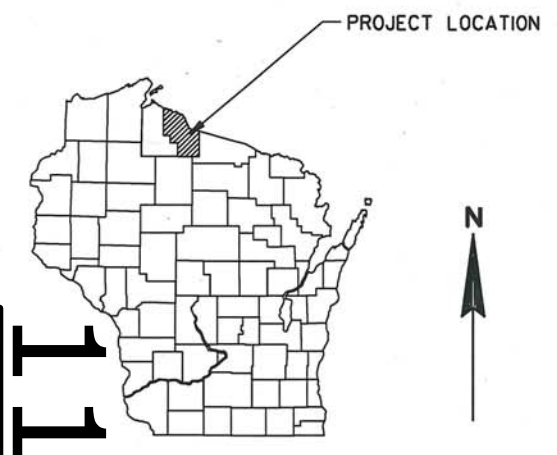


RHI NOVEMBER 2016
PROJECT ID: 1175-19-60
WITH: N/A
COUNTY: IRON

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 = 140



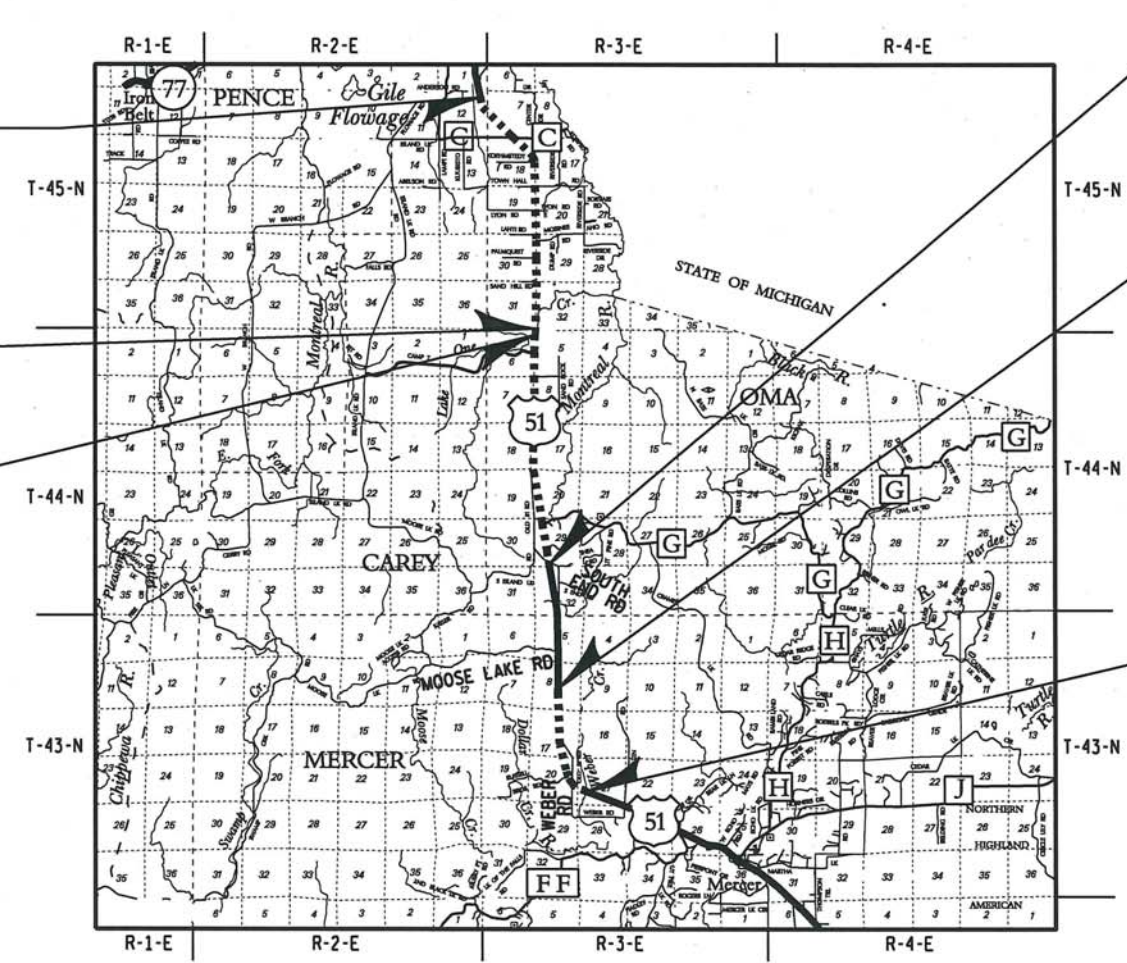
DESIGN DESIGNATION

A.A.D.T. (2014)	=	2,710
A.A.D.T. (2034)	=	3,300
D.H.V.	=	426
D.D.	=	61/39
T.	=	19.48
DESIGN SPEED	=	55
ESALS	=	1,518,400

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
MANITOWISH - HURLEY
WEBER ROAD TO CTH C
USH 51
IRON COUNTY

STATE PROJECT NUMBER
1175-19-60



LAYOUT
SCALE 0 2 MI
TOTAL NET LENGTH OF CENTERLINE = 12.020 MI

END EXCEPTION TO NET CENTERLINE LENGTH
STA 274+25.00
BEGIN EXCEPTION TO NET CENTERLINE LENGTH
STA 139+50.00

BEGIN PROJECT
STA 19+65.00
Y=275287.638
X=755601.136

COORDINATES ON THIS PLAN ARE REFERENCED TO THE
IRON COUNTY COORDINATE SYSTEM.
ELEVATIONS ON THIS PLAN ARE REFERENCED TO THE
NORTH AMERICAN VERTICAL DATUM 1988.

ORIGINAL PLANS PREPARED BY
AECOM

BRUCE N. GERLAND
E26213
Stevens Point, WI
10/31/13
PROFESSIONAL ENGINEER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor: AECOM
Designer: AECOM
Project Manager: JIM VOLKMANN
Regional Examiner: CHERYL SIMON
Regional Supervisor: ANNA WISNER
C.O. Examiner:

APPROVED FOR THE DEPARTMENT
DATE: 10/31/13
ANNA WISNER
(Signature)

E

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS, AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE ALL UTILITIES LOCATED BEFORE EXCAVATION.

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

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

2-INCH HMA PAVEMENT USED FOR MAINLINE USH 51 SHALL BE CONSTRUCTED IN ONE (1) LAYER, HMA PAVEMENT 4 MT 58-34 S.

4-INCH HMA PAVEMENT USED AT CTH G SHALL BE CONSTRUCTED IN TWO (2) LAYERS. THE UPPER LAYER SHALL BE 2 INCHES OF HMA PAVEMENT 4 MT 58-34 S. THE LOWER LAYER SHALL BE 2 INCHES OF HMA PAVEMENT 4 MT 58-28 S.

6-INCH HMA PAVEMENT USED FOR MAINLINE AT CULVERT REPLACEMENT LOCATIONS SHALL BE CONSTRUCTED IN TWO (2) LAYERS. THE UPPER LAYER SHALL BE 2 INCHES OF HMA PAVEMENT 4 MT 58-34 S. THE LOWER LAYER SHALL BE 4 INCHES OF HMA PAVEMENT 3 MT 58-28 S.

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.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 = 53.2 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 53.2 ACRES

UTILITY OWNERS

COMMUNICATION LINE:

BRIAN HUHN
CENTURYLINK
SUITE 5
400 W 9TH ST N
LADYSMITH, WI 54848
(715) 523-0023
(715) 563-8294 (CELL)
brian.huhn@centurylink.com

ELECTRIC:

GARY TARASEWICZ
BAYFIELD ELECTRIC COOPERATIVE INC - ELECTRICITY
P.O. BOX 68
IRON RIVER, WI 54847
(715) 372-4287
(715) 492-0725 (CELL)
gary.tarasewicz@bayfieldelectric.com

MURRAY SMERER
XCEL ENERGY - ELECTRICITY
2400 FARM ROAD
ASHLAND, WI 54806
(715) 682-6928
murray.j.smerer@xcelenergy.com

KYLE NEIDERMIRE
XCEL ENERGY - ELECTRICITY-TRANSMISSION
P.O. BOX 8 - MELBY CENTRE
EAU CLAIRE, WI 54702
(715) 737-1576
kyle.s.neidermire@xcelenergy.com

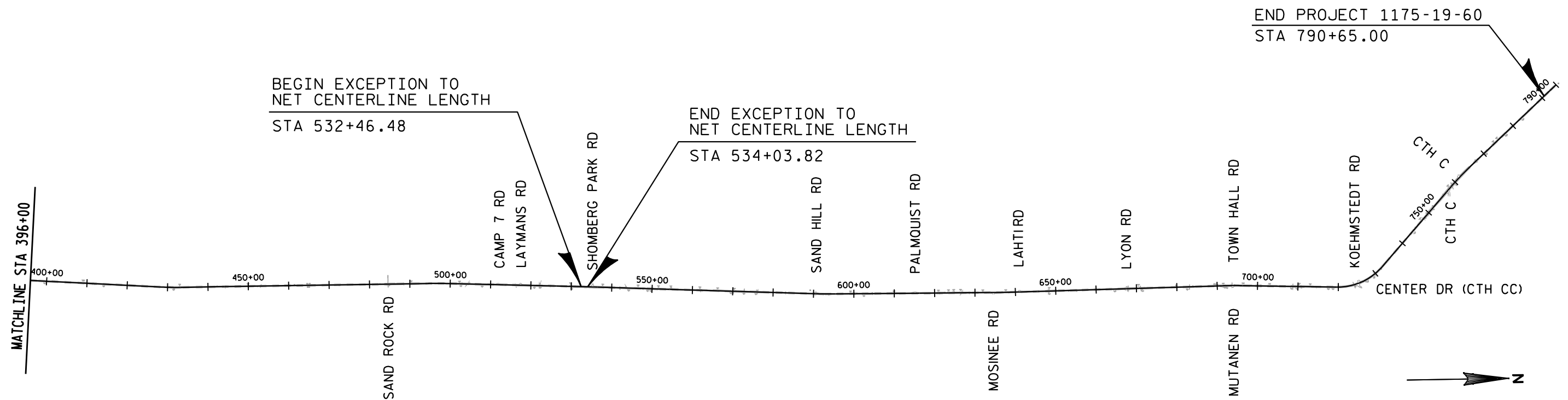
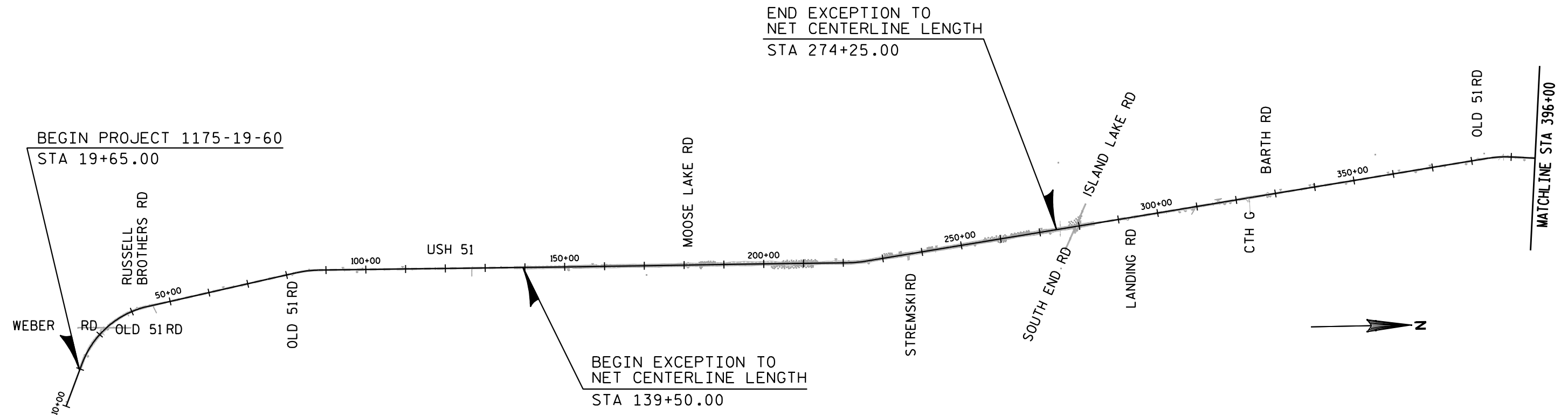
DIGGERSHOTLINE

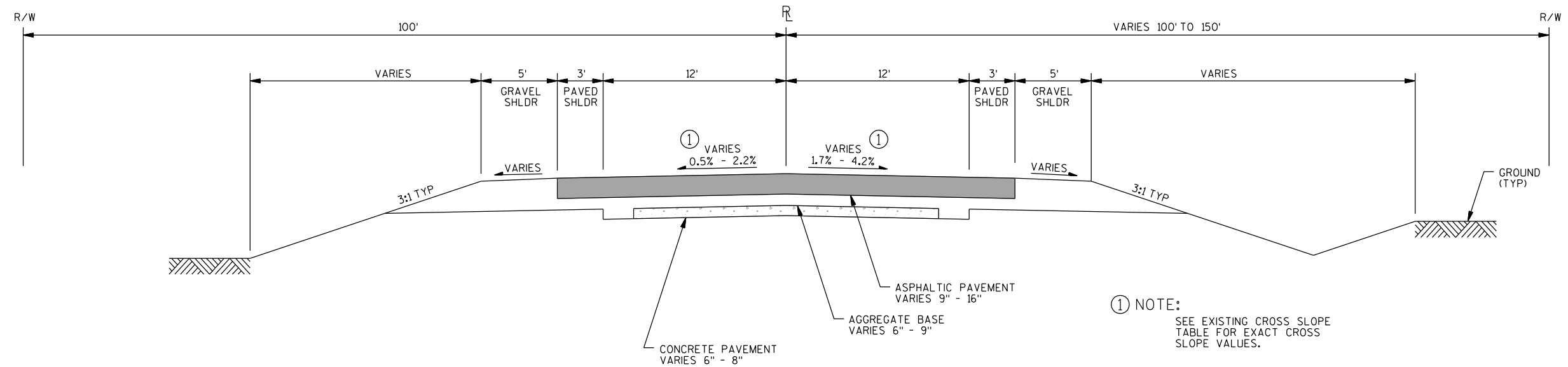
Dial 811 or (800) 242-8511

www.DiggersHotline.com

DNR LIAISON

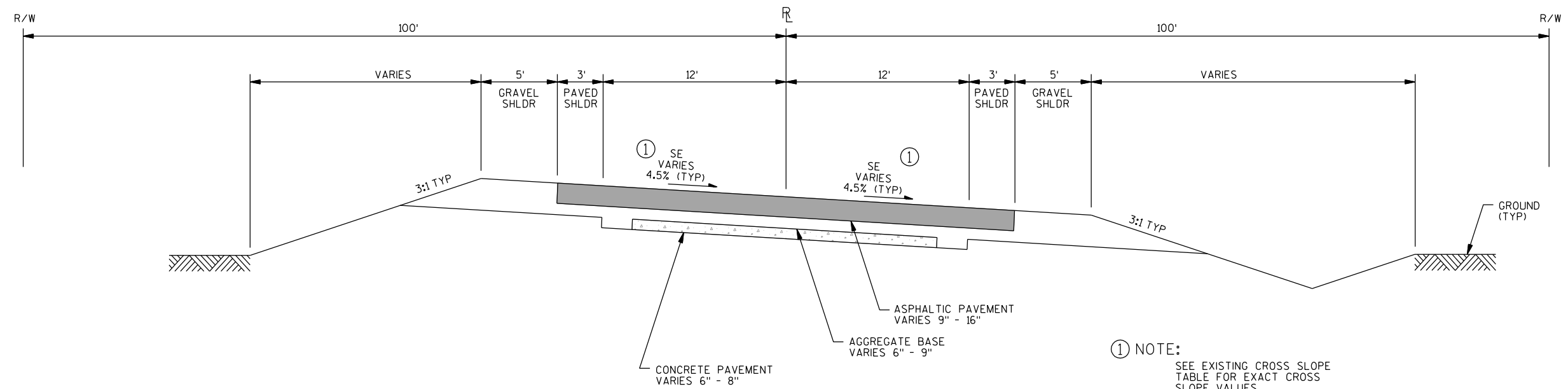
WISCONSIN DNR
JON SIMONSEN
107 SUTLIFF AVE
RHINELANDER, WI 54501
715-365-8916
EMAIL: jonathan.simonsen@wisconsin.gov





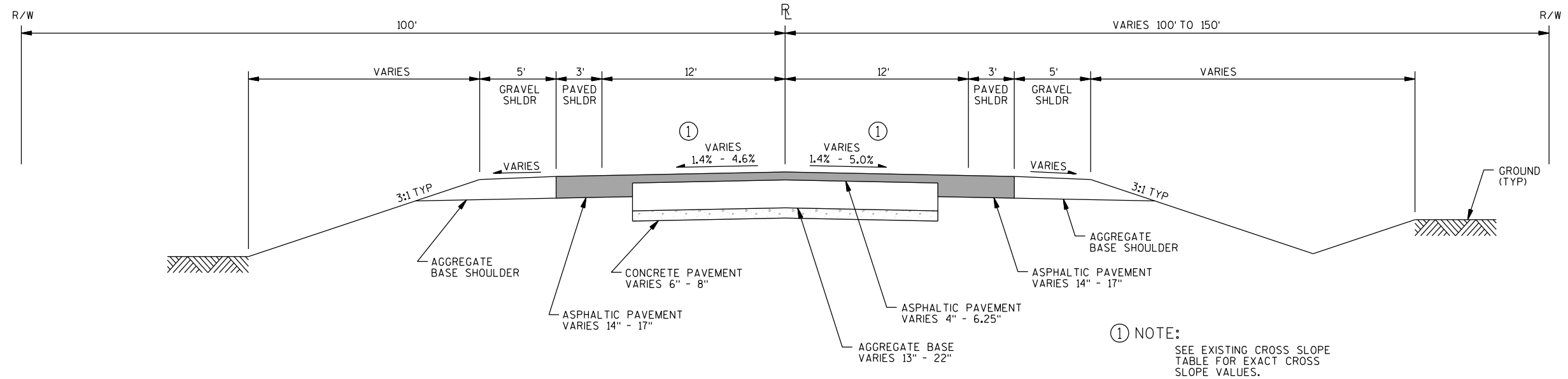
TYPICAL EXISTING SECTION - USH 51

STA 19+65 - STA 20+11
STA 45+50 - STA 55+00



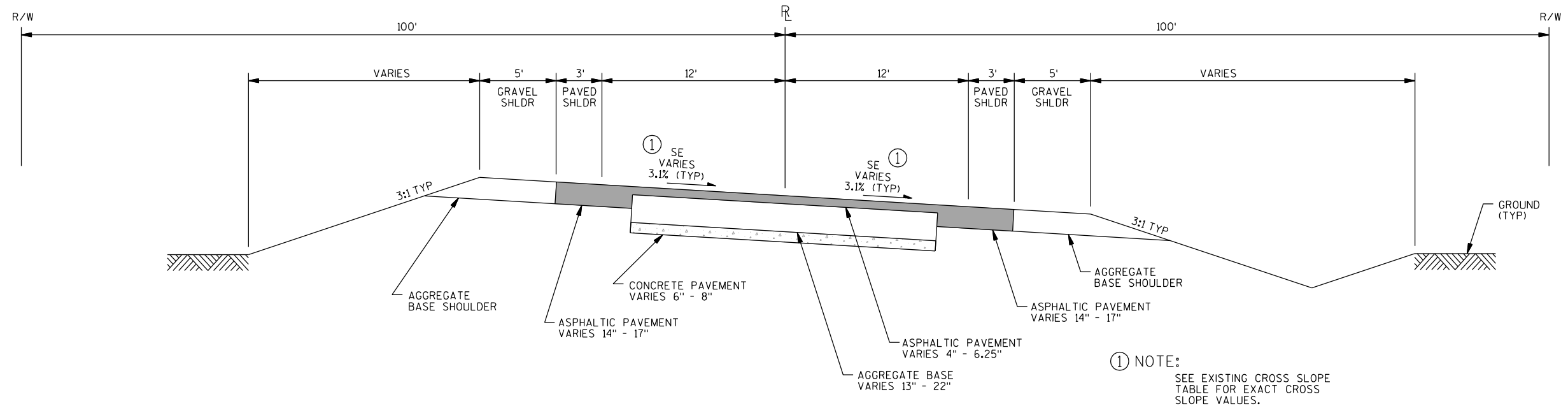
TYPICAL SUPERELEVATED EXISTING SECTION - USH 51

STA 20+11 - STA 45+50



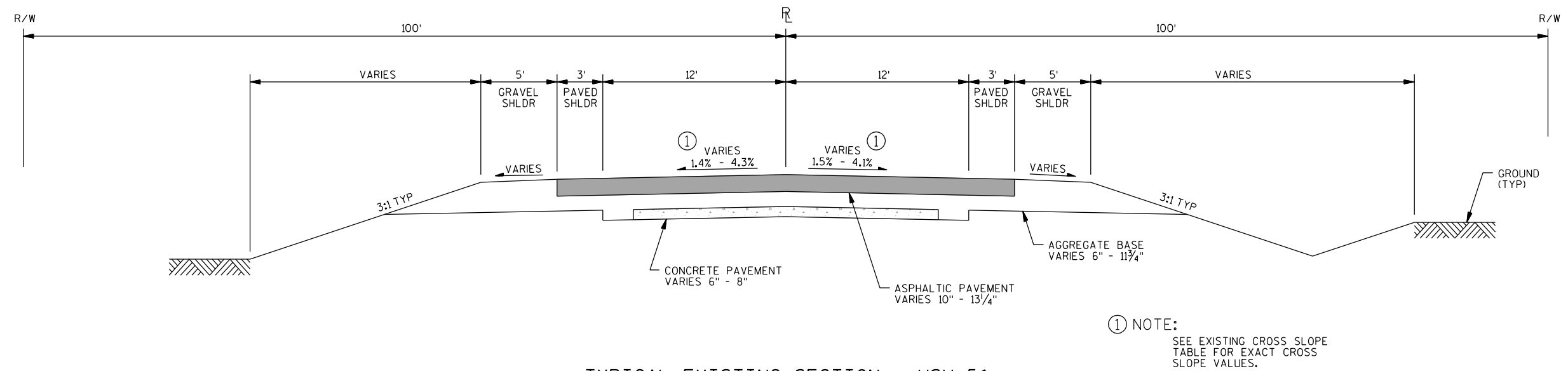
TYPICAL EXISTING SECTION - USH 51

STA 55+00 - STA 81+38
STA 89+31 - STA 139+50



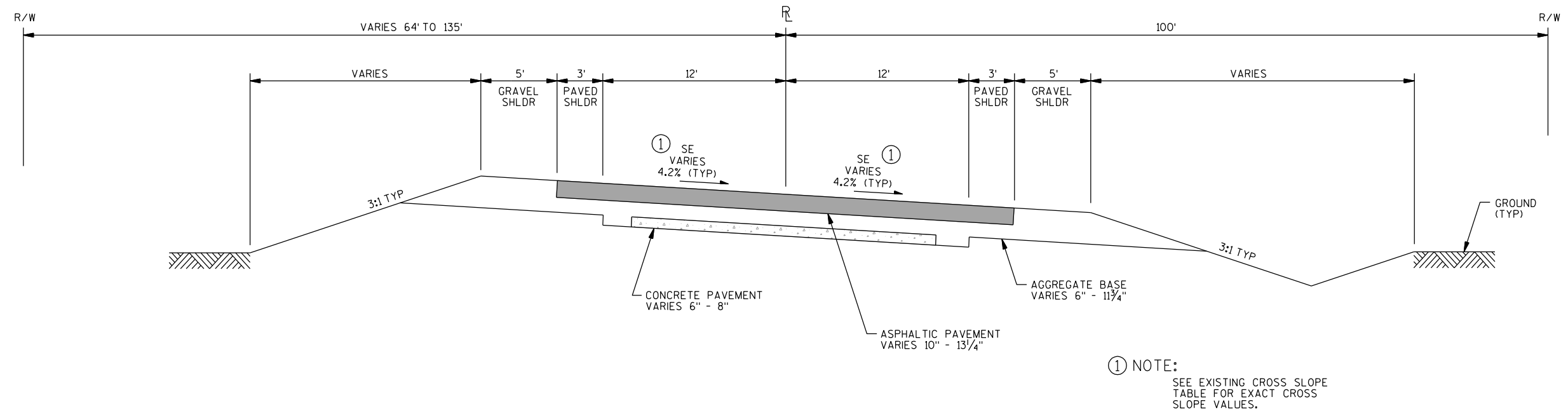
TYPICAL SUPERELEVATED EXISTING SECTION - USH 51

STA 81+38 - STA 89+31



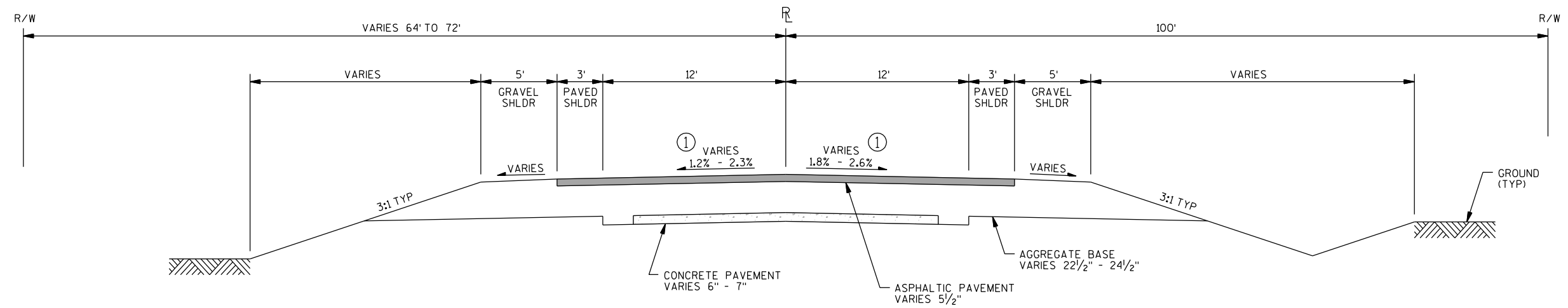
TYPICAL EXISTING SECTION - USH 51

STA 274+25 - STA 383+06



TYPICAL SUPERELEVATED EXISTING SECTION - USH 51

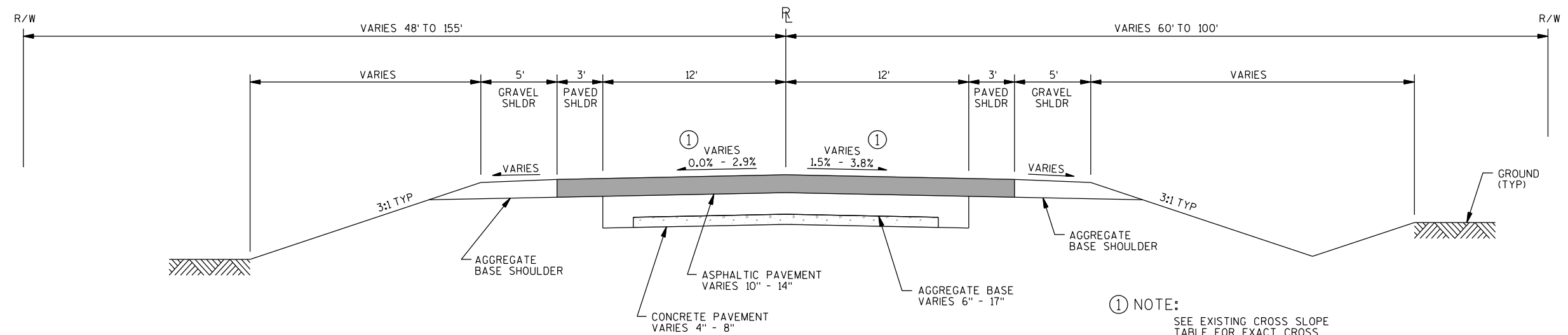
STA 383+06 - STA 391+14



① NOTE:
SEE EXISTING CROSS SLOPE
TABLE FOR EXACT CROSS
SLOPE VALUES.

TYPICAL EXISTING SECTION - USH 51

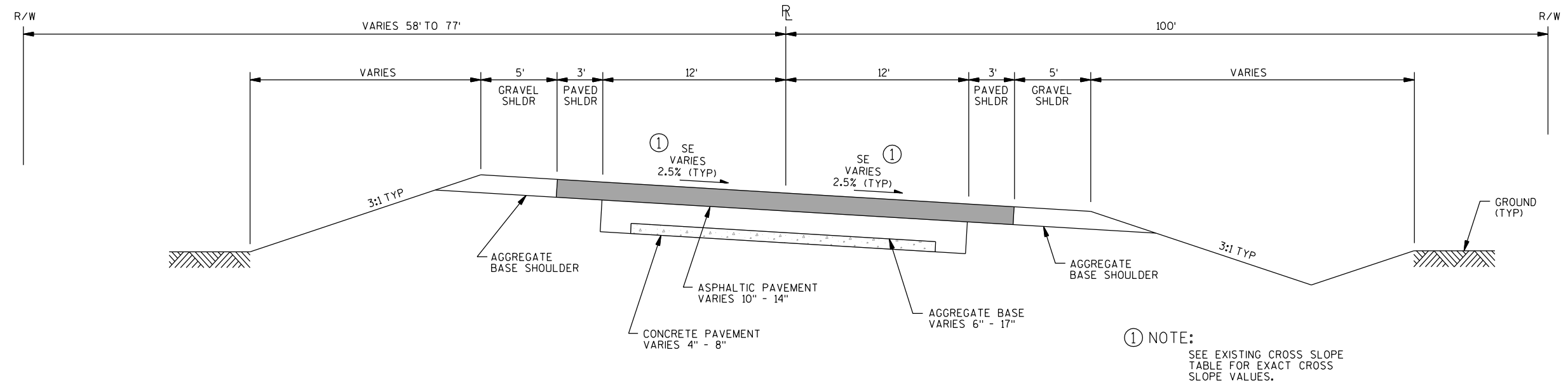
STA 391+14 - STA 410+00



① NOTE:
SEE EXISTING CROSS SLOPE
TABLE FOR EXACT CROSS
SLOPE VALUES.

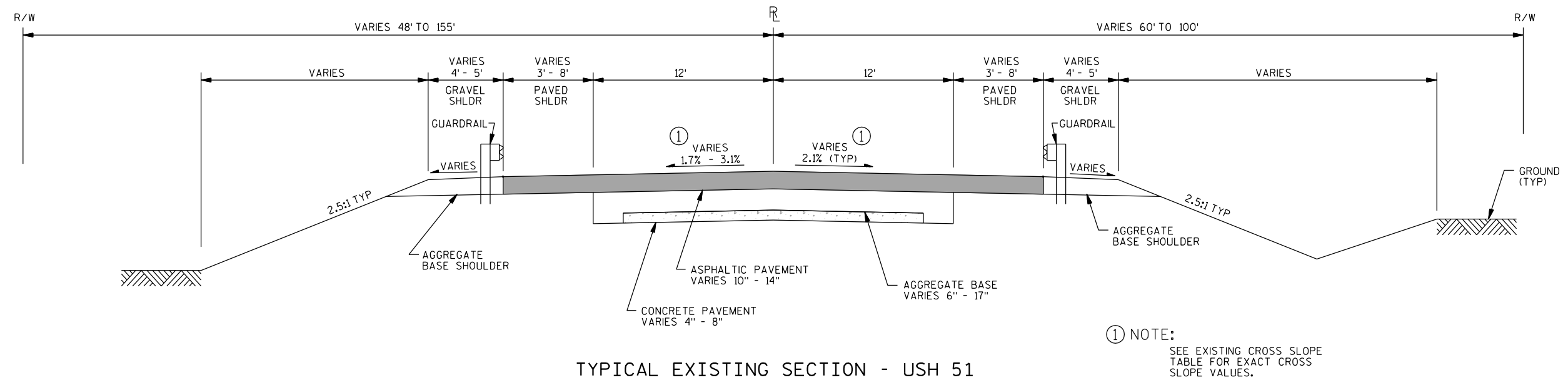
TYPICAL EXISTING SECTION - USH 51

STA 410+00 - STA 427+61
STA 433+95 - STA 529+70
STA 536+50 - STA 570+00



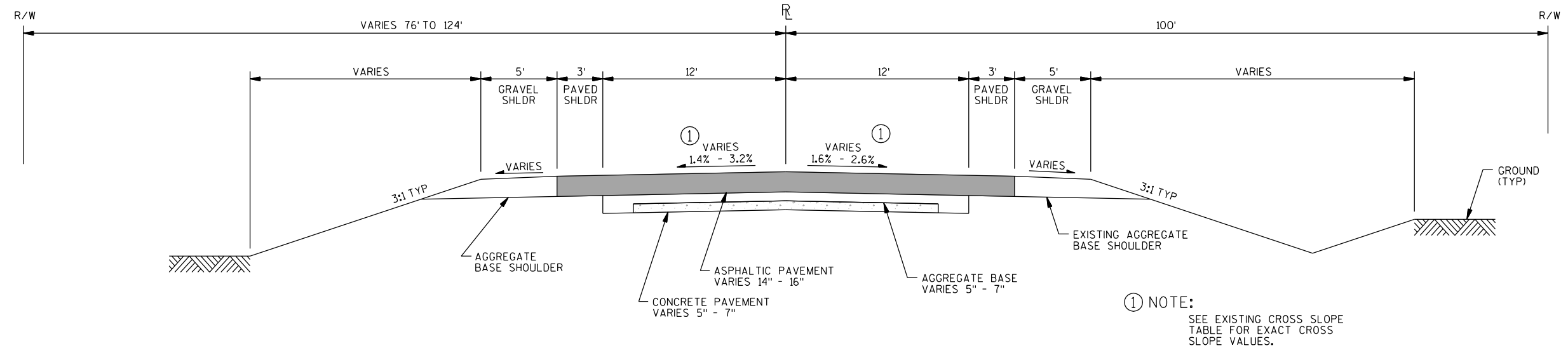
TYPICAL SUPERELEVATED EXISTING SECTION - USH 51

STA 427+61 - STA 433+95



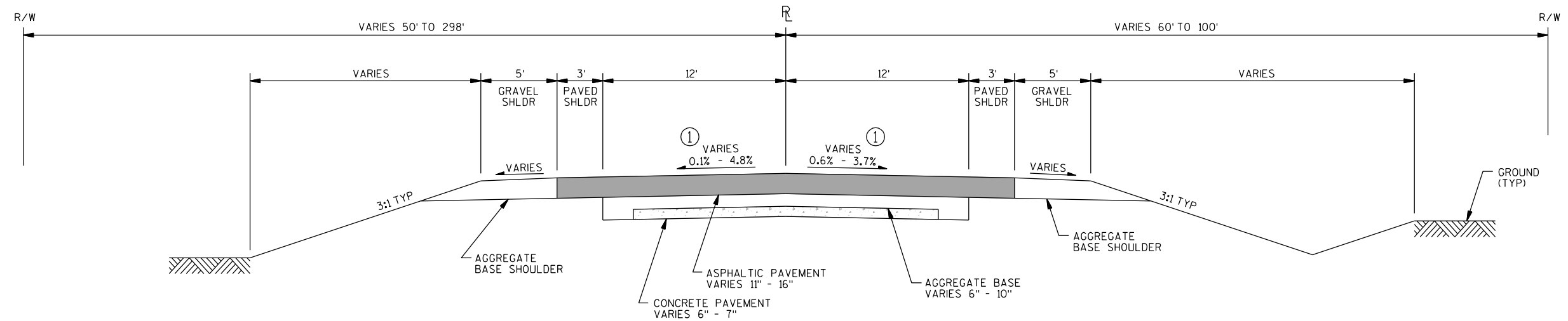
TYPICAL EXISTING SECTION - USH 51

STA 529+70 - STA 532+46
STA 534+04 - STA 536+50



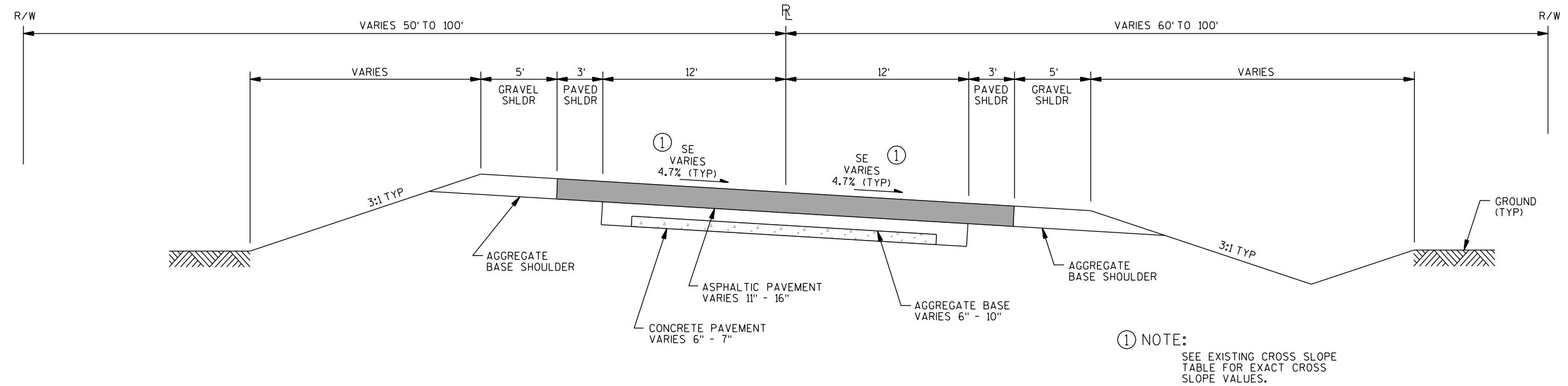
TYPICAL EXISTING SECTION - USH 51

STA 570+00 - STA 620+00



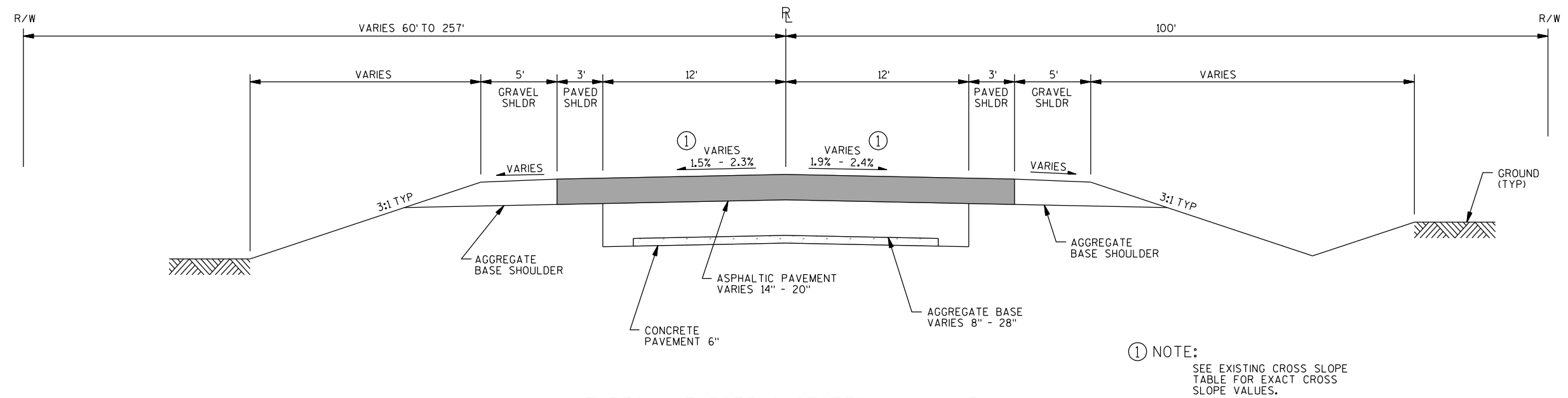
TYPICAL EXISTING SECTION - USH 51

STA 620+00 - STA 718+16
STA 733+76 - STA 750+00



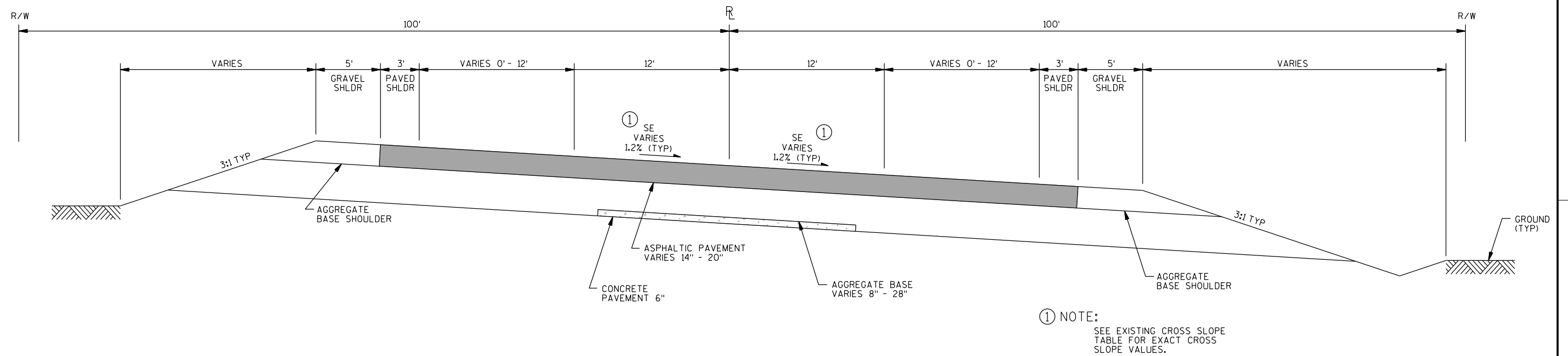
TYPICAL SUPERELEVATED EXISTING SECTION - USH 51

STA 718+16 - STA 733+76



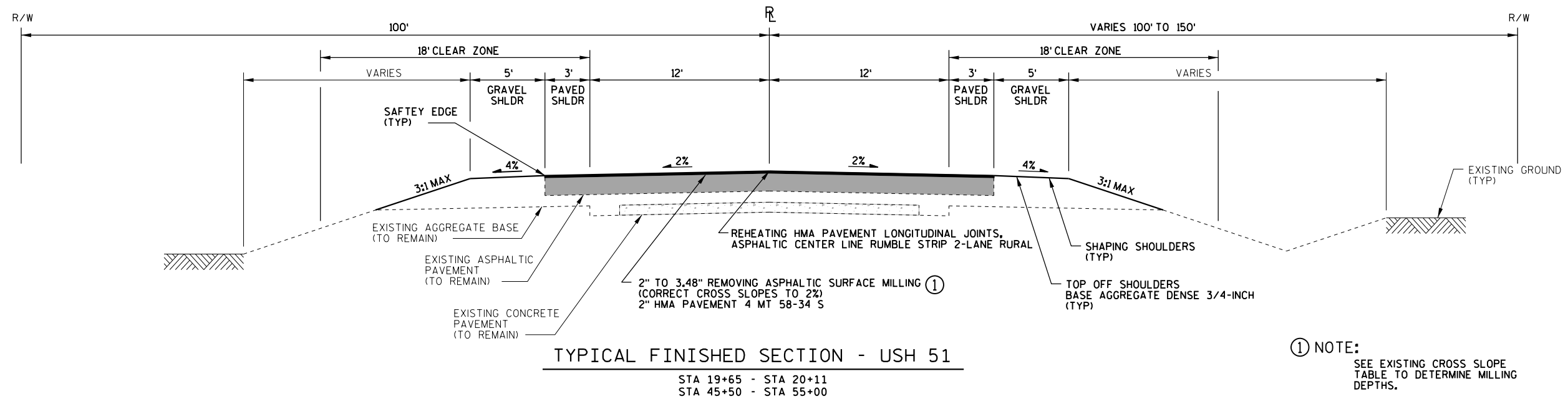
TYPICAL EXISTING SECTION - USH 51

STA 750+00 - STA 757+64
STA 765+41 - STA 790+65

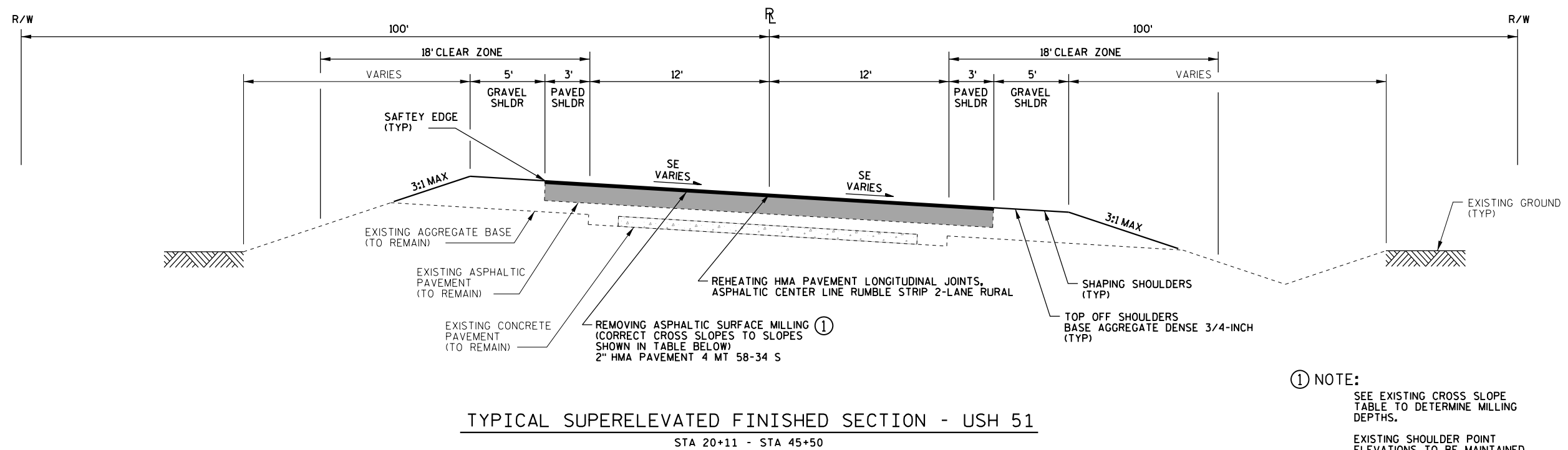


TYPICAL SUPERELEVATED EXISTING SECTION - USH 51

STA 757+64 - STA 765+41

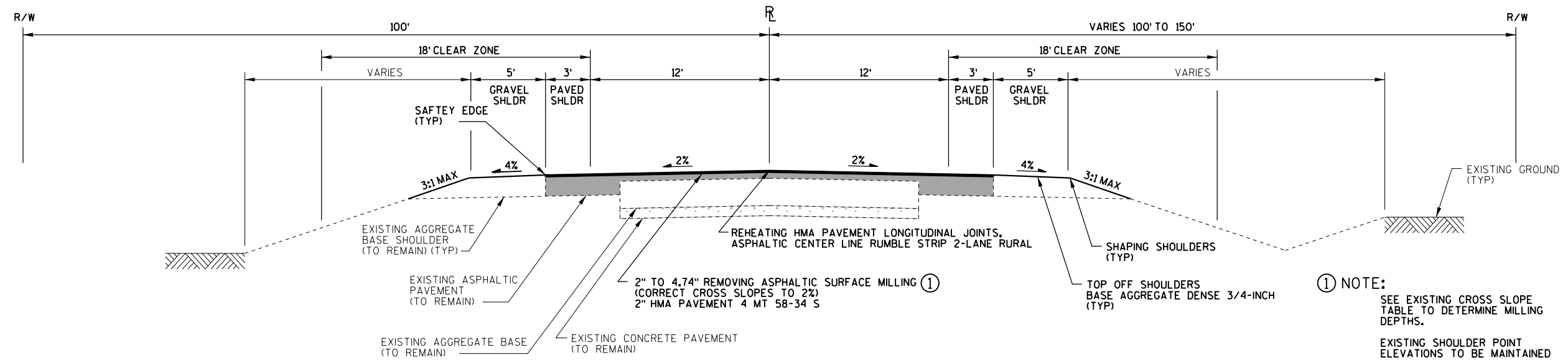


① NOTE:
SEE EXISTING CROSS SLOPE
TABLE TO DETERMINE MILLING
DEPTHS.
EXISTING SHOULDER POINT
ELEVATIONS TO BE MAINTAINED

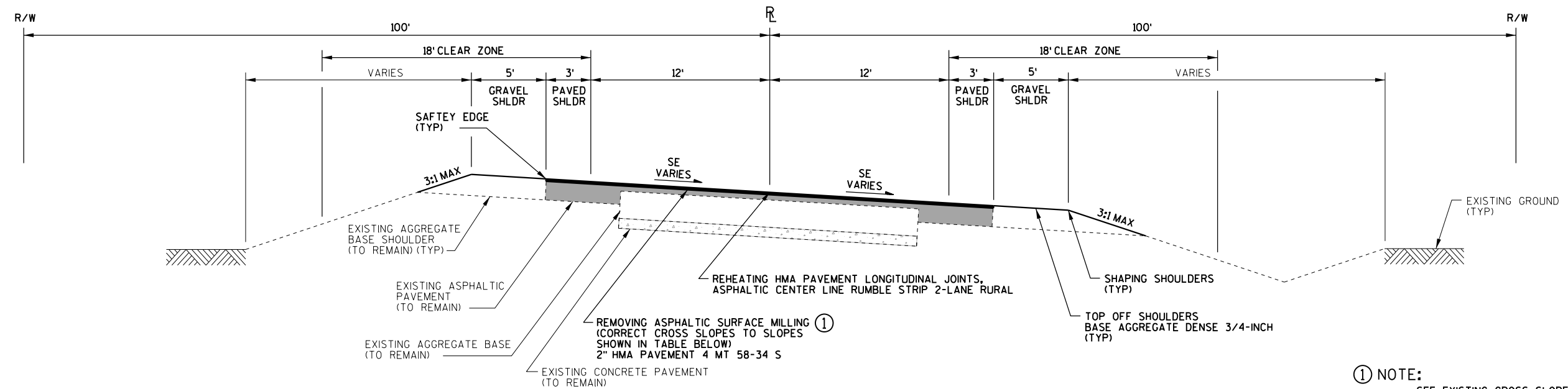


① NOTE:
SEE EXISTING CROSS SLOPE
TABLE TO DETERMINE MILLING
DEPTHS.
EXISTING SHOULDER POINT
ELEVATIONS TO BE MAINTAINED

CURVE INFORMATION								PC SIDE OF CURVE				PT SIDE OF CURVE			
PC STATION	PI STATION	PT STATION	RADIUS (FT)	SUPER ELEVATION	DESIGN SPEED (MPH)	SUPER RUNOFF (L)	TANGENT RUNOUT (X)	NORMAL CROWN	FLAT	REVERSE CROWN	FULL SUPER BEGIN	FULL SUPER END	REVERSE CROWN	FLAT	NORMAL CROWN
21+38.69	33+84.69	44+21.94	2300	4.50%	55	115	51	20+11	20+62	21+13	21+77	43+84	44+48	44+99	45+50



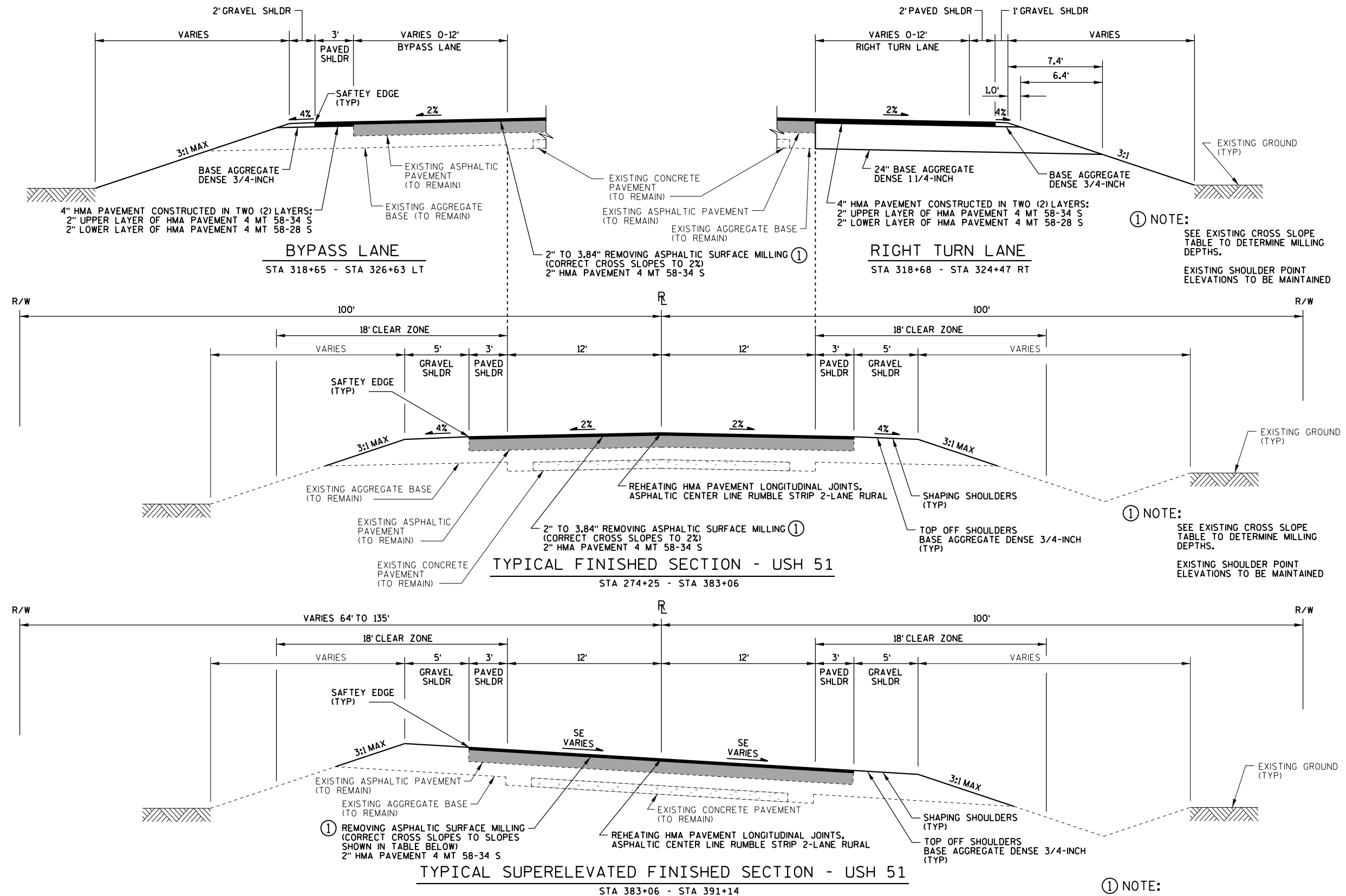
TYPICAL FINISHED SECTION - USH 51

STA 55+00 - STA 81+38
STA 89+31 - STA 139+50

TYPICAL SUPERELEVATED FINISHED SECTION - USH 51

STA 81+38 - STA 89+31

CURVE INFORMATION								PC SIDE OF CURVE				PT SIDE OF CURVE			
PC STATION	PI STATION	PT STATION	RADIUS (FT)	SUPER ELEVATION	DESIGN SPEED (MPH)	SUPER RUNOFF (L)	TANGENT RUNOUT (X)	NORMAL CROWN	FLAT	REVERSE CROWN	FULL SUPER BEGIN	FULL SUPER END	REVERSE CROWN	FLAT	NORMAL CROWN
21+38.69	33+84.69	44+21.94	2300	4.50%	55	115	51	20+11	20+62	21+13	21+77	43+84	44+48	44+99	45+50
82+60.24	85+35.40	88+08.60	2650	4.20%	55	107	51	81+38	81+89	82+40	82+96	87+73	88+29	88+80	89+31



CURVE INFORMATION								PC SIDE OF CURVE			PT SIDE OF CURVE			
PC STATION	PI STATION	PT STATION	RADIUS (FT)	SUPER ELEVATION	DESIGN SPEED (MPH)	SUPER RUNOFF (L)	TANGENT RUNOUT (X)	NORMAL CROWN	FLAT CROWN	REVERSE CROWN	FULL SUPER BEGIN	FULL SUPER END	REVERSE CROWN	NORMAL CROWN
384+27.00	387+10.94	389+92.87	2750	4.10%	55	105	51	383+06	383+57	384+08	384+62	389+58	390+12	391+14

PROJECT NUMBER: 1175-19-60

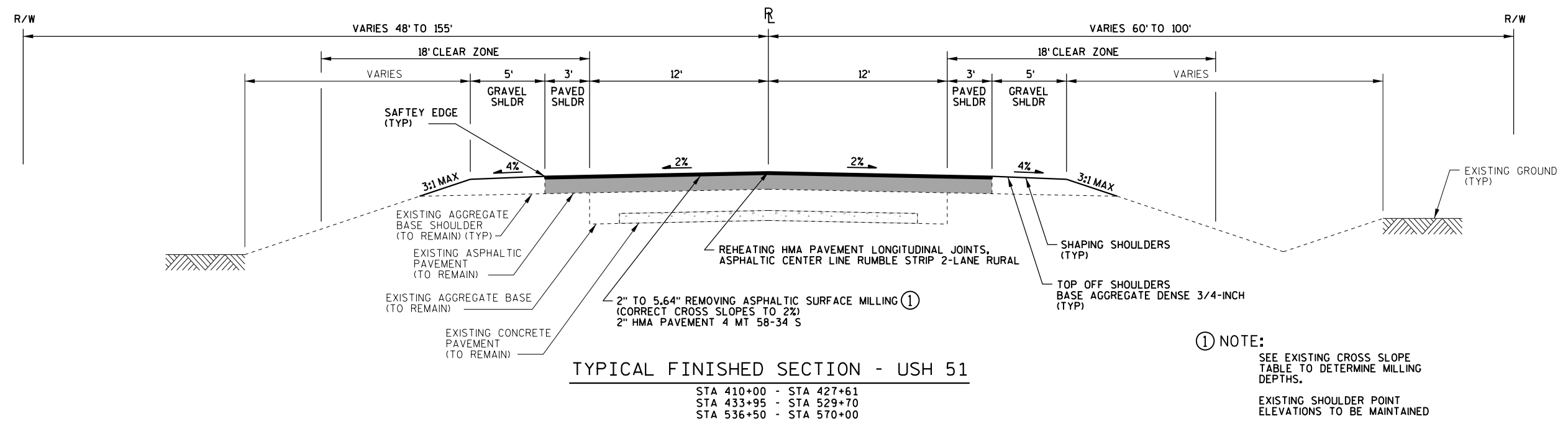
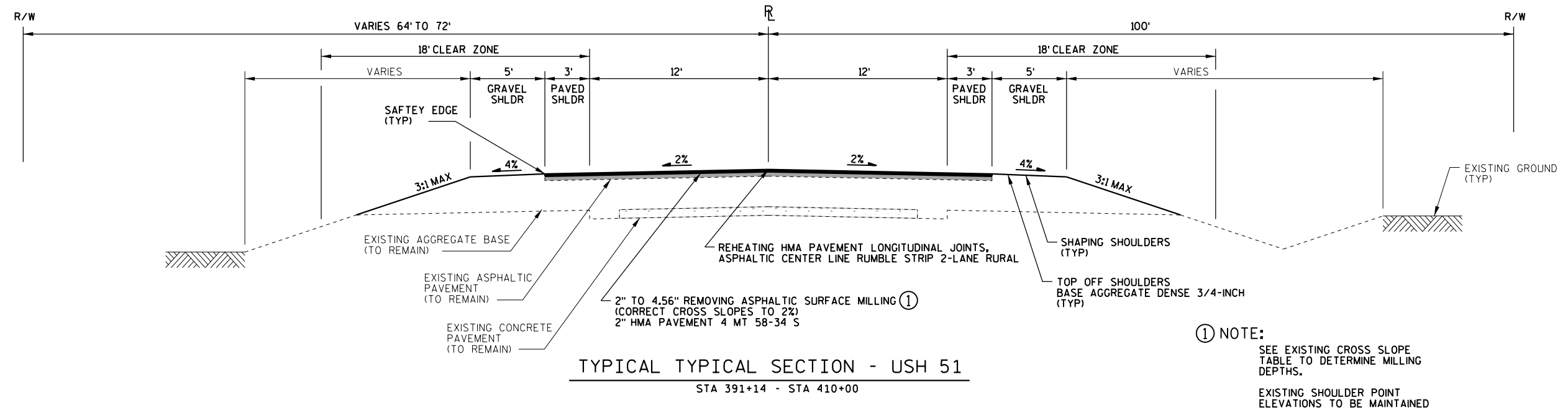
HWY: USH 51

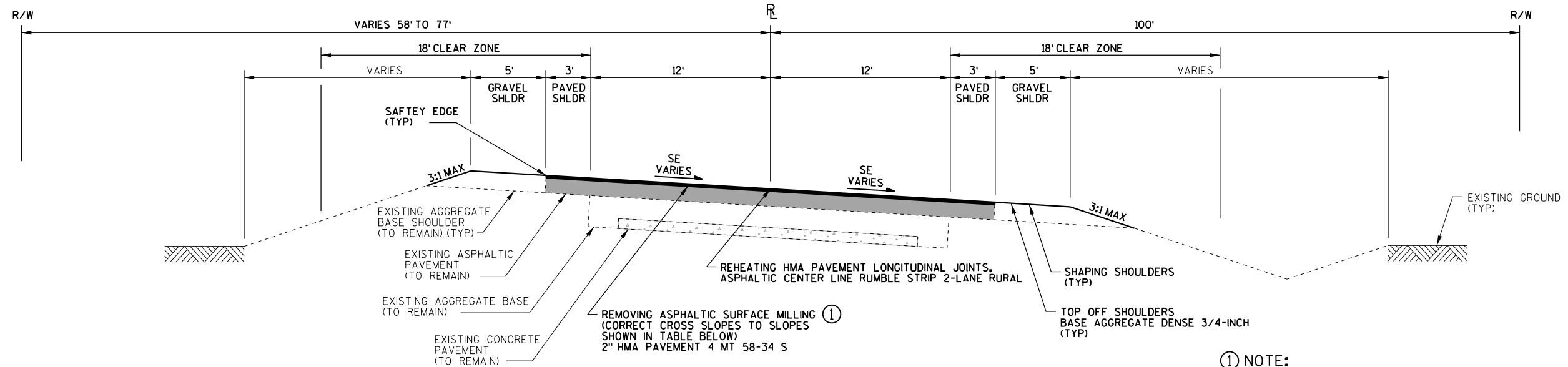
COUNTY: IRON

TYPICAL SECTIONS

SHEET

E

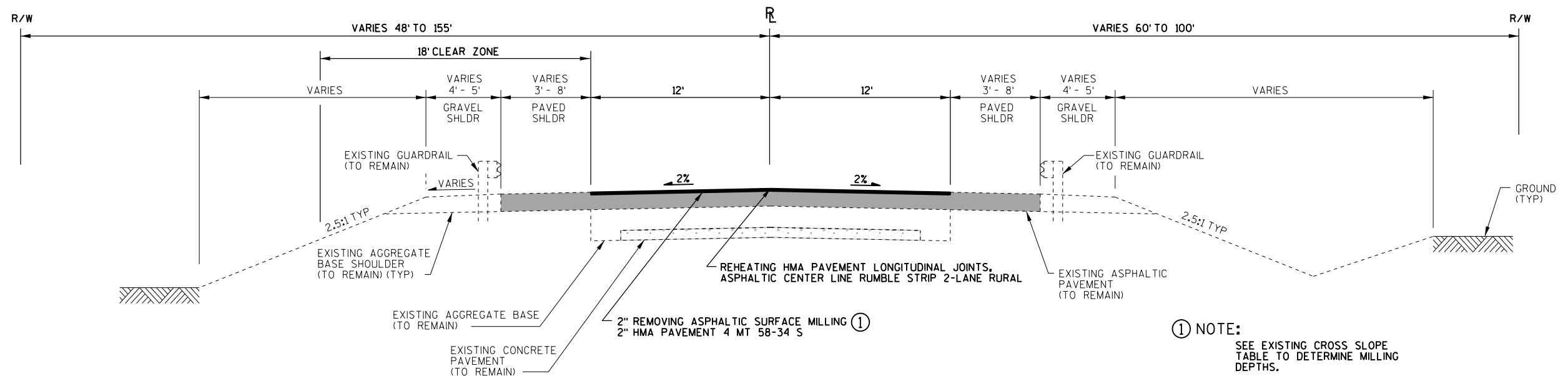




TYPICAL SUPERELEVATED FINISHED SECTION - USH 51

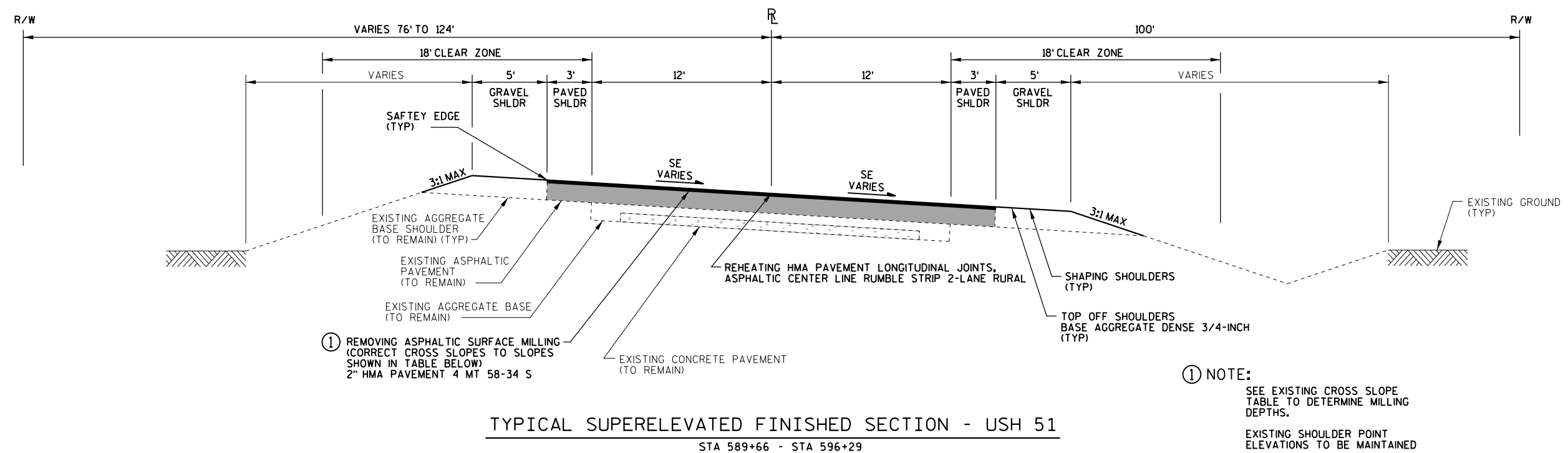
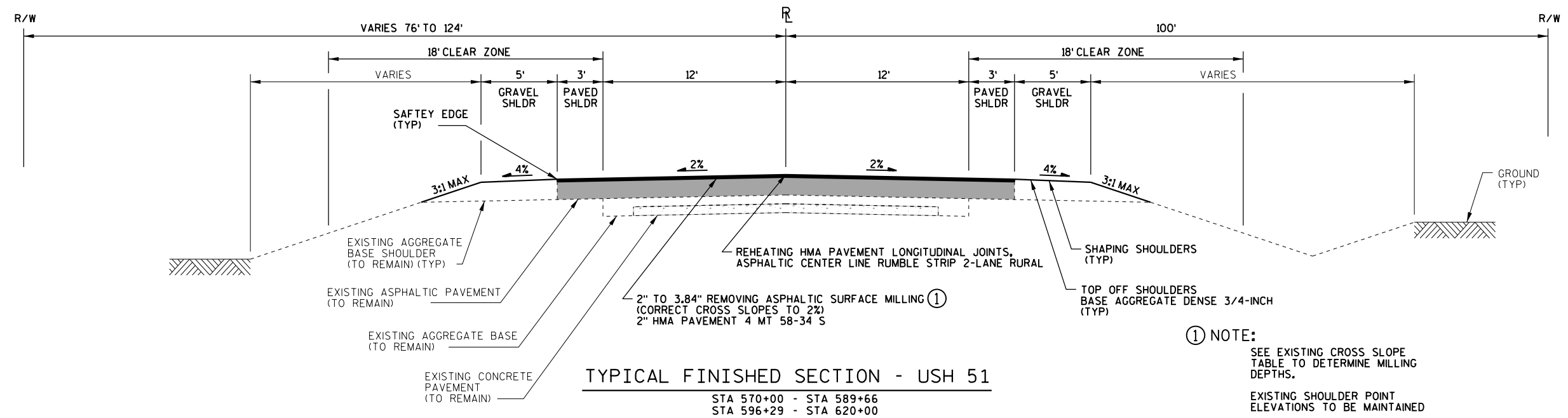
STA 427+61 - STA 433+95

CURVE INFORMATION								PC SIDE OF CURVE			PT SIDE OF CURVE				
PC STATION	PI STATION	PT STATION	RADIUS (FT)	SUPER ELEVATION	DESIGN SPEED (MPH)	SUPER RUNOFF (L)	TANGENT RUNOUT (X)	NORMAL CROWN	FLAT	REVERSE CROWN	FULL SUPER BEGIN	FULL SUPER END	REVERSE CROWN	FLAT	NORMAL CROWN
428+45.64	430+78.12	433+10.44	7000	RC	55	51	51	427+61	428+12	428+63	428+63	432+93	432+93	433+44	433+95

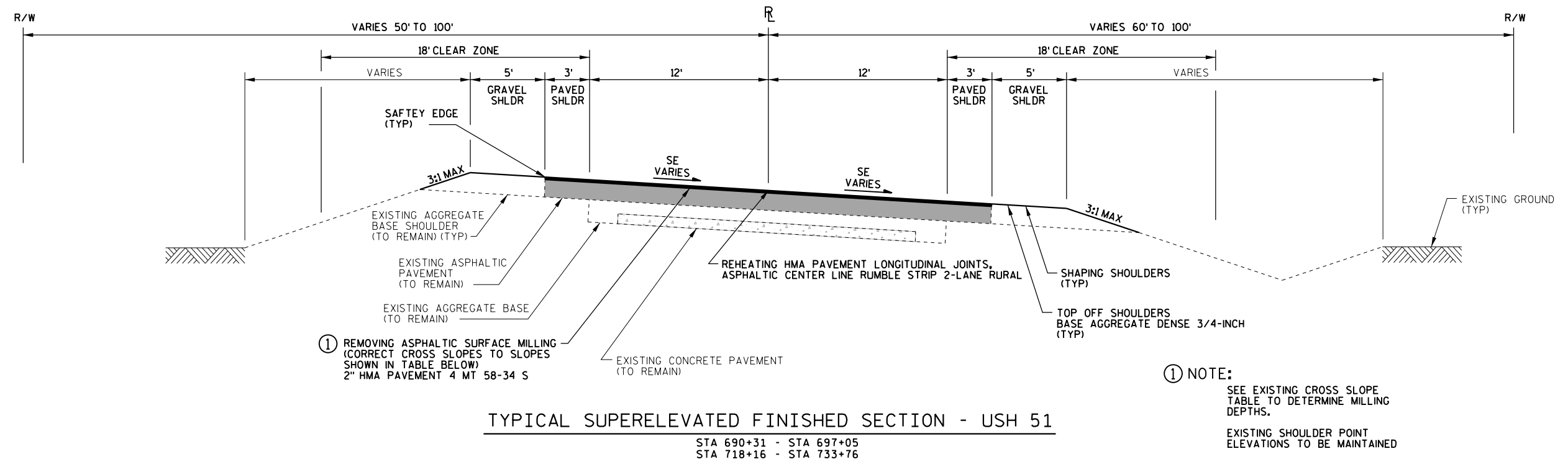
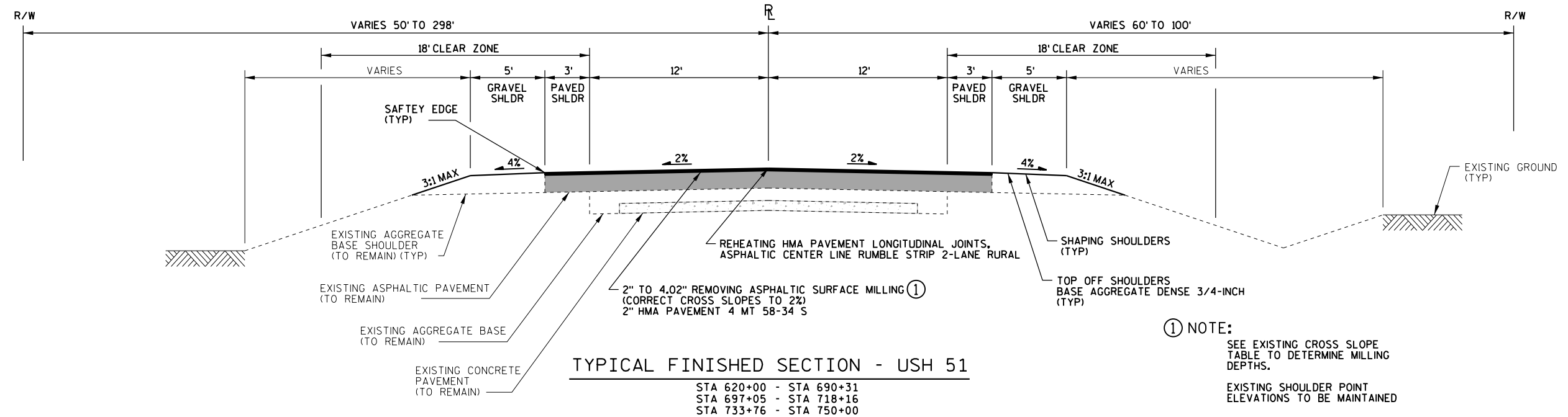


TYPICAL FINISHED SECTION - USH 51

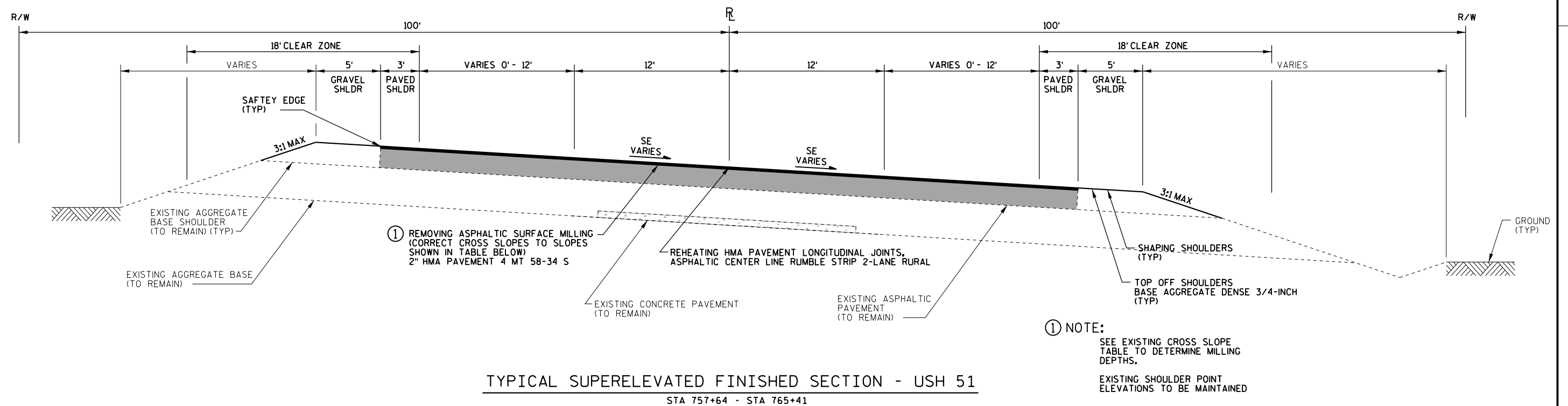
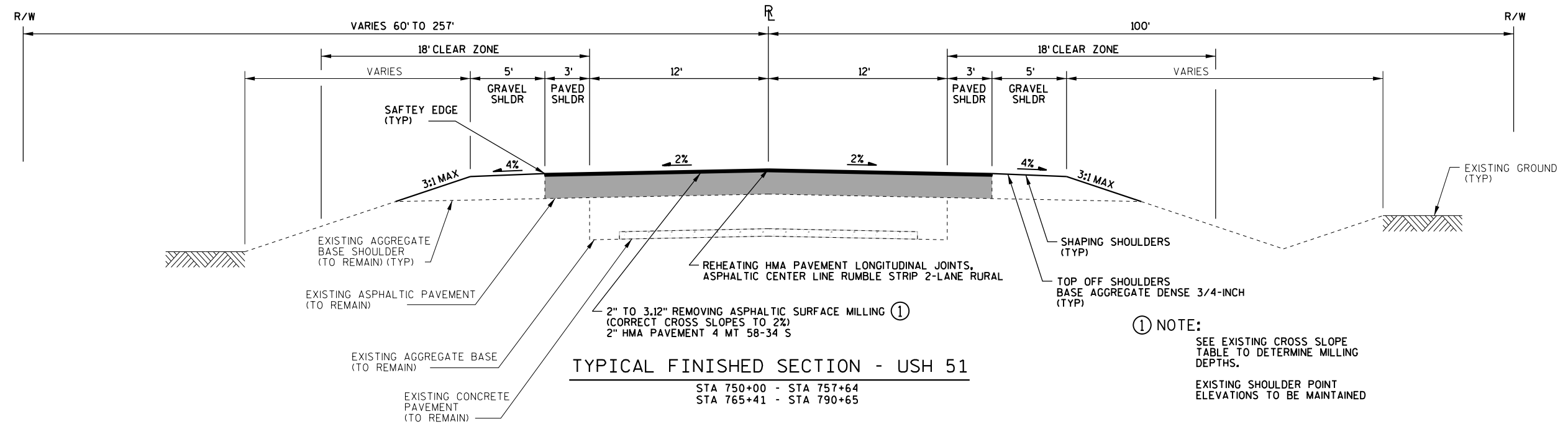
STA 529+70 - STA 532+46
STA 534+04 - STA 536+50



CURVE INFORMATION								PC SIDE OF CURVE				PT SIDE OF CURVE			
PC STATION	PI STATION	PT STATION	RADIUS (FT)	SUPER ELEVATION	DESIGN SPEED (MPH)	SUPER RUNOFF (L)	TANGENT RUNOUT (X)	NORMAL CROWN	FLAT	REVERSE CROWN	FULL SUPER BEGIN	FULL SUPER END	REVERSE CROWN	FLAT	NORMAL CROWN
590+50.93	592+97.34	595+43.68	12000	RC	55	51	51	589+66	590+17	590+68	590+68	595+27	595+27	595+78	596+29



CURVE INFORMATION								PC SIDE OF CURVE				PT SIDE OF CURVE			
PC	PI	PT	RADIUS	SUPER	DESIGN	SUPER	TANGENT	NORMAL		FULL		FULL		NORMAL	
STATION	STATION	STATION	(FT)	ELEVATION	SPEED	RUNOFF	RUNOUT	CROWN	FLAT	REVERSE	SUPER	SUPER	REVERSE	FLAT	CROWN
691+16.03	693+67.85	696+19.58	11000	RC	55	51	51	690+31	690+82	691+33	691+33	696+03	696+03	696+54	697+05
719+64.37	726+39.35	732+27.82	1450	5.70%	55	146	51	718+16	718+67	719+18	720+13	731+79	732+74	733+25	733+76



CURVE INFORMATION									PC SIDE OF CURVE				PT SIDE OF CURVE			
PC STATION	PI STATION	PT STATION	RADIUS (FT)	SUPER ELEVATION	DESIGN SPEED (MPH)	SUPER RUNOFF (L)	TANGENT RUNOUT (X)		NORMAL CROWN	FLAT	REVERSE CROWN	FULL SUPER BEGIN	FULL SUPER END	REVERSE CROWN	FLAT	NORMAL CROWN
758+52.03	761+52.54	764+52.61	6350	2.20%	55	56	51		757+64	758+15	758+66	758+71	764+34	764+39	764+90	765+41

The diagram illustrates a cross-section of a pavement repair. The top layer is labeled "2" HMA PAVEMENT" and is shown with a cross-hatch pattern. Below this is the "EXISTING ASPHALTIC SURFACE" and "EXISTING BASE COURSE", both indicated by dashed lines. A vertical line marks the "MATCH EXISTING" point. To the left of this match line, the area is labeled "REMOVING ASPHALTIC SURFACE MILLING". To the right, a "SAWCUT REQUIRED" is indicated, with a "2" MAX" dimension for the depth of the cut. The "EXISTING ASPHALTIC SURFACE BUTT JOINTS" are also labeled.

The diagram illustrates a road cross-section with three main sections: LANE, SHOULDER, and VAR. The LANE section has a width of 12.00m and a grade of 0.02%. The SHOULDER section has a width of 3.00m and a grade of 0.04%. The VAR section is a variable width area. A vertical line labeled 'C' is shown on the left. A dashed line labeled 'MATCH EXISTING' indicates the transition point between the SHOULDER and VAR sections.

ENTRANCE

3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES (FOR PE AND CE ONLY)

PAVED SHOULDER

FINISHED SHOULDER

BASE AGGREGATE DENSE $\frac{3}{4}$ "

EXISTING ASPHALTIC PAVEMENT

EXISTING ENTRANCE

VAR

EXISTING GRAVEL

SAWING ASPHALT REQ'D

REMOVING ASPHALTIC SURFACE ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES REQ'D MATCH EXISTING THICKNESS

R **

R **

D

L

* * *

RIGHT-OF-WAY

℄ HIGHWAY

℄

** RADIUS IS TANGENT AT PAVED SHOULDER E
R=30' FOR 0' TO 3' PAVED SHOULDER

```

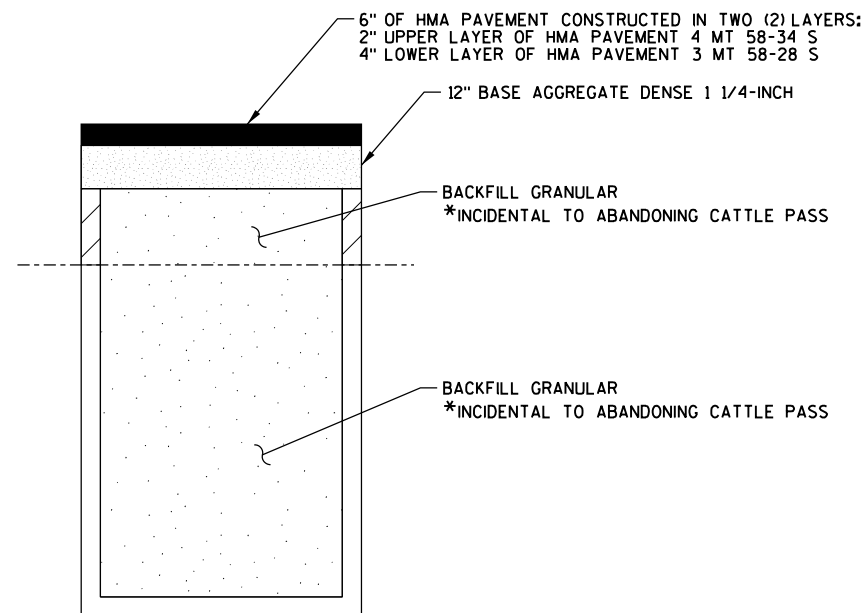
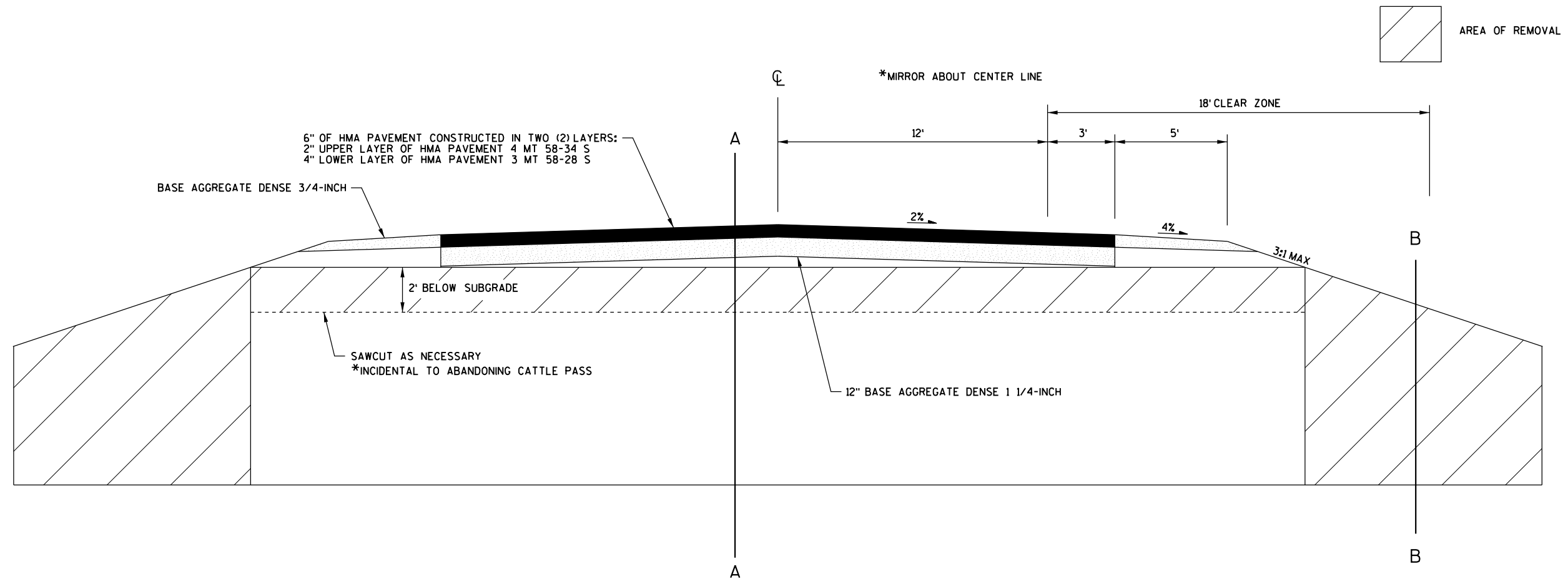
** RADIUS IS TANGENT AT PAVED SHOULDER EDGE
R=30' FOR 0' TO 3' PAVED SHOULDER
R=25' FOR GREATER THAN 3' PAVED SHOULDER
* 3' MIN OR TO FINISHED SHOULDER
  WHICH EVER IS GREATER.

```

Diagram illustrating the cross-section of a road shoulder and snowmobile trail. The diagram shows a central snowmobile trail (hatched area) flanked by shoulders. The left shoulder is labeled "EDGE OF HMA PAVEMENT" and "EDGE OF BASE AGGREGATE DENSE SHOULDER". The right shoulder is labeled "USH 51". Dimensions include a 15' typical width for the snowmobile trail, a 30' typical width for the shoulder, and a 5' width for the dense shoulder. A 0.04% slope is indicated for the shoulder.

