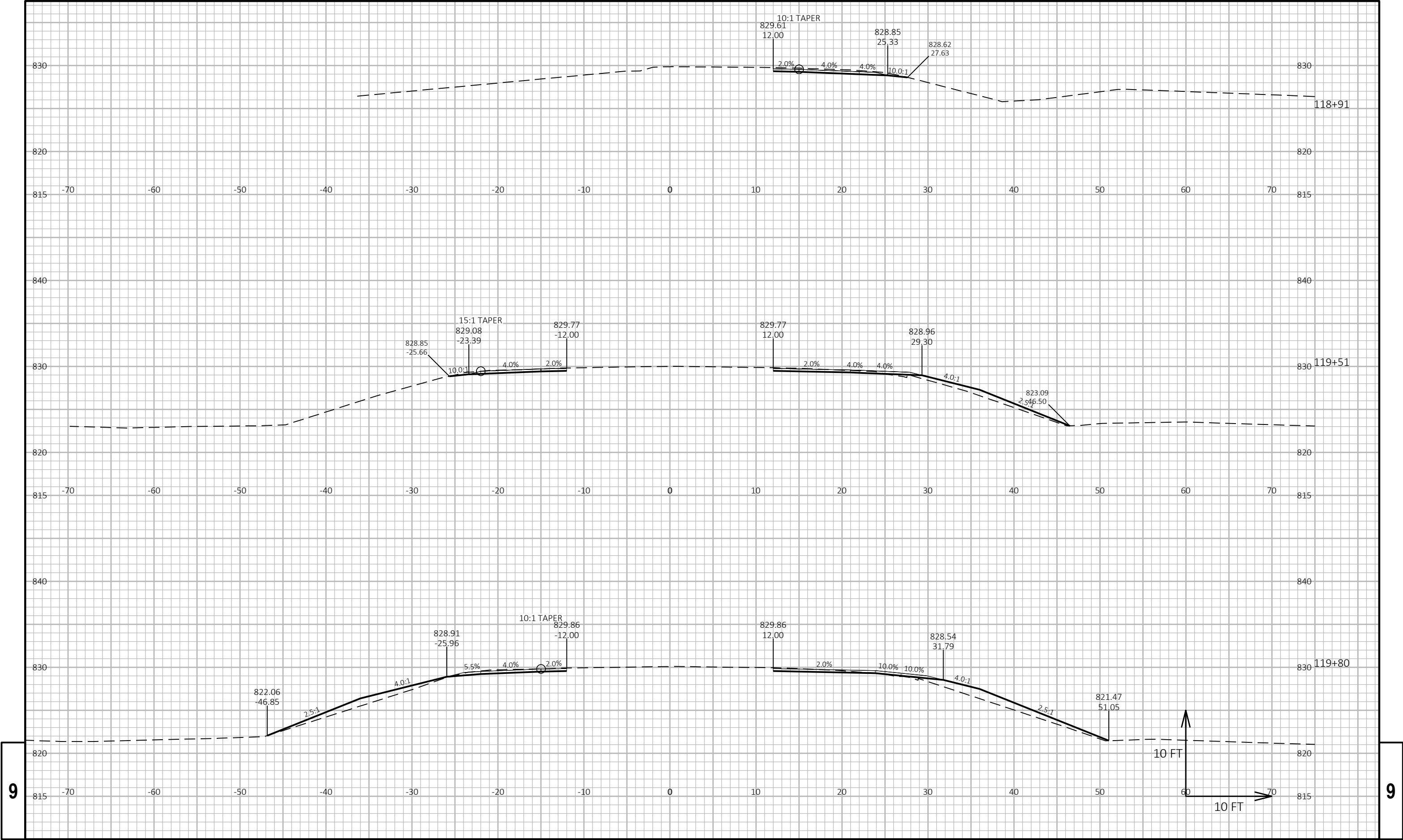


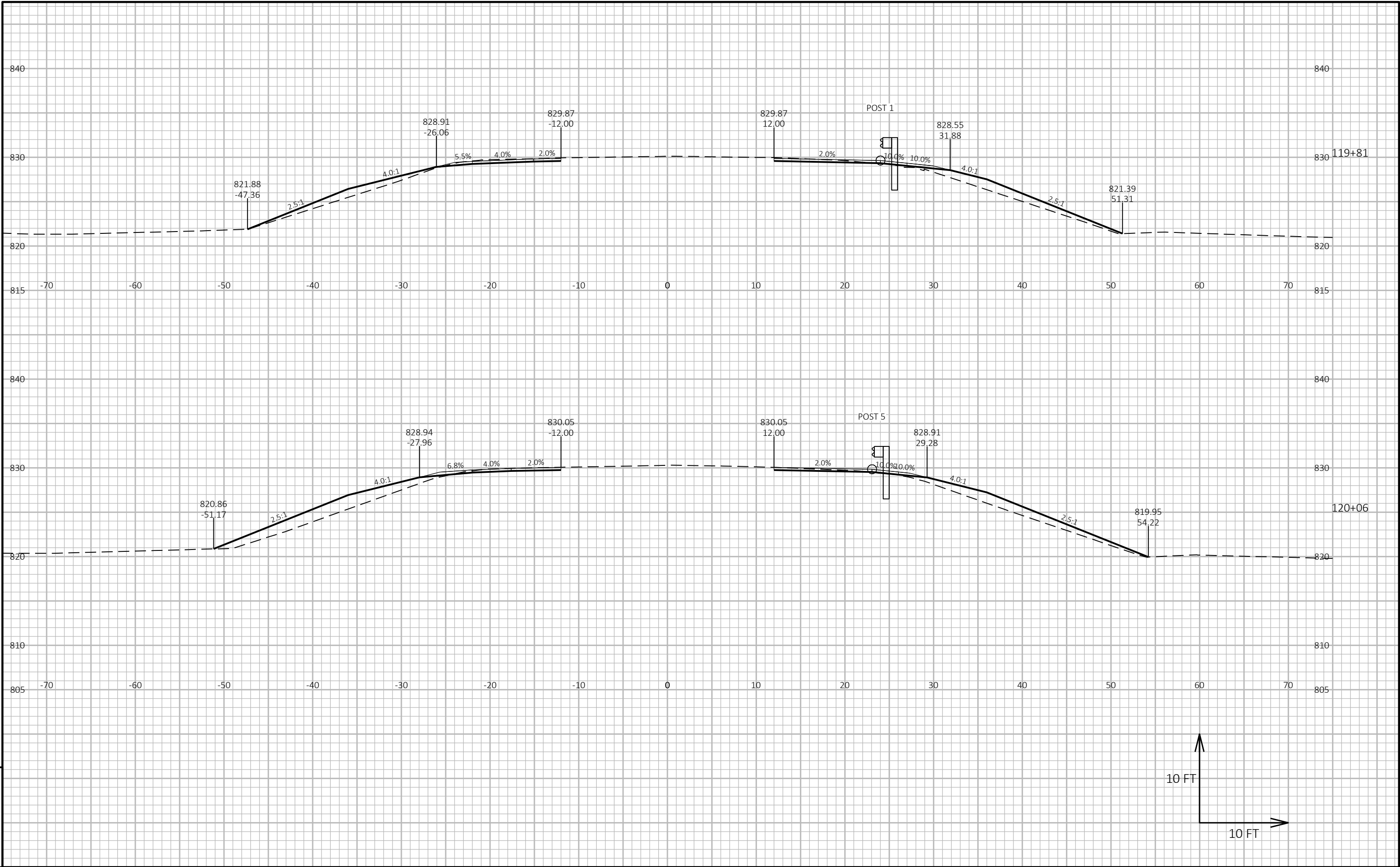


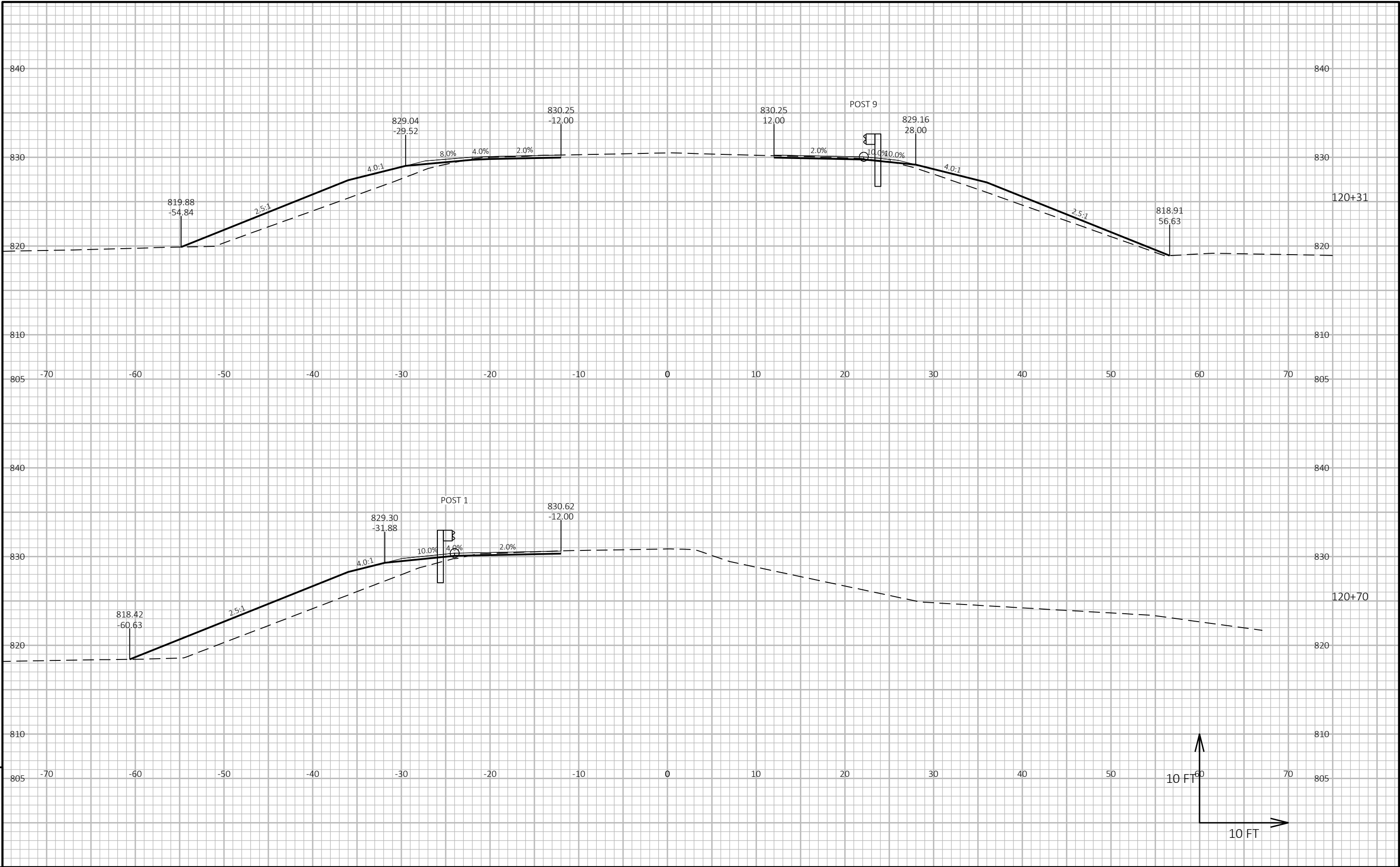


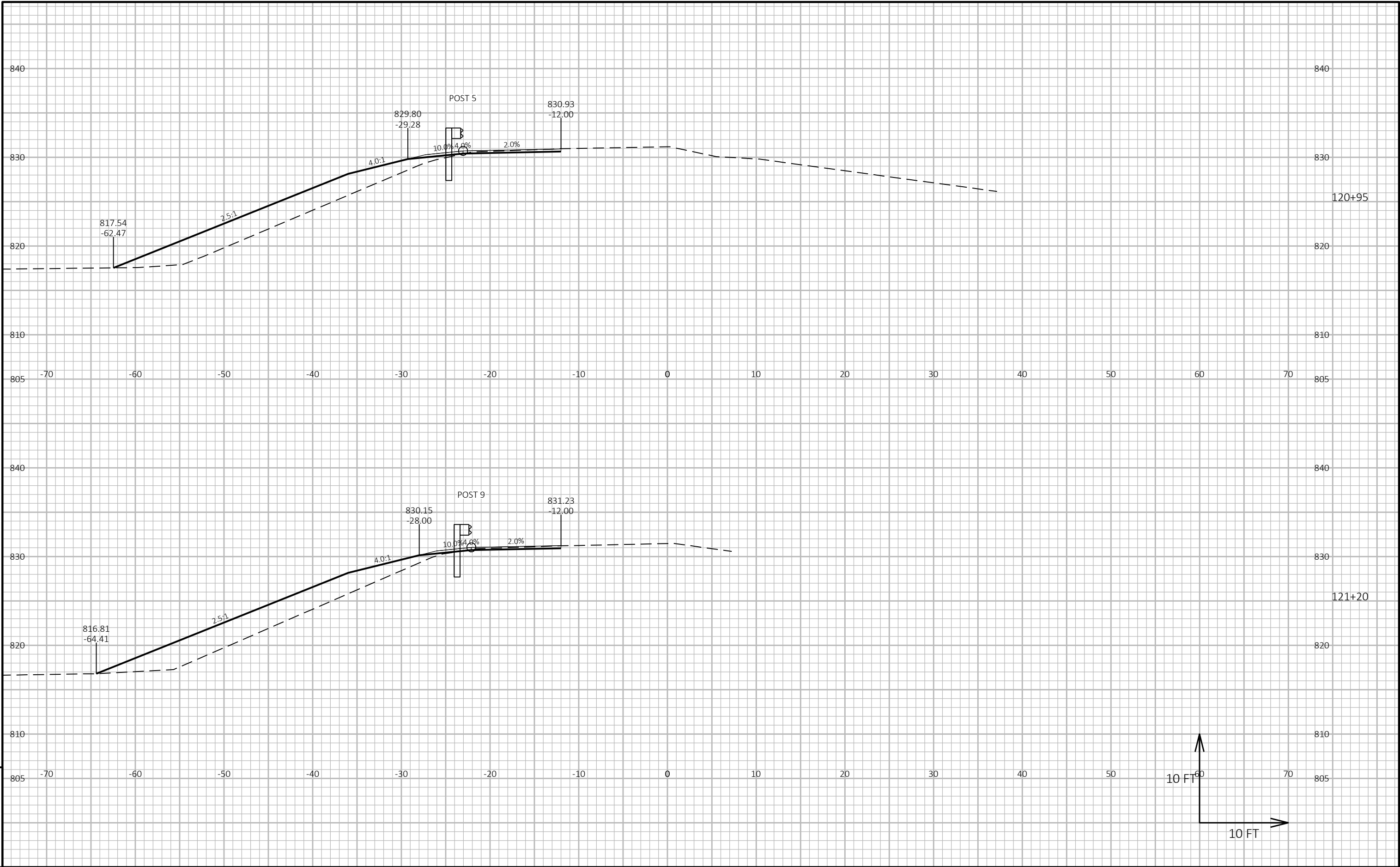


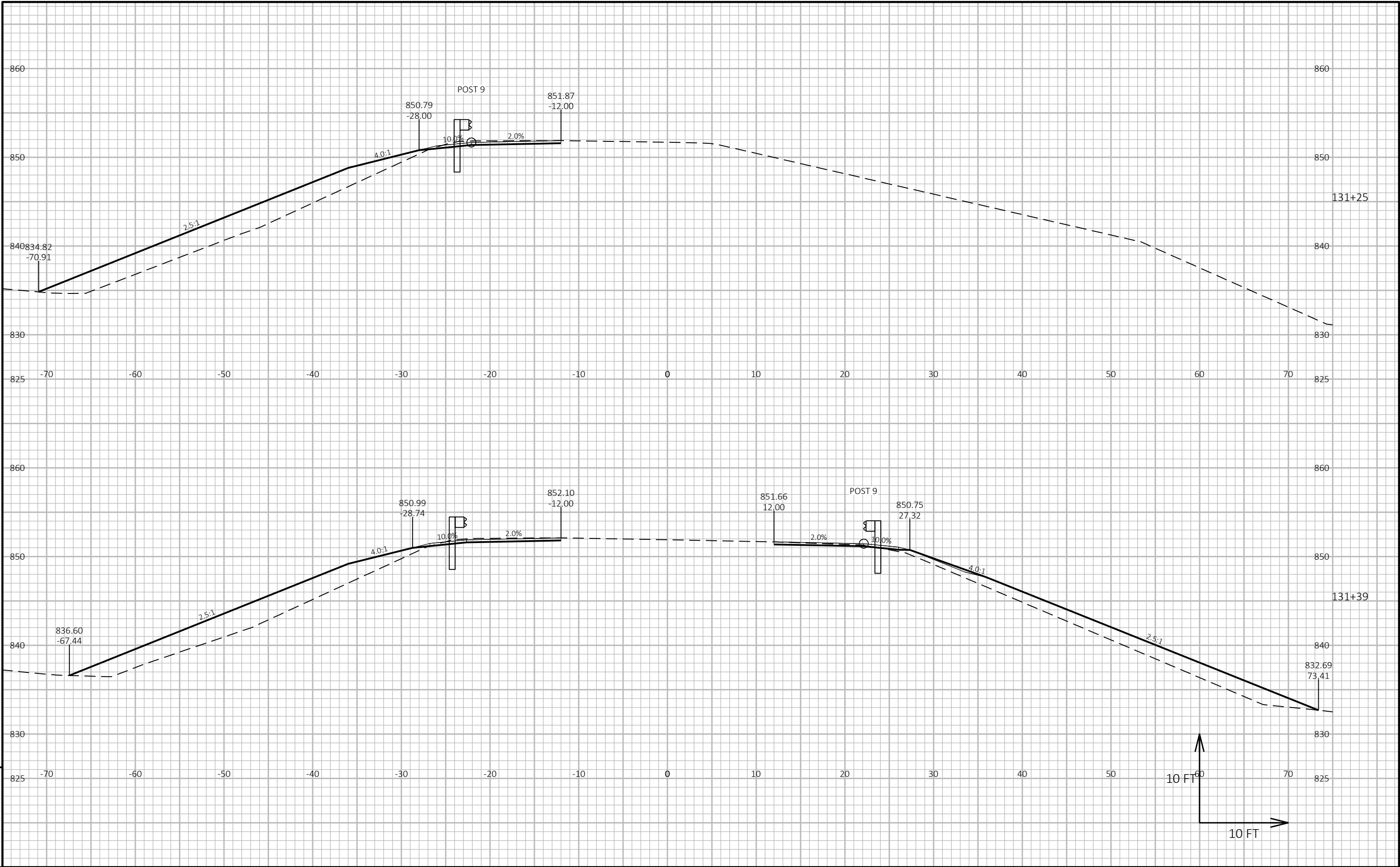


