

SUP
PROJECT ID:
WITH: N/A

8726-00-70

COUNTY:
ASHLAND

NOVEMBER 2022

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 = 34



DESIGN DESIGNATION

A.A.D.T.	2023	=	1170
A.A.D.T.	2043	=	1575
D.H.V.		=	120
D.D.		=	51/49
T.		=	6.5%
DESIGN SPEED		=	55
ESALS		=	260,000

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

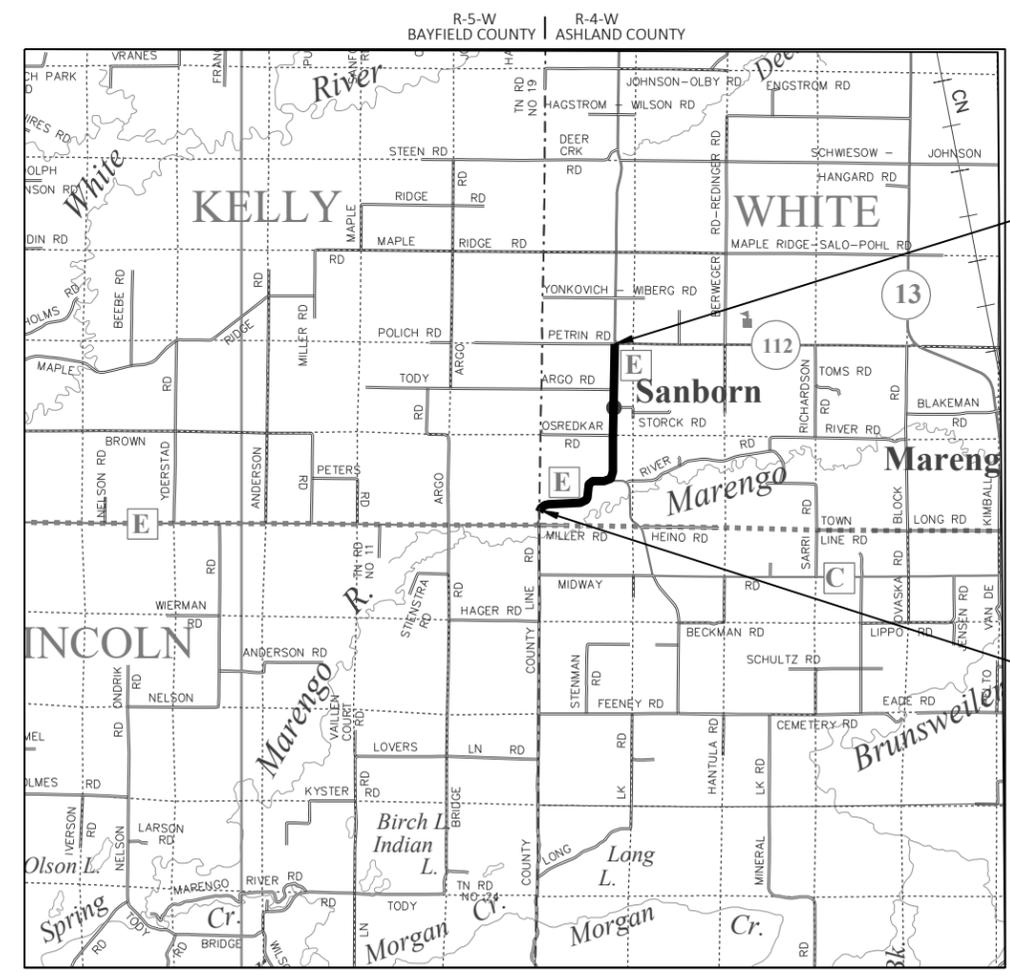
USH 63 - STH 112

ASHLAND/BAYFIELD ROAD TO STH 112

CTH E

ASHLAND COUNTY

STATE PROJECT NUMBER
8726-00-70



END CONSTRUCTION
STA 435+00.00
MATCH EXISTING
SAWCUT REQ'D

BEGIN CONSTRUCTION
STA 300+00.00
MATCH EXISTING
SAWCUT REQ'D
Y = 258880.606
X = 490743.443

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), ASHLAND COUNTY, NAD83 (2021), 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 (2021). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8726-00-70	WISC 2023055	1

ACCEPTED FOR
ASHLAND COUNTY

Date: 7/19/2022
Ashland County Highway Commissioner
(Signature and Title of Official)

Original Plans Prepared by

Short Elliott Hendrickson Inc.
1701 W Knapp Street Suite b
Rice Lake, WI 54868
715.236.4000 | Main
www.sehinc.com

DERRICK D. BACHA
E-47066
BIRCHWOOD, WI

(Signature) 7-18-2022 (Date)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SEH
Designer	SEH
Project Manager	PAULA GROOM
Regional Examiner	TOU YANG
Regional Supervisor	TYLER RONGSTAD

APPROVED FOR THE DEPARTMENT

DATE: 07/19/2022
Paula Groom
(Signature)

E

STANDARD ABBREVIATIONS

ABUT	ABUTMENT	ID	INSIDE DIAMETER
AC	ACRE	INV	INVERT
AGG	AGGREGATE	IP	IRON PIPE ON PIN
AECPRC	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE	LHF	LEFT-HAND FORWARD
AECPCS	APRON ENDWALL FOR CULVERT PIPE CORRUGATED STEEL	L	LENGTH OF CURVE
ASPH	ASPHALTIC	LF	LINEAR FOOT
AVG	AVERAGE	LC	LONG CHORD OF CURVE
ADT	AVERAGE DAILY TRAFFIC	LS	LUMP SUM
BF	BACK FACE	MH	MANHOLE
BM	BENCH MARK	MOR	MID POINT OF RADIUS
BR	BRIDGE	NC	NORMAL CROWN
CE	COMMERCIAL ENTRANCE	NO	NUMBER
C/L	CENTER LINE	OBLIT	OBLITERATE
Δ	CENTRAL ANGLE OR DELTA	PAVT	PAVEMENT
COB	CENTER OF BARRIER	PE	PRIVATE ENTRANCE
CONC	CONCRETE	PVRC	POINT OF VERTICAL REVERSE CURVE
CPRC	CULVERT PIPE REINFORCED CONCRETE	QOR	QUARTER POINT OF RADIUS
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL	R	RADIUS
CR	CREEK	REQ'D	REQUIRED
CY	CUBIC YARD	RES	RESIDENCE OR RESIDENTIAL
C&G	CURB AND GUTTER	RHF	RIGHT-HAND FORWARD
D	DEGREE OF CURVE	R/W	RIGHT-OF-WAY
DHV	DESIGN HOUR VOLUME	R	RIVER
DISCH	DISCHARGE	RDWY	ROADWAY
DG	DITCH GRADE	R/L	REFERENCE LINE
DWY	DRIVEWAY	SALV	SALVAGED
X	EAST GRID COORDINATE	SAN	SANITARY SEWER
EAT	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	SF	SQUARE FEET
EOR	END POINT OF RADIUS	SY	SQUARE YARD
EL	ELEVATION	SDD	STANDARD DETAIL DRAWINGS
ENT	ENTRANCE	STA	STATION
ESALS	EQUIVALENT SINGLE AXLE LOADS	SS	STORM SEWER
EXC	EXCAVATION	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
EBS	EXCAVATION BELOW SUBGRADE	SE	SUPERELEVATION RATE
EXIST	EXISTING	TC	TOP OF CURB
FC	FACE OF CURB	T OR TN	TOWN
FF	FACE TO FACE	T	TRUCKS (PERCENT OF)
FERT	FERTILIZE	TYP	TYPICAL
FE	FIELD ENTRANCE	VAR	VARIABLE
FL	FLOW LINE	VC	VERTICAL CURVE
FO	FIBER OPTIC	Y	NORTH GRID COORDINATE
CWT	HUNDREDWEIGHT	YD	YARD
HYD	HYDRANT		

DESIGN CONTACT:

SHORT ELLIOTT HENDRICKSON INC
1701 W KNAPP STREET SUITE B
RICE LAKE WI 54868
TELEPHONE: 715.790.6620
ATTENTION: DERRICK BACHA
EMAIL: DBACHA@SEHINC.COM

DNR AREA LIAISON:

WI DEPT OF NATURAL RESOURCES
DNR NORTHERN REGIONAL HQ
810 W MAPLE STREET
SPOONER, WI 54801
TELEPHONE: 715.635.4228
ATTENTION: SHAWN HASELEU
EMAIL: SHAWN.HASELEU@WISCONSIN.GOV

ASHLAND CO HD CONTACT:

ASHLAND COUNTY HIGHWAY DEPARTMENT
39181 5TH 13
HIGHBRIDGE, WI 54846
TELEPHONE: 715.274.3662 EXT. 2
CELLPHONE: 715.209.4798
ATTENTION: MATT ERICKSON
EMAIL: MATT.ERICKSON@CO.ASHLAND.WI.US

UTILITY CONTACT LIST:

LIST DATE 05/31 /22

XCEL ENERGY

GAS/PETRO/ELECTRIC/TRANSMISSION
2400 FARM ROAD
ASHLAND, WI 54806
TELEPHONE: 906.364.5786
ATTENTION: BRIAN DARY
EMAIL: BRIAN.M.DARY@XCELENERGY.COM

NORVADO

COMMUNICATION LINES
43705 US HWY 63
CABLE, WI 54821
TELEPHONE: 715.580.8123
ATTENTION: GUY FOLSOM
EMAIL: GFOLSOM@NORVADO.COM

LUMEN

COMMUNICATIONS LINES
425 ELLINGSON AVE
HAWKINS, WI 54530
TELEPHONE: 715.563.8294
ATTENTION: BRIAN HUHN
EMAIL: BRIAN.HUHN@LUMEN.COM

GENERAL NOTES:

SUPER ELEVATIONS SHALL MATCH EXISTING ROADWAY.

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

ACCESS TO ALL RESIDENCES SHALL BE MAINTAINED DURING CONSTRUCTION.

THE LOCATION OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

WHEN THE QUANTITY OF HMA PAVEMENT OR BASE AGGREGATE DENSE IS MEASURED BY THE TON, THE DEPTH OR THICKNESS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

RESTORE SIDE ROAD INTERSECTIONS AND PRIVATE ENTRANCES TO EXISTING CONDITIONS UNLESS OTHERWISE SHOWN.

THE EXACT CONSTRUCTION LIMITS OF PRIVATE ENTRANCES SHALL BE COORDINATED WITH THE ENGINEER IN THE FIELD.

PAVEMENT MARKING SHALL MEET MUTCD STANDARDS.

A PORTION OF THE ASPHALTIC SURFACE QUANTITY IS UNDISTRIBUTED TO IMPROVE AREAS AFTER MILLING OPERATIONS. LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

ORDER OF SHEETS - SECTION 2:

- GENERAL NOTES
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- ALIGNMENT DETAILS

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN



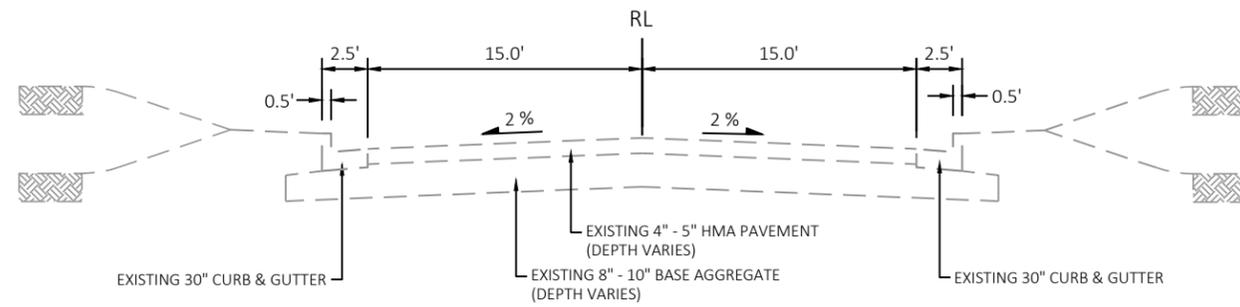
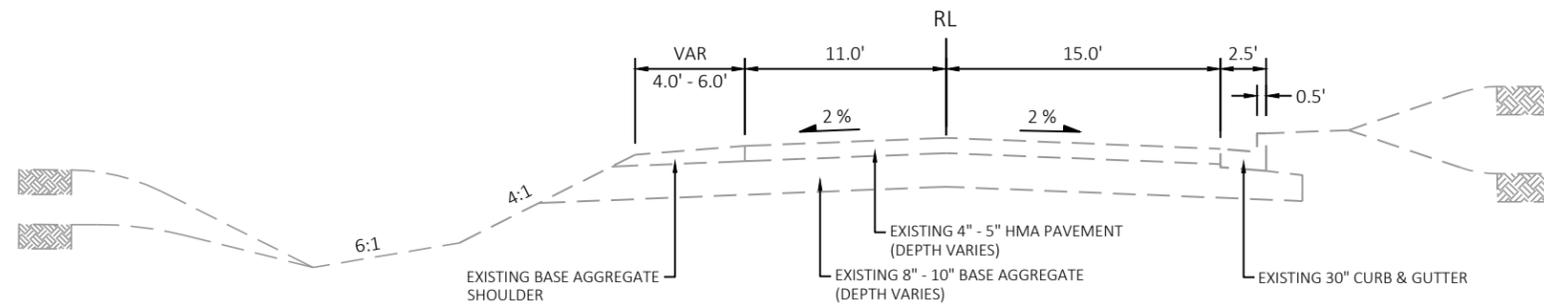
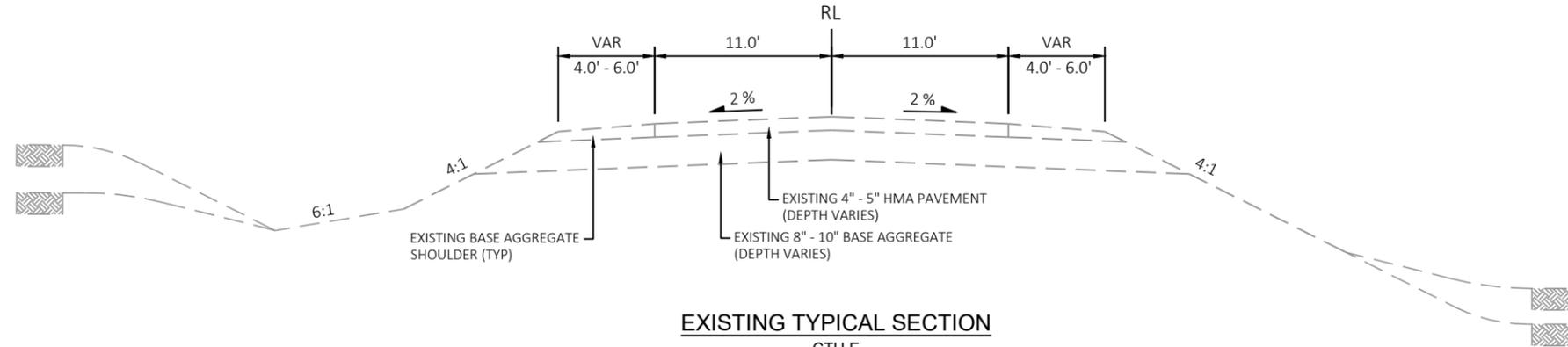
Dial 811 or (800)242-8511

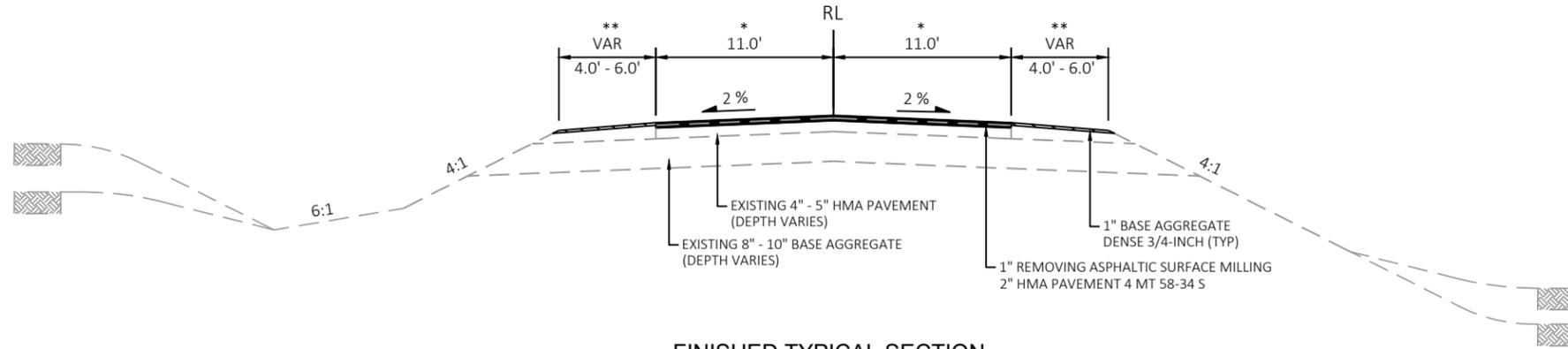
www.DiggersHotline.com

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 10.697 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 10.697 ACRES



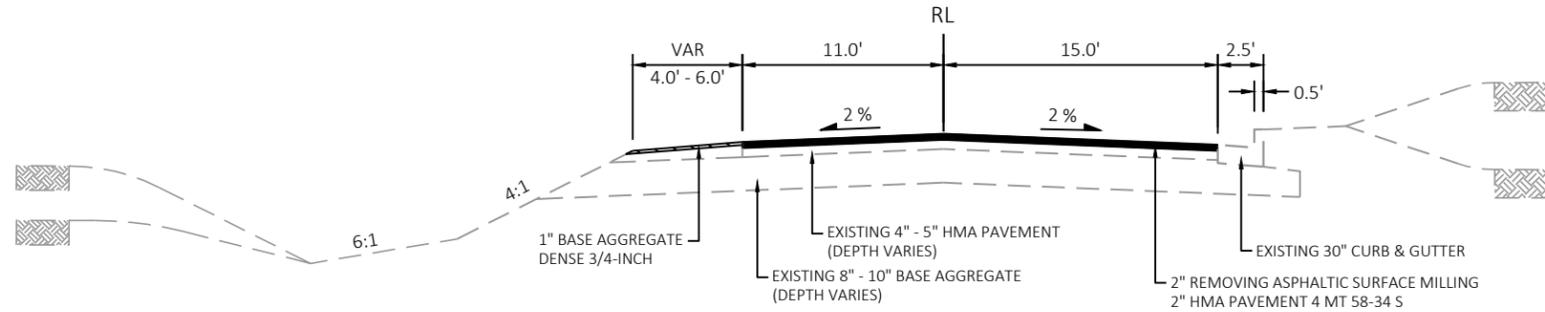


FINISHED TYPICAL SECTION

CTH E
STA 300+00.0 - 381+09.3
STA 383+90.3 - 389+99.5
STA 396+08.1 - 435+10.0

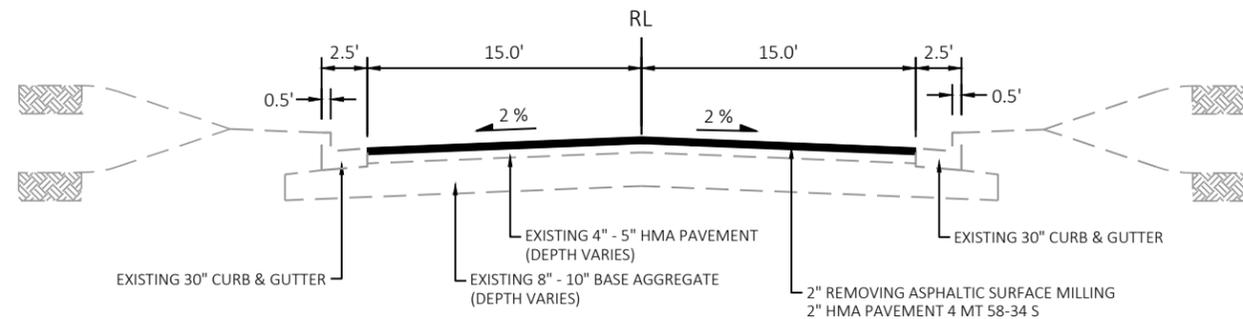
NOTES:

- * PAVEMENT WIDTH TO BE 13.0' ON INSIDE CURVES FROM PC TO PT OR MATCH EXISTING PAVEMENT WIDTH AND LOCATION.
- ** SHOULDER WIDTH TO BE 2.0' - 4.0' ON INSIDE CURVES FROM PC TO PT.



