

RHI

PROJECT ID: 1600-29-71

COUNTY: ONEIDA

AUGUST 2025
ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile (Includes Erosion Control Plan)
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 = 172



DESIGN DESIGNATION

A.A.D.T.	2027	=	1780
A.A.D.T.	2047	=	1780
D.H.V.		=	237
D.D.		=	61/39
T.		=	15.9%
DESIGN SPEED		=	60 MPH
ESALS		=	520,000

CONVENTIONAL SYMBOLS

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

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

ROCK	
LABEL	
SCALE	
E	
FO	
G	
SAN	
SS	
T	
W	
W	
W	

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MONICO - EAGLE RIVER

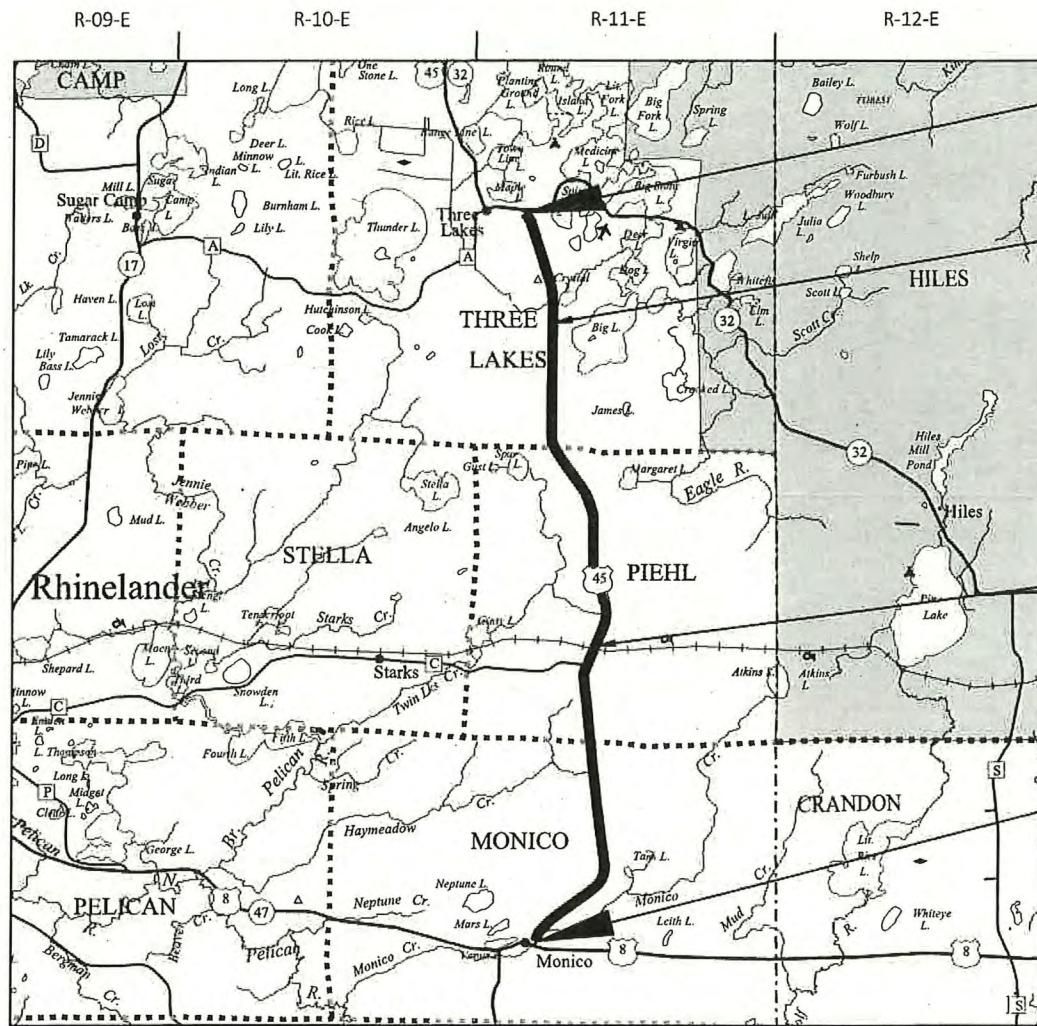
USH 8 TO STH 32

USH 45

ONEIDA COUNTY

STATE PROJECT NUMBER

1600-29-71



END PROJECT
STA 874+83.91

STRUCTURE C-43-0008

T-38-N

STRUCTURE B-43-0015
NET EXCEPTION TO CL LENGTH
STA 372+78.50 - 374+12.83

T-37-N

BEGIN PROJECT
STA 11+05.57
Y = 142,553.144
X = 331,074.655

T-36-N

LAYOUT
SCALE 0 4 MI

TOTAL NET LENGTH OF CENTERLINE = 16.334 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), ONEIDA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18

STATE PROJECT

1600-29-71

FEDERAL PROJECT

PROJECT

CONTRACT

ORIGINAL PLANS PREPARED BY

ISG



DATE: 4/10/2025
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	I & S GROUP, INC
Designer	I & S GROUP, INC
Project Manager	FELIX OGLES, PE
Regional Examiner	FRED SCHUNK, PE
Regional Supervisor	ELIZABETH NEMEC, PE

APPROVED FOR THE DEPARTMENT
DATE: 4/21/2025
(Signature)

E

GENERAL NOTES

- THE LOCATIONS OF EISTING AND ROOSED UTILITY INSTALLATIONS AS SHON ON THE LAN ARE AROIAE THERE AY E OTHER UTILITY INSTALLATIONS ITHIN THE ROECT AREA THAT ARE NOT SHON
- FERTILIER SHALL NOT E USED ITHIN 2 FEET OF NAIGALE ATERAYS OR ETLANDS
- RIOR TO THE LACEENT OF GS GUARDRAIL THE SHOULDERS SHALL E IN LACE SHAED AND COACTED UNLESS SHON OTHERWISE
- HA AEENT EIGHT CALCULATIONS ARE ASED ON 2 LSYIN

DNR LIAISON

WENDY HENNIGES
DEPARTMENT OF NATURAL RESOURCES
107 SUTLIFF AVE
RHINELANDER, WI 54501
.....
ENDYHENNIGESISCONSINGO

STANDARD AREIATIONS

AC	ACRE	LC	LONG CHORD
AGG	AGGREGATE	LS	LU SU
<	ANGLE	M.P.	ARER OST
AE AE	ARON ENDALL	GAL	GALLONS
ASH	ASHALTIC	NC	NORAL CRON
ADT	AERAGE DAILY TRAFFIC	N	NORTH
AADT	ANNUAL AERAGE DAILY TRAFFIC	N	NORTHOUND
F	AC FACE	NOR	NORAL
BM	ENCHAR	NO	NUER
TN	ETEEN	AT	AEENT
CTR	CENTER	LE	ERANENT LIITED EASEENT
CL	CENTER LINE	C	OINT OF CURATURE
?	CENTRAL ANGLE OR DELTA	I	OINT OF INTERSECTION
CE	COERCIAL ENTRANCE	T	OINT OF TANGENCY
CONST	CONSTRUCTION	CC	ORTLAND CEENT CONCRETE
CC	CORRUGATED ETAL CULERT IE	E	RIATE ENTRANCE
C	CORRUGATED ETAL IE	GL	ROFILE GRADE LINE
CO	COUNTY	L	ROERTY LINE
CTH	COUNTY TRUN HIGHAY	R	RADIUS OR RANGE
CR	CREE	RL	REFERENCE LINE
CAC	CRUSHED AGGREGATE ASE COURSE	RCC	REINFORCED CONCRETE CULERT IE
CY	CUIC YARD	RED	REUIRED
C	CONTROL OINT OR CULERT IE	RT	RIGHT
CG	CUR AND GUTTER	RHF	RIGHT HAND FORARD
D	DEGREE OF CURE	R	RIGHT OF AY
DH	DESIGN HOURLY OLU	RD	ROAD
DIA	DIAETER	SHLD	SHOULDERS
DD	DIRECTIONAL DISTRIUTION	SHR	SHRINAGE
DISCH	DISCHARGE	S	SOUTH
DS	DYNAIC ESSAGE SIGN	S	SOUTHOUND
EA	EACH	SF	SUARE FOOT FEET
E	EAST	SDD	STANDARD DETAIL DRAINGS
E	EASTOUND	STH	STATE TRUN HIGHAY
ELEC	ELECTRICAL ELEC CALE	STA	STATION
EL ELE	ELEATION	SE	SUERELEATION
ESALS	EUIALENT SINGLE ALE LOADS	SL	SUREY LINE
EC	ECAATION	SY	SYETRICAL
EIST	EISTING	T	ERCENT TRUCS
FF	FACE TO FACE	TEL	TELEPHONE
FERT	FERTILIER	TE	TEORARY
FE	FIELD ENTRANCE	TLE	TEORARY LIITED EASEENT
FL FL	FLO LINE	TOC	TO OF CUR
GAL	GALANIE	TY	TYICAL
HS	HIGH STRENGTH	UNCL	UNCLASSIFIED
CT	HUNDRED EIGHT	UG	UNDERGROUND CALE
INL	INLET	AR	ARIALE
INTER	INTERSECTION	C	ERTICAL CURE
IH	INTERSTATE HIGHAY	C	ERTICAL OINT OF CURATURE
T	OINT	I	ERTICAL OINT OF INTERSECTION
LT	LEFT	T	ERTICAL OINT OF TANGENCY
LHF	LEFT HAND FORARD	Wt.	EIGHT
L	LENGTH OF CURE	W	EST
LF	LINEAR FOOTFEET	WB	ESTOUND

UTILITY CONTACTS

ANR PIPELINE CO (GSPTR)
DEVON SHUMAKER
N4956 OAKCREST DRIVE
BONDUEL, WI 54107
(269) 286-3502
DEVON_SHUMAKER@TCENERGY.COM

ATC MANAGEMENT, INC (ELCTY)
DOUG VOSBERG
2489 RINDEN ROAD
COTTAGE GROVE, WI 53527
(608) 877-3692
DVOSBERG@ATCLLC.COM

BUG TUSSEL WIRELESS LLC (COMLN)
DUSTIN TEAFF
1262 CAMBER COURT
DE PERE, WI 54301
(920) 254-3539
DUSTIN.TEAFF@BTUSSEL.COM

NSIGHT TELESERVICES (COMLN)
RICK VINCENT
470 SECURITY BLVD
GREEN BAY, WI 54313
(920) 617-7316
RICK.VINCENT@NSIGHT.COM

FRONTIER COMMUNICATIONS OF WI LLC (COMLN)
CHRIS POLLACK
521 N. 4th STREET
WAUSAU, WI 54403
(715) 847-1240 office
(715) 297-4773 mobile
CHRISTOPHER.POLLAK@FTR.COM

SPECTRUM (COMLN)
JASON GOERTZ
853 MCINTOSH STREET
WAUSAU, WI 54403
(715) 527-0183
JASON.GOERTZ@CHARTER.COM

WISCONSIN PUBLIC SERVICE CORPORATION (ELCTY)
SCOTT KOLINSKI
2027 NAVAJO STREET
RHINELANDER, WI 54501
(715) 499-2577
SCOTT.KOLINSKI@WISCONSINPUBLICSERVICES.COM

WISCONSIN PUBLIC SERVICE CORPORATION (GSPTR)
SHANE SARKKINEN
2027 NAVAJO STREET
RHINELANDER, WI 54501
(715) 966-1040
SHANE.SARKKINEN@WISCONSINPUBLICSERVICES.COM



Dial **811** or (800)242-8511
www.DiggersHotline.com

ORDER OF SECTION 2 DETAIL SHEETS

- GENERAL NOTES
- ROECT OERIE
- TYICAL SECTIONS
- CONSTRUCTION DETAILS
- REOAL DETAIL
- LAN DETAILS CROSS CULERTS
- LAN DETAIL AYSIDE
- AEENT ARING
- ADANCE ARNING SIGNING

REFERENCE LINE CALLOUTS

USH
S AYSIDE

2

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 = 122.3 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 6.7 ACRES

2

CONTROL POINT TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
1	11+39.02	71.61 RT	142576.38	331150.20	1616.54
2	25+39.33	68.69 LT	143956.91	331398.60	1605.40
3	36+79.34	49.00 RT	144734.72	332248.71	1602.10
4	43+95.07	43.14 RT	145241.61	332750.97	1604.95
5	55+80.62	36.56 LT	146020.88	333643.07	1608.95
6	63+06.40	49.87 RT	146384.35	334277.20	1609.28
7	71+95.83	55.03 RT	146910.67	334994.21	1612.78
8	81+94.99	53.94 RT	147507.43	335795.58	1615.27
9	82+98.18	51.65 LT	147653.72	335815.43	1615.31
10	89+66.65	33.26 RT	147984.24	336402.65	1613.81
11	97+32.66	52.84 LT	148510.19	336966.17	1621.27
12	102+34.70	47.70 RT	148728.90	337429.12	1620.77
13	111+59.87	42.51 RT	149372.83	338105.41	1619.13
14	118+65.08	47.38 RT	149985.06	338473.74	1624.87
15	127+03.21	49.65 RT	150804.01	338698.73	1622.30

CONTROL POINT TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
16	132+68.90	47.15 LT	151370.88	338613.99	1625.52
17	149+21.71	32.52 RT	153017.02	338473.39	1636.50
18	161+59.92	41.71 LT	154233.66	338231.57	1642.85
19	177+83.04	34.34 LT	155842.71	338018.27	1650.33
20	196+69.68	58.92 LT	157710.37	337742.28	1652.23
21	217+94.06	55.00 RT	159834.75	337622.47	1644.36
22	231+24.67	58.52 LT	161144.92	337363.93	1644.53
23	248+21.02	50.40 LT	162831.97	337186.24	1644.36
24	266+93.67	48.72 RT	164704.20	337079.70	1657.38
25	284+06.94	57.85 LT	166395.50	336786.16	1654.83
26	301+92.72	32.20 RT	168180.41	336680.12	1648.05
27	319+08.71	40.99 LT	169878.06	336419.46	1644.35
28	332+58.85	64.29 RT	171231.61	336376.27	1641.64
29	341+43.75	60.40 LT	172107.21	336176.74	1644.06
30	368+96.92	26.24 RT	174675.42	337178.67	1679.74

CONTROL POINT TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
31	377+86.29	29.44 LT	175516.71	337472.41	1681.63
32	398+98.85	59.00 RT	177429.48	338373.55	1653.94
33	414+97.21	28.81 RT	179000.74	338694.90	1647.06
34	428+41.22	33.53 RT	180331.50	338479.99	1653.27
35	448+11.74	39.45 RT	182189.43	337823.06	1661.57
36	463+21.18	46.00 LT	183590.97	337247.29	1653.76
37	491+11.12	67.51 RT	186385.53	337261.90	1649.23
38	502+09.49	69.77 LT	187483.02	337117.75	1650.93
39	519+07.56	46.86 RT	189181.78	337223.75	1650.91
40	530+04.78	42.74 RT	190278.80	337091.17	1654.69
41	547+79.99	43.69 RT	191945.07	336467.94	1667.84
42	566+36.88	37.35 LT	193459.17	335390.99	1665.98
43	586+61.81	54.57 LT	195072.55	334166.65	1657.83
44	600+95.21	44.99 RT	196324.49	333457.56	1656.55
45	615+32.48	51.33 LT	197513.50	332635.28	1671.95

CONTROL POINT TABLE					
POINT	STATION	OFFSET	Y COORDS	X COORDS	ELEVATION
46	630+62.57	29.03 RT	199046.65	332591.70	1666.87
47	650+30.28	29.67 RT	201014.35	332598.60	1650.82
48	664+52.80	43.88 LT	202437.10	332529.57	1644.95
49	671+27.28	43.94 RT	203111.30	332619.54	1643.87
50	691+34.64	36.47 RT	205118.68	332618.46	1646.02
51	715+75.37	49.73 LT	207560.09	332546.55	1660.86
52	736+85.21	38.21 RT	209668.93	332660.91	1638.61
53	761+70.44	44.29 RT	212154.09	332680.20	1643.28
54	777+65.08	33.58 LT	213745.91	332540.98	1638.62
55	788+05.60	37.94 RT	214784.78	332461.30	1640.91
56	822+40.58	54.30 RT	218068.46	331444.36	1659.66
57	842+01.35	34.77 RT	219930.02	330828.23	1639.44
58	869+25.32	46.10 RT	222512.30	329939.73	1660.64
59	872+87.87	387.91 RT	223040.14	329946.68	1676.40
60	880+04.68	40.56 RT	223207.83	329101.16	1675.46

PROJECT NO:1600-29-71

HWY: USH 45

COUNTY: ONEIDA

GENERAL NOTES

SHEET

E

FILE NAME : W:\16002901\SHEETS\020101-GN.DWG

LAYOUT NAME - 020102-gn

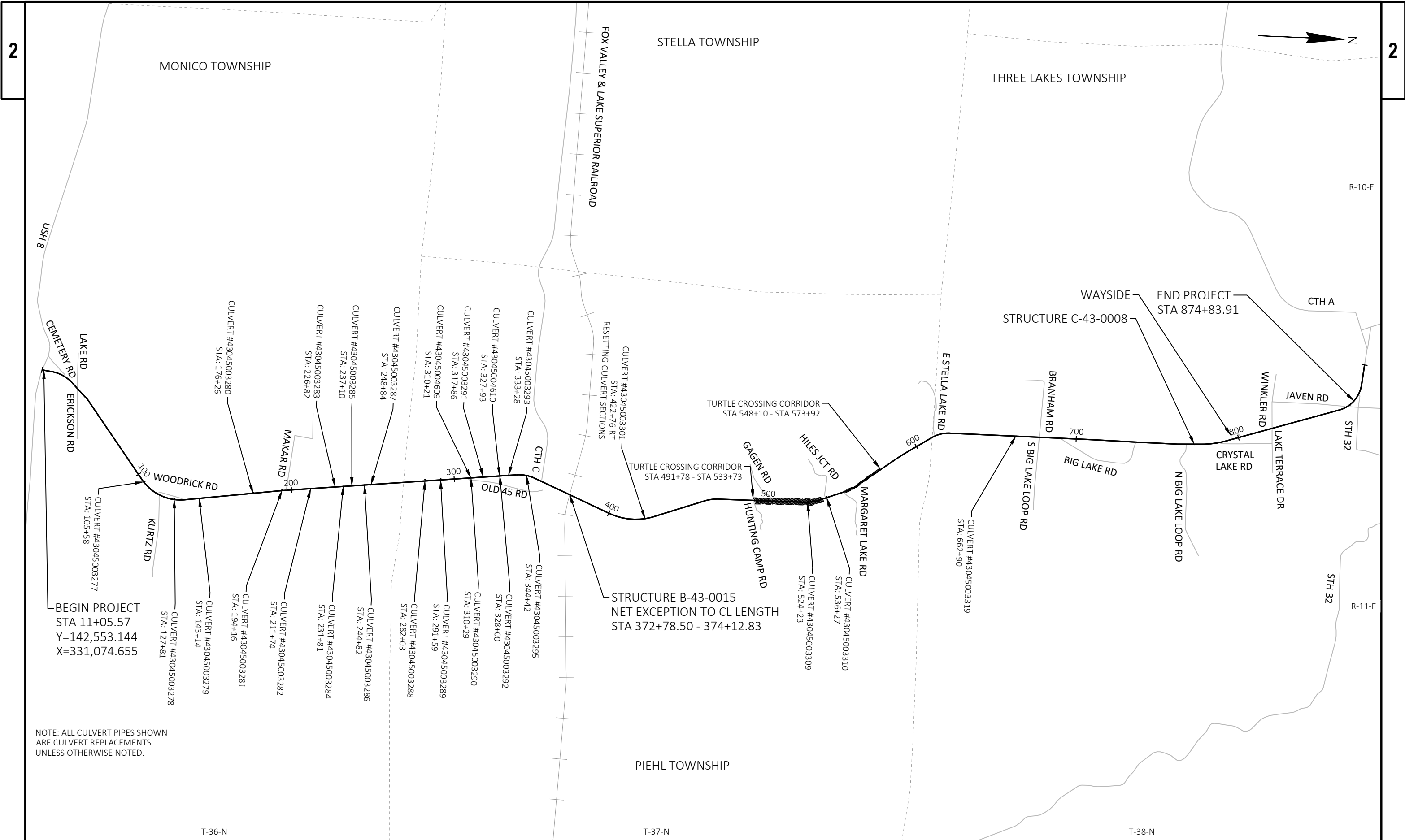
PLOT DATE : 4/24/2025 1:44 PM

PLOT BY : CORONA WOYCHIK

PLOT NAME :

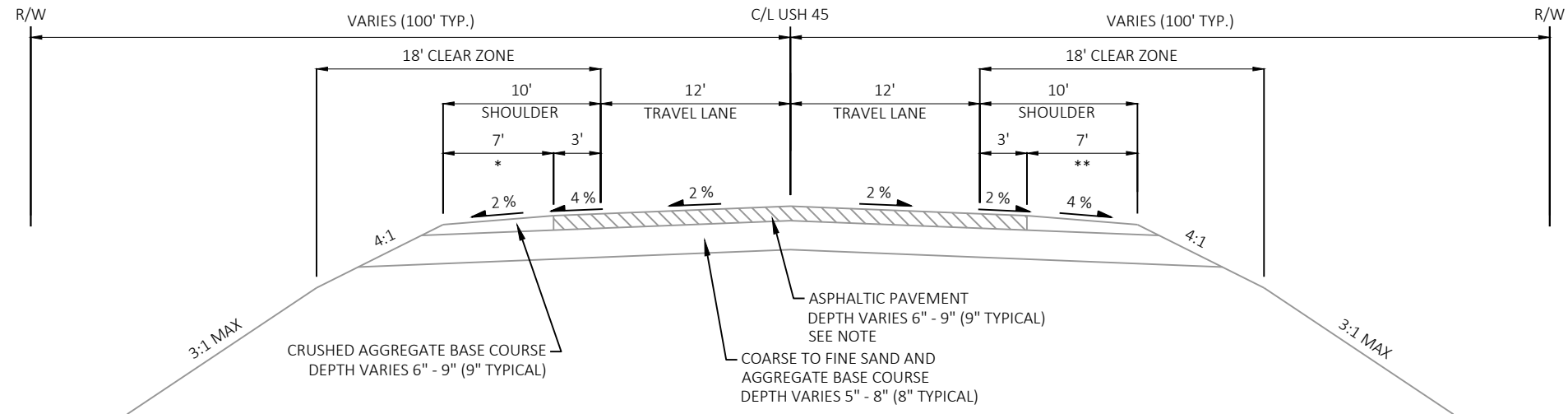
PLOT SCALE : 1 IN:10 FT

WISDOT/CADDs SHEET 42

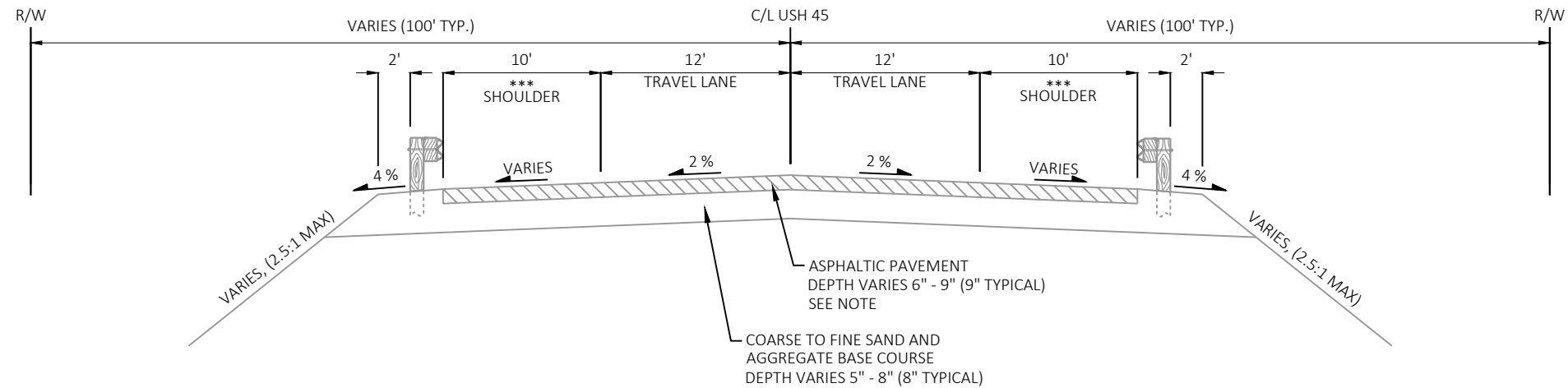


NOTE: ALL CULVERT PIPES SHOWN
ARE CULVERT REPLACEMENTS
UNLESS OTHERWISE NOTED.

PROJECT NO: 1600-29-71	HWY: USH 45	COUNTY: ONEIDA	PROJECT OVERVIEW	SHEET	E
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**EXISTING TYPICAL SECTION**

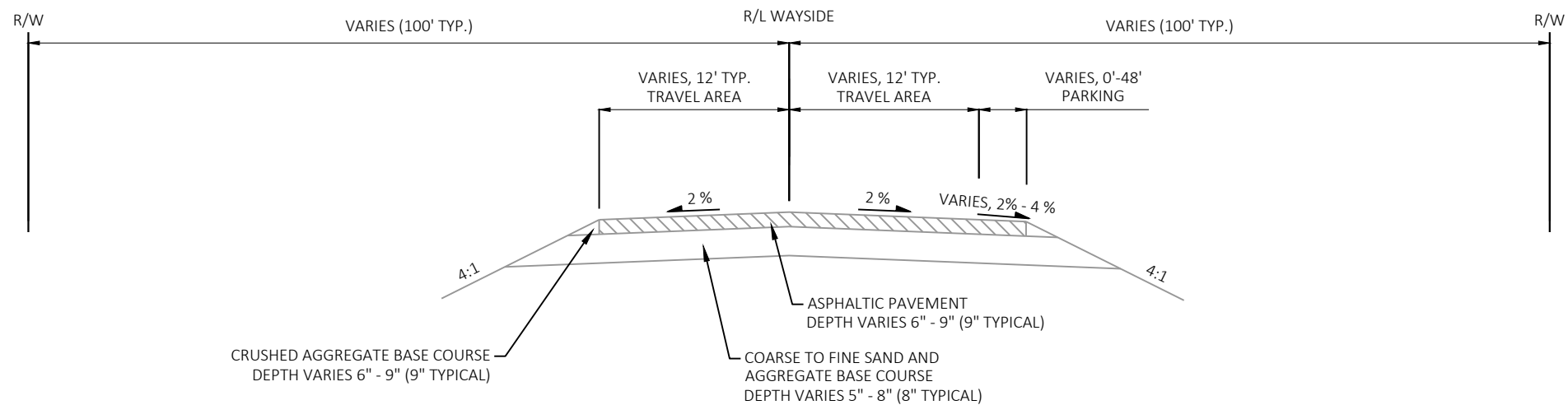
STA 11+06 - 371+59
STA 372+78 - 374+13
STA 375+62 - 770+98
STA 773+66 - 874+84

**EXISTING TYPICAL SECTION**

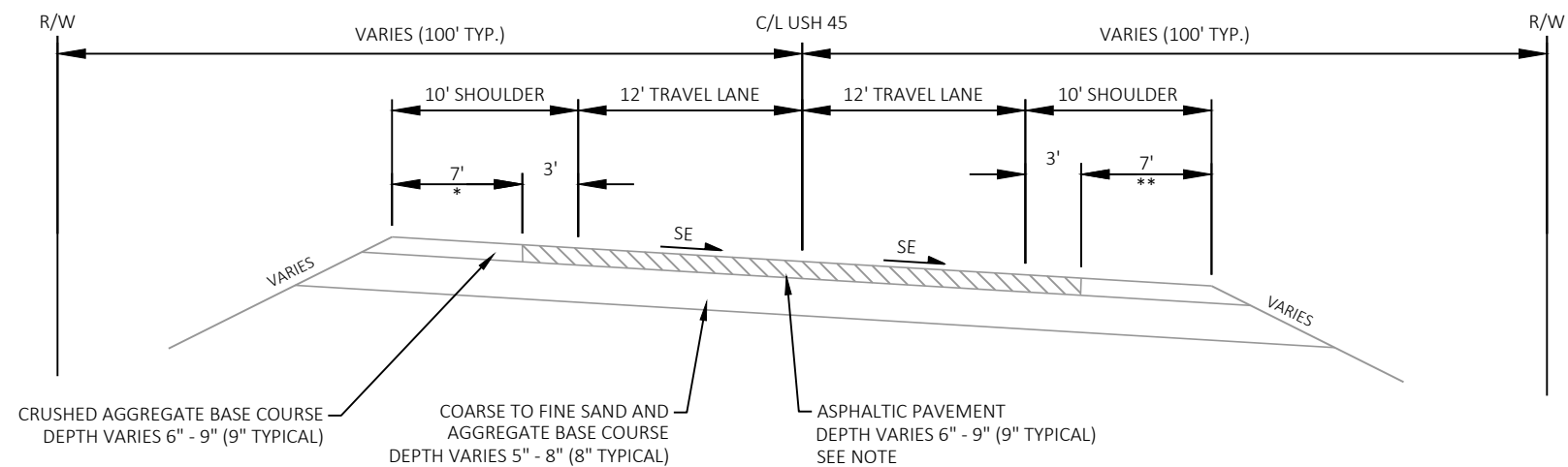
STA 371+59 - 372+78
STA 374+13 - 375+62
STA 770+98 - 773+66

* 10' TYPICAL STA 11+06 - 14+00
STA 869+65 - 874+84
** 10' TYPICAL STA 11+06 - 35+00
*** 7' TYPICAL STA 770+98 - 773+66

NOTE
PAVEMENT THICKNESS DETERMINED USING
ASBUILTS AND PAVEMENT CORES AT:
- STA 71+40 (7.5" ASPHALTIC PAVEMENT)
- STA 201+00 (9" ASPHALTIC PAVEMENT)
- STA 300+50 (7" ASPHALTIC PAVEMENT)
- STA 361+00 (6" ASPHALTIC PAVEMENT)
- STA 446+70 (8" ASPHALTIC PAVEMENT)
- STA 649+00 (9" ASPHALTIC PAVEMENT)
- STA 759+20 (9" ASPHALTIC PAVEMENT)
- STA 844+30 (9" ASPHALTIC PAVEMENT)



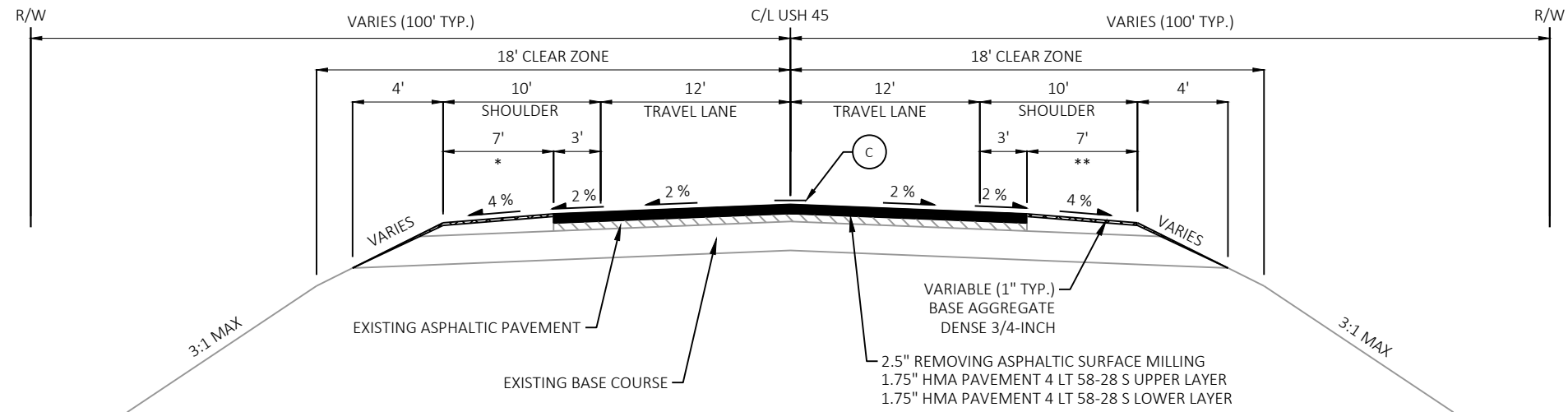
EXISTING TYPICAL SECTION - WAYSIDE
STA 10+21 "WS" - STA 19+20 "WS"



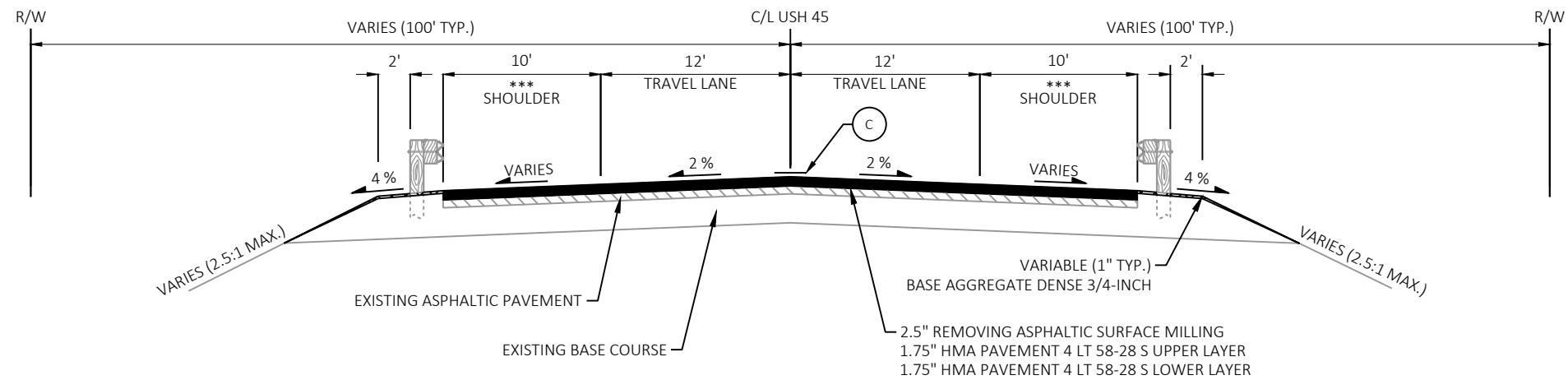
EXISTING SUPERELEVATED SECTION
SEE SUPERELEVATION REPORT FOR LOCATIONS

* 10' TYPICAL STA 11+06 - 14+00
STA 869+65 - 874+84
** 10' TYPICAL STA 11+06 - 35+00
*** 7' TYPICAL STA 770+98 - 773+66

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- STA 649+00 (9" ASPHALTIC PAVEMENT)
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- STA 844+30 (9" ASPHALTIC PAVEMENT)

**PROPOSED TYPICAL SECTION**

STA 11+06 - 371+59
STA 372+78 - 374+13
STA 375+62 - 770+98
STA 773+66 - 874+84

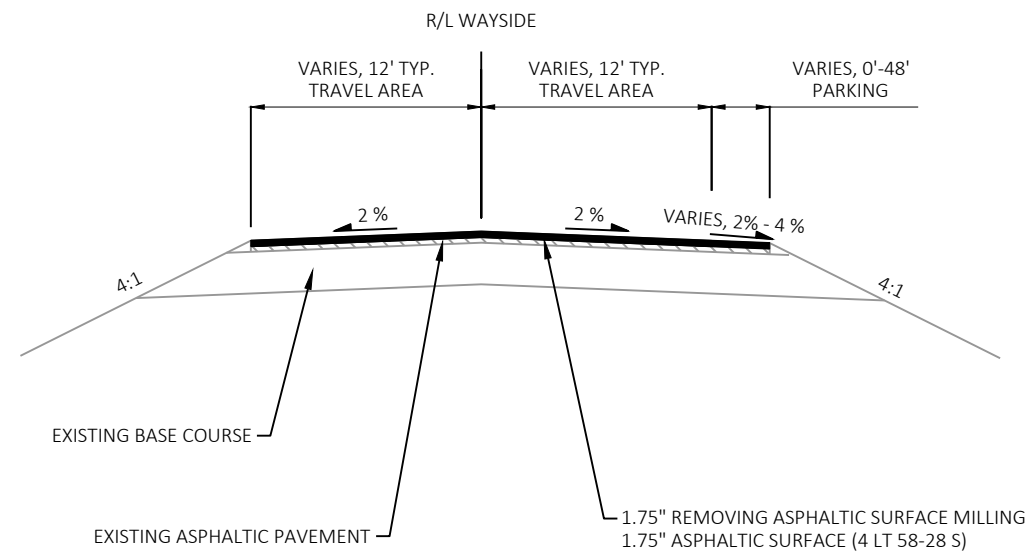
**PROPOSED TYPICAL SECTION**

STA 371+59 - 372+78
STA 374+13 - 375+62
STA 770+98 - 773+66

* 10' TYPICAL STA 11+06 - 14+00
STA 869+65 - 874+84
** 10' TYPICAL STA 11+06 - 35+00
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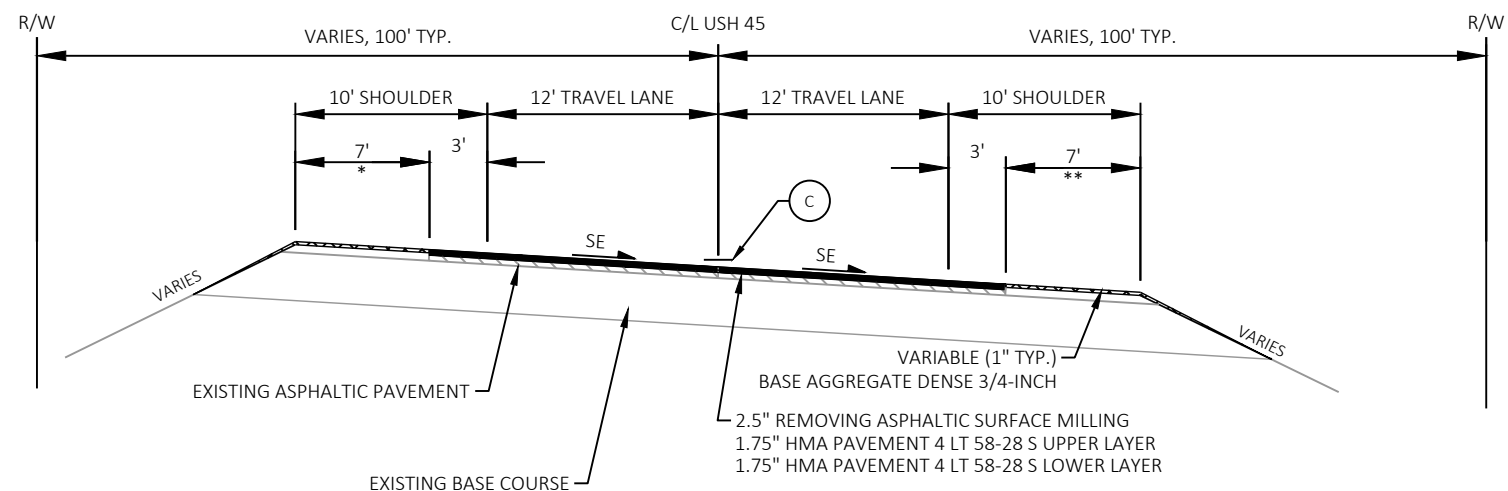
NOTE:

- IN AREAS WITH PAVED SHOULDERS OR GUARDRAIL, CONTRACTOR TO MATCH EXISTING PAVING WIDTHS
- GUARDRAIL THAT IS REMAINING IN PLACE, MILL/PAVE WITHIN 6" OF GUARDRAIL FACE IN EACH LANE
- (C) = ASPHALTIC RUMBLE STRIPS, CENTERLINE SINUSOIDAL



PROPOSED TYPICAL SECTION - WAYSIDE

STA 10+21 "WS" - STA 19+20 "WS"



PROPOSED SUPERELVATED SECTION

* 10' TYPICAL STA 11+06 - 14+00
STA 869+65 - 874+84
** 10' TYPICAL STA 11+06 - 35+00
*** 7' TYPICAL STA 770+98 - 773+66

NOTE:

- IN AREAS WITH PAVED SHOULDERS OR GUARDRAIL, CONTRACTOR TO MATCH EXISTING PAVING WIDTHS
- GUARDRAIL THAT IS REMAINING IN PLACE, MILL/PAVE WITHIN 6" OF GUARDRAIL FACE IN EACH LANE
- **C** = ASPHALTIC RUMBLE STRIPS, CENTERLINE SINUSOIDAL

SUPERELEVATION REPORT

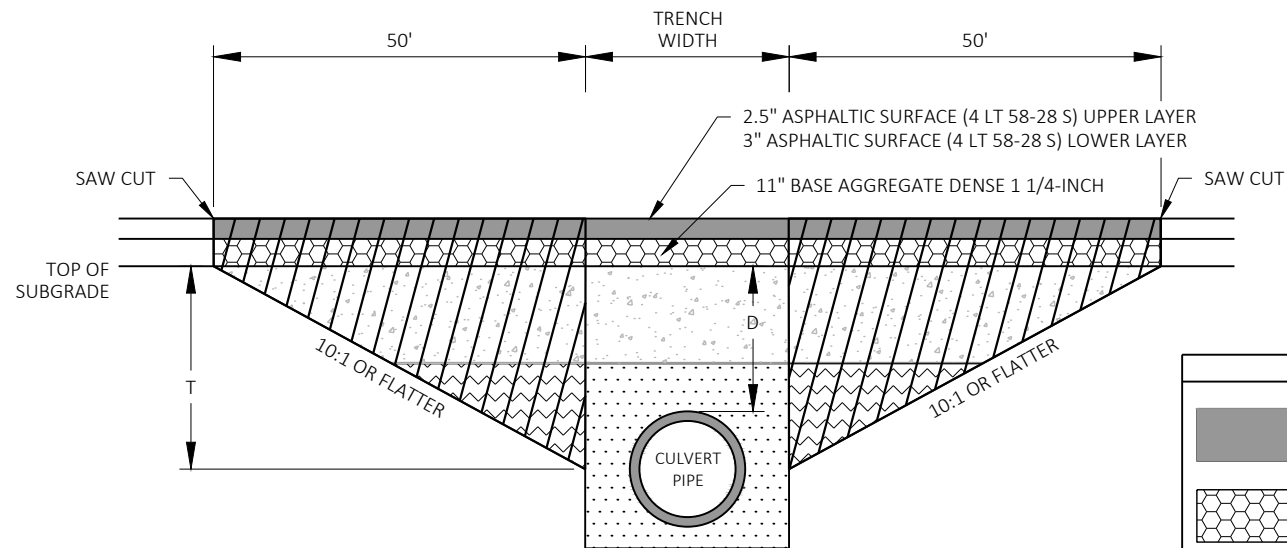
SUPERELEVATION REPORT FOR USH 45							
TRANSITION EVENT POINTS			RATE (FT/FT)				
LOCATION	STATION	LEFT OF CROWNLINE		RIGHT OF CROWNLINE			
		LEFT SHOULDER	LEFT LANE	RIGHT LANE	RIGHT SHOULDER		
CURVE 1							
EndNormalShoulder	14+56.13	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
EndNormalCrown	14+56.13	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
LevelCrown	15+09.46	0	0	-0.02	-0.02	-0.04	-0.04
ReverseCrown	15+62.80	0.02	0.02	-0.02	-0.02	-0.04	-0.04
LowShoulderMatch	16+16.13	0.04	0.04	-0.04	-0.04	-0.04	-0.04
BeginFullSuper	16+45.46	0.05	0.05	-0.05	-0.05	-0.05	-0.05
EndFullSuper	30+34.48	0.05	0.05	-0.05	-0.05	-0.05	-0.05
LowShoulderMatch	30+63.82	0.04	0.04	-0.04	-0.04	-0.04	-0.04
ReverseCrown	31+17.15	0.02	0.02	-0.02	-0.02	-0.04	-0.04
LevelCrown	31+70.48	0	0	-0.02	-0.02	-0.04	-0.04
BeginNormalCrown	32+23.82	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
BeginNormalShoulder	32+23.82	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
CURVE 2							
EndNormalShoulder	41+22.40	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
EndNormalCrown	41+22.40	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
LevelCrown	41+75.73	0	0	-0.02	-0.02	-0.04	-0.04
ReverseCrown	42+29.07	0.02	0.02	-0.02	-0.02	-0.04	-0.04
LowShoulderMatch	42+82.40	0.04	0.04	-0.04	-0.04	-0.04	-0.04
BeginFullSuper	42+95.73	0.044	0.044	-0.044	-0.044	-0.044	-0.044
EndFullSuper	46+38.20	0.044	0.044	-0.044	-0.044	-0.044	-0.044
LowShoulderMatch	46+51.54	0.04	0.04	-0.04	-0.04	-0.04	-0.04
ReverseCrown	47+04.87	0.02	0.02	-0.02	-0.02	-0.04	-0.04
LevelCrown	47+58.20	0	0	-0.02	-0.02	-0.04	-0.04
BeginNormalCrown	48+11.54	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
BeginNormalShoulder	48+11.54	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
CURVE 3							
EndNormalShoulder	102+41.95	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
EndNormalCrown	102+41.95	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
LevelCrown	102+95.28	-0.04	-0.02	0	0	0	0
ReverseCrown	103+48.61	-0.04	-0.02	-0.02	0.02	0.02	0.02
LowShoulderMatch	104+01.95	-0.04	-0.04	-0.04	0.04	0.04	0.04
BeginFullSuper	104+15.28	-0.04	-0.03	-0.03	0.03	0.03	0.03
EndFullSuper	133+95.25	-0.04	-0.03	-0.03	0.03	0.03	0.03
LowShoulderMatch	134+08.59	-0.04	-0.04	-0.04	0.04	0.04	0.04
ReverseCrown	134+61.92	-0.04	-0.02	-0.02	0.02	0.02	0.02
LevelCrown	135+15.25	-0.04	-0.02	-0.02	0	0	0
BeginNormalCrown	135+68.59	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
BeginNormalShoulder	135+68.59	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
CURVE 4							
CURVE 5							
EndNormalShoulder	336+84.25	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
EndNormalCrown	336+84.25	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
LevelCrown	337+37.59	0	0	-0.02	-0.02	-0.04	-0.04
ReverseCrown	337+90.92	0.02	0.02	-0.02	-0.02	-0.04	-0.04
LowShoulderMatch	338+44.25	0.04	0.04	-0.04	-0.04	-0.04	-0.04
BeginFullSuper	338+73.59	0.057	0.057	-0.057	-0.057	-0.057	-0.057
EndFullSuper	349+47.55	0.057	0.057	-0.057	-0.057	-0.057	-0.057
LowShoulderMatch	349+76.89	0.04	0.04	-0.04	-0.04	-0.04	-0.04
ReverseCrown	350+30.22	0.02	0.02	-0.02	-0.02	-0.04	-0.04
LevelCrown	350+83.55	0	0	-0.02	-0.02	-0.04	-0.04
BeginNormalCrown	351+36.89	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
BeginNormalShoulder	351+36.89	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
CURVE 6							
EndNormalShoulder	399+03.05	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
EndNormalCrown	399+03.05	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
LevelCrown	399+56.56	-0.04	-0.02	0	0	0	0
ReverseCrown	400+10.07	-0.04	-0.02	0.02	0.02	0.02	0.02
BeginFullSuper	400+55.56	-0.044	-0.044	0.044	0.044	0.044	0.044
EndFullSuper	428+21.22	-0.044	-0.044	0.044	0.044	0.044	0.044
ReverseCrown	428+66.70	-0.04	-0.02	0.02	0.02	0.02	0.02
LevelCrown	429+20.22	-0.04	-0.02	0	0	0	0
BeginNormalCrown	429+73.73	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
BeginNormalShoulder	429+73.73	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
CURVE 7							
EndNormalShoulder	459+02.61	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
EndNormalCrown	459+02.61	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
LevelCrown	459+55.94	0	0	-0.02	-0.02	-0.04	-0.04
ReverseCrown	460+09.28	0.02	0.02	-0.02	-0.02	-0.04	-0.04
LowShoulderMatch	460+62.61	0.04	0.04	-0.04	-0.04	-0.04	-0.04
BeginFullSuper	460+75.94	0.05	0.05	-0.05	-0.05	-0.05	-0.05
EndFullSuper	469+60.31	0.05	0.05	-0.05	-0.05	-0.05	-0.05
LowShoulderMatch	469+73.64	0.04	0.04	-0.04	-0.04	-0.04	-0.04
ReverseCrown	470+26.97	0.02	0.02	-0.02	-0.02	-0.04	-0.04
LevelCrown	470+80.31	0	0	-0.02	-0.02	-0.04	-0.04
BeginNormalCrown	471+33.64	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04
BeginNormalShoulder	471+33.64	-0.04	-0.02	-0.02	-0.02	-0.04	-0.04

NOTE:
SUPERELEVATION REPORT REFLECTS EXISTING
CONDITIONS (FIELD SURVEY AND AS-BUILTS)

SUPERELEVATION REPORT (CONTINUED)

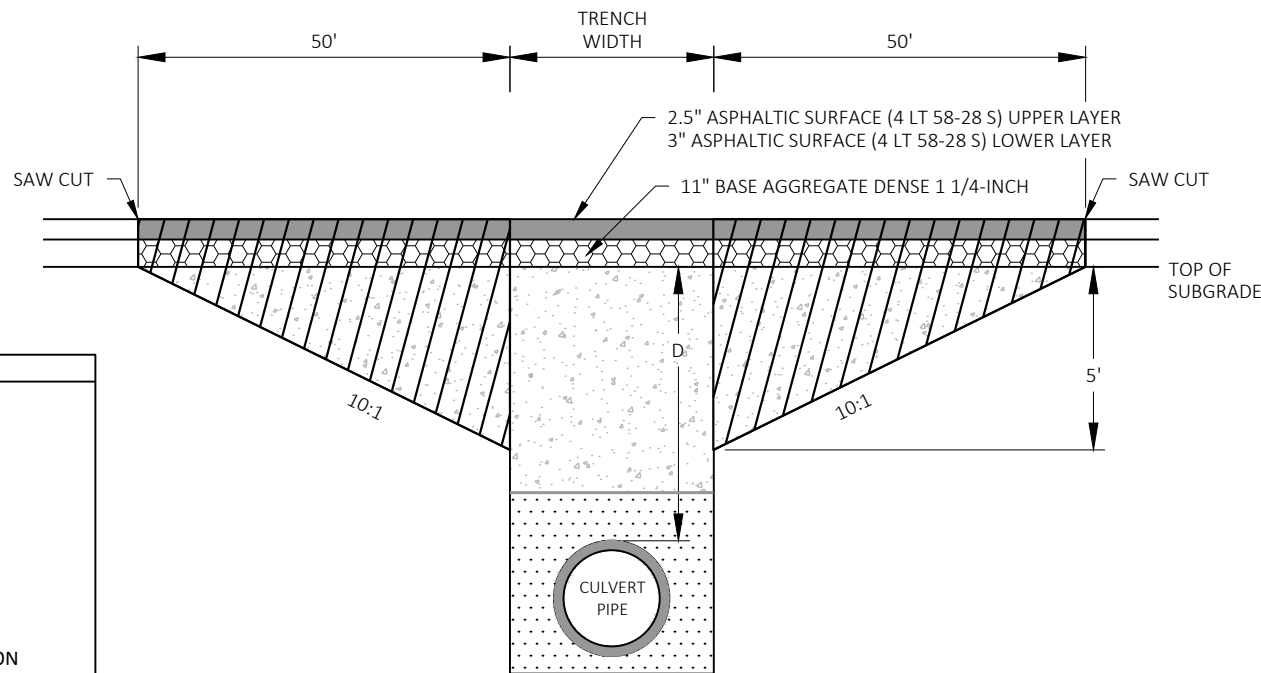
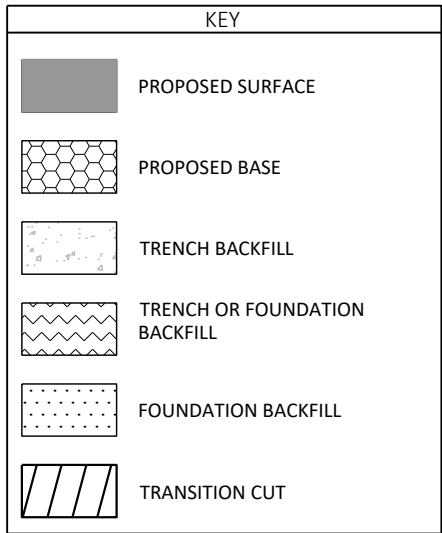
SUPERELEVATION REPORT FOR USH 45						
TRANSITION EVENT POINTS		RATE (FT/FT)				
LOCATION	STATION	LEFT OF CROWNLINE		RIGHT OF CROWNLINE		RIGHT SHOULDER
		LEFT SHOULDER	LEFT LANE	RIGHT LANE	RIGHT SHOULDER	
CURVE 8						
EndNormalShoulder	520+40.03	-0.04	-0.02	-0.02	-0.04	-0.04
EndNormalCrown	520+40.03	-0.04	-0.02	-0.02	-0.04	-0.04
LevelCrown	520+93.36	-0.04	-0.02	0	0	0
ReverseCrown	521+46.69	-0.04	-0.02	0.02	0.02	0.02
LowShoulderMatch	522+00.03	-0.04	-0.04	0.04	0.04	0.04
BeginFullSuper	522+13.36	-0.05	-0.05	0.05	0.05	0.05
EndFullSuper	531+49.85	-0.05	-0.05	0.05	0.05	0.05
LowShoulderMatch	531+63.18	-0.04	-0.04	0.04	0.04	0.04
ReverseCrown	532+16.51	-0.04	-0.02	0.02	0.02	0.02
LevelCrown	532+69.85	-0.04	-0.02	0	0	0
BeginNormalCrown	533+23.18	-0.04	-0.02	-0.02	-0.04	-0.04
BeginNormalShoulder	533+23.18	-0.04	-0.02	-0.02	-0.04	-0.04
CURVE 9						
EndNormalShoulder	545+57.94	-0.04	-0.02	-0.02	-0.04	-0.04
EndNormalCrown	545+57.94	-0.04	-0.02	-0.02	-0.04	-0.04
LevelCrown	546+11.46	-0.04	-0.02	0	0	0
ReverseCrown	546+64.97	-0.04	-0.02	0.02	0.02	0.02
BeginFullSuper	547+10.46	-0.04	-0.04	0.04	0.04	0.04
EndFullSuper	557+12.69	-0.04	-0.04	0.04	0.04	0.04
ReverseCrown	557+58.18	-0.04	-0.02	0.02	0.02	0.02
LevelCrown	558+11.69	-0.04	-0.02	0	0	0
BeginNormalCrown	558+65.20	-0.04	-0.02	-0.02	-0.04	-0.04
BeginNormalShoulder	558+65.20	-0.04	-0.02	-0.02	-0.04	-0.04
CURVE 10						
EndNormalShoulder	585+17.40	-0.04	-0.02	-0.02	-0.04	-0.04
EndNormalCrown	585+17.40	-0.04	-0.02	-0.02	-0.04	-0.04
LevelCrown	585+70.40	0	0	-0.02	-0.04	-0.04
BeginFullSuper	586+23.40	0.02	0.02	-0.02	-0.04	-0.04
ReverseCrown	586+23.40	0.02	0.02	-0.02	-0.04	-0.04
EndFullSuper	591+82.04	0.02	0.02	-0.03	-0.04	-0.04
ReverseCrown	591+82.04	0.02	0.02	-0.03	-0.04	-0.04
LevelCrown	592+35.04	0	0	-0.03	-0.04	-0.04
BeginNormalCrown	592+88.04	-0.04	-0.02	-0.029	-0.04	-0.04
BeginNormalShoulder	592+88.04	-0.04	-0.02	-0.029	-0.04	-0.04
CURVE 11						
EndNormalShoulder	609+39.26	-0.04	-0.02	-0.021	-0.04	-0.04
EndNormalCrown	609+39.26	-0.04	-0.02	-0.021	-0.04	-0.04
LevelCrown	609+92.59	0	0	-0.02	-0.04	-0.04
ReverseCrown	610+45.92	0.02	0.02	-0.02	-0.04	-0.04
LowShoulderMatch	610+99.26	0.04	0.04	-0.04	-0.04	-0.04
BeginFullSuper	611+36.59	0.054	0.054	-0.054	-0.054	-0.054
EndFullSuper	621+98.81	0.054	0.054	-0.054	-0.054	-0.054
LowShoulderMatch	622+36.14	0.04	0.04	-0.04	-0.04	-0.04
ReverseCrown	622+89.48	0.02	0.02	-0.02	-0.04	-0.04
LevelCrown	623+42.81	0	0	-0.02	-0.04	-0.04
BeginNormalCrown	623+96.14	-0.04	-0.02	-0.02	-0.04	-0.04
BeginNormalShoulder	623+96.14	-0.04	-0.02	-0.02	-0.04	-0.04
CURVE 12						
EndNormalShoulder	775+80.07	-0.04	-0.02	-0.02	-0.04	-0.04
EndNormalCrown	775+80.07	-0.04	-0.02	-0.02	-0.04	-0.04
LevelCrown	776+33.40	-0.04	-0.02	0	0	0
ReverseCrown	776+86.74	-0.04	-0.02	0.02	0.02	0.02
BeginFullSuper	777+05.40	-0.04	-0.027	0.027	0.027	0.027
EndFullSuper	792+04.94	-0.04	-0.027	0.027	0.027	0.027
ReverseCrown	792+23.61	-0.04	-0.02	0.02	0.02	0.02
LevelCrown	792+76.94	-0.04	-0.02	0	0	0
BeginNormalCrown	793+30.27	-0.04	-0.02	-0.02	-0.04	-0.04
BeginNormalShoulder	793+30.27	-0.04	-0.02	-0.02	-0.04	-0.04
CURVE 13						
EndNormalShoulder	862+72.13	-0.04	-0.02	-0.02	-0.04	-0.04
EndNormalCrown	862+72.13	-0.04	-0.02	-0.02	-0.04	-0.04
LevelCrown	863+25.46	-0.04	-0.02	0	0	0
ReverseCrown	863+78.80	-0.04	-0.02	0.02	0.02	0.02
LowShoulderMatch	864+32.13	-0.04	-0.04	0.04	0.04	0.04
BeginFullSuper	864+77.46	-0.054	-0.054	0.054	0.054	0.054
EndFullSuper	870+67.32	-0.054	-0.054	0.054	0.054	0.054
LowShoulderMatch	871+12.65	-0.054	-0.054	0.054	0.054	0.054
ReverseCrown	871+65.98	-0.054	-0.054	0.054	0.054	0.054
LevelCrown	872+19.32	-0.054	-0.054	0.054	0.054	0.054
BeginNormalCrown	872+72.65	-0.054	-0.054	0.054	0.054	0.054
BeginNormalShoulder	872+72.65	-0.054	-0.054	0.054	0.054	0.054
CURVE 14						
EndNormalShoulder	869+66.52	-0.054	-0.054	0.054	0.054	0.054
EndNormalCrown	869+66.52	-0.054	-0.054	0.054	0.054	0.054
LevelCrown	870+19.97	-0.054	-0.054	0.054	0.054	0.054
ReverseCrown	870+73.43	-0.054	-0.054	0.054	0.054	0.054
LowShoulderMatch	871+26.88	-0.054	-0.054	0.054	0.054	0.054
BeginFullSuper	871+66.97	-0.054	-0.054	0.054	0.054	0.054
EndFullSuper	885+60.19	-0.054	-0.055	0.054	0.054	0.054
LowShoulderMatch	885+99.46	-0.04	-0.04	0.04	0.04	0.04
ReverseCrown	886+51.83	-0.04	-0.02	0.02	0.02	0.02
LevelCrown	887+04.19	-0.04	-0.02	0	0	0
BeginNormalCrown	887+57.65	-0.04	-0.02	-0.02	-0.04	-0.04
BeginNormalShoulder	887+57.65	-0.04	-0.02	-0.02	-0.04	-0.04

NOTE:
SUPERELEVATION REPORT REFLECTS EXISTING
CONDITIONS (FIELD SURVEY AND AS-BUILTS)



DEPTH D < 6 FT

TRANSITION CUT DEPTH (T) = THE LESSER OF DEPTH TO CENTER OF PIPE OR 5 FT.
DO NOT EXTEND TRANSITION CUT BELOW HORIZONTAL CENTER OF PIPE.



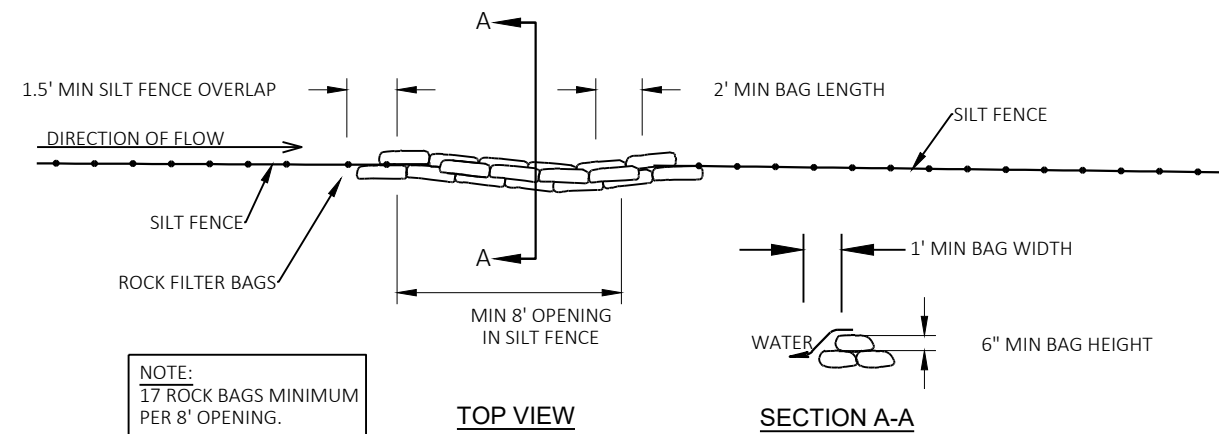
DEPTH D ≥ 6 FT

CULVERT PIPE TRANSITION

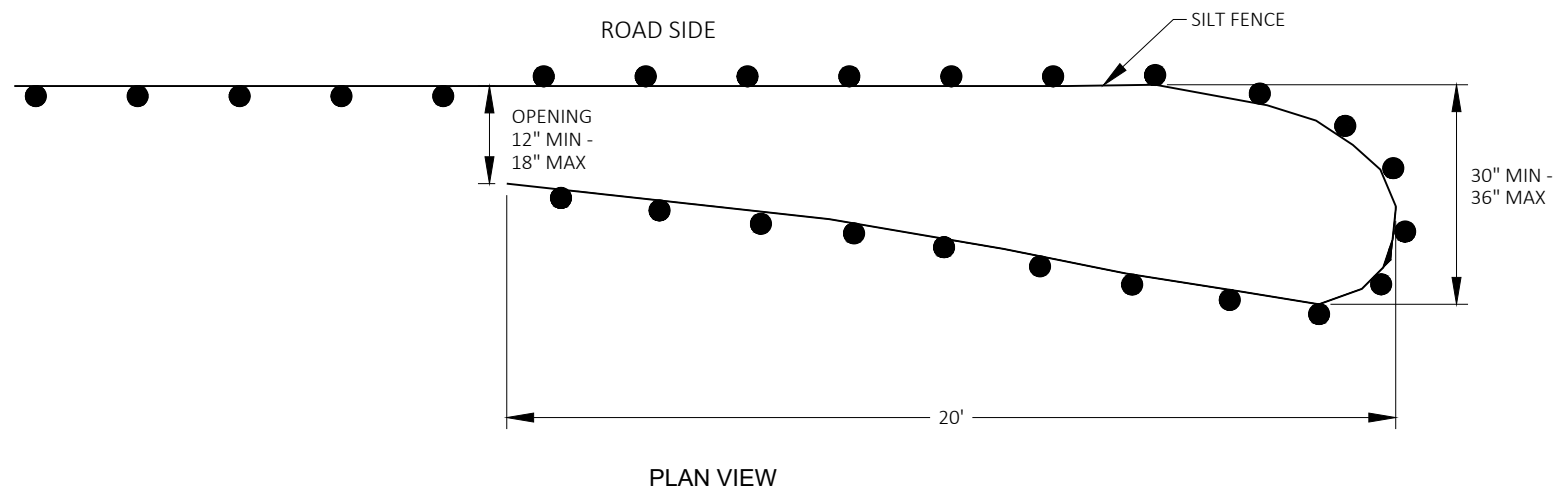
ROUTE	STA (CL)	DEPTH D (FT)	PIPE DIA (IN)	REMARKS
USH 45	105+58	4.0	48	CPRC CLASS IV
USH 45	127+81	2.1	36	CPRC CLASS IV
USH 45	143+14	2.9	36	CLASS III-A NON-METAL
USH 45	176+26	6.0	30	CLASS III-A NON-METAL
USH 45	194+16	6.7	30	CLASS III-A NON-METAL
USH 45	211+74	3.8	30	CLASS III-A NON-METAL
USH 45	226+82	3.7	30	CLASS III-A NON-METAL
USH 45	231+81	2.9	30	CLASS III-A NON-METAL
USH 45	237+10	0.4	60	CPRC CLASS IV
USH 45	244+82	3.2	30	CLASS III-A NON-METAL
USH 45	248+84	5.1	30	CLASS III-A NON-METAL
USH 45	282+03	9.1	30	CLASS III-A NON-METAL
USH 45	291+59	6.3	30	CLASS III-A NON-METAL
USH 45	310+21	3.1	36	CLASS III-A NON-METAL
USH 45	310+29	2.9	36	CLASS III-A NON-METAL
USH 45	317+86	3.6	24	CLASS III-A NON-METAL
USH 45	327+93	2.9	36	CLASS III-A NON-METAL
USH 45	328+00	3.0	36	CLASS III-A NON-METAL
USH 45	333+28	3.0	24	CLASS III-A NON-METAL
USH 45	344+42	5.4	24	CLASS III-A NON-METAL
USH 45	524+23	4.2	30	CLASS III-A NON-METAL
USH 45	536+27	3.5	30	CLASS III-A NON-METAL
USH 45	662+90	3.5	24	CLASS III-A NON-METAL

NOTES

- TRANSITION CUT IS PAID AS EXCAVATION COMMON.
- TRANSITION CUT WIDTH IS FROM SUBGRADE SHOULDER POINT TO SUBGRADE SHOULDER POINT.
- BACKFILL THE TRANSITION CUT AREAS WITH FOUNDATION AND TRENCH BACKFILL AS SPECIFIED IN STANDARD SPEC 520.
- PERFORM CULVERT PIPE INSTALLATION BEFORE MILLING AND PAVING.

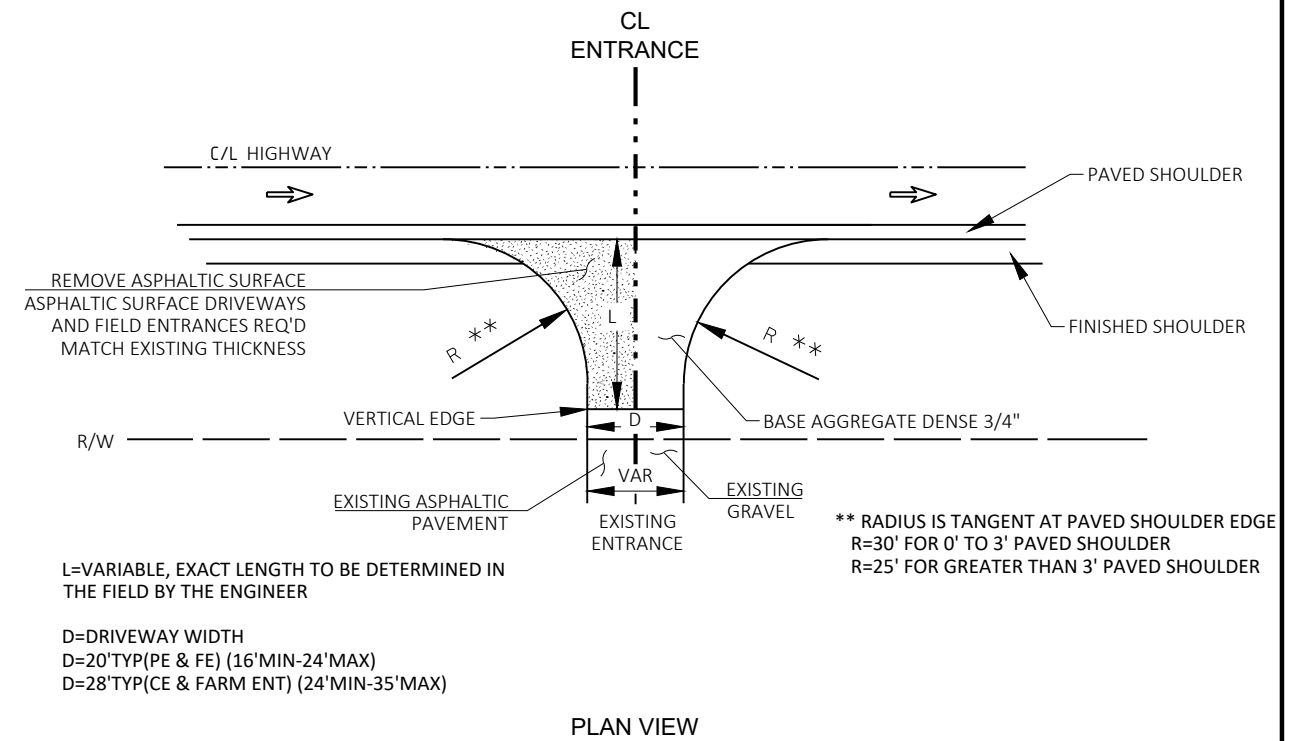
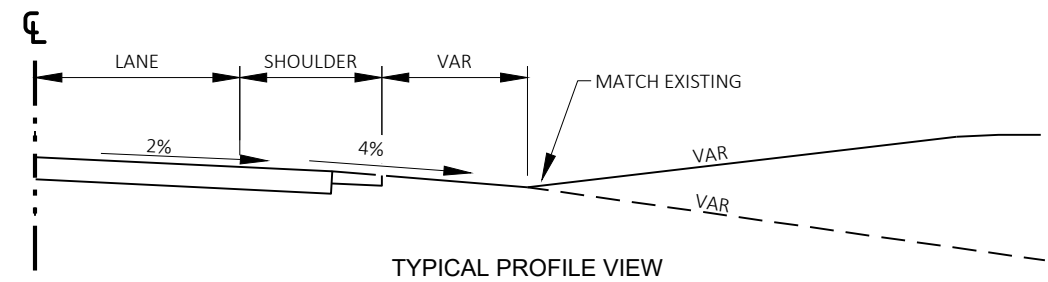


ROCK BAGS USED FOR SILT FENCE RELIEF

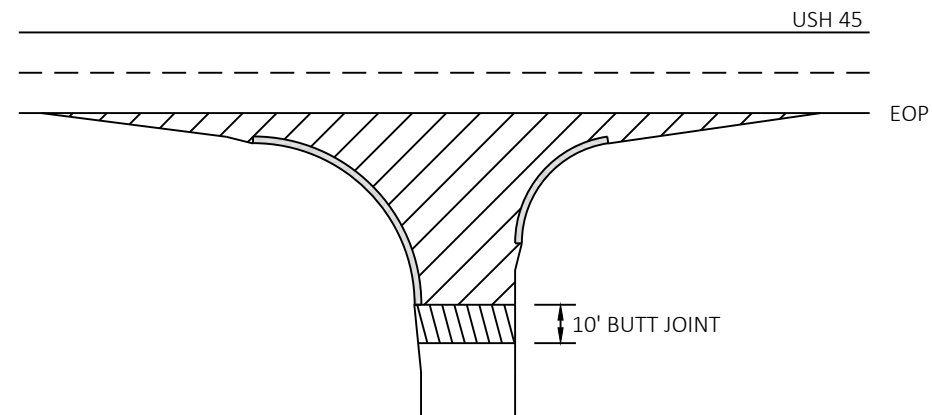


TEMPORARY SMALL ANIMAL TURN-AROUND

GENERAL NOTES:
SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND AND TRENCHED IN ACCORDING TO SILT FENCE REQUIREMENTS.



RURAL DRIVEWAY INTERSECTION (PE, FE & CE)



- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

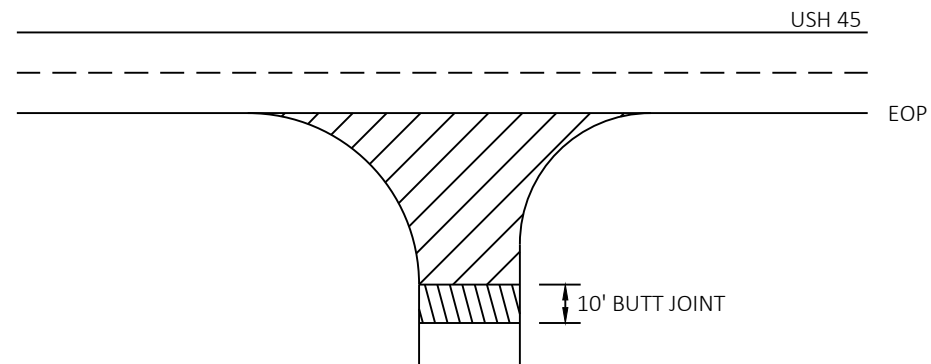
NOTE: WHEN MATCHING TO AN UNPAVED SURFACE
BUTT JOINT IS NOT REQUIRED

SIDE ROADS

WITH CURB AND GUTTER

CEMETERY RD
LAKE RD
KURTZ RD
CTH C
GAGEN RD
MARGARET LAKE
E STELLA LAKE RD

S BIG LAKE LOOP RD
BIG LAKE RD
N BIG LAKE LOOP RD
CRYSTAL LAKE RD
WAYSIDE
WINKLER RD
LAKE TERRACE DR
JAVEN RD



- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

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

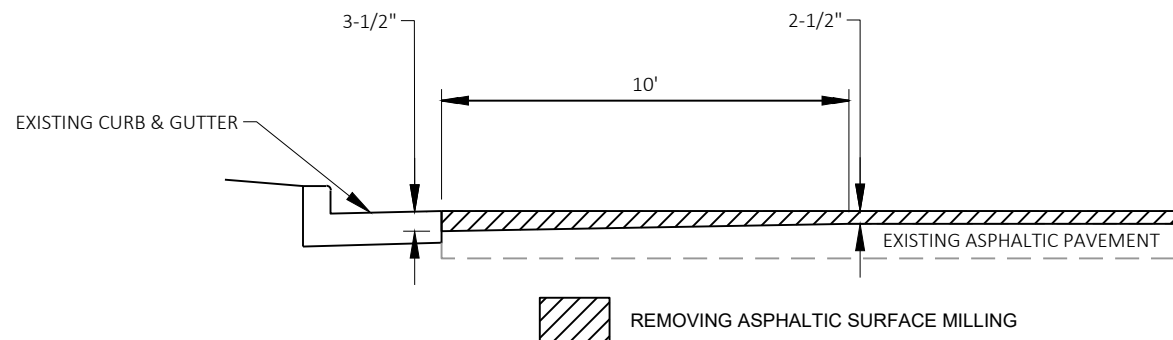
SIDE ROADS

WITHOUT CURB AND GUTTER

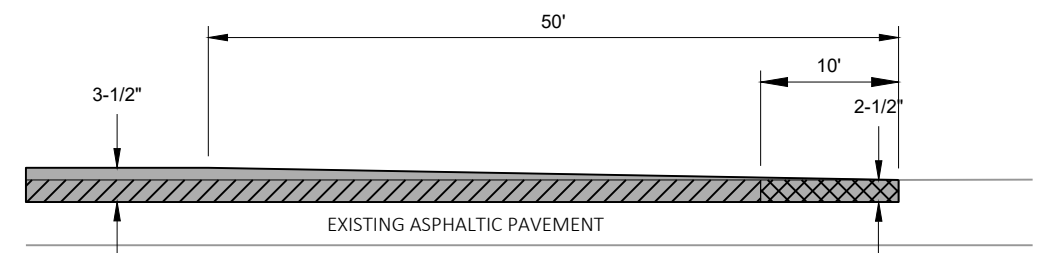
ERICKSON RD
WOODRICK RD
MAKAR RD
OLD 45 RD
HILES JUNCTION
BRANHAM RD

LEGEND

- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE BUTT JOINTS
- HMA PAVEMENT



MILLED JOINT AT CURB & GUTTER



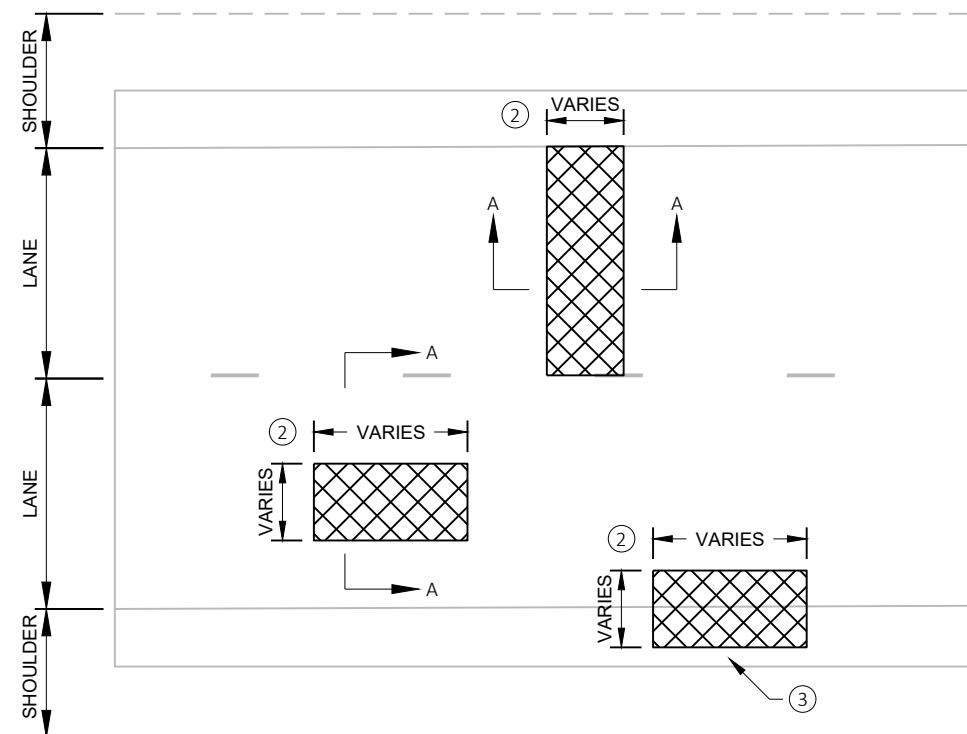
BUTT JOINT AND TRANSITION AT MAINLINE AND SIDE ROADS

STA 24+50	STA 196+00	STA 677+50	STA 801+50	STA 11+05 - 11+15
STA 34+50	STA 354+00	STA 691+00	STA 821+50	STA 372+68 - 372+78
STA 35+50	STA 502+00	STA 736+50	STA 868+50	STA 374+13 - 374+23
STA 117+50	STA 535+50	STA 767+50	STA 870+00	STA 874+74 - 874+84
STA 118+50	STA 547+50	STA 788+00		
STA 132+50	STA 613+50	STA 796+00		

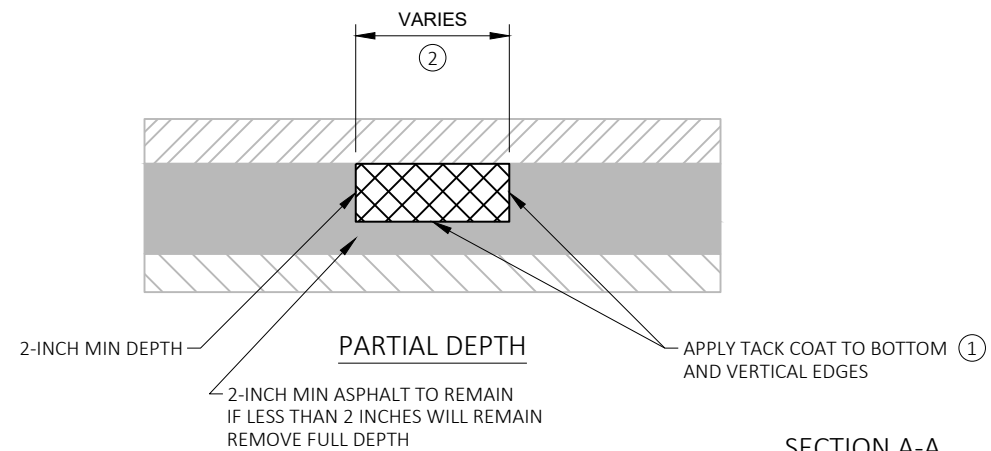
NOTES:

PERFORM REMOVING ASPHALTIC SURFACE MILLING PRIOR TO REMOVING DISTRESSED ASPHALTIC SURFACE MILLING

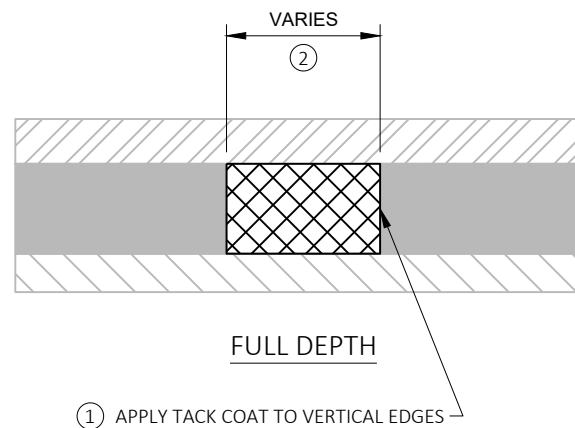
- ① MILLED VERTICAL EDGES ARE ACCEPTABLE, SAW CUTS ARE NOT REQUIRED.
- ② THE SMALLEST DIMENSION OF REMOVING DISTRESSED ASPHALTIC SURFACE MILLING IS 4 FEET IN ANY DIRECTION.
- ③ WHEN THE DISTANCE FROM THE EDGE OF PAVEMENT TO EDGE OF REMOVING DISTRESSED ASPHALTIC SURFACE MILLING IS LESS THAN 1-FOOT, EXTEND THE REMOVING DISTRESSED ASPHALTIC SURFACE MILLING TO THE EDGE OF PAVEMENT.



PLAN VIEW



SECTION A-A

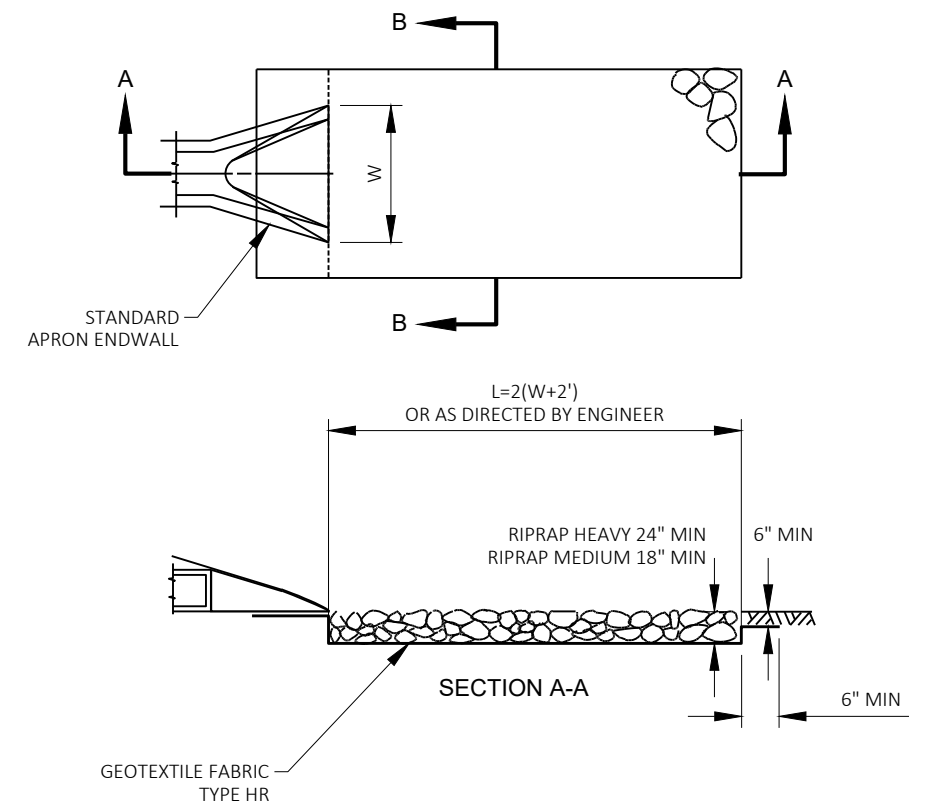


- ① APPLY TACK COAT TO VERTICAL EDGES

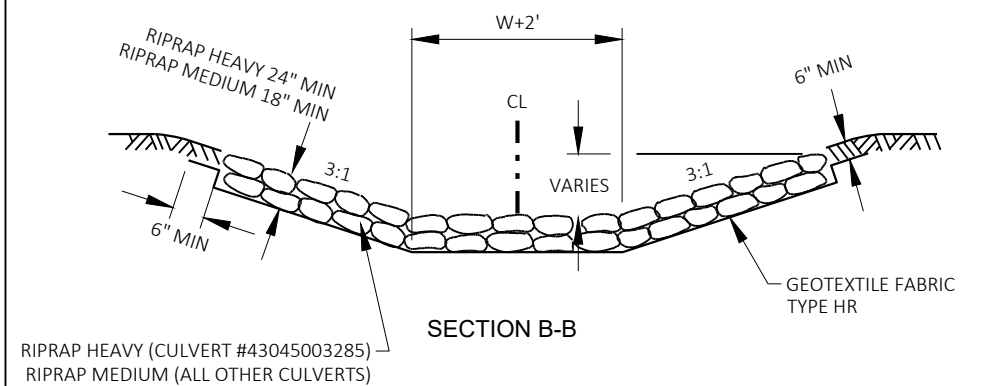
	REMOVING ASPHALTIC SURFACE MILLING
	REMOVING DISTRESSED ASPHALTIC SURFACE MILLING
	ASPHALTIC SURFACE PATCHING
	EXISTING ASPHALT
	EXISTING BASE COURSE

REMOVING DISTRESSED ASPHALTIC SURFACE MILLING

LOCATIONS AND LIMITS DETERMINED BY THE ENGINEER IN THE FIELD



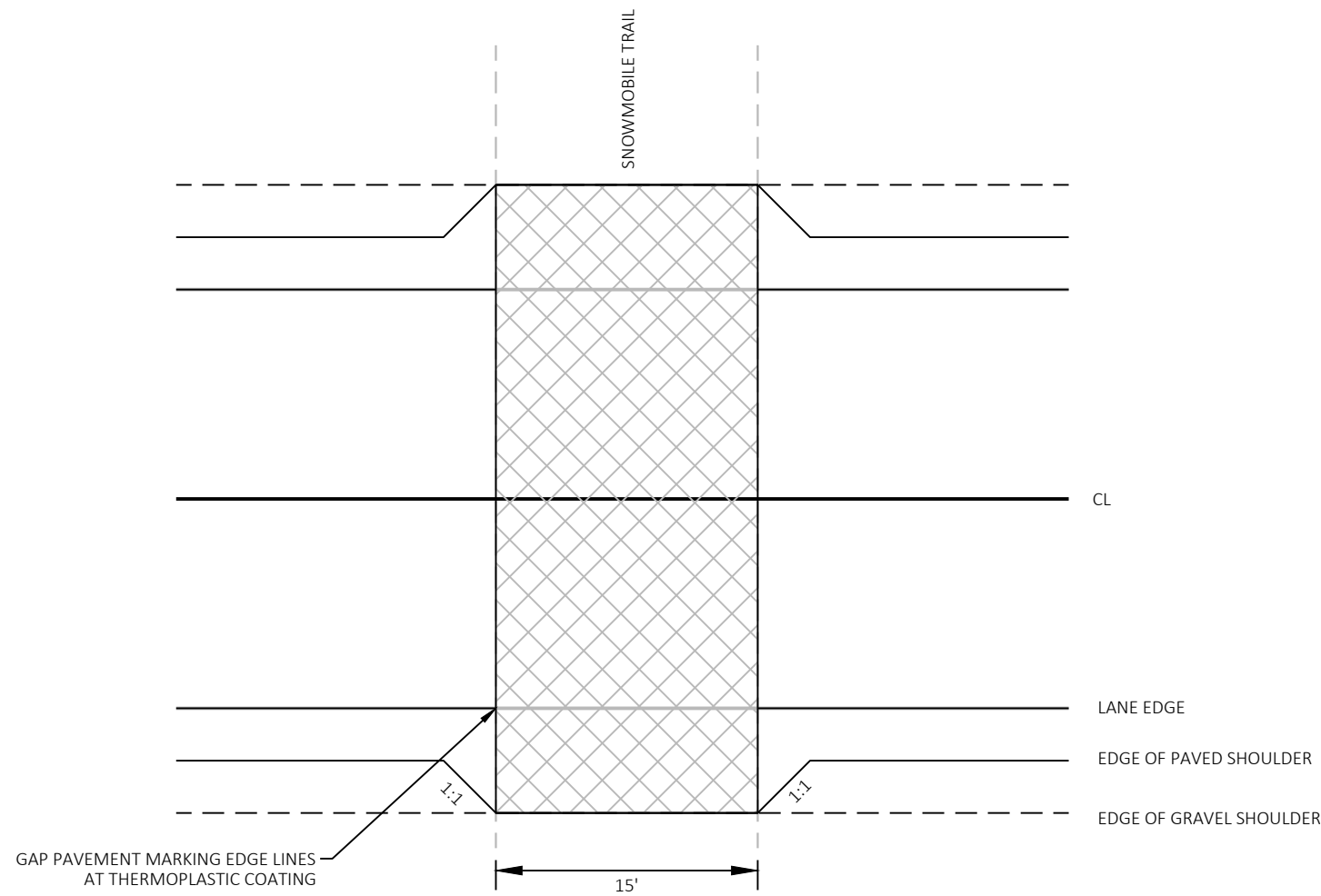
SECTION A-A



SECTION B-B

RIPRAP HEAVY (CULVERT #43045003285)
RIPRAP MEDIUM (ALL OTHER CULVERTS)

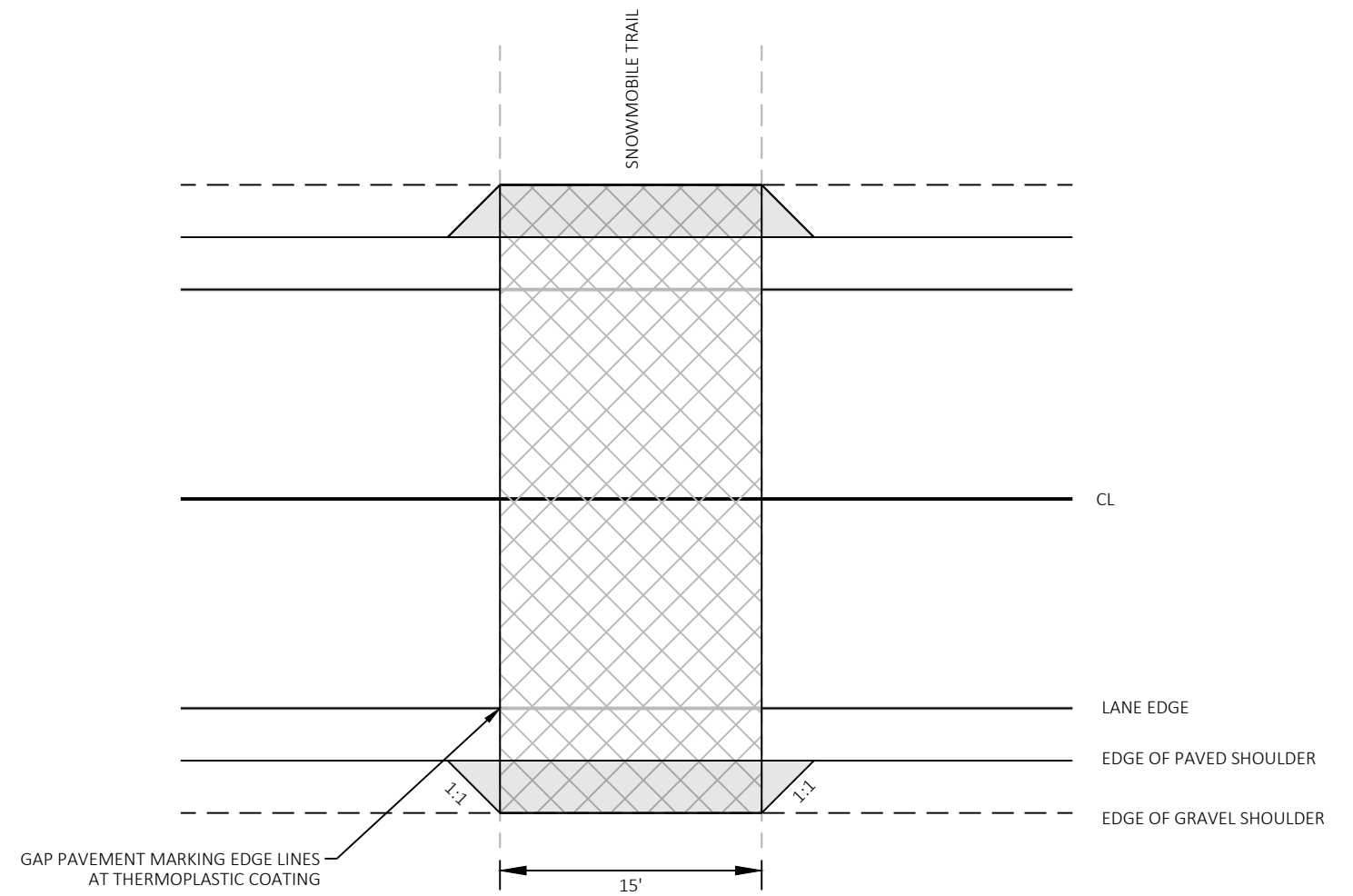
RIP RAP AND GEOTEXTILE



PROTECTIVE THERMOPLASTIC COATING AT SNOWMOBILE TRAIL CROSSING
SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION

EXISTING SNOWMOBILE TRAIL CROSSING
WITH FULL WIDTH SHOULDERS AND PROTECTIVE COATING

STA 491+94
STA 813+28



PROTECTIVE THERMOPLASTIC COATING AT SNOWMOBILE TRAIL CROSSING

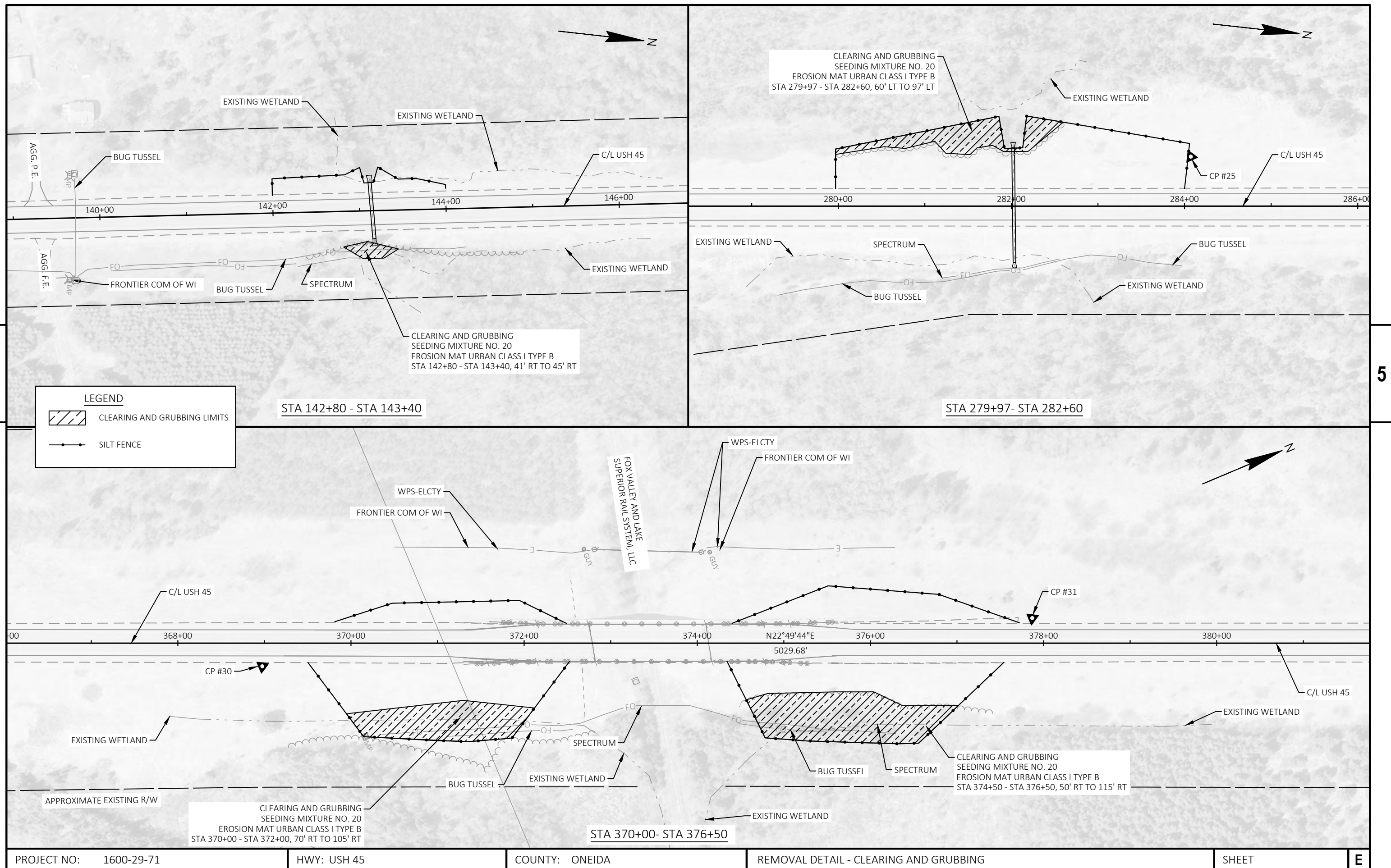


HMA PAVEMENT (4 LT 58-28 S) WIDENING 6-INCHES
1.75" HMA PAVEMENT 4 LT 58-28 S (SURFACE)
1.75" HMA PAVEMENT 4 LT 58-28 S (INTERMEDIATE)
2.5" HMA PAVEMENT 4 LT 58-28 S (BINDER) (MATCH EXISTING SHOULDER THICKNESS)

