

SUP  
PROJECT ID: 1610-11-70  
WITH:

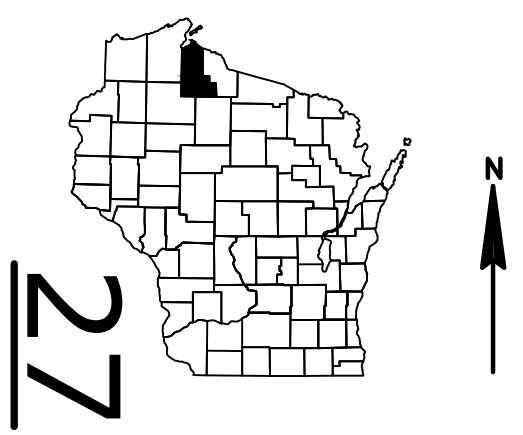
COUNTY: ASHLAND

NOVEMBER 2021

ORDER OF SHEETS

Section No.	Title
1	Typical Sections and Details
2	Estimate of Quantities
3	Miscellaneous Quantities
<del>4</del>	<del>Right of Way Plat</del>
5	Plan and Profile
6	Standard Detail Drawings
<del>7</del>	<del>Sign Plates</del>
<del>8</del>	<del>Structure Plans</del>
<del>9</del>	<del>Computer Earthwork Data</del>
<del>10</del>	<del>Cross Sections</del>

TOTAL SHEETS = 54



DESIGN DESIGNATION 1610-11-01

A.A.D.T.	2020	=	1300
A.A.D.T.	2040	=	1400
D.H.V.		=	120
D.D.		=	60/40
T.		=	30.6%
DESIGN SPEED		=	55 MPH
ESALS		=	1,600,000

CONVENTIONAL SYMBOLS

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

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

## PLAN OF PROPOSED IMPROVEMENT

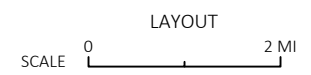
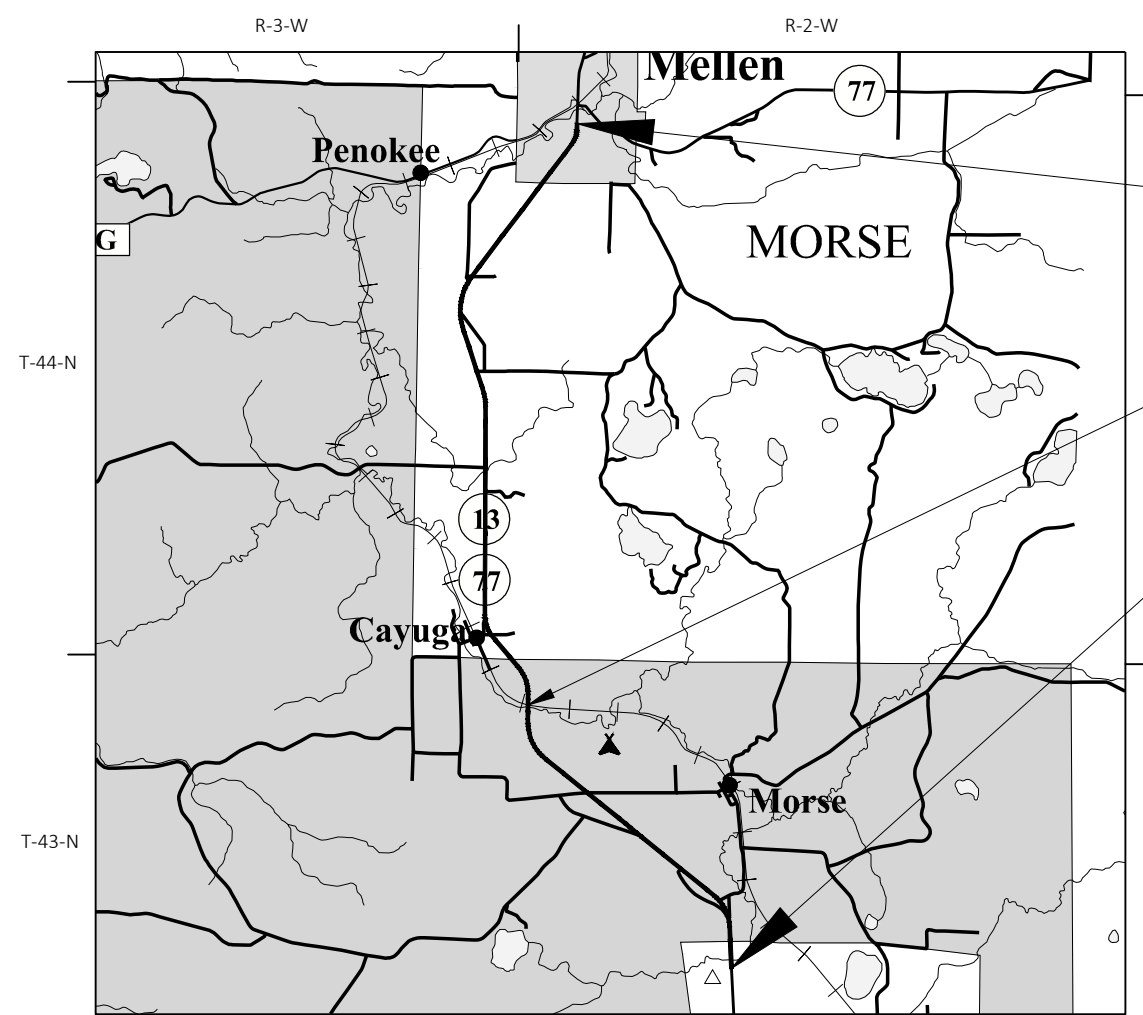
### PARK FALLS - MELLEEN

MORSE ROAD TO JEFFERSON AVENUE

STH 13

ASHLAND COUNTY

STATE PROJECT NUMBER  
**1610-11-70**



TOTAL NET LENGTH OF CENTERLINE = 10.17

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

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1610-11-70	WISC 2022044	1

END PROJECT  
STA 927+00

EXCEPTION TO NET CENTERLINE LENGTH  
STRUCTURE B-02-0025  
STA 580+56 - STA 582+66

BEGIN PROJECT  
STA 390+00

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	Surveyor _____ WISDOT
Designer	_____ TRAVIS JENSEN
Project Manager	_____ MATT DICKENSON
Regional Examiner	_____ TOU YANG
Regional Supervisor	_____ JEFF OLSON

APPROVED FOR THE DEPARTMENT  
DATE: 8/31/21 *Matthew J. Dickenson*  
(signature)

E

UTILITIES

CENTURY LINK  
COMMUNICATION LINES  
PO BOX 78  
HAWKINS, WI, 54530  
BENJAMIN BAKER  
BEN.BAKER@CENTURYLINK.COM  
715-585-6303

ASTREA  
COMMUNICATION LINES  
105 KENT ST  
PO BOX 190  
IRON MOUNTAIN, MI, 49801  
RUSSEL KENNY  
RUSSEL.KENNY@ASTREACONNECT.COM  
906-282-6434

PRICE ELECTRIC COOP INC  
ELECTRICITY  
PO BOX 110  
PHILIPS, WI 54555-0110  
BEN ORYSEN  
BORYSEN@PRICE-ELECTRIC.COM  
715-339-2155

EXCEL ENERGY  
ELECTRICITY  
2400 FARM ROAD  
ASHLAND, WI 54808  
MURRAY SMERER  
MURRAY.J.SMERER@XCELENERGY.COM  
715-682-6928

EXCEL ENERGY  
TRANSMISSION  
414 NICOLLET MALL 5TH FLOOR  
MINNEAPOLIS, MN 55401  
MITCHELL DIENGER  
MITCHELL.A.DIENGER@XCELENERGY.COM  
612-321-3109

BAYFIELD ELECTRIC COOP  
ELECTRICAL FACILITIES  
PO BOX 68  
IRON RIVER, WI 548  
GARY TARASEWICZ  
GARY.TARASEWICS@BAYFIELDELECTRIC.COM  
715-372-4287

CONTACTS

WISCONSIN DNR  
WISCONSIN DNR NORTHERN REGION  
810 WEST MAPLE STREET  
SPOONER, WI, 54801  
SHAWN HASELEU - DNR LIAISON  
SHAWN.HASELEU@WISCONSIN.GOV  
715-635-4228

WISDOT DESIGN CONTACT  
WISDOT NW REGION  
1701 N 4TH STREET  
SUPERIOR, WI, 54880  
MATT DICKENSON - PROJECT MANAGER  
MATTHEW.DICKENSON@DOT.WI.GOV  
715-395-3022

WISCONSIN CENTRAL LTD (CN)  
3192 S POKEGAMA ROAD  
SUPERIOR, WI, 54880  
JACKIE MACEWICZ  
JACKIE.MACEWICZ@CN.CA  
715-345-2503  
NOTE: WCL (CN) IS NOT PART OF DIGGER HOTLINE.  
CALL CN BEFORE YOU DIG PER SPECIAL PROVISIONS.

GENERAL NOTES

WHEN THE QUANTITY OF BASE AGGREGATE OR PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR BY THE CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

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

THE LOCATION OF DRIVEWAYS WILL BE DETERMINED BY THE ENGINEER.

THE LOCATIONS OF UTILITY FACILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE PRIOR TO THE START OF WORK.

CURVE DATA IS BASED ON THE ARC DEFINITION.

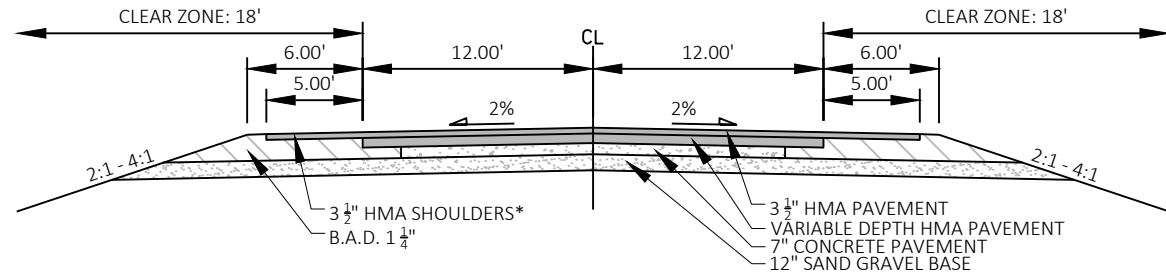
THE EXACT LOCATION OF EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

NO EQUIPMENT OR MATERIALS SHALL BE STORED IN WETLAND AREAS.

PAVEMENT QUANTITIES ARE BASED ON 112 LBS/SY COMPACTED 1" THICK.

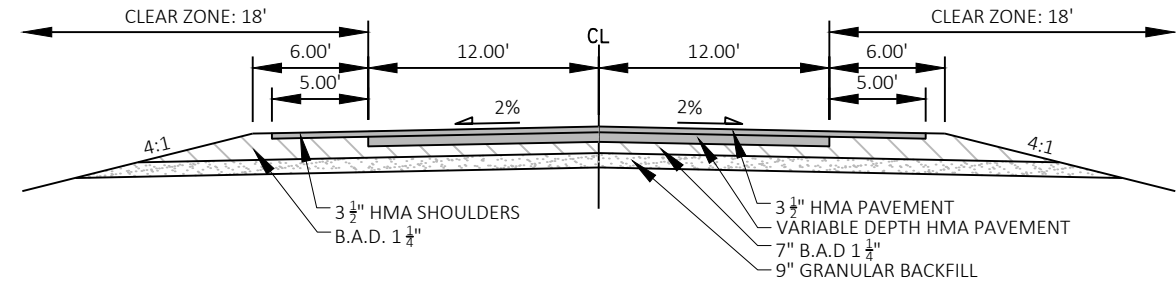
SUPERELEVATIONS SHALL MATCH EXISTING EXCEPT STATION 920+00 TO STATION 928+58 WHICH SHALL MATCH THE CURVE NOTES IN THE PLAN. THE FIELD ENGINEER SHALL PROVIDE MILLING AND PAVING SPECIFICATIONS NECESSARY TO AFFECT THE REQUIRED CROSS SLOPES.



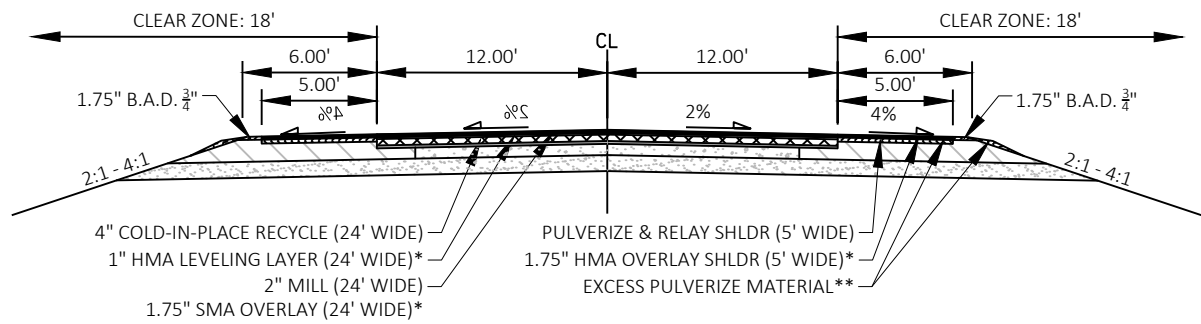


**EXISTING TYPICAL SECTION STH 13**  
 STA 390+00 - 565+55.76

\*6 1/2" HMA SHOULDERS  
 STA 390+00 - 410+86.52  
 STA 604+44.55 - 927+00



**EXISTING TYPICAL SECTION STH 13**  
 STA 565+55.76 - 604+44.55

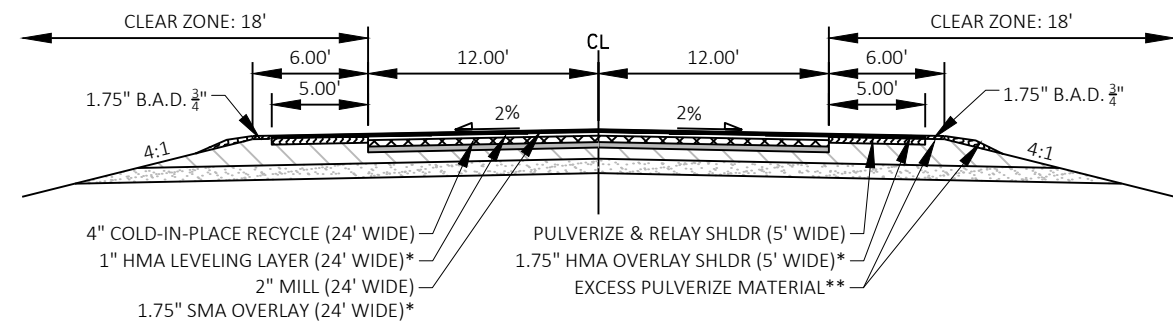


**PROPOSED TYPICAL SECTION STH 13**  
 STA 390+00 - 565+55.76  
 STA 604+44.55 - 927+00

EXCEPTIONS SHOWN ON NEXT PAGE

\*PAVEMENT TYPE  
 -DRIVING LANES: 4 SMA 58-34 V  
 -SHOULDERS / LEVELING LAYER: 4 MT 58-34 S

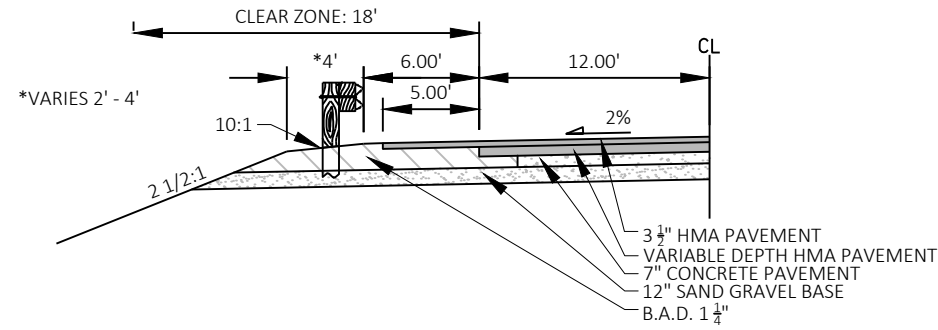
- \*\*CONSTRUCTION SEQUENCE NOTES
- DRIVING LANES: 2" MILL (24' WIDE), 4" CIR (24' WIDE), 1" HMA LEVELING (24' WIDE), 1.75" SMA (24' WIDE)
  - SHOULDERS: PULVERIZE & RELAY (5' WIDE EACH SIDE - BLADE OFF 1" OVER THE SHOULDER POINT TO MATCH ML LEVELING LAYER FOR FINAL OVERLAY), 1.75" HMA OVERLAY (5' WIDE EACH SIDE). BLADING OF MATERIAL OFF SHOULDER IS INCIDENTAL TO ITEM: PULVERIZE & RELAY.



**PROPOSED TYPICAL SECTION STH 13**  
 STA 565+55.76 - 604+44.55

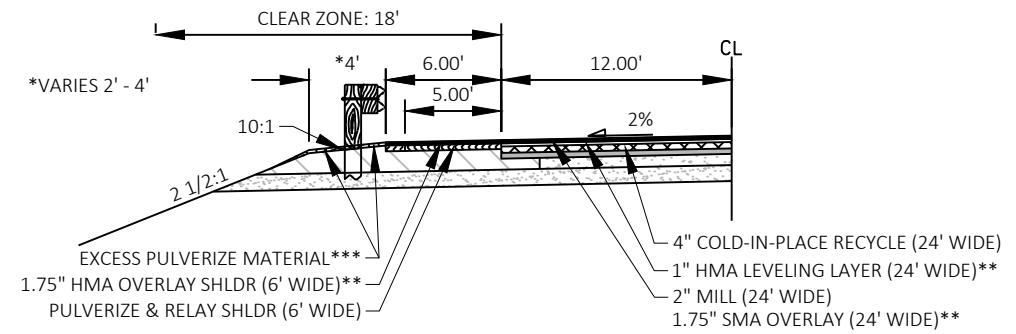
\*PAVEMENT TYPE  
 -DRIVING LANES: 4 SMA 58-34 V  
 -SHOULDERS / LEVELING LAYER: 4 MT 58-34 S

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**EXISTING HALF TYPICAL SECTION STH 13**

- STA 438+50 - 446+00 (L)
- STA 470+50 - 480+00 (L)
- STA 717+00 - 721+00 (R)
- STA 804+10 - 808+00 (L)
- STA 813+00 - 826+00 (L)



**PROPOSED HALF TYPICAL SECTION STH 13**

- STA 438+50 - 446+00 (L)
- STA 470+50 - 480+00 (L)
- STA 717+00 - 721+00 (R)
- STA 804+10 - 808+00 (L)
- STA 813+00 - 826+00 (L)

\*\*PAVEMENT TYPE  
 -DRIVING LANES: 4 SMA 58-34 H  
 -SHOULDERS / LEVELING LAYER: 4 MT 58-34 S

- \*\*\*CONSTRUCTION SEQUENCE NOTES
- DRIVING LANES: 2" MILL (24' WIDE), 4" CIR (24' WIDE), 1" HMA LEVELING (24' WIDE), 1.75" SMA (24' WIDE)
  - SHOULDERS: PULVERIZE & RELAY (6' WIDE EACH SIDE - BLADE OFF 1" OVER THE SHOULDER POINT TO MATCH ML LEVELING LAYER FOR FINAL OVERLAY), 1.75" HMA OVERLAY (6' WIDE EACH SIDE). BLADING OF MATERIAL OFF SHOULDER IS INCIDENTAL TO ITEM: PULVERIZE & RELAY.

**PAVEMENT CORING DATA**

- STA 392+27: 8 1/4"
- STA 415+50: 5 3/4"
- STA 426+50: 9 1/4"
- STA 443+15: 10"
- STA 451+10: 13"
- STA 483+50: 9 1/2"
- STA 519+50: 10"
- STA 520+50: 9 1/2"
- STA 540+50: 8"
- STA 556+00: 8 1/2"
- STA 581+25: 8 3/4"
- STA 591+00: 7 7/8"
- STA 608+00: 8 1/4"
- STA 626+00: 9 1/2"

STATIONS ARE APPROXIMATE

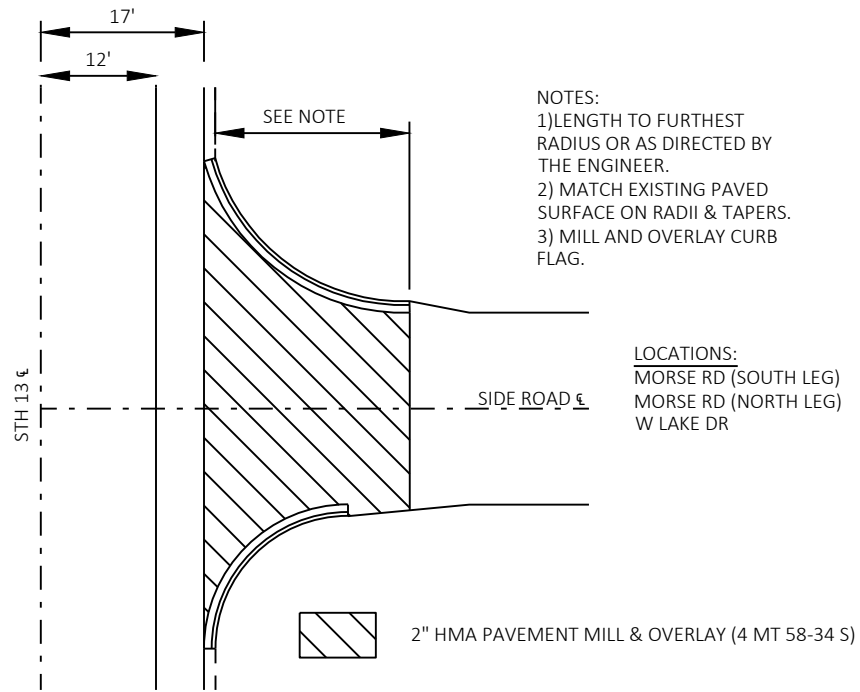
**PAVEMENT GPR DATA**

- STA 650+30: 9"
- STA 671+80: 11"
- STA 703+00: 12"
- STA 729+35: 12"
- STA 755+00: 10 1/2"
- STA 783+00: 9"
- STA 810+00: 8 1/2"
- STA 838+00: 10"

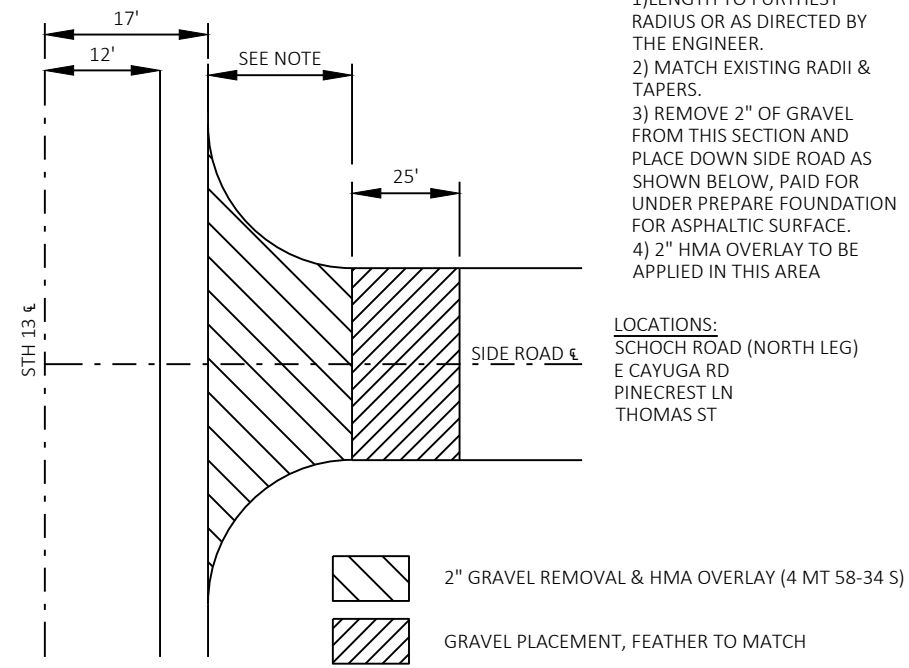
STATIONS ARE APPROXIMATE

**NOTE:**

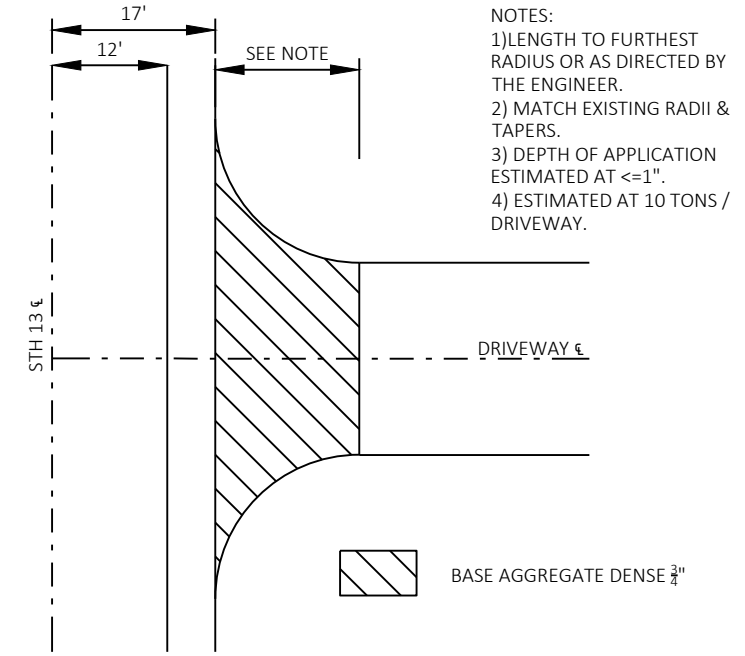
CIR MILLING MACHINE MAY HIT THE EXISTING PCC BASED ON THE CORING DATA. THE CIR PROCESS SHOULD STOP AT THE TOP OF THE PCC.



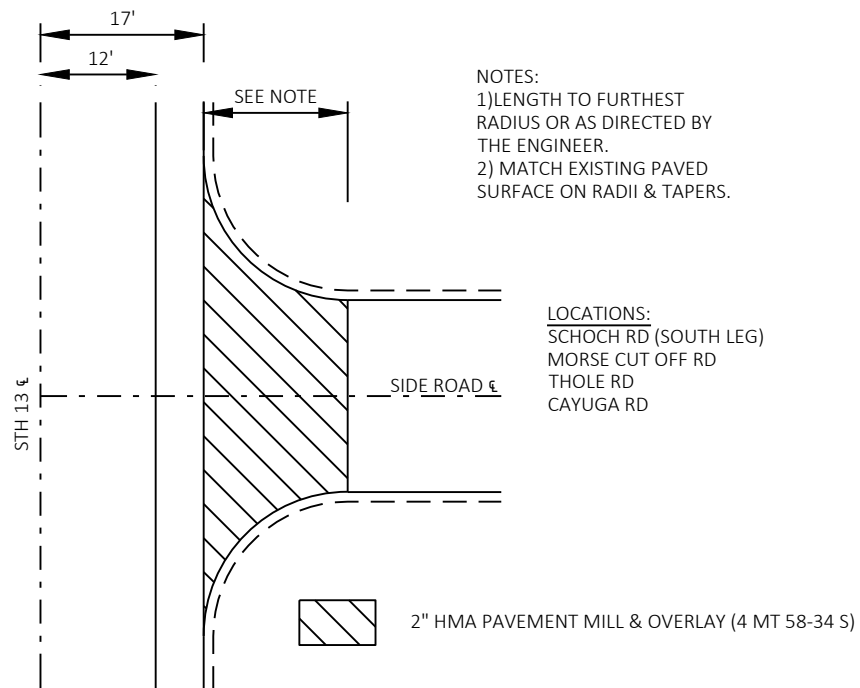
DETAIL OF PAVED SIDE ROAD WITH CURB & GUTTER



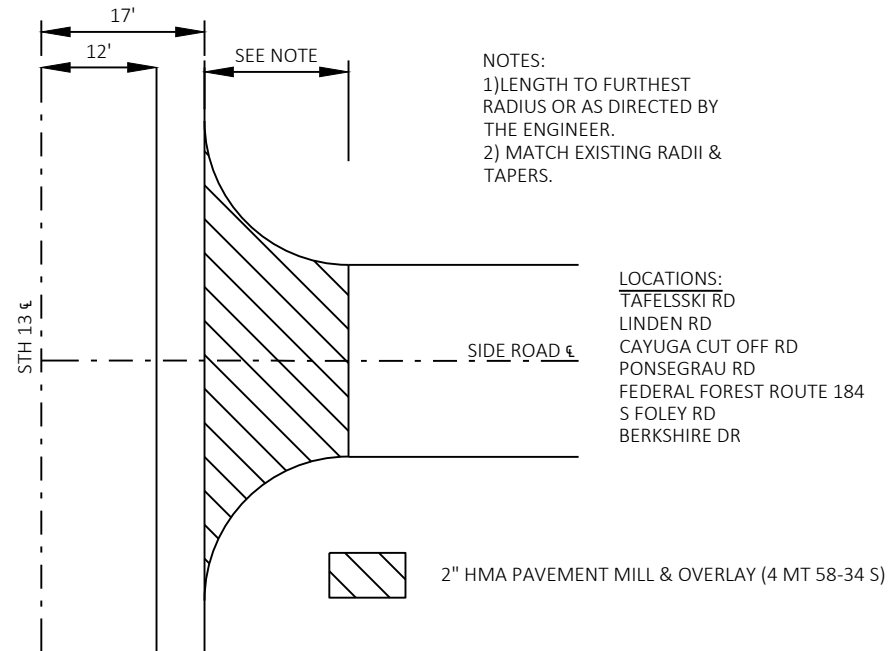
DETAIL OF UNPAVED SIDE ROAD WITH UNPAVED APPROACH



DETAIL OF GRAVEL DRIVEWAY

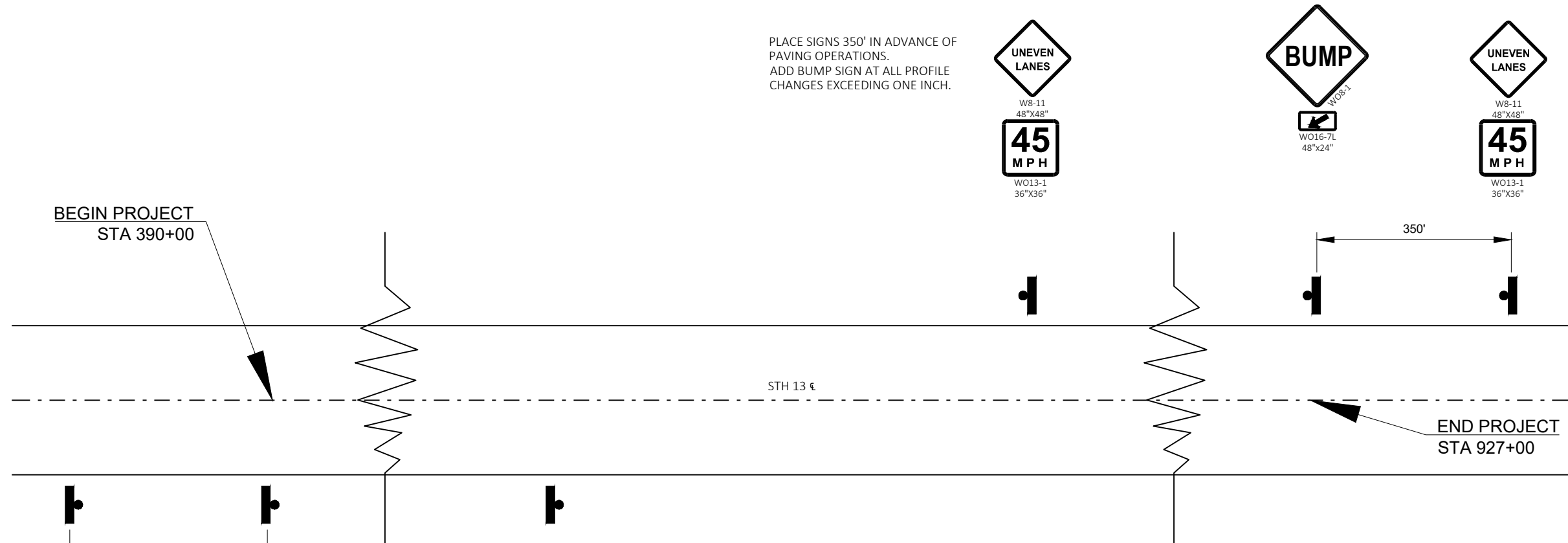


DETAIL OF PAVED SIDE ROAD WITH NO CURB & GUTTER



DETAIL OF UNPAVED SIDE ROAD WITH PAVED APPROACH

- 394+44L
- 395+76R
- 400+17L
- 403+19R
- 403+39L
- 407+96L
- 423+53L
- 424+80R
- 455+06R
- 481+50R
- 495+98R
- 497+25L
- 511+36R
- 513+27L
- 523+61R
- 523+68L
- 533+50R
- 552+17L
- 565+68L
- 586+00L
- 586+10R
- 611+02R
- 620+05L
- 624+50R
- 626+80L
- 641+55R
- 641+55L
- 649+45L
- 650+15R
- 665+00L
- 661+95R
- 665+90L
- 685+00R
- 686+35L
- 691+20R
- 693+20L
- 696+40R
- 703+75R
- 705+55L
- 710+40L
- 711+64R
- 730+95R
- 730+95L
- 741+25L
- 745+50R
- 747+85R
- 747+90L
- 751+75L
- 763+10L
- 768+30L
- 768+35R
- 777+40R
- 780+75L
- 797+90L
- 799+90L
- 801+45R
- 803+85L
- 808+25L
- 826+20R
- 826+45L
- 840+00R
- 840+00L
- 845+00R
- 845+05L
- 854+60L
- 854+65R
- 861+45R
- 873+35R
- 873+75L
- 875+95R
- 876+80L
- 881+85L
- 885+30R
- 888+30R
- 890+25L
- 891+10L
- 902+45L
- 904+30R
- 907+05L
- 907+15R
- 911+80R
- 916+80R
- 917+20L
- 924+40L
- 924+50R



PLACE SIGNS 350' IN ADVANCE OF PAVING OPERATIONS. ADD BUMP SIGN AT ALL PROFILE CHANGES EXCEEDING ONE INCH.