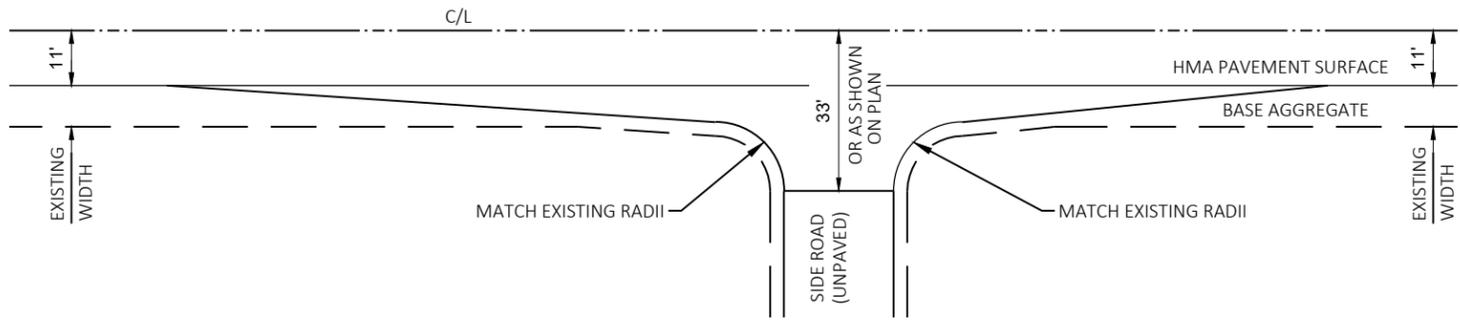
FINISHED TYPICAL SECTION

CTH E
STA 381+09.3 - 383+90.3
STA 389+99.5 - 390+48.8
STA 391+61.6 - 396+08.1

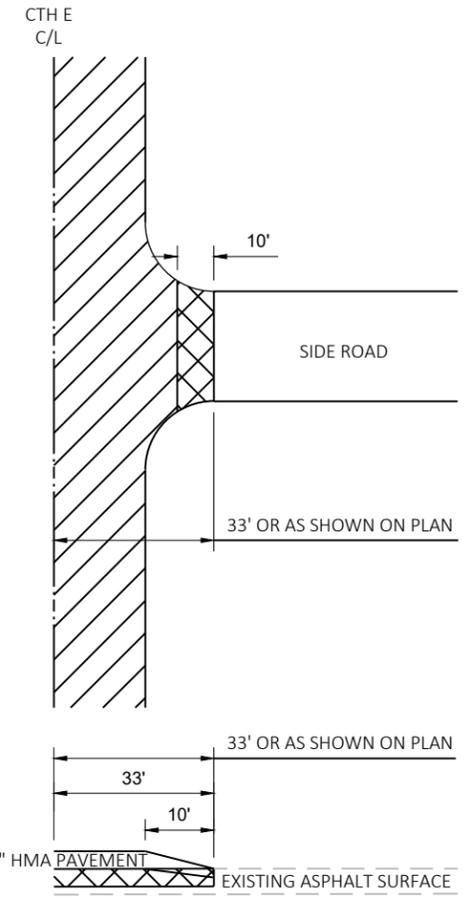


FINISHED TYPICAL SECTION

CTH E
STA 390+48.8 - 391+61.1



GRAVEL SIDE ROAD DETAIL



PAVEMENT TRANSITION

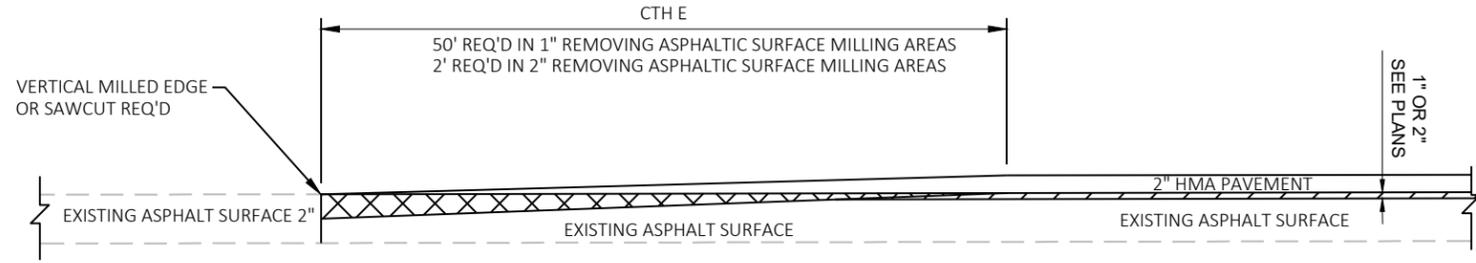
NOT TO SCALE



REMOVE MATERIAL UNDER ITEM "REMOVING ASPHALTIC SURFACE BUTT JOINTS" MATERIAL SHALL NOT BE REMOVED UNDER THIS ITEM UNTIL 24 HOURS BEFORE SIDE ROAD PAVING.

SIDE ROAD PAVEMENT DEPTH SHALL MATCH AT MAINLINE PAVEMENT EDGE AND BE TAPERED TO 2" MINIMUM AT JOINT.

ANY SAWCUT USED WILL BE CONSIDERED INCIDENTAL TO THE ITEM "REMOVING ASPHALTIC SURFACE BUTT JOINTS".



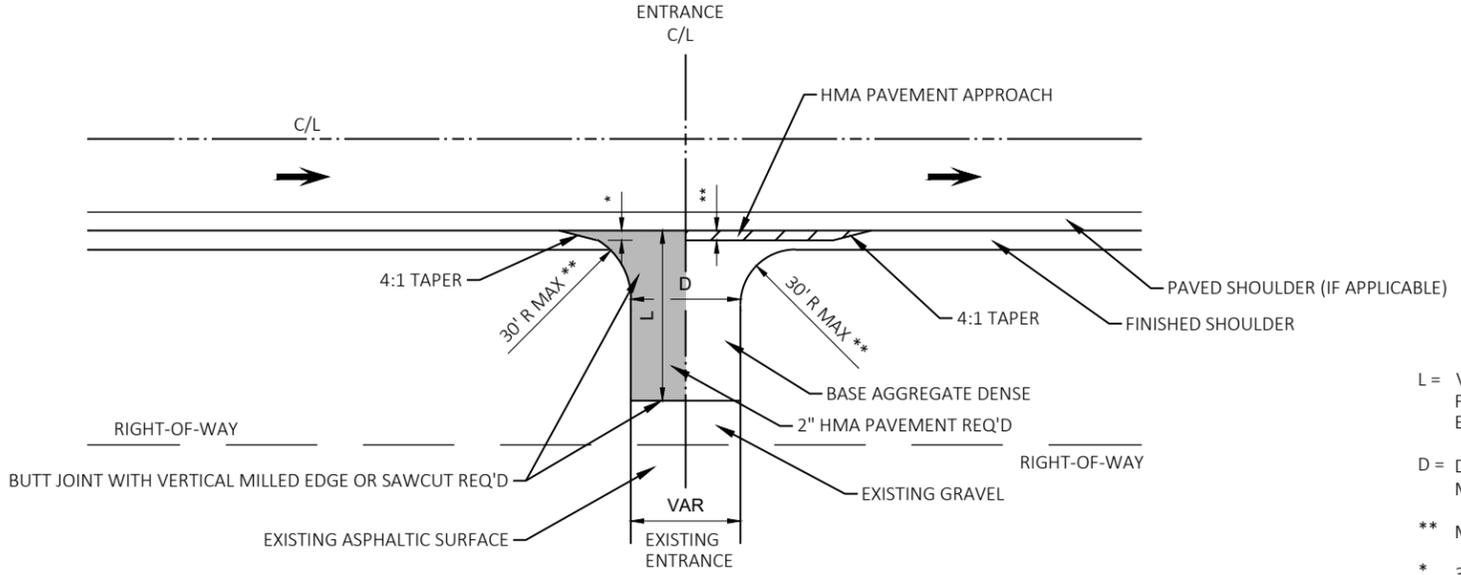
BUTT JOINT

BEGIN PROJECT
END PROJECT
STH 112 MATCH



PAID FOR AS REMOVING ASPHALTIC SURFACE BUTT JOINTS

NOTE:
ANY SAWCUT USED IN THIS OPERATION CONSIDERED INCIDENTAL TO THIS ITEM.



RURAL DRIVEWAY DETAIL

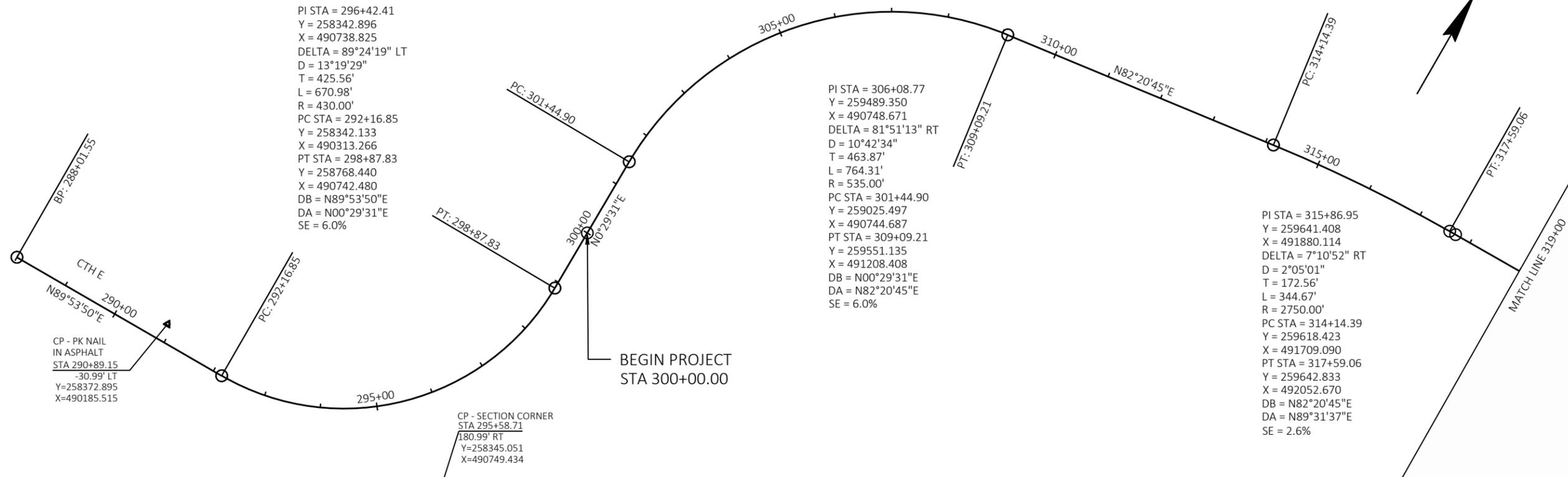
(PE'S AND FE'S)

L = VARIABLE, EXACT LENGTH TO BE DETERMINED IN THE FIELD BY THE ENGINEER. BLEND BACK ON THE ENTRANCE FAR ENOUGH TO GET A SMOOTH PROFILE.

D = DRIVEWAY WIDTH (MATCH EXISTING SURFACE MATERIAL AND WIDTH).

** MATCH EXISTING RADIUS WHERE POSSIBLE.

* 3' MAX OR TO FINISHED SHOULDER WHICHEVER IS LESS.



PI STA = 296+42.41
 Y = 258342.896
 X = 490738.825
 DELTA = 89°24'19" LT
 D = 13°19'29"
 T = 425.56'
 L = 670.98'
 R = 430.00'
 PC STA = 292+16.85
 Y = 258342.133
 X = 490313.266
 PT STA = 298+87.83
 Y = 258768.440
 X = 490742.480
 DB = N89°53'50"E
 DA = N00°29'31"E
 SE = 6.0%

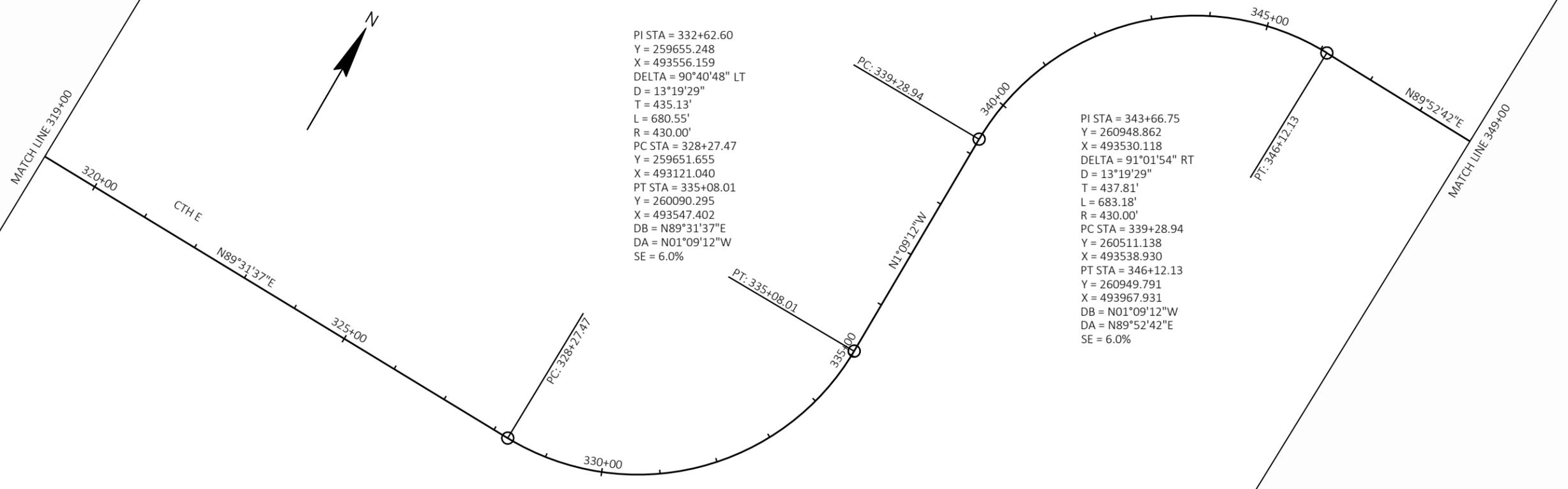
PI STA = 306+08.77
 Y = 259489.350
 X = 490748.671
 DELTA = 81°51'13" RT
 D = 10°42'34"
 T = 463.87'
 L = 764.31'
 R = 535.00'
 PC STA = 301+44.90
 Y = 259025.497
 X = 490744.687
 PT STA = 309+09.21
 Y = 259551.135
 X = 491208.408
 DB = N00°29'31"E
 DA = N82°20'45"E
 SE = 6.0%

PI STA = 315+86.95
 Y = 259641.408
 X = 491880.114
 DELTA = 7°10'52" RT
 D = 2°05'01"
 T = 172.56'
 L = 344.67'
 R = 2750.00'
 PC STA = 314+14.39
 Y = 259618.423
 X = 491709.090
 PT STA = 317+59.06
 Y = 259642.833
 X = 492052.670
 DB = N82°20'45"E
 DA = N89°31'37"E
 SE = 2.6%

CP - PK NAIL
 IN ASPHALT
 STA 290+89.15
 -30.99' LT
 Y=258372.895
 X=490185.515

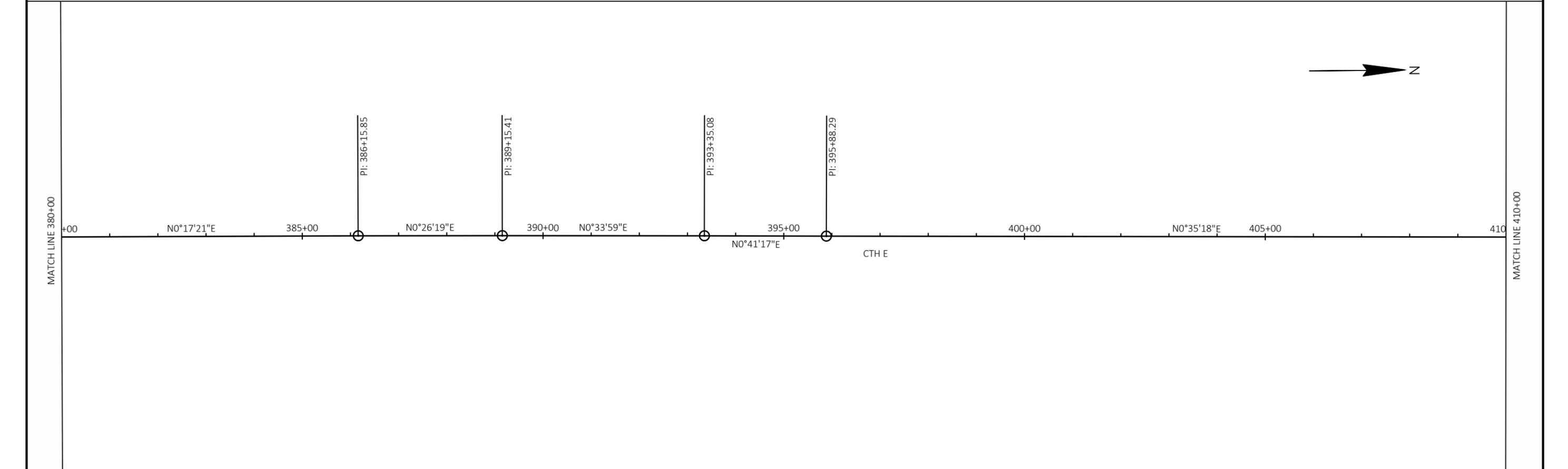
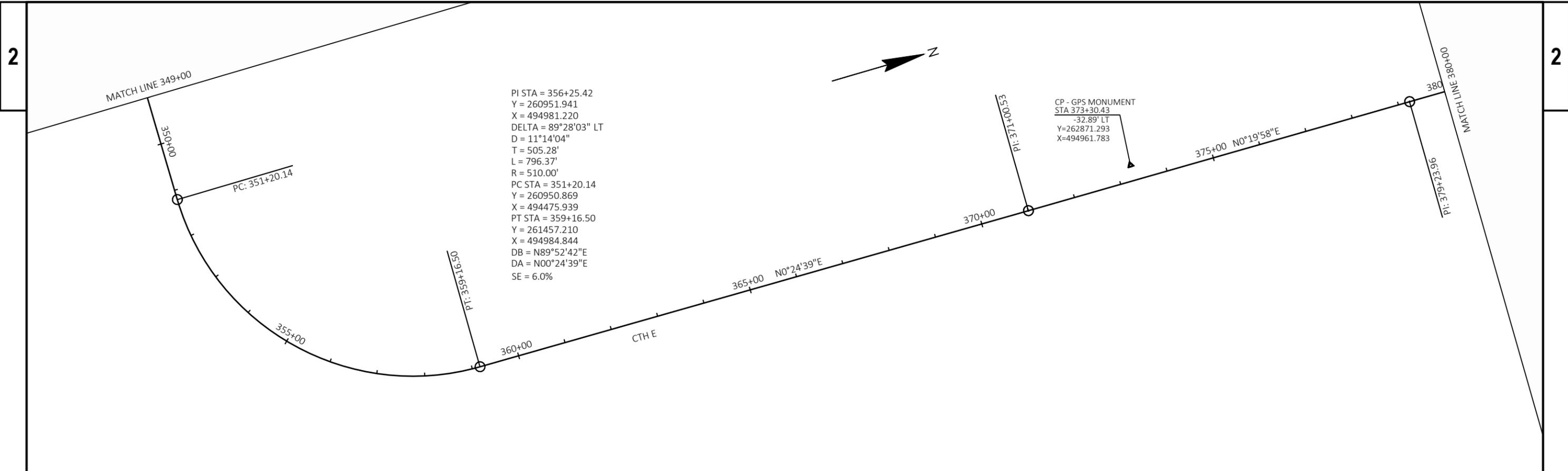
CP - SECTION CORNER
 STA 295+58.71
 180.99' RT
 Y=258345.051
 X=490749.434

BEGIN PROJECT
 STA 300+00.00

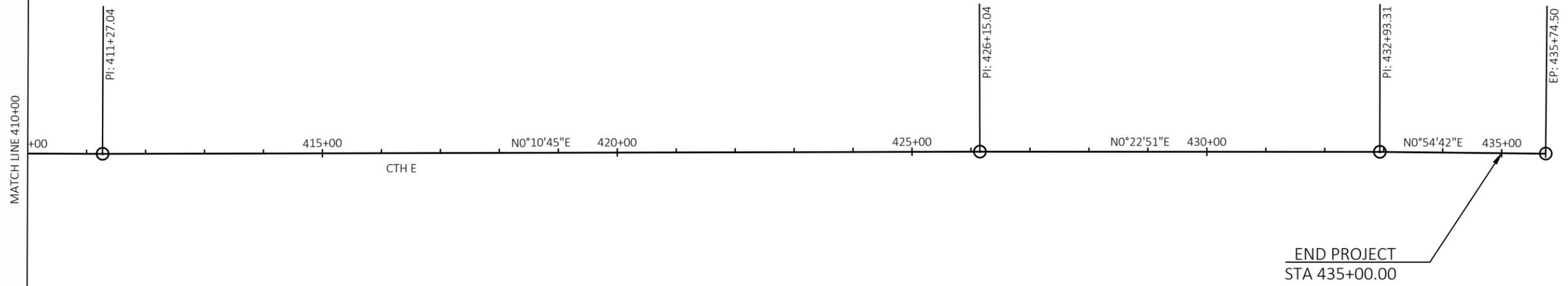


PI STA = 332+62.60
 Y = 259655.248
 X = 493556.159
 DELTA = 90°40'48" LT
 D = 13°19'29"
 T = 435.13'
 L = 680.55'
 R = 430.00'
 PC STA = 328+27.47
 Y = 259651.655
 X = 493121.040
 PT STA = 335+08.01
 Y = 260090.295
 X = 493547.402
 DB = N89°31'37"E
 DA = N01°09'12"W
 SE = 6.0%