	PROTECTIVE THERMOPLASTIC COATING AT SNOWMOBILE TRAIL CROSSING
	HMA PAVEMENT WIDENING 2-INCHES FOR SNOWMOBILE TRAIL CROSSING

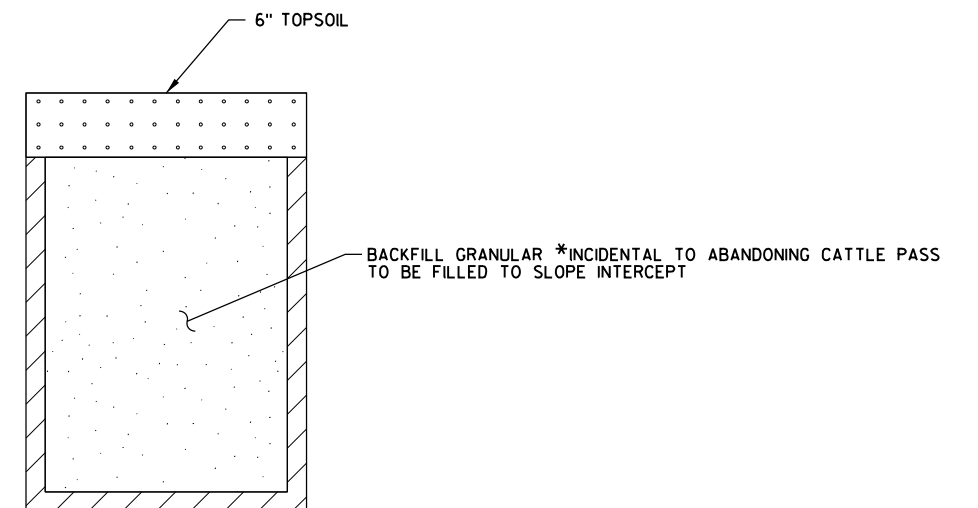
WISDOT/CADDS SHEET 42



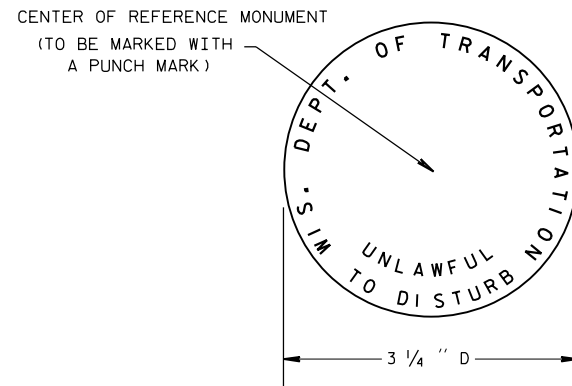
SECTION A - A

ABANDONING CATTLE PASS

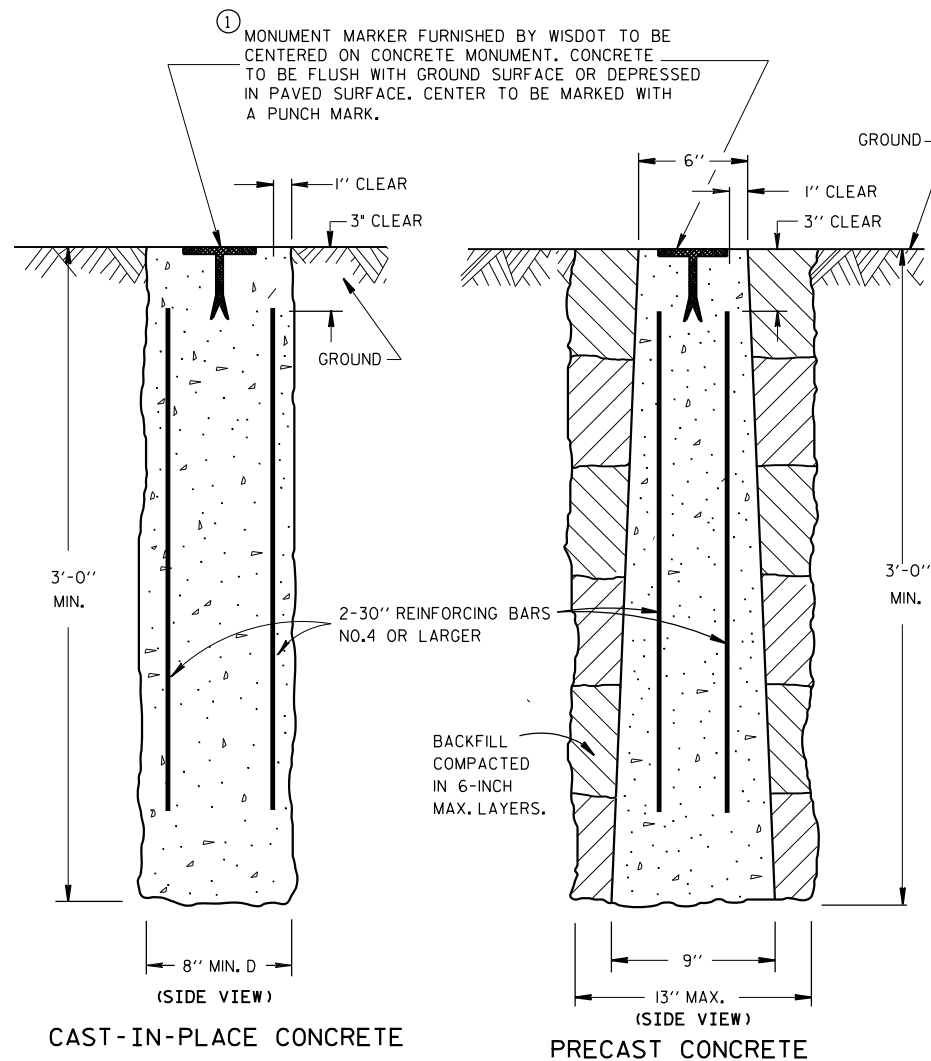
STA 746+50



SECTION B - B

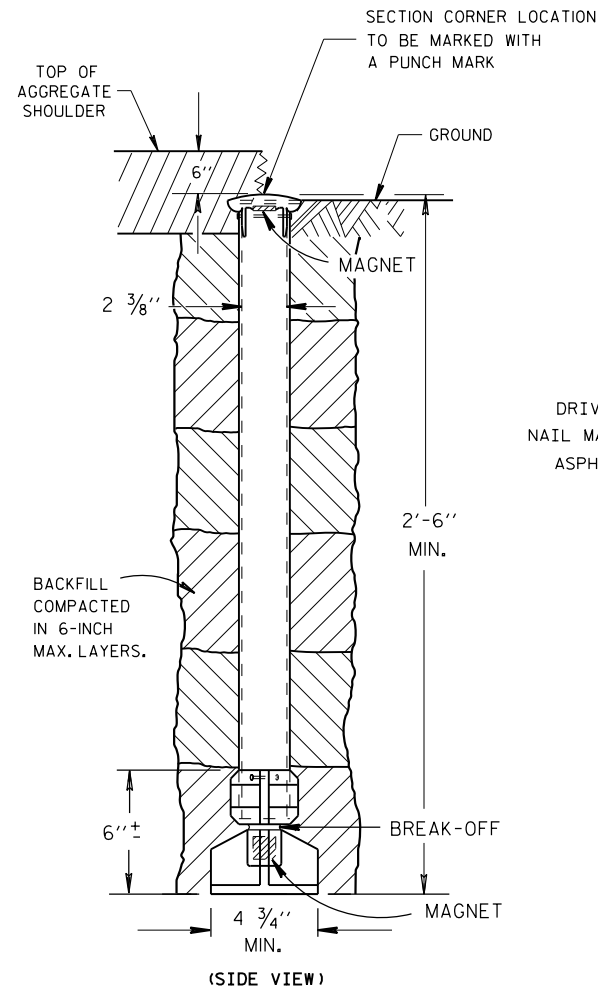


① WIS DOT MONUMENT MARKER LOGO



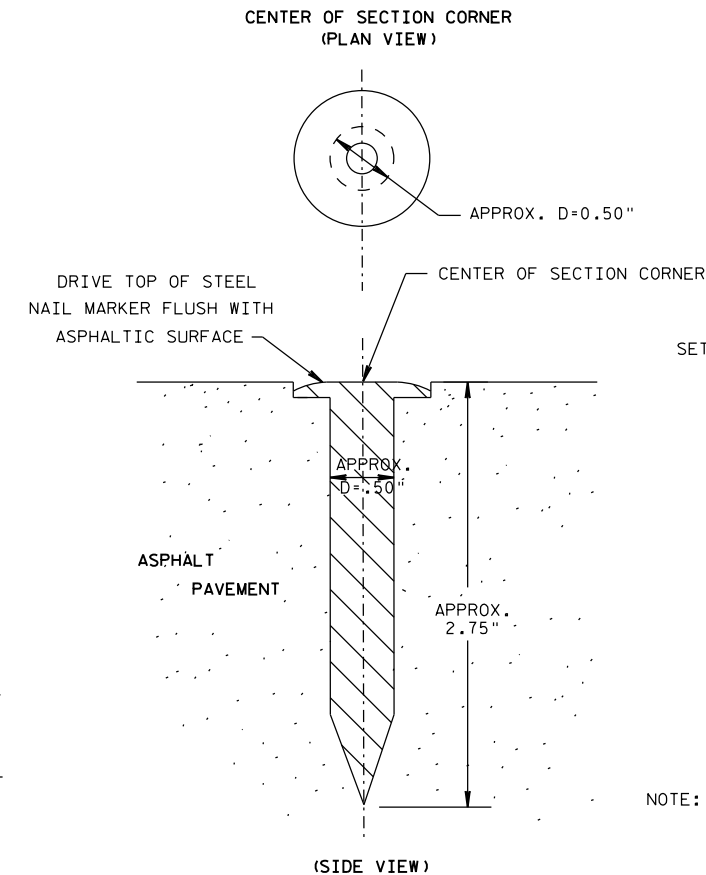
LANDMARK REFERENCE MONUMENTS (TIES ONLY)

SECTION CORNER MONUMENT AND LANDMARK REFERENCE MONUMENT DETAIL



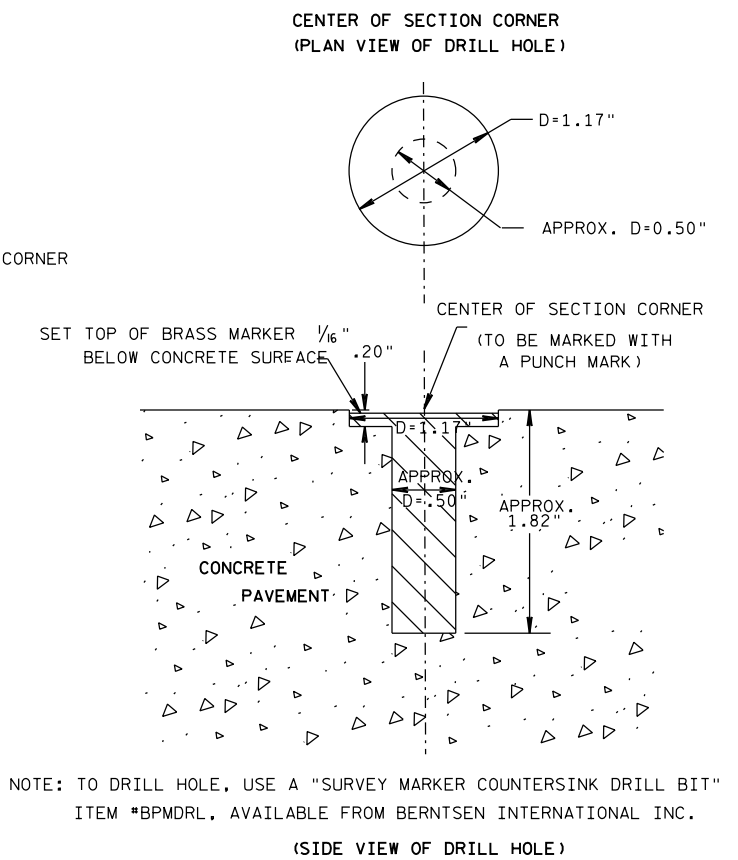
OUTSIDE OF PAVEMENT

① BERNSTEN A1BR30 ALUMINUM BREAK-OFF MONUMENT



IN ASPHALTIC PAVEMENT

① BERNSTEN SNM1 STEEL NAIL MARKER



IN CONCRETE PAVEMENT

① BERNSTEN BP -1 BRASS MARKER WITH ANCHOR PLUG

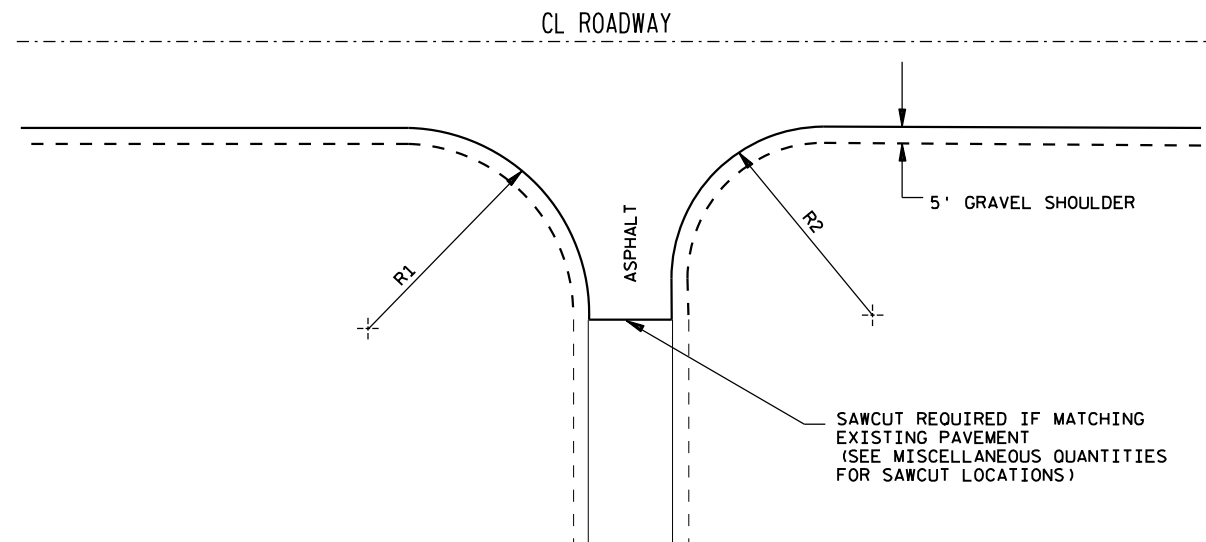
SECTION CORNER MONUMENTS

GENERAL NOTES

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

LOCATE LANDMARK REFERENCE MONUMENTS OUTSIDE THE CONSTRUCTION LIMITS AND WITHIN WISDOT RIGHT OF WAY. LOCATION TO BE APPROVED BY THE ENGINEER.

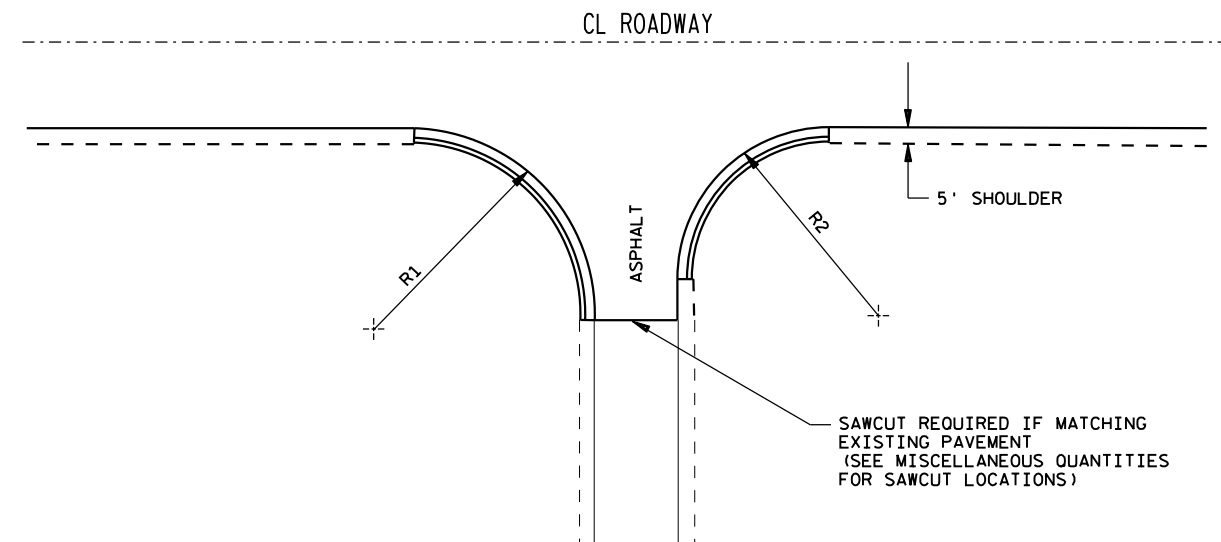
① THE REGION SURVEY COORDINATOR WILL SUPPLY.



TYPE "C" MODIFIED INTERSECTION

SIDE ROAD	R1 DISTANCE	STATION	OFFSET	R2 DISTANCE	STATION	OFFSET
WEBER ROAD	84'	31+95	101' LT	15.5'	30+92	38' LT
OLD 51 ROAD	111'	31+31	118' RT	5'	32+32	27' RT
RUSSELL BROTHERS ROAD	26'	41+86	45' LT	22'	41+23	41' LT
OLD 51 ROAD	22'	81+10	41' RT	11'	81+57	33.5' RT
SOUTH END ROAD	22'	278+97	41' RT	40'	279+90	58' RT
ISLAND LAKE ROAD	24'	280+39	46' LT	59'	279+43	81' LT
LANDING ROAD	47'	291+76	69' RT	24'	292+69	47' RT
BARTH ROAD	21'	328+37	46' LT	44'	327+55	59' LT
OLD 51 ROAD	25'	381+99	46' LT	22'	381+30	44' LT
SAND ROCK ROAD	24'	484+38	44' RT	18'	484+97	42' RT
CAMP 7 ROAD	13'	512+12	35' LT	9'	511+74	33' LT
LAYMANS ROAD	47'	517+93	64' LT	9.5'	517+20	32' LT
SHOMBERG PARK ROAD	35'	535+72	51' LT	30'	534+86	50' LT
SAND HILL ROAD	12'	590+81	35' LT	18'	590+32	40' LT
PALMQUIST ROAD	18'	615+38	40' LT	19'	614+85	40' LT
MOSINEE ROAD	30'	634+16	50' RT	34'	634+98	55' RT
LATHI ROAD	20'	641+37	42' LT	50'	640+54	64' LT
LYON ROAD	34'	667+09	54.5' RT	22'	667+87	44' RT
LYON ROAD	25'	667+99	42' LT	16'	667+34	39' LT
MUTANENE ROAD	30'	693+48	49' RT	23'	694+22	42' RT
TOWN HALL ROAD	20'	694+28	39' LT	27'	693+56	46' LT
CENTER DRIVE (CTH CC)	61'	724+13	78.5' RT	39'	725+53	60' RT
KOEHMSTEDT ROAD	50'	725+97	68' LT	39'	724+80	58' LT

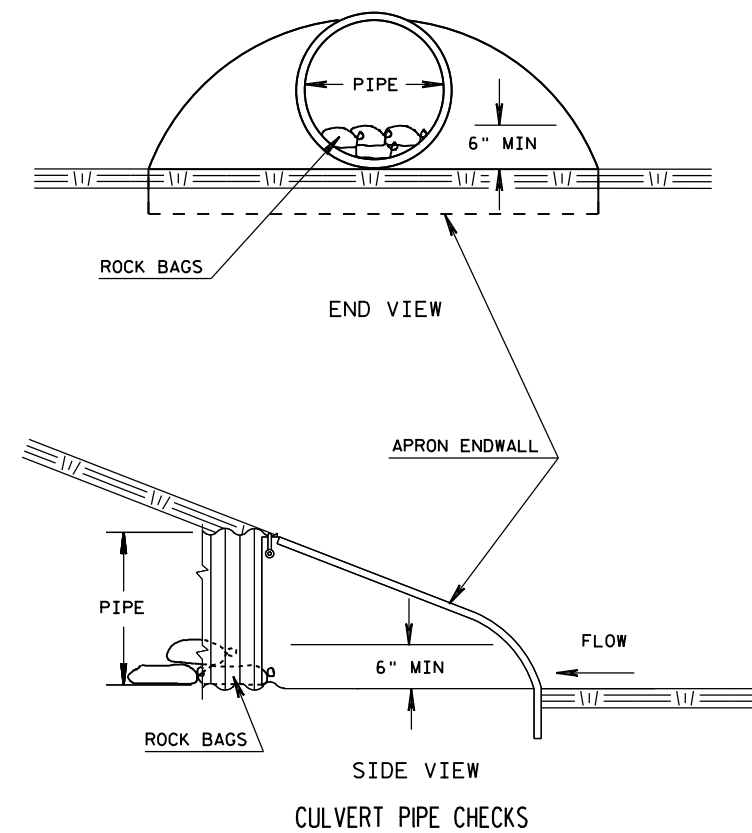
NOTE: CONTRACTOR TO FIELD VERIFY PRIOR TO REMOVING EXISTING ASPHALT

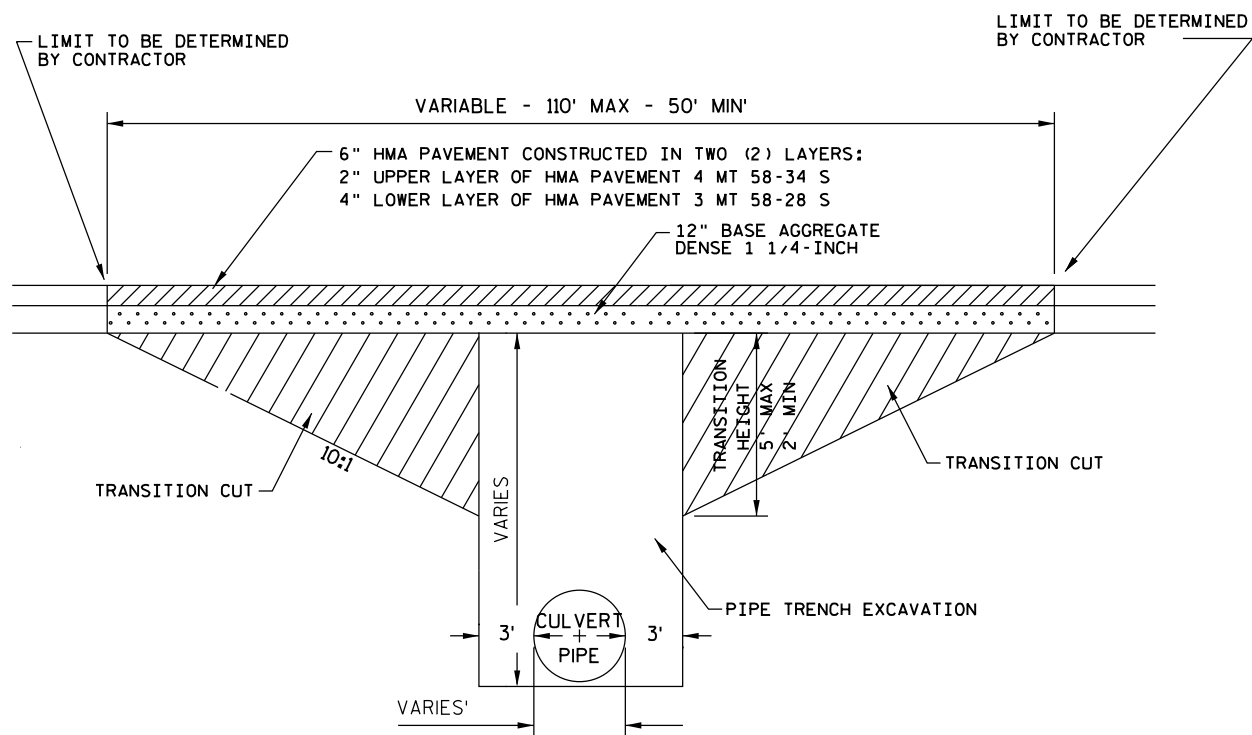


TYPE "D" INTERSECTION, MODIFIED

SIDE ROAD	R1 DISTANCE	STATION	OFFSET	R2 DISTANCE	STATION	OFFSET
CTH C	42'	756+37	65' RT	78.5'	757+90	102.5' RT
CTH C	49'	762+27	74' LT	40'	761+12	65' LT

NOTE: CONTRACTOR TO FIELD VERIFY PRIOR TO REMOVING EXISTING ASPHALT





QUANTITIES FOR INFORMATIONAL PURPOSES

CULVERT	TRANSITION HEIGHT FT	CUT VOL CY
36	5	765
58	5	725
71	5	685
75R	5	605
87R	5	575
89	5	720

NOTE: REUSE MATERIAL REMOVED IN TRANSITION CUT AND PIPE TRENCH EXCAVATIONS AS BACKFILL UNLESS OTHERWISE DIRECTED BY THE ENGINEER TO USE BACKFILL GRANULAR

PIPE TRENCH EXCAVATION, EXCLUDING TRANSITION CUT IS CONSIDERED INCIDENTAL TO PIPE INSTALLATION. TRANSITION CUT WILL BE PAID FOR AS CULVERT PIPE TRANSITION.

TRANSITION CUT WILL BE SHOULDER POINT TO SHOULDER POINT.

CULVERT PIPE TRANSITION

STA 38+81 CULVERT 36
STA 302+20 CULVERT 58
STA 464+93 CULVERT 71
STA 562+02 CULVERT 75R
STA 710+83 CULVERT 87R
STA 767+36 CULVERT 89

Approximate Station	Boring Number	LT. Shoulder	Mainline	RT. Shoulder
31+75	S-0 (LT) B-1 (Main) B-1A (RT)	17.62' LT 9" Asphalt 6" Base 0" Pulv Asph 0" Conc Pav	7.01' RT 14" Asphalt 6" Base 0" Pulv Asph 6" Conc Pav	17.25' RT 0" Asphalt 6" Base 0" Pulv Asph 0" Conc Pav
41+80	B-2 (Main)		4.82' LT 17" Asphalt 7" Base 0" Pulv Asph 7" Conc Pav	
51+78	B-3 (Main) S-1 (RT)		5.76' RT 15" Asphalt 9" Base 0" Pulv Asph 8" Conc Pav	13.5' RT 16" Asphalt 0" Base 0" Pulv Asph 0" Conc Pav
61+80	B-4 (Main)		5.76' RT 6" Asphalt 18" Base 0" Pulv Asph 6" Conc Pav	
71+82	B-5 (Main)		6.92' RT 4" Asphalt 5" Base 15" Pulv Asph 7" Conc Pav	
81+79	S-2 (LT) B-6 (Main)	13.73' LT 17" Asphalt	6.53' LT 5" Asphalt 5" Base 15" Pulv Asph 7" Conc Pav	
91+80	B-7 (Main)		6.56' RT 5.5" Asphalt 16.5" Base 0" Pulv Asph 8" Conc Pav	
101+85	B-8 (Main)		6.45' LT 4" Asphalt 4" Base 13" Pulv Asph 8" Conc Pav	
111+75	B-9 (Main) S-3 (RT)		6.81' RT 4.5" Asphalt 4.5" Base 13" Pulv Asph 7" Conc Pav	14.0' RT 15" Asphalt
121+81	B-10 (Main)		7.11' LT 5" Asphalt 5" Base 15" Pulv Asph 7" Conc Pav	
131+81	B-11 (Main)		6.90' RT 5" Asphalt 3" Base 19" Pulv Asph 8" Conc Pav	
281+85	S-8A (LT) B-26 (Main)	13.72' LT 13.25" Asphalt 16.75" Base	8.35' LT 13.25" Asphalt 11.75" Base 0" Pulv Asph 6" Conc Pav	
291+65	B-27 (Main) S-9 (RT)		6.34' RT 6.5" Asphalt 6.5" Base 9.5" Pulv Asph 6.5" Conc Pav	13.66' RT 6.5" Asphalt 6" Base

Approximate Station	Boring Number	LT. Shoulder	Mainline	RT. Shoulder
301+67	B-28 (Main)		6.40' LT 10" Asphalt 9.5" Base 0" Pulv Asph 7" Conc Pav	
311+62	B-29 (Main)		8.02' RT 11" Asphalt 9" Base 0" Pulv Asph 7" Conc Pav	
321+70	S-10 (LT) B-30 (Main)	16.0' LT 11.5" Asphalt 18.5" Base	7.58' LT 12" Asphalt 10.5" Base 0" Pulv Asph 6" Conc Pav	
331+64	B-31 (Main)		7.43' RT 11.5" Asphalt 10" Base 0" Pulv Asph 6.5" Conc Pav	
341+75	B-32 (Main)		6.31' LT 11.5" Asphalt 11.5" Base 0" Pulv Asph 7" Conc Pav	
351+74	B-33 (Main) S-11 (RT)		7.26' RT 12.75" Asphalt 8.75" Base 0" Pulv Asph 8" Conc Pav	13.07' RT 12.5" Asphalt 17.5" Base
361+83	B-34 (Main)		7.30' LT 10.5" Asphalt 6" Base 0" Pulv Asph 7" Conc Pav	
371+79	B-35 (Main)		8.45' RT 12" Asphalt 8.5" Base 0" Pulv Asph 8" Conc Pav	
381+89	S-2 (LT) B-36 (Main)	13.57' LT 12.5" Asphalt 17.5" Base	8.32' LT 12.25" Asphalt 9.75" Base 0" Pulv Asph 8" Conc Pav	
391+92	B-37 (Main)		6.32' RT 5.5" Asphalt 22.5" Base 0" Pulv Asph 6" Conc Pav	
401+95	B-38 (Main)		6.94' LT 5.5" Asphalt 24.5" Base 0" Pulv Asph 7" Conc Pav	
411+95	B-39 (Main) S-13 (RT)		5.51' RT 12" Asphalt 13" Base 0" Pulv Asph 7" Conc Pav	13.40' RT 12" Asphalt
422+00	B-40 (Main)		6.82' LT 11" Asphalt 17" Base 0" Pulv Asph 6" Conc Pav	

Approximate Station	Boring Number	LT. Shoulder	Mainline	RT. Shoulder
432+02	B-41 (Main)		4.39' RT 14" Asphalt 9" Base 0" Pulv Asph 6" Conc Pav	
442+27	S-14 (LT) B-42 (Main)	13.79' LT 13" Asphalt 7" Base	6.07' LT 13" Asphalt 0" Base 0" Pulv Asph 8" Conc Pav	
452+30	B-43 (Main)		5.11' RT 11" Asphalt 8" Base 0" Pulv Asph 4" Conc Pav	
462+44	B-44 (Main)		6.70' LT 12" Asphalt 6" Base 0" Pulv Asph 4" Conc Pav	
472+50	B-45 (Main) S-15 (RT)		6.32' RT 12" Asphalt 7" Base 0" Pulv Asph 6" Conc Pav	13.26' RT 13" Asphalt
482+60	B-46 (Main)		7.75' LT 10" Asphalt 9" Base 0" Pulv Asph 6" Conc Pav	
492+70	B-47 (Main)		5.59' RT 13" Asphalt 8" Base 0" Pulv Asph 6" Conc Pav	
502+96	S-16 (LT) B-48 (Main)	12.82' LT 11" Asphalt	6.30' LT 11" Asphalt 9" Base 0" Pulv Asph 6" Conc Pav	
512+10	B-49 (Main)		5.52' RT 12" Asphalt 9" Base 0" Pulv Asph 6" Conc Pav	
521+89	B-50 (Main)		6.55' LT 12" Asphalt 9" Base 0" Pulv Asph 6" Conc Pav	
529+49	B-51 (Main) S-17 (RT)		5.97' RT 10.5" Asphalt 4" Base 0" Pulv Asph 7" Conc Pav	13.28' RT 11" Asphalt 8" Conc Pav
542+25	B-52 (Main)		5.98' LT 10" Asphalt 10" Base 0" Pulv Asph 6" Conc Pav	
552+16	B-53 (Main)		5.93' RT 13" Asphalt 8" Base 0" Pulv Asph 6" Conc Pav	

Approximate Station	Boring Number	LT. Shoulder	Mainline	RT. Shoulder
562+25	S-18 (LT) B-54 (Main)	13.68' LT 12.5" Asphalt	6.95' LT 12" Asphalt 9" Base 0" Pulv Asph 7" Conc Pav	
572+22	B-55 (Main)		5.72' RT 15" Asphalt 7" Base 0" Pulv Asph 6" Conc Pav	
582+33	B-56 (Main)		7.48' LT 14" Asphalt 7" Base 0" Pulv Asph 6" Conc Pav	
592+42	B-57 (Main) S-19 (RT)		5.91' RT 16" Asphalt 7" Base 0" Pulv Asph 6" Conc Pav	13.54' RT 17" Asphalt
602+33	B-58 (Main)		6.65' LT 15" Asphalt 7" Base 0" Pulv Asph 5" Conc Pav	
612+35	B-59 (Main)		6.38' RT 15" Asphalt 5" Base 0" Pulv Asph 7" Conc Pav	
622+54	S-20 (LT) B-60 (Main)	13.50' LT 13" Asphalt	6.66' LT 11" Asphalt 9" Base 0" Pulv Asph 6" Conc Pav	
632+70	B-61 (Main)		6.33' RT 11" Asphalt 10" Base 0" Pulv Asph 6" Conc Pav	
642+96	B-62 (Main)		5.93' LT 14" Asphalt 0" Base 0" Pulv Asph 6" Conc Pav	
653+19	B-63 (Main) S-21 (RT)		6.36' RT 12" Asphalt 8" Base 0" Pulv Asph 6" Conc Pav	13.73' RT 11" Asphalt
663+40	B-64 (Main)		6.17' LT 13" Asphalt 9" Base 0" Pulv Asph 6" Conc Pav	
673+65	B-65 (Main)		6.24' RT 14" Asphalt 8" Base 0" Pulv Asph 6" Conc Pav	
683+98	S-22 (LT) B-66 (Main)	13.37' LT 13" Asphalt	6.81' LT 13" Asphalt 8" Base 0" Pulv Asph 6" Conc Pav	

Approximate Station	Boring Number	LT. Shoulder	Mainline	RT. Shoulder
694+19	B-67 (Main)		7.26' RT 15" Asphalt 8" Base 0" Pulv Asph 7" Conc Pav	
704+35	B-68 (Main)		6.71' LT 11" Asphalt 9" Base 0" Pulv Asph 7" Conc Pav	
714+58	B-69 (Main) S-23 (RT)		6.99' RT 15" Asphalt 7" Base 0" Pulv Asph 6" Conc Pav	13.43' RT 10.5" Asphalt
725+60	B-70 (Main)		7.49' LT 16" Asphalt 6" Base 0" Pulv Asph 7" Conc Pav	
734+95	B-71 (Main)		6.19' RT 14" Asphalt 6" Base 0" Pulv Asph 6" Conc Pav	
745+10	S-24 (LT) B-72 (Main)	13.60' LT 12" Asphalt 6" Base	6.62' LT 12.5" Asphalt 6.5" Base 0" Pulv Asph 7" Conc Pav	
755+33	B-73 (Main)		6.34' RT 20" Asphalt 8" Base 0" Pulv Asph 6" Conc Pav	
764+58	B-74 (Main)		8.31' LT 14" Asphalt 28" Base 0" Pulv Asph 6" Conc Pav	

EXISTING CROSS SLOPES

STATION	CROSS SLOPE (%)	
	LT	RT
19+65.00	2.2	-1.8
20+00.00	0.5	-4.2
21+00.00	-0.5	-4.2
22+00.00	-5.1	-5.6
23+00.00	-5.1	-5.8
24+00.00	-5.1	-5.7
25+00.00	-5.3	-5.4
26+00.00	-5.4	-5.4
27+00.00	-4.9	-5.7
28+00.00	-4.9	-5.6
29+00.00	-5.2	-5.5
30+00.00	-5.7	-5.6
31+00.00	-4.9	-5.9
32+00.00	-4.9	-5.9
33+00.00	-5.4	-6.4
34+00.00	-5.4	-6.2
35+00.00	-5.4	-5.8
36+00.00	-5.3	-5.9
37+00.00	-5.1	-6.1
38+00.00	-5.4	-5.9
39+00.00	-5.8	-5.5
40+00.00	-5.4	-5.8
41+00.00	-5.2	-6.0
42+00.00	-5.1	-5.9
43+00.00	-5.3	-5.8
43+85.67	-4.4	-4.2
47+18.10	1.3	-1.8
50+60.89	1.9	-1.7
54+05.64	1.7	-2.5
57+63.09	2.1	-2.6
61+29.29	1.8	-2.2
64+81.08	2.2	-2.7
68+43.16	2.0	-2.5
71+91.74	2.1	-2.2
75+42.34	2.4	-2.6
78+95.73	1.9	-2.0
82+08.55	-2.2	-2.6
83+00.00	-3.1	-4.5
84+00.00	-4.2	-4.9
85+00.00	-4.5	-4.5
86+00.00	-4.3	-4.6
87+00.00	-4.2	-4.9
87+64.93	-4.1	-5.0
91+11.75	2.9	-1.4
94+46.42	2.1	-1.8
97+78.67	2.4	-1.8
101+04.73	2.4	-2.2
104+49.29	2.1	-2.2
107+92.13	2.5	-1.8
111+27.67	1.6	-1.6
114+65.51	1.7	-2.2
117+94.70	2.5	-3.2
121+15.16	1.4	-1.9
124+52.06	2.2	-3.1
126+67.14	2.1	-2.8
127+65.21	1.6	-2.2
130+00.00	4.6	-5.0
130+96.80	1.8	-2.3
134+04.86	2.2	-2.5
137+27.11	2.2	-2.3
275+00.00	1.9	-2.0
276+00.00	1.9	-1.9

FOR INFORMATION ONLY

EXISTING CROSS SLOPES

STATION	CROSS SLOPE (%)	
	LT	RT
276+00.00	1.9	-1.9
277+00.00	2.4	-2.1
277+20.00	2.9	-2.4
277+74.09	2.9	-2.4
278+76.32	2.1	-2.8
279+78.99	4.3	-2.6
280+87.25	3.0	-2.0
281+90.03	2.1	-2.5
282+88.58	2.1	-2.0
283+91.20	1.9	-2.1
287+15.57	1.8	-1.8
290+17.02	2.2	-1.8
293+36.43	2.0	-2.2
296+43.94	2.0	-1.8
299+54.97	1.9	-1.9
302+62.87	1.9	-2.3
305+73.06	1.6	-1.9
308+67.90	1.7	-4.1
311+54.80	1.6	-2.1
314+66.65	1.8	-1.7
315+64.11	2.2	-1.7
320+61.90	2.0	-2.5
325+65.79	1.4	-2.0
329+82.18	2.0	-2.0
333+19.98	2.0	-2.0
336+39.72	2.1	-2.1
339+48.87	1.9	-2.0
342+69.36	1.4	-1.5
345+88.94	1.6	-1.7
348+87.23	1.9	-2.0
352+06.07	1.8	-1.7
355+23.43	1.9	-2.0
358+50.61	2.1	-2.1
361+85.62	2.0	-2.3
364+99.83	2.0	-2.2
368+39.69	1.8	-1.6
371+87.55	1.9	-2.4
375+12.70	2.1	-2.1
378+62.18	2.1	-2.0
381+78.80	2.3	-2.1
385+10.83	-4.6	-4.5
386+00.00	-4.4	-4.6
387+00.00	-4.4	-4.6
388+00.00	-4.3	-4.4
389+00.00	-4.2	-4.5
390+00.00	-2.0	-4.6
391+00.00	1.2	-2.5
391+52.30	1.2	-2.6
394+80.12	1.9	-2.4
397+99.34	1.8	-2.1
401+22.03	1.5	-2.1
404+45.08	1.7	-1.7
407+70.32	2.3	-1.8
410+83.54	2.3	-2.0
413+94.57	2.0	-2.0
417+12.99	2.0	-1.5
420+29.45	1.7	-2.7
423+47.43	2.1	-2.2
426+57.94	2.1	-1.7
429+81.35	2.5	2.5
433+79.08	2.0	0.3
437+01.84	2.1	-2.1

FOR INFORMATION ONLY

EXISTING CROSS SLOPES

STATION	CROSS SLOPE (%)	
	LT	RT
440+21.95	2.0	-2.3
443+43.27	2.9	-2.6
446+57.15	2.5	-2.3
449+75.50	2.0	-2.0
452+81.76	2.3	-2.5
455+95.57	2.4	-2.2
458+89.64	2.4	-2.2
461+89.37	2.4	-2.2
465+02.90	2.4	-2.4
468+13.72	2.2	-2.2
471+22.91	2.5	-2.3
474+34.04	1.9	-1.8
477+41.27	2.0	-2.5
480+57.90	2.2	-1.6
483+66.01	2.5	-1.9
486+66.41	1.9	-1.8
490+76.27	2.3	-2.2
493+88.06	0.0	-2.3
496+92.76	-1.8	-3.8
500+01.24	-0.2	-2.2
503+06.40	2.5	-2.3
506+08.07	2.3	-2.2
509+19.62	2.1	-2.1
512+30.79	2.5	-2.9
515+34.32	1.9	-2.0
518+30.52	1.8	-1.9
521+26.70	2.2	-2.1
524+20.67	2.1	-2.5
527+30.08	1.8	-2.5
530+00.00	2.1	-2.1
530+45.70	3.1	-2.1
536+17.36	1.7	-2.1
539+23.35	2.5	-2.0
542+19.41	2.3	-2.0
545+60.62	2.3	-1.9
548+76.31	1.8	-1.7
551+83.57	2.1	-1.8
554+85.68	1.7	-1.9
557+91.60	2.1	-1.8
560+99.14	2.2	-1.9
565+06.11	2.2	-2.5
567+95.62	2.3	-2.1
571+16.80	2.1	-1.9
574+19.46	1.8	-2.4
577+36.62	2.1	-2.1
580+61.63	2.2	-2.1
583+72.65	1.8	-2.3
586+68.95	2.2	-2.6
589+77.67	2.7	-1.7
592+76.14	3.2	2.3
595+77.49	2.0	-1.6
598+89.20	2.1	-2.5
601+94.28	1.4	-1.8
605+10.19	2.0	-2.5
608+11.85	1.9	-2.3
611+17.77	1.8	-2.0
614+26.47	2.1	-2.3
617+34.73	2.3	-2.5
620+38.02	2.0	-2.1
623+35.59	2.0	-2.2
626+25.99	1.9	-2.2
629+26.87	2.0	-2.1

FOR INFORMATION ONLY

EXISTING CROSS SLOPES

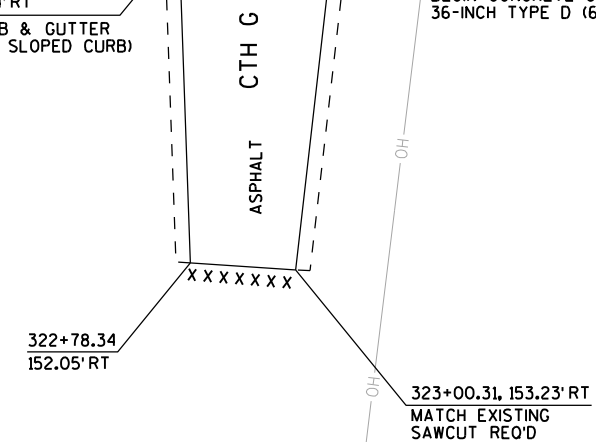
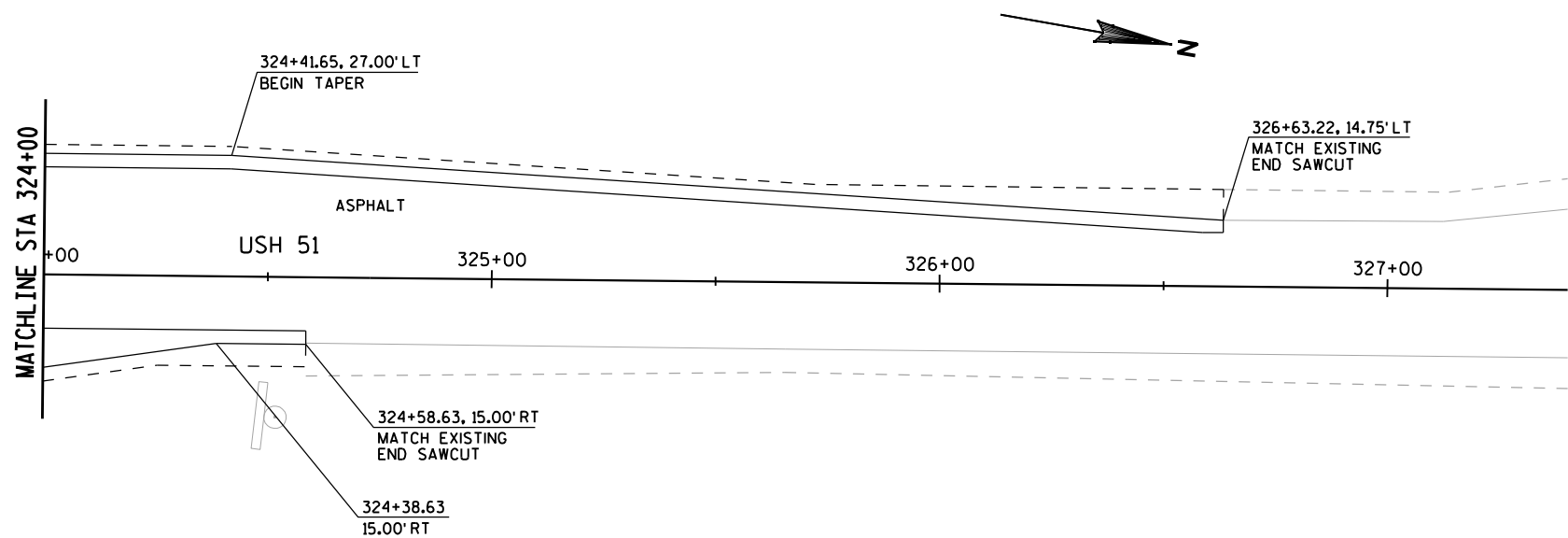
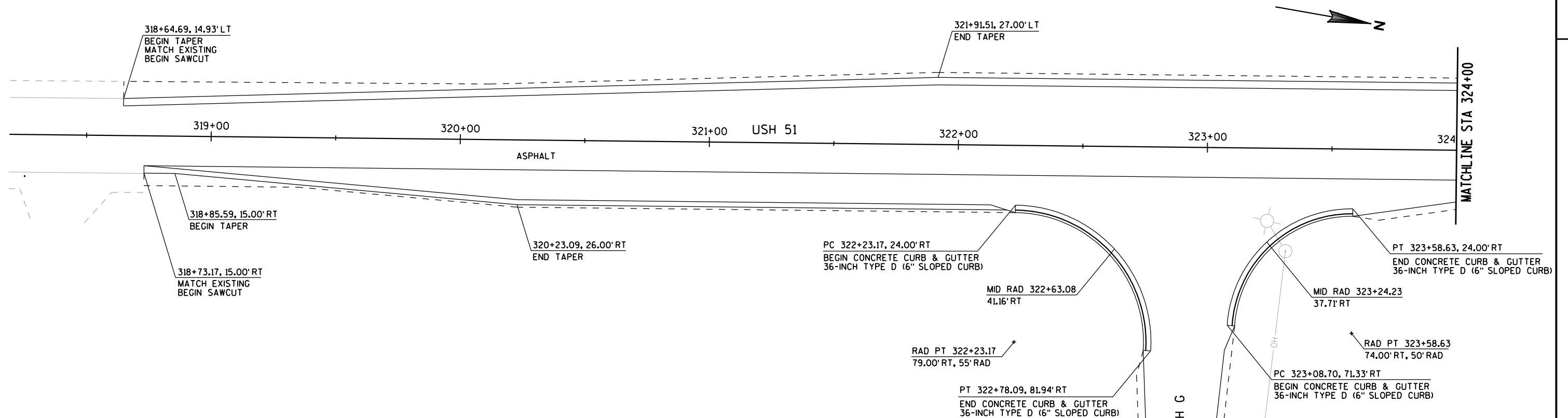
STATION	CROSS SLOPE (%)	
	LT	RT
632+18.60	1.8	-2.1
635+21.65	1.8	-2.9
638+15.67	2.3	-2.1
641+29.96	4.8	-2.5
644+32.76	2.0	-2.1
647+42.31	2.2	-2.1
650+55.70	3.0	-3.2
653+48.98	2.0	-2.4
656+45.38	2.0	-2.5
659+41.63	2.0	-2.3
662+34.09	2.0	-2.2
665+32.82	2.2	-2.3
668+56.13	2.2	-2.3
672+43.99	2.1	-2.4
675+40.22	2.1	-2.3
678+50.00	2.2	-2.0
681+45.70	2.1	-2.4
684+55.68	2.4	-2.2
687+60.97	2.4	-2.4
690+63.95	-0.1	-2.3
693+49.04	-1.5	-3.7
696+51.89	0.4	-2.0
699+45.11	2.0	-2.0
702+42.09	2.6	-2.2
705+36.25	2.2	-2.2
708+21.27	2.0	-1.9
711+17.45	1.2	-0.6
714+08.76	2.0	-2.4
717+10.48	2.1	-2.4
719+68.61	4.1	3.4
720+00.00	4.2	4.4
721+00.00	6.2	5.0
722+00.00	5.6	5.8
723+00.00	5.2	5.9
724+00.00	6.0	4.7
725+00.00	6.0	4.9
726+00.00	6.9	5.4
727+00.00	6.2	5.4
728+00.00	6.3	5.8
729+00.00	6.2	5.9
730+00.00	6.2	6.2
731+00.00	6.3	5.8
732+00.00	6.2	5.6
733+00.00	3.2	2.8
733+66.48	1.7	-0.4
736+76.76	1.8	-2.0
739+81.56	1.8	-2.2
742+87.78	2.1	-2.1
745+82.71	1.8	-2.2
748+88.85	1.1	-1.7
751+82.76	1.5	-2.0
755+74.37	1.6	-1.9
758+65.64	-1.2	-2.8
759+00.00	-1.7	-3.0
760+00.00	-2.5	-3.1
761+00.00	-2.4	-3.1
762+00.00	-2.4	-3.0
763+00.00	-2.3	-2.9
763+54.57	-2.3	-3.1
766+62.88	1.8	-2.4
769+69.33	1.8	-2.3
772+89.47	2.0	-1.9

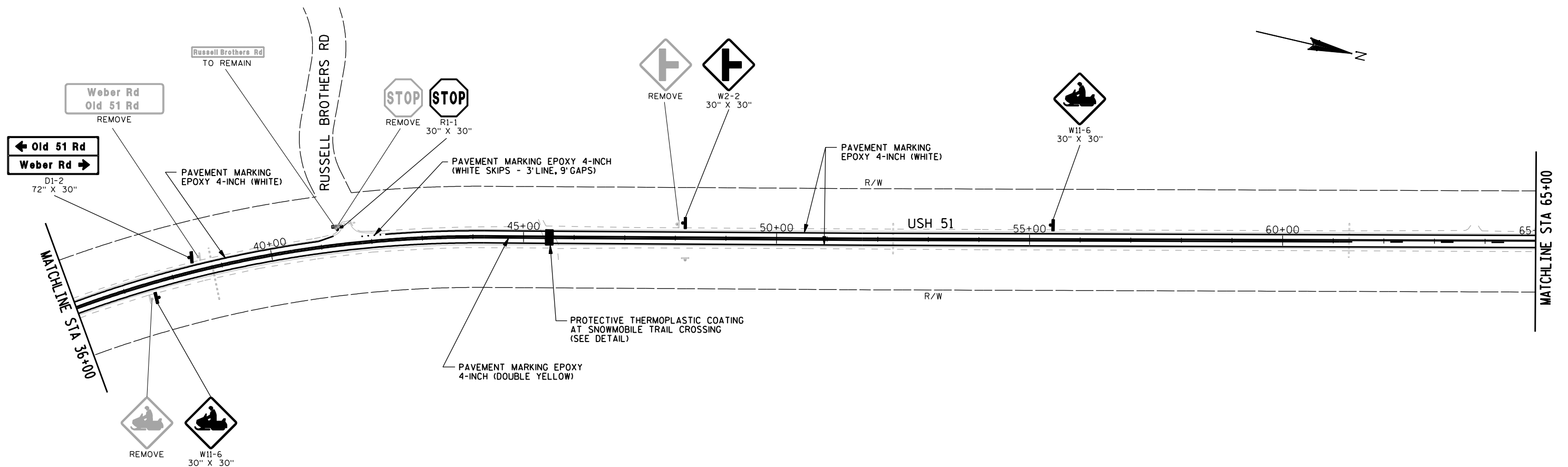
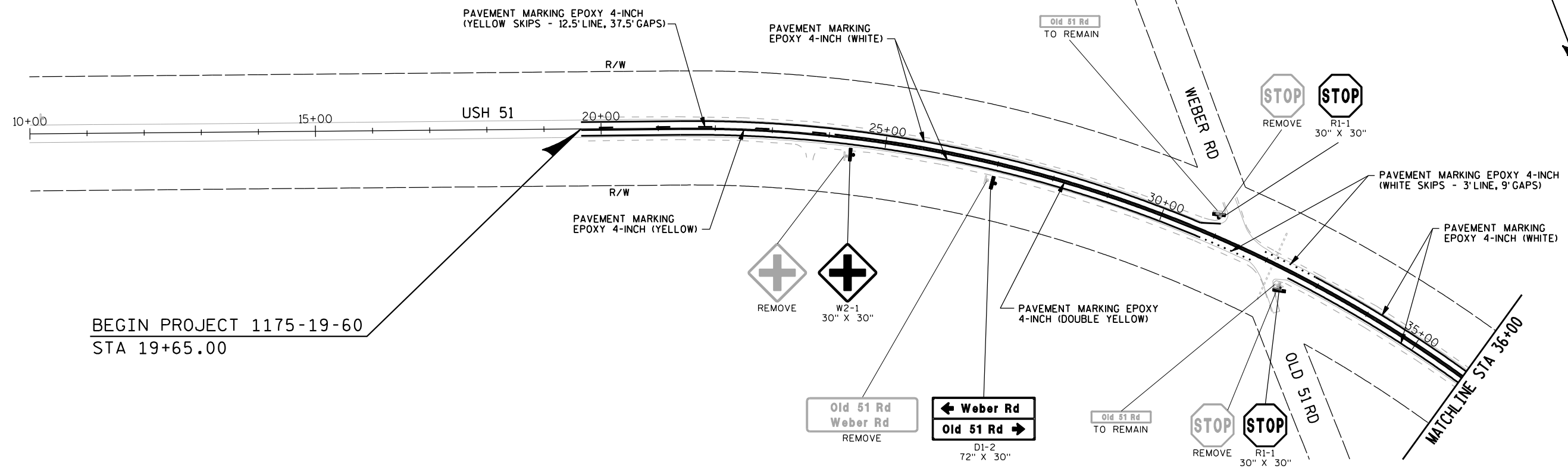
FOR INFORMATION ONLY

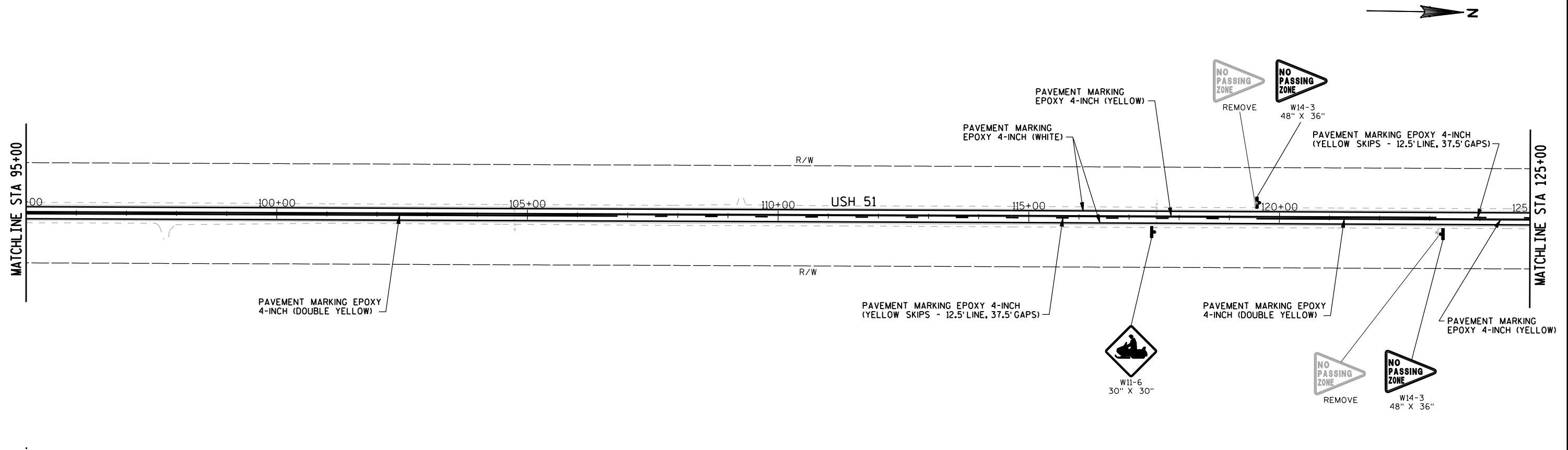
EXISTING CROSS SLOPES

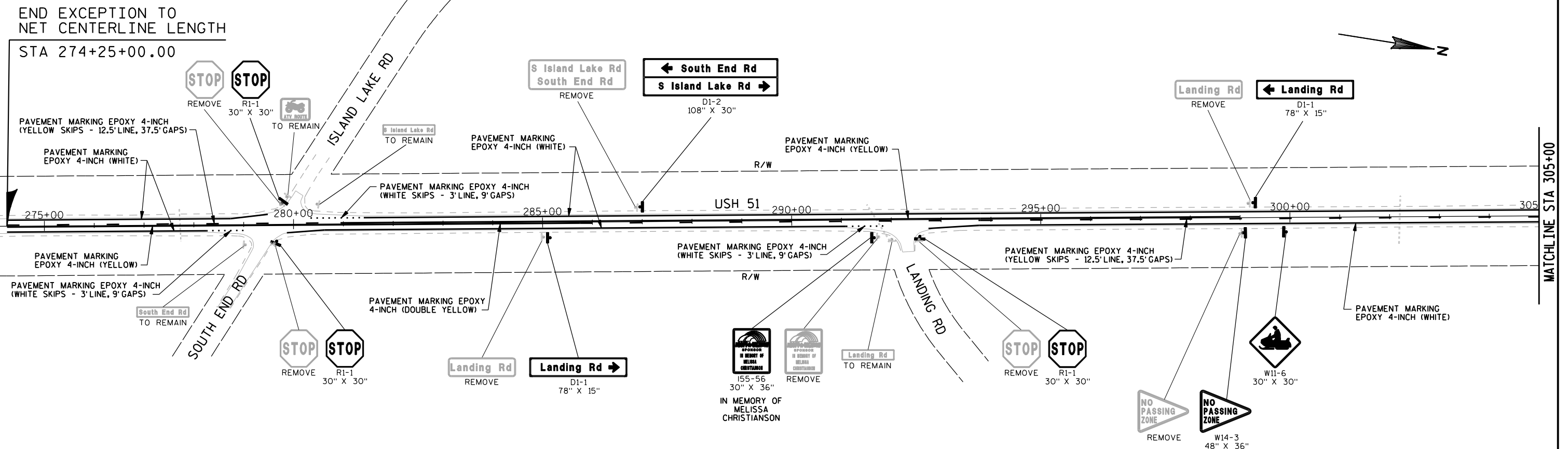
STATION	CROSS SLOPE (%)	
	LT	RT
775+94.94	2.2	-2.1
778+96.18	2.0	-2.0
781+96.21	2.1	-1.9
785+06.25	2.2	-2.1
788+21.06	2.3	-2.0
790+54.49	2.3	-1.9
792+64.00	2.3	-1.9

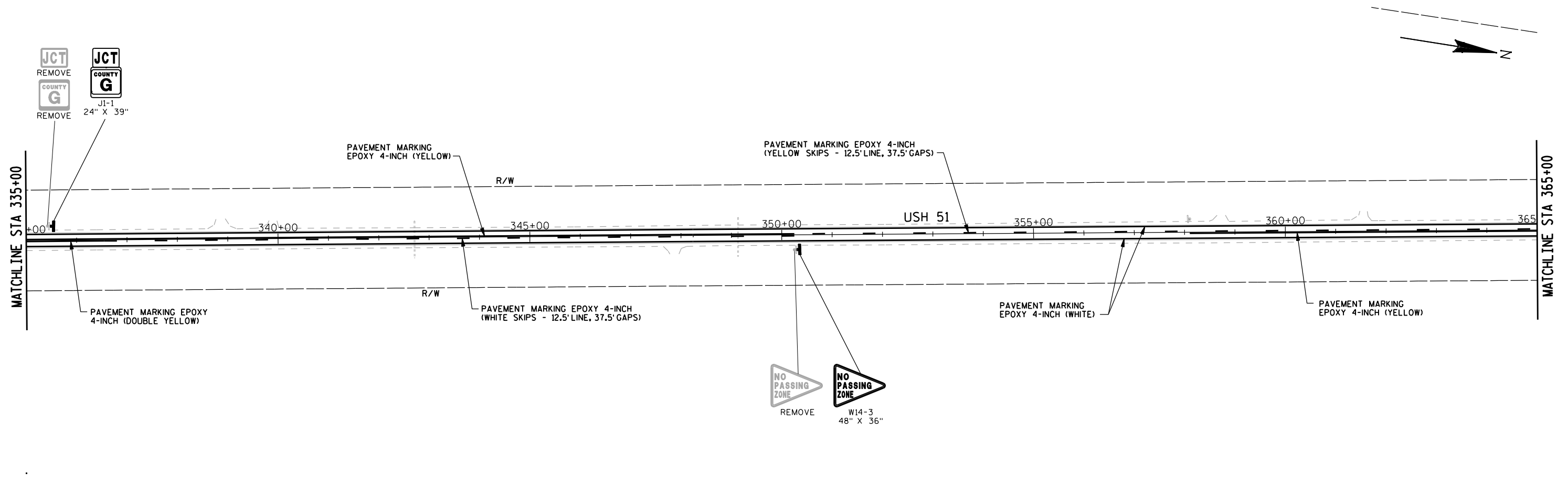
FOR INFORMATION ONLY

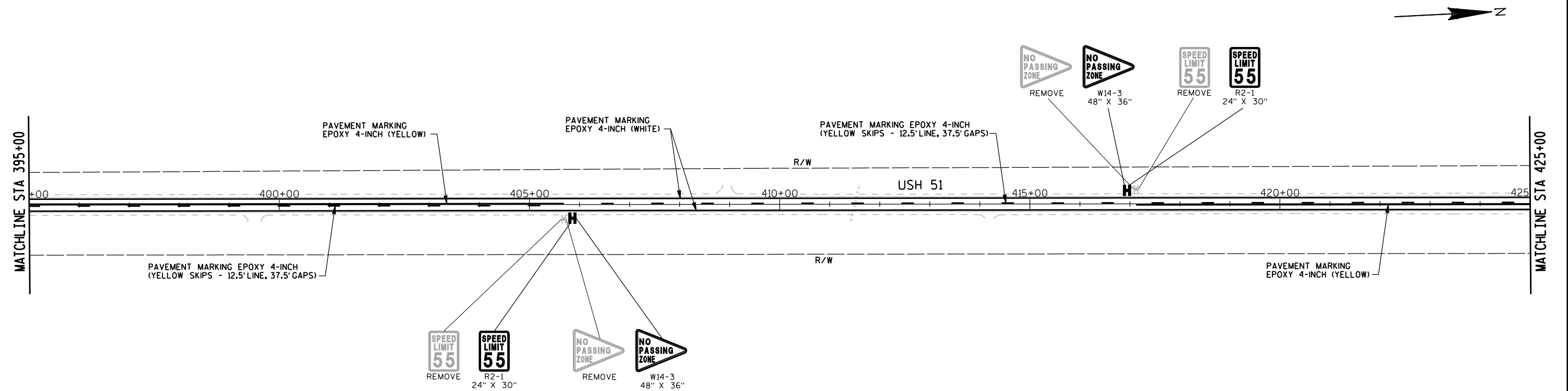
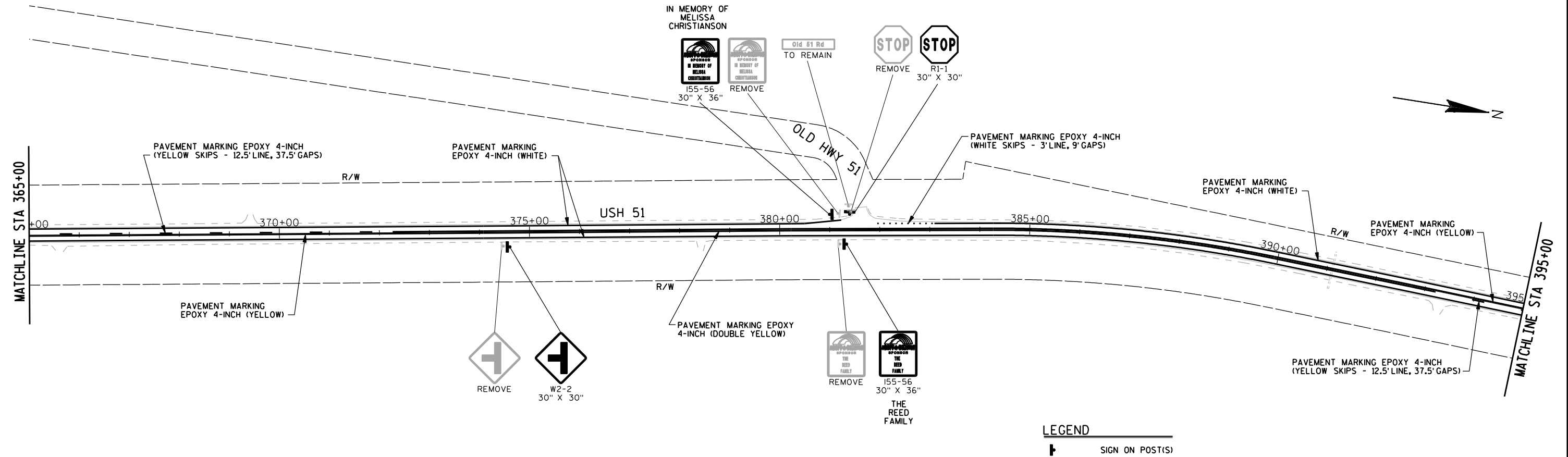


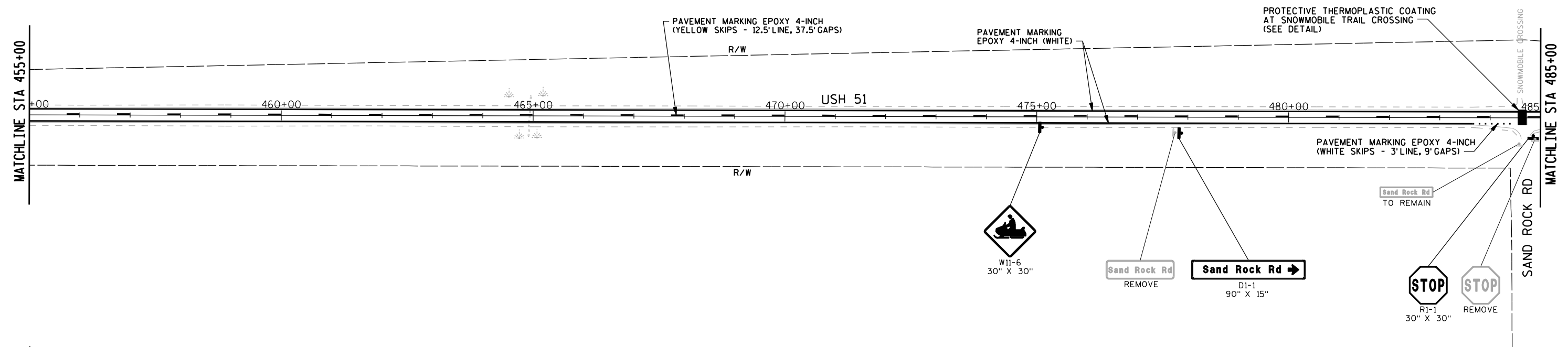
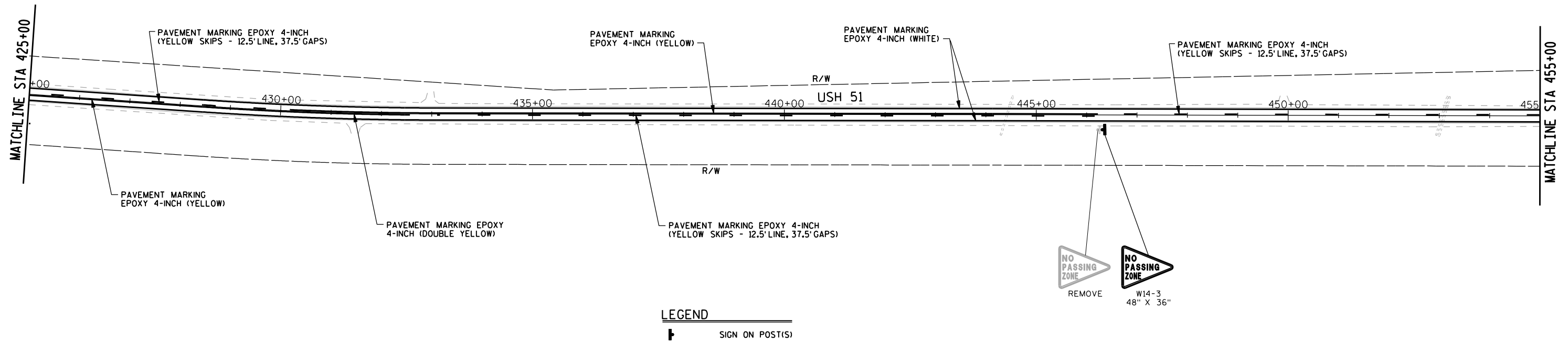




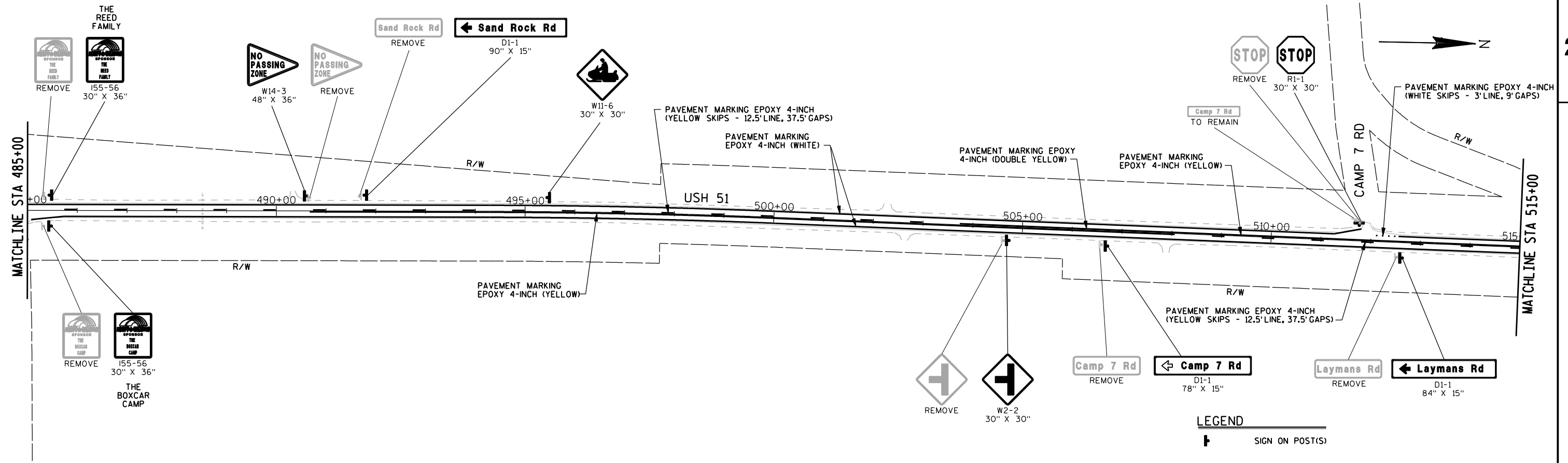




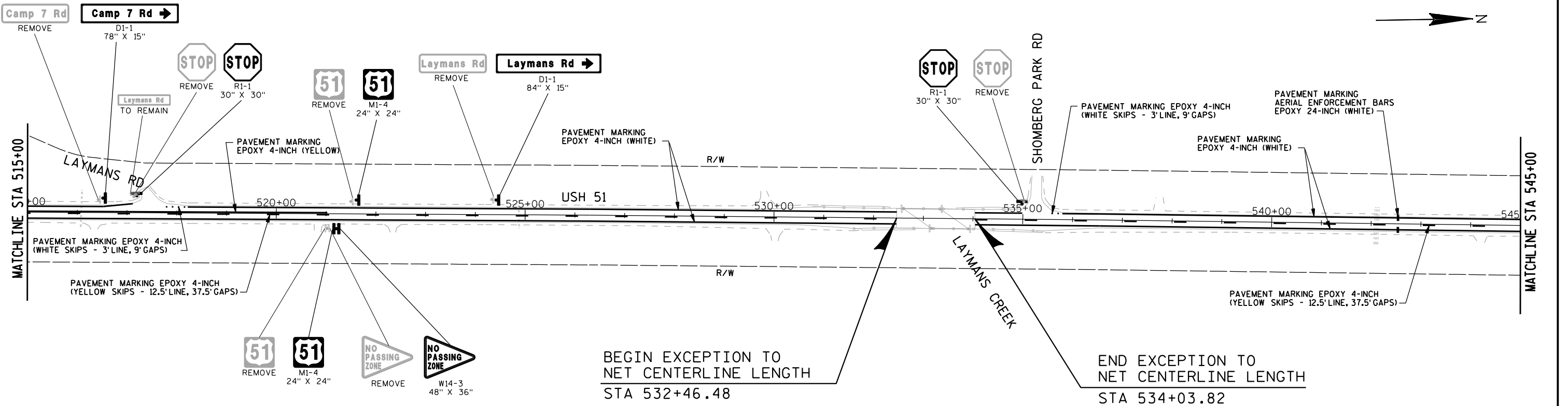




2



2



PROJECT NUMBER: 1175-19-60

HWY: USH 51

COUNTY: IRON

PERMANENT SIGNING AND PAVEMENT MARKINGS

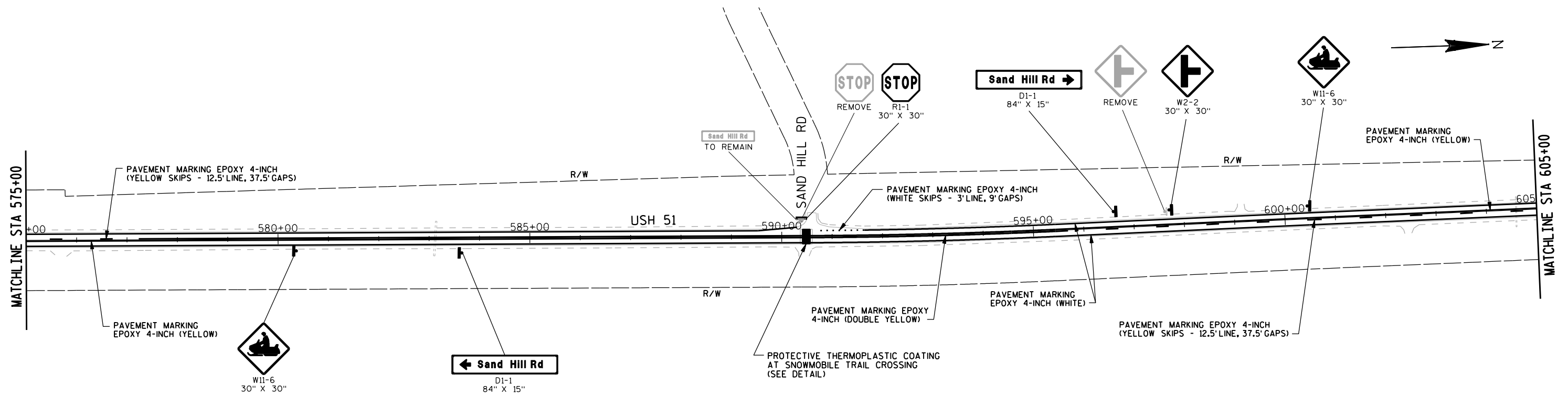
SHEET

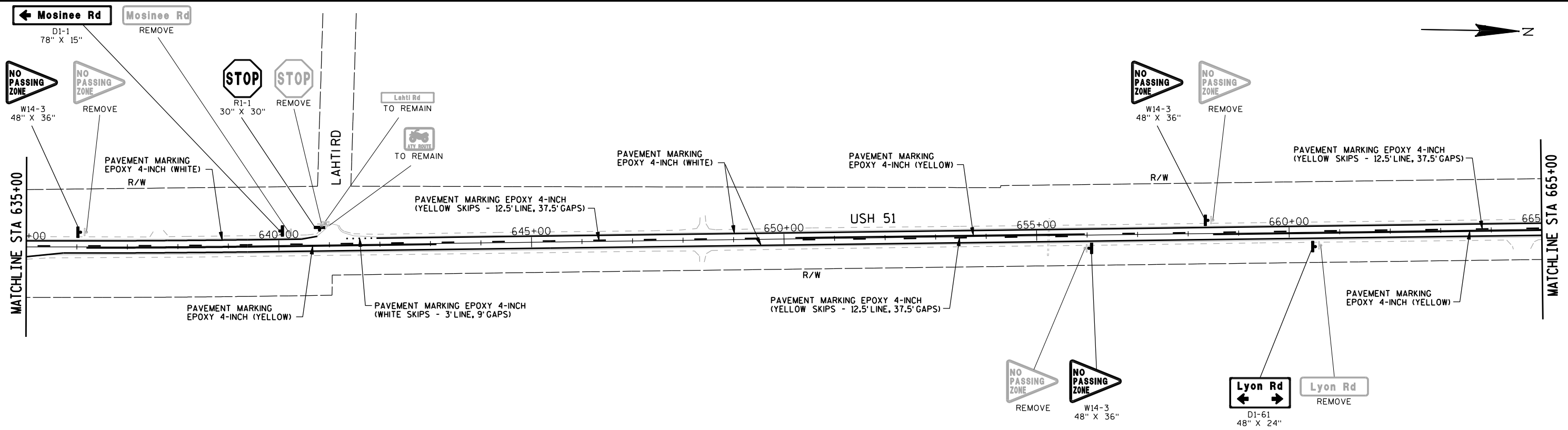
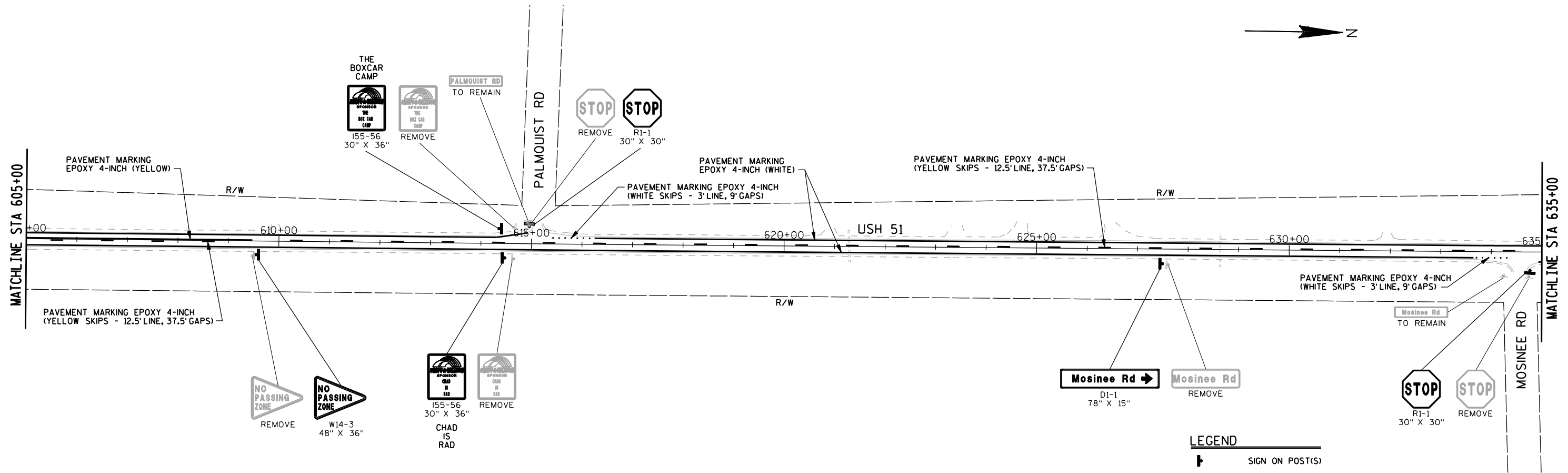
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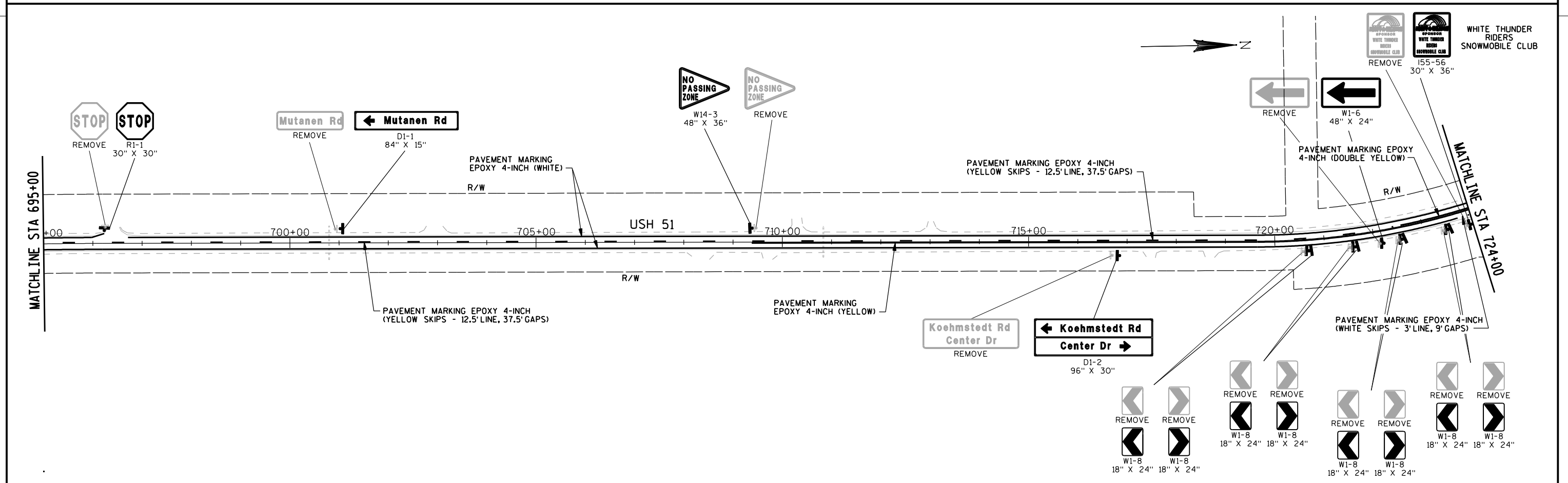
FILE NAME: p:\60268701\000.cad\001.drawings\sheet\project 1175-19-60\024507.pm.ps.dgn
BATCH PRINT SHEET 7 OF 12PRINTER DRIVER: L:\Library\TPN_CADstds\Workspace\CLIENTS\WisDOT\MicroStation\Resources\MS.Printing\Printer_Drivers\ET_PDF.11 x 17.plt
PEN TABLE: P:\60268701\000.CAD\001.Drawings\Sheet\Project 1175-19-60\MS.Printing\Pen.Tables\ET_WisDOT.tblPLOT DATE: 11/1/2013
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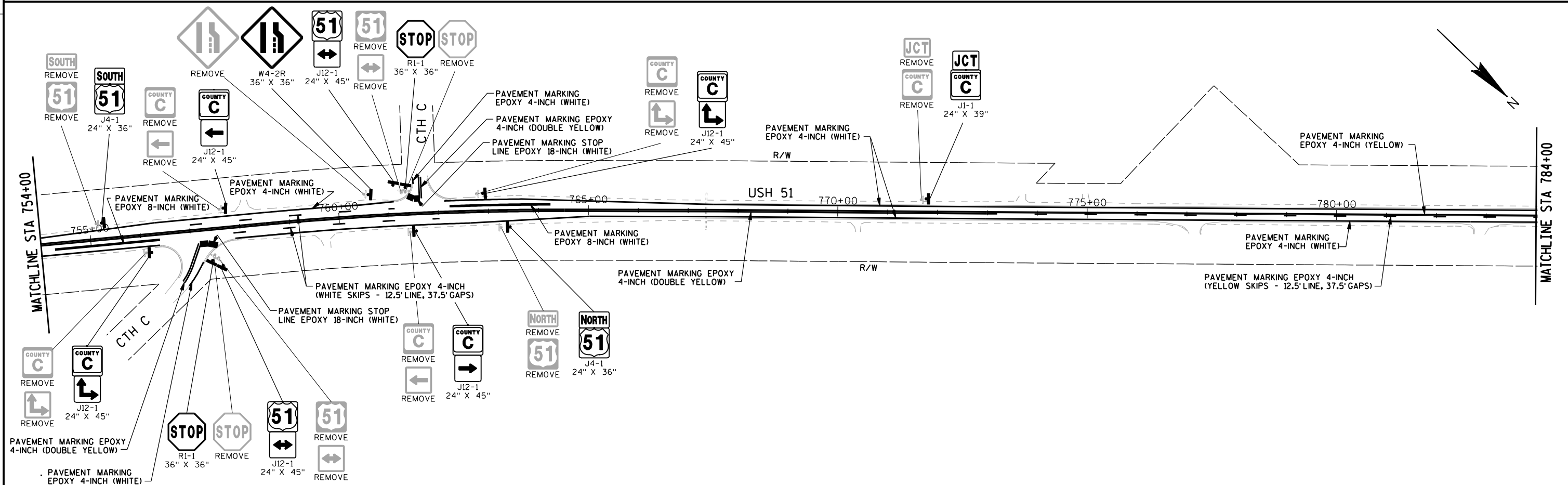
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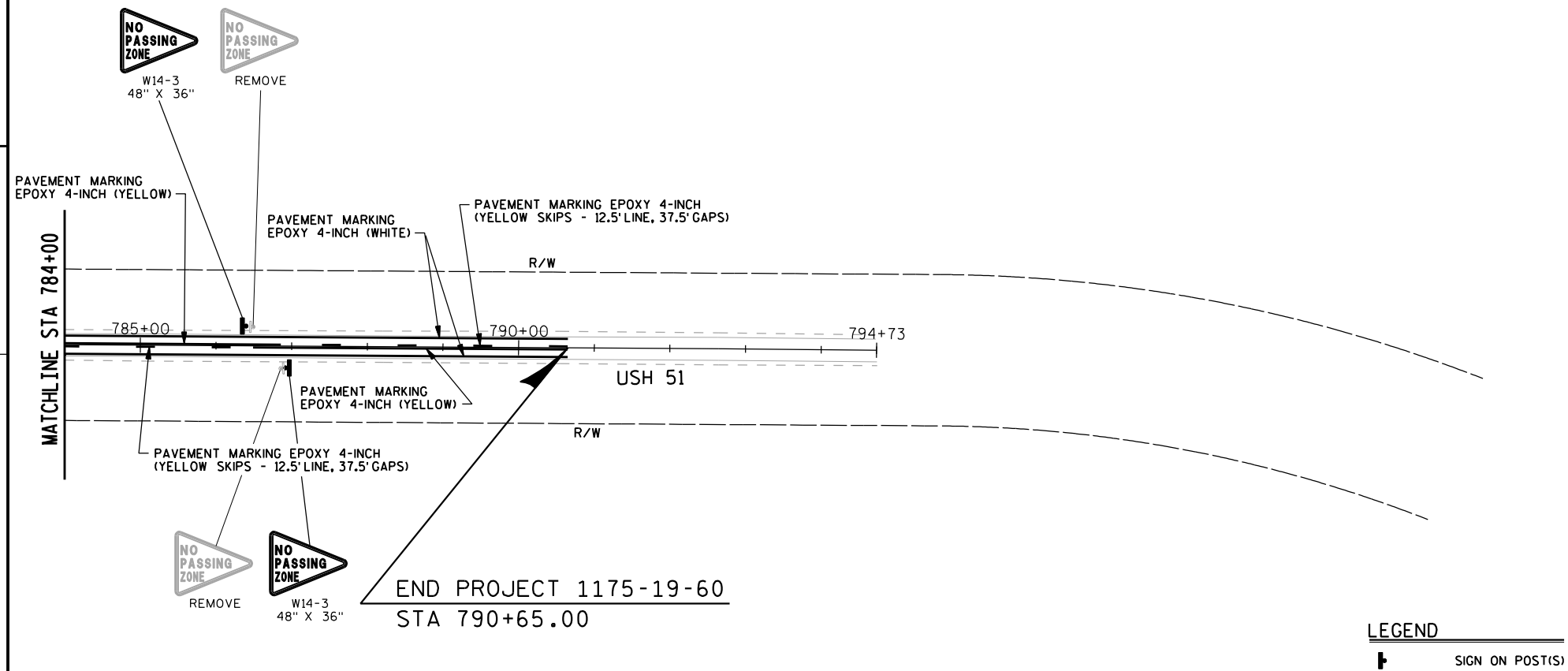
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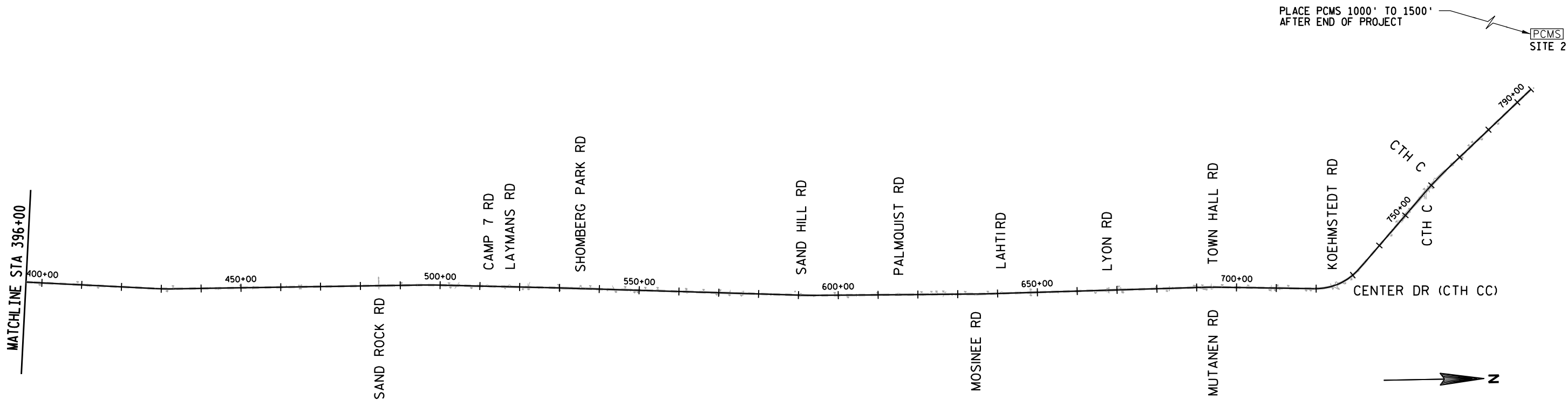
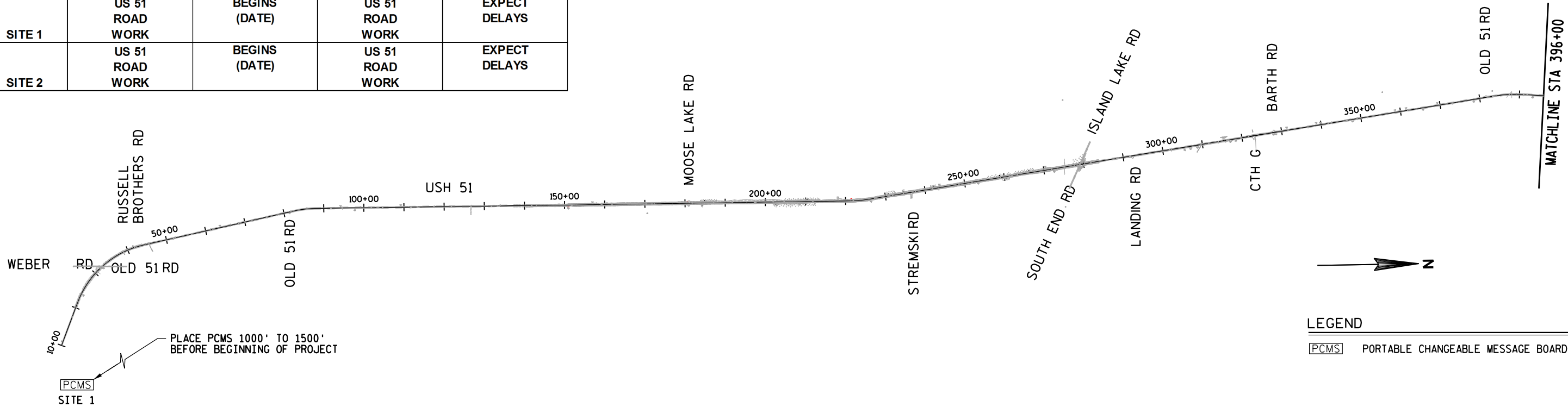