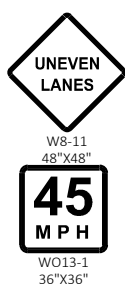
BEGIN PROJECT  
STA 390+00

END PROJECT  
STA 927+00

STH 13

350'

350'



PLACE SIGNS 350' IN ADVANCE OF PAVING OPERATIONS. ADD BUMP SIGN AT ALL PROFILE CHANGES EXCEEDING ONE INCH.

NOTES:

USE SDD 15C4 (TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC) FOR ADVANCE WARNING SIGNS.

DRAWING NOT TO SCALE. ALL SIGNS & POSTS ON THIS SHEET SHALL BE PAID FOR WITH "TRAFFIC CONTROL SIGNS".

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 SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE NEXT DETAIL SHEET FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MARKINGS ARE MISSING. "DO NOT PASS" SIGNS MUST BE INSTALLED UNTIL PAVEMENT MARKINGS ARE IN PLACE.

WHEN CIR OPERATIONS EXTEND BEYOND ONE MILE IN LENGTH, PLACE SHOWN SIGNS AT ONE MILE INTERVALS.

DETAIL FOR SIGNING ON CIR PAVEMENT SURFACES

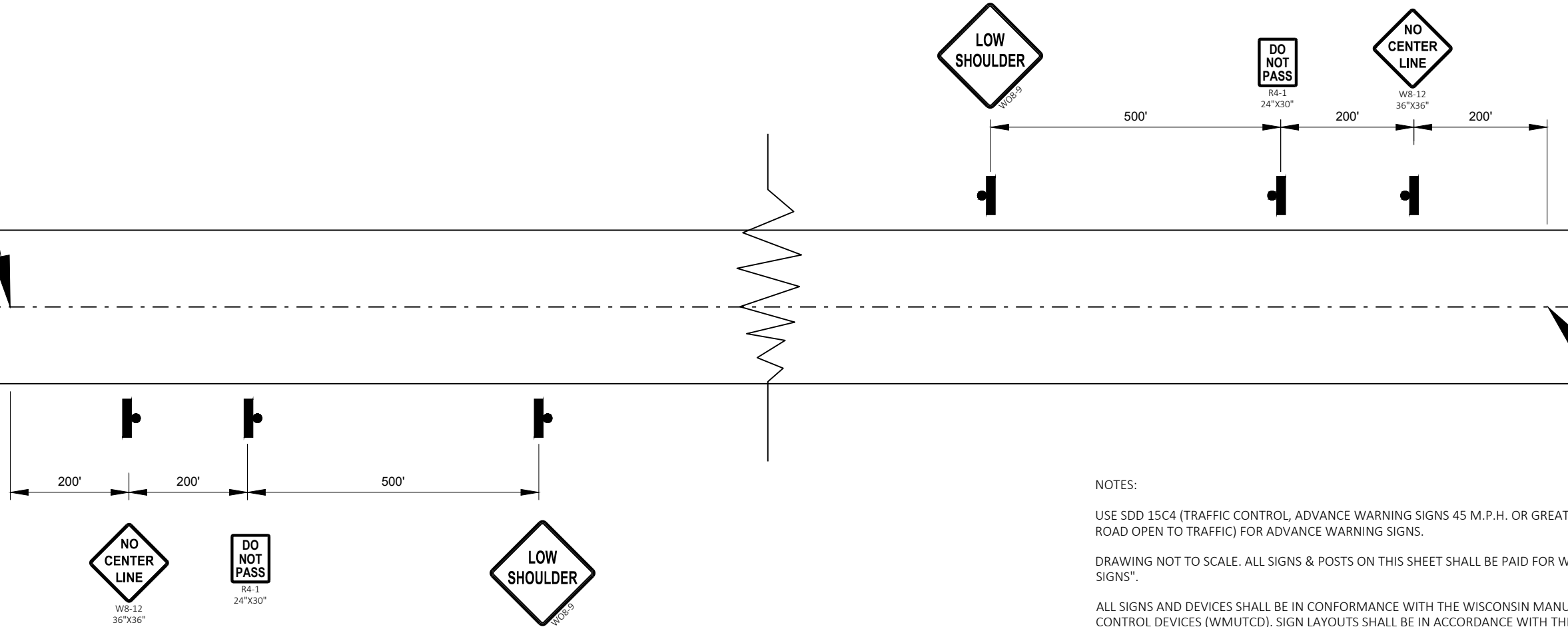
NOTES:  
 SEE SDD 15C34 "STANDARD APPLICATION FOR TEMPORARY RAISED PAVEMENT MARKERS TYPE II" FOR PLACEMENT AND FREQUENCY OF R4-1 & W8-12 SIGNS.

W08-9 SIGNS SHALL BE PLACED AT LEAST 200' IN ADVANCE OF THE LOW SHOULDER CONDITION AND EVERY 1 MILE IF CIR OPERATIONS EXTEND BEYOND 1 MILE.

BEGIN PROJECT  
 STA 390+00

STH 13

END PROJECT  
 STA 927+00



NOTES:

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REMOVE OR COVER W8-12 AND R4-1 SIGNS IMMEDIATELY FOLLOWING PLACEMENT OF TEMPORARY OR SAME-DAY PAVEMENT MARKING.

DETAIL FOR SIGNING ON HMA PAVEMENT SURFACES

Estimate Of Quantities

1610-11-70

Line	Item	Item Description	Unit	Total	Qty
0002	204.0120	Removing Asphaltic Surface Milling	SY	142,640.000	142,640.000
0004	204.0126.S	Removing Asphaltic Longitudinal Notched Wedge Joint Milling	LF	53,700.000	53,700.000
0006	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 1610-11-70	LS	1.000	1.000
0008	213.0100	Finishing Roadway (project) 01. 1610-11-70	EACH	1.000	1.000
0010	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,129.000	2,129.000
0012	325.0100	Pulverize and Relay	SY	59,433.000	59,433.000
0014	455.0605	Tack Coat	GAL	20,192.000	20,192.000
0016	455.0770.S	Asphalt Stabilizing Agent	TON	571.000	571.000
0018	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0020	460.0115.S	HMA Pavement Test Strips Volumetrics	EACH	1.000	1.000
0022	460.0120.S	HMA Pavement Test Strips Density	EACH	1.000	1.000
0024	460.2000	Incentive Density HMA Pavement	DOL	11,183.000	11,183.000
0026	460.2010	Incentive Air Voids HMA Pavement	DOL	11,334.000	11,334.000
0028	460.6244	HMA Pavement 4 MT 58-34 S	TON	14,167.000	14,167.000
0030	460.8644	HMA Pavement 4 SMA 58-34 V	TON	13,979.000	13,979.000
0032	460.9000.S	Material Transfer Vehicle	EACH	1.000	1.000
0034	465.0110	Asphaltic Surface Patching	TON	150.000	150.000
0036	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	20.000	20.000
0038	465.0425	Asphaltic Shoulder Rumble Strips 2-Lane Rural	LF	106,980.000	106,980.000
0040	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	53,490.000	53,490.000
0042	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1610-11-70	EACH	1.000	1.000
0044	619.1000	Mobilization	EACH	1.000	1.000
0046	624.0100	Water	MGAL	32.000	32.000
0048	642.5201	Field Office Type C	EACH	1.000	1.000
0050	643.0900	Traffic Control Signs	DAY	2,532.000	2,532.000
0052	643.0920	Traffic Control Covering Signs Type II	EACH	160.000	160.000
0054	643.5000	Traffic Control	EACH	1.000	1.000
0056	646.1020	Marking Line Epoxy 4-Inch	LF	61,823.000	61,823.000
0058	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	106,125.000	106,125.000
0060	649.0105	Temporary Marking Line Paint 4-Inch	LF	165,084.000	165,084.000
0062	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	55,028.000	55,028.000
0064	650.8000	Construction Staking Resurfacing Reference	LF	53,700.000	53,700.000
0066	650.9910	Construction Staking Supplemental Control (project) 01. 1610-11-70	LS	1.000	1.000
0068	740.0440	Incentive IRI Ride	DOL	26,745.000	26,745.000
0070	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,500.000	2,500.000
0072	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,440.000	1,440.000
0074	SPV.0035	Special 01. Base Repair for CIR Pavement	CY	30.000	30.000
0076	SPV.0060	Special 01. Prepare Foundation For HMA Upper Layer 1610-11-70	EACH	1.000	1.000
0078	SPV.0180	Special 01. Cold-In-Place Recycling (CIR) Pavement Partial Depth	SY	142,640.000	142,640.000



REMOVING ASPHALTIC SURFACE MILLING

CATEGORY	STATION TO	STATION	LOCATION	SY	REMARKS
0010	39000 -	58056	MAINLINE	50816	2" DEEP
0010	58266 -	92700	MAINLINE	91824	2" DEEP
TOTAL 0010				142640	

REMOVING ASPHALTIC LONGITUDINAL NOTCHED WEDGE JOINT MILLING,  
ITEM 204.0126.S

CAT	STATION TO	STATION	LOCATION	LF	REMARKS
0010	390+00 -	927+00	SMA PAVEMENT	53700	CENTERLINE
TOTAL 0010				53700	

TACK COAT

CATEGORY	STATION TO	STATION	LOCATION	GAL	REMARKS
<b>MAINLINE</b>					
0010	390+00 -	580+56	MAINLINE	7114	24' WIDE
0010	582+66 -	927+00	MAINLINE	12855	24' WIDE
<b>SIDEROADS</b>					
0010	415+60		MORSE CUT OFF ROAD	20	
0010	415+60		SCHOCH ROAD	13	
0010	426+33		MORSE ROAD	28	
0010	453+56		SCHOCH ROAD	12	
0010	483+17		LINDEN RD	14	
0010	519+33		MORSE RD	20	
0010	519+90		THOLE ROAD	16	
0010	527+54		E CAYUGA ROAD	3	
0010	527+90		CAYUGA ROAD	21	
0010	636+00		CAYUGA CUT OFF ROAD	12	
0010	707+05		PONSEGRAU ROAD	6	
0010	720+30		FEDERAL FOREST ROUTE 184	8	
0010	773+80		LAKE DRIVE	11	
0010	807+74		FOLEY ROAD	18	
0010	828+55		FOLEY ROAD	7	
0010	829+00		TAFESLKI ROAD	8	
0010	909+28		BERKSHIRE DRIVE	5	
TOTAL 0010				20192	

NOTE: ASSUMES 2 APPS OF TACK  
(1 ON CIR, 1 ON LEVELING LAYER)

PREPARE FOUNDATION FOR ASPHALTIC PAVING (1610-11-70)

CATEGORY	STATION	LOCATION	LS	REMARKS
0010	453+56	SCHOCH RD (N LEG)	0.25	:E DETAIL OF UNPAVED SIDE RD W UNPAVED APPR.
0010	527+54	E CAYUGA RD	0.25	:E DETAIL OF UNPAVED SIDE RD W UNPAVED APPR.
0010	893+83	PINECREST LN	0.25	:E DETAIL OF UNPAVED SIDE RD W UNPAVED APPR.
0010	913+00	THOMAS ST	0.25	:E DETAIL OF UNPAVED SIDE RD W UNPAVED APPR.
TOTAL 0010			1	

BASE AGGREGATE DENSE 3/4-INCH

CATEGORY	STATION TO	STATION	LOCATION	TON	REMARKS
0010	390+00 -	437+31	MAINLINE SHOULDERS	105	
0010	437+31 -	447+19	MAINLINE SHOULDERS	22	BG LEFT SIDE
0010	447+19 -	469+30	MAINLINE SHOULDERS	49	
0010	469+30 -	481+19	MAINLINE SHOULDERS	26	BG LEFT SIDE
0010	481+19 -	580+56	MAINLINE SHOULDERS	221	
0010	582+66 -	802+92	MAINLINE SHOULDERS	489	
0010	802+92 -	809+18	MAINLINE SHOULDERS	14	BG LEFT SIDE
0010	809+18 -	811+81	MAINLINE SHOULDERS	6	
0010	811+81 -	827+17	MAINLINE SHOULDERS	34	BG LEFT SIDE
0010	827+17 -	927+00	MAINLINE SHOULDERS	222	
0010			DRIVEWAY / FIELD ENTRANCE:	840	84 DRIVEWAYS @ 10 TONS/EACH
0010			UNDISTRIBUTED	100	
TOTAL 0010				2129	

PULVERIZE AND RELAY

CATEGORY	STATION TO	STATION	LOCATION	SY	REMARKS
0010	390+00 -	580+56	MAINLINE SHLDRS	21173	ASSUME 5' EACH SIDE
0010	582+66 -	927+00	MAINLINE SHLDRS	38260	ASSUME 5' EACH SIDE
TOTAL 0010				59433	

FINISHING ROADWAY (1610-11-70)

CATEGORY	STATION TO	STATION	LOCATION	EACH	REMARKS
0010	390+00 -	927+00	PROJECT	1	
TOTAL 0010				1	

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ASPHALT STABILIZING AGENT

CATEGORY	STATION TO	STATION	LOCATION	455.0770.S TON	REMARKS
0010	390+00	- 927+00	MAINLINE	571	
TOTAL 0010				571	

HMA PAVEMENT TEST STRIP

CATEGORY	LOCATION	460.0100.S EACH
0010	PROJECT	1
TOTAL 0010		1

HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS

CATEGORY	LOCATION	460.0105.S EACH
0010	PROJECT	1
TOTAL 0010		1

HMA PAVEMENT TEST STRIP VOLUMETRICS

CATEGORY	LOCATION	460.0115.S EACH
0010	PROJECT	1
TOTAL 0010		1

HMA PAVEMENT TEST STRIP DENSITY

CATEGORY	LOCATION	460.0120.S EACH
0010	PROJECT	1
TOTAL 0010		1

HMA PAVEMENT 4 SMA 58-34 V

CATEGORY	STATION TO	STATION	LOCATION	460.8644 TON	REMARKS
0010	390+00	- 580+56	MAINLINE DRIVING LANES	4980	1.75" DEE
0010	582+66	- 927+00	MAINLINE DRIVING LANES	8999	1.75" DEE
TOTAL 0010				13979	

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

CATEGORY	STATION	LOCATION	465.0120 TON
0010	861+45	DRIVEWAY - R	10
0010	907+05	DRIVEWAY - L	10
TOTAL 0010			20

HMA PAVEMENT 4 MT 58-34 S

CATEGORY	STATION TO	STATION	LOCATION	460.6244 TON	REMARKS
0010	390+00	- 580+56	MAINLINE DRIVING LANES	2846	1" LEVELING
0010	582+66	- 927+00	MAINLINE DRIVING LANES	5142	1" LEVELING
0010	390+00	- 580+56	MAINLINE SHOULDERS	2075	1.75" DEEP
0010	582+66	- 927+00	MAINLINE SHOULDERS	3749	1.75" DEEP
0010		415+60	MORSE CUT OFF ROAD	31	2" DEEP
0010		415+60	SCHOCH ROAD	21	2" DEEP
0010		426+33	MORSE ROAD	44	2" DEEP
0010		453+56	SCHOCH ROAD	19	2" DEEP
0010		483+17	LINDEN RD	23	2" DEEP
0010		519+33	MORSE RD	32	2" DEEP
0010		519+90	THOLE ROAD	26	2" DEEP
0010		527+54	E CAYUGA ROAD	5	2" DEEP
0010		527+90	CAYUGA ROAD	33	2" DEEP
0010		636+00	CAYUGA CUT OFF ROAD	20	2" DEEP
0010		707+05	PONSEGRAU ROAD	10	2" DEEP
0010		720+30	FEDERAL FOREST ROUTE 184	12	2" DEEP
0010		773+80	LAKE DRIVE	18	2" DEEP
0010		807+74	FOLEY ROAD	28	2" DEEP
0010		828+55	FOLEY ROAD	11	2" DEEP
0010		829+00	TAFESLKI ROAD	13	2" DEEP
0010		909+28	BERKSHIRE DRIVE	8	2" DEEP
TOTAL 0010				14167	

ASPHALTIC SURFACE PATCHING

CATEGORY	STATION TO	STATION	LOCATION	465.0110 TON	REMARKS
0010	390+00	- 927+00	UNDISTRIBUTED	150	PREPARE FOUNDATION FOR CIR & SMA / HMA
TOTAL 0010				150	

ASPHALTIC SHOULDER RUMBLE STRIPS 2-LANE RURAL

CATEGORY	STATION TO	STATION	LOCATION	465.0425 LF	REMARKS
0010	390+00	- 580+56	SHOULDERS	38112	
0010	582+66	- 927+00	SHOULDERS	68868	
TOTAL 0010				106980	

ASPHALT CENTER LINE RUMBLE STRIPS 2-LANE RURAL

CATEGORY	STATION TO	STATION	LOCATION	465.0475 LF	REMARKS
0010	390+00	- 580+56	CENTERLINE	19056	
0010	582+66	- 927+00	CENTERLINE	34434	
TOTAL 0010				53490	

MAINTENANCE AND REPAIR OF HAUL ROADS (1610-11-70)

		618.0100	
CATEGORY	LOCATION	EACH	REMARKS
0010	PROJECT	1	
TOTAL 0010		<u>1</u>	

MOBILIZATION

		619.1000	
CATEGORY	LOCATION	EACH	REMARKS
0010	PROJECT	1	
TOTAL 0010		<u>1</u>	

WATER

		624.0100	
CAT	STATION TO STATION	LOC	MGAL
0010	390+00 - 927+00	UNDIST.	32
TOTAL 0010			<u>32</u>

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FIELD OFFICE TYPE C

		642.5201	
CATEGORY	LOCATION	EACH	REMARKS
0010	PROJECT	1	
TOTAL 0010		<u>1</u>	

TRAFFIC CONTROL SIGNS

		643.0900	
CATEGORY	SIGNS	DAYS	LOCATION
0010	10.00	60.00	BEGINNING AND END OF WORK ZONE
0010	18.00	60.00	SIDERoadS
0010	12.00	21.00	CIR SURFACES
0010	60.00	10.00	NO CL/NO PASSING
TOTAL 0010			<u>2532</u>

TRAFFIC CONTROL COVERING SIGNS TYPE II

		643.0920	
CAT	STATION TO STATION	LOCATION	EACH
0010	390+00 - 927+00	TC SIGNS: R4-1, W8-12	40
0010	390+00 - 927+00	TC SIGNS: R4-1, W8-12	40
0010	390+00 - 927+00	TC SIGNS: R4-1, W8-12	40
0010	390+00 - 927+00	TC SIGNS: R4-1, W8-12	40
TOTAL 0010			<u>160</u>

TRAFFIC CONTROL

		643.5000	
CATEGORY	LOCATION	EACH	REMARKS
0010	PROJECT	1	
TOTAL 0010		<u>1</u>	

CONSTRUCTION STAKING RESURFACING REFERENCE

		650.8000	
CATEGORY	STATION TO STATION	LOCATION	LF
0010	390+00 - 927+00	MAINLINE	53700
TOTAL 0010			<u>53700</u>

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (1610-11-70)

		650.9910	
CATEGORY	LOCATION	LS	REMARKS
0010	PROJECT	1	
TOTAL 0010		<u>1</u>	

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PAVEMENT MARKING SUMMARY

CAT	STATION TO	STATION	LOCATION	646.1040	646.1020	649.0105	649.0120	WHITE	YELLOW
				MARKING LINE GROOVED WET REF EPOXY 4-INCH LF	MARKING LINE EPOXY 4-INCH LF	TEMPORARY MARKING LINE PAINT 4-INCH LF	TEMPORARY MARKING LINE EPOXY 4-INCH LF		
0010	390+00	- 927+00	STH 13 CENTERLINE (MILLED SURF)			55028			55028
0010	390+00	- 927+00	STH 13 CENTERLINE (ON CIR)			55028			55028
0010	390+00	- 927+00	CENTERLINE (ON LEVELING LAYER)			55028			55028
0010	390+00	- 927+00	STH 13 CENTERLINE (ON SMA)		61823		55028		61823
0010	390+00	- 927+00	STH 13 EDGELINES	105565				105565	
0010		426+33	MORSE ROAD	150					150
0010		519+33	MORSE ROAD	160					160
0010		527+90	CAYUGA ROAD	150					150
0010		773+80	LAKE DRIVE	100					100
TOTAL 0010				106125	61823	165084	55028		

ASPHALT STABILIZING AGENT

CATEGORY	STATION TO	STATION	LOCATION	455.0770.S TON	REMARKS
0010	390+00	- 927+00	MAINLINE	571	
TOTAL 0010				571	

BASE REPAIR FOR CIR PAVEMENT

CATEGORY	STATION TO	STATION	LOCATION	SPV.0035.01 CY	REMARKS
0010	390+00	- 927+00	PROJECT	30	
TOTAL 0010				30	

MATERIAL TRANSFER VEHICLE

CATEGORY	LOCATION	460.9000.S EACH	REMARKS
0010	PROJECT	1	
TOTAL 0010		1	

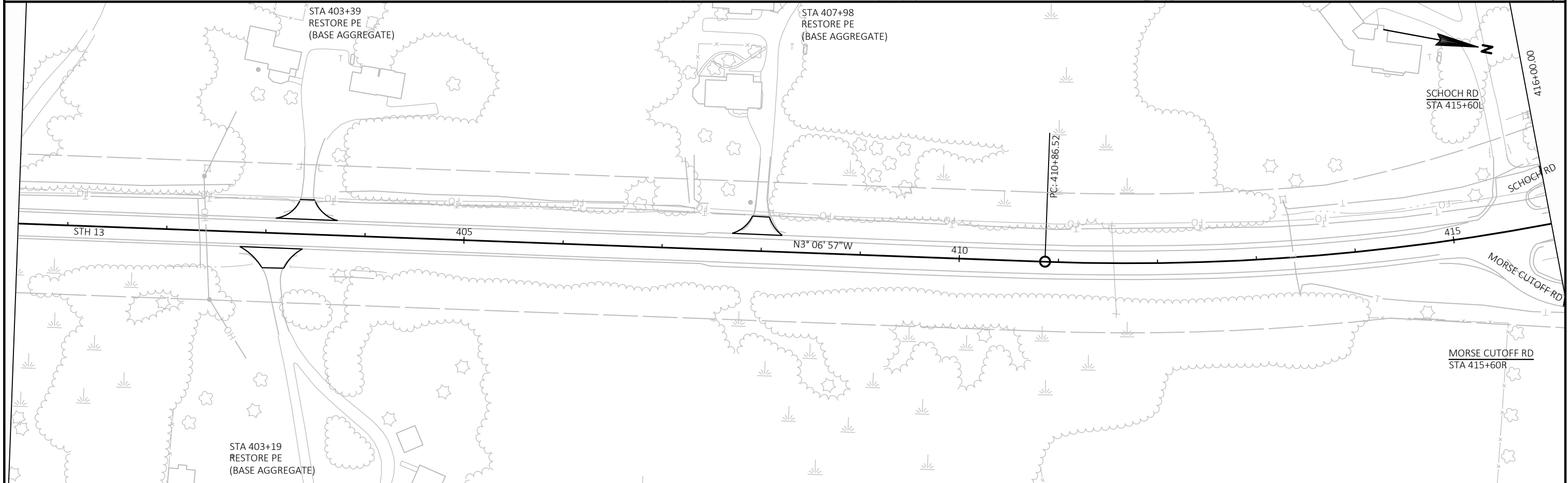
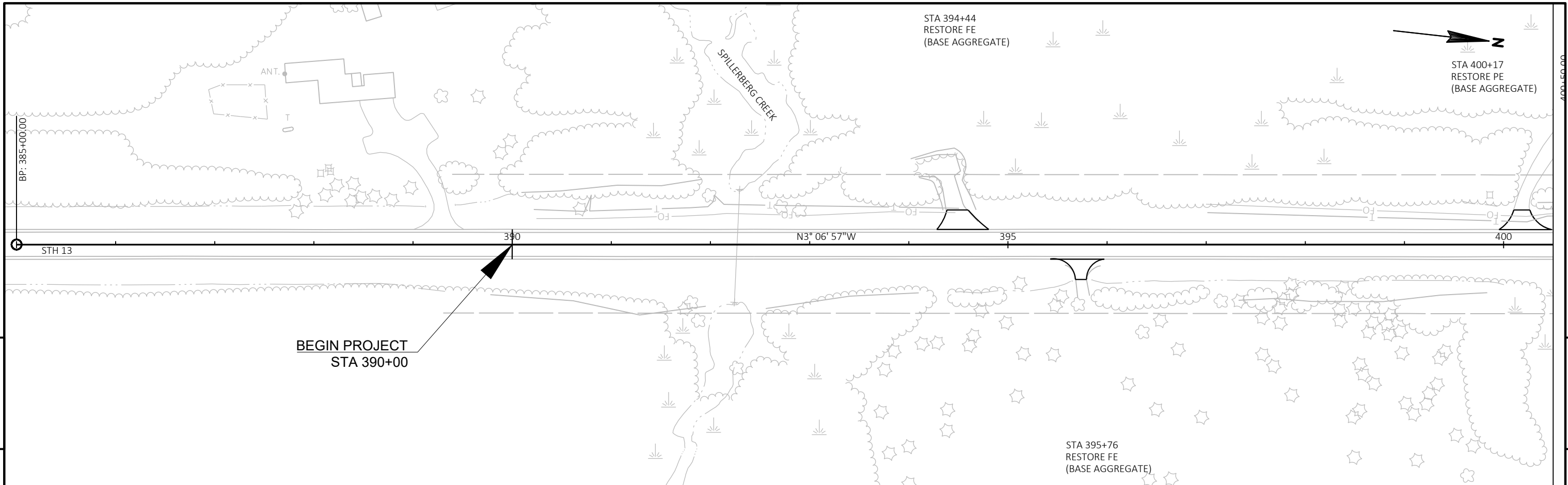
PREPARE FOUNDATION FOR HMA UPPER LAYER 1610-11-70

CATEGORY	LOCATION	SPV.0060.01 EACH	REMARKS
0010	PROJECT	1	
TOTAL 0010		1	

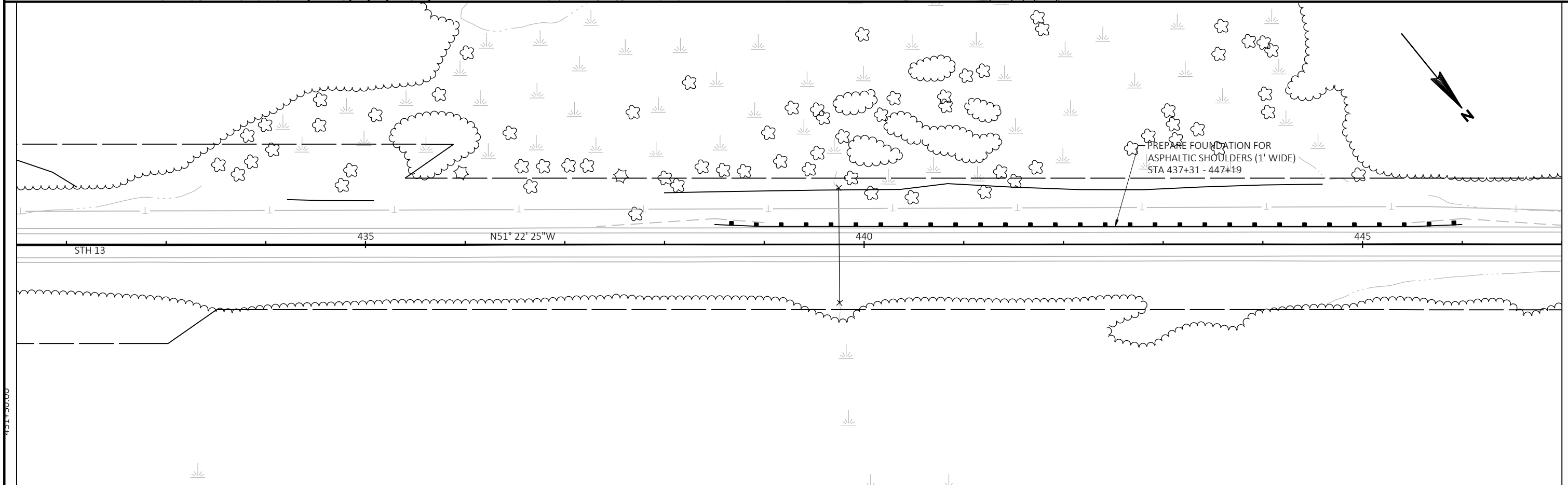
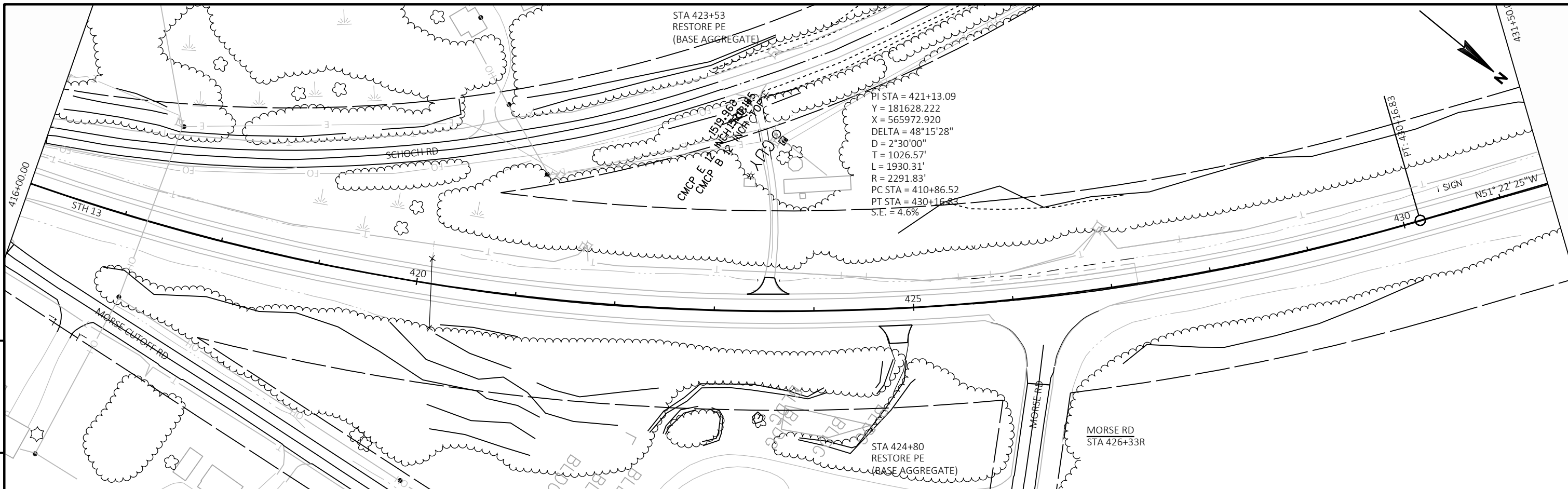
COLD-IN-PLACE RECYCLING (CIR) PAVEMENT PARTIAL DEPTH