PI STA = 343+66.75
 Y = 260948.862
 X = 493530.118
 DELTA = 91°01'54" RT
 D = 13°19'29"
 T = 437.81'
 L = 683.18'
 R = 430.00'
 PC STA = 339+28.94
 Y = 260511.138
 X = 493538.930
 PT STA = 346+12.13
 Y = 260949.791
 X = 493967.931
 DB = N01°09'12"W
 DA = N89°52'42"E
 SE = 6.0%



PROJECT NO: 8726-00-70	HWY: CTH E	COUNTY: ASHLAND	ALIGNMENT - CTH E	SHEET	E
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END PROJECT
STA 435+00.00

PROJECT NO: 8726-00-70	HWY: CTH E	COUNTY: ASHLAND	ALIGNMENT - CTH E	SHEET	E
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Estimate Of Quantities

8726-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	204.0110	Removing Asphaltic Surface	SY	20.000	20.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	480.000	480.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	35,800.000	35,800.000
0008	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 8726-00-70	EACH	1.000	1.000
0010	213.0100	Finishing Roadway (project) 01. 8726-00-70	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,500.000	2,500.000
0014	450.4000	HMA Cold Weather Paving	TON	1,025.000	1,025.000
0016	455.0605	Tack Coat	GAL	2,700.000	2,700.000
0018	460.2000	Incentive Density HMA Pavement	DOL	2,624.000	2,624.000
0020	460.6244	HMA Pavement 4 MT 58-34 S	TON	4,100.000	4,100.000
0022	460.9000.S	Material Transfer Vehicle (project) 01. 8726-00-70	EACH	1.000	1.000
0024	465.0105	Asphaltic Surface	TON	325.000	325.000
0026	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	35.000	35.000
0028	465.0315	Asphaltic Flumes	SY	5.000	5.000
0030	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8726-00-70	EACH	1.000	1.000
0032	619.1000	Mobilization	EACH	1.000	1.000
0034	624.0100	Water	MGAL	25.000	25.000
0036	642.5001	Field Office Type B	EACH	1.000	1.000
0038	643.0300	Traffic Control Drums	DAY	200.000	200.000
0040	643.0420	Traffic Control Barricades Type III	DAY	200.000	200.000
0042	643.0705	Traffic Control Warning Lights Type A	DAY	200.000	200.000
0044	643.0900	Traffic Control Signs	DAY	300.000	300.000
0046	643.3105	Temporary Marking Line Paint 4-Inch	LF	12,040.000	12,040.000
0048	643.5000	Traffic Control	EACH	1.000	1.000
0050	646.1020	Marking Line Epoxy 4-Inch	LF	26,850.000	26,850.000
0052	646.4520	Marking Line Same Day Epoxy 4-Inch	LF	13,870.000	13,870.000
0054	648.0100	Locating No-Passing Zones	MI	2.560	2.560
0056	650.8000	Construction Staking Resurfacing Reference	LF	13,500.000	13,500.000
0058	650.9911	Construction Staking Supplemental Control (project) 01. 8726-00-70	EACH	1.000	1.000
0060	690.0150	Sawing Asphalt	LF	100.000	100.000
0062	740.0440	Incentive IRI Ride	DOL	10,240.000	10,240.000
0064	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0066	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000

3

REMOVING ASPHALTIC SURFACE

STATION	LOCATION	204.0115 SY	COMMENTS
CTH E 300+00 - 435+00	LT & RT	20	POOR CONDITION ENTRANCES
ITEM TOTAL		20	

REMOVING ASPHALTIC SURFACE BUTT JOINTS

STATION	LOCATION	204.0115 SY	COMMENTS
CTH E 300+00 - 300+50	LT & RT	122	CTH E
355+13	RT	71	CTH C
379+64	LT	34	OSREDKAR DR
393+83	LT	16	PE
396+22	RT	32	STORCK RD
406+52	LT	32	ARGO RD
412+67	RT	18	PE
418+41	RT	21	PE
419+35	LT	20	PE
420+81	LT	24	PE
426+46	LT	18	PE
432+94	LT	7	PETRIN RD
433+04	RT	30	PETRIN RD/STH 112
435+00	LT & RT	35	CTH E/STH 112
ITEM TOTAL		480	

REMOVING ASPHALTIC SURFACE MILLING

STATION	LOCATION	204.0120 SY	COMMENTS
CTH E 300+00 - 435+00	LT & RT	35800	
ITEM TOTAL		35800	

PREPARE FOUNDATION FOR

STATION	LOCATION	211.0101 ASPHALTIC PAVING (PROJECT) EACH	COMMENTS
CTH E 300+00 - 435+00	LT & RT	1	8726-00-70
ITEM TOTALS		1	

FINISHING ROADWAY (PROJECT)

STATION	LOCATION	213.0100 EACH
CTH E 300+00 - 435+00	LT & RT	1
ITEM TOTAL		1

BASE AGGREGATE DENSE

STATION	LOCATION	305.0110 3/4-INCH TON	COMMENTS
CTH E 300+00 - 435+00	LT & RT	2500	SHOULDER/ENTRANCES
ITEM TOTAL		2500	

ASPHALT ITEMS

STATION	LOCATION	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.6244 HMA PAVEMENT 4 MT 58-34 S TON	465.0105 ASPHALTIC SURFACE TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	465.0315 ASPHALTIC FLUMES SY	COMMENTS
CTH E 300+00 - 435+00	LT & RT		75.0		150			REPAIR/LEVEL AREAS
300+00 - 435+00	LT & RT	1025	2500.0	4100			5	UPPER LAYER
300+00 - 435+00	LT & RT		125.0		175	35		INTERSECTIONS/ENTRANCES
ITEM TOTALS		1025	2700	4100	325	35	5	

MATERIAL TRANSFER VEHICLE (PROJECT)

STATION	LOCATION	460.9000.S 8726-00-70 EACH
CTH E 300+00 - 435+00	LT & RT	1
ITEM TOTAL		1

MOBILIZATION

STATION	LOCATION	619.1000 EACH
CTH E 300+00 - 435+00		1
ITEM TOTAL		1

WATER

STATION	LOCATION	624.0100 MGAL
CTH E 300+00 - 435+00		25
ITEM TOTAL		25

FIELD OFFICE TYPE B

STATION	LOCATION	642.5001 EACH
CTH E 300+00 - 435+00		1
ITEM TOTAL		1

TRAFFIC CONTROL ITEMS

STATION - STATION	DAYS	643.0300	643.0420	643.0705	643.0900	643.5000
		DRUMS DAY	TYPE III DAY	WARNING LIGHTS TYPE A DAY	SIGNS DAY	TRAFFIC CONTROL EACH
CTH E 300+00 - 435+00	20	200	200	200	300	1
ITEM TOTALS		200	200	200	300	1

MARKING ITEMS

STATION	LOCATION	643.3105	646.1020	646.4520	COMMENTS
		TEMPORARY MARKING LINE PAINT 4-INCH 4-INCH LF	MARKING LINE EPOXY 4-INCH (WHITE) LF	MARKING LINE SAME DAY EPOXY 4-INCH (YELLOW) LF	
CTH E 300+00 - 435+00	LT & RT		26850		WHITE, EDGELINE
300+00 - 309+25	CL	1870		1870	YELLOW, CL DOUBLE YELLOW
309+25 - 317+81	CL	907		1068	YELLOW, CL NO PASSING WESTBOUND
317+81 - 318+75	CL	6		25	YELLOW, CL PASSING ZONE
318+75 - 329+39	CL	1130		1339	YELLOW, CL NO PASSING EASTBOUND
329+39 - 358+21	CL	5764		5764	YELLOW, CL DOUBLE YELLOW
358+21 - 368+58	CL	1100		1300	YELLOW, CL NO PASSING WESTBOUND
368+58 - 427+93	CL	358		1489	YELLOW, CL PASSING ZONE
427+93 - 434+08	CL	655		765	YELLOW, CL NO PASSING EASTBOUND
432+95	RT	250		250	YELLOW, CL DOUBLE YELLOW PETRIN ROAD
ITEM TOTALS		12040	26850	13870	

LOCATING NO-PASSING ZONES

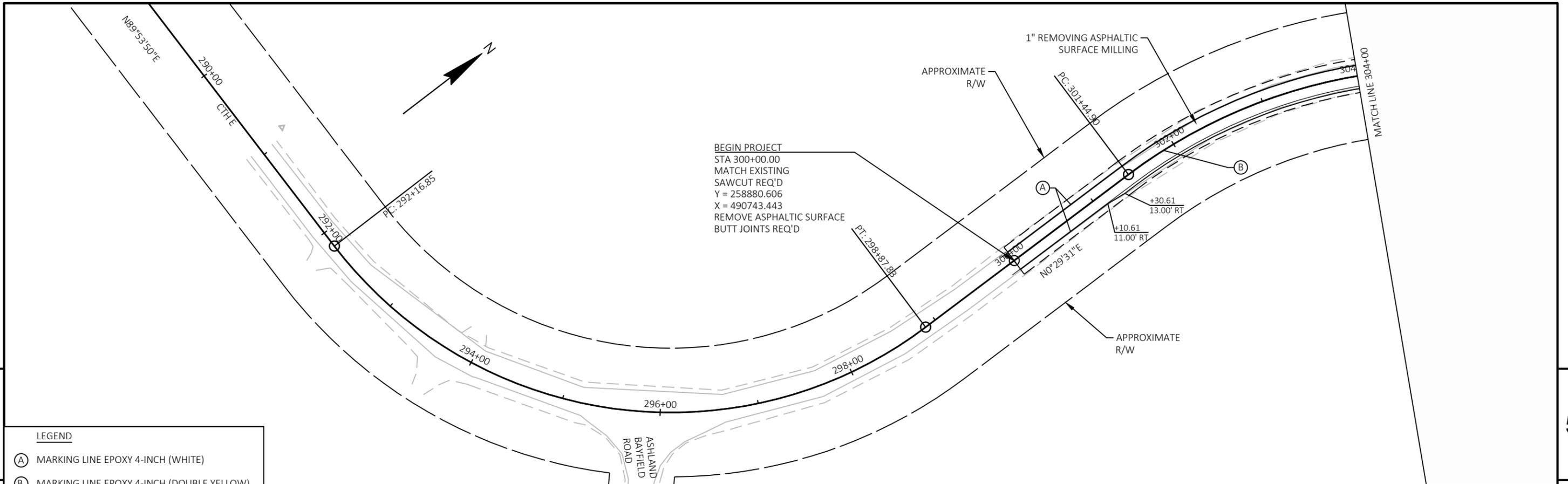
STATION	LOCATION	648.0100 MI
CTH E 300+00 - 435+00	LT & RT	2.56
ITEM TOTAL		2.56

CONSTRUCTION STAKING

STATION	LOCATION	650.8000 RESURFACING REFERENCE LF	650.9911 SUPPLEMENTAL CONTROL (PROJECT) EACH
CTH E 300+00 - 435+00	LT & RT	13500	1
ITEM TOTAL		13500	1

SAWING

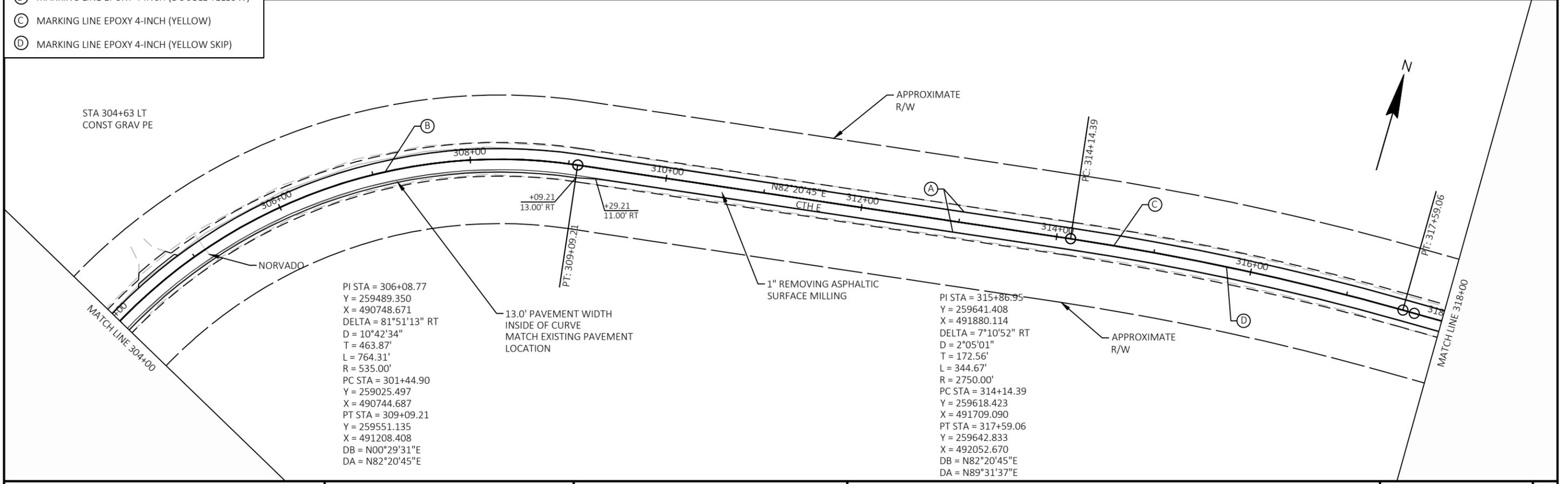
STATION	LOCATION	690.0150 ASPHALT LF
CTH E 300+00 - 435+00	LT & RT	100
ITEM TOTAL		100



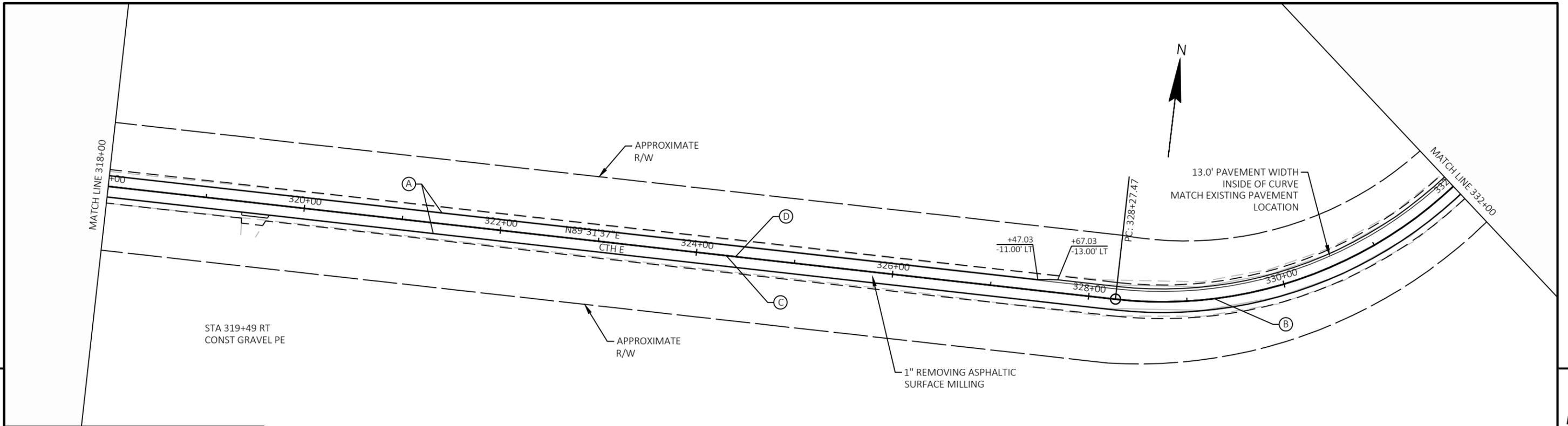
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5

- LEGEND**
- (A) MARKING LINE EPOXY 4-INCH (WHITE)
 - (B) MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
 - (C) MARKING LINE EPOXY 4-INCH (YELLOW)
 - (D) MARKING LINE EPOXY 4-INCH (YELLOW SKIP)



PROJECT NO: 8726-00-70	HWY: CTH E	COUNTY: ASHLAND	PLAN: CTH E	SHEET	E
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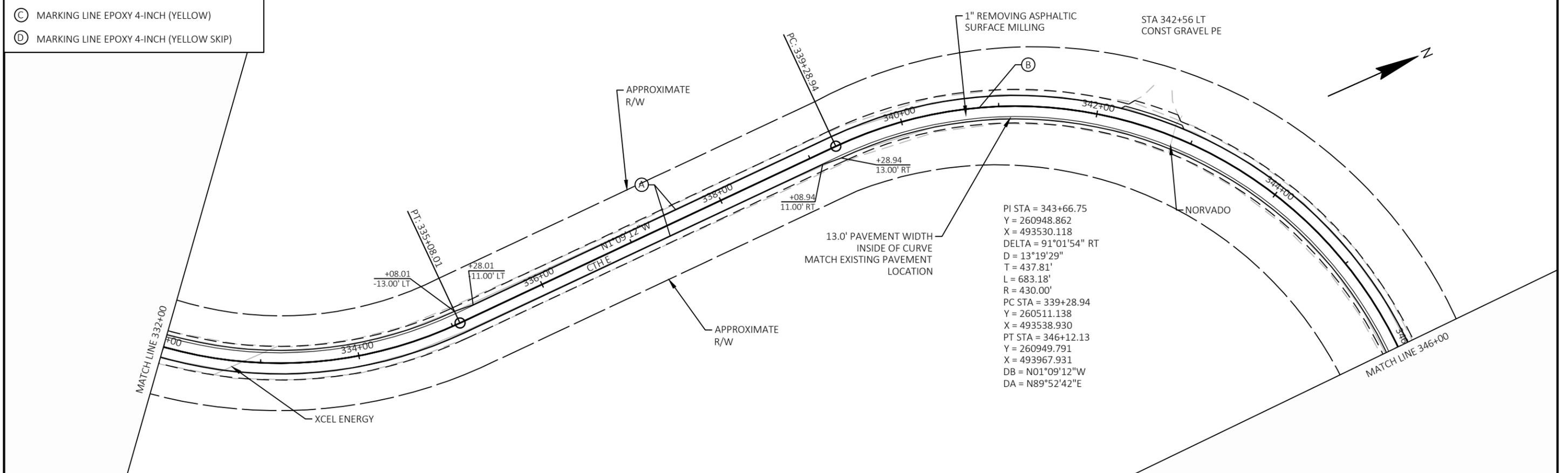


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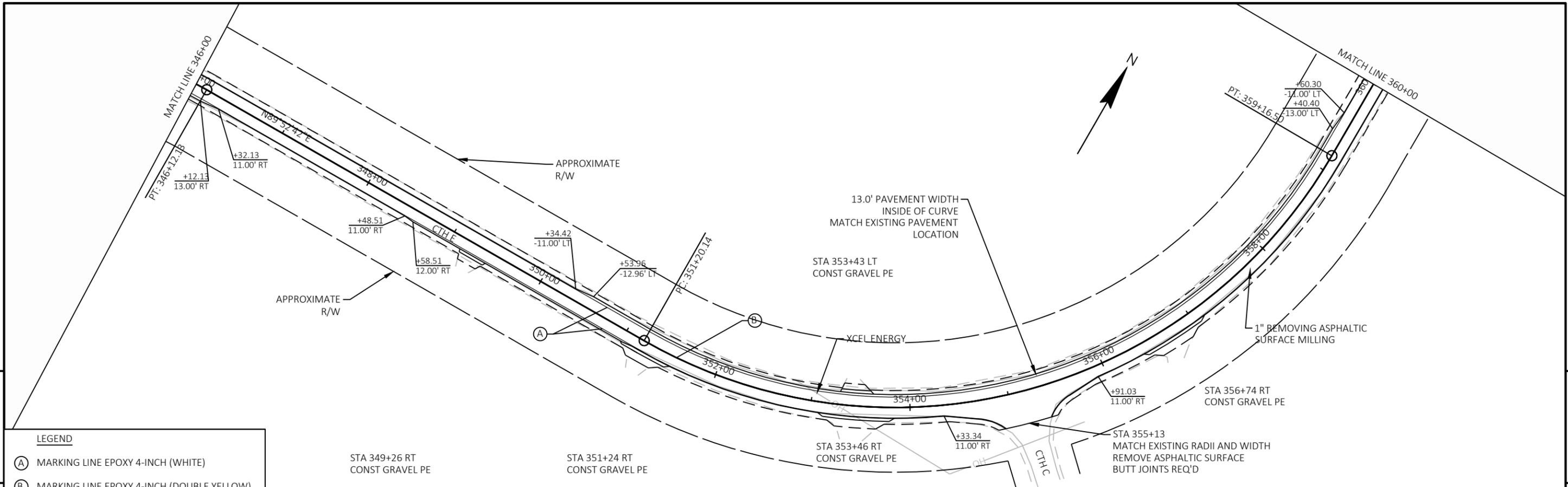
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LEGEND

- (A) MARKING LINE EPOXY 4-INCH (WHITE)
- (B) MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
- (C) MARKING LINE EPOXY 4-INCH (YELLOW)
- (D) MARKING LINE EPOXY 4-INCH (YELLOW SKIP)



