

EAU

PROJECT ID:
WITH: N/A

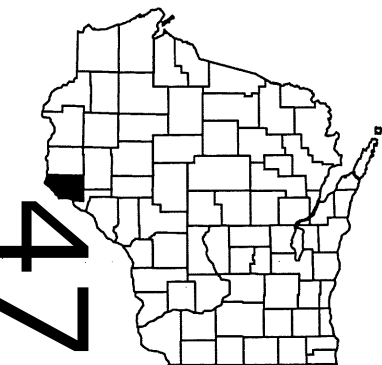
7210-00-80

COUNTY:
PIERCE

MARCH 2025
ORDER OF SHEETS

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

TOTAL SHEETS = 142



DESIGN DESIGNATION 7210-00-10

A.A.D.T.	2027	=	5,420
A.A.D.T.	2047	=	5,990
D.H.V.		=	14.7
D.D.		=	50/50
T.		=	11.1%
DESIGN SPEED		=	60 MPH
ESALS		=	1,200,000

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

RED WING - ELLSWORTH

MN/WI STATE LINE TO USH 10

USH 63

PIERCE COUNTY

STATE PROJECT NUMBER

7210-00-80

END PROJECT

STA 741+85.48

NET EXCEPTION TO CL LENGTH
STRUCTURE B-47-11
STA 249+11.42 - STA 251+26.31

NET EXCEPTION TO CL LENGTH
STRUCTURE B-47-23
STA 196+43.79 - STA 203+82.93

BEGIN PROJECT

STA 150+51.05

X:468469.763

Y:260501.799

LAYOUT
SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 11.019 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), PIERCE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	CORRE INC
Designer	WISDOT
Project Manager	KEVIN DRUNASKY
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	ALEX HAGEN

APPROVED FOR THE DEPARTMENT

DATE: 12/3/24

E

GENERAL NOTES

- 1) THE LOCATIONS OF EXISTING AND PROPOSED UTILITIES INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- 2) ALL RADII ARE MEASURED TO EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN OR NOTES ON THE PLAN.
- 3) PRIOR TO THE PAVEMENT TO STEEL PLATE BEAM GUARD, THE SHOULDER SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE.
- 4) THE CONTRACTORS PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTION AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURING, BIKE OR PARKING LANE.
- 5) HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN
- 6) APPLY TACK COAT AT A RATE OF 0.07 GAL/SY TO MILLED SURFACES AND 0.05 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT.
- 7) NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
- 8) STEEL PLATE BEAM GUARD HEIGHT SHALL BE ADJUSTED TO BETWEEN 29-INCHES AND 27.75-INCHES, FIELD CONFIRM HEIGHTS BEFORE ADJUSTMENTS. IF BLOCKS HAVE ALREADY BEEN ADJUSTED ASSURE THAT BLOCKS DO NOT GET ADJUSTED TO MORE THAN 3-INCHES ABOVE POSTS.

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 89.6 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.515 ACRES

ORDER OF SECTION 2 SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- EROSION CONTROL
- PAVEMENT MARKINGS
- TRAFFIC CONTROL

USH 63 HMA MILL AND OVERLAY 150+51-170+00		
LAYER	THICKNESS	TYPE
UPPER	2-INCHES	4 MT 58-34 V
LOWER	3-INCHES	4 MT 58-34 V

USH 63 HMA MILL AND OVERLAY 170+00-741+85		
LAYER	THICKNESS	TYPE
UPPER	1.75-INCHES	4 MT 58-34 V
LOWER	2-INCHES	4 MT 58-34 V

UTILITIES

COMMUNICATIONS

AT&T WI
RICK PODOLAK
304 S DEWEY ST
EAU CLAIRE, WI 54701
PHONE:(715) 410-0656
EMAIL: RP4514@ATT.COM

ELECTRICITY/COMMUNICATIONS

PIERCE PEPIN COOP
BRAD RISTOW
W7725 US HWY 10 P.O. BOX 420
ELLSWORTH, WI 54011
PHONE: (715) 273-2473
EMAIL: BRISTOW@PIERCEPEPIN.COOP

GAS/PETROLEUM

FLINT HILLS RESOURCES, LC
ELIZABETH BARTLEY
13775 CLARK ROAD
ROSEMOUNT, MN 55068
PHONE: (612) 244-9950
EMAIL: ELIZABETH.BARTLEY@FHR.COM

GAS/PETROLEUM

WE ENERGIES
STEVEN CHAVERS
104 W SOUTH STREET
RICE LAKE, WI 54868
PHONE: (715) 234-9605
EMAIL: WE-UTILITY-RELOCATIONS@WE-ENERGIES.COM

DESIGN CONTACTS

DESIGN PROJECT MANAGER

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2101 WRIGHT ST
MADISON, WI 53704
PHONE: 608-246-3811
EMAIL: KEVIN.DRUNASKY@DOT.WI.GOV

DESIGN PROJECT LEADER

WISDOT
2101 WRIGHT ST
MADISON, WI 53704

COMMUNICATIONS

BEVCOMM
CHAD WHITCOMB
W8108 165TH AVE P.O. BOX 125
HAGER CITY, WI 54014
PHONE: (715) 792-2103
EMAIL: CWHITCOMB@BEVCOMM.COM

ELECTRICITY

XCEL ENERGY
ASHLEY LARSON
2001 OLD HIGHWAY 35 A
HUDSON, WI 54016
PHONE: (612) 346-5766
EMAIL: ASHLEY.M.LARSON@XCELENERGY.COM

GAS/PETROLEUM

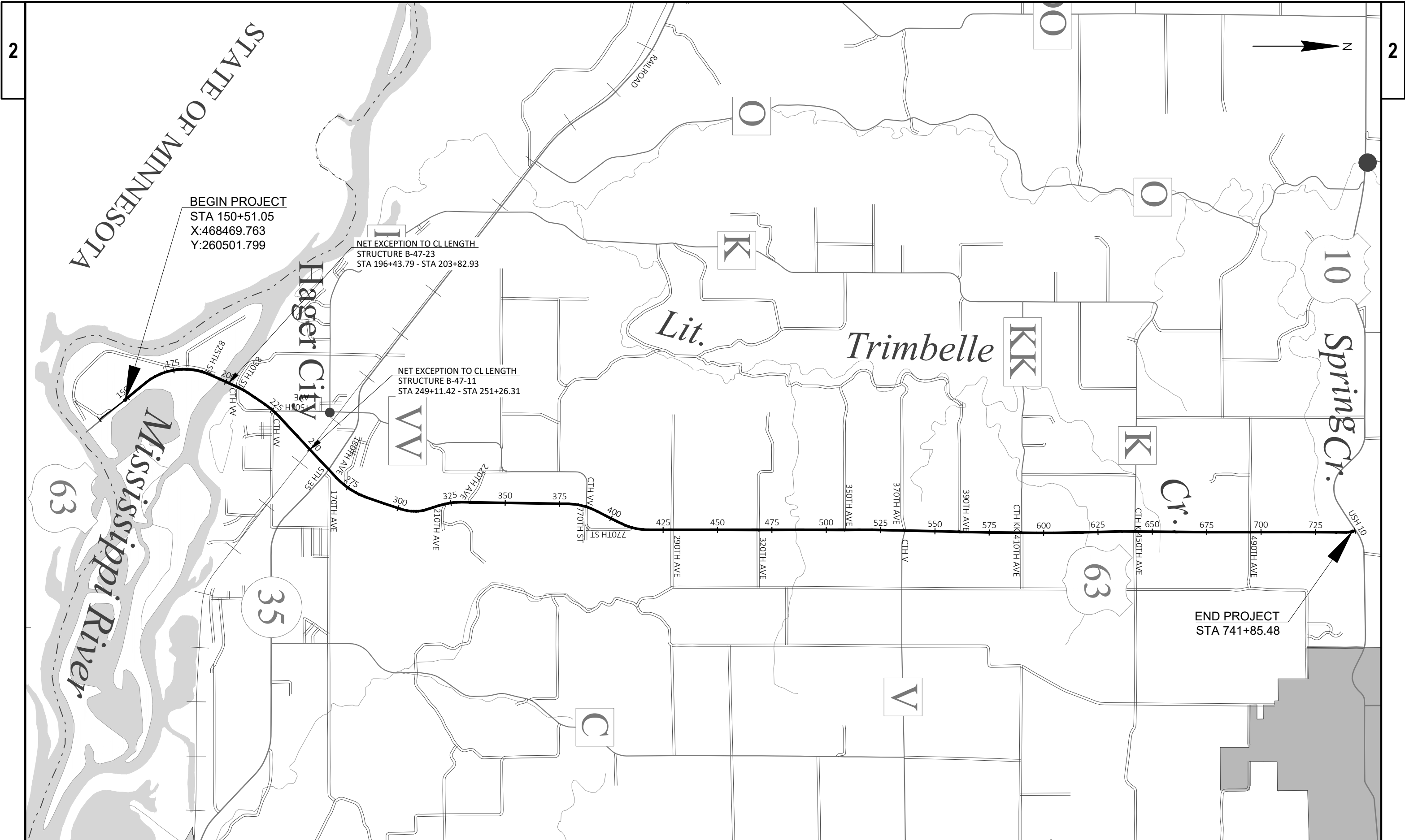
NORTHERN NATURAL GAS CO.
MITCH KLEIST
1120 CENTRE POINT DR STE 400
MENDOTA HEIGHTS, MN 55120
PHONE: (651) 456-1766
EMAIL: MITCHELL.KLEIST@NNGCO.COM

WISCONSIN DNR LIAISON

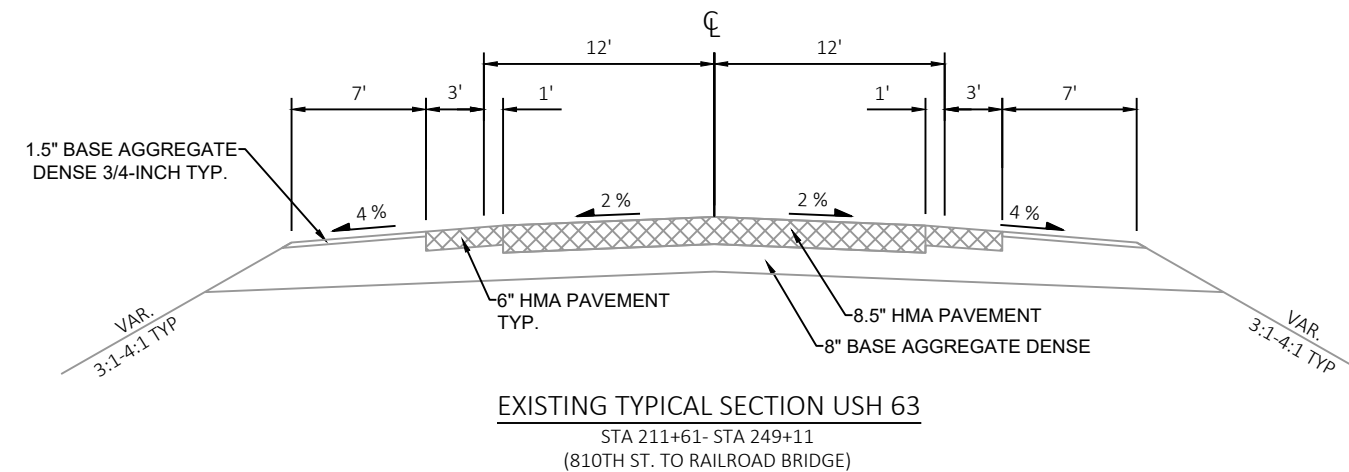
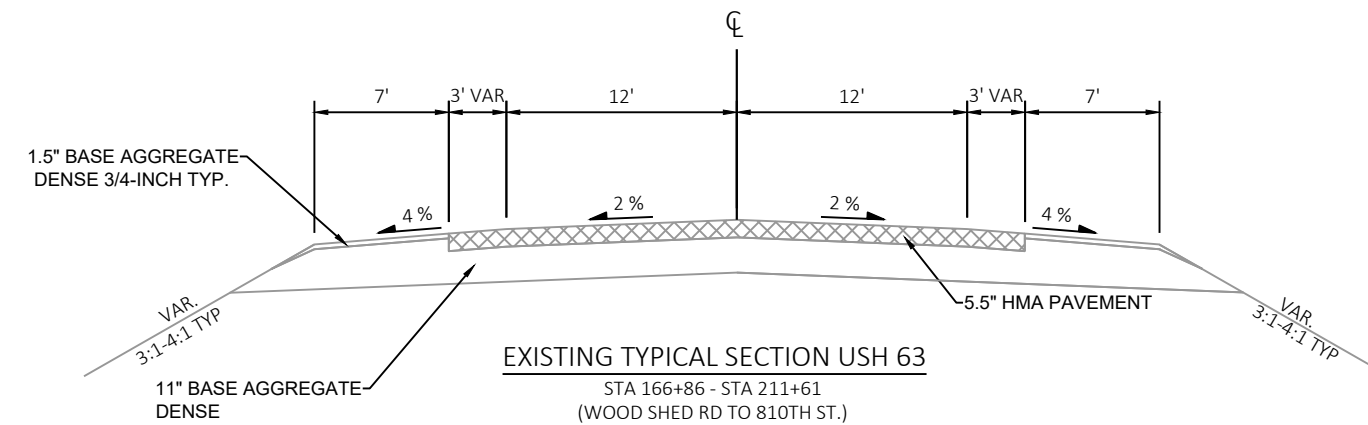
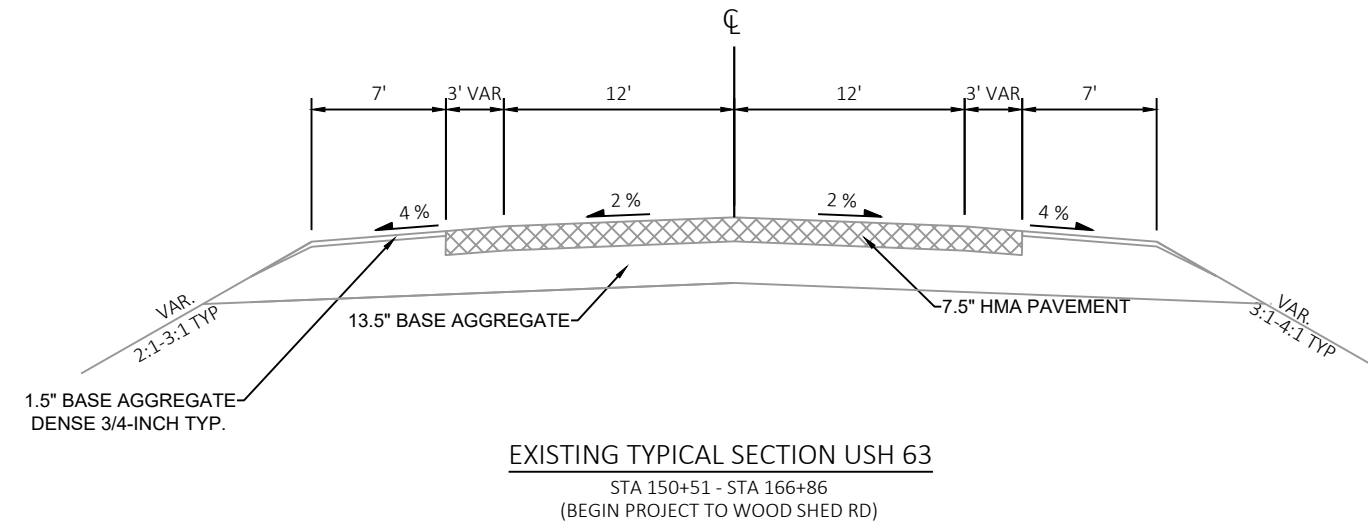
AMY LESIK
1300 WEST CLAIREMONT AVE.
EAU CLAIRE, WI 54701
PHONE: 715-836-2068
EMAIL: AMYI.LESIK@WISCONSIN.GOV

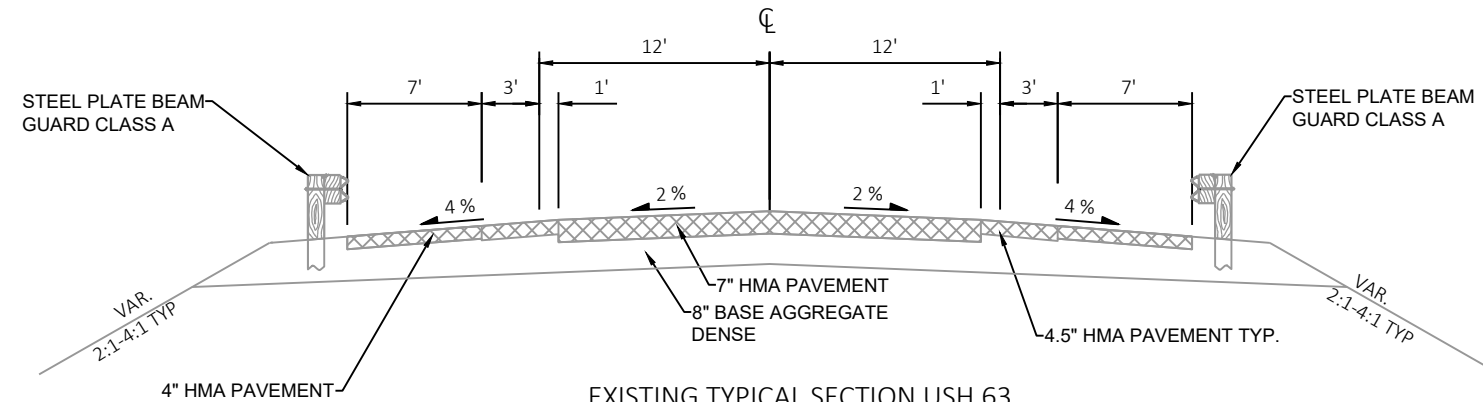


Dial  or (800)242-8511
www.DiggersHotline.com



PROJECT NO: 7210-00-80	HWY: USH 63	COUNTY: PIERCE	PROJECT OVERVIEW	SHEET 3	E
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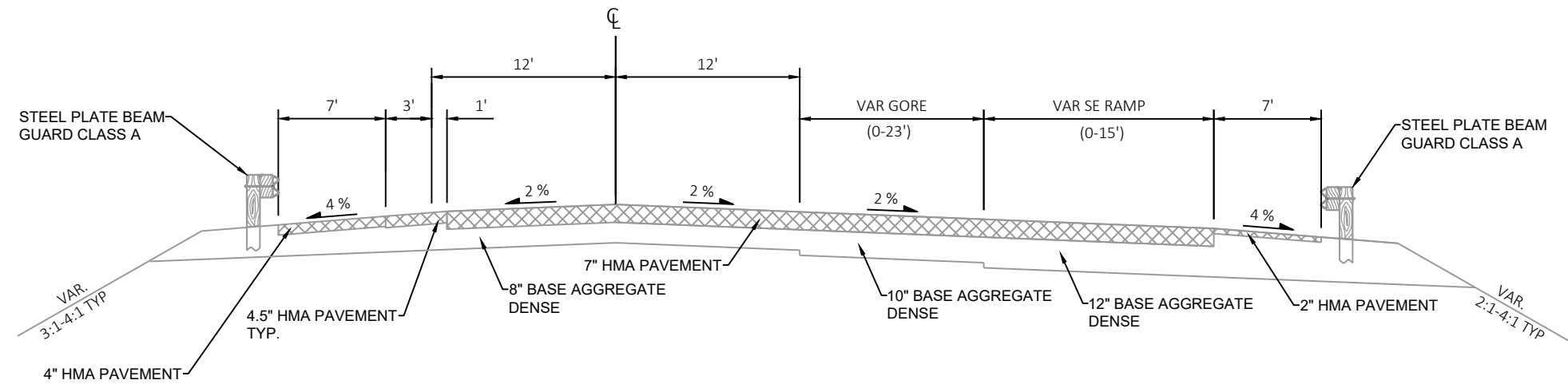




EXISTING TYPICAL SECTION USH 63

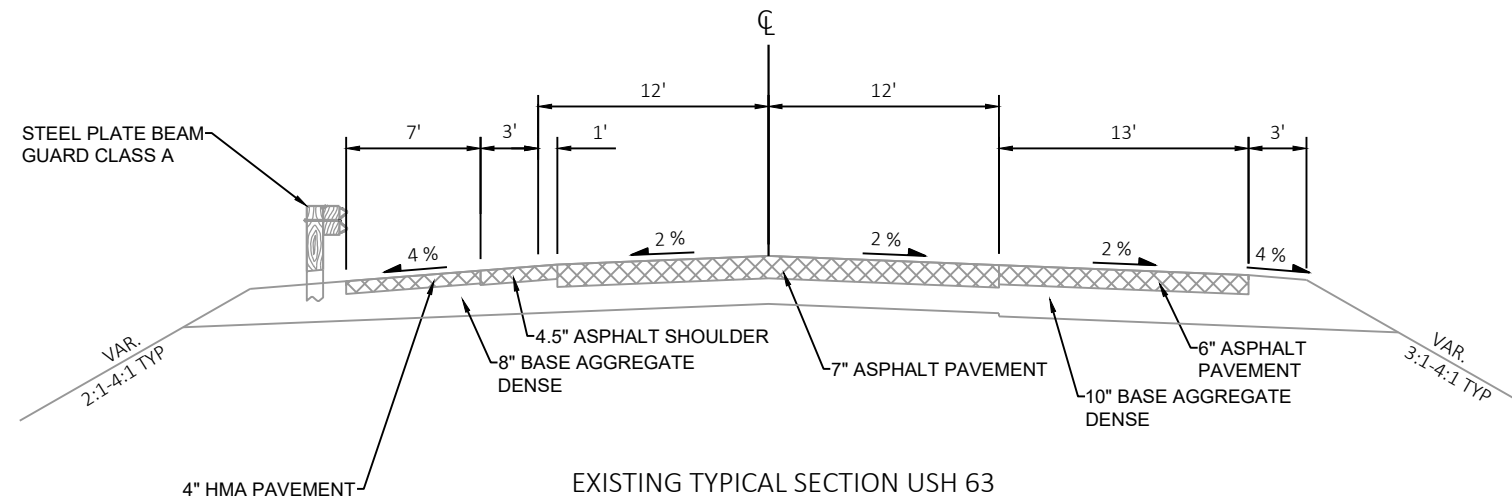
STA 251+26 - STA 252+29
(RAILROAD BRIDGE TO STH 35/USH63 INTERSECTION)

EXCEPTION TO THE NET LENGTH:
B-47-11, STA 249+11 - STA 251+26



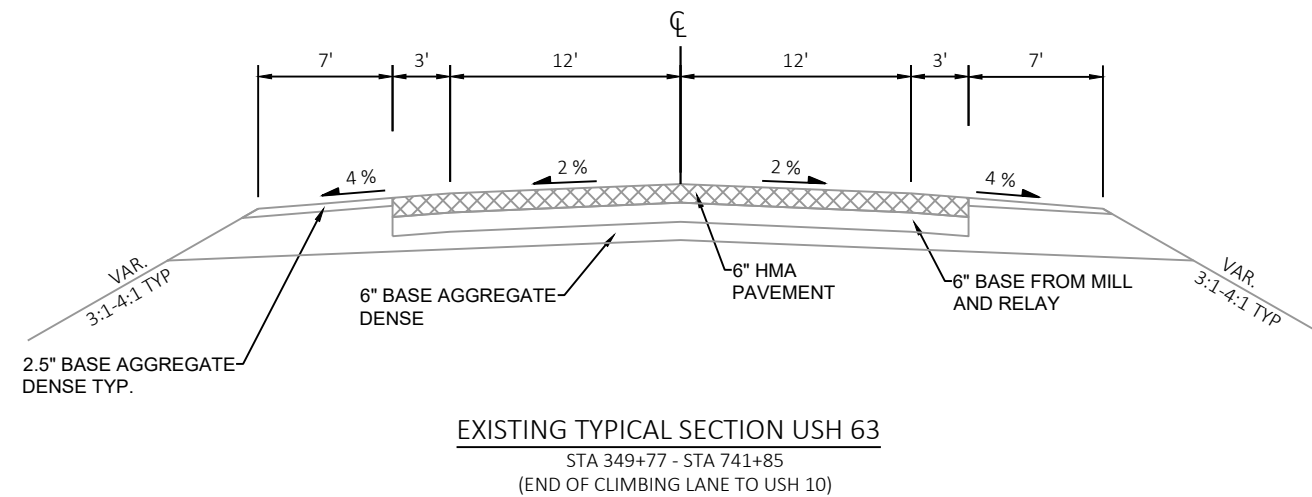
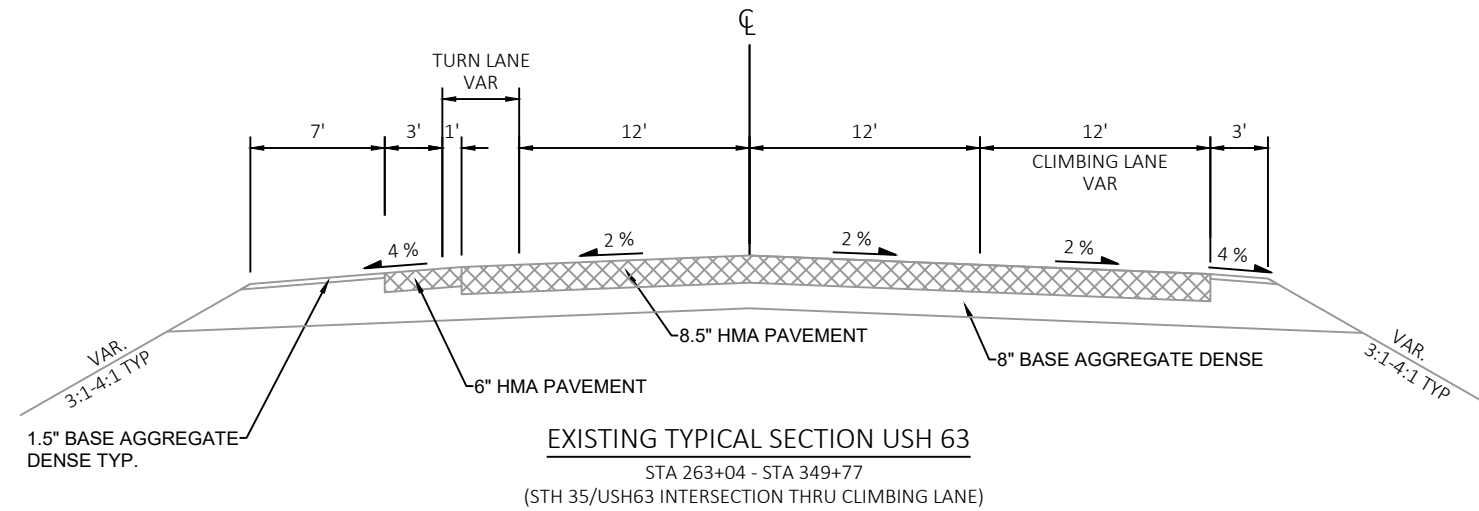
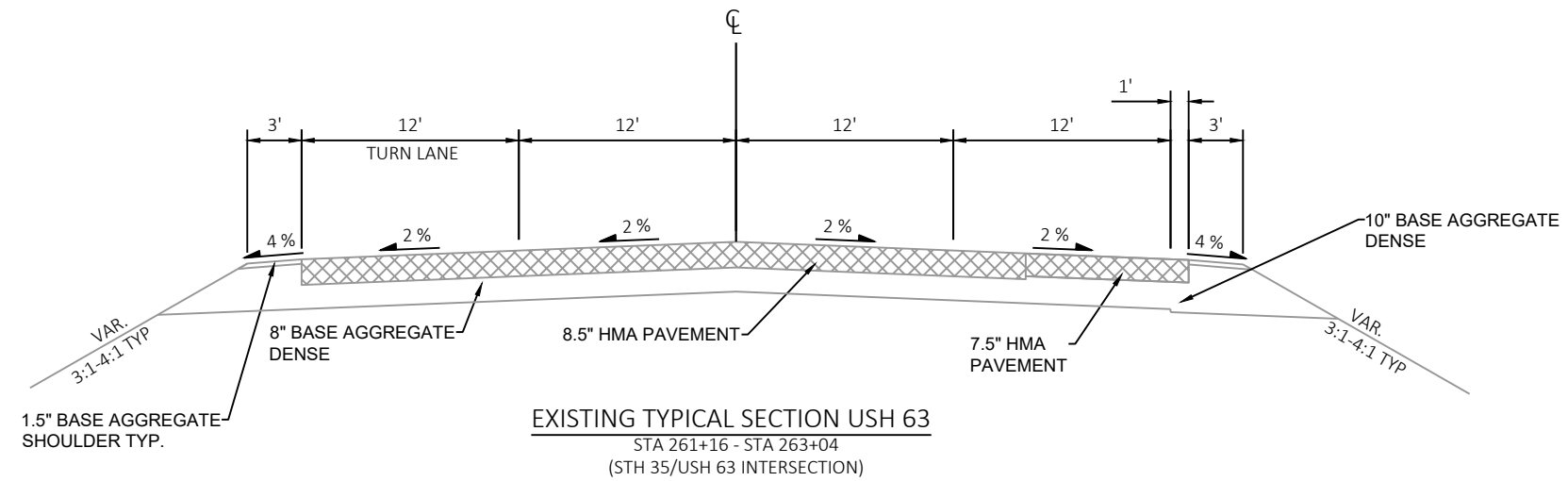
EXISTING TYPICAL SECTION USH 63

STA 252+29 - STA 257+23
(STH 35/USH 63 INTERSECTION)

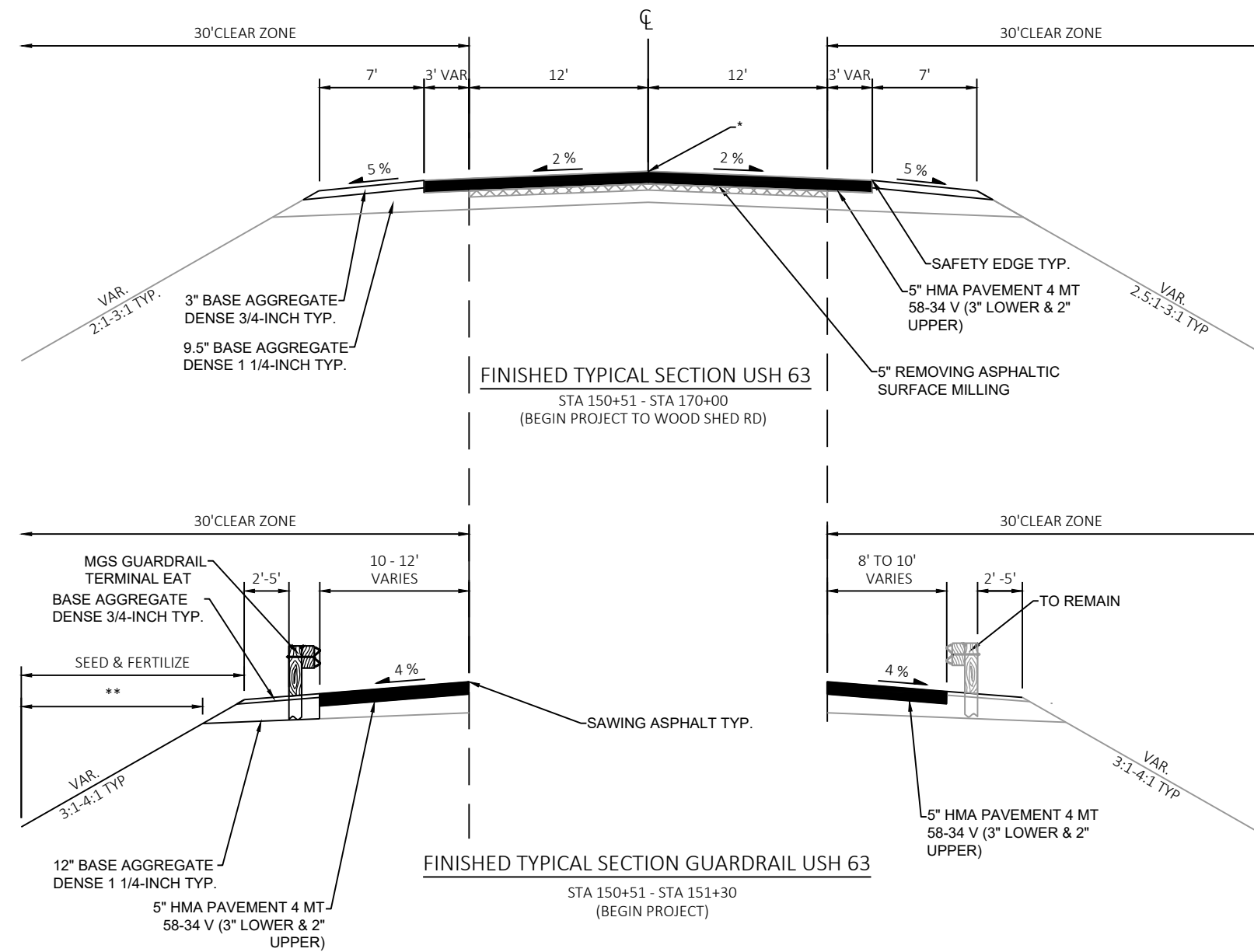


EXISTING TYPICAL SECTION USH 63

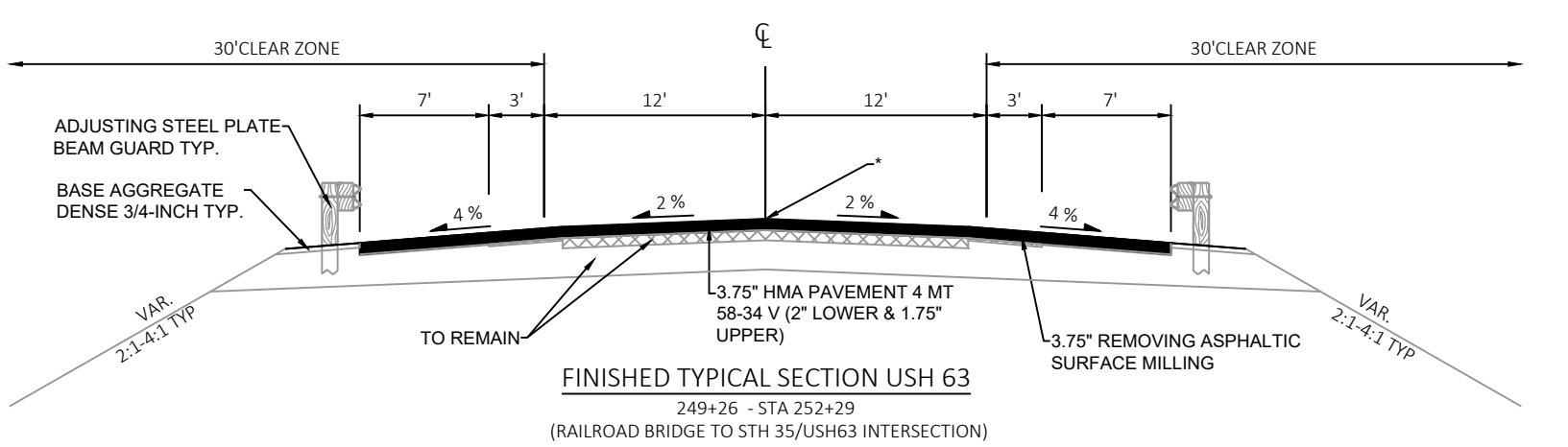
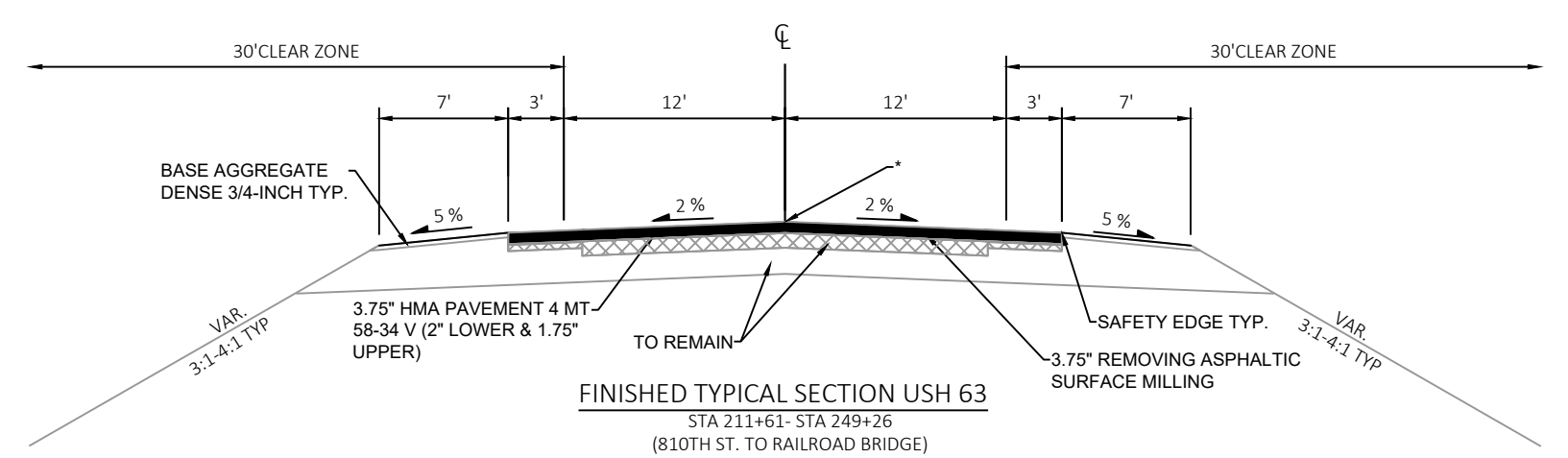
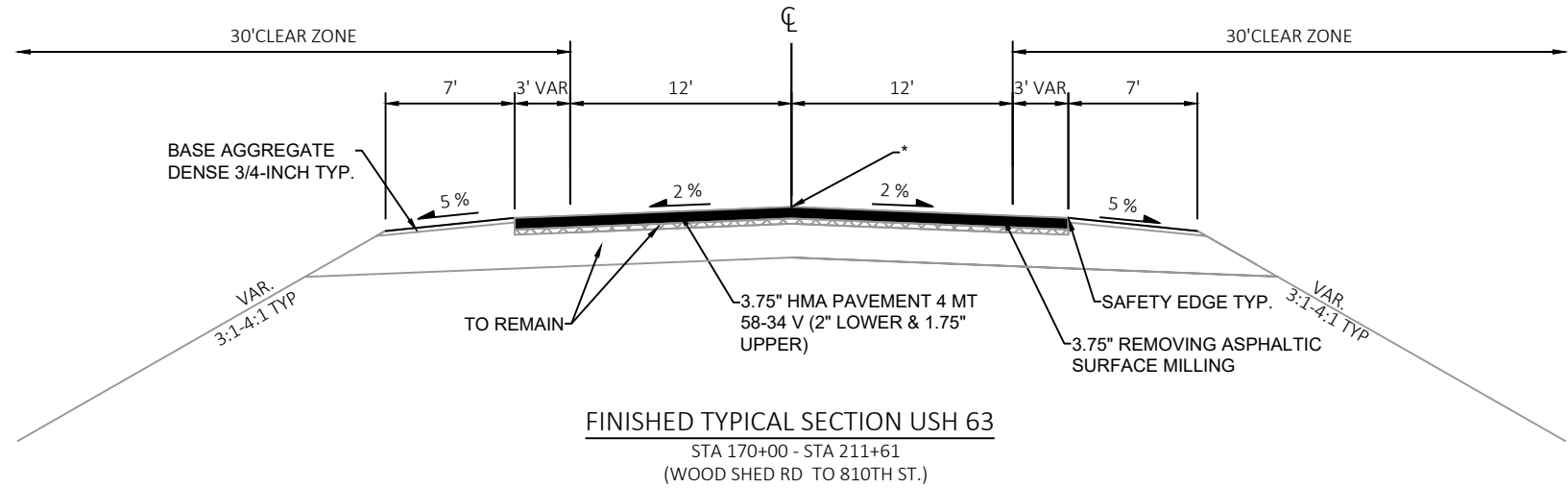
STA 257+23 - STA 261+16
(STH 35/USH 63 INTERSECTION)



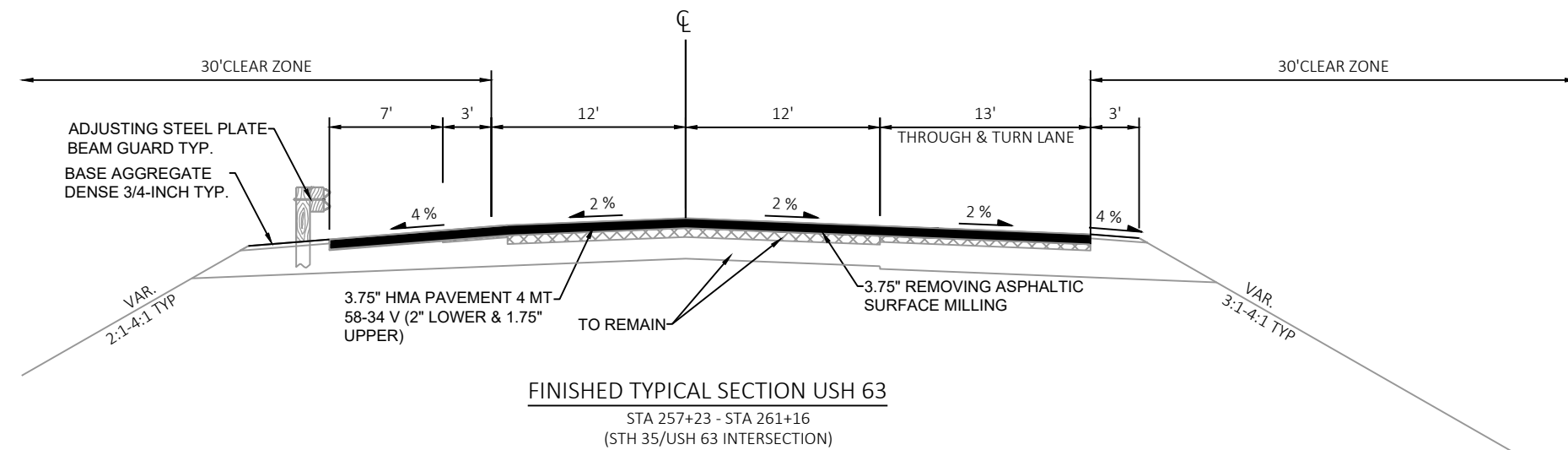
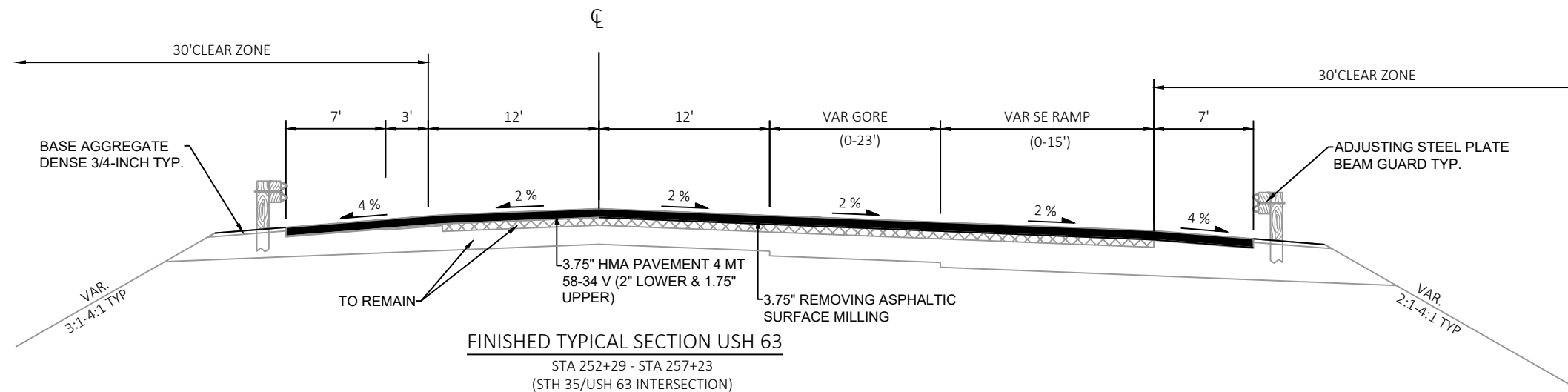
* ASPHALTIC RUMBLE STRIPS, CENTERLINE
** TOPSOIL, SEEDING MIXTURE NO. 10, FERTILIZER TYPE B, &
EROSION MAT URBAN CLASS 1, TYPE A



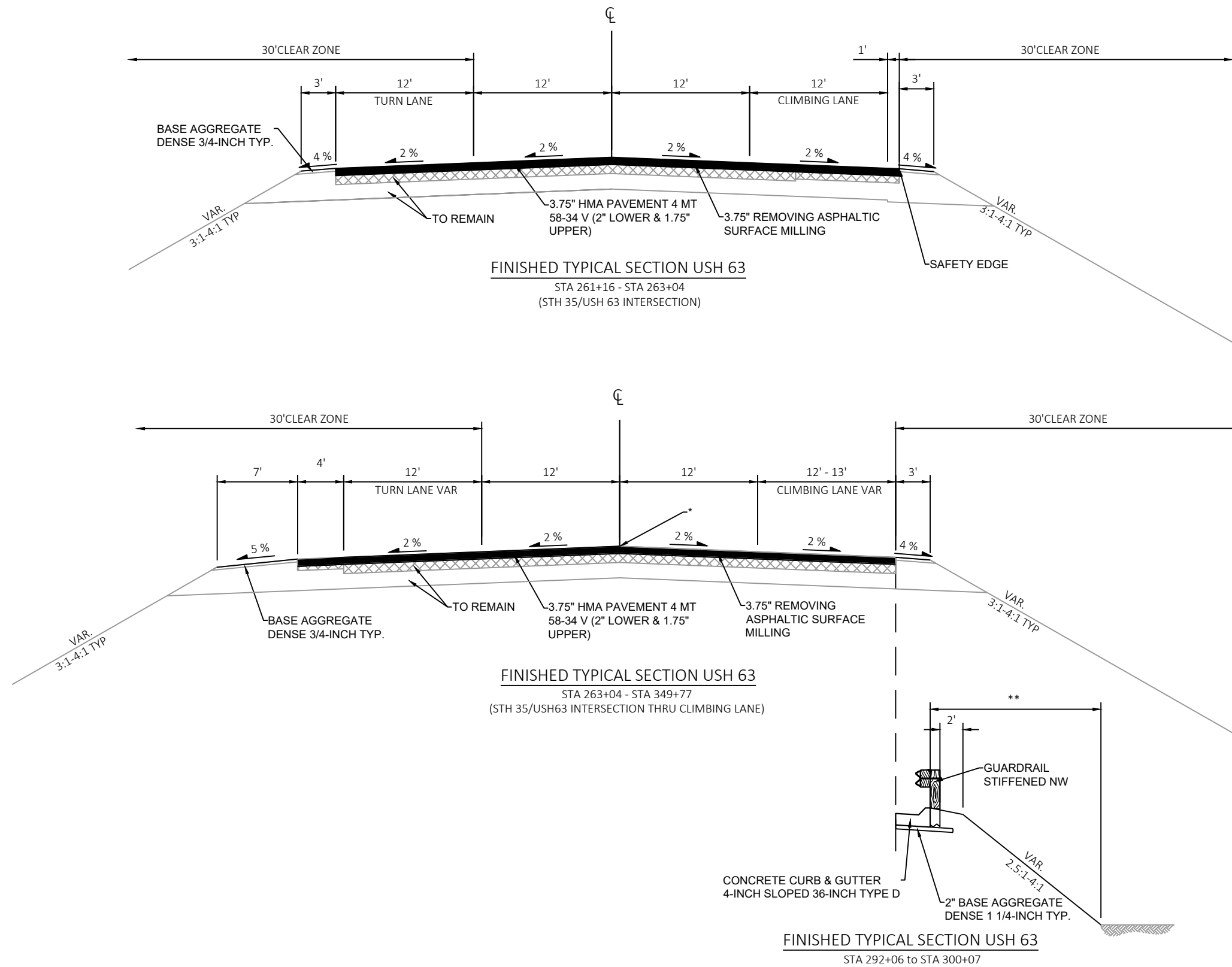
*ASPHALTIC RUMBLE STRIPS, CENTERLINE

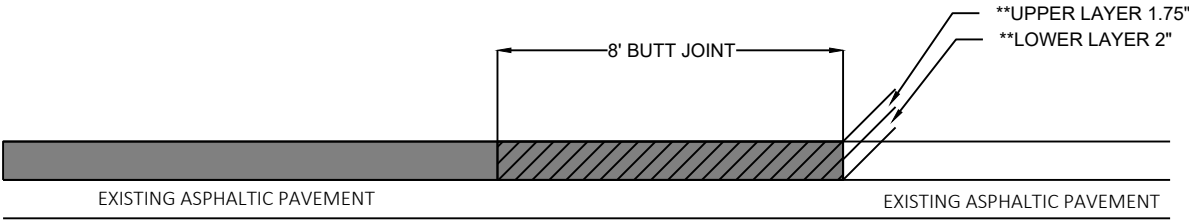


*ASPHALTIC RUMBLE STRIPS, CENTERLINE



* ASPHALTIC RUMBLE STRIPS, CENTERLINE
 ** TOPSOIL, SEEDING MIXTURE NO. 70A, FERTILIZER TYPE B, &
 EROSION MAT URBAN CLASS 1, TYPE A



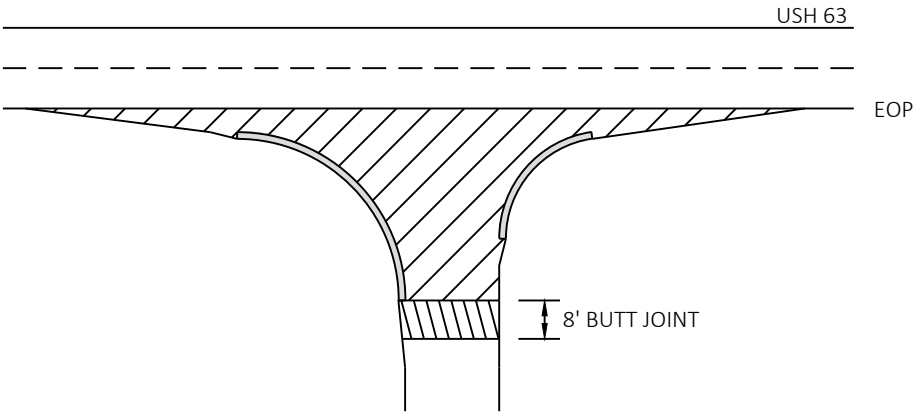


HMA PAVEMENT 4 MT 58 - 34 V

REMOVING ASPHALTIC SURFACE BUTT JOINTS

BUTT JOINT FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)

** STA 150+51 TO 170+00:
UPPER LAYER 2"
LOWER LAYER 3"

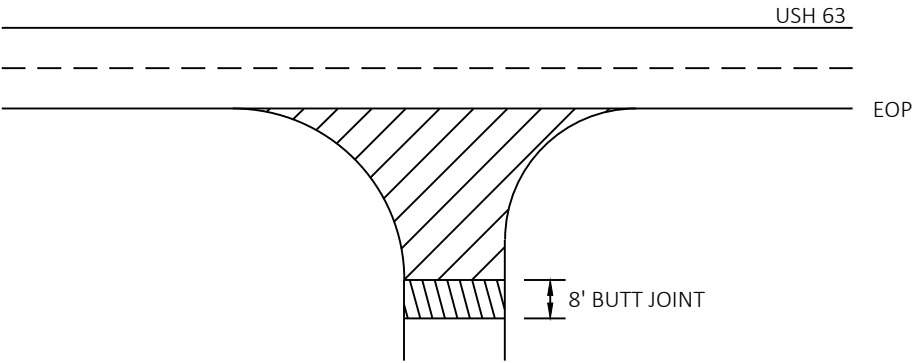


REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS

NOTE: WHEN MATCHING TO AN UNPAVED SURFACE
BUTT JOINT IS NOT REQUIRED

SIDE ROADS
WITH CURB AND GUTTER

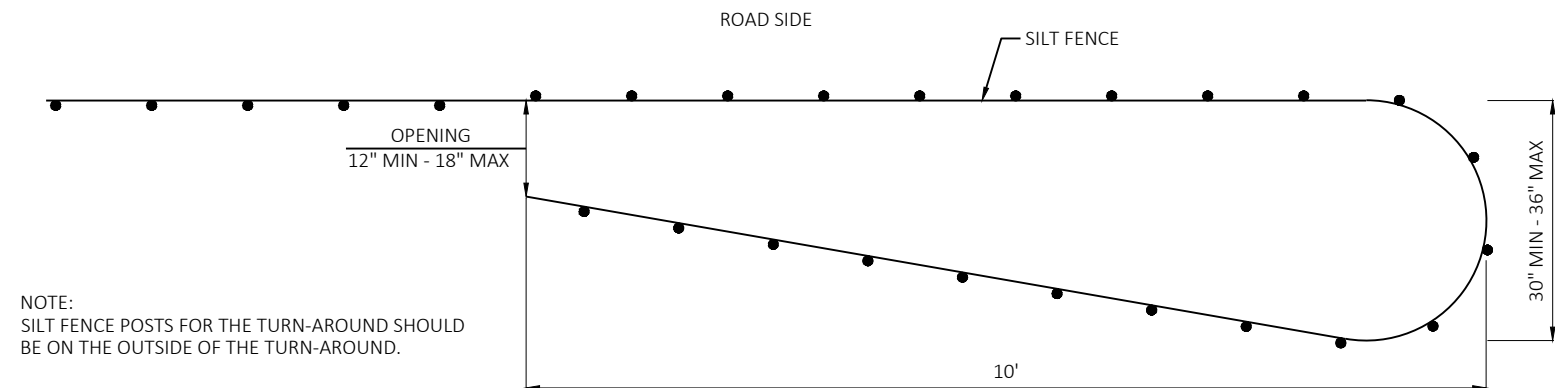


REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS

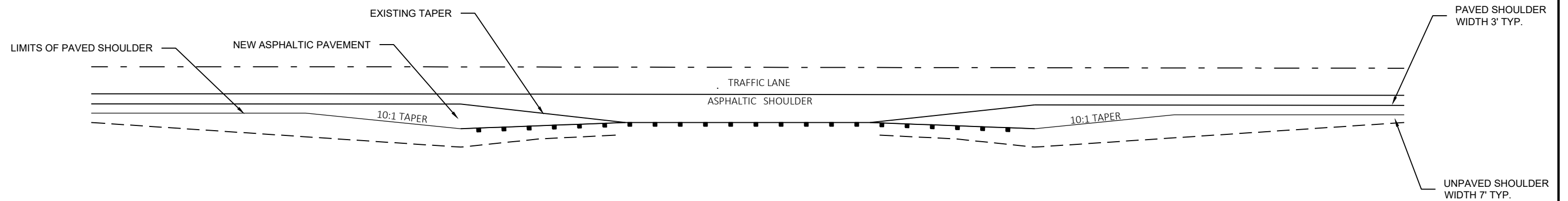
NOTE: WHEN MATCHING TO AN UNPAVED SURFACE
BUTT JOINT IS NOT REQUIRED

SIDE ROADS
WITHOUT CURB AND GUTTER

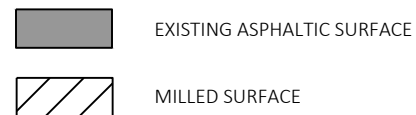
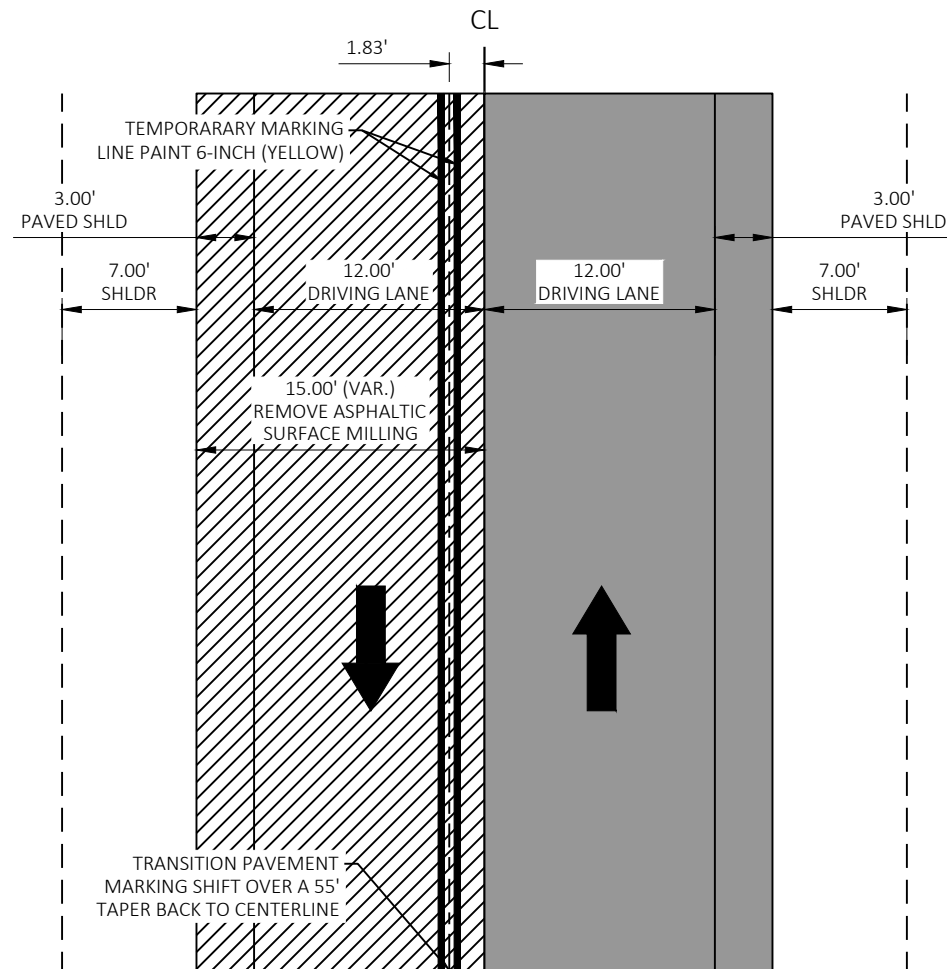


PLAN VIEW

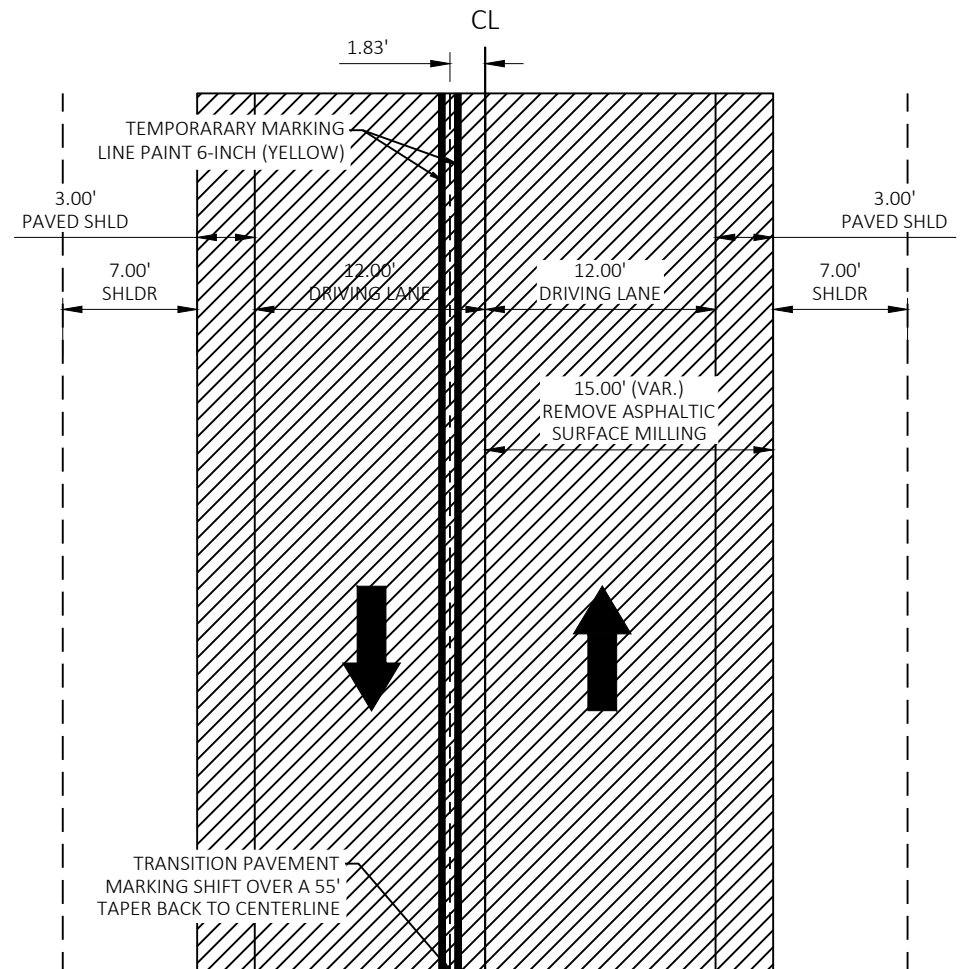
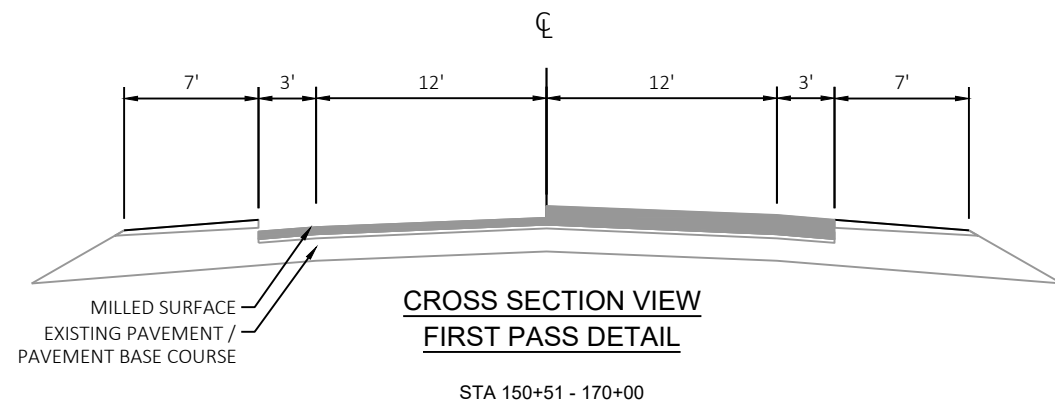
SILT FENCE TURN-AROUND DETAIL
STA 149+67 LT, 153+71 LT



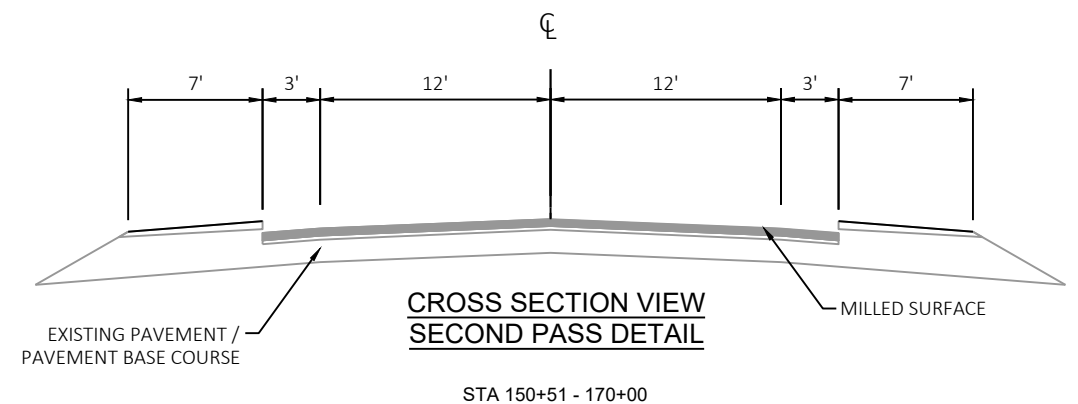
DETAIL FOR ASPHALTIC SHOULDER AT EXISTING BEAM GUARD

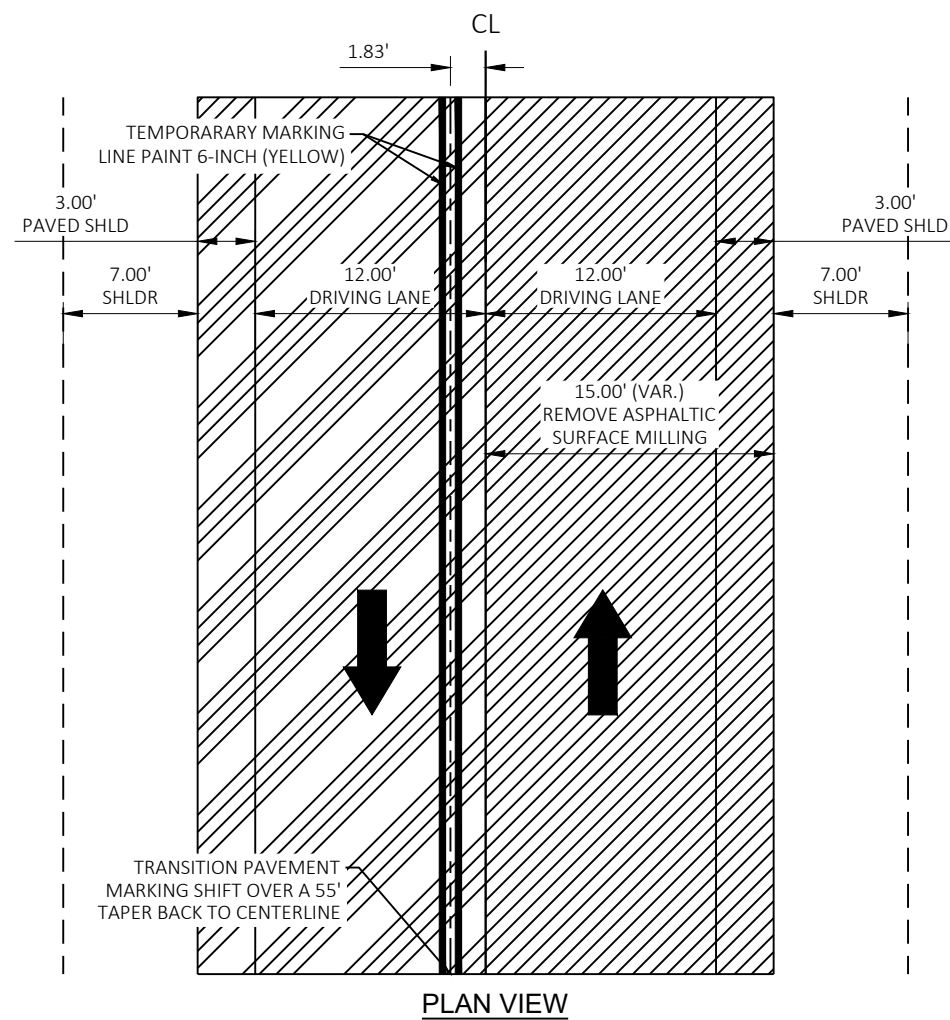


FIRST PASS OF HMA PAVING SHALL BE PAVED THE SAME DAY OF ANY EXISTING MAINLINE SURFACE MILLING.



FIRST PASS OF HMA PAVING SHALL BE PAVED THE SAME DAY OF ANY EXISTING MAINLINE SURFACE MILLING.



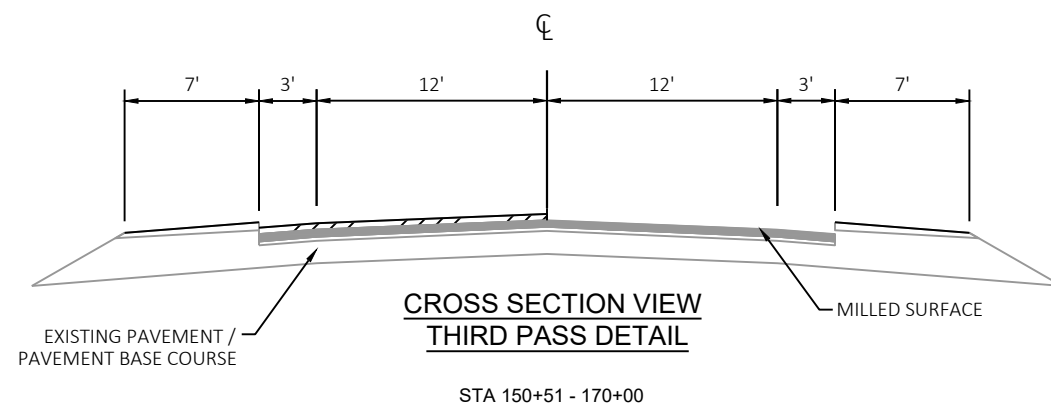


MILLED SURFACE

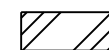
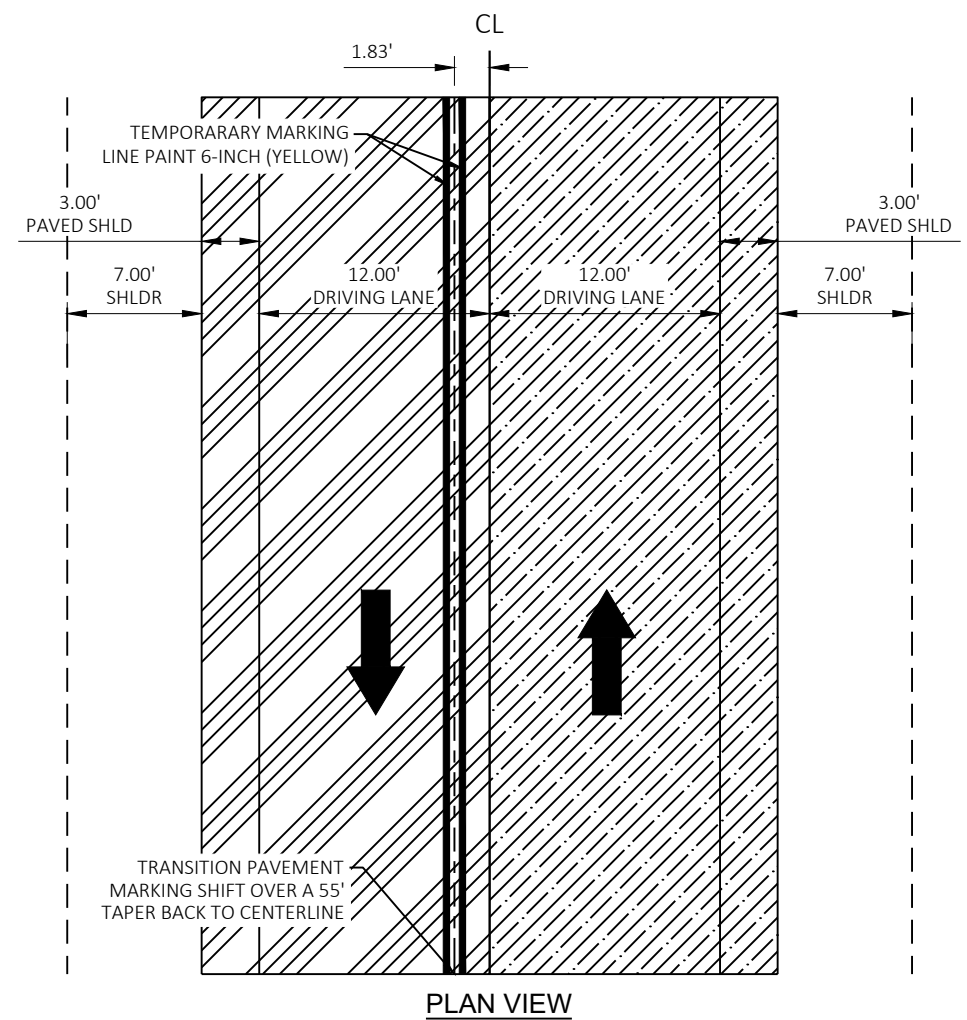


FIRST PASS 3" HMA PAVEMENT 4MT58-34V (LOWER LIFT)

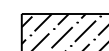
FIRST PASS OF HMA PAVING SHALL BE PAVED SAME DAY OF ANY EXISTING MAINLINE SURFACE MILLING.



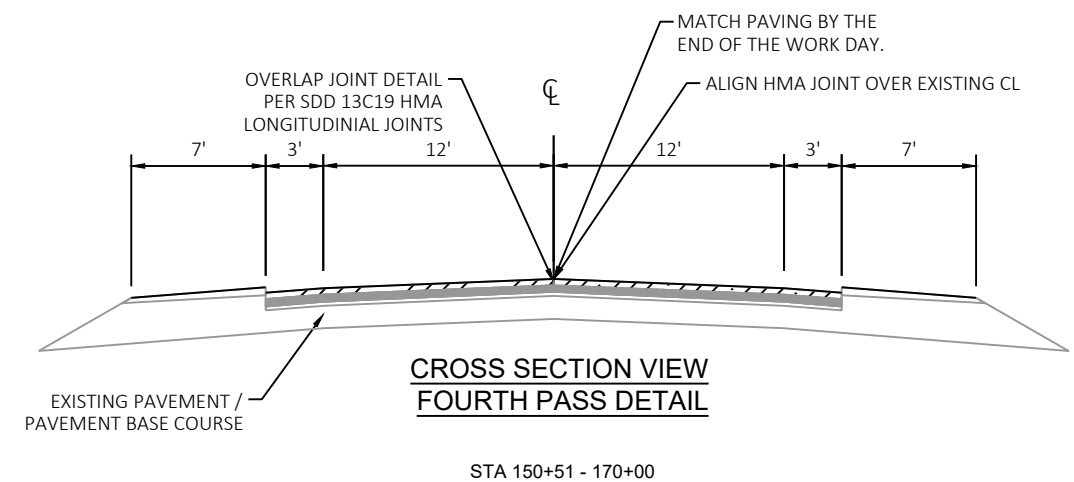
THIRD AND FOURTH PASS SHALL BE COMPLETED IN THE SAME DAY TO MATCH PAVING AT THE END OF EACH WORKING DAY

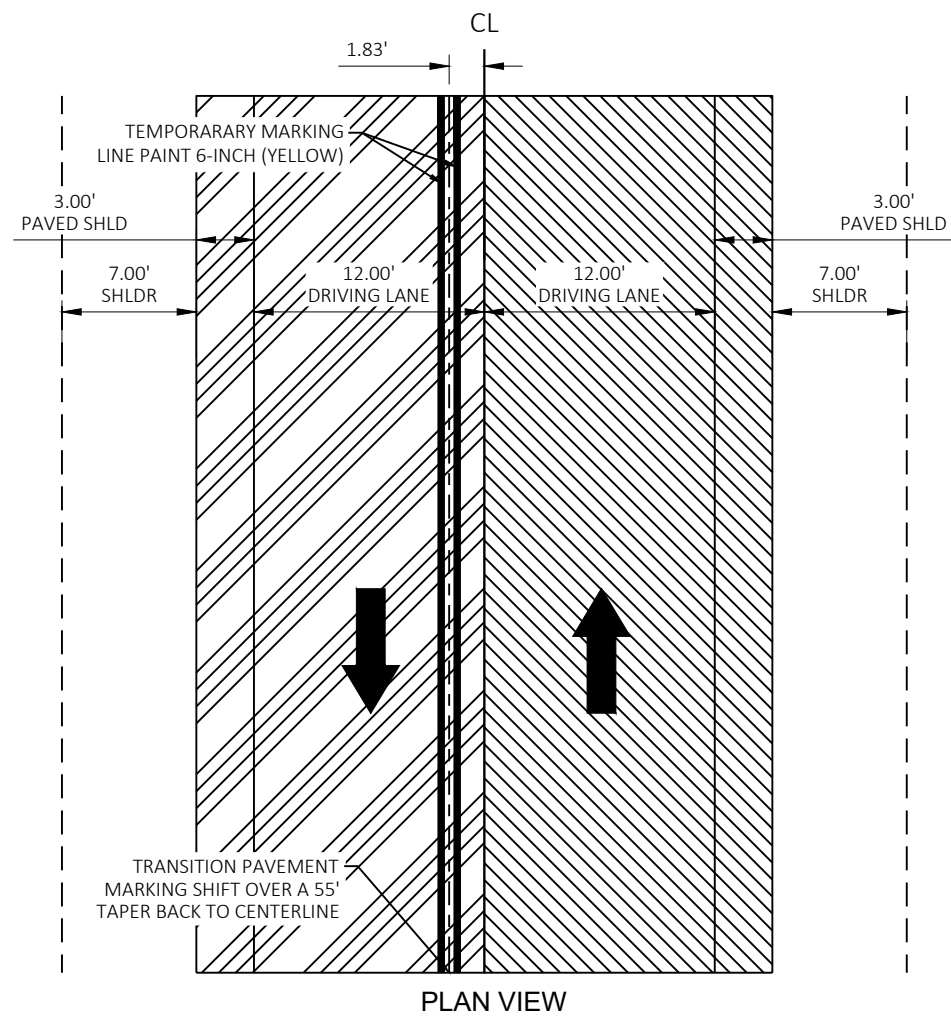


FIRST PASS 3" HMA PAVEMENT 4MT58-34V (LOWER LIFT)

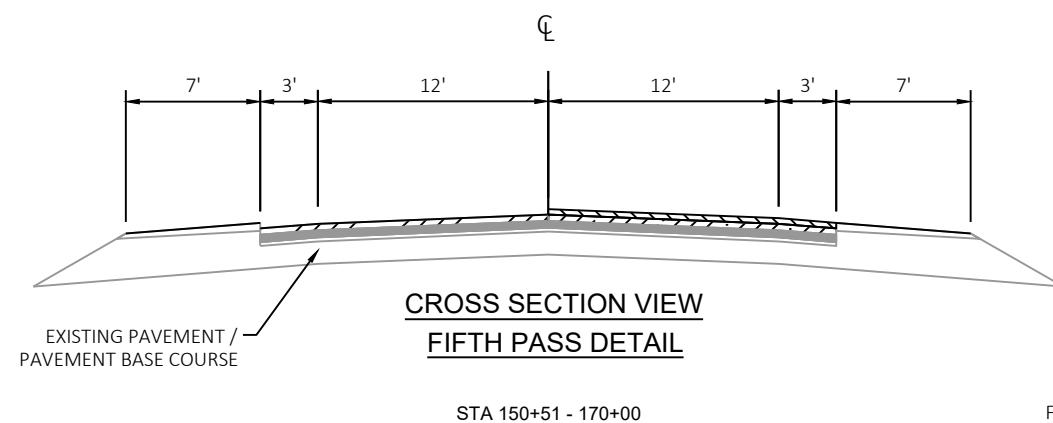


SECOND PASS 3" HMA PAVEMENT 4MT58-34V (LOWER LIFT)

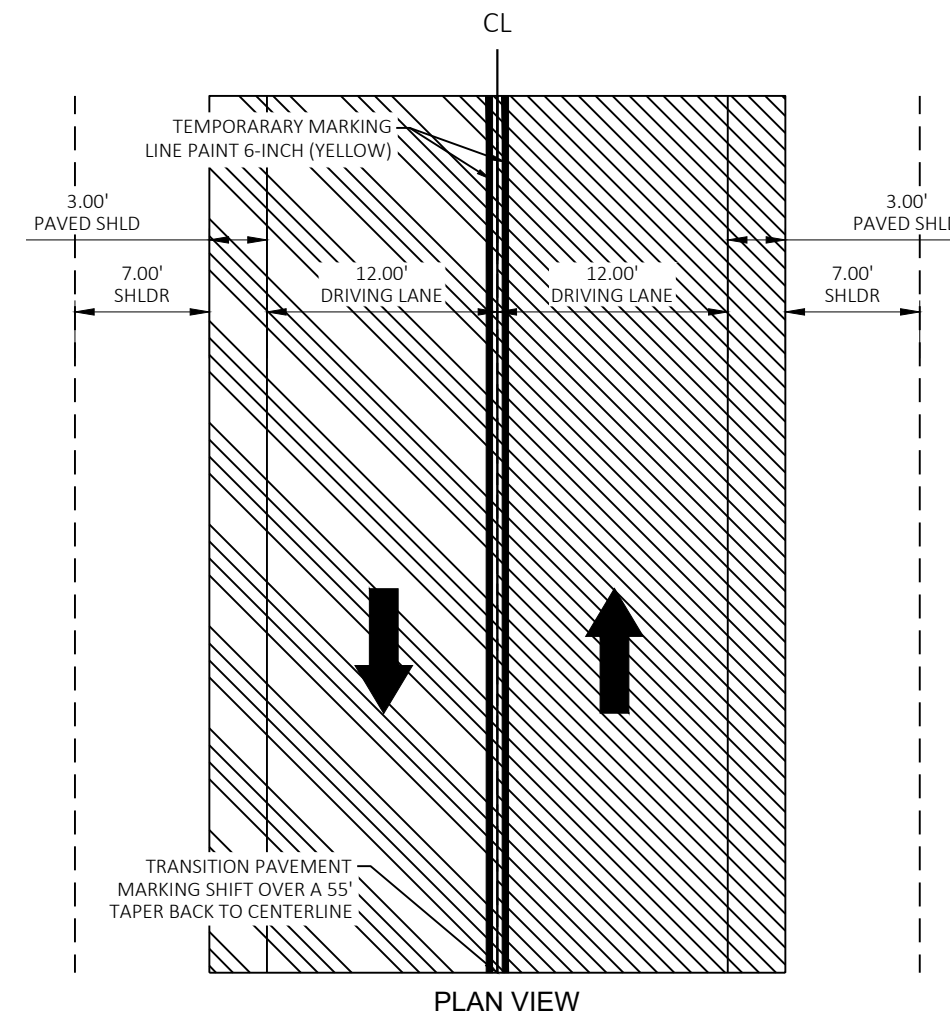




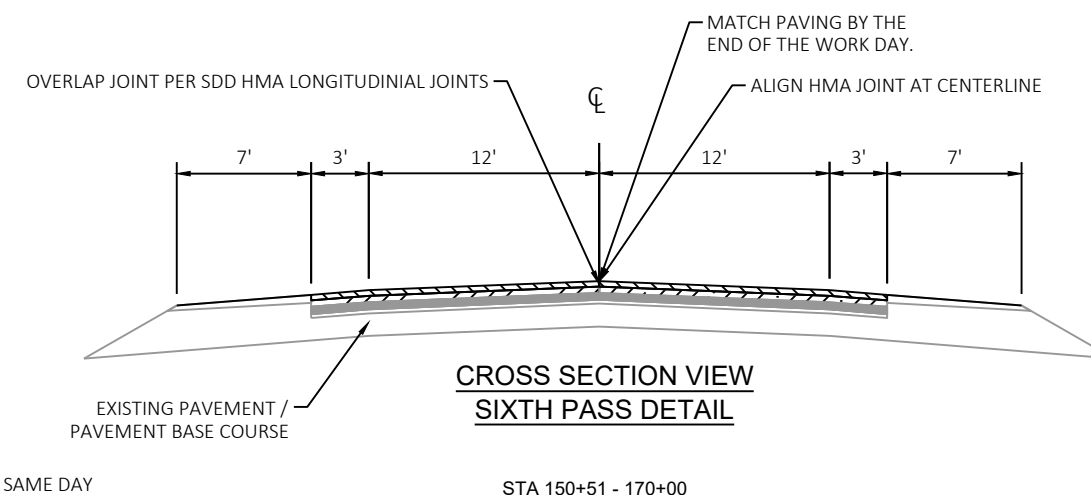
- Legend:
- FIRST PASS 3" HMA PAVEMENT 4MT58-34V (LOWER LIFT)
 - THIRD PASS 2" HMA PAVEMENT 4MT58-34V (UPPER LIFT)

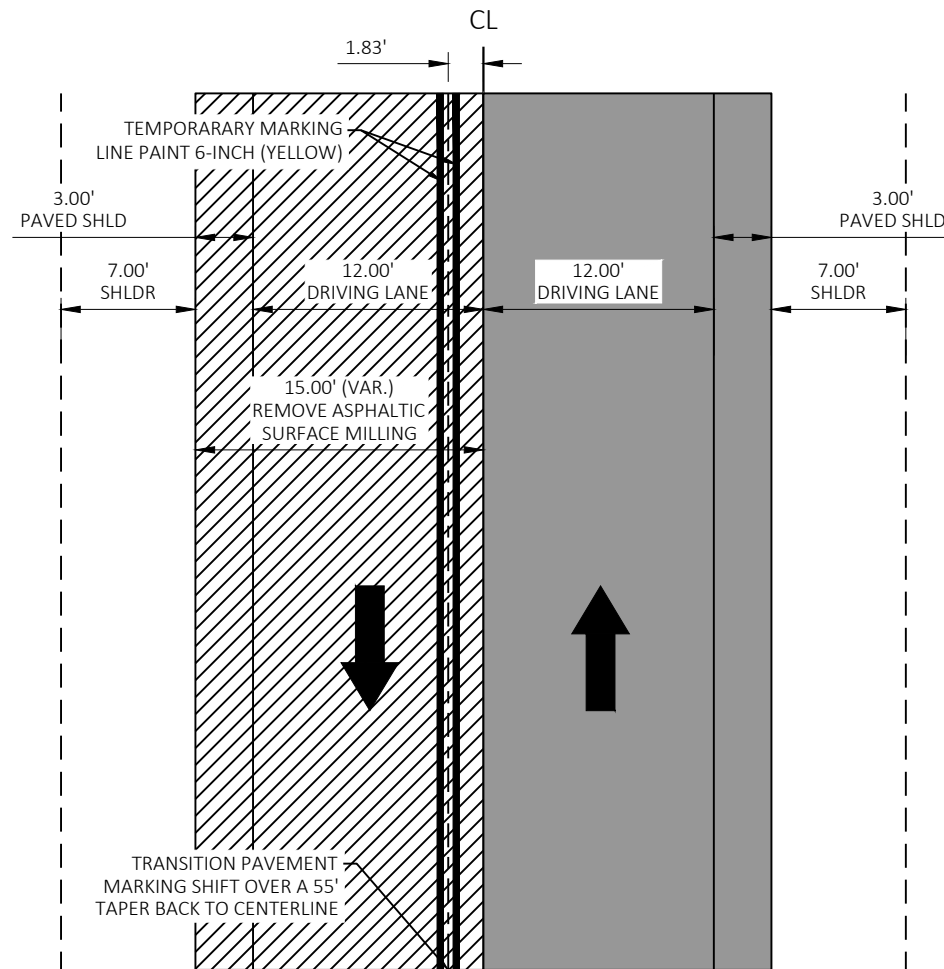


FIFTH AND SIXTH PASS SHALL BE COMPLETED IN THE SAME DAY TO MATCH PAVING AT THE END OF EACH WORKING DAY

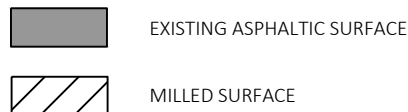


- Legend:
- THIRD PASS 2" HMA PAVEMENT 4MT58-34V (UPPER LIFT)
 - FOURTH PASS 2" HMA PAVEMENT 4MT58-34V (UPPER LIFT)

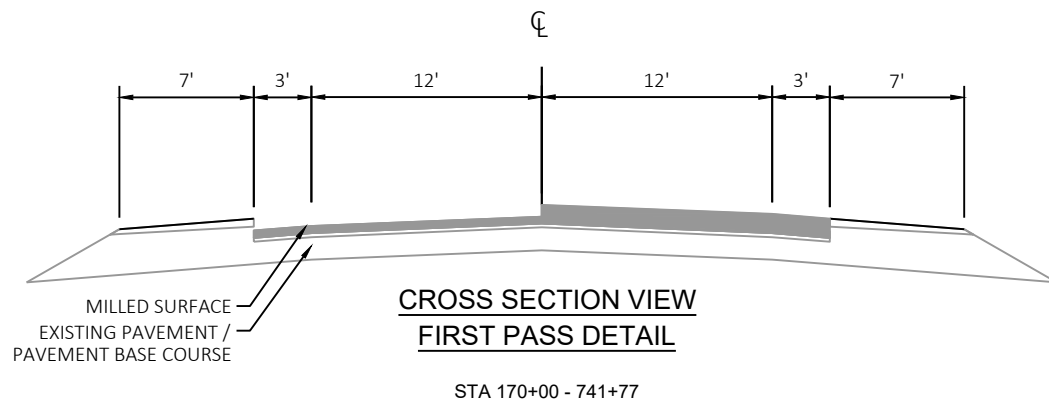




PLAN VIEW

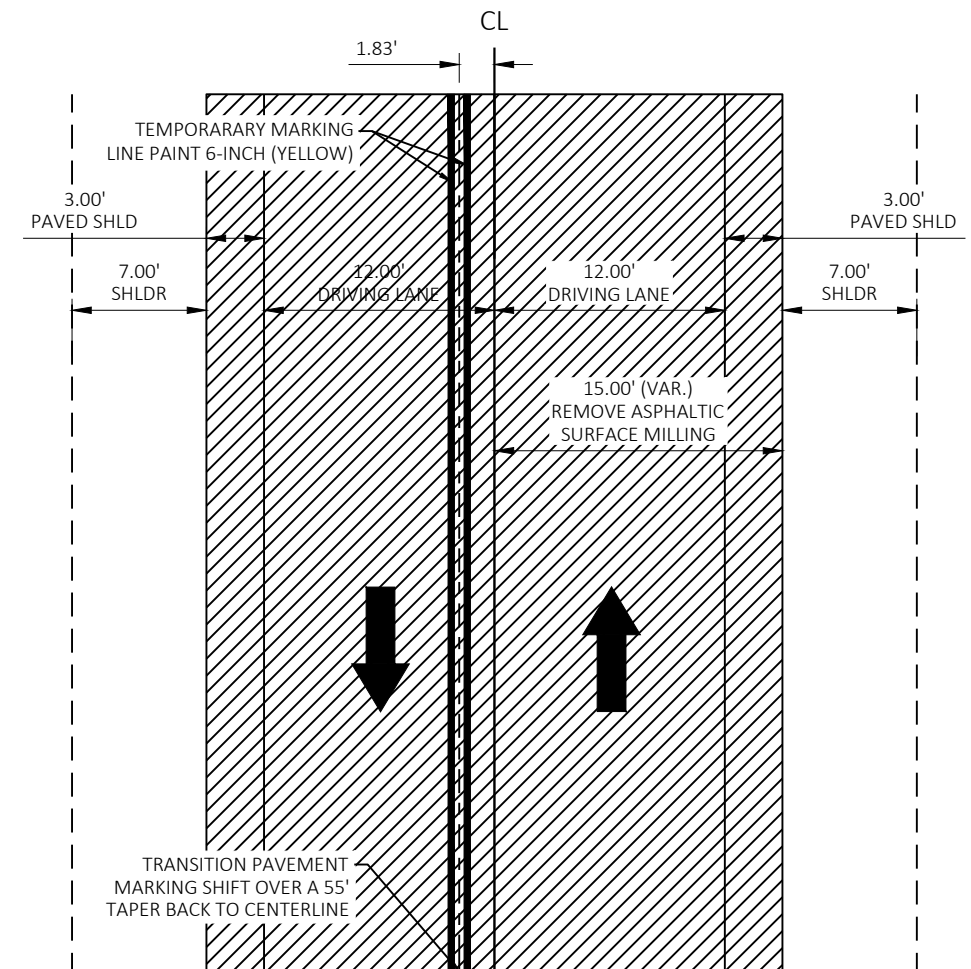


FIRST PASS OF HMA PAVING SHALL BE PAVED WITHIN 72 HOURS OF ANY EXISTING MAINLINE SURFACE MILLING.