CATEGORY	STATION TO	STATION	LOCATION	SPV.0180.01 SY	REMARKS
0010	390+00	- 580+56	STH 13	50816	DRIVING LANES ONLY
0010	582+66	- 927+00	STH 13	91824	DRIVING LANES ONLY
TOTAL 0010				142640	

HMA / SMA ACCEPTANCE TABLE								
Location	Station	Mixture Use	Underlying Surface	Bid Item	Tons	Thickness	Quality Management Program to be used for:	
							Mixture Acceptance	Density Acceptance
12' Driving Lanes (Cold-In-Place Recycle)	390+00 - 580+56, 582+66 - 927+00	Asphalt Stabilizing Agent	Milled Surface	SPV.0180.01, 455.0770.S	571	4"	Cold-In-Place Recycling (CIR) Pavement Partial Depth (SPV.0180.01)	
12' Driving Lanes (Leveling Layer)	390+00 - 580+56, 582+66 - 927+00	4 MT 58-34 S	Cold-In-Place Recycle	460.6244	7988	1"	PWL Incentive Air Voids HMA Pavement (460.2010)	Acceptance by ordinary compaction
12' Driving Lanes (SMA Pavement)	390+00 - 580+56, 582+66 - 927+00	4 SMA 58-34 V	1" Leveling Layer (4 MT 58-34 S)	460.8644	13979	1.75"	QMP as per SS 460	Incentive density HMA Pavement(460.2000)
5' Shoulders	390+00 - 580+56, 582+66 - 927+00	4 MT 58-34 S	Pulverize and Relay	460.6244	5824	1.75"	PWL Incentive Air Voids HMA Pavement (460.2010)	Acceptance testing by department; Not eligible for incentive or disincentive
Sideroads	Varies	4 MT 58-34 S	Milled Surface	460.6244	355	2"	PWL Incentive Air Voids HMA Pavement (460.2010)	Acceptance testing by department; Not eligible for incentive or disincentive

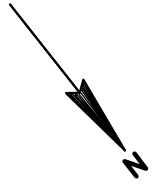


PROJECT NO: 1610-11-70	HWY: STH 13	COUNTY: ASHLAND	PLANS	SHEET	<b>E</b>
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SCHOCH RD  
STA 453+56L

SCHOCH RD



STH 13 450 N51° 22' 25"W 455 460

STA 455+06  
RESTORE PE  
(BASE AGGREGATE)

PREPARE FOUNDATION FOR  
ASPHALTIC SHOULDER (1' WIDE)  
STA 469+30 - 481+19

STH 13 465 N51° 22' 25"W 470 475

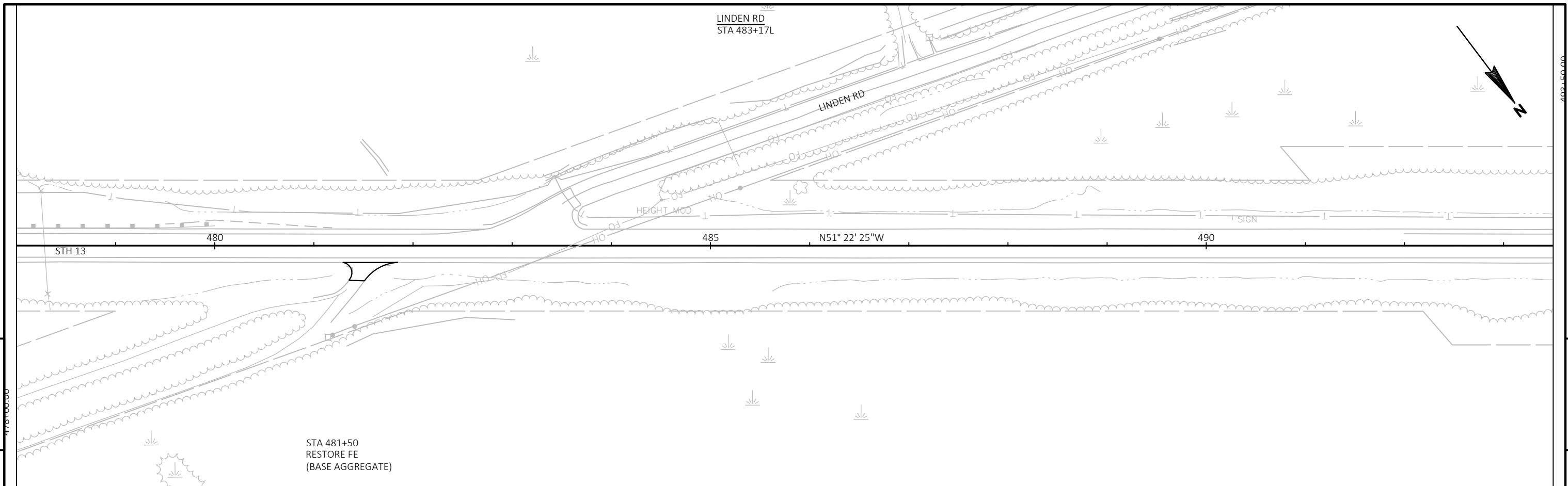
SIGN

SIGN

5

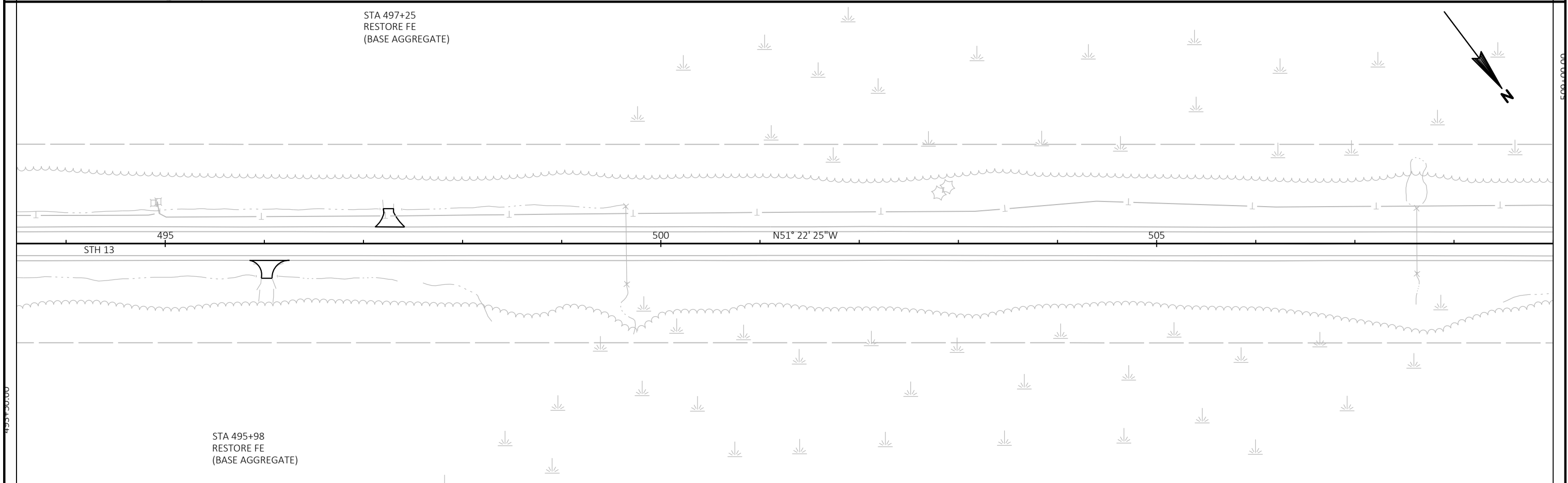
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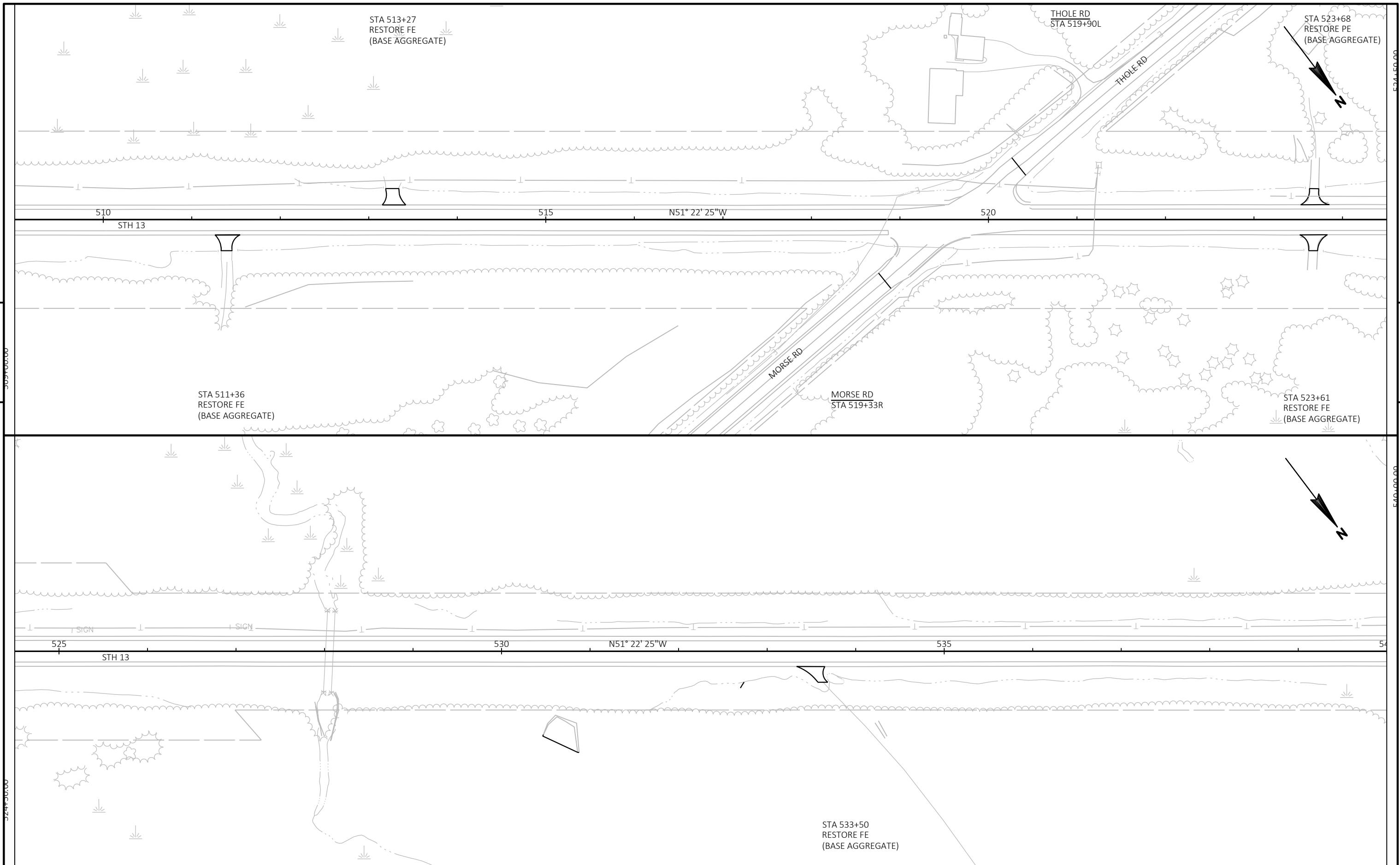


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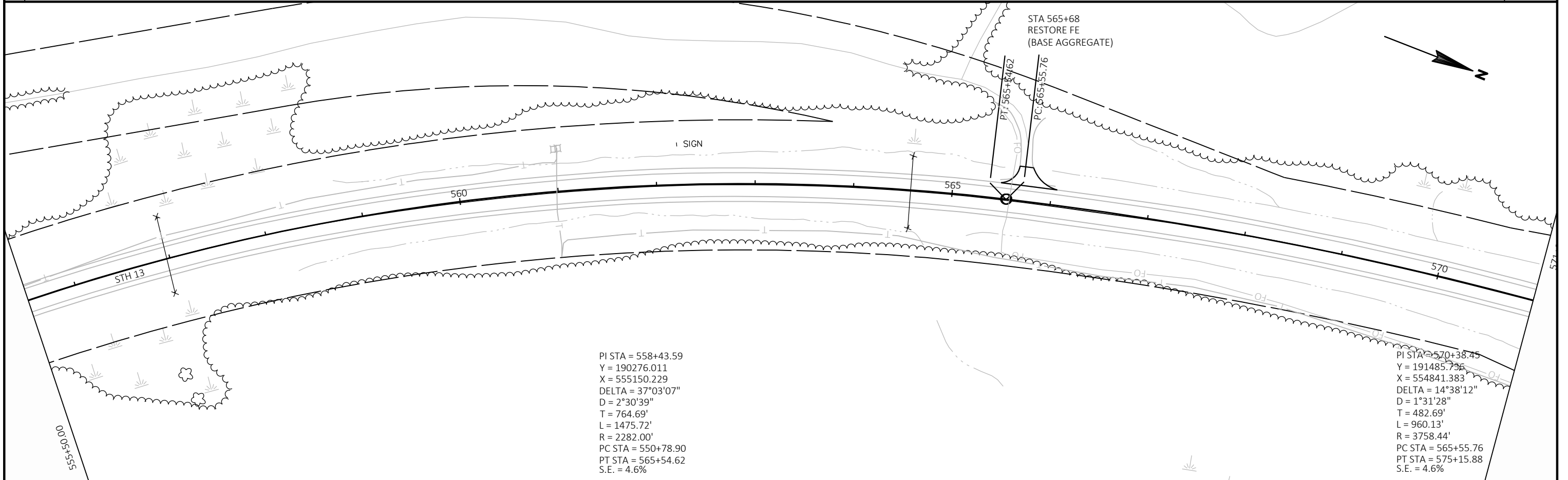
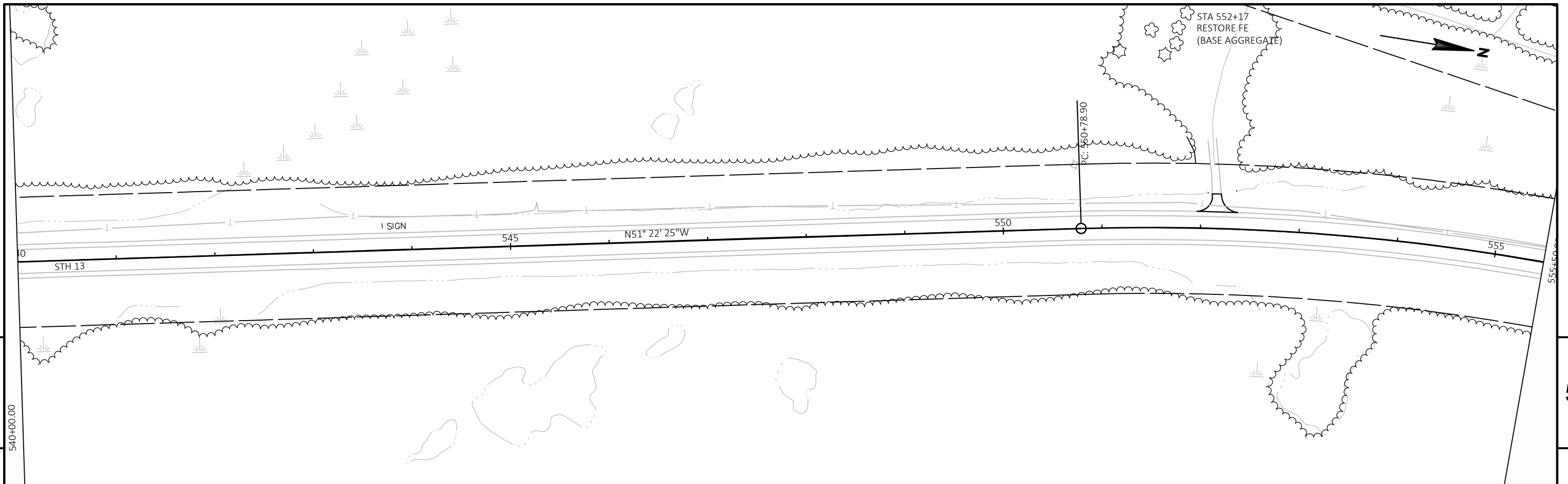
PROJECT NO: 1610-11-70	HWY: STH 13	COUNTY: ASHLAND	PLANS	SHEET	E
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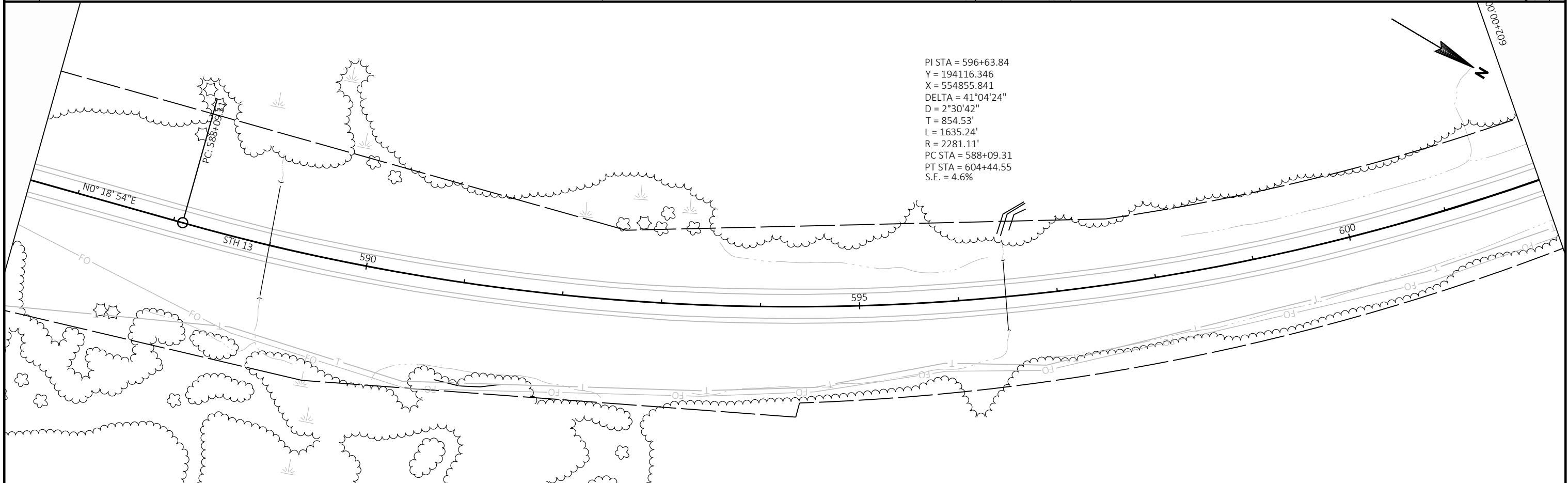
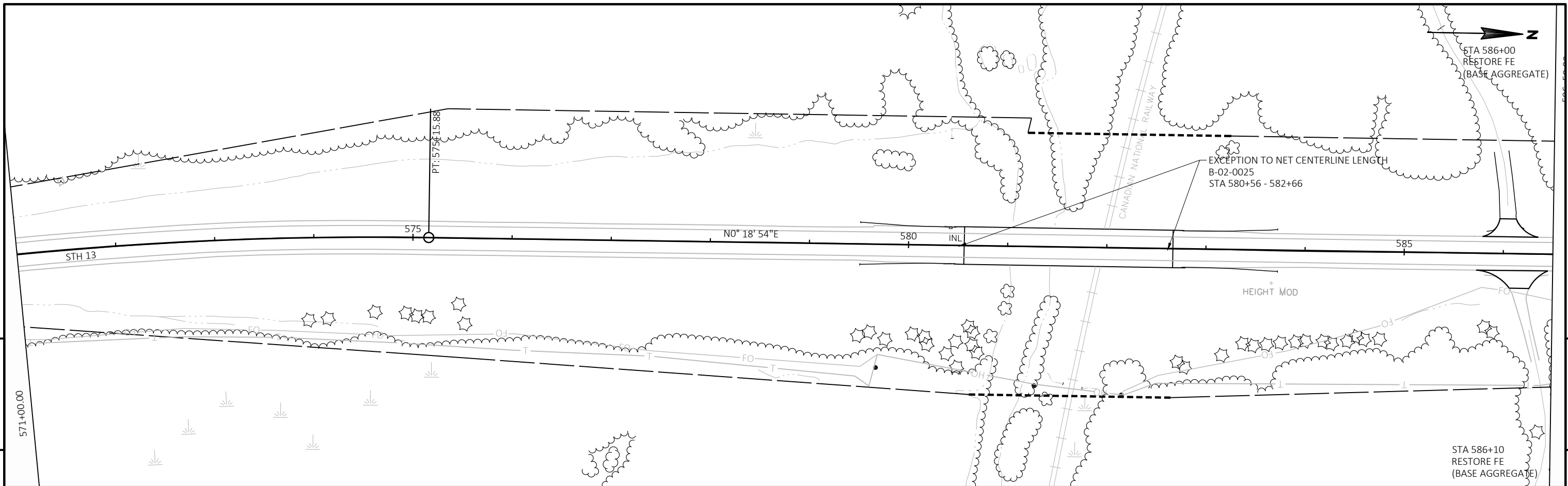
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PROJECT NO: 1610-11-70	HWY: STH 13	COUNTY: ASHLAND	PLANS	SHEET	E
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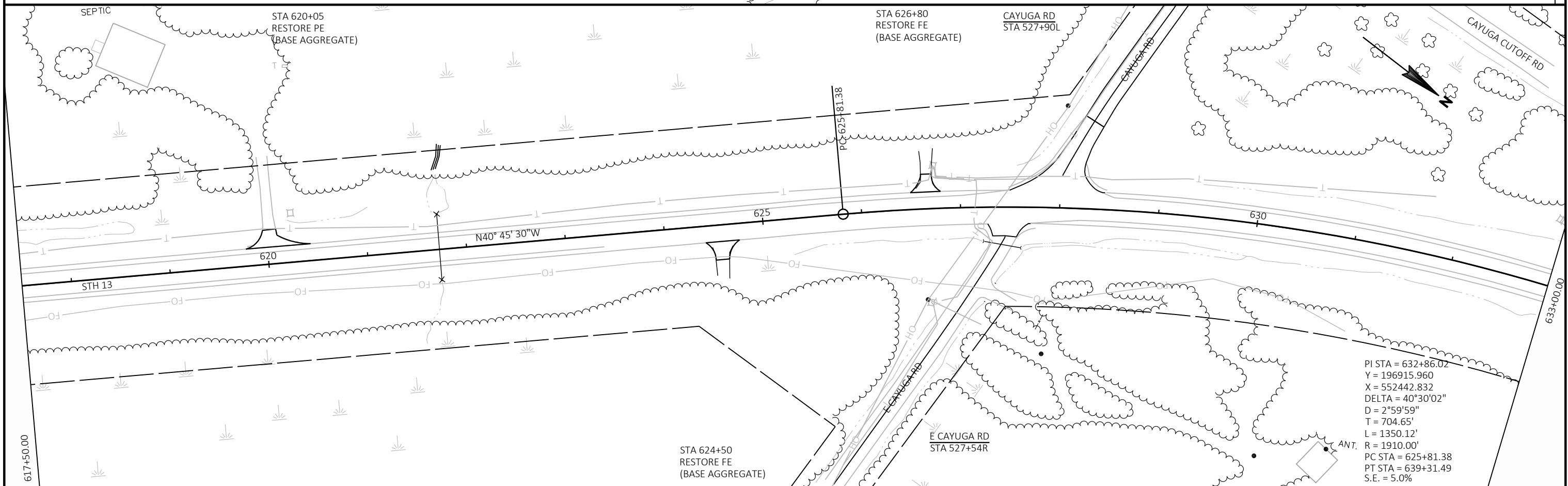
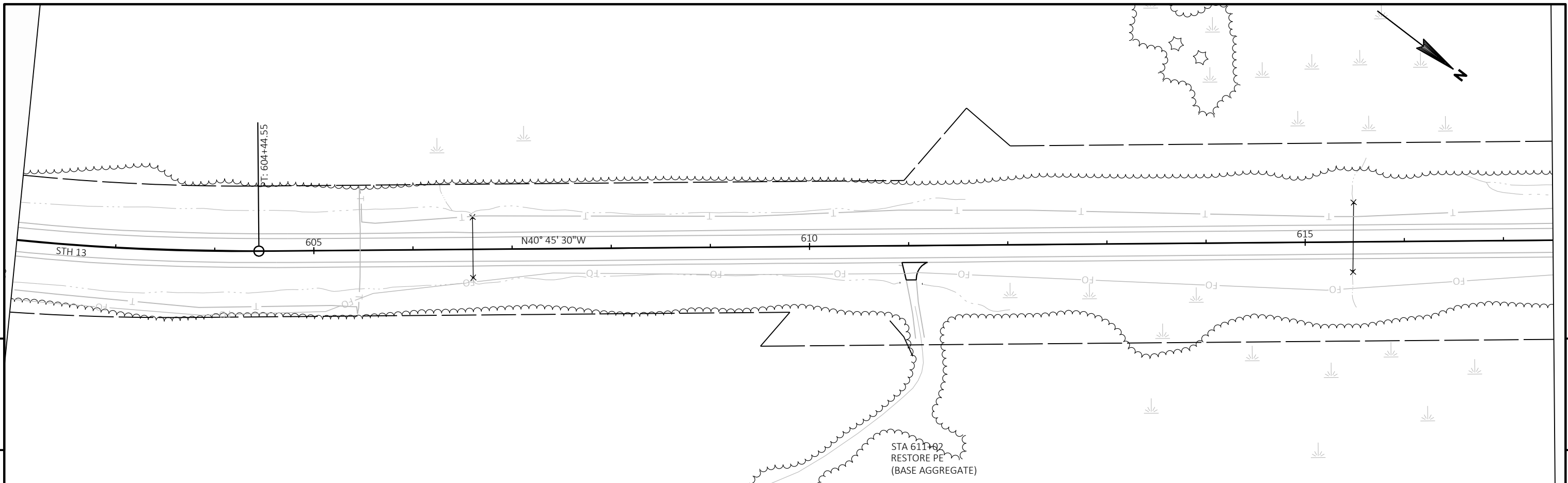


PI STA = 558+43.59  
 Y = 190276.011  
 X = 555150.229  
 DELTA = 37°03'07"  
 D = 2°30'39"  
 T = 764.69'  
 L = 1475.72'  
 R = 2282.00'  
 PC STA = 550+78.90  
 PT STA = 565+54.62  
 S.E. = 4.6%

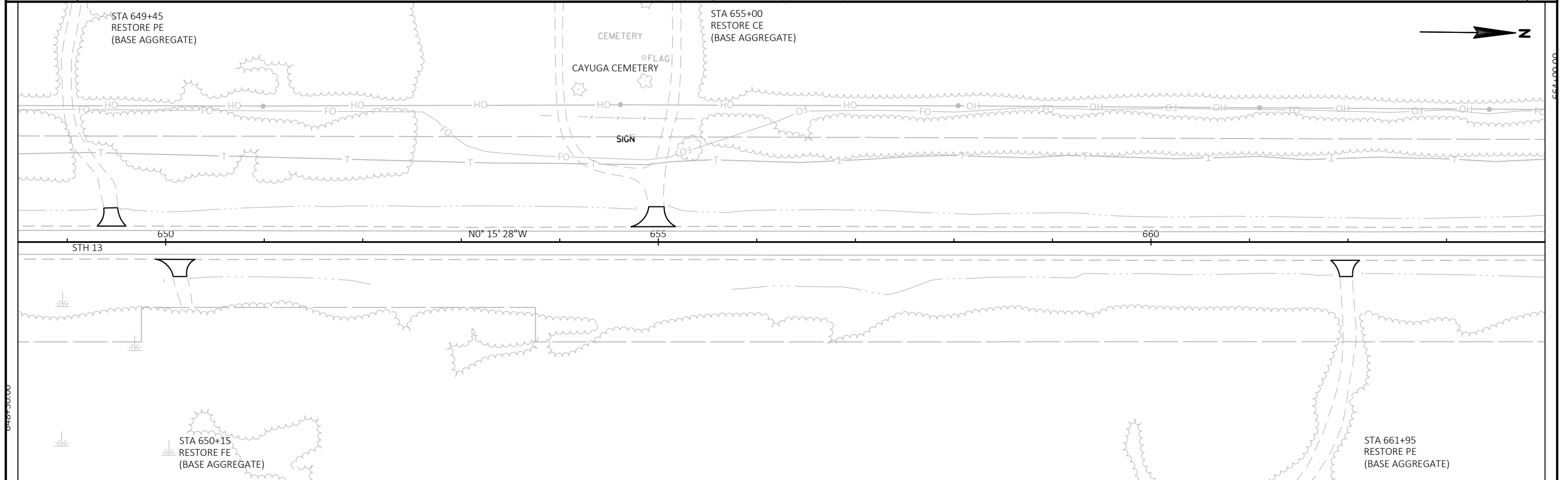
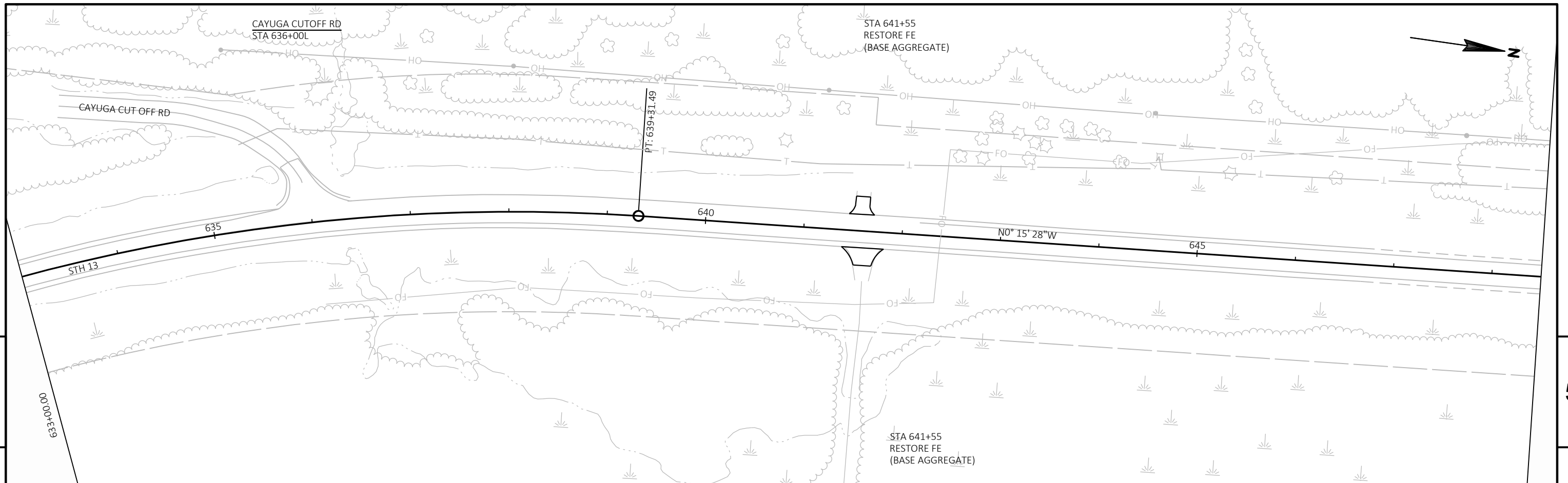
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 X = 554841.383  
 DELTA = 14°38'12"  
 D = 1°31'28"  
 T = 482.69'  
 L = 960.13'  
 R = 3758.44'  
 PC STA = 565+55.76  
 PT STA = 575+15.88  
 S.E. = 4.6%