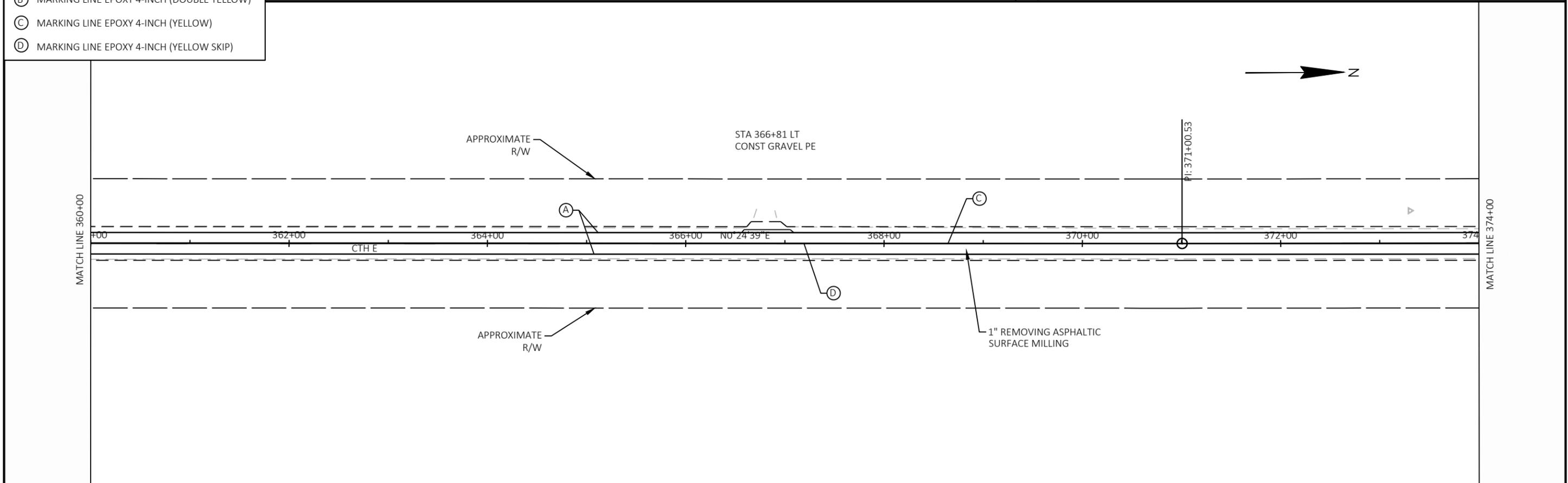
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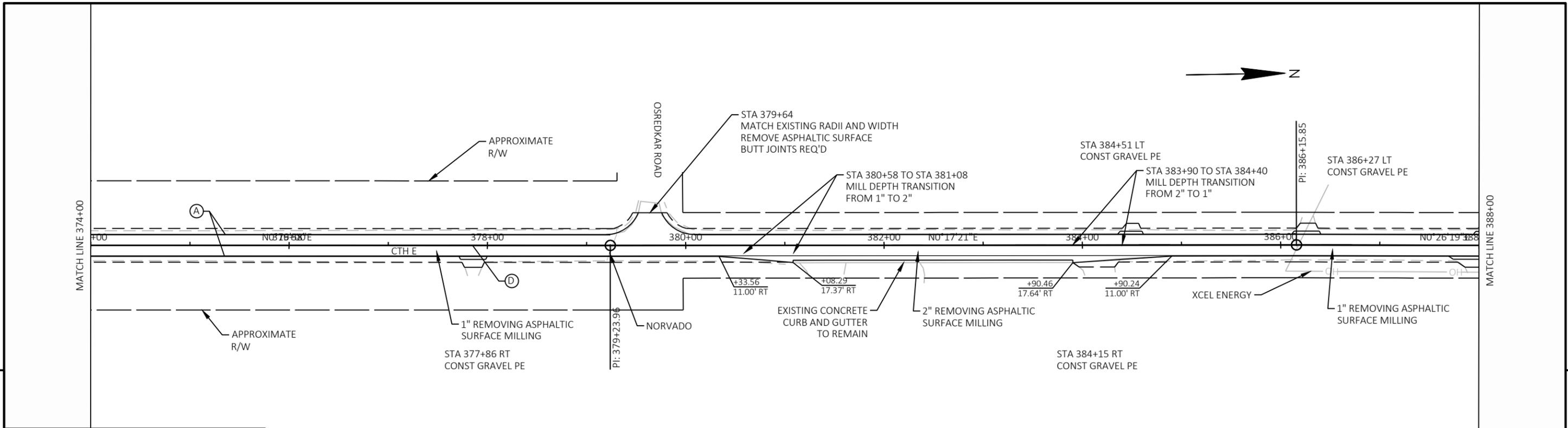
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- LEGEND**
- (A) MARKING LINE EPOXY 4-INCH (WHITE)
 - (B) MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
 - (C) MARKING LINE EPOXY 4-INCH (YELLOW)
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PROJECT NO: 8726-00-70	HWY: CTH E	COUNTY: ASHLAND	PLAN: CTH E	SHEET	E
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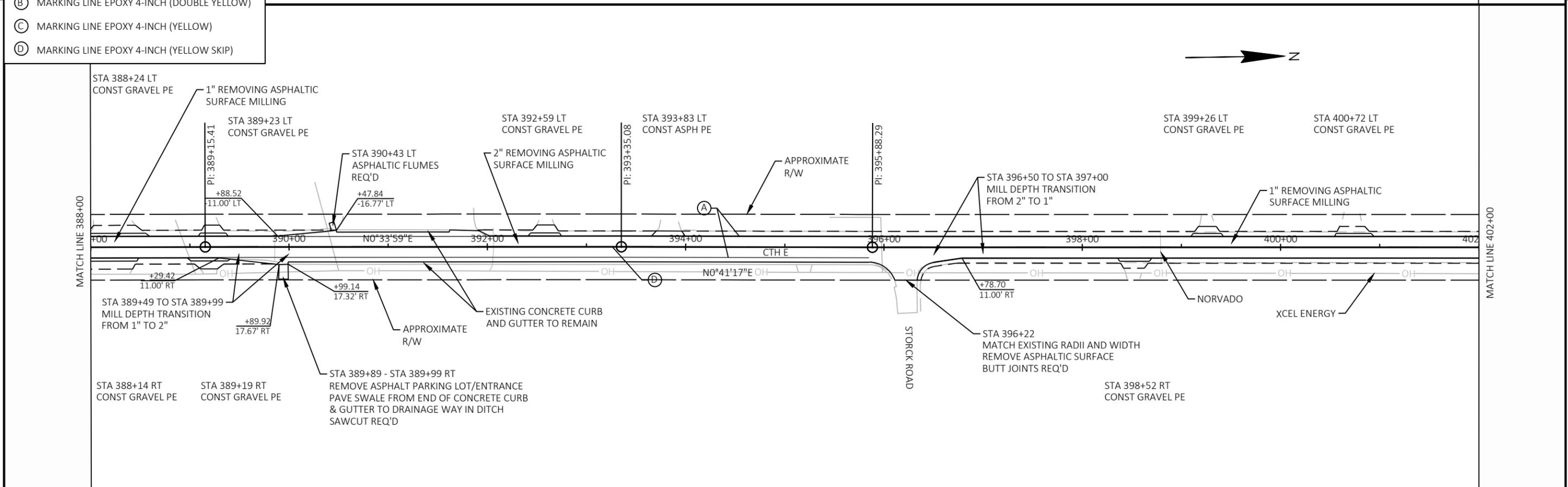


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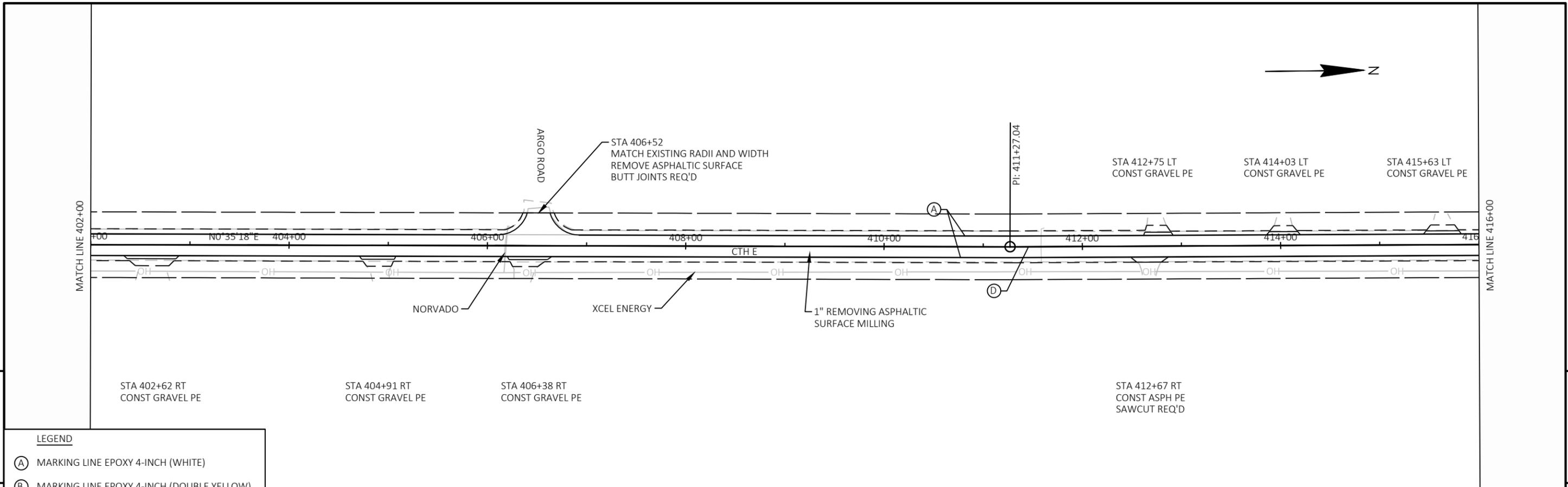
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LEGEND

- (A) MARKING LINE EPOXY 4-INCH (WHITE)
- (B) MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
- (C) MARKING LINE EPOXY 4-INCH (YELLOW)
- (D) MARKING LINE EPOXY 4-INCH (YELLOW SKIP)



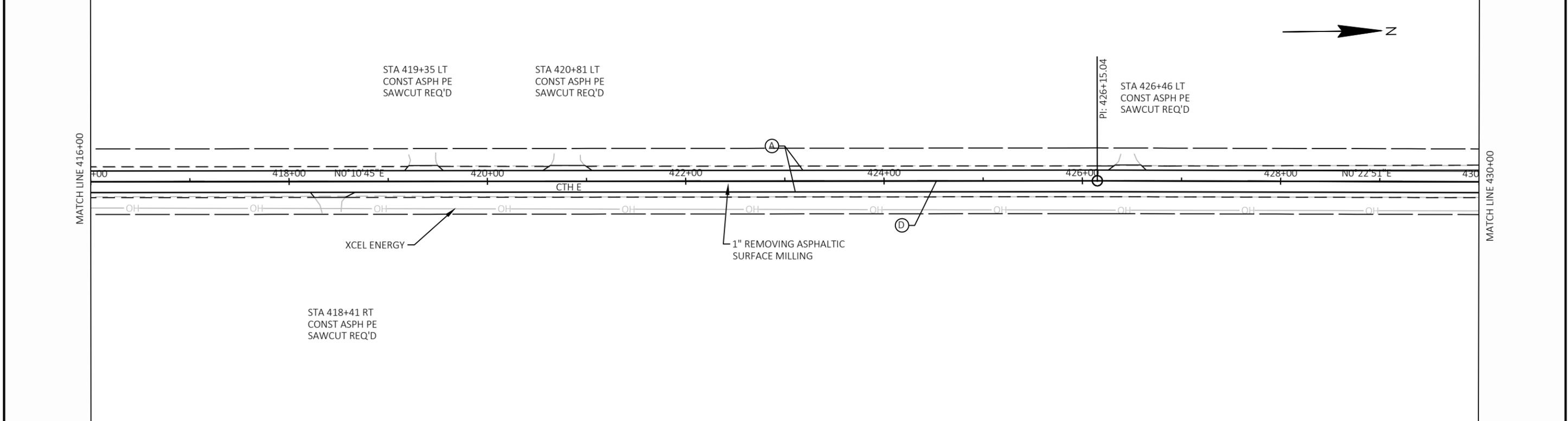
PROJECT NO: 8726-00-70	HWY: CTH E	COUNTY: ASHLAND	PLAN: CTH E
SHEET			E



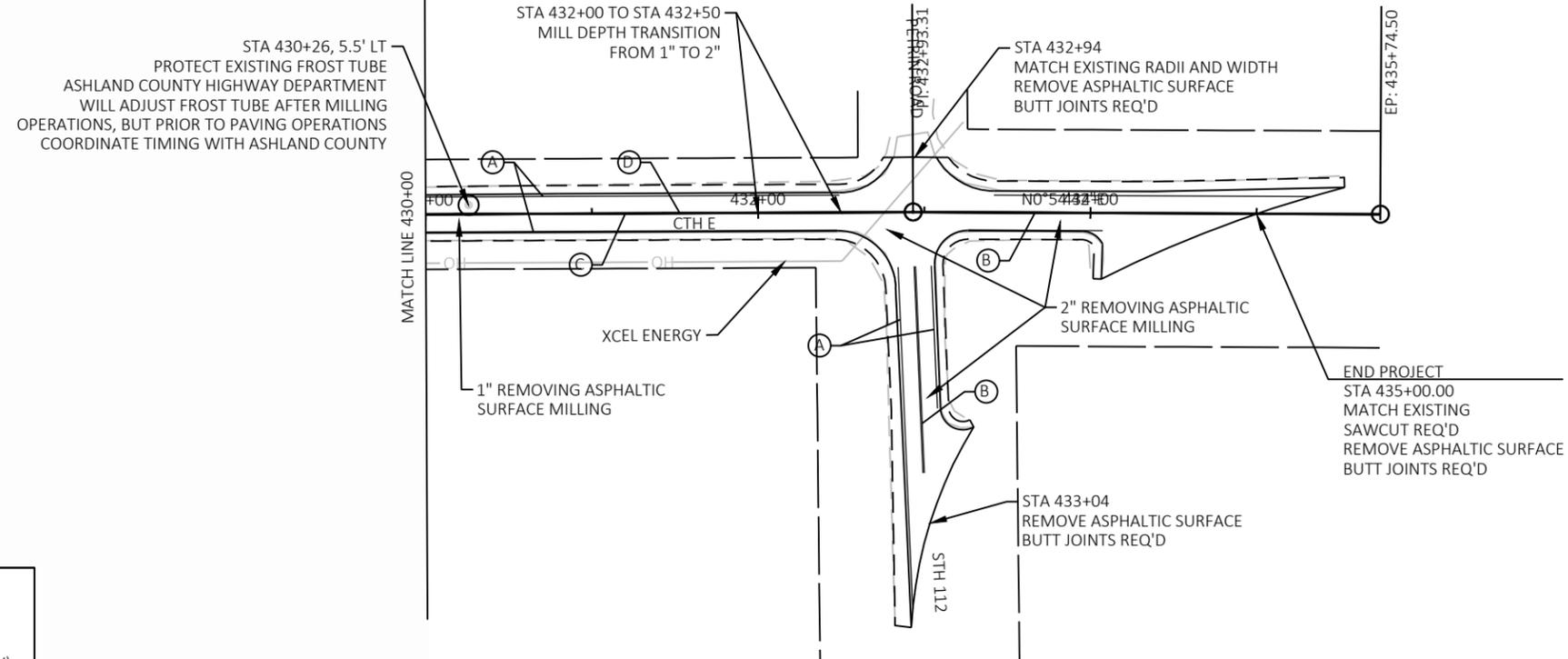
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5

- LEGEND**
- (A) MARKING LINE EPOXY 4-INCH (WHITE)
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 - (C) MARKING LINE EPOXY 4-INCH (YELLOW)
 - (D) MARKING LINE EPOXY 4-INCH (YELLOW SKIP)



PROJECT NO: 8726-00-70	HWY: CTH E	COUNTY: ASHLAND	PLAN: CTH E	SHEET	E
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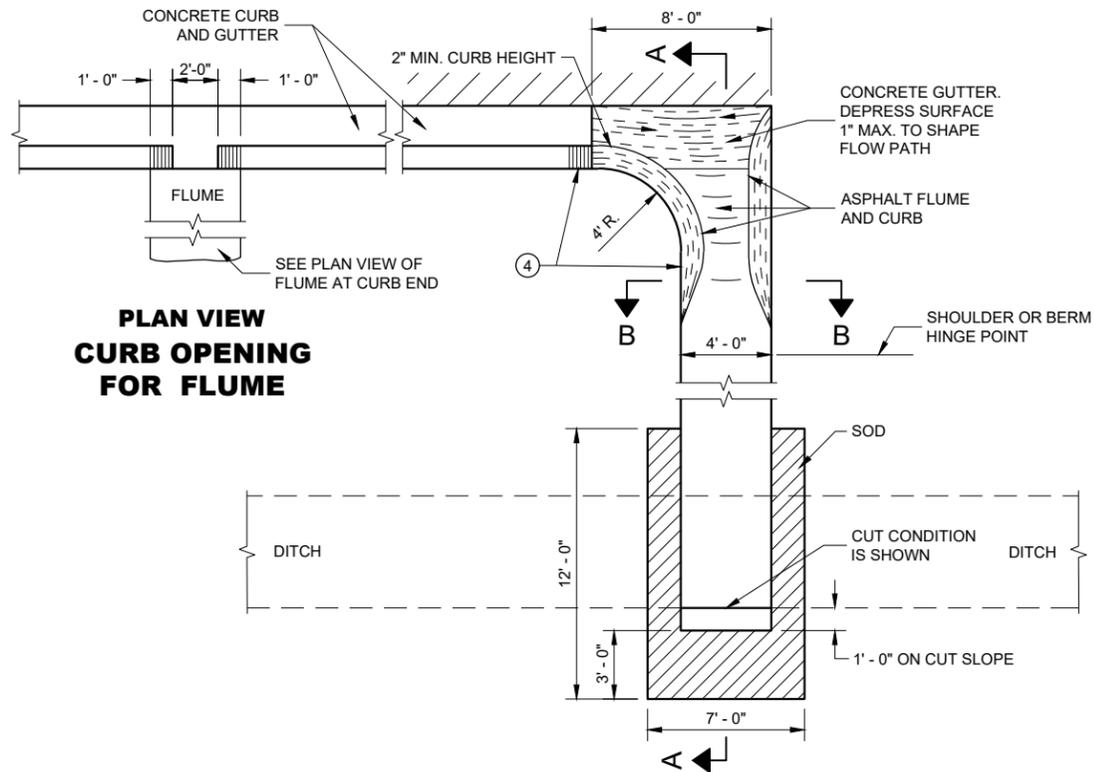
- LEGEND**
- (A) MARKING LINE EPOXY 4-INCH (WHITE)
 - (B) MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
 - (C) MARKING LINE EPOXY 4-INCH (YELLOW)
 - (D) MARKING LINE EPOXY 4-INCH (YELLOW SKIP)

Standard Detail Drawing List

08D04-06	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-13B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
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
15C08-21A	LONGITUDINAL MARKING (MAINLINE)
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-07A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-05A	PAVEMENT MARKING (INTERSECTIONS)
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

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

ASPHALTIC FLUME



**PLAN VIEW
CURB OPENING
FOR FLUME**

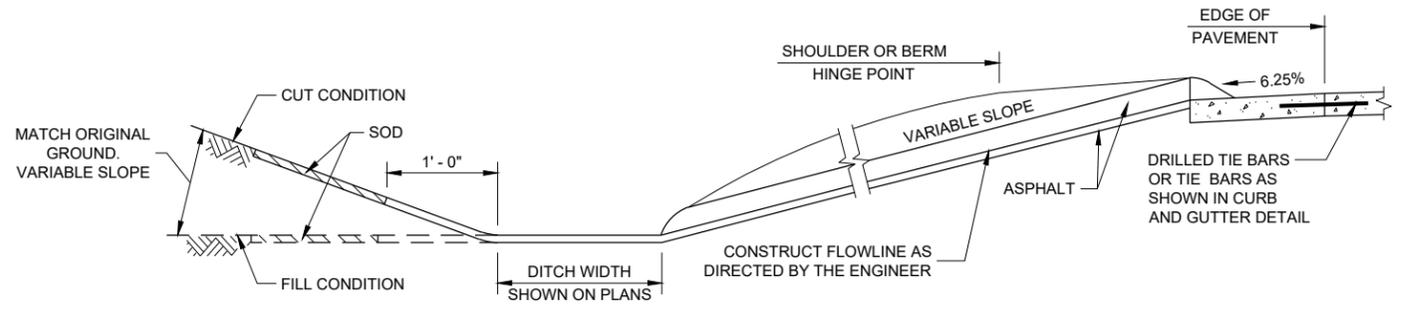
**PLAN VIEW
FLUME AT CURB END**

GENERAL NOTES

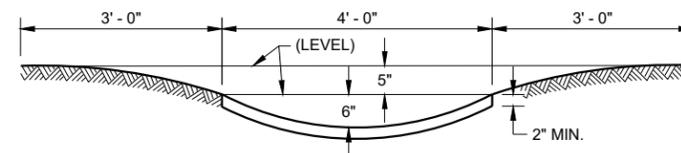
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

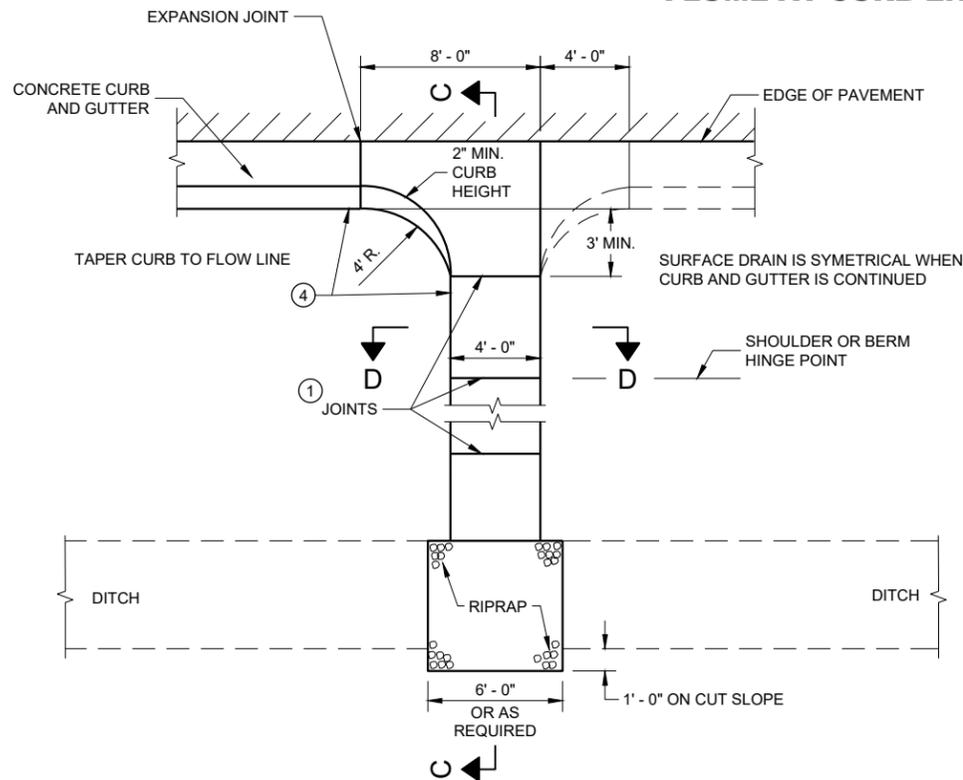
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- 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.