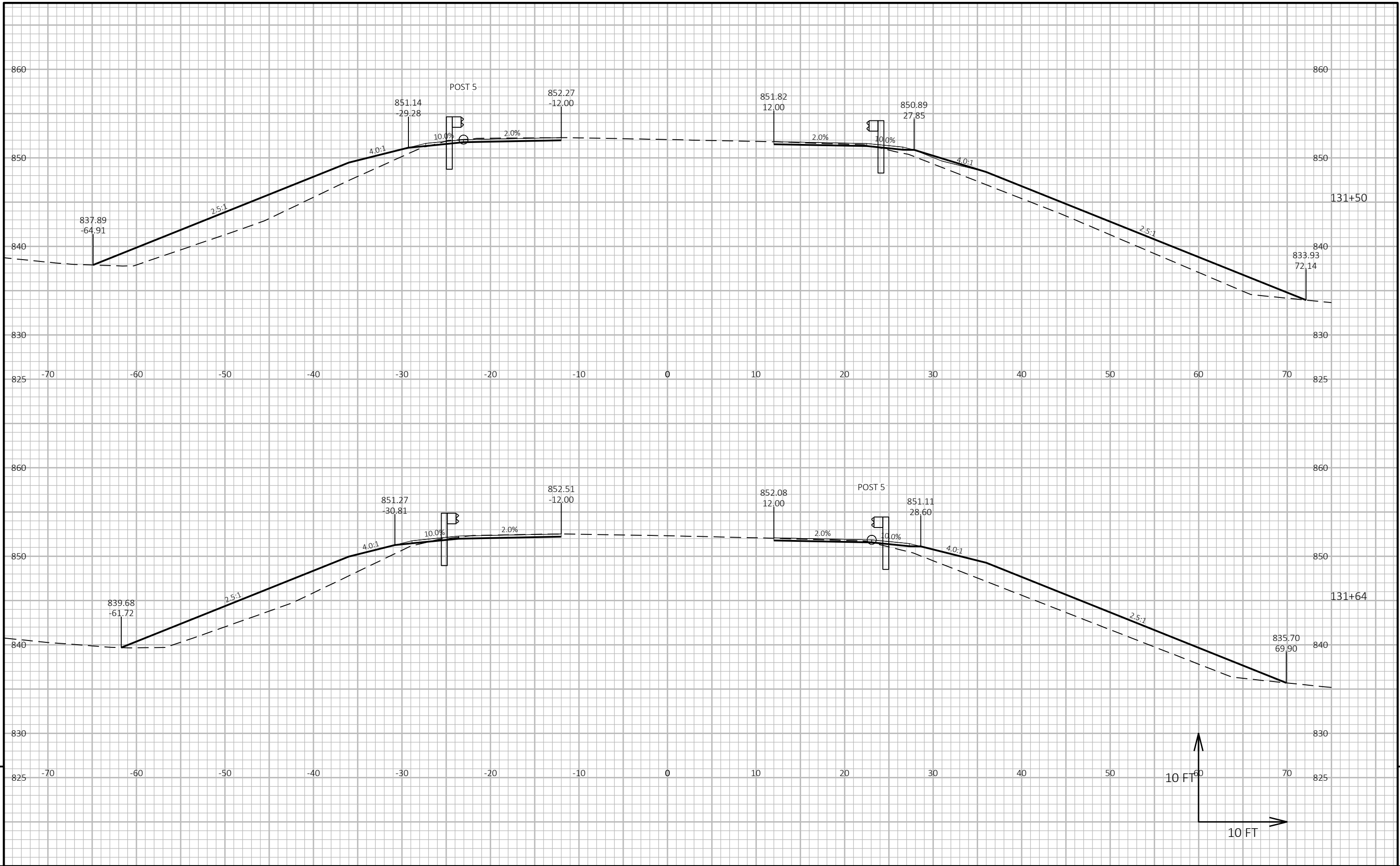


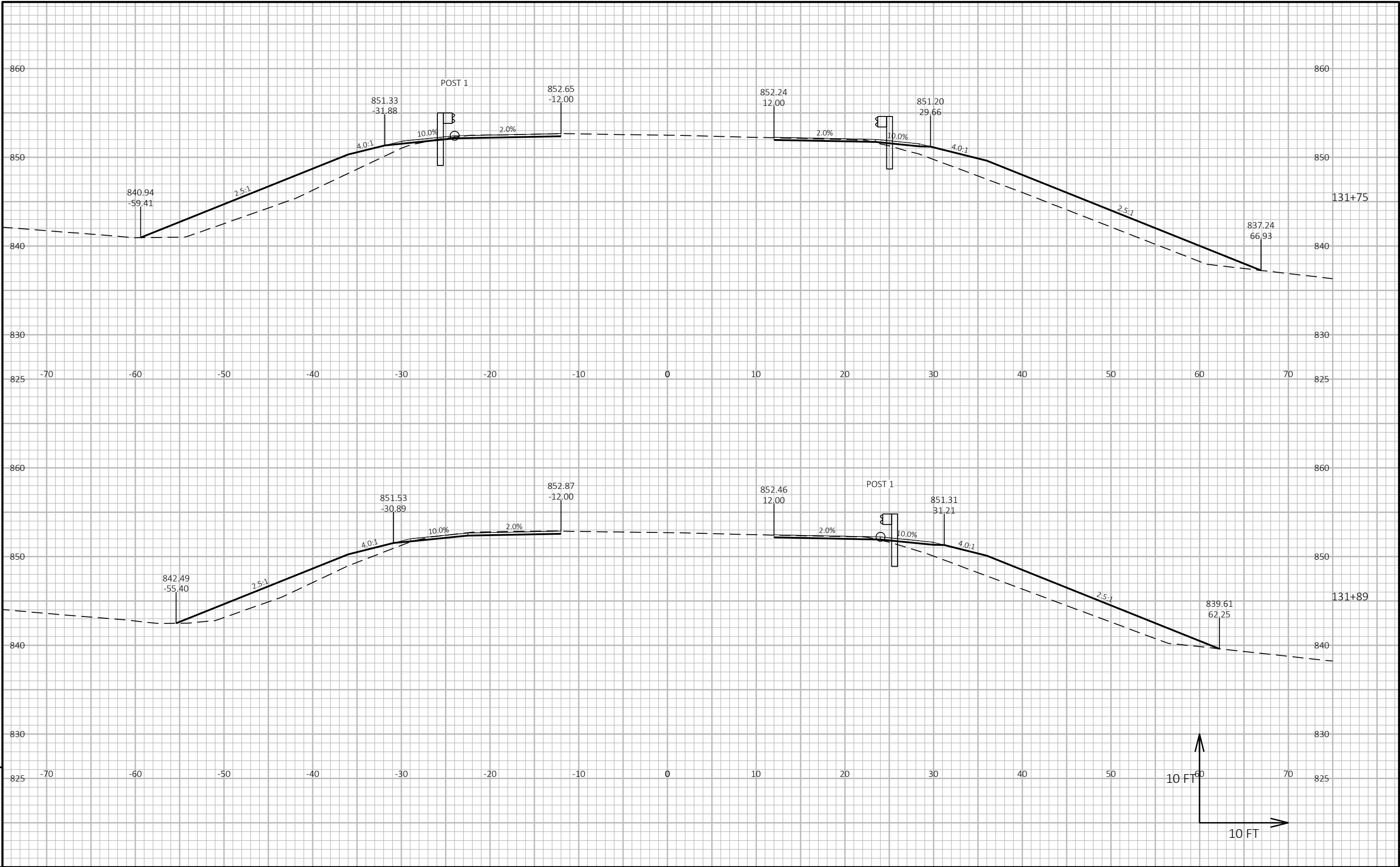


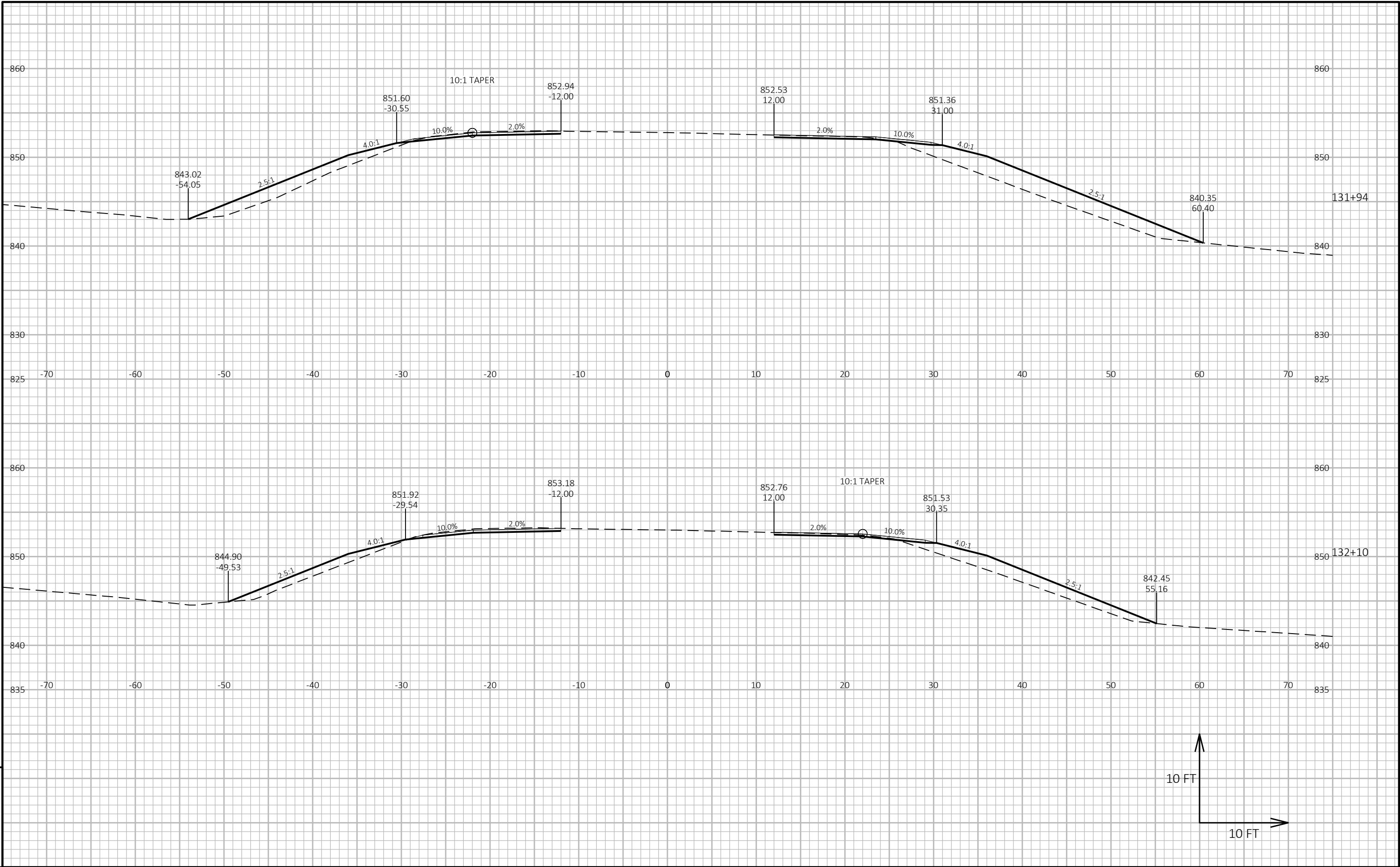


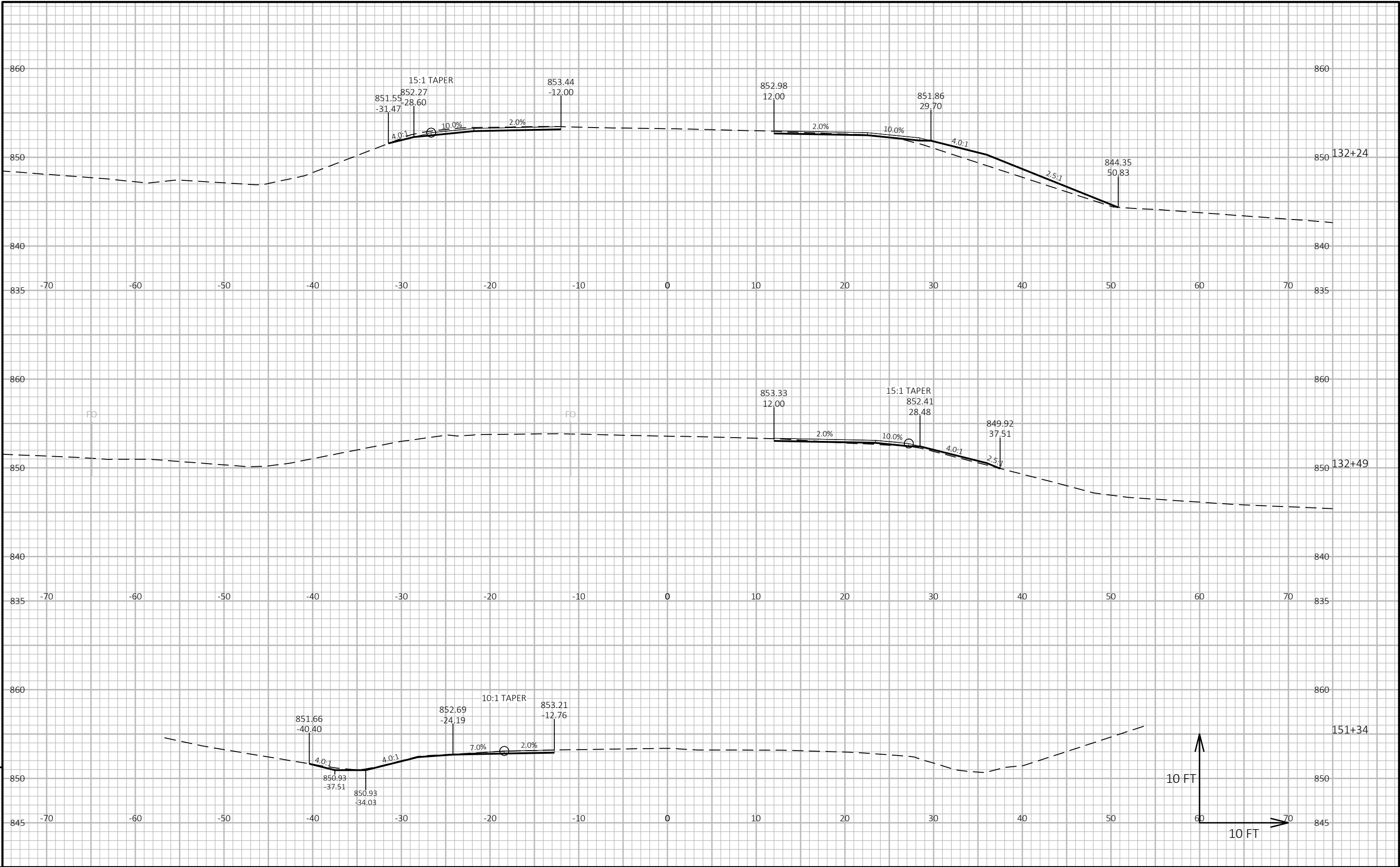