CROSS SECTION VIEW
FIRST PASS DETAIL

STA 170+00 - 741+77

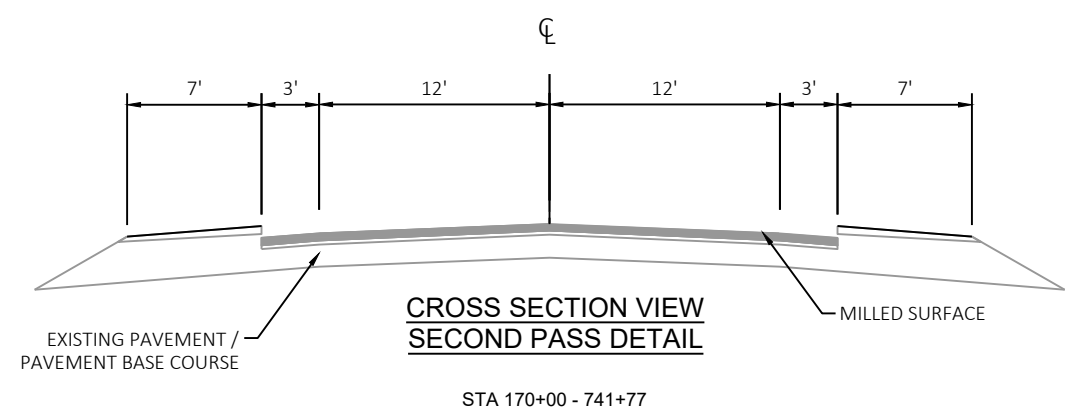
FIRST AND SECOND PASS SHALL BE COMPLETED IN THE SAME DAY TO MATCH MILLING AT THE END OF EACH WORKING DAY



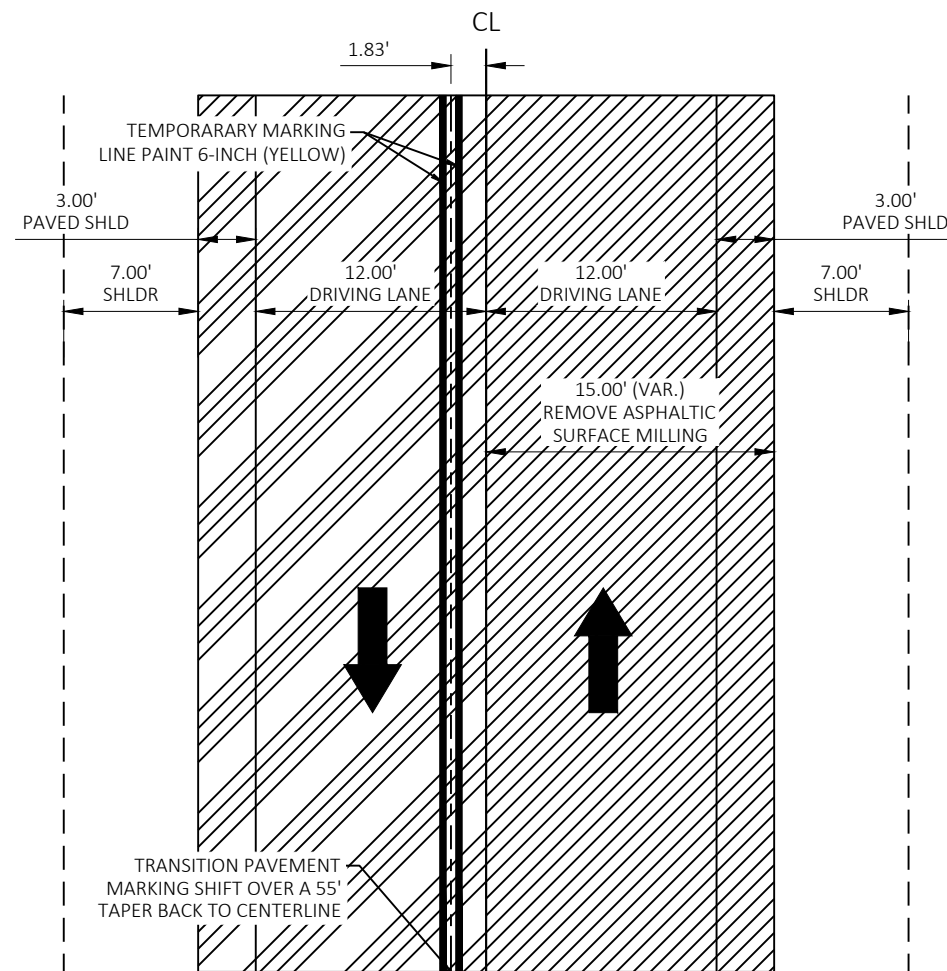
PLAN VIEW



FIRST PASS OF HMA PAVING SHALL BE PAVED WITHIN 72 HOURS OF ANY EXISTING MAINLINE SURFACE MILLING.

CROSS SECTION VIEW
SECOND PASS DETAIL

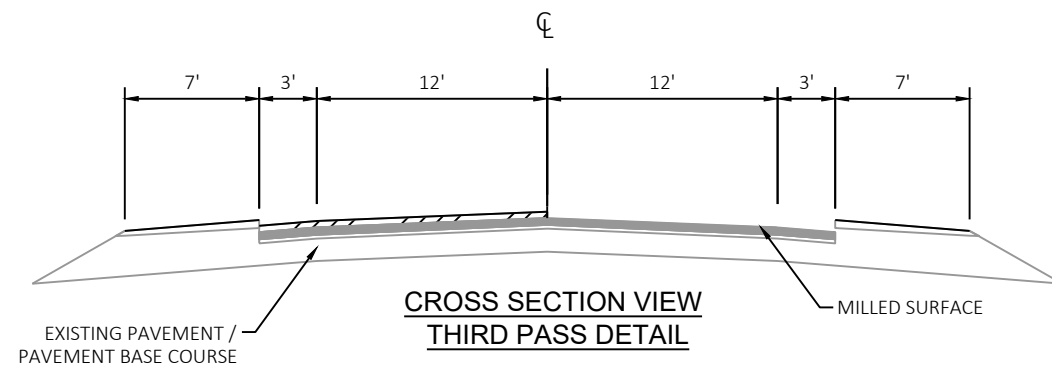
STA 170+00 - 741+77



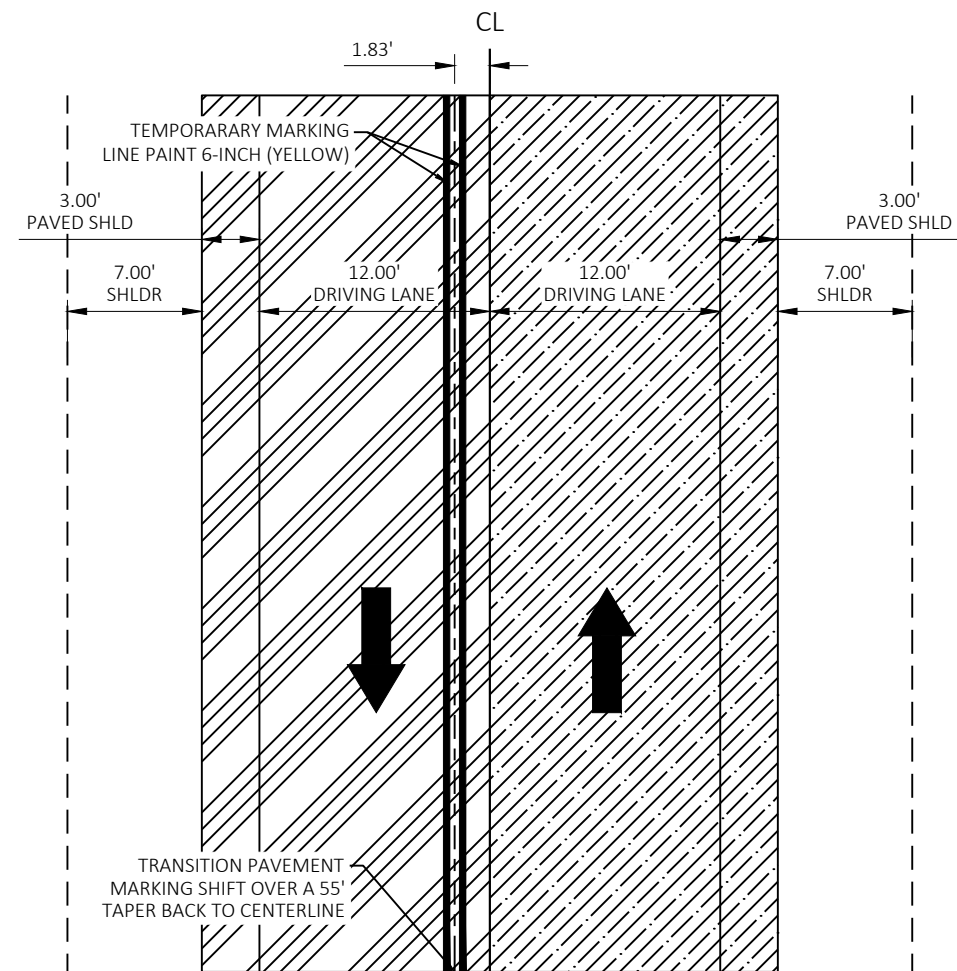
PLAN VIEW



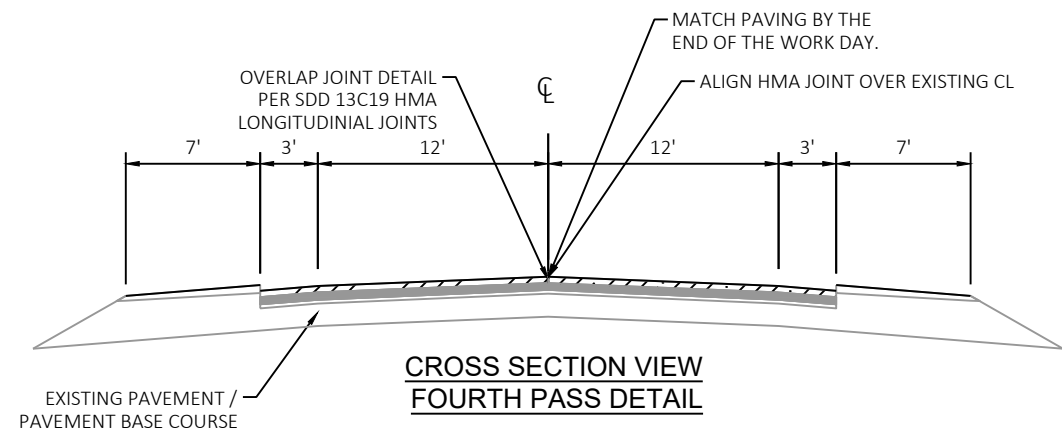
FIRST AND SECOND PASS OF HMA PAVING SHALL BE PAVED WITHIN 72 HOURS OF ANY EXISTING MAINLINE SURFACE MILLING.



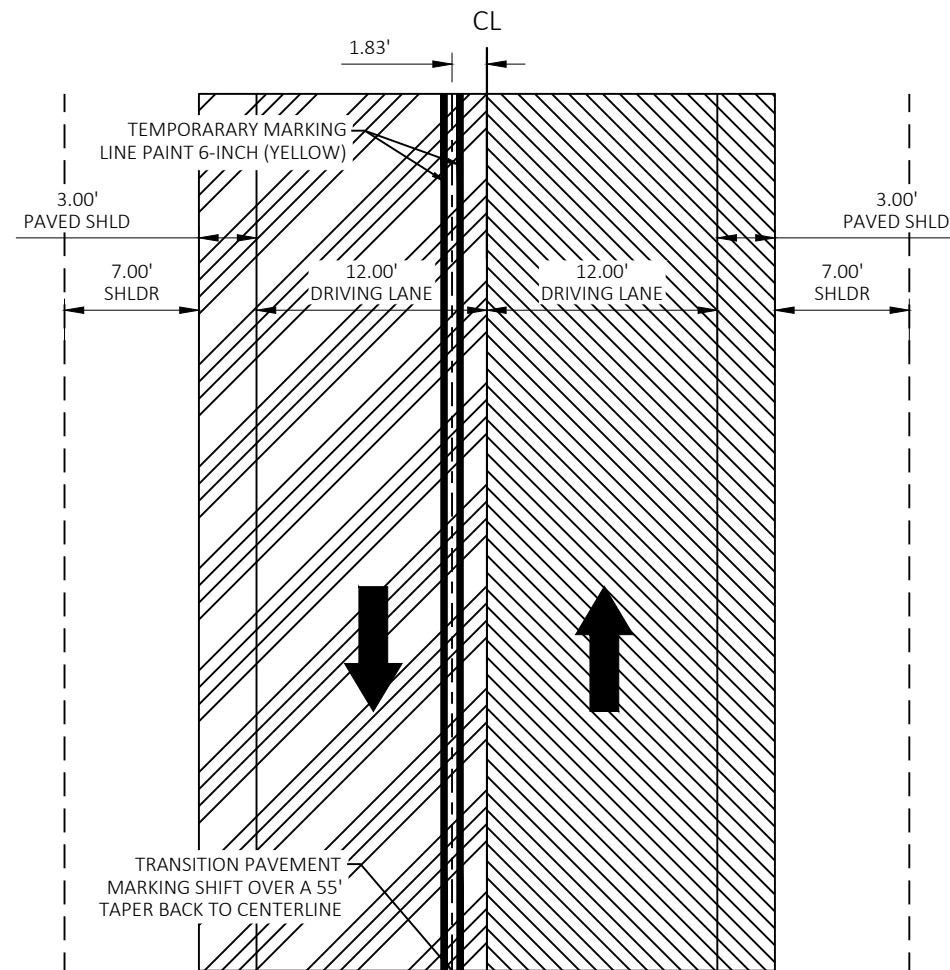
STA 170+00 - 741+77



PLAN VIEW

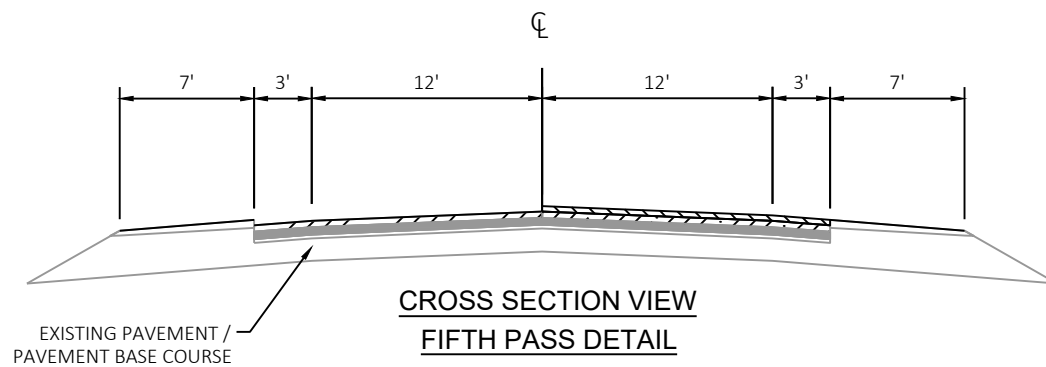


STA 170+00 - 741+77

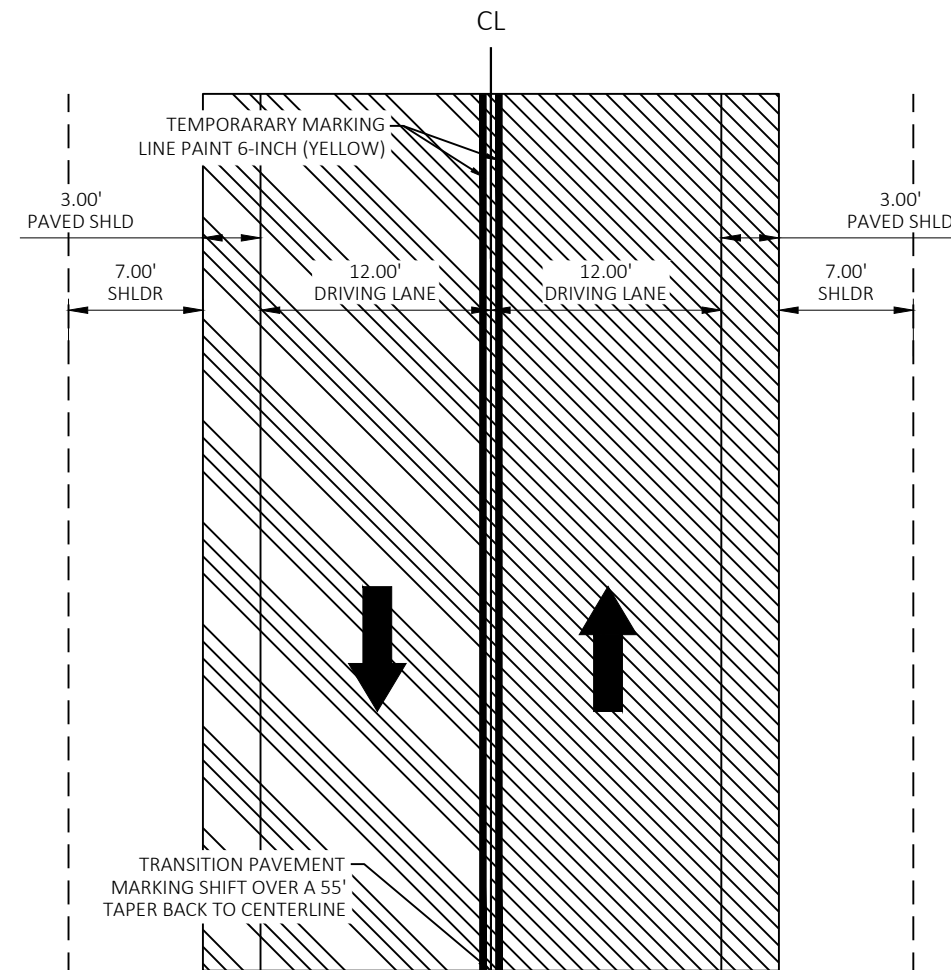


PLAN VIEW

-  FIRST PASS 2" HMA PAVEMENT 4MT58-34V (LOWER LIFT)
-  THIRD PASS 1.75" HMA PAVEMENT 4MT58-34V (UPPER LIFT)

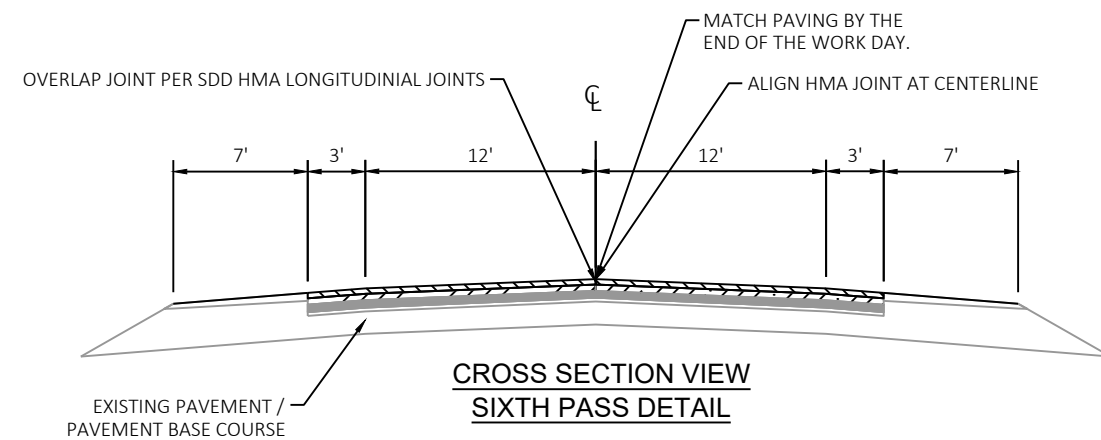


STA 170+00 - 741+77

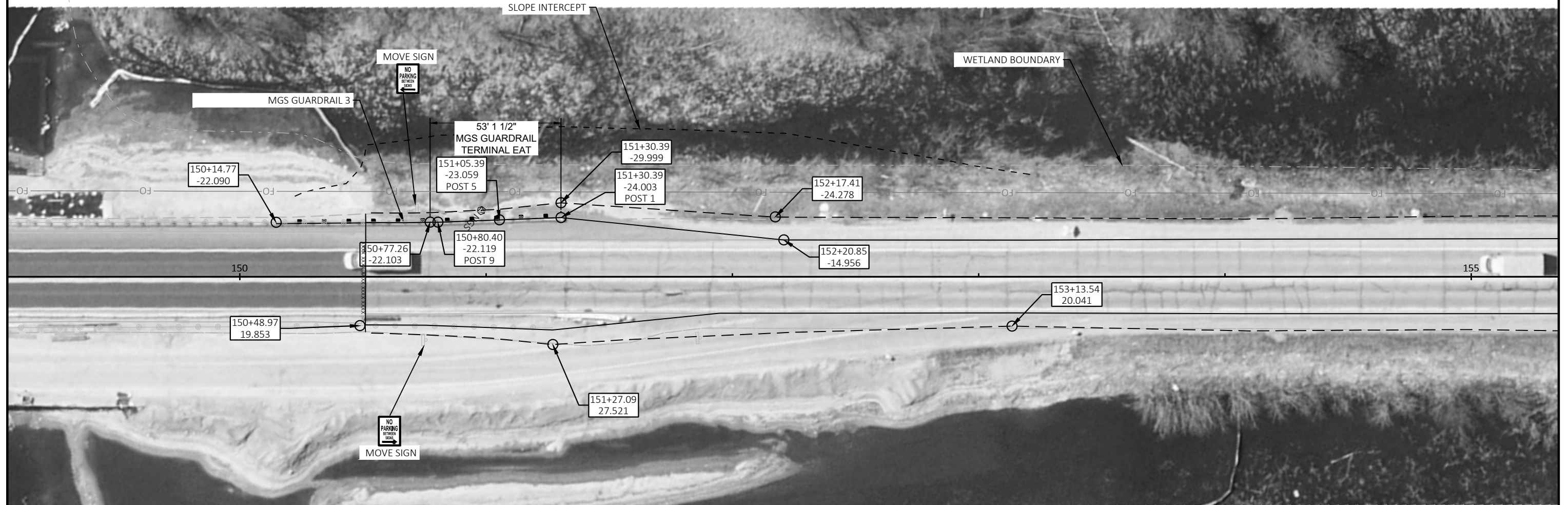


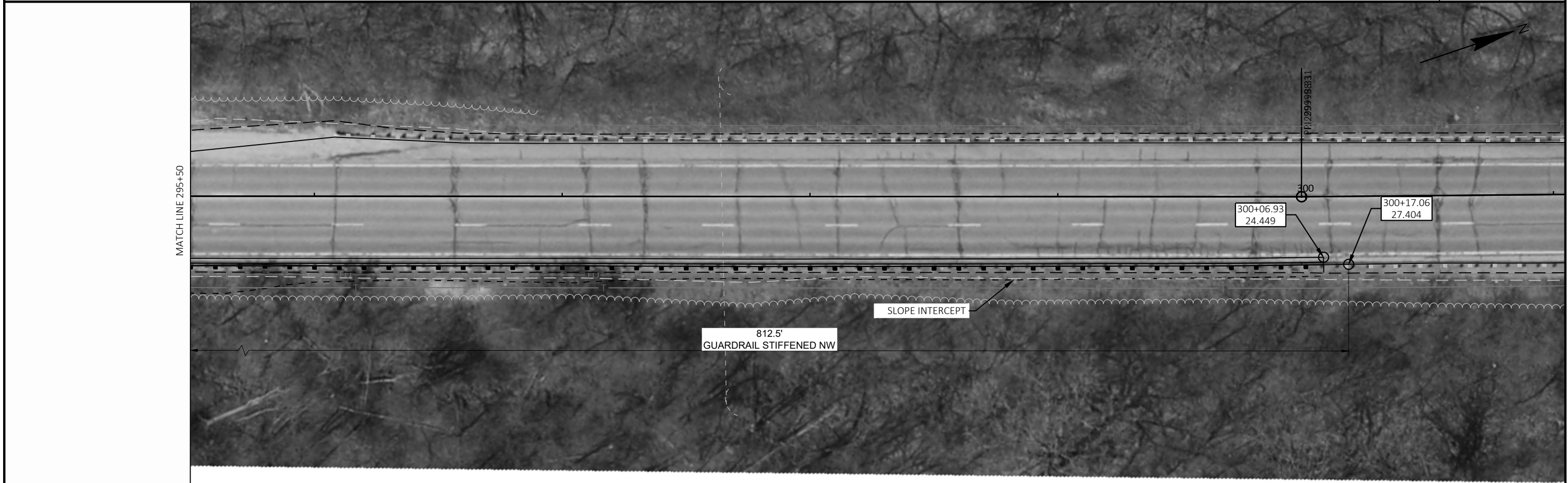
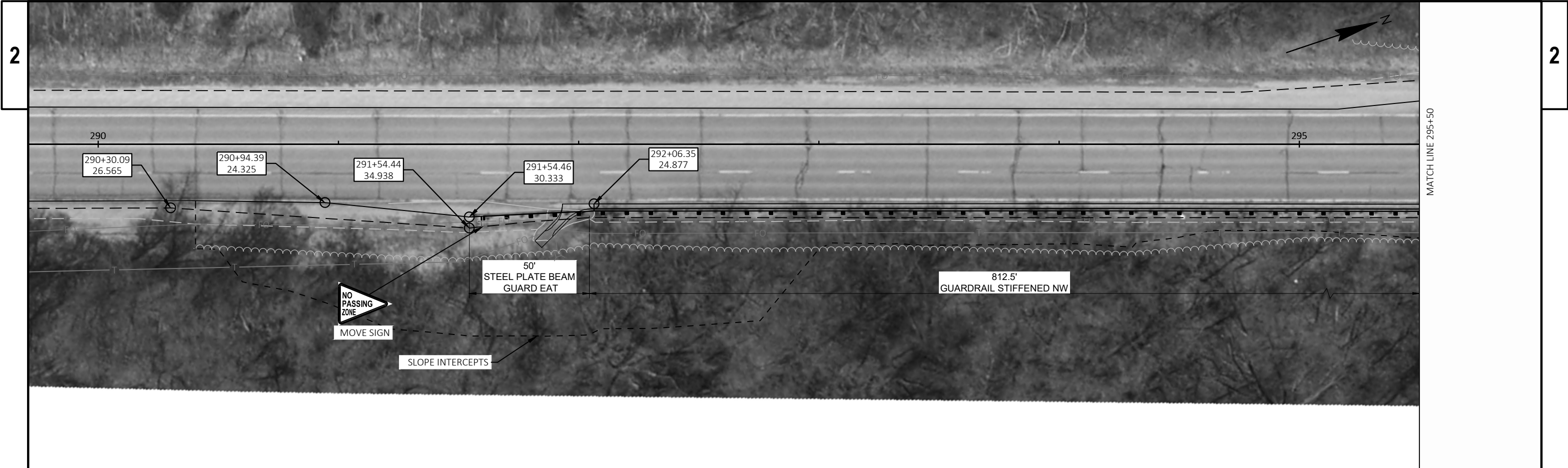
PLAN VIEW

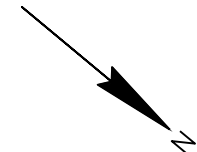
-  THIRD PASS 1.75" HMA PAVEMENT 4MT58-34V (UPPER LIFT)
-  FOURTH PASS 1.75" HMA PAVEMENT 4MT58-34V (UPPER LIFT)



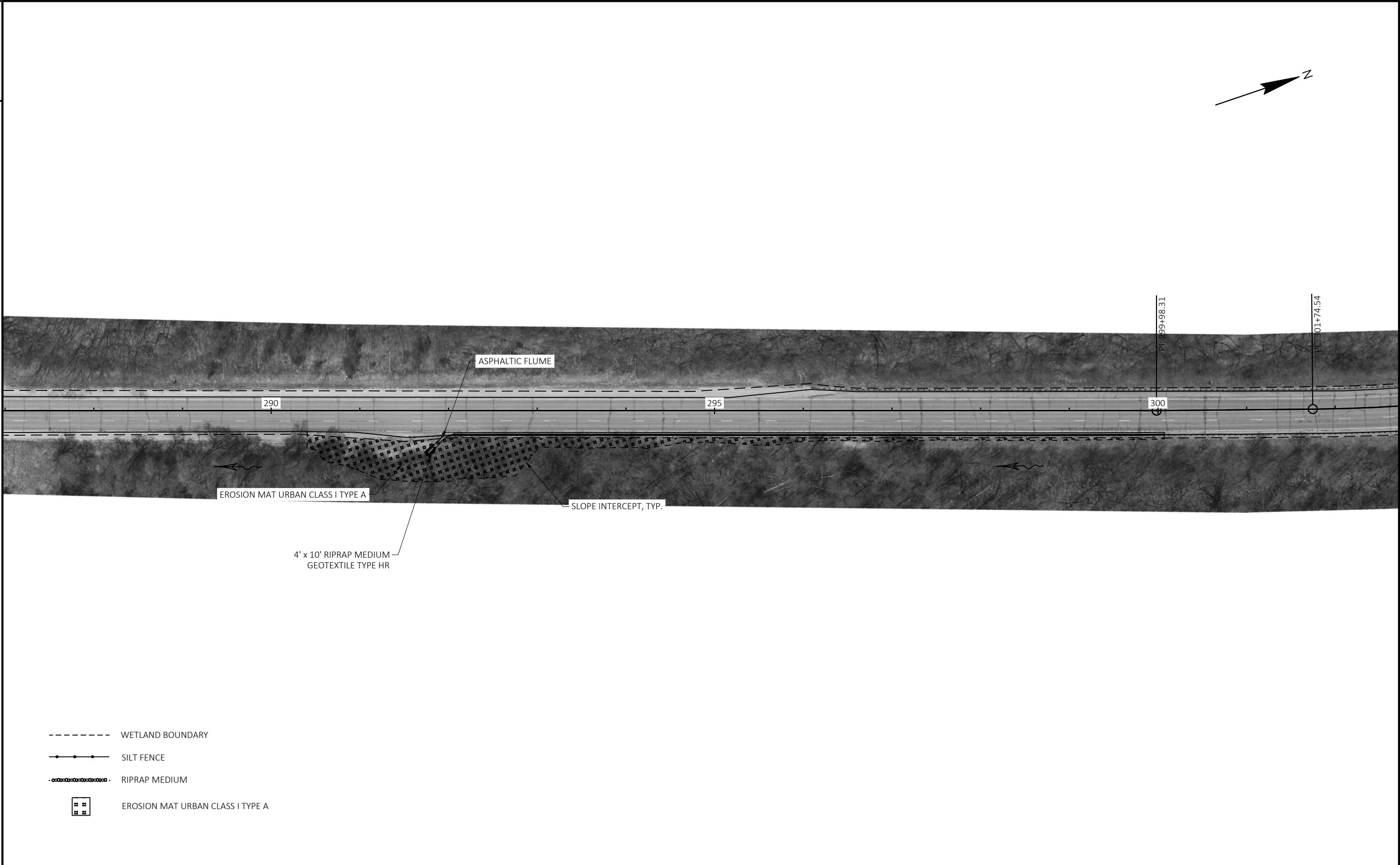
STA 170+00 - 741+77





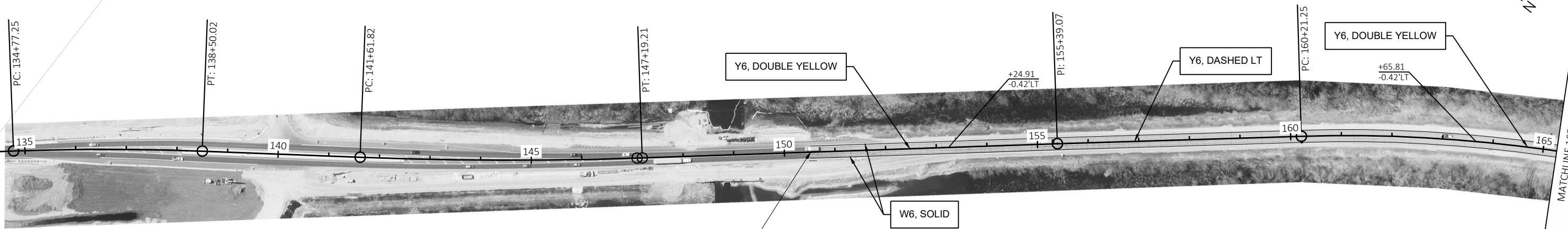


- WETLAND BOUNDARY
- SILT FENCE
- RIPRAP MEDIUM
- EROSION MAT URBAN CLASS I TYPE A

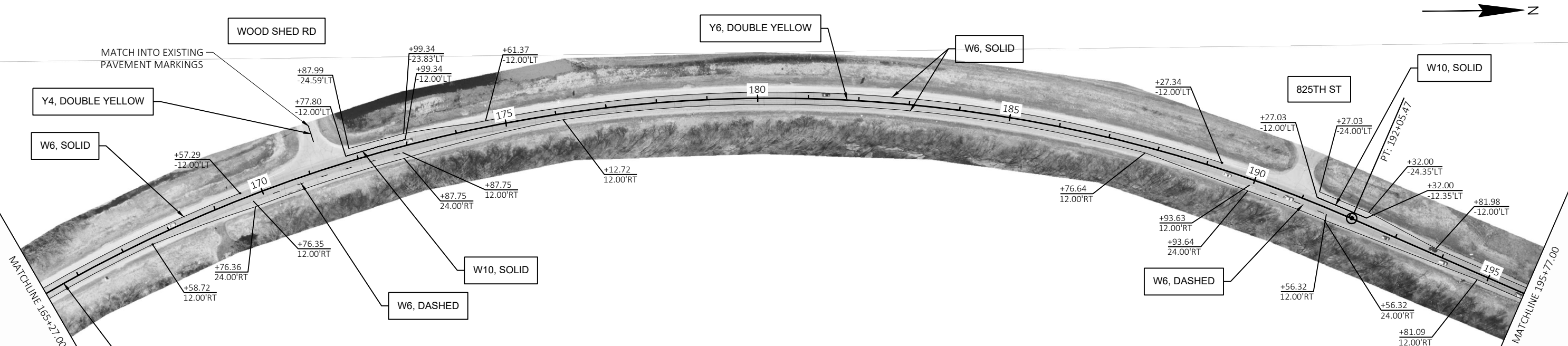


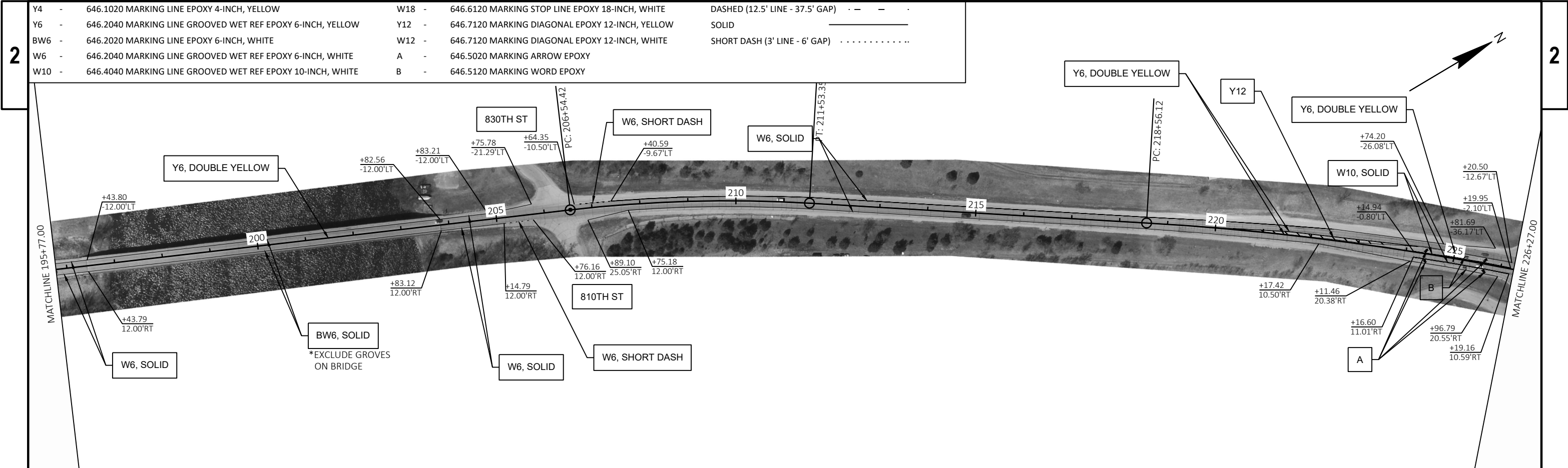
- WETLAND BOUNDARY
- SILT FENCE
- RIPRAP MEDIUM
- EROSION MAT URBAN CLASS I TYPE A

2	Y4	-	646.1020 MARKING LINE EPOXY 4-INCH, YELLOW	W18	-	646.6120 MARKING STOP LINE EPOXY 18-INCH, WHITE	DASHED (12.5' LINE - 37.5' GAP)	· - - ·
	Y6	-	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH, YELLOW	Y12	-	646.7120 MARKING DIAGONAL EPOXY 12-INCH, YELLOW	SOLID	_____
	BW6	-	646.2020 MARKING LINE EPOXY 6-INCH, WHITE	W12	-	646.7120 MARKING DIAGONAL EPOXY 12-INCH, WHITE	SHORT DASH (3' LINE - 6' GAP)	· · · · ·
	W6	-	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH, WHITE	A	-	646.5020 MARKING ARROW EPOXY		
	W10	-	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE	B	-	646.5120 MARKING WORD EPOXY		

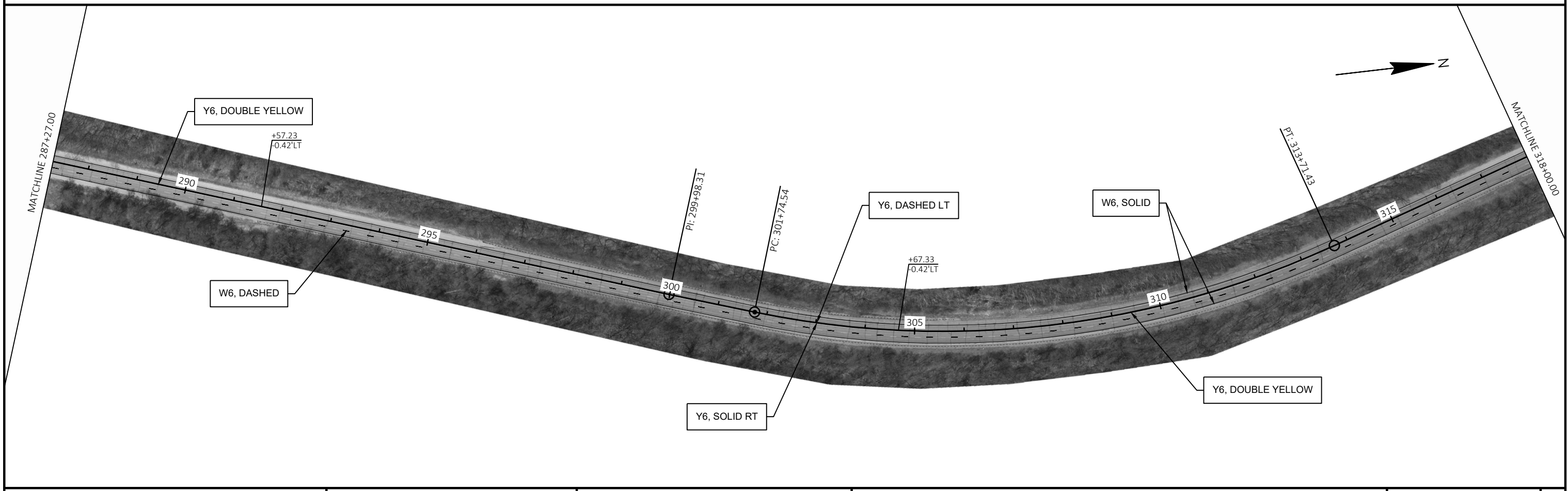
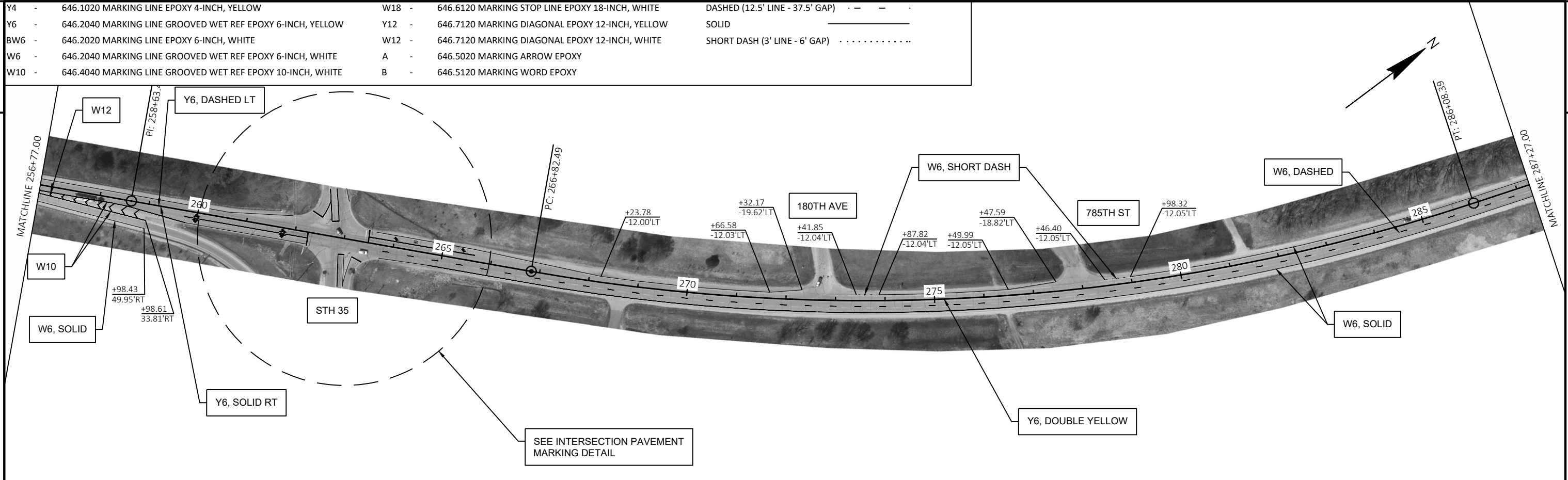


MATCH INTO EXISTING PAVEMENT MARKINGS AT STA 150+51.05

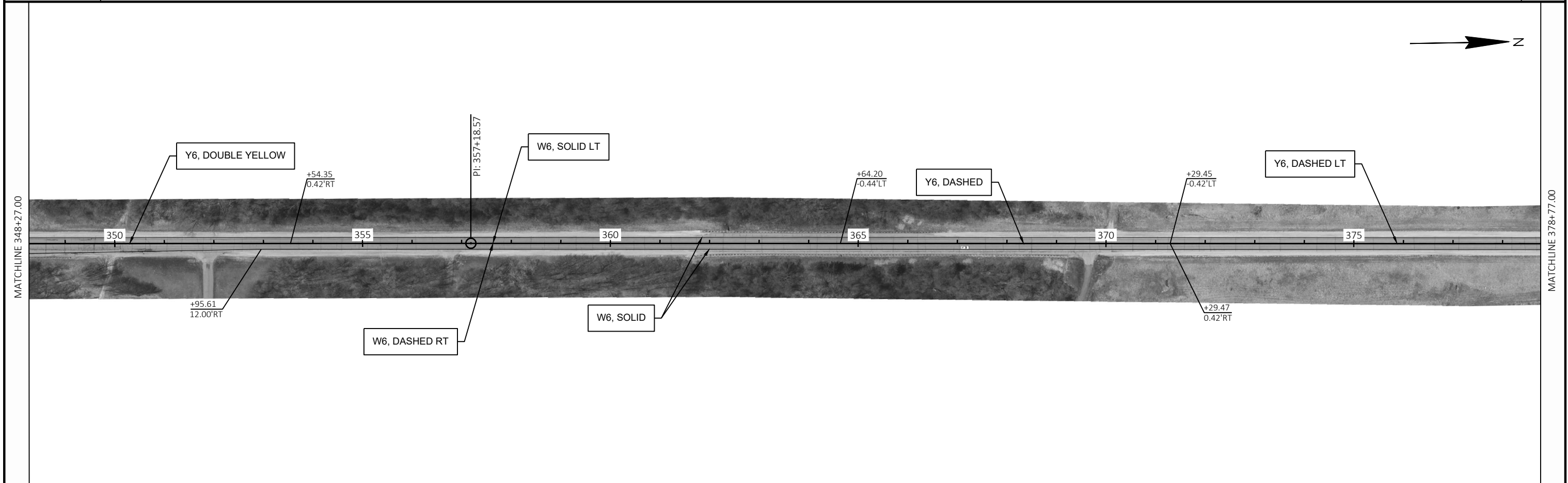
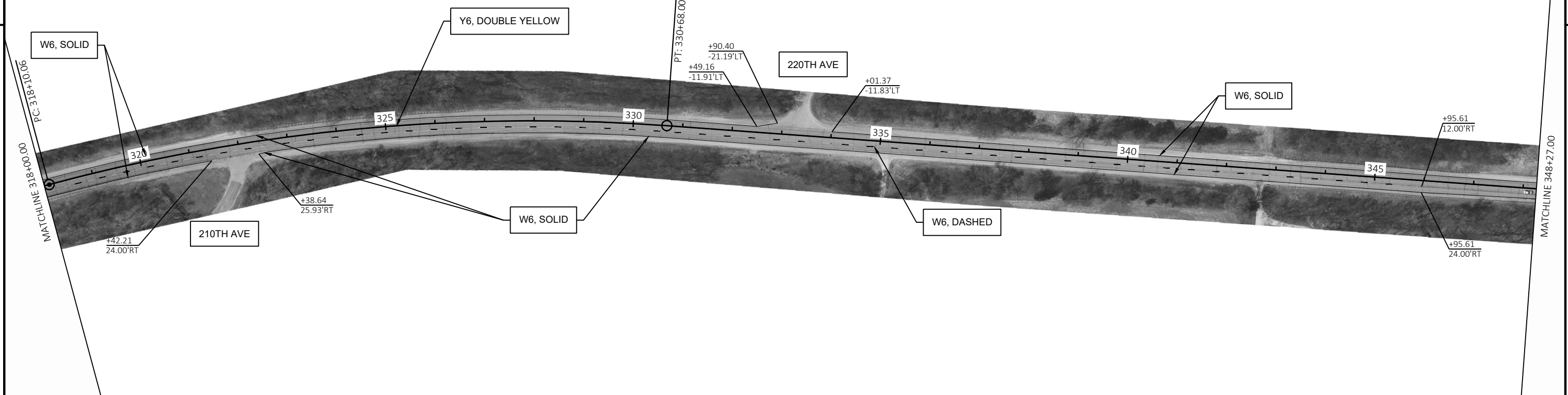




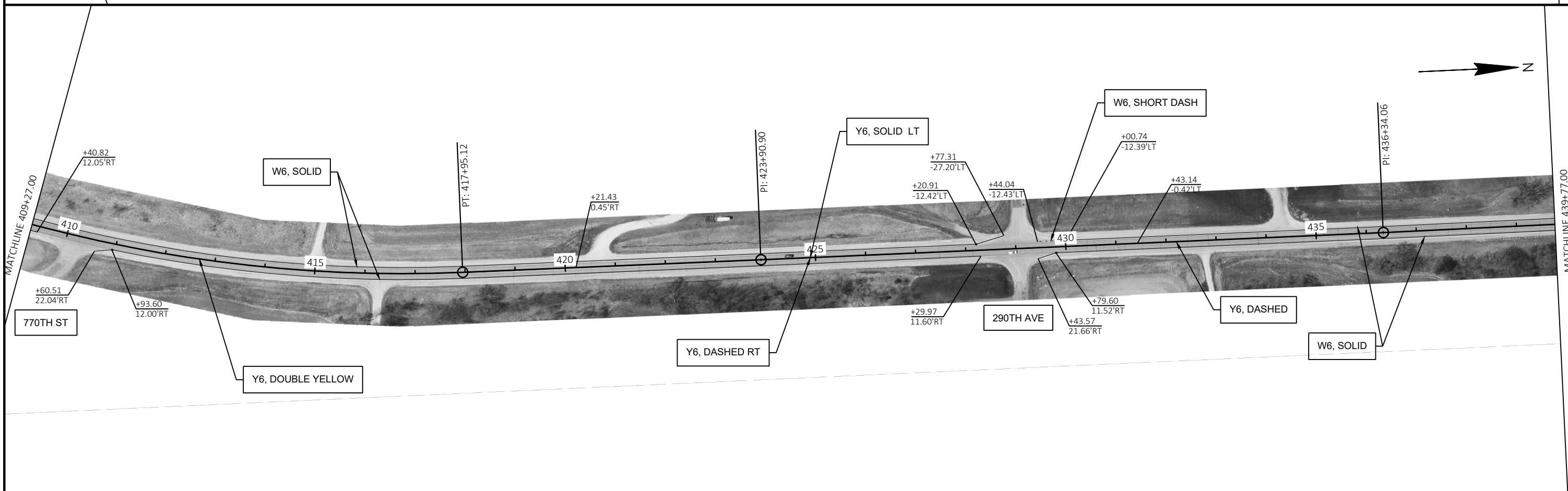
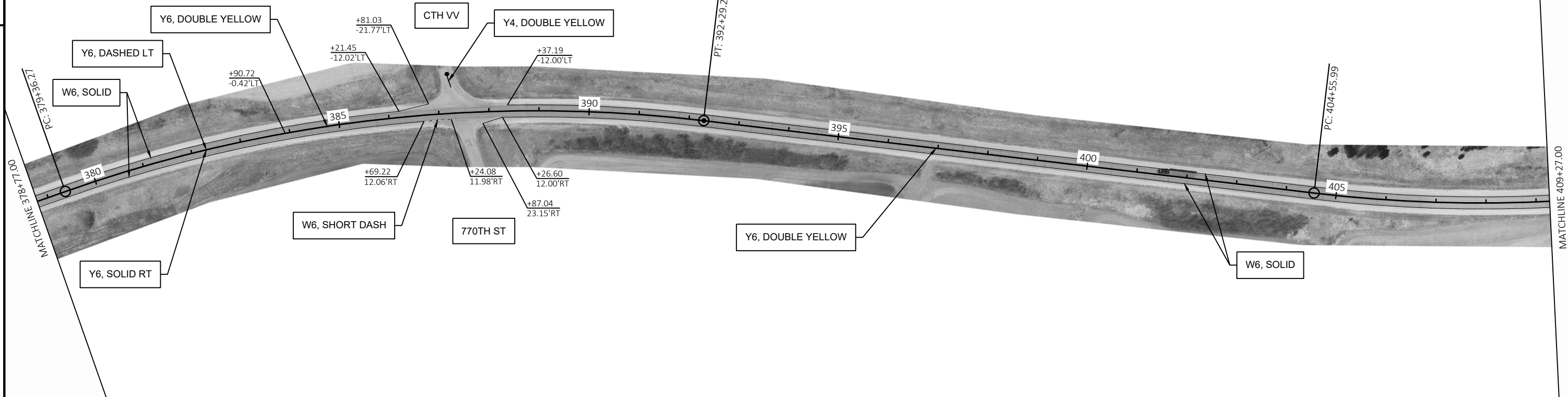
2	Y4	-	646.1020 MARKING LINE EPOXY 4-INCH, YELLOW	W18	-	646.6120 MARKING STOP LINE EPOXY 18-INCH, WHITE	DASHED (12.5' LINE - 37.5' GAP)	- - - -
	Y6	-	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH, YELLOW	Y12	-	646.7120 MARKING DIAGONAL EPOXY 12-INCH, YELLOW	SOLID	_____
	BW6	-	646.2020 MARKING LINE EPOXY 6-INCH, WHITE	W12	-	646.7120 MARKING DIAGONAL EPOXY 12-INCH, WHITE	SHORT DASH (3' LINE - 6' GAP)	
	W6	-	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH, WHITE	A	-	646.5020 MARKING ARROW EPOXY		
	W10	-	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE	B	-	646.5120 MARKING WORD EPOXY		

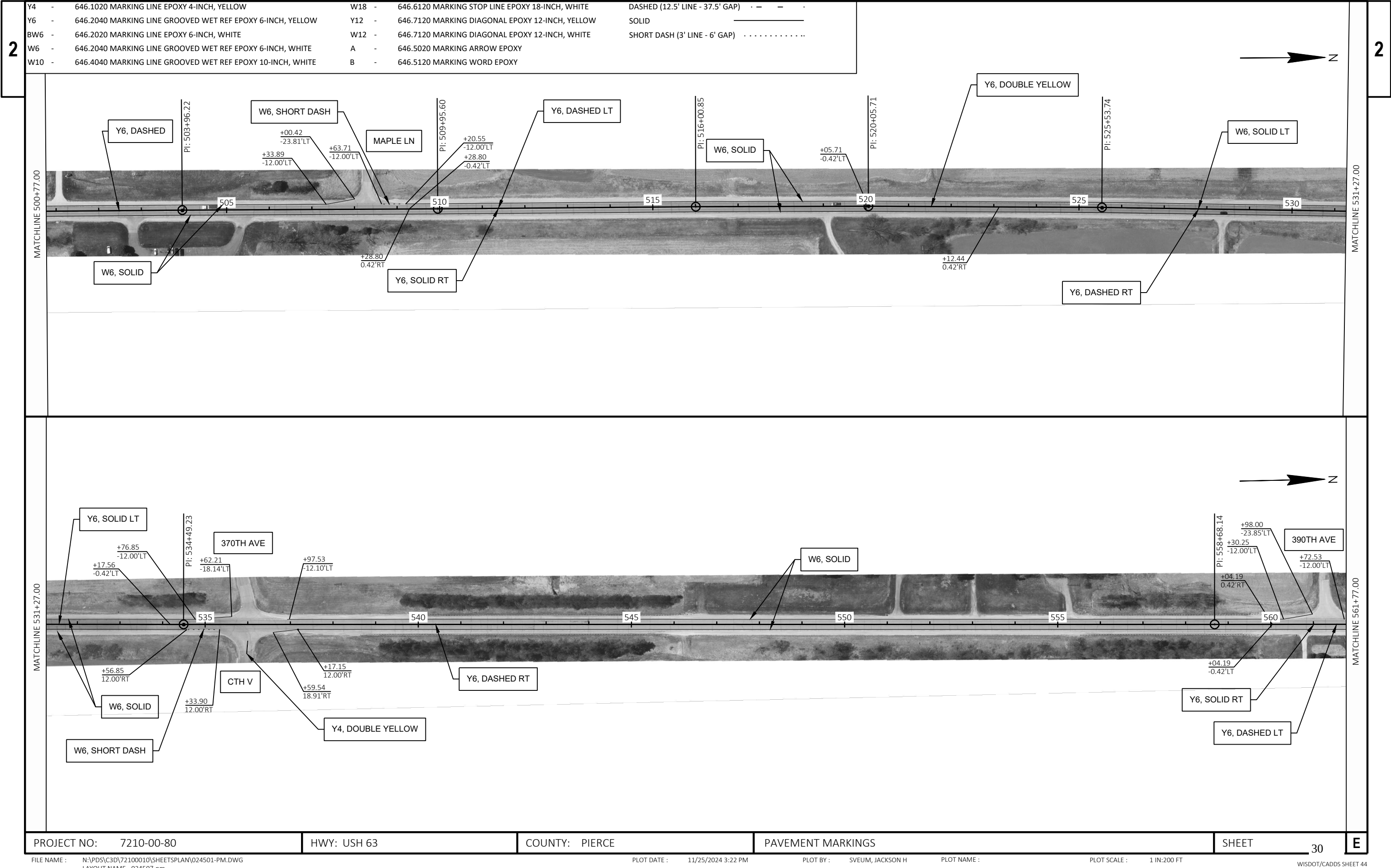


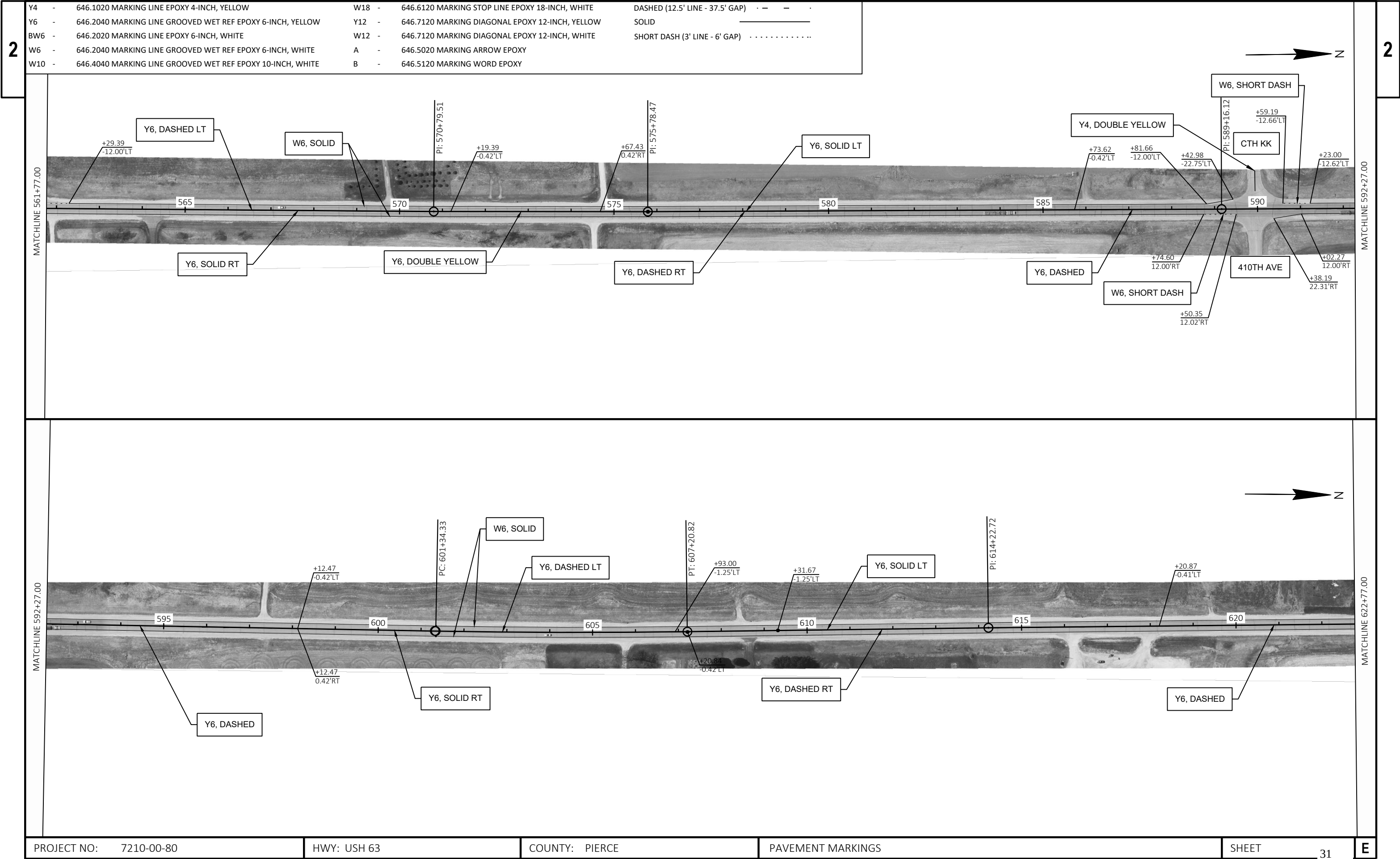
2	Y4	-	646.1020 MARKING LINE EPOXY 4-INCH, YELLOW	W18	-	646.6120 MARKING STOP LINE EPOXY 18-INCH, WHITE	DASHED (12.5' LINE - 37.5' GAP)	- - - -
	Y6	-	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH, YELLOW	Y12	-	646.7120 MARKING DIAGONAL EPOXY 12-INCH, YELLOW	SOLID	_____
	BW6	-	646.2020 MARKING LINE EPOXY 6-INCH, WHITE	W12	-	646.7120 MARKING DIAGONAL EPOXY 12-INCH, WHITE	SHORT DASH (3' LINE - 6' GAP)	
	W6	-	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH, WHITE	A	-	646.5020 MARKING ARROW EPOXY		
	W10	-	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE	B	-	646.5120 MARKING WORD EPOXY		



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	BW6	-	646.2020 MARKING LINE EPOXY 6-INCH, WHITE	W12	-	646.7120 MARKING DIAGONAL EPOXY 12-INCH, WHITE	SHORT DASH (3' LINE - 6' GAP)	
	W6	-	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH, WHITE	A	-	646.5020 MARKING ARROW EPOXY		
	W10	-	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE	B	-	646.5120 MARKING WORD EPOXY		

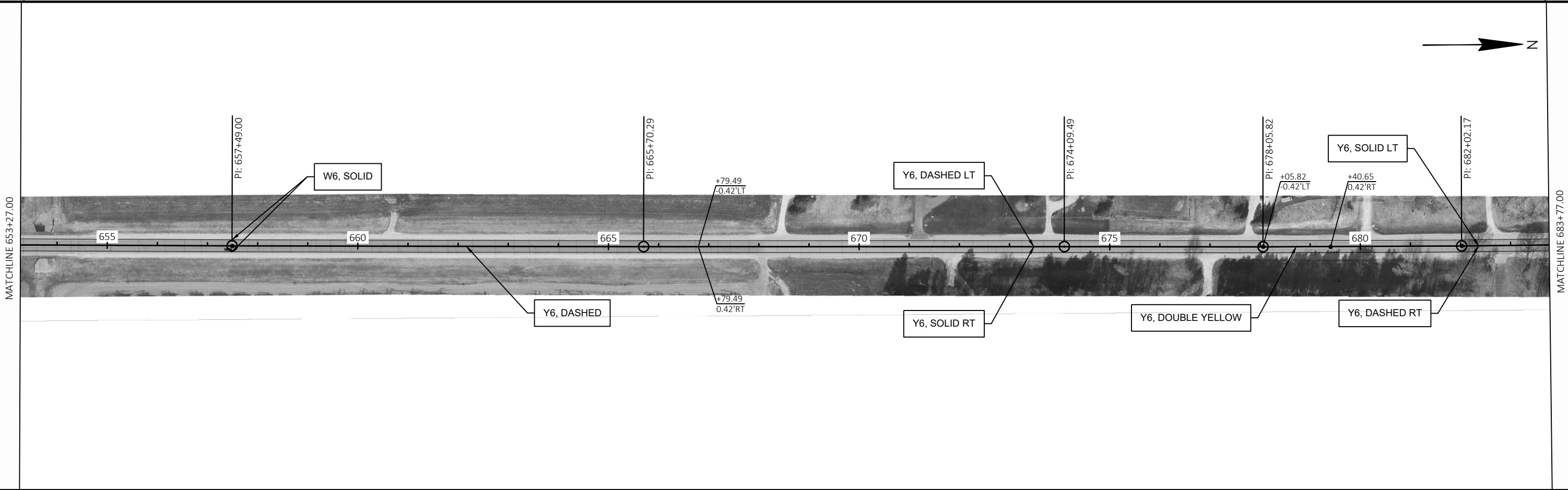
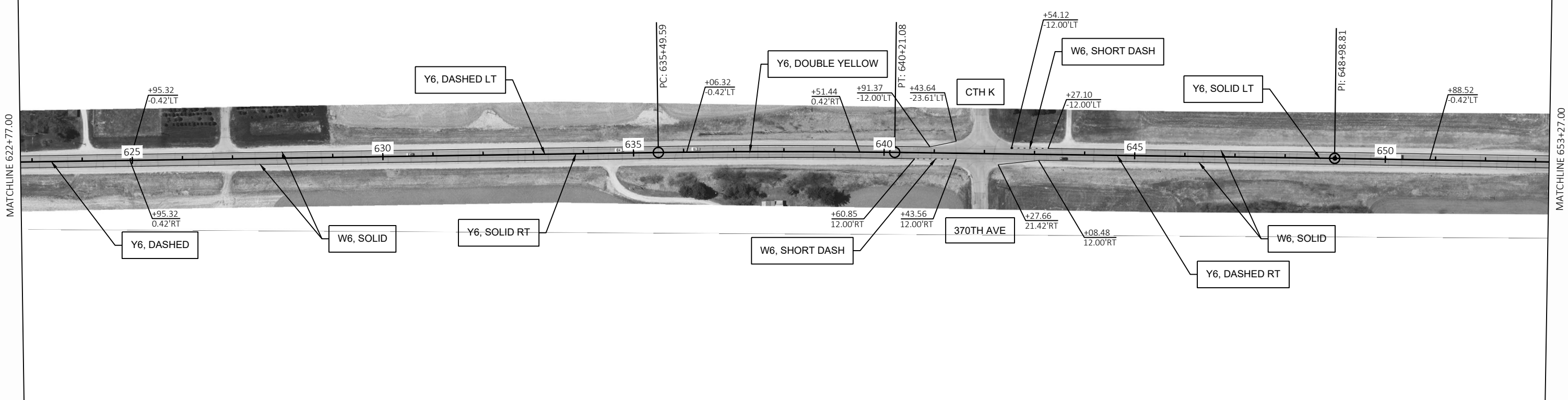




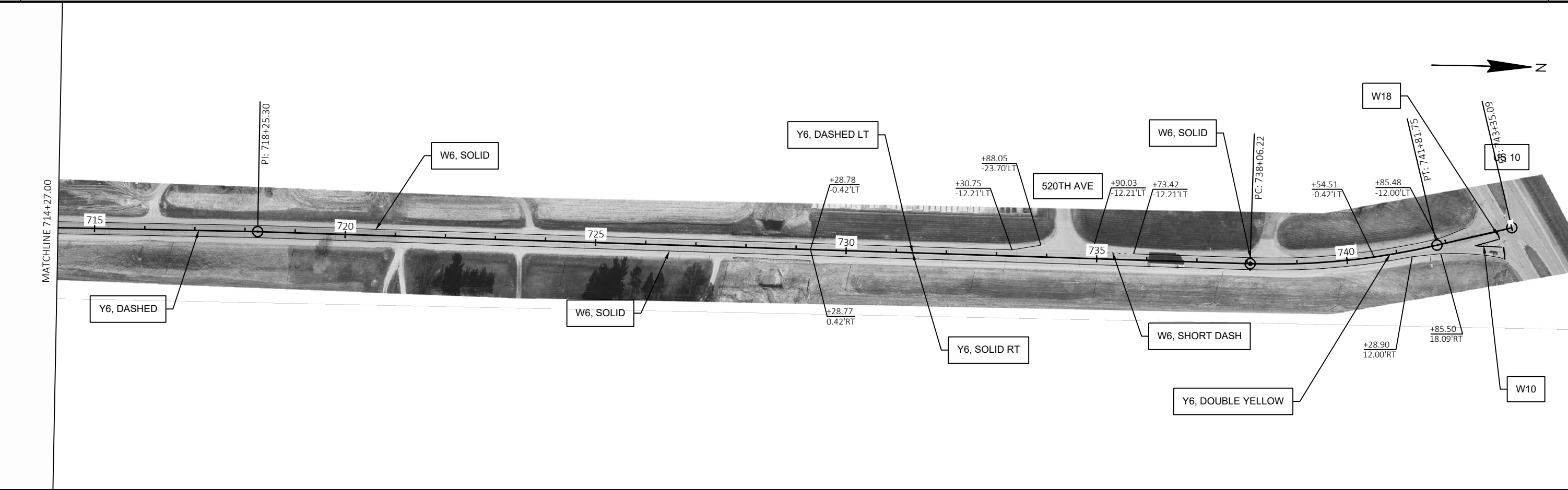
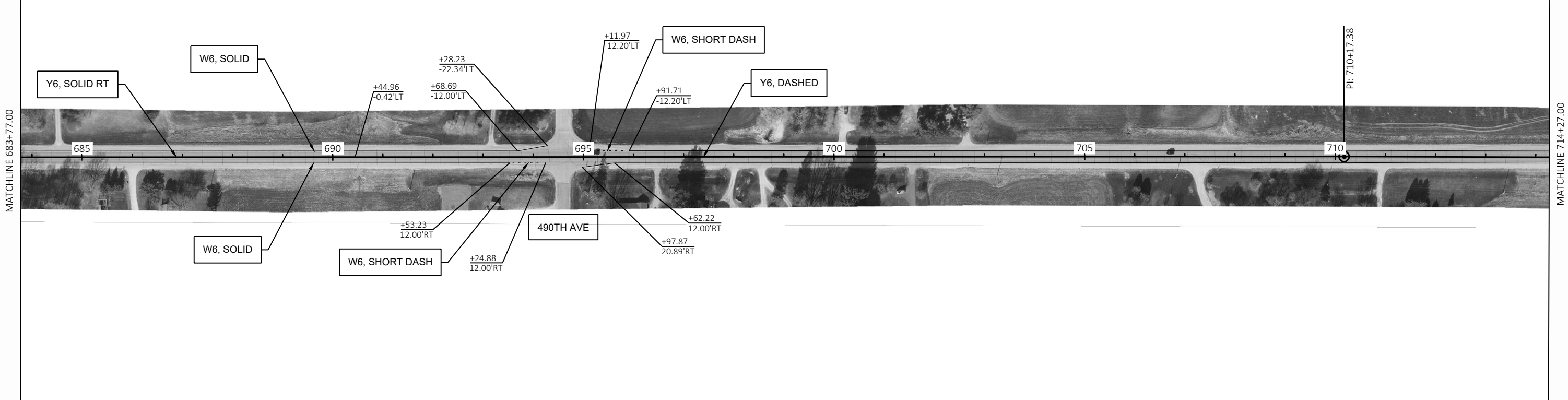


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Y6	-	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH, YELLOW	Y12	-	646.7120 MARKING DIAGONAL EPOXY 12-INCH, YELLOW	SOLID	_____
BW6	-	646.2020 MARKING LINE EPOXY 6-INCH, WHITE	W12	-	646.7120 MARKING DIAGONAL EPOXY 12-INCH, WHITE	SHORT DASH (3' LINE - 6' GAP)	
W6	-	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH, WHITE	A	-	646.5020 MARKING ARROW EPOXY		
W10	-	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE	B	-	646.5120 MARKING WORD EPOXY		

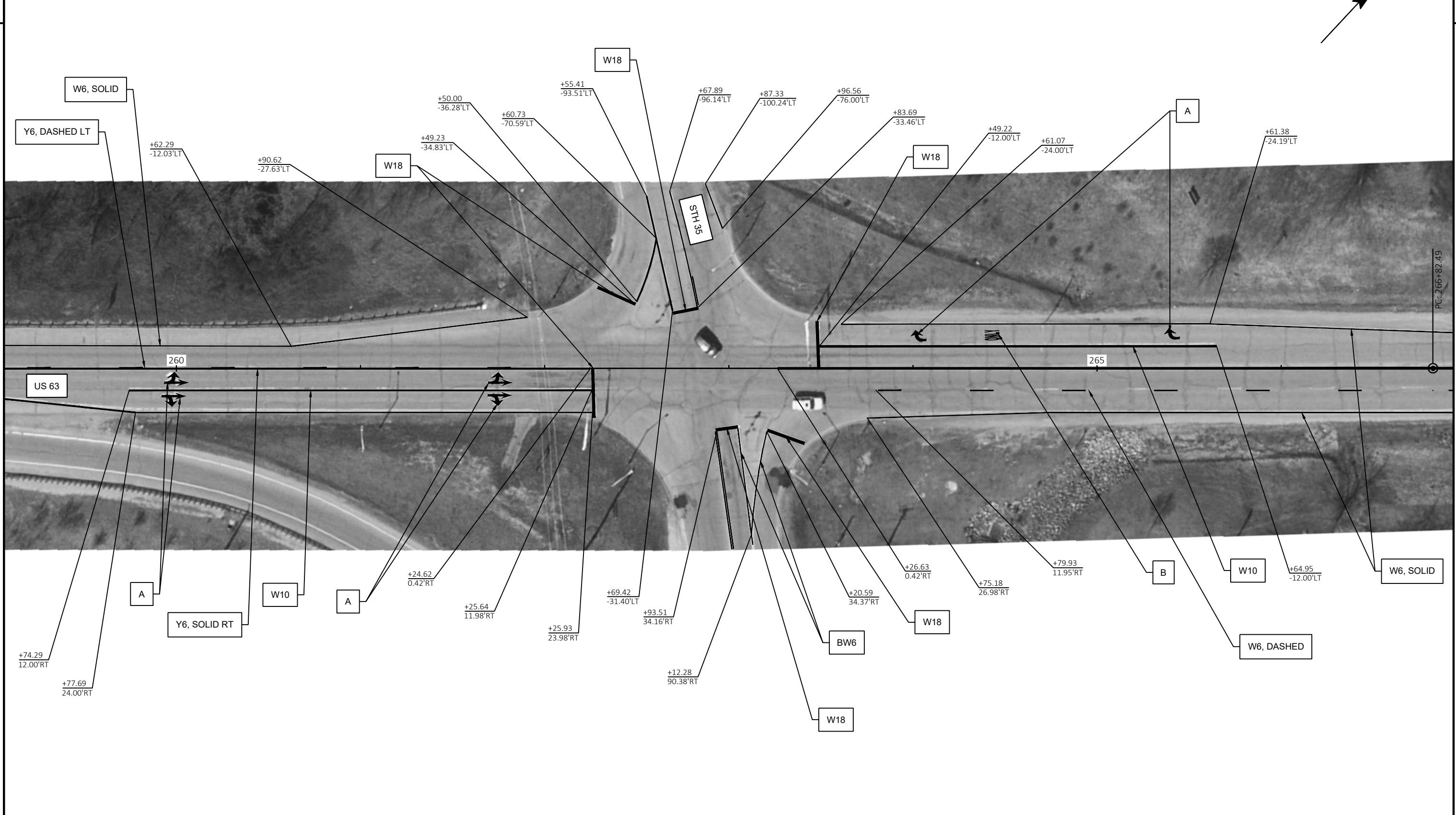
2	Y4	-	646.1020 MARKING LINE EPOXY 4-INCH, YELLOW	W18	-	646.6120 MARKING STOP LINE EPOXY 18-INCH, WHITE	DASHED (12.5' LINE - 37.5' GAP)	- - - -
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	W6	-	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH, WHITE	A	-	646.5020 MARKING ARROW EPOXY		
	W10	-	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE	B	-	646.5120 MARKING WORD EPOXY		

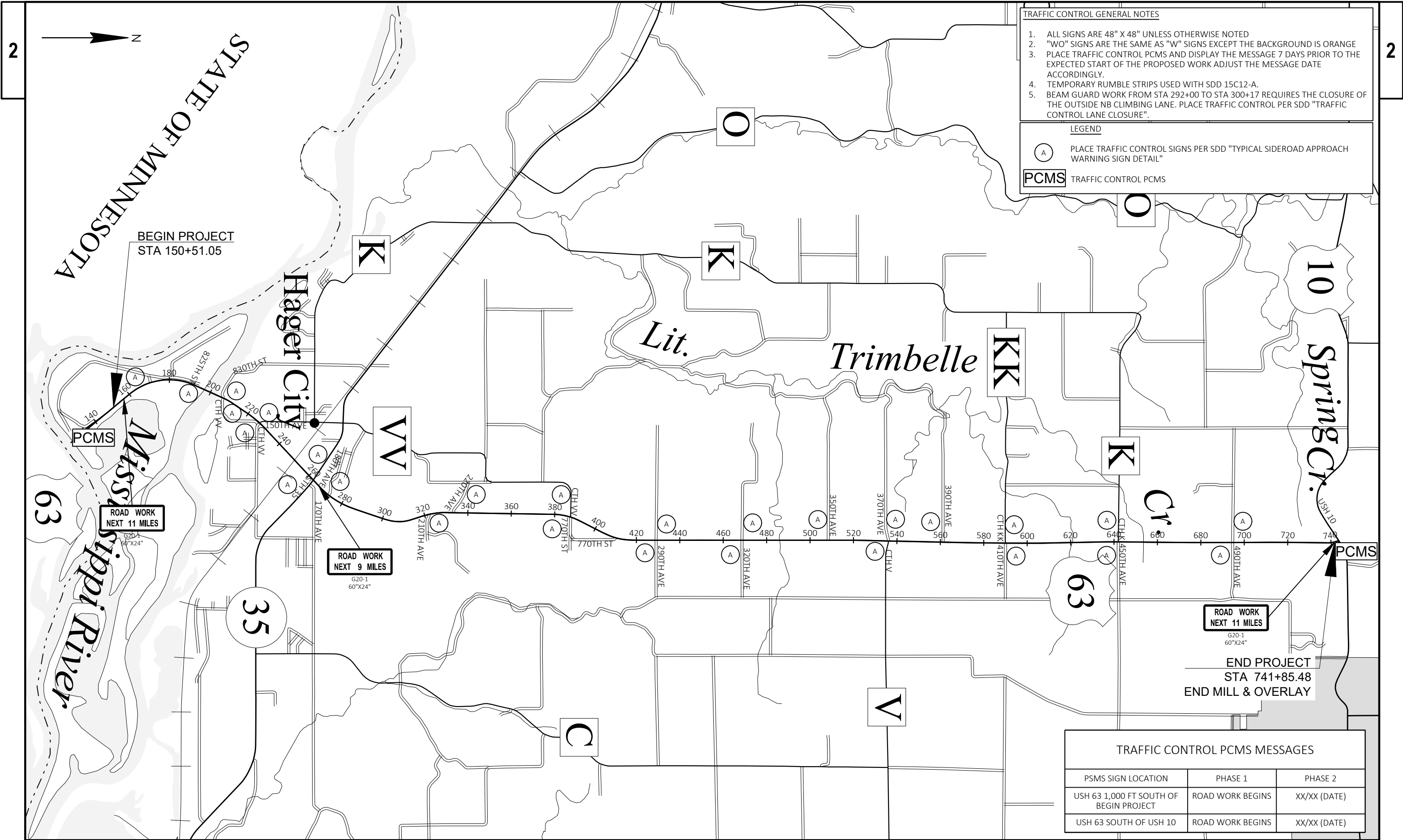


2	Y4	-	646.1020 MARKING LINE EPOXY 4-INCH, YELLOW	W18	-	646.6120 MARKING STOP LINE EPOXY 18-INCH, WHITE	DASHED (12.5' LINE - 37.5' GAP)	- - -
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	BW6	-	646.2020 MARKING LINE EPOXY 6-INCH, WHITE	W12	-	646.7120 MARKING DIAGONAL EPOXY 12-INCH, WHITE	SHORT DASH (3' LINE - 6' GAP)	
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	BW6	-	646.2020 MARKING LINE EPOXY 6-INCH, WHITE	W12	-	646.7120 MARKING DIAGONAL EPOXY 12-INCH, WHITE	SHORT DASH (3' LINE - 6' GAP)	
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	W10	-	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH, WHITE	B	-	646.5120 MARKING WORD EPOXY		





- TRAFFIC CONTROL GENERAL NOTES
1. ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED
 2. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE
 3. PLACE TRAFFIC CONTROL PCMS AND DISPLAY THE MESSAGE 7 DAYS PRIOR TO THE EXPECTED START OF THE PROPOSED WORK ADJUST THE MESSAGE DATE ACCORDINGLY.
 4. TEMPORARY RUMBLE STRIPS USED WITH SDD 15C12-A.
 5. BEAM GUARD WORK FROM STA 292+00 TO STA 300+17 REQUIRES THE CLOSURE OF THE OUTSIDE NB CLIMBING LANE. PLACE TRAFFIC CONTROL PER SDD "TRAFFIC CONTROL LANE CLOSURE".