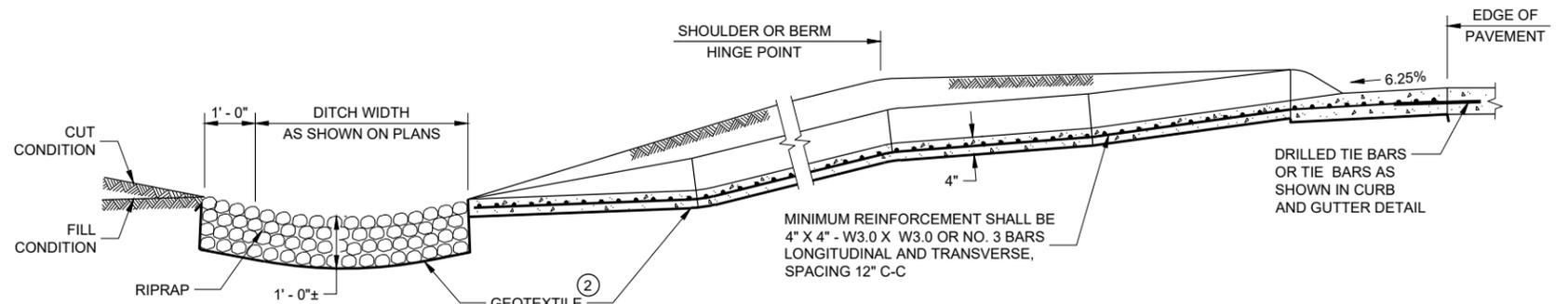
SECTION A - A



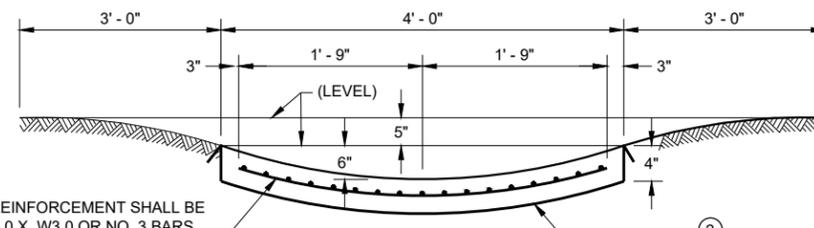
SECTION B - B



**PLAN VIEW
CONCRETE SURFACE DRAIN**



SECTION C - C



SECTION D - D

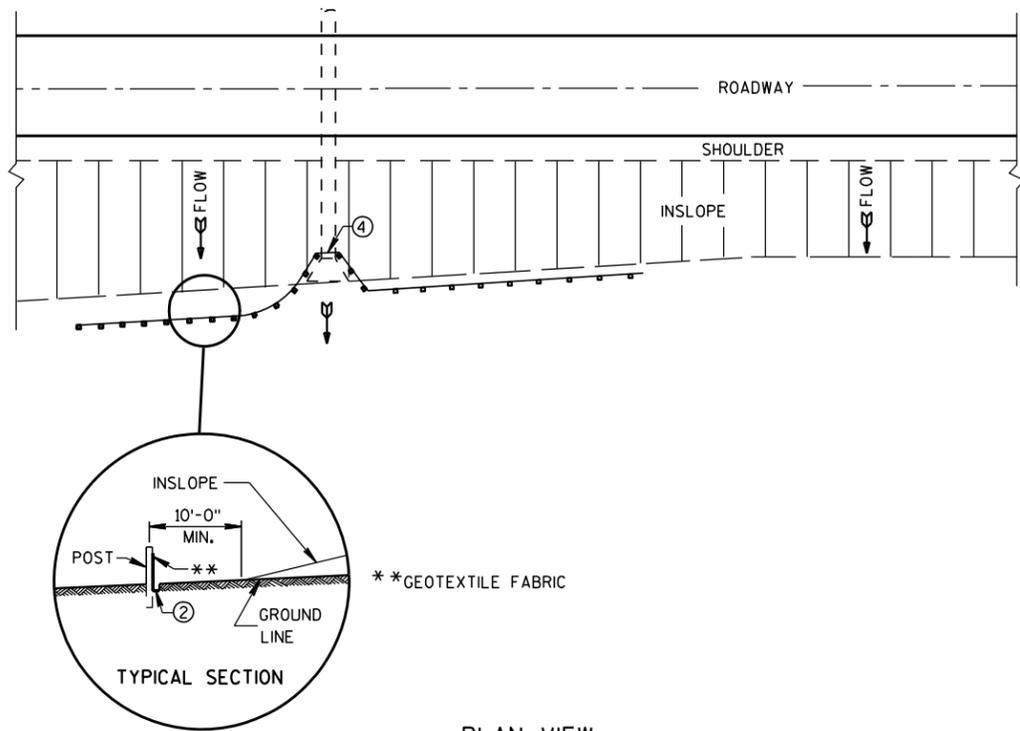
MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE, SPACING 12" C-C

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

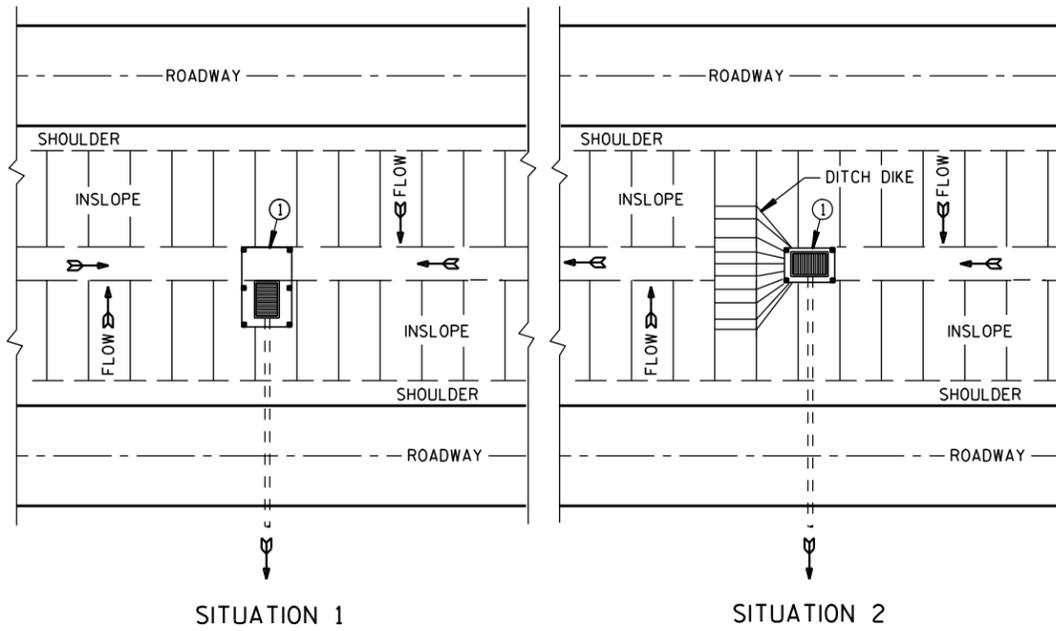
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

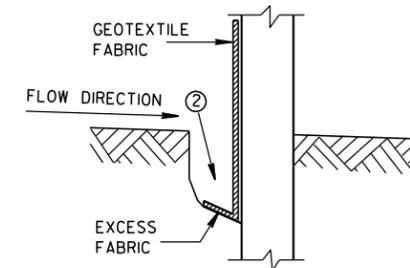


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

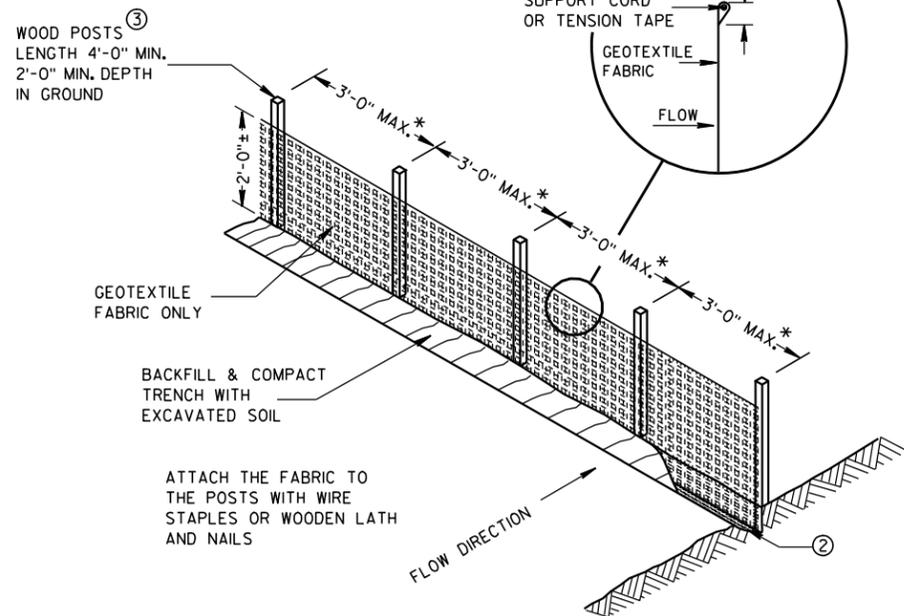
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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.



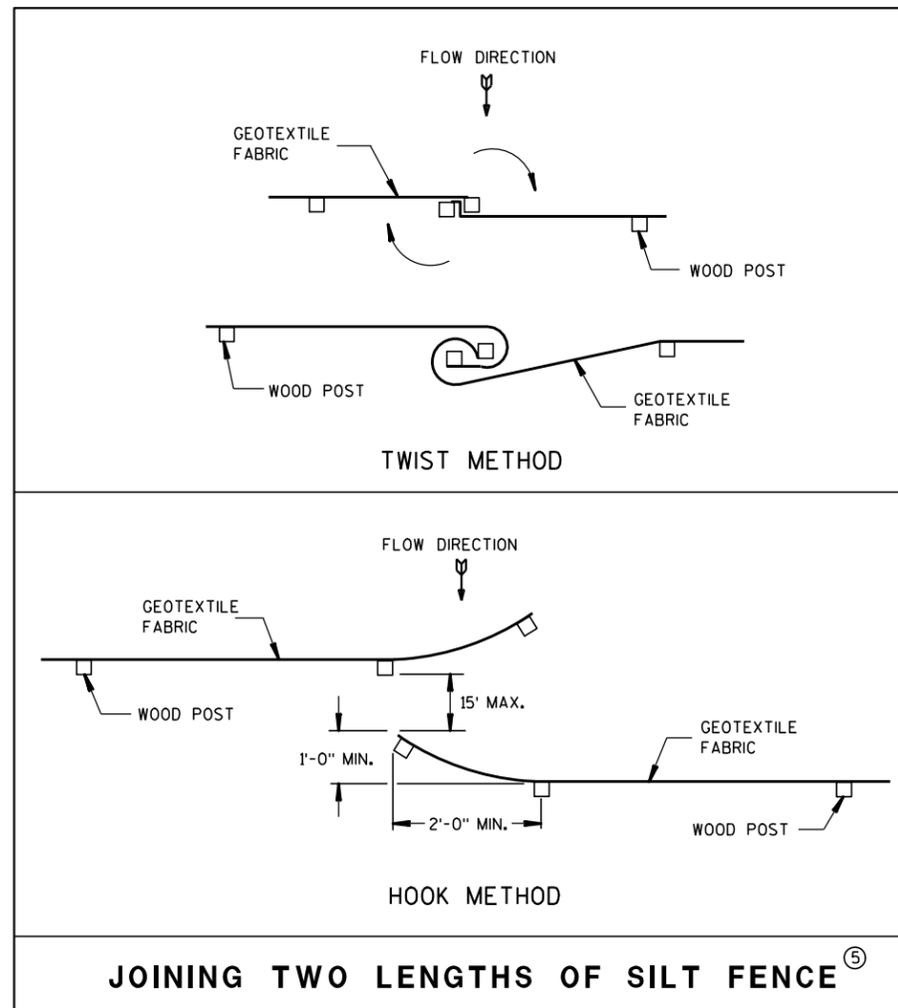
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

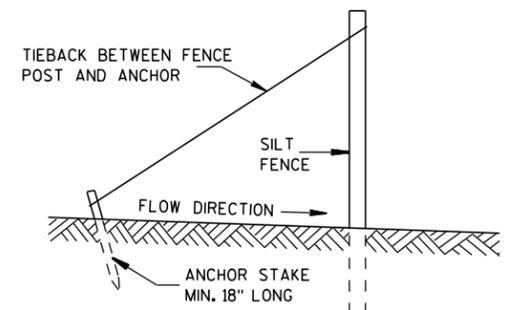


SILT FENCE

* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤

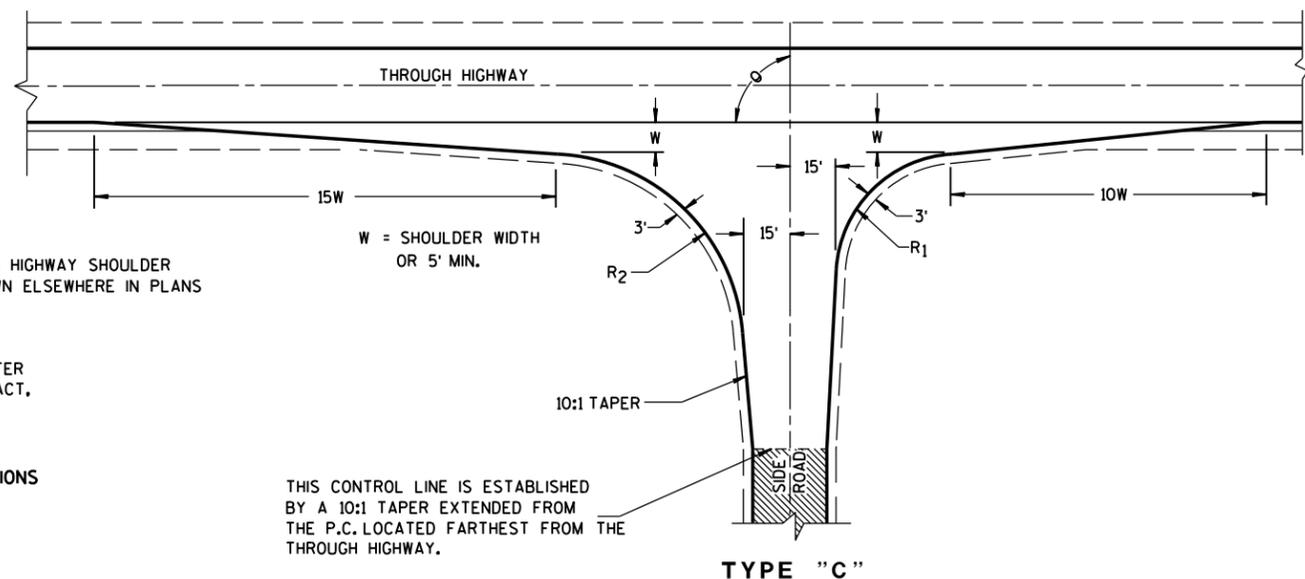
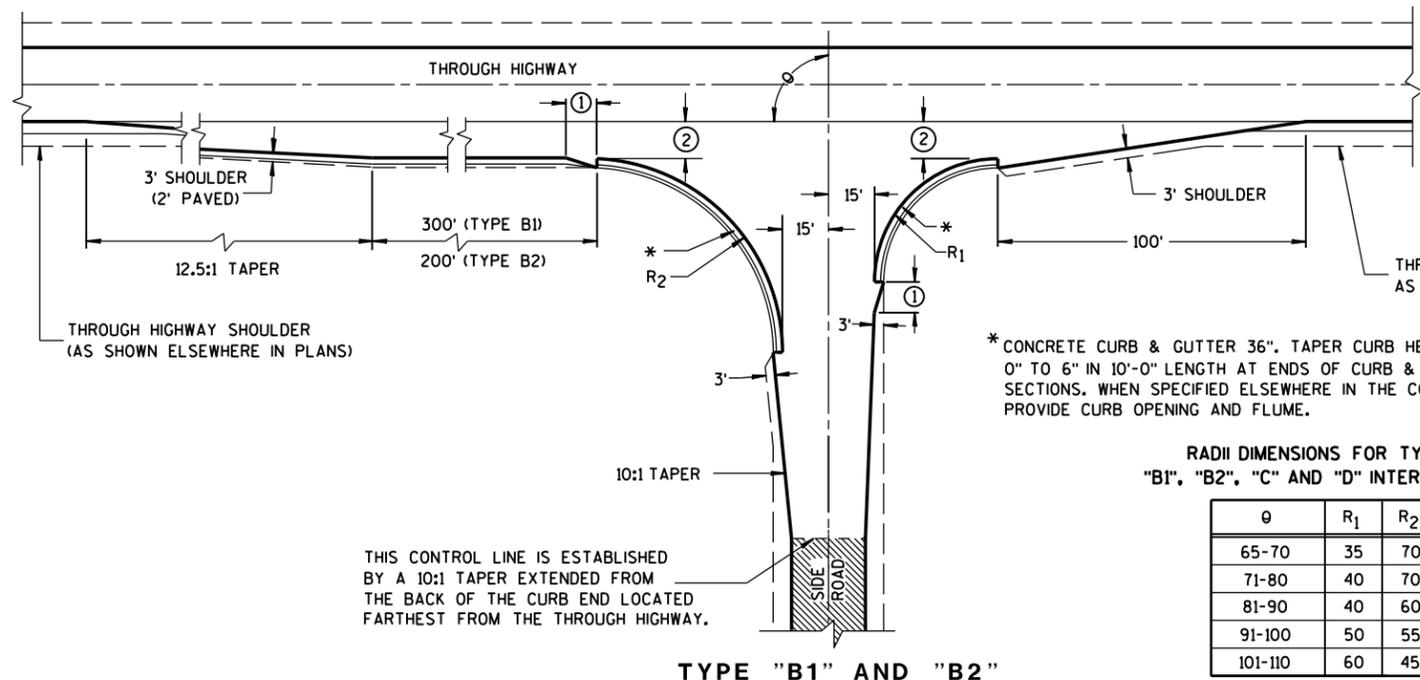


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Canestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