PROJECT NO: 1610-11-70      HWY: STH 13      COUNTY: ASHLAND      PLANS      SHEET      E

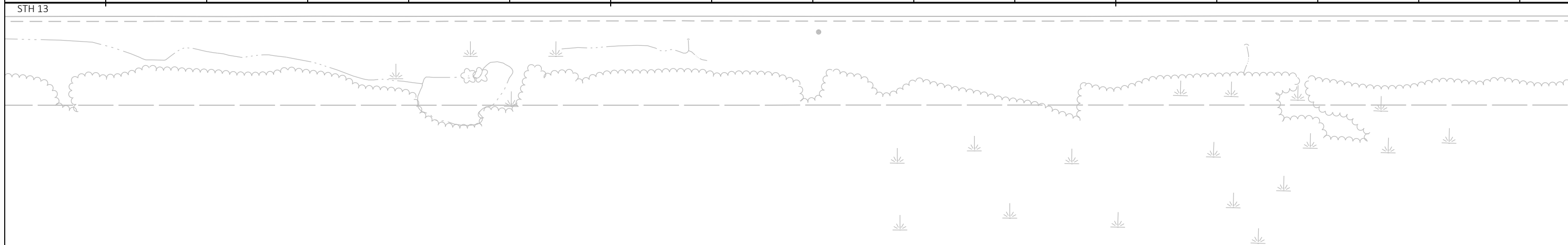
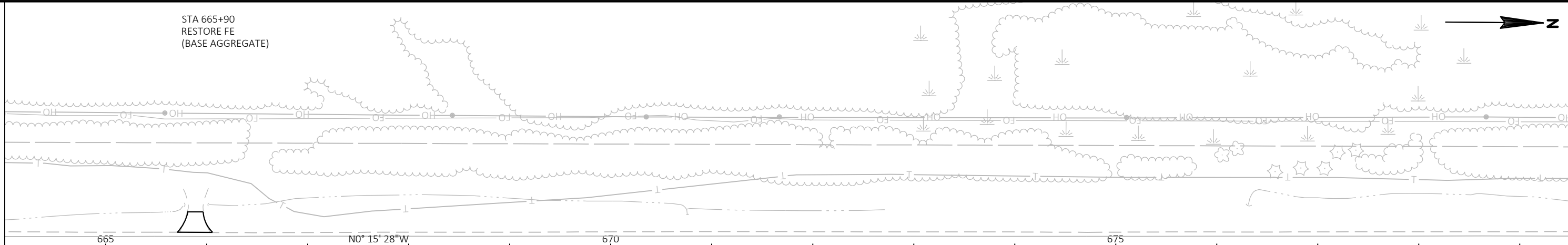


PROJECT NO: 1610-11-70      HWY: STH 13      COUNTY: ASHLAND      PLANS      SHEET      E



PROJECT NO: 1610-11-70	HWY: STH 13	COUNTY: ASHLAND	PLANS	SHEET	E
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STA 665+90  
RESTORE FE  
(BASE AGGREGATE)

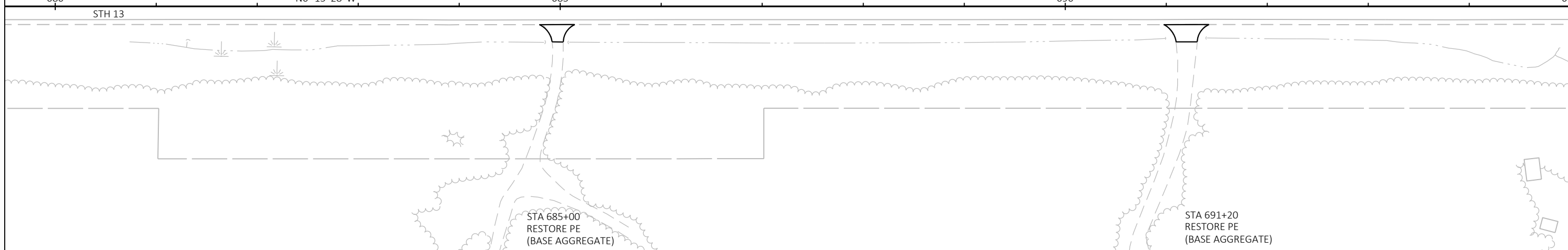
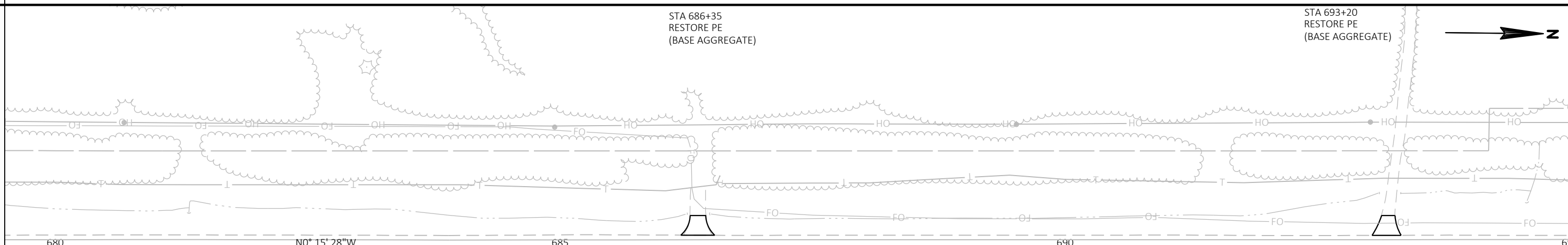


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STA 686+35  
RESTORE PE  
(BASE AGGREGATE)

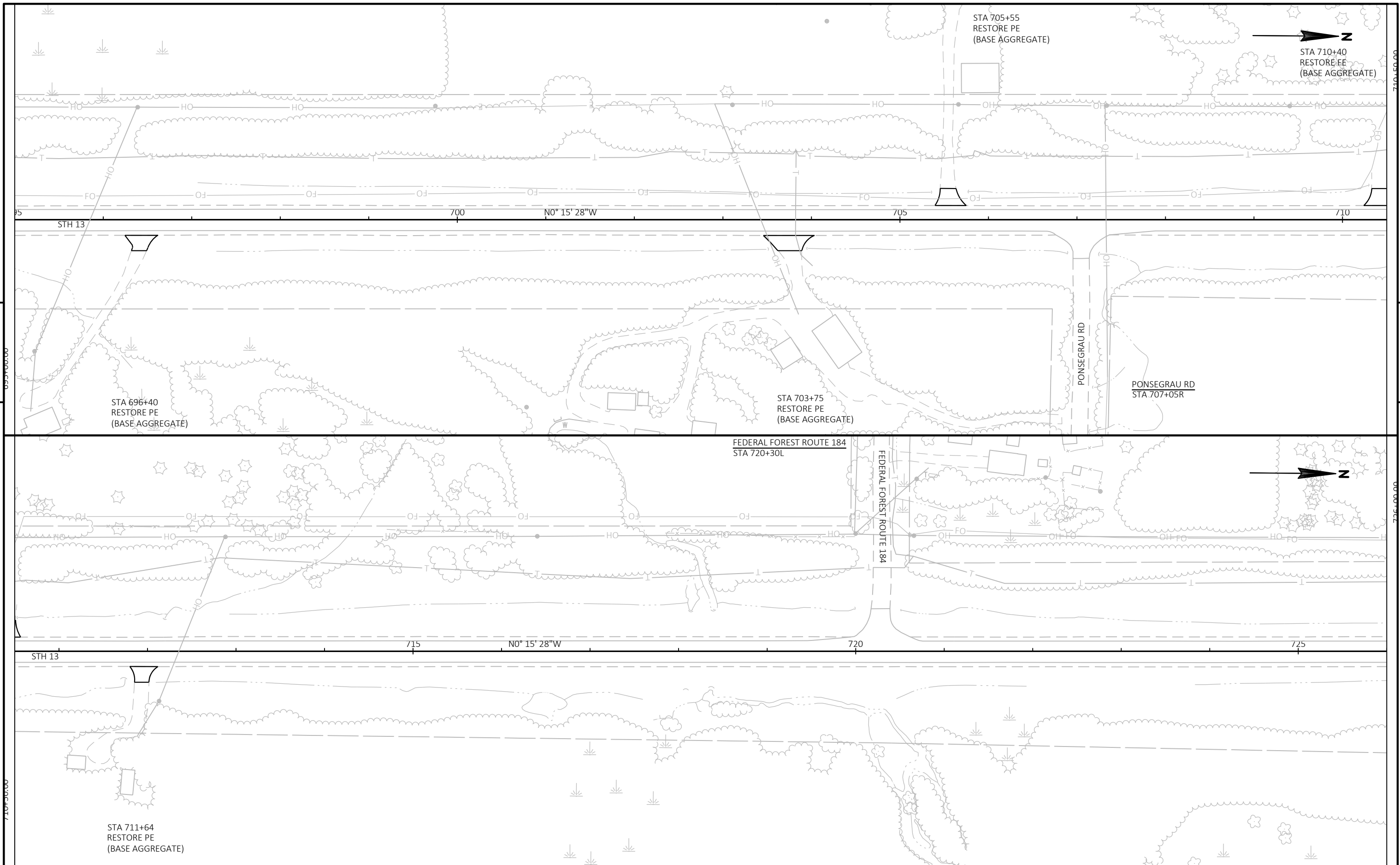
STA 693+20  
RESTORE PE  
(BASE AGGREGATE)



STA 685+00  
RESTORE PE  
(BASE AGGREGATE)

STA 691+20  
RESTORE PE  
(BASE AGGREGATE)

PROJECT NO: 1610-11-70	HWY: STH 13	COUNTY: ASHLAND	PLANS	SHEET	E
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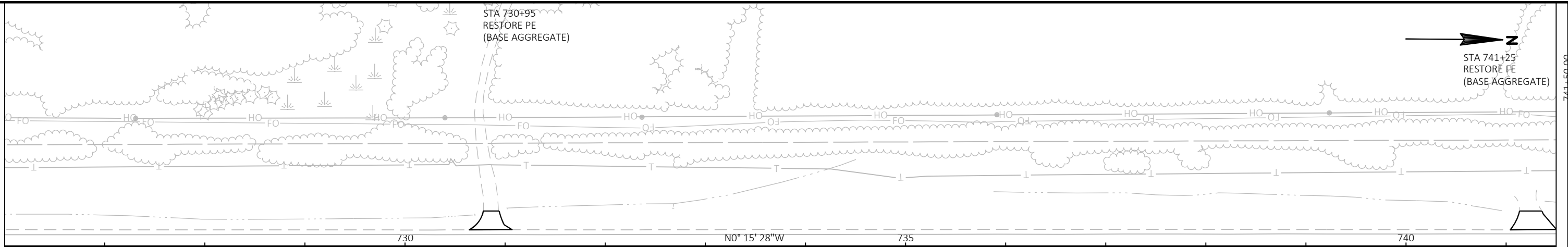
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PROJECT NO: 1610-11-70	HWY: STH 13	COUNTY: ASHLAND	PLANS	SHEET	E
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STA 730+95  
RESTORE PE  
(BASE AGGREGATE)

STA 741+25  
RESTORE FE  
(BASE AGGREGATE)



STH 13

730

N0° 15' 28" W

735

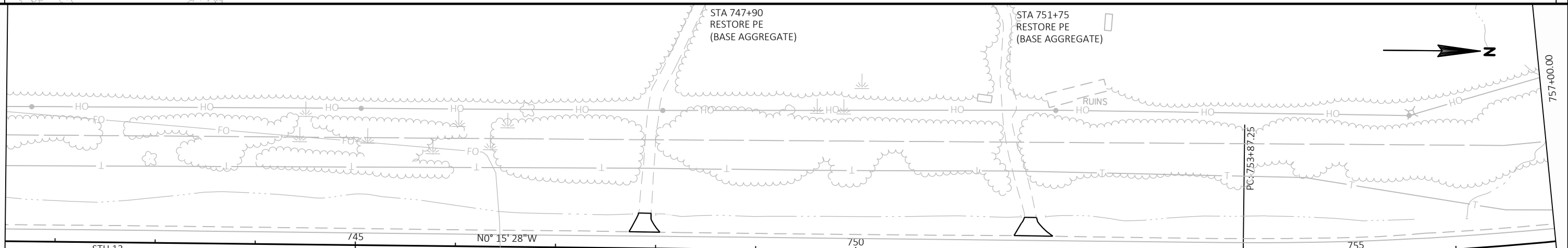
740

5

STA 730+95  
RESTORE PE  
(BASE AGGREGATE)

STA 747+90  
RESTORE PE  
(BASE AGGREGATE)

STA 751+75  
RESTORE PE  
(BASE AGGREGATE)



STH 13

745

N0° 15' 28" W

750

755

757+00.00

STA 745+50  
RESTORE PE  
(BASE AGGREGATE)

STA 747+85  
RESTORE PE  
(BASE AGGREGATE)

PROJECT NO: 1610-11-70

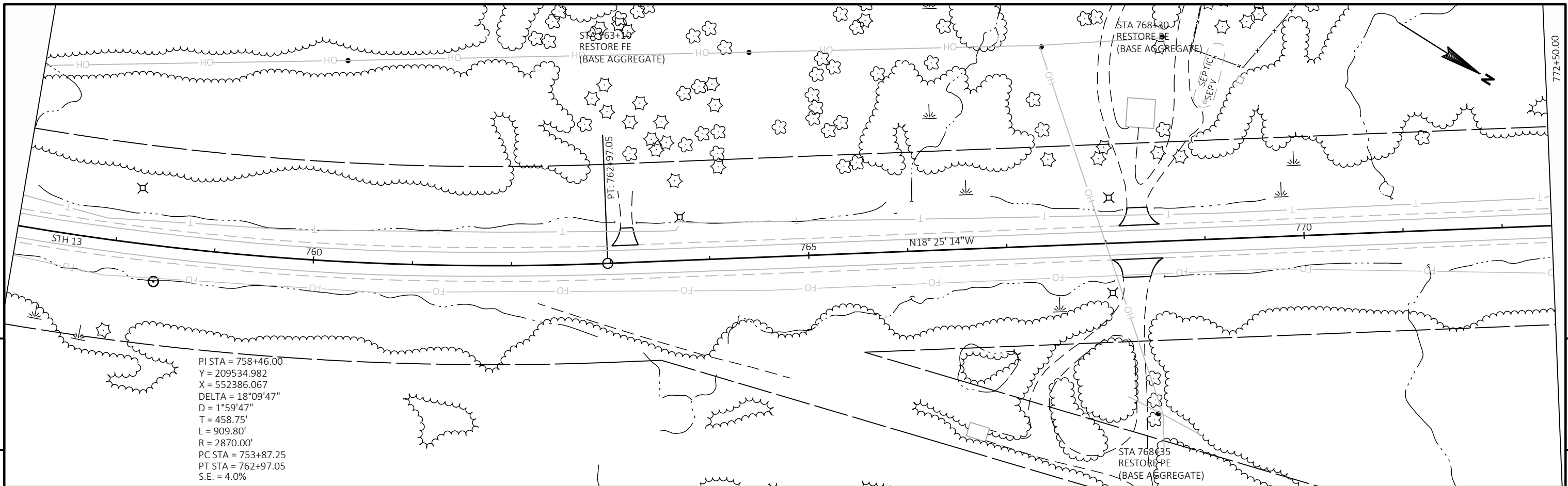
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COUNTY: ASHLAND

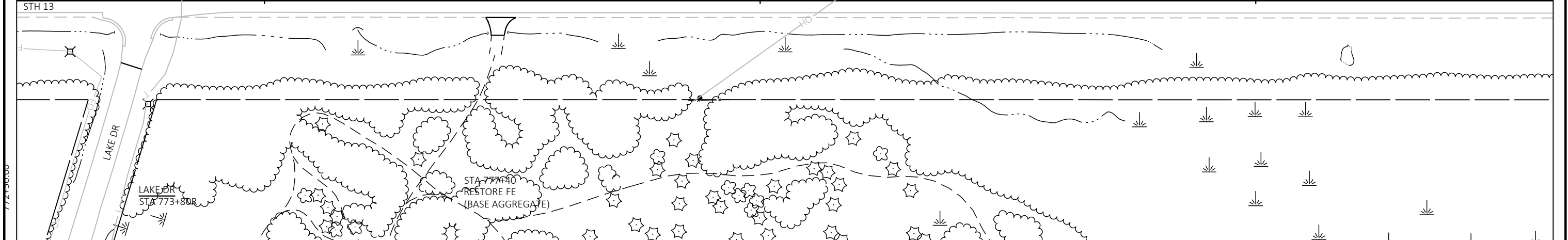
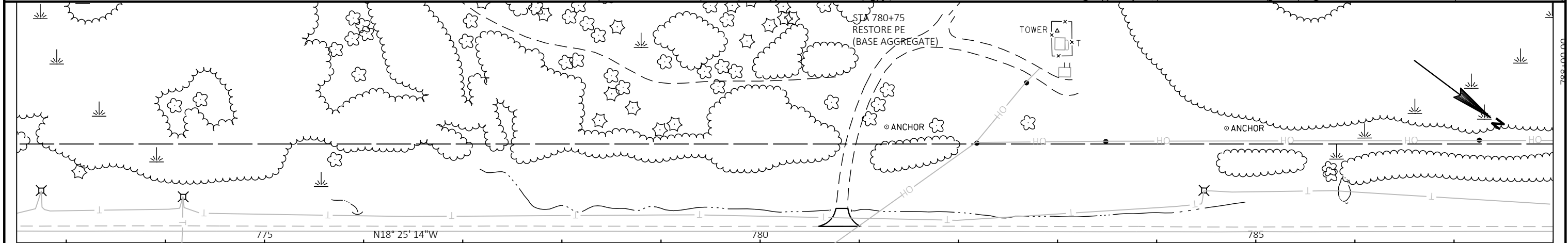
PLANS

SHEET

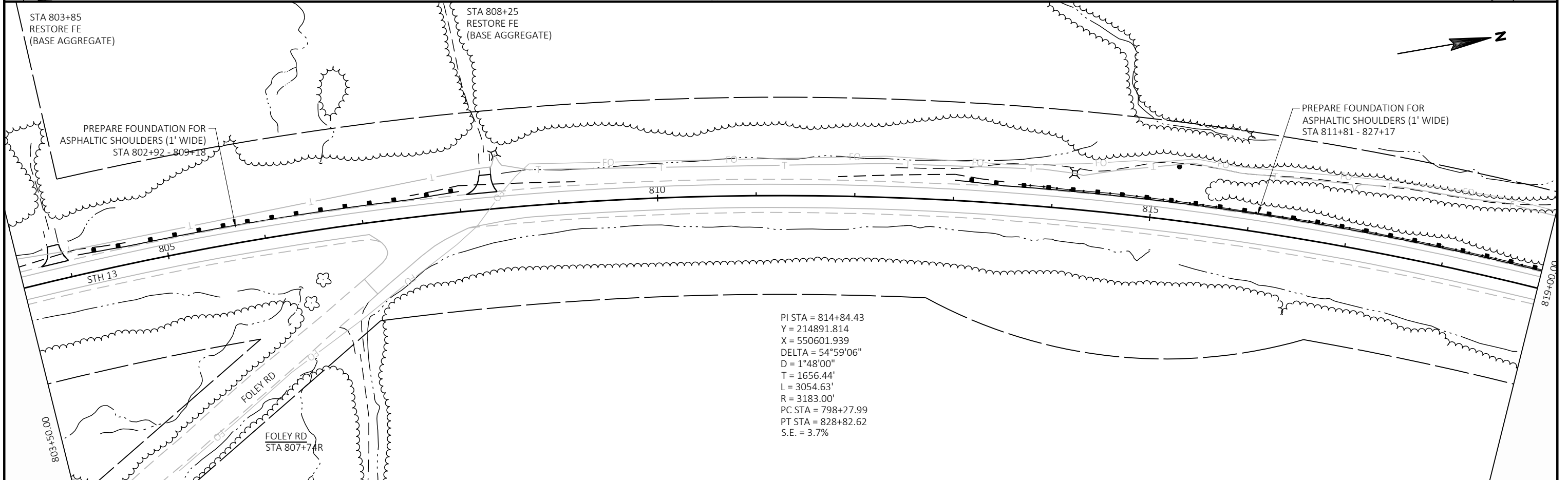
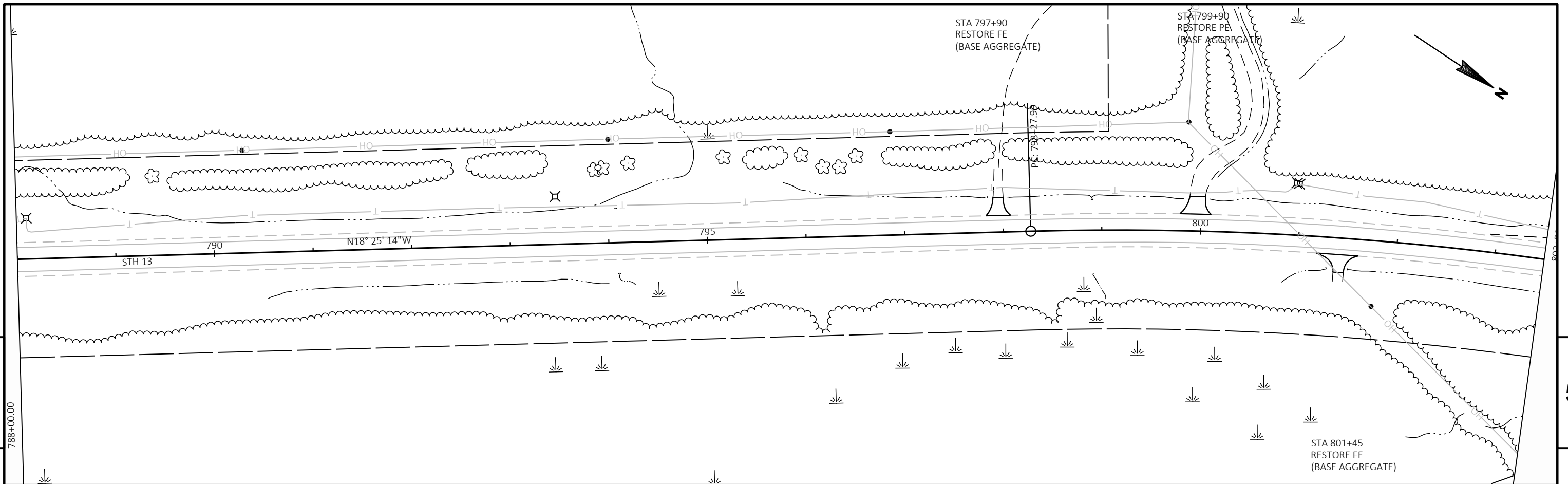
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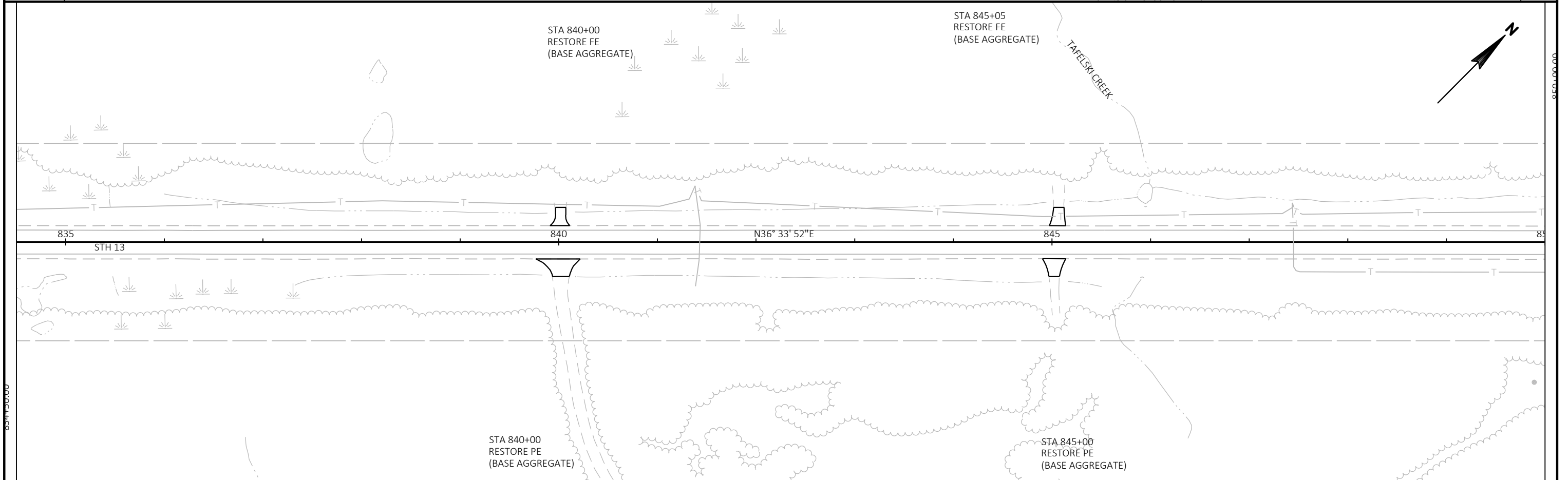
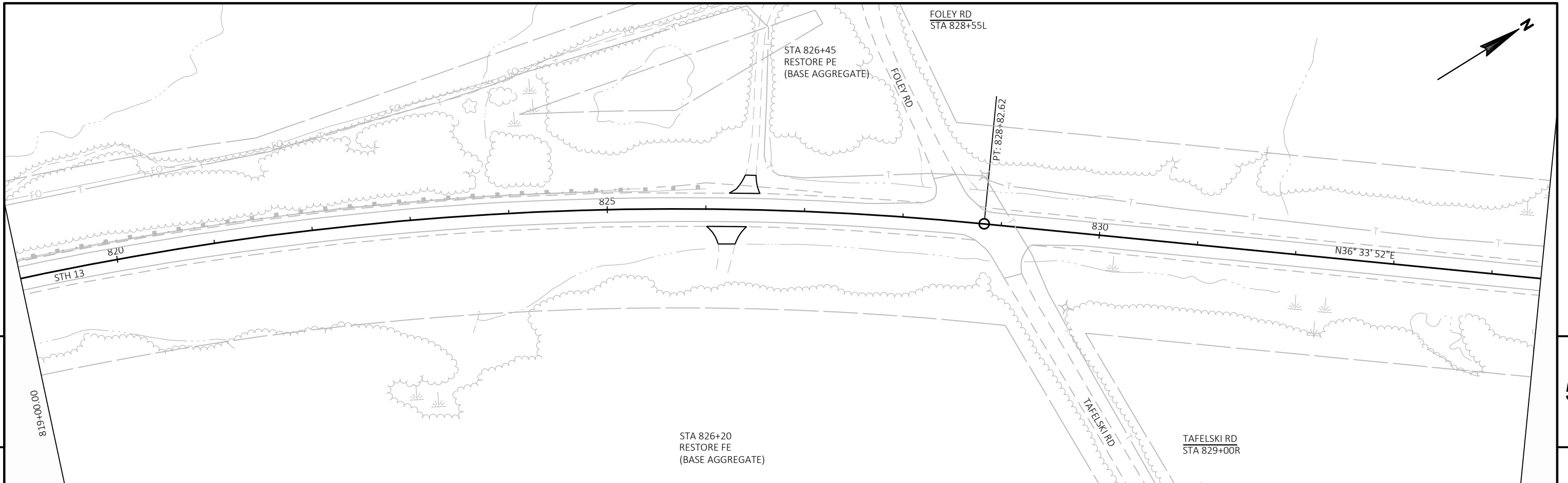
PI STA = 758+46.00  
 Y = 209534.982  
 X = 552386.067  
 DELTA = 18°09'47"  
 D = 1°59'47"  
 T = 458.75'  
 L = 909.80'  
 R = 2870.00'  
 PC STA = 753+87.25  
 PT STA = 762+97.05  
 S.E. = 4.0%



PROJECT NO: 1610-11-70	HWY: STH 13	COUNTY: ASHLAND	PLANS	SHEET	E
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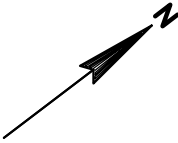


PROJECT NO: 1610-11-70	HWY: STH 13	COUNTY: ASHLAND	PLANS
			SHEET <b>E</b>



PROJECT NO: 1610-11-70	HWY: STH 13	COUNTY: ASHLAND	PLANS	SHEET	E
------------------------	-------------	-----------------	-------	-------	---

STA 854+60  
RESTORE PE  
(BASE AGGREGATE)



850 855 860 865

STH 13

STA 854+65  
RESTORE PE  
(BASE AGGREGATE)

STA 861+45  
RESTORE PE  
(BASE AGGREGATE)

STA 873+75  
RESTORE PE  
(BASE AGGREGATE)

STA 876+80  
RESTORE PE  
(BASE AGGREGATE)



870 875 880

STH 13

STA 873+35  
RESTORE PE  
(BASE AGGREGATE)

STA 875+95  
RESTORE PE  
(BASE AGGREGATE)