LEGEND

PLACE TRAFFIC CONTROL SIGNS PER SDD "TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL"

PCMS TRAFFIC CONTROL PCMS

TRAFFIC CONTROL PCMS MESSAGES		
PSMS SIGN LOCATION	PHASE 1	PHASE 2
USH 63 1,000 FT SOUTH OF BEGIN PROJECT	ROAD WORK BEGINS	XX/XX (DATE)
USH 63 SOUTH OF USH 10	ROAD WORK BEGINS	XX/XX (DATE)

Estimate Of Quantities

7210-00-80					
Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	3.000	3.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	1,036.000	1,036.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	230,430.000	230,430.000
0008	204.0165	Removing Guardrail	LF	979.000	979.000
0010	204.9090.S	Removing (item description) 01. Removing Buried Guardrail	LF	800.000	800.000
0012	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 7280-00-80	EACH	1.000	1.000
0014	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	44.000	44.000
0016	213.0100	Finishing Roadway (project) 01. 7210-00-80	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	4,957.000	4,957.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,342.000	1,342.000
0022	450.4000	HMA Cold Weather Paving	TON	500.000	500.000
0024	455.0605	Tack Coat	GAL	28,180.000	28,180.000
0026	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0028	460.6644	HMA Pavement 4 MT 58-34 V	TON	49,670.000	49,670.000
0030	460.9000.S	Material Transfer Vehicle	EACH	1.000	1.000
0032	465.0105	Asphaltic Surface	TON	600.000	600.000
0034	465.0110	Asphaltic Surface Patching	TON	300.000	300.000
0036	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	285.000	285.000
0038	465.0315	Asphaltic Flumes	SY	14.000	14.000
0040	465.0560	Asphaltic Rumble Strips, Centerline	LF	49,110.000	49,110.000
0042	465.0580	Asphaltic Rumble Strips, Transverse	SY	75.000	75.000
0044	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	800.000	800.000
0046	606.0200	Riprap Medium	CY	2.000	2.000
0048	614.0010	Barrier System Grading Shaping Finishing	EACH	2.000	2.000
0050	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	1.000	1.000
0052	614.0400	Adjusting Steel Plate Beam Guard	LF	7,862.000	7,862.000
0054	614.0510	Guardrail Stiffened NW	LF	813.000	813.000
0056	614.0950	Replacing Guardrail Posts and Blocks	EACH	919.000	919.000
0058	614.2300	MGS Guardrail 3	LF	63.000	63.000
0060	614.2610	MGS Guardrail Terminal EAT	EACH	1.000	1.000
0062	618.0100	Maintenance and Repair of Haul Roads (project) 01. 7210-00-80	EACH	1.000	1.000
0064	619.1000	Mobilization	EACH	1.000	1.000
0066	624.0100	Water	MGAL	63.000	63.000
0068	628.1504	Silt Fence	LF	444.000	444.000
0070	628.1520	Silt Fence Maintenance	LF	444.000	444.000
0072	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0074	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0076	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	1.000	1.000
0078	637.2210	Signs Type II Reflective H	SF	12.000	12.000
0080	638.2102	Moving Signs Type II	EACH	3.000	3.000
0082	638.4000	Moving Small Sign Supports	EACH	3.000	3.000
0084	642.5001	Field Office Type B	EACH	1.000	1.000
0086	643.0300	Traffic Control Drums	DAY	463.000	463.000
0088	643.0800	Traffic Control Arrow Boards	DAY	14.000	14.000
0090	643.0900	Traffic Control Signs	DAY	3,438.000	3,438.000
0092	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0094	643.3165	Temporary Marking Line Paint 6-Inch	LF	215,538.000	215,538.000
0096	643.5000	Traffic Control	EACH	1.000	1.000
0098	645.0120	Geotextile Type HR	SY	8.000	8.000

Estimate Of Quantities

7210-00-80

Line	Item	Item Description	Unit	Total	Qty
0100	646.1020	Marking Line Epoxy 4-Inch	LF	402.000	402.000
0102	646.2020	Marking Line Epoxy 6-Inch	LF	2,365.000	2,365.000
0104	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	163,840.000	163,840.000
0106	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	2,260.000	2,260.000
0108	646.5020	Marking Arrow Epoxy	EACH	14.000	14.000
0110	646.5120	Marking Word Epoxy	EACH	5.000	5.000
0112	646.6120	Marking Stop Line Epoxy 18-Inch	LF	198.000	198.000
0114	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	8,710.000	8,710.000
0116	646.6470	Cold Weather Marking Epoxy 10-Inch	LF	510.000	510.000
0118	646.7120	Marking Diagonal Epoxy 12-Inch	LF	318.000	318.000
0120	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	3,440.000	3,440.000
0122	648.0100	Locating No-Passing Zones	MI	11.000	11.000
0124	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	800.000	800.000
0126	650.8000	Construction Staking Resurfacing Reference	LF	59,126.000	59,126.000
0128	650.9911	Construction Staking Supplemental Control (project) 01. 7210-00-80	EACH	1.000	1.000
0130	650.9920	Construction Staking Slope Stakes	LF	1,236.000	1,236.000
0132	690.0150	Sawing Asphalt	LF	800.000	800.000
0134	740.0440	Incentive IRI Ride	DOL	47,339.000	47,339.000
0136	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,600.000	1,600.000
0138	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	3,200.000	3,200.000
0140	SPV.0055	Special 01. Incentive Density PWL HMA Pavement	DOL	32,945.000	32,945.000
0142	SPV.0055	Special 02. Incentive Air Voids HMA Pavement	DOL	49,670.000	49,670.000
0144	SPV.0055	Special 03. Incentive Density HMA Pavement Longitudinal Joints	DOL	11,830.000	11,830.000
0146	SPV.0060	Special 01. Adjusting EATs	EACH	18.000	18.000
0148	SPV.0060	Special 02. Utility Line Opening (ULO)	EACH	5.000	5.000
0150	SPV.0060	Special 03. Verify Landmark Reference Monuments	EACH	12.000	12.000

200 - REMOVALS

					201.0205	204.0115	204.0120	204.9090.S.01		
						REMOVING ASPHALTIC SURFACE BUTT JOINTS	REMOVING ASPHALTIC SURFACE MILLING	REMOVING (ITEM DESCRIPTION) (01. REMOVING BURIED GUARDRAIL)		
CATEGORY	STATION	TO	STATION	LOCATION	GRUBBING STA	SY	SY	LF	REMARKS	
0010	150+51	-	170+00	BEGIN PROJECT TO 825TH ST ACCESS RD	-	27	6,600	-		
0010	170+00	-	191+29	825TH ACCESS RD TO 825TH ST	-	57	9,010	-		
0010	191+29	-	196+44	825TH ST TO BRIDGE	-	27	2,280	-		
0010	203+83	-	206+76	BRIDGE TO 830TH ST	-	75	1,780	-		
0010	206+76	-	227+56	830TH ST & CTH VV INTERSECTION	-	113	9,100	-		
0010	227+56	-	249+11	CTH VV INTERSECTION TO RAILROAD	-	39	8,870	-		
0010	251+26	-	263+75	RAILROAD TO STH 35	-	151	8,220	-		
0010	263+75	-	273+42	STH 35 TO 180TH ST	-	31	5,000	-		
0010	273+42	-	322+39	180TH ST TO 210TH AVE	3	49	24,890	800		
0010	322+39	-	334+02	210TH AVE. TO 220TH AVE.	-	23	6,490	-		
0010	334+02	-	388+04	220TH AVE. TO CTH VV	-	47	21,770	-		
0010	388+04	-	410+91	CTH VV TO 770TH ST	-	26	7,880	-		
0010	410+91	-	429+44	770TH ST TO 290TH AVE	-	41	6,940	-		
0010	429+44	-	469+02	290TH AVE TO 320TH AVE	-	43	14,660	-		
0010	469+01	-	508+64	320TH AVE TO MAPLE LN	-	19	14,170	-		
0010	508+64	-	536+60	MAPLE LN TO CTH V	-	49	9,950	-		
0010	536+59	-	561+73	CTH V TO 390TH AVE	-	23	9,990	-		
0010	561+73	-	590+60	390TH AVE. TO VTH KK	-	52	10,350	-		
0010	590+59	-	642+54	CTH KK TO 450TH AVE.	-	45	18,000	-		
0010	642+54	-	695+12	450TH AVE TO 490TH AVE	-	46	18,230	-		
0010	695+12	-	734+96	490TH AVE TO 520TH AVE	-	22	13,930	-		
0010	734+96	-	741+77	520TH AVE TO END PROJECT	-	31	2,320	-		
TOTAL 0010					3	1,036	230,430	800		

205 - EARTHWORK

DIVISION	FROM/TO STATION	LOCATION	* COMMON EXCAVATION (1)		SALVAGED/ UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	* BORROW
			CUT (2)	EBS EXCAVATION				FACTOR			
								1.20			
DIVISION 1											
150-153 GUARDRAIL	150+80.43/153+00.00	LT	132	0	0	132	543	652	-520		
DIVISION 1 SUBTOTAL			132	0	0	132	543	652	-520	0	520
GRAND TOTAL			132	0	0	132	543	652	-520	0	520
TOTAL COMMON EXC			132								

FROM/TO STATION	LOCATION	* 205.0100 COMMON EXCAVATION (1)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	* 208.0100 BORROW
		CUT (2)				FACTOR 1.20			
290+40.54/300+06.95	CLIMBING LANE	202	0	202	675	810	-608		
		202	0	202	675	810	-608	0	608
		202	0	202	675	810	-608	0	608
TOTAL COMMON EXC		202							

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL.

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(13) EXPANDED FILL FACTOR = 1.20

DEPENDING ON SELECTIONS:

EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH - REDUCED EBS) * FILL FACTOR

OR

EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED EBS) * FILL FACTOR

OR

EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH) * FILL FACTOR

OR

EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK) * FILL FACTOR

(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

* FOR BIDDING PURPOSES ONLY. SEE ITEM 614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING

300 - BASE AGGREGATE

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	150+51	-	170+00	BEGIN PROJECT TO 825TH ACCESS RD	522	1,181	BEAM GUARD REPLACEMENT
0010	170+00	-	191+29	825TH ACCESS RD TO 825TH ST	178	-	
0010	191+29	-	196+44	825TH ST TO BRIDGE	32	-	
0010	203+83	-	206+76	BRIDGE TO 830TH ST	13	-	
0010	206+76	-	227+56	830TH ST & CTH VV INTERSECTION	158	-	
0010	227+56	-	249+11	CTH VV INTERSECTION TO RAILROAD	144	-	
0010	251+26	-	263+75	RAILROAD TO STH 35	35	-	
0010	263+75	-	273+42	STH 35 TO 180TH ST	50	-	
0010	273+42	-	322+39	180TH ST TO 210TH AVE	308	161	BEAM GUARD REPLACEMENT
0010	322+39	-	334+02	210TH AVE. TO 220TH AVE.	49	-	
0010	334+02	-	388+04	220TH AVE. TO CTH VV	401	-	
0010	388+04	-	410+91	CTH VV TO 770TH ST	202	-	
0010	410+91	-	429+44	770TH ST TO 290TH AVE	169	-	
0010	429+44	-	469+02	290TH AVE TO 320TH AVE	340	-	
0010	469+01	-	508+64	320TH AVE TO MAPLE LN	324	-	
0010	508+64	-	536+60	MAPLE LN TO CTH V	246	-	
0010	536+59	-	561+73	CTH V TO 390TH AVE	183	-	
0010	561+73	-	590+60	390TH AVE. TO VTH KK	251	-	
0010	590+59	-	642+54	CTH KK TO 450TH AVE.	457	-	
0010	642+54	-	695+12	450TH AVE TO 490TH AVE	472	-	
0010	695+12	-	734+96	490TH AVE TO 520TH AVE	364	-	
0010	734+96	-	741+77	520TH AVE TO END PROJECT	58	-	
TOTAL 0010					4,957	1,342	

460 - PAVEMENT														
					450.4000	455.0605	460.6644	465.0105	465.0110	465.0120	465.0315	601.0553	690.0150	
					HMA COLD WEATHER PAVING	TACK COAT	HMA PAVEMENT 4 MT 58-34 V	ASPHALTIC SURFACE	ASPHALTIC SURFACE PATCHING	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	ASPHALTIC FLUMES	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D	SAWING ASPHALT	
CATEGORY	STATION	TO	STATION	LOCATION	TON	GAL	TON	TON	TON	TON	SY	LF	LF	REMARKS
0010	150+51	-	170+00	BEGIN PROJECT TO 825TH RD ACCESS RD	-	820	1,900	-	-	-	-	-	-	
0010	170+00	-	191+29	825TH ACCESS RD TO 825TH ST	-	1,090	1,910	-	-	-	-	-	-	
0010	191+29	-	196+44	825TH ST TO BRIDGE	-	300	510	-	-	-	-	-	-	
0010	203+83	-	206+76	BRIDGE TO 830TH ST	-	230	400	-	-	-	-	-	-	
0010	206+76	-	227+56	830TH ST & CTH VV INTERSECTION	-	1,110	1,940	-	-	-	-	-	-	
0010	227+56	-	249+11	CTH VV INTERSECTION TO RAILROAD	-	1,090	1,900	-	-	26	-	-	-	
0010	251+26	-	263+75	RAILROAD TO STH 35	-	1,010	1,760	-	-	-	-	-	-	
0010	263+75	-	273+42	STH 35 TO 180TH ST	-	610	1,060	-	-	19	-	-	-	
0010	273+42	-	322+39	180TH ST TO 210TH AVE	-	3,020	5,280	-	-	-	14	800	800	
0010	322+39	-	334+02	210TH AVE. TO 220TH AVE.	-	790	1,370	-	-	-	-	-	-	
0010	334+02	-	388+04	220TH AVE. TO CTH VV	-	2,670	4,670	-	-	38	-	-	-	
0010	388+04	-	410+91	CTH VV TO 770TH ST	-	950	1,660	-	-	-	-	-	-	
0010	410+91	-	429+44	770TH ST TO 290TH AVE	-	840	1,470	-	-	-	-	-	-	
0010	429+44	-	469+02	290TH AVE TO 320TH AVE	-	1,800	3,140	-	-	-	-	-	-	
0010	469+01	-	508+64	320TH AVE TO MAPLE LN	-	1,740	3,030	-	-	52	-	-	-	
0010	508+64	-	536+60	MAPLE LN TO CTH V	-	1,200	2,100	-	-	-	-	-	-	
0010	536+59	-	561+73	CTH V TO 390TH AVE	-	1,270	2,220	-	-	25	-	-	-	
0010	561+73	-	590+60	390TH AVE. TO VTH KK	-	1,250	2,190	-	-	-	-	-	-	
0010	590+59	-	642+54	CTH KK TO 450TH AVE.	-	2,170	3,790	-	-	52	-	-	-	
0010	642+54	-	695+12	450TH AVE TO 490TH AVE	-	2,220	3,890	-	-	34	-	-	-	
0010	695+12	-	734+96	490TH AVE TO 520TH AVE	-	1,710	2,980	-	-	6	-	-	-	
0010	734+96	-	741+77	520TH AVE TO END PROJECT	-	290	500	-	-	33	-	-	-	
0010	150+51	-	741+77	PROJECT LENGTH	500	-	-	600	300	-	-	-	-	UNDISTRIBUTED
TOTAL 0010					500	28,180	49,670	600	300	285	14	800	800	

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PWL MIXTURE USE TABLE										
THE FOLLOWING ACCEPTANCE CRITERIA ARE APPLICABLE FOR THIS PROJECT:										
LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEMS	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:			
							MIXTURE ACCEPTANCE		DENSITY ACCEPTANCE	
LOWER LAYER										
24' MAINLINE	150+51 TO 170+00	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	873	3.00	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		INCENTIVE DENSITY PWL HMA PAVEMENT SPV.0055.02	
VARYING SHOULDER	150+51 TO 170+00	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	459	3.00	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE	
24' MAINLINE	170+00 TO 196+44	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	790	2.00	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		INCENTIVE DENSITY PWL HMA PAVEMENT SPV.0055.02	
VARYING SHOULDER	170+00 TO 196+44	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	438	2.00	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE	
24' MAINLINE	203+83 TO 249+11	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	1352	2.00	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		INCENTIVE DENSITY PWL HMA PAVEMENT SPV.0055.02	
VARYING SHOULDER	203+83 TO 249+11	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	579	2.00	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE	
24' MAINLINE	251+26 TO 741+85	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	14652	2.00	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		INCENTIVE DENSITY PWL HMA PAVEMENT SPV.0055.02	
VARYING SHOULDER	251+26 TO 741+85	LOWER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	7186	2.00	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE	
UPPER LAYER										
24' MAINLINE	150+51 TO 170+00	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	582	2.00	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		INCENTIVE DENSITY PWL HMA PAVEMENT SPV.0055.02	
VARYING SHOULDER	150+51 TO 170+00	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	386	2.00	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE	
24' MAINLINE	170+00 TO 196+44	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	691	1.75	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		INCENTIVE DENSITY PWL HMA PAVEMENT SPV.0055.02	
VARYING SHOULDER	170+00 TO 196+44	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	413	1.75	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE	
24' MAINLINE	203+83 TO 249+11	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	1183	1.75	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		INCENTIVE DENSITY PWL HMA PAVEMENT SPV.0055.02	
VARYING SHOULDER	203+83 TO 249+11	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	536	1.75	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE	
24' MAINLINE	251+26 TO 741+85	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	12821	1.75	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		INCENTIVE DENSITY PWL HMA PAVEMENT SPV.0055.02	
VARYING SHOULDER	251+26 TO 741+85	UPPER LAYER	MILLED EXISTING HMA SURFACE	4 MT 58-34 V	6728	1.75	INCENTIVE AIR VOIDS HMA PAVEMENT SPV.0055.01		ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE	
460 - PWL										

465 - RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	465.0560 ASPHALTIC RUMBLE STRIPS, CENTERLINE LF	465.0580 ASPHALTIC RUMBLE STRIPS, TRANSVERSE SY	REMARKS
0010	150+51	-	171+26	BEGIN PROJECT TO 825TH RD ACCESS	1,880	-	OMIT INTERSECTION
0010	171+26	-	190+82	825TH ACCESS RD TO 825TH ST	1,560	-	OMIT INTERSECTION
0010	190+82	-	196+44	825TH ST TO BRIDGE	340	-	OMIT INTERSECTION & BRIDGE
0010	203+83	-	206+28	BRIDGE TO 830TH ST	30	-	OMIT INTERSECTION & BRIDGE
0010	206+28	-	220+37	830TH ST & CTH VV INTERSECTION	1,390	-	OMIT INTERSECTION
0010	234+71	-	249+11	CTH VV INTERSECTION TO RAILROAD	1,420	-	OMIT INTERSECTION & BRIDGE
0010	251+26	-	262+88	RAILROAD TO STH 35	940	-	OMIT INTERSECTION & BRIDGE
0010	262+88	-	272+88	STH 35 TO 180TH ST	600	-	OMIT INTERSECTION
0010	272+88	-	321+95	180TH ST TO 210TH AVE	4,110	-	OMIT 2 INTERSECTION
0010	321+95	-	333+35	210TH AVE. TO 220TH AVE.	740	-	OMIT INTERSECTION
0010	333+35	-	387+43	220TH AVE. TO CTH VV	5,010	-	OMIT INTERSECTION
0010	387+43	-	410+28	CTH VV TO 770TH ST	1,890	-	OMIT INTERSECTION
0010	410+28	-	429+08	770TH ST TO 290TH AVE	1,490	-	OMIT INTERSECTION
0010	429+08	-	468+63	290TH AVE TO 320TH AVE	3,560	-	OMIT INTERSECTION
0010	468+63	-	508+32	320TH AVE TO MAPLE LN	3,570	-	OMIT INTERSECTION
0010	508+32	-	536+04	MAPLE LN TO CTH V	2,380	-	OMIT INTERSECTION
0010	536+04	-	561+27	CTH V TO 390TH AVE	2,130	-	OMIT INTERSECTION
0010	561+27	-	589+94	390TH AVE. TO VTH KK	2,470	-	OMIT INTERSECTION
0010	589+94	-	641+93	CTH KK TO 450TH AVE.	4,800	-	OMIT INTERSECTION
0010	641+93	-	694+60	450TH AVE TO 490TH AVE	4,870	-	OMIT INTERSECTION
0010	694+60	-	734+35	490TH AVE TO 520TH AVE	3,580	-	OMIT INTERSECTION
0010	733+00	-	733+25	USH 10 INTERSECTION	-	25	
0010	736+50	-	738+75	USH 10 INTERSECTION	-	25	
0010	738+75	-	739+00	USH 10 INTERSECTION	-	25	
0010	734+35	-	741+77	520TH AVE TO END PROJECT	350	-	OMIT INTERSECTION
TOTAL 0010					49,110	75	

614 - BEAM GUARD																						
														FOR BID INFORMATION ONLY								
CATEGORY	STATION	TO	STATION	LOCATION	204.0165	614.0010	614.0370	614.0400	614.0510	614.0950	614.2300	614.2610	SPV.0060.01	REMARKS	EROSION							
					REMOVING GUARDRAIL LF	BARRIER SYSTEM GRADING SHAPING FINISHING EACH	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL EACH	ADJUSTING STEEL PLATE BEAM GUARD LF	GUARDRAIL STIFFENED NW LF	REPLACING GUARDRAIL POSTS AND BLOCKS EACH	MGS GUARDRAIL 3 LF	MGS GUARDRAIL TERMINAL EAT EACH	SPECIAL (01. ADJUSTING EATs) EACH		SALVAGED TOPSOIL SY	CLASS I URBAN TYPE A SY	FERTILIZER TYPE B LB	SEEDING MIXTURE NO. 10A LB	SEEDING MIXTURE NO. 70A LB	SEED WATER MGAL	EXCAVATION COMMON CY	BORROW CY
0010	150+51	-	153+00	BEGIN PROJECT LT	116	1	-	-	-	-	63	1	-		915	920	1	4		21	132	520
0010	193+76	-	196+34	SOUTH OF BRIDGE OVER RIVER LT	-	-	-	208	-	2	-	-	1		-	-	-	-	-	-	-	-
0010	194+51	-	196+34	SOUTH OF BRIDGE OVER RIVER RT	-	-	-	134	-	2	-	-	1		-	-	-	-	-	-	-	-
0010	203+92	-	205+27	NORTH OF BRIDGE OVER RIVER LT	-	-	-	-	-	2	-	-	1		-	-	-	-	-	-	-	-
0010	203+93	-	205+76	NORTH OF BRIDGE OVER RIVER RT	-	-	-	134	-	2	-	-	1		-	-	-	-	-	-	-	-
0010	241+12	-	249+16	SOUTH OF RAILROAD LT	-	-	-	754	-	10	-	-	-		-	-	-	-	-	-	-	-
0010	241+13	-	249+23	SOUTH OF RAILROAD RT	-	-	-	760	-	10	-	-	1		-	-	-	-	-	-	-	-
0010	251+16	-	261+66	NORTH OF RAILROAD LT	-	-	-	601	-	85	-	-	1		-	-	-	-	-	-	-	-
0010	251+24	-	258+98	NORTH OF RAILROAD RT	-	-	-	620	-	35	-	-	-		-	-	-	-	-	-	-	-
0010	291+54	-	319+49	SOUTH OF 210TH AVE RT	863	1	1	1,527	813	84	-	-	1		1561	1570	1	-	22	35	202	608
0010	296+08	-	305+77	SOUTH OF 210TH AVE LT	-	-	-	62	-	109	-	-	-		-	-	-	-	-	-	-	-
0010	322+18	-	331+01	SOUTH OF 220TH AVE LT	-	-	-	-	-	10	-	-	1		-	-	-	-	-	-	-	-
0010	343+07	-	349+12	NORTH OF 220TH AVE RT	-	-	-	-	-	75	-	-	-		-	-	-	-	-	-	-	-
0010	343+16	-	347+09	NORTH OF 220TH AVE LT	-	-	-	74	-	34	-	-	-		-	-	-	-	-	-	-	-
0010	361+85	-	366+78	SOUTH OF COUNTY VV L LT	-	-	-	315	-	8	-	-	-		-	-	-	-	-	-	-	-
0010	361+68	-	369+23	SOUTH OF COUNTY VV RT	-	-	-	328	-	106	-	-	2		-	-	-	-	-	-	-	-
0010	439+84	-	448+63	NORTH OF 290TH AVE LT	-	-	-	780	-	10	-	-	2		-	-	-	-	-	-	-	-
0010	438+35	-	447+22	NORTH OF 290TH AVE RT	-	-	-	676	-	10	-	-	-		-	-	-	-	-	-	-	-
0010	483+31	-	488+86	NORTH OF ERICKSON RD LT	-	-	-	76	-	71	-	-	-		-	-	-	-	-	-	-	-
0010	481+61	-	488+04	NORTH OF ERICKSON RD RT	-	-	-	181	-	4	-	-	1		-	-	-	-	-	-	-	-
0010	540+14	-	546+32	NORTH OF COUNTY V LT	-	-	-	207	-	59	-	-	-		-	-	-	-	-	-	-	-
0010	538+65	-	545+82	NORTH OF COUNTY V RT	-	-	-	144	-	57	-	-	2		-	-	-	-	-	-	-	-
0010	555+73	-	559+77	BEFORE 390TH AVE LT	-	-	-	228	-	30	-	-	-		-	-	-	-	-	-	-	-
0010	555+51	-	559+69	BEFORE 390TH AVE RT	-	-	-	-	-	77	-	-	2		-	-	-	-	-	-	-	-
0010	652+97	-	654+76	NORTH OF COUNTY K LT	-	-	-	-	-	7	-	-	1		-	-	-	-	-	-	-	-
0010	652+67	-	654+47	NORTH OF COUNTY K RT	-	-	-	-	-	9	-	-	-		-	-	-	-	-	-	-	-
0010	727+71	-	729+76	LAST CREEK LT	-	-	-	53	-	10	-	-	-		-	-	-	-	-	-	-	-
0010	727+74	-	729+29	LAST CREEK RT	-	-	-	-	-	1	-	-	-		-	-	-	-	-	-	-	-
TOTAL 0010					979	2	1	7,862	813	919	63	1	18		2476	2490	2	4	22	56	334	1128

620 - EROSION CONTROL

					606.0200	628.1504	628.1520	628.1905	628.1910	645.0120		
					RIPRAP MEDIUM CY	SILT FENCE LF	SILT FENCE MAINTENANCE LF	MOBILIZATIONS	MOBILIZATIONS	EMERGENCY	GEOTEXTILE TYPE	REMARKS
								EROSION CONTROL EACH	EROSION CONTROL EACH	HR SY		
CATEGORY	STATION	TO	STATION	LOCATION								
0010	149+66	-	166+86	BEGIN PROJECT	-	444	444	1	1	-		
0010	290+40	-	300+07	180TH ST TO 210TH AVE	2	-	-	1	-	8		
TOTAL 0010					2	444	444	2	1	8		

624 - WATER

CATEGORY	STATION	TO	STATION	LOCATION	624.0100 WATER MGAL	REMARKS
0010	150+51	-	741+77	PROJECT LENGTH	72	
TOTAL 0010					72	

630 - PERMANENT SIGNING

CATEGORY	STATION	TO	STATION	LOCATION	634.0612 POSTS WOOD 4X6- INCH X 12-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	150+71	-	150+71	BEGIN PROJECT	-	-	1	1	
0010	150+75	-	150+75	BEGIN PROJECT	-	-	1	1	
0010	265+84	-	265+84	STH 35 TO 180TH ST	1	12	-	-	R8-7; EMERGENCY STOPPING ONLY
0010	291+58	-	291+58	STH 35 TO 180TH ST	-	-	1	1	
TOTAL 0010					1	12	3	3	

643 - TRAFFIC CONTROL

						643.0300	643.0800	643.0900	643.1050	643.5000		
						TRAFFIC CONTROL DRUMS DAY	TRAFFIC CONTROL ARROW BOARDS DAY	TRAFFIC CONTROL SIGNS DAY	TRAFFIC CONTROL SIGNS PCMS DAY	TRAFFIC CONTROL EACH		
CATEGORY	STATION	TO	STATION	DAYS	LOCATION						REMARKS	
0010	150+51	-	153+00	7	SHOULDER WORK	99	-	14	-	-	BEAMGUARD WORK	
0010	290+41	-	300+07	14	CLIMBING LANE BEAM GUARD	364	14	112	-	-		
0010	150+52	-	741+78	56	FLAGGING SIGNS	-	-	336	-	-	SDD 15C12-a	
0010	150+53	-	741+79	96	ROAD WORK AHEAD, END ROAD WORK	-	-	384	-	-		
0010	150+54	-	741+80	96	SIDEROAD ROADWORK AHEAD	-	-	2,592	-	-		
0010	150+57	-	741+83	7	Project Length	-	-	-	14	1		
TOTAL 0010						463	14	3,438	14	1		

643 - SAME DAY TEMPORARY PM

643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF						
CATEGORY	STATION	TO	STATION	LOCATION	LF	REMARKS
0010	150+51	-	153+25	STH 63 CL	1,095	DOUBLE YELLOW
0010	153+25	-	163+66	STH 63 CL	3,903	DASHED LT, SOLID RIGHT
0010	163+66	-	170+00	STH 63 CL	2,537	DOUBLE YELLOW
0010	170+00	-	226+20	STH 63 CL	33,720	DOUBLE YELLOW
0010	226+20	-	227+30	STH 63 CL	0	SIDEROAD GAP
0010	227+30	-	234+01	STH 63 CL	4,029	DOUBLE YELLOW
0010	234+01	-	239+01	STH 63 CL	1,875	SOLID LT, DASHED RT
0010	239+01	-	249+11	STH 63 CL	757	DASHED
0010	249+11	-	262+25	STH 63 CL	4,924	DASHED LT, SOLID RIGHT
0010	262+25	-	263+27	STH 63 CL	0	SIDEROAD GAP
0010	263+27	-	291+57	STH 63 CL	16,984	DOUBLE YELLOW
0010	291+57	-	304+67	STH 63 CL	4,913	DASHED LT, SOLID RIGHT
0010	304+67	-	353+54	STH 63 CL	29,322	DOUBLE YELLOW
0010	353+54	-	364+64	STH 63 CL	4,162	SOLID LT, DASHED RT
0010	364+64	-	371+29	STH 63 CL	499	DASHED
0010	371+29	-	383+91	STH 63 CL	4,730	DASHED LT, SOLID RIGHT
0010	383+91	-	420+21	STH 63 CL	21,784	DOUBLE YELLOW
0010	420+21	-	431+43	STH 63 CL	4,206	SOLID LT, DASHED RT
0010	431+43	-	442+39	STH 63 CL	822	DASHED
0010	442+39	-	453+76	STH 63 CL	4,264	DASHED LT, SOLID RIGHT
0010	453+76	-	460+19	STH 63 CL	3,858	DOUBLE YELLOW
0010	460+19	-	471+31	STH 63 CL	4,170	SOLID LT, DASHED RT
0010	471+31	-	509+29	STH 63 CL	2,848	DASHED
0010	509+29	-	520+06	STH 63 CL	4,038	DASHED LT, SOLID RIGHT
0010	520+06	-	523+12	STH 63 CL	1,840	DOUBLE YELLOW
0010	523+12	-	534+18	STH 63 CL	4,144	SOLID LT, DASHED RT
0010	534+18	-	560+04	STH 63 CL	1,940	DASHED
0010	560+04	-	571+19	STH 63 CL	4,182	DASHED LT, SOLID RIGHT
0010	571+19	-	574+67	STH 63 CL	2,088	DOUBLE YELLOW
0010	574+67	-	585+74	STH 63 CL	4,148	SOLID LT, DASHED RT
0010	585+74	-	598+12	STH 63 CL	929	DASHED
0010	598+12	-	606+93	STH 63 CL	3,302	DASHED LT, SOLID RIGHT
0010	606+93	-	618+21	STH 63 CL	4,230	SOLID LT, DASHED RT
0010	618+21	-	624+95	STH 63 CL	506	DASHED
0010	624+95	-	636+06	STH 63 CL	4,166	DASHED LT, SOLID RIGHT
0010	636+06	-	639+51	STH 63 CL	2,071	DOUBLE YELLOW
0010	639+51	-	650+89	STH 63 CL	4,264	SOLID LT, DASHED RT
0010	650+89	-	666+79	STH 63 CL	1,193	DASHED
0010	666+79	-	678+06	STH 63 CL	4,224	DASHED LT, SOLID RIGHT
0010	678+06	-	679+41	STH 63 CL	809	DOUBLE YELLOW
0010	679+41	-	690+45	STH 63 CL	4,141	SOLID LT, DASHED RT
0010	690+45	-	729+29	STH 63 CL	2,913	DASHED
0010	729+29	-	740+54	STH 63 CL	4,221	DASHED LT, SOLID RIGHT
0010	740+54	-	741+85	STH 63 CL	784	DOUBLE YELLOW
TOTAL 0010					215,538	

3

3

646 - PAVEMENT MARKINGS

					646.1020	646.2020	646.2040	646.4040	646.5020	646.5120	646.6120	646.6466	646.6470	646.7120	646.9010		
					MARKING LINE EPOXY 4-INCH LF	MARKING LINE EPOXY 6-INCH LF	MARKING LINE GROOVED WET REF EPOXY 6-INCH LF	MARKING LINE GROOVED WET REF EPOXY 10- INCH LF	MARKING ARROW EPOXY EACH	MARKING WORD EPOXY EACH	MARKING STOP LINE EPOXY 18- INCH LF	COLD WEATHER MARKING EPOXY 6- INCH LF	COLD WEATHER MARKING EPOXY 10-INCH LF	MARKING DIAGONAL EPOXY 12-INCH LF	MARKING REMOVAL LINE WATER BLASTING 4-INCH LF		
CATEGORY	STATION	TO	STATION	LOCATION												REMARKS	
0010	150+51	-	171+78	BEGIN PROJECT TO 825TH RD ACCESS	LT	-	-	1920	-	-	-	-	480	-	-	-	
0010	171+78	-	171+88	825TH RD SIDE ROAD		67	-	-	-	-	-	3,820	-	-	-	YELLOW	
0010	150+51	-	196+44	BEGIN PROJECT TO BRIDGE	RT	-	-	4580	-	-	-	1,150	-	-	-		
0010	196+44	-	203+83	BRIDGE	RT/LT	-	1,479	-	-	-	-	-	-	-	2,958		
0010	171+88	-	191+27	825TH ACCESS RD TO 825TH ST	LT	-	-	1750	130	-	-	440	40	-	-		
0010	191+27	-	196+44	825TH ST TO BRIDGE	LT	-	-	520	110	-	-	130	30	-	-		
0010	203+83	-	205+76	BRIDGE TO 830TH ST	LT	-	-	200	-	-	-	50	-	-	-		
0010	203+83	-	205+76	BRIDGE TO 830TH ST	RT	-	-	150	-	-	-	40	-	-	-		
0010	206+89	-	225+97	830TH ST & CTH VV INTERSECTION	RT	-	-	1910	410	4	2	480	110	-	-		
0010	206+64	-	225+82	830TH ST & CTH VV INTERSECTION	LT	-	-	1870	-	-	-	470	-	-	-		
0010	225+97	-	227+35	CTH VV SIDEROAD		45	-	-	-	-	-	-	-	-	-	WHITE	
0010	225+97	-	227+35	CTH VV SIDEROAD	LT/RT	78	-	-	-	-	38	-	-	-	-	YELLOW	
0010	227+35	-	249+11	CTH VV INTERSECTION TO RAILROAD	RT	-	-	2180	-	-	-	550	-	-	-		
0010	227+52	-	249+12	CTH VV INTERSECTION TO RAILROAD	LT	-	-	2170	340	4	2	550	90	150	-		
0010	249+11	-	251+26	RAILROAD BRIDGE	RT/LT	-	430	-	-	-	-	-	-	-	482		
0010	251+26	-	261+91	RAILROAD TO STH 35	LT	-	-	1070	-	-	-	270	-	-	-		
0010	251+26	-	258+98	RAILROAD TO STH 35 OFF RAMP	RT	-	-	820	680	-	-	210	170	168	-		
0010	259+50	-	262+26	STH 35 TURN LANE	RT	-	-	280	260	4	-	70	70	-	-		
0010	263+80	-	345+96	H 35 TO NORTH OF 220TH AVE BYPASS LA	RT	-	-	2060	-	-	-	-	-	-	-		
0010	262+26	-	263+32	STH 35 SIDEROAD		-	220	-	-	-	70	-	-	-	-	WHITE	
0010	262+26	-	263+32	STH 35 SIDEROAD		-	236	-	-	-	-	-	-	-	-	YELLOW	
0010	263+61	-	272+32	STH 35 TO 180TH ST	LT	-	-	870	220	2	1	25	-	-	-		
0010	263+75	-	321+74	STH 35 TO 210TH AVE	RT	-	-	5800	-	-	-	-	-	-	-		
0010	273+42	-	277+48	180TH ST TO 785TH ST.	LT	-	-	380	-	-	-	-	-	-	-		
0010	278+46	-	332+90	785TH ST TO 220TH AVE	LT	-	-	5410	-	-	-	-	-	-	-		
0010	322+39	-	387+24	210TH AVE TO CTH VV	RT	-	-	6420	-	-	-	-	-	-	-		
0010	334+01	-	386+81	220TH AVE TO CTH VV	LT	-	-	5290	-	-	-	-	-	-	-		
0010	387+24	-	387+87	CTH VV		56	-	-	-	-	-	-	-	-	-	YELLOW	
0010	387+87	-	409+80	CTH VV TO 770TH ST	RT	-	-	2160	-	-	-	-	-	-	-		
0010	388+00	-	428+77	CTH VV TO 290TH AVE.	LT	-	-	4040	-	-	-	-	-	-	-		
0010	410+61	-	428+70	770TH ST TO 290TH AVE	RT	-	-	1780	-	-	-	-	-	-	-		
0010	429+44	-	468+23	290TH AVE TO 320TH AVE	RT	-	-	3830	-	-	-	-	-	-	-		
0010	429+44	-	468+33	290TH AVE TO 320TH AVE	LT	-	-	3850	-	-	-	-	-	-	-		
0010	468+97	-	535+34	320TH AVE TO CTH V	RT	-	-	6580	-	-	-	-	-	-	-		
0010	469+01	-	508+00	320TH AVE TO MAPLE LN	LT	-	-	3850	-	-	-	-	-	-	-		
0010	508+64	-	535+62	MAPLE LN TO CTH V	LT	-	-	2660	-	-	-	-	-	-	-		
0010	535+62	-	536+54	CTH V	RT	61	-	-	-	-	-	-	-	-	-	YELLOW	
0010	536+60	-	589+50	CTH V TO CTH KK	RT	-	-	5240	-	-	-	-	-	-	-		
0010	536+54	-	560+98	CTH V TO 390TH AVE	LT	-	-	2410	-	-	-	-	-	-	-		
0010	561+73	-	589+43	390TH AVE. TO VTH KK	LT	-	-	2730	-	-	-	-	-	-	-		
0010	589+43	-	590+38	CTH KK	LT	95	-	-	-	-	-	-	-	-	-	YELLOW	
0010	590+38	-	641+44	CTH KK TO 450TH AVE.	RT	-	-	5050	-	-	-	-	-	-	-		
0010	590+59	-	641+44	CTH KK TO 450TH AVE.	LT	-	-	5040	-	-	-	-	-	-	-		
0010	642+28	-	694+25	450TH AVE TO 490TH AVE	RT	-	-	5150	-	-	-	-	-	-	-		
0010	642+54	-	694+28	450TH AVE TO 490TH AVE	LT	-	-	5130	-	-	-	-	-	-	-		
0010	694+98	-	741+86	490TH AVE TO END PROJECT	RT	-	-	4700	-	-	-	-	-	-	-		
0010	695+12	-	733+88	490TH AVE TO 520TH AVE	LT	-	-	3820	-	-	-	-	-	-	-		
0010	734+90	-	741+85	520TH AVE TO END PROJECT	LT	-	-	630	-	-	-	-	-	-	-		
0010	741+85	-	743+35	END PROJECT TO USH 10	LT	-	-	60	-	-	-	-	-	-	-		
0010	741+85	-	743+35	END PROJECT TO USH 10	RT	-	-	370	110	-	-	38	-	-	-	INCLUDES 234 LF YELLOW CL	
0010	150+51	-	741+85	PROJECT LENGTH		-	-	49110	-	-	-	-	-	-	-	YELLOW CL AFTER RUMBLES	
TOTAL 0010						402	2,365	163,840	2,260	14	5	198	8,710	510	318	3,440	

642 - FIELD OFFICE

CATEGORY	STATION	TO	STATION	LOCATION	642.5001 FIELD OFFICE TYPE B EACH
0010	150+51	-	741+77	PROJECT LENGTH	1
				TOTAL 0010	1

650 - STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.5500	650.8000	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 7210-00-80) EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	REMARKS
0010	150+51	-	741+77	PROJECT LENGTH	800	59,126	1	1,236	
				TOTAL 0010	800	59,126	1	1,236	

SPV - VERIFY LANDMARK MONUMENTS

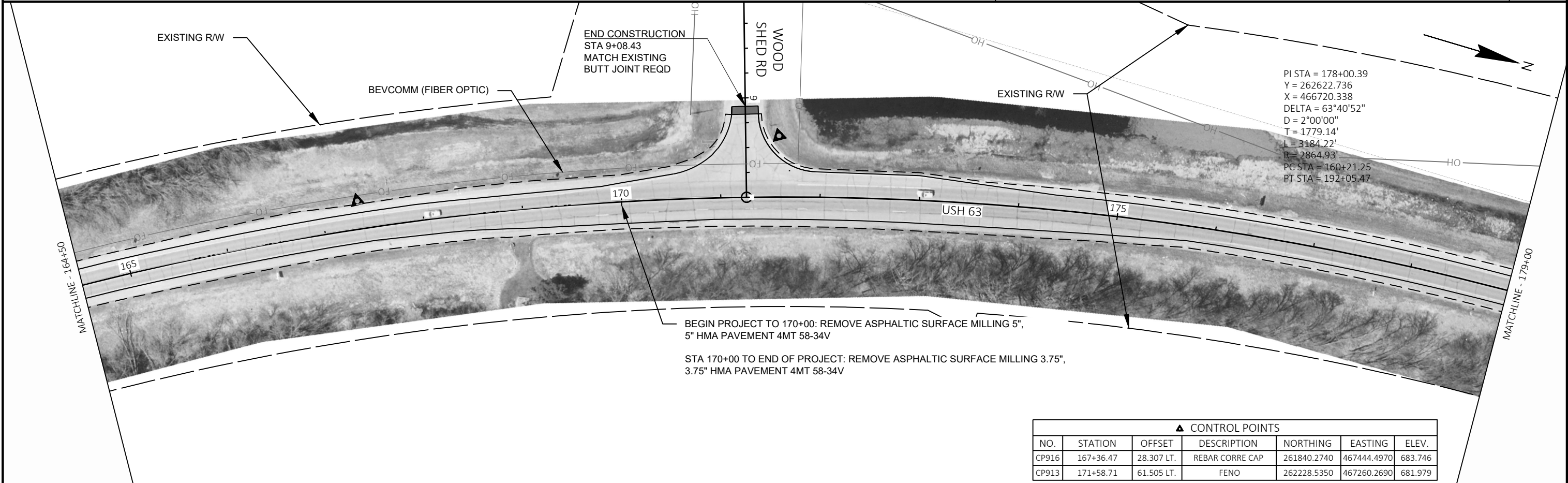
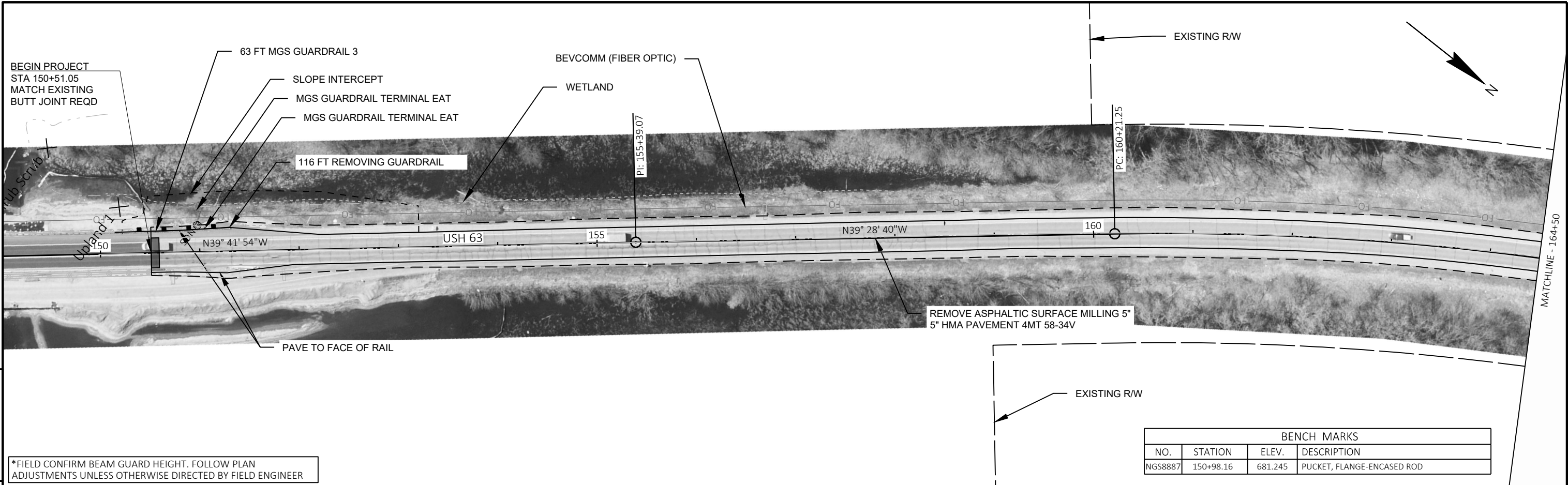
SPV - UTILITY LINE OPENING

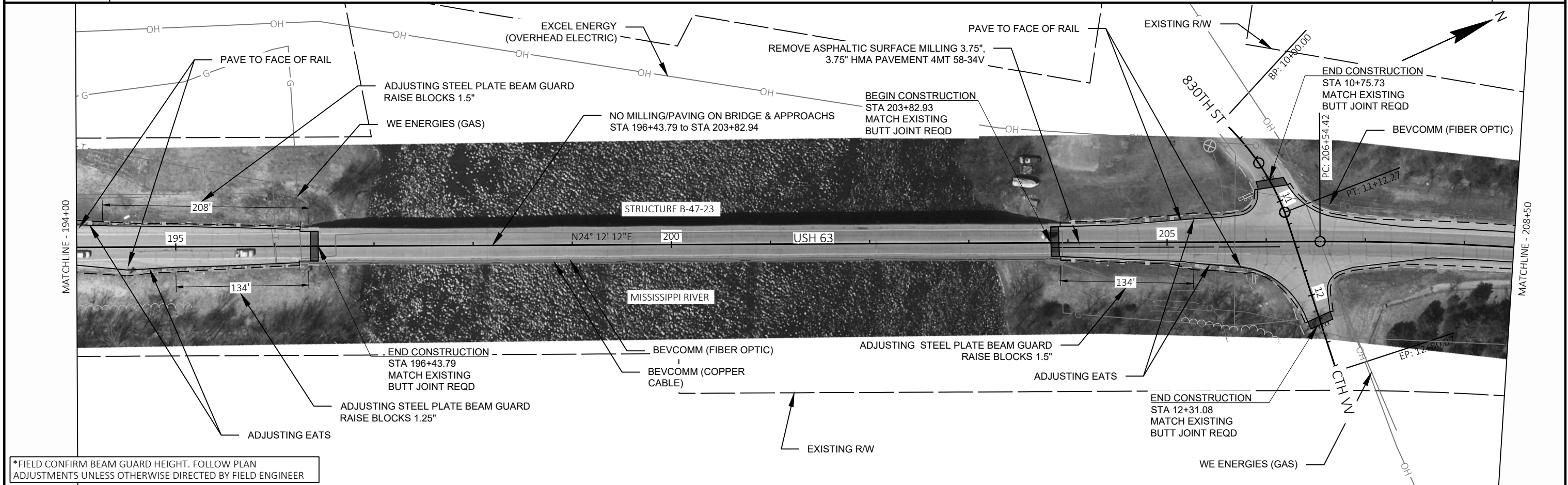
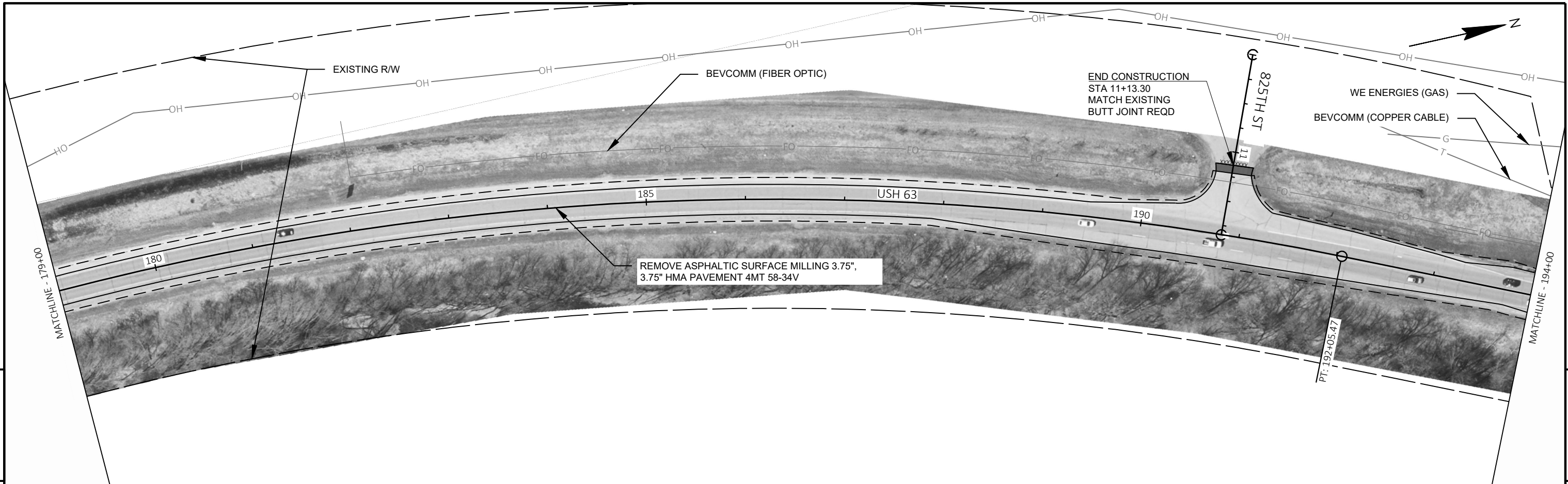
CATEGORY	STATION	TO	STATION	LOCATION	SPV.0060.02 SPECIAL (02. UTILITY LINE OPENING (ULO)) EACH	REMARKS
0010	291+54	-	319+49	SOUTH OF 210TH AVE RT	5	
				TOTAL 0010	5	

CATEGORY	STATION	LOCATION	SPV.0060.03 SPECIAL (VERIFY LANDMARK REFERENCE MONUMENTS) EACH	REMARKS
0010	225+30	15.9' RT	1	
0010	263+13	20.1' LT	1	
0010	429+05	23.7' LT	1	
0010	481+88	0.2' LT	1	
0010	508+31	0.2' LT	1	
0010	534+78	3.1' LT	1	
0010	561+30	33.3' LT	1	
0010	589+92	50.7' LT	1	
0010	641+91	20.1' RT	1	
0010	668+30	12.9' LT	1	
0010	694+61	24.3' LT	1	
0010	721+05	5.8' RT	1	
		TOTAL 0010	12	

211-PREPARE FOUNDATION

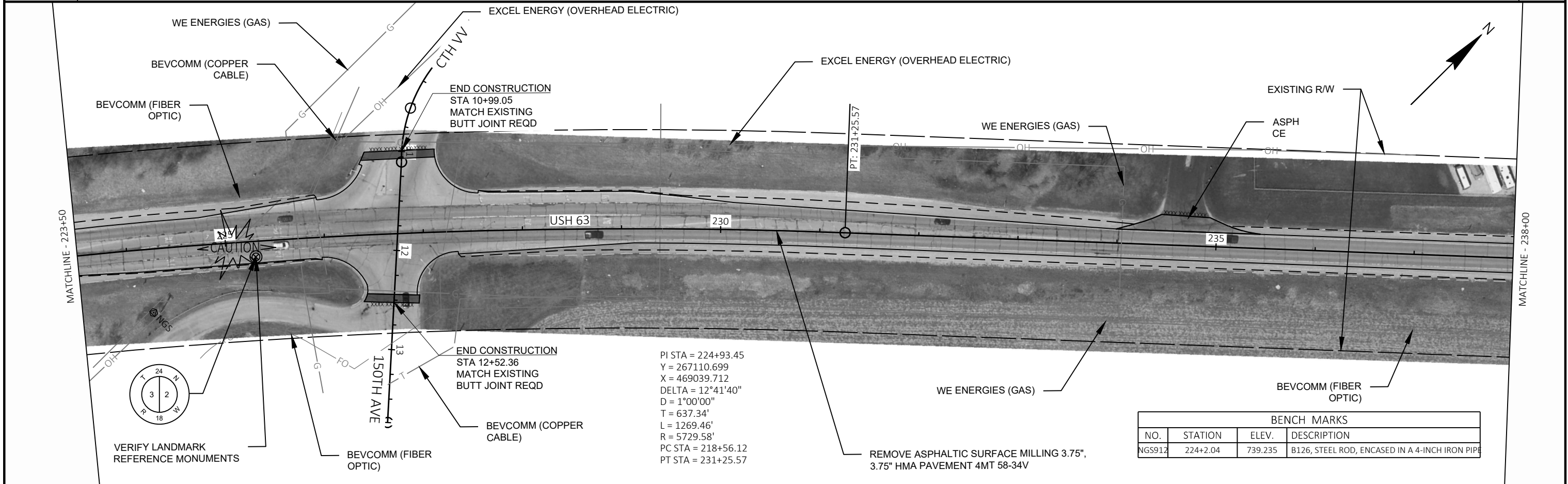
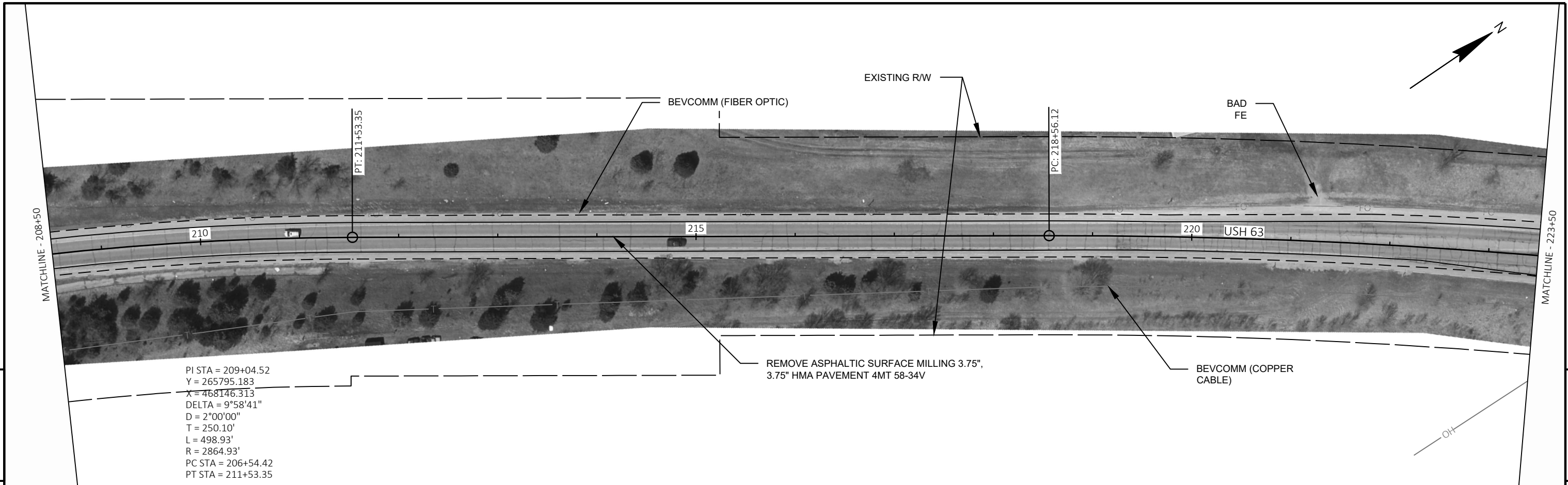
CATEGORY	STATION	TO	STATION	LOCATION	211.0101.01 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (01. 7210-00-80) EACH	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	REMARKS
0010	151+00	-	152+00	RT	-	1	PAVE TO FACE OF RAIL
0010	193+00	-	194+00	LT	-	1	PAVE TO FACE OF RAIL
0010	193+75	-	194+75	RT	-	1	PAVE TO FACE OF RAIL
0010	205+00	-	206+00	LT/RT	-	2	PAVE TO FACE OF RAIL
0010	240+25	-	241+25	LT/RT	-	2	PAVE TO FACE OF RAIL
0010	291+00	-	292+00	RT	-	1	PAVE TO FACE OF RAIL
0010	295+00	-	296+00	LT	-	1	PAVE TO FACE OF RAIL
0010	305+00	-	306+00	LT	-	1	PAVE TO FACE OF RAIL
0010	319+00	-	320+00	RT	-	1	PAVE TO FACE OF RAIL
0010	321+25	-	322+25	LT	-	1	PAVE TO FACE OF RAIL
0010	330+00	-	331+00	LT	-	1	PAVE TO FACE OF RAIL
0010	342+50	-	343+50	LT/RT	-	2	PAVE TO FACE OF RAIL
0010	346+00	-	347+00	LT	-	1	PAVE TO FACE OF RAIL
0010	348+50	-	349+50	RT	-	1	PAVE TO FACE OF RAIL
0010	361+00	-	362+00	LT/RT	-	2	PAVE TO FACE OF RAIL
0010	366+50	-	367+50	LT	-	1	PAVE TO FACE OF RAIL
0010	437+50	-	438+50	RT	-	1	PAVE TO FACE OF RAIL
0010	439+00	-	440+00	LT	-	1	PAVE TO FACE OF RAIL
0010	447+00	-	448+00	RT	-	1	PAVE TO FACE OF RAIL
0010	448+50	-	449+50	LT	-	1	PAVE TO FACE OF RAIL
0010	481+00	-	482+00	RT	-	1	PAVE TO FACE OF RAIL
0010	482+50	-	483+50	LT	-	1	PAVE TO FACE OF RAIL
0010	487+50	-	488+50	RT	-	1	PAVE TO FACE OF RAIL
0010	488+50	-	489+50	LT	-	1	PAVE TO FACE OF RAIL
0010	538+00	-	539+00	RT	-	1	PAVE TO FACE OF RAIL
0010	539+50	-	540+50	LT	-	1	PAVE TO FACE OF RAIL
0010	545+50	-	546+50	RT	-	1	PAVE TO FACE OF RAIL
0010	545+75	-	546+75	LT	-	1	PAVE TO FACE OF RAIL
0010	554+75	-	555+75	LT/RT	-	2	PAVE TO FACE OF RAIL
0010	559+75	-	560+75	LT/RT	-	2	PAVE TO FACE OF RAIL
0010	652+00	-	653+00	LT/RT	-	2	PAVE TO FACE OF RAIL
0010	654+50	-	655+50	LT/RT	-	2	PAVE TO FACE OF RAIL
0010	727+00	-	728+00	LT/RT	-	2	PAVE TO FACE OF RAIL
0010	729+00	-	730+00	LT/RT	-	2	PAVE TO FACE OF RAIL
0010	150+51	-	741+77	PROJECT LENGTH	1	-	
				TOTAL 0010	1	44	

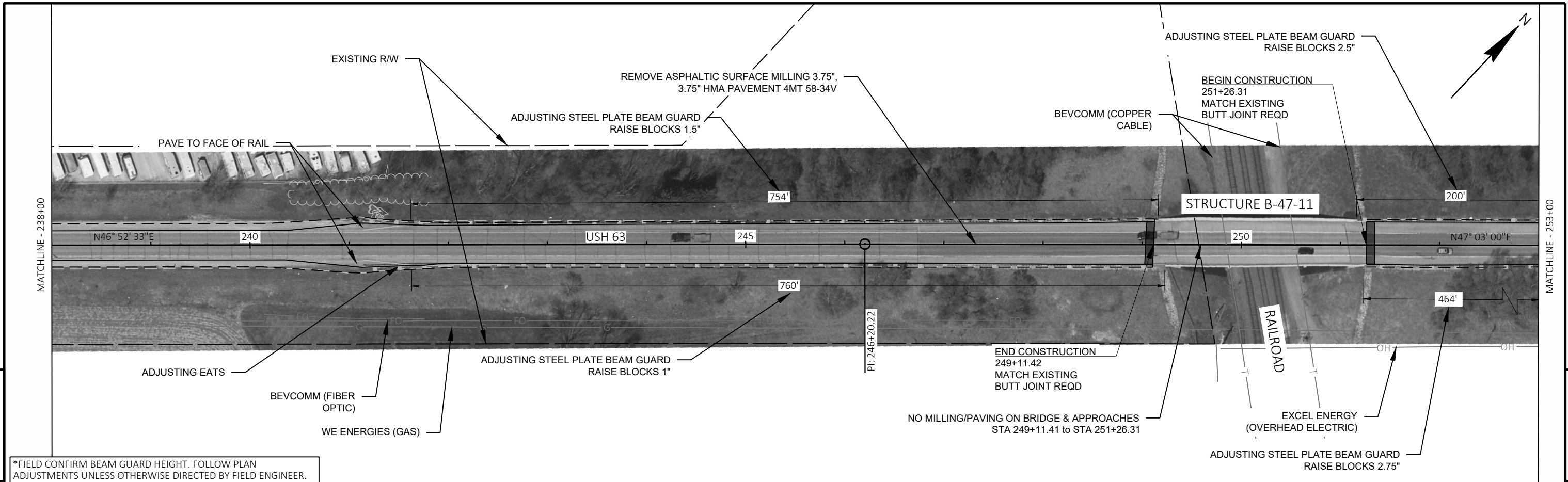




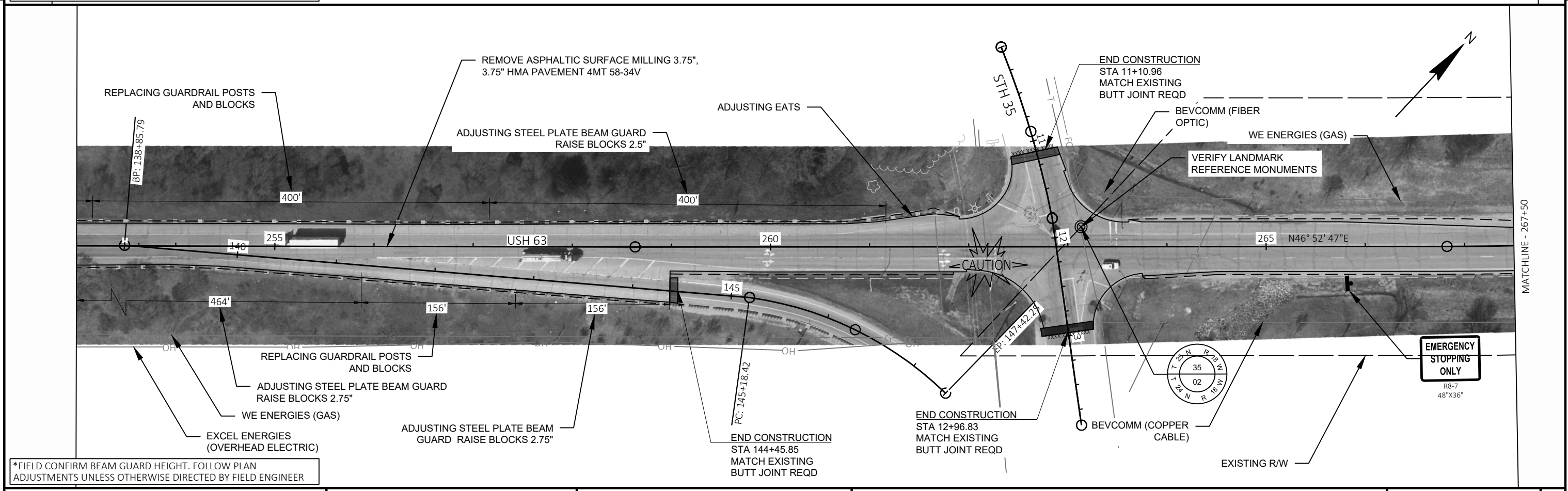
*FIELD CONFIRM BEAM GUARD HEIGHT. FOLLOW PLAN ADJUSTMENTS UNLESS OTHERWISE DIRECTED BY FIELD ENGINEER

PROJECT NO: 7210-00-80	HWY: USH 63	COUNTY: PIERCE	PLAN SHEETS	SHEET 50	E
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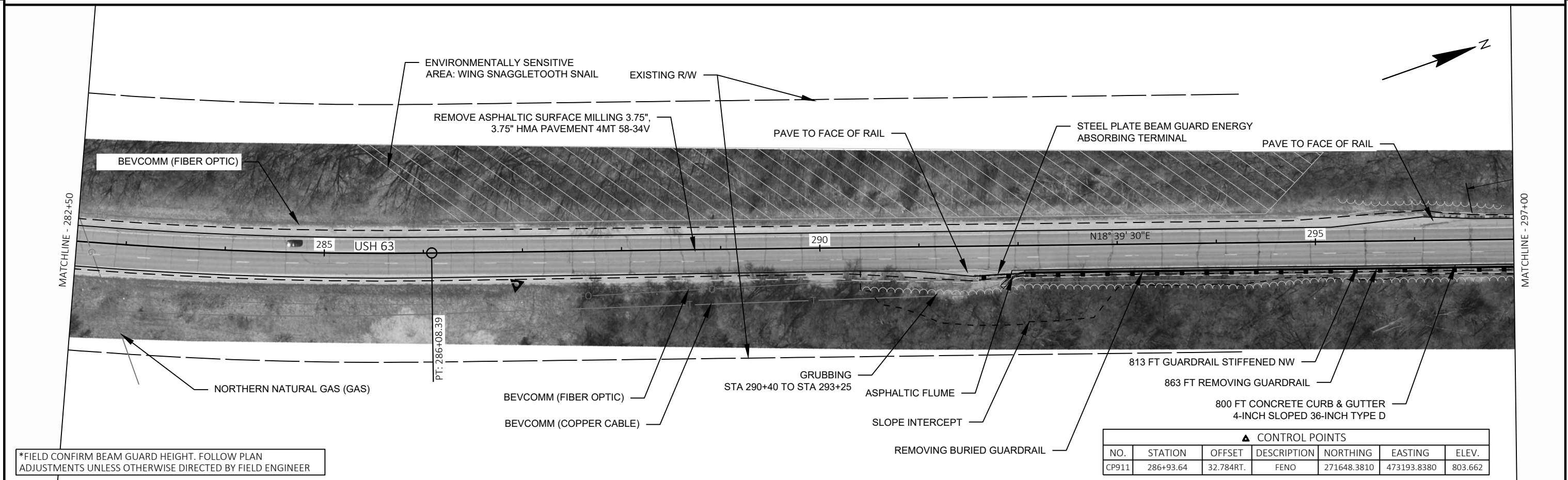
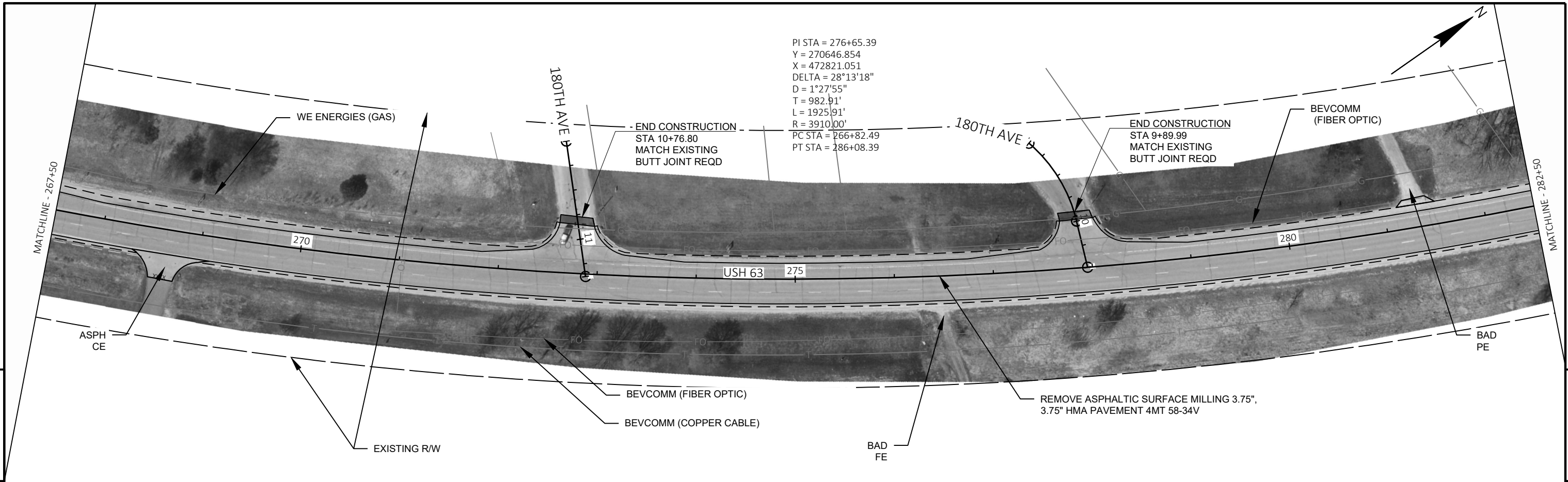




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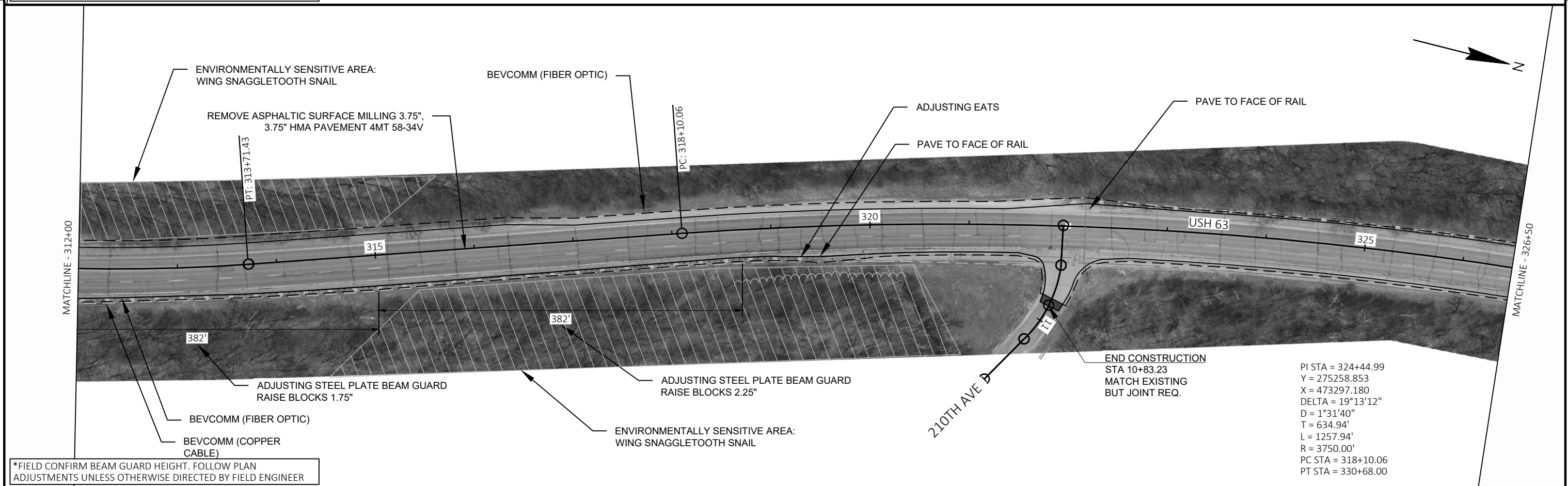
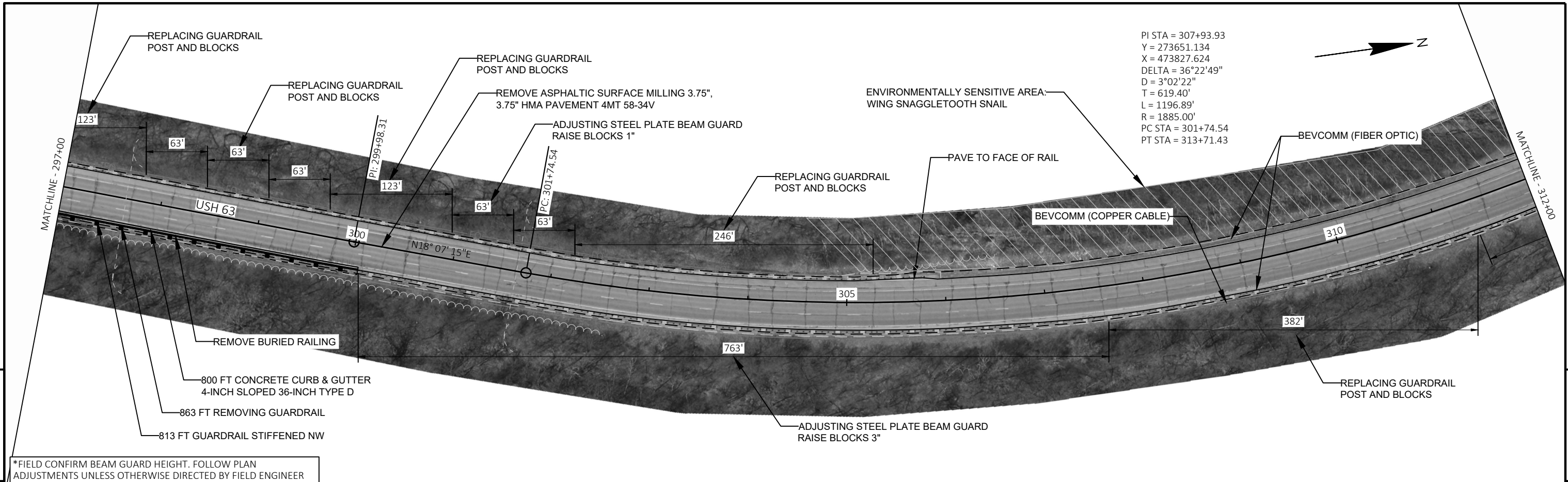


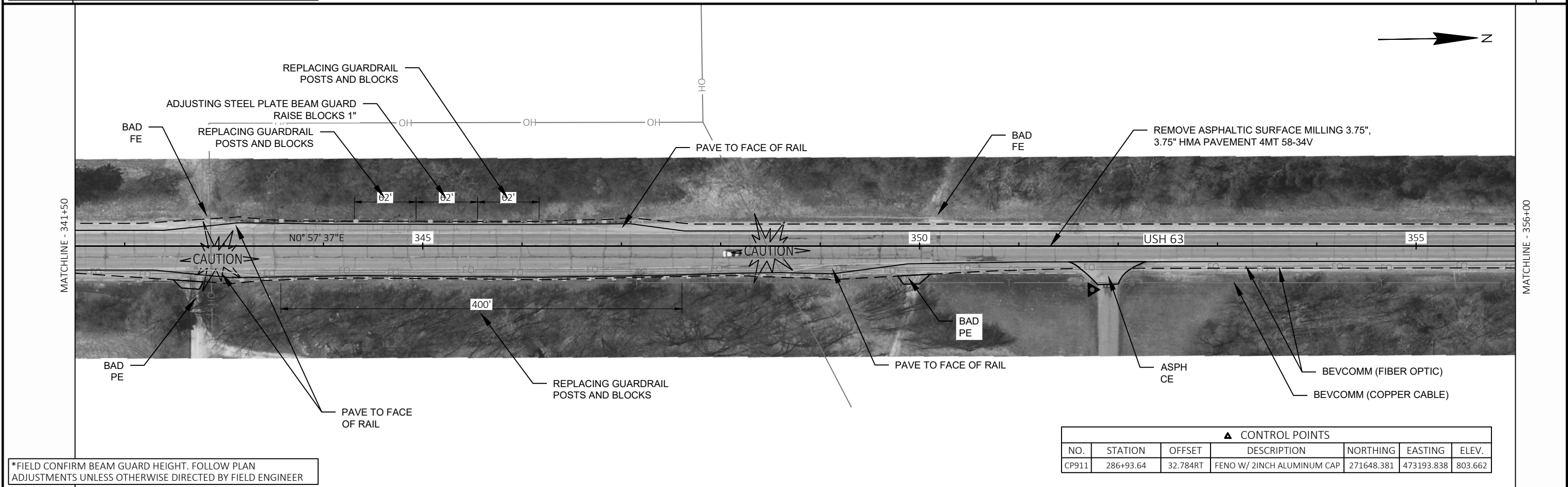
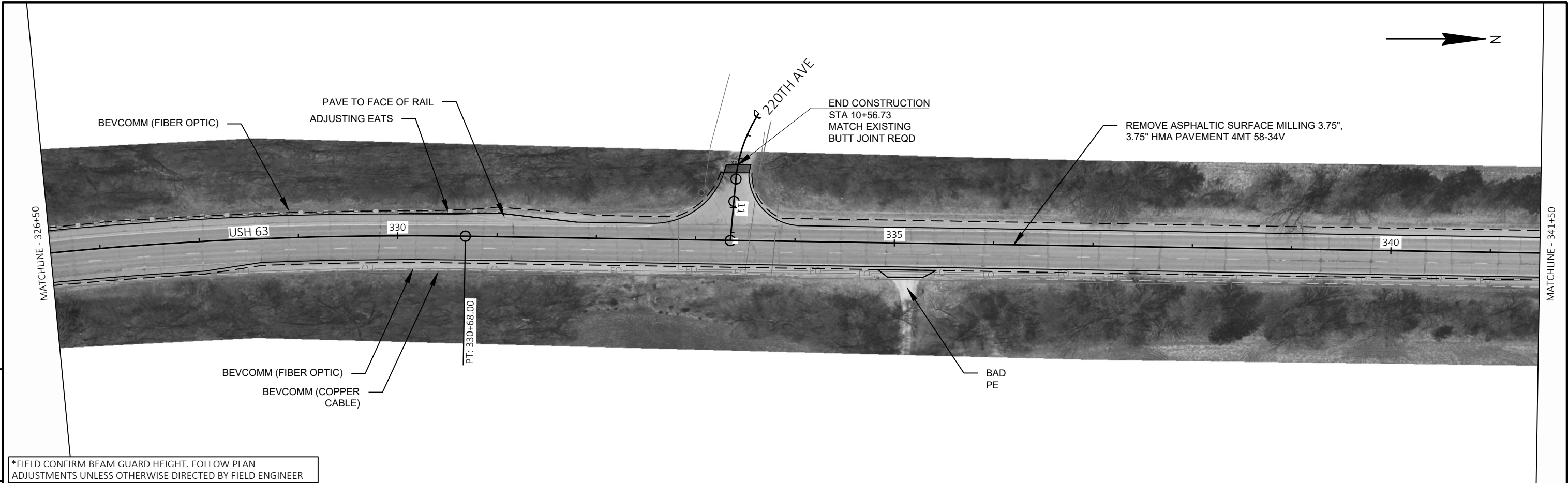
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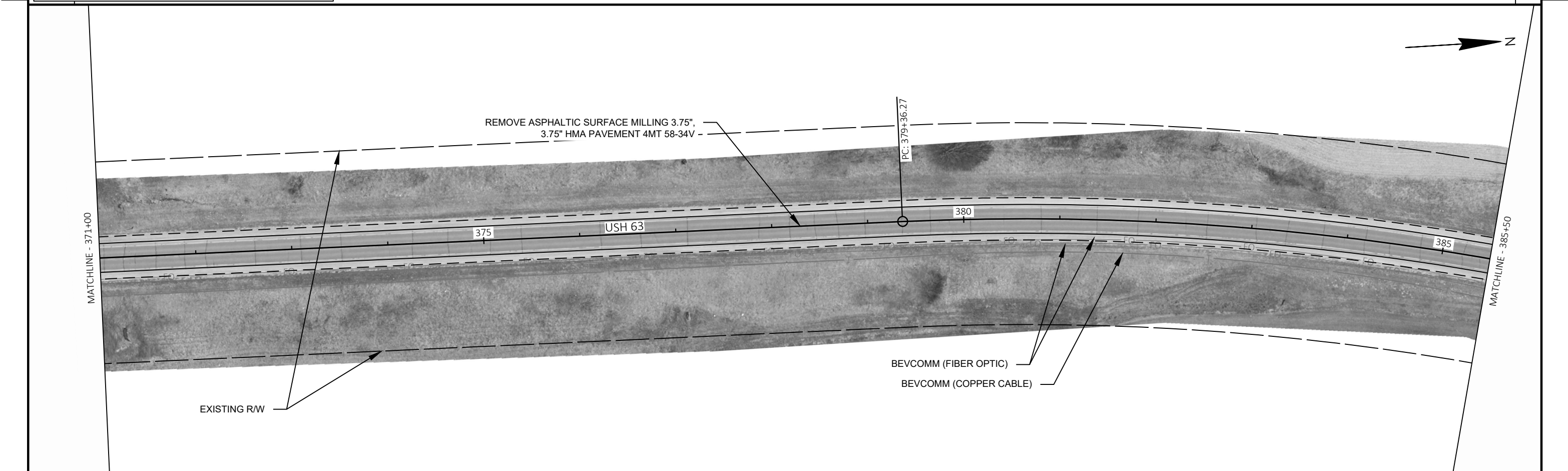
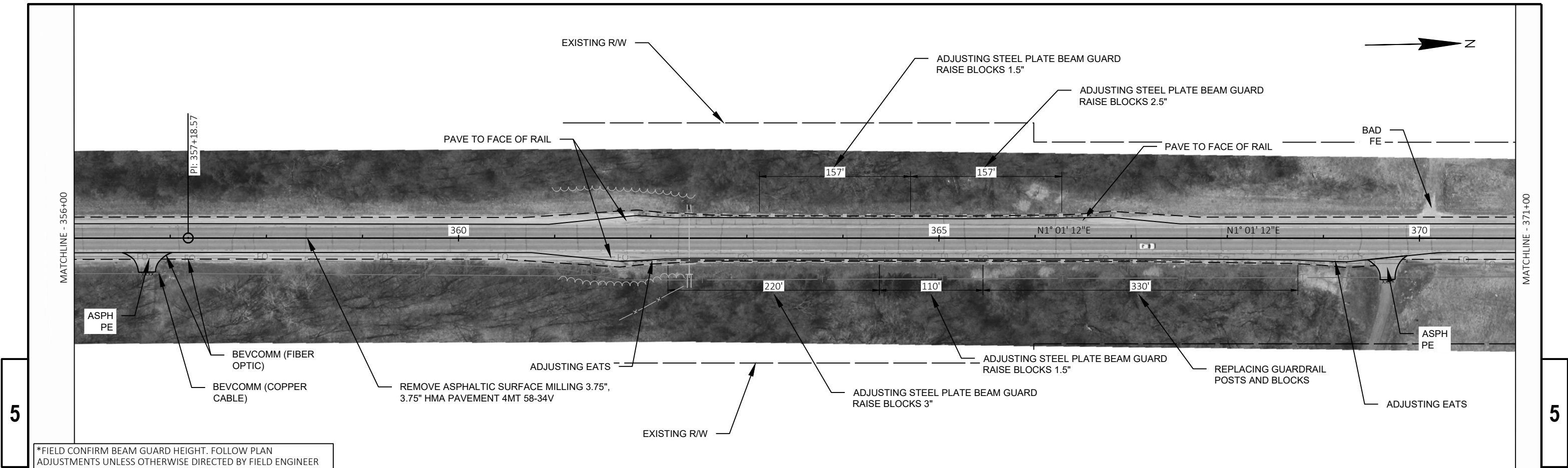


