

WIS
PROJECT ID: 1053-00-71
WITH: N/A
COUNTY: MARATHON

MAY 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 Plot
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 118

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT

ABBOTSFORD - WAUSAU

BRIDGE OVERLAYS B-37-0116, 0287

STH 29
MARATHON COUNTY

STATE PROJECT NUMBER
1053-00-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1053-00-71		



DESIGN DESIGNATION

	B-37-0116	B-37-0287
A.A.D.T. 2025	= 9710	3570
A.A.D.T. 2045	= 11300	3840
D.H.V.	= 1126	422
D.D.	= 60/40	60/40
T.	= 21.5%	27.8%
DESIGN SPEED	= 50	60
ESALS	= N/A	N/A

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	

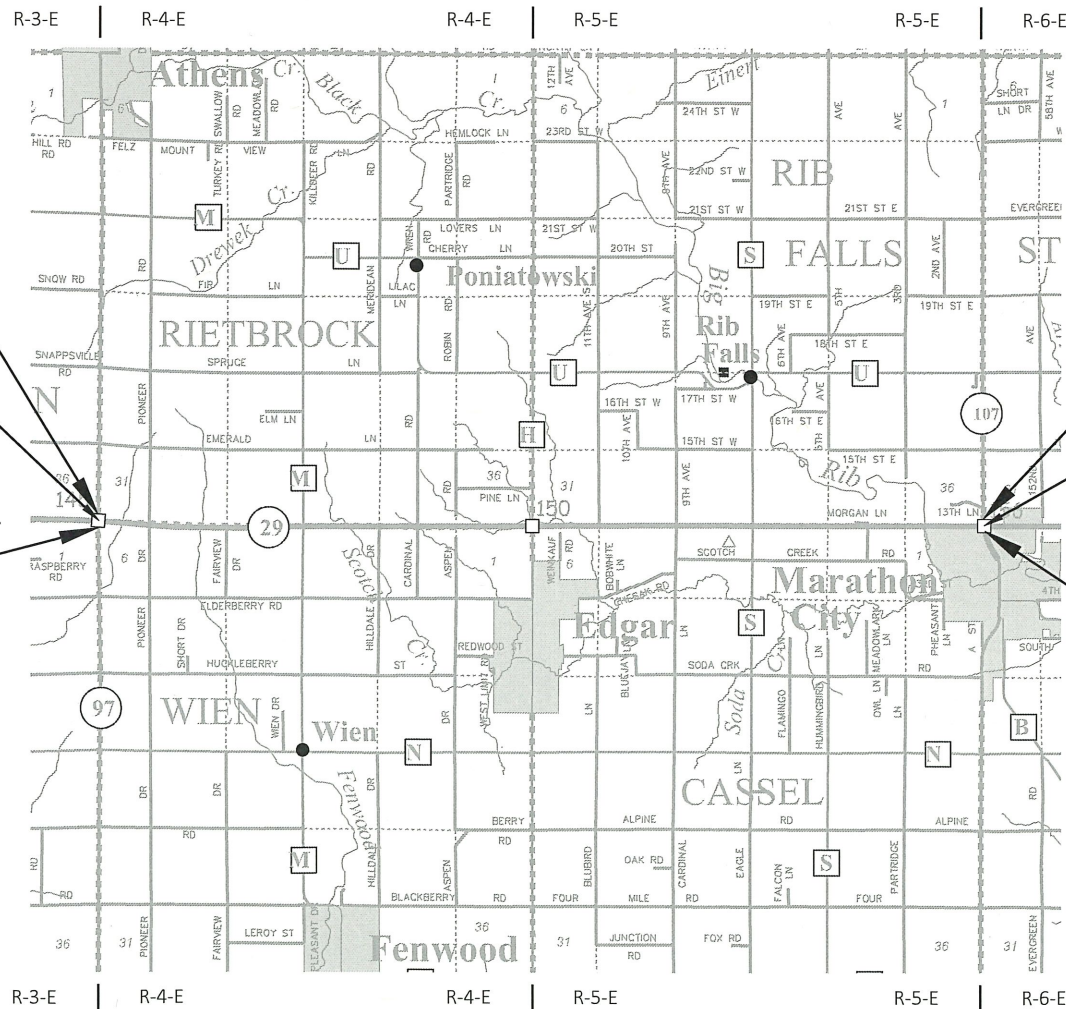
PROFILE

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	

END PROJECT
STA 101+06.27

STRUCTURE B-37-0287

BEGIN PROJECT
STA 98+93.73
X=164,933.771
Y= 196,812.469



LAYOUT
SCALE 0 2.5 MI

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), MARATHON 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 (2011). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

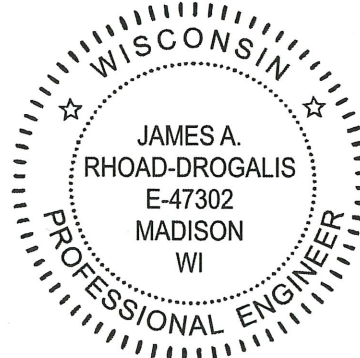
END PROJECT
STA 107SB+40.61

STRUCTURE B-37-0116

BEGIN PROJECT
STA 104NB+07.35
X=225,824.976
Y=196,282.411

ORIGINAL PLANS PREPARED BY

AECOM



DATE: 1/27/2025
Professional Engineer Signature

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	AECOM
Designer	AECOM
Project Manager	TIMOTHY HANLEY
Regional Examiner	FRED SCHUNKE
Regional Supervisor	NICHOLE LYSNE

APPROVED FOR THE DEPARTMENT

DATE: 1-28-2025
Signature

E

GENERAL NOTES

THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS IN THE AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK.

PROJECT CONTACTS

WISCONSIN DNR
JAY SCHIEFELBEIN
NORTHEAST REGIONAL HEADQUARTERS
2984 SHAWANO AVE.
GREEN BAY, WI 54313
(920)360-3784
JEREMIAH.SCHIEFELBEIN@WISCONSIN.GOV

ORDER OF SECTION 2 DETAIL SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- MARKING PLAN
- TRAFFIC CONTROL



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

UTILITY CONTACTS

TRANS 220 MAILBOX
ATC MANAGEMENT, INC. - ELECTRICITY-TRANSMISSION
801 O'KEEFE ROAD
DE PERE, WI 54115
(920) 338-6582
DL-ATCDOTNOTIFICATIONS@ATCLLC.COM

CHRIS POLLACK
FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATION LINE
421 4TH ST
WAUSAU, WI 54403
847-1240
CHRISTOPHER.POLLACK@FTR.COM

STEVEN CHEREK
VILLAGE OF MARATHON CITY WATER & SEWER DEPT. - SEWER
311 WALNUT STREET
BOX 487
MARATHON CITY, WI 54448-0487
(715) 443-2221
SCHEREK@MARATHONCITYWI.GOV

WISCONSIN PUBLIC SERVICE UTILITY COORDINATOR
WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRICITY
BOX 19001
GREEN BAY, WI 54307-9001
(920) 433-1513
UTILITIESRELOCATION@WISCONSINPUBLICSERVICE.COM

DAWN SCHULTZ
XCEL ENERGY - ELECTRICITY
1414 W HAMILTON AVE
BOX 8
EAU CLAIRE, WI 54702-0008
(715) 737-2482
DAWN.SCHULTZ@XCELENERGY.COM

ALAN ZARECKI
SPECTRUM - COMMUNICATION LINE
1201 MCCANN DRIVE
ALTOONA, WI 54720
214-1175
CHTR_WI_CONST@CHARTER.COM

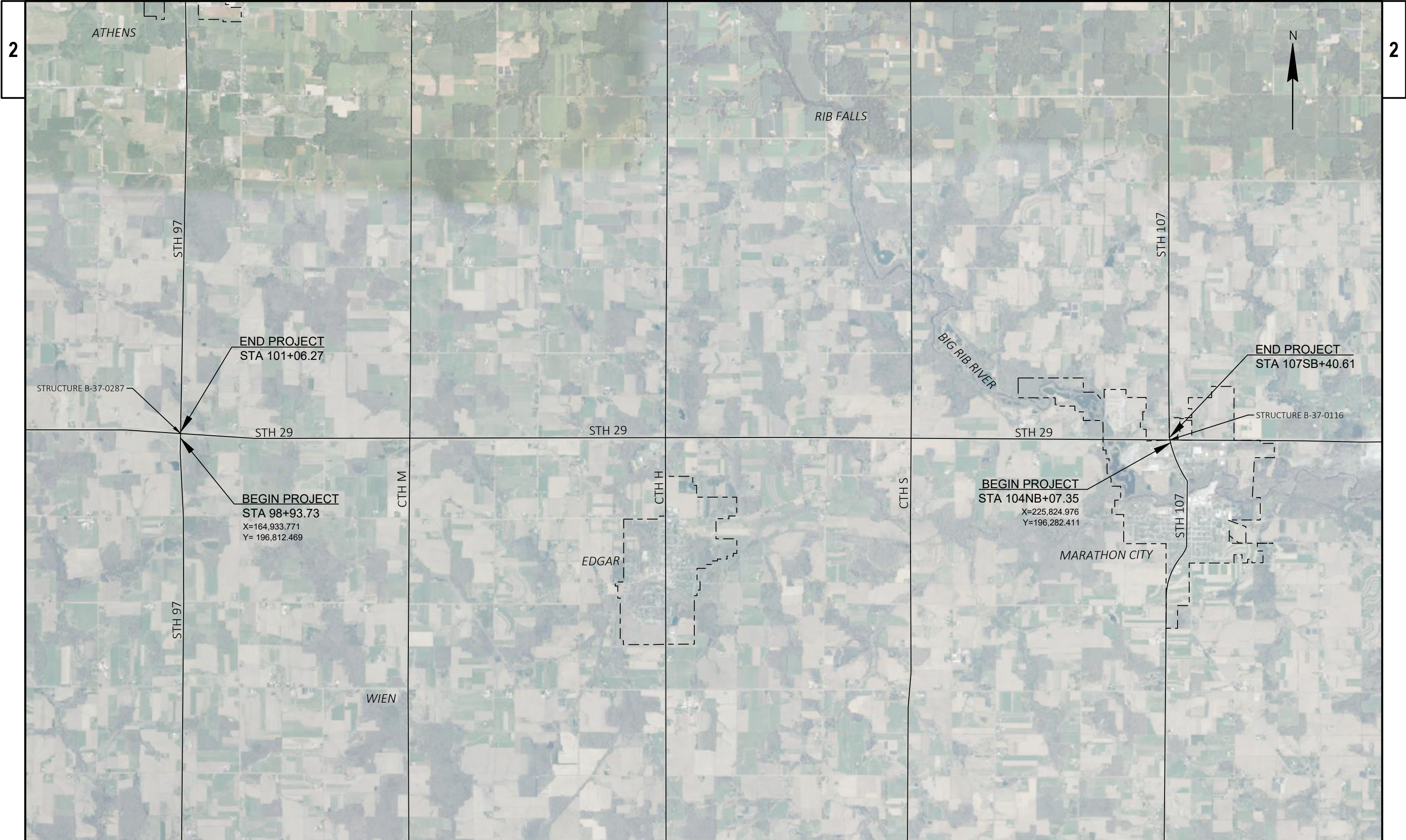
STEVEN CHEREK
VILLAGE OF MARATHON CITY WATER & SEWER DEPT. - WATER
311 WALNUT STREET
BOX 487
MARATHON CITY, WI 54448-0487
(715) 443-2221
SCHEREK@MARATHONCITYWI.GOV

WISCONSIN PUBLIC SERVICE UTILITY COORDINATOR
WISCONSIN PUBLIC SERVICE CORPORATION - GAS/PETROLEUM
BOX 19001
GREEN BAY, WI 54307-9001
(920) 433-1513
UTILITIESRELOCATION@WISCONSINPUBLICSERVICE.COM

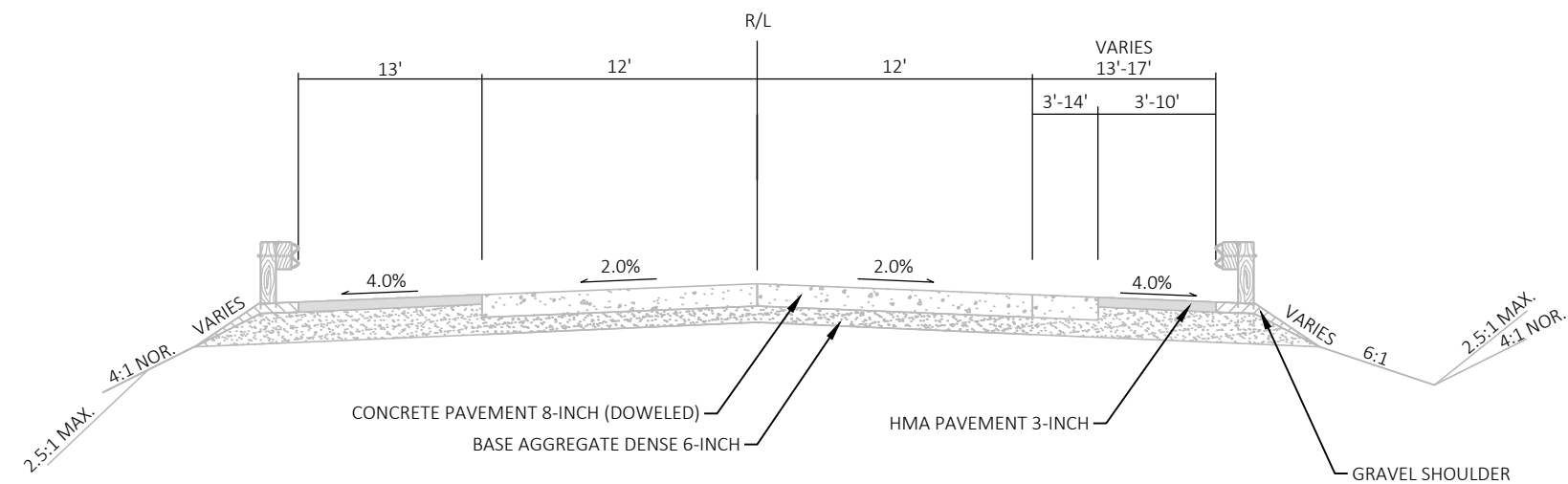
RUNOFF COEFFICIENT TABLE

LAND USE:	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS:	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIPTURF:	.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 SLOPETURF:			.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											