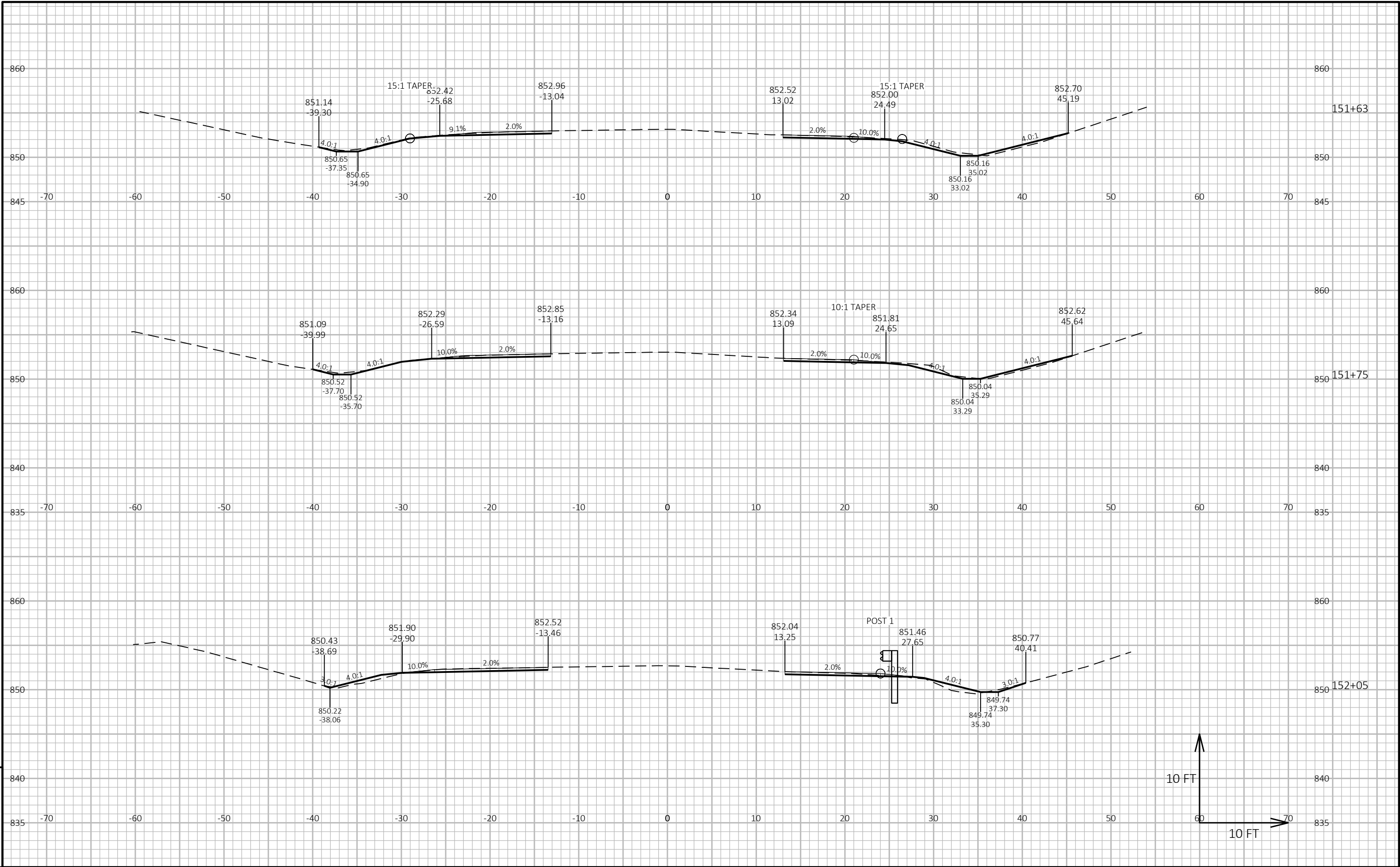


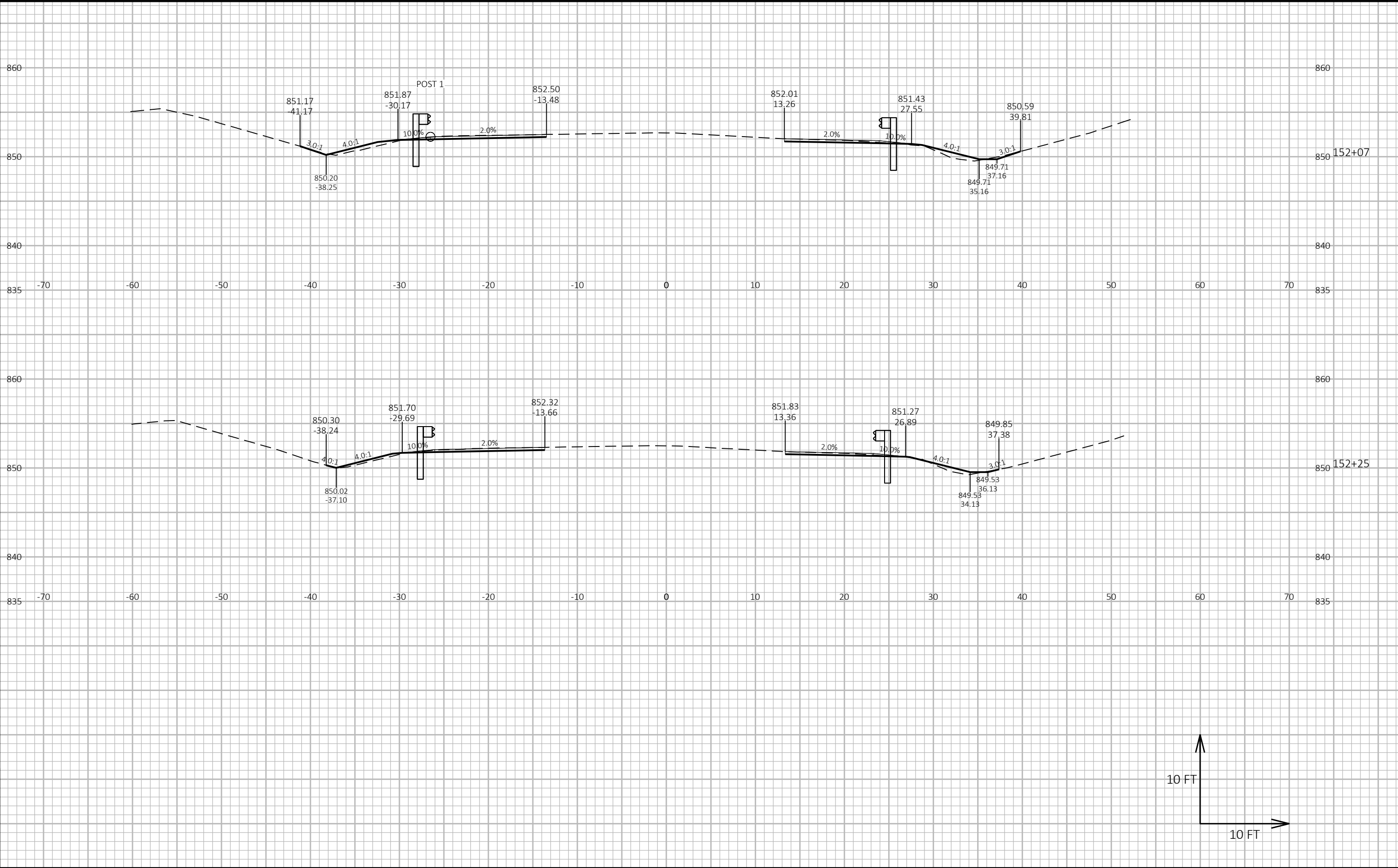






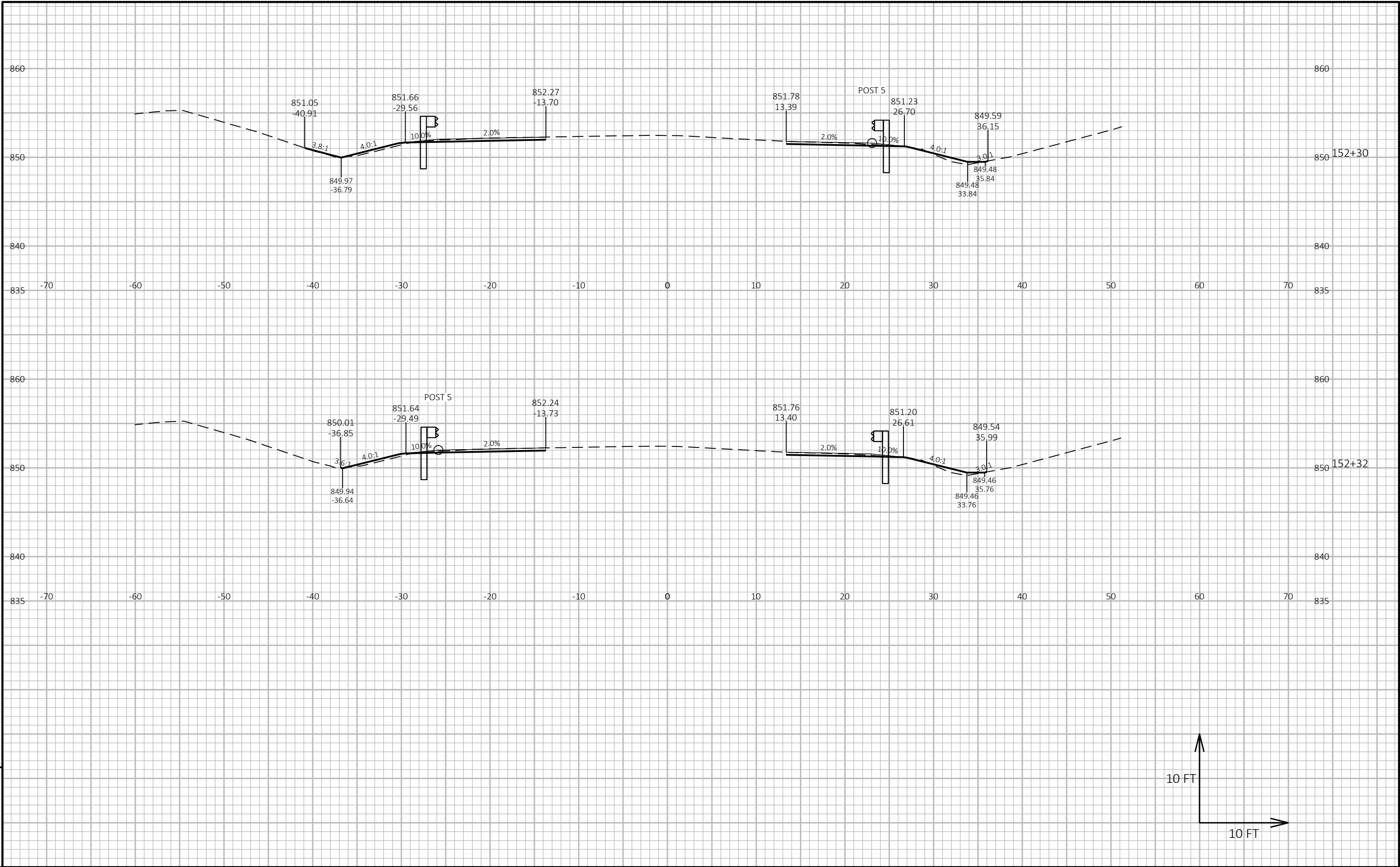


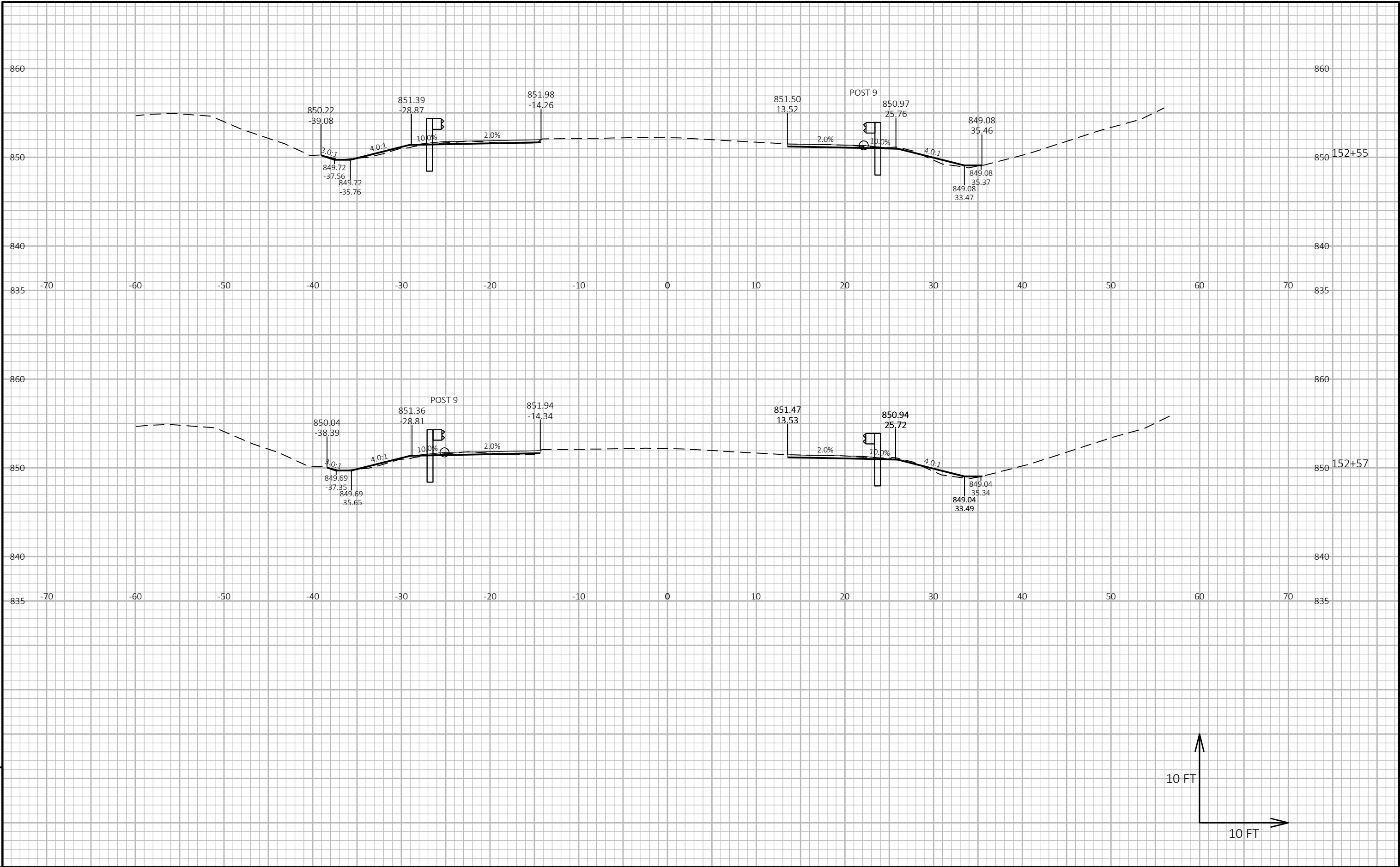


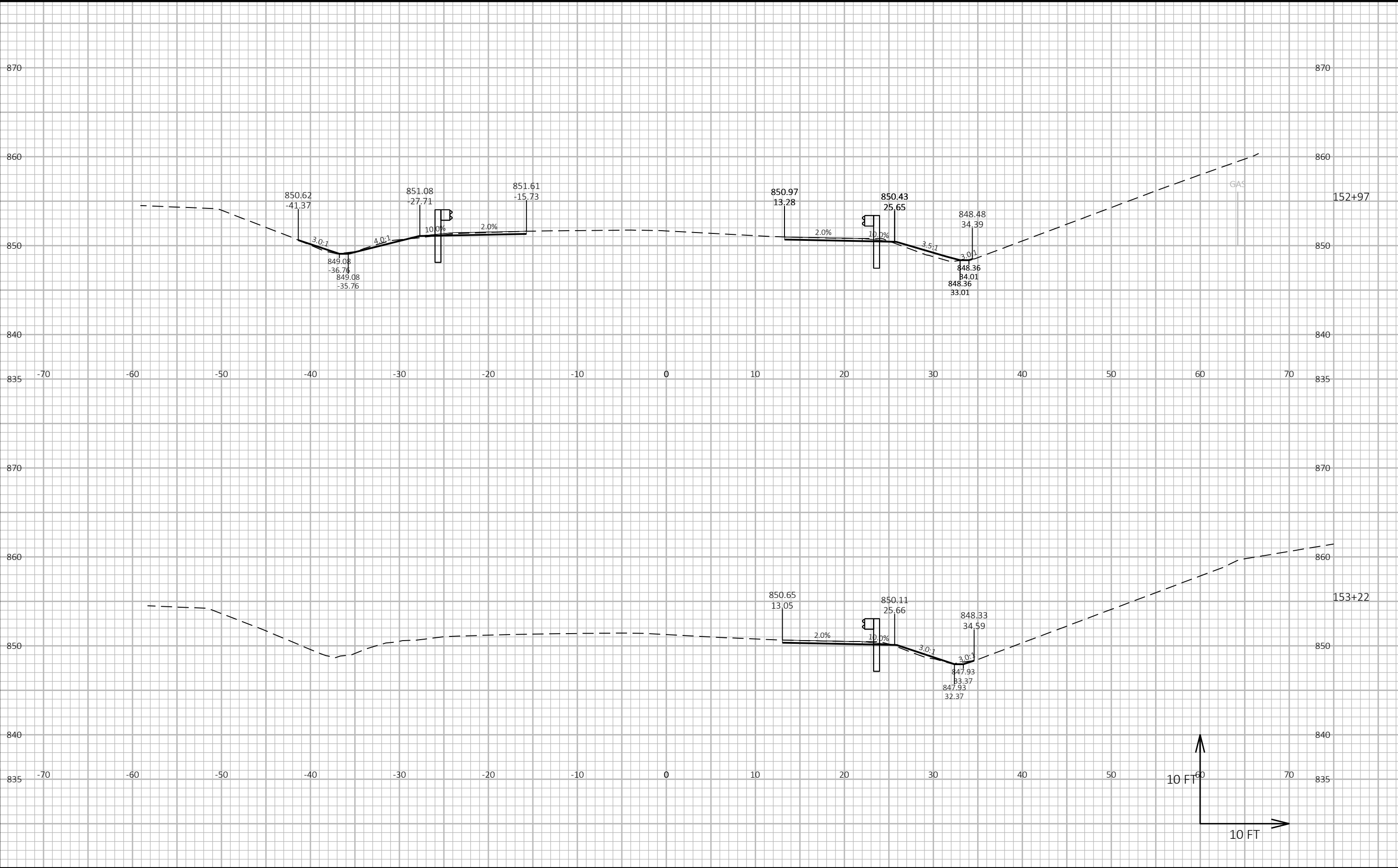