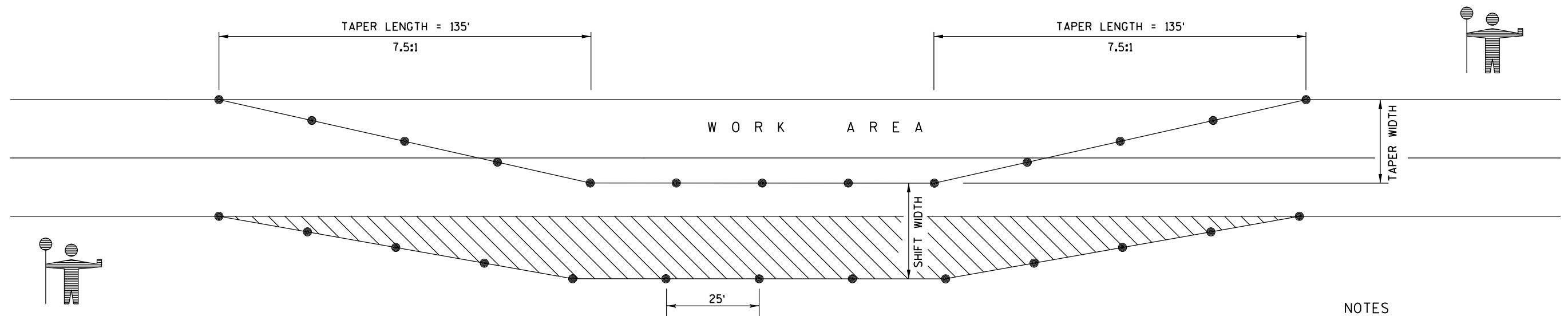






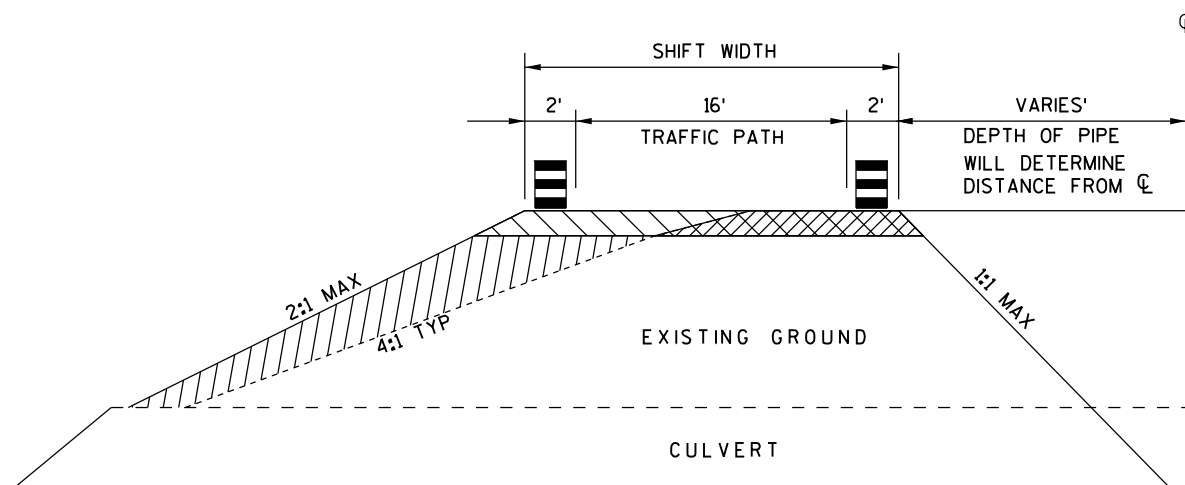
	ONE WEEK PRIOR TO STAGE 1		DURING STAGE 1	
SITE NO.	PHASE 1 (3 SEC.)	PHASE 2 (3 SEC.)	PHASE 1 (3 SEC.)	PHASE 2 (3 SEC.)
	US 51 ROAD WORK	BEGINS (DATE)	US 51 ROAD WORK	EXPECT DELAYS
SITE 1	US 51 ROAD WORK	BEGINS (DATE)	US 51 ROAD WORK	EXPECT DELAYS
SITE 2	US 51 ROAD WORK	BEGINS (DATE)	US 51 ROAD WORK	EXPECT DELAYS





NOTES

1. USE WITH SDD "TRAFFIC CONTROL FOR LANE CLOSURE"
2. FLAGGERS ARE SPECIFIC TO THIS OPERATION
3. THE TAPER SHOULD EXTEND ACROSS THE SHOULDER UNLESS DOING SO WOULD GREATLY CONFLICT WITH THE WORK OPERATION
4. ALL LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL DEVICES REMOVED BEYOND THE SHOULDER WHEN WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION
5. CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE WHEN WORK IS NOT IN PROGRESS

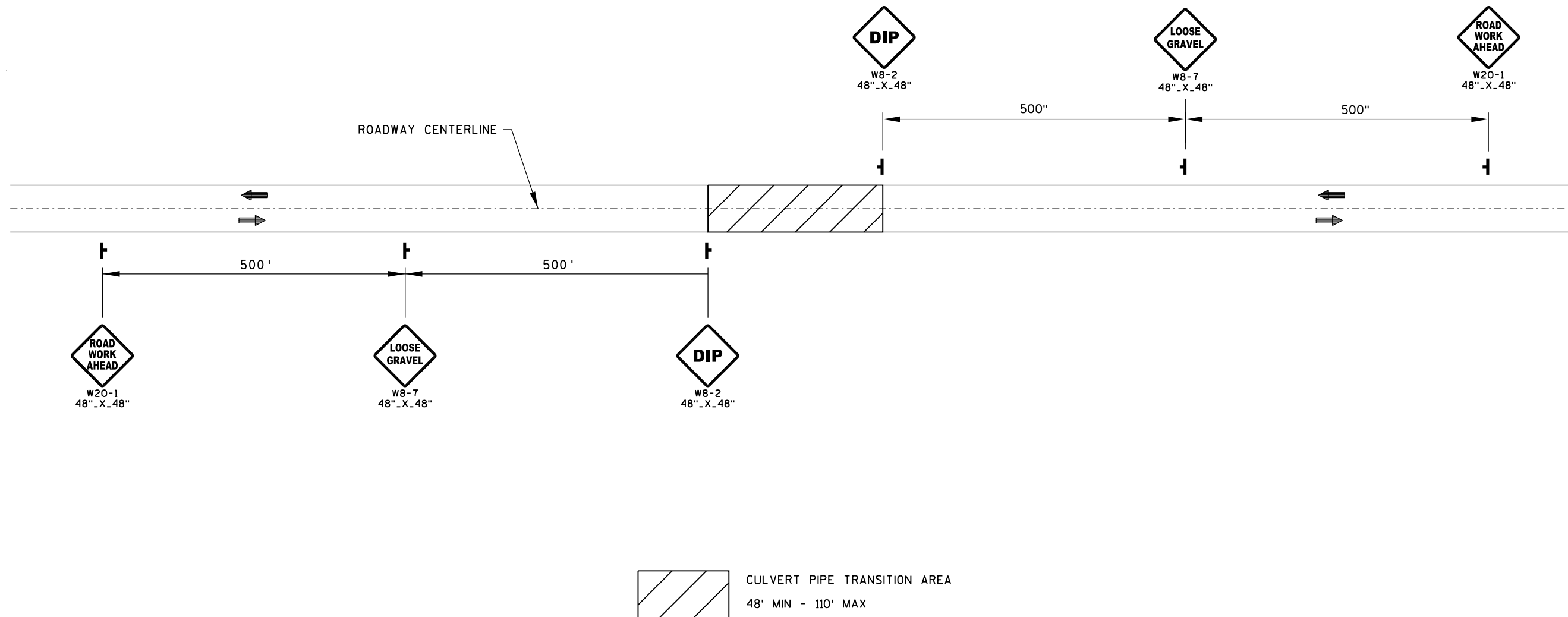


LANE SHIFT DETAIL

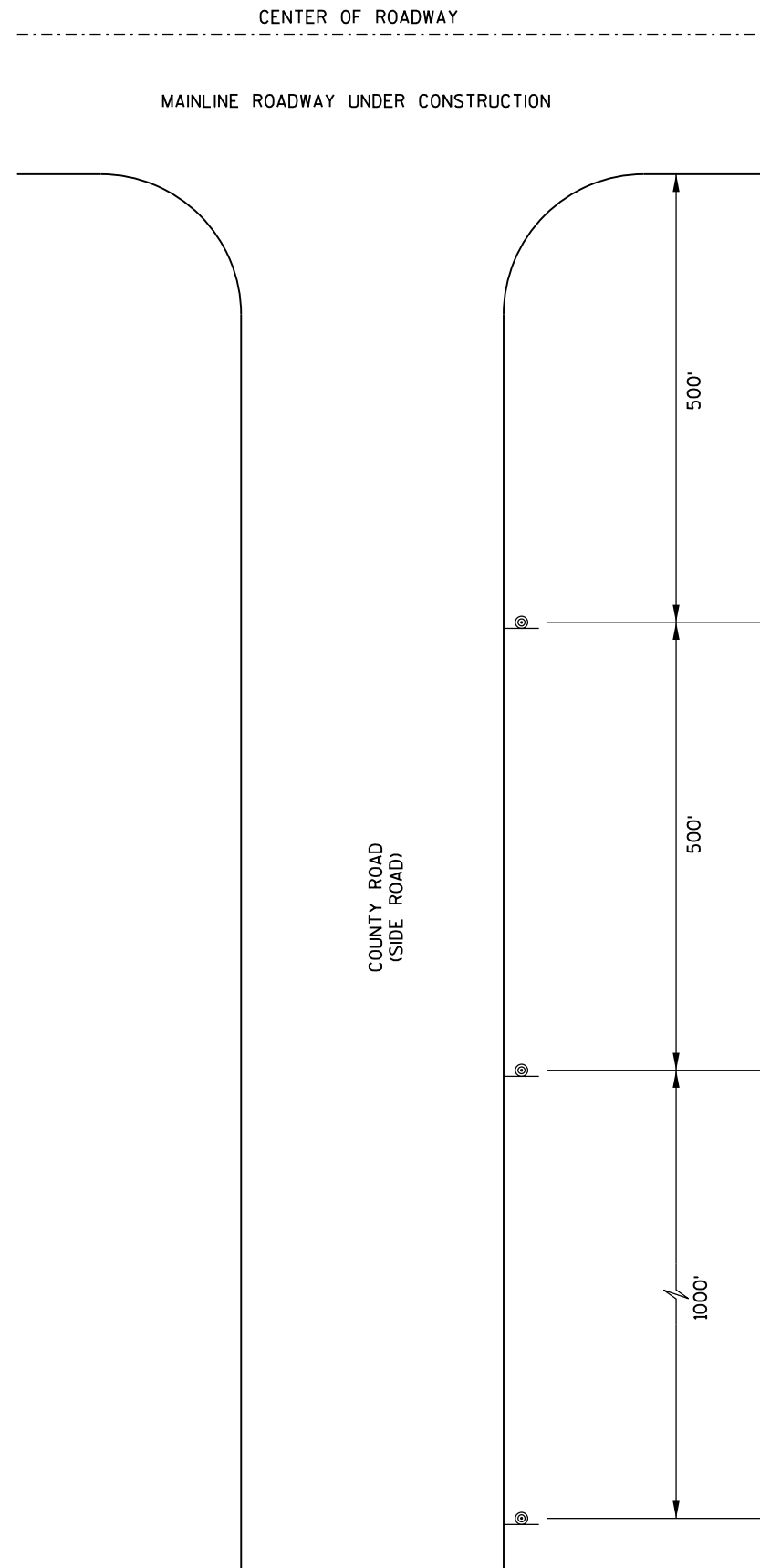
STA 36+96 - STA 40+66
STA 300+36 - STA 304+06
STA 463+08 - STA 466+78
STA 560+17 - STA 563+87
STA 708+98 - STA 712+68
STA 765+51 - STA 769+21

KEY

- DRUM WITHOUT WARNING LIGHT
- ▨ FILL
- INCIDENTAL TO LANE SHIFT ITEM
- ▩ EXISTING PAVED SURFACE
OR
6" BASE AGGREGATE DENSE 1 1/4 INCH
- INCIDENTAL TO LANE SHIFT ITEM
- ▧ 6" BASE AGGREGATE DENSE 1 1/4 INCH
- INCIDENTAL TO LANE SHIFT ITEM



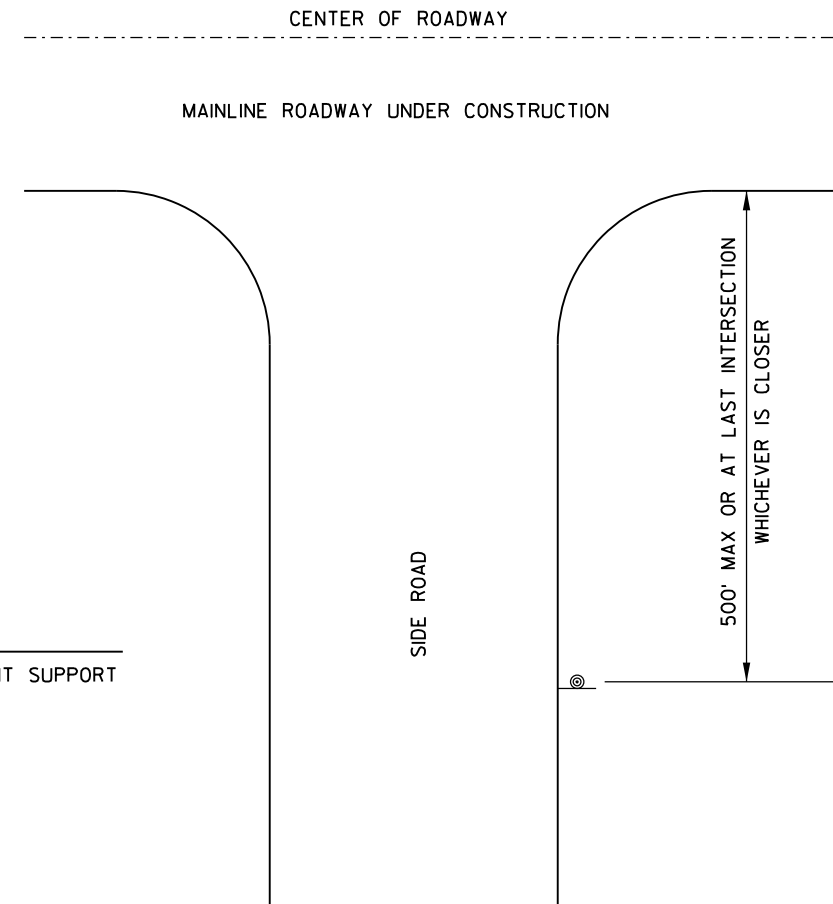
TEMPORARY SIGNING AT CULVERT PIPE REPLACEMENT



TYPICAL COUNTY SIDEROAD APPROACH WARNING SIGN DETAIL

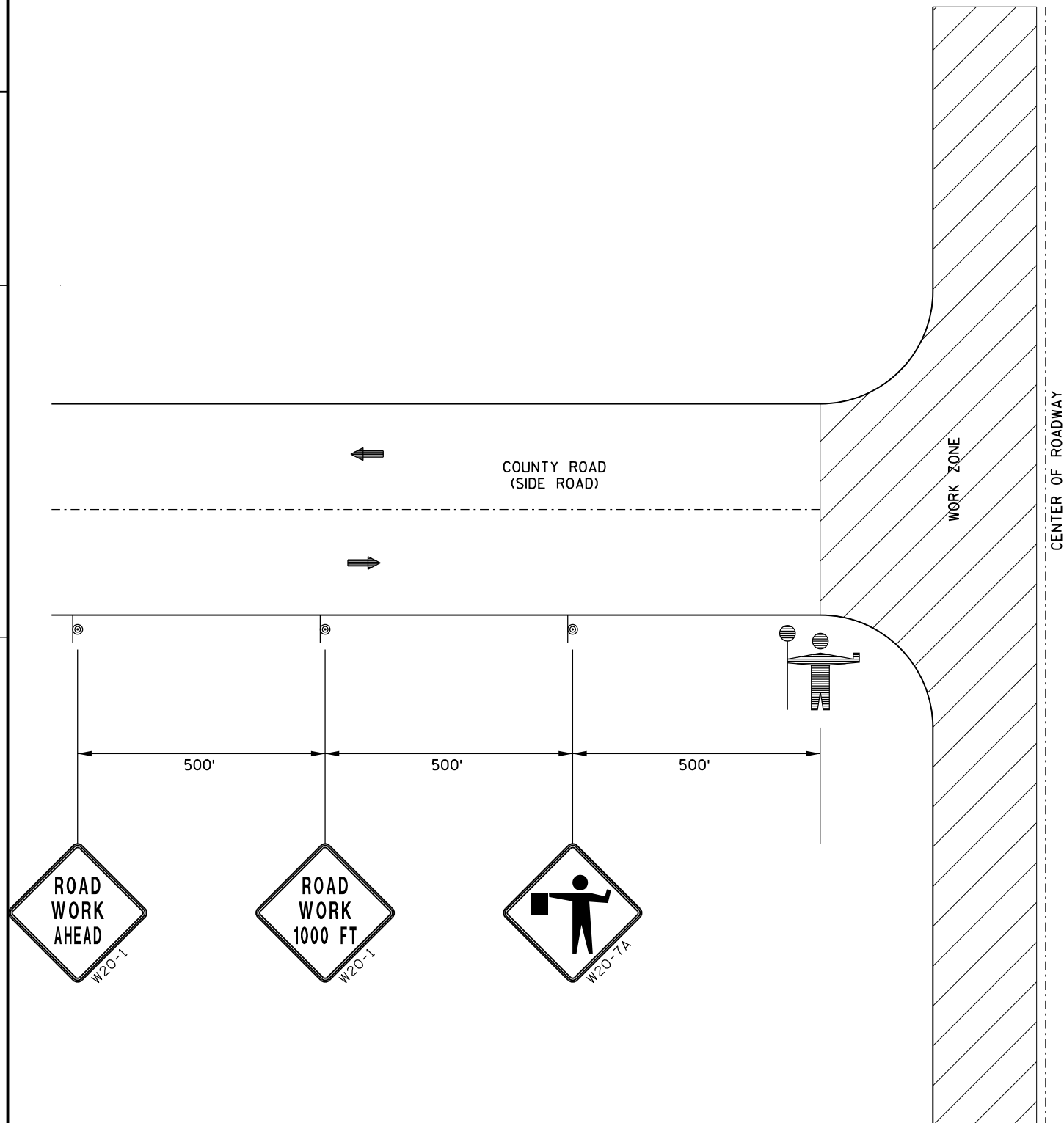
LEGEND

① SIGN ON PERMANENT SUPPORT



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

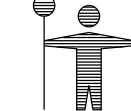
MAINLINE ROADWAY UNDER CONSTRUCTION

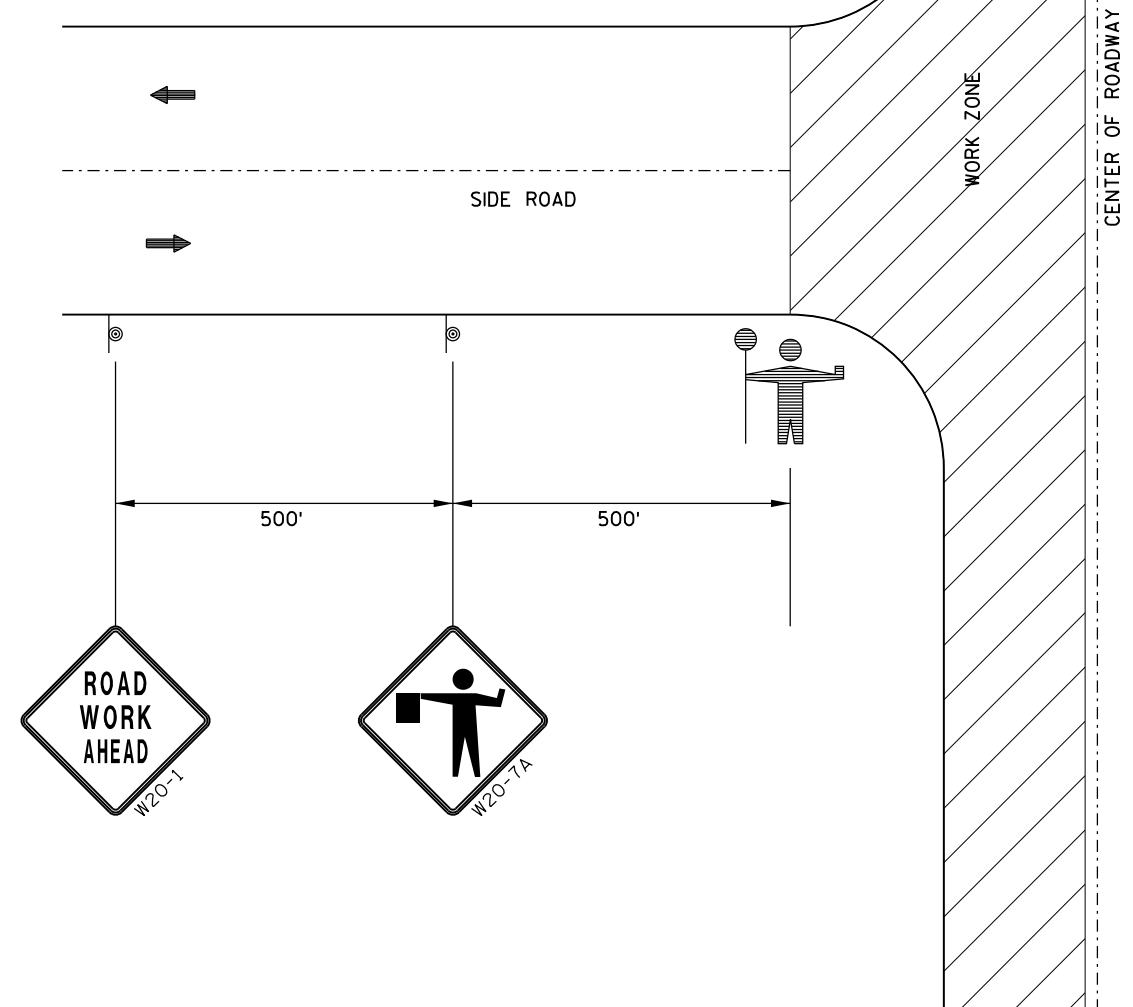


SIGNS FOR COUNTY SIDE ROADS DURING FLAGGING OPERATIONS

MAINLINE ROADWAY UNDER CONSTRUCTION

LEGEND

-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK ZONE
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



SIGNS FOR SIDE ROADS DURING FLAGGING OPERATIONS

PRESTAGE 1A**TRAFFIC**

USH 51 REDUCED TO 1-LANE OF TRAFFIC USING THE EXISTING SB LANE. USH 51 TO BE KEPT OPEN TO TRAFFIC WITH THE USE OF FLAGGERS USING WISDOT STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)."

CONSTRUCTION

CONSTRUCT THE NB LANE SHIFT AT CULVERT REPLACEMENT LOCATIONS. SEE "LANE SHIFT DETAIL."

PRESTAGE 1B**TRAFFIC**

USH 51 REDUCED TO 1-LANE OF TRAFFIC USING THE NB LANE SHIFT. USH 51 TO BE KEPT OPEN TO TRAFFIC WITH THE USE OF FLAGGERS USING WISDOT STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)."

CONSTRUCTION

REPLACE CULVERT PIPE UNDER THE EXISTING SB LANE.
CONSTRUCT THE SB LANE SHIFT AT CULVERT REPLACEMENT LOCATIONS. SEE "LANE SHIFT DETAIL."

PRESTAGE 1C**TRAFFIC**

USH 51 REDUCED TO 1-LANE OF TRAFFIC USING THE SB LANE SHIFT. USH 51 TO BE KEPT OPEN TO TRAFFIC WITH THE USE OF FLAGGERS USING WISDOT STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)."

CONSTRUCTION

REPLACE CULVERT PIPE UNDER THE EXISTING NB LANE.
REMOVE THE NB LANE SHIFT AT CULVERT REPLACEMENT LOCATIONS.

PRESTAGE 1D**TRAFFIC**

USH 51 REDUCED TO 1-LANE OF TRAFFIC USING THE NB LANE. USH 51 TO BE KEPT OPEN TO TRAFFIC WITH THE USE OF FLAGGERS USING WISDOT STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)."

CONSTRUCTION

REMOVE THE SB LANE SHIFT AT CULVERT REPLACEMENT LOCATIONS.

PRESTAGE 1E**TRAFFIC**

USH 51 REDUCED TO 1-LANE OF TRAFFIC USING THE SB LANE. USH 51 TO BE KEPT OPEN TO TRAFFIC WITH THE USE OF FLAGGERS USING WISDOT STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)."

CONSTRUCTION

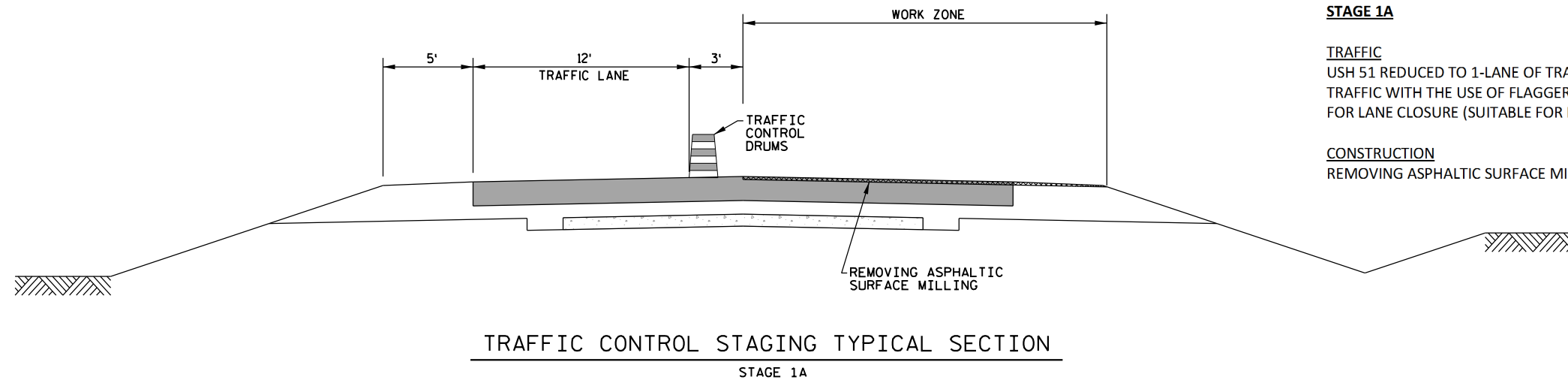
PLACE HMA PAVEMENT AT CULVERT REPLACEMENT LOCATIONS ON THE NB LANE.

PRESTAGE 1F**TRAFFIC**

USH 51 REDUCED TO 1-LANE OF TRAFFIC USING THE PAVED NB LANE. USH 51 TO BE KEPT OPEN TO TRAFFIC WITH THE USE OF FLAGGERS USING WISDOT STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)."

CONSTRUCTION

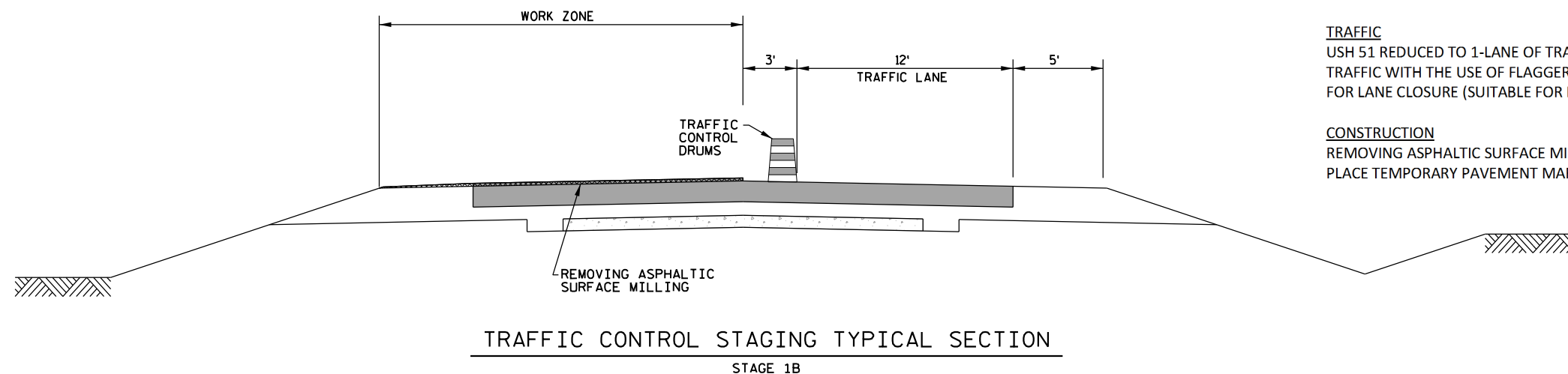
PLACE HMA PAVEMENT AT CULVERT REPLACEMENT LOCATIONS ON THE SB LANE.
PLACE TEMPORARY PAVEMENT MARKING.

**STAGE 1A****TRAFFIC**

USH 51 REDUCED TO 1-LANE OF TRAFFIC USING THE EXISTING SB LANE. USH 51 TO BE KEPT OPEN TO TRAFFIC WITH THE USE OF FLAGGERS USING WISDOT STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)."

CONSTRUCTION

REMOVING ASPHALTIC SURFACE MILLING ON THE NB LANE.

**STAGE 1B****TRAFFIC**

USH 51 REDUCED TO 1-LANE OF TRAFFIC USING THE MILLED NB LANE. USH 51 TO BE KEPT OPEN TO TRAFFIC WITH THE USE OF FLAGGERS USING WISDOT STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)."

CONSTRUCTION

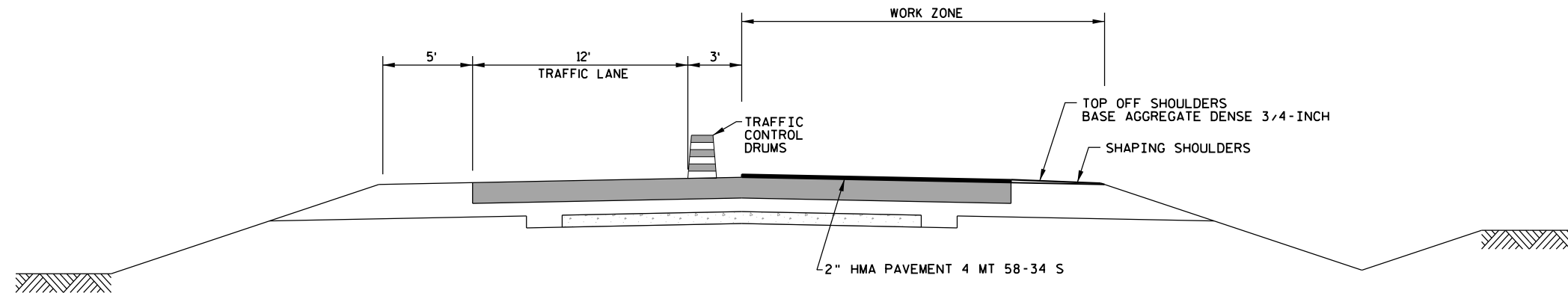
REMOVING ASPHALTIC SURFACE MILLING ON THE SB LANE.
PLACE TEMPORARY PAVEMENT MARKING ALONG THE CENTERLINE.

STAGE 2A**TRAFFIC**

USH 51 REDUCED TO 1-LANE OF TRAFFIC USING THE MILLED SB LANE. USH 51 TO BE KEPT OPEN TO TRAFFIC WITH THE USE OF FLAGGERS USING WISDOT STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)."

CONSTRUCTION

PLACE HMA PAVEMENT ON THE NB LANE.
CONSTRUCT CTH G INTERSECTION IMPROVEMENTS.

**TRAFFIC CONTROL STAGING TYPICAL SECTION**

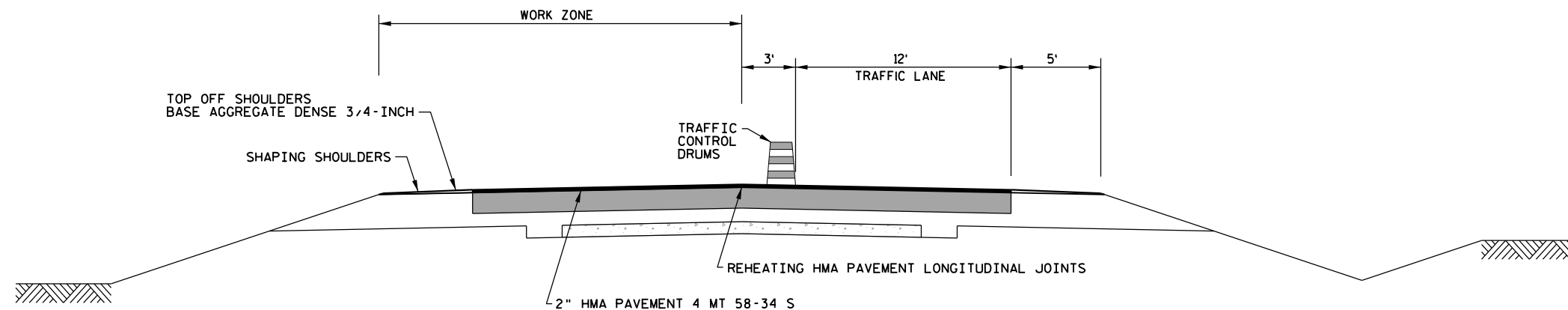
STAGE 2A

STAGE 2B**TRAFFIC**

USH 51 REDUCED TO 1-LANE OF TRAFFIC USING THE RESURFACED NB LANE. USH 51 TO BE KEPT OPEN TO TRAFFIC WITH THE USE OF FLAGGERS USING WISDOT STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)."

CONSTRUCTION

PLACE HMA PAVEMENT ON THE SB LANE.
PLACE PAVEMENT MARKING SAME DAY EPOXY 4-INCH ALONG THE CENTERLINE.
PLACE PERMANENT PAVEMENT MARKING ALONG THE OUTSIDE EDGE LINE OF THE SB LANE.

**TRAFFIC CONTROL STAGING TYPICAL SECTION**

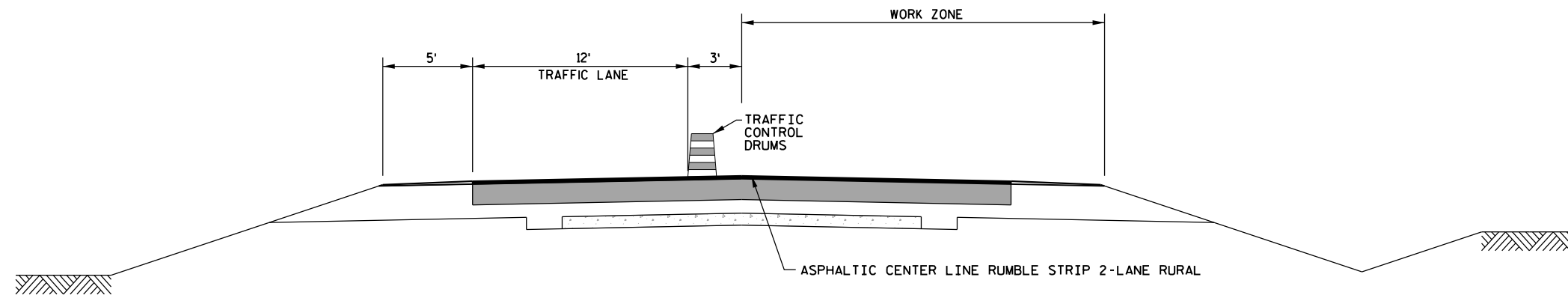
STAGE 2B

STAGE 3**TRAFFIC**

USH 51 REDUCED TO 1-LANE OF TRAFFIC USING THE RESURFACED SB LANE. USH 51 TO BE KEPT OPEN TO TRAFFIC WITH THE USE OF FLAGGERS USING WISDOT STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)."

CONSTRUCTION

MILL ASPHALTIC CENTER LINE RUMBLE STRIP.
PLACE PERMANENT PAVEMENT MARKING ALONG THE CENTERLINE.
PLACE PERMANENT PAVEMENT MARKING ALONG THE CENTERLINE AND THE OUTSIDE EDGE OF THE NB LANE.

**TRAFFIC CONTROL STAGING TYPICAL SECTION**

STAGE 3

DATE 18AUG16		E S T I M A T E O F Q U A N T I T I E S			
LINE		1175-19-60			
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	203.0100	Removing Small Pipe Culverts	EACH	6.000	6.000
0020	204.0110	Removing Asphaltic Surface	SY	3,350.000	3,350.000
0030	204.0115	Removing Asphaltic Surface Butt Joints	SY	155.000	155.000
0040	204.0120	Removing Asphaltic Surface Milling	SY	218,800.000	218,800.000
0050	204.0150	Removing Curb & Gutter	LF	155.000	155.000
0060	204.9060.S	Removing (item description) 01. Apron Endwalls	EACH	1.000	1.000
0070	205.0100	Excavation Common	CY	760.000	760.000
0080	209.0100	Backfill Granular	CY	2,050.000	2,050.000
0090	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	8.000	8.000
0100	213.0100	Finishing Roadway (project) 01. 1175-19-60	EACH	1.000	1.000
0110	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,400.000	1,400.000
0120	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,000.000	2,000.000
0130	305.0500	Shaping Shoulders	STA	1,270.000	1,270.000
0140	440.4410	Incentive IRI Ride	DOL	24,590.000	24,590.000
0150	455.0605	Tack Coat	GAL	5,500.000	5,500.000
0160	460.2000	Incentive Density HMA Pavement	DOL	15,960.000	15,960.000
0170	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	63,450.000	63,450.000
0180	460.6223	HMA Pavement 3 MT 58-28 S	TON	150.000	150.000
0190	460.6224	HMA Pavement 4 MT 58-28 S	TON	170.000	170.000
0200	460.6244	HMA Pavement 4 MT 58-34 S	TON	24,680.000	24,680.000
0210	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	300.000	300.000
0220	465.0475	Asphalt Center Line Rumble Strips	LF	53,850.000	53,850.000
0230	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000
0240	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	320.000	320.000
0250	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	74.000	74.000
0260	522.0136	Culvert Pipe Reinforced Concrete Class III 36-Inch	LF	70.000	70.000
0270	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	8.000	8.000
0280	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	3.000	3.000
0290	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	2.000	2.000
0300	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	165.000	165.000
0310	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1175-19-60	EACH	1.000	1.000
0320	619.1000	Mobilization	EACH	1.000	1.000
0330	624.0100	Water	MGAL	34.000	34.000
0340	625.0100	Topsoil	SY	9,238.000	9,238.000
0350	628.1504	Silt Fence	LF	3,940.000	3,940.000
0360	628.1520	Silt Fence Maintenance	LF	3,940.000	3,940.000
0370	628.1905	Mobilizations Erosion Control	EACH	8.000	8.000
0380	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0390	628.2008	Erosion Mat Urban Class I Type B	SY	9,250.000	9,250.000
0400	628.2027	Erosion Mat Class II Type C	SY	90.000	90.000
0410	628.7504	Temporary Ditch Checks	LF	45.000	45.000
0420	628.7555	Culvert Pipe Checks	EACH	29.000	29.000

DATE 18AUG16		E S T I M A T E O F Q U A N T I T I E S			
LINE					1175-19-60
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0430	629.0210	Fertilizer Type B	CWT	5.000	5.000
0440	630.0130	Seeding Mixture No. 30	LB	165.000	165.000
0450	630.0160	Seeding Mixture No. 60	LB	2.000	2.000
0460	633.5200	Markers Culvert End	EACH	13.000	13.000
0470	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	126.000	126.000
0480	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	33.000	33.000
0490	637.2210	Signs Type II Reflective H	SF	602.790	602.790
0500	637.2230	Signs Type II Reflective F	SF	347.500	347.500
0510	638.2602	Removing Signs Type II	EACH	158.000	158.000
0520	638.3000	Removing Small Sign Supports	EACH	137.000	137.000
0530	642.5001	Field Office Type B	EACH	1.000	1.000
0540	643.0100	Traffic Control (project) 01. 1175-19-60	EACH	1.000	1.000
0550	643.0300	Traffic Control Drums	DAY	34,344.000	34,344.000
0560	643.0900	Traffic Control Signs	DAY	5,360.000	5,360.000
0570	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0580	646.0106	Pavement Marking Epoxy 4-Inch	LF	198,150.000	198,150.000
0590	646.0126	Pavement Marking Epoxy 8-Inch	LF	610.000	610.000
0600	646.0406	Pavement Marking Same Day Epoxy 4-Inch	LF	74,030.000	74,030.000
0610	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	95.000	95.000
0620	647.0803	Pavement Marking Aerial Enforcement Bars Epoxy 24-Inch	LF	24.000	24.000
0630	648.0100	Locating No-Passing Zones	MI	12.050	12.050
0640	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	147,560.000	147,560.000
0650	650.4500	Construction Staking Subgrade	LF	1,380.000	1,380.000
0660	650.5000	Construction Staking Base	LF	1,380.000	1,380.000
0670	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	170.000	170.000
0680	650.6000	Construction Staking Pipe Culverts	EACH	6.000	6.000
0690	650.8000	Construction Staking Resurfacing Reference	LF	63,640.000	63,640.000
0700	650.9910	Construction Staking Supplemental Control (project) 01. 1175-19-60	LS	1.000	1.000
0710	650.9920	Construction Staking Slope Stakes	LF	1,380.000	1,380.000
0720	690.0150	Sawing Asphalt	LF	2,380.000	2,380.000
0730	690.0250	Sawing Concrete	LF	320.000	320.000
0740	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,000.000	2,000.000
0750	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,260.000	1,260.000
0760	SPV.0060	Special 01. Abandoning Cattle Pass	EACH	1.000	1.000
0770	SPV.0060	Special 02. Culvert Pipe Transitions	EACH	7.000	7.000
0780	SPV.0060	Special 03. Reestablishing Section Corner Monuments	EACH	4.000	4.000
0790	SPV.0060	Special 04. Lane Shift	EACH	14.000	14.000
0800	SPV.0180	Special 01. Protective Thermoplastic Coating At Snowmobile Trail Crossings	SY	250.000	250.000

3

3

REMOVING SMALL PIPE CULVERTS			
203.0100		204.9060.S REMOVING APRON ENDWALLS	
STATION	EACH	EACH	REMARKS
38+81	1	-	24-INCH RCP
302+21	1	-	24-INCH RCP
319+81	-	1	30-INCH RCP, RT
464+93	1	-	36-INCH RCP
562+02	1	-	24-INCH RCP
710+83	1	-	24-INCH RCP
767+36	1	-	30-INCH RCP
TOTAL	6	1	

REMOVING ASPHALTIC SURFACE BUTT JOINTS			
204.0115			
STATION	LOCATION	SY	REMARKS
19+65	-	7	-
31+32	LT	5	WEBER RD
32+09	RT	5	OLD 51 RD
139+50	-	7	-
274+25	-	7	-
535+26	LT	5	SHOMBERG PARK RD
693+93	LT	5	TOWN HALL RD
724+89	RT	7	CENTER DR (CTH CC)
725+34	LT	6	KOEHMSTEDT RD
757+29	RT	7	CTH C
761+66	LT	7	CTH C
790+65	-	7	-
UNDISTRIBUTED	STAGING	80	-
TOTAL		155	

REMOVING ASPHALTIC SURFACE		
		MILLING
	204.0110	204.0120
STATION	SY	SY
19+65 - 139+50	-	40,500
274+25 - 532+46	-	87,900
534+04 - 790+65	-	90,400
VARIOUS DRIVEWAYS	3,350	-
TOTAL	3,350	218,800

REMOVING CURB & GUTTER		
		204.0150
STATION	LOCATION	LF
322+18 - 322+77	RT	95
323+12 - 323+52	RT	60
TOTAL		155

EARTHWORK SUMMARY											
DIVISION	STATION	LOCATION	205.0100 COMMON EXCAVATION	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL (2)	UNEXPANDED FILL	EXPANDED FILL (3)	MASS ORDINATE +/- (4)	WASTE	208.0100 BORROW	COMMENT:
			CUT (1)				FACTOR 1.30				
1	318+68 - 324+47	USH 51 AT CTH G	604	0	604	163	212	392	392		
SUBTOTAL			604	0	604	163	212	392	392		
2	725+94 - 730+00	USH 51	156	0	156	0	0	156	156		
SUBTOTAL			156	0	156	0	0	156	156		
TOTAL			760	0	760	163	212	548	548		
1) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT. 2) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL. 3) EXPANDED FILL. FACTOR = 1.30 EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR 4) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.											

BACKFILL GRANULAR		
		209.0100
STATION	CY	
UNDISTRIBUTED	2,050	
TOTAL	2,050	

NOTE: NATIVE MATERIAL PROPOSED AT CULVERT PIPE LOCATIONS. BACKFILL GRANULAR TO BE USED IF SPECIFIED BY THE FIELD ENGINEER.

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS		
		211.0400
STATION	LOCATION	STA
318+65 - 326+63	LT	8
TOTAL		8

FINISHING ROADWAY (PROJECT)		
		213.0100
PROJECT	EACH	
PROJECT 1175-19-60	1	
TOTAL	1	

BASE AGGREGATE DENSE <table><tr><td colspan="2"></td><td>305.0110</td><td>305.0120</td></tr><tr><td colspan="2"></td><td>3/4-INCH</td><td>1 1/4-INCH</td></tr><tr><td>STATION</td><td>LOCATION</td><td>TON</td><td>TON</td></tr><tr><td>38+81</td><td>CULVERT 36</td><td>14</td><td>109</td></tr><tr><td>302+21</td><td>CULVERT 58</td><td>14</td><td>109</td></tr><tr><td>318+65 - 326+63</td><td>LT</td><td>65</td><td>-</td></tr><tr><td>318+68 - 324+47</td><td>RT</td><td>-</td><td>1,015</td></tr><tr><td>318+68 - 322+18</td><td>RT</td><td>20</td><td>125</td></tr><tr><td>322+78</td><td>RT</td><td>5</td><td>35</td></tr><tr><td>323+00</td><td>RT</td><td>10</td><td>50</td></tr><tr><td>323+47 - 324+47</td><td>RT</td><td>5</td><td>35</td></tr><tr><td>464+93</td><td>CULVERT 71</td><td>17</td><td>133</td></tr><tr><td>562+02</td><td>CULVERT 75R</td><td>15</td><td>120</td></tr><tr><td>710+83</td><td>CULVERT 87R</td><td>15</td><td>109</td></tr><tr><td>767+36</td><td>CULVERT 89</td><td>15</td><td>120</td></tr><tr><td>VARIOUS</td><td>DRIVEWAYS</td><td>1,150</td><td>-</td></tr><tr><td>UNDISTRIBUTED</td><td>-</td><td>55</td><td>40</td></tr><tr><td>TOTAL</td><td></td><td>1,400</td><td>2,000</td></tr></table>						305.0110	305.0120			3/4-INCH	1 1/4-INCH	STATION	LOCATION	TON	TON	38+81	CULVERT 36	14	109	302+21	CULVERT 58	14	109	318+65 - 326+63	LT	65	-	318+68 - 324+47	RT	-	1,015	318+68 - 322+18	RT	20	125	322+78	RT	5	35	323+00	RT	10	50	323+47 - 324+47	RT	5	35	464+93	CULVERT 71	17	133	562+02	CULVERT 75R	15	120	710+83	CULVERT 87R	15	109	767+36	CULVERT 89	15	120	VARIOUS	DRIVEWAYS	1,150	-	UNDISTRIBUTED	-	55	40	TOTAL		1,400	2,000	SHAPING SHOULDERS <table><tr><td colspan="2"></td><td>305.0500</td></tr><tr><td>STATION</td><td>LOCATION</td><td>STA</td></tr><tr><td>19+65 - 139+50</td><td>LT</td><td>120</td></tr><tr><td>19+65 - 139+50</td><td>RT</td><td>120</td></tr><tr><td>274+25 - 532+46</td><td>LT</td><td>258</td></tr><tr><td>274+25 - 532+46</td><td>RT</td><td>258</td></tr><tr><td>534+04 - 790+65</td><td>LT</td><td>257</td></tr><tr><td>534+04 - 790+65</td><td>RT</td><td>257</td></tr><tr><td>TOTAL</td><td></td><td>1,270</td></tr></table>						305.0500	STATION	LOCATION	STA	19+65 - 139+50	LT	120	19+65 - 139+50	RT	120	274+25 - 532+46	LT	258	274+25 - 532+46	RT	258	534+04 - 790+65	LT	257	534+04 - 790+65	RT	257	TOTAL		1,270	HMA ITEMS <table><tr><td colspan="2"></td><td>455.0605</td><td>450.6223</td><td>460.6224</td><td>460.6244</td><td>465.0120</td><td>460.4110.S.</td></tr><tr><td colspan="2"></td><td>TACK</td><td>HMA PAVEMENT</td><td>HMA PAVEMENT</td><td>HMA PAVEMENT</td><td>ASPHALTIC</td><td>REHEATING HMA</td></tr><tr><td colspan="2"></td><td>COAT</td><td>3 MT 58-28 S</td><td>4 MT 58-28 S</td><td>4 MT 58-34 S</td><td>SURFACE</td><td>PAVEMENT</td></tr><tr><td colspan="2"></td><td></td><td></td><td></td><td></td><td>DRIVEWAYS &</td><td>LONGITUDINAL</td></tr><tr><td colspan="2"></td><td></td><td></td><td></td><td></td><td>FIELD ENTRANCES</td><td>JOINTS</td></tr><tr><td>STATION</td><td>LOCATION</td><td>GAL</td><td>TON</td><td>TON</td><td>TON</td><td>TON</td><td>LF</td></tr><tr><td>19+65 - 139+50</td><td>-</td><td>1,000</td><td>-</td><td>-</td><td>4,540</td><td>-</td><td>12,000</td></tr><tr><td>38+81</td><td>CULVERT 36</td><td>2</td><td>18</td><td>-</td><td>SEE NOTE 1</td><td>-</td><td>-</td></tr><tr><td>274+25 - 532+46</td><td>-</td><td>2,200</td><td>-</td><td>-</td><td>9,845</td><td>-</td><td>25,800</td></tr><tr><td>302+21</td><td>CULVERT 58</td><td>2</td><td>18</td><td>-</td><td>SEE NOTE 1</td><td>-</td><td>-</td></tr><tr><td>318+65 - 326+63</td><td>LT</td><td>10</td><td>-</td><td>30</td><td>30</td><td>-</td><td>-</td></tr><tr><td>318+68 - 324+47</td><td>RT</td><td>15</td><td>-</td><td>140</td><td>140</td><td>-</td><td>-</td></tr><tr><td>464+93</td><td>CULVERT 71</td><td>3</td><td>25</td><td>-</td><td>SEE NOTE 1</td><td>-</td><td>-</td></tr><tr><td>534+04 - 790+65</td><td>-</td><td>2,260</td><td>-</td><td>-</td><td>10,125</td><td>-</td><td>25,650</td></tr><tr><td>562+02</td><td>CULVERT 75R</td><td>2</td><td>18</td><td>-</td><td>SEE NOTE 1</td><td>-</td><td>-</td></tr><tr><td>710+83</td><td>CULVERT 87R</td><td>2</td><td>18</td><td>-</td><td>SEE NOTE 1</td><td>-</td><td>-</td></tr><tr><td>767+36</td><td>CULVERT 89</td><td>4</td><td>23</td><td>-</td><td>SEE NOTE 1</td><td>-</td><td>-</td></tr><tr><td>VARIOUS</td><td>DRIVEWAYS</td><td>-</td><td>-</td><td>-</td><td>-</td><td>300</td><td>-</td></tr><tr><td>TOTAL</td><td></td><td>5,500</td><td>150</td><td>170</td><td>24,680</td><td>300</td><td>63,450</td></tr></table> NOTE 1: THE 2" UPPER LAYER OF HMA PAVEMENT 4 MT 58-34 S AT CULVERT LOCATIONS IS INCLUDED IN MAINLINE PAVING CALCULATION.										455.0605	450.6223	460.6224	460.6244	465.0120	460.4110.S.			TACK	HMA PAVEMENT	HMA PAVEMENT	HMA PAVEMENT	ASPHALTIC	REHEATING HMA			COAT	3 MT 58-28 S	4 MT 58-28 S	4 MT 58-34 S	SURFACE	PAVEMENT							DRIVEWAYS &	LONGITUDINAL							FIELD ENTRANCES	JOINTS	STATION	LOCATION	GAL	TON	TON	TON	TON	LF	19+65 - 139+50	-	1,000	-	-	4,540	-	12,000	38+81	CULVERT 36	2	18	-	SEE NOTE 1	-	-	274+25 - 532+46	-	2,200	-	-	9,845	-	25,800	302+21	CULVERT 58	2	18	-	SEE NOTE 1	-	-	318+65 - 326+63	LT	10	-	30	30	-	-	318+68 - 324+47	RT	15	-	140	140	-	-	464+93	CULVERT 71	3	25	-	SEE NOTE 1	-	-	534+04 - 790+65	-	2,260	-	-	10,125	-	25,650	562+02	CULVERT 75R	2	18	-	SEE NOTE 1	-	-	710+83	CULVERT 87R	2	18	-	SEE NOTE 1	-	-	767+36	CULVERT 89	4	23	-	SEE NOTE 1	-	-	VARIOUS	DRIVEWAYS	-	-	-	-	300	-	TOTAL		5,500	150	170	24,680	300	63,450	UNLESS OTHERWISE NOTED ALL ITEMS IN CATEGORY 0010	
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PROJECT NUMBER: 1175-19-60	HWY: USH 51	COUNTY: IRON	MISCELLANEOUS QUANTITIES	SHEET	E
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ASHPALTIC CENTERLINE RUMBLE
STRIP 2-LANE RURAL

STATION	465.0475 LF
19+65 - 29+32	965
34+09 - 39+53	545
43+53 - 45+39	185
45+64 - 79+38	3,380
83+38 - 126+56	4,320
126+81 - 139+50	1,270
274+25 - 277+61	335
281+84 - 290+27	840
294+27 - 305+93	1,170
309+79 - 314+51	470
316+51 - 321+00	450
325+00 - 326+00	100
330+00 - 379+64	4,960
383+64 - 482+67	9,900
486+67 - 509+94	2,330
513+94 - 515+52	160
519+52 - 532+21	1,370
537+26 - 588+44	5,120
592+58 - 613+11	2,060
617+11 - 623+69	660
627+49 - 632+55	505
636+55 - 639+05	250
643+05 - 665+53	2,250
669+59 - 691+89	2,230
695+93 - 722+89	2,700
727+34 - 728+19	85
730+19 - 755+29	2,500
759+29 - 759+66	40
763+66 - 790+65	2,700
TOTAL	53,850

SILT FENCE

STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
38+26 - 39+34	LT	108	108
38+25 - 39+33	RT	108	108
277+19 - 280+17	LT	330	330
301+67 - 302+75	LT	108	108
301+65 - 302+74	RT	110	110
318+65 - 326+63	LT	800	800
318+68 - 322+69	RT	490	490
323+09 - 324+47	RT	240	240
464+39 - 465+49	LT	110	110
464+37 - 465+47	RT	110	110
531+50 - 532+46	LT	105	105
532+00 - 532+47	RT	55	55
534+03 - 534+64	LT	70	70
534+04 - 535+04	RT	100	100
562+26 - 562+57	LT	30	30
561+47 - 562+55	RT	110	110
710+46 - 711+37	LT	90	90
710+29 - 711+37	RT	108	108
766+82 - 767+90	LT	108	108
766+81 - 767+90	RT	110	110
UNDISTRIBUTED	-	540	540
TOTAL		3,940	3,940

CULVERT PIPE ITEMS

					522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH	522.0136 CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH	522.1024 APRON ENDWALLS FOR CULVERT REINFORCED CONCRETE CLASS III 24-INCH	522.1030 APRON ENDWALLS FOR CULVERT REINFORCED CONCRETE CLASS III 30-INCH	522.1036 APRON ENDWALLS FOR CULVERT REINFORCED CONCRETE CLASS III 36-INCH	520.8000 CONCRETE COLLARS FOR PIPE	633.5200 MARKERS CULVERT END	SPV.0060.02 CULVERT PIPE TRANSITIONS
STATION	CULVERT NUMBER	INLET ELEVATION	DISCHARGE ELEVATION	PIPE SLOPE	LF	LF	LF	EACH	EACH	EACH	EACH	EACH	EACH
38+81	36	1639.05	1632.79	6.14%	106	-	-	2	-	-	-	2	1
302+21	58	1646.39	1644.73	1.93%	86	-	-	2	-	-	-	2	1
319+81	60	1629.12	1629.07	0.62%	-	8	-	-	1	-	1	1	1
464+93	71	1603.99	1603.54	0.70%	-	-	70	-	-	2	-	2	1
562+02	75R	1586.01	1584.93	1.08%	64	-	-	2	-	-	-	2	1
710+83	87R	1554.99	1553.93	1.89%	64	-	-	2	-	-	-	2	1
767+36	89	1555.71	1555.28	0.72%	-	66	-	-	2	-	-	2	1
TOTAL					320	74	70	8	3	2	1	13	7

CONCRETE CURB & GUTTER

			601.0557 6-INCH SLOPED 36-INCH TYPE D
STATION	LOCATION	LF	
322+23 - 322+78	RT	89	
323+09 - 323+59	RT	76	
TOTAL		165	

MOBILIZATION

PROJECT	619.1000 EACH
PROJECT 1175-19-60	1
TOTAL	1

LANDSCAPING ITEMS

		625.0100 TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.2027 EROSION MAT CLASS II TYPE C SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO 30 LB	630.0160 SEEDING MIXTURE NO 60 LB
STATION	LOCATION						
38+81	CULVERT 36	210	186	27	0.10	4	0.3
302+21	CULVERT 58	270	260	20	0.20	4	-
318+73 - 325+00	LT	600	600	-	0.40	11	-
318+73 - 322+75	RT	520	520	-	0.30	9	-
323+14 - 325+00	RT	330	330	-	0.20	6	-
464+93	CULVERT 71	220	227	17	0.01	4	0.2
562+02	CULVERT 75R	190	195	2	0.01	4	-
710+83	CULVERT 87R	190	208	-	0.01	4	0.3
725+92 - 730+00	LT	1,188	1,200	-	0.70	21	-
767+36	CULVERT 89	220	224	4	0.01	4	0.2
UNDISTRIBUTED	-	5,300	5,300	20	2.6	94	1
TOTAL		9,238	9,250	90	5	165	2

WATER

STATION	LOCATION	624.0100 MGAL	REMARKS
38+81 - 767+36	USH 51	34	BASE AGG. COMPACTION
TOTAL		34	

MOBILIZATIONS EROSION CONTROL

		628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT			
PROJECT 1175-19-60		8	2
TOTAL		8	2

CULVERT PIPE CHECKS

STATION	LOCATION	628.7555 EACH
38+81	LT	3
302+21	LT	3
464+93	RT	6
562+02	LT	3
710+83	LT	3
767+36	RT	5
UNDISTRIBUTED	-	6
TOTAL		29

TEMPORARY DITCH CHECK

STATION	LOCATION	628.7504 LF
277+19	LT	8
280+17	LT	8
318+66	LT	8
326+80	LT	8
730+00	LT	8
UNDISTRUBUTED	-	5
TOTAL		45

UNLESS OTHERWISE NOTED
ALL ITEMS IN CATEGORY 0010

PROJECT NUMBER: 1175-19-60

HWY: USH 51

COUNTY: IRON

MISCELLANEOUS QUANTITIES

SHEET

E

PERMANENT SIGNING									
STATION	LOCATION	CODE	SIZE (IN X IN)	634.0616	634.0618	637.2210	637.2230	REMARKS	
				POSTS WOOD 4X6-INCH X 16 FT	POSTS WOOD 4X6-INCH X 18 FT	SIGNS TYPE II REFLECTIVE H	SIGNS TYPE II REFLECTIVE F		
24+34	RT	W2-1	30 X 30	-	1	-	6.25	"WEBER RD/OLD 51 RD"	
26+87	RT	D1-2	72 X 30	2	-	15	-		
30+91	LT	R1-1	30 X 30	-	1	5.18	-		
32+39	RT	R1-1	30 X 30	1	-	5.18	-		
37+48	RT	W11-6	30 X 30	1	-	-	6.25		
38+59	LT	D1-2	72 X 30	2	-	15	-	"OLD 51 RD/WEBER RD"	
41+38	LT	R1-1	30 X 30	1	-	5.18	-		
48+03	LT	W2-2	30 X 30	-	1	-	6.25		
55+04	LT	W11-6	30 X 30	-	1	-	6.25		
73+65	RT	D1-1	72 X 15	2	-	7.5	-		"OLD 51 RD"
74+36	LT	W14-3	48 X 36	1	-	-	6		
74+38	RT	W14-3	48 X 36	1	-	-	6		
80+97	RT	I55-56	30 X 36	1	-	7.5	-		
81+56	RT	R1-1	30 X 30	1	-	5.18	-		
88+36	LT	D1-1	72 X 15	2	-	7.5	-		"OLD 51 RD"
117+50	RT	W11-6	30 X 30	-	1	-	6.25		
119+54	LT	W14-3	48 X 36	1	-	-	6		
123+13	RT	W14-3	48 X 36	1	-	-	6		
134+30	LT	W11-6	30 X 30	-	1	-	6.25		
279+62	RT	R1-1	30 X 30	1	-	5.18	-		
279+75	LT	R1-1	30 X 30	1	-	5.18	-	"LANDING RD"	
285+02	RT	D1-1	78 X 15	2	-	8.125	-		
286+87	LT	D1-2	108 X 30	-	2	22.5	-		"SOUTH END RD/S ISLAND LAKE RD"
291+74	RT	I55-56	30 X 36	1	-	7.5	-		
292+55	RT	R1-1	30 X 30	1	-	5.18	-		
298+99	RT	W14-3	48 X 36	1	-	-	6	"LANDING RD"	
299+16	LT	D1-1	78 X 15	2	-	8.125	-		
299+92	RT	W11-6	30 X 30	-	1	-	6.25		
305+91	RT	W11-8	30 X 30	-	1	-	6.25		
312+50	RT	J1-1	24 X 39	-	1	6.5	-		
319+41	LT	W11-6	30 X 30	-	1	-	6.25		
321+23	LT	J4-1	24 X 36	1	-	6	-		
322+30	RT	J13-1	24 X 45	-	1	7.5	-		
323+04	LT	W1-7	48 X 24	1	-	-	8		
323+58	LT	J13-1	24 X 45	-	-	7.5	-		ON SAME POST AS W14-3
323+22	RT	R1-1	30 X 30	1	-	5.18	-		
323+27	RT	J13-1	24 X 45	-	1	7.5	-		
323+58	LT	W14-3	48 X 36	1	-	-	6		
323+60	RT	J4-1	24 X 36	1	-	6	-		
324+52	RT	D1-1	66 X 15	2	-	6.875	-		"BARTH RD"
326+08	LT	W11-8	30 X 30	-	1	-	6.25	"BARTH RD"	
327+86	LT	R1-1	30 X 30	1	-	5.18	-		
332+98	LT	D1-1	66 X 15	2	-	6.875	-		
335+42	LT	J1-1	24 X 39	-	1	6.5	-		
350+25	RT	W14-3	48 X 36	1	-	-	6		
374+48	RT	W2-2	30 X 30	-	1	-	6.25		
381+17	LT	I55-56	30 X 36	1	-	7.5	-		
381+21	RT	I55-56	30 X 36	1	-	7.5	-		
381+42	LT	R1-1	30 X 30	1	-	5.18	-		
405+69	RT	R2-1	24 X 30	-	-	5	-		ON SAME POST AS W14-3
SUBTOTAL				40	17	231.80	118.75		

PERMANENT SIGNING (CONTINUED)									
STATION	LOCATION	CODE	(IN X IN)	634.0616	634.0618	637.2210	637.2230	REMARKS	
				POSTS WOOD 4X6-INCH X 16 FT	POSTS WOOD 4X6-INCH X 18 FT	SIGNS TYPE II REFLECTIVE H	SIGNS TYPE II REFLECTIVE F		
405+69	RT	W14-3	48 X 36	1	-	-	6	ON SAME POST AS R2-1	
417+12	LT	W14-3	48 X 36	-	-	-	6		
417+12	LT	R2-1	24 X 30	1	-	5	-		ON SAME POST AS W14-3
446+22	RT	W14-3	48 X 36	1	-	-	6		ON SAME POST AS R2-1
475+10	RT	W11-6	30 X 30	-	1	-	6.25		
477+74	RT	D1-1	90 X 15	2	-	9.375	-	"SAND ROCK RD"	
484+89	RT	R1-1	30 X 30	1	-	5.18	-		
485+31	LT	I55-56	30 X 36	1	-	7.5	-		
485+33	RT	I55-56	30 X 36	1	-	7.5	-		
490+67	LT	W14-3	48 X 36	1	-	-	6		
491+67	LT	D1-1	90 X 15	2	-	9.375	-	"SAND ROCK RD"	
495+35	LT	W11-6	30 X 30	-	1	-	6.25		
504+63	RT	W2-2	30 X 30	-	1	-	6.25		
506+60	RT	D1-1	78 X 15	2	-	8.125	-		"CAMP 7 RD"
511+77	LT	R1-1	30 X 30	1	-	5.18	-		
512+53	RT	D1-1	84 X 15	2	-	8.75	-	"LAYMANS RD"	
516+42	LT	D1-1	78 X 15	2	-	8.125	-		"CAMP 7 RD"
517+17	LT	R1-1	30 X 30	1	-	5.18	-		
521+03	RT	M1-4	24 X 24	-	-	4	-		ON SAME POST AS W14-3
521+03	RT	W14-3	48 X 36	1	-	-	6		ON SAME POST AS M1-4
521+50	LT	M1-4	24 X 24	1	-	4	-	"LAYMANS RD"	
524+32	LT	D1-1	84 X 15	2	-	8.75	-		
535+02	LT	R1-1	30 X 30	1	-	5.18	-		
563+47	LT	W14-3	48 X 36	1	-	-	6		
580+40	RT	W11-6	30 X 30	-	1	-	6.25		
583+65	RT	D1-1	84 X 15	2	-	8.75	-	"SAND HILL RD"	
590+40	LT	R1-1	30 X 30	1	-	5.18	-		
596+60	LT	D1-1	84 X 15	2	-	8.75	-		"SAND HILL RD"
597+62	LT	W2-2	30 X 30	-	1	-	6.25		
600+45	LT	W11-6	30 X 30	-	1	-	6.25		
609+47	RT	W14-3	48 X 36	1	-	-	6		
614+65	RT	I55-56	30 X 36	1	-	7.5	-		
614+65	LT	I55-56	30 X 36	1	-	7.5	-		
614+96	LT	R1-1	30 X 30	1	-	5.18	-		
627+61	RT	D1-1	78 X 15	2	-	8.125	-		"MOSINEE RD"
634+74	RT	R1-1	30 X 30	1	-	5.18	-	"MOSINEE RD"	
636+19	LT	W14-3	48 X 36	1	-	-	6		
640+20	LT	D1-1	78 X 15	2	-	8.125	-		
640+85	LT	R1-1	30 X 30	1	-	5.18	-		
655+95	RT	W14-3	48 X 36	1	-	-	6		
658+49	LT	W14-3	48 X 36	1	-	-	6	"LYON RD"	
660+62	RT	D1-1	48 X 24	1	-	8	-		
667+43	LT	R1-1	30 X 30	1	-	5.18	-		
667+73	RT	R1-1	30 X 30	1	-	5.18	-		
672+60	LT	D1-1	48 X 24	1	-	8	-		"LYON RD"
674+57	LT	W2-1	30 X 30	-	1	-	6.25	"MUTANEN RD"	
686+89	RT	D1-1	84 X 15	2	-	8.75	-		
691+71	RT	W14-3	48 X 36	1	-	-	6		
693+70	LT	R1-1	30 X 30	1	-	5.18	-		
694+08	RT	R1-1	30 X 30	1	-	5.18	-		
696+25	LT	R1-1	30 X 30	1	-	5.18	-	"MUTANEN RD"	
700+92	LT	D1-1	84 X 15	2	-	8.75	-		
SUBTOTAL				55	7	230.09	109.75		

UNLESS OTHERWISE NOTED
ALL ITEMS IN CATEGORY 0010

PERMANENT SIGNING (CONTINUED)										
STATION	LOCATION	CODE	(IN X IN)			634.0616	634.0618	637.2210	637.2230	REMARKS
						POSTS WOOD 4X6-INCH X 16 FT EACH	POSTS WOOD 4X6-INCH X 18 FT EACH	SIGNS TYPE II REFLECTIVE H SF	SIGNS TYPE II REFLECTIVE F SF	
709+47	LT	W14-3	48	X	36	1	-	-	6	
716+70	RT	D1-2	96	X	30	2	-	20	-	"KOEHMSTEDT RD/CENTER DR"
720+56	RT	W1-8	18	X	24	-	-	-	3	ON SAME POST AS W1-8
720+56	RT	W1-8	18	X	24	1	-	-	3	ON SAME POST AS W1-8
721+50	RT	W1-8	18	X	24	-	-	-	3	ON SAME POST AS W1-8
721+50	RT	W1-8	18	X	24	1	-	-	3	ON SAME POST AS W1-8
722+11	RT	W1-6	48	X	24	1	-	-	8	
722+47	RT	W1-8	18	X	24	-	-	-	3	ON SAME POST AS W1-8
722+47	RT	W1-8	18	X	24	1	-	-	3	ON SAME POST AS W1-8
723+39	RT	W1-8	18	X	24	-	-	-	3	ON SAME POST AS W1-8
723+39	RT	W1-8	18	X	24	1	-	-	3	ON SAME POST AS W1-8
723+89	RT	I55-56	30	X	36	1	-	7.5	-	
724+31	RT	W1-8	18	X	24	-	-	-	3	ON SAME POST AS W1-8
724+31	RT	W1-8	18	X	24	1	-	-	3	ON SAME POST AS W1-8
724+43	LT	I55-56	30	X	36	1	-	7.5	-	
724+51	RT	R1-1	30	X	30	1	-	5.18	-	
725+07	LT	R1-1	30	X	30	1	-	5.18	-	
725+25	RT	R1-1	30	X	30	1	-	5.18	-	
725+38	RT	W1-8	18	X	24	-	-	-	3	ON SAME POST AS W1-8
725+38	RT	W1-8	18	X	24	1	-	-	3	ON SAME POST AS W1-8
726+35	RT	W1-8	18	X	24	-	-	-	3	ON SAME POST AS W1-8
726+35	RT	W1-8	18	X	24	1	-	-	3	ON SAME POST AS W1-8
727+46	RT	W1-8	18	X	24	-	-	-	3	ON SAME POST AS W1-8
727+46	RT	W1-8	18	X	24	1	-	-	3	ON SAME POST AS W1-8
728+44	RT	W1-8	18	X	24	-	-	-	3	ON SAME POST AS W1-8
728+44	RT	W1-8	18	X	24	1	-	-	3	ON SAME POST AS W1-8
729+67	RT	W1-8	18	X	24	-	-	-	3	ON SAME POST AS W1-8
729+67	RT	W1-8	18	X	24	1	-	-	3	ON SAME POST AS W1-8
730+68	RT	W1-8	18	X	24	-	-	-	3	ON SAME POST AS W1-8
730+68	RT	W1-8	18	X	24	1	-	-	3	ON SAME POST AS W1-8
731+68	RT	W1-8	18	X	24	-	-	-	3	ON SAME POST AS W1-8
731+68	RT	W1-8	18	X	24	1	-	-	3	ON SAME POST AS W1-8
732+19	LT	D1-2	96	X	15	2	-	10	-	"CENTER DR/KOEHMSTEDT RD"
735+29	LT	W14-3	48	X	36	1	-	-	6	
740+85	RT	W14-3	48	X	36	1	-	-	6	
747+33	RT	J1-1	24	X	39	-	1	6.5	-	
755+14	LT	J4-1	24	X	36	1	-	6	-	
756+08	RT	J13-1	24	X	45	-	1	7.5	-	
757+45	RT	R1-1	30	X	30	1	-	5.18	-	
757+52	RT	J13-1	24	X	45	-	1	7.5	-	
757+62	LT	J13-1	24	X	45	-	1	7.5	-	
760+52	LT	W4-2R	36	X	36	-	1	-	9	
761+27	LT	J13-1	24	X	45	-	1	7.5	-	
761+35	LT	R1-1	30	X	30	1	-	5.18	-	
761+41	RT	J13-1	24	X	45	-	1	7.5	-	
762+77	LT	J13-1	24	X	45	-	1	7.5	-	
763+25	RT	J4-1	24	X	36	1	-	6	-	
771+49	LT	J1-1	24	X	39	-	1	6.5	-	
786+49	LT	W14-3	48	X	36	1	-	-	6	
786+86	RT	W14-3	48	X	36	1	-	-	6	
SUBTOTAL						31	9	140.9	119.00	
TOTAL						126	33	602.79	347.50	

UNLESS OTHERWISE NOTED
ALL ITEMS IN CATEGORY 0010

3

EXISTING SIGNING				
STATION	LOCATION	638.2602	638.3000	REMARKS
		REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS	
24+34	RT	1	1	W2-1
26+87	RT	1	2	"OLD 51 RD/WEBER RD"
30+91	LT	1	1	R1-1
32+39	RT	1	1	R1-1
37+48	RT	1	1	W11-6
38+59	LT	1	2	"WEBER RD/OLD 51 RD"
41+38	LT	1	1	R1-1
48+03	LT	1	1	W2-2
73+65	RT	1	1	"OLD 51 RD"
74+36	LT	1	1	W14-3
74+38	RT	1	1	W14-3
80+97	RT	1	1	I55-56
81+56	RT	1	1	R1-1
88+35	LT	1	1	"OLD 51 RD"
119+54	LT	1	1	W14-3
123+13	RT	1	1	W14-3
134+30	LT	1	1	W11-6
279+62	RT	1	1	R1-1
279+75	LT	1	1	R1-1
285+02	RT	1	2	"LANDING RD"
286+87	LT	1	2	"S ISLAND LAKE RD/SOUTH END RD"
291+74	RT	1	1	I55-56
292+55	RT	1	1	R1-1
298+99	RT	1	1	W14-3
305+91	RT	1	1	W11-8
312+50	RT	2	1	J1-1
321+23	LT	2	1	J4-1
323+04	LT	5	2	J ASSEMBLIES & W1-7
323+22	RT	1	1	R1-1
323+27	RT	2	1	J12-1
323+58	LT	1	1	W14-3
323+60	RT	2	1	J4-1
324+52	RT	1	1	"BARTH RD"
326+08	LT	1	1	W11-8
327+86	LT	1	1	R1-1
332+98	LT	1	1	"BARTH RD"
335+42	LT	2	1	J1-1
350+25	RT	1	1	W14-3
374+48	RT	1	1	W2-2
381+17	RT	1	1	I55-56
381+21	LT	1	1	I55-56
381+42	LT	1	1	R1-1
405+69	RT	2	1	R2-1 & W14-3
417+12	LT	2	1	R2-1 & W14-3
446+22	RT	1	1	W14-3
477+74	RT	1	2	"SAND ROCK RD"
484+89	RT	1	1	R1-1
485+31	LT	1	1	I55-56
485+33	RT	1	1	I55-56
490+67	LT	1	1	W14-3
SUBTOTAL		61	56	

EXISTING SIGNING (CONTINUED)

STATION	LOCATION	638.2602	638.3000	REMARKS
		REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS	
491+67	LT	1	2	"SAND ROCK RD"
504+63	RT	1	1	W2-2
506+60	RT	1	1	"CAMP 7 RD"
511+77	LT	1	1	R1-1
512+53	RT	1	2	"LAYMANS RD"
516+42	LT	1	1	"CAMP 7 RD"
517+17	LT	1	1	R1-1
521+03	RT	2	1	M1-4 & W14-3
521+50	LT	1	1	M1-4
524+32	LT	1	2	"LAYMANS RD"
535+02	LT	1	1	R1-1
563+47	LT	1	1	W14-3
590+40	LT	1	1	R1-1
597+62	LT	1	1	W2-2
609+47	RT	1	1	W14-3
614+65	RT	1	1	I55-56
614+65	LT	1	1	I55-56
614+96	LT	1	1	R1-1
627+61	RT	1	1	"MOSINEE RD"
634+74	RT	1	1	R1-1
636+19	LT	1	1	W14-3
640+20	LT	1	1	"MOSINEE RD"
640+85	LT	1	1	R1-1
655+95	RT	1	1	W14-3
658+49	LT	1	1	W14-3
660+62	RT	1	1	"LYON RD"
667+43	LT	1	1	R1-1
667+73	RT	1	1	R1-1
672+60	LT	1	1	"LYON RD"
674+57	LT	1	1	W2-1
686+89	RT	1	2	"MUTANEN RD"
691+65	RT	1	1	W14-3
693+70	LT	1	1	R1-1
694+08	RT	1	1	R1-1
696+25	LT	1	1	R1-1
700+92	LT	1	2	"MUTANEN RD"
709+47	LT	1	1	W14-3
716+70	RT	1	2	"KOEHMSTEDT RD/CENTER DR"
720+56	RT	2	1	W1-8
721+50	RT	2	1	W1-8
722+11	RT	1	1	W1-6
722+47	RT	2	1	W1-8
723+39	RT	2	1	W1-8
723+89	RT	1	1	I55-56
724+31	RT	2	1	W1-8
724+43	LT	1	1	I55-56
724+51	RT	1	1	R1-1
725+07	LT	1	1	R1-1
725+25	RT	1	1	R1-1
725+38	RT	2	1	W1-8
SUBTOTAL		57	56	

EXISTING SIGNING (CONTINUED)

STATION	LOCATION	638.2602	638.3000	REMARKS
		REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS	
726+35	RT	2	1	W1-8
727+46	RT	2	1	W1-8
728+44	RT	2	1	W1-8
729+67	RT	2	1	W1-8
730+68	RT	2	1	W1-8
731+68	RT	2	1	W1-8
732+19	LT	1	2	"CENTER DR/KOEHMSTEDT RD"
735+29	LT	1	1	W14-3
740+85	RT	1	1	W14-3
747+33	RT	2	1	J1-1
755+14	LT	2	1	J4-1
756+08	RT	2	1	J12-1
757+45	RT	1	1	R1-1
757+52	RT	2	1	J12-1
757+62	LT	2	1	J12-1
760+52	LT	1	1	W4-2R
761+27	LT	2	1	J12-1
761+35	LT	1	1	R1-1
761+41	RT	2	1	J12-1
762+77	LT	2	1	J12-1
763+25	RT	2	1	J4-1
771+67	LT	2	1	J1-1
786+49	LT	1	1	W14-3
786+86	RT	1	1	W14-3
SUBTOTAL		40	25	
TOTAL		158	137	

FIELD OFFICE TYPE B

PROJECT	642.5001
	EACH
PROJECT 1175-19-60	1
TOTAL	1

TRAFFIC CONTROL (PROJECT)

PROJECT	643.0100
	EACH
PROJECT 1175-19-60	1
TOTAL	1

TRAFFIC CONTROL ITEMS

		643.0300		643.0900		643.1050		SPV.0060.04
		TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL SIGNS PCMS		LANE SHIFT
STATION	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH
SITE 1	14	-	-	-	-	1	14	-
19+65	7	-	-	1	7	-	-	-
38+81	-	-	-	-	-	-	-	2
19+65 - 139+50	54	120	6,480	18	972	-	-	-
302+21	-	-	-	-	-	-	-	2
319+81	-	-	-	-	-	-	-	2
464+93	-	-	-	-	-	-	-	2
562+02	-	-	-	-	-	-	-	2
710+83	-	-	-	-	-	-	-	2
767+36	-	-	-	-	-	-	-	2
274+25 - 790+65	54	516	27,864	81	4,374	-	-	-
790+65	7	-	-	1	7	-	-	-
SITE 2	14	-	-	-	-	1	14	-
TOTAL		34,344		5,360		28		14

UNLESS OTHERWISE NOTED
ALL ITEMS IN CATEGORY 0010

3

PROJECT NUMBER: 1175-19-60

HWY:USH 51

COUNTY:IRON

MISCELLANEOUS QUANTITIES

SHEET

E

PAVEMENT MARKING EPOXY											
		646.0106 4-INCH					646.0406 SAME DAY 4-INCH		646.0126 8-INCH	647.0566 STOP LINE	647.0803 AERIAL ENFORCEMENT BARS EPOXY 24-INCH
STATION	LOCATION	WHITE LF	DASHED WHITE 3-FOOT LINE 9-FOOT SKIP LF	YELLOW LF	DASHED YELLOW 12.5-FOOT LINE 37.5-FOOT SKIP LF	DASHED WHITE 12.5-FOOT LINE 37.5-FOOT SKIP LF	YELLOW LF	DASHED YELLOW 12.5-FOOT LINE 37.5-FOOT SKIP LF	LF	LF	LF
19+65 - 139+50	-	-	-	-	-	-	-	-	-	-	-
274+25 - 790+65	-	-	-	-	-	-	-	-	-	-	-
320+18 - 322+18	RT	-	-	-	-	-	-	-	200	-	-
754+27 - 756+38	RT	-	-	-	-	-	-	-	210	-	-
762+22 - 764+24	LT	-	-	-	-	-	-	-	200	-	-
19+65 - 30+75	RT	1,110	-	-	-	-	-	-	-	-	-
19+65 - 31+01	LT	1,140	-	-	-	-	-	-	-	-	-
19+65 - 45+44	CENTER LINE	-	-	2,580	-	-	2,580	-	-	-	-
19+65 - 24+09	CENTER LINE	-	-	-	110	-	-	110	-	-	-
24+09 - 45+44	CENTER LINE	-	-	2,140	-	-	2,140	-	-	-	-
30+75 - 31+75	RT	-	25	-	-	-	-	-	-	-	-
31+91 - 32+90	LT	-	25	-	-	-	-	-	-	-	-
32+47 - 45+44	RT	1,300	-	-	-	-	-	-	-	-	-
32+90 - 41+26	LT	850	-	-	-	-	-	-	-	-	-
41+81 - 42+28	LT	-	12	-	-	-	-	-	-	-	-
42+28 - 45+44	LT	320	-	-	-	-	-	-	-	-	-
45+59 - 80+90	RT	3,610	-	-	-	-	-	-	-	-	-
45+59 - 126+61	LT	8,100	-	-	-	-	-	-	-	-	-
45+59 - 61+12	CENTER LINE	-	-	1,550	-	-	1,550	-	-	-	-
45+59 - 74+38	CENTER LINE	-	-	2,880	-	-	2,880	-	-	-	-
61+12 - 74+38	CENTER LINE	-	-	-	330	-	-	330	-	-	-
74+38 - 106+80	CENTER LINE	-	-	3,250	-	-	3,250	-	-	-	-
74+38 - 88+59	CENTER LINE	-	-	-	1,420	-	-	1,420	-	-	-
80+90 - 81+11	RT	-	6	-	-	-	-	-	-	-	-
81+55 - 126+61	RT	4,520	-	-	-	-	-	-	-	-	-
88+59 - 123+13	CENTER LINE	-	-	3,450	-	-	3,450	-	-	-	-
106+80 - 119+54	CENTER LINE	-	-	-	320	-	-	320	-	-	-
119+54 - 126+61	CENTER LINE	-	-	-	-	-	-	-	-	-	-
126+76 - 139+50	RT	1,280	-	-	-	-	-	-	-	-	-
126+76 - 139+50	LT	1,280	-	-	-	-	-	-	-	-	-
126+76 - 134+14	CENTER LINE	-	-	740	-	-	740	-	-	-	-
126+76 - 133+42	CENTER LINE	-	-	-	170	-	-	170	-	-	-
133+42 - 139+50	CENTER LINE	-	-	610	-	-	610	-	-	-	-
134+14 - 139+50	CENTER LINE	-	-	-	140	-	-	140	-	-	-
274+25 - 278+24	RT	400	-	-	-	-	-	-	-	-	-
274+25 - 279+48	LT	520	-	-	-	-	-	-	-	-	-
274+25 - 285+75	CENTER LINE	-	-	1,150	-	-	1,150	-	-	-	-
274+25 - 280+95	CENTER LINE	-	-	-	170	-	-	170	-	-	-
278+24 - 279+07	RT	-	22	-	-	-	-	-	-	-	-
279+87 - 291+09	RT	1,120	-	-	-	-	-	-	-	-	-
280+34 - 281+41	LT	-	27	-	-	-	-	-	-	-	-
280+94 - 299+00	CENTER LINE	-	-	1,760	-	-	1,760	-	-	-	-
281+41 - 309+59	LT	2,820	-	-	-	-	-	-	-	-	-
285+75 - 323+60	CENTER LINE	-	-	-	950	-	-	950	-	-	-
291+09 - 291+87	RT	-	20	-	-	-	-	-	-	-	-
292+75 - 309+59	RT	1,700	-	-	-	-	-	-	-	-	-
309+74 - 322+08	RT	1,230	-	-	-	-	-	-	-	-	-
309+74 - 327+78	LT	1,800	-	-	-	-	-	-	-	-	-
319+27 - 350+25	CENTER LINE	-	-	3,100	-	-	3,100	-	-	-	-
323+60 - 336+55	CENTER LINE	-	-	1,290	-	-	1,290	-	-	-	-
322+25 - 324+37	LT	-	-	-	-	210	-	-	-	-	-
323+00	RT	-	-	-	-	-	-	-	-	35	-
323+47 - 483+65	RT	16,000	-	-	-	-	-	-	-	-	-
328+30 - 329+21	LT	-	23	-	-	-	-	-	-	-	-
329+21 - 381+23	LT	5,200	-	-	-	-	-	-	-	-	-
336+55 - 372+27	CENTER LINE	-	-	-	890	-	-	890	-	-	-
SUBTOTAL		54,300	160	24,500	4,500	210	24,500	4,500	610	35	0