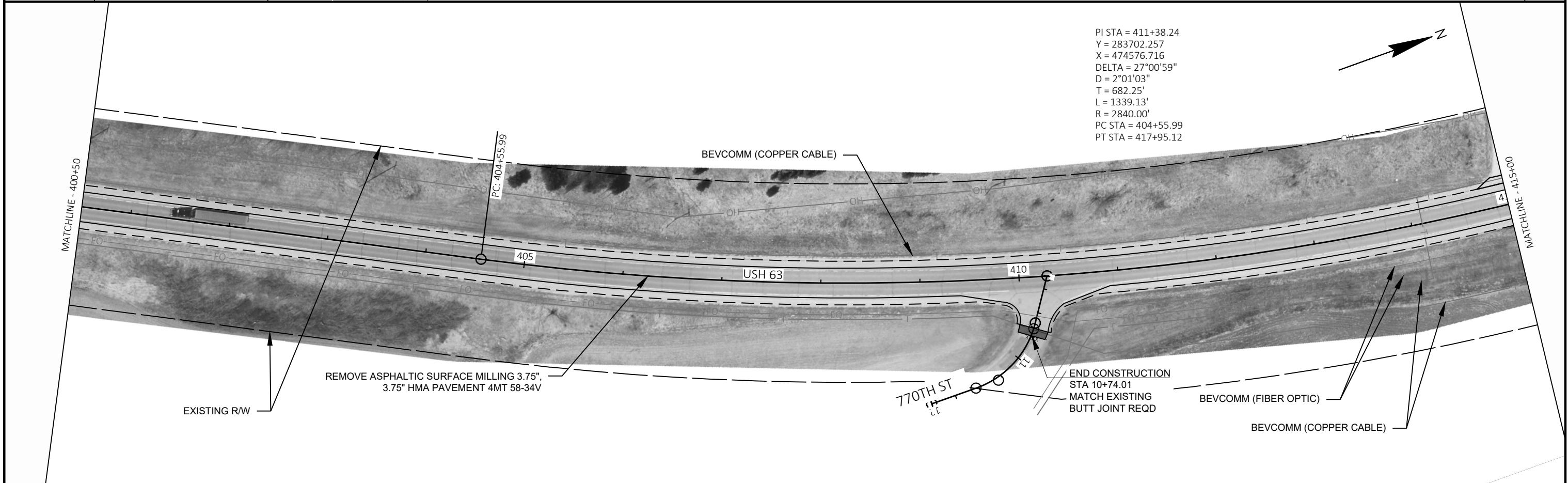
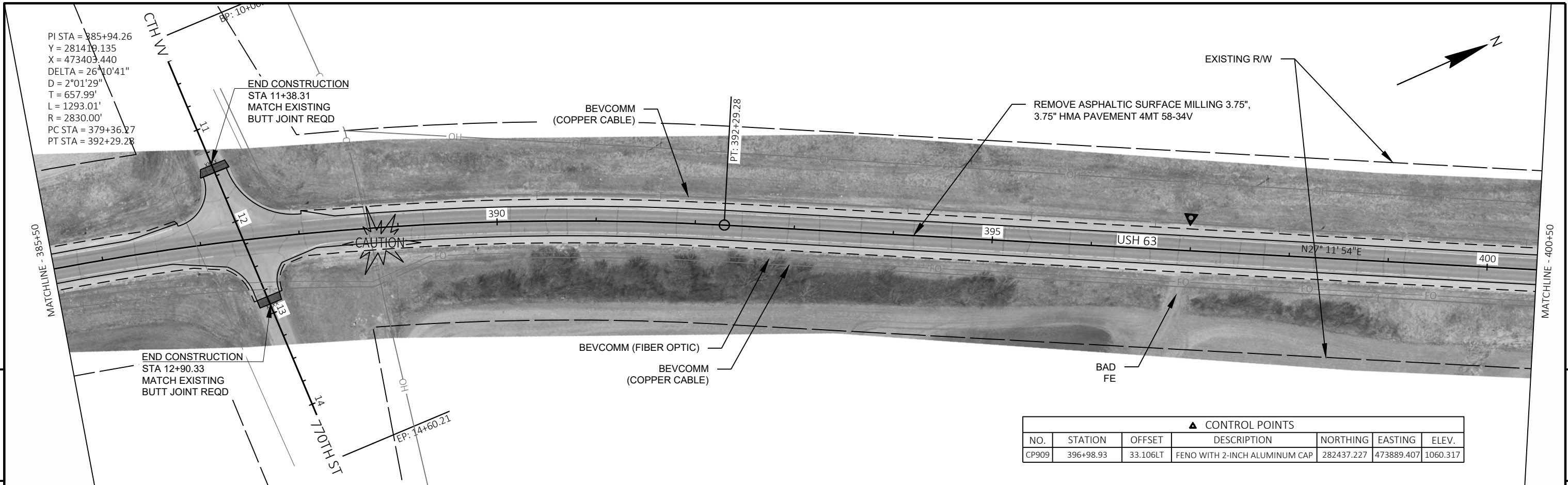
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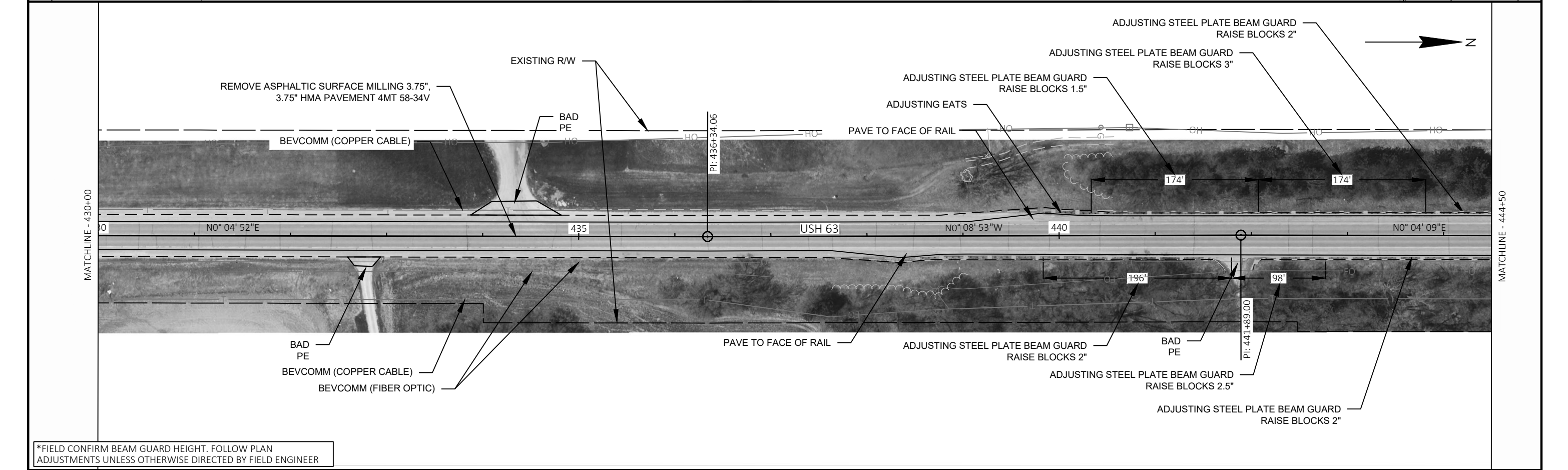
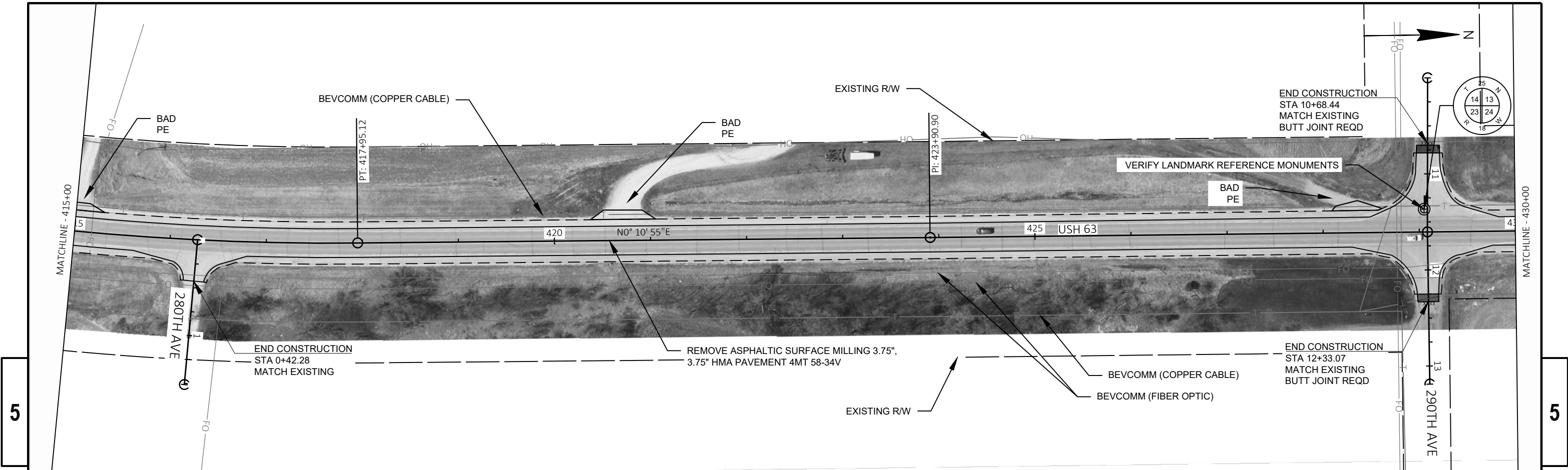
▲ CONTROL POINTS						
NO.	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING	ELEV.
CP911	286+93.64	32.784RT.	FENO	271648.3810	473193.8380	803.662





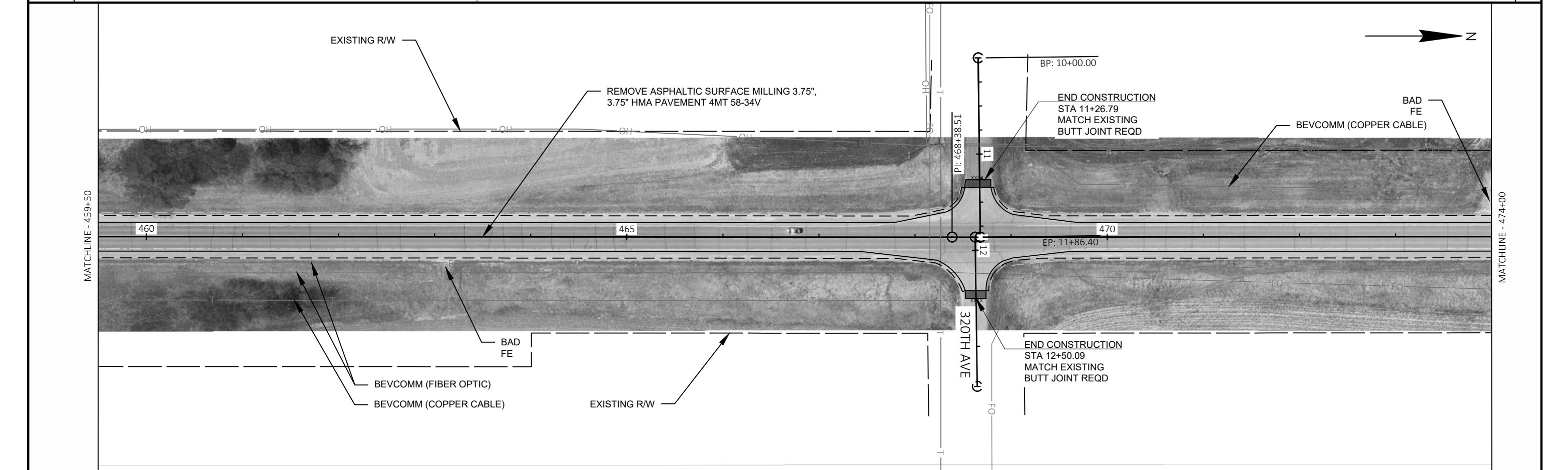
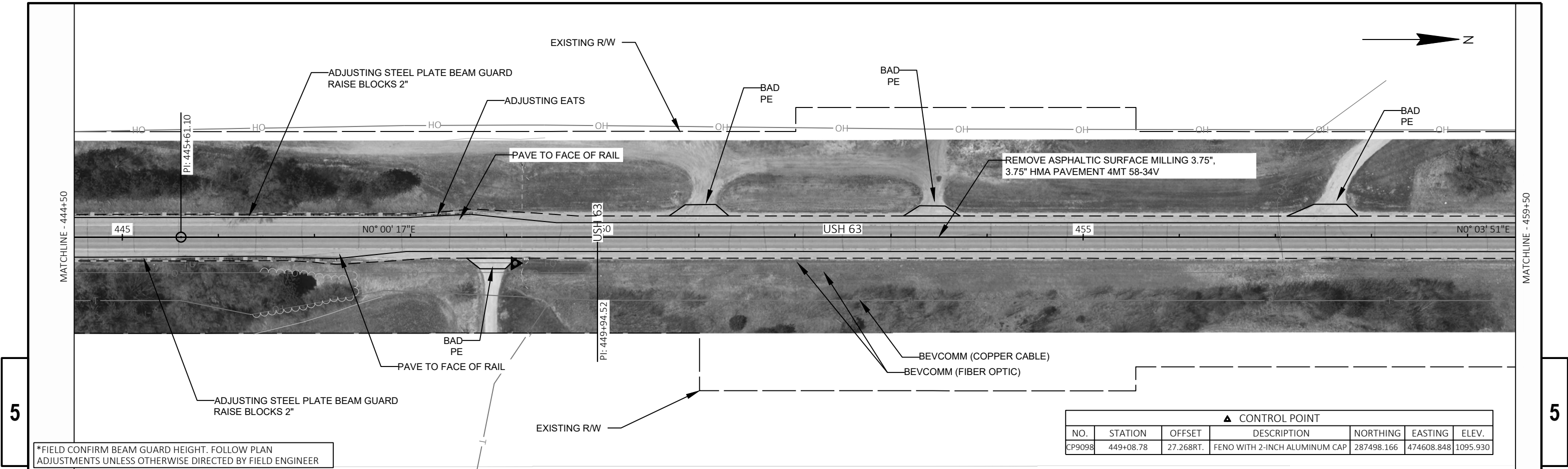


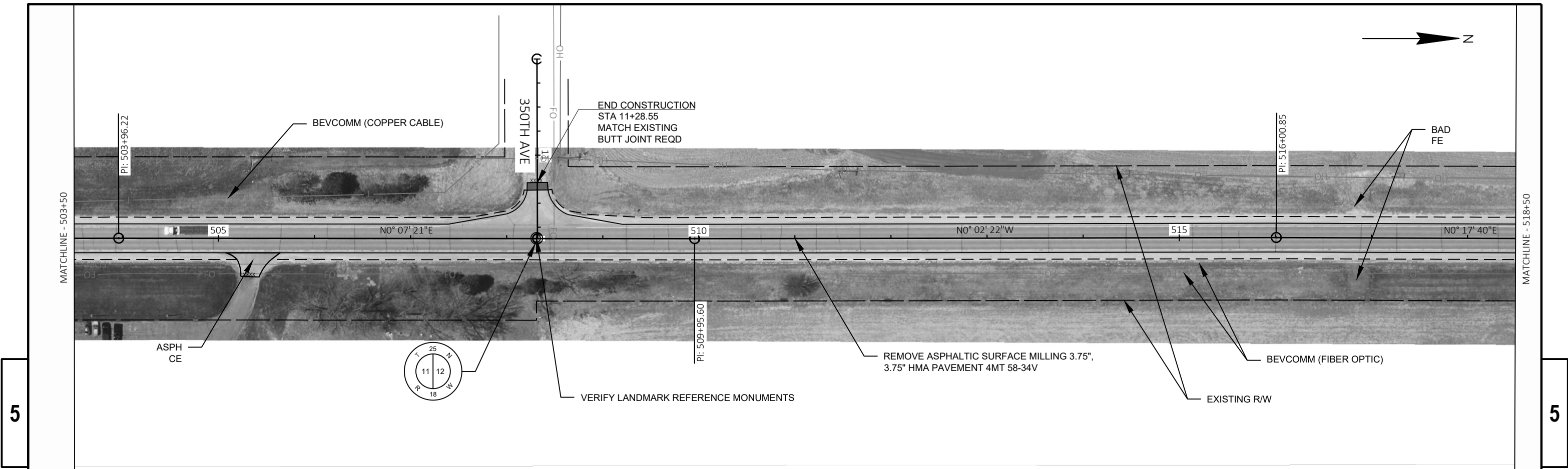


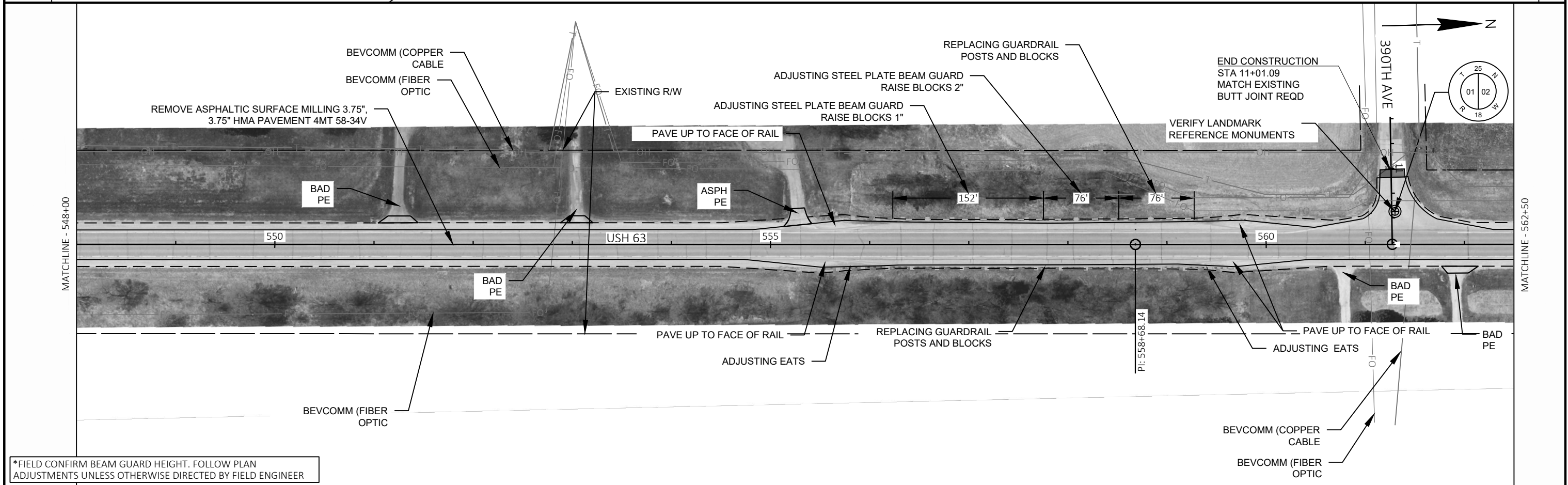
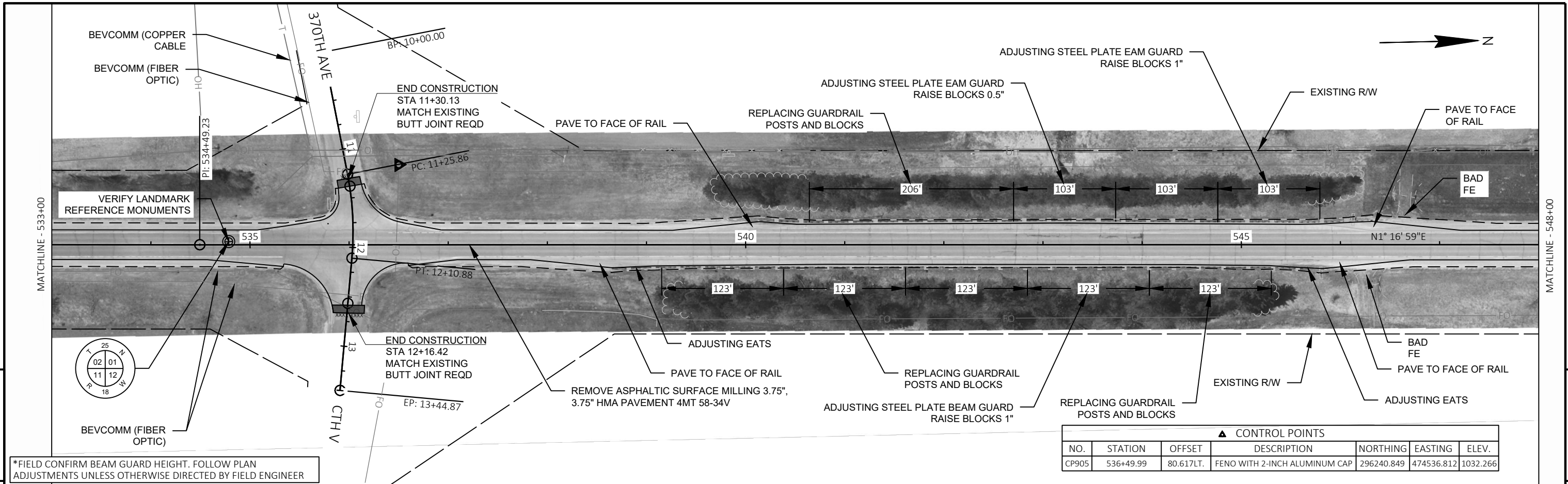


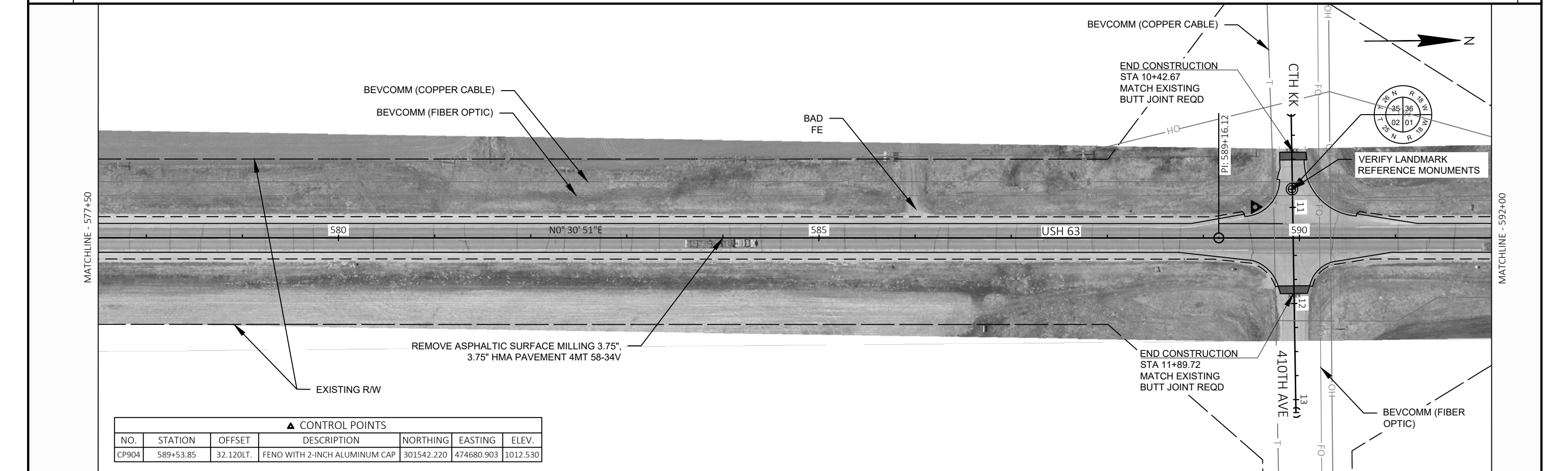
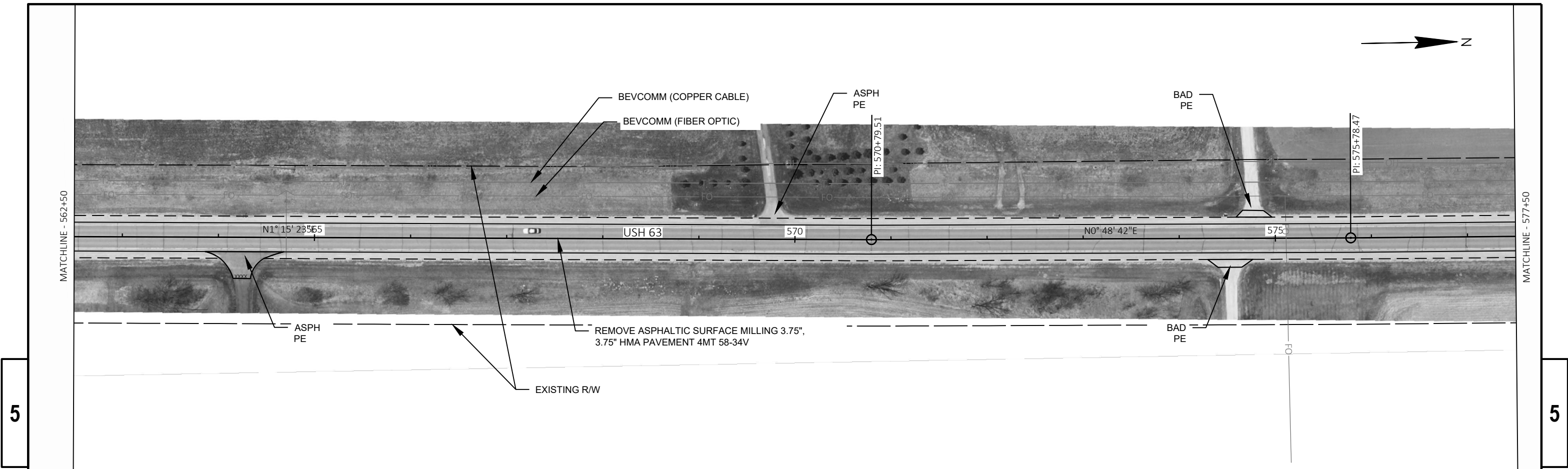
*FIELD CONFIRM BEAM GUARD HEIGHT. FOLLOW PLAN ADJUSTMENTS UNLESS OTHERWISE DIRECTED BY FIELD ENGINEER

PROJECT NO: 7210-00-80	HWY: USH 63	COUNTY: PIERCE	PLAN SHEETS	SHEET 58	E
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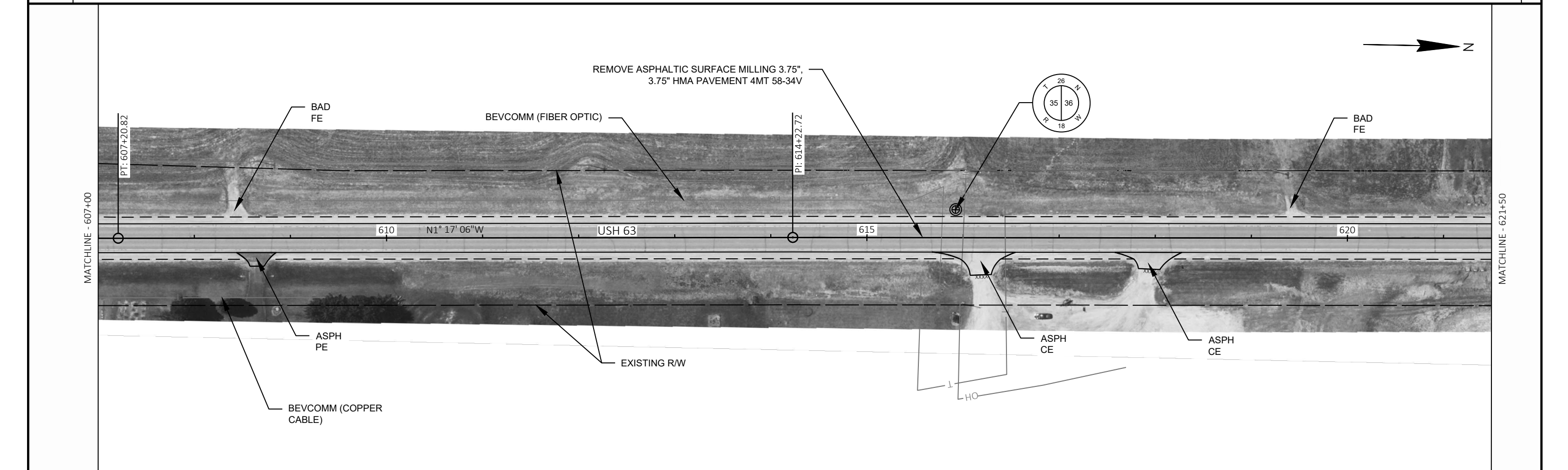
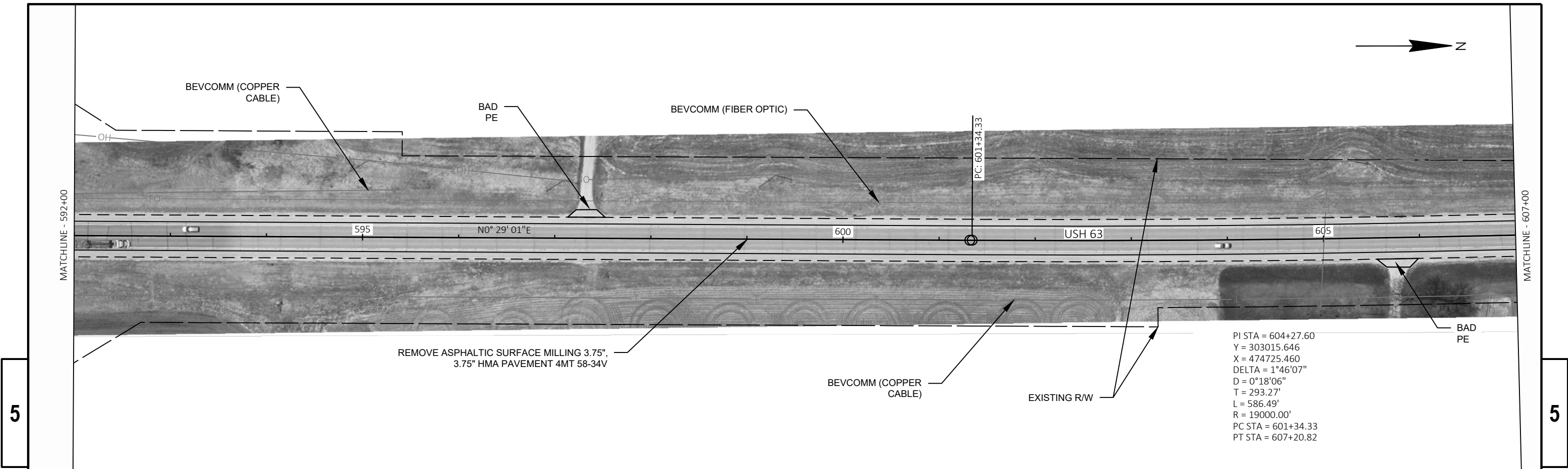


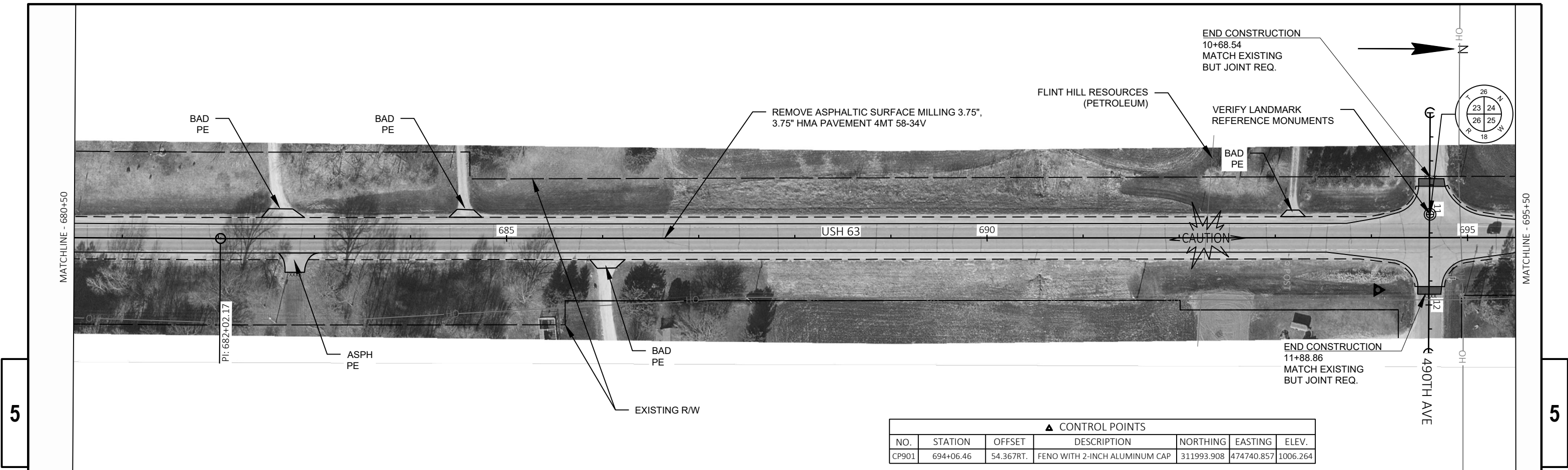


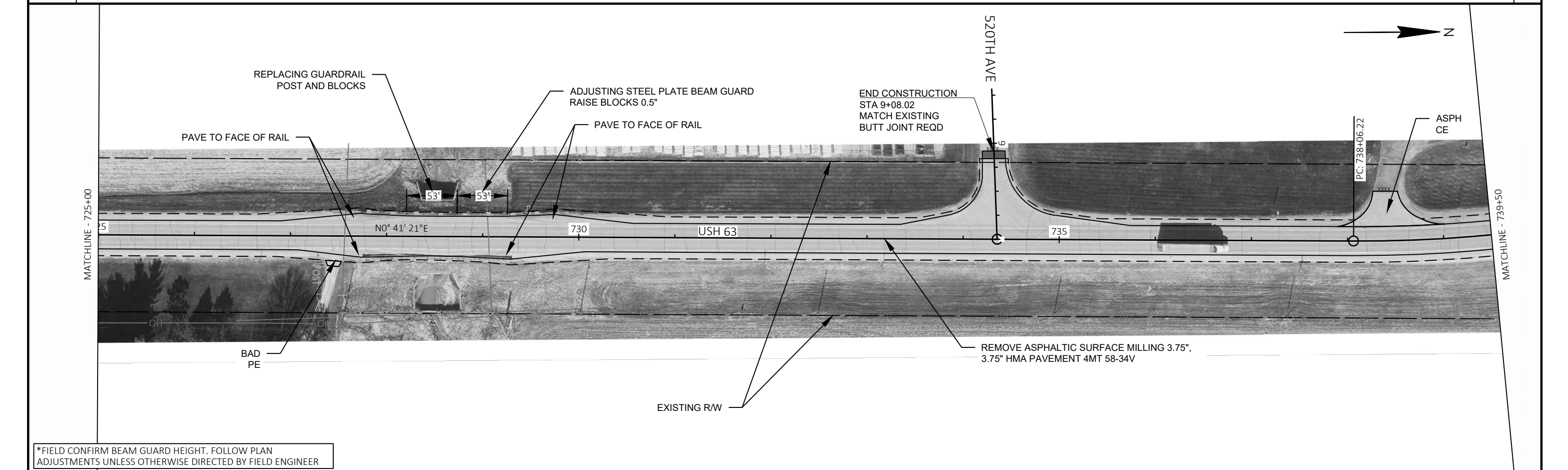
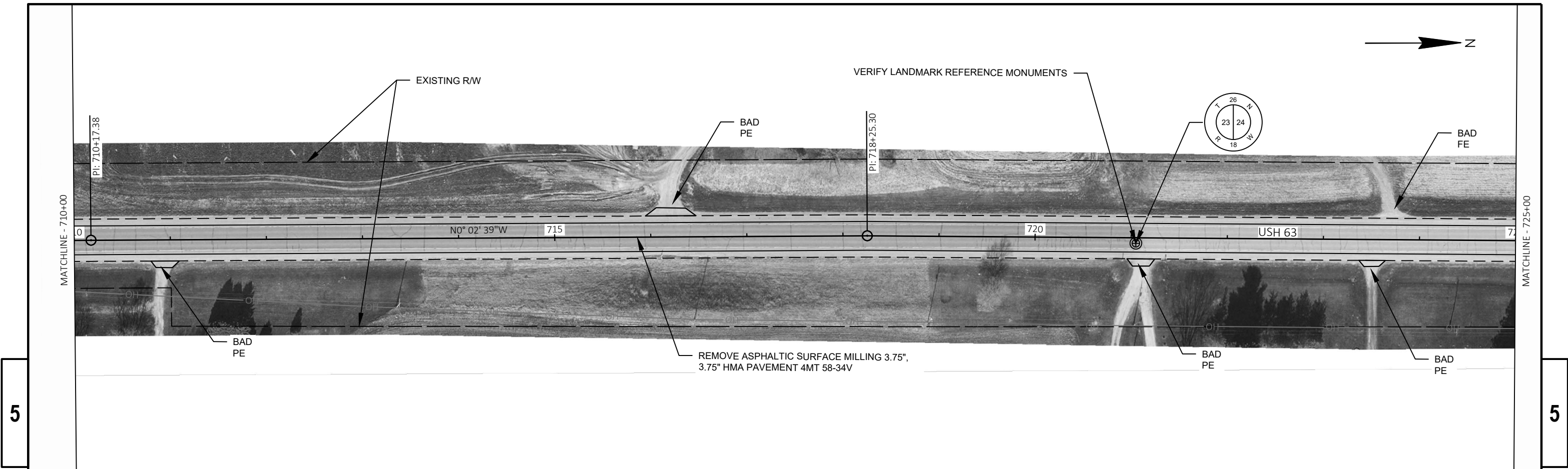




▲ CONTROL POINTS						
NO.	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING	ELEV.
CP904	589+53.85	32.120LT.	FENO WITH 2-INCH ALUMINUM CAP	301542.220	474680.903	1012.530

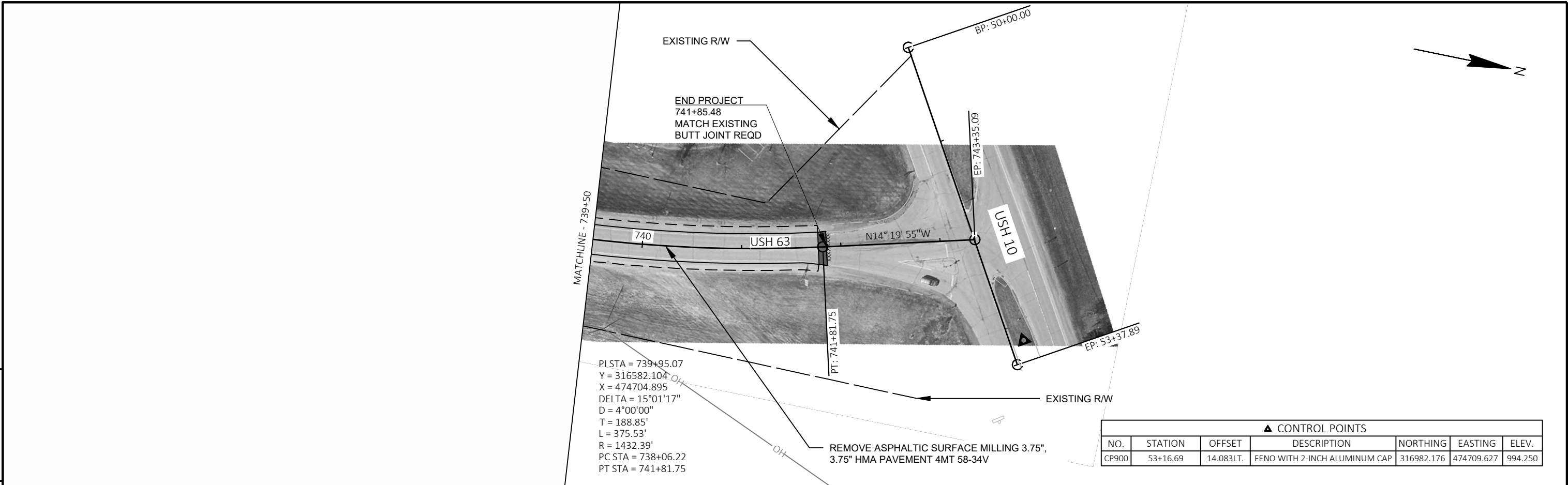






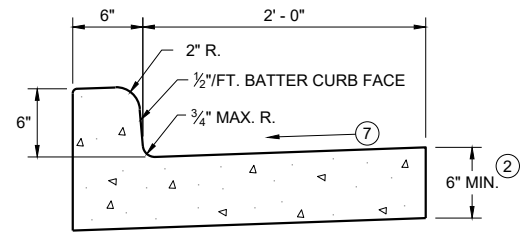
*FIELD CONFIRM BEAM GUARD HEIGHT. FOLLOW PLAN ADJUSTMENTS UNLESS OTHERWISE DIRECTED BY FIELD ENGINEER

PROJECT NO: 7210-00-80	HWY: USH 63	COUNTY: PIERCE	PLAN SHEETS	SHEET 68	E
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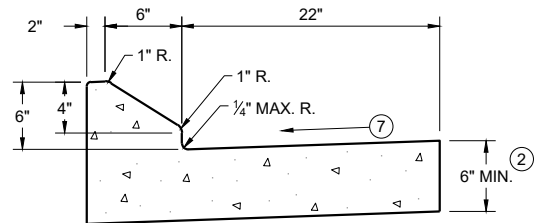


Standard Detail Drawing List

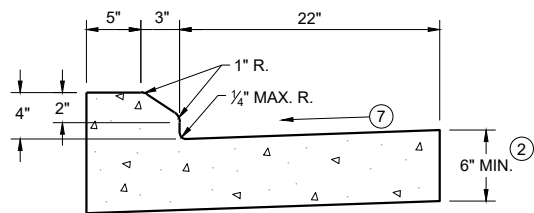
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E09-06	SILT FENCE
13A08-02	TRANSVERSE RUMBLE STRIPS, ASPHALTIC
13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13C19-03	HMA LONGITUDINAL JOINTS
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
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-15A	PAVEMENT MARKING SYMBOLS
15C07-15B	PAVEMENT MARKING WORDS
15C07-15C	PAVEMENT MARKING ARROWS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23C	PAVEMENT MARKING (TURN LANES)
15C08-23D	PAVEMENT MARKING (TURN LANES)
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-09A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-09B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15C35-06B	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15C35-06C	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15D20-09B	TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY
16A01-07	LANDMARK REFERENCE MONUMENTS AND COVERS



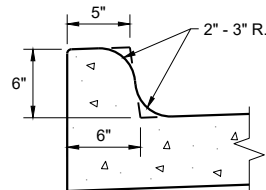
TYPES A^① & D



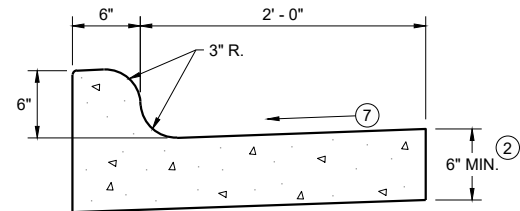
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

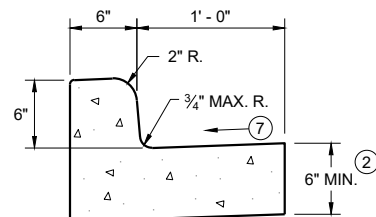


TYPES K^① & L
(OPTIONAL CURB SHAPE)



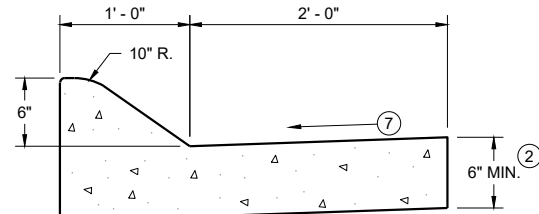
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

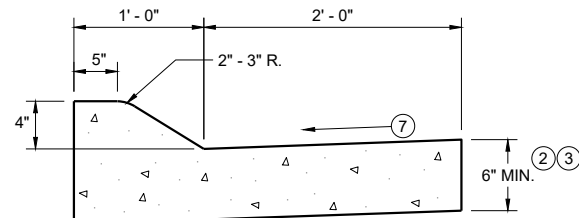


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

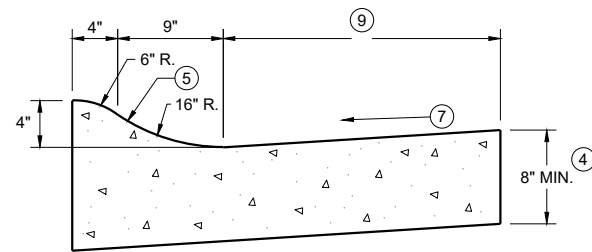


6" SLOPED CURB TYPES A^① & D



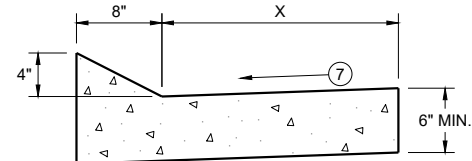
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

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

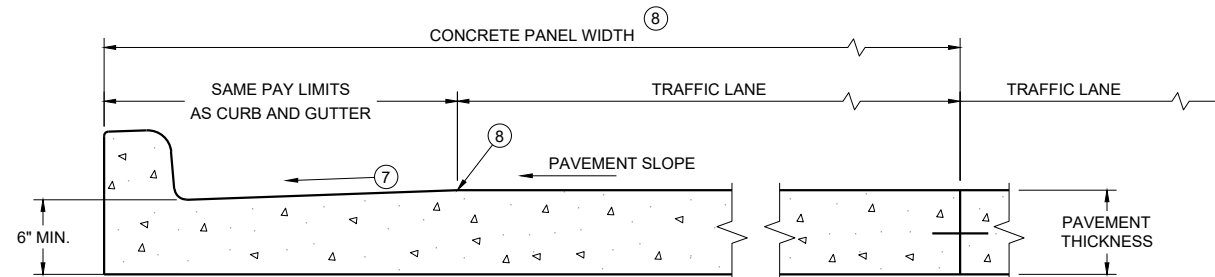


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

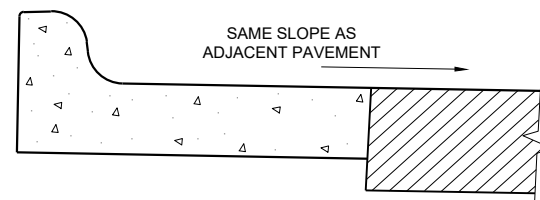
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB AND GUTTER *

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

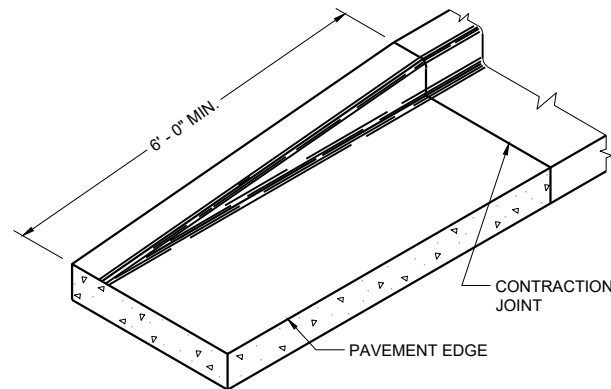
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

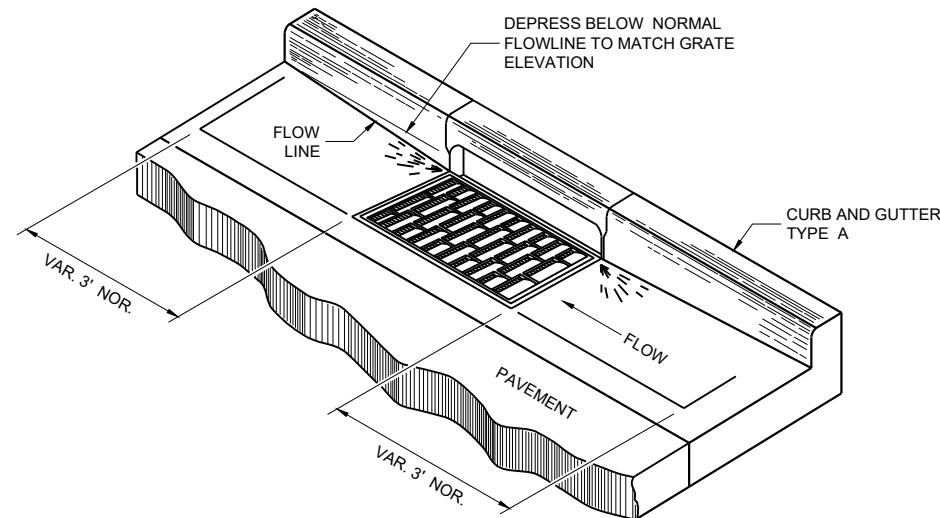
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

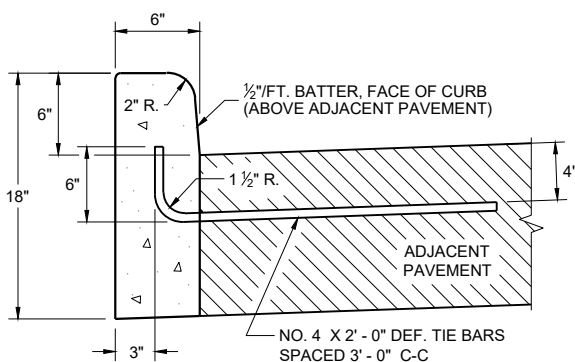


END SECTION CURB AND GUTTER

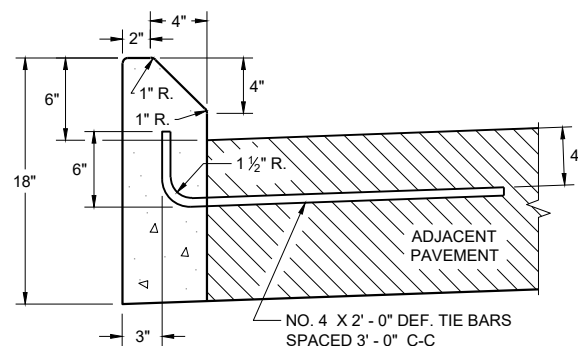


DETAIL OF CURB AND GUTTER AT INLETS

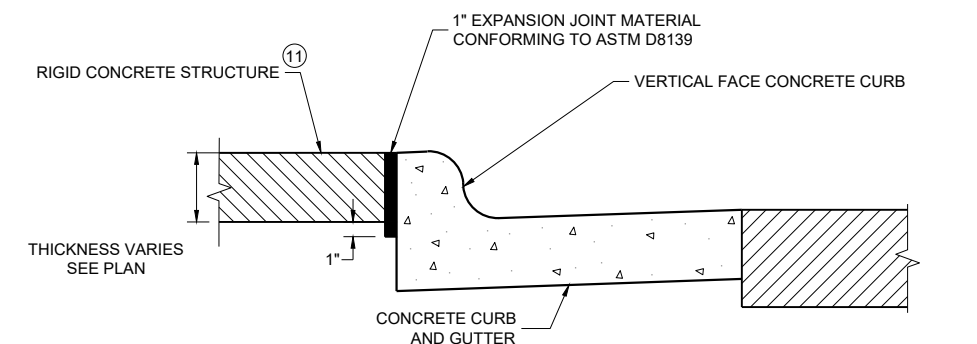
(TYPICAL H INLET COVER SHOWN)



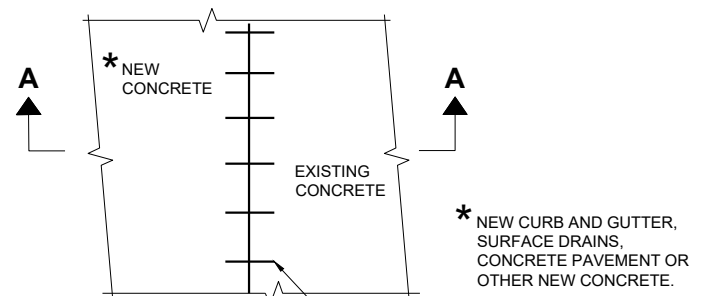
TYPES A^① & D



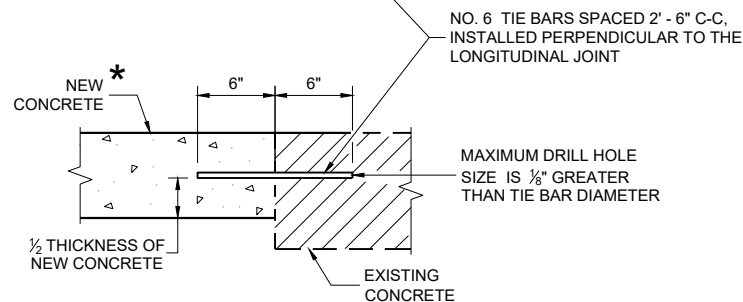
TYPES G^① & J
CONCRETE CURB



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



PLAN VIEW



SECTION A - A
TIE BARS DRILLED INTO EXISTING PAVEMENT

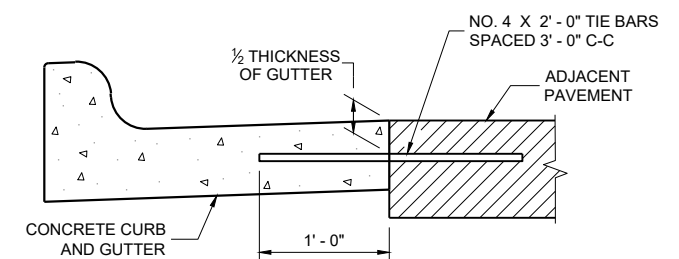
GENERAL NOTES

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

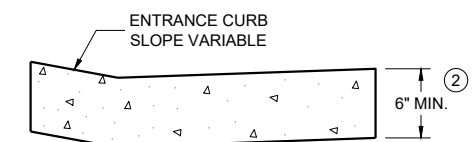
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

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



TYPICAL TIE BAR LOCATION^①



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

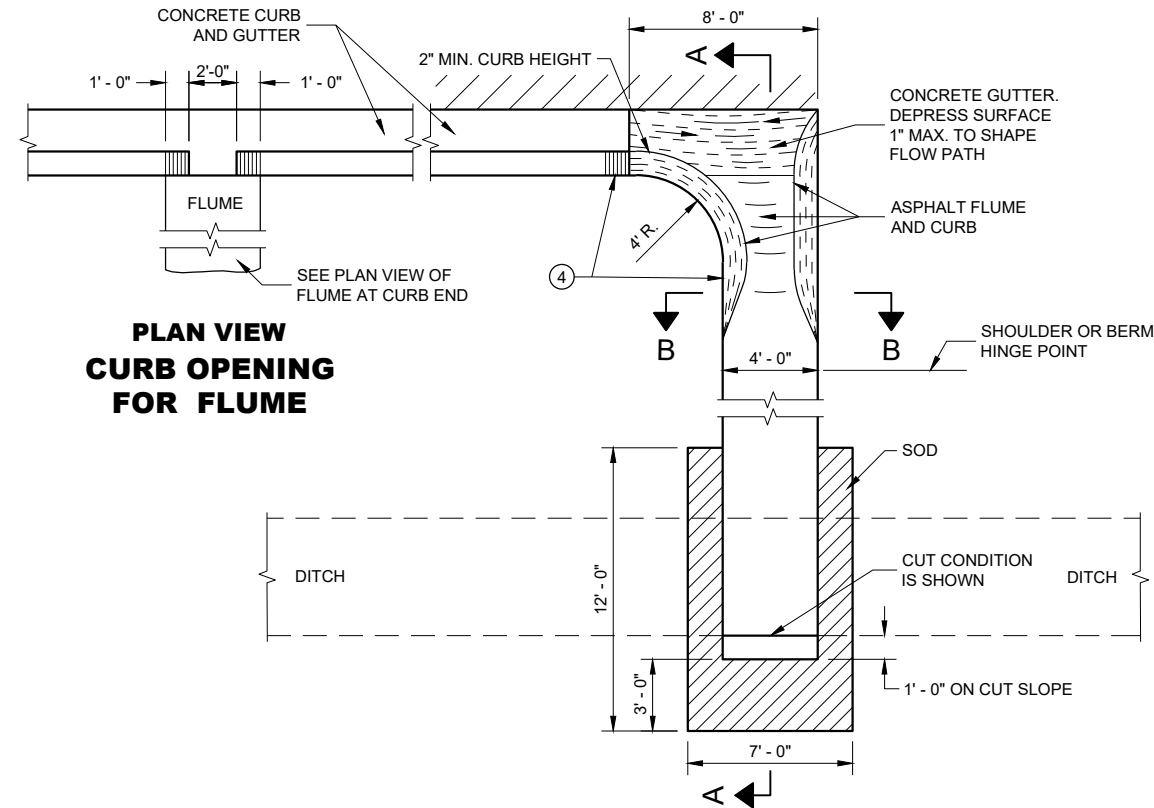
CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

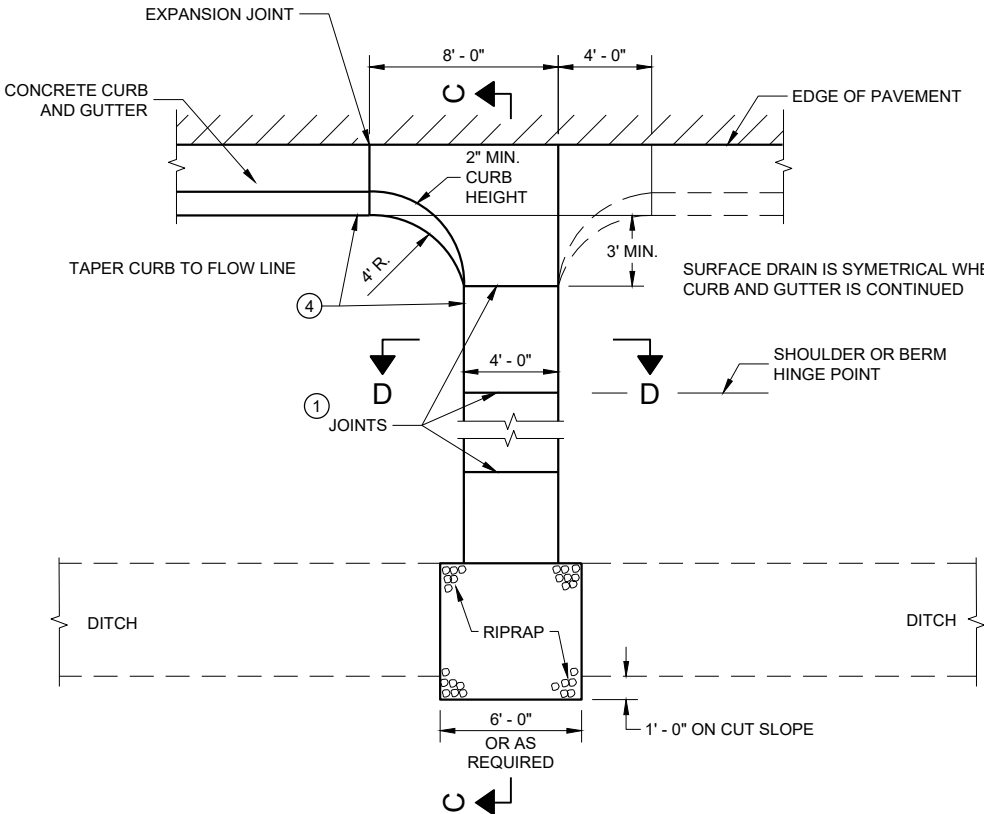
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING
FOR FLUME

PLAN VIEW
FLUME AT CURB END



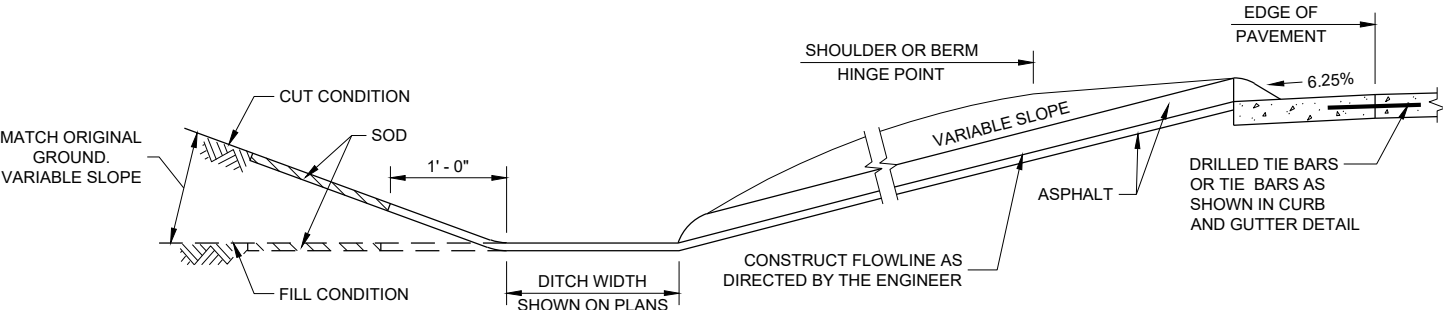
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

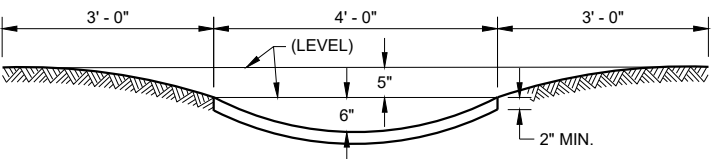
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

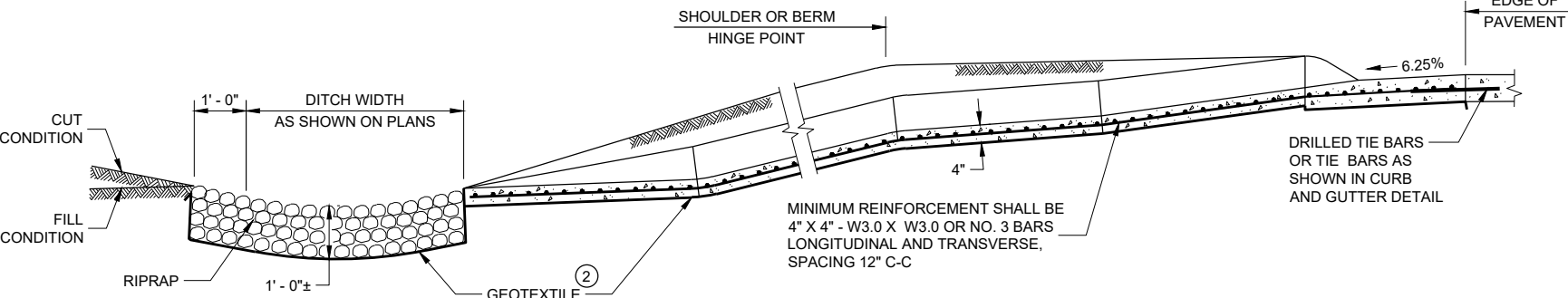
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



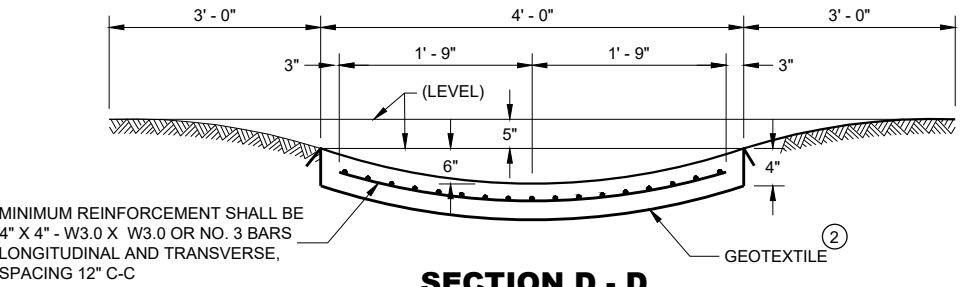
SECTION A - A



SECTION B - B



SECTION C - C

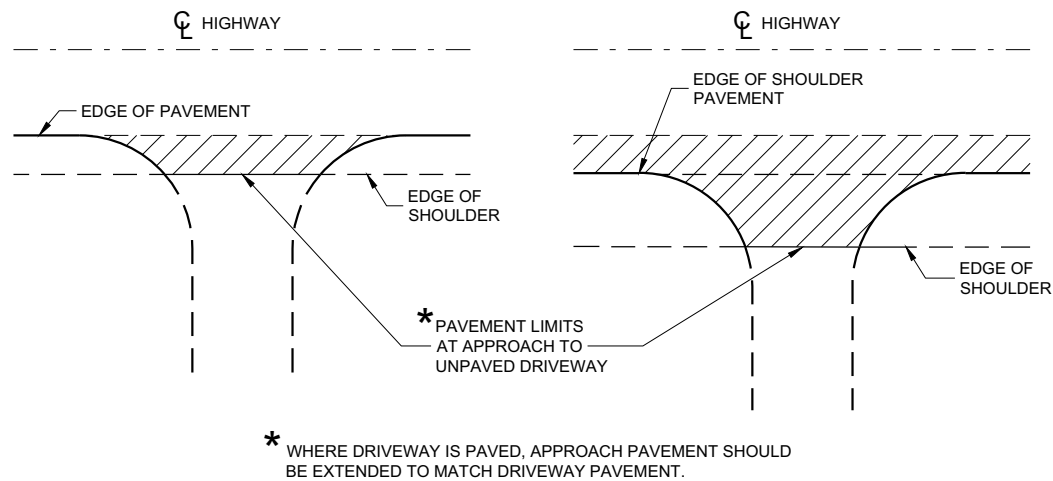


SECTION D - D

CONCRETE SURFACE
DRAINS AND
ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

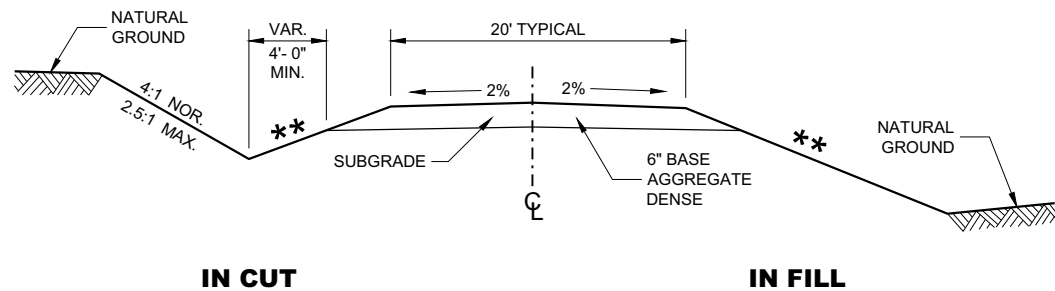
APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVE 73
ENGINEER
FHWA



PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

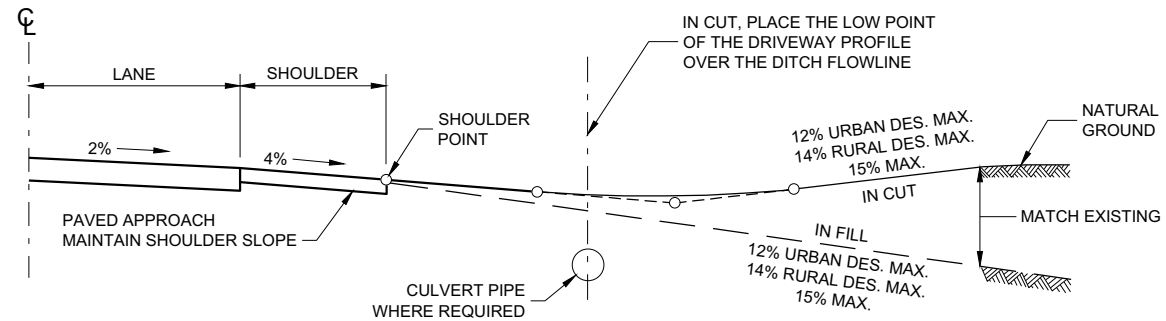
**RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)**



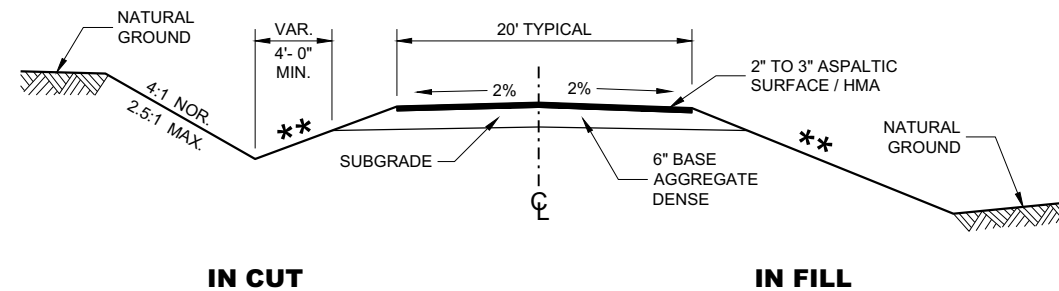
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

****** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



TYPICAL DRIVEWAY PROFILES

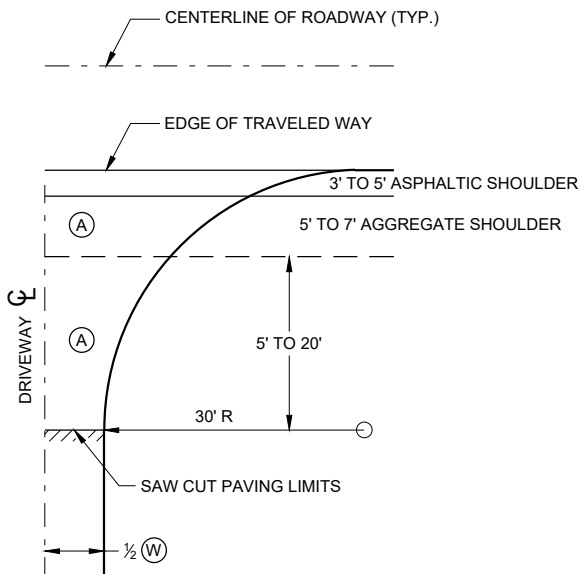


**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE**

**DRIVEWAYS WITHOUT
CURB AND GUTTER**

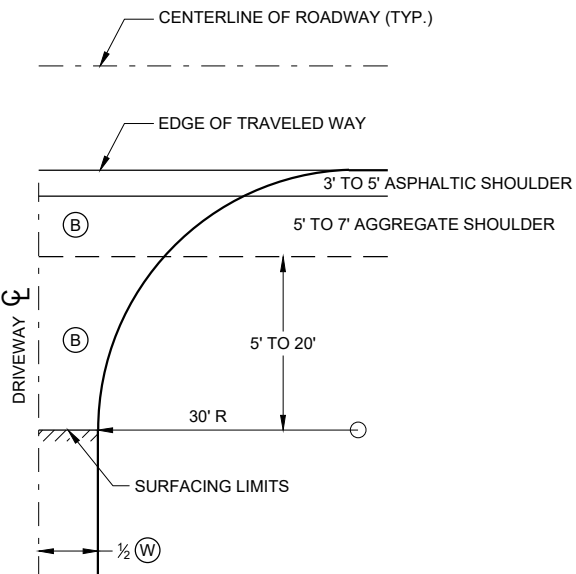
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

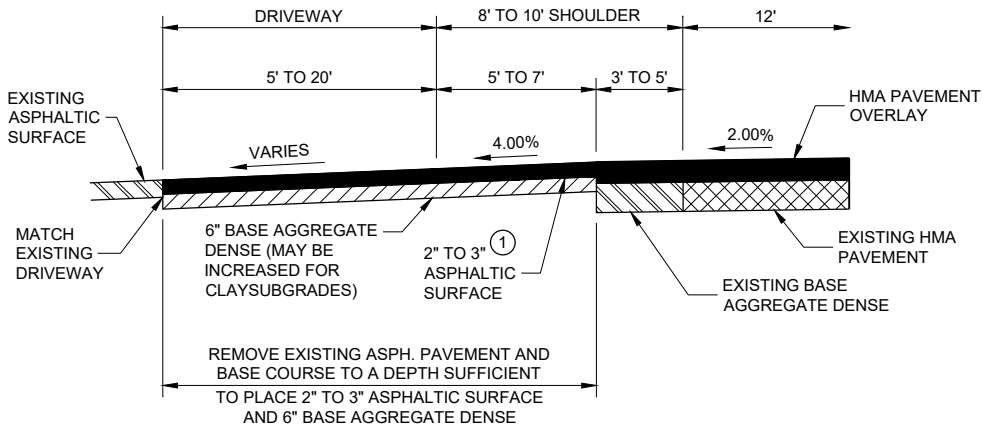


PLAN VIEW
HALF SECTION

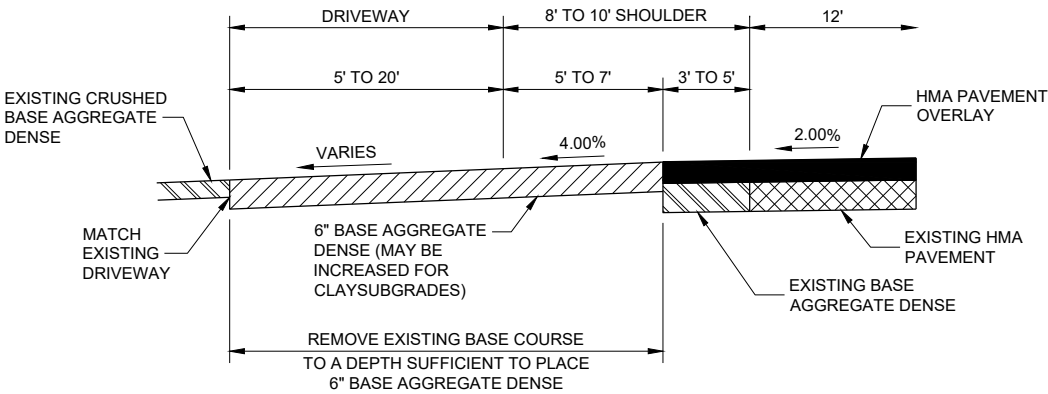
- (A) : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)
- (B) : PAID FOR AS BASE AGGREGATE DENSE 1 1/4" (TON)
- (W) : DRIVEWAY WIDTH 16' MIN. - 24' MAX.



PLAN VIEW
HALF SECTION



PROFILE VIEW
RURAL ENTRANCE
WITH ASPHALTIC SURFACE
RESURFACING PROJECTS



PROFILE VIEW
RURAL ENTRANCE
WITH AGGREGATE SURFACE
6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

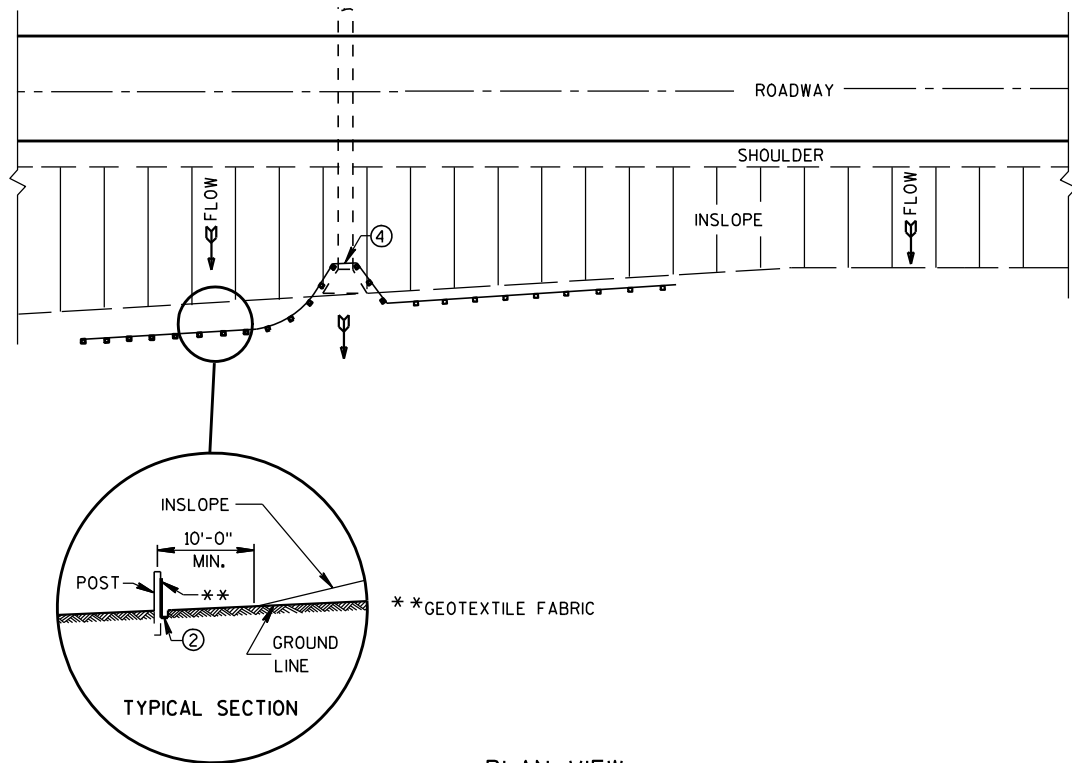
GENERAL NOTES

- ① DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.