PROJECT NO: 1610-11-70

HWY: STH 13

COUNTY: ASHLAND

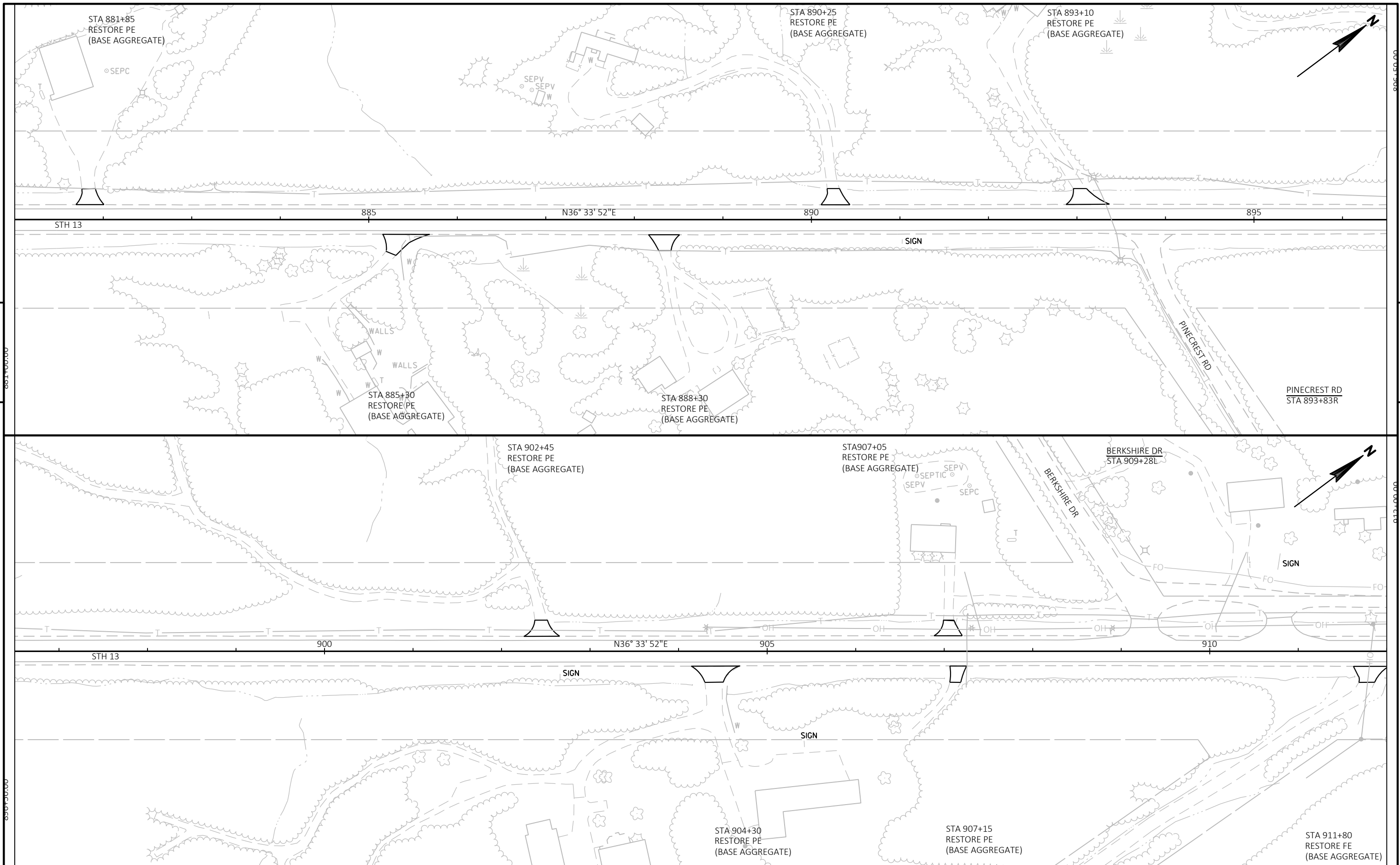
PLANS

SHEET

E

5

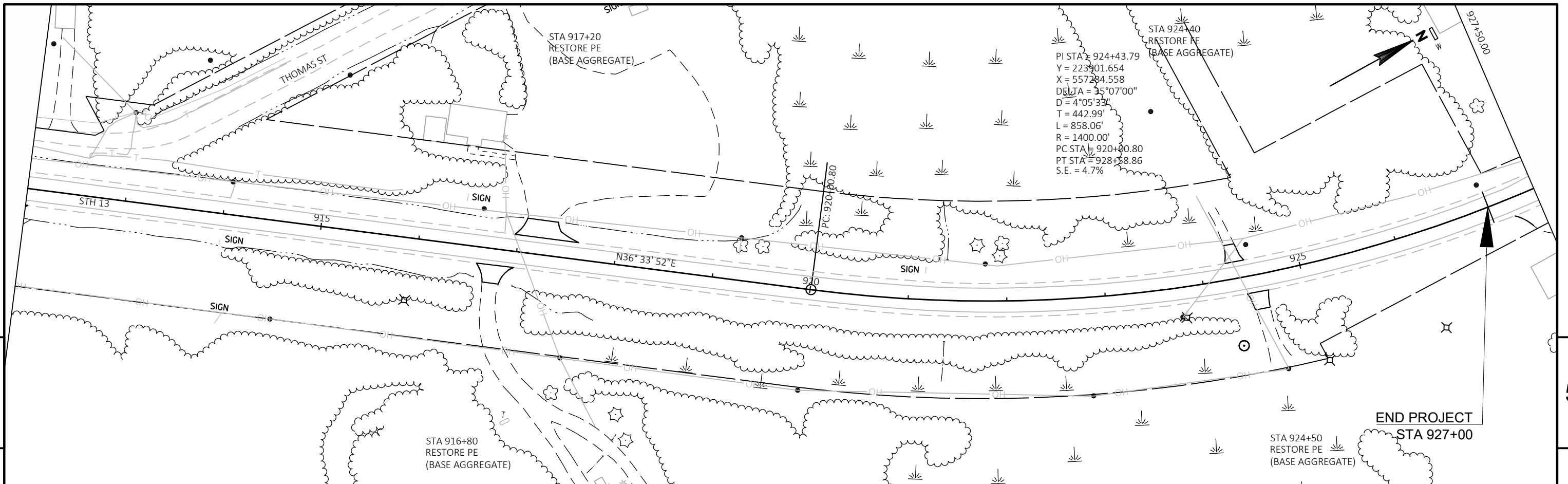
5



5

5

PROJECT NO: 1610-11-70	HWY: STH 13	COUNTY: ASHLAND	PLANS	SHEET	E
------------------------	-------------	-----------------	-------	-------	---

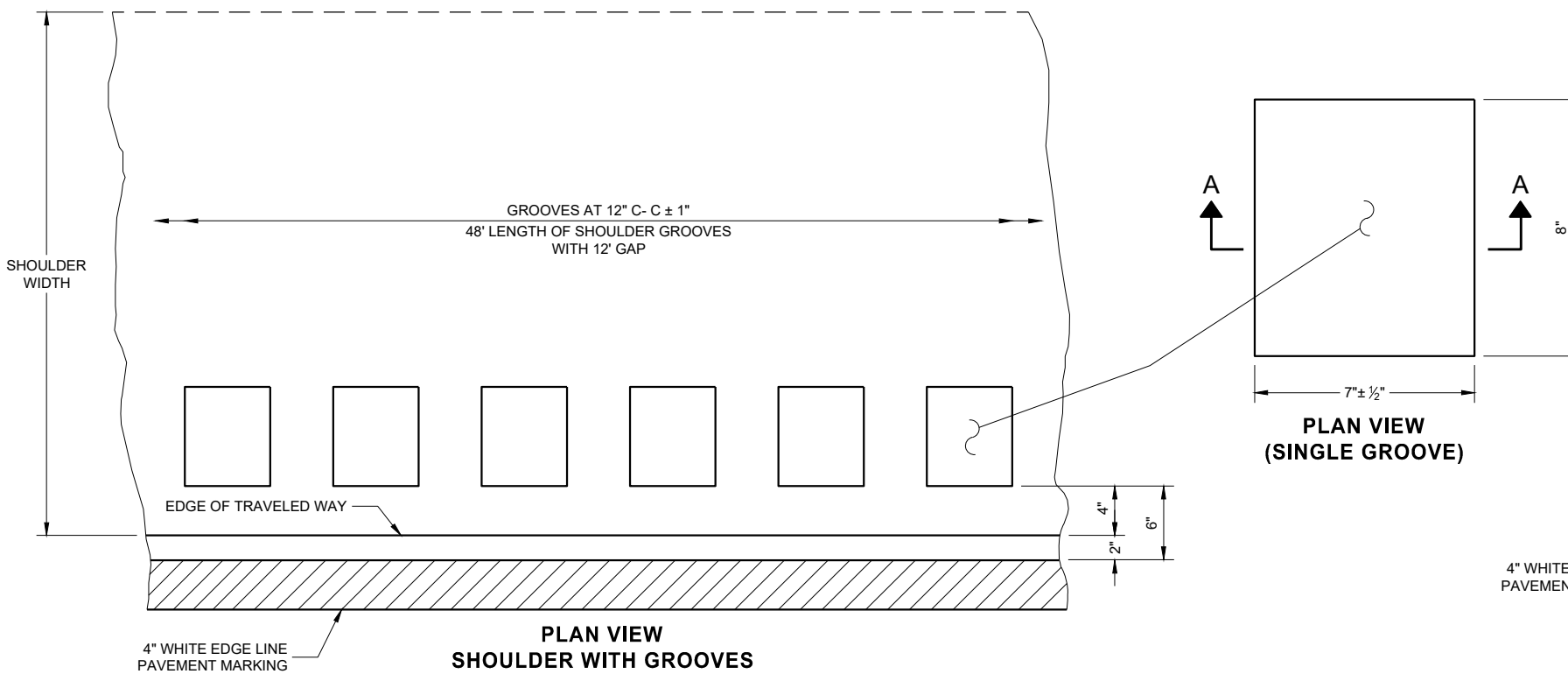


PROJECT NO: 1610-11-70      HWY: STH 13      COUNTY: ASHLAND      PLANS      SHEET      E

## Standard Detail Drawing List

13A10-02A	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02B	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-02D	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20B	PAVEMENT MARKING (TURN LANES)
15C11-08A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-08B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C34-03	STANDARD APPLICATION FOR TEMPORARY RAISED PAVEMENT MARKER, TYPE 2
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES





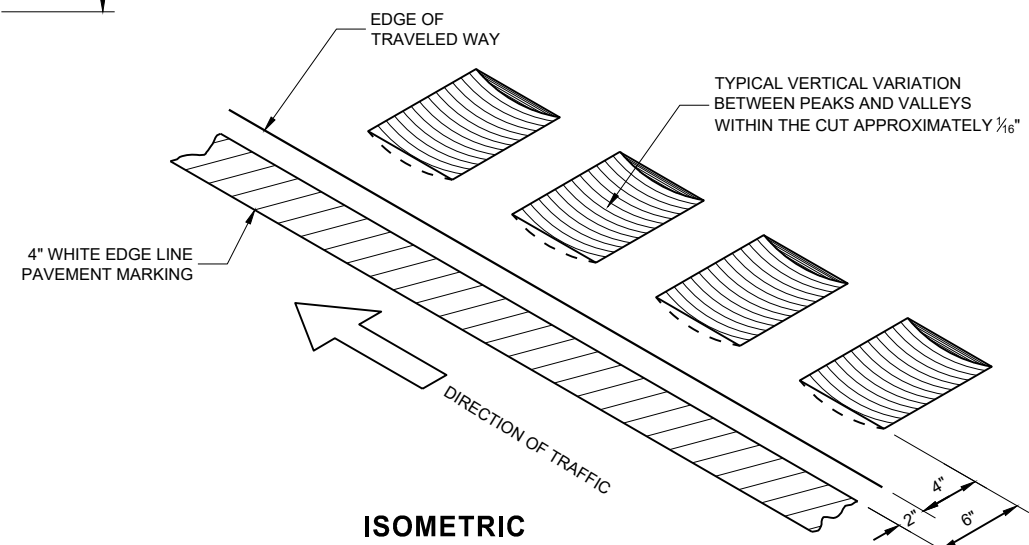
PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

**GENERAL NOTES**

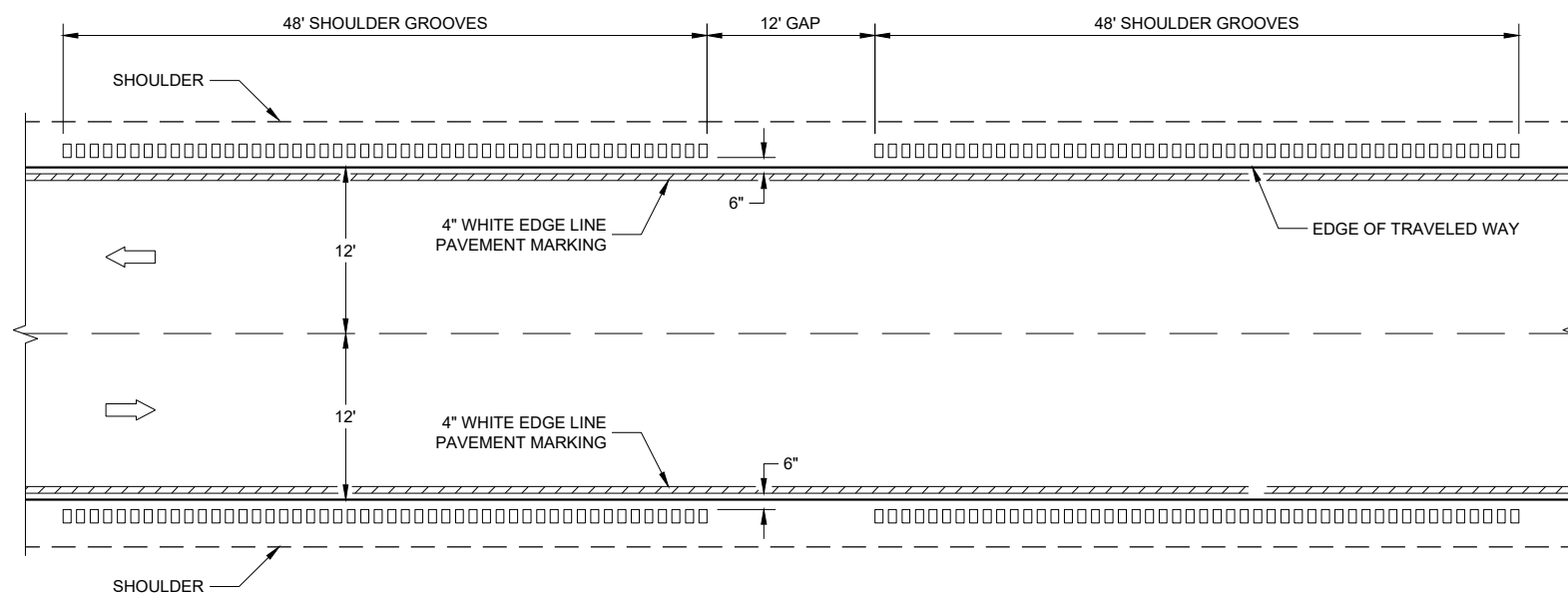
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

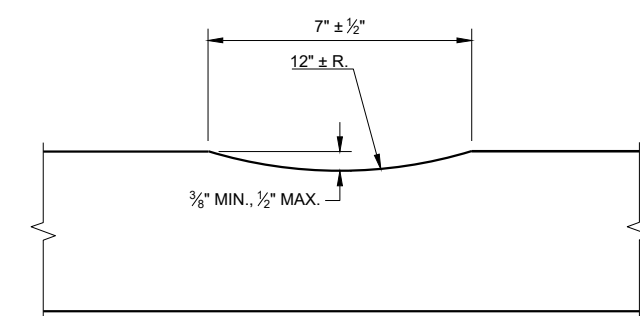
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



ISOMETRIC



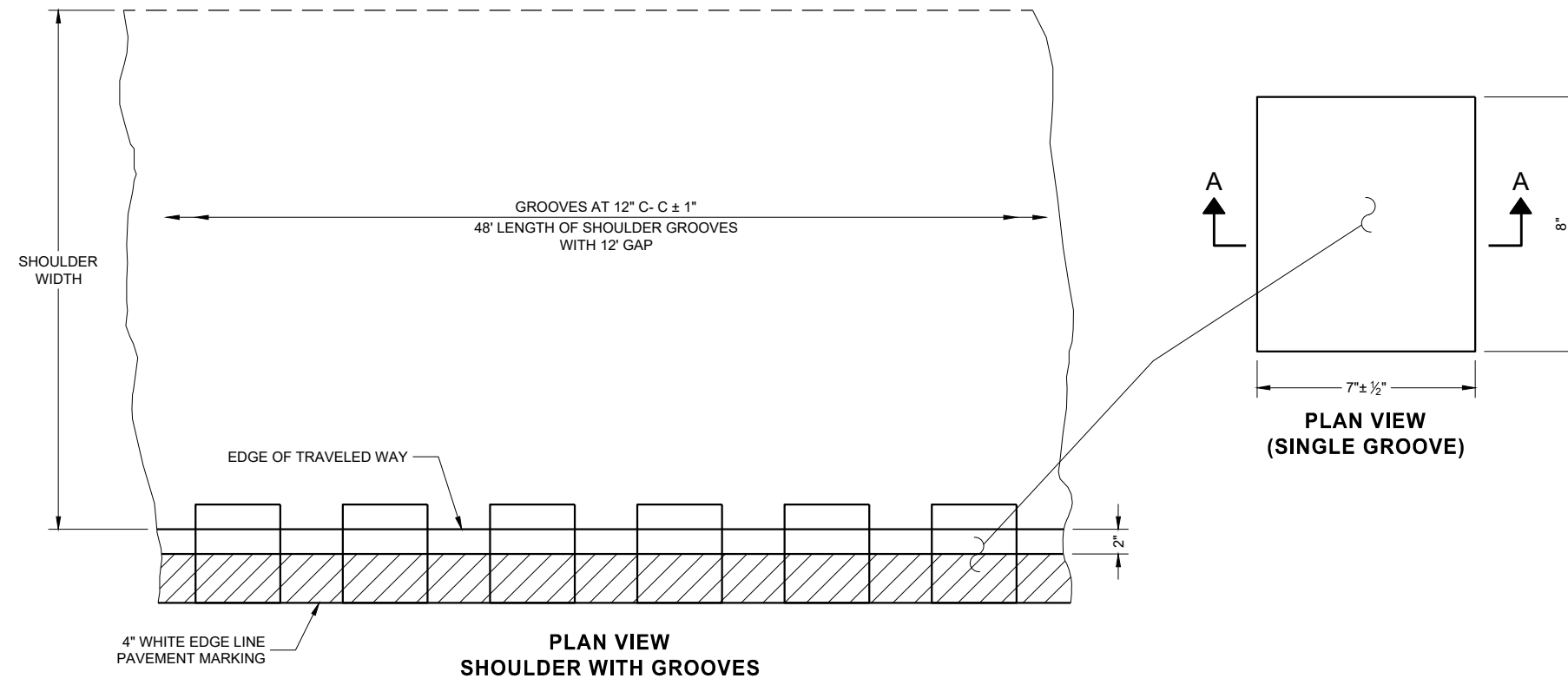
TYPE 1  
2 - LANE SHOULDER RUMBLE STRIP



SECTION A - A

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



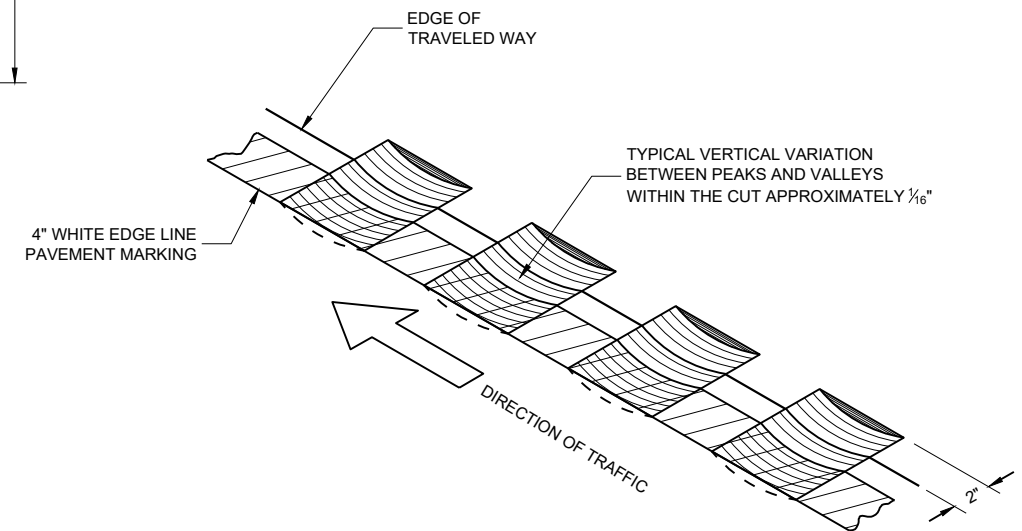
**PLACEMENT DETAIL FOR TYPE 2 MILLED RUMBLE STRIP**

**GENERAL NOTES**

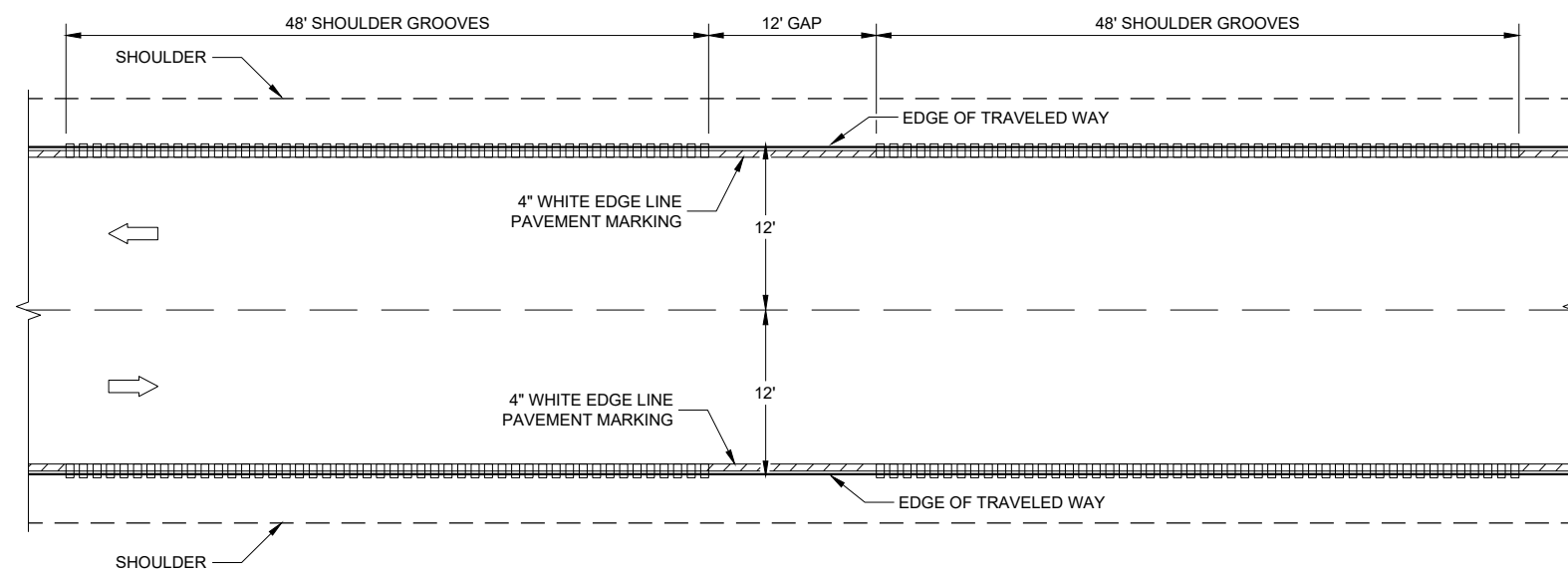
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

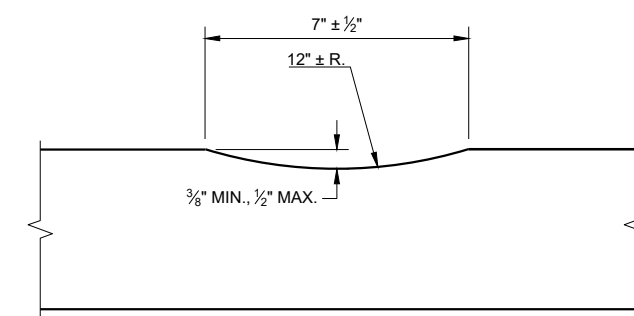
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



**ISOMETRIC**



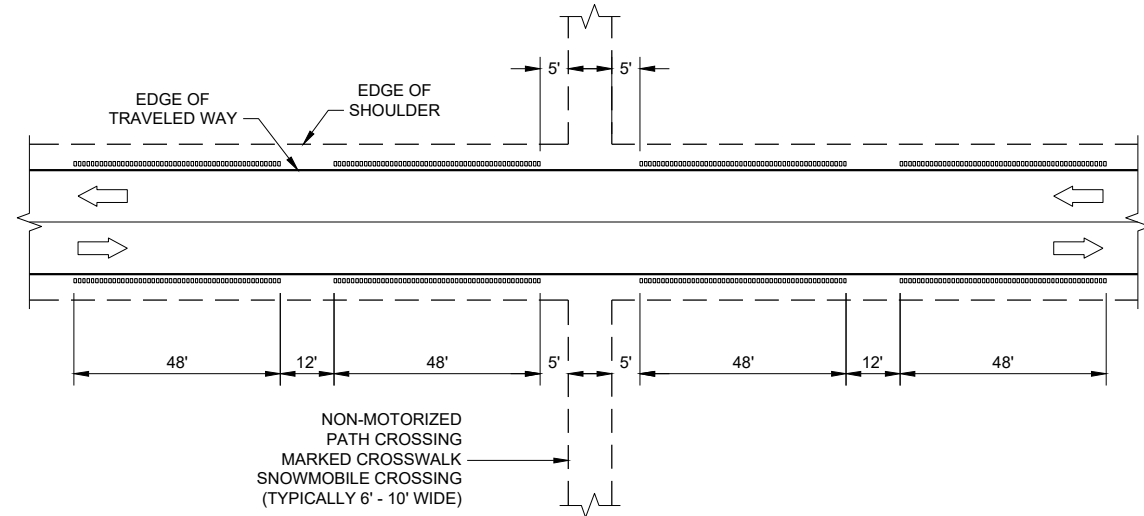
**TYPE 2  
2 - LANE SHOULDER RUMBLE STRIP**



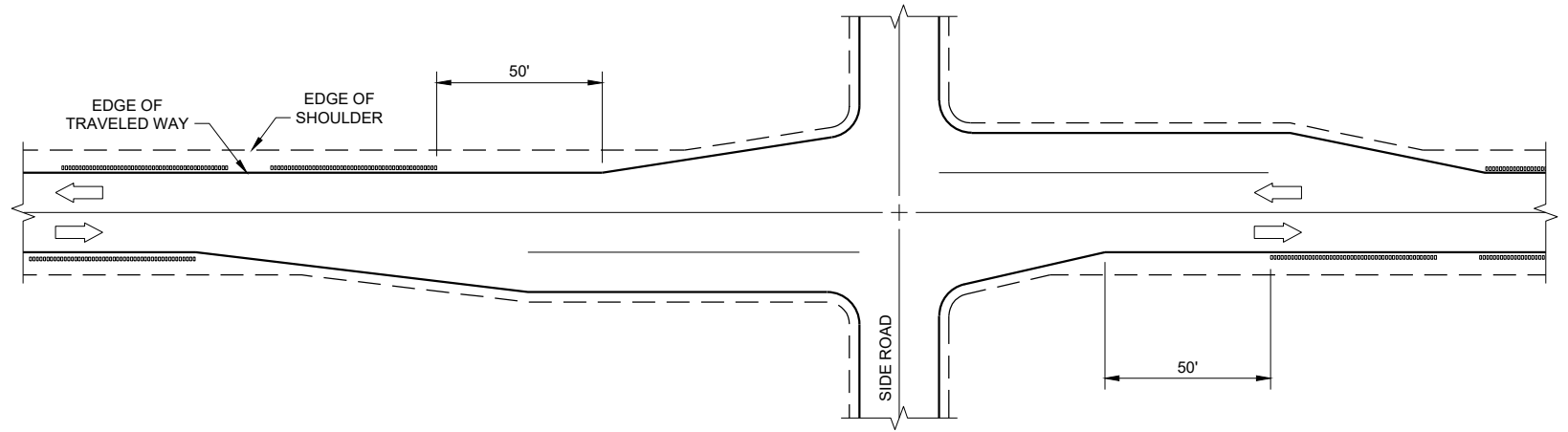
**SECTION A - A**

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

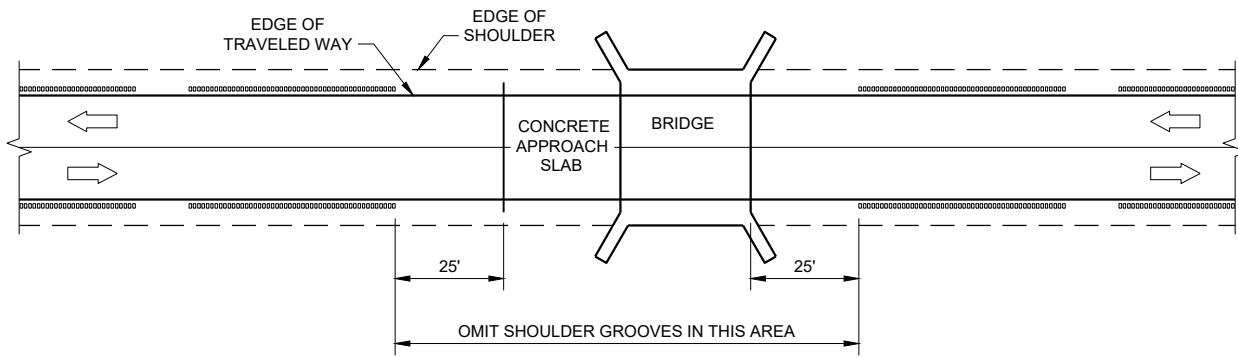
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



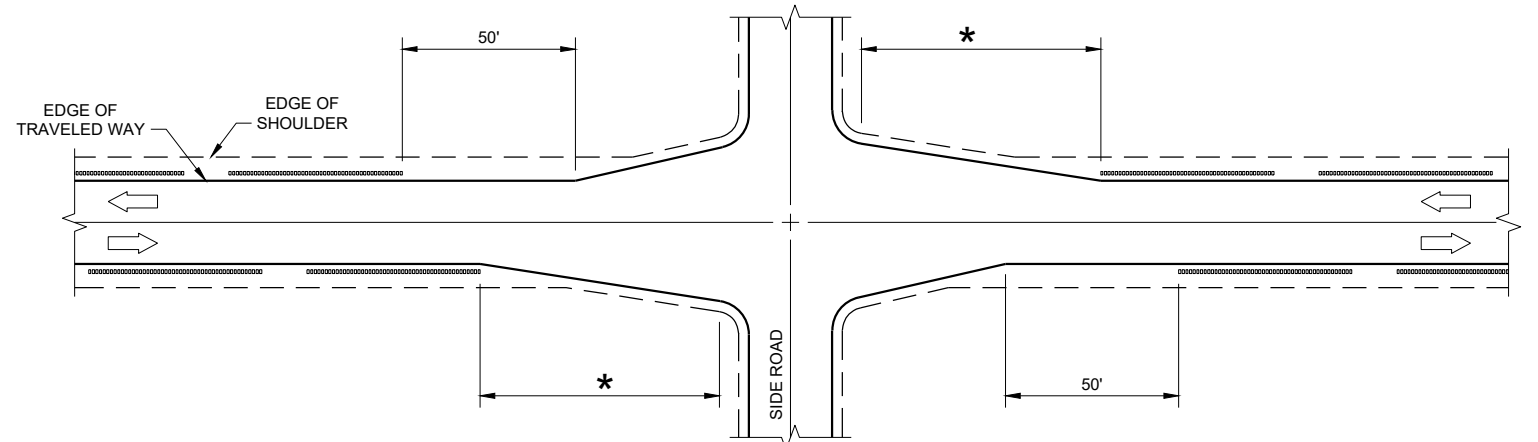
**SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS**



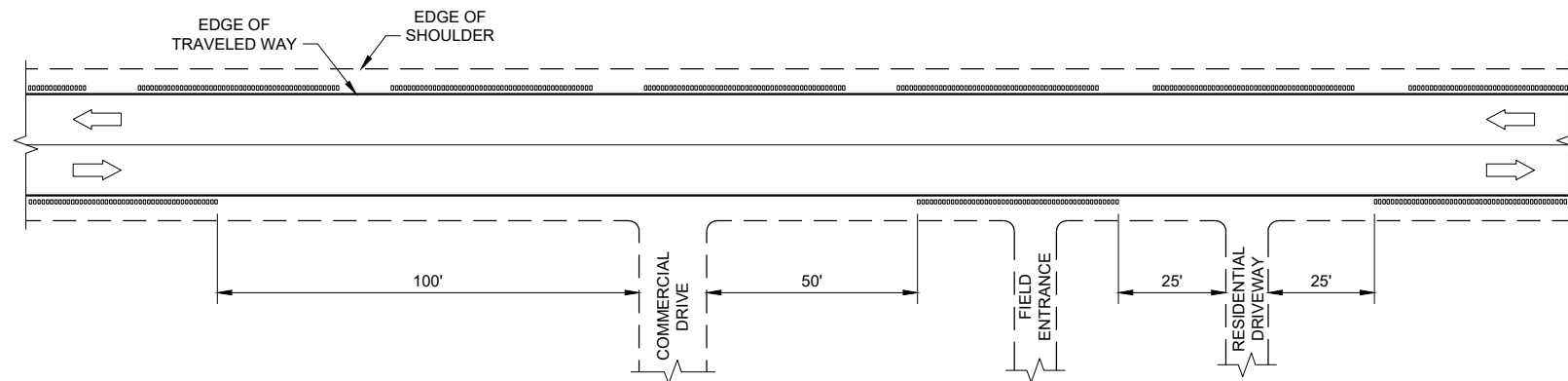
**SHOULDER GROOVES AT RIGHT TURN LANE**



**SHOULDER GROOVES AT BRIDGES**



**SHOULDER GROOVES AT INTERSECTIONS WITH APPROACH TAPER**



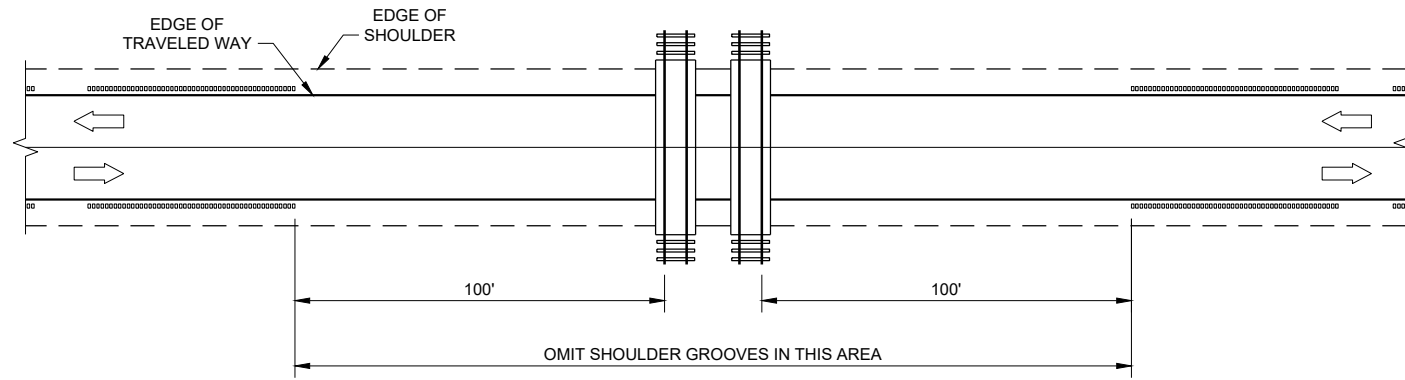
**SHOULDER GROOVES AT DRIVEWAYS<sup>①</sup>**