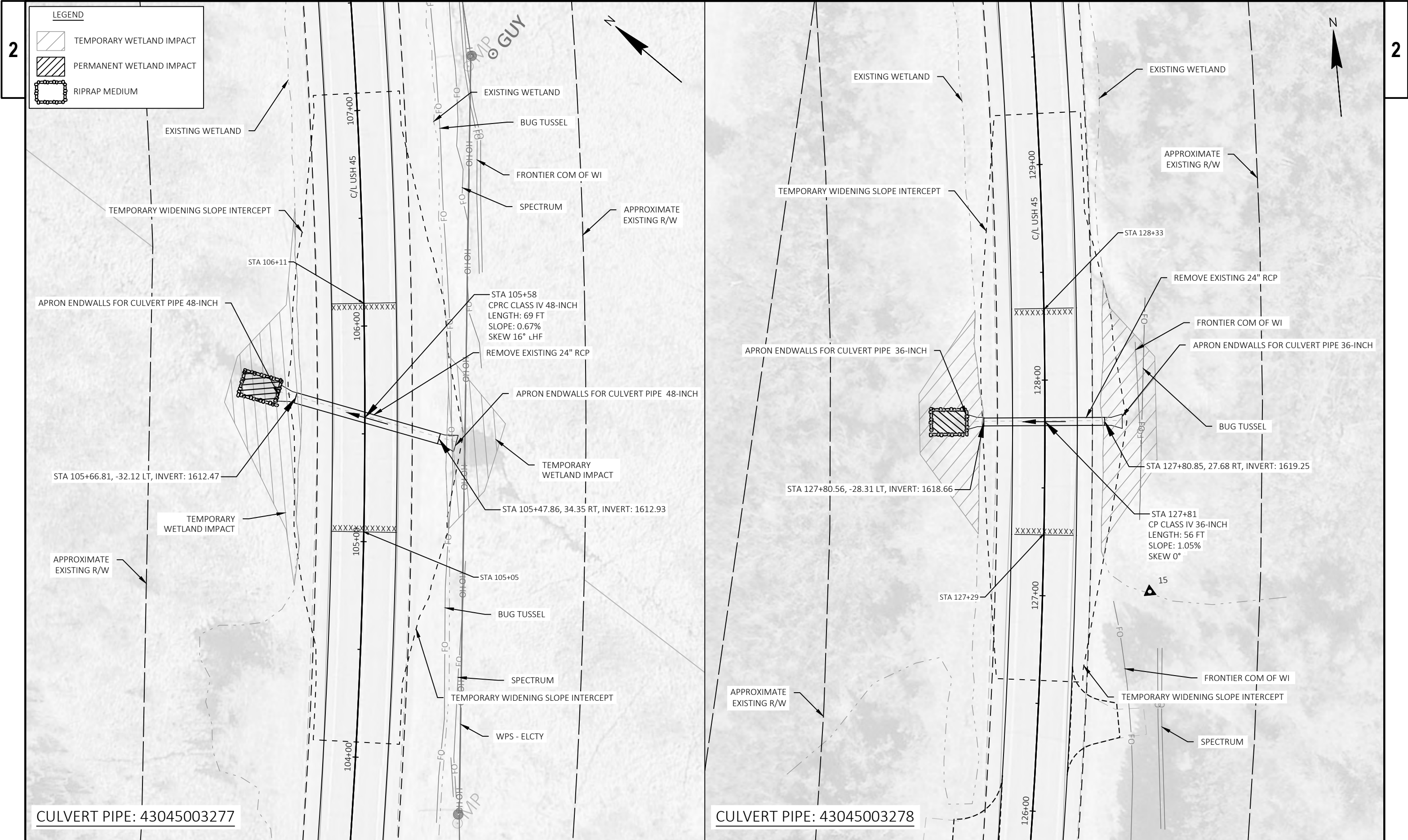
PREPARATION FOR PAVEMENT WIDENING IS INCLUDED IN
PREPARE FOUNDATION FOR ASPHALT SHOULDERS

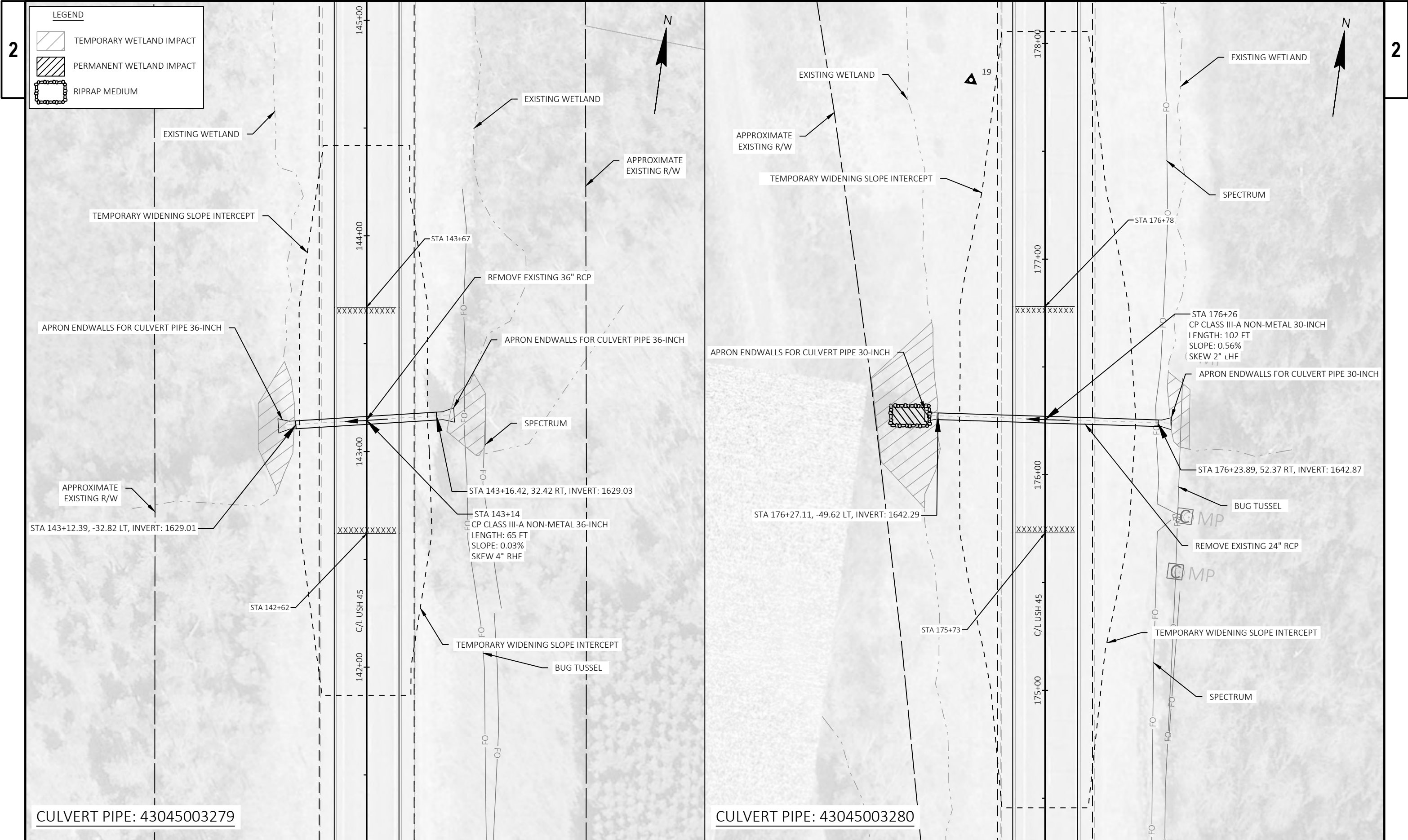
NEW SNOWMOBILE TRAIL CROSSING
WITH FULL WIDTH SHOULDERS AND PROTECTIVE COATING

STA 754+67



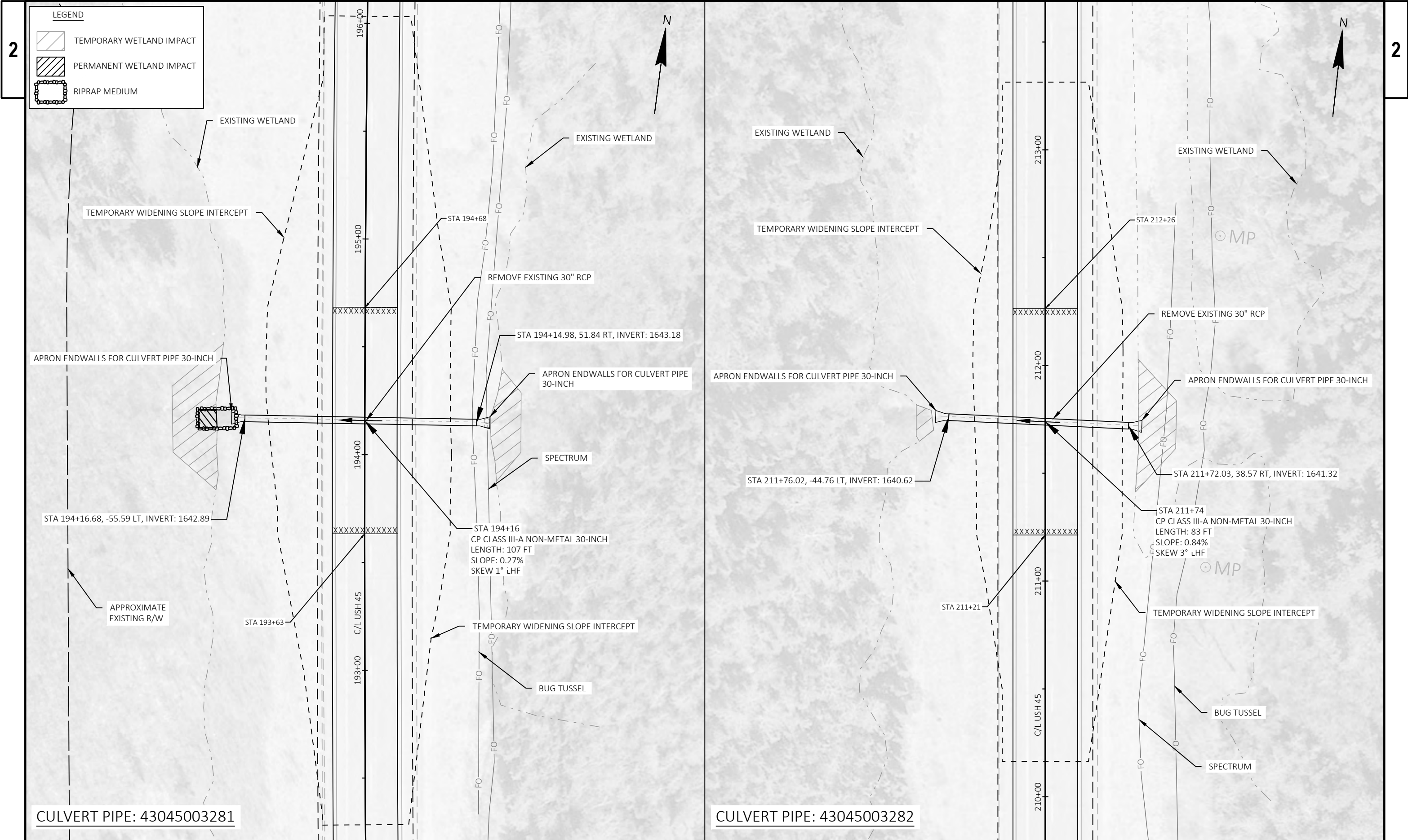
CATEGORY	STATION	LOCATION	CULVERT NUMBER	INLET END			DISCHARGE END		
				STA	OFFSET	ELEV	STA	OFFSET	ELEV
0010	105+58	USH 45	43045003277	105+48	34' RT	1612.93	105+67	32' LT	1612.47
0010	127+81	USH 45	43045003278	127+81	28' RT	1619.25	127+81	28' LT	1618.66
0010	143+14	USH 45	43045003279	143+16	32' RT	1629.03	143+12	33' LT	1629.01
0010	176+26	USH 45	43045003280	176+24	52' RT	1642.87	176+27	50' LT	1642.29
0010	194+16	USH 45	43045003281	194+15	52' RT	1643.18	194+17	56' LT	1642.89
0010	211+74	USH 45	43045003282	211+72	39' RT	1641.32	211+76	45' LT	1640.62
0010	226+82	USH 45	43045003283	226+82	32' RT	1637.92	226+82	43' LT	1637.77
0010	231+81	USH 45	43045003284	231+81	41' RT	1638.60	231+81	40' LT	1638.31
0010	237+10	USH 45	43045003285	237+10	32' RT	1638.28	237+10	35' LT	1638.21
0010	244+82	USH 45	43045003286	244+83	38' RT	1639.89	244+82	41' LT	1639.36
0010	248+84	USH 45	43045003287	248+86	47' RT	1639.82	248+83	50' LT	1639.56
0010	282+03	USH 45	43045003288	282+04	65' RT	1647.38	282+02	67' LT	1645.81
0010	291+59	USH 45	43045003289	291+58	58' RT	1644.74	291+60	52' LT	1643.99
0010	310+21	USH 45	43045004609	310+19	36' RT	1638.03	310+23	38' LT	1637.40
0010	310+29	USH 45	43045003290	310+27	36' RT	1638.03	310+31	38' LT	1637.41
0010	317+86	USH 45	43045003291	317+85	40' RT	1638.70	317+88	40' LT	1637.83
0010	327+93	USH 45	43045004610	327+93	40' RT	1637.89	327+92	37' LT	1637.62
0010	328+00	USH 45	43045003292	328+01	40' RT	1637.90	327+99	37' LT	1637.62
0010	333+28	USH 45	43045003293	333+30	39' RT	1638.87	333+26	41' LT	1638.74
0010	344+42	USH 45	43045003295	344+46	51' LT	1637.95	344+40	35' RT	1637.11
0010	524+23	USH 45	43045003309	524+22	65' RT	1645.12	524+24	49' LT	1643.69
0010	536+27	USH 45	43045003310	536+27	41' RT	1650.57	536+26	40' LT	1649.28
0010	662+90	USH 45	43045003319	662+90	33' RT	1639.53	662+90	28' LT	1638.42

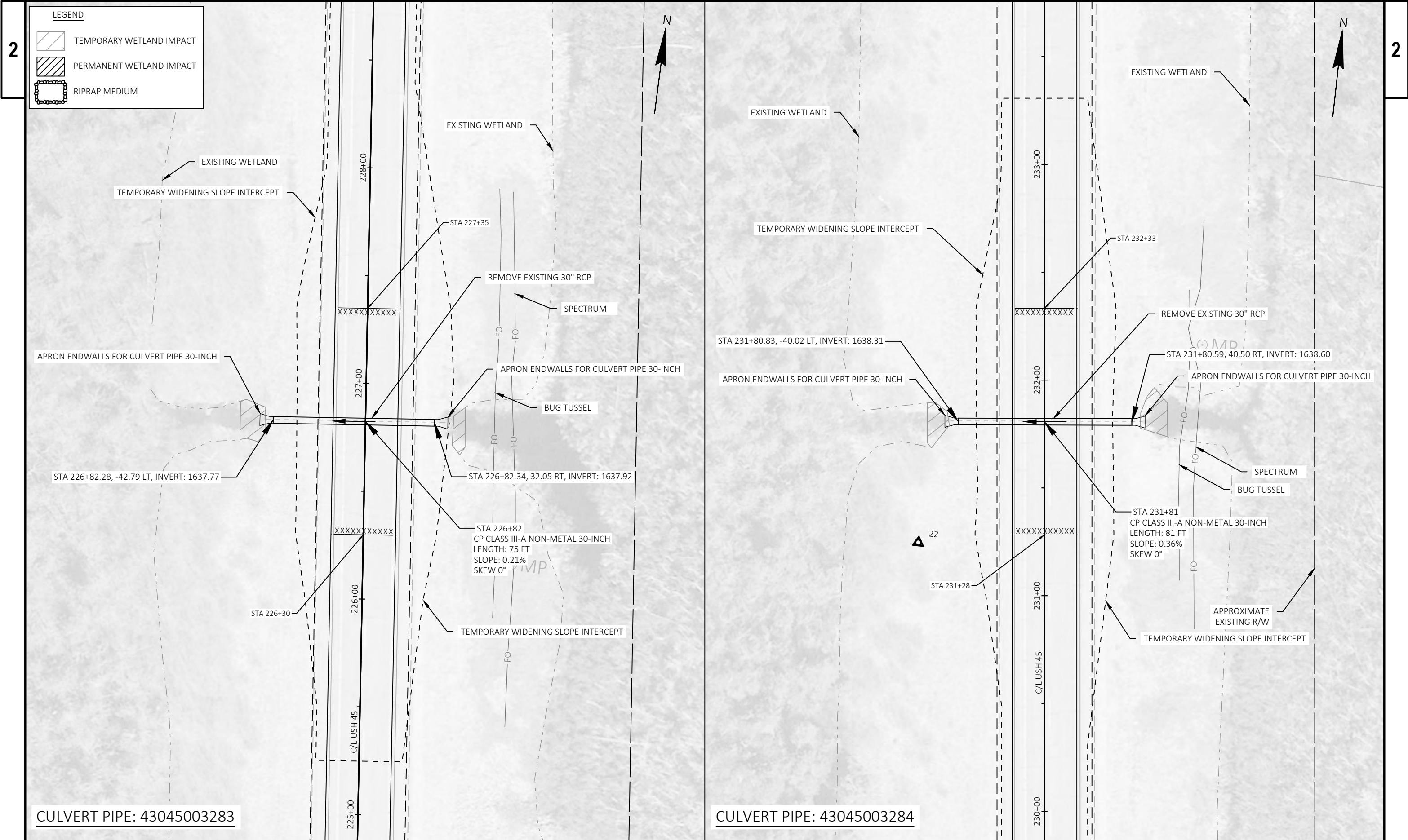




CULVERT PIPE: 43045003279

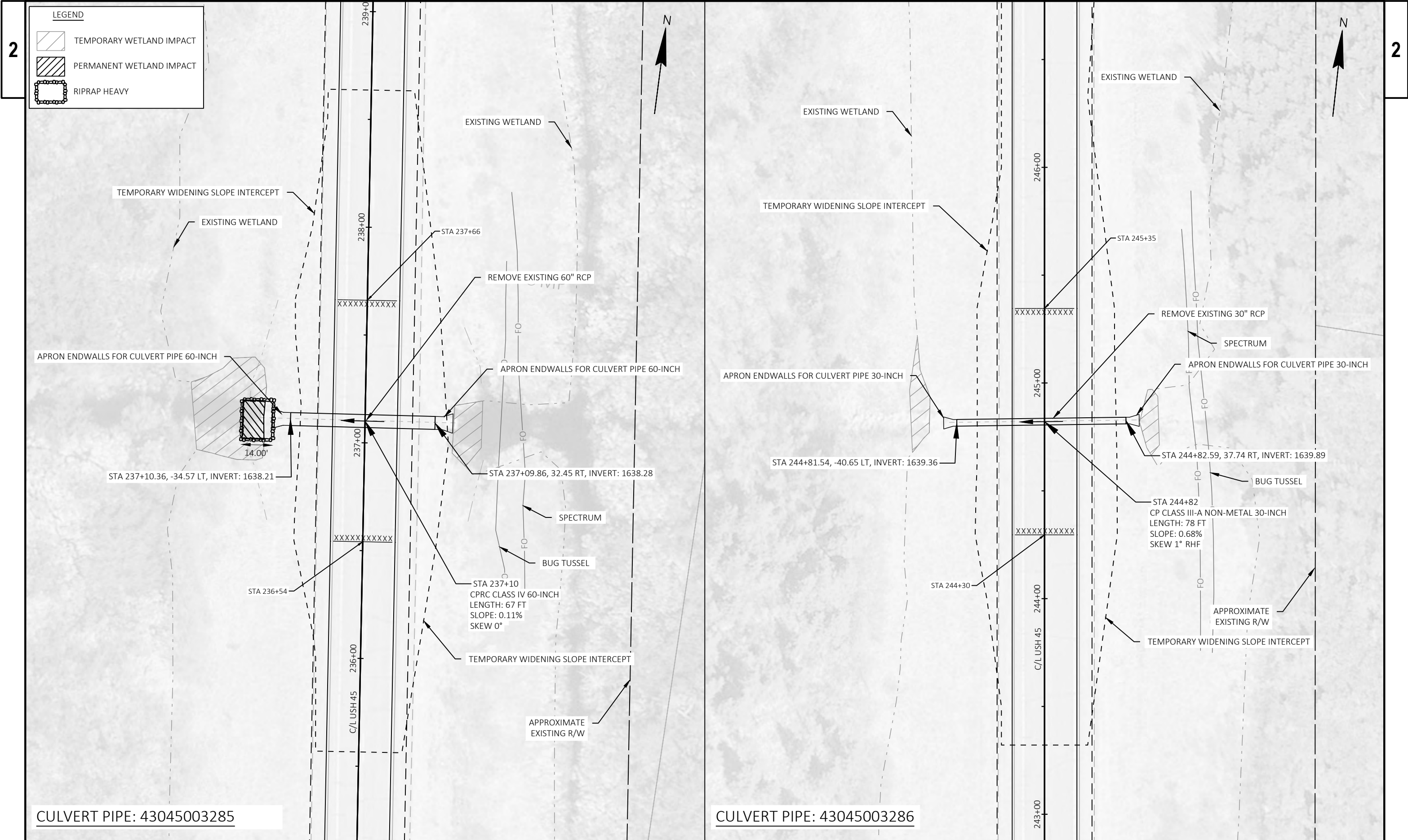
CULVERT PIPE: 43045003280

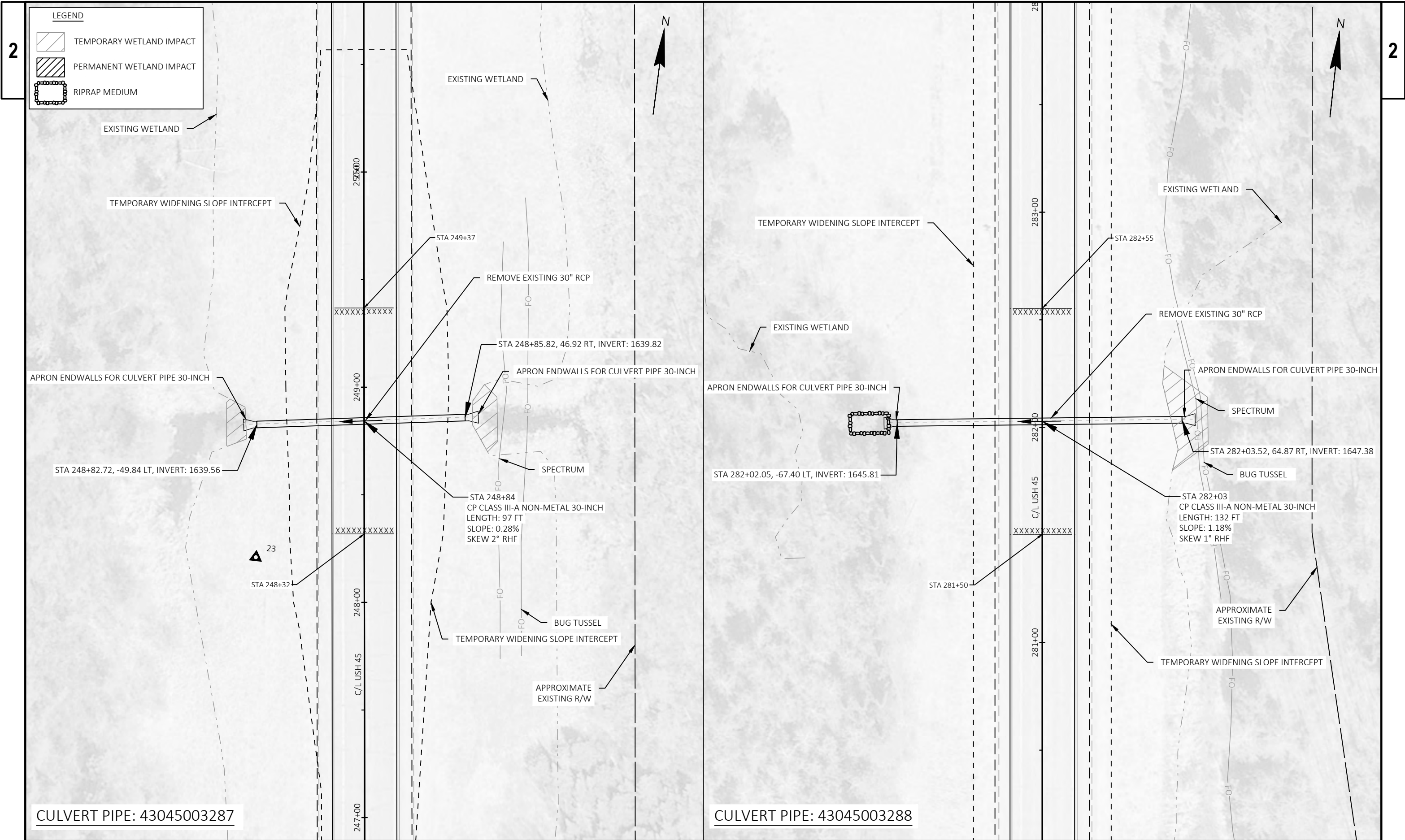


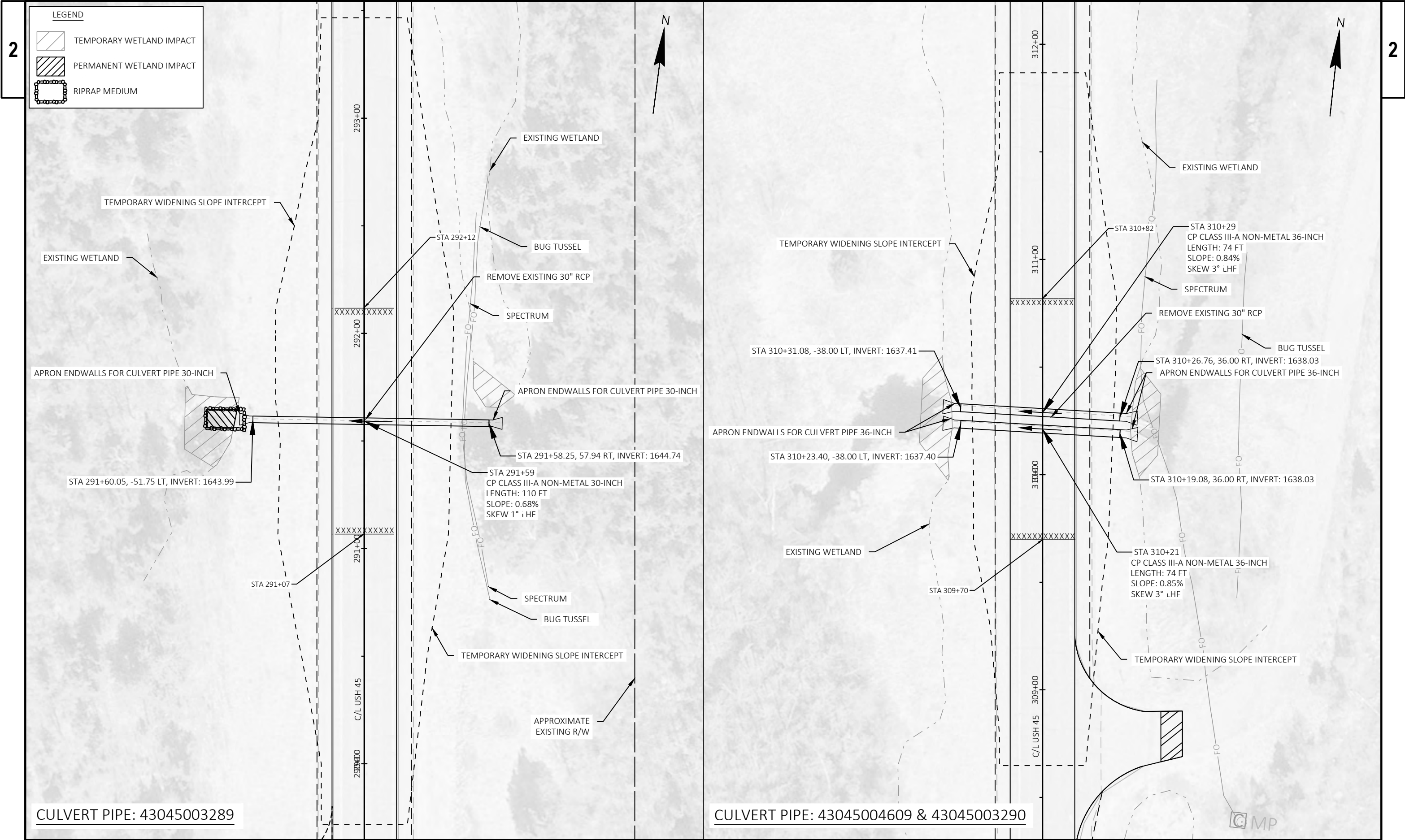


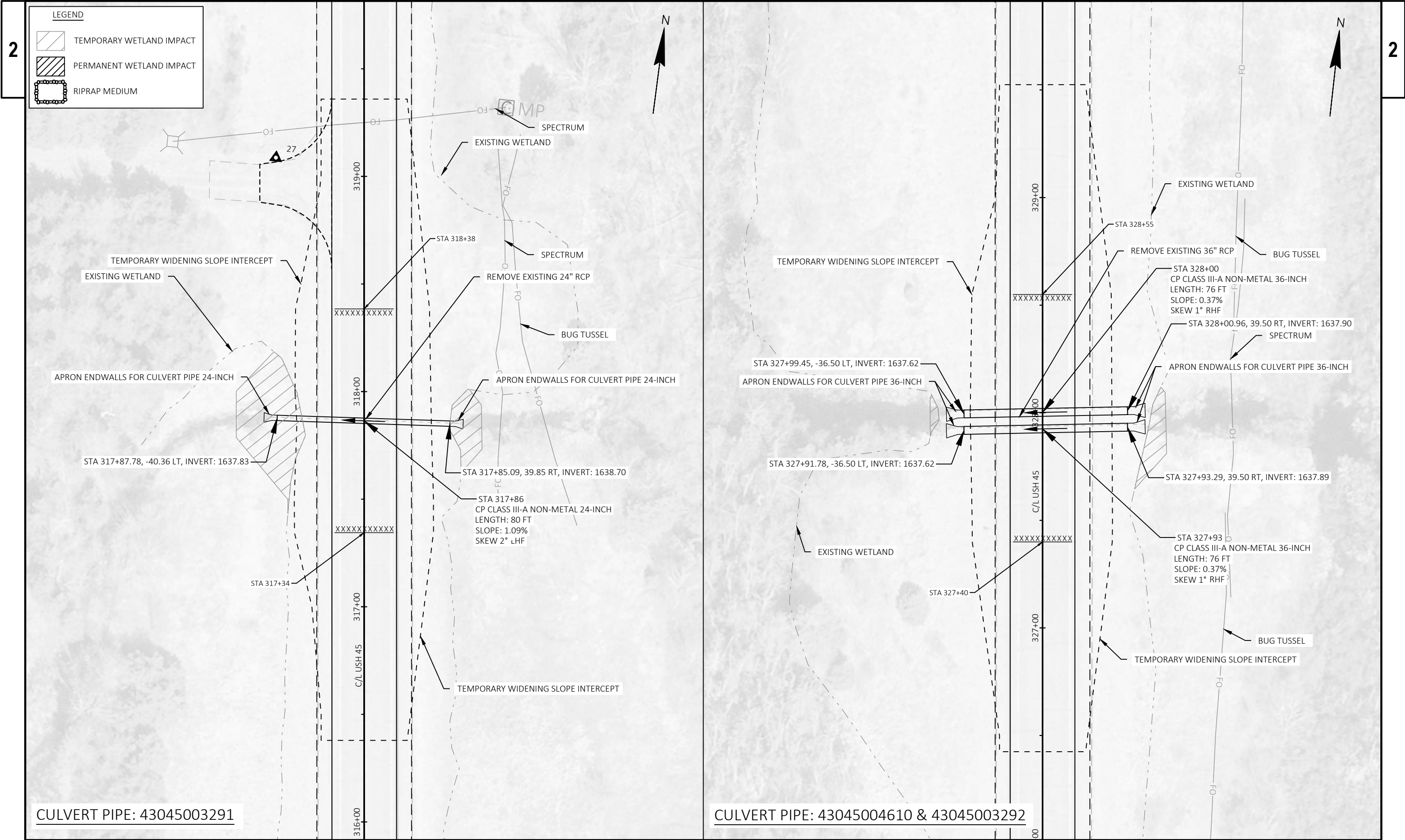
CULVERT PIPE: 43045003283

CULVERT PIPE: 43045003284



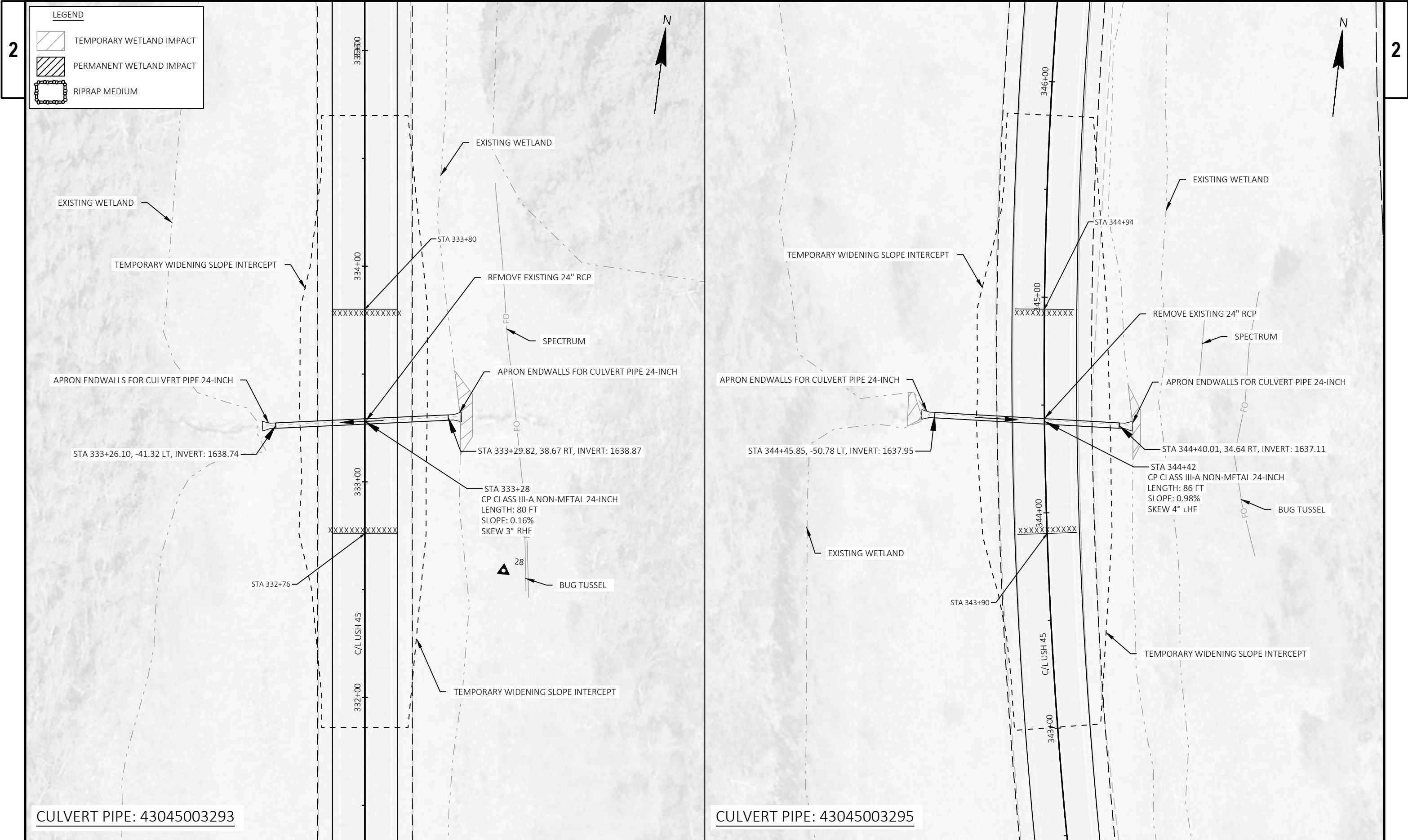






CULVERT PIPE: 43045003291

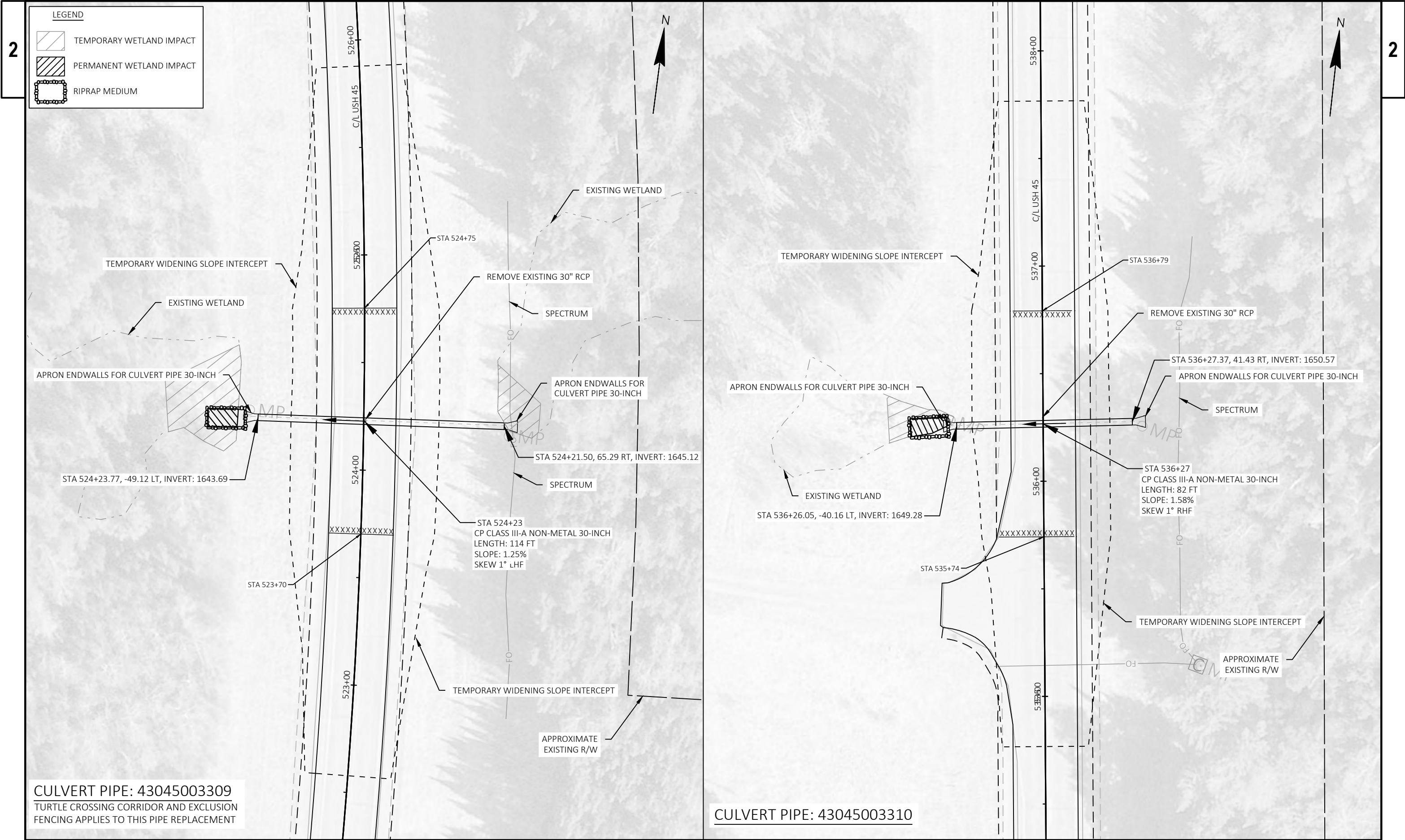
CULVERT PIPE: 43045004610 & 43045003292

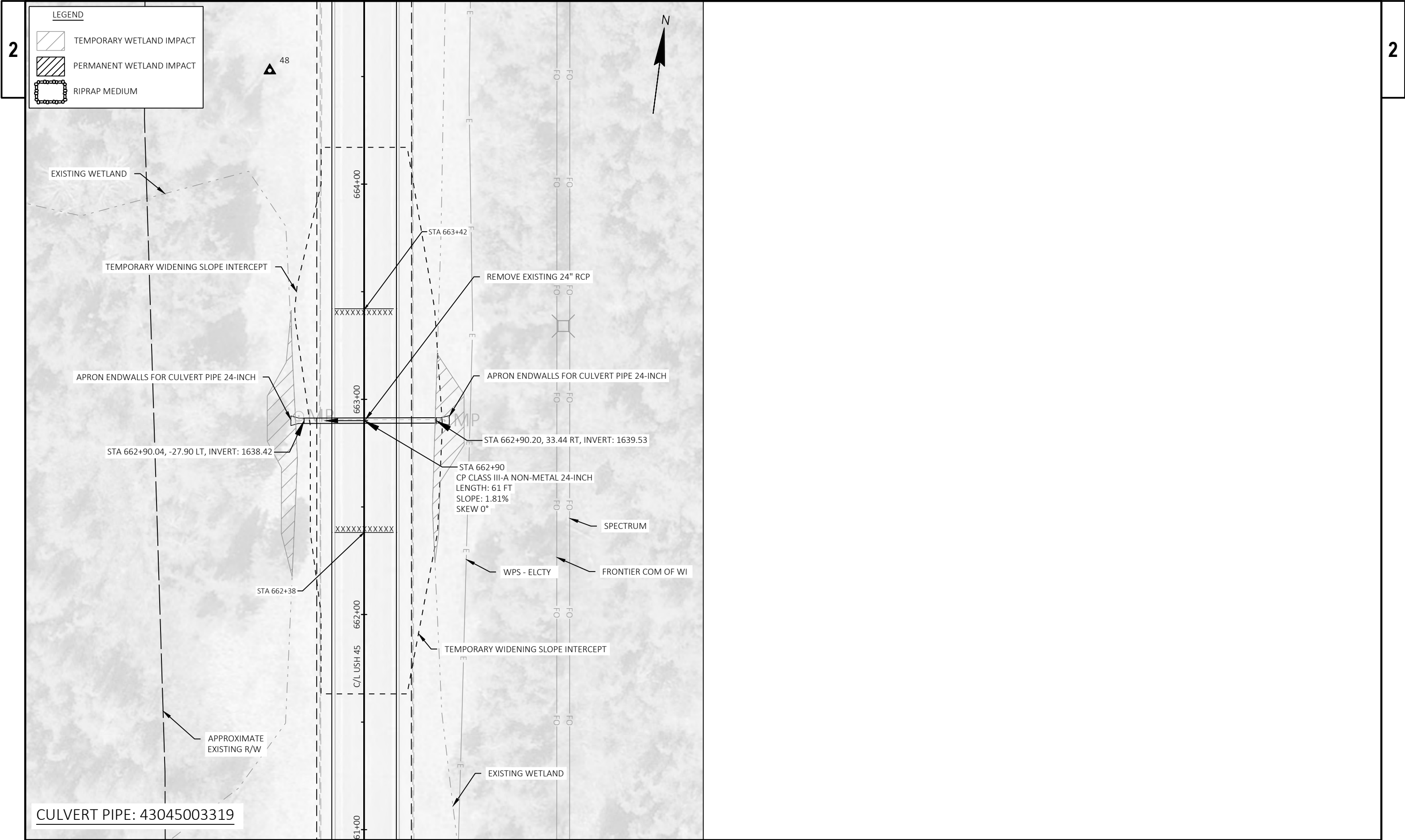


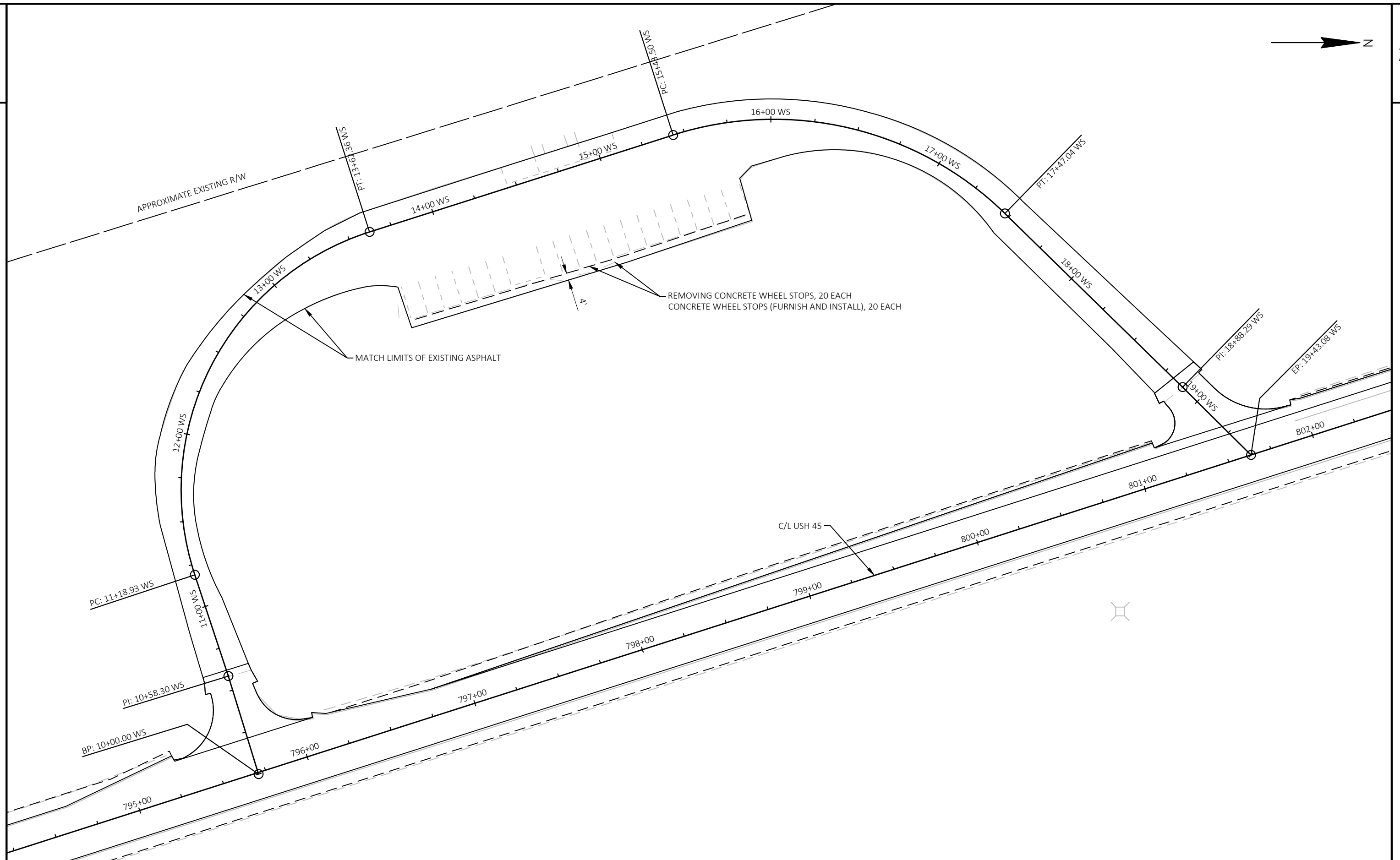
CULVERT PIPE: 43045003293

CULVERT PIPE: 43045003295

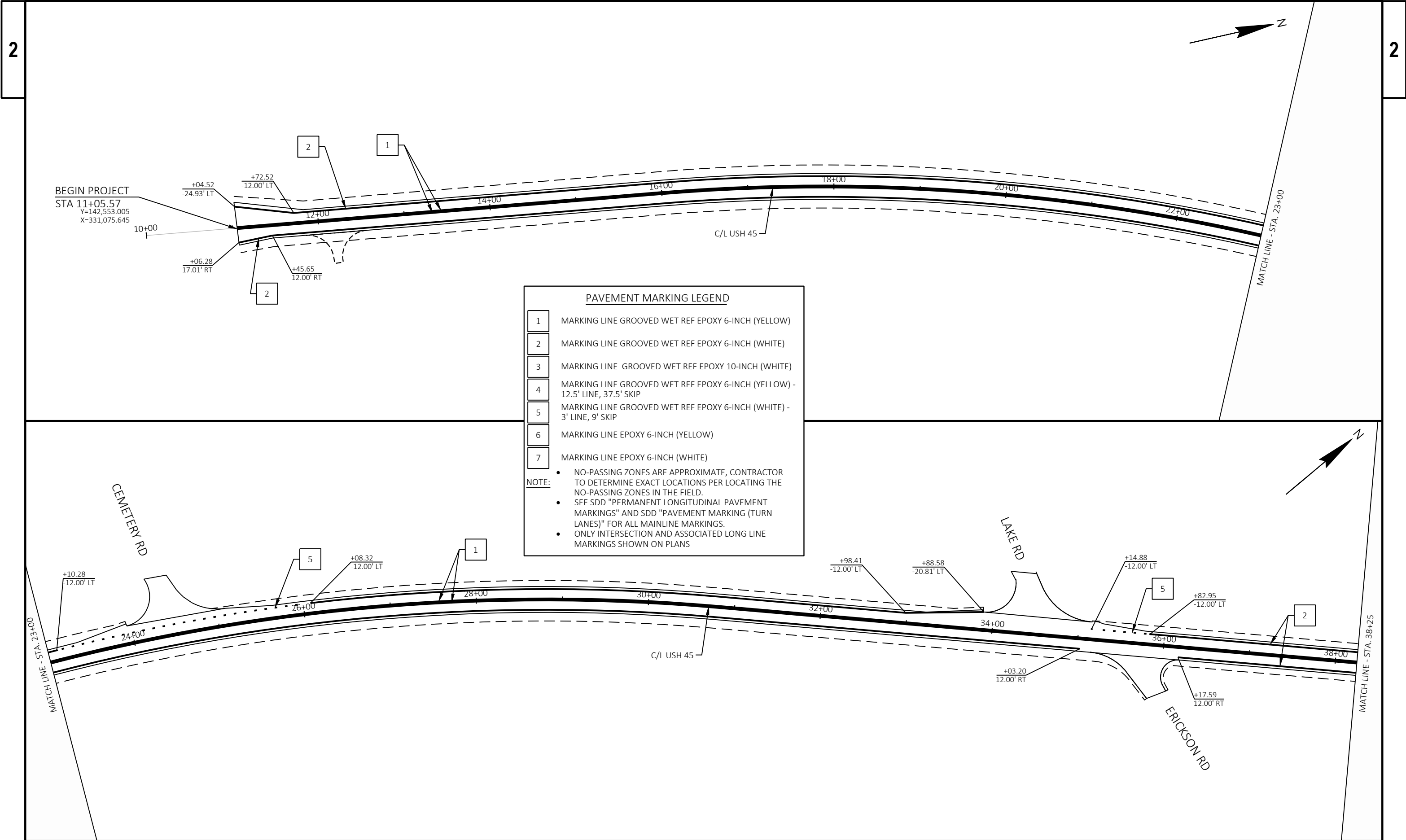
PROJECT NO: 1600-29-71	HWY: USH 45	COUNTY: ONEIDA	PLAN DETAILS - CROSS CULVERTS	SHEET	E
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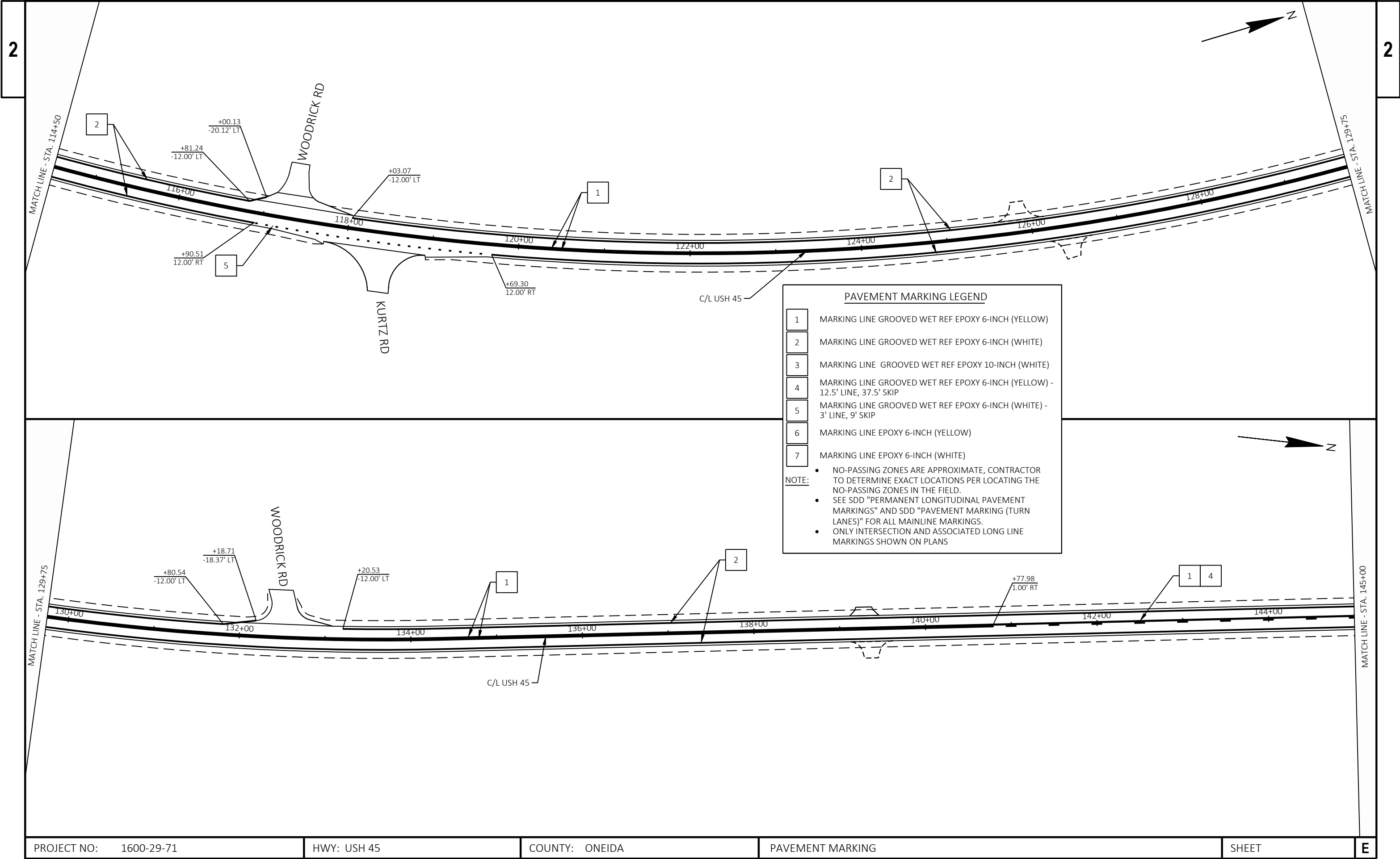


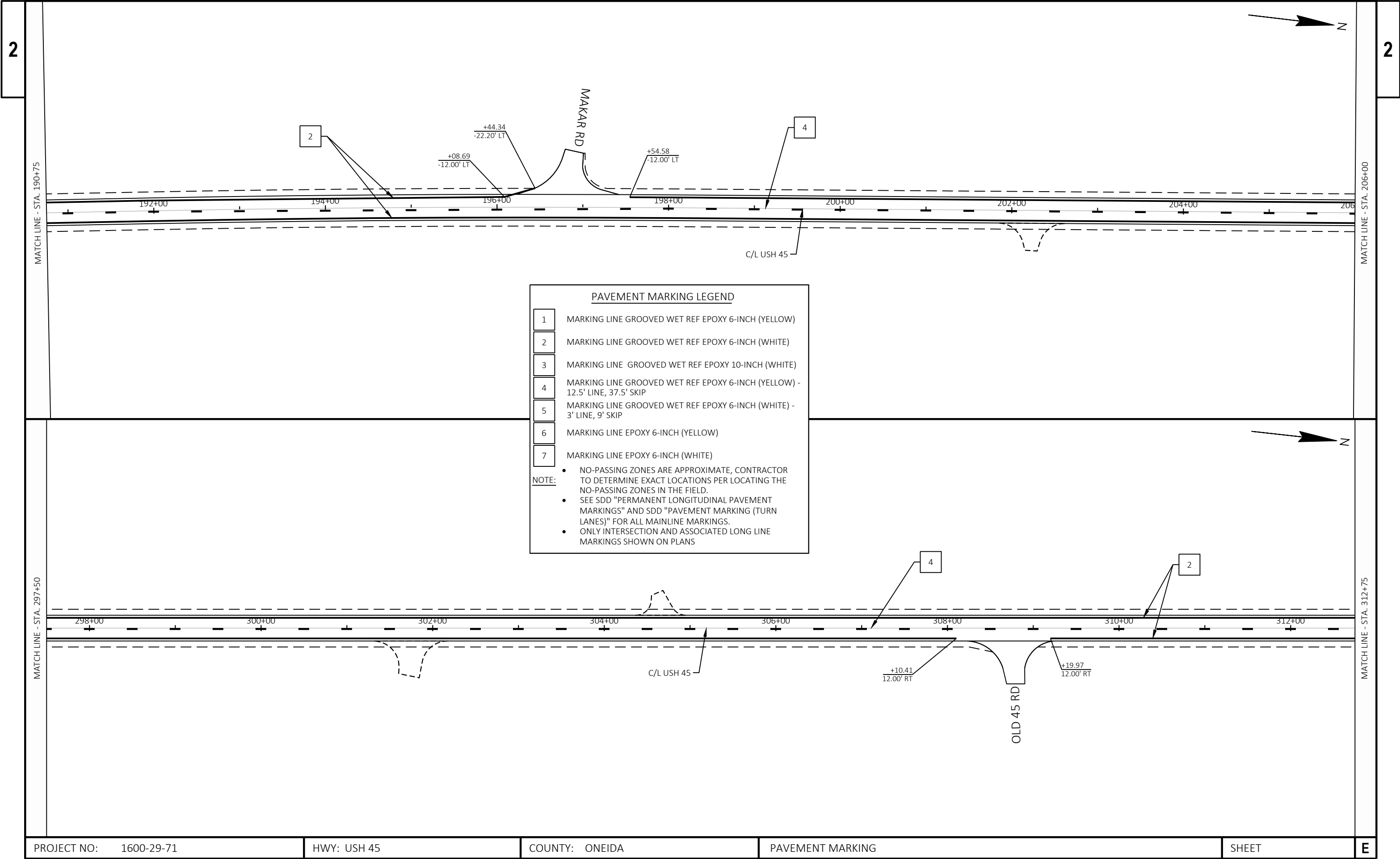


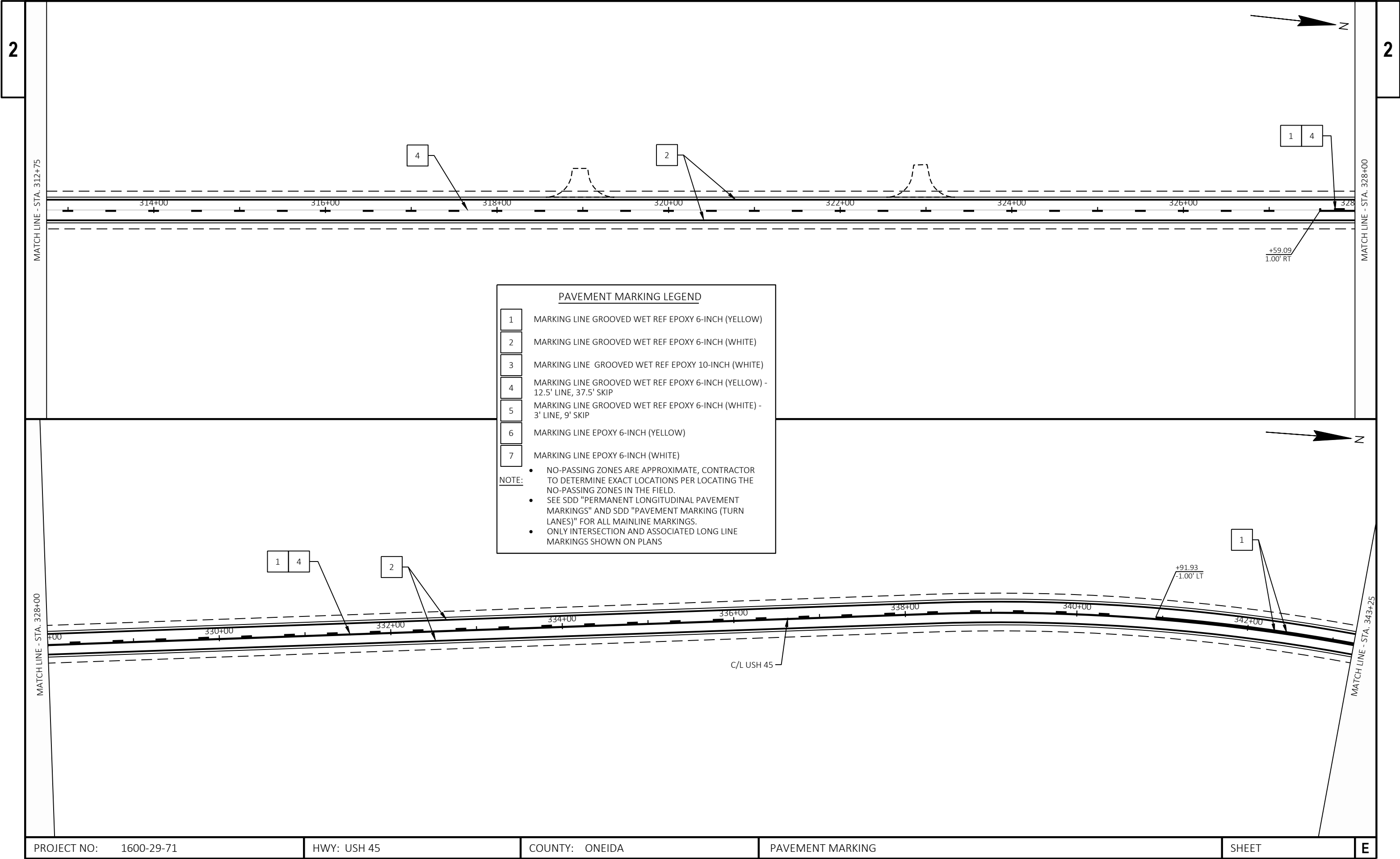


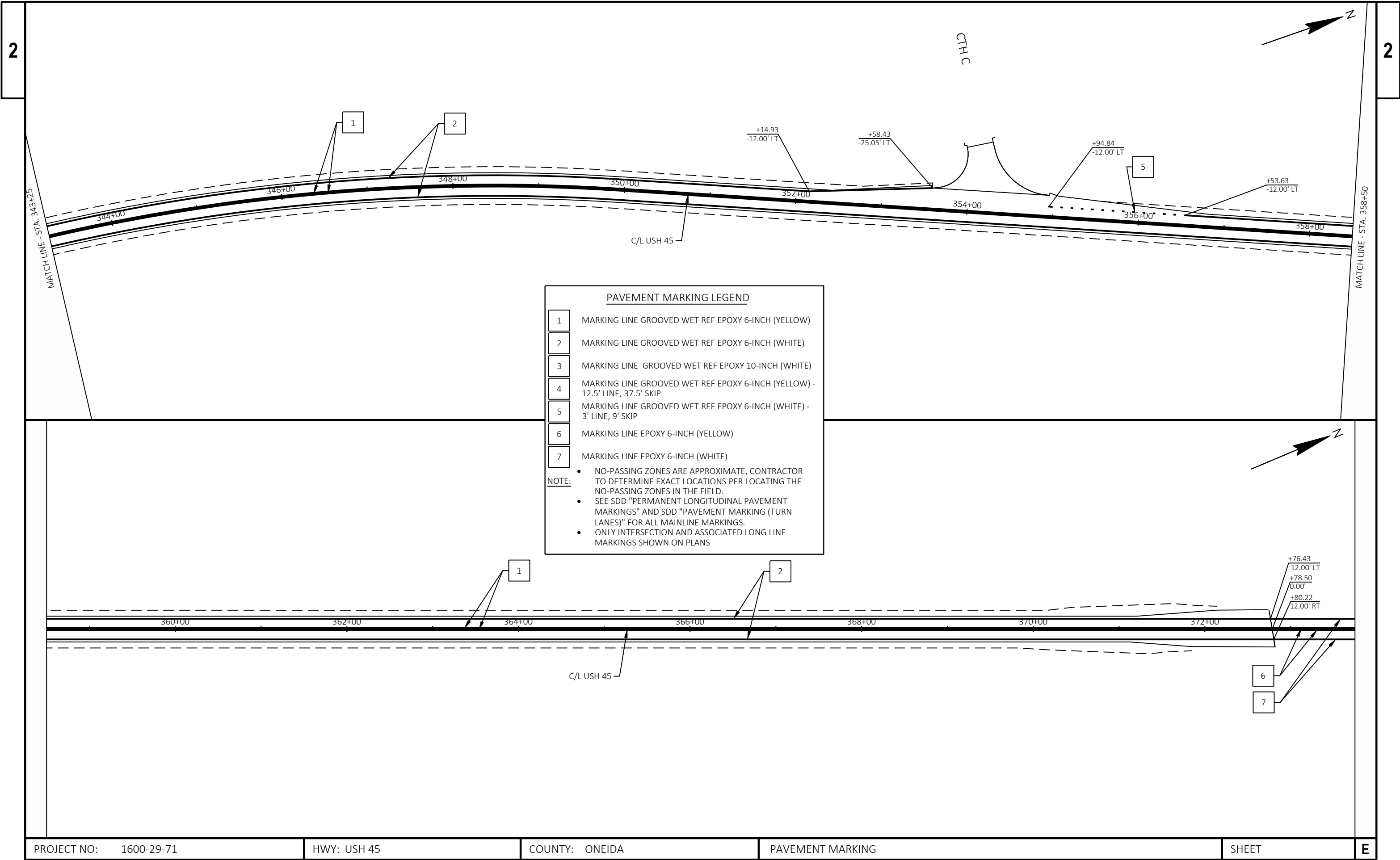
PROJECT NO: 1600-29-71	HWY: USH 45	COUNTY: ONEIDA	PLAN DETAIL - WAYSIDE	SHEET	E
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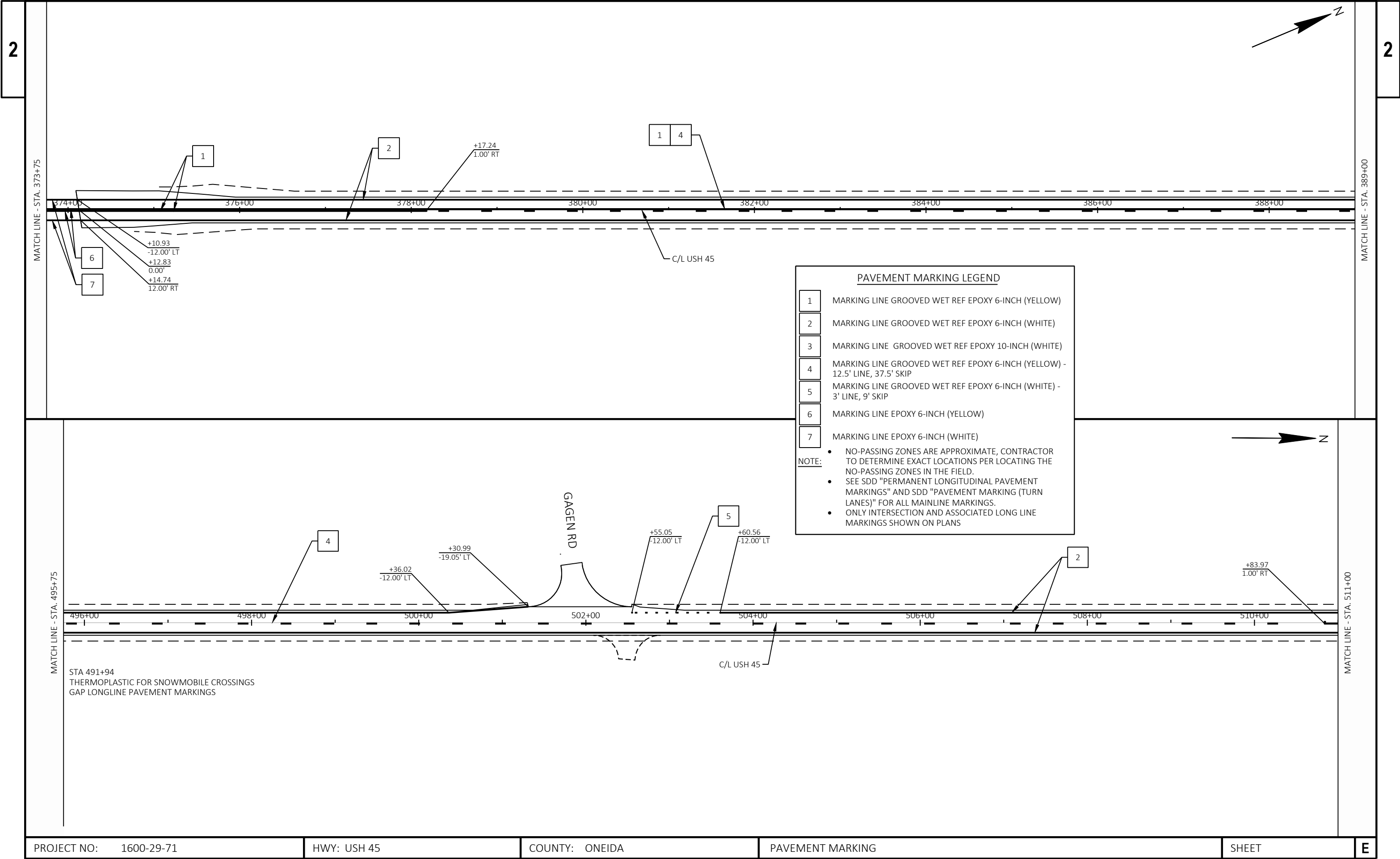


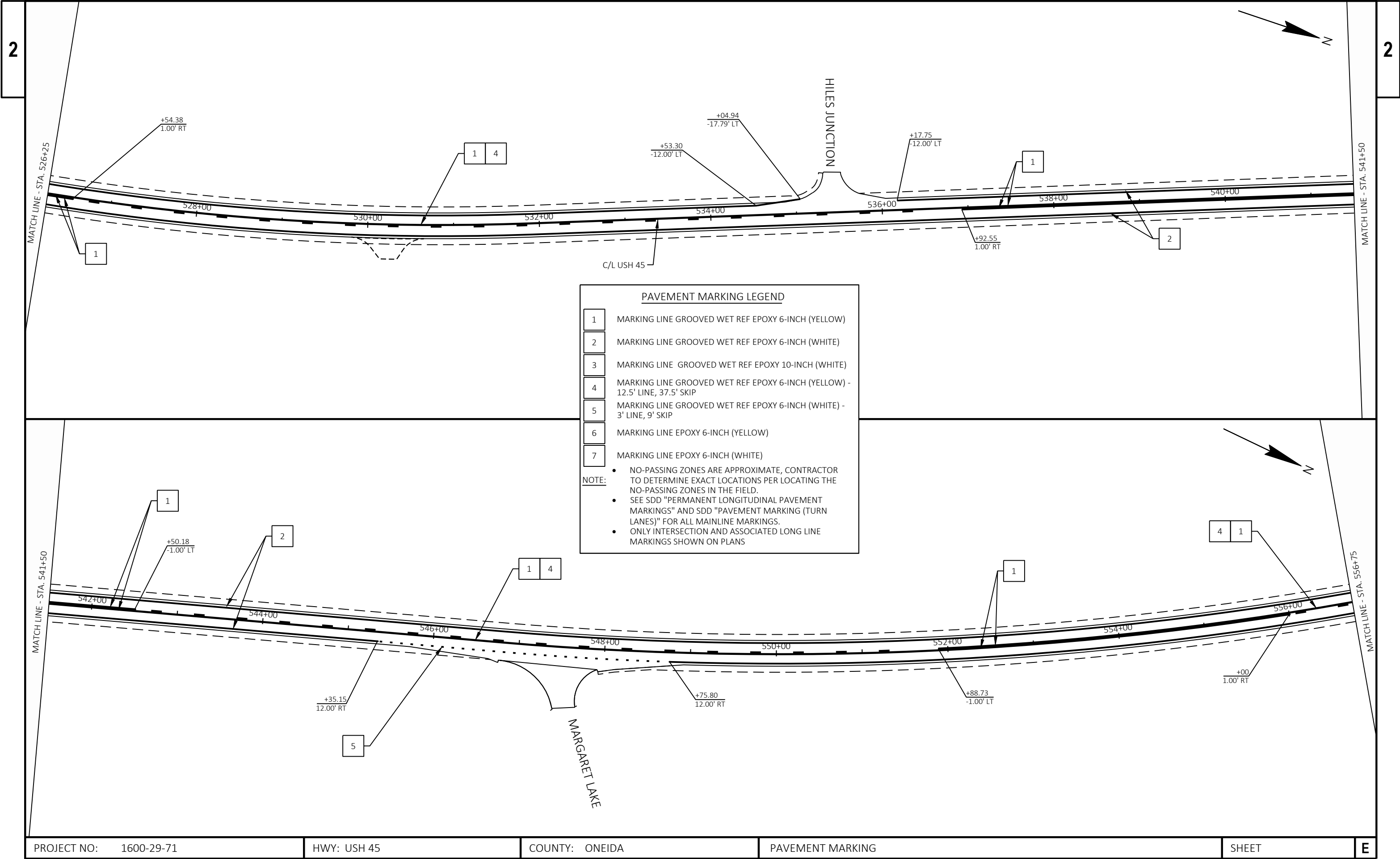










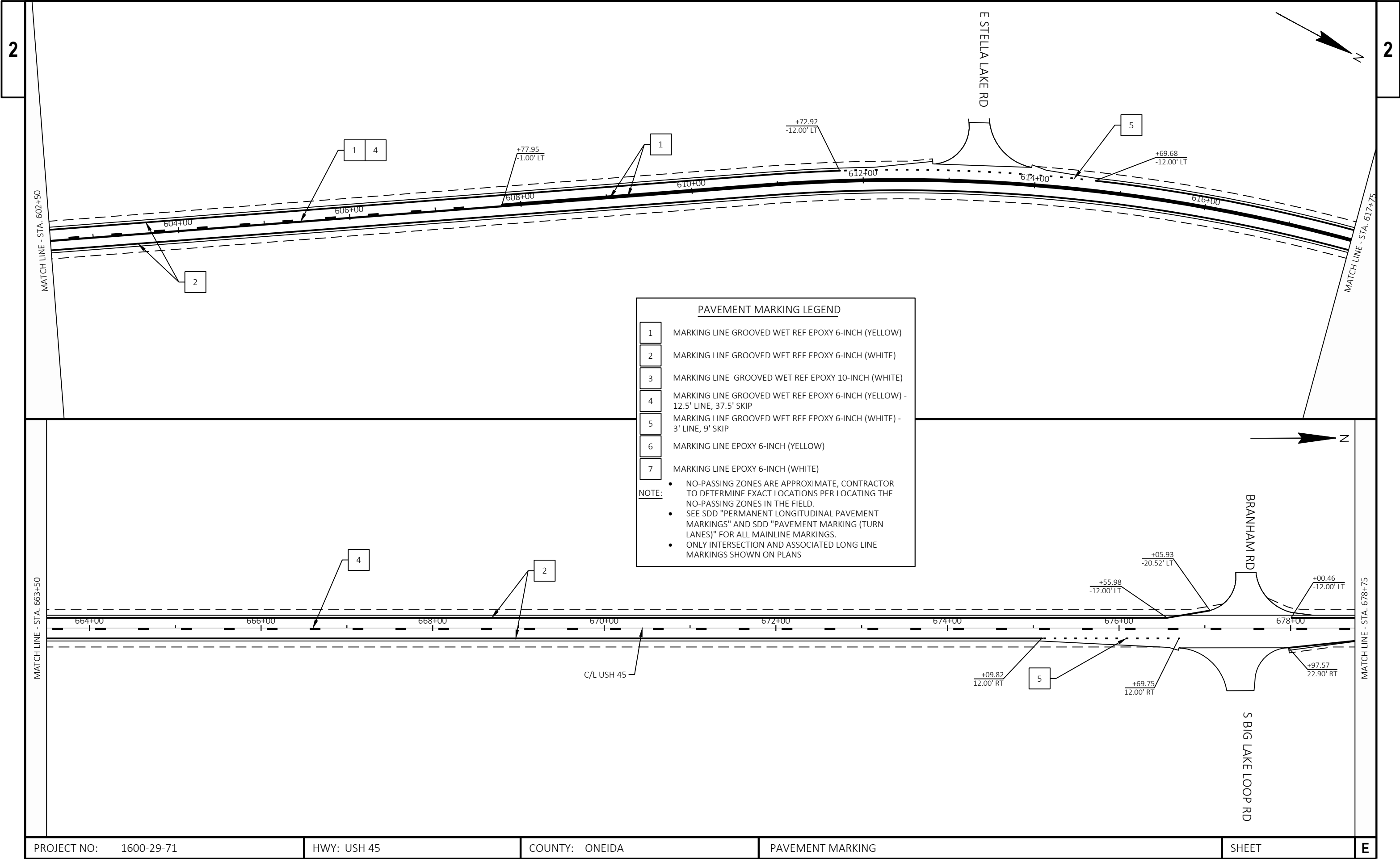


PAVEMENT MARKING LEGEND

1	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
4	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW) - 12.5' LINE, 37.5' SKIP
5	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) - 3' LINE, 9' SKIP
6	MARKING LINE EPOXY 6-INCH (YELLOW)
7	MARKING LINE EPOXY 6-INCH (WHITE)

NOTE:

- NO-PASSING ZONES ARE APPROXIMATE, CONTRACTOR TO DETERMINE EXACT LOCATIONS PER LOCATING THE NO-PASSING ZONES IN THE FIELD.
- SEE SDD "PERMANENT LONGITUDINAL PAVEMENT MARKINGS" AND SDD "PAVEMENT MARKING (TURN LANES)" FOR ALL MAINLINE MARKINGS.
- ONLY INTERSECTION AND ASSOCIATED LONG LINE MARKINGS SHOWN ON PLANS

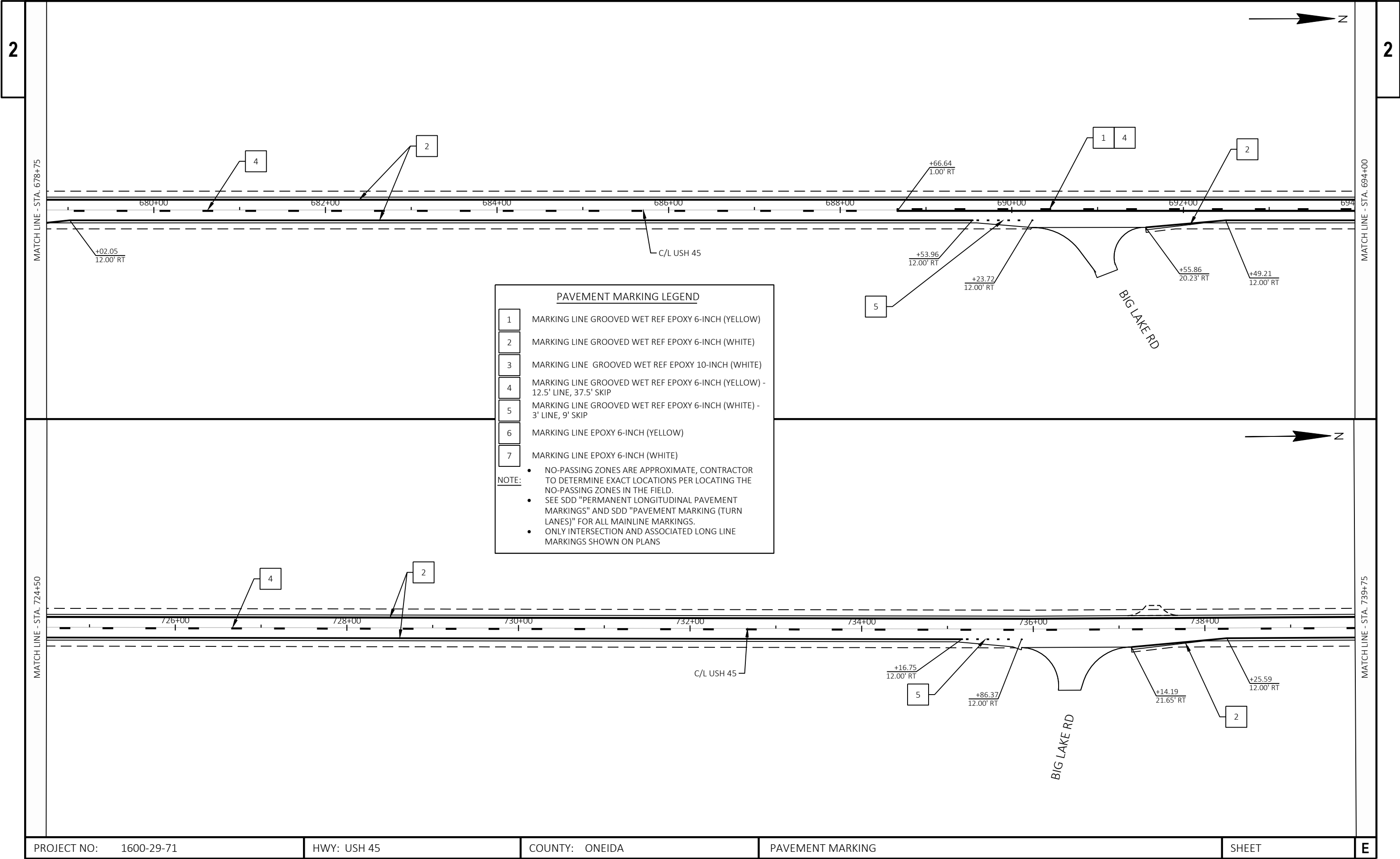


PAVEMENT MARKING LEGEND

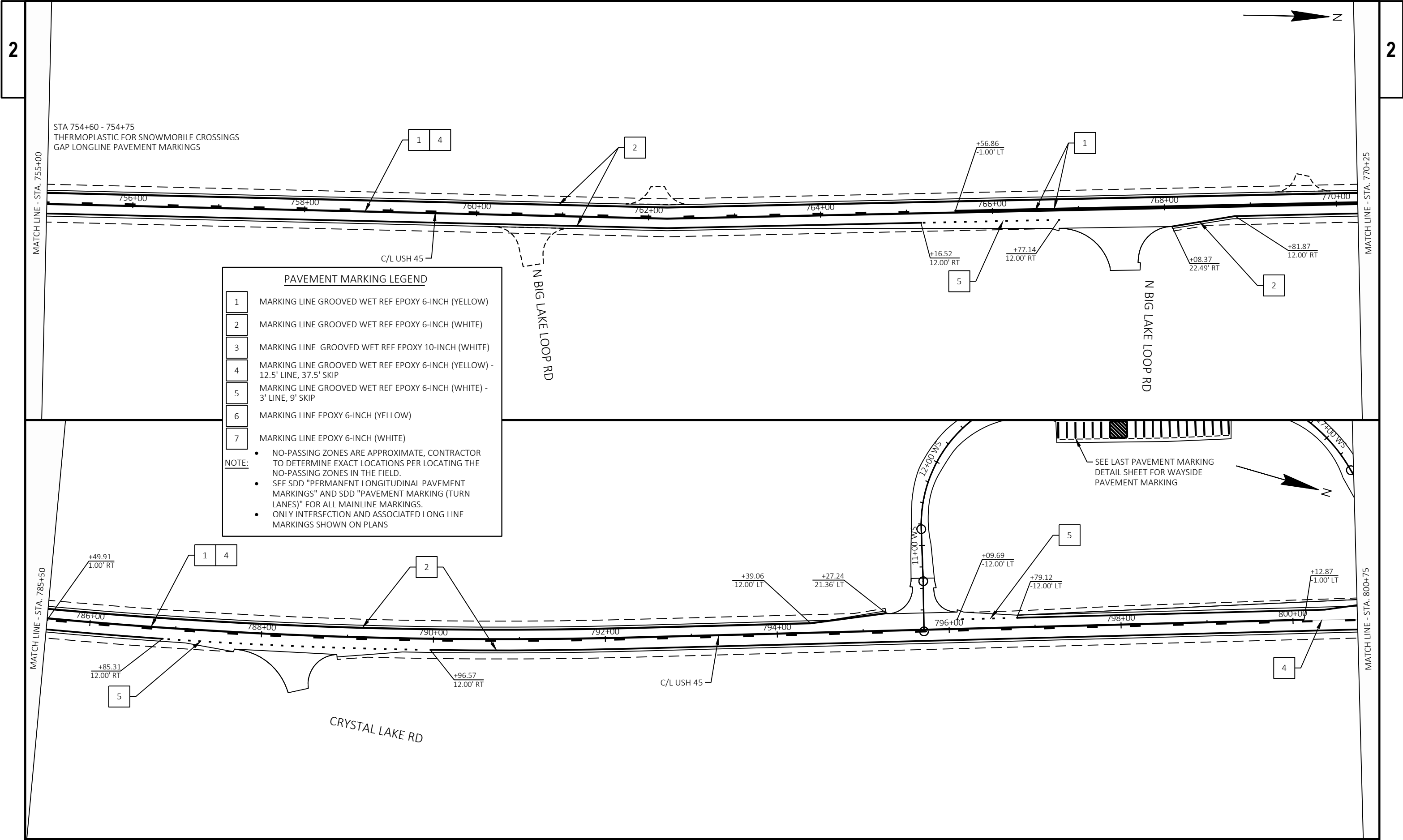
1	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
4	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW) - 12.5' LINE, 37.5' SKIP
5	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) - 3' LINE, 9' SKIP
6	MARKING LINE EPOXY 6-INCH (YELLOW)
7	MARKING LINE EPOXY 6-INCH (WHITE)

NOTE:

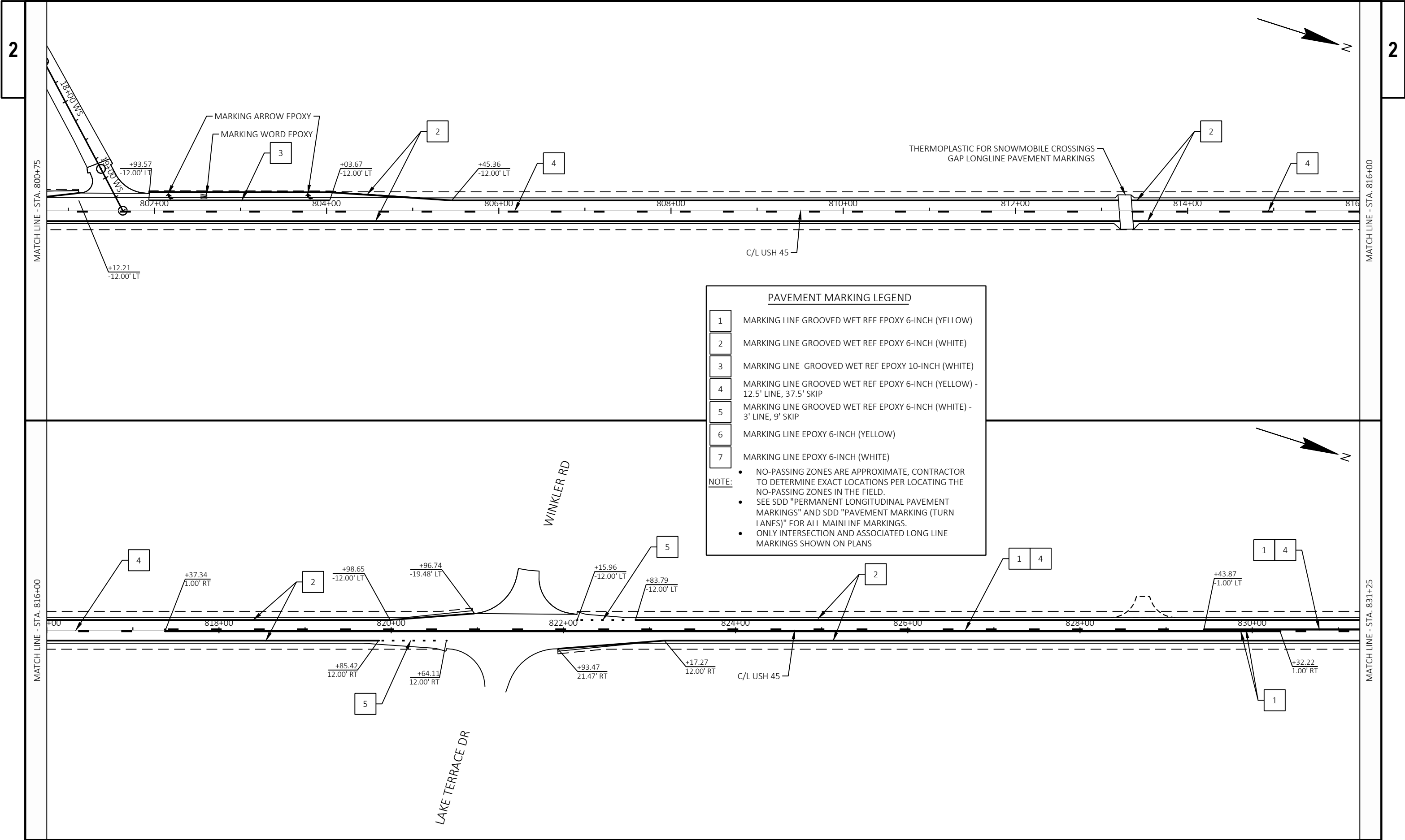
- NO-PASSING ZONES ARE APPROXIMATE, CONTRACTOR TO DETERMINE EXACT LOCATIONS PER LOCATING THE NO-PASSING ZONES IN THE FIELD.
- SEE SDD "PERMANENT LONGITUDINAL PAVEMENT MARKINGS" AND SDD "PAVEMENT MARKING (TURN LANES)" FOR ALL MAINLINE MARKINGS.
- ONLY INTERSECTION AND ASSOCIATED LONG LINE MARKINGS SHOWN ON PLANS



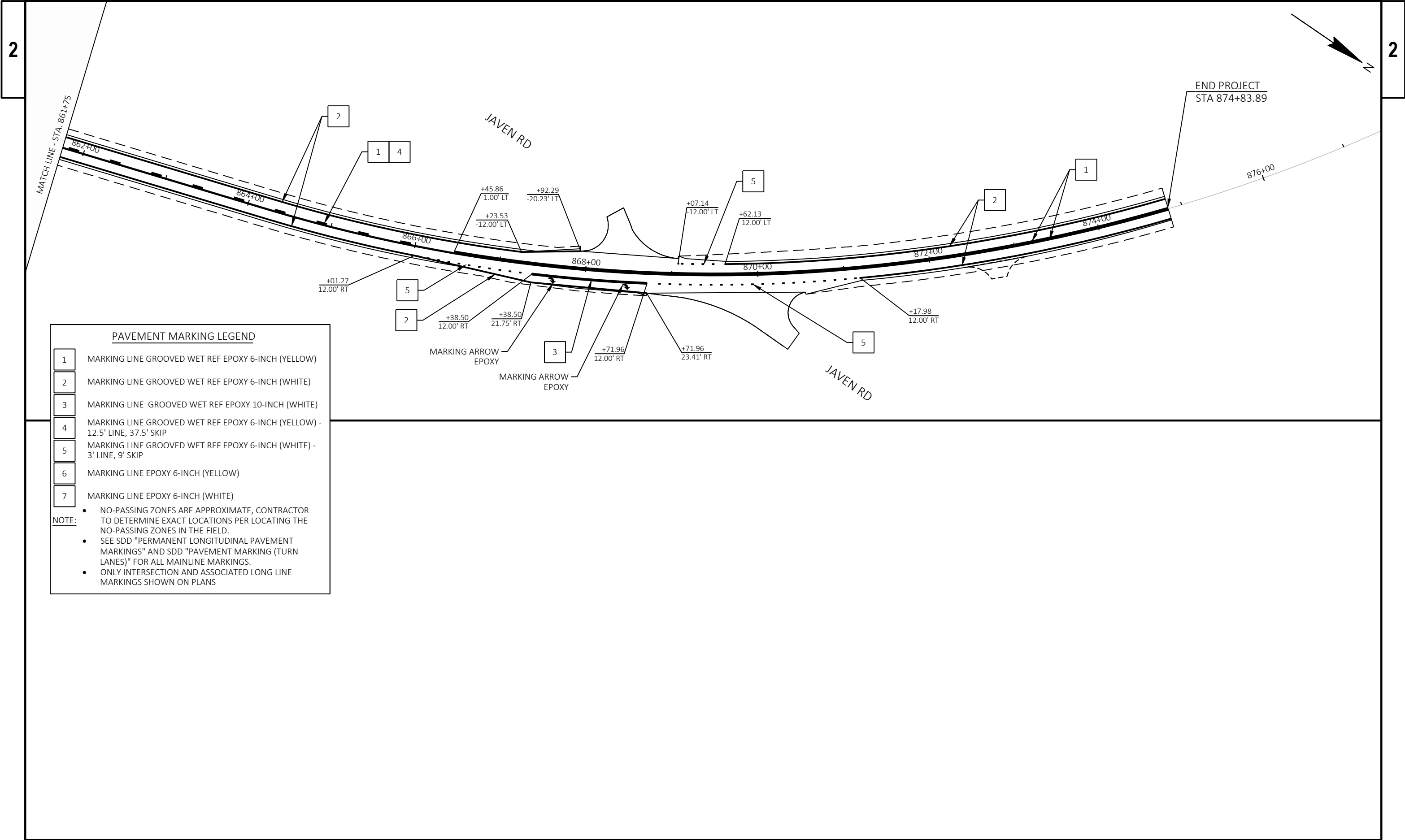
PROJECT NO: 1600-29-71	HWY: USH 45	COUNTY: ONEIDA	PAVEMENT MARKING	SHEET	E
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PROJECT NO: 1600-29-71	HWY: USH 45	COUNTY: ONEIDA	PAVEMENT MARKING	SHEET	E
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PROJECT NO: 1600-29-71	HWY: USH 45	COUNTY: ONEIDA	PAVEMENT MARKING	SHEET	E
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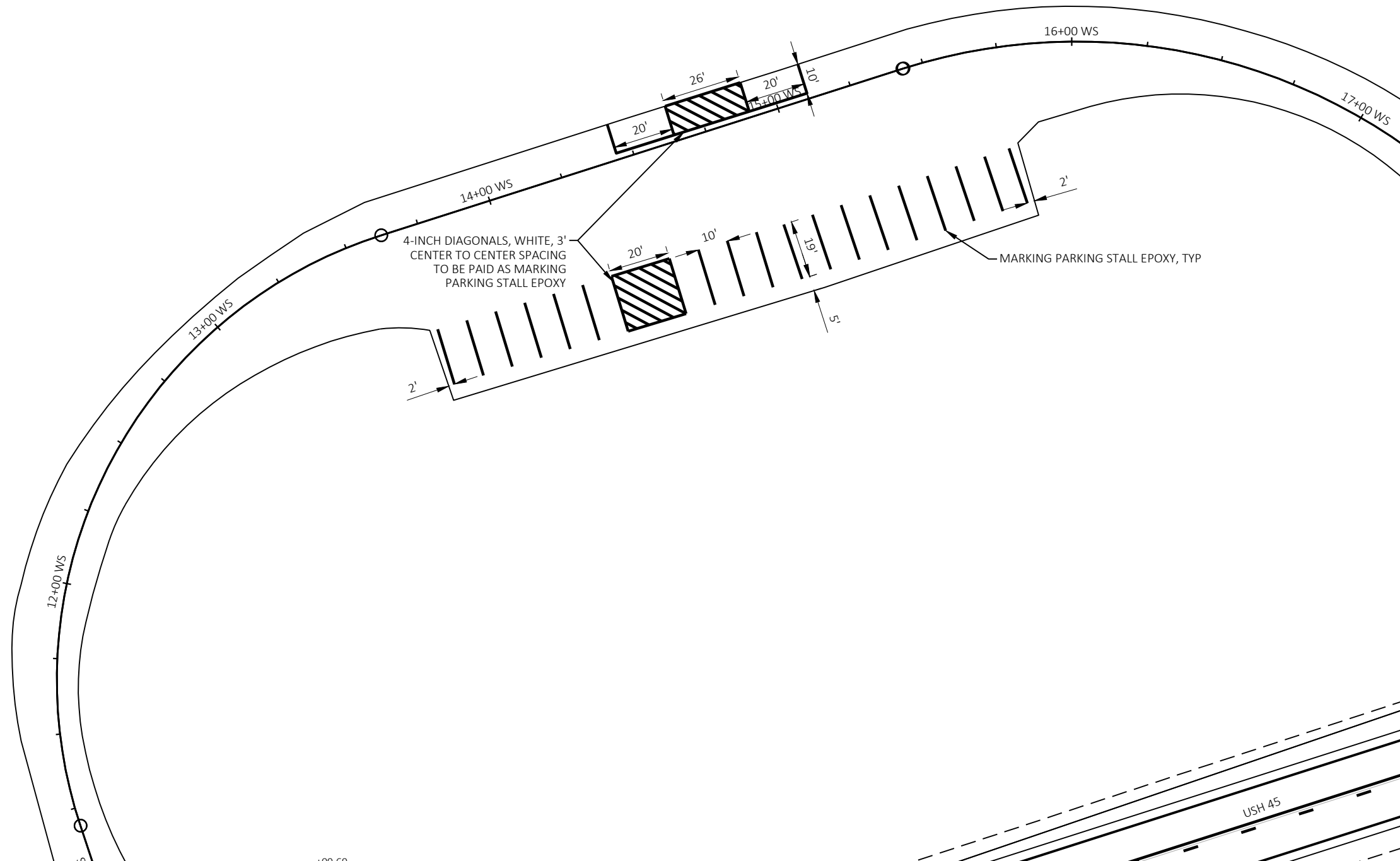
PAVEMENT MARKING LEGEND

1	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
2	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
3	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
4	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW) - 12.5' LINE, 37.5' SKIP
5	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE) - 3' LINE, 9' SKIP
6	MARKING LINE EPOXY 6-INCH (YELLOW)
7	MARKING LINE EPOXY 6-INCH (WHITE)

NOTE:

- NO-PASSING ZONES ARE APPROXIMATE, CONTRACTOR TO DETERMINE EXACT LOCATIONS PER LOCATING THE NO-PASSING ZONES IN THE FIELD.
- SEE SDD "PERMANENT LONGITUDINAL PAVEMENT MARKINGS" AND SDD "PAVEMENT MARKING (TURN LANES)" FOR ALL MAINLINE MARKINGS.
- ONLY INTERSECTION AND ASSOCIATED LONG LINE MARKINGS SHOWN ON PLANS

- NOTE:
- ALL LINES 4-INCH WHITE UNLESS OTHERWISE NOTED



HWY 45 ROAD WORK BEGINS XXX-XX

END PROJECT STA 874+83.91

TRAFFIC CONTROL LEGEND

A PLACE MAINLINE TRAFFIC CONTROL SIGNS PER SDD "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC". ALL SIGNS PLACED ON USH 8 SHOULD HAVE A NORTH 45 SIGN ABOVE THEM.