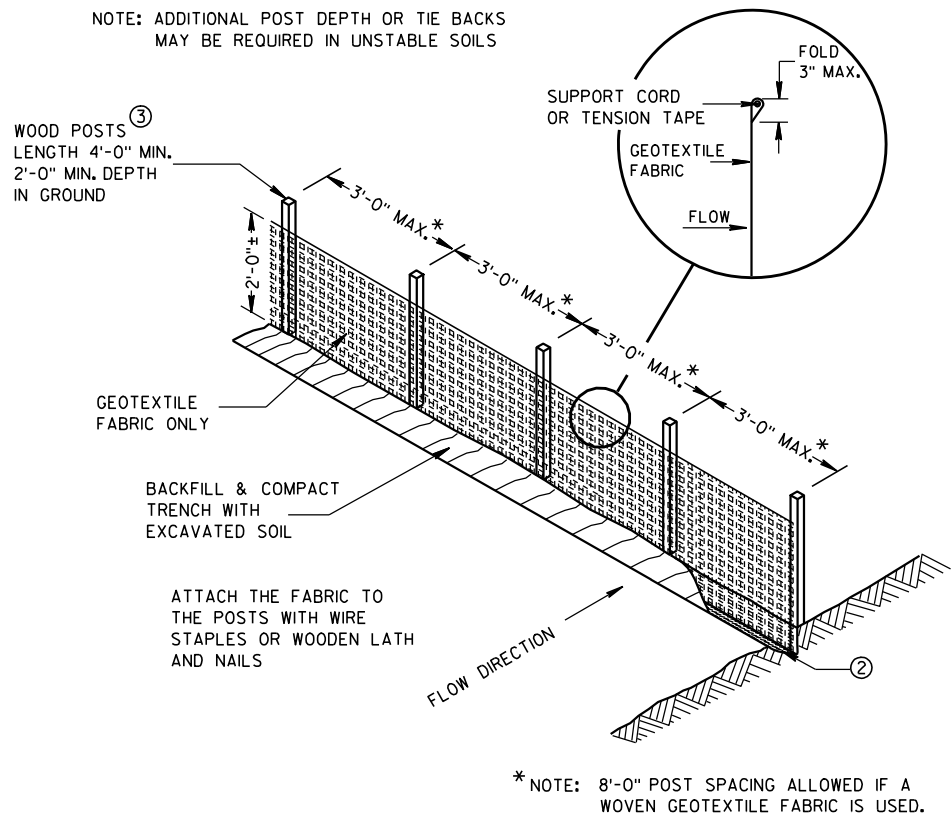
DRIVEWAYS WITHOUT CURB
AND GUTTER RESURFACING
PROJECTS RURAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

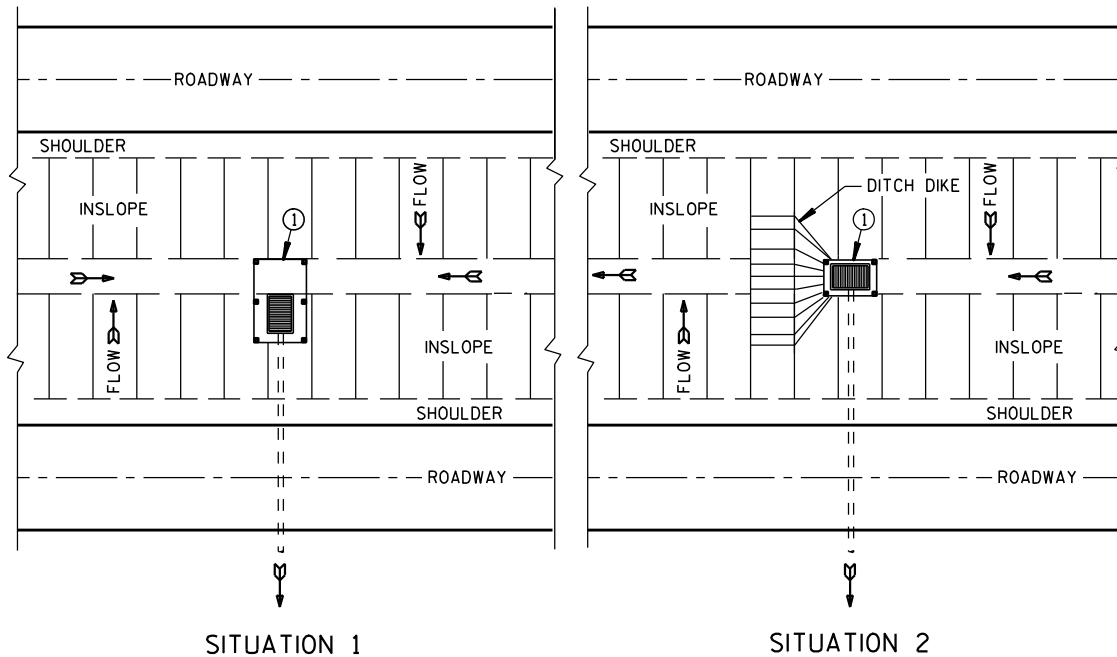
APPROVED
December 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 75
FHWA



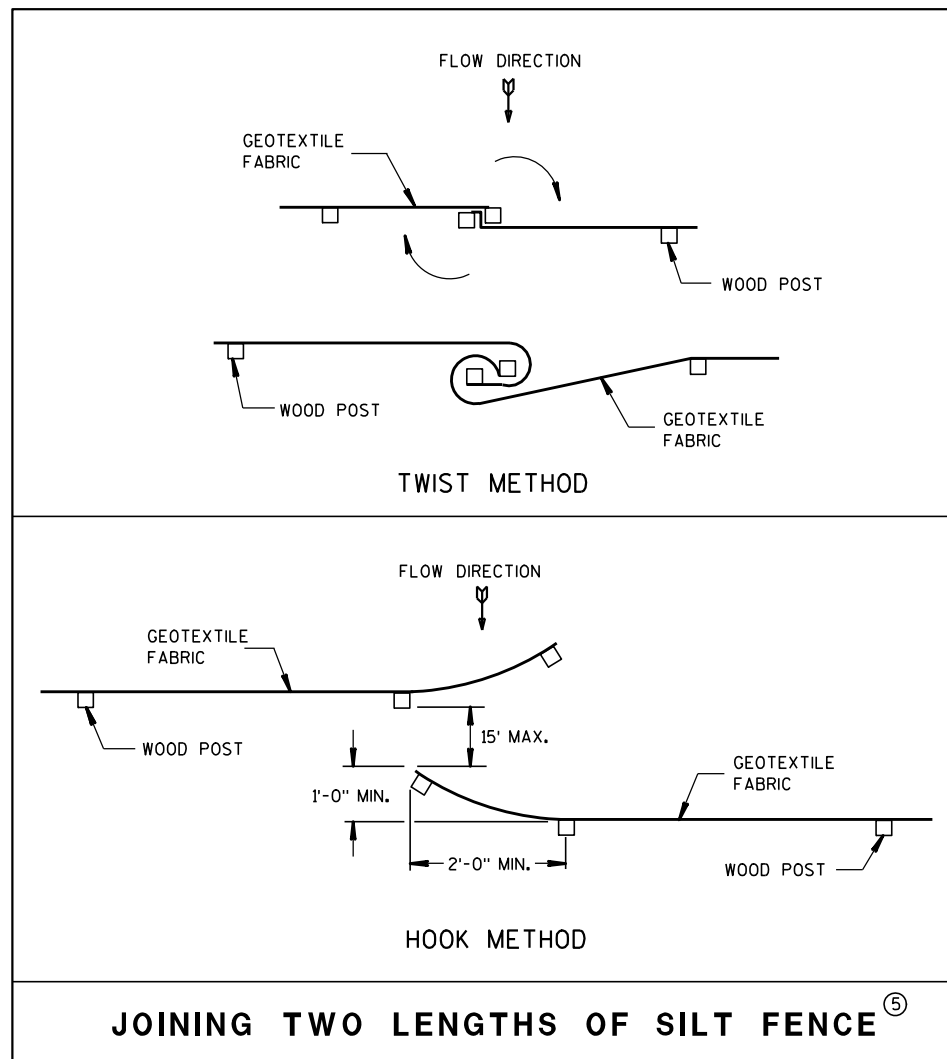
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

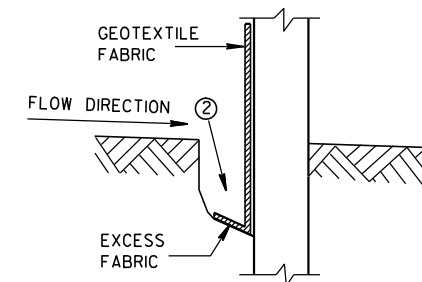


JOINING TWO LENGTHS OF SILT FENCE^⑤

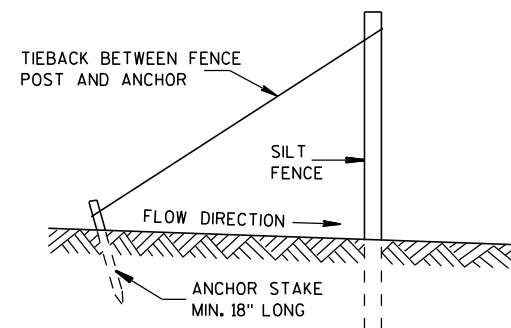
GENERAL NOTES

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

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL

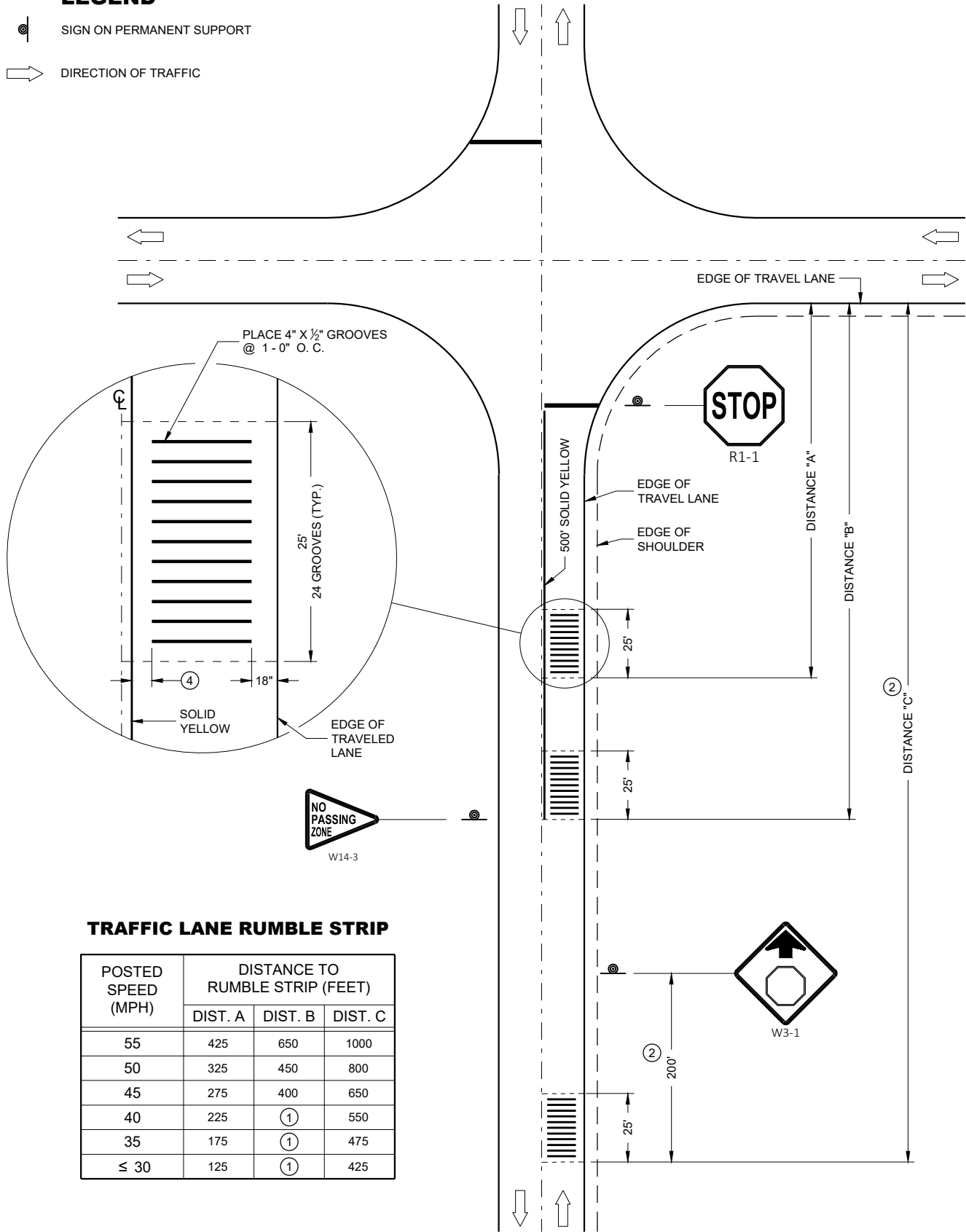


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Conn CHIEF ROADWAY DEVELOPER 76 ENGINEER
FHWA	

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC



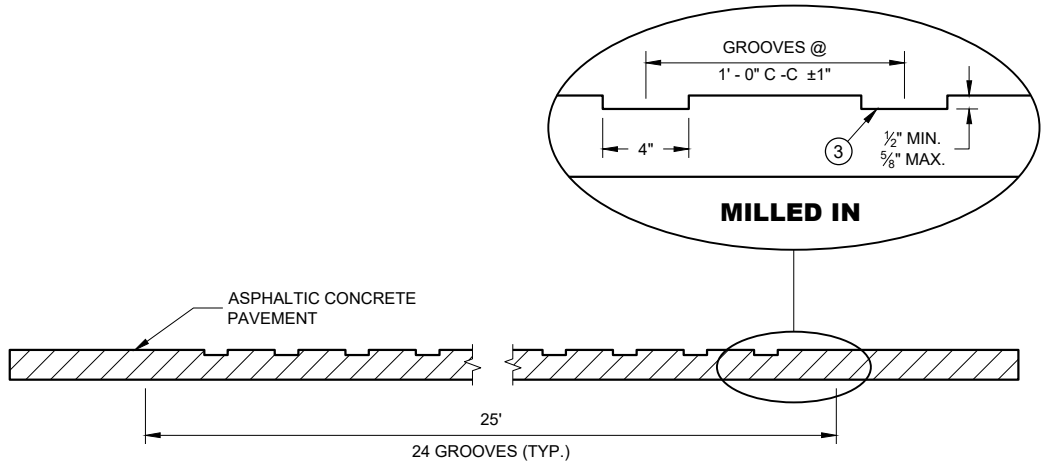
TRAFFIC LANE RUMBLE STRIP

POSTED SPEED (MPH)	DISTANCE TO RUMBLE STRIP (FEET)		
	DIST. A	DIST. B	DIST. C
55	425	650	1000
50	325	450	800
45	275	400	650
40	225	①	550
35	175	①	475
≤ 30	125	①	425

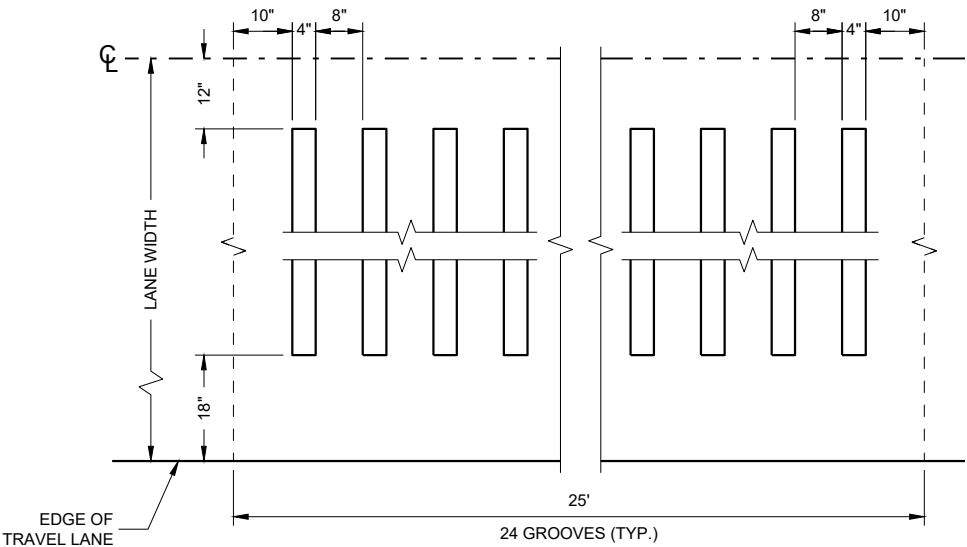
RUMBLE STRIP LOCATION

GENERAL NOTES

- CONTRACTOR SHALL CONFIRM RUMBLE STRIP LOCATION WITH THE ENGINEER PRIOR TO INSTALLATION. THE ENGINEER MAY MODIFY THE RUMBLE STRIP LOCATION AS FIELD CONDITIONS DICTATE.
- WHEN ASPHALTIC PAVEMENT IS NEW IN THE RUMBLE AREA, THE CONTRACTOR SHALL ALLOW THE PAVEMENT TO CURE A MINIMUM OF 7 DAYS PRIOR TO RUMBLE INSTALLATION.
- PAVEMENT MARKING AND SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDE ELSEWHERE IN THE CONTRACT.
- ① ELIMINATE THE MIDDLE SET OF RUMBLE STRIPS.
 - ② LOCATE RUMBLE STRIP 200 FEET IN ADVANCE OF W3-1 SIGN AS SHOWN. IF W3-1 IS NOT IN PLACE, USE DISTANCE "C".
 - ③ TYPICAL VERTICAL VARIATION BETWEEN PEAKS AND VALLEYS WITHIN THE CUT APPROXIMATELY $\frac{1}{16}$ ".
 - ④ 12 INCH CLEAR BETWEEN THE SOLID YELLOW LINE AND THE EDGE OF THE RUMBLE.



ELEVATION VIEW



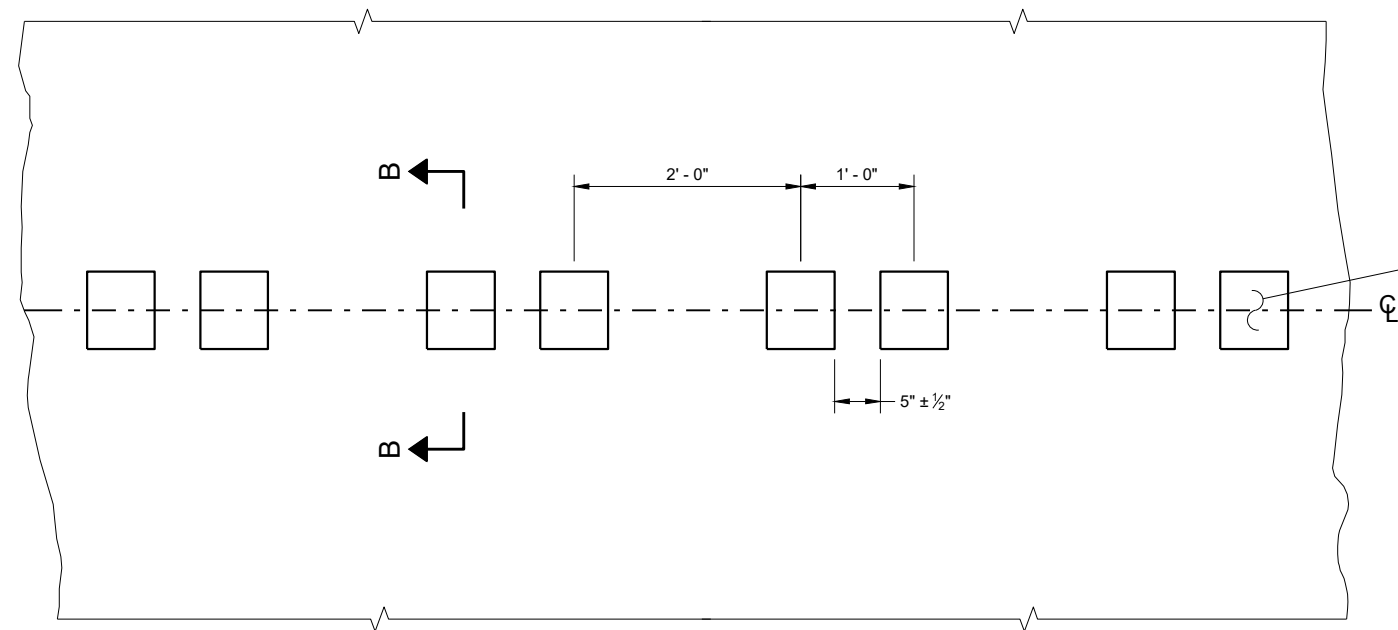
PLAN VIEW

ASPHALTIC PAVEMENT MILLED IN

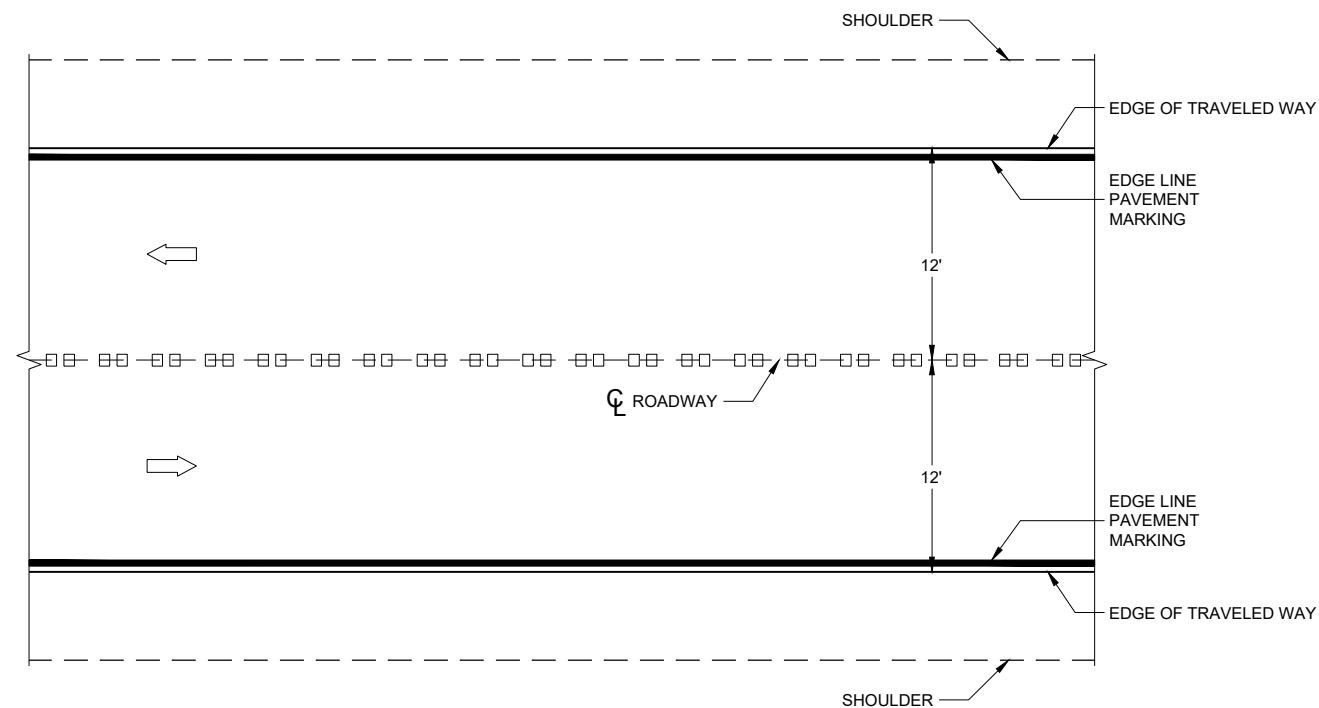
TRANSVERSE RUMBLE STRIPS, ASPHALTIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Rodney Taylor
ROADWAY DESIGN STAFF
UNIT SUPERVISOR
77
FHWA

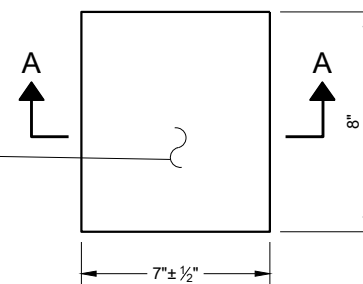


PLAN DETAIL VIEW

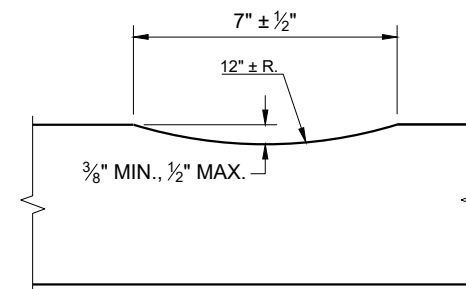


PLAN VIEW

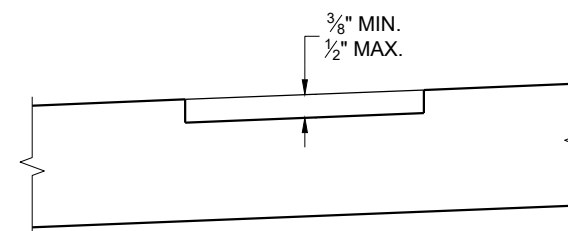
CENTERLINE RUMBLE STRIPS - ASPHALT



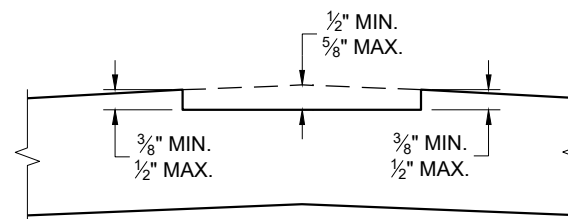
PLAN VIEW
(SINGLE GROOVE)



SECTION A - A



SECTION B - B
SUPERELEVATED ROADWAY

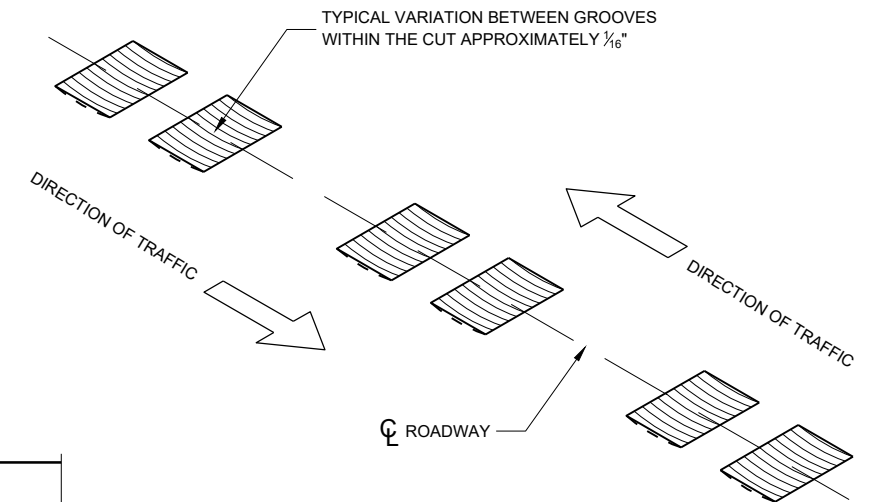


SECTION B - B
CROWNED ROADWAY

GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A11 SHEETS "d" AND "e".

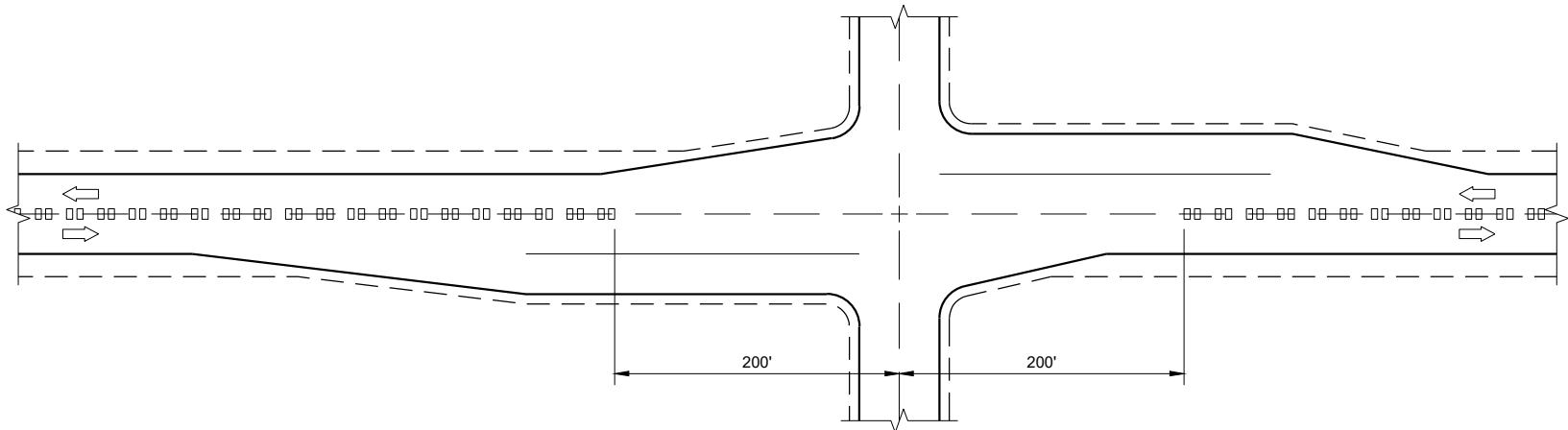
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



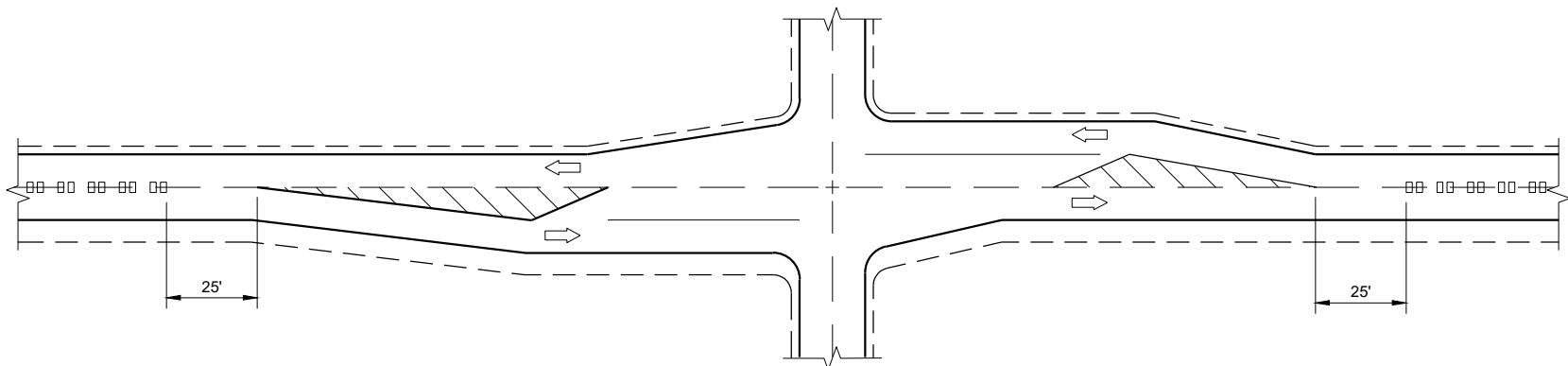
ISOMETRIC

**CENTERLINE RUMBLE
STRIPS - ASPHALT**

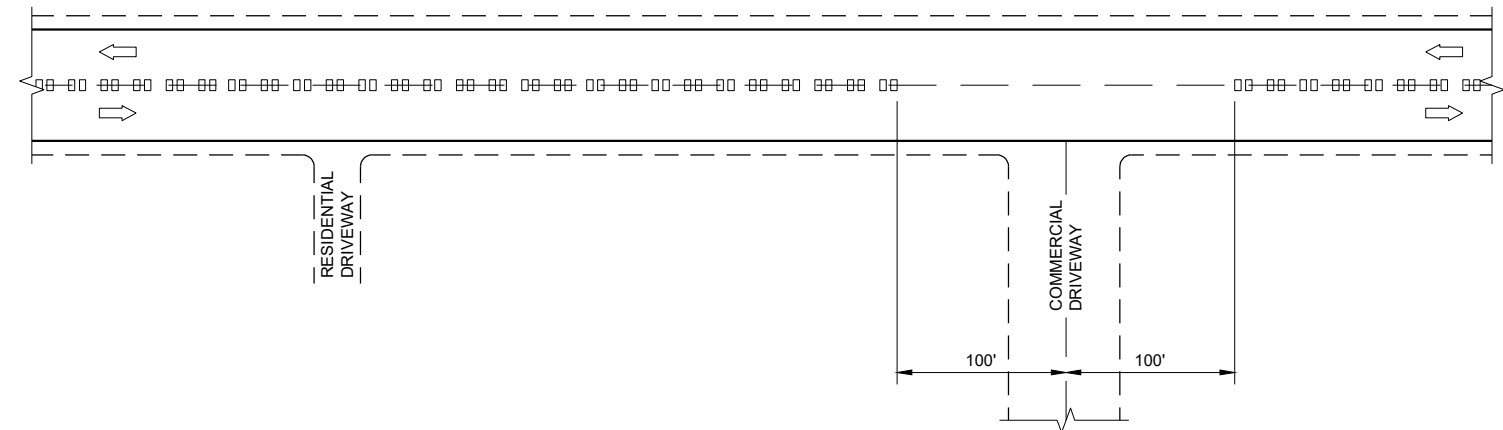
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTERLINE GROOVES AT INTERSECTIONS



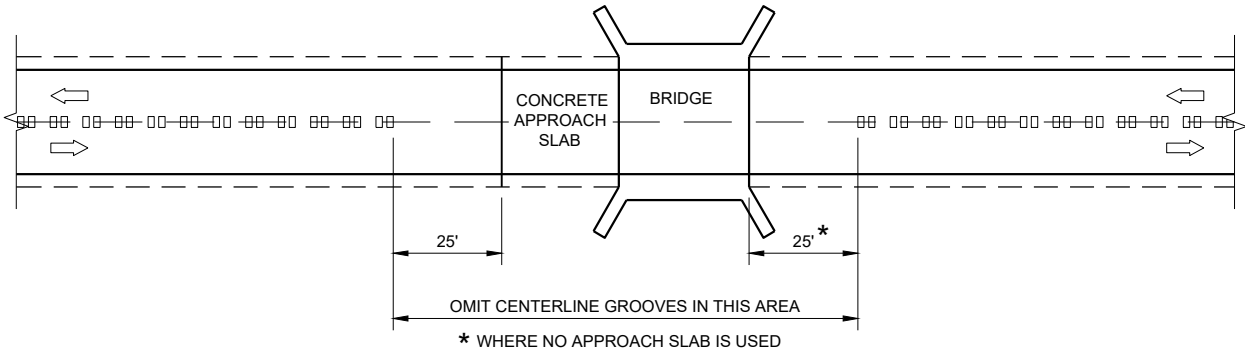
CENTERLINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)



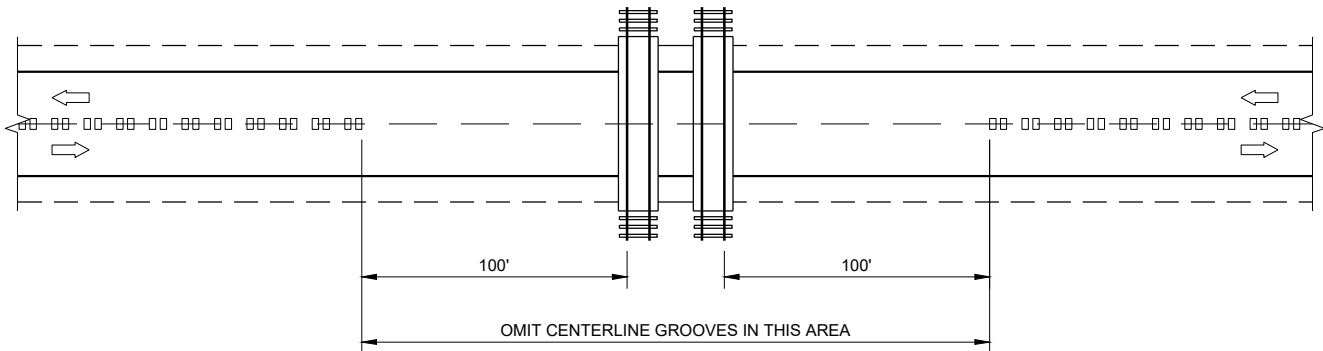
CENTERLINE GROOVES AT DRIVEWAYS^①

GENERAL NOTES

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



CENTERLINE GROOVES AT BRIDGES

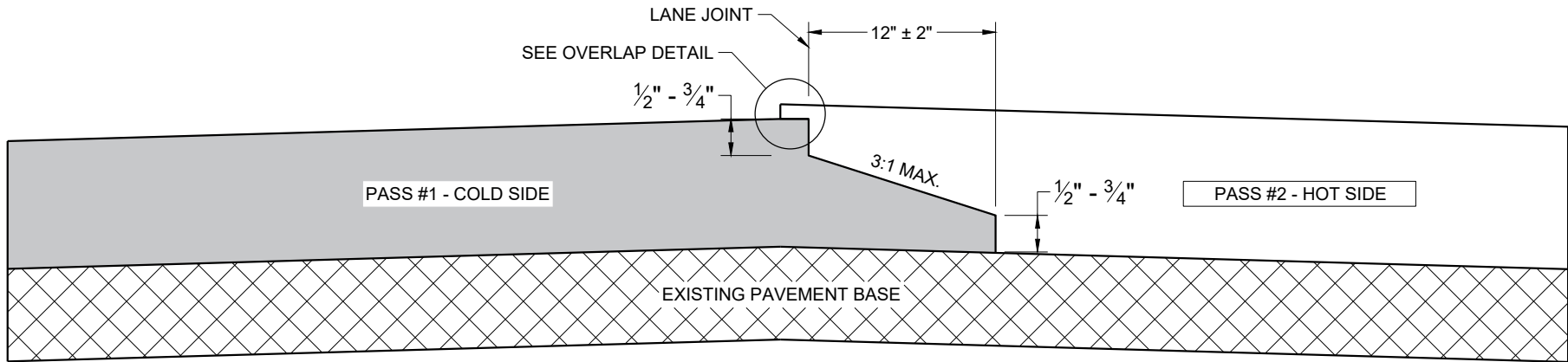


CENTERLINE GROOVES AT RAILROADS

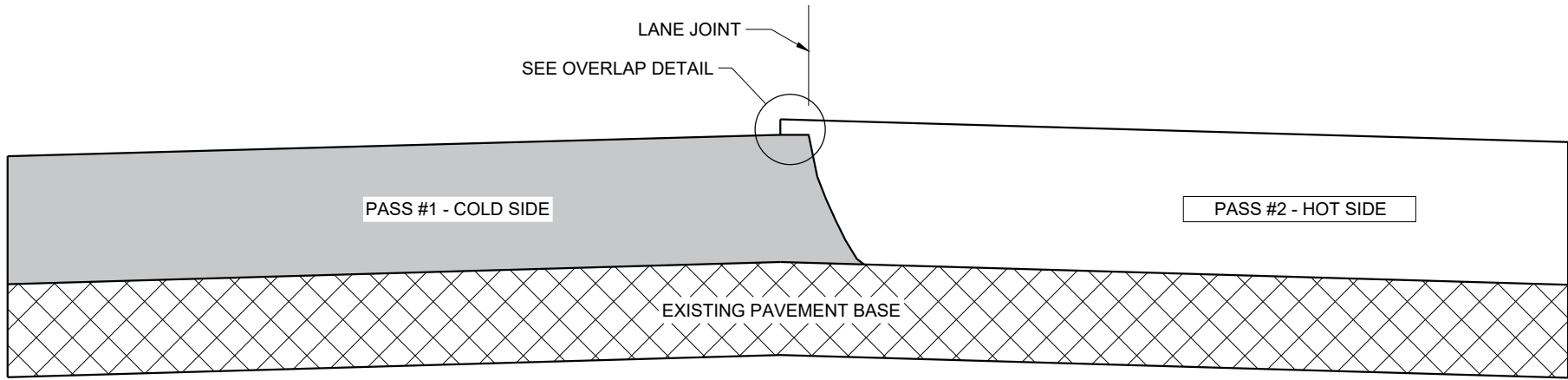
CENTER LINE
RUMBLE STRIPS -
INTERSECTIONS, DRIVEWAYS,
BRIDGES, RAIL ROADS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

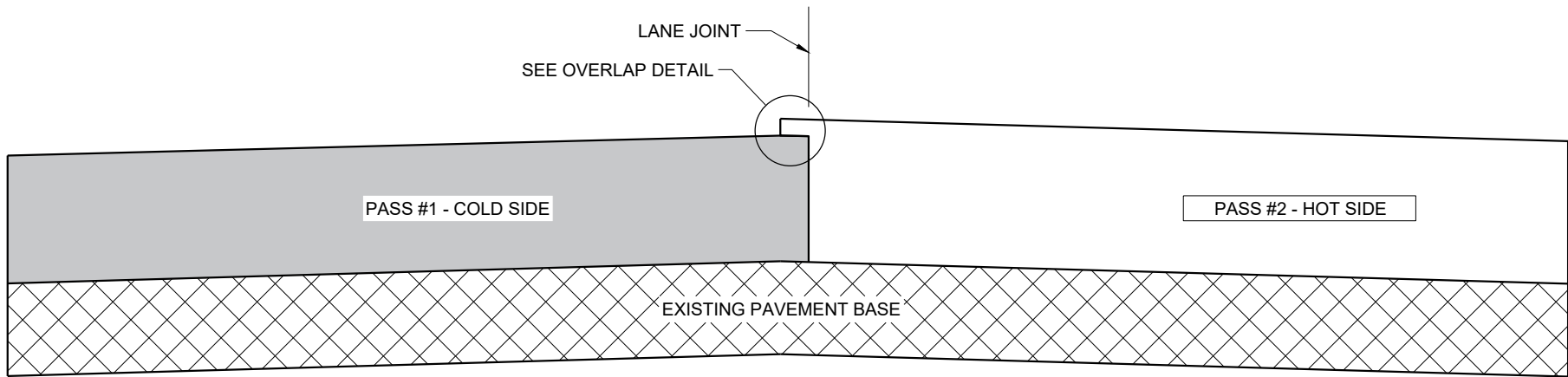
APPROVED
May 2023
DATE
/S/ John Jenkins
ROADWAY STANDARDS DEVELOPMENT ENGINEER
79
FHWA



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

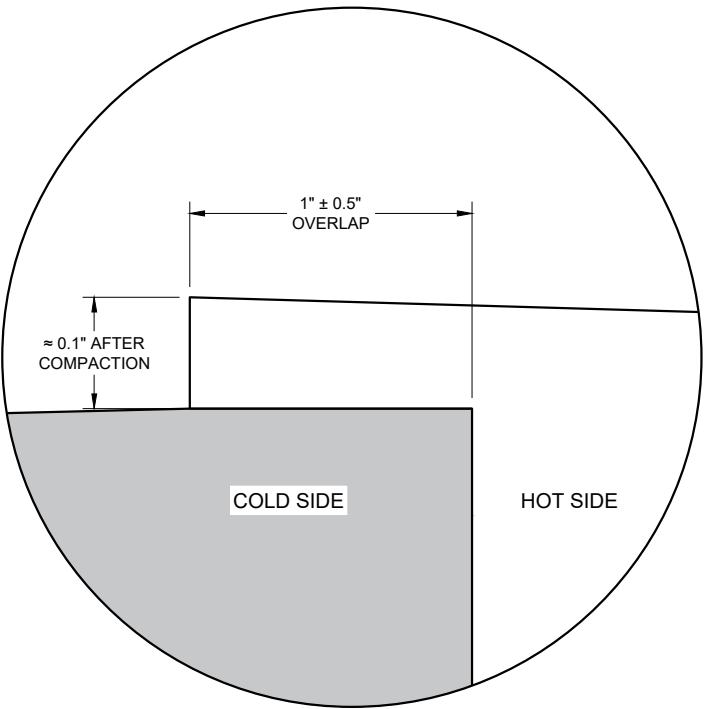
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

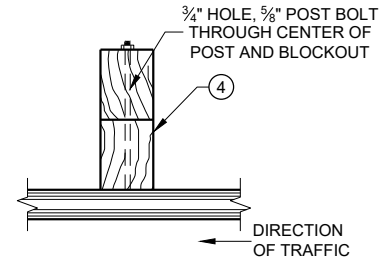
APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGIN 80
FHWA

GENERAL NOTES

- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6"X8" 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 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 DAMAGE 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 HIGHE 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 INCHES IN DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL 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.

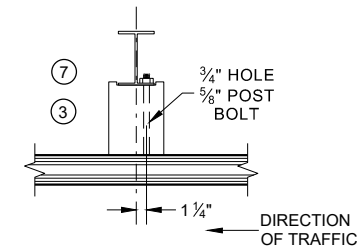
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



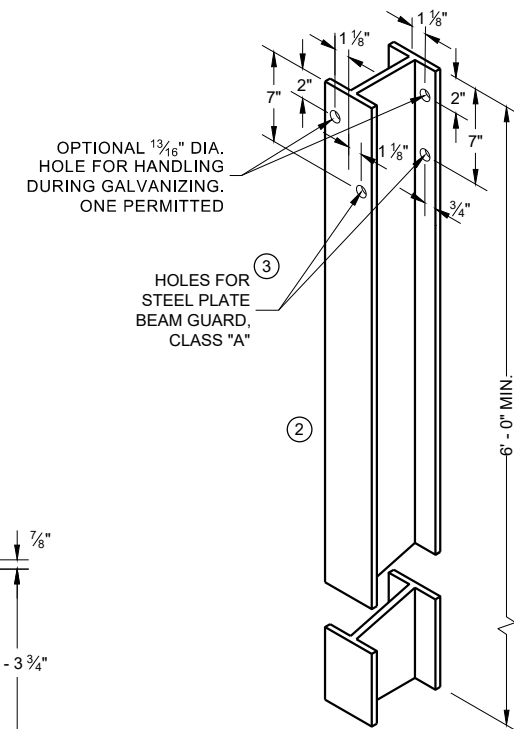
PLAN VIEW

**WOOD POST, BLOCKOUT
AND BEAM**



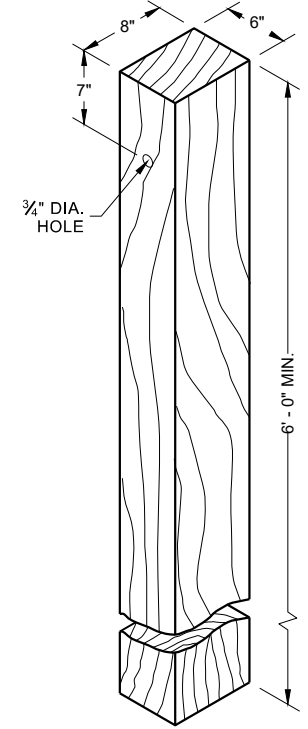
PLAN VIEW

WOOD POST, BLOCKOUT AND BEAM

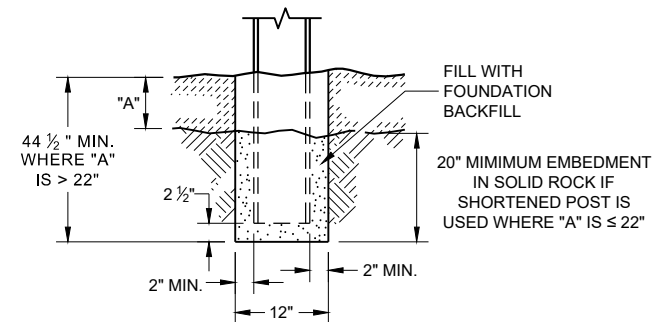


**STEEL POST & HOLE
PUNCHING DETAIL
(W 6 X 9) ①**

ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED

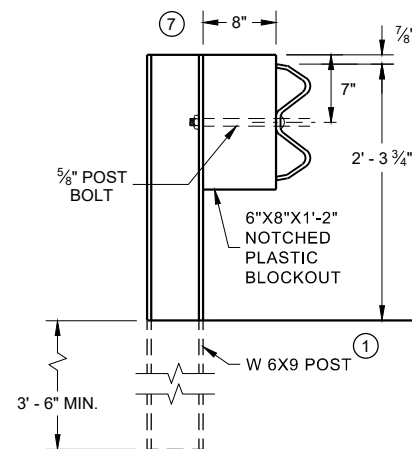


WOOD POST (6" X 8") NOMINAL ⁽¹⁾

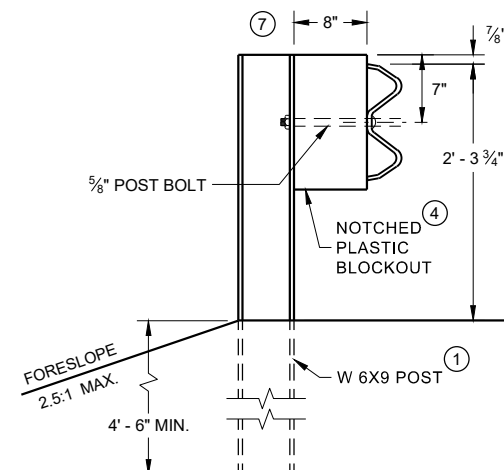


END VIEW

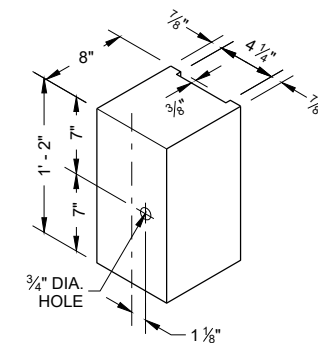
SETTING STEEL OR WOOD POST IN ROCK[®] (6)



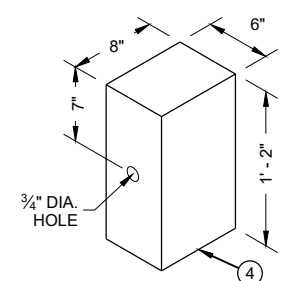
END VIEW
STEEL POST AND NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



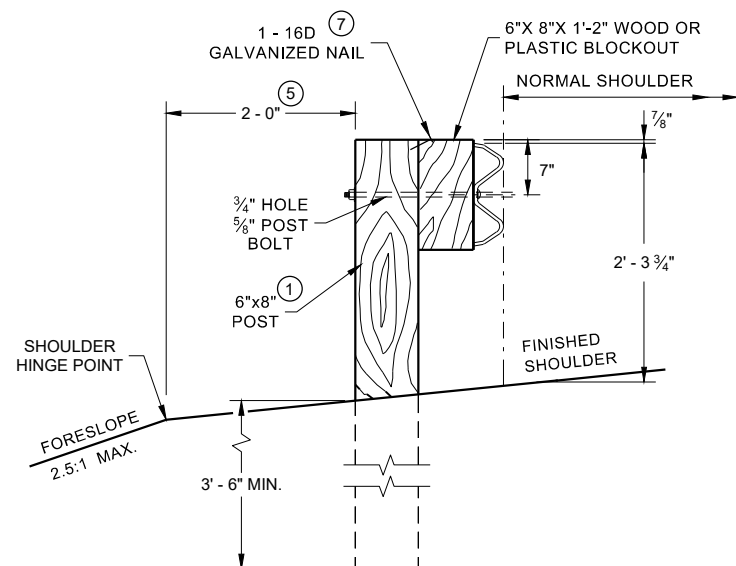
END VIEW
LONGER POST AT HALF POST
SPACING W BEAM (LHW)



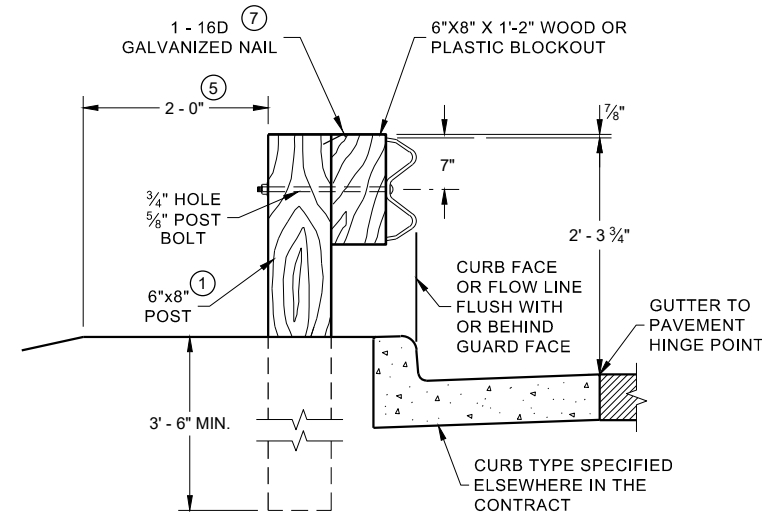
TYPICAL NOTCHED PLASTIC BLOCKOUT FOR STEEL POSTS



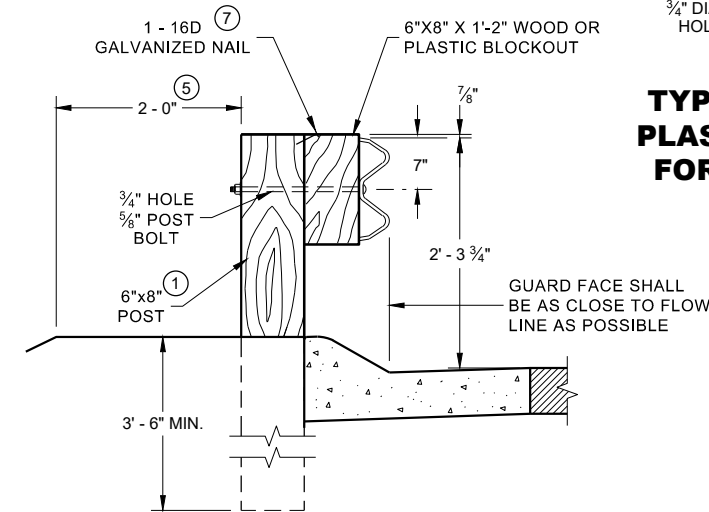
WOOD OR PLASTIC BLOCKOUT FOR WOOD POSTS



END VIEW
LOCATED ALONG A ROADWAY
SHOULDER STANDARD INSTALLATION



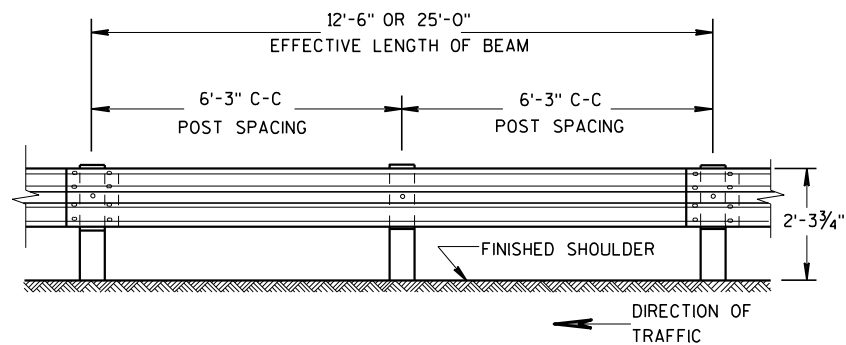
END VIEW
LOCATED ALONG A CURBED ROADWAY



**END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY**

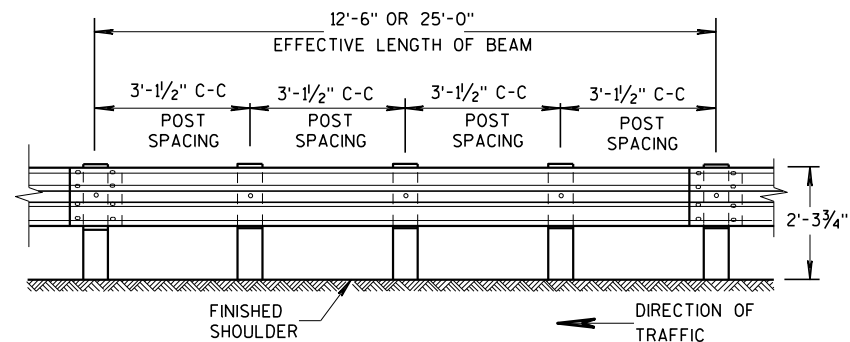
STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION AND ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 81



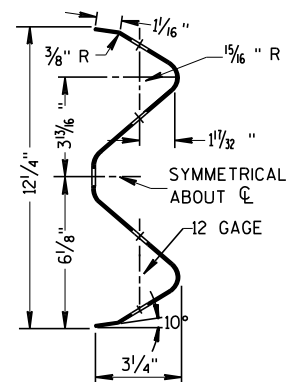
FRONT VIEW

POST SPACING STANDARD INSTALLATION

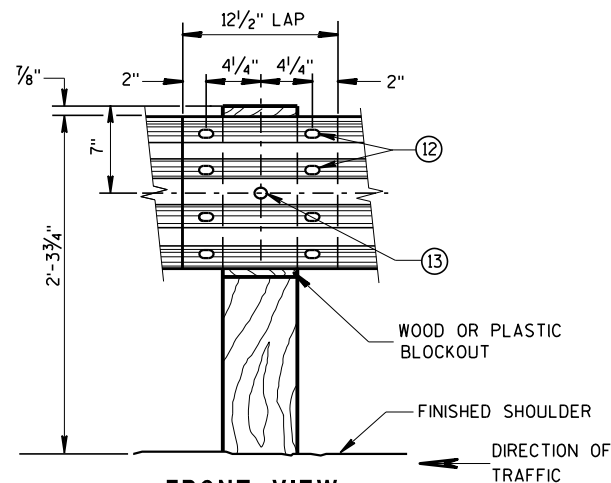


FRONT VIEW

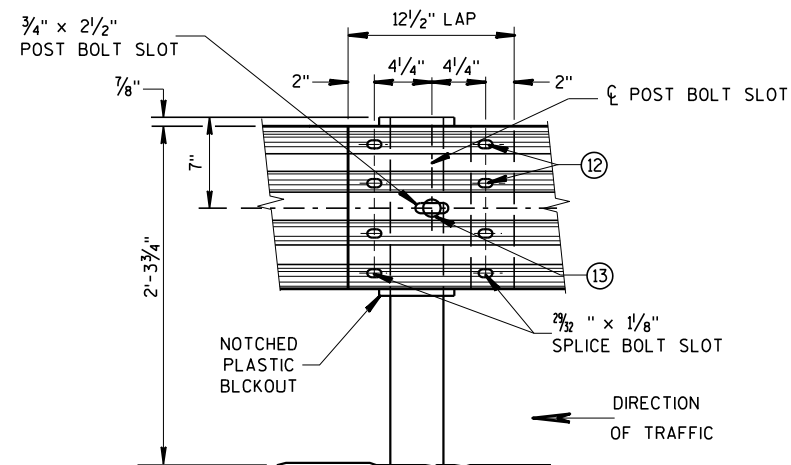
POST SPACING FOR LONGER POST
AT HALF POST SPACING W BEAM (LHW)



SECTION THRU W BEAM



FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL



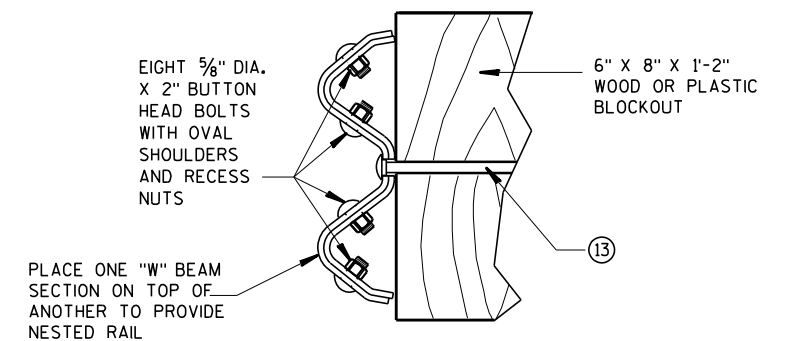
FRONT VIEW
BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS
OF STEEL PLATE BEAM GUARD

GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

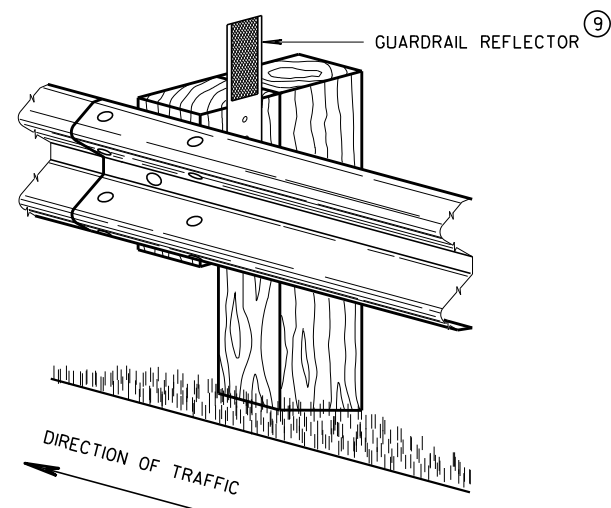
- ⑨ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.
- ⑫ 8 - 5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.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



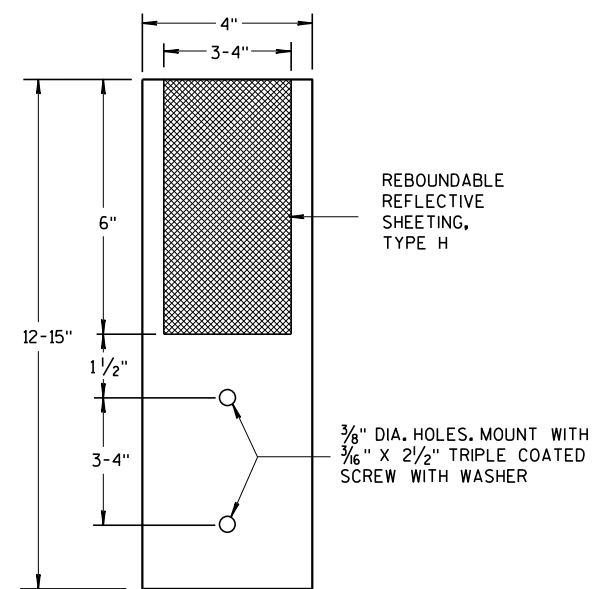
NESTED W BEAM (NW)

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.



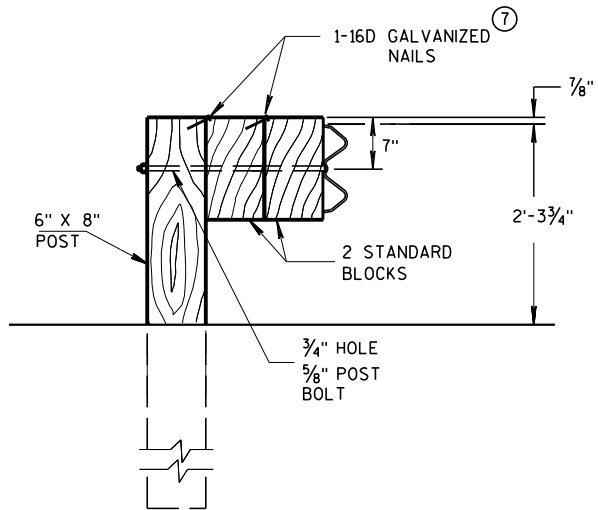
4" X 12" GUARDRAIL REFLECTOR DETAIL
AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

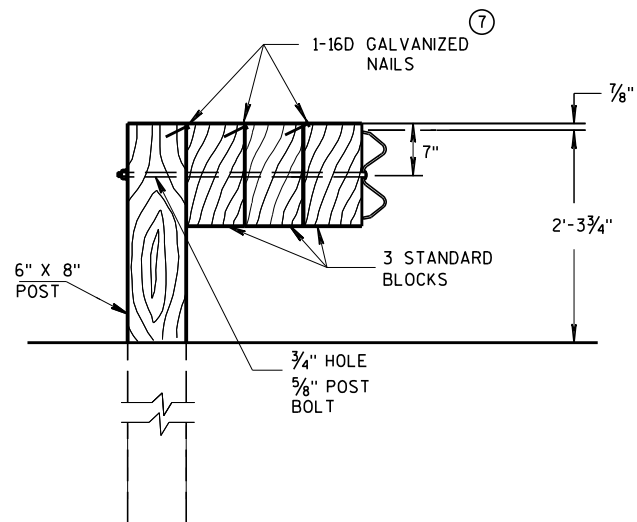
STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN⁸²
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

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

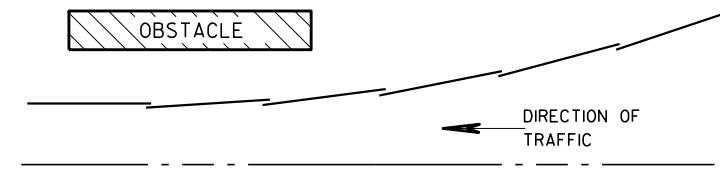


DETAIL FOR TRIPLE BLOCKS

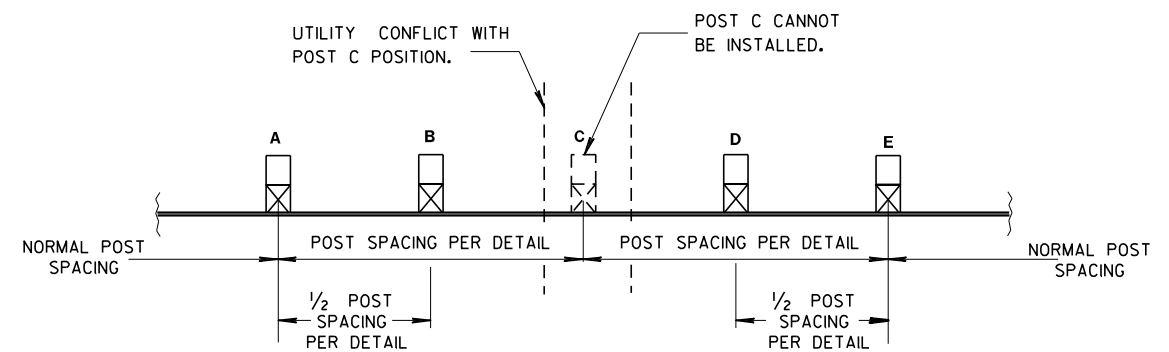
TRIPLE BLOCK DETAIL IS LIMITED TO ONE
LOCATION WITHIN A BEAM GUARD RUN.

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

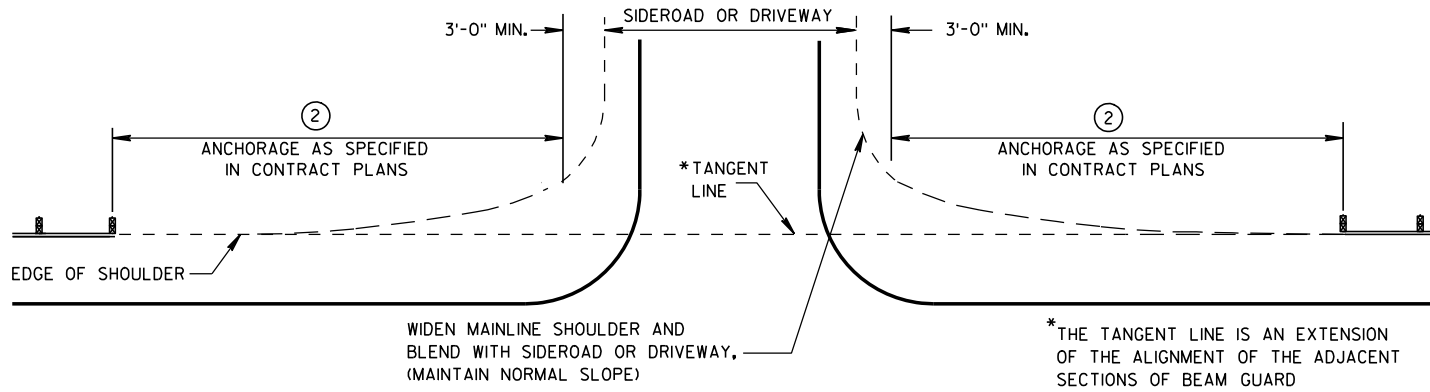


POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

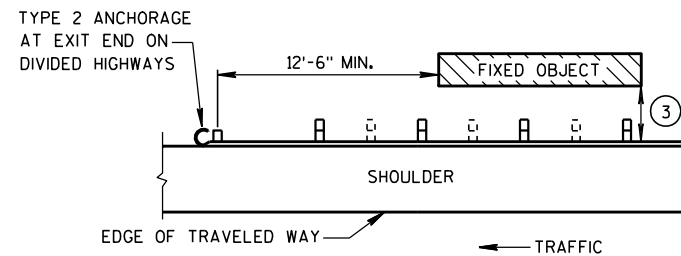
STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

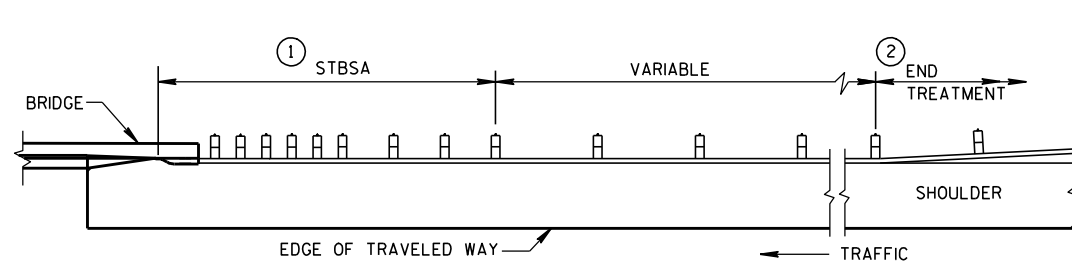
APPROVED	/S/ Rodney Taylor
June 2017	DATE
ROADWAY STANDARDS 83	UNIT SUPERVISOR
FHWA	MENT



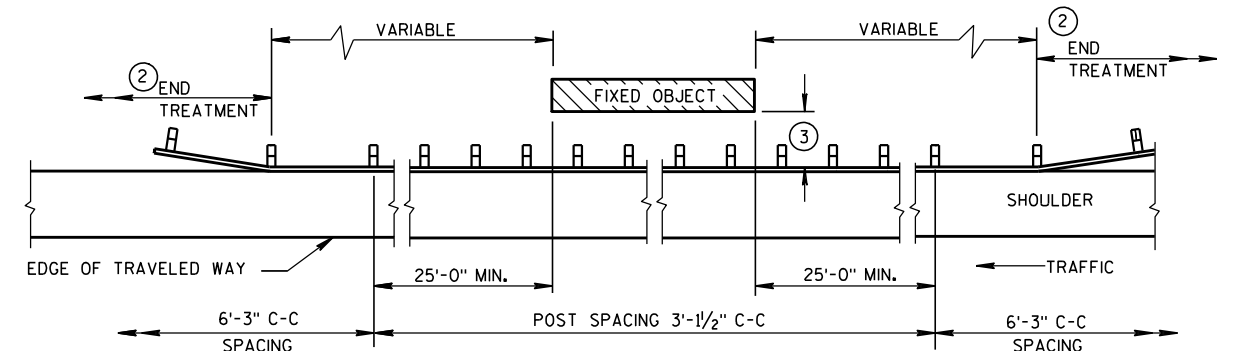
BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC



BEAM GUARD AT FULL WIDTH BRIDGES

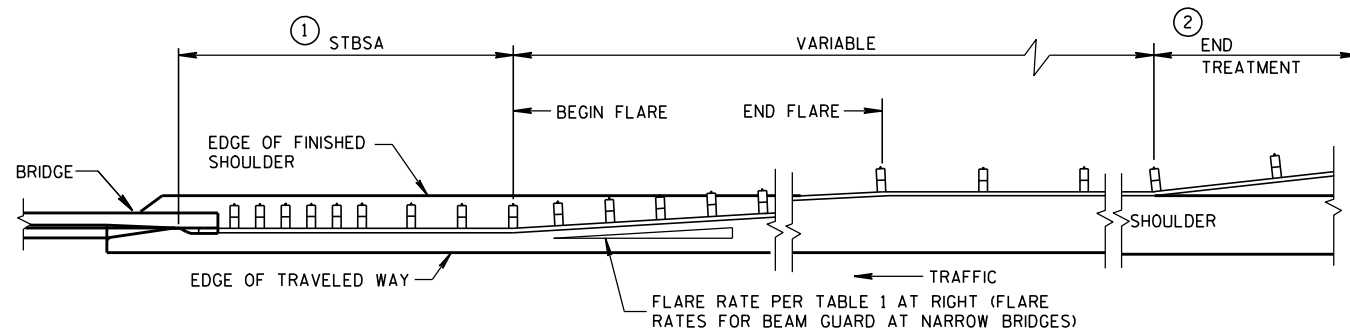


BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(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)

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.

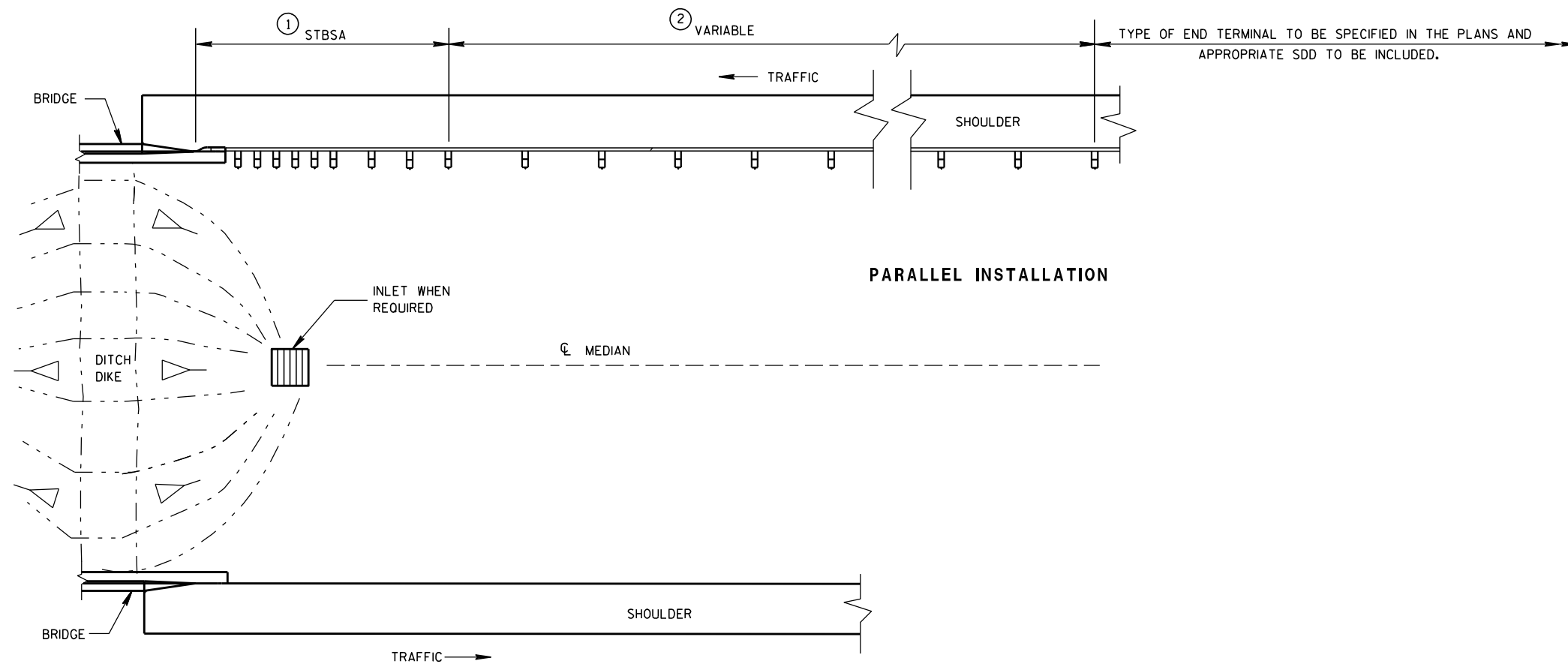
- STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.
- USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

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

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. Zoon
DATE ROADWAY STANDARDS (84) INT
FHWA ENGINEER



BEAM GUARD AT MEDIAN APPROACH TO BRIDGES

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.

STEEL PLATE BEAM GUARD
CLASS "A" AT
MEDIAN APPROACH TO BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-21-07

DATE

FHWA

/S/ Jerry H. Zopp

ROADWAY STANDARDS

ENGINEER

ENT

BILL OF MATERIALS

NOTE NO.	DESCRIPTION
①	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" 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 ½" 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'-6½"
⑬	IMPACT HEAD
⑭	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS

GENERAL NOTES

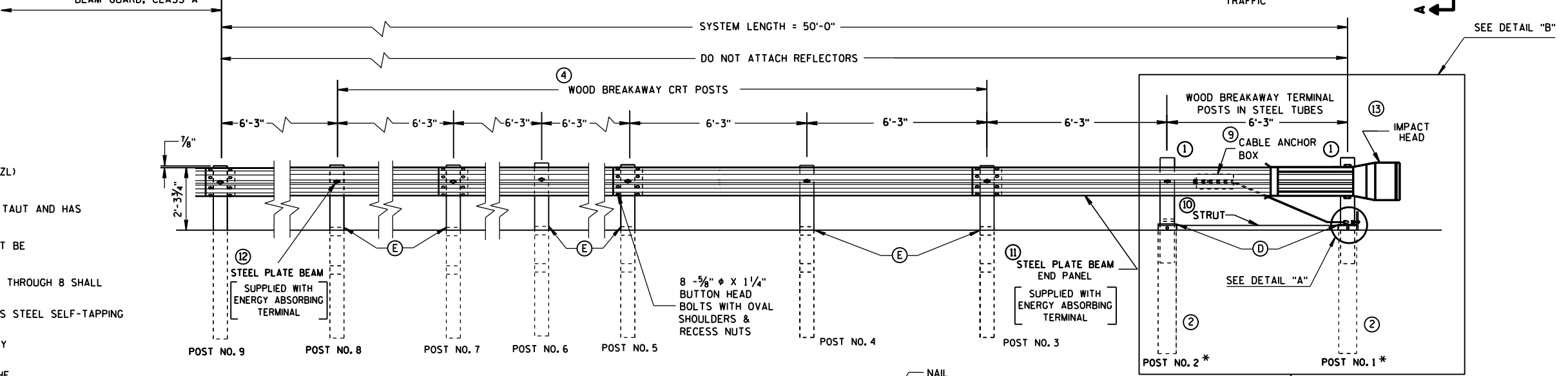
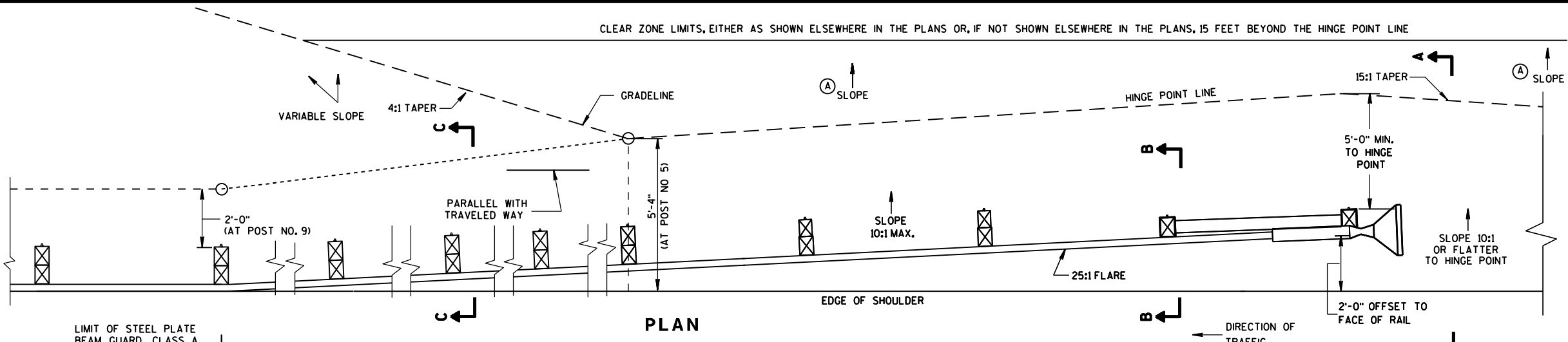
FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

- (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 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" 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.

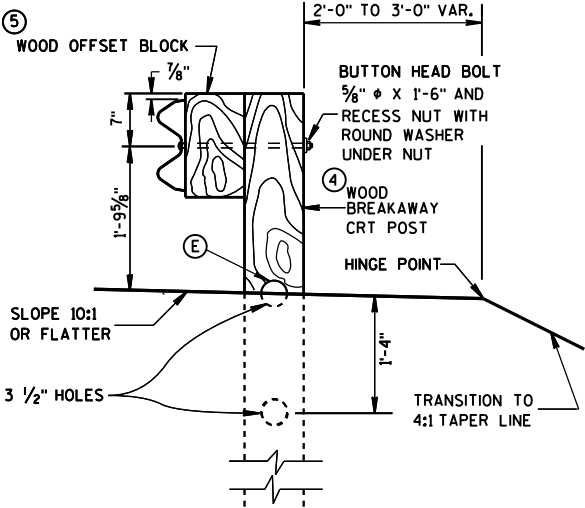
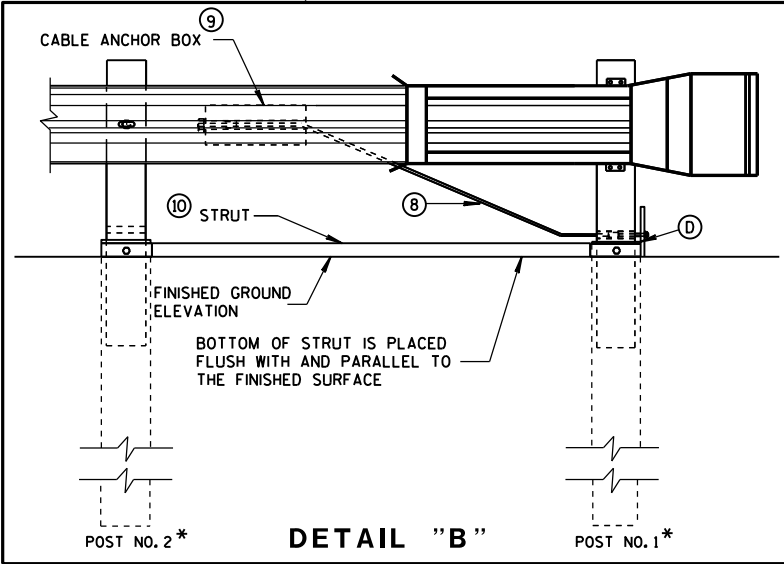
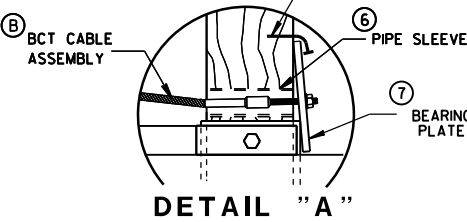
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

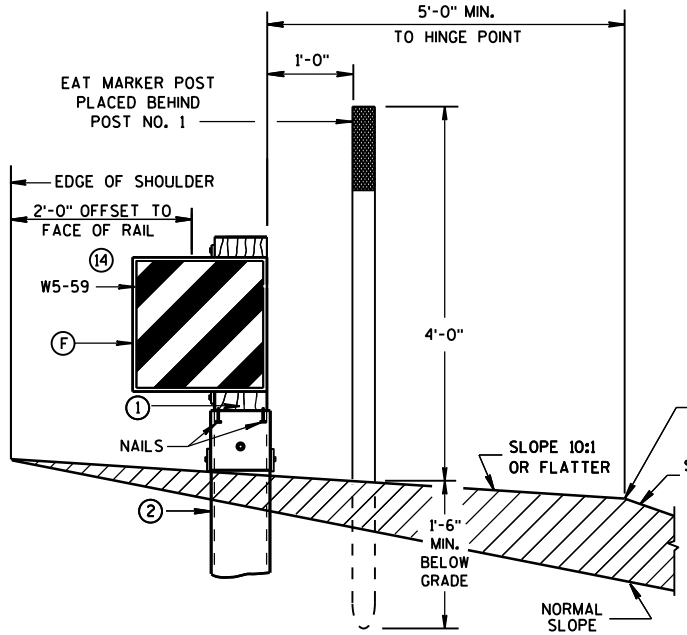
*DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.