**GENERAL NOTES**

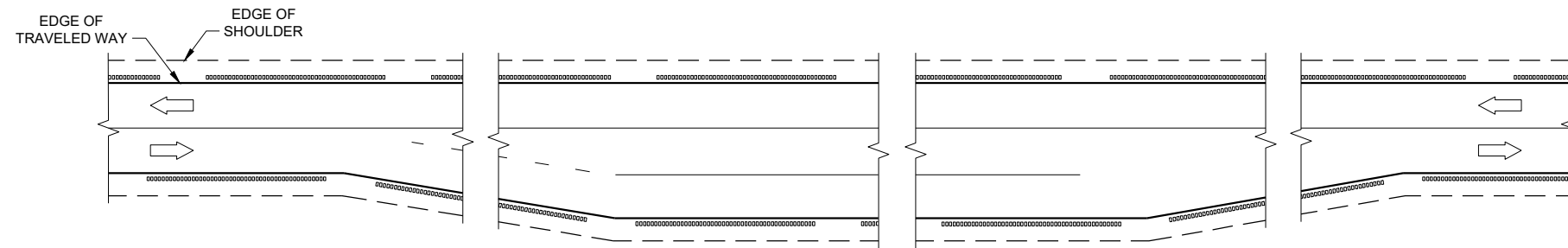
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

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

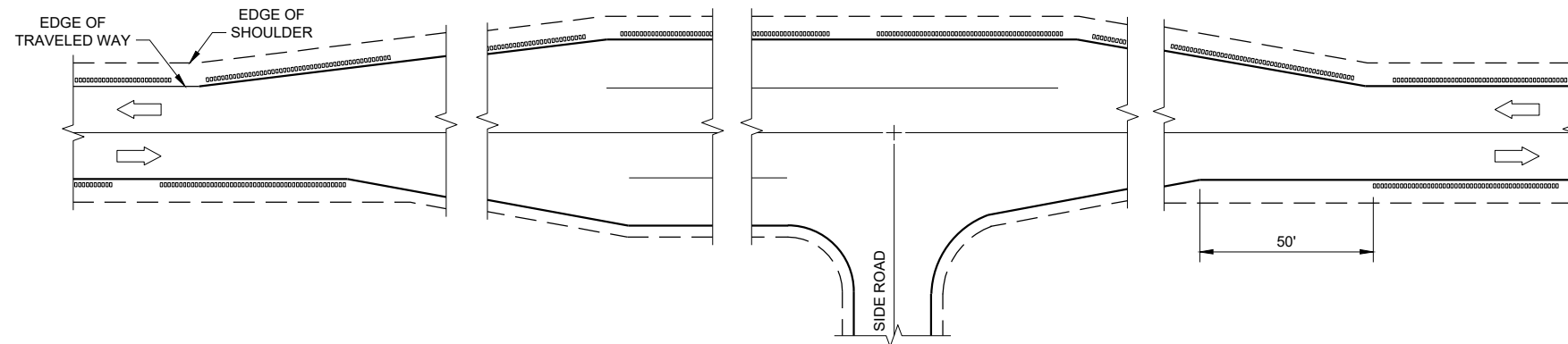
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**SHOULDER GROOVES AT RAILROADS**



**SHOULDER GROOVES AT PASSING AND CLIMBING LANES**



**SHOULDER GROOVES AT BYPASS LANES**

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

**GENERAL NOTES**

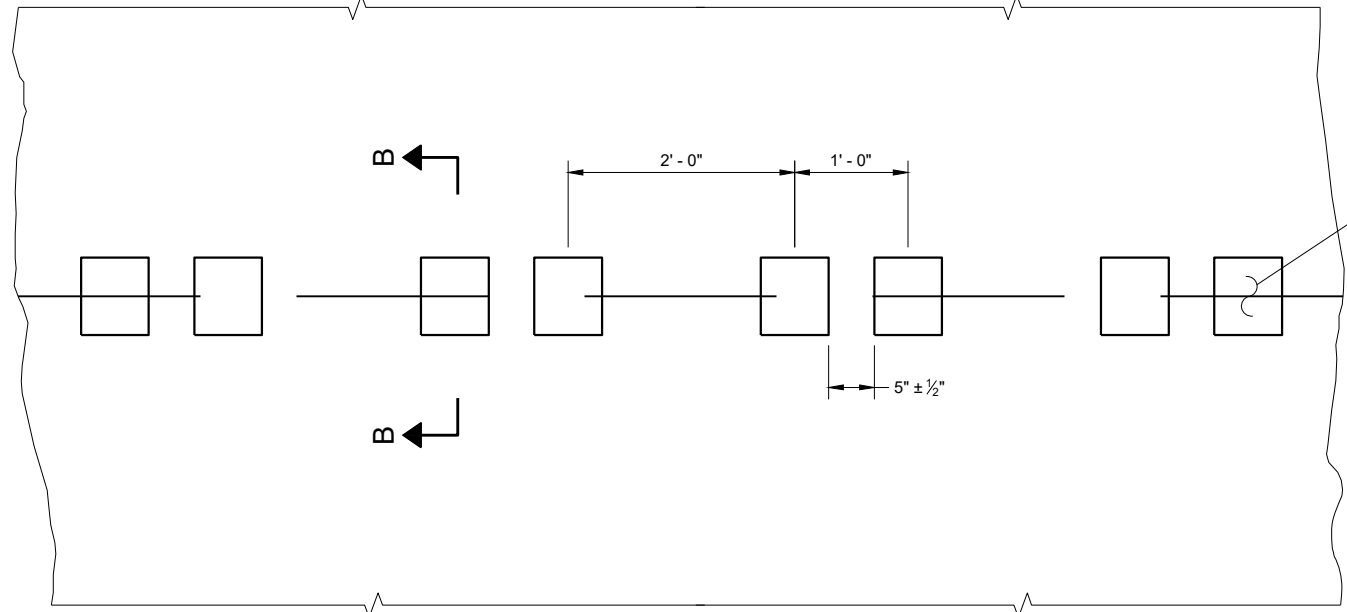
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

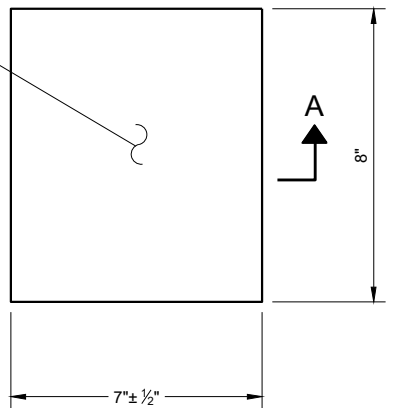
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

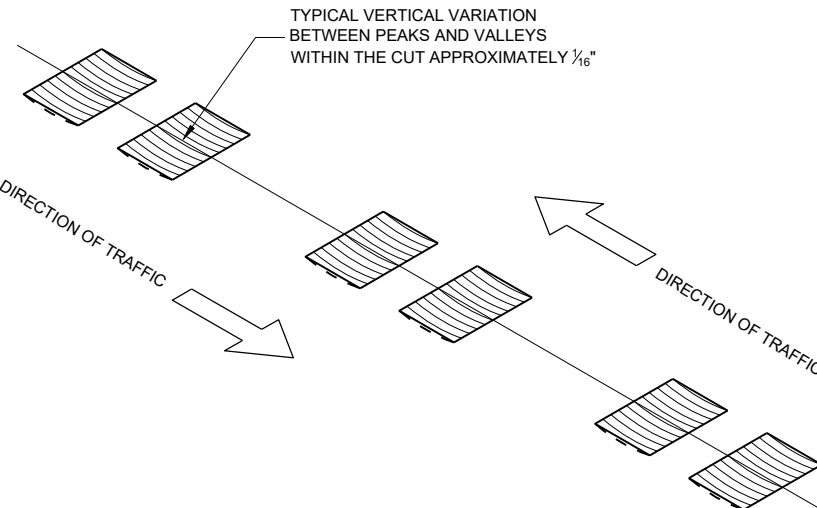
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



**PLAN VIEW  
SHOULDER WITH GROOVES**

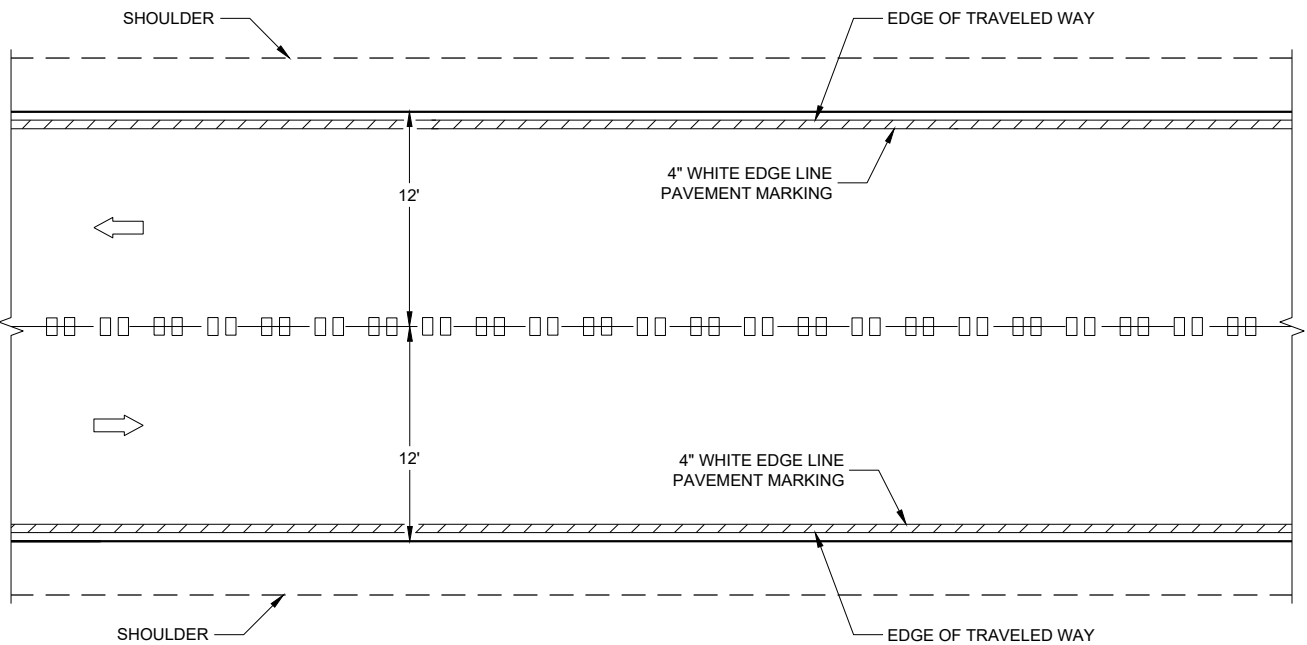


**PLAN VIEW  
(SINGLE GROOVE)**

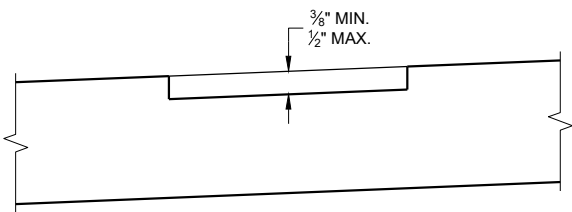


**ISOMETRIC**

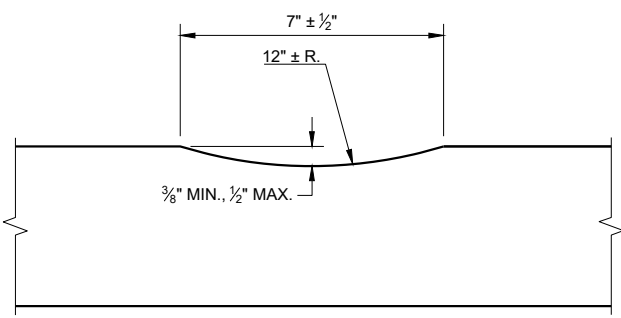
**PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP**



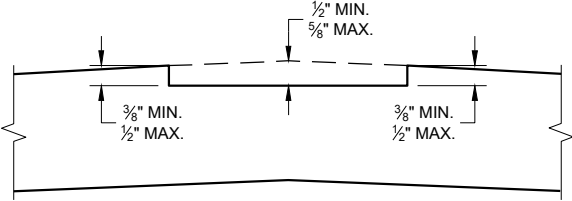
**CENTERLINE GROOVES ON TWO-WAY ROADWAYS**



**SECTION B - B  
SUPERELEVATED ROADWAY**



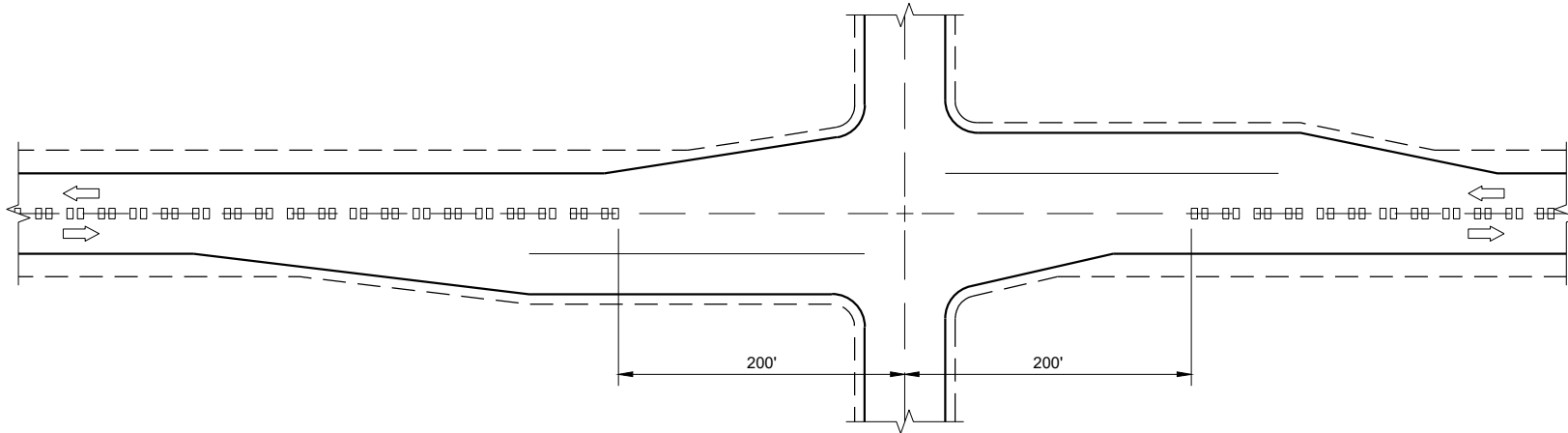
**SECTION A - A**



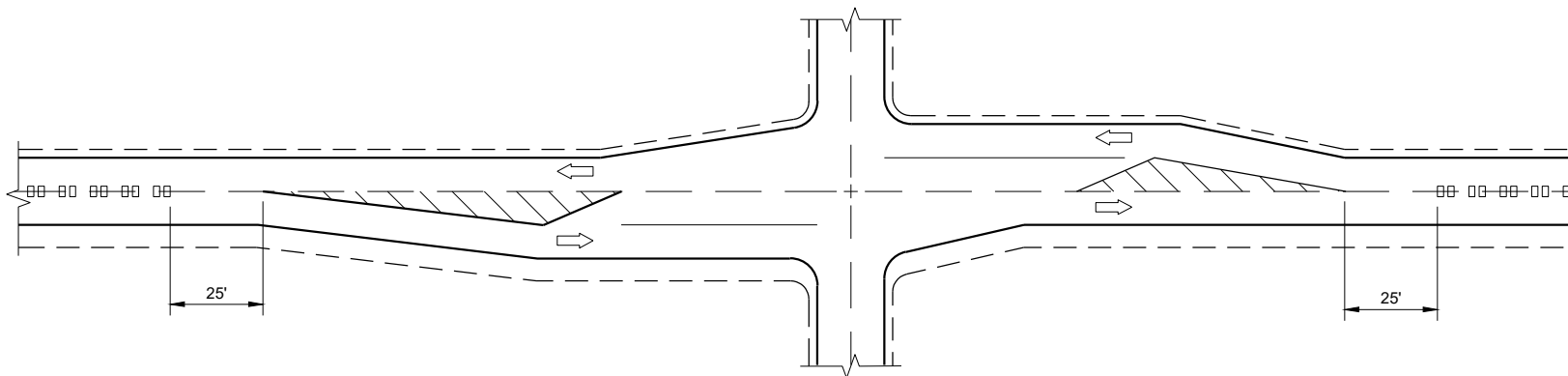
**SECTION B - B  
CROWNED ROADWAY**

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

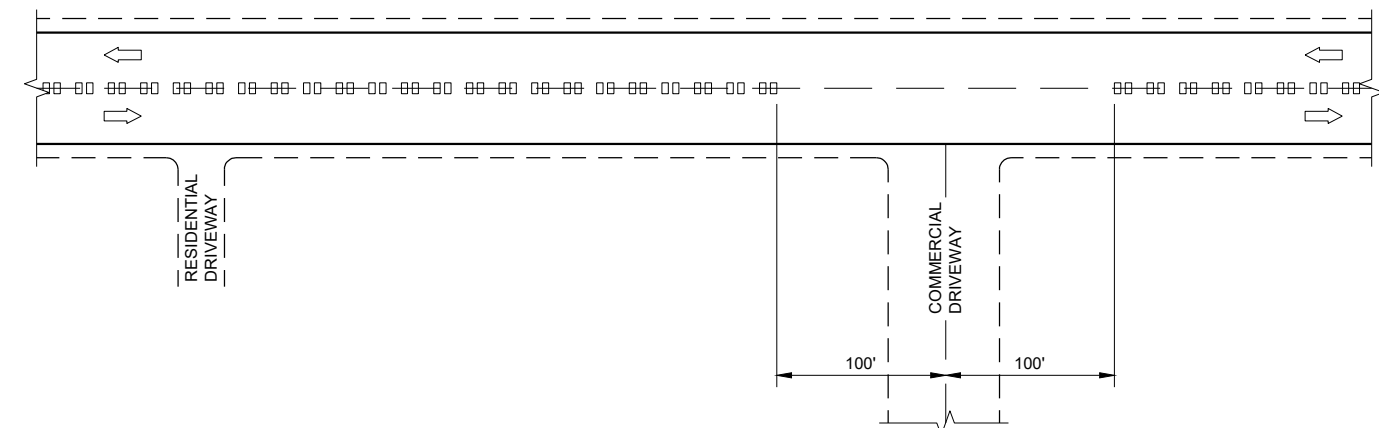
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**CENTERLINE GROOVES AT INTERSECTIONS**



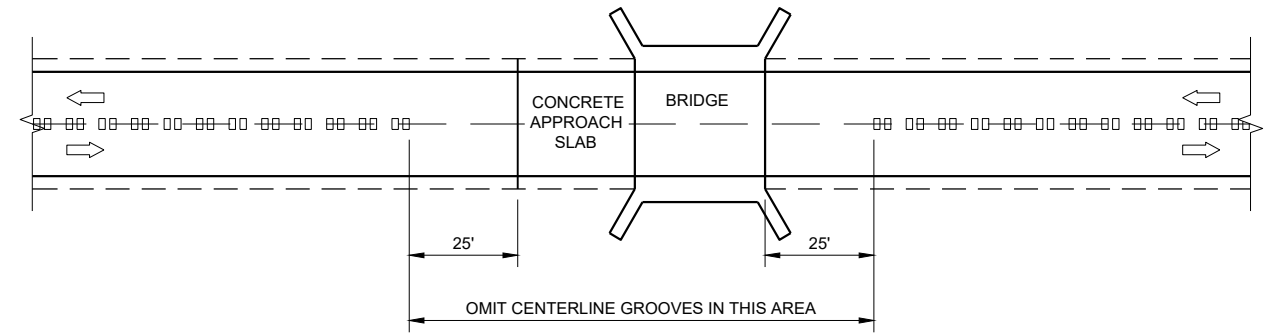
**CENTERLINE GROOVES AT INTERSECTIONS  
(WITH LEFT TURN LANES)**



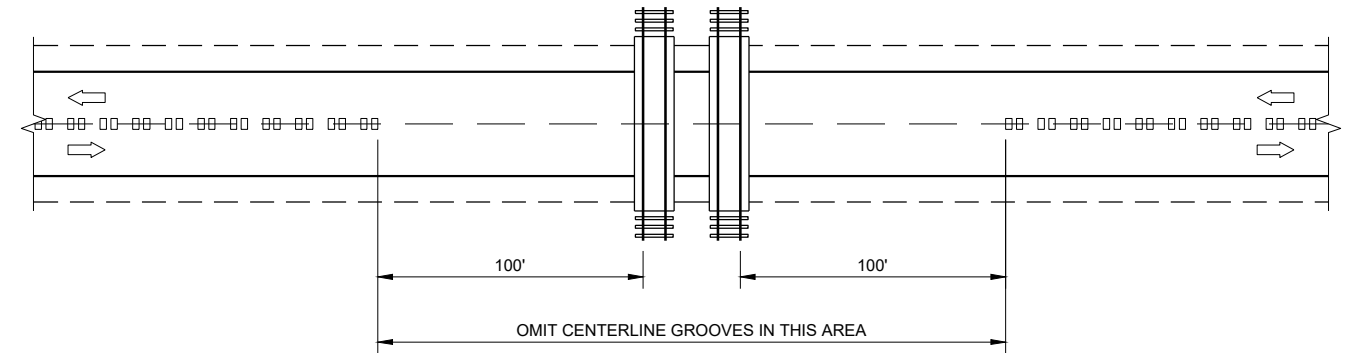
**CENTERLINE GROOVES AT DRIVEWAYS<sup>①</sup>**

**GENERAL NOTES**

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



**CENTERLINE GROOVES AT BRIDGES**



**CENTERLINE GROOVES AT RAILROADS**

6

6

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

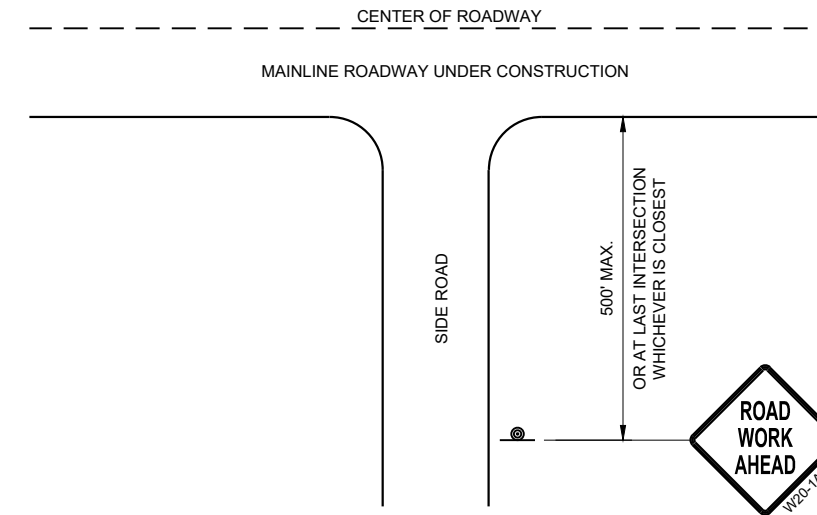
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

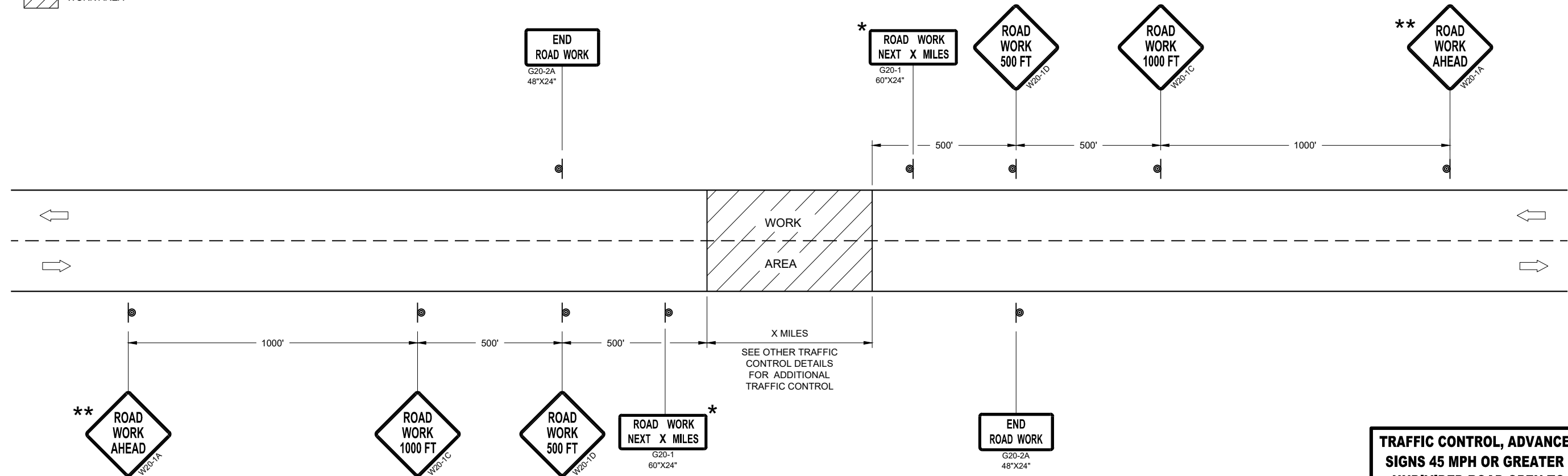
- \* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- \*\* PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

### 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 \_\_\_\_\_  
DATE July 2018 /S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

### GENERAL NOTES

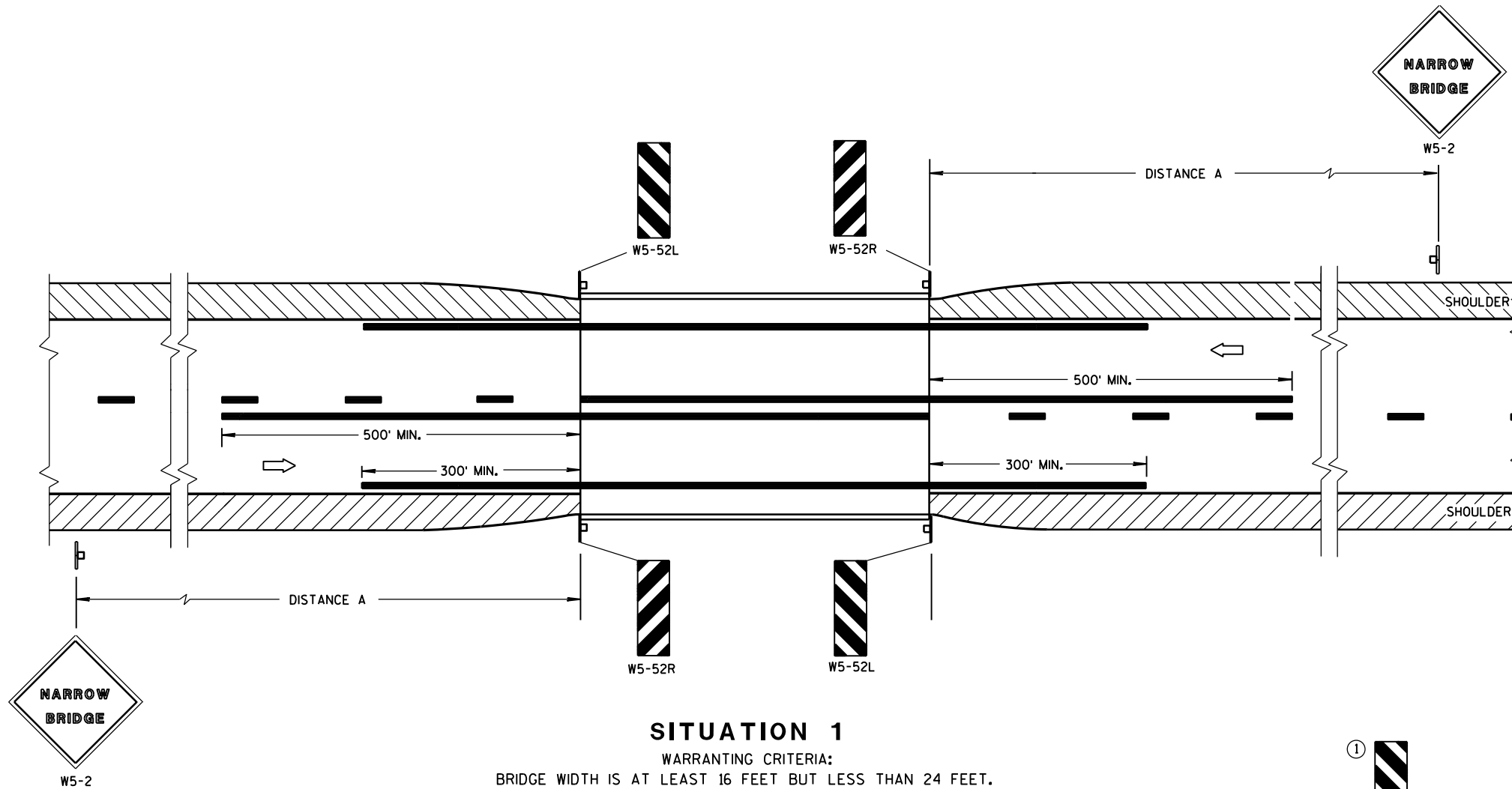
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

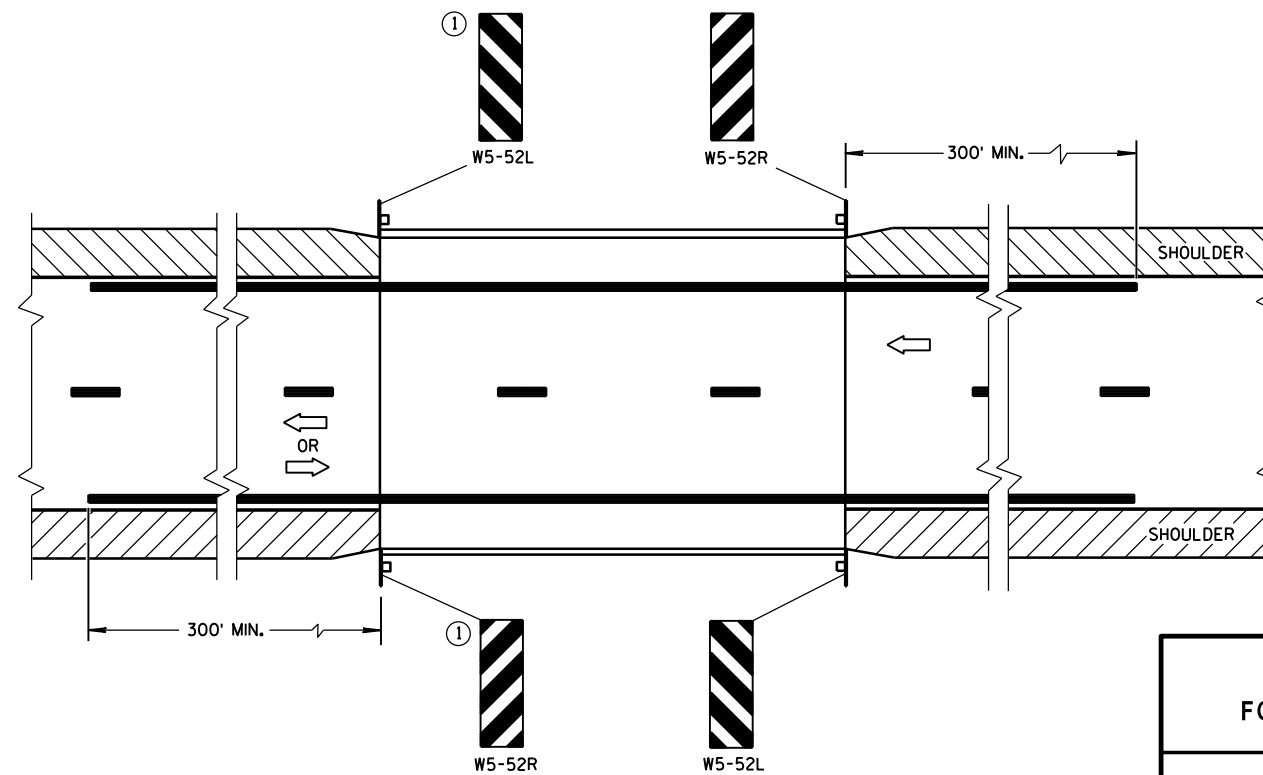
① OMIT ON ONE-WAY TRAVELLED WAYS.