PAVEMENT MARKING EPOXY (CONTINUED)											
STATION	LOCATION	646.0106 4-INCH					646.0406 SAME DAY 4-INCH		646.0126 8-INCH	647.0566 STOP LINE	647.0803 AERIAL
		WHITE	DASHED WHITE 3-FOOT LINE 9-FOOT SKIP	YELLOW	DASHED YELLOW 12.5-FOOT LINE 37.5-FOOT SKIP	DASHED WHITE 12.5-FOOT LINE 37.5-FOOT SKIP	YELLOW	DASHED YELLOW 12.5-FOOT LINE 37.5-FOOT SKIP	WHITE	18-INCH	ENFORCEMENT BARS EPOXY 24-INCH
		LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
358+10 - 393+22	CENTER LINE	-	-	3,510	-	-	3,510	-	-	-	-
372+27 - 405+69	CENTER LINE	-	-	3,340	-	-	3,340	-	-	-	-
381+95 - 383+10	LT	-	29	-	-	-	-	-	-	-	-
383+10 - 484+56	LT	10,150	-	-	-	-	-	-	-	-	-
393+22 - 430+18	CENTER LINE	-	-	-	925	-	-	925	-	-	-
417+12 - 432+56	CENTER LINE	-	-	1,550	-	-	1,550	-	-	-	-
430+18 - 446+22	CENTER LINE	-	-	1,600	-	-	1,600	-	-	-	-
432+56 - 503+99	CENTER LINE	-	-	-	1,790	-	-	1,790	-	-	-
483+65 - 484+48	RT	-	21	-	-	-	-	-	-	-	-
484+71 - 511+81	LT	2,710	-	-	-	-	-	-	-	-	-
485+08 - 532+46	RT	4,740	-	-	-	-	-	-	-	-	-
490+67 - 507+81	CENTER LINE	-	-	1,710	-	-	1,710	-	-	-	-
503+99 - 521+03	CENTER LINE	-	-	1,710	-	-	1,710	-	-	-	-
507+81 - 532+46	CENTER LINE	-	-	-	615	-	-	615	-	-	-
512+06 +- 512+56	LT	-	12	-	-	-	-	-	-	-	-
512+56 - 517+12	LT	455	-	-	-	-	-	-	-	-	-
517+78 - 518+22	LT	-	12	-	-	-	-	-	-	-	-
518+22 - 532+46	LT	1,420	-	-	-	-	-	-	-	-	-
534+04 - 534+99	LT	95	-	-	-	-	-	-	-	-	-
535+57 - 535+80	LT	-	6	-	-	-	-	-	-	-	-
535+80 - 590+30	LT	5,450	-	-	-	-	-	-	-	-	-
534+04 - 590+41	RT	5,640	-	-	-	-	-	-	-	-	-
534+04 - 577+23	CENTER LINE	-	-	-	1,080	-	-	1,080	-	-	-
542+54	LT & RT	-	-	-	-	-	-	-	-	-	12
549+14	LT & RT	-	-	-	-	-	-	-	-	-	12
563+47 - 590+41	CENTER LINE	-	-	2,700	-	-	2,700	-	-	-	-
577+23 - 590+41	CENTER LINE	-	-	1,320	-	-	1,320	-	-	-	-
590+56 - 633+65	RT	4,300	-	-	-	-	-	-	-	-	-
590+56 - 595+44	CENTER LINE	-	-	500	-	-	500	-	-	-	-
590+56 - 609+47	CENTER LINE	-	-	1,900	-	-	1,900	-	-	-	-
590+77 - 591+64	LT	-	22	-	-	-	-	-	-	-	-
591+64 - 614+92	LT	2,330	-	-	-	-	-	-	-	-	-
595+44 - 671+38	CENTER LINE	-	-	-	1,900	-	-	1,900	-	-	-
615+34 - 616+25	LT	-	24	-	-	-	-	-	-	-	-
616+25 - 640+77	LT	2,450	-	-	-	-	-	-	-	-	-
633+65 - 634+32	RT	-	18	-	-	-	-	-	-	-	-
634+93 - 666+79	RT	3,190	-	-	-	-	-	-	-	-	-
636+19 - 643+12	CENTER LINE	-	-	700	-	-	700	-	-	-	-
641+29 - 641+93	LT	-	16	-	-	-	-	-	-	-	-
641+93 - 667+22	LT	2,530	-	-	-	-	-	-	-	-	-
650+37 - 655+95	CENTER LINE	-	-	560	-	-	560	-	-	-	-
658+49 - 678+24	CENTER LINE	-	-	1,980	-	-	1,980	-	-	-	-
667+84 - 693+02	RT	2,500	-	-	-	-	-	-	-	-	-
667+99 - 668+56	LT	-	14	-	-	-	-	-	-	-	-
668+56 - 693+53	LT	2,500	-	-	-	-	-	-	-	-	-
671+38 - 691+67	CENTER LINE	-	-	2,040	-	-	2,040	-	-	-	-
678+24 - 722+58	CENTER LINE	-	-	-	1,110	-	-	1,110	-	-	-
693+02 - 693+60	RT	-	15	-	-	-	-	-	-	-	-
694+17 - 723+71	RT	2,960	-	-	-	-	-	-	-	-	-
694+23 - 694+92	LT	-	18	-	-	-	-	-	-	-	-
694+92 - 696+23	LT	130	-	-	-	-	-	-	-	-	-
696+71 - 724+80	LT	2,800	-	-	-	-	-	-	-	-	-
709+38 - 727+89	CENTER LINE	-	-	1,850	-	-	1,850	-	-	-	-
722+58 - 740+85	CENTER LINE	-	-	1,830	-	-	1,830	-	-	-	-
723+71 - 724+24	RT	-	13	-	-	-	-	-	-	-	-
SUBTOTAL		56,350	220	28,800	7,420	0	28,800	7,420	0	0	24
UNLESS OTHERWISE NOTED ALL ITEMS IN CATEGORY 0010											

UNLESS OTHERWISE NOTED
ALL ITEMS IN CATEGORY 0010

3

PAVEMENT MARKING EPOXY (CONTINUED)											
STATION	LOCATION	646.0106 4-INCH					646.0406 SAME DAY 4-INCH		646.0126 8-INCH	647.0566 STOP LINE 18-INCH	647.0803 AERIAL ENFORCEMENT BARS EPOXY 24-INCH
		WHITE	DASHED WHITE 3-FOOT LINE 9-FOOT SKIP	YELLOW	DASHED YELLOW 12.5-FOOT LINE 37.5-FOOT SKIP	DASHED WHITE 12.5-FOOT LINE 37.5-FOOT SKIP	YELLOW	DASHED YELLOW 12.5-FOOT LINE 37.5-FOOT SKIP	WHITE		
		LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
725+41 - 756+37	RT	3,100	-	-	-	-	-	-	-	-	-
725+95 - 726+80	LT	-	20	-	-	-	-	-	-	-	-
726+80 - 761+11	LT	3,430	-	-	-	-	-	-	-	-	-
727+89 - 735+29	CENTER LINE	-	-	-	185	-	-	185	-	-	-
735+29 - 772+97	CENTER LINE	-	-	3,770	-	-	3,770	-	-	-	-
740+85 - 748+81	CENTER LINE	-	-	-	200	-	-	200	-	-	-
748+81 - 786+86	CENTER LINE	-	-	3,800	-	-	3,800	-	-	-	-
757+29	RT	-	-	-	-	-	-	-	35	-	-
757+00 - 761+12	LT	-	-	-	-	100	-	-	-	-	-
757+86 - 762+01	RT	-	-	-	-	100	-	-	-	-	-
757+89 - 790+65	RT	3,280	-	-	-	-	-	-	-	-	-
761+66	LT	-	-	-	-	-	-	-	25	-	-
762+12 - 790+65	LT	2,850	-	-	-	-	-	-	-	-	-
772+97 - 786+49	CENTER LINE	-	-	-	340	-	-	340	-	-	-
786+49 - 790+65	CENTER LINE	-	-	420	-	-	420	-	-	-	-
786+86 - 790+65	CENTER LINE	-	-	-	95	-	-	95	-	-	-
SUBTOTAL		12,660	20	7,990	820	200	7,990	820	0	60	0
TOTAL				198,150			74,030		610	95	24

TEMPORARY PAVEMENT MARKING 4-INCH				
STAGE 1F	STATION	LOCATION	649.0402	
			YELLOW	DASHED YELLOW 12.5-FOOT LINE 37.5-FOOT SKIP
			LF	LF
	38+27 - 39+35	CENTER LINE	110	-
	301+66 - 302+74	CENTER LINE	-	27
	464+38 - 465+48	CENTER LINE	-	28
	561+48 - 562+56	CENTER LINE	-	27
	710+29 - 711+37	CENTER LINE	110	-
	766+82 - 767+90	CENTER LINE	110	-
	SUBTOTAL		330	80

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TEMPORARY PAVEMENT MARKING 4-INCH (CONTINUED)				
STAGE 1B	STATION	LOCATION	649.0402	
			YELLOW	DASHED YELLOW 12.5-FOOT LINE 37.5-FOOT SKIP
	19+65 - 45+44	CENTER LINE	2,580	-
	19+65 - 24+09	CENTER LINE	-	110
	24+09 - 45+44	CENTER LINE	2,140	-
	45+59 - 61+12	CENTER LINE	1,550	-
	45+59 - 74+38	CENTER LINE	2,880	-
	61+12 - 74+38	CENTER LINE	-	330
	74+38 - 106+80	CENTER LINE	3,250	-
	74+38 - 88+59	CENTER LINE	-	1,420
	88+59 - 123+13	CENTER LINE	3,450	-
	106+80 - 119+54	CENTER LINE	-	320
	119+54 - 126+61	CENTER LINE	-	-
	126+76 - 134+14	CENTER LINE	740	-
	126+76 - 133+42	CENTER LINE	-	170
	133+42 - 139+50	CENTER LINE	610	-
	134+14 - 139+50	CENTER LINE	-	145
	274+25 - 285+75	CENTER LINE	1,150	-
	274+25 - 280+95	CENTER LINE	-	170
	280+94 - 299+00	CENTER LINE	1,760	-
	285+75 - 323+60	CENTER LINE	-	950
	319+27 - 350+25	CENTER LINE	3,100	-
	323+60 - 336+55	CENTER LINE	1,290	-
	336+55 - 372+27	CENTER LINE	-	890
	358+10 - 393+22	CENTER LINE	3,510	-
	372+27 - 405+69	CENTER LINE	3,340	-
	393+22 - 430+18	CENTER LINE	-	930
	417+12 - 432+56	CENTER LINE	1,550	-
	430+18 - 446+22	CENTER LINE	1,600	-
	432+56 - 503+99	CENTER LINE	-	1,790
	490+67 - 507+81	CENTER LINE	1,710	-
	503+99 - 521+03	CENTER LINE	1,710	-
	507+81 - 532+46	CENTER LINE	-	625
	534+04 - 577+23	CENTER LINE	-	1,080
	563+47 - 590+41	CENTER LINE	2,700	-
	577+23 - 590+41	CENTER LINE	1,320	-
	590+56 - 595+44	CENTER LINE	500	-
	590+56 - 609+47	CENTER LINE	1,900	-
	595+44 - 671+38	CENTER LINE	-	1,900
	636+19 - 643+12	CENTER LINE	700	-
	650+37 - 655+95	CENTER LINE	560	-
	658+49 - 678+24	CENTER LINE	1,980	-
	671+38 - 691+67	CENTER LINE	2,040	-
	678+24 - 722+58	CENTER LINE	-	1,110
	709+38 - 727+89	CENTER LINE	1,850	-
	722+58 - 740+85	CENTER LINE	1,830	-
	727+89 - 735+29	CENTER LINE	-	185
	735+29 - 772+97	CENTER LINE	3,770	-
	740+85 - 748+81	CENTER LINE	-	200
	748+81 - 786+86	CENTER LINE	3,800	-
	772+97 - 786+49	CENTER LINE	-	340
	786+49 - 790+65	CENTER LINE	420	-
	786+86 - 790+65	CENTER LINE	-	95
	SUBTOTAL		61,290	12,760

UNLESS OTHERWISE NOTED
ALL ITEMS IN CATEGORY 0010

PROJECT NUMBER: 1175-19-60

HWY: USH 51

COUNTY: IRON

MISCELLANEOUS QUANTITIES

SHEET

E

3

STAGE 2B	STATION	LOCATION	YELLOW	DASHED YELLOW
				12.5-FOOT LINE
			LF	37.5-FOOT SKIP
	19+65 - 45+44	CENTER LINE	2,580	-
	19+65 - 24+09	CENTER LINE	-	110
	24+09 - 45+44	CENTER LINE	2,140	-
	45+59 - 61+12	CENTER LINE	1,550	-
	45+59 - 74+38	CENTER LINE	2,880	-
	61+12 - 74+38	CENTER LINE	-	330
	74+38 - 106+80	CENTER LINE	3,250	-
	74+38 - 88+59	CENTER LINE	-	1,420
	88+59 - 123+13	CENTER LINE	3,450	-
	106+80 - 119+54	CENTER LINE	-	320
	119+54 - 126+61	CENTER LINE		-
	126+76 - 134+14	CENTER LINE	740	-
	126+76 - 133+42	CENTER LINE	-	170
	133+42 - 139+50	CENTER LINE	610	-
	134+14 - 139+50	CENTER LINE	-	145
	274+25 - 285+75	CENTER LINE	1,150	-
	274+25 - 280+95	CENTER LINE	-	170
	280+94 - 299+00	CENTER LINE	1,760	-
	285+75 - 323+60	CENTER LINE	-	
	319+27 - 350+25	CENTER LINE	3,100	-
	323+60 - 336+55	CENTER LINE	1,290	-
	336+55 - 372+27	CENTER LINE	-	890
	358+10 - 393+22	CENTER LINE	3,510	-
	372+27 - 405+69	CENTER LINE	3,340	-
	393+22 - 430+18	CENTER LINE	-	930
	417+12 - 432+56	CENTER LINE	1,550	-
	430+18 - 446+22	CENTER LINE	1,600	-
	432+56 - 503+99	CENTER LINE	-	1,790
	490+67 - 507+81	CENTER LINE	1,710	-
	503+99 - 521+03	CENTER LINE	1,710	-
	507+81 - 532+46	CENTER LINE	-	625
	534+04 - 577+23	CENTER LINE	-	1,080
	563+47 - 590+41	CENTER LINE	2,700	-
	577+23 - 590+41	CENTER LINE	1,320	-
	590+56 - 595+44	CENTER LINE	500	-
	590+56 - 609+47	CENTER LINE	1,900	-
	595+44 - 671+38	CENTER LINE	-	1,900
	636+19 - 643+12	CENTER LINE	700	-
	650+37 - 655+95	CENTER LINE	560	-
	658+49 - 678+24	CENTER LINE	1,980	-
	671+38 - 691+67	CENTER LINE	2,040	-
	678+24 - 722+58	CENTER LINE	-	1,110
	709+38 - 727+89	CENTER LINE	1,850	-
	722+58 - 740+85	CENTER LINE	1,830	-
	727+89 - 735+29	CENTER LINE	-	185
	735+29 - 772+97	CENTER LINE	3,770	-
	740+85 - 748+81	CENTER LINE	-	200
	748+81 - 786+86	CENTER LINE	3,800	-
	772+97 - 786+49	CENTER LINE	-	340
	786+49 - 790+65	CENTER LINE	420	-
	786+86 - 790+65	CENTER LINE	-	95
	SUBTOTAL		61,290	11,810
	TOTAL			147,560

		650.4500 SUBGRADE	650.5000 BASE	650.5500 CURB GUTTER AND CURB & GUTTER	650.6000 PIPE CULVERTS	650.8000 RESURFACING REFERENCE	650.9910 SUPPLEMENTAL CONTROL	650.9920 SLOPE STAKES
STATION	LOCATION	LF	LF	LF	EACH	LF	LS	LF
PROJECT 1175-19-60	-	-	-	-	-	-	1	-
19+65 - 139+50	-	-	-	-	-	12,000	-	-
274+25 - 790+65	-	-	-	-	-	51,640	-	-
38+81	-	-	-	-	1	-	-	-
302+20	-	-	-	-	1	-	-	-
464+93	-	-	-	-	1	-	-	-
562+02	-	-	-	-	1	-	-	-
710+83	-	-	-	-	1	-	-	-
767+36	-	-	-	-	1	-	-	-
318+67 - 324+47	RT	580	580	-	-	-	-	580
318+65 - 326+63	LT	800	800	-	-	-	-	800
322+23 - 322+78	RT	-	-	90	-	-	-	-
323+08 - 323+59	RT	-	-	80	-	-	-	-
TOTAL		1,380	1,380	170	6	63,640	1	1,380

690.0250			
STATION	LOCATION	LF	REMARKS
19+65	-	20	-
38+27	-	20	CULVERT 36
39+35	-	20	CULVERT 36
301+66	-	20	CULVERT 58
302+74	-	20	CULVERT 58
464+38	-	20	CULVERT 71
465+48	-	20	CULVERT 71
561+48	-	20	CULVERT 75R
562+56	-	20	CULVERT 75R
710+29	-	20	CULVERT 87R
711+37	-	20	CULVERT 87R
766+82	-	20	CULVERT 89
767+90	-	20	CULVERT 89
790+65	-	20	-
TOTAL		320	

690.0150			
STATION	LOCATION	LF	REMARKS
19+65	-	30	-
31+32	LT	15	WEBER RD
32+09	RT	21	OLD 51 RD
38+27	-	30	CULVERT 36
39+35	-	30	CULVERT 36
139+50	-	30	-
274+25	-	30	-
279+61	RT	25	SOUTH END RD
301+66	-	30	CULVERT 58
302+74	-	30	CULVERT 58
306+93	RT	26	-
308+73	RT	33	-
315+51	LT	32	-
316+98	RT	28	-
318+64 - 326+63	LT	800	-
318+67 - 324+46	RT	580	-
323+00	RT	22	CTH G
328+00	LT	18	BARTH RD
464+38	-	30	CULVERT 71
465+48	-	30	CULVERT 71
535+26	LT	21	SHOMBERG PARK RD
561+48	-	30	CULVERT 75R
562+56	-	30	CULVERT 75R
667+53	RT	23	LYON RD
670+46	LT	12	-
693+93	LT	18	TOWN HALL RD
696+42	LT	24	-
710+29	-	30	CULVERT 87R
711+37	-	30	CULVERT 87R
724+89	RT	32	CENTER DR (CTH CC)
725+34	LT	25	KOEHMSTEDT RD
743+94	RT	25	-
747+44	LT	18	-
757+29	RT	30	CTH C
761+66	LT	30	CTH C
766+82	-	30	CULVERT 89
767+90	-	30	CULVERT 89
777+15	RT	22	-
782+89	RT	20	-
790+65	-	30	-
TOTAL		2,380	

	648.0100
STATION	MI
19+65 - 139+50	2.27
274+25 - 790+65	9.78
TOTAL	12.05

		SPV.0060.03
STATION	LOCATION	EACH
589+12.17	88.18' LT	1
615+13.51	47.22' LT	1
693+90.49	2.23' LT	1
720+36.91	2.37' RT	1
TOTAL		4

	SPV.0060.01
LOCATION	EACH
112258 N US HWY 51	1
TOTAL	1

SPV.0180.01	
STATION	SY
45+51	50
126+68	50
309+66	50
484+64	50
590+49	50
TOTAL	250

PROJECT NUMBER: 1175-19-60

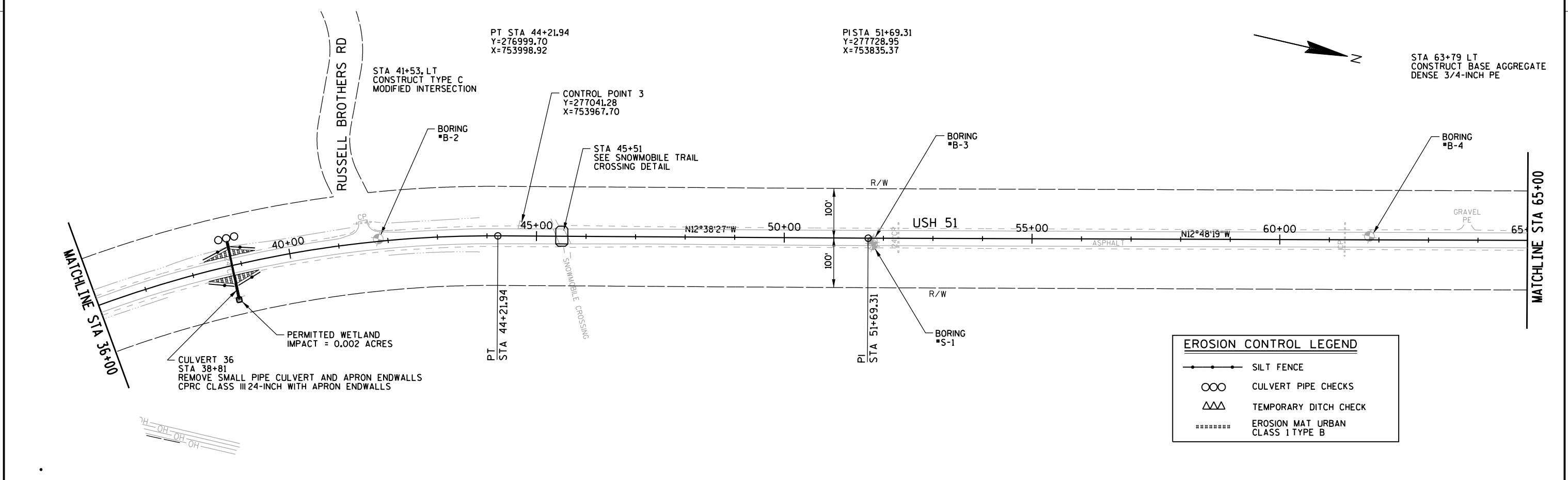
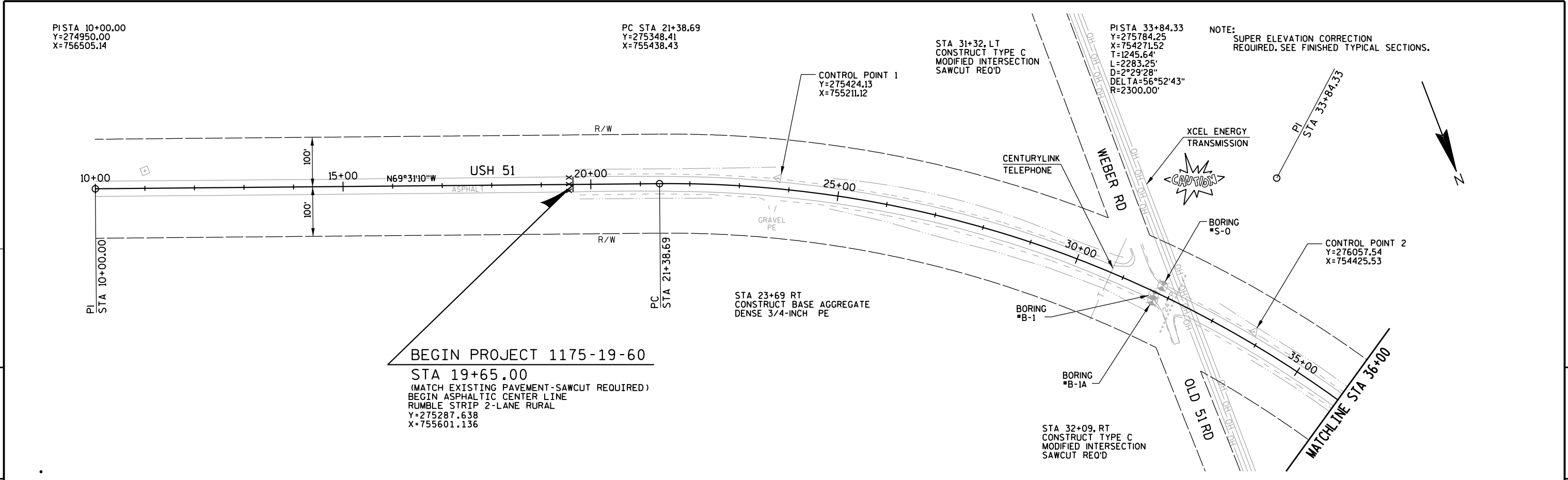
HWY:USH 51

COUNTY:IRON

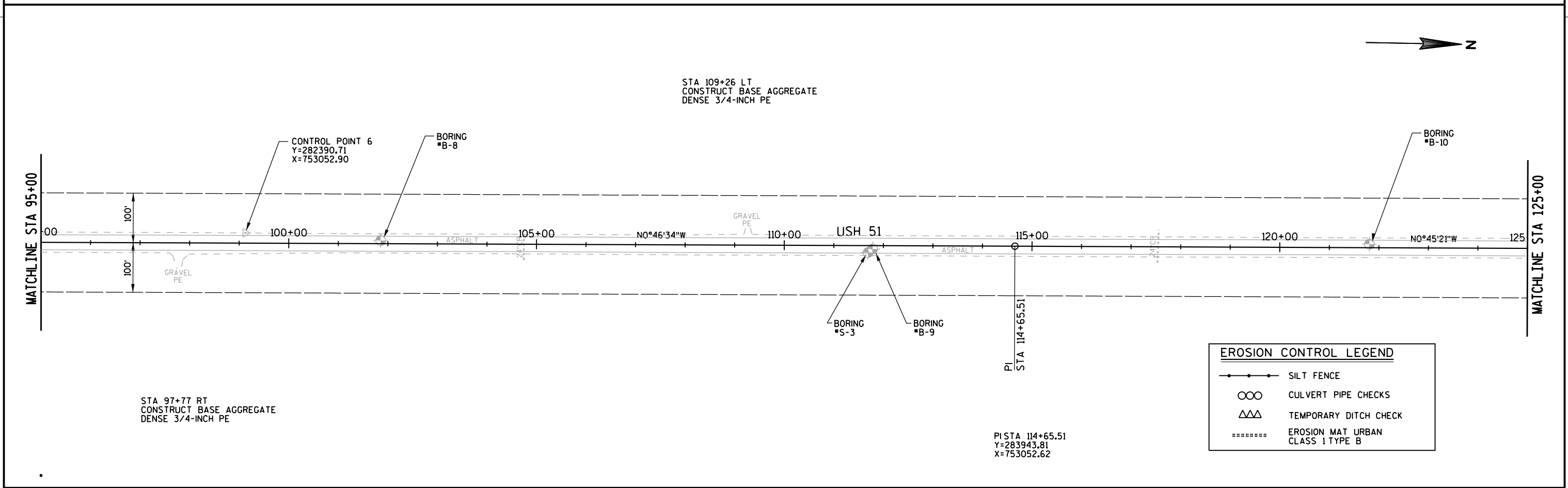
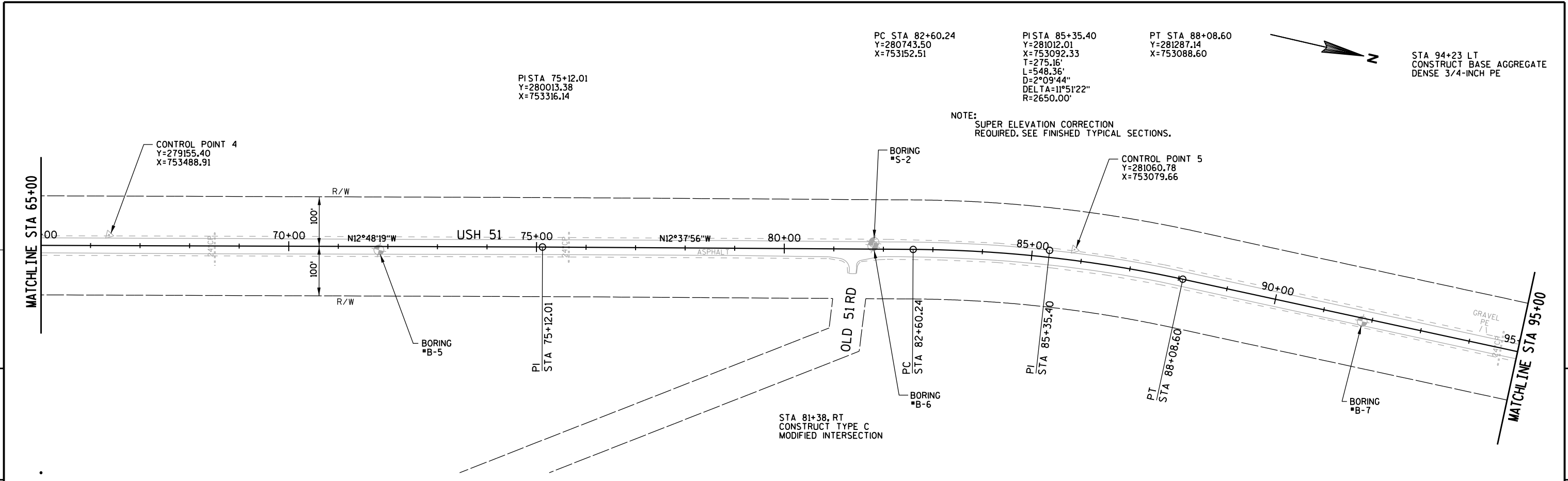
MISCELLANEOUS QUANTITIES

SHEET

3

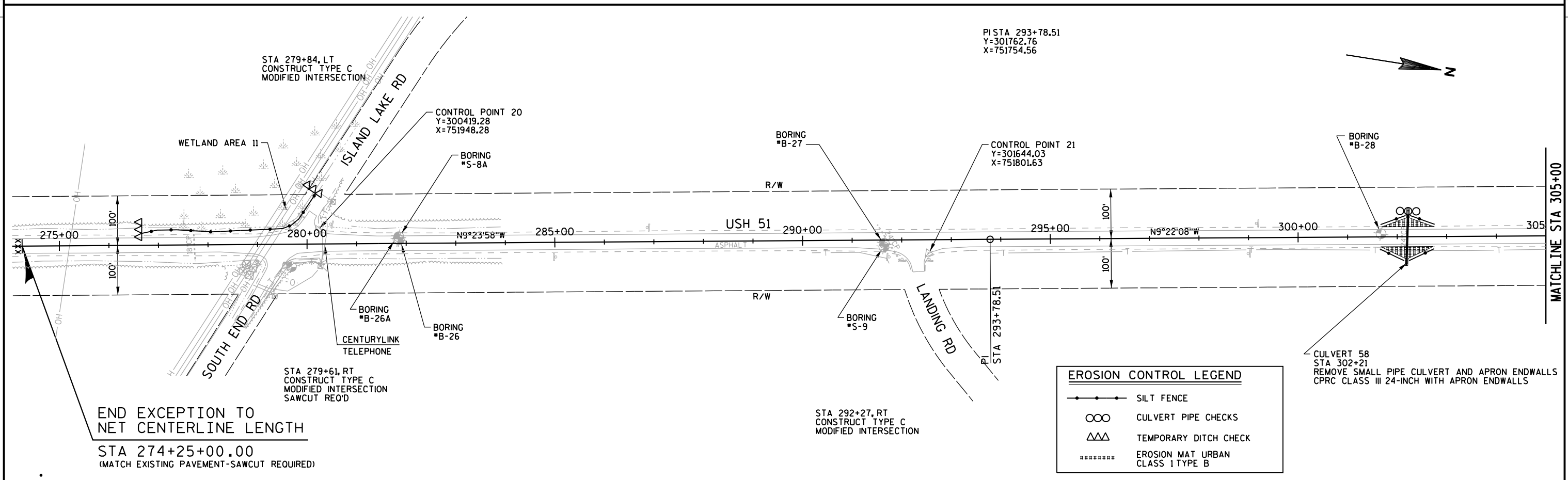
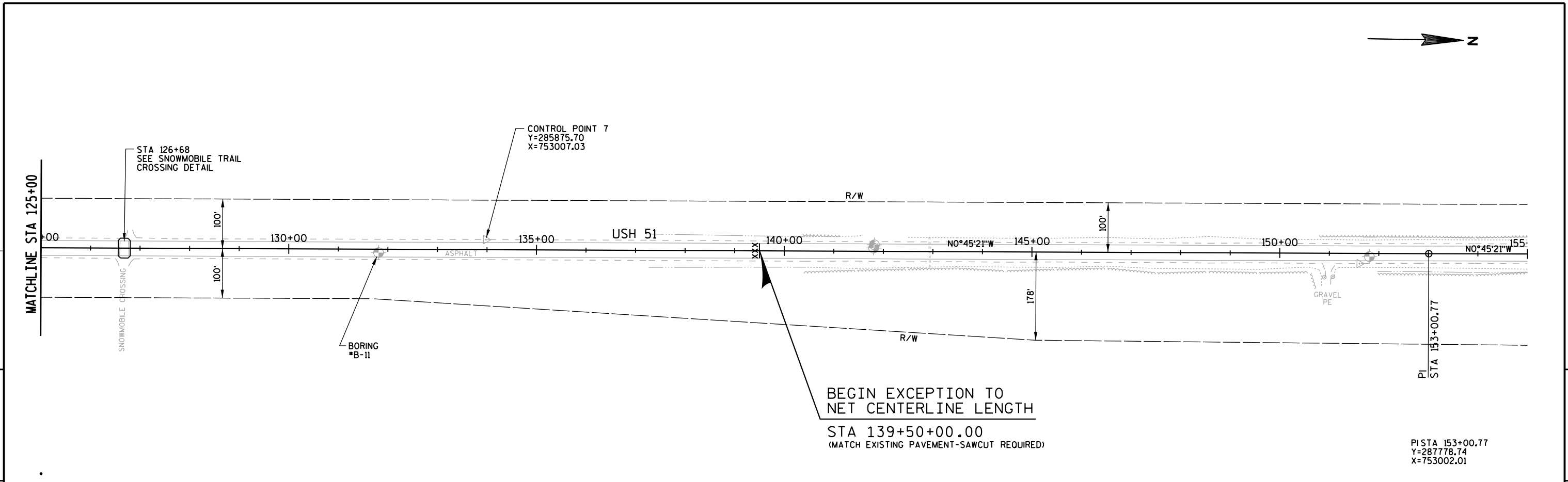


EROSION CONTROL LEGEND	
—●—●—●—	SILT FENCE
○○○	CULVERT PIPE CHECKS
△△△	TEMPORARY DITCH CHECK
*****	EROSION MAT URBAN CLASS 1 TYPE B

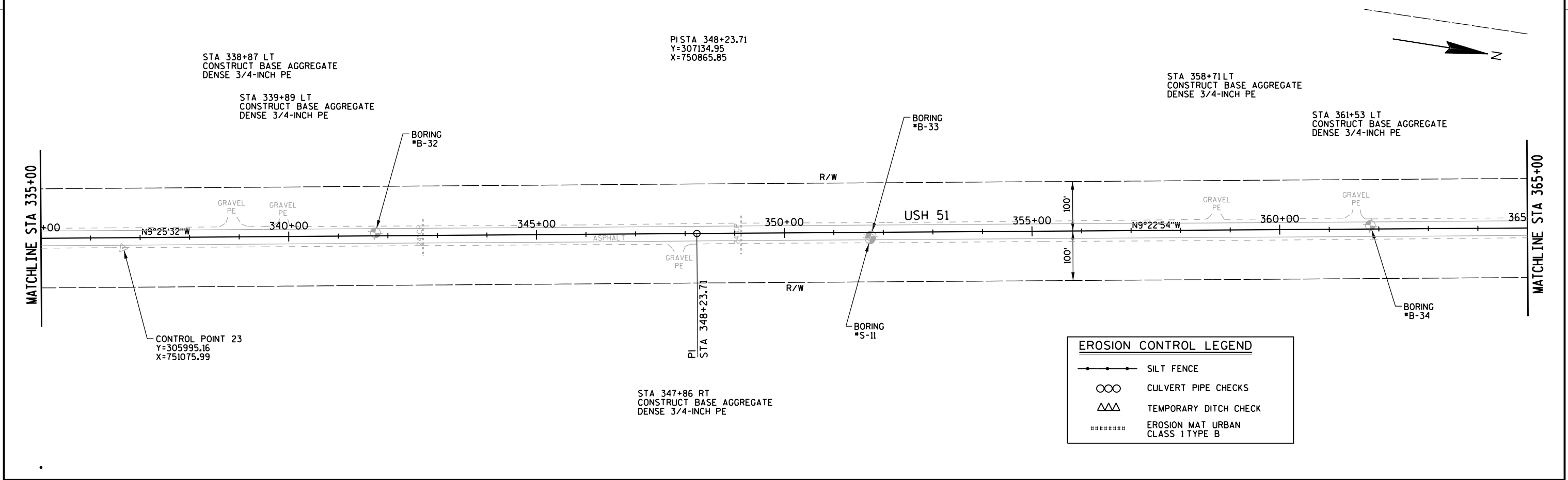
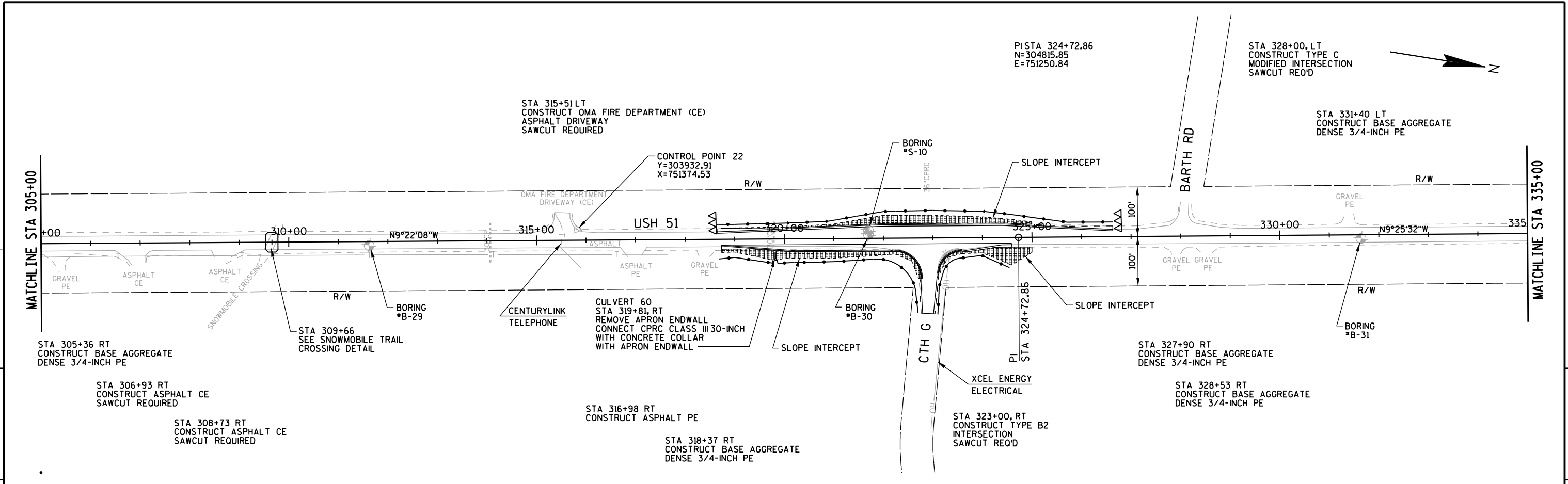


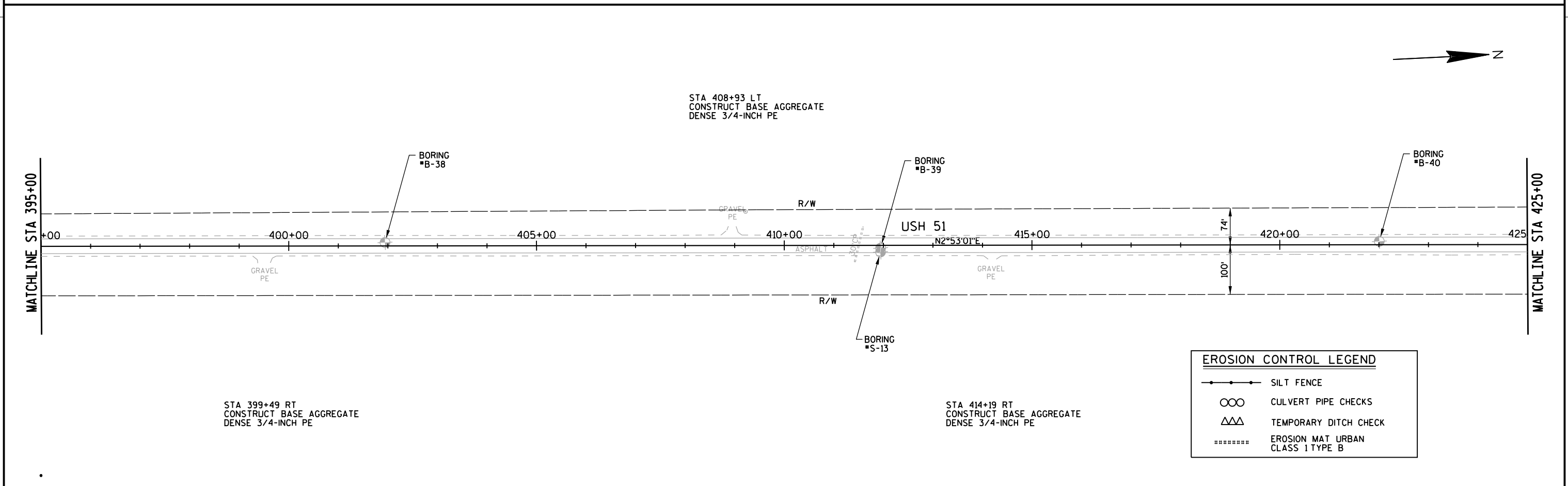
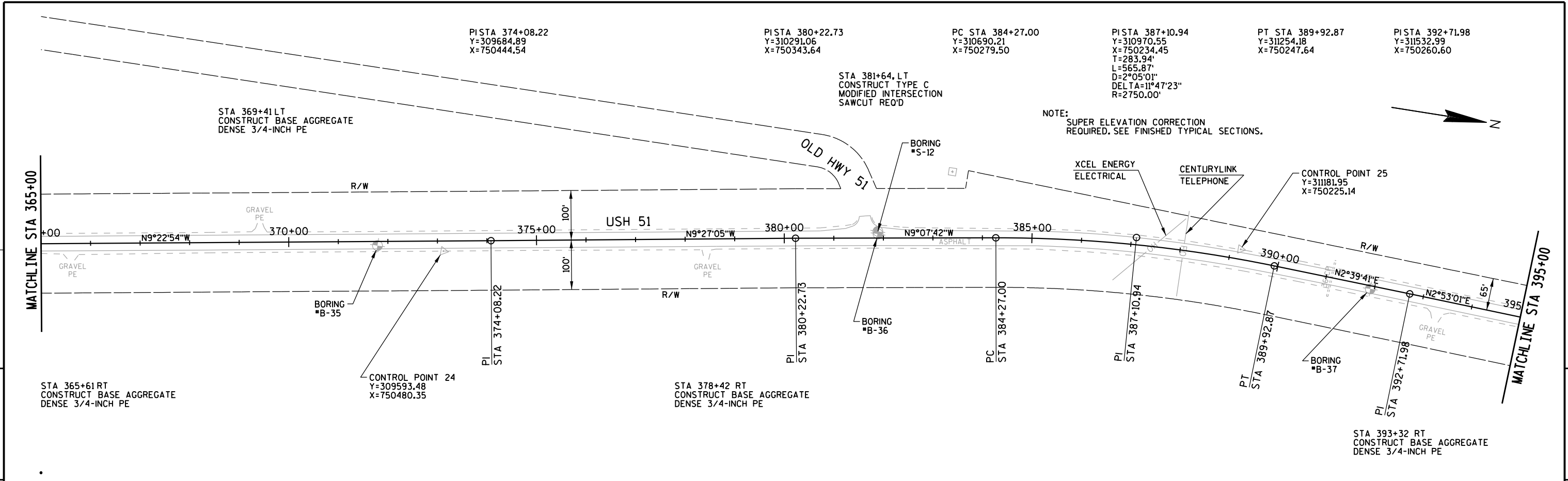
EROSION CONTROL LEGEND	
—●—●—●—	SILT FENCE
○○	CULVERT PIPE CHECKS
△△	TEMPORARY DITCH CHECK
*****	EROSION MAT URBAN CLASS 1 TYPE B

PROJECT NUMBER: 1175-19-60	HWY: USH 51	COUNTY: IRON	PLAN SHEET	SHEET	E
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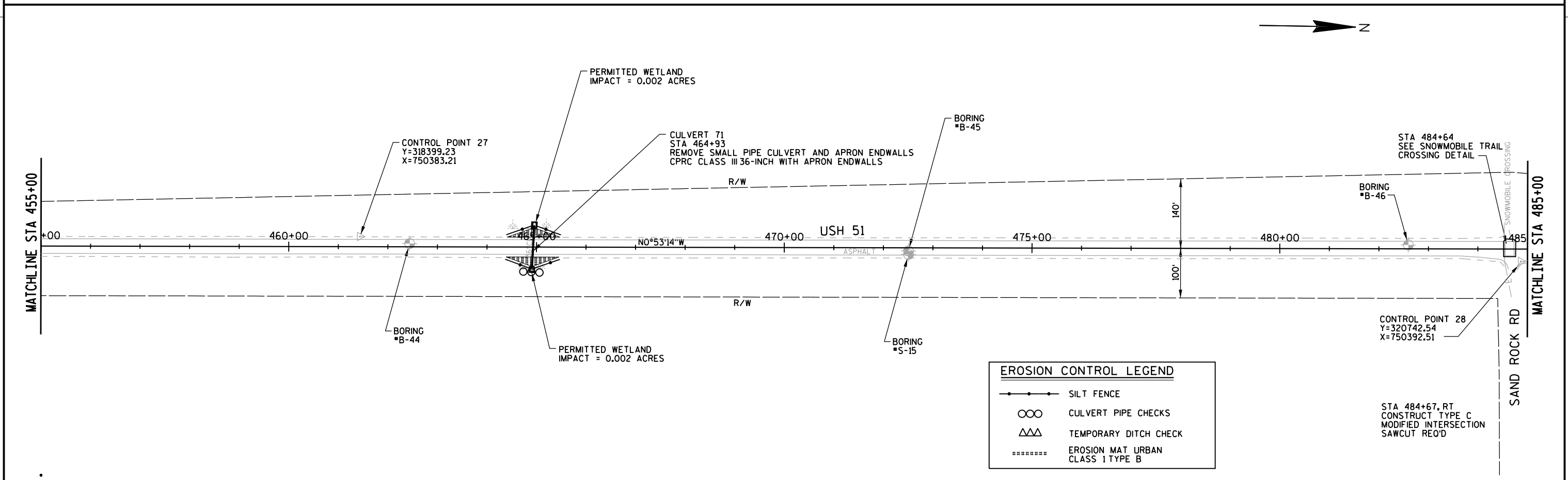
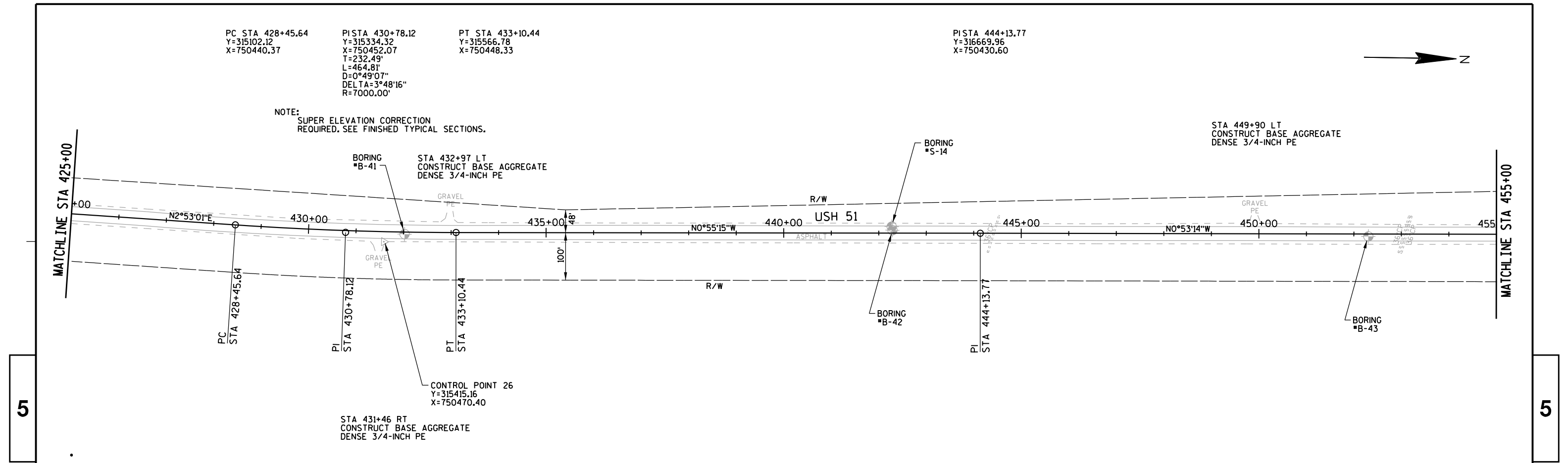


EROSION CONTROL LEGEND	
—●—●—●—	SILT FENCE
○○○	CULVERT PIPE CHECKS
△△△	TEMPORARY DITCH CHECK
*****	EROSION MAT URBAN CLASS 1 TYPE B



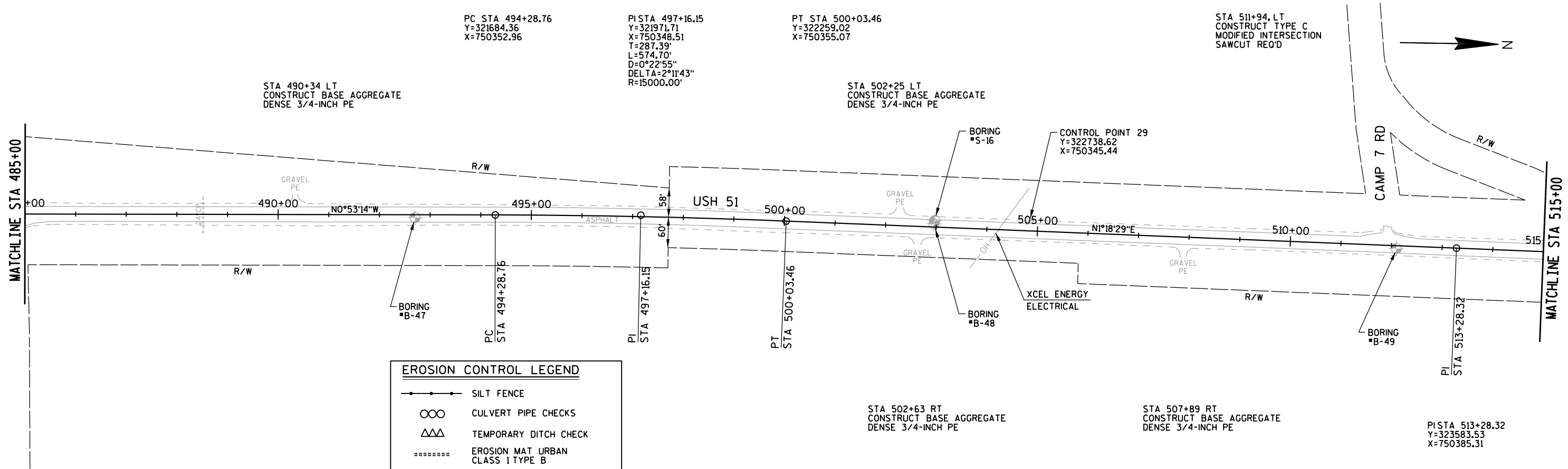


EROSION CONTROL LEGEND	
—●—●—●—	SILT FENCE
∞∞	CULVERT PIPE CHECKS
△△	TEMPORARY DITCH CHECK
*****	EROSION MAT URBAN CLASS 1 TYPE B

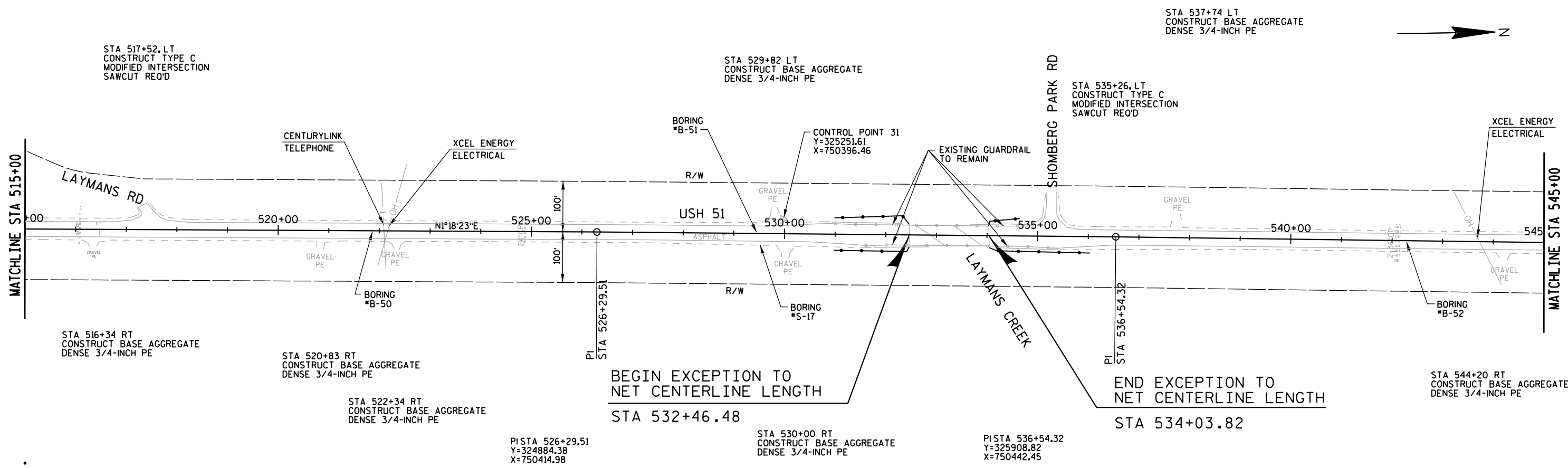


EROSION CONTROL LEGEND	
—●—●—●—	SILT FENCE
∞∞	CULVERT PIPE CHECKS
△△△	TEMPORARY DITCH CHECK
*****	EROSION MAT URBAN CLASS 1 TYPE B

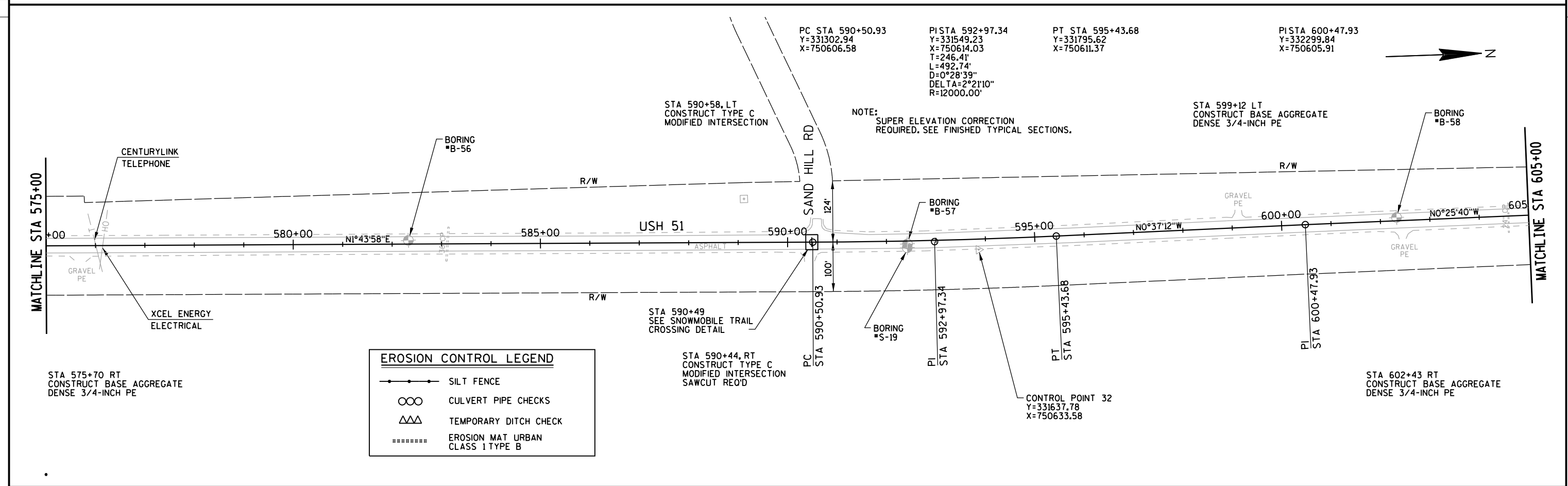
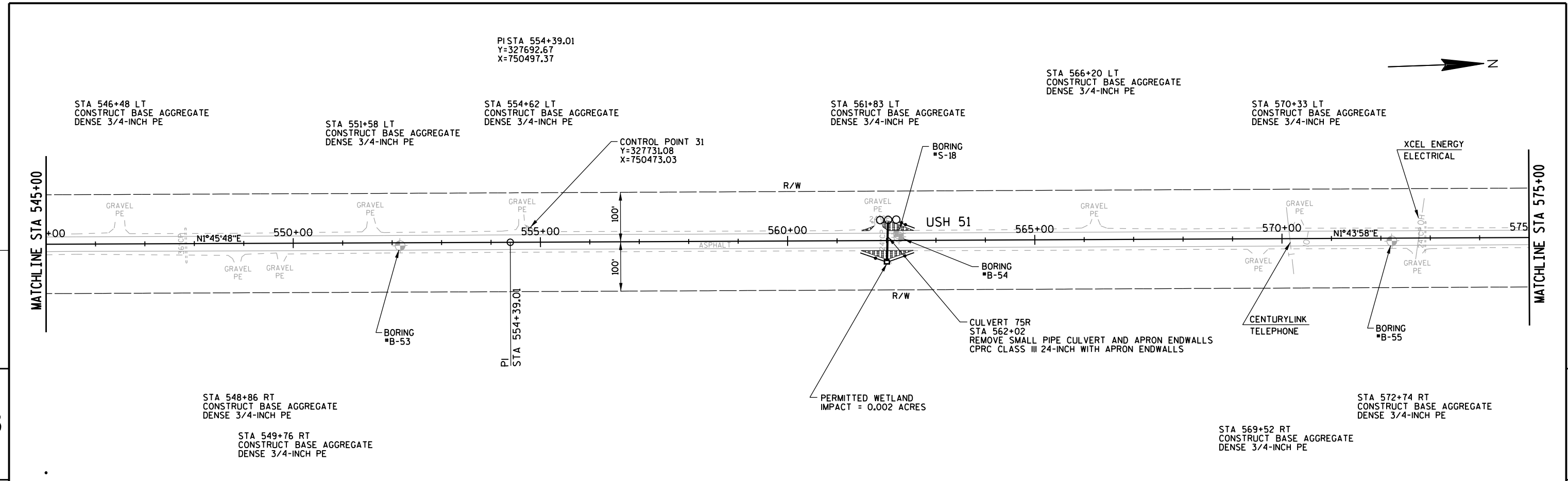
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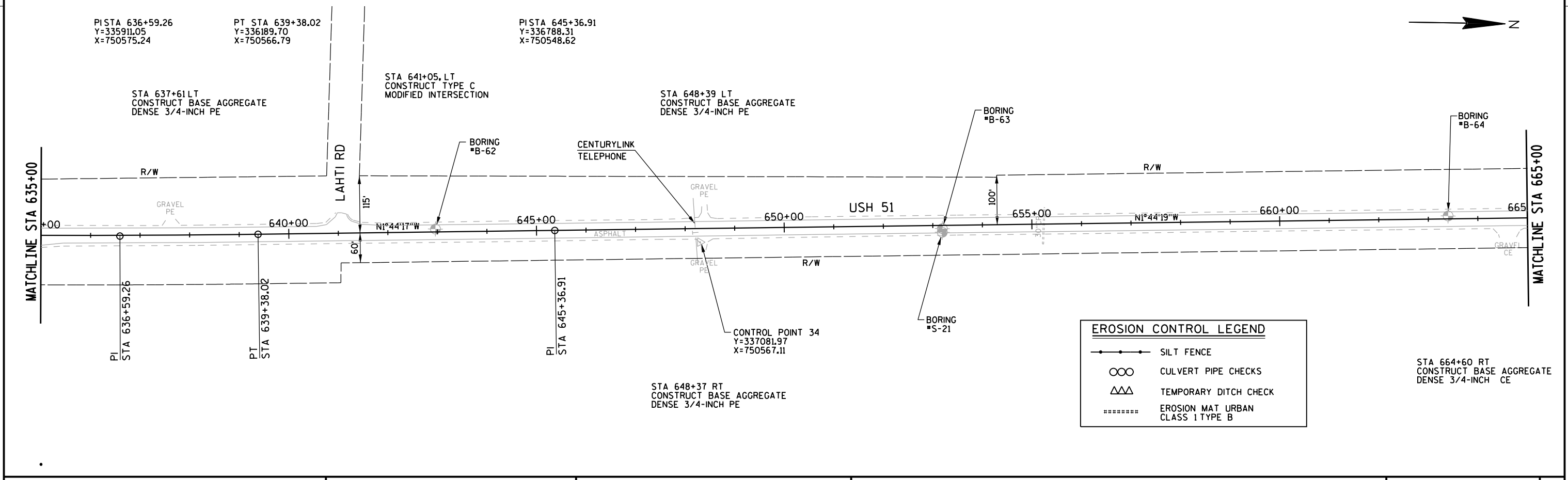
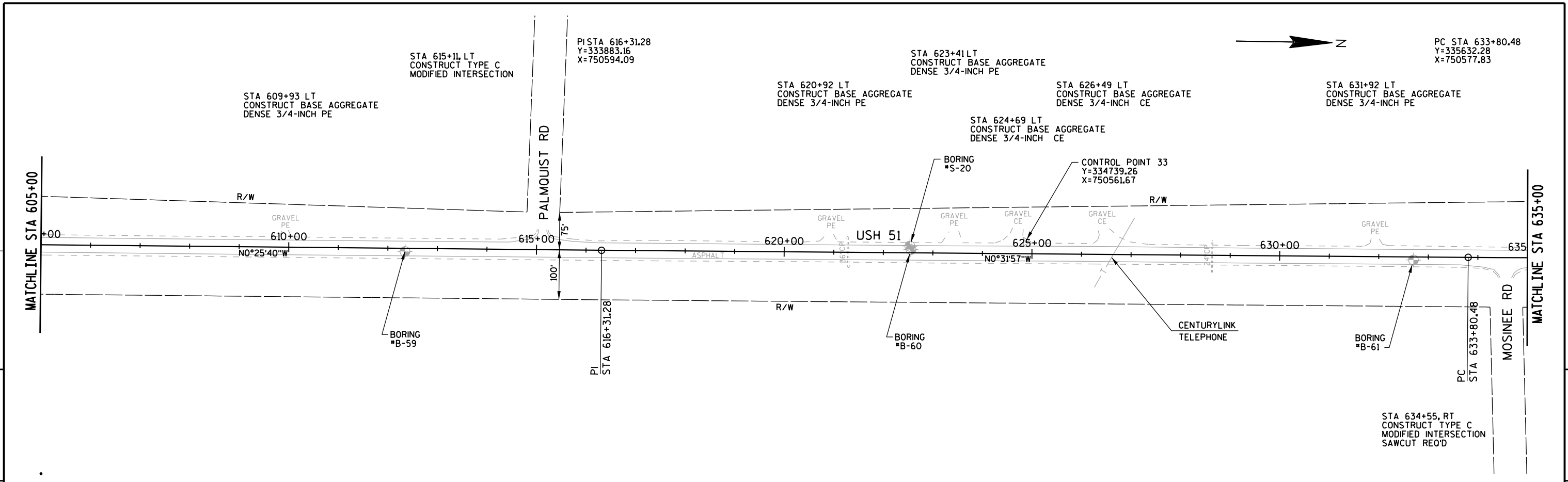


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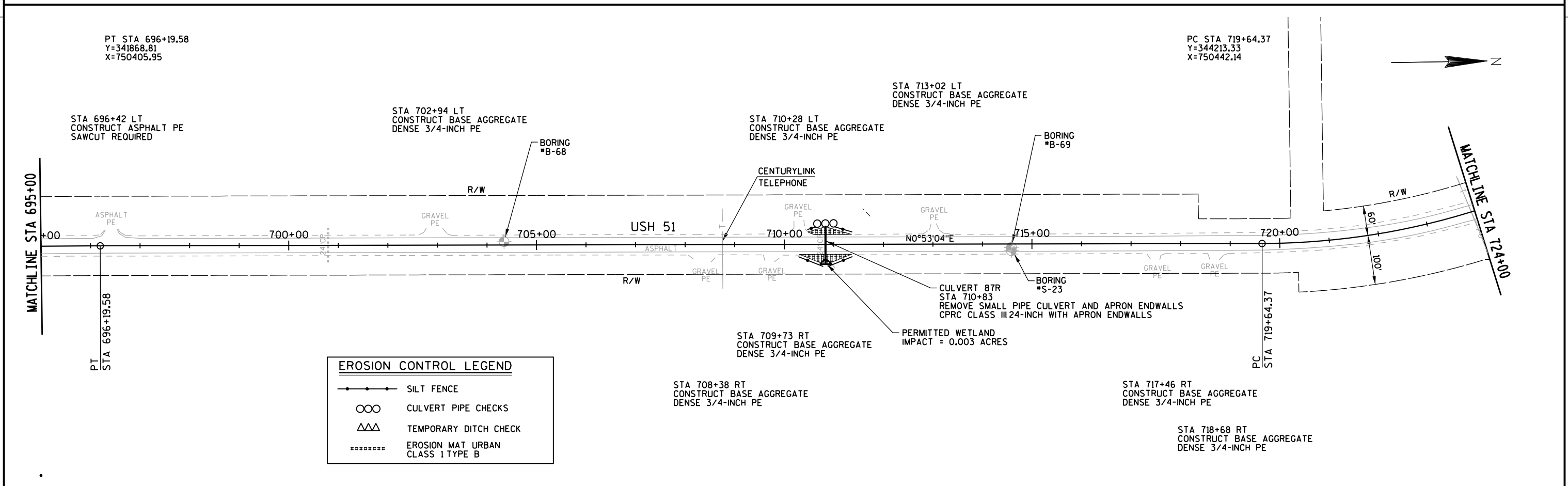
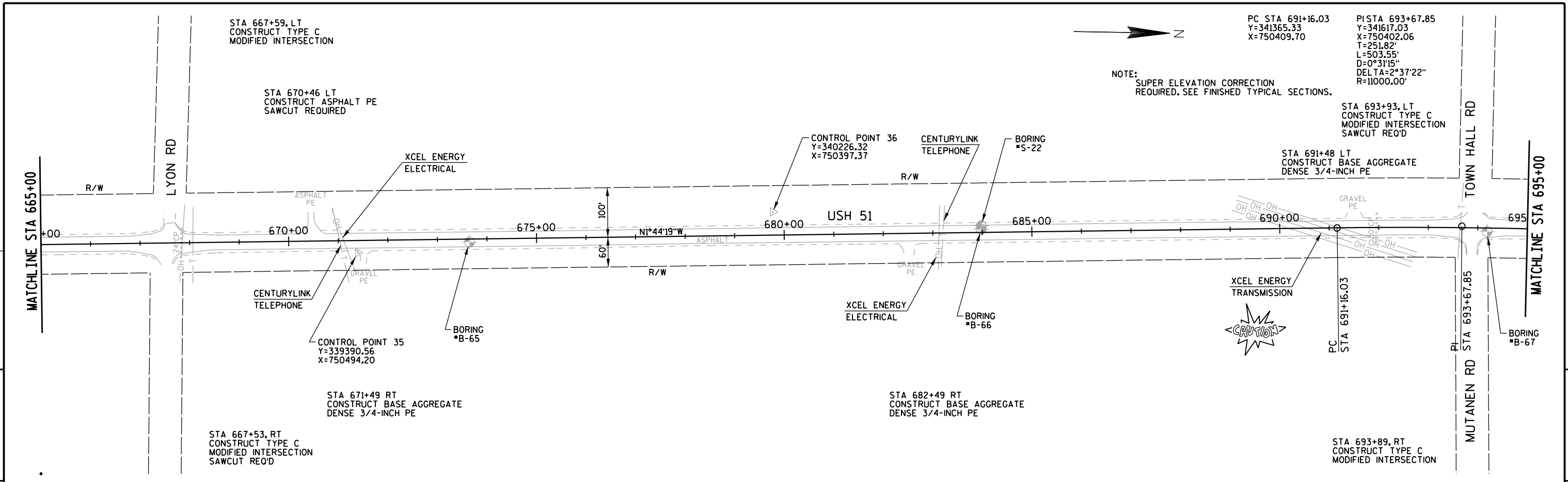


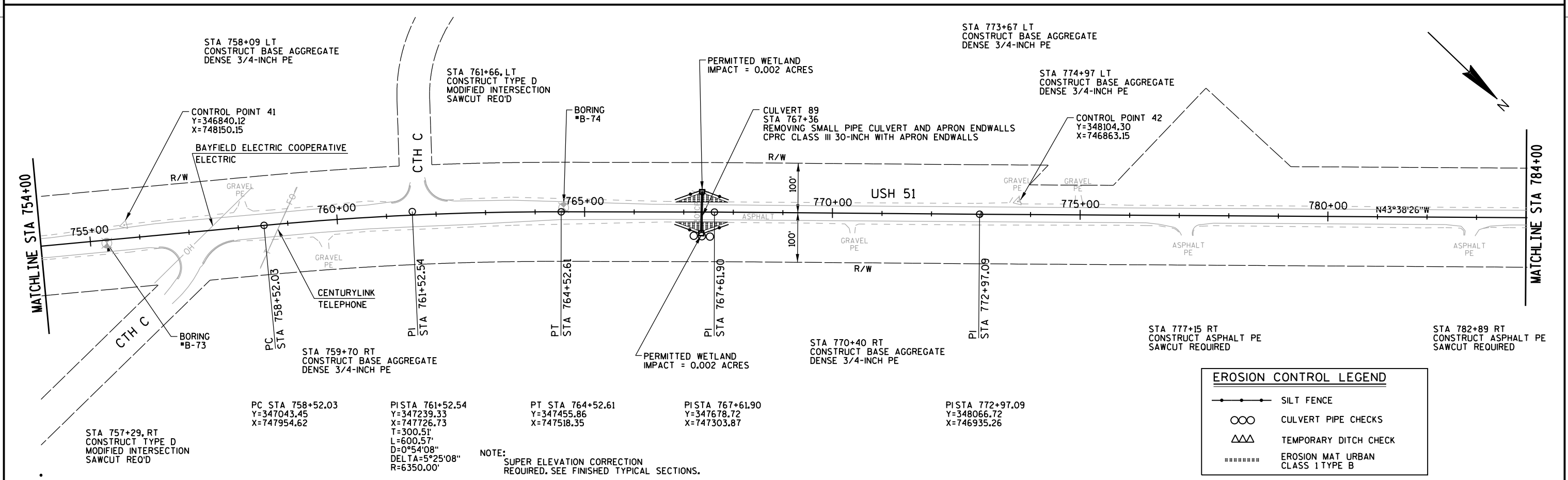
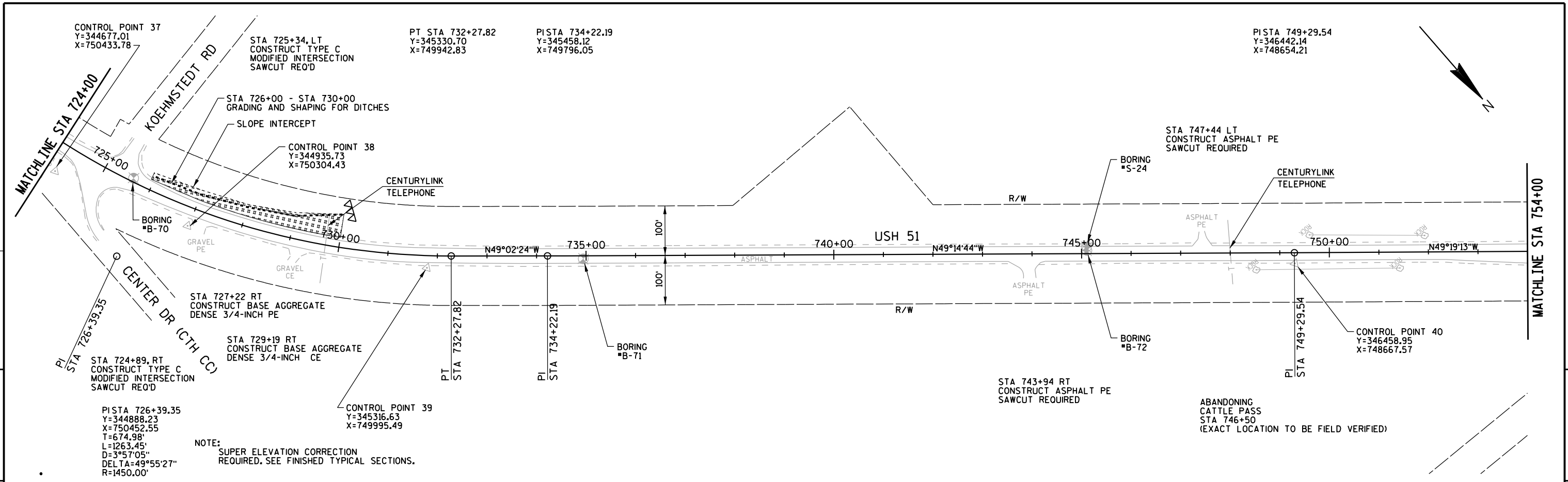
PROJECT NUMBER: 1175-19-60	HWY: USH 51	COUNTY: IRON	PLAN SHEET	SHEET	E
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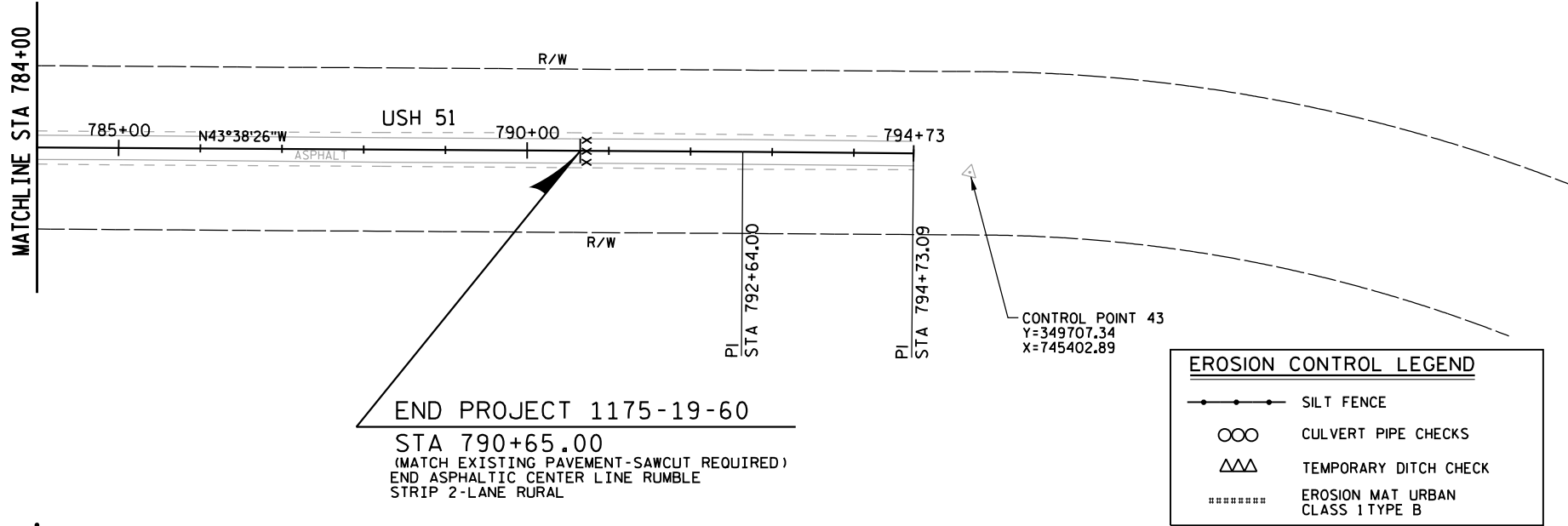


EROSION CONTROL LEGEND	
—●—●—●—	SILT FENCE
○○	CULVERT PIPE CHECKS
△△	TEMPORARY DITCH CHECK
*****	EROSION MAT URBAN CLASS 1 TYPE B





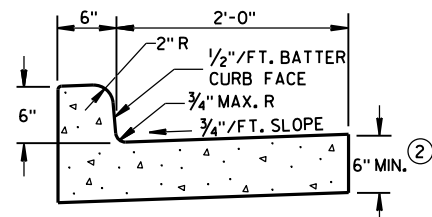
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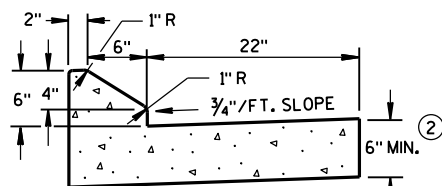
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Standard Detail Drawing List

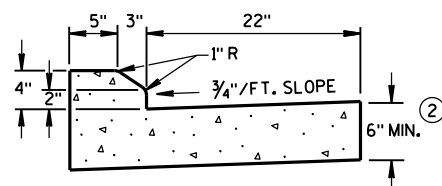
08D01-18	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13A11-02A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-02B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B29-01	SAFETY EDGE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-03A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-03B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY



TYPES A & D ①

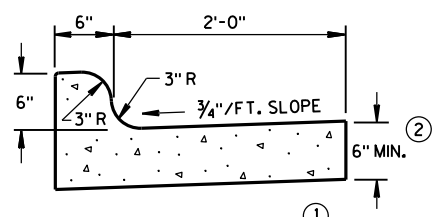


6" SLOPED CURB TYPES G & J ①



4" SLOPED CURB TYPES G & J ①

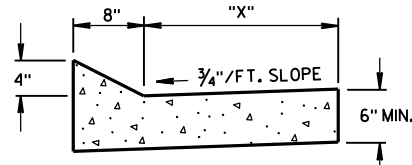
CONCRETE CURB & GUTTER 30"



TYPES K & L ①

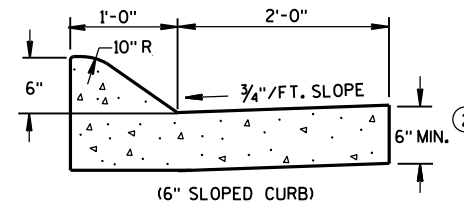
OPTIONAL CURB SHAPE
FOR TYPES K & L ①

CONCRETE CURB & GUTTER 30"

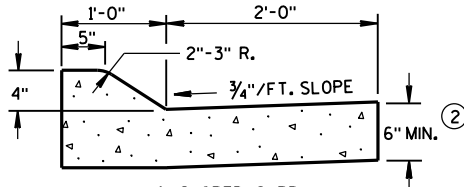


TYPES TBT & TBT ①
CONCRETE CURB & GUTTER

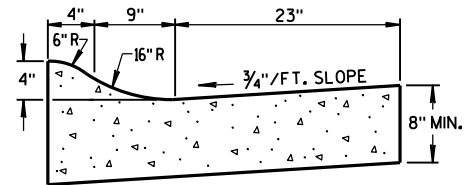
TBT & TBT	"X"
30"	22"
36"	28"



(6" SLOPED CURB)

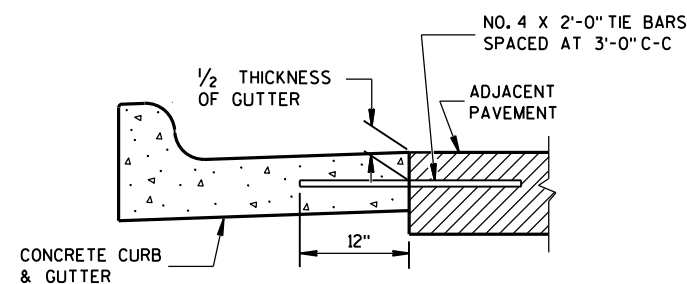


TYPES A & D ①

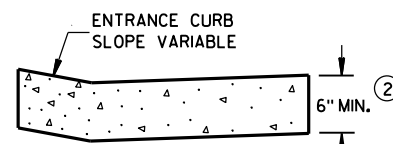


4" SLOPED CURB TYPES R & T ① ④

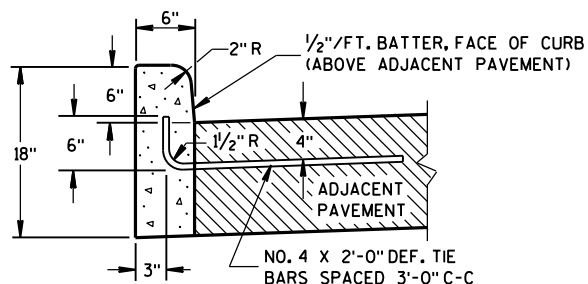
CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION ①

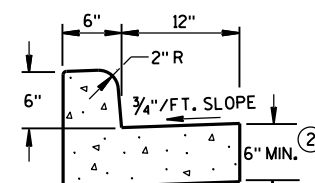


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

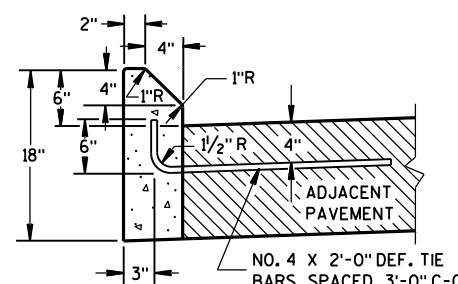


TYPES A & D ①

CONCRETE CURB



TYPES A & D
CONCRETE CURB & GUTTER 18"



TYPES G & J ①

GENERAL NOTES

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

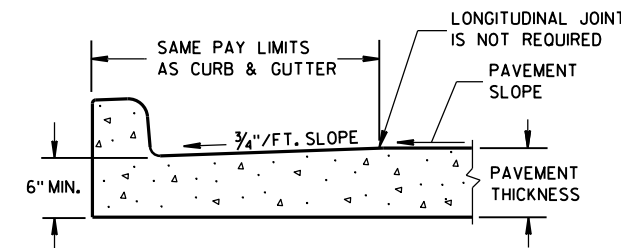
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

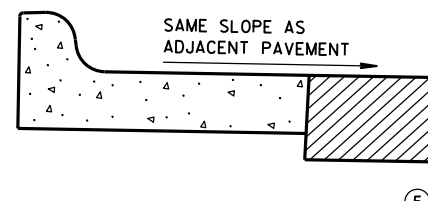
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

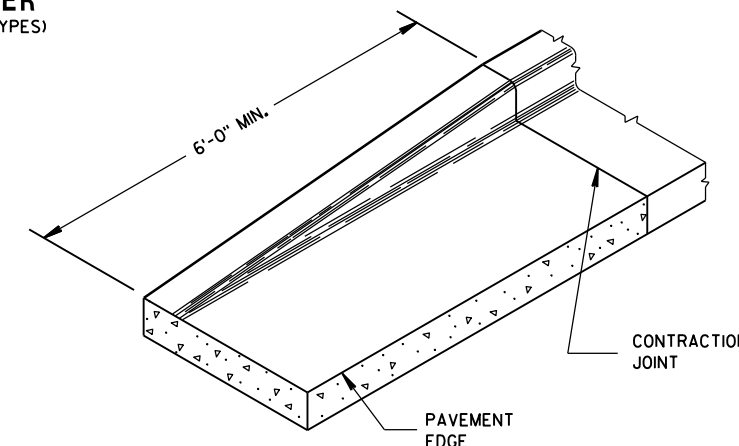
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



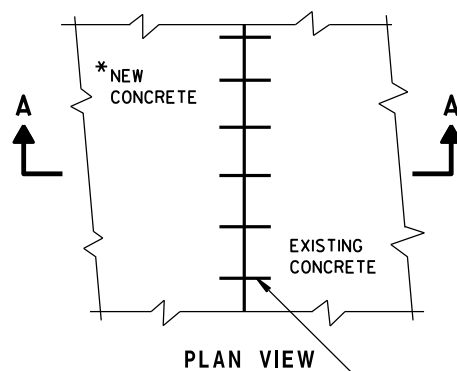
PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



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



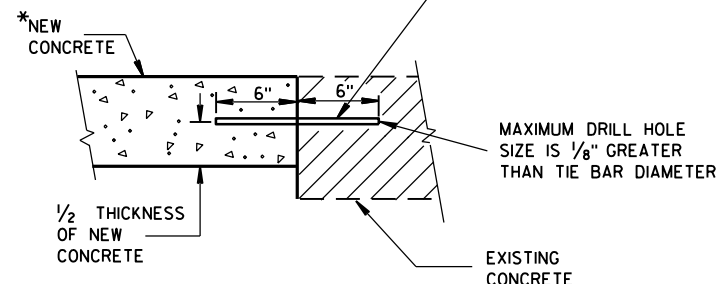
END SECTION CURB & GUTTER



PLAN VIEW

*NEW CURB & GUTTER,
SURFACE DRAINS,
CONCRETE PAVEMENT
OR OTHER NEW CONCRETE.

NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.