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

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

GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

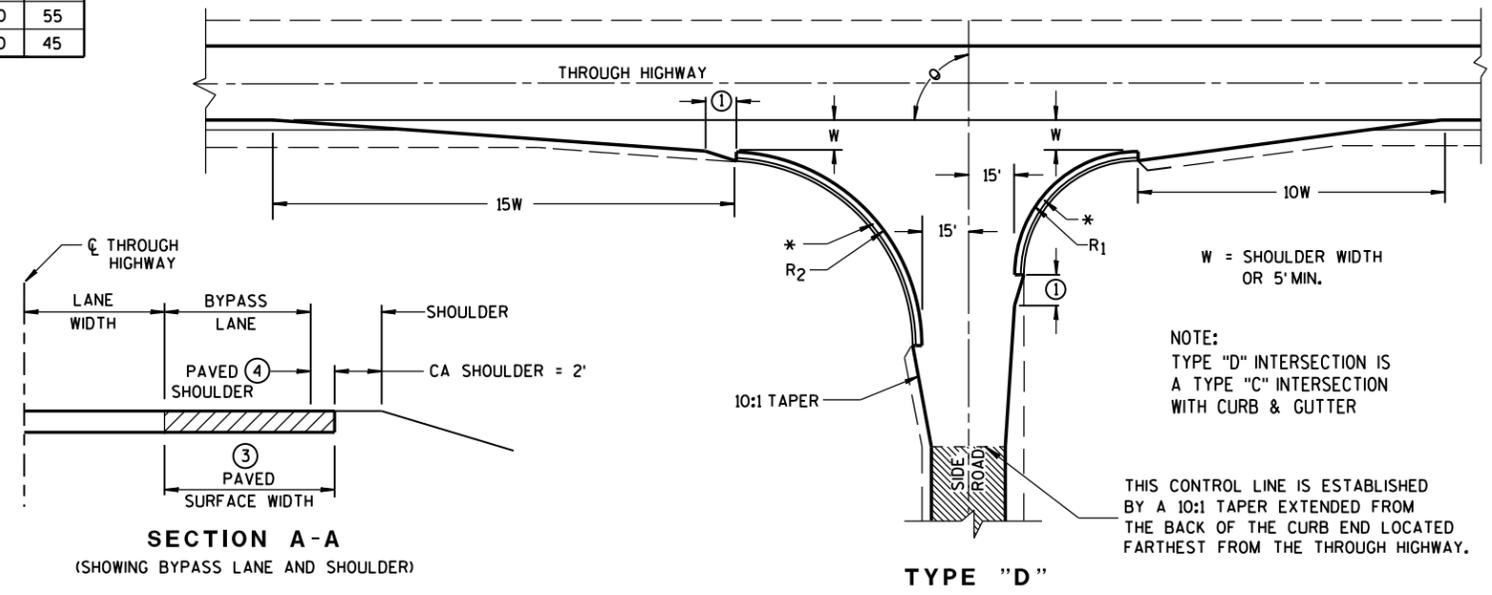
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

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

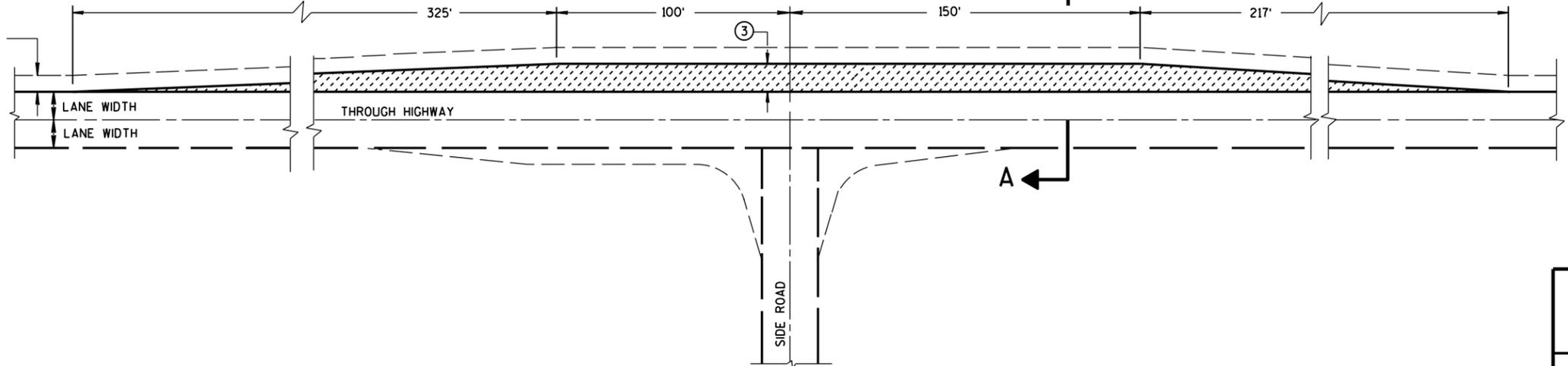
EXISTING PAVED SURFACE

BYPASS LANE

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

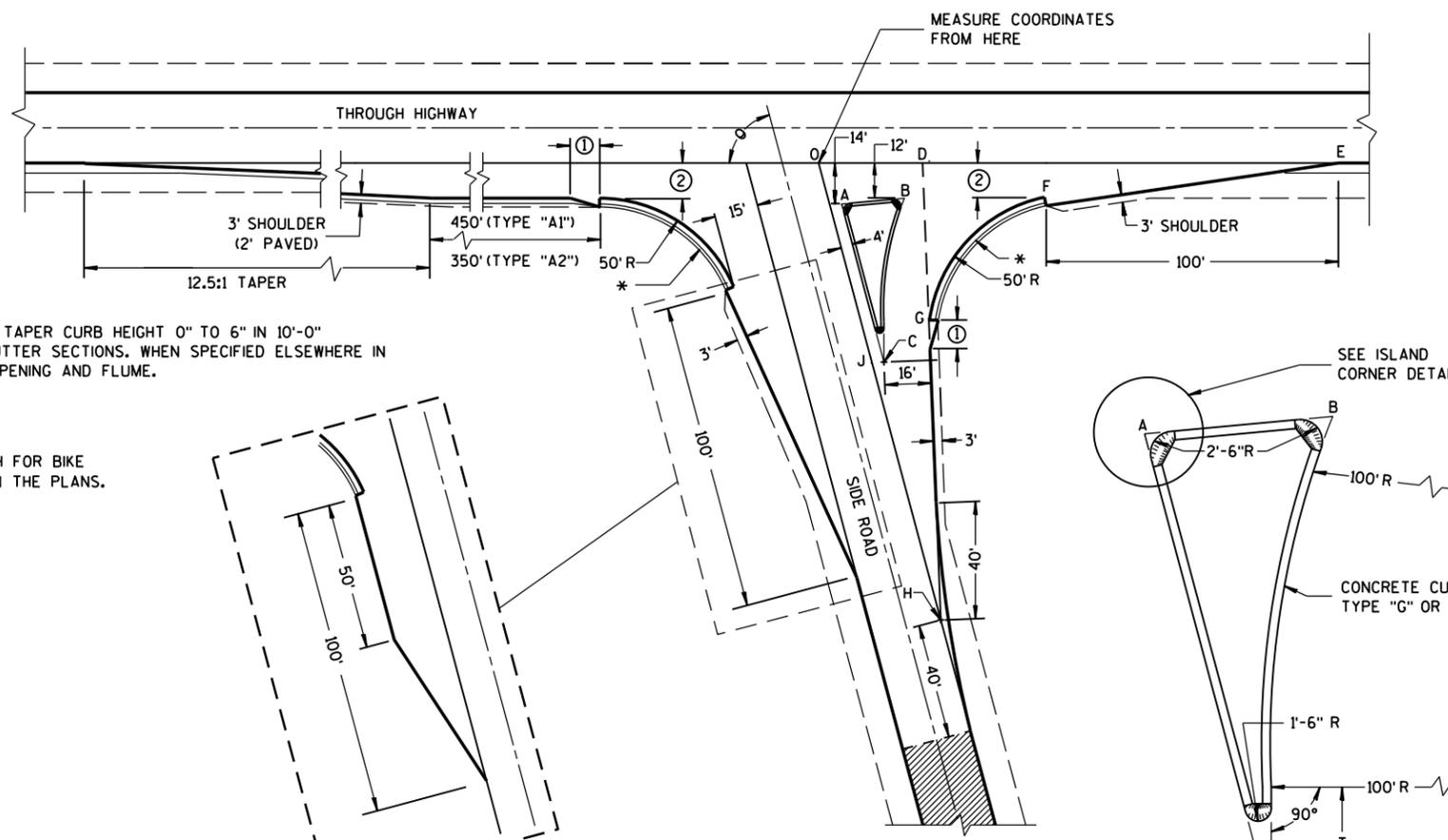
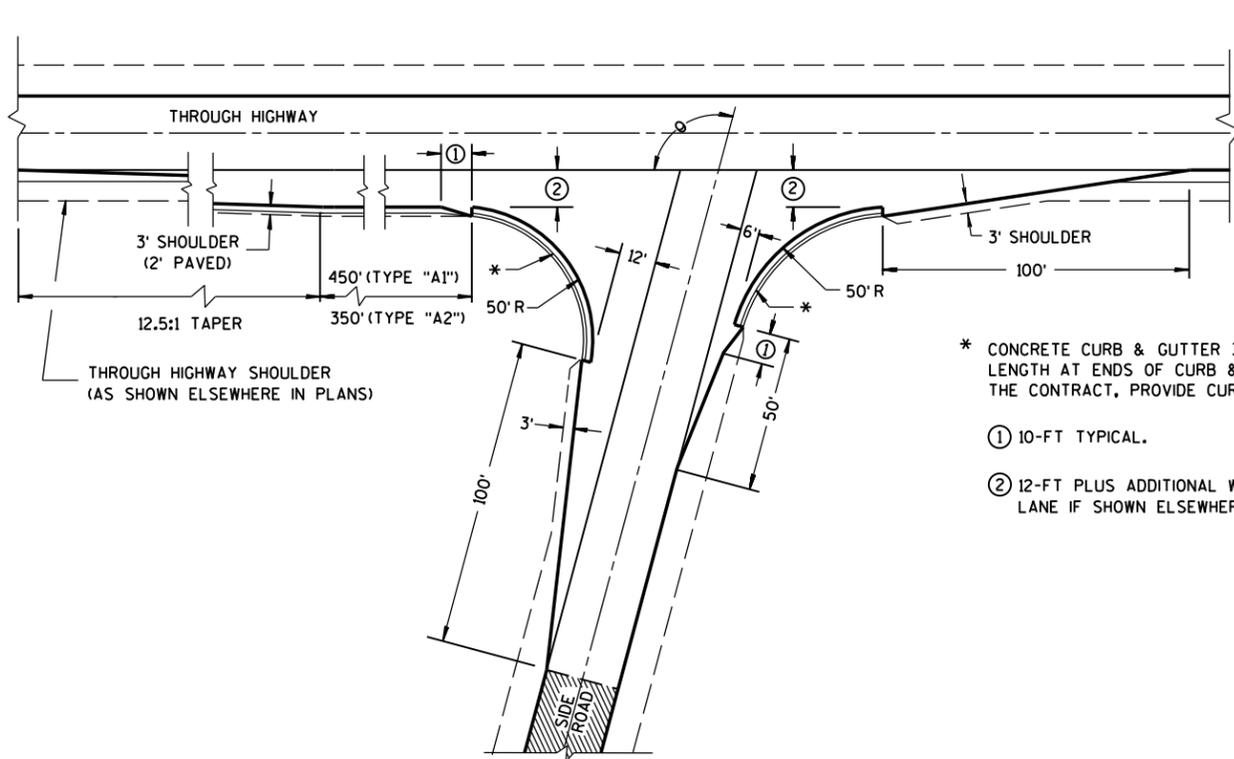


SECTION A-A (SHOWING BYPASS LANE AND SHOULDER)

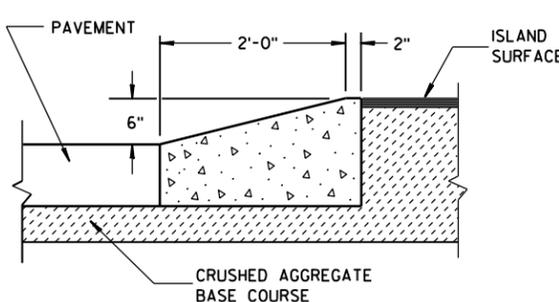
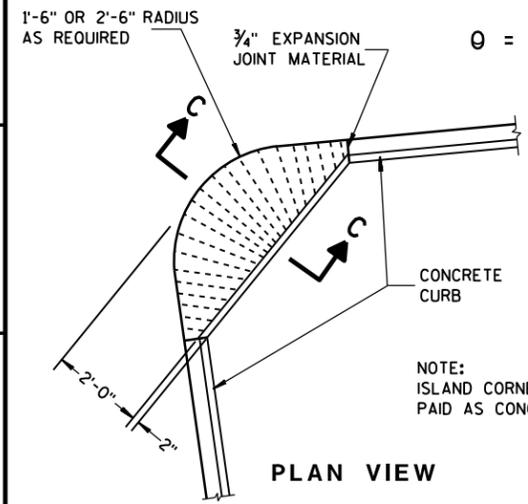


TEE INTERSECTION BYPASS LANE DETAIL

AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



- * CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.
- ① 10-FT TYPICAL.
- ② 12-FT PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLANS.



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

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

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

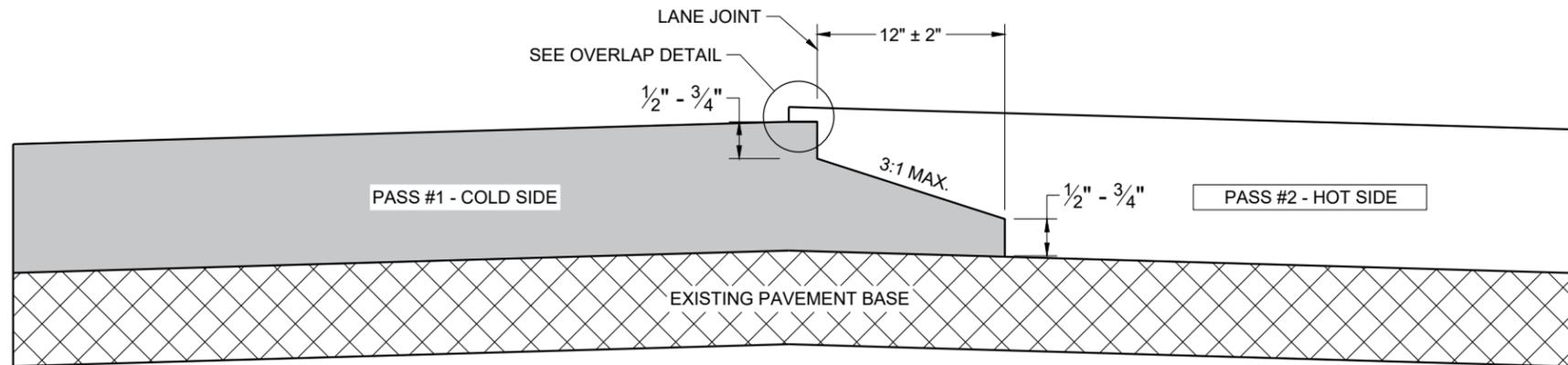
TYPE "A1" & "A2" SIDE ROAD INTERSECTION DETAILS

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

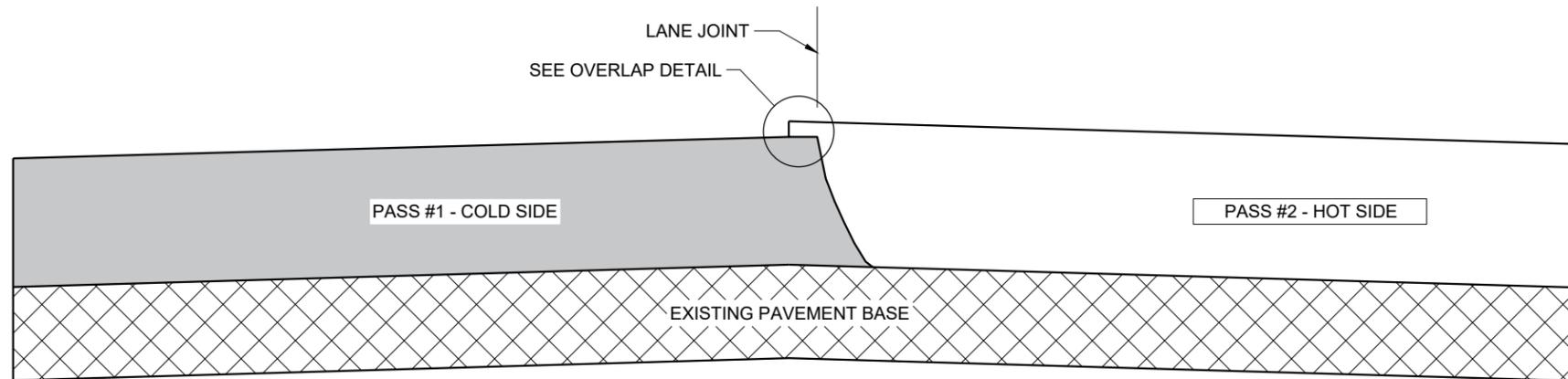
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

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

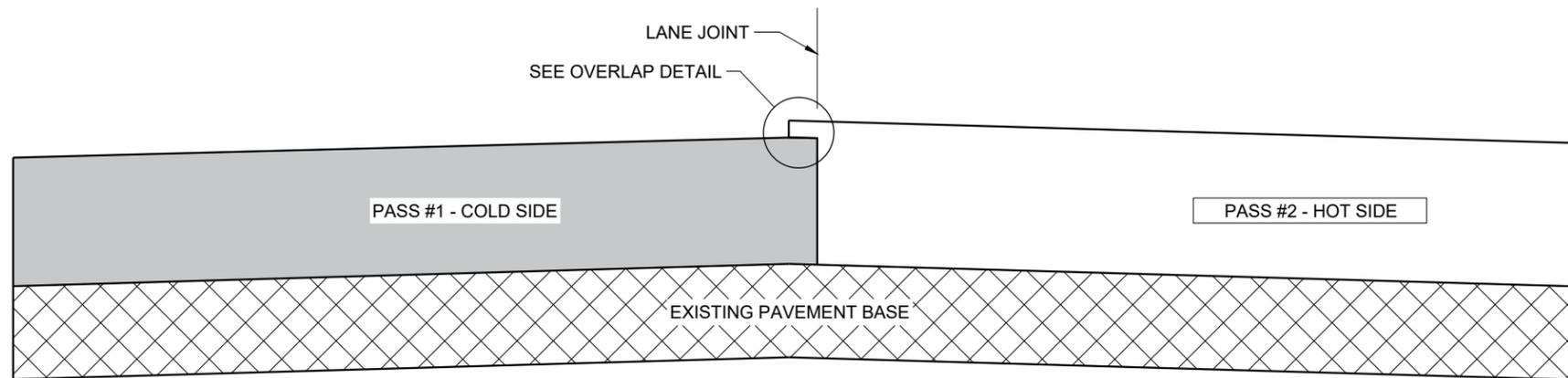
ISLAND CORNER DETAIL
 (TO BE CONSTRUCTED AT ALL ISLAND CORNERS)



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

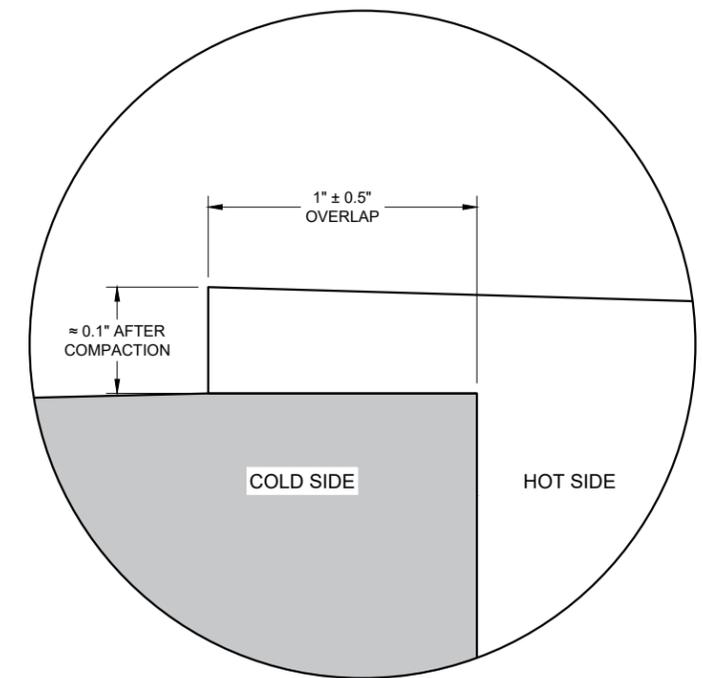
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

6

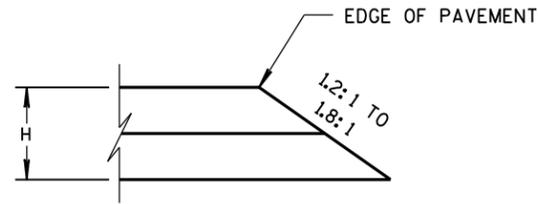
SDD 13C19 - 03

SDD 13C19 - 03

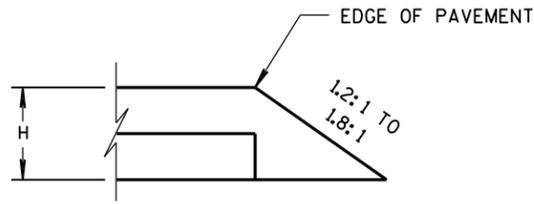
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

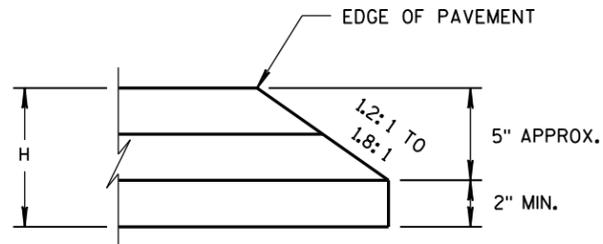
APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGINEER
FHWA



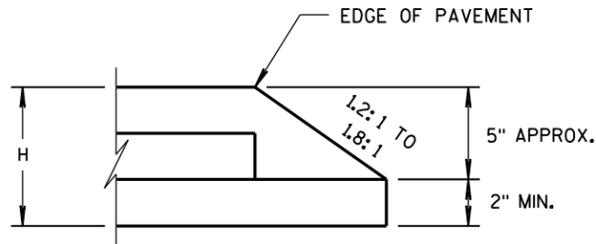
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

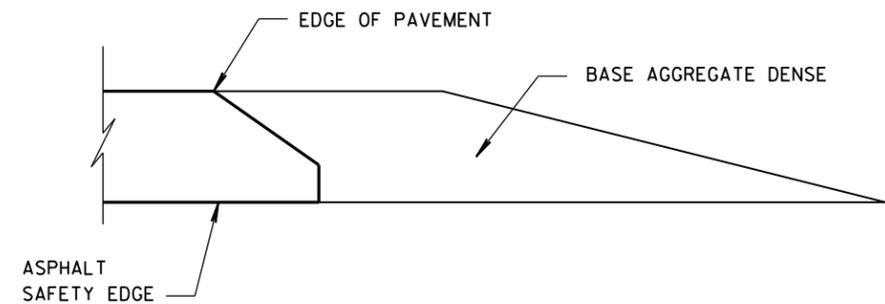


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE _{SM}	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/s/ Jerry H. Zogg 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.