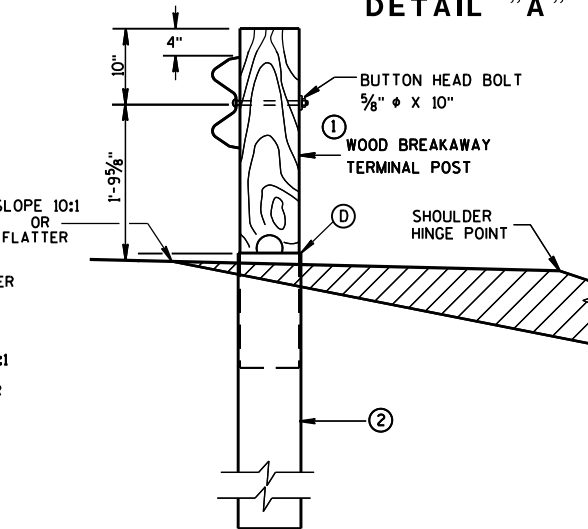
ELEVATION



SECTION C-C
TYPICAL AT POST NOS. 6, 8



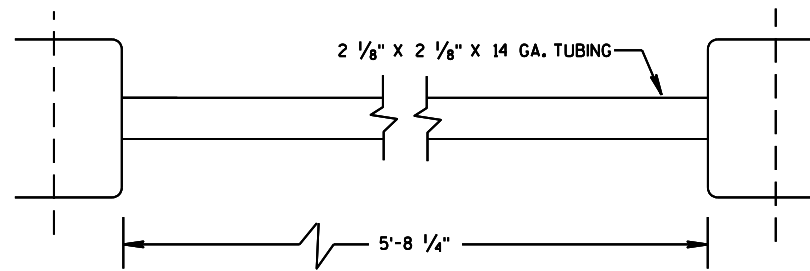
SECTION A-A
TYPICAL AT POST NO. 1*



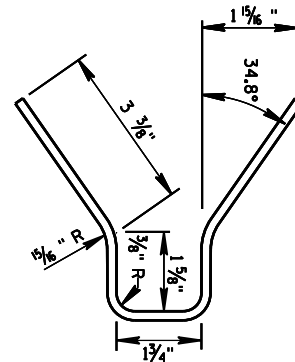
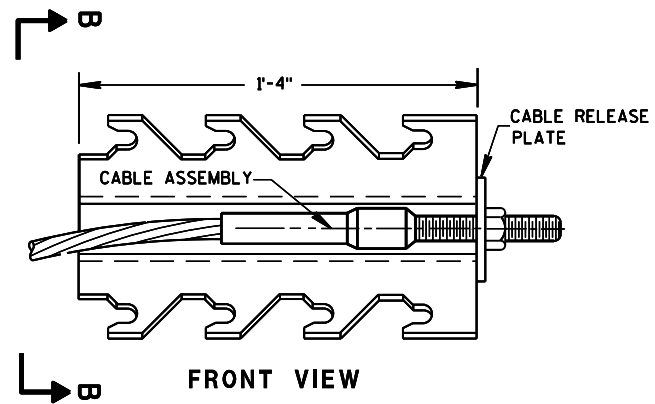
SECTION B-B
TYPICAL AT POST NO. 2*

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

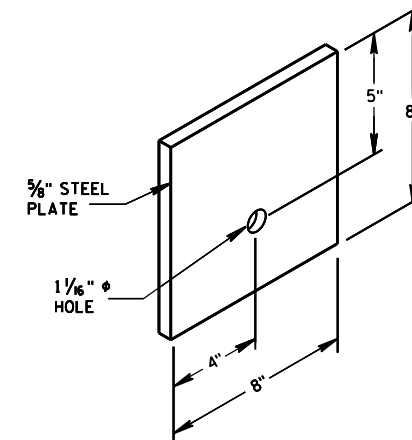
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



⑩ STRUT DETAIL



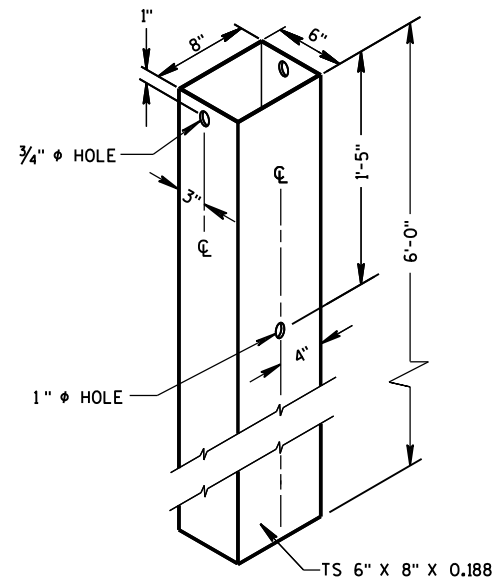
⑨ CABLE ANCHOR BOX



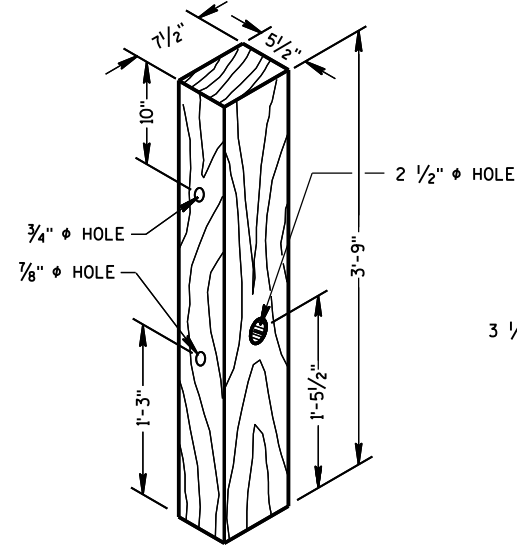
⑦ STEEL BEARING PLATE

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

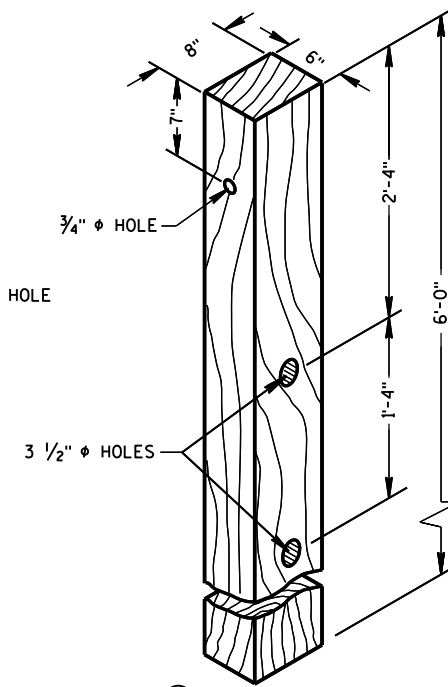
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



② **72" STEEL TUBE**
(POSTS NO. 1-2)



① **TERMINAL POST**

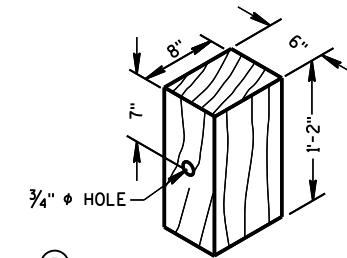


④ **CRT POST**
(POSTS NO'S 5-8)

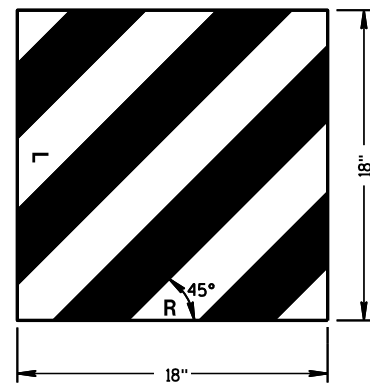
WOOD BREAKAWAY POSTS

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.

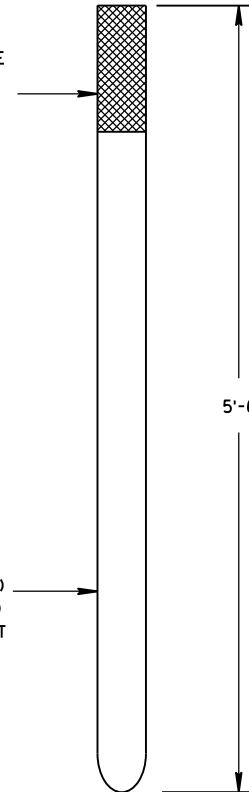


⑤ **WOOD OFFSET BLOCK**
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



⑭ **REFLECTIVE SHEETING DETAILS**

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



FRONT VIEW

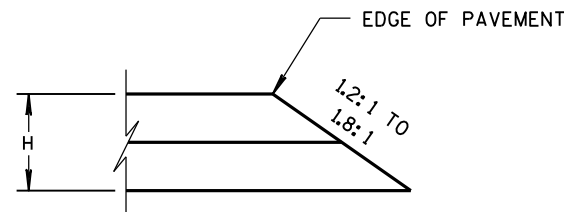
SIDE VIEW

E.A.T. MARKER POST

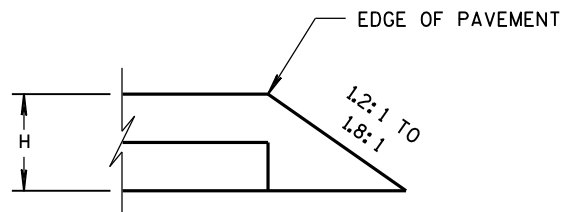
**STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

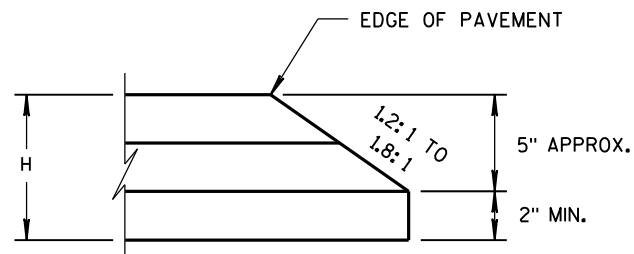
APPROVED
June 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS 88 ENT
FHWA UNIT SUPERVISOR



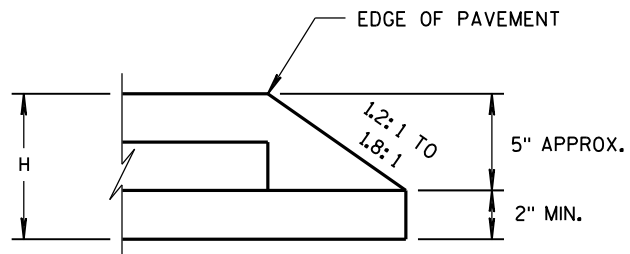
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

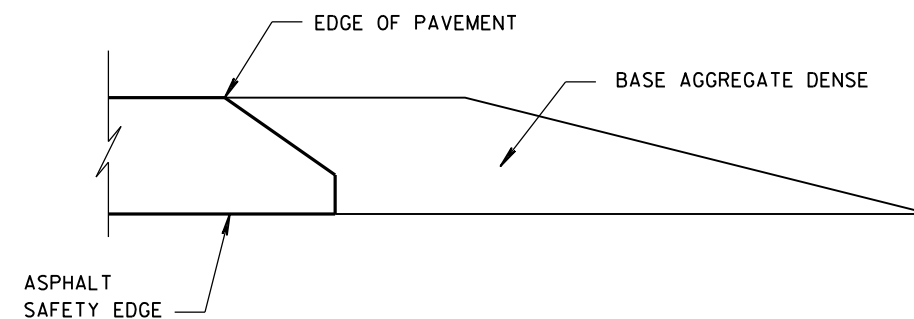


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE_{SM}

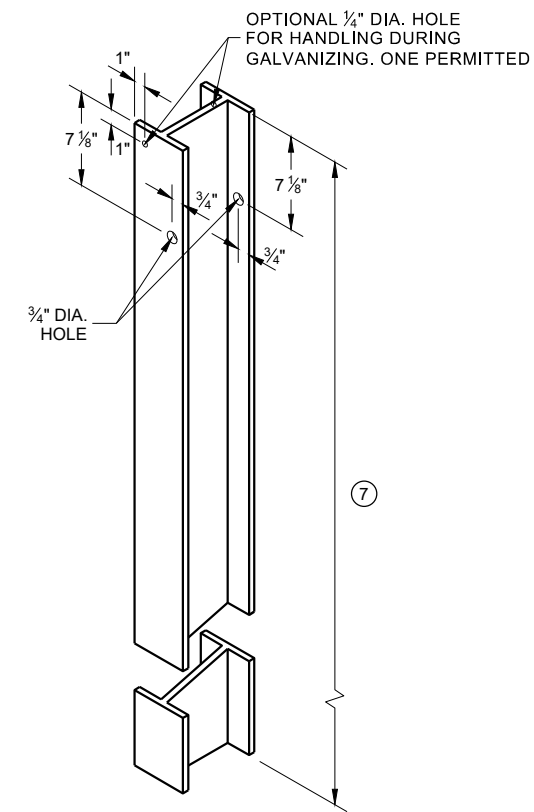
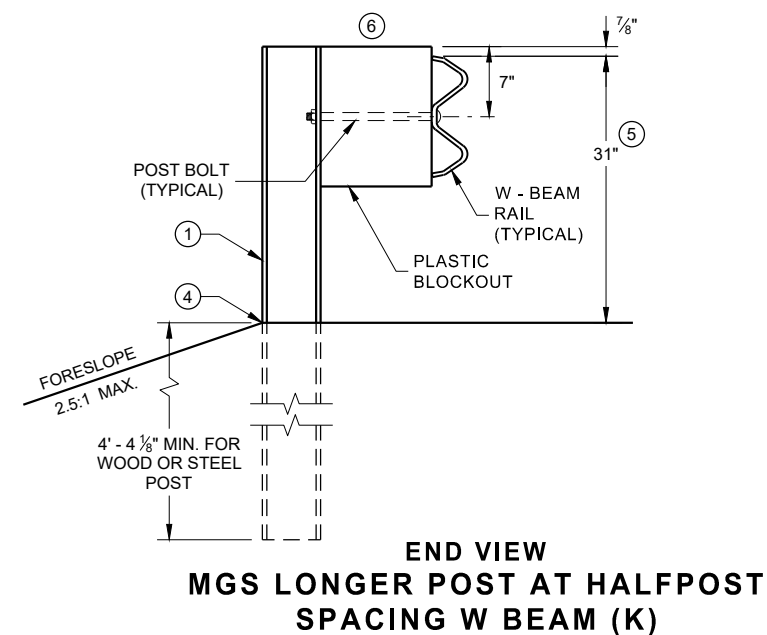
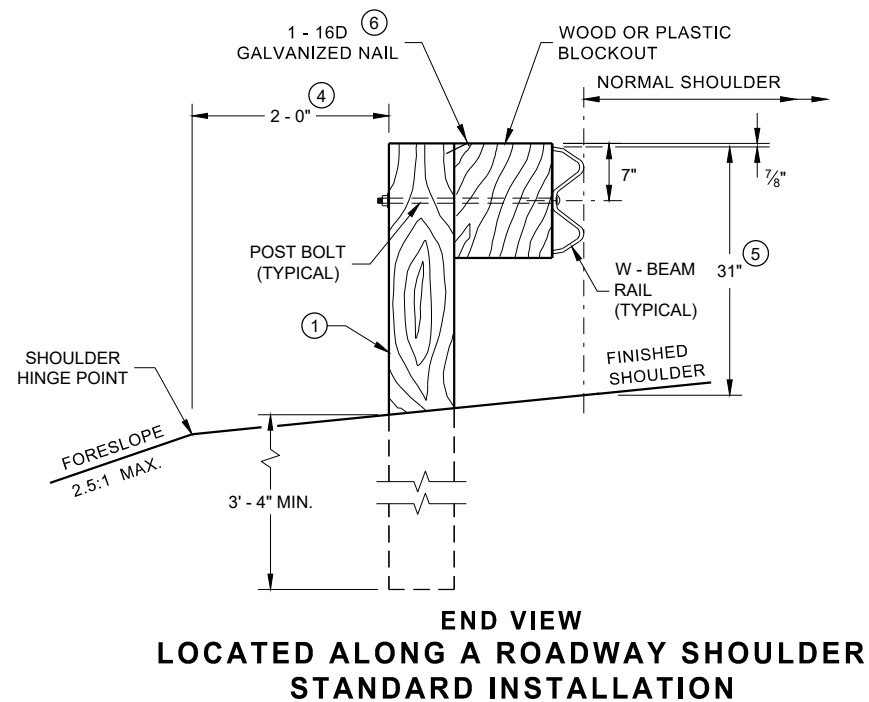
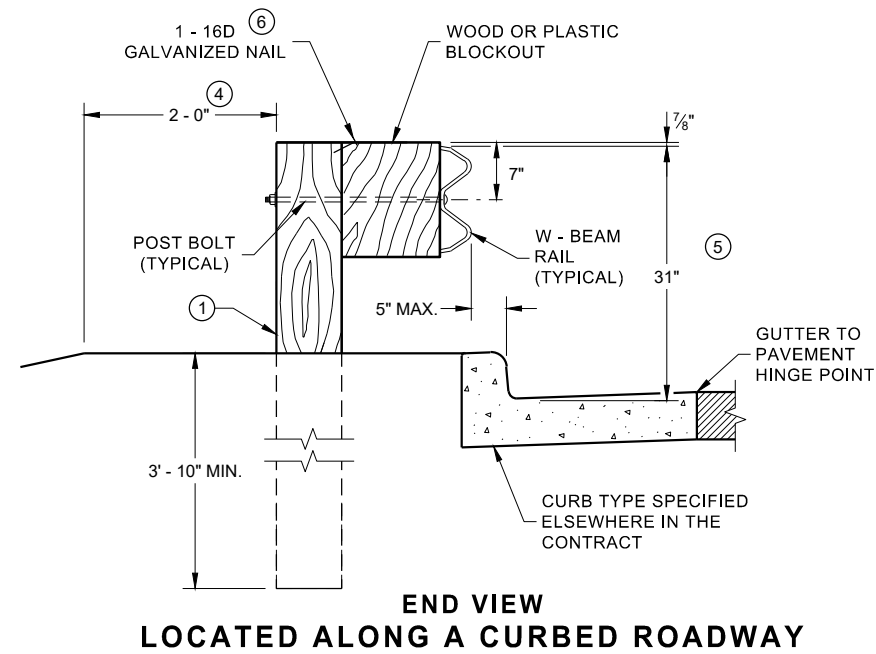
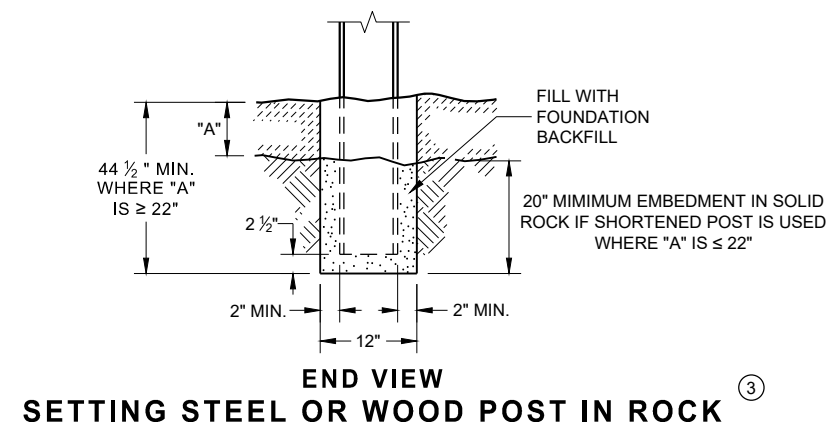
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 11/30/2012
FHWA

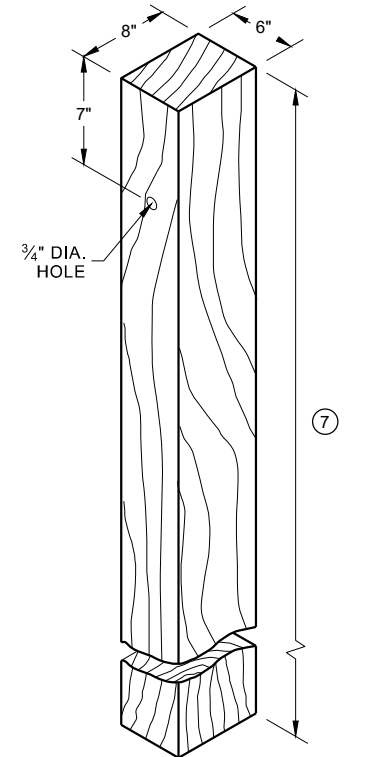
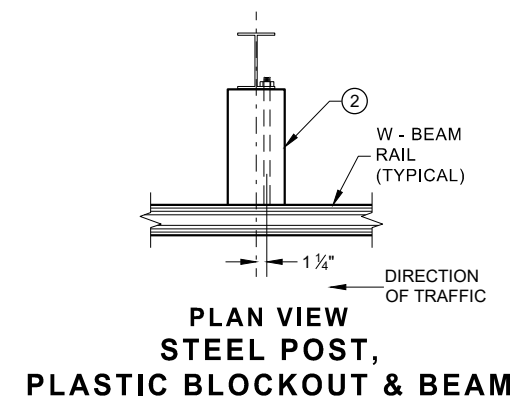
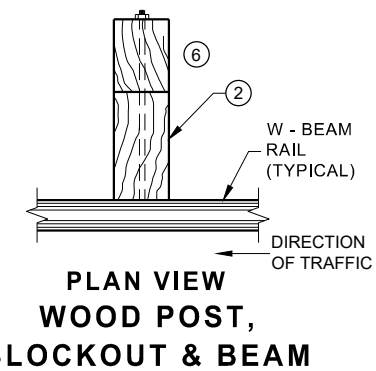
/s/ Jerry H. Zoaga
ROADWAY STANDARDS
ENGINEER

ENT

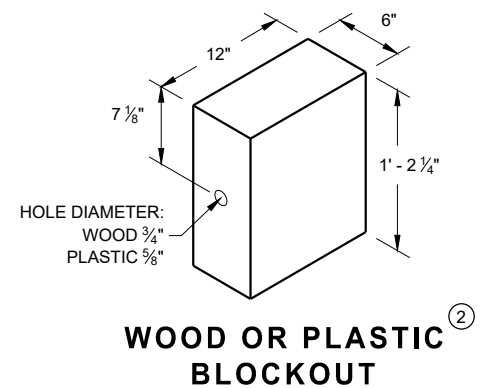
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL.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



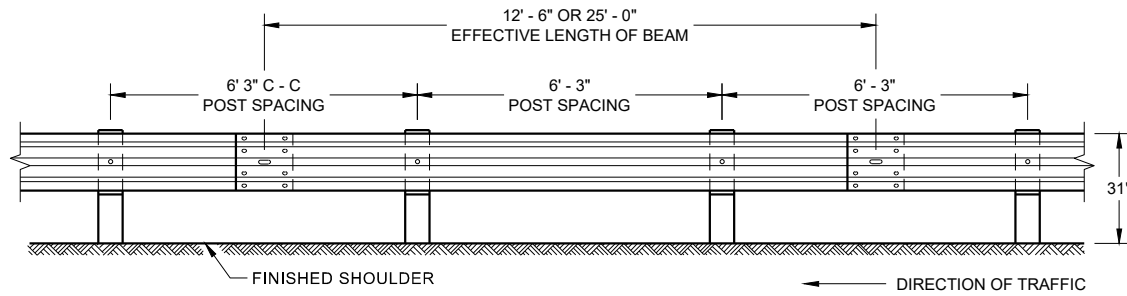
**STEEL POST & HOLE
PUNCHING DETAIL
(W 6 X 9) ①**



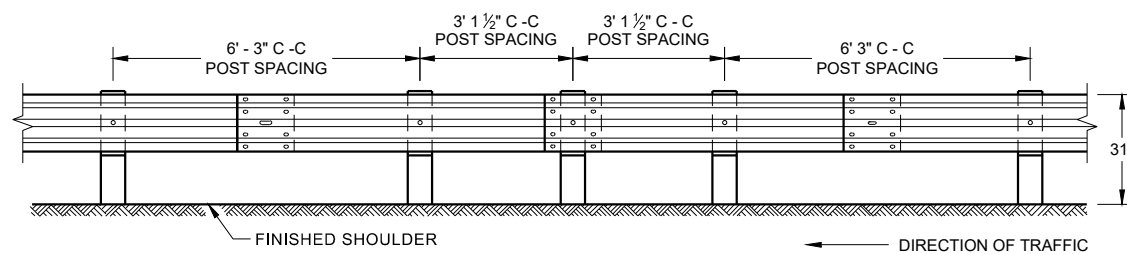
WOOD POST (6" X 8") NOMINAL ⁽¹⁾



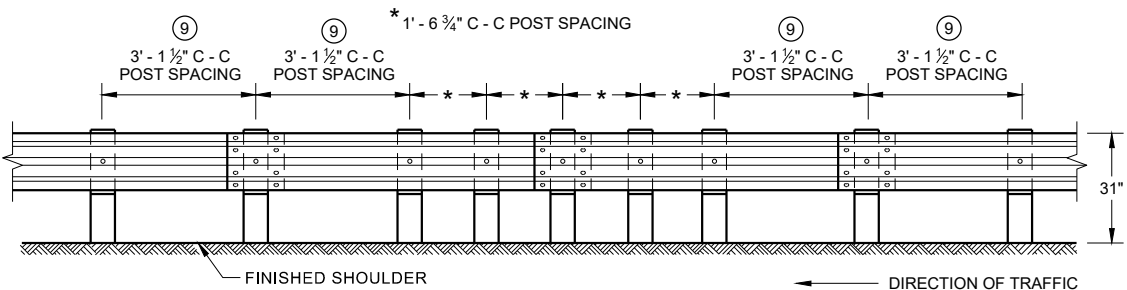
**WOOD OR PLASTIC
BLOCKOUT**



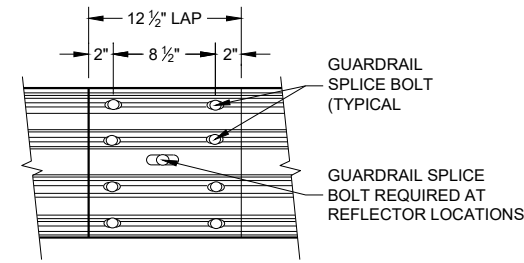
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



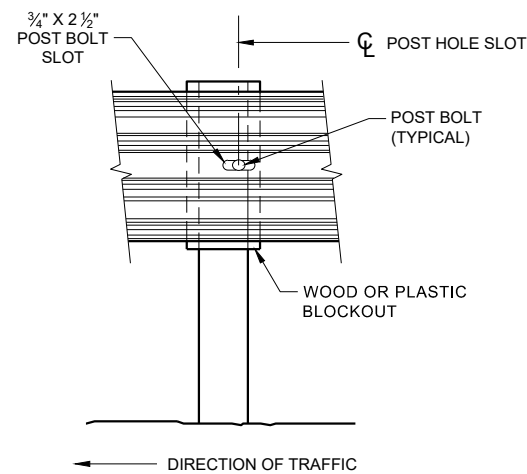
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



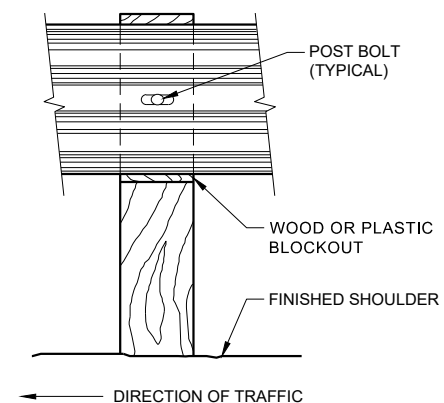
**FRONT VIEW
QUARTER POST SPACING (QS)**



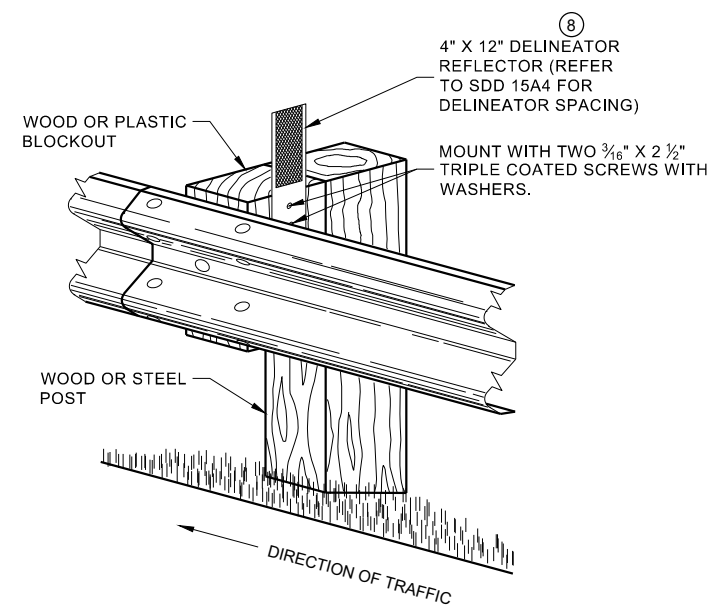
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



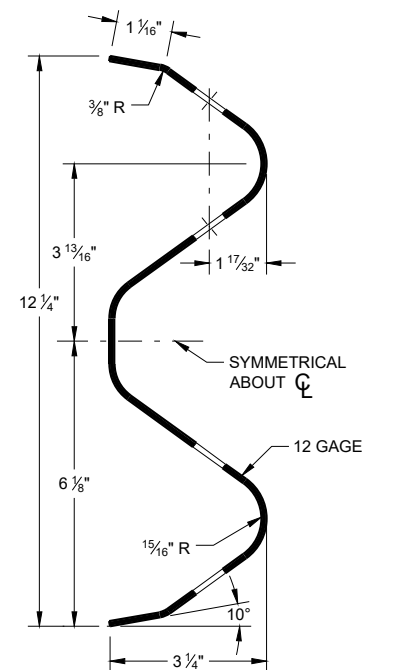
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

GENERAL NOTES

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

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

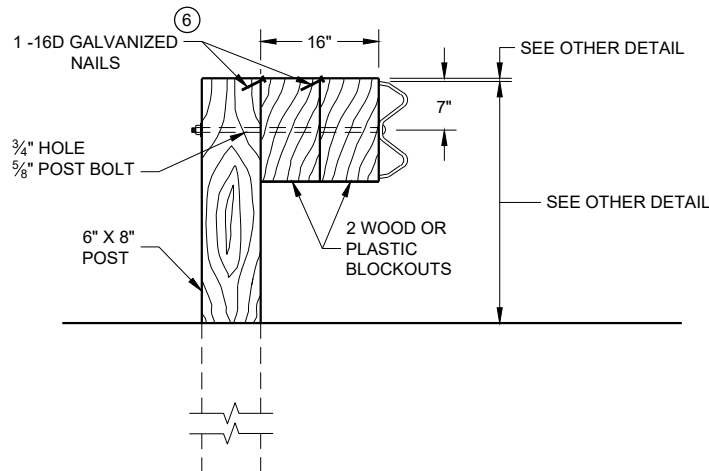
GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

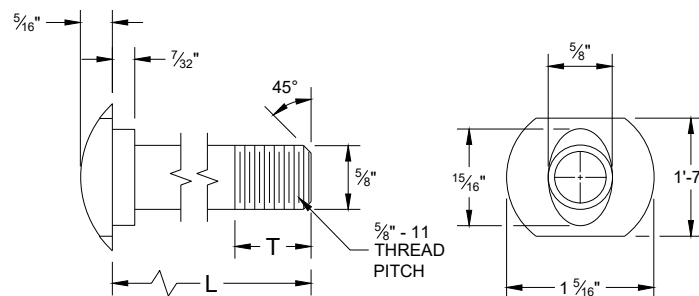
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DETAIL FOR 16" BLOCKOUT DEPTH

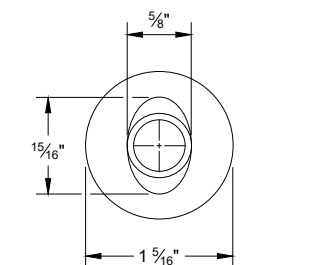
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

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

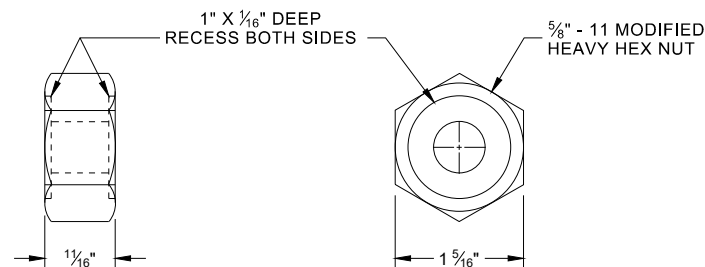


POST BOLT TABLE

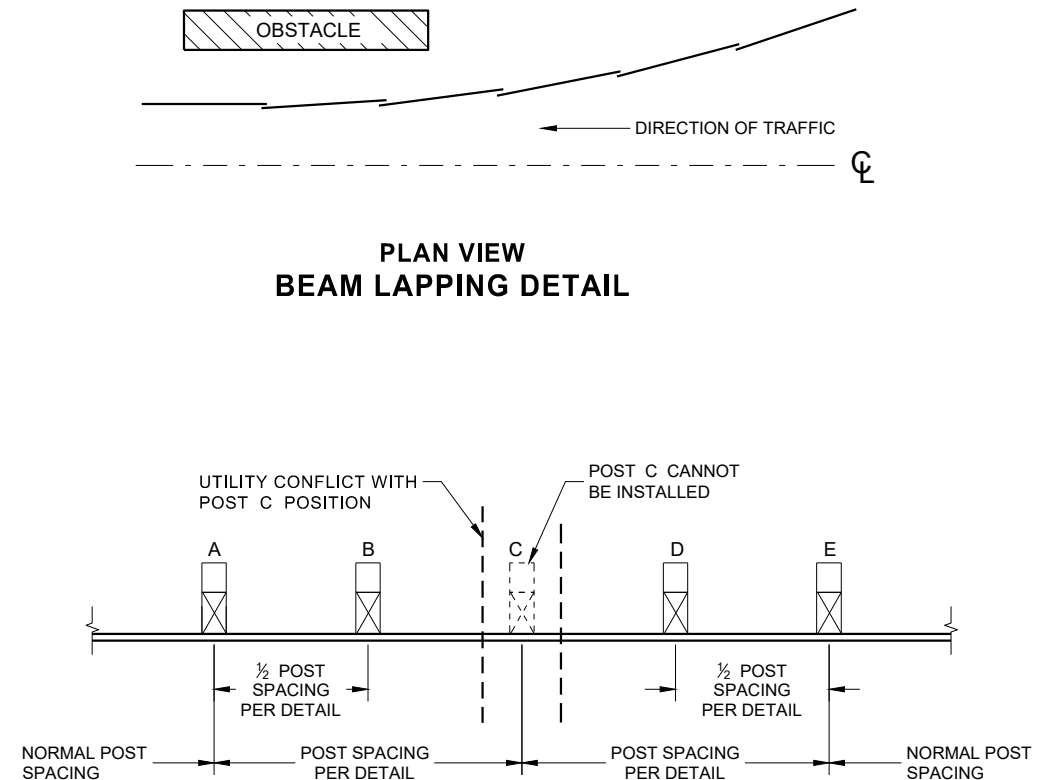
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



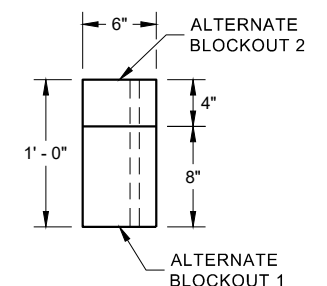
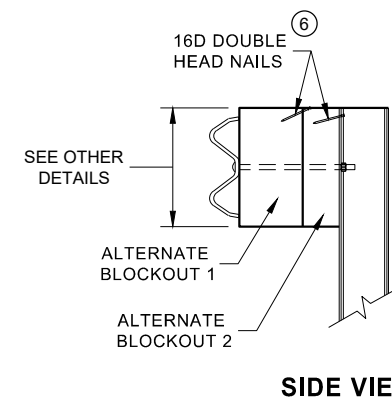
ALTERNATE BOLT HEAD



POST BOLT, SPLICE BOLT AND RECESS NUT



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



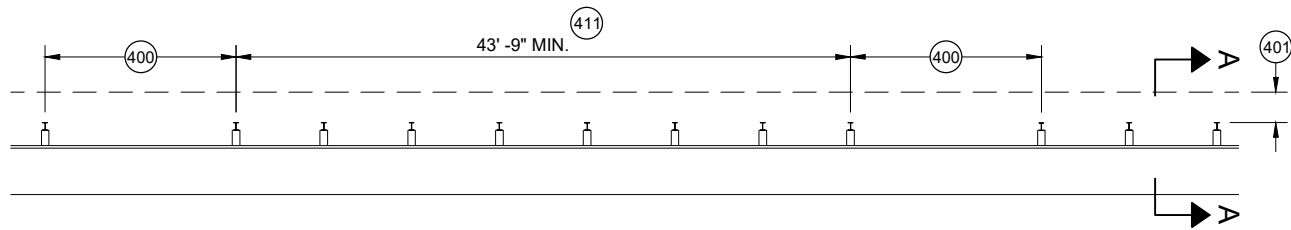
ALTERNATE WOOD BLOCKOUT DETAIL

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

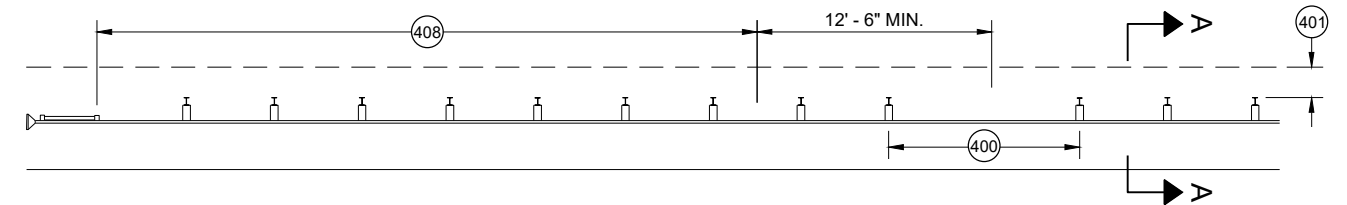
- 6 WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

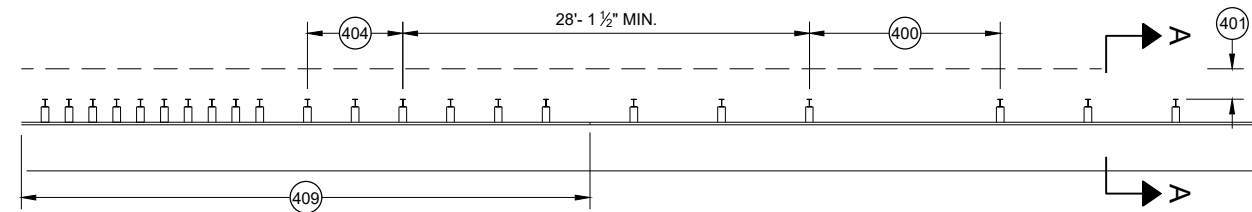
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION 192



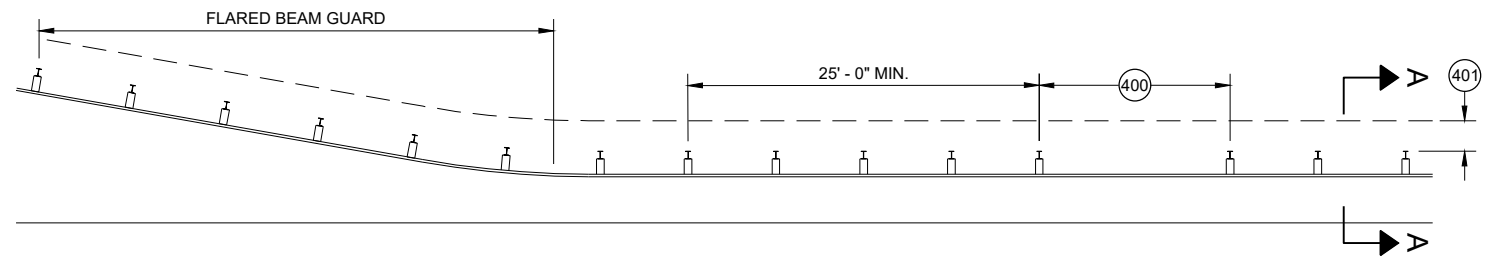
MISSING POST IN MGS GUARDRAIL



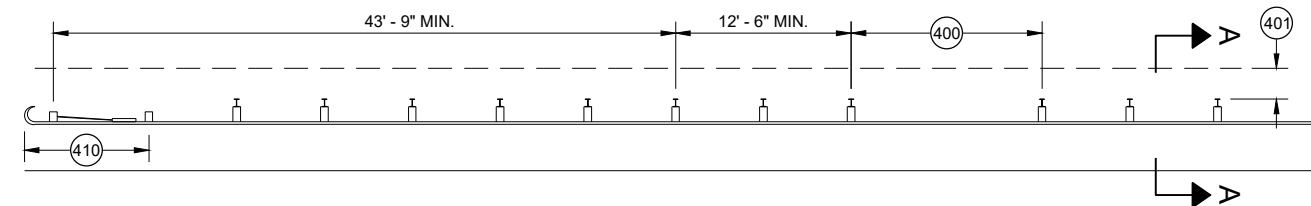
MISSING POST IN MGS GUARDRAIL NEAR EAT



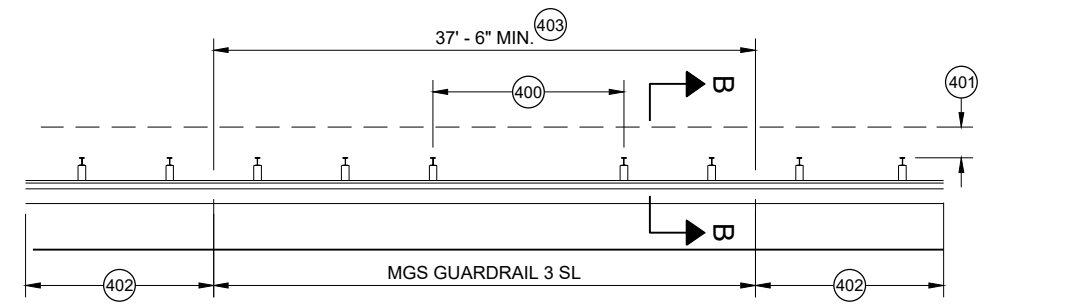
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

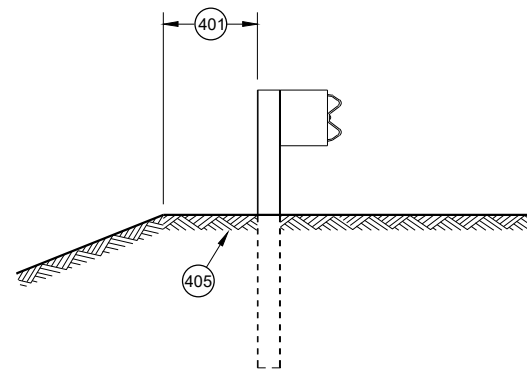


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

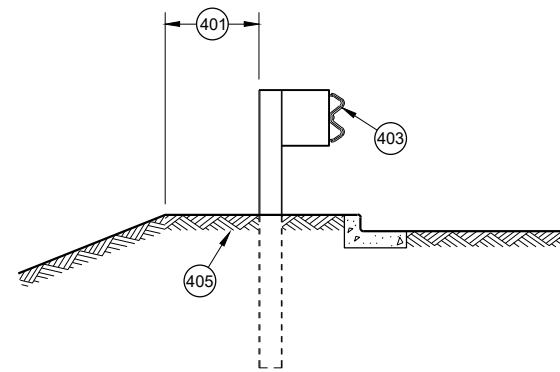


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

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



SECTION A - A



SECTION B - B

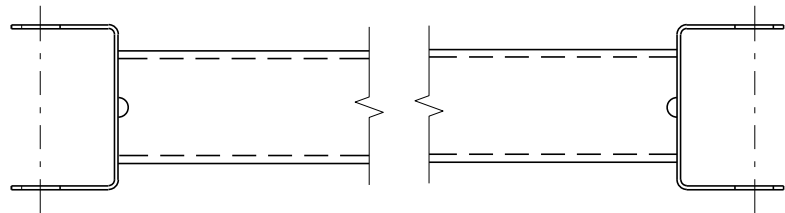
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

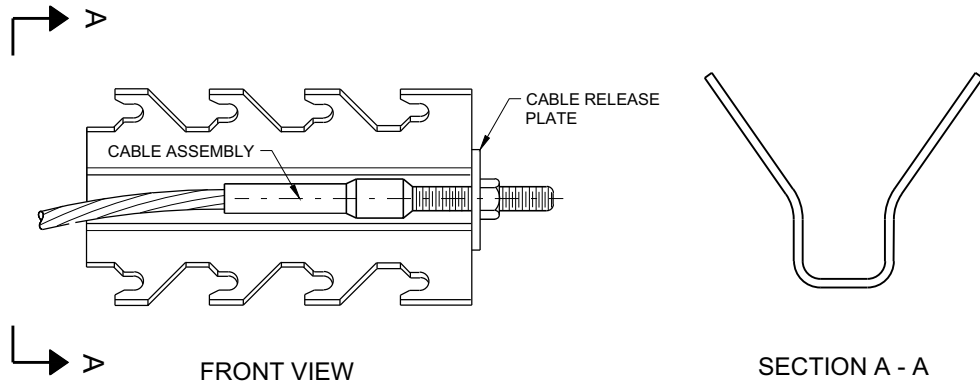
THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 94

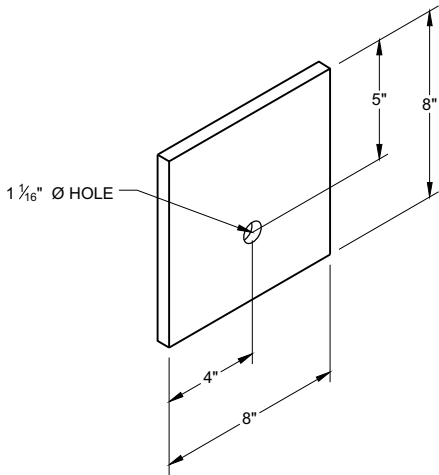


GENERIC GROUND STRUT⁹ ^E

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



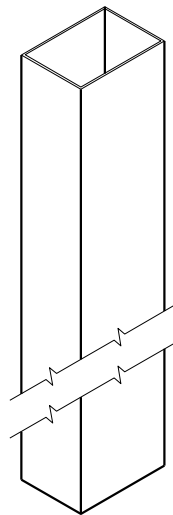
GENERIC ANCHOR CABLE BOX⁹ ^E



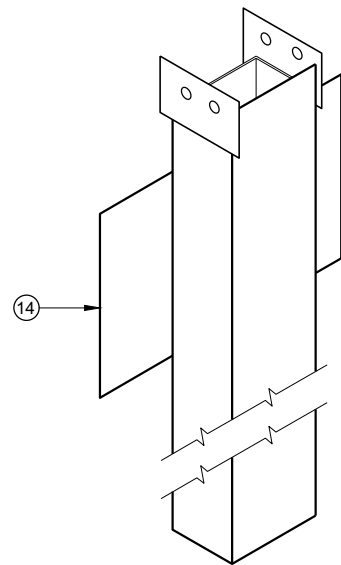
BEARING PLATE⁶ ^E

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

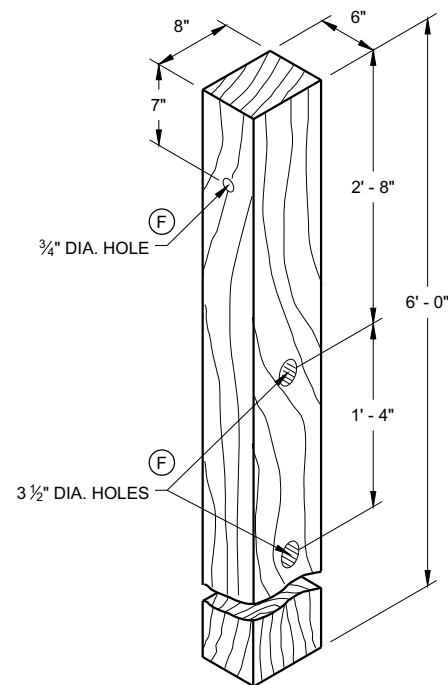
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



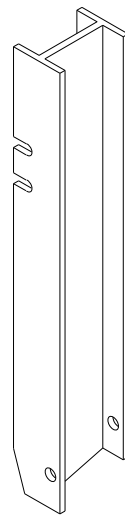
UPPER POST NO. 1 ⁽¹⁾ (E)



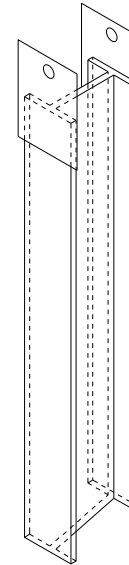
LOWER POST NO. 1 ⁽²⁾ (E)



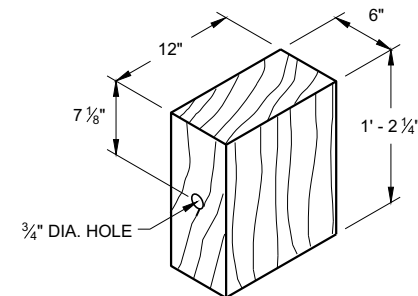
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



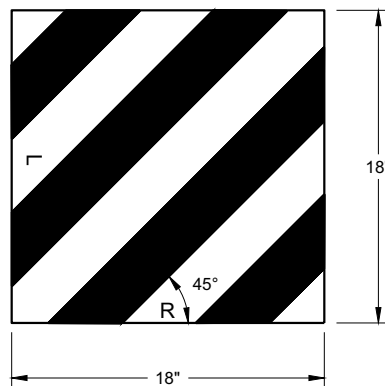
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



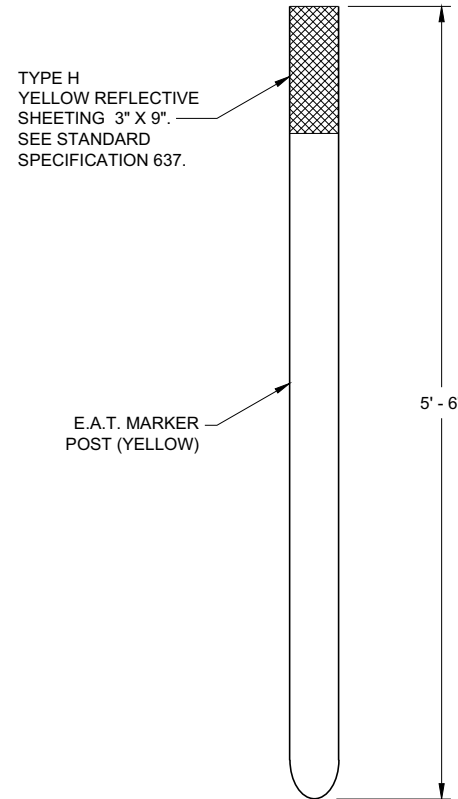
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



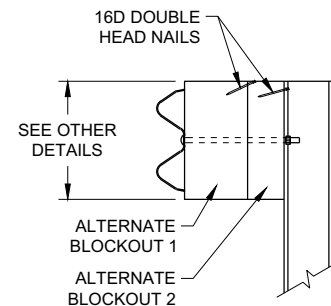
WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



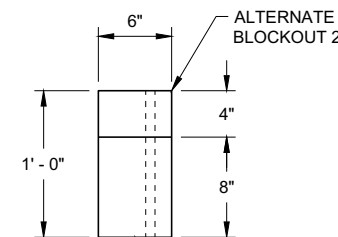
REFLECTIVE SHEETING DETAIL ^(E)



E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

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

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

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

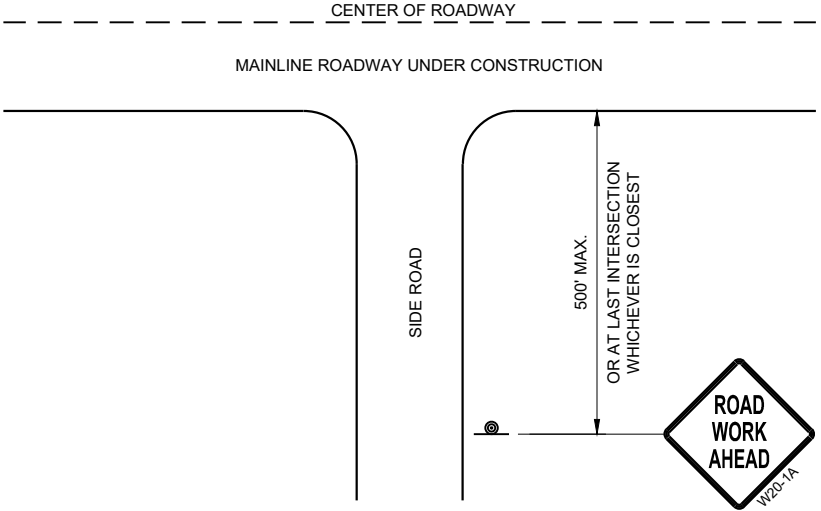
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

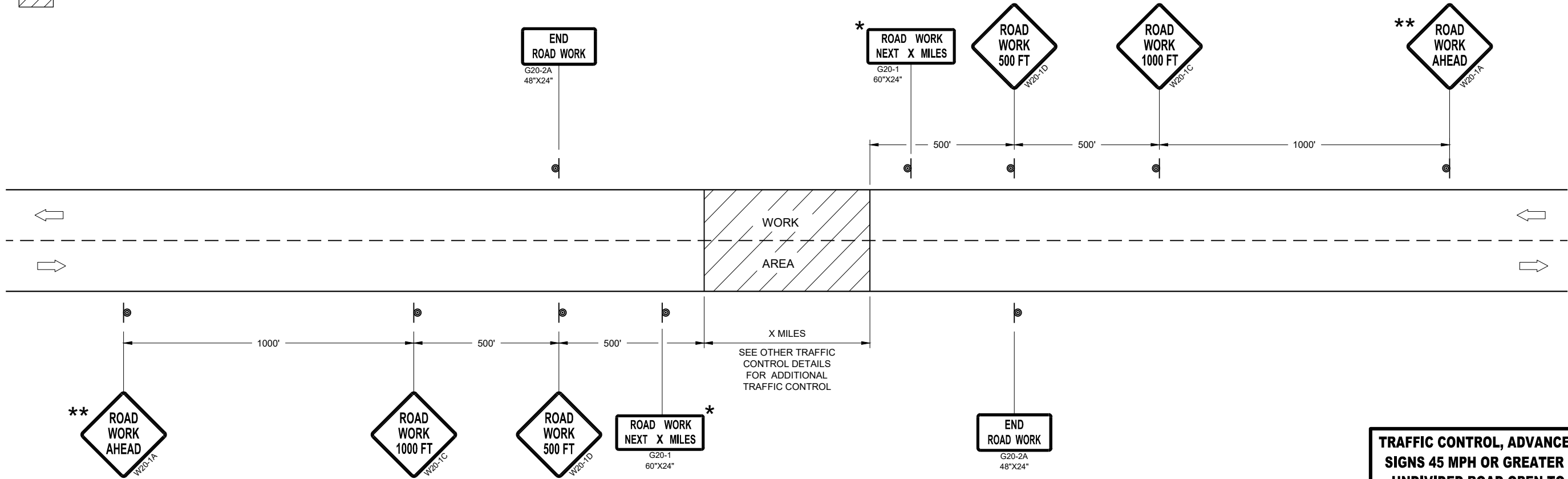
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 97
FHWA

GENERAL NOTES

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

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

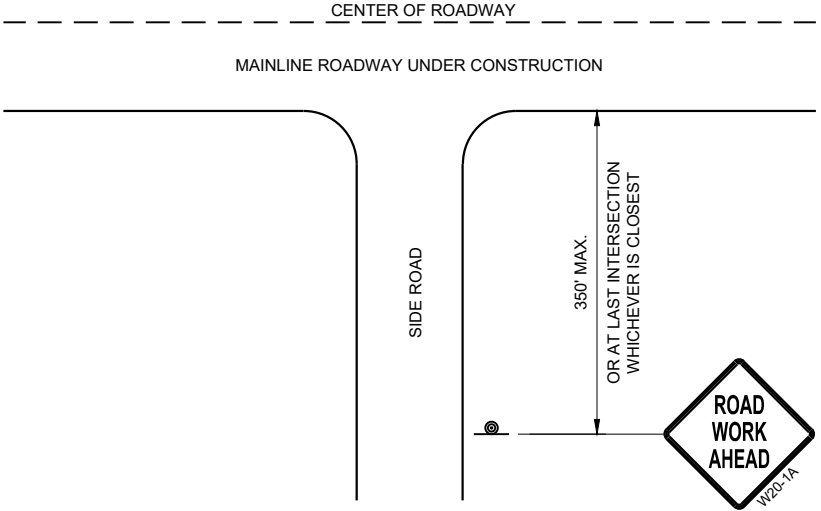
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

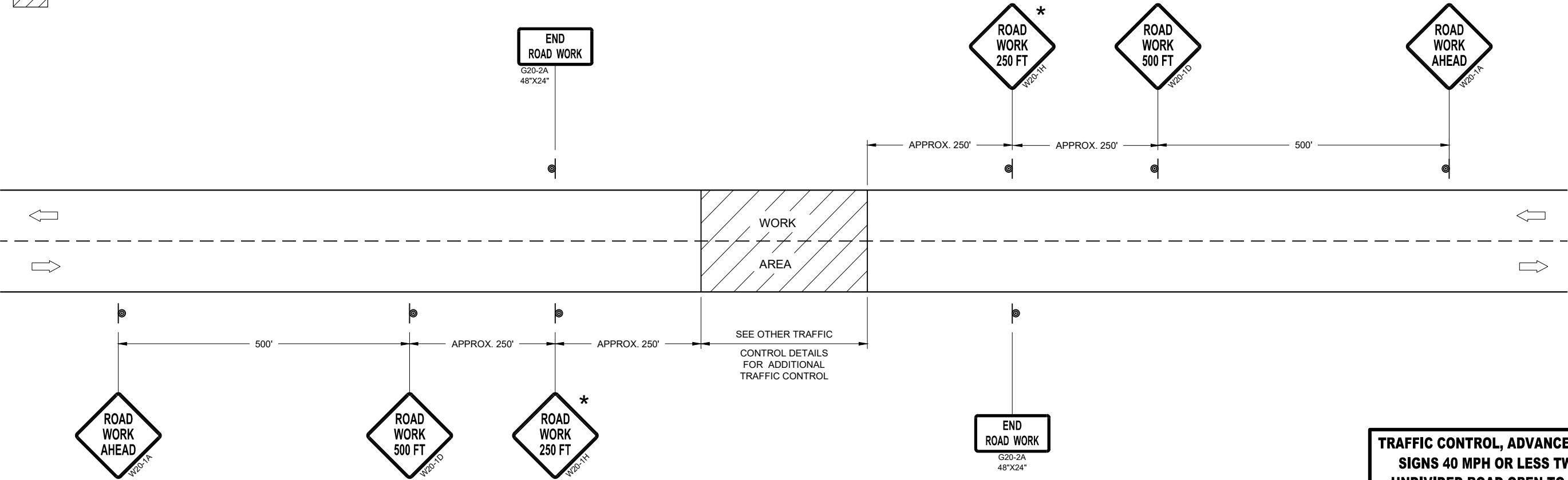
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL



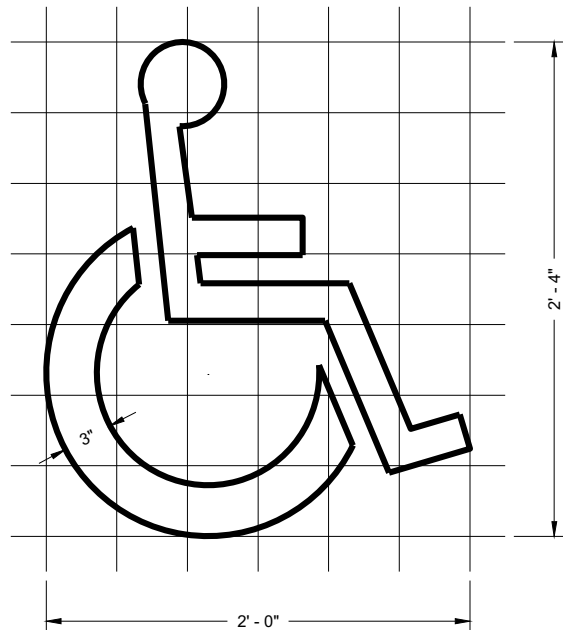
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 40 MPH OR LESS TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

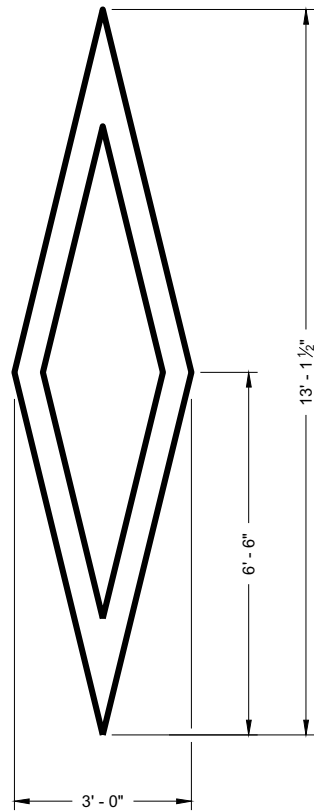
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 98

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HANDICAP SYMBOL



PREFERENTIAL
LANE SYMBOL

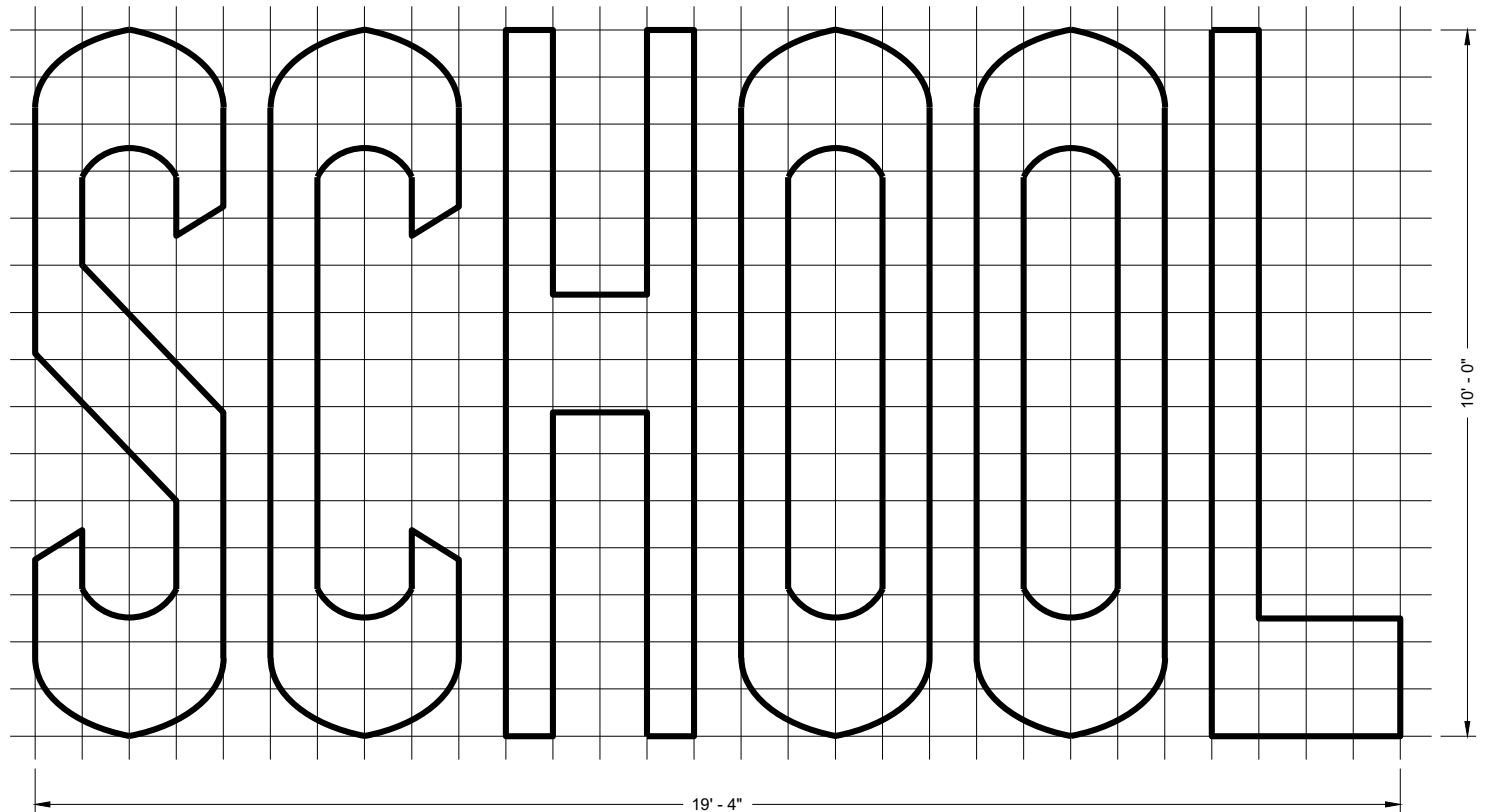
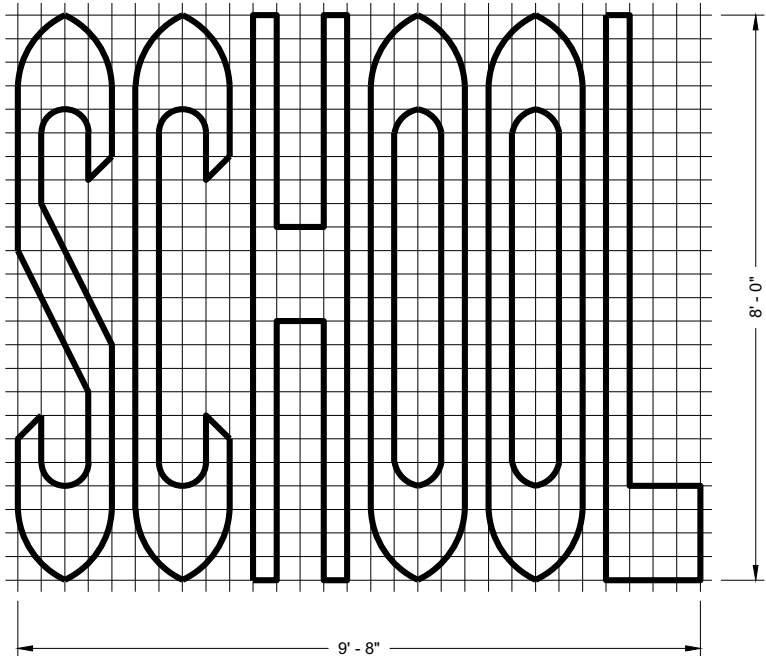
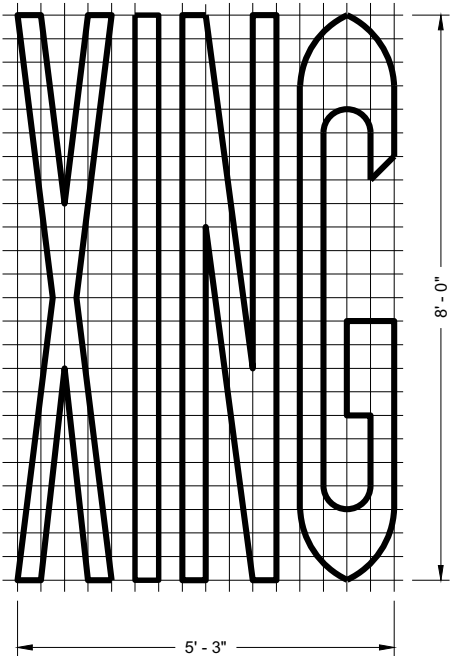
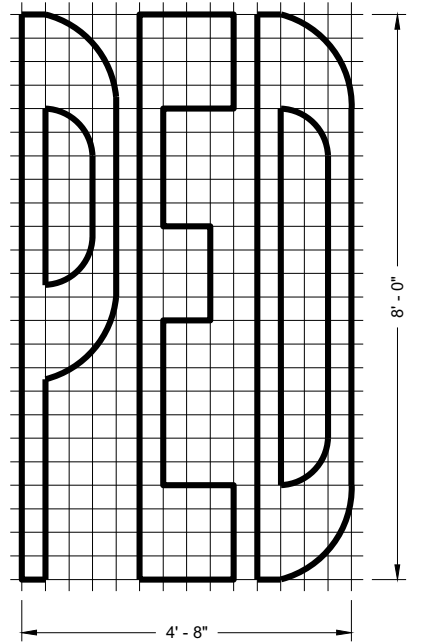
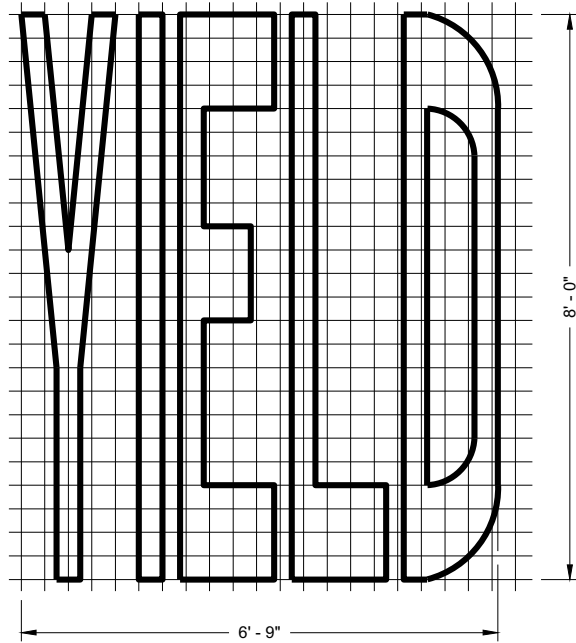
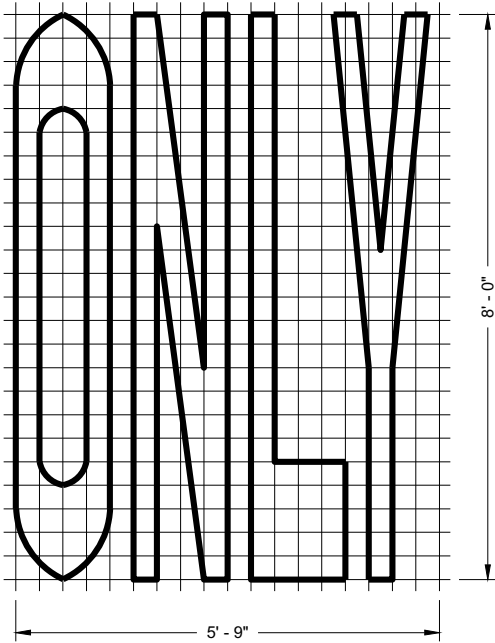
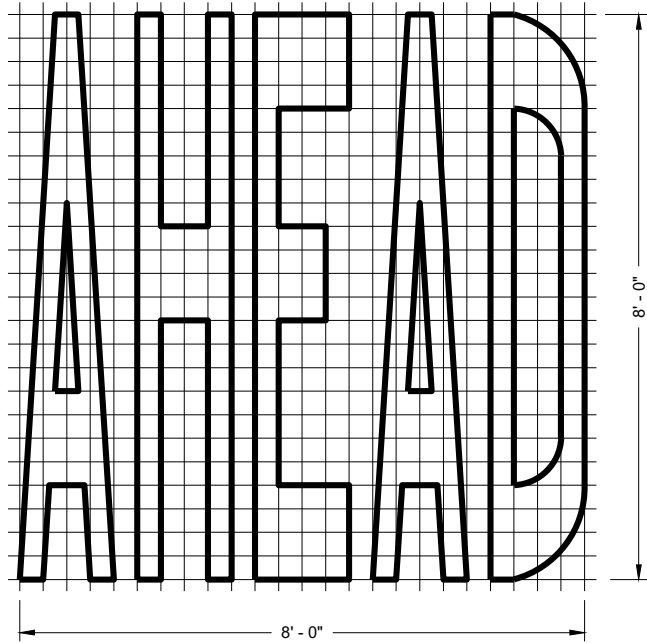
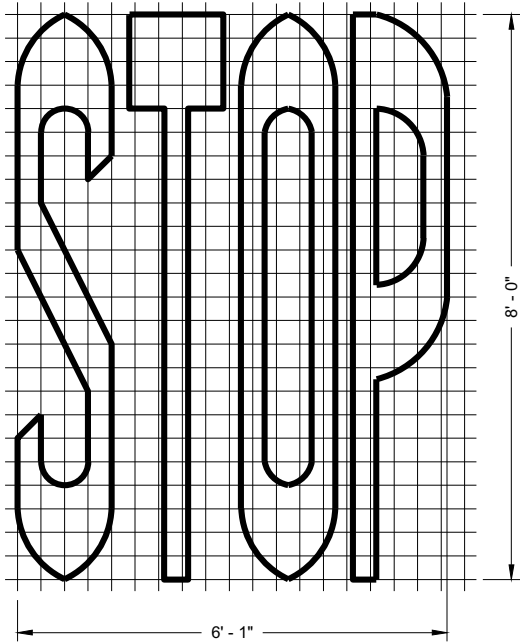
GENERAL NOTES

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

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MAP 99
ENGINEER
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SINGLE LANE

TWO - LANE

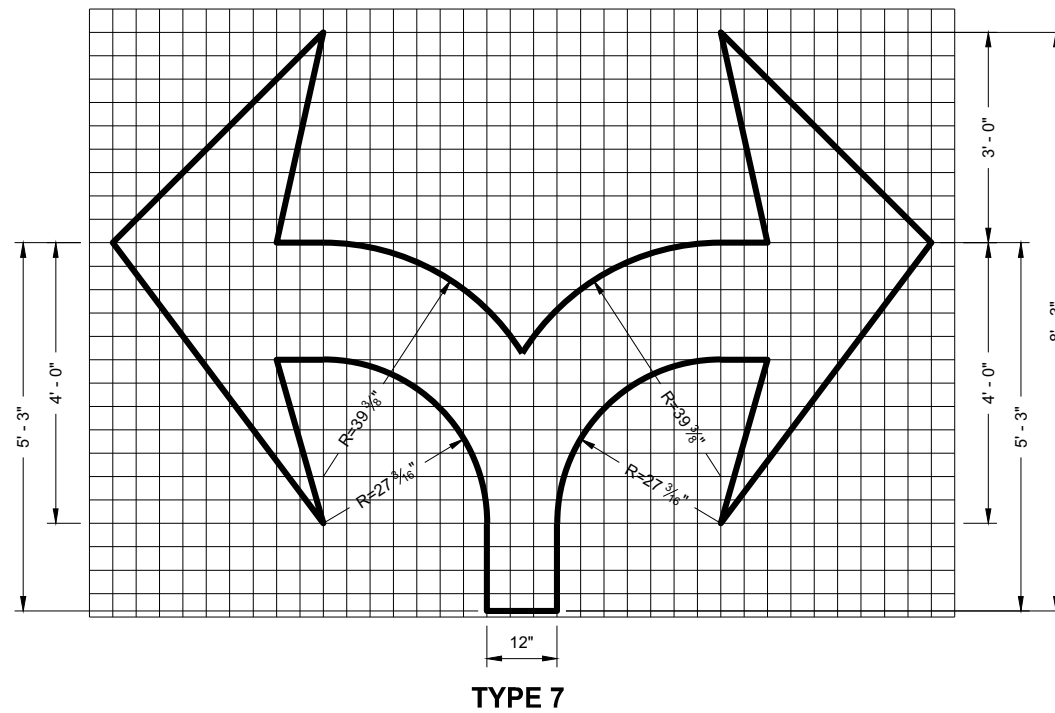
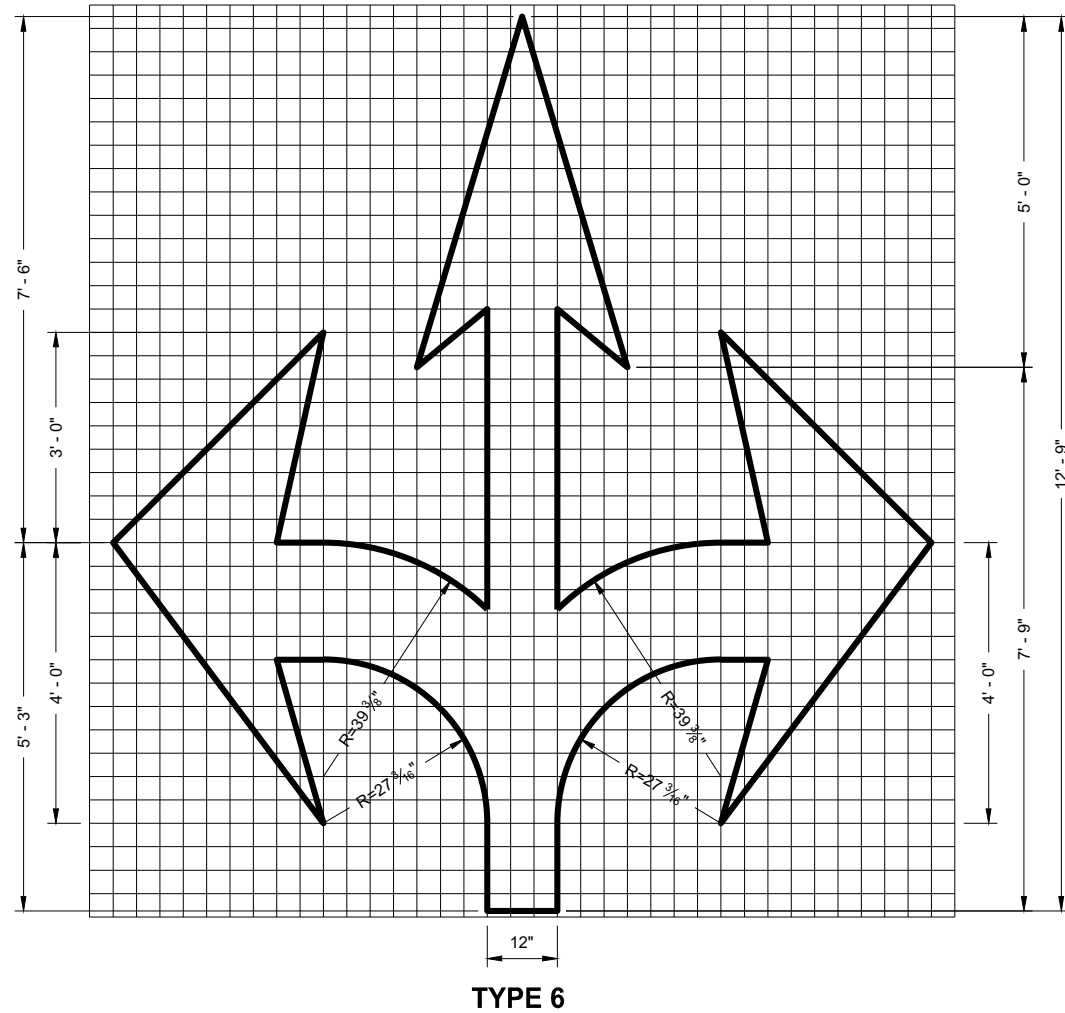
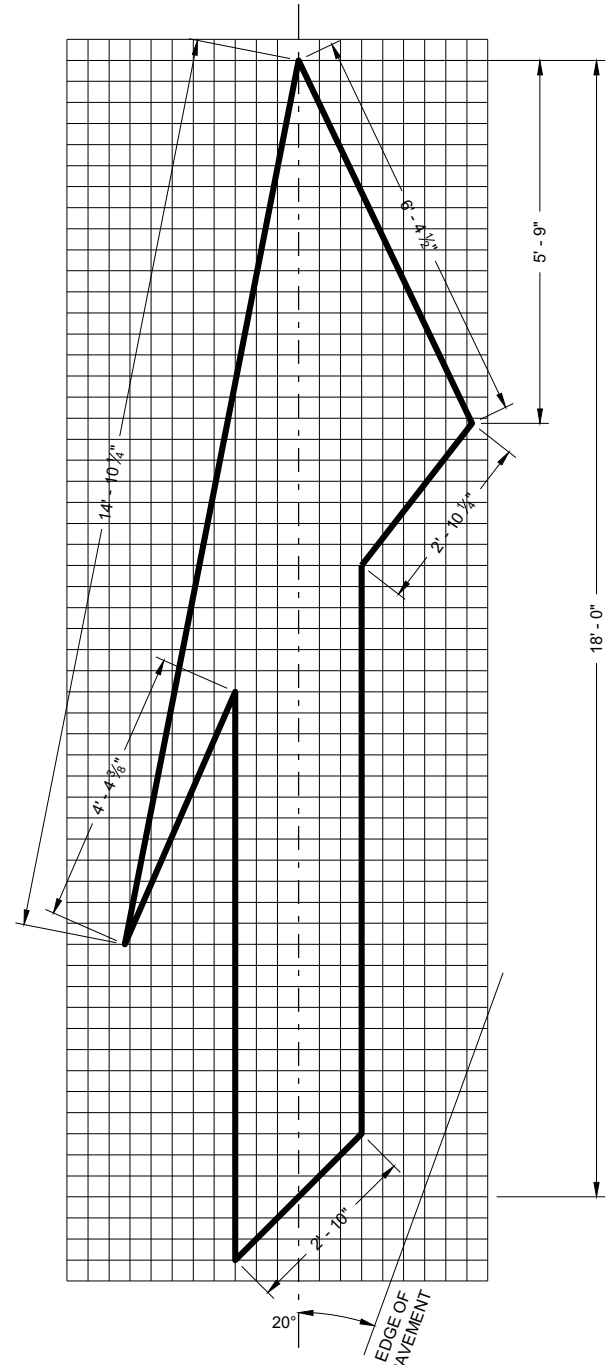
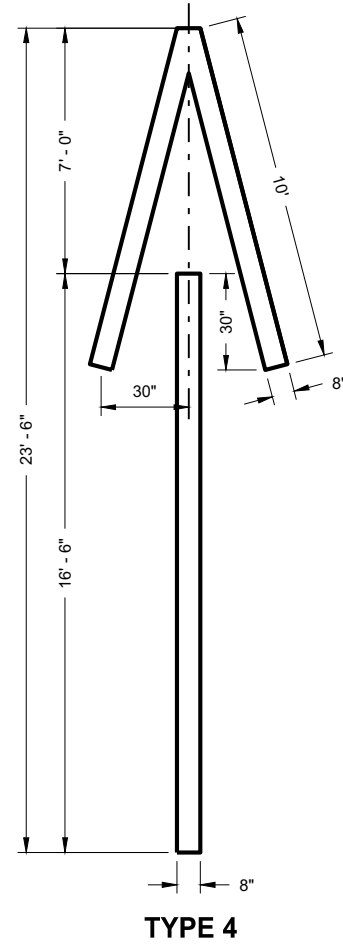
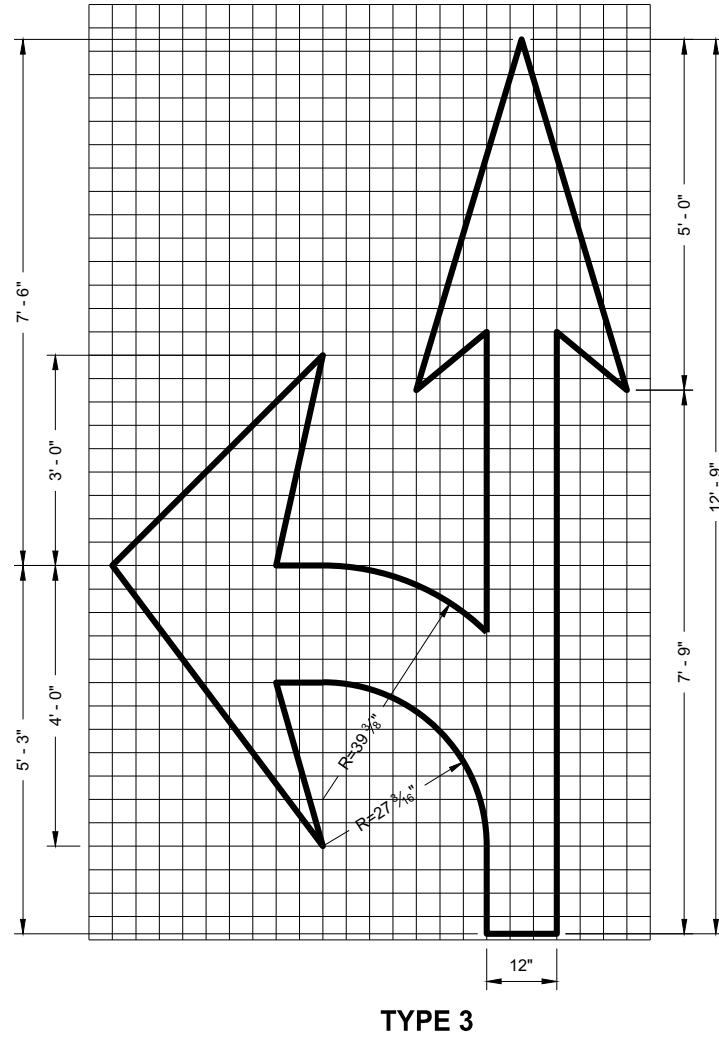
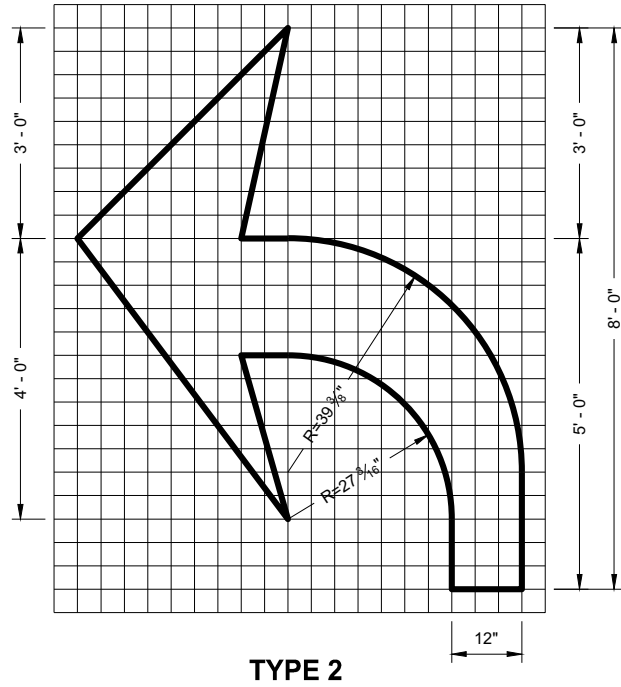
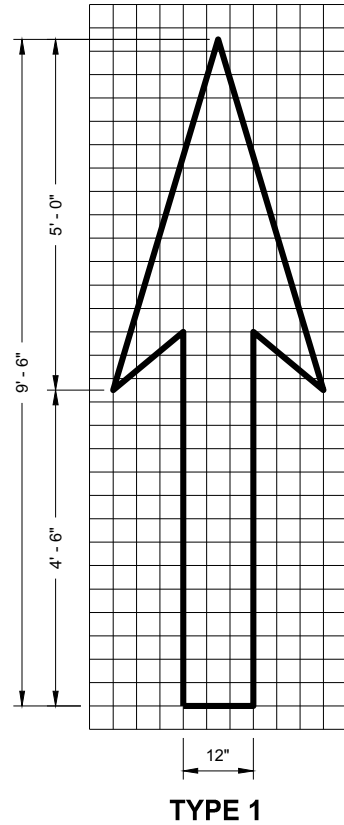
GENERAL NOTES

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 MAP ENGINEER 100
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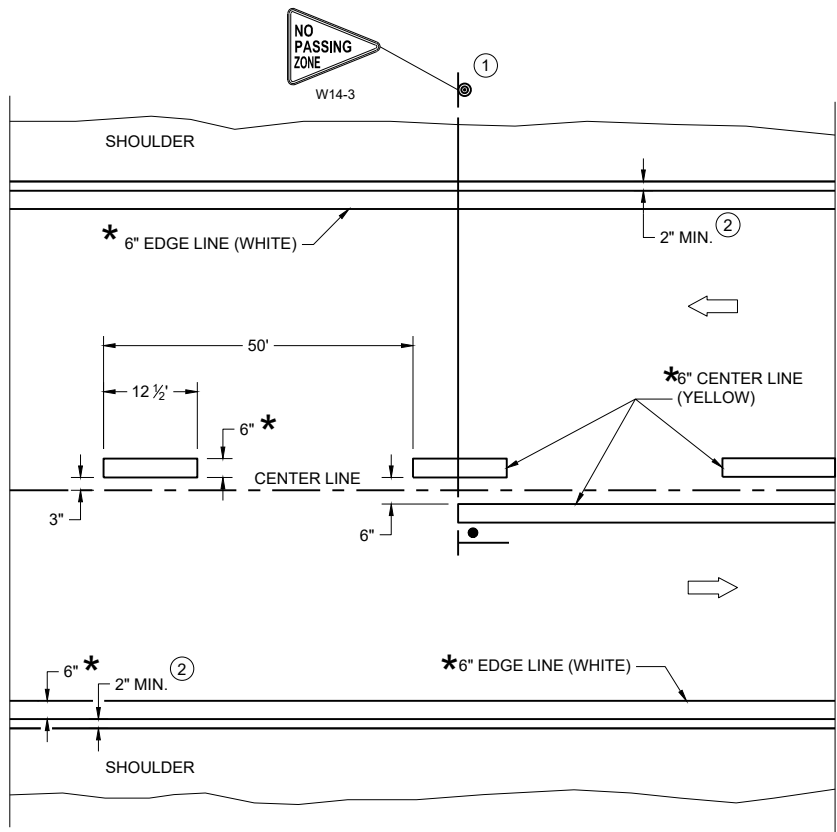
GENERAL NOTES

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.