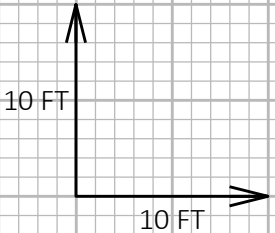
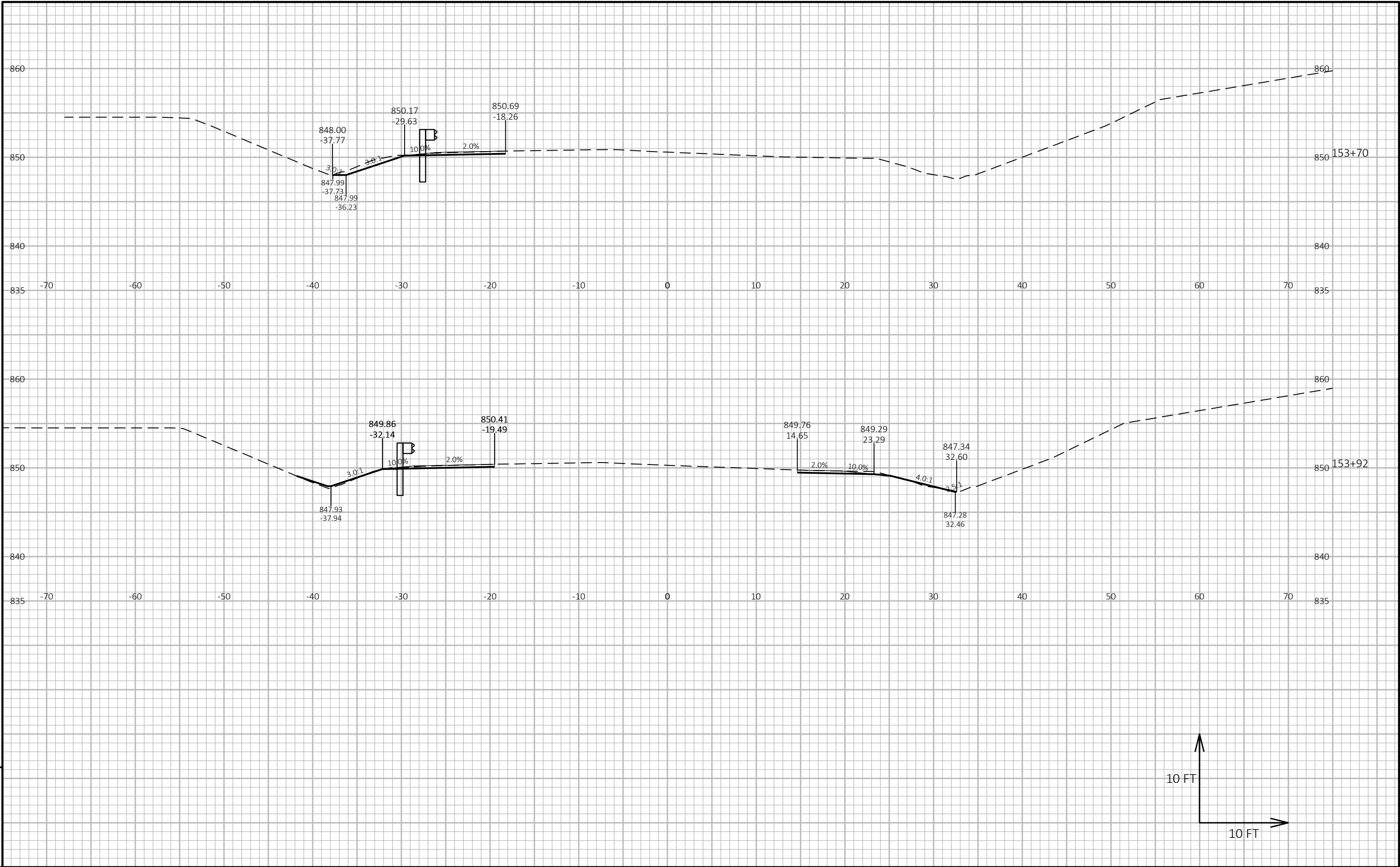
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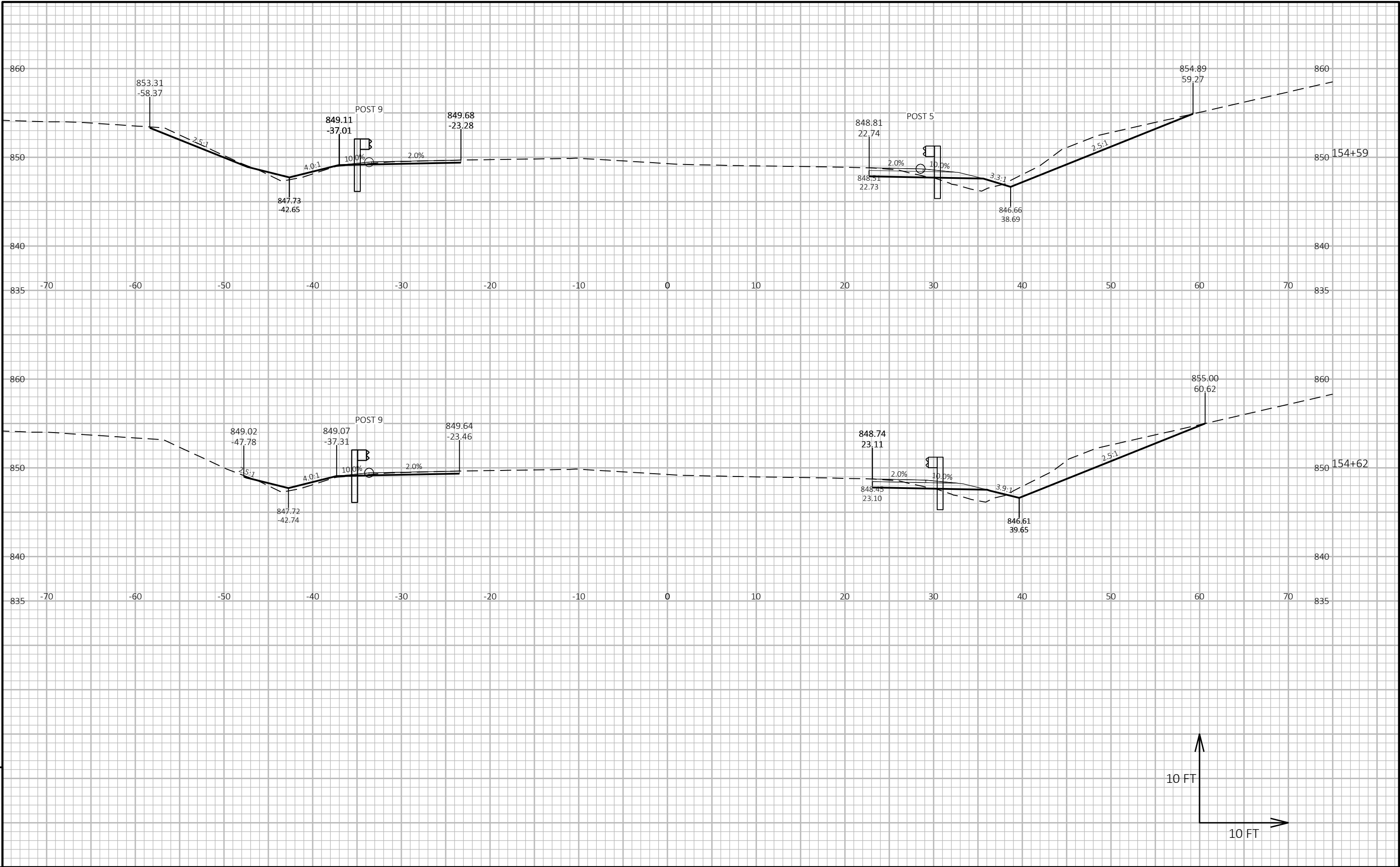


