

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
PROJECT ID		
1706-04-61	WISC 2020529	1
1706-04-62	WISC 2020530	1

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. 8	Computer Earthwork Data
Section No. 9	Cross Sections

TOTAL SHEETS = 116

SHULLSBURG - MONROE

W COUNTY LINE TO MONROE CITY LIMITS

STH 11
GREEN COUNTY

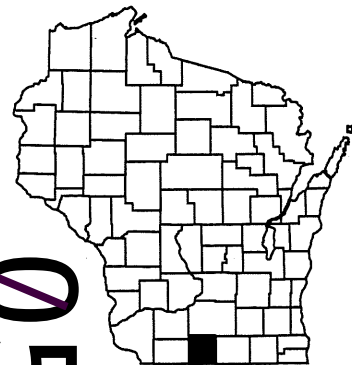
MONROE - BRODHEAD

HILTBRAND LANE TO C BRODHEAD LIMITS

STH 11
GREEN COUNTY

PROJECT ID: 1706-04-61 & 1706-04-62

COUNTY: GREEN



05



STATE PROJECT NUMBER
1706-04-61

STATE PROJECT NUMBER
1706-04-62

DESIGN DESIGNATION	1706-04-61	1706-04-62
A.A.D.T. (2018)	= 5490	7610
A.A.D.T. (2028)	= 5910	8210
D.H.V.	=	
D.D.	= 60-40	62-38
T.	= 23.6%	19.1%
DESIGN SPEED	= 60 MPH	60 MPH
ESALS	= 2,800,000	3,100,000

CONVENTIONAL SYMBOLS

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

B-23-100
NET EXCEPTION TO CL LENGTH
STA 630+04 - STA 631+40

B-23-099
NET EXCEPTION TO CL LENGTH
STA 611+18 - STA 615+86

B-23-098
NET EXCEPTION TO CL LENGTH
STA 603+90 - STA 604+90

ID: 1706-04-61
BEGIN PROJECT
STA 529+00
X = 558229.7037
Y = 129761.6298

B-23-116
NET EXCEPTION TO CL LENGTH
STA 659+11 - STA 660+52

B-23-041
NET EXCEPTION TO CL LENGTH
STA 716+80 - STA 718+25

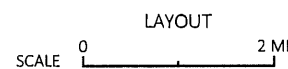
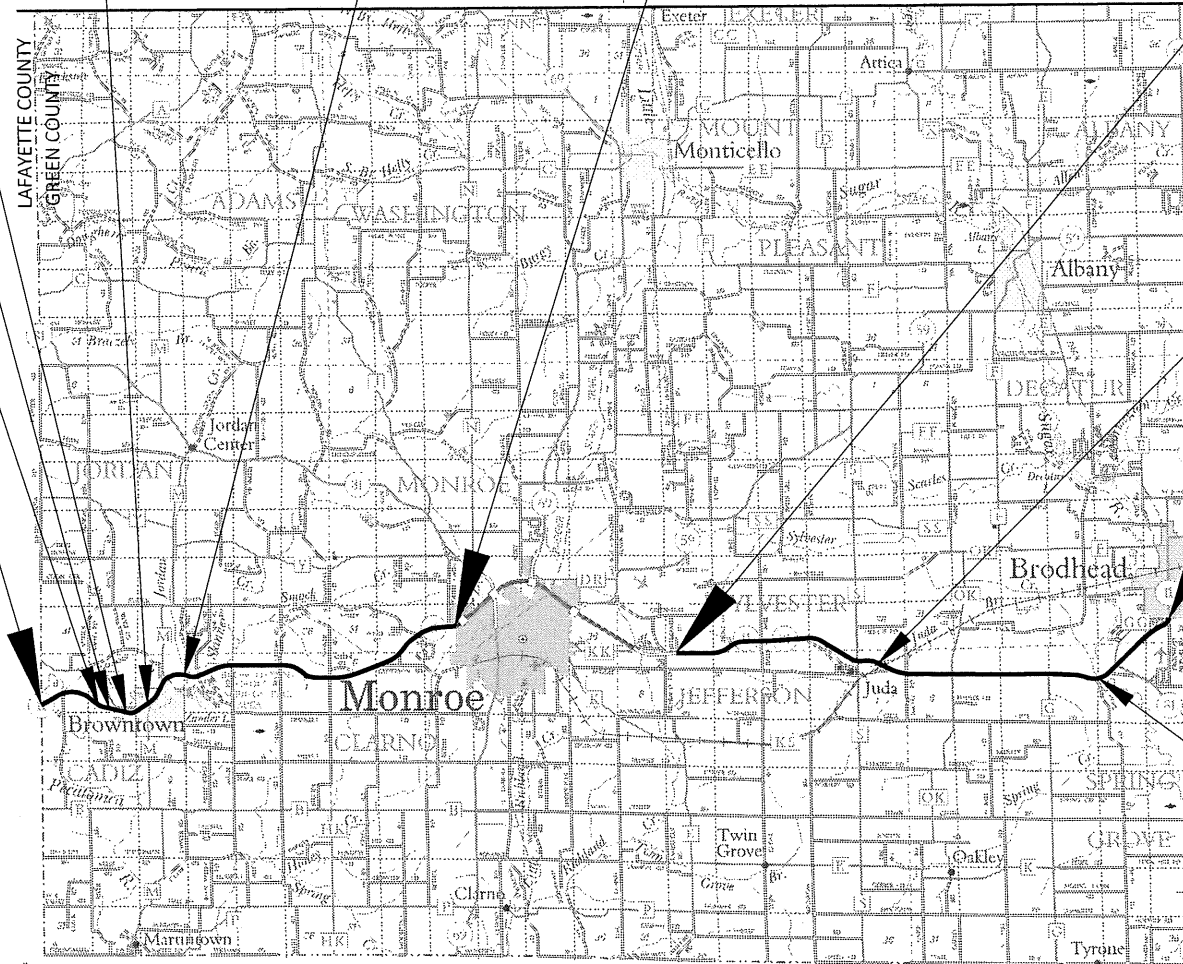
ID: 1706-04-61
END PROJECT
STA 1009+00
X = 601291.8072
Y = 138014.0997

ID: 1706-04-62
BEGIN PROJECT
STA 1170+00
X = 630806.4455
Y = 135091.2032

B-23-10
NET EXCEPTION TO CL LENGTH
STA 1376+63 - STA 1377+69

ID: 1706-04-62
END PROJECT
STA 1730+20
X = 682429.5952
Y = 139269.3544

B-23-40
NET EXCEPTION TO CL LENGTH
STA 1620+58 - STA 1622+91



PROJECT ID: 1706-04-61
TOTAL NET LENGTH OF CENTERLINE = 8.904 MI
PROJECT ID: 1706-04-62
TOTAL NET LENGTH OF CENTERLINE = 10.546 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, GREEN COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATION SHOWN ON THIS PLAN ARE REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD (2012.)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	_____ SURVEYOR
Designer	_____ DELLA KOENIG
Project Manager	_____ MARC SCHWEIGER
Regional Examiner	_____ SW REGION
Regional Supervisor	_____ KURT JOHNSON

APPROVED FOR THE DEPARTMENT

DATE: 7/15/2020 *Marc Schweiger*
(Signature)

E

STANDARD ABBREVIATIONS:

AP	ACCESS POINT	PVT	POINT OF VERTICAL TANGENCY
AC	ACRE	R	RADIUS
ADJ	ADJUST	RD	ROAD
AECPRC	APRON ENDWALLS FOR CULVERT	RDWY	ROADWAY
AH	AHEAD	REINF	REINFORCING OR REINFORCEMENT
AC	ASPHALT CEMENT	REQD	REQUIRED
ASPH	ASPHALTIC	RR	RAILROAD
ACP	ASPHALTIC PAVEMENT CONCRETE	RT	RIGHT
AVG	AVERAGE	R/L	REFERENCE LINE
ADT	AVERAGE DAILY TRAFFIC	R/W	RIGHT-OF-WAY
BK	BACK	S	SOUTH
BAD	BASE AGGREGATE DENSE	SB	SOUTHBOUND
BM	BENCH MARK	SC	SECTION CORNER
C/L	CENTER LINE	SDD	STANDARD DETAIL DRAWINGS
CONC	CONCRETE	SE	SUPERELEVATION
CONST	CONSTRUCTION	SF	SQUARE FEET
CTH	COUNTY TRUNK HIGHWAY	SHLDR	SHOULDER
CABC	CRUSHED AGGREGATE BASE COURSE	SS	STORM SEWER
CWA	HUNDREDWEIGHT	ST	STREET
CY	CUBIC YARD	STA	STATION
CP	CULVERT PIPE	STH	STATE TRUNK HIGHWAYS
C & G	CURB AND GUTTER	STR	STRUCTURE OR STRUCTURAL
D	DEGREE OF CURVE	SQ	SQUARE
DRV	DESIGN HOUR VOLUME	SW	SIDEWALK
DIA	DIAMETER	SY	SQUARE YARD
DWY	DRIVEWAY	T	TANGENT
E	EAST	t	TON
EB	EASTBOUND	T	TOWN
EL	ELEVATION	T	TRUCKS (PERCENT OF)
ESALS	EQUIVALENT SINGLE AXLE LOADS	TEMP	TEMPORARY
EXC	EXCAVATION	TI	TEMPORARY INTEREST
EBS	EXCAVATION BELOW SUBGRADE	TLE	TEMPORARY LIMITED EASEMENT
EXIST	EXISTING	TYP	TYPICAL
FERT	FERTILIZE	USH	UNITED STATES HIGHWAY
FE	FIELD ENTRANCE	V	VELOCITY OF DESIGN SPEED
FL	FLOW LINE	VAR	VARIABLE
FT	FOOT	VERT	VERTICAL
HES	HIGH EARLY STRENGTH	VC	VERTICAL CURVE
HP	HIGH POINT	VOL	VOLUME
HMA	HOT MIX ASPHALT	W	WEST
INL	INLET	WB	WESTBOUND
ID	INSIDE DIAMETER	WM	WATER MAIN
I	INTERSECTION ANGLE	WV	WATER VALVE
INV	INVERT	X	EAST GRID COORDINATE
IP	IRON PIPE OR PIN	Y	YARD
JT	JOINT	Y	NORTH GRID COORDINATE
LB	POUND		
LT	LEFT		
L	LENGTH OF CURVE		
LF	LINEAR FOOT		
LP	LOW POINT		
LS	LUMP SUM		
MH	MANHOLE		
MAX	MAXIMUM		
Mgal	MEGAGALLON		
MPH	MILES PER HOUR		
MIN	MINIMUM		
MON	MONUMENT		
N	NORTH		
NB	NORTHBOUND		
NC	NORMAL CROWN		
NO	NUMBER		
NOM	NOMINAL		
OD	OUTSIDE DIAMETER		
OPT	OPTIONAL		
PAVT	PAVEMENT		
PC	POINT OF CURVATURE		
PCC	PORTLAND CEMENT CONCRETE		
PE	PRIVATE ENTRANCE		
PGL	PROFILE GRADE LINE		
PI	POINT OF INTERSECTION		
PL	PROPERTY LINE		
PLE	PERMANENT LIMITED EASEMENT		
PSI	POUNDS PER SQUARE INCH		
PSF	POUNDS PER SQUARE FOOT		
PT	POINT		
PT	POINT OF TANGENCY		
PVC	POINT OF VERTICAL CURVE		
PVI	POINT OF VERTICAL INTERSECTION		

GENERAL NOTES:

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SEEDED, FERTILIZED, AND MULCHED AS DIRECTED BY THE ENGINEER. ALL OTHER DISTURBED AREAS SHALL BE SEEDED, FERTILIZED, AND MULCHED AT THE CONTRACTORS EXPENSE.

ALL CURB AND GUTTER RADII ARE MEASURED TO THE FLAG OF CURB UNLESS OTHERWISE NOTED.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

SAWCUTS AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS AND MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER TO BETTER SUIT FIELD CONDITIONS.

ASPHALTIC SURFACE/HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

PLACE 4" HMA PAVEMENT IN TWO LAYERS. 2.25" LOWER LAYER (3 MT58-28 S), 1.75" UPPER LAYER (4 MT 58-28 S).

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.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS, SHALL BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

GRADING IS NOT ALLOWED IN DELINEATED WETLAND AREAS. DO NOT STORE EQUIPMENT OR MATERIAL IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

NUMBER, LOCATIONS, AND SPACING OF TEMPORARY AND PERMANENT SIGNS AND DEVICES AS SHOWN ON THE PLANS, SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

UTILITY CONTACTS 1706-04-61:

ATC MANAGEMENT, INC - ELECTRICITY -TRANSMISSION
ANTHONY MARCINIAK
W 234 N 2000 RIDGEVIEW PARKWAY CT
PO BOX 47
WAUKESHA, WI 53187-0047
(262) 506-6814
amarciniak@atcllc.com

ALLIANT ENERGY - ELECTRICITY
MARY MONTGOMERY
200 FIRST ST
CEDAR RAPIDS, IA 52401
(319) 786-4768
MaryMontgomery@alliantenergy.com

TDS TELECOM - COMMUNICATION LINE
JERRY MYERS
525 JUNCTION RD
MADISON, WI 53717
(608) 664-4404
jerry.myers@tdstelecom.com

WE ENERGIES - GAS/PETROLEUM
ADAM MARING
N3025 14TH AVE
MONROE, WI 53566
(608) 328-5679
(608) 426-1715 - MOBILE
Adam.maring@we-energies.com

TRI-COUNTRY TRAILS - CHEESE COUNTRY TRAIL
TOM GEAN
12016 HILL ST
PO BOX 100
DARLINGTON, WI 53530
(608) 574-4055
Tom.Gean@lafayettecounty.wi.org

WISCONSIN DEPT OF NATURAL RESOURCES CONTACTS:

SHELLEY WARWICK
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711-5367
608-444-2835
Shelley.Warwick@wisconsin.gov

WISCONSIN DEPT OF TRANSPORTATION CONTACTS:

PROJECT MANAGER
MARC SCHWEIGER, PE
2101 WRIGHT ST
MADISON WI, 53704
608-245-2633
Marc.Schweiger@dot.wi.gov

DESIGN ENGINEER
DELLA KOENIG, PE
2101 WRIGHT ST
MADISON, WI 53704
608-246-7963
della.koenig@dot.wi.gov

UTILITY CONTACTS 1706-04-62:

ALLIANT ENERGY - ELECTRICITY
MARY MONTGOMERY
200 FIRST ST
CEDAR RAPIDS, IA 52401
(319) 786-4768
MaryMontgomery@alliantenergy.com

BRODHEAD AIRPORT - AIRPORT FACILITY
MICHAEL WEEDEN
N3382 MONROE-SYLVESTER RD.
MONROE, WI 53566-9418
(608) 214-6652
blueleader@wekz.net

CHARTER COMMUNICATIONS - COMMUNICATION LINE
LUKAS LACROSSE
2701 DANIELS ST.
MADISON, WI 53718
(608) 709-1562 X 41562
Lukas.LaCrosse@charter.com

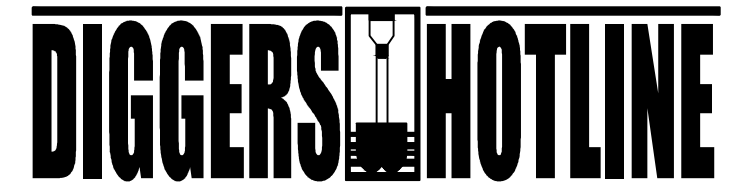
CITY OF BRODHEAD WATER AND LIGHT COMMISSION - ELECTRICITY
ED HOFF
507 19TH STREET
PO BOX 227
BRODHEAD, WI 53520
(608) 558-9405
ehoff@brodheadwl.com

FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATION LINE
RUSS RYAN
118 DIVISION STREET
PLYMOUTH, WI 53073
(920) 583-3275
Russell.w.ryan@ftr.com

JUDA SANITARY DISTRICT - SEWER
JUNE KELLY
22934 MILL ST
JUDA, WI 53550
(608) 558-0708
jbugkelly8@gmail.com

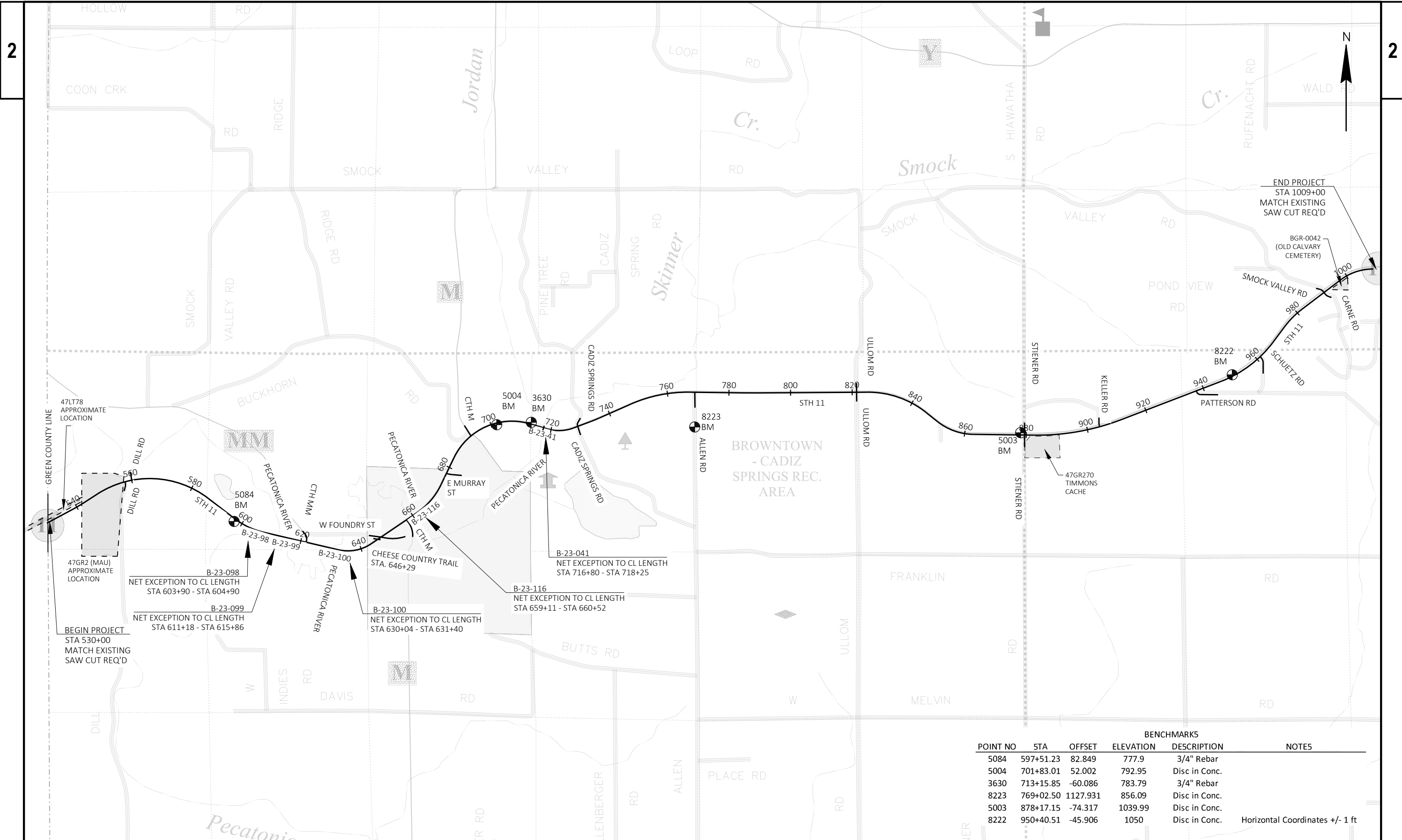
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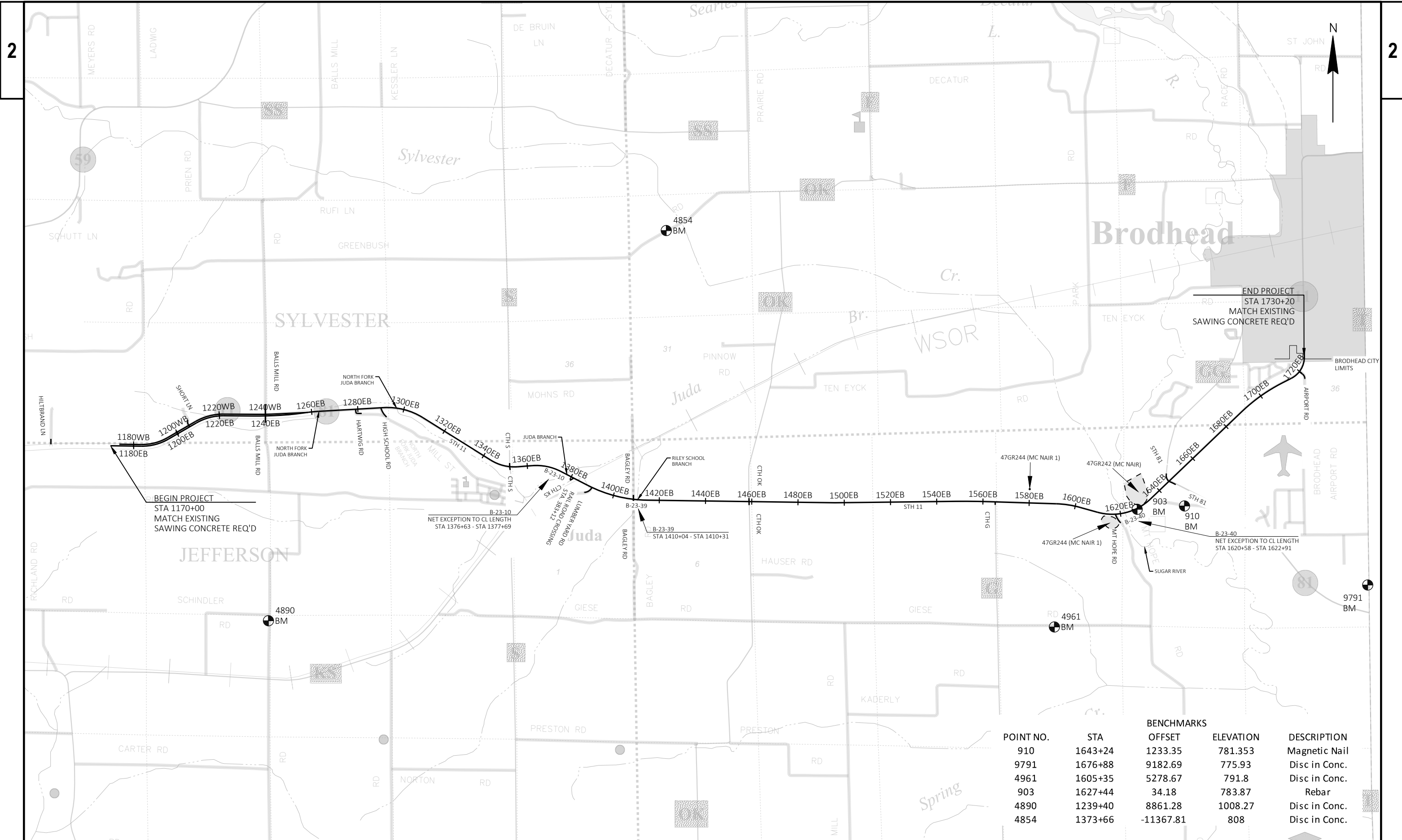
Dial 811 or (800)242-8511

www.DiggersHotline.com



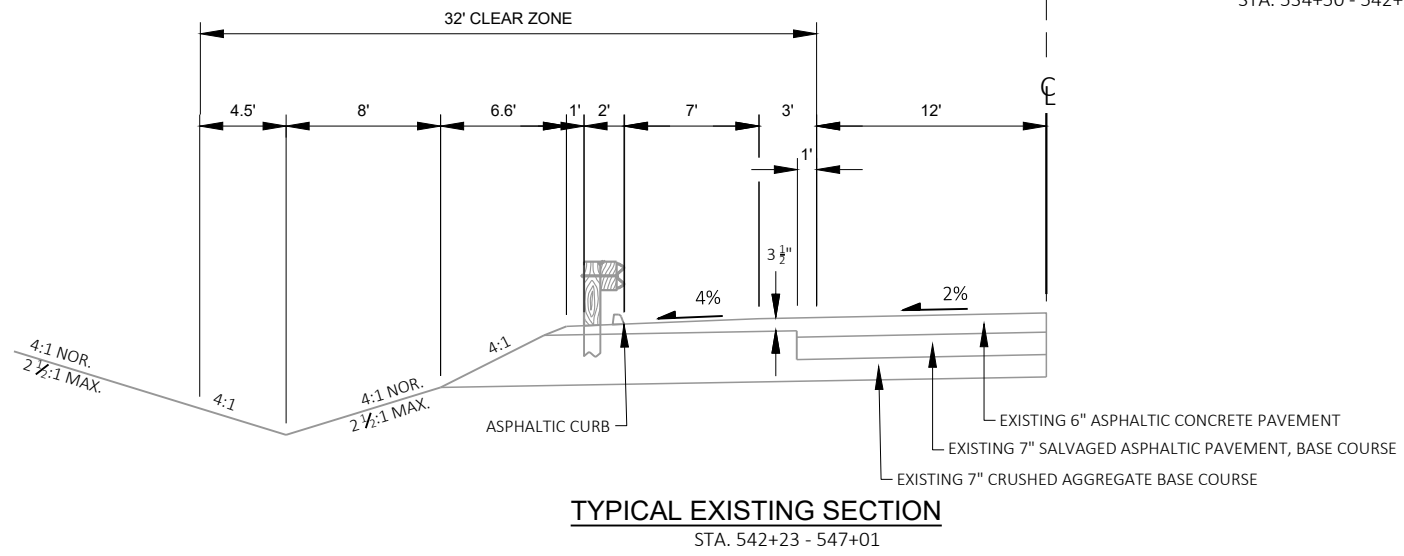
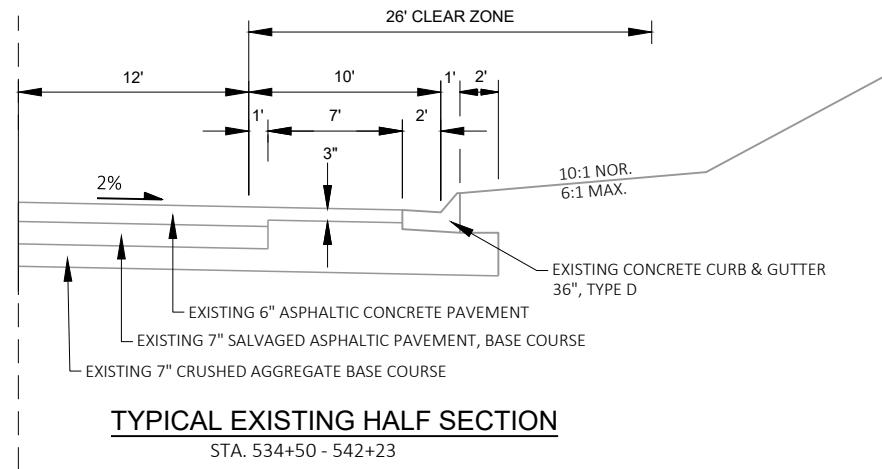
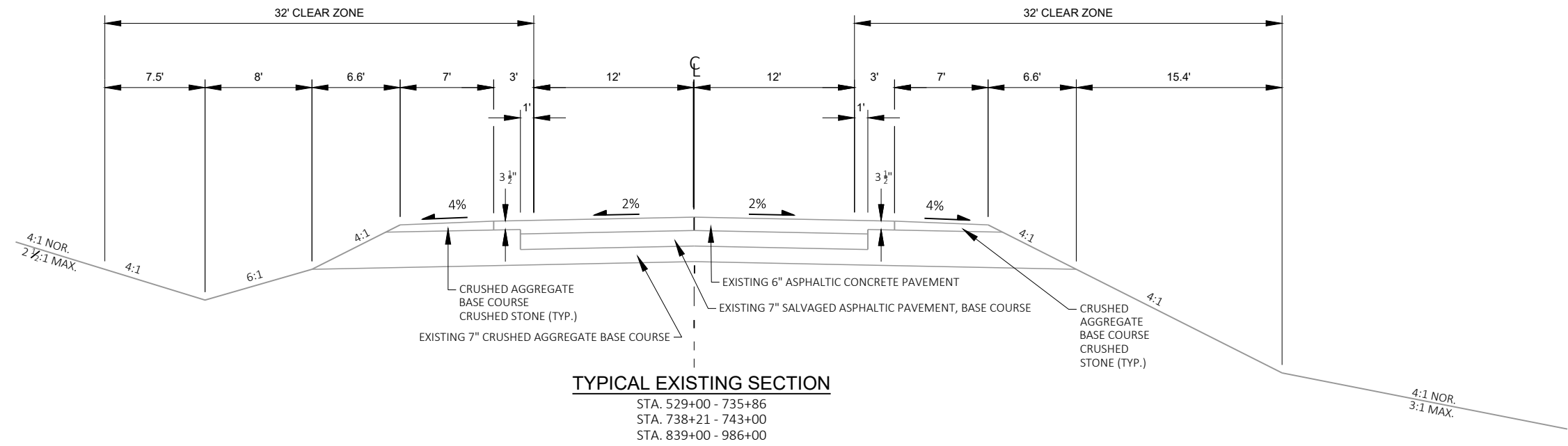
BENCHMARKS					
POINT NO	STA	OFFSET	ELEVATION	DESCRIPTION	NOTES
5084	597+51.23	82.849	777.9	3/4" Rebar	
5004	701+83.01	52.002	792.95	Disc in Conc.	
3630	713+15.85	-60.086	783.79	3/4" Rebar	
8223	769+02.50	1127.931	856.09	Disc in Conc.	
5003	878+17.15	-74.317	1039.99	Disc in Conc.	
8222	950+40.51	-45.906	1050	Disc in Conc.	Horizontal Coordinates +/- 1 ft

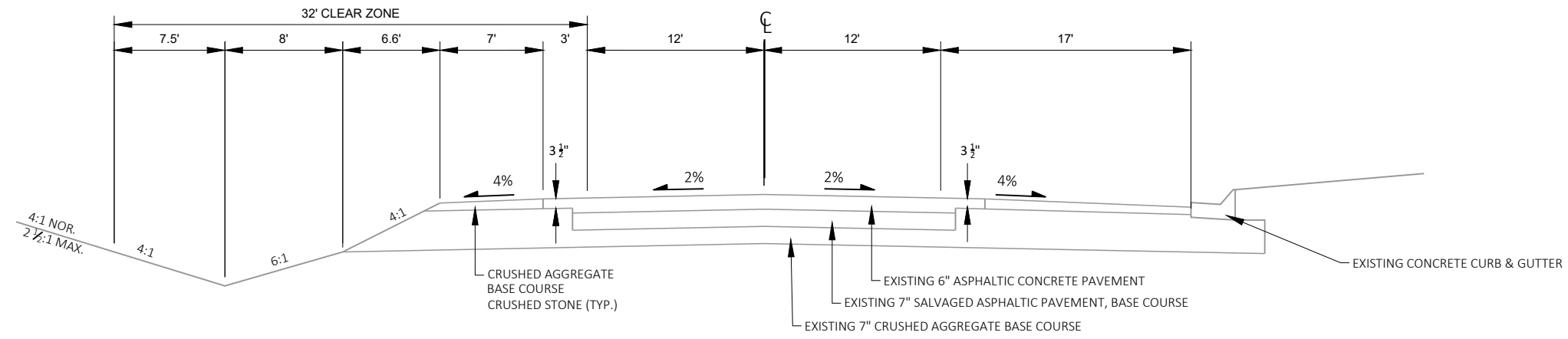
PROJECT NO: 1706-04-61 HWY: STH 11 COUNTY: GREEN PROJECT OVERVIEW SHEET E



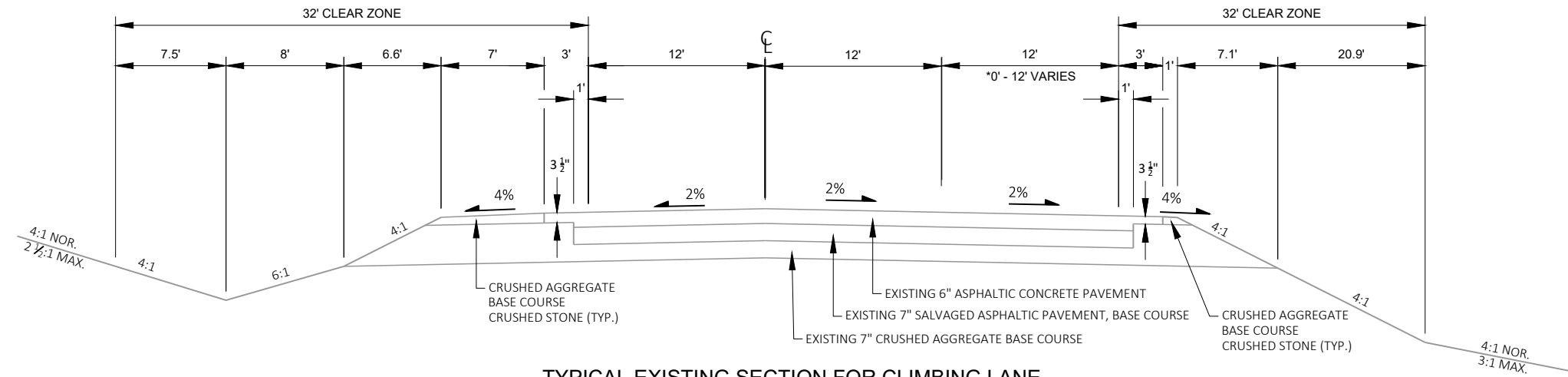
POINT NO.	STA	OFFSET	ELEVATION	DESCRIPTION
910	1643+24	1233.35	781.353	Magnetic Nail
9791	1676+88	9182.69	775.93	Disc in Conc.
4961	1605+35	5278.67	791.8	Disc in Conc.
903	1627+44	34.18	783.87	Rebar
4890	1239+40	8861.28	1008.27	Disc in Conc.
4854	1373+66	-11367.81	808	Disc in Conc.

PROJECT NO: 1706-04-62 HWY: STH 11 COUNTY: GREEN PROJECT OVERVIEW SHEET E

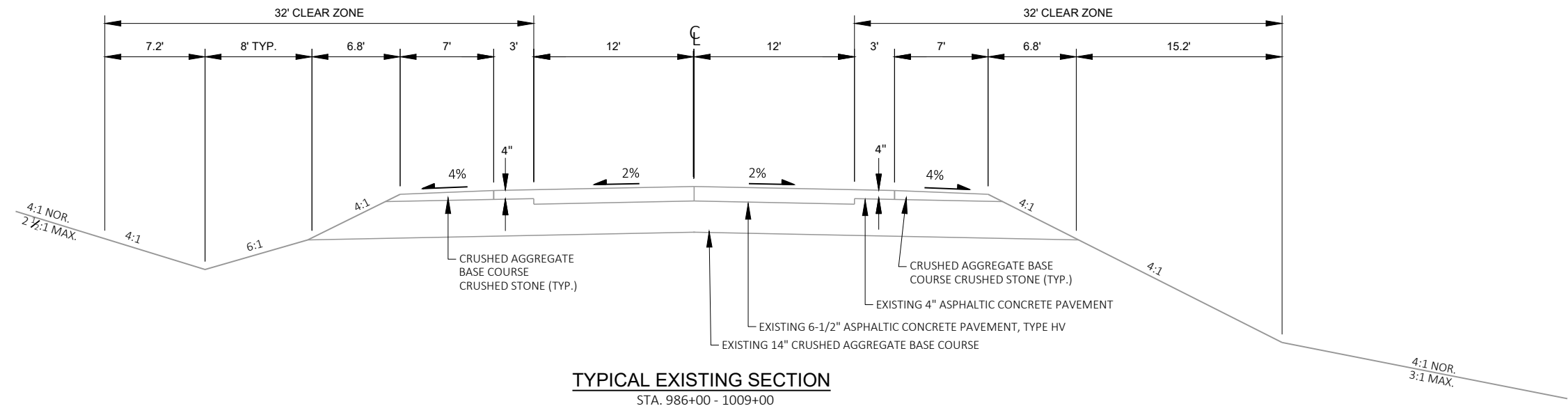




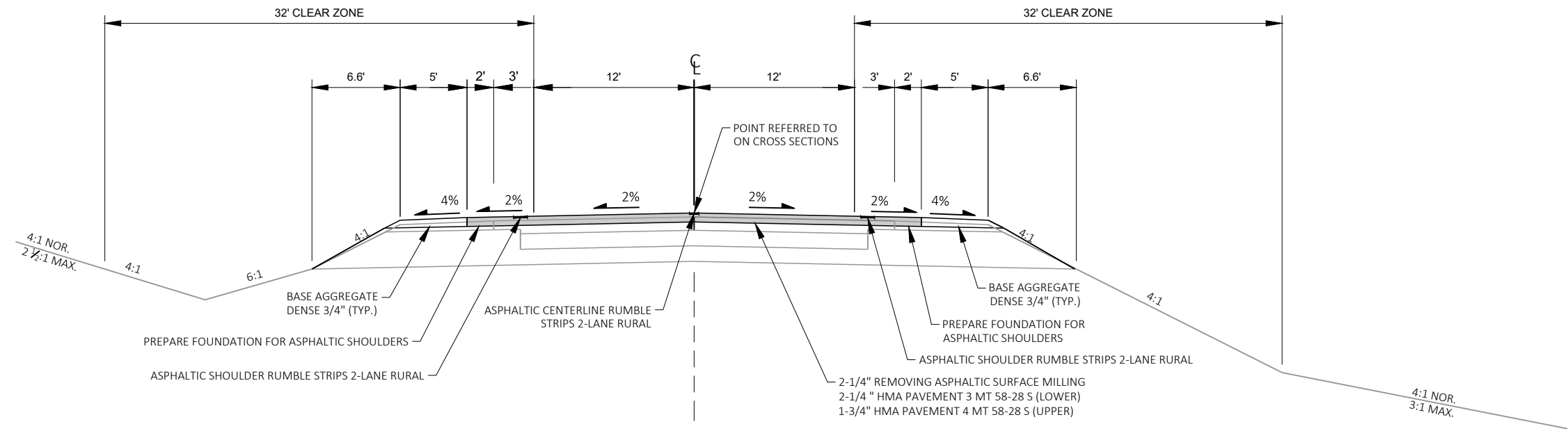
TYPICAL EXISTING SECTION
 STA. 735+86 - 738+21



TYPICAL EXISTING SECTION FOR CLIMBING LANE
 STA. 743+00 - 839+00

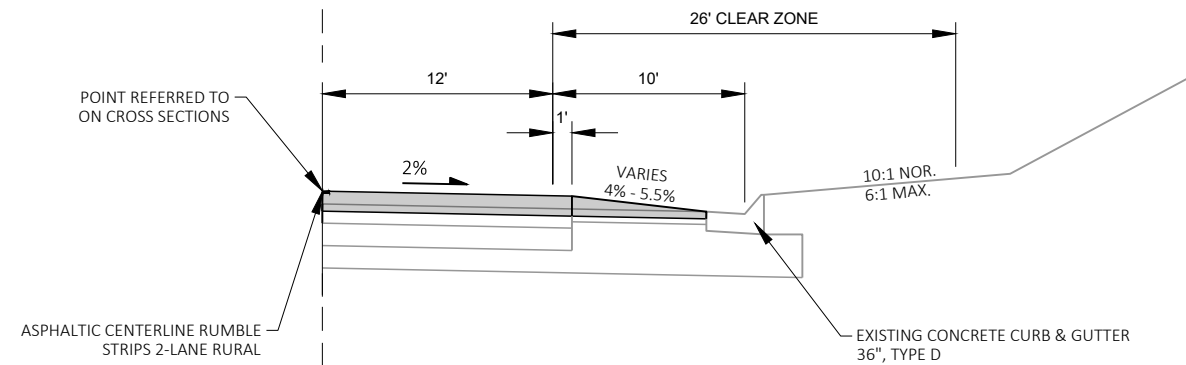


TYPICAL EXISTING SECTION
 STA. 986+00 - 1009+00



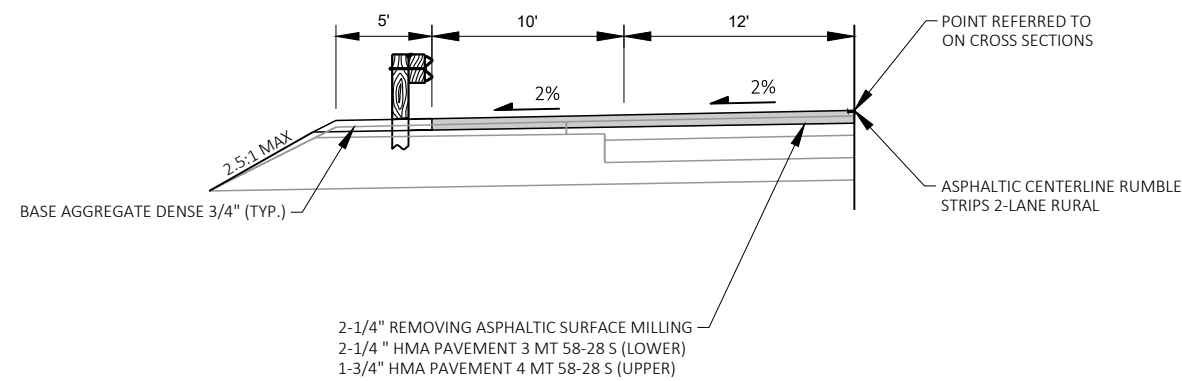
TYPICAL PROPOSED SECTION

STA. 529+00 - 735+86
STA. 738+21 - 743+00
STA. 839+00 - 986+00



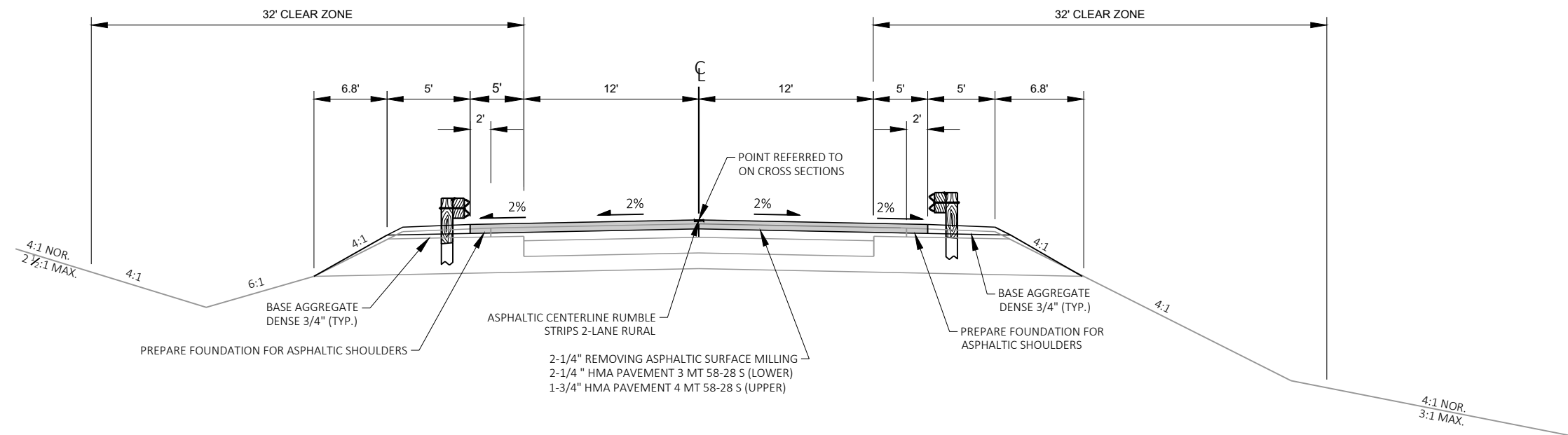
TYPICAL PROPOSED HALF SECTION

STA. 534+50 - 542+23



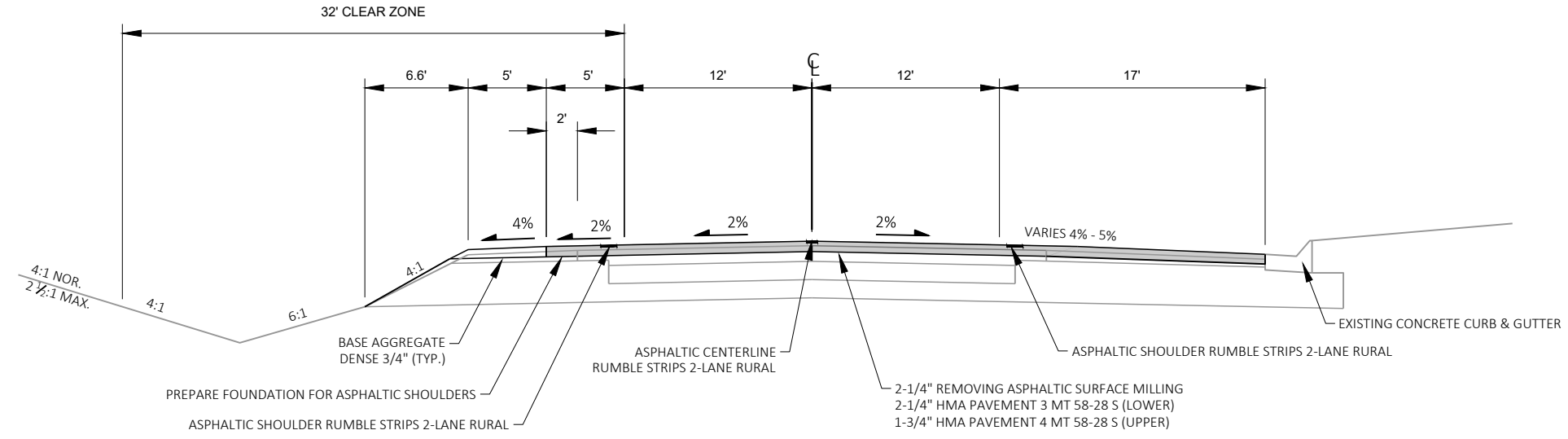
TYPICAL PROPOSED HALF SECTION

STA. 542+23 - 547+01



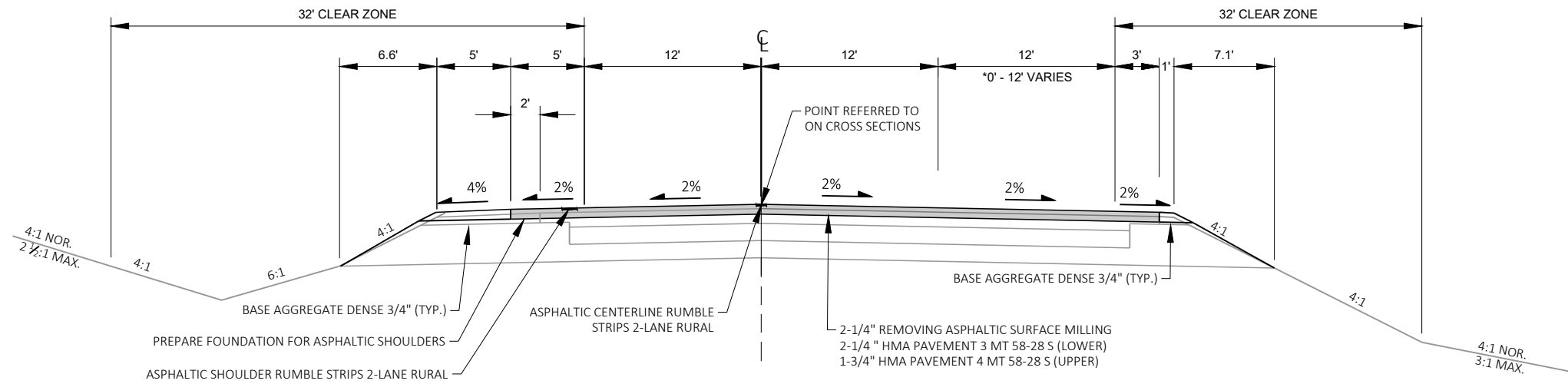
TYPICAL PROPOSED BEAM GUARD SECTION

STA. 601+20 - 603+83, STA. 604+98 - 611+07,
 STA. 615+98 - 618+33, STA. 631+49 - 634+12,
 STA. 658+20 - 659+18, STA. 660+49 - 662+42,
 STA. 715+03 - 716+76, STA. 718+28 - 720+80

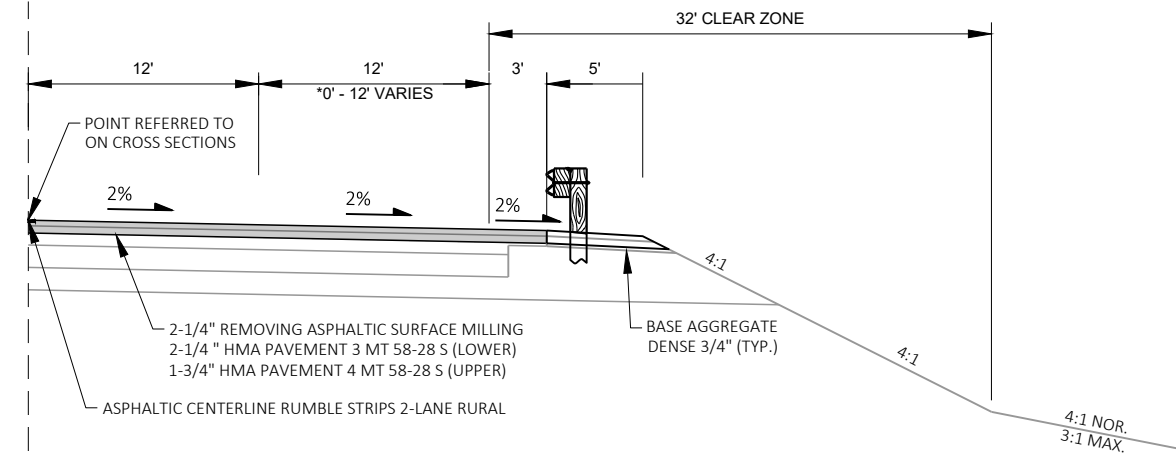


TYPICAL PROPOSED SECTION

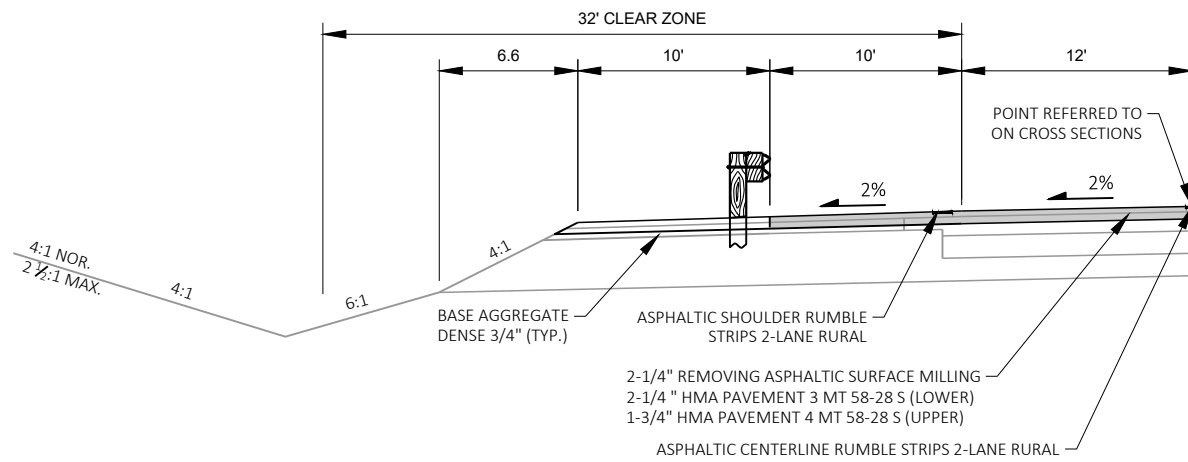
STA. 735+86 - 738+21



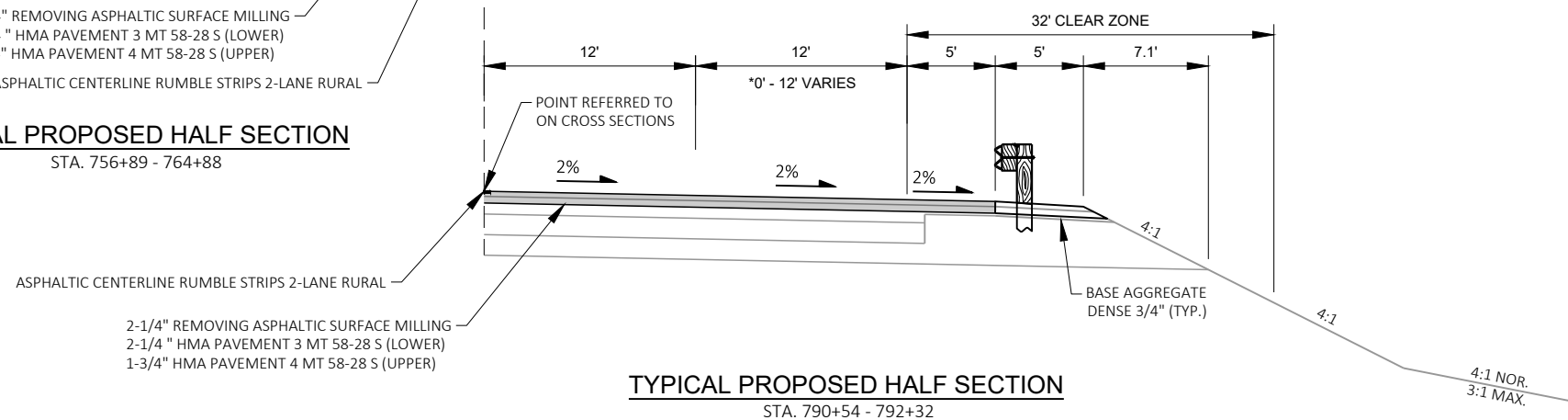
TYPICAL PROPOSED SECTION FOR CLIMBING LANE
 STA. 743+00 - 839+00



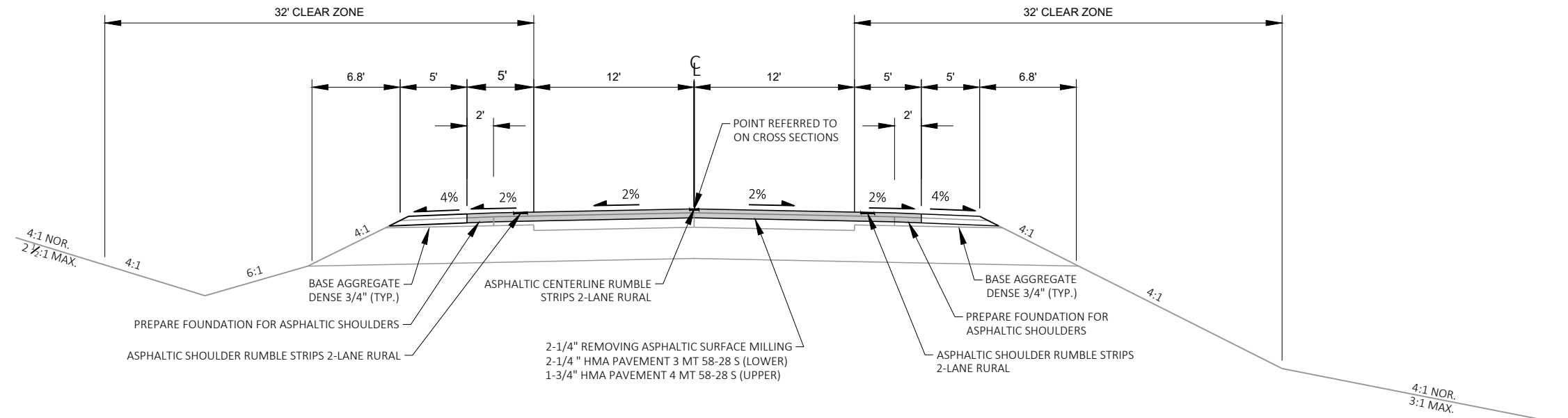
TYPICAL PROPOSED HALF SECTION
 STA. 754+35 - 764+89



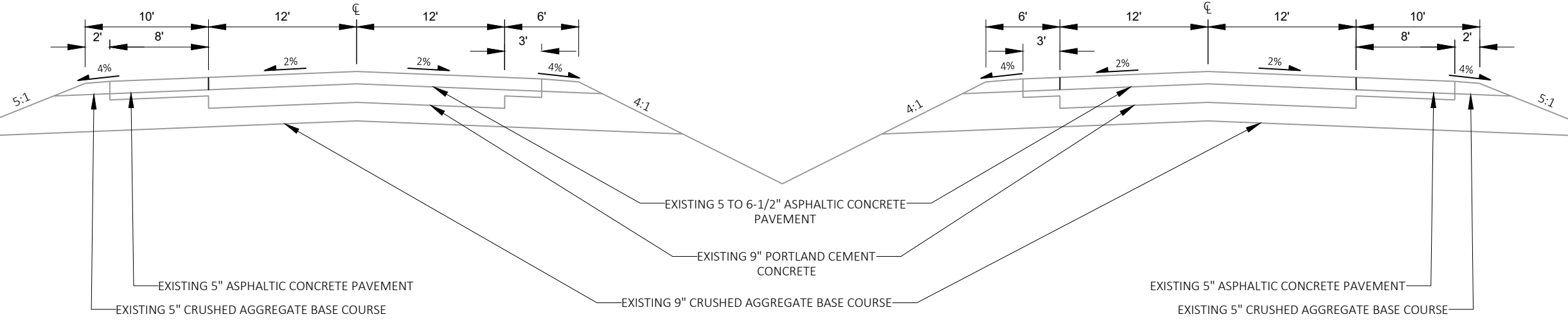
TYPICAL PROPOSED HALF SECTION
 STA. 756+89 - 764+88



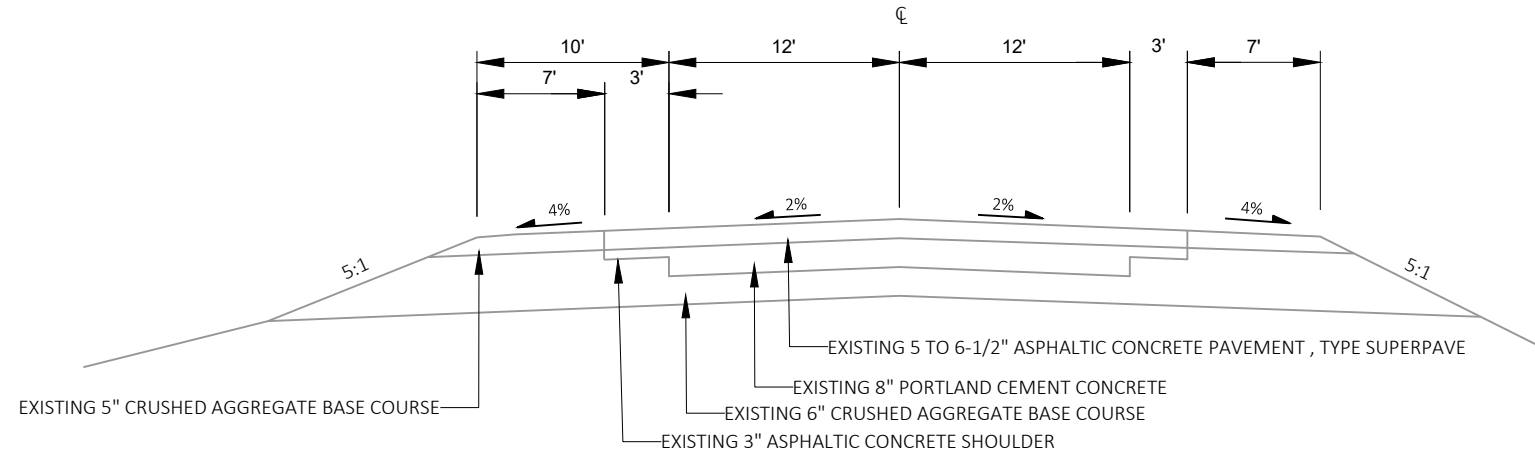
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 STA. 790+54 - 792+32



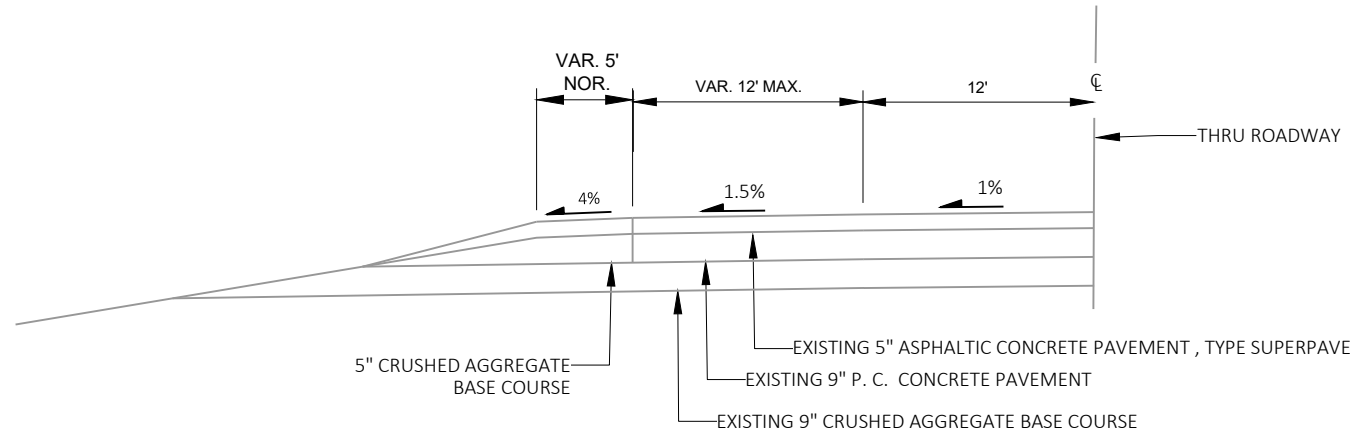
TYPICAL PROPOSED SECTION
STA. 986+00 - 1009+00



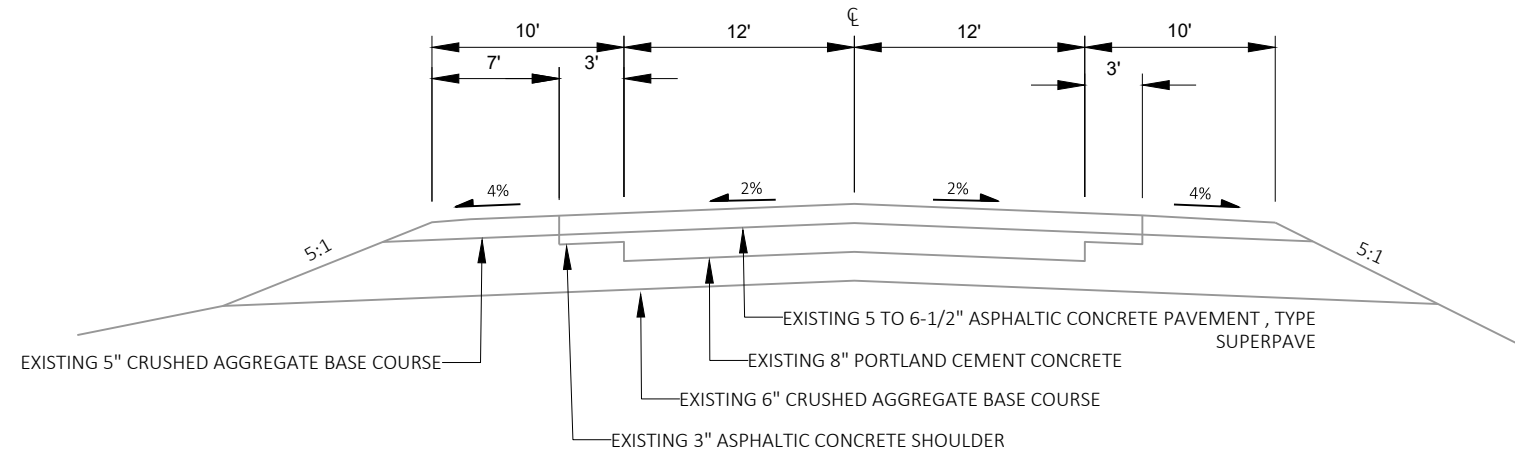
TYPICAL EXISTING SECTION
 (4 LANE DIVIDED SECTION)
 STA. 1170+00 TO STA. 1262+00