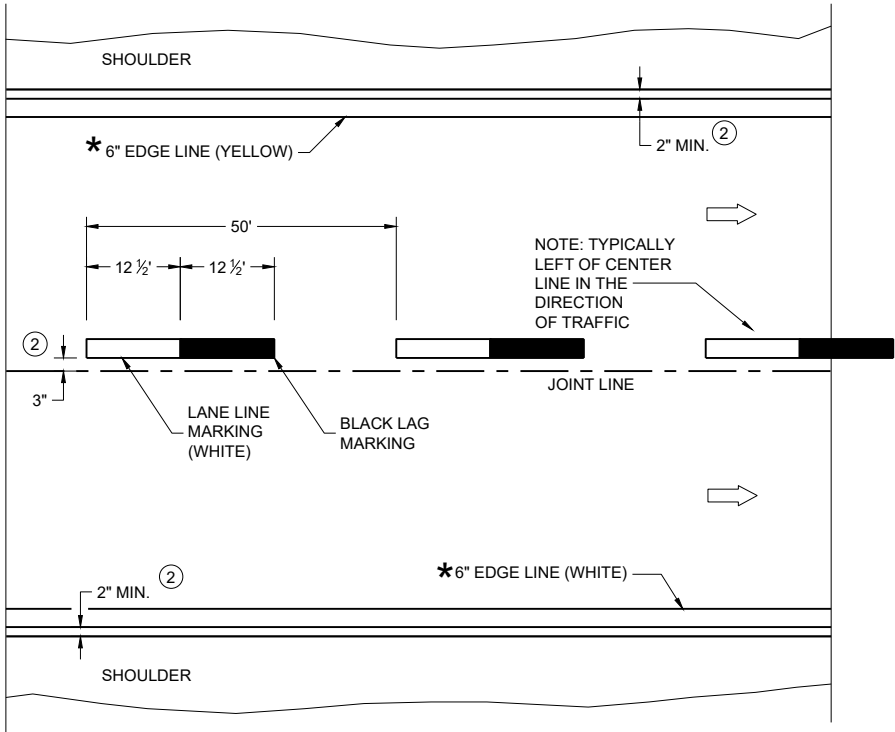
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE
/S/ Matthew Rauch
STATE SIGNING AND MAF
ENGINEER 101
FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

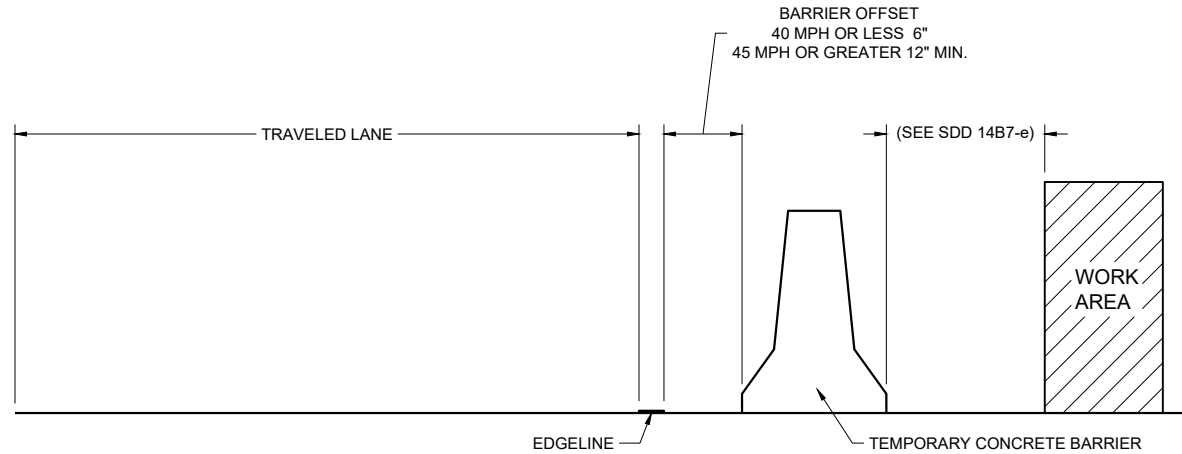
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

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

PERMANENT LONGITUDINAL PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer

FHWA



TEMPORARY BARRIER OFFSET FROM EDGE LINE

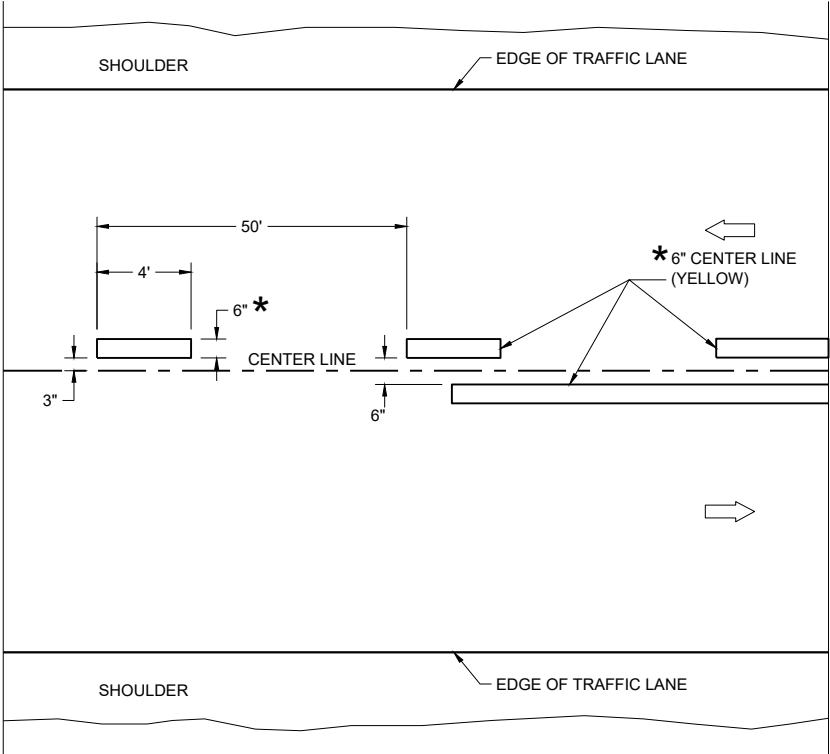
GENERAL NOTES

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

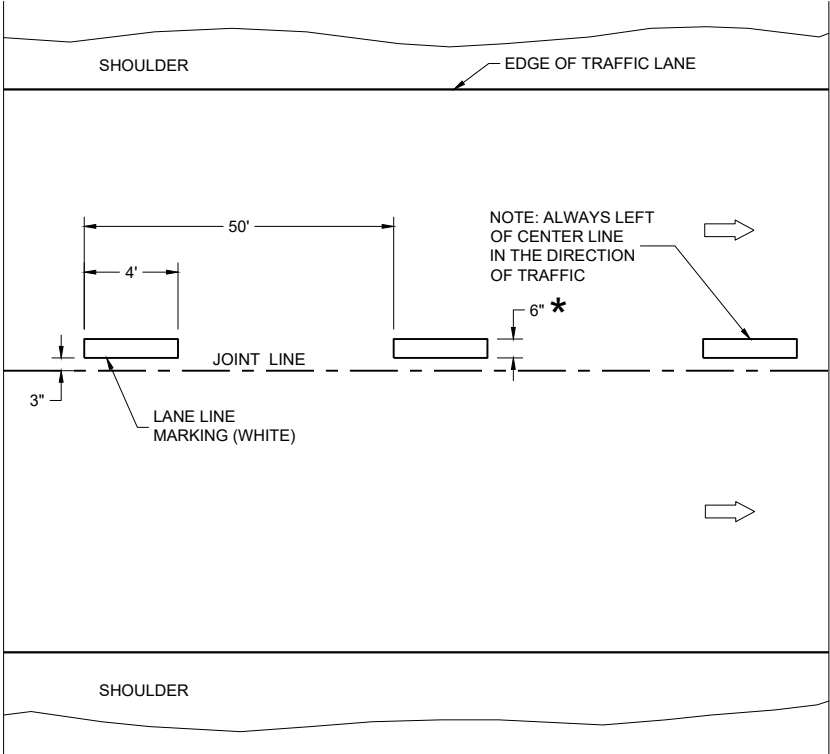
LEGEND

➡ DIRECTION OF TRAFFIC

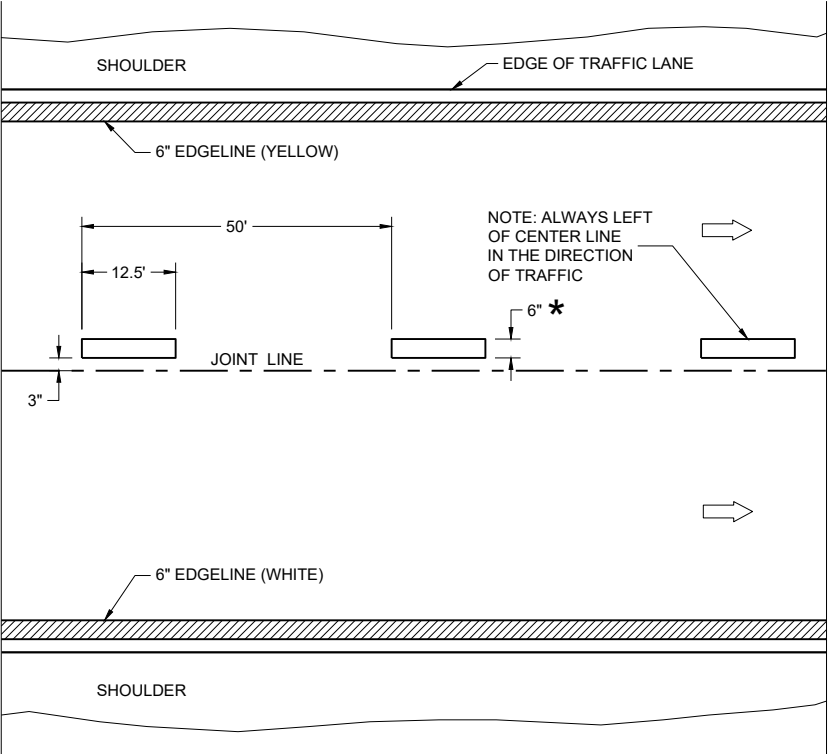
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC

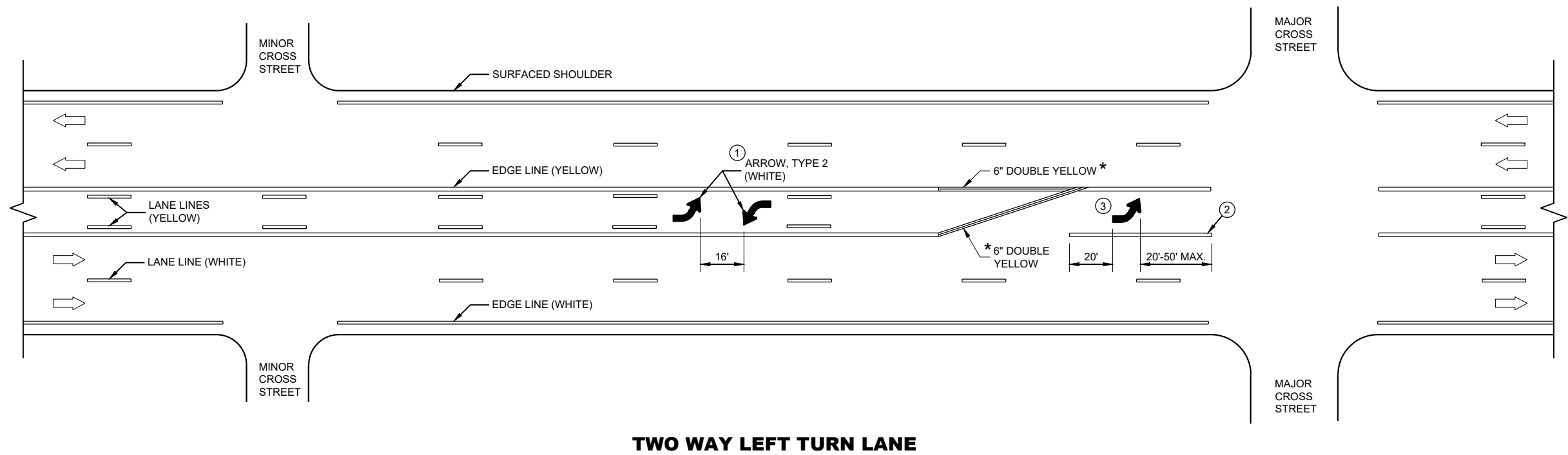


FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer

FHWA



GENERAL NOTES

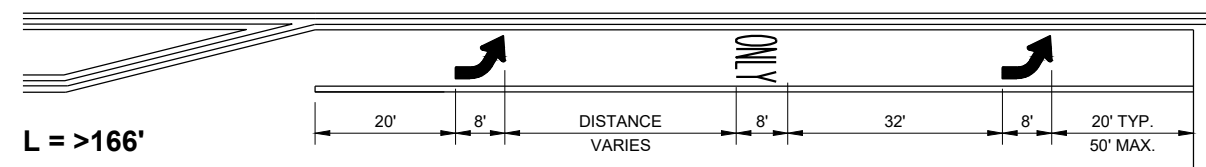
- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 10" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

➡ DIRECTION OF TRAFFIC

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



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

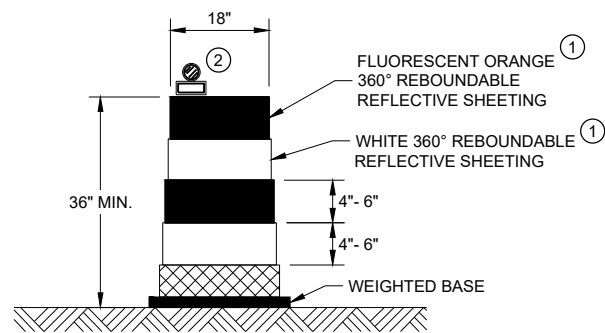


① QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

L = LENGTH OF TURN BAY

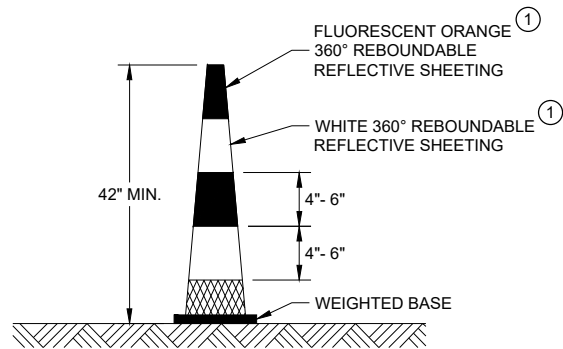
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 105



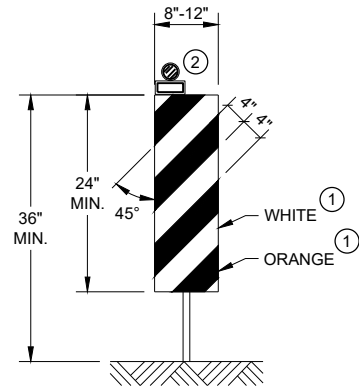
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



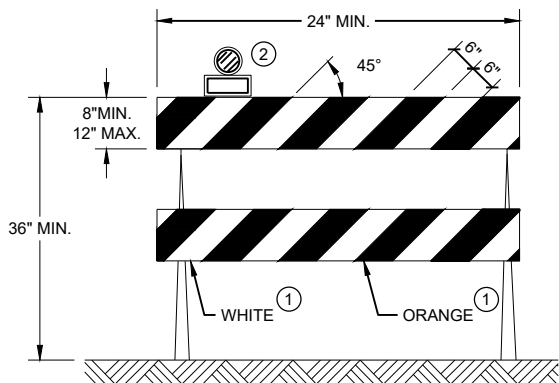
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



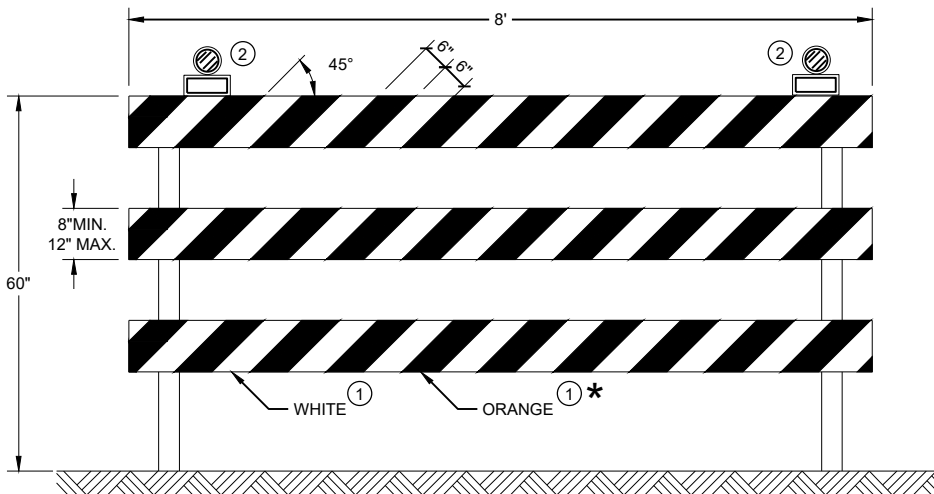
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 106

FHWA

	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

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.

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.

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

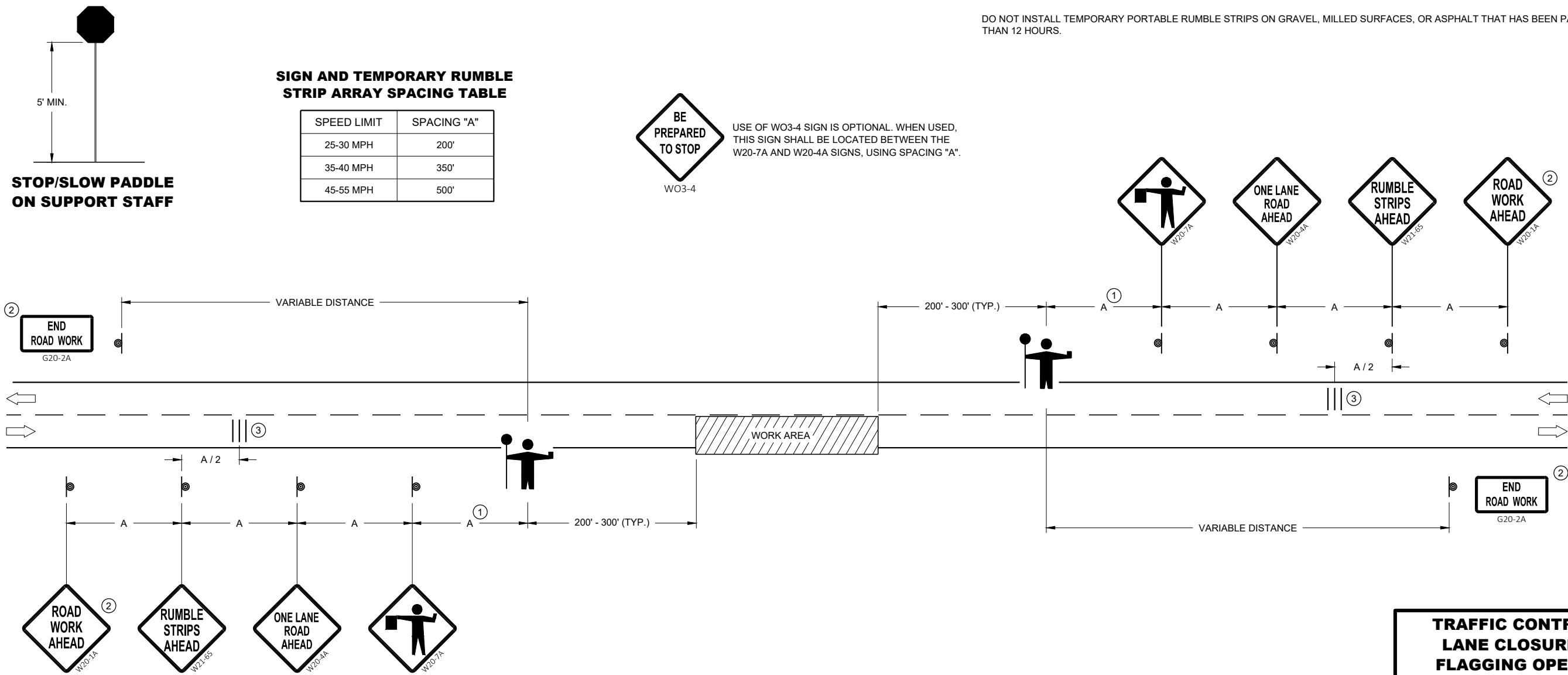
EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM 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.



APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

107

FHWA

LEGEND

- V1

LEAD VEHICLE
- V2

MARKING VEHICLE
- V3

SHADOW VEHICLE
- 

TRUCK MOUNTED ATTENUATOR (TMA)
- 

SIGN ON TEMPORARY SUPPORT
- 

DIRECTION OF TRAFFIC

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.

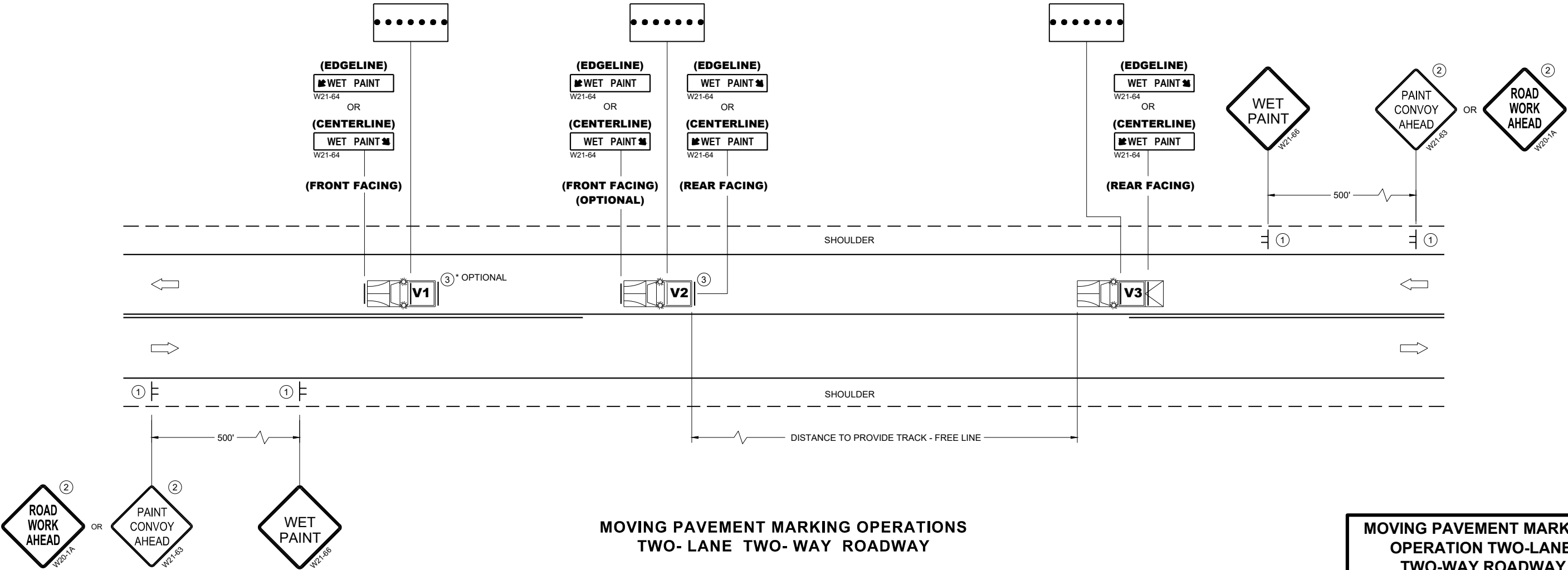
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH

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 28" FOR WET PAVEMENT MARKING .

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY MAJOR INTERSECTION.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.



MOVING PAVEMENT MARKING
OPERATION TWO-LANE
TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024 /S/ Andrew Heidtke
DATE 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)

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.

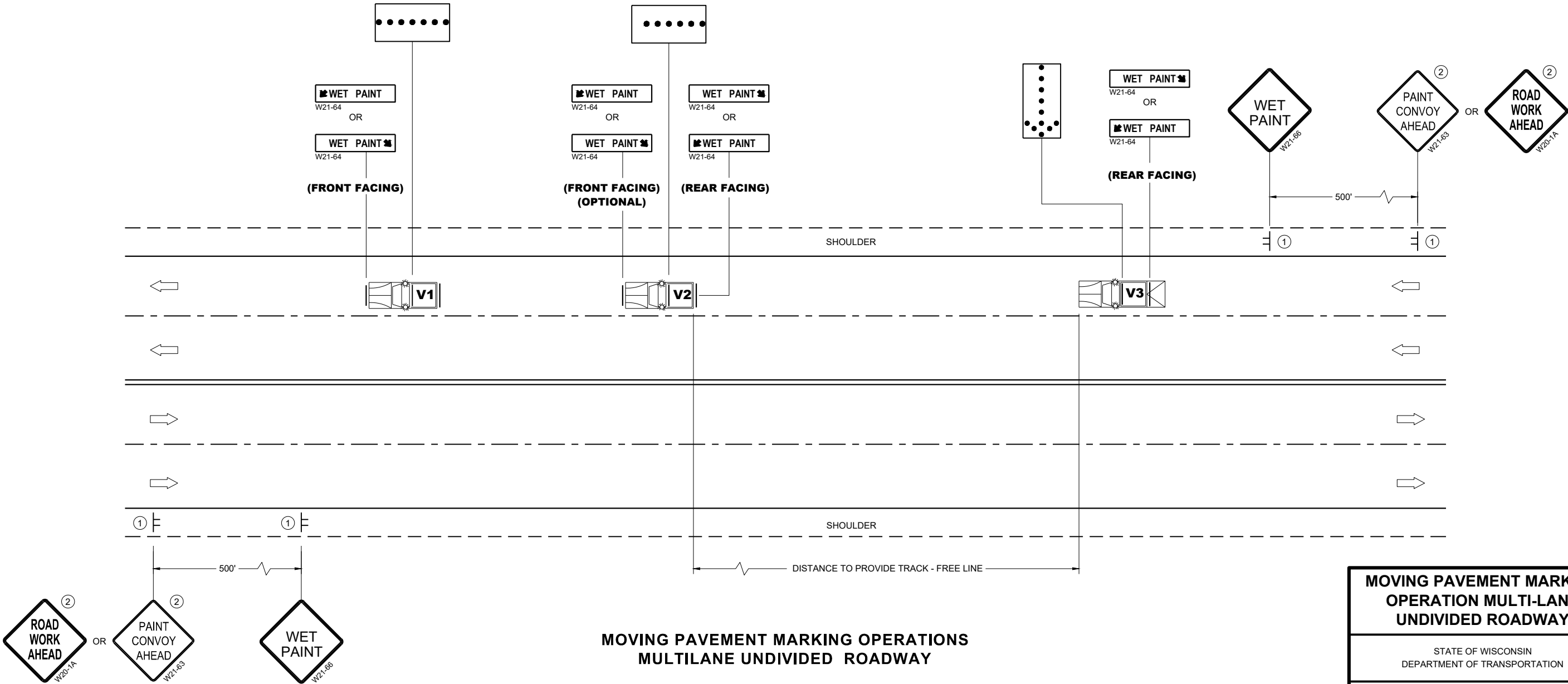
WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

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 28" FOR WET PAVEMENT MARKINGS.

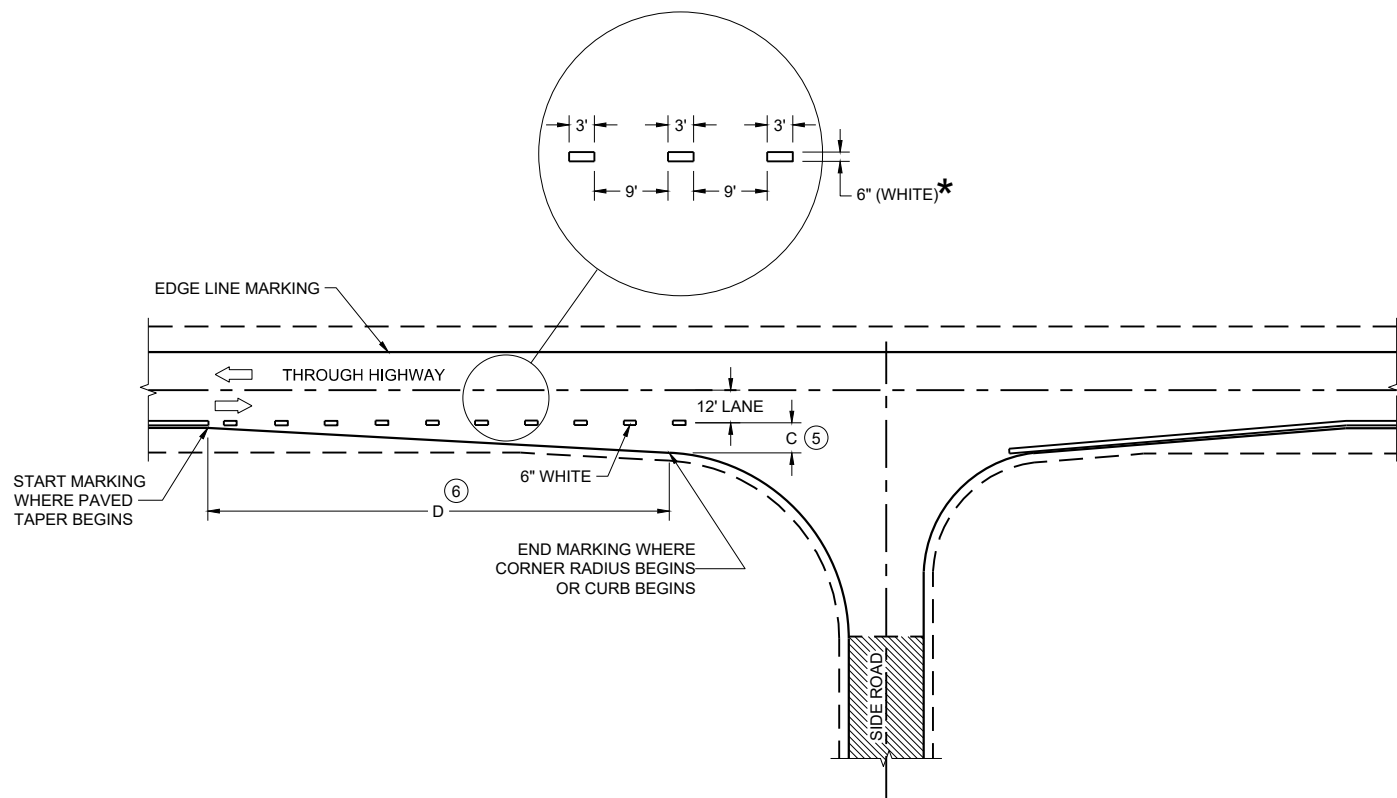
- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY MAJOR INTERSECTION.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



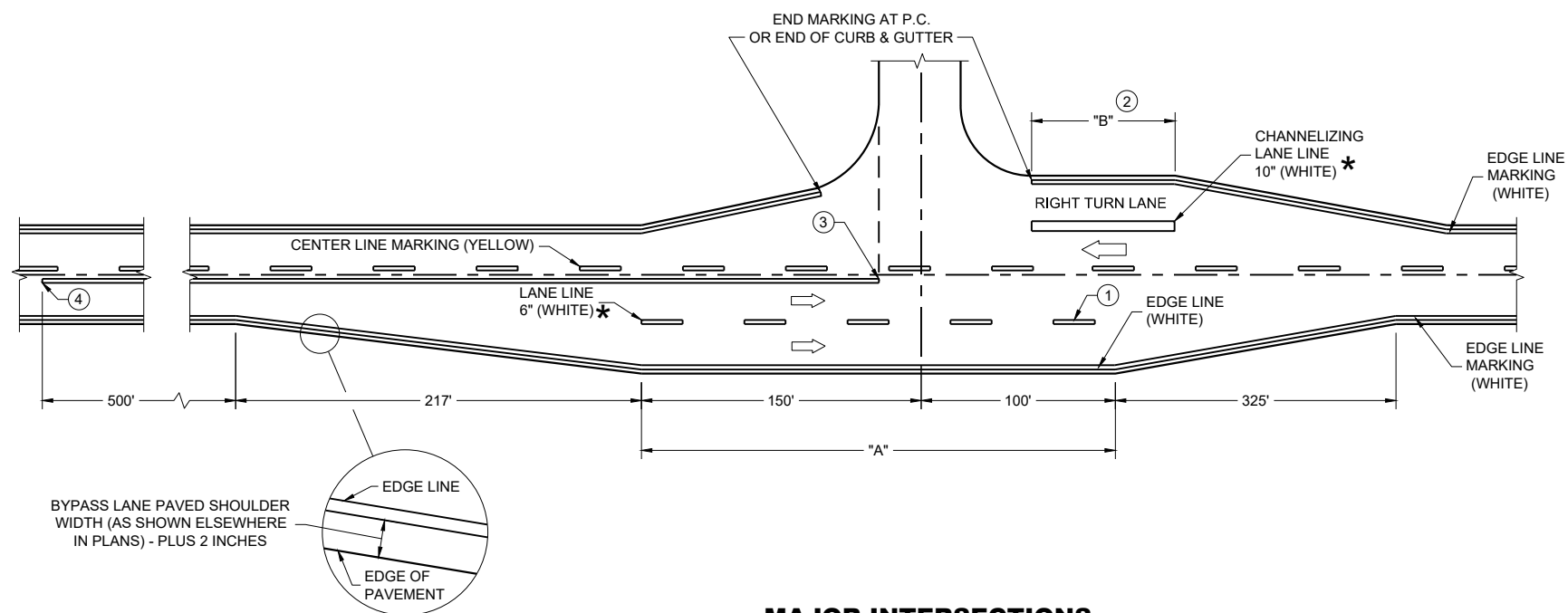
MOVING PAVEMENT MARKING
OPERATION MULTI-LANE
UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



MINOR INTERSECTION



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

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

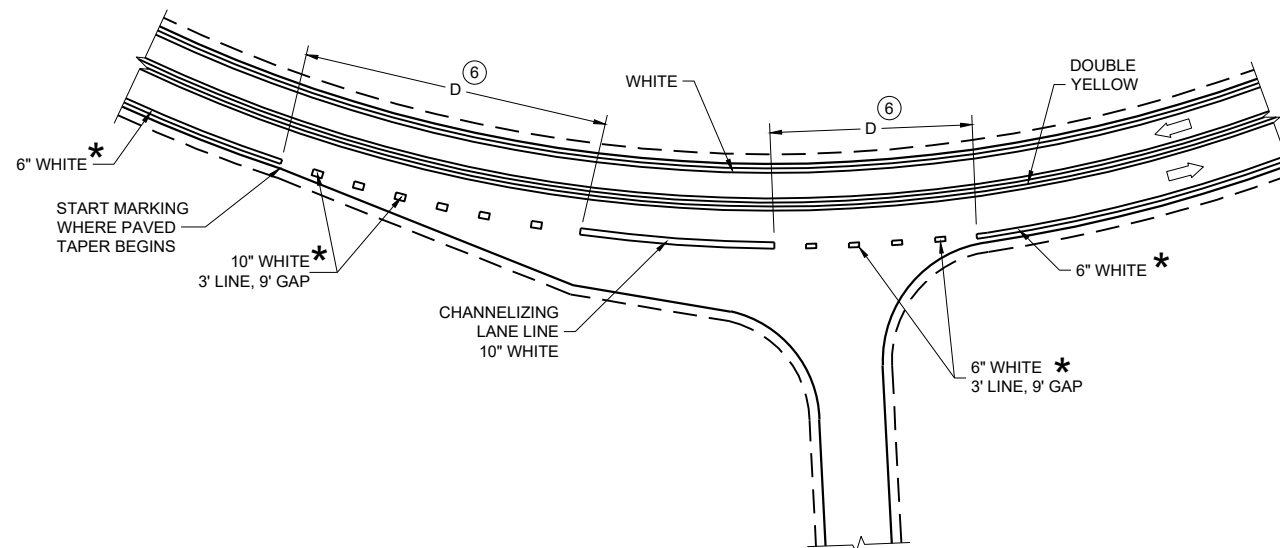
GENERAL NOTES

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

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

LEGEND

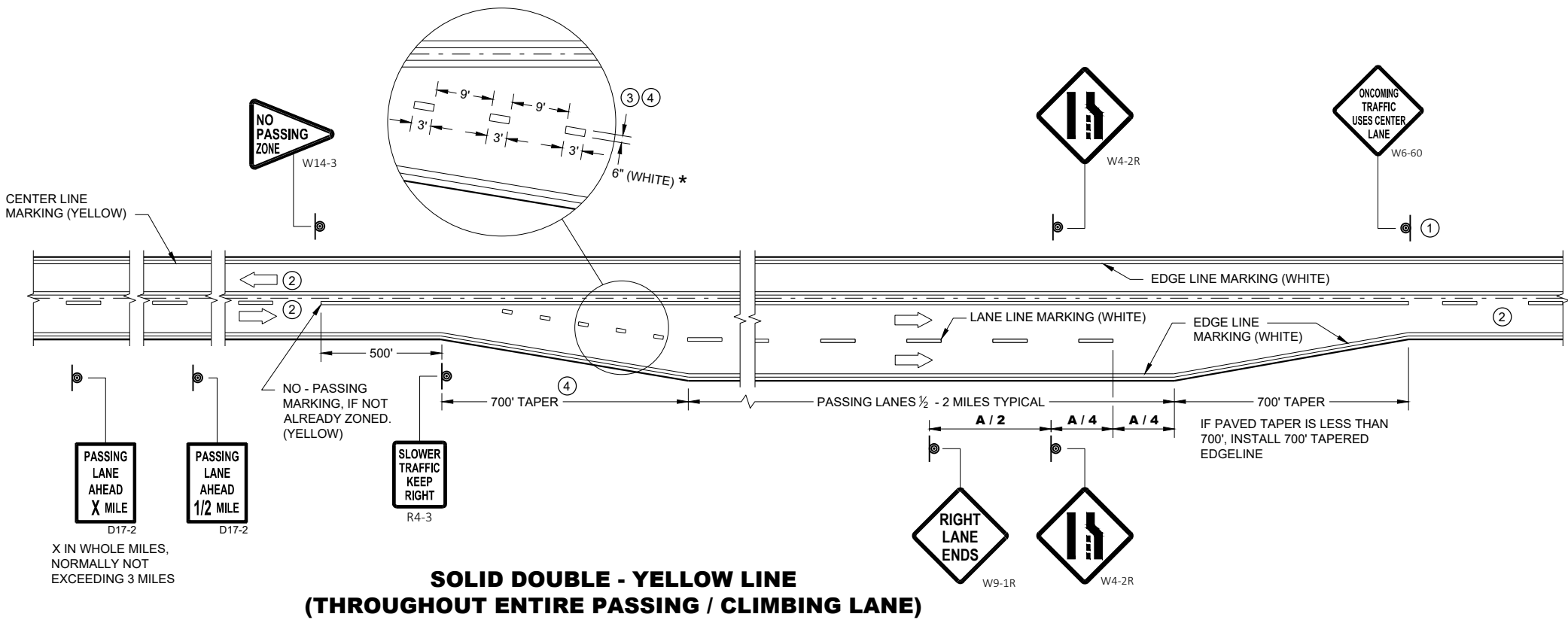
➡ DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

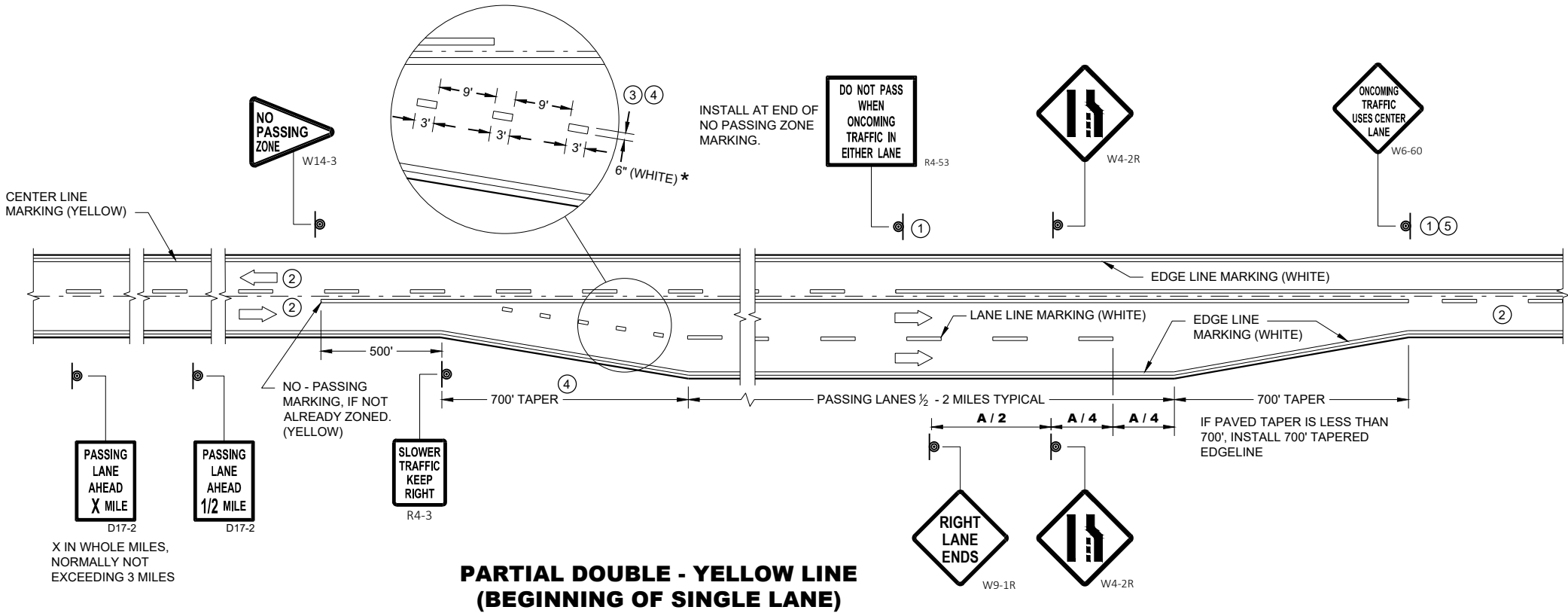
- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - 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 1 MILE UP UNTIL R4-53.

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

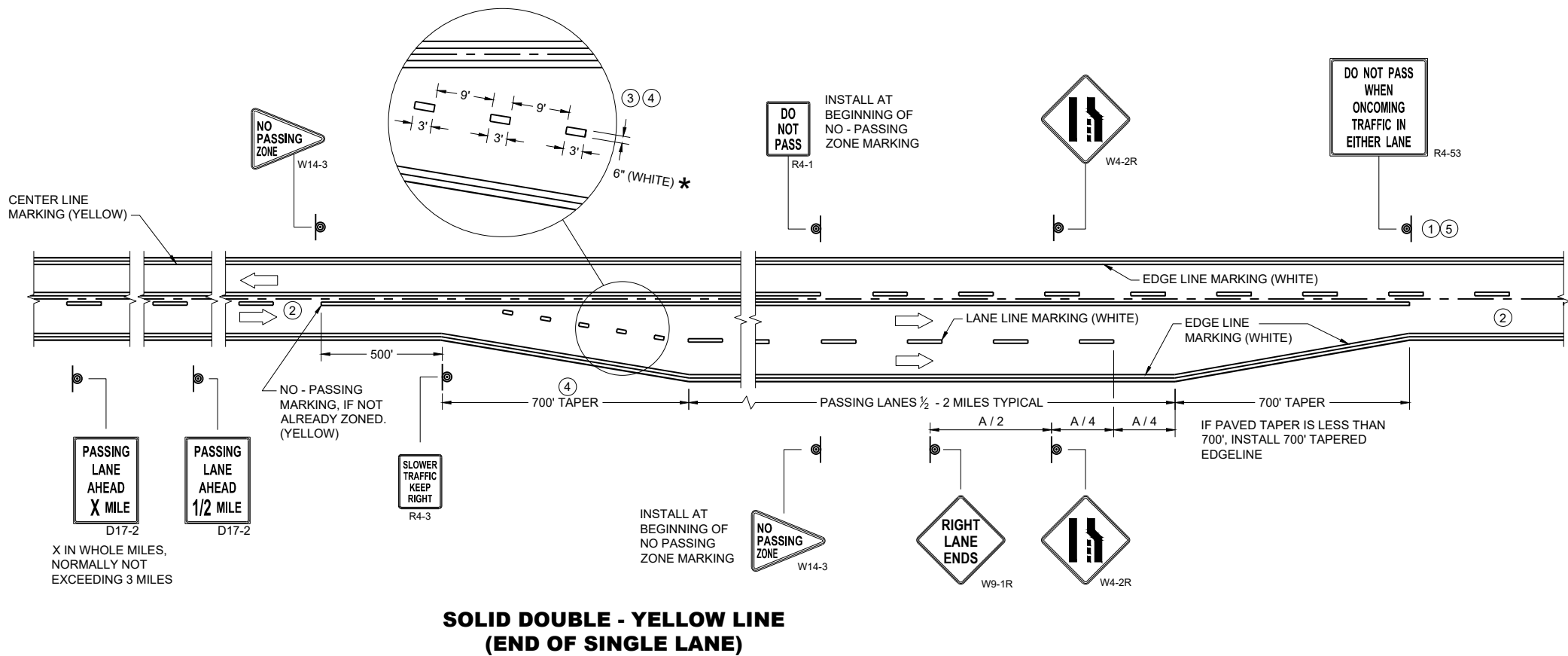
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 111



GENERAL NOTES

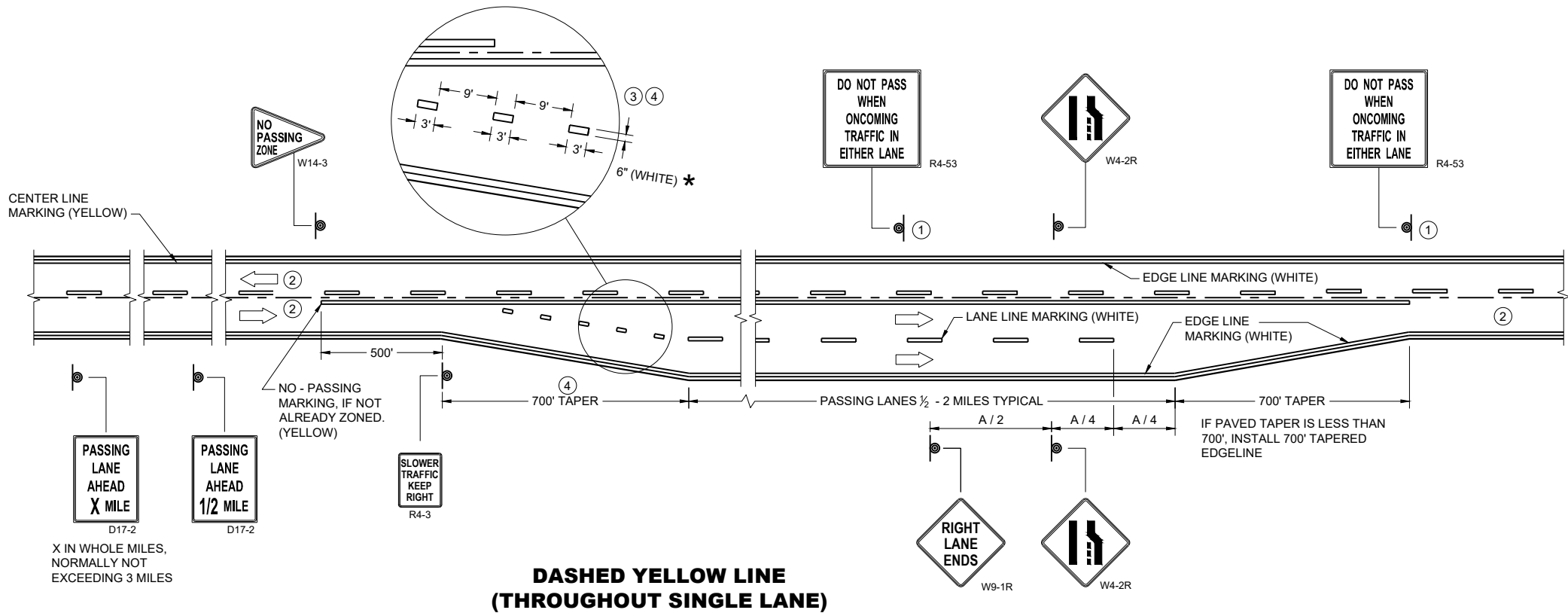
- 1 SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- 2 THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- 3 THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - 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

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Jeannie Silver
DATE
FHWA Statewide Pavement Marking Engineer

	SIGN ON PERMANENT SUPPORT
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
	TYPE III BARRICADE WITH ATTACHED SIGN
	TYPE "A" WARNING LIGHT (FLASHING)
	REMOVING PAVEMENT MARKINGS
	DIRECTION OF TRAFFIC
	WORK AREA
	CONNECTED ARROW BOARD
	WZ START LOCATION MARKER
	WZ END LOCATION MARKER

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

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 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. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

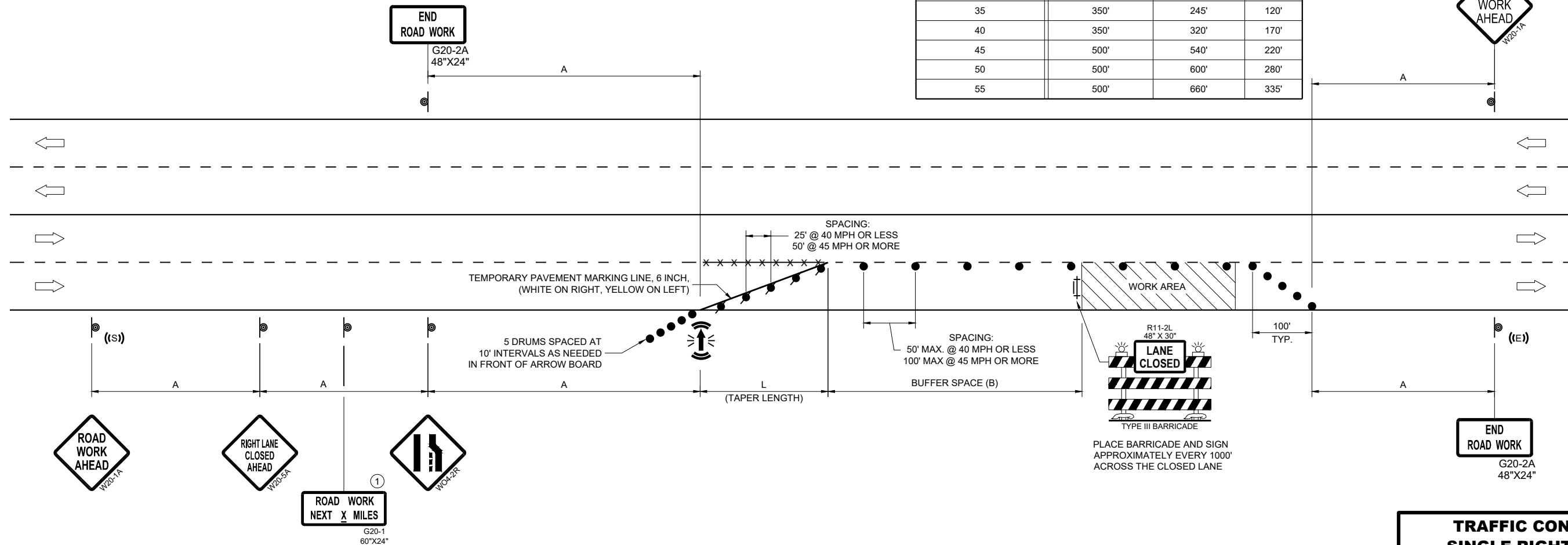
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'



APPROVED

November 2024 /S/ Andrew Heidtke

DATE WORK ZONE ENGINEER

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.

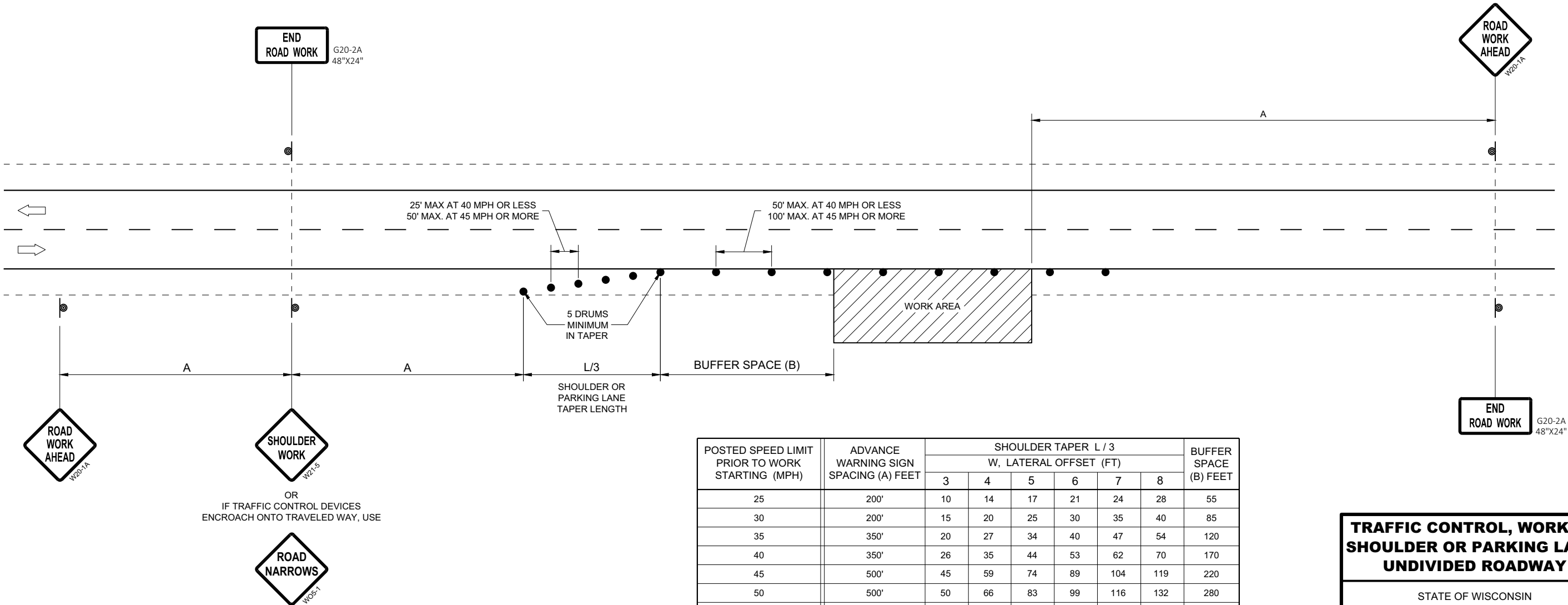
W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

6

6

SDD 15D28 - 04

SDD 15D28 - 04



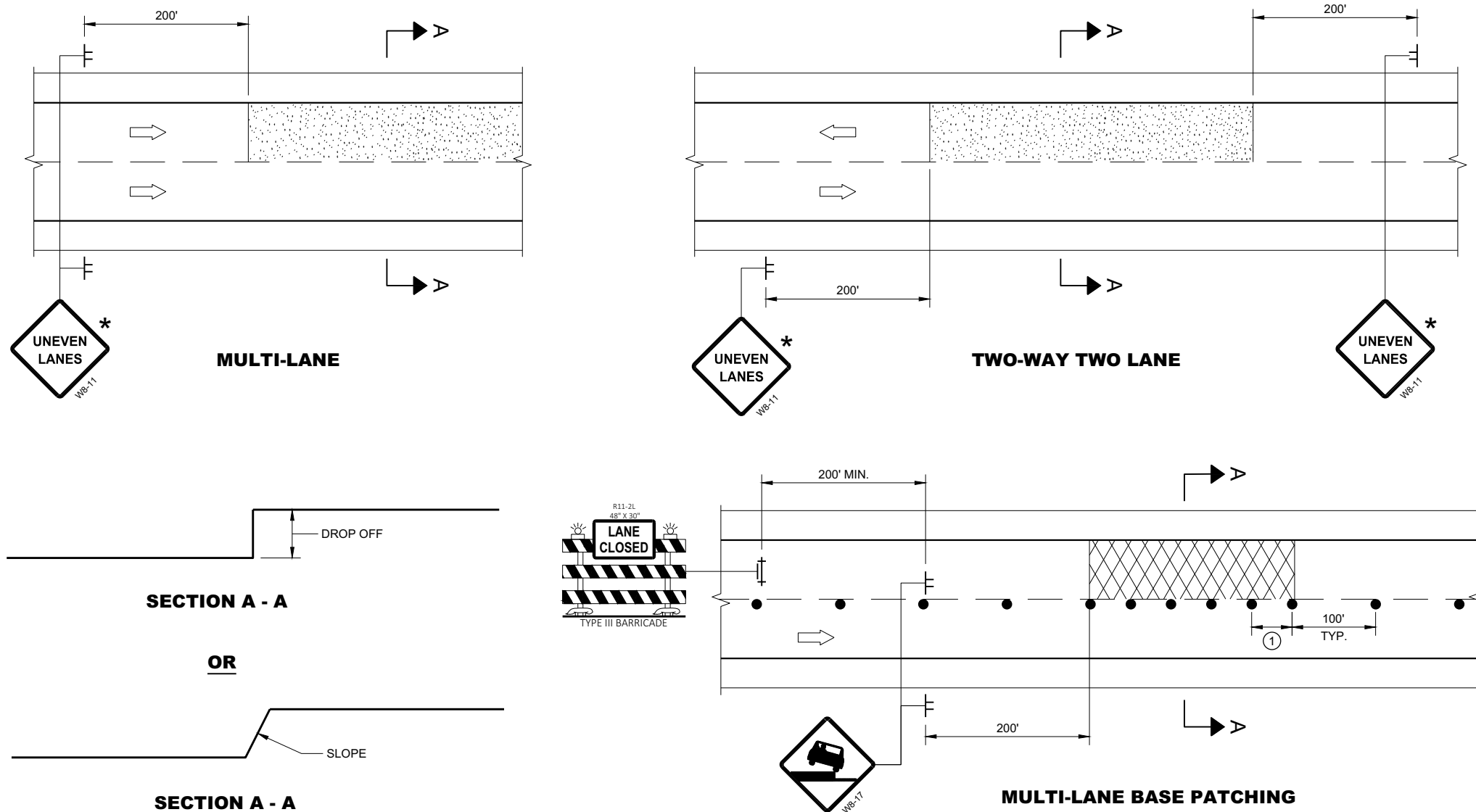
POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	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 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE T
SAFETY ENGINEER 114

FHWA



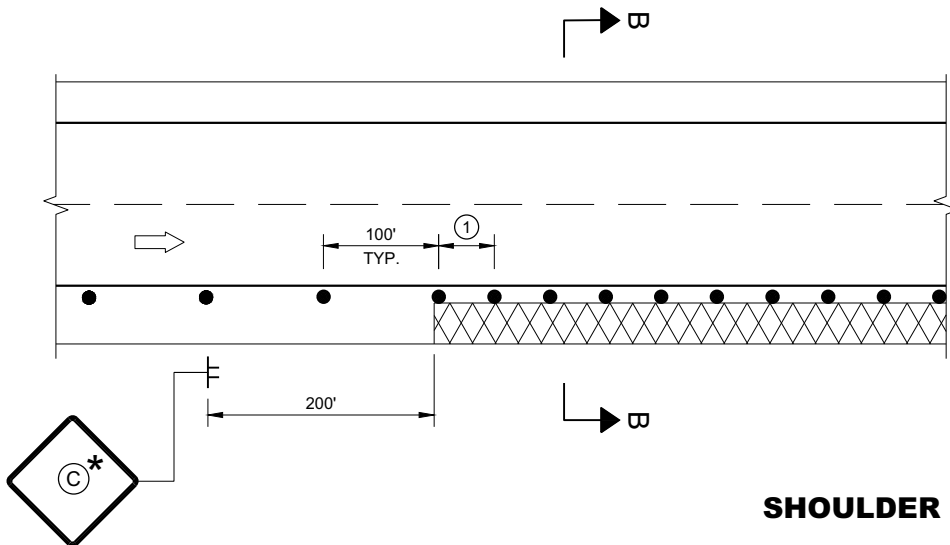
ADJACENT LANE DROP-OFFS

GENERAL NOTES

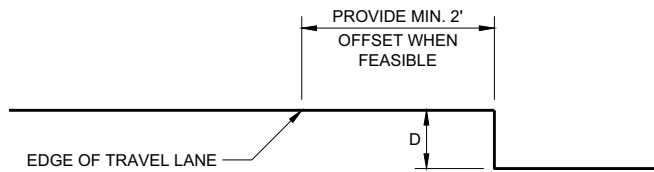
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 115
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.

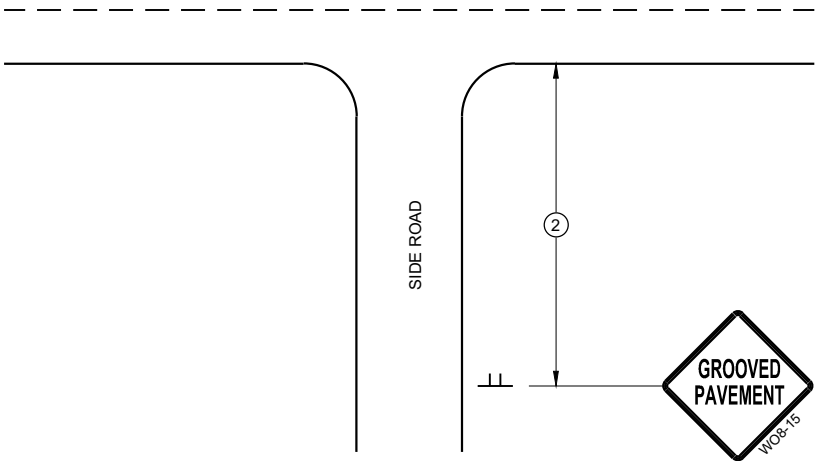
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

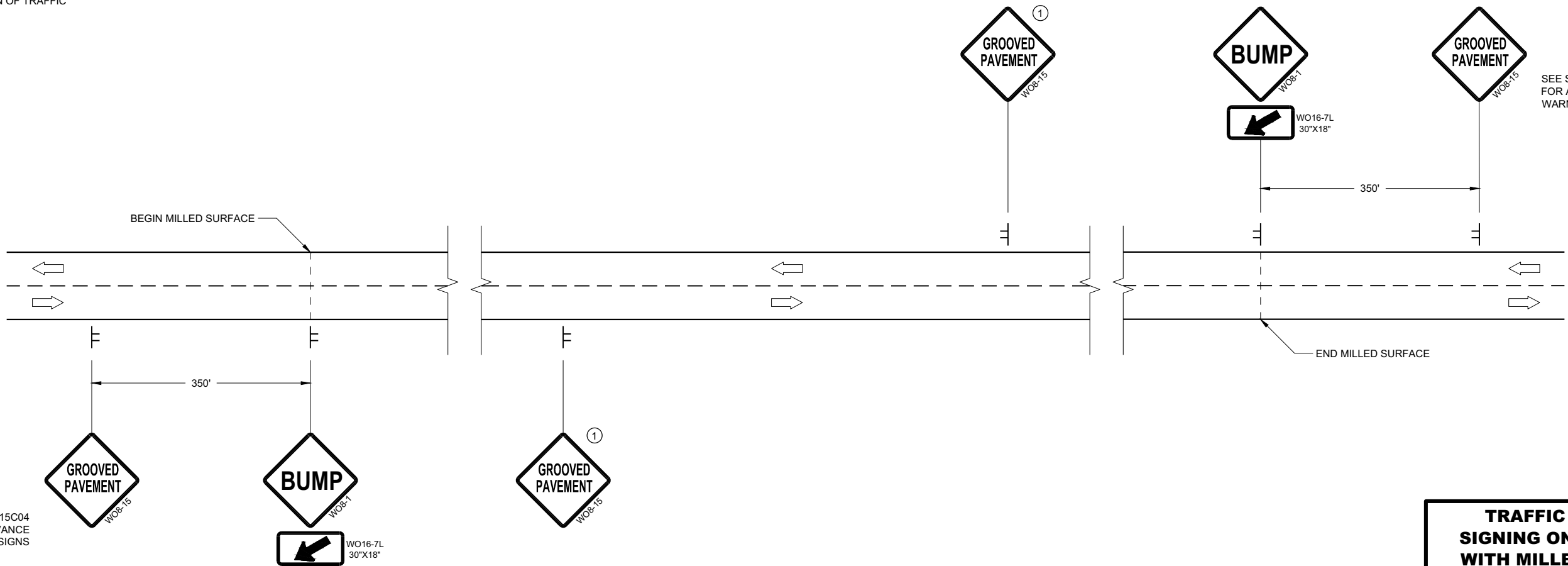
- 1 PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- 2 PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL



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 116

FHWA

LEGEND

- V1

WORK VEHICLE
- V2

SHADOW VEHICLE
- 

TRUCK MOUNTED ATTENUATOR (TMA)
- 

FLASHING ARROW PANEL (CAUTION)
- 

WORK AREA
- 

DIRECTION OF TRAFFIC

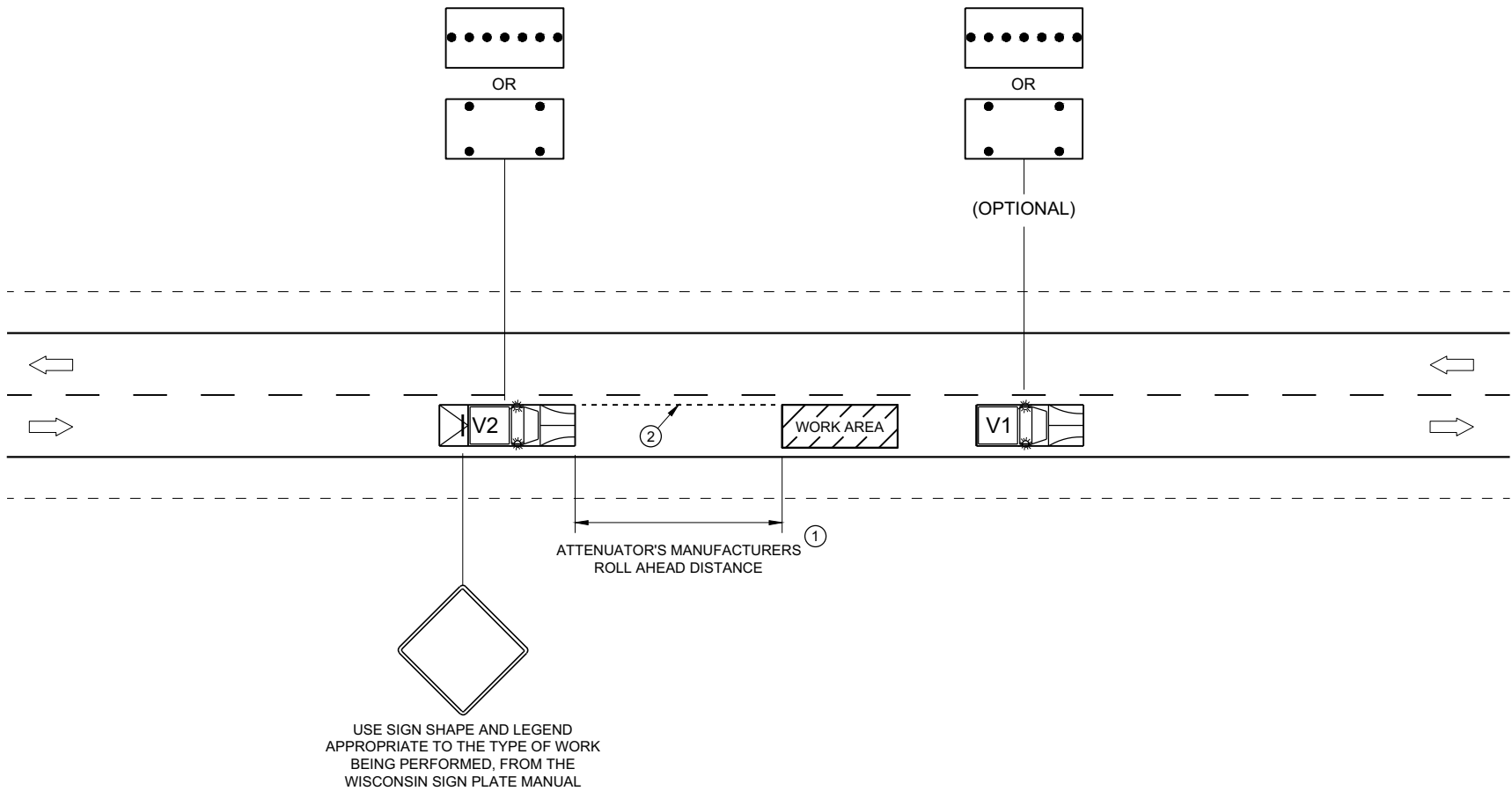
POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

- ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
- MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.
- ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.
- ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.
- USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.
- ①

DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- ②

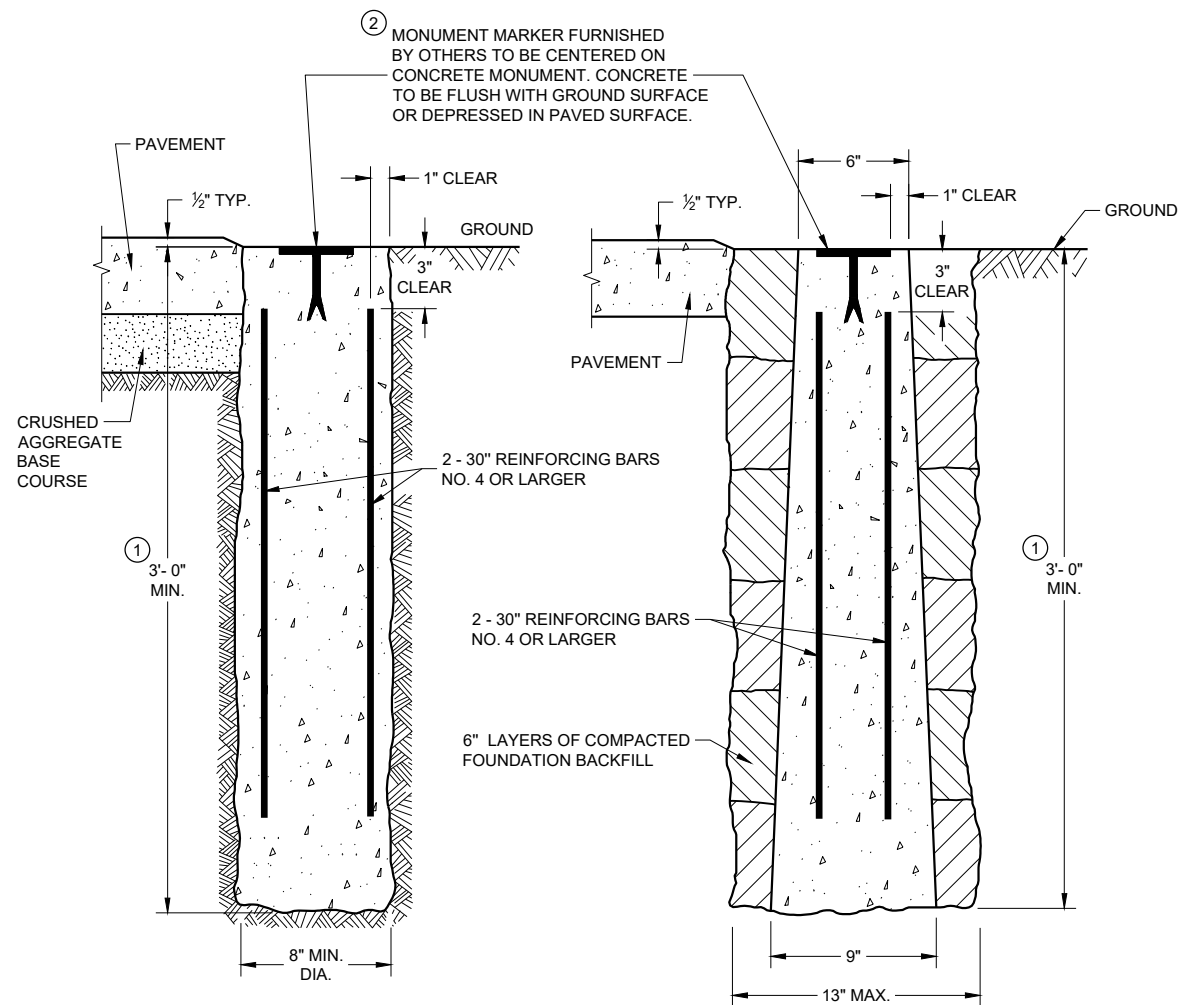
ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



TRAFFIC CONTROL,
MOBILE OPERATIONS ON
AN UNDIVIDED ROADWAY

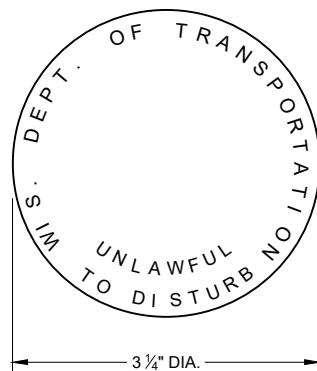
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE T SAFETY ENGINEER 117
FHWA

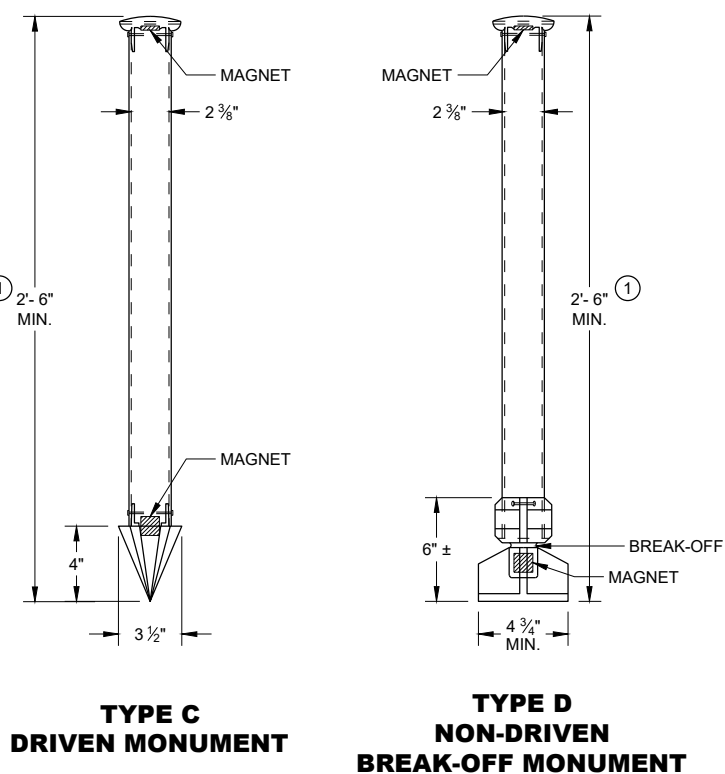


CAST-IN-PLACE

PRECAST

**CONCRETE MONUMENTS
TYPE A**

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

TYPE C
DRIVEN MONUMENTTYPE D
NON-DRIVEN
BREAK-OFF MONUMENT**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.

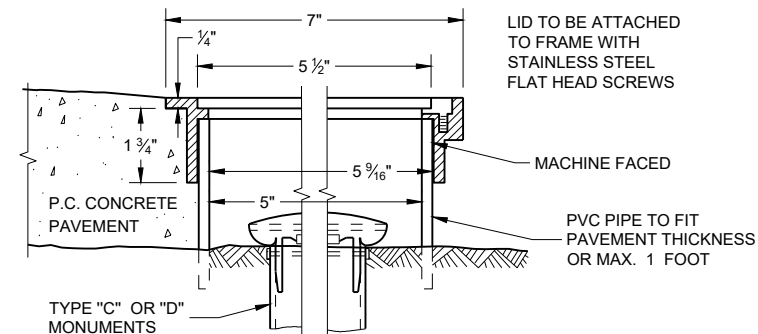
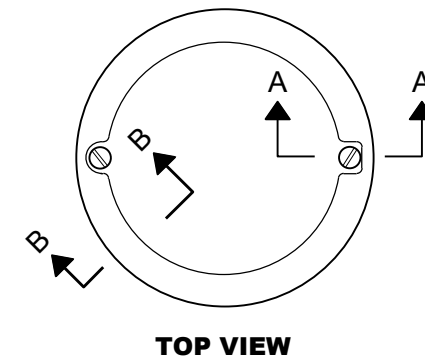
MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

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

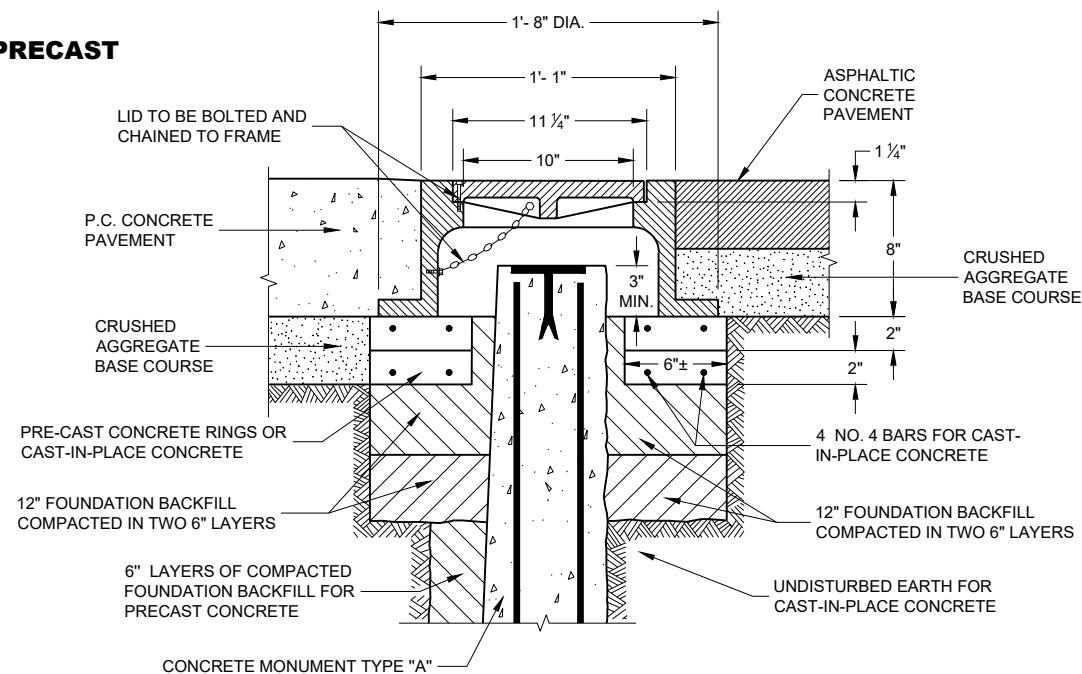
THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

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 WISDOT MARKER.