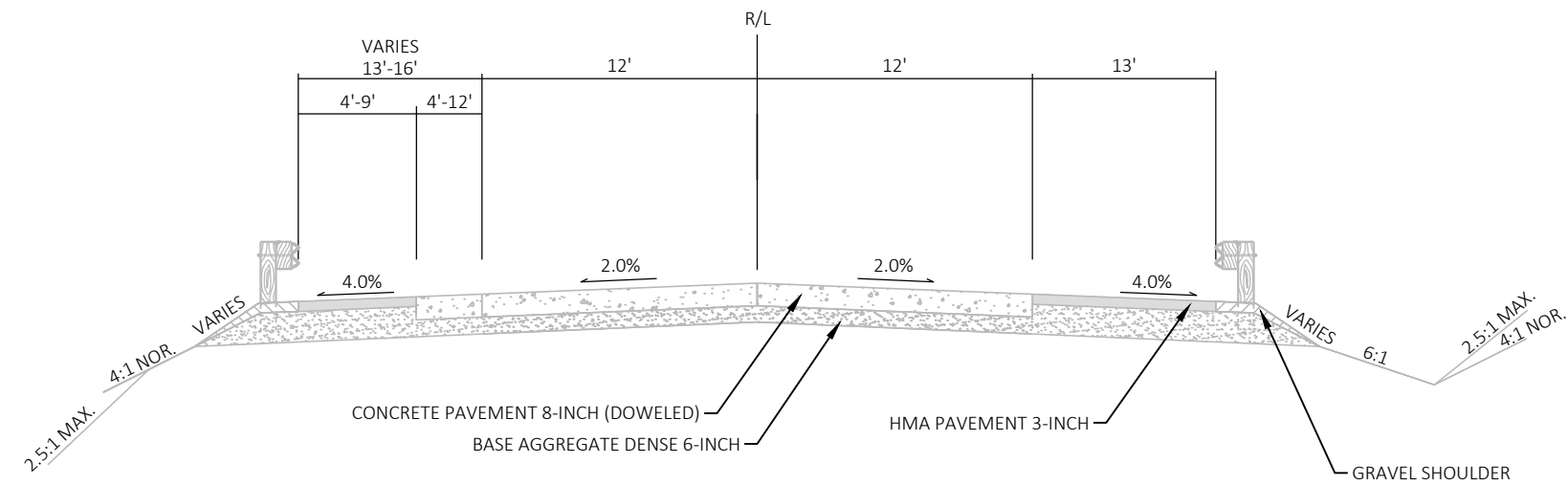
TOTAL PROJECT AREA = 0.67 ACRES (STH 107)
= 0.24 ACRES (STH 97)
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.14 ACRES (STH 107)
= 0.00 ACRES (STH 97)



PROJECT NO: 1053-00-71	HWY: STH 29	COUNTY: MARATHON	PROJECT OVERVIEW	SHEET	E
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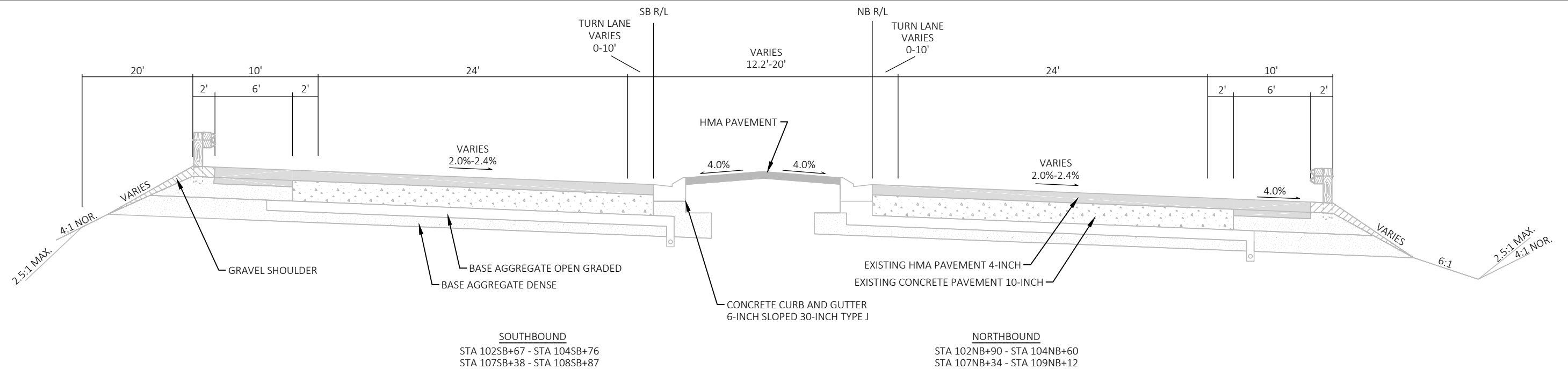


EXISTING TYPICAL SECTION
STH 97 - SOUTH OF STH 29

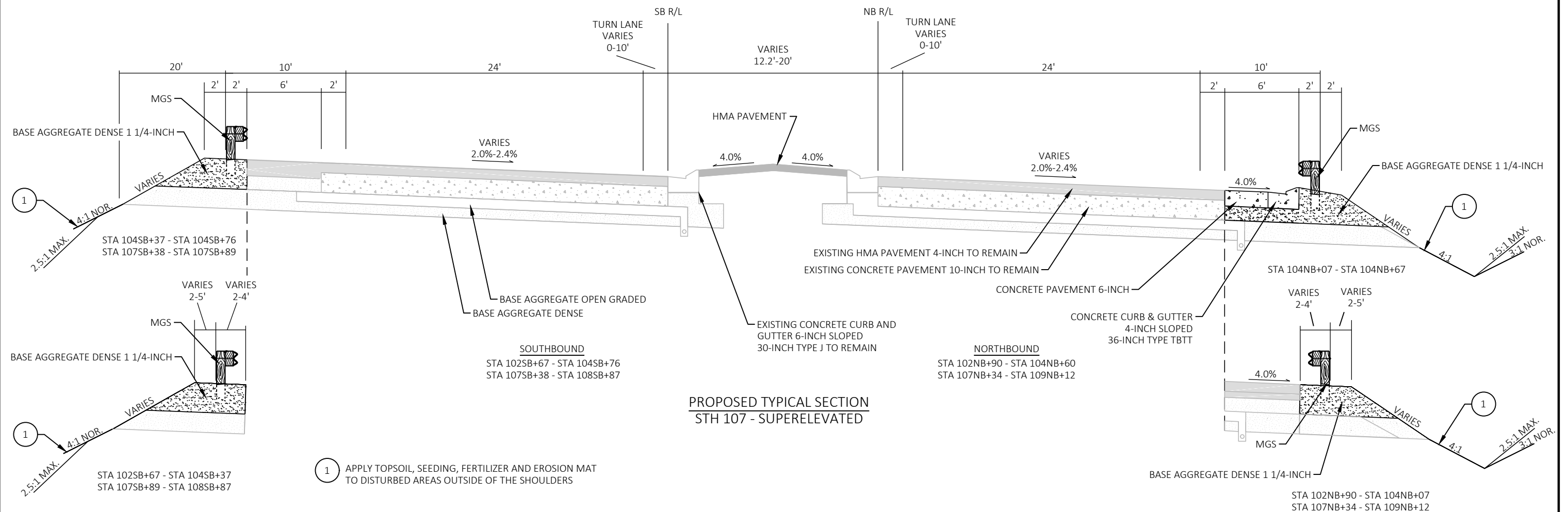


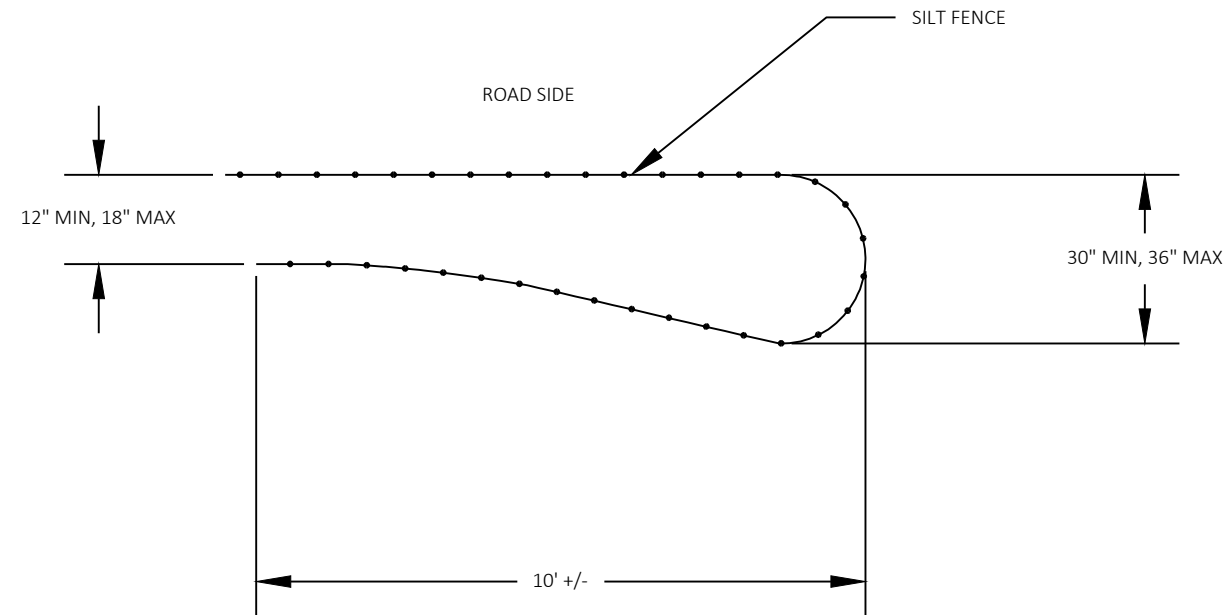
EXISTING TYPICAL SECTION
STH 97 - NORTH OF STH 29

NOTE:
ROADWAY APPROACH WORK NOT ANTICIPATED. ONLY
EXISTING TYPICALS SHOWN.



EXISTING TYPICAL SECTION
STH 107 - SUPERELEVATED



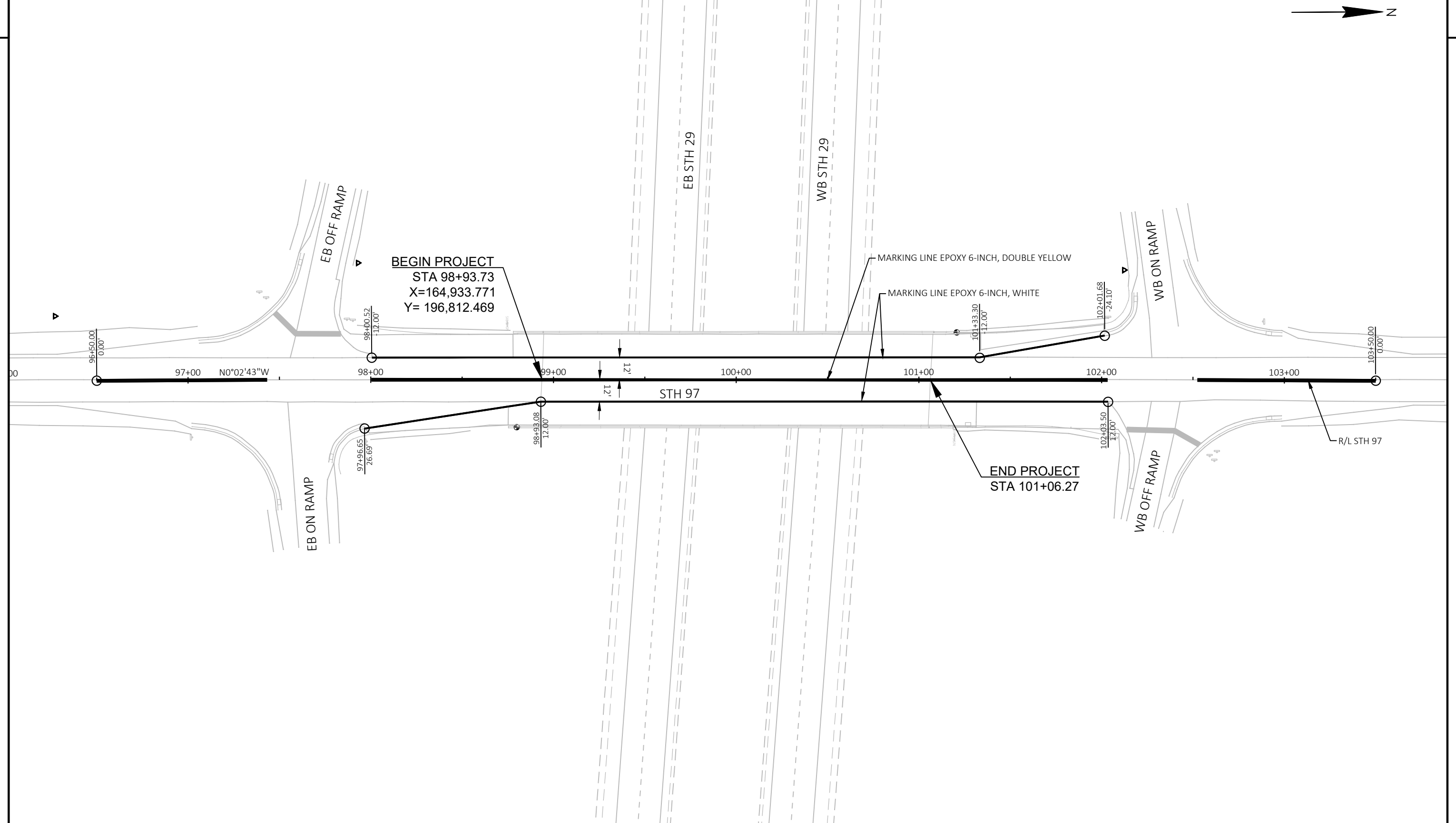


SILT FENCE TURN-AROUND

SEE PLANS FOR LOCATIONS

2

2 |



PROJECT NO:	1053-00-71
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HWY: STH 29

COUNTY: MARATHON

MARKING PLAN - STH 97

SHEET

3

FILE NAME : C:\USERS\ETHAN.VANSICKLE\AECOM\60703298 - STH 29 OVERPASSES (97 & 107) - GENERAL\900_CAD_GIS\910_CAD\10530001\024501-PM_97.DWG
LAYOUT NAME - 051201-01-97