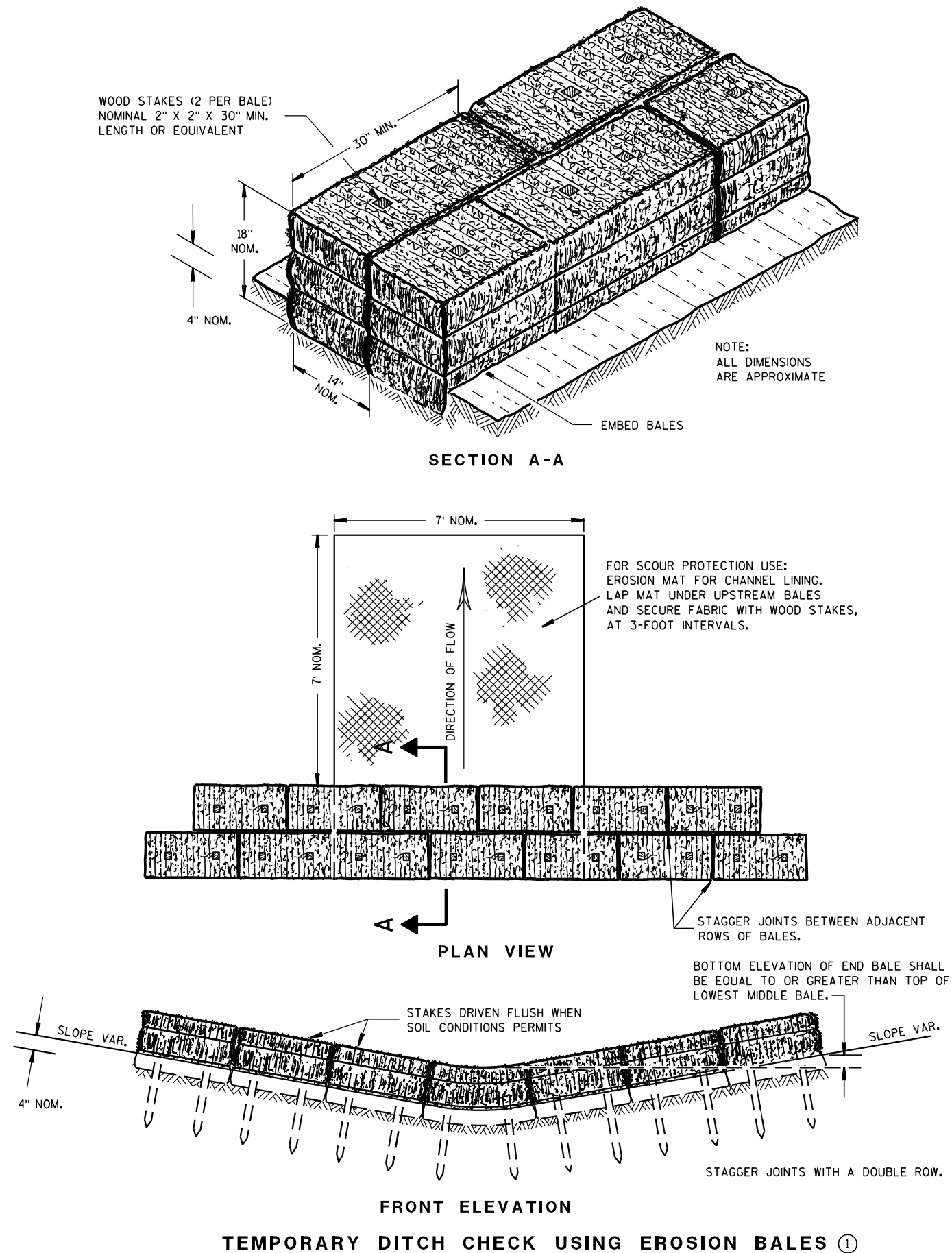


SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

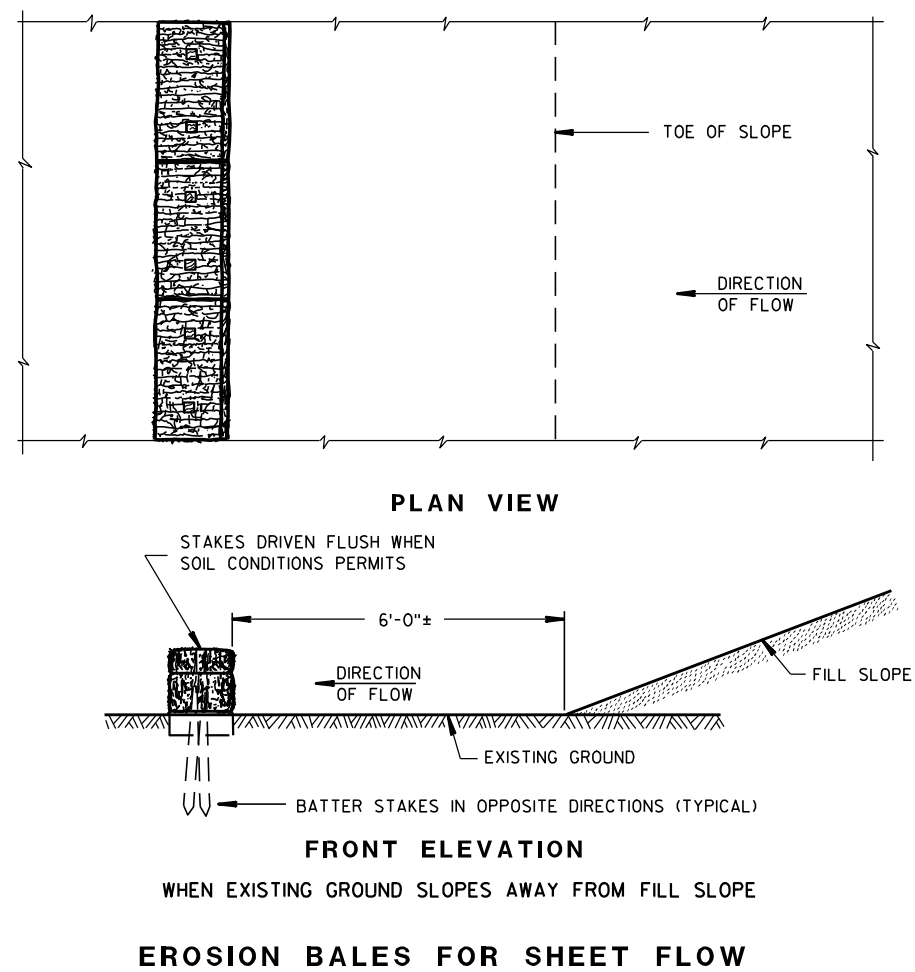
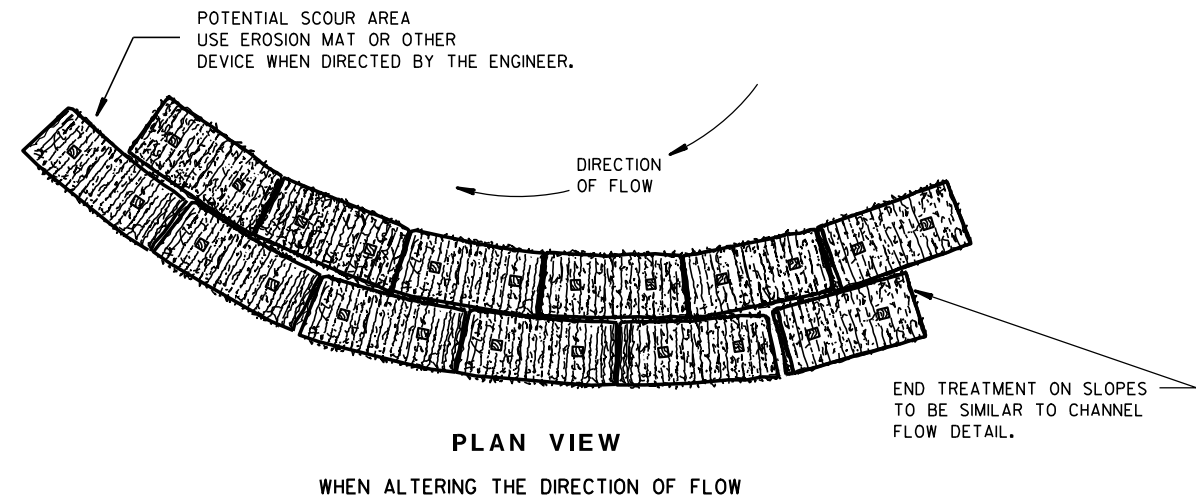
APPROVED
June, 2015 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



GENERAL NOTES

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

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

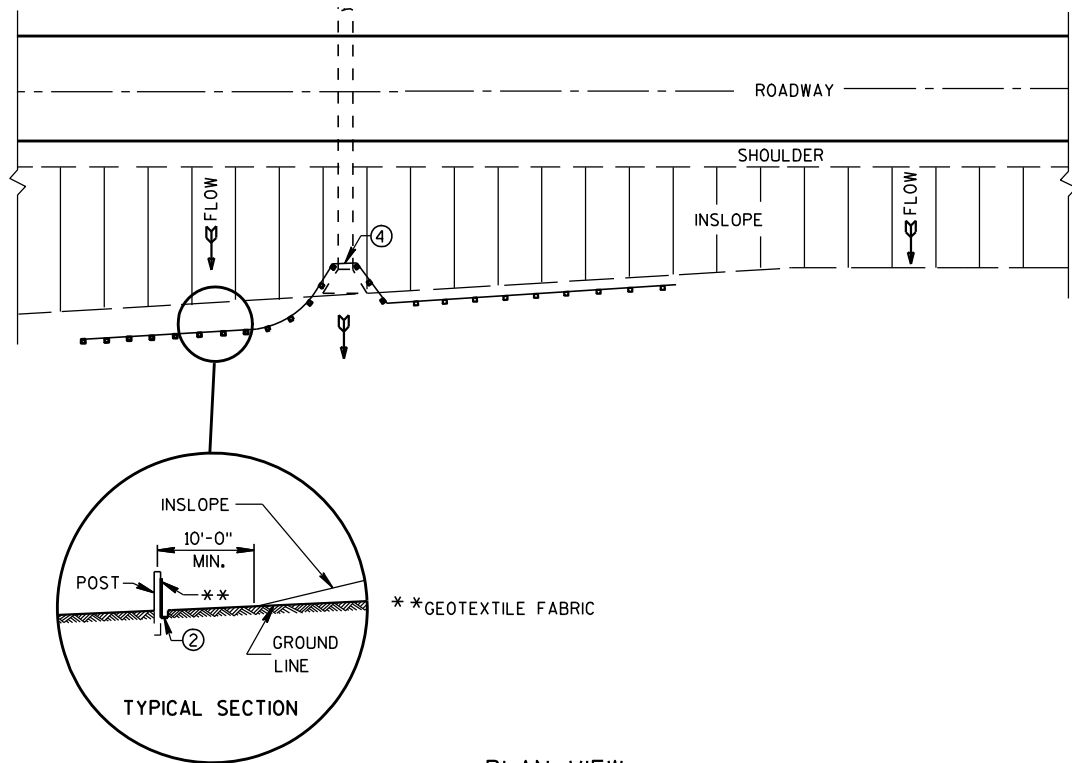
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

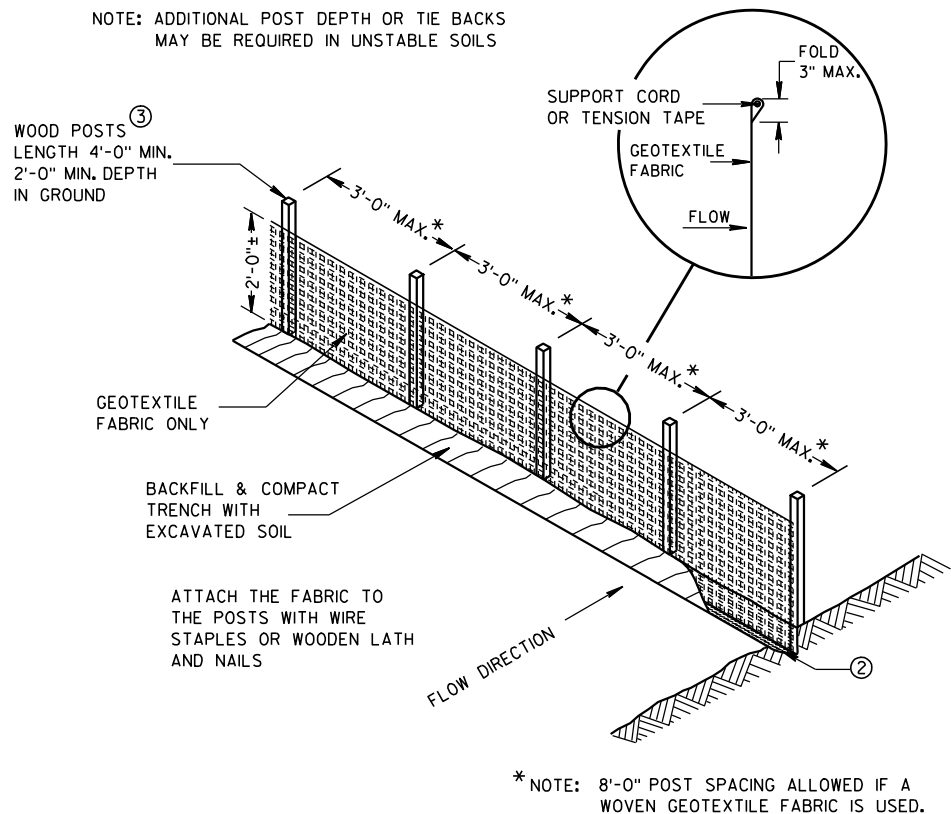
APPROVED

6/04/02
DATE/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

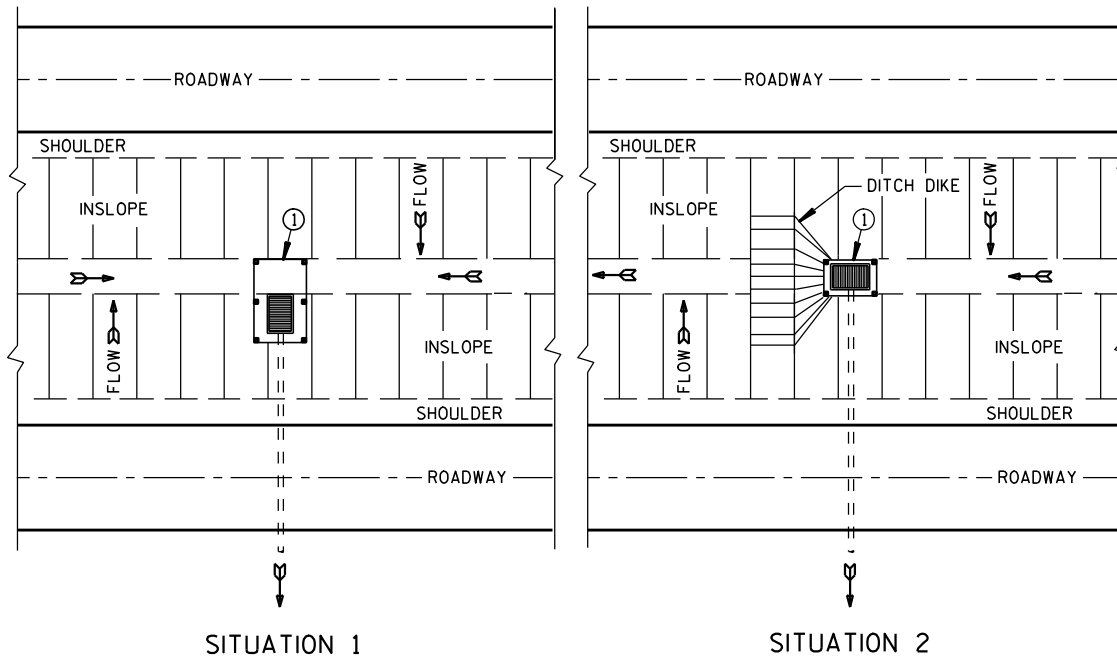
FHWA



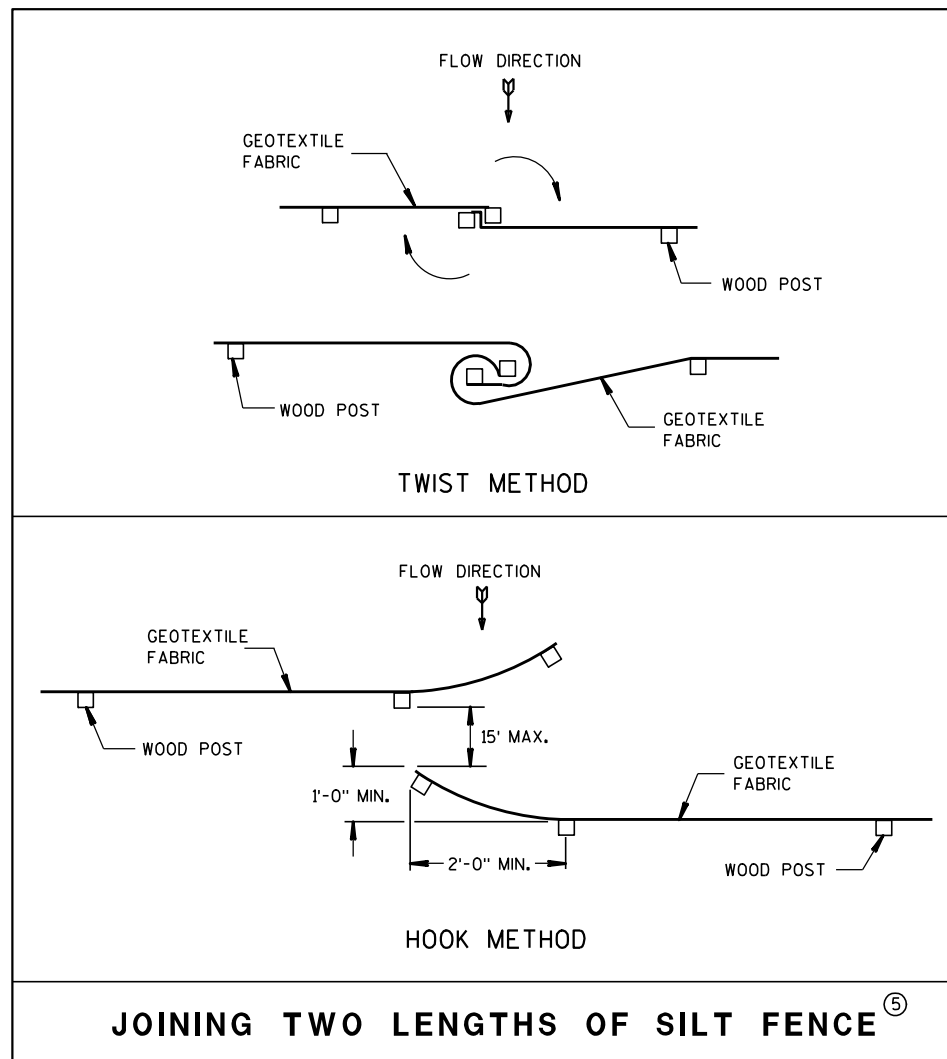
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

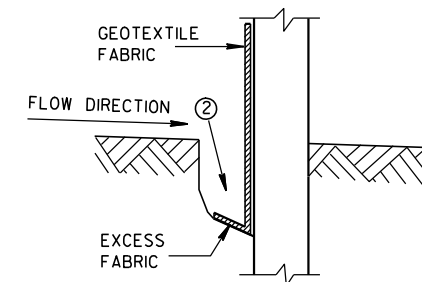


JOINING TWO LENGTHS OF SILT FENCE^⑤

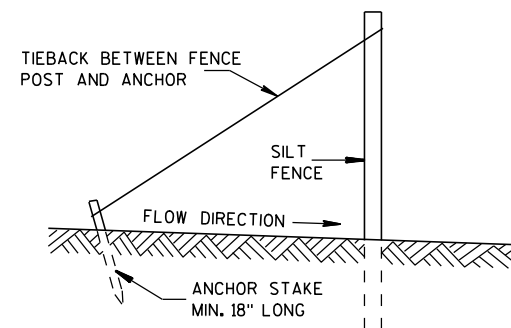
GENERAL NOTES

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

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



TRENCH DETAIL

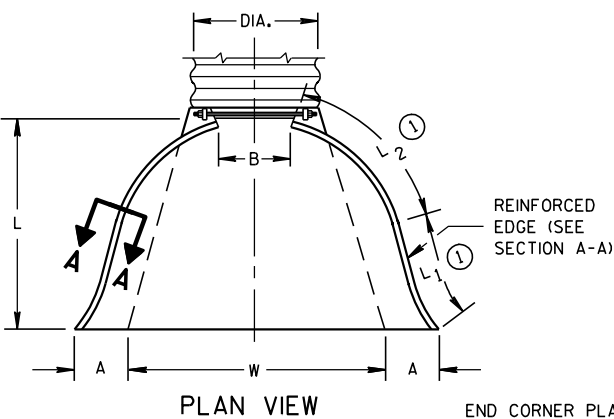


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

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

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

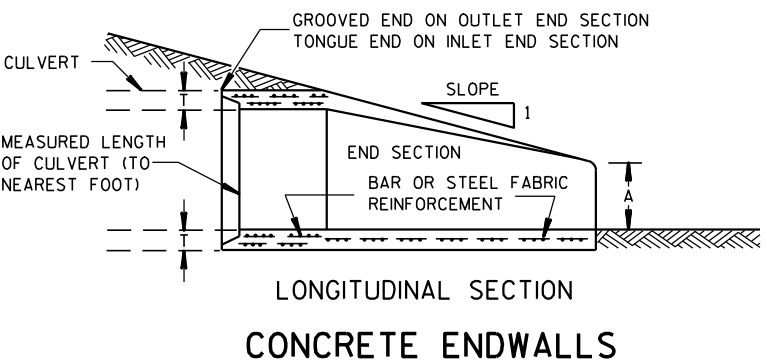
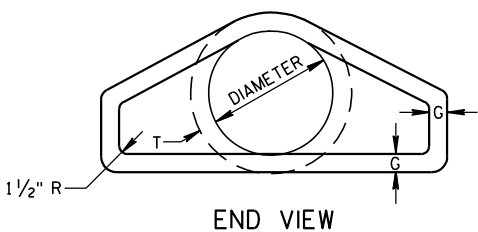
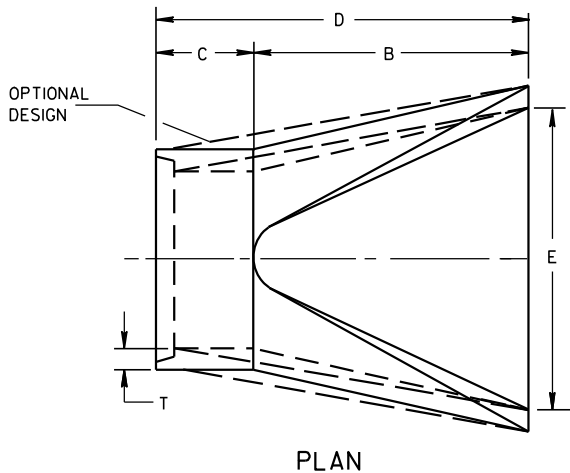
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



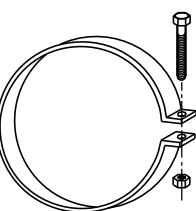
SIDE ELEVATION
METAL ENDWALLS

REINFORCED CONCRETE APRON ENDWALLS												
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE				
	T	A	B	C	D	E	G					
12	2	4	24	48 7/8	72 7/8	24	2	3 to 1				
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1				
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1				
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1				
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1				
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1				
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1				
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1				
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1				
48	5	24	72	26	98	84	5	3 to 1				
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 1/2 to 1				
60	6	30-35	60	39	99	96	5	2 to 1				
66	6 1/2	24-30	72-78	21-27	99	102	5 1/2	2 to 1				
72	7	24-36	78	21	99	108	6	2 to 1				
78	7 1/2	24-36	78	21	99	114	6 1/2	2 to 1				
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1				
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1				

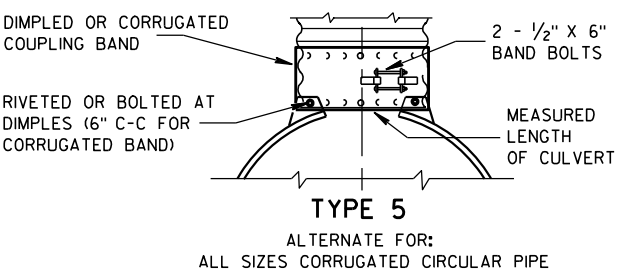
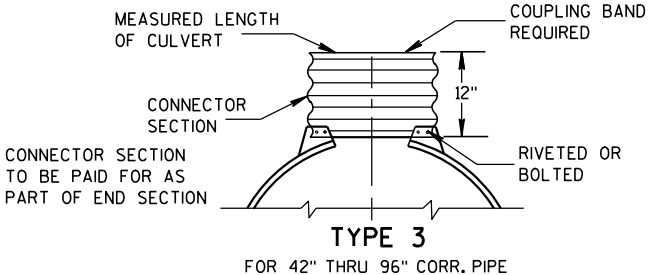
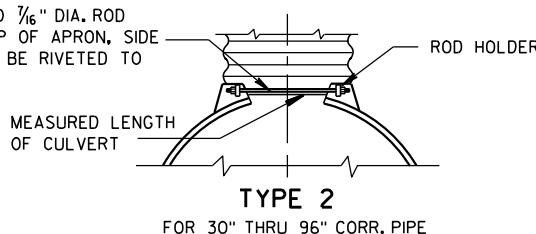
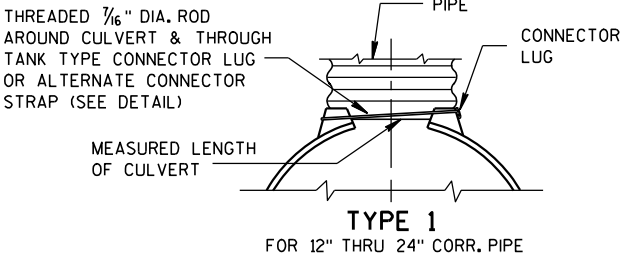
* MINIMUM
** MAXIMUM



1" WIDE, 12 GA. (0.109"
THICK) GALVANIZED STRAP
WITH STANDARD 6" X 1/2"
BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



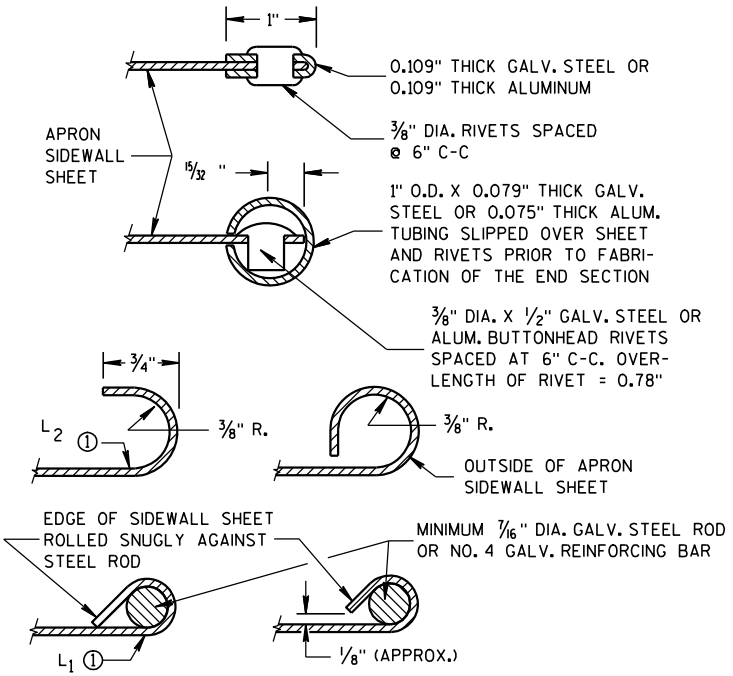
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.
DIMPLED BAND MAY BE USED WITH HELICALLY
CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE
ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5
AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL
CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO
CIRCUMFERENTIAL CORRUGATIONS AT EACH END
USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



GENERAL NOTES

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

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL
OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR
ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE
OF THE SAME METAL.

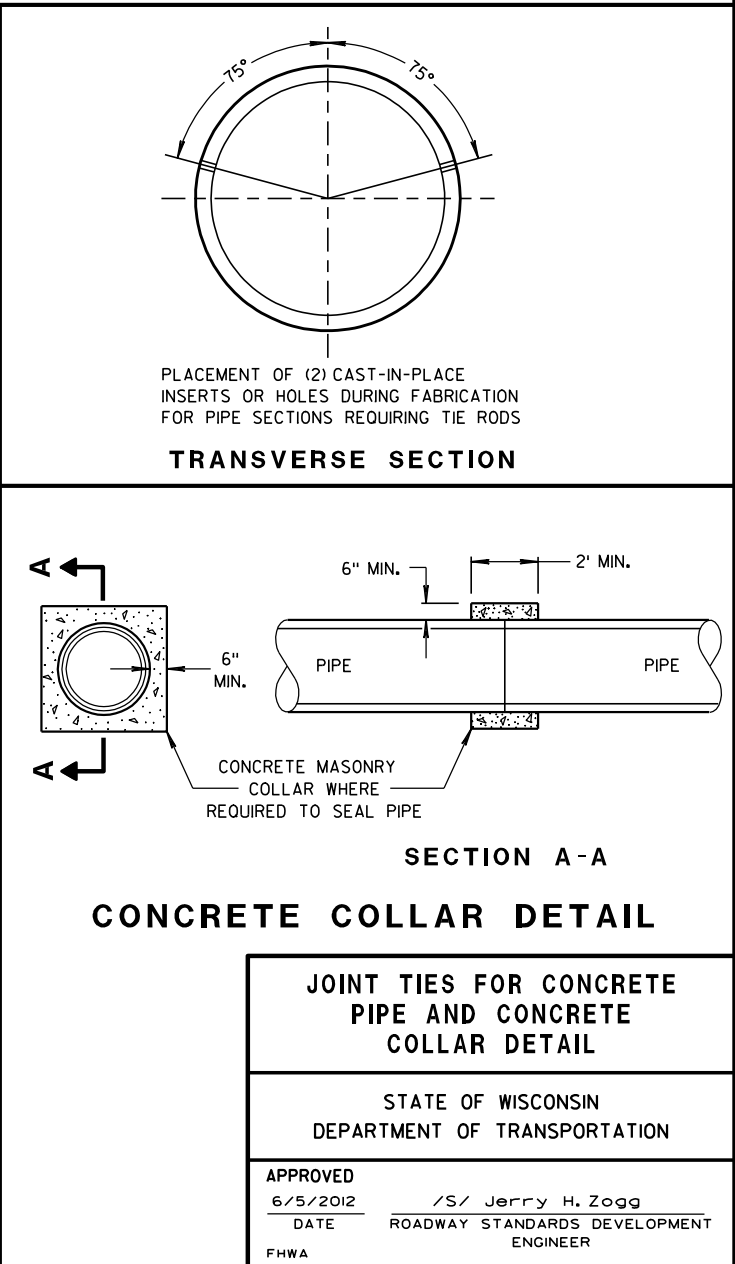
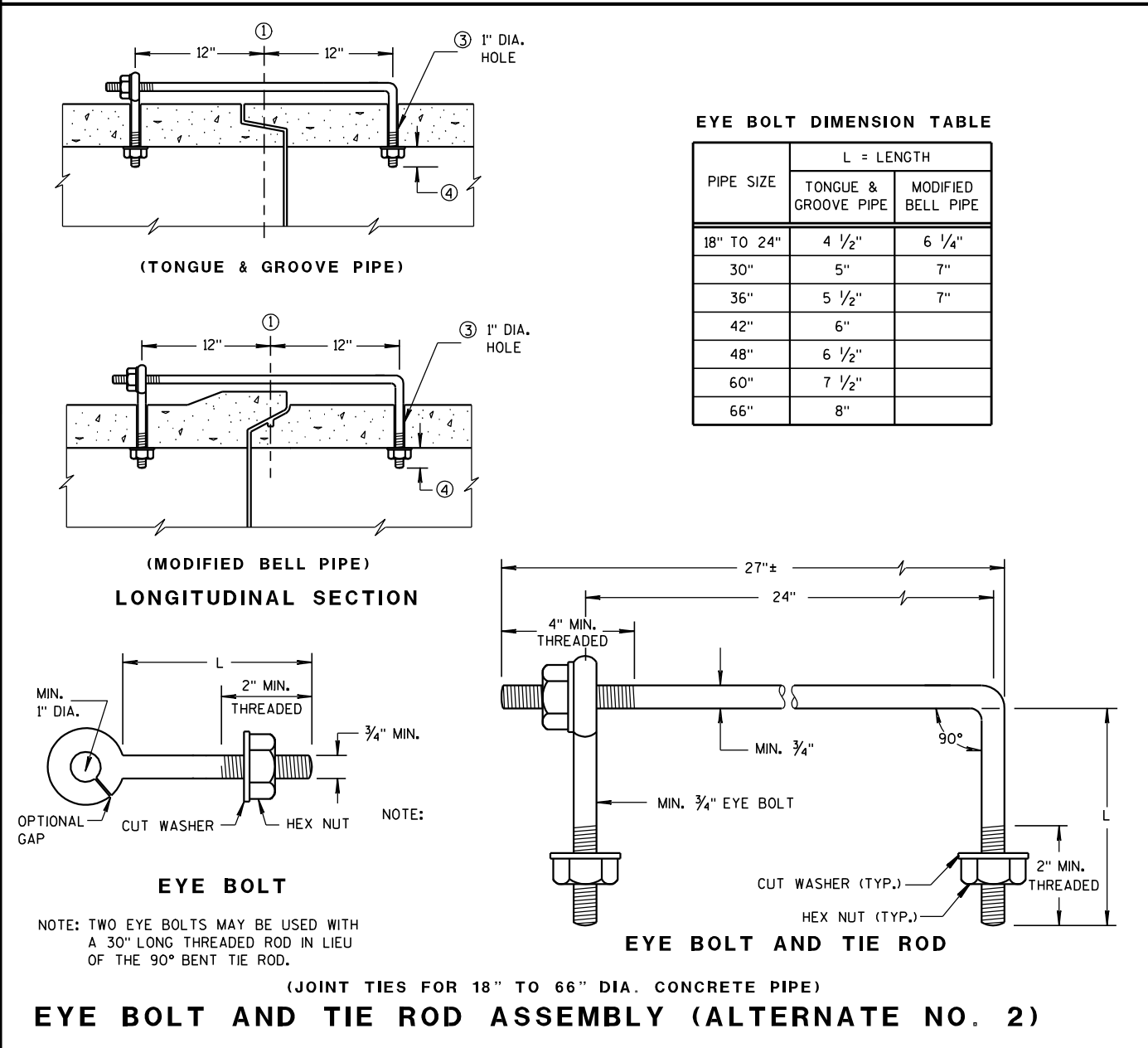
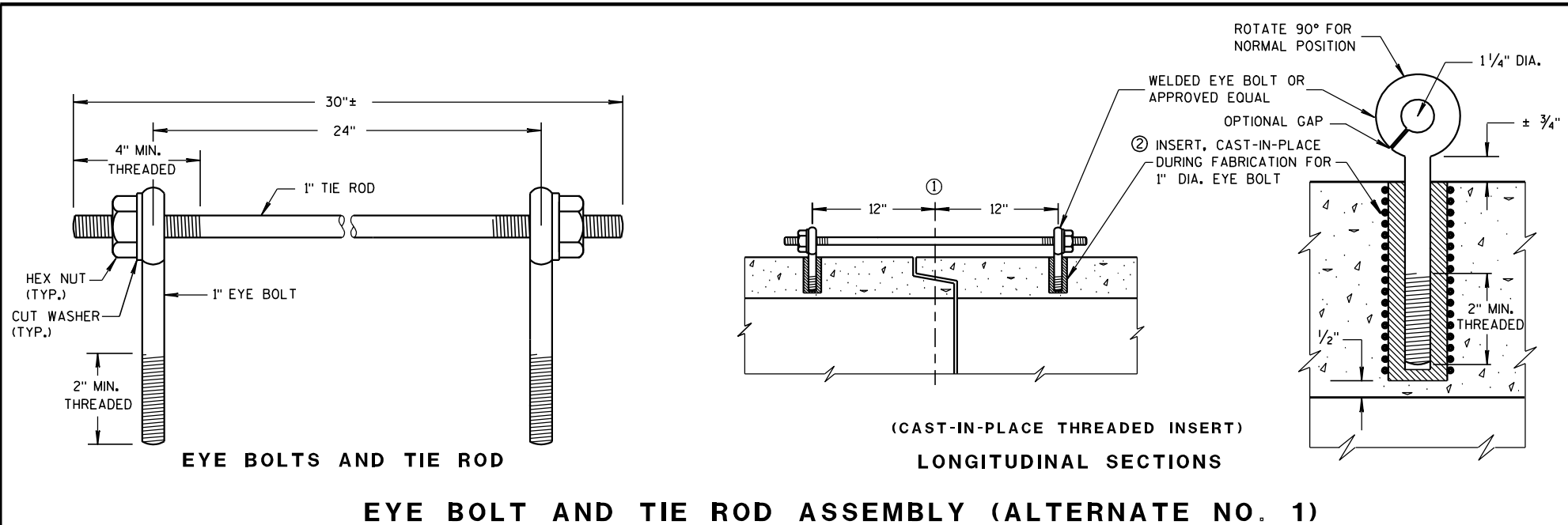
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL
THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH
OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS
FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS.
FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED
EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH
GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE
ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM
NUTS AND BOLTS FOR ALUMINUM UNITS.

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

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED
INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11/30/94 DATE	/S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



GENERAL NOTES

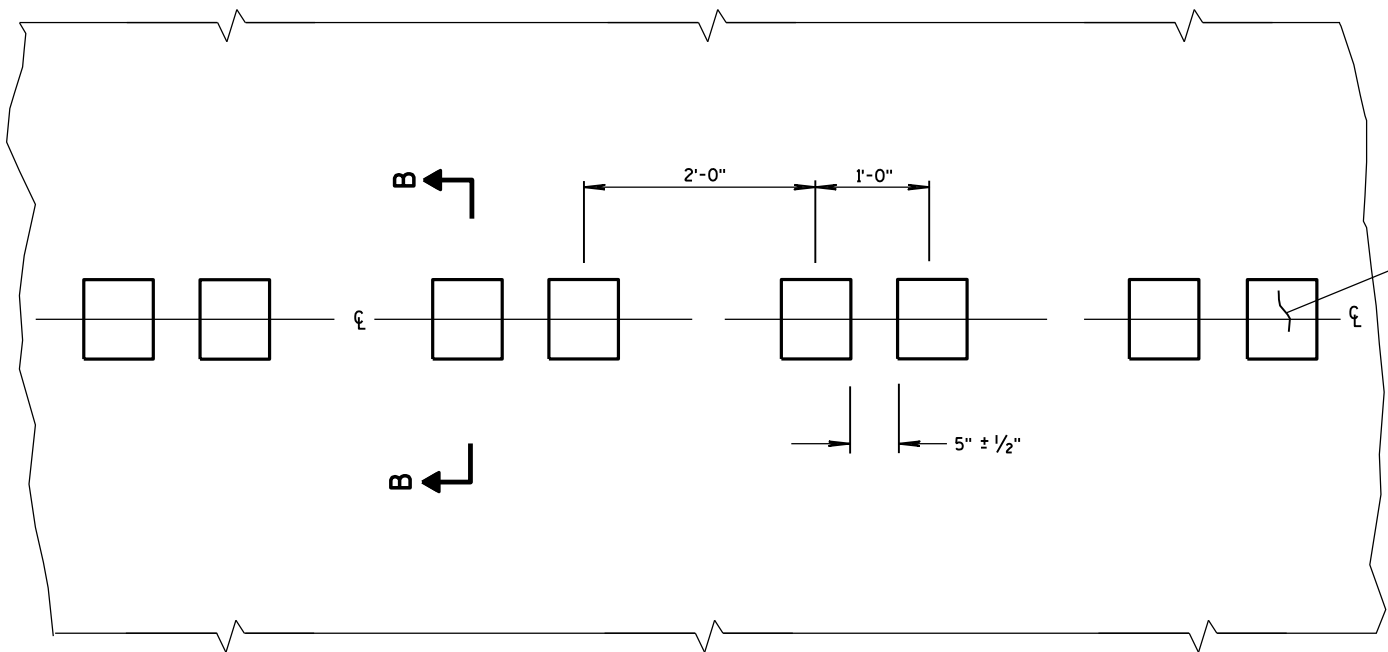
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

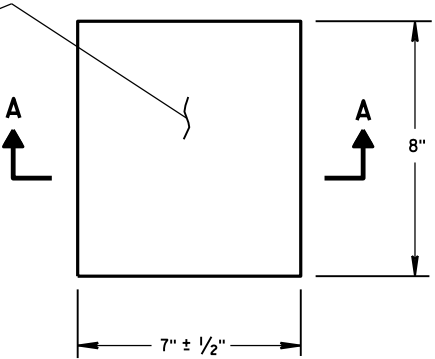
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

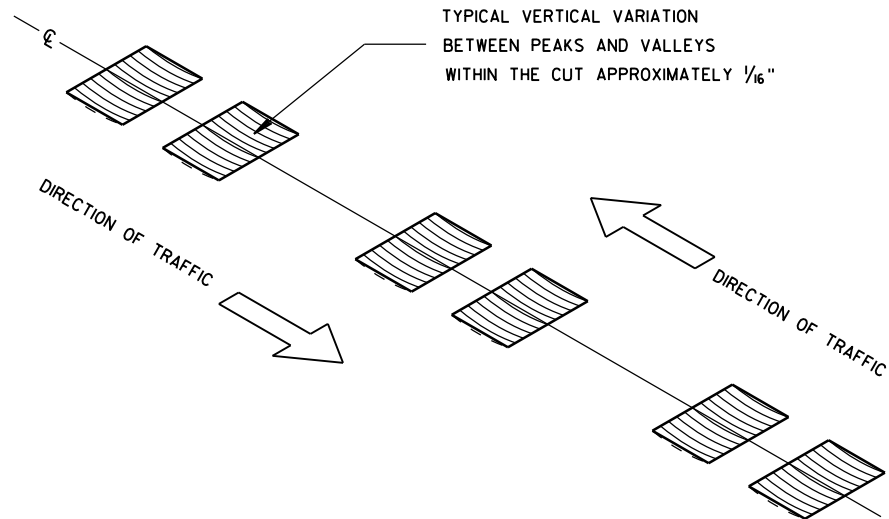
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



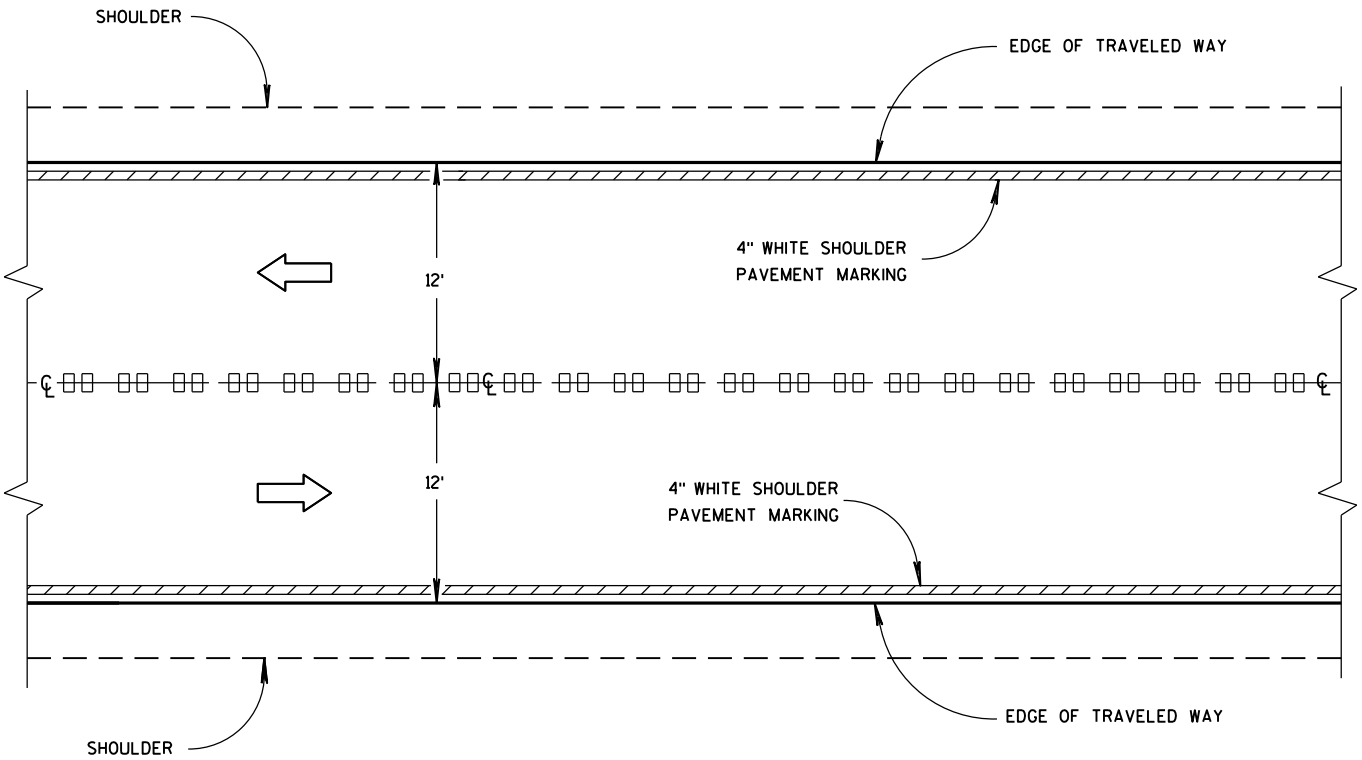
PLAN VIEW
CENTER LINE WITH GROOVES



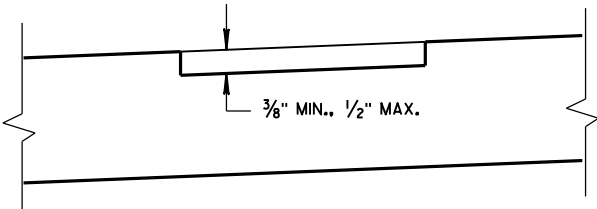
PLAN VIEW
(SINGLE GROOVE)



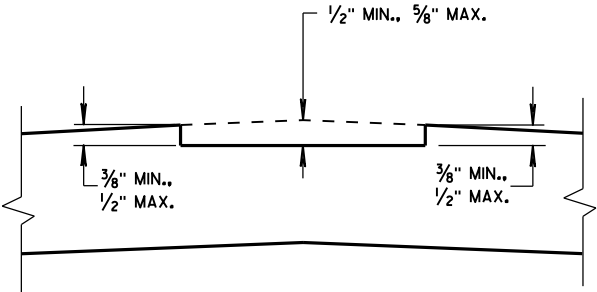
ISOMETRIC



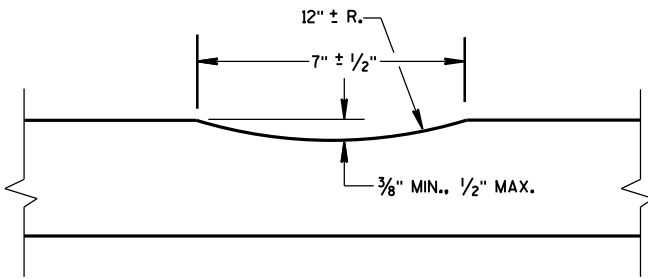
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



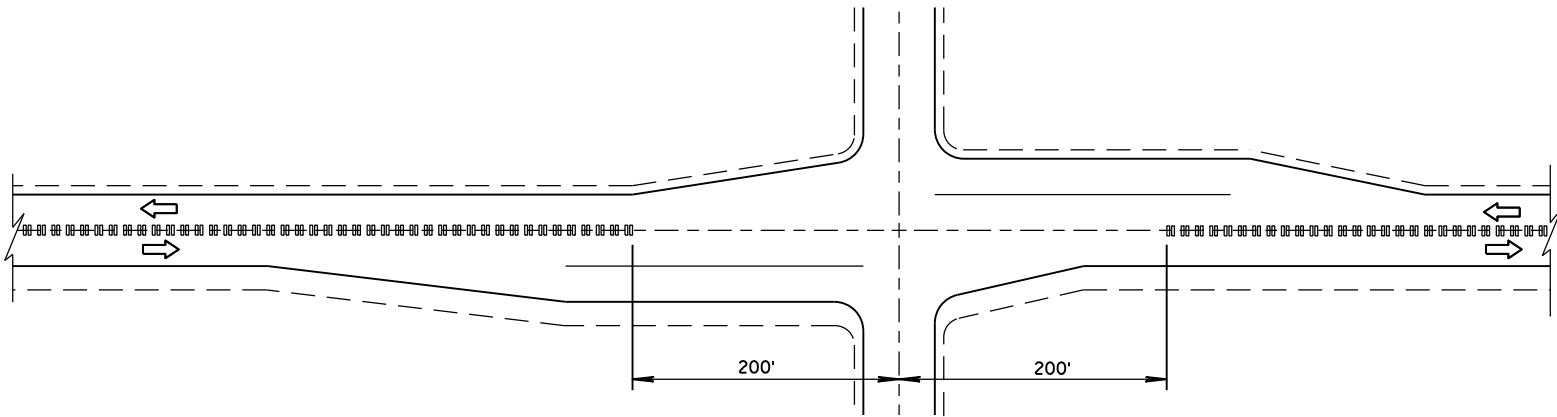
SECTION B-B
CROWNED ROADWAY



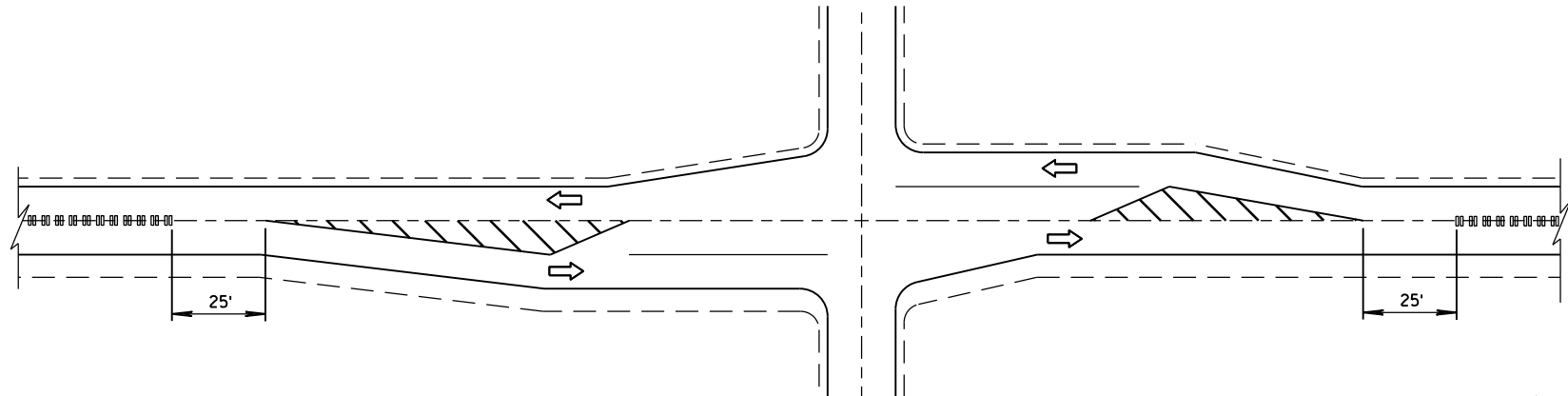
SECTION A-A

2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING

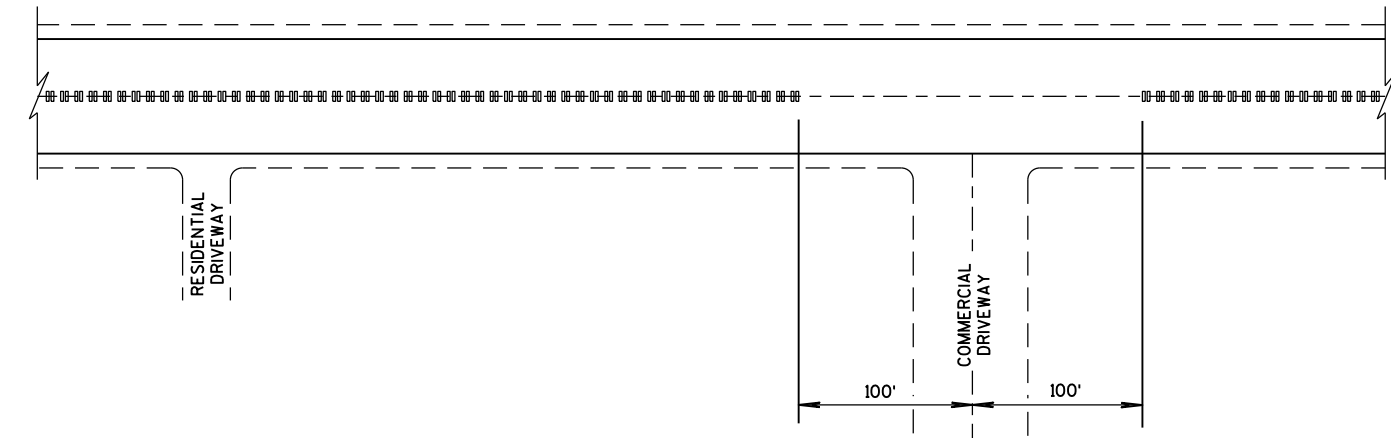
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTER LINE GROOVES AT INTERSECTIONS

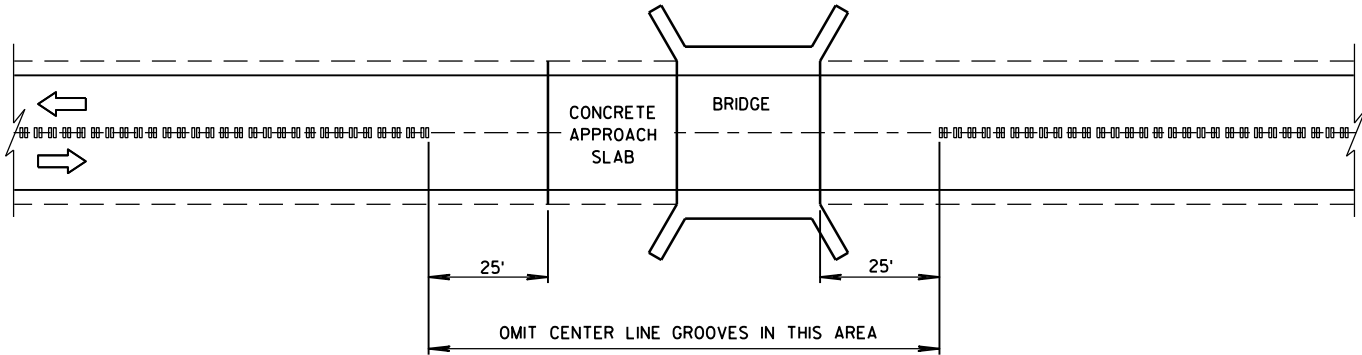


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

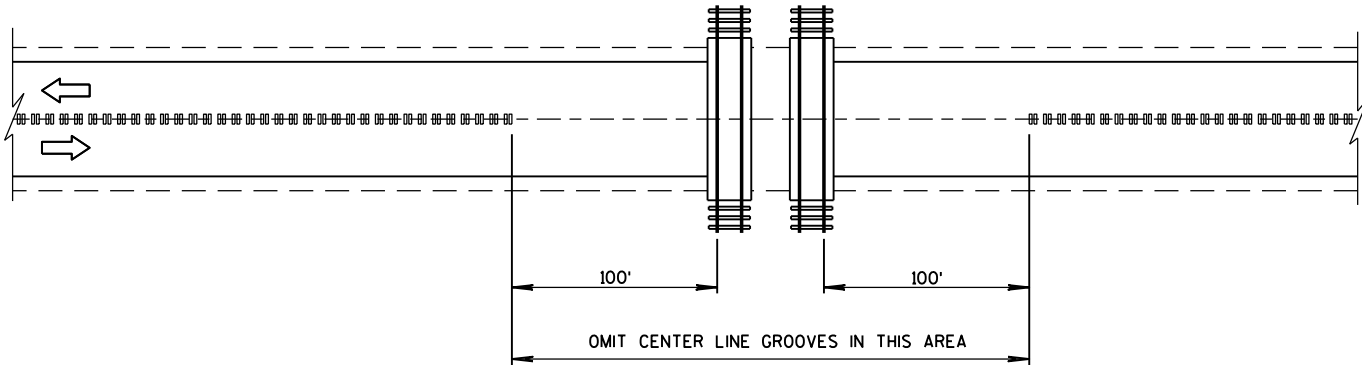


CENTER LINE GROOVES AT DRIVEWAYS^①

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

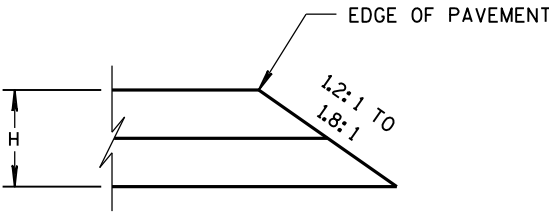


CENTER LINE GROOVES AT BRIDGES

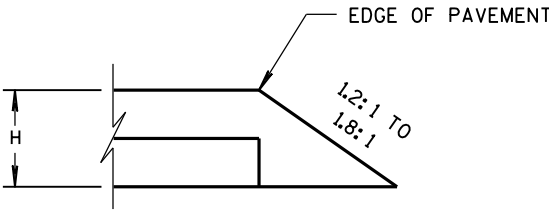


CENTER LINE GROOVES AT RAILROADS

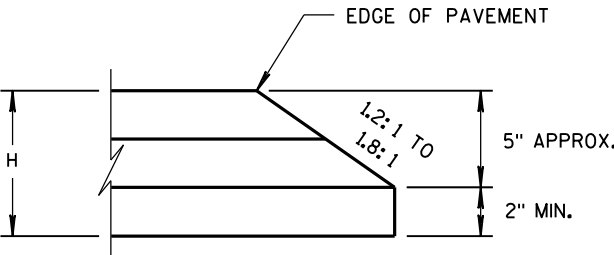
2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 5/15/2013 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



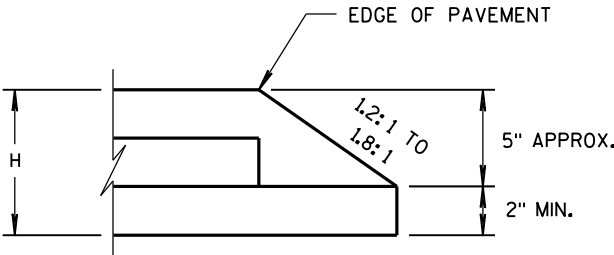
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

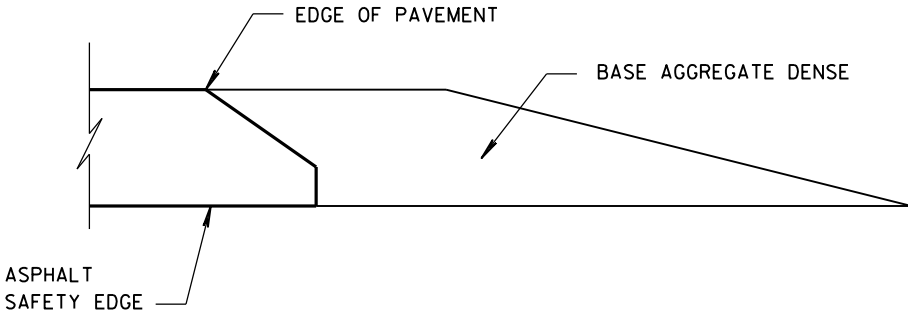


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

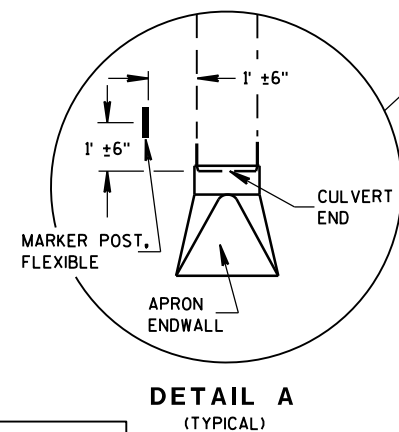
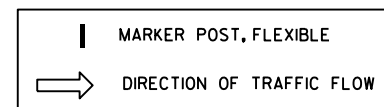
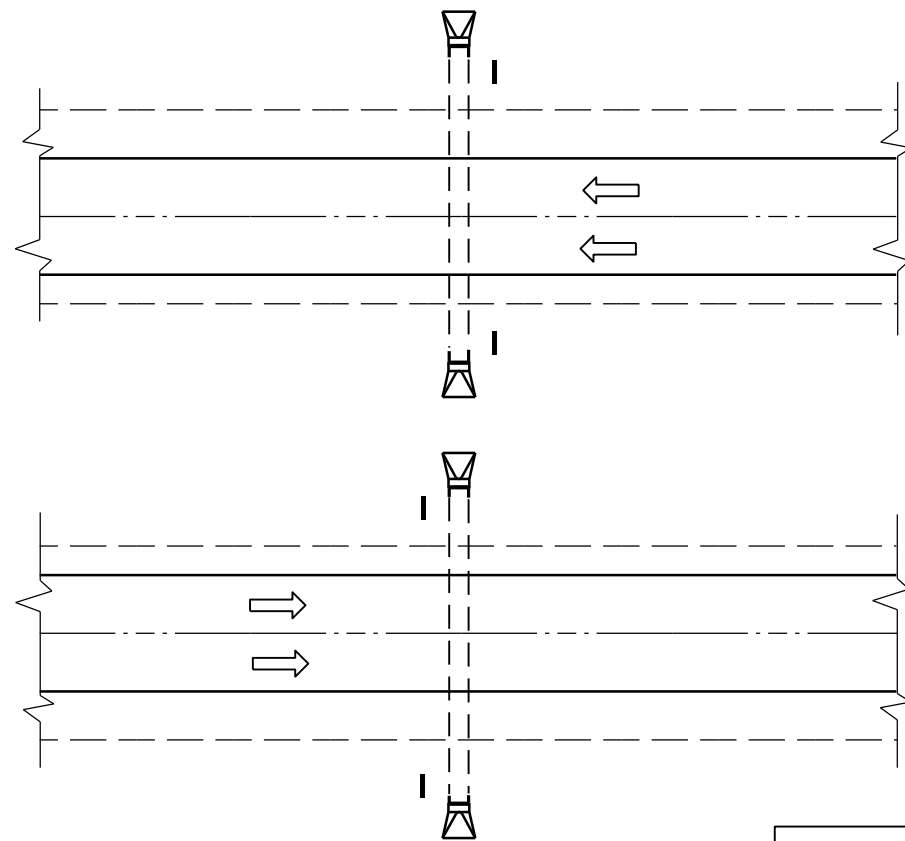
HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

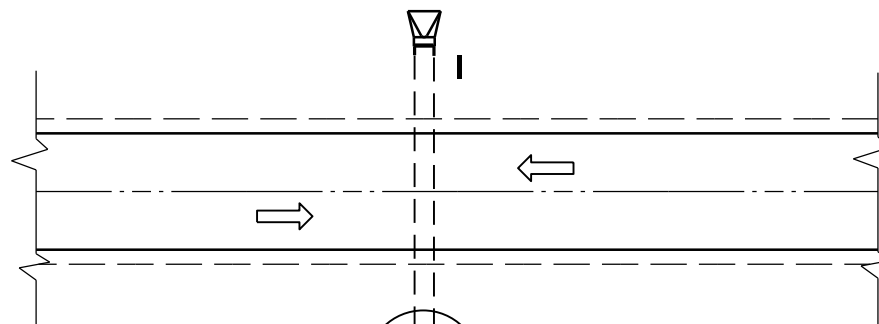
SAFETY EDGE _{SM}	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 11/30/2012	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER FHWA

PLAN VIEW
DIVIDED HIGHWAY

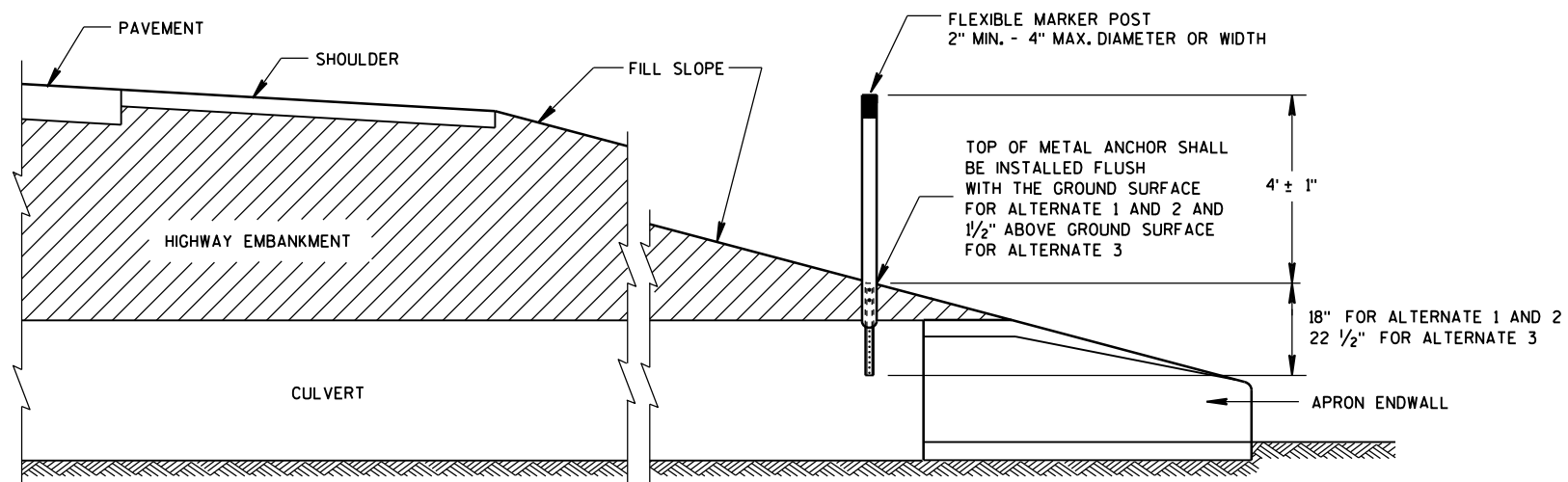


DETAIL A
(TYPICAL)

PLAN VIEW
UNDIVIDED HIGHWAY



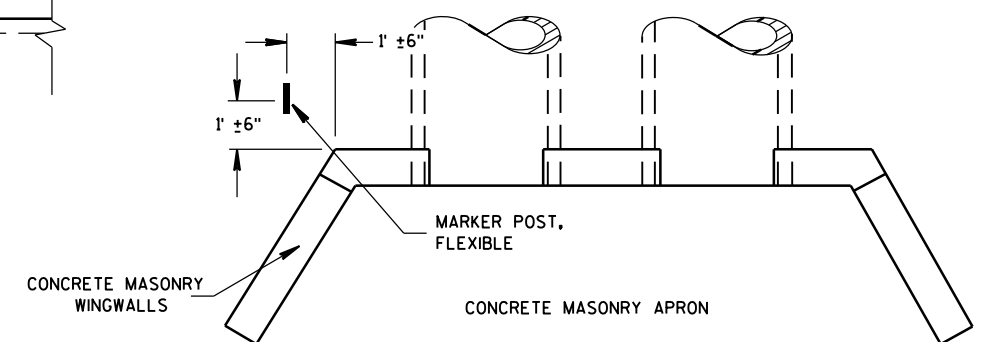
FLEXIBLE MARKER POST LOCATION



CROSS SECTION
FLEXIBLE MARKER POST

GENERAL NOTES

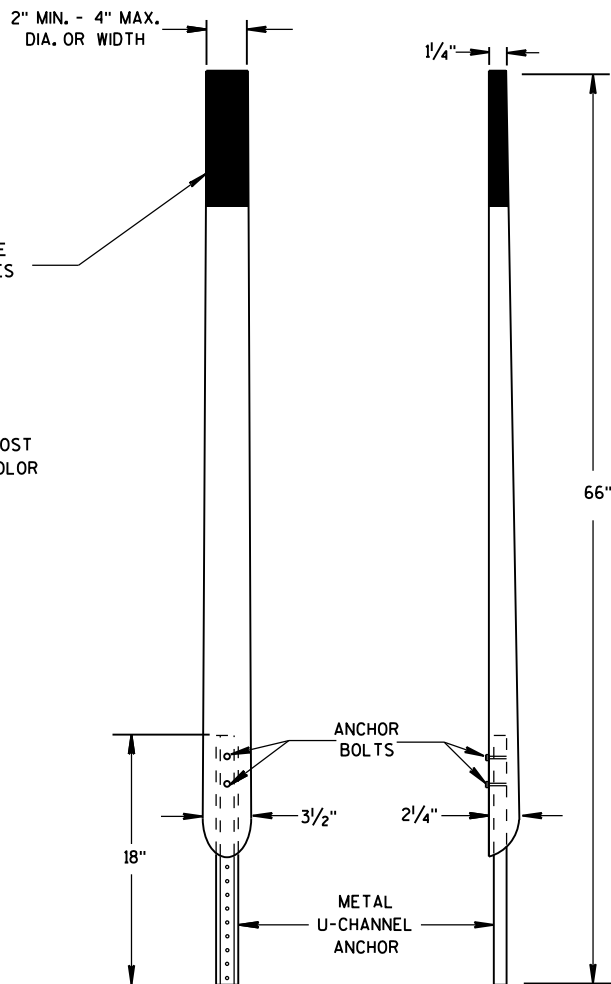
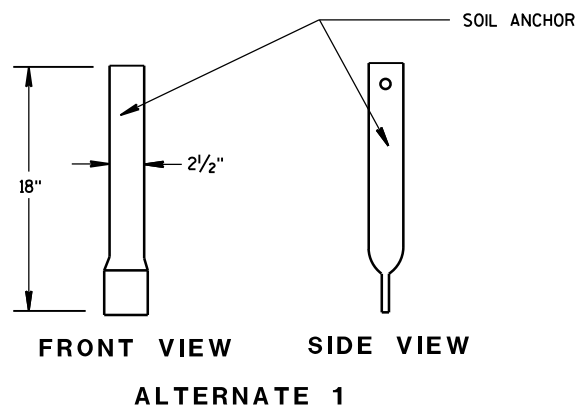
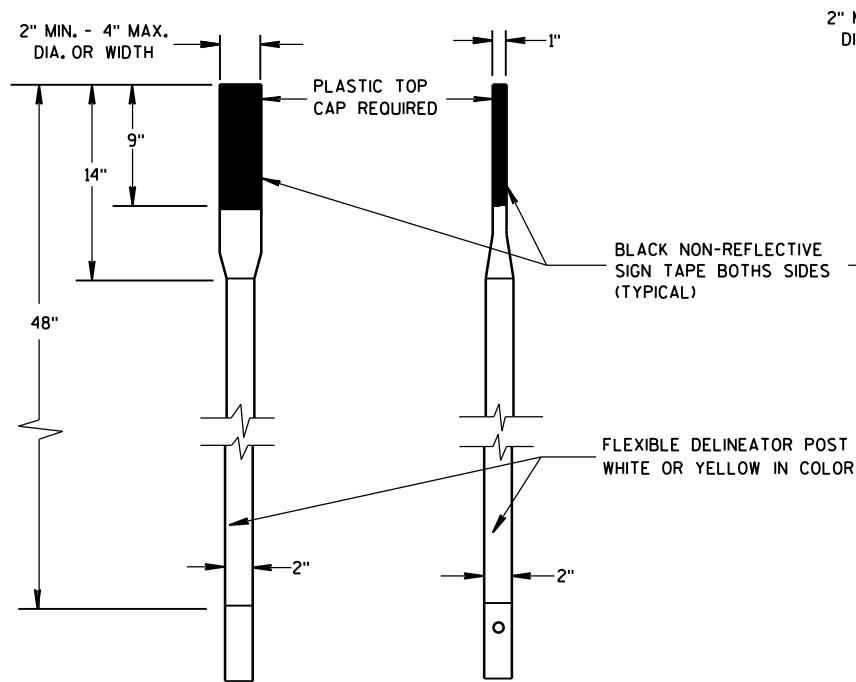
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH

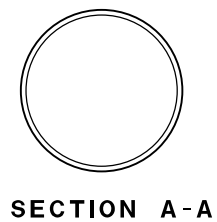
FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

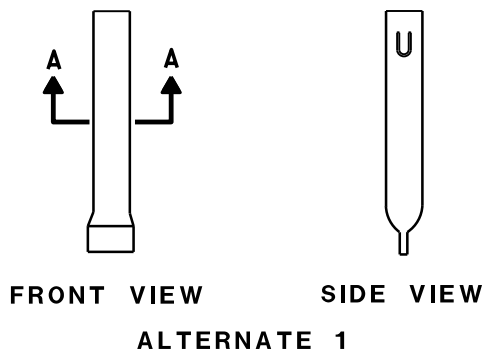


FRONT VIEW SIDE VIEW
ALTERNATE 2

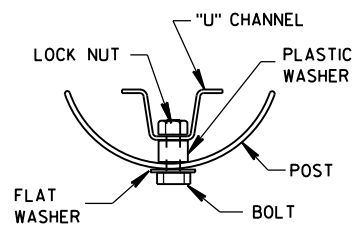
FLEXIBLE MARKER POSTS



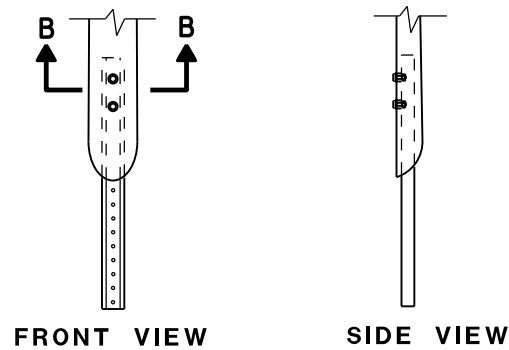
SECTION A-A



FRONT VIEW SIDE VIEW
ALTERNATE 1

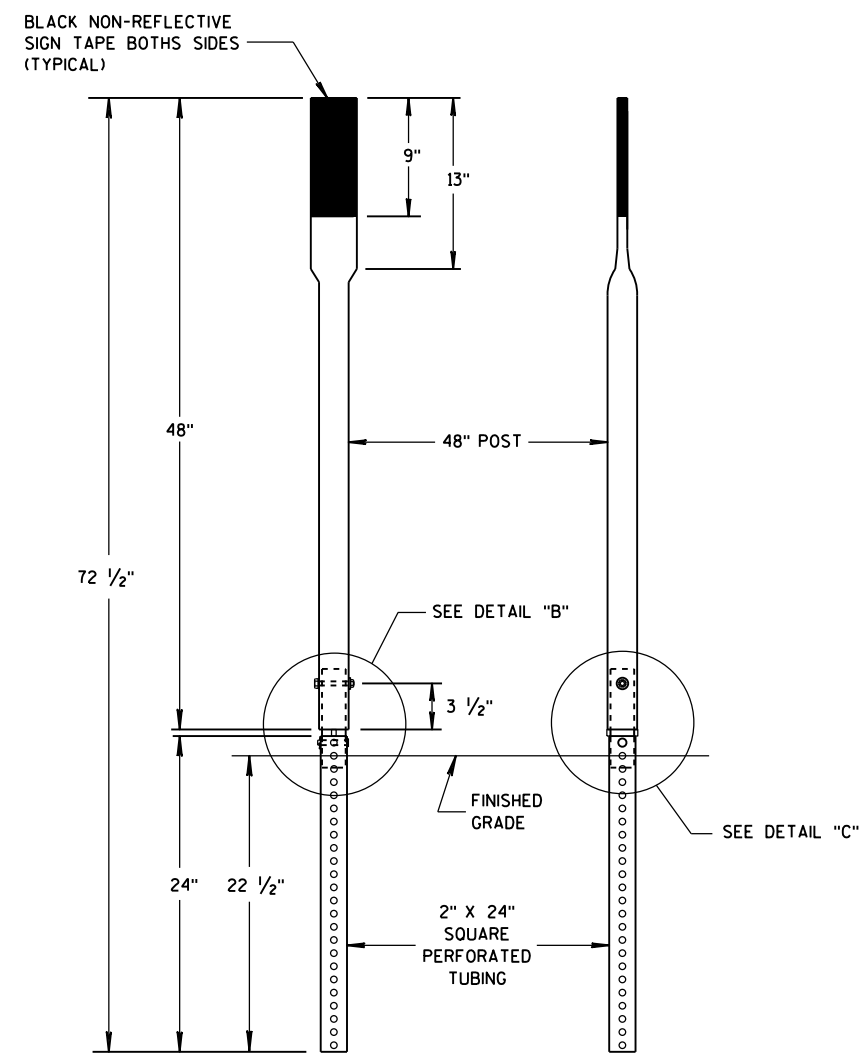


SECTION B-B

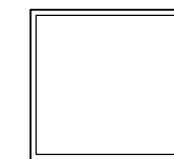


FRONT VIEW SIDE VIEW
ALTERNATE 2

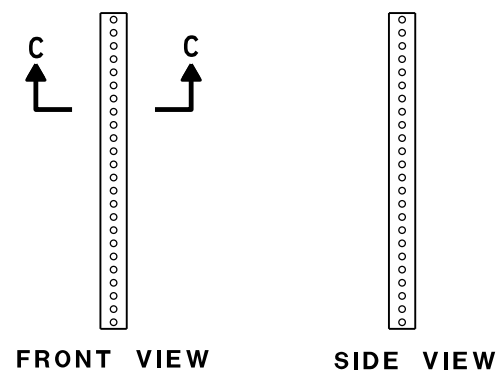
FLEXIBLE MARKER POST ANCHORS



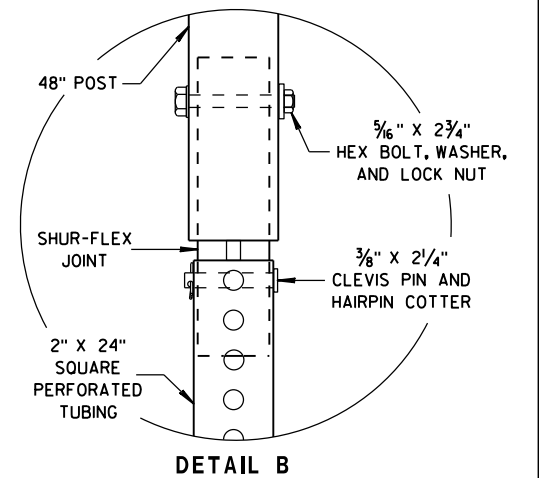
FRONT VIEW SIDE VIEW
ALTERNATE 3



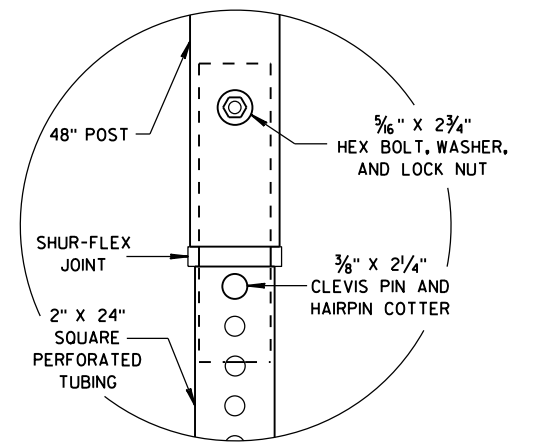
SECTION C-C



FRONT VIEW SIDE VIEW
ALTERNATE 3



DETAIL B



DETAIL C

FLEXIBLE MARKER POST FOR CULVERT END

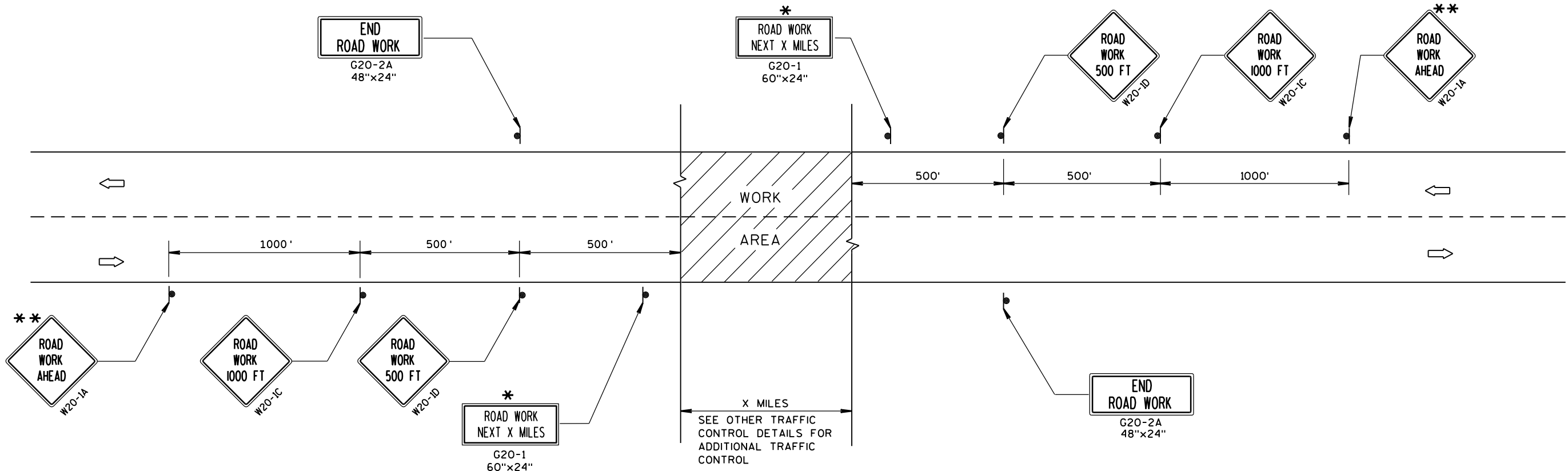
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/1/2012
DATE

FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

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.