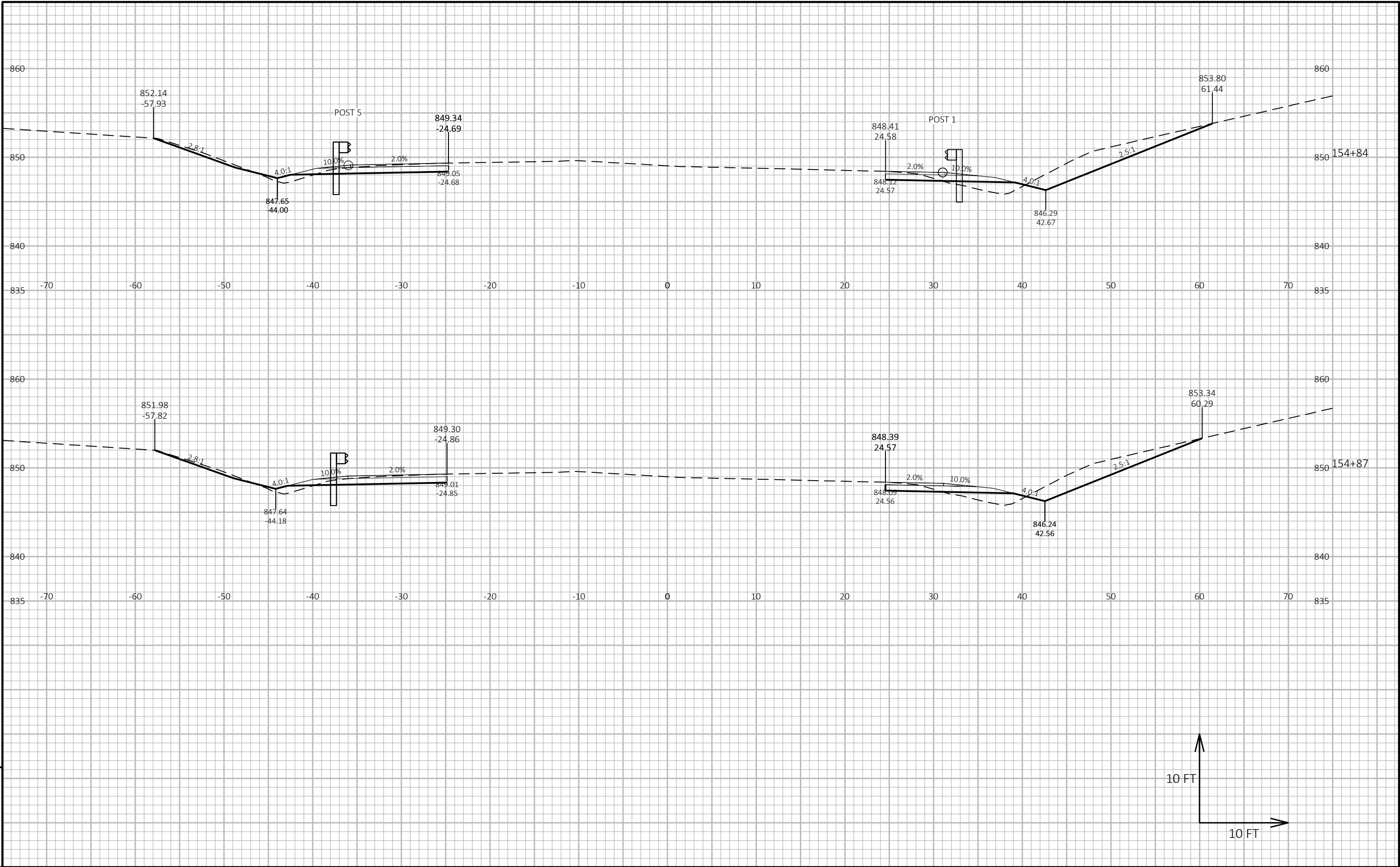


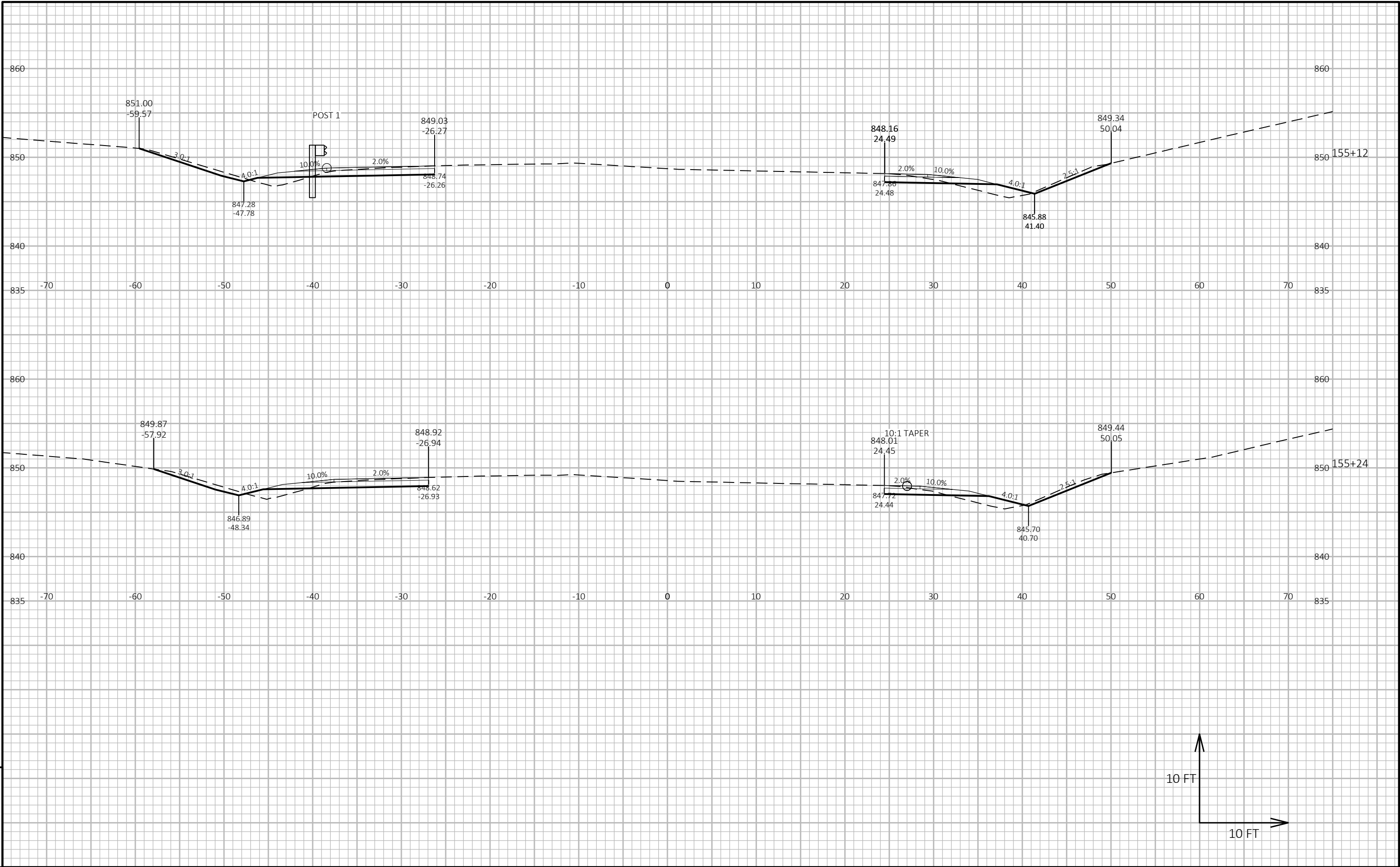


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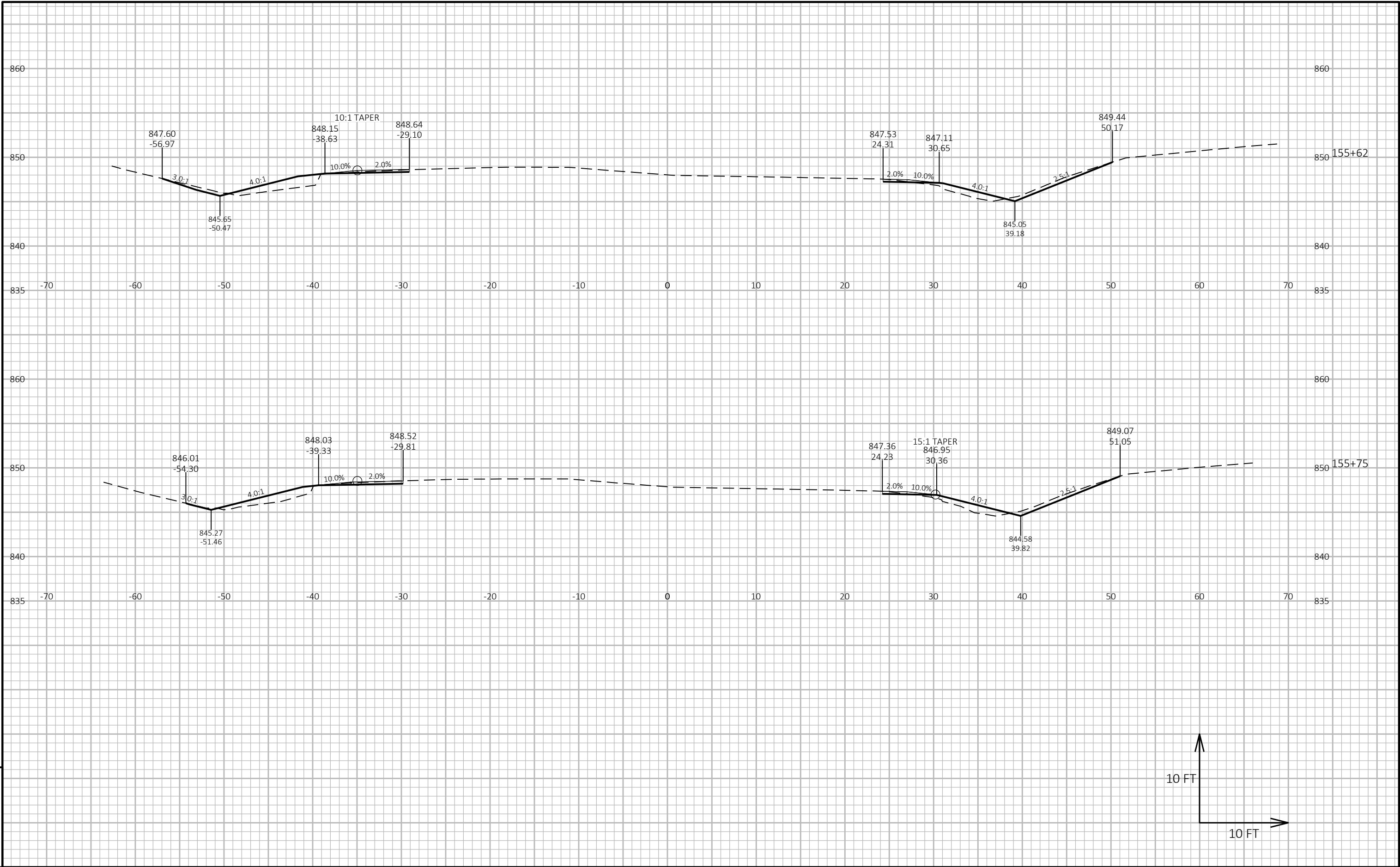