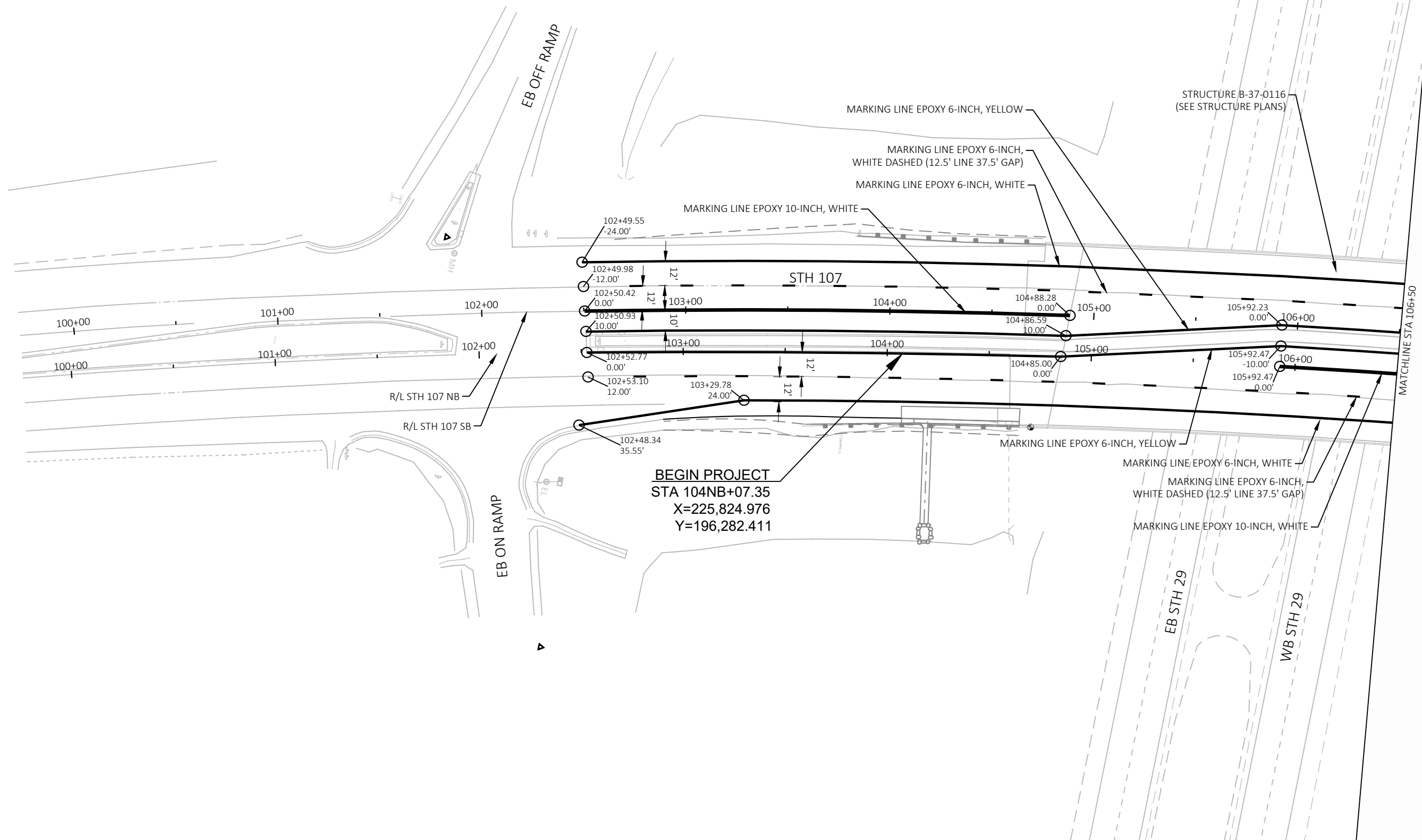
PLOT DATE : 1/29/2025 3:18 PM

PLOT BY : VAN SICKLE, ETHAN

PLOT NAME :

PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 1053-00-71

HWY: STH 29

COUNTY: MARATHON

MARKING PLAN - STH 107

SHEET

E

FILE NAME: C:\USERS\ETHAN.VANSICKLE\AECOM\60703298 - STH 29 OVERPASSES (97 & 107) - GENERAL\900_CAD_GIS\910_CAD\10530001\SHEETSP\PLAN\024501-PM_107.DWG
LAYOUT NAME - 051202-01-107

PLOT DATE: 1/29/2025 3:18 PM

PLOT BY: VAN SICKLE, ETHAN

PLOT NAME:

PLOT SCALE: 1 IN=50 FT

WISDOT/CADDs SHEET 42

2

2



PROJECT NO:	1053-00-71
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HWY: STH 29

COUNTY: MARATHON

MARKING PLAN - STH 107

SHEET

E

WISDOT/CADDS SHEET 42

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

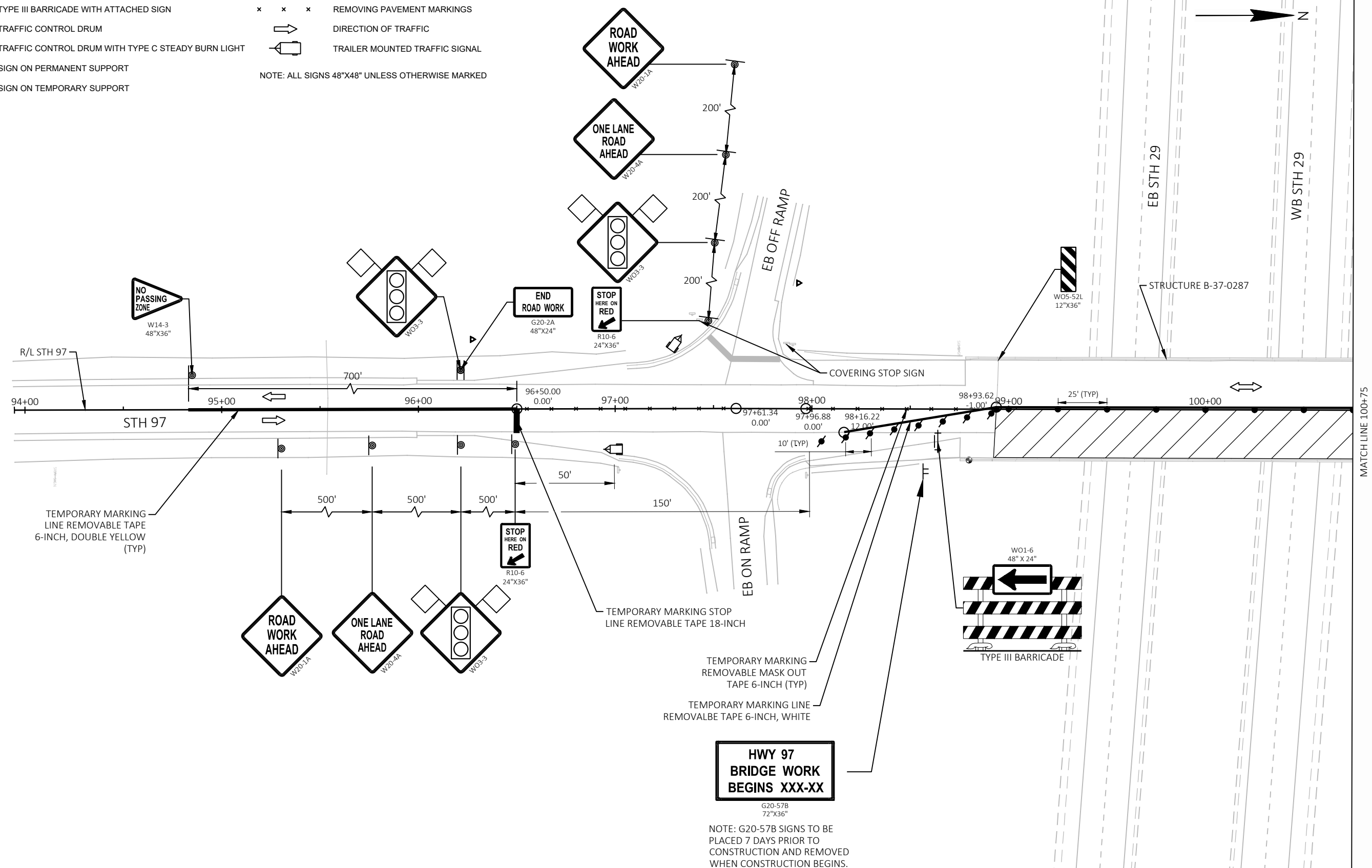
WORK AREA

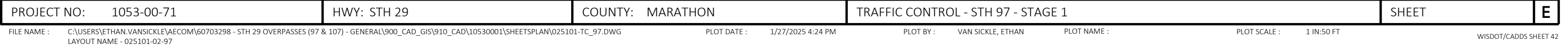
REMOVING PAVEMENT MARKINGS

DIRECTION OF TRAFFIC

TRAILER MOUNTED TRAFFIC SIGNAL

NOTE: ALL SIGNS 48"X48" UNLESS OTHERWISE MARKED





LEGEND

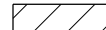
TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

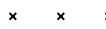
TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

SIGN ON PERMANENT SUPPORT



WORK AREA



REMOVING PAVEMENT MARKINGS

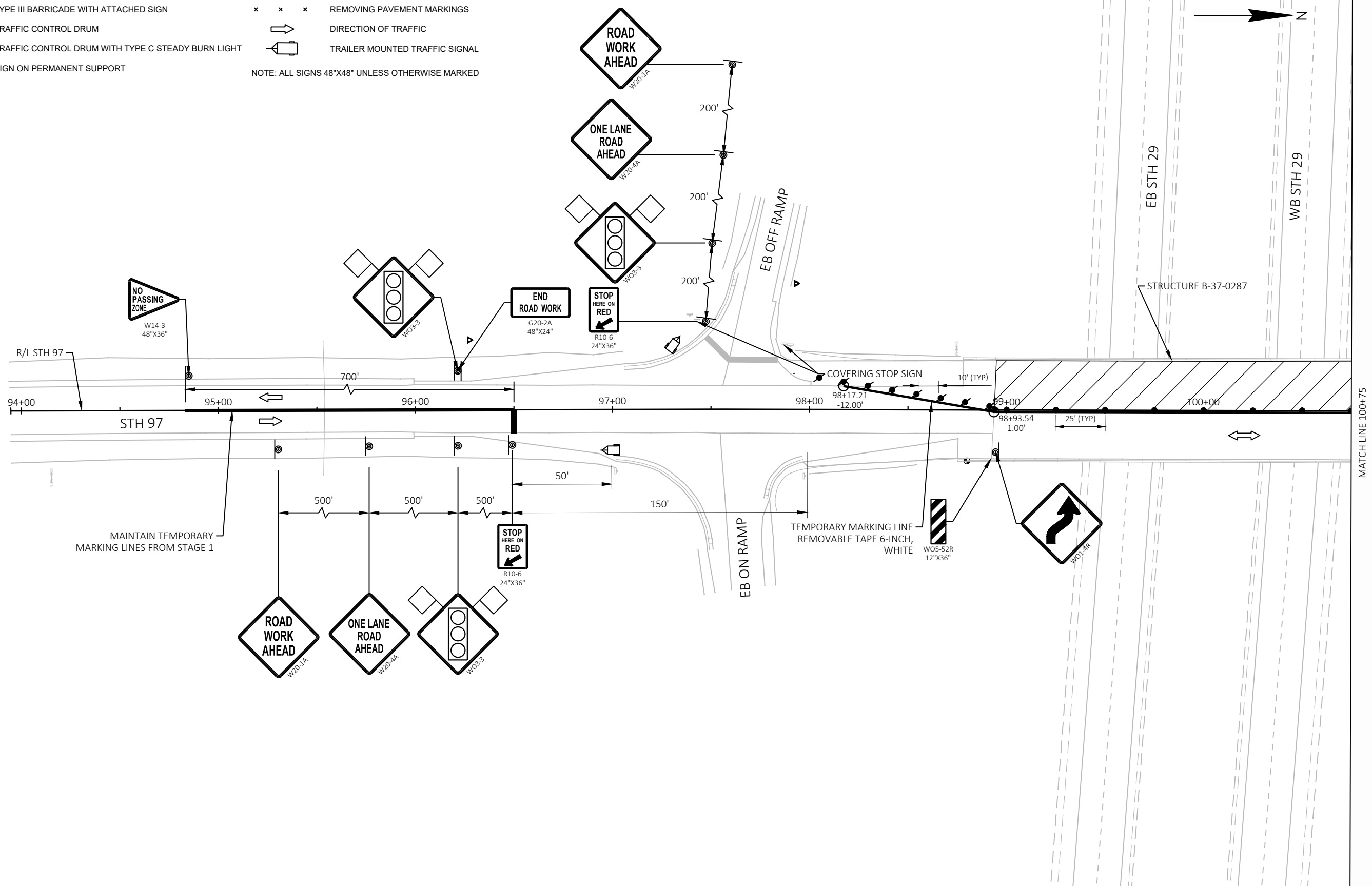


DIRECTION OF TRAFFIC



TRAILER MOUNTED TRAFFIC SIGNAL

NOTE: ALL SIGNS 48"X48" UNLESS OTHERWISE MARKED



PROJECT NO: 1053-00-71

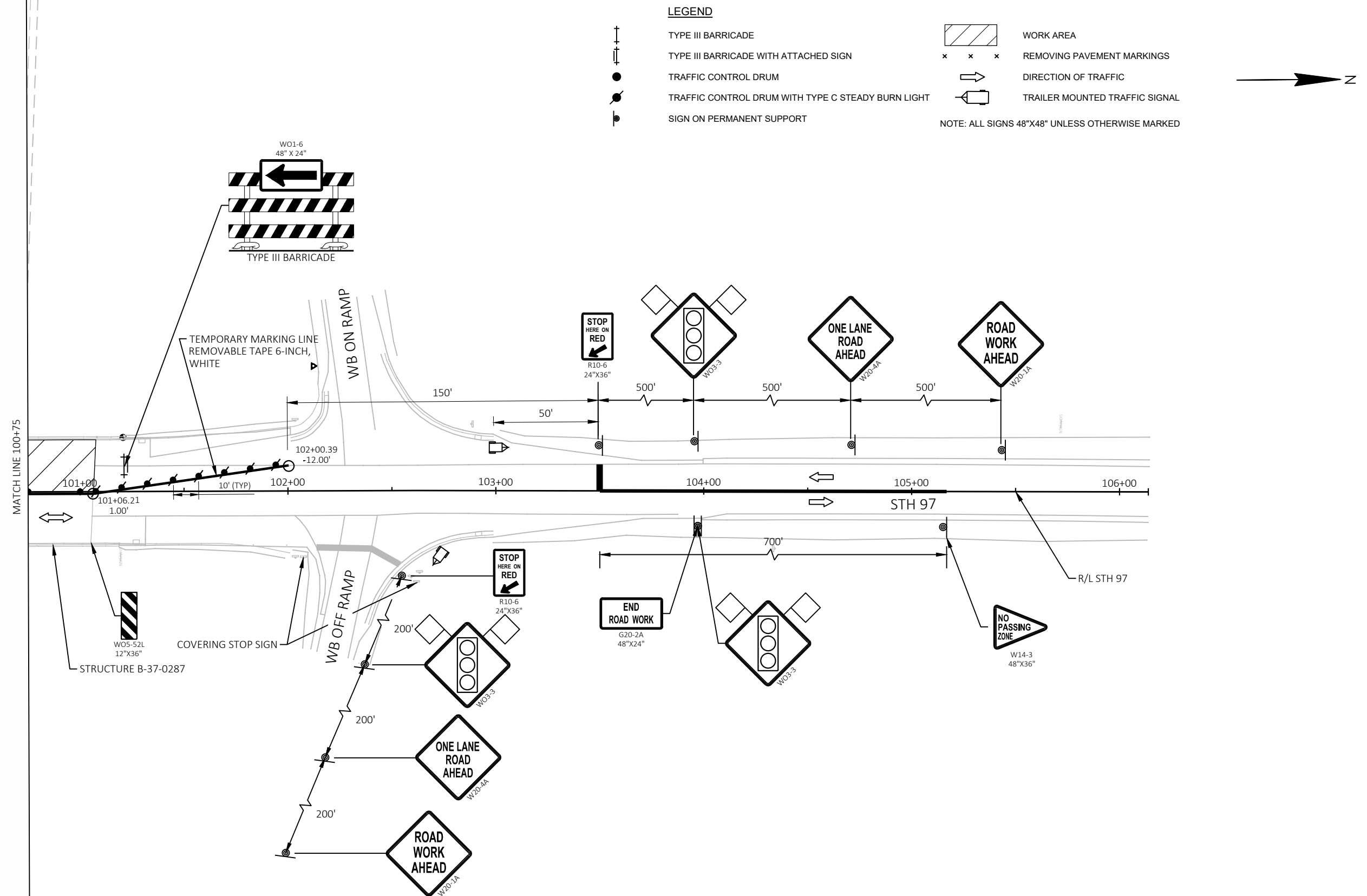
HWY: STH 29

COUNTY: MARATHON

TRAFFIC CONTROL - STH 97 - STAGE 2

SHEET

E



TEMPORARY SIGNAL TIMING

	Ø1 NB STH 97	Ø2 EB STH 29 EB OFF RAMP	Ø3 SB STH 97	Ø4 WB STH 29 WB OFF RAMP
MINIMUM GREEN TIME	9 sec	5 sec	9 sec	5 sec
MAXIMUM PASSAGE TIME DURING GREEN PHASE	5 sec	5 sec	5 sec	5 sec
MINIMUM PASSAGE TIME DURING GREEN PHASE	3 sec	-	3 sec	-
START OF REDUCTION OF PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE	15 sec	-	15 sec	-
TIME TO REDUCE PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE	0 sec	-	0 sec	-
MAXIMUM GREEN TIME	24 sec	7 sec	24 sec	7 sec
YELLOW	5 sec	4 sec	5 sec	4 sec
ALL-RED	5 sec	21 sec	5 sec	21 sec
RECALL MODE	MIN	MIN	MIN	MIN

PHASE 2 SHALL COME AFTER PHASE 1, PHASE 4 SHALL COME AFTER PHASE 3.