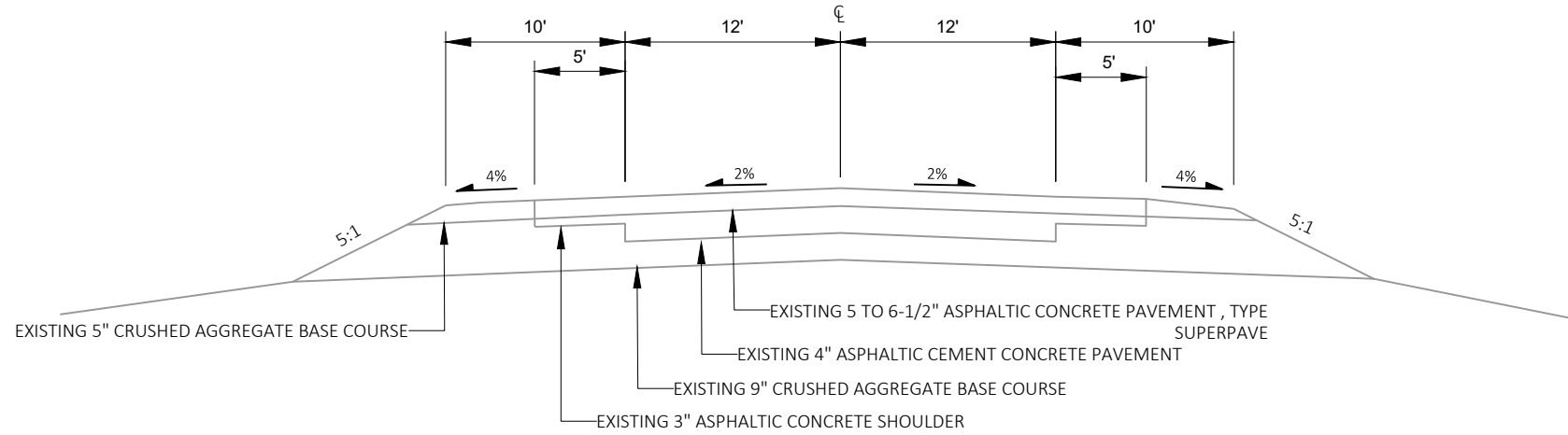
TYPICAL EXISTING SECTION
 (2-LANE SECTION)
 STA. 1262+00 TO STA. 1562+15



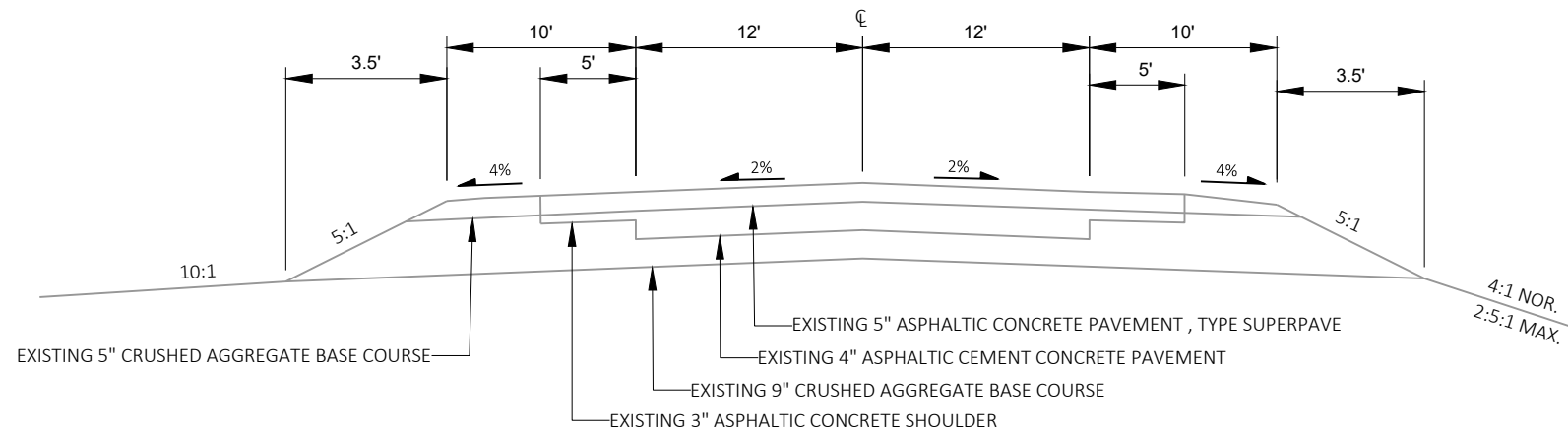
TYPICAL EXISTING SECTION FOR CLIMBING LANE
 STA. 1483+00 TO STA. 1527+00



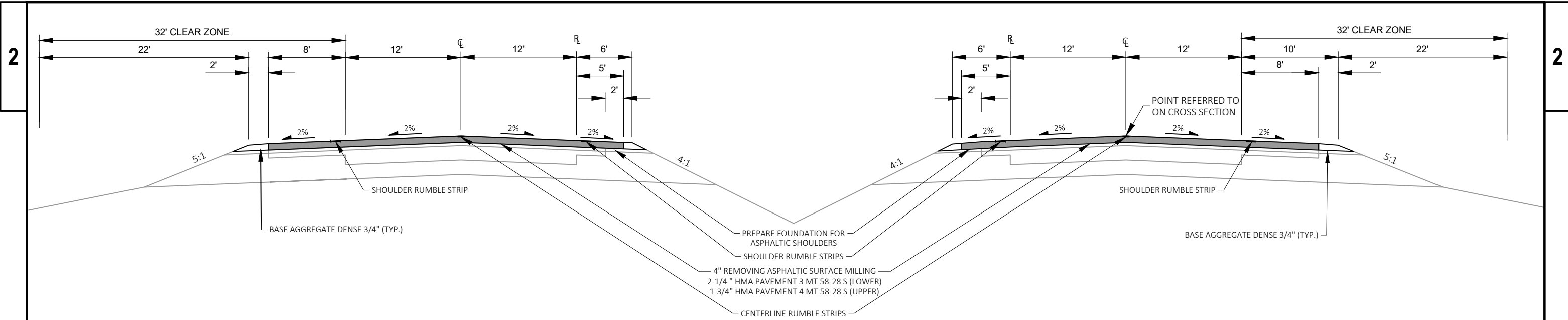
TYPICAL EXISTING SECTION
 (2-LANE SECTION)
 STA. 1562+15 TO STA. 1711+50



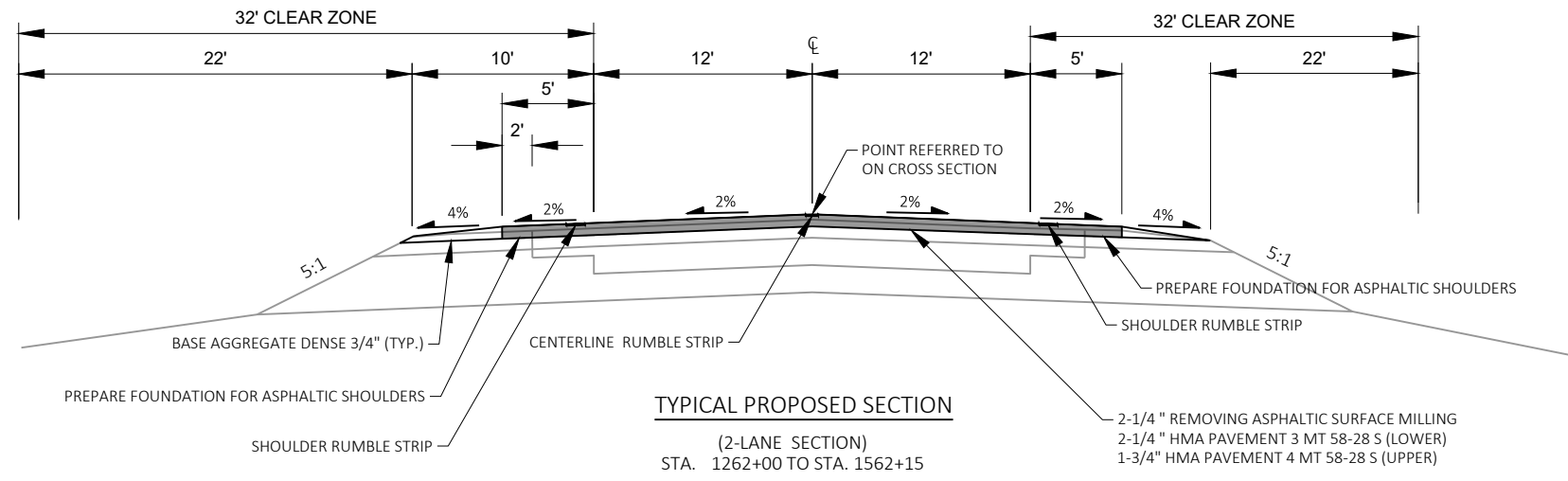
TYPICAL EXISTING SECTION
 (2-LANE SECTION)
 STA. 1711+50 TO STA. 1727+93



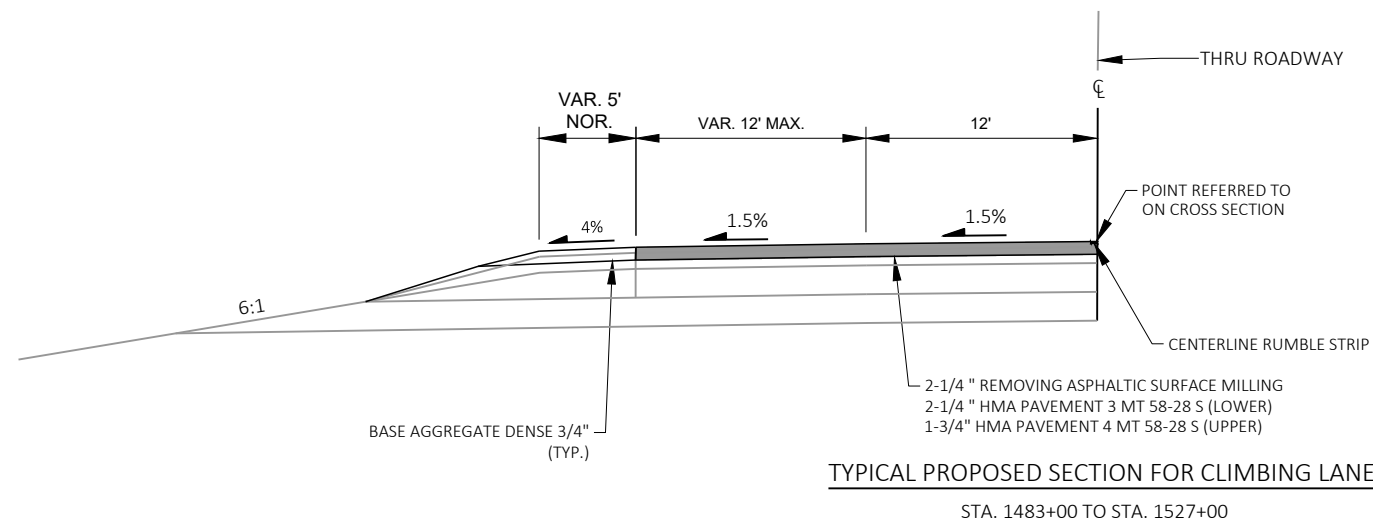
TYPICAL EXISTING SECTION
 (2-LANE SECTION)
 STA. 1727+93 TO STA. 1730+20



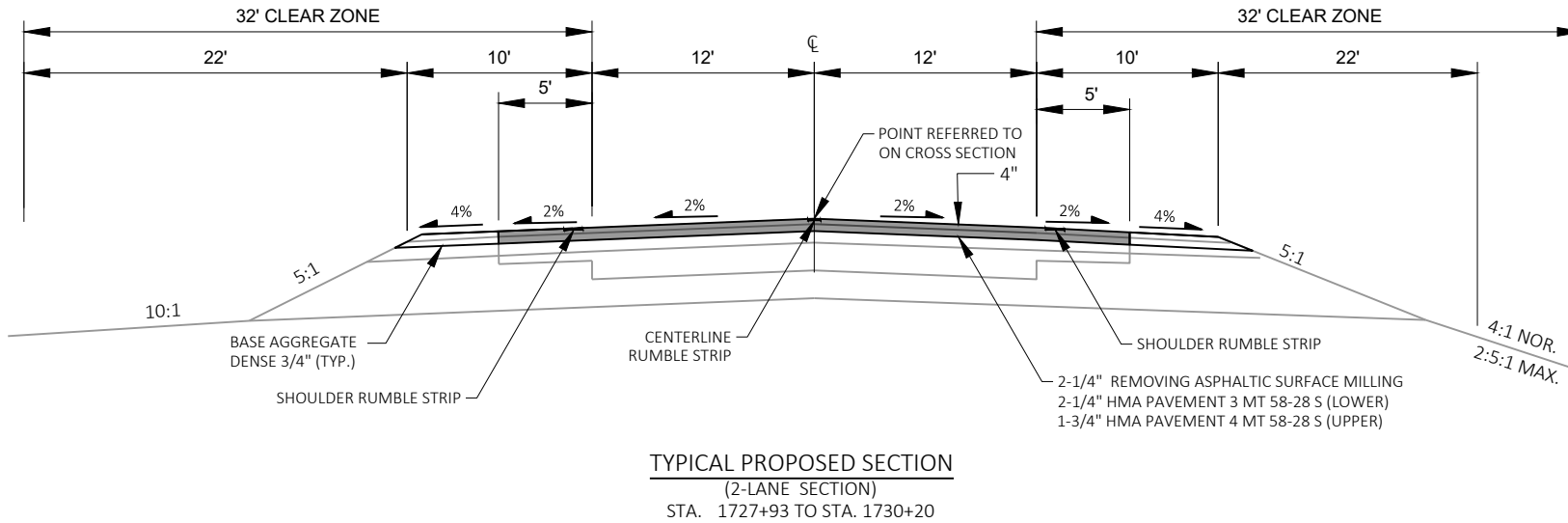
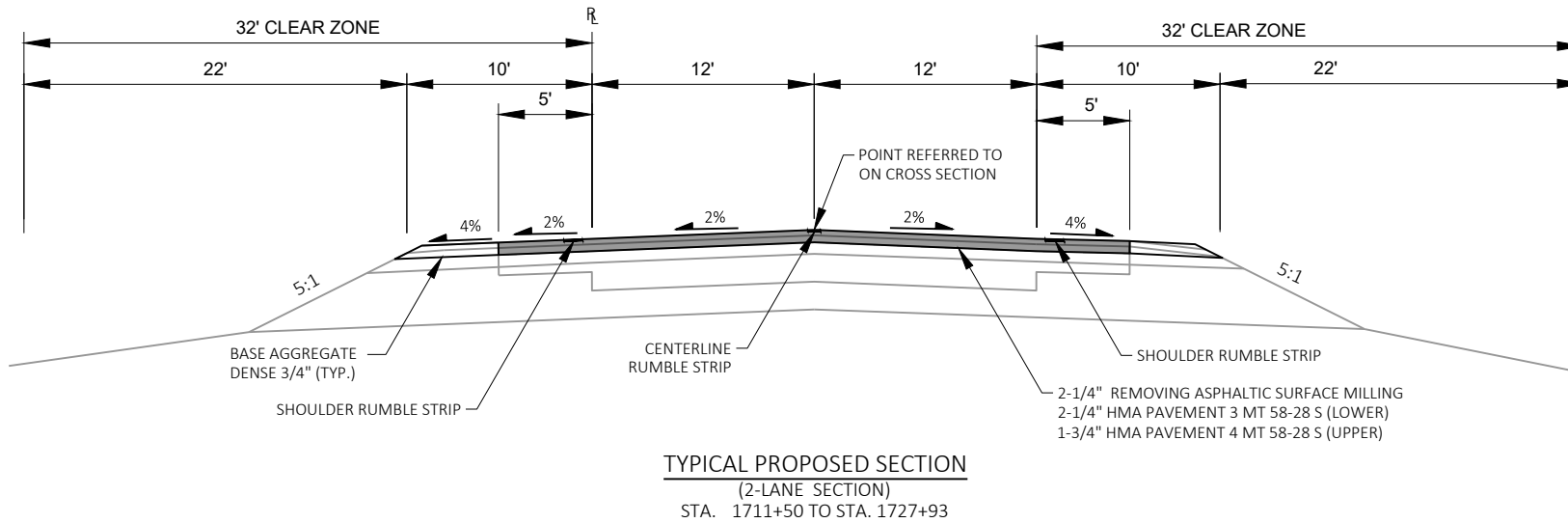
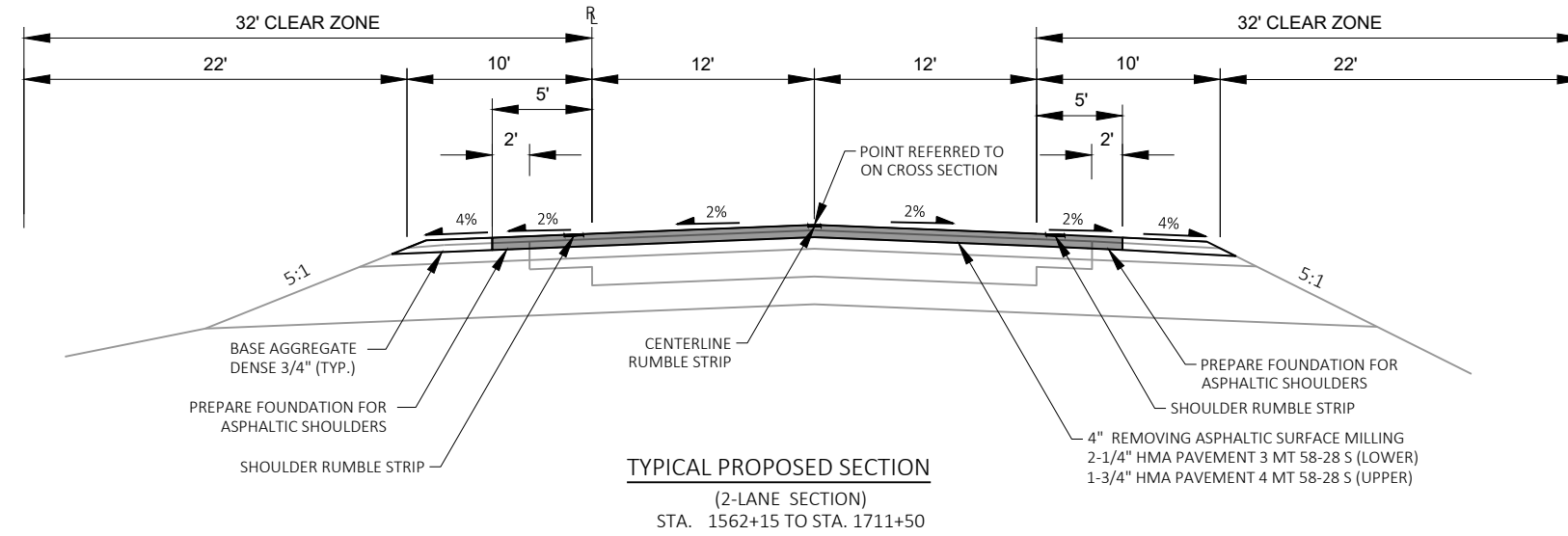
TYPICAL PROPOSED SECTION
 (4 LANE DIVIDED SECTION)
 STA. 1170+00 TO STA. 1262+00

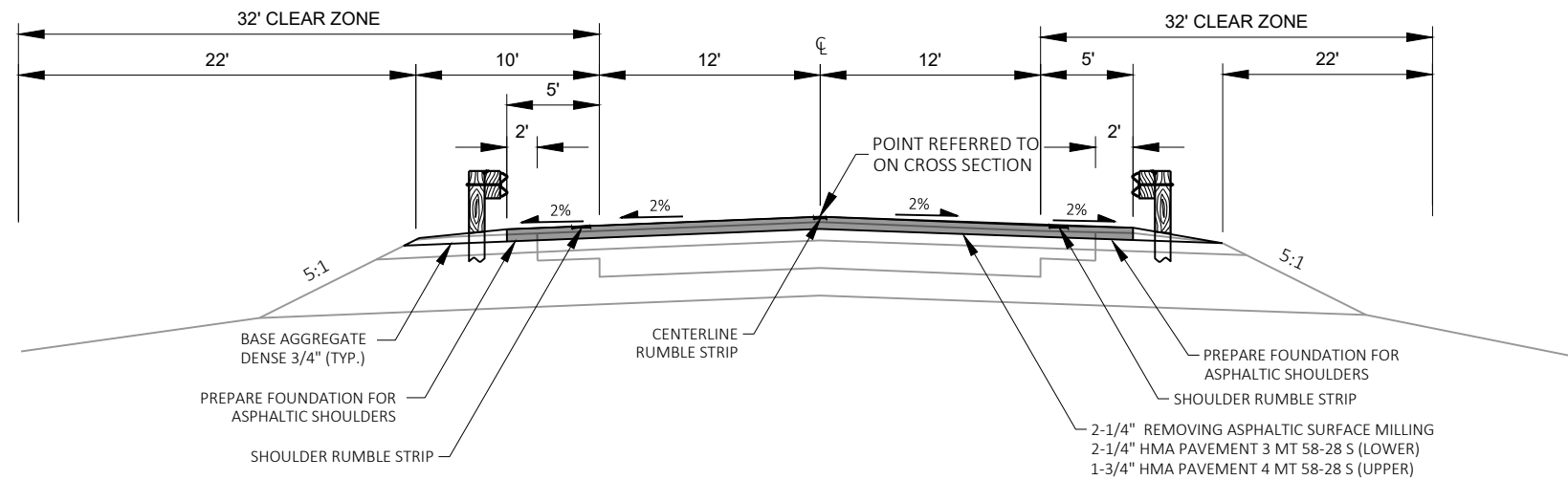


TYPICAL PROPOSED SECTION
 (2-LANE SECTION)
 STA. 1262+00 TO STA. 1562+15

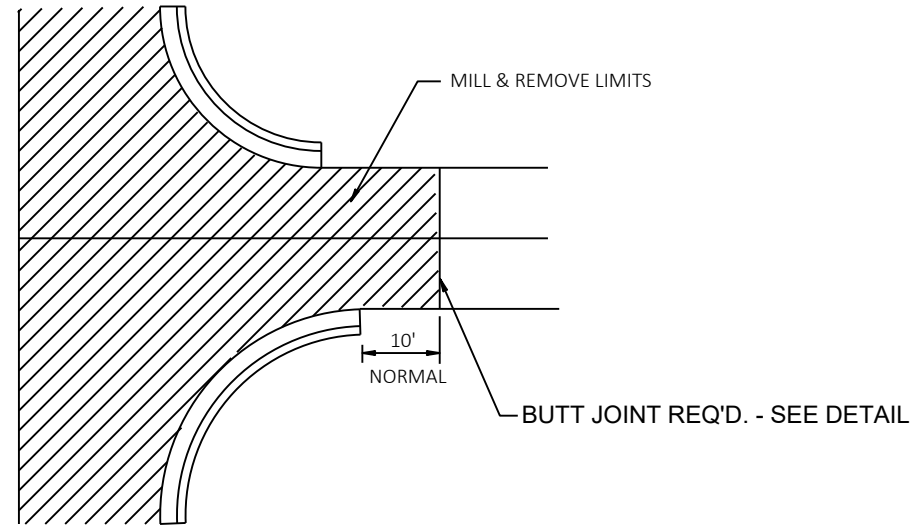


TYPICAL PROPOSED SECTION FOR CLIMBING LANE
 STA. 1483+00 TO STA. 1527+00

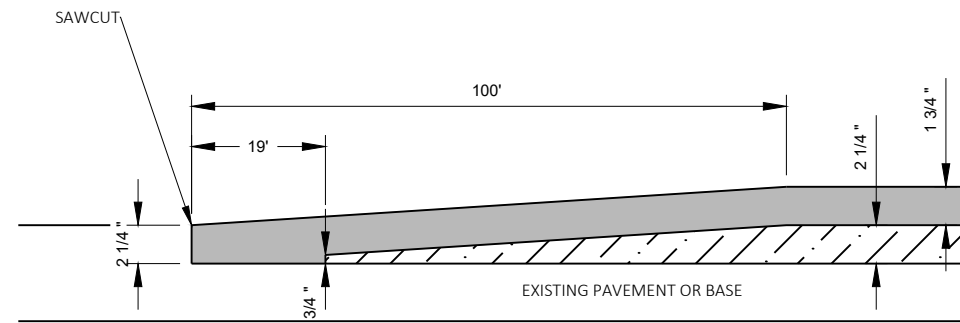




TYPICAL PROPOSED SECTION
 (2-LANE SECTION)
 STA. 1262+00 TO STA. 1562+15

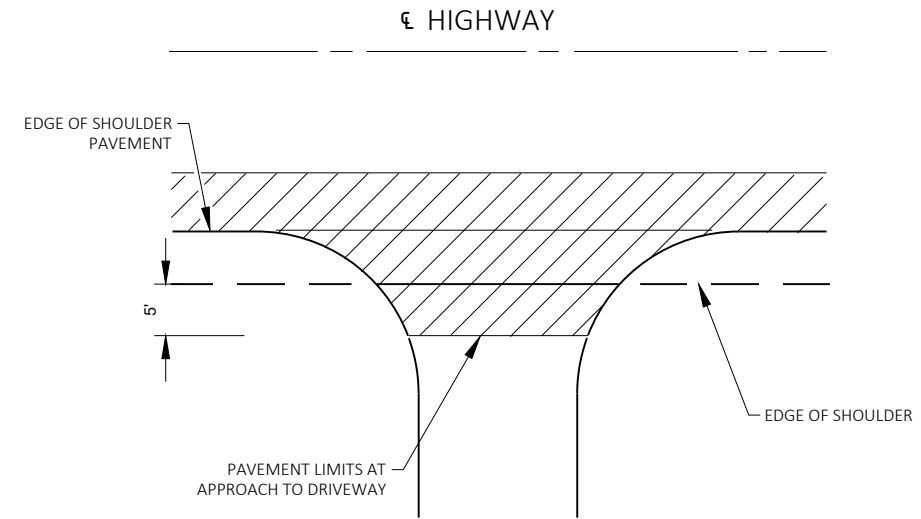


SIDEROAD DETAIL - CURB & GUTTER TO REMAIN
NOT TO SCALE

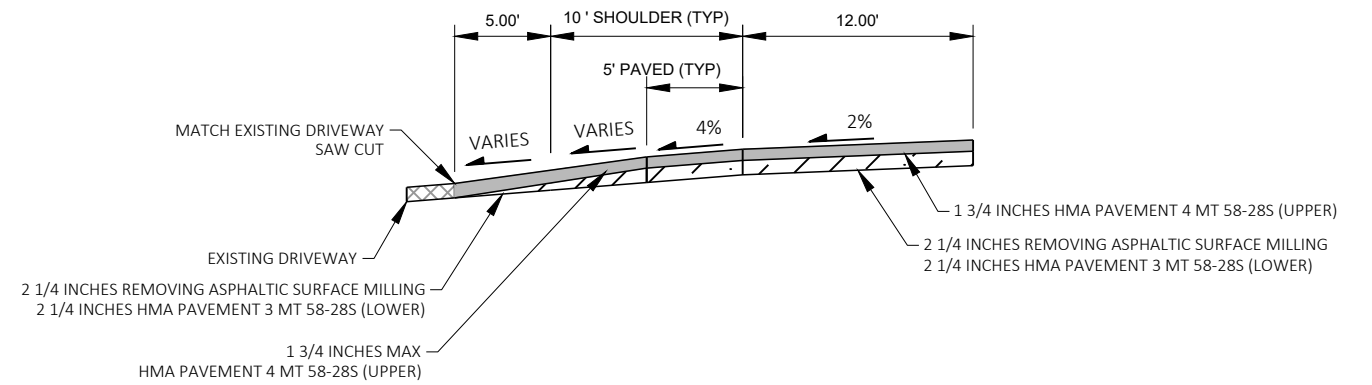


- PLACE 1 3/4" HMA PAVEMENT 4 MT 58-28 S
- REMOVING ASPHALTIC SURFACE MILLING AND PLACE 2 1/4" HMA PAVEMENT 3 MT 58-28 S

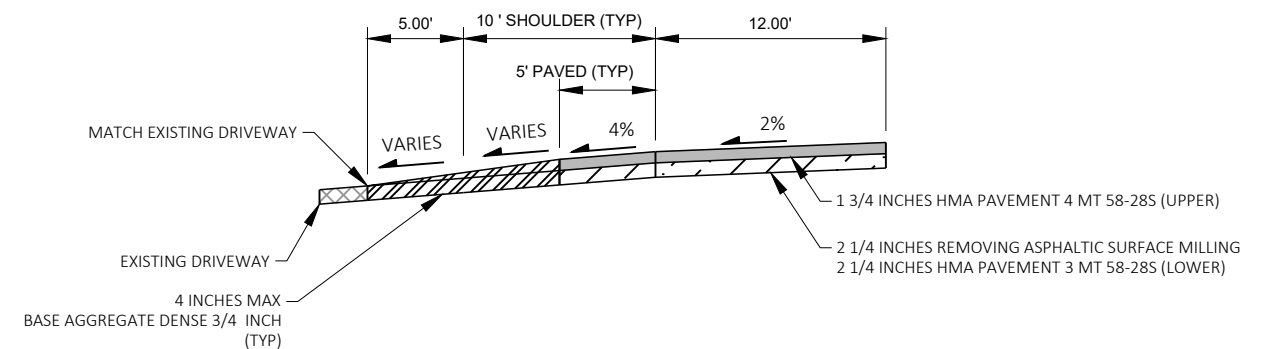
MAINLINE BUTT JOINT
NOT TO SCALE



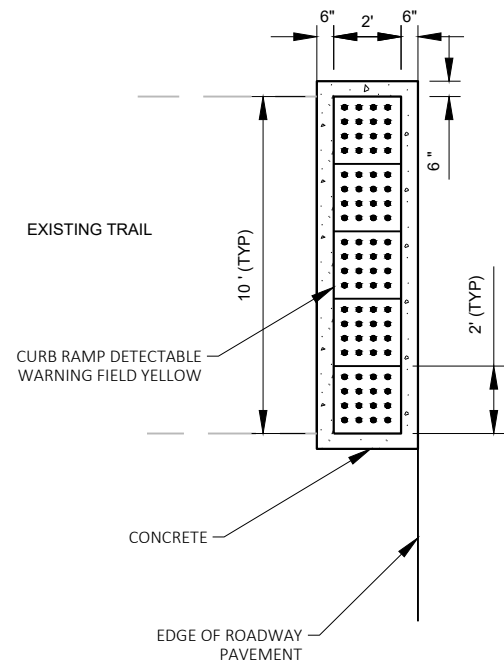
PLAN VIEW
RURAL DRIVEWAY
INTERSECTION DETAIL



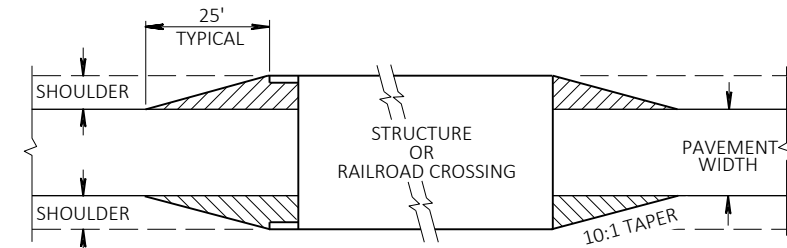
RURAL ENTRANCE WITH PAVED SURFACE
TYPICAL



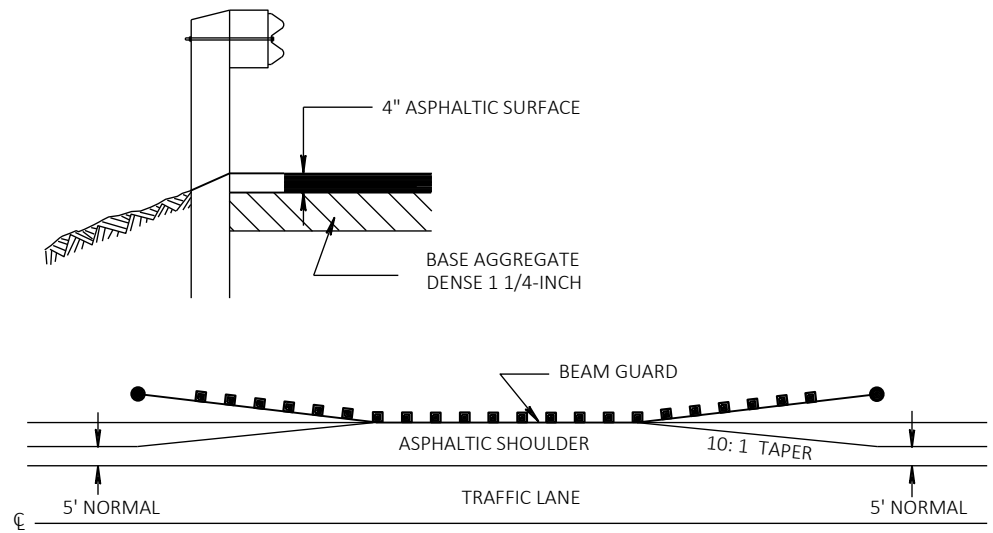
RURAL ENTRANCE WITH AGGREGATE SURFACE
TYPICAL



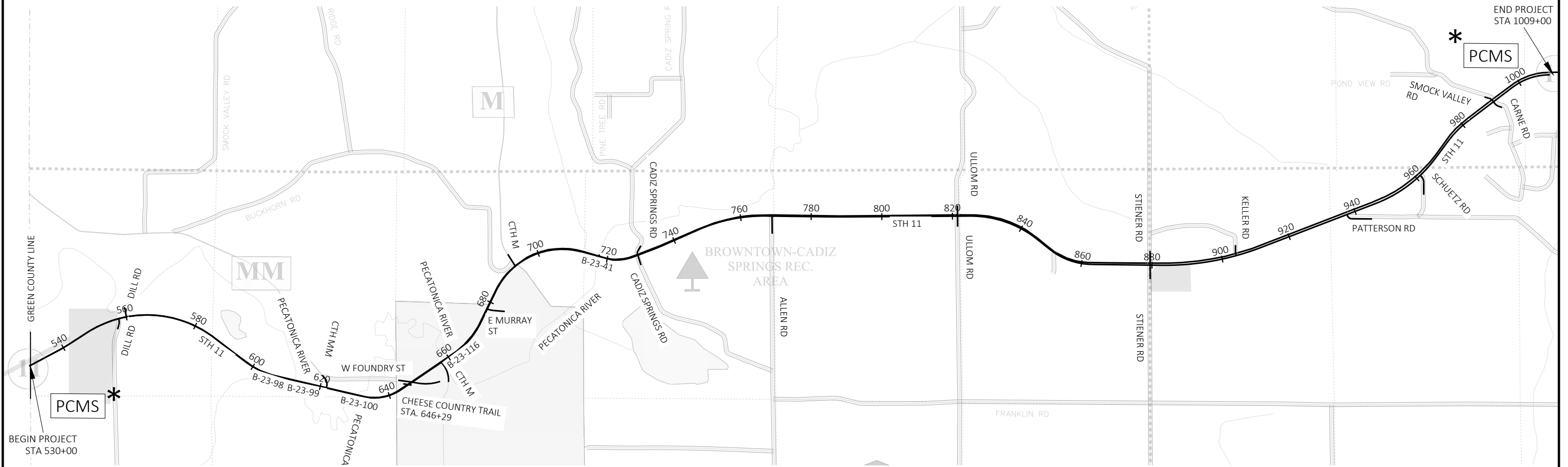
DETECTABLE WARNING FIELD
STA.646+29



DETAIL FOR ASPHALTIC SURFACE TAPERS AT STRUCTURES AND R.R. CROSSINGS



DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD

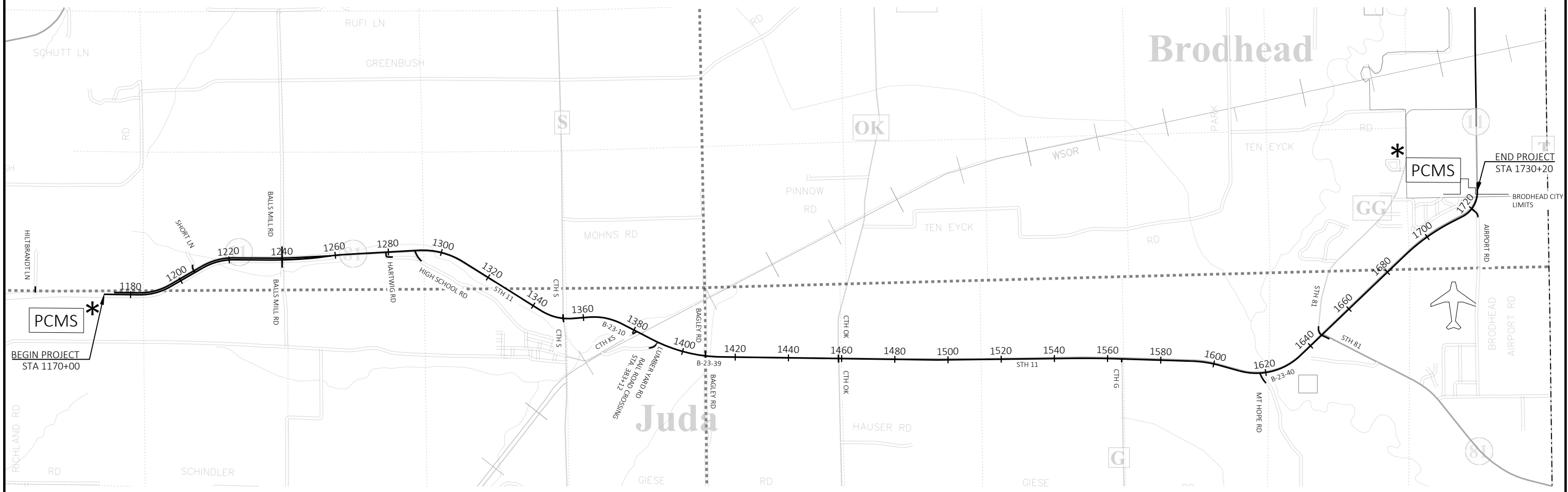


* ROAD WORK
BEGINS

/

* PLACE PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) AT THE LIMITS OF THE PROJECT FOR 7 DAYS PRIOR TO BEGINNING CONSTRUCTION.

SEE STANDARD DETAIL 15C12 - TRAFFIC CONTROL FOR LANE CLOSURES WITHIN FLAGGING OPERATIONS



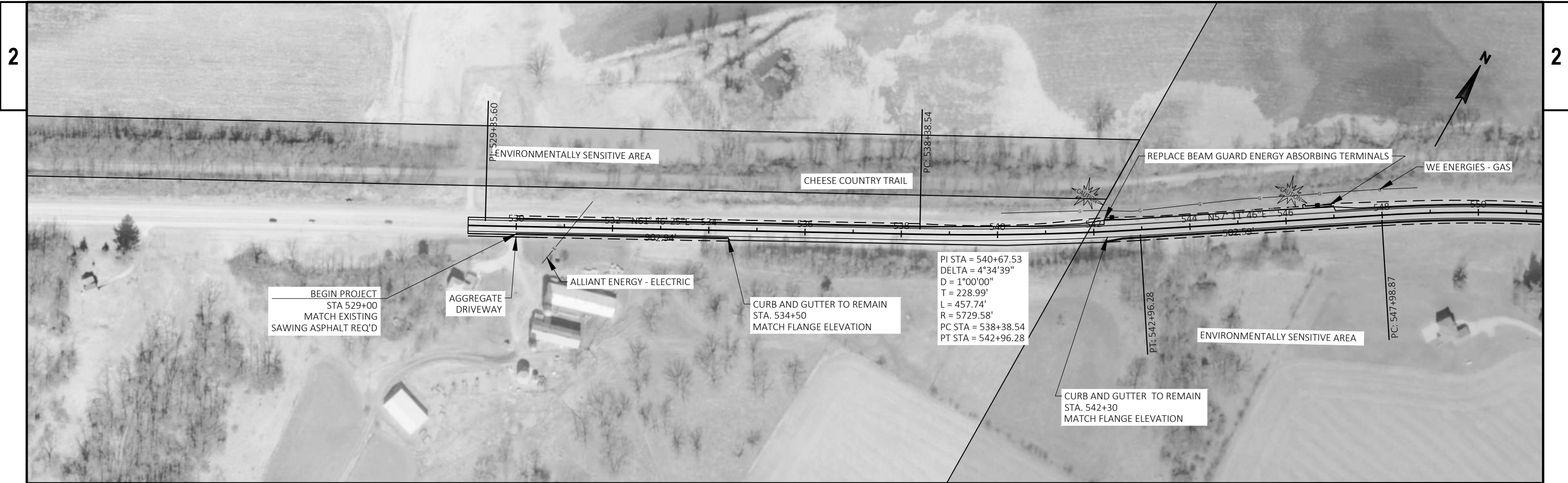
* ROAD WORK BEGINS

/

* PLACE PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) AT THE LIMITS OF THE PROJECT FOR 7 DAYS PRIOR TO BEGINNING CONSTRUCTION.

SEE STANDARD DETAIL 15C12 - TRAFFIC CONTROL FOR LANE CLOSURES WITHIN FLAGGING OPERATIONS

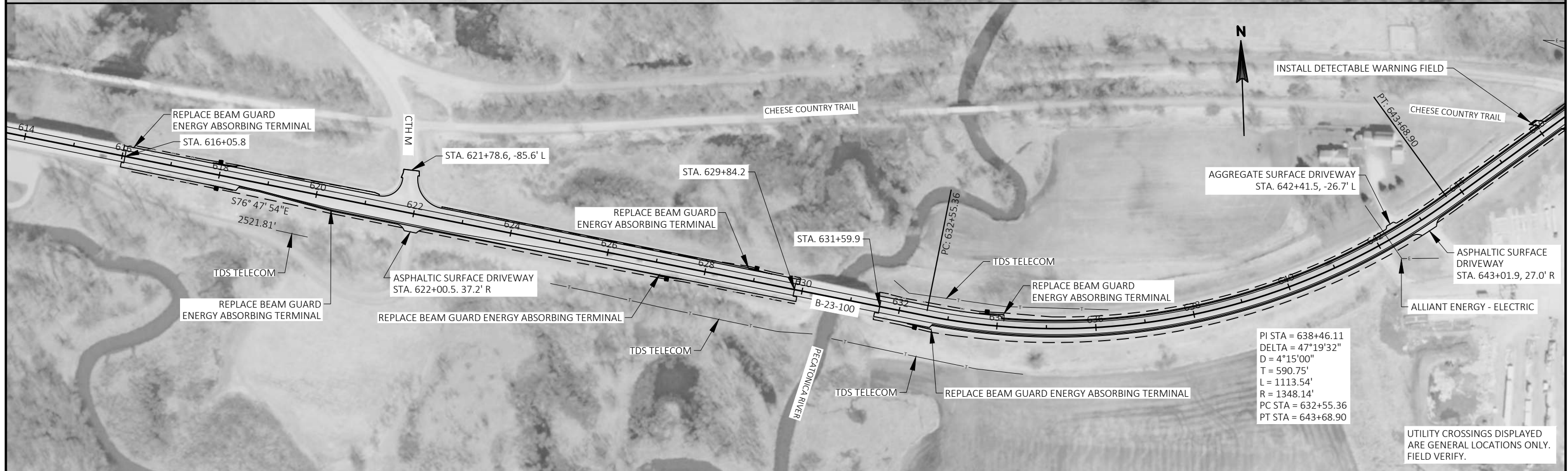
PROJECT NO: 1706-04-62	HWY: STH 11	COUNTY: GREEN	TRAFFIC CONTROL	SHEET	E
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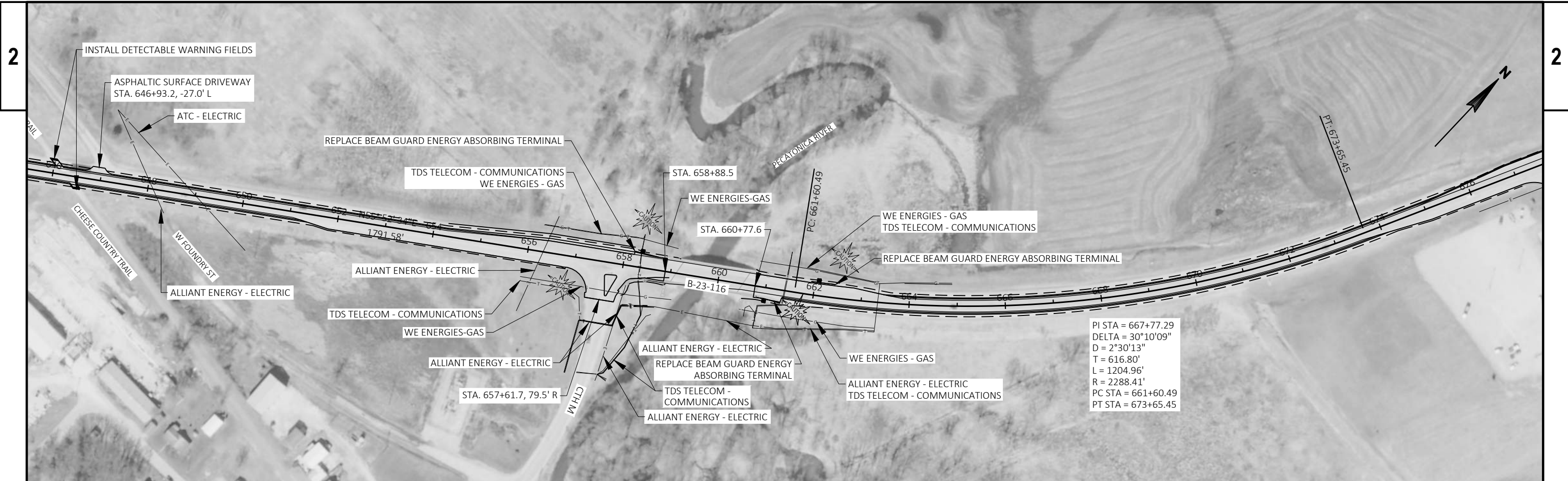
UTILITY CROSSINGS DISPLAYED ARE GENERAL LOCATIONS ONLY. FIELD VERIFY.

REFER TO SDD 15C8 - "PAVEMENT MARKING, MAINLINE AND TURN LANES" AND SDD 15C35 "PAVEMENT MARKING" FOR PAVEMENT MARKING REQUIREMENTS

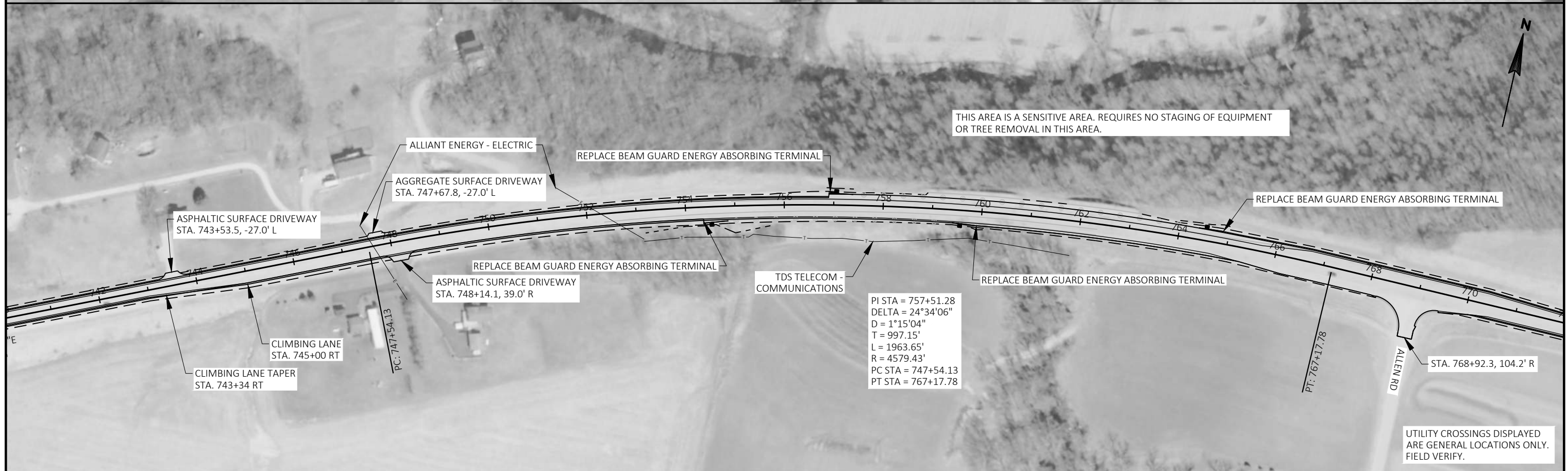
PROJECT NO: 1706-04-61	HWY: STH 11	COUNTY: GREEN	PLAN	SHEET	E
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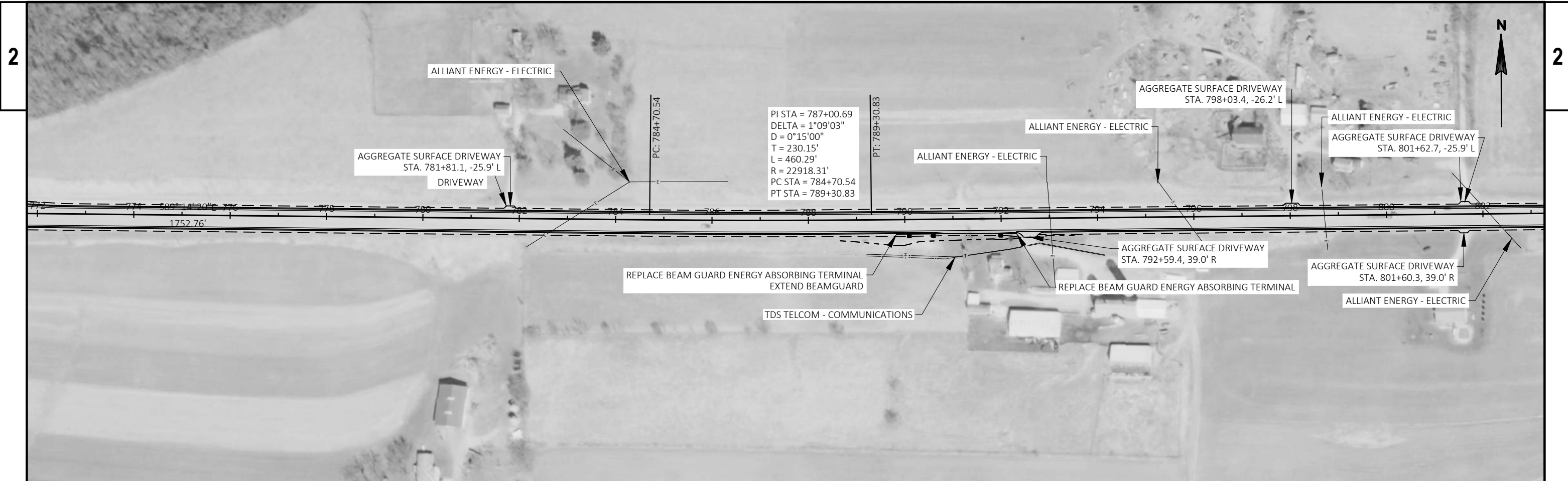
PROJECT NO: 1706-04-61	HWY: STH 11	COUNTY: GREEN	PLAN	SHEET	E
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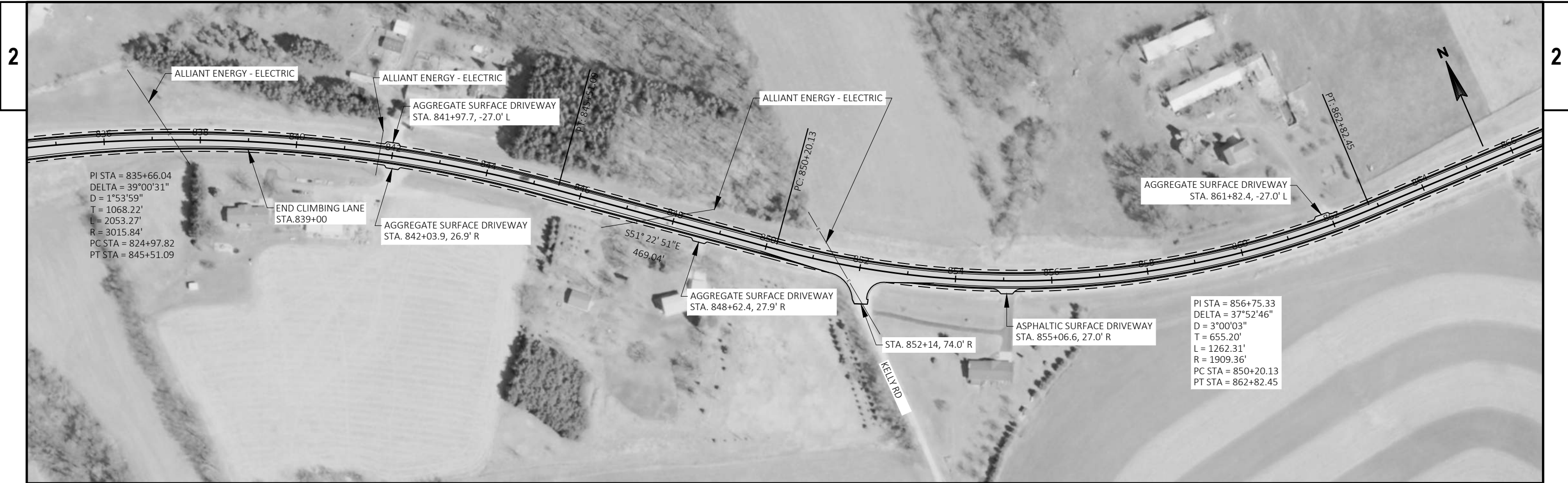
UTILITY CROSSINGS DISPLAYED
ARE GENERAL LOCATIONS ONLY.
FIELD VERIFY.



PROJECT NO: 1706-04-61	HWY: STH 11	COUNTY: GREEN	PLAN	SHEET	E
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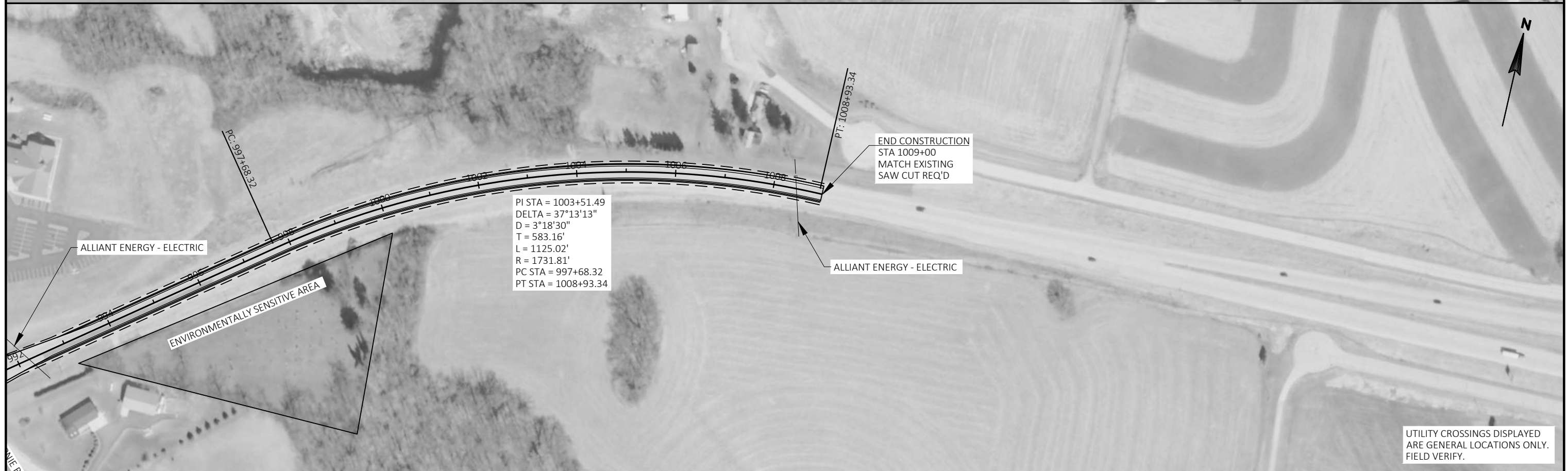
PROJECT NO: 1706-04-61 HWY: STH 11 COUNTY: GREEN PLAN SHEET E



PROJECT NO: 1706-04-61	HWY: STH 11	COUNTY: GREEN	PLAN	SHEET	E
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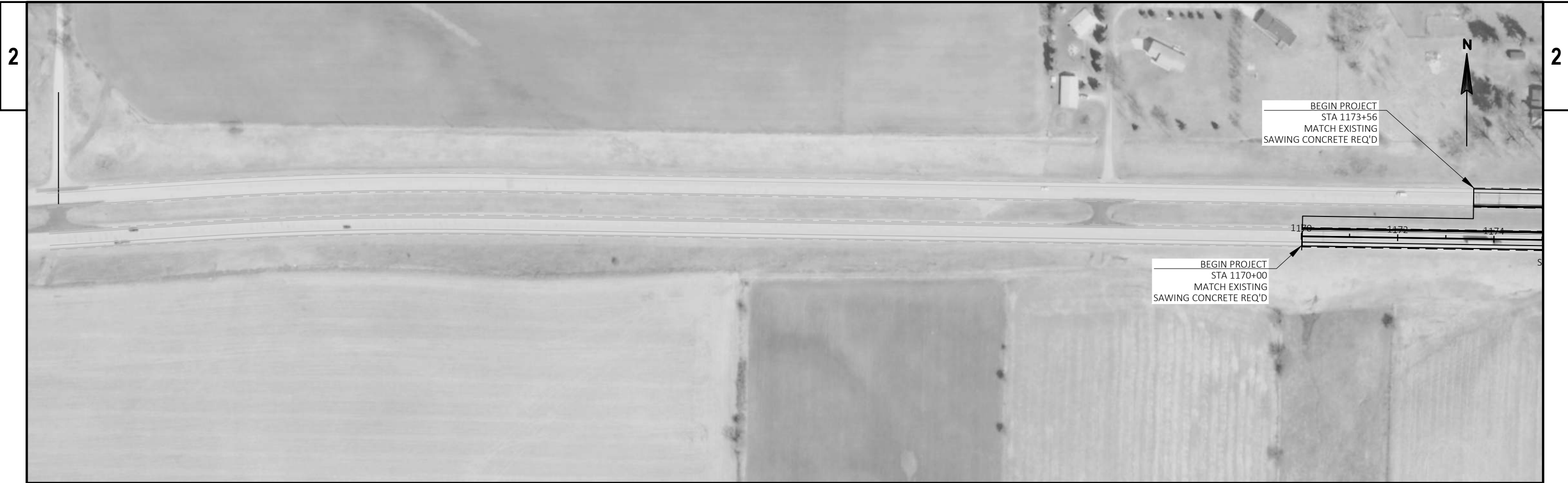


UTILITY CROSSINGS DISPLAYED
ARE GENERAL LOCATIONS ONLY.
FIELD VERIFY.

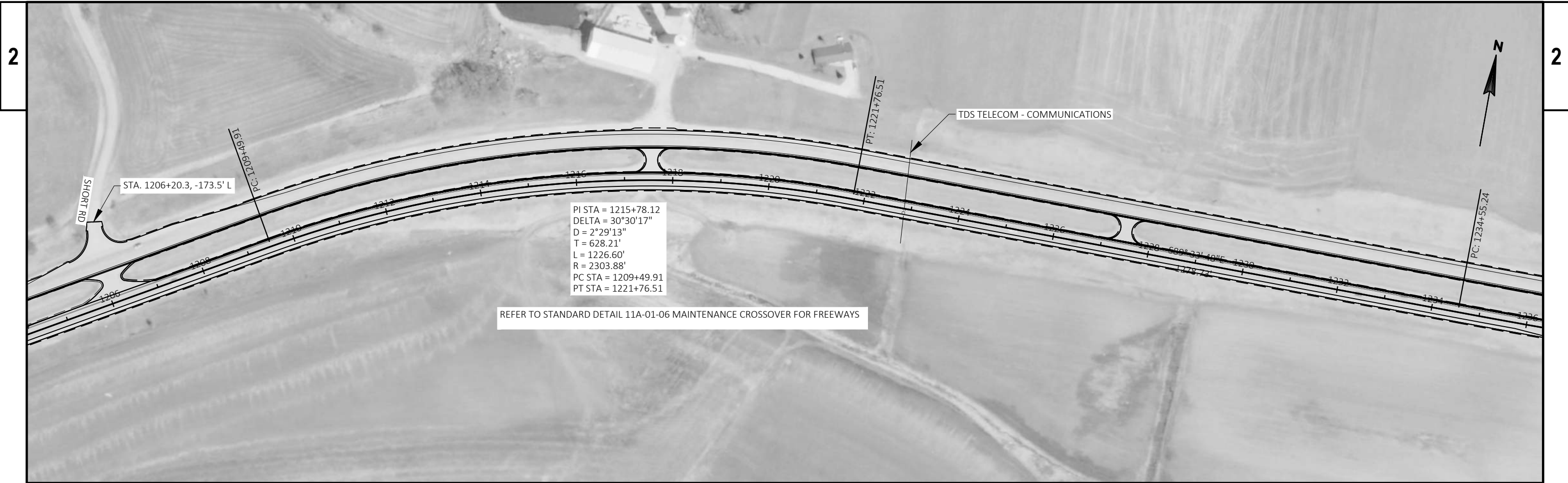


UTILITY CROSSINGS DISPLAYED
ARE GENERAL LOCATIONS ONLY.
FIELD VERIFY.

PROJECT NO: 1706-04-61	HWY: STH 11	COUNTY: GREEN	PLAN	SHEET	E
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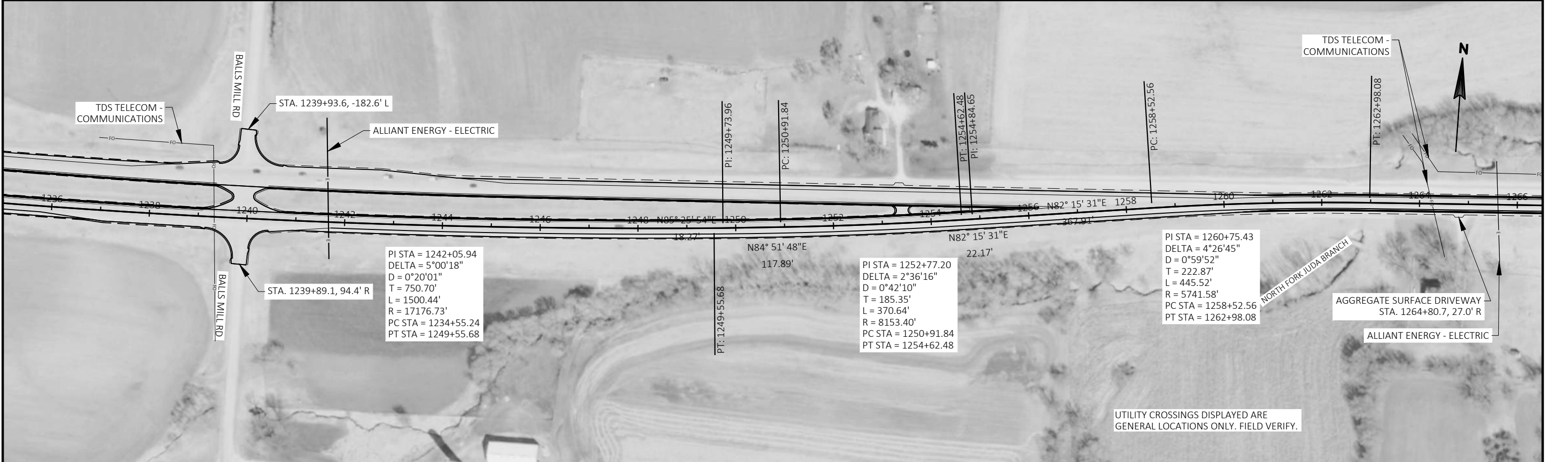


PROJECT NO: 1706-04-62	HWY: STH 11	COUNTY: GREEN	PLAN	SHEET	E
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PI STA = 1215+78.12
 DELTA = 30°30'17"
 D = 2°29'13"
 T = 628.21'
 L = 1226.60'
 R = 2303.88'
 PC STA = 1209+49.91
 PT STA = 1221+76.51

REFER TO STANDARD DETAIL 11A-01-06 MAINTENANCE CROSSOVER FOR FREEWAYS



PI STA = 1242+05.94
 DELTA = 5°00'18"
 D = 0°20'01"
 T = 750.70'
 L = 1500.44'
 R = 17176.73'
 PC STA = 1234+55.24
 PT STA = 1249+55.68

PI STA = 1252+77.20
 DELTA = 2°36'16"
 D = 0°42'10"
 T = 185.35'
 L = 370.64'
 R = 8153.40'
 PC STA = 1250+91.84
 PT STA = 1254+62.48

PI STA = 1260+75.43
 DELTA = 4°26'45"
 D = 0°59'52"
 T = 222.87'
 L = 445.52'
 R = 5741.58'
 PC STA = 1258+52.56
 PT STA = 1262+98.08

UTILITY CROSSINGS DISPLAYED ARE
 GENERAL LOCATIONS ONLY. FIELD VERIFY.

PROJECT NO: 1706-04-62	HWY: STH 11	COUNTY: GREEN	PLAN	SHEET	E
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UTILITY CROSSINGS DISPLAYED ARE
GENERAL LOCATIONS ONLY. FIELD
VERIFY.

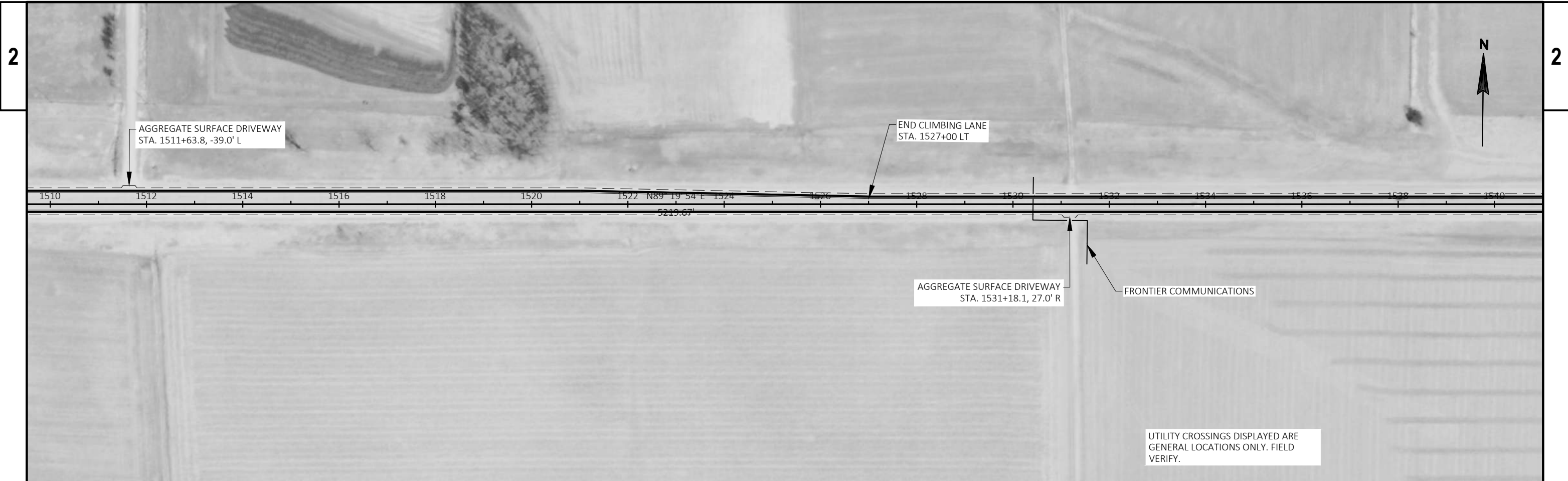
PROJECT NO: 1706-04-62	HWY: STH 11	COUNTY: GREEN	PLAN	SHEET	E
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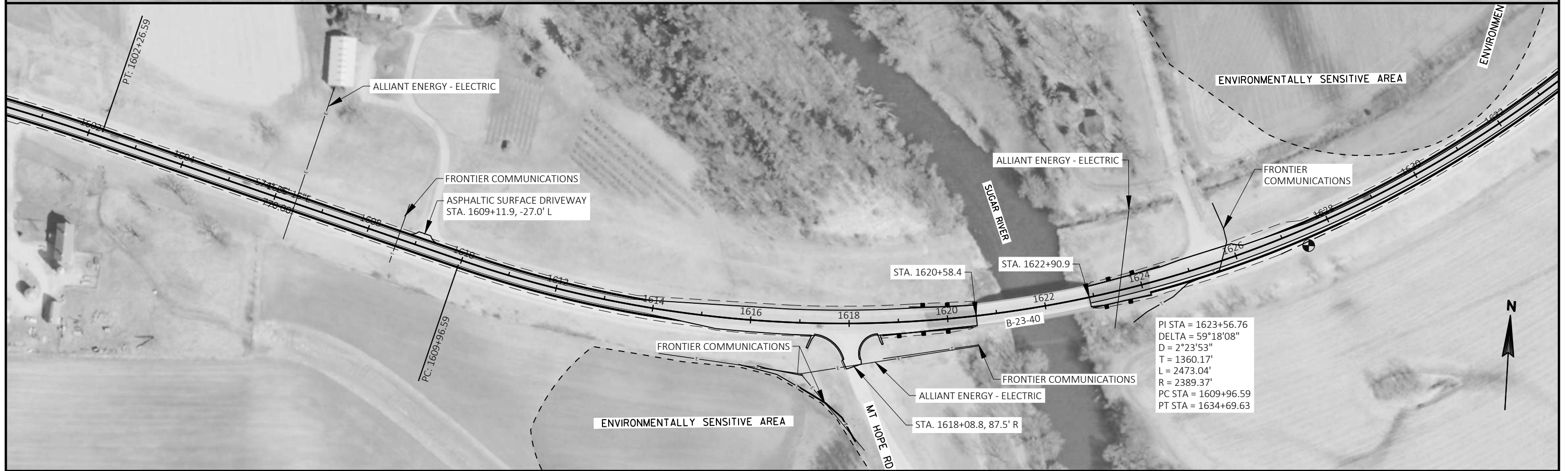
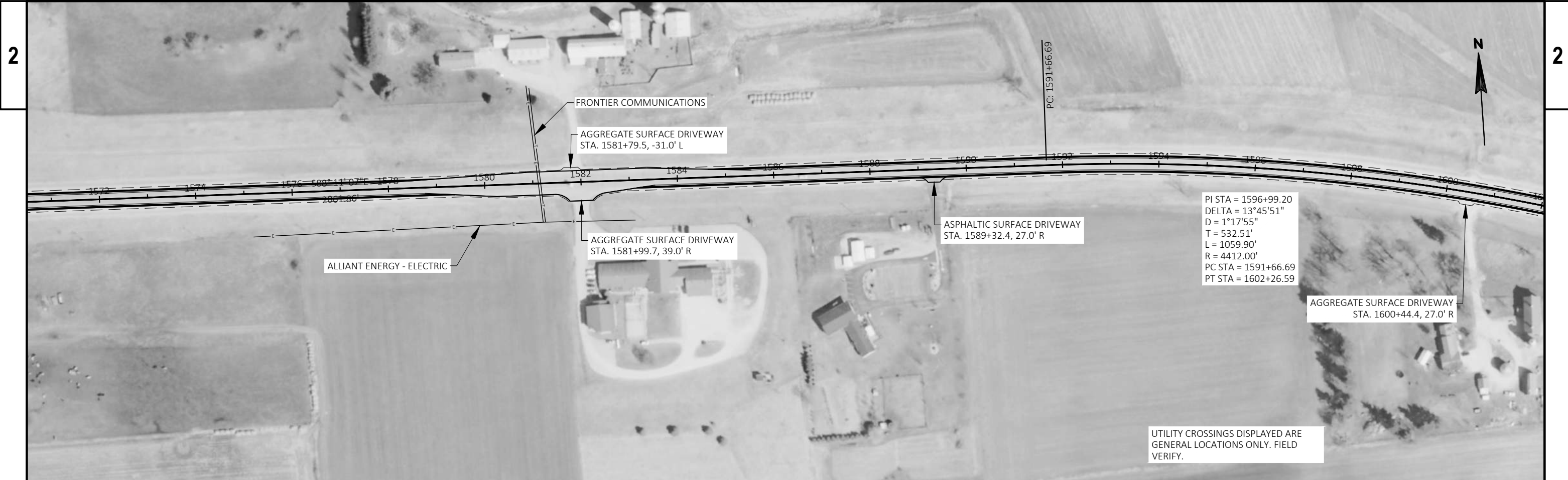




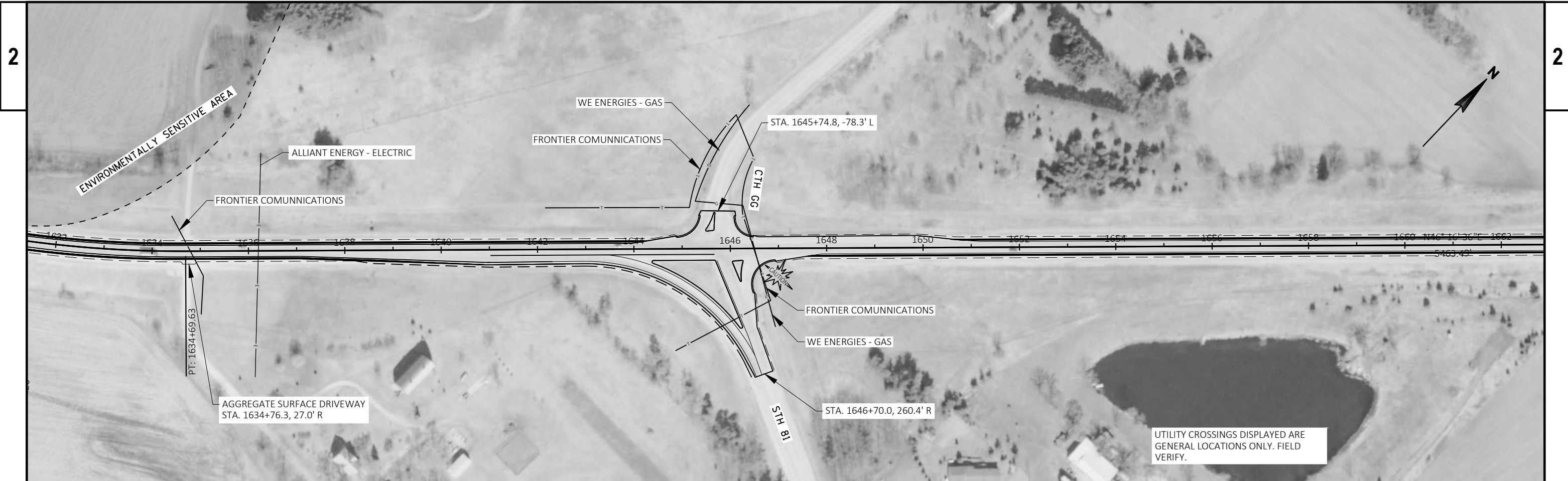
PROJECT NO: 1706-04-61	HWY: STH 11	COUNTY: GREEN	PLAN	SHEET	E
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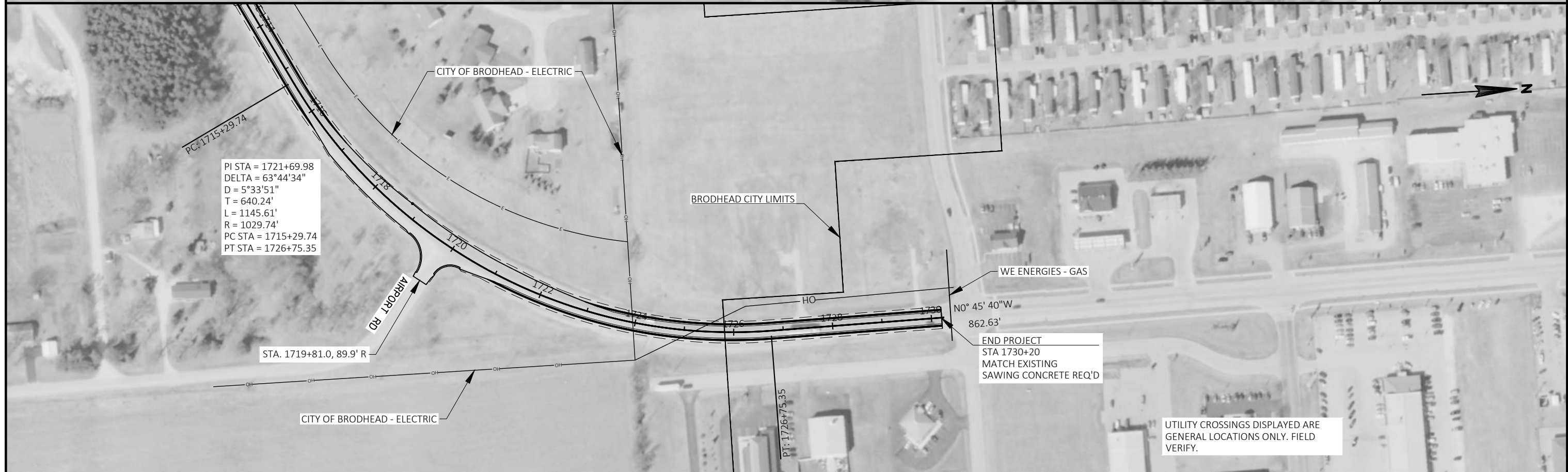
PROJECT NO: 1706-04-62	HWY: STH 11	COUNTY: GREEN	PLAN	SHEET	E
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PROJECT NO: 1706-04-62	HWY: STH 11	COUNTY: GREEN	PLAN	SHEET	E
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PROJECT NO: 1706-04-62	HWY: STH 11	COUNTY: GREEN	PLAN	SHEET	E
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PROJECT NO: 1706-04-62 HWY: STH 11 COUNTY: GREEN PLAN SHEET E

FILE NAME : C:\USERS\DOTD6K\BOX\DTSD-PUBLIC\SWR-PUBLIC\SWR-PDS-PUBLIC\17060432\SHEETS\PLAN\050201-62_PN.DWG PLOT DATE : 7/22/2020 10:12 AM PLOT BY : KOENIG, DELLA M PLOT NAME : PLOT SCALE : 1 IN:200 FT WISDOT/CADD SHEET 42

UTILITY CROSSINGS DISPLAYED ARE
GENERAL LOCATIONS ONLY. FIELD
VERIFY.