➡ DIRECTION OF TRAFFIC



### SITUATION 1

WARRANTING CRITERIA:  
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



### SITUATION 2

WARRANTING CRITERIA:  
1. BRIDGE WIDTH IS AT LEAST 24 FEET AND  
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

DISTANCE TABLE

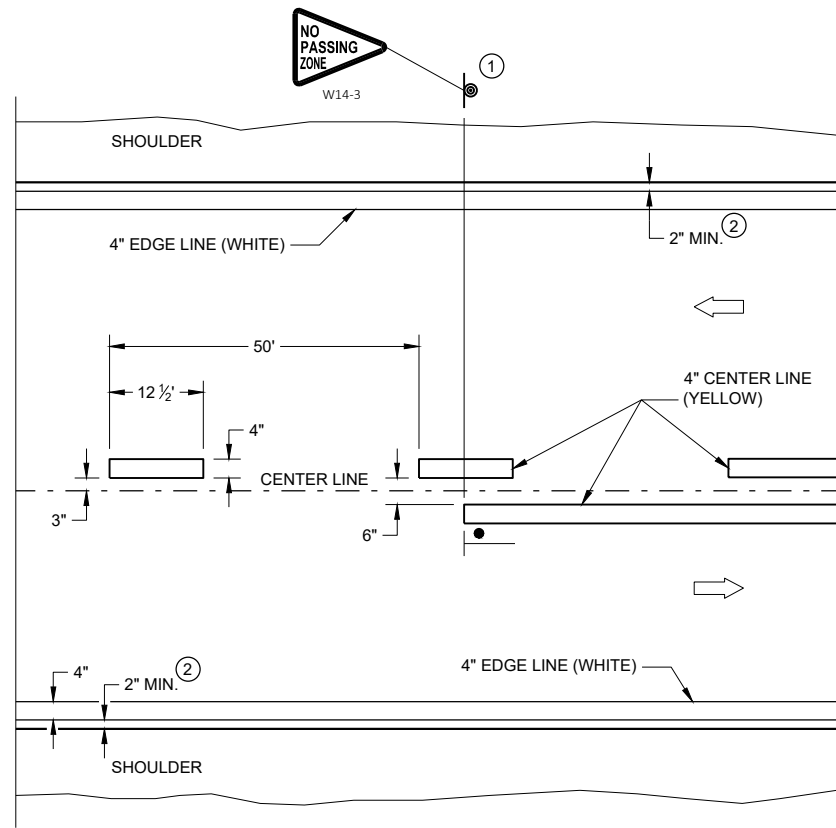
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

### SIGNING & MARKING FOR TWO LANE BRIDGES

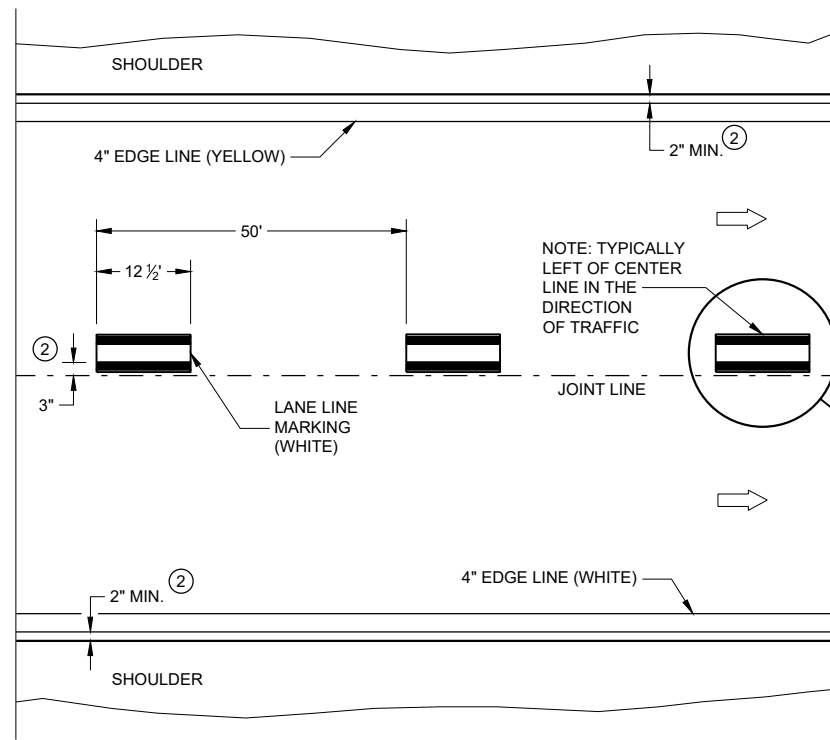
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



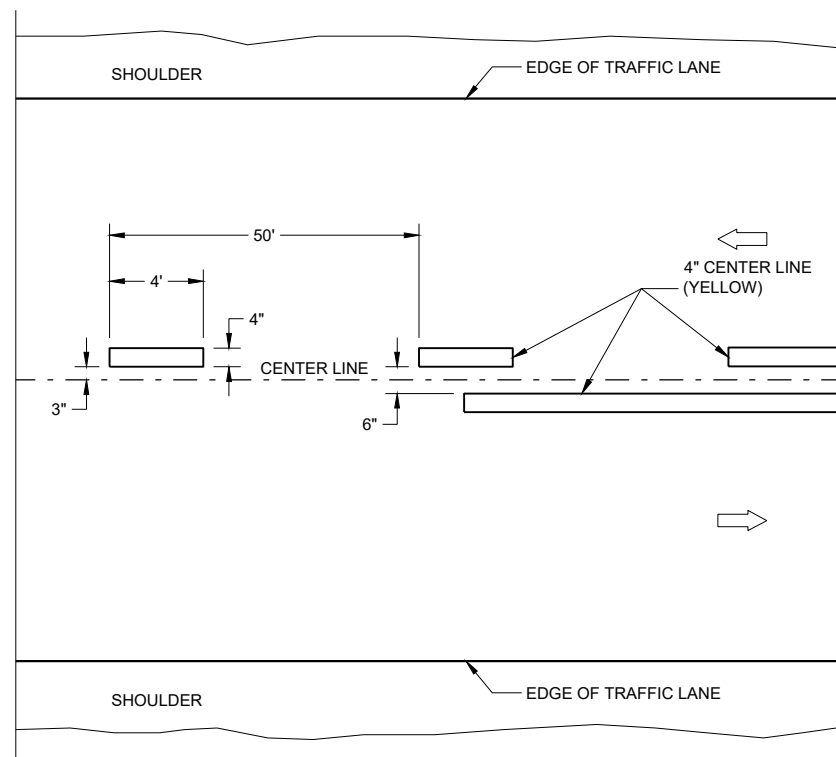


**TWO WAY TRAFFIC**

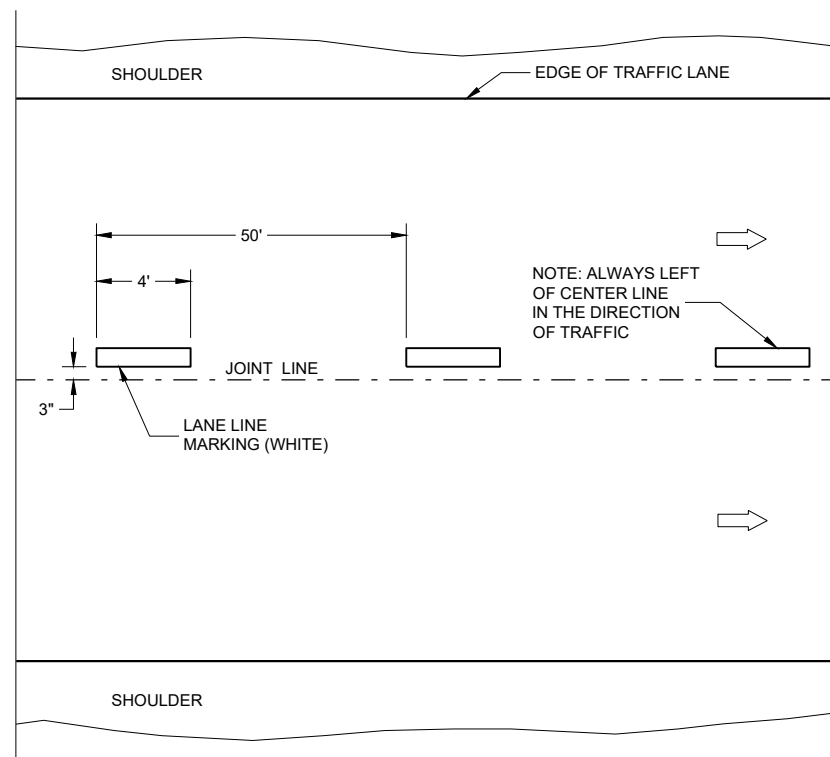


**ONE WAY TRAFFIC**

**PERMANENT PAVEMENT MARKING**



**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**

**TEMPORARY PAVEMENT MARKING**

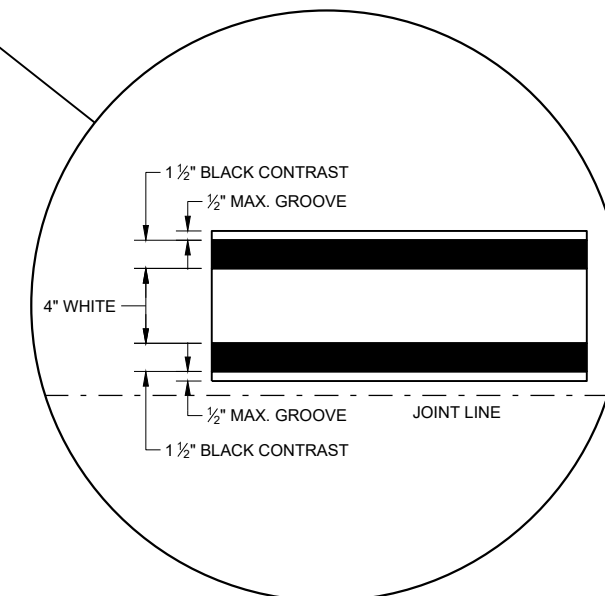
**GENERAL NOTES**

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

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN 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



**LONGITUDINAL MARKING  
(MAINLINE)**

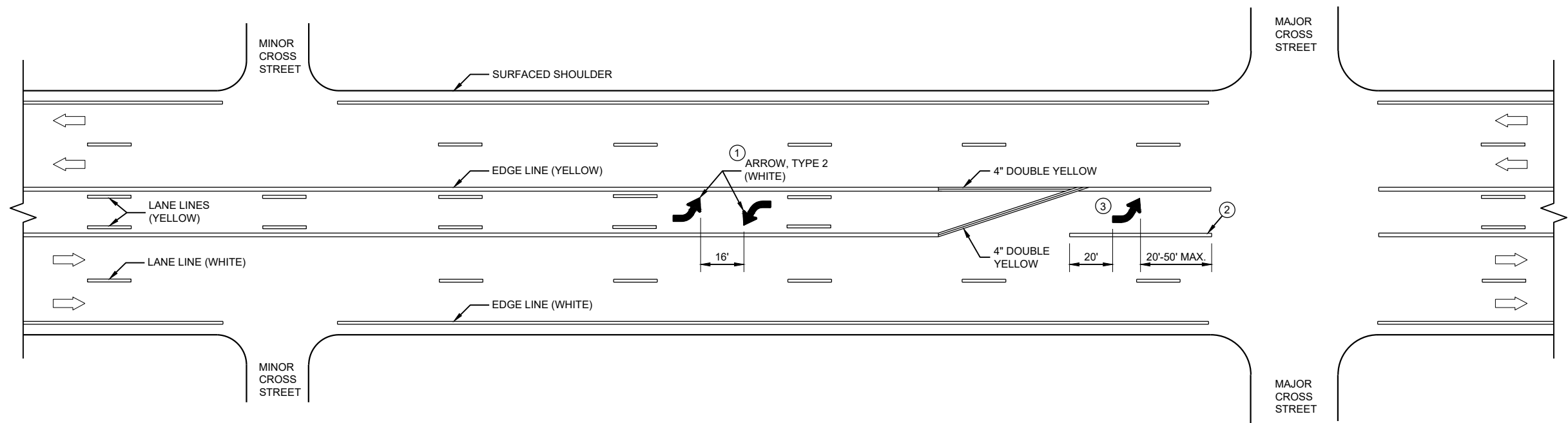
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

**GENERAL NOTES**

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

➡ DIRECTION OF TRAFFIC



**TWO WAY LEFT TURN LANE**

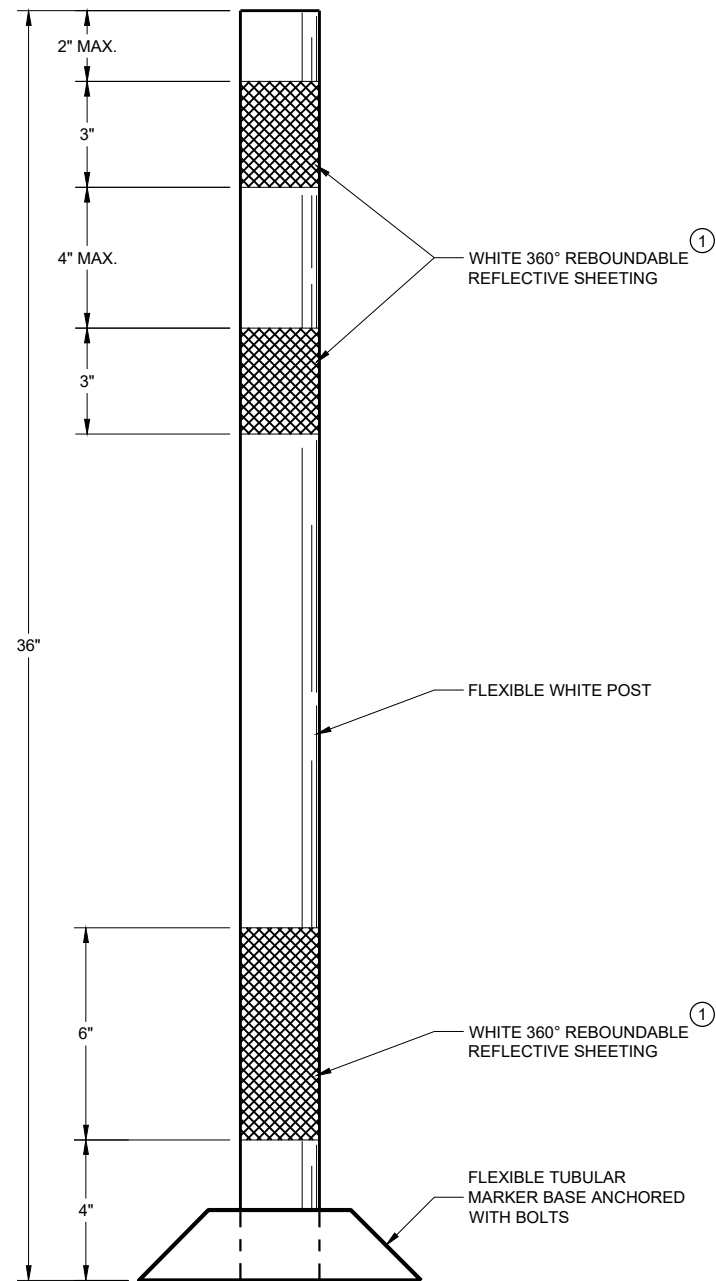
6

6

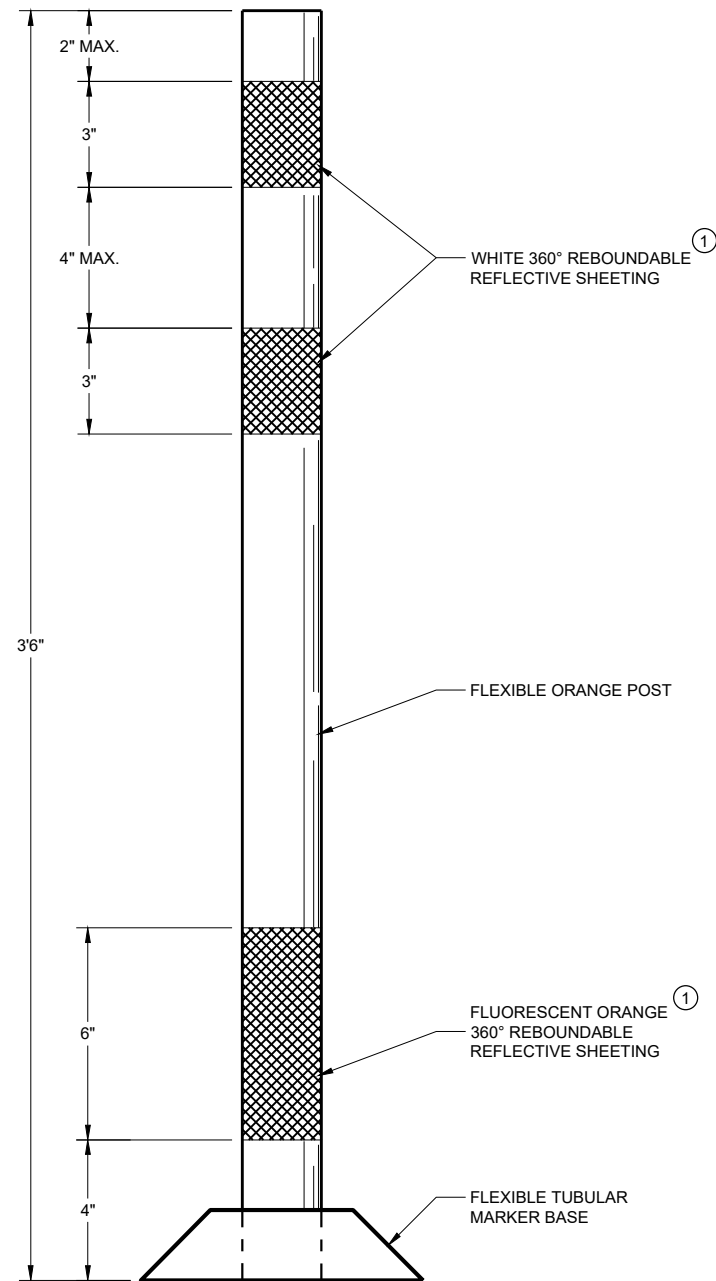
SDD 15C08 - 20b

SDD 15C08 - 20b

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



**FLEXIBLE TUBULAR  
MARKER POST  
PERMANENT CROSSOVER**



**FLEXIBLE TUBULAR  
MARKER POST  
WORK ZONE**

**GENERAL NOTES**

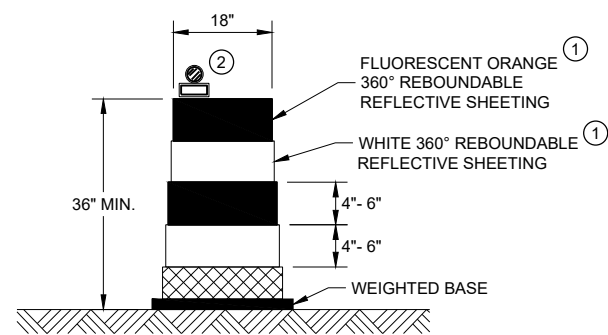
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

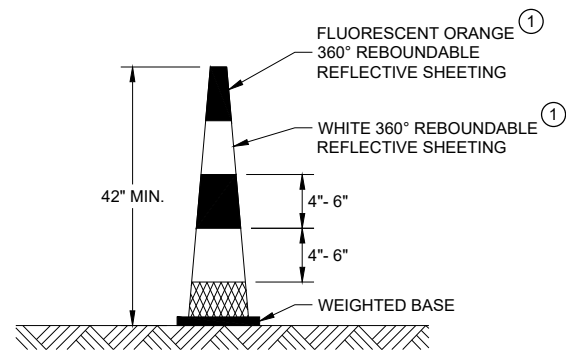
THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

<b>CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

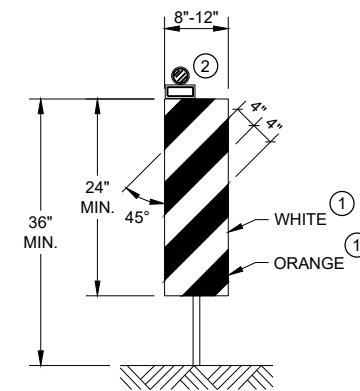


**DRUM**



**42" CONE**

DO NOT USE IN TAPERS  
1/2 SPACING OF DRUMS

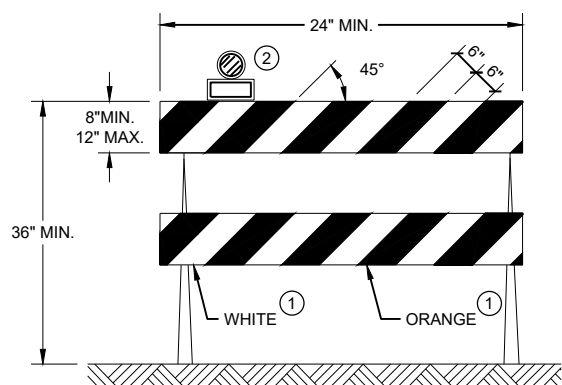


**VERTICAL PANEL**

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

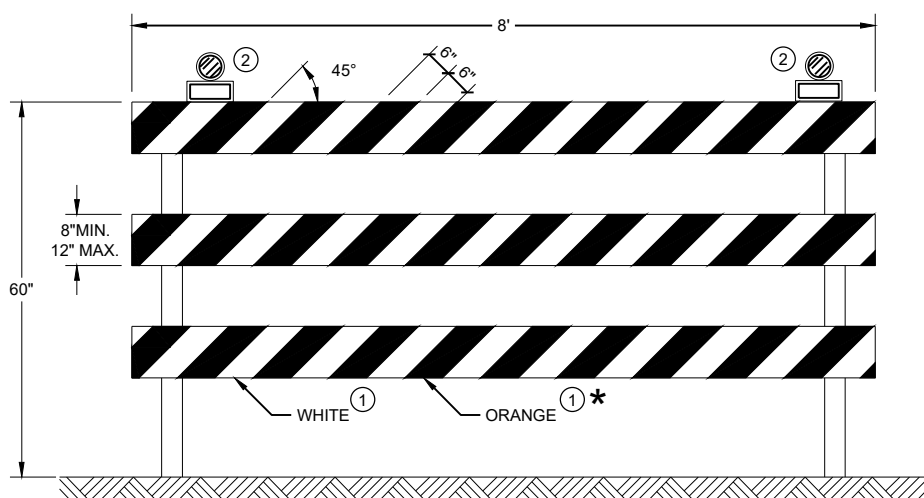
**GENERAL NOTES**

- 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.



**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.

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
 November 2020 /S/ Andrew Heidtke  
 DATE WORK ZONE ENGINEER  
 FHWA

**LEGEND**

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

**GENERAL NOTES**

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

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

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

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

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

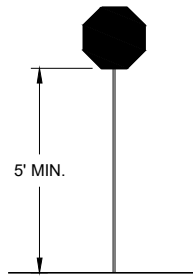
WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

**FLAGGING**

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

**TEMPORARY PORTABLE RUMBLE STRIPS**

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



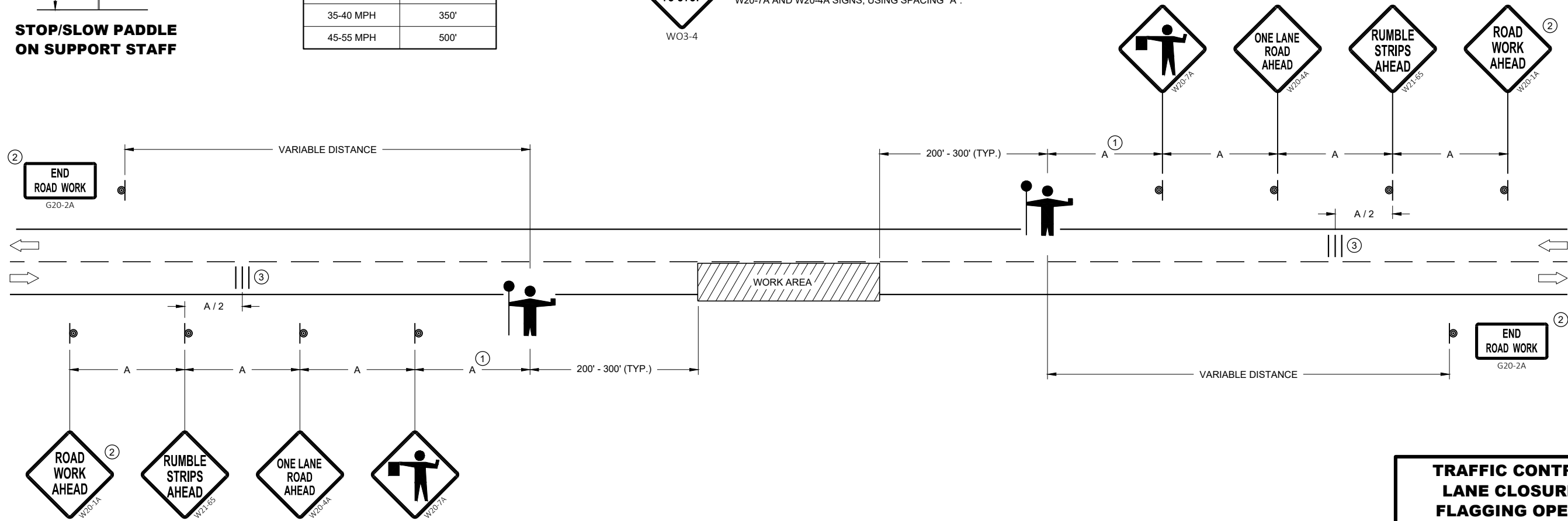
**STOP/SLOW PADDLE ON SUPPORT STAFF**

**SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE**

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



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



**TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION**





**TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA

**LEGEND**

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

**GENERAL NOTES**

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

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

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

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

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

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

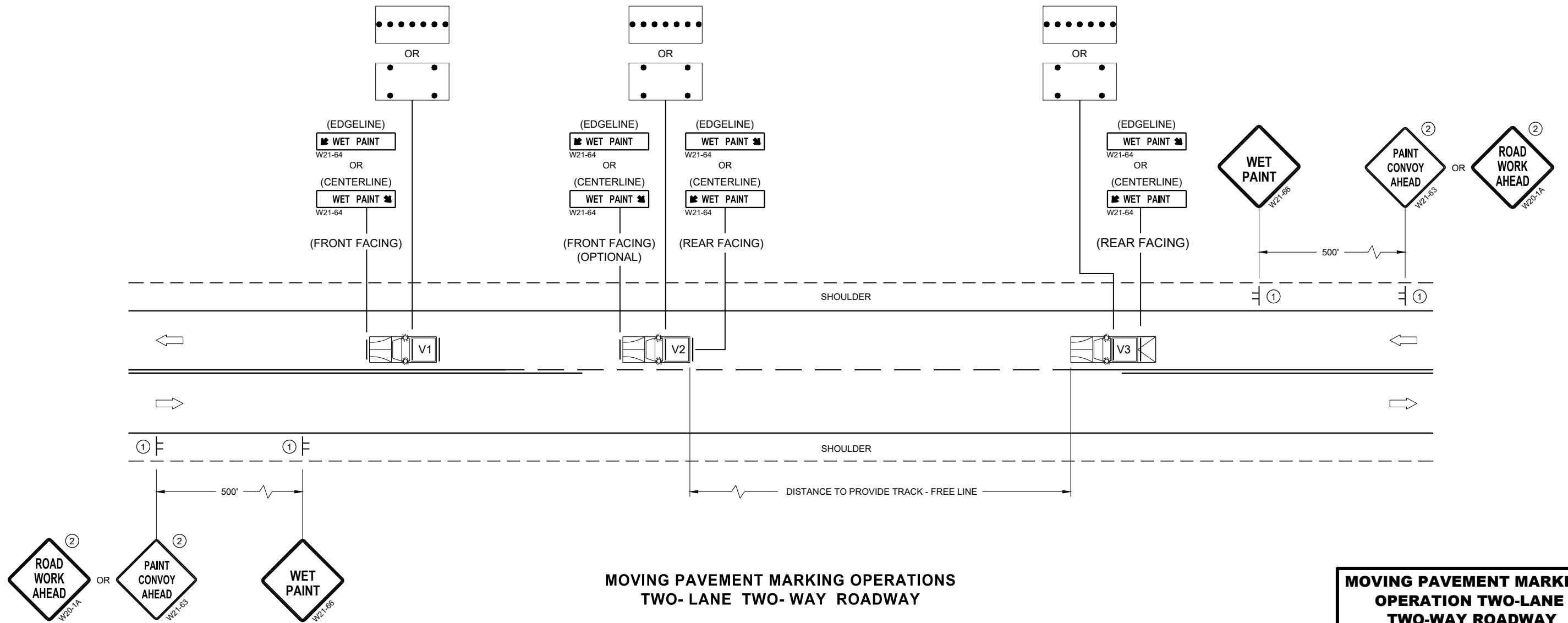
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