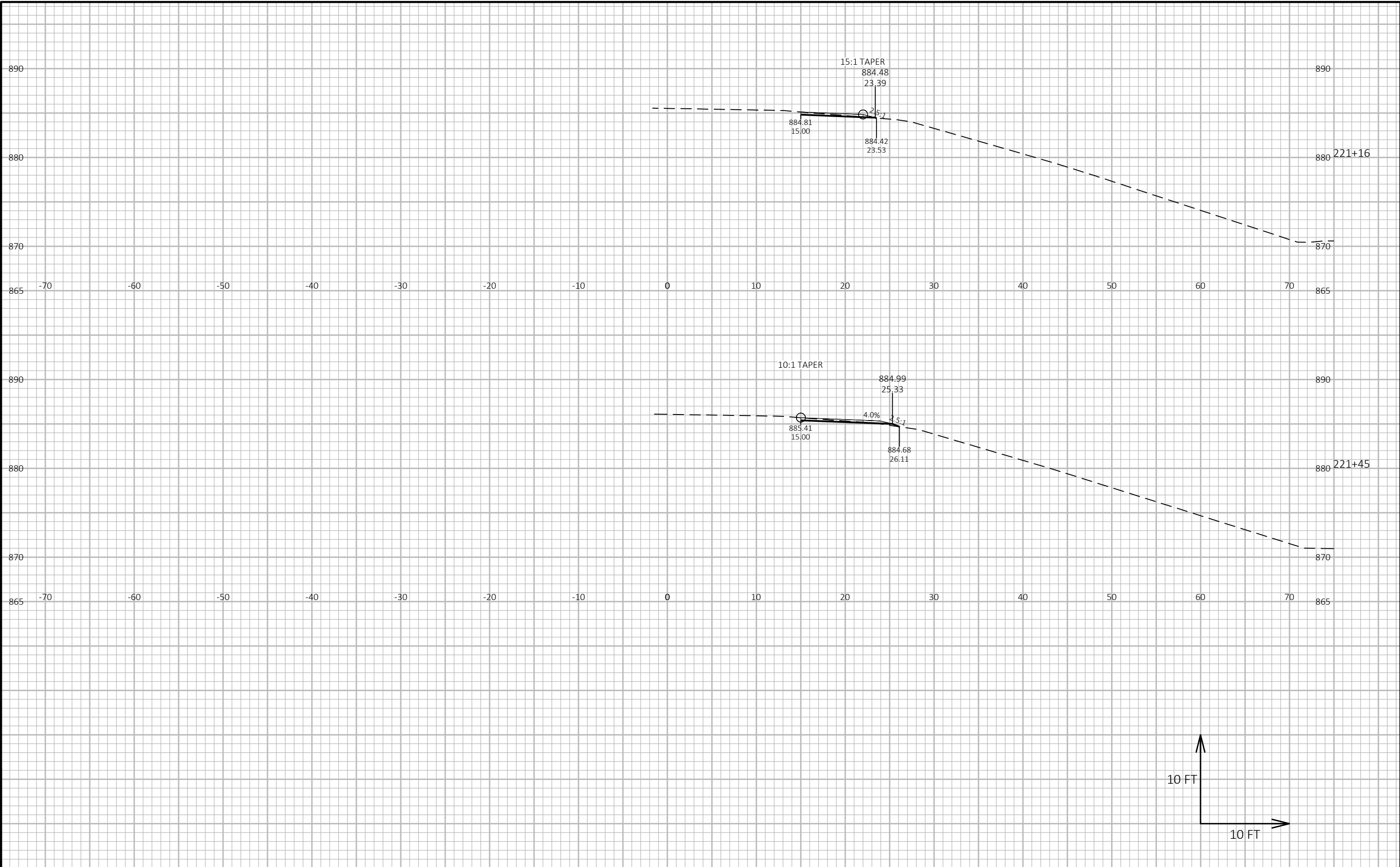




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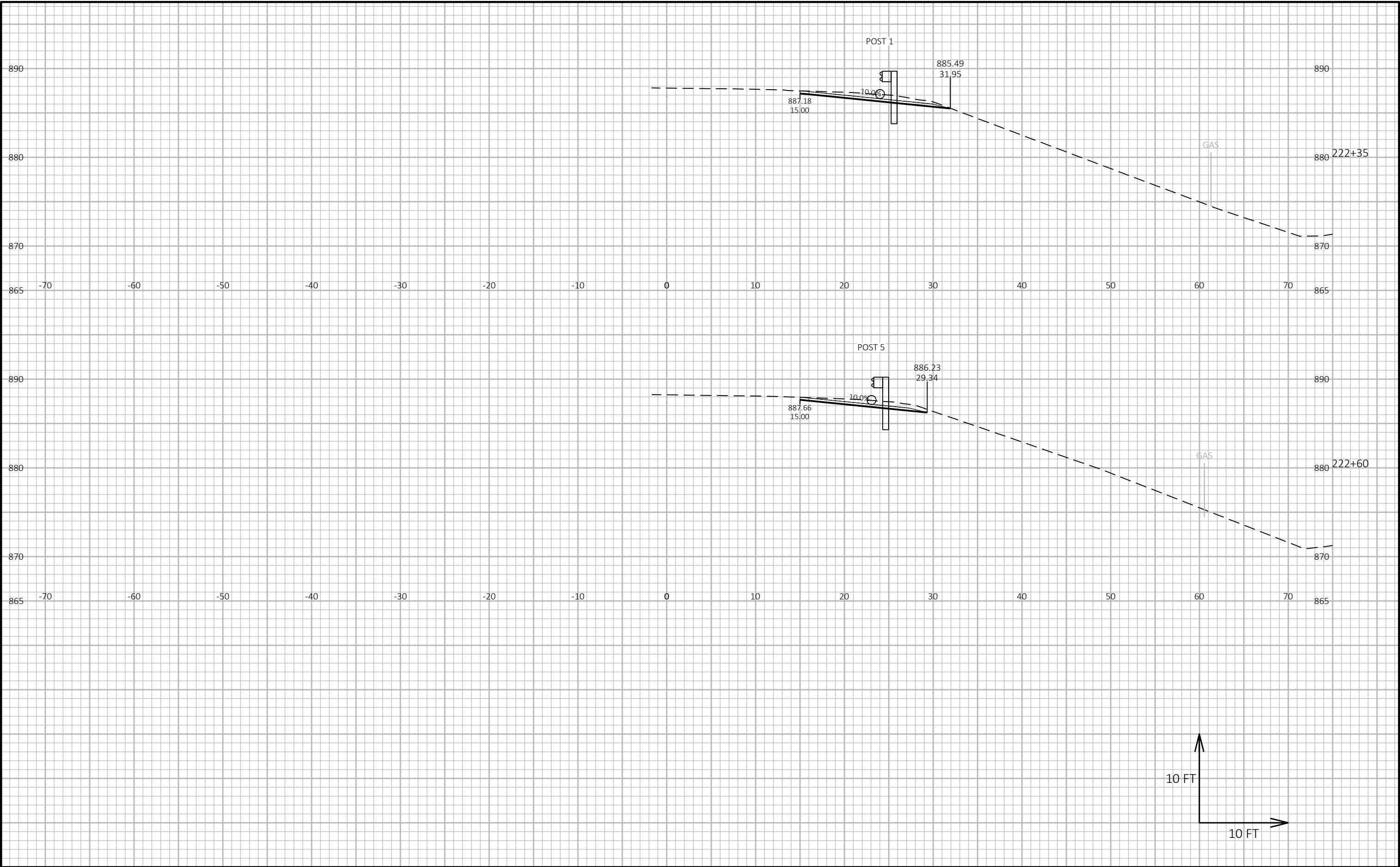
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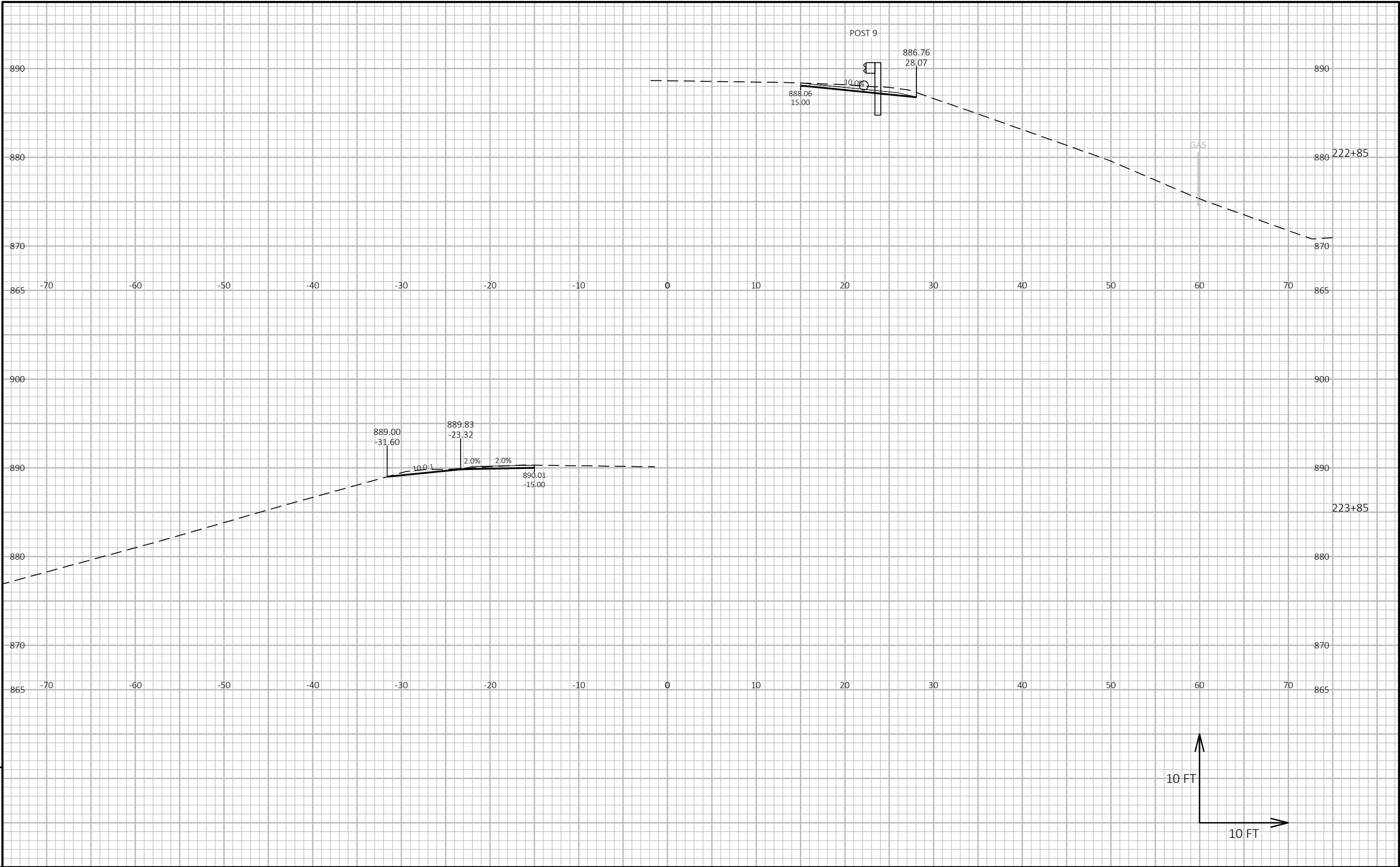