END PROJECT
STA 1730+20
MATCH EXISTING
SAWING CONCRETE REQ'D

BRODHEAD CITY LIMITS

WE ENERGIES - GAS

CITY OF BRODHEAD - ELECTRIC

CITY OF BRODHEAD - ELECTRIC

Estimate Of Quantities

1706-04-61 1706-04-62

Line	Item	Item Description	Unit	Total	Qty	Qty
0002	204.0115	Removing Asphaltic Surface Butt Joints	SY	1,776.000	960.000	816.000
0004	204.0120	Removing Asphaltic Surface Milling	SY	477,020.000	208,920.000	268,100.000
0006	204.0130	Removing Curb	LF	127.000	127.000	
0008	204.0165	Removing Guardrail	LF	1,175.000	1,050.000	125.000
0010	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	1,719.000	796.000	923.000
0012	213.0100	Finishing Roadway (project) 01. 1706-04-61	EACH	1.000	1.000	
0014	213.0100	Finishing Roadway (project) 02. 1706-04-62	EACH	1.000		1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	19,200.000	8,500.000	10,700.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	640.000	440.000	200.000
0020	455.0605	Tack Coat	GAL	68,034.000	29,315.000	38,719.000
0022	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	4.000	2.000	2.000
0024	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	4.000	2.000	2.000
0026	460.2000	Incentive Density HMA Pavement	DOL	87,108.000	37,329.000	49,779.000
0028	460.2005	Incentive Density PWL HMA Pavement	DOL	2.000	1.000	1.000
0030	460.6223	HMA Pavement 3 MT 58-28 S	TON	61,150.000	26,320.000	34,830.000
0032	460.6224	HMA Pavement 4 MT 58-28 S	TON	47,570.000	20,480.000	27,090.000
0034	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	165.000	131.000	34.000
0036	465.0425	Asphaltic Shoulder Rumble Strips 2-Lane Rural	LF	191,876.000	79,593.000	112,283.000
0038	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	103,588.000	39,147.000	64,441.000
0040	602.0405	Concrete Sidewalk 4-Inch	SF	60.000	60.000	
0042	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	20.000	20.000	
0044	614.0010	Barrier System Grading Shaping Finishing	EACH	20.000	20.000	
0046	614.0305	Steel Plate Beam Guard Class A	LF	150.000	150.000	
0048	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	20.000	20.000	
0050	614.0400	Adjusting Steel Plate Beam Guard	LF	1,000.000	500.000	500.000
0052	614.0920	Salvaged Rail	LF	250.000	250.000	
0054	614.0925	Salvaged Guardrail End Treatments	EACH	20.000	20.000	
0056	614.0950	Replacing Guardrail Posts and Blocks	EACH	80.000	40.000	40.000
0058	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1706-04-61	EACH	1.000	1.000	
0060	618.0100	Maintenance And Repair of Haul Roads (project) 02. 1706-04-62	EACH	1.000		1.000
0062	619.1000	Mobilization	EACH	1.000	0.500	0.500
0064	624.0100	Water	MGAL	0.200	0.100	0.100
0066	627.0200	Mulching	SY	1,000.000	500.000	500.000
0068	628.1504	Silt Fence	LF	500.000	250.000	250.000
0070	628.1520	Silt Fence Maintenance	LF	500.000	250.000	250.000
0072	628.1905	Mobilizations Erosion Control	EACH	2.000	1.000	1.000
0074	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	1.000	1.000
0076	628.2002	Erosion Mat Class I Type A	SY	700.000	500.000	200.000

Estimate Of Quantities

1706-04-61 1706-04-62

Line	Item	Item Description	Unit	Total	Qty	Qty
0078	630.0130	Seeding Mixture No. 30	LB	6.000	4.000	2.000
0080	630.0171	Seeding Mixture No. 70A	LB	2.000	2.000	
0082	630.0200	Seeding Temporary	LB	12.000	9.000	3.000
0084	630.0500	Seed Water	MGAL	0.200	0.100	0.100
0086	642.5201	Field Office Type C	EACH	1.000	0.500	0.500
0088	643.0300	Traffic Control Drums	DAY	84.000	42.000	42.000
0090	643.0900	Traffic Control Signs	DAY	410.000	210.000	200.000
0092	643.1050	Traffic Control Signs PCMS	DAY	28.000	14.000	14.000
0094	643.5000	Traffic Control	EACH	1.000	0.500	0.500
0096	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	223,351.000	96,378.000	126,973.000
0098	646.1555	Marking Line Grooved Contrast Permanent Tape 4-Inch	LF	4,109.000		4,109.000
0100	646.3555	Marking Line Grooved Contrast Permanent Tape 8-Inch	LF	500.000		500.000
0102	646.4520	Marking Line Same Day Epoxy 4-Inch	LF	138,371.000	81,618.000	56,753.000
0104	646.4620	Marking Line Same Day Epoxy 8-Inch	LF	5,740.000	2,381.000	3,359.000
0106	646.5020	Marking Arrow Epoxy	EACH	60.000	20.000	40.000
0108	646.5120	Marking Word Epoxy	EACH	25.000	10.000	15.000
0110	646.5320	Marking Railroad Crossings Epoxy	EACH	2.000		2.000
0112	646.7120	Marking Diagonal Epoxy 12-Inch	LF	557.000		557.000
0114	648.0100	Locating No-Passing Zones	MI	19.710	9.100	10.610
0116	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	143,161.000	81,973.000	61,188.000
0118	650.8000	Construction Staking Resurfacing Reference	LF	103,900.000	47,900.000	56,000.000
0120	650.9910	Construction Staking Supplemental Control (project) 01. 1706-04-61	LS	1.000	1.000	
0122	650.9910	Construction Staking Supplemental Control (project) 02. 1706-04-62	LS	1.000		1.000
0124	690.0150	Sawing Asphalt	LF	3,580.000	2,072.000	1,508.000
0126	740.0440	Incentive IRI Ride	DOL	134,527.000	52,300.000	82,227.000
0128	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,400.000	2,400.000	
0130	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	4,900.000	4,900.000	
0132	SPV.0060	Special 01. Utility Line Opening (ULO)	EACH	3.000	3.000	
0134	SPV.0060	Special 02. Landmark Reference Monument	EACH	1.000	1.000	

3

REMOVALS

CATEGORY	STATION	TO	STATION	LOCATION	204.0115	204.0120	204.0130	REMARKS
					REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	REMOVING ASPHALTIC SURFACE MILLING SY	REMOVING CURB LF	
0010	530+00	-	603+70		75.6	28,700.0	61	
	605+10	-	610+98		151.1	3,020.0	-	
	616+06	-	629+84		158.7	8,010.0	-	
	631+60	-	658+89		158.7	12,240.0	-	
	660+81	-	716+80		166.2	25,610.0	-	
	718+25	-	1009+00		249.3	131,370.0	65	
PROJECT ID 1706-04-61 TOTAL					960.0	209,000.0	127	
0010	1170+00	-	1376+50		279.6	114,618.0	-	
	1378+09	-	1620+56		362.7	104,658.0	-	
	1622+91	-	1730+20		173.8	47,034.0	-	
	1176+66			CROSSOVER	-	193.0	-	
	1183+05			CROSSOVER	-	193.0	-	
	1206+05			CROSSOVER	-	464.0	-	
	1217+55			CROSSOVER	-	193.0	-	
	1227+48			CROSSOVER	-	193.0	-	
	1239+91			CROSSOVER	-	464.0	-	
	1253+43			CROSSOVER	-	58.0	-	
PROJECT ID 1706-04-62 TOTAL					816.0	268,100.0	0	
TOTAL 0010					1,776	477,100	127	

PREPARE FOUNDATION

CATEGORY	STATION	TO	STATION	LOCATION	211.0400	REMARKS
					PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	
0020	530+00	-	1009+00		797	1706-04-61
0020	1170+00	-	1730+00		923	1706-04-62
TOTAL 0020					1,720	

FINISHING ROADWAY

CATEGORY	STATION	TO	STATION	LOCATION	213.0100.01	213.0100.02	REMARKS
					FINISHING ROADWAY (PROJECT) (01. 1706-04-61)	FINISHING ROADWAY (PROJECT) (02. 1706-04-62)	
0010	530+00	-	1009+00	-61	1	-	1706-04-61
0010	1170+00	-	1730+21	-62	-	1	1706-04-62
TOTAL 0010					1	1	

3

3

BASE COURSE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	305.0110	305.0120	REMARKS
					BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	
0010	530+00	-	534+44	RT	43.1	-	
	530+00	-	542+23	LT	80.6	-	
	542+26	-	557+03	RT	141.8	-	
	547+01	-	602+57	LT	624.1	-	
	588+54			LT	3.6	-	DWY
	557+03	-	558+40	RT	376.9	-	
	601+00	-	618+33	RT	26.0	-	
	618+33	-	627+10	RT	121.2	-	
	627+10	-	632+71	RT	43.4	-	
	602+57	-	621+25	LT	61.3	-	
	621+25	-	628+85	LT	52.3	-	
	632+71	-	656+88	RT	104.1	-	
	628+85	-	656+88	LT	132.4	-	
	642+42			LT	1.7	-	DWY
	656+88	-	661+34	RT	7.5	-	
	656+88	-	662+43	LT	58.6	-	
	661+34	-	677+06	RT	155.5	-	
	662+43	-	671+84	LT	234.9	-	
	678+55	-	715+03	RT	353.0	-	
	679+73			LT	2.8	-	DWY
	693+30	-	715+64	LT	230.2	-	
	719+49	-	728+10	RT	87.8	-	
	720+80	-	728+31	LT	80.2	-	
	729+41	-	754+36	RT	242.6	-	
	754+36	-	759+91	RT	16.3	-	
	729+75	-	756+89	LT	257.6	-	
	734+70			LT	2.5	-	DWY
	747+73			LT	2.5	-	DWY
	756+89	-	764+88	LT	22.9	-	
	759+91	-	768+17	RT	70.9	-	
	764+88	-	820+88	LT	465.1	-	
	769+47	-	790+54	RT	206.3	231.0	
	781+81			LT	1.8	-	DWY
	798+03			LT	2.6	-	DWY
	801+60			RT	1.6	-	DWY
	801+63			LT	1.8	-	DWY
	803+69			LT	2.8	-	DWY
	790+54	-	820+69	RT	382.8	-	
	821+99	-	878+67	RT	538.7	-	
	822+18	-	878+86	LT	538.0	-	
	841+98			LT	2.5	-	DWY
	842+04			RT	2.5	-	DWY
	848+62			RT	2.5	-	DWY
	861+82			LT	2.6	-	DWY
	879+97	-	936+90	RT	545.1	-	
	880+17	-	903+55	LT	220.4	-	
	904+90	-	990+31	LT	823.1	-	
	910+09			LT	1.6	-	DWY
	925+41			LT	3.3	-	DWY
	933+87			LT	2.5	-	DWY
	938+18	-	960+55	RT	214.4	-	
	967+13			LT	2.5	-	DWY
	972+05			RT	2.8	-	DWY
	972+48			LT	2.2	-	DWY
	975+31			RT	2.1	-	DWY

CONTINUED

BASE COURSE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	305.0110	305.0120	REMARKS
					BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	
0010	861+83	-	990+14	RT	357.4	-	
	991+44	-	1009+00	RT	168.8	-	
	991+81	-	1009+00	LT	166.0	-	
				UNDISTRIBUTED	200.0	200.0	
PROJECT ID 1706-04-61 TOTAL					8,500.0	440.0	
0010	1170+00	-	1239+71	RT	307.4	-	
	1170+00	-	1239+70	LT	455.6	-	
	1176+57			LT	3.0	-	DWY
	1240+12	-	1260+00	RT	88.4	-	
	1240+12	-	1351+56	LT	170.1	-	
	1264+80			RT	1.6	-	DWY
	1172+02	-	1260+00	WB RT	515.7	-	
	1172+02	-	1230+70	WB LT	443.6	-	
	1260+00	-	1278+33	RT	171.3	-	
	1260+00	-	1351+56	LT	567.5	-	
	1345+64				2.8	-	DWY
	1279+62	-	1289+35	RT	82.1	-	
	1290+72	-	1351+77	RT	575.9	-	
	1353+35	-	1376+52	RT	272.8	-	
	1352+47	-	1366+21	LT	116.0	-	
	1366+76	-	1376+38	LT	125.0	-	
	1377+73	-	1380+14	RT	17.7	-	
	1377+98	-	1408+17	LT	320.7	-	
	1381+59	-	1389+24	RT	33.6	-	
	1390+61	-	1408+15	RT	156.9	-	
	1409+47	-	1458+24	LT	461.7	-	
	1428+73			LT	1.6	-	DWY
	1441+16			LT	1.6	-	DWY
	1409+42	-	1458+10	RT	460.3	-	
	1459+54	-	1620+59	LT	1540.4	-	
	1488+71			LT	1.6	-	DWY
	1511+64			LT	2.5	-	DWY
	1531+18			RT	2.5	-	DWY
	1549+94			RT	1.6	-	DWY
	1459+39	-	1564+58	RT	1011.4	-	
	1565+87	-	1581+76	RT	144.5	-	
	1571+89			LT	3.0	-	DWY
	1582+27	-	1617+23	RT	339.4	-	
	1600+44			RT	2.5	-	DWY
	1618+63	-	1620+59	RT	25.0	-	
	1634+76			RT	2.5	-	DWY
	1622+91	-	1625+24	LT	28.9	-	
	1622+91	-	1646+51	RT	253.9	-	
	1625+64	-	1644+91	LT	205.4	-	
	1646+55	-	1719+12	RT	690.8	-	
	1646+36	-	1730+21	LT	786.5	-	
	1720+33	-	1730+21	RT	95.1	-	
				UNDISTRIBUTED	200.0	200.0	
PROJECT ID 1706-04-62 TOTAL					10,700	200	
TOTAL 0010					19,200.0	640.0	

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ASPHALTIC ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	455.0605	460.6223	460.6224	465.0120	REMARKS
					TACK COAT GAL	HMA PAVEMENT 3 MT 58-28 S TON	HMA PAVEMENT 4 MT 58-28 S TON	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	
0010	530+00	-	603+70		3,740	3,366	2,618	-	
	560+12			LT	6	-	-	9	DWY
	605+10	-	610+98		421	379	295	-	
	616+06	-	629+84		1,073	966	751	-	
	622+00			RT	6	-	-	9	DWY
	631+60	-	658+89		1,520	1,368	1,064	-	
	643+02			RT	7	-	-	12	DWY
	646+93			LT	6	-	-	9	DWY
	660+81	-	716+80		3,056	2,751	2,139	-	
	743+53			LT	6	-	-	9	DWY
	748+14			RT	10	-	-	15	DWY
	855+07			RT	6	-	-	9	DWY
	911+59			LT	6	-	-	9	DWY
	915+85			LT	6	-	-	9	DWY
	962+94			LT	5	-	-	9	DWY
	965+54			LT	5	-	-	9	DWY
	979+65			RT	5	-	-	8	DWY
	988+02			RT	5	-	-	9	DWY
	988+68			LT	5	-	-	8	DWY
	718+25	-	1009+00		16,764	15,088	11,735	-	
PROJECT ID 1706-04-61 TOTAL					26,656	23,920	18,610	131	
0010	1170+00	-	1376+50		16,082	14,474	11,257	-	
	1324+80				3	-	-	6	DWY
	1378+09	-	1620+56		13,355	12,019	9,348	-	
	1395+20				4	-	-	6	DWY
	1565+29				3	-	-	5	DWY
	1589+32				6	-	-	9	DWY
	1609+12				6	-	-	9	DWY
	1622+87	-	1730+21		6,017	5,415	4,212	-	
	1176+66	-			27	24	19	-	CROSSOVER
	1183+05	-			27	24	19	-	CROSSOVER
	1206+05	-			65	58	45	-	CROSSOVER
	1217+55	-			27	24	19	-	CROSSOVER
	1227+48	-			27	24	19	-	CROSSOVER
	1239+91	-			65	58	45	-	CROSSOVER
	1253+43	-			8	7	6	-	CROSSOVER
PROJECT ID 1706-04-62 TOTAL					35,721	32,130	24,990	35	
TOTAL 0010					62,378	56,050	43,600	166	
0020	530+00	-	534+41	RT	17	15	12	-	SHLDR
	530+00	-	542+22	LT	42	38	30	-	SHLDR
	542+26	-	555+94	RT	42	38	29	-	SHLDR
	547+04	-	602+57	LT	176	159	123	-	SHLDR
	559+11	-	601+20	RT	153	138	107	-	SHLDR
	618+43	-	627+28	RT	28	25	20	-	SHLDR
	622+38	-	628+95	LT	20	18	14	-	SHLDR
	632+71	-	651+39	RT	70	63	49	-	SHLDR
	634+10	-	658+20	LT	91	82	64	-	SHLDR
	661+38	-	674+13	RT	48	43	34	-	SHLDR
	663+45	-	691+22	LT	86	77	60	-	SHLDR
	679+13	-	715+03	RT	127	114	89	-	SHLDR
	696+26	-	715+66	LT	60	54	42	-	SHLDR

ASPHALTIC ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	455.0605	460.6223	460.6224	465.0120	REMARKS
					TACK COAT GAL	HMA PAVEMENT 3 MT 58-28 S TON	HMA PAVEMENT 4 MT 58-28 S TON	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	
	719+50	-	725+21	RT	21	19	15	-	SHLDR
	720+80	-	727+72	LT	21	19	15	-	SHLDR
	730+03	-	744+98	RT	100	90	70	-	SHLDR
	732+63	-	756+89	LT	75	68	53	-	SHLDR
	759+91	-	765+28	RT	16	15	11	-	SHLDR
	764+88	-	820+27	LT	172	155	120	-	SHLDR
	770+05	-	790+54	RT	64	57	44	-	SHLDR
	792+32	-	820+69	RT	88	79	61	-	SHLDR
	821+99	-	875+51	RT	164	147	115	-	SHLDR
	825+06	-	877+95	LT	166	150	116	-	SHLDR
	880+58	-	934+13	RT	196	177	137	-	SHLDR
	881+24	-	902+81	LT	66	60	46	-	SHLDR
	906+02	-	989+57	LT	259	233	181	-	SHLDR
	938+77	-	959+83	RT	78	70	54	-	SHLDR
	962+29	-	989+24	RT	100	90	70	-	SHLDR
	992+06	-	1009+00	RT	62	56	44	-	SHLDR
	992+94	-	1009+00	LT	50	45	35	-	SHLDR
PROJECT ID 1706-04-61 TOTAL					2,659	2,400	1,870	0	
0020	1170+00	-	1205+41	MEDIAN	104	94	73	-	SHLDR
	1173+56	-	1205+62	MEDIAN	98	89	69	-	SHLDR
	1206+92	-	1239+20	MEDIAN	100	90	70	-	SHLDR
	1206+66	-	1239+41	MEDIAN	103	93	72	-	SHLDR
	1240+67	-	1256+21	MEDIAN	48	43	34	-	SHLDR
	1240+36	-	1256+21	MEDIAN	48	43	34	-	SHLDR
	1260+38	-	1276+44	RT	49	44	34	-	SHLDR
	1260+60	-	1350+86	LT	280	252	196	-	SHLDR
	1280+32	-	1286+46	RT	18	17	13	-	SHLDR
	1291+43	-	1347+51	RT	174	156	122	-	SHLDR
	1354+00	-	1374+62	RT	64	57	45	-	SHLDR
	1357+40	-	1356+27	LT	24	21	17	-	SHLDR
	1370+09	-	1375+90	LT	18	16	12	-	SHLDR
	1378+58	-	1380+14	RT	4	4	3	-	SHLDR
	1382+35	-	1387+21	RT	15	13	10	-	SHLDR
	1391+22	-	1405+50	RT	44	39	31	-	SHLDR
	1384+39	-	1407+42	LT	71	64	50	-	SHLDR
	1409+98	-	1455+15	RT	140	126	98	-	SHLDR
	1412+67	-	1457+51	LT	139	125	97	-	SHLDR
	1459+96	-	1561+69	RT	316	284	221	-	SHLDR
	1462+41	-	1562+34	LT	310	279	217	-	SHLDR
	1566+51	-	1579+37	RT	39	35	28	-	SHLDR
	1568+21	-	1578+98	LT	32	29	23	-	SHLDR
	1583+12	-	1614+60	RT	97	88	68	-	SHLDR
	1584+64	-	1613+94	LT	90	81	63	-	SHLDR
	1624+14	-	1640+95	RT	49	44	34	-	SHLDR
	1626+68	-	1644+30	LT	54	48	38	-	SHLDR
	1647+57	-	1716+35	RT	213	192	149	-	SHLDR
	1650+58	-	1716+95	LT	205	185	144	-	SHLDR
	1720+90	-	1730+21	RT	29	26	20	-	SHLDR
	1722+91	-	1730+21	LT	22	20	15	-	SHLDR
PROJECT ID 1706-04-62 TOTAL					2,998	2,700	2,100	0	
TOTAL 0020					5,658	5,100	3,970	0	
PROJECT TOTAL					68,036	61,150	47,570	166	

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RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	465.0425	465.0475	REMARKS
					ASPHALTIC SHOULDER RUMBLE STRIPS 2-LANE RURAL	ASPHALT CENTERLINE RUMBLE STRIPS 2-LANE RURAL	
					LF	LF	
0010	530+00	-	1009+00		-	39,147	1706-04-61
	1170+00	-	1730+21		-	64,441	1706-04-62
TOTAL 0010					0	103,588	
0020	530+00	-	673+58	LT	12,379	-	
	673+58	-	679+53	LT	595	-	TYPE 2
	680+16	-	1009+00	LT	28,205	-	
	530+00	-	689+06	RT	11,334	-	
	689+06	-	696+35	RT	729	-	TYPE 2
	696+35	-	743+00	RT	3,474	-	
	743+00	-	747+81	RT	481	-	TYPE 2
	748+50	-	764+67	RT	1,617	-	
	770+97	-	792+21	RT	2,124	-	TYPE 2
	792+21	-	1009+00	RT	18,655	-	
PROJECT ID 1706-04-61 TOTAL					79,593	0	
0020	1170+00		1205+16	LT	3,516	-	
	1170+00		1235+81	RT	6,581	-	
	1173+63		1203+85	WB LT	3,022	-	
	1173+63		1203+85	WB LT	3,022	-	
	1207+16		1239+15	WB RT	3,199	-	
	1207+17		1238+95	LT	3,178	-	
	1210+00		1237+08	WB LT	2,708	-	
	1240+61		1256+37	WB RT	1,576	-	
	1240+92		1256+37	LT	1,545	-	
	1242+22		1275+82	RT	3,360	-	
	1245+25		1350+06	WB LT	10,481	-	
	1281+16		1285+87	RT	471	-	
	1292+25		1346+90	RT	5,465	-	
	1354+86		1376+11	RT	2,125	-	
	1358+07		1364+26	LT	619	-	
	1370+77		1376+11	LT	534	-	
	1384+09		1386+57	RT	248	-	
	1384+93		1406+60	LT	2,167	-	
	1392+06		1404+76	RT	1,270	-	
	1410+77		1454+55	RT	4,378	-	
	1413+21		1456+70	LT	4,349	-	
	1460+77		1561+10	RT	10,033	-	
	1463+01		1619+95	LT	15,694	-	
	1567+34		1578+78	RT	1,144	-	
	1584+02		1613+88	RT	2,986	-	
	1623+51		1624+72	LT	121	-	
	1623+51		1634+40	RT	1,089	-	
	1626+13		1643+47	LT	1,734	-	
	1635+10		1637+14	RT	204	-	
	1648+38		1715+58	RT	6,720	-	
	1651+18		1730+21	LT	7,903	-	
	1721+80		1730+21	RT	841	-	
PROJECT ID 1706-04-62 TOTAL					112,283	0	
TOTAL 0020					191,876	0	

TRAIL CROSSING

CATEGORY	STATION	602.0405	602.0505	REMARKS
		CONCRETE SIDEWALK 4-INCH SF	CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	
0010	646+29	60	20	1706-04-61
TOTAL 0010		60	20	

Project ID 1706-04-61 PWL

Location	Station		Mixture Use	Underlying Surface	Bid Item	Tons	Thickness	Quality Management Program to be used for:	
	From	To						Mixture Acceptance	Density Acceptance
2 x 12 foot driving lanes	530+00	603+70	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	3366	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
2 x 12 foot driving lanes	530+00	603+70	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	2618	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
5 foot shoulders + intersections	530+00	603+70	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	388	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
5 foot shoulders + intersections	530+00	603+70	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	301	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
2 x 12 foot driving lanes	605+10	610+98	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	379	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
2 x 12 foot driving lanes	605+10	610+98	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	295	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
2 x 12 foot driving lanes	616+06	629+84	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	966	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
2 x 12 foot driving lanes	616+06	629+84	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	751	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
5 foot shoulders + intersections	616+06	629+84	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	43	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
5 foot shoulders + intersections	616+06	629+84	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	34	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
2 x 12 foot driving lanes	631+60	658+89	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	1368	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
2 x 12 foot driving lanes	631+60	658+89	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	1064	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
5 foot shoulders + intersections	631+60	658+89	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	145	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
5 foot shoulders + intersections	631+60	658+89	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	113	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
2 x 12 foot driving lanes	660+81	716+80	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	2751	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
2 x 12 foot driving lanes	660+81	716+80	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	2139	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
5 foot shoulders + intersections	660+81	716+80	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	288	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
5 foot shoulders + intersections	660+81	716+80	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	225	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive

Project ID 1706-04-62 PWL

Location	Station		Mixture Use	Underlying Surface	Bid Item	Tons	Thickness	Quality Management Program to be used for:	
	From	To						Mixture Acceptance	Density Acceptance
2 x 12 foot driving lanes	1170+00	1376+50	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	14474	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
2 x 12 foot driving lanes	1170+00	1376+50	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	11257	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
5 foot shoulders + intersections	1170+00	1376+50	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	1015	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
5 foot shoulders + intersections	1170+00	1376+50	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	790	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
2 x 12 foot driving lanes	1378+09	1620+56	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	12019	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
2 x 12 foot driving lanes	1378+09	1620+56	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	9348	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
5 foot shoulders + intersections	1378+09	1620+56	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	1167	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
5 foot shoulders + intersections	1378+09	1620+56	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	908	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
2 x 12 foot driving lanes	1622+87	1730+21	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	5415	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
2 x 12 foot driving lanes	1622+87	1730+21	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	4212	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Incentive Density PWL HMA Pavement 460.2005
5 foot shoulders + intersections	1622+87	1730+21	Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	515	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
5 foot shoulders + intersections	1622+87	1730+21	Upper Layer	3 MT 58-28 S	4 MT 58-28 S	401	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
Crossover	1177+66		Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	24	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
Crossover	1177+66		Upper Layer	3 MT 58-28 S	4 MT 58-28 S	19	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
Crossover	1183+05		Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	24	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
Crossover	1183+05		Upper Layer	3 MT 58-28 S	4 MT 58-28 S	19	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
Crossover	1206+05		Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	58	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
Crossover	1206+05		Upper Layer	3 MT 58-28 S	4 MT 58-28 S	46	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
Crossover	1217+55		Lower Layer	Milled Existing Asphaltic Surface	3 MT 58-28 S	24	2.25"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive
Crossover	1217+55		Upper Layer	3 MT 58-28 S	4 MT 58-28 S	19	1.75"	PWL Incentive Air Voids HMA Pavement 460.2010	Acceptance testing by department; Not eligible for incentive

BEAM GUARD

CATEGORY	STATION	TO STATION	LOCATION	204.0165	614.0010	614.0305	614.0370	614.0400	614.0920	614.0925	614.0950	REMARKS
				REMOVING GUARDRAIL LF	BARRIER SYSTEM GRADING SHAPING FINISHING EACH	STEEL PLATE BEAM GUARD CLASS A LF	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL EACH	ADJUSTING STEEL PLATE BEAM GUARD LF	SALVAGED RAIL LF	SALVAGED GUARDRAIL END TREATMENTS EACH	REPLACING GUARDRAIL POSTS AND BLOCKS EACH	
0010	542+23		LT	50	1	-	1	25	12.5	1	2	
	547+01		LT	50	1	-	1	25	12.5	1	2	
	601+20		RT	50	1	-	1	25	12.5	1	2	
	602+59		LT	50	1	-	1	25	12.5	1	2	
	618+32		LT	50	1	-	1	25	12.5	1	2	
	618+33		RT	50	1	-	1	25	12.5	1	2	
	627+10		RT	50	1	-	1	25	12.5	1	2	
	628+85		LT	50	1	-	1	25	12.5	1	2	
	632+71		RT	50	1	-	1	25	12.5	1	2	
	634+12		LT	50	1	-	1	25	12.5	1	2	
	658+20		LT	50	1	-	1	25	12.5	1	2	
	661+34		RT	50	1	-	1	25	12.5	1	2	
	662+42		LT	50	1	-	1	25	12.5	1	2	
	754+36		RT	50	1	-	1	25	12.5	1	2	
	756+89		LT	50	1	-	1	25	12.5	1	2	
	759+91		RT	50	1	-	1	25	12.5	1	2	
	764+88		LT	50	1	-	1	25	12.5	1	2	
	789+82		RT	50	1	-	1	25	12.5	1	2	
	789+82	- 791+04	RT	-	1	75	1	25	12.5	1	2	
	792+33		RT	50	1	-	1	25	12.5	1	2	
			UNDISTRIBUTED	100	-	75	-	-	-	-	-	
			PROJECT ID 1706-04-61 TOTAL	1,050	20	150	20	500	250	20	40	
0010	1170+00	1730+21	UNDISTRIBUTED	125	-	-	-	500	-	-	40	
			PROJECT ID 1706-04-62 TOTAL	125	0	0	0	500	0	0	40	
			TOTAL 0010	1,175	20	150	20	1,000	250	20	80	

*BORROW WILL USE 1-1/4" BASE AGGREGATE DENSE.
FOR INFORMATIONAL PURPOSES ONLY.
ITEM IS PAID FOR PER EACH BARRIER SYSTEM.

BEAM GUARD END TERMINAL MATERIALS

PROJECT	CATEGORY	STATION	TO STATION	LOCATION	BASE	BASE	BORROW	TOPSOIL	SEEDING	MULCHING	FERTILIZER	EROSION	614.0010
					AGGREGATE DENSE 3/4- INCH TON	AGGREGATE DENSE 1 1/4- INCH TON							AGGREGATE DENSE 1 1/4- INCH EACH
1706-04-61	0010	530+00	- 1009+00	LT	46.63	34.28	22.82	268.75	4.84	268.75	0.17	17.78	10
		530+00	- 1009+00	RT	67.33	73.11	111.80	424.28	7.64	424.28	0.27	50.67	9
				TOTAL 0010	114	108	135	694	13	694	1	69	19

EROSION CONTROL

CATEGORY	STATION	TO	STATION	627.0200 MULCHING SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2002 EROSION MAT CLASS I TYPE A SY	630.0130 SEEDING MIXTURE NO. 30 LB	630.0171 SEEDING MIXTURE NO. 70A LB	630.0200 SEEDING TEMPORARY LB	REMARKS
0010	530+00	-	1009+00	500	250	250	500	4	2	9	1706-04-61
0010	1170+00	-	1730+21	500	250	250	200	2	0	3	1706-04-62
TOTAL 0010				1,000	500	500	700	6	2	12	

EROSION CONTROL MOBILIZATION

CATEGORY	STATION	TO	STATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	REMARKS
0010	530+00	-	1009+00	1	1	1706-04-61
	1170+00	-	1730+21	1	1	1704-04-62
TOTAL 0010				2	2	

WATER

CATEGORY	STATION	TO	STATION	624.0100 WATER MGAL	630.0500 SEED WATER MGAL	REMARKS
0010	530+00	-	1009+00	0.100	0.100	1706-04-61
0010	1170+00	-	1730+21	0.100	0.100	1706-04-62
TOTAL 0010				0.200	0.200	

TRAFFIC CONTROL

CATEGORY	STATION	TO	STATION	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	REMARKS
0010	530+00	-	1009+00	42	210	14	1706-04-61
0010	1170+00	-	1730+21	42	200	14	1706-04-62
TOTAL 0010				84	410	28	

PAVEMENT MARKING

CAT	STATION	TO	STATION	646.1040 MARKING LINE GROOVED WET REF EPOXY 4-INCH YELLOW LF	646.1555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4- INCH WHITE LF	646.3555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8- INCH WHITE LF	646.4520 MARKING LINE SAME DAY EPOXY 4-INCH YELLOW LF	646.4620 MARKING LINE SAME DAY EPOXY 8-INCH WHITE LF	646.5020 MARKING ARROW EPOXY WHITE EACH	646.5120 MARKING WORD EPOXY WHITE EACH	646.5320 MARKING RAILROAD CROSSINGS EPOXY WHITE EACH	646.7120 MARKING DIAGONAL EPOXY 12-INCH LF	REMARKS
0010	530+00	-	1009+00	-	96,378	-	81,618	2,381	20	10	-	-	
PROJECT 1706-04-61 TOTAL:					96,378		81,618	2,381	20	10			
0010	1170+00	1254+34	1254+34	19,957	16,463	4,109	-	-	6	2	-	557	4 lane
	1170+00	-	1254+34	-	90,553	-	56,753	3,359	34	13	2	-	2 lane
PROJECT 1706-04-62 TOTAL:				19,957	107,016	4,109	56,753	3,359	40	15	2	557	
TOTAL 0010				223,351	4,109	500	138,371	5,740	60	25	2	557	

NO PASSING ZONES

CATEGORY	STATION	TO	STATION	648.0100 LOCATING NO- PASSING ZONES MI	REMARKS
0010	530+00	-	1009+00	9.10	
PROJECT 1706-04-61 TOTAL:				9.10	
0010	1170+00	-	1730+00	10.70	
PROJECT 1706-04-62 TOTAL:				10.70	
TOTAL 0010				19.80	

TEMPORARY PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	649.0120 TEMPORARY MARKING LINE EPOXY		REMARKS
				YELLOW LF	WHITE LF	
0010	530+00	-	1009+00	81,618	355	
PROJECT 1706-04-61 TOTAL:				81,618	355	
0010	1170+00	-	1254+34	56,753	4,435	
PROJECT 1706-04-62 TOTAL:				56,753	4,435	
TOTAL 0010				143,161		

SAWING

CATEGORY	STATION	TO	STATION	690.0150 SAWING ASPHALT LF	REMARKS
0010	530+00	-	1009+00	2,072	
PROJECT 1706-04-61 TOTAL:				2,072	
0010	1170+00	-	1730+00	1,508	
PROJECT 1706-04-62 TOTAL:				1,508	
TOTAL 0010				3,580	

STAKING

CATEGORY	STATION	TO	STATION	650.8000	650.9910.01	650.9910.02	REMARKS
				CONSTRUCTION STAKING RESURFACING REFERENCE LF	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (01. 1706-04-61) LS	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (02. 1706-04-62) LS	
0010	530+00	-	1009+00	47,900	1	-	
PROJECT 1706-04-61 TOTAL:				47,900	1	-	
0010	1170+00	-	1730+00	56,000	-	1	
PROJECT 1706-04-62 TOTAL:				56,000	-	1	
TOTAL 0010				103,900	1	1	

UTILITY LINE OPENING (ULO)

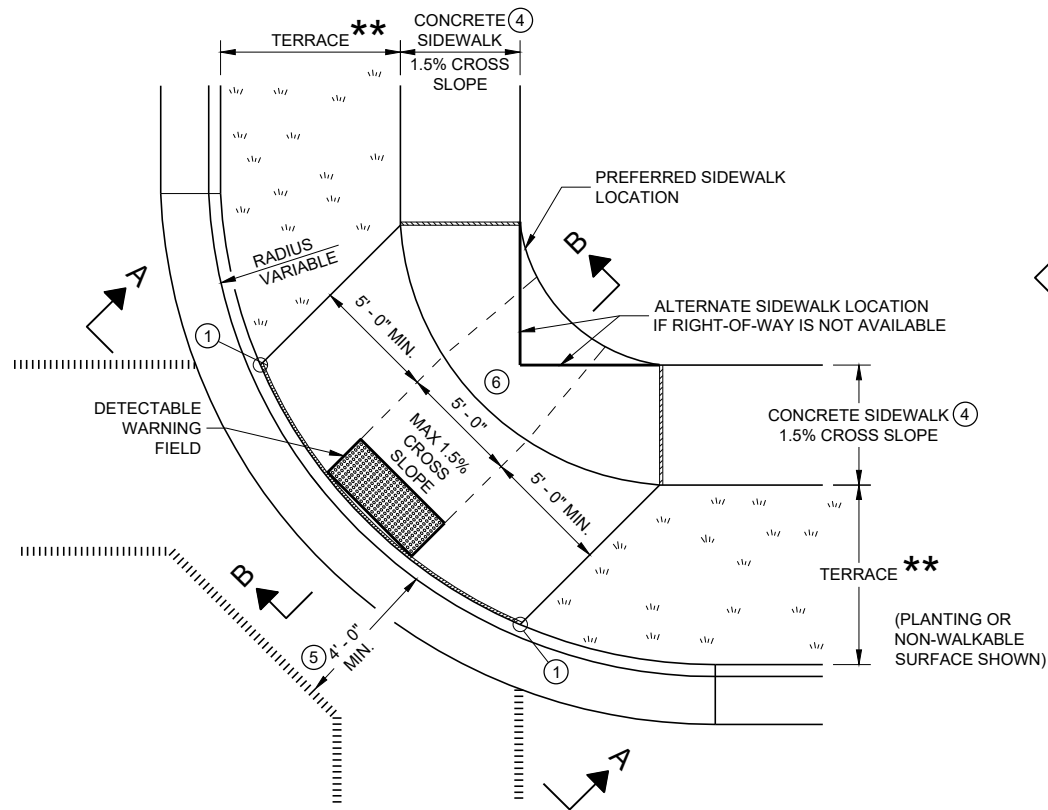
CATEGORY	STATION	TO	STATION	SPV.0060.01 UTILITY LINE OPENING EACH	REMARKS
0010	658+20	-	662+42	3	1706-04-61
TOTAL 0010				3	

LANDMARK REFERENCE MONUMENTS

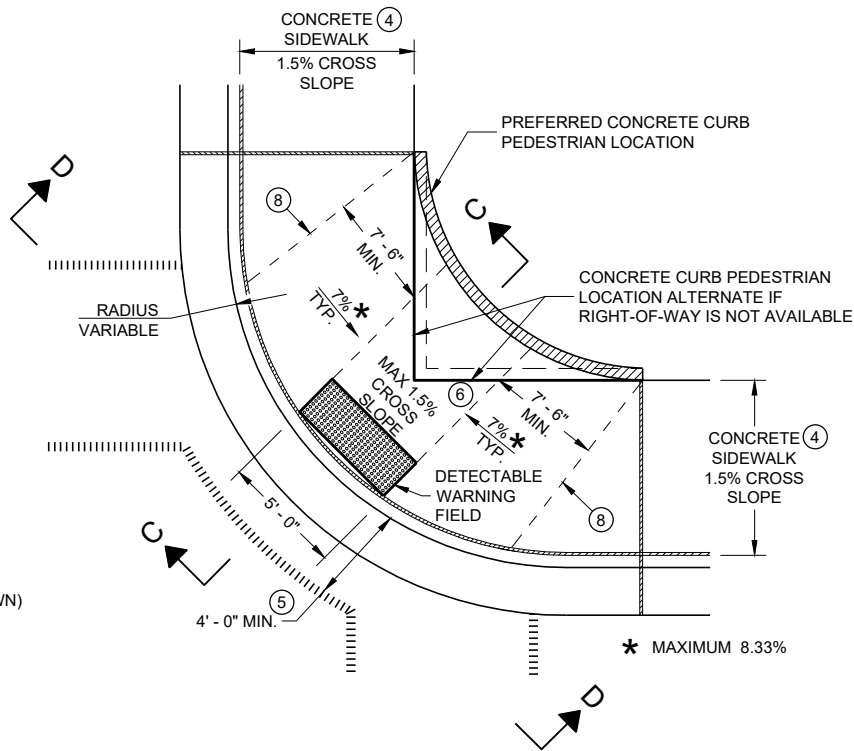
CATEGORY	STATION	SPV.0060.02 SPECIAL (02.TBD) EACH	REMARKS
0010	680+00	1	1706-04-61
TOTAL 0010		1	

Standard Detail Drawing List

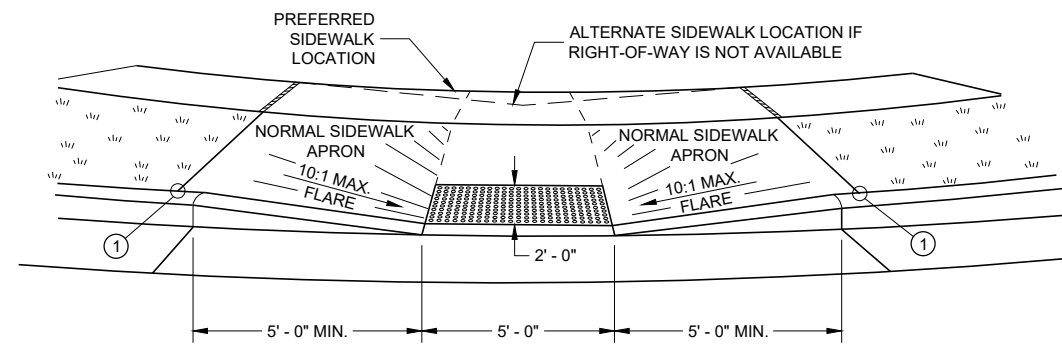
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-13B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
11A01-06	MAINTENANCE CROSSOVER FOR FREEWAYS
13A10-02A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02B	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02D	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13B01-10	PAVEMENT DETAILS FOR RAILROAD APPROACH
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B18-06B	STEEL PLATE BEAM GUARD, CLASS "A" AT MEDIAN APPROACH TO BRIDGES
14B24-09A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B29-01	SAFETY EDGE
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20B	PAVEMENT MARKING (TURN LANES)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C09-11A	SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-06B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C21-10	SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS
15C34-03	STANDARD APPLICATION FOR TEMPORARY RAISED PAVEMENT MARKER, TYPE 2
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15C35-04B	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15C35-04C	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D29-06	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS



**PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)**

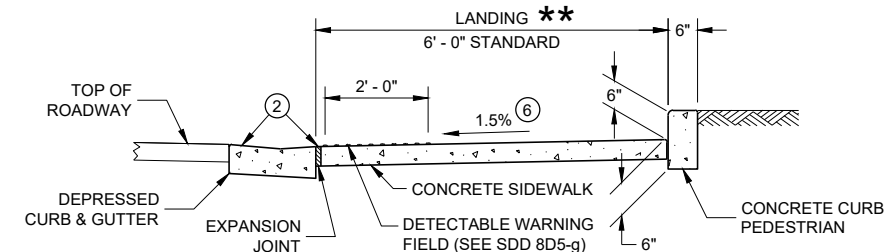


**PLAN VIEW
CURB RAMP TYPE 1 - A
(NO TERRACE)**

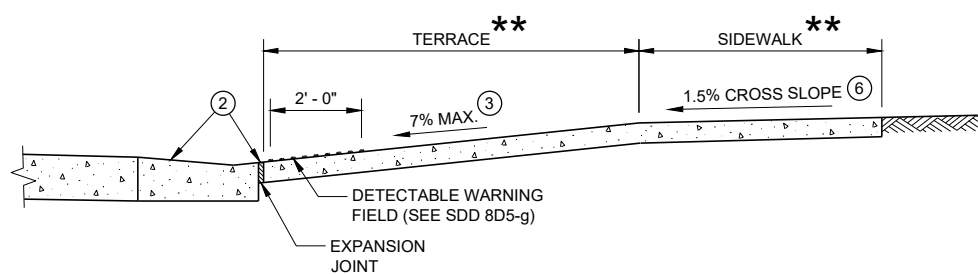


VIEW A - A FOR TYPE 1

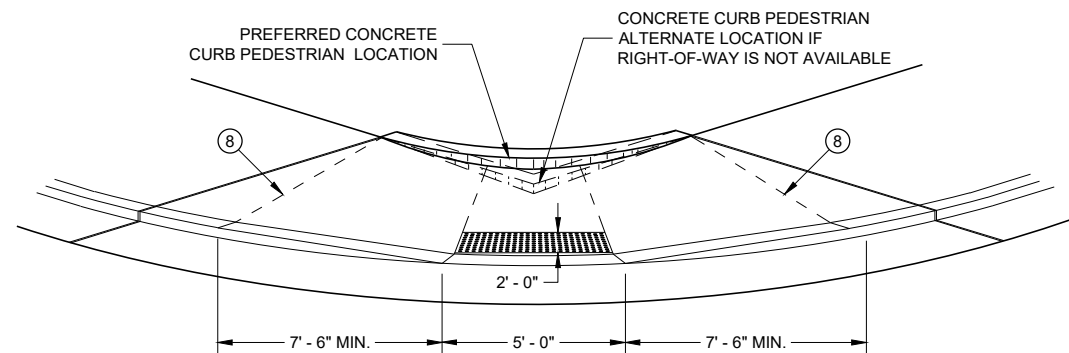
** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION C - C FOR TYPE 1 - A



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF 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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.
 TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

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

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

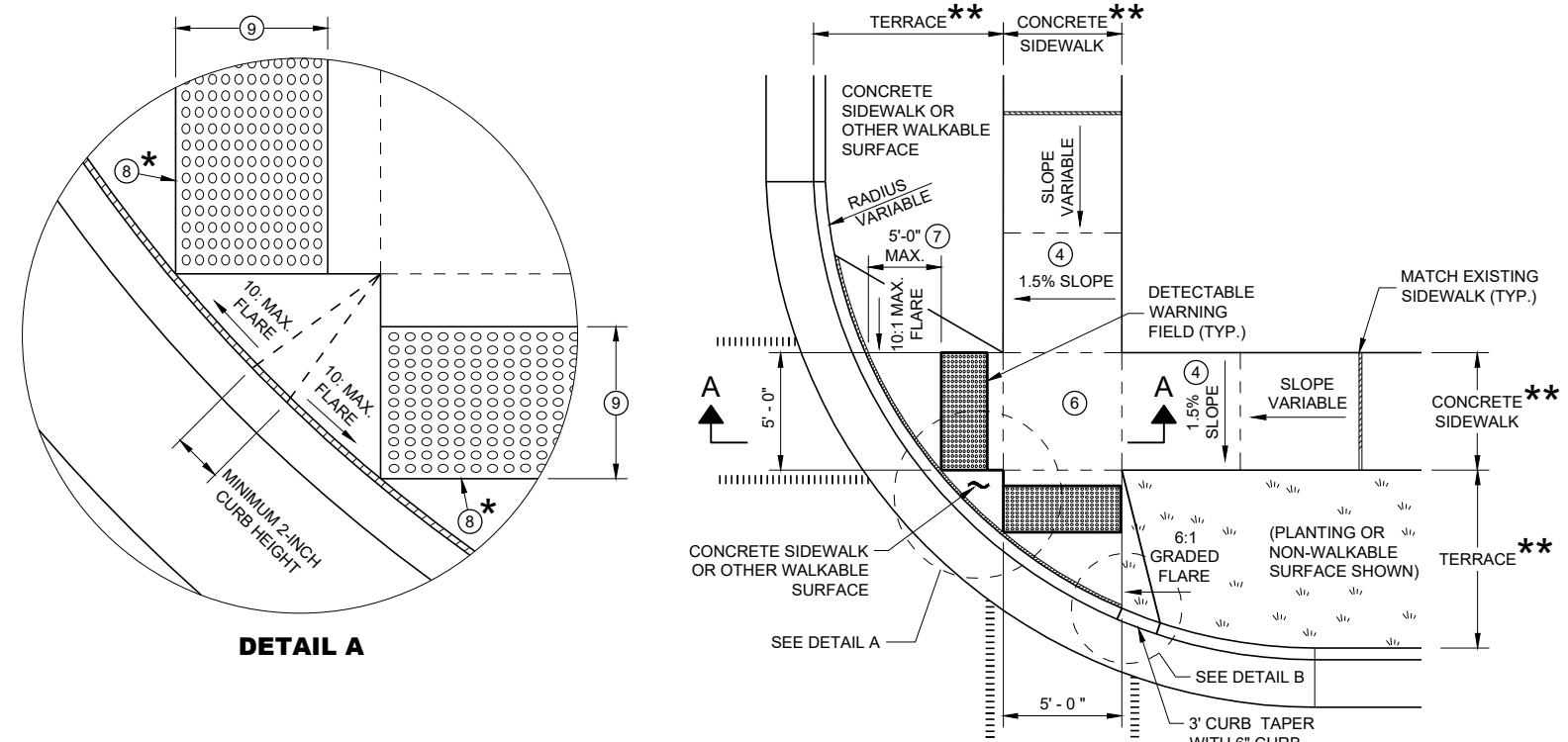
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

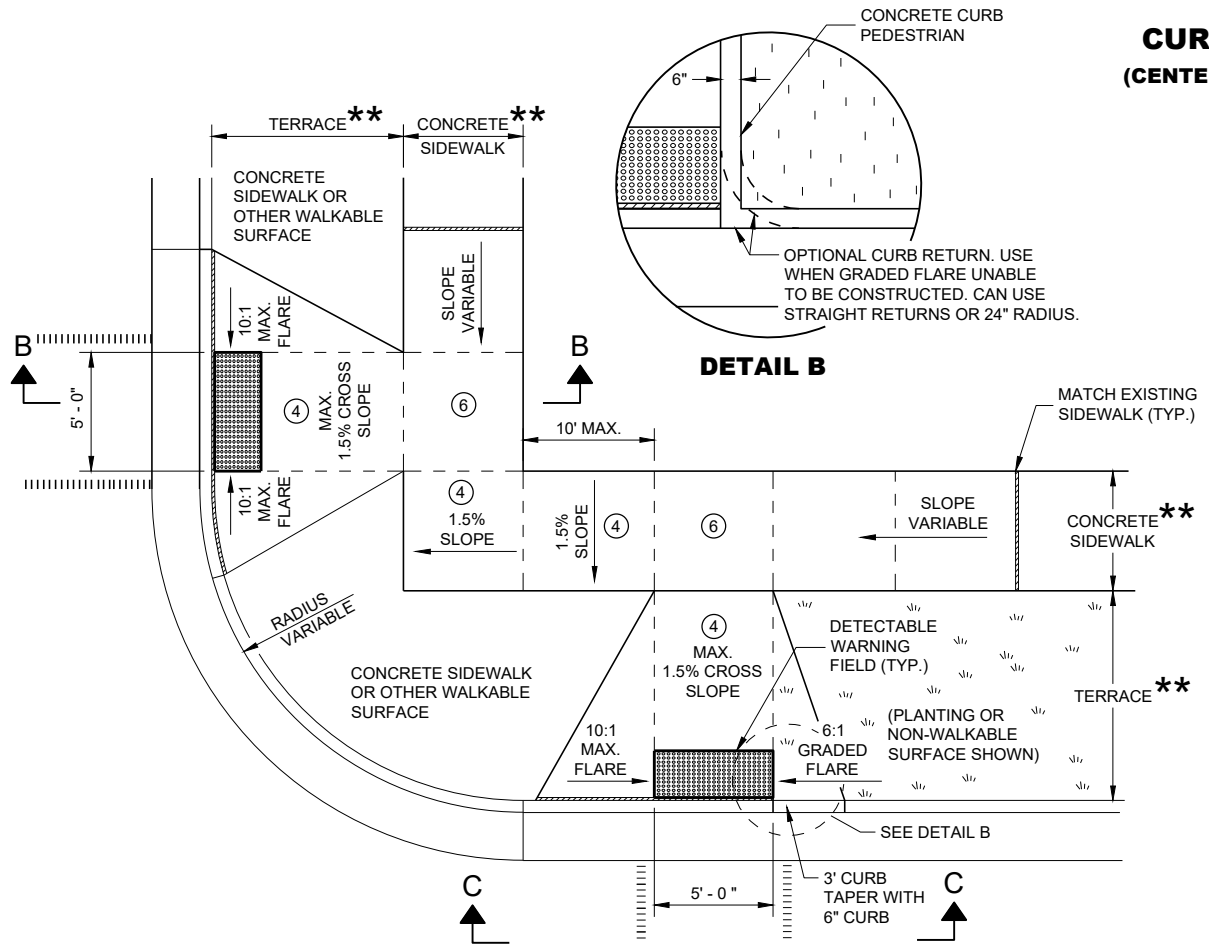
- 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

**CURB RAMPS
TYPE 1 AND 1-A**

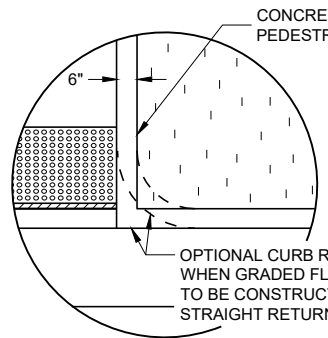
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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



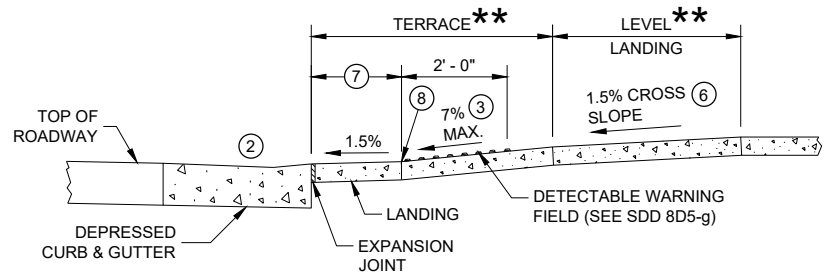
PLAN VIEW CURB RAMP TYPE 3 (OUTSIDE OF CROSSWALK AREA)



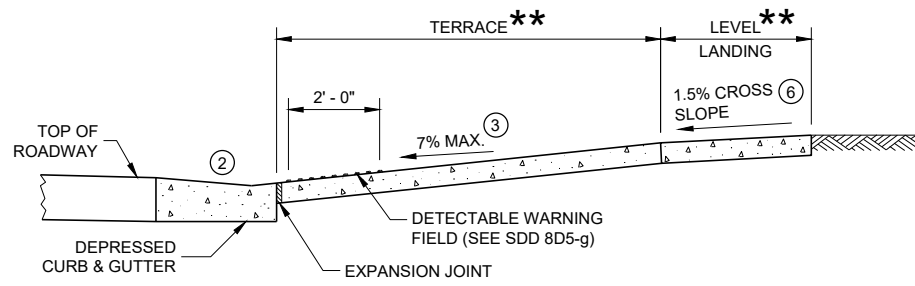
DETAIL B

GENERAL NOTES

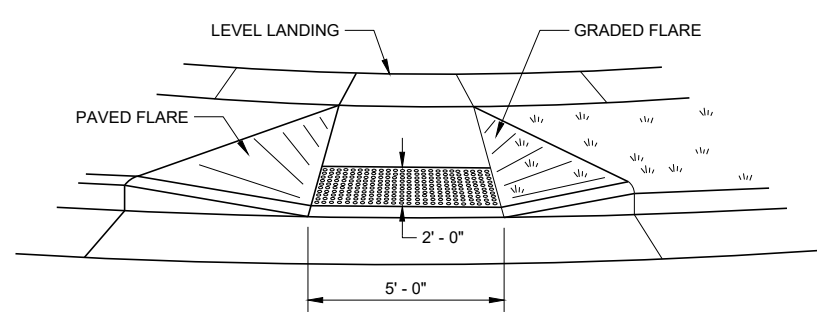
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
- 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% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



SECTION A - A FOR TYPE 2



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

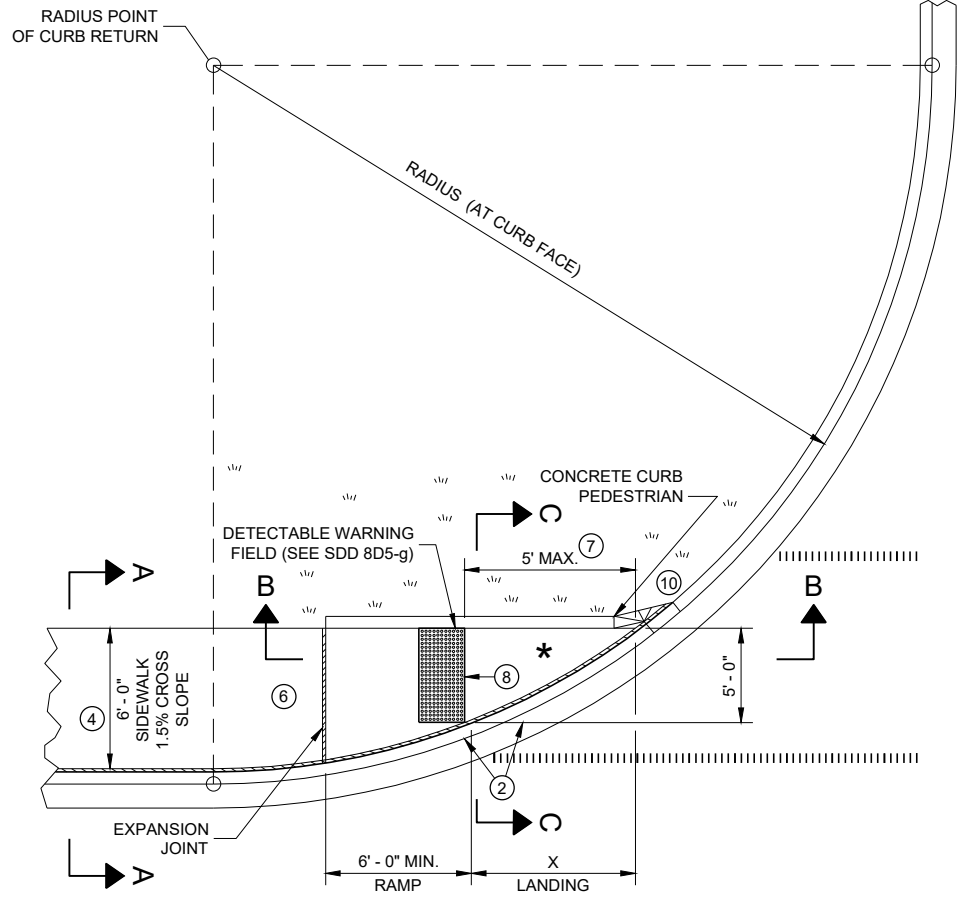
- * MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

**CURB RAMPS
TYPE 2 AND 3**

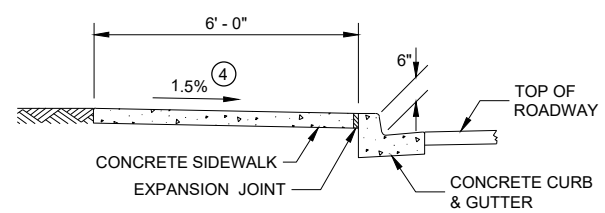
STATE OF WISCONSIN
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**PLAN VIEW
CURB RAMP TYPE 4A**

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



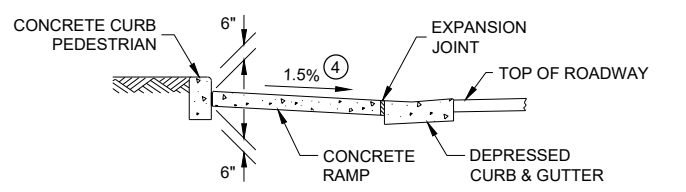
SECTION A - A FOR TYPE 4A

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF 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 FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- 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.

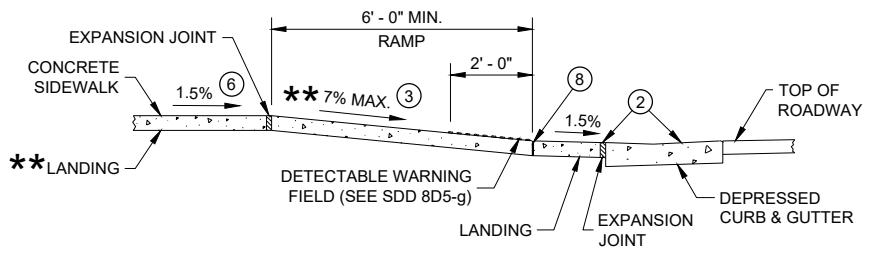
LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



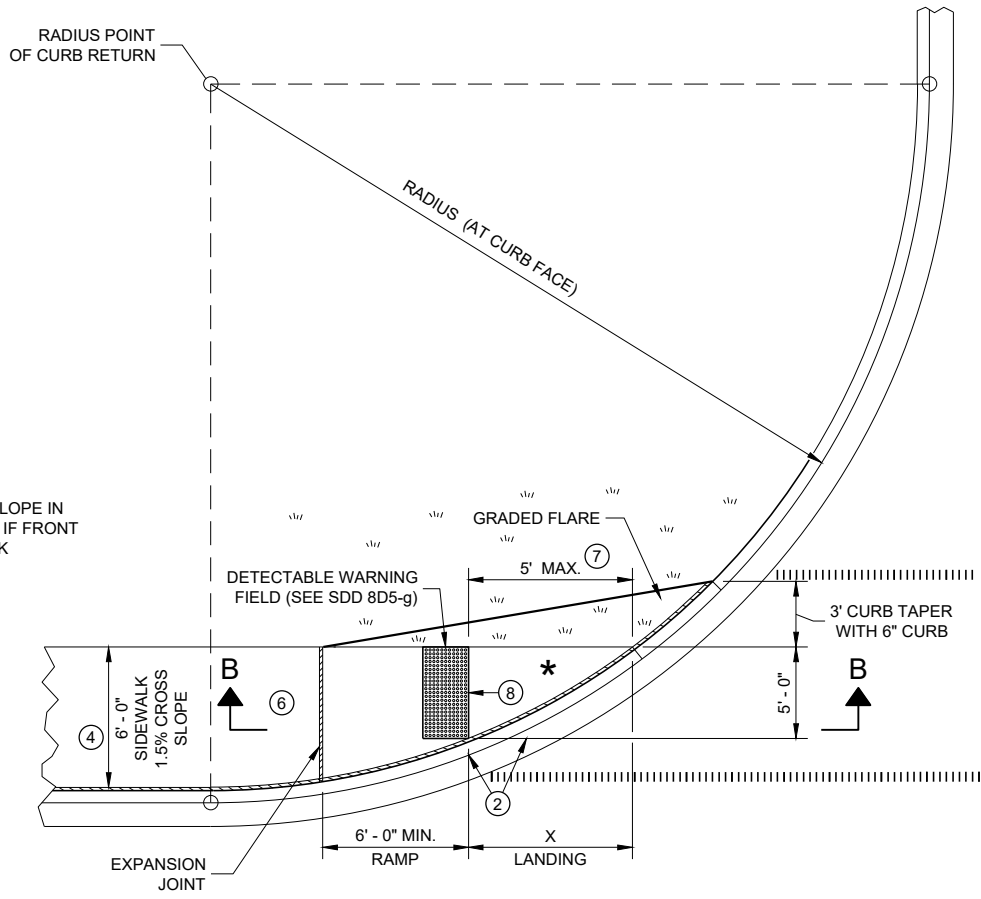
SECTION C - C FOR TYPE 4A

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

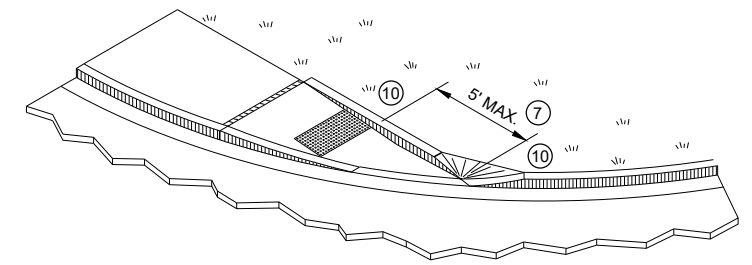


**SECTION B - B FOR
TYPE 4A AND TYPE 4A1**

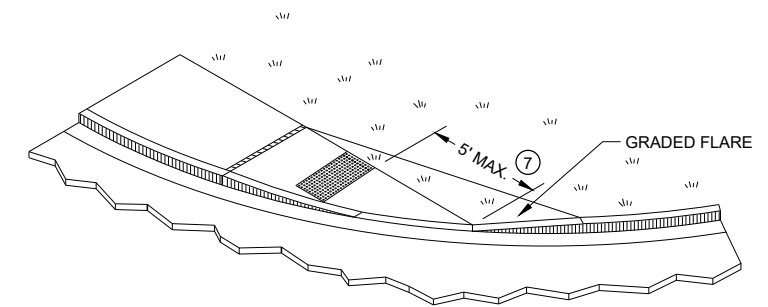
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



**PLAN VIEW
CURB RAMP TYPE 4A1**



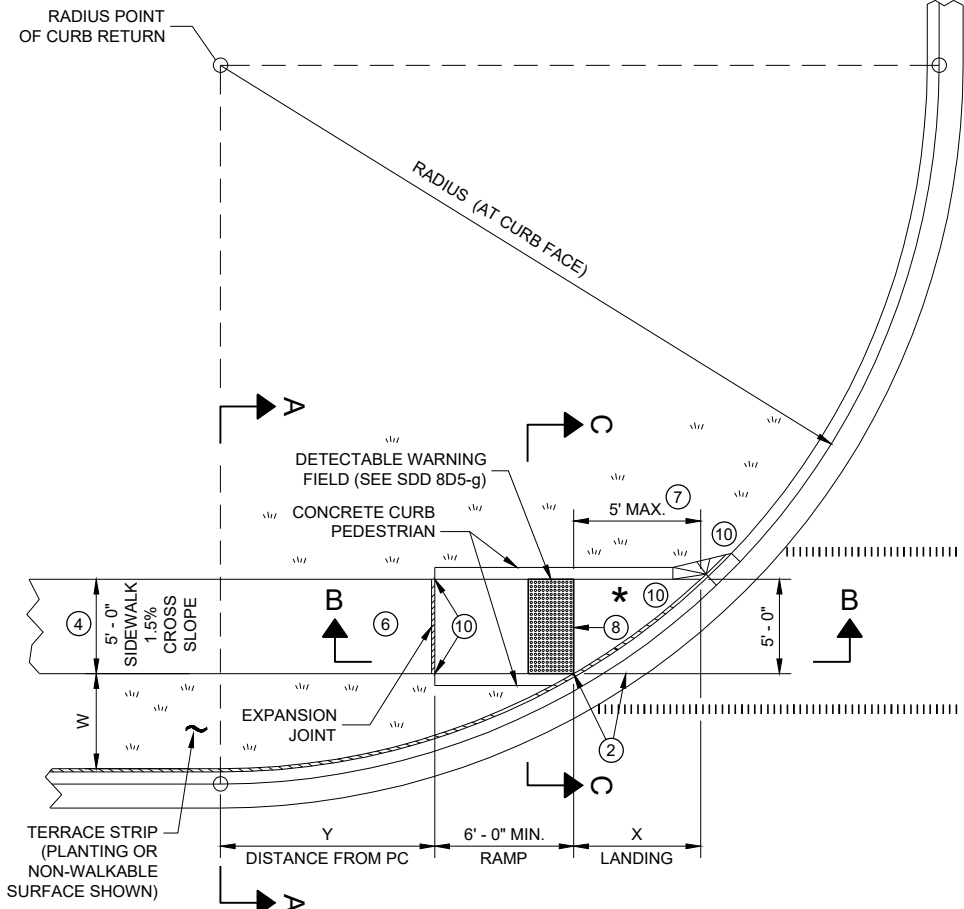
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



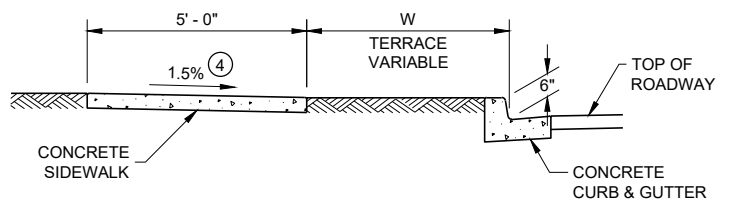
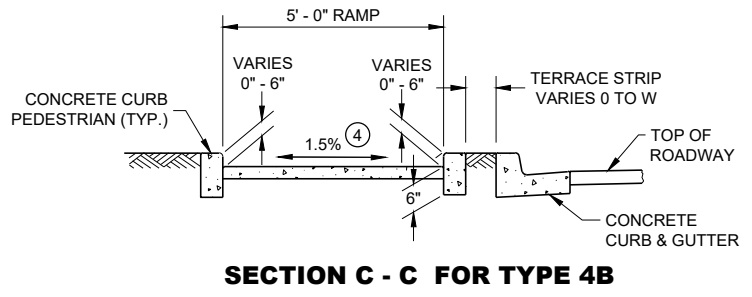
RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET	5' - 9 3/4"	3' - 6 1/2"	4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET			6' - 9 1/4"	7' - 11 1/4"	6' - 0 1/4"	9' - 8"	5' - 5"	11' - 1 3/4"	4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET									6' - 1 3/4"	15' - 8 1/2"	5' - 8"	17' - 2"	5' - 3"	18' - 5 3/4"	4' - 10 3/4"	19' - 8 1/4"
50 FEET															5' - 10 1/4"	23' - 2"

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

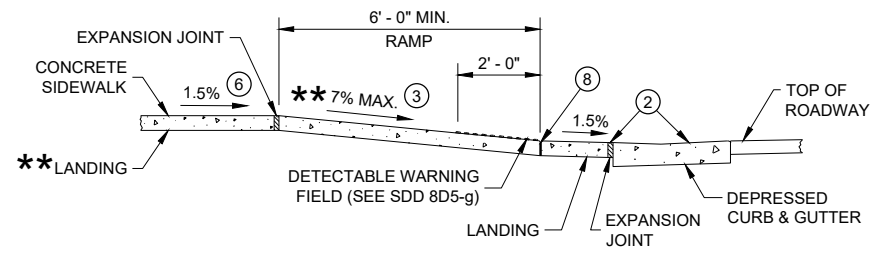
- LEGEND**
- ===== 1/2" EXPANSION JOINT SIDEWALK
 - - - - - CONTRACTION JOINT SIDEWALK
 - ||||||| PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

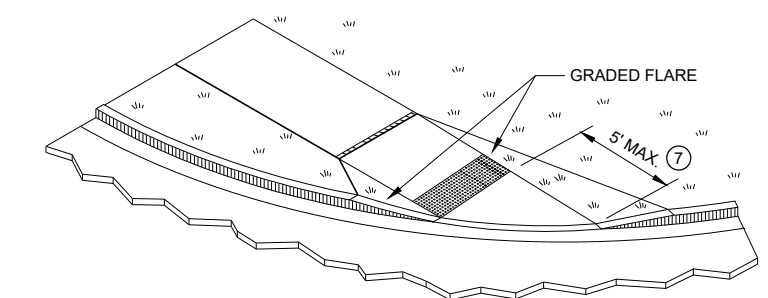
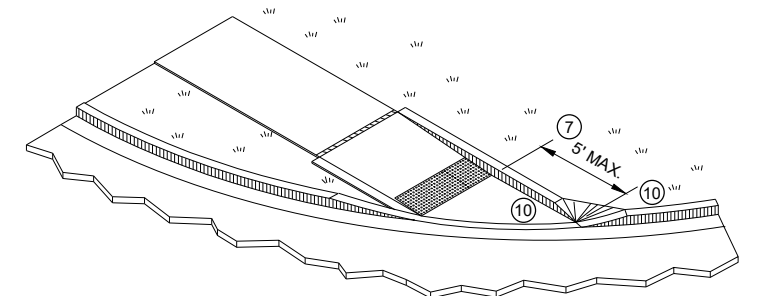
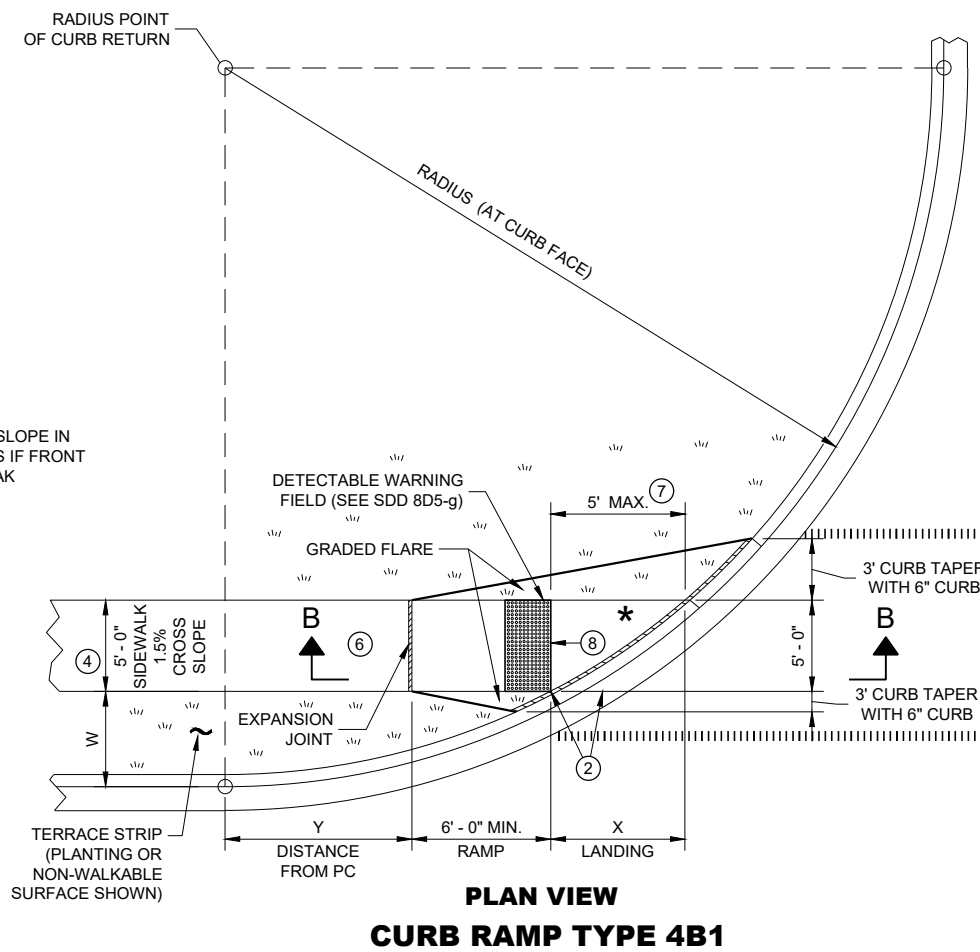
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/2 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- 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.