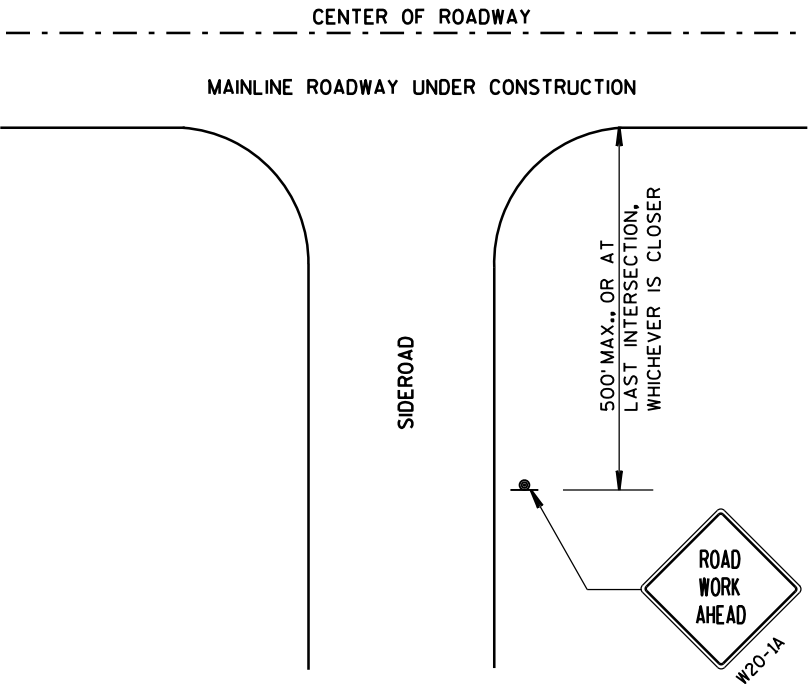
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 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 RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



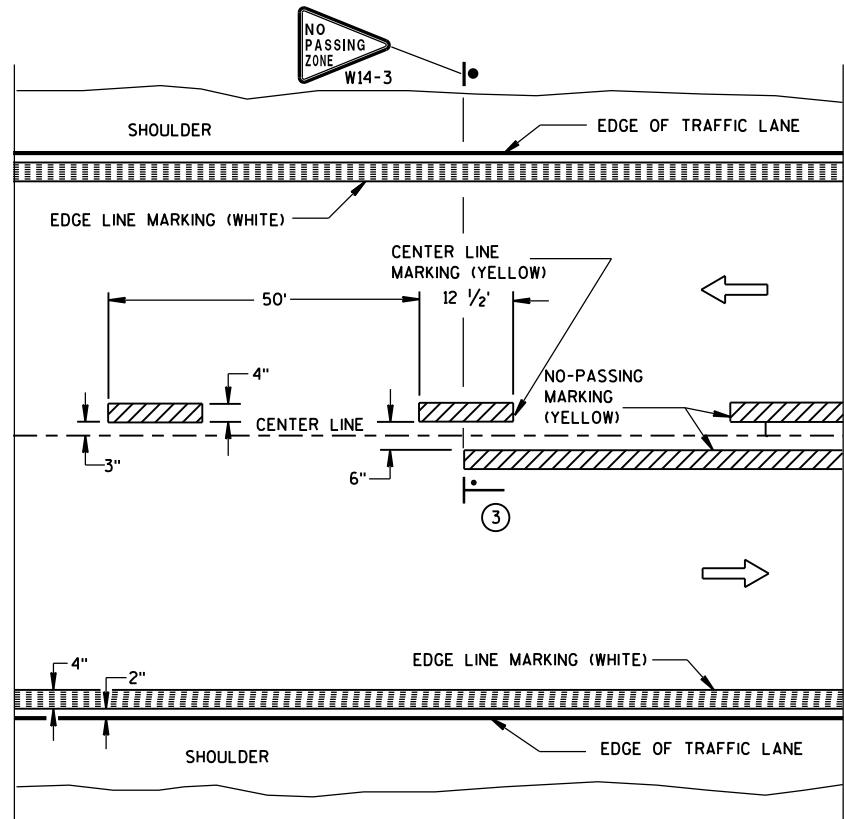
LEGEND

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

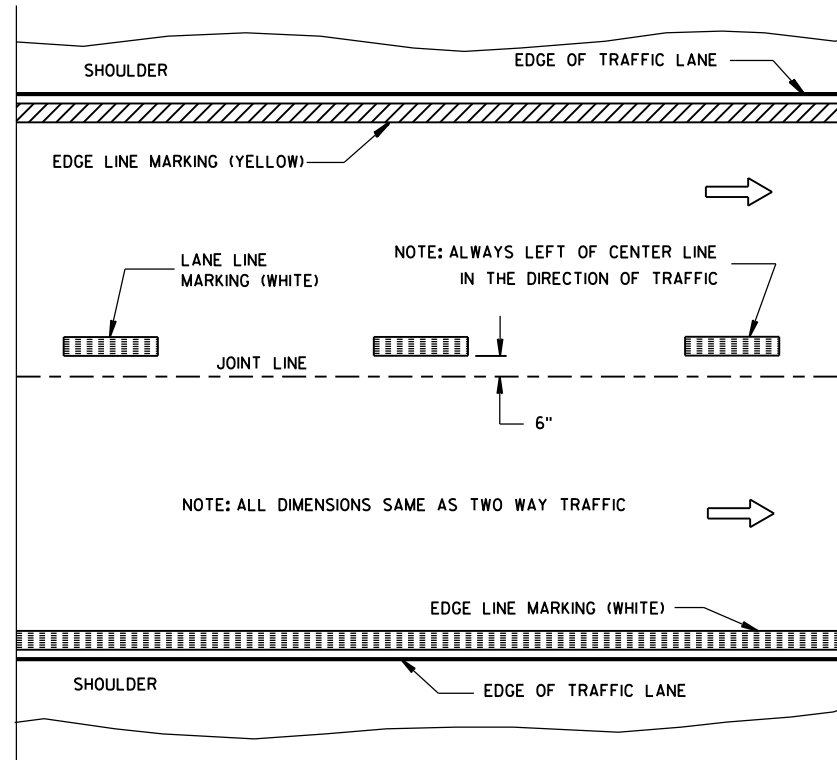
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 45 M.P.H.
OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

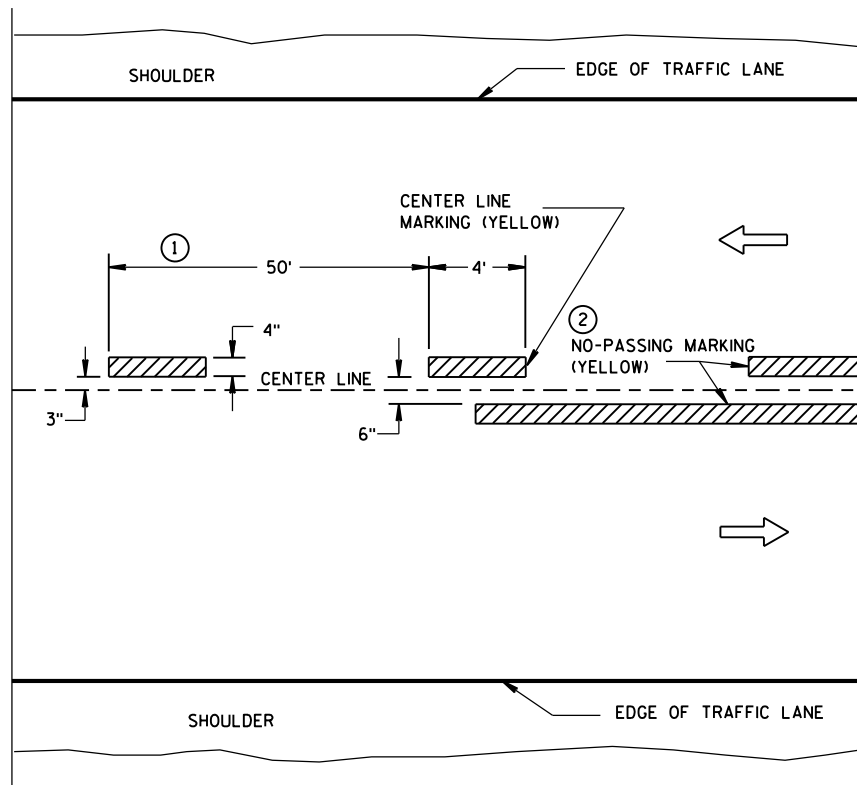


TWO WAY TRAFFIC

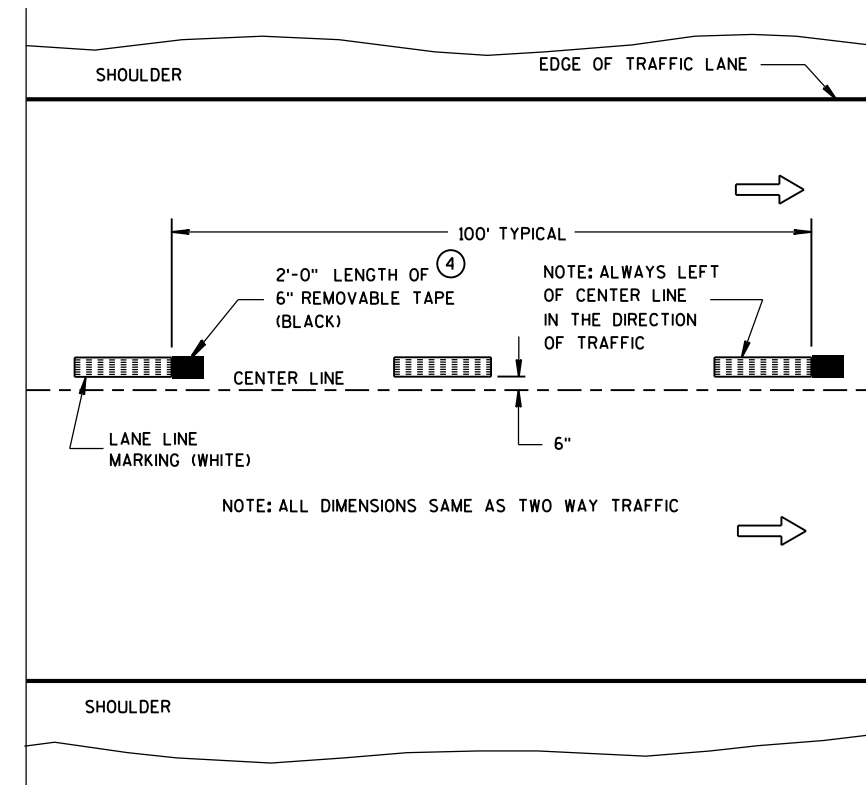


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

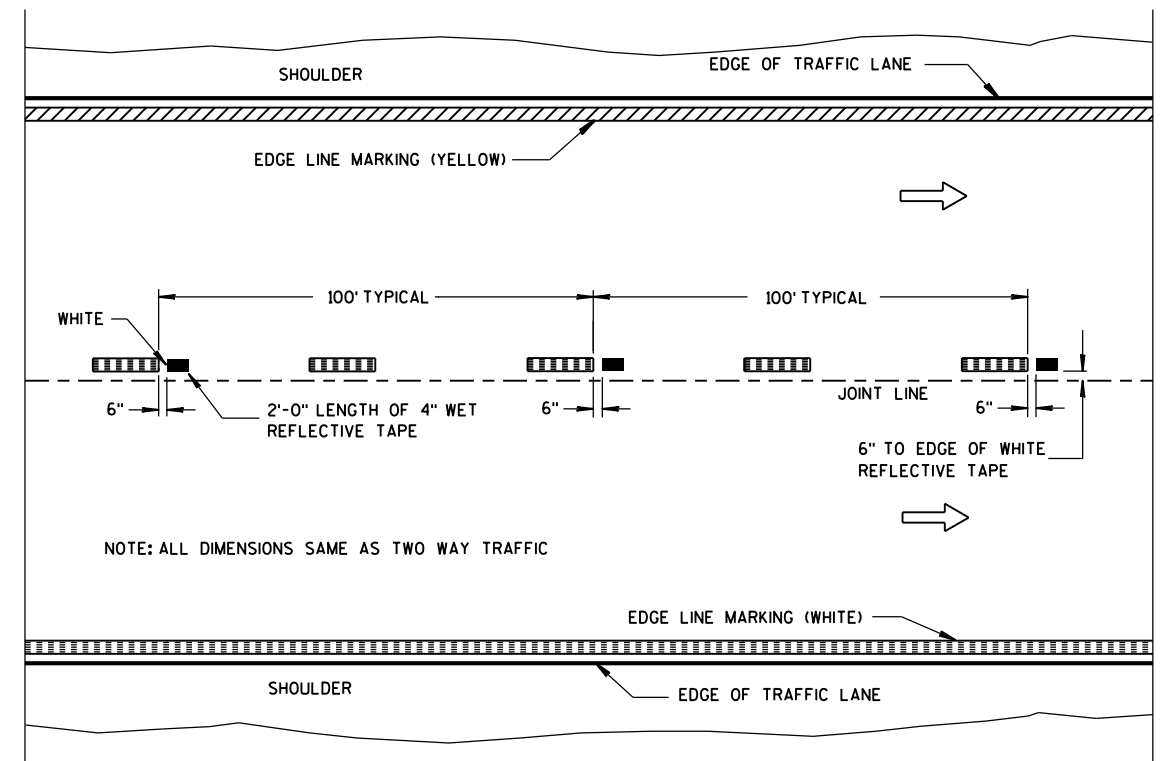
GENERAL NOTES

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

- 1 HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- 2 NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- 3 NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- 4 CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

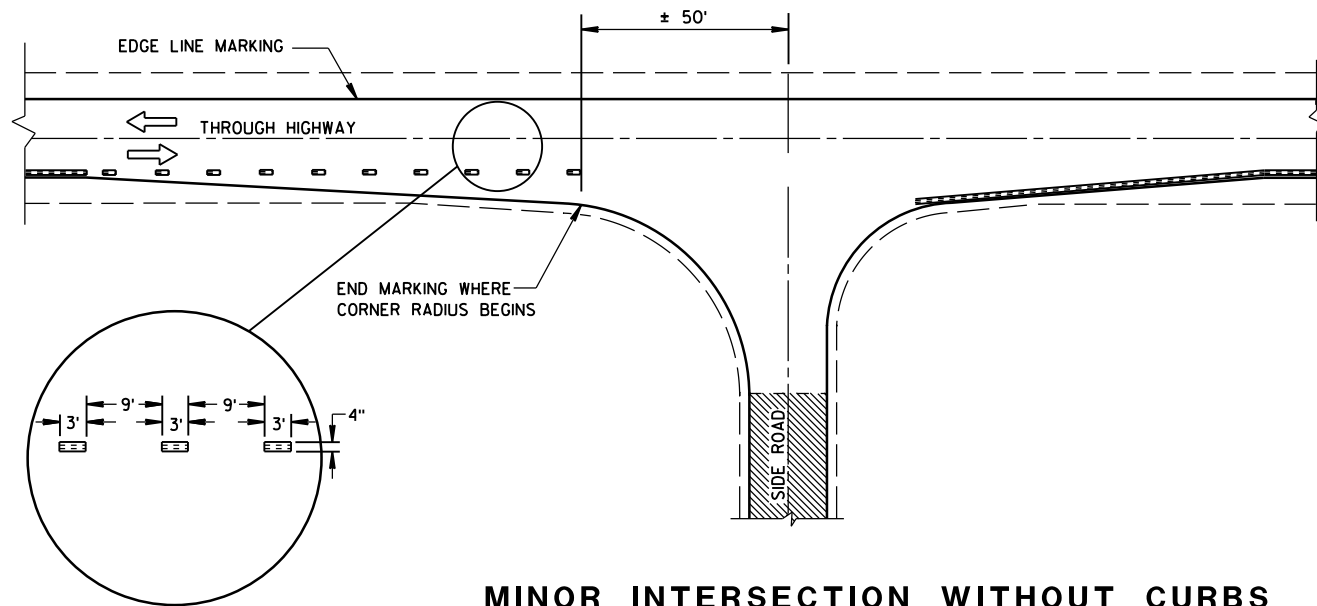
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

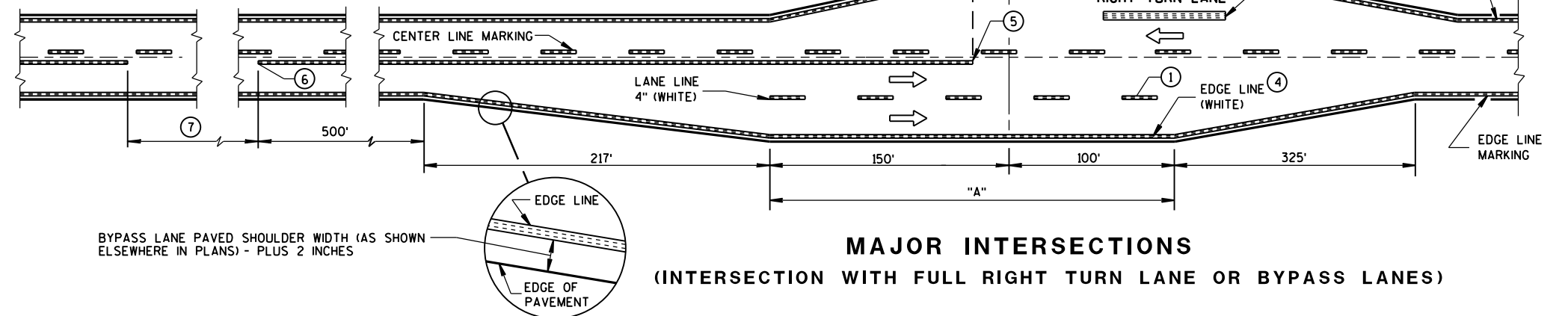
APPROVED
5-13-2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER
FHWA



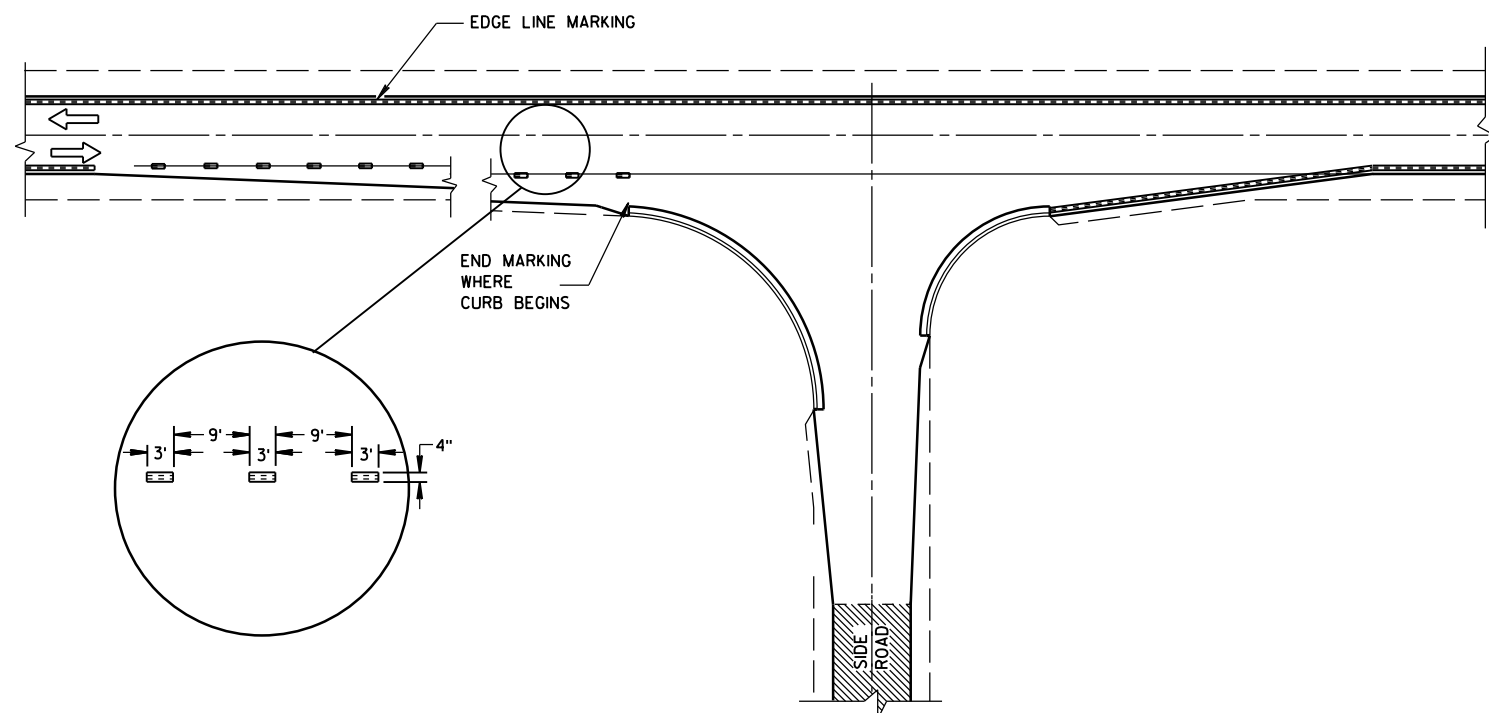
MINOR INTERSECTION WITHOUT CURBS

⑦

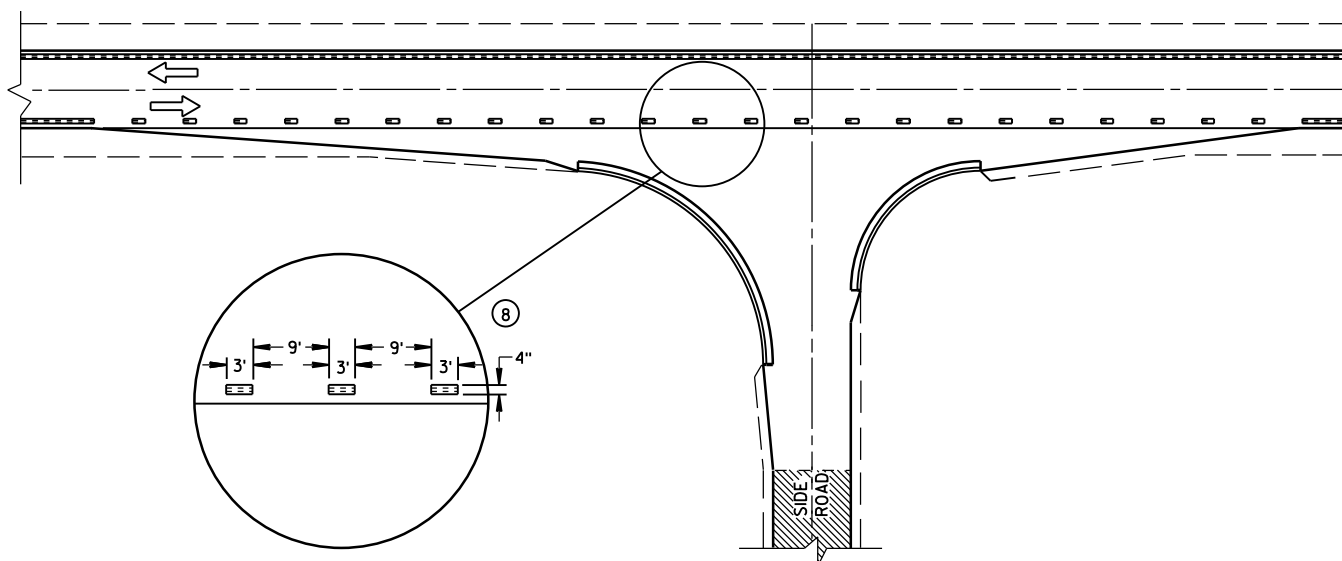
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



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



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS
⑧ (FOR SPECIAL CONDITIONS AS SPECIFIED)

GENERAL NOTES

- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED 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 ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
 - ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
 - ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
 - ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

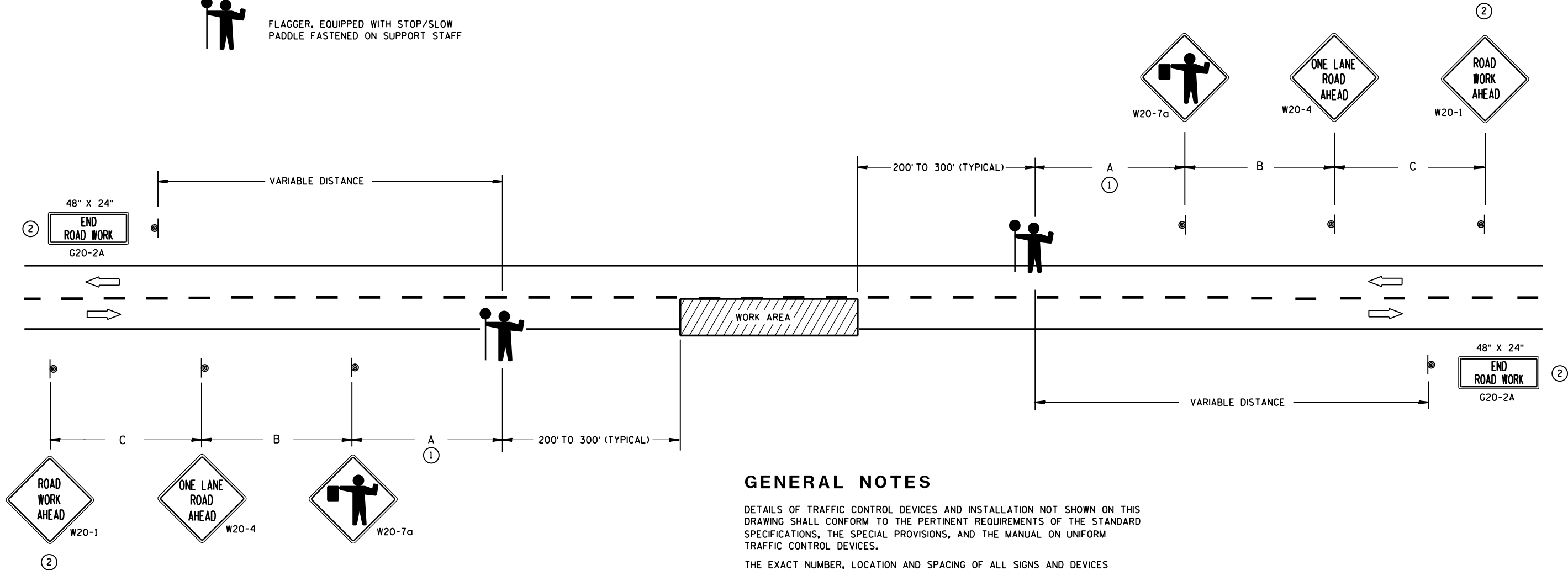
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT 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.

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.

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

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

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

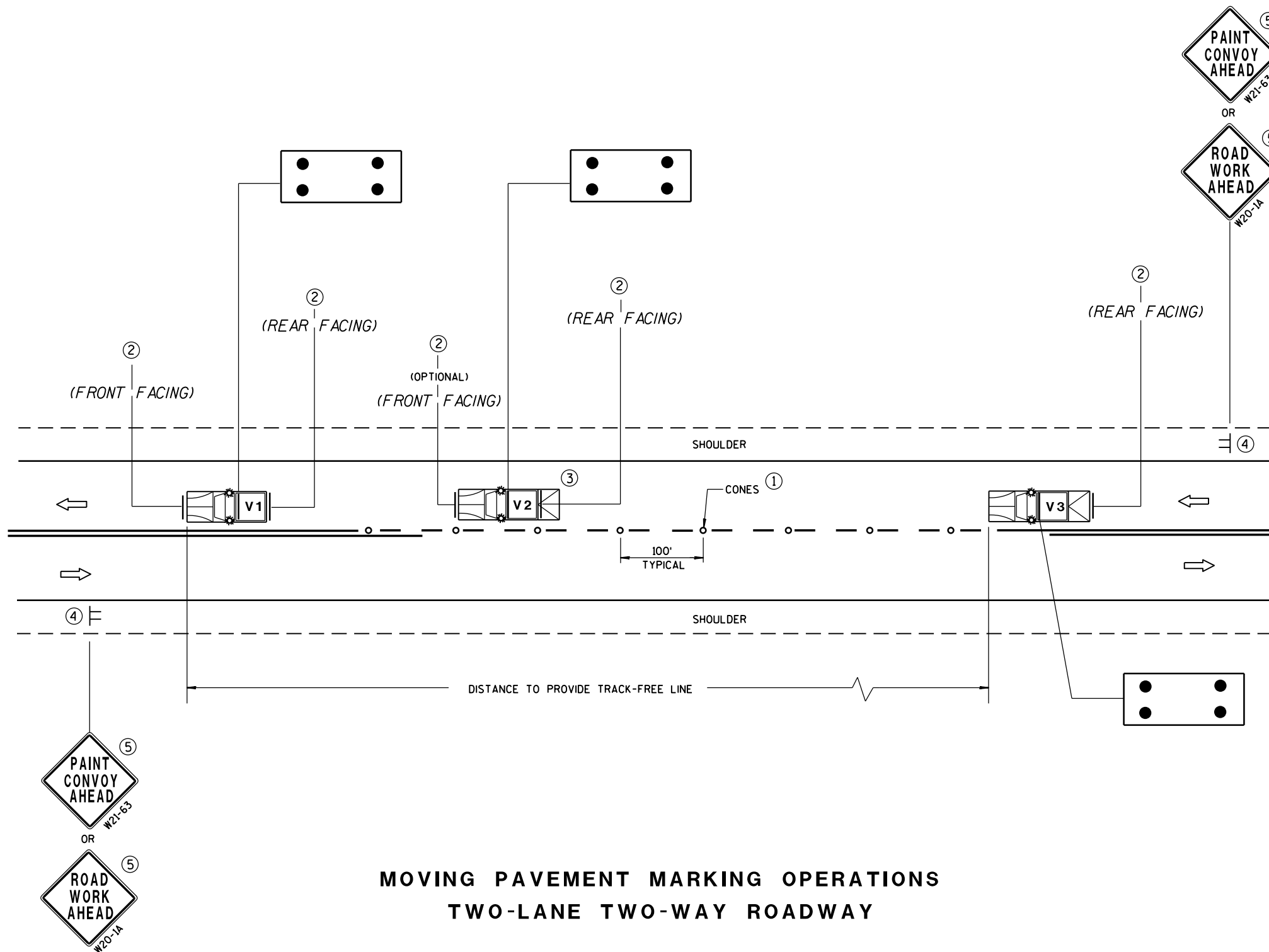
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

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.

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.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

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 OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

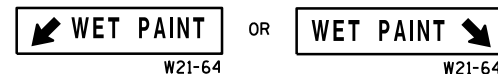
THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.



③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1 LEAD VEHICLE

V2 SHADOW VEHICLE

V3 TRAIL VEHICLE WITH TMA

TMA TRUCK-MOUNTED ATTENUATOR

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

CONES

FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING
OPERATION
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

DATE /S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

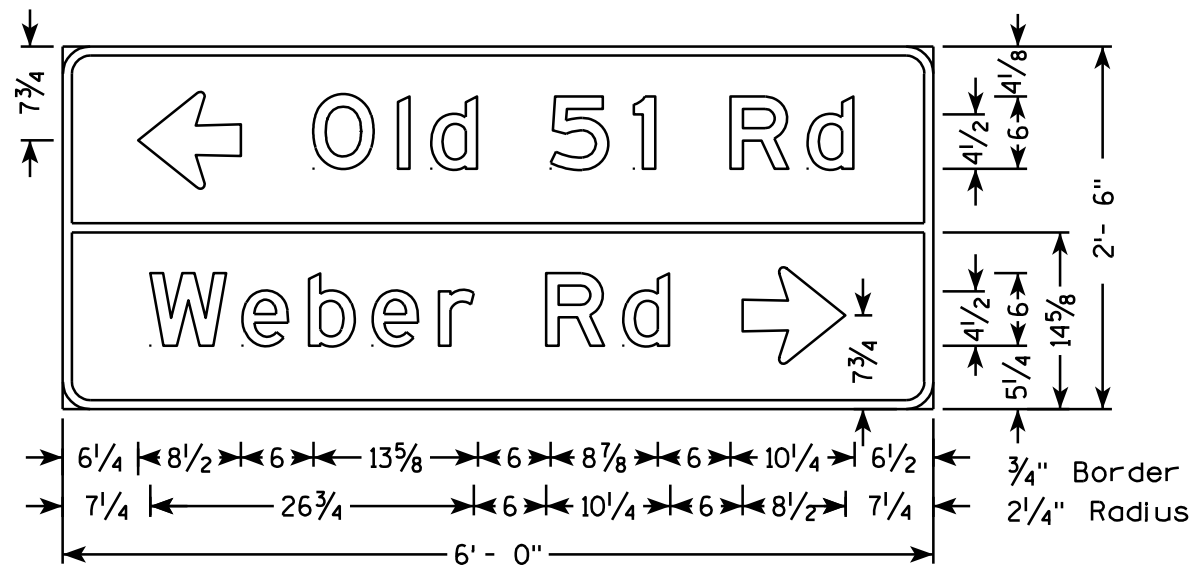
FHWA



THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE OR LANELINE MARKING FOR MULTILANE UNDIVIDED ROADWAYS.

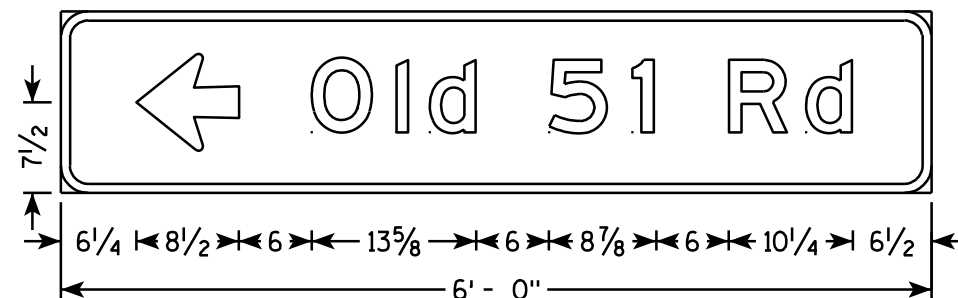
- FLASHING ARROW PANEL (MERGE)

APPROVED Sept. 2015 DATE FHWA	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
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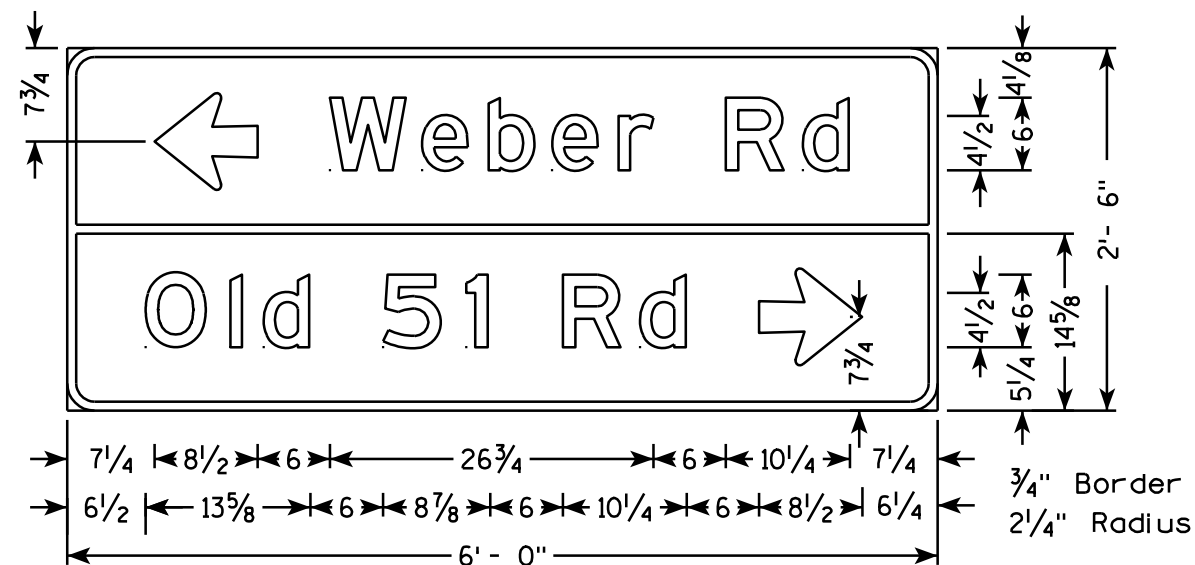


D1-2

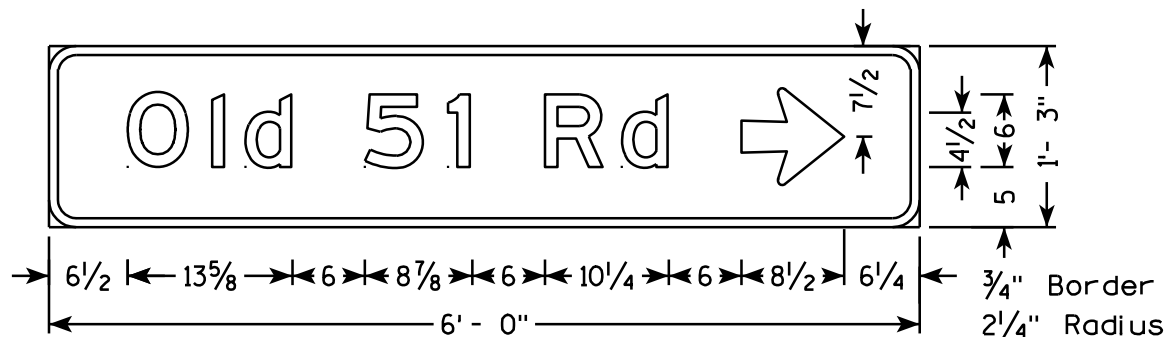
- NOTES**
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - GREEN
Message - WHITE
 3. Message Series - E



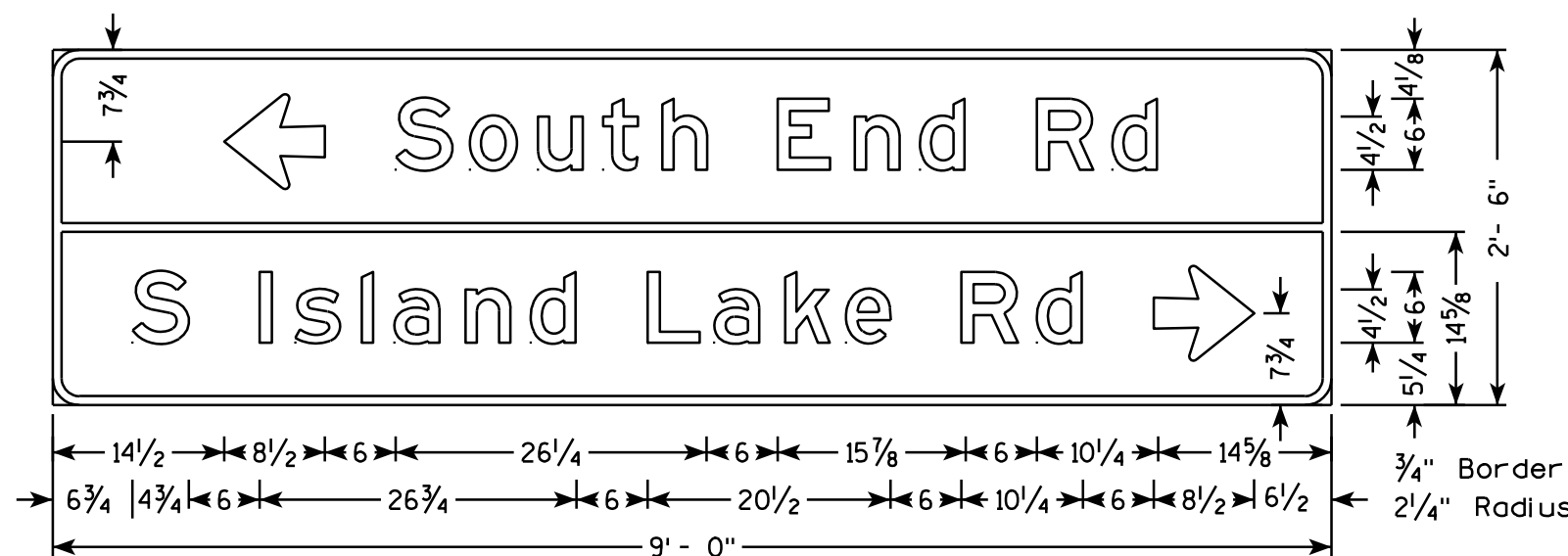
D1-1



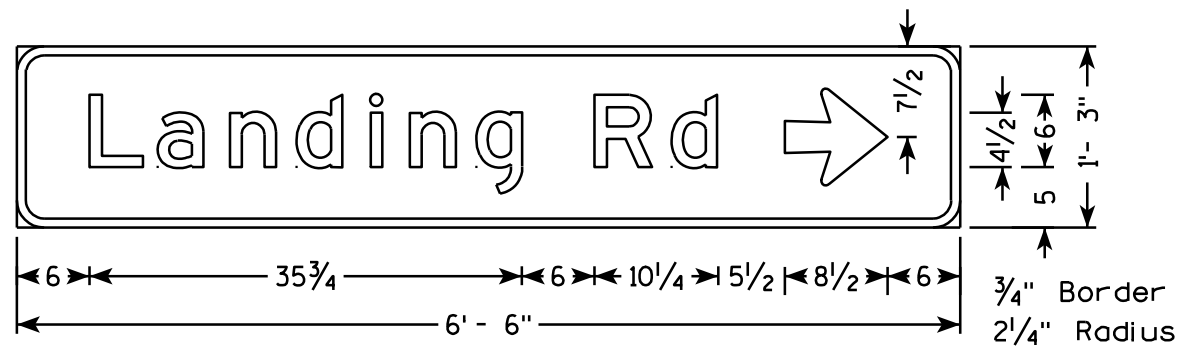
D1-2



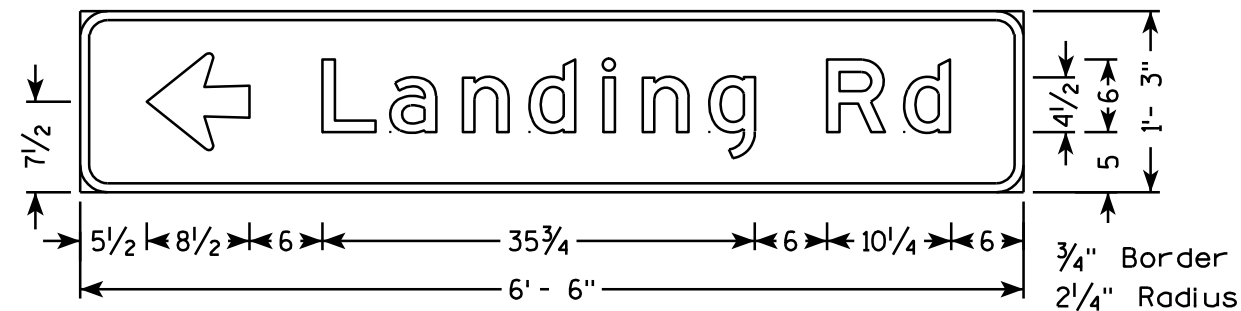
D1-1



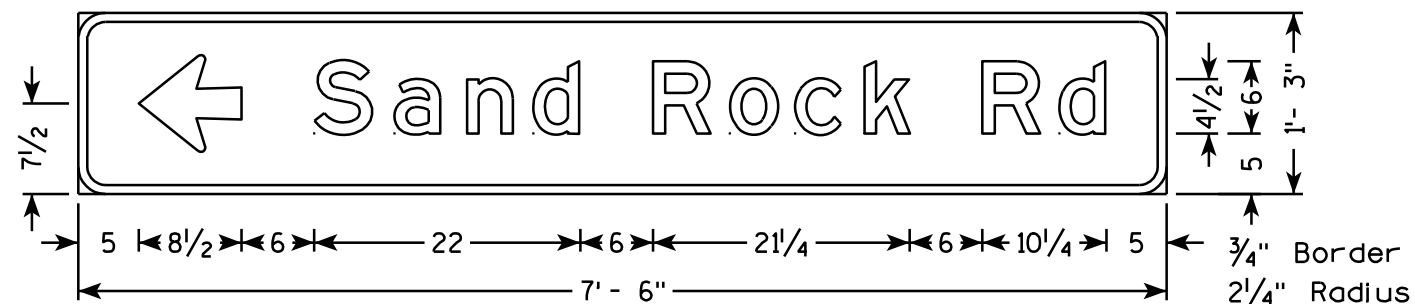
D1-2



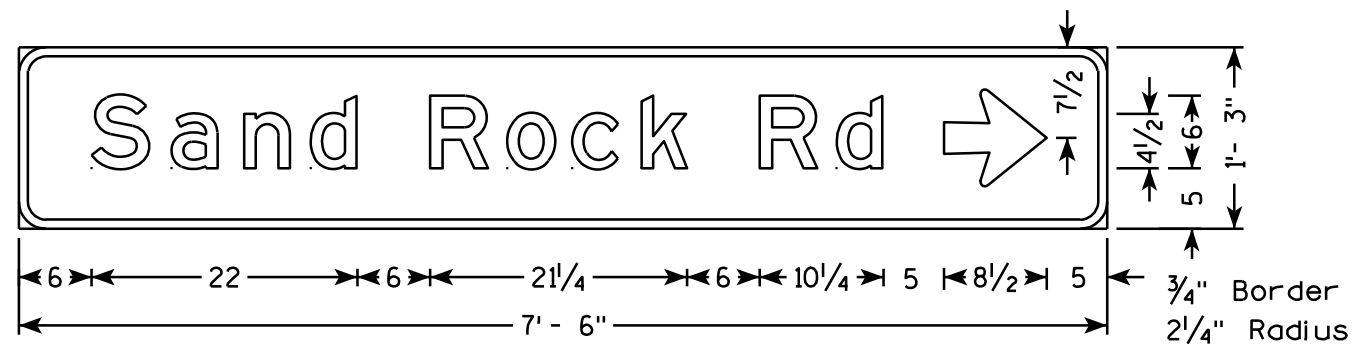
D1-1



D1-1



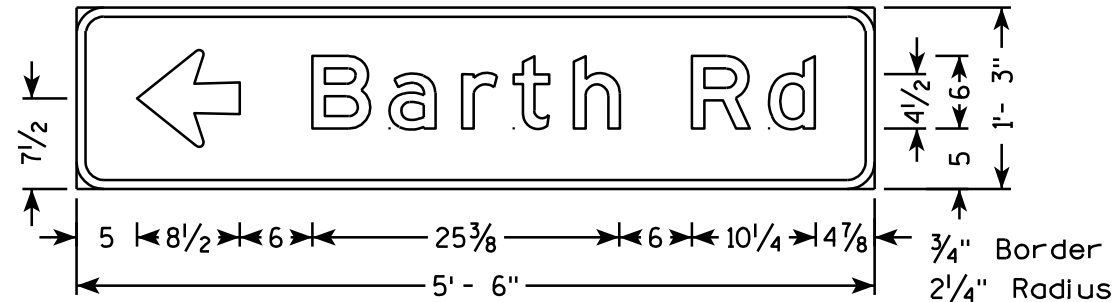
D1-1



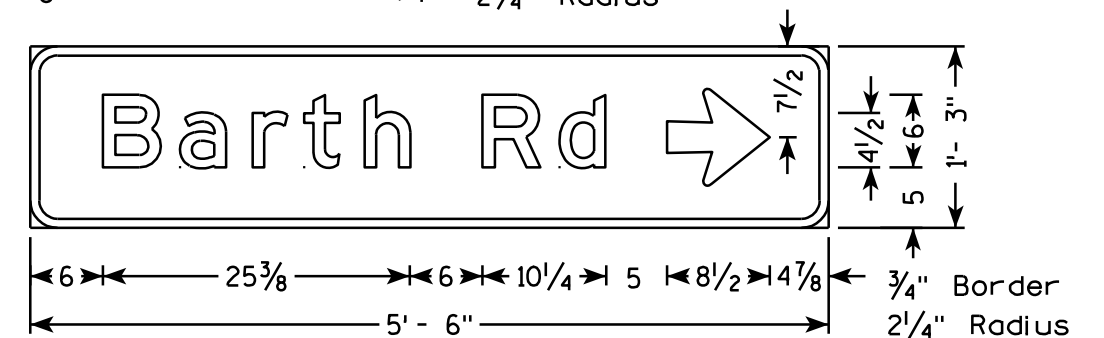
D1-1

NOTES

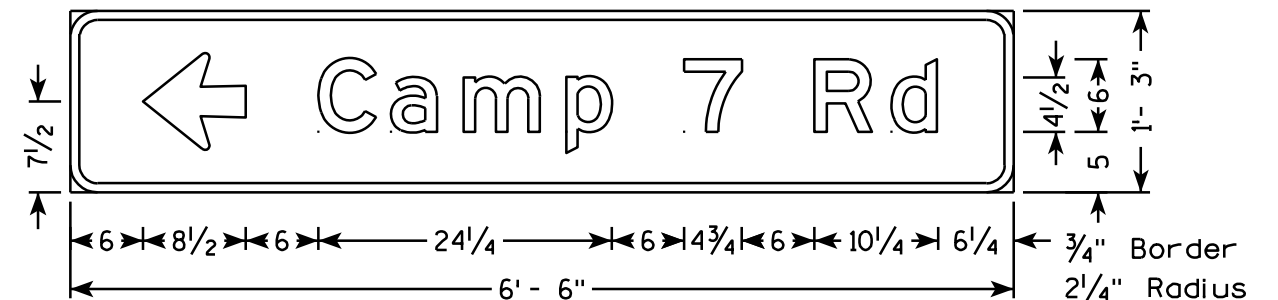
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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Background - GREEN
Message - WHITE
3. Message Series - E



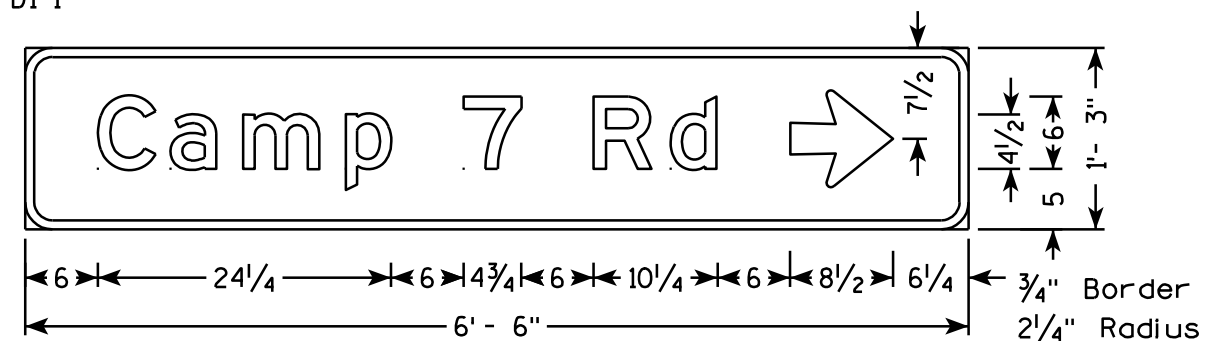
D1-1



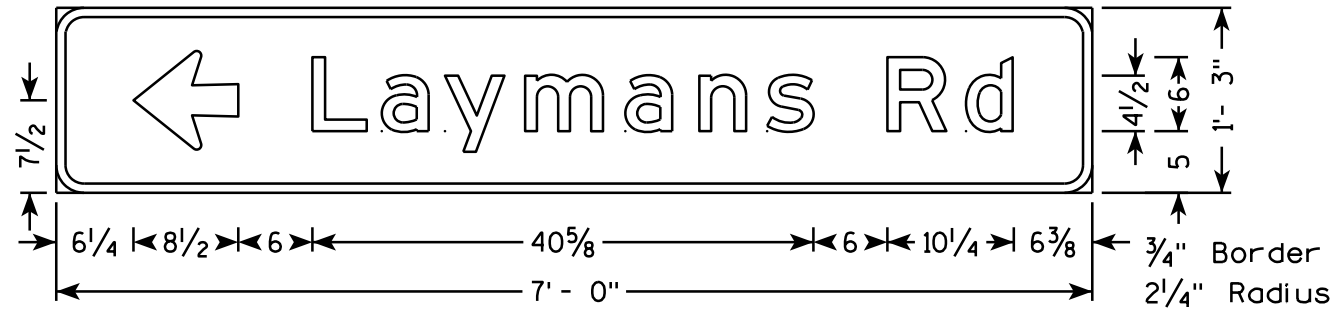
D1-1



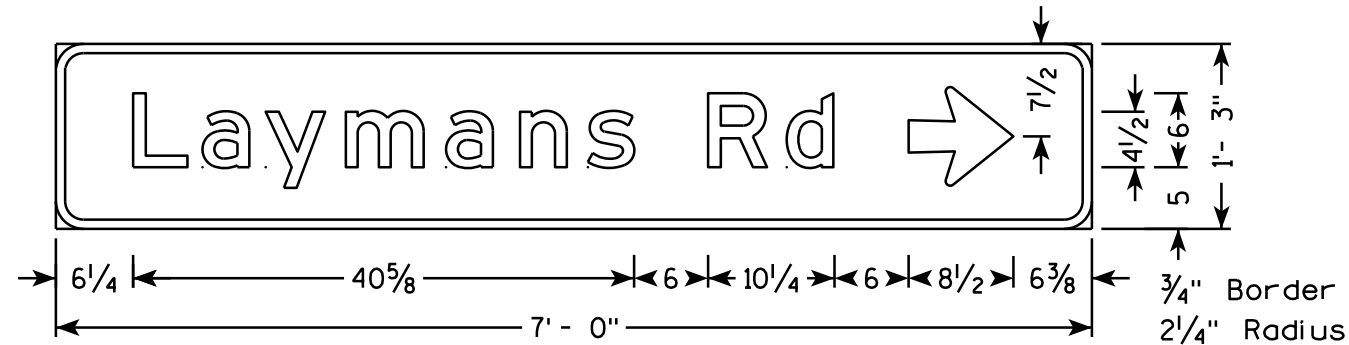
D1-1



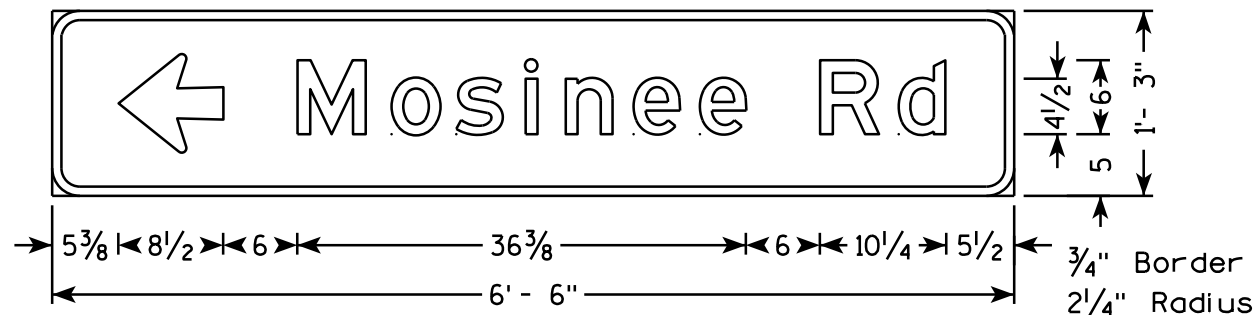
D1-1



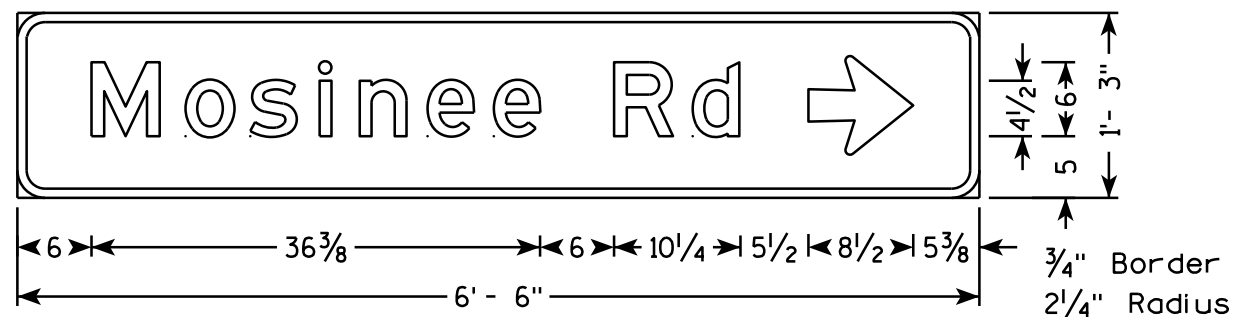
D1-1



D1-1

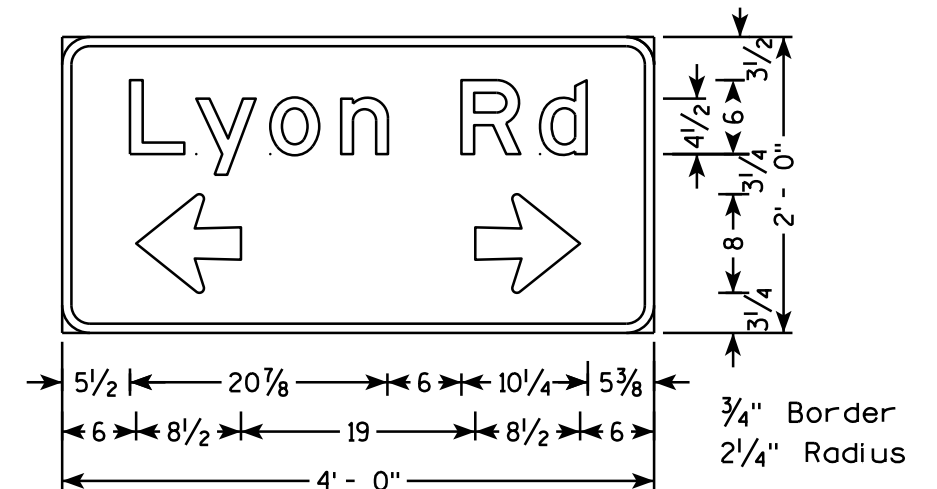


D1-1

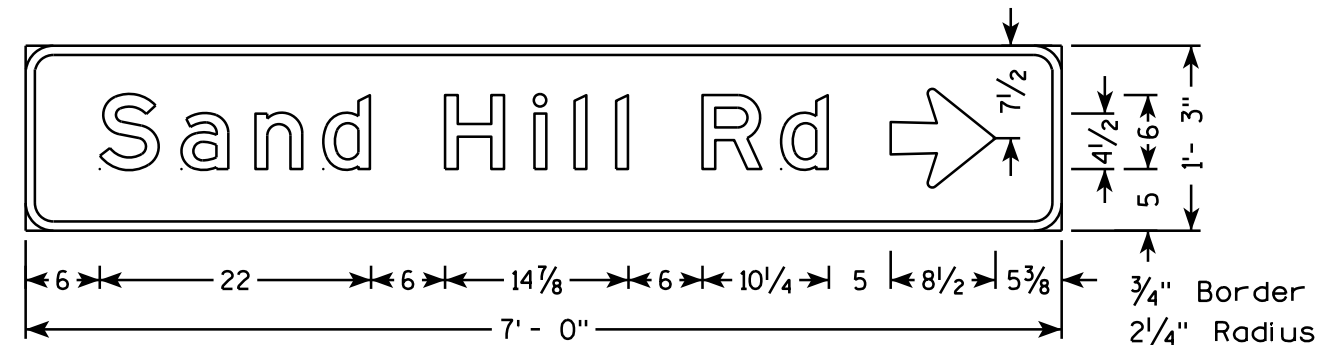


D1-1

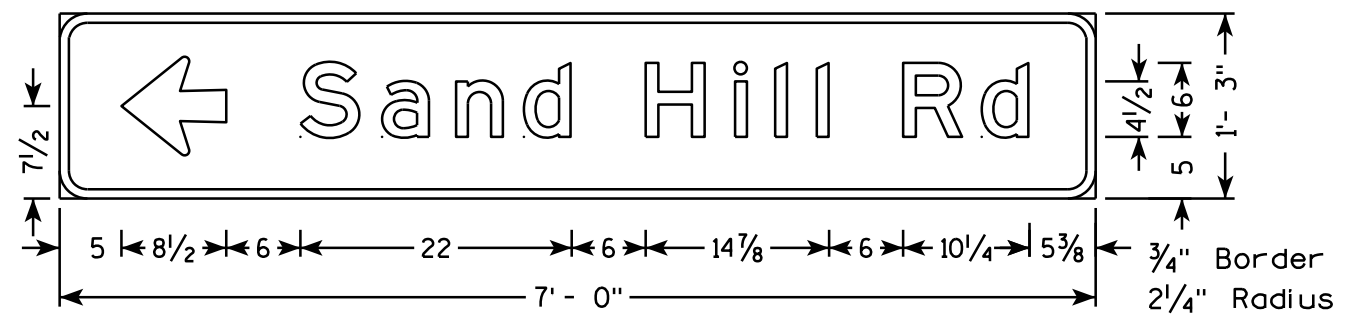
- NOTES**
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - GREEN
Message - WHITE
 3. Message Series - E



D1-61



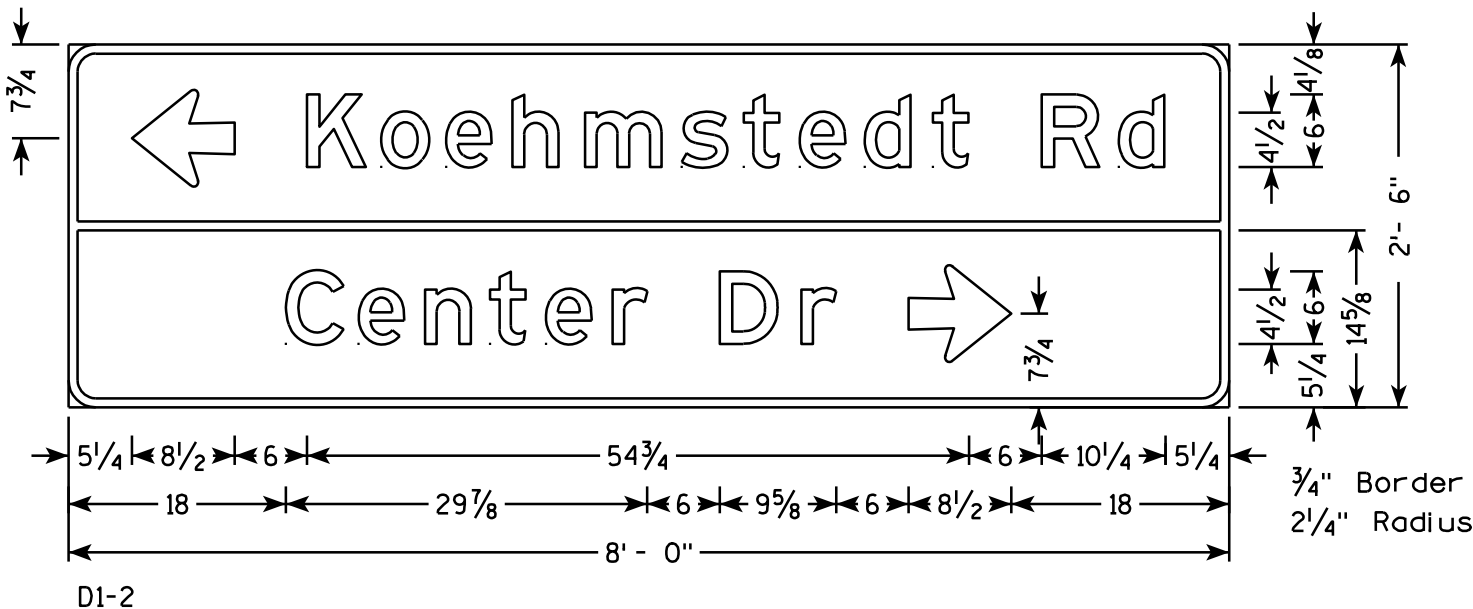
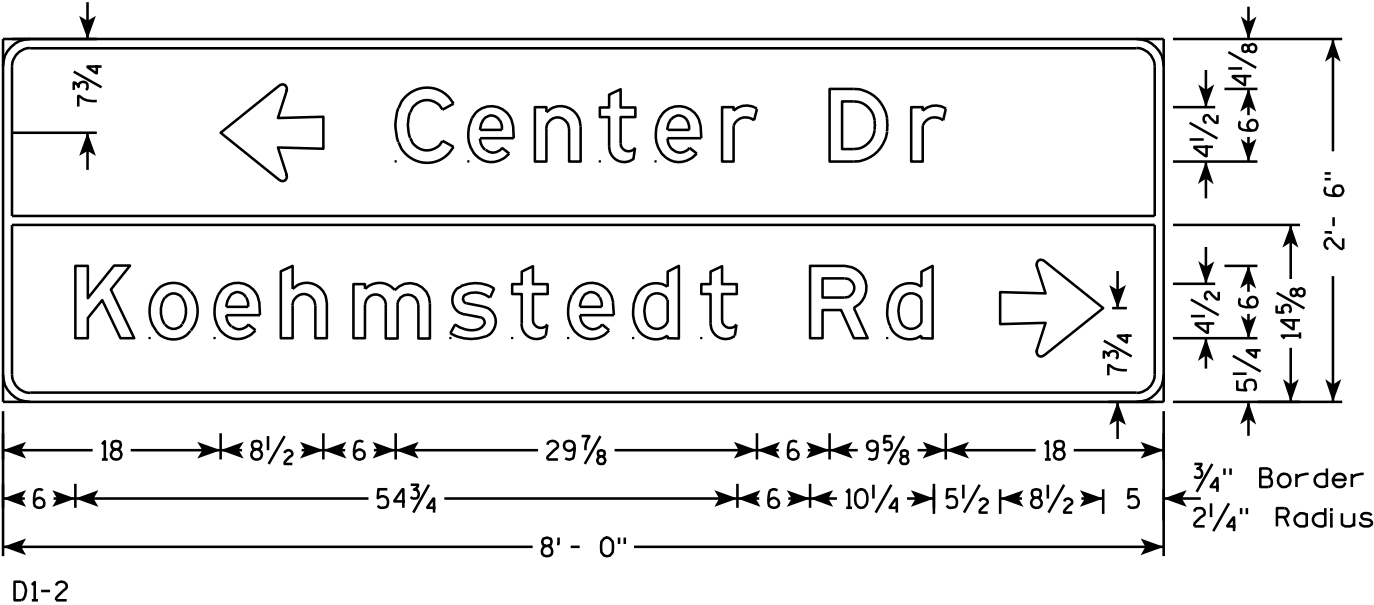
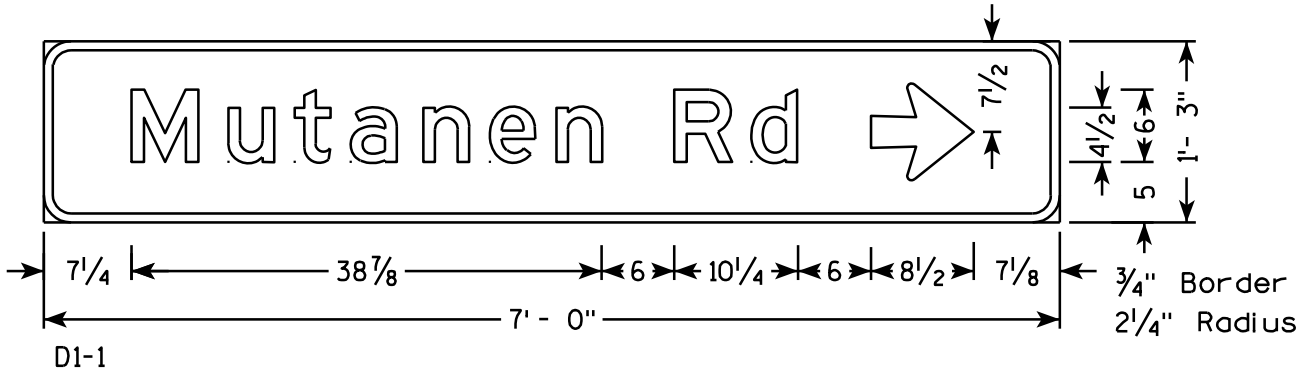
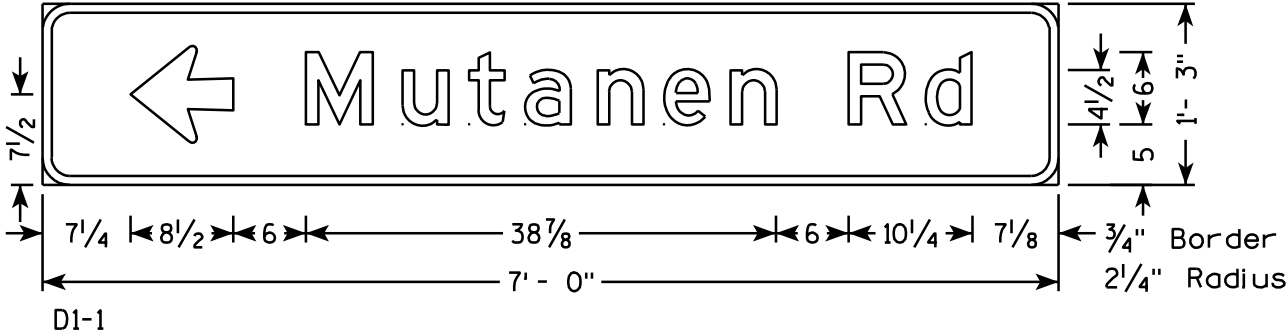
D1-1



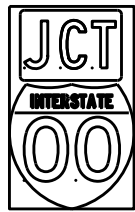
D1-1

NOTES

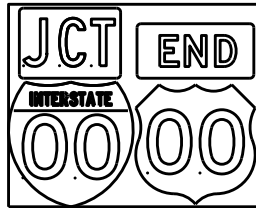
- 1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - GREEN
Message - WHITE
- 3. Message Series - E



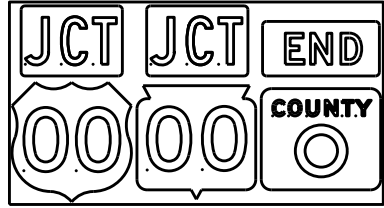
TYPICAL ASSEMBLIES



J1-1



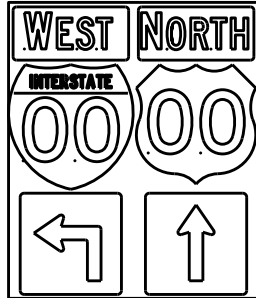
J1-2



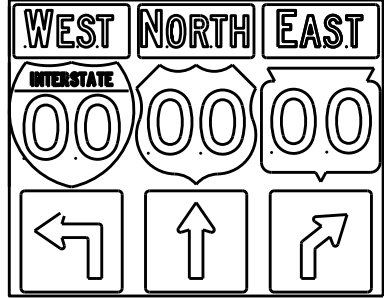
J1-3



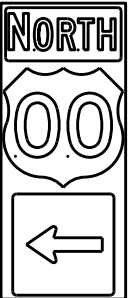
J2-1



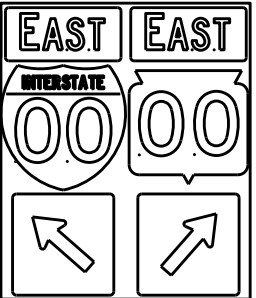
J2-2



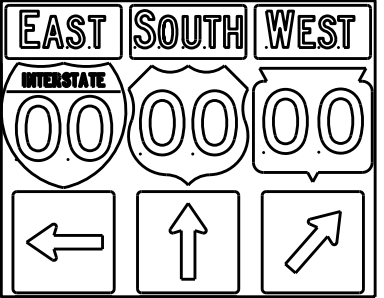
J2-3



J3-1



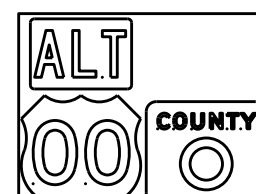
J3-2



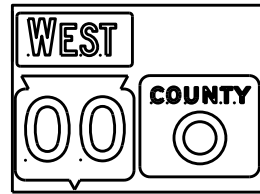
J3-3



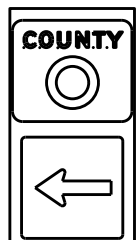
J4-1



J4-2



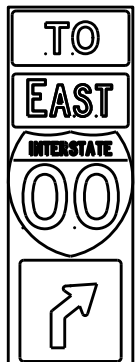
J4-2



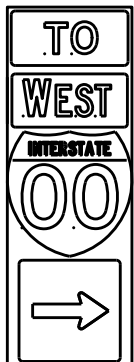
J13-1



J12-1



J32-1



J33-1



J23-1

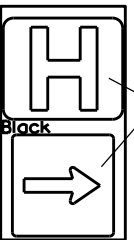


J22-1



JV

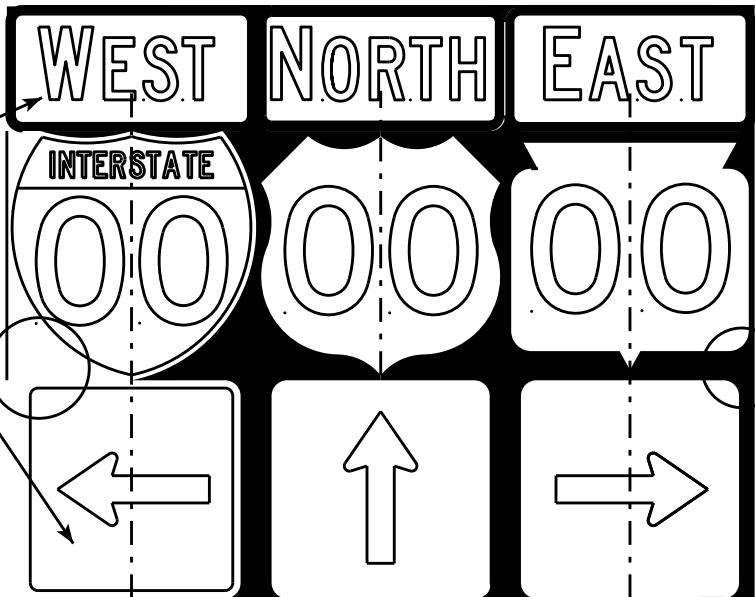
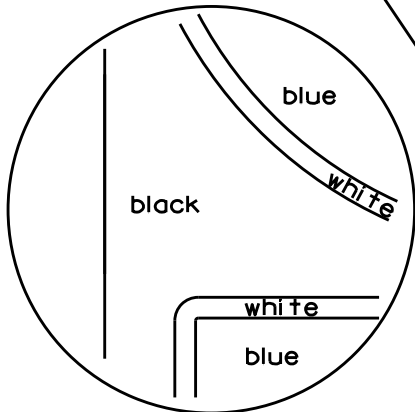
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

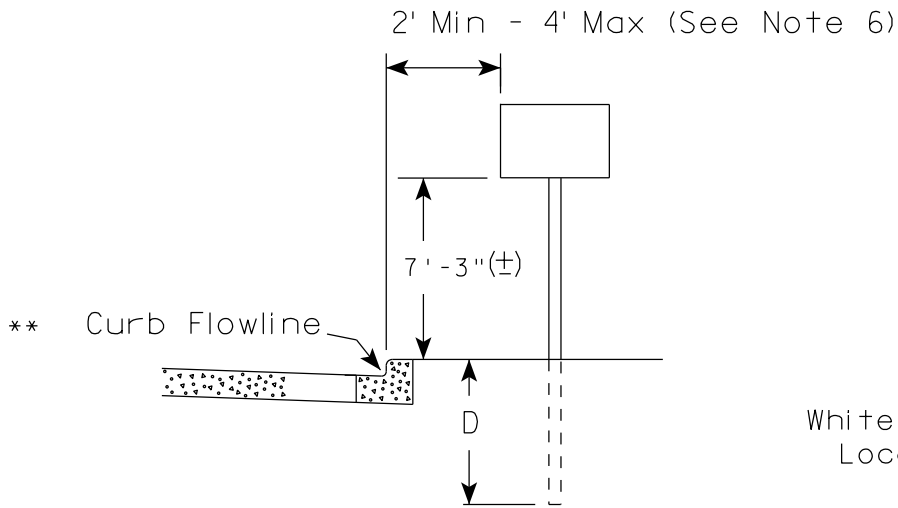
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/06/14 PLATE NO. A2-1S.8

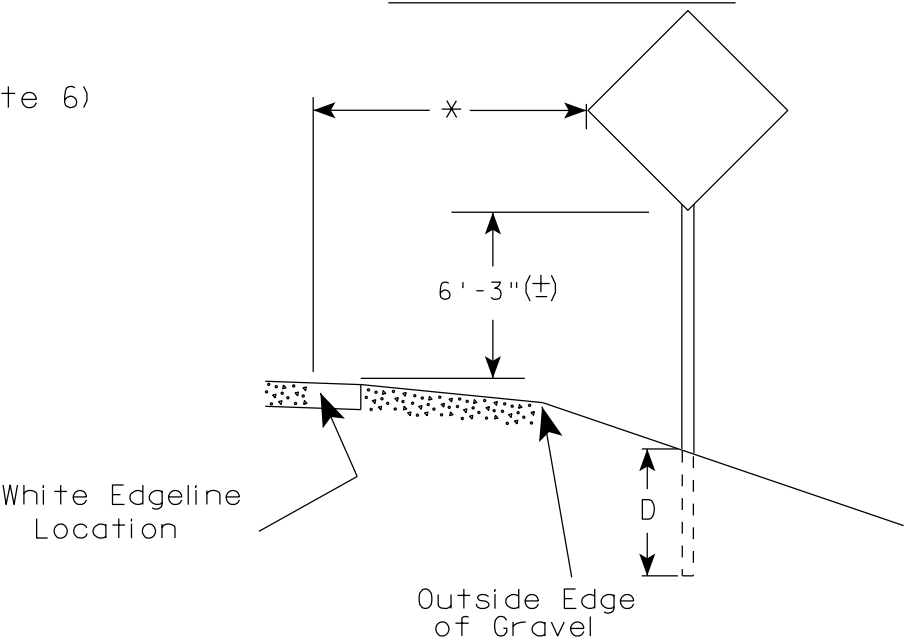
NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Black Non-reflective
Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

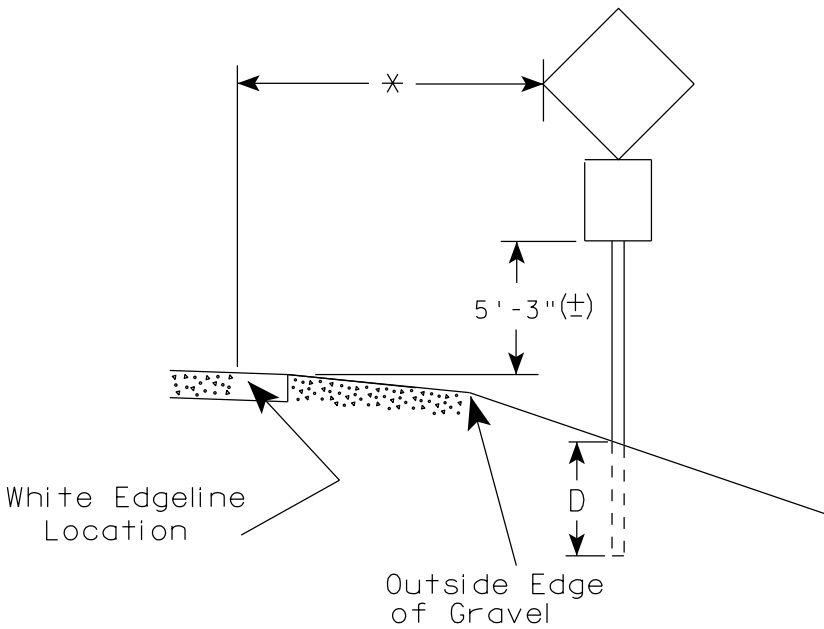
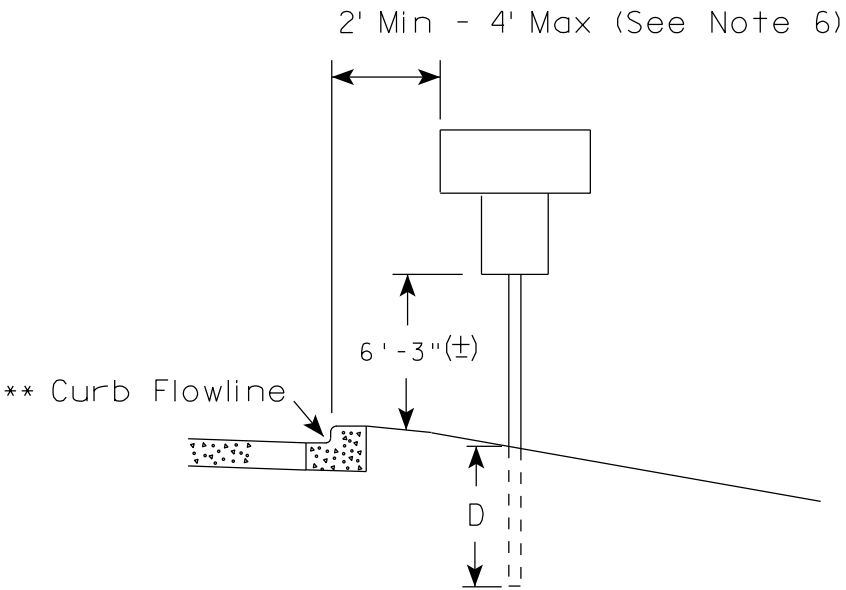
URBAN AREA



RURAL AREA (See Note 2)



- GENERAL NOTES
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
 2. If signs are mounted on barrier wall, see A4-10 sign plate.
 3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
 4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
 5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. The (±) tolerance for mounting height is 3 inches.
 8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
 9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).



POST EMBEDMENT DEPTH

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

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

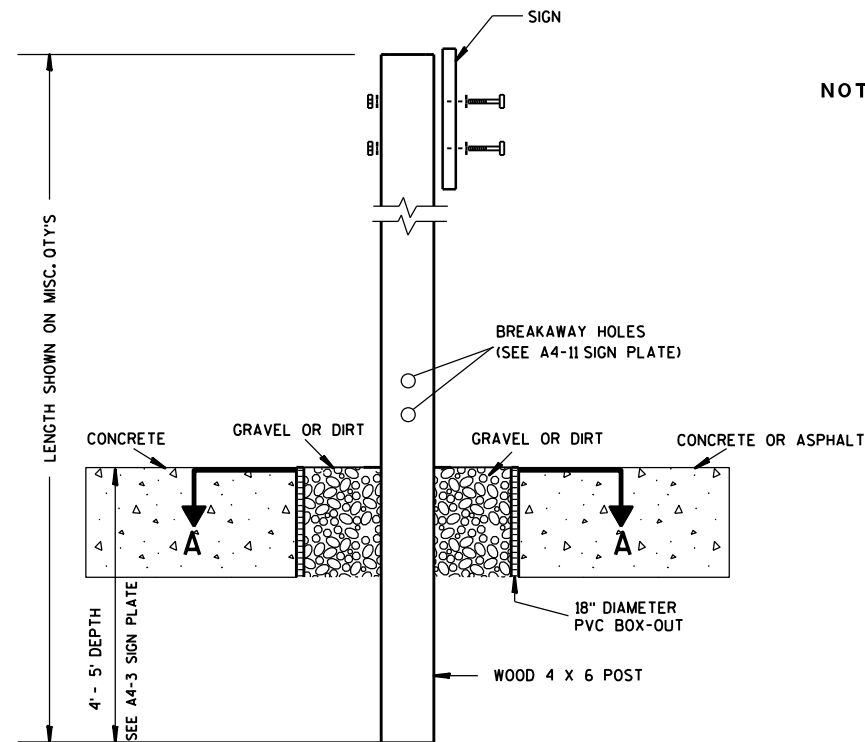
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

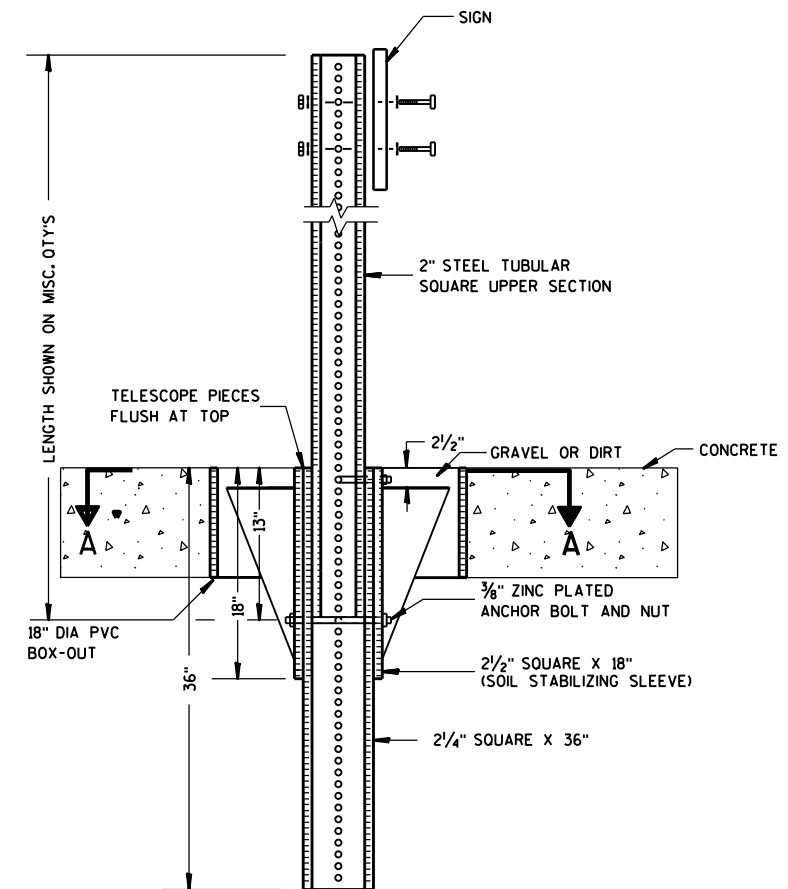
DATE 7/23/15 PLATE NO. A4-3.20



ELEVATION VIEW

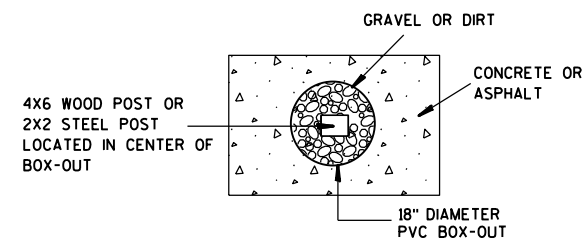
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

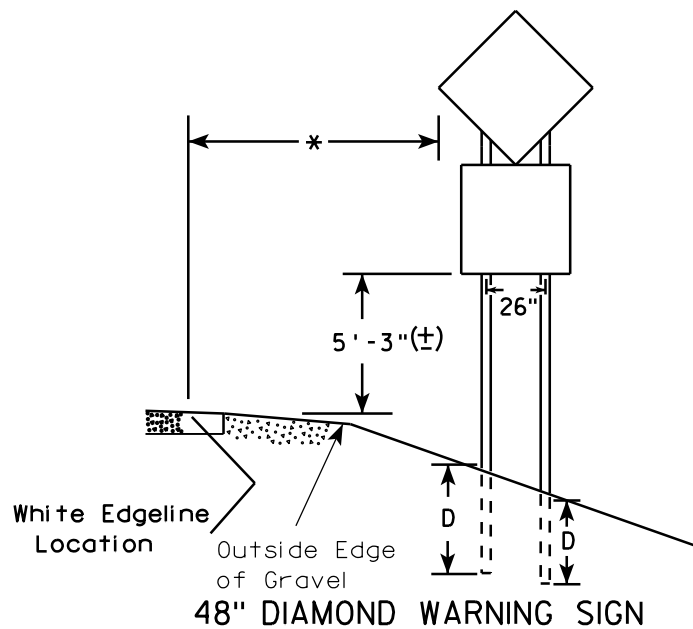
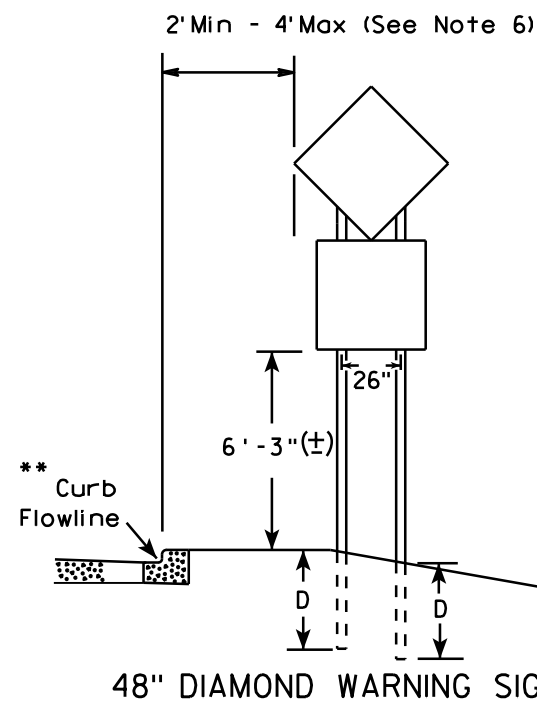
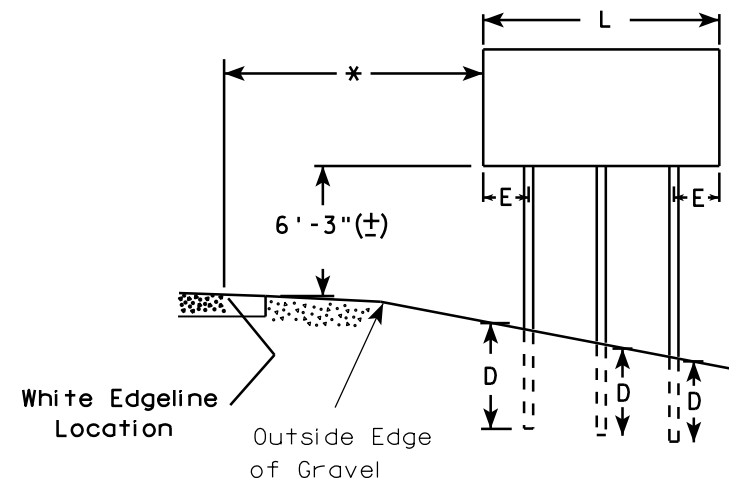
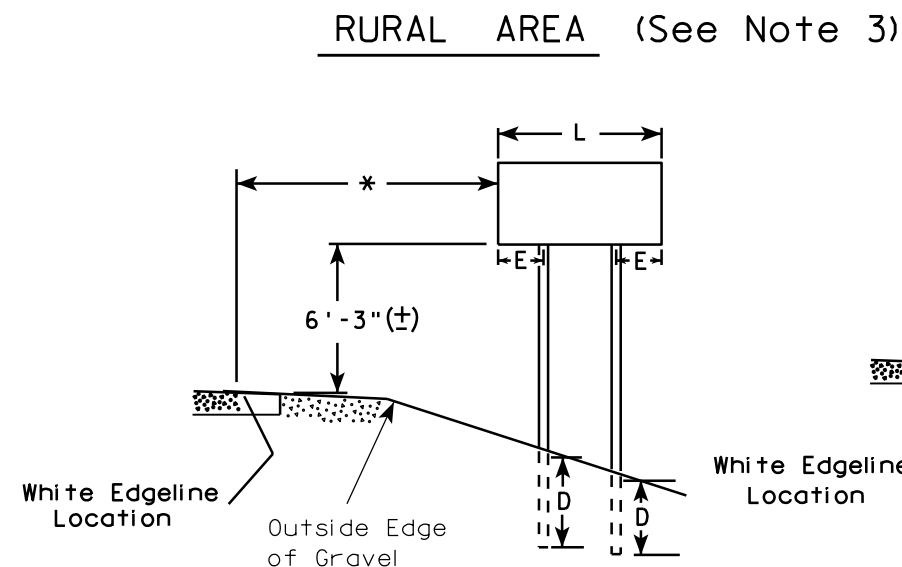
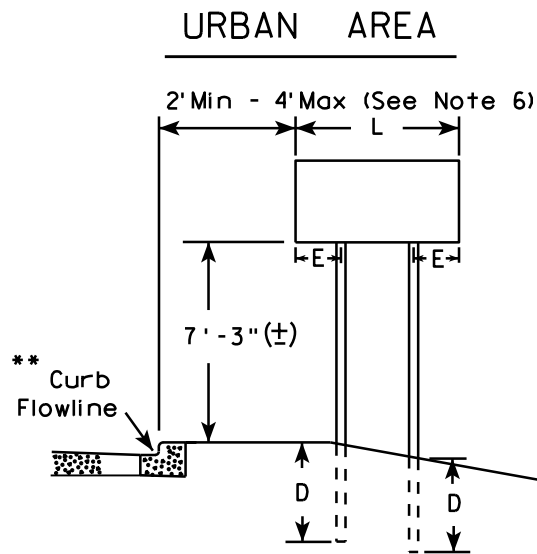
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



- GENERAL NOTES**
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
 2. See tables below for required number of posts.
 3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
 4. The (±) tolerance for mounting height is 3 inches.
 5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

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

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

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

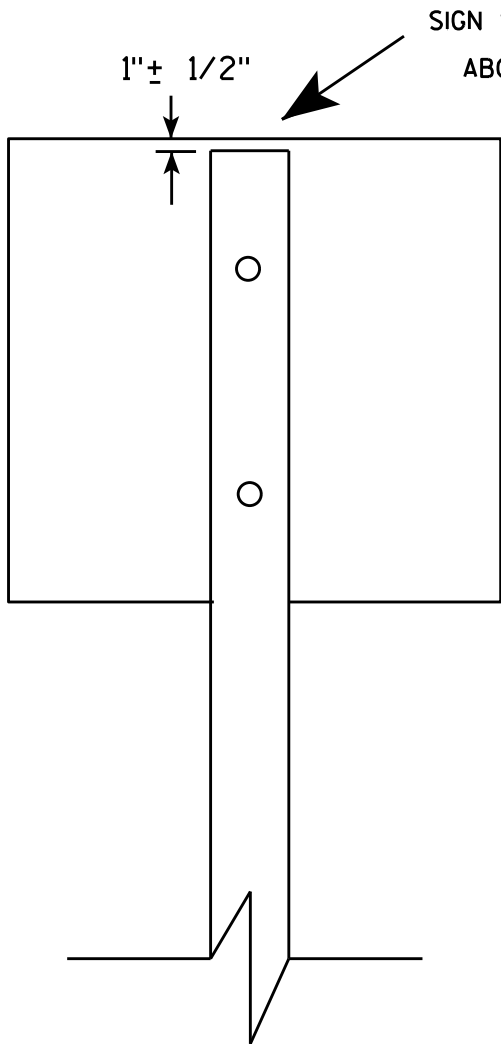
SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

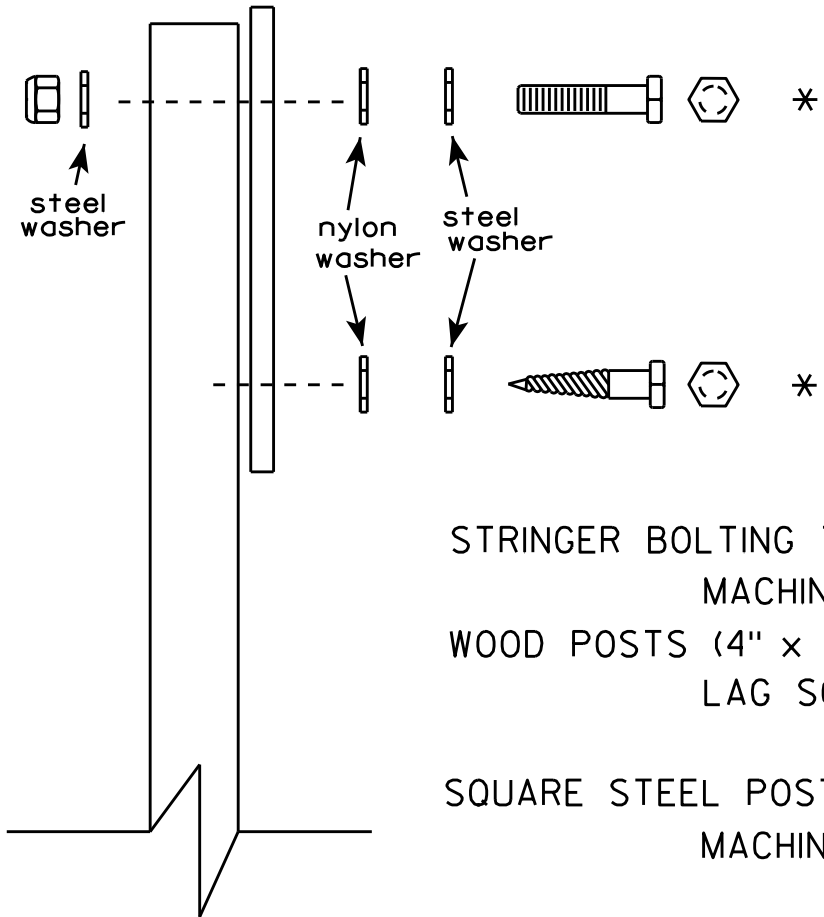
SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 7/23/15	PLATE NO. A4-4.14



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



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

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

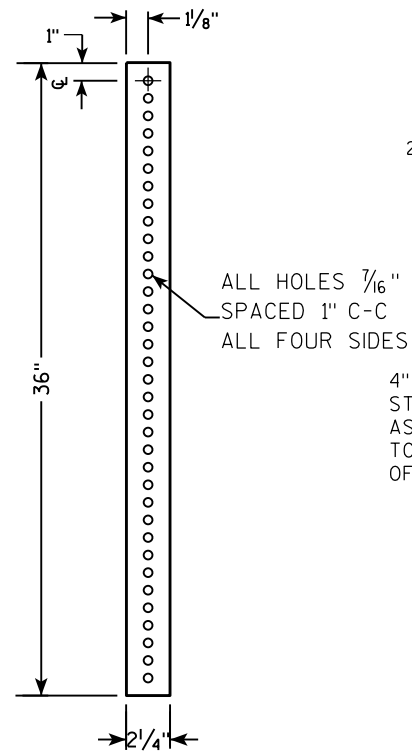
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - 5/16" X 1-3/4" Length w/ nuts
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
 - 3/8" X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 - 3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
- O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 - 1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/27/16	PLATE NO. A4-8.8

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



LENGTH SHOWN ON MISC. QTY'S

36"

18" DIA SCHEDULE 40 PVC BOX-OUT

TELESCOPE PIECES FLUSH AT TOP

13"

18"

2 1/2" GRAVEL OR DIRT

3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT

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

2 1/4" SQUARE X 36"

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES

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

SIGN

LENGTH SHOWN ON MISC. QTY'S

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

2" STEEL TUBULAR SQUARE UPPER SECTION

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

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

TELESCOPE PIECES FLUSH AT TOP

1"

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

$2\frac{1}{2}$ " SQUARE X 18" (SOIL STABILIZING SLEEVE)

$2\frac{1}{4}$ " SQUARE X 36"

18"

12"

36"