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

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

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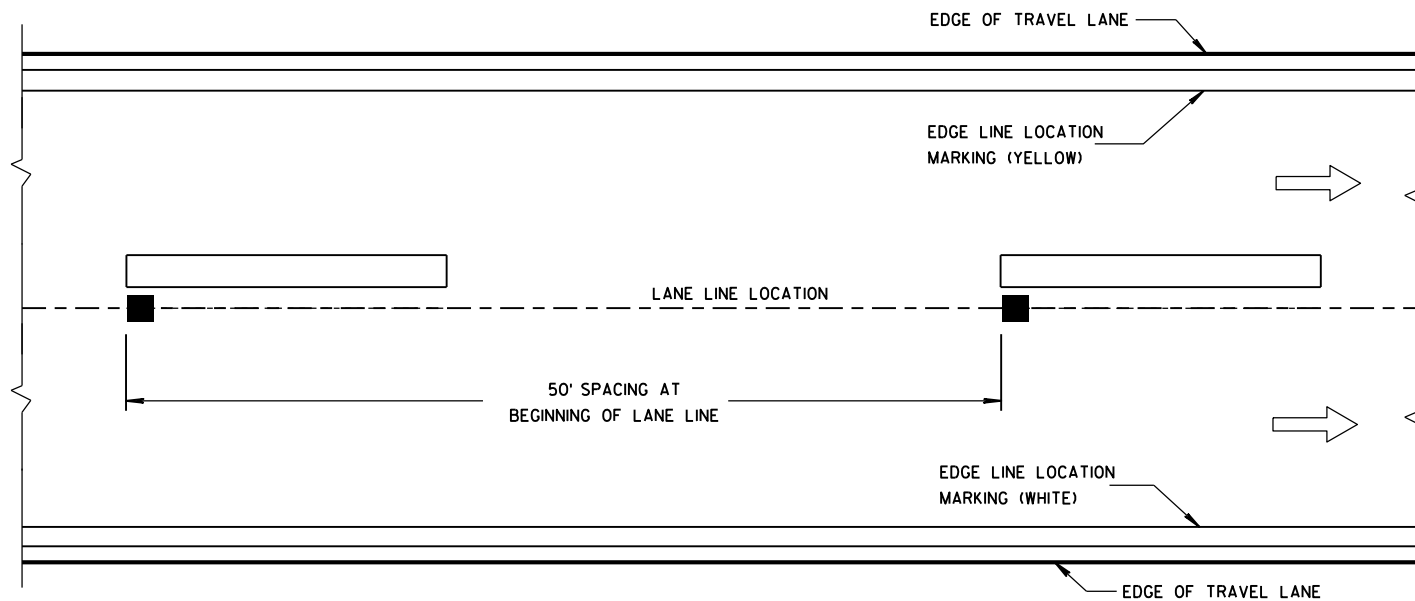


**MOVING PAVEMENT MARKING OPERATIONS  
TWO-LANE TWO-WAY ROADWAY**

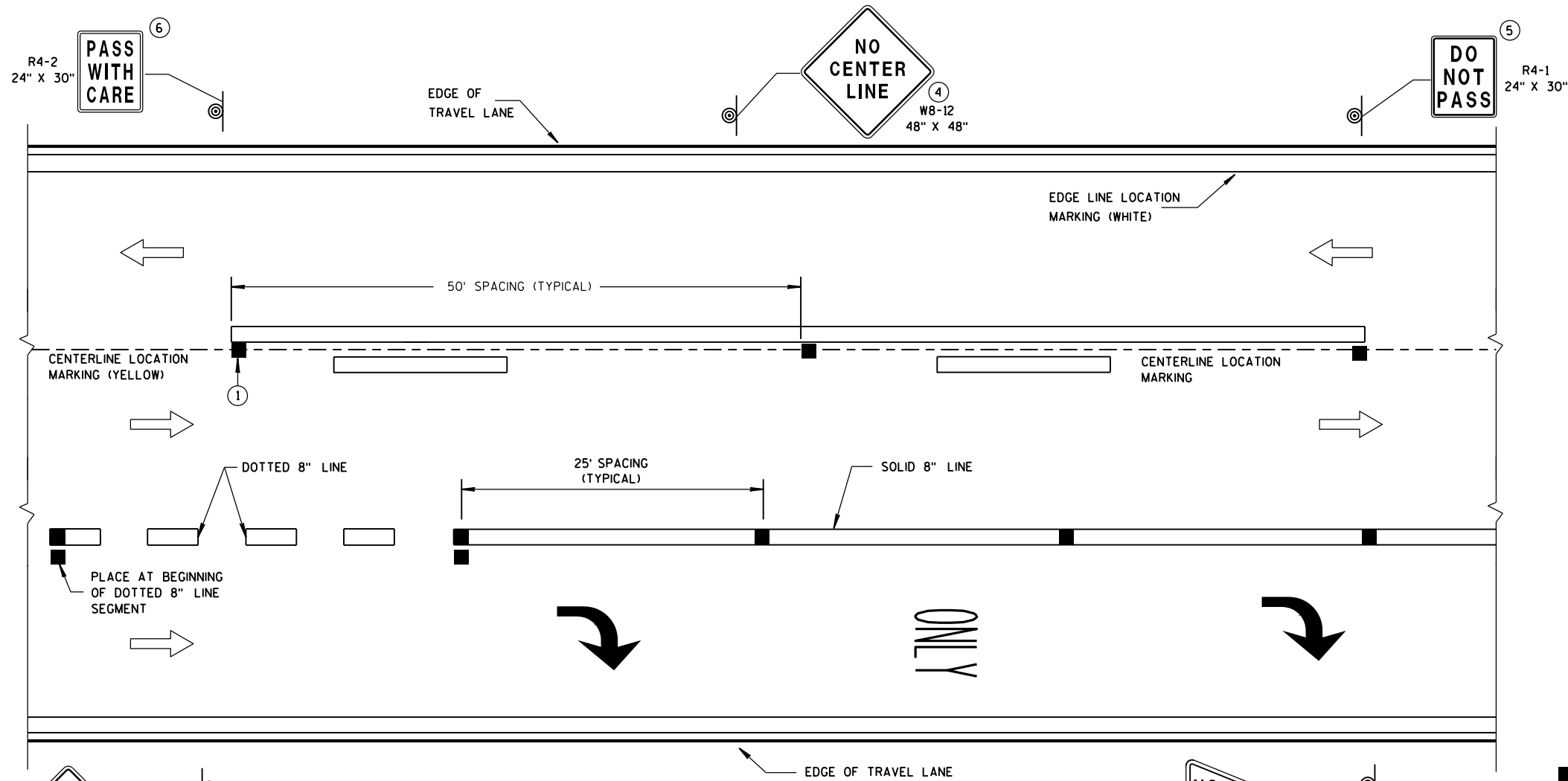
**SDD 15C19 - 06a**

**SDD 15C19 - 06a**

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



**LONGITUDINAL PLACEMENT 4-INCH LANE LINE**



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

**GENERAL NOTES**

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

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

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

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

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

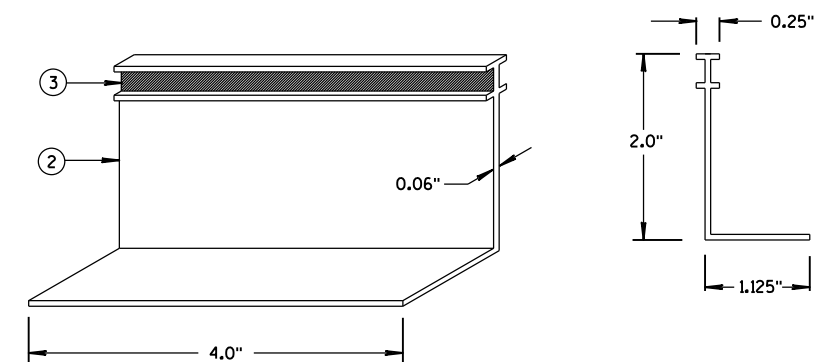
SAME DAY TEMPORARY PAVEMENT MARKING MAY BE USED IN LIEU OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II.

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

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

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

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



**ISOMETRIC VIEW**

**SIDE VIEW**

**TEMPORARY RAISED PAVEMENT MARKER, TYPE II**

**LEGEND**

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

**STANDARD APPLICATION FOR TEMPORARY RAISED PAVEMENT MARKERS, TYPE II**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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





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S.D.D. 15 C 34-3

S.D.D. 15 C 34-3

**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.

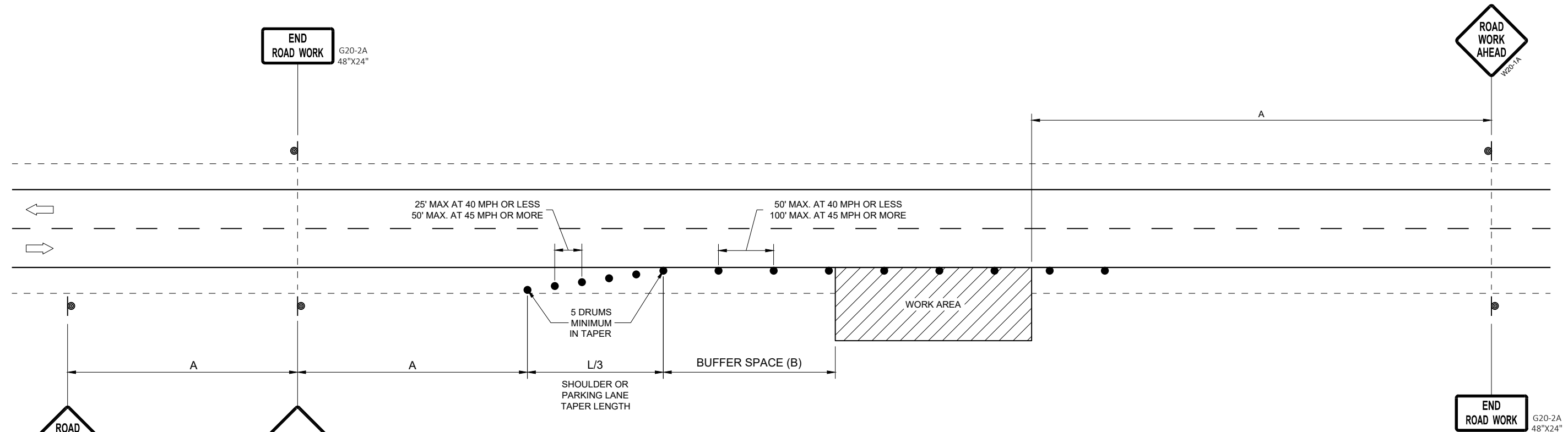
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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.

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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'

OR  
IF TRAFFIC CONTROL DEVICES  
ENCROACH ONTO TRAVELED WAY, USE



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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

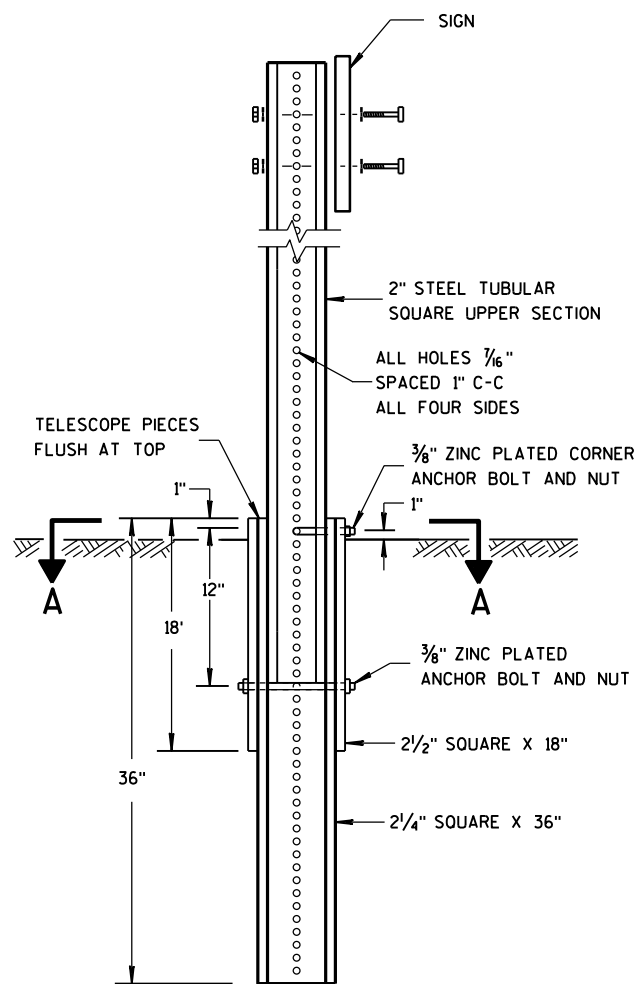
APPROVED  
May 2020 /S/ Andrew Heidtke  
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

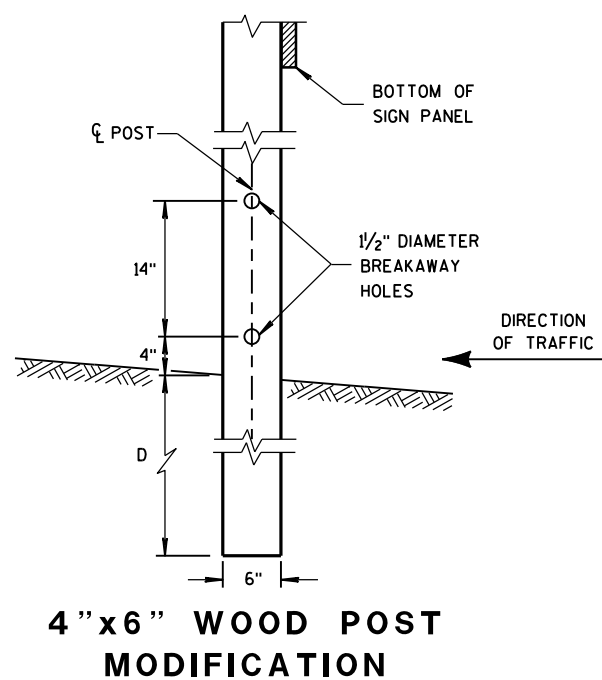
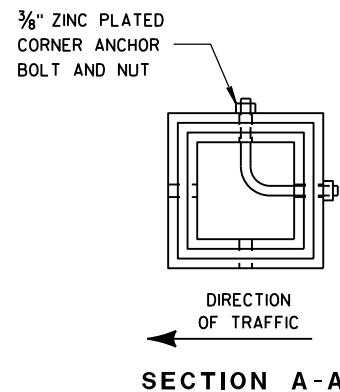
SDD 15D28 - 04

SDD 15D28 - 04





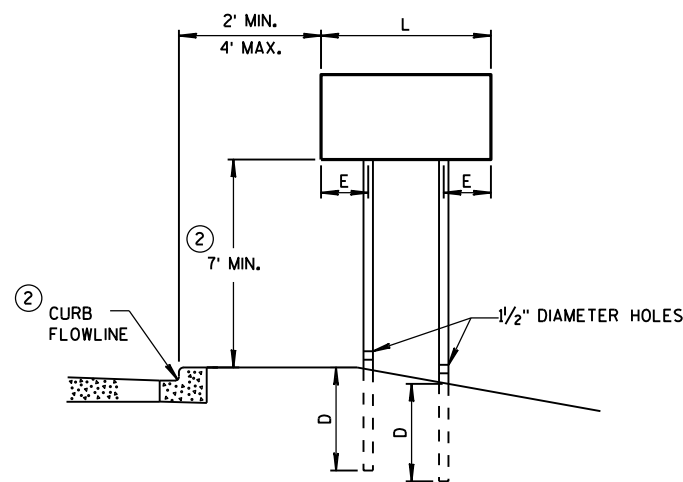
**DETAIL OF TUBULAR STEEL SIGN POST**



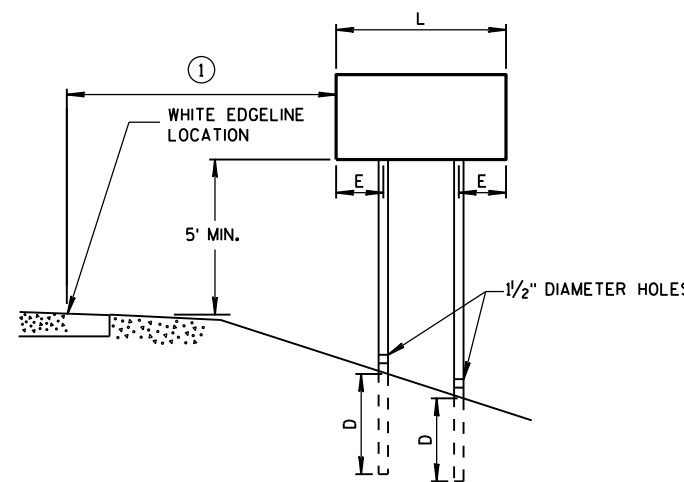
**4" X 6" WOOD POST MODIFICATION**

**GENERAL NOTES**

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



**URBAN AREA**



**RURAL AREA**

**POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS**

**TUBULAR STEEL POSTS**

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

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

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

**WOOD POST EMBEDMENT DEPTH**

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

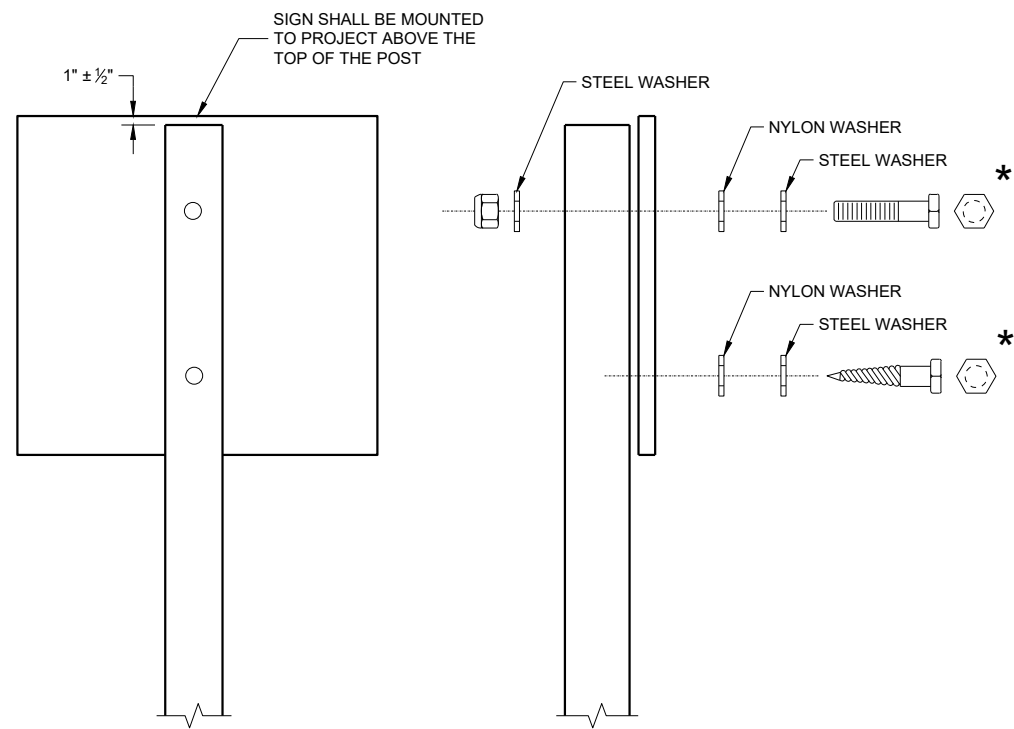
**4" X 6" WOOD POST**

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

SEE NOTE ③

**TEMPORARY TRAFFIC CONTROL SIGN MOUNTING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

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

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

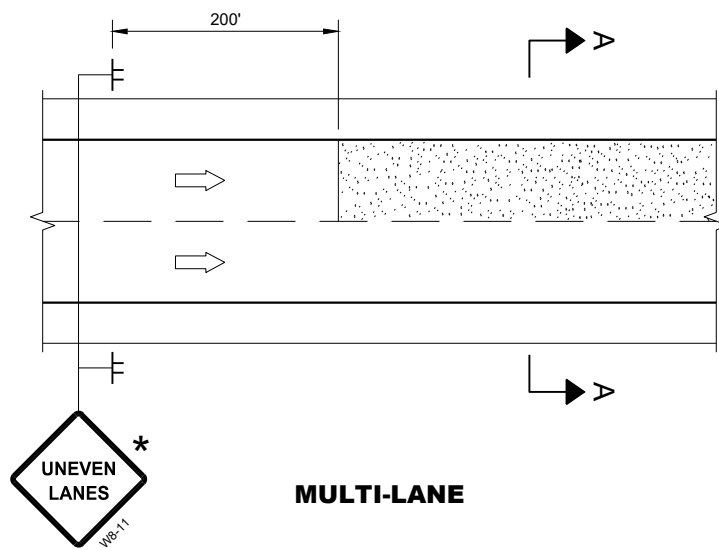
WOOD POST (4" x 6")  
 LAG SCREWS - 3/8" x 3"  
 MACHINE BOLTS - 5/16" x 6 1/2" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")  
 MACHINE BOLTS - 3/8" x 3 1/4" LENGTH W/NUTS  
 RIVETS - 3/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM  
 BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH,  
 GRIP RANGE 0.042 - 0.375 INCH

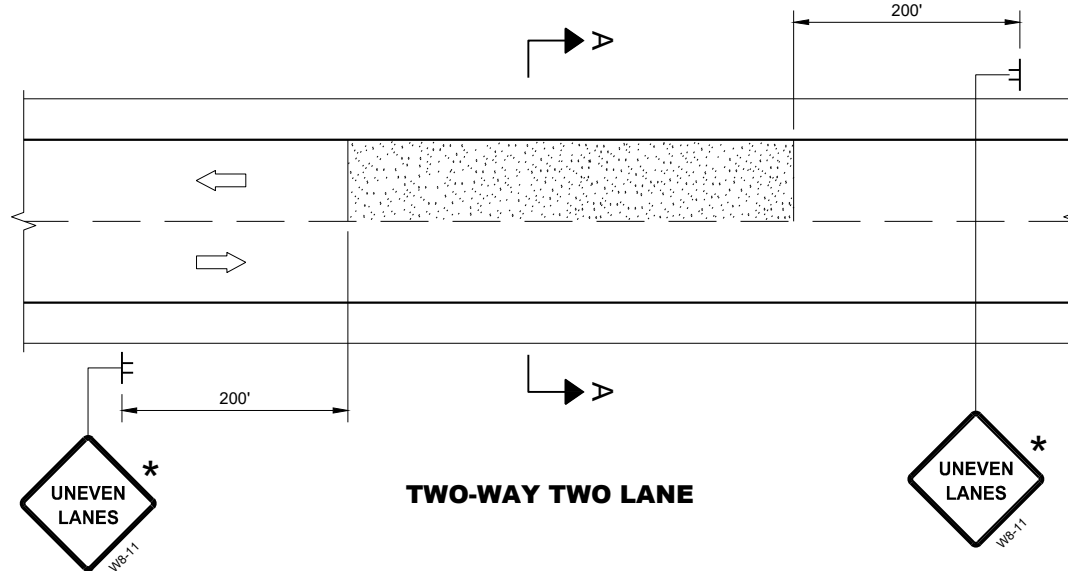
WASHERS (ALL POSTS) -  
 1 1/4" O.D. x 3/8" I.D. x 1/16" STEEL  
 1 1/4" O.D. x 3/8" I.D. x 0.080 NYLON

\* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

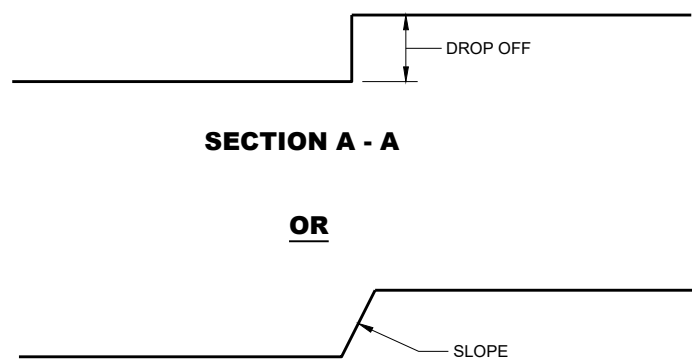
<b>ATTACHMENT OF SIGNS TO POSTS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	



**MULTI-LANE**



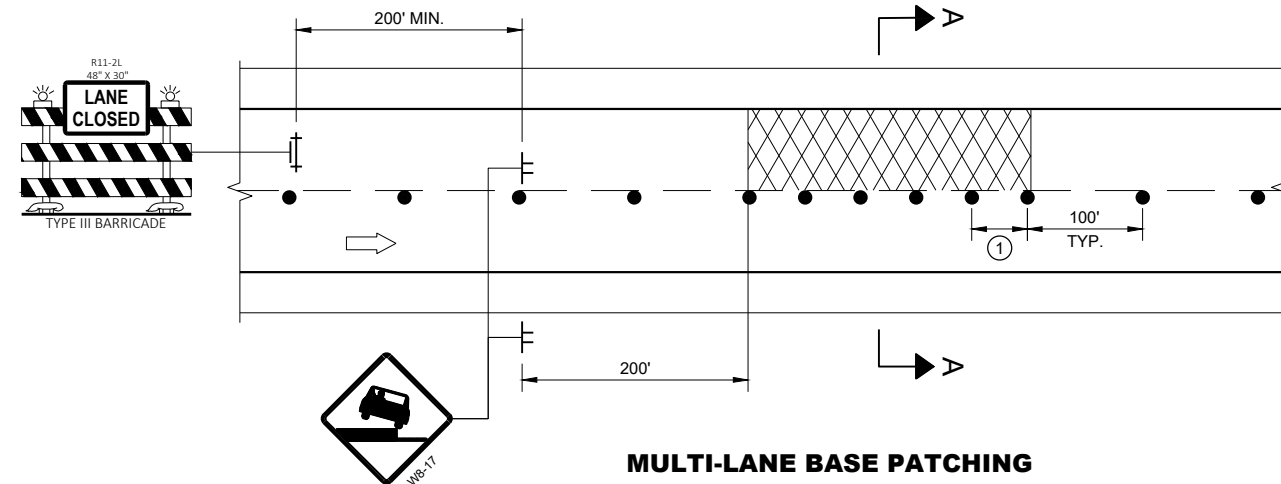
**TWO-WAY TWO LANE**



**SECTION A - A**

**OR**

**SECTION A - A**



**MULTI-LANE BASE PATCHING**

**ADJACENT LANE DROP-OFFS**

**GENERAL NOTES**

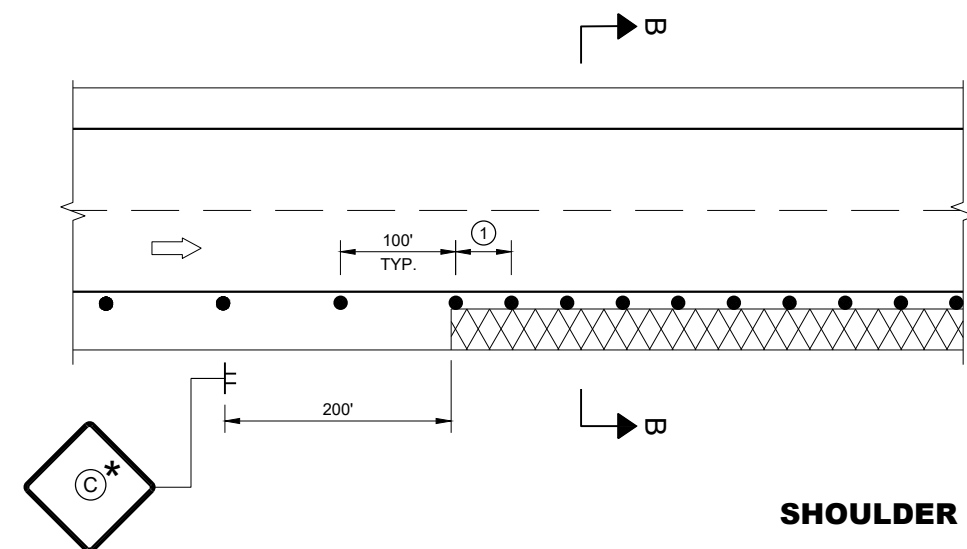
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- \* IF THE DROP-OFF 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**

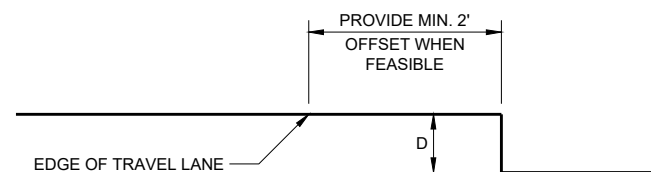
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

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**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

SDD 15D39 - 02

SDD 15D39 - 02

**TRAFFIC CONTROL,  
DROP-OFF SIGNING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA

**GENERAL NOTES**

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

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

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

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

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

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

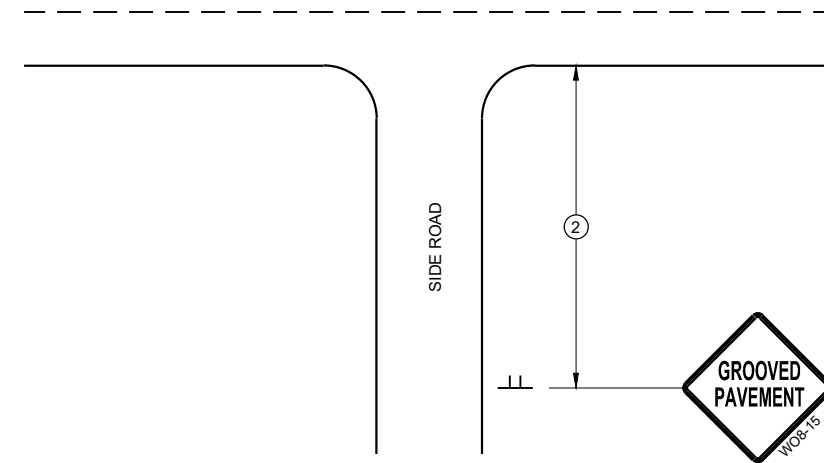
SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

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

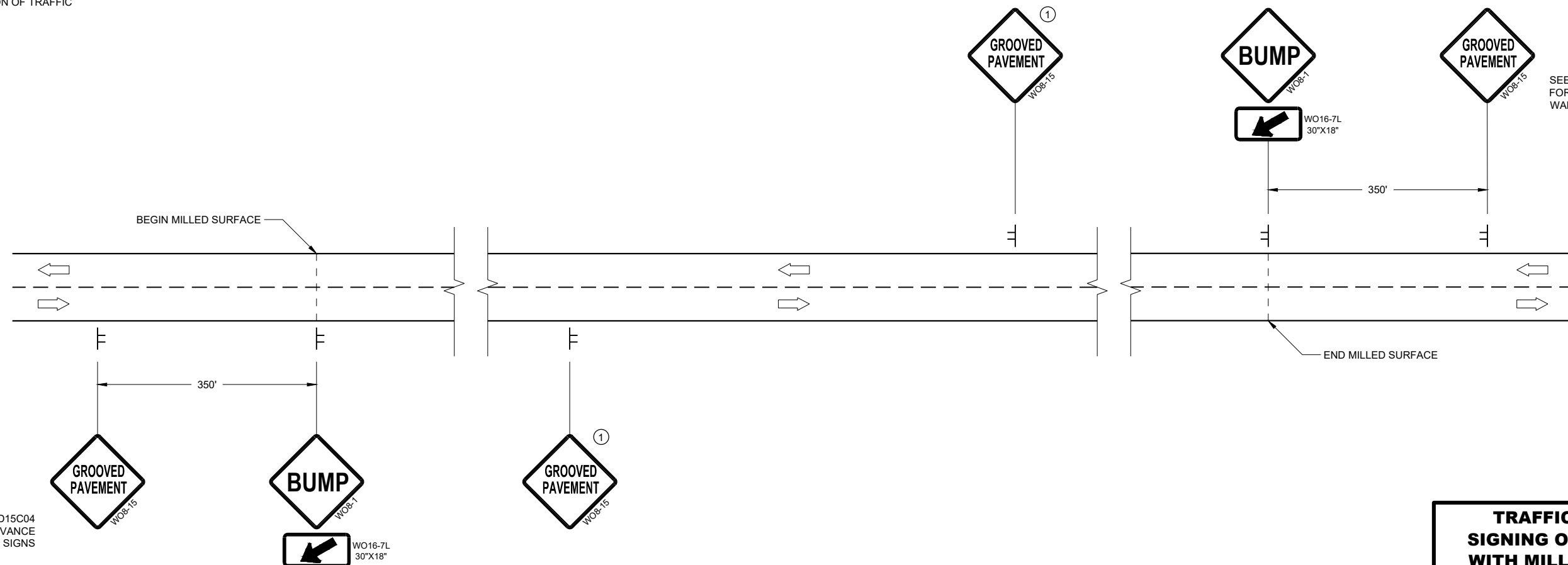
**LEGEND**

⊥ SIGN ON TEMPORARY SUPPORT

⇨ DIRECTION OF TRAFFIC



**TYPICAL SIDE ROAD APPROACH SIGN DETAIL**



**DETAIL FOR SIGNING ON MILLED SURFACES**

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

**TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA

# Notes



## ***Wisconsin Department of Transportation***

Dedicated people creating transportation solutions through innovation and exceptional service.

<http://www.dot.wisconsin.gov>