**SECTION B-B SECTION A-A
ALUMINUM MONUMENT COVER**
(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)



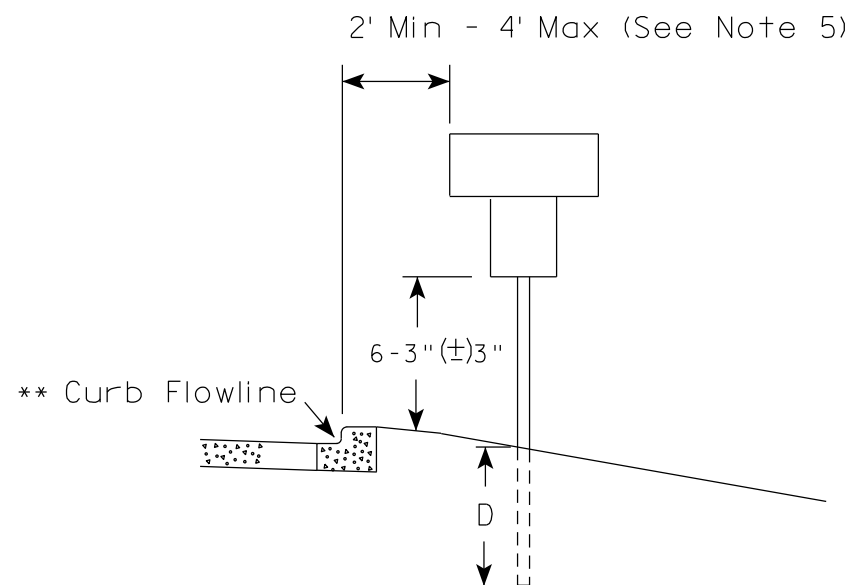
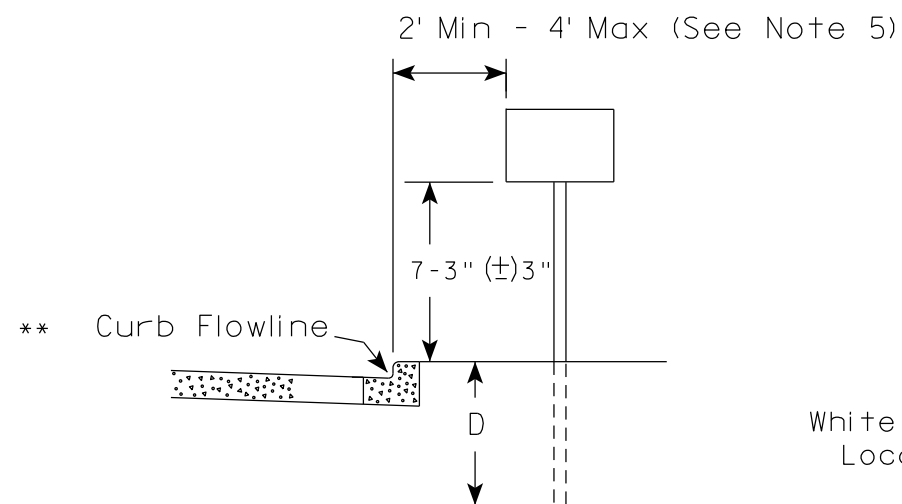
CAST IRON MONUMENT COVER
(APPROXIMATE WEIGHT 95 LBS)

**LANDMARK REFERENCE
MONUMENTS AND COVERS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

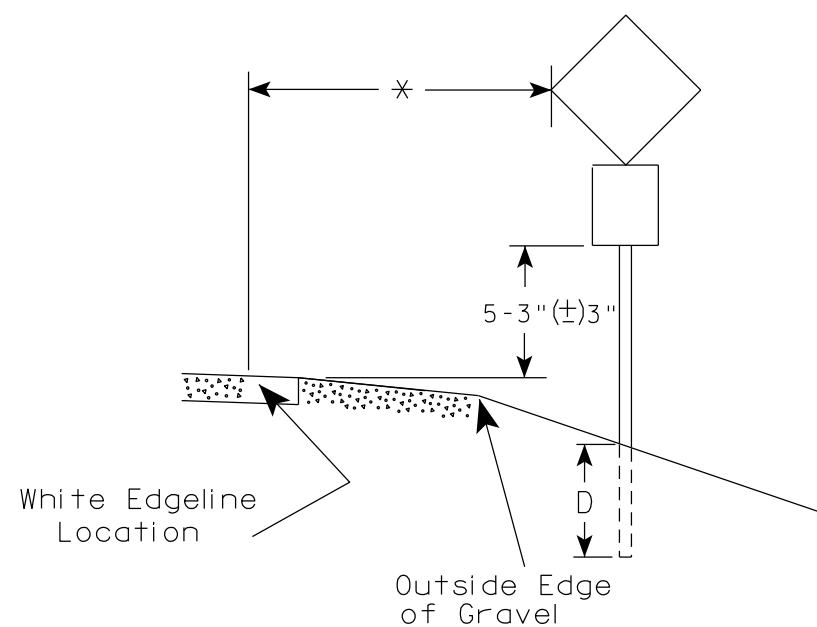
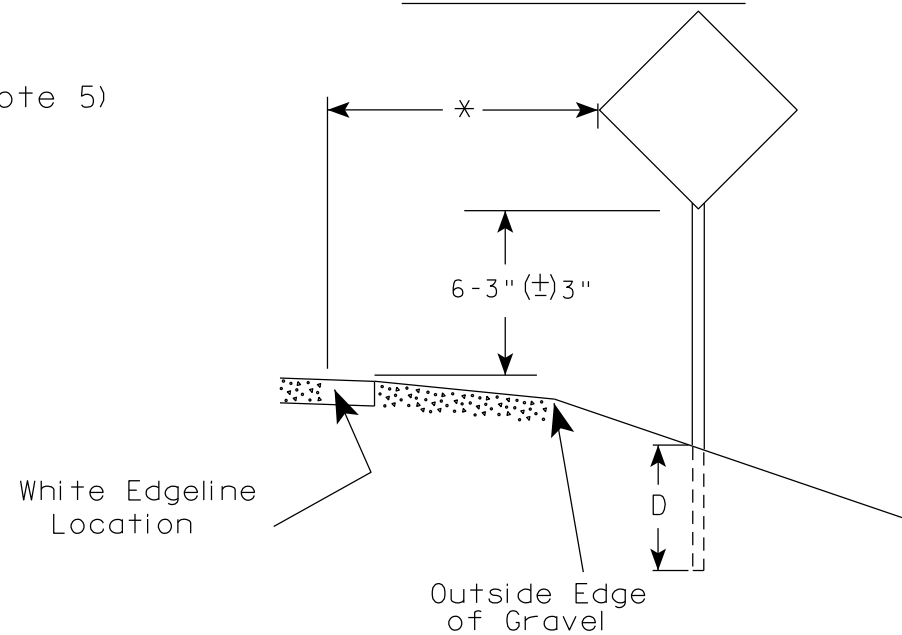
APPROVED
March 2018 /S/ Raymond A. Kumaovii
DATE CHIEF SURVEYING AND MAPPING ENGINEER 118
FHWA

URBAN AREA



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

RURAL AREA (See Note 2)



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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 12/6/23

PLATE NO. A4-3.23

PROJECT NO:

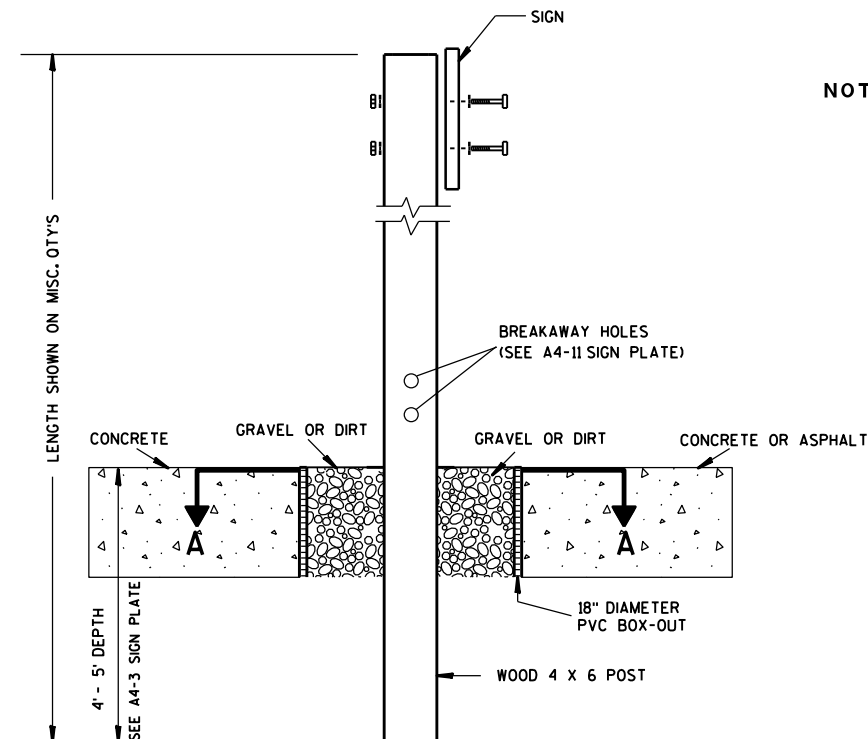
HWY:

COUNTY:

SHEET NO:

119

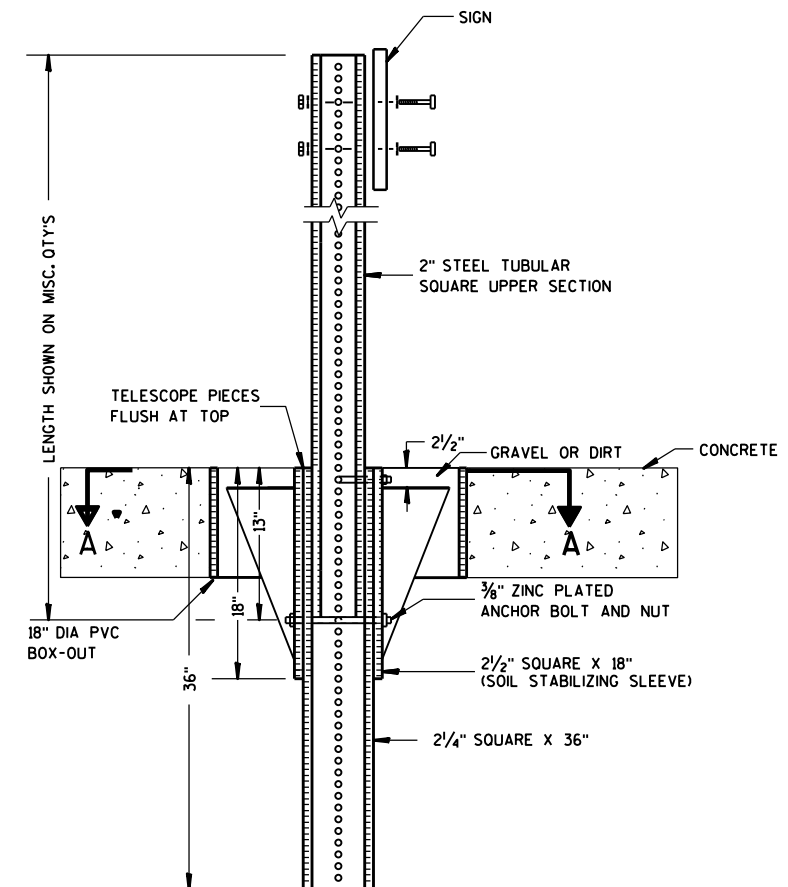
E



ELEVATION VIEW

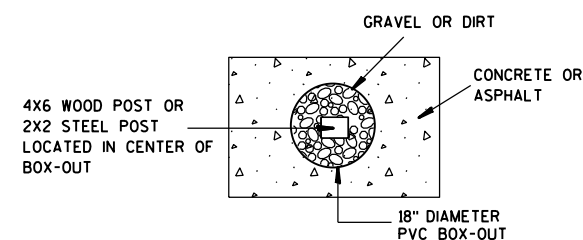
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

**SIGN POST
BOX-OUTS
A4-3B**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLAT 120 A4-3B.1

PROJECT NO:

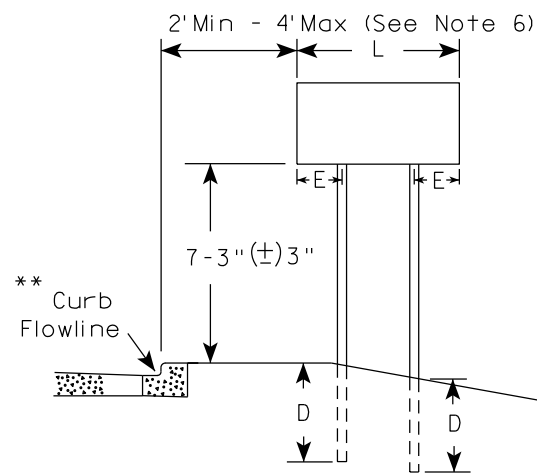
HWY:

COUNTY:

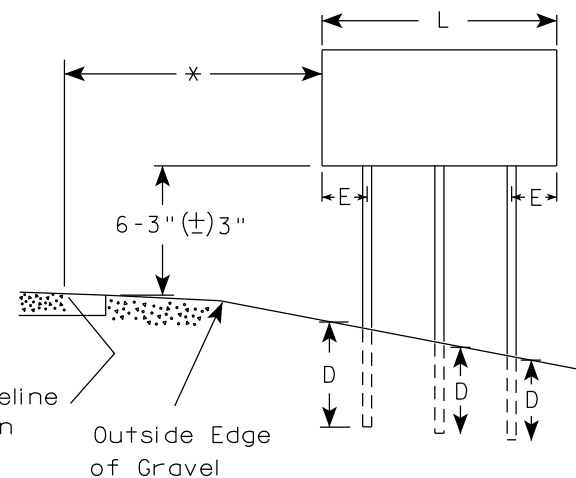
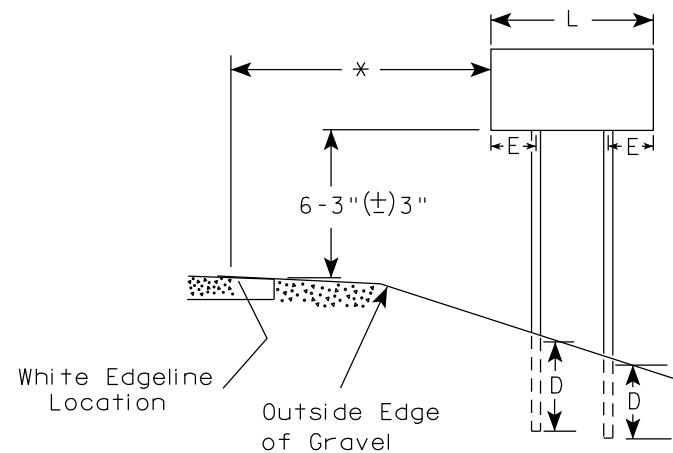
SHEET NO:

E

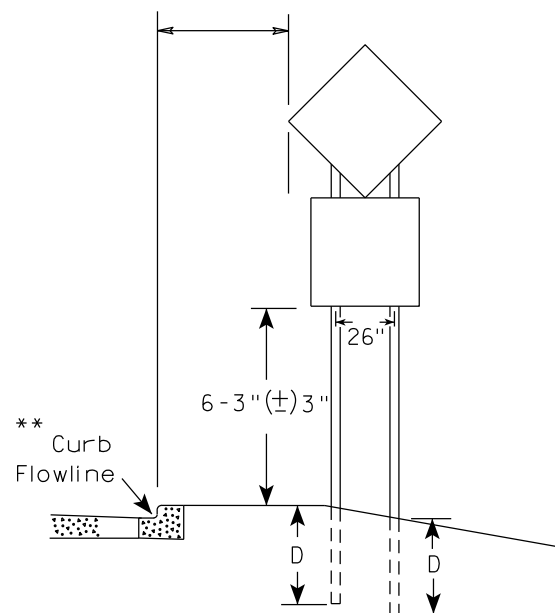
URBAN AREA



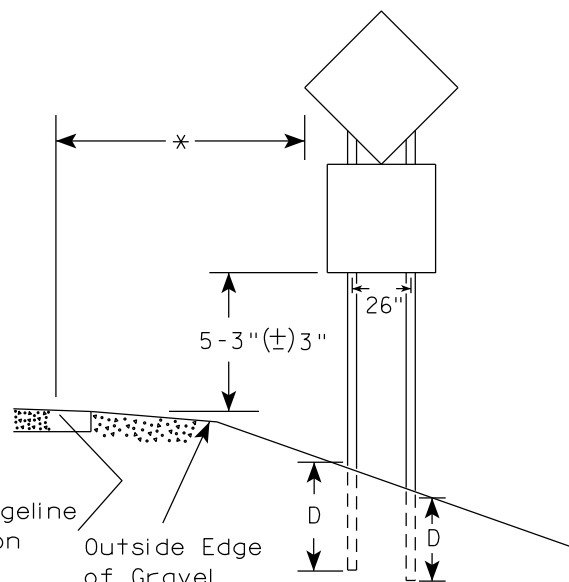
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

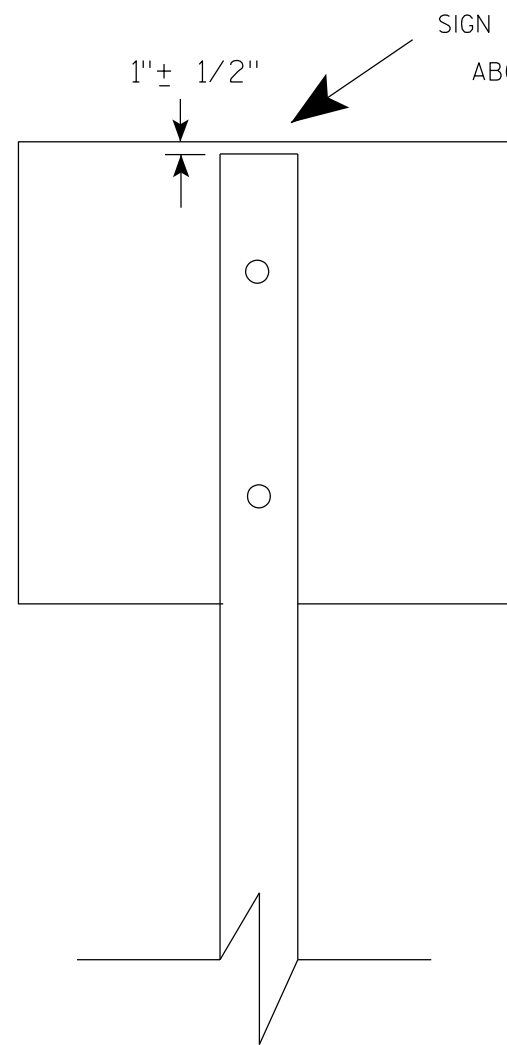
GENERAL NOTES

- For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- See tables below for required number of posts.
- For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
- The (±) tolerance for mounting height is 3 inches.
- J-Assemblies are considered to be one sign for mounting height.
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the engineer.
- The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".

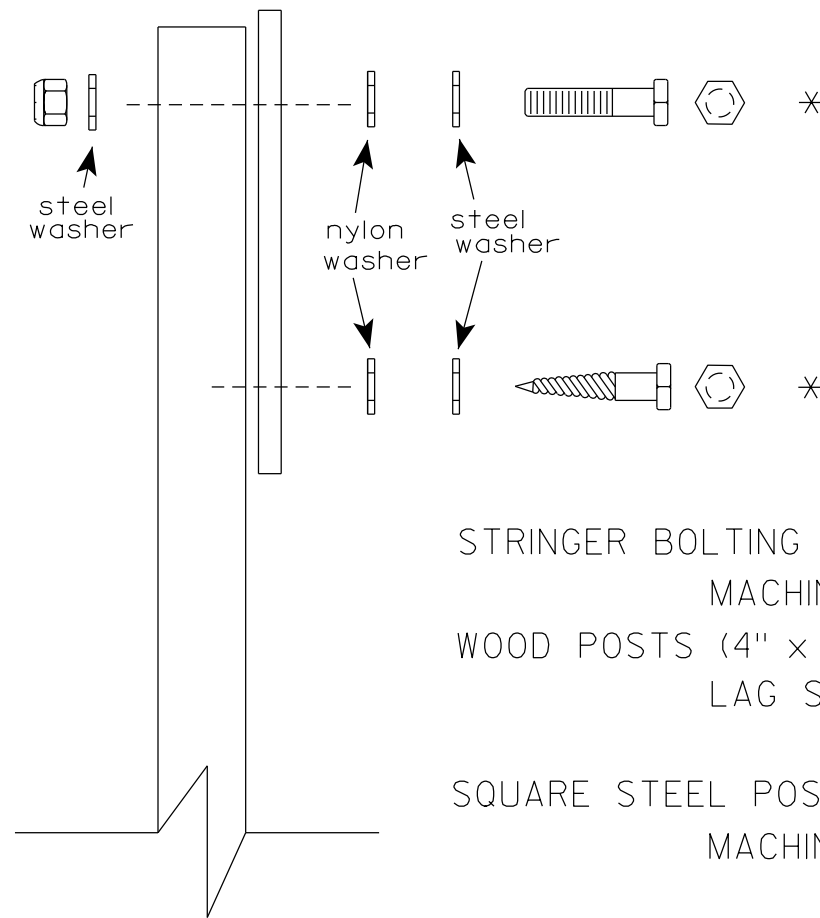
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

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

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.



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



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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
For State Traffic Engineer

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

**2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**

1"

$\frac{1}{8}"$

ALL HOLES $\frac{7}{16}"$
SPACED 1" C-C
ALL FOUR SIDES

4" x 10" x 10 GA. — 
STEEL PLATE (CUT
AS SHOWN) WELDED
TO ALL FOUR CORNERS
OF TELESPAR TUBE

**2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH**

2 1/2" TELESAR TUBE

4" x 10" x 10 GA. STEEL PLATE (CUT AS SHOWN) WELDED TO ALL FOUR CORNERS OF TELESAR TUBE

4"

2 1/2"

10"

3 1/2"

19"

LENGTH SHOWN ON MISC. QTY'S
 18" DIA SCHEDULE 40 PVC BOX-OUT
 TELESCOPE PIECES FLUSH AT TOP
 36"
 18"
 13"
 2 1/2"
 2 1/4" SQUARE X 36"
 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
 3/8" ZINC PLATED ANCHOR BOLT AND NUT
 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT
 ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES
 2" STEEL TUBULAR SQUARE UPPER SECTION
 SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
 SIGN
 2 1/2" GRAVEL OR DIRT

LENGTH SHOWN ON MISC. QTY'S

TELESCOPE PIECES FLUSH AT TOP

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

1"

$\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT

2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL

SIGN

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT

DIRECTION
OF TRAFFIC

SECTION A-A

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

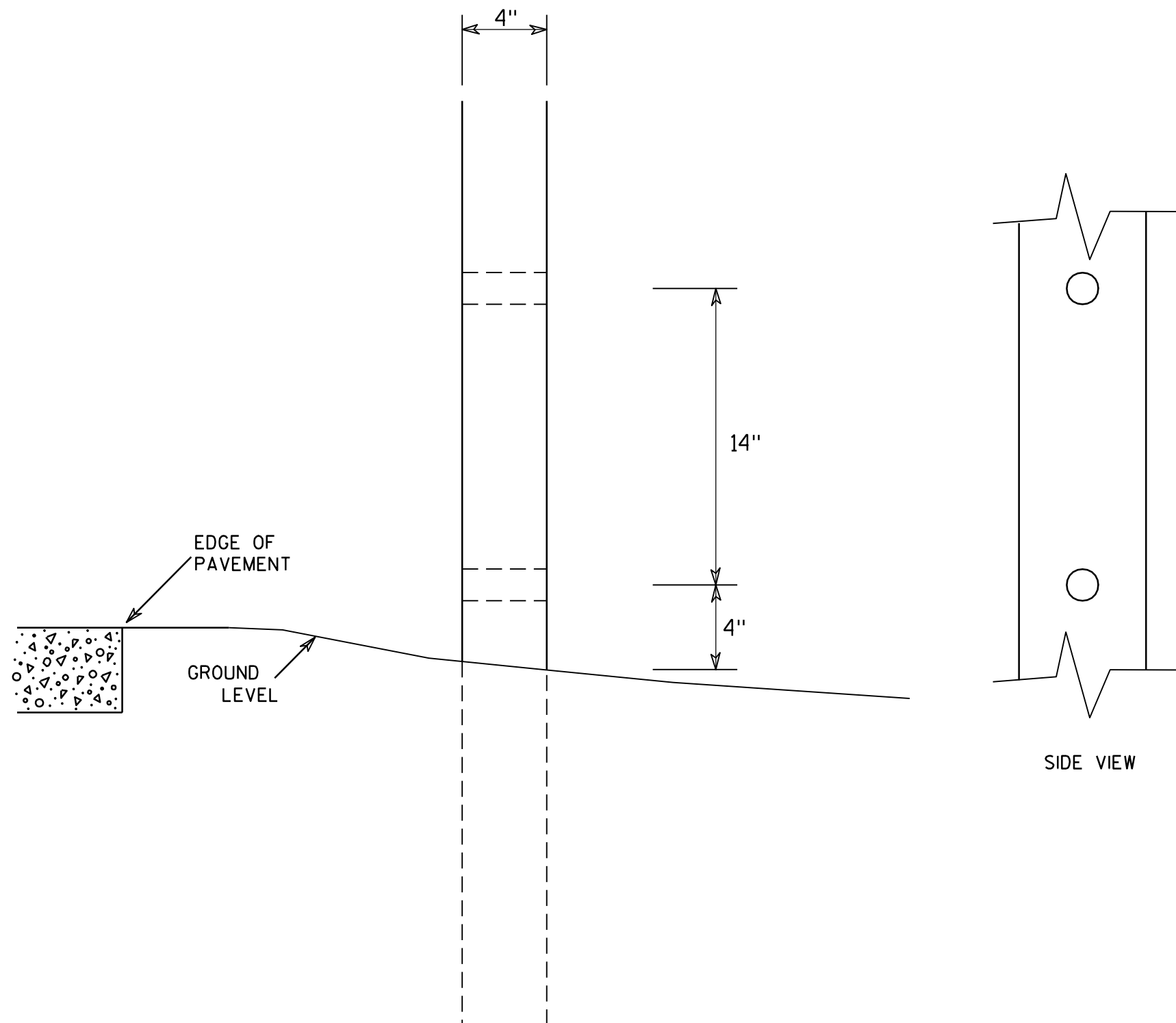
APPROVED Matthew R. Rauch

for State Traffic Engineer

DATE 2/05/15 PLATI 123 14-9.9

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



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

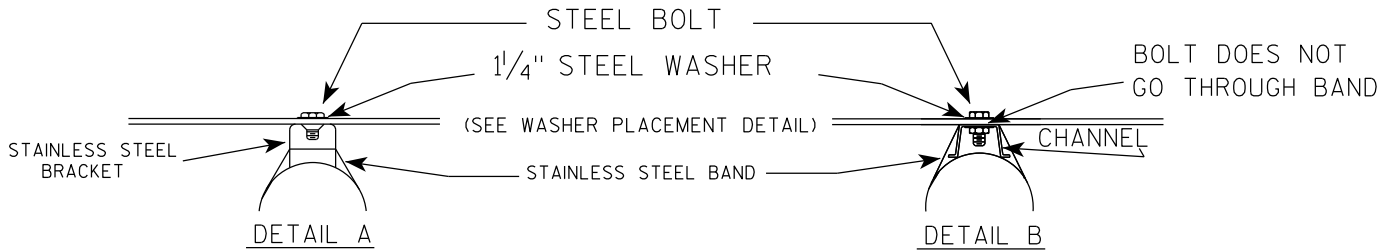
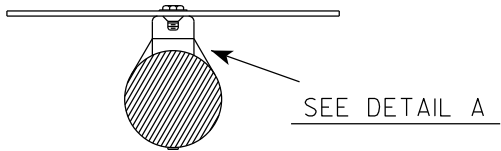
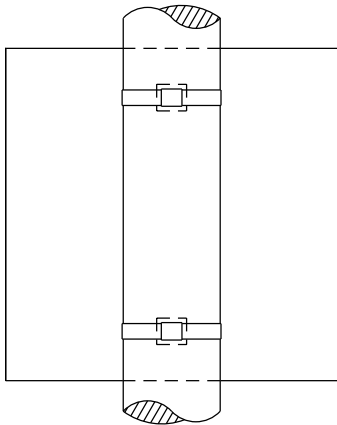
COUNTY:

SHEET NO: 124

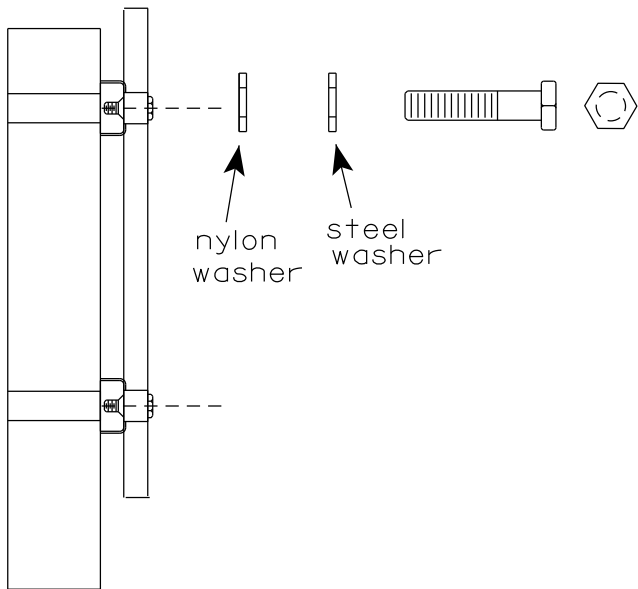
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

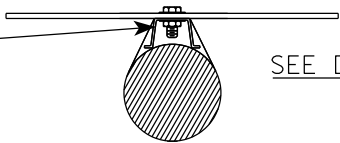
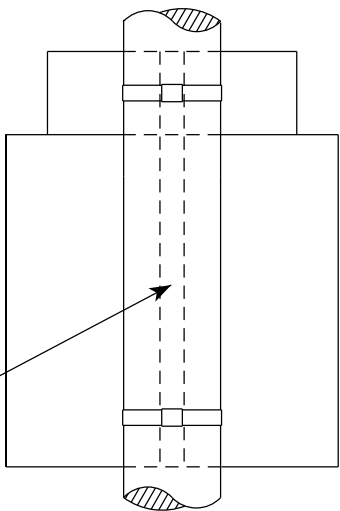


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

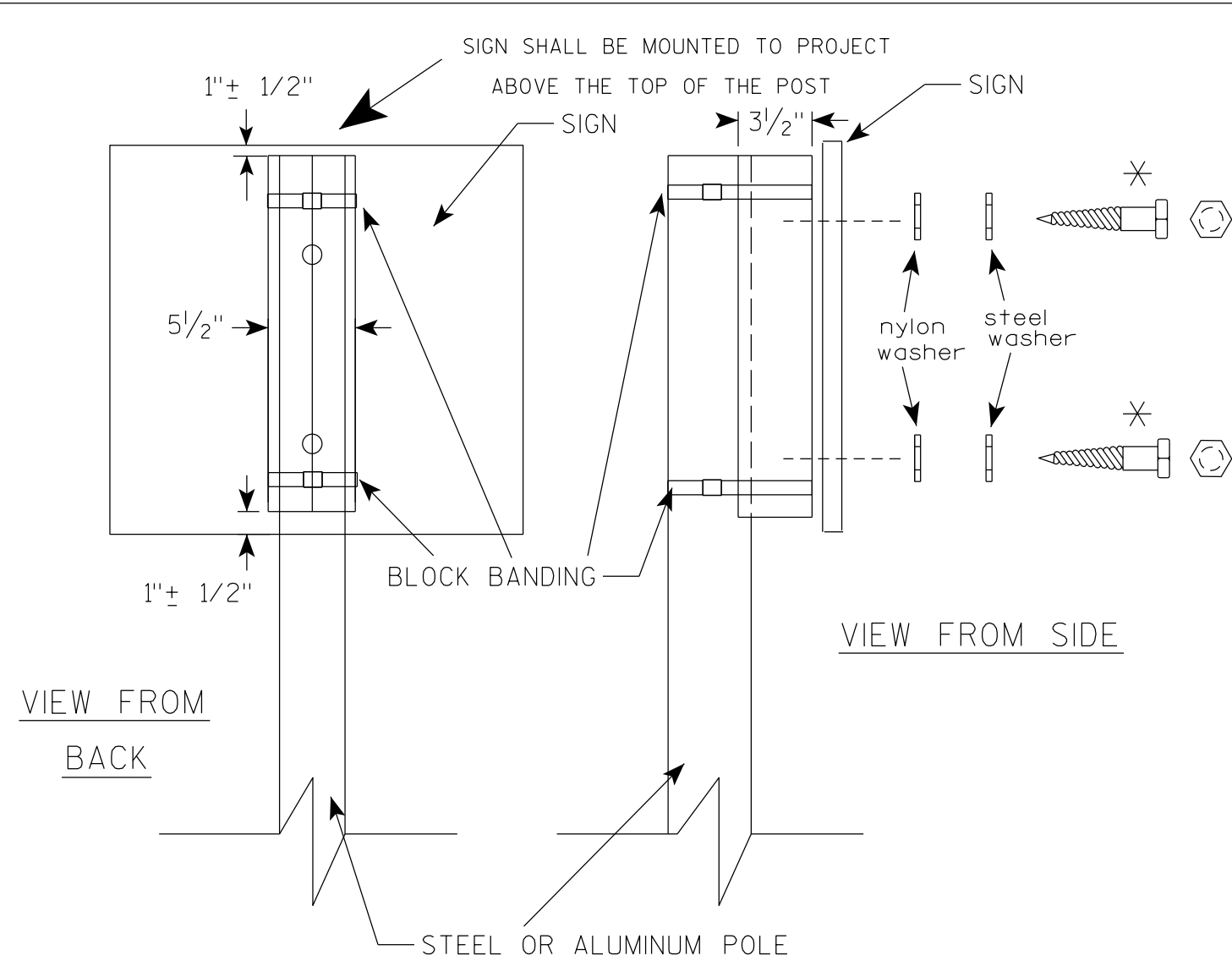
"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

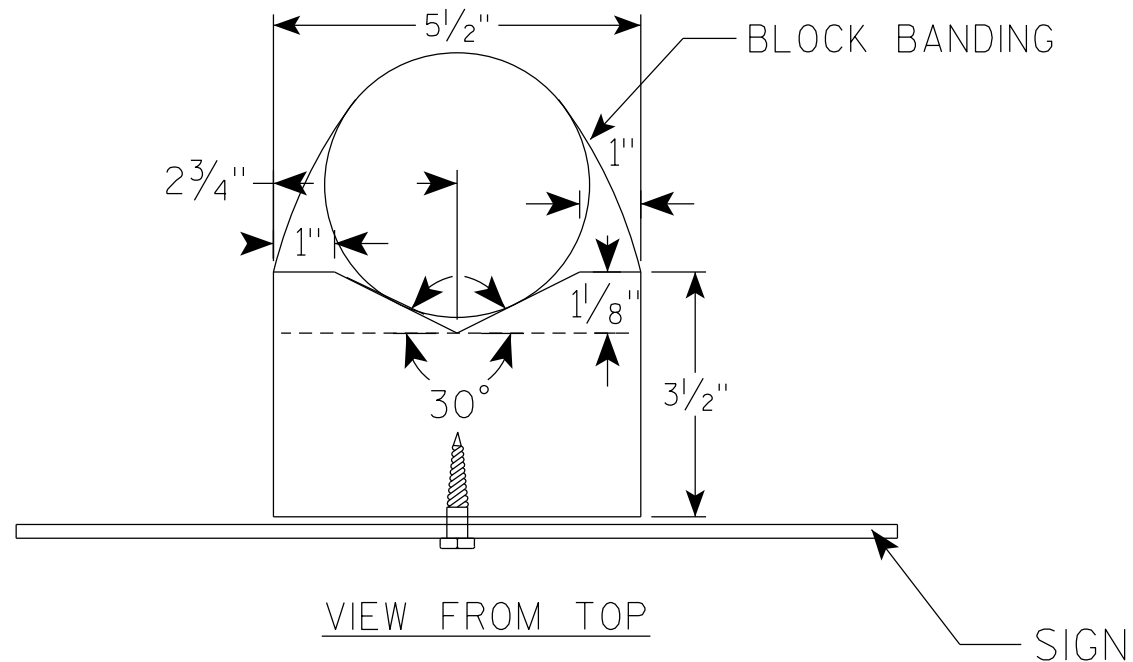
WISCONSIN DEPT OF TRANSPORTATION

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



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

SIGN

GENERAL NOTES

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

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

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

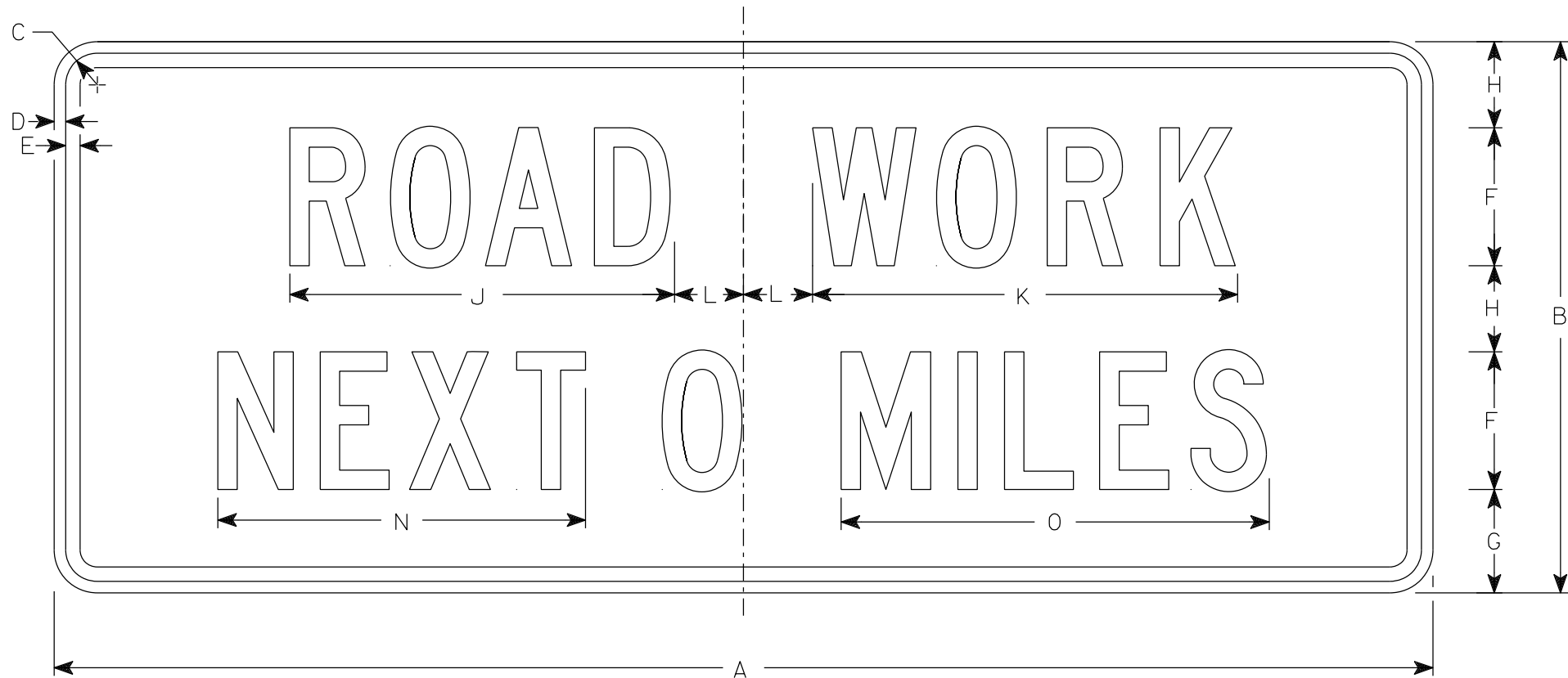
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 126

E

7



G20-1

NOTES

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

7

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

STANDARD SIGN

G20-1

WISCONSIN DEPT OF TRANSPORTATION

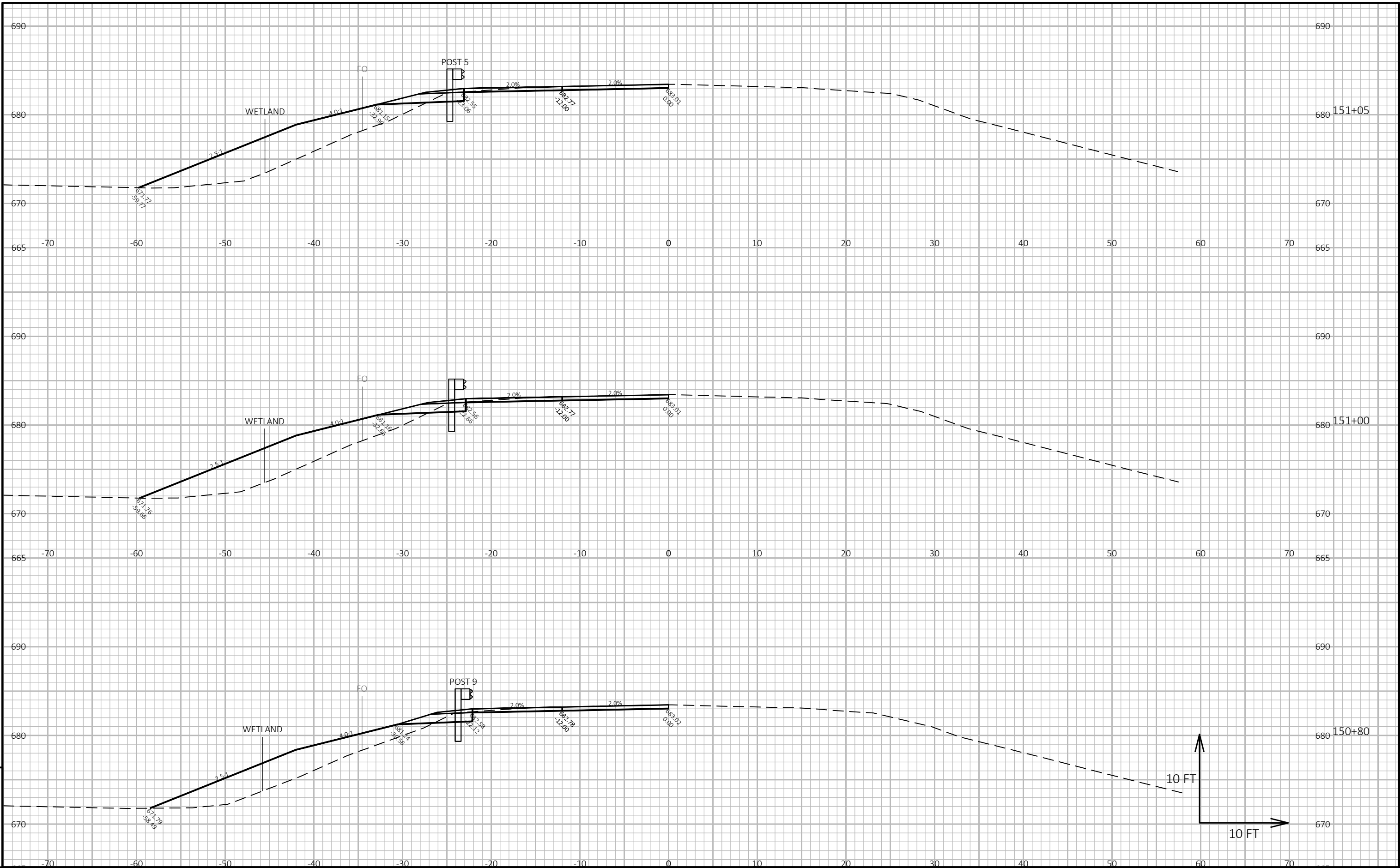
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

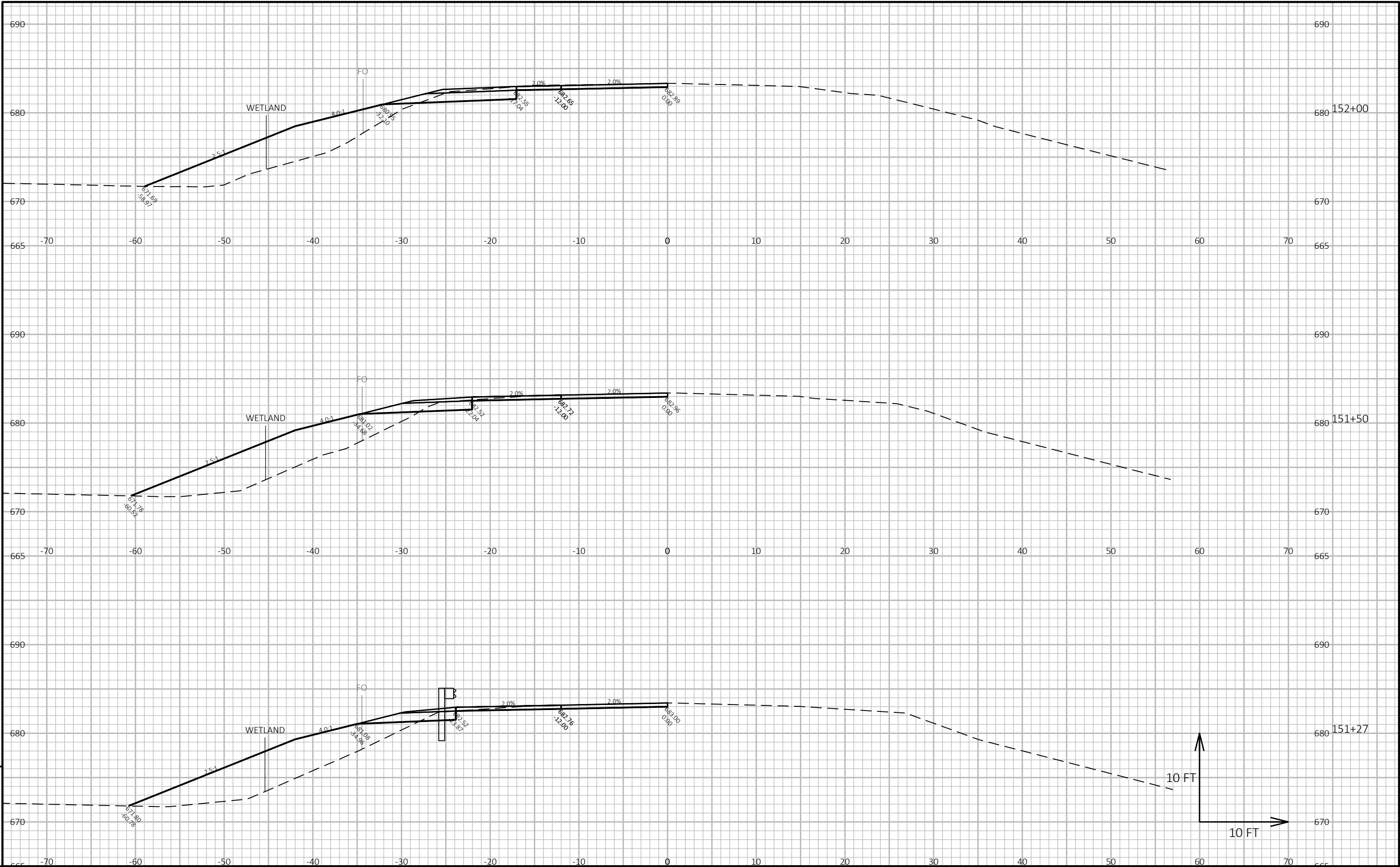
DATE 1/26/2023 PLATE NO. G20-1.9

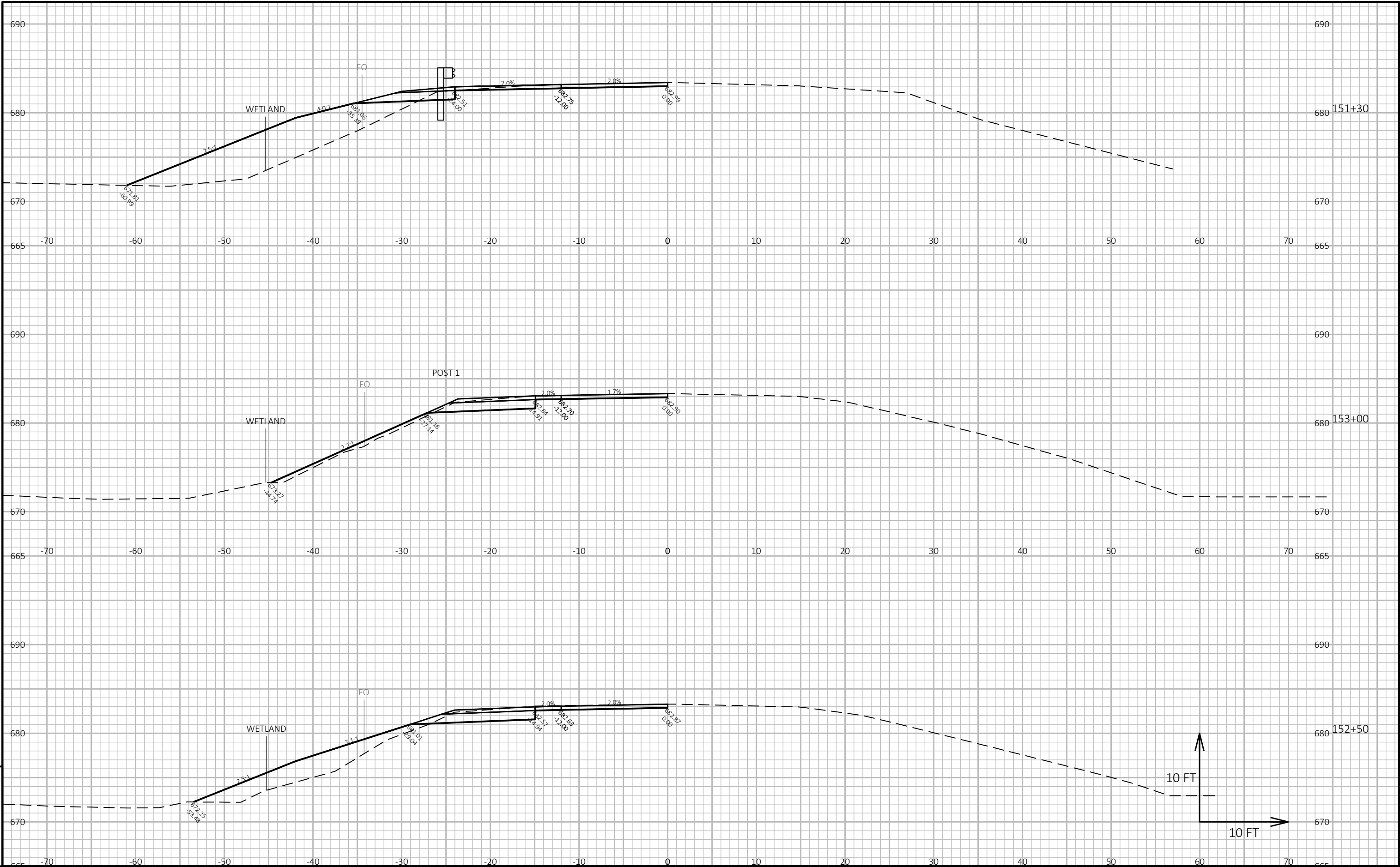
DIVISION 1 - USH 63											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			SALVAGED/UNUSABLE PAVEMENT MATERIAL			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL		CUT	EXPANDED FILL	
			CUT	FILL			NOTE 1	NOTE 2		1.00 NOTE 1	1.20 NOTE 8
150+80.43	15080.43	0.00	11.68	0.00	67.32	0	0	0	0	0	0
151+00.00	15100.00	19.57	11.43	0.00	81.76	8	0	54	8	65	-57
151+05.39	15105.39	5.39	11.35	0.00	83.43	2	0	16	10	84	-74
151+26.90	15126.90	21.51	10.98	0.00	94.57	9	0	71	19	169	-150
151+30.39	15130.39	3.49	10.97	0.00	96.64	1	0	12	20	184	-164
151+50.00	15150.00	19.61	13.12	0.00	92.73	9	0	69	29	266	-237
152+00.00	15200.00	50	18.92	0.00	80.57	30	0	160	59	458	-399
152+50.00	15250.00	50	20.56	0.00	43.05	37	0	114	96	595	-499
153+00.00	15300.00	50	18.77	0.00	7.58	36	0	47	132	652	-520

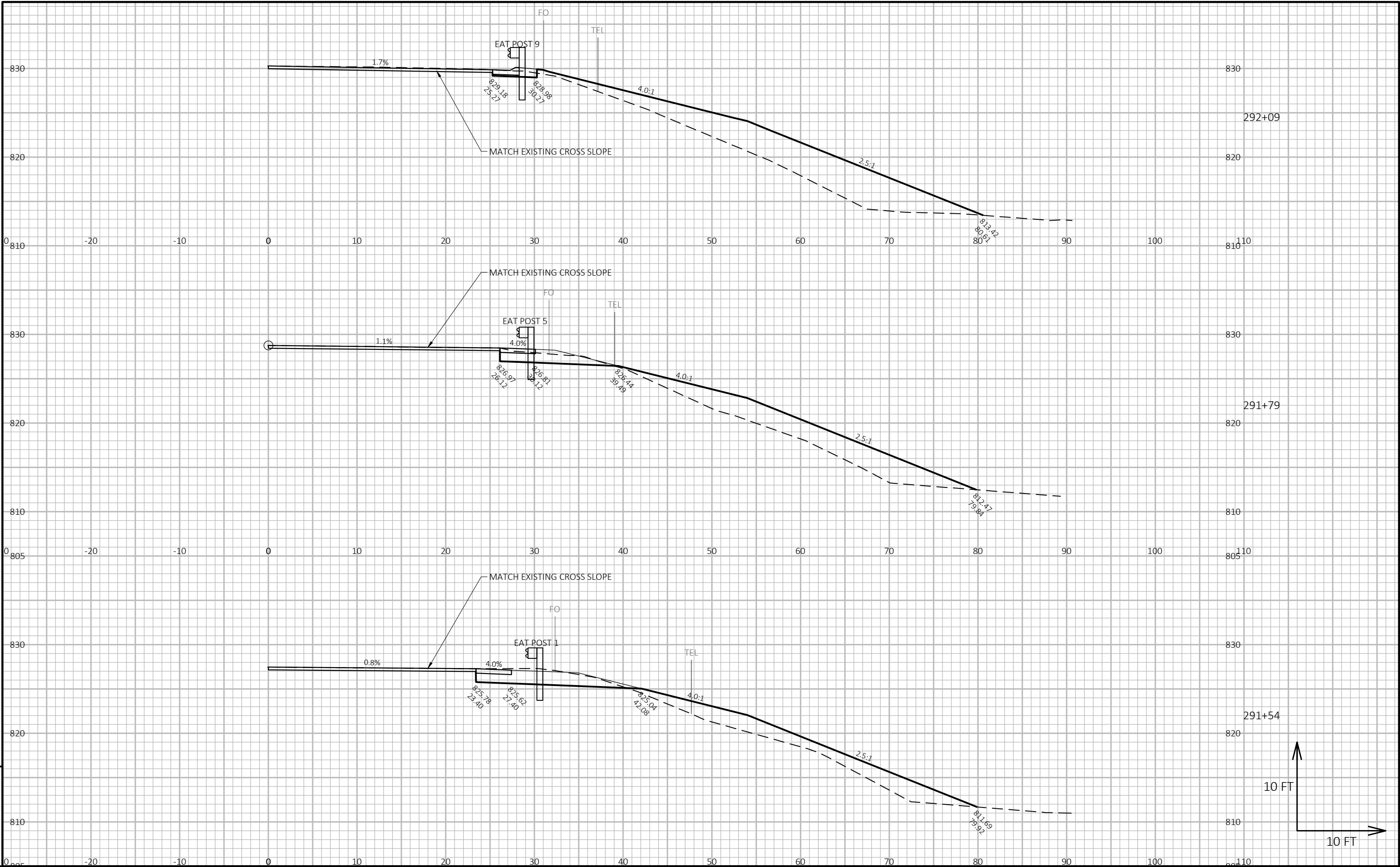
DIVISION 1 - USH 63								
STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY)		CUMULATIVE VOL (CY)		
		CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDNATE
290+40.54	0.00	18.59	0.01	0	0	0	0	0
291+00.00	59.46	20.67	18.07	43	20	43	24	19
291+50.00	50.00	22.30	45.58	40	59	83	95	-12
291+54.45	4.45	22.92	54.89	4	8	87	104	-17
291+79.45	25.00	11.92	76.25	16	61	103	178	-75
292+09.34	29.89	3.11	119.88	8	109	111	308	-197
292+50.00	40.66	3.01	160.01	5	211	116	562	-446
293+00.00	50.00	2.90	4.96	5	153	121	745	-624
293+50.00	50.00	3.00	5.90	5	10	126	757	-631
294+00.00	50.00	2.64	4.70	5	10	131	769	-638
294+50.00	50.00	2.63	2.59	5	7	136	778	-642
295+00.00	50.00	3.06	2.35	5	5	141	784	-643
295+50.00	50.00	3.15	2.52	6	5	147	790	-643
296+00.00	50.00	3.26	1.19	6	3	153	793	-640
296+50.00	50.00	3.33	1.05	6	2	159	796	-637
297+00.00	50.00	3.32	1.28	6	2	165	798	-633
297+50.00	50.00	3.14	0.99	6	2	171	800	-629
298+00.00	50.00	3.19	0.84	6	2	177	803	-626
298+50.00	50.00	3.31	0.94	6	2	183	805	-622
299+00.00	50.00	3.38	0.89	6	2	189	808	-619
299+50.00	50.00	3.28	0.71	6	1	195	809	-614
300+06.95	56.95	3.46	0.37	7	1	202	810	-608

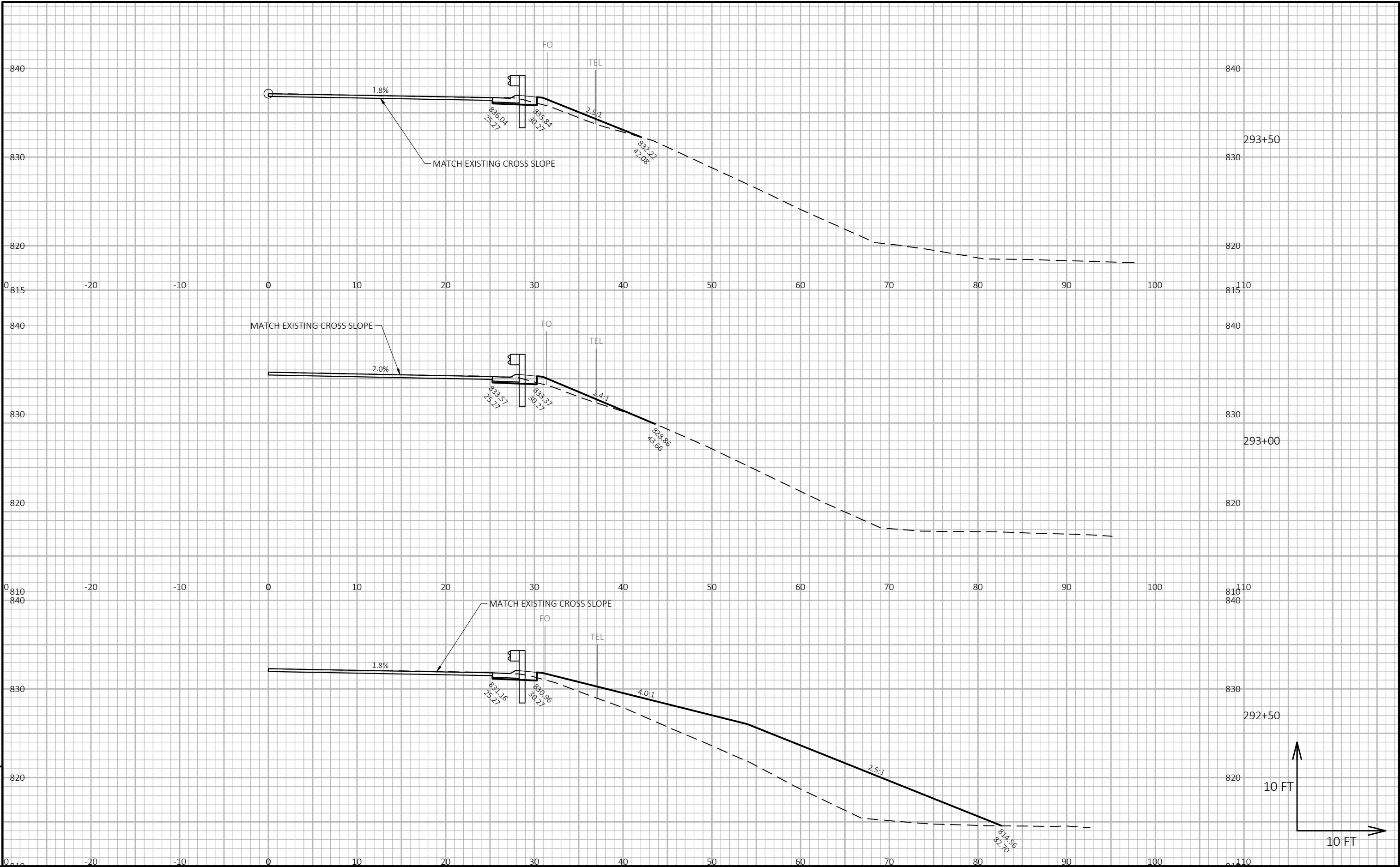
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDNATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: ((CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR))
*	EARTHWORK DATA TABLES ARE FOR BIDDING PURPOSES ONLY. SEE ITEM 614.0100 BARRIER GRADING SHAPING AND FINISHING.

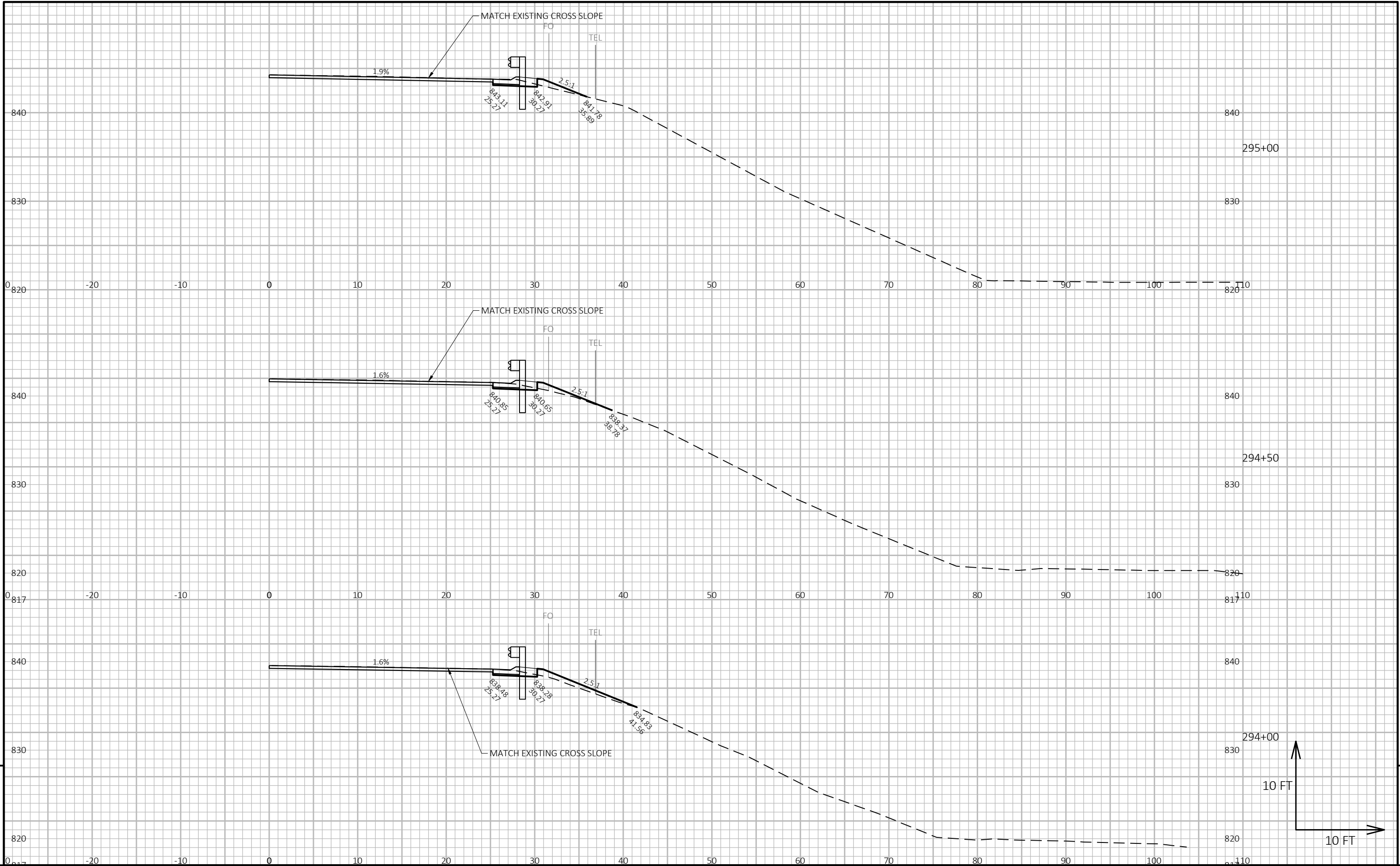


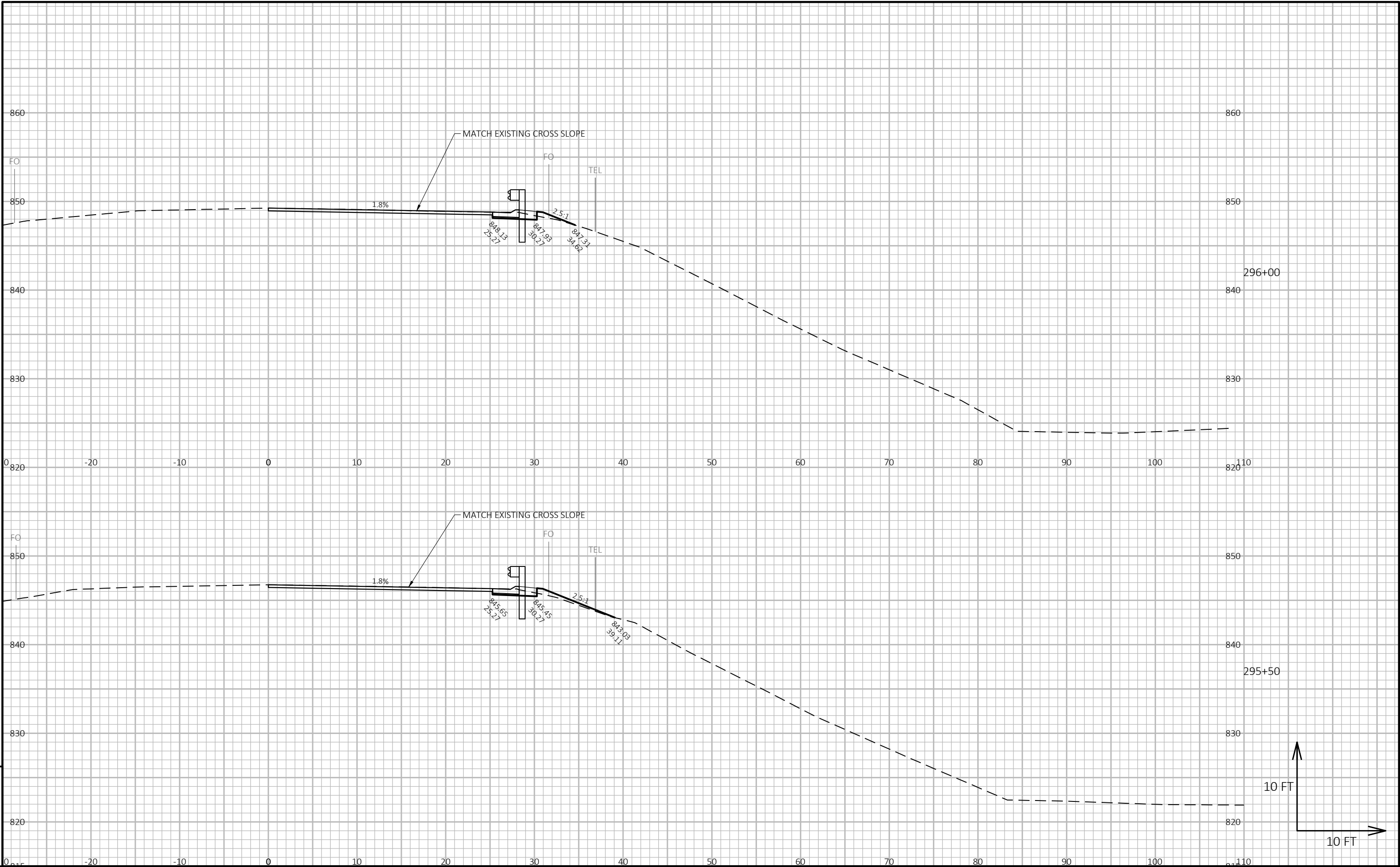


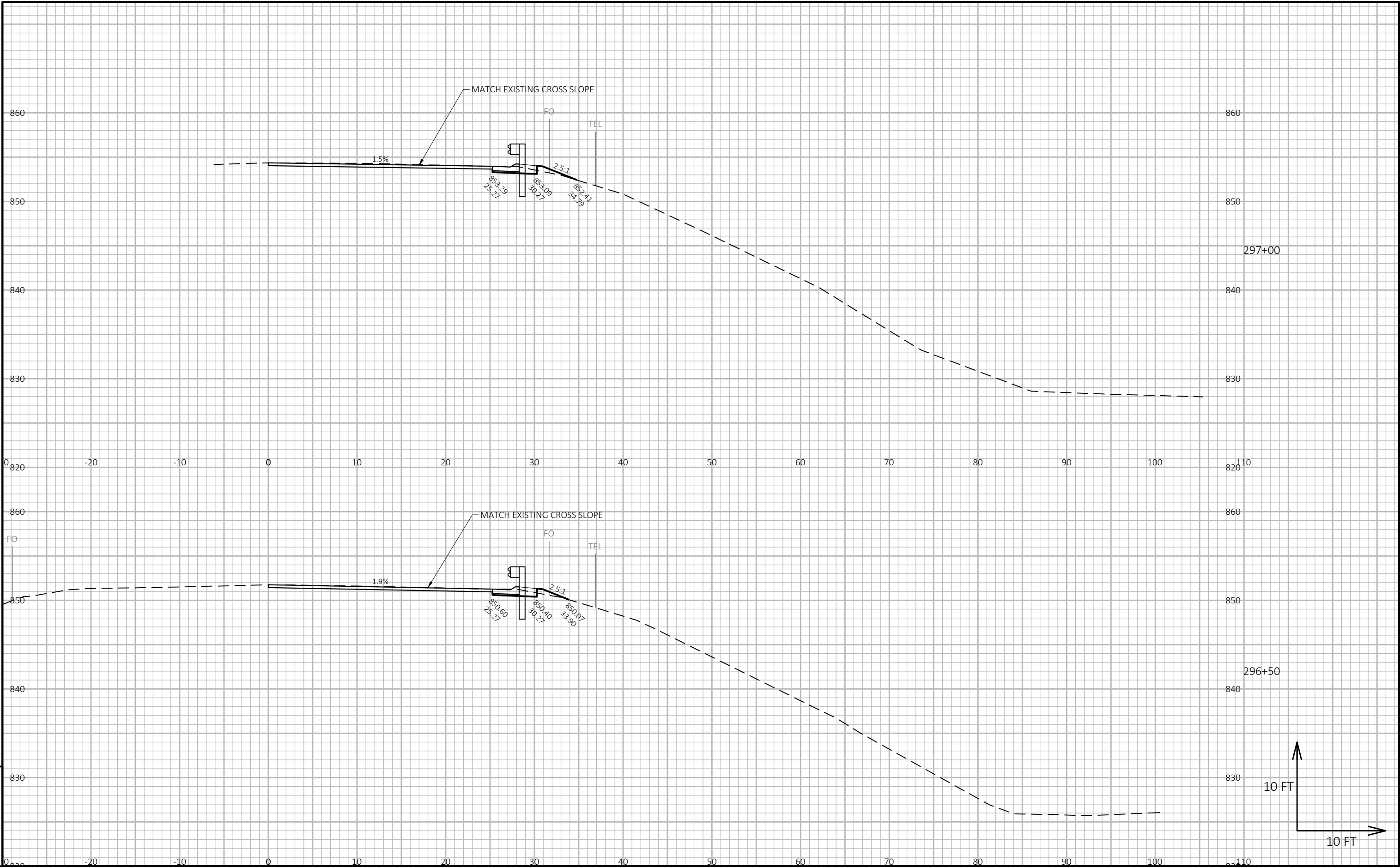


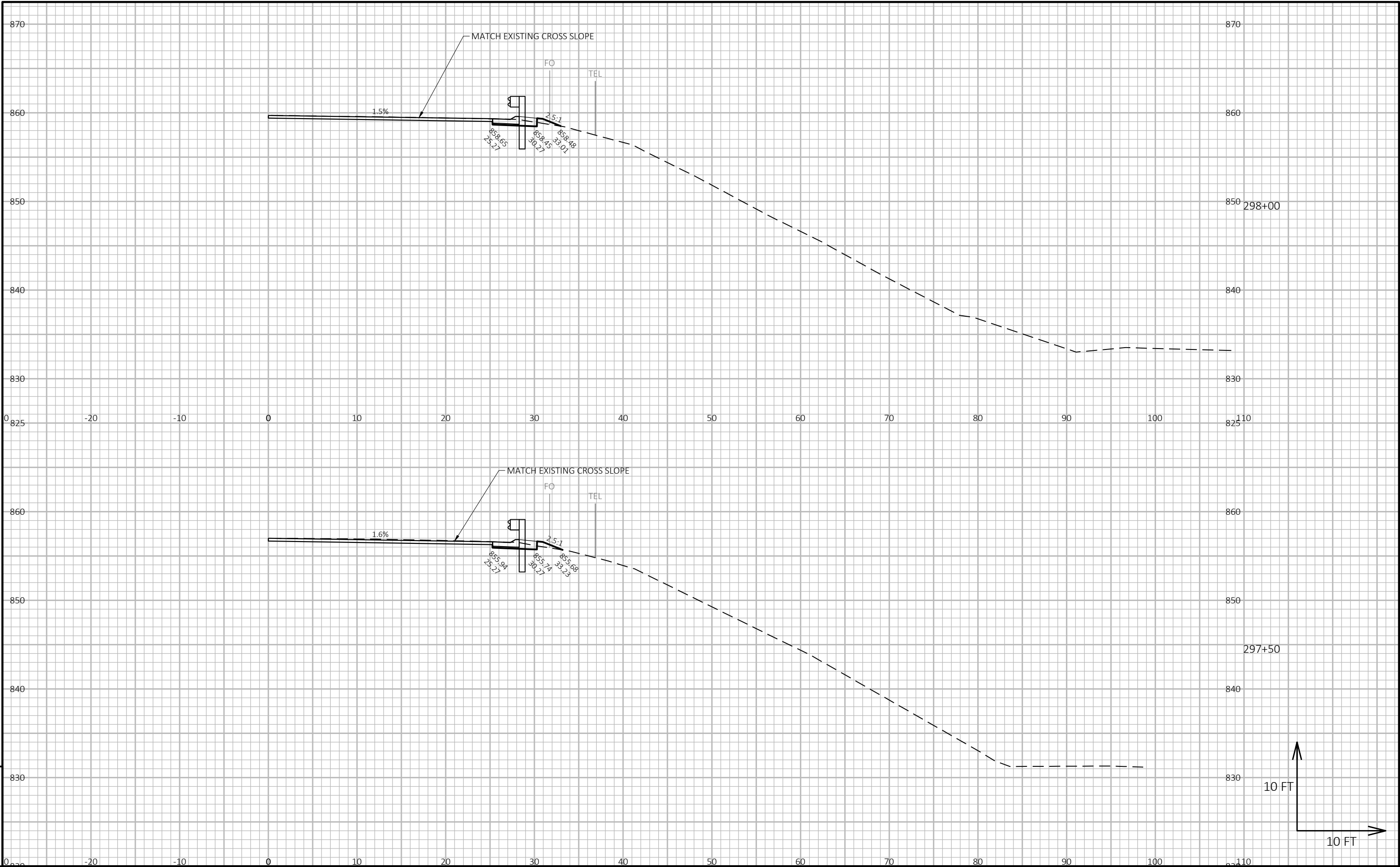


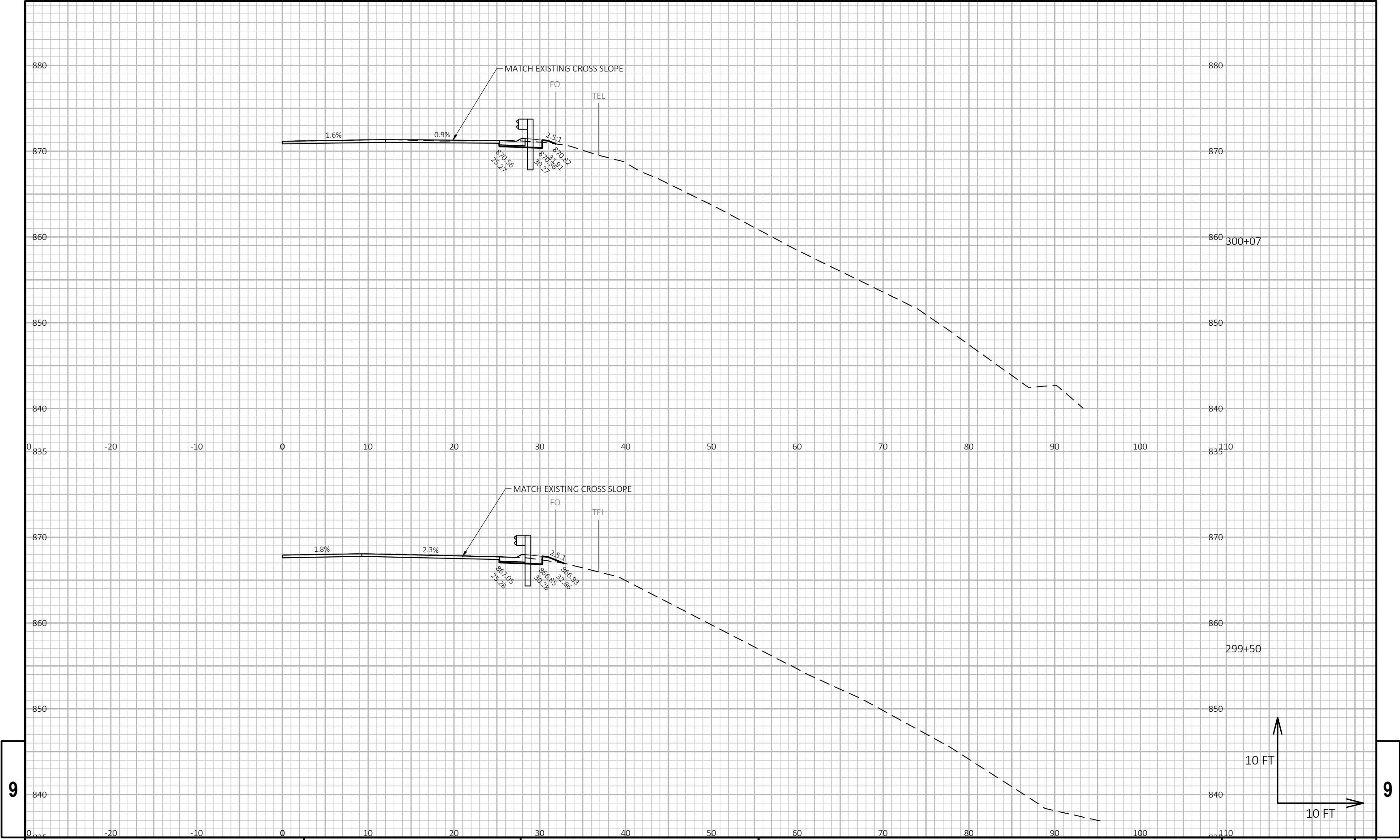










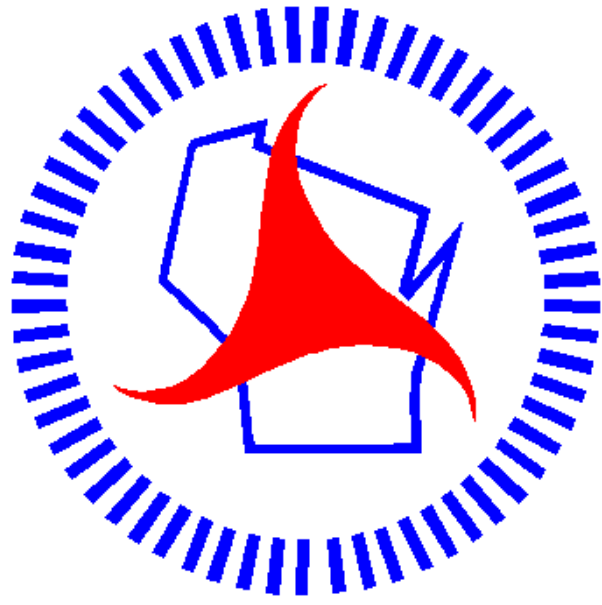


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PROJECT NO: 7210-00-80	HWY: USH 63	COUNTY: PIERCE	CROSS SECTIONS: USH 63	SHEET 140	E
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Notes



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