A

A

DIRECTION
OF TRAFFIC

SECTION A-A

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN

PLOT DATE : 05-FEB-2015 17:09

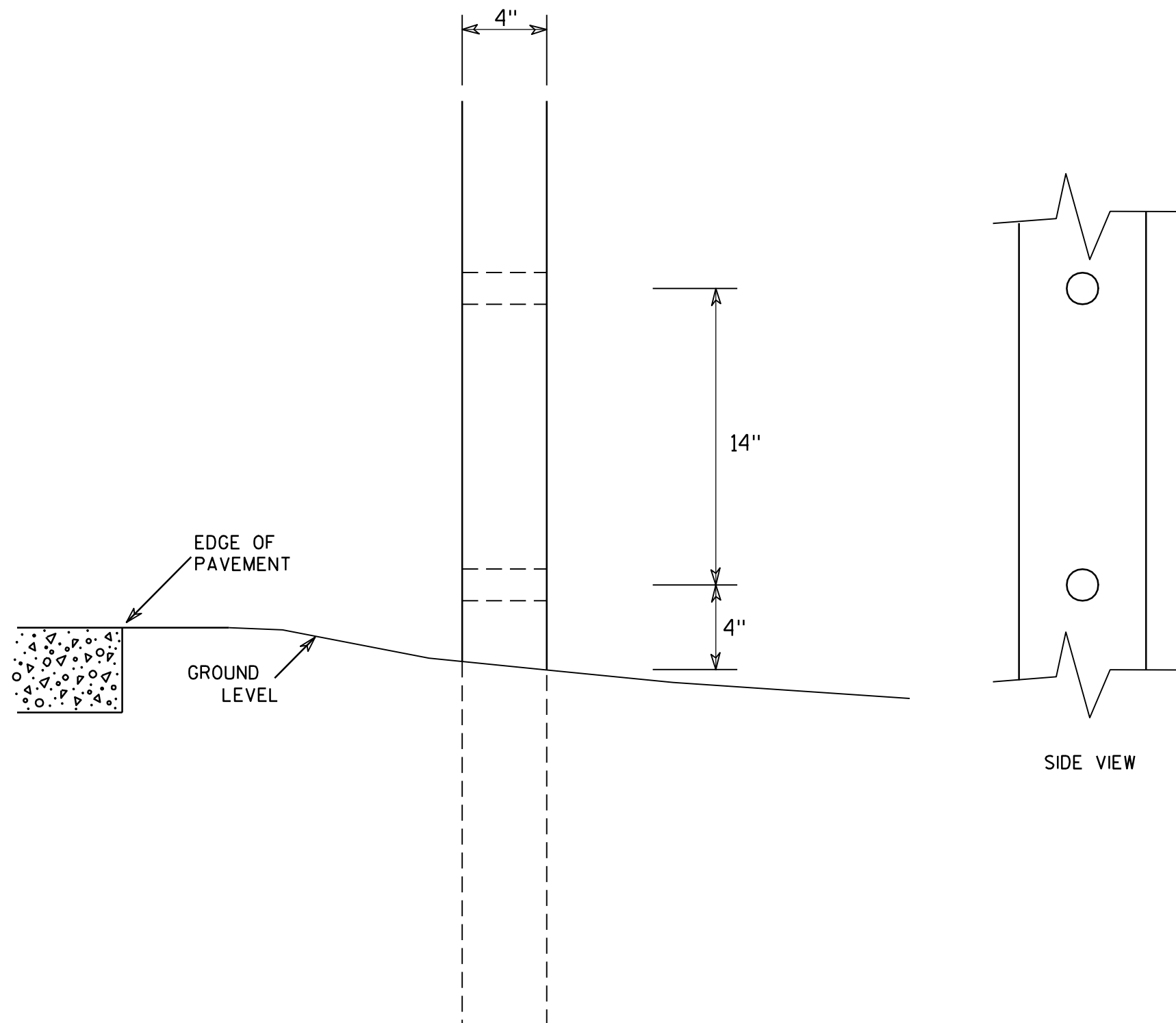
PLOT BY : mscs_ja

PLOT NAME :

PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

COUNTY:

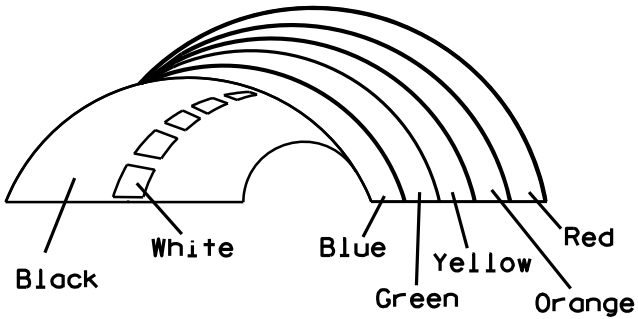
SHEET NO:

E



* VARIES

Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - (See Note 5)
3. Message Series - (See Note 6)
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Border - Blue
Line 1 - Red
Line 2 - Black
Line 3-5 - Blue
6. Line 1 - Dutch 8011L
Line 2 - Series E
Line 3-5 - Series C
7. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

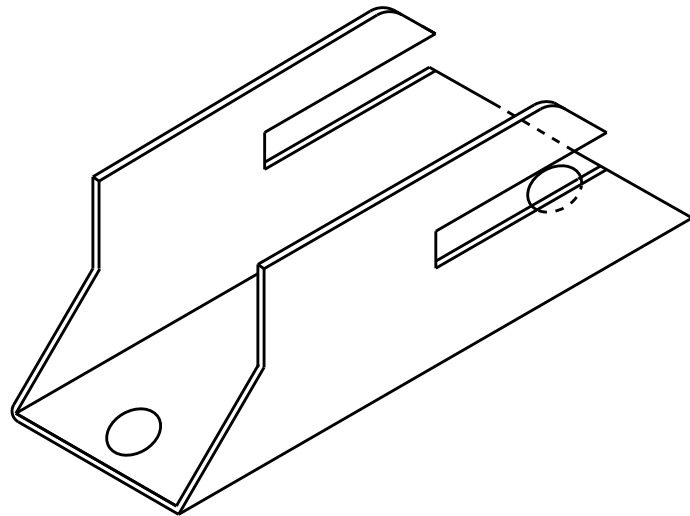
STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION

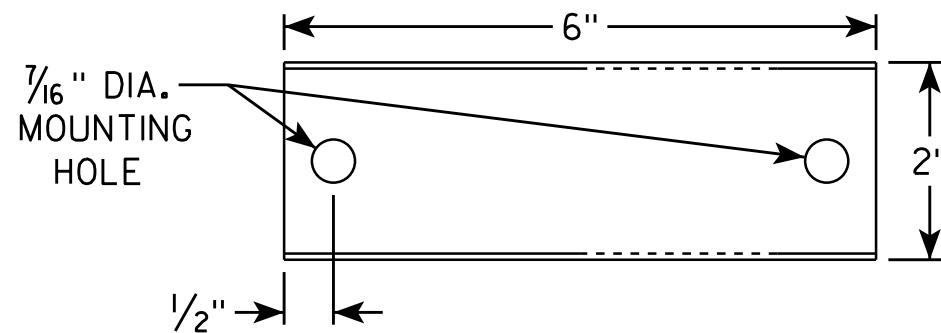
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 4/27/11 PLATE NO. I55-56.3

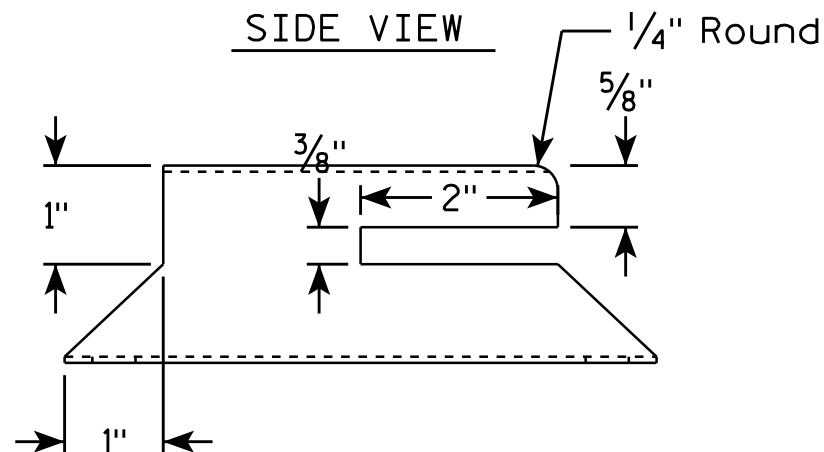
ISOMETRIC VIEW



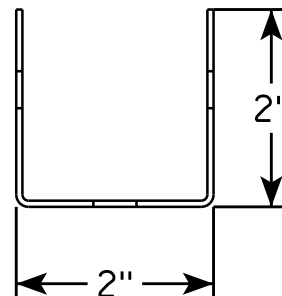
TOP VIEW



SIDE VIEW



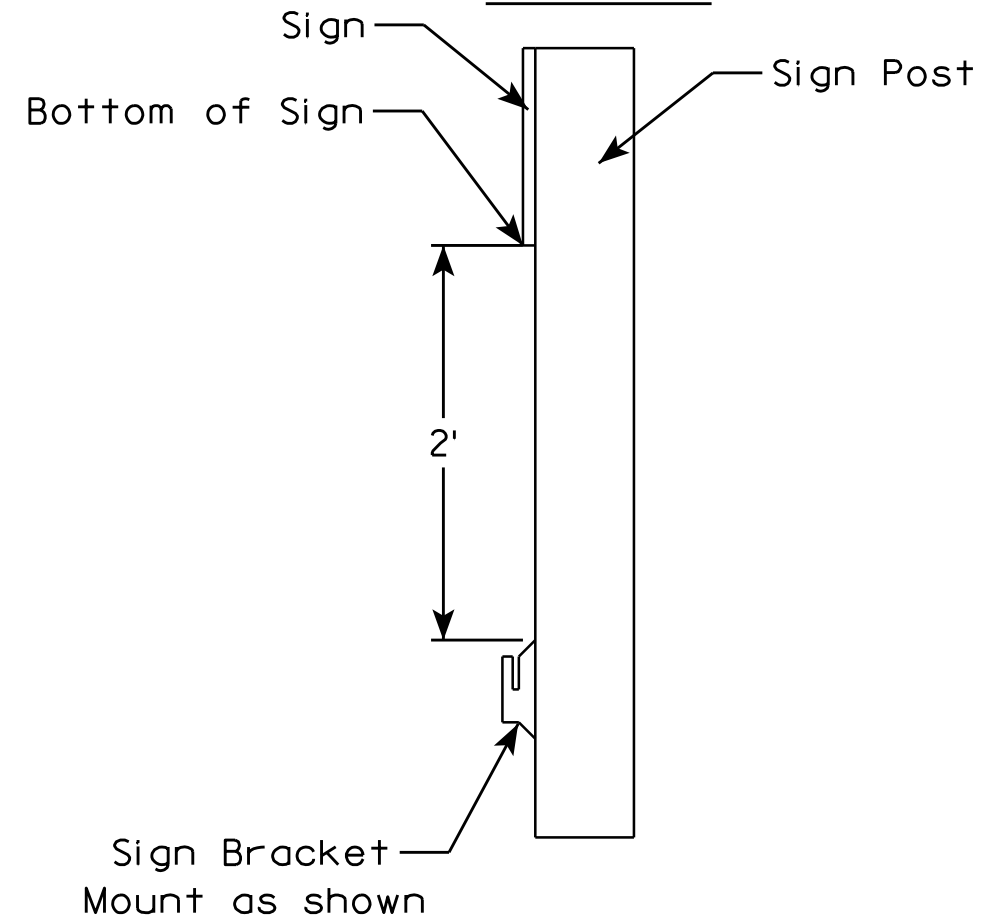
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

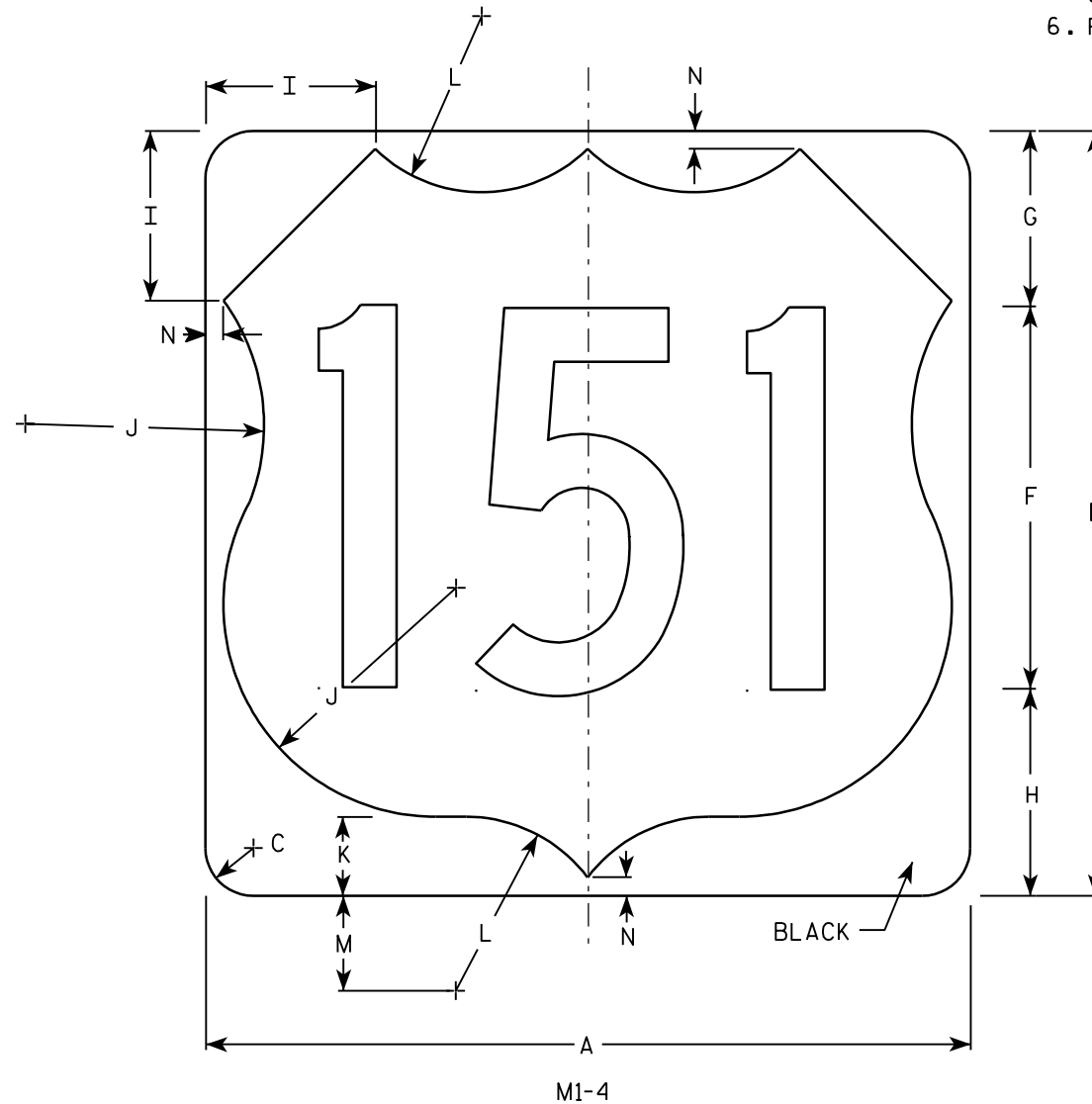
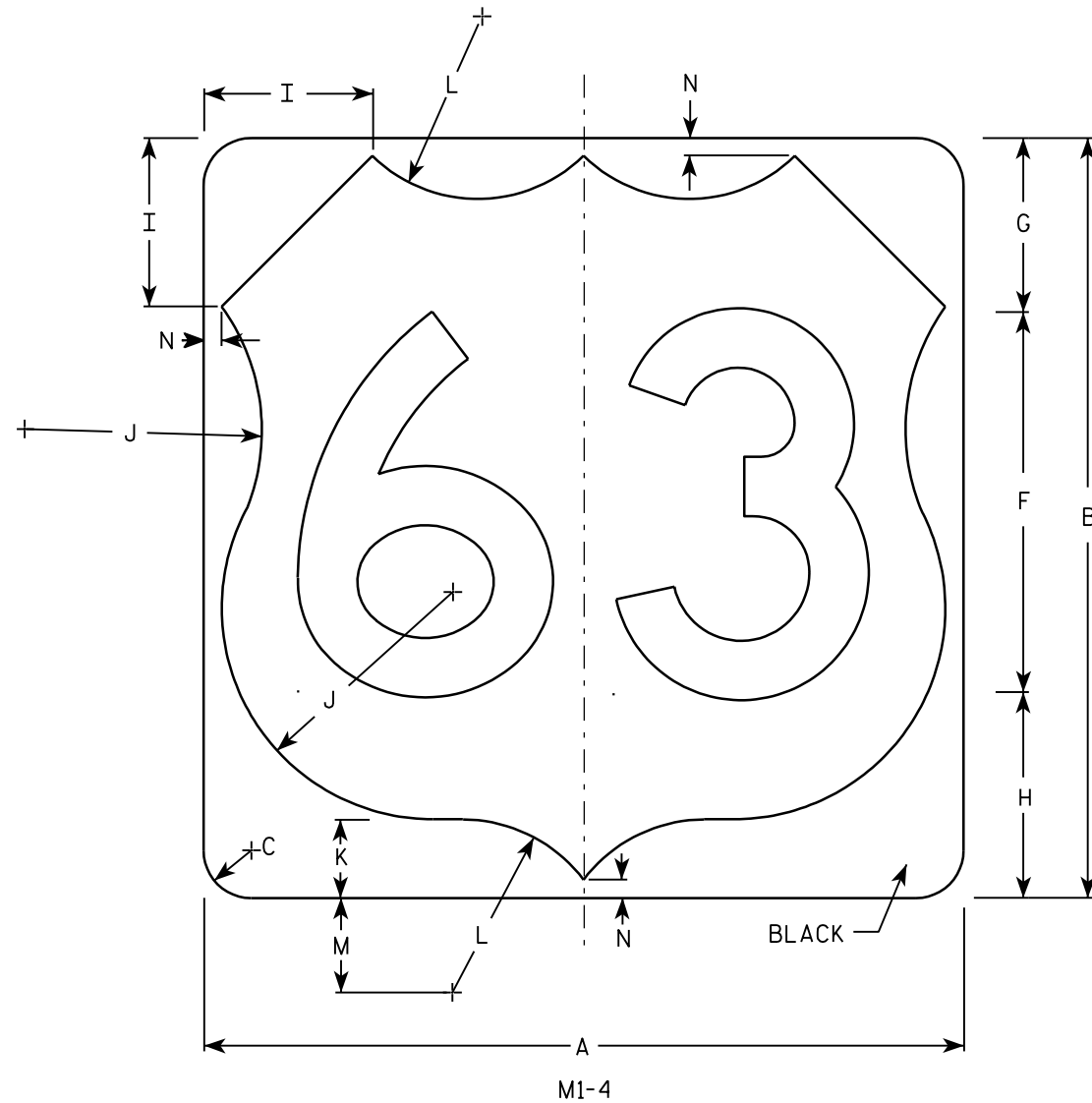
SIDE VIEW



ROLLUP SIGN BRACKET I55-56B	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 4/26/16	PLATE NO. I55-56B.2

NOTES

1. Sign is Type II - See Note 6 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 6
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.
5. Substitute appropriate numerals and adjust
spacing as per Plate A10-1.
6. Permanent Signs
Background - Type H Reflective
Detour or other temporary signs
Background - Reflective



Metric equivalent
for this sign is:

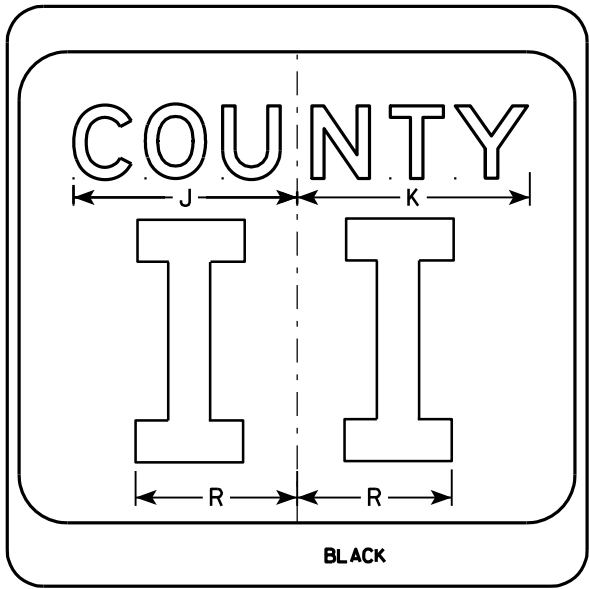
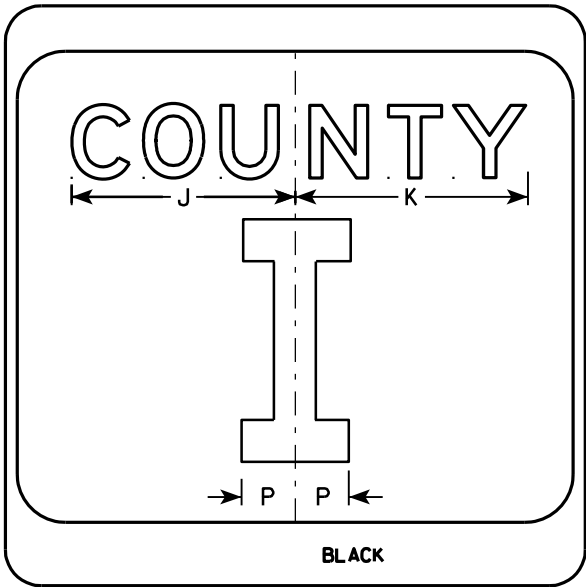
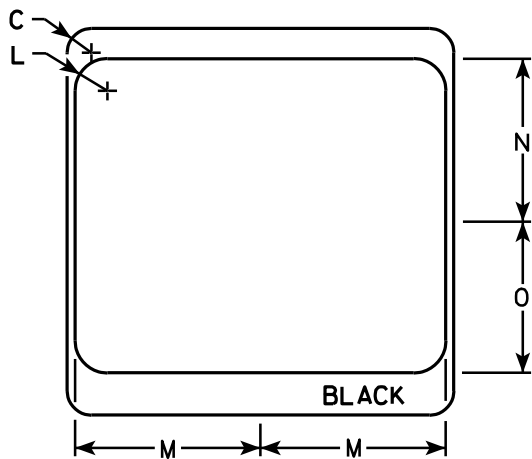
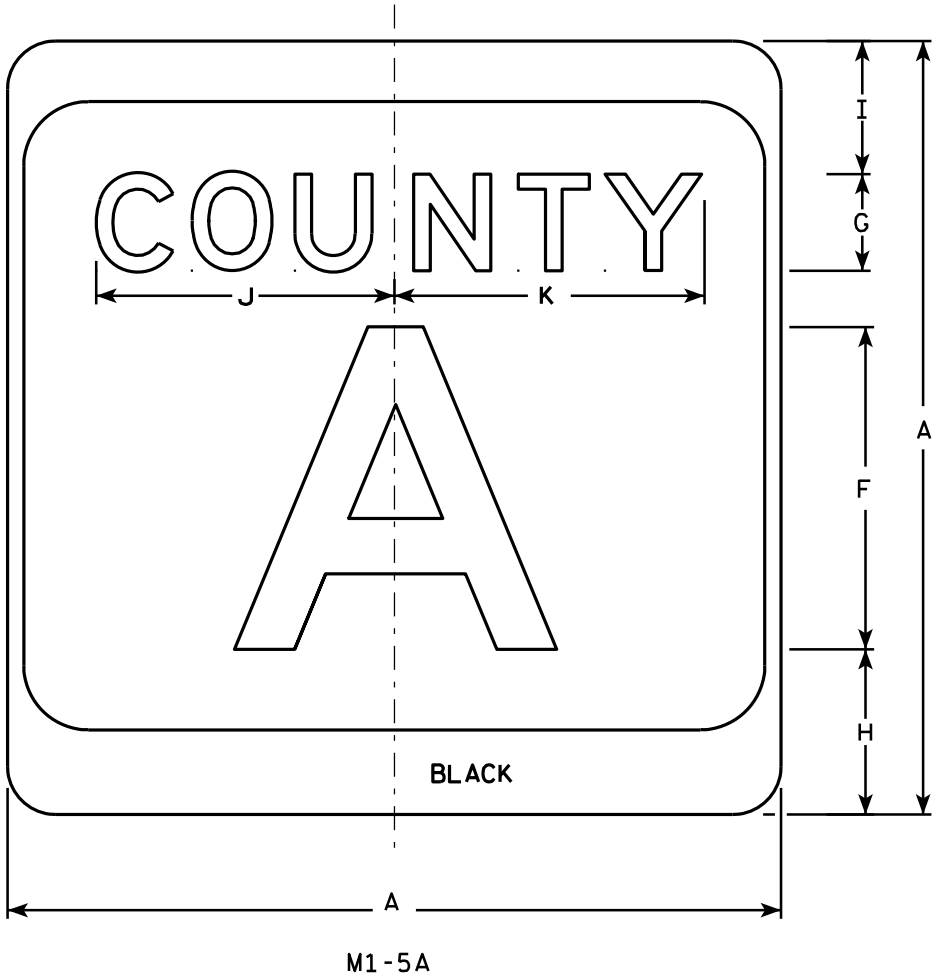
SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Areq sq. ft.	Areq m ²
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

PROJECT NO: HWY: COUNTY: SHEET NO: E

FILE NAME : C:\Users\Projects\tr_stdplate\M14.DGN PLOT DATE : 13-OCT-2005 14:52 PLOT BY : DITJPH PLOT NAME : PLOT SCALE : 5.960833:1.000000 WISDOT/CADDs SHEET 42

7



NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 7
Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

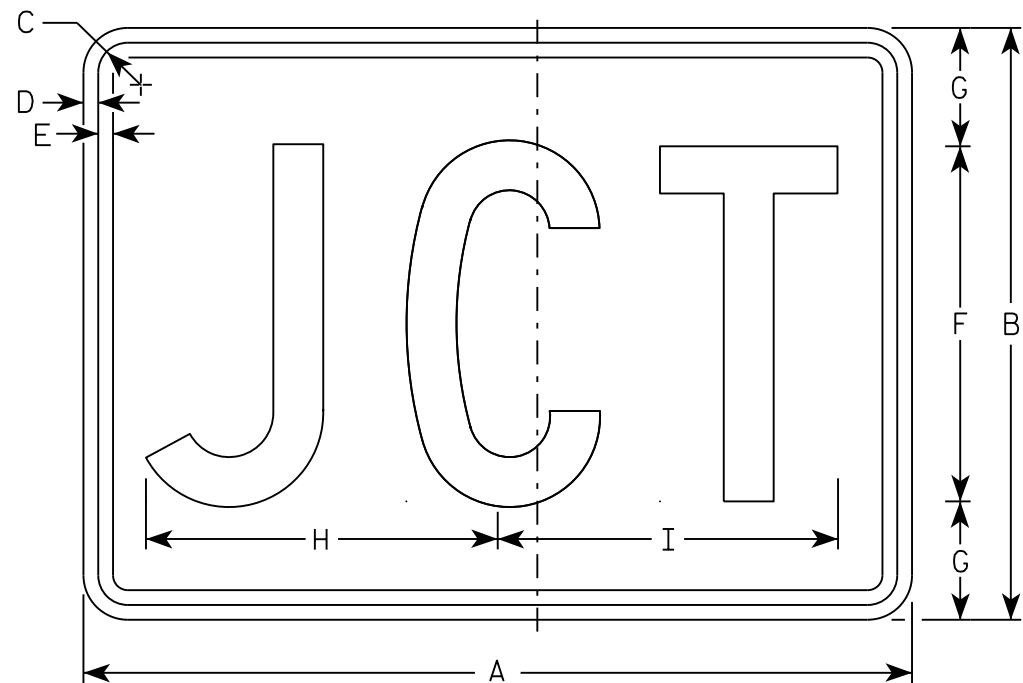
CTH MARKER

M1-5A FOR ASSEMBLIES

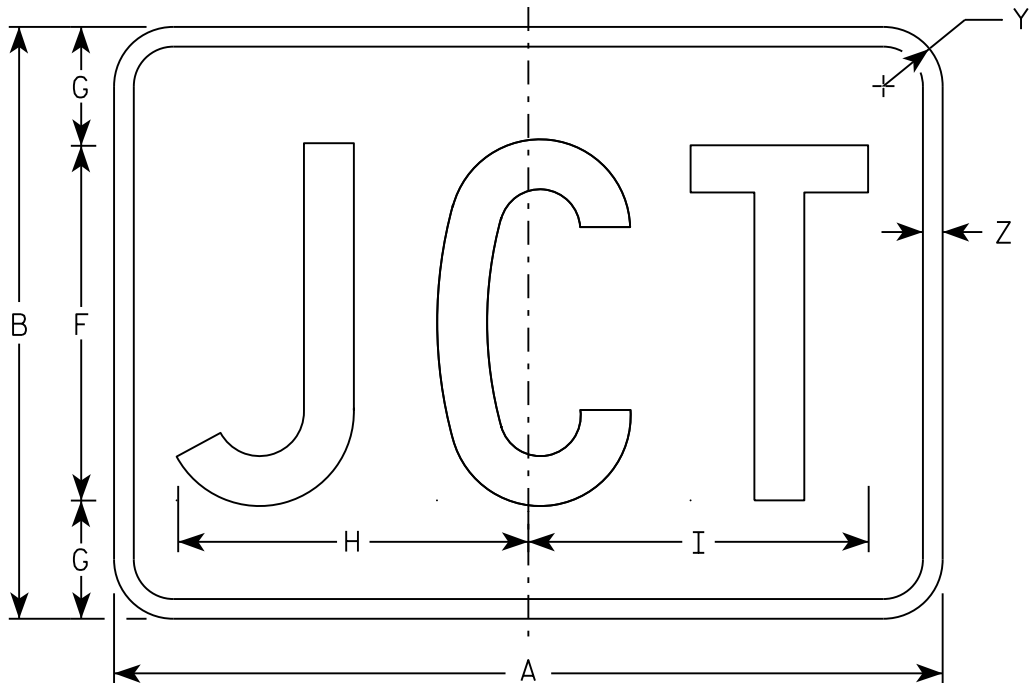
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

- 1. Sign is Type II - Type H
- 2. Color:
 - Background - See note 5
 - Message - See note 5
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. M2-1 Background - White
 Message - Black
 MB2-1 Background - Blue
 Message - White
 MK2-1 Background - Green
 Message - White
 MM2-1 Background - White
 Message - Green
 MN2-1 Background - Brown
 Message - White
 MP2-1 Background - White
 Message - Blue
 MR2-1 Background - Brown
 Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN

M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

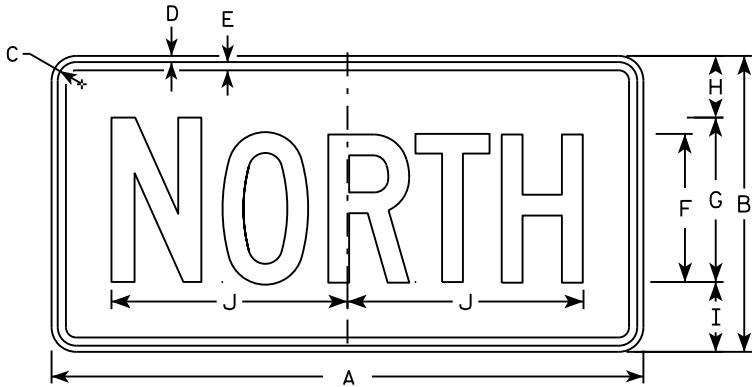
APPROVED

Matthew R. Rauch

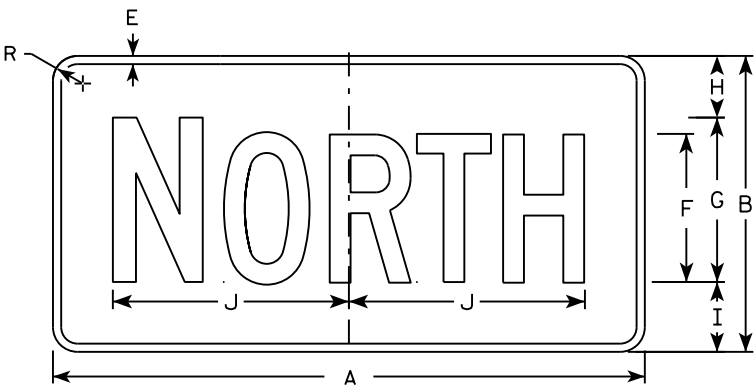
For State Traffic Engineer

DATE 10/15/15

PLATE NO. M2-1.12



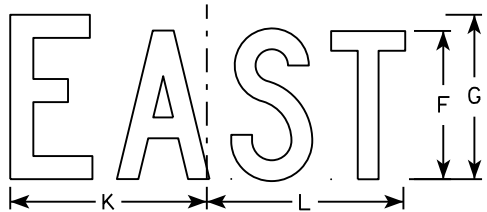
M3-1
MM3-1
MP3-1



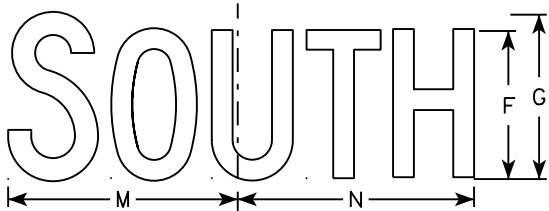
MB3-1
MK3-1
MN3-1



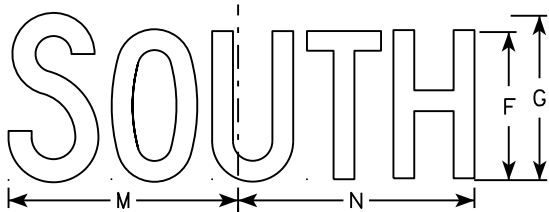
M3-2
MM3-2
MP3-2



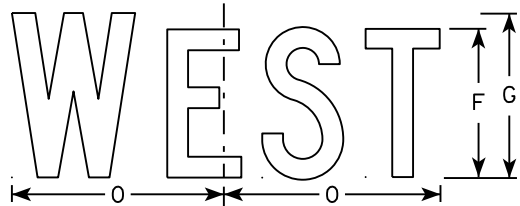
MB3-2
MK3-2
MN3-2



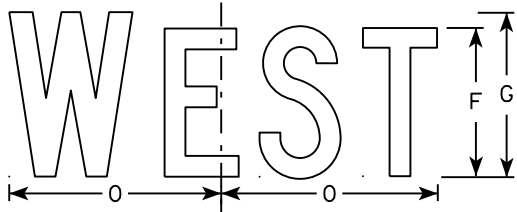
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

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

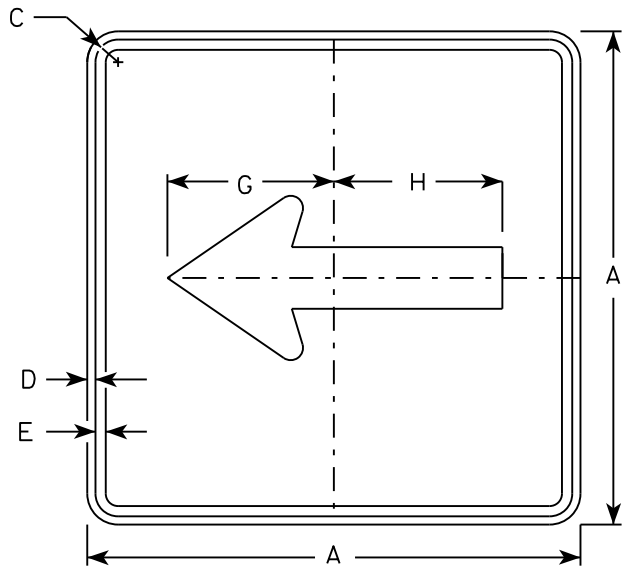
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8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

STANDARD SIGNS
M3-1 thru M3-4
SERIES

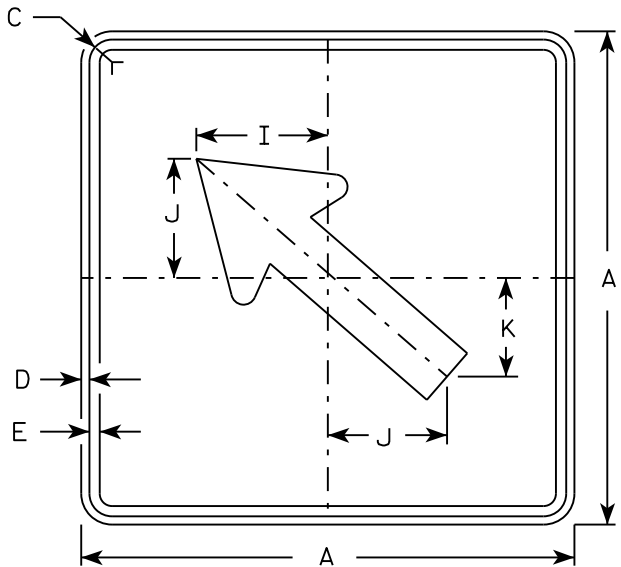
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

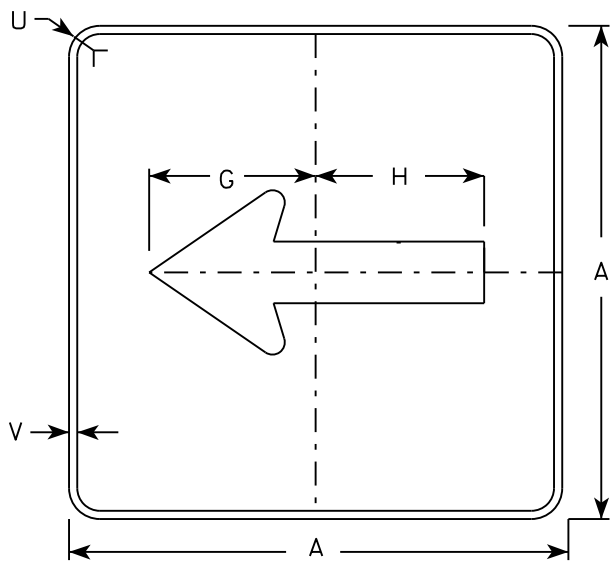
DATE 10/15/15 PLATE NO. M3-1.14



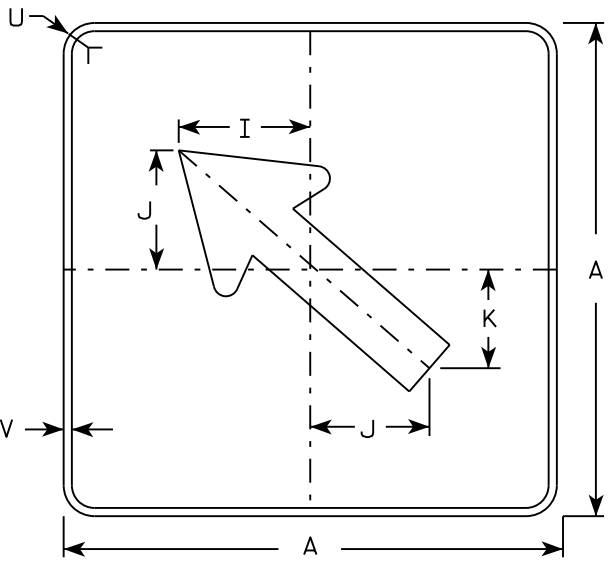
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



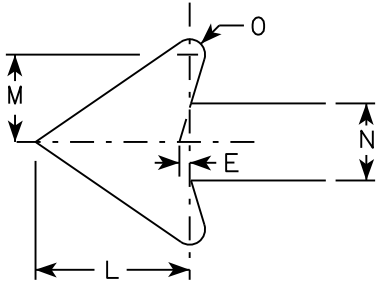
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



MB6 - 1
MK6 - 1
MN6 - 1
MR6 - 1



MB6 - 2
MK6 - 2
MN6 - 2
MR6 - 2



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

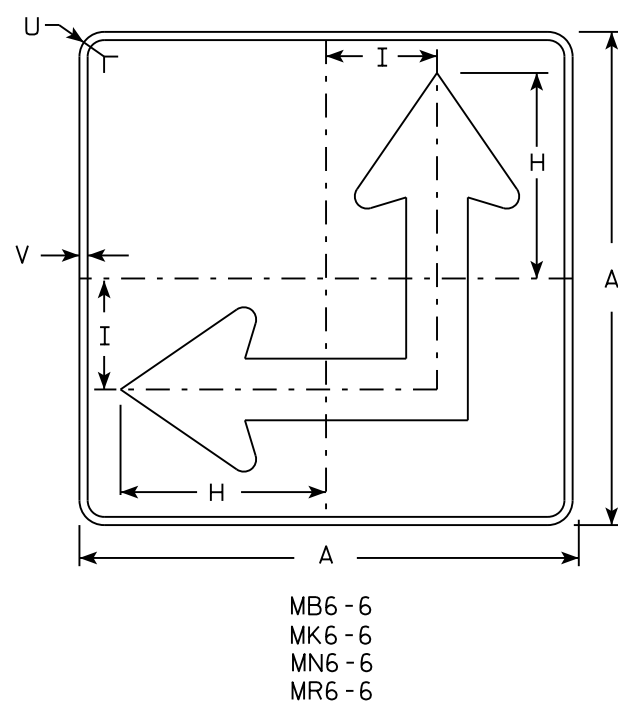
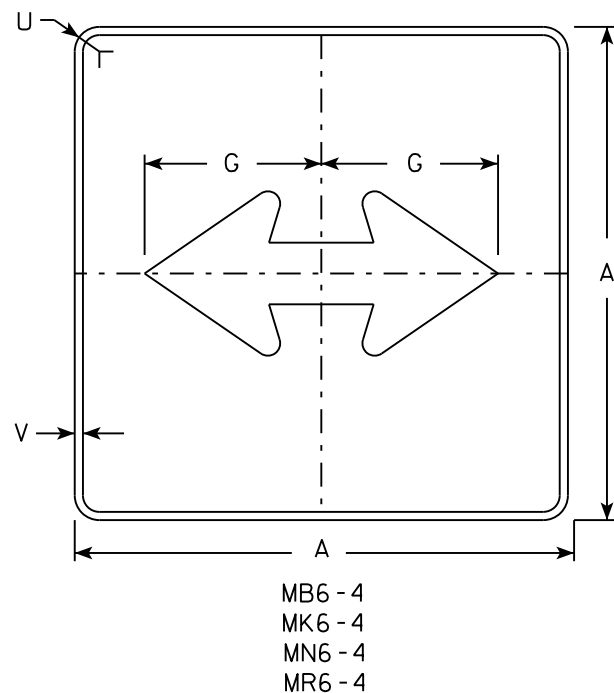
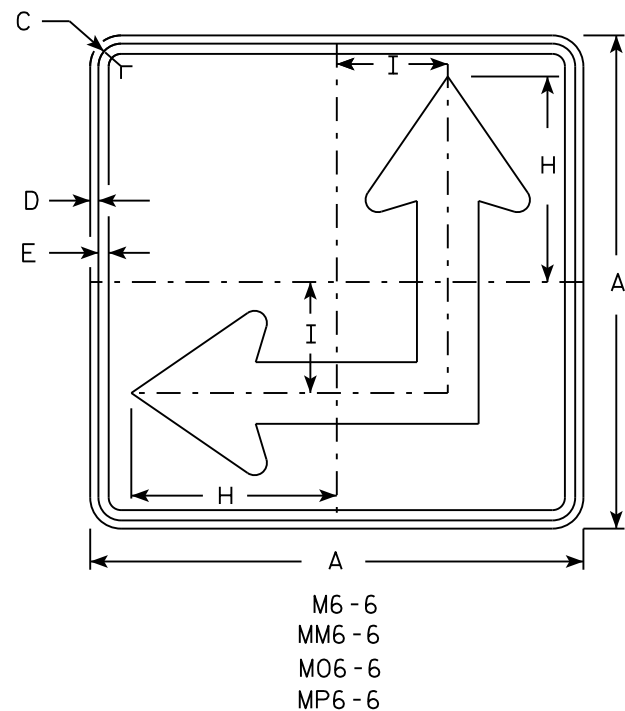
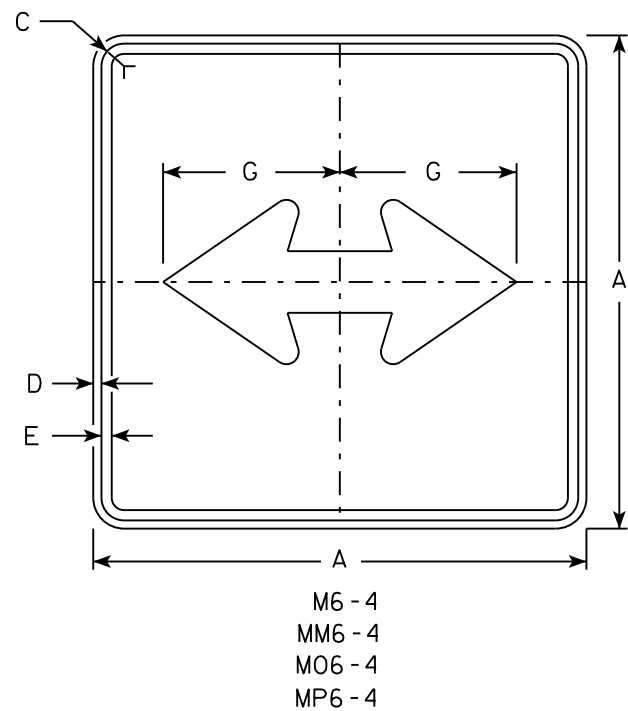
E

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

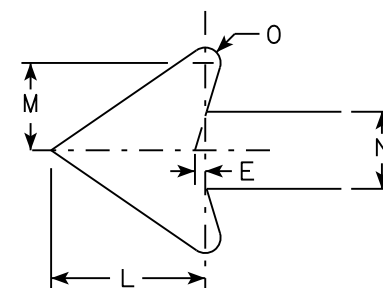
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See Note 4
Message - See Note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-4 and M6-6 Background - White
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White
MK6-4 and MK6-6 Background - Green
Message - White
MM6-4 and MM6-6 Background - White
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White
M06-4 and M06-6 Background - Orange - Type F Reflective
Message - Black
MP6-4 and MP6-6 Background - White
Message - Blue
MR6-4 and MR6-6 Background - Brown
Message - Yellow
- M6-6R same as M6-6L except arrow points ahead and right.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

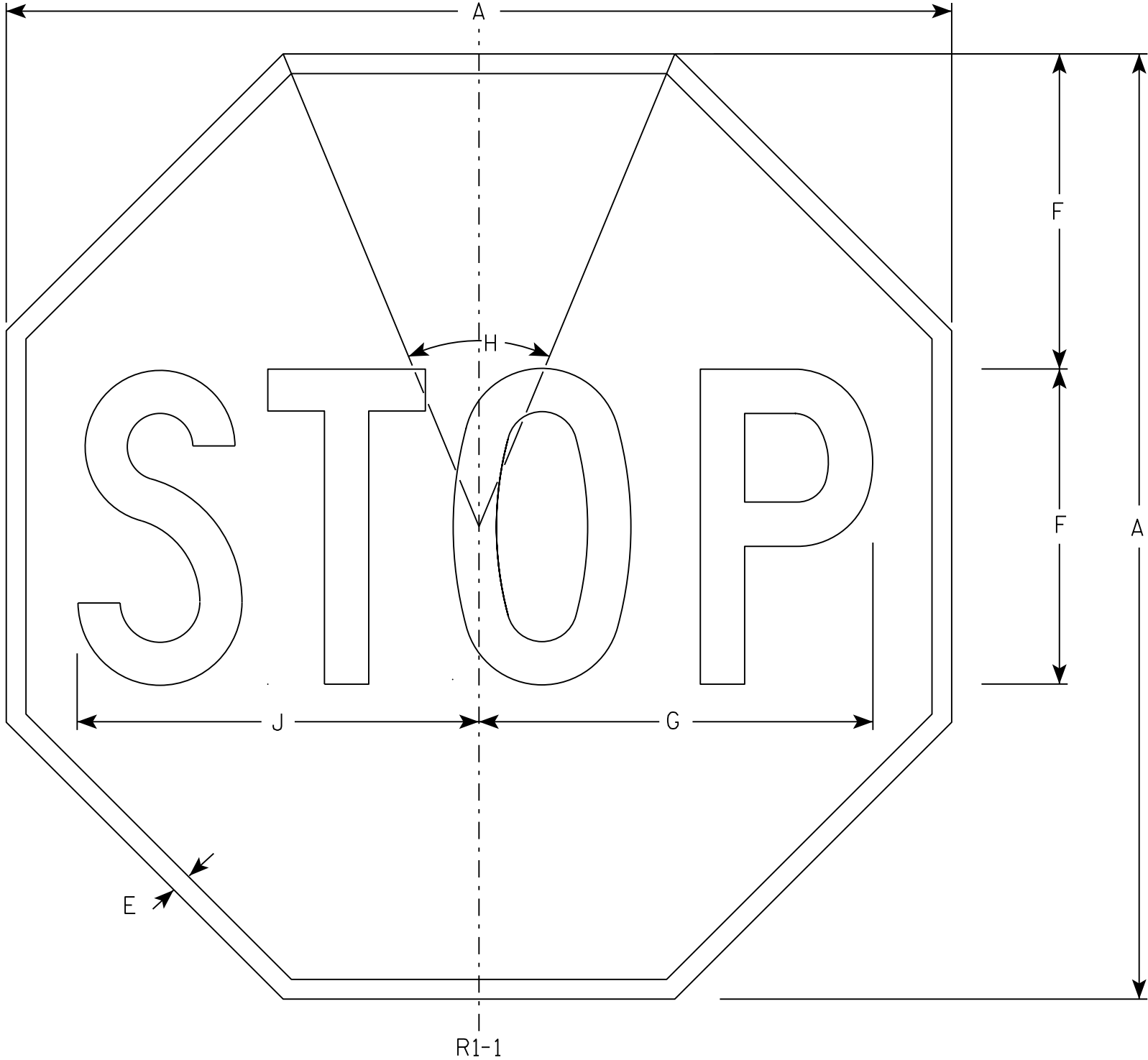
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M6 - 4 & M6 - 6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-4.10



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Red
 - Message - White
- 3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

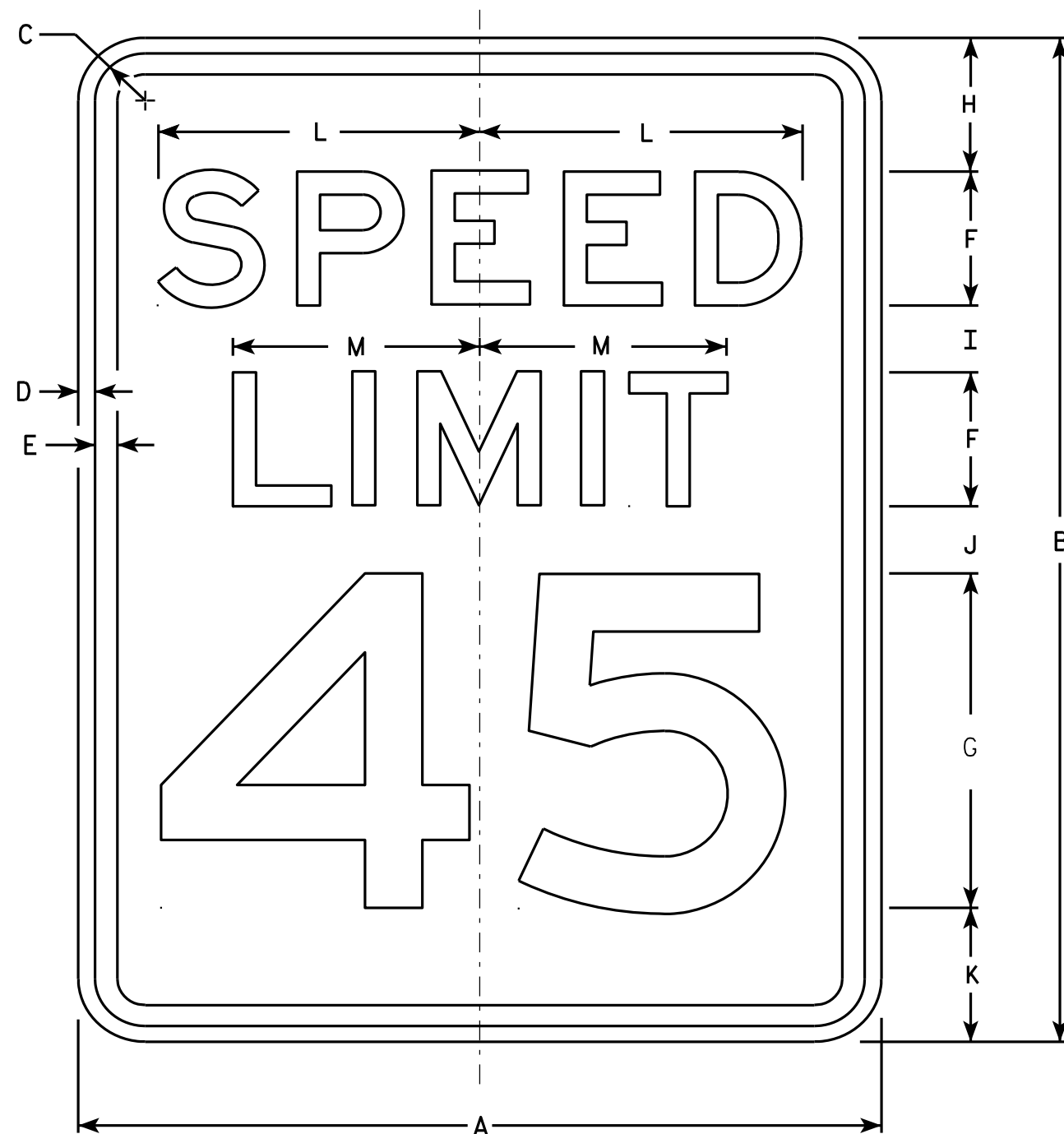
STANDARD SIGN

R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13



R2-1

NOTES

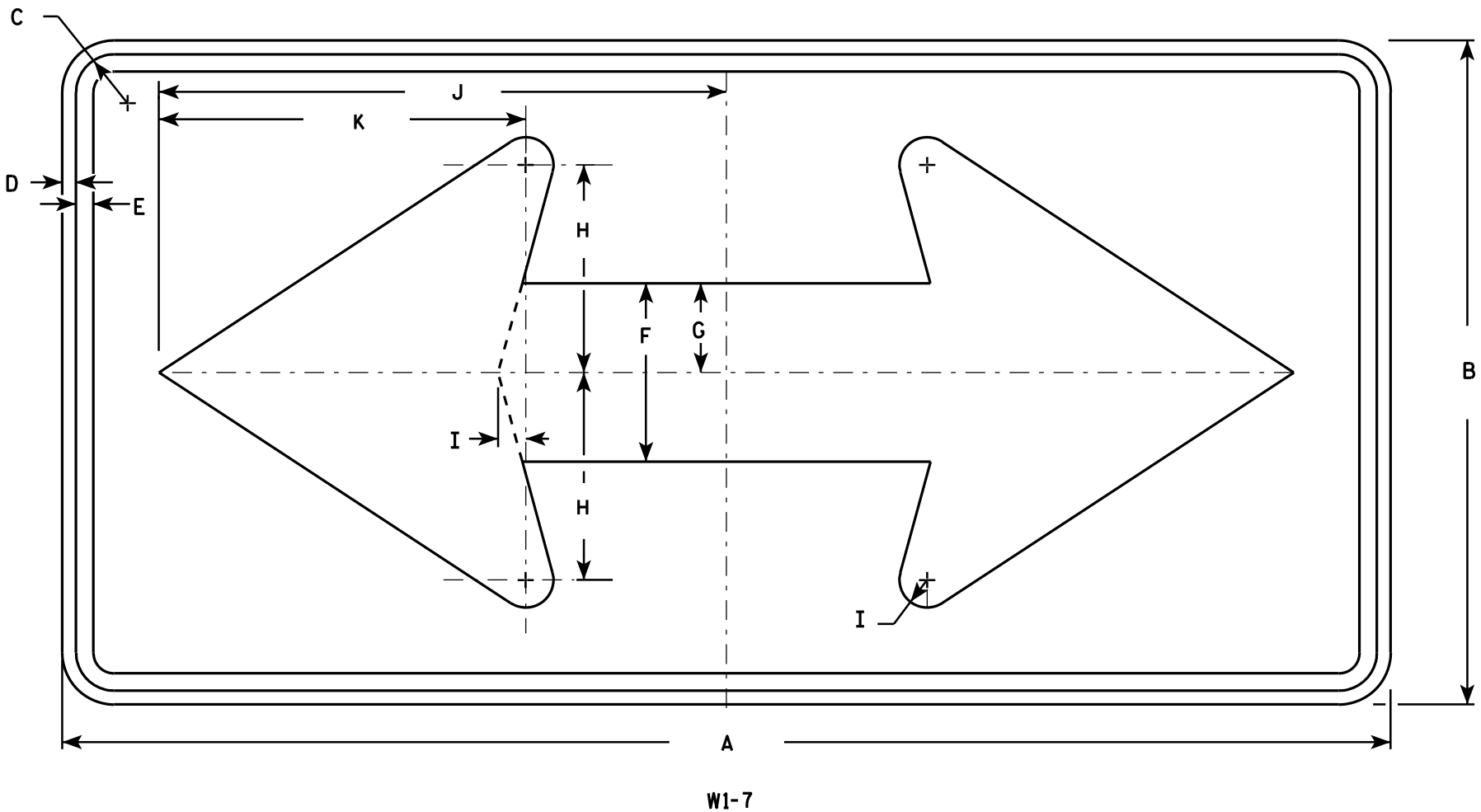
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

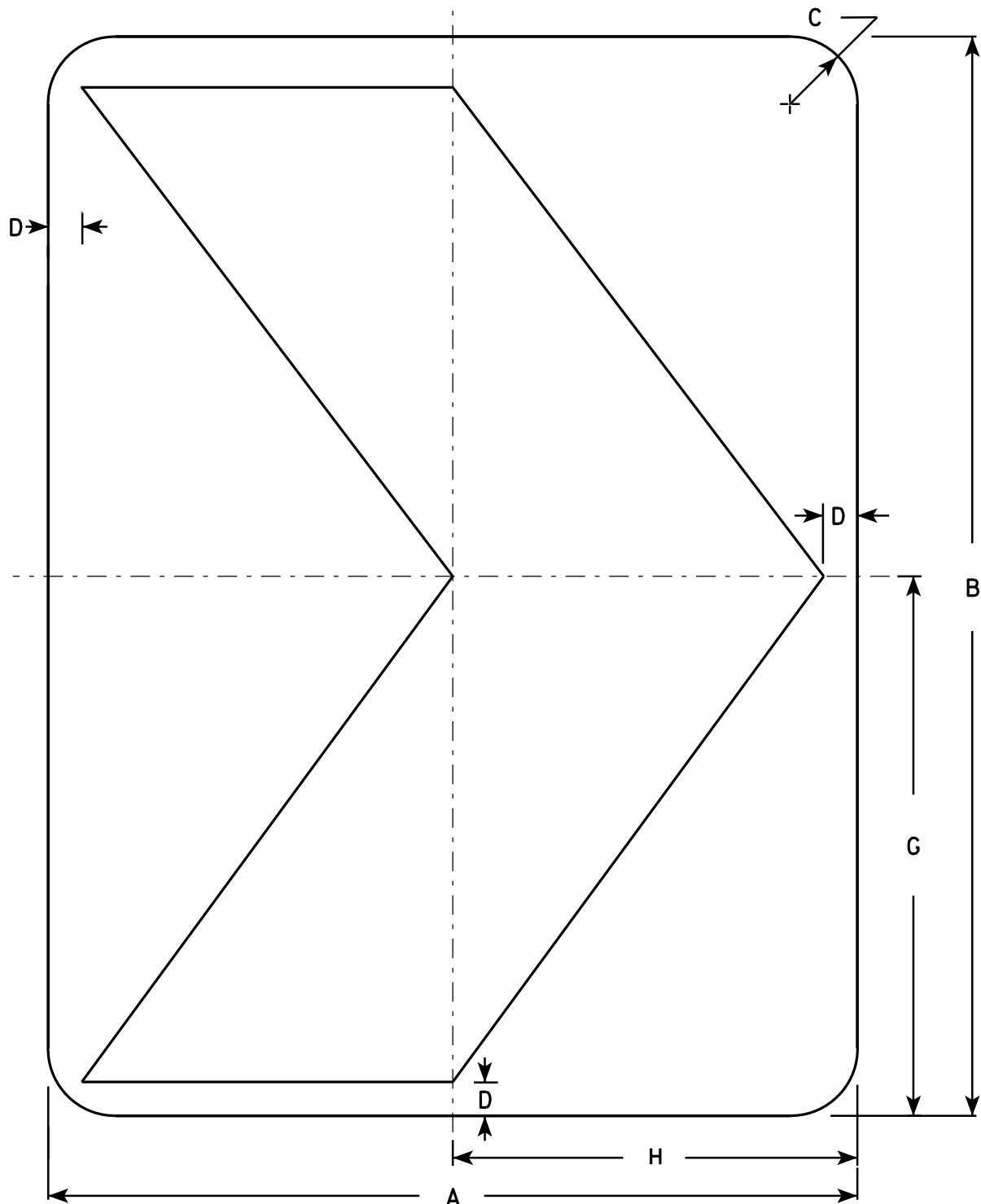
STANDARD SIGN

W1 - 7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7



W1-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/2	1/2			9	6																			1.5
2S	18	24	1 1/2	3/4			12	9																			3.0
2M	18	24	1 1/2	3/4			12	9																			3.0
3	24	30	1 1/2	1			15	12																			5.0
4	30	36	1 7/8	1 1/4			18	15																			7.5
5	36	48	2 1/4	1 1/2			24	18																			12.0

STANDARD SIGN

W1-8

WISCONSIN DEPT OF TRANSPORTATION

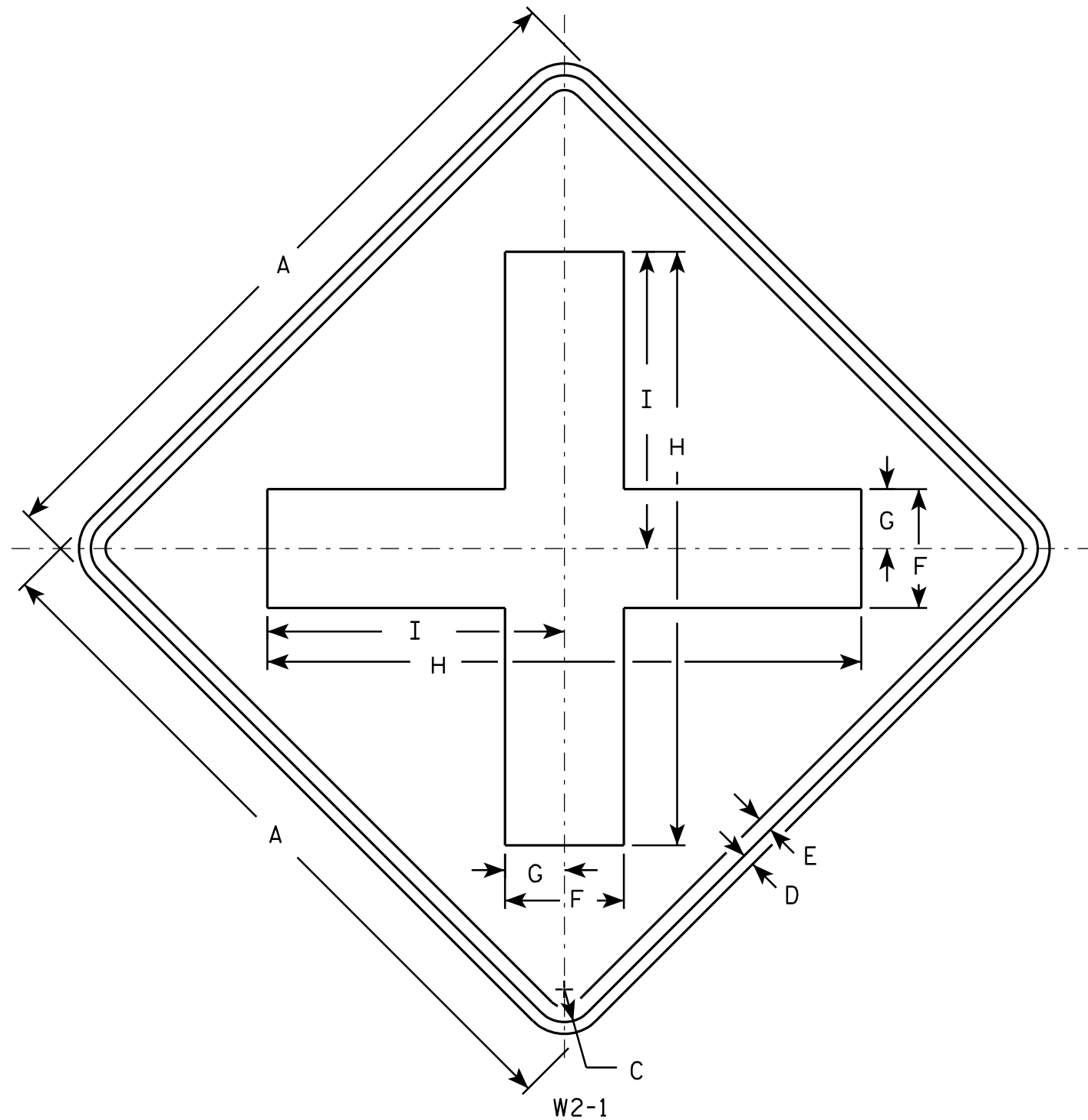
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-8.6

PROJECT NO:

SHEET NO:

E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2	20	10																		4.0
2S	30		1 3/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3	30	15																		9.0
4	48		2 1/4	3/4	1	8	4	40	20																		16.0
5																											

STANDARD SIGN

W2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 5/29/12

PLATE NO. W2-1.9

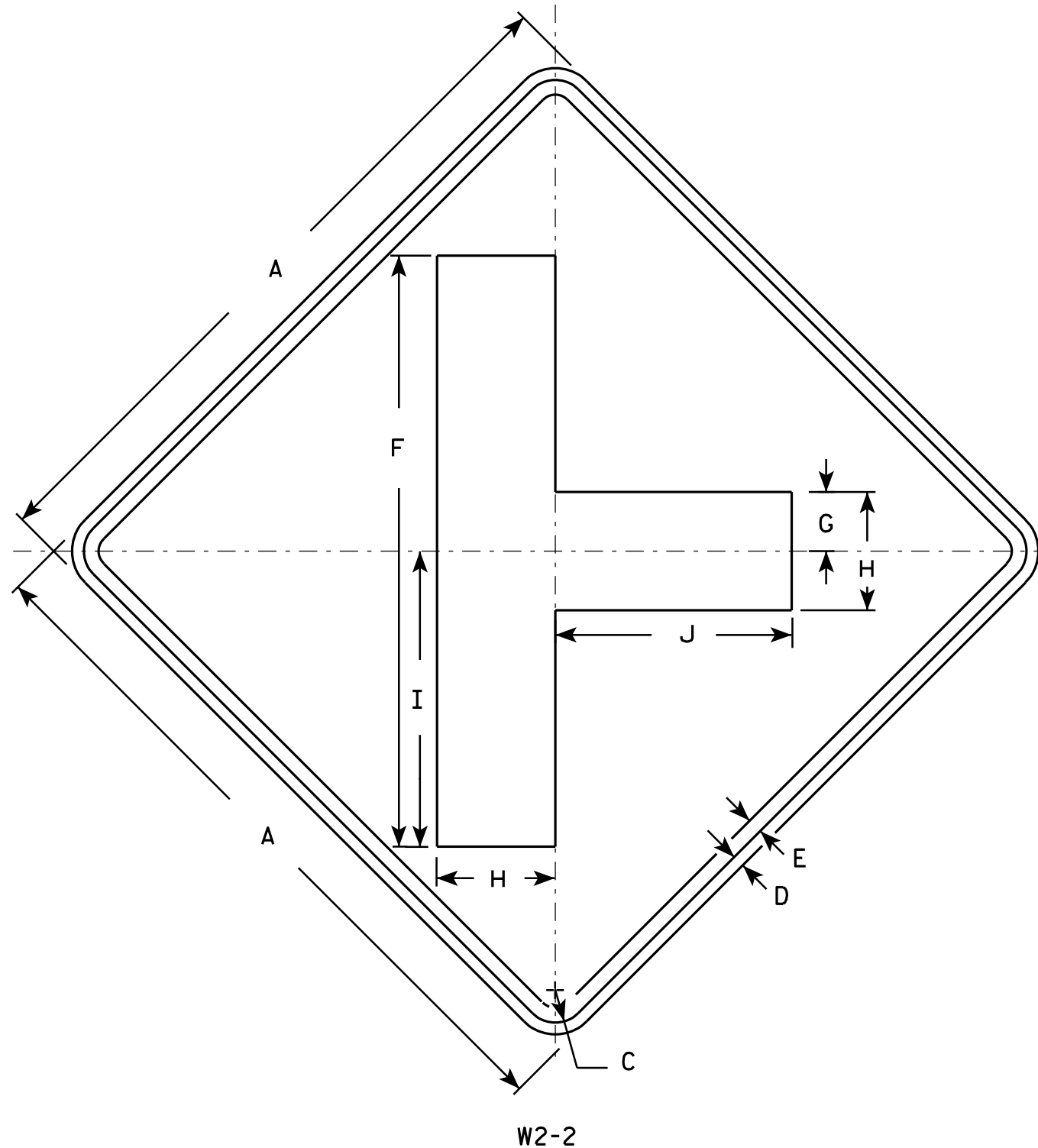
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	20	2	4	10	8																	4.0
2S	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
2M	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
3	36		1 5/8	5/8	3/4	30	3	6	15	12																	9.0
4	48		2 1/4	3/4	1	40	4	8	20	16																	16.0
5																											

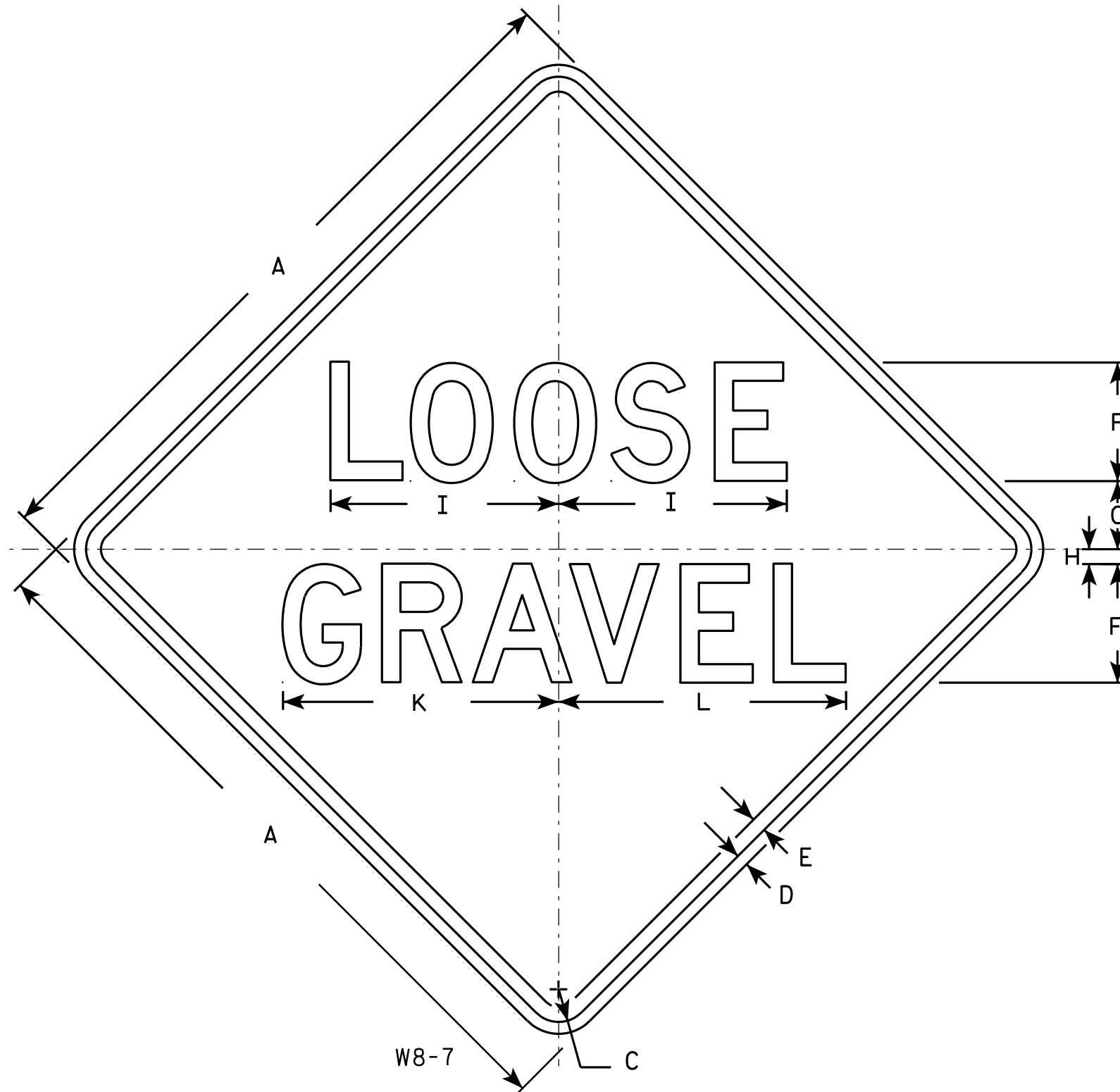
STANDARD SIGN W2-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W2-2.6

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2 3/4	1/2	7 3/4		9 1/4	9 3/4															4.0
2S	36		1 5/8	5/8	3/4	6	4 1/8	3/4	11 5/8		14	14 1/2															9.0
2M	36		1 5/8	5/8	3/4	6	4 1/8	3/4	11 5/8		14	14 1/2															9.0
3	36		1 5/8	5/8	3/4	6	4 1/8	3/4	11 5/8		14	14 1/2															9.0
4	36		1 5/8	5/8	3/4	6	4 1/8	3/4	11 5/8		14	14 1/2															9.0
5	48		2 1/4	3/4	1	8	5 1/2	1	15 1/2		18 5/8	19 3/8															16.0

STANDARD SIGN

W8-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 5/30/12 PLATE NO. W8-7.7

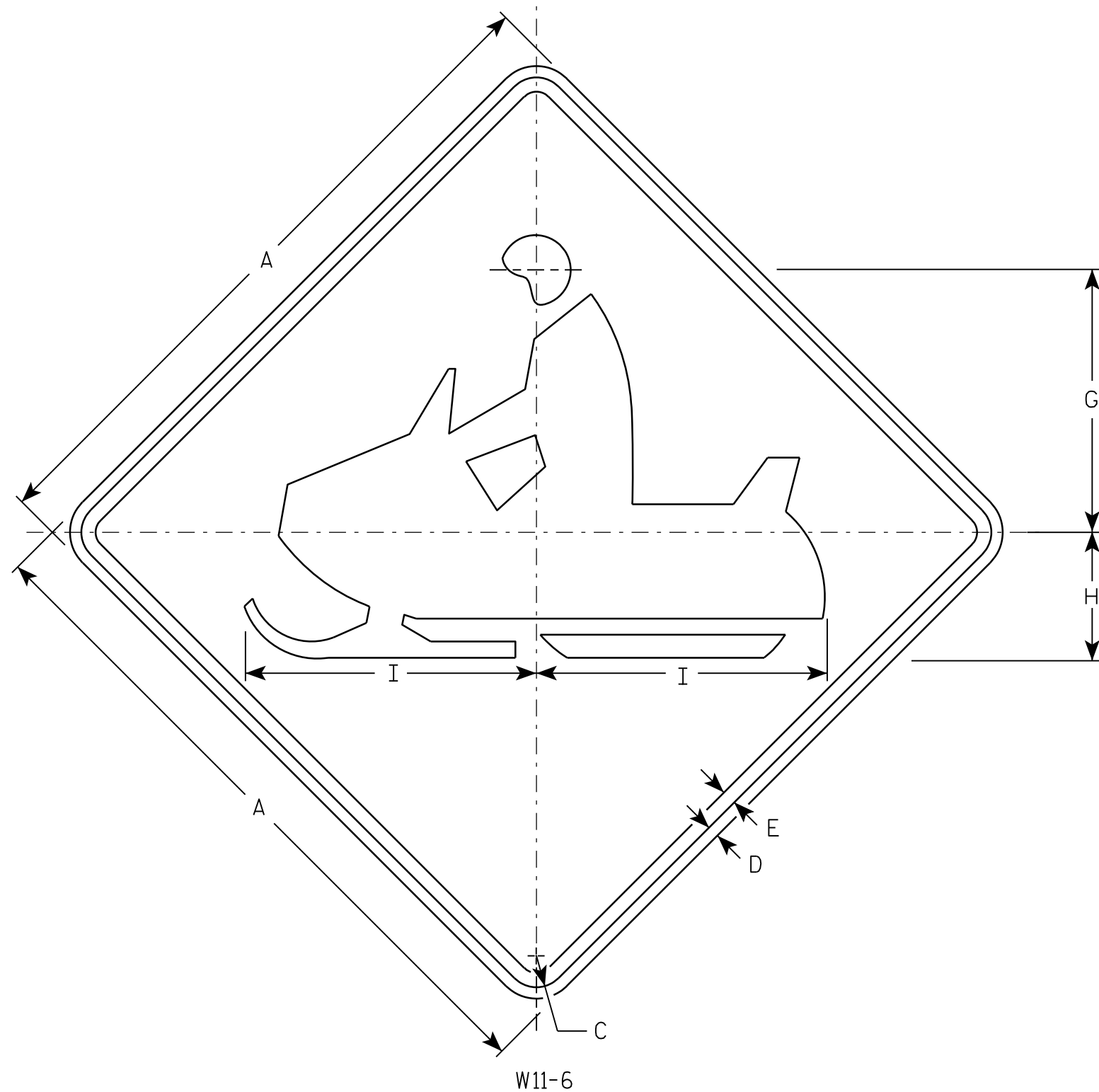
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

W11-6

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		9 1/2	4 1/2	10 1/4																		4.0
2S	30		1 3/8	1/2	5/8		11 1/2	5 5/8	12 3/4																		6.25
2M	30		1 3/8	1/2	5/8		11 1/2	5 5/8	12 3/4																		6.25
3	36		1 5/8	5/8	3/4		14 1/8	6 3/4	15 1/4																		9.0
4	48		2 1/4	3/4	1		19	9	20 1/2																		16.0
5																											

STANDARD SIGN W11-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W11-6.8

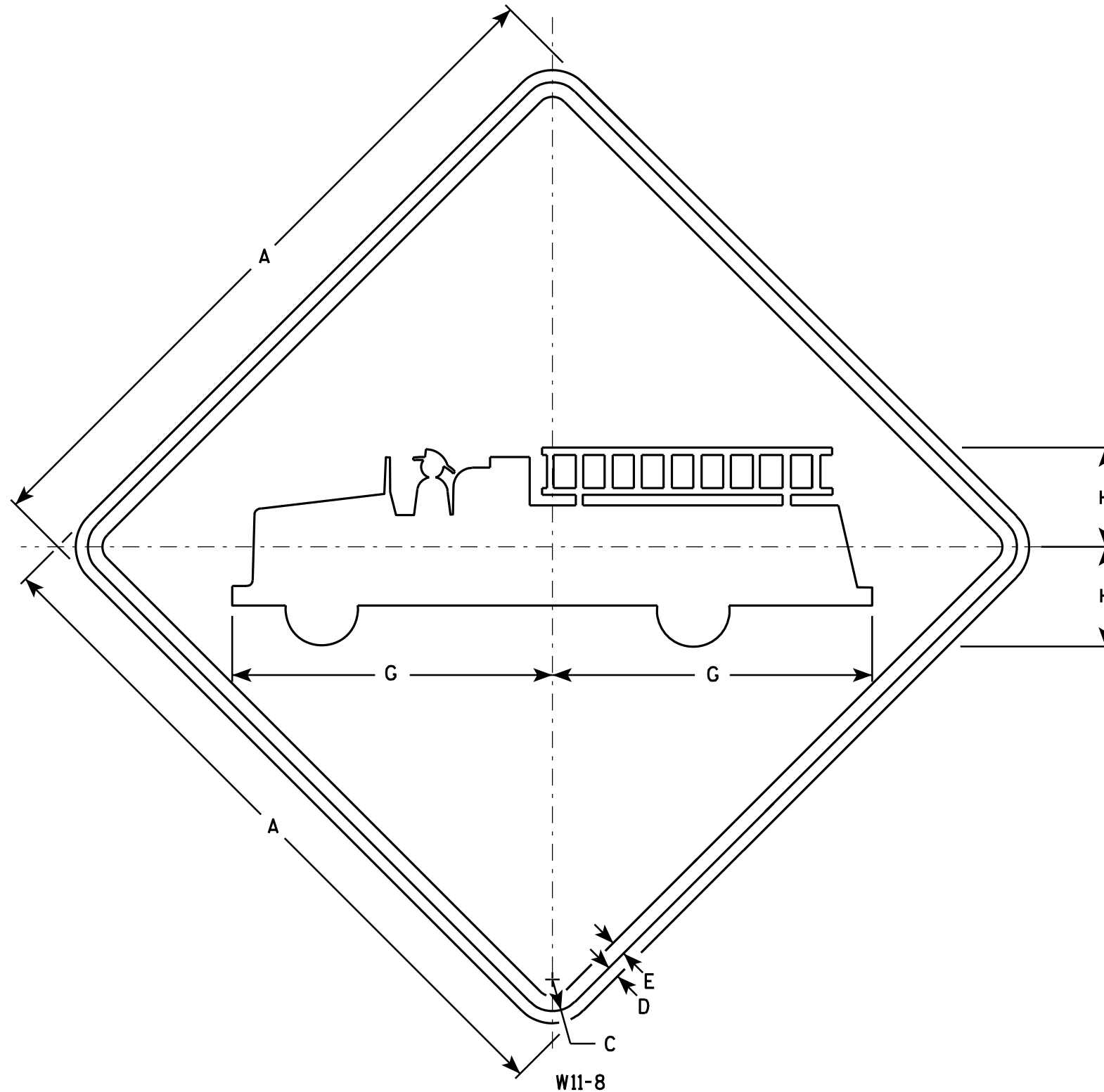
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

W11-8

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		11	3 3/8																			4.0
2S	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
2M	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
3	36		1 5/8	5/8	3/4		16 1/2	5 1/4																			9.0
4	48		2 1/4	3/4	1		22	7																			16.0
5																											

STANDARD SIGN W11-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 3/13/13 PLATE NO. W11-8.7

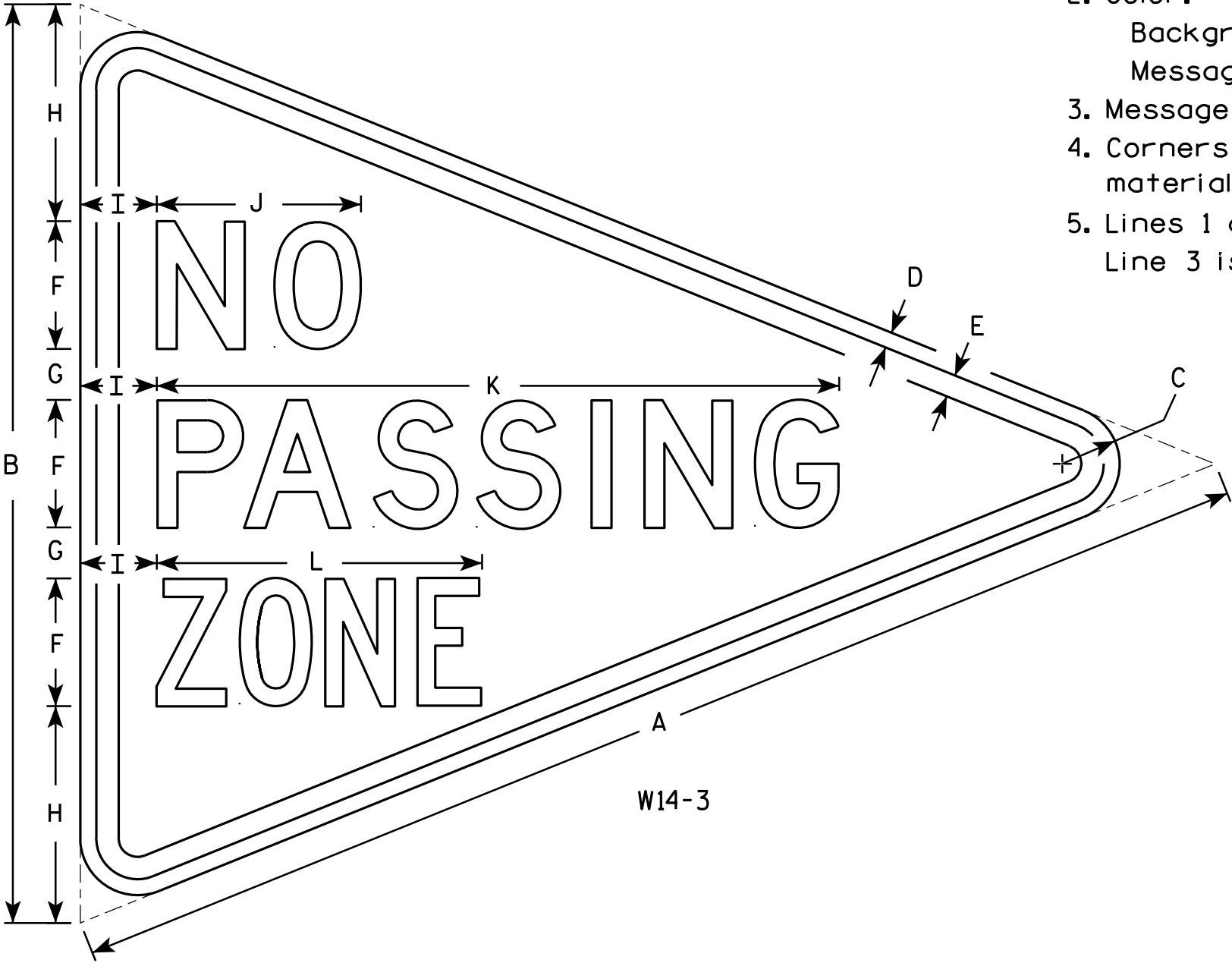
PROJECT NO:

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - See note 5
- 4. Corners and borders shall be rounded on all base materials for this sign.
- 5. Lines 1 and 2 are Series D.
Line 3 is series C.