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

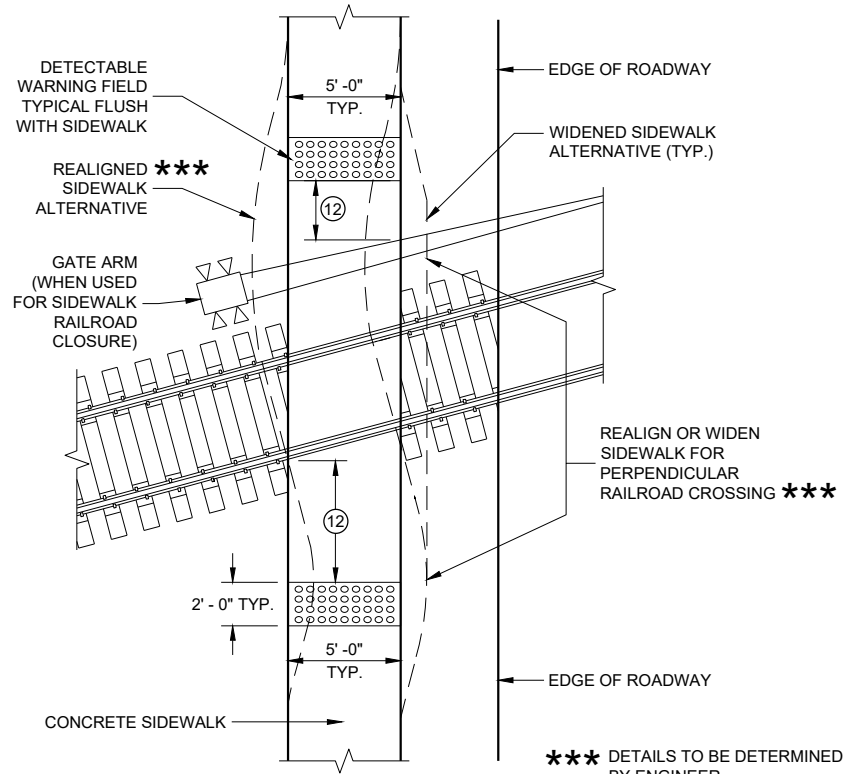


** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



**CURB RAMPS
TYPE 4B AND 4B1**

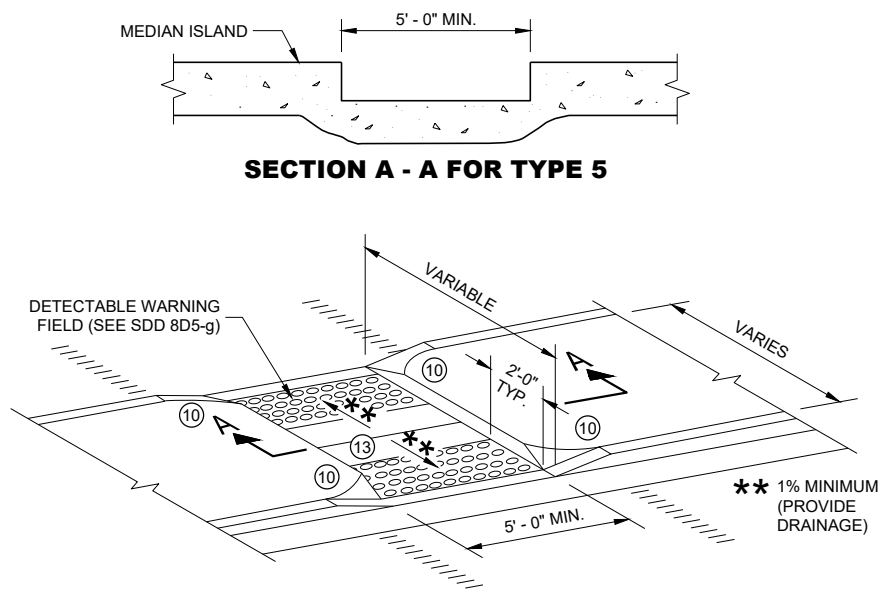
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 8

DETECTABLE WARNINGS AT RAILROAD CROSSING

*** DETAILS TO BE DETERMINED BY ENGINEER



SECTION A - A FOR TYPE 5

CURB RAMP TYPE 5

**MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING**

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF 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.

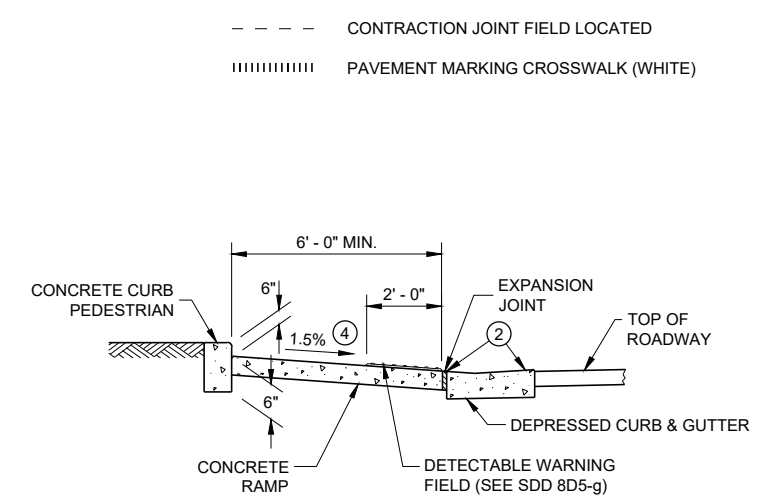
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

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

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- 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. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

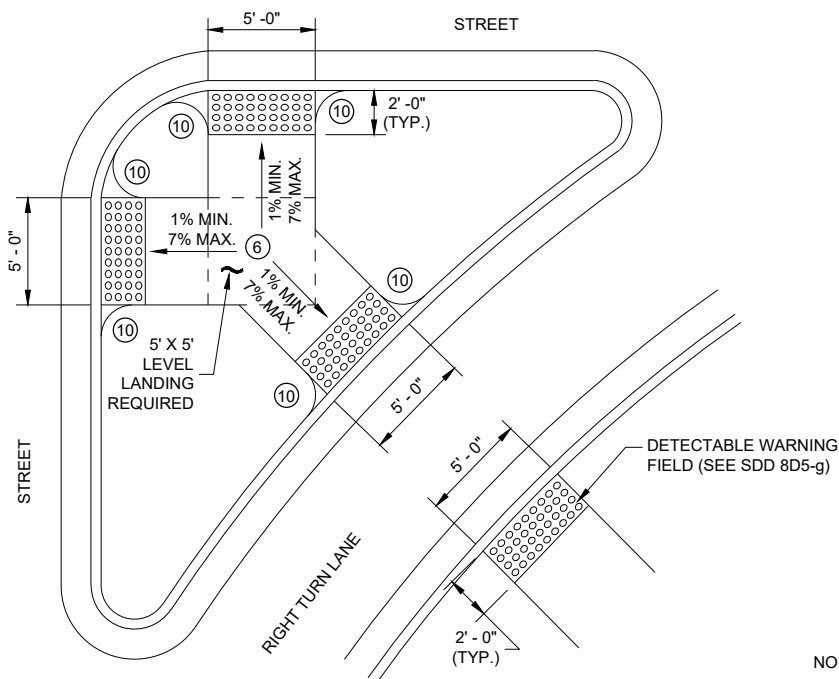
LEGEND

- ===== 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)



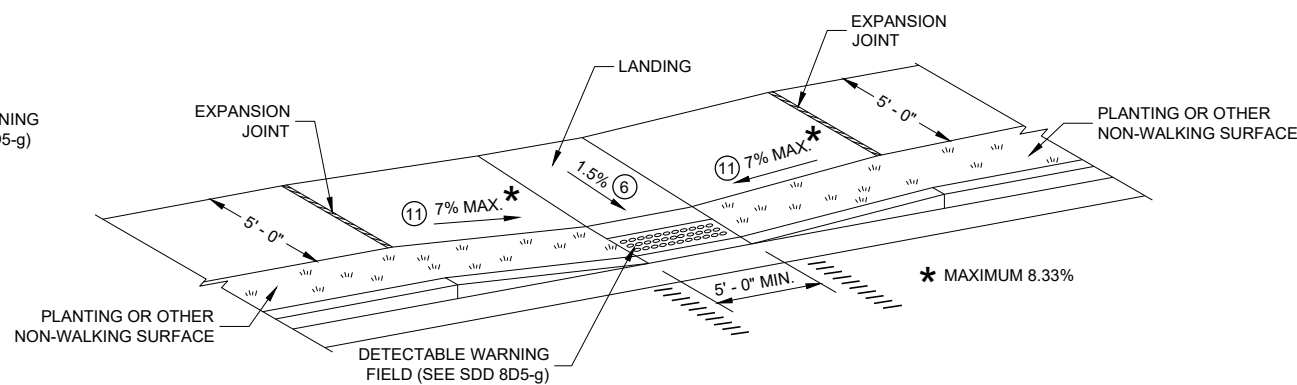
**CURB RAMP TYPE 7A
MID BLOCK CROSSING**

SECTION B - B FOR TYPE 7A



**CURB RAMP TYPE 6
DETECTABLE WARNING AT ISLANDS**

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



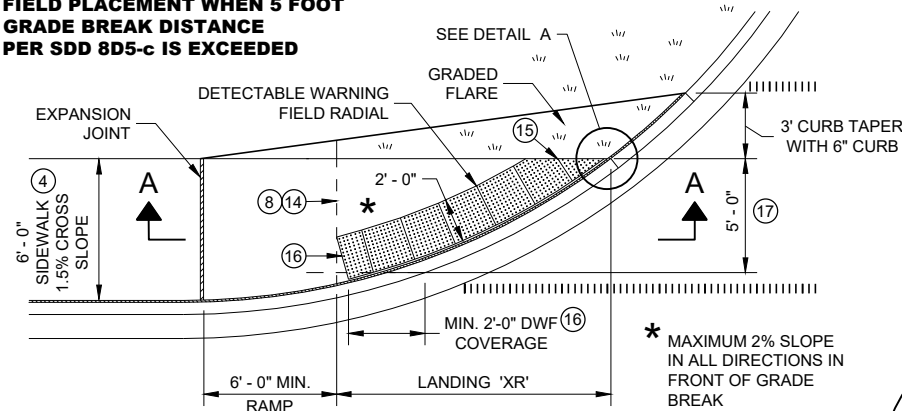
**CURB RAMP TYPE 7B
MID BLOCK CROSSING**

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

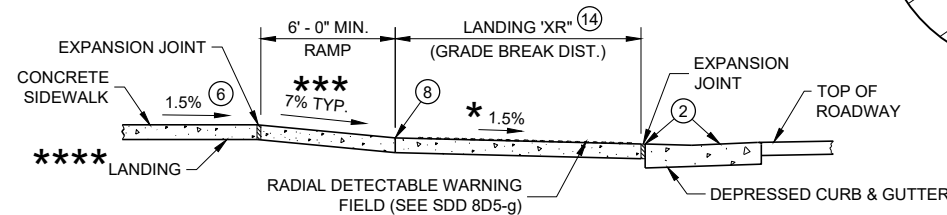
**CURB RAMPS
TYPE 5, 6, 7A, 7B & 8**

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)

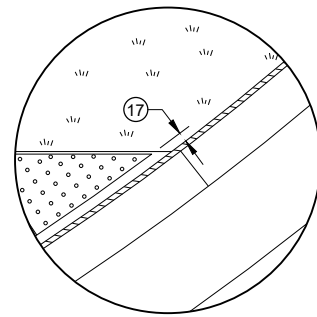


SECTION A - A FOR TYPE 4A1

**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - - - - - CONTRACTION JOINT SIDEWALK
 - ||||| PAVEMENT MARKING CROSSWALK (WHITE)

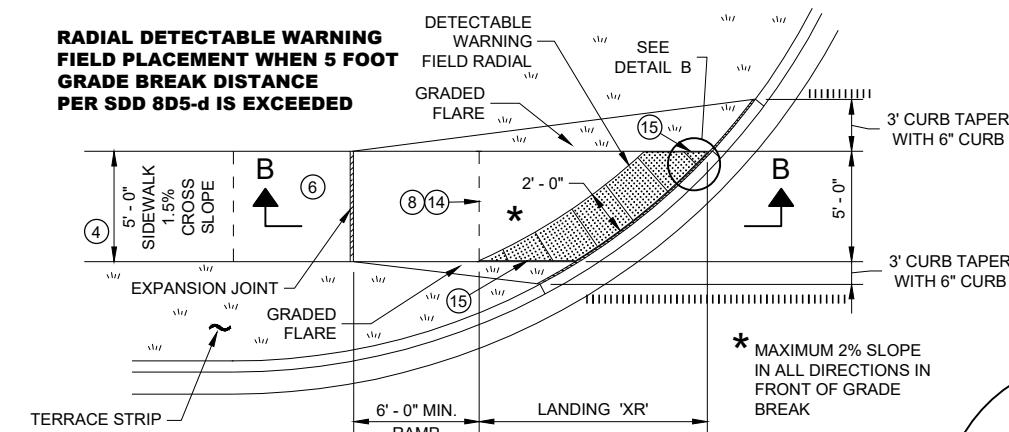


DETAIL A

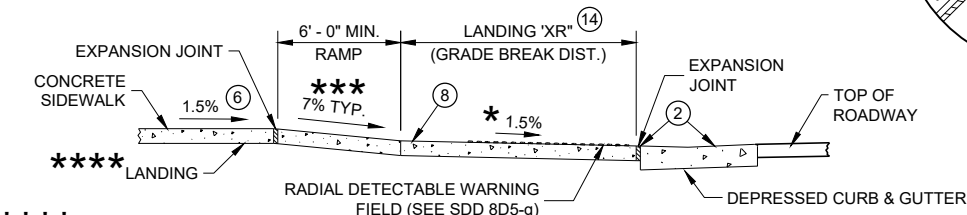
GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF 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 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 FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
 - 3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
 - 4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - 6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
 - 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 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
 - 16) 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 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

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



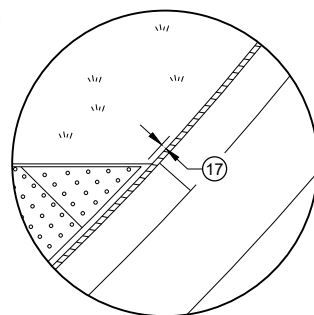
PLAN VIEW CURB RAMP TYPE 4B1 (GRADE BREAK DISTANCE GREATER THAN 5 FEET)



SECTION B - B FOR TYPE 4B1

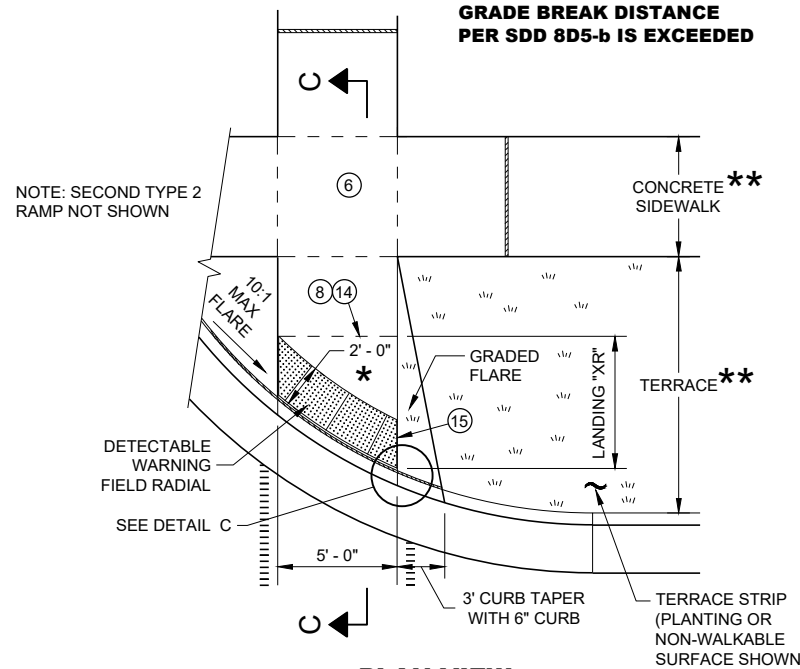
**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%



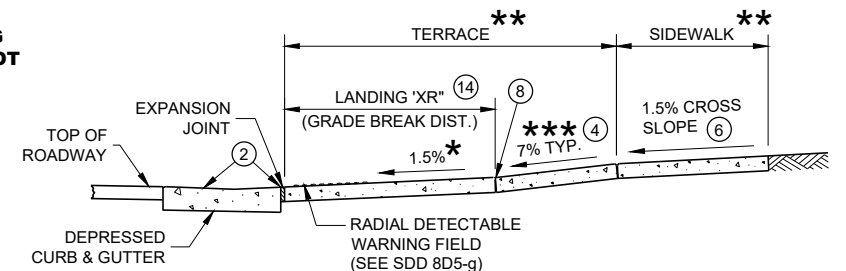
DETAIL B

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



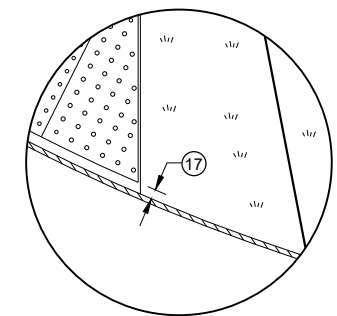
PLAN VIEW CURB RAMP TYPE 2 (GRADE BREAK DISTANCE GREATER THAN 5 FEET) (ON LINE WITH SIDEWALK)

NOTE: SECOND TYPE 2 RAMP NOT SHOWN



SECTION C - C FOR TYPE 2

- * MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS
- *** MAXIMUM 8.33%



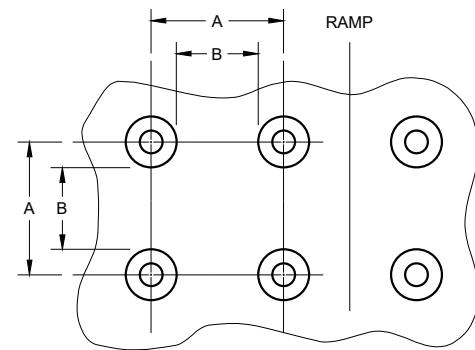
DETAIL C

CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

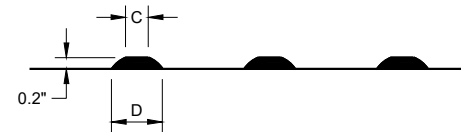
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

	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.

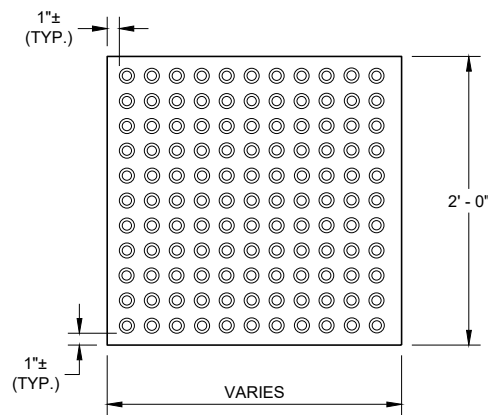


PLAN VIEW

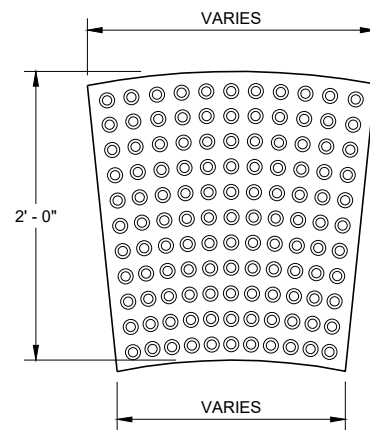


ELEVATION VIEW

**TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL**

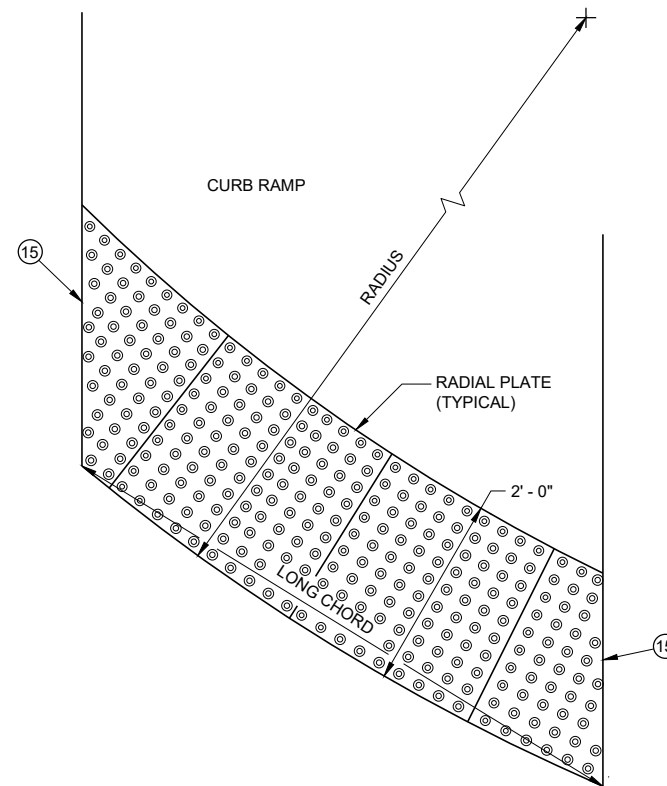


**RECTANGULAR
PLATES**

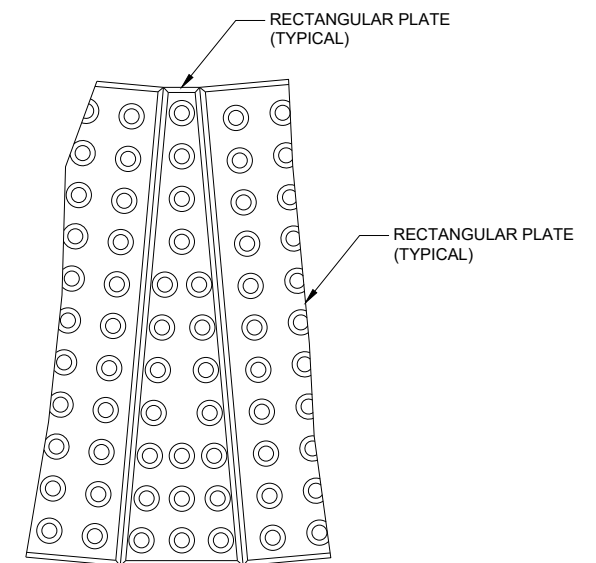


**RADIAL
PLATES**

**PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)**



**PLAN VIEW
RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES**



**PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL**

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 FIELD 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.

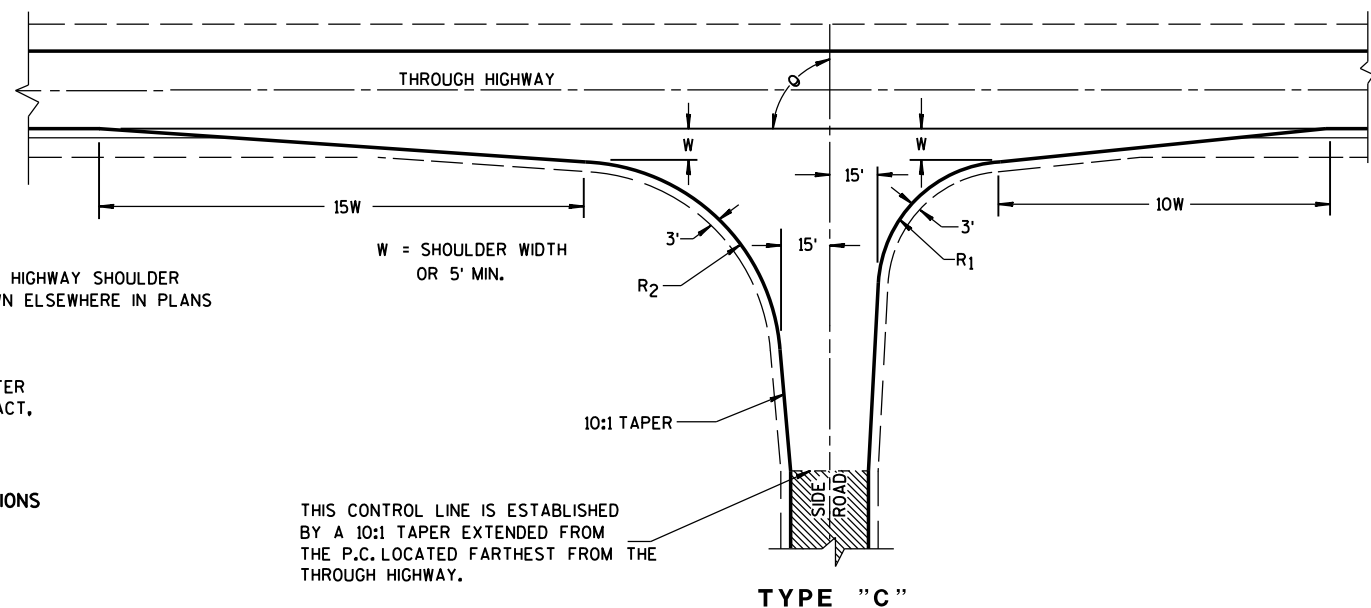
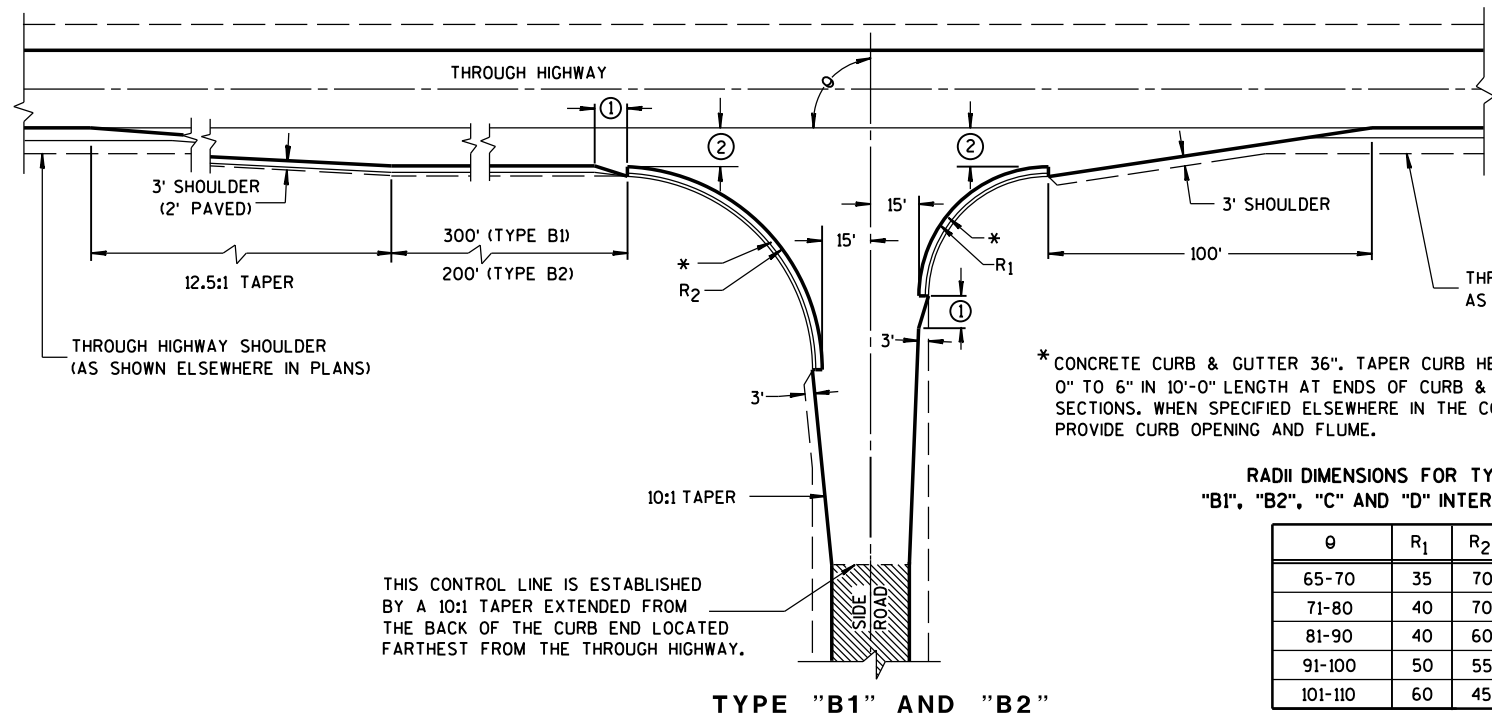
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE.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

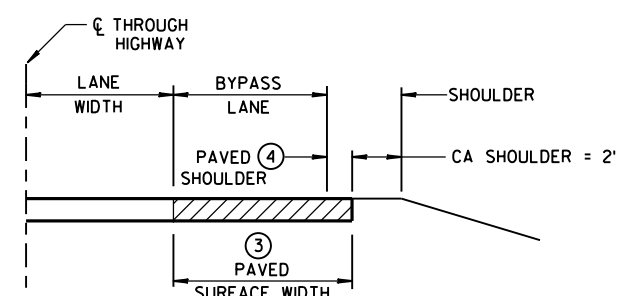
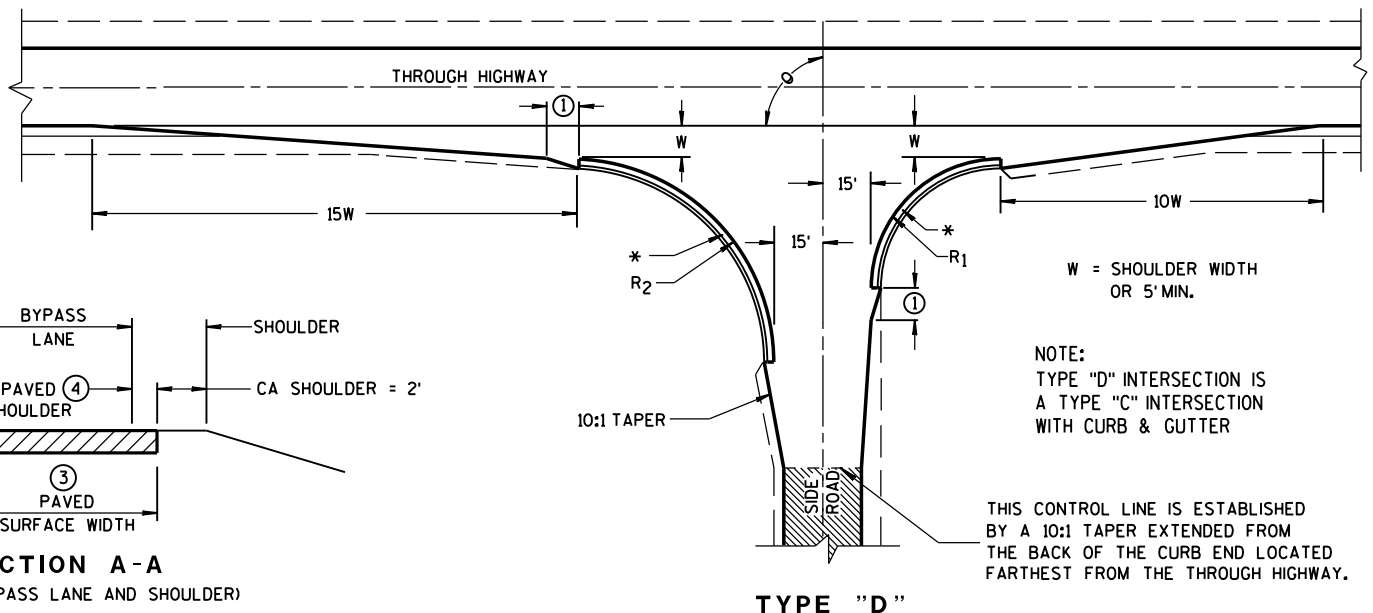
15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	



RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R ₁	R ₂
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45



GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

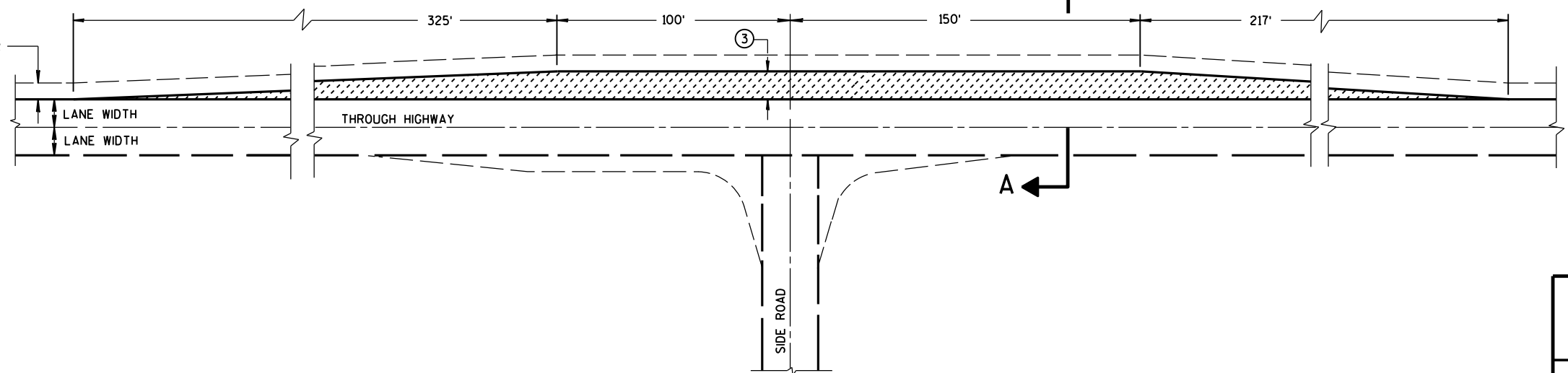
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

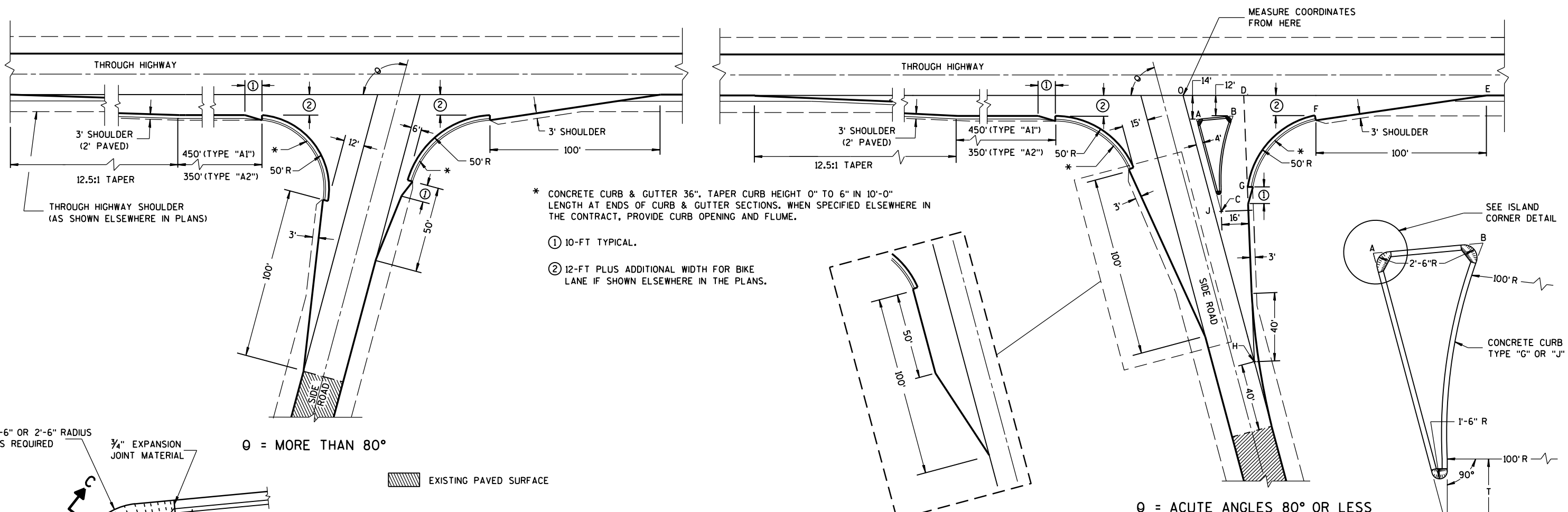
BYPASS LANE

- ① 10-FT TYPICAL.
- ② 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.
- **10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- ③ BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.
- ④ BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

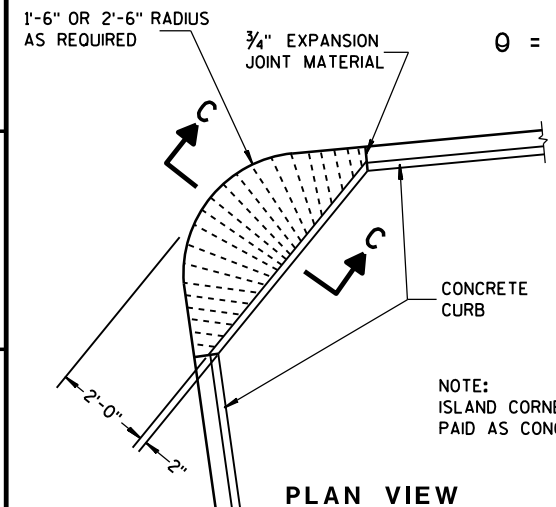
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



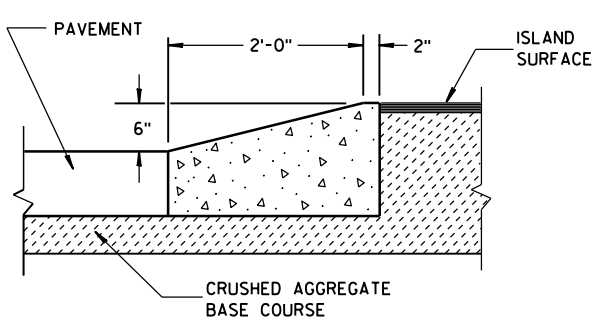
* CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

① 10-FT TYPICAL.

② 12-FT PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLANS.



PLAN VIEW



SECTION C-C

SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
 $\theta =$ ACUTE ANGLES 70° OR LESS

TABLE OF DIMENSIONS FOR VARIABLE SIDE ROAD INTERSECTION ANGLES
 (INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

ANGLE θ DEGREES	COORDINATES IN FEET (MEASURED FROM POINT "O")								LENGTH IN FEET				
	A	B	C	D	E	F	G	H	AB	AC	T	OJ	OH
60	12.7	44.9	46.4	41.9	205.0	104.6	64.0	85.0	32.3	67.4	4.9	85.9	169.9
65	10.9	39.0	37.8	39.4	196.1	95.7	54.1	70.5	28.2	63.6	8.5	80.9	166.9
70	9.4	33.9	29.8	37.4	188.3	87.8	45.6	56.1	24.6	59.7	11.5	76.1	164.1
75	7.9	29.3	22.3	35.7	181.2	80.7	38.2	41.8	21.5	55.8	13.8	71.4	161.4
80	6.5	25.4	15.6	34.4	174.8	74.4	31.8	27.6	18.9	52.0	15.6	66.9	158.9

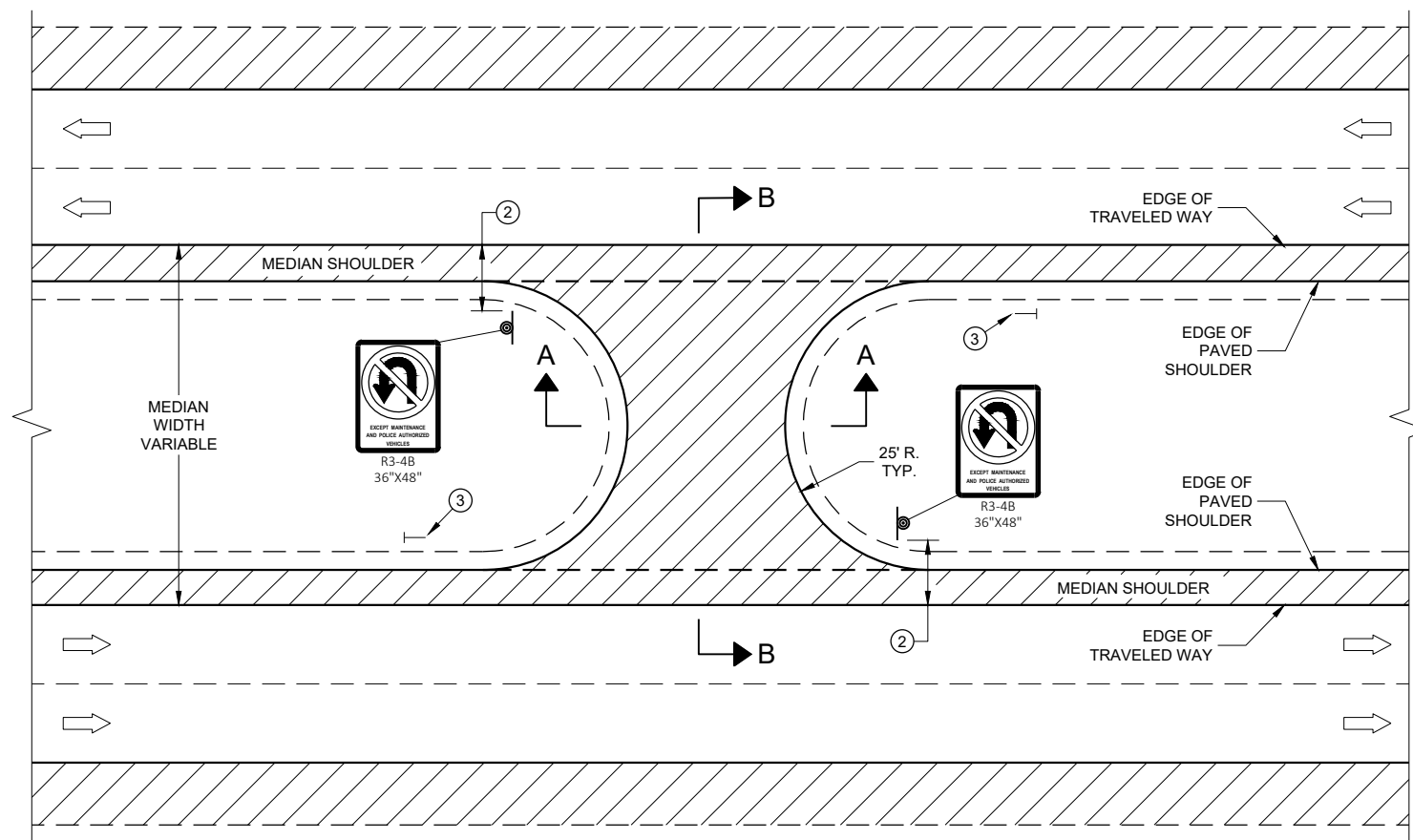
TYPE "A1" & "A2" SIDE ROAD INTERSECTION DETAILS

AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/18/12 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



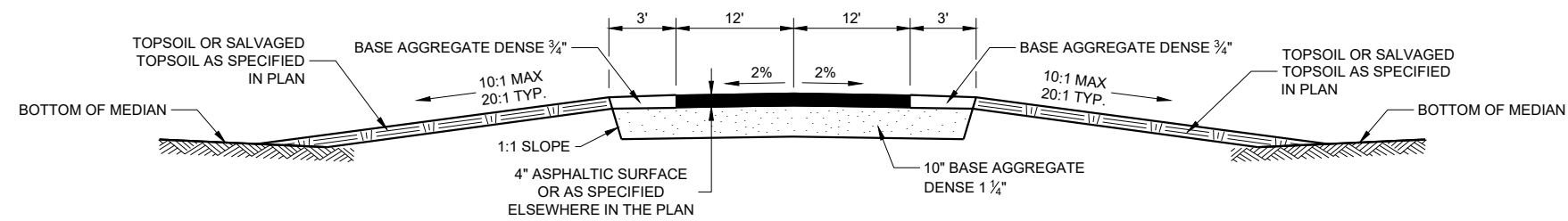
PLAN VIEW

GENERAL NOTES

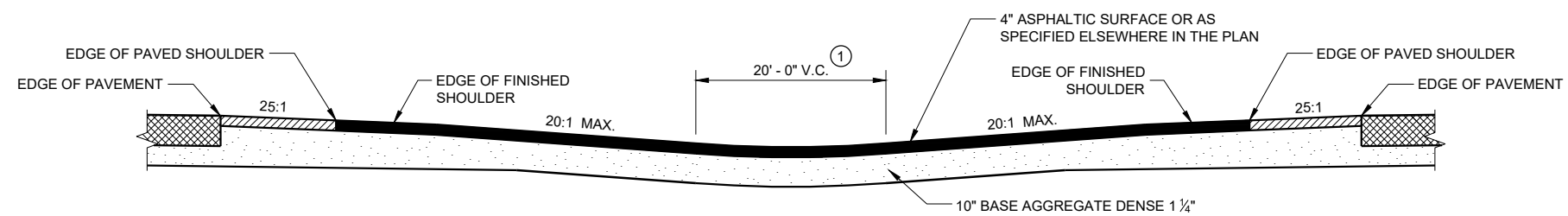
- ① ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.
- ② SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.
- ③ INSTALL DELINEATOR. SEE STANDARD DETAIL DRAWING 15A4.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DELINEATOR
- DIRECTION OF TRAFFIC



SECTION A-A



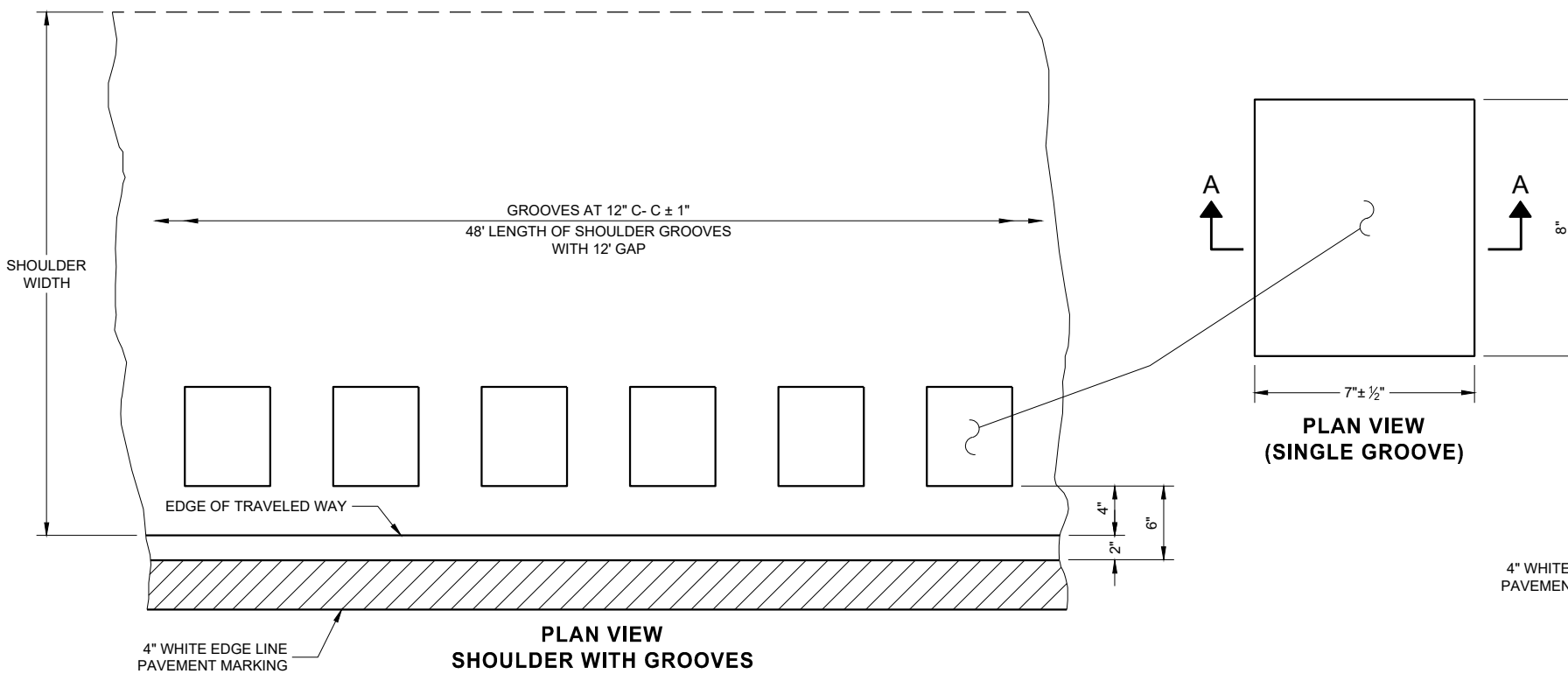
SECTION B-B

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA



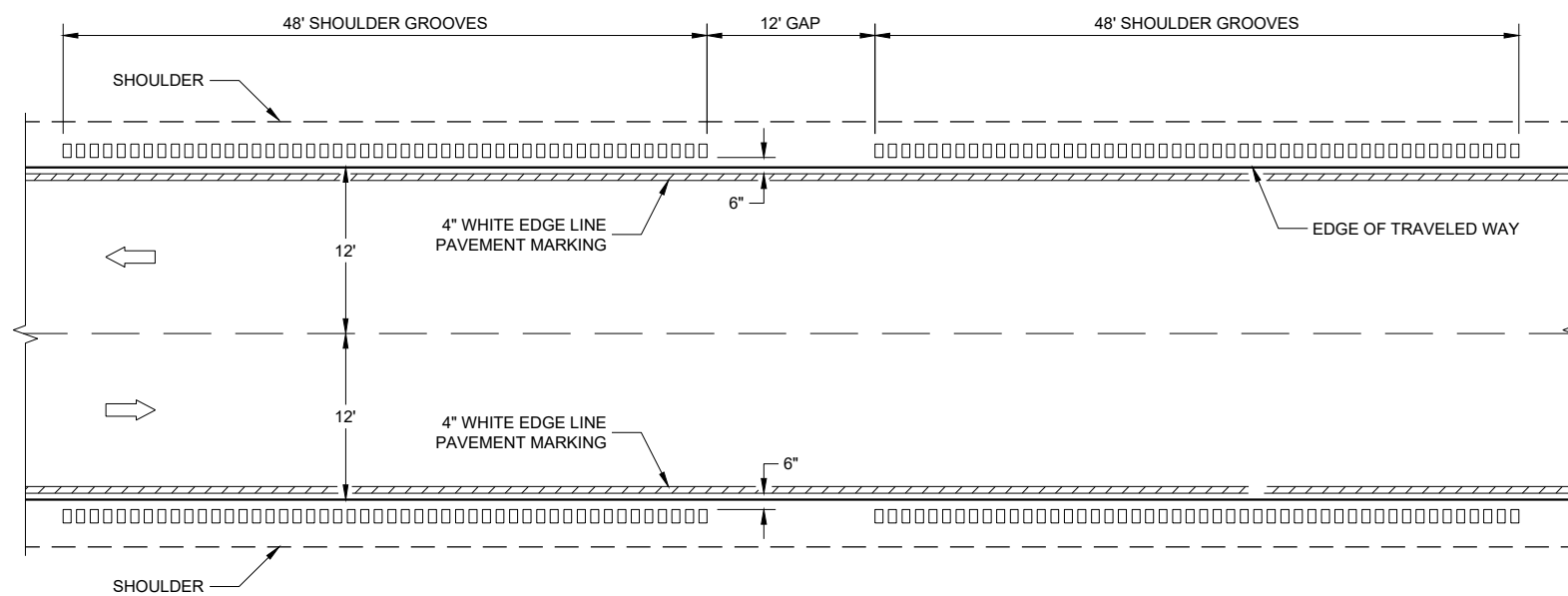
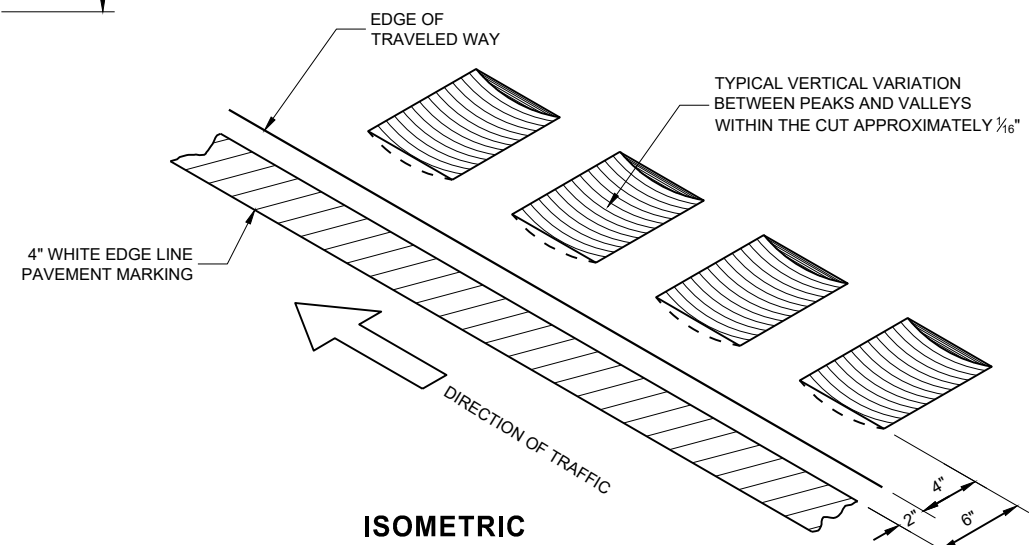
PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

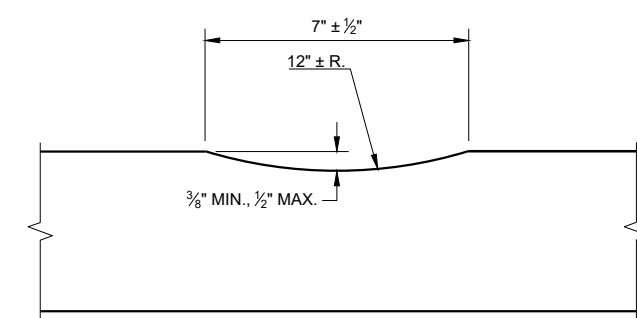
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



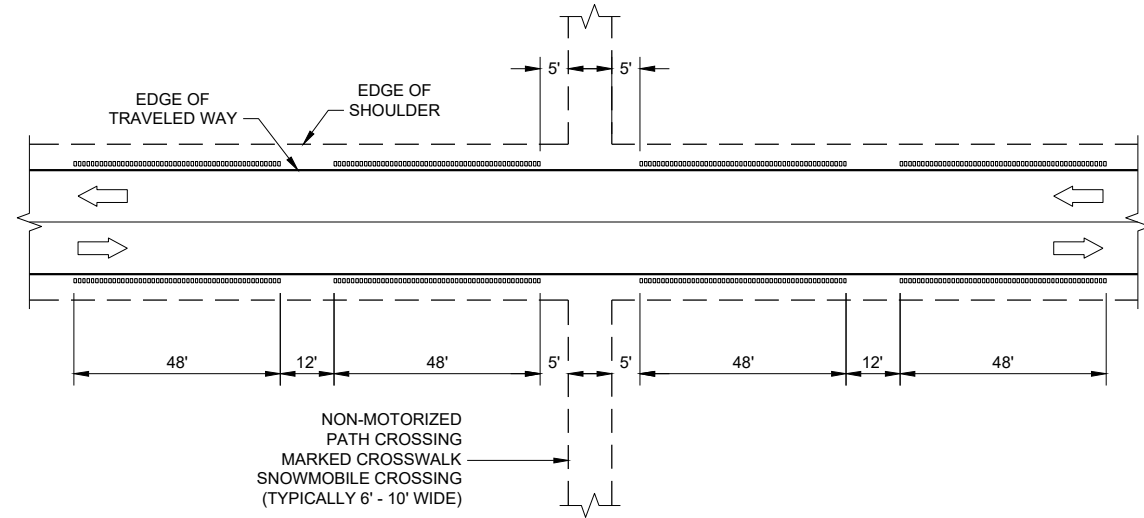
TYPE 1
2 - LANE SHOULDER RUMBLE STRIP



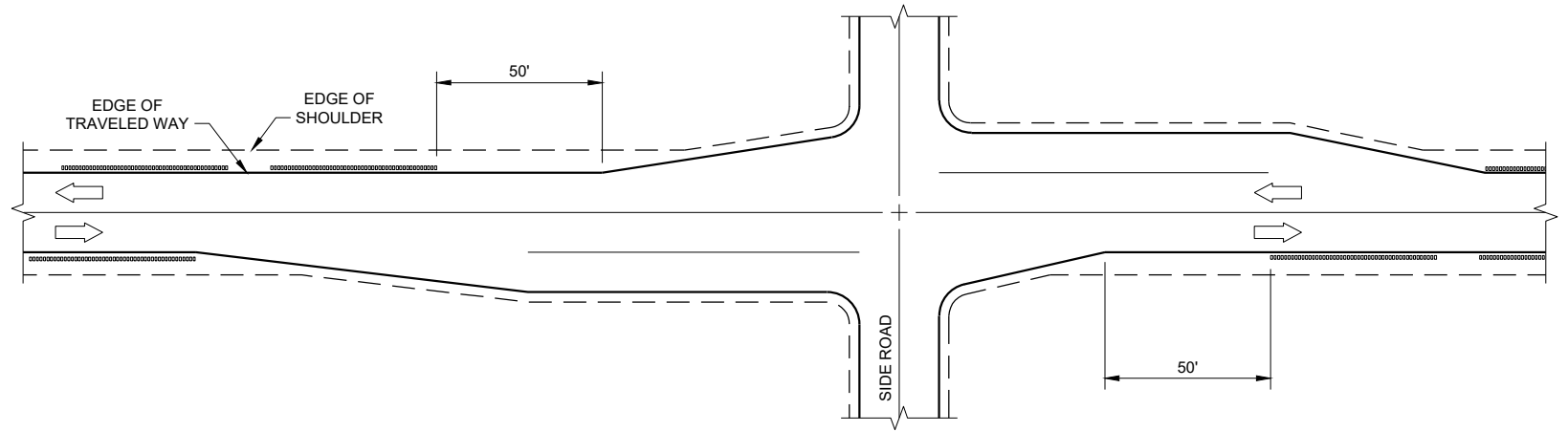
SECTION A - A

2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING

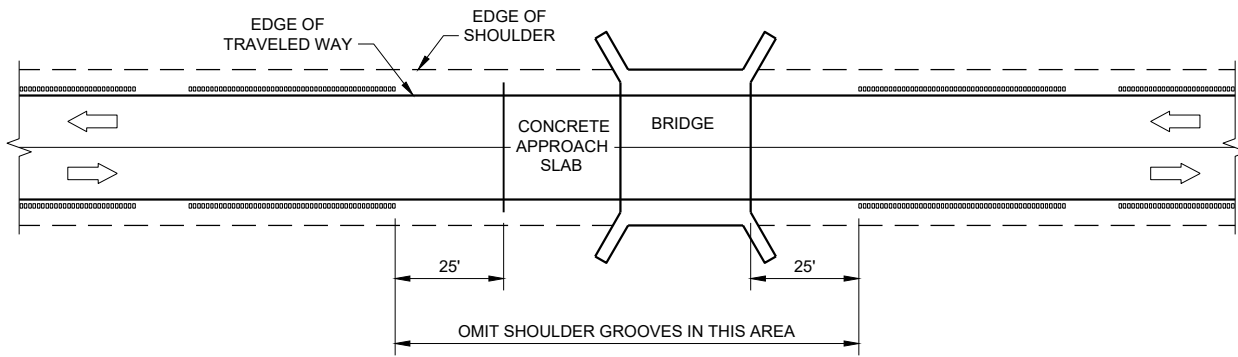
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



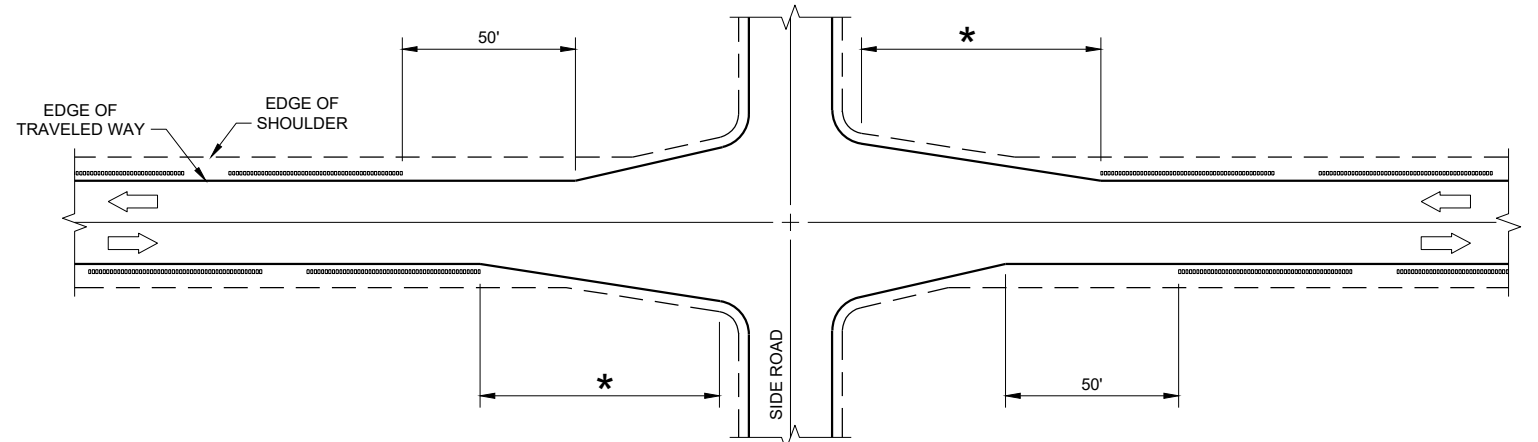
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



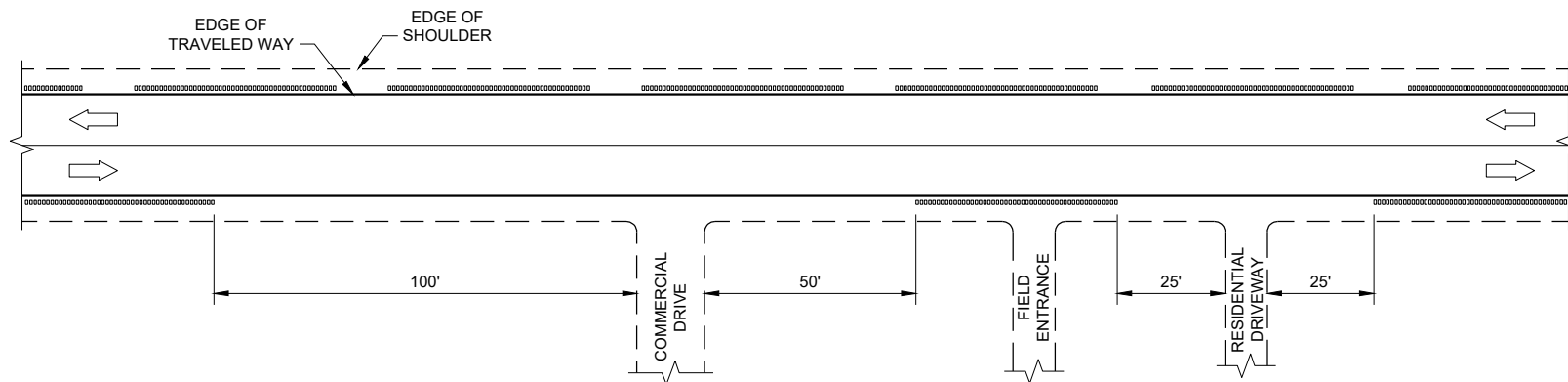
SHOULDER GROOVES AT RIGHT TURN LANE



SHOULDER GROOVES AT BRIDGES



SHOULDER GROOVES AT INTERSECTIONS WITH APPROACH TAPER



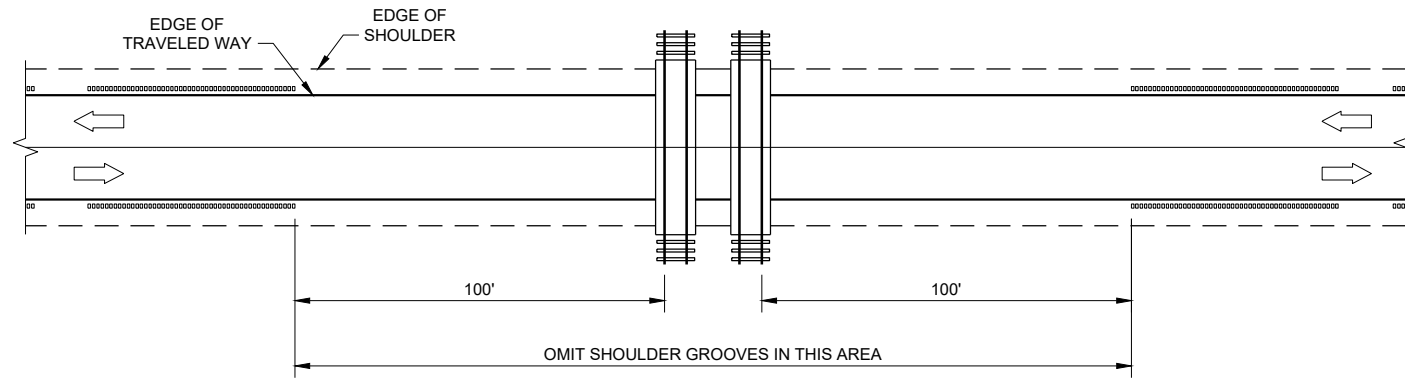
SHOULDER GROOVES AT DRIVEWAYS^①

GENERAL NOTES

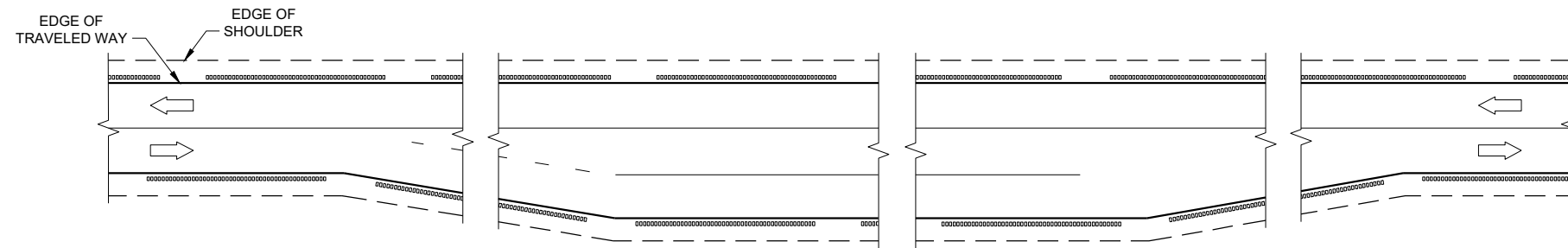
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

**2-LANE RURAL SHOULDER
RUMBLE STRIP, MILLING**

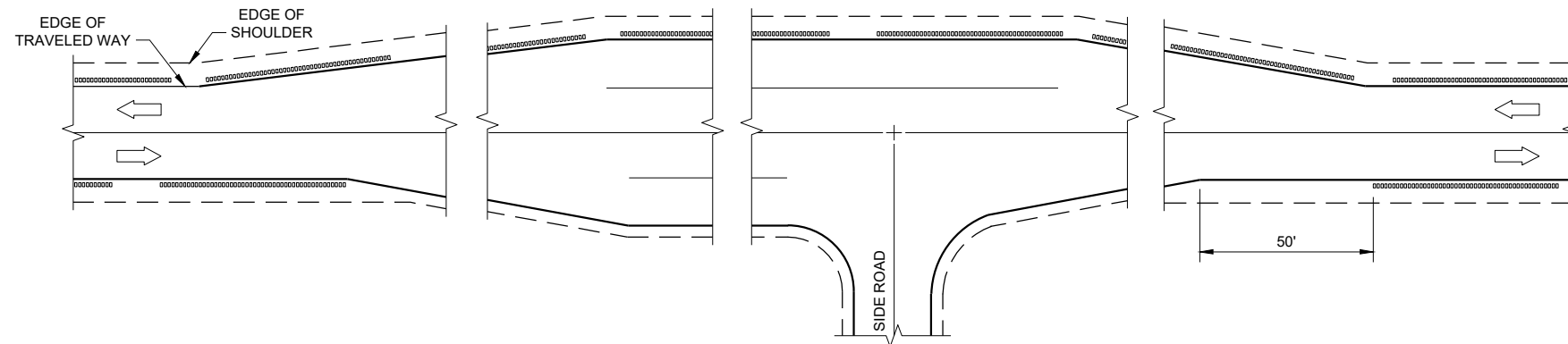
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SHOULDER GROOVES AT RAILROADS