REVIEW SIGNALS AFTER PROGRAMMING TO ASSURE THERE ARE NOT CONFLICTING MOVEMENTS.

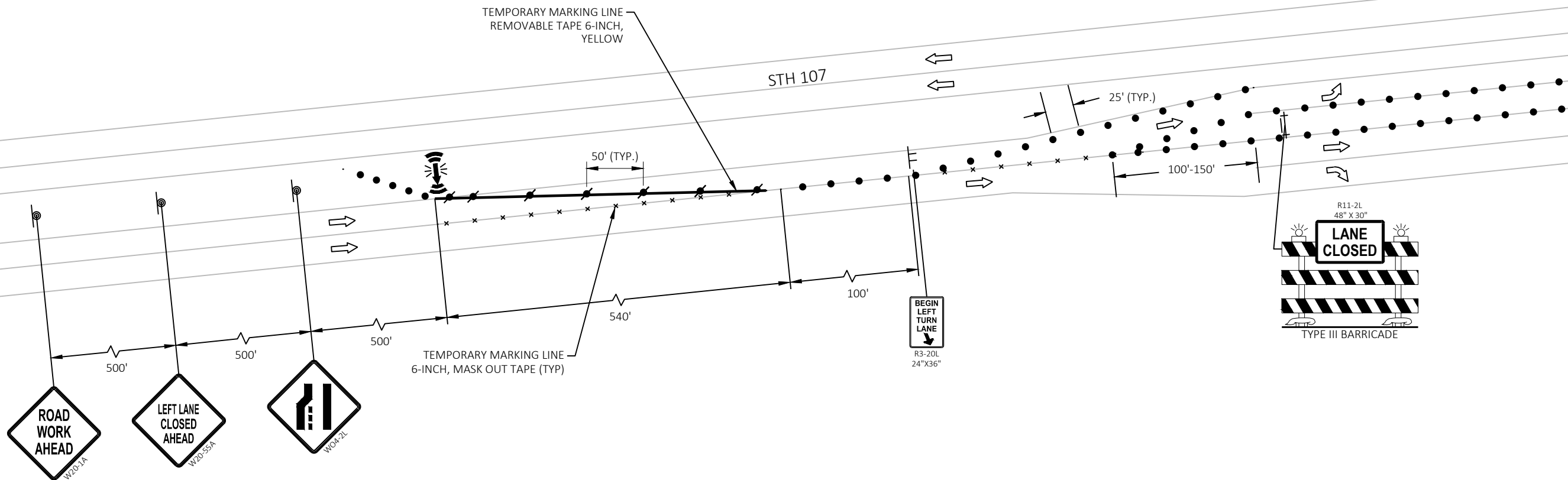
IF THERE ARE QUESTIONS REGARDING THE TIMINGS PLEASE CONTACT TRAFFIC ENGINEER

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

- WORK AREA
- REMOVING PAVEMENT MARKINGS
- CONNECTED ARROW BOARD
- DIRECTION OF TRAFFIC

NOTE: ALL SIGNS ARE 48"x48" UNLESS OTHERWISE MARKED.
MAINTAIN 16' USABLE WIDTH NORTH OF STH 29 FOR OSOW USE.



NOTE:
SCHEMATIC ONLY, NOT TO SCALE.

PROJECT NO: 1053-00-71

HWY: STH 29

COUNTY: MARATHON

TRAFFIC CONTROL - STH 107 - STAGE 1

SHEET

E

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

SIGN ON TEMPORARY SUPPORT

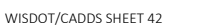
TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH
TYPE C STEADY BURN LIGHT

Diagram illustrating a single-lane road closure setup:

- WORK AREA**: The central section where the lane is closed.
- REMOVING PAVEMENT MARKINGS**: The area to the left of the work area, marked with 'x' symbols.
- CONNECTED ARROW BOARD**: A sign at the entrance of the work area.
- DIRECTION OF TRAFFIC**: Indicated by a large arrow pointing right.

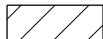
NOTE: ALL SIGNS ARE 48"X48" UNLESS OTHERWISE MARKED.
MAINTAIN 16' USABLE WIDTH NORTH OF STH 29 FOR OSOW USE.



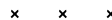


LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT



WORK AREA



REMOVING PAVEMENT MARKINGS

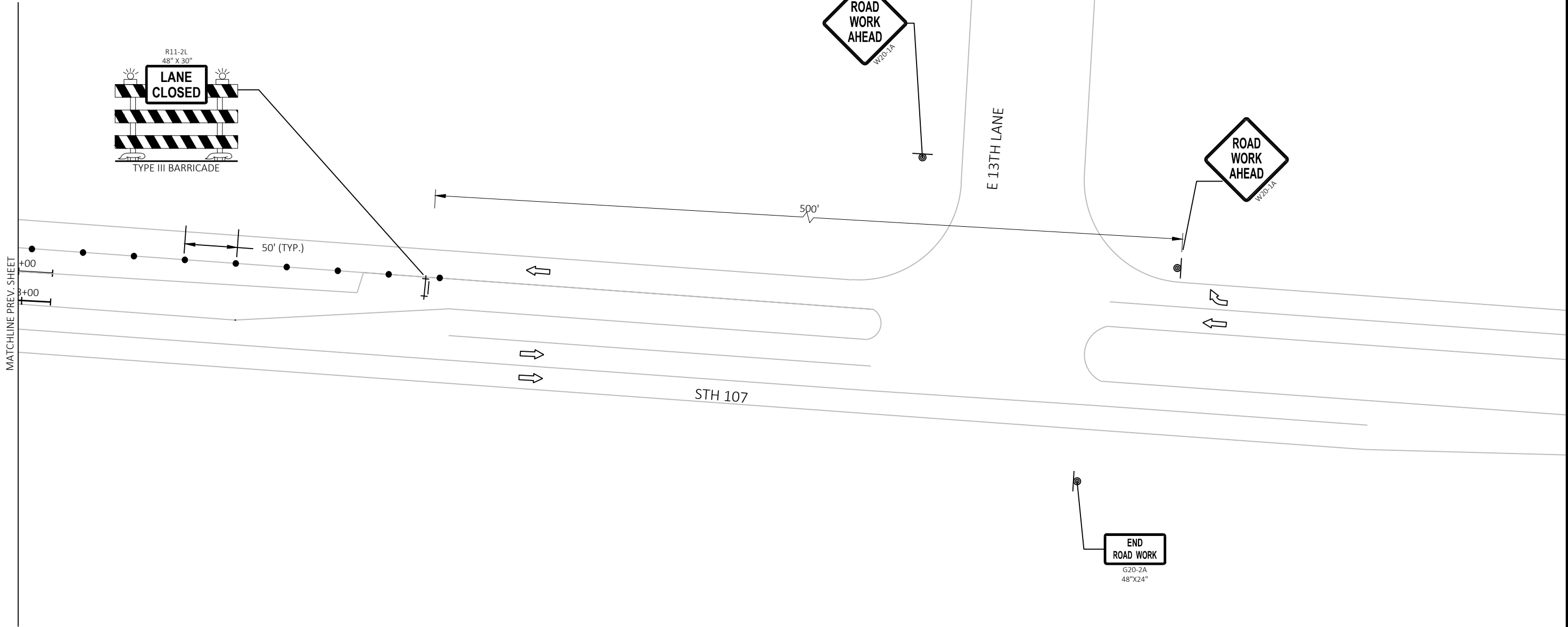
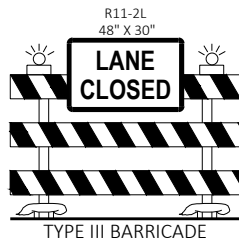


CONNECTED ARROW BOARD

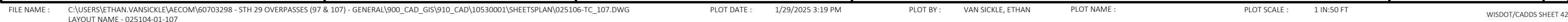


DIRECTION OF TRAFFIC

NOTE: ALL SIGNS ARE 48"X48" UNLESS OTHERWISE MARKED.
MAINTAIN 16' USABLE WIDTH NORTH OF STH 29 FOR OSOW USE.

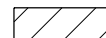


NOTE:
SCHEMATIC ONLY, NOT TO SCALE.

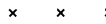


LEGEND

TYPE III BARRICADE
TYPE III BARRICADE WTH ATTACHED SIGN
SIGN ON PERMANENT SUPPORT
SIGN ON TEMPORARY SUPPORT
TRAFFIC CONTROL DRUM
TRAFFIC CONTROL DRUM WITH
TYPE C STEADY BURN LIGHT



WORK AREA



REMOVING PAVEMENT MARKINGS

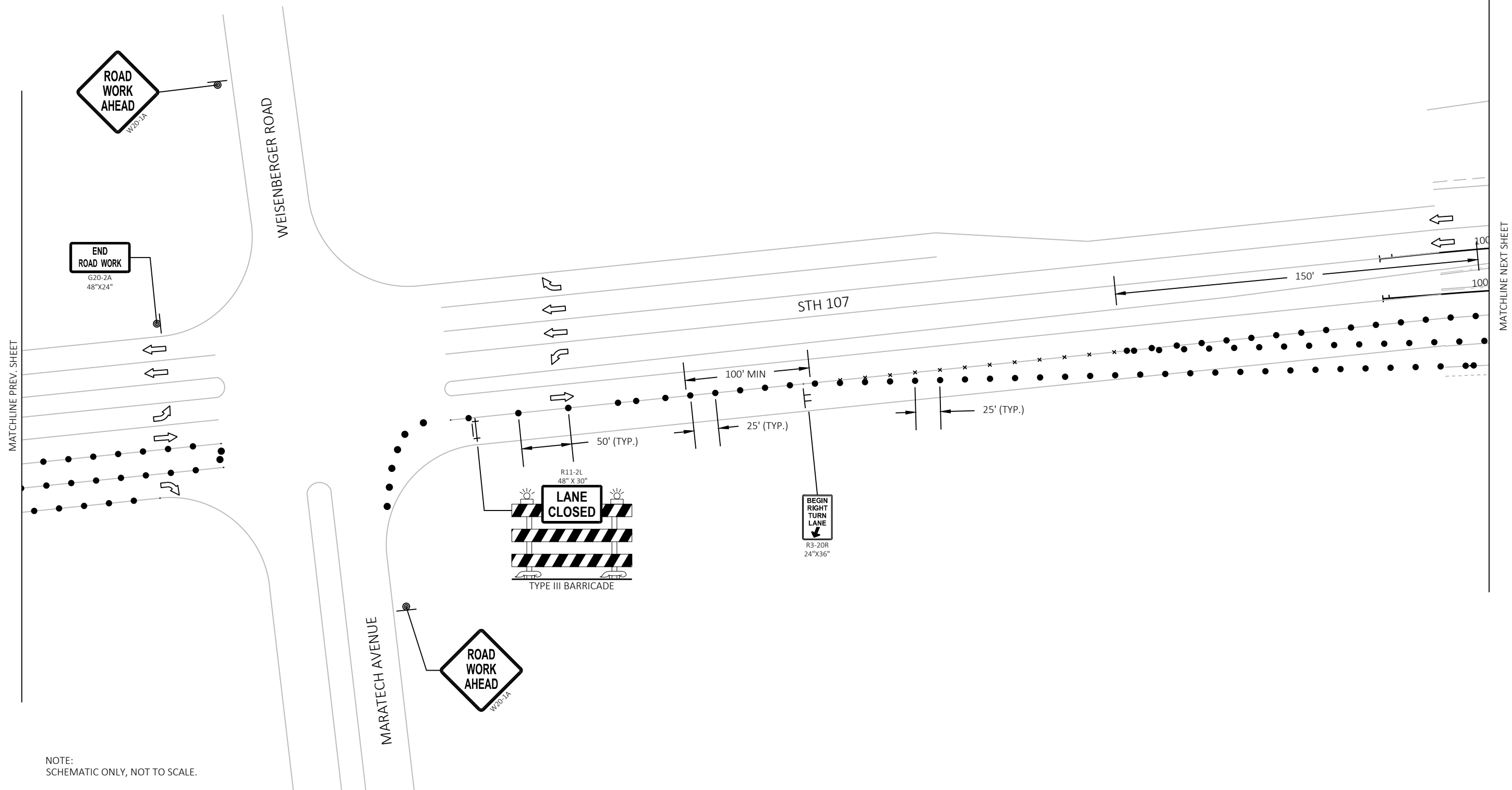


CONNECTED ARROW BOARD



DIRECTION OF TRAFFIC

NOTE: ALL SIGNS ARE 48"X48" UNLESS OTHERWISE MARKED.
MAINTAIN 16' USABLE WIDTH NORTH OF STH 29 FOR OSOW USE.