B PLACE SIDE ROAD TRAFFIC CONTROL SIGNS PER SDD "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

STRUCTURE B-43-0015
NET EXCEPTION TO CL LENGTH
STA 372+78.50 - 374+12.83

STRUCTURE C-43-0008

PIEHL TOWNSHIP

USH 8

CEMETERY RD

ERICKSON RD

WOODRUFF RD

KURTZ RD

MAKAR RD

OLD 45 RD

GAGEN RD

HILES JCT RD

MARGARET LAKE RD

S BIG LAKE LOOP RD

BIG LAKE RD

N BIG LAKE LOOP RD

WINKLER RD

JAVEN RD

LAKE TERRACE DR

STH 32

STH 33

PIEHL LAKE

PIEHL CREEK

STA 11+05.57
Y=142,553.144
X=331,074.655

STA 105+58

STA 127+81

STA 143+14

STA 176+26

STA 194+16

STA 211+74

STA 231+81

STA 244+82

STA 282+03

STA 291+59

STA 310+29

STA 310+21

STA 317+86

STA 327+93

STA 328+00

STA 333+28

STA 344+42

STA 372+78.50

STA 374+12.83

STA 382+00

STA 392+00

STA 402+00

STA 412+00

STA 422+00

STA 432+00

STA 442+00

STA 452+00

STA 462+00

STA 472+00

STA 482+00

STA 492+00

STA 502+00

STA 512+00

STA 522+00

STA 532+00

STA 542+00

STA 552+00

STA 562+00

STA 572+00

STA 582+00

STA 592+00

STA 602+00

STA 612+00

STA 622+00

STA 632+00

STA 642+00

STA 652+00

STA 662+00

STA 672+00

STA 682+00

STA 692+00

STA 702+00

STA 712+00

STA 722+00

STA 732+00

STA 742+00

STA 752+00

STA 762+00

STA 772+00

STA 782+00

STA 792+00

STA 802+00

STA 812+00

STA 822+00

STA 832+00

STA 842+00

STA 852+00

STA 862+00

STA 872+00

STA 874+83.91

STA 105+58

STA 127+81

STA 143+14

STA 176+26

STA 194+16

STA 211+74

STA 231+81

STA 244+82

STA 282+03

STA 291+59

STA 310+29

STA 310+21

STA 317+86

STA 327+93

STA 328+00

STA 333+28

STA 344+42

STA 372+78.50

STA 374+12.83

STA 382+00

STA 392+00

STA 402+00

STA 412+00

STA 422+00

STA 432+00

STA 442+00

STA 452+00

STA 462+00

STA 472+00

STA 482+00

STA 492+00

STA 502+00

STA 512+00

STA 522+00

STA 532+00

STA 542+00

STA 552+00

STA 562+00

STA 572+00

STA 582+00

STA 592+00

STA 602+00

STA 612+00

STA 622+00

STA 632+00

STA 642+00

STA 652+00

STA 662+00

STA 672+00

STA 682+00

STA 692+00

STA 702+00

STA 712+00

STA 722+00

STA 732+00

STA 742+00

STA 752+00

STA 762+00

STA 772+00

STA 782+00

STA 792+00

STA 802+00

STA 812+00

STA 822+00

STA 832+00

STA 842+00

STA 852+00

STA 862+00

STA 872+00

STA 874+83.91

STA 105+58

STA 127+81

STA 143+14

STA 176+26

STA 194+16

STA 211+74

STA 231+81

STA 244+82

STA 282+03

STA 291+59

STA 310+29

STA 310+21

STA 317+86

STA 327+93

STA 328+00

STA 333+28

STA 344+42

STA

A	PLACE MAINLINE TRAFFIC CONTROL SIGNS PER SDD "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC". ALL SIGNS PLACED ON USH 8 SHOULD HAVE A NORTH 45 SIGN ABOVE THEM.
B	PLACE SIDE ROAD TRAFFIC CONTROL SIGNS PER SDD "TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

Estimate Of Quantities

1600-29-71					
Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	8.000	8.000
0004	201.0205	Grubbing	STA	8.000	8.000
0006	203.0100	Removing Small Pipe Culverts	EACH	22.000	22.000
0008	203.0220	Removing Structure (structure) 01. 60-Inch Culvert	EACH	1.000	1.000
0010	204.0110	Removing Asphaltic Surface	SY	110.000	110.000
0012	204.0115	Removing Asphaltic Surface Butt Joints	SY	910.000	910.000
0014	204.0120	Removing Asphaltic Surface Milling	SY	308,000.000	308,000.000
0016	204.0165	Removing Guardrail	LF	150.000	150.000
0018	204.0180	Removing Delineators and Markers	EACH	42.000	42.000
0020	204.0185	Removing Masonry	CY	11.000	11.000
0022	204.9060.S	Removing (item description) 01. Concrete Wheel Stops	EACH	20.000	20.000
0024	205.0100	Excavation Common	CY	15,600.000	15,600.000
0026	208.0100	Borrow	CY	2,190.000	2,190.000
0028	208.1500.S	Temporary Lane Shift During Culvert Work	EACH	42.000	42.000
0030	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 1600-29-71	EACH	1.000	1.000
0032	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	2.000	2.000
0034	213.0100	Finishing Roadway (project) 01. 1600-29-71	EACH	1.000	1.000
0036	305.0110	Base Aggregate Dense 3/4-Inch	TON	14,700.000	14,700.000
0038	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	6,200.000	6,200.000
0040	450.4000	HMA Cold Weather Paving	TON	15,690.000	15,690.000
0042	455.0605	Tack Coat	GAL	36,900.000	36,900.000
0044	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0046	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0048	460.2005	Incentive Density PWL HMA Pavement	DOL	47,410.000	47,410.000
0050	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	17,330.000	17,330.000
0052	460.2010	Incentive Air Voids HMA Pavement	DOL	62,700.000	62,700.000
0054	460.5224	HMA Pavement 4 LT 58-28 S	TON	62,700.000	62,700.000
0056	465.0105	Asphaltic Surface	TON	2,660.000	2,660.000
0058	465.0110	Asphaltic Surface Patching	TON	1,670.000	1,670.000
0060	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	20.000	20.000
0062	465.0565	Asphaltic Rumble Strips, Centerline Sinusoidal	LF	77,000.000	77,000.000
0064	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	8.000	8.000
0066	520.1030	Apron Endwalls for Culvert Pipe 30-Inch	EACH	22.000	22.000
0068	520.1036	Apron Endwalls for Culvert Pipe 36-Inch	EACH	12.000	12.000
0070	520.1048	Apron Endwalls for Culvert Pipe 48-Inch	EACH	2.000	2.000
0072	520.1060	Apron Endwalls for Culvert Pipe 60-Inch	EACH	2.000	2.000
0074	520.3424	Culvert Pipe Class III-A Non-metal 24-Inch	LF	307.000	307.000
0076	520.3430	Culvert Pipe Class III-A Non-metal 30-Inch	LF	1,061.000	1,061.000
0078	520.3436	Culvert Pipe Class III-A Non-metal 36-Inch	LF	365.000	365.000
0080	522.0436	Culvert Pipe Reinforced Concrete Class IV 36-Inch	LF	56.000	56.000
0082	522.0448	Culvert Pipe Reinforced Concrete Class IV 48-Inch	LF	69.000	69.000
0084	522.0460	Culvert Pipe Reinforced Concrete Class IV 60-Inch	LF	67.000	67.000
0086	606.0200	Riprap Medium	CY	76.000	76.000
0088	606.0300	Riprap Heavy	CY	14.000	14.000
0090	614.0400	Adjusting Steel Plate Beam Guard	LF	120.000	120.000
0092	614.2300	MGS Guardrail 3	LF	12.500	12.500
0094	614.2610	MGS Guardrail Terminal EAT	EACH	3.000	3.000
0096	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1600-29-71	EACH	1.000	1.000
0098	619.1000	Mobilization	EACH	1.000	1.000

Estimate Of Quantities

1600-29-71

Line	Item	Item Description	Unit	Total	Qty
0100	624.0100	Water	MGAL	330.000	330.000
0102	625.0100	Topsoil	SY	30,100.000	30,100.000
0104	628.1504	Silt Fence	LF	12,800.000	12,800.000
0106	628.1520	Silt Fence Maintenance	LF	12,800.000	12,800.000
0108	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0110	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0112	628.2006	Erosion Mat Urban Class I Type A	SY	30,100.000	30,100.000
0114	628.7504	Temporary Ditch Checks	LF	190.000	190.000
0116	628.7555	Culvert Pipe Checks	EACH	135.000	135.000
0118	628.7570	Rock Bags	EACH	40.000	40.000
0120	629.0210	Fertilizer Type B	CWT	6.000	6.000
0122	630.0120	Seeding Mixture No. 20	LB	1,380.000	1,380.000
0124	630.0200	Seeding Temporary	LB	50.000	50.000
0126	630.0500	Seed Water	MGAL	700.000	700.000
0128	633.5200	Markers Culvert End	EACH	42.000	42.000
0130	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	4.000	4.000
0132	638.2102	Moving Signs Type II	EACH	10.000	10.000
0134	638.2602	Removing Signs Type II	EACH	15.000	15.000
0136	638.3000	Removing Small Sign Supports	EACH	8.000	8.000
0138	638.4000	Moving Small Sign Supports	EACH	10.000	10.000
0140	642.5001	Field Office Type B	EACH	1.000	1.000
0142	643.0300	Traffic Control Drums	DAY	31,500.000	31,500.000
0144	643.0900	Traffic Control Signs	DAY	16,800.000	16,800.000
0146	643.1000	Traffic Control Signs Fixed Message	SF	54.000	54.000
0148	643.3165	Temporary Marking Line Paint 6-Inch	LF	215,700.000	215,700.000
0150	643.5000	Traffic Control	EACH	1.000	1.000
0152	645.0120	Geotextile Type HR	SY	220.000	220.000
0154	646.2020	Marking Line Epoxy 6-Inch	LF	538.000	538.000
0156	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	251,600.000	251,600.000
0158	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	345.000	345.000
0160	646.5020	Marking Arrow Epoxy	EACH	4.000	4.000
0162	646.5120	Marking Word Epoxy	EACH	1.000	1.000
0164	646.6466	Cold Weather Marking Epoxy 6-Inch	LF	251,600.000	251,600.000
0166	646.8320	Marking Parking Stall Epoxy	LF	766.000	766.000
0168	650.6000	Construction Staking Pipe Culverts	EACH	23.000	23.000
0170	650.8000	Construction Staking Resurfacing Reference	LF	86,244.000	86,244.000
0172	650.9911	Construction Staking Supplemental Control (project) 01. 1600-29-71	EACH	1.000	1.000
0174	650.9920	Construction Staking Slope Stakes	LF	1,193.000	1,193.000
0176	690.0150	Sawing Asphalt	LF	1,360.000	1,360.000
0178	740.0440	Incentive IRI Ride	DOL	65,300.000	65,300.000
0180	SPV.0060	Special 01. Resetting Culvert Sections	EACH	1.000	1.000
0182	SPV.0060	Special 02. Concrete Wheel Stops	EACH	20.000	20.000
0184	SPV.0180	Special 01. Removing Distressed Pavement Milling	SY	14,900.000	14,900.000
0186	SPV.0180	Special 02. Protective Thermoplastic Coating at Snowmobile Trail Crossing	SY	211.000	211.000

201 CLEARING AND GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA	REMARKS
0010	142+80	-	143+40	USH 45 41' RT TO 45' RT	1	1	
0010	279+97	-	282+60	USH 45 60' LT TO 97' LT	3	3	
0010	370+00	-	372+00	USH 45 70' RT TO 105' RT	2	2	
0010	374+50	-	376+50	USH 45 50' RT TO 115' RT	2	2	
				TOTAL 0010	8	8	

203 REMOVING CULVERT SUMMARY

			203.0100	203.0220.01 REMOVING STRUCTURE (STRUCTURE) (01. 60-INCH CULVERT)	204.0180	204.0185	*	208.1500.S		
			REMOVING SMALL PIPE CULVERTS EACH		REMOVING DELINEATORS AND MARKERS EACH	REMOVING MASONRY CY	EXCAVATION COMMON CY	TEMPORARY LANE SHIFT DURING CULVERT WORK EACH		
CATEGORY	STATION	LOCATION	CULVERT NUMBER						REMARKS	
0010	105+58	USH 45	43045003277	1	-	2	1.00	734	2	24" CMP
0010	127+81	USH 45	43045003278	1	-	2	1.25	639	2	30" CMP
0010	143+14	USH 45	43045003279	1	-	2	-	717	2	36" CMP
0010	176+26	USH 45	43045003280	1	-	2	-	734	2	30" CMP
0010	194+16	USH 45	43045003281	1	-	2	-	734	2	30" CMP
0010	211+74	USH 45	43045003282	1	-	2	-	734	2	30" CMP
0010	226+82	USH 45	43045003283	1	-	2	1.25	734	2	30" CMP
0010	231+81	USH 45	43045003284	1	-	2	1.25	688	2	30" CMP
0010	237+10	USH 45	43045003285	-	1	2	-	576	2	60" CMP
0010	244+82	USH 45	43045003286	1	-	2	1.00	723	2	24" CMP
0010	248+84	USH 45	43045003287	1	-	2	1.25	734	2	30" CMP
0010	282+03	USH 45	43045003288	1	-	2	-	734	2	30" CMP
0010	291+59	USH 45	43045003289	1	-	2	-	734	2	30" CMP
0010	310+21	USH 45	43045004609	1	-	2	-	734	1	36" CMP, SHARED TRENCH
0010	310+29	USH 45	43045003290	1	-	-	-	252	1	36" CMP, SHARED TRENCH
0010	317+86	USH 45	43045003291	1	-	2	1.00	731	2	24" CMP
0010	327+93	USH 45	43045004610	1	-	2	-	718	1	36" CMP, SHARED TRENCH
0010	328+00	USH 45	43045003292	1	-	-	-	252	1	36" CMP, SHARED TRENCH
0010	333+28	USH 45	43045003293	1	-	2	-	679	2	24" CMP
0010	344+42	USH 45	43045003295	1	-	2	1.25	734	2	30" CMP
0010	524+23	USH 45	43045003309	1	-	2	1.25	734	2	30" CMP
0010	536+27	USH 45	43045003310	1	-	2	-	734	2	30" CMP
0010	662+90	USH 45	43045003319	1	-	2	-	725	2	24" CMP
0010	-	PROJECT	-	-	-	-	0.50	9	-	UNDISTRIBUTED
			TOTAL 0010	22	1	42	11	15,517	42	

NOTES

* ADDITIONAL QUANTITIES LISTED ELSEWHERE
MAINTAIN 15 FEET MINIMUM CLEAR WIDTH BETWEEN TRAFFIC CONTROL DRUMS

204 REMOVING ASPHALTIC SURFACE									
CATEGORY	STATION	TO	STATION	LOCATION	204.0110	204.0115	204.0120	SPV.0180.01 SPECIAL (01. DISTRESSED PAVEMENT MILLING)	REMARKS
					REMOVING ASPHALTIC SURFACE SY	REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	REMOVING ASPHALTIC SURFACE MILLING SY	SY	
0010	11+56	-	372+27	ML	-	-	121,520	6,066	USH 45
0010	374+63	-	874+34	ML	-	-	176,974	8,834	USH 45
0010	795+55	-	801+51	LT	-	-	3,499	-	WAYSIDE
0010	11+04	-	11+56	USH 45 ML	-	55	-	-	BUTT JOINT
0010	23+95	-	25+10	USH 45 LT	-	-	273	-	CEMETARY RD
0010	24+20	-	24+47	USH 45 LT	-	30	-	-	BUTT JOINT
0010	33+89	-	35+15	USH 45 LT	-	-	253	-	LAKE RD
0010	34+17	-	34+47	USH 45 LT	-	30	-	-	BUTT JOINT
0010	35+15	-	36+19	USH 45 RT	-	-	244	-	ERICKSON RD
0010	35+97	-	36+19	USH 45 RT	-	24	-	-	BUTT JOINT
0010	116+88	-	118+03	USH 45 LT	-	-	103	-	WOODRICK RD
0010	117+12	-	117+55	USH 45 LT	-	39	-	-	BUTT JOINT
0010	117+74	-	118+92	USH 45 RT	-	-	244	-	KURTZ RD
0010	118+30	-	118+58	USH 45 RT	-	30	-	-	BUTT JOINT
0010	131+95	-	133+09	USH 45 LT	-	-	114	-	WOODRICK RD
0010	132+35	-	132+66	USH 45 LT	-	31	-	-	BUTT JOINT
0010	139+12	-	139+46	USH 45 LT	27	-	-	-	DRIVEWAY
0010	196+23	-	197+42	USH 45 LT	-	-	249	-	MAKAR RD
0010	196+79	-	197+03	USH 45 LT	-	24	-	-	BUTT JOINT
0010	308+25	-	309+25	USH 45 RT	-	-	154	-	OLD 45 RD
0010	308+65	-	308+90	USH 45 RT	-	27	-	-	BUTT JOINT
0010	353+58	-	354+95	USH 45 LT	-	-	343	-	CTH C
0010	353+90	-	354+26	USH 45 LT	-	39	-	-	BUTT JOINT
0010	372+24	-	372+81	USH 45 ML	-	49	-	-	BRIDGE APPROACH
0010	374+09	-	374+67	USH 45 ML	-	49	-	-	BRIDGE APPROACH
0010	501+31	-	502+55	USH 45 LT	-	-	263	-	GAGEN RD
0010	501+68	-	501+98	USH 45 LT	-	32	-	-	BUTT JOINT
0010	534+87	-	536+04	USH 45 LT	-	-	155	-	HILES JUNCTION RD
0010	535+32	-	535+53	USH 45 LT	-	23	-	-	BUTT JOINT
0010	546+77	-	547+92	USH 45 RT	-	-	259	-	MARGARET LAKE RD
0010	547+41	-	547+72	USH 45 RT	-	33	-	-	BUTT JOINT
0010	612+81	-	613+95	USH 45 LT	-	-	270	-	E STELLA LAKE RD
0010	613+17	-	613+47	USH 45 LT	-	31	-	-	BUTT JOINT
0010	676+70	-	677+98	USH 45 RT	-	-	316	-	S BIG LAKE LOOP RD
0010	677+21	-	677+59	USH 45 RT	-	40	-	-	BUTT JOINT
0010	676+74	-	678+26	USH 45 LT	-	-	266	-	BRANHAM RD
0010	677+36	-	677+60	USH 45 LT	-	26	-	-	BUTT JOINT
0010	690+24	-	691+56	USH 45 RT	-	-	277	-	BIG LAKE RD
0010	690+96	-	691+28	USH 45 RT	-	32	-	-	BUTT JOINT
0010	735+86	-	737+14	USH 45 RT	-	-	277	-	BIG LAKE RD
0010	736+26	-	736+56	USH 45 RT	-	31	-	-	BUTT JOINT
0010	750+43	-	750+93	USH 45 LT	55	-	-	-	DRIVEWAY
0010	754+60	-	754+75	USH 45 RT	14	-	-	-	SNOWMOBILE CROSSING
0010	754+60	-	754+75	USH 45 LT	14	-	-	-	SNOWMOBILE CROSSING
0010	766+77	-	768+08	USH 45 RT	-	-	280	-	N BIG LAKE LOOP RD
0010	767+33	-	767+71	USH 45 RT	-	43	-	-	BUTT JOINT
0010	787+70	-	788+88	USH 45 RT	-	-	235	-	CRYSTAL LAKE RD
0010	788+31	-	788+66	USH 45 RT	-	33	-	-	BUTT JOINT
0010	795+27	-	796+10	USH 45 LT	-	-	125	-	WAYSIDE TRANSITION
0010	801+12	-	801+94	USH 45 LT	-	-	129	-	WAYSIDE TRANSITION
0010	820+64	-	821+93	USH 45 RT	-	-	262	-	LAKE TERRACE DR
0010	821+06	-	821+35	USH 45 RT	-	31	-	-	BUTT JOINT
0010	820+97	-	822+16	USH 45 LT	-	-	255	-	WINKLER RD
0010	821+45	-	821+78	USH 45 LT	-	33	-	-	BUTT JOINT
0010	867+92	-	869+07	USH 45 LT	-	-	221	-	JAVEN RD
0010	868+10	-	868+43	USH 45 LT	-	31	-	-	BUTT JOINT
0010	868+72	-	870+54	USH 45 RT	-	-	440	-	JAVEN RD
0010	870+24	-	870+49	USH 45 RT	-	32	-	-	BUTT JOINT
0010	874+33	-	874+84	USH 45 ML	-	32	-	-	BUTT JOINT
TOTAL 0010					110	910	308,000	14,900	

PREPARE FOUNDATION SUMMARY

211.0400						
PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS						
CATEGORY	STATION	TO	STATION	LOCATION	STA	REMARKS
0010	11+56	-	874+34	PROJECT	-	
0010	754+60	-	754+75	USH 45 RT	1	SNOWMOBILE CROSSING
0010	754+60	-	754+75	USH 45 LT	1	SNOWMOBILE CROSSING
				TOTAL 0010	2	

305 BASE AGGREGATE SUMMARY

305.0110							305.0120		624.0100	
BASE AGGREGATE							BASE AGGREGATE		WATER	
DENSE 3/4-INCH							DENSE 1 1/4-INCH		MGAL	
CATEGORY	STATION	TO	STATION	LOCATION	TON		TON			REMARKS
0010	11+06	-	874+84	USH 45	-		4,546		69	BASE IN CULVERT PATCHES TEMP AGGREGATE IN CULVERT PATCHES 59 GRAVEL DRIVEWAYS, 3" TYP DEPTH
0010	11+06	-	874+84	USH 45	-		1,654		25	
0010	11+06	-	874+84	USH 45 LT & RT	430		-		7	
0010	11+04	-	23+95	USH 45 LT	78		-		2	
0010	11+06	-	35+86	USH 45 RT	150		-		3	SHOULDER
0010	24+94	-	33+88	USH 45 LT	37		-		1	SHOULDER
0010	35+15	-	117+12	USH 45 LT	351		-		6	SHOULDER
0010	35+99	-	117+74	USH 45 RT	352		-		6	SHOULDER
0010	117+74	-	132+36	USH 45 LT	63		-		1	SHOULDER
0010	118+93	-	148+81	USH 45 RT	128		-		2	SHOULDER
0010	132+62	-	196+44	USH 45 LT	274		-		5	SHOULDER
0010	149+27	-	308+65	USH 45 RT	685		-		11	SHOULDER
0010	197+00	-	353+58	USH 45 LT	672		-		11	SHOULDER
0010	309+05	-	372+66	USH 45 RT	275		-		5	SHOULDER
0010	354+95	-	372+75	USH 45 LT	75		-		2	SHOULDER
0010	374+21	-	501+30	USH 45 LT	547		-		9	SHOULDER
0010	374+26	-	398+97	USH 45 RT	107		-		2	SHOULDER
0010	399+32	-	491+09	USH 45 RT	394		-		6	SHOULDER
0010	491+45	-	546+77	USH 45 RT	235		-		4	SHOULDER
0010	502+56	-	535+33	USH 45 LT	140		-		3	SHOULDER
0010	535+73	-	612+81	USH 45 LT	330		-		5	SHOULDER
0010	547+93	-	676+70	USH 45 RT	548		-		9	SHOULDER
0010	613+95	-	677+25	USH 45 LT	272		-		5	SHOULDER
0010	677+72	-	795+27	USH 45 LT	504		-		8	SHOULDER
0010	677+98	-	690+24	USH 45 RT	51		-		1	SHOULDER
0010	691+56	-	735+80	USH 45 RT	188		-		3	SHOULDER
0010	737+14	-	766+77	USH 45 RT	118		-		2	SHOULDER
0010	754+60	-	754+75	USH 45 RT	7		-		1	REMOVING SNOWMOBILE CROSSING
0010	754+60	-	754+75	USH 45 LT	7		-		1	REMOVING SNOWMOBILE CROSSING
0010	768+09	-	787+69	USH 45 RT	83		-		2	SHOULDER
0010	788+89	-	820+64	USH 45 RT	133		-		2	SHOULDER
0010	796+21	-	801+12	USH 45 LT	11		-		1	SHOULDER
0010	801+94	-	820+95	USH 45 LT	71		-		2	SHOULDER
0010	821+94	-	868+72	USH 45 RT	196		-		3	SHOULDER
0010	822+15	-	867+92	USH 45 LT	196		-		3	SHOULDER
0010	869+07	-	874+84	USH 45 LT	34		-		1	SHOULDER
0010	870+55	-	874+84	USH 45 RT	18		-		1	SHOULDER
0010			UNDISTRIBUTED		6,940		-		100	RAISING LOW SHOULDERS
			TOTAL 0010		14,700		6,200		330	

465.0565 ASPHALTIC RUMBLE STRIPS, CENTERLINE SINUSOIDAL						REMARKS
CATEGORY	STATION	TO	STATION	LOCATION	LF	
0010	11+06	-	22+47	USH 45	1,141	
0010	26+47	-	32+47	USH 45	600	
0010	37+70	-	115+32	USH 45	7,763	
0010	120+41	-	130+54	USH 45	1,013	
0010	134+54	-	148+04	USH 45	1,349	
0010	150+04	-	194+79	USH 45	4,476	
0010	198+79	-	306+77	USH 45	10,804	
0010	310+77	-	352+27	USH 45	4,149	
0010	356+27	-	372+54	USH 45	1,627	
0010	374+38	-	491+86	USH 45	11,755	
0010	492+02	-	499+90	USH 45	788	
0010	503+90	-	533+43	USH 45	2,953	
0010	537+43	-	545+46	USH 45	803	
0010	549+46	-	585+53	USH 45	3,607	
0010	587+53	-	611+42	USH 45	2,389	
0010	615+42	-	675+43	USH 45	6,001	
0010	679+43	-	688+97	USH 45	953	
0010	692+97	-	734+50	USH 45	4,153	
0010	738+50	-	754+60	USH 45	1,937	
0010	754+75	-	759+59	USH 45	157	
0010	761+59	-	765+50	USH 45	391	
0010	769+50	-	786+32	USH 45	1,683	
0010	790+32	-	793+71	USH 45	338	
0010	797+71	-	799+63	USH 45	193	
0010	803+63	-	813+21	USH 45	957	
0010	813+36	-	819+42	USH 45	607	
0010	823+42	-	866+50	USH 45	4,308	
0010	873+79	-	874+84	USH 45	105	
TOTAL 0010					77,000	

NOTE: GAP AT INTERSECTIONS, C.E.s, BRIDGE, AND SNOWMOBILE CROSSINGS.

SEE SDD "CENTERLINE RUMBLE STRIPS - ASPHALT, SINUSOIDAL" AND SDD "CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAIL ROADS".

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465 HMA SUMMARY

		450.4000		455.0605		460.5224		465.0105		465.0110		465.0120		
		HMA COLD WEATHER		TACK COAT		HMA PAVEMENT 4 LT		ASPHALTIC SURFACE		ASPHALTIC SURFACE		ASPHALTIC SURFACE		
CATEGORY	STATION	TO	STATION	LOCATION	PAVING TON	GAL	58-28 S TON	ASPHALTIC SURFACE TON	ASPHALTIC SURFACE PATCHING TON	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON				REMARKS
0010	11+06	-	11+56	USH 45 ML	11	29	42	-	-	-				BUTT JOINT
0010	11+56	-	372+28	USH 45 ML	6,238	14,531	24,946	-	-	-				MAINLINE
0010	372+28	-	372+78	USH 45 ML	11	30	44	-	-	-				BRIDGE APPROACH
0010	374+13	-	374+63	USH 45 ML	11	30	44	-	-	-				BRIDGE APPROACH
0010	374+67	-	874+84	USH 45 ML	9,096	21,190	36,376	-	-	-				MAINLINE
0010	874+34	-	874+84	USH 45 ML	8	20	29	-	-	-				BUTT JOINT
0010	23+95	-	25+10	USH 45 LT	14	37	54	-	-	-				CEMETARY RD
0010	33+89	-	35+15	USH 45 LT	13	34	51	-	-	-				LAKE RD
0010	35+15	-	36+19	USH 45 RT	12	33	48	-	-	-				ERICKSON RD
0010	116+88	-	118+03	USH 45 LT	7	18	26	-	-	-				WOODRICK RD
0010	117+74	-	118+92	USH 45 RT	13	33	49	-	-	-				KURTZ RD
0010	131+95	-	133+09	USH 45 LT	7	18	26	-	-	-				WOODRICK RD
0010	139+12	-	139+46	USH 45 LT	-	-	-	-	-	7				DRIVEWAY
0010	196+23	-	197+42	USH 45 LT	13	33	49	-	-	-				MAKAR RD
0010	308+25	-	309+25	USH 45 RT	9	22	33	-	-	-				OLD 45 RD
0010	353+58	-	354+95	USH 45 LT	17	46	68	-	-	-				CTH C
0010	501+31	-	502+55	USH 45 LT	14	36	53	-	-	-				GAGEN RD
0010	534+87	-	536+04	USH 45 LT	8	22	32	-	-	-				HILES JUNCTION RD
0010	546+77	-	547+92	USH 45 RT	13	36	52	-	-	-				MARGARET LAKE RD
0010	612+81	-	613+95	USH 45 LT	14	37	54	-	-	-				E STELLA LAKE RD
0010	676+70	-	677+98	USH 45 RT	16	43	64	-	-	-				S BIG LAKE LOOP RD
0010	676+74	-	678+26	USH 45 LT	13	36	52	-	-	-				BRANHAM RD
0010	690+24	-	691+56	USH 45 RT	14	38	56	-	-	-				BIG LAKE RD
0010	735+86	-	737+14	USH 45 RT	14	37	55	-	-	-				BIG LAKE RD
0010	750+43	-	750+93	USH 45 LT	-	-	-	-	-	13				DRIVEWAY
0010	754+60	-	754+75	USH 45 RT	2	2	5	-	-	-				SNOWMOBILE CROSSING
0010	754+60	-	754+75	USH 45 LT	2	2	5	-	-	-				SNOWMOBILE CROSSING
0010	766+77	-	768+08	USH 45 RT	15	39	58	-	-	-				N BIG LAKE LOOP RD
0010	787+70	-	788+88	USH 45 RT	12	33	48	-	-	-				CRYSTAL LAKE RD
0010	795+27	-	796+10	USH 45 LT	6	15	23	-	-	-				WAYSIDE TRANSITION
0010	801+12	-	801+94	USH 45 LT	6	16	23	-	-	-				WAYSIDE TRANSITION
0010	820+64	-	821+93	USH 45 RT	14	36	53	-	-	-				LAKE TERRACE DR
0010	820+97	-	822+16	USH 45 LT	13	35	52	-	-	-				WINKLER RD
0010	867+92	-	869+07	USH 45 LT	12	31	45	-	-	-				JAVEN RD
0010	868+72	-	870+54	USH 45 RT	22	57	85	-	-	-				JAVEN RD
0011	11+06		874+84	UNDISTRIBUTED	-	-	-	-	1,670	-				FOR PATCHING OF MILLED SURFACE
0010	10+21 "WS"	-	19+20 "WS"	WAYSIDE	-	245	-	376	-	-				WAYSIDE
0010			105+58	USH 45	-	-	-	109	-	-				CULVERT 43045003277
0010			127+81	USH 45	-	-	-	108	-	-				CULVERT 43045003278
0010			143+14	USH 45	-	-	-	108	-	-				CULVERT 43045003279
0010			176+26	USH 45	-	-	-	108	-	-				CULVERT 43045003280
0010			194+16	USH 45	-	-	-	108	-	-				CULVERT 43045003281
0010			211+74	USH 45	-	-	-	108	-	-				CULVERT 43045003282
0010			226+82	USH 45	-	-	-	108	-	-				CULVERT 43045003283
0010			231+81	USH 45	-	-	-	108	-	-				CULVERT 43045003284
0010			237+10	USH 45	-	-	-	110	-	-				CULVERT 43045003285
0010			244+82	USH 45	-	-	-	108	-	-				CULVERT 43045003286
0010			248+84	USH 45	-	-	-	108	-	-				CULVERT 43045003287
0010			282+03	USH 45	-	-	-	108	-	-				CULVERT 43045003288
0010			291+59	USH 45	-	-	-	108	-	-				CULVERT 43045003289
0010			310+21	USH 45	-	-	-	108	-	-				CULVERT 43045004609
0010			310+29	USH 45	-	-	-	9	-	-				CULVERT 43045003290
0010			317+86	USH 45	-	-	-	107	-	-				CULVERT 43045003291
0010			327+93	USH 45	-	-	-	108	-	-				CULVERT 43045004610
0010			328+00	USH 45	-	-	-	8	-	-				CULVERT 43045003292
0010			333+28	USH 45	-	-	-	107	-	-				CULVERT 43045003293
0010			344+42	USH 45	-	-	-	107	-	-				CULVERT 43045003295
0010			524+23	USH 45	-	-	-	108	-	-				CULVERT 43045003309
0010			536+27	USH 45	-	-	-	108	-	-				CULVERT 43045003310
0010			662+90	USH 45	-	-	-	107	-	-				CULVERT 43045003319
TOTAL 0010					15,690	36,900	62,700	2,660	1,670	20				

*APPLY TACK COAT AT A RATE OF 0.07 GAL/SY TO MILLED SURFACES

PROJECT NO: 1600-29-71

HWY: USH 45

COUNTY: ONEIDA

MISCELLANEOUS QUANTITIES

SHEET

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PWL MIXTURE TABLE
THE FOLLOWING ACCEPTANCE CRITERIA ARE APPLICABLE FOR THIS PROJECT:

LOCATION	STATION	MIXTURE USE	UNDERLAYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12-FOOT DRIVING LANE	USH 45 11+06 - 372+79 374+12 - 874+84	UPPER LAYER	4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	22,555	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005 HMA PAVEMENT LONGITUDINAL JOINT DENSITY 460.2007
12-FOOT DRIVING LANE	USH 45 11+06 - 372+79 374+12 - 874+84	LOWER LAYER	MILLED EXISTING ASPHALT SURFACE	HMA PAVEMENT 4 LT 58-28 S	24,854	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005 HMA PAVEMENT LONGITUDINAL JOINT DENSITY 460.2007
10-FOOT SHOULDER	USH 45 371+59 - 372+78 374+13 - 375+62 770+98 - 773+66	UPPER LAYER	4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	69	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2); NOT ELIGIBLE FOR INCENTIVE
10-FOOT SHOULDER	USH 45 371+59 - 372+78 374+13 - 375+62 770+98 - 773+66	LOWER LAYER	MILLED EXISTING ASPHALT SURFACE	HMA PAVEMENT 4 LT 58-28 S	76	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2); NOT ELIGIBLE FOR INCENTIVE
3-FOOT SHOULDER	USH 45 11+06 - 371+59 372+78 - 374+13 375+62 - 770+98 773+66 - 874+84	UPPER LAYER	4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	6,626	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2); NOT ELIGIBLE FOR INCENTIVE
3-FOOT SHOULDER	USH 45 11+06 - 371+59 372+78 - 374+13 375+62 - 770+98 773+66 - 874+84	LOWER LAYER	MILLED EXISTING ASPHALT SURFACE	HMA PAVEMENT 4 LT 58-28 S	7,301	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2); NOT ELIGIBLE FOR INCENTIVE
CULVERT PATCHES	VAR.	PATCH	BASE AGGREGATE	ASPHALTIC SURFACE	1,671	4" TOTAL	(SS 465)	ORDINARY COMPACTION (SS 450.3.2.6.2)
INTERSECTIONS	VAR.	UPPER LAYER	4 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	711	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2); NOT ELIGIBLE FOR INCENTIVE
INTERSECTIONS	VAR.	LOWER LAYER	MILLED EXISTING ASPHALT SURFACE	HMA PAVEMENT 4 LT 58-28 S	508	0.75" - 1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	DEPARTMENT ACCEPTANCE (SS 460.3.3.2); NOT ELIGIBLE FOR INCENTIVE

614 MGS SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.0400 ADJUSTING STEEL PLATE BEAM GUARD LF	614.2300 MGS GUARDRAIL 3 LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	REMARKS
0010	371+64	-	372+14	LT	50	-	-	1	
0010	372+14	-	372+39	LT	-	25	-	-	
0010	374+37	-	374+69	LT	-	31.5	-	-	
0010	374+39	-	374+77	RT	-	38.5	-	-	
0010	374+77	-	375+27	RT	50	-	-	1	
0010	375+07	-	375+69	LT	50	-	12.5	1	
0010	771+41	-	771+66	RT	-	25	-	-	
TOTAL 0010					150	120	12.5	3	

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION	SALVAGED/UNUSABLE PAVEMENT MATERIAL (2)	AVAILABLE MATERIAL (3)	UNEXPANDED FILL	EXPANDED FILL (4)	MASS ORDINATE +/- (5)	WASTE	* 208.0100 BORROW	COMMENT
			CUT (1)				FACTOR 1.25				
DIVISION 1											
BOX CULVERT - SW	770+29.16/771+98.18	USH 45 LT	9	0	9	20	25	-16			
BOX CULVERT - NW	773+09.88/774+78.92	USH 45 LT	7	0	7	66	83	-76			
BOX CULVERT - NE	772+66.72/774+41.21	USH 45 RT	13	0	13	2	3	11			
BRIDGE - SW	370+45.28/372+14.26	USH 45 LT	9	0	9	9	11	-2			
BRIDGE - SE	370+15.70/371+84.72	USH 45 RT	15	0	15	721	901	-886			
BRIDGE - NE	374+78.60/376+39.89	USH 45 RT	10	0	10	955	1,194	-1,184			
BRIDGE - NW	375+06.15/376+87.63	USH 45 LT	20	0	20	36	45	-25			
DIVISION 1 SUBTOTAL			83	0	83	1,809	2,261	-2,178	0	2,178	
GRAND TOTAL			83	0	83	1,809	2,261	-2,178	0	2,178	

NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (1) SALVAGED/UNSUAble PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL.
- (2) SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (3) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUAble PAVEMENT MATERIAL
- (6) MARSH EXCAVATION - TO BE BACKFILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACKFILLED WITH BORROW, OR CUT AS WELL. ITEM NUMBER 205.0500
- (7) ROCK EXCAVATION ITEM NUMBER 205.0200
- (4) EXPANDED FILL FACTOR = 1.25
- DEPENDING ON SELECTIONS:

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

OR

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

OR

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

EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR
- (5) 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.
- (6) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

520 CULVERT PIPE SUMMARY

CATEGORY	STATION	LOCATION	CULVERT NUMBER	520.1024	520.1030	520.1036	520.1048	520.1060	520.3424	520.3430	520.3436	522.0436	522.0448	522.0460	633.5200	REMARKS
				APRON ENDWALLS FOR CULVERT PIPE 24-INCH	APRON ENDWALLS FOR CULVERT PIPE 30-INCH	APRON ENDWALLS FOR CULVERT PIPE 36-INCH	APRON ENDWALLS FOR CULVERT PIPE 48-INCH	APRON ENDWALLS FOR CULVERT PIPE 60-INCH	CULVERT PIPE CLASS III-A NON-METAL 24-INCH	CULVERT PIPE CLASS III-A NON-METAL 30-INCH	CULVERT PIPE CLASS III-A NON-METAL 36-INCH	CULVERT PIPE REINFORCED CONCRETE CLASS IV 36-INCH	CULVERT PIPE REINFORCED CONCRETE CLASS IV 48-INCH	CULVERT PIPE REINFORCED CONCRETE CLASS IV 60-INCH	MARKERS CULVERT END	
				EACH	EACH	EACH	EACH	EACH	LF	LF	LF	LF	LF	LF	EACH	
0010	105+58	USH 45	43045003277	-	-	-	2	-	-	-	-	-	69	-	2	
0010	127+81	USH 45	43045003278	-	-	2	-	-	-	-	-	56	-	-	2	
0010	143+14	USH 45	43045003279	-	-	2	-	-	-	-	65	-	-	-	2	
0010	176+26	USH 45	43045003280	-	2	-	-	-	-	102	-	-	-	-	2	
0010	194+16	USH 45	43045003281	-	2	-	-	-	-	107	-	-	-	-	2	
0010	211+74	USH 45	43045003282	-	2	-	-	-	-	83	-	-	-	-	2	
0010	226+82	USH 45	43045003283	-	2	-	-	-	-	75	-	-	-	-	2	
0010	231+81	USH 45	43045003284	-	2	-	-	-	-	81	-	-	-	-	2	
0010	237+10	USH 45	43045003285	-	-	-	-	2	-	-	-	-	-	67	2	
0010	244+82	USH 45	43045003286	-	2	-	-	-	-	78	-	-	-	-	2	
0010	248+84	USH 45	43045003287	-	2	-	-	-	-	97	-	-	-	-	2	
0010	282+03	USH 45	43045003288	-	2	-	-	-	-	132	-	-	-	-	2	
0010	291+59	USH 45	43045003289	-	2	-	-	-	-	110	-	-	-	-	2	
0010	310+21	USH 45	43045004609	-	-	2	-	-	-	-	74	-	-	-	2	SHARED TRENCH
0010	310+29	USH 45	43045003290	-	-	2	-	-	-	-	74	-	-	-	-	SHARED TRENCH
0010	317+86	USH 45	43045003291	2	-	-	-	-	80	-	-	-	-	-	2	
0010	327+93	USH 45	43045004610	-	-	2	-	-	-	-	76	-	-	-	2	SHARED TRENCH
0010	328+00	USH 45	43045003292	-	-	2	-	-	-	-	76	-	-	-	-	SHARED TRENCH
0010	333+28	USH 45	43045003293	2	-	-	-	-	80	-	-	-	-	-	2	
0010	344+42	USH 45	43045003295	2	-	-	-	-	86	-	-	-	-	-	2	
0010	524+23	USH 45	43045003309	-	2	-	-	-	-	114	-	-	-	-	2	
0010	536+27	USH 45	43045003310	-	2	-	-	-	-	82	-	-	-	-	2	
0010	662+90	USH 45	43045003319	2	-	-	-	-	61	-	-	-	-	-	2	
NOTES				8	22	12	2	2	307	1,061	365	56	69	67	42	

1) STATION, OFFSETS, AND ELEVATIONS SHOWN ARE TO THE END OF THE PIPE OR EDGE OF STRUCTURE, NOT THE APRON END OF ENDWALLS
2) PIPE LENGTHS ARE COMPUTED ASSUMING REINFORCED CONCRETE PIPE AND APRON ENDWALLS

628 EC MOBILIZATIONS

CATEGORY	STATION	TO	STATION	LOCATION	628.1905	628.1910	REMARKS
					MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	
0010	11+06	-	874+84	PROJECT 1600-29-71	6	6	
				TOTAL 0010	6	6	

638 REMOVING AND MOVING SIGNS

CATEGORY	STATION	LOCATION	634.0616	638.2102	638.2602	638.3000	638.4000	REMARKS
			POSTS WOOD 4X6-INCH X 16-FT EACH	MOVING SIGNS TYPE II EACH	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	MOVING SMALL SIGN SUPPORTS EACH	
0010	17+90	USH 45 RT	-	-	1	1	-	CENTERLINE RUMBLE STRIPS
0010	282+90	USH 45 LT	-	-	2	1	-	CENTERLINE RUMBLE STRIPS, NEXT 5 MILES
0010	282+90	USH 45 RT	-	-	2	1	-	CENTERLINE RUMBLE STRIPS, NEXT 11 MILES
0010	327+37	USH 45 LT	-	1	-	-	1	NO PASSING ZONE
0010	350+50	USH 45 LT	-	-	2	1	-	CENTERLINE RUMBLE STRIPS, NEXT 6 MILES
0010	357+90	USH 45 RT	-	-	2	1	-	CENTERLINE RUMBLE STRIPS, NEXT 10 MILES
0010	536+75	USH 45 LT	-	1	-	-	1	NO PASSING ZONE
0010	616+50	USH 45 LT	-	-	2	1	-	CENTERLINE RUMBLE STRIPS, NEXT 11 MILES
0010	616+50	USH 45 RT	-	-	2	1	-	CENTERLINE RUMBLE STRIPS, NEXT 5 MILES
0010	865+10	USH 45 LT	-	-	2	1	-	CENTERLINE RUMBLE STRIPS, NEXT 16 MILES
0010		UNDISTRIBUTED	-	3	-	-	3	SIGNS IN CONFLICT WITH TEMP WIDENINGS
0010		UNDISTRIBUTED	4	5	-	-	5	NO PASSING ZONE
		TOTAL 0010	4	10	15	8	10	

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643 TRAFFIC CONTROL SUMMARY									
CATEGORY	LOCATION	DAYS	EACH	643.0300	EACH	643.0900	EACH	643.1000	REMARKS
				TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL SIGNS FIXED MESSAGE	
				DAY		DAY		SF	
0010	GRUBBING B-43-0015	2	15	30	3	6	-	-	
0010	PRIOR TO PROJECT START OF PROJECT	-	-	-	-	-	-	36.0	2 SIGNS ON USH 8 - G20-57 72"x36"
0010	END OF PROJECT	-	-	-	-	-	1	18.0	G20-57 72"x36"
0010	CULVERT REPLACEMENTS - LANE SHIFT PROJECT 1600-29-71	46	20	920	-	-	-	-	
0010	CULVERT REPLACEMENTS PROJECT 1600-29-71	66	460	30,360	115	7,590	-	-	20 BARRELS AND 5 SIGNS PER CULVERT AT 23 LOCATIONS
0010	BEAM GUARD GRADING PROJECT 1600-29-71	7	15	105	2	14	-	-	
0010	MILLING PROJECT 1600-29-71	37	-	-	20	740	-	-	GROOVED PAVEMENT, UNEVEN LANE, BUMP SIGNS
0010	PAVING PROJECT 1600-29-71	30	-	-	18	540	-	-	UNEVEN LANE, BUMP SIGNS
0010	ADVANCED WARNING START OF PROJECT	145	-	-	20	2,900	-	-	
0010	END OF PROJECT	145	-	-	5	725	-	-	
0010	CEMETERY RD	145	-	-	1	145	-	-	
0010	LAKE RD	145	-	-	1	145	-	-	
0010	ERICKSON RD	145	-	-	1	145	-	-	
0010	WOODRICK RD - S	145	-	-	1	145	-	-	
0010	KURTZ RD	145	-	-	1	145	-	-	
0010	WOODRICK RD - N	145	-	-	1	145	-	-	
0010	BLADE RD	145	-	-	1	145	-	-	
0010	MAKAR RD	145	-	-	1	145	-	-	
0010	OLD 45 RD	145	-	-	1	145	-	-	
0010	CTH C	145	-	-	1	145	-	-	
0010	HUNTING CAMP RD	145	-	-	1	145	-	-	
0010	GAGEN RD	145	-	-	1	145	-	-	
0010	HILES JCT RD	145	-	-	1	145	-	-	
0010	MARGARET LAKE RD	145	-	-	1	145	-	-	
0010	E STELLA LAKE RD	145	-	-	1	145	-	-	
0010	BRANHAM RD	145	-	-	1	145	-	-	
0010	S BIG LAKE LOOP RD	145	-	-	1	145	-	-	
0010	BIG LAKE RD - S	145	-	-	1	145	-	-	
0010	BIG LAKE RD - N	145	-	-	1	145	-	-	
0010	N BIG LAKE LOOP RD - S	145	-	-	1	145	-	-	
0010	N BIG LAKE LOOP RD - N	145	-	-	1	145	-	-	
0010	CYRSTAL LAKE RD	145	-	-	1	145	-	-	
0010	MOSQUITO WAYSIDE - S	145	-	-	1	145	-	-	
0010	MOSQUITO WAYSIDE - N	145	-	-	1	145	-	-	
0010	WINKLER RD	145	-	-	1	145	-	-	
0010	LAKE TERRACE DR	145	-	-	1	145	-	-	
0010	JAVEN RD - LT	145	-	-	1	145	-	-	
0010	JAVEN RD - RT	145	-	-	1	145	-	-	
0010	STH 32	145	-	-	1	145	-	-	
0010	UNDISTRIBUTED	-	-	85	-	80	-	-	
	TOTAL 0010			31,500		16,800		54.0	

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646 PAVEMENT MARKING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF	646.2020 MARKING LINE EPOXY 6-INCH LF	646.2040 MARKING LINE GROOVED WET REF EPOXY 6-INCH LF	646.4040 MARKING LINE GROOVED WET REF EPOXY 10-INCH LF	646.5020 MARKING ARROW EPOXY EACH	646.5120 MARKING WORD EPOXY EACH	646.6466 COLD WEATHER MARKING EPOXY 6-INCH LF	646.8320 MARKING PARKING STALL EPOXY LF	REMARKS
0010	11+06	-	42+98	USH 45 CL	19,152	-	6,384	-	-	-	6,384	-	DOUBLE YELLOW
0010	42+98	-	55+87	USH 45 CL	4,179	-	1,614	-	-	-	1,614	-	SOLID SKIP
0010	55+87	-	93+40	USH 45 CL	900	-	938	-	-	-	938	-	SKIP
0010	93+40	-	106+94	USH 45 CL	4,386	-	1,692	-	-	-	1,692	-	SOLID SKIP
0010	106+94	-	140+78	USH 45 CL	20,304	-	6,768	-	-	-	6,768	-	DOUBLE YELLOW
0010	140+78	-	151+55	USH 45 CL	3,495	-	1,352	-	-	-	1,352	-	SOLID SKIP
0010	151+55	-	327+59	USH 45 CL	4,224	-	4,400	-	-	-	4,400	-	SKIP
0010	327+59	-	340+92	USH 45 CL	4,323	-	1,671	-	-	-	1,671	-	SOLID SKIP
0010	340+92	-	372+79	USH 45 CL	19,122	-	6,374	-	-	-	6,374	-	DOUBLE YELLOW
0010	372+79	-	374+13	USH 45 CL	-	268	-	-	-	-	-	-	REFRESH STRUCTURE PAVEMENT MARKINGS
0010	374+13	-	378+17	USH 45 CL	2,424	-	808	-	-	-	808	-	DOUBLE YELLOW
0010	378+17	-	405+33	USH 45 CL	8,796	-	3,391	-	-	-	3,391	-	SOLID SKIP
0010	405+33	-	422+86	USH 45 CL	10,518	-	3,506	-	-	-	3,506	-	DOUBLE YELLOW
0010	422+86	-	436+19	USH 45 CL	4,323	-	1,671	-	-	-	1,671	-	SOLID SKIP
0010	436+19	-	448+19	USH 45 CL	288	-	300	-	-	-	300	-	SKIP
0010	448+19	-	463+53	USH 45 CL	4,974	-	1,922	-	-	-	1,922	-	SOLID SKIP
0010	463+53	-	467+01	USH 45 CL	2,088	-	696	-	-	-	696	-	DOUBLE YELLOW
0010	467+01	-	480+41	USH 45 CL	4,344	-	1,678	-	-	-	1,678	-	SOLID SKIP
0010	480+41	-	491+86	USH 45 CL	276	-	288	-	-	-	288	-	SKIP
0010	492+02	-	510+84	USH 45 CL	456	-	475	-	-	-	475	-	SKIP
0010	510+84	-	523+14	USH 45 CL	3,990	-	1,543	-	-	-	1,543	-	SOLID SKIP
0010	523+14	-	526+54	USH 45 CL	2,040	-	680	-	-	-	680	-	DOUBLE YELLOW
0010	526+54	-	536+93	USH 45 CL	3,369	-	1,302	-	-	-	1,302	-	SOLID SKIP
0010	536+93	-	542+50	USH 45 CL	3,342	-	1,114	-	-	-	1,114	-	DOUBLE YELLOW
0010	542+50	-	551+89	USH 45 CL	3,045	-	1,177	-	-	-	1,177	-	SOLID SKIP
0010	551+89	-	556+00	USH 45 CL	2,466	-	822	-	-	-	822	-	DOUBLE YELLOW
0010	556+00	-	566+26	USH 45 CL	3,330	-	1,289	-	-	-	1,289	-	SOLID SKIP
0010	566+26	-	592+65	USH 45 CL	636	-	663	-	-	-	663	-	SKIP
0010	592+65	-	607+78	USH 45 CL	4,899	-	1,888	-	-	-	1,888	-	SOLID SKIP
0010	607+78	-	622+47	USH 45 CL	8,814	-	2,938	-	-	-	2,938	-	DOUBLE YELLOW
0010	622+47	-	639+42	USH 45 CL	5,493	-	2,120	-	-	-	2,120	-	SOLID SKIP
0010	639+42	-	688+67	USH 45 CL	1,188	-	1,238	-	-	-	1,238	-	SKIP
0010	688+67	-	702+00	USH 45 CL	4,323	-	1,671	-	-	-	1,671	-	SOLID SKIP
0010	702+00	-	710+12	USH 45 CL	4,872	-	1,624	-	-	-	1,624	-	DOUBLE YELLOW
0010	710+12	-	723+60	USH 45 CL	4,368	-	1,686	-	-	-	1,686	-	SOLID SKIP
0010	723+60	-	752+69	USH 45 CL	696	-	725	-	-	-	725	-	SKIP
0010	752+69	-	754+60	USH 45 CL	621	-	241	-	-	-	241	-	SOLID SKIP
0010	754+75	-	765+57	USH 45 CL	3,510	-	1,357	-	-	-	1,357	-	SOLID SKIP
0010	765+57	-	785+50	USH 45 CL	11,958	-	3,986	-	-	-	3,986	-	DOUBLE YELLOW
0010	785+50	-	800+13	USH 45 CL	4,737	-	1,826	-	-	-	1,826	-	SOLID SKIP
0010	800+13	-	813+21	USH 45 CL	312	-	325	-	-	-	325	-	SKIP
0010	813+36	-	817+37	USH 45 CL	96	-	100	-	-	-	100	-	SKIP
0010	817+37	-	829+44	USH 45 CL	3,909	-	1,507	-	-	-	1,507	-	SOLID SKIP
0010	829+44	-	830+32	USH 45 CL	528	-	176	-	-	-	176	-	DOUBLE YELLOW
0010	830+32	-	845+47	USH 45 CL	4,905	-	1,890	-	-	-	1,890	-	SOLID SKIP
0010	845+47	-	852+68	USH 45 CL	168	-	175	-	-	-	175	-	SKIP
0010	852+68	-	866+46	USH 45 CL	4,470	-	1,728	-	-	-	1,728	-	SOLID SKIP
0010	866+46	-	874+84	USH 45 CL	5,028	-	1,676	-	-	-	1,676	-	DOUBLE YELLOW
0010	11+05	-	23+10	USH 45 LT	-	-	1,205	-	-	-	1,205	-	WHITE, SOLID
0010	26+08	-	33+89	USH 45 LT	-	-	781	-	-	-	781	-	WHITE, SOLID
0010	35+83	-	117+00	USH 45 LT	-	-	8,117	-	-	-	8,117	-	WHITE, SOLID
0010	118+03	-	131+81	USH 45 LT	-	-	1,378	-	-	-	1,378	-	WHITE, SOLID
0010	131+81	-	132+19	USH 45 LT	-	-	38	-	-	-	38	-	WHITE, SOLID
0010	133+21	-	196+44	USH 45 LT	-	-	6,323	-	-	-	6,323	-	WHITE, SOLID
0010	197+55	-	353+58	USH 45 LT	-	-	15,603	-	-	-	15,603	-	WHITE, SOLID
0010	356+54	-	372+76	USH 45 LT	-	-	1,622	-	-	-	1,622	-	WHITE, SOLID
0010	372+76	-	374+11	USH 45 LT	-	135	-	-	-	-	-	-	REFRESH STRUCTURE PAVEMENT MARKINGS
0010	374+11	-	491+90	USH 45 LT	-	-	11,779	-	-	-	11,779	-	WHITE, SOLID
0010	492+06	-	501+31	USH 45 LT	-	-	925	-	-	-	925	-	WHITE, SOLID
0010	503+61	-	535+05	USH 45 LT	-	-	3,144	-	-	-	3,144	-	WHITE, SOLID
PAGE SUBTOTAL					215,685	403	134,310	0	0	0	134,310	0	

PROJECT NO: 1600-29-71

HWY: USH 45

COUNTY: ONEIDA

MISCELLANEOUS QUANTITIES

SHEET

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646 PAVEMENT MARKING SUMMARY (CONT'D)

CATEGORY	STATION	TO	STATION	LOCATION	643.3165	646.2020	646.2040	646.4040	646.5020	646.5120	646.6466	646.8320	REMARKS
					TEMPORARY MARKING LINE PAINT 6-INCH	MARKING LINE EPOXY 6-INCH	MARKING LINE GROOVED WET REF EPOXY 6-INCH	MARKING LINE GROOVED WET REF EPOXY 10-INCH	MARKING ARROW EPOXY EACH	MARKING WORD EPOXY EACH	COLD WEATHER MARKING EPOXY 6-INCH	MARKING PARKING STALL EPOXY	
					LF	LF	LF	LF			LF	LF	
0010	536+18	-	611+73	USH 45 LT	-	-	7,555	-	-	-	7,555	-	WHITE, SOLID
0010	614+70	-	677+06	USH 45 LT	-	-	6,236	-	-	-	6,236	-	WHITE, SOLID
0010	678+00	-	754+60	USH 45 LT	-	-	7,660	-	-	-	7,660	-	WHITE, SOLID
0010	754+75	-	795+27	USH 45 LT	-	-	4,052	-	-	-	4,052	-	WHITE, SOLID
0010	796+79	-	801+12	USH 45 LT	-	-	433	-	-	-	433	-	WHITE, SOLID
0010	801+94	-	813+20	USH 45 LT	-	-	1,126	-	-	-	1,126	-	WHITE, SOLID
0010	813+35	-	820+97	USH 45 LT	-	-	762	-	-	-	762	-	WHITE, SOLID
0010	822+84	-	867+92	USH 45 LT	-	-	4,508	-	-	-	4,508	-	WHITE, SOLID
0010	869+62	-	874+84	USH 45 LT	-	-	522	-	-	-	522	-	WHITE, SOLID
0010	11+06	-	35+03	USH 45 RT	-	-	2,397	-	-	-	2,397	-	WHITE, SOLID
0010	36+18	-	116+91	USH 45 RT	-	-	8,073	-	-	-	8,073	-	WHITE, SOLID
0010	119+69	-	308+10	USH 45 RT	-	-	18,841	-	-	-	18,841	-	WHITE, SOLID
0010	309+20	-	372+80	USH 45 RT	-	-	6,360	-	-	-	6,360	-	WHITE, SOLID
0010	372+80	-	374+15	USH 45 RT	-	135	-	-	-	-	-	-	REFRESH STRUCTURE PAVEMENT MARKINGS
0010	374+15	-	491+82	USH 45 RT	-	-	11,767	-	-	-	11,767	-	WHITE, SOLID
0010	491+98	-	545+35	USH 45 RT	-	-	5,337	-	-	-	5,337	-	WHITE, SOLID
0010	548+76	-	675+10	USH 45 RT	-	-	12,634	-	-	-	12,634	-	WHITE, SOLID
0010	677+98	-	689+54	USH 45 RT	-	-	1,156	-	-	-	1,156	-	WHITE, SOLID
0010	691+56	-	735+17	USH 45 RT	-	-	4,361	-	-	-	4,361	-	WHITE, SOLID
0010	737+14	-	754+60	USH 45 RT	-	-	1,746	-	-	-	1,746	-	WHITE, SOLID
0010	754+75	-	765+17	USH 45 RT	-	-	1,042	-	-	-	1,042	-	WHITE, SOLID
0010	768+08	-	786+85	USH 45 RT	-	-	1,877	-	-	-	1,877	-	WHITE, SOLID
0010	789+97	-	813+21	USH 45 RT	-	-	2,324	-	-	-	2,324	-	WHITE, SOLID
0010	813+36	-	819+85	USH 45 RT	-	-	649	-	-	-	649	-	WHITE, SOLID
0010	821+93	-	868+72	USH 45 RT	-	-	4,679	-	-	-	4,679	-	WHITE, SOLID
0010	871+18	-	874+84	USH 45 RT	-	-	366	-	-	-	366	-	WHITE, SOLID
0010	23+10	-	26+08	USH 45 LT	-	-	75	-	-	-	75	-	WHITE, 3' LINE, 9' SKIP
0010	35+15	-	35+83	USH 45 LT	-	-	17	-	-	-	17	-	WHITE, 3' LINE, 9' SKIP
0010	354+95	-	356+54	USH 45 LT	-	-	40	-	-	-	40	-	WHITE, 3' LINE, 9' SKIP
0010	502+55	-	503+61	USH 45 LT	-	-	27	-	-	-	27	-	WHITE, 3' LINE, 9' SKIP
0010	611+73	-	614+70	USH 45 LT	-	-	75	-	-	-	75	-	WHITE, 3' LINE, 9' SKIP
0010	796+10	-	796+79	USH 45 LT	-	-	18	-	-	-	18	-	WHITE, 3' LINE, 9' SKIP
0010	822+16	-	822+84	USH 45 LT	-	-	17	-	-	-	17	-	WHITE, 3' LINE, 9' SKIP
0010	869+07	-	869+62	USH 45 LT	-	-	14	-	-	-	14	-	WHITE, 3' LINE, 9' SKIP
0010	116+91	-	119+69	USH 45 RT	-	-	70	-	-	-	70	-	WHITE, 3' LINE, 9' SKIP
0010	545+35	-	548+76	USH 45 RT	-	-	86	-	-	-	86	-	WHITE, 3' LINE, 9' SKIP
0010	675+10	-	676+70	USH 45 RT	-	-	40	-	-	-	40	-	WHITE, 3' LINE, 9' SKIP
0010	689+54	-	690+24	USH 45 RT	-	-	18	-	-	-	18	-	WHITE, 3' LINE, 9' SKIP
0010	735+17	-	735+86	USH 45 RT	-	-	18	-	-	-	18	-	WHITE, 3' LINE, 9' SKIP
0010	765+17	-	766+77	USH 45 RT	-	-	40	-	-	-	40	-	WHITE, 3' LINE, 9' SKIP
0010	786+85	-	789+97	USH 45 RT	-	-	78	-	-	-	78	-	WHITE, 3' LINE, 9' SKIP
0010	819+85	-	820+64	USH 45 RT	-	-	20	-	-	-	20	-	WHITE, 3' LINE, 9' SKIP
0010	866+01	-	867+39	USH 45 RT	-	-	35	-	-	-	35	-	WHITE, 3' LINE, 9' SKIP
0010	868+72	-	871+18	USH 45 RT	-	-	62	-	-	-	62	-	WHITE, 3' LINE, 9' SKIP
0010	801+93	-	804+04	USH 45 LT	-	-	-	211	2	1	-	-	RIGHT-TURN LANE
0010	867+39	-	868+72	USH 45 RT	-	-	-	134	2	-	-	-	RIGHT-TURN LANE
0010	14+30 WS	-	14+51 WS	WAYSIDE RT	-	-	-	-	-	-	-	205	DIAGONALS, 4-INCH WHITE
0010	14+65 WS	-	14+91 WS	WAYSIDE LT	-	-	-	-	-	-	-	159	DIAGONALS, 4-INCH WHITE
0010	14+65 WS	-	15+11 WS	WAYSIDE LT	-	-	-	-	-	-	-	60	4-INCH WHITE
0010	13+70 WS	-	15+79 WS	WAYSIDE RT	-	-	-	-	-	-	-	342	4-INCH WHITE
0010	-	-	-	UNDISTRIBUTED	15	-	77	-	-	-	77	-	FOR ROUNDING
				PAGE SUBTOTAL	15	135	117,290	345	4	1	117,290	766	
				TOTAL 0010	215,700	538	251,600	345	4	1	251,600	766	

* FOR APPLICATION OF CENTERLINE ON MILLED SURFACE BEFORE LOWER LAYER OF HMA IS PAVED, ON LOWER LAYER BEFORE UPPER LAYER IS PAVED, AND ON UPPER LAYER PRIOR TO CENTERLINE RUMBLE STRIP INSTALLATION
NOTE: GAP LONGLINE PAVEMENT MARKINGS AT SNOWMOBILE CROSSINGS.

650 STAKING SUMMARY									
		650.6000		650.8000		650.9920		650.9911.01	
		CONSTRUCTION STAKING PIPE CULVERTS		CONSTRUCTION STAKING RESURFACING REFERENCE		CONSTRUCTION STAKING SLOPE STAKES		CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 1600-29-71)	
CATEGORY	STATION	TO	STATION	LOCATION	EACH	LF	LF	EACH	REMARKS
0010	11+06	-	874+84	PROJECT 1600-29-71	-	-	-	1	
0010	11+06	-	372+79	USH 45	-	36,173	-	-	
0010	374+13	-	874+84	USH 45	-	50,071	-	-	
0010			105+58	USH 45	1	-	-	-	CULVERT 43045003277
0010			127+81	USH 45	1	-	-	-	CULVERT 43045003278
0010			143+14	USH 45	1	-	-	-	CULVERT 43045003279
0010			176+26	USH 45	1	-	-	-	CULVERT 43045003280
0010			194+16	USH 45	1	-	-	-	CULVERT 43045003281
0010			211+74	USH 45	1	-	-	-	CULVERT 43045003282
0010			226+82	USH 45	1	-	-	-	CULVERT 43045003283
0010			231+81	USH 45	1	-	-	-	CULVERT 43045003284
0010			237+10	USH 45	1	-	-	-	CULVERT 43045003285
0010			244+82	USH 45	1	-	-	-	CULVERT 43045003286
0010			248+84	USH 45	1	-	-	-	CULVERT 43045003287
0010			282+03	USH 45	1	-	-	-	CULVERT 43045003288
0010			291+59	USH 45	1	-	-	-	CULVERT 43045003289
0010			310+21	USH 45	1	-	-	-	CULVERT 43045004609
0010			310+29	USH 45	1	-	-	-	CULVERT 43045003290
0010			317+86	USH 45	1	-	-	-	CULVERT 43045003291
0010			327+93	USH 45	1	-	-	-	CULVERT 43045004610
0010			328+00	USH 45	1	-	-	-	CULVERT 43045003292
0010			333+28	USH 45	1	-	-	-	CULVERT 43045003293
0010			344+42	USH 45	1	-	-	-	CULVERT 43045003295
0010			524+23	USH 45	1	-	-	-	CULVERT 43045003309
0010			536+27	USH 45	1	-	-	-	CULVERT 43045003310
0010			662+90	USH 45	1	-	-	-	CULVERT 43045003319
0010	370+45	-	372+14	USH 45 LT	-	-	169	-	BEAMGUARD AT B-43-0015, SW
0010	370+16	-	371+85	USH 45 RT	-	-	169	-	BEAMGUARD AT B-43-0015, SE
0010	374+79	-	376+40	USH 45 RT	-	-	161	-	BEAMGUARD AT B-43-0015, NE
0010	375+06	-	376+88	USH 45 LT	-	-	182	-	BEAMGUARD AT B-43-0015, NW
0010	770+29	-	771+98	USH 45 LT	-	-	169	-	BEAMGUARD AT C-43-0008, SW
0010	773+10	-	774+79	USH 45 LT	-	-	169	-	BEAMGUARD AT C-43-0008, NW
0010	772+67	-	774+41	USH 45 LT	-	-	174	-	BEAMGUARD AT C-43-0008, NE
TOTAL 0010					23	86,244	1,193	1	

690.0150

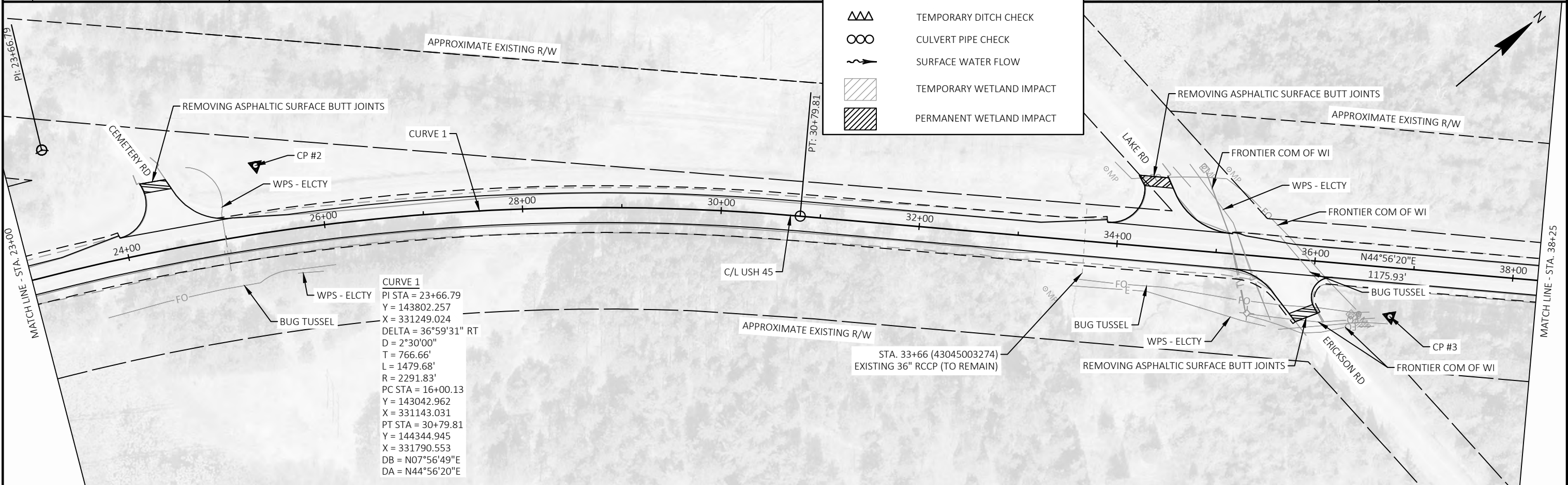
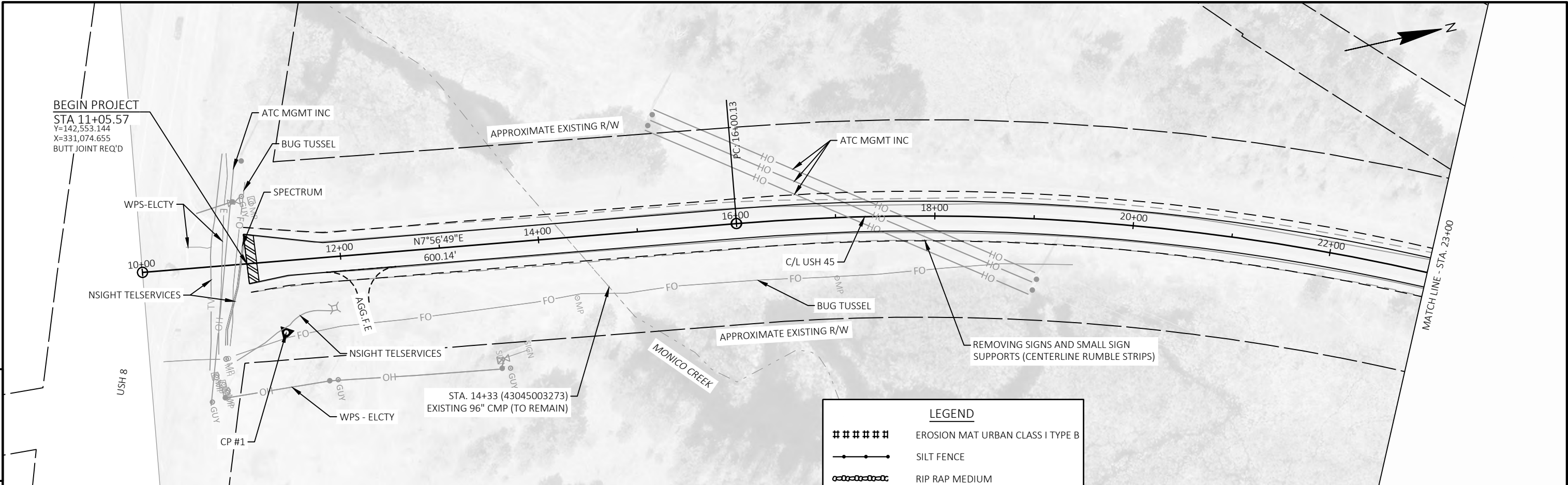
690.0150 SAWING ASPHALT				
CATEGORY	STATION	LOCATION	LF	REMARKS
0010	105+06	USH 45	30	CULVERT
0010	106+10	USH 45	30	CULVERT
0010	127+29	USH 45	30	CULVERT
0010	128+33	USH 45	30	CULVERT
0010	139+19	USH 45 LT	20	DRIVEWAY
0010	142+62	USH 45	30	CULVERT
0010	143+67	USH 45	30	CULVERT
0010	175+73	USH 45	30	CULVERT
0010	176+78	USH 45	30	CULVERT
0010	193+63	USH 45	30	CULVERT
0010	194+68	USH 45	30	CULVERT
0010	211+21	USH 45	30	CULVERT
0010	212+26	USH 45	30	CULVERT
0010	226+30	USH 45	30	CULVERT
0010	227+35	USH 45	30	CULVERT
0010	231+28	USH 45	30	CULVERT
0010	232+33	USH 45	30	CULVERT
0010	236+57	USH 45	30	CULVERT
0010	237+64	USH 45	30	CULVERT
0010	244+30	USH 45	30	CULVERT
0010	245+35	USH 45	30	CULVERT
0010	248+32	USH 45	30	CULVERT
0010	249+37	USH 45	30	CULVERT
0010	281+50	USH 45	30	CULVERT
0010	282+55	USH 45	30	CULVERT
0010	291+07	USH 45	30	CULVERT
0010	292+12	USH 45	30	CULVERT
0010	309+70	USH 45	30	CULVERT
0010	310+82	USH 45	30	CULVERT
0010	317+34	USH 45	30	CULVERT
0010	318+38	USH 45	30	CULVERT
0010	327+40	USH 45	30	CULVERT
0010	328+55	USH 45	30	CULVERT
0010	332+76	USH 45	30	CULVERT
0010	333+80	USH 45	30	CULVERT
0010	343+90	USH 45	30	CULVERT
0010	344+94	USH 45	30	CULVERT
0010	523+70	USH 45	30	CULVERT
0010	524+75	USH 45	30	CULVERT
0010	535+74	USH 45	38	CULVERT
0010	536+79	USH 45	30	CULVERT
0010	662+38	USH 45	30	CULVERT
0010	663+42	USH 45	30	CULVERT
0010	757+93	USH 45 LT	26	REMOVING SNOWMOBILE CROSSING
0010	757+93	USH 45 RT	26	REMOVING SNOWMOBILE CROSSING
0010	750+57	USH 45 LT	20	DRIVEWAY
TOTAL 0010			1,360	

CATEGORY	STATION	LOCATION	* 208.0100 BORROW CY	SPV.0060.01 SPECIAL (01. RESETTING CULVERT SECTIONS) EACH	REMARKS
0010	422+76	USH 45 RT	12	1	RESET APRON ENDWALL AND NEXT 2 SECTIONS OF DISJOINTED CULVERT PIPE
		TOTAL 0010	12	1	

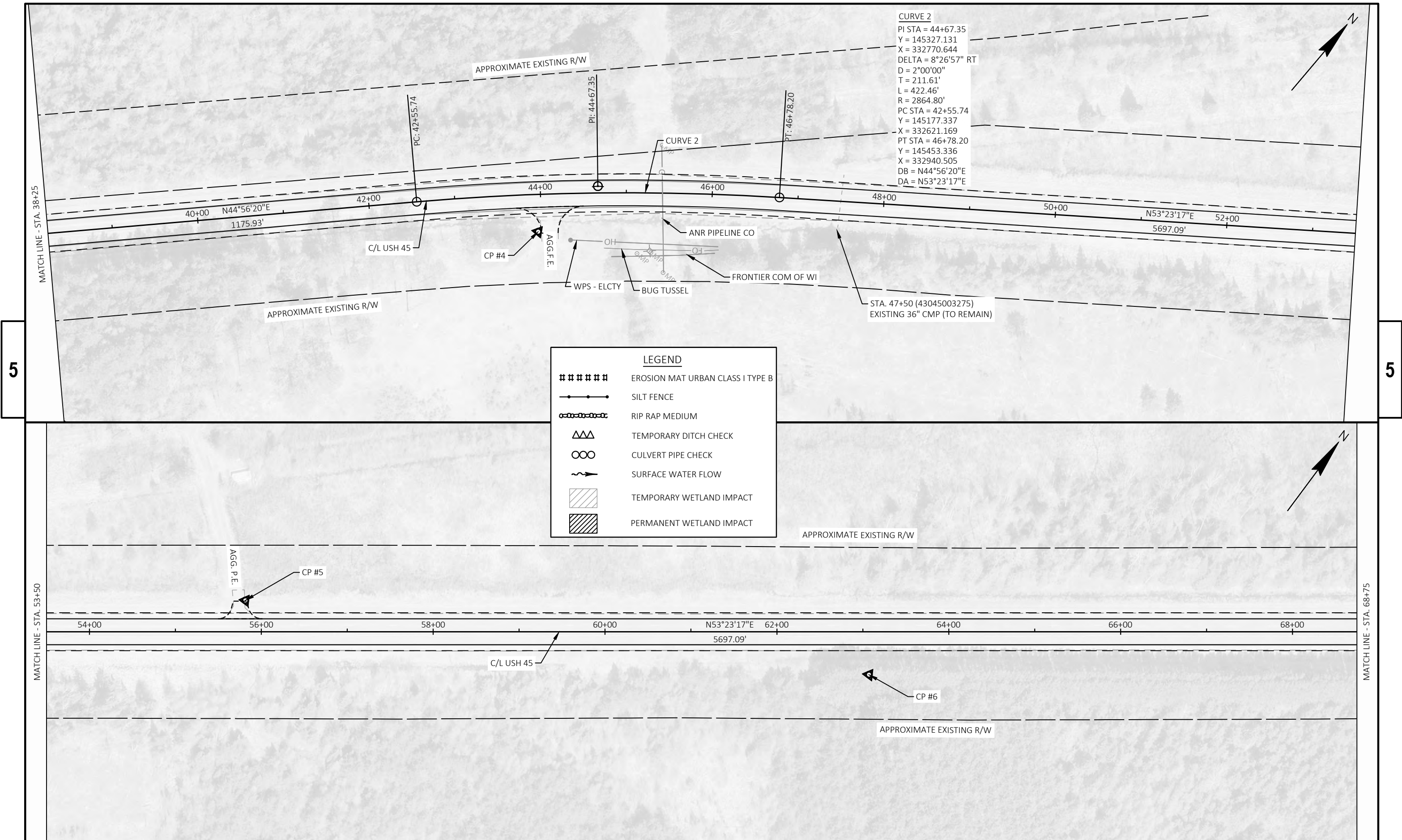
CATEGORY	STATION	LOCATION	SPV.0180.02 SPECIAL (02. THERMOPLASTIC FOR SNOWMOBILE CROSSINGS) SY	REMARKS
0010	491+94	USH 45	70	
0010	754+67	USH 45	74	
0010	813+28	USH 45	67	
		TOTAL 0010	211	

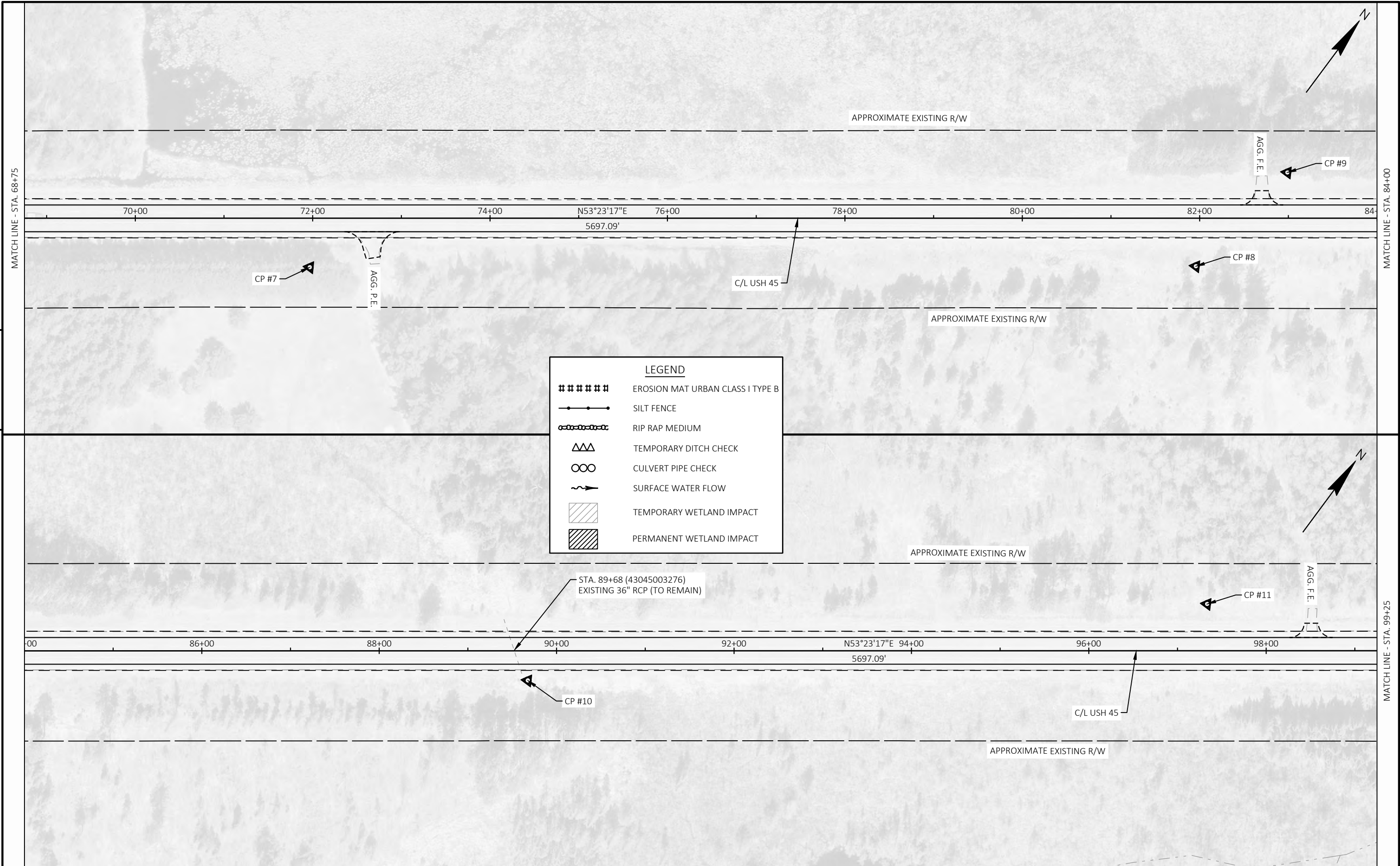
SPV WHEEL STOPS

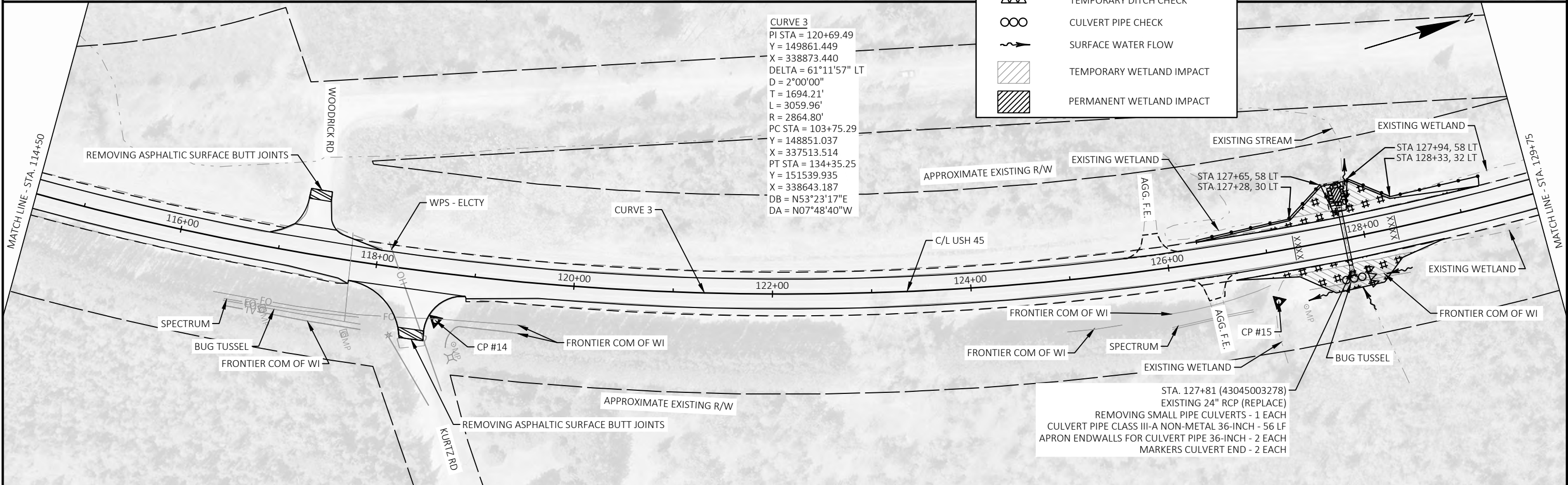
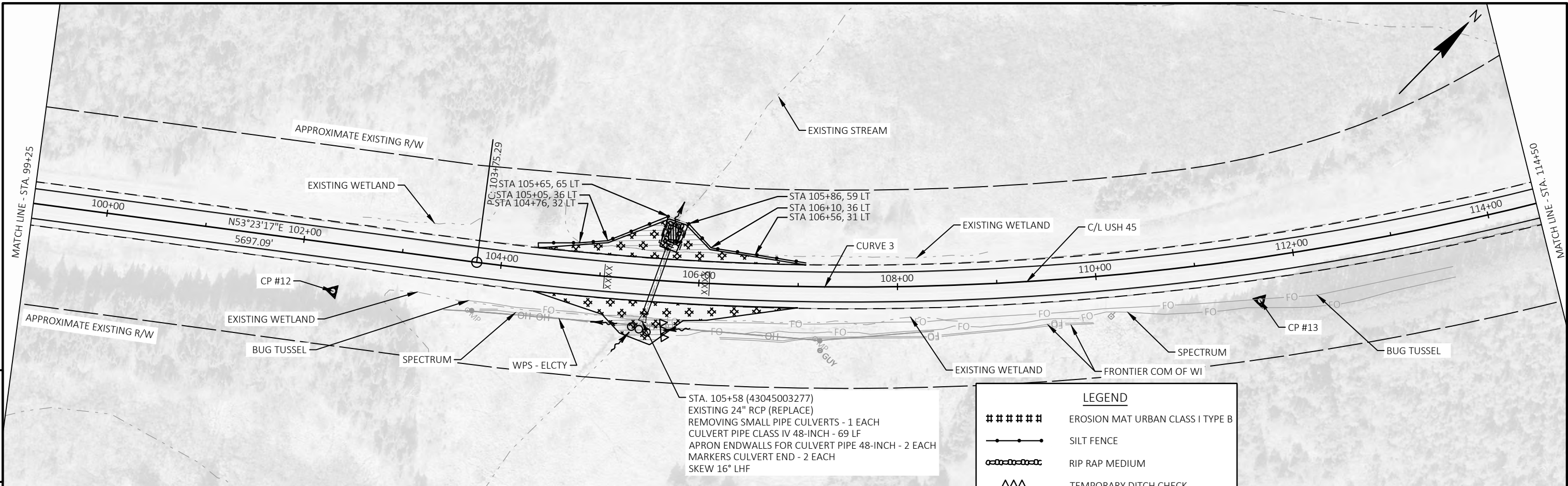
CATEGORY	STATION	TO	STATION	LOCATION	204.9060.S.01 REMOVING (ITEM DESCRIPTION) (01. CONCRETE WHEEL STOPS) EACH	SPV.0060.02 SPECIAL (02. CONCRETE WHEEL STOPS) EACH	REMARKS
0010	13+72 WS	-	15+79 WS	WAYSIDE RT	20	20	18 PARKING STALLS WITH WHEEL STOPS
				TOTAL 0010	20	20	

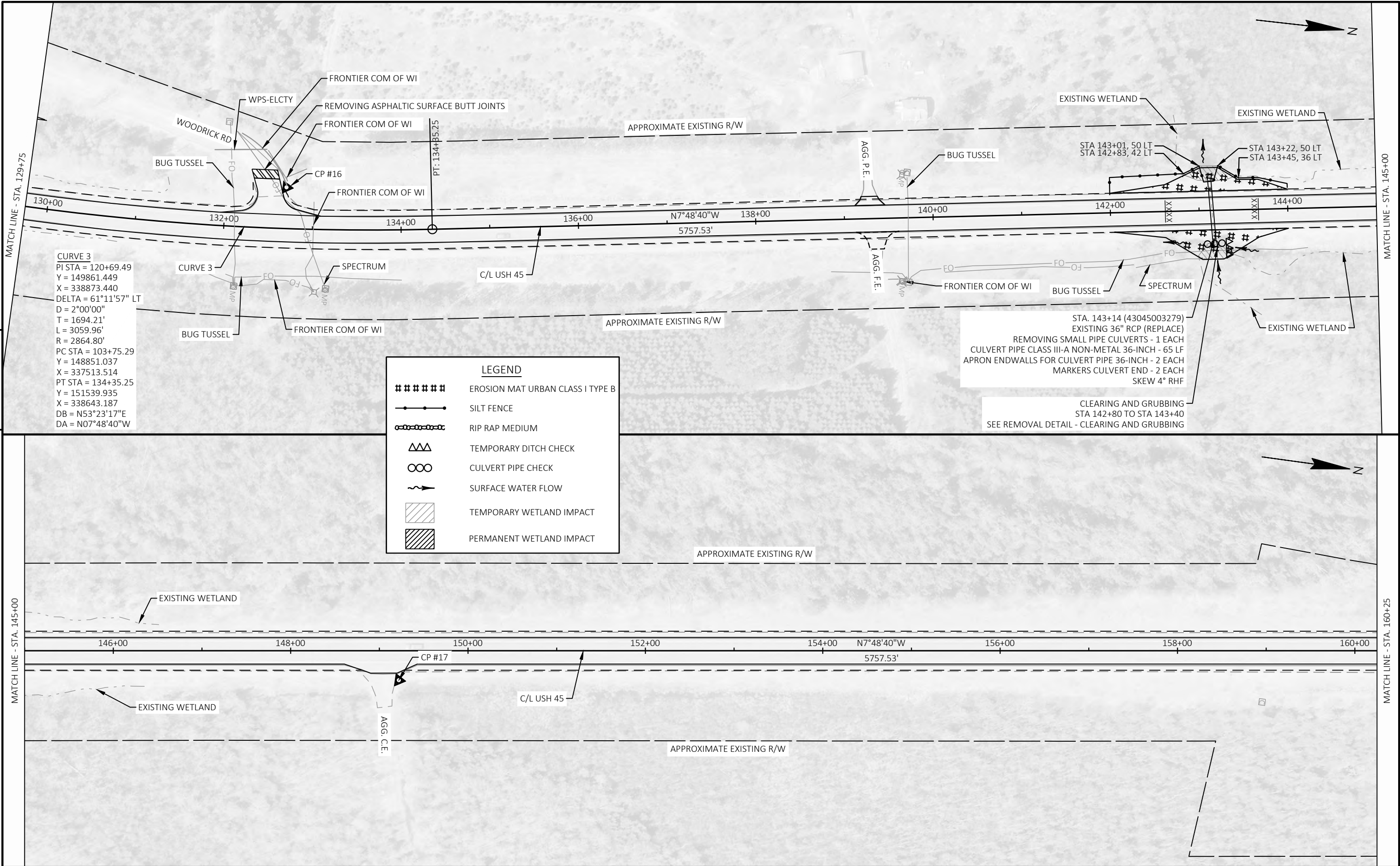


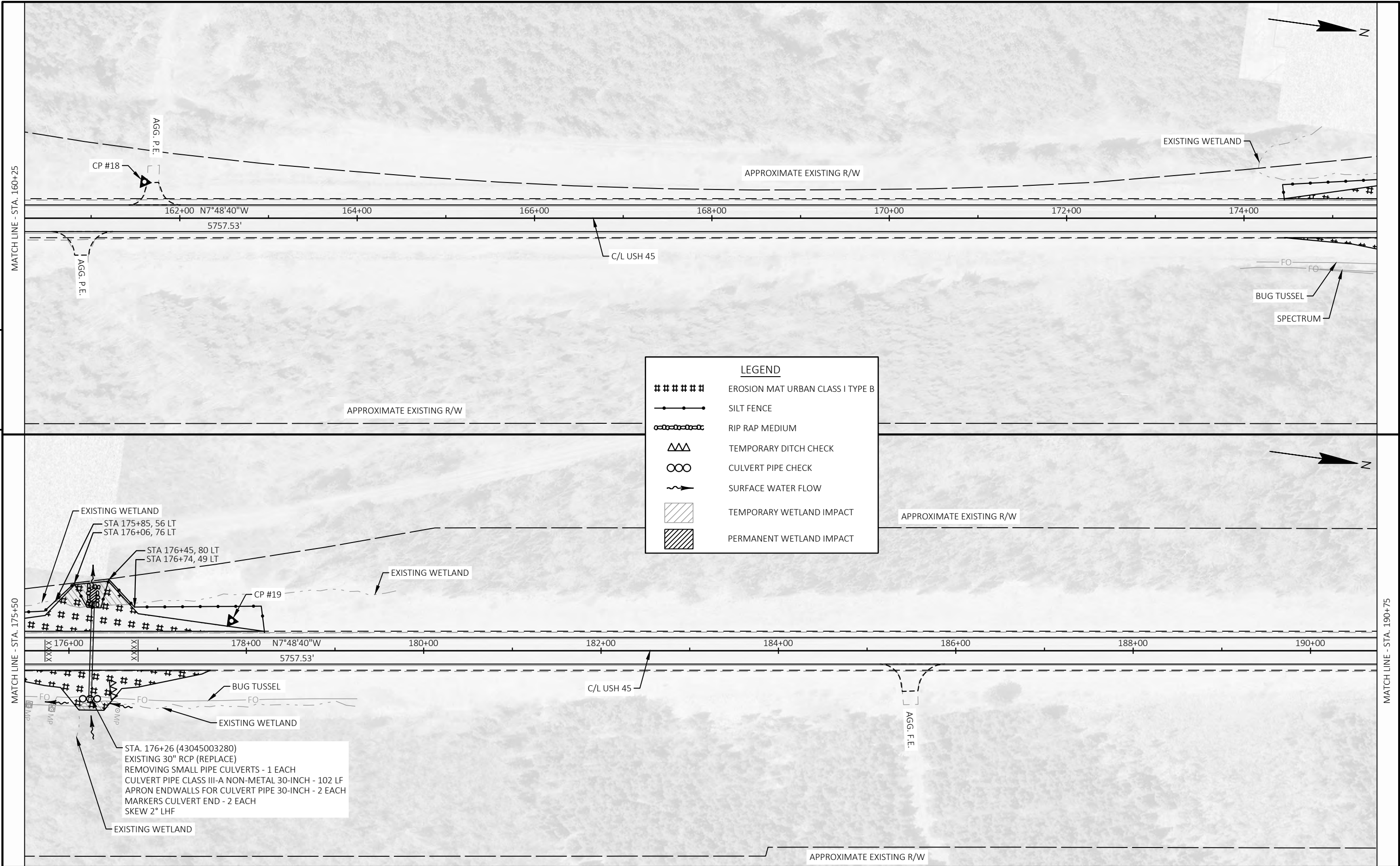
PROJECT NO: 1600-29-71	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET	E
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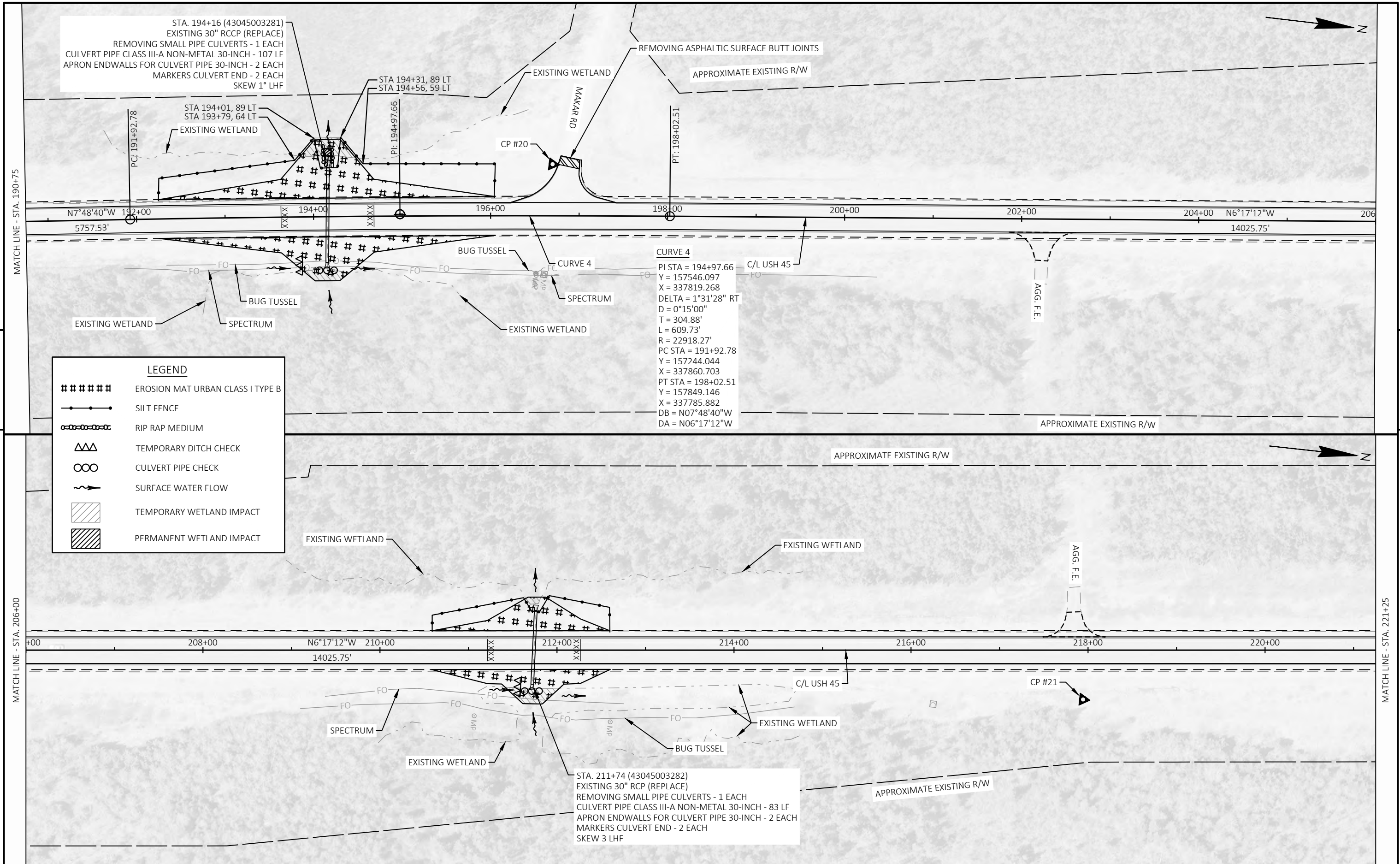