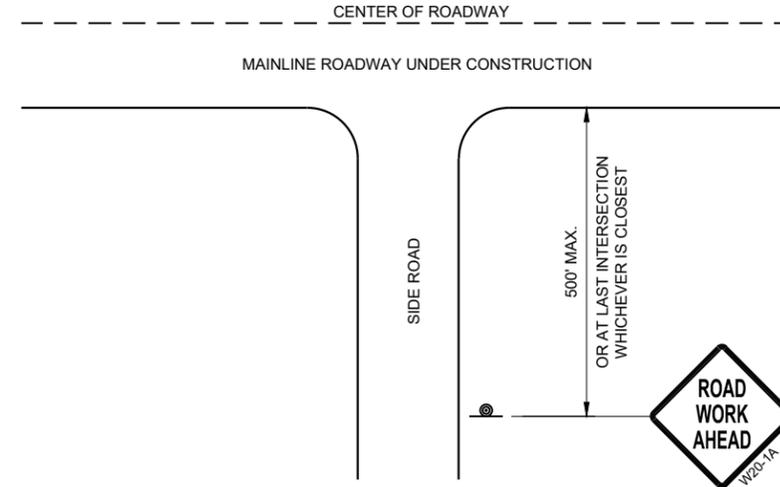
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

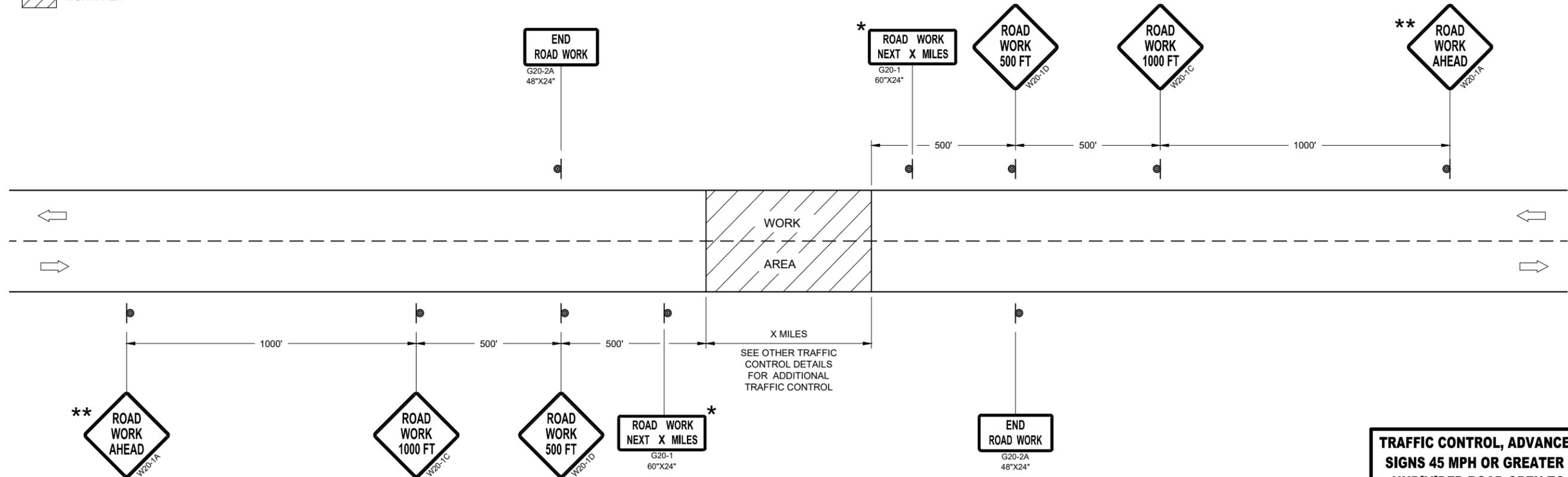
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

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

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.

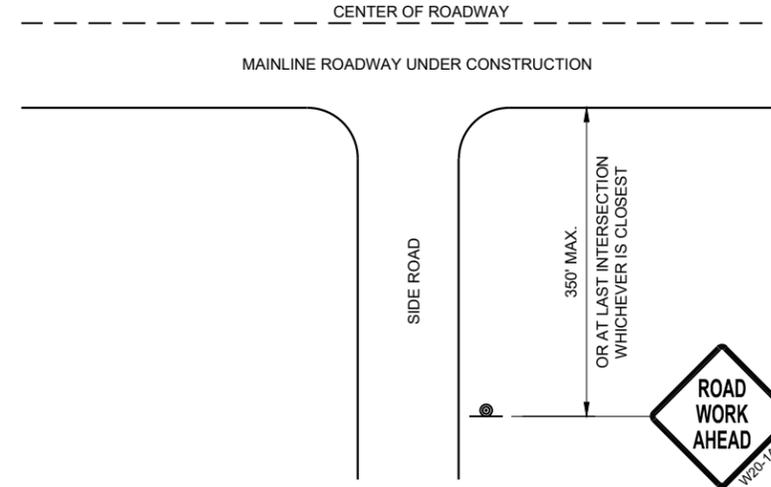
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

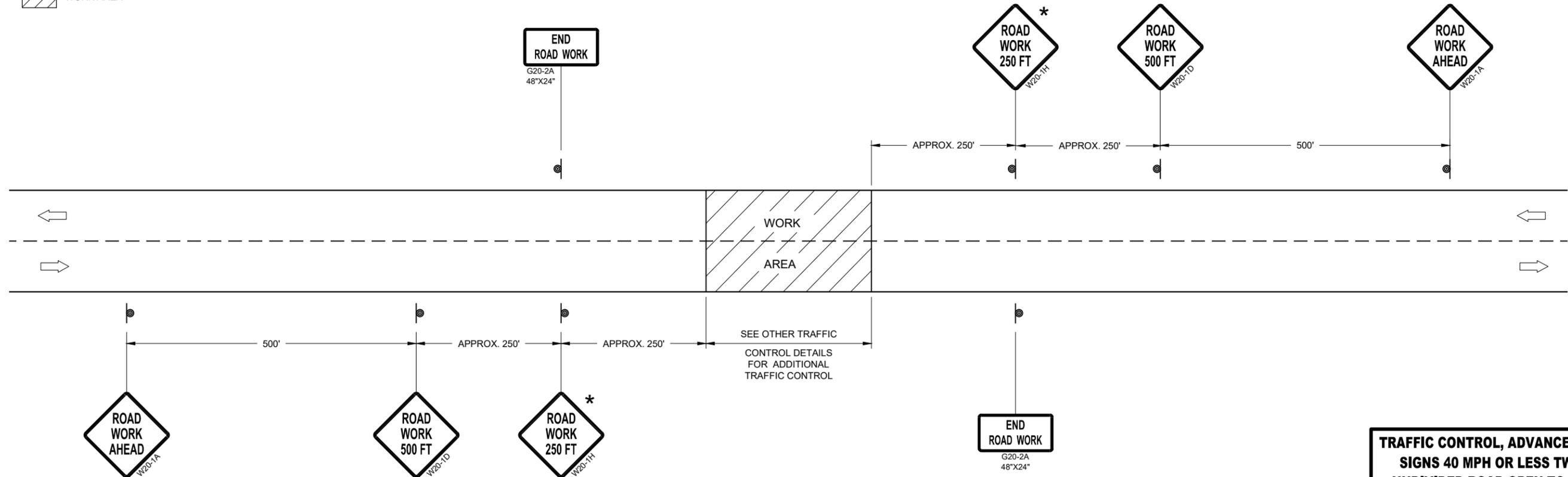
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

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

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

FHWA

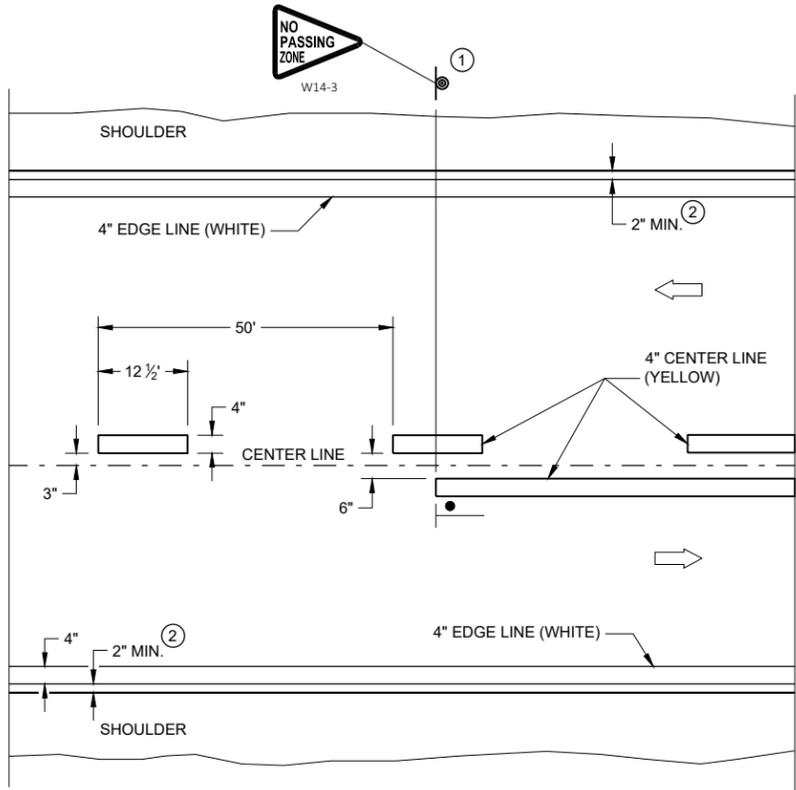
GENERAL NOTES

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

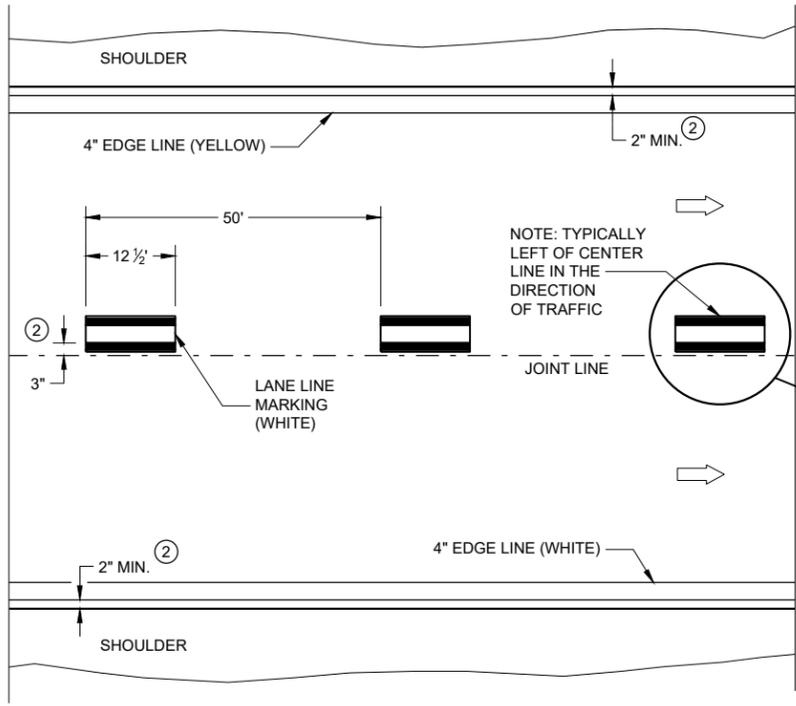
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

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

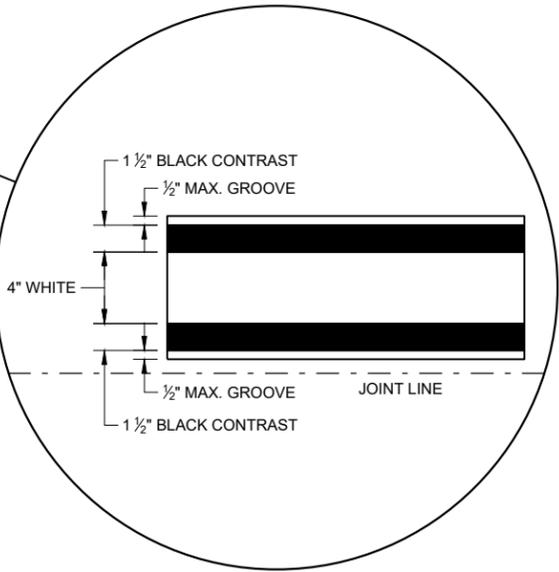


TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2022 /S/ Jeannie Silver
STATEWIDE SIGNING AND MARKING ENGINEER

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.

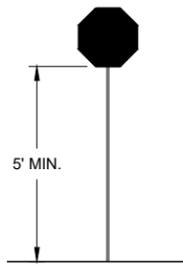
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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.



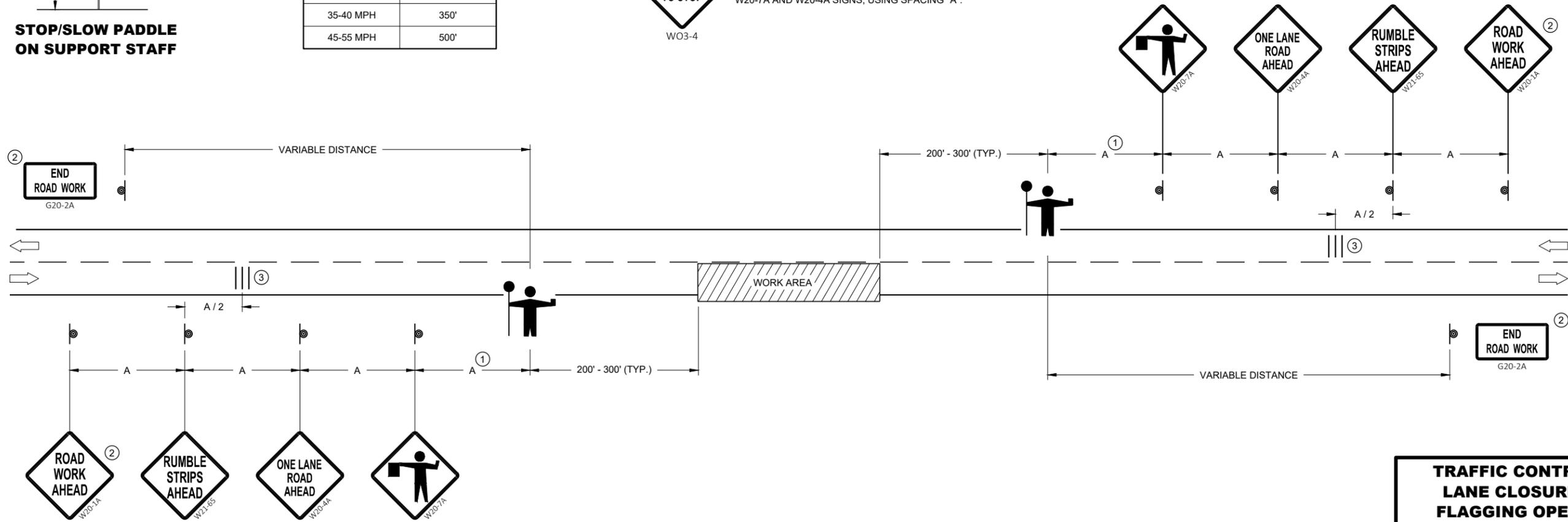
STOP/SLOW PADDLE ON SUPPORT STAFF

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2022 /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.

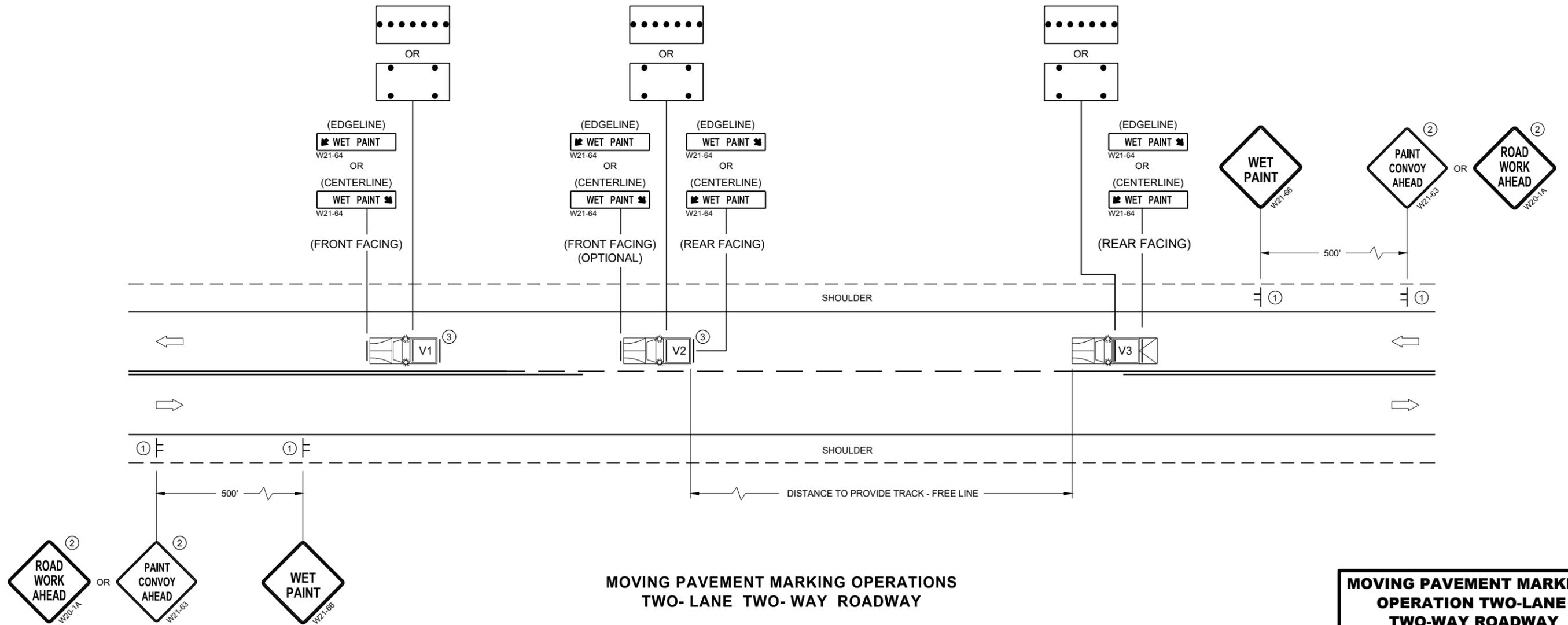
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" 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.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.