PROJECT NO: 1053-00-71

HWY: STH 29

COUNTY: MARATHON

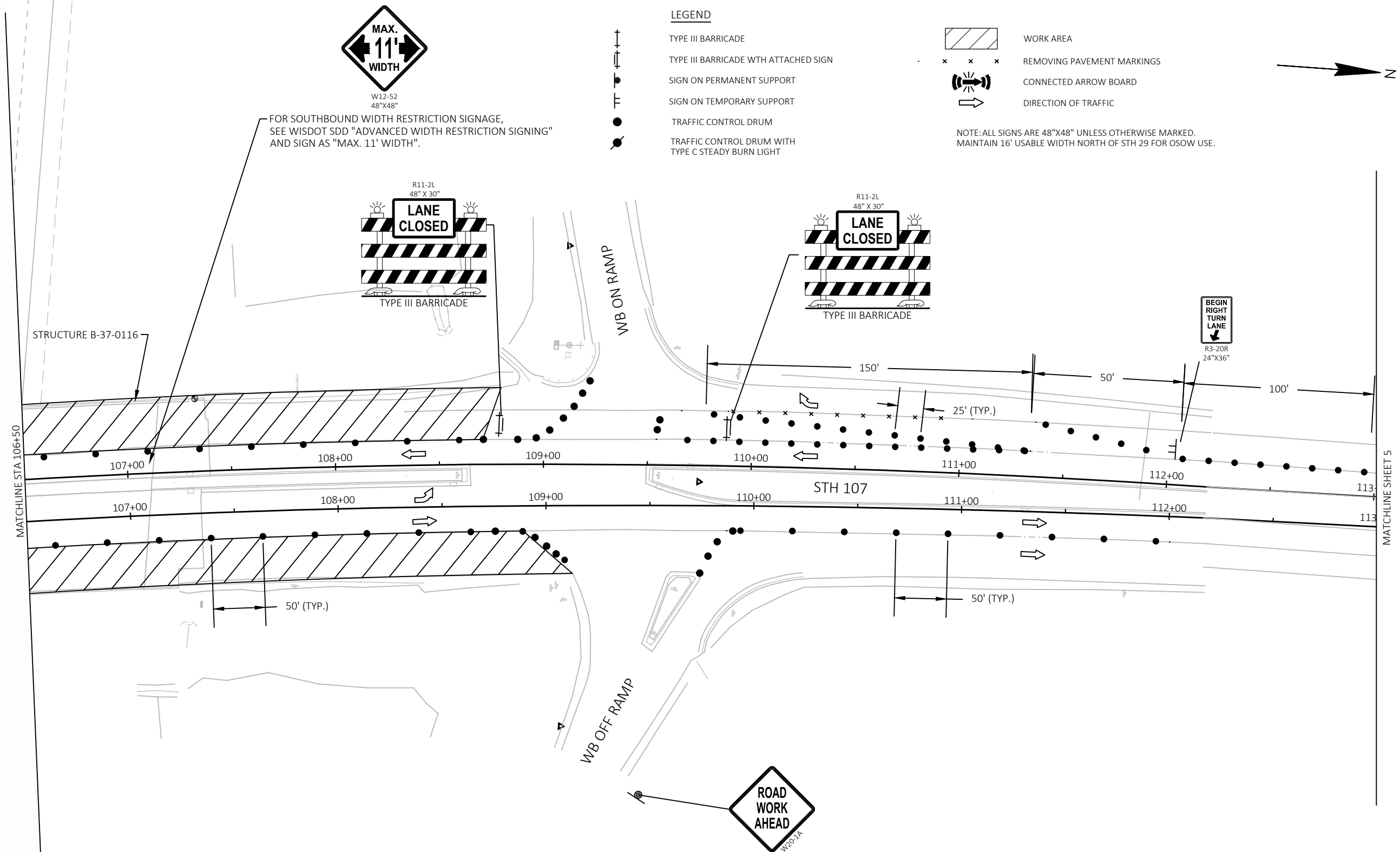
TRAFFIC CONTROL - STH 107 - STAGE 2

SHEET

E

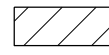
NOTE: ALL SIGNS ARE 48"X48" UNLESS OTHERWISE MARKED.
MAINTAIN 16' USABLE WIDTH NORTH OF STH 29 FOR OSOW USE.



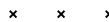


LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT



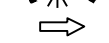
WORK AREA



REMOVING PAVEMENT MARKINGS

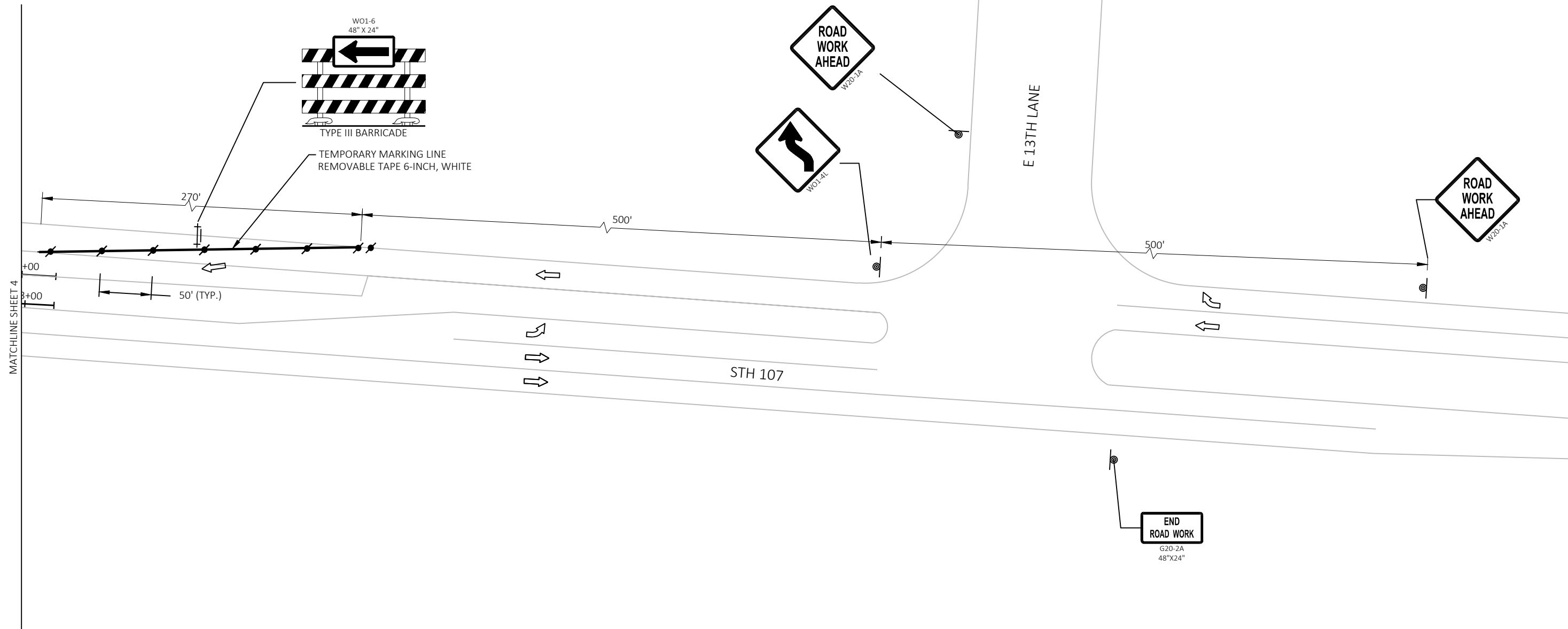
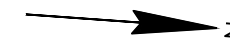


CONNECTED ARROW BOARD



DIRECTION OF TRAFFIC

NOTE: ALL SIGNS ARE 48"X48" UNLESS OTHERWISE MARKED.
MAINTAIN 16' USABLE WIDTH NORTH OF STH 29 FOR OSOW USE.



NOTE:
SCHEMATIC ONLY, NOT TO SCALE.

PROJECT NO: 1053-00-71

HWY: STH 29

COUNTY: MARATHON

TRAFFIC CONTROL - STH 107 - STAGE 2

SHEET

E

Estimate Of Quantities

1053-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	203.0211.S	Abatement of Asbestos Containing Material (structure) 01. B-37-0116	EACH	1.000	1.000
0004	204.0100	Removing Concrete Pavement	SY	88.000	88.000
0006	204.0165	Removing Guardrail	LF	396.000	396.000
0008	204.0190	Removing Surface Drains	EACH	1.000	1.000
0010	205.0100	Excavation Common	CY	817.000	817.000
0012	213.0100	Finishing Roadway (project) 1053-00-71	EACH	1.000	1.000
0014	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	314.000	314.000
0016	415.0060	Concrete Pavement 6-Inch	SY	45.000	45.000
0018	415.0410	Concrete Pavement Approach Slab	SY	90.000	90.000
0020	416.0610	Drilled Tie Bars	EACH	101.000	101.000
0022	502.3205	Pigmented Surface Sealer Reseal	SY	420.000	420.000
0024	509.0301	Preparation Decks Type 1	SY	27.000	27.000
0026	509.0302	Preparation Decks Type 2	SY	9.000	9.000
0028	509.0310.S	Sawing Pavement Deck Preparation Areas 01. B-37-0116	LF	220.000	220.000
0030	509.0310.S	Sawing Pavement Deck Preparation Areas 02. B-37-0287	LF	50.000	50.000
0032	509.5100.S	Polymer Overlay 01. B-37-0116	SY	2,030.000	2,030.000
0034	509.5100.S	Polymer Overlay 02. B-37-0287	SY	1,180.000	1,180.000
0036	509.9015.S	Removing Polymer Overlay (structure) 01. B-37-0116	SY	2,030.000	2,030.000
0038	509.9015.S	Removing Polymer Overlay (structure) 02. Structure B-37-0287	SY	1,180.000	1,180.000
0040	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	10.000	10.000
0042	601.0590	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBTT	LF	60.000	60.000
0044	602.3010	Concrete Surface Drains	CY	12.000	12.000
0046	606.0200	Riprap Medium	CY	2.000	2.000
0048	611.8115	Adjusting Inlet Covers	EACH	1.000	1.000
0050	614.2300	MGS Guardrail 3	LF	25.000	25.000
0052	614.2500	MGS Thrie Beam Transition	LF	156.000	156.000
0054	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0056	618.0100	Maintenance and Repair of Haul Roads (project) 1053-00-71	EACH	1.000	1.000
0058	619.1000	Mobilization	EACH	1.000	1.000
0060	624.0100	Water	MGAL	6.000	6.000
0062	625.0105	Topsoil	CY	779.000	779.000
0064	628.1504	Silt Fence	LF	1,085.000	1,085.000
0066	628.1520	Silt Fence Maintenance	LF	1,085.000	1,085.000
0068	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0070	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0072	628.2002	Erosion Mat Class I Type A	SY	779.000	779.000
0074	628.7010	Inlet Protection Type B	EACH	2.000	2.000
0076	629.0210	Fertilizer Type B	CWT	0.500	0.500
0078	630.0130	Seeding Mixture No. 30	LB	36.000	36.000
0080	630.0500	Seed Water	MGAL	264.000	264.000
0082	642.5001	Field Office Type B	EACH	1.000	1.000
0084	643.0300	Traffic Control Drums	DAY	12,164.000	12,164.000
0086	643.0420	Traffic Control Barricades Type III	DAY	363.000	363.000
0088	643.0705	Traffic Control Warning Lights Type A	DAY	654.000	654.000
0090	643.0715	Traffic Control Warning Lights Type C	DAY	1,432.000	1,432.000
0092	643.0800	Traffic Control Arrow Boards	DAY	50.000	50.000
0094	643.0900	Traffic Control Signs	DAY	2,133.000	2,133.000
0096	643.0920	Traffic Control Covering Signs Type II	EACH	4.000	4.000
0098	643.1000	Traffic Control Signs Fixed Message	SF	72.000	72.000

Estimate Of Quantities

1053-00-71

Line	Item	Item Description	Unit	Total	Qty
0100	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	6,265.000	6,265.000
0102	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	24.000	24.000
0104	643.5000	Traffic Control	EACH	1.000	1.000
0106	645.0120	Geotextile Type HR	SY	9.000	9.000
0108	646.2020	Marking Line Epoxy 6-Inch	LF	4,876.000	4,876.000
0110	646.4020	Marking Line Epoxy 10-Inch	LF	501.000	501.000
0112	646.9000	Marking Removal Line 4-Inch	LF	400.000	400.000
0114	650.5000	Construction Staking Base	LF	741.000	741.000
0116	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	70.000	70.000
0118	650.7000	Construction Staking Concrete Pavement	LF	96.000	96.000
0120	650.9911	Construction Staking Supplemental Control (project) 1053-00-71	EACH	1.000	1.000
0122	650.9920	Construction Staking Slope Stakes	LF	402.000	402.000
0124	661.0101	Temporary Traffic Signals for Bridges (structure) B-37-0287	EACH	1.000	1.000
0126	690.0150	Sawing Asphalt	LF	167.000	167.000
0128	690.0250	Sawing Concrete	LF	131.000	131.000
0130	SPV.0035	Special 01. Rapid Set Deck Repair	CY	3.000	3.000
0132	SPV.0180	Special 01. Reinforced Concrete Pavement Approach Approach Slab Repair	SY	4.000	4.000

REMOVALS

			204.0100	204.0190
			REMOVING CONCRETE PAVEMENT	REMOVING SURFACE DRAINS
ROADWAY	LOCATION	QUAD.	SY	EACH
STH 107	CONCRETE TRANSITION PANEL	SE	19	-
	CONCRETE TRANSITION PANEL	NE	43	-
	CONCRETE TRANSITION PANEL	NW	26	-
	SURFACE DRAIN	SE	-	1
PROJECT 1053-00-71 TOTAL			88	1

REMOVING GUARDRAIL

ROADWAY	STATION	-	STATION	OFFSET	204.0165
					REMOVING GUARDRAIL LF
STH 107	103+60	-	104+66	RT	105
	103+83	-	104+75	LT	93
	107+21	-	108+15	RT	93
	107+38	-	108+42	LT	105
PROJECT 1053-00-71 TOTAL					396

EARTHWORK

DIVISION	FROM/TO STATION	205.0100 COMMON EXCAVATION (1)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE
		CUT (2)			FACTOR 1.25		
SE QUADRANT	102+91.00/104+65.65	189	189	3	4	185	185
NE QUADRANT	107+21.78/109+13.28	221	221	5	6	215	215
SW QUADRANT	102+65.41/104+75.00	235	235	10	13	223	223
NW QUADRANT	107+38.22/108+87.43	172	172	6	8	165	165
TOTAL COMMON EXC		817					

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(13) EXPANDED FILL FACTOR = 1.25
(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

CONCRETE SURFACE DRAIN

				602.3010	601.0590	606.0200	645.0120
				CONCRETE SURFACE DRAINS	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBTT	RIPRAP MEDIUM	GEOTEXTILE TYPE HR
STATION -	STATION	OFFSET	ROADWAY	CY	LF	CY	SY
104+07	104+67	RT	STH 107	12	60	-	-
104+20	-	RT	STH 107	-	-	2	9
PROJECT 1053-00-71 TOTAL				12	60	2	9

PAVING ITEMS

					305.0120	415.0410	415.0060	624.0100	416.0610	SPV.0180
					BASE AGGREGATE DENSE 1 1/4-INCH	CONCRETE PAVEMENT APPROACH SLAB	CONCRETE PAVEMENT 6-INCH	WATER	DRILLED TIE BARS	REINFORCED CONCRETE PAVEMENT APPROACH SLAB REPAIR
ROADWAY	LOCATION	FROM STA	TO STA	LOCATION	TON	SY	SY	MGAL	EACH	SY
STH 107	MAINLINE TRANSITION PANEL	104+59	104+65	RT	7	20	-	0.2	27	-
	MAINLINE APPROACH PANEL	104+65	104+82	RT	-	-	-	-	-	1
	MAINLINE TRANSITION PANEL	107+25	107+35	RT	14	40	-	0.3	38	-
	MGS/SHOULDER	102+90	104+65	RT	66	-	45	1.1	-	-
	MGS/SHOULDER	107+21	109+12	RT	75	-	-	1.4	-	-
	MAINLINE APPROACH PANEL	104+67	104+91	LT	-	-	-	-	-	2
	MAINLINE APPROACH PANEL	107+14	107+34	LT	-	-	-	-	-	1
	MAINLINE TRANSITION PANEL	107+34	107+41	LT	9	30	-	0.2	36	-
	MGS/SHOULDER	102+67	104+76	LT	67	-	-	1.4	-	-
	MGS/SHOULDER	107+38	108+87	LT	76	-	-	1.4	-	-
PROJECT 1053-00-71 TOTAL					314	90	45	6.0	101	4

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

GUARDRAIL

				614.2300 MGS GUARDRAIL 3	614.2500 MGS THRIE BEAM TRANSITION	614.2610 MGS GUARDRAIL TERMINAL EAT	
ROADWAY	STATION	-	STATION	LOCATION	LF	LF	EACH
STH 107	103+13		104+18	SE	12.5	39	1
	103+83		104+75	SW	0	39	1
	107+22		108+15	NE	0	39	1
	107+38		108+42	NW	12.5	39	1
PROJECT 1053-00-71 TOTAL					25	156	4