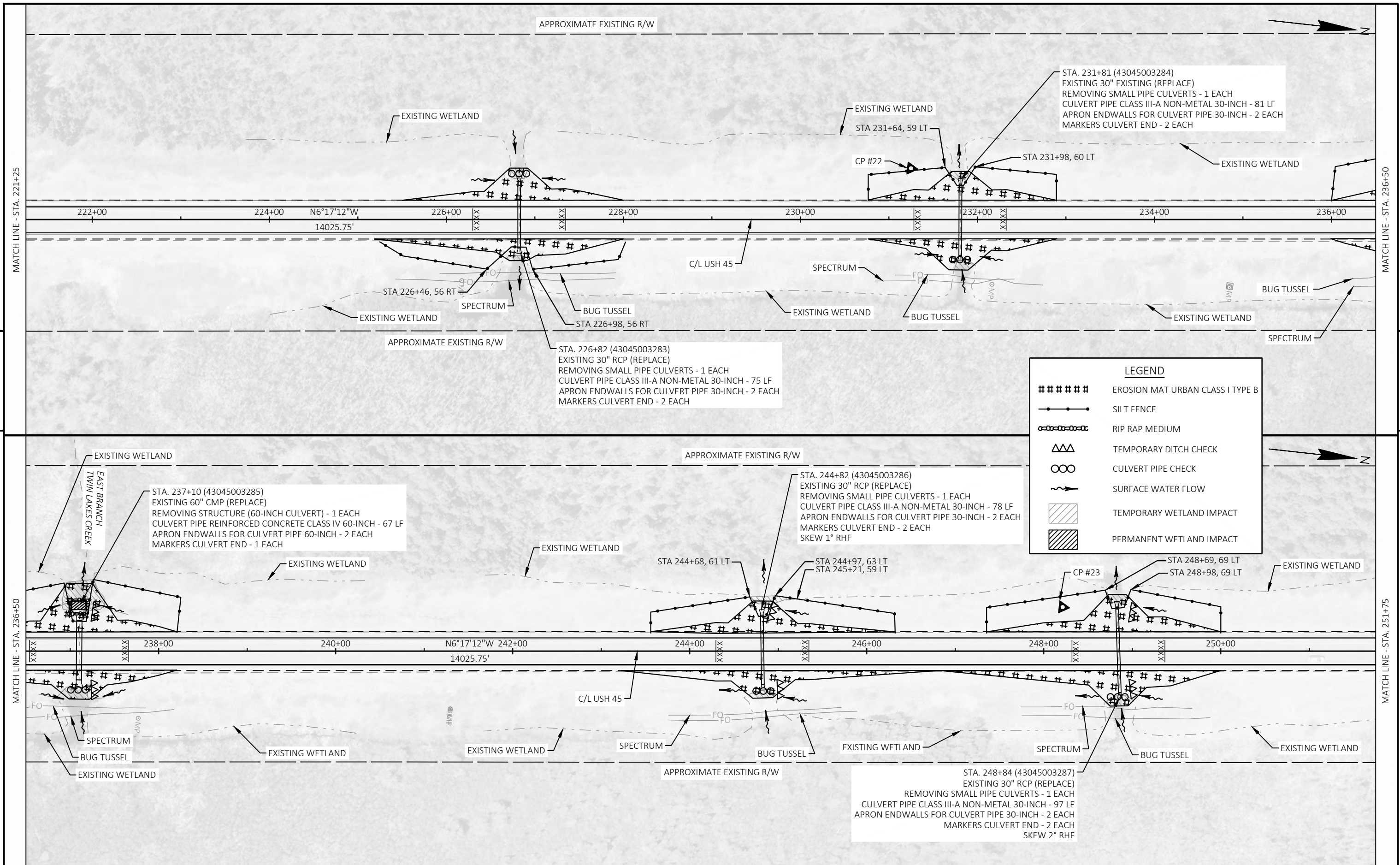


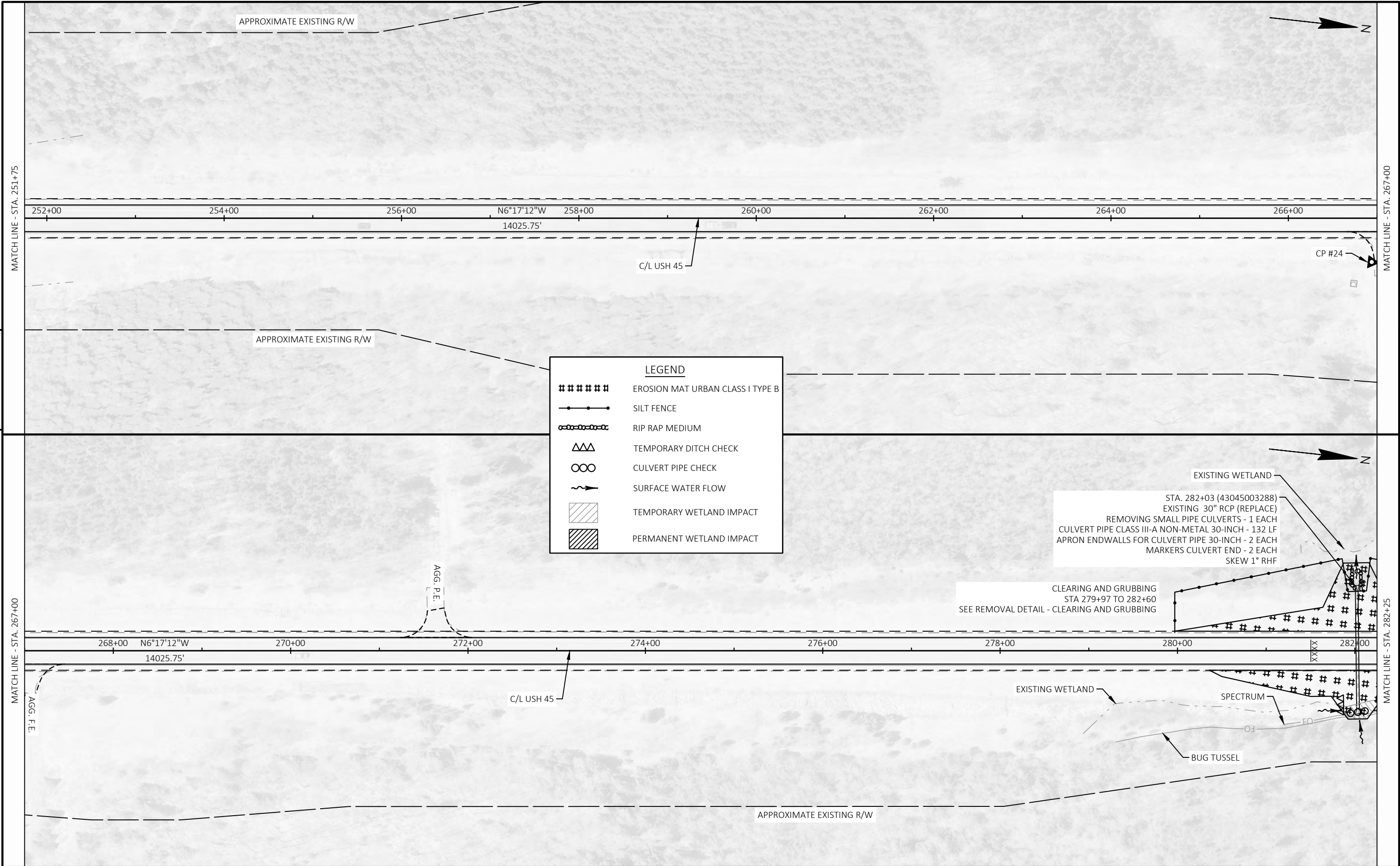




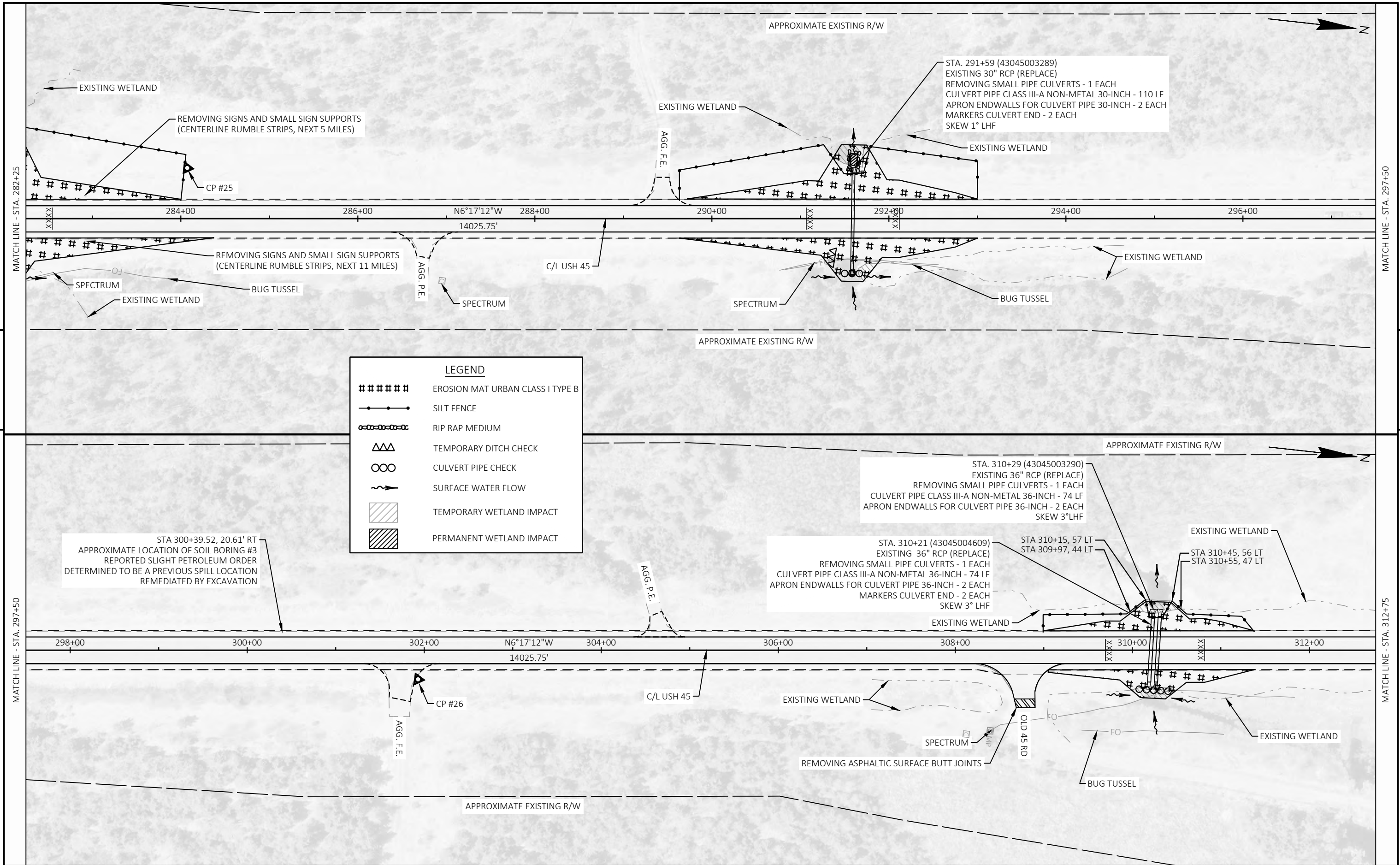
PROJECT NO: 1600-29-71	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET	E
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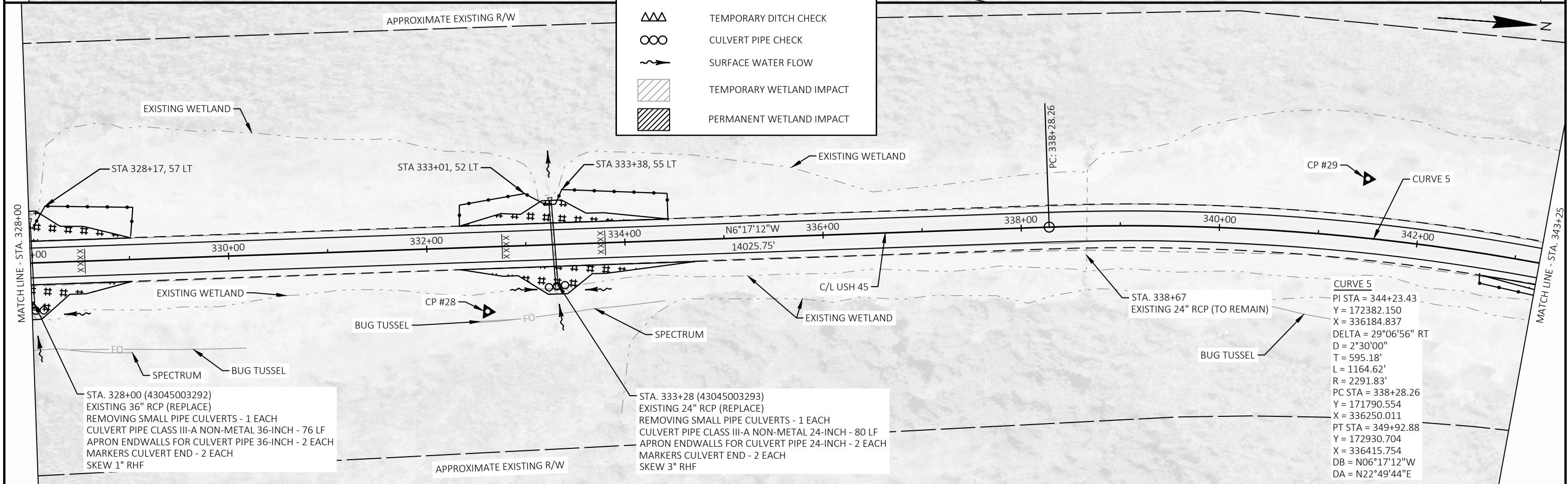
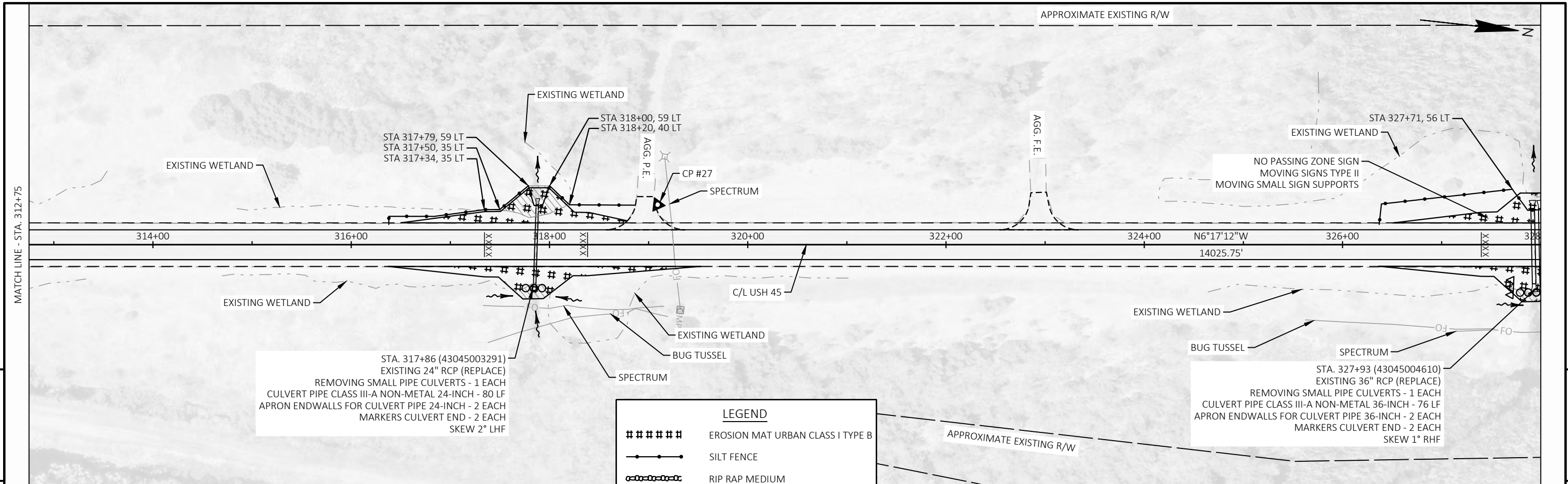


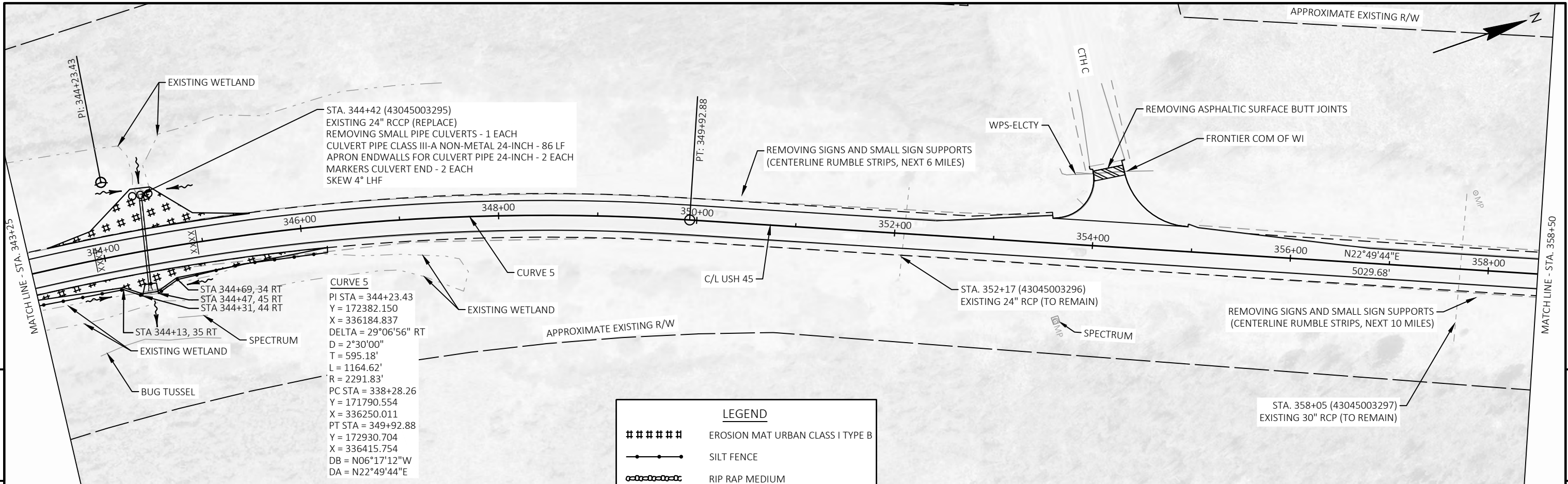




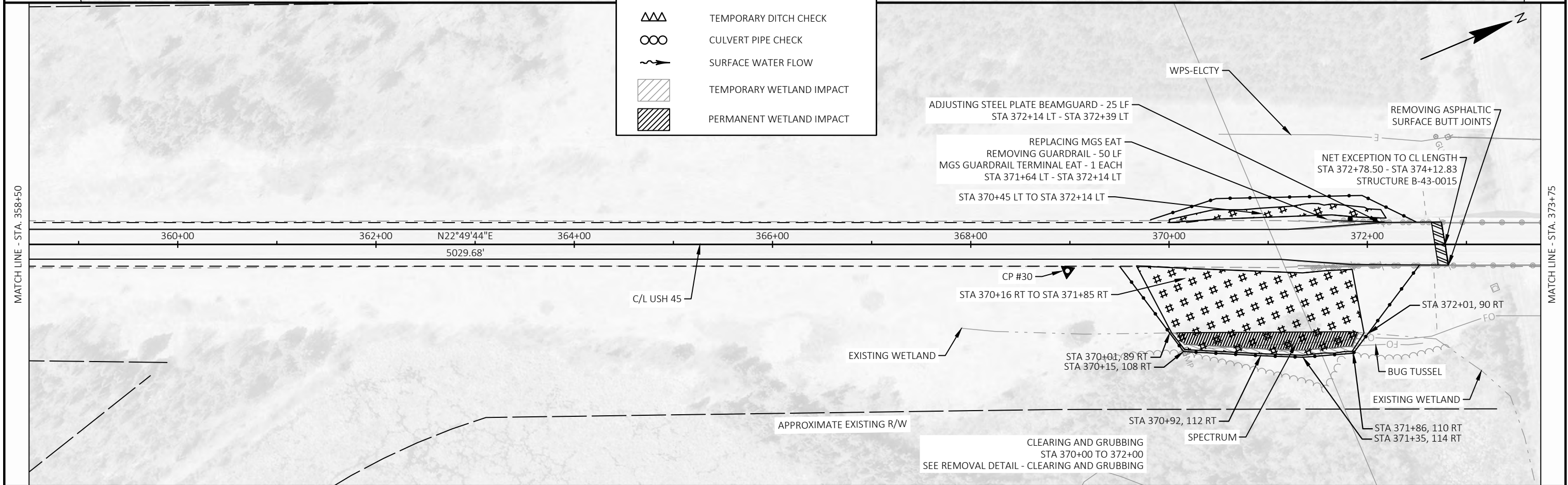
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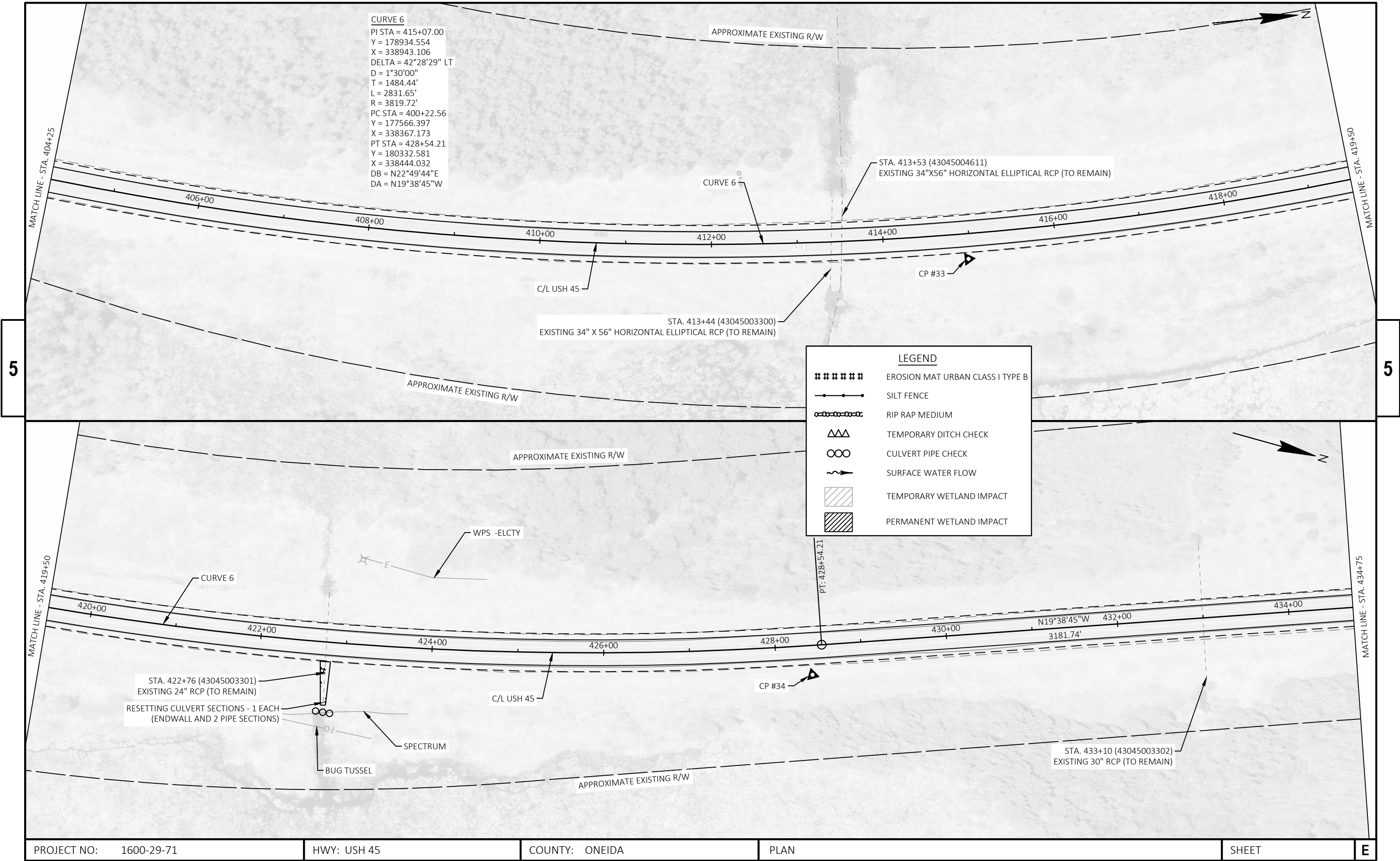




LEGEND	
#####	EROSION MAT URBAN CLASS I TYPE B
—●—●—●—	SILT FENCE
—○—○—○—	RIP RAP MEDIUM
△△△	TEMPORARY DITCH CHECK
○○○	CULVERT PIPE CHECK
~>	SURFACE WATER FLOW
▨	TEMPORARY WETLAND IMPACT
▩	PERMANENT WETLAND IMPACT



PROJECT NO: 1600-29-71	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET	E
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PROJECT NO: 1600-29-71

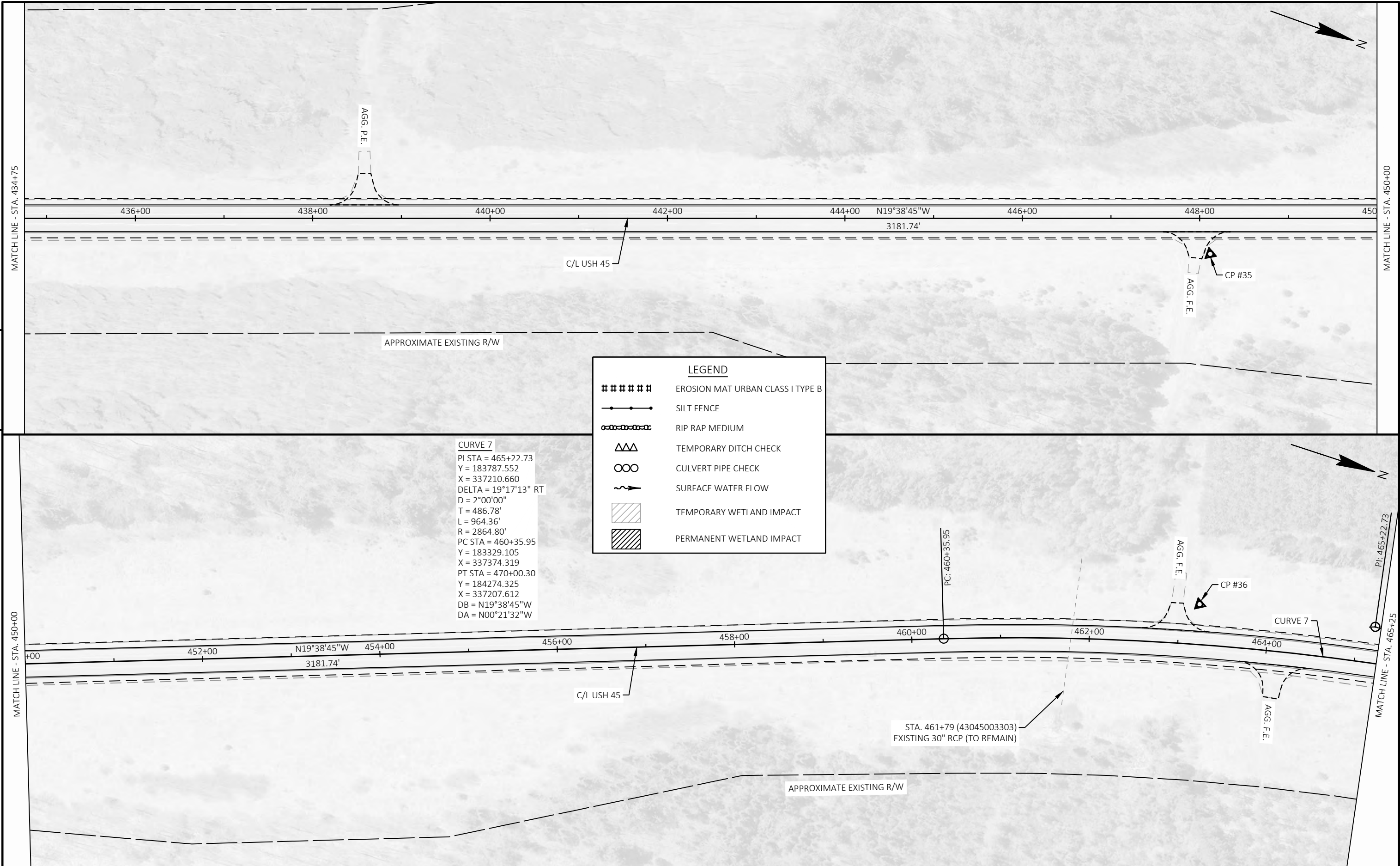
HWY: USH 45

COUNTY: ONEIDA

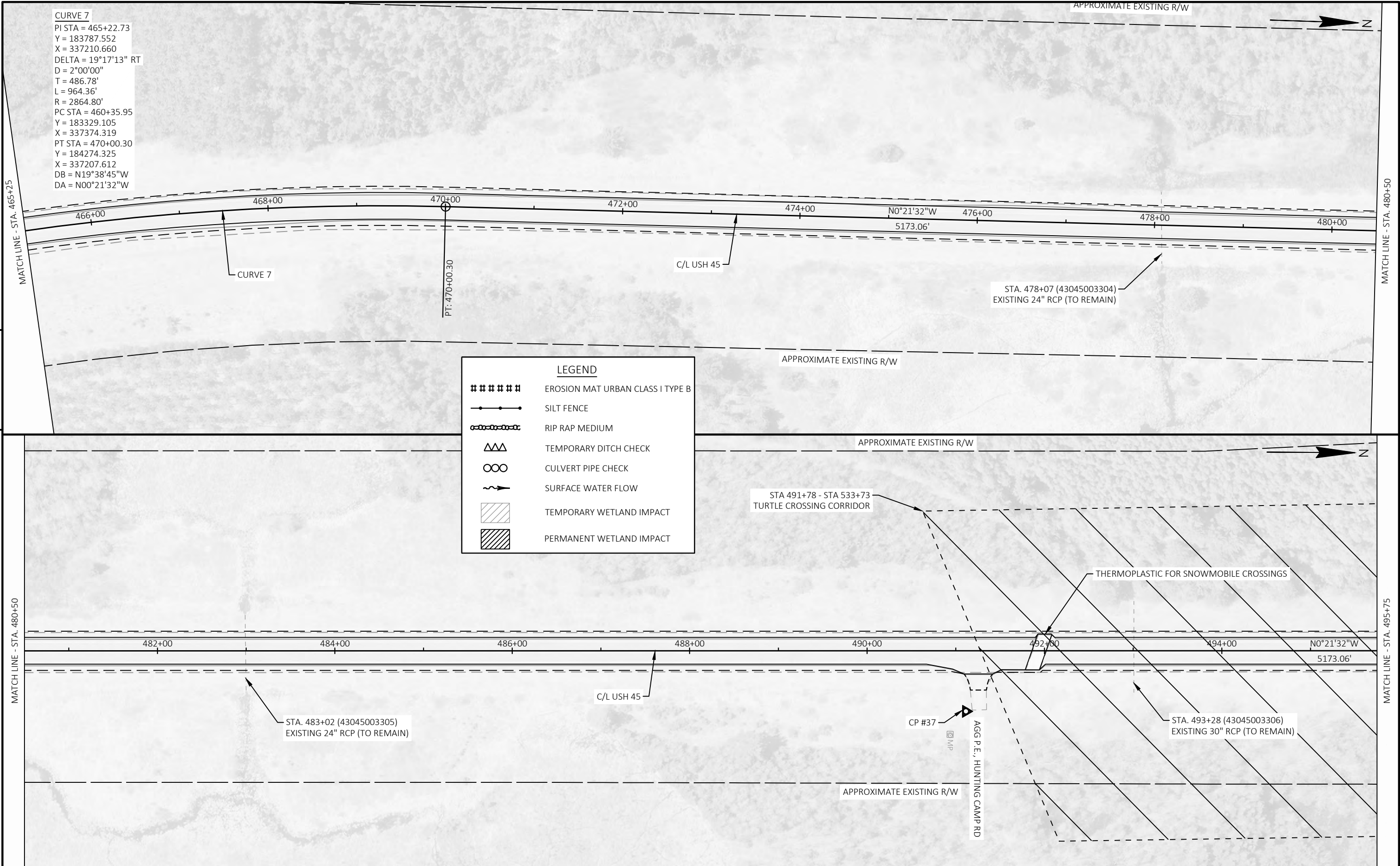
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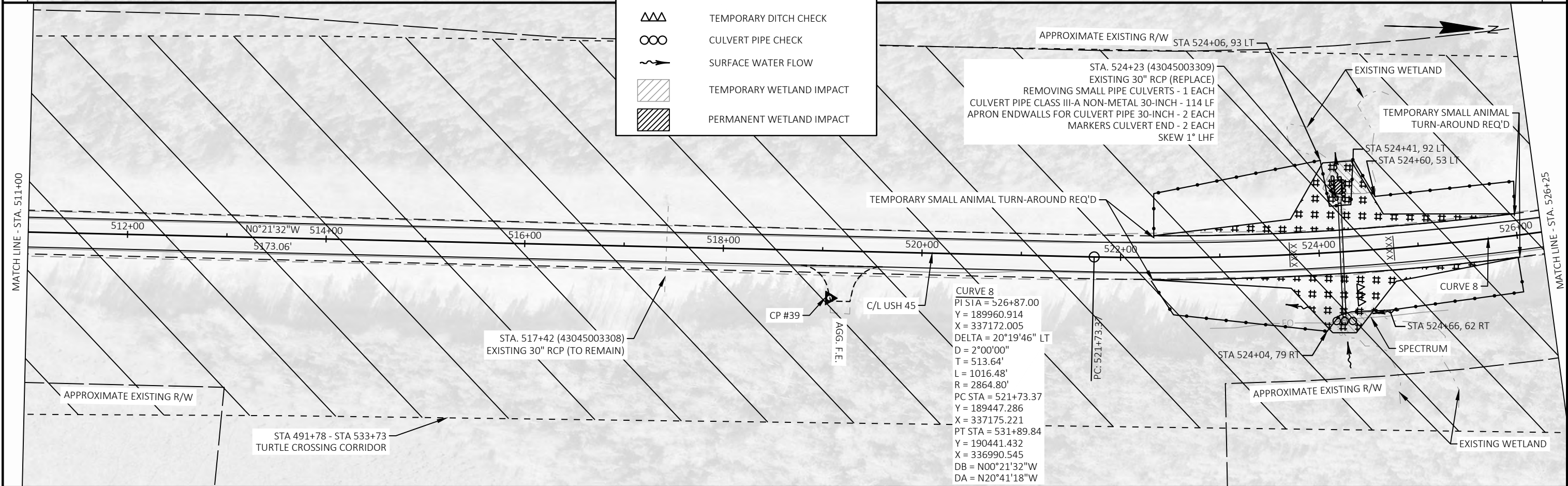
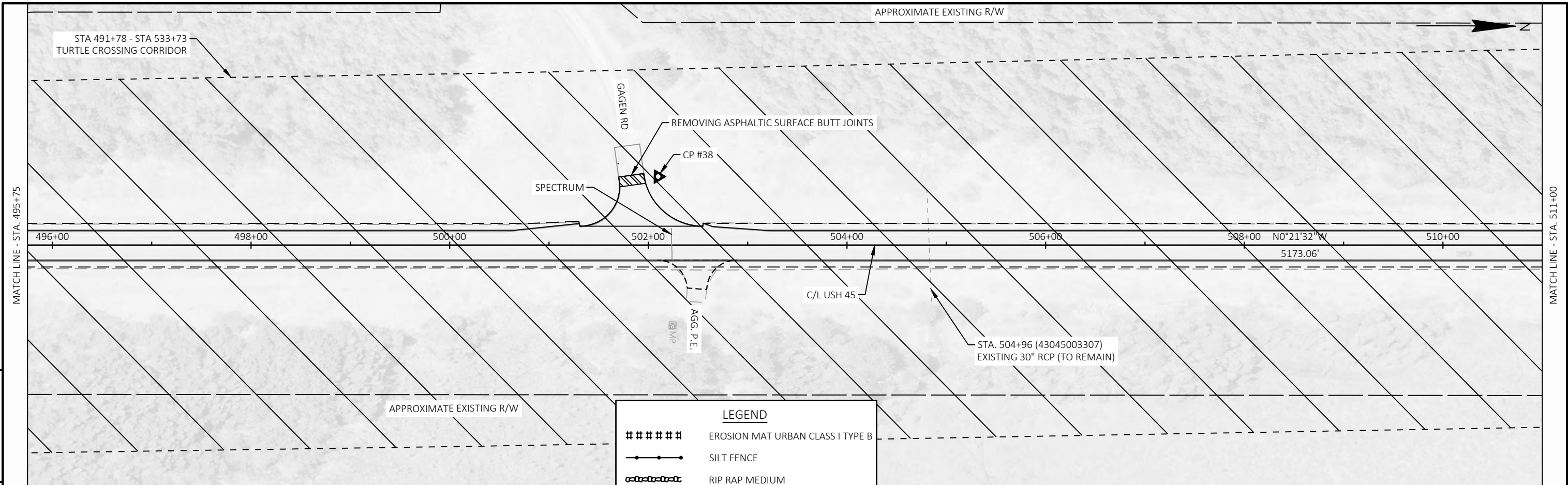
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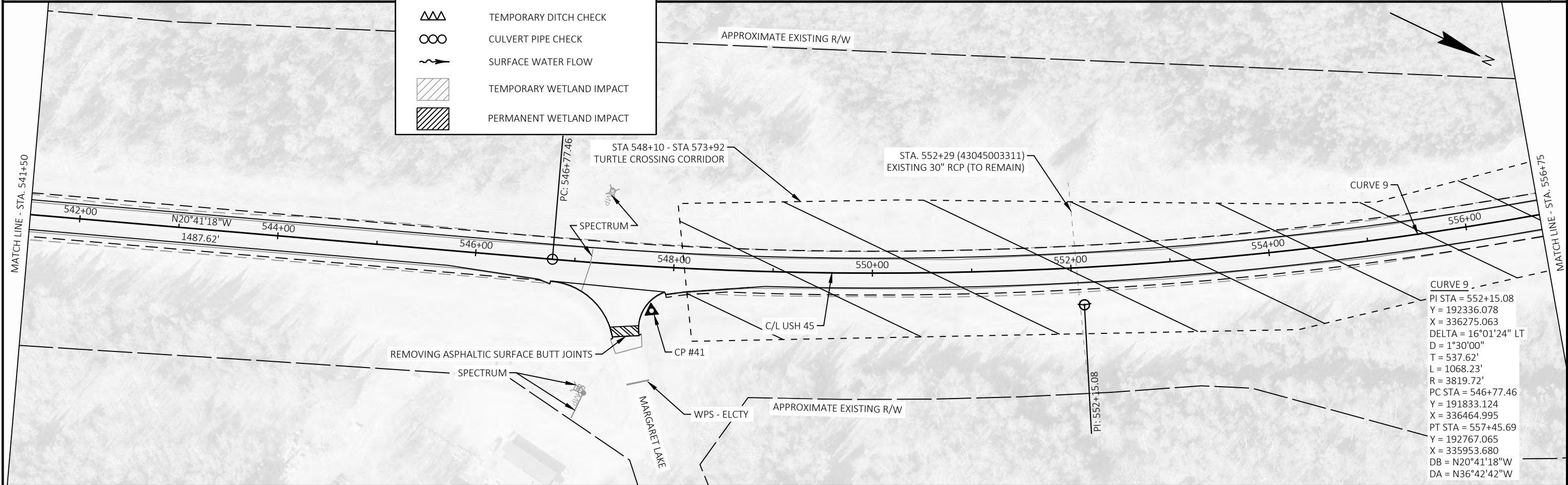
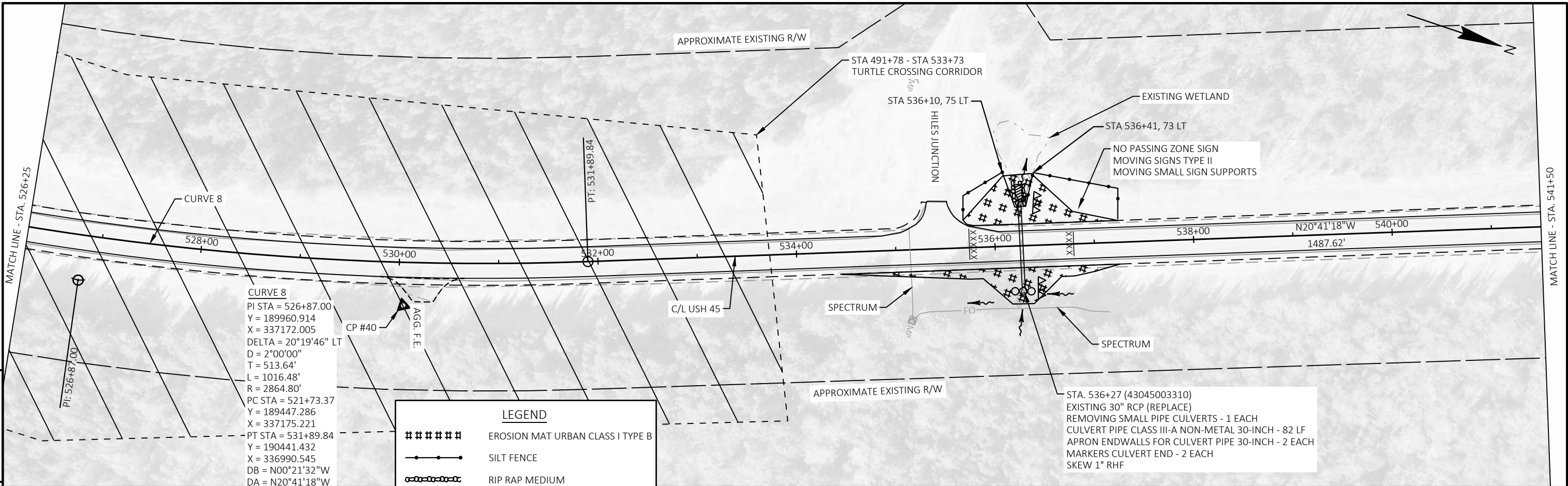
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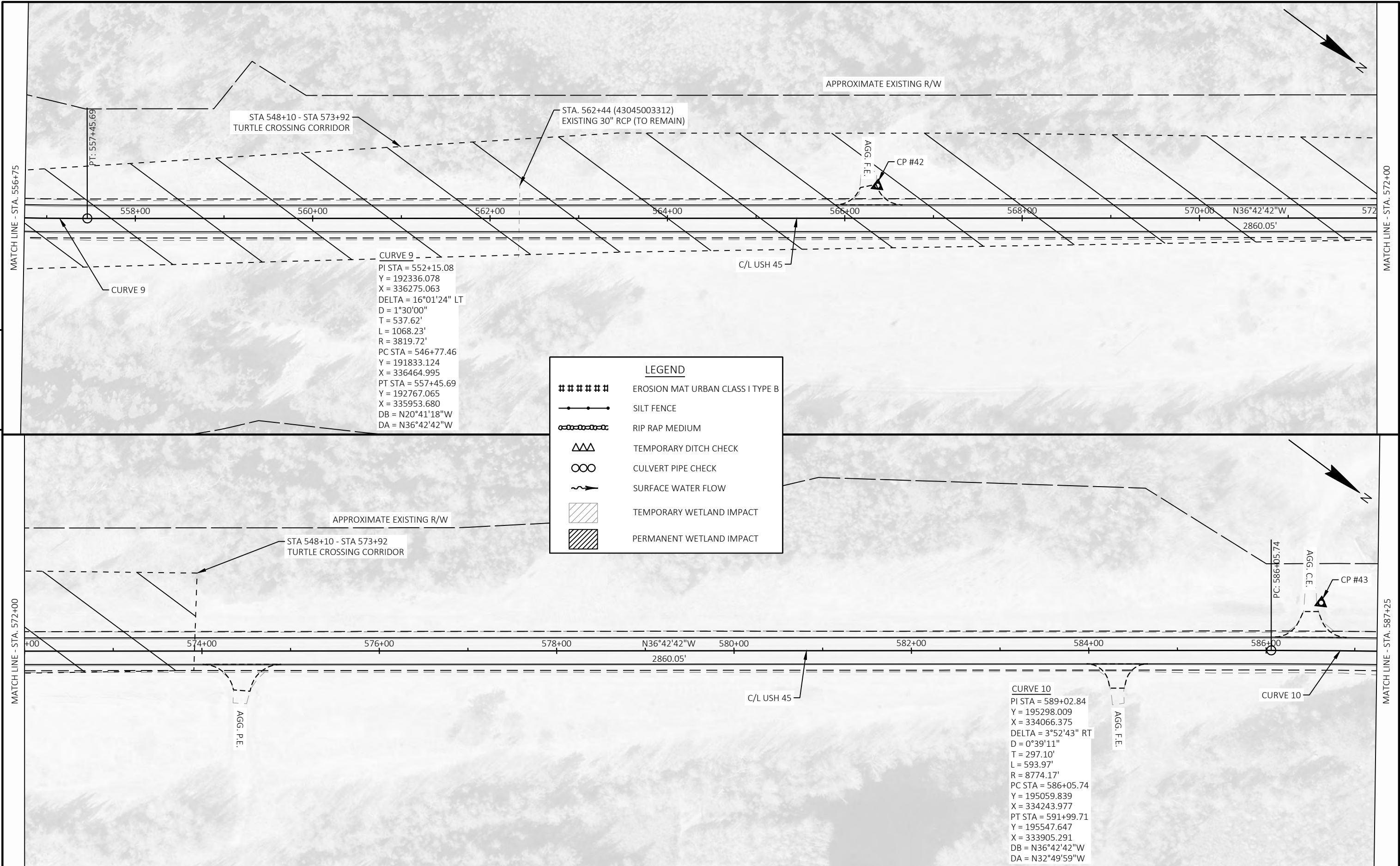


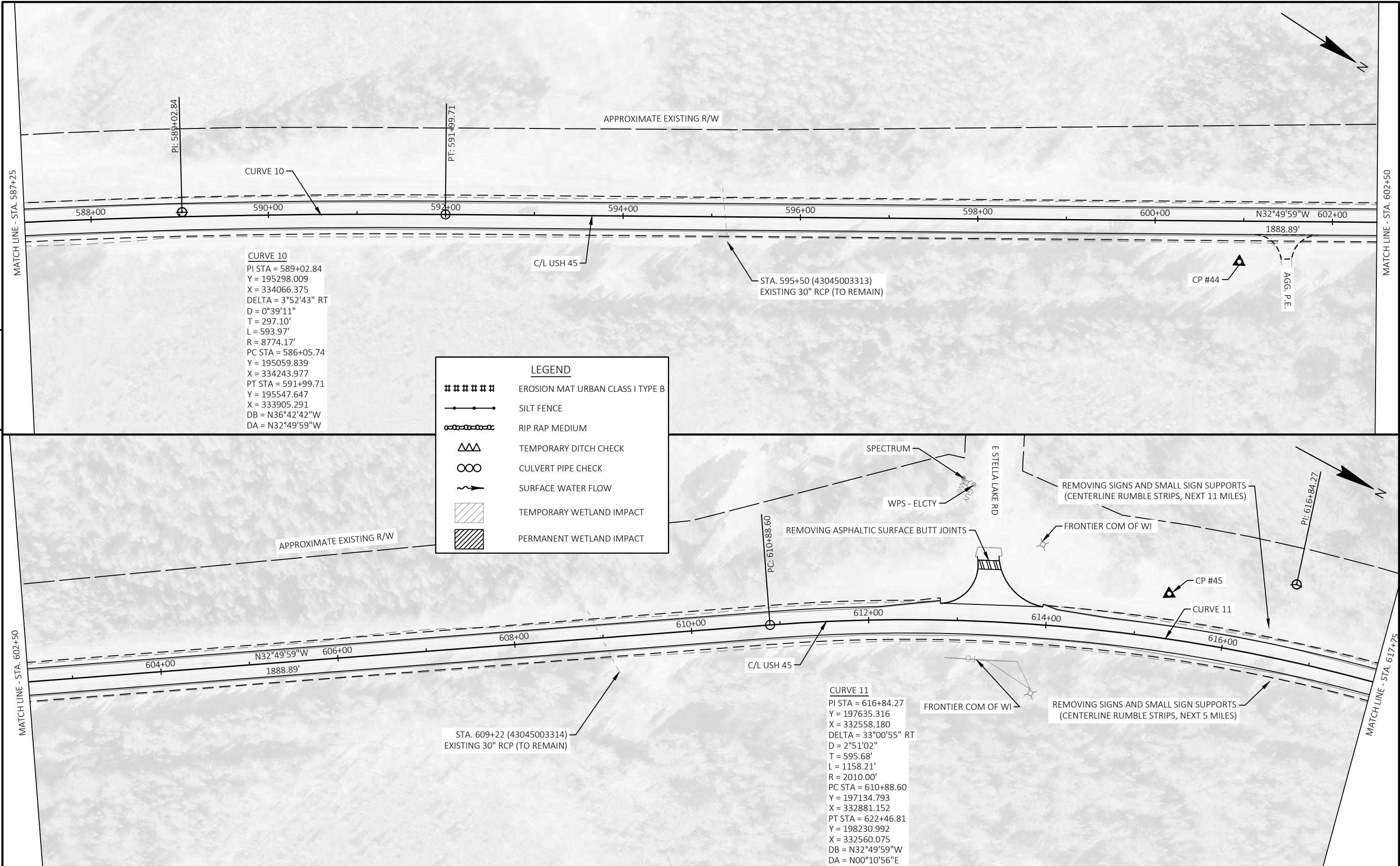
PROJECT NO: 1600-29-71	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET	E
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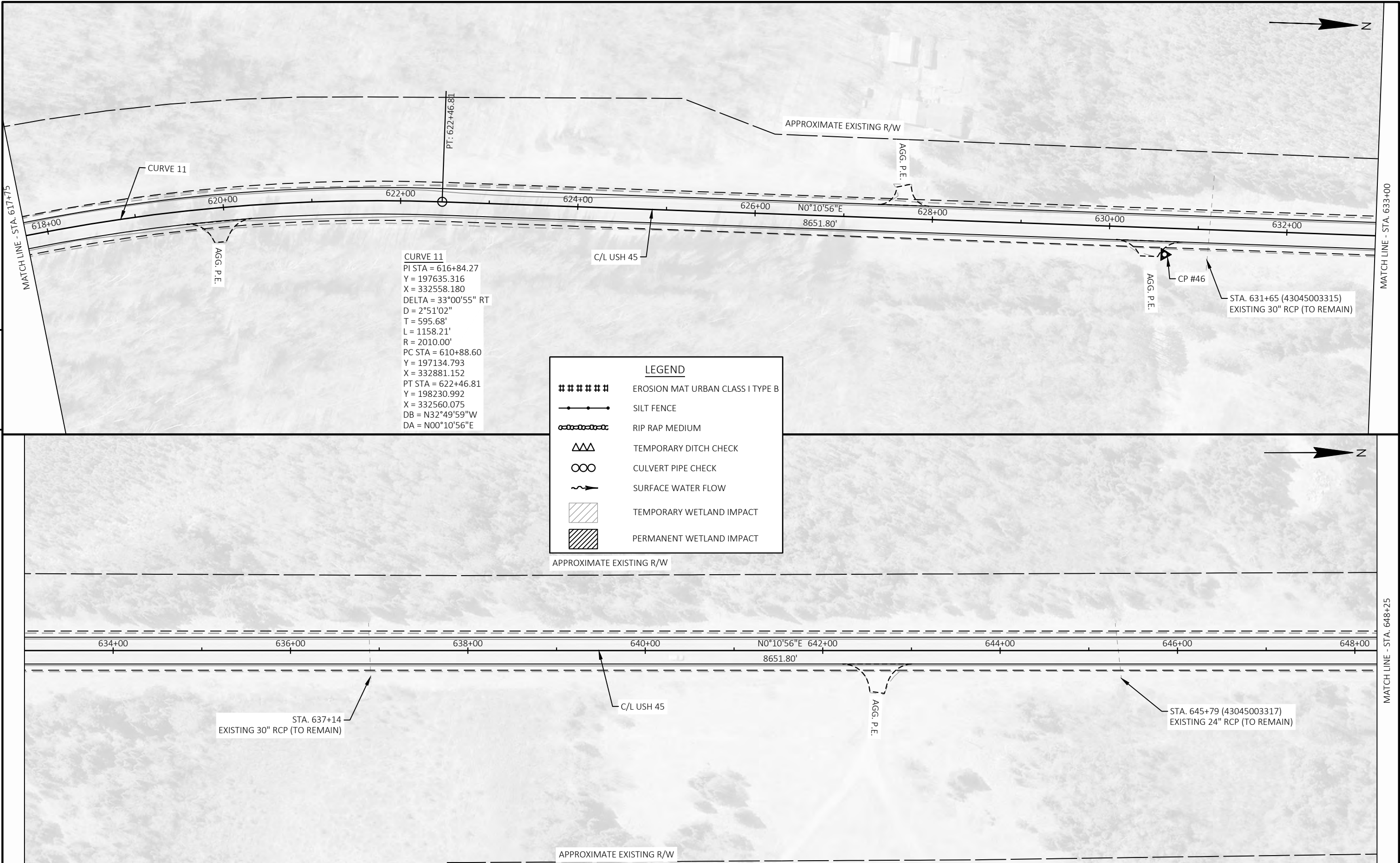


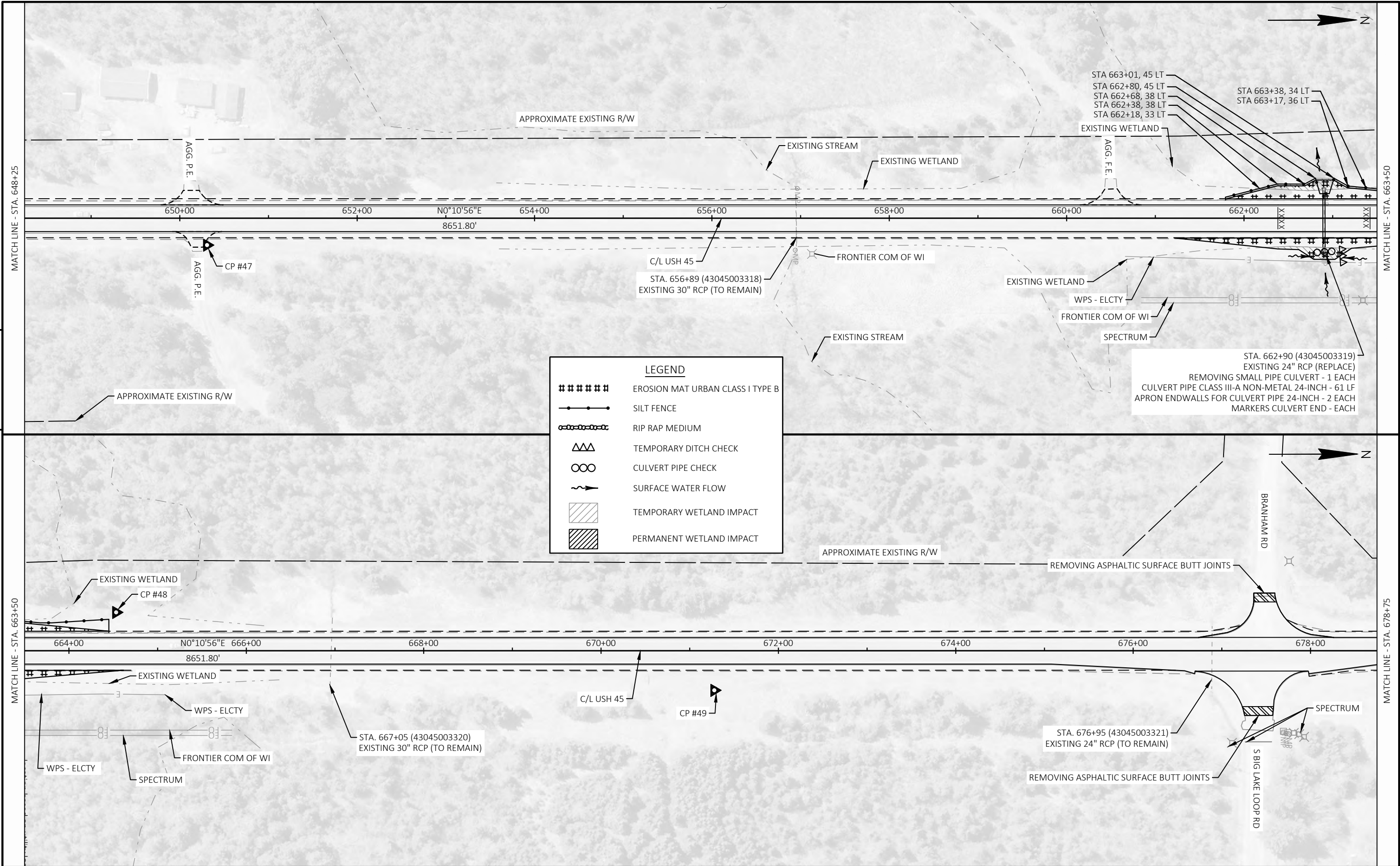




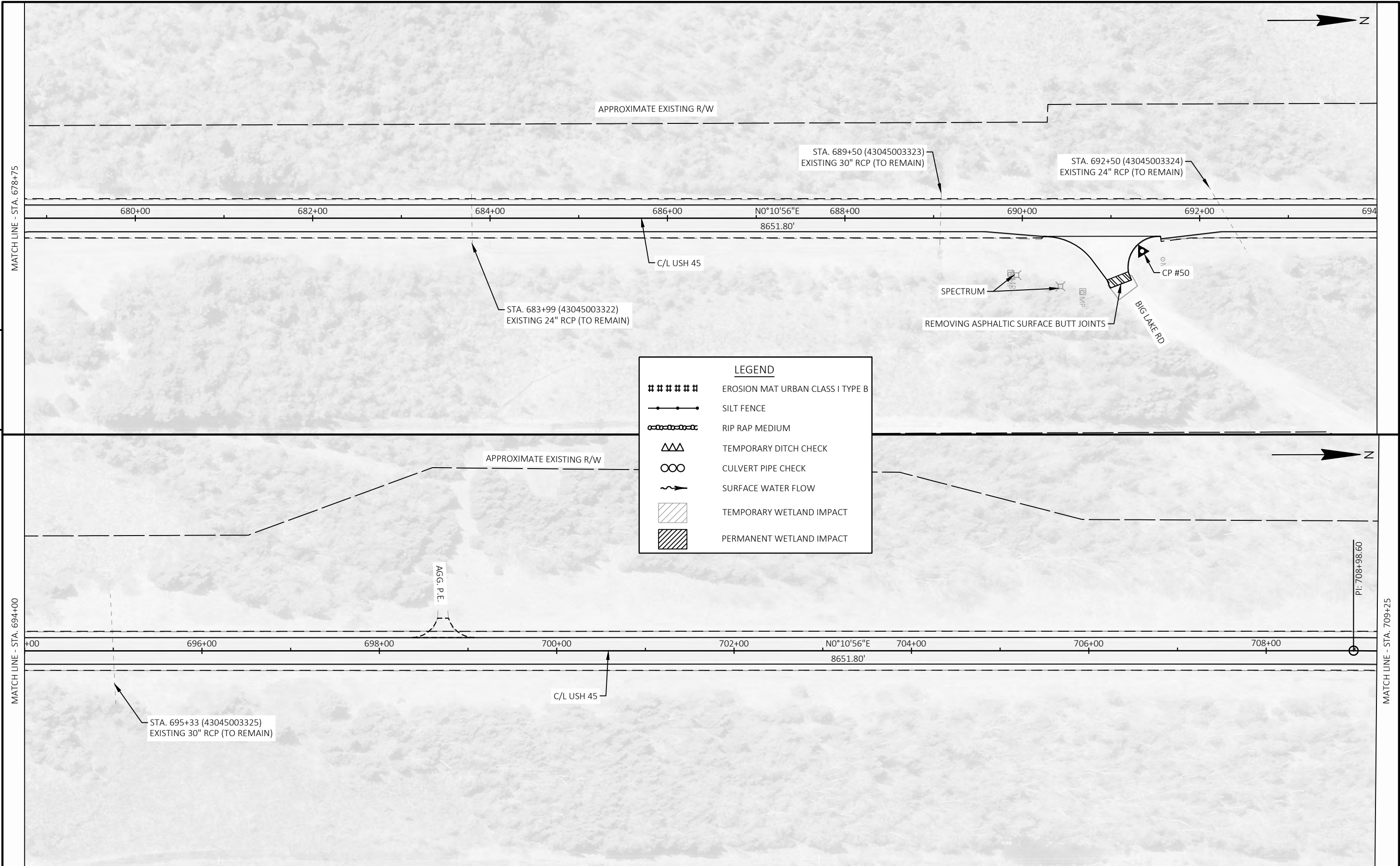


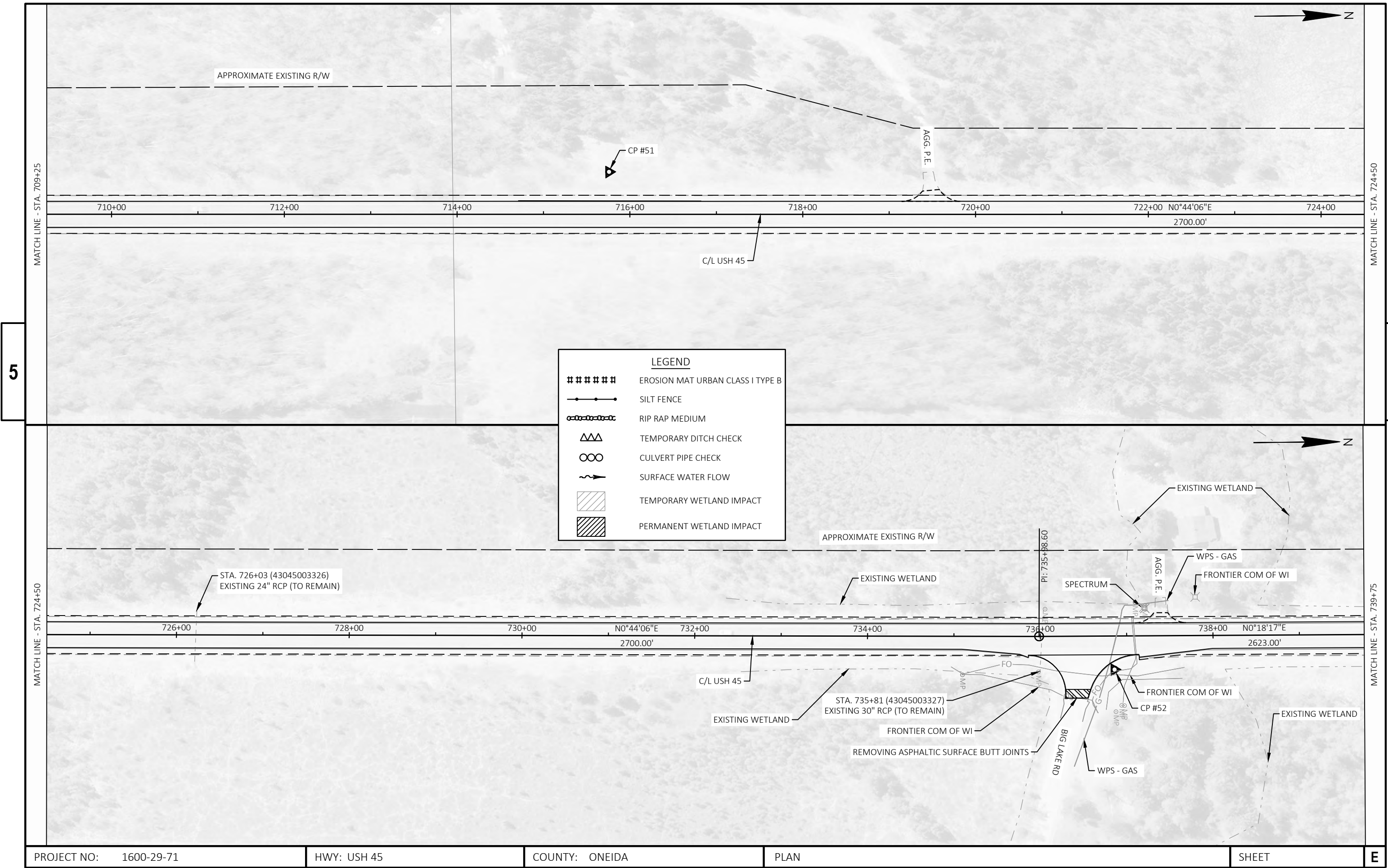


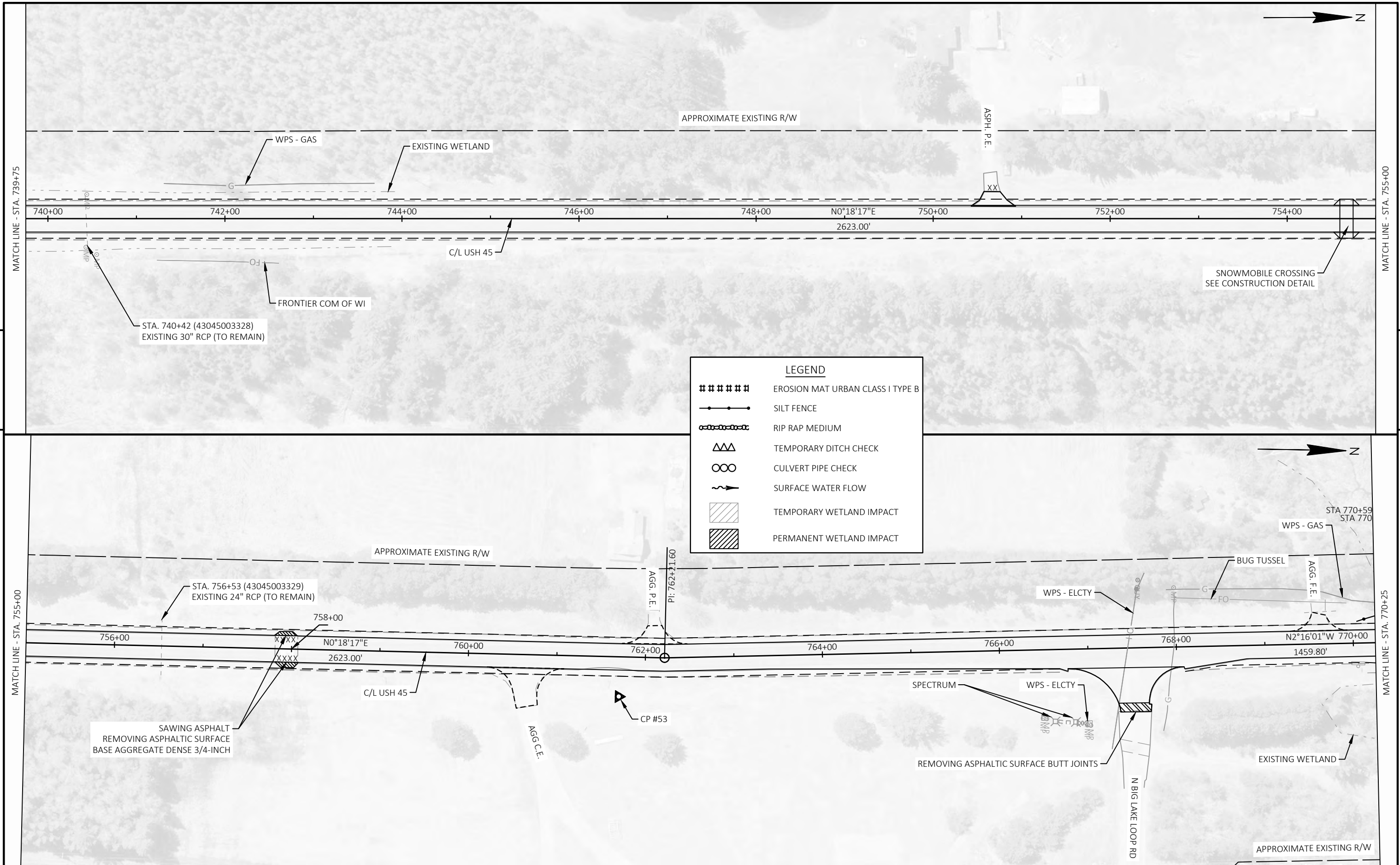




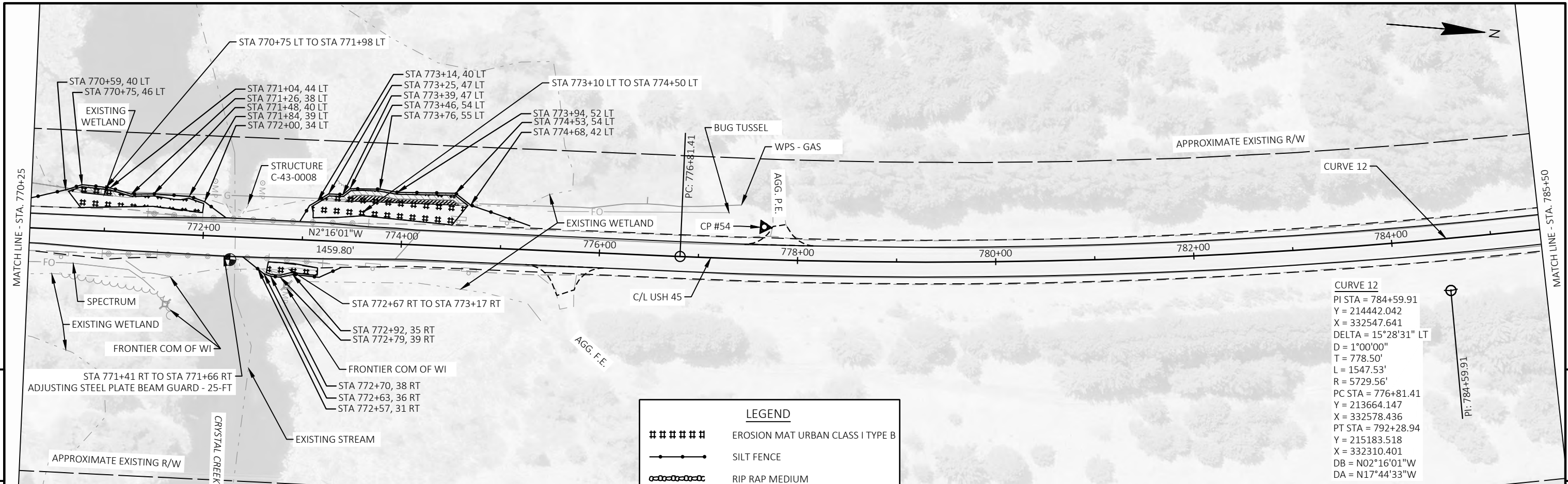
PROJECT NO: 1600-29-71	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET	E
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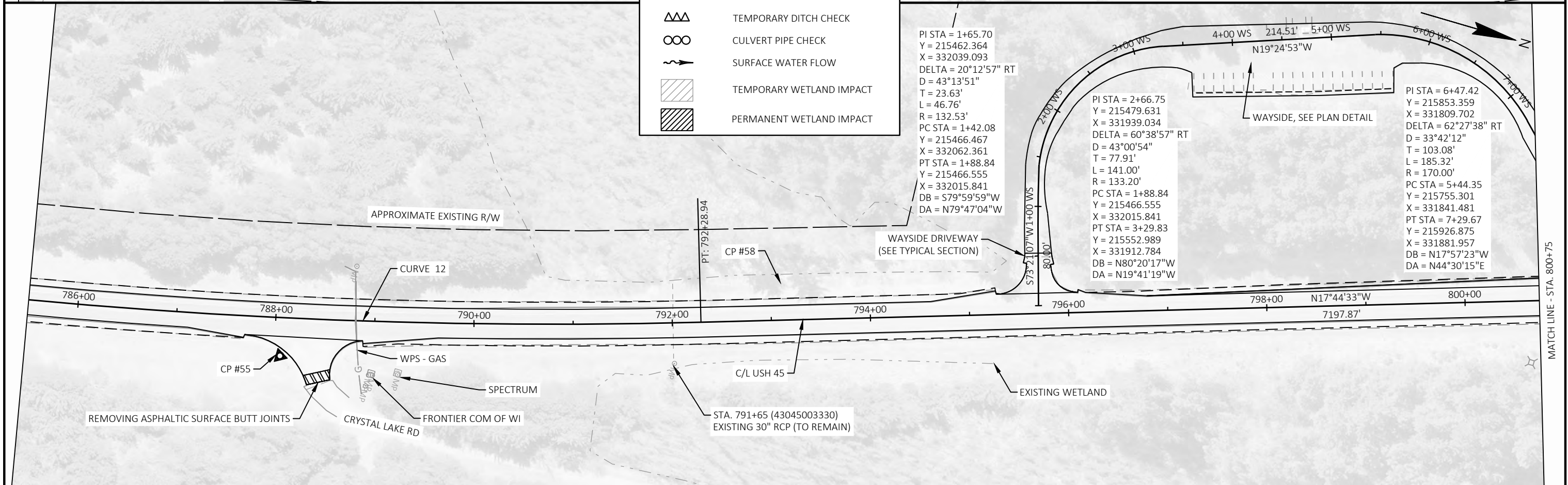


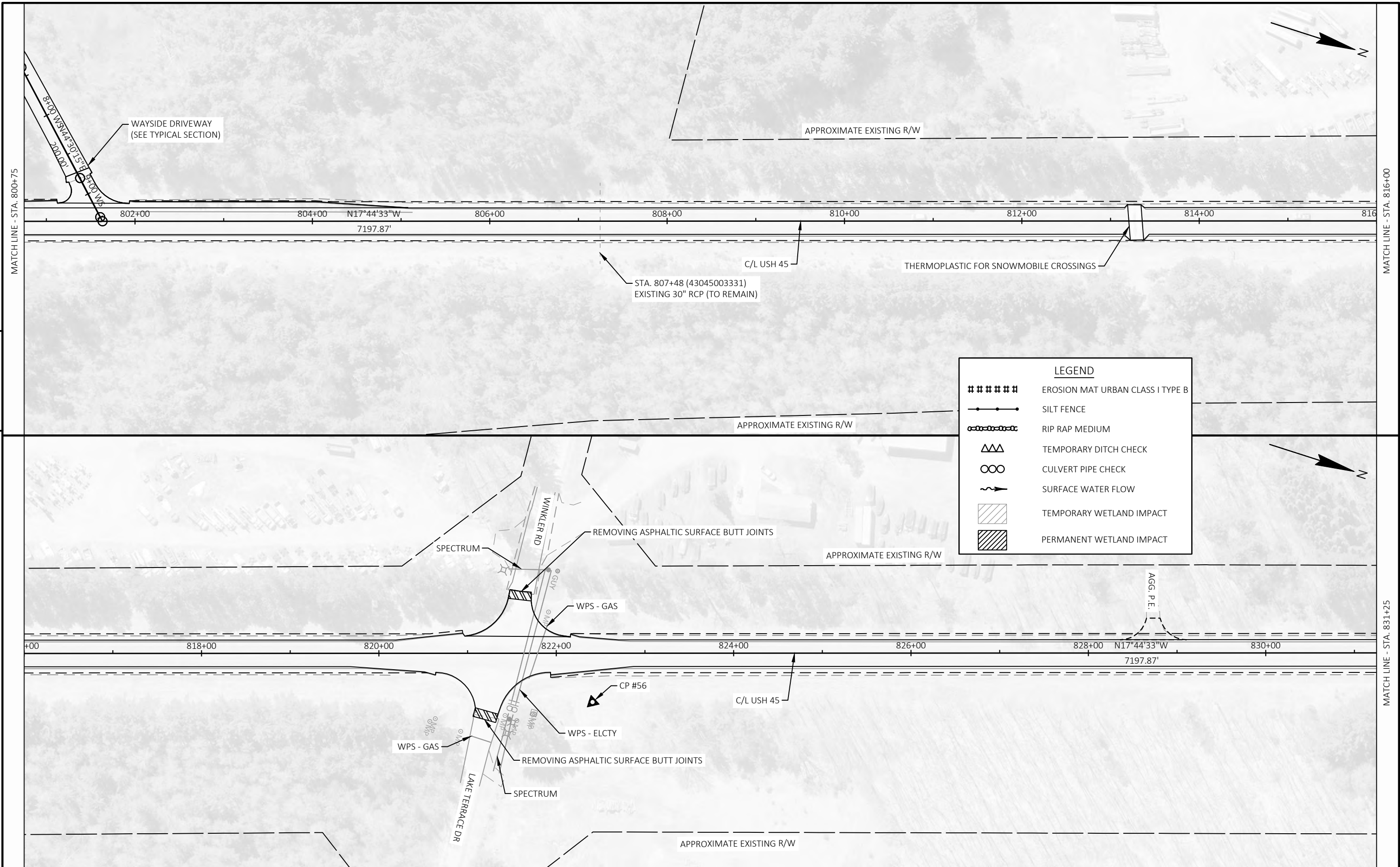
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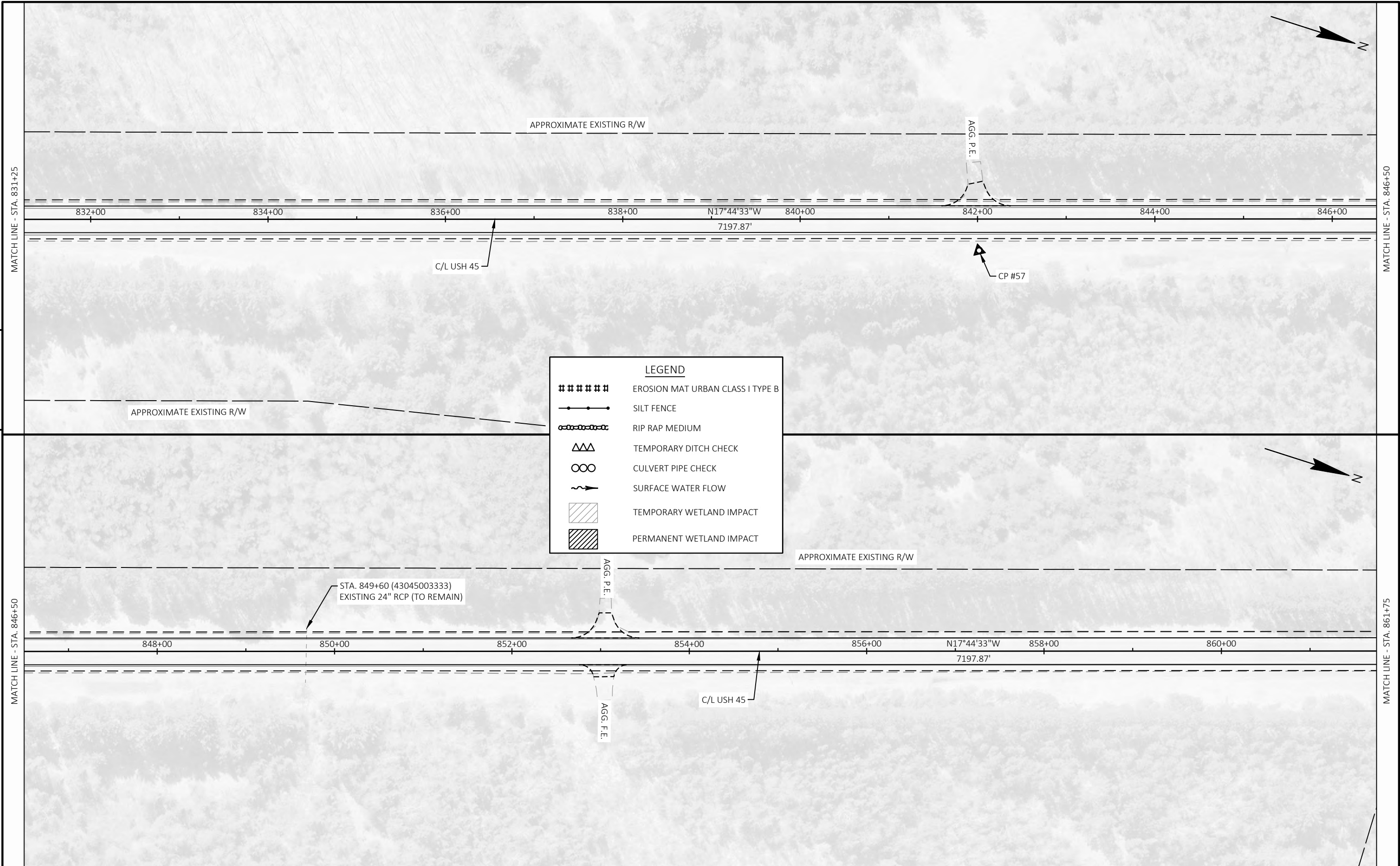


LEGEND

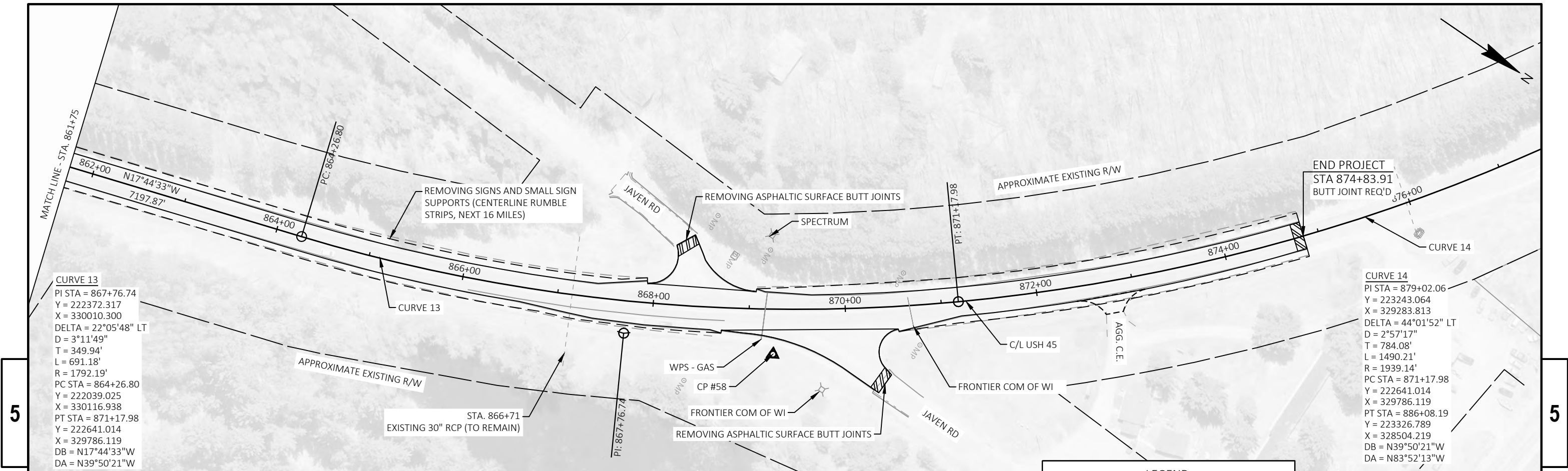
- ##### EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIP RAP MEDIUM
- △△△ TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- ~ SURFACE WATER FLOW
- ▨ TEMPORARY WETLAND IMPACT
- ▩ PERMANENT WETLAND IMPACT







PROJECT NO: 1600-29-71	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET	E
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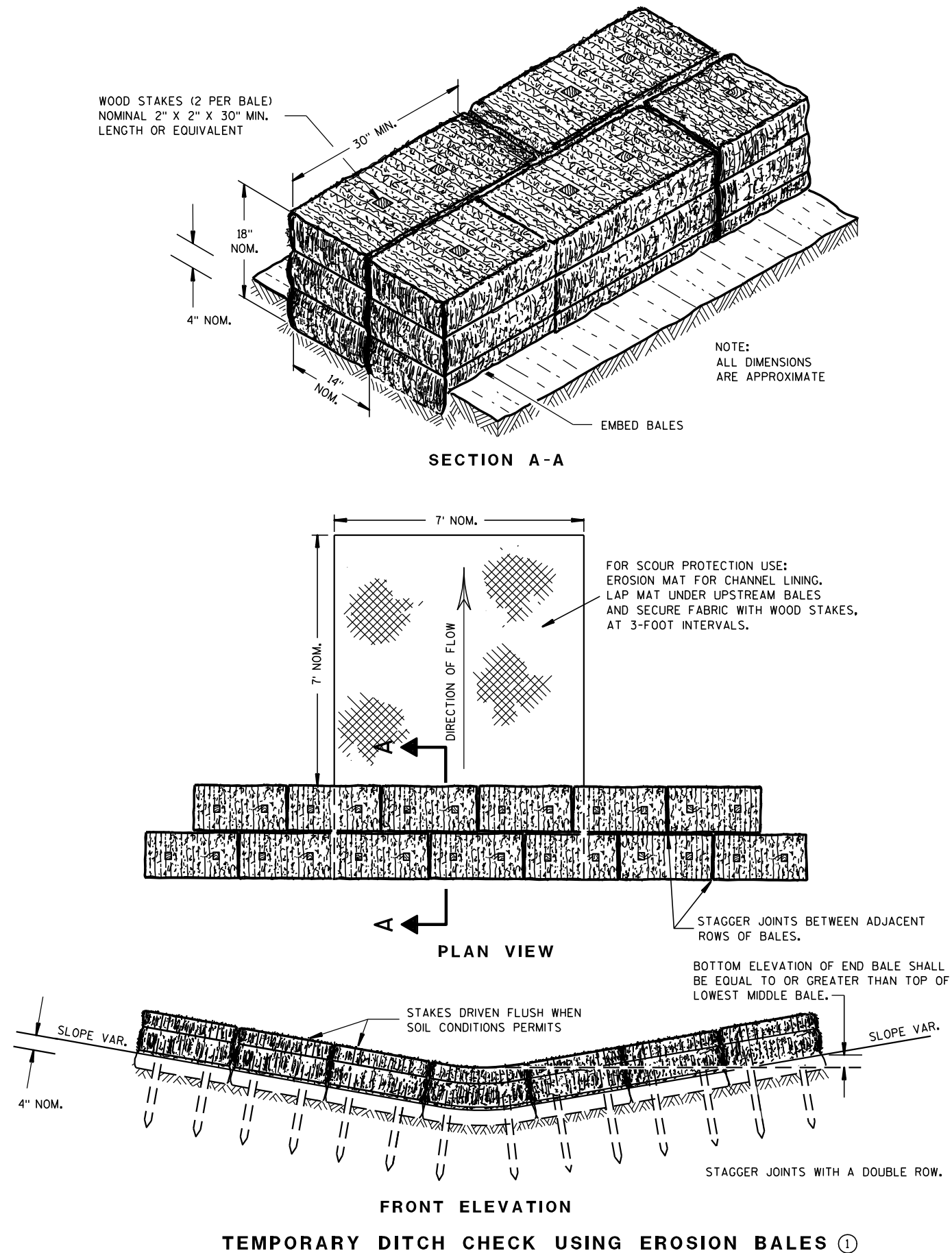


LEGEND

#####	EROSION MAT URBAN CLASS I TYPE B
—●—●—●—	SILT FENCE
—○—○—○—	RIP RAP MEDIUM
△△△	TEMPORARY DITCH CHECK
○○○	CULVERT PIPE CHECK
~>	SURFACE WATER FLOW
▨	TEMPORARY WETLAND IMPACT
▩	PERMANENT WETLAND IMPACT

Standard Detail Drawing List

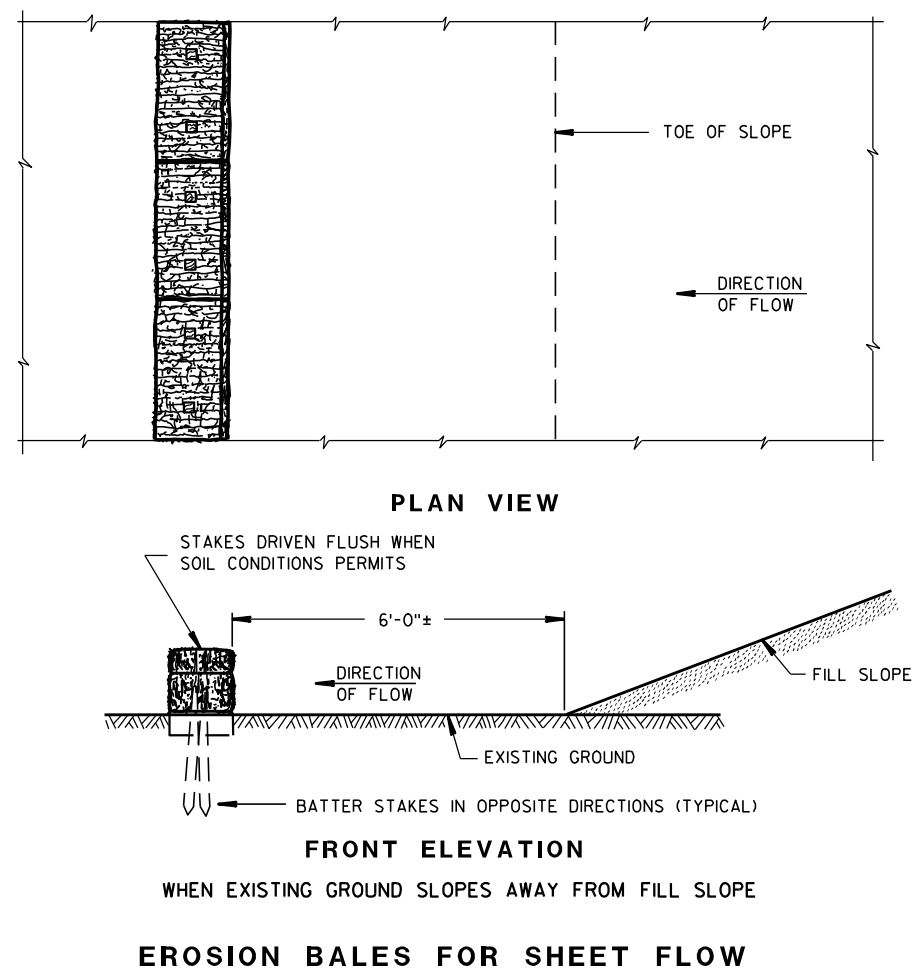
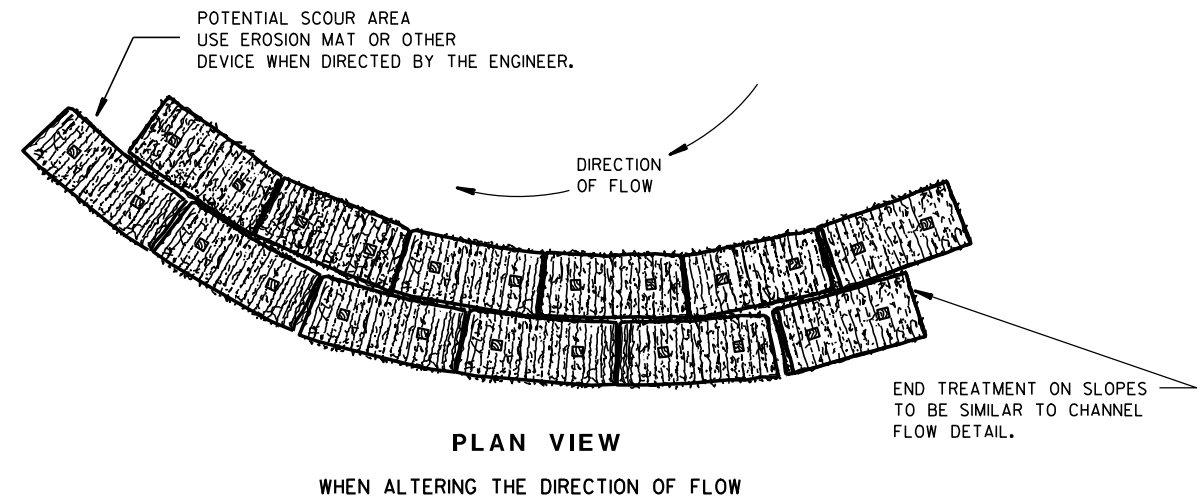
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13A11-04C	CENTERLINE RUMBLE STRIPS - ASPHALT SINUSOIDAL
13A11-04D	CENTERLINE RUMBLE STRIPS - INTERSECTIONS, DRIVEWAYS, BRIDGES, RAILROADS
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C07-16B	PAVEMENT MARKING WORDS
15C07-16C	PAVEMENT MARKING ARROWS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-23D	PAVEMENT MARKING (TURN LANES)
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15C19-09A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D48-01	TRAFFIC CONTROL, LANE SHIFT IN FLAGGING OPERATION



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

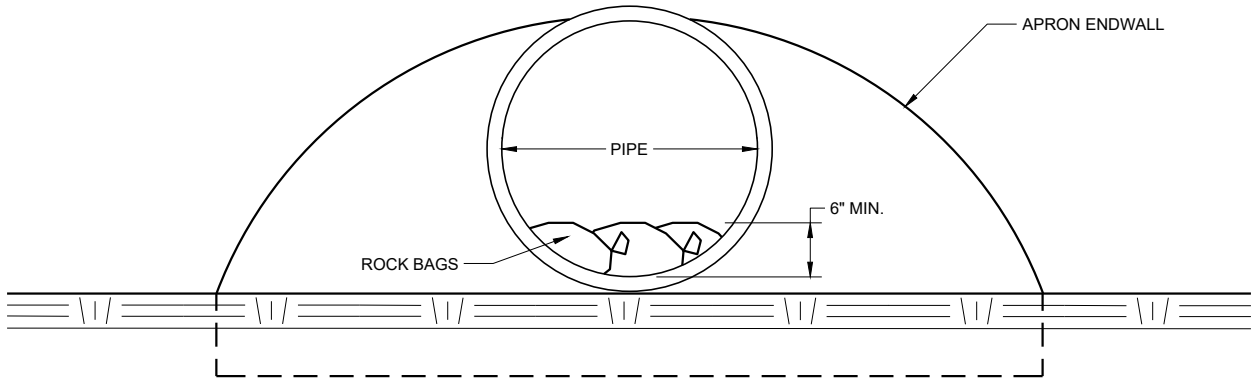
FHWA



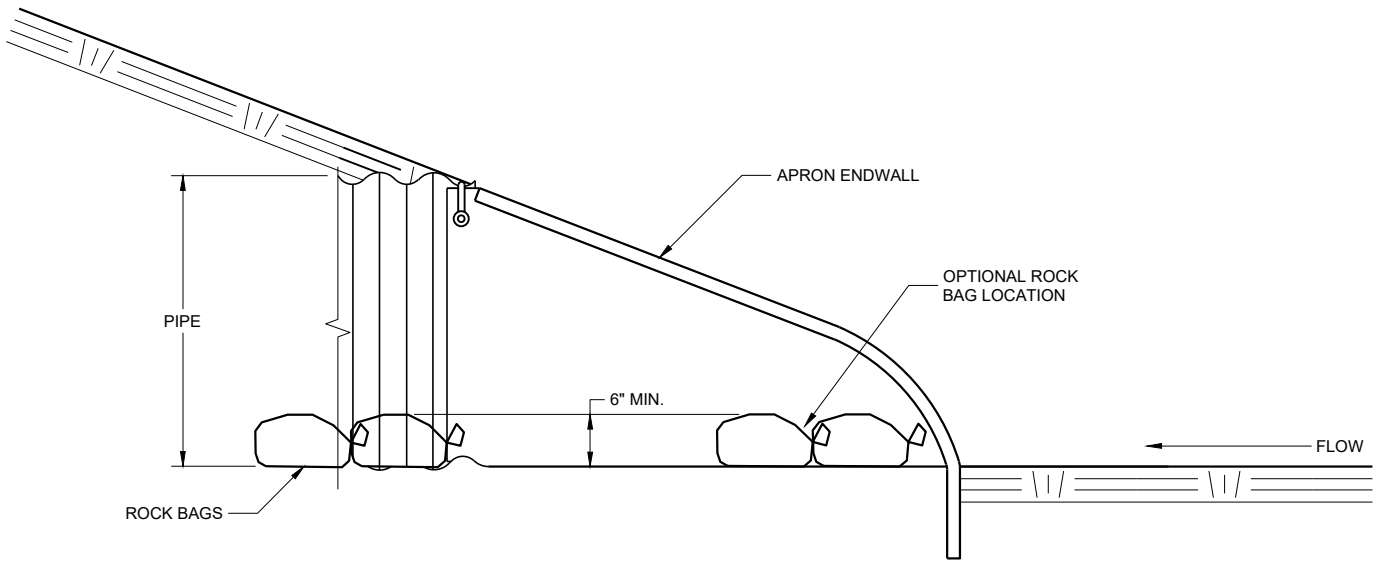
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" 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.