SHOULDER GROOVES AT PASSING AND CLIMBING LANES



SHOULDER GROOVES AT BYPASS LANES

2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

GENERAL NOTES

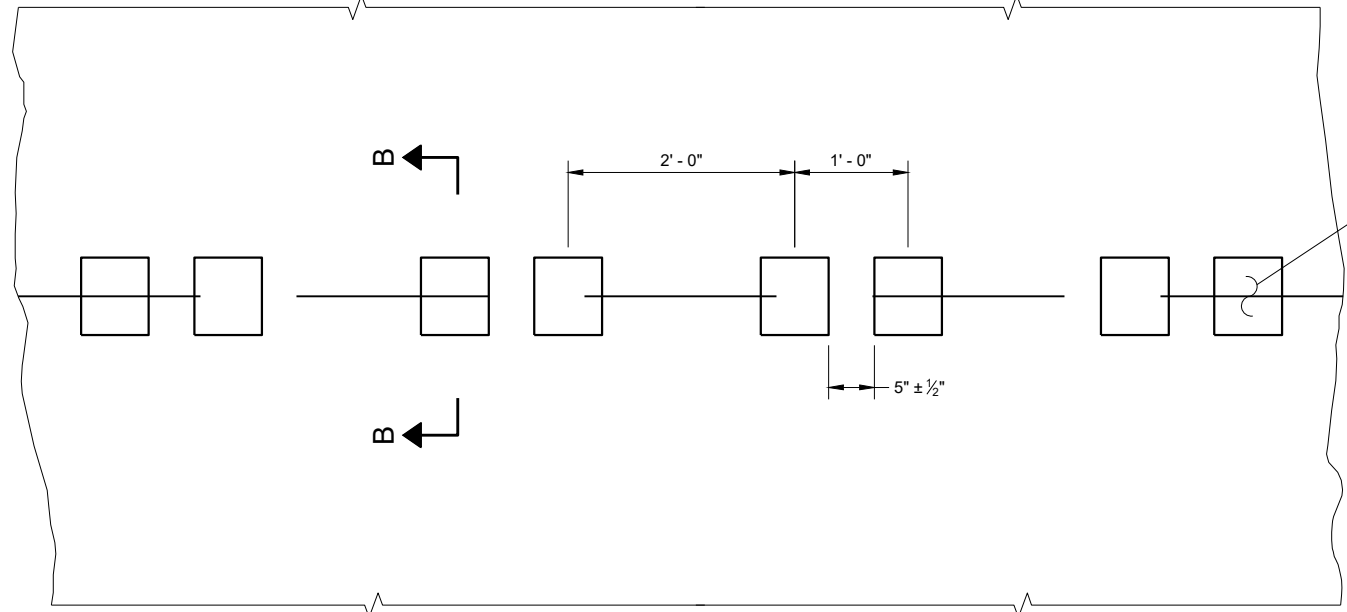
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTERLINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

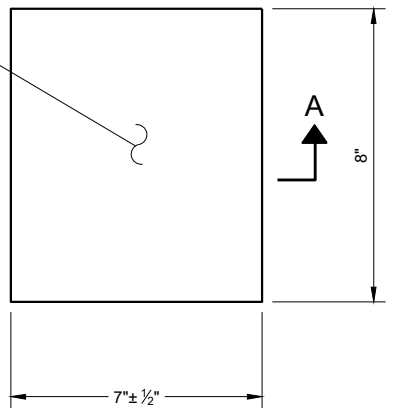
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

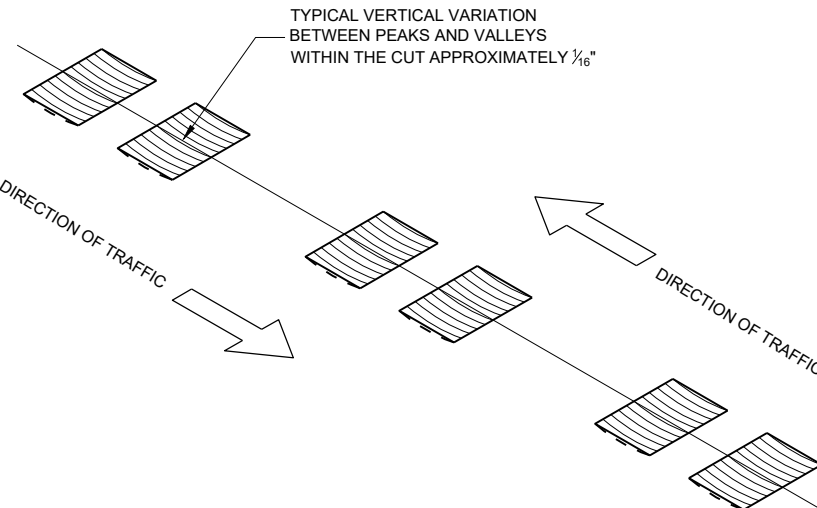
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



**PLAN VIEW
SHOULDER WITH GROOVES**

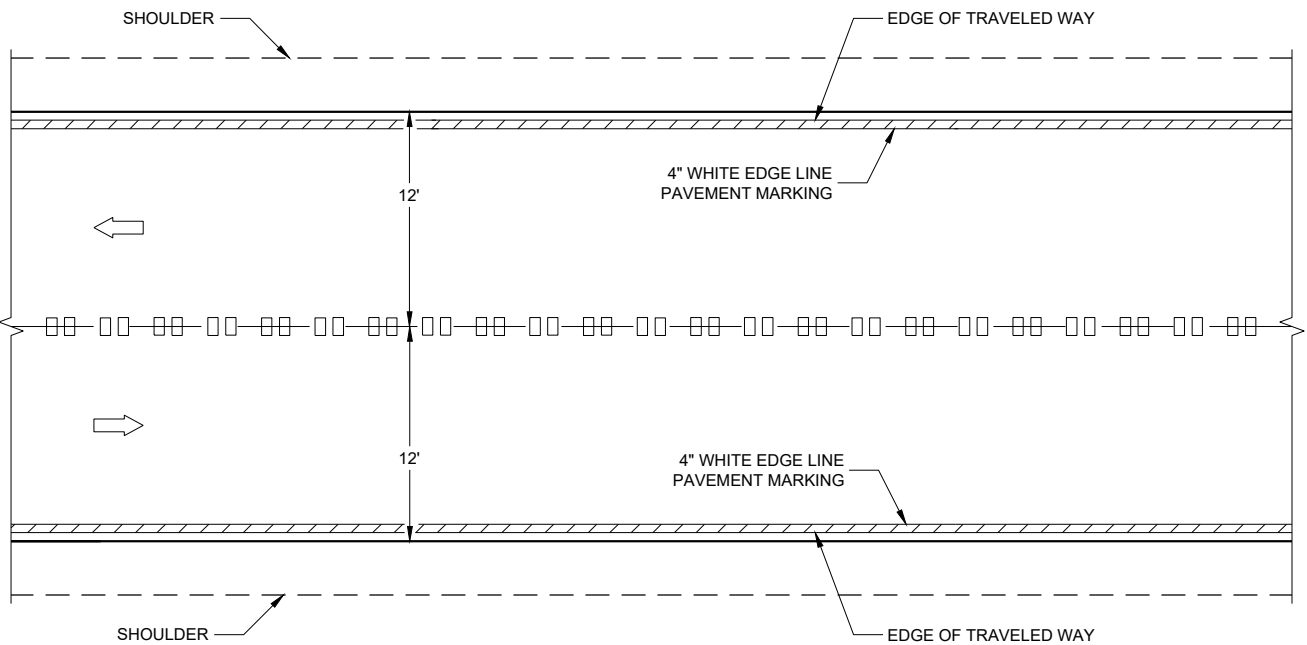


**PLAN VIEW
(SINGLE GROOVE)**

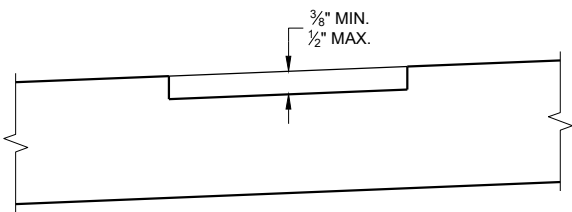


ISOMETRIC

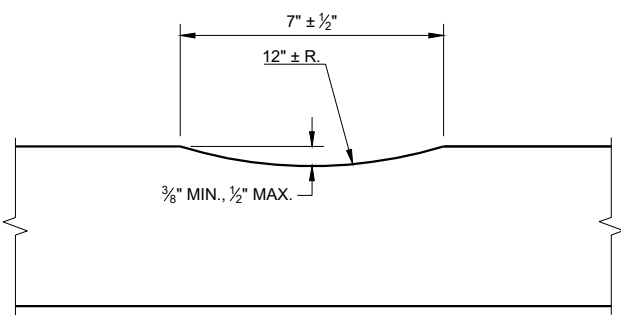
PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP



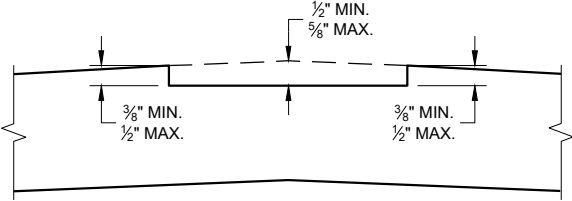
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



**SECTION B - B
SUPERELEVATED ROADWAY**



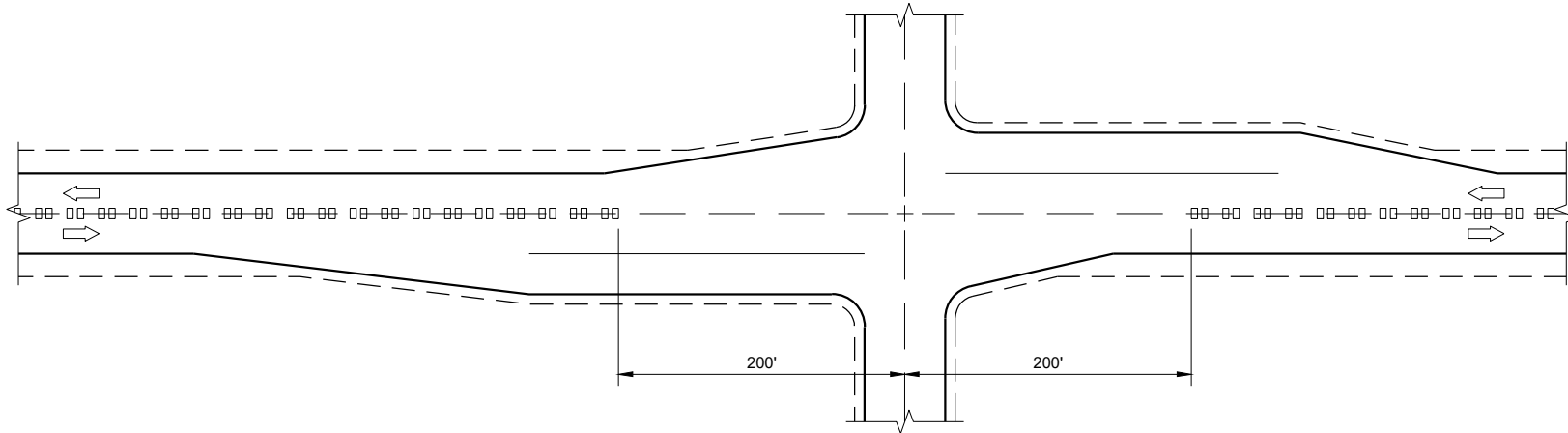
SECTION A - A



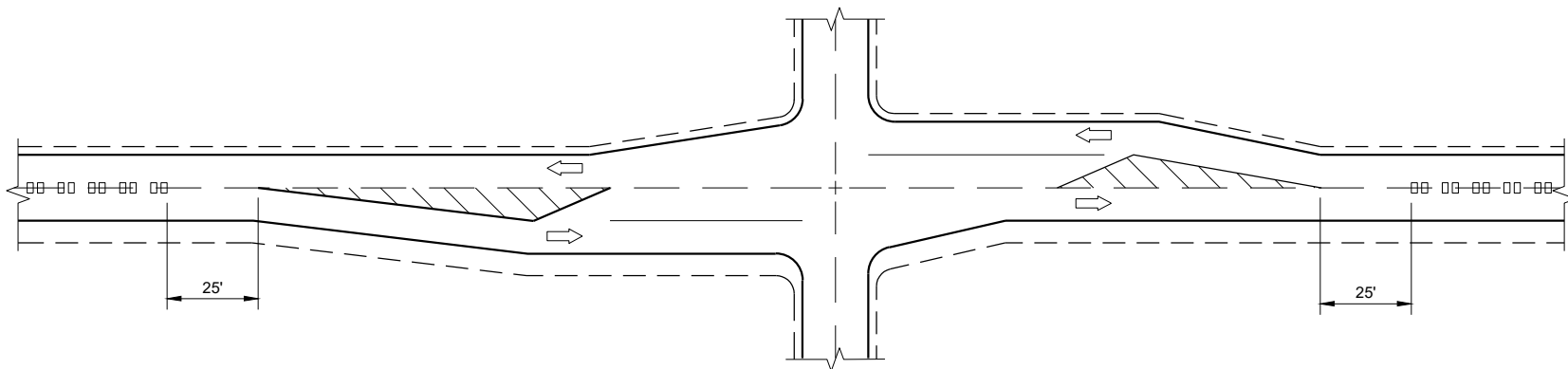
**SECTION B - B
CROWNED ROADWAY**

**2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING**

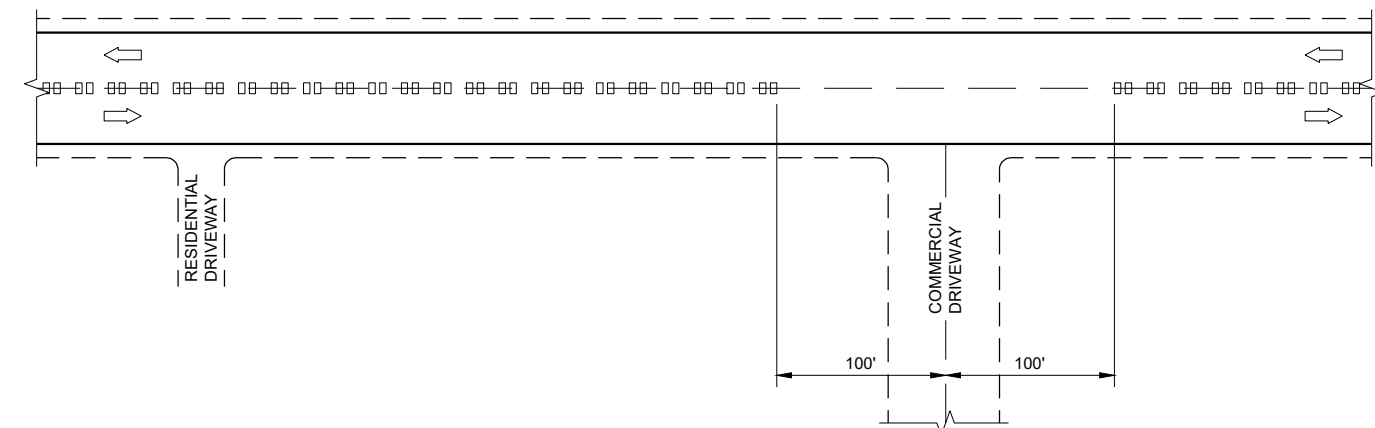
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTERLINE GROOVES AT INTERSECTIONS



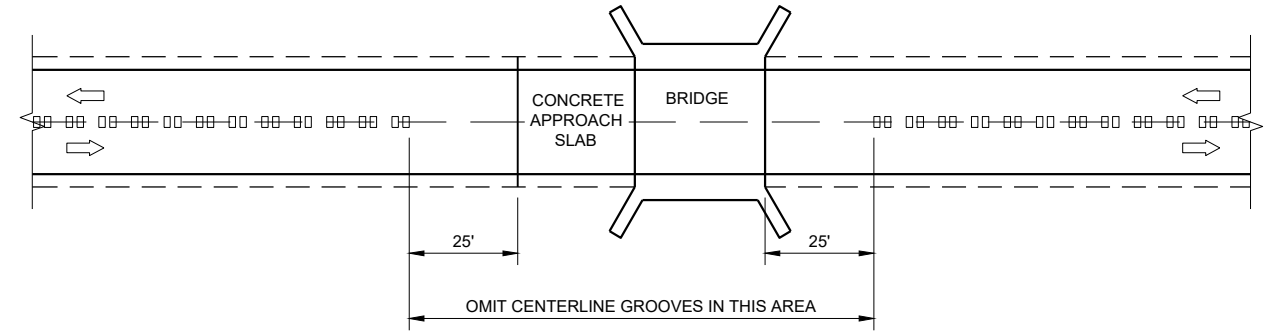
**CENTERLINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)**



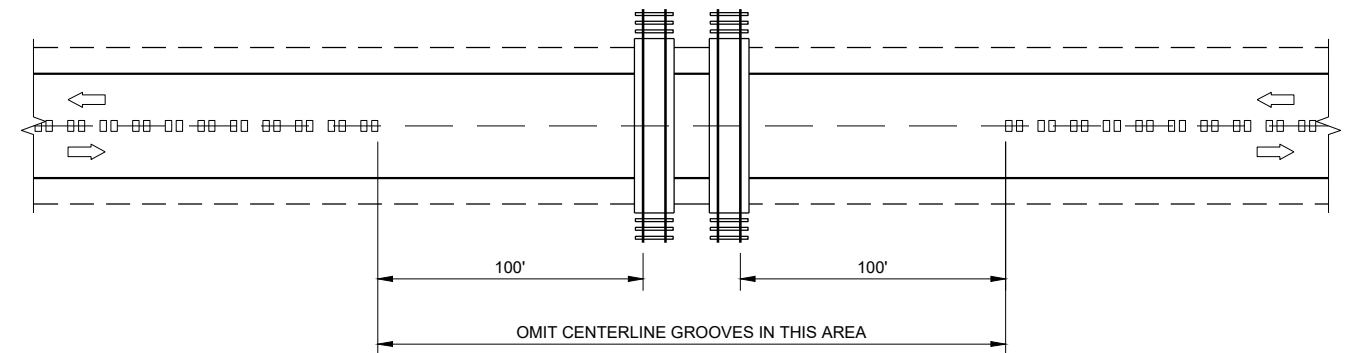
CENTERLINE GROOVES AT DRIVEWAYS^①

GENERAL NOTES

- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

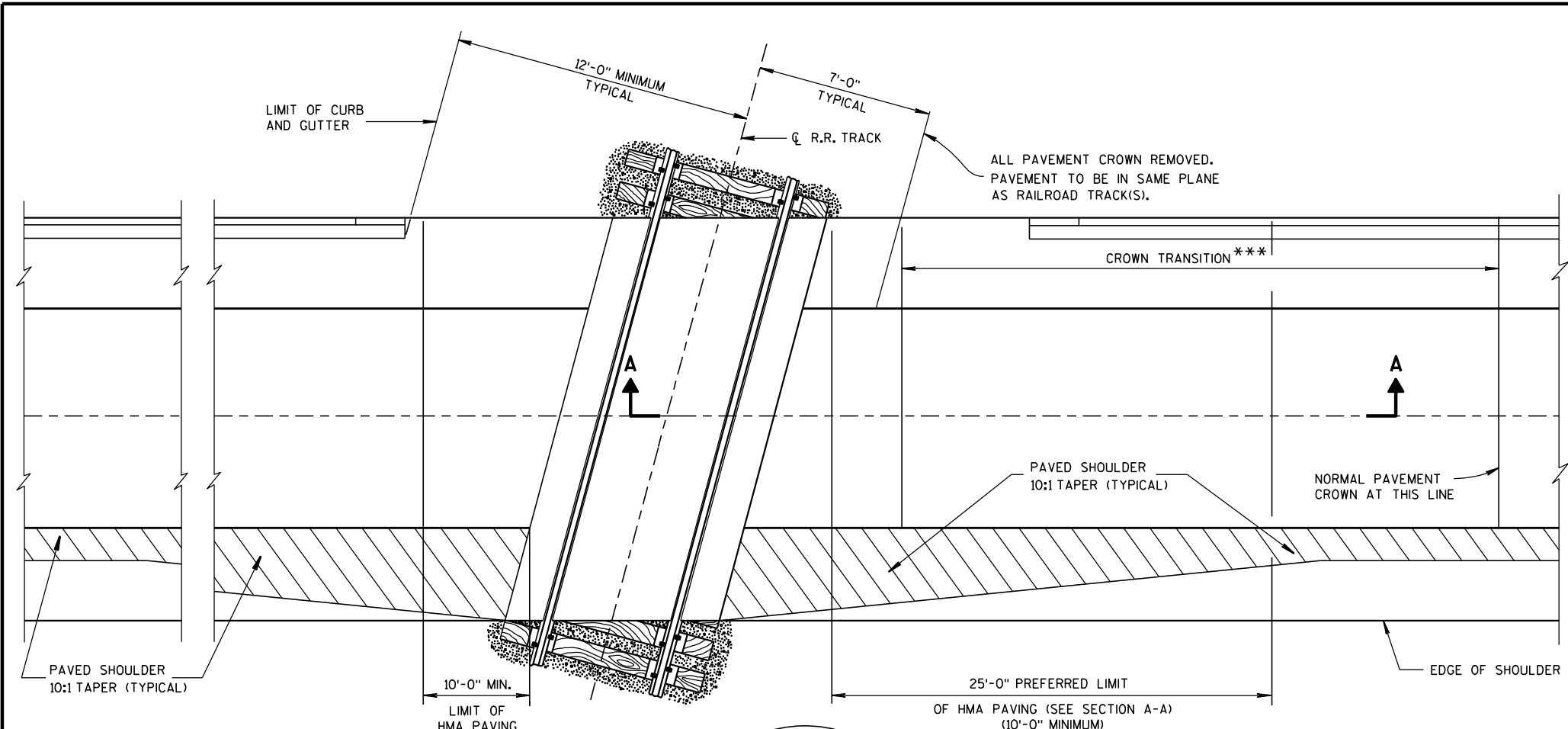
6

6

SDD 13A11 - 03b

SDD 13A11 - 03b

2-LANE RURAL CENTERLINE RUMBLE STRIP, MILLING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 7/2018	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT ENGINEER
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.

TIMBER, CONCRETE OR RUBBER CROSSING SURFACE MATERIAL, RAILS, TIES, BALLAST, GEOTEXTILE FABRIC AND CROSSING DRAINAGE SYSTEM BY OTHERS UNLESS OTHERWISE PROVIDED.

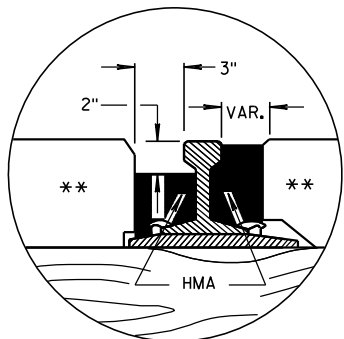
HMA PAVEMENT APPROACHES AND HMA PAVEMENT CROSSING SURFACES TO BE PLACED BY CONTRACTOR UNLESS OTHERWISE PROVIDED.

HMA FLANGEWAY AND FIELD FILLERS TO BE PLACED AND THOROUGHLY HAND COMPACTED BY THE CONTRACTOR WHEN NOT PROVIDED BY OTHERS. SEE DETAIL B. HMA FILLERS NOT REQUIRED WHEN RUBBER FILLERS ARE PROVIDED.

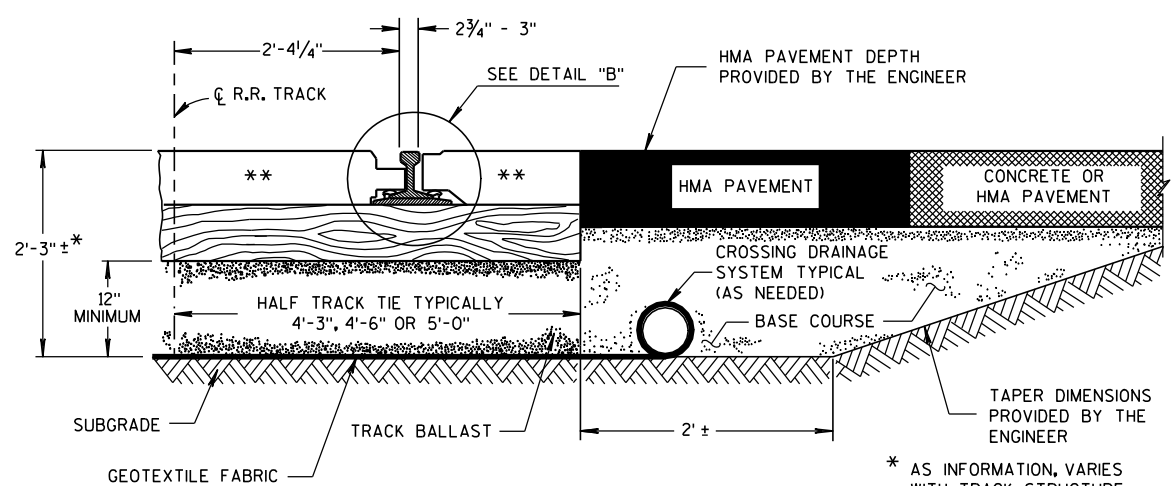
HMA PAVEMENT SHALL BE ROLLED PARALLEL TO THE TRACK.

** CROSSING SURFACE MAY BE TIMBER, RUBBER, CONCRETE, HMA PAVEMENT OR A COMBINATION OF SUCH MATERIALS.

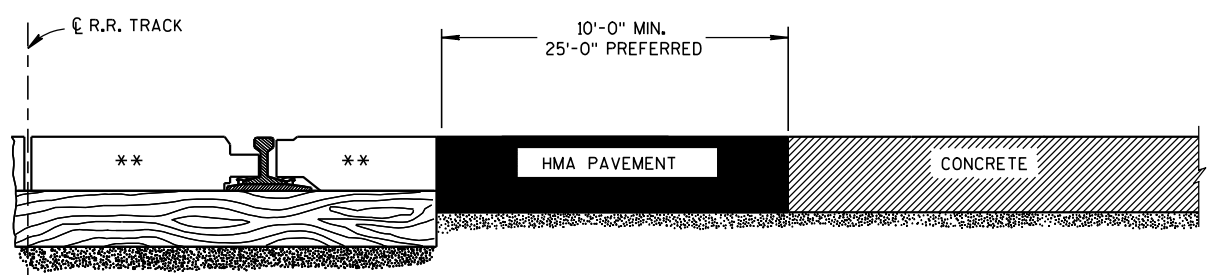
*** CROWN TRANSITION LENGTH SHOWN ELSEWHERE IN THE PLAN.



**DETAIL B
HMA FLANGEWAY
AND FIELD FILLERS**



TYPICAL HALF SECTION



**SECTION A-A
CONCRETE PAVEMENT APPROACH**



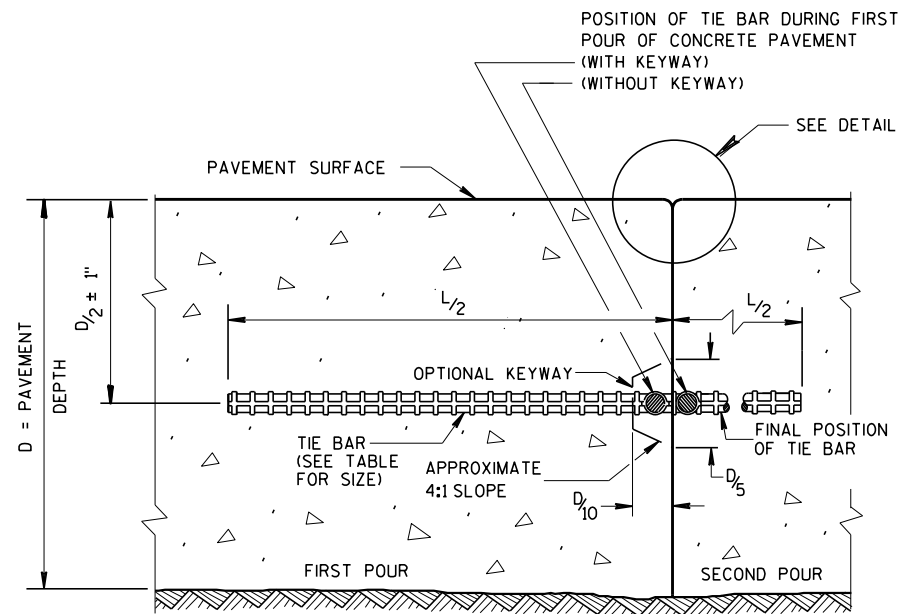
**SECTION A-A
HMA PAVEMENT APPROACH**

EXAMPLES OF PAVEMENT APPROACHES

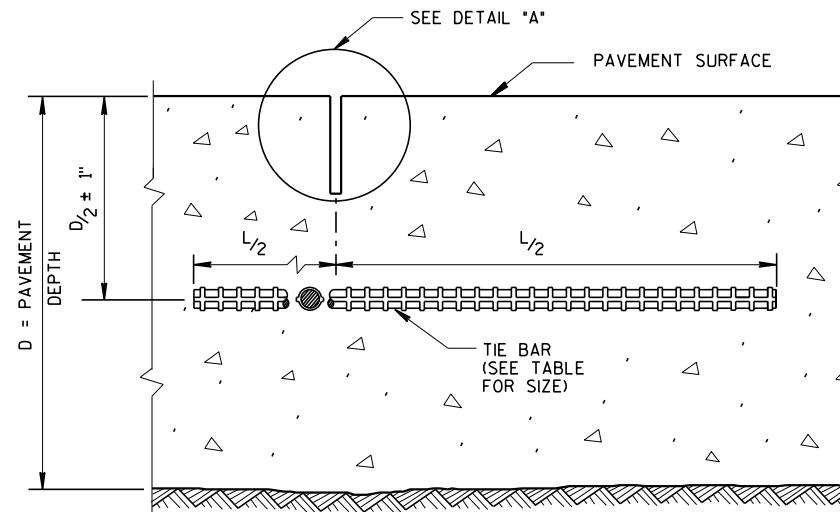
**PAVEMENT DETAILS
FOR RAILROAD APPROACH**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-28-09 /S/ Ronald E. Adams
DATE CHIEF, RAILROADS & HARBORS SECTION
FHWA



CONSTRUCTION JOINT



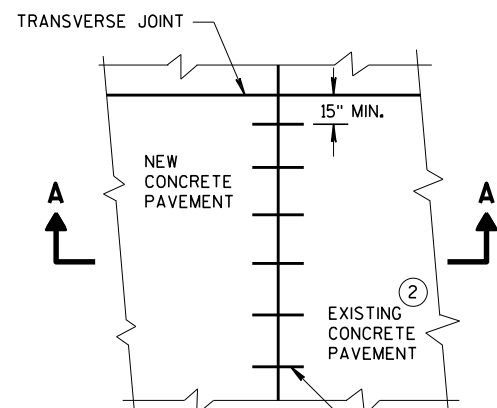
SAWED JOINT

GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

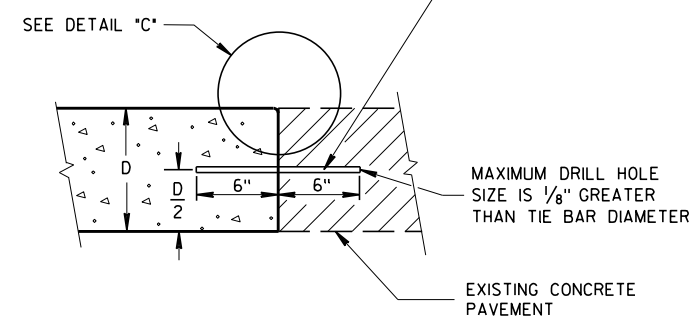
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

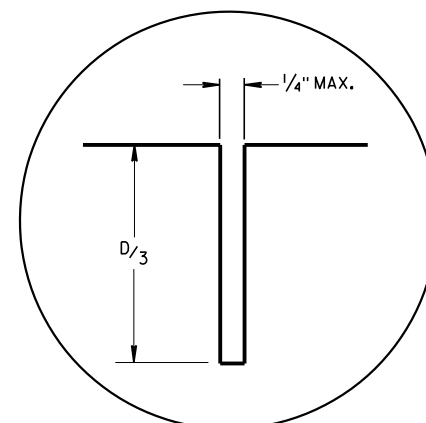


PLAN VIEW

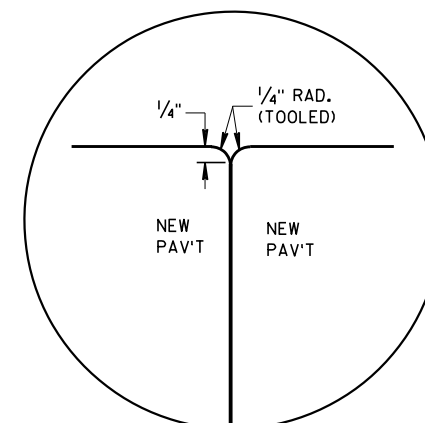
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



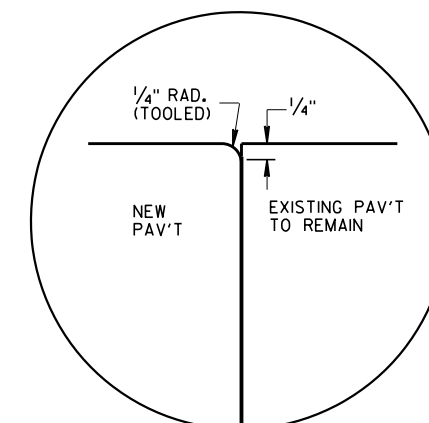
**SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT**



DETAIL "A"



DETAIL "B"



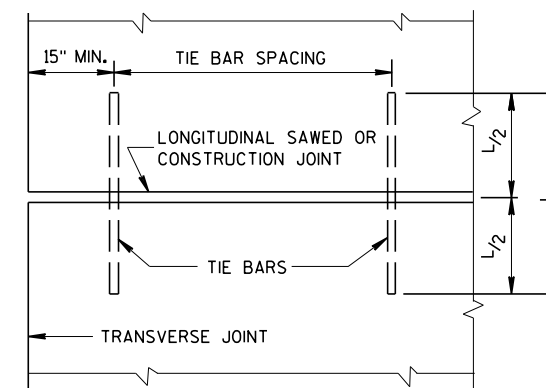
DETAIL "C"

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.



**PLAN VIEW
SHOWING LOCATION OF TIE BARS**

**CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES**

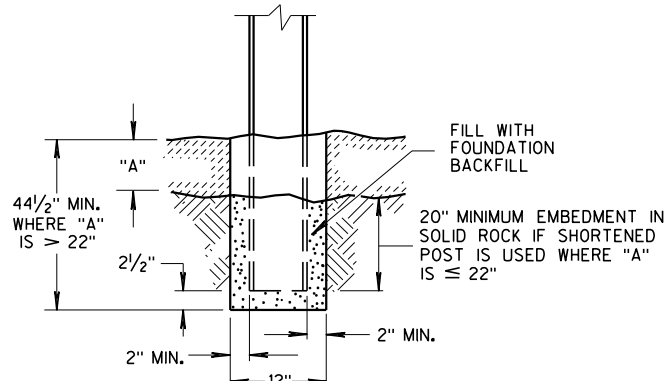
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

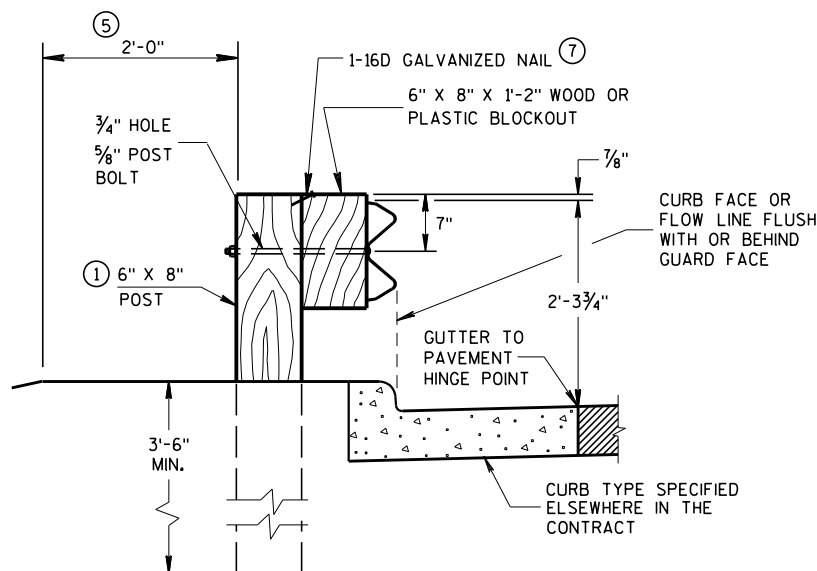
GENERAL NOTES

- ① W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS. DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
- ② USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.
- ③ INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ④ USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
- ⑤ IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
- ⑥ IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATELY.
- ⑦ 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.

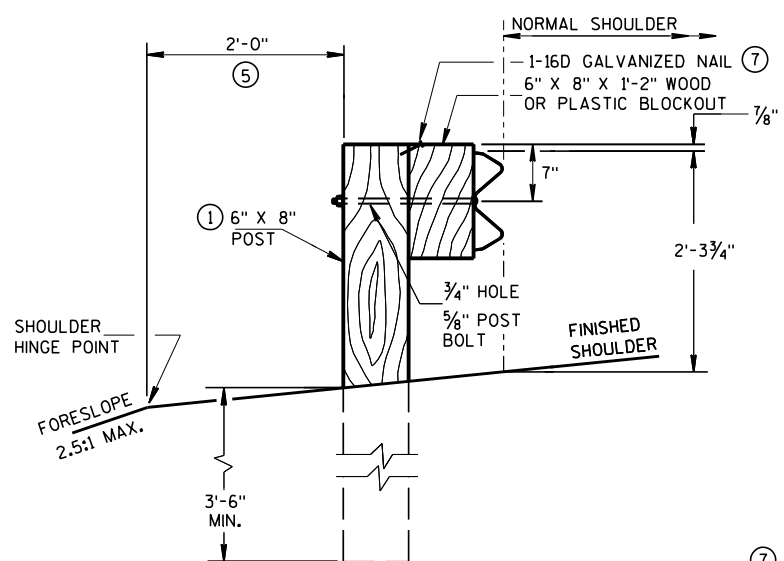
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



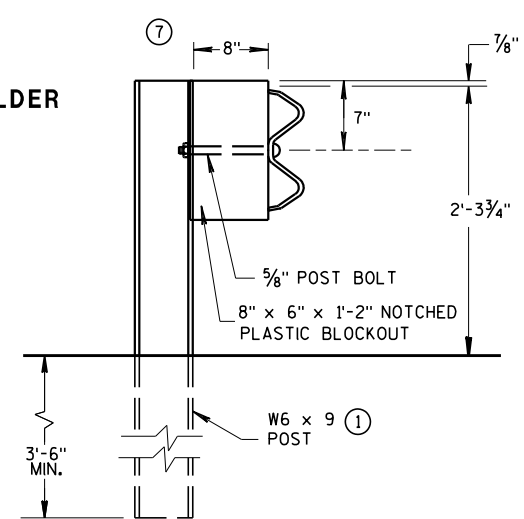
END VIEW SETTING STEEL OR WOOD POST IN ROCK ⑥



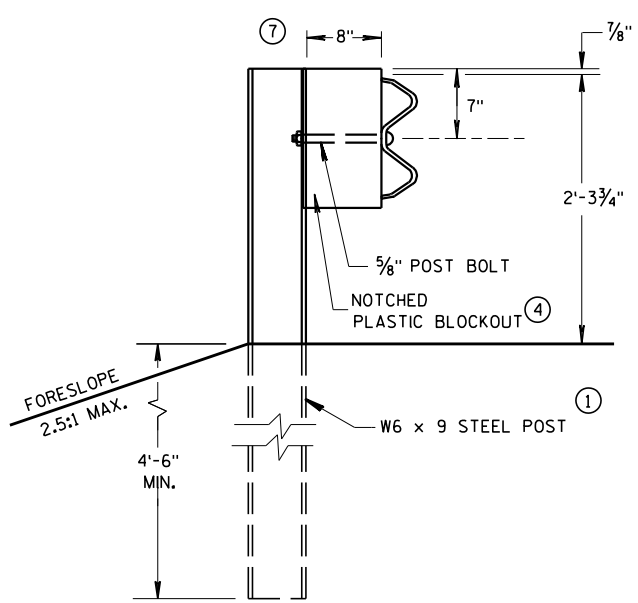
END VIEW LOCATED ALONG A CURBED ROADWAY



END VIEW LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION

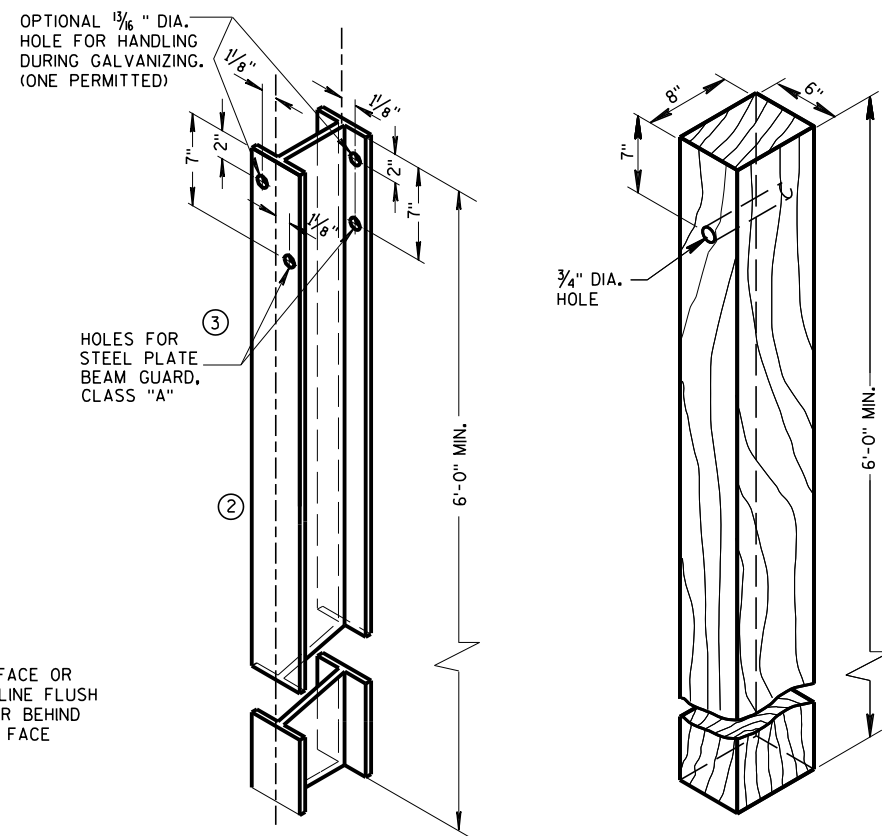


END VIEW STEEL POST & NOTCHED PLASTIC BLOCKOUT ALTERNATIVE STANDARD INSTALLATION



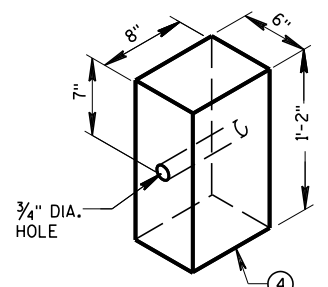
END VIEW LONGER POST AT HALF POST SPACING W BEAM (LHW)

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

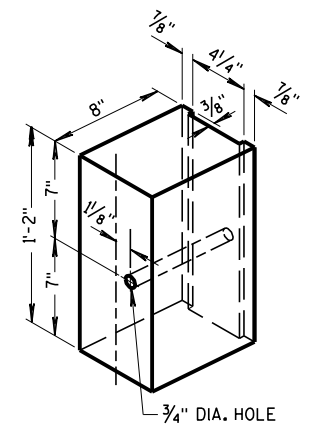


STEEL POST & HOLE PUNCHING DETAIL (W6 X 9) ①
ALL HOLES 3/8" DIAMETER EXCEPT AS NOTED

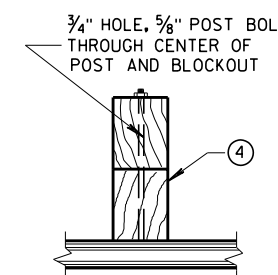
WOOD POST (6" X 8") NOMINAL



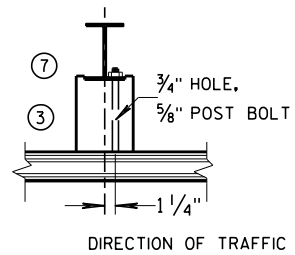
WOOD OR PLASTIC BLOCKOUT FOR WOOD POSTS



TYPICAL NOTCHED PLASTIC BLOCKOUT FOR STEEL POSTS ①



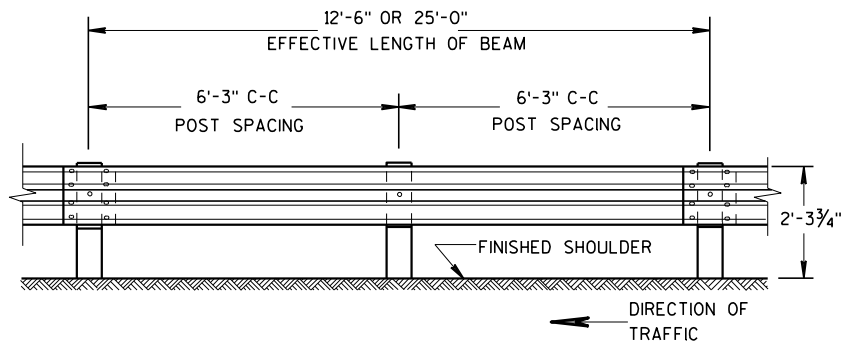
PLAN VIEW WOOD POST, BLOCKOUT & BEAM



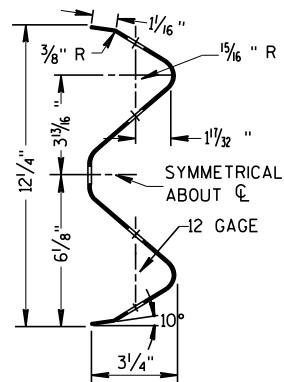
PLAN VIEW STEEL POST, NOTCHED PLASTIC BLOCKOUT & BEAM

STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS

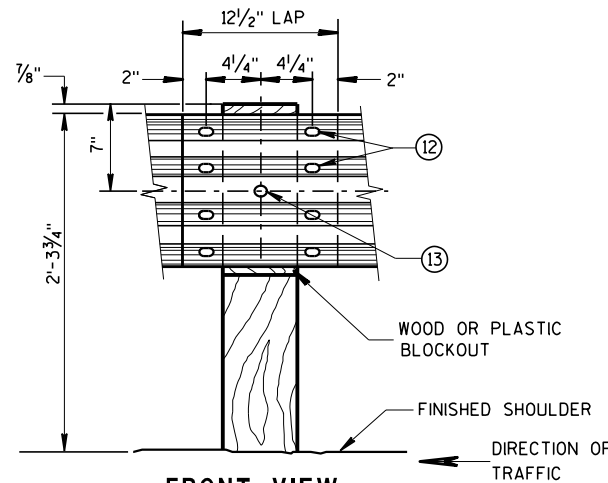
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



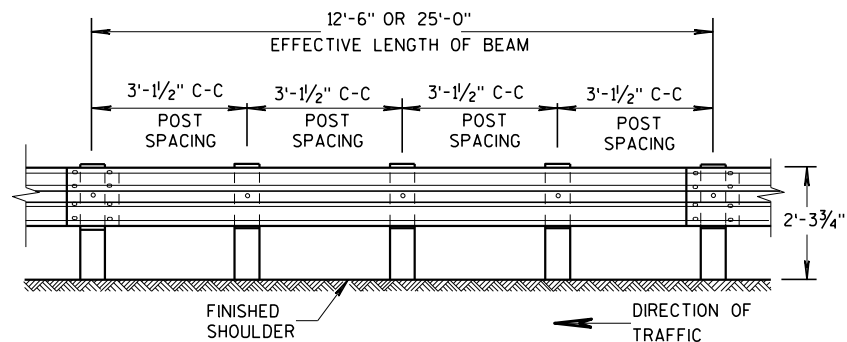
SECTION THRU W BEAM



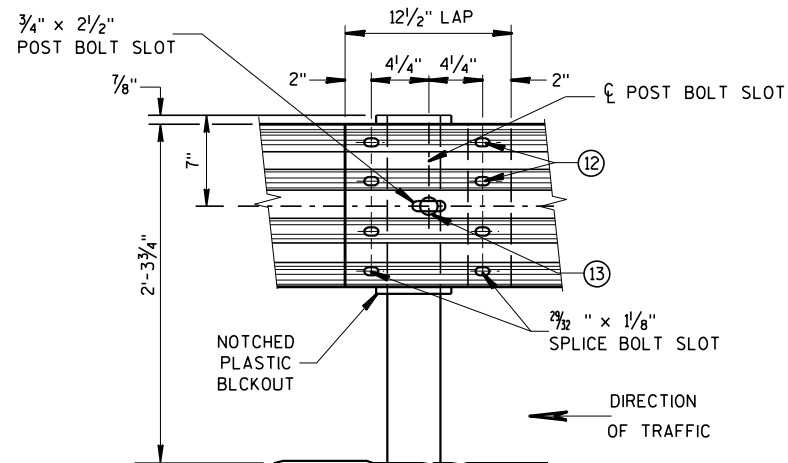
**FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL**

GENERAL NOTES

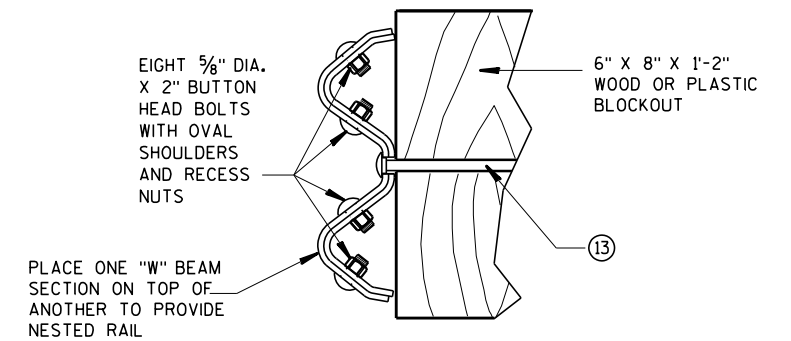
- FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.
- ⑨ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.
 - ⑫ 8 - 5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
 - ⑬ 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



**FRONT VIEW
POST SPACING FOR LONGER POST
AT HALF POST SPACING W BEAM (LHW)**

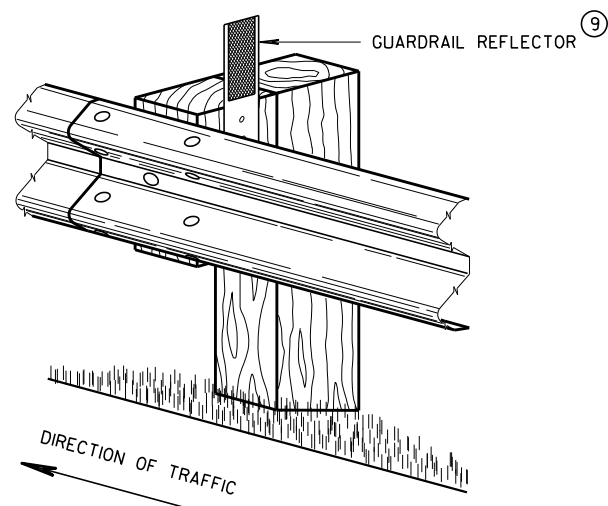


**FRONT VIEW
BEAM SPLICE AT STEEL POST
TYPICAL SPLICING DETAILS
OF STEEL PLATE BEAM GUARD**

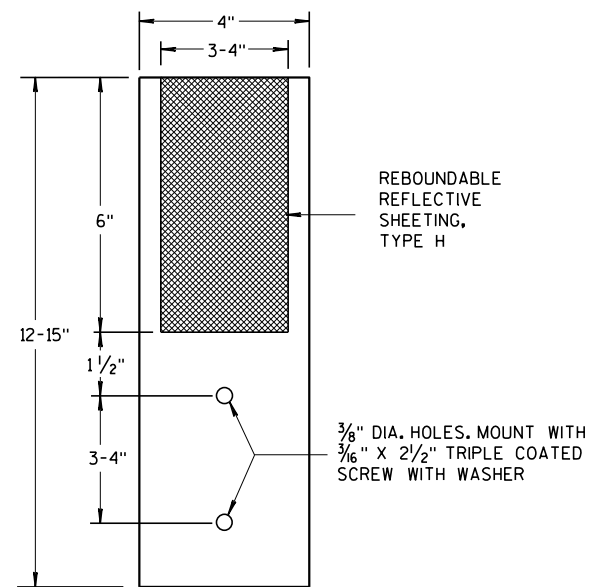


NESTED W BEAM (NW)
USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR
CONSTRUCTING NESTED W BEAM (NW)

* USE DOUBLE SIDED WHITE GUARDRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



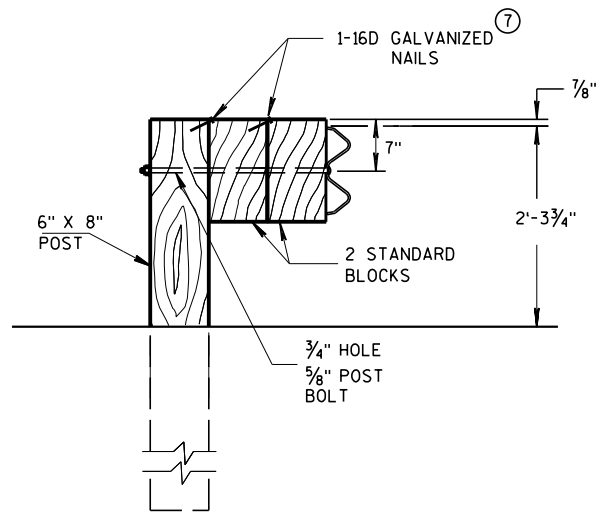
**4" X 12" GUARDRAIL REFLECTOR DETAIL
AND TYPICAL INSTALLATION ***



4" x 12" GUARDRAIL REFLECTOR

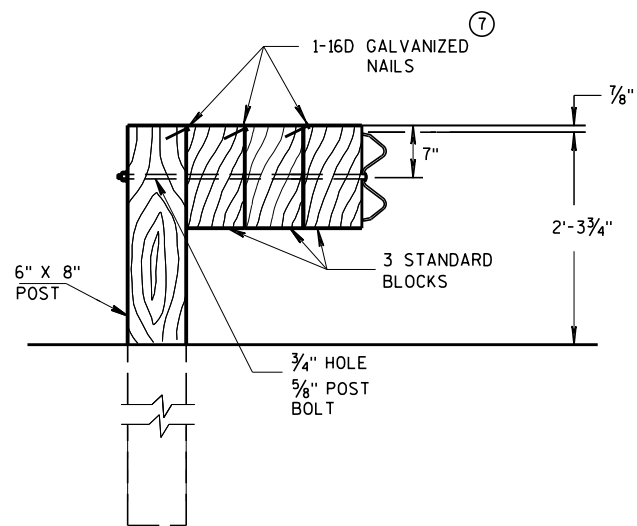
**STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

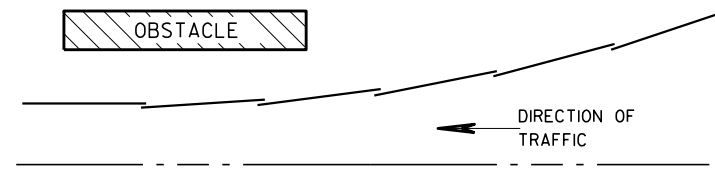


DETAIL FOR TRIPLE BLOCKS

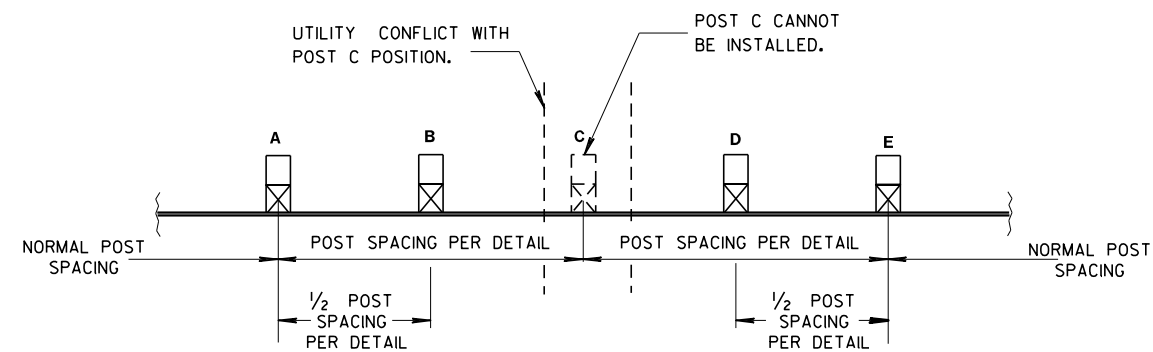
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.

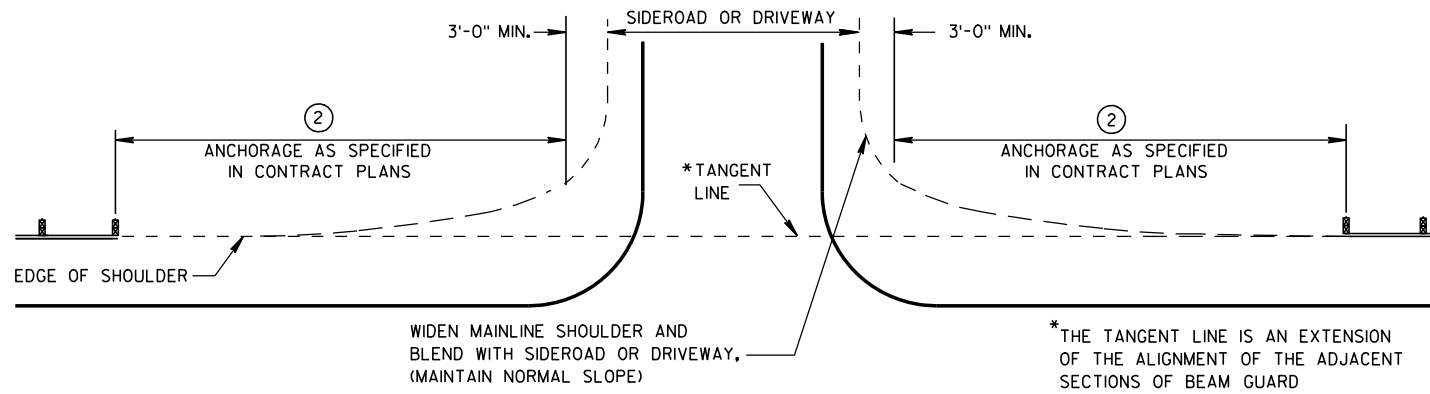


**PLAN VIEW
BEAM LAPPING DETAIL**

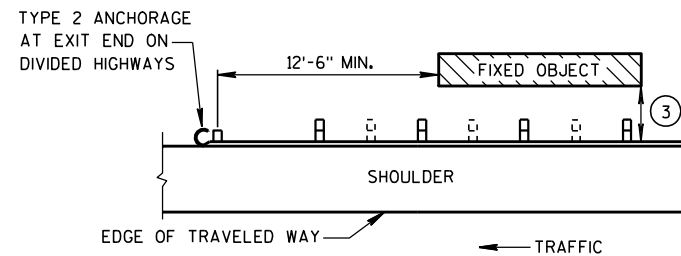


**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017	/s/ Rodney Taylor
DATE	ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	



BEAM GUARD AT SIDEROADS OR DRIVEWAYS



**BEAM GUARD AT OBSTACLES
EXIT END - ONE WAY TRAFFIC**

GENERAL NOTES

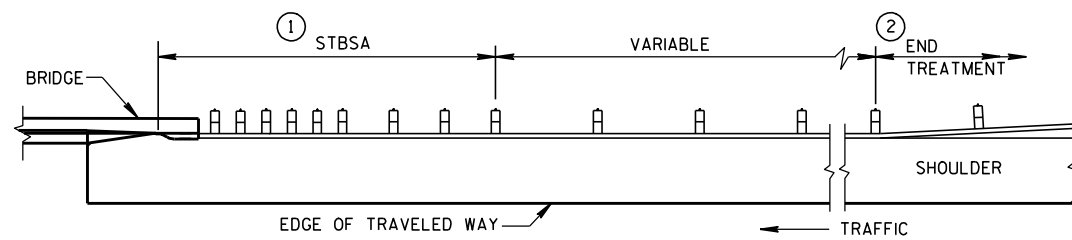
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

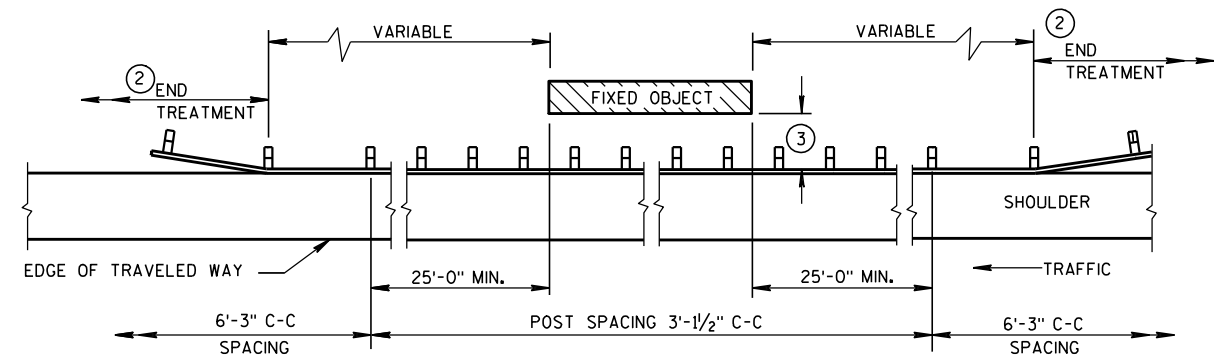
THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

- ① STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.
- ② USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT	POST SPACING
3'-6"	3' - 1 1/2"
4'-6"	6' - 3"



BEAM GUARD AT FULL WIDTH BRIDGES

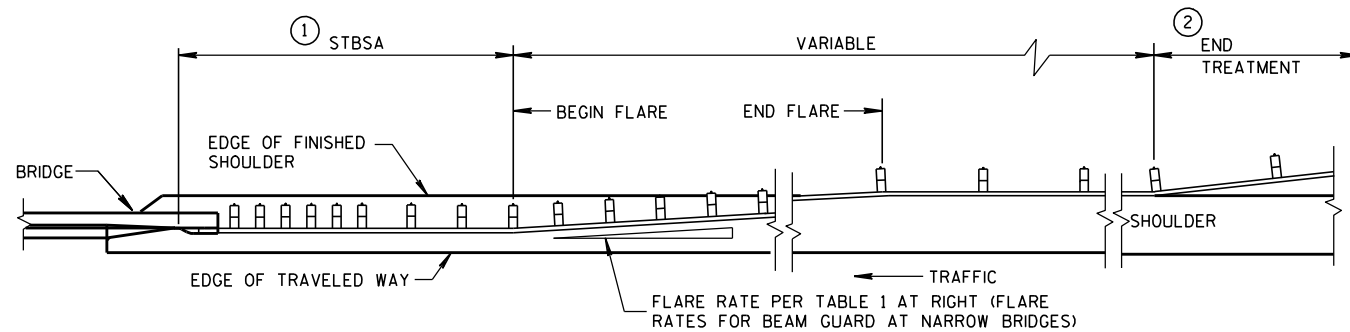


BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")

**TABLE 1
FLARE RATES FOR BEAM
GUARD AT NARROW BRIDGES**

POSTED SPEED (MPH)	FLARE RATE
25	13:1
30	15:1
35	16:1
40	18:1
45	21:1
50	24:1
55	26:1
65	30:1



**BEAM GUARD AT NARROW BRIDGES
(FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)**

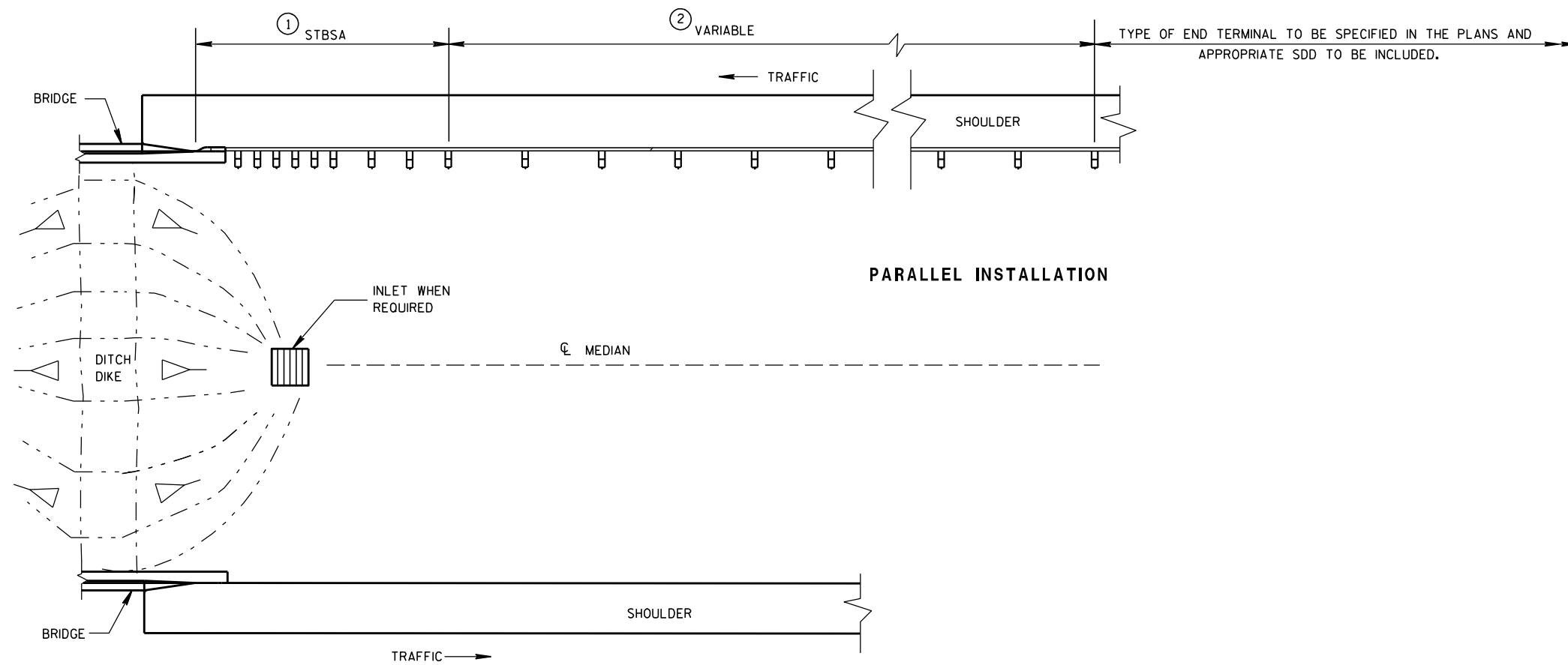
**STEEL PLATE BEAM GUARD
CLASS "A"
AT BRIDGES, OBSTACLES
AND SIDEROADS/DRIVEWAYS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-21-07 /s/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

GENERAL NOTES

- ① STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.
- ② LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.



BEAM GUARD AT MEDIAN APPROACH TO BRIDGES

6

6

S.D.D. 14 B 18-6b

S.D.D. 14 B 18-6b

STEEL PLATE BEAM GUARD CLASS "A" AT MEDIAN APPROACH TO BRIDGES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	/S/ Jerry H. Zogg
8-21-07 DATE	ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

BILL OF MATERIALS

NOTE NO.	DESCRIPTION
①	WOOD BREAKAWAY TERMINAL POST: 5 1/2" X 7 1/2" X 3'-9"
②	STEEL TUBE TS 8" X 6" X 0.188", 6'-0"
④	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	PIPE SLEEVE: 2" X 5 1/2" STANDARD PIPE
⑦	BEARING PLATE
⑧	BCT CABLE ASSEMBLY
⑨	CABLE ANCHOR BOX
⑩	STRUT & YOKE
⑪	STEEL PLATE BEAM, END PANEL 12 GA.
⑫	STEEL PLATE BEAM: 12 GA. 13'-6 1/2"
⑬	IMPACT HEAD
⑭	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS

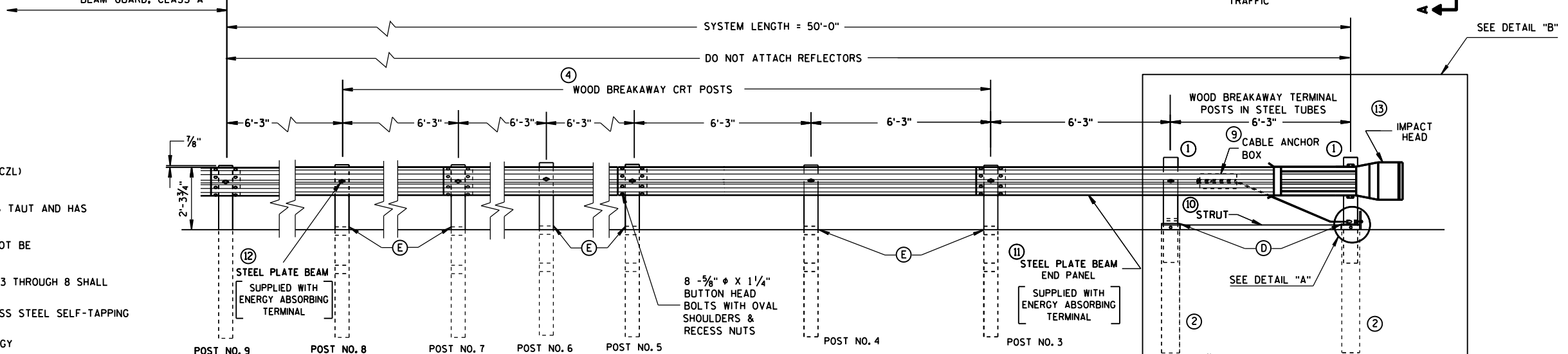
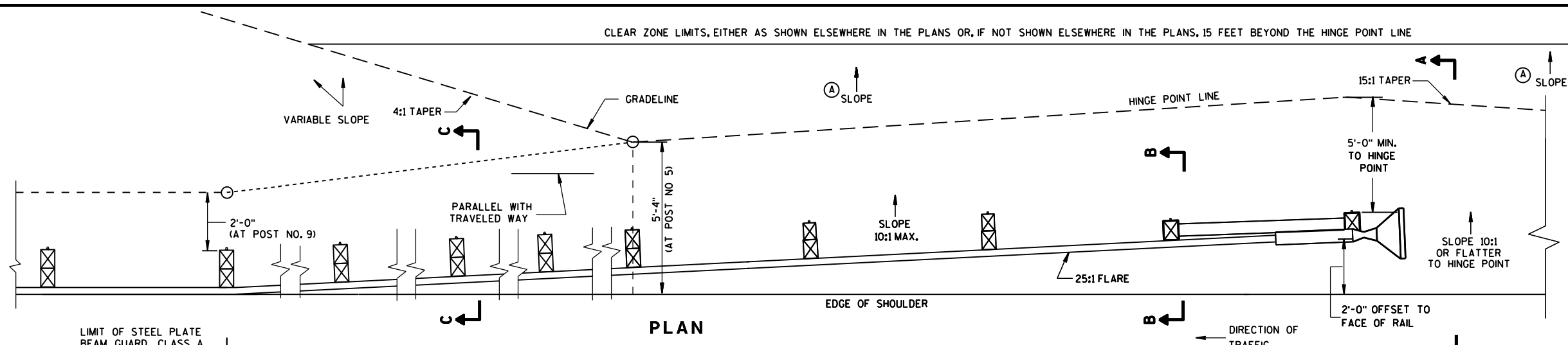
GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

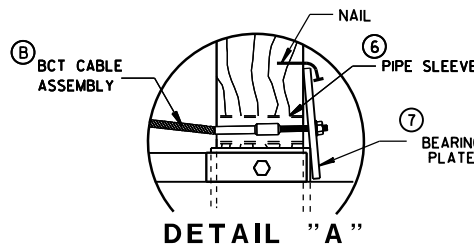
- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.
- (D) THE TOP OF THE STEEL TUBE ON POSTS 1 AND 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE 3/4" ABOVE THE FINISHED GROUND LINE.
- (F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER.

STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

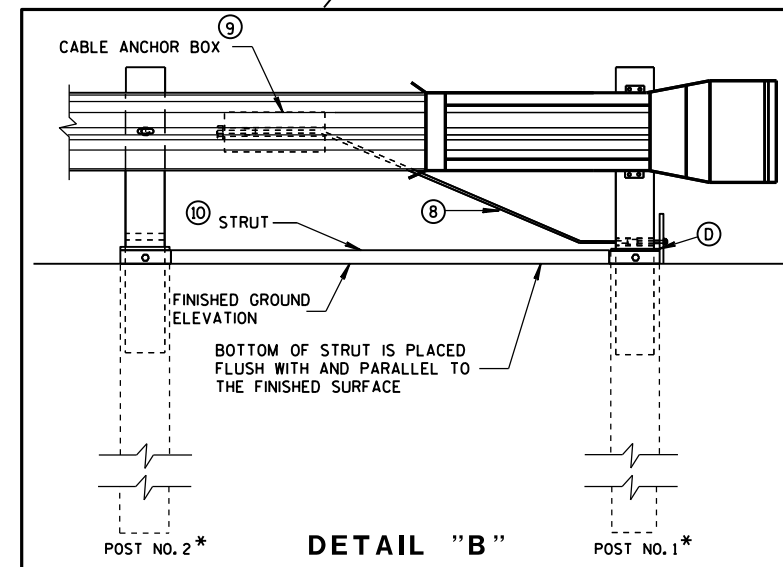
*DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.



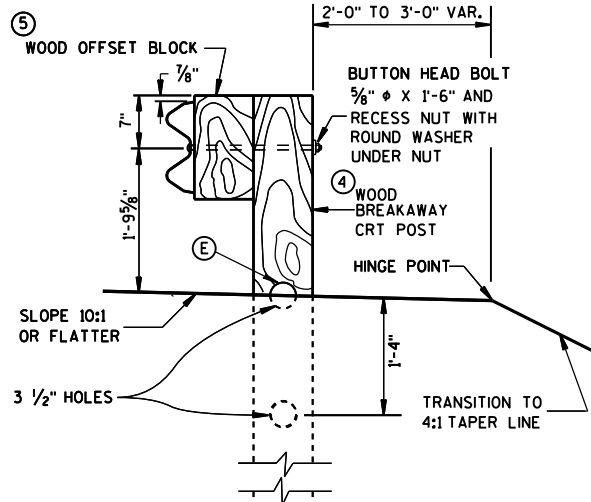
ELEVATION



DETAIL "A"

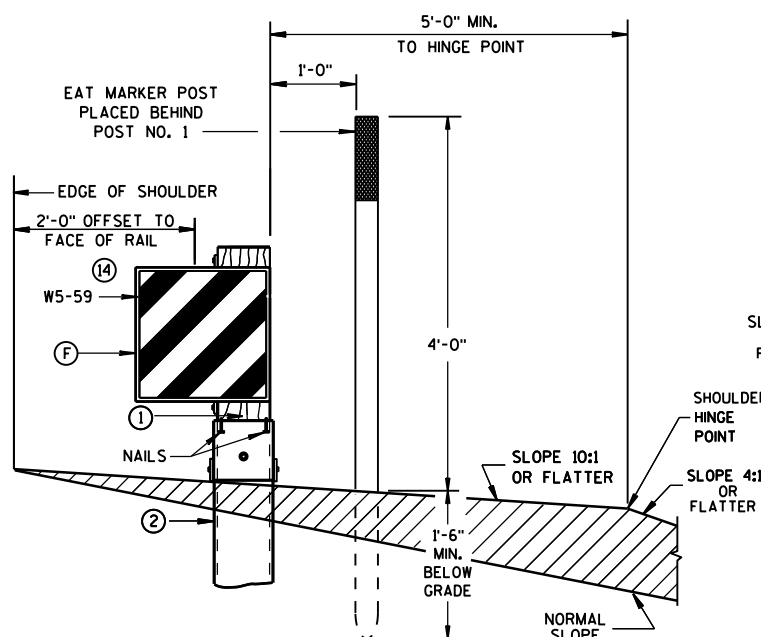


DETAIL "B"



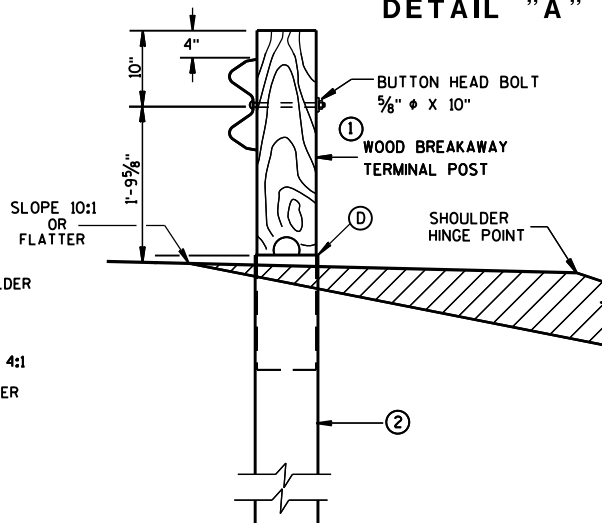
SECTION C-C

TYPICAL AT POST NOS. 6, 8



SECTION A-A

TYPICAL AT POST NO. 1*

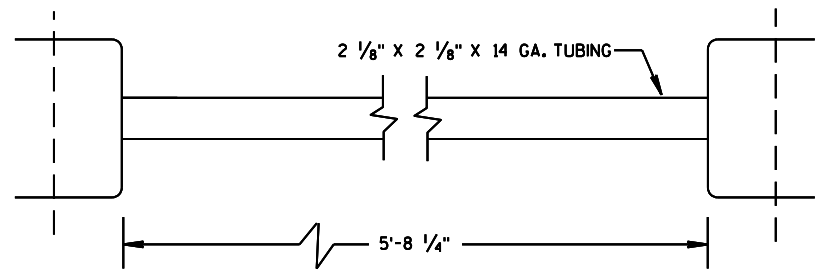


SECTION B-B

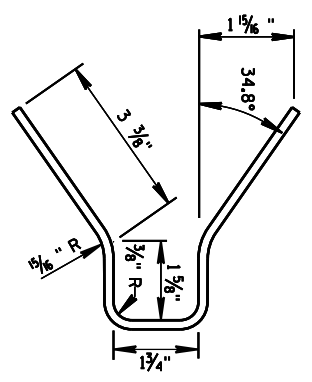
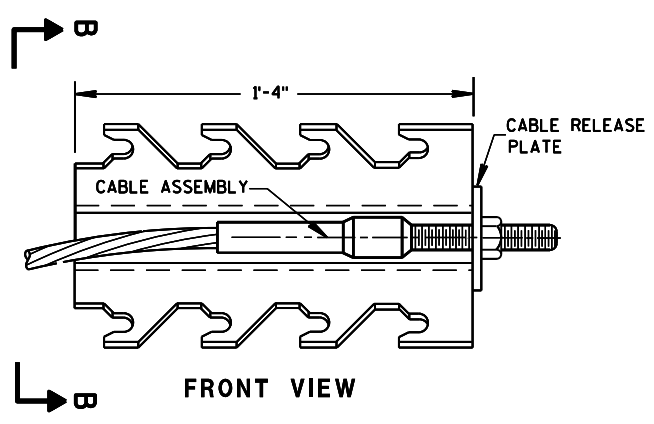
TYPICAL AT POST NO. 2*

**STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL**

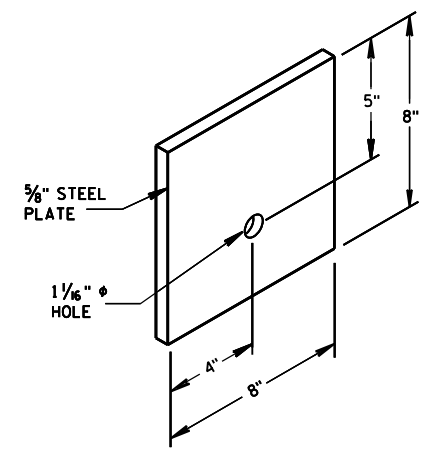
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



⑩ STRUT DETAIL



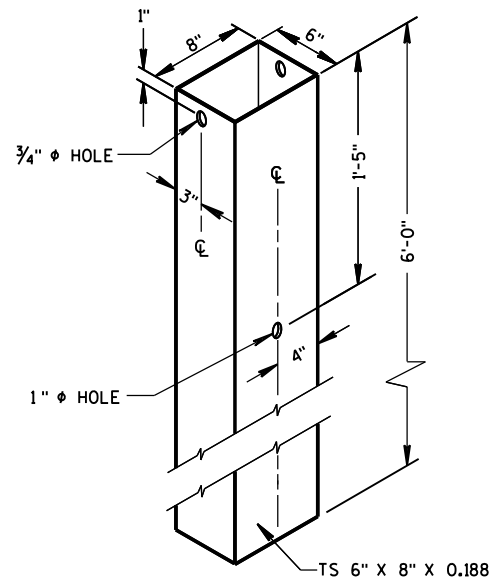
⑨ CABLE ANCHOR BOX



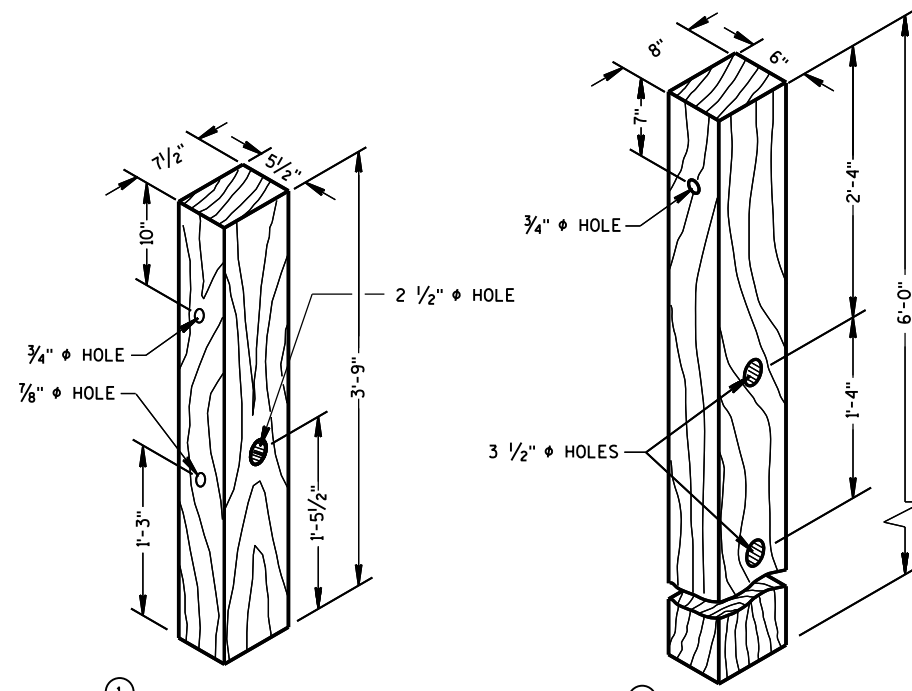
⑦ STEEL BEARING PLATE

6

6



② 72" STEEL TUBE
(POSTS NO. 1-2)



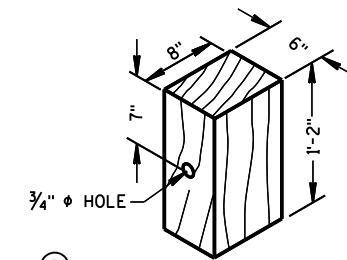
① TERMINAL POST

④ CRT POST
(POSTS NO'S 5-8)

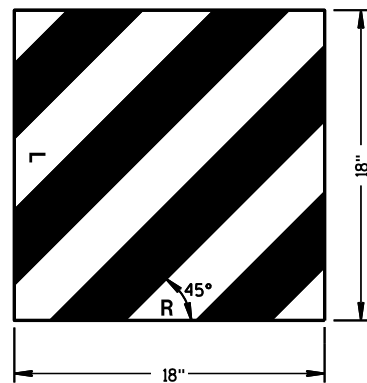
WOOD BREAKAWAY POSTS

GENERAL NOTES

WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

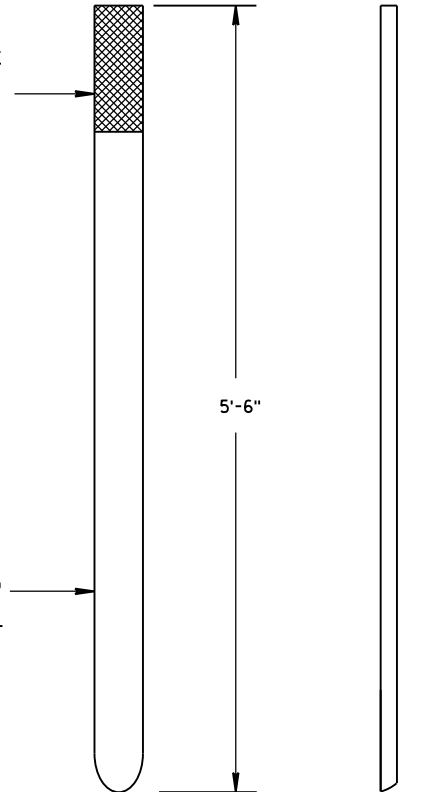


⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



⑭ REFLECTIVE SHEETING DETAILS

TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9".
SEE STANDARD
SPECIFICATION 637.



FRONT VIEW SIDE VIEW

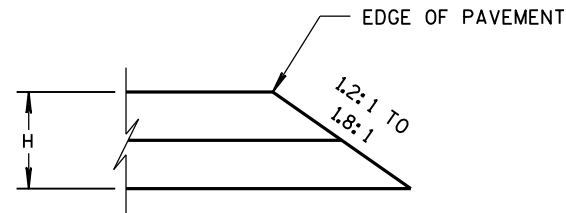
E.A.T. MARKER POST

E.A.T. MARKER
POST (YELLOW)
SEE APPROVED
PRODUCTS LIST

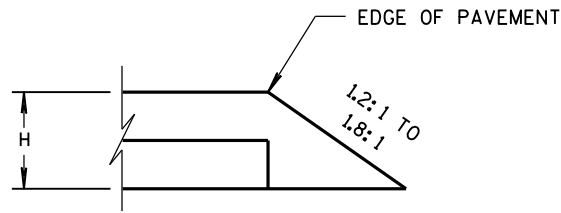
STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

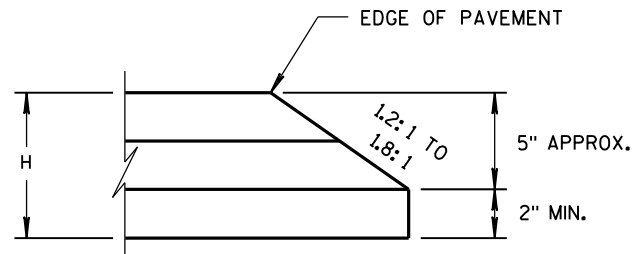
APPROVED
June 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



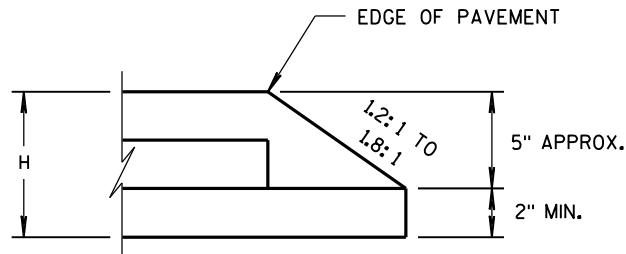
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

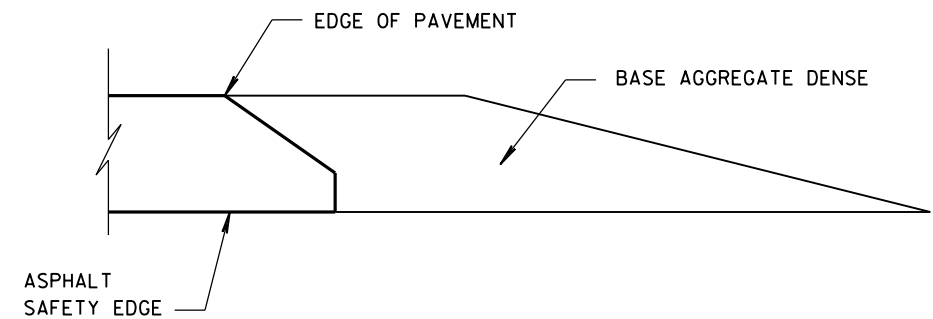


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

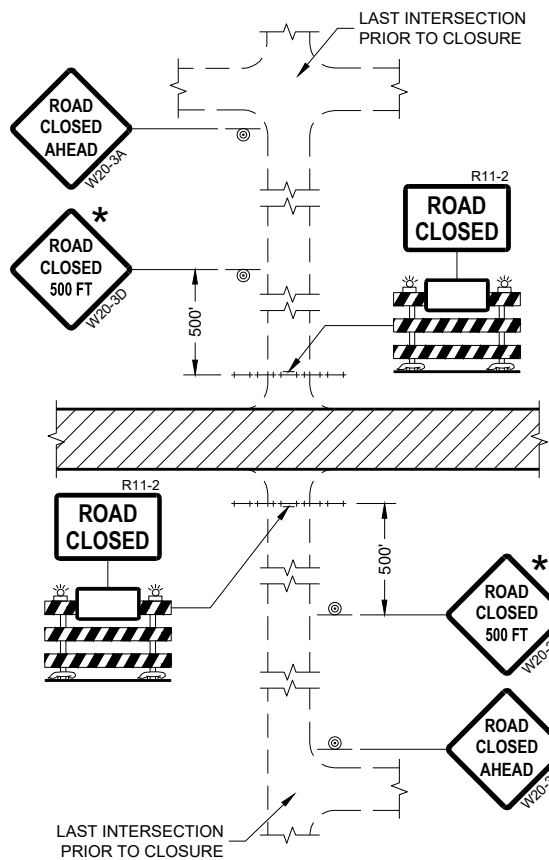
6

6

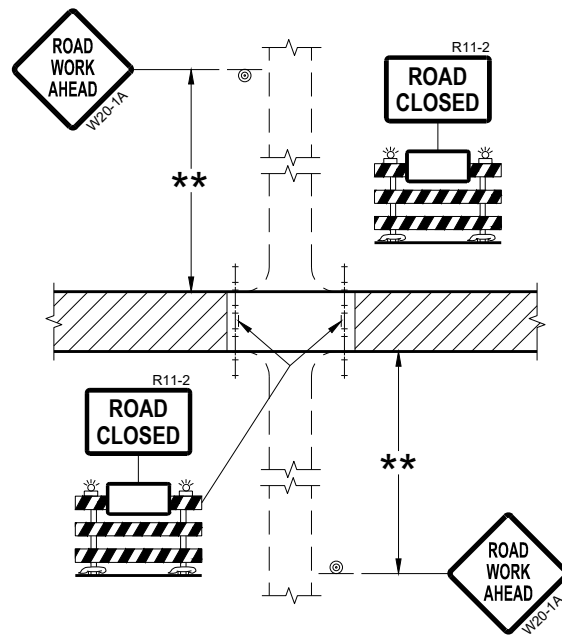
S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

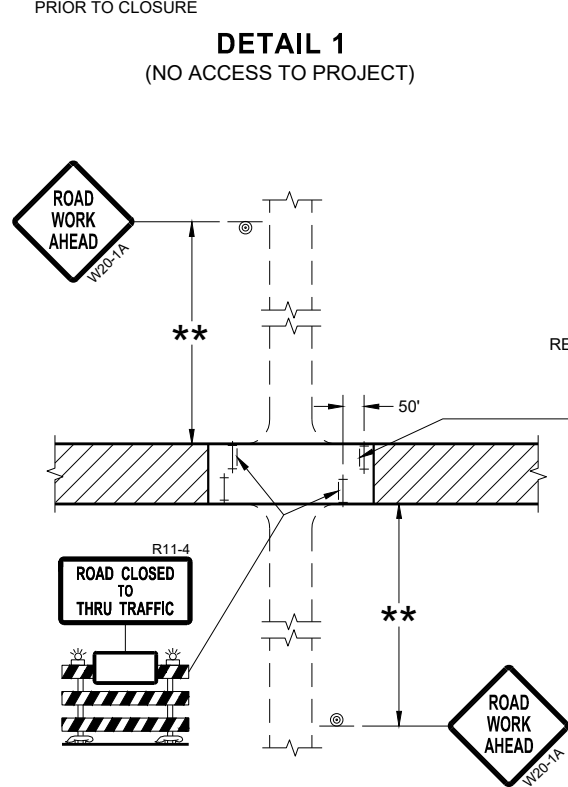
SAFETY EDGE _{SM}	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 11/30/2012	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



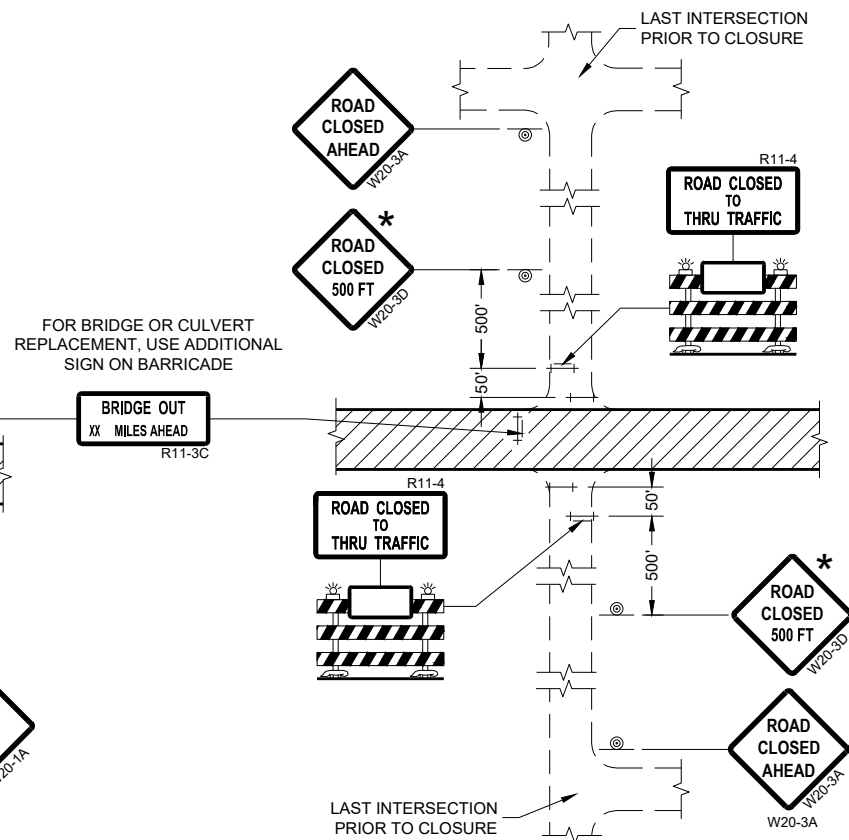
DETAIL 1
(NO ACCESS TO PROJECT)



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



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT 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.

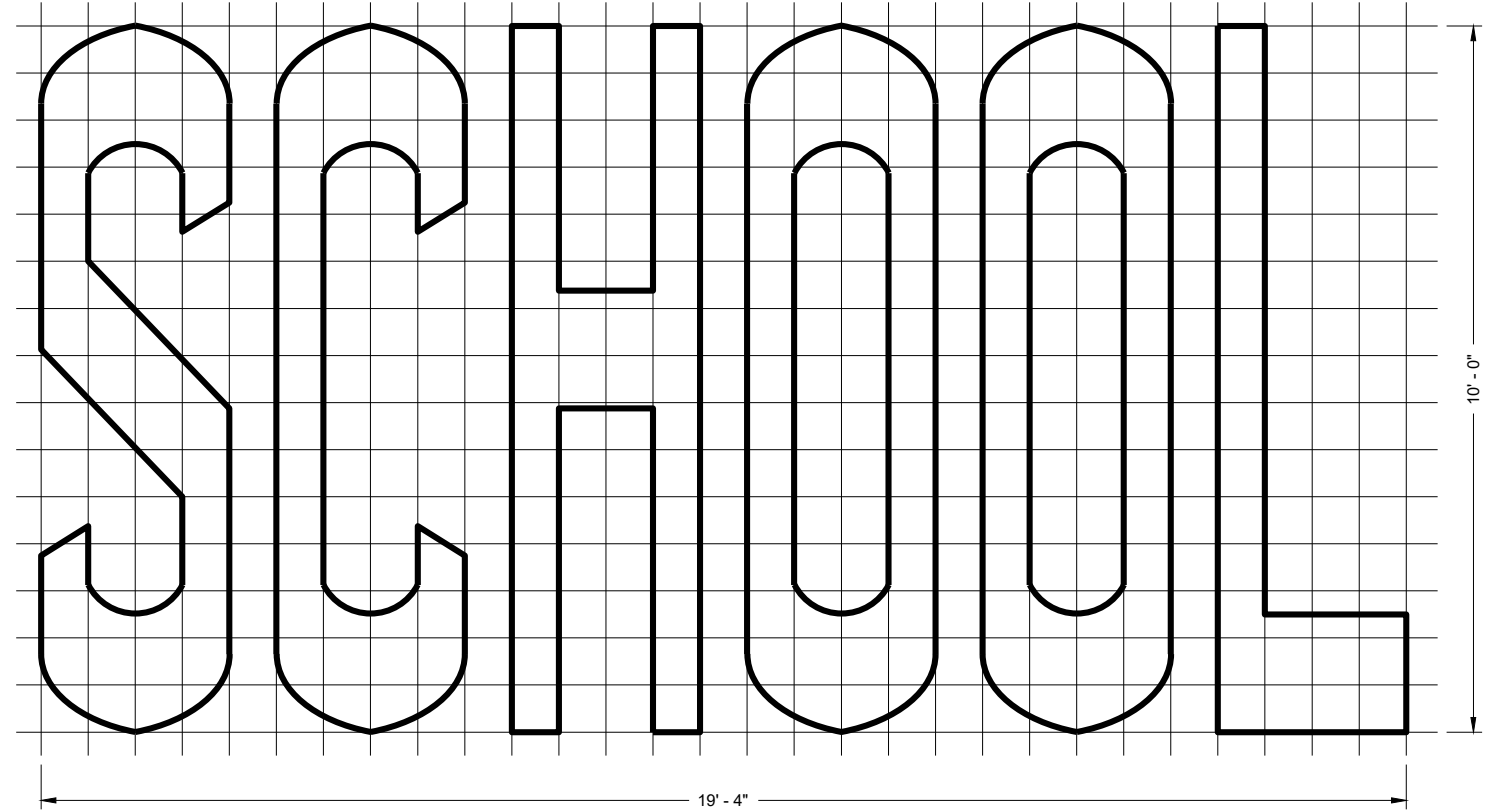
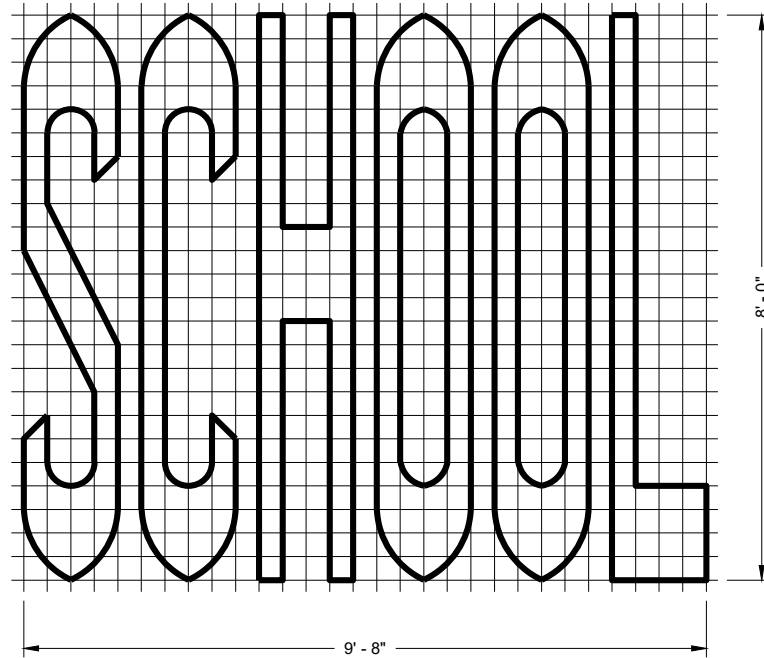
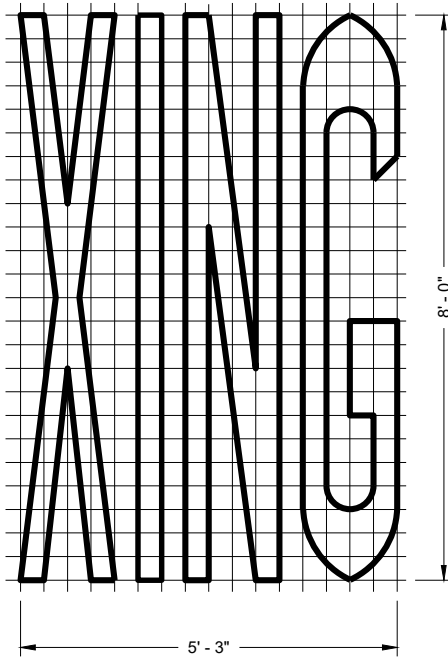
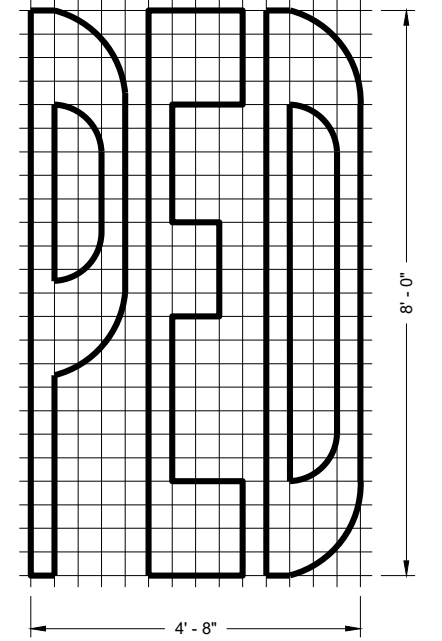
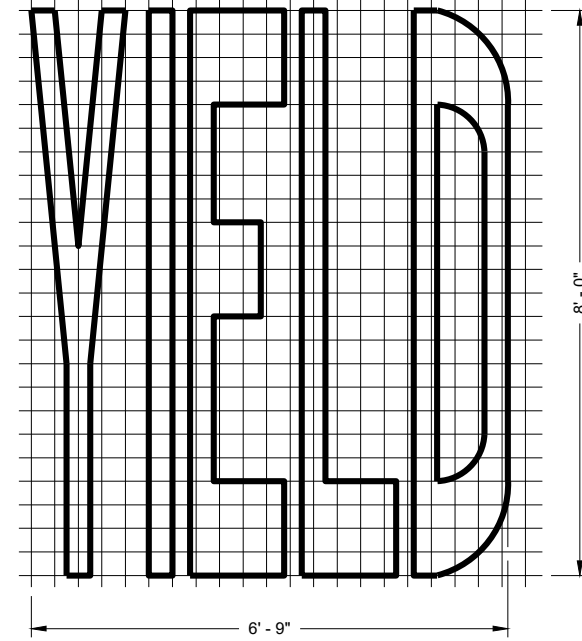
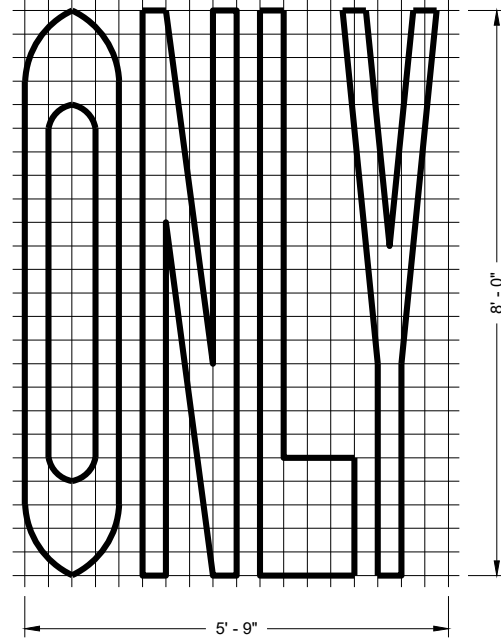
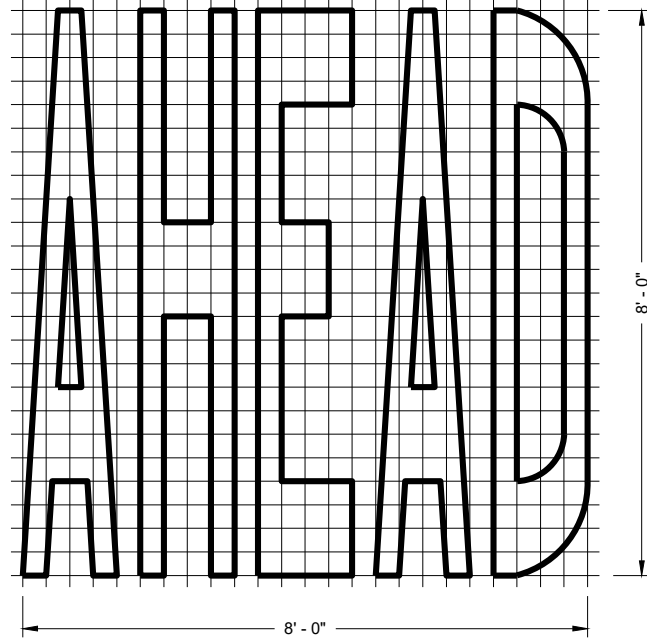
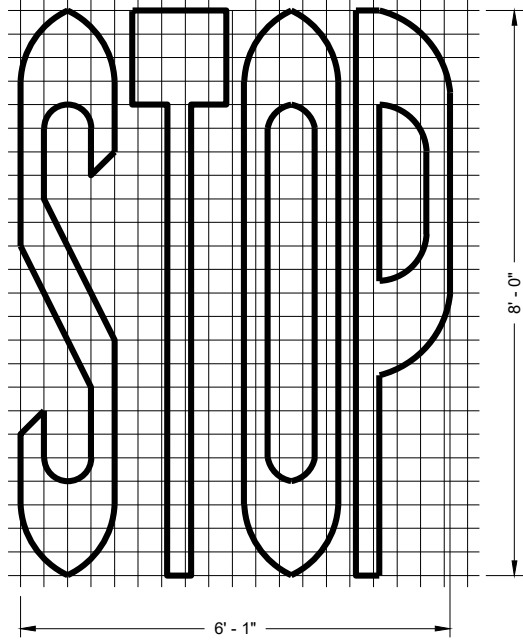
LEGEND

- ⊙ 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



SINGLE LANE

TWO - LANE

GENERAL NOTES

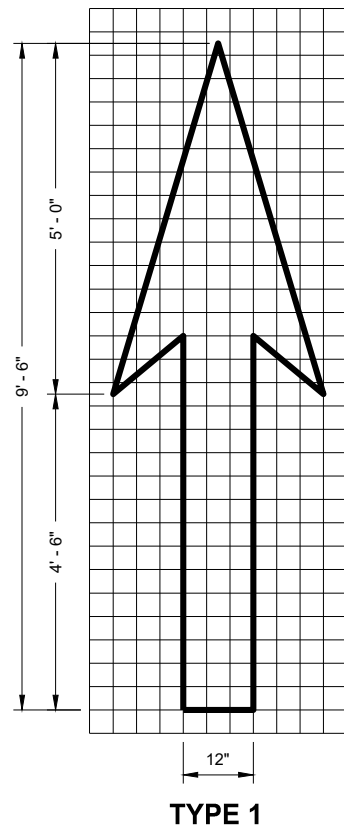
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING WORDS

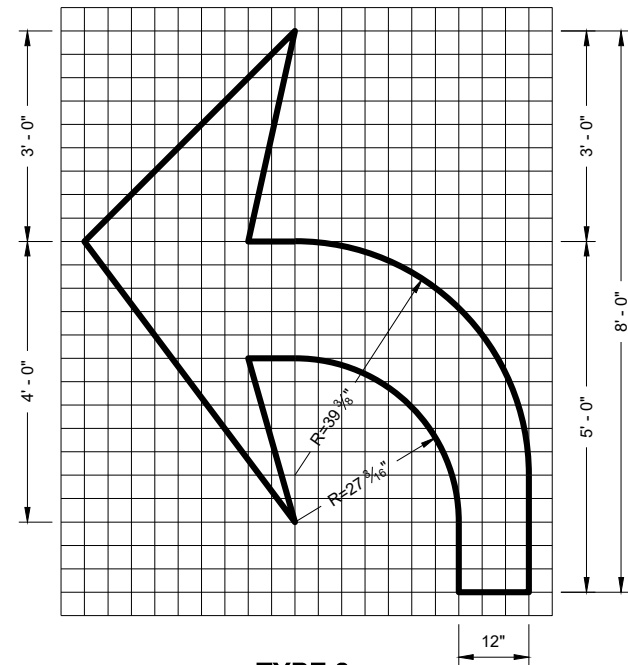
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING
ENGINEER

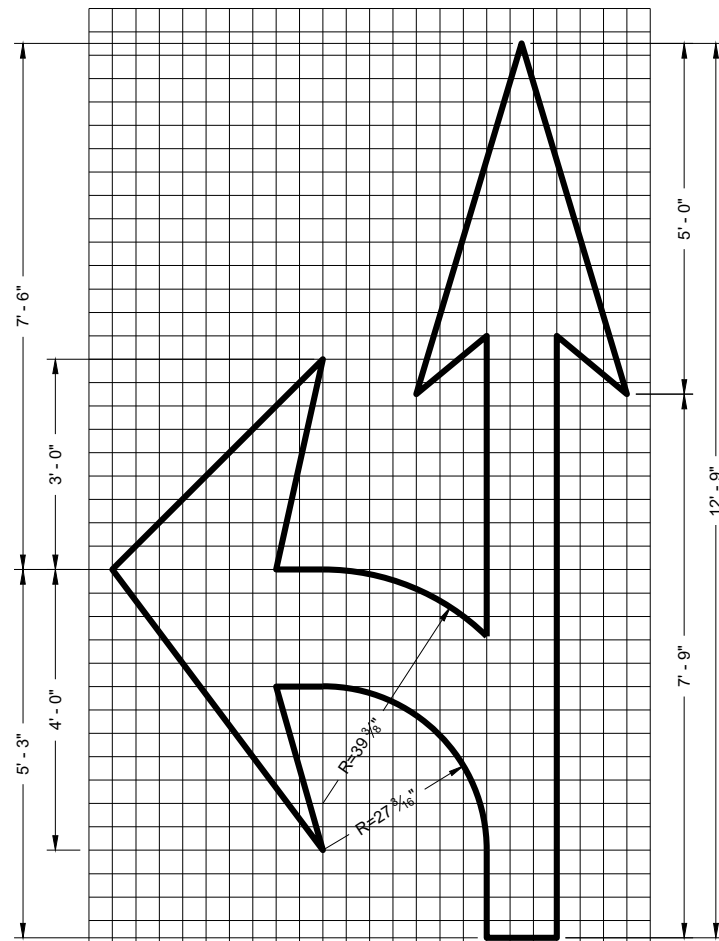
FHWA



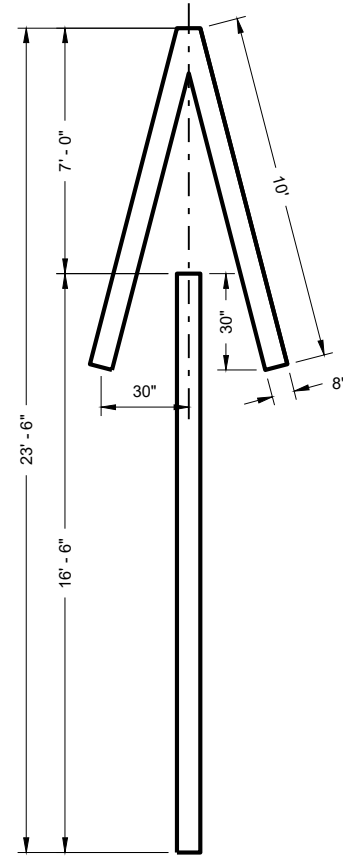
TYPE 1



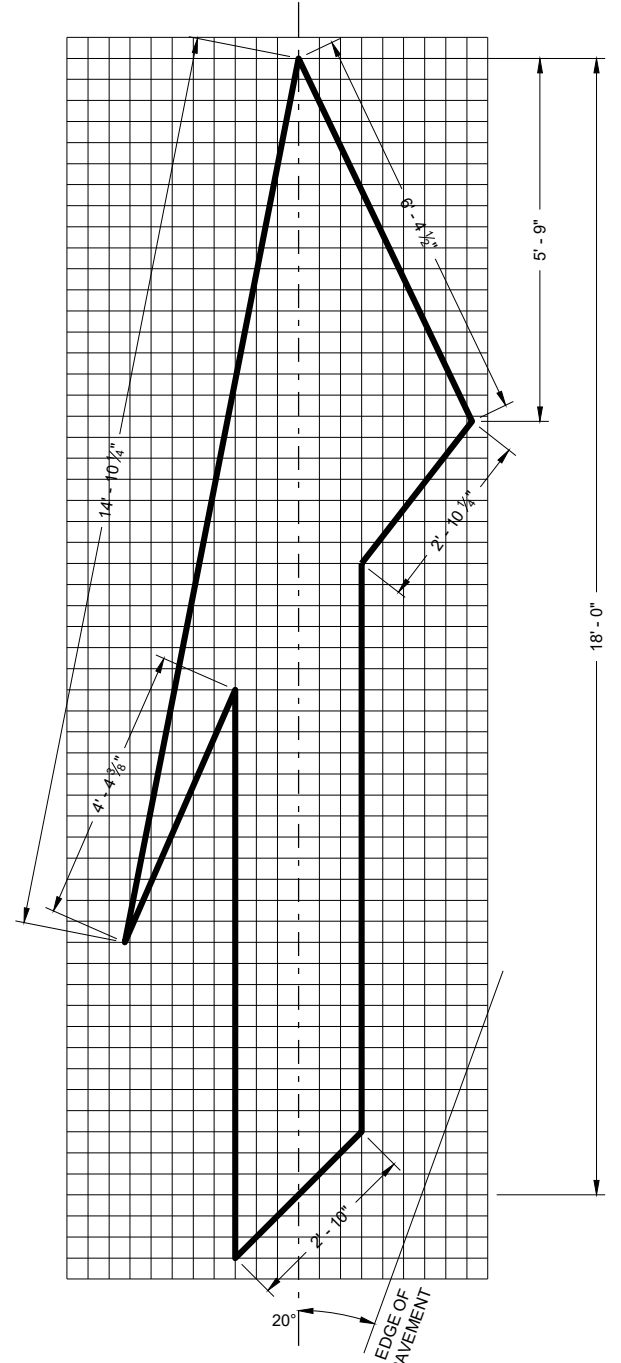
TYPE 2



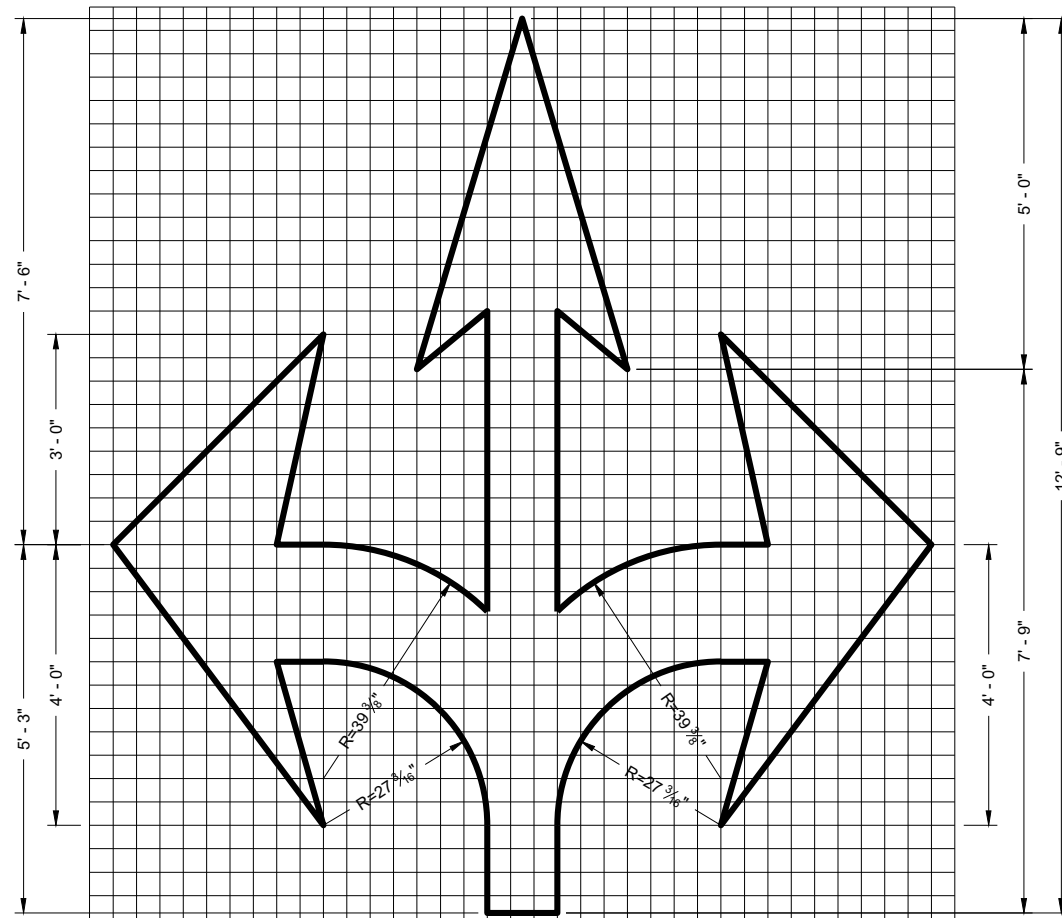
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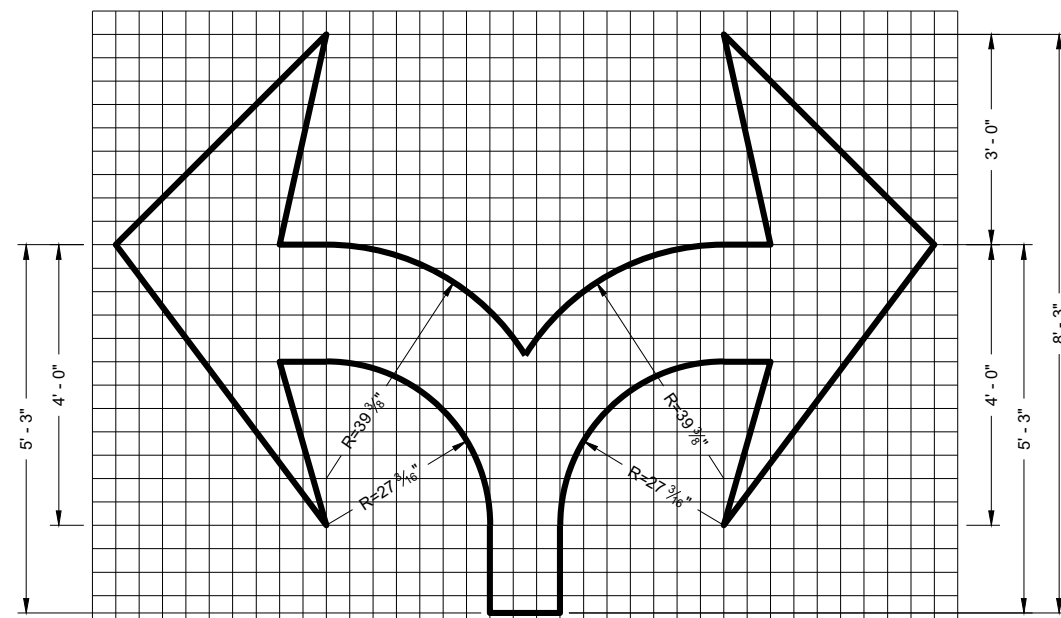
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

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 ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

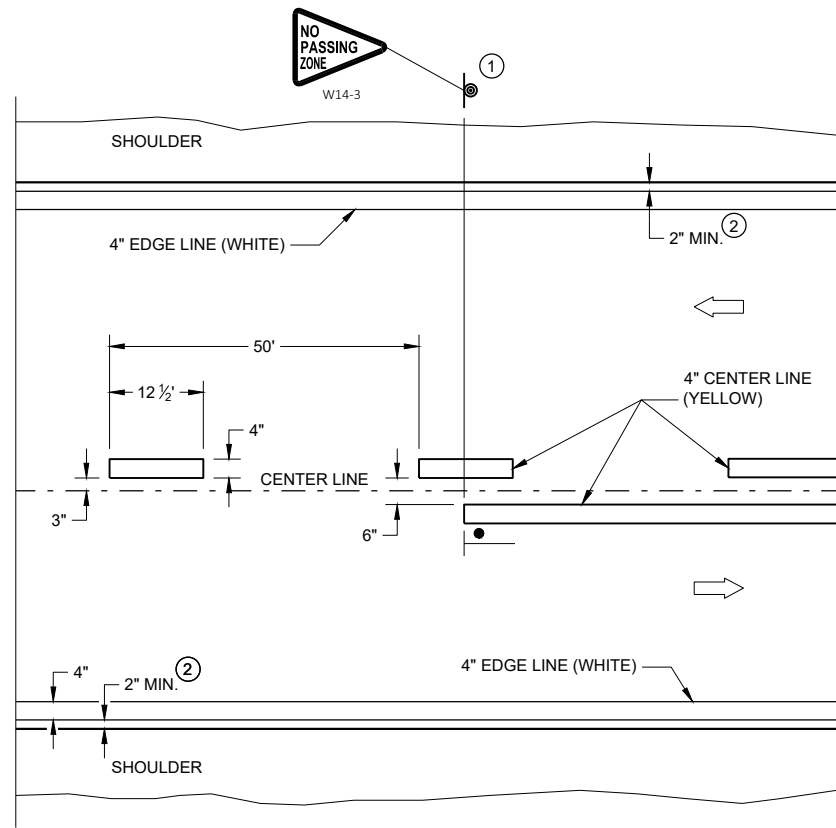
APPROVED

November 2019

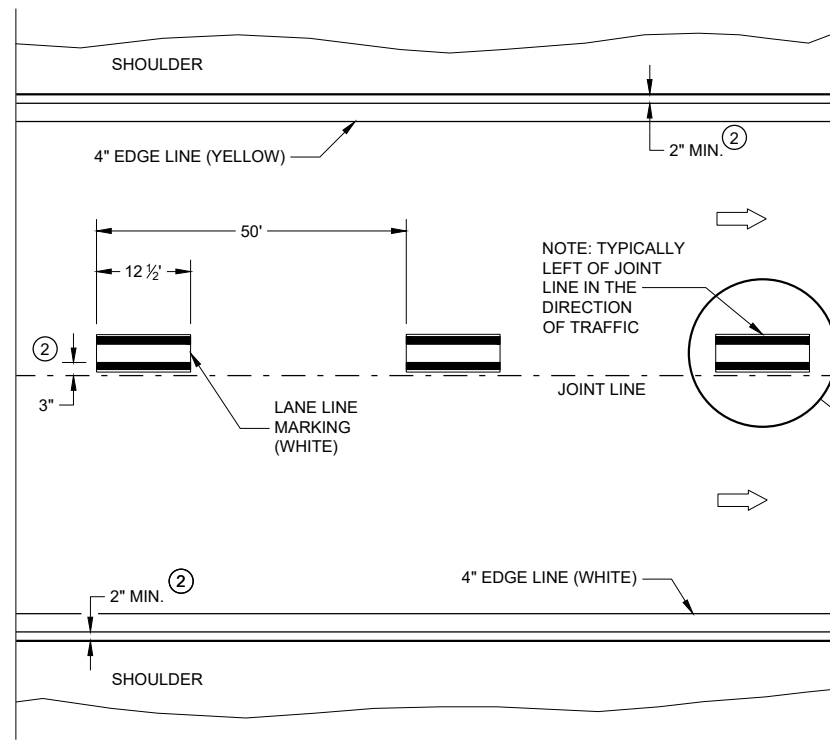
DATE

FHWA

/s/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER

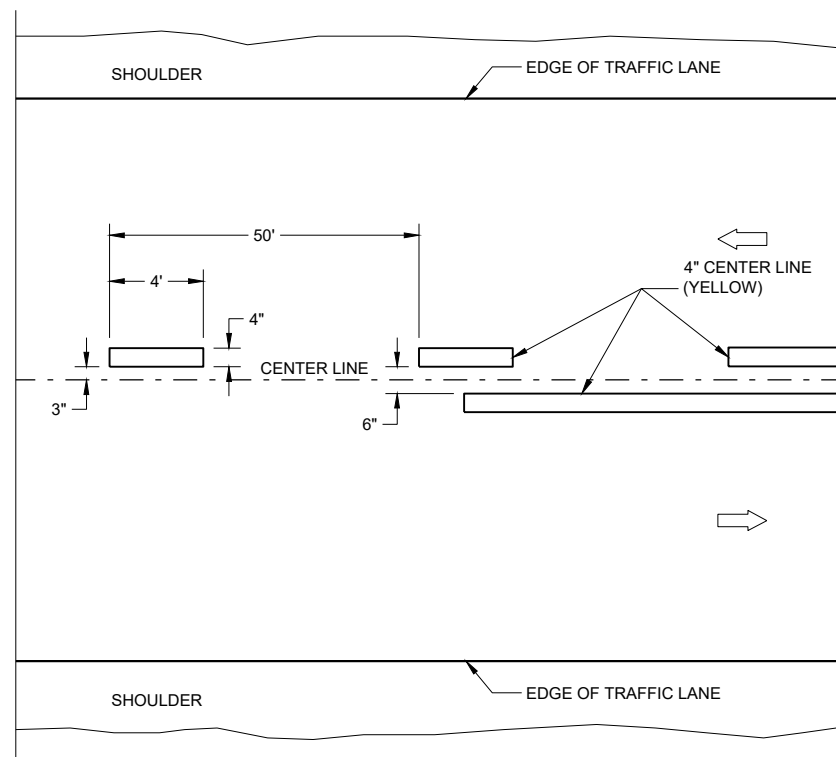


TWO WAY TRAFFIC

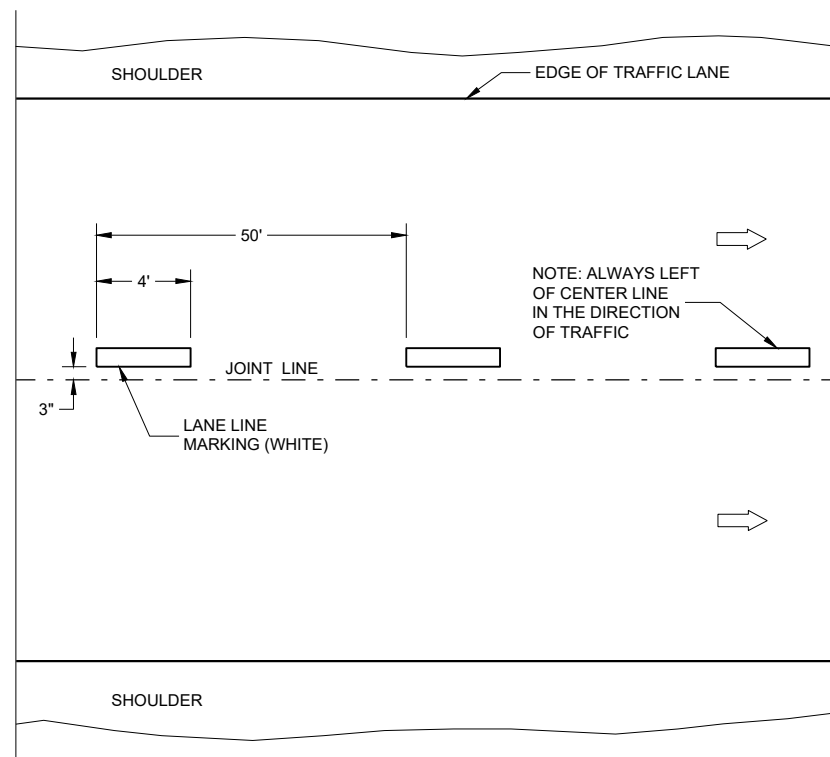


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

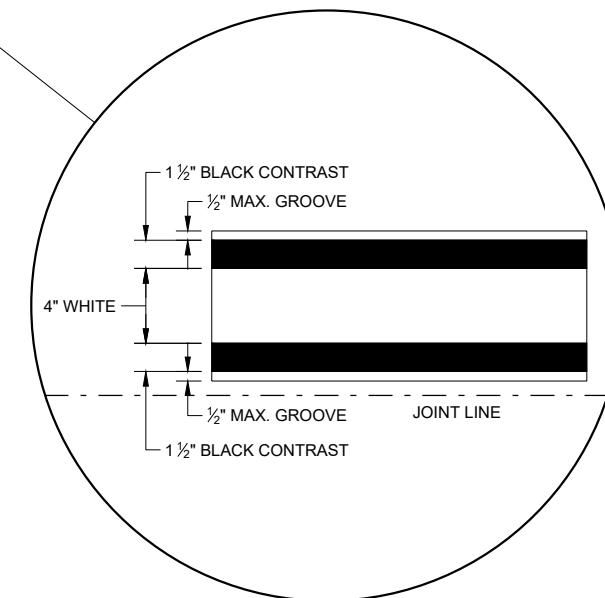
GENERAL NOTES

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

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 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



LONGITUDINAL MARKING (MAINLINE)

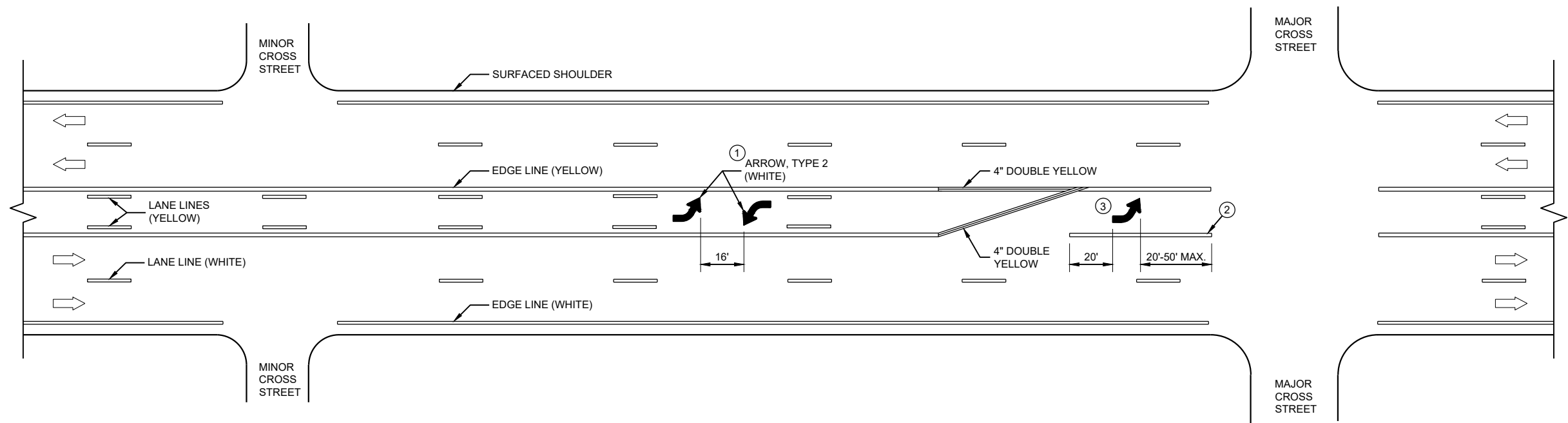
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Matthew Rauch
DATE STATEWIDE SIGNING AND MARKING
ENGINEER

GENERAL NOTES

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

➡ DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

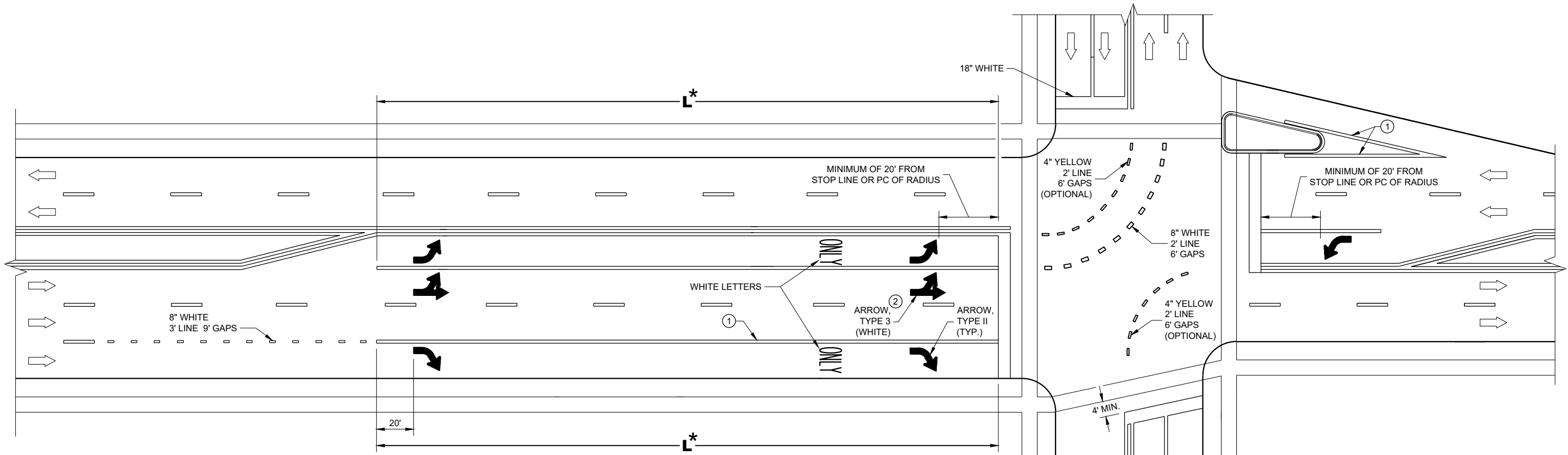
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6

SDD 15C08 - 20b

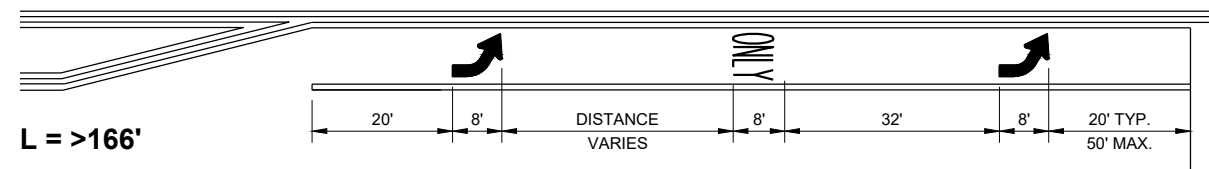
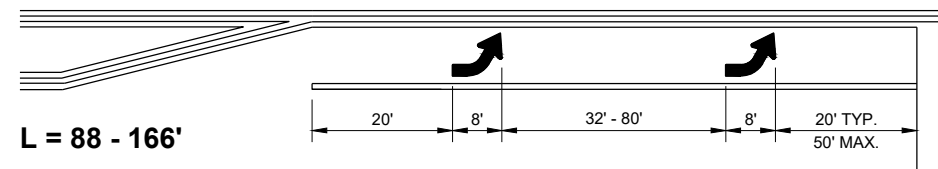
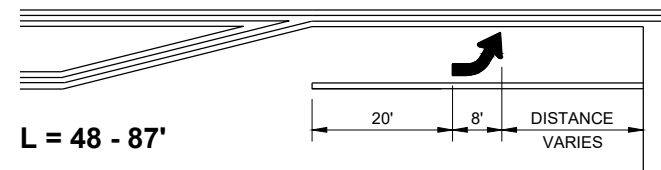
SDD 15C08 - 20b

<p>PAVEMENT MARKING (TURN LANES)</p>
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>



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 8" WHITE
- ② 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

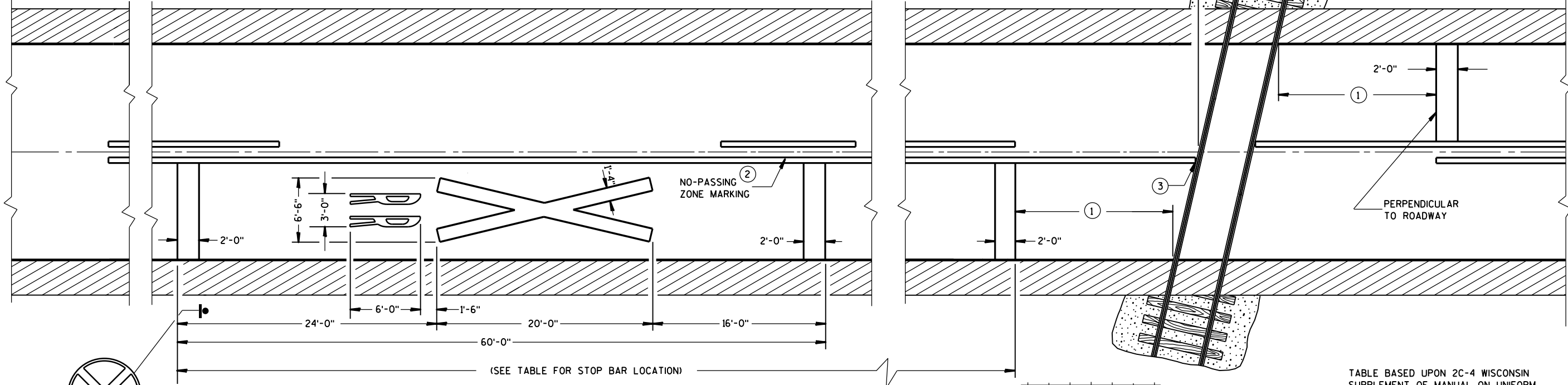
PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



W14-3

500' MIN.



W10-1

PAVEMENT MARKING

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.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.

CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.

RETRACE EXISTING SYMBOL WHERE EXISTING SYMBOLS ARE PLACED.

- ① MINIMUM 8' FROM ANY RAILROAD WARNING DEVICES (SIGNALS, GATES, ETC.) OR 25' FROM THE NEAREST RAIL, WHICHEVER DISTANCE IS GREATER.
- ② 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.
- ③ FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

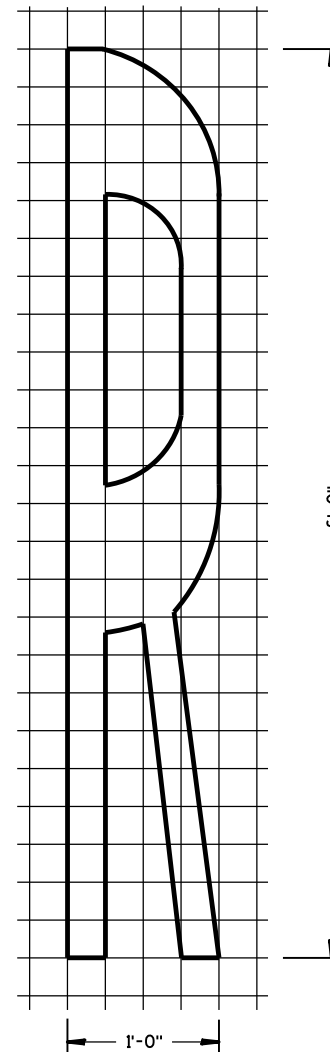


TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

Posted Speed (M.P.H.)	Dimension Range (Feet)
25	150* - 250
30	200* - 300
35	250* - 450
40	300* - 500
45	400* - 650
50	550* - 800
55	750* - 1000
60	1000* - 1250
65	1000* - 1250

* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSE PROXIMITY OF DRIVEWAYS, BRIDGES, SIDEROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.

SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS






STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept., 2017 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

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

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

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

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

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

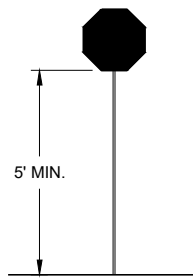
WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

- FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.
- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
 - ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR THE APPROVED PRODUCTS LIST.
- INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.
- PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.
- DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



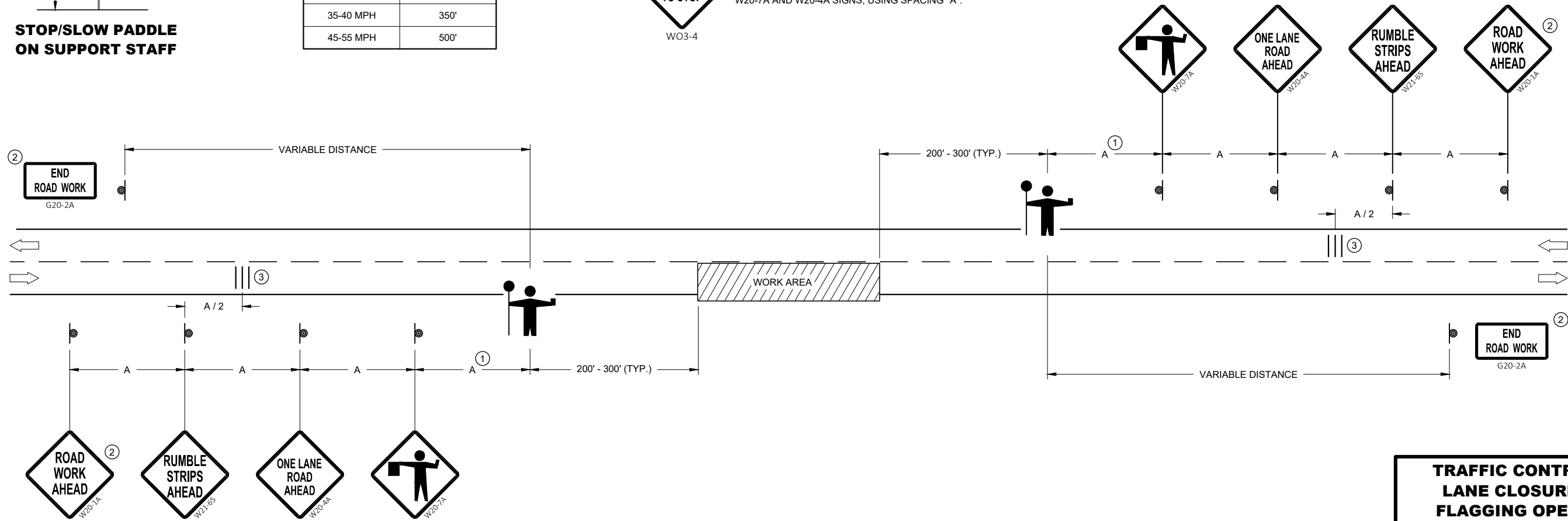
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION





TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2019 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

LEGEND

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

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

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

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

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

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

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

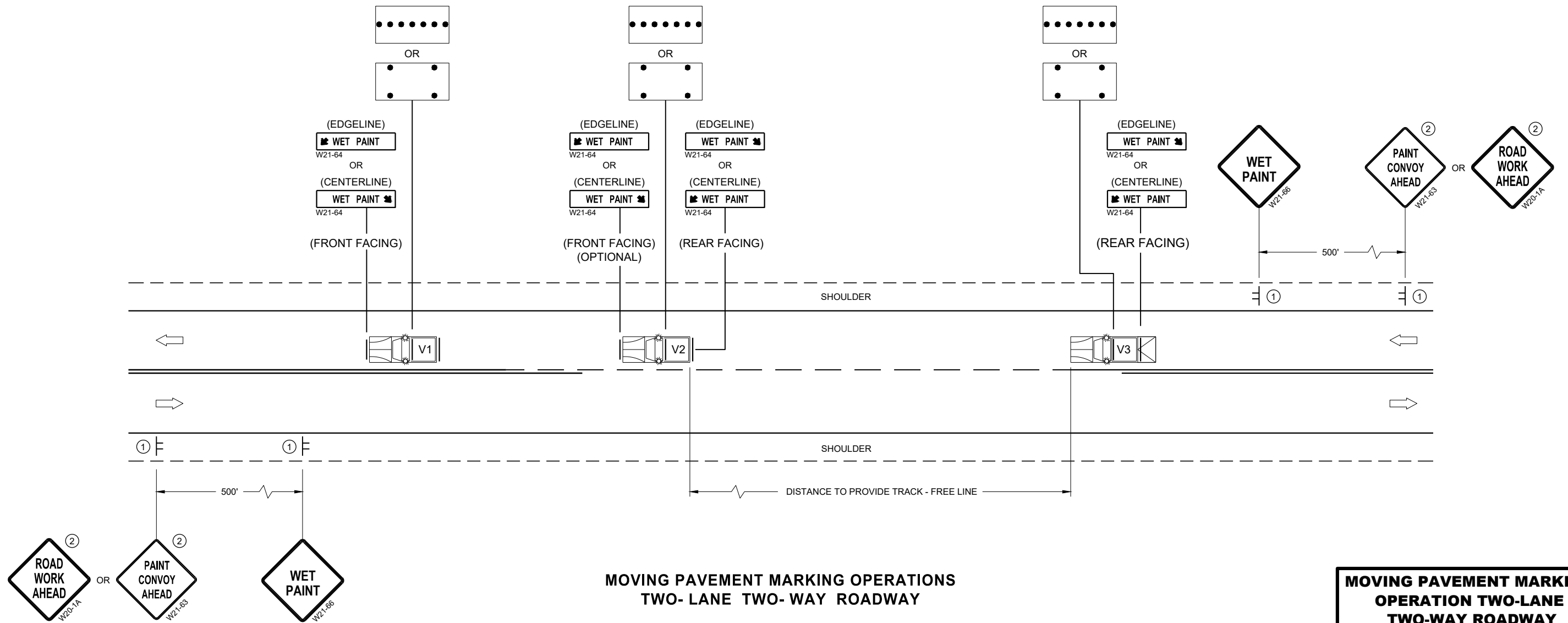
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 18" FOR WET PAVEMENT MARKING.

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.

6

6








**MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY**

SDD 15C19 - 06a

SDD 15C19 - 06a

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2019 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (MERGE)
-  FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

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

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

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

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

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

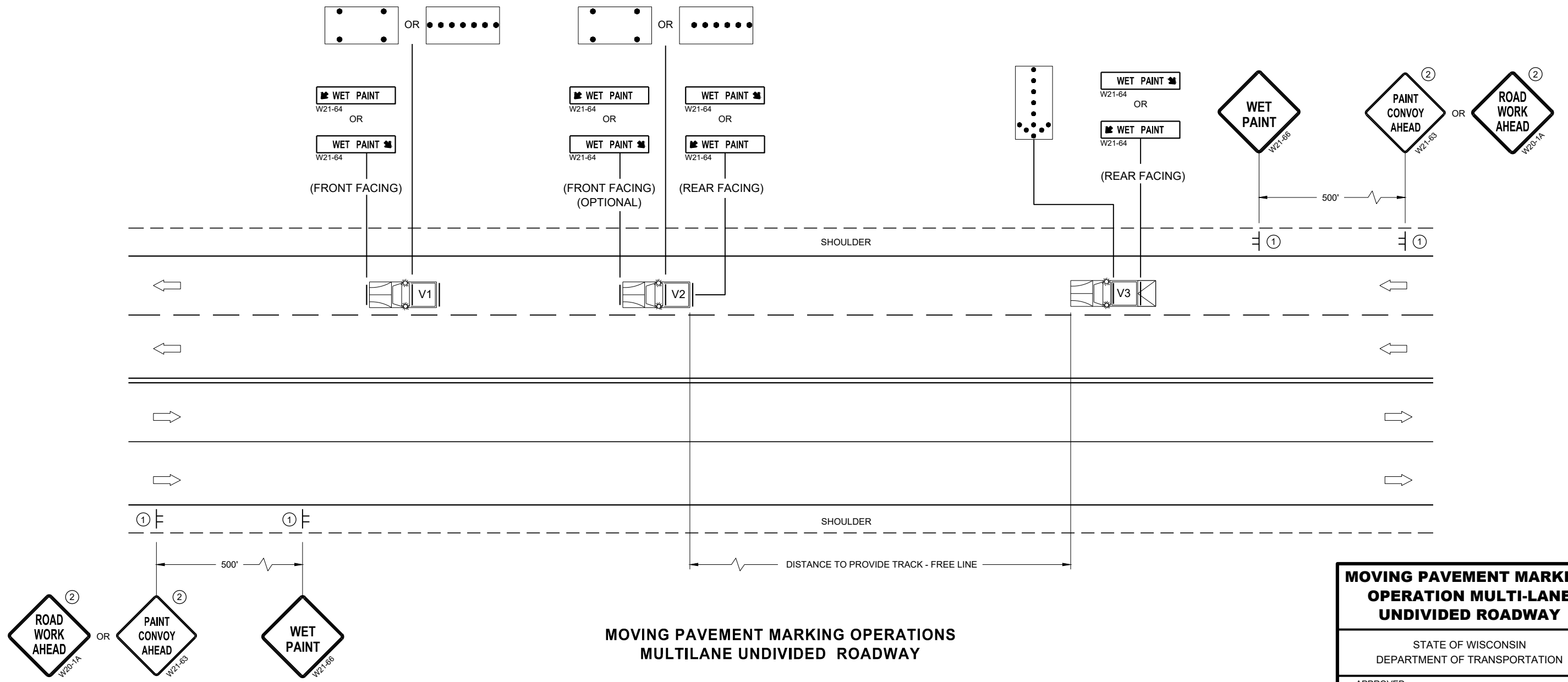
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLES AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL HAVE A MINIMUM HEIGHT OF 18" FOR WET PAVEMENT MARKINGS.

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.

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**MOVING PAVEMENT MARKING OPERATIONS
MULTILANE UNDIVIDED ROADWAY**

MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2019 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

SDD 15C19 - 06b

SDD 15C19 - 06b

GENERAL NOTES

SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

① USED ONLY WHEN APPROVED BY REGION TRAFFIC ENGINEER.

* SIGNS MAY BE OMITTED IF SPACE DOES NOT PERMIT PLACEMENT.

** IF POSTED SPEED IS 45 MPH OR GREATER, PLACE W5-54 SIGN UNDER R4-7 SIGN. MOUNT W5-54 SIGN AT 4' MOUNTING HEIGHT (TOP OF ROADWAY TO BOTTOM OF SIGN).

LEGEND

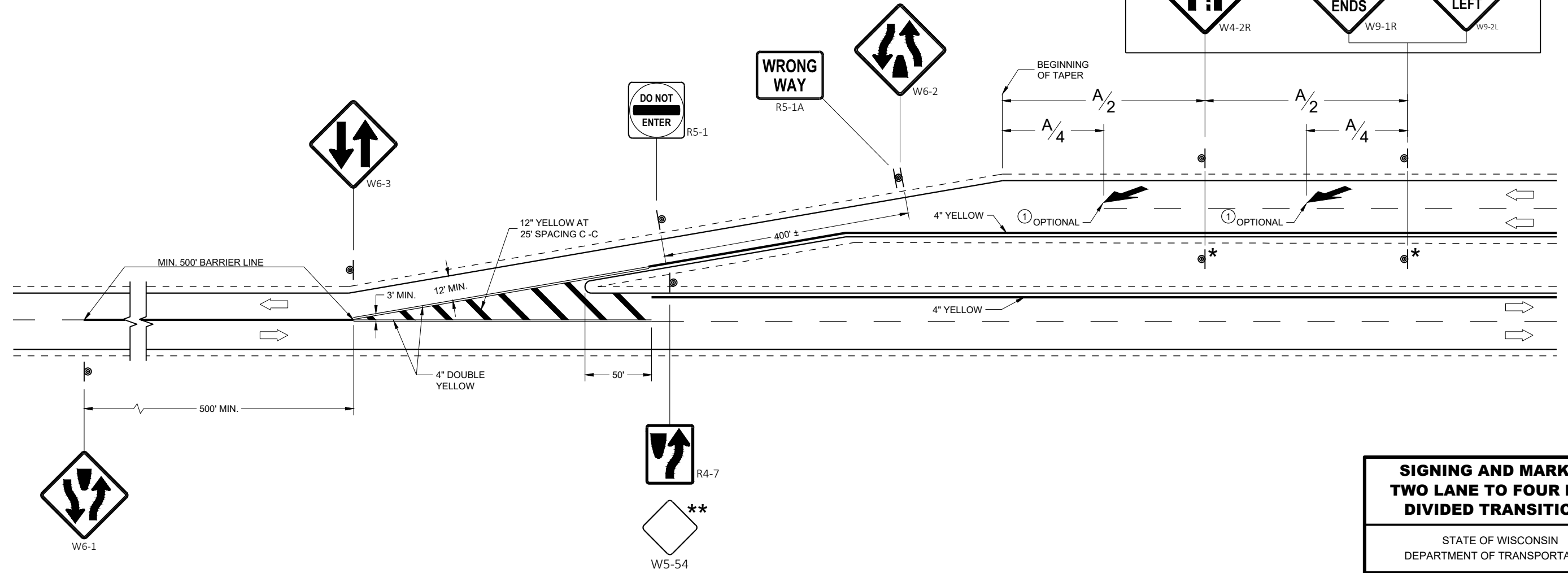
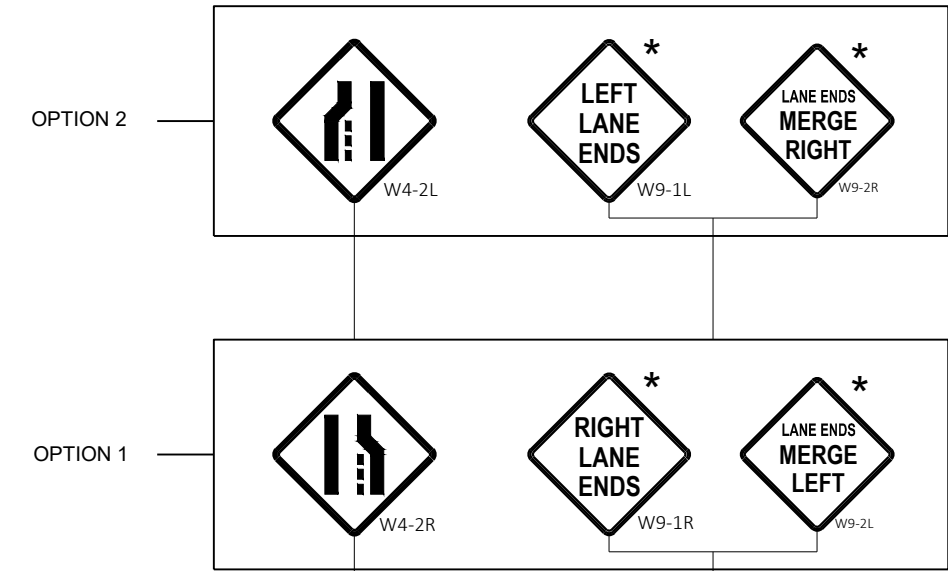
A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

⊙ SIGN MOUNTED ON PERMANENT SUPPORT

➡ DIRECTION OF TRAFFIC

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	325'
30	460'
35	565'
40	670'
45	775'
50	885'
55	990'
65	1200'
70	1250'

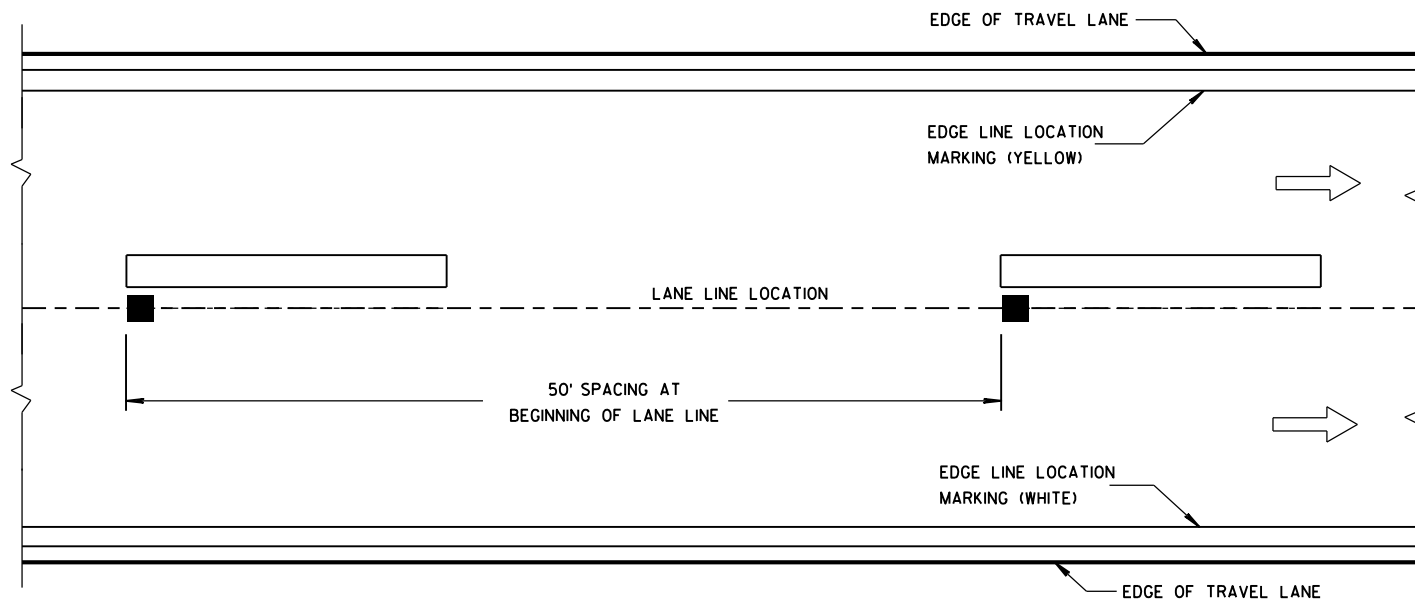


**SIGNING AND MARKING
TWO LANE TO FOUR LANE
DIVIDED TRANSITIONS**

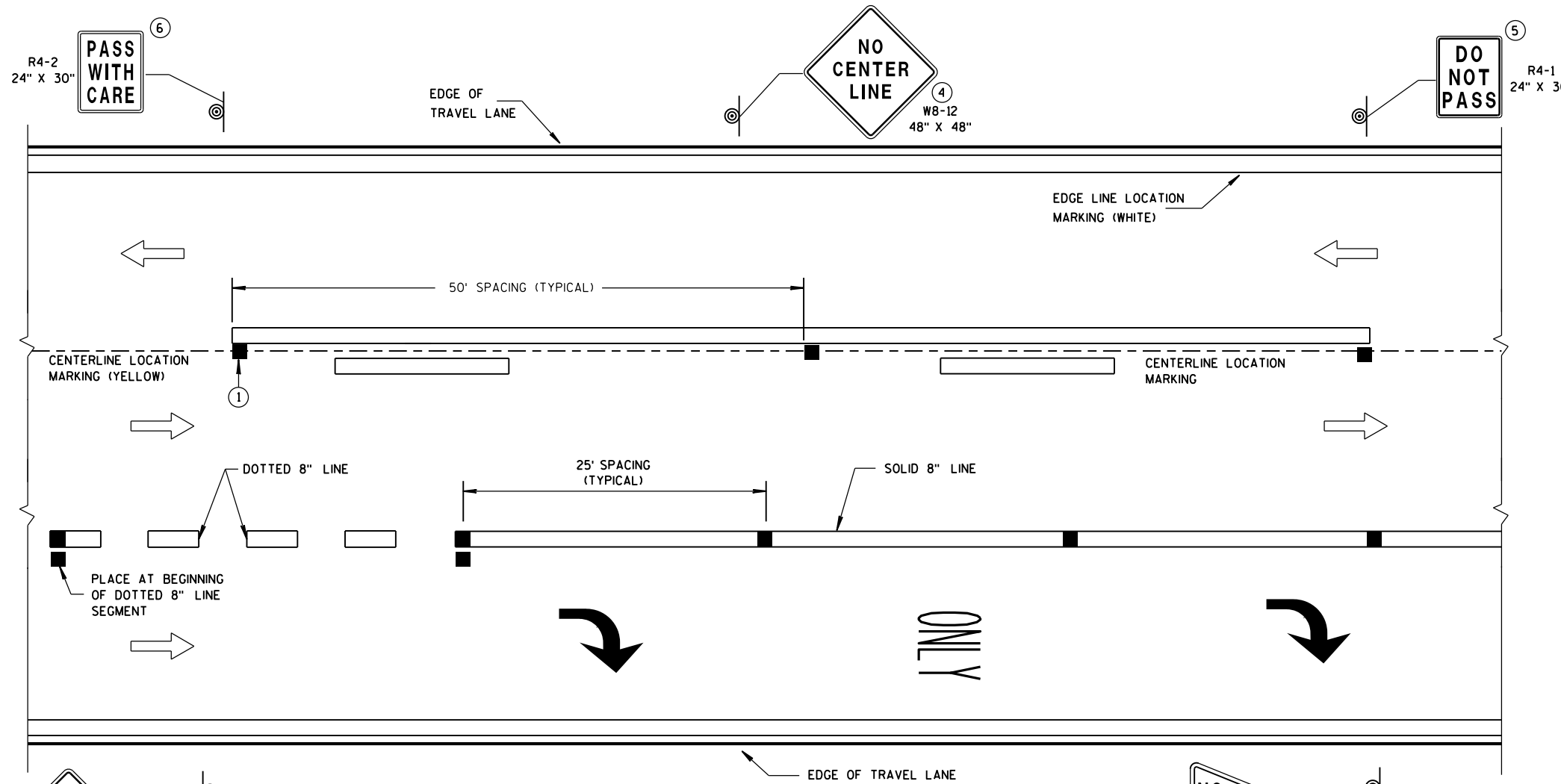
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING
ENGINEER

FHWA



LONGITUDINAL PLACEMENT 4-INCH LANE LINE



LONGITUDINAL PLACEMENT 4-INCH CENTERLINE AND 8-INCH CHANNEL LINE

GENERAL NOTES

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

COLOR OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II SHALL MATCH THE COLOR OF THE MARKING THEY SUPPLEMENT.

PLACEMENT OF TEMPORARY RAISED PAVEMENT MARKERS ON EDGE LINES ARE OPTIONAL. IF PLACED ON EDGE LINES, MAXIMUM SPACING SHALL BE 50 FEET.

PROVIDE SINGLE OR MULTI-COVER TEMPORARY RAISED PAVEMENT MARKERS AS SHOWN ON PLAN.

MARK T's ON PAVEMENT FOR RE-ESTABLISHING NO PASSING ZONES.

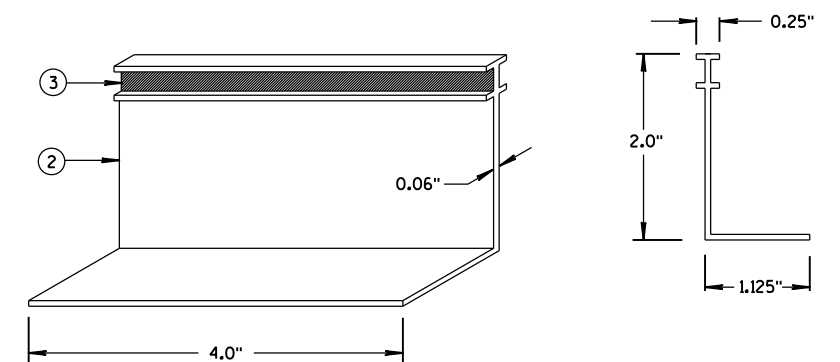
SAME DAY TEMPORARY PAVEMENT MARKING MAY BE USED IN LIEU OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF TEMPORARY SAME DAY PAVEMENT MARKING IS USED, ENSURE PROPOSED PAVEMENT MARKINGS ARE PLACED IN THE EXACT LOCATIONS AS THE EXISTING MARKINGS, USING A MINIMAL AMOUNT OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II OR OTHER METHODS AS APPROVED BY THE ENGINEER.

IF ROADWAY IS DETOURED DURING CONSTRUCTION, THE DO NOT PASS, PASS WITH CARE AND NO CENTERLINE SIGNS MAY BE OMITTED, PROVIDED A LIQUID MARKING IS INSTALLED BEFORE THE ROADWAY IS REOPENED TO TRAFFIC.

- ① FOR DOUBLE SOLID YELLOW, PLACE THE MARKERS BETWEEN THE LINES.
- ② MARKERS SHALL BE OF POLYURETHANE MATERIAL.
- ③ MARKERS SHALL HAVE A MINIMUM SIZE REFLECTIVE SURFACE OF 4 INCH WIDTH X 0.25 INCH HEIGHT.
- ④ NO CENTER LINE SIGNS SHALL BE PLACED AT THE BEGINNING OF PROJECT, AT TWO-MILE INTERVALS AND AFTER STATE AND COUNTY HIGHWAY INTERSECTIONS.
- ⑤ DO NOT PASS SIGNS SHALL BE INSTALLED AT THE BEGINNING OF NO PASSING ZONES. ADDITIONAL DO NOT PASS SIGNS SHALL BE INSTALLED AT ONE MILE INTERVALS AND AFTER STATE AND COUNTY HIGHWAY INTERSECTIONS WITHIN THE NO PASSING ZONE.
- ⑥ PASS WITH CARE SIGNS SHALL BE PLACED AT THE DOWNSTREAM END OF NO PASSING ZONES.



ISOMETRIC VIEW

SIDE VIEW

TEMPORARY RAISED PAVEMENT MARKER, TYPE II

LEGEND

- TEMPORARY RAISED PAVEMENT MARKER, TYPE II
- ⊙ SIGN ON PORTABLE OR PERMANENT SUPPORT
- ➔ DIRECTION OF TRAVEL

STANDARD APPLICATION FOR TEMPORARY RAISED PAVEMENT MARKERS, TYPE II

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6-2017 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

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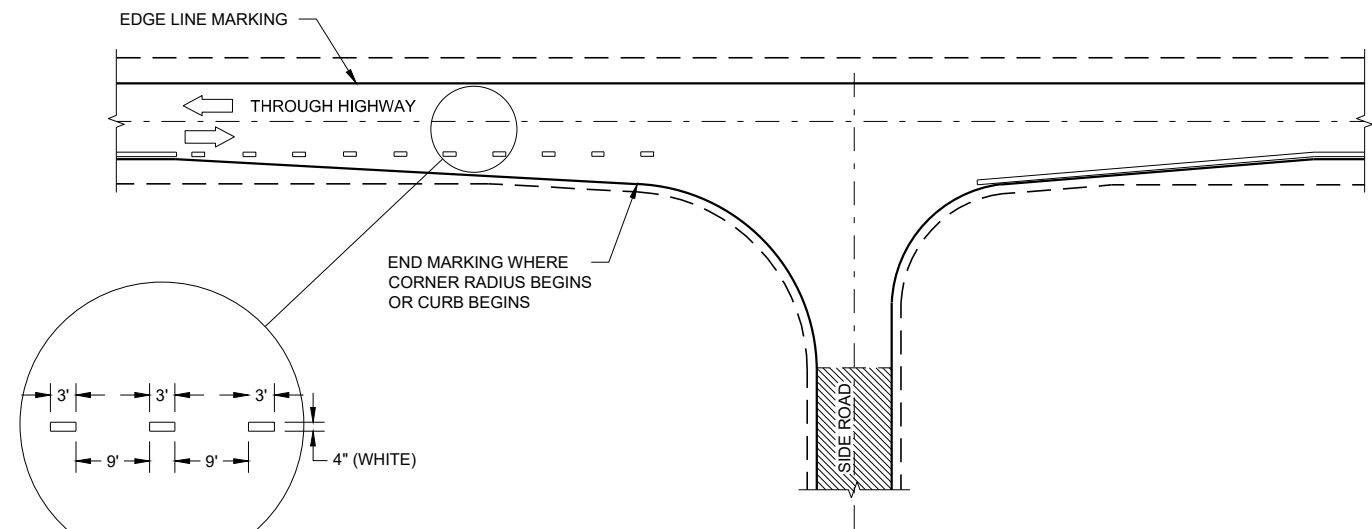
GENERAL NOTES

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

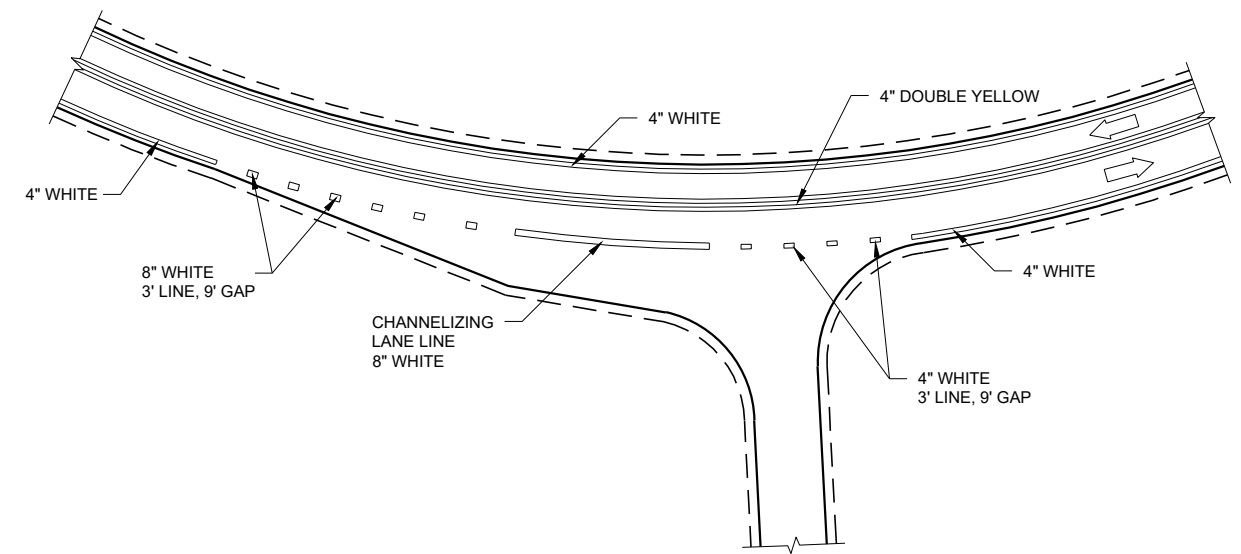
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

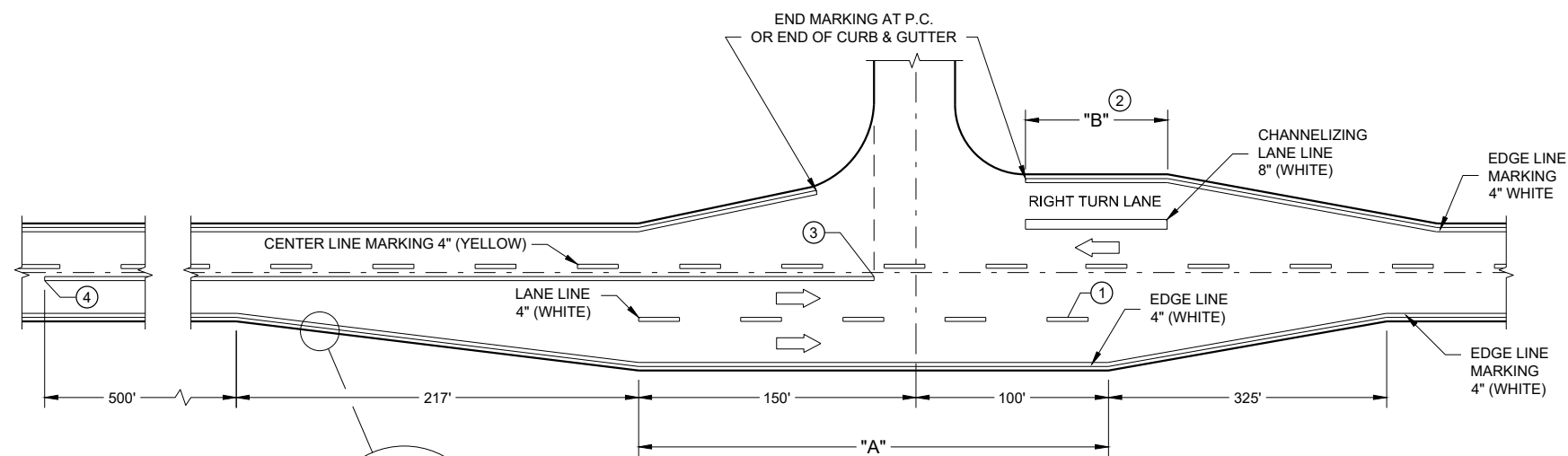
➡ DIRECTION OF TRAVEL



MINOR INTERSECTION



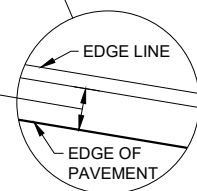
INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS

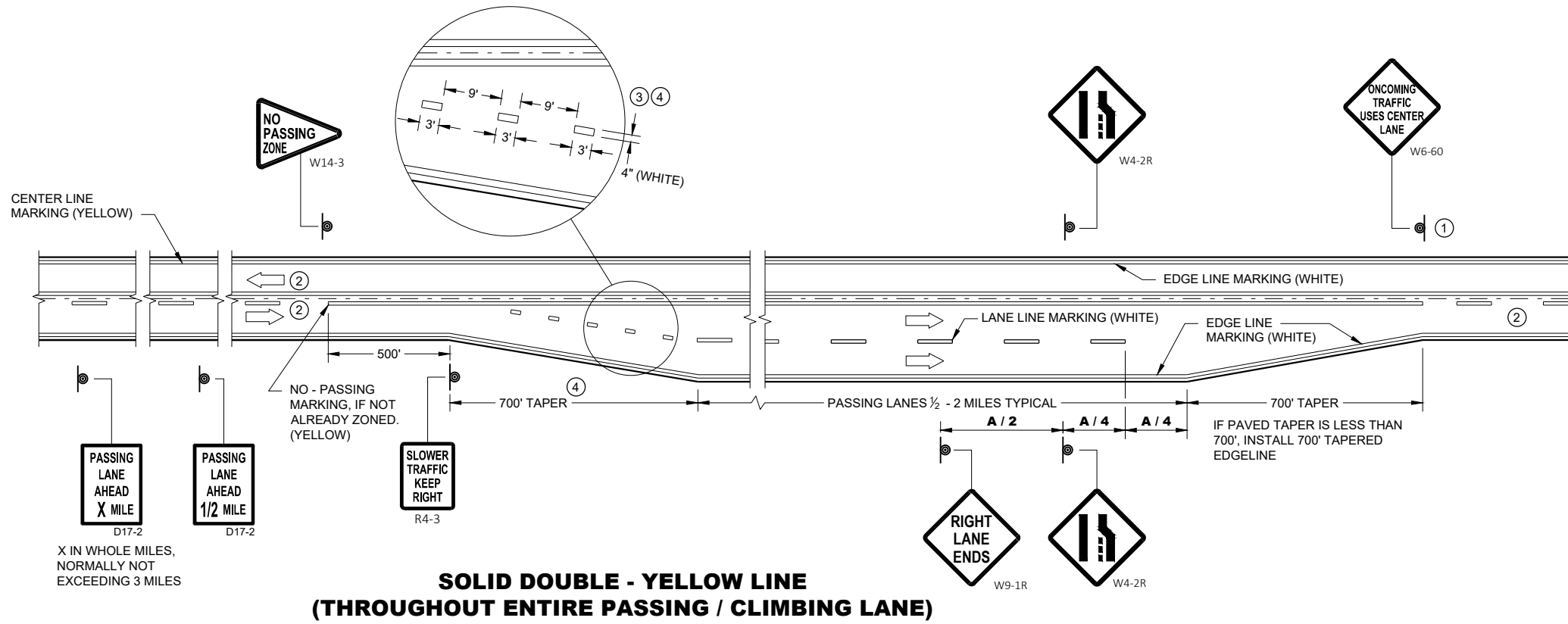
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

BYPASS LANE PAVED SHOULDER WIDTH (AS SHOWN ELSEWHERE IN PLANS) - PLUS 2 INCHES



PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



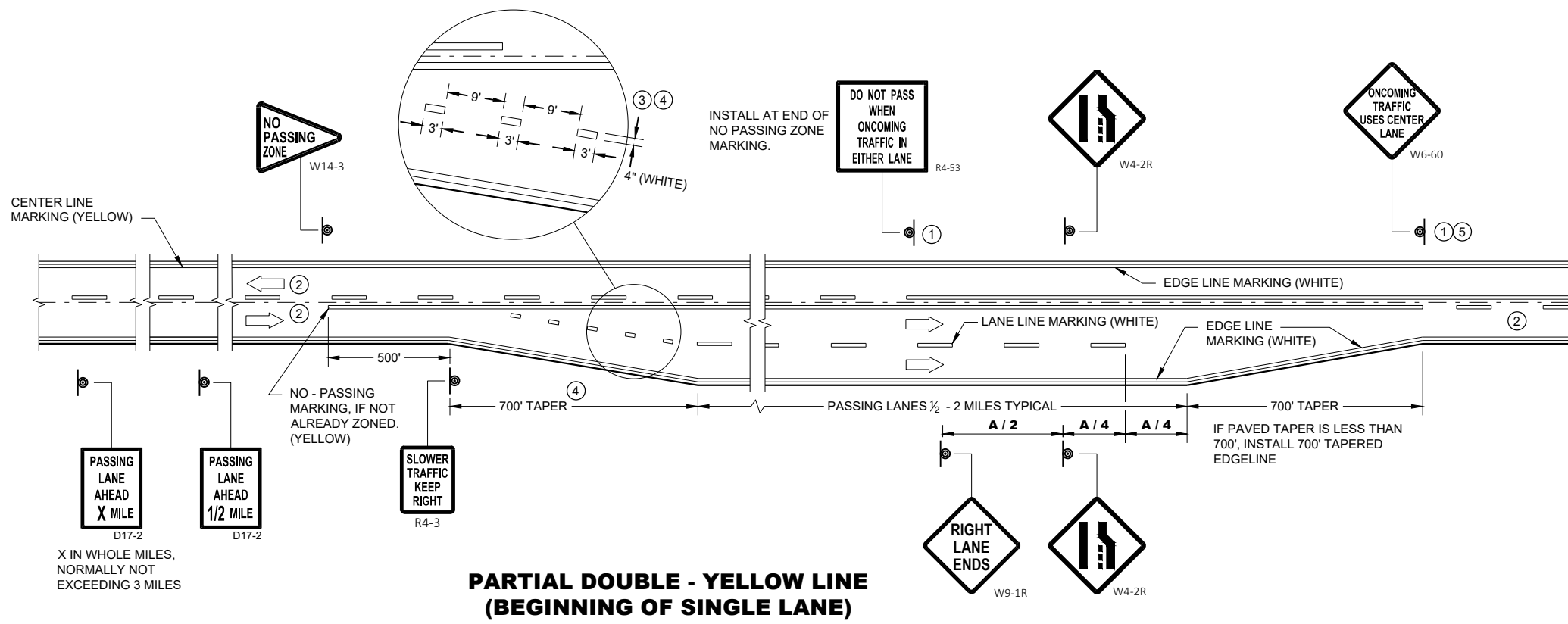
GENERAL NOTES

- SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- REPEAT EVERY 1 MILE UP UNTIL R4-53.

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

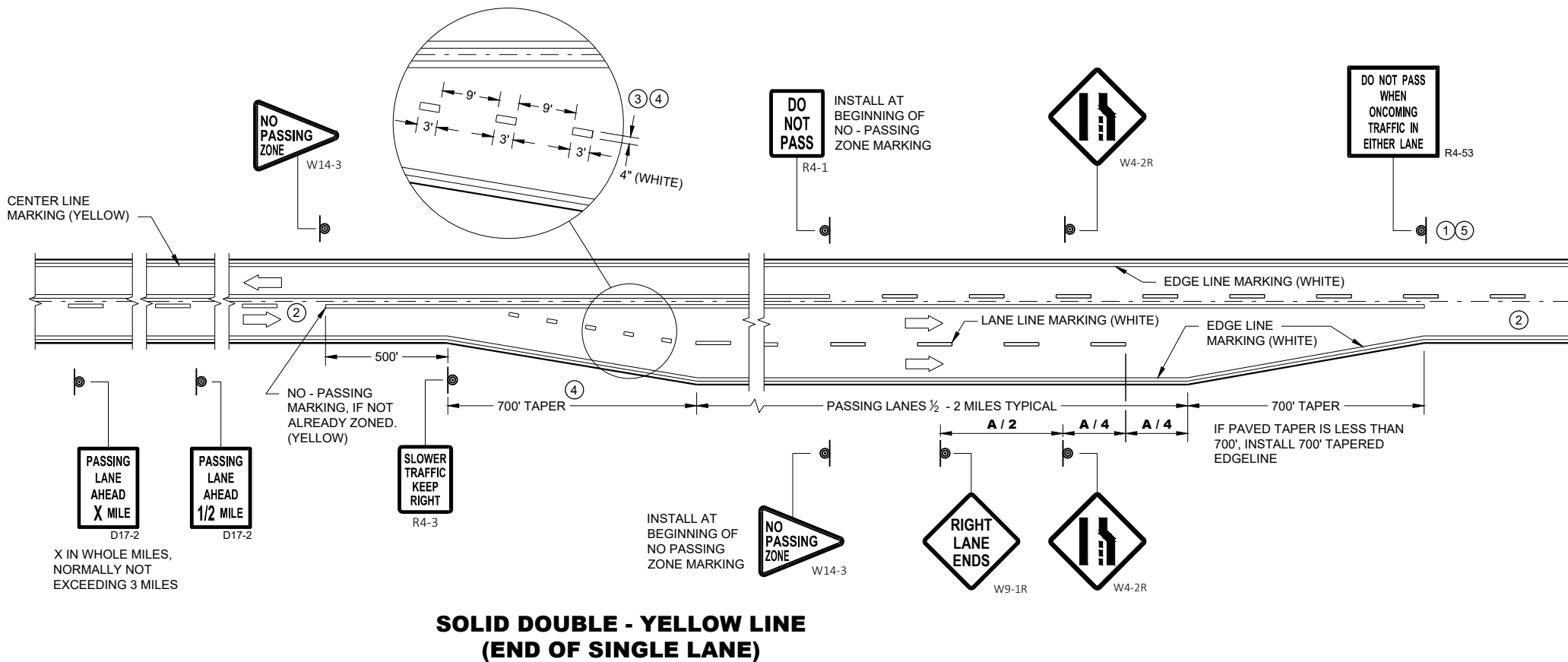
DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990



**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



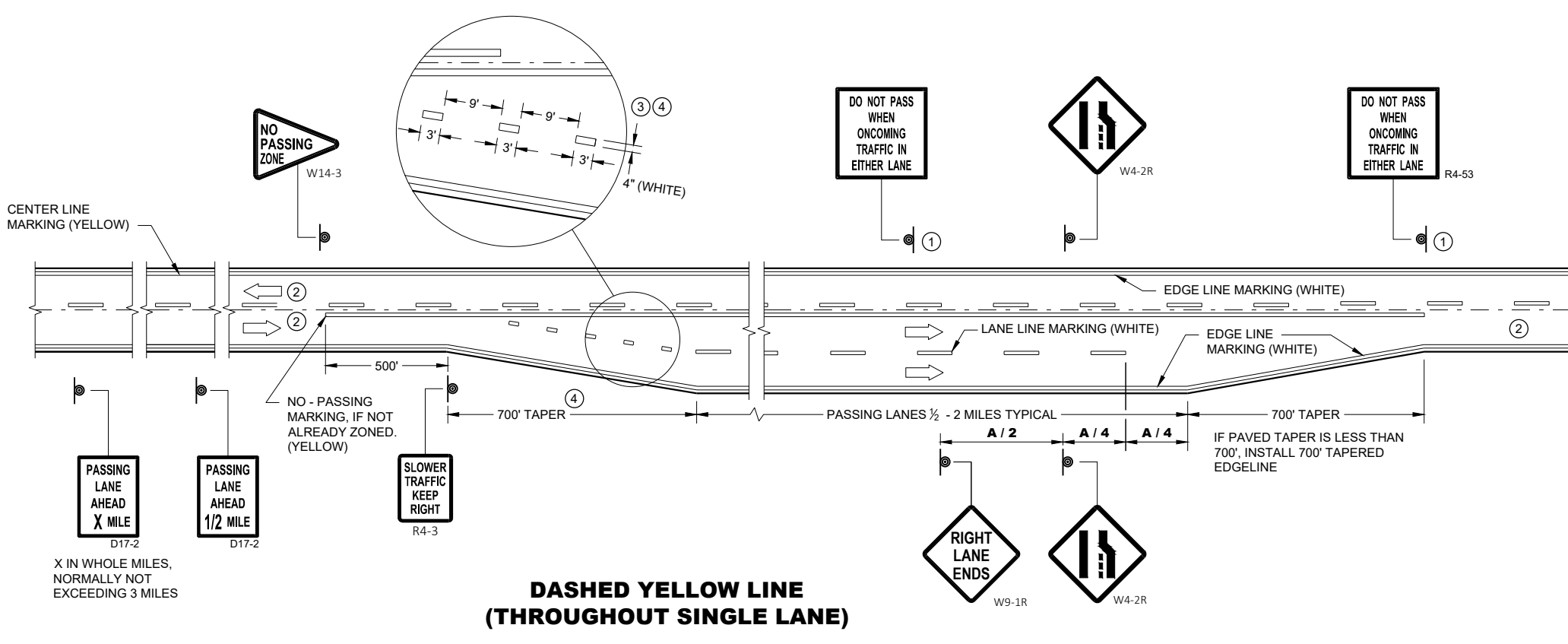
GENERAL NOTES

- 1 SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- 2 THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- 3 THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- 4 WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- 5 REPEAT EVERY ONE MILE UP UNTIL NO PASSING ZONE.

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990



PAVEMNET MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER

FHWA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

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

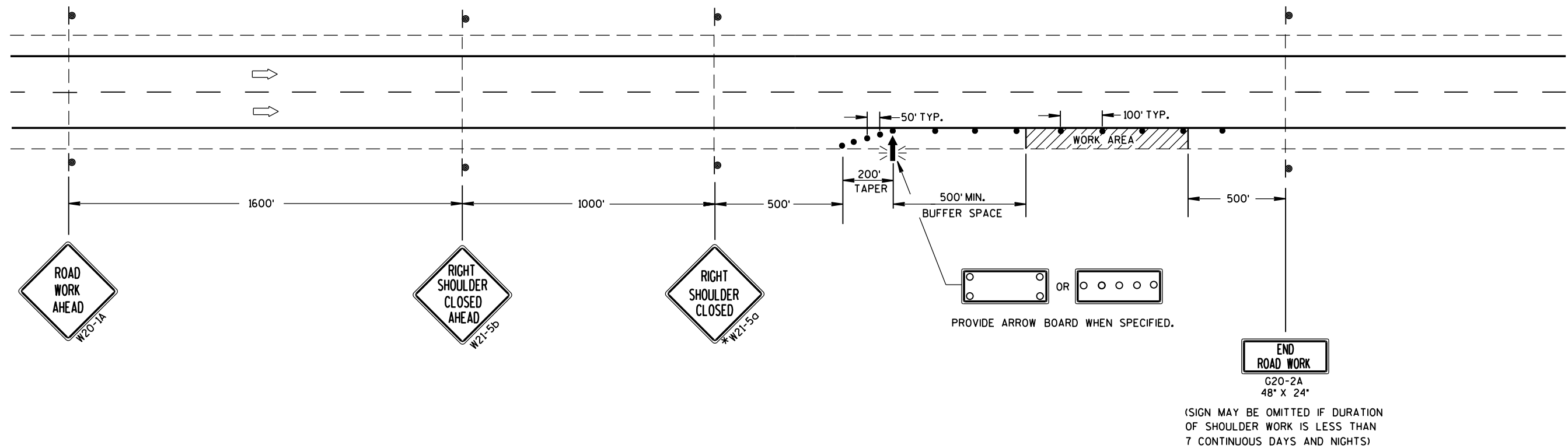
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-50 SIGN MAY BE OMITTED.

LEGEND





- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡➡ FLASHING ARROW BOARD
- ▨ WORK AREA



(SIGN MAY BE OMITTED IF DURATION OF SHOULDER WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS)

TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2016 DATE	/s/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

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

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

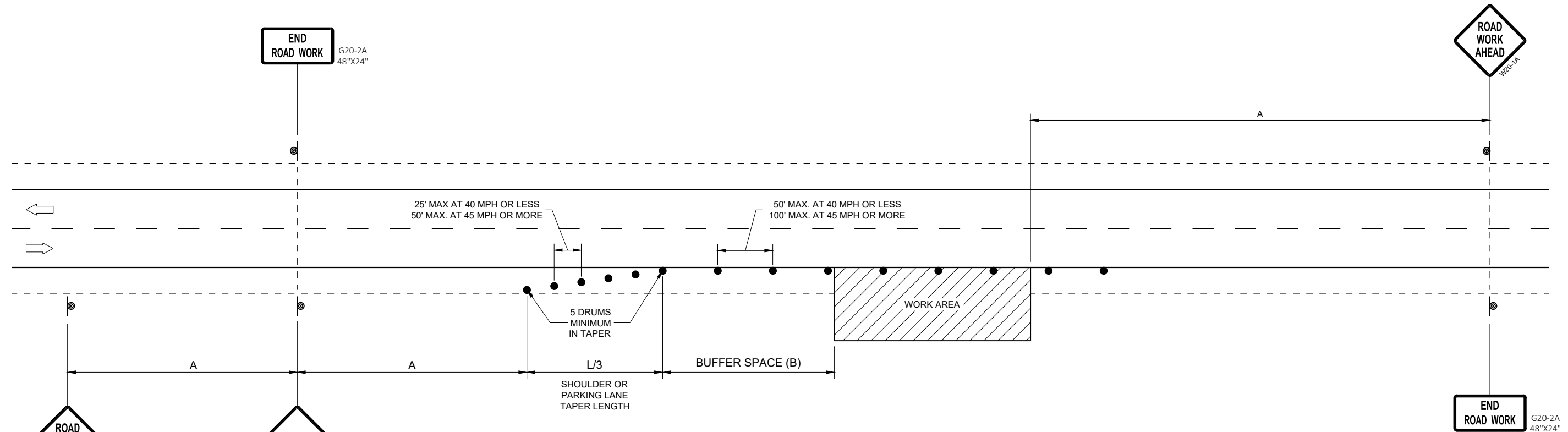
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

6

6



OR
IF TRAFFIC CONTROL DEVICES
ENCROACH ONTO TRAVELED WAY, USE

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

**TRAFFIC CONTROL, WORK ON
SHOULDER OR PARKING LANE,
UNDIVIDED ROADWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION








APPROVED
May 2020 DATE /S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

FHWA

SDD 15D28 - 04

SDD 15D28 - 04

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  SIGN ON PERMANENT SUPPORT
-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

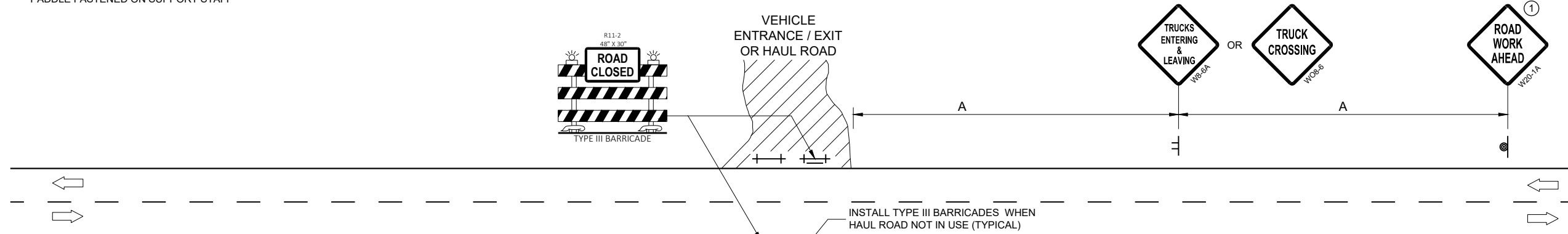
POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET
0-30	200'
35-40	350'
45-55	500'

GENERAL NOTES

- ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
- "WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.
- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.
- WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.
- PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.
- ① THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE / EXIT CONDITIONS ARE SEPARATED BY MORE THAN TWO MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.

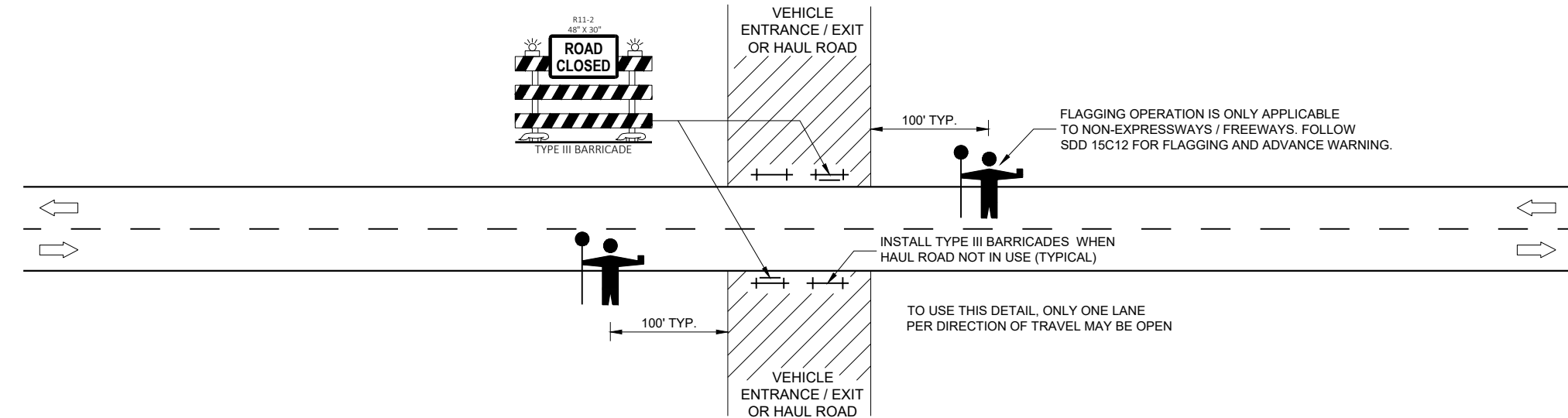
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THIS ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC.

DRAFT
9/17/19



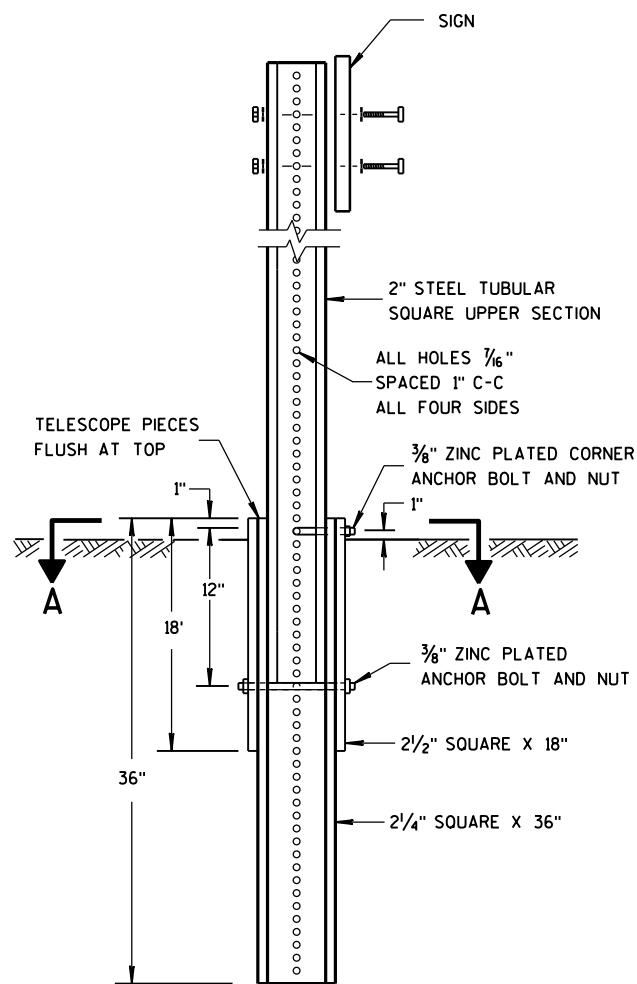
THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

FLAGGING OPERATION IS ONLY APPLICABLE TO NON-EXPRESSWAYS / FREEWAYS. FOLLOW SDD 15C12 FOR FLAGGING AND ADVANCE WARNING.

SDD 15D29 - 06

SDD 15D29 - 06

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



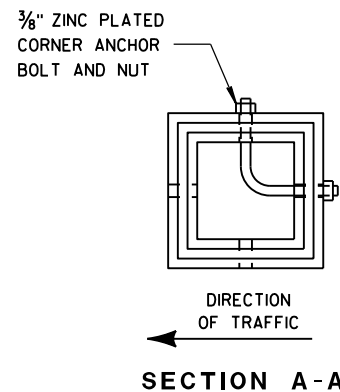
DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

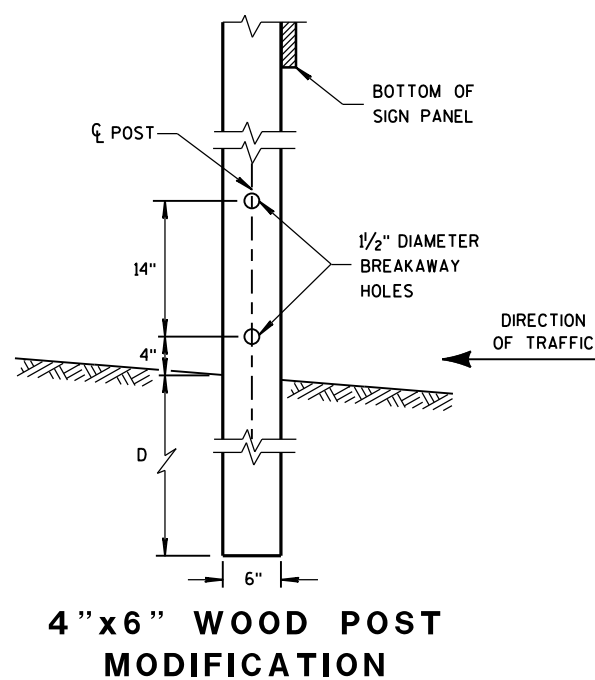
AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

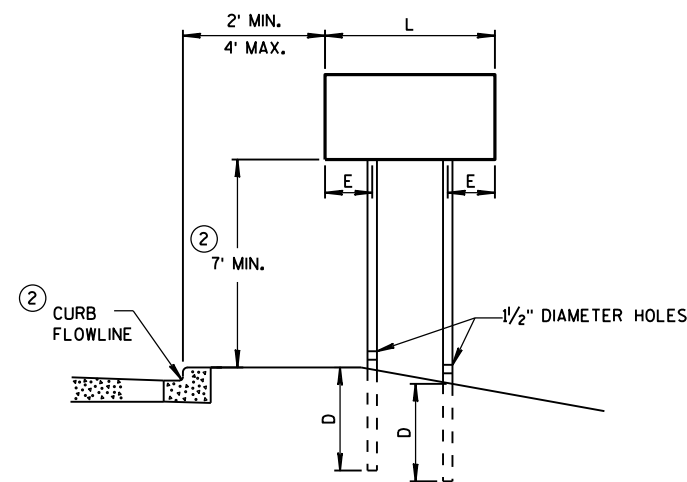
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.



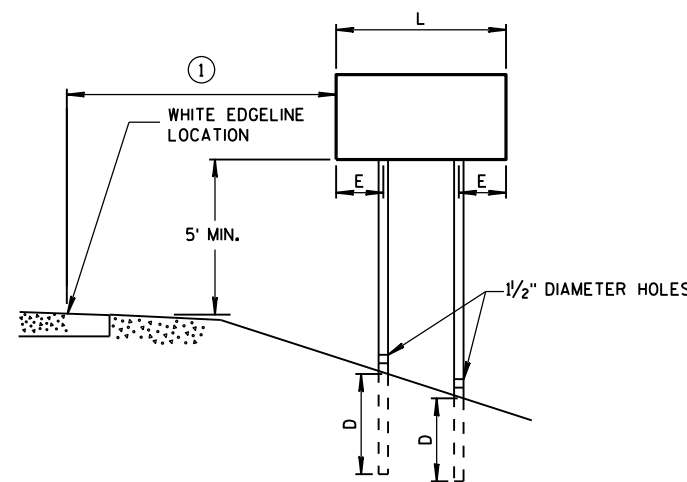
SECTION A-A



4" X 6" WOOD POST MODIFICATION



URBAN AREA



RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

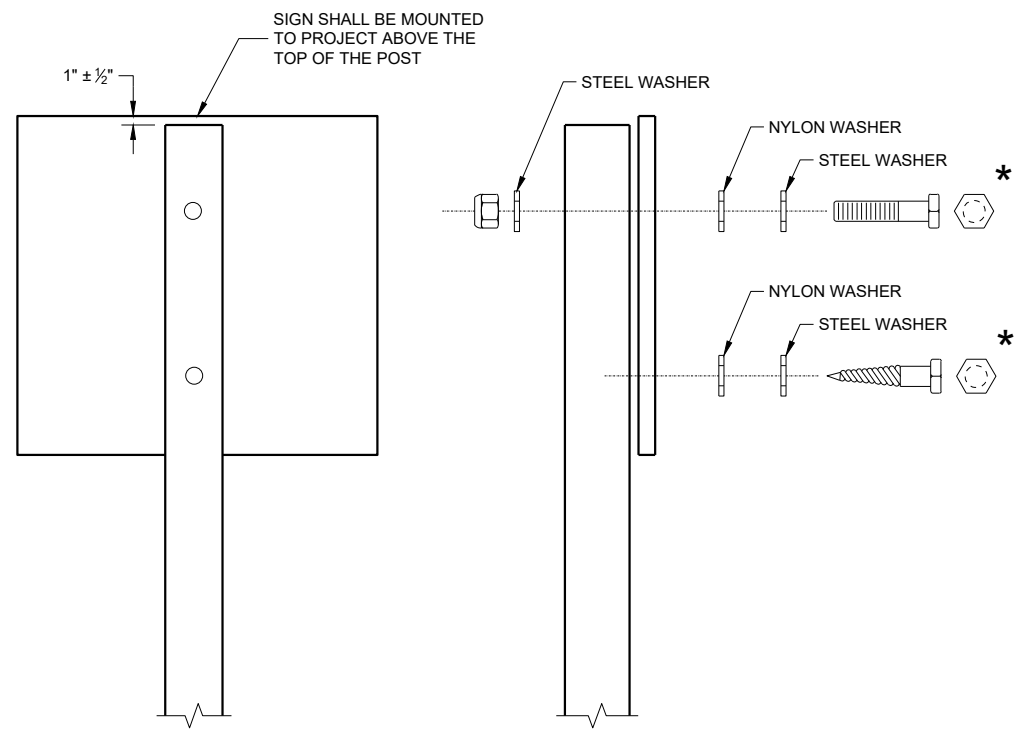
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② 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. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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.

WOOD POST (4" x 6")
 LAG SCREWS - 3/8" x 3"
 MACHINE BOLTS - 5/16" x 6 1/2" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
 MACHINE BOLTS - 3/8" x 3 1/4" LENGTH W/NUTS
 RIVETS - 3/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM
 BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH,
 GRIP RANGE 0.042 - 0.375 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 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

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.

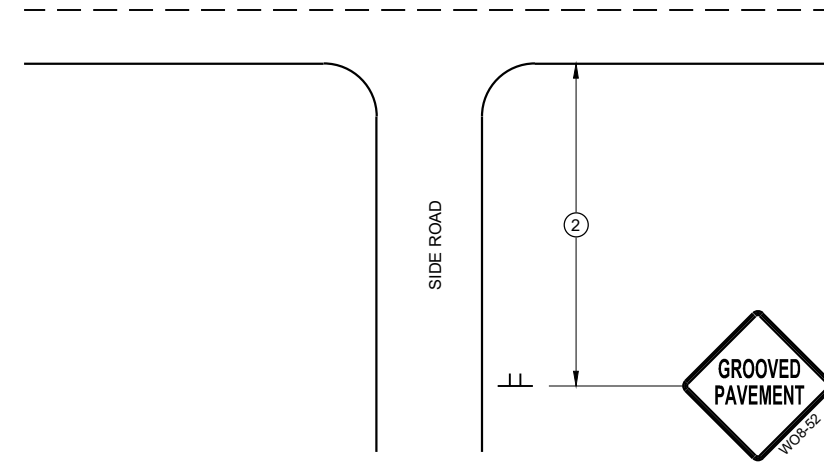
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

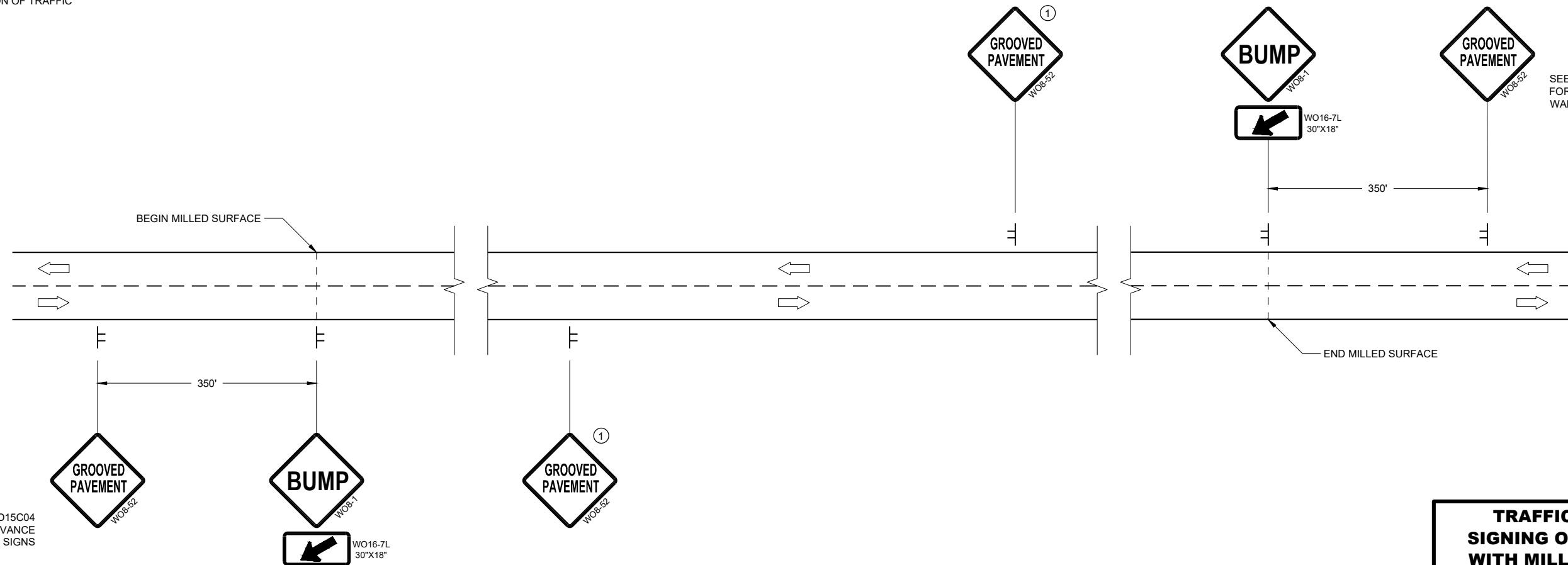
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



SEE SDD15C04 FOR ADVANCE WARNING SIGNS

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

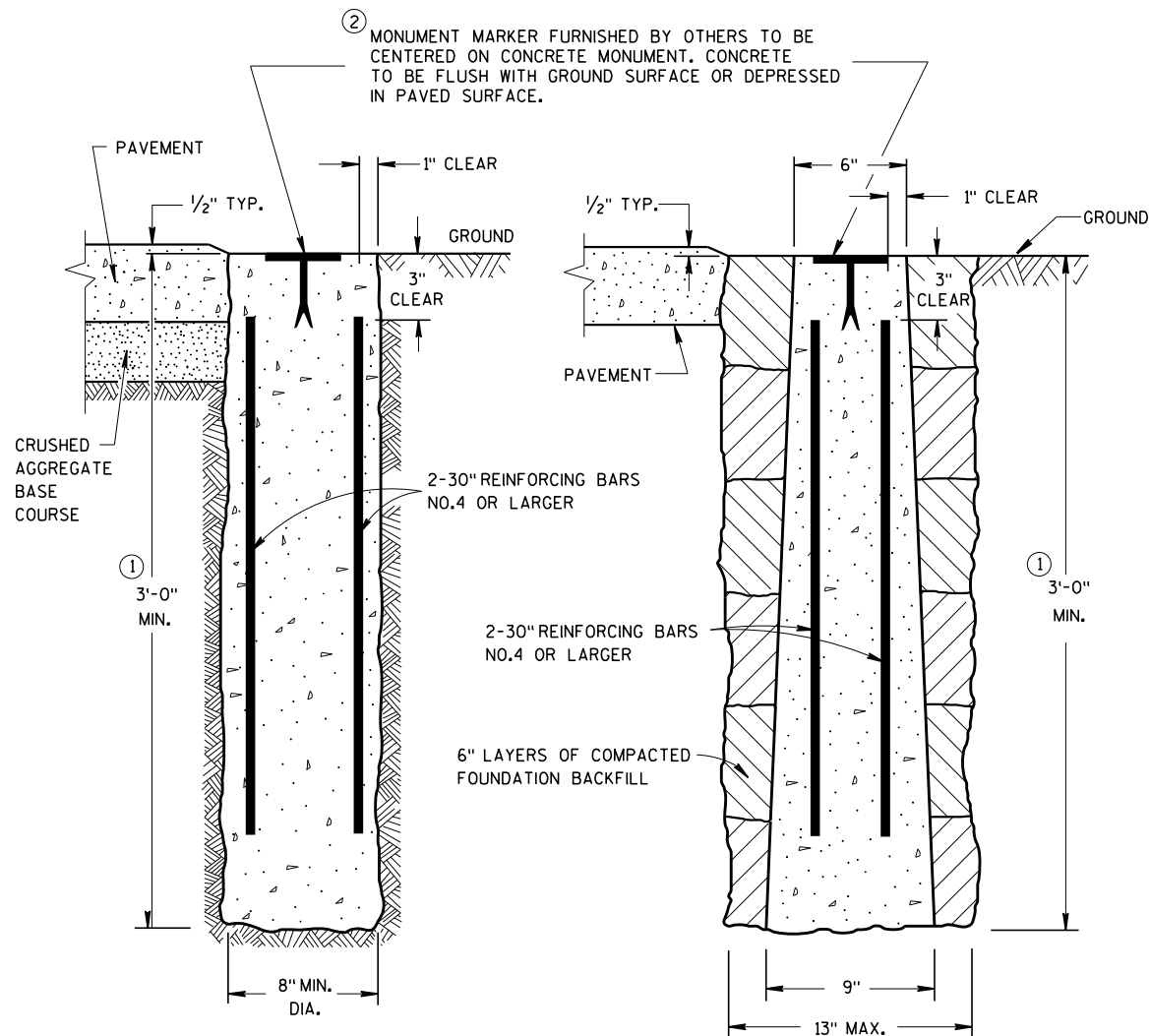
DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

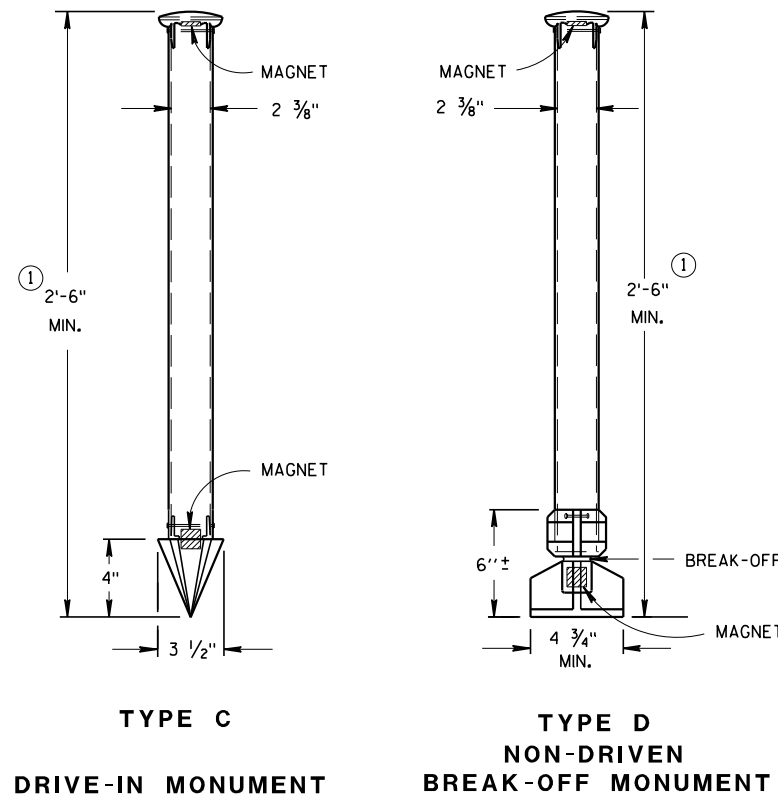
APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



**CAST-IN-PLACE
CONCRETE MONUMENTS
TYPE A**

PRECAST



**ALUMINUM MONUMENTS
(INCLUDES MARKER)**

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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

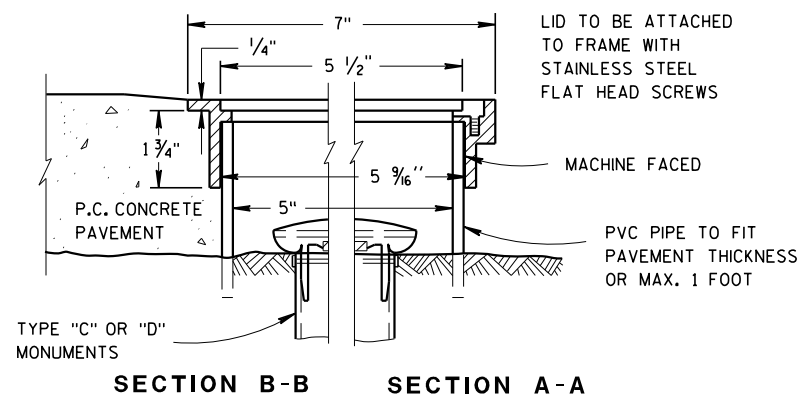
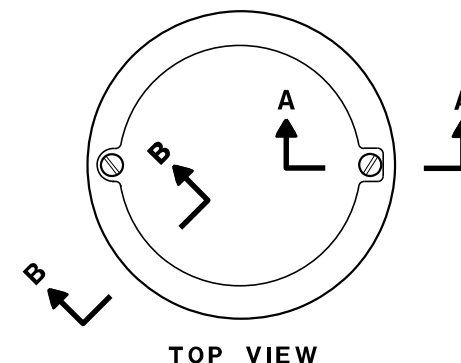
MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

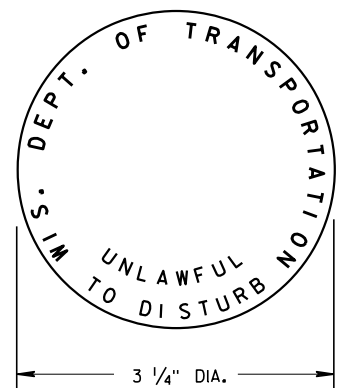
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER

- ① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.
- ② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.