EROSION CONTROL MOBILIZATION

		628.1905 MOBILIZATIONS EROSION CONTROL	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL
PROJECT	ROADWAY	EACH	EACH
1053-00-71	STH 107	3	2
	STH 97	1	1
PROJECT 1053-00-71 TOTAL		4	3

LANDSCAPING

				625.0100 TOPSOIL	628.2002 EROSION MAT CLASS I TYPE A	629.0210 FERTILIZER TYPE B	630.0130 SEEDING MIXTURE NO. 30	630.0500 SEED WATER MGAL
ROADWAY	STATION	-	STATION	LOCATION	SY	SY	CWT	LB
STH 107	102+65		104+75	LT	179	179	0.11	8.1
	102+90	-	104+66	RT	195	195	0.12	8.8
	107+21	-	109+12	RT	173	173	0.11	7.8
	107+38	-	108+42	LT	161	161	0.10	7.3
1053-00-71				UNDISTRIBUTED	71	71	0.05	3.2
PROJECT 1053-00-71 TOTAL					779	779	0.5	36

EROSION CONTROL

					628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE	628.7010 INLET PROTECTION TYPE B
ROADWAY	STATION	-	STATION	OFFSET	LF	LF	EACH
STH 107	102+55	-	104+95	LT	305	305	-
	102+62	-	104+80	RT	300	300	-
	107+09	-	109+14	RT	240	240	-
	107+20	-	109+05	LT	240	240	-
STH 107			104+60	RT	-	-	1
			107+30	LT	-	-	1
PROJECT 1053-00-71 TOTAL					1,085	1,085	2

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

TRAFFIC CONTROL

ROADWAY	LOCATION	STAGE	DAYS IN SERVICE	643.0300 TRAFFIC CONTROL DRUMS		643.0420 TRAFFIC CONTROL BARRICADES TYPE III		643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0900 TRAFFIC CONTROL SIGNS		643.0800 TRAFFIC CONTROL ARROW BOARDS		643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II		643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE	
				NO.	DAY	NO.	DAY	NO.	DAY	NO.	DAY	NO.	DAY	NO.	DAY	NO.	EACH	NO.	SF
STH 107	LANE CLOSURES	1	23	217	4991	6	138	12	276	11	253	18	414	1	23	-	-	2	36
STH 107	LANE CLOSURES	2	27	227	6129	7	189	14	378	17	459	29	783	1	27	-	-	-	-
STH 97	LANE CLOSURES	1	17	29	493	1	17	-	-	20	340	26	442	-	-	4	4	2	36
STH 97	LANE CLOSURES	2	19	29	551	1	19	-	-	20	380	26	494	-	-	-	-	-	-
PROJECT 1053-00-71 TOTAL				12,164		363		654		1,432		2,133		50		4		72	

TEMPORARY TRAFFIC SIGNALS

661.0101 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES B-37-287	
ROADWAY	EACH
STH 97	1
PROJECT 1053-00-71 TOTAL	
1	

PAVEMENT MARKING ITEMS

ROADWAY	STATION	- STATION	646.2020 MARKING LINE EPOXY 6-INCH		646.4020 MARKING LINE EPOXY 10-INCH		646.9000 MARKING REMOVAL LINE 4-INCH
			YELLOW	SOLID WHITE	DASHED WHITE	WHITE	
				LF		LF	LF
STH 97	96+50	98+93	200	-	-	-	200
	101+06	103+50	200	-	-	-	200
	97+96	102+04	816	808	-	-	-
STH 107			1,226	1,322	304	501	-
PROJECT 1053-00-71 TOTAL			2,442	2,130	304	501	400
			4,876				

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE SPECIFIED.

TEMPORARY PAVEMENT MARKING ITEMS

		643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH			643.3850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH WHITE	
ROADWAY	STAGE	YELLOW LF	WHITE LF	MASK OUT LF	WHITE LF	
STH 107	1	540	-	246	-	
STH 107	2	-	810	685	-	
STH 97	1	2,800	385	414	24	
STH 97	2	-	385	-	-	
PROJECT 1053-00-71 TOTAL		3,340	1,580	1,345	24	6,265

CONSTRUCTION STAKING

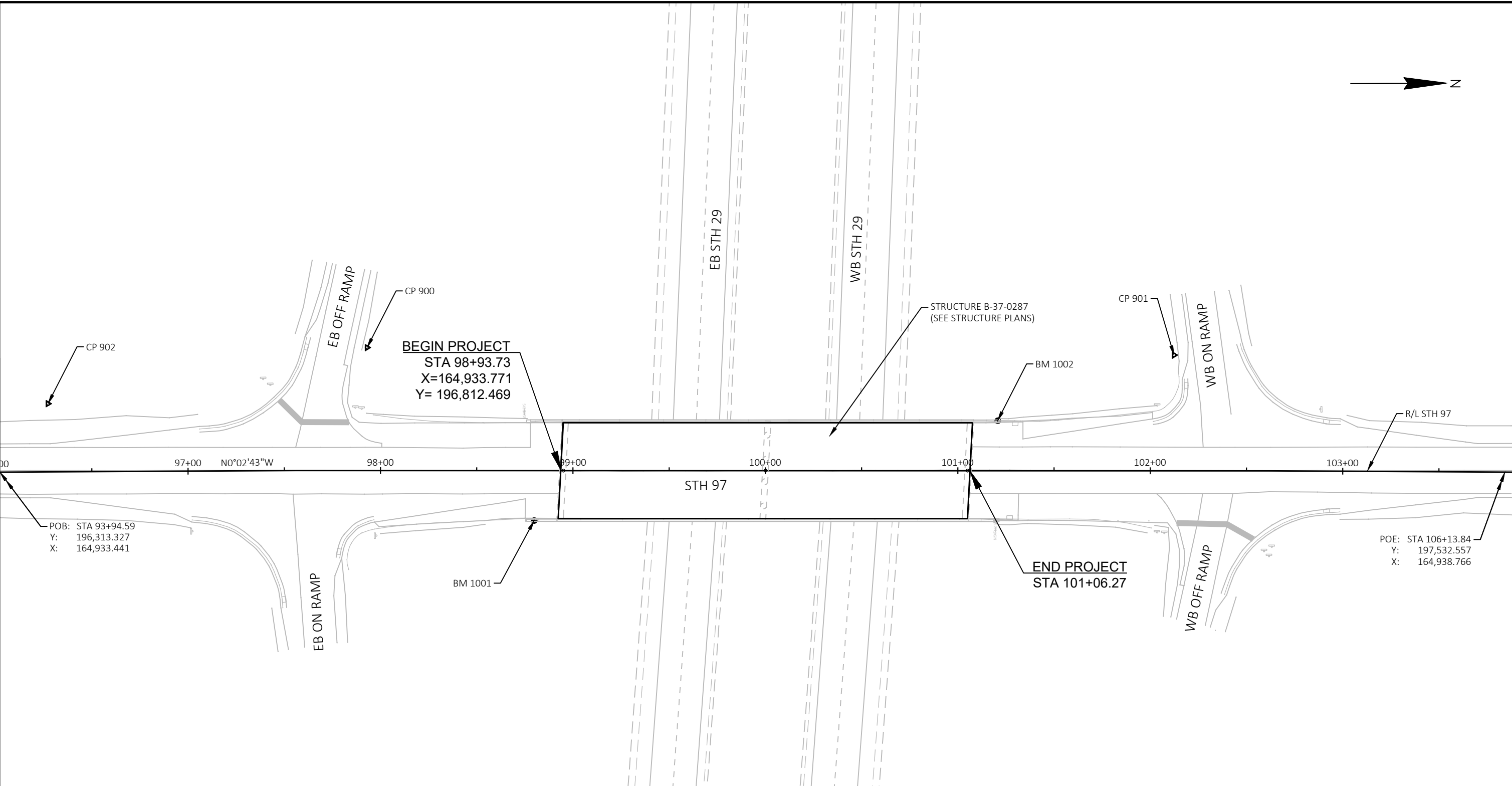
	650.5000 CONSTRUCTION STAKING BASE	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 1053-00-71	650.9920 CONSTRUCTION STAKING SLOPE STAKES	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT
ROADWAY	LF	LF	EACH	LF	LF
PROJECT	-	-	1	-	-
STH 97	-	-	-	-	-
STH 107	741	70	-	402	96
PROJECT 1053-00-71 TOTAL	741	70	1	402	96

SAWING

				690.0150 SAWING ASPHALT	690.0250 SAWING CONCRETE
STATION -	STATION	LOCATION		LF	LF
104+07	- 104+80	STH 107 NB	SOUTH ABUTMENT	87	47
107+25	- 107+35	STH 107 NB	NORTH ABUTMENT	47	42
107+33	- 107+40	STH 107 SB	NORTH ABUTMENT	33	42
PROJECT 1053-00-71 TOTAL				167	131

INLET ADJUSTMENT

					601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A	611.8115 ADJUSTING INLET COVERS
ROADWAY	LOCATION	STA	STA	SIDE	LF	EACH
STH 107	NORTH ABUTMENT	107+25	107+35	NB	10	1
PROJECT 1053-00-71 TOTAL					10	1



STH 97						
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION	CONTROL POINT DESCRIPTION
CP 900	97+93.00	63.91' LT	196712.019	164869.410	--	CP 3/4" REBAR-CAP
CP 901	102+12.39	60.08' LT	197131.389	164875.110	--	CP 3/4" REBAR-CAP
CP 902	96+27.40	35.44' LT	196546.109	164897.812	--	CP FENO
BM 1001	98+79.87	25.91' RT	196798.491	164959.621	1443.285	DISK IN SE WINGWALL
BM 1002	101+20.71	26.12' LT	197039.560	164908.814	1440.979	CHISELED SQUARE IN NW WINGWALL

NOTE: NO WETLANDS FOUND WITHIN PROJECT AREA.

LEGEND

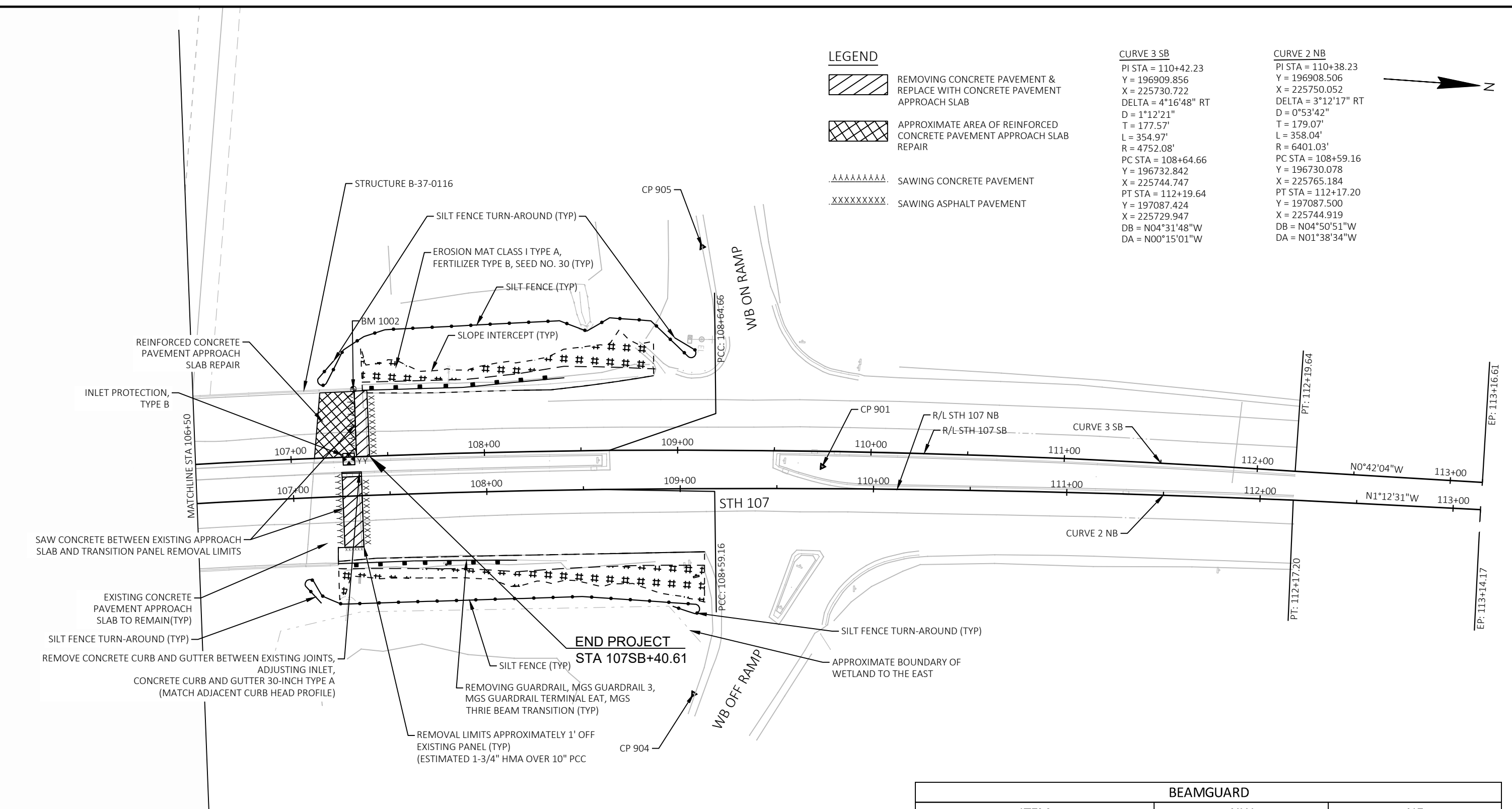
- REMOVING CONCRETE PAVEMENT & REPLACE WITH CONCRETE PAVEMENT APPROACH SLAB
- APPROXIMATE AREA OF REINFORCED CONCRETE PAVEMENT APPROACH SLAB REPAIR
-

SAWING CONCRETE PAVEMENT
-

SAWING ASPHALT PAVEMENT

CURVE 3 SB
PI STA = 110+42.23
Y = 196909.856
X = 225730.722
DELTA = 4°16'48" RT
D = 1°12'21"
T = 177.57'
L = 354.97'
R = 4752.08'
PC STA = 108+64.66
Y = 196732.842
X = 225744.747
PT STA = 112+19.64
Y = 197087.424
X = 225729.947
DB = N04°31'48"W
DA = N00°15'01"W

CURVE 2 NB
PI STA = 110+38.23
Y = 196908.506
X = 225750.052
DELTA = 3°12'17" RT
D = 0°53'42"
T = 179.07'
L = 358.04'
R = 6401.03'
PC STA = 108+59.16
Y = 196730.078
X = 225765.184
PT STA = 112+17.20
Y = 197087.500
X = 225744.919
DB = N04°50'51"W
DA = N01°38'34"W