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



END VIEW



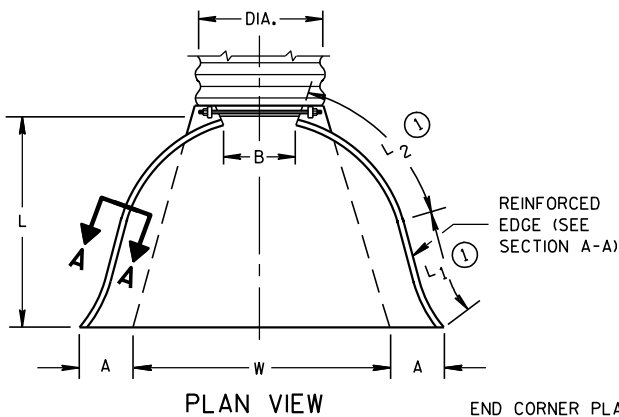
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

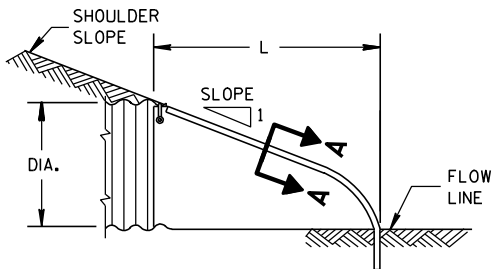
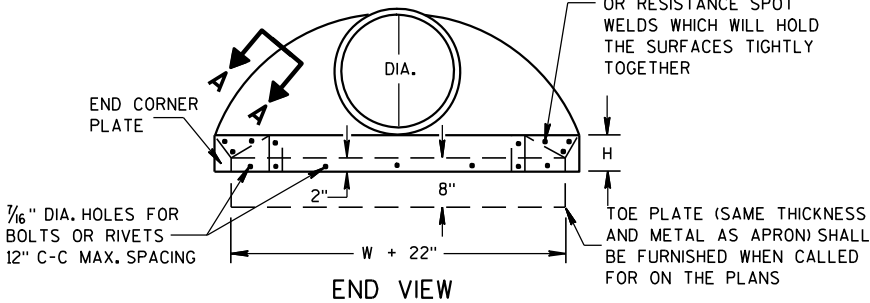
CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGINEER

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



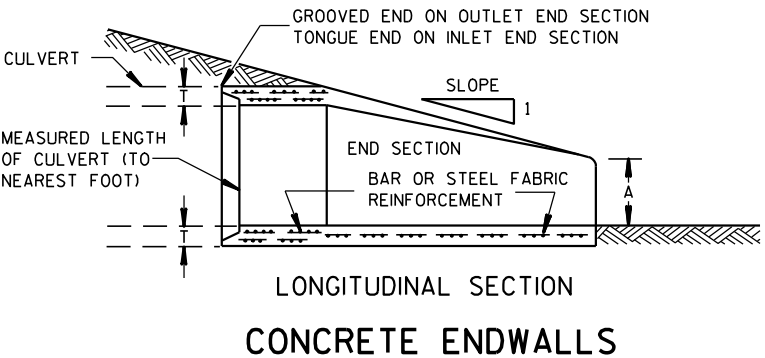
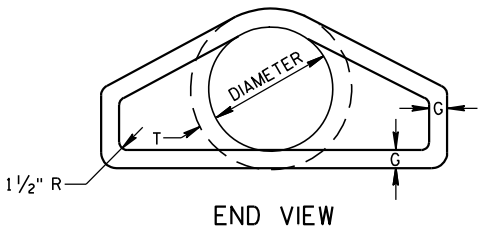
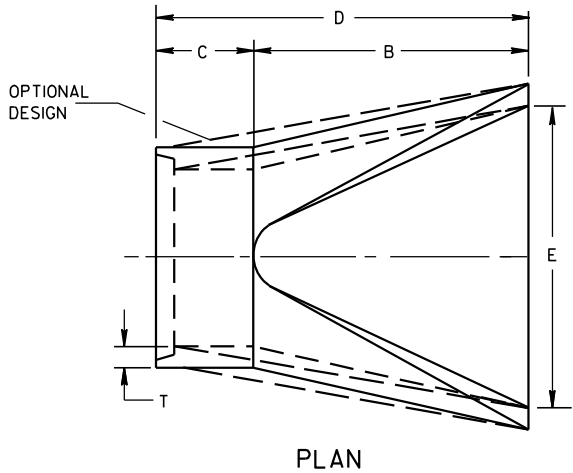
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



SIDE ELEVATION
METAL ENDWALLS

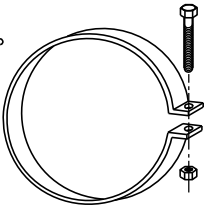
REINFORCED CONCRETE APRON ENDWALLS												
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE				
	T	A	B	C	D	E	G					
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1				
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1				
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1				
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1				
24	3	9 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

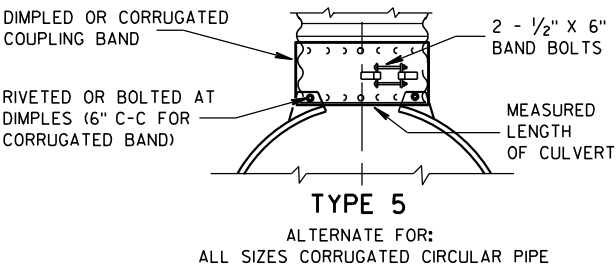
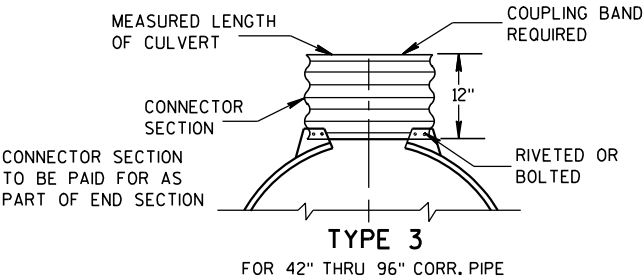
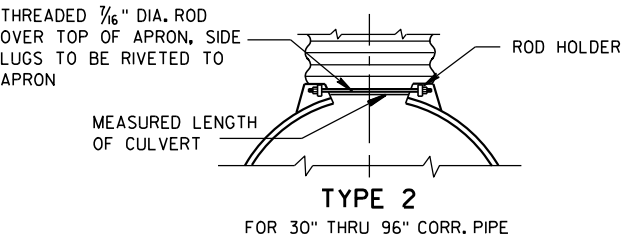
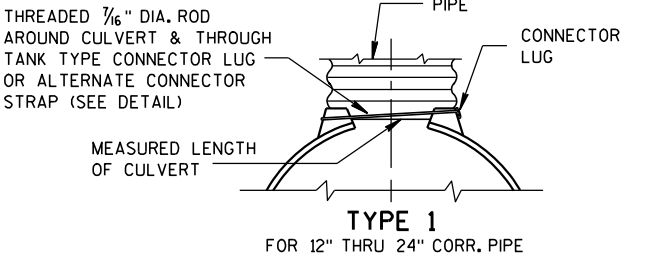


LONGITUDINAL SECTION
CONCRETE ENDWALLS

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



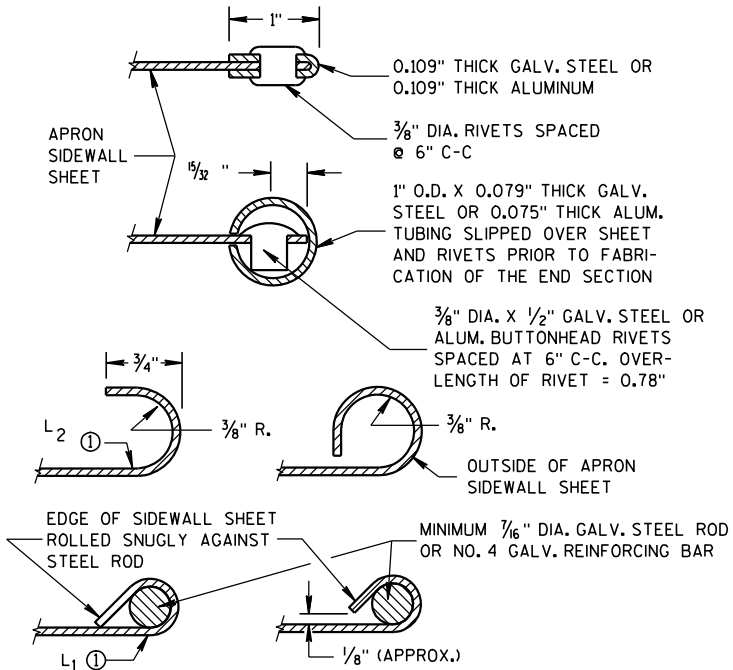
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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



SECTION A-A

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.

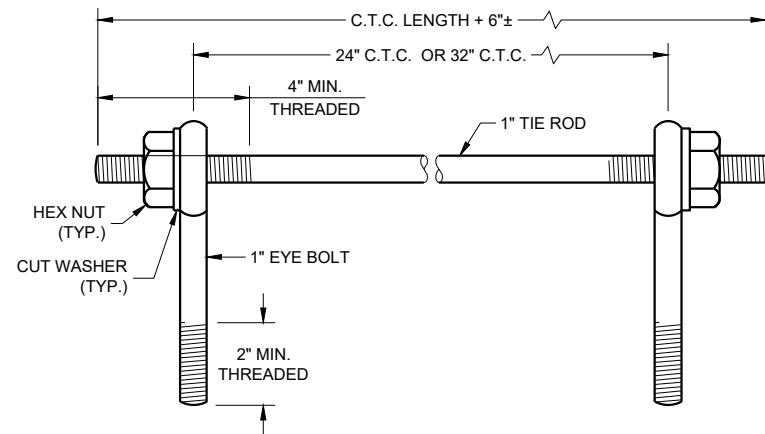
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

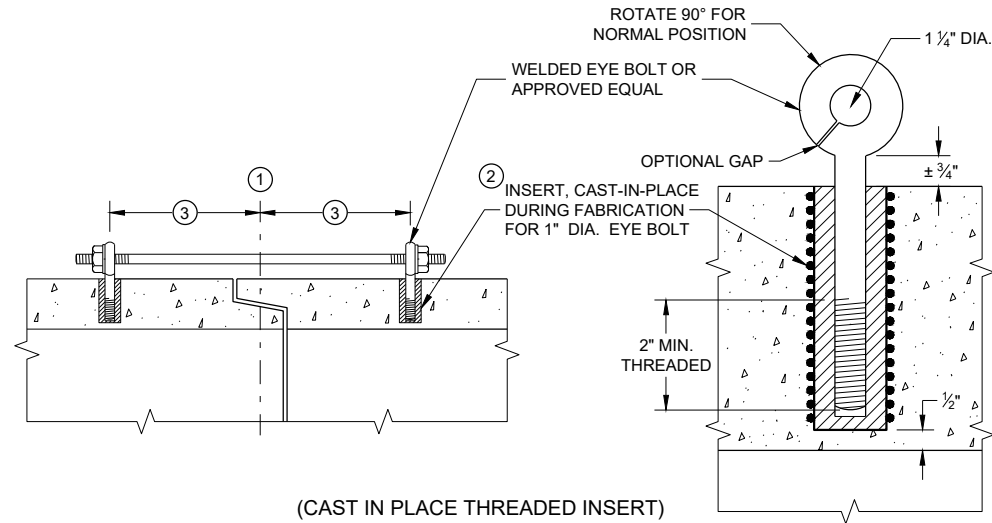
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94
DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



EYE BOLTS AND TIE ROD

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

GENERAL NOTES

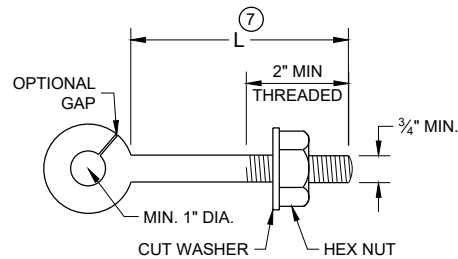
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

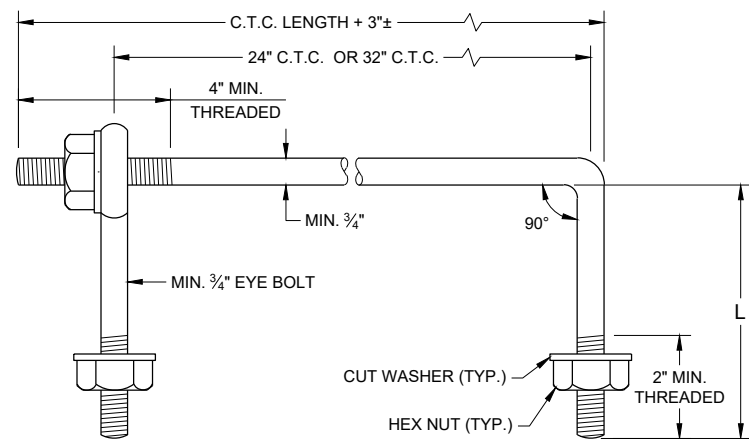
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- 1 CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- 2 THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- 3 HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- 4 BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- 5 OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- 6 LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- 7 EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

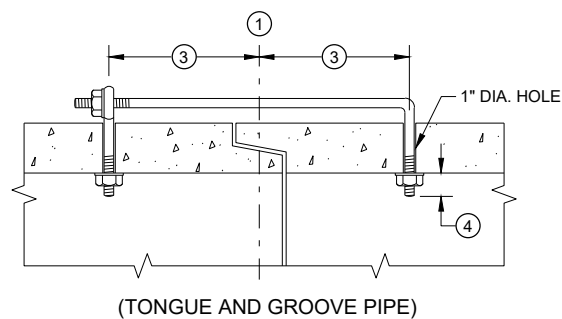


EYE BOLT 7

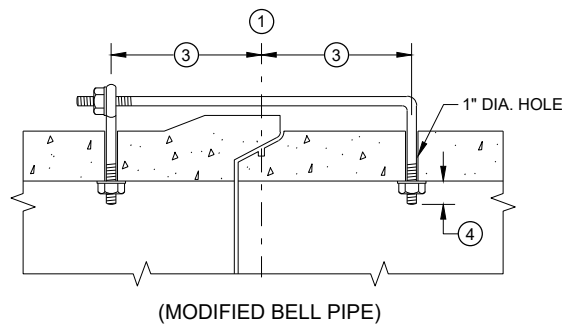
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

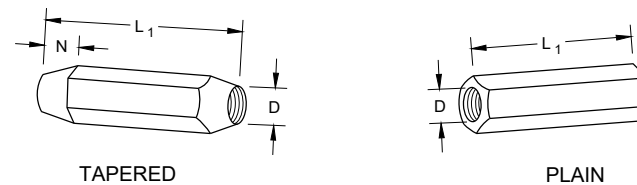
LONGITUDINAL SECTION
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 1/16

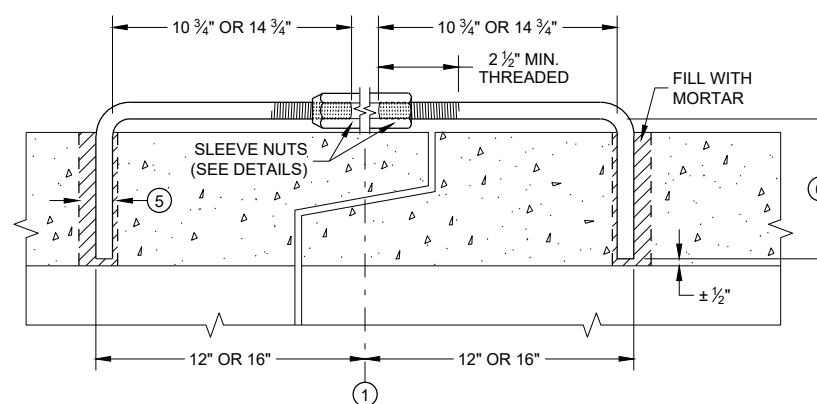
DIMENSIONS SHOWN ARE IN INCHES



TAPERED

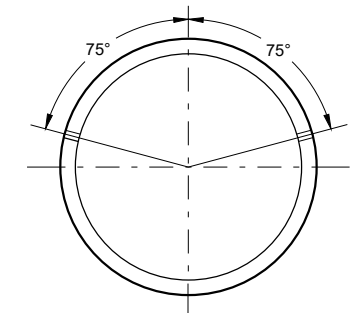
PLAIN

RIGHT AND LEFT THREADS
SLEEVE NUTS



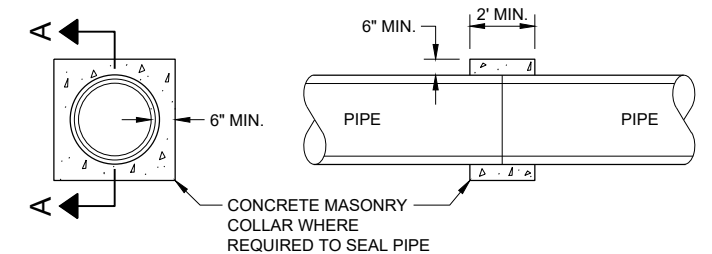
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION

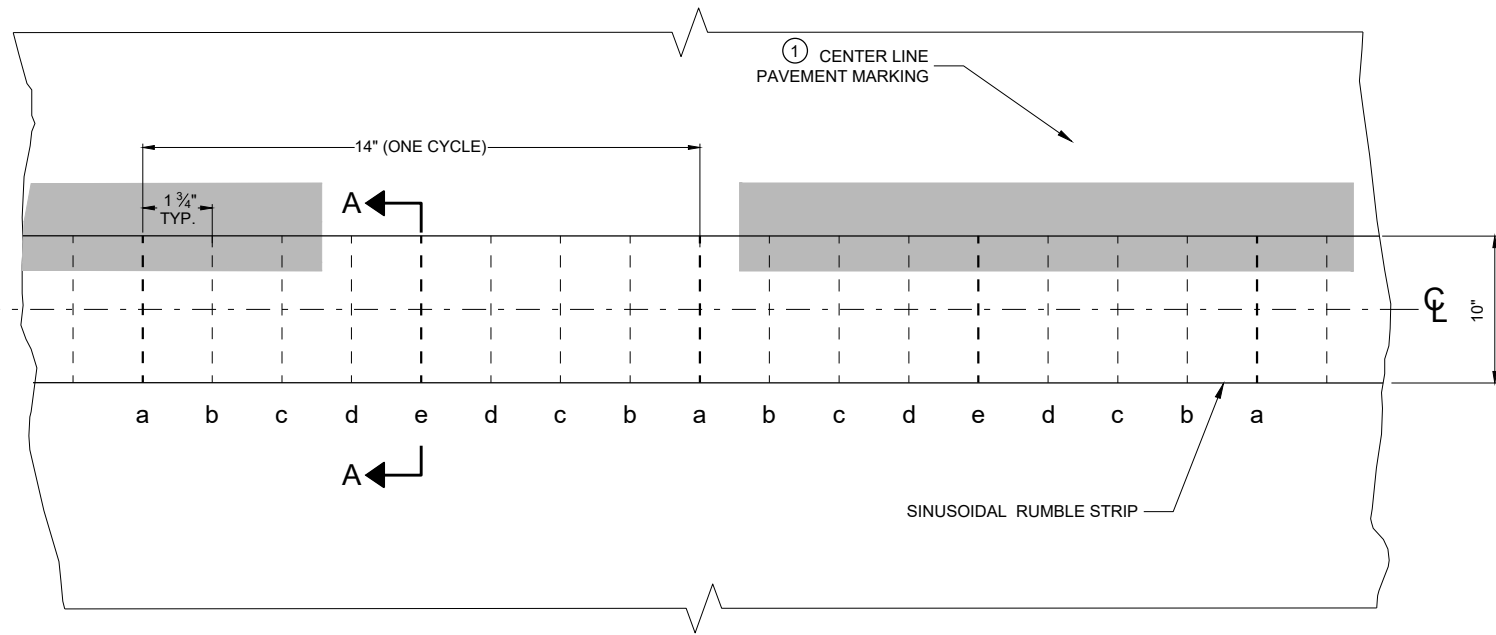


SECTION A - A
CONCRETE COLLAR DETAIL

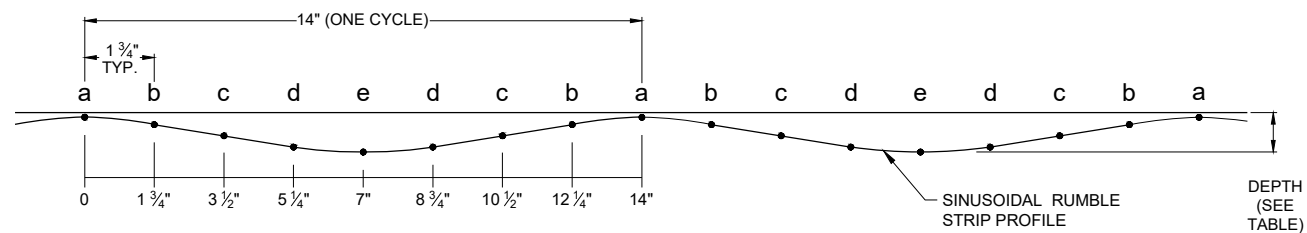
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

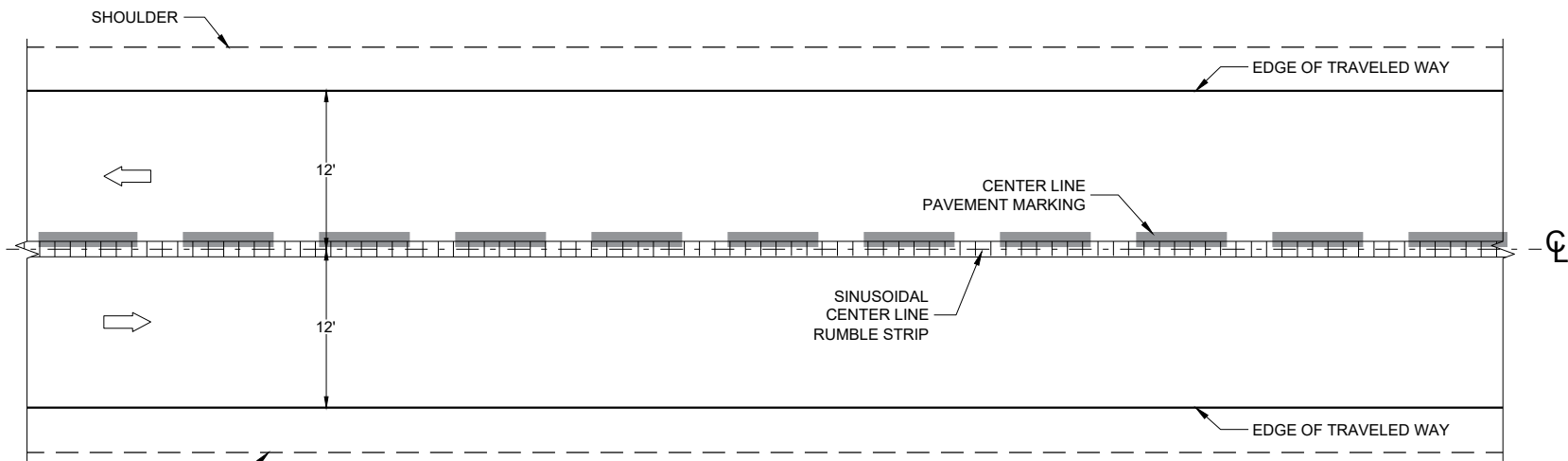


PLAN DETAIL VIEW

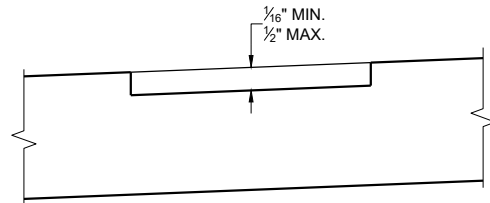


PROFILE VIEW
SINUSOIDAL CENTERLINE RUMBLE STRIPS

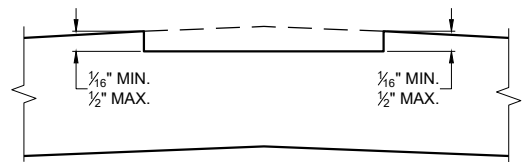
LOCATION	DEPTH (INCHES)
a	1/16"
b	5/32"
c	9/32"
d	7/16"
e	1/2"



CENTERLINE RUMBLE STRIPS - ASPHALT,
SINUSOIDAL



SECTION A - A
SUPERELEVATED ROADWAY



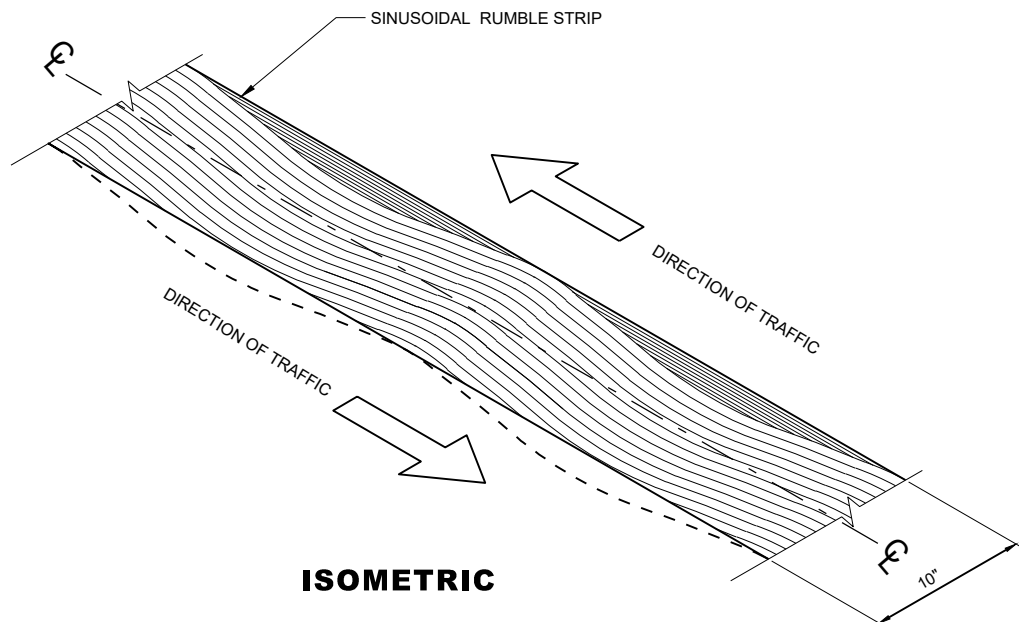
SECTION A - A
CROWNED ROADWAY

GENERAL NOTES

SDD 13A11, SHEET "d" SHOWS THE LOCATIONS OF RUMBLE STRIPS AT INTERSECTIONS, INTERSECTIONS WITH LEFT TURN LANES, BRIDGES, COMMERCIAL AND RESIDENTIAL DRIVEWAYS AND RAILROAD CROSSINGS.

SHOULDER RUMBLE STRIPS MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.

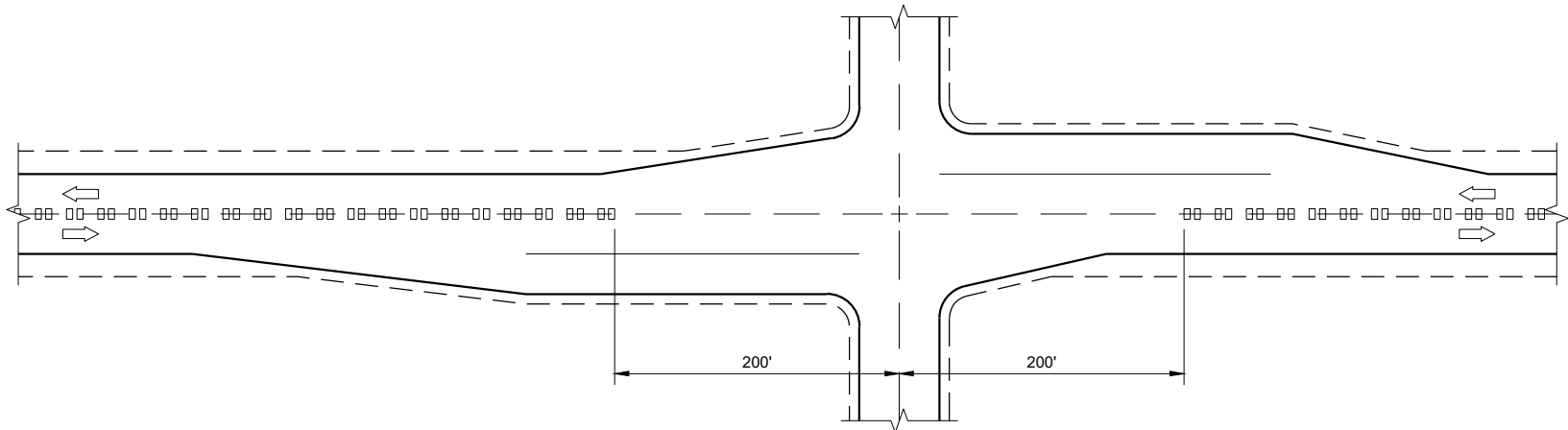
① CENTERLINE PAVEMENT MARKINGS SHALL BE PLACED PARTIALLY IN RUMBLE STRIP GROOVE AND PARTIALLY OUT OF THE RUMBLE STRIP GROOVE.



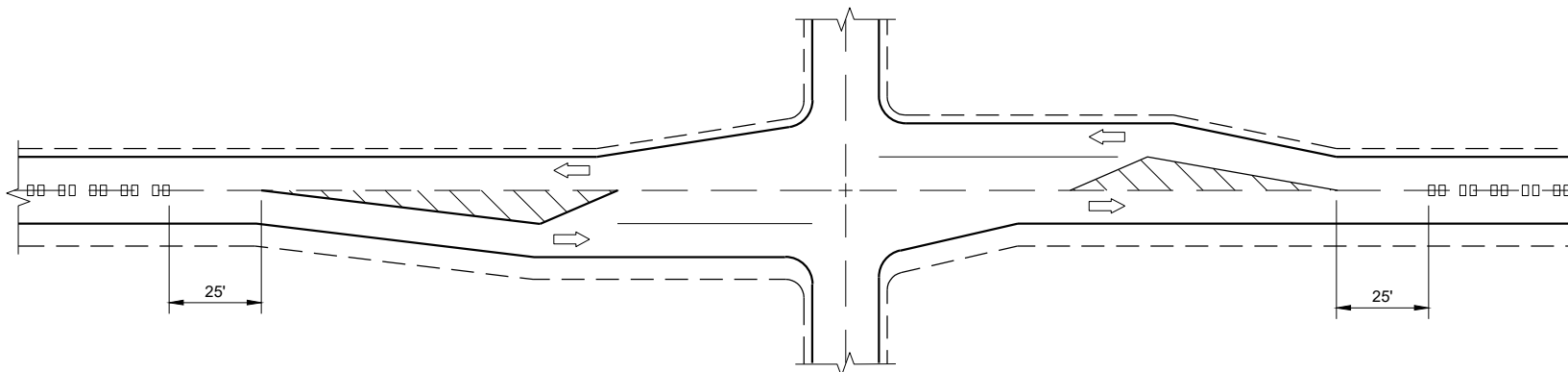
ISOMETRIC

CENTERLINE
RUMBLE STRIPS - ASPHALT,
SINUSOIDAL

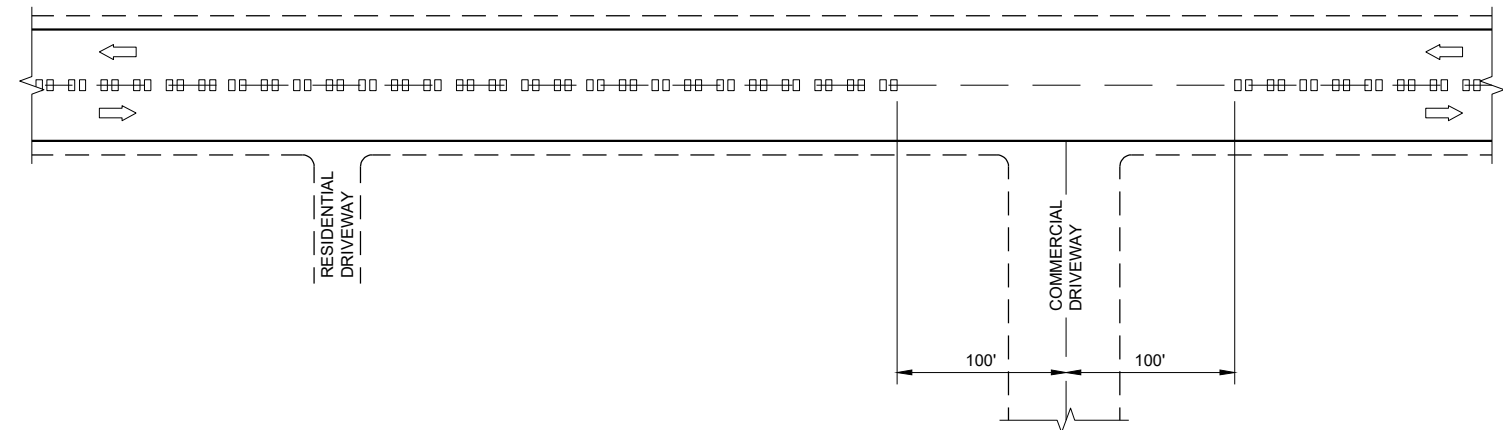
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTERLINE GROOVES AT INTERSECTIONS



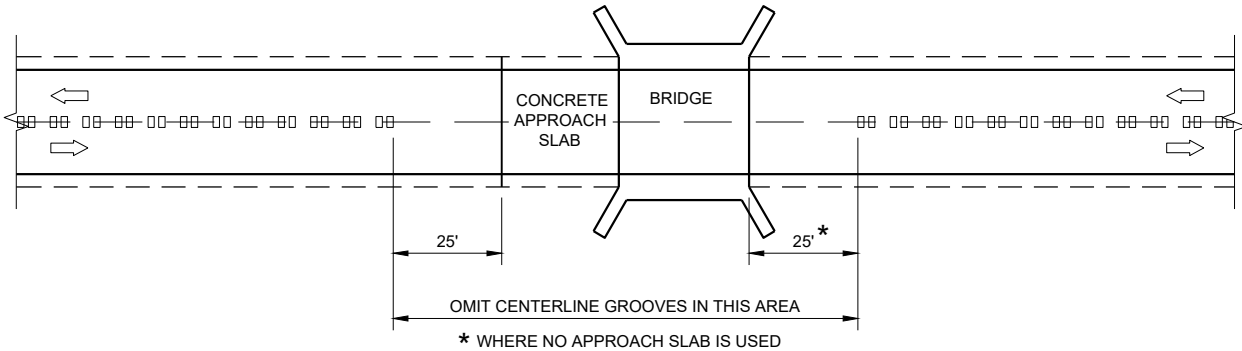
CENTERLINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)



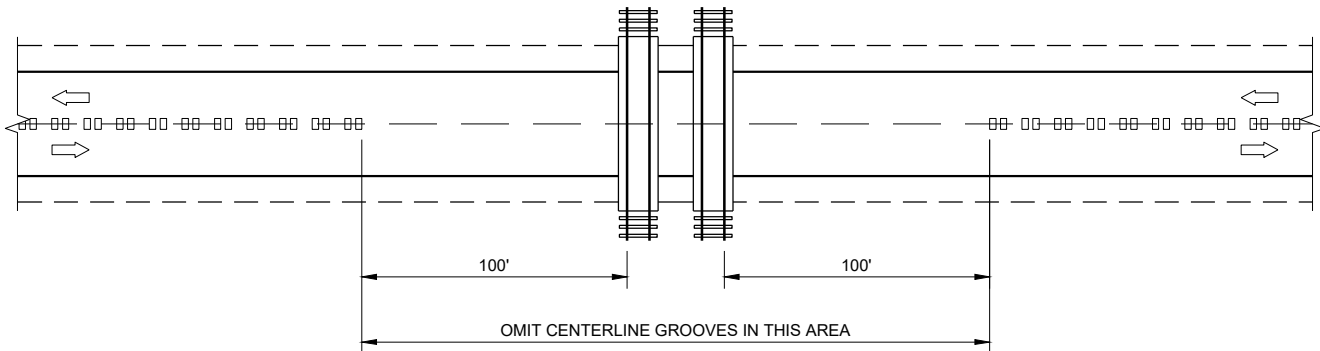
CENTERLINE GROOVES AT DRIVEWAYS^①

GENERAL NOTES

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



CENTERLINE GROOVES AT BRIDGES

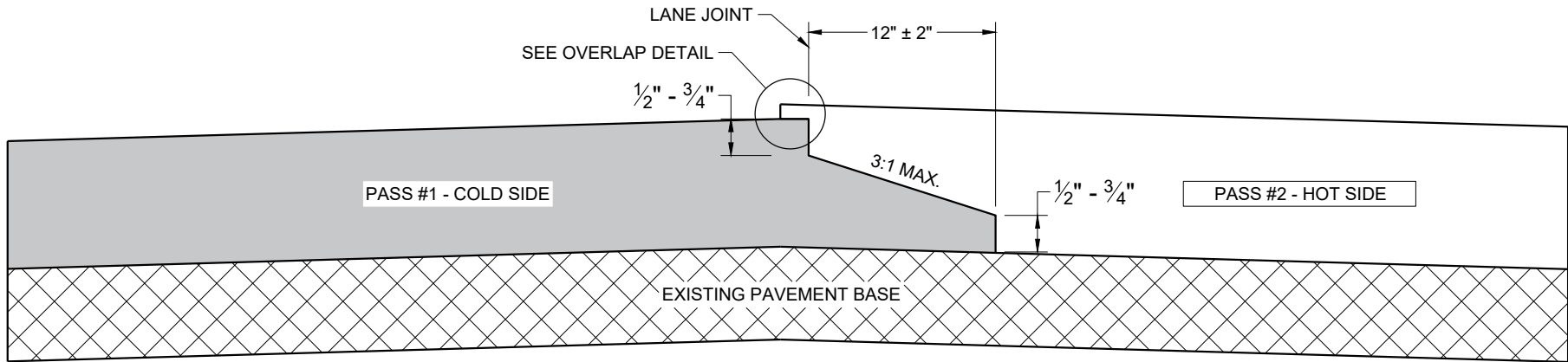


CENTERLINE GROOVES AT RAILROADS

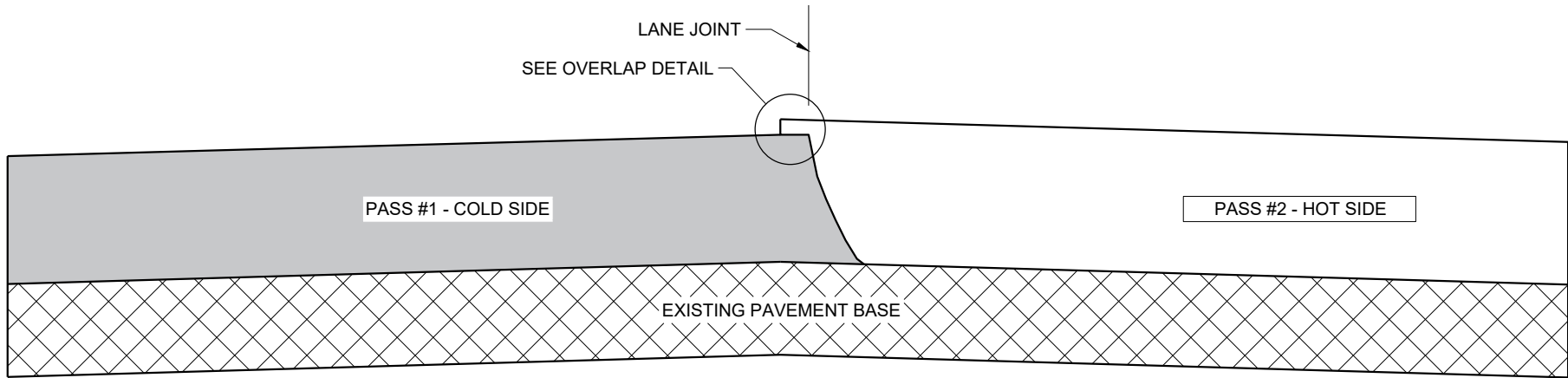
CENTER LINE
RUMBLE STRIPS -
INTERSECTIONS, DRIVEWAYS,
BRIDGES, RAIL ROADS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

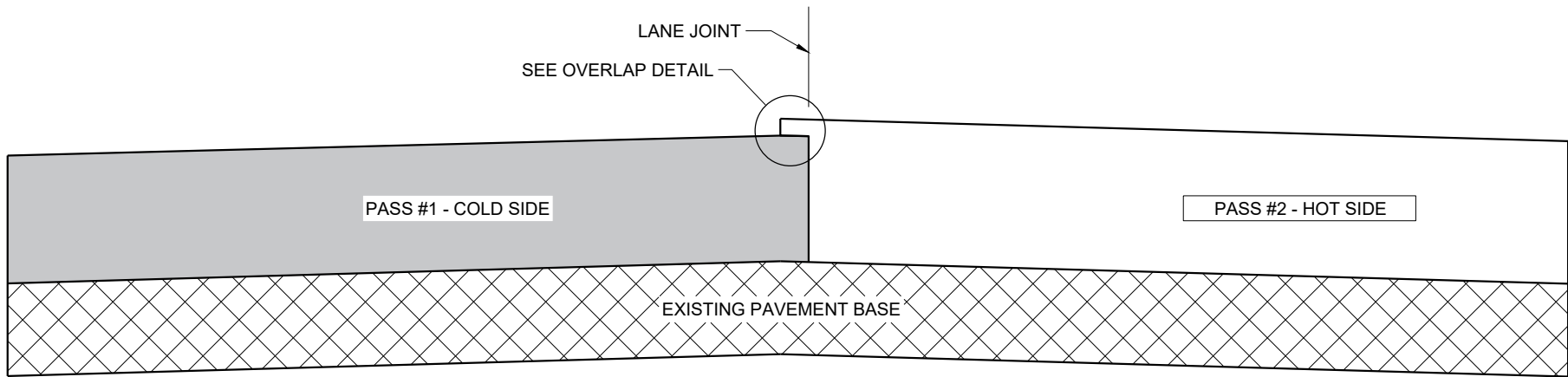
APPROVED
May 2023
DATE
/S/ John Jenkins
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

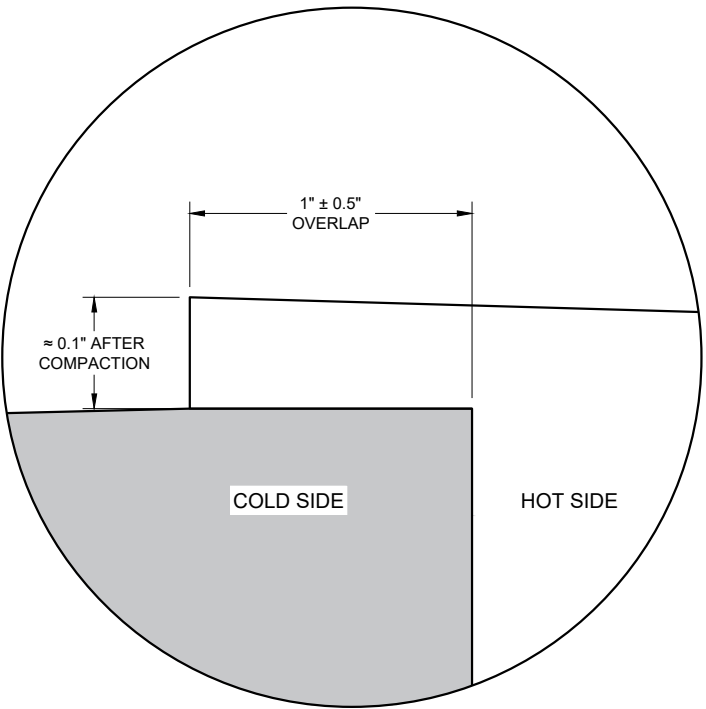
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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

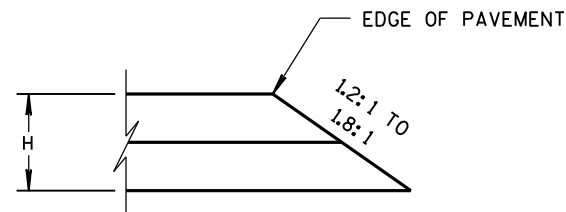


OVERLAP DETAIL (TYPICAL)

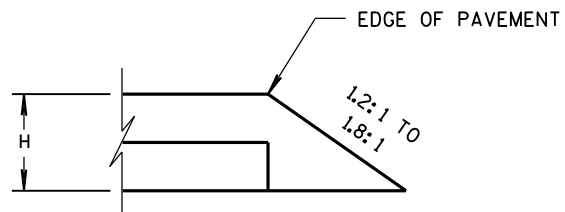
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

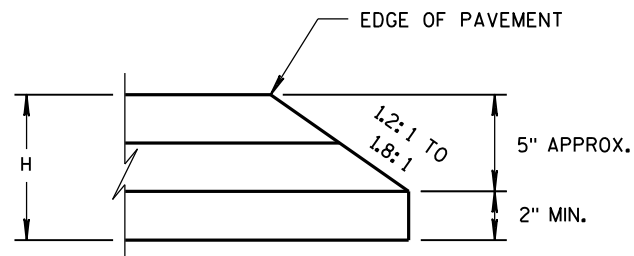
APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGINEER
FHWA



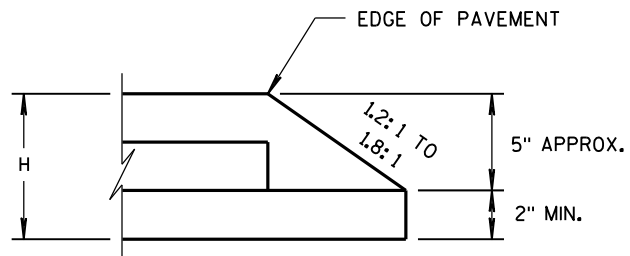
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

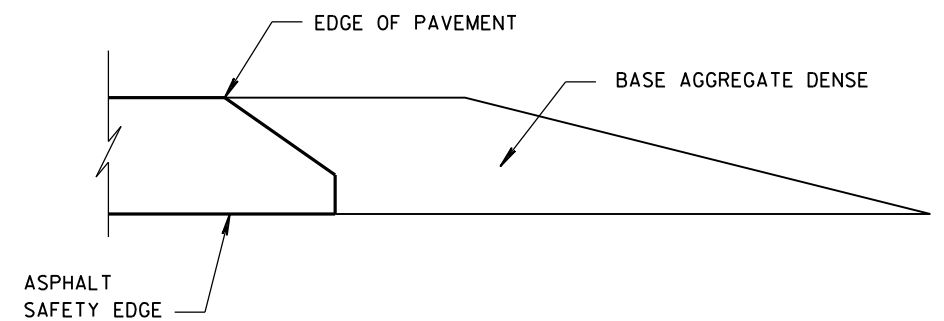


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

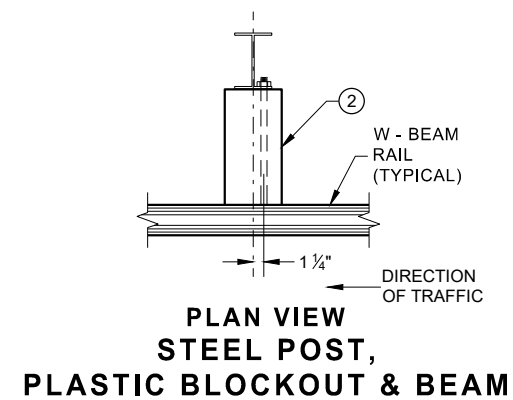
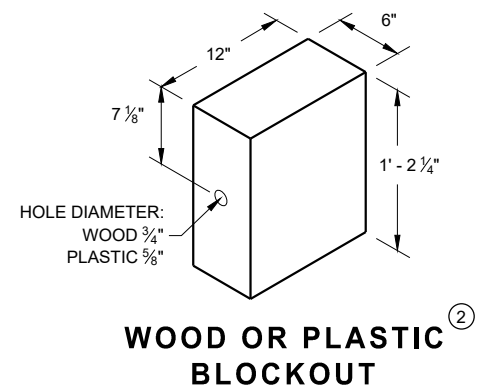
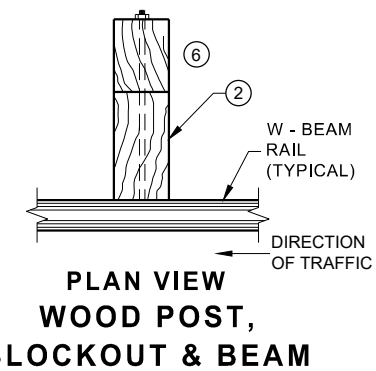
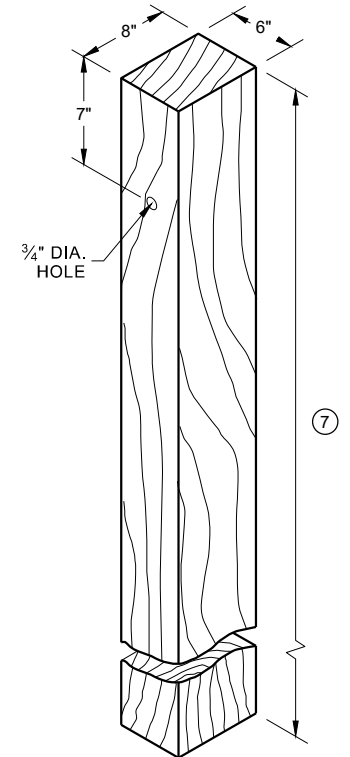
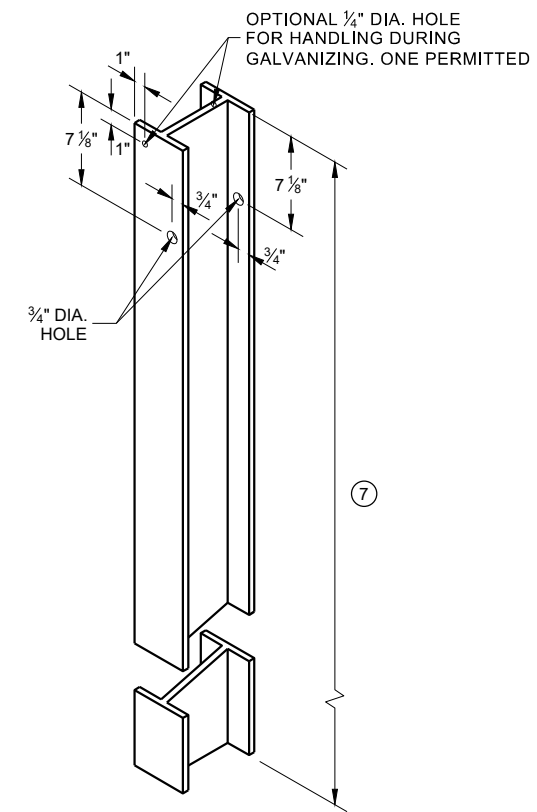
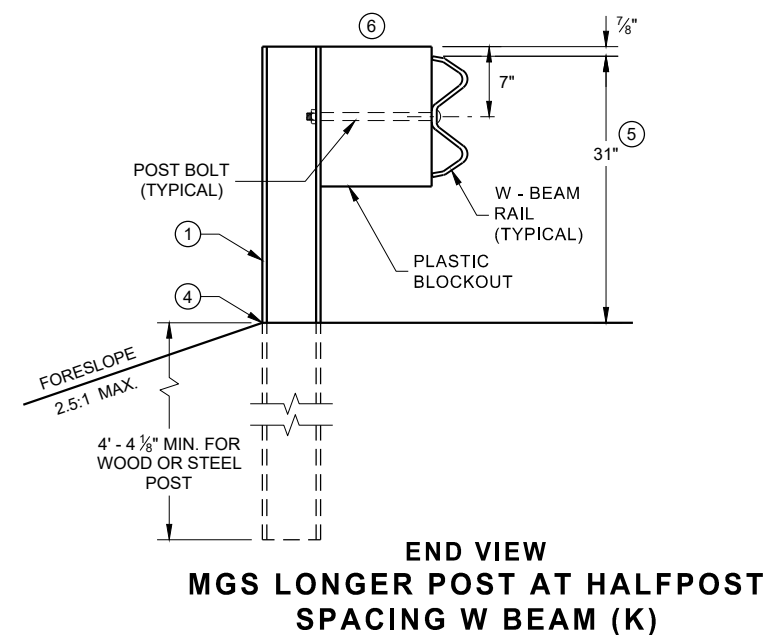
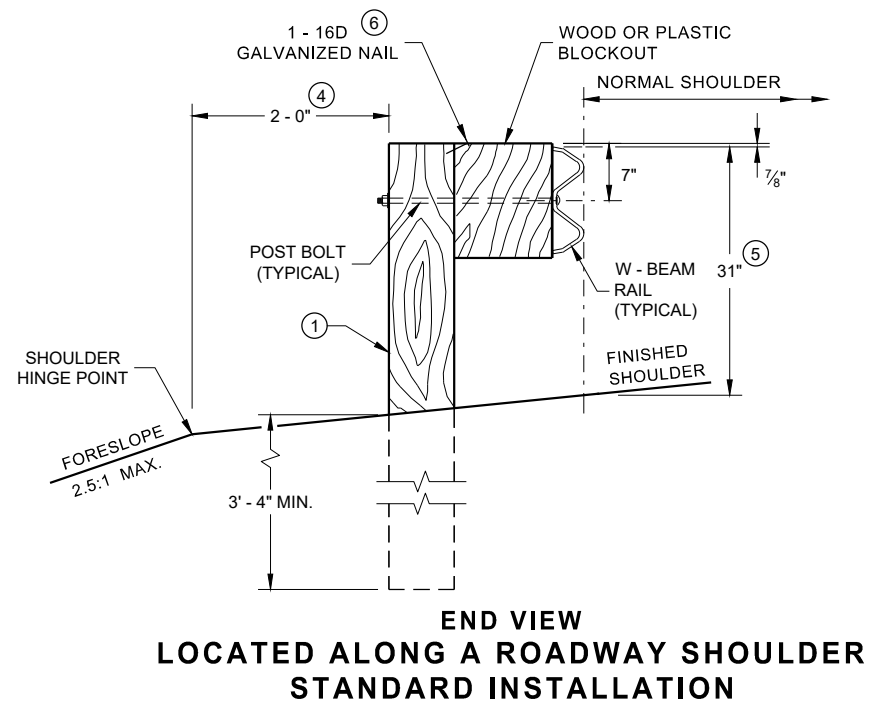
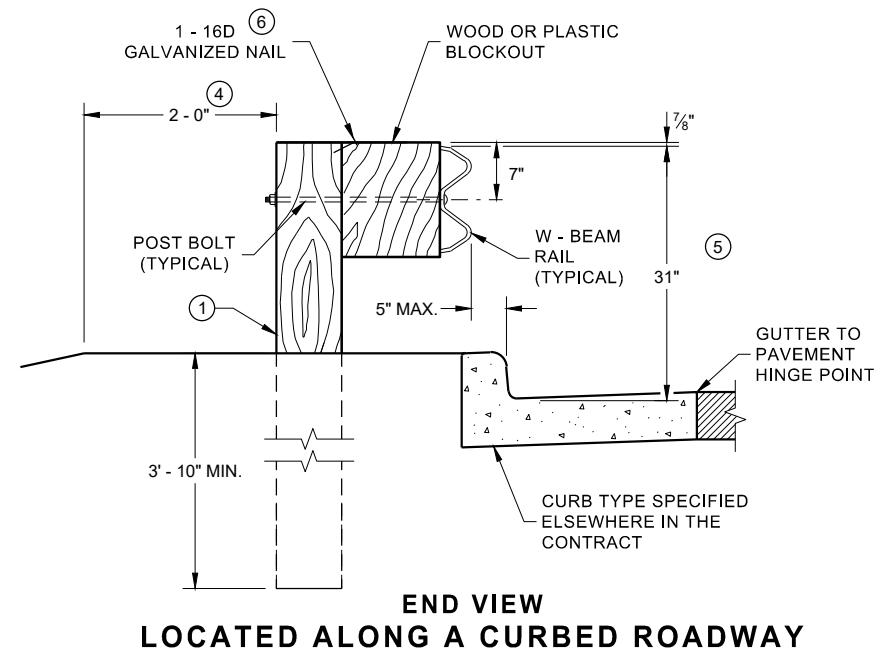
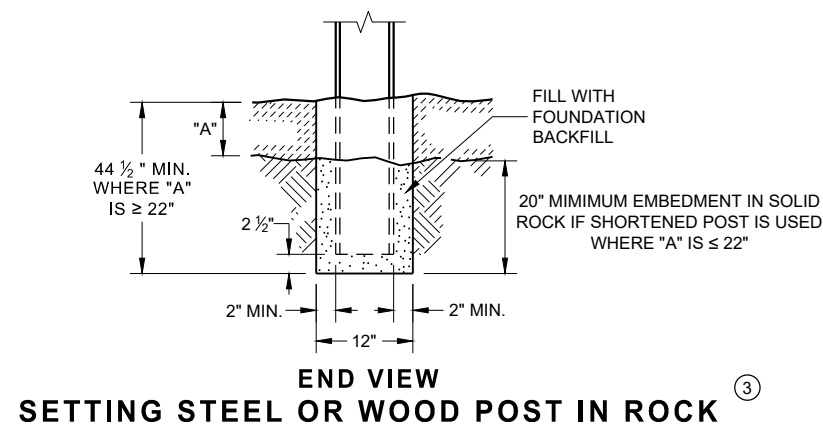
SAFETY EDGE_{SM}

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE
FHWA

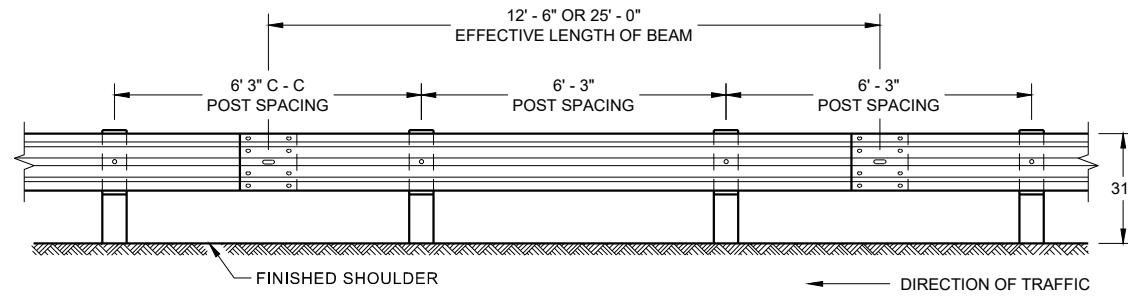
/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

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

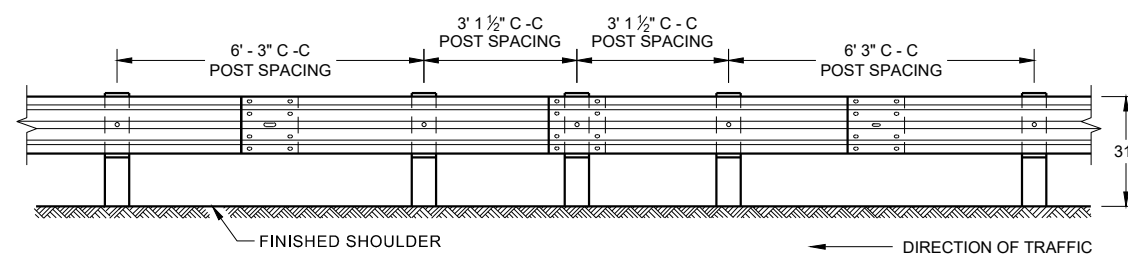


MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

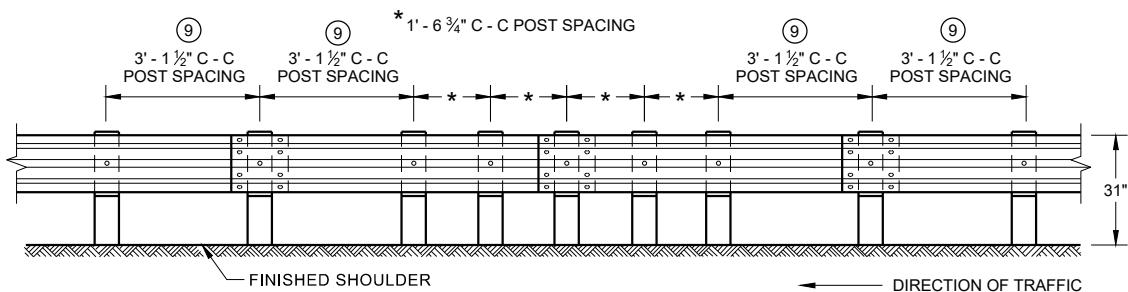
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



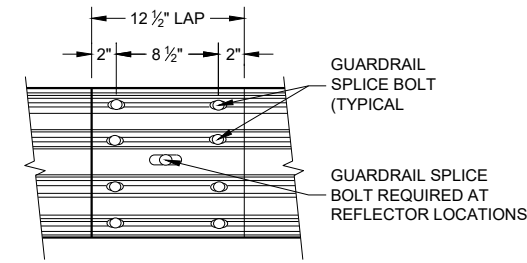
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



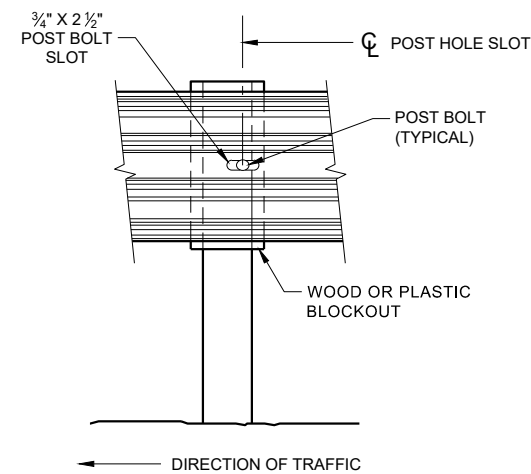
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



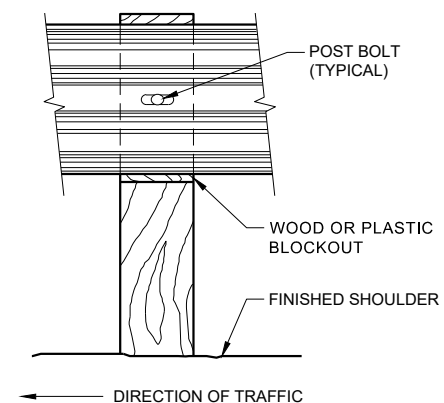
**FRONT VIEW
QUARTER POST SPACING (QS)**



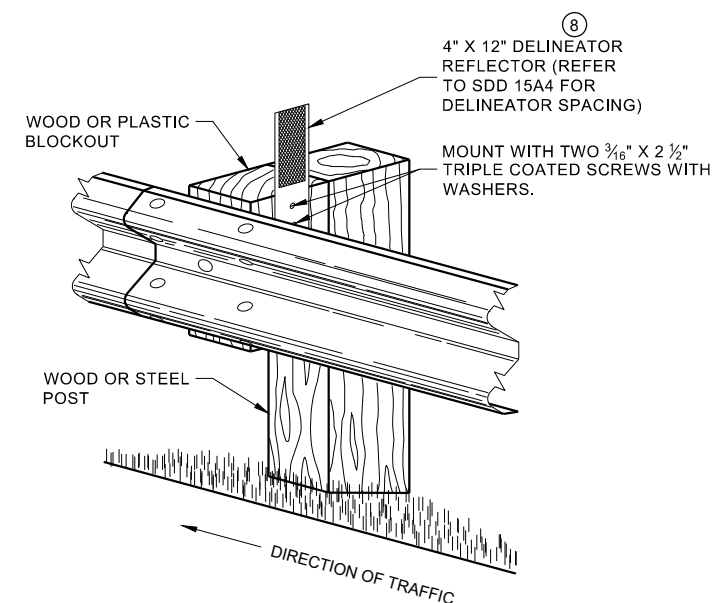
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



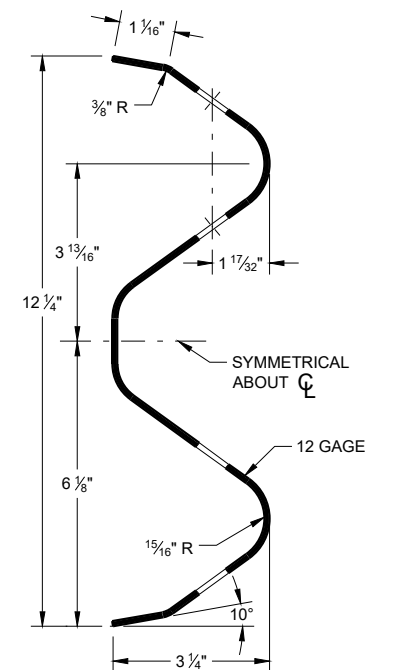
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

GENERAL NOTES

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

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

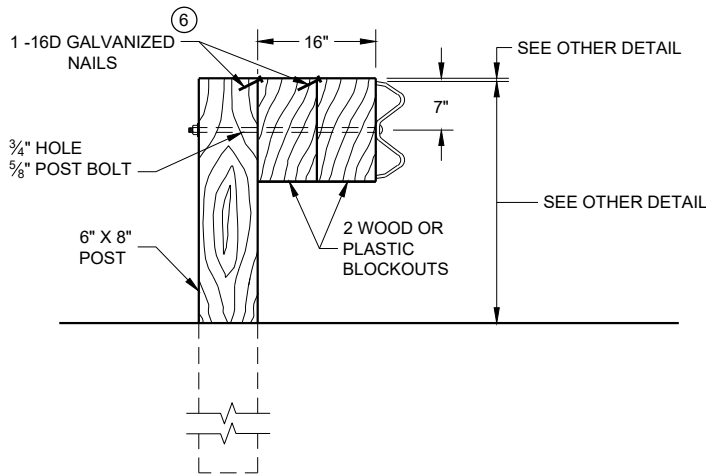
GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

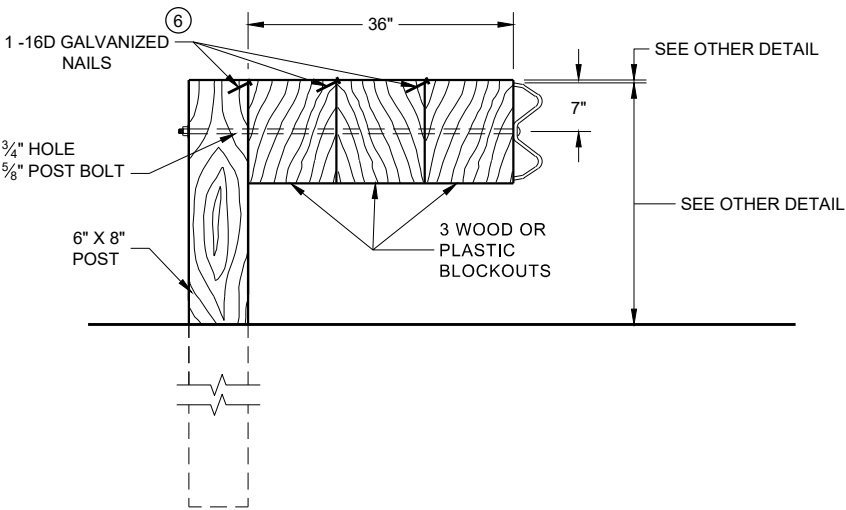
**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

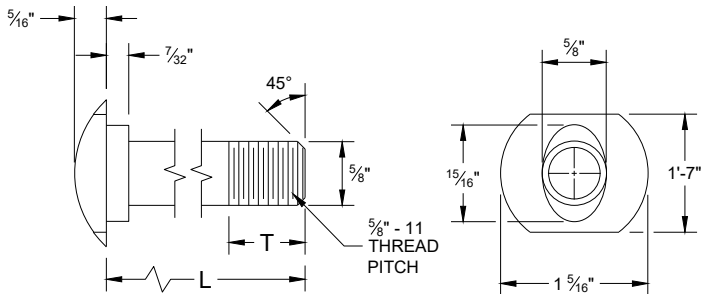
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



DETAIL FOR 36" BLOCKOUT DEPTH

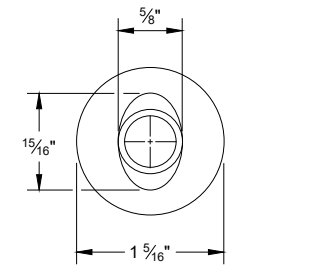
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT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

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

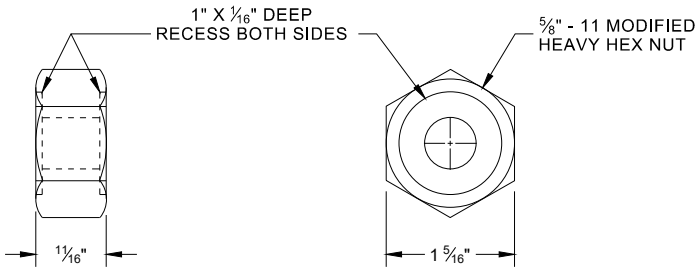


POST BOLT TABLE

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

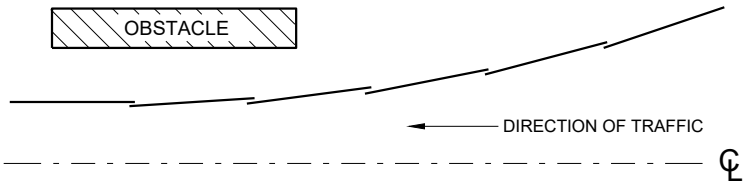


ALTERNATE BOLT HEAD

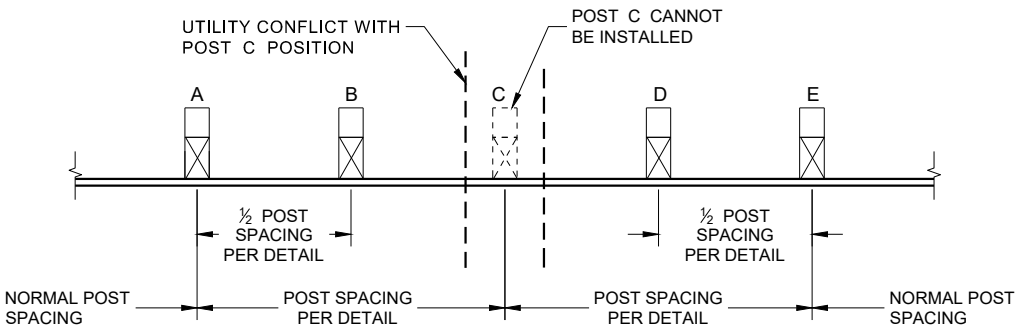


POST BOLT, SPLICE BOLT AND RECESS NUT

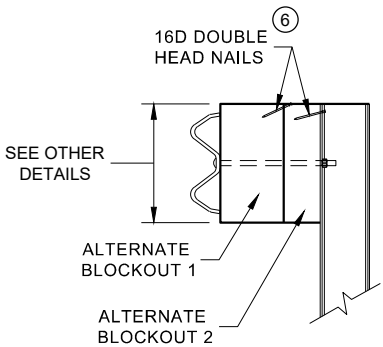
- 6 WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



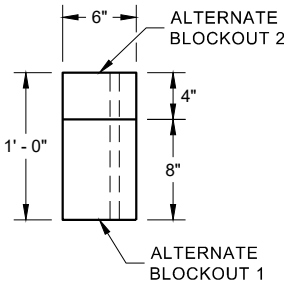
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW

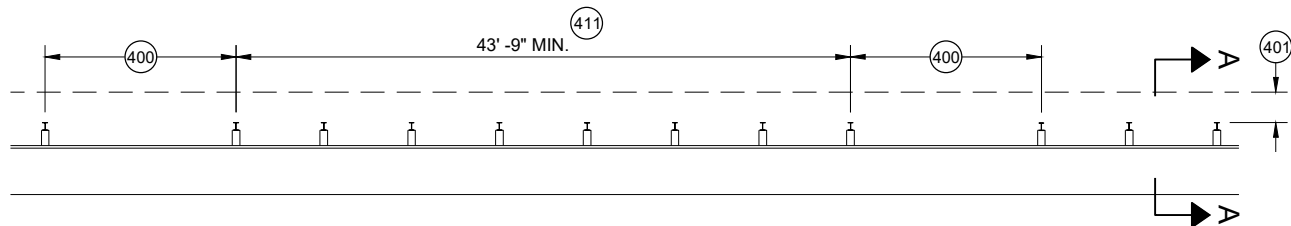


PLAN VIEW

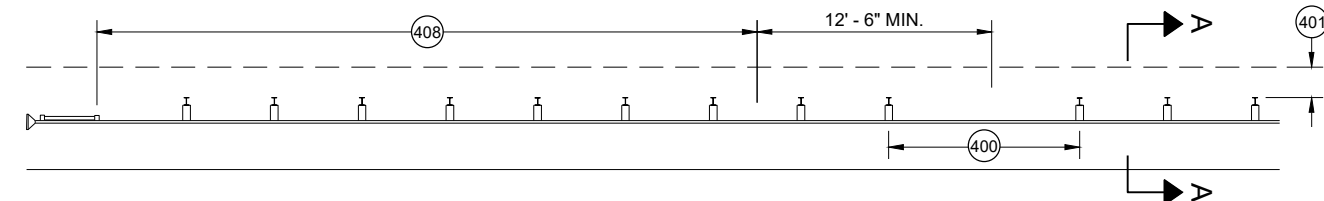
ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

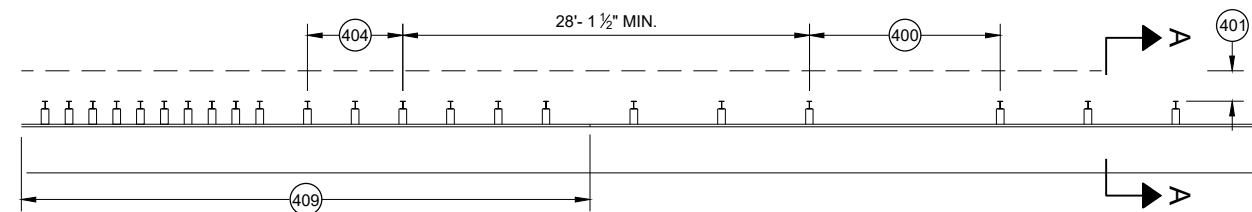
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



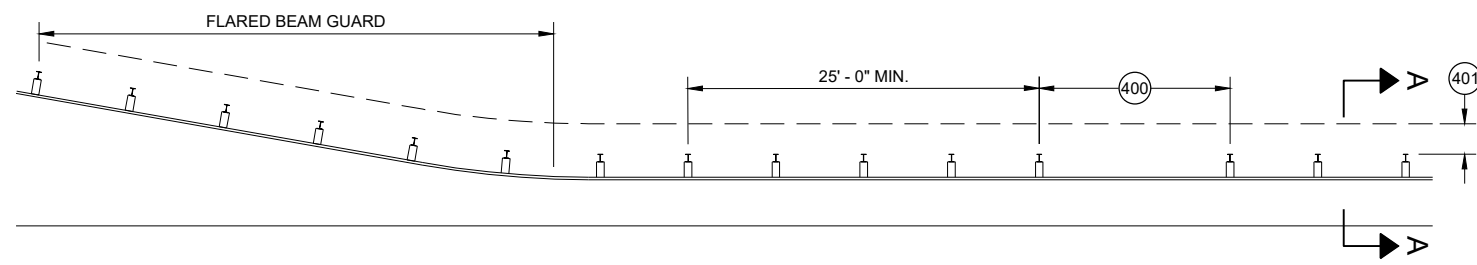
MISSING POST IN MGS GUARDRAIL



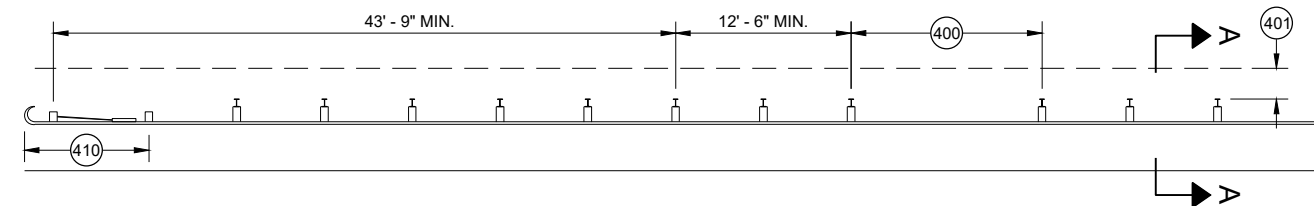
MISSING POST IN MGS GUARDRAIL NEAR EAT



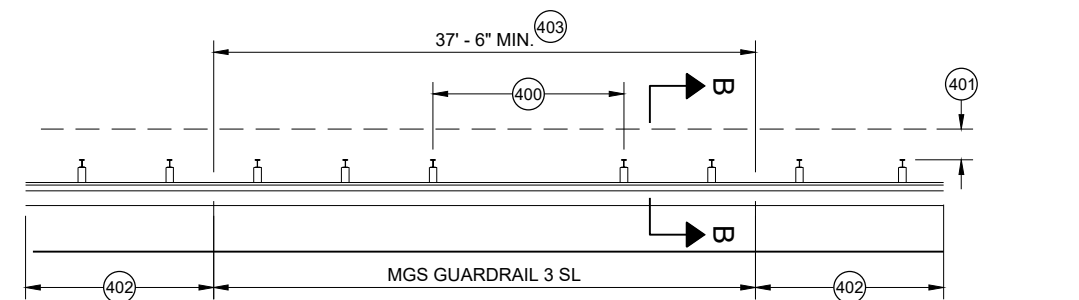
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

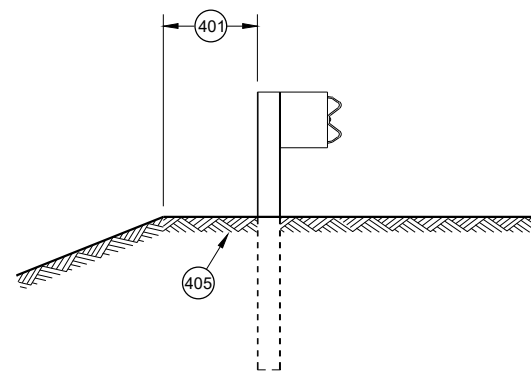


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

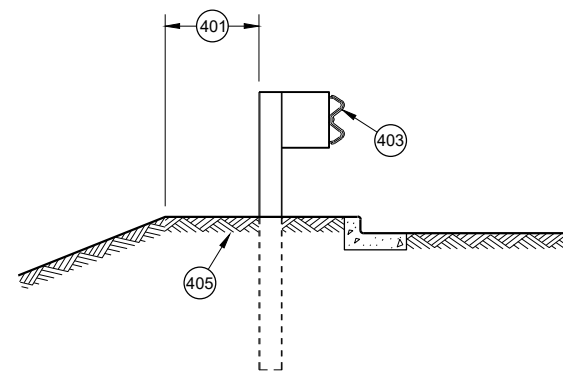


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

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



SECTION A - A



SECTION B - B

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

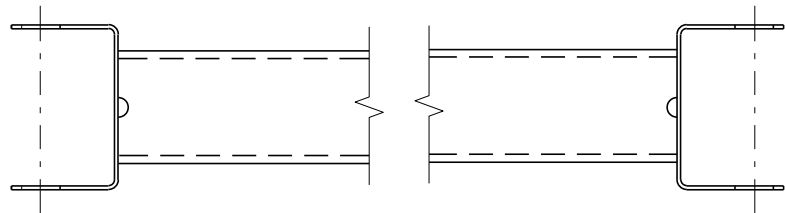
- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS.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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

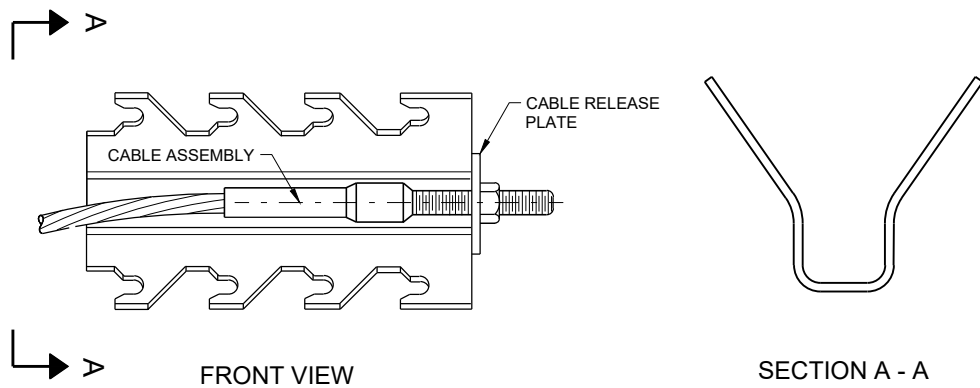
THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



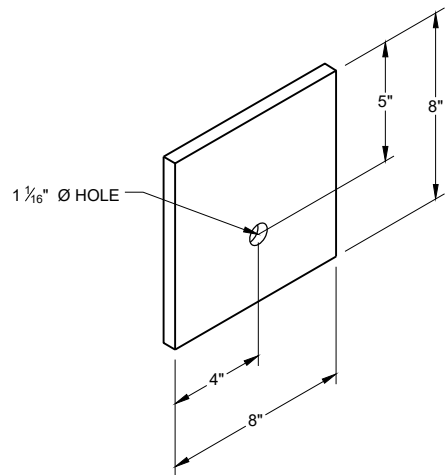
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERIC GROUND STRUT⁹ ^E



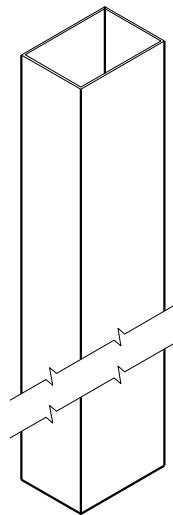
GENERIC ANCHOR CABLE BOX⁹ ^E



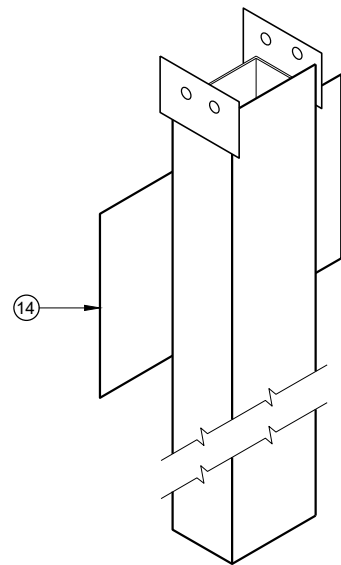
BEARING PLATE⁶ ^E

BILL OF MATERIALS

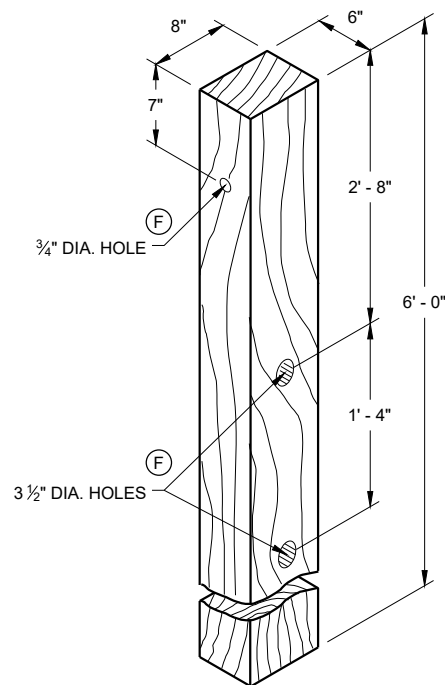
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL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



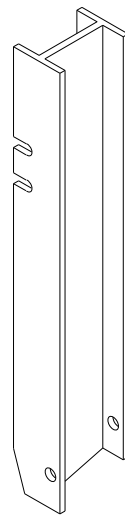
UPPER POST NO. 1 ⁽¹⁾ (E)



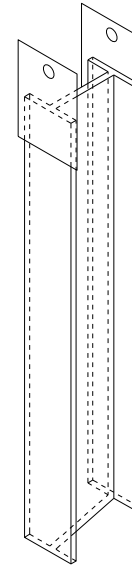
LOWER POST NO. 1 ⁽²⁾ (E)



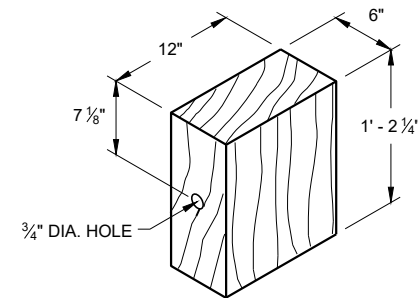
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



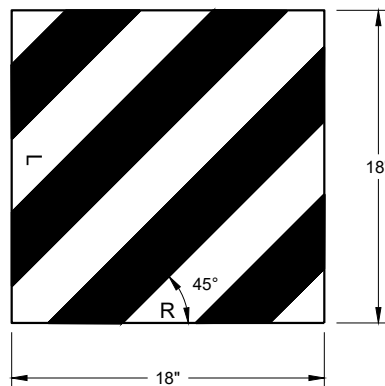
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



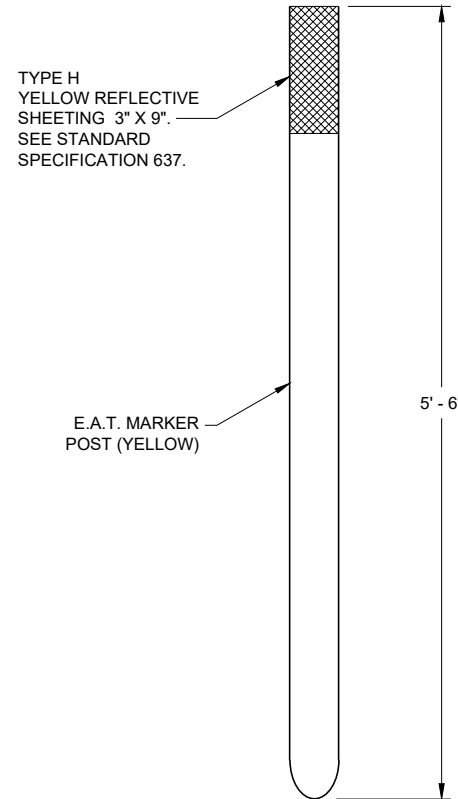
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



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



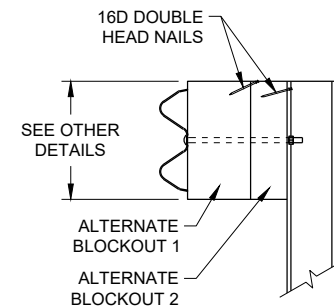
REFLECTIVE SHEETING DETAIL ^(E)



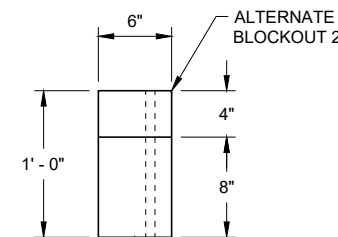
FRONT VIEW

SIDE VIEW

E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



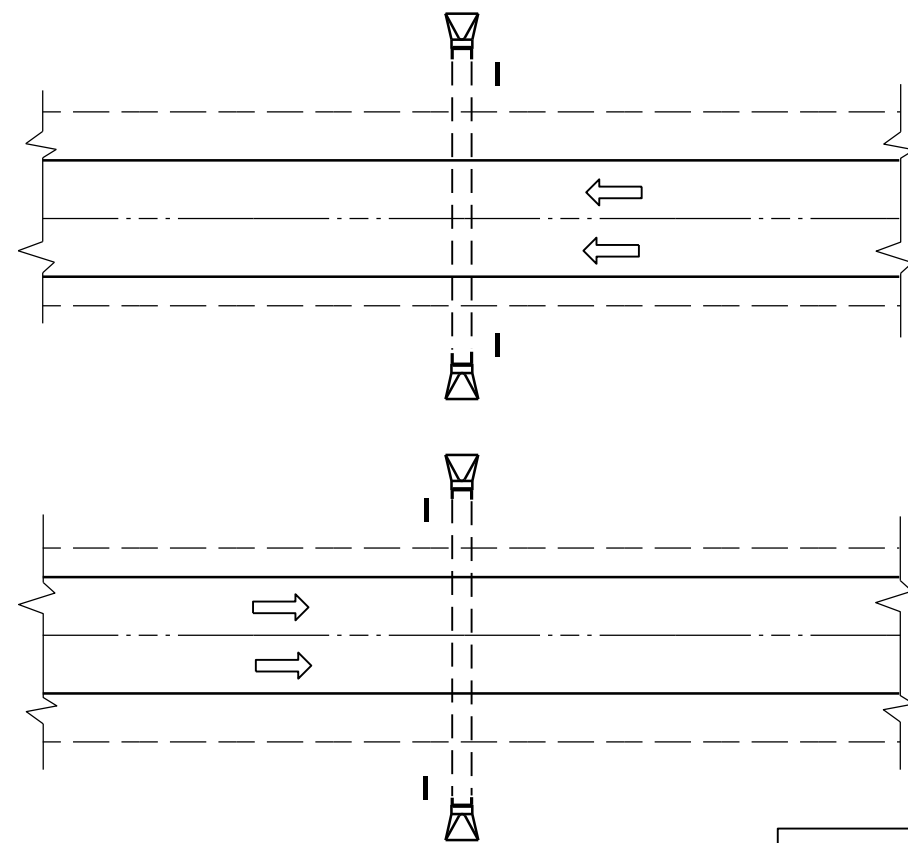
TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

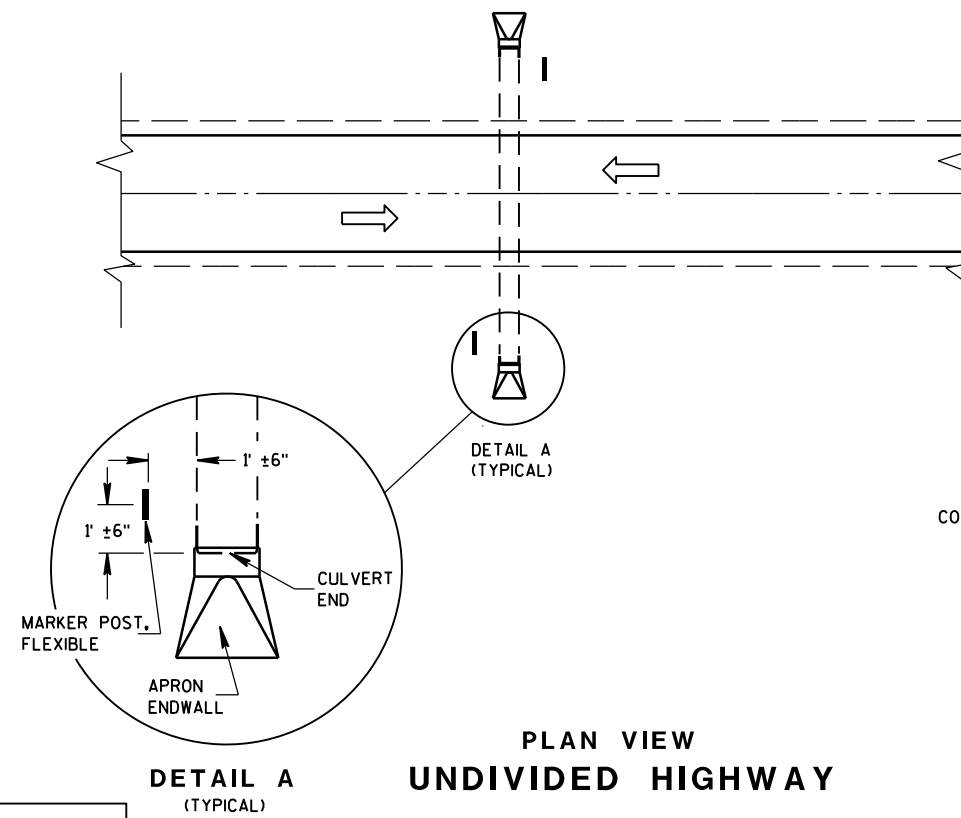
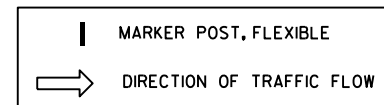
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
DIVIDED HIGHWAY

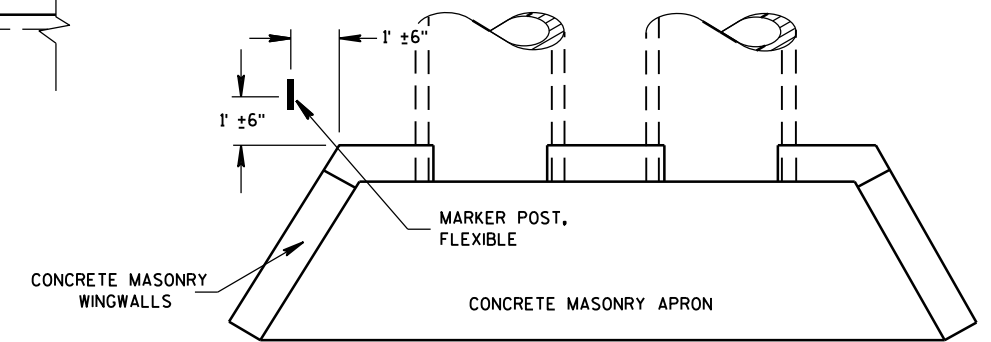


PLAN VIEW
UNDIVIDED HIGHWAY

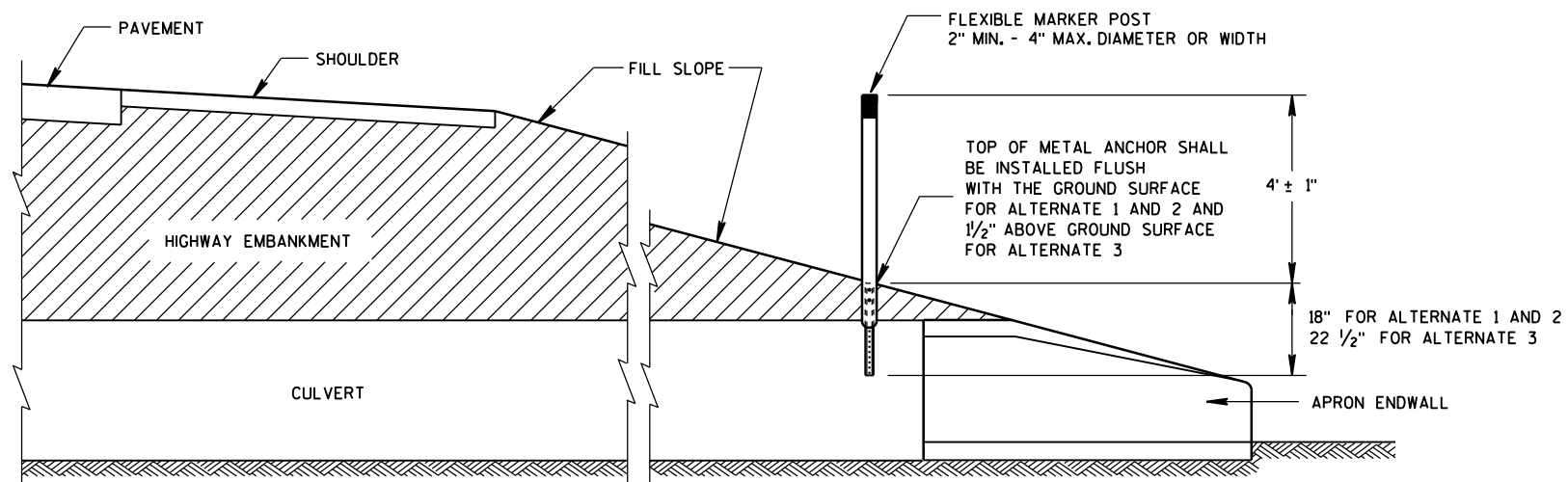
FLEXIBLE MARKER POST LOCATION

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.