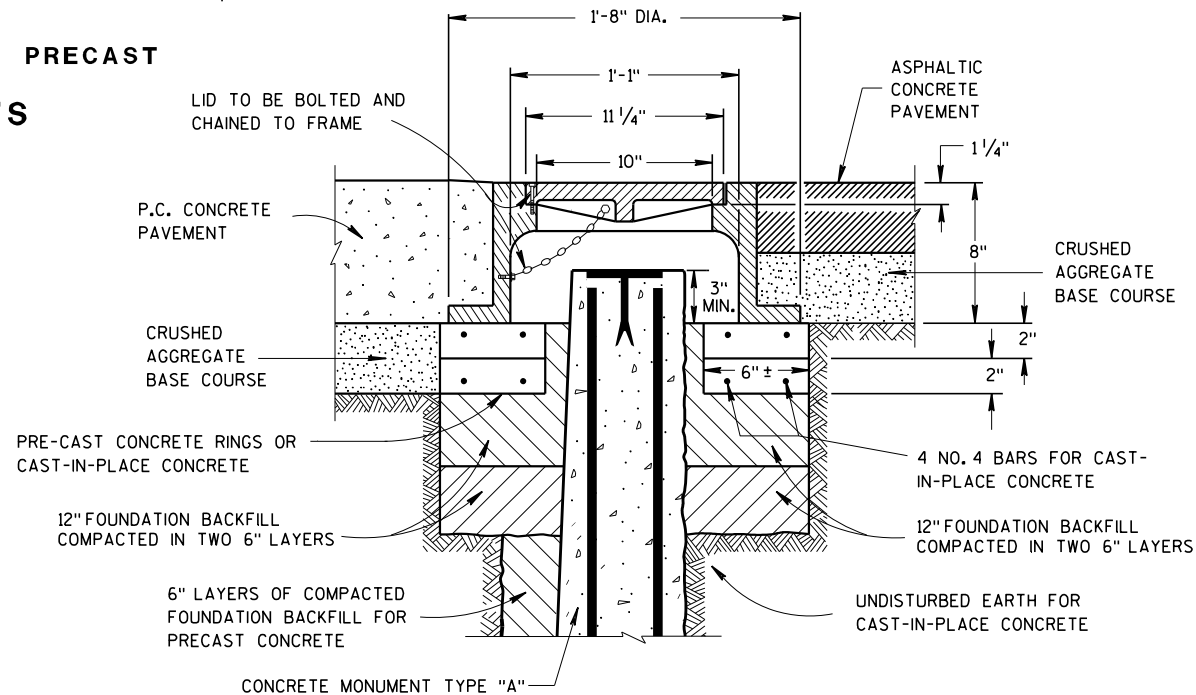


ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)



② **WIS DOT MONUMENT MARKER LOGO
FOR TYPES "A", "C", & "D"**



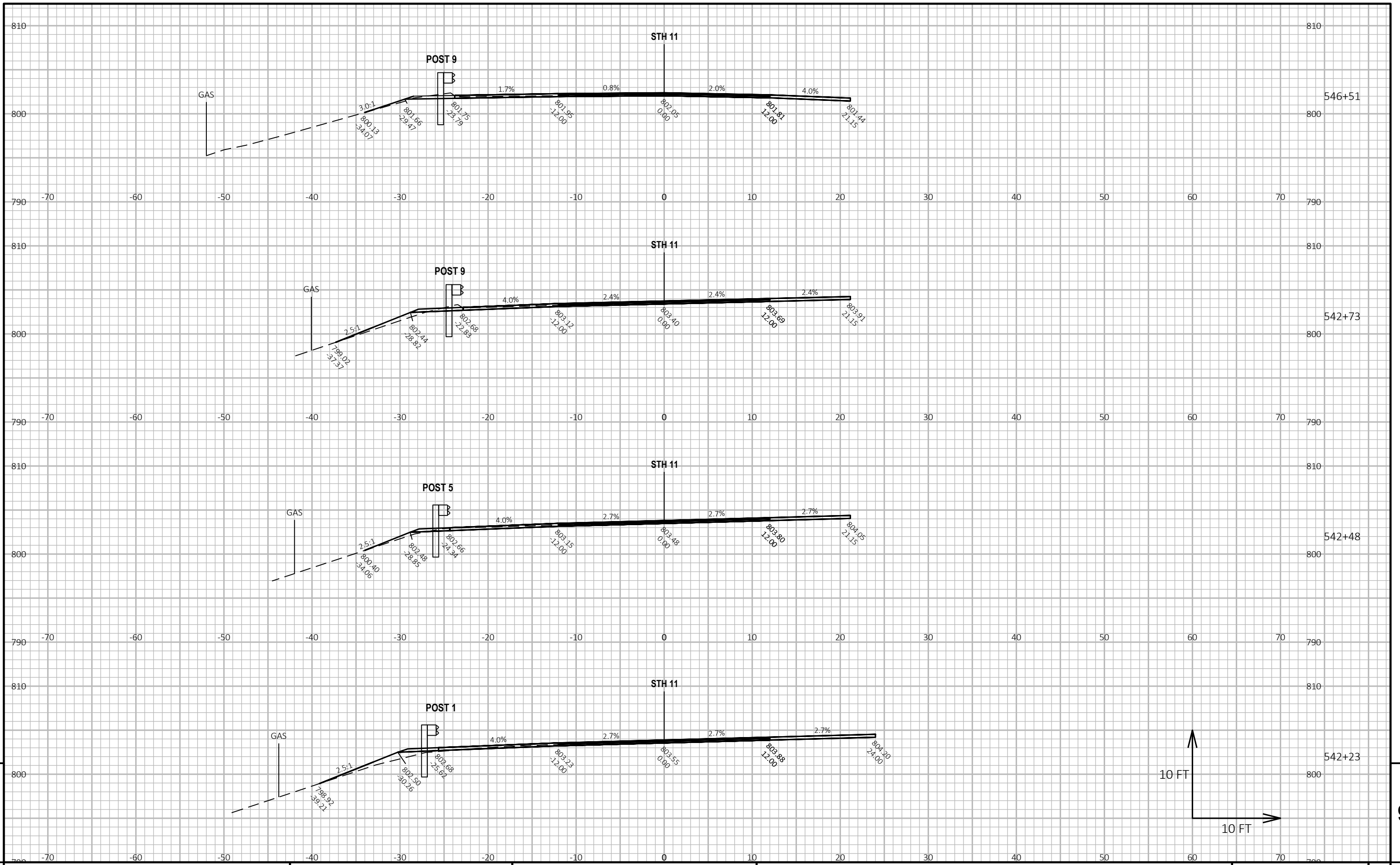
CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT 95 LBS)

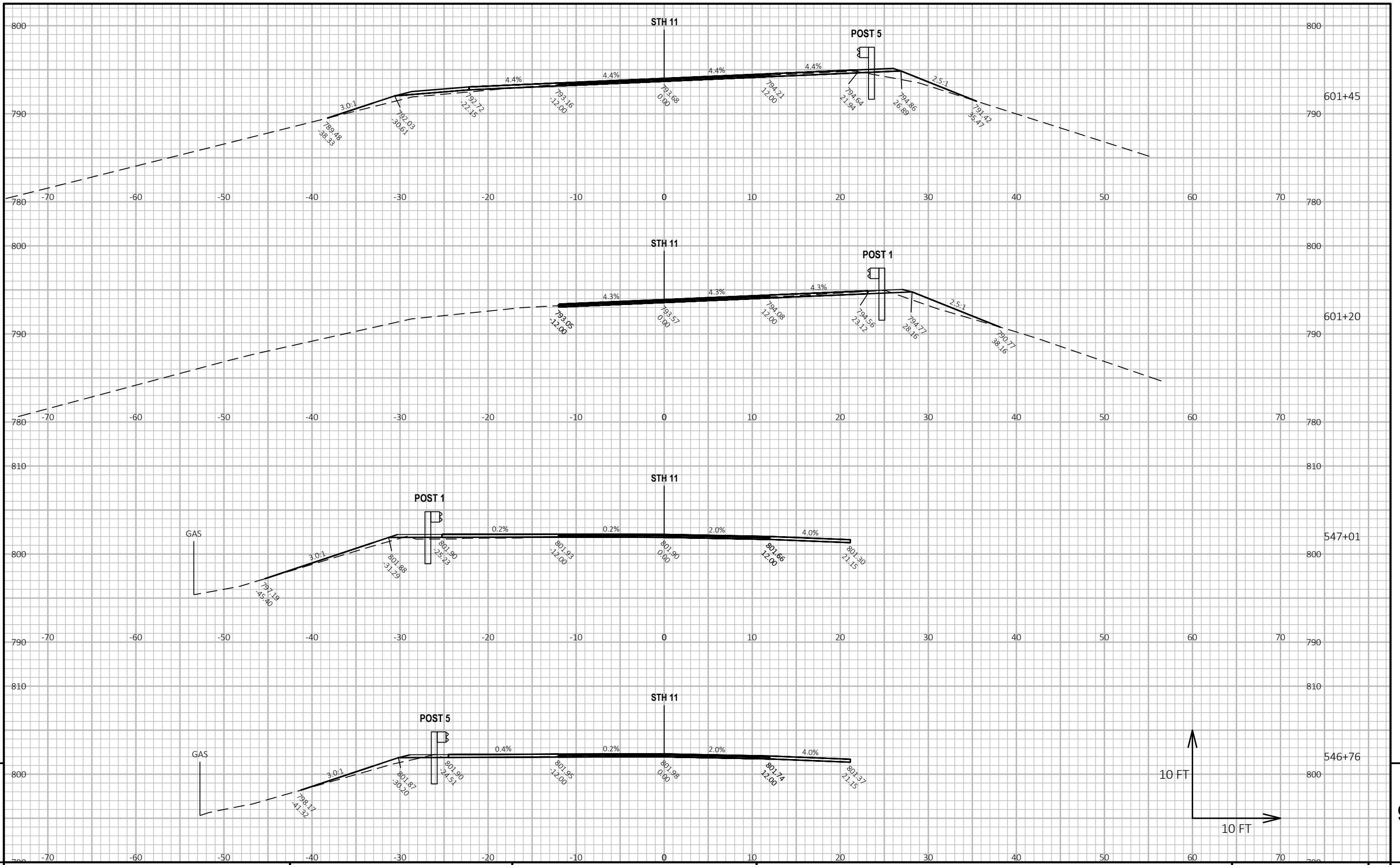
**LANDMARK REFERENCE
MONUMENTS AND COVERS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Raymond A. Kumapayi
DATE CHIEF SURVEYING AND MAPPING ENGINEER
FHWA



PROJECT NO: 1706-04-61 HWY: STH 11 COUNTY: GREEN CROSS SECTIONS: BEAM GUARD SHEET E



PROJECT NO: 1706-04-61

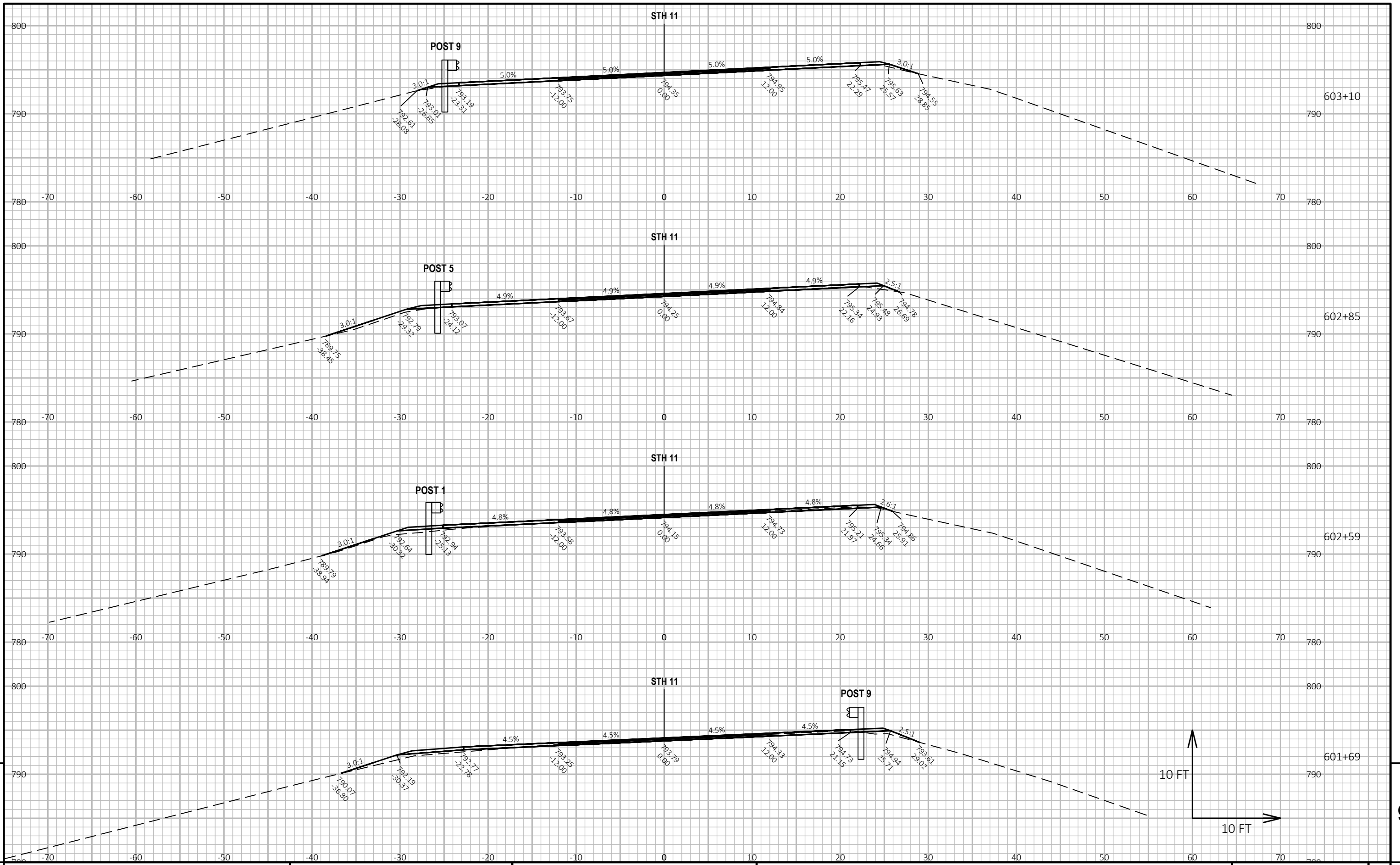
HWY: STH 11

COUNTY: GREEN

CROSS SECTIONS: BEAM GUARD

SHEET

E

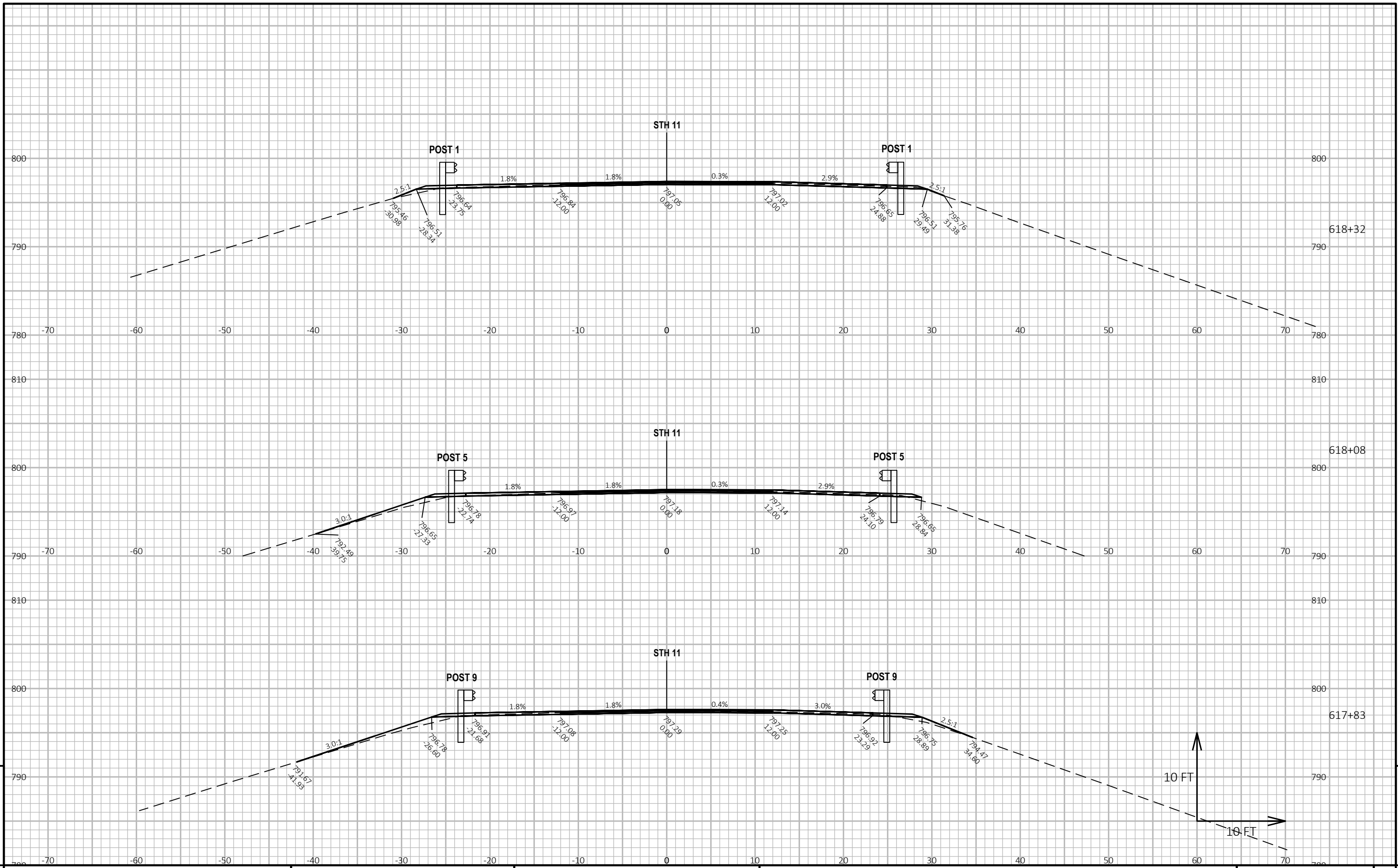


PROJECT NO: 1706-04-61 HWY: STH 11 COUNTY: GREEN CROSS SECTIONS: BEAM GUARD SHEET E

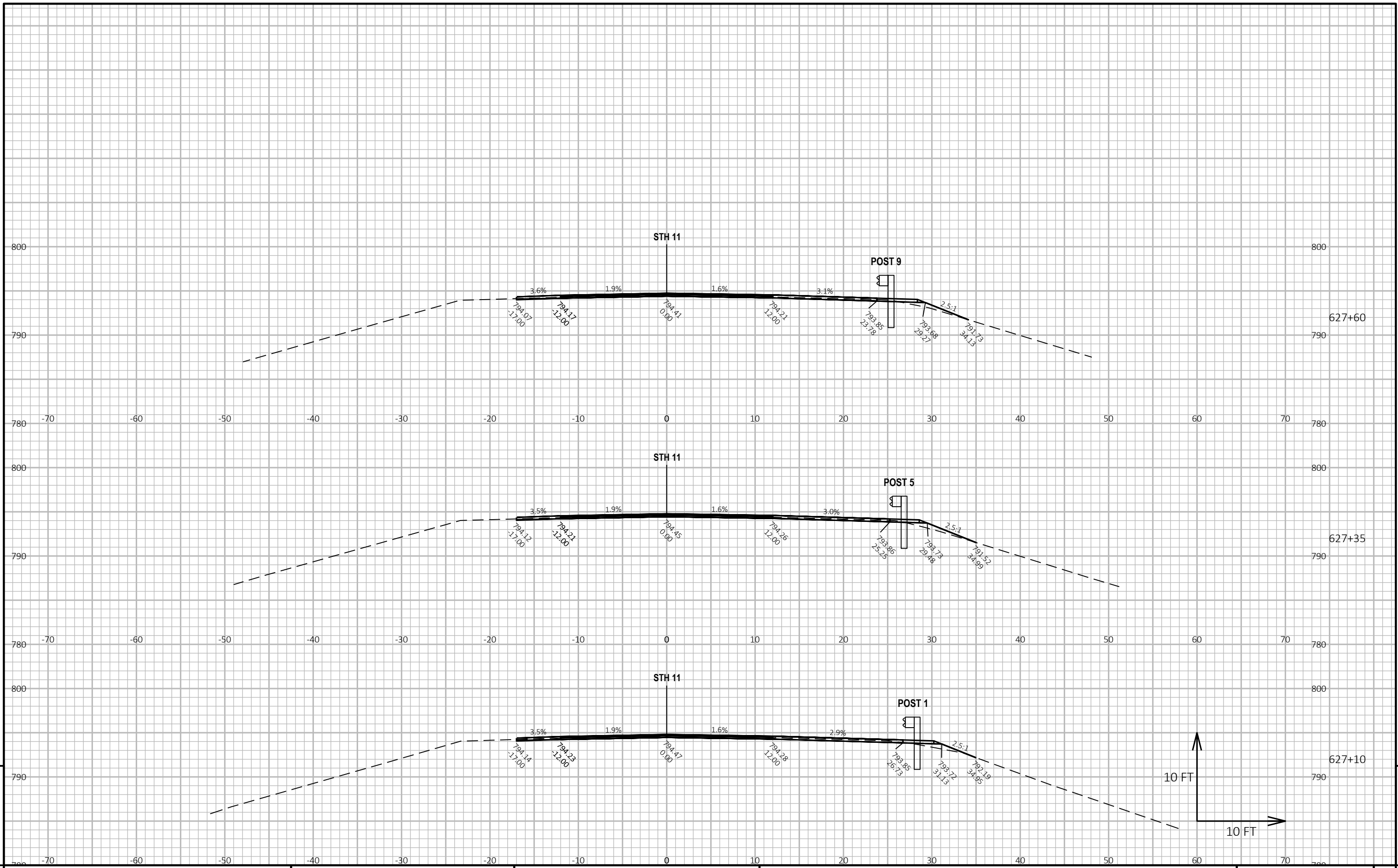
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9

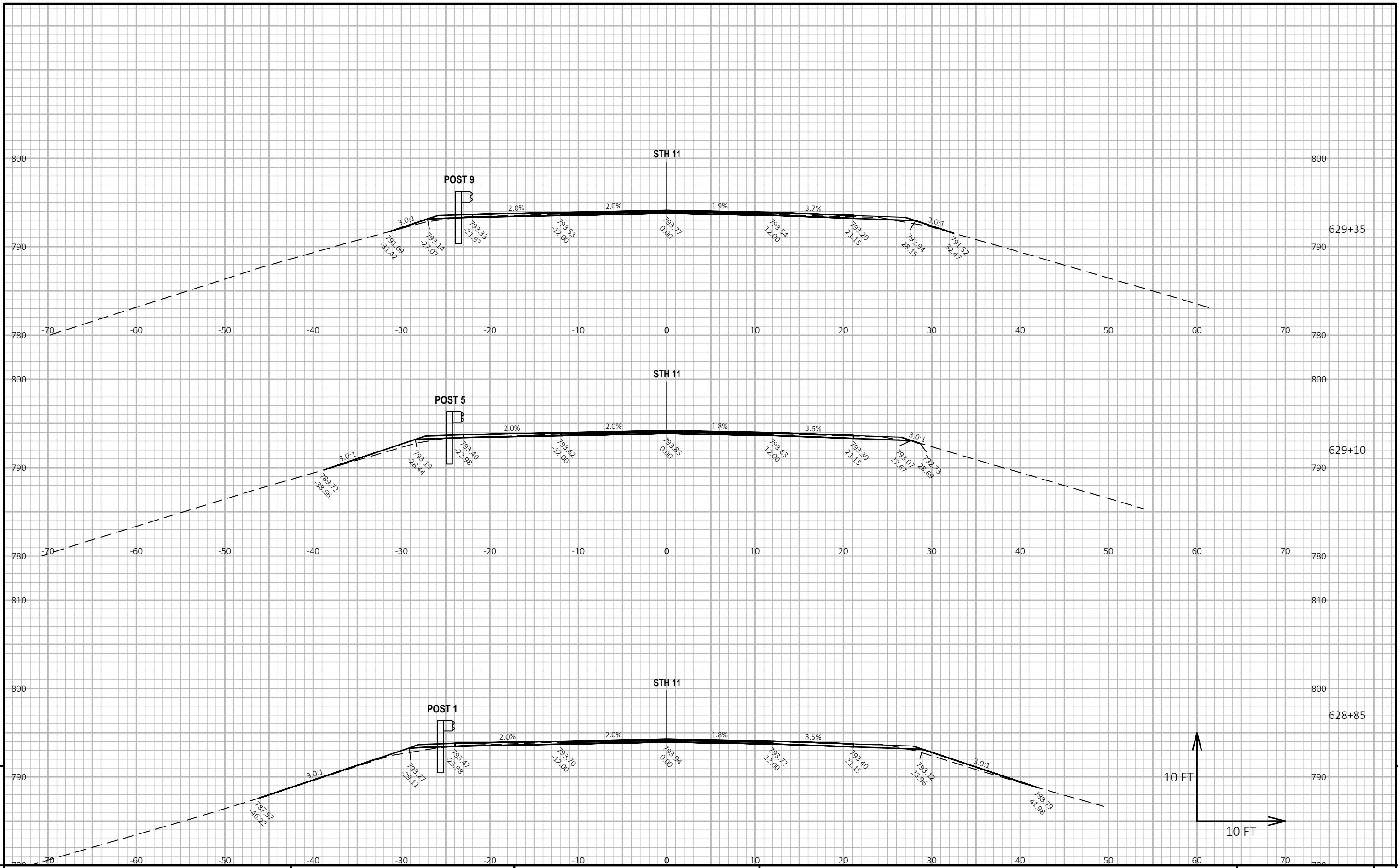
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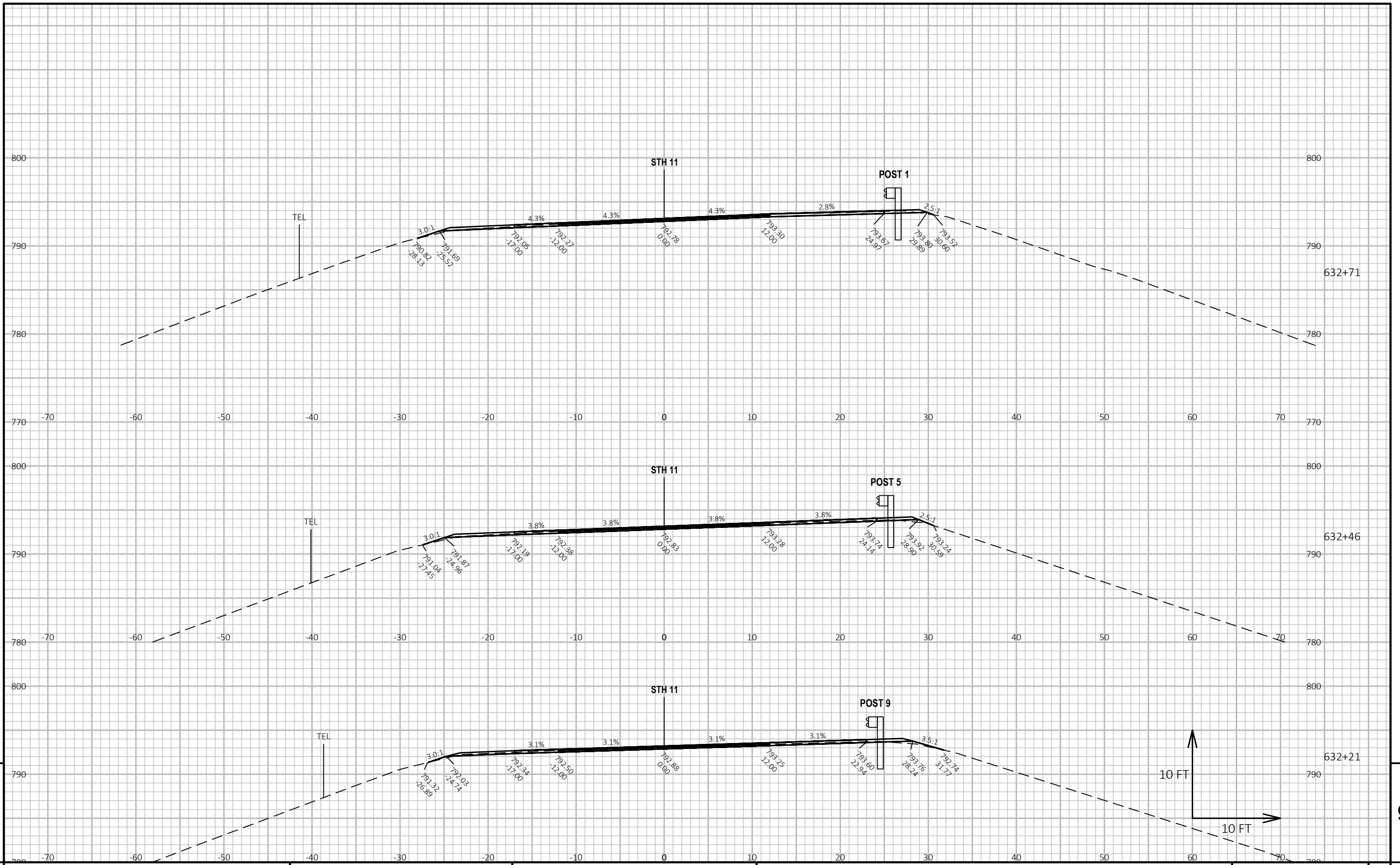
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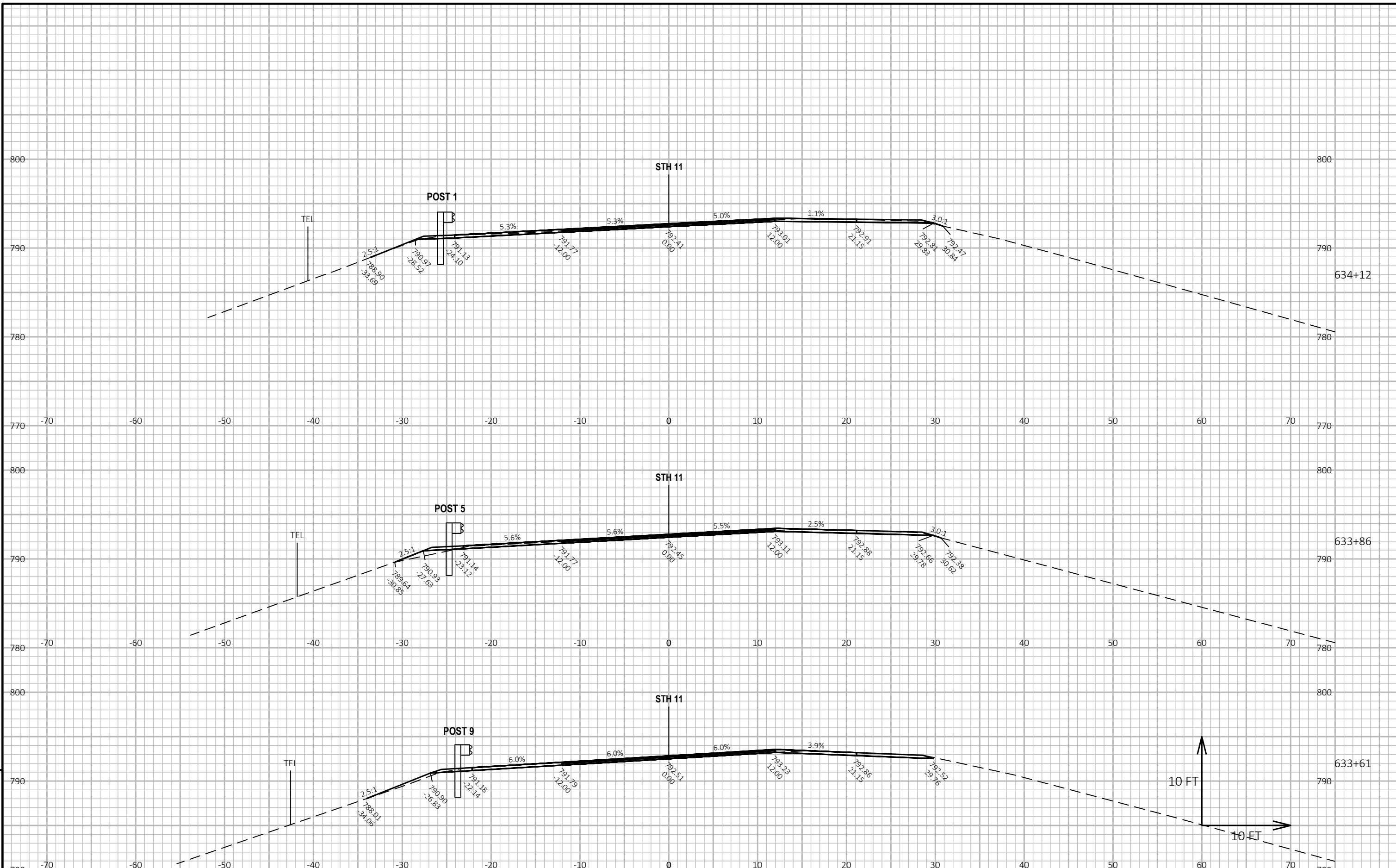
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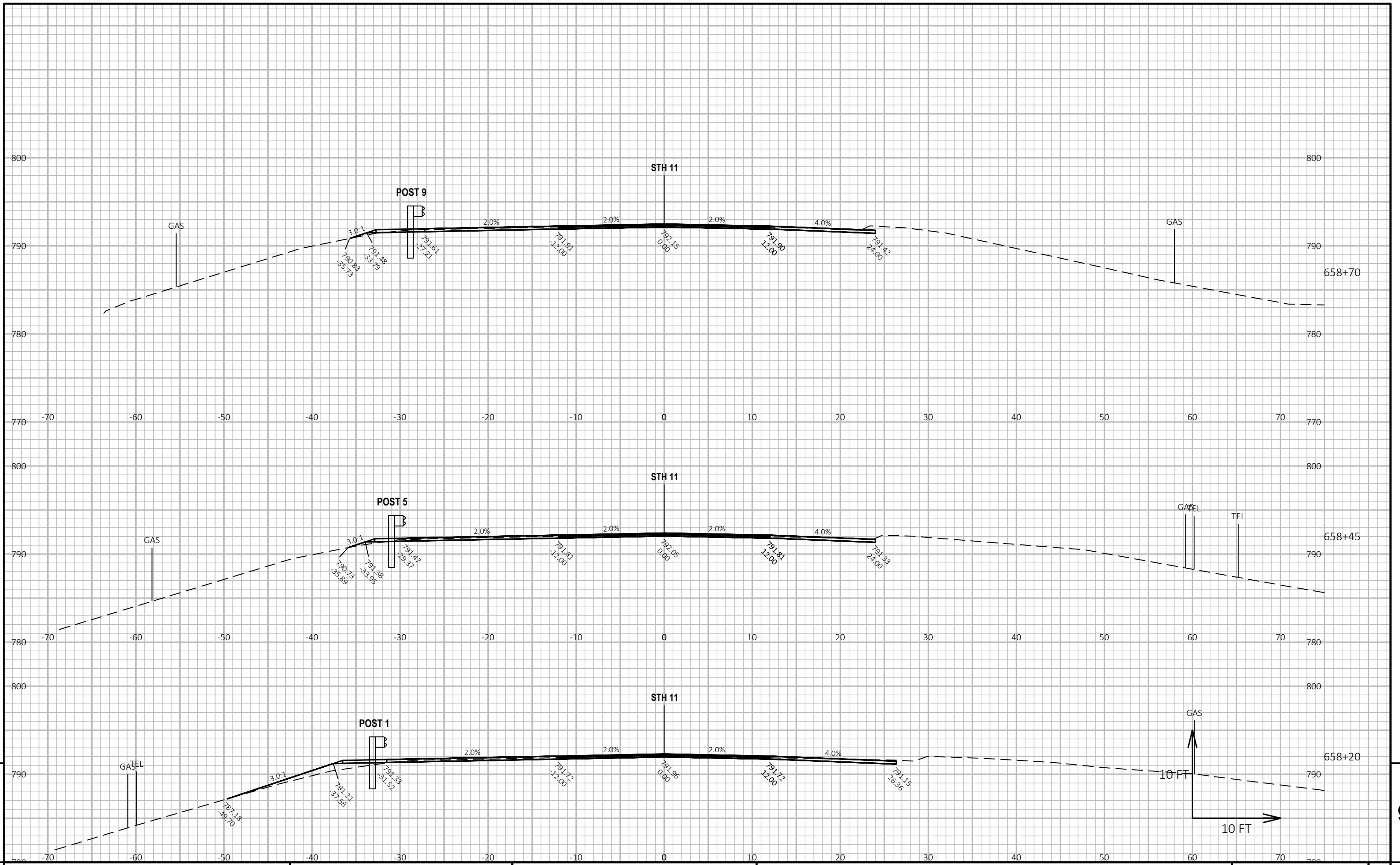
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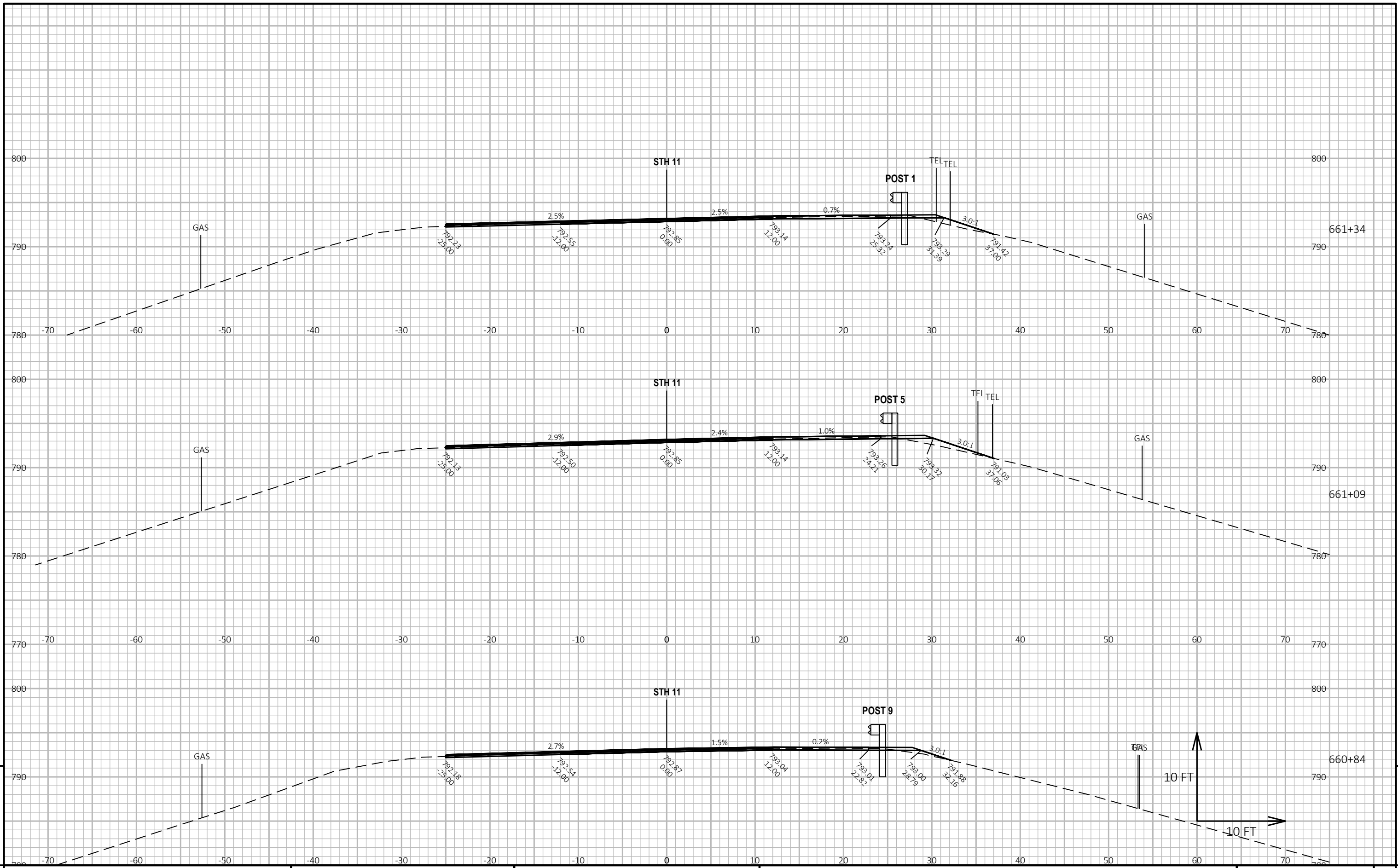
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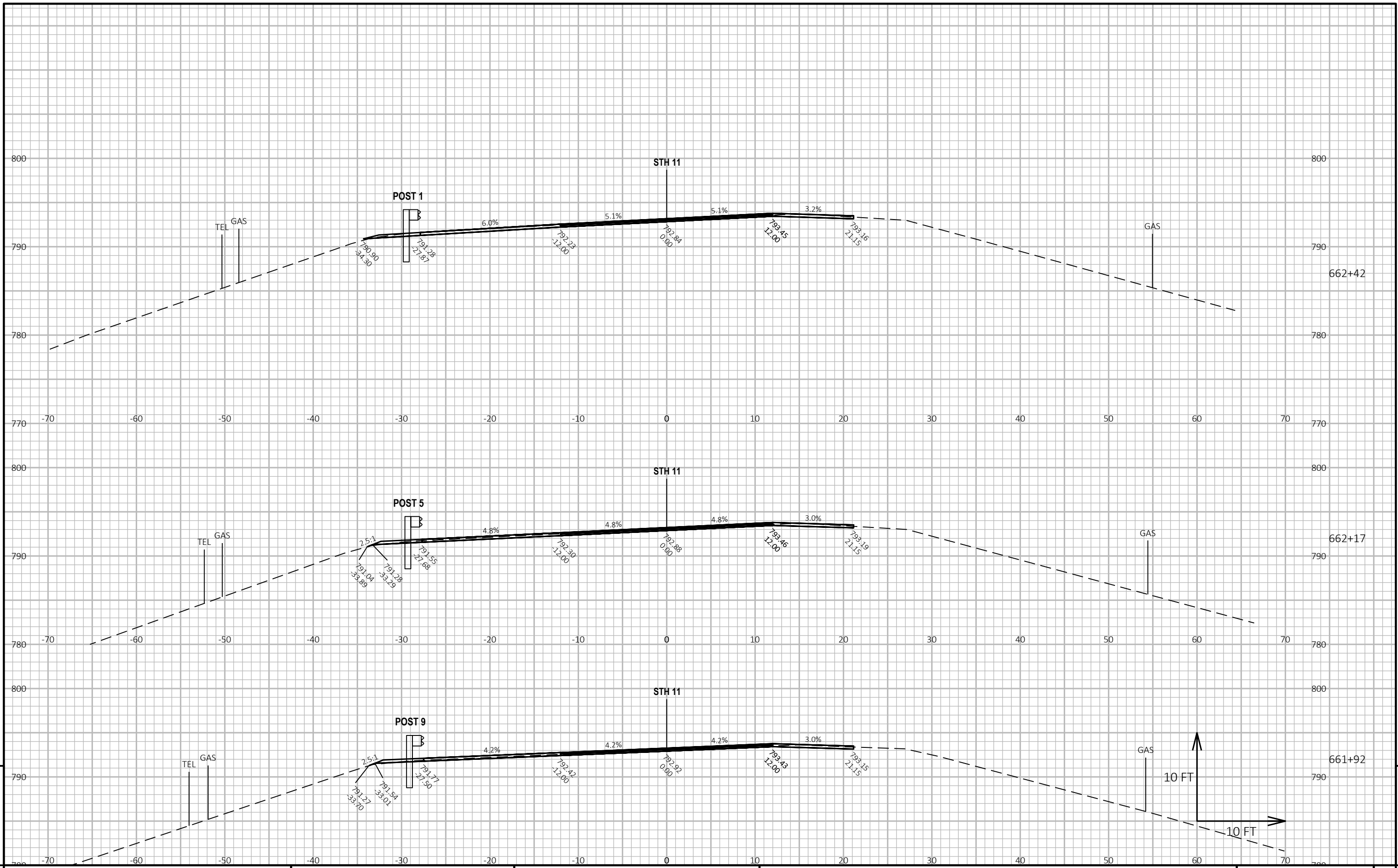
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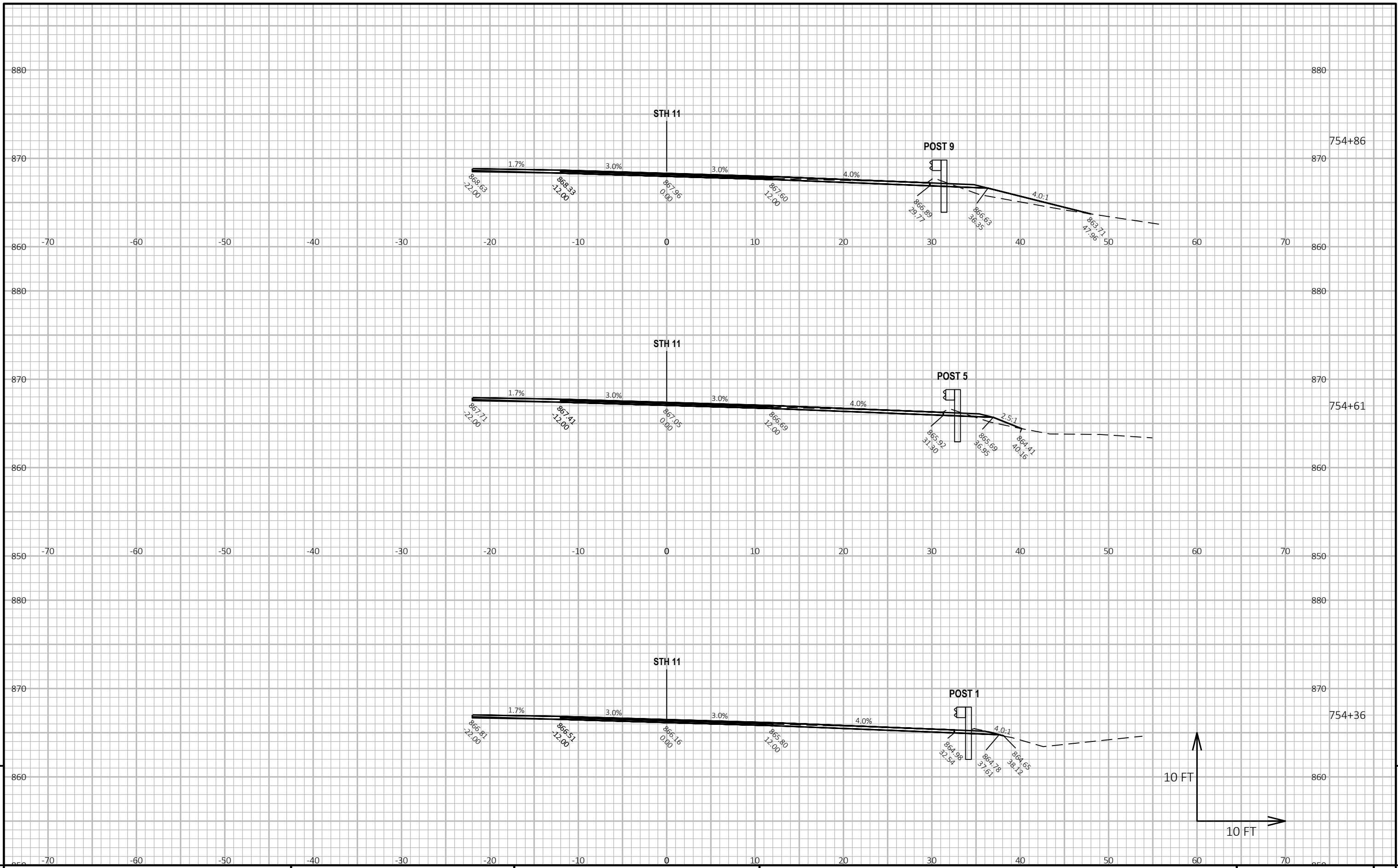
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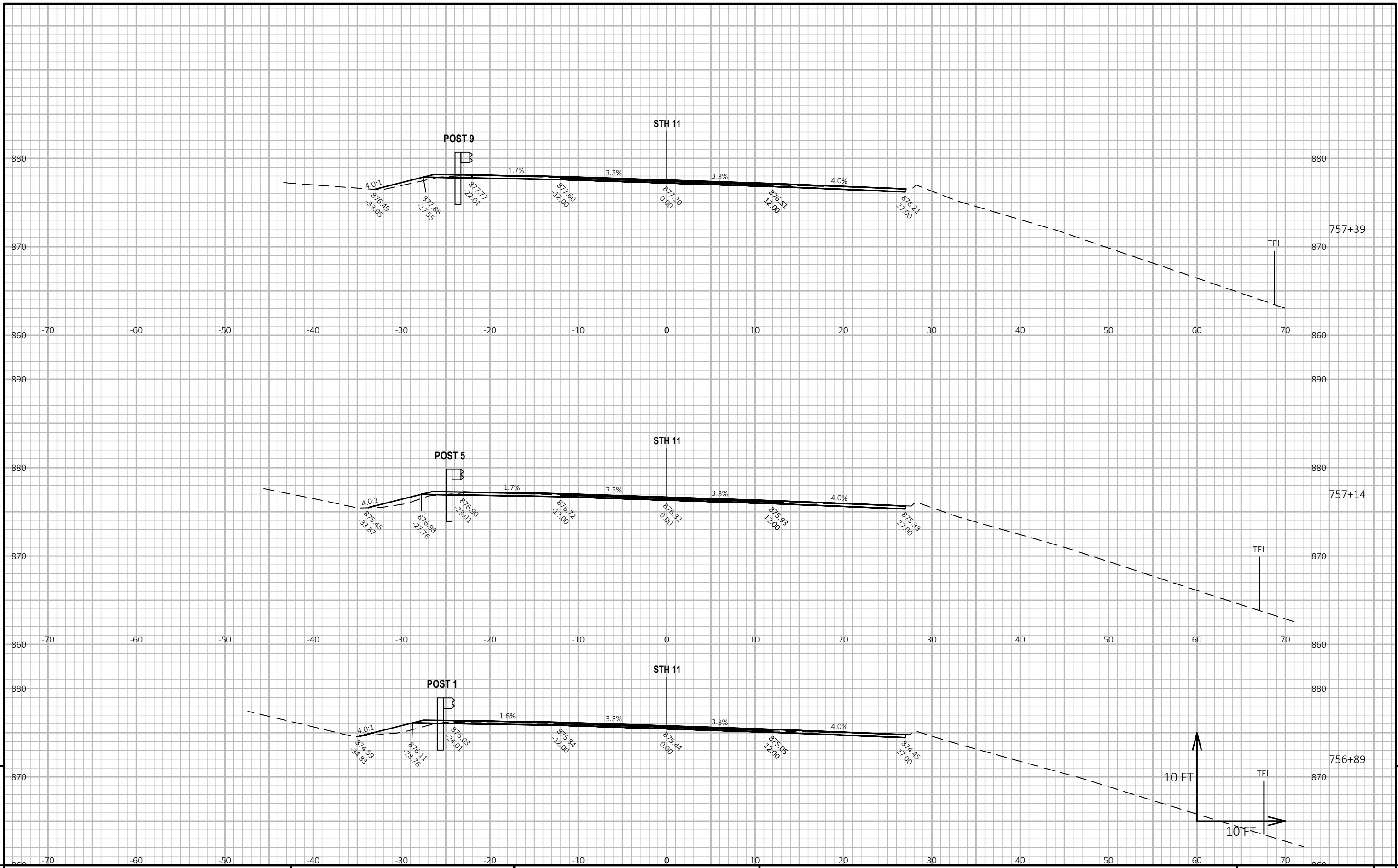
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PROJECT NO: 1706-04-61	HWY: STH 11	COUNTY: GREEN	CROSS SECTIONS: BEAM GUARD	SHEET	E
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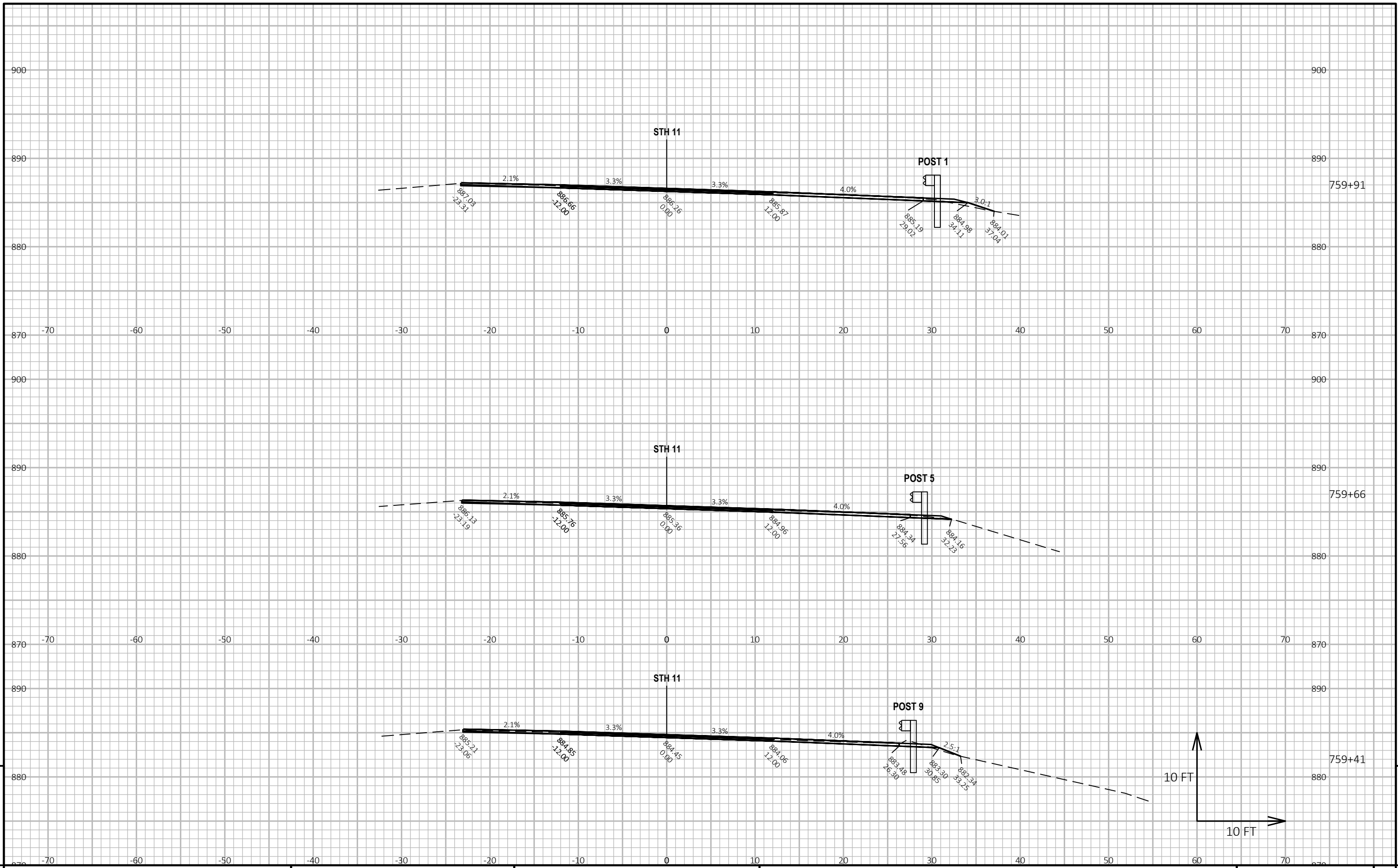
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PROJECT NO: 1706-04-61 HWY: STH 11 COUNTY: GREEN CROSS SECTIONS: BEAM GUARD SHEET E

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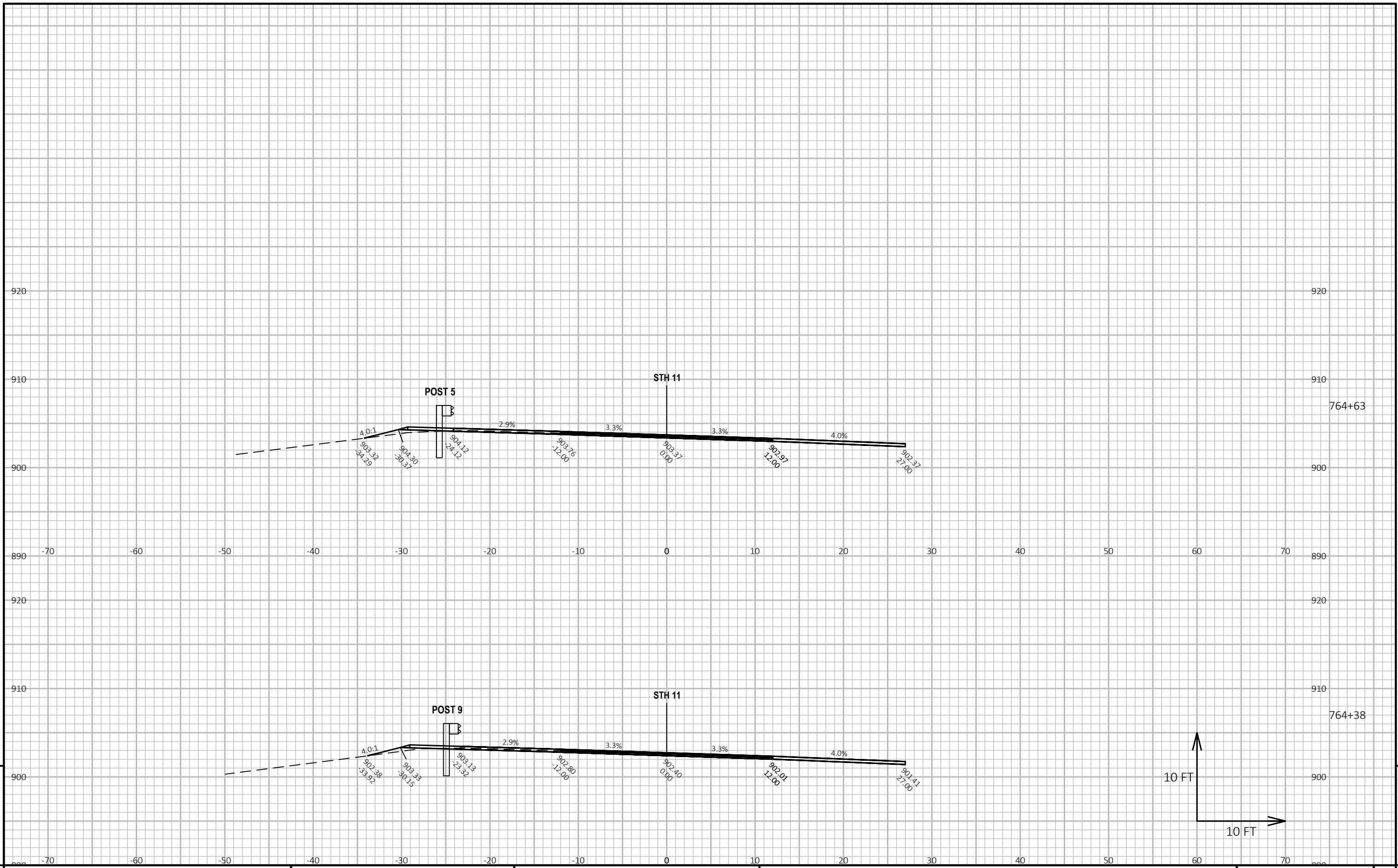
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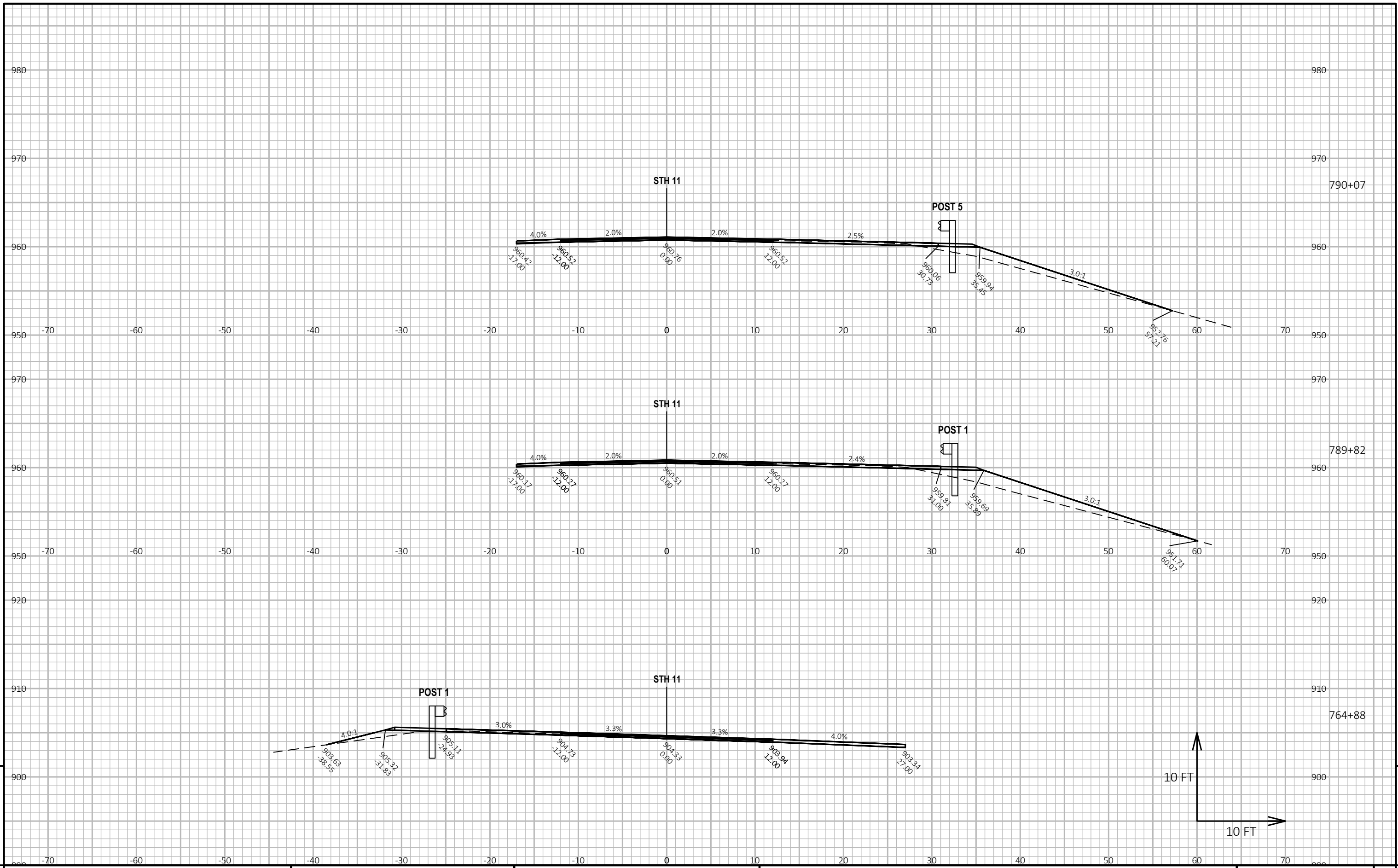
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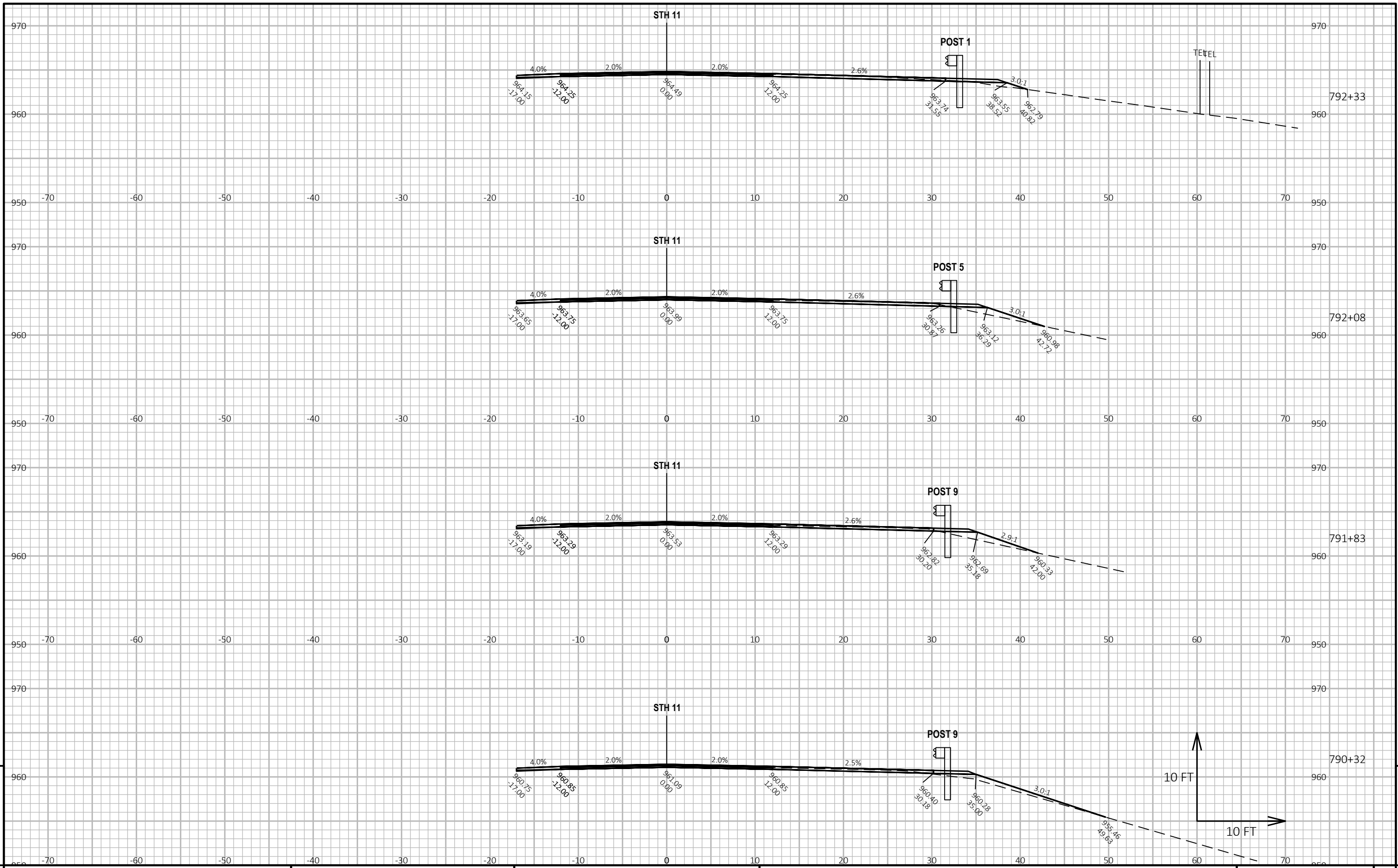
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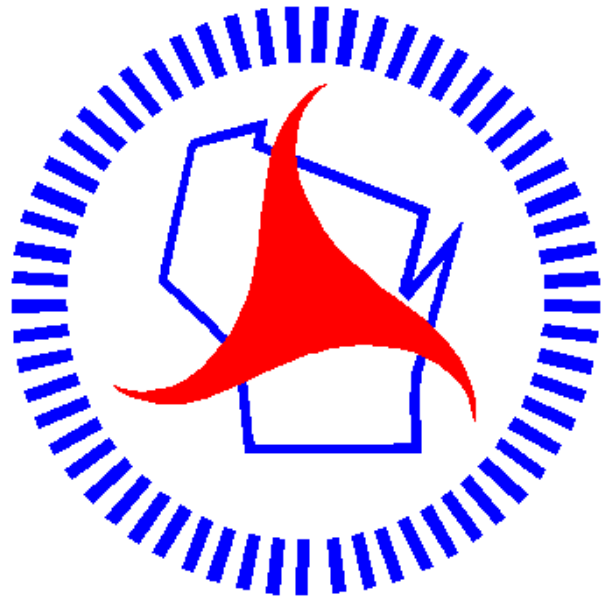
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Wisconsin Department of Transportation

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