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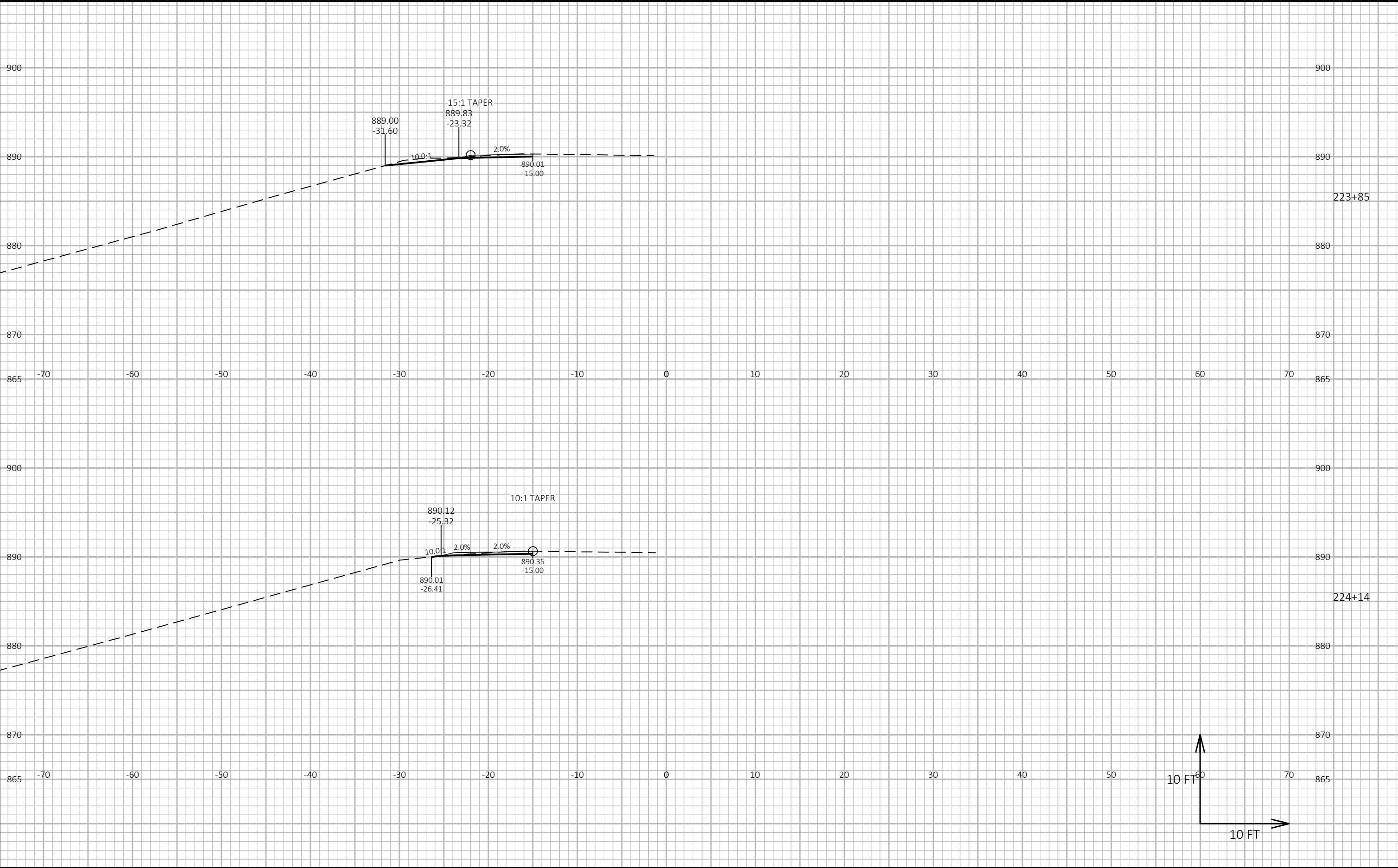
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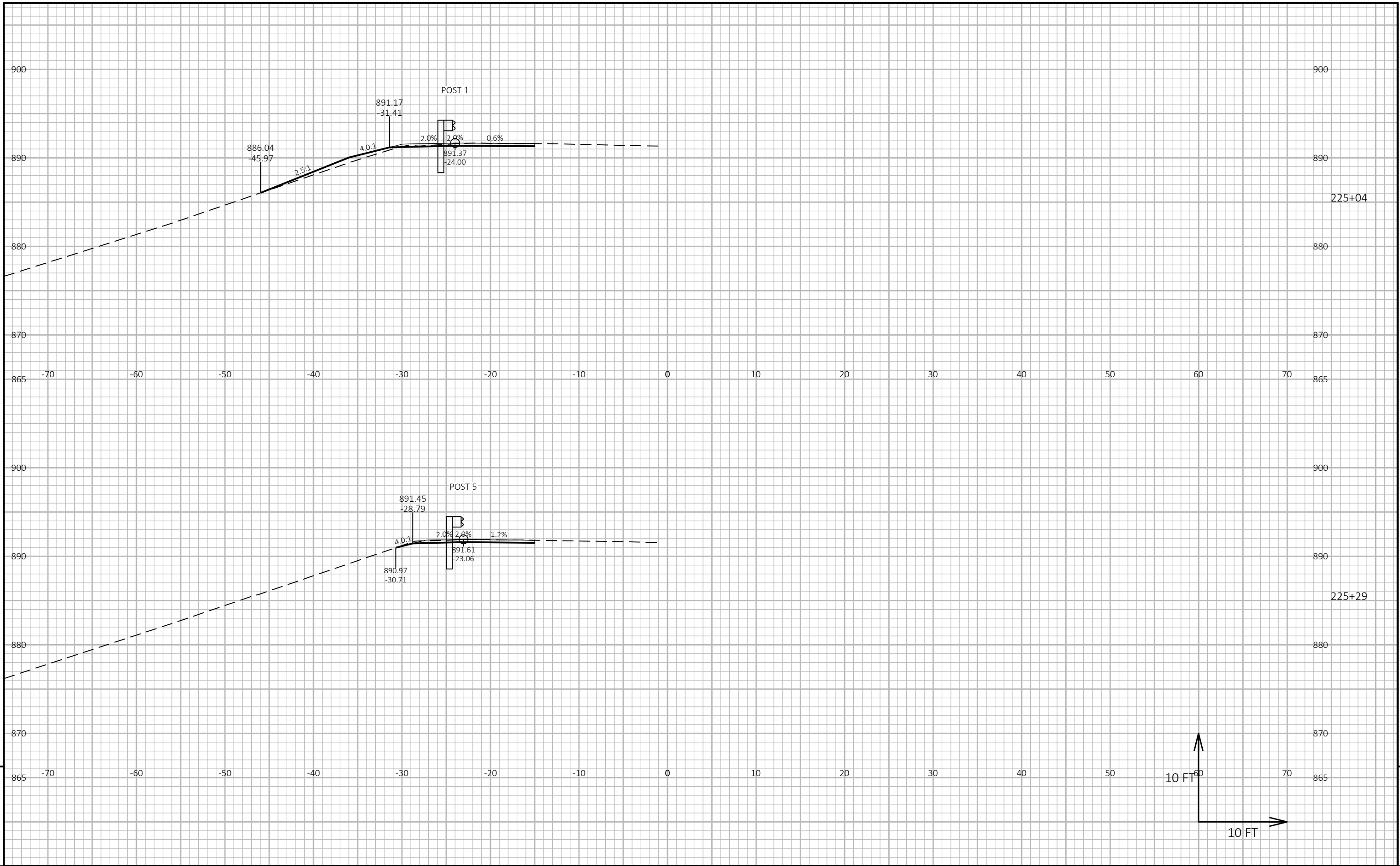
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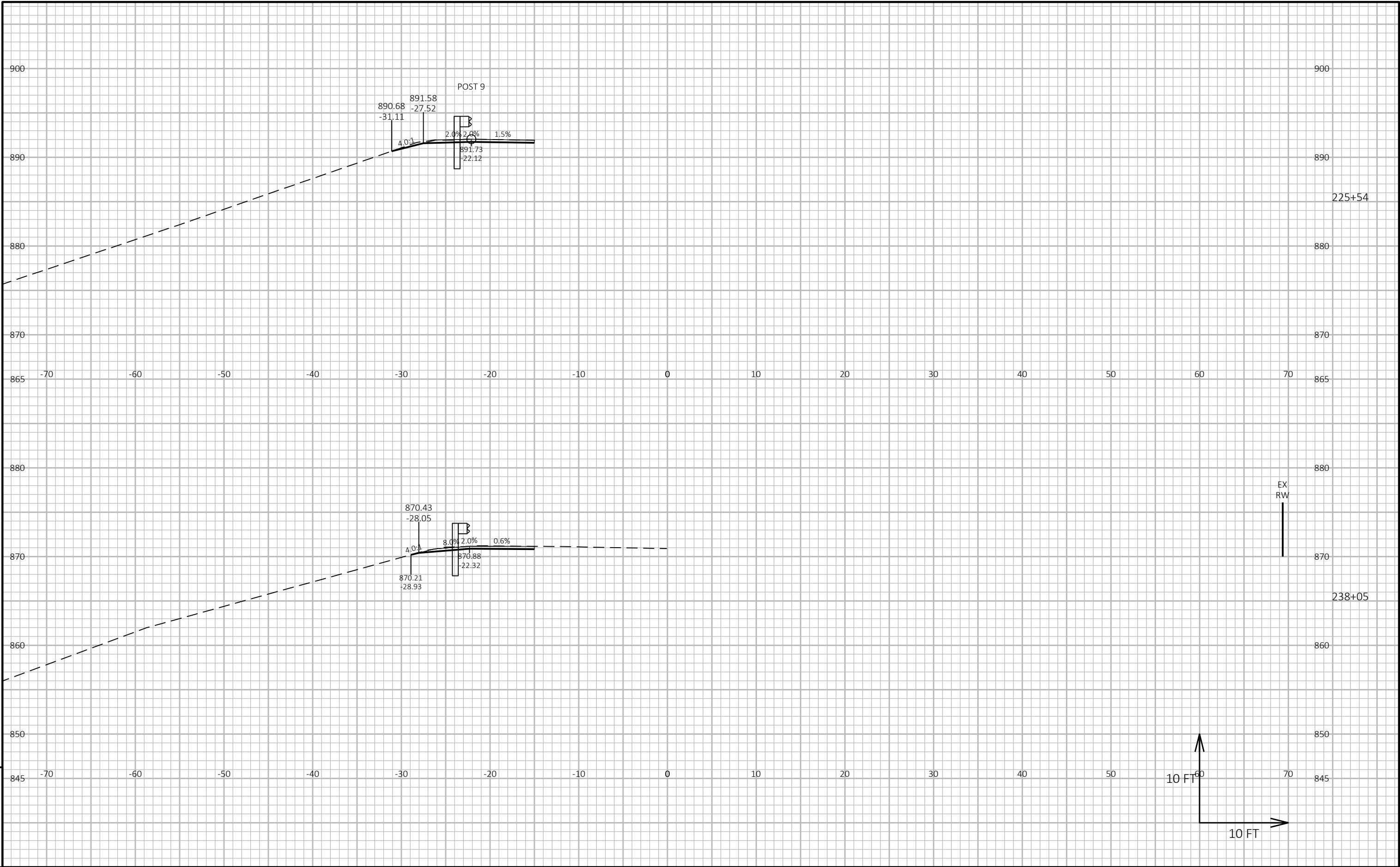