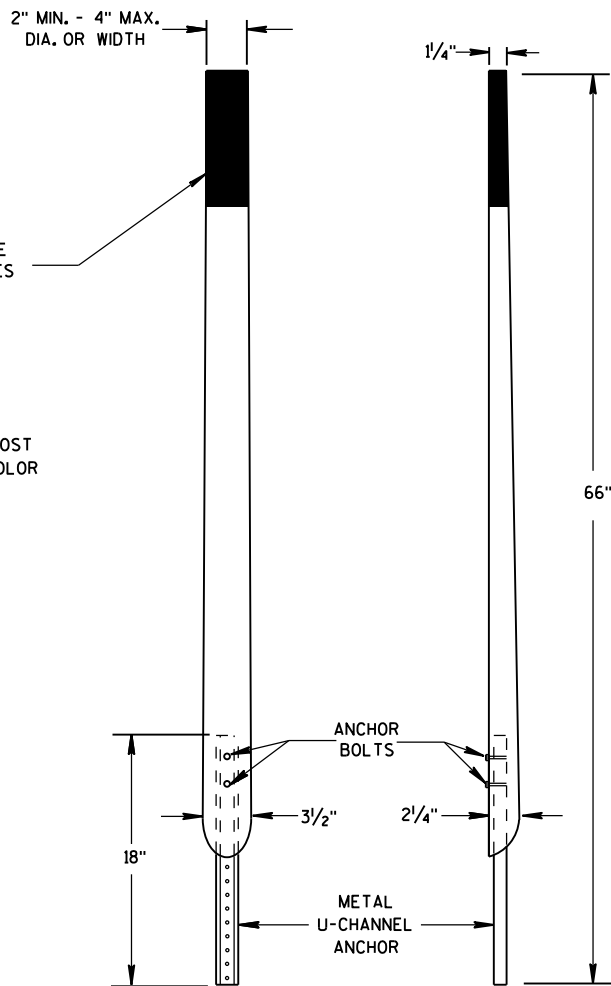
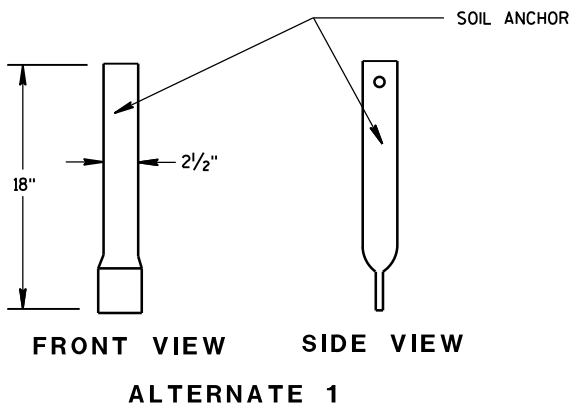
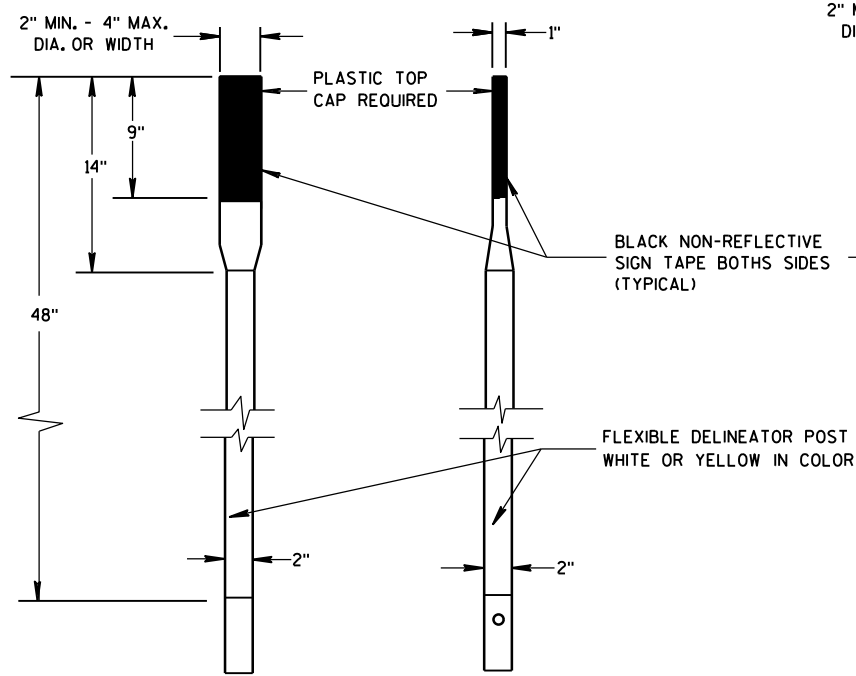
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



CROSS SECTION
FLEXIBLE MARKER POST

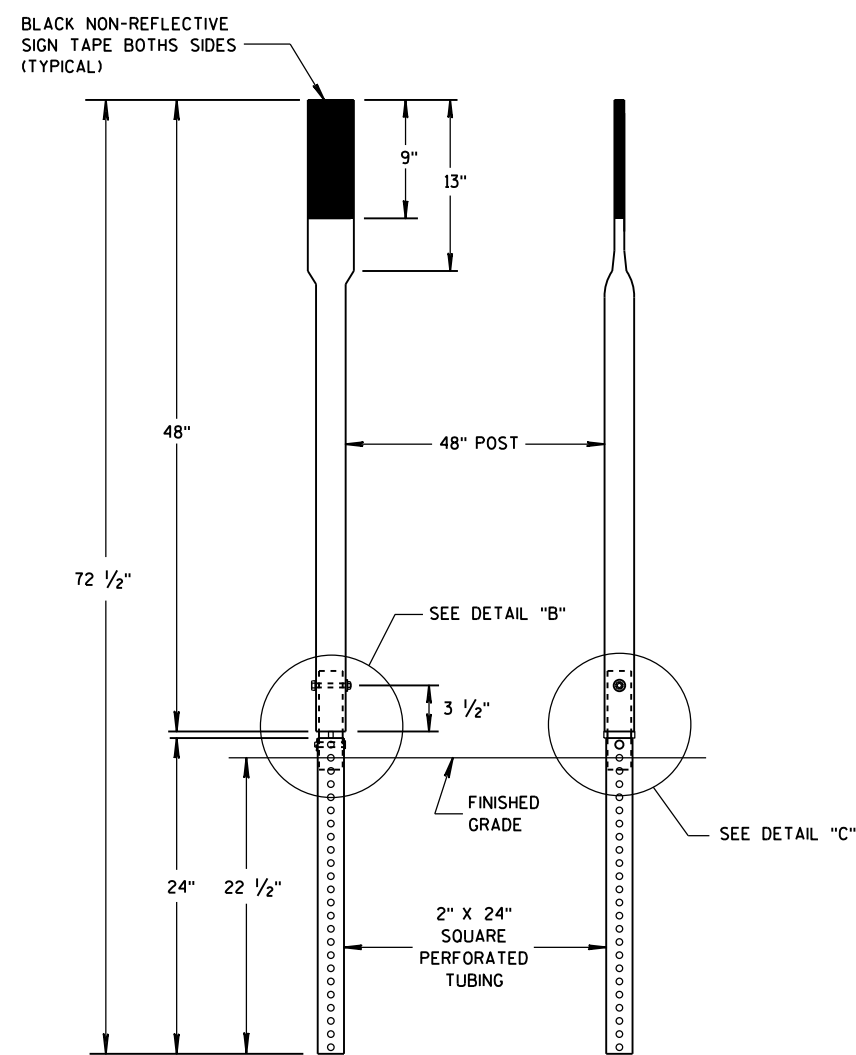
FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

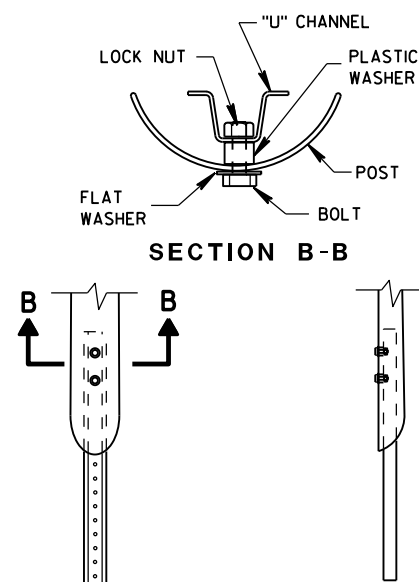
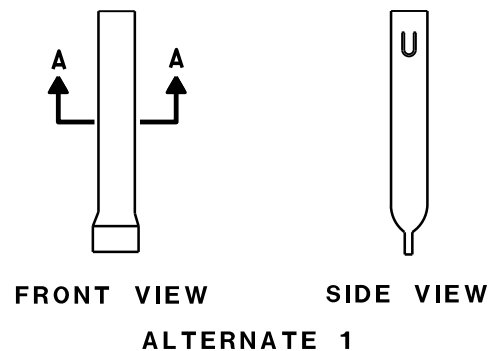
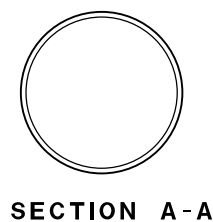
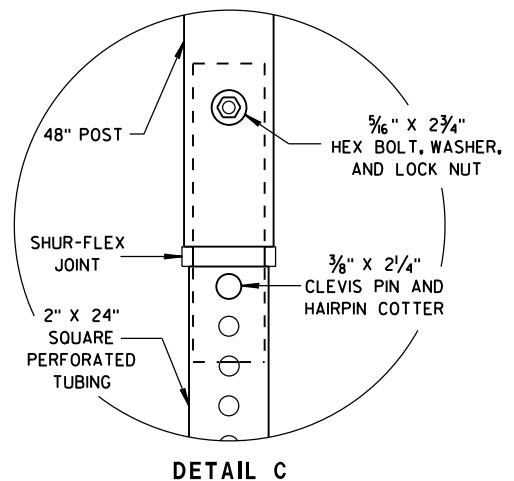
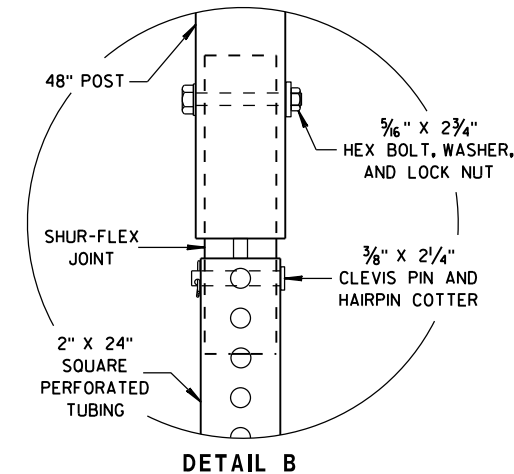
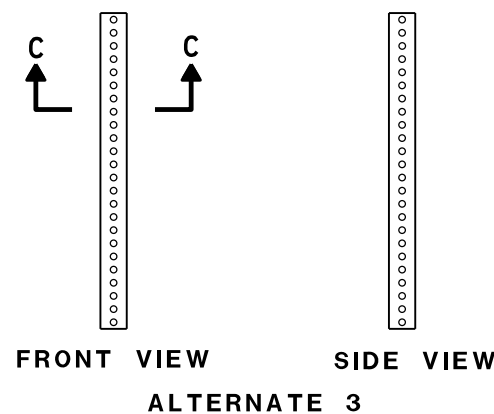
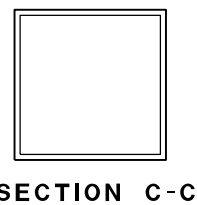


FRONT VIEW SIDE VIEW
ALTERNATE 2

FLEXIBLE MARKER POSTS



FRONT VIEW SIDE VIEW
ALTERNATE 3



FRONT VIEW SIDE VIEW
ALTERNATE 2
FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST FOR CULVERT END	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/1/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	

GENERAL NOTES

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

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

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

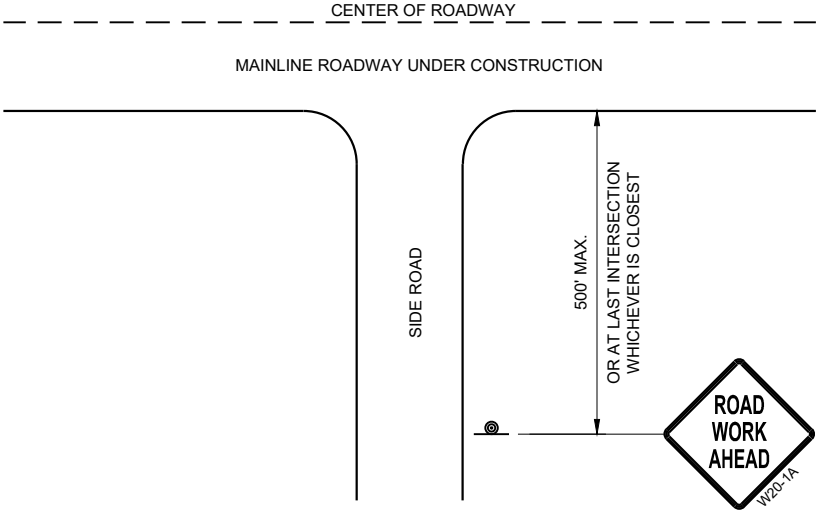
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

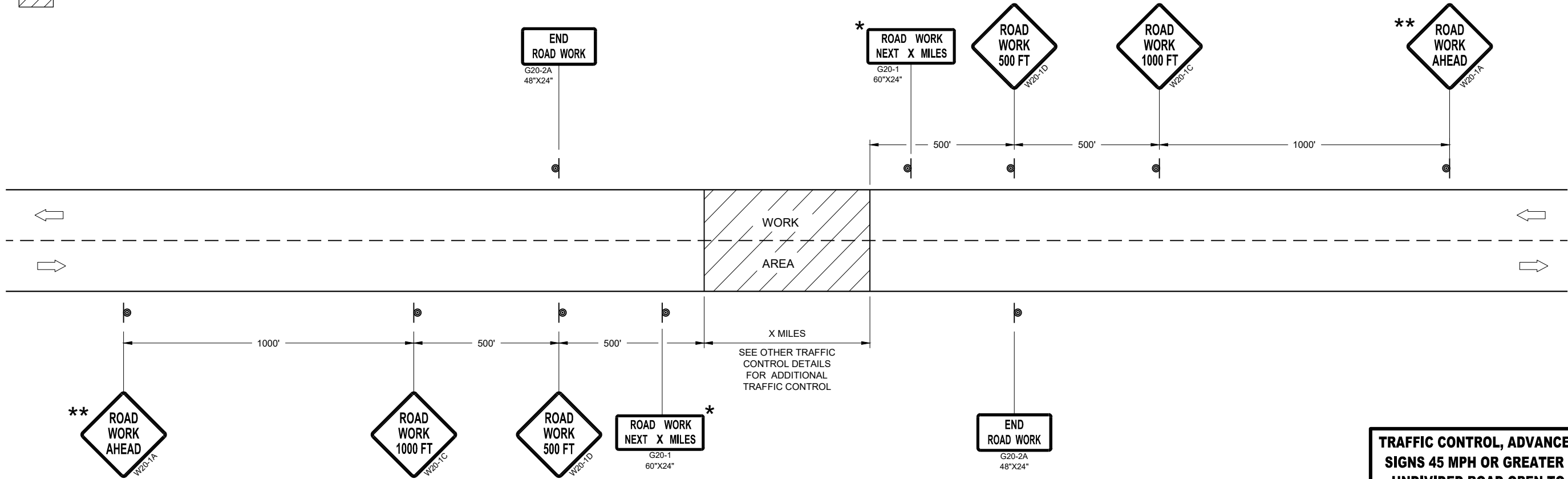
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL

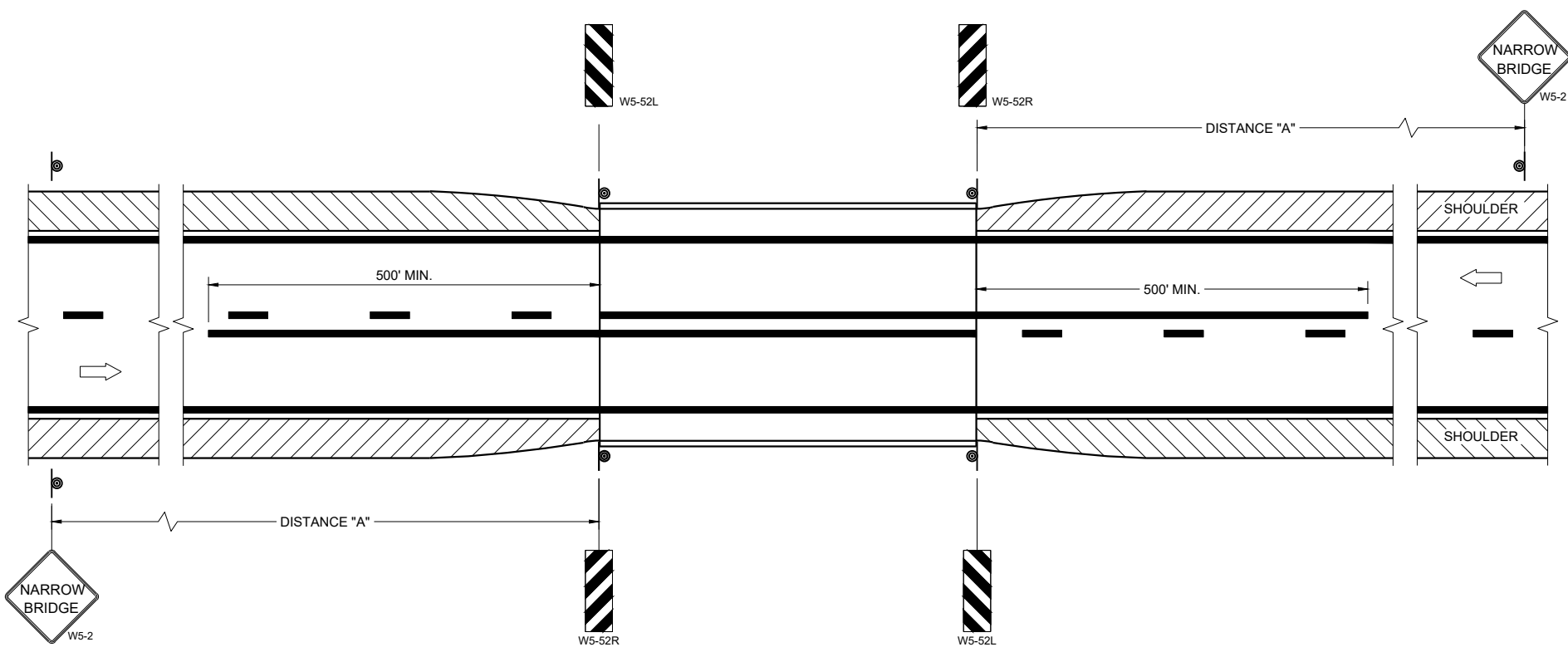


TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

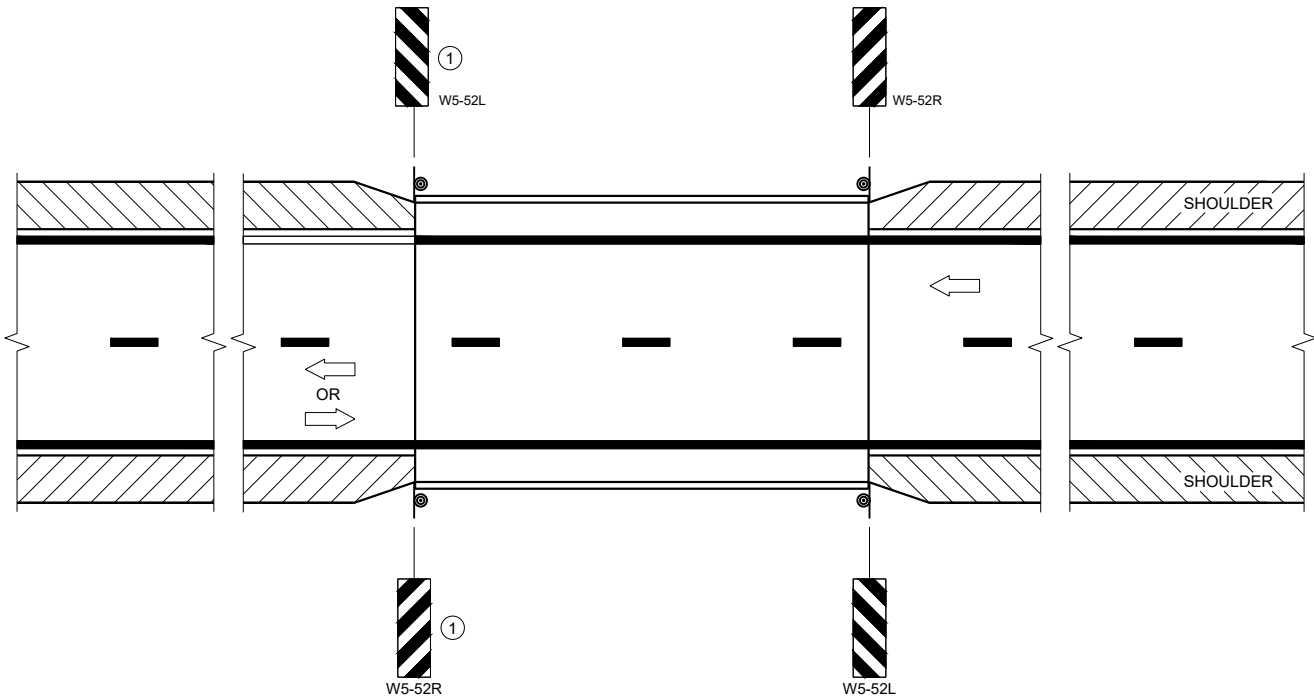
TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



SITUATION 1
WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

① OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

⊙ SIGN ON PERMANENT SUPPORT

➡ DIRECTION OF TRAFFIC

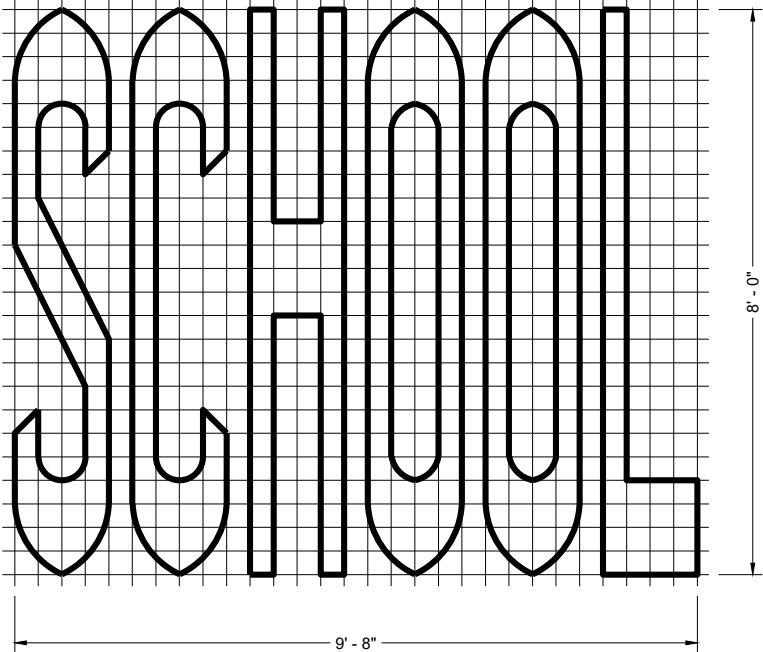
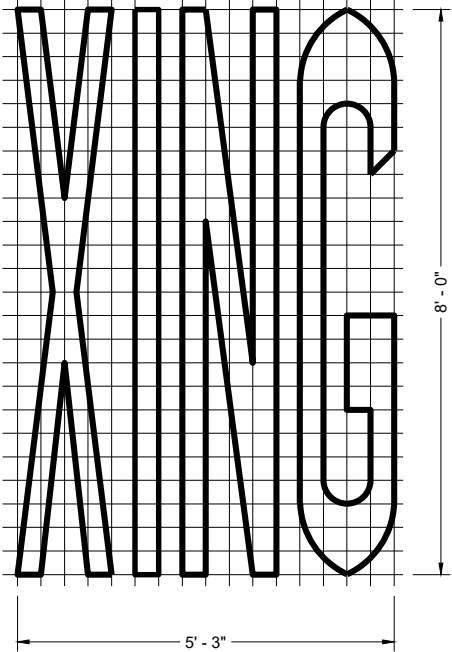
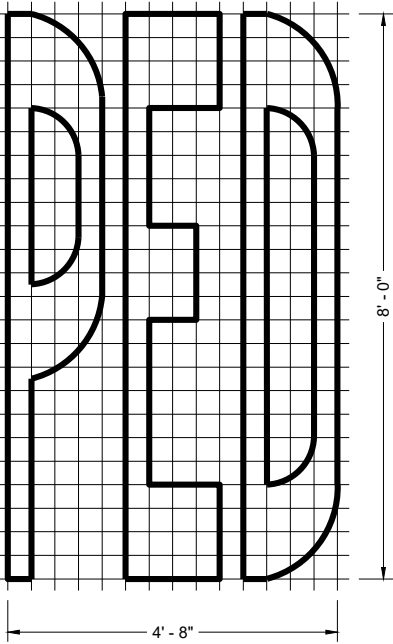
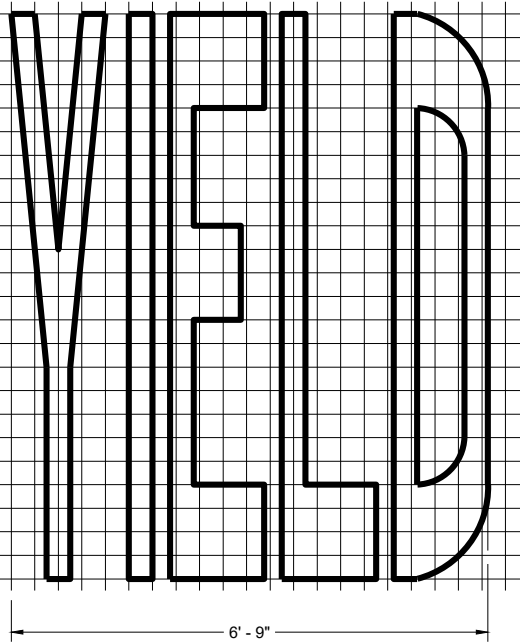
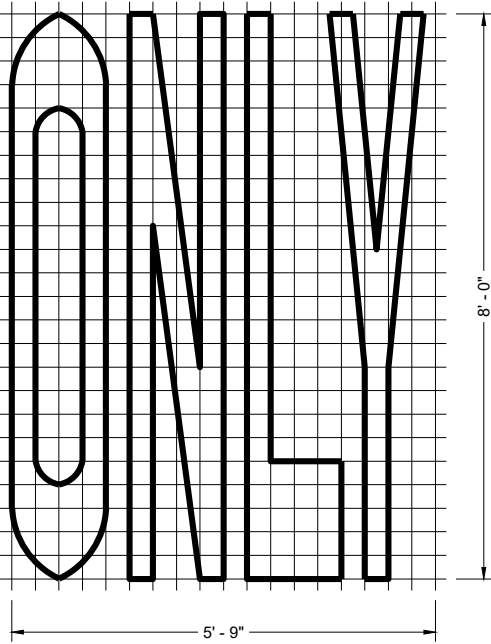
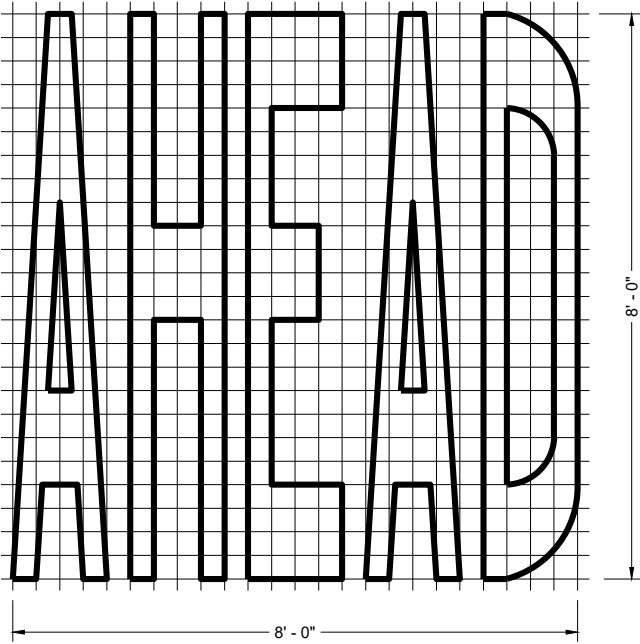
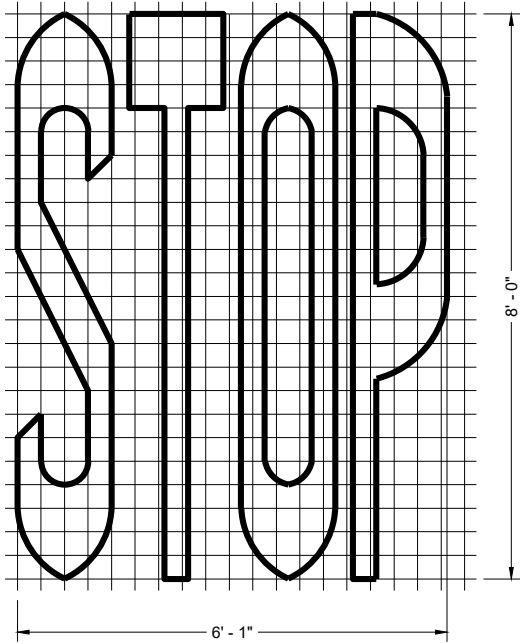
DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	700'

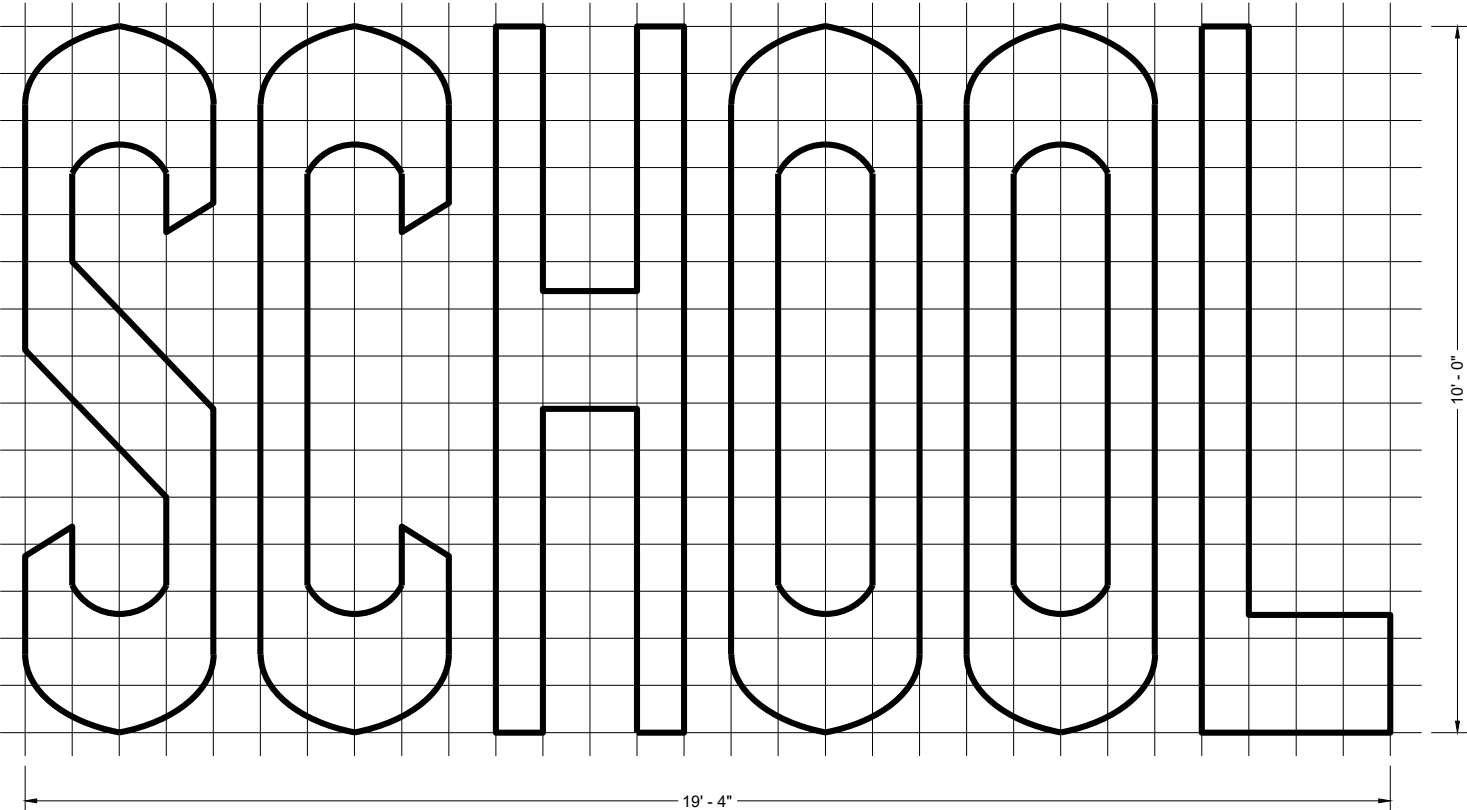
**SIGNING AND MARKING
FOR TWO LANE BRIDGES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



SINGLE LANE

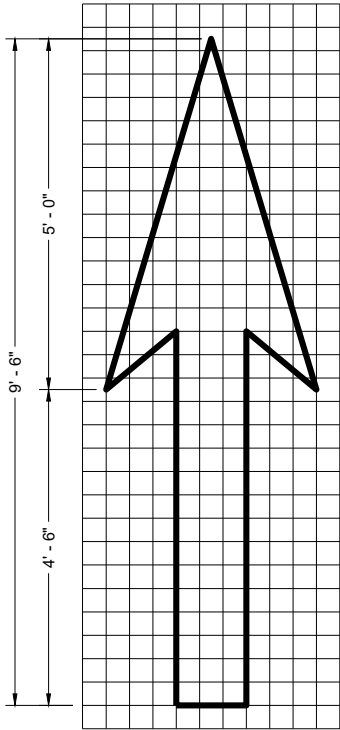


TWO - LANE

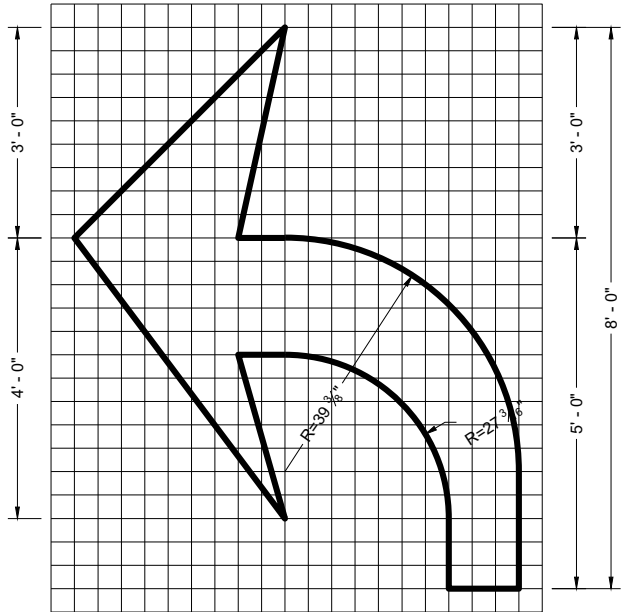
GENERAL NOTES

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

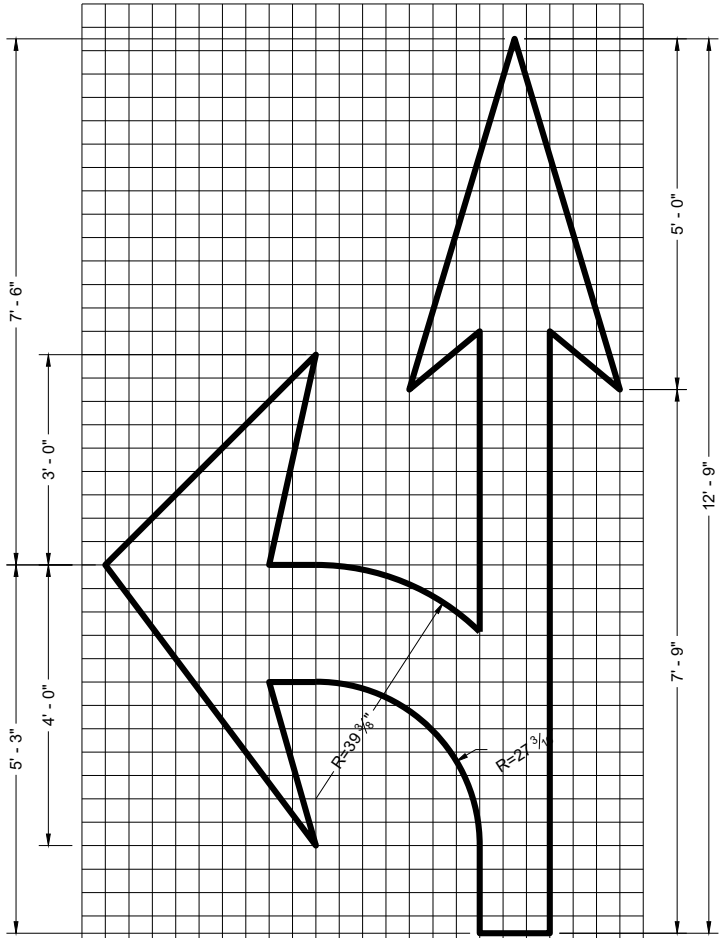
PAVEMENT MARKING WORDS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2024 DATE	/S/ Matthew Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	



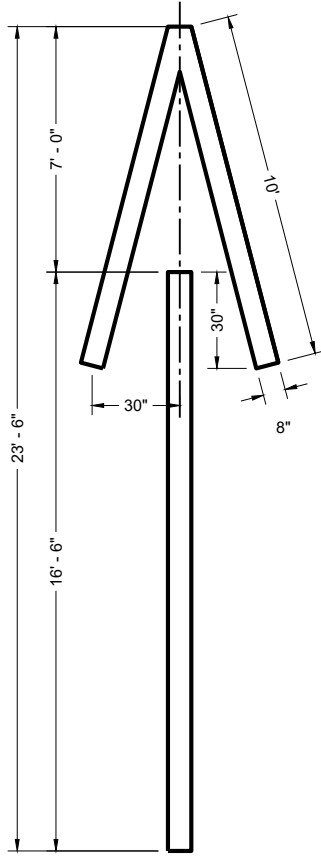
TYPE 1



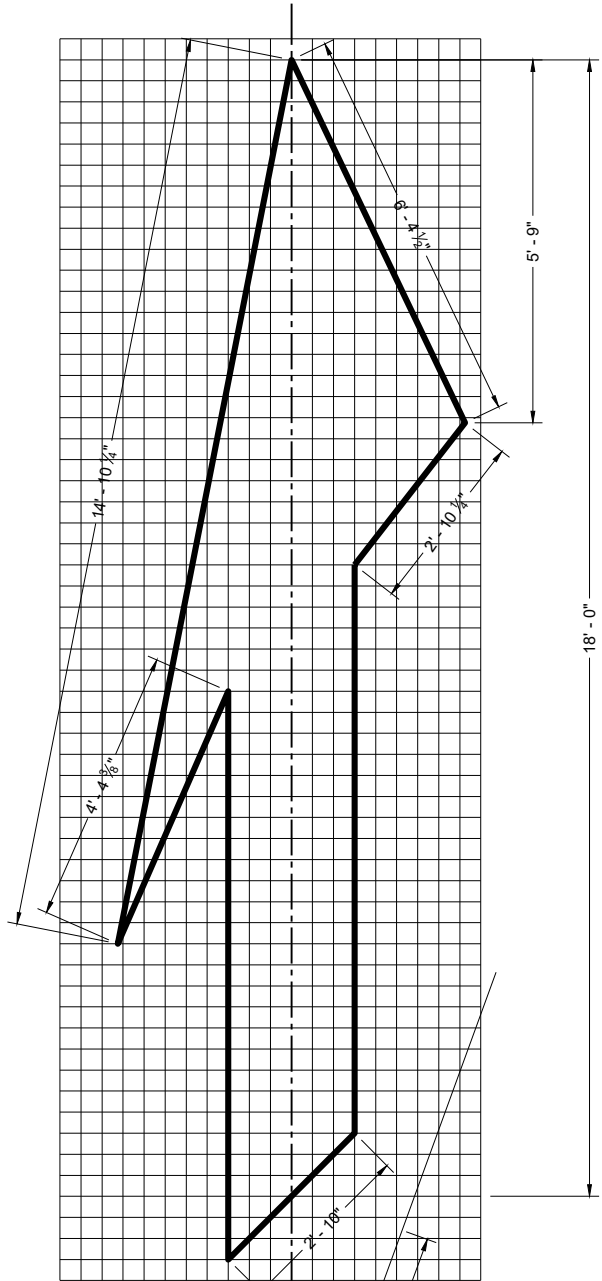
TYPE 2



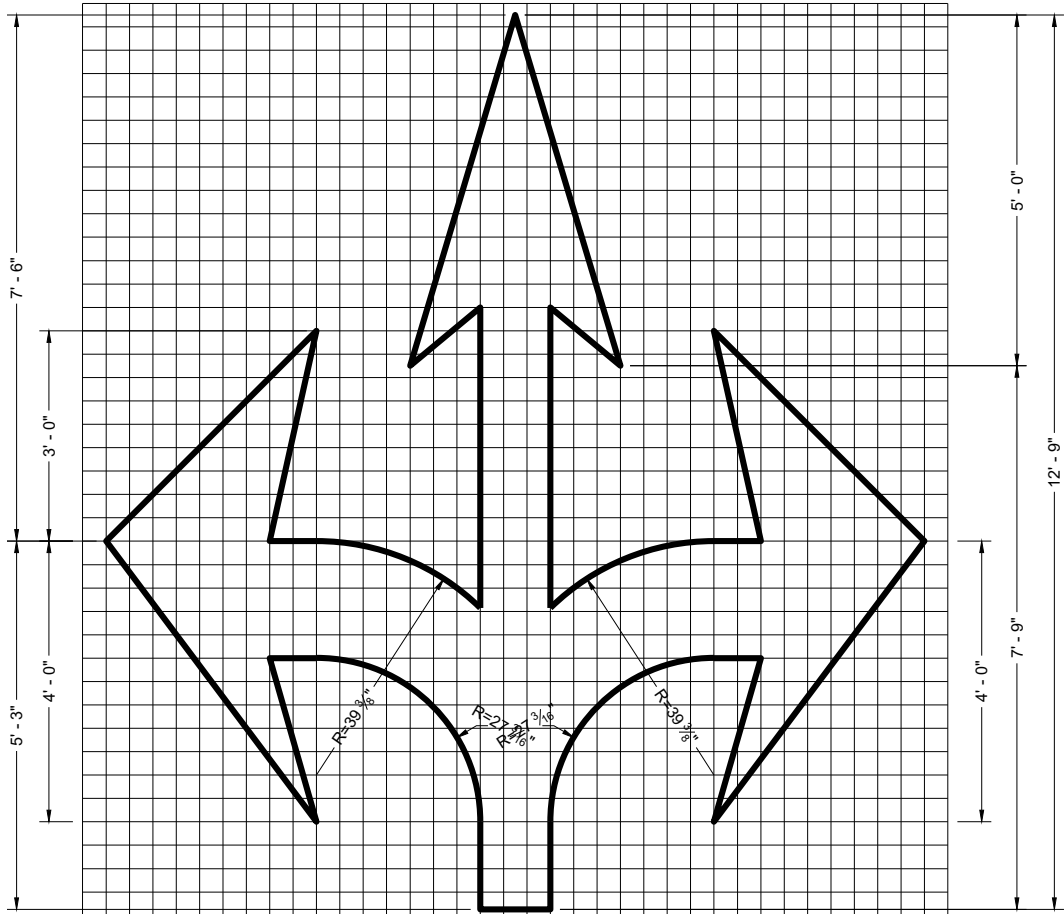
TYPE 3



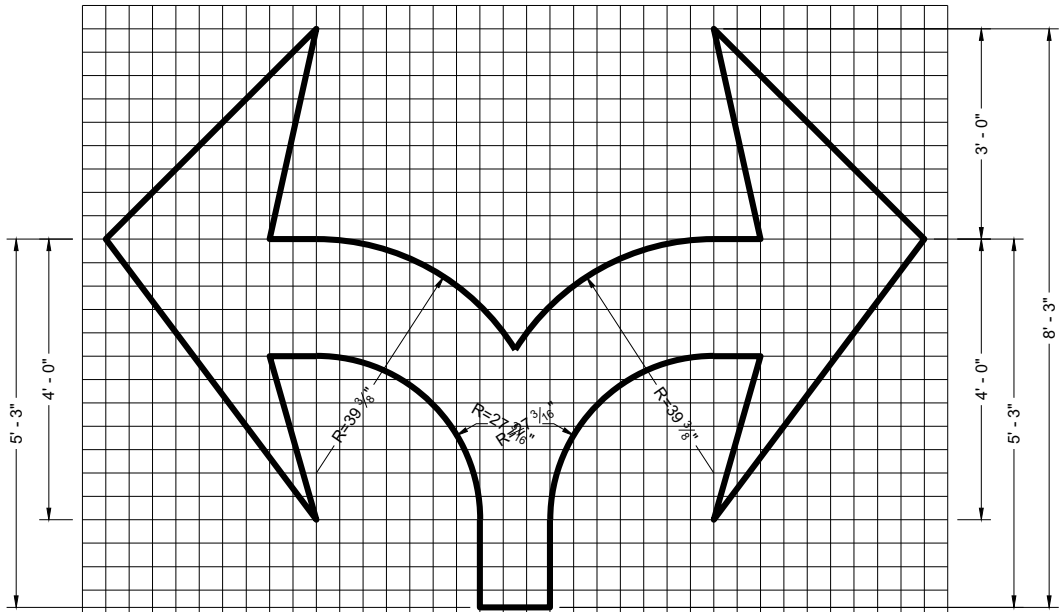
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

GENERAL NOTES

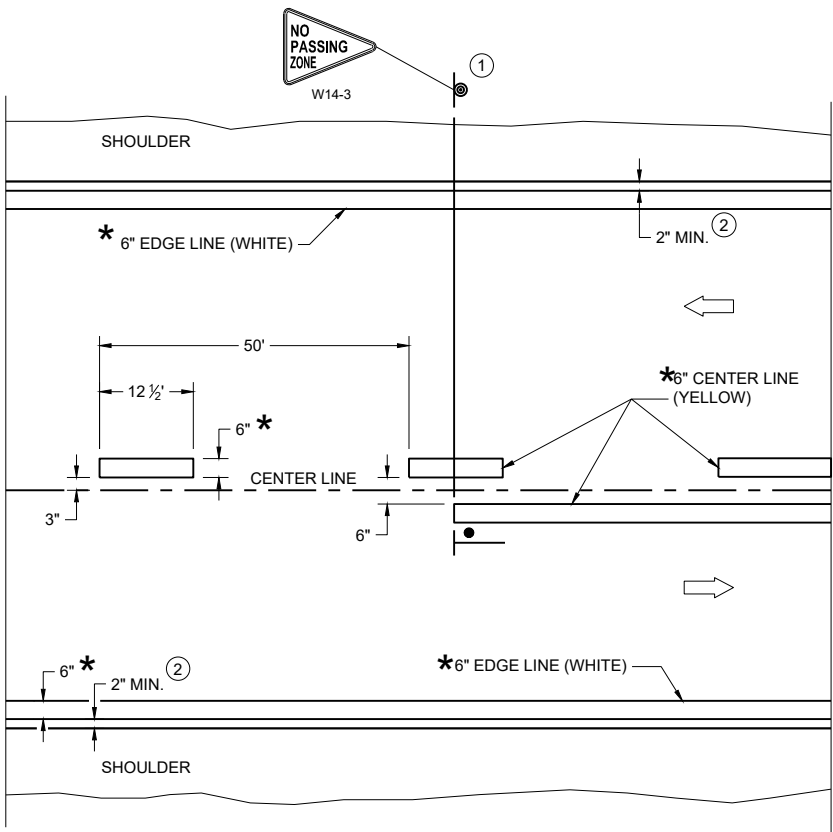
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING ARROWS

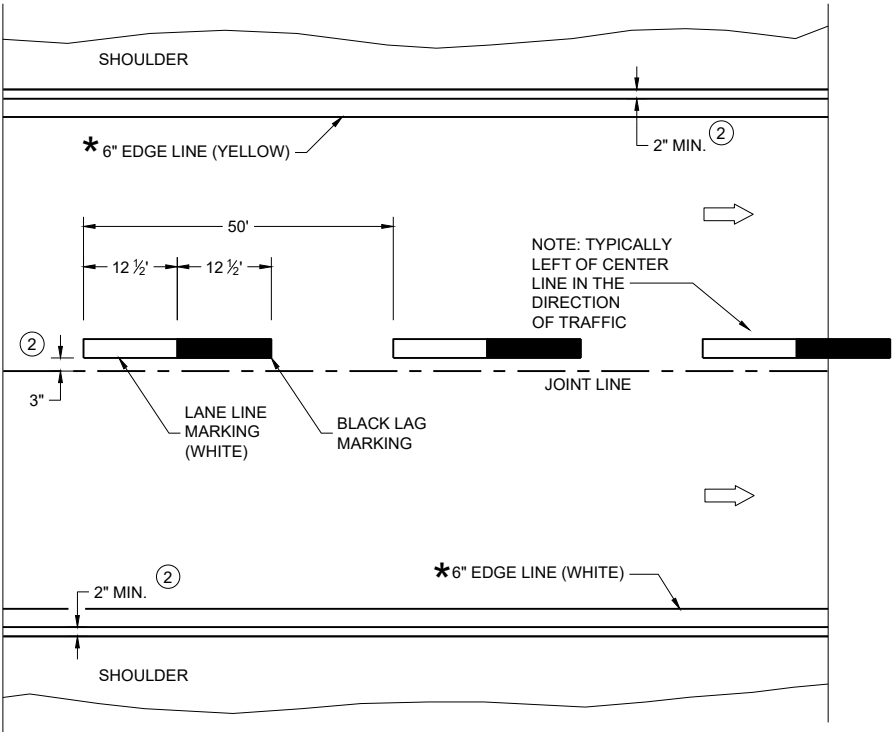
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER

FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

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

LEGEND

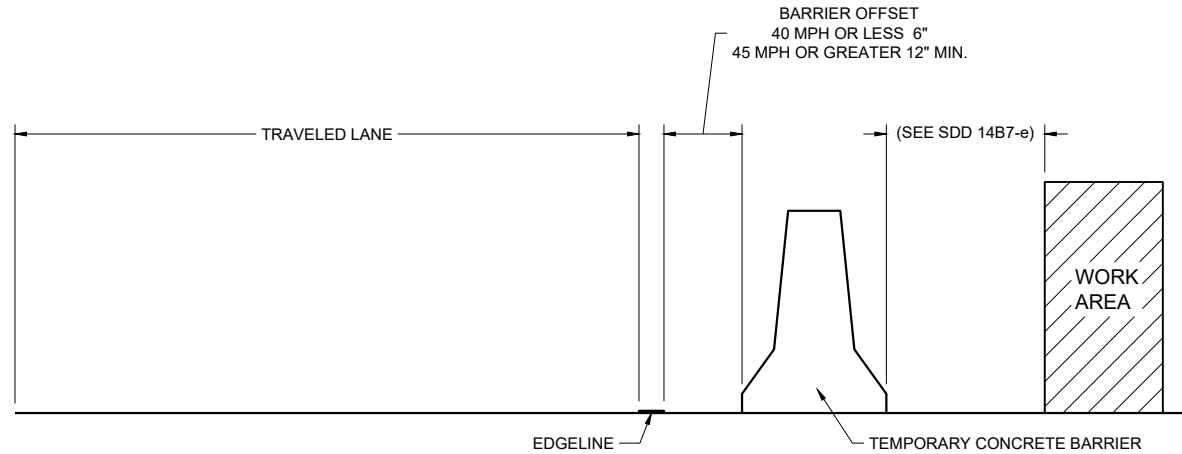
- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



TEMPORARY BARRIER OFFSET FROM EDGE LINE

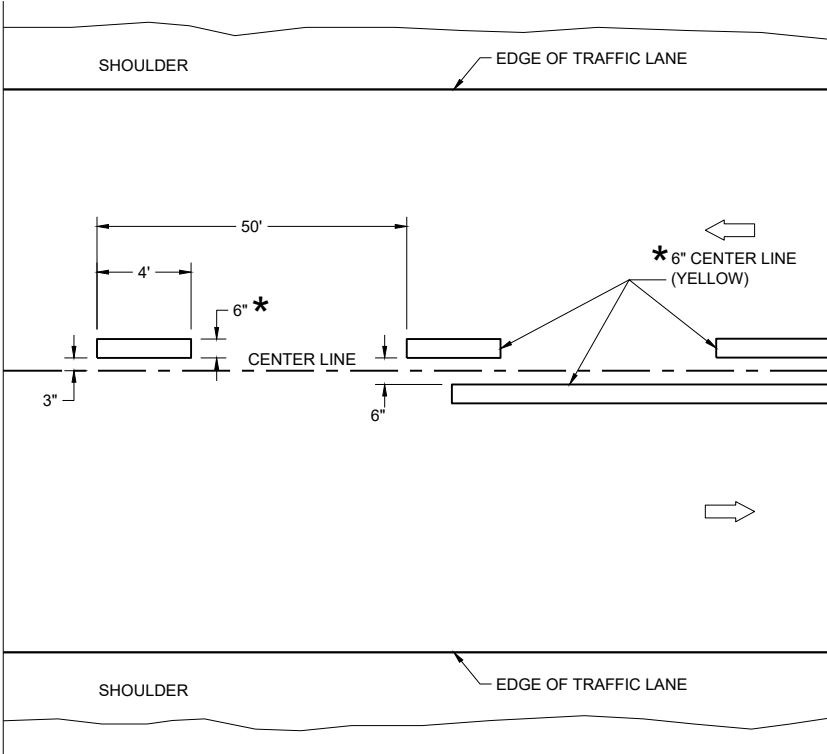
GENERAL NOTES

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

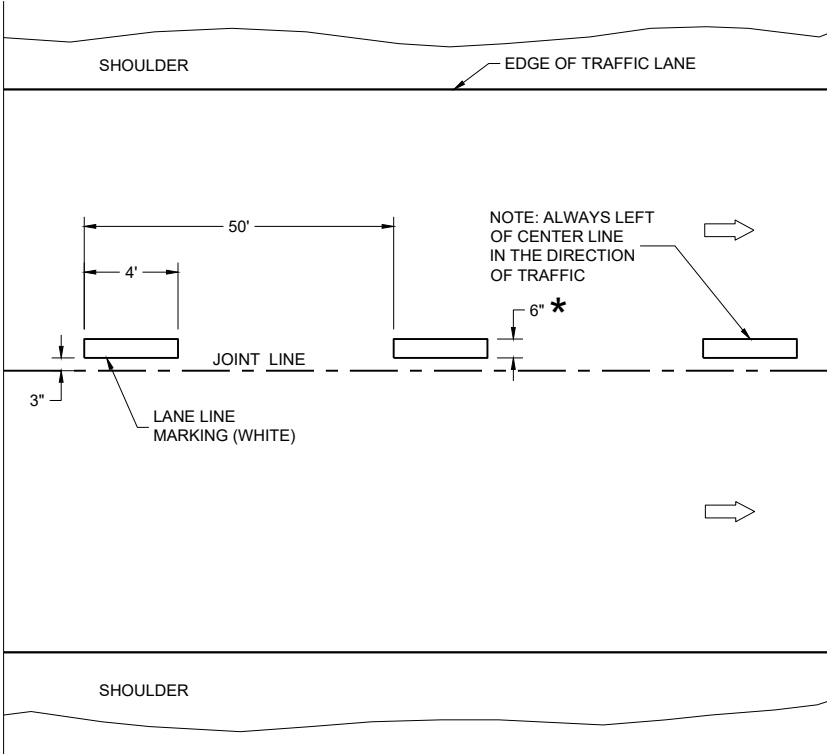
LEGEND

➡ DIRECTION OF TRAFFIC

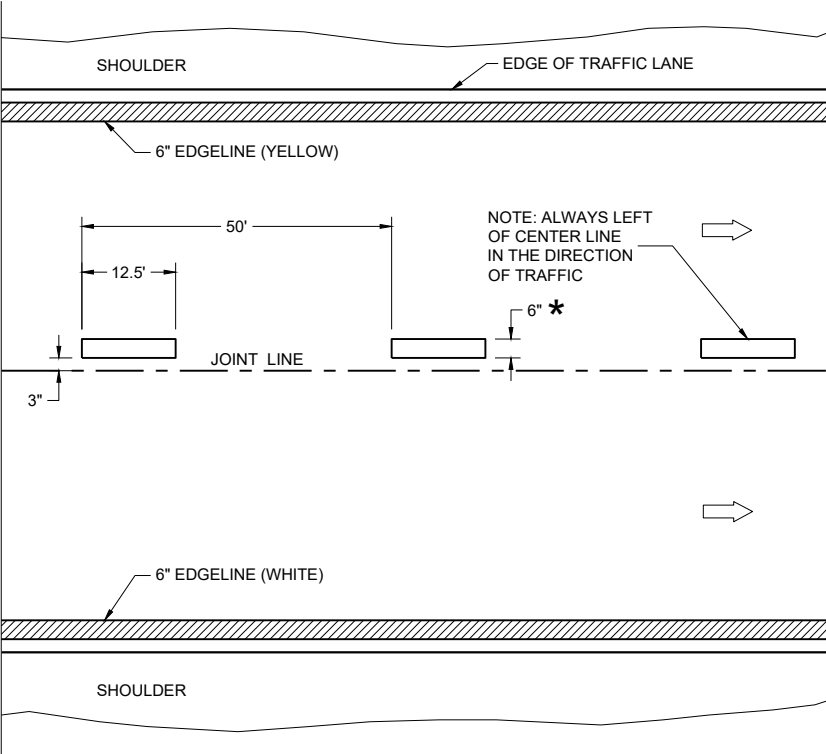
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



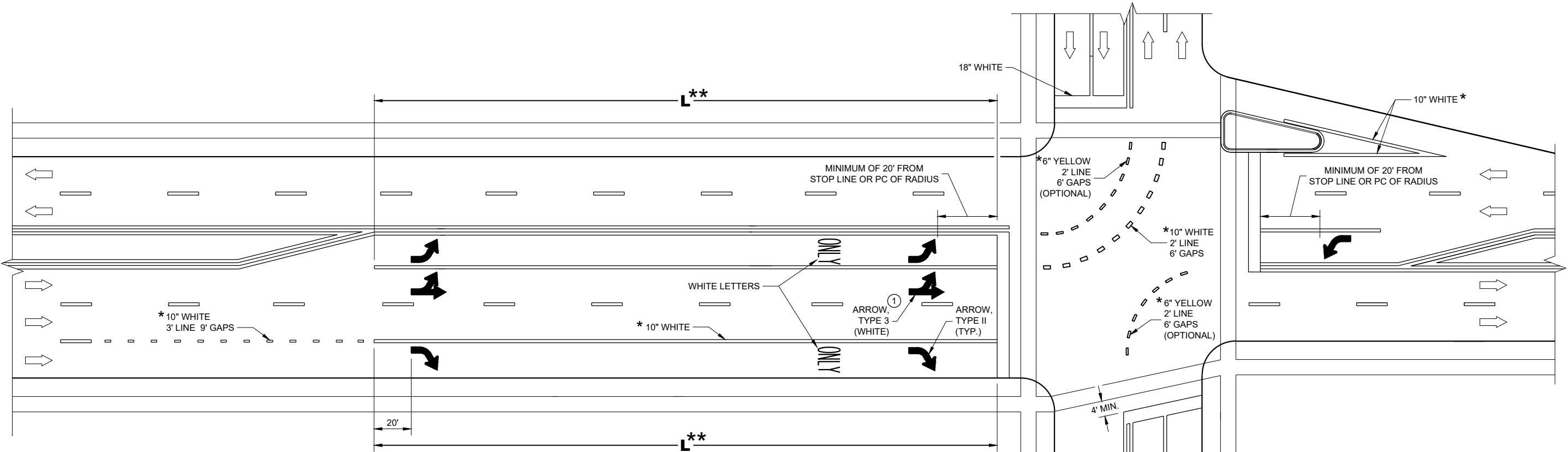
ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

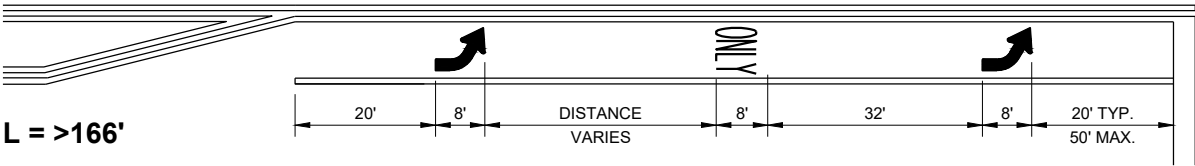
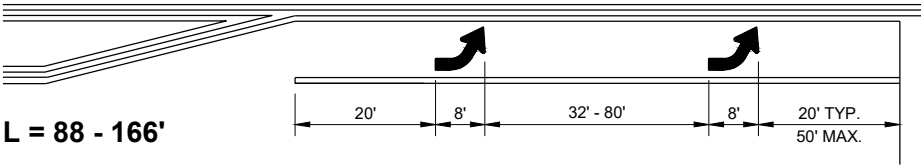
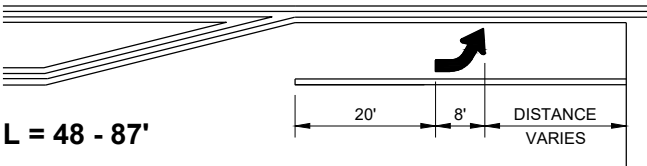
TEMPORARY PAVEMENT MARKING

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



TURN LANE OPTIONS

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



** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

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

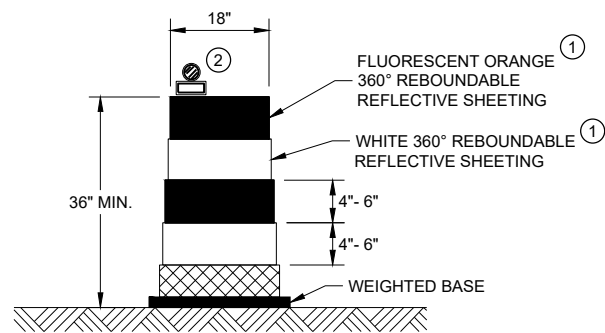
→ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

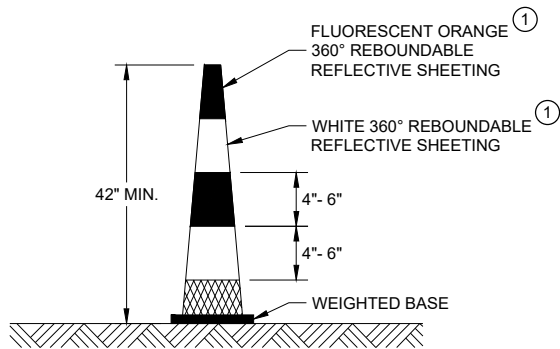
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING
(TURN LANES)

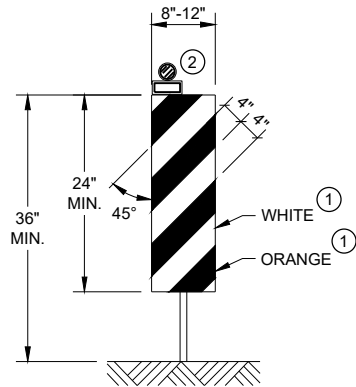
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



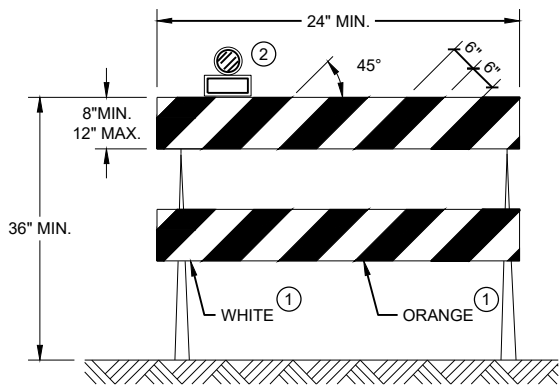
DRUM
BALLAST WIDTHS
RANGE FROM 24"-36"



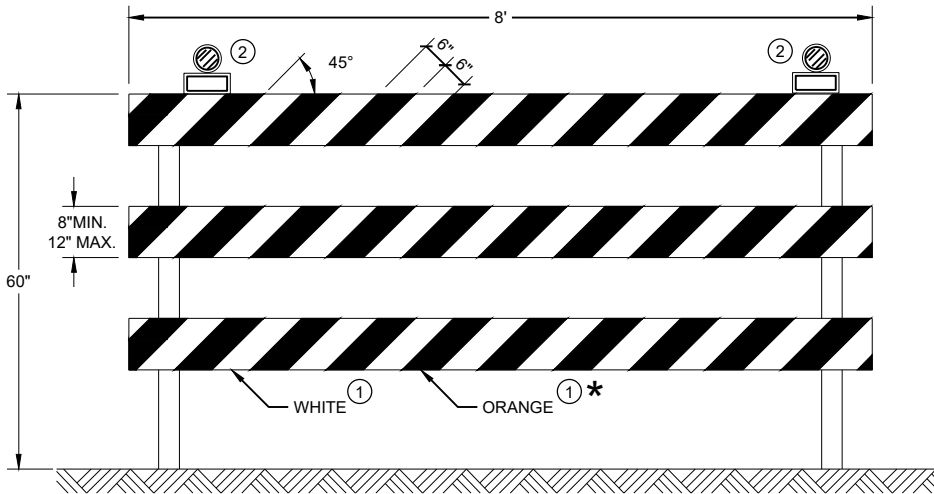
42" CONE
DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



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



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



TYPE III BARRICADE
IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.
* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

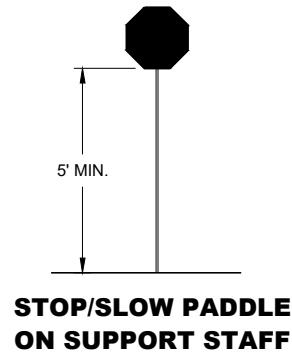
③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

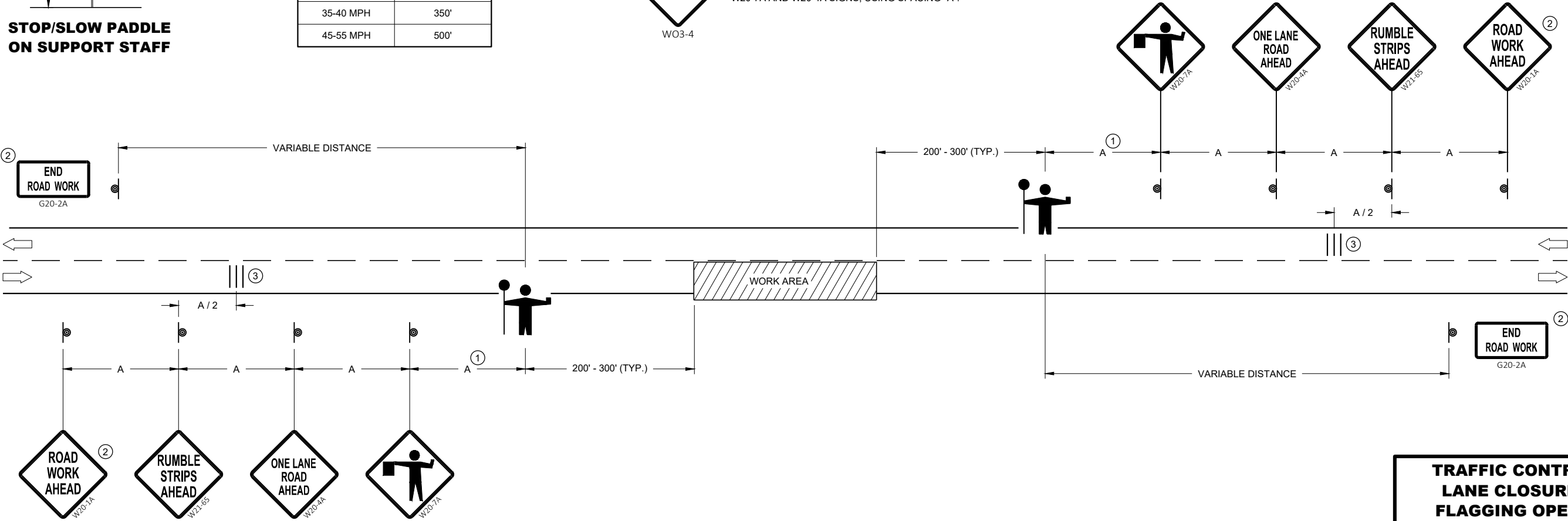


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

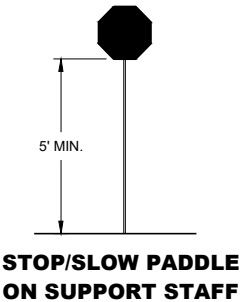


USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

- **GENERAL NOTES**
SIGN ON PERMANENT SUPPORT
- 
TRAFFIC CONTROL CONE 42-INCH
- 
TRAFFIC CONTROL DRUM
- 
TEMPORARY PORTABLE RUMBLE STRIP ARRAY
- 
DIRECTION OF TRAFFIC
- 
WORK AREA
- 
AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)



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

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

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

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

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

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

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

- FLAGGING**
IF THE AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) STOPS WORKING, FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.
- ①

SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- ②

IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

TEMPORARY PORTABLE RUMBLE STRIPS
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

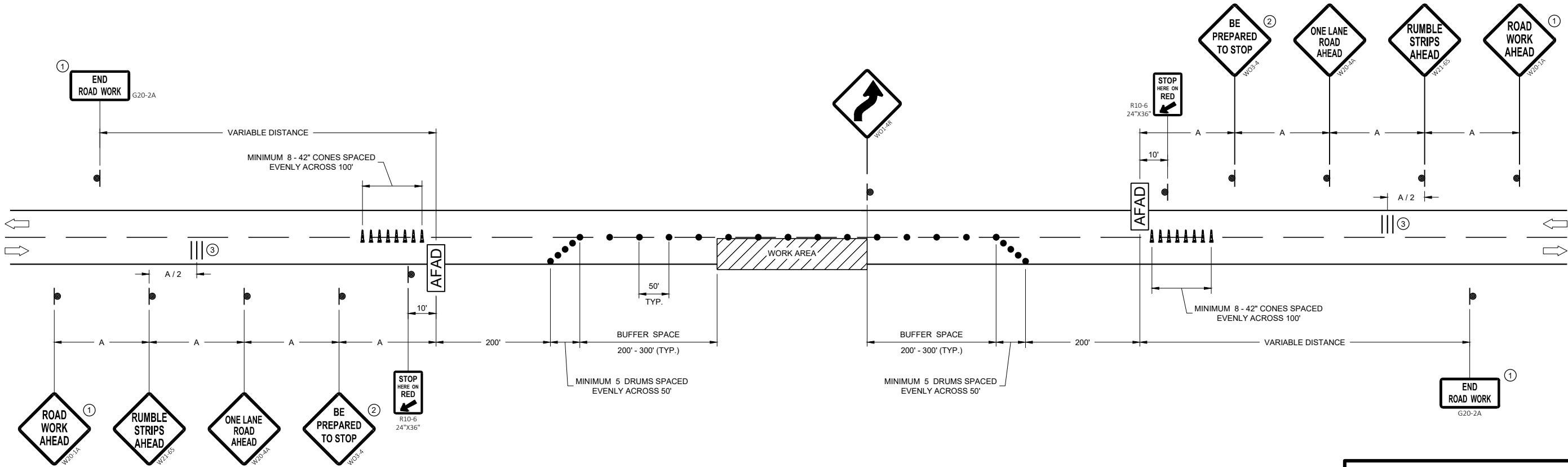
ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

③

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



**TRAFFIC CONTROL, LANE
CLOSURE WITH AUTOMATED
FLAGGER ASSISTANCE DEVICE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

LEGEND

- V1

LEAD VEHICLE
- V2

MARKING VEHICLE
- V3

SHADOW VEHICLE
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC

GENERAL NOTES

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

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

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

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

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

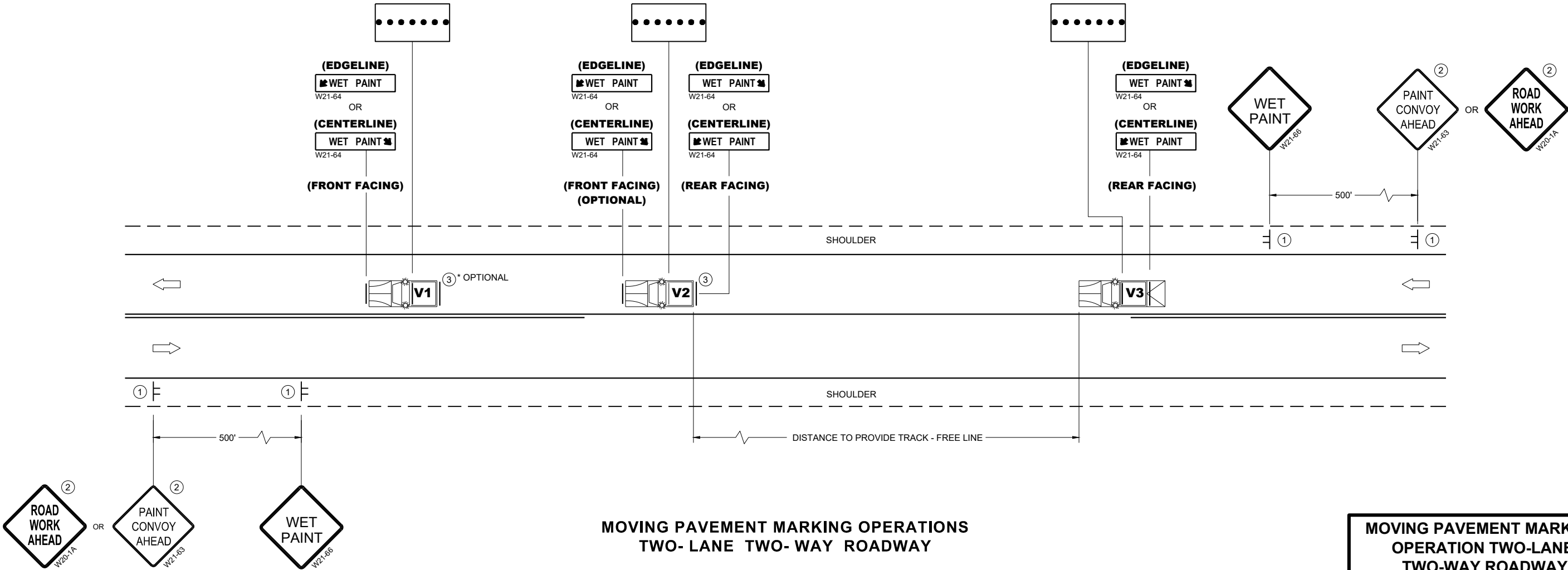
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH

UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

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

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

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

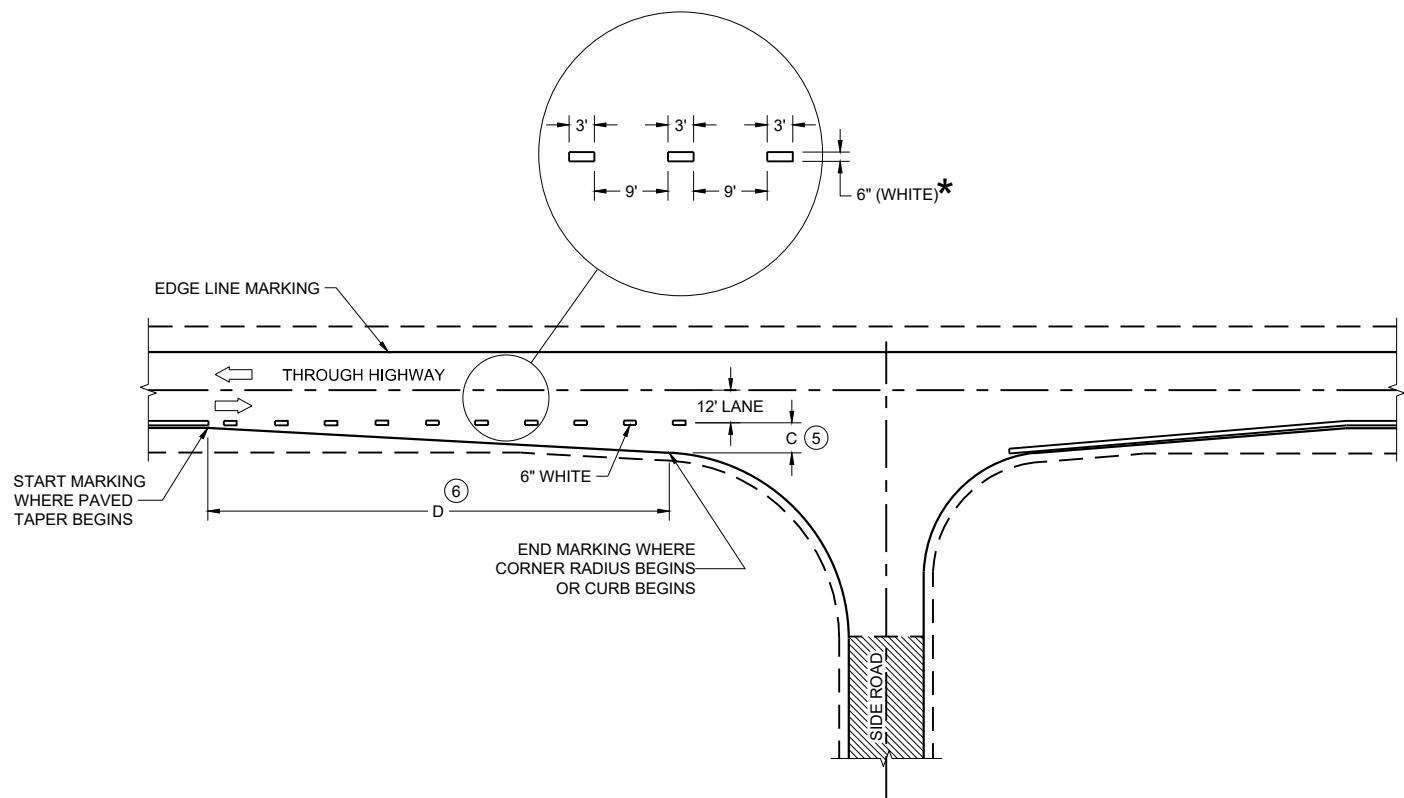


MOVING PAVEMENT MARKING
OPERATION TWO-LANE
TWO-WAY ROADWAY

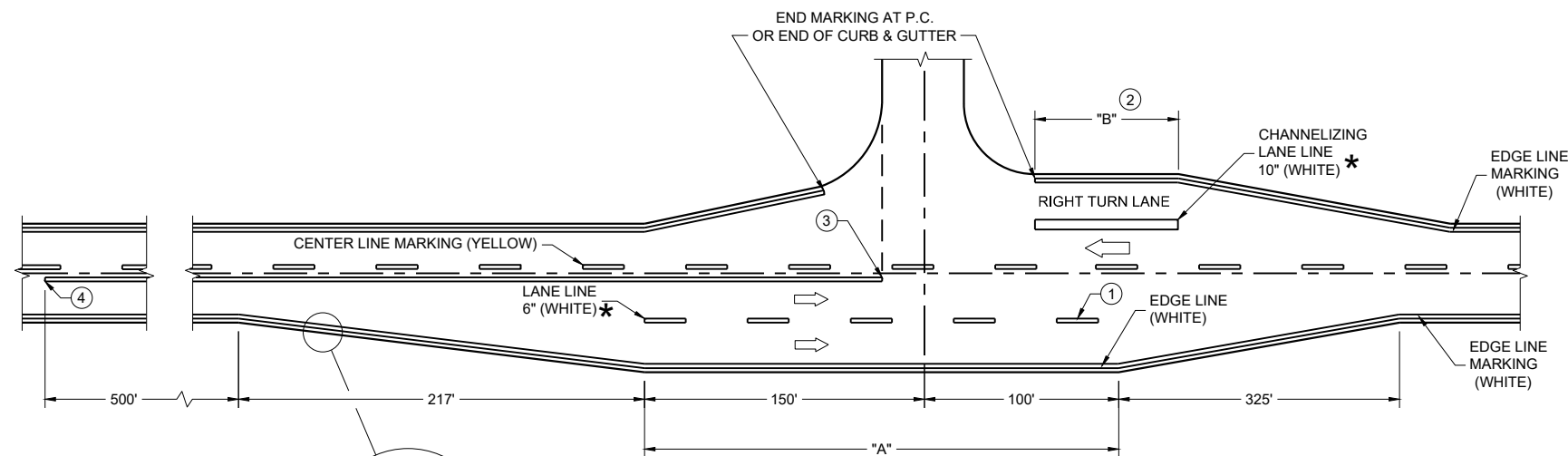
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



MINOR INTERSECTION



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

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

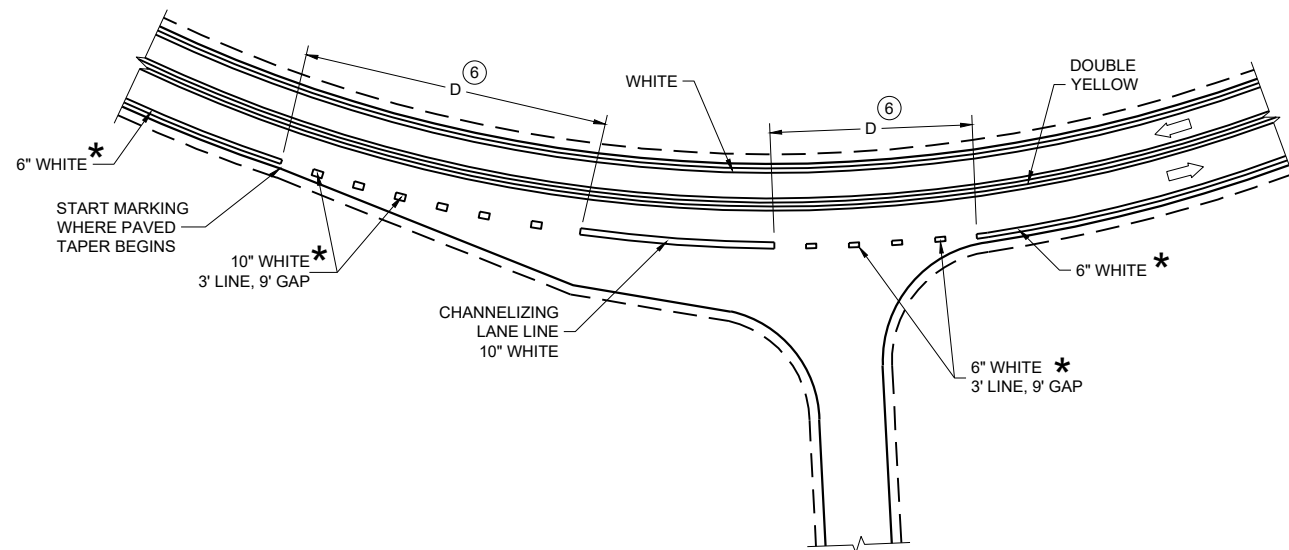
GENERAL NOTES

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

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

LEGEND

➡ DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

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

GENERAL NOTES

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

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

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

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

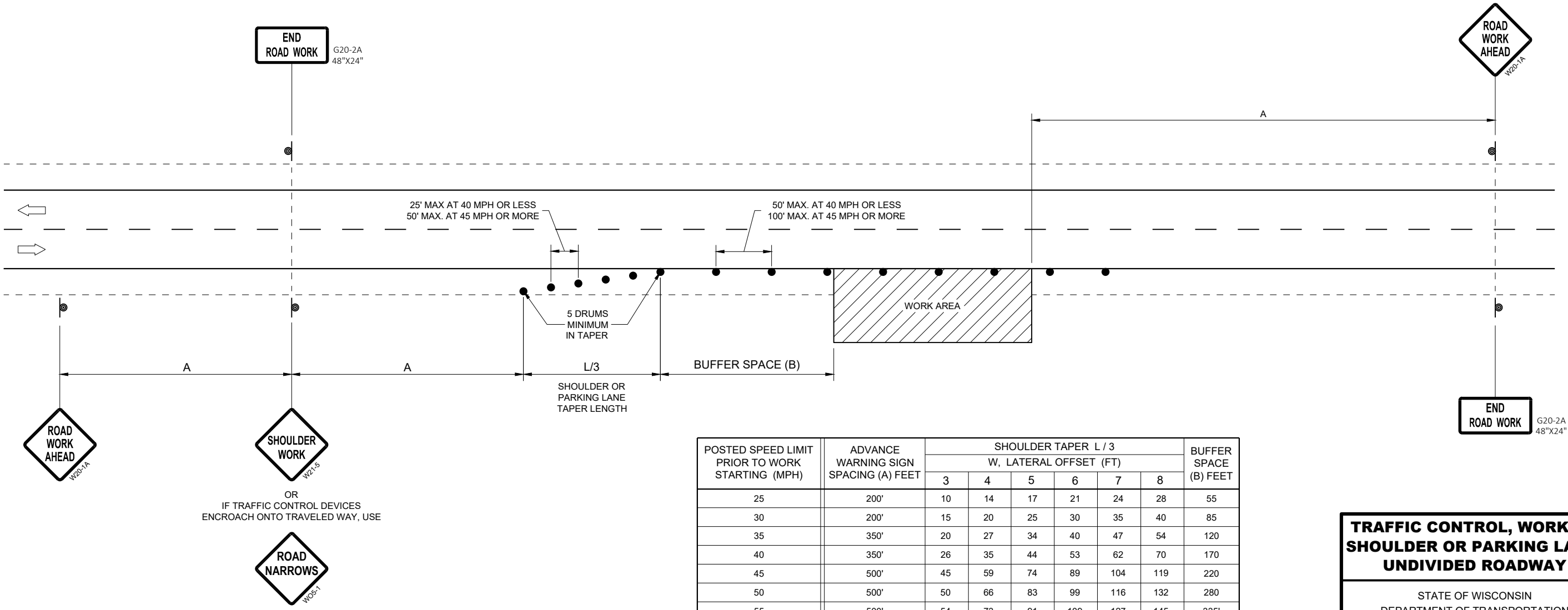
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

6

6



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

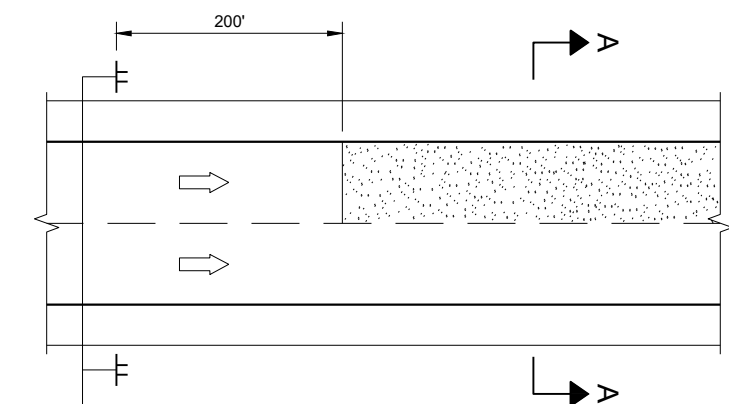
TRAFFIC CONTROL, WORK ON
SHOULDER OR PARKING LANE,
UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

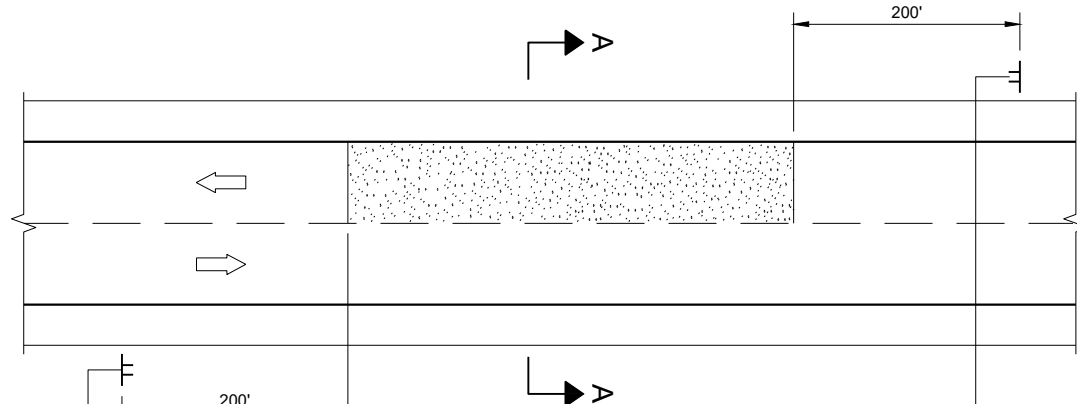
APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

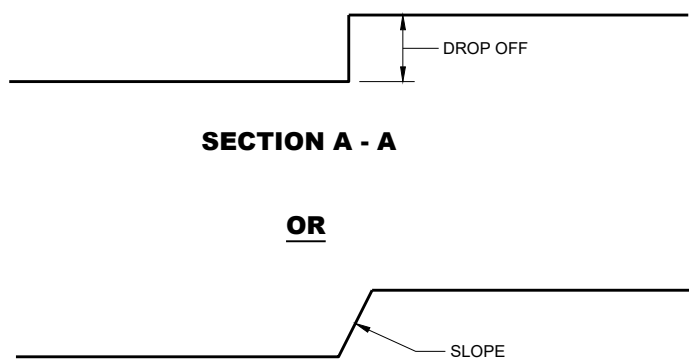
FHWA



MULTI-LANE



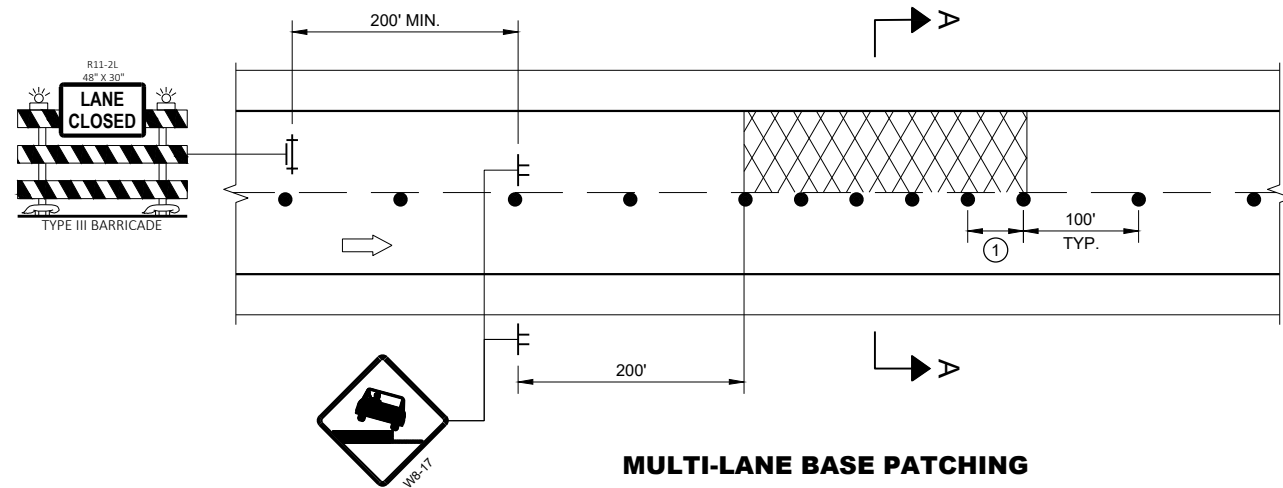
TWO-WAY TWO LANE



SECTION A - A

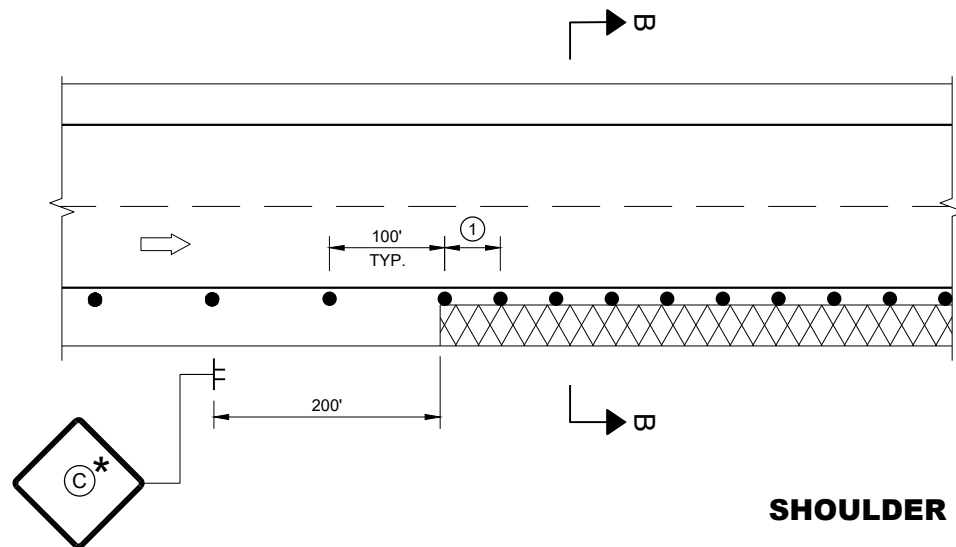
OR

SECTION A - A

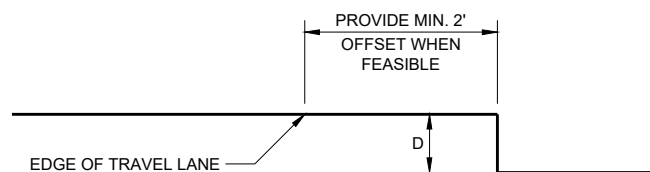


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

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

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

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

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

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

TRAFFIC CONTROL,
DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

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

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

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

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

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

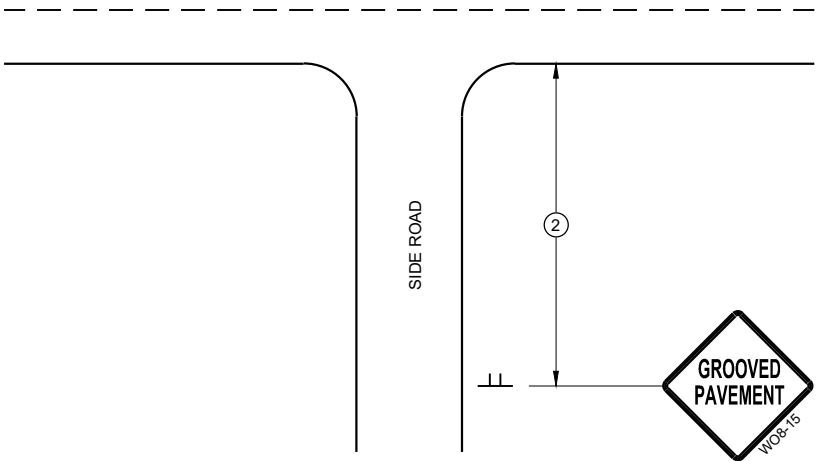
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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

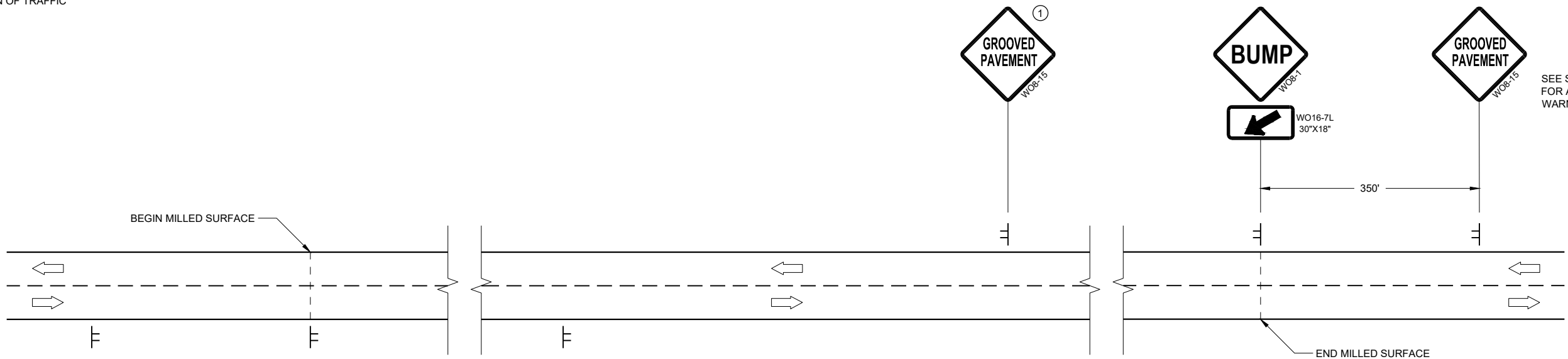
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL



SEE SDD15C04
FOR ADVANCE
WARNING SIGNS

SEE SDD15C04
FOR ADVANCE
WARNING SIGNS

DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL,
SIGNING ON ROADWAYS
WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

GENERAL NOTES

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

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

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

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

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

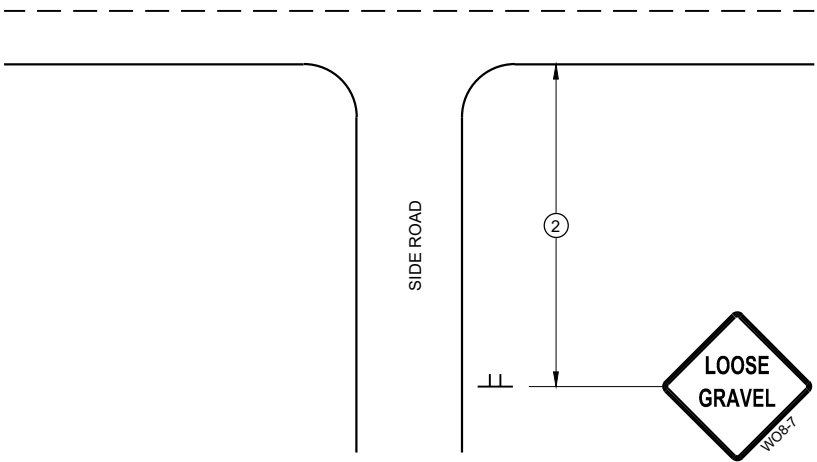
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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

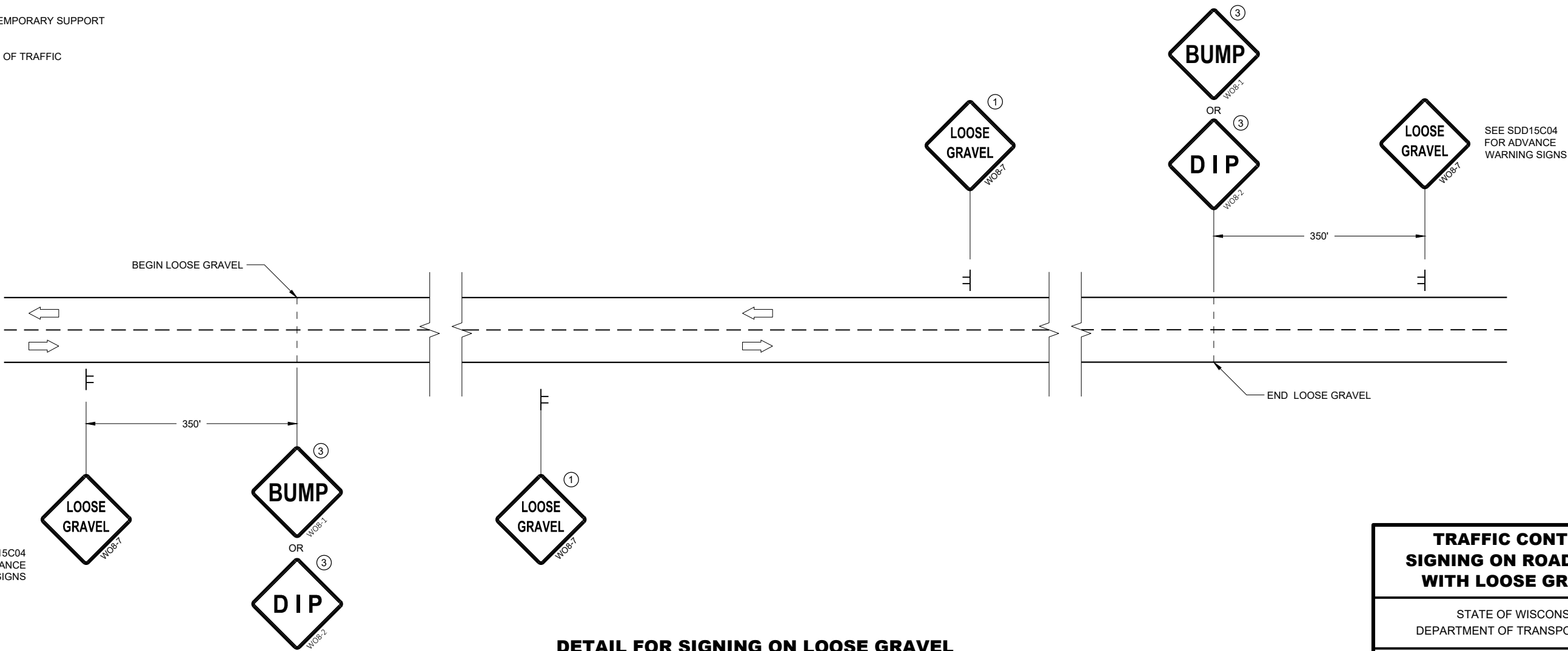
- ① PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.
- ③ ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL

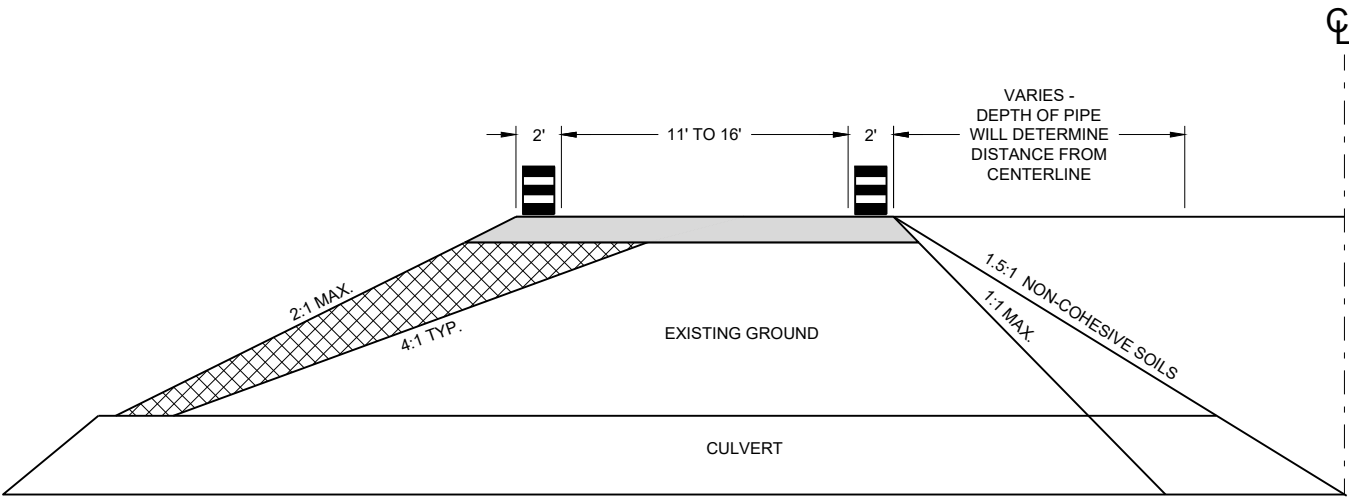


DETAIL FOR SIGNING ON LOOSE GRAVEL
OR CHIP SEALED SURFACES

TRAFFIC CONTROL
SIGNING ON ROADWAYS
WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



CROSS SECTION

GENERAL NOTES

USE 1:1 FOR COHESIVE CLAYS AND SILTS, LOAMS, SANDY CLAYS AND ANGULAR GRAVEL SOILS.
USE 1.5:1 FOR NON-COHESIVE SOILS.