W14-3

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9

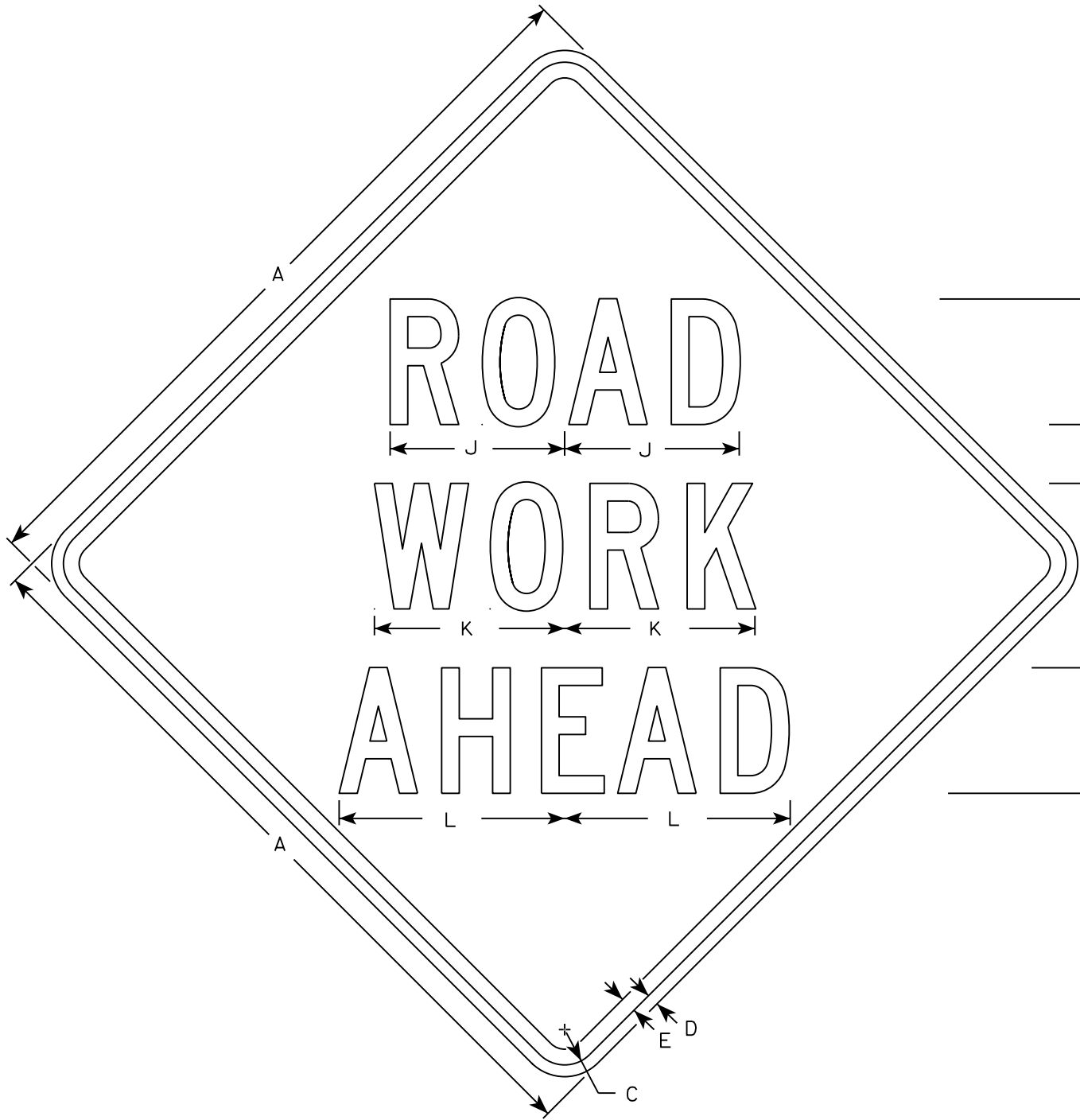
PROJECT NO:

HWY:

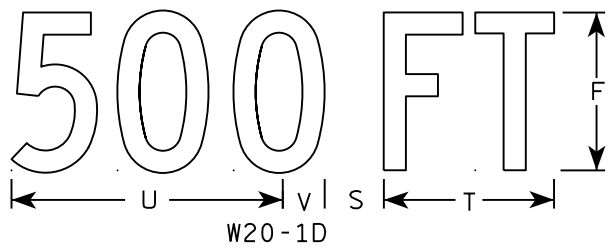
COUNTY:

SHEET NO:

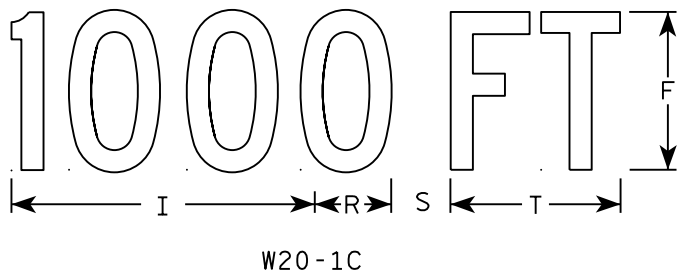
E



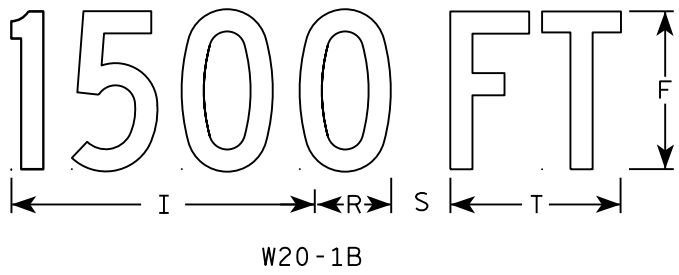
W20-1A



W20-1D



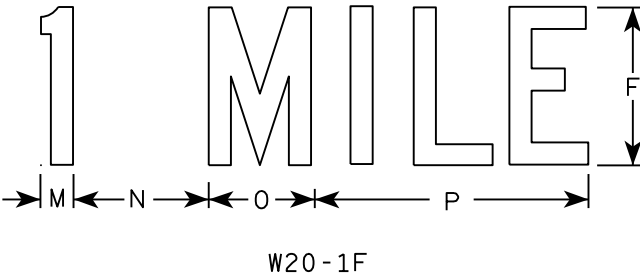
W20-1C



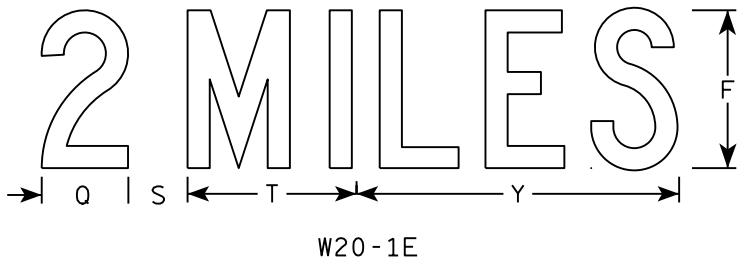
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

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

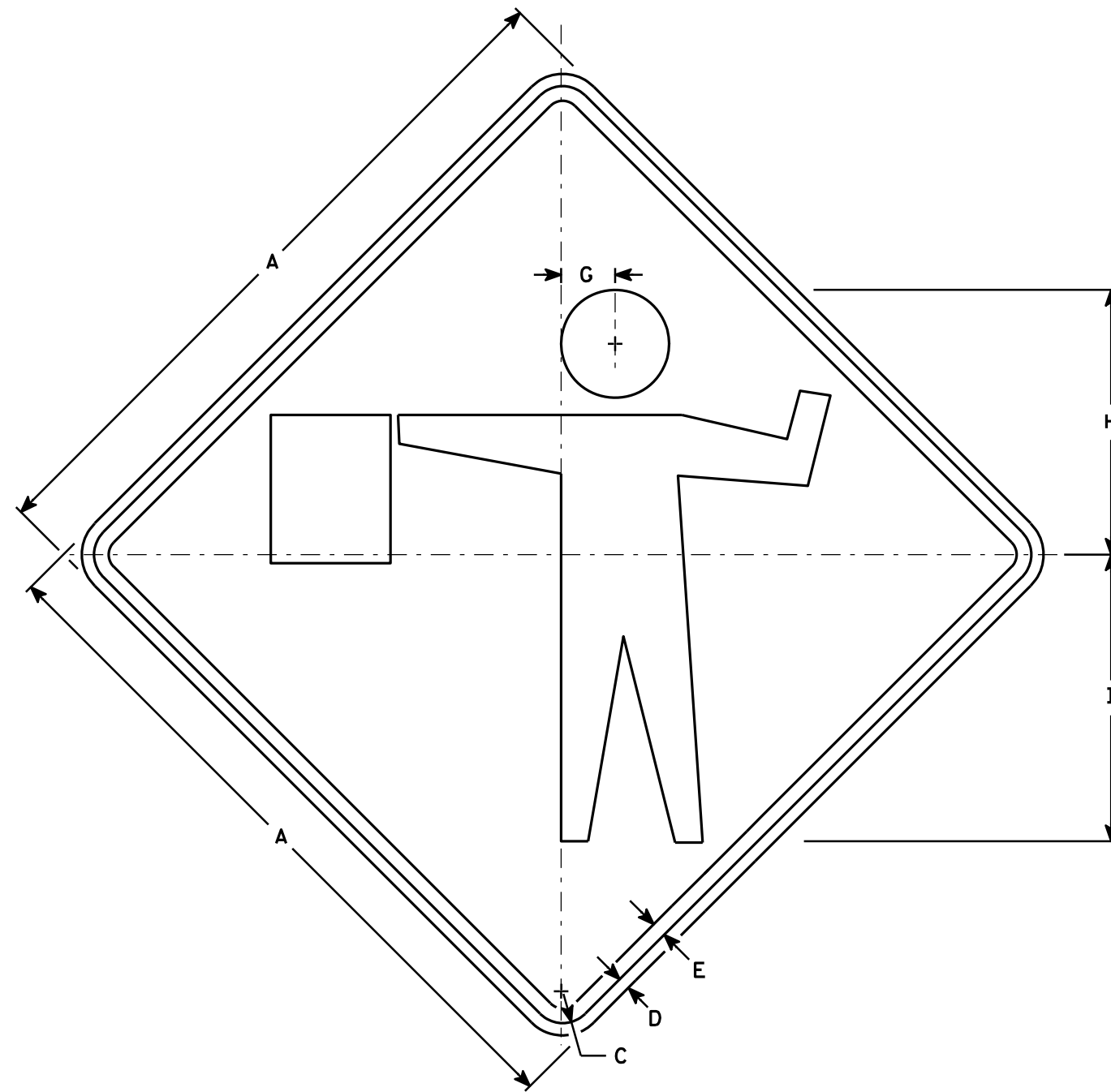
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10



W20-7A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		2 3/4	13 1/2	14 5/8																		9.00
2S	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00
2M	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00
3	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00
4	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00
5	48		2 1/4	3/4	1		3 3/4	18	19 1/2																		16.00

STANDARD SIGN W20-7A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-7A.5

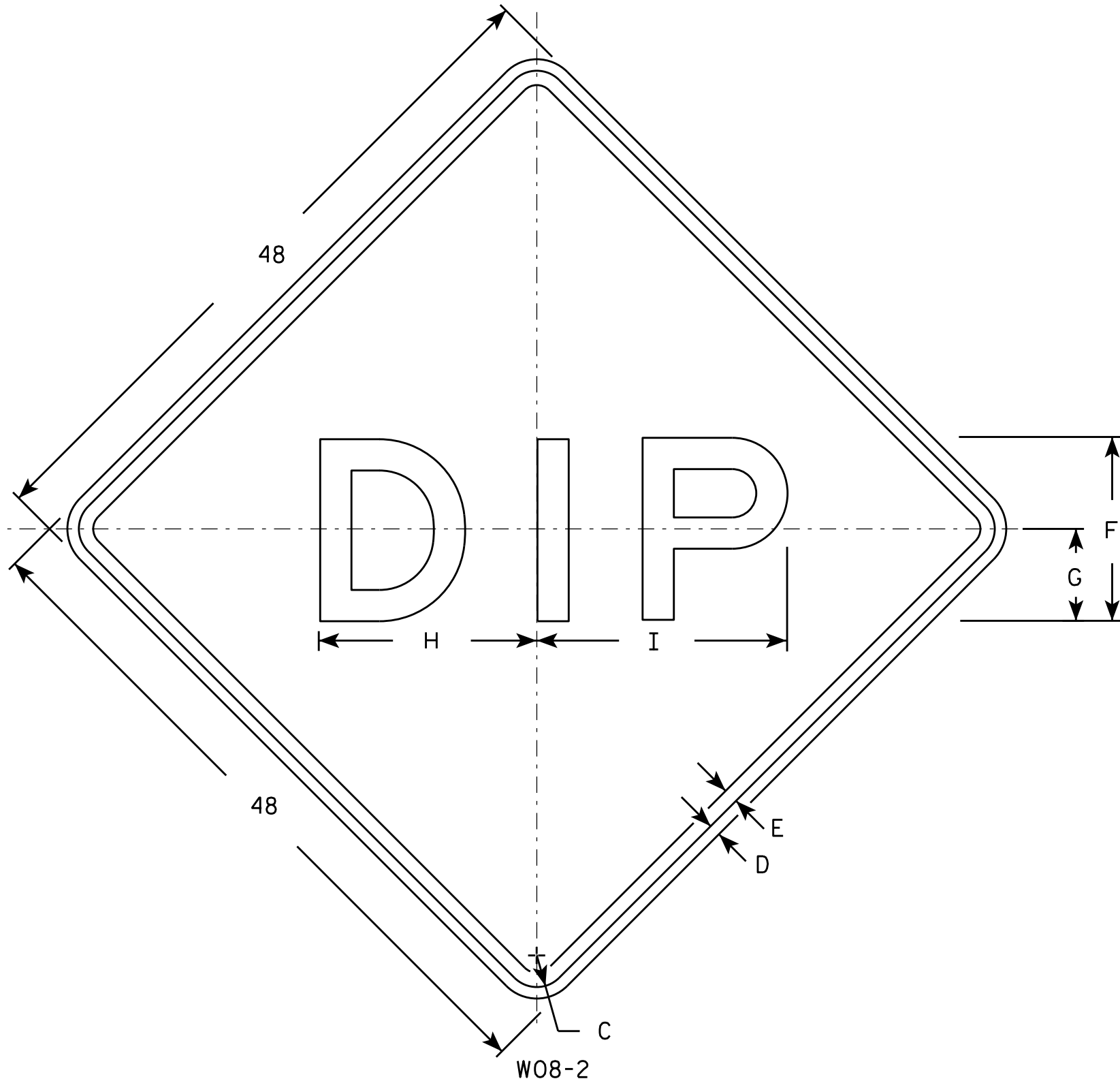
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - E
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

W08-2

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	10	5	11 7/8	13 1/2																		9.0
2S	48		2 1/4	3/4	1	12	6	14 1/4	16 1/4																		16.0
2M	48		2 1/4	3/4	1	12	6	14 1/4	16 1/4																		16.0
3	48		2 1/4	3/4	1	12	6	14 1/4	16 1/4																		16.0
4	48		2 1/4	3/4	1	12	6	14 1/4	16 1/4																		16.0
5	48		2 1/4	3/4	1	12	6	14 1/4	16 1/4																		16.0

STANDARD SIGN

W08-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 11/20/13

PLATE NO. W08-2.1

STATION	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		MASS ORDINATE
	CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	
		NOTE 1	NOTE 3	1.00 NOTE 1	1.3	NOTE 4	
318+73	17	0	0	0	0	0	0
319+00	16	0	17	0	17	0	16
319+81	18	18	51	27	68	36	32
320+00	18	11	13	10	80	49	31
321+00	17	15	65	48	145	111	34
322+00	24	10	76	46	221	172	49
323+00	31	1	102	21	323	198	124
324+00	25	1	104	4	426	203	223
324+59	81	3	116	4	542	209	333
325+00	0	0	62	2	604	212	392
			604	163			

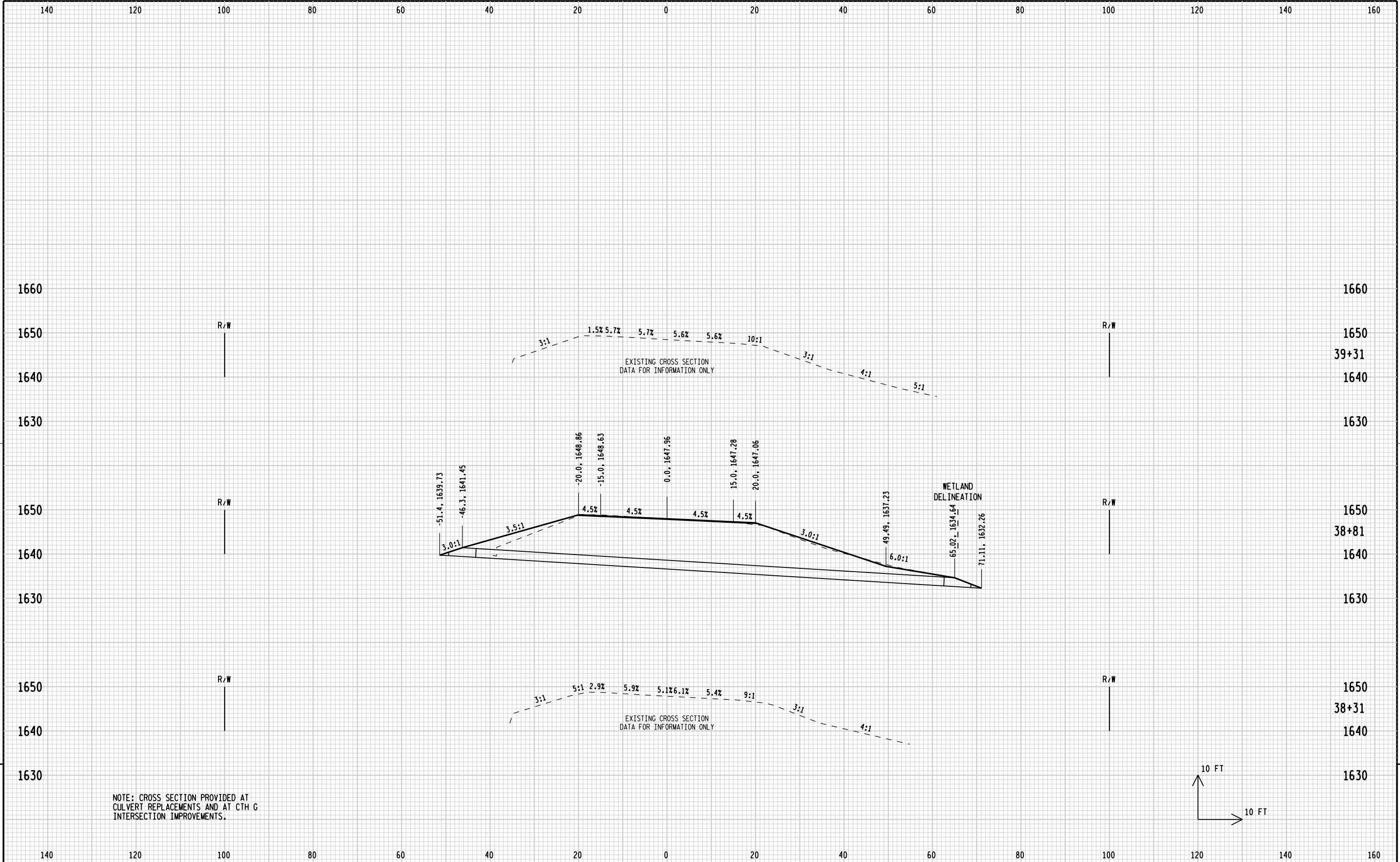
NOTES:
1 - CUT
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL
4 - MASS ORDINATE

CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
DOES NOT SHOW UP IN CROSS SECTIONS
DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
USABLE CUT - (FILL)*FILL FACTOR

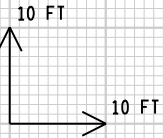
STATION	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		MASS ORDINATE
	CUT	FILL	CUT	FILL	EXPANDED		
					CUT	FILL	
			NOTE 1	NOTE 3			NOTE 4
725+94	0	0	0	0	0	0	0
726+00	12	0	1	0	1	0	1
727+00	14	0	48	0	49	0	49
728+00	11	0	46	0	95	0	95
729+00	11	0	41	0	136	0	136
730+00	0	0	20	0	156	0	156
			156	0			

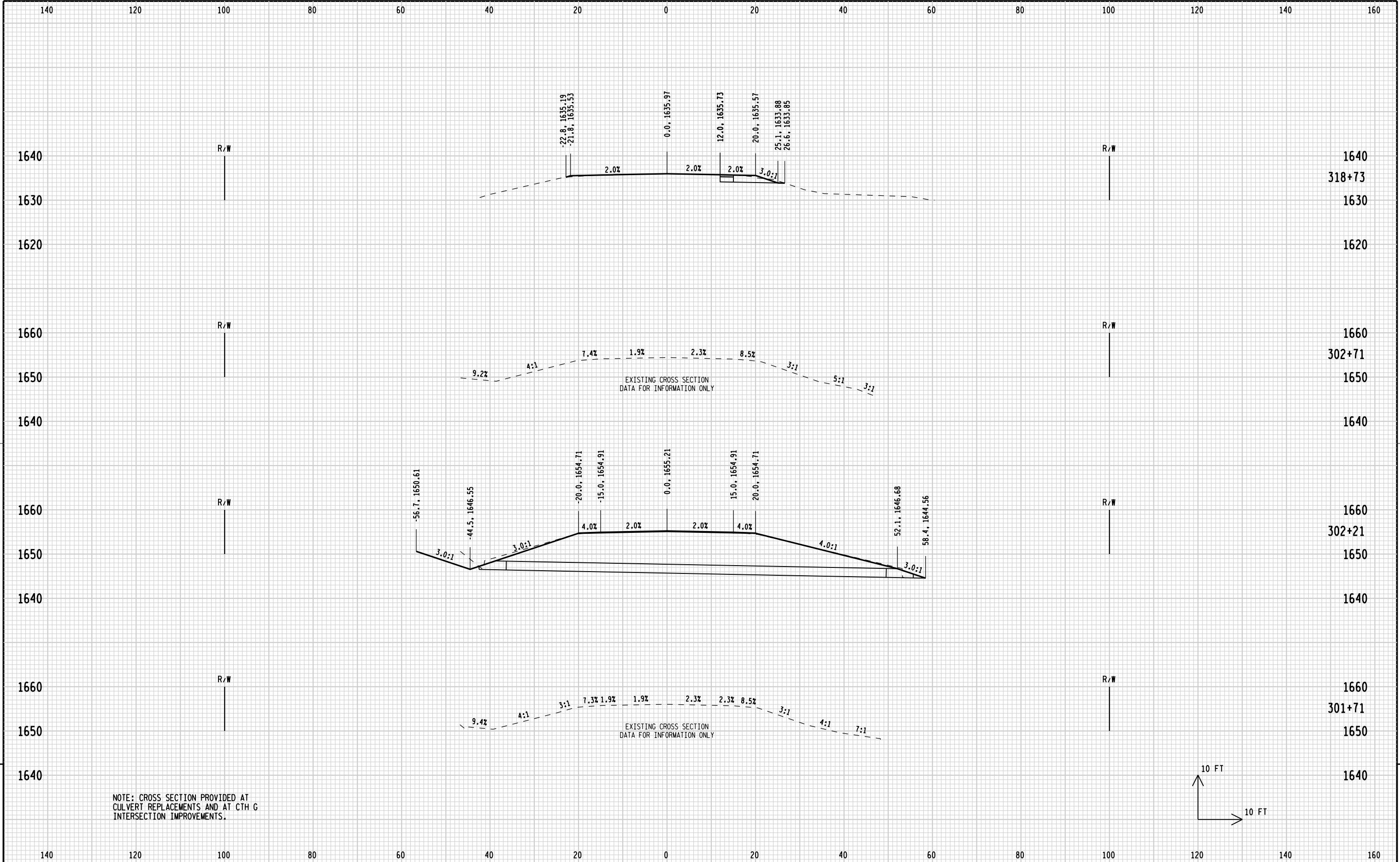
NOTES:
1 - CUT
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL
4 - MASS ORDINATE

CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
DOES NOT SHOW UP IN CROSS SECTIONS
DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
USABLE CUT - (FILL)*FILL FACTOR

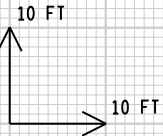


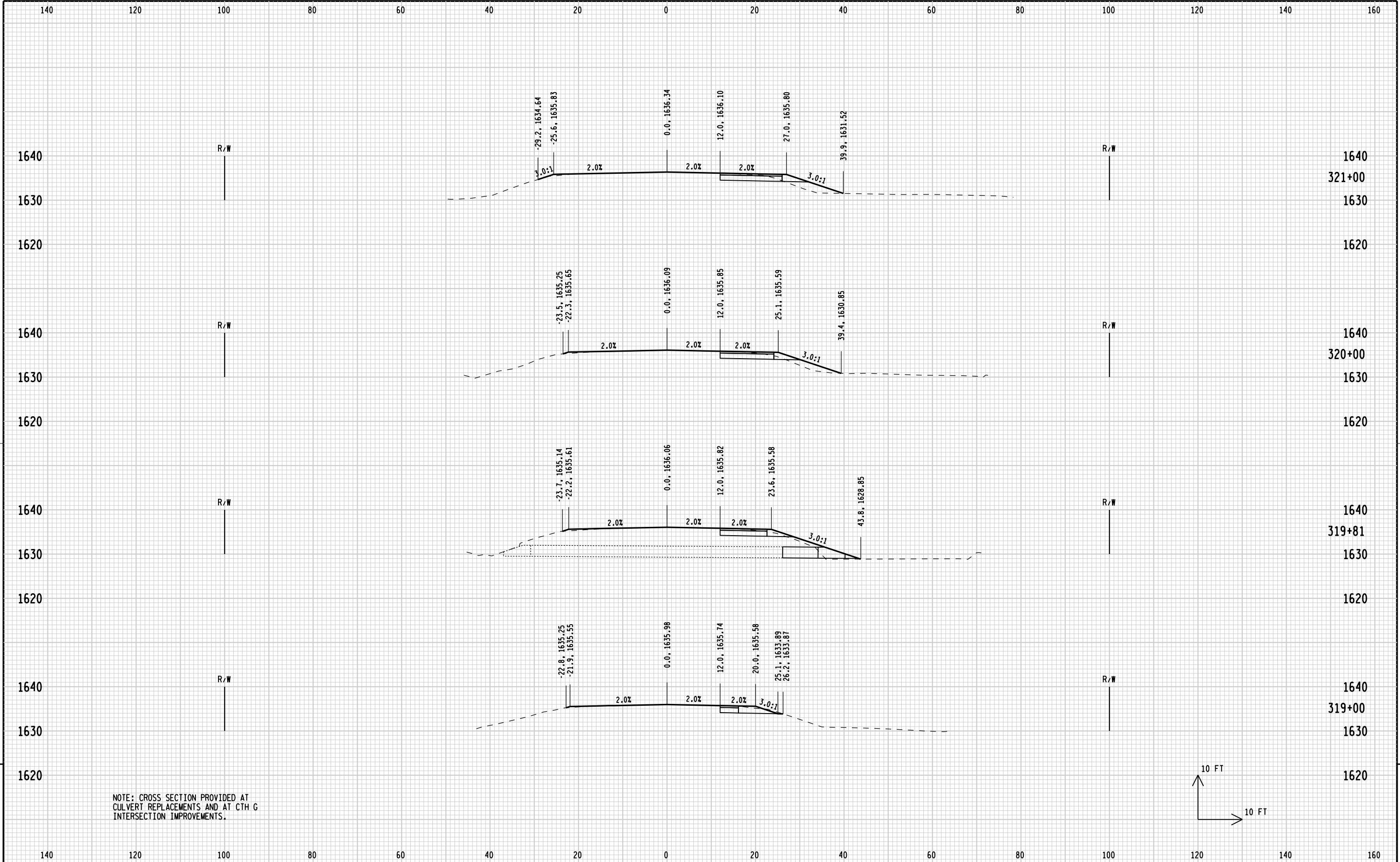
NOTE: CROSS SECTION PROVIDED AT
CULVERT REPLACEMENTS AND AT CTH G
INTERSECTION IMPROVEMENTS.



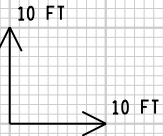


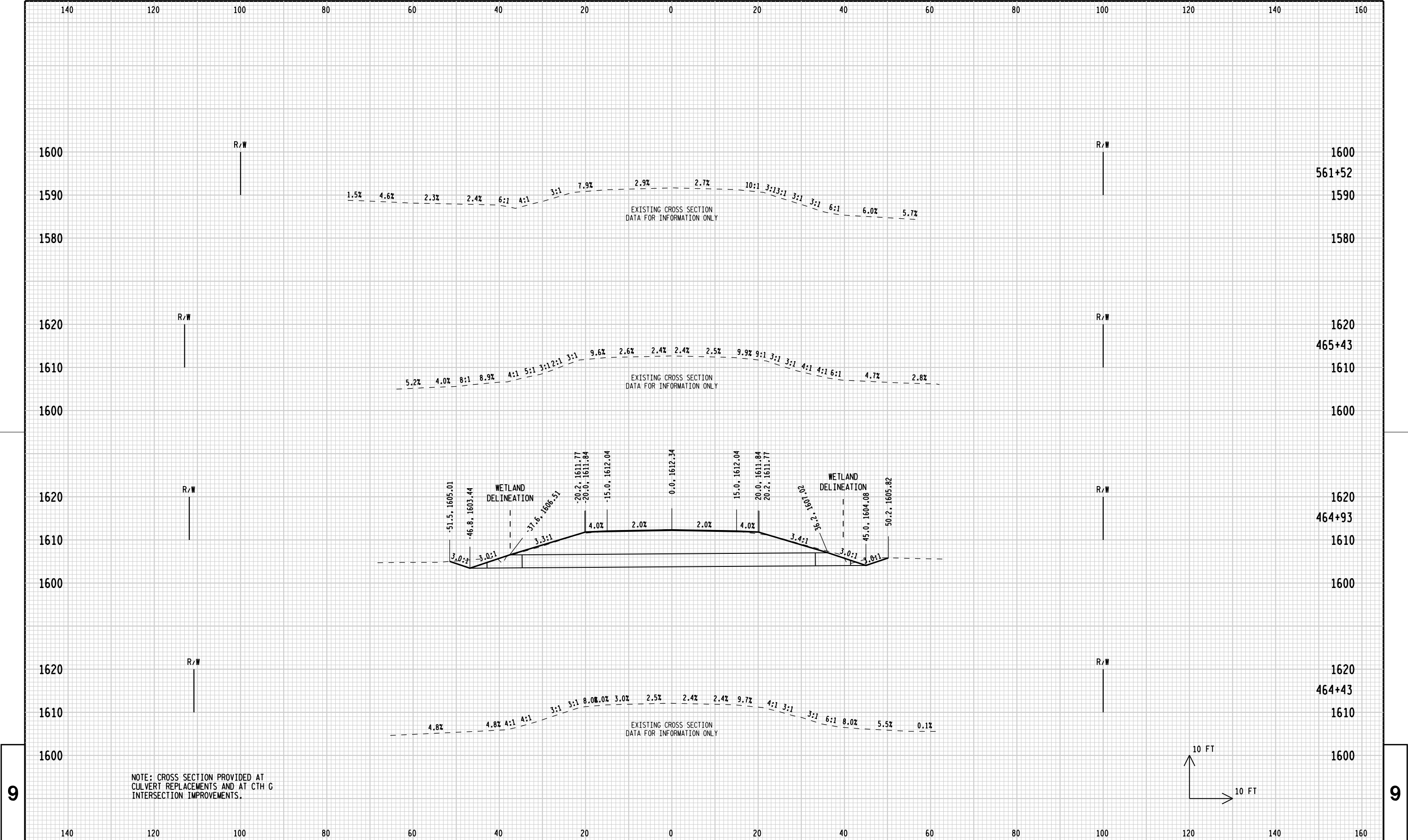
NOTE: CROSS SECTION PROVIDED AT
CULVERT REPLACEMENTS AND AT CTH G
INTERSECTION IMPROVEMENTS.





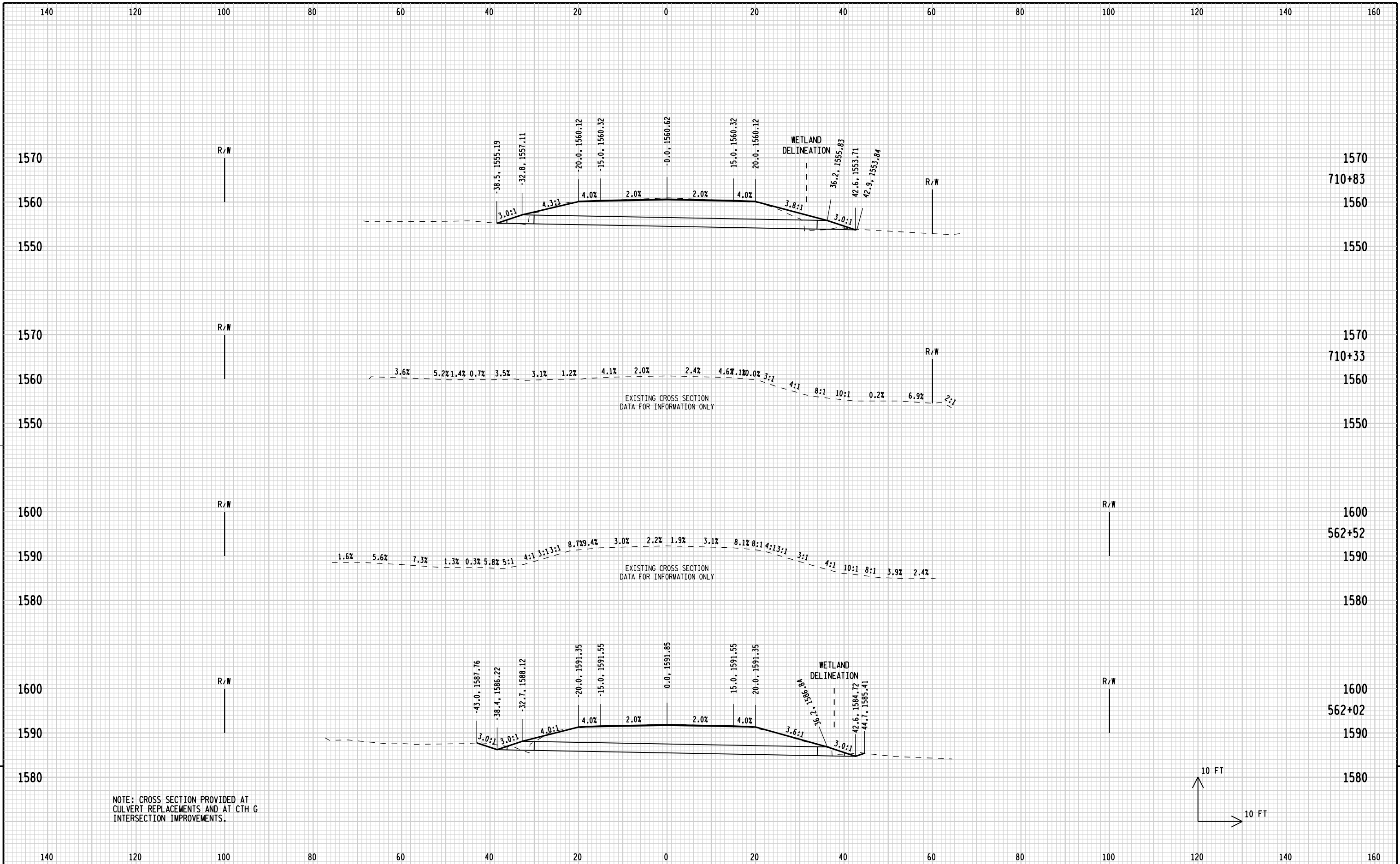
NOTE: CROSS SECTION PROVIDED AT
CULVERT REPLACEMENTS AND AT CTH G
INTERSECTION IMPROVEMENTS.



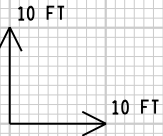


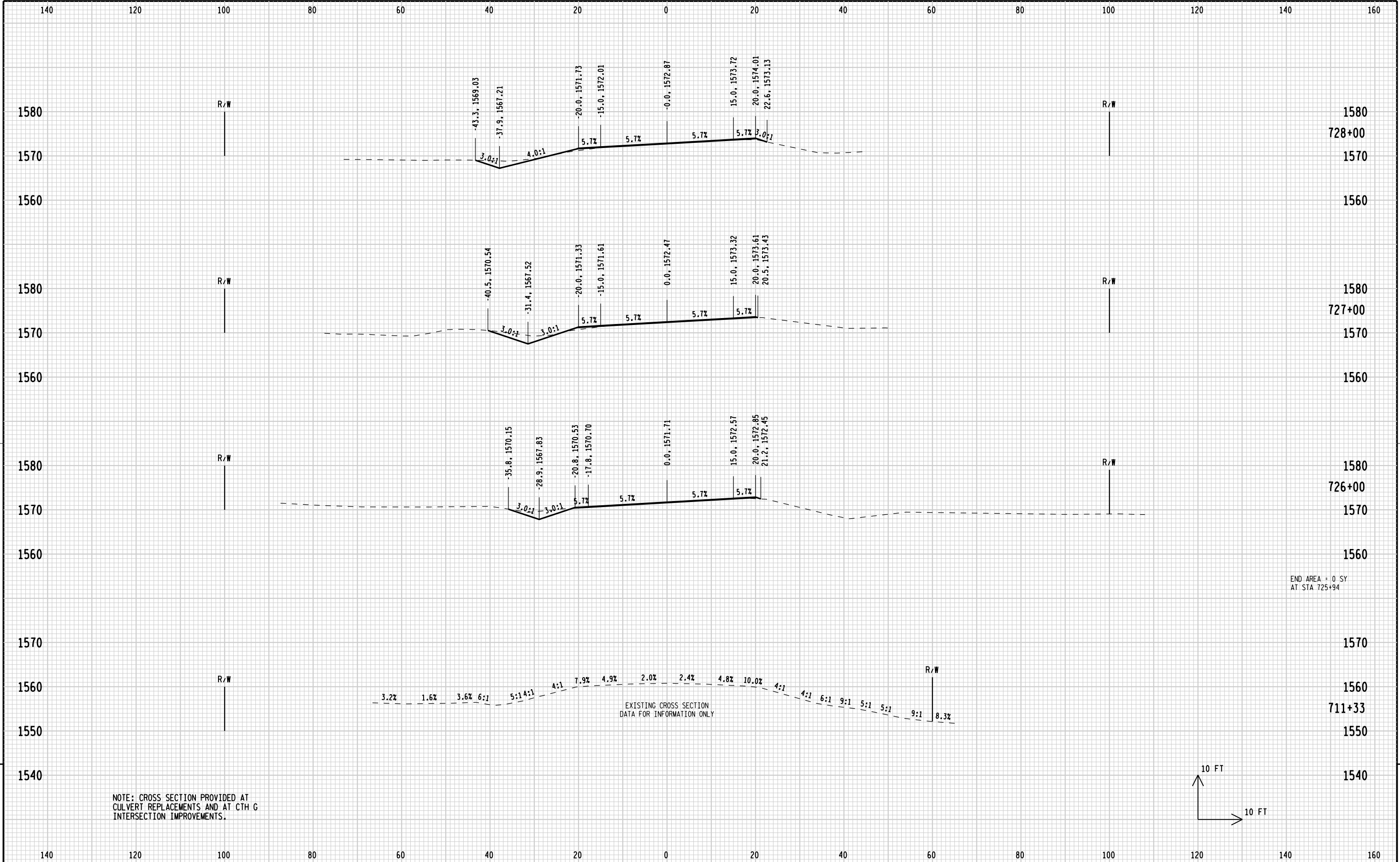
9

9



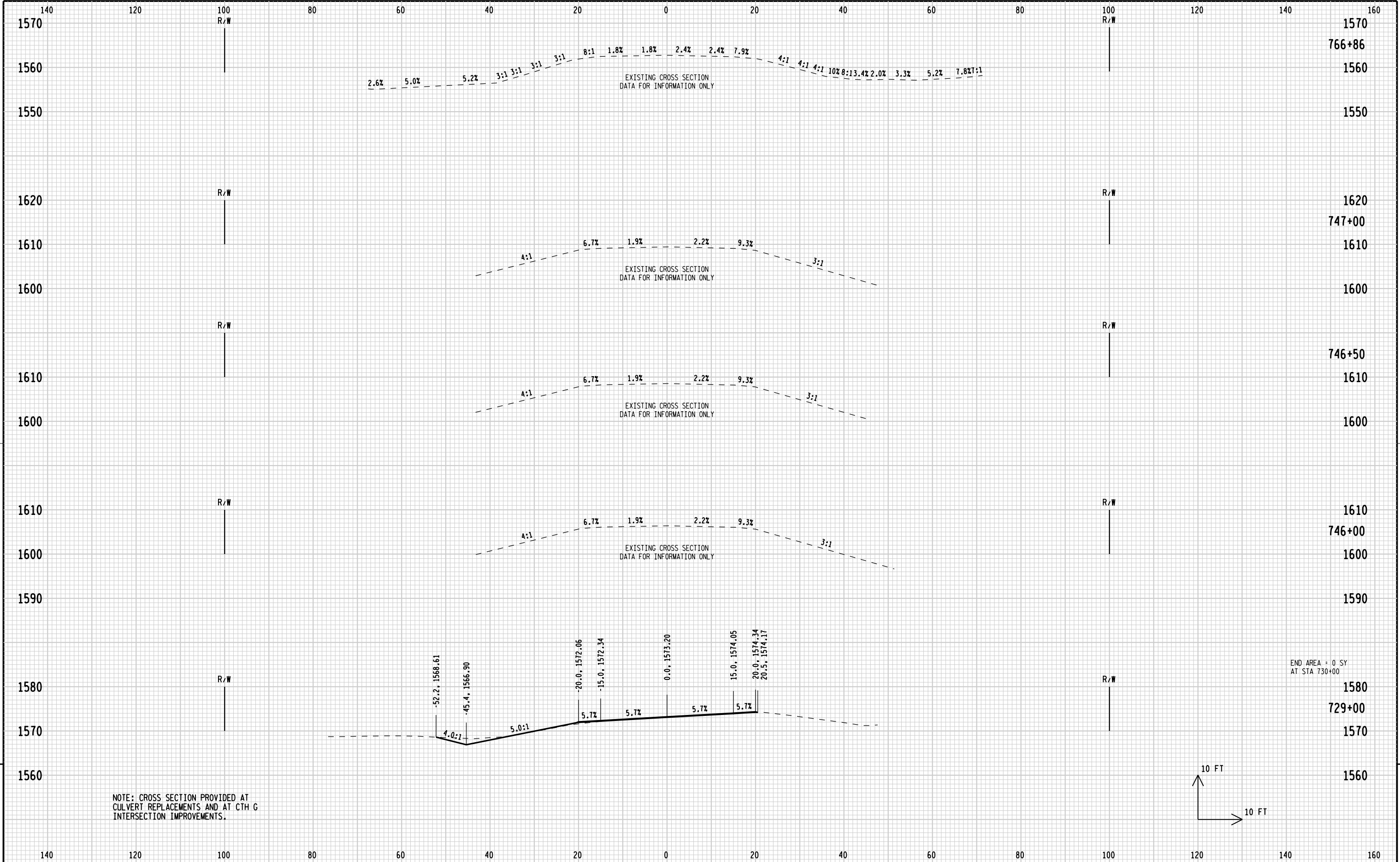
NOTE: CROSS SECTION PROVIDED AT
CULVERT REPLACEMENTS AND AT CTH G
INTERSECTION IMPROVEMENTS.





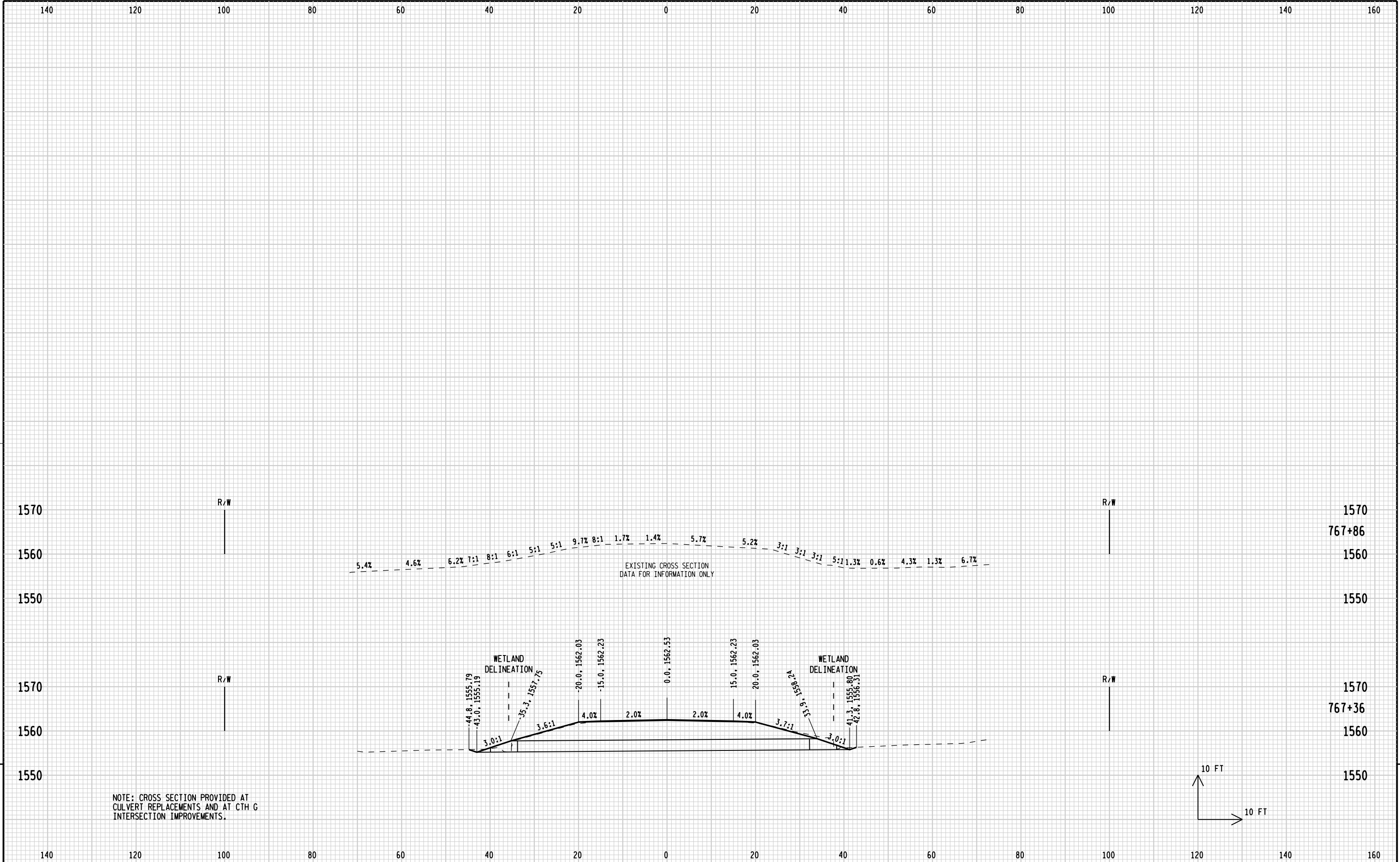
NOTE: CROSS SECTION PROVIDED AT
CULVERT REPLACEMENTS AND AT CTH G
INTERSECTION IMPROVEMENTS.

END AREA = 0 SY
AT STA 725+94



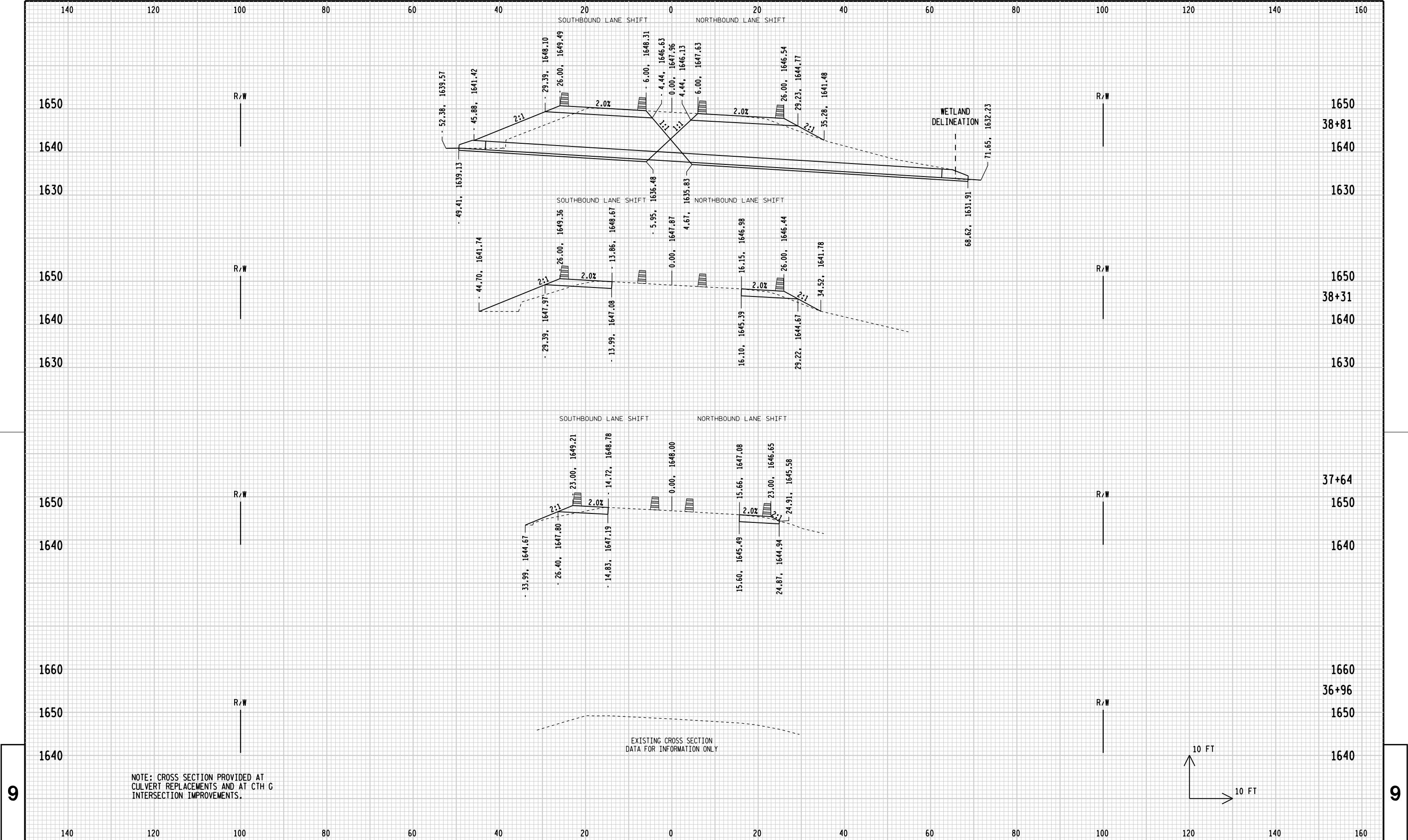
9

9



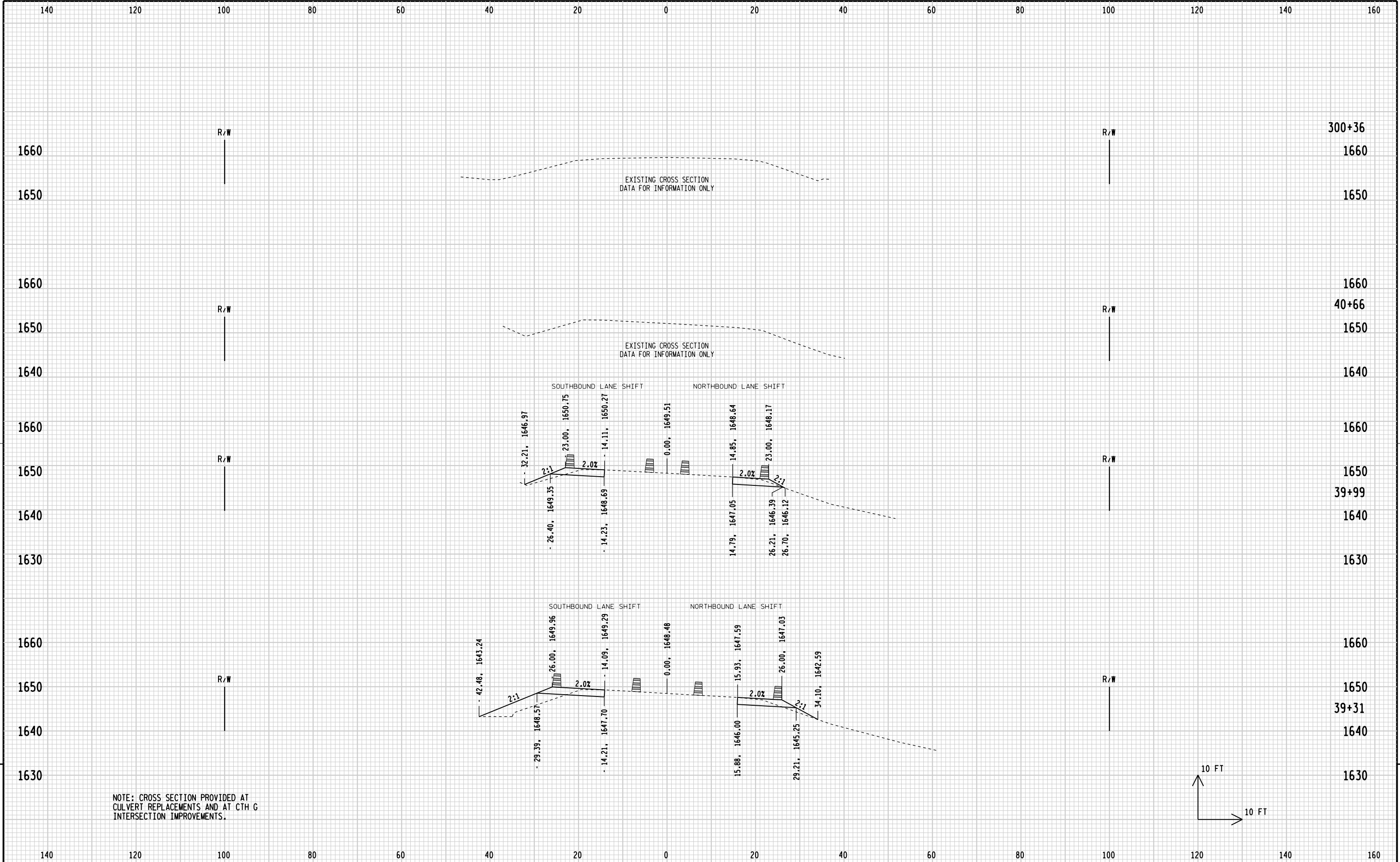
9

9

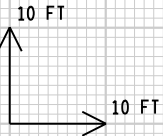


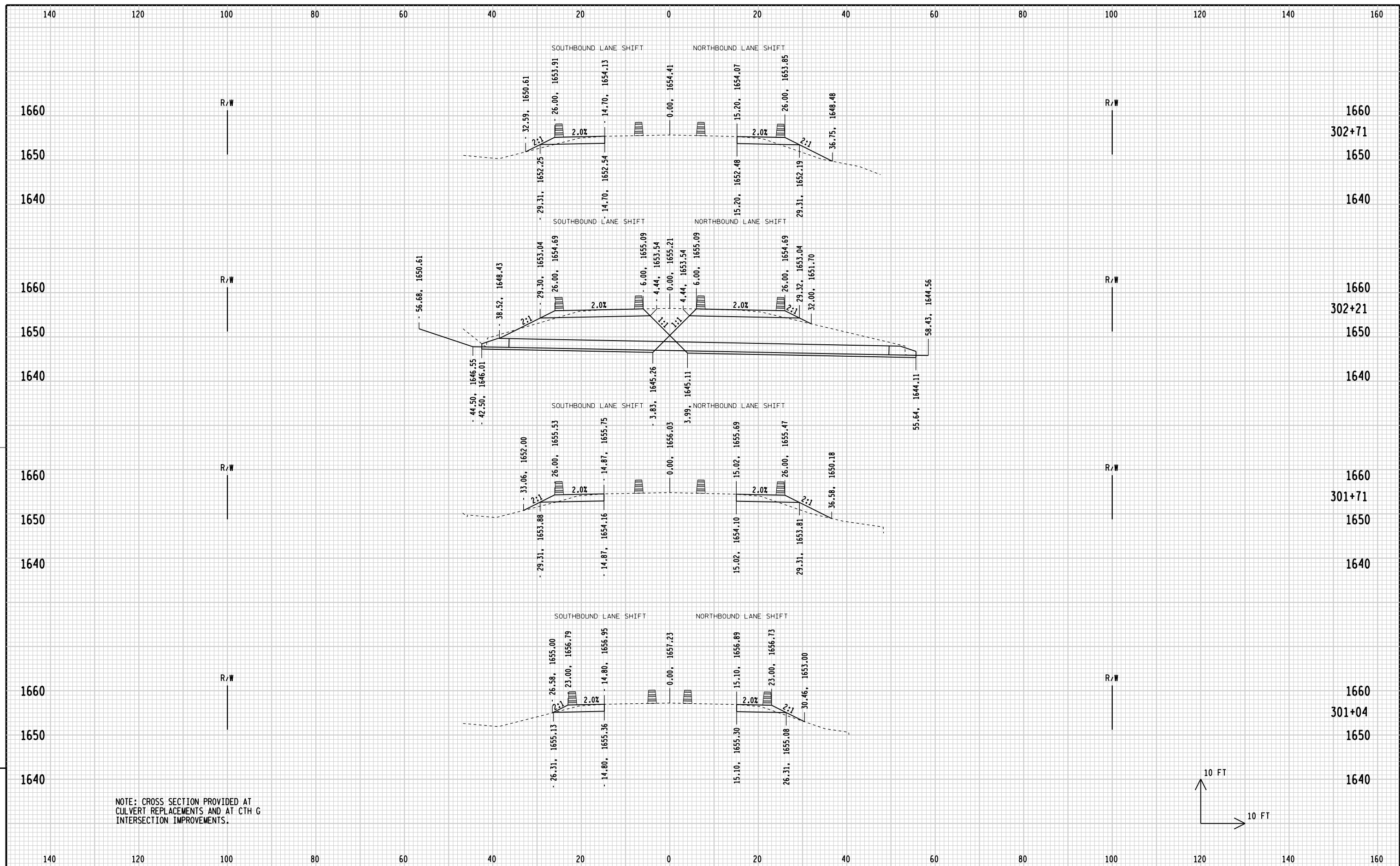
9

9



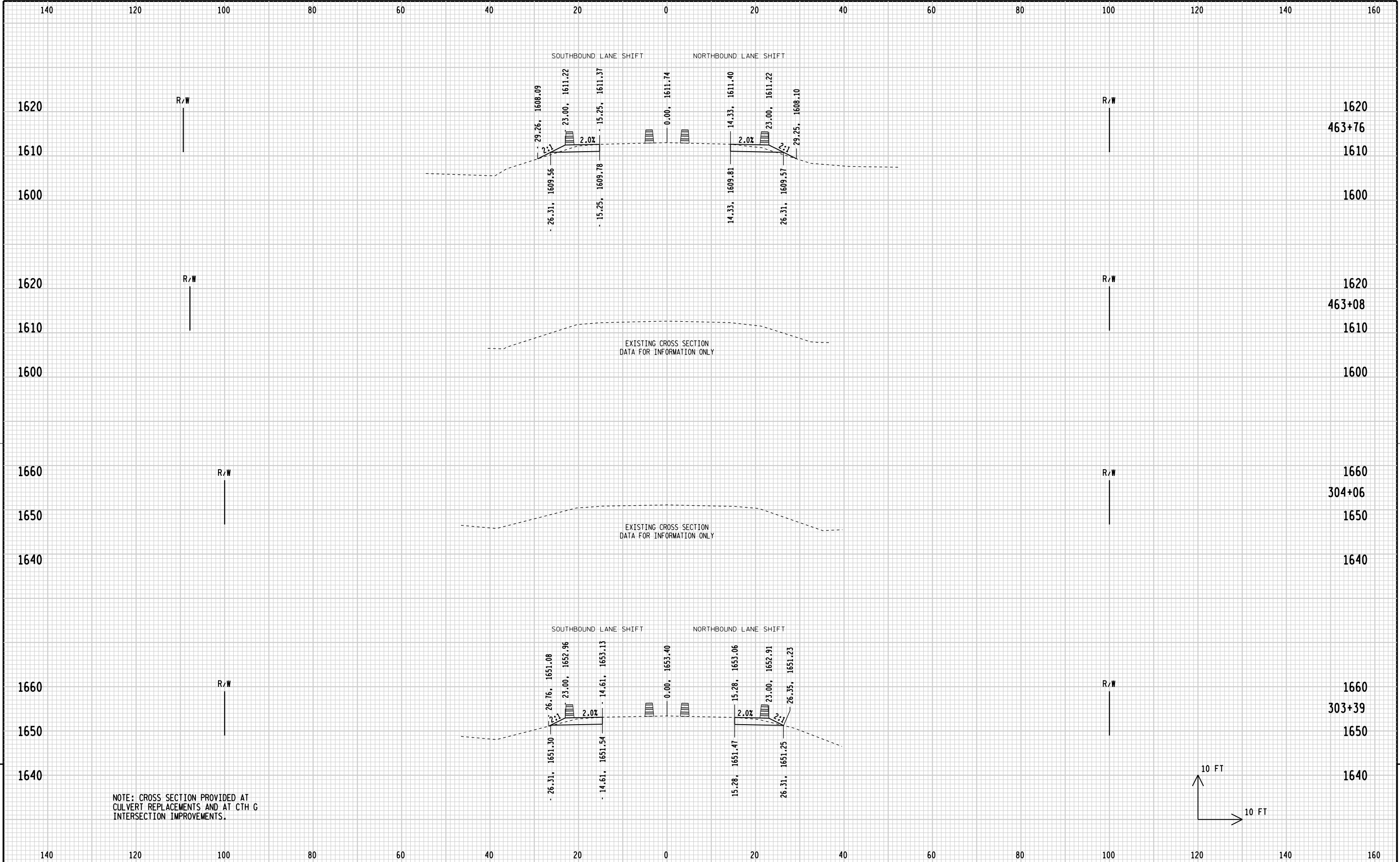
NOTE: CROSS SECTION PROVIDED AT
CULVERT REPLACEMENTS AND AT CTH G
INTERSECTION IMPROVEMENTS.



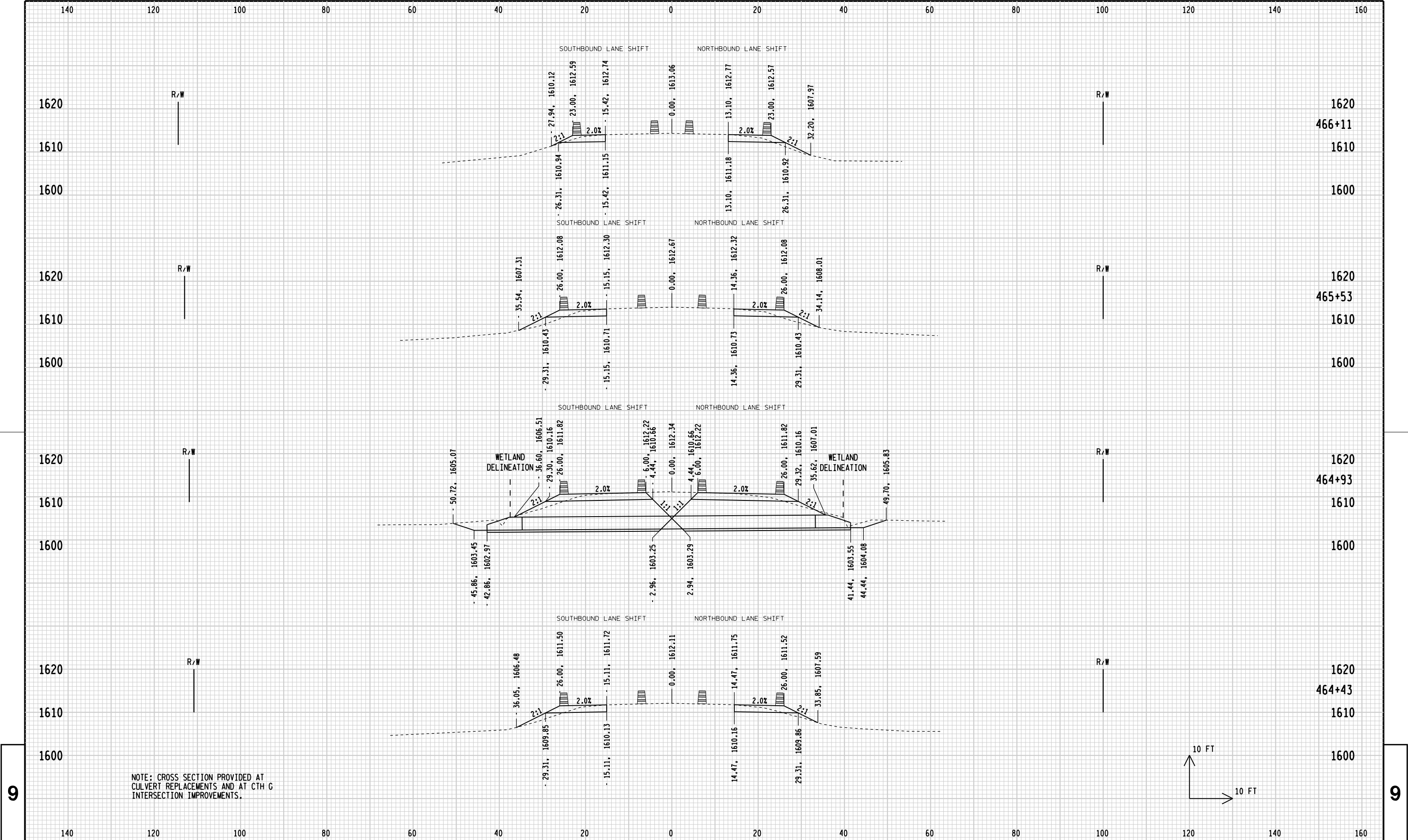


NOTE: CROSS SECTION PROVIDED AT
CULVERT REPLACEMENTS AND AT CTH G
INTERSECTION IMPROVEMENTS.

A right triangle is shown with a vertical leg labeled "10 FT" and a horizontal leg labeled "10 FT". The legs meet at a right angle at the bottom-left vertex.

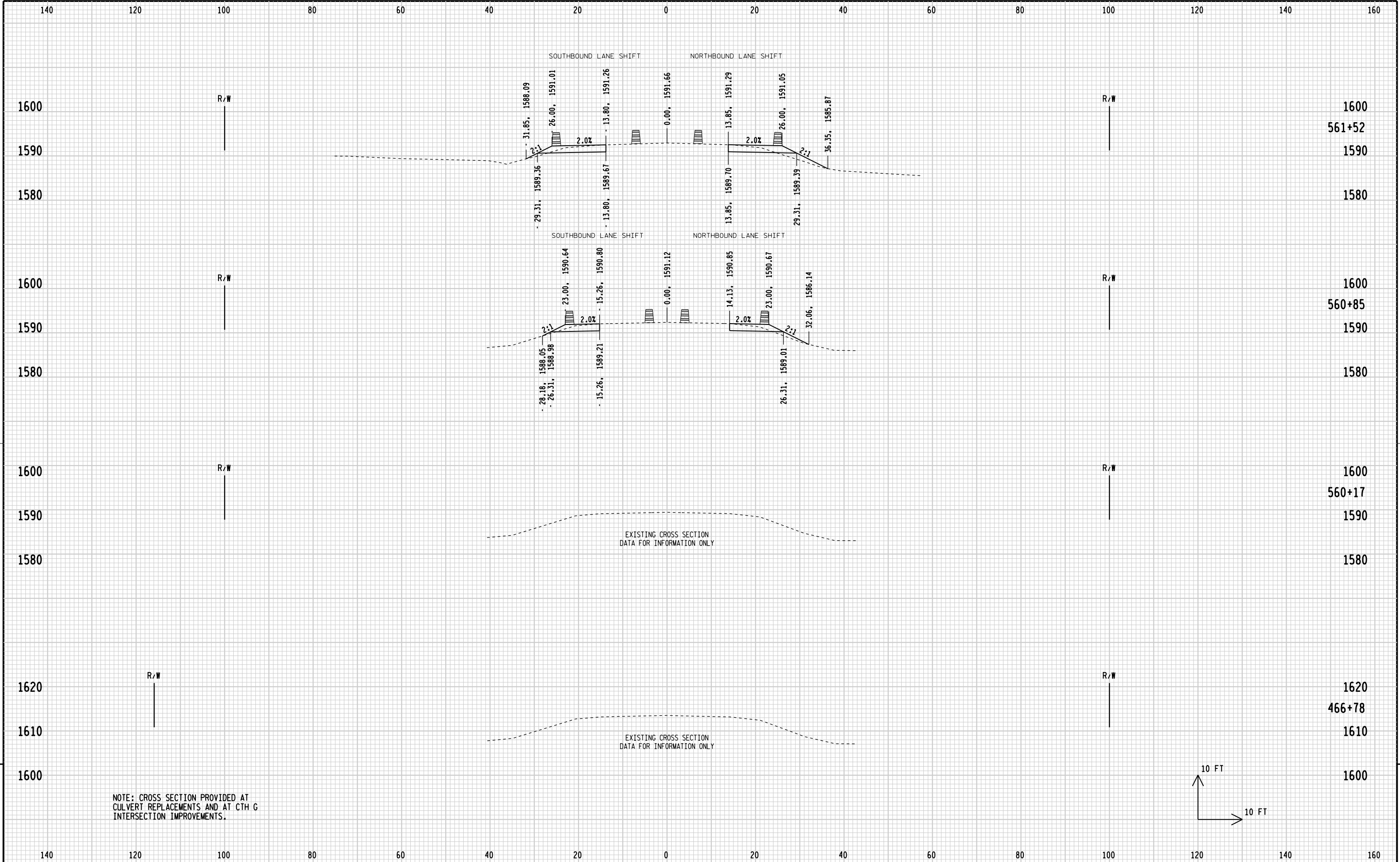


NOTE: CROSS SECTION PROVIDED AT
CULVERT REPLACEMENTS AND AT CTH G
INTERSECTION IMPROVEMENTS.

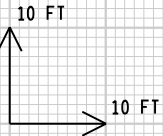


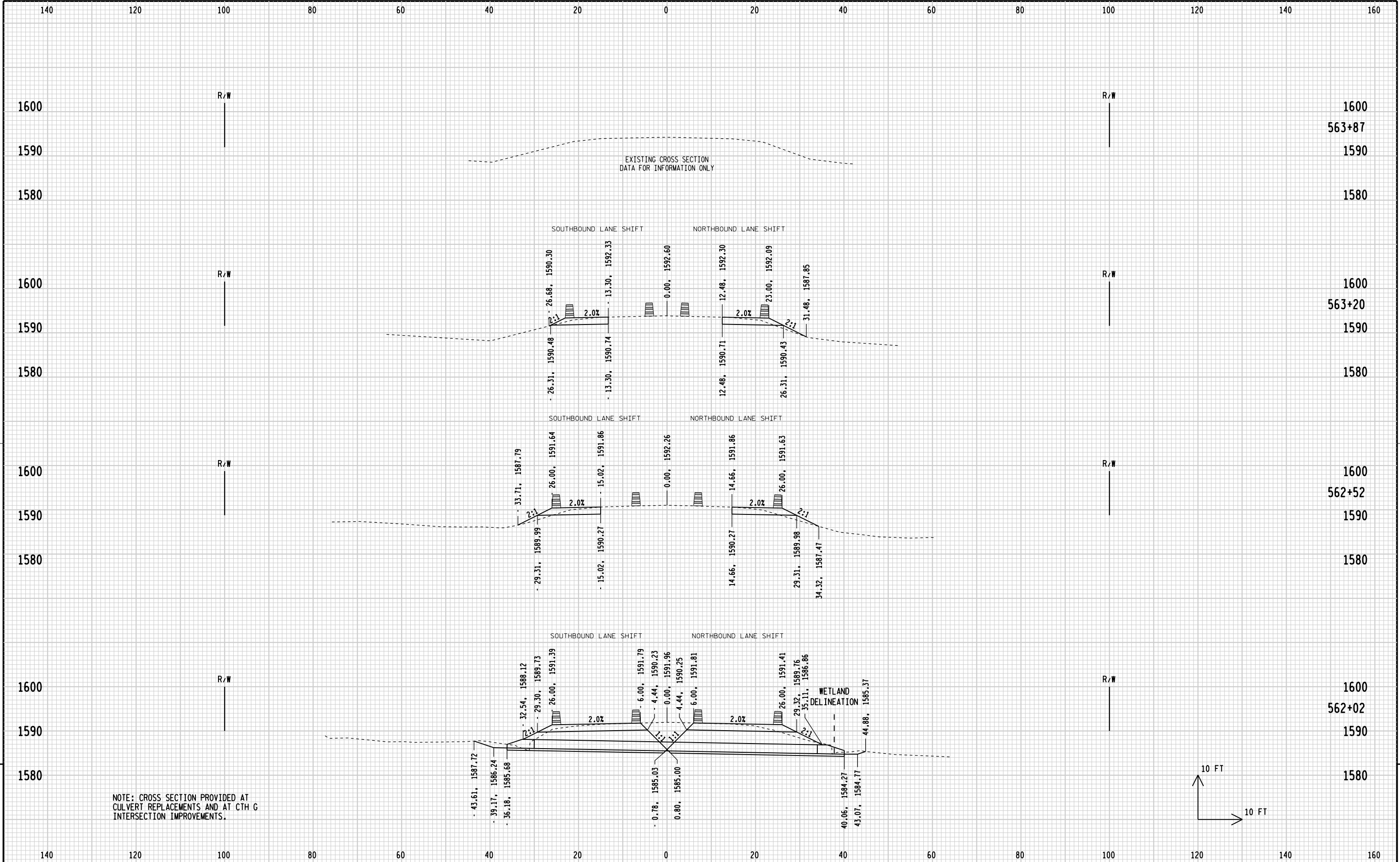
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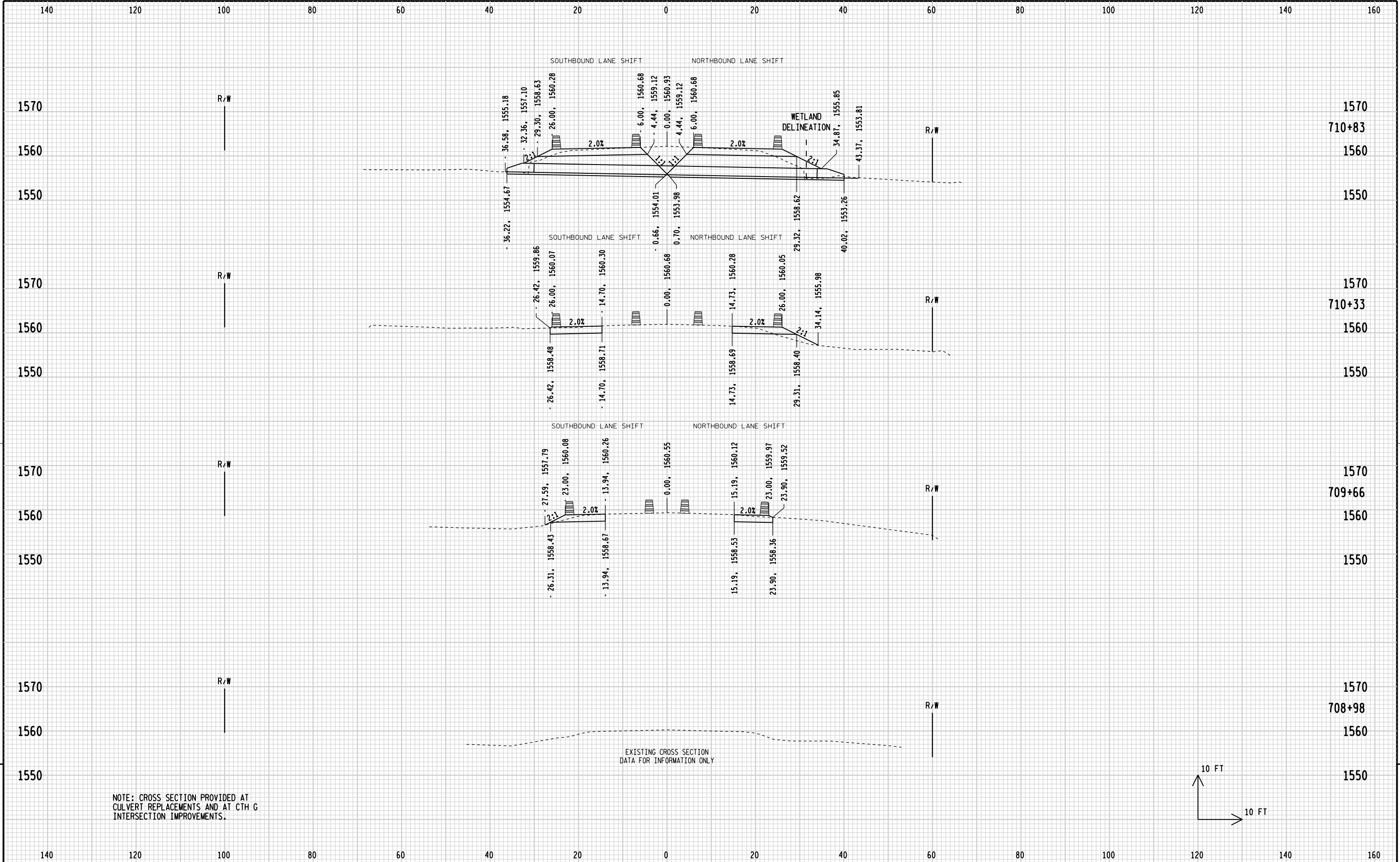
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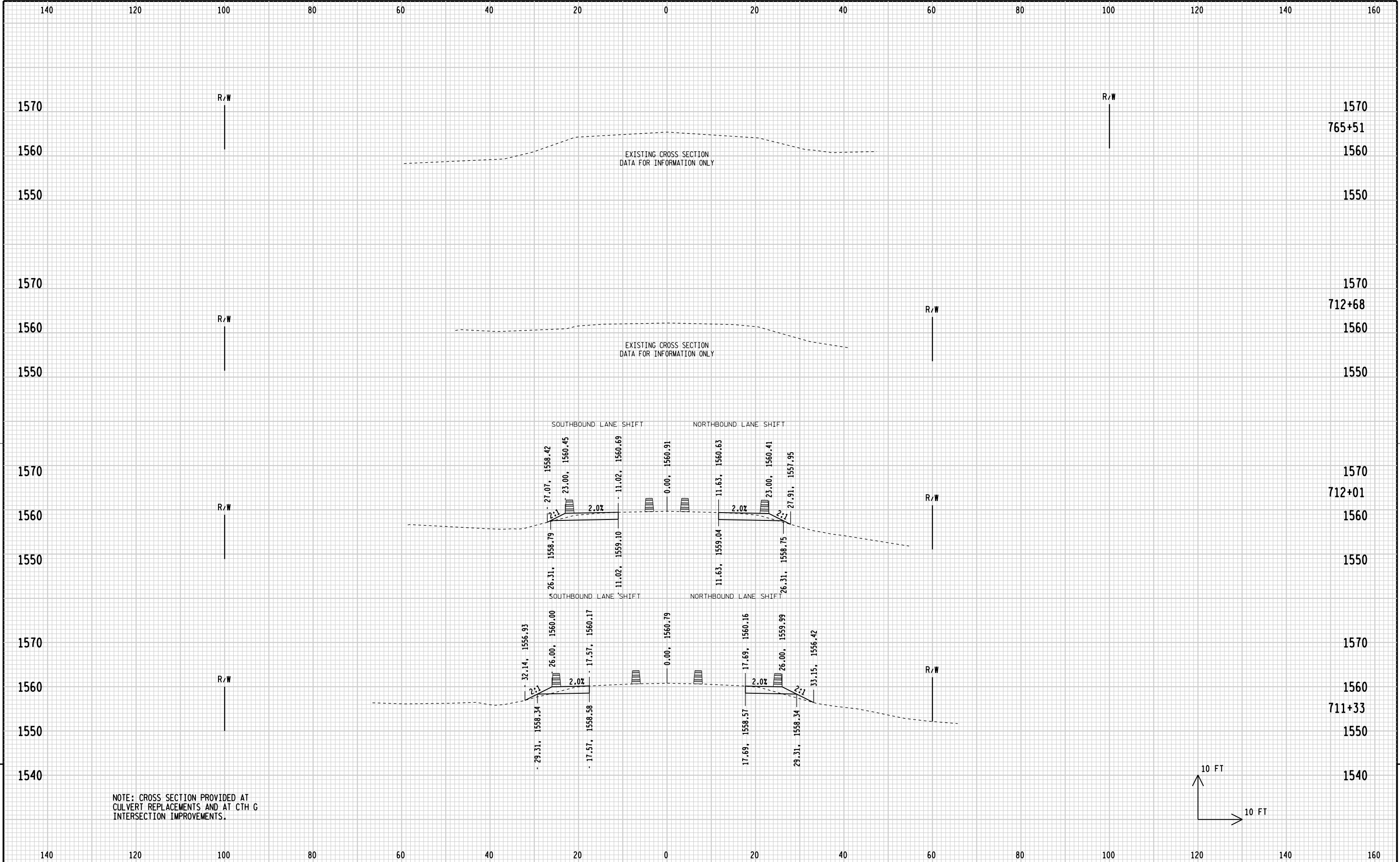
NOTE: CROSS SECTION PROVIDED AT
CULVERT REPLACEMENTS AND AT CTH G
INTERSECTION IMPROVEMENTS.

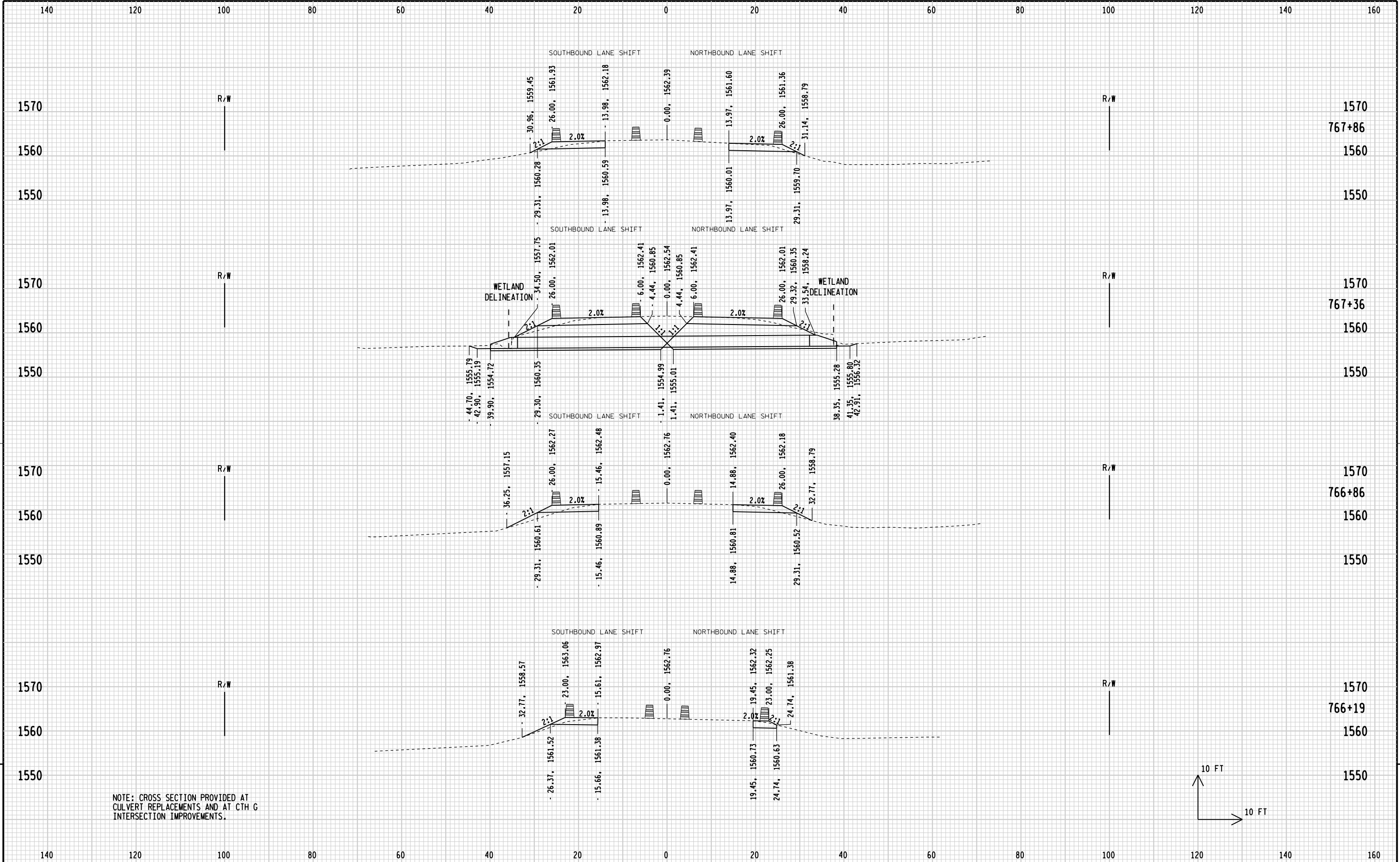




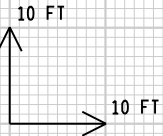


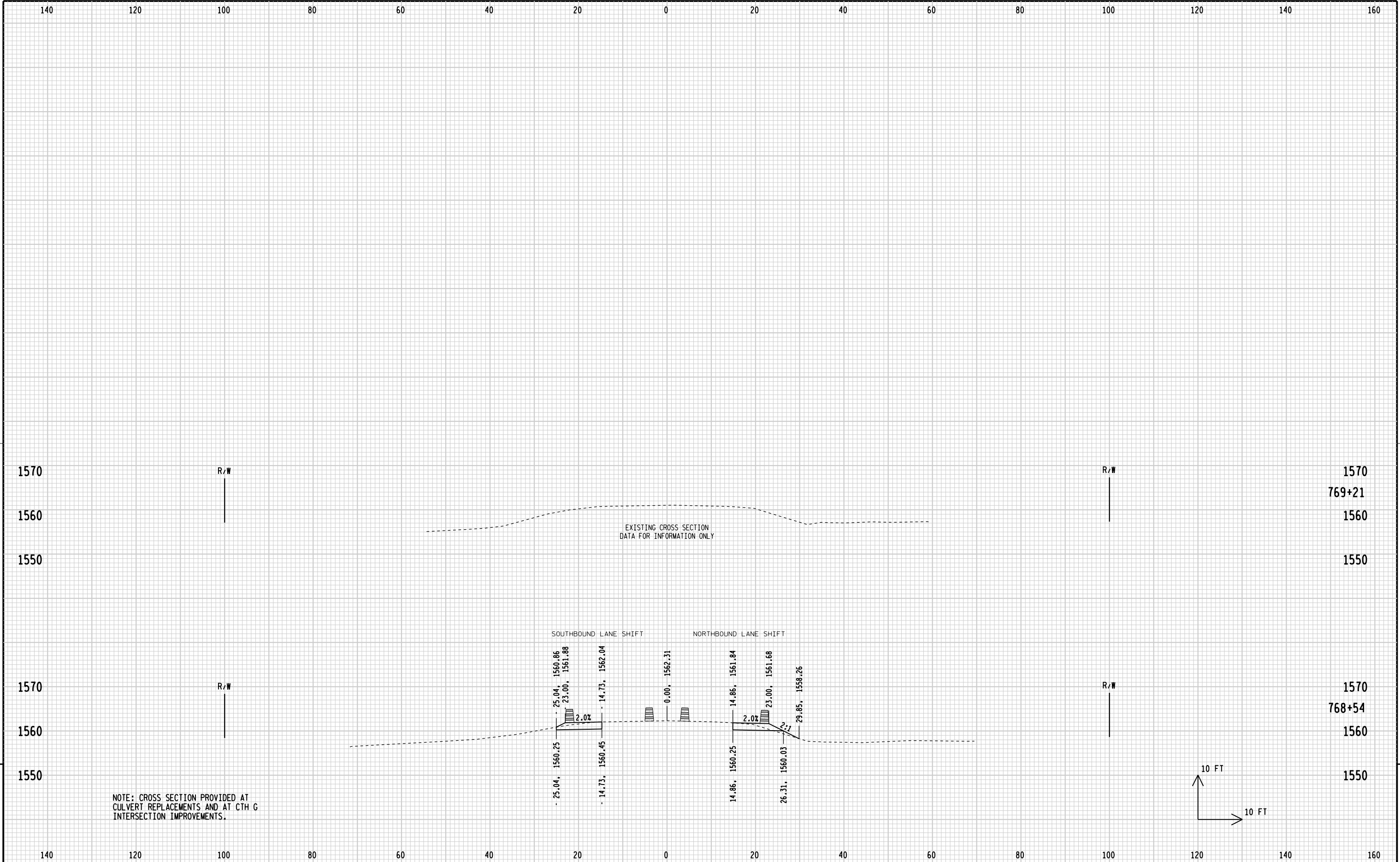
NOTE: CROSS SECTION PROVIDED AT
CULVERT REPLACEMENTS AND AT CTH G
INTERSECTION IMPROVEMENTS.



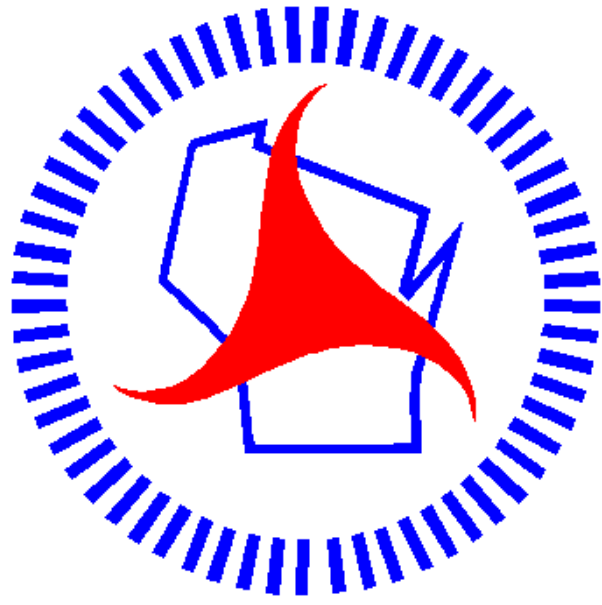


NOTE: CROSS SECTION PROVIDED AT
CULVERT REPLACEMENTS AND AT CTH G
INTERSECTION IMPROVEMENTS.





STATE PROJECT NUMBER:1175-19-60			HWY:USH 51			COUNTY:IRON			CROSS SECTIONS: TRAFFIC CONTROL LANE SHIFT			SHEET			E		
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