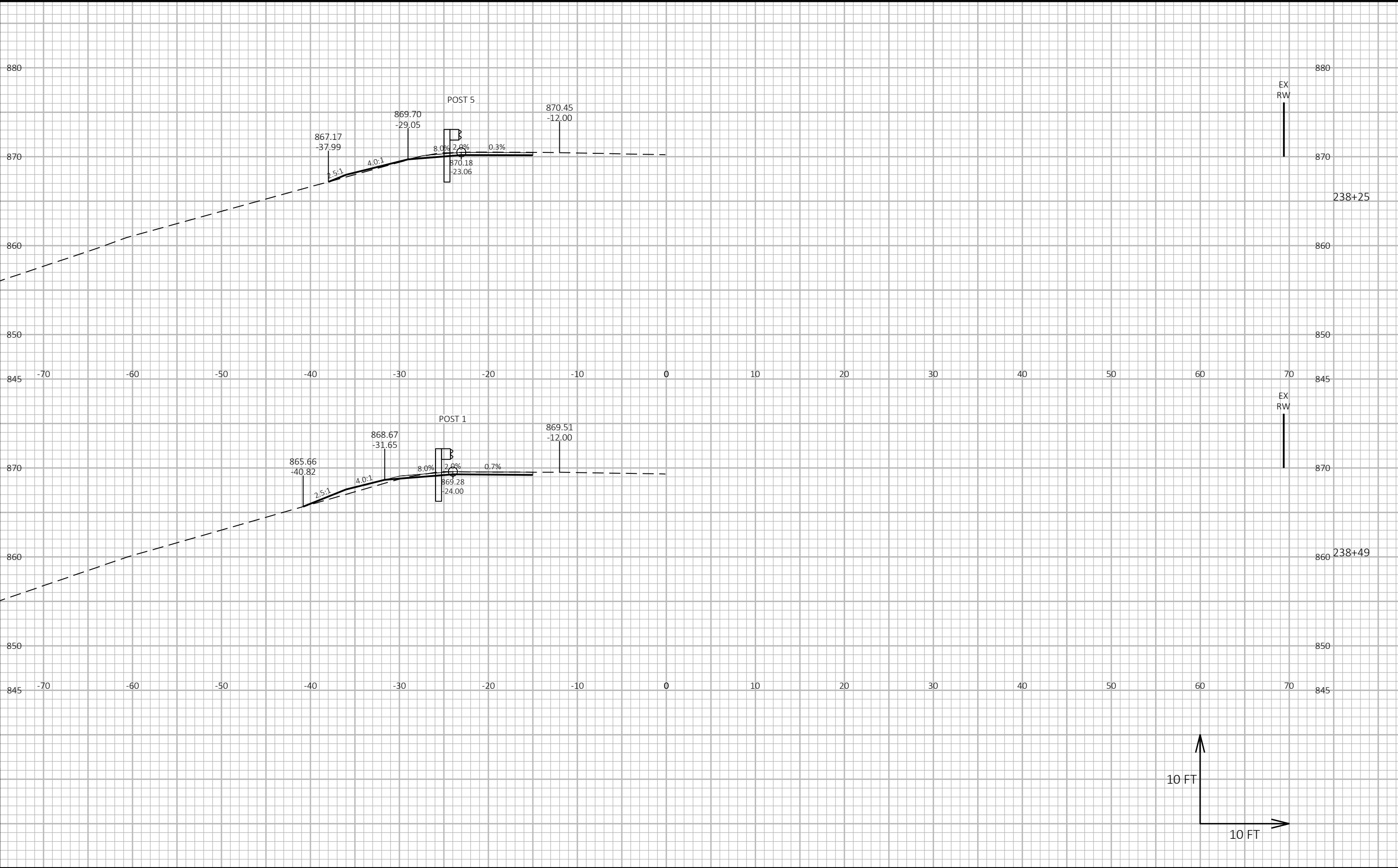


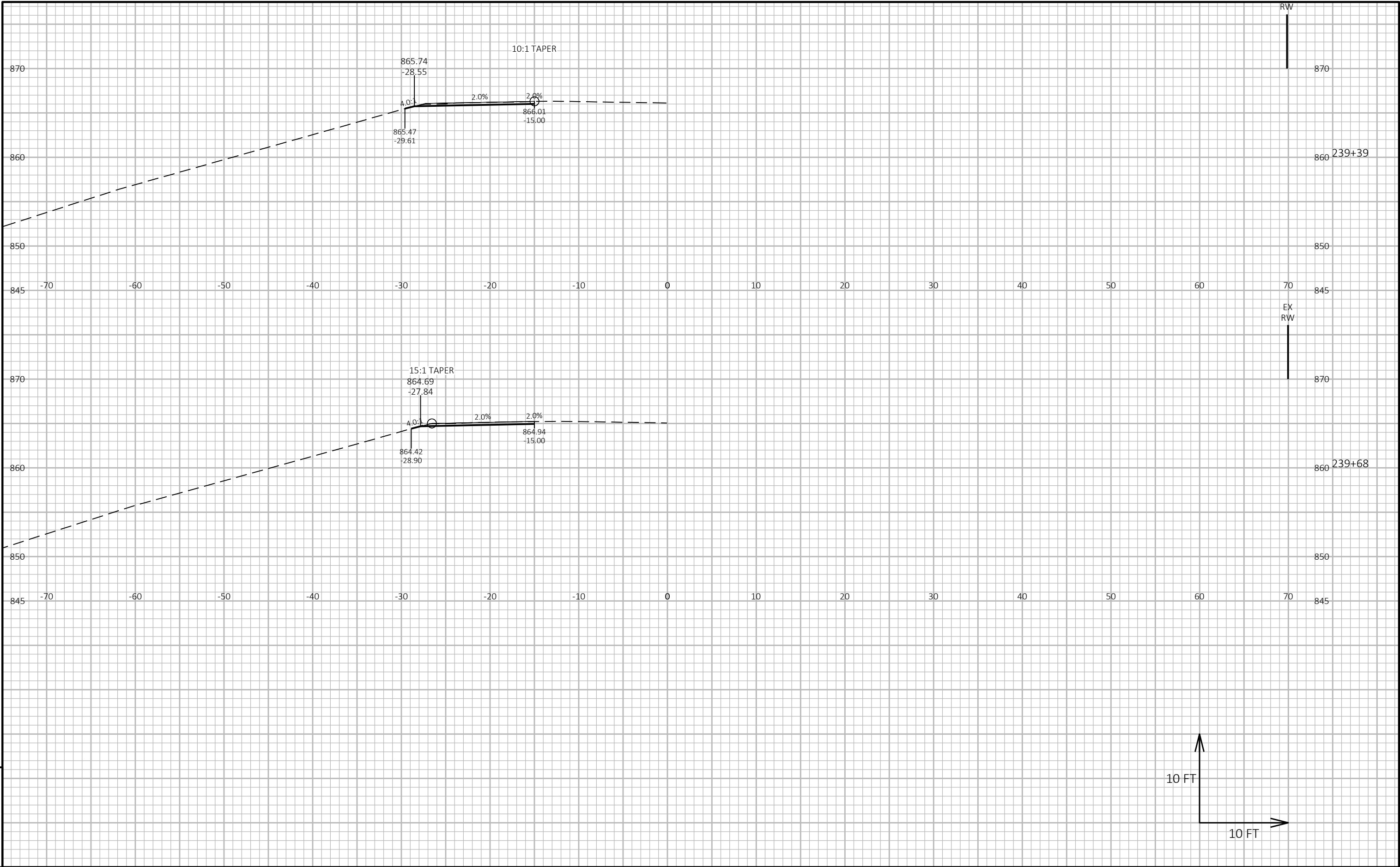
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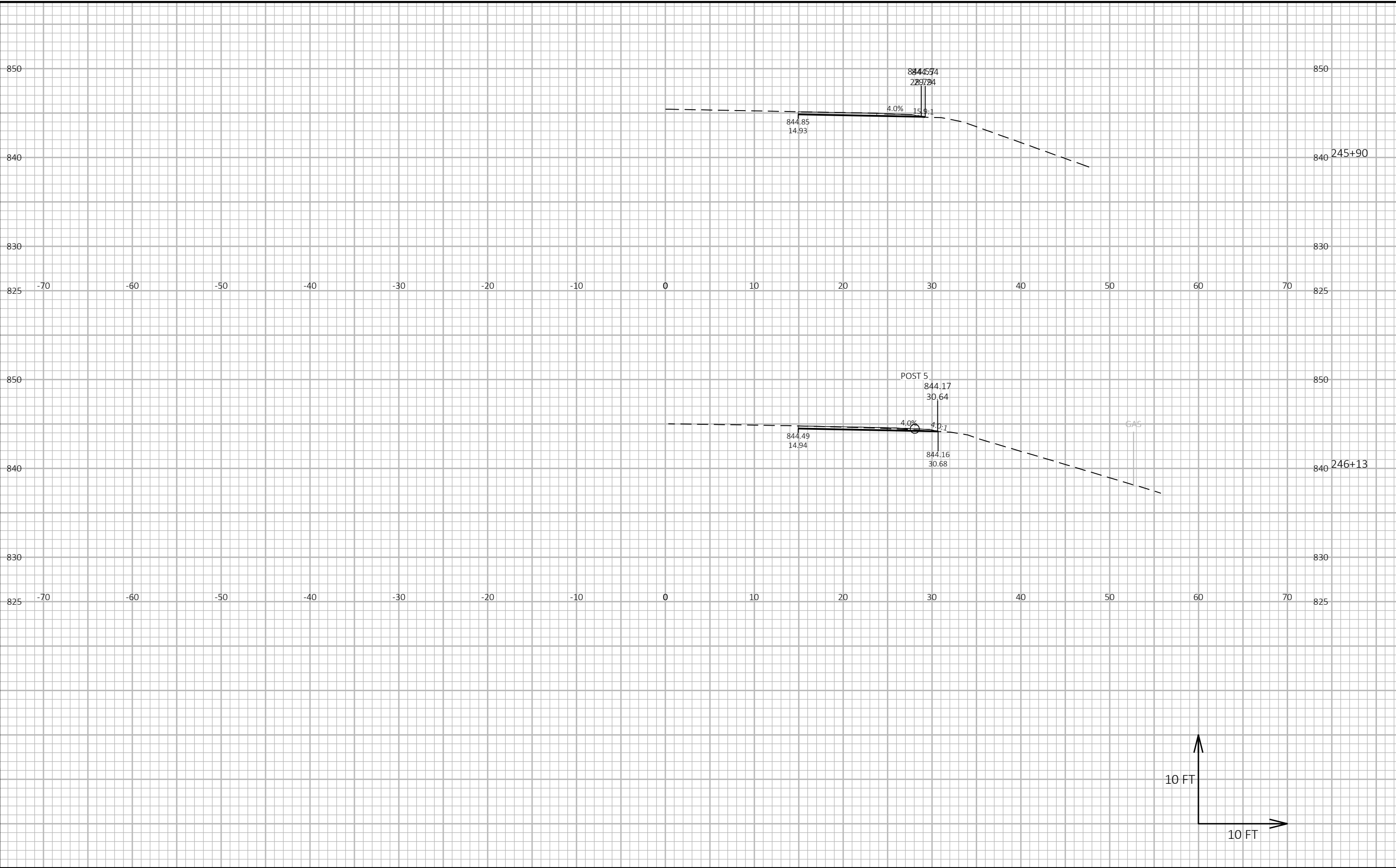
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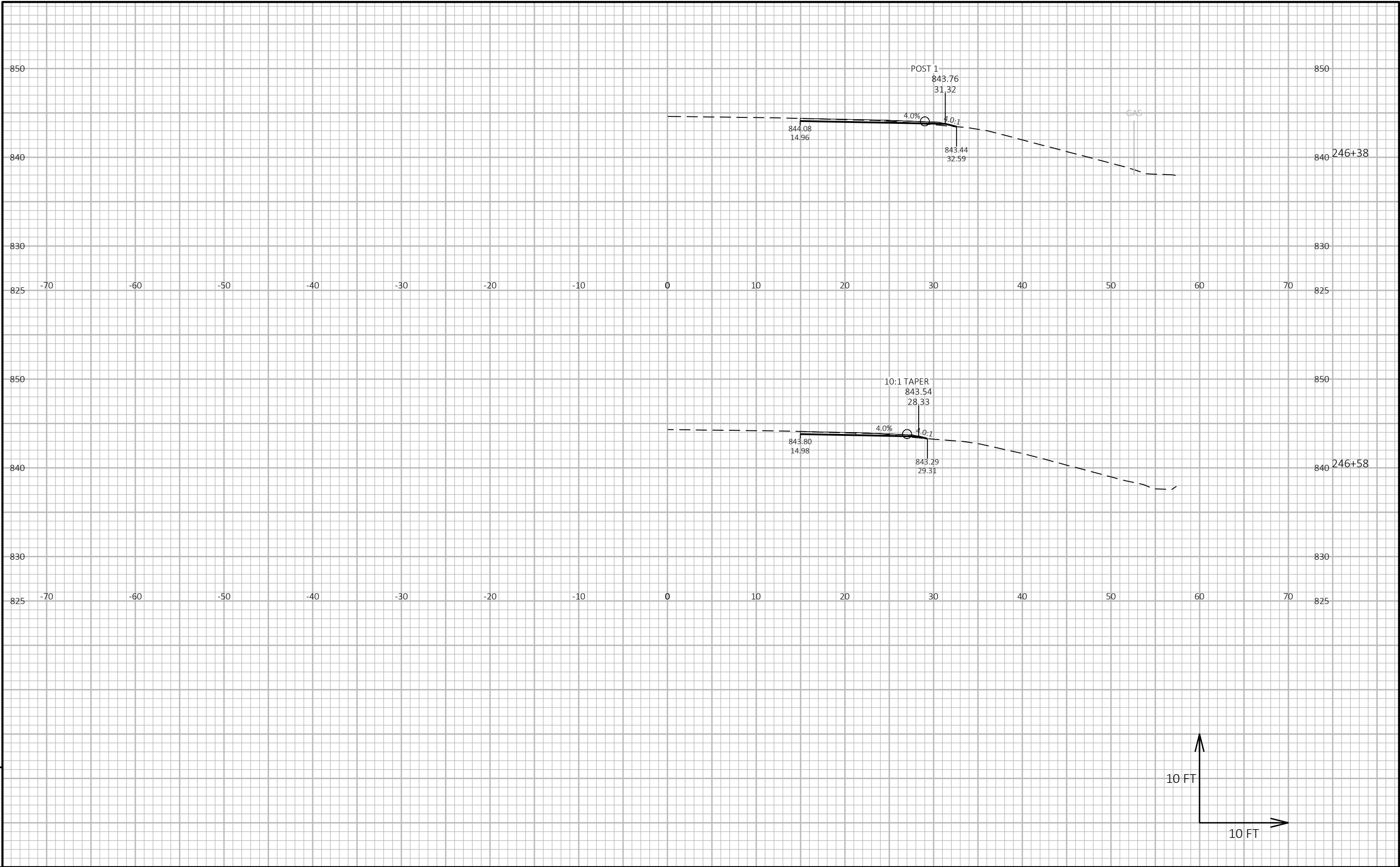


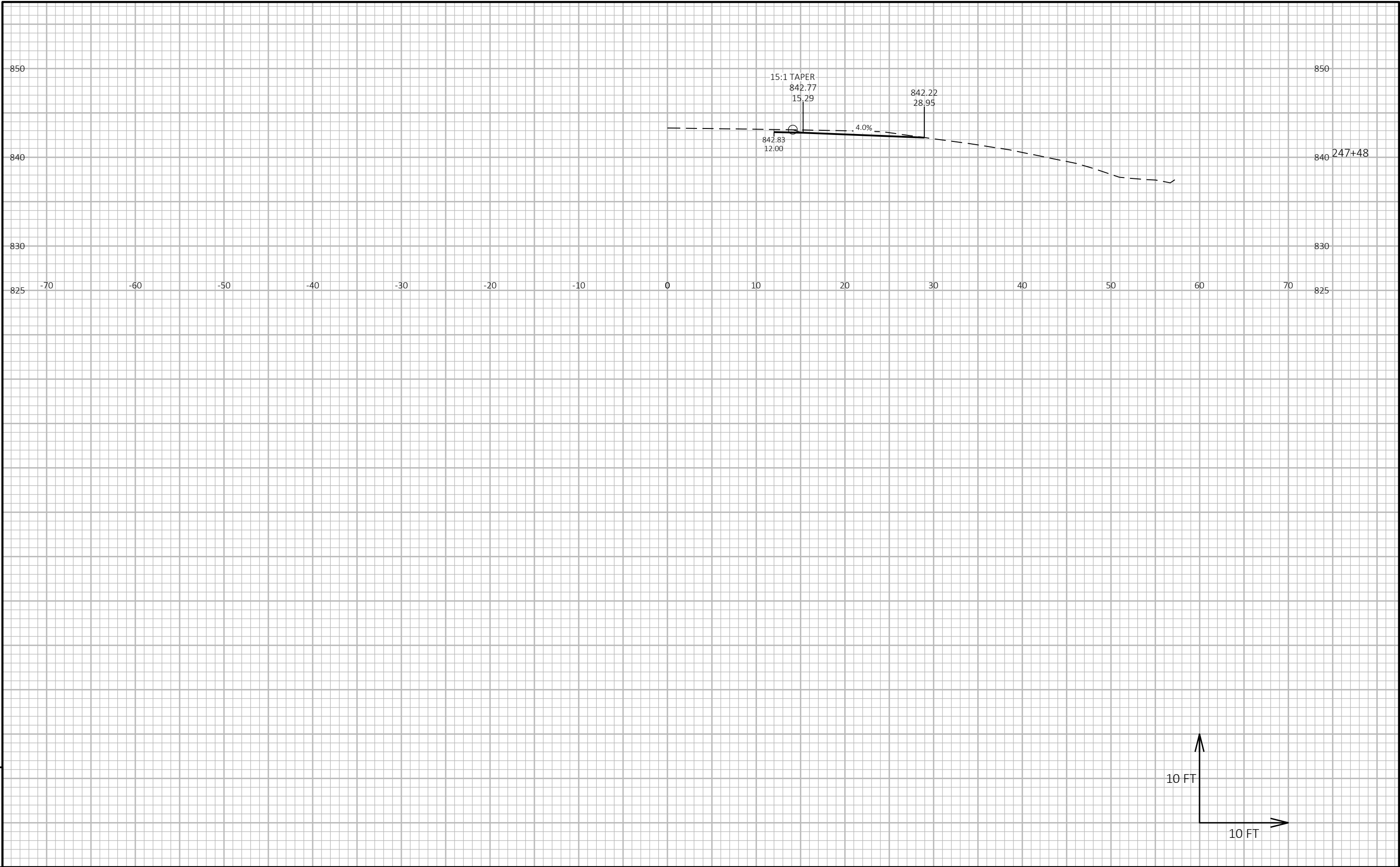




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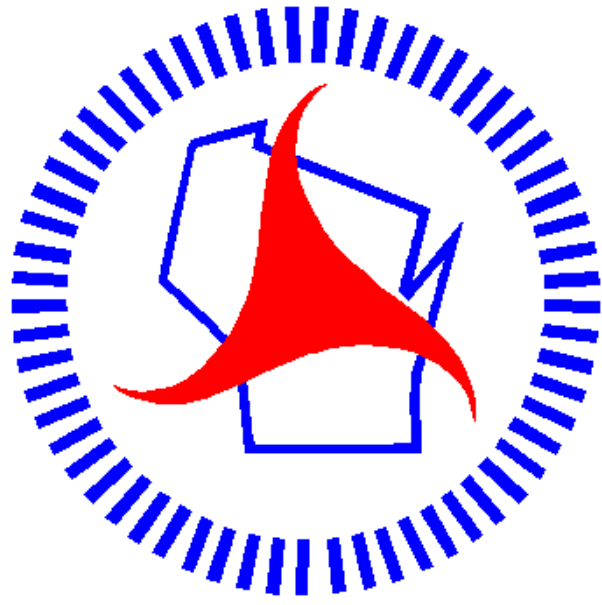
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