THE TAPER SHOULD EXTEND ACROSS THE SHOULDER UNLESS DOING SO WOULD GREATLY CONFLICT WITH THE WORK OPERATION.

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.

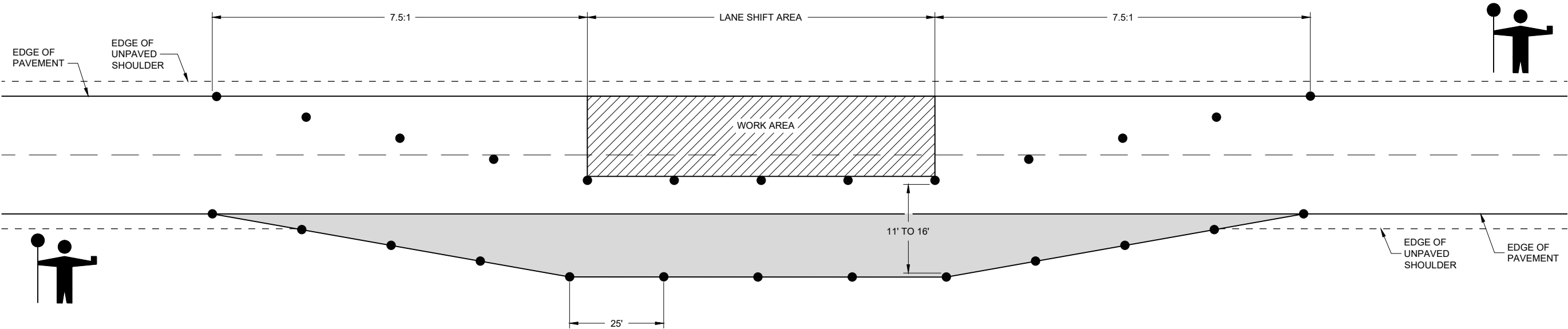
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

USE WITH SDD 15C12 "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS"

USE WITH SDD 15D45 "SIGNING ON ROADWAYS WITH LOOSE GRAVEL"

LEGEND

- DRUM WITHOUT WARNING LIGHT
- 6" BASE AGGREGATE DENSE 1 1/4" - INCIDENTAL TO LANE SHIFT ITEM
- FILL - INCIDENTAL TO LANE SHIFT ITEM
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



LANE SHIFT IN FLAGGING OPERATION

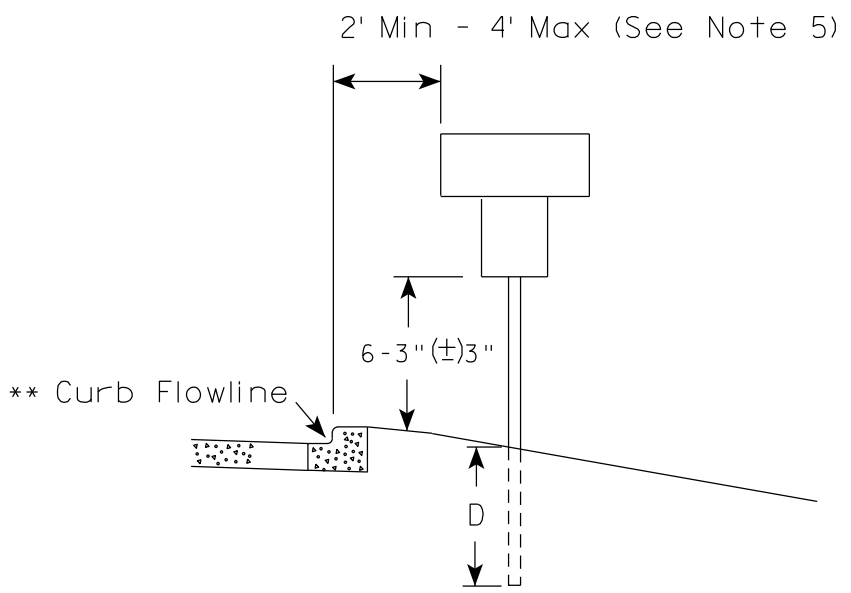
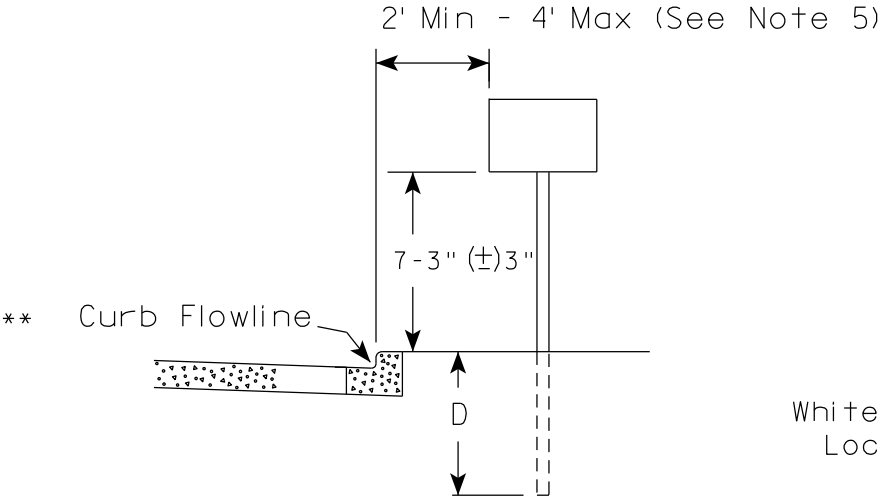
TRAFFIC CONTROL,
TEMPORARY LANE SHIFT
DURING CULVERT WORK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

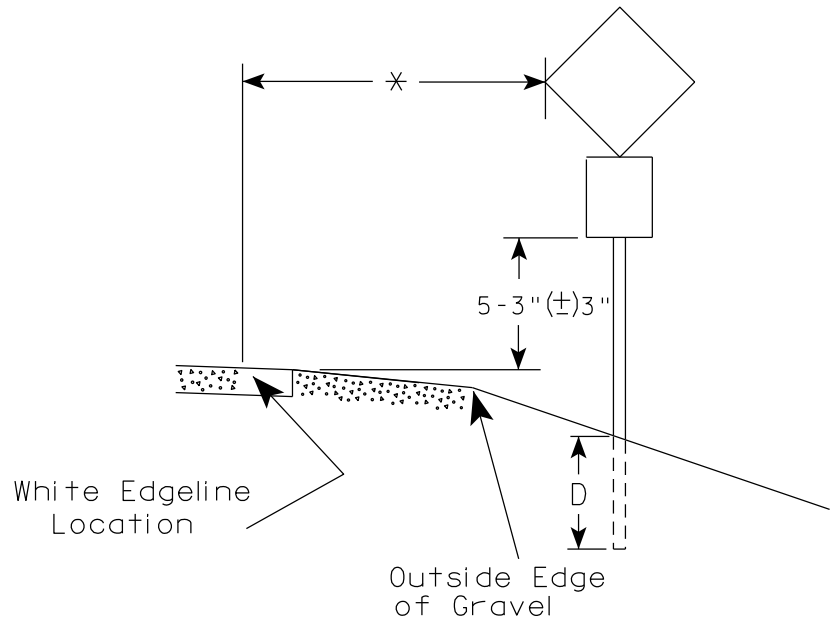
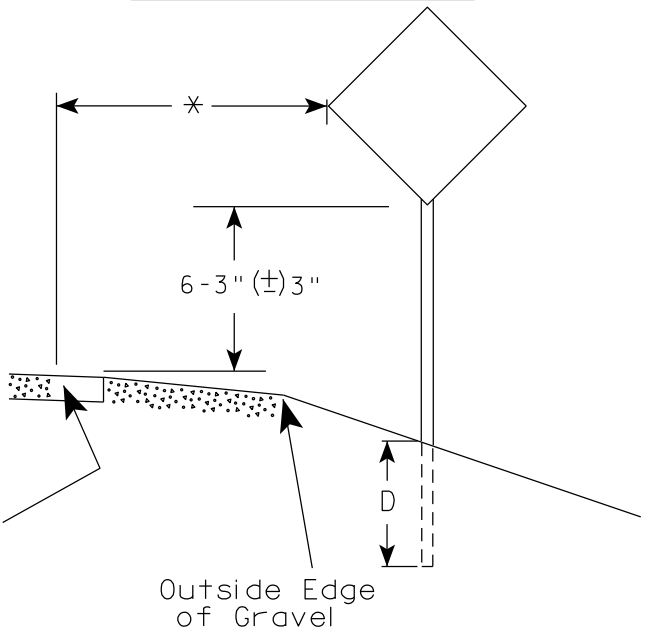
APPROVED
February 2021
DATE /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

URBAN AREA



RURAL AREA (See Note 2)



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

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

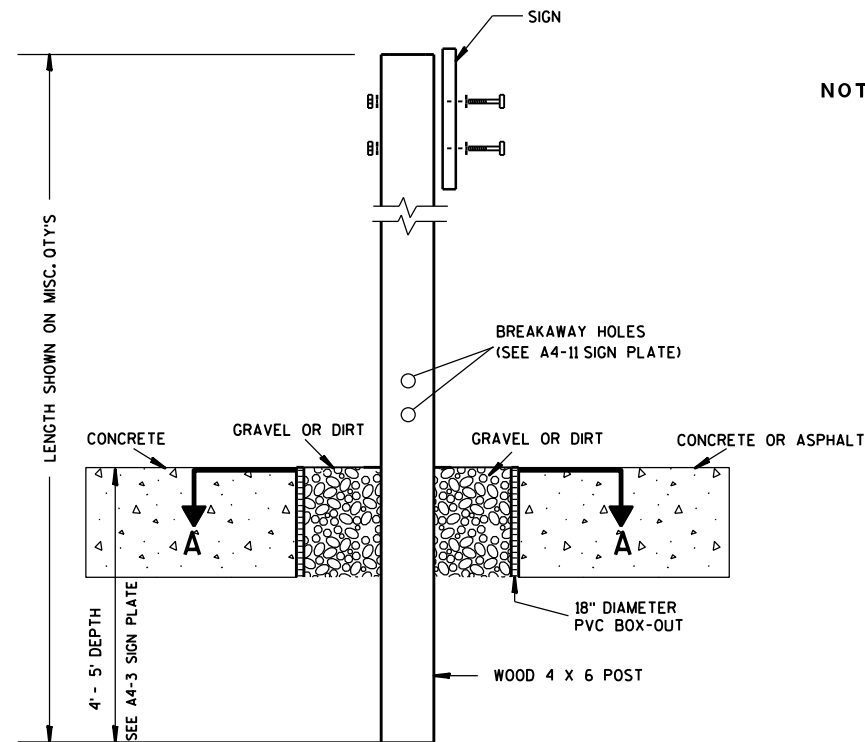
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED 
for State Traffic Engineer

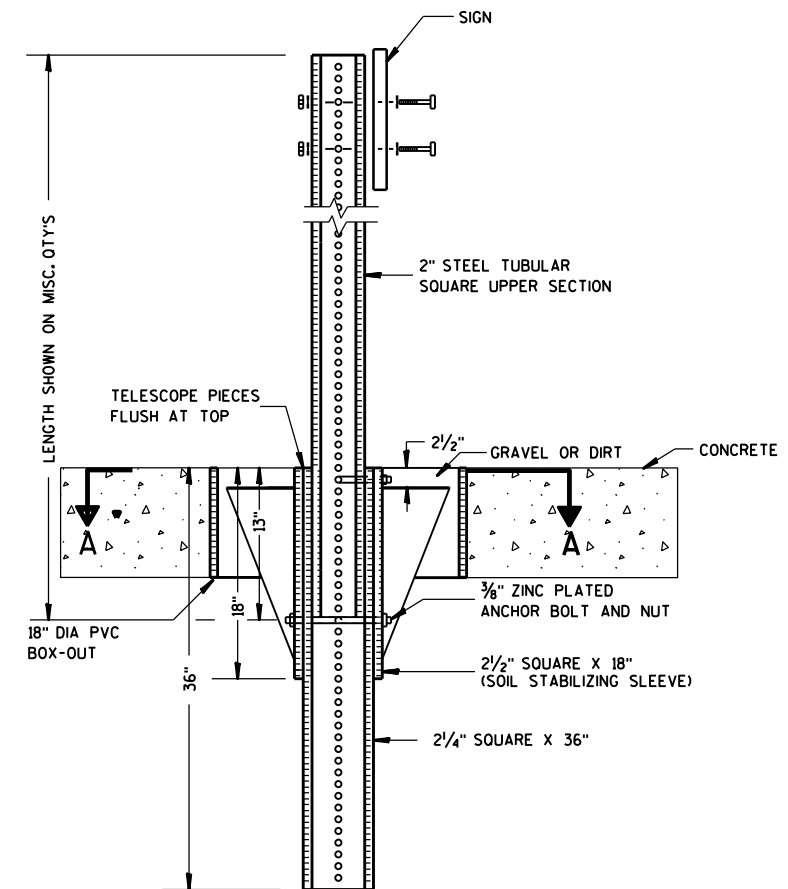
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

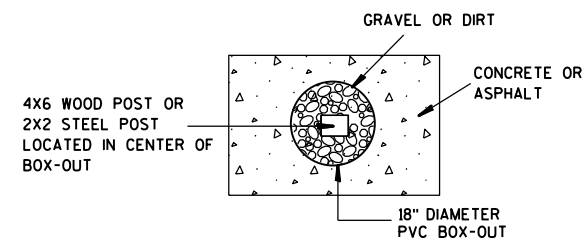
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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:

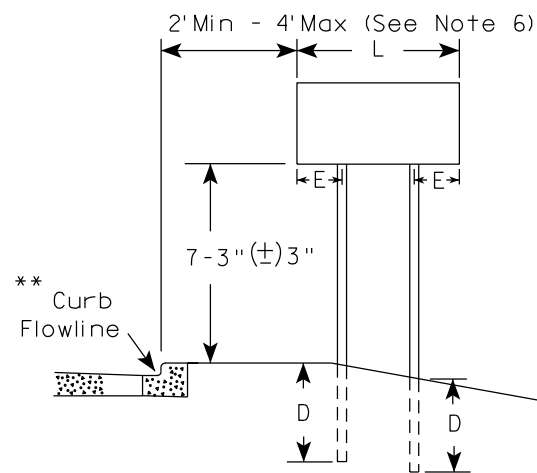
HWY:

COUNTY:

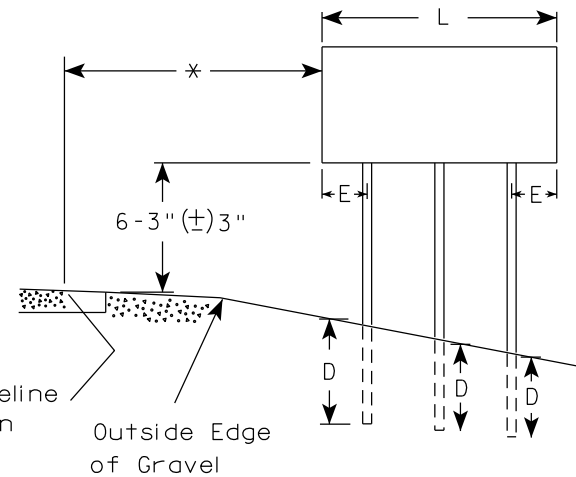
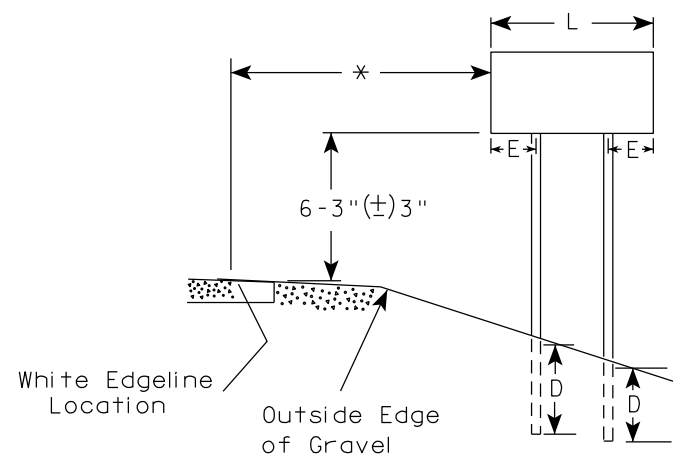
SHEET NO:

E

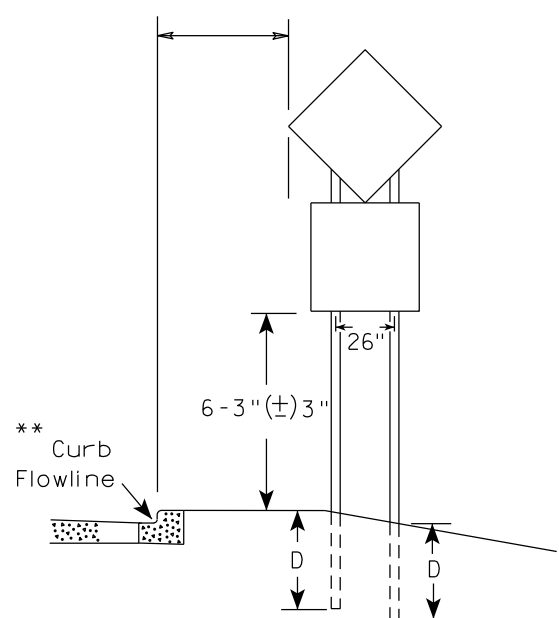
URBAN AREA



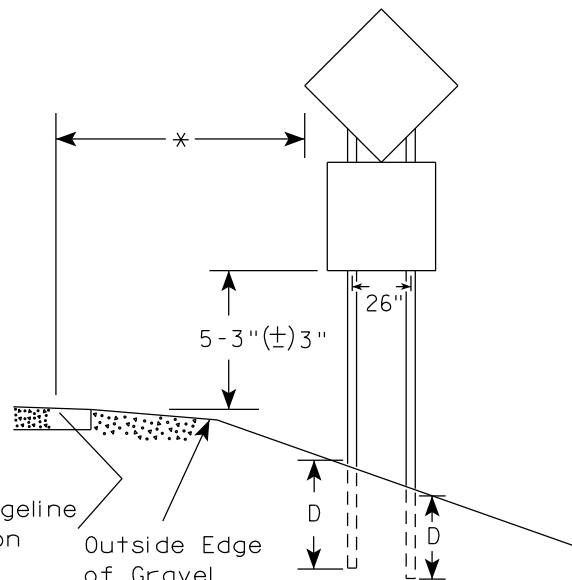
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

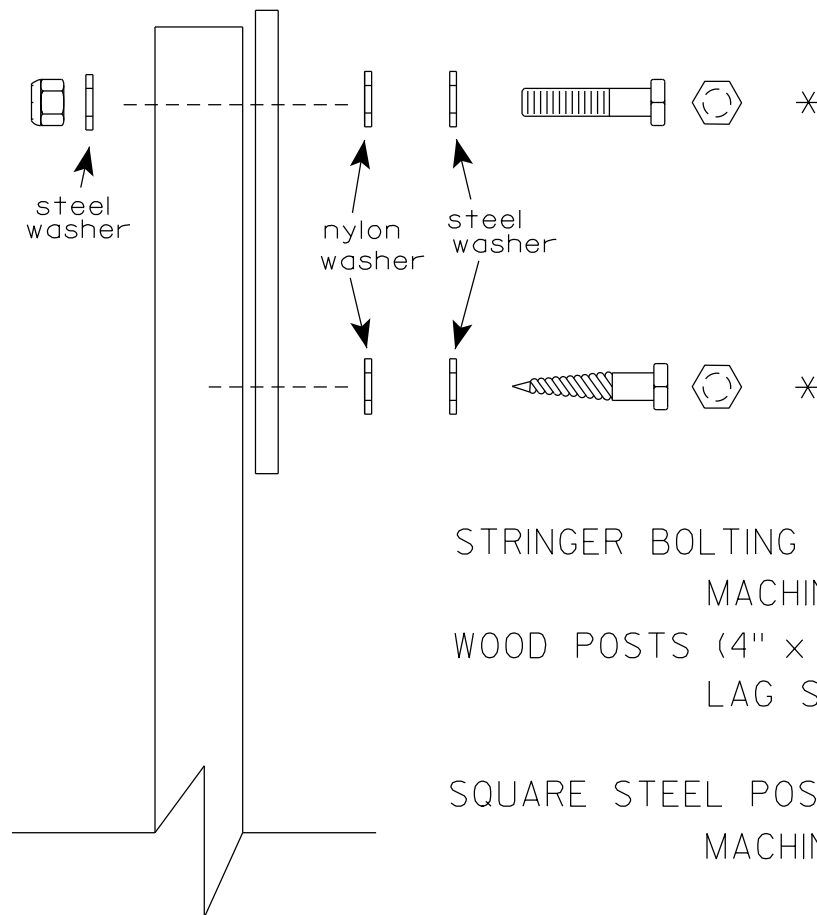
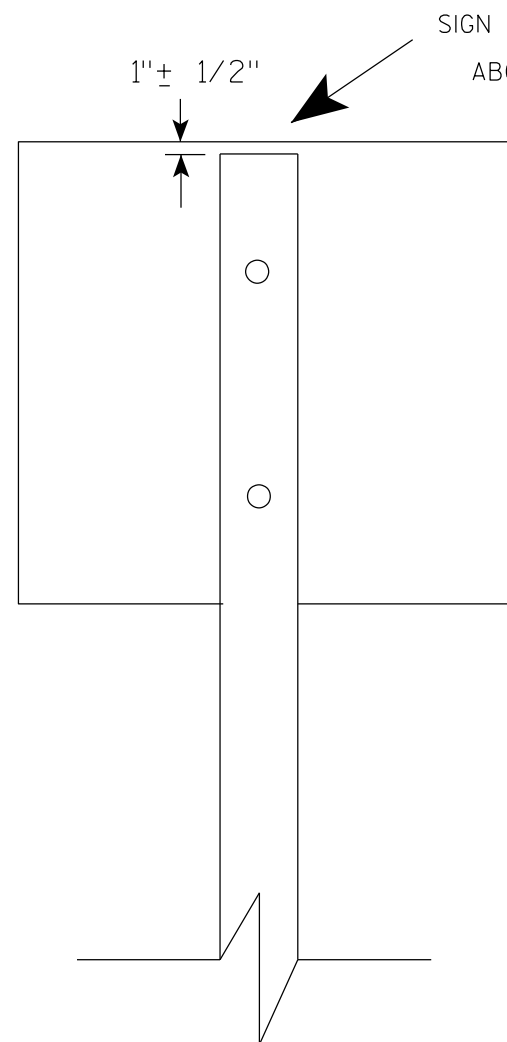
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 12/6/23

PLATE NO. A4-4.16



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.

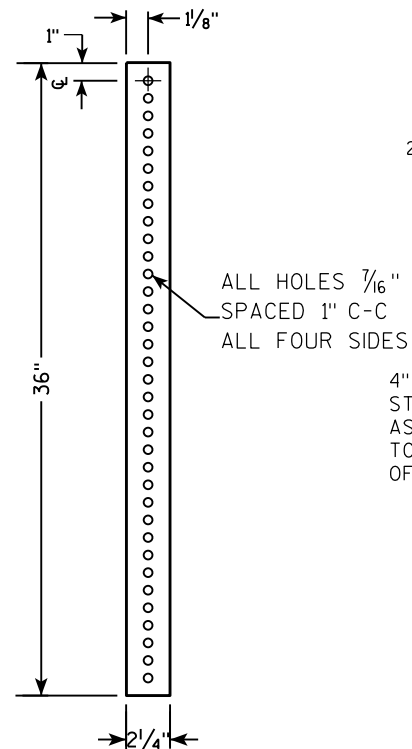
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (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 $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

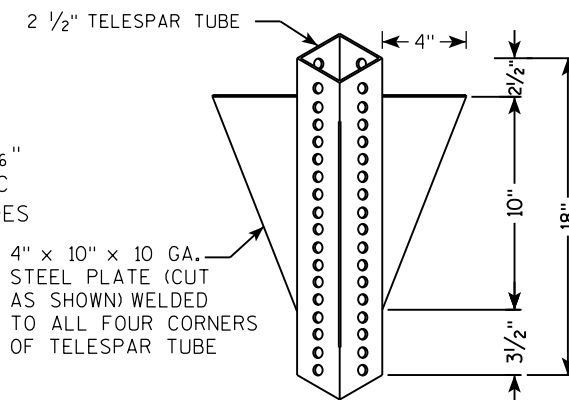
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require 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 4/1/2020	PLATE NO. A4-8.9

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



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



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

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

1"

TELESCOPE PIECES FLUSH AT TOP

18"

12"

36"

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

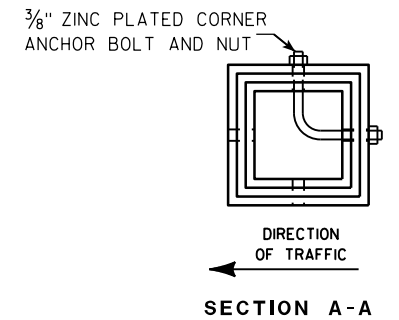
2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

A

B

C



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:

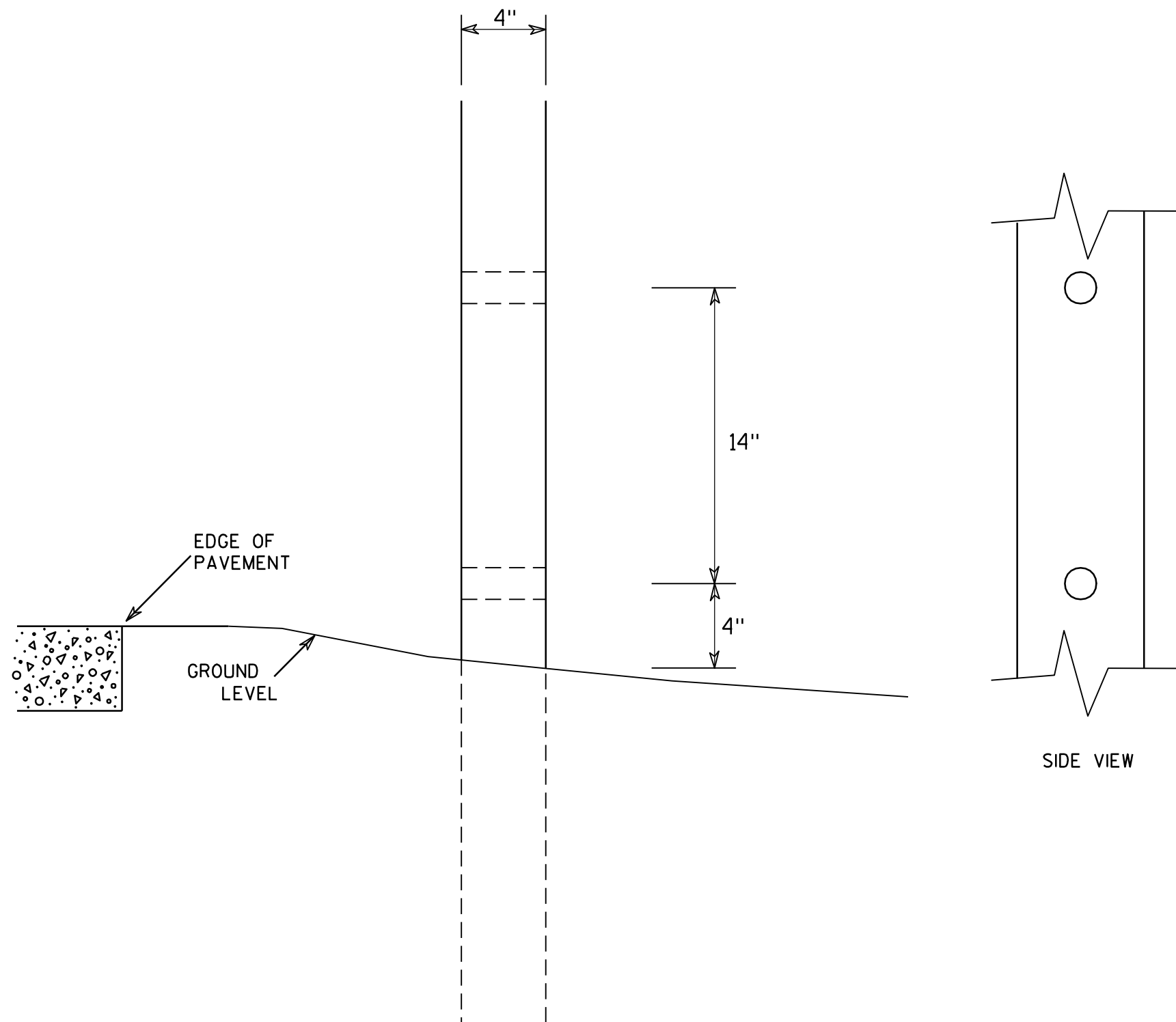
HWY:

COUNTY:

SHEET NO:

11

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:

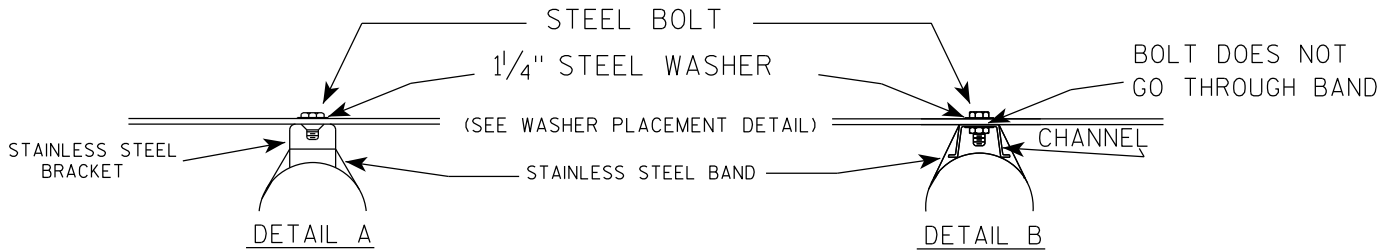
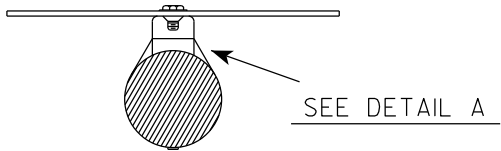
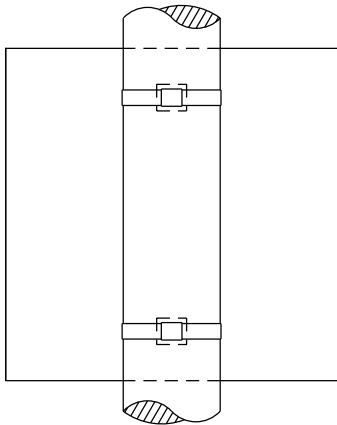
COUNTY:

SHEET NO:

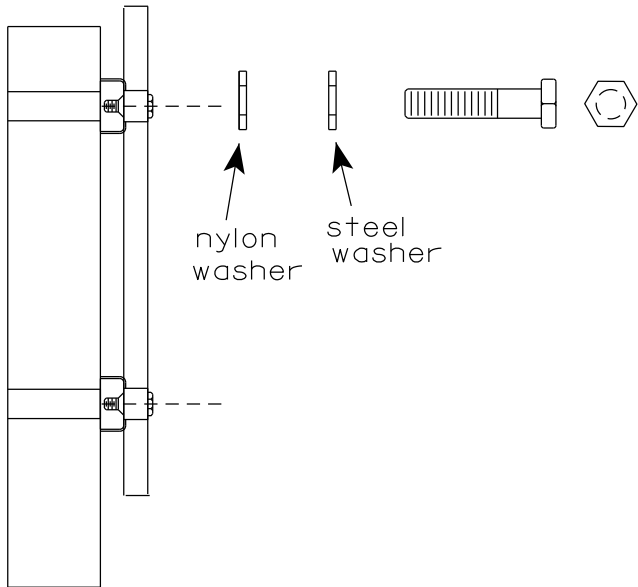
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

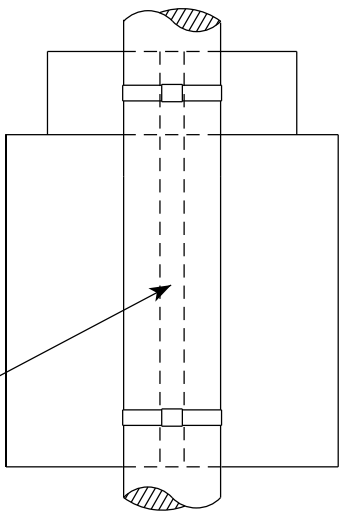


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

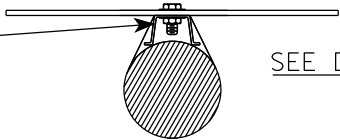
GENERAL NOTES

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

"J" ASSEMBLY



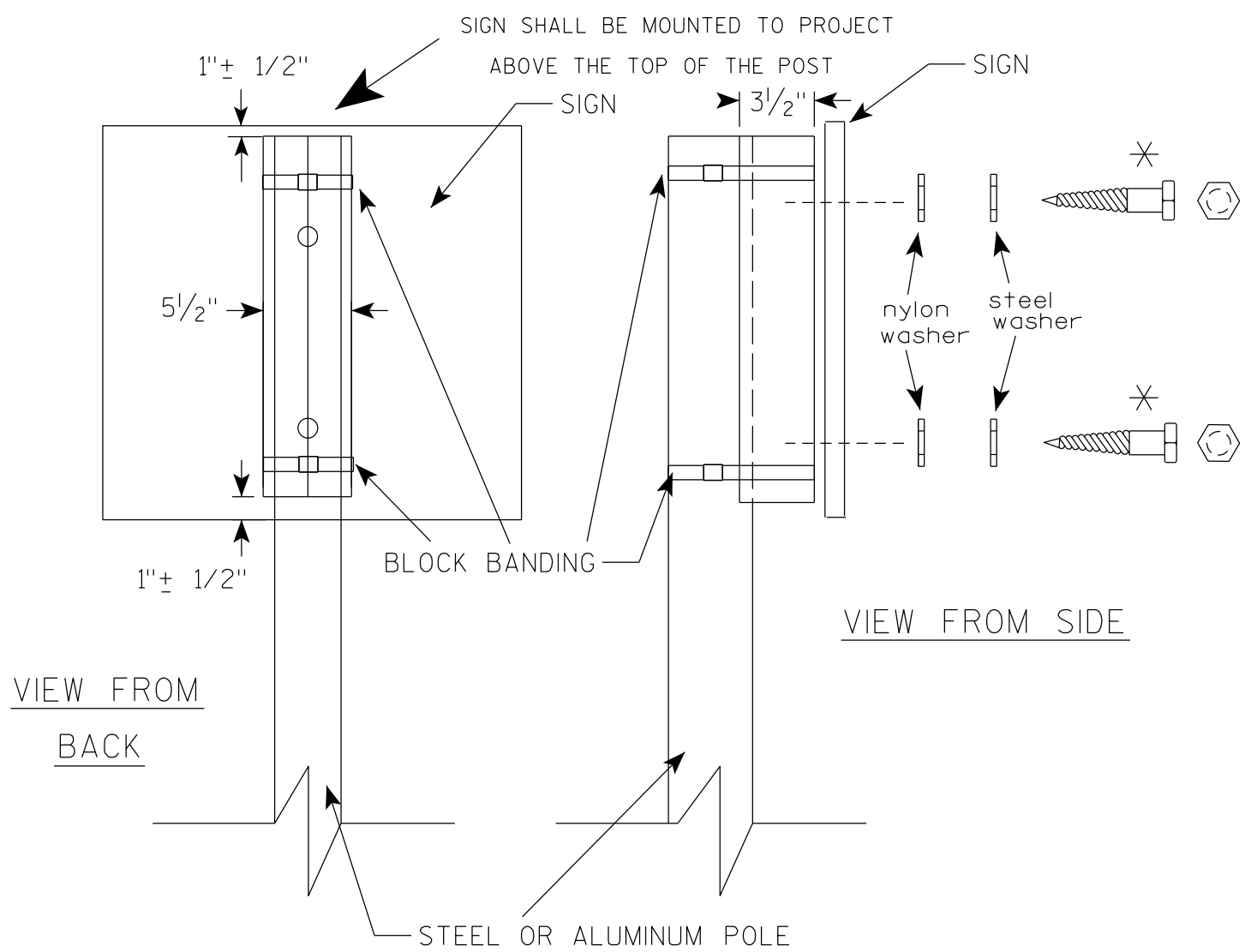
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



STANDARD SIGN
SIGN BANDING DETAILS

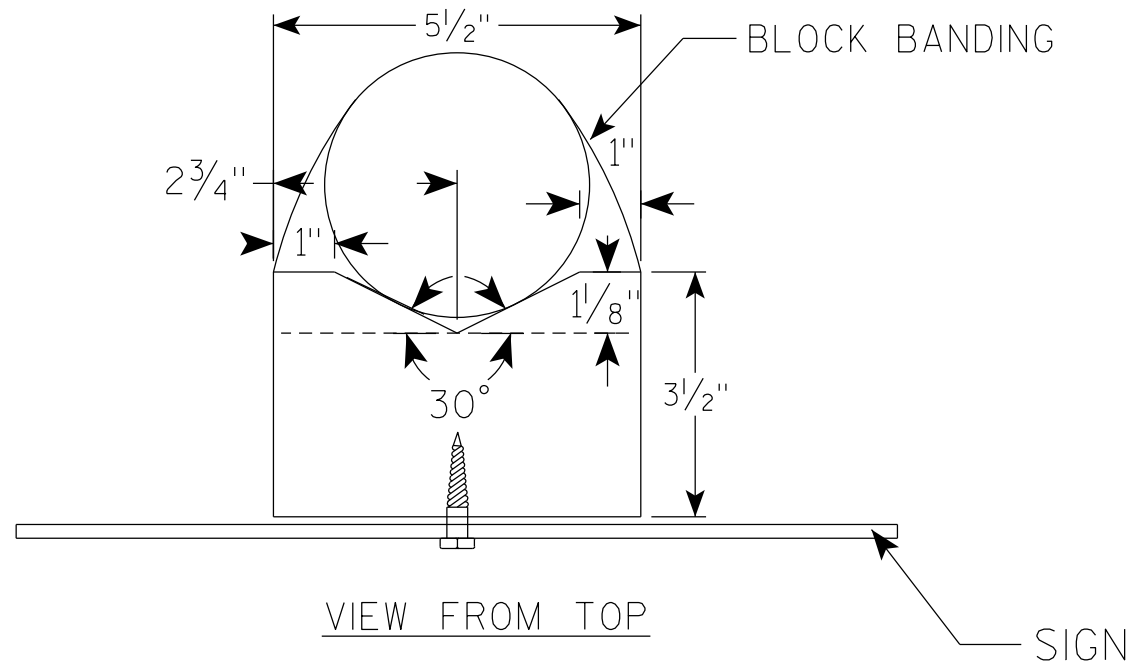
WISCONSIN DEPT OF TRANSPORTATION

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



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

GENERAL NOTES

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

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

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

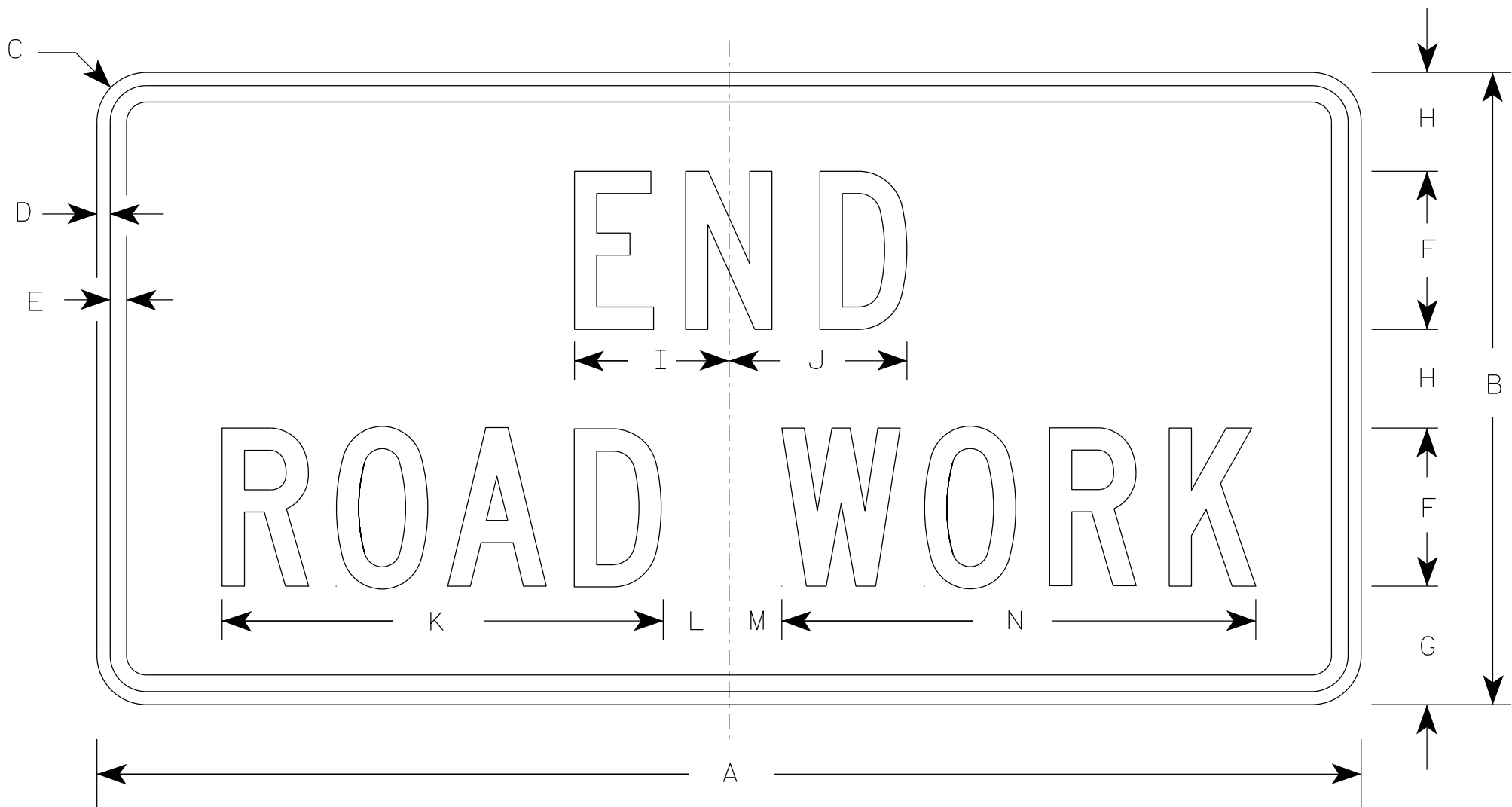
PROJECT NO:

SHEET NO:

E

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.



G20-2A

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 1/2	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5
2	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
2M	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
3	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
4	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
5	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0

STANDARD SIGN

G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - D
- 4. Substitute appropriate numeral and adjust spacing to achieve proper balance.



G20-57

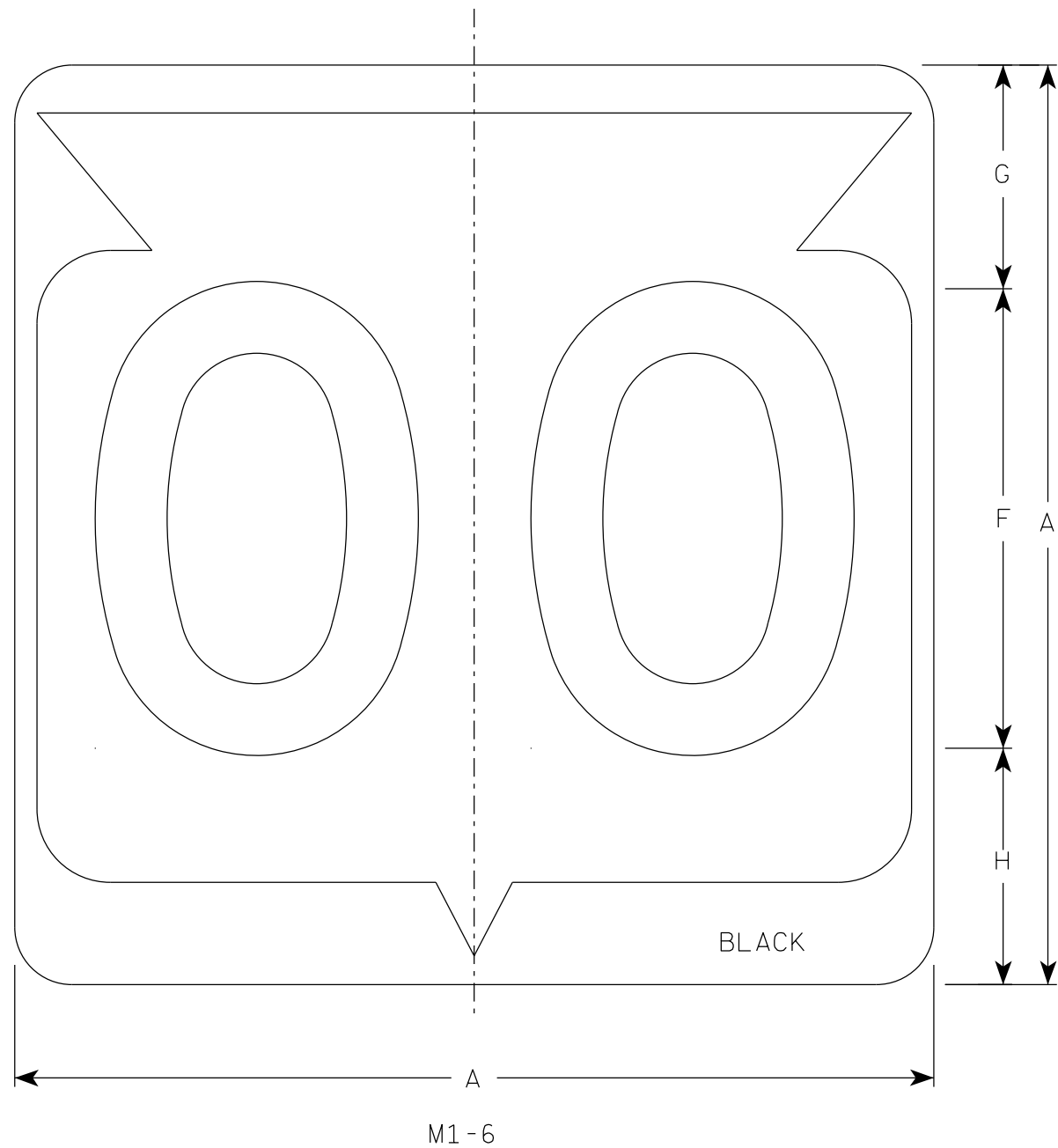
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	21 1/4	3 1/2	1 1/2	23 1/4		29 7/8	1 3/4	3 1/4	28 1/2						18.0
4	96	48	2 1/4	3/4	1	8	6 1/2	5 1/2	20 5/8	2 1/4	6	12 1/4	28 1/4	4 3/8	1 5/8	31		39 1/4	2	4	37 7/8						32.0
5																											

STANDARD SIGN
G20-57

WISCONSIN DEPT OF TRANSPORTATION

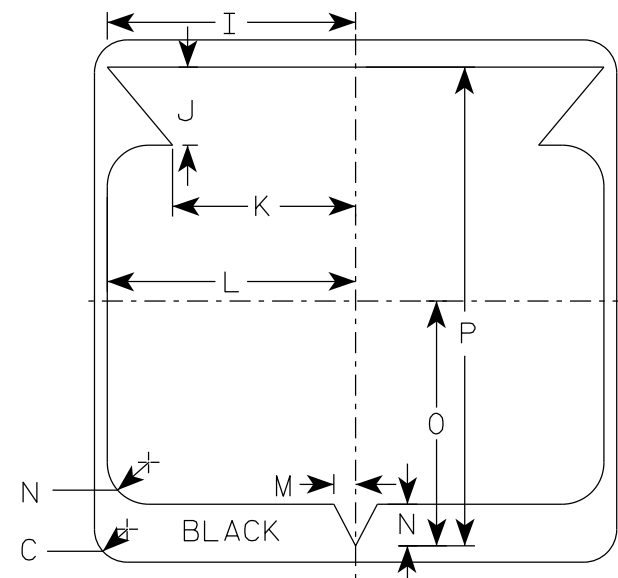
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 1/22/19 PLATE NO. G20-57.3



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D except 3 number signs Series C



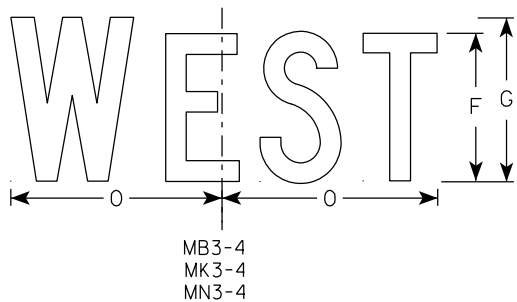
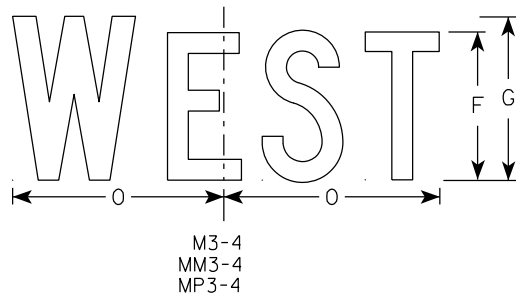
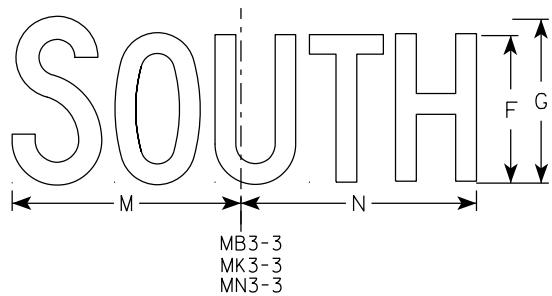
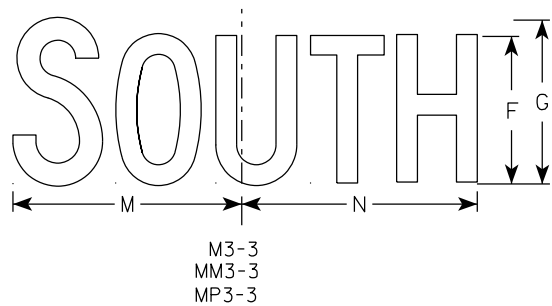
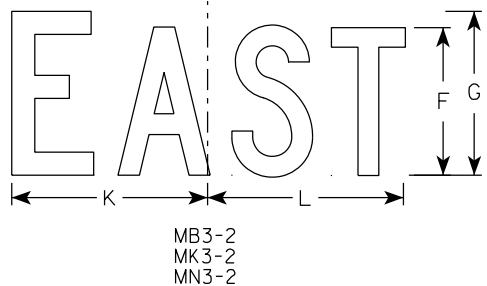
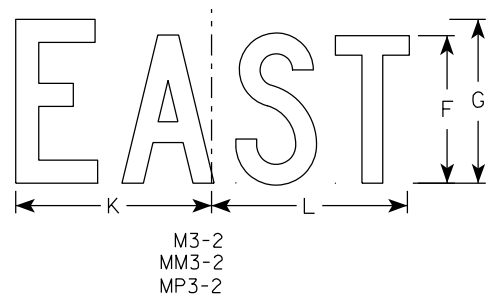
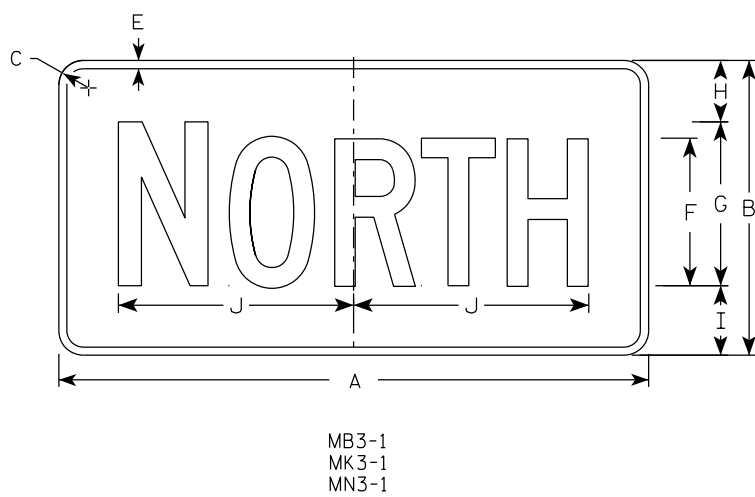
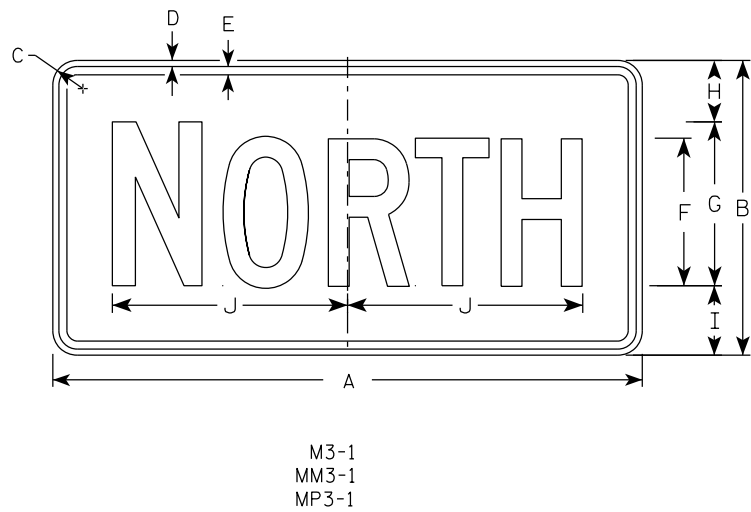
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
2M	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-6.11



NOTES

1. All Signs Type II - Type H Reflective
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																											
2S	24	12	1 1/2	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												2.00
2M	24	12	1 1/2	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												2.00
3	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
4	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
5	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

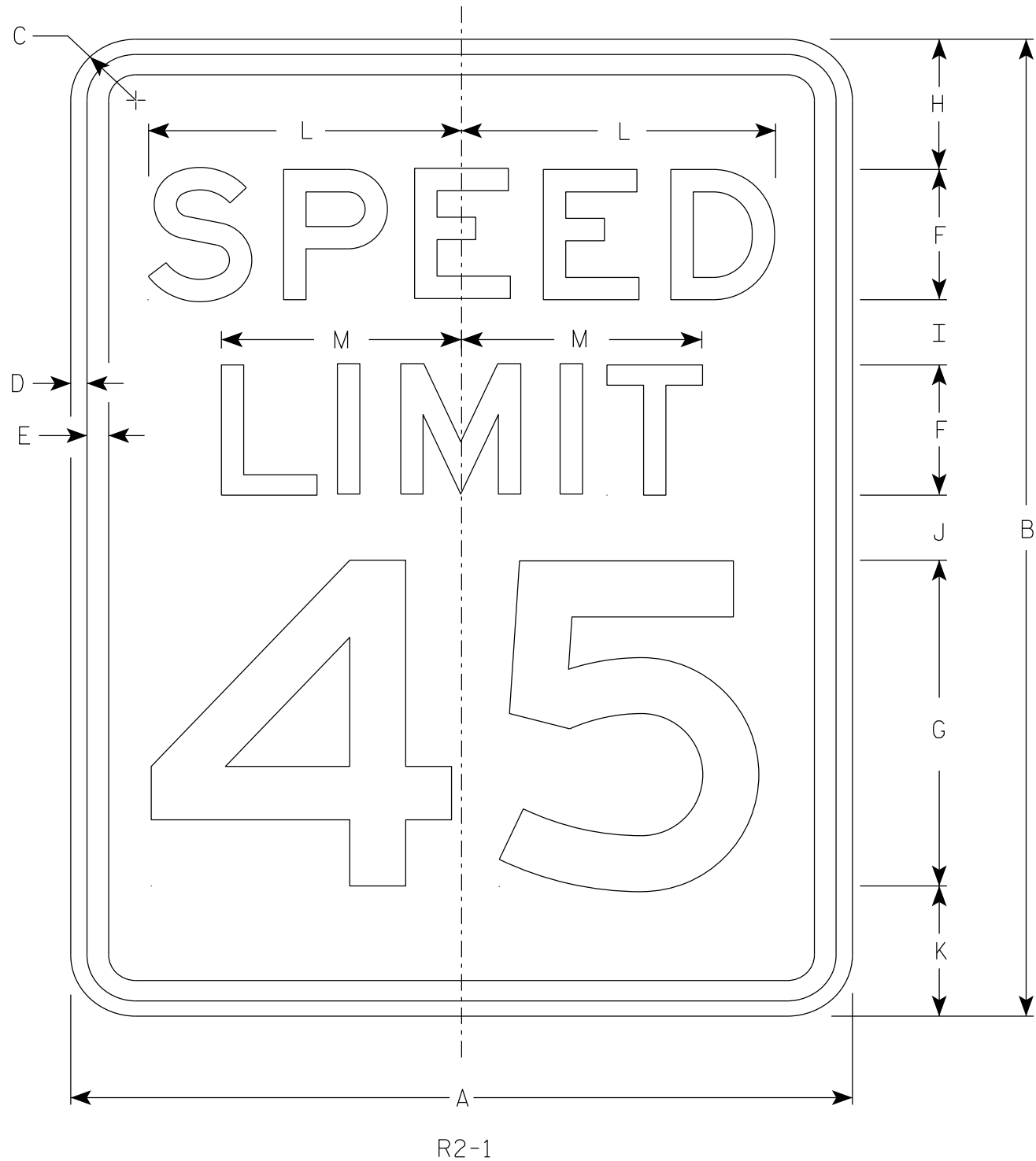
STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - E
- 4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

7

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

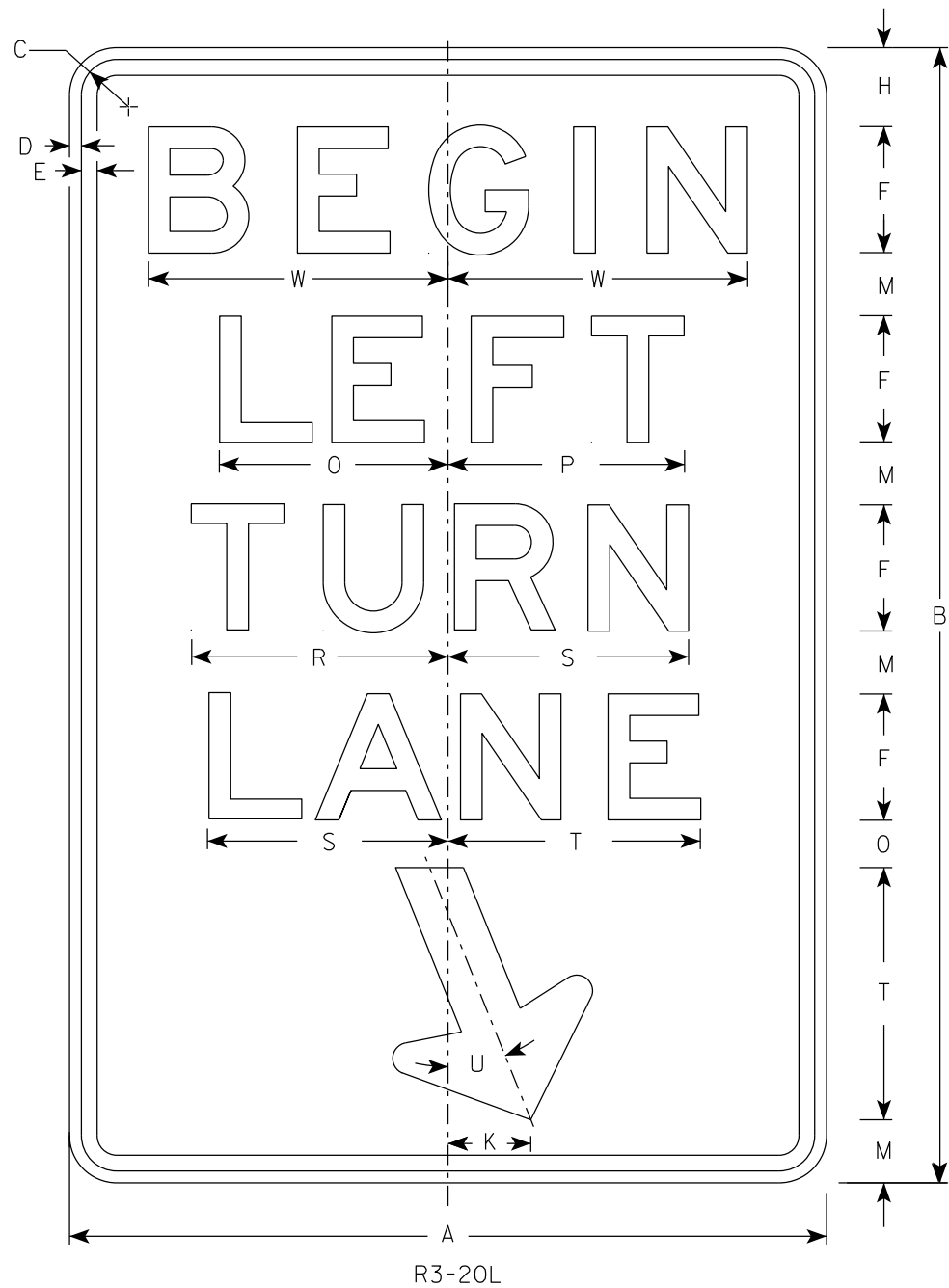
STANDARD SIGN
R2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 2/1/23 PLATE NO. R2-1.14

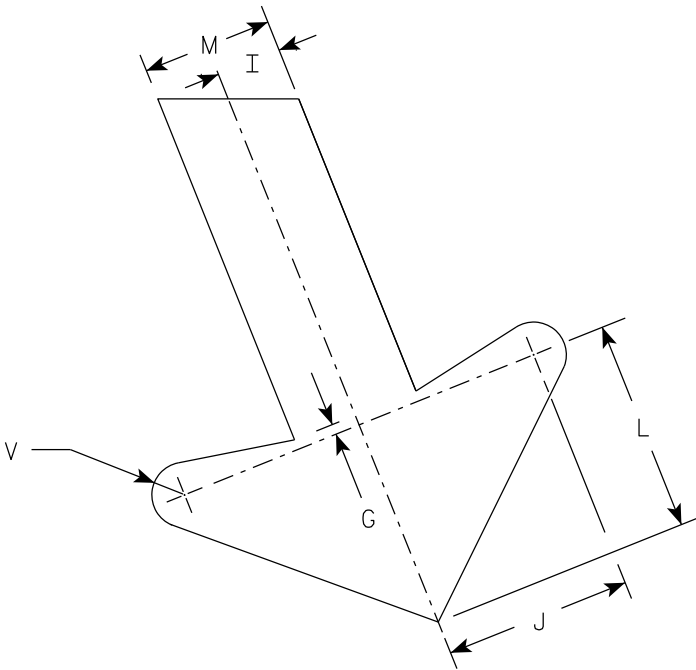
7



R3-20L

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - E



ARROW DETAIL

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/2	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/2	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 7/8	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

PROJECT NO:

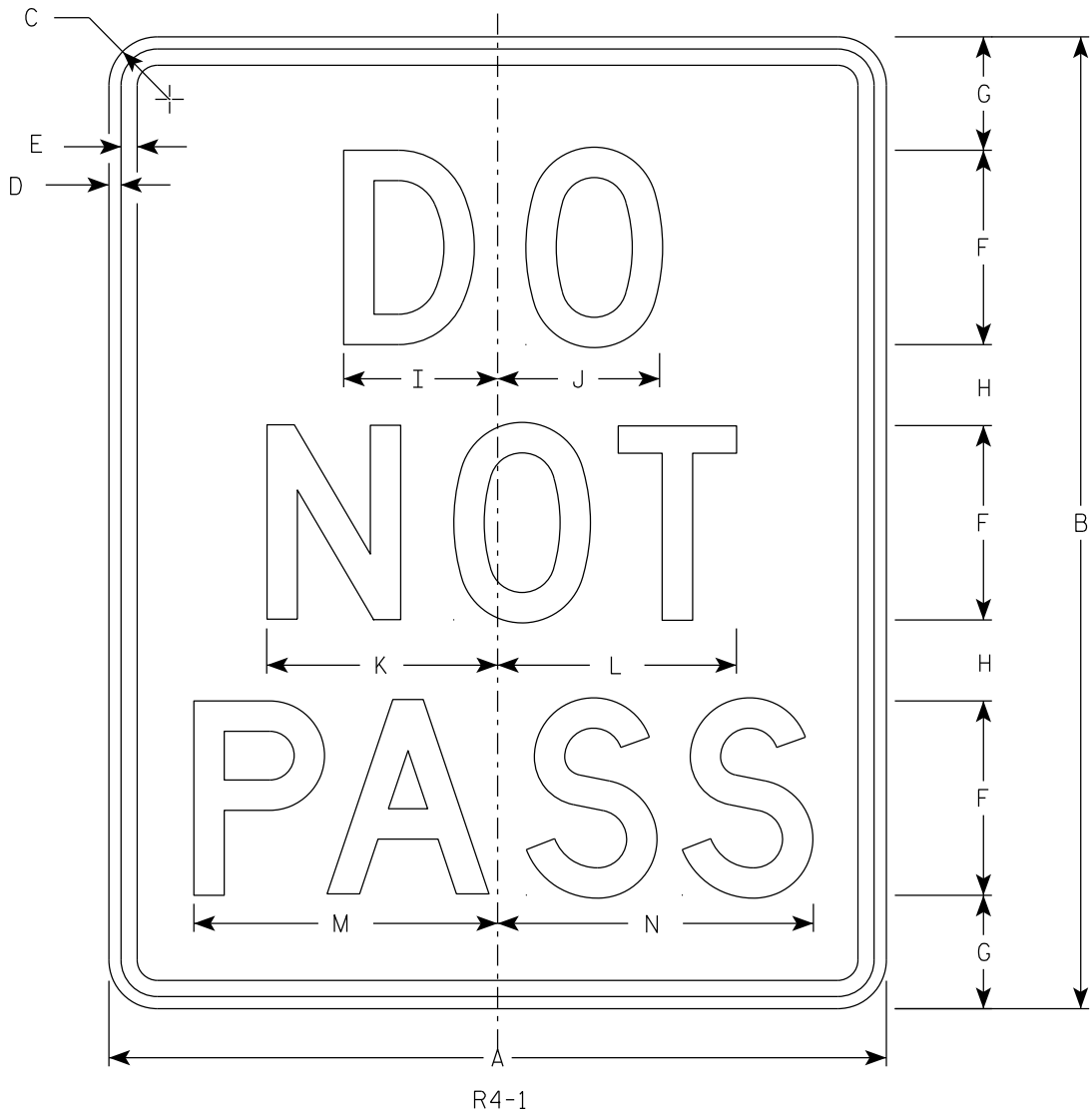
HWY:

COUNTY:

SHEET NO:

E

7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - D

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/2	3/8	1/2	4	3 1/2	2 1/2	3 1/8	3 1/4	4 3/4	4 7/8	6 1/4	6 1/2													3.0
2S	24	30	1 1/2	3/8	1/2	6	3 1/2	2 1/2	4 3/4	5	7 1/8	7 3/8	9 3/8	9 3/4													5.0
2M	24	30	1 1/2	3/8	1/2	6	3 1/2	2 1/2	4 3/4	5	7 1/8	7 3/8	9 3/8	9 3/4													5.0
3	36	48	1 7/8	5/8	3/4	8	7	5	6 1/4	6 5/8	9 1/2	9 3/4	12 1/2	13													12.0
4	36	48	1 7/8	5/8	3/4	8	7	5	6 1/4	6 5/8	9 1/2	9 3/4	12 1/2	13													12.0
5	48	60	3	3/4	1	10	8	7	7 3/4	8 3/8	11 7/8	12 1/4	15 5/8	16 1/4													20.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

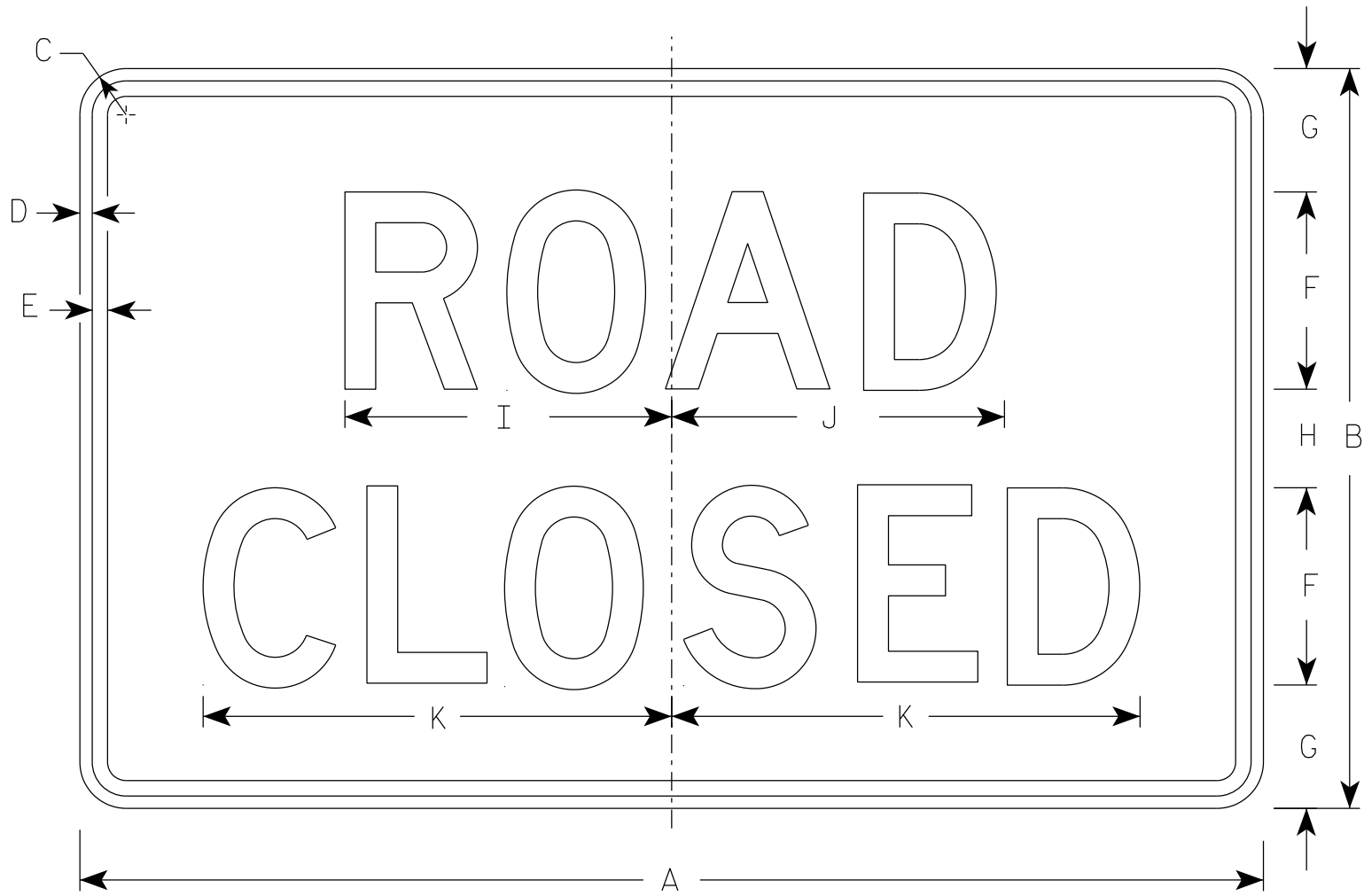
E

STANDARD SIGN
R4-1

WISCONSIN DEPT OF TRANSPORTATION

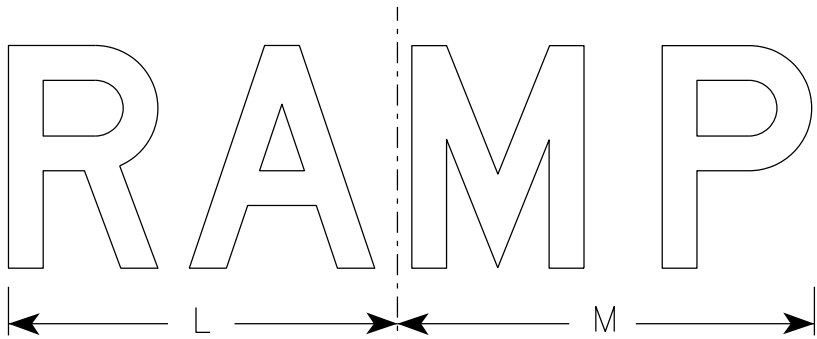
APPROVED
Matthew R. Rauch
For State Traffic Engineer

DATE 3/16/23 PLATE NO. R4-1.8

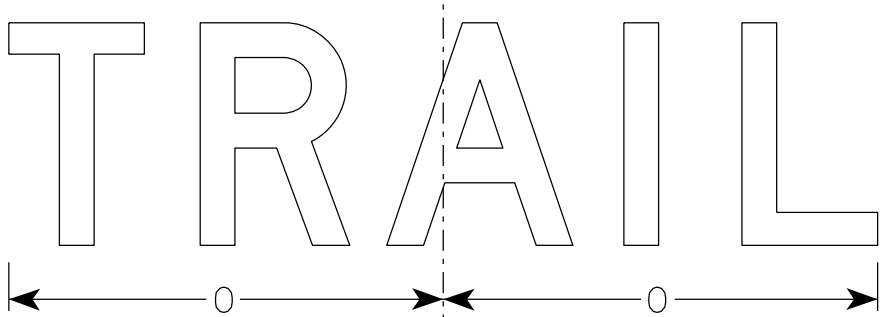


R11-2

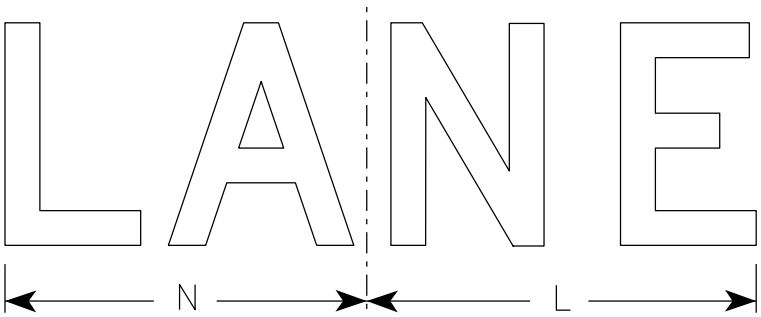
- NOTES
1. Sign is Type II - Type H Reflective
 2. Color:
Background - White
Message - Black
 3. Message Series - D
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 5. Modify the message as required.



R11-2R



R11-2T



R11-2L

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	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

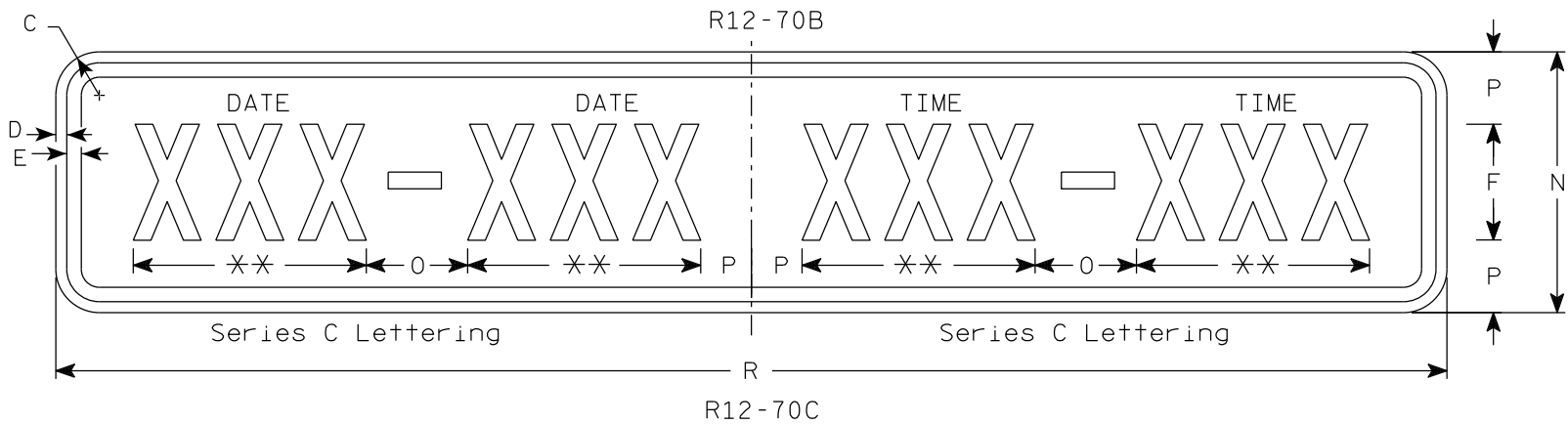
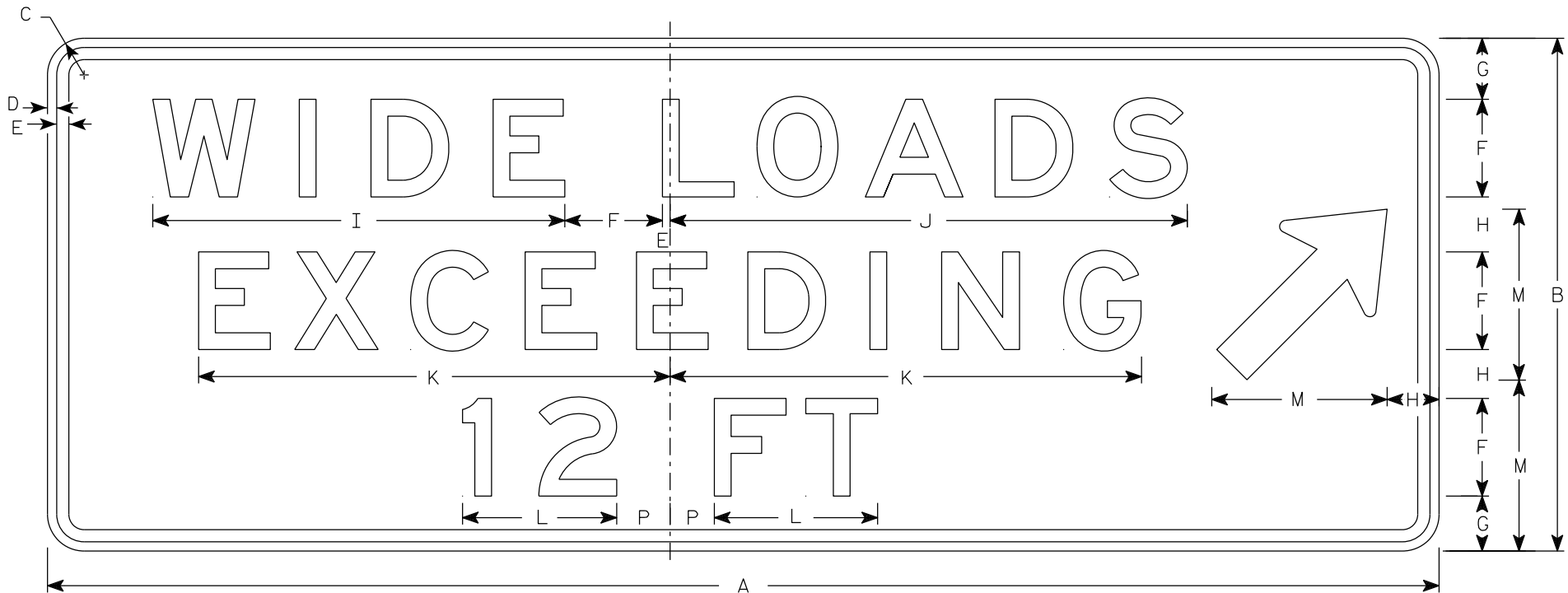
STANDARD SIGN R11-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 2/5/24	PLATE NO. R11-2.12

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - E except as noted
- 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.

** Substitute appropriate message, optically center message



R12-70C																												R12-70	R12-70C
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.	Area sq. ft.	
1																													
2S	90	36	3	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5	
2M	90	36	3	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5	
3	90	36	3	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5	
4	114	42	3	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0	
5	114	42	3	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0	

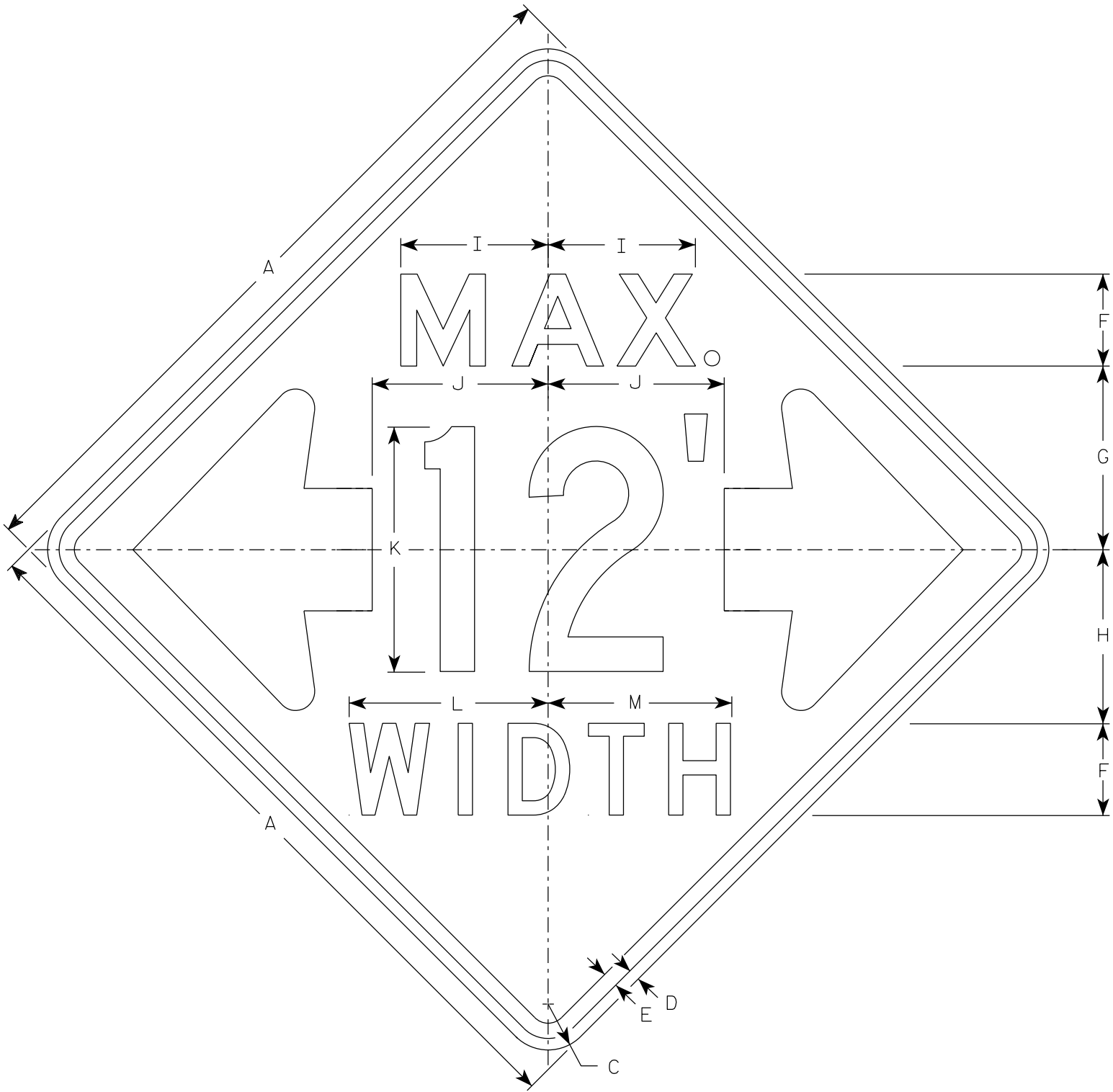
TYPICAL SIGN
R12-70B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/9/24 PLATE NO. R12-70B.4

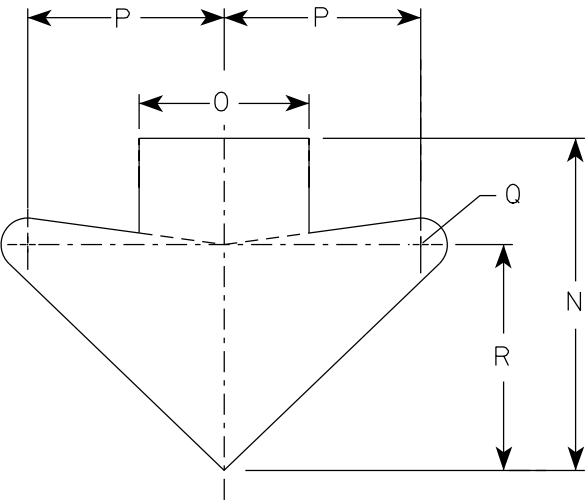
PROJECT NO: HWY: COUNTY: SHEET NO: E



W12-52

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - See note 5
- 4. The top line is series E, the numerals are series C, and the bottom line is series D.
- 5. Substitute appropriate numerals and adjust spacing as required.



ARROW 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																											
2S	48		3	¾	1	6	12	11 ⅜	9 ⅝	11 ½	16	13	12	15 ⅝	8	9 ¼	1 ¼	10 ⅝									16.0
2M	48		3	¾	1	6	12	11 ⅜	9 ⅝	11 ½	16	13	12	15 ⅝	8	9 ¼	1 ¼	10 ⅝									16.0
3																											
4																											
5																											

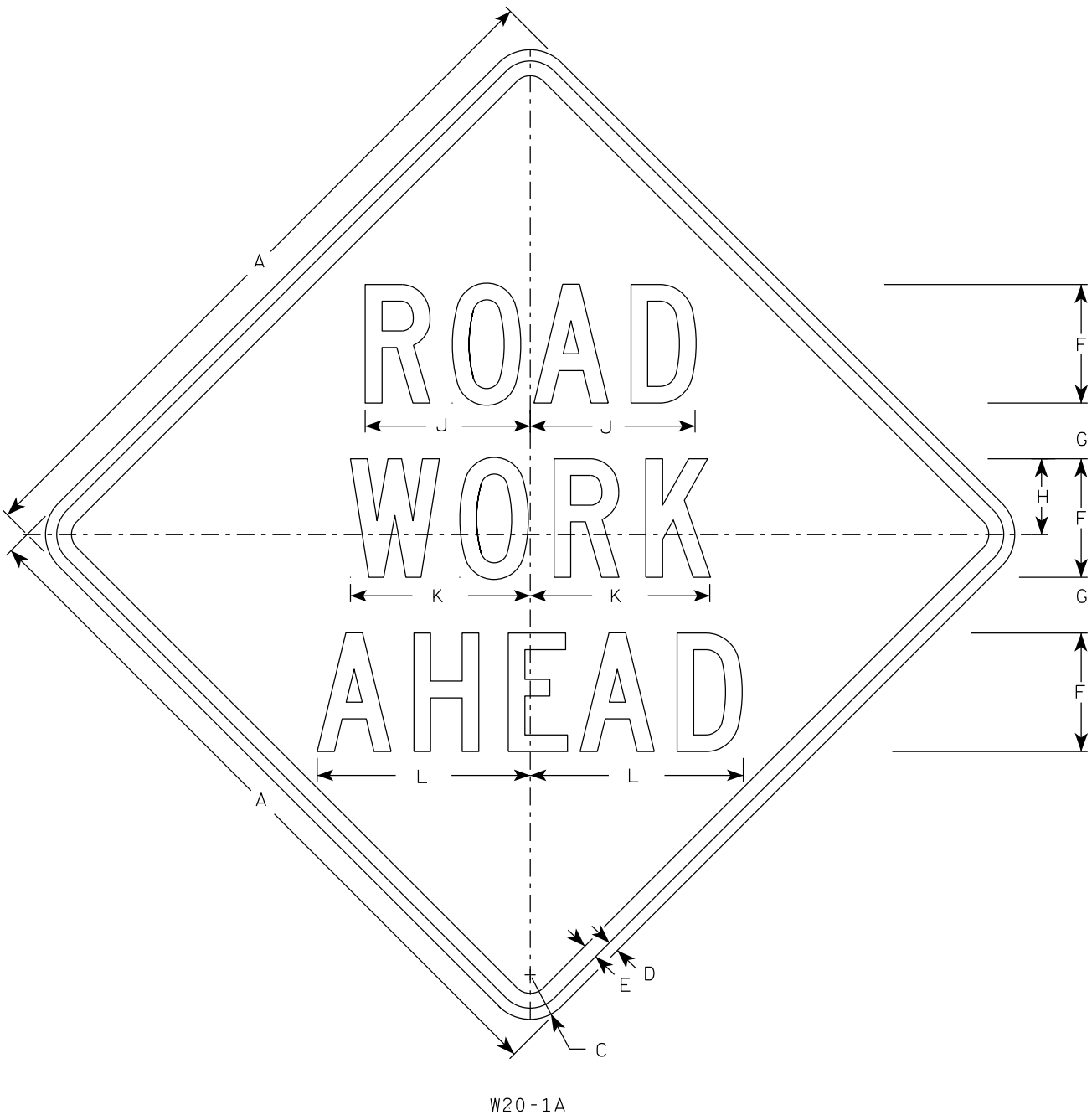
STANDARD SIGN

W12-52

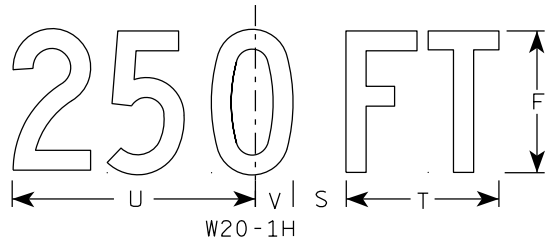
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

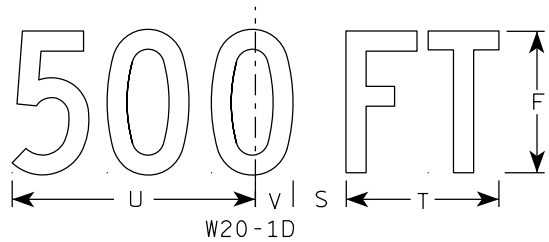
DATE 3/10/2024 PLATE NO. W12-52.8



W20-1A



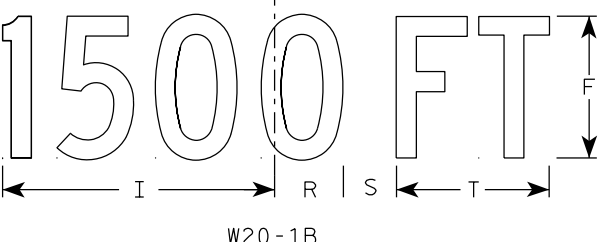
W20-1H



W20-1D

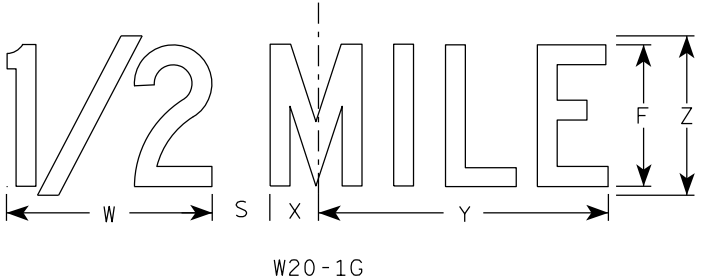


W20-1C

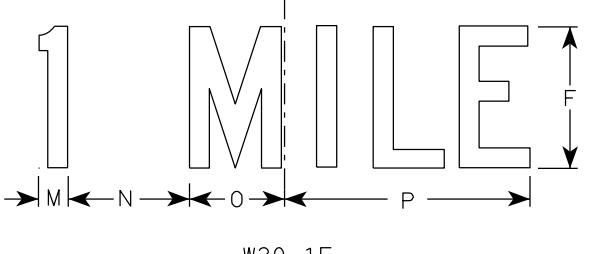


W20-1B

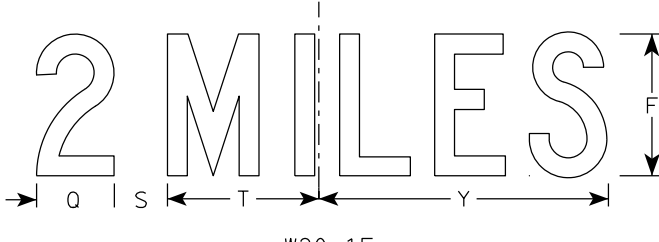
- NOTES
1. Sign is Type II - Type F Reflective
 2. Color:
Background - Orange
Message - Black
 3. Message Series - C
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G

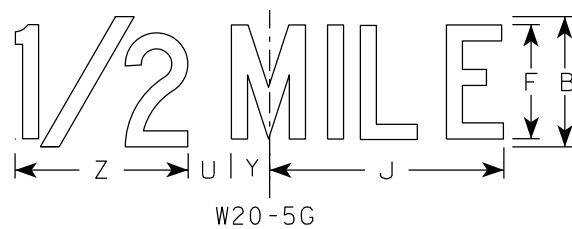
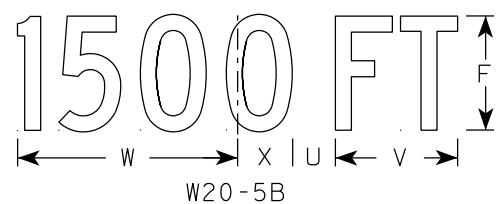
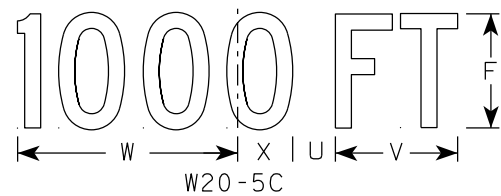
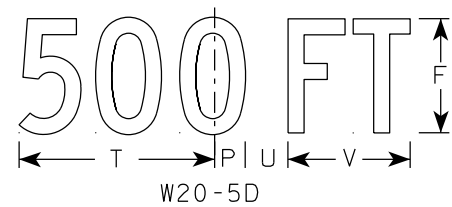
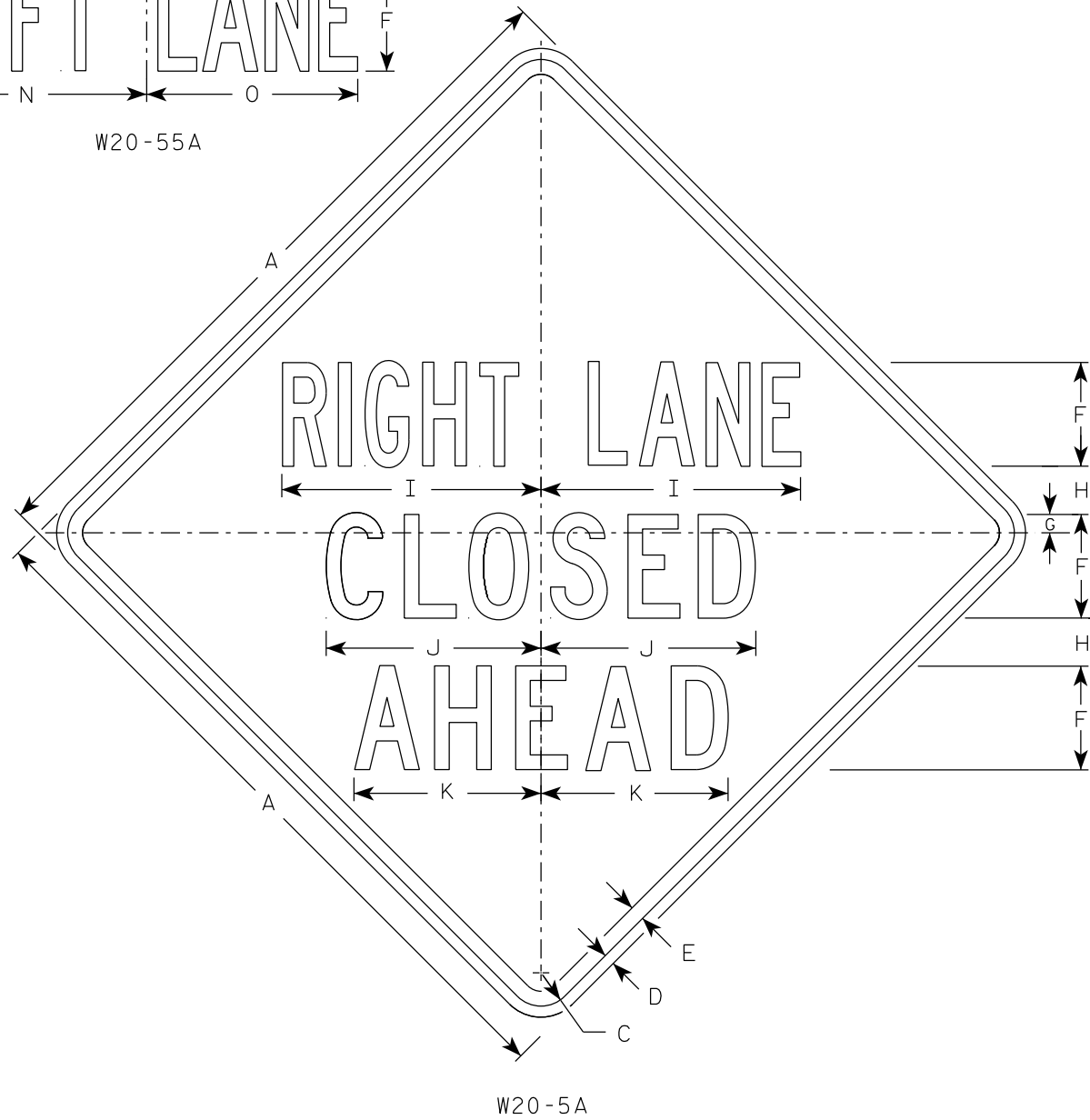
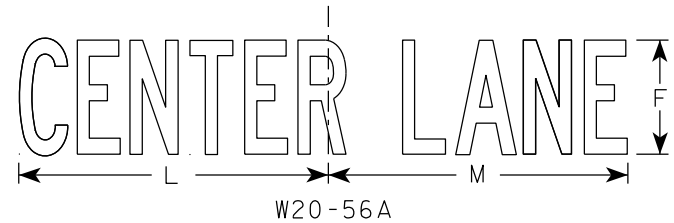


W20-1F



W20-1E

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		2 1/4	5/8	3/4	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	3 1/4	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		3	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		3	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		3	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		3	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		3	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



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
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. " _____ LANE" is Series B.
All other copy is Series C.