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

SDD 15C19 - 07a

SDD 15C19 - 07a

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

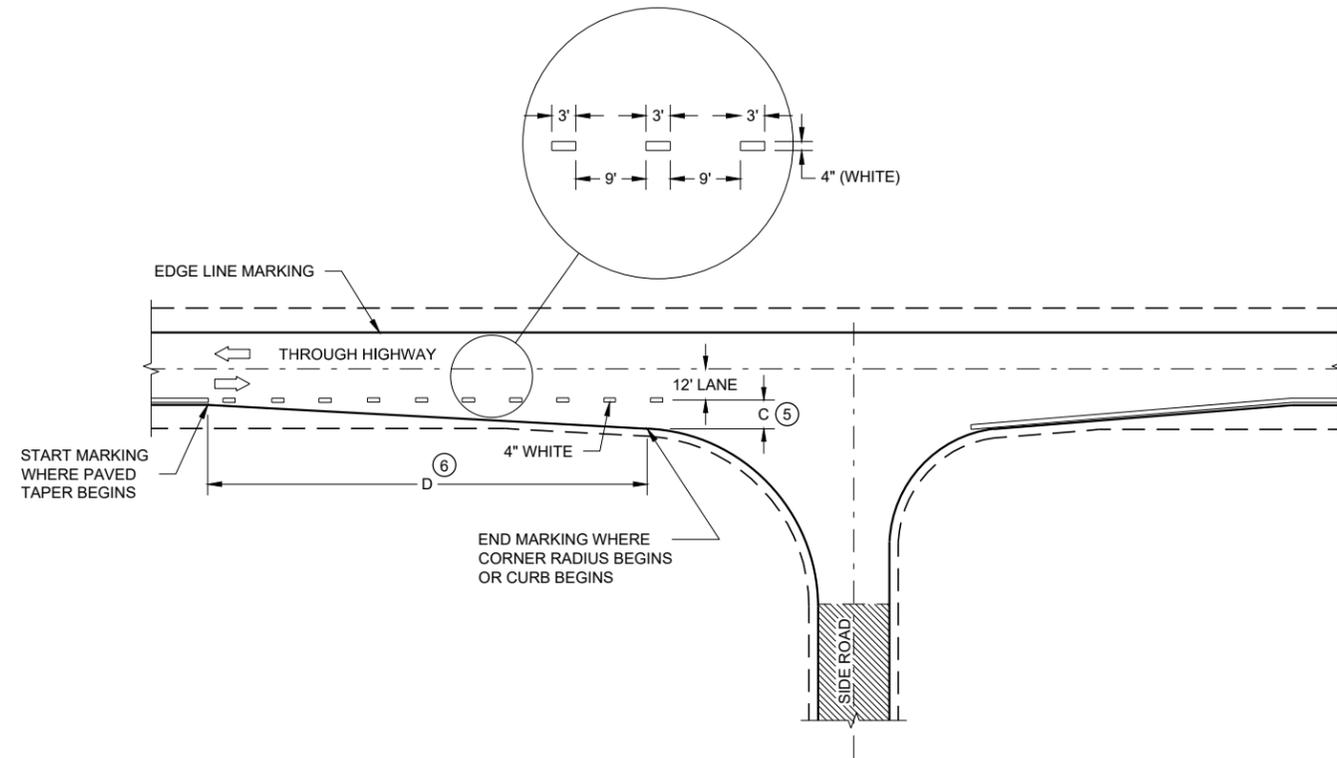
GENERAL NOTES

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

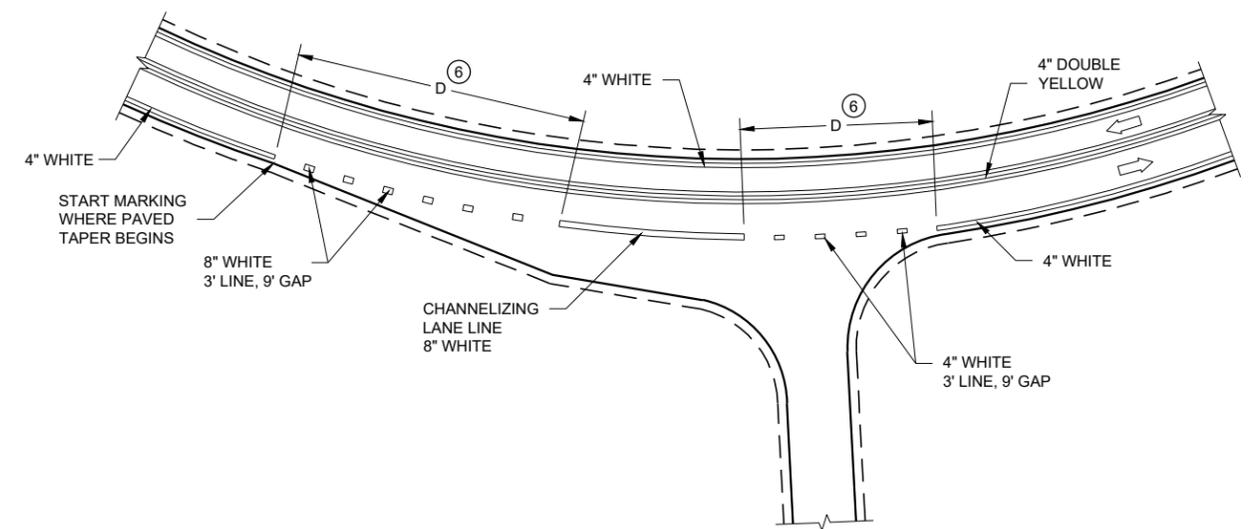
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4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

LEGEND

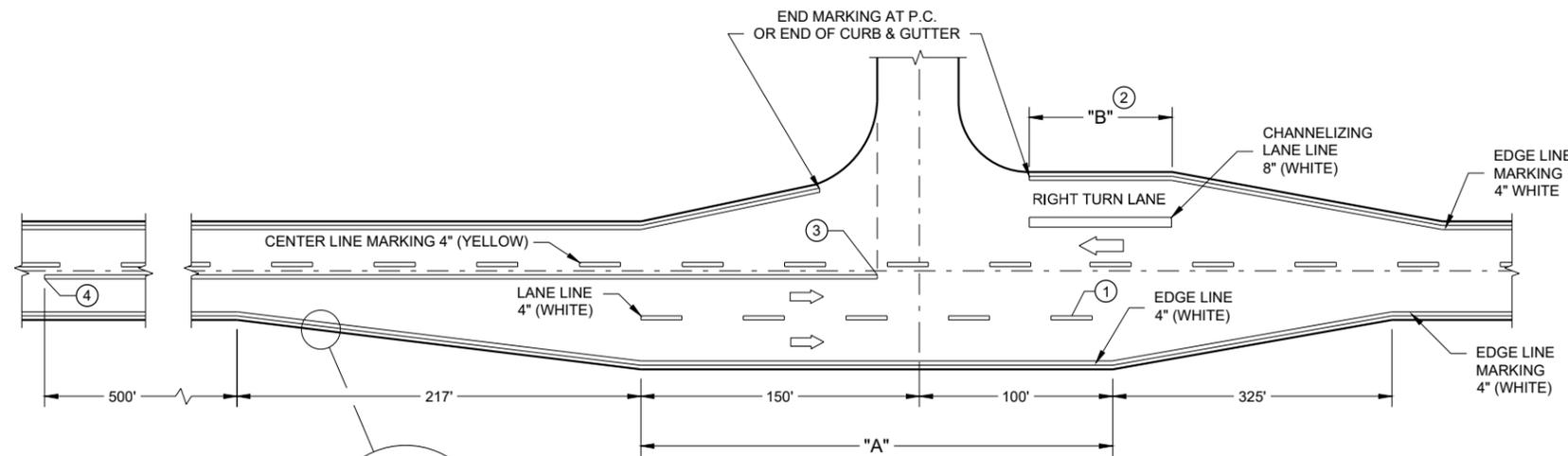
➔ DIRECTION OF TRAVEL



MINOR INTERSECTION

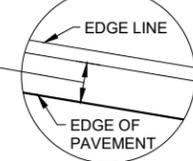


INTERSECTION ON OUTSIDE OF CURVE



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

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



**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

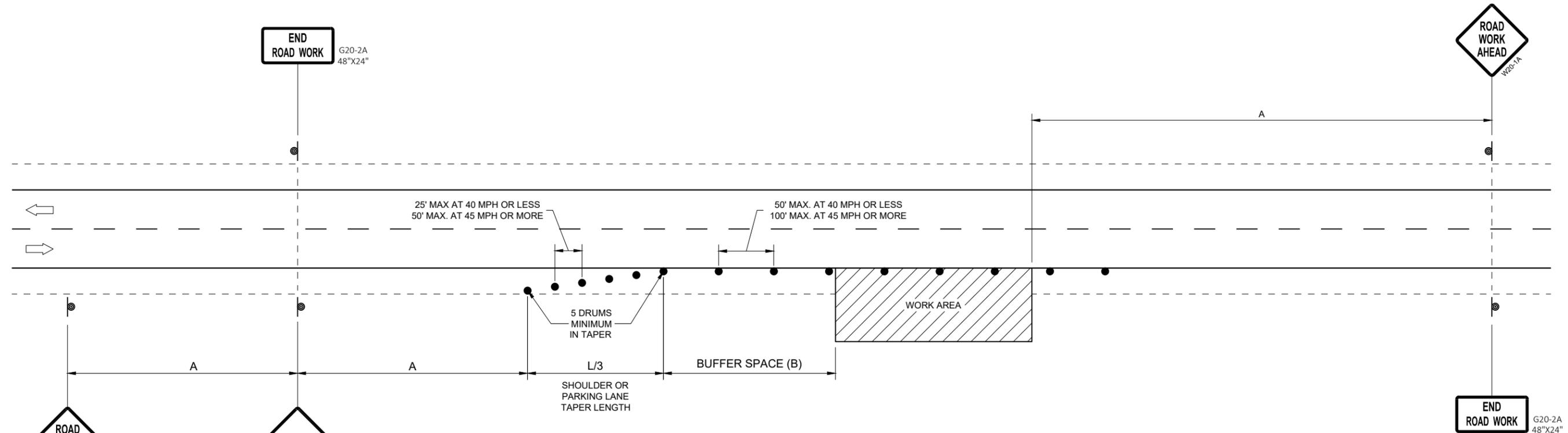
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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'

SDD 15D28 - 04

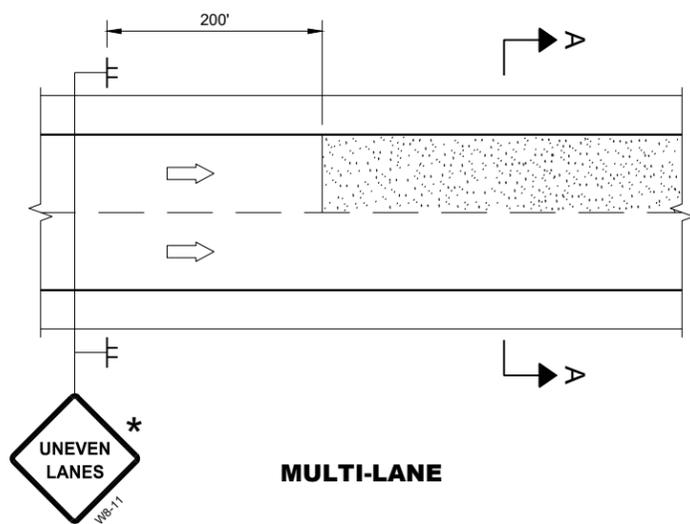
SDD 15D28 - 04

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

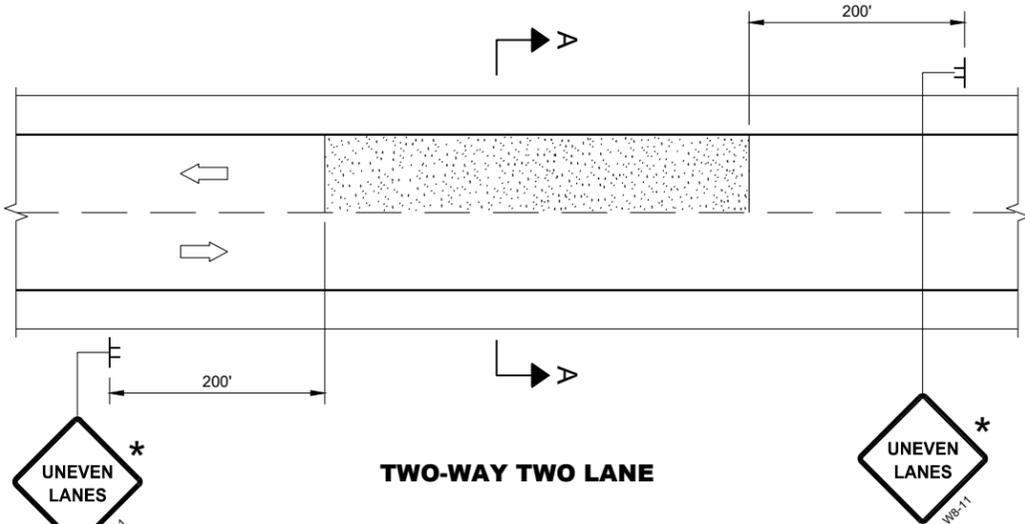
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

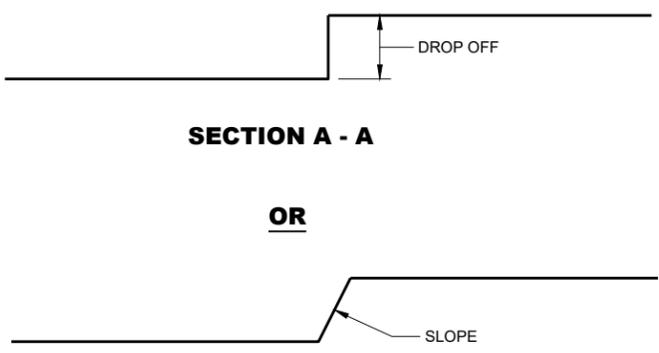
FHWA



MULTI-LANE



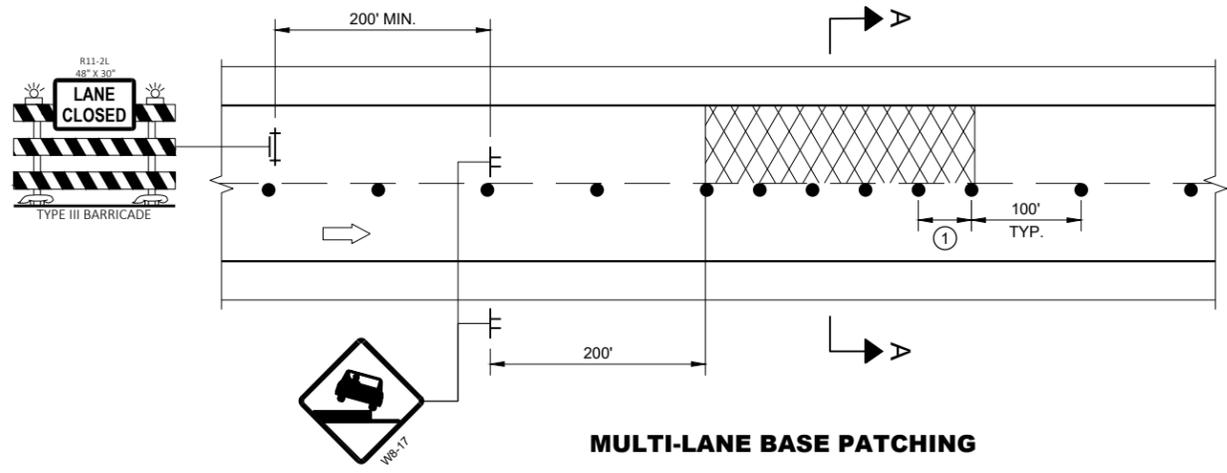
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

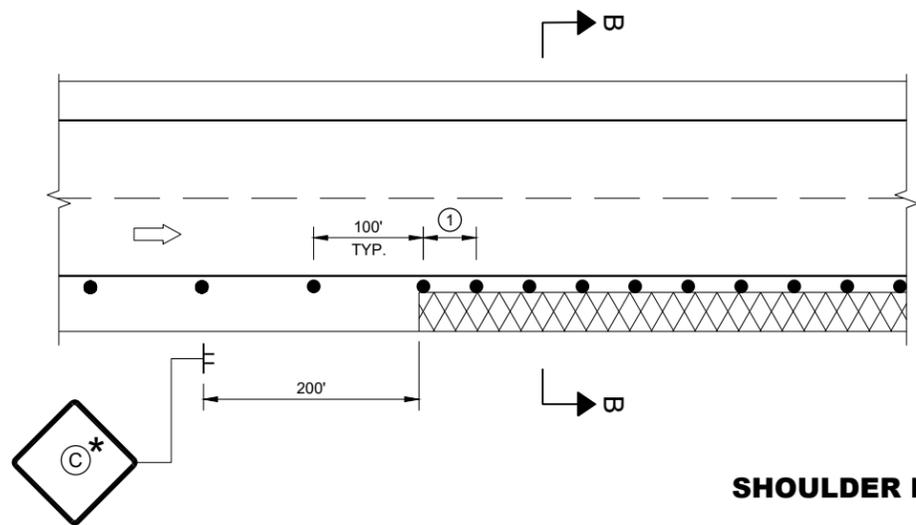
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF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

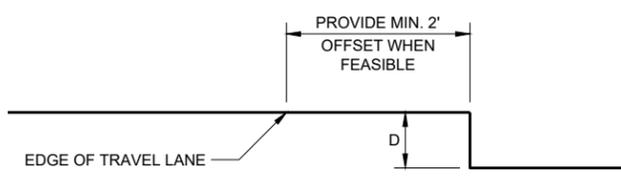
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

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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.

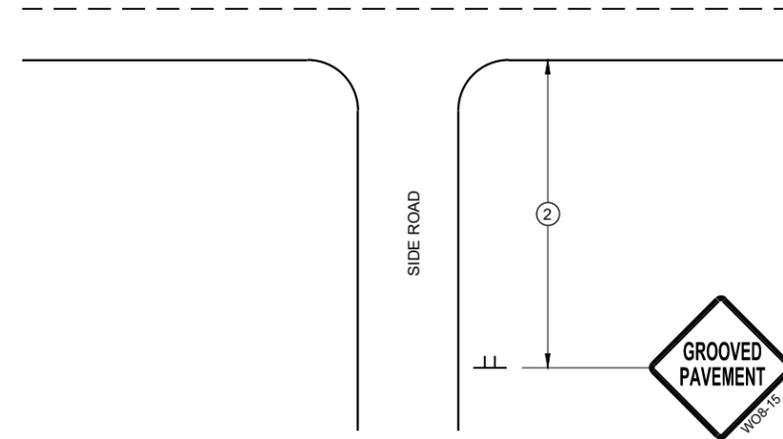
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

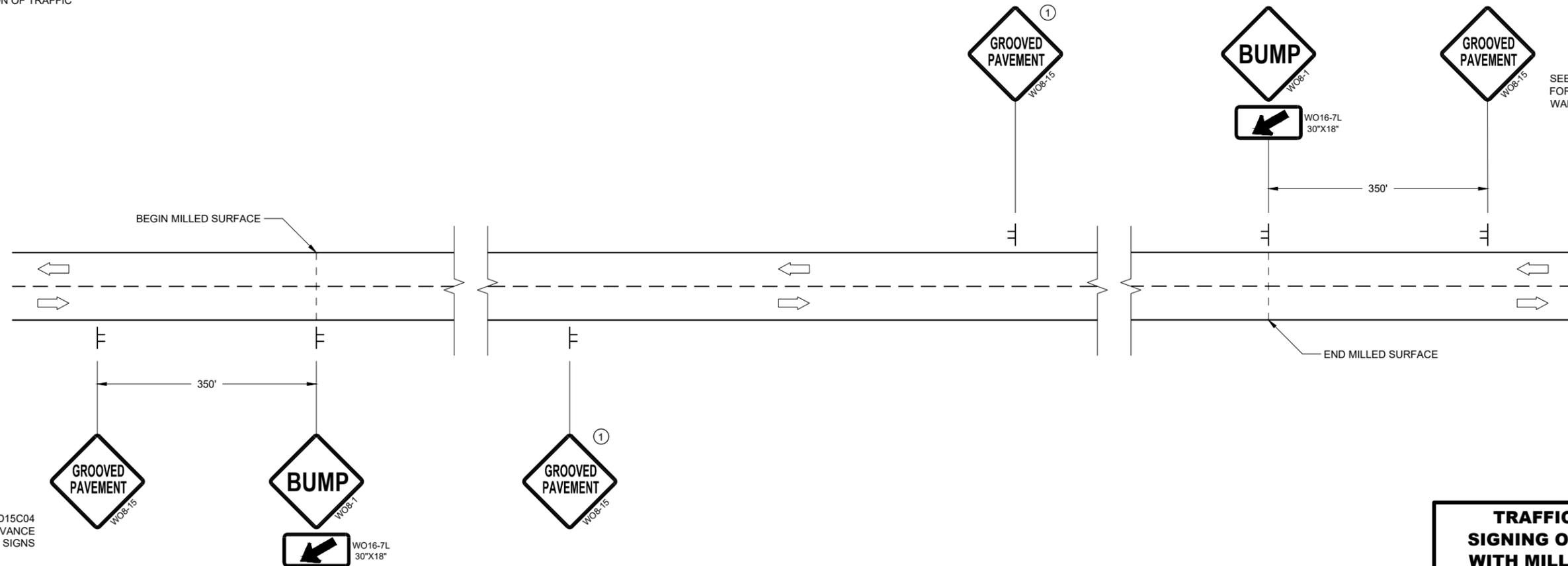
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



SEE SDD15C04 FOR ADVANCE WARNING SIGNS

SEE SDD15C04 FOR ADVANCE WARNING SIGNS

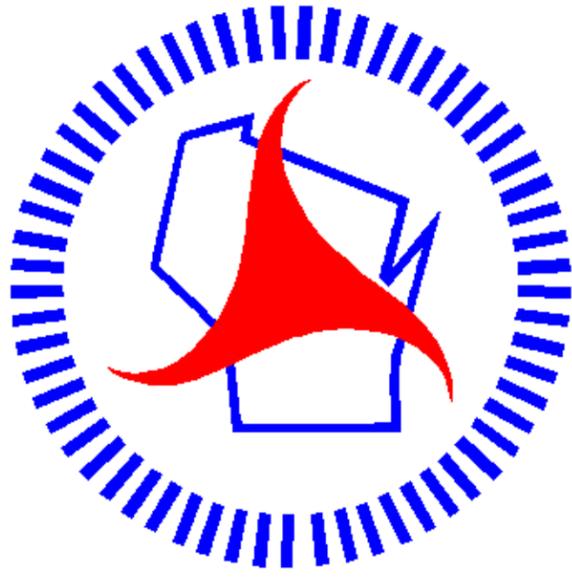
DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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