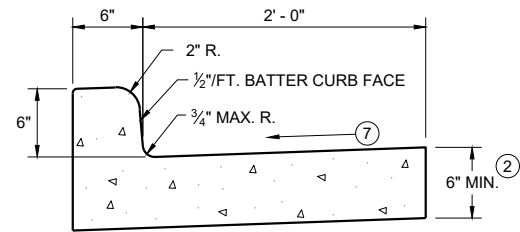


STH 107						
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP 901	109NB+73.46	11.48' LT	196843.283	225745.090	--	CP MAG-NL
CP 904	109NB+06.41	106.06' RT	196785.333	225867.170	--	CP SPIKE
CP 905	109SB+12.31	105.17' LT	196773.097	225636.299	--	CP SPIKE
BM 1002	107SB+33.51	34.94' LT	196598.441	225722.729	1287.251	CHISELED SQUARE IN NW WINGWALL

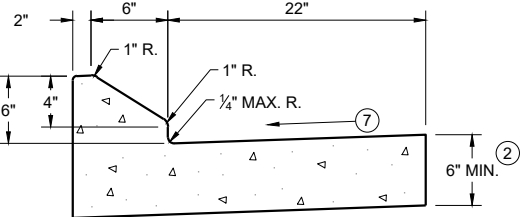
BEAMGUARD		
ITEM	NW	NE
MGS THRIE BEAM TRANSITION	107SB+37.93, 34' LT - 107SB+77.33, 34' LT	107NB+21.58, 34' RT - 107NB+60.98, 34' RT
MGS GUARDRAIL 3	107SB+77.33, 34' LT - 107SB+89.83, 34' LT	--
MGS GUARDRAIL TERMINAL EAT	107SB+89.83, 34' LT - 108SB+42.91, 36' LT	107NB+60.98, 34' RT - 108NB+14.06, 36' RT

Standard Detail Drawing List

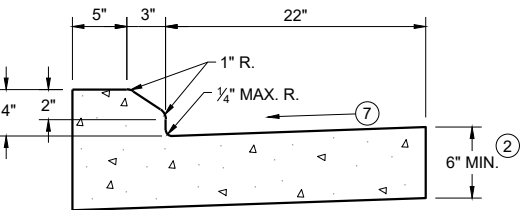
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
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)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-09F	ADVANCED WIDTH RESTRICTION SIGNING
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15D20-09A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D33-09	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D50-03B	TRAFFIC CONTROL, ADDED LANE CLOSURE WITH LANE SHIFT
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY



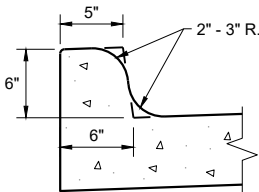
TYPES A^① & D



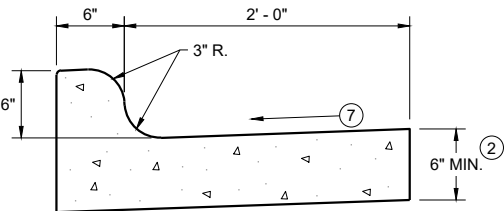
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

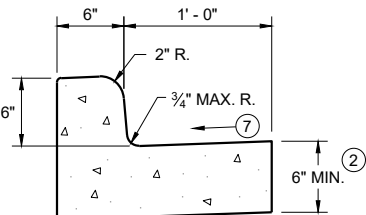


TYPES K^① & L
(OPTIONAL CURB SHAPE)



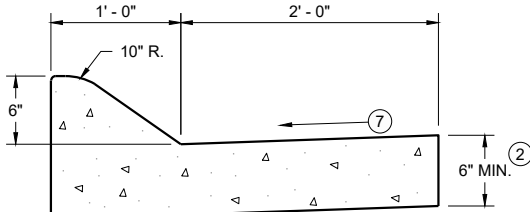
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

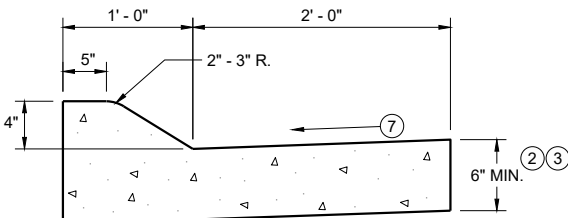


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

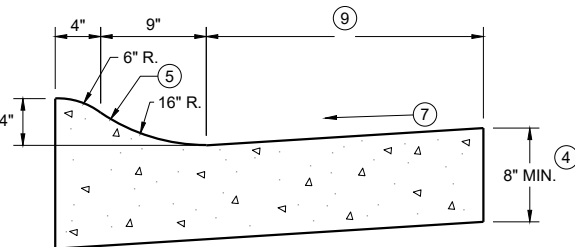


6" SLOPED CURB TYPES A^① & D



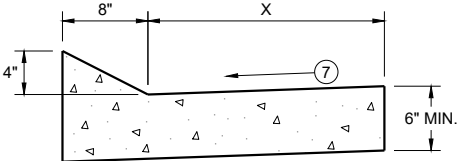
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

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

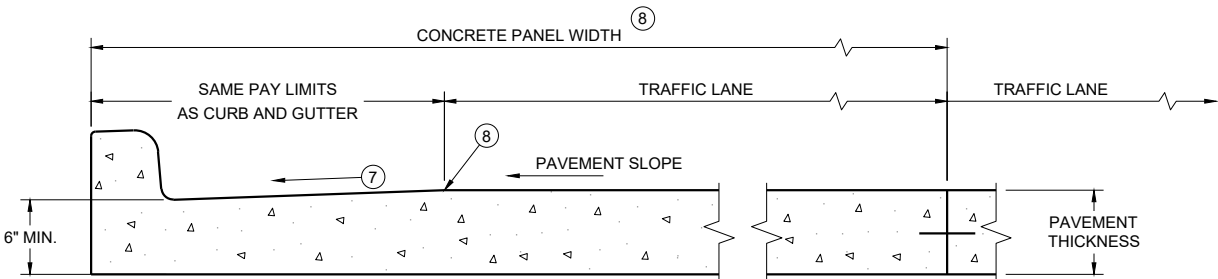


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

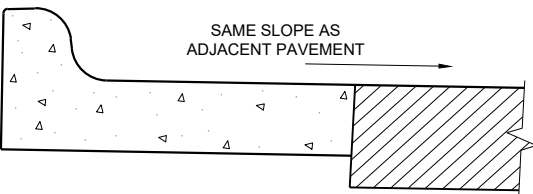
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

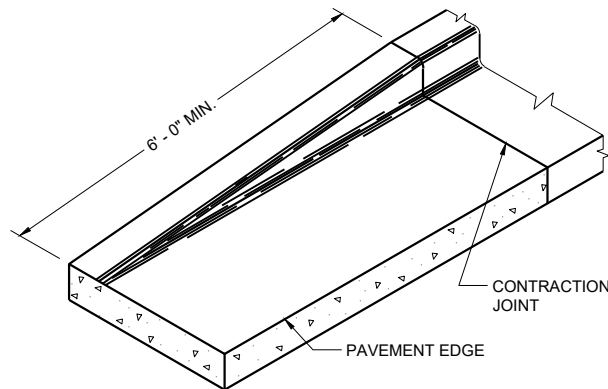
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

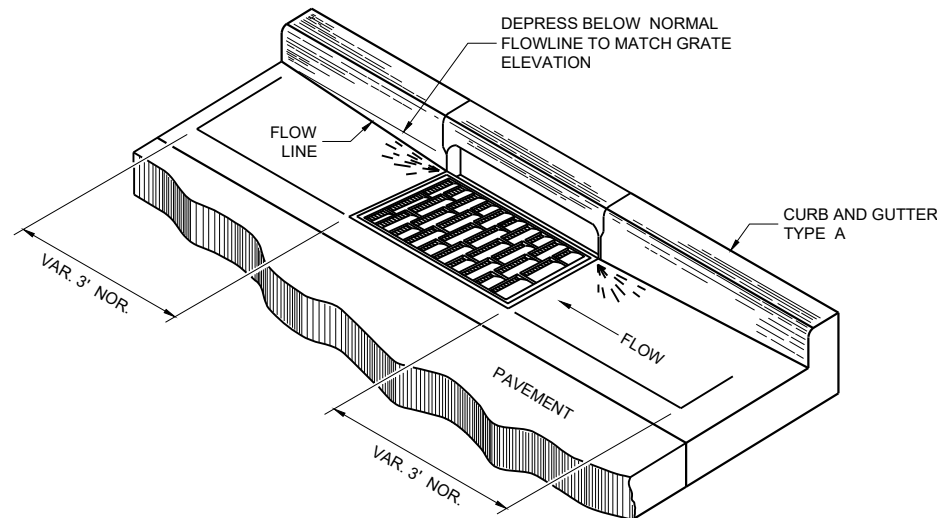
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH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

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

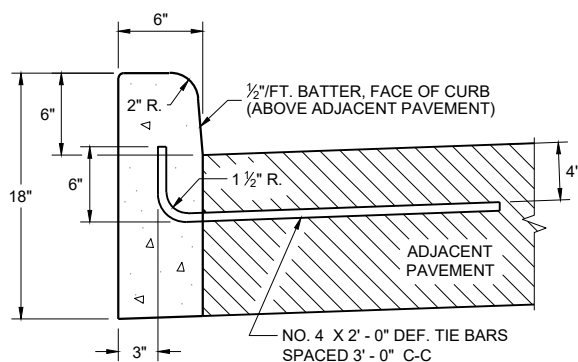


END SECTION CURB AND GUTTER

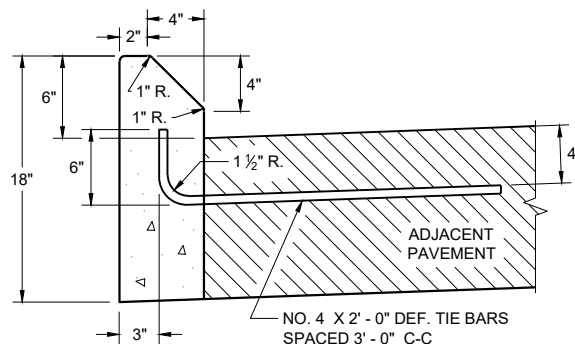


DETAIL OF CURB AND GUTTER AT INLETS

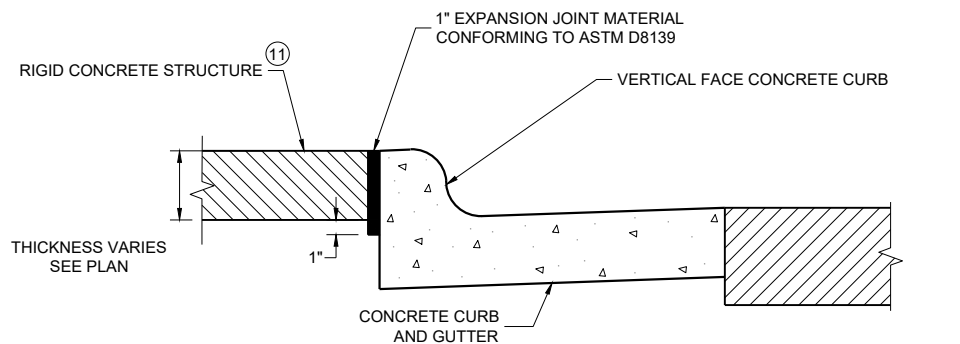
(TYPICAL H INLET COVER SHOWN)



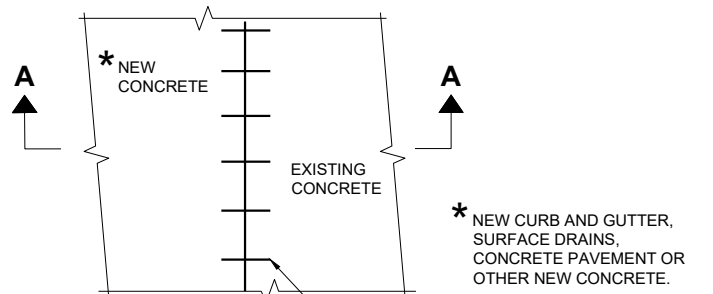
TYPES A^① & D



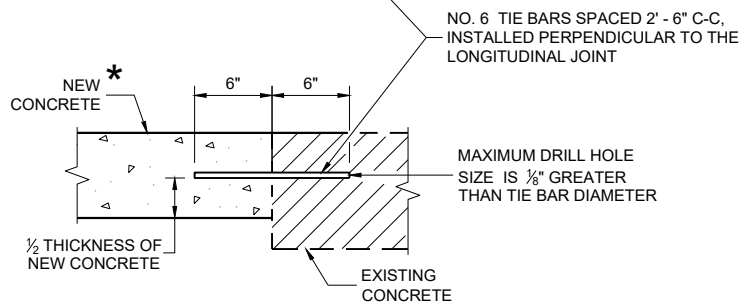
TYPES G^① & J
CONCRETE CURB



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



PLAN VIEW



SECTION A - A
TIE BARS DRILLED INTO EXISTING PAVEMENT

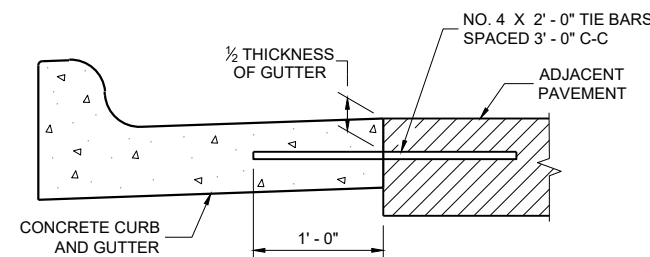
GENERAL NOTES

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

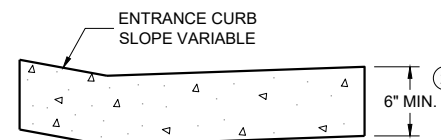
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

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



TYPICAL TIE BAR LOCATION^①



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

CONCRETE CURB, TIES
AND CURB AND GUTTER
APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

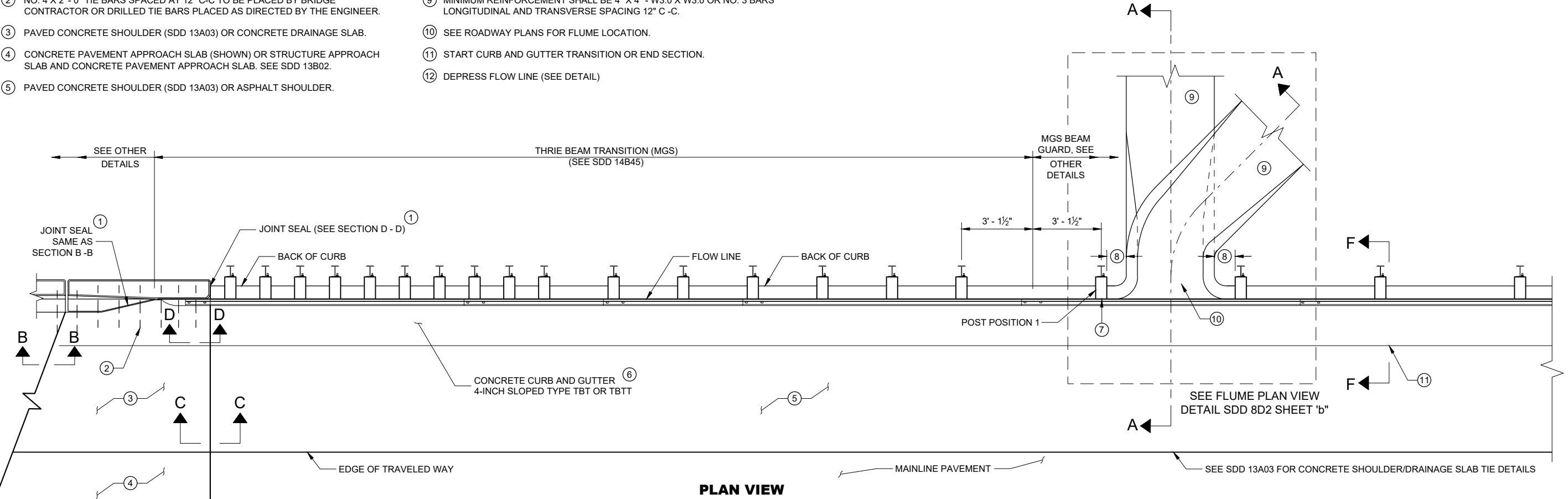
GENERAL NOTES

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.

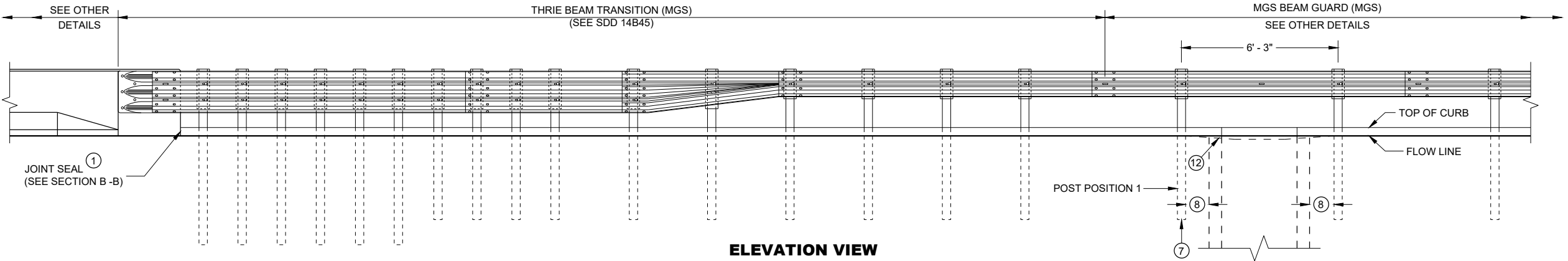
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- 1 USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- 2 NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- 3 PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- 4 CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.
- 5 PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

- 6 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- 7 PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- 8 CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- 9 MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- 10 SEE ROADWAY PLANS FOR FLUME LOCATION.
- 11 START CURB AND GUTTER TRANSITION OR END SECTION.
- 12 DEPRESS FLOW LINE (SEE DETAIL)



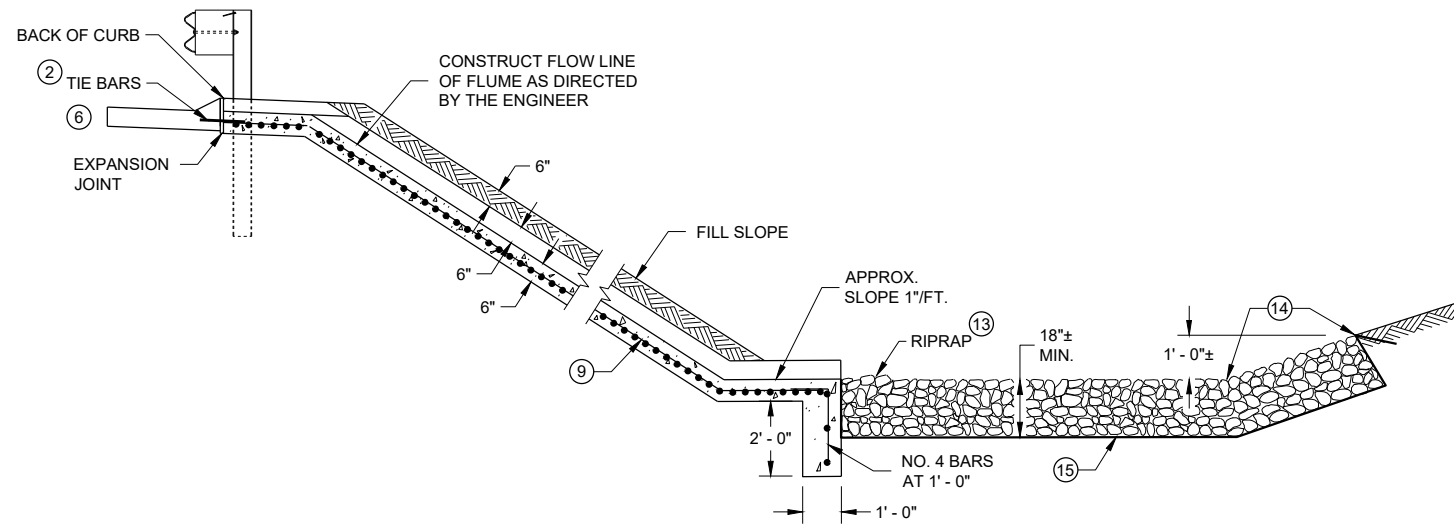
PLAN VIEW



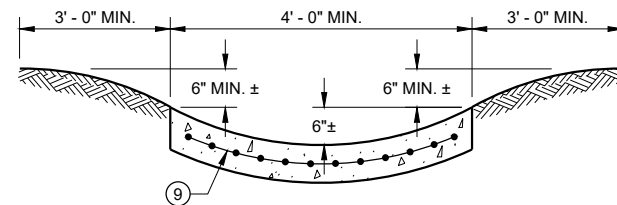
ELEVATION VIEW

CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES

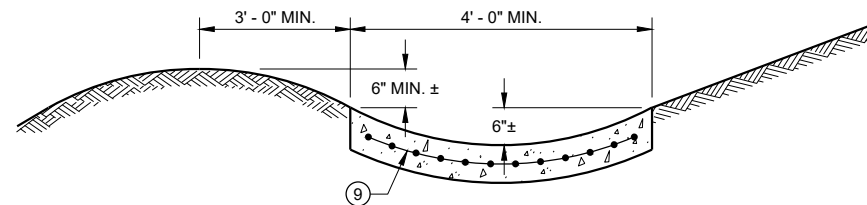
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



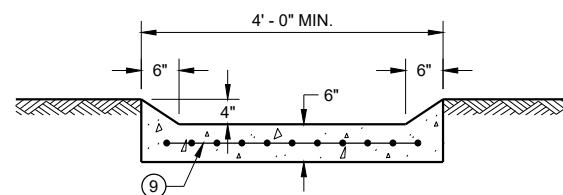
SECTION A - A



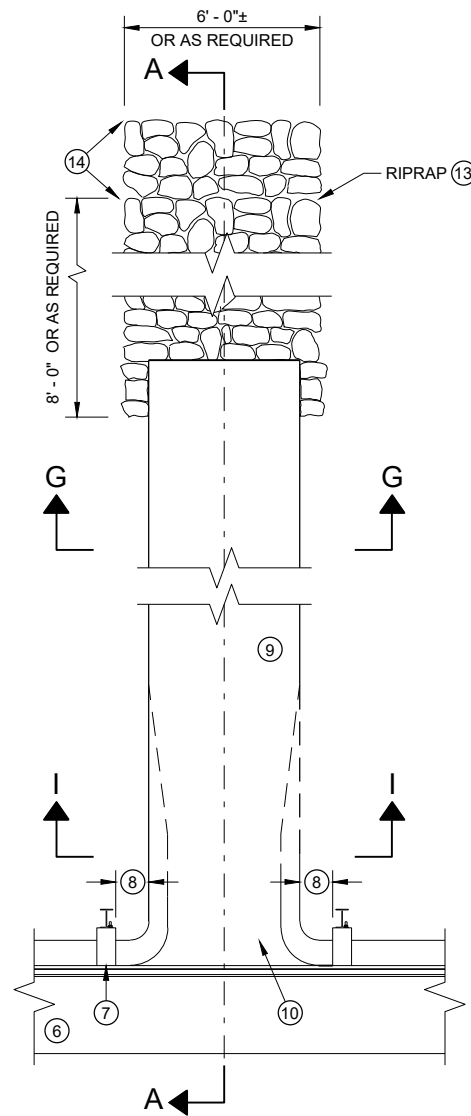
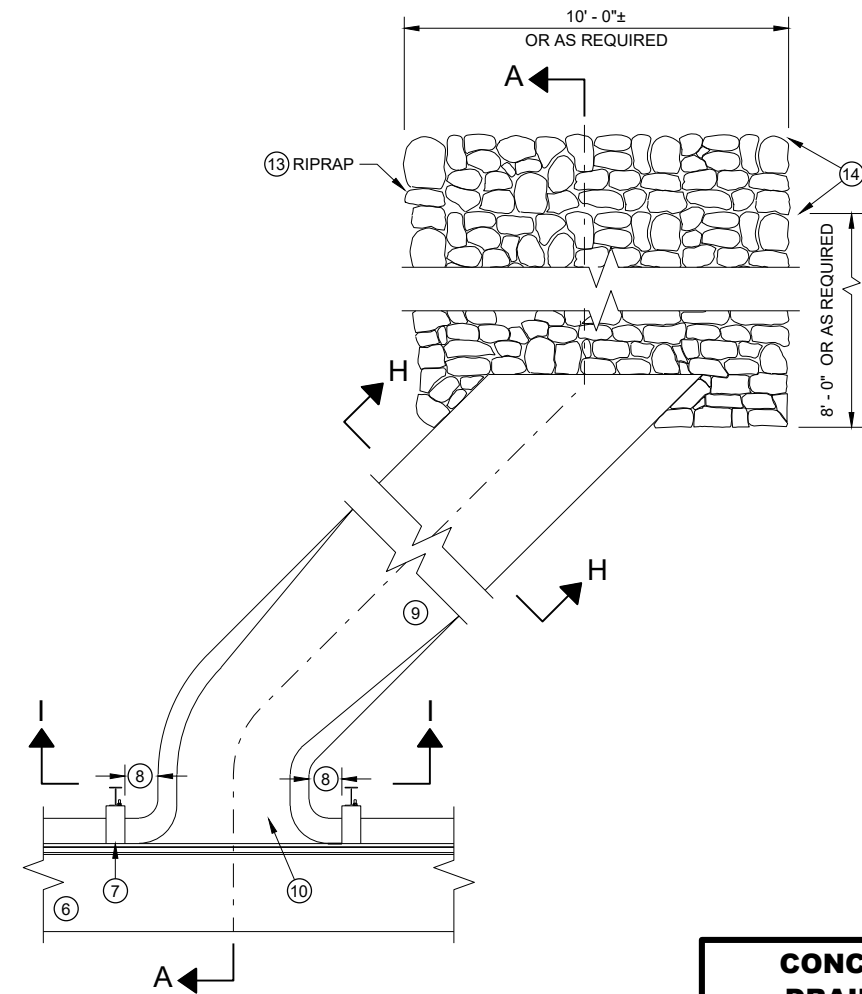
SECTION G - G



SECTION H - H



SECTION I - I

PLAN VIEW
PERPENDICULAR FLUMEPLAN VIEW
SKEWED FLUME

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.

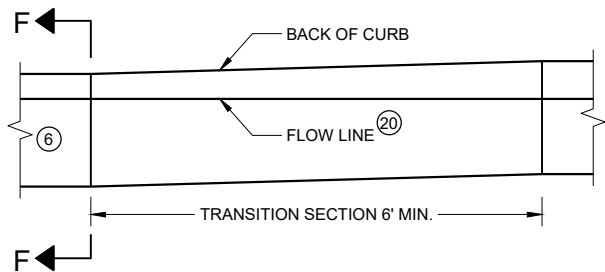
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBT. USE TYPE TBT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

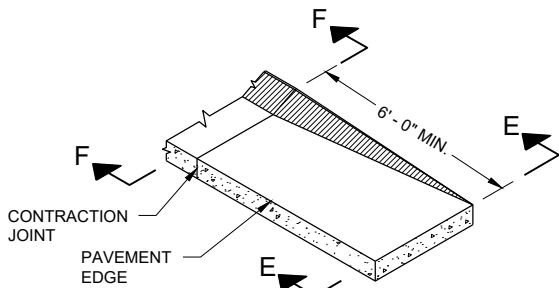
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
- ⑮ GEOTEXTILE TYPE HR.

**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

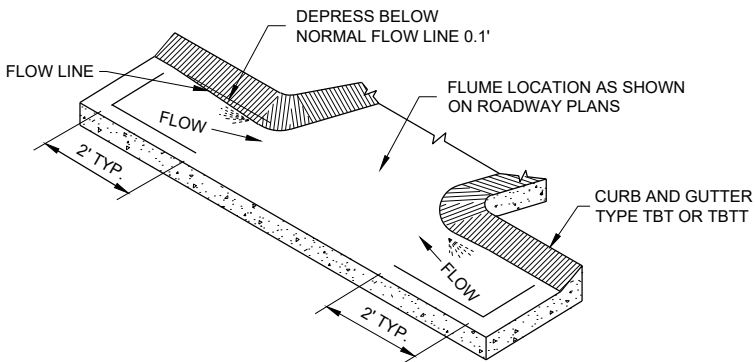
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



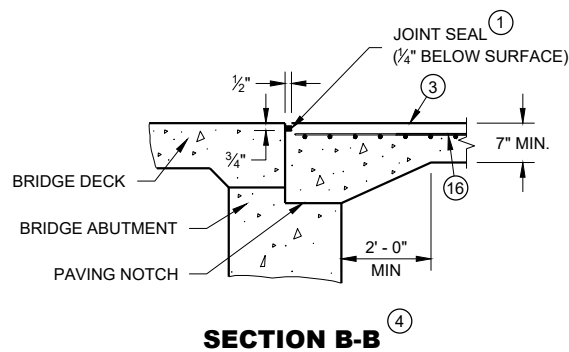
**CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



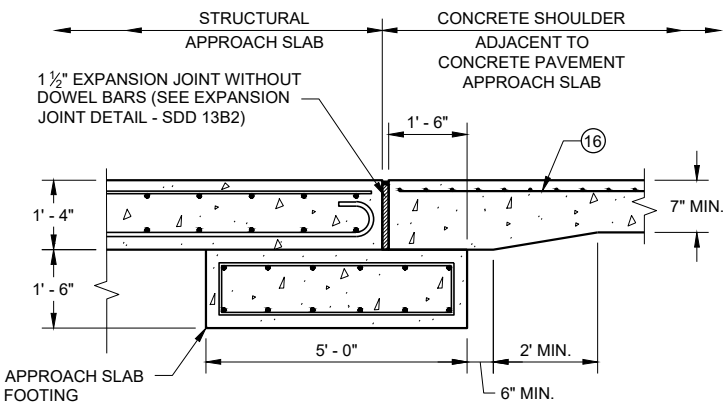
**CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



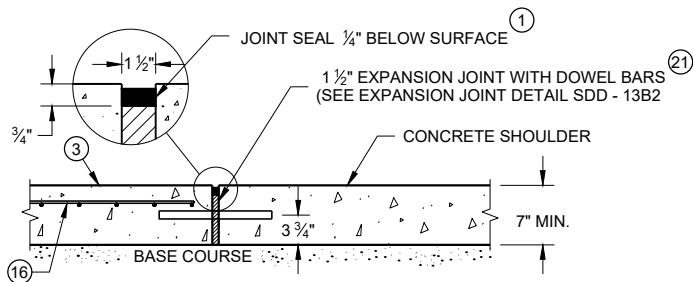
**CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**