7

7

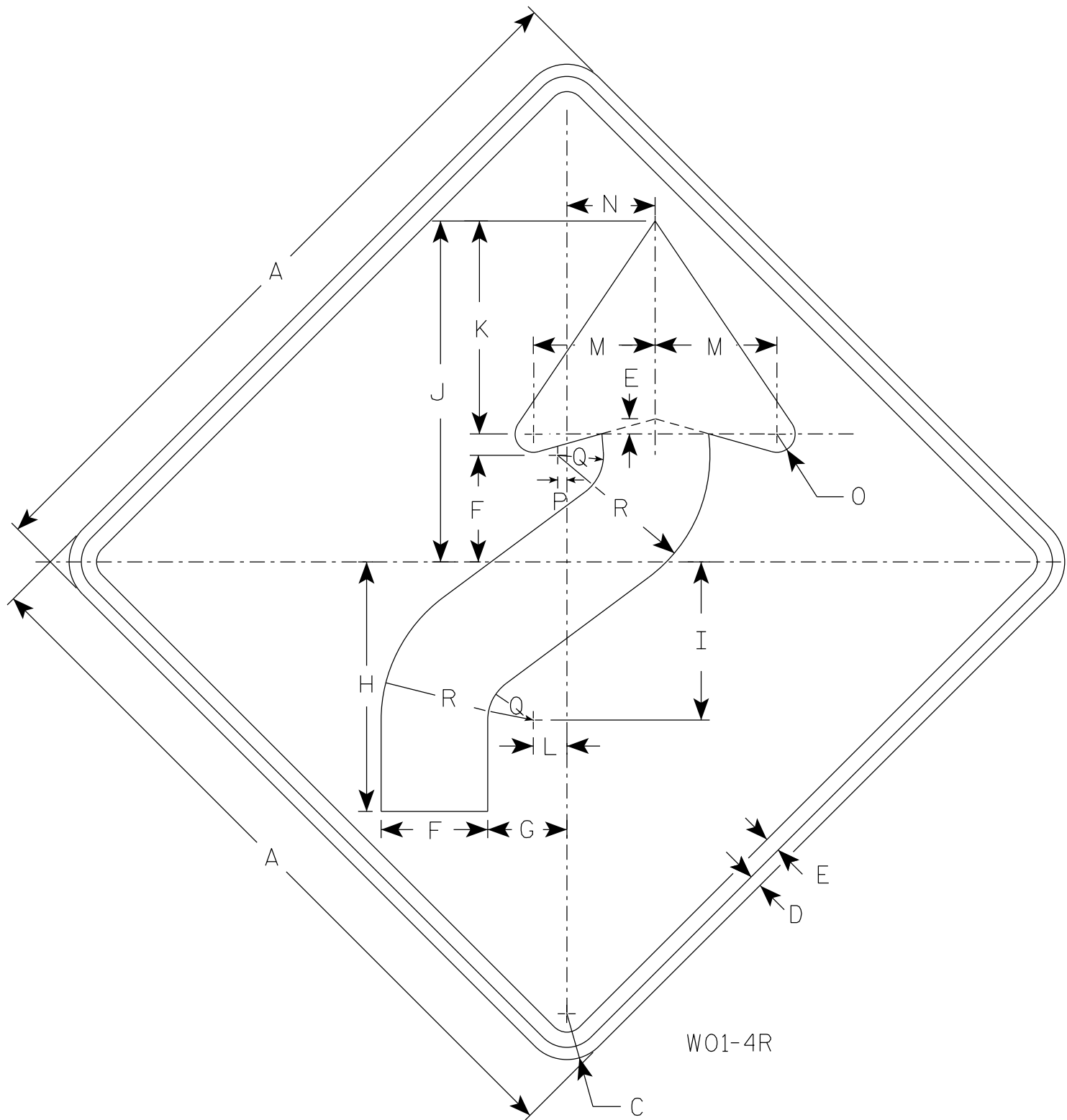
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	2 1/4	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/27/24 PLATE NO. W20-5.12



NOTES

- 1. Sign is Type II - Type F Reflective
- 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.
- 4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

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		2 1/4	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

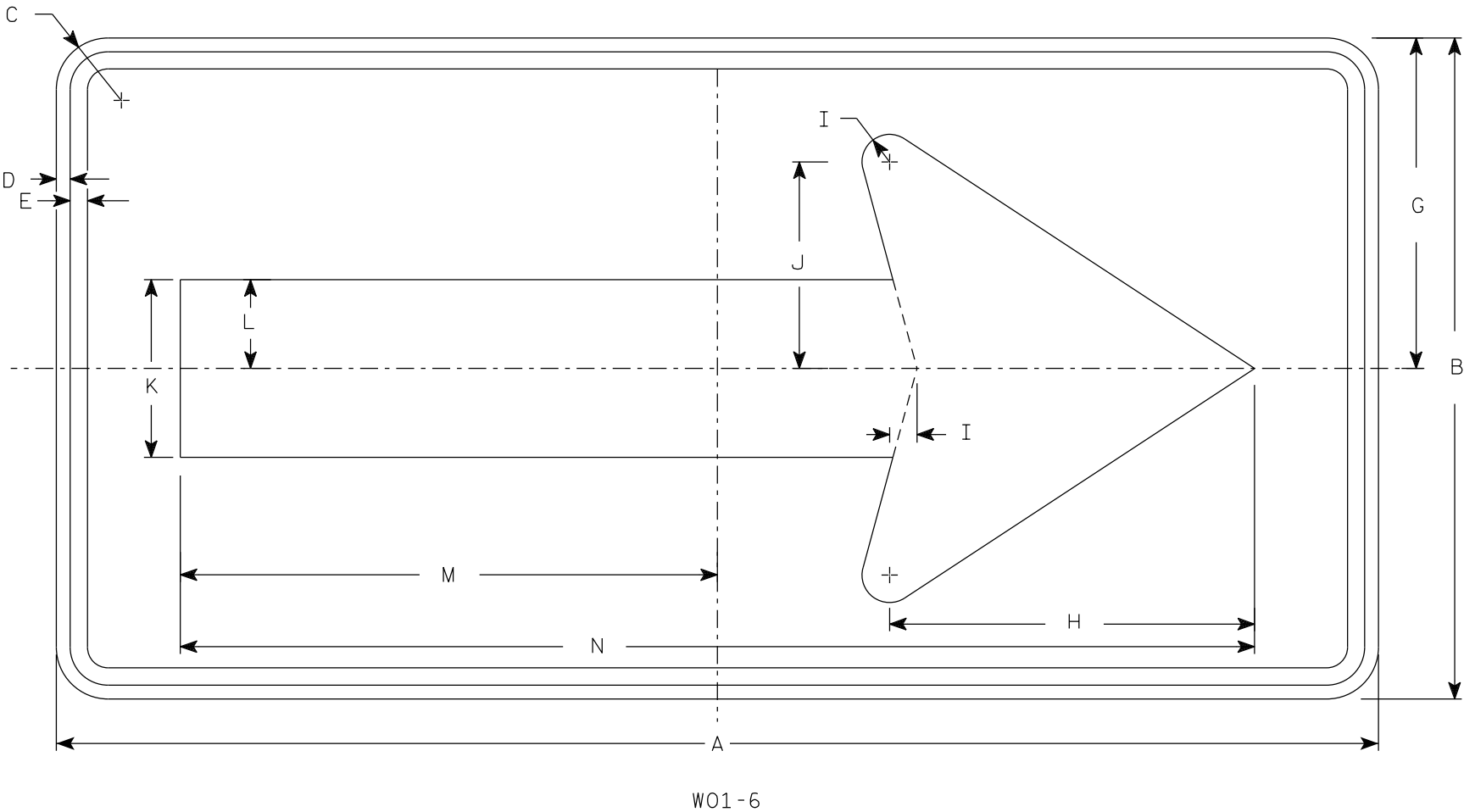
STANDARD SIGN
W01-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-4.2

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 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.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN

W01-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

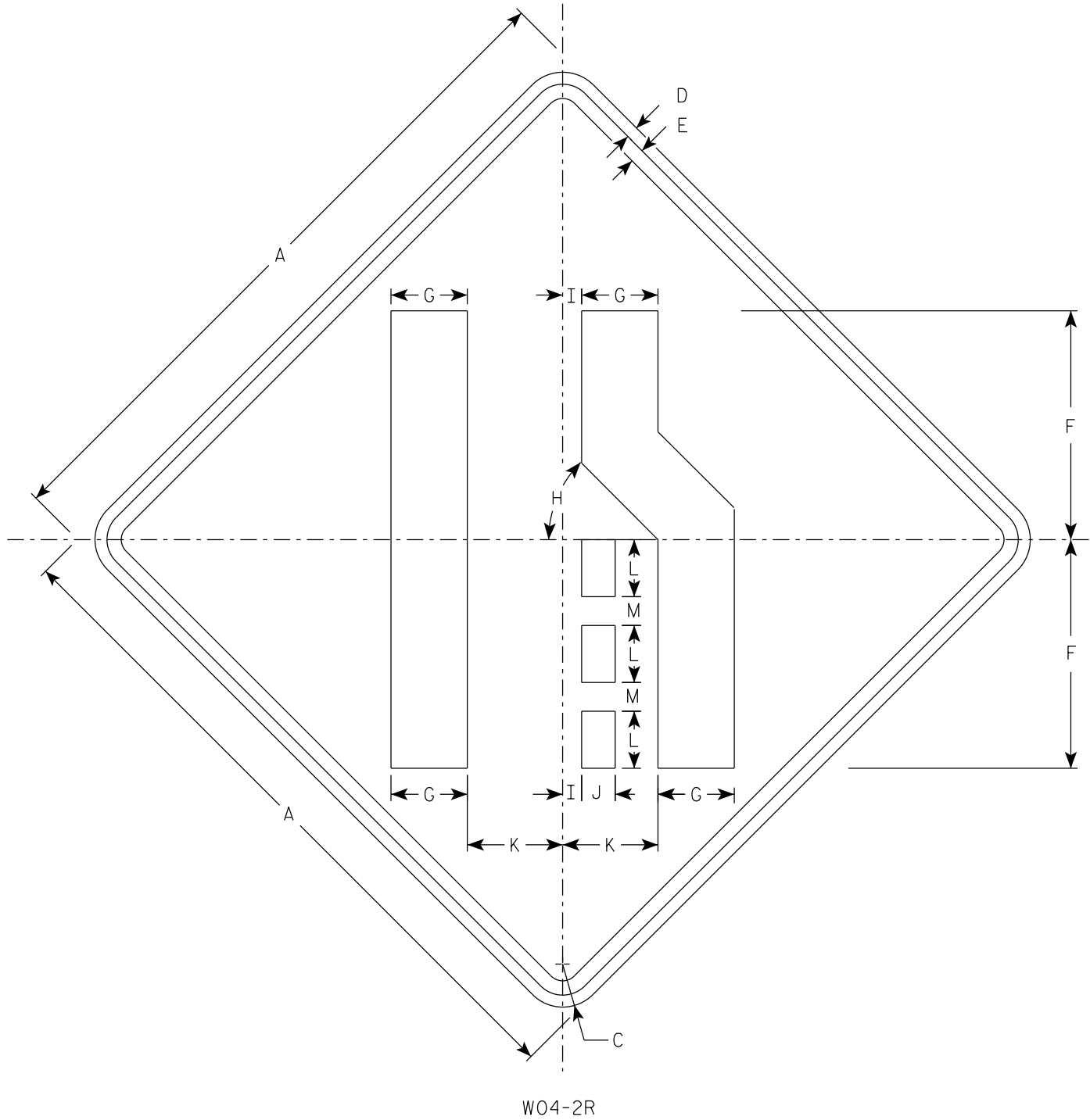
Matthew R. Rauch

for State Traffic Engineer

DATE 1/24/2024

PLATE NO. W01-6.2

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 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.
- 4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

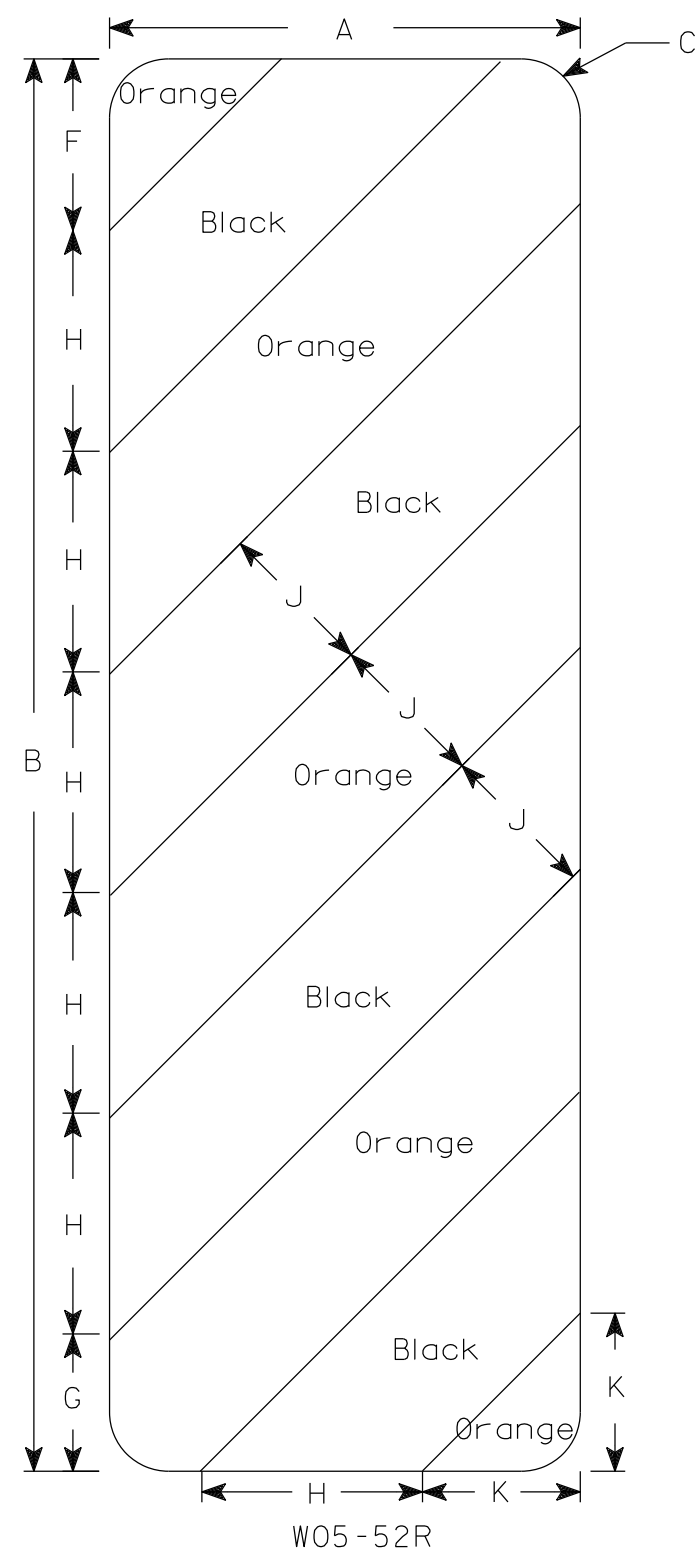
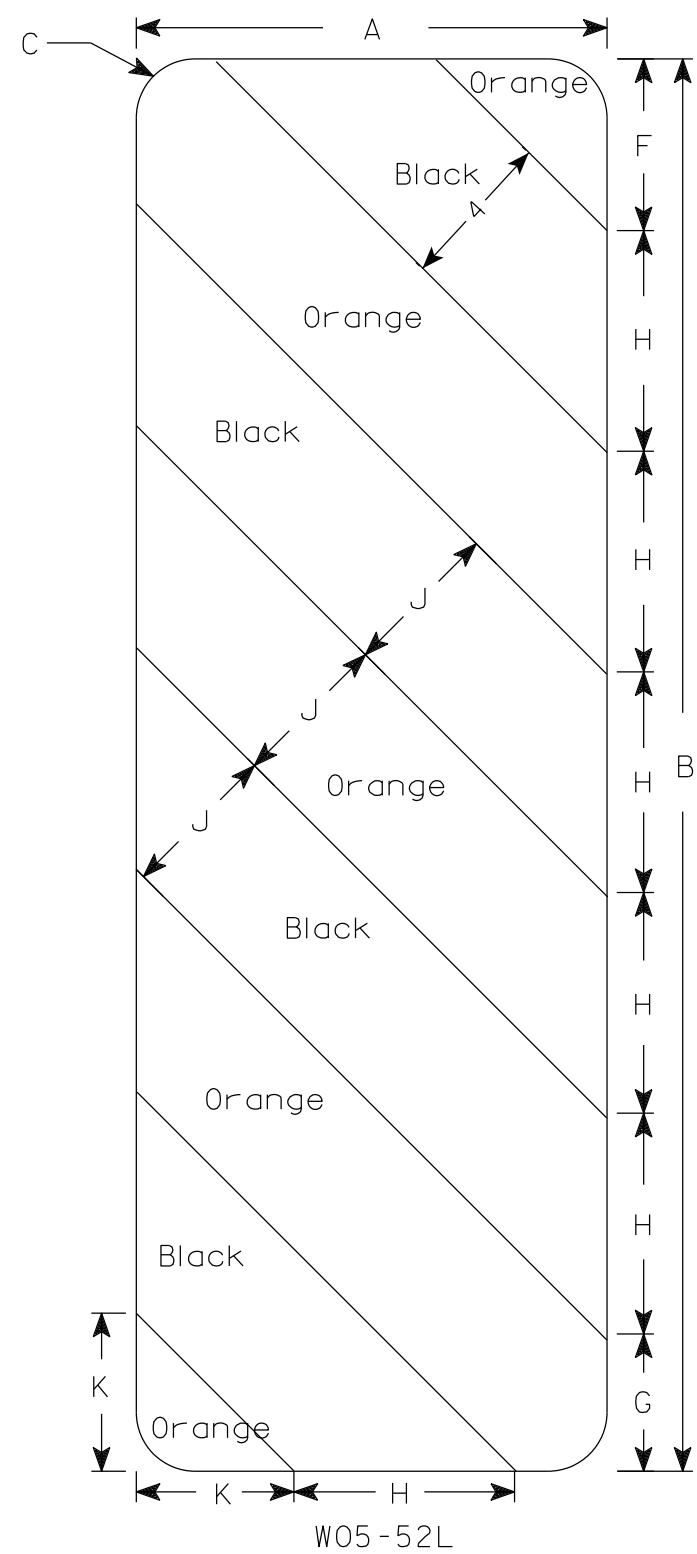
7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

PROJECT NO:

SHEET NO:

E



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
4. Alternate colors of stripes as shown.

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	Areg sq. ft.
1																											
2S	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54	1 1/2			6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

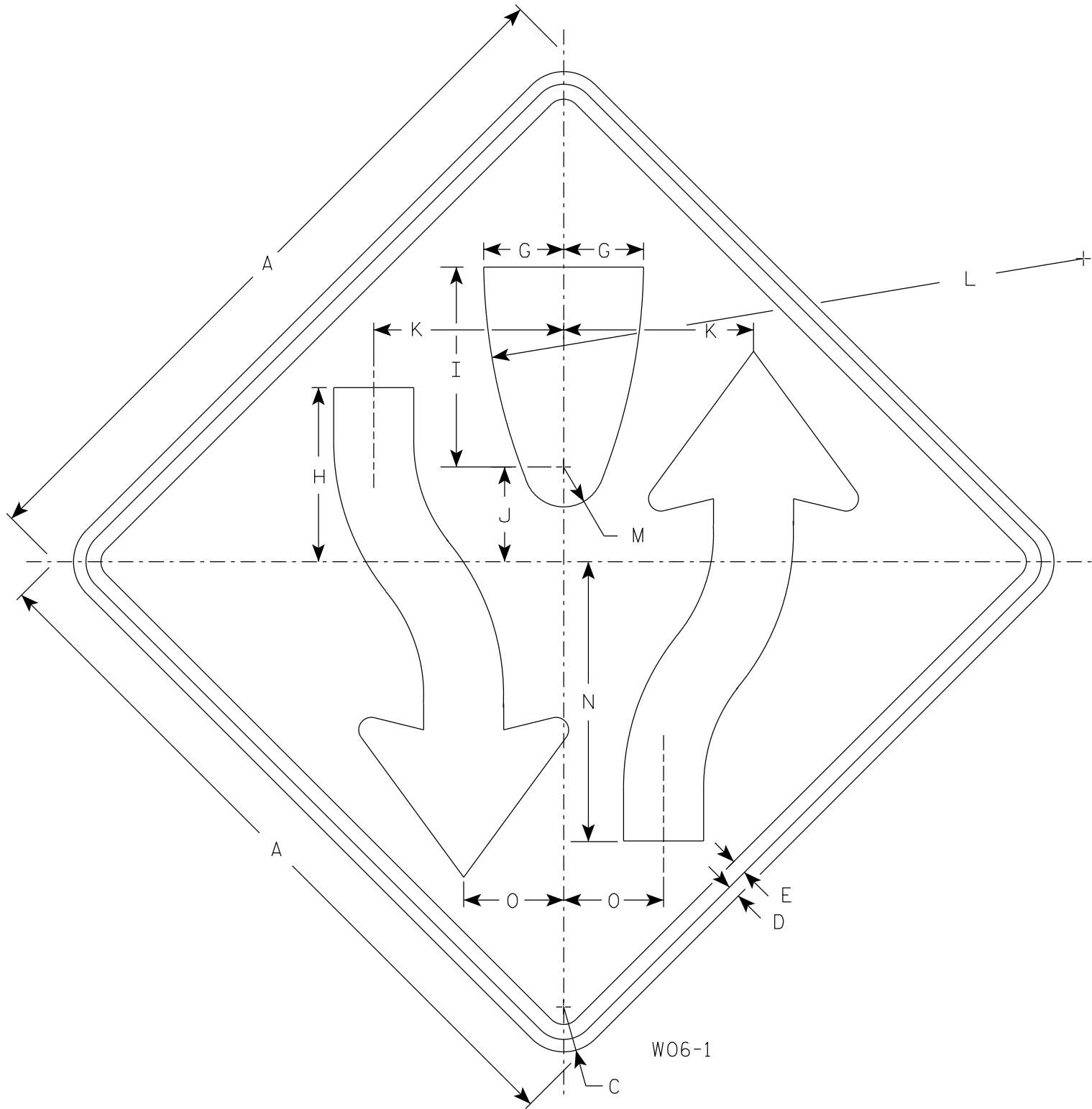
PROJECT NO:				HWY:				COUNTY:				SHEET NO:												E
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STANDARD SIGN
W05-52L & W05-52R

WISCONSIN DEPT OF TRANSPORTATION

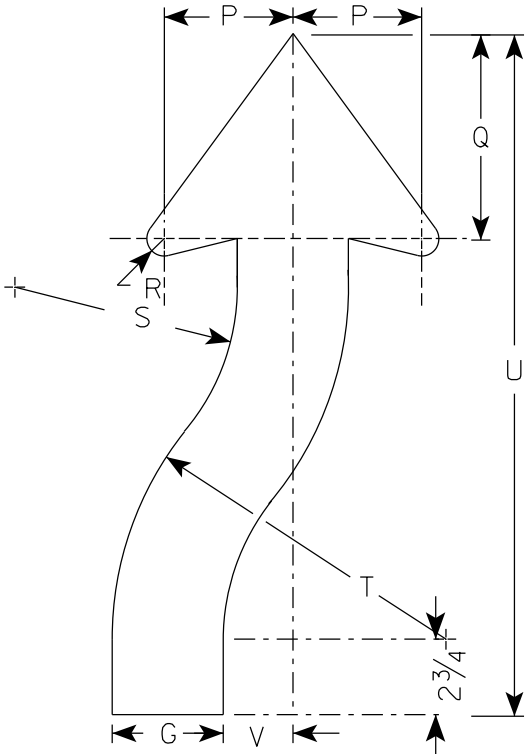
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/13/2024 PLATE NO. W05-52.2



NOTES

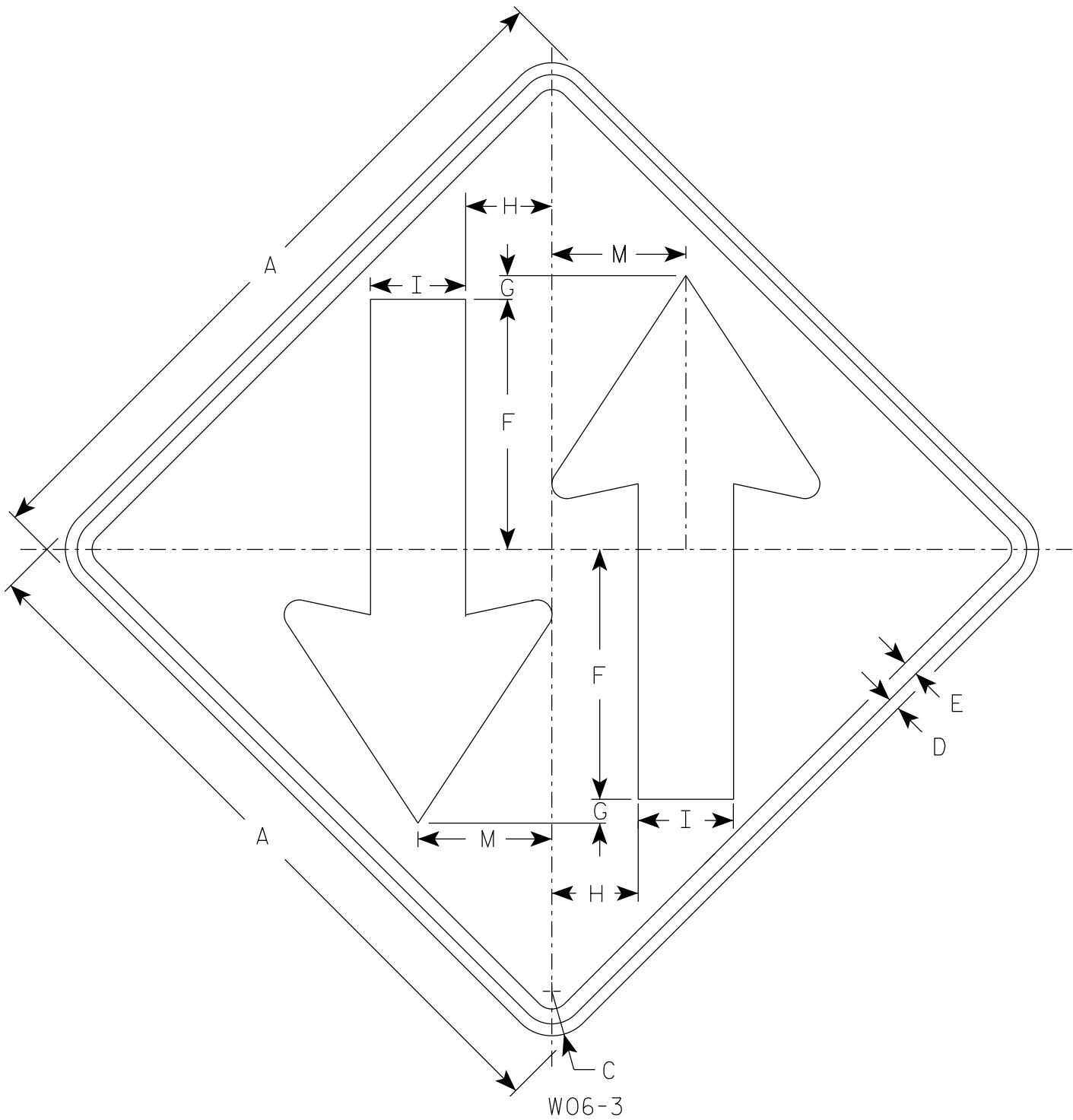
- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. W06-2 same as W06-1 but is rotated 180° when mounted.



ARROW 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	36		2 1/4	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
2S	48		3	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
2M	48		3	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
3	48		3	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
4	48		3	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
5	48		3	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0

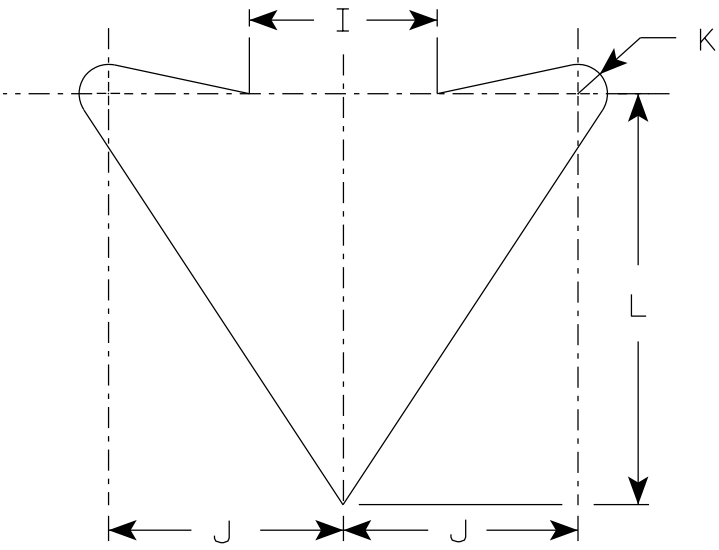
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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W06-3

NOTES

- 1. Sign is Type II - Type F Reflective
- 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.



ARROW 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	36		2 1/4	5/8	3/4	12	1	4 1/4	5	6	3/4	10 1/2	6 3/4														9.0
2S	48		3	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
2M	48		3	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
3	48		3	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
4	48		3	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0
5	48		3	3/4	1	15 1/2	1	6	6	8	1	14	9														16.0

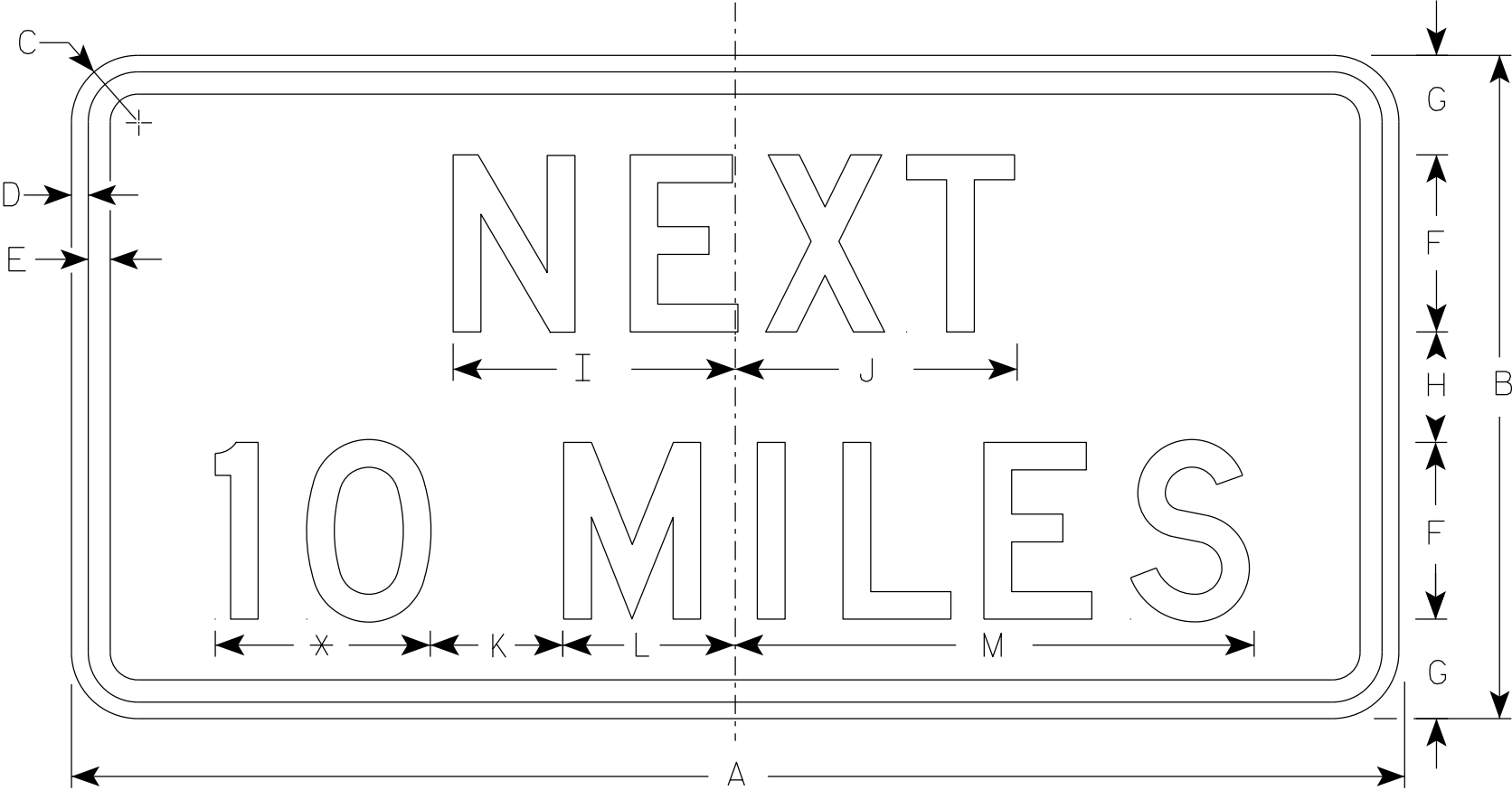
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



W057-51

* See note 5

NOTES

- 1. Sign is Type II - Type F Reflective
- 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.
- 5. Round distance to the nearest whole Mile and 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	36	18	1 1/2	3/8	1/2	5	2 3/4	2 1/2	7 7/8	8	5	4 1/8	15 3/8														4.5
2S	48	24	1 7/8	1/2	5/8	6	4	4	10	10 1/8	6	5 5/8	19														8.0
2M	48	24	1 7/8	1/2	5/8	6	4	4	10	10 1/8	6	5 5/8	19														8.0
3	48	24	1 7/8	1/2	5/8	6	4	4	10	10 1/8	6	5 5/8	19														8.0
4	48	24	1 7/8	1/2	5/8	6	4	4	10	10 1/8	6	5 5/8	19														8.0
5	48	24	1 7/8	1/2	5/8	6	4	4	10	10 1/8	6	5 5/8	19														8.0

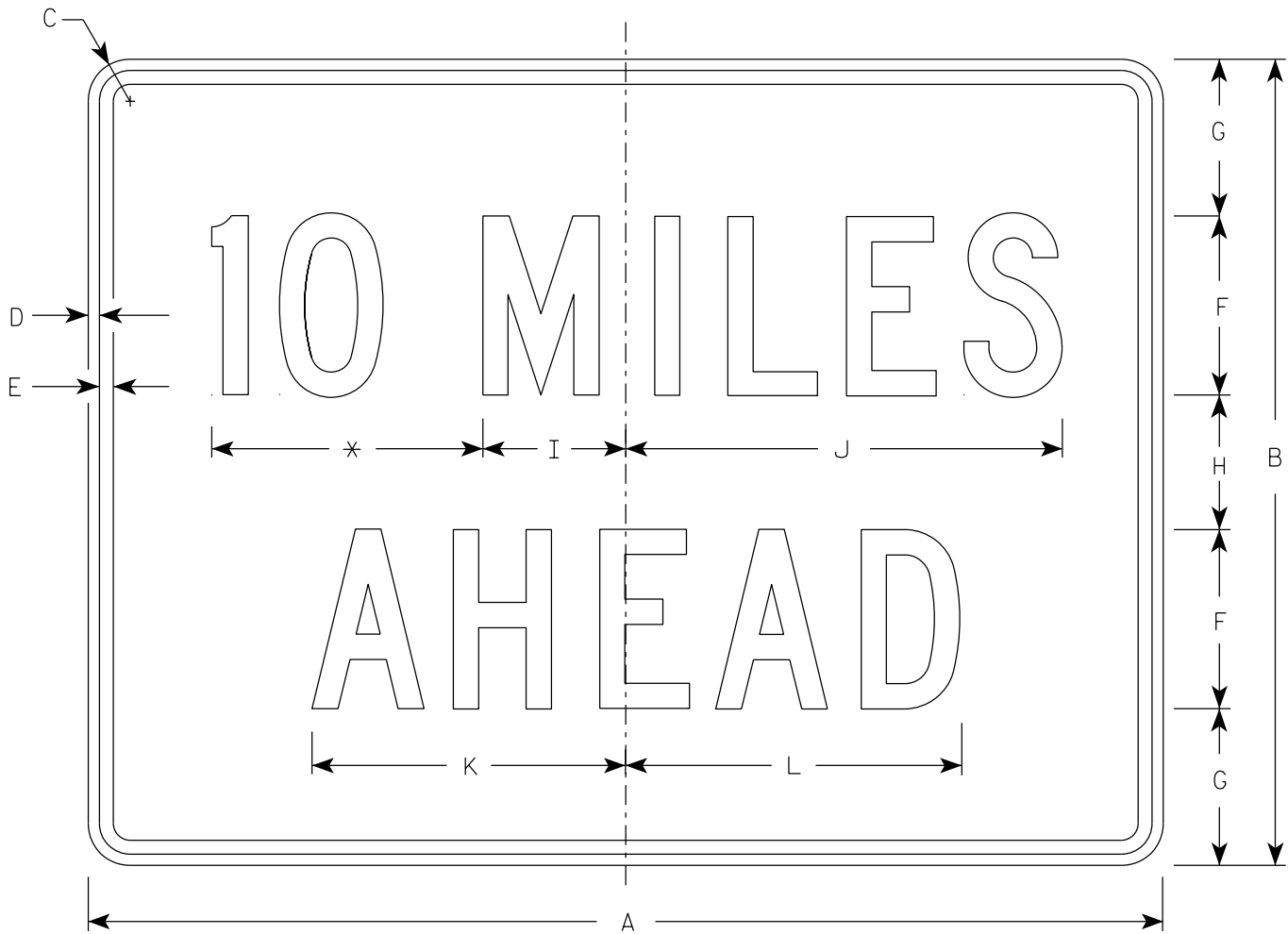
STANDARD SIGN
W057-51

WISCONSIN DEPT OF TRANSPORTATION

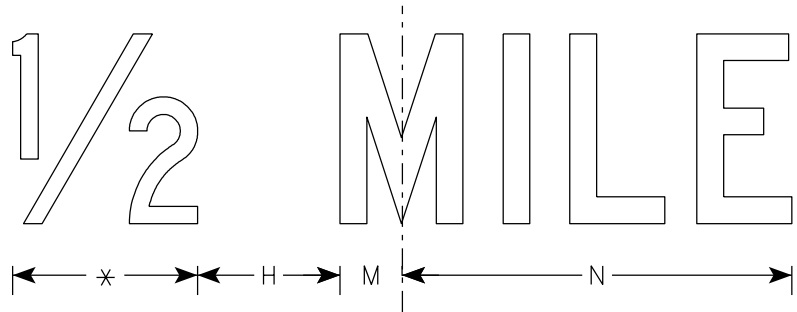
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/1/2024 PLATE NO. W057-51.4

7



W057-52



* See note 5

NOTES

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

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/2	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	2 1/4	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

STANDARD SIGN
W057-52

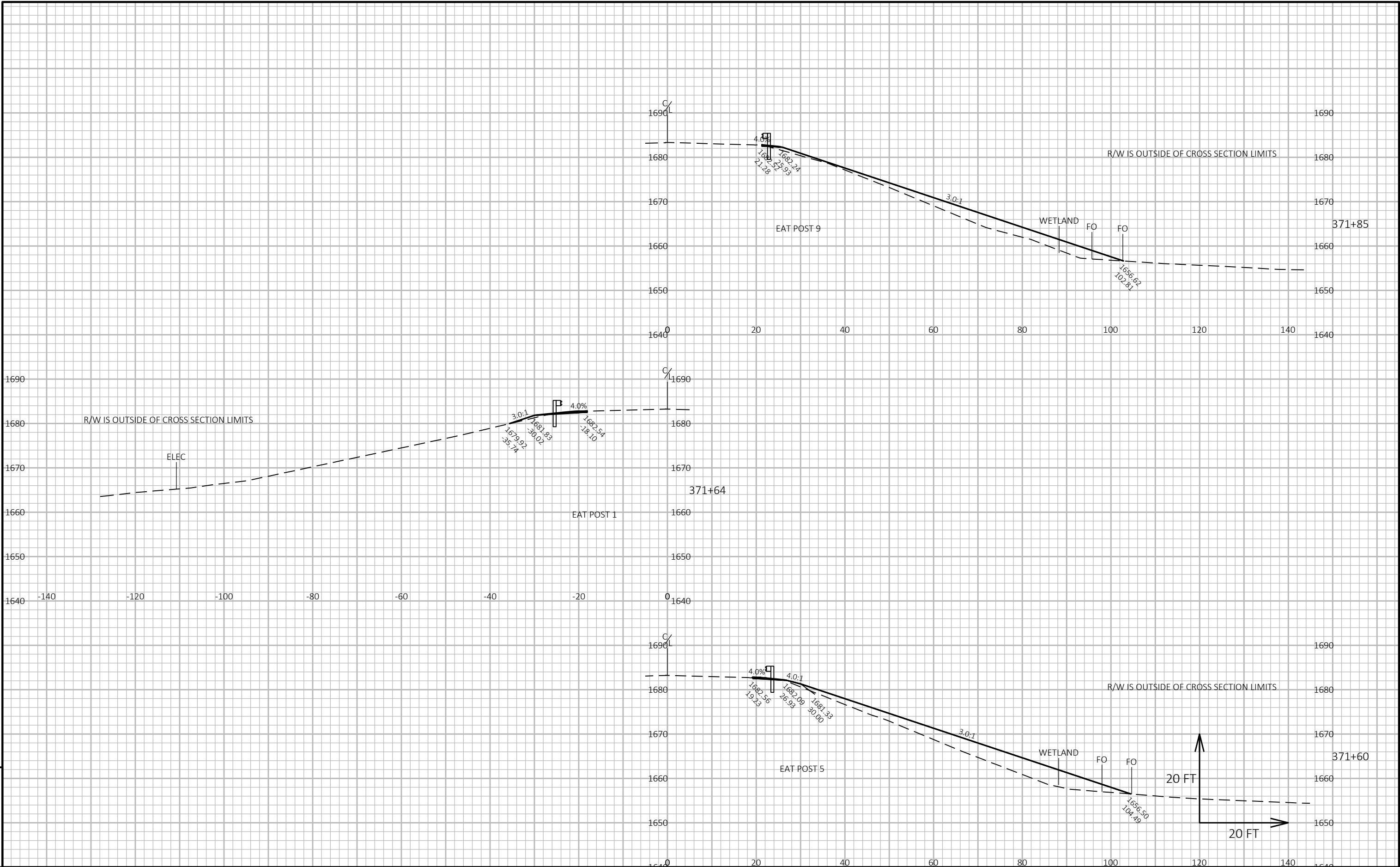
WISCONSIN DEPT OF TRANSPORTATION

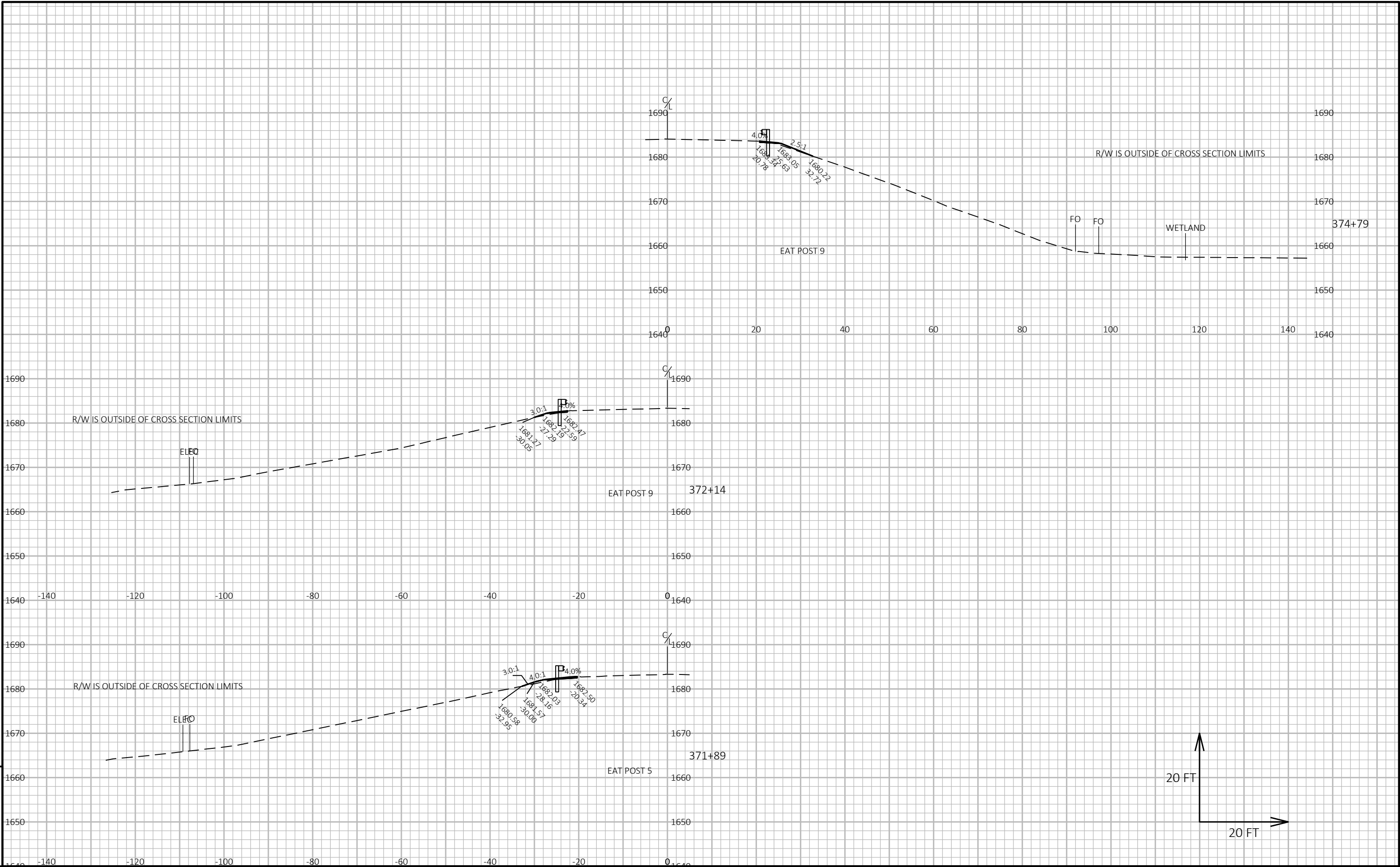
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

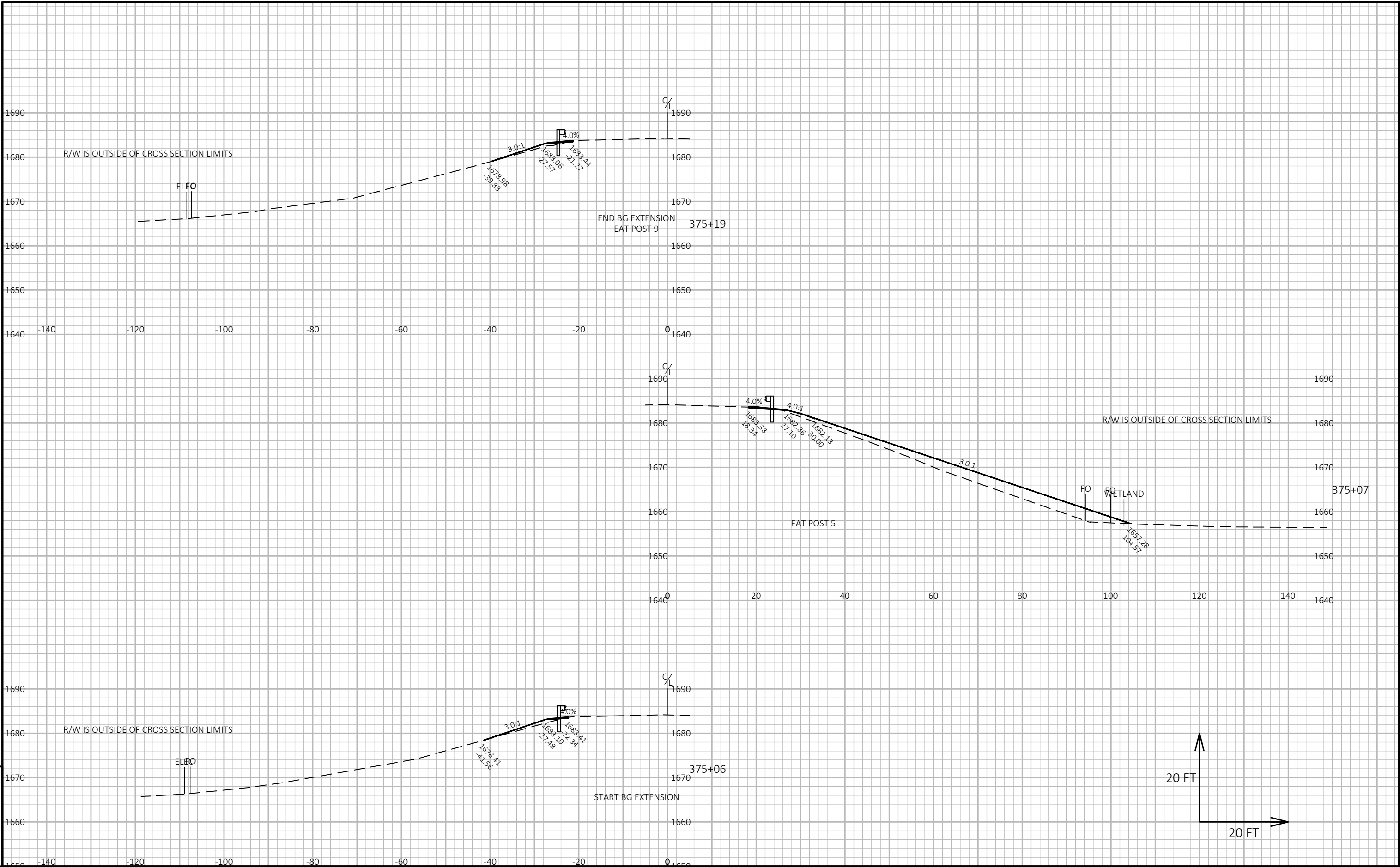
DATE 2/1/2024 PLATE NO. W057-52.3

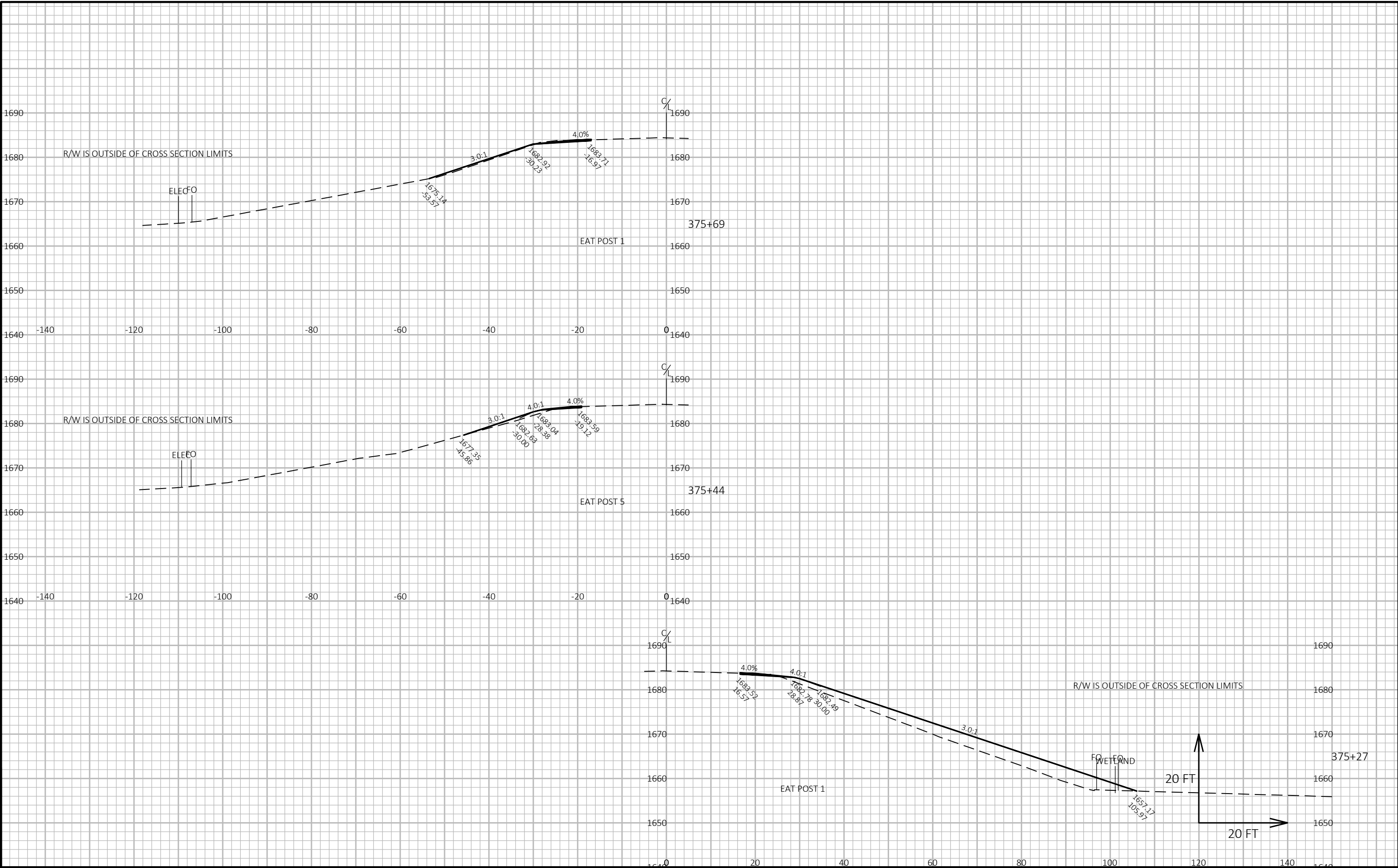
BOX CULVERT - NE							CUMULATIVE VOL (CY)		
STATION	AREA (SF)	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
				NOTE 1			1.00		
							NOTE 1		
772+66.72	0.14	0.00	3.72	0	0	0	0	0	0
772+91.69	0.53	0.00	0.74	0	0	2	0	3	-3
773+16.66	4.56	0.00	0.00	2	0	0	2	3	-1
774+41.21	0.00	0.00	0.00	11	0	0	13	3	11
BOX CULVERT - NW							CUMULATIVE VOL (CY)		
STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUT	EXPANDED FILL	MASS ORDINATE
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	1.00	1.25	
							NOTE 1		
773+09.88	0.14	0.00	2.40	0	0	0	0	0	0
773+34.85	0.51	0.00	10.33	0	0	6	0	8	-8
773+59.81	1.40	0.00	16.30	1	0	12	1	23	-22
774+50.36	1.38	0.00	9.05	5	0	43	6	76	-70
774+78.92	0.00	0.00	0.00	1	0	5	7	83	-76
BOX CULVERT - SW							CUMULATIVE VOL (CY)		
STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUT	EXPANDED FILL	MASS ORDINATE
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	1.00	1.25	
							NOTE 1		
770+29.16	0.00	0.00	0.00	0	0	0	0	0	0
770+75.36	1.79	0.00	6.78	2	0	6	2	8	-6
771+48.20	1.94	0.00	2.24	5	0	12	7	23	-16
771+73.21	1.11	0.00	0.68	1	0	1	8	24	-16
771+98.18	0.11	0.00	2.33	1	0	1	9	25	-16
BRIDGE - NE							CUMULATIVE VOL (CY)		
STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUT	EXPANDED FILL	MASS ORDINATE
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	1.00	1.25	
							NOTE 1		
374+78.60	0.18	0.00	0.62	0	0	0	0	0	0
375+06.67	1.01	0.00	140.58	1	0	73	1	91	-90
375+27.00	1.90	0.00	178.71	1	0	120	2	241	-239
376+39.89	1.72	0.00	185.78	8	0	762	10	1194	-1184
BRIDGE - NW							CUMULATIVE VOL (CY)		
STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUT	EXPANDED FILL	MASS ORDINATE
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	1.00	1.25	
							NOTE 1		
375+06.15	0.12	0.00	6.96	0	0	0	0	0	0
375+18.65	0.12	0.00	5.95	0	0	3	0	4	-4
375+43.65	1.14	0.00	9.33	1	0	7	1	13	-12
375+68.67	4.61	0.00	6.21	3	0	7	4	21	-17
376+87.63	2.58	0.00	2.26	16	0	19	20	45	-25
BRIDGE - SE							CUMULATIVE VOL (CY)		
STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUT	EXPANDED FILL	MASS ORDINATE
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	1.00	1.25	
							NOTE 1		
370+15.70	2.46	0.00	47.82	0	0	0	0	0	0
371+34.77	2.76	0.00	148.19	12	0	432	12	540	-528
371+59.73	1.42	0.00	178.78	2	0	151	14	729	-715
371+84.72	0.13	0.00	120.38	1	0	138	15	901	-886
BRIDGE - SW							CUMULATIVE VOL (CY)		
STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUT	EXPANDED FILL	MASS ORDINATE
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	1.00	1.25	
							NOTE 1		
370+45.28	1.47	0.00	0.00	0	0	0	0	0	0
371+64.27	2.20	0.00	2.42	8	0	5	8	6	2
371+89.20	0.90	0.00	2.10	1	0	2	9	9	0
372+14.26	0.17	0.00	1.16	0	0	2	9	11	-2

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL THIS DOES NOT SHOW UP IN CROSS SECTIONS DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	
3 - FILL	





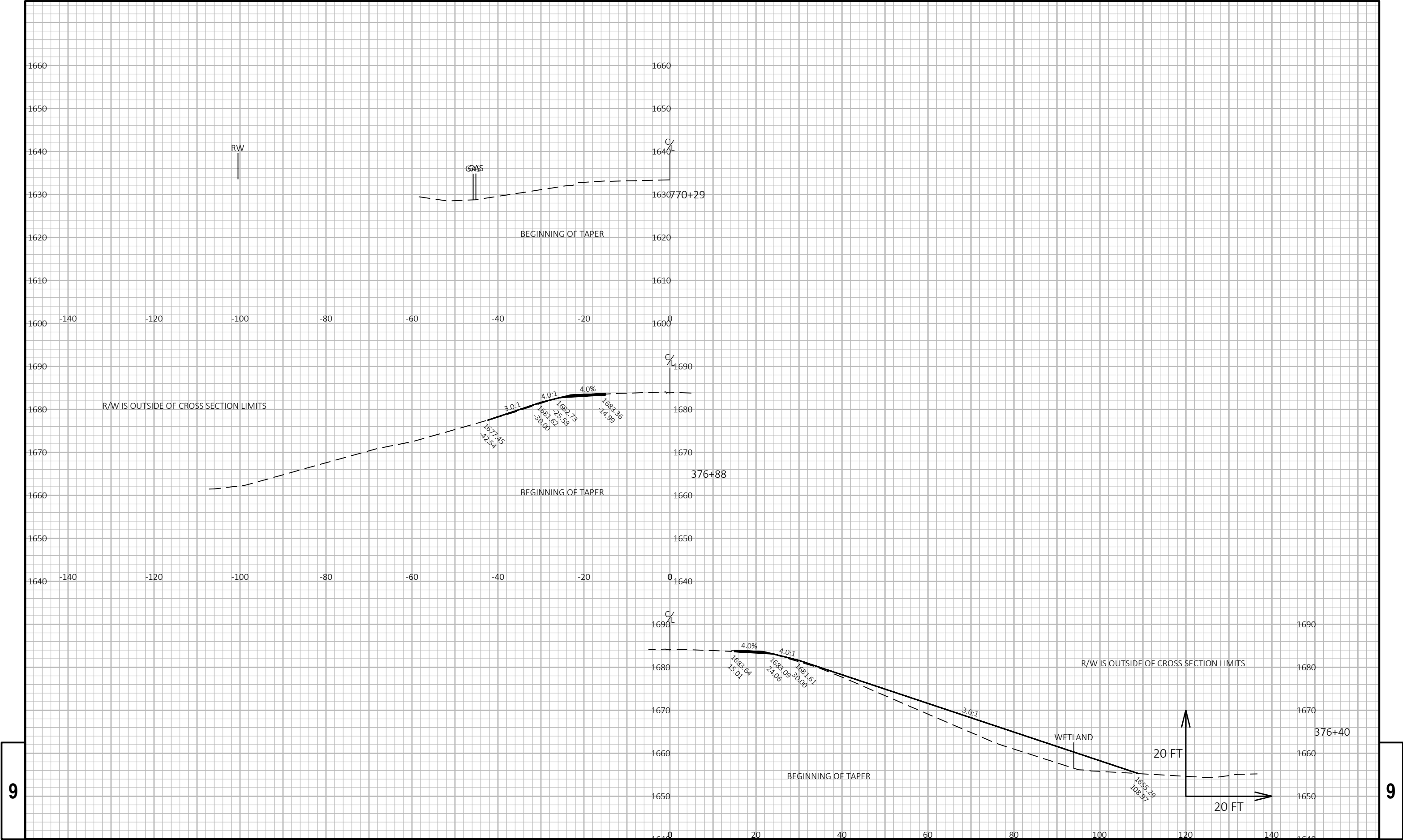




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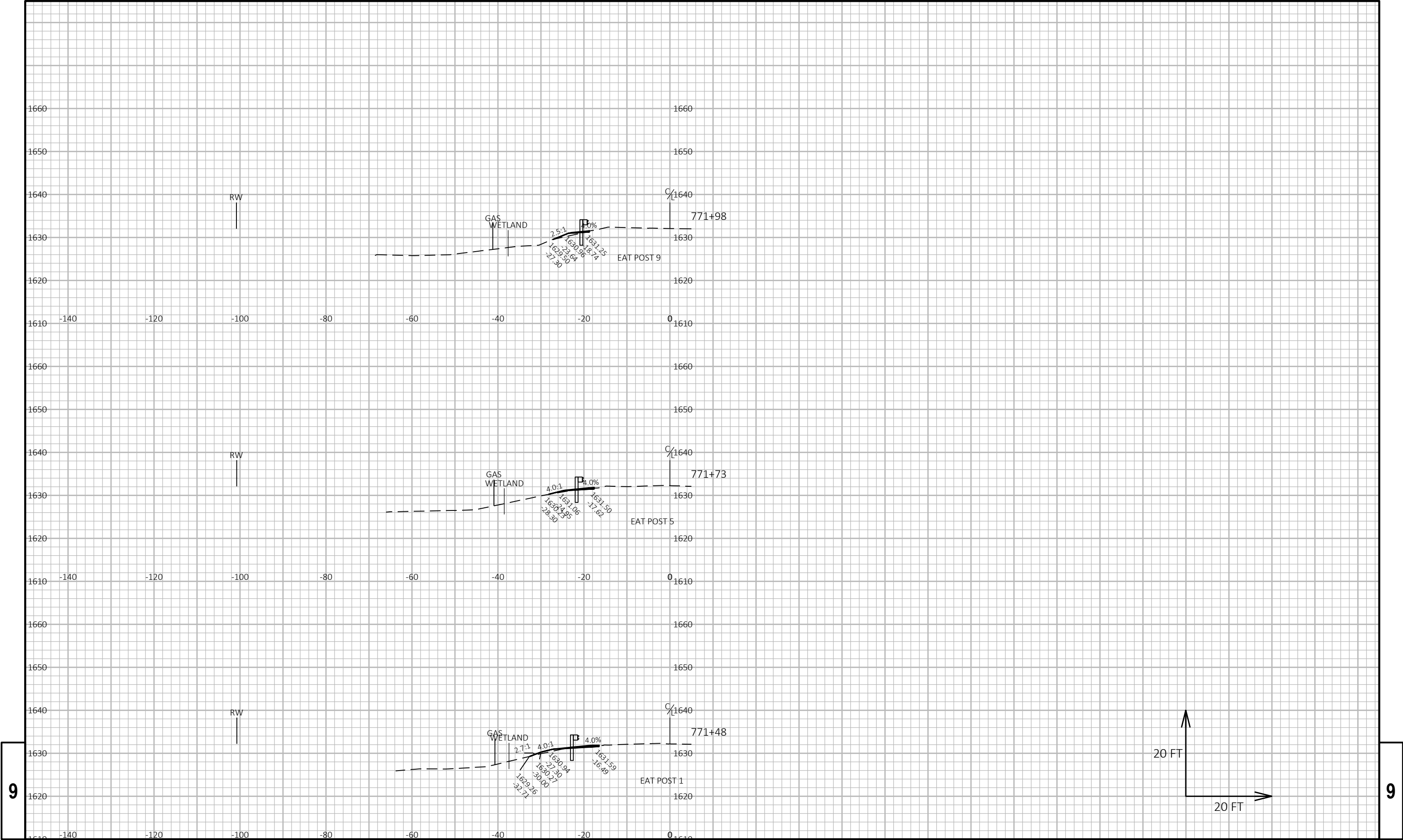
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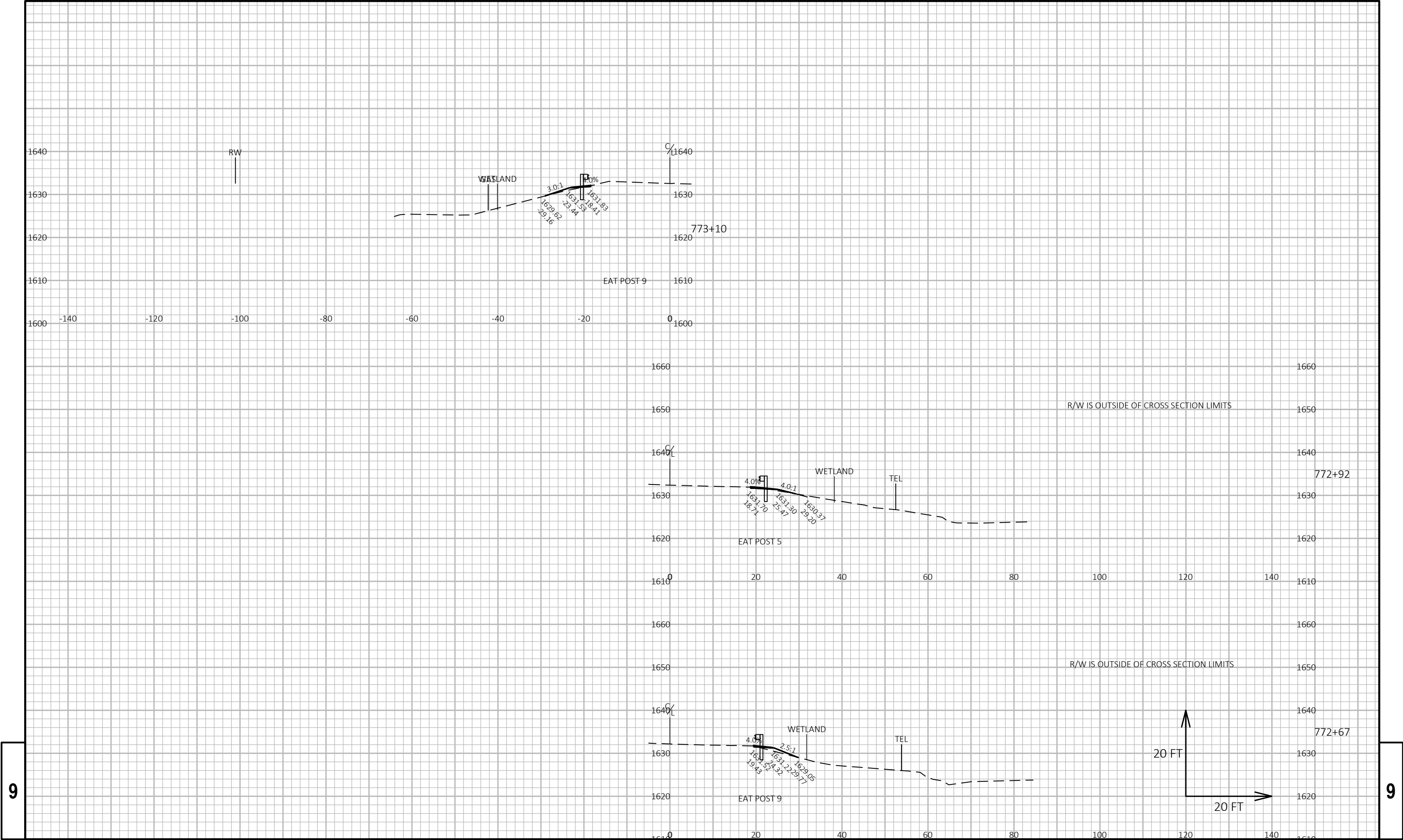
PROJECT NO: 1600-29-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45 - BEAMGUARD	SHEET E
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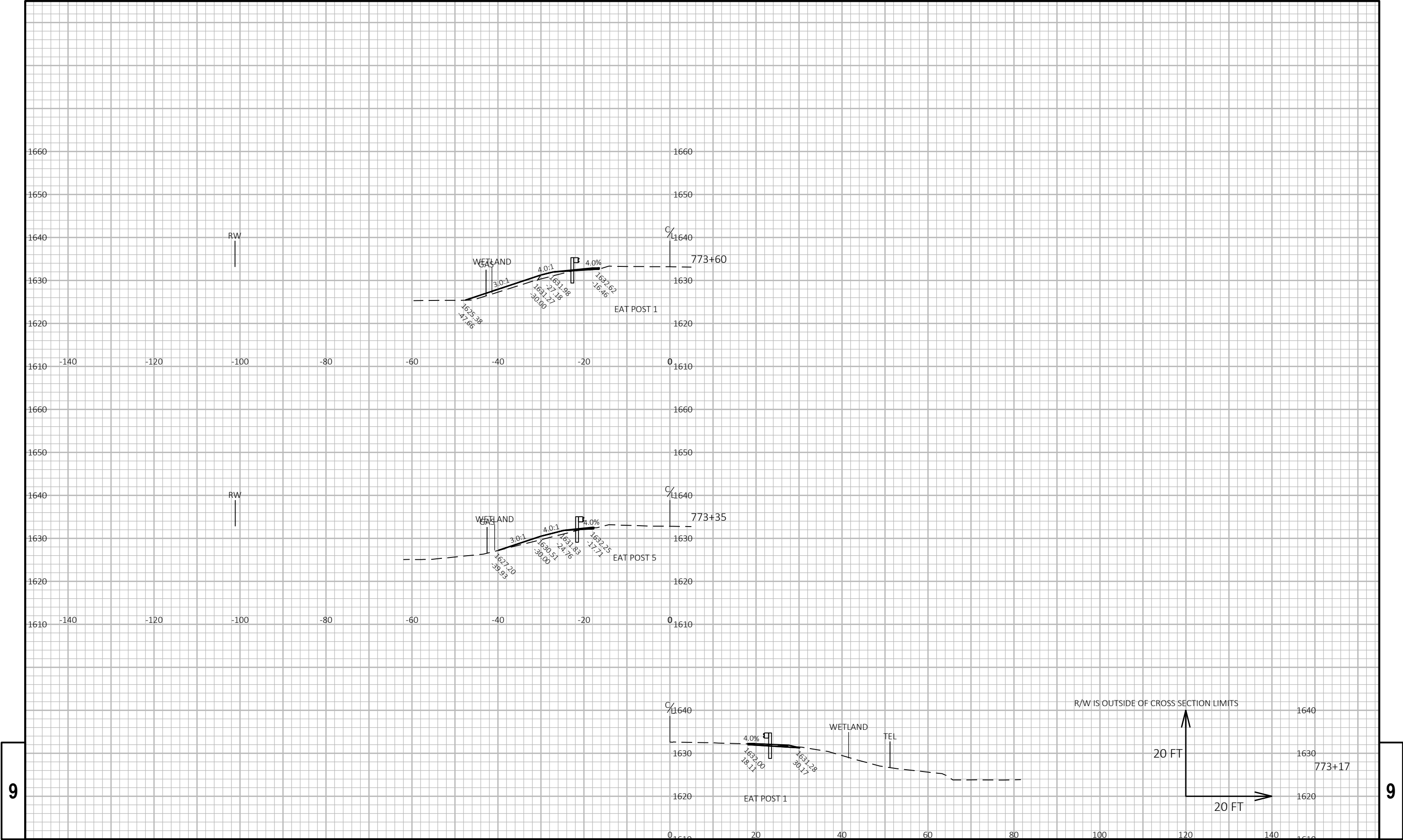


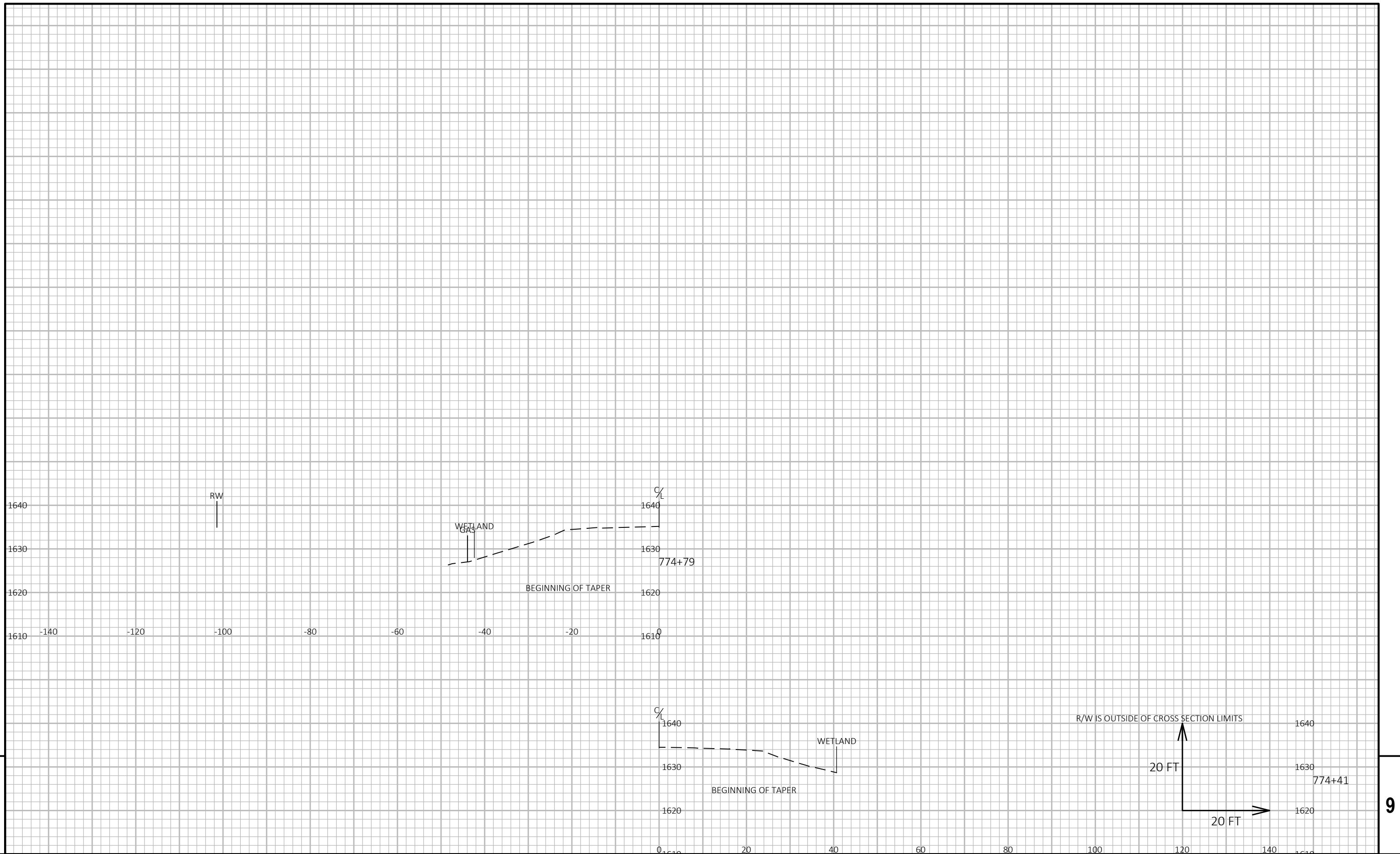
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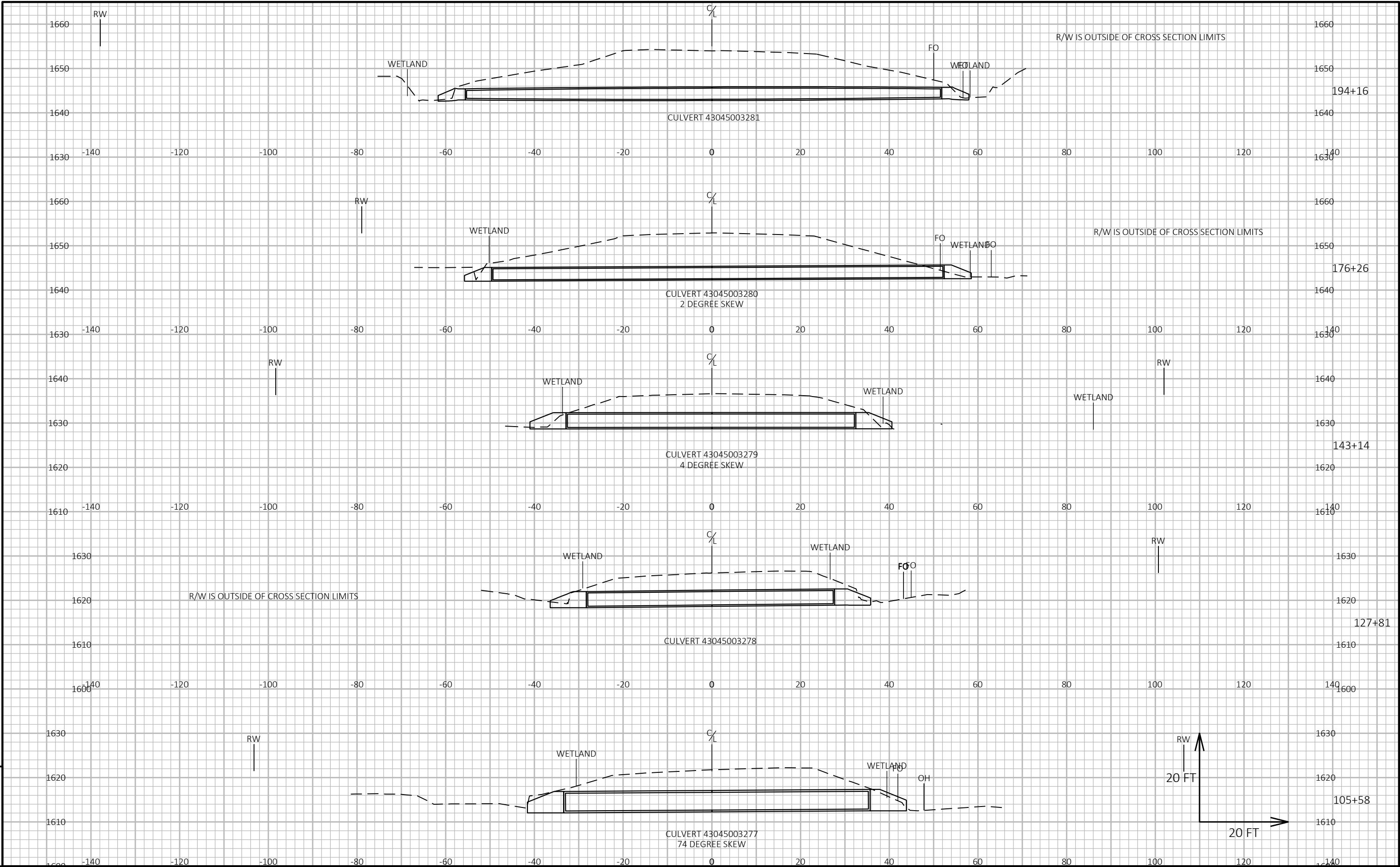
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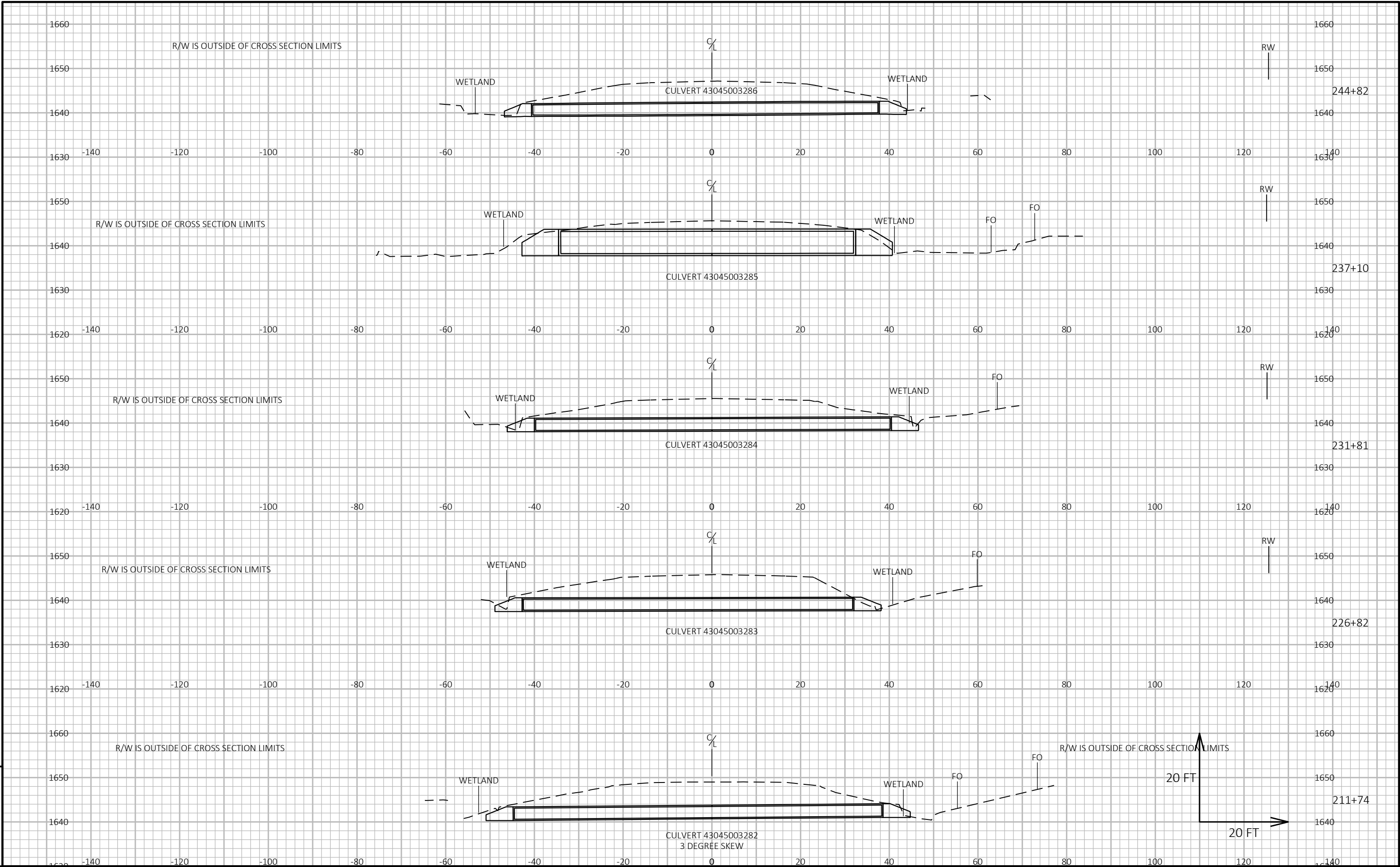








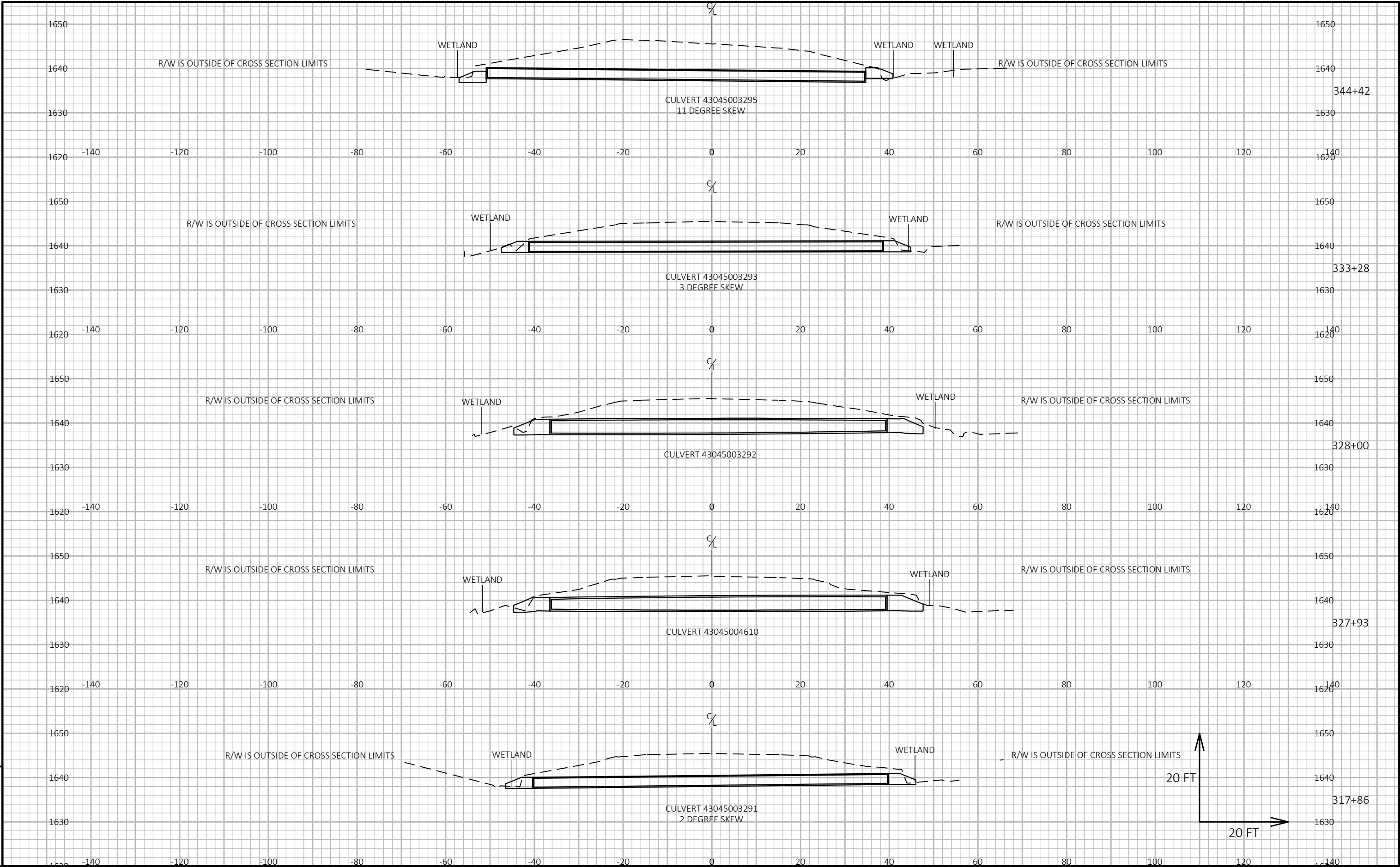




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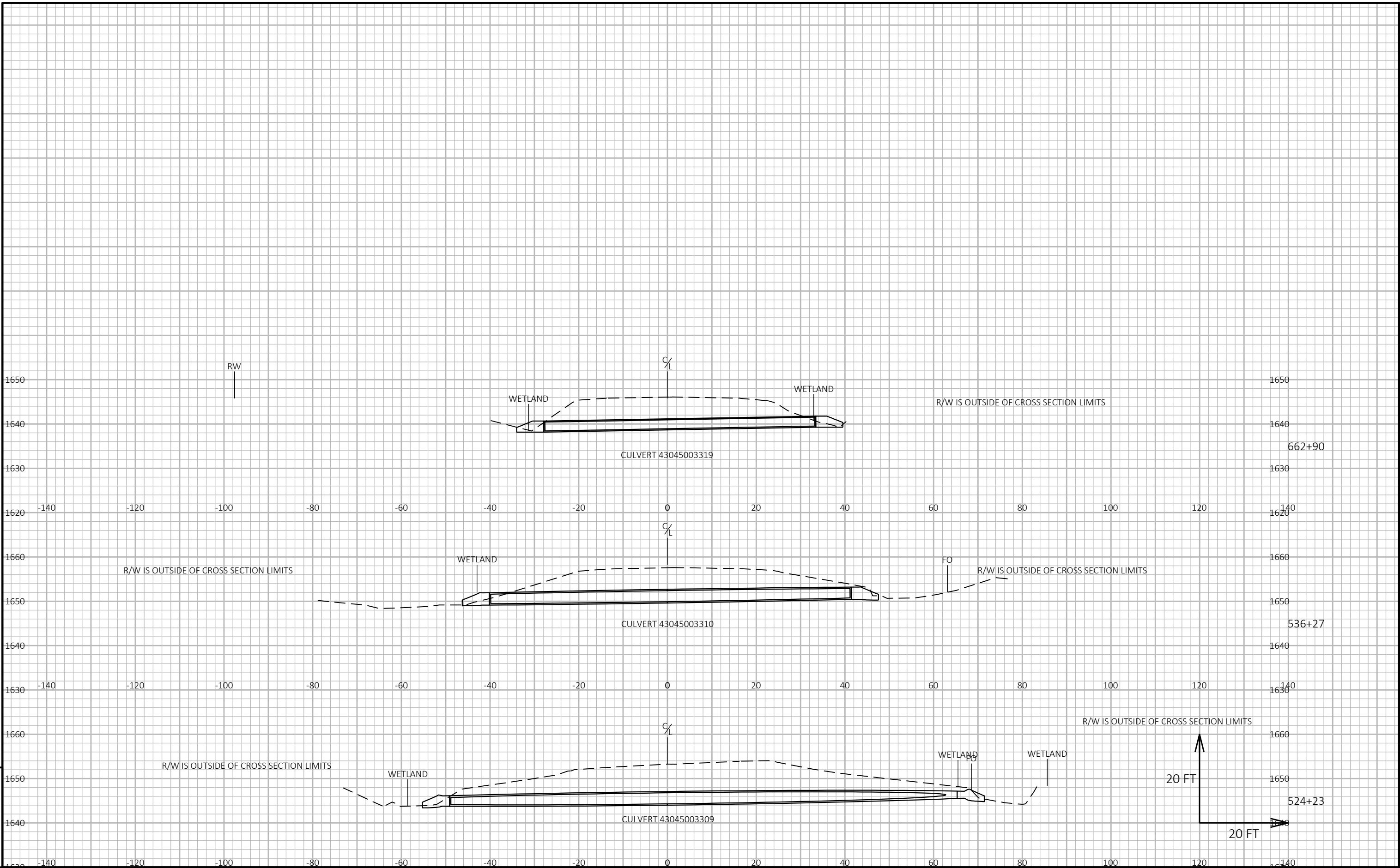
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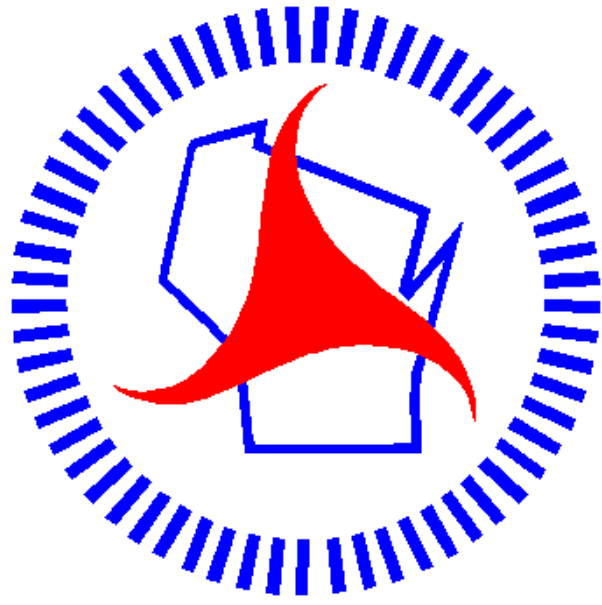
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PROJECT NO: 1600-29-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45 - CULVERTS	SHEET	E
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Notes



Wisconsin Department of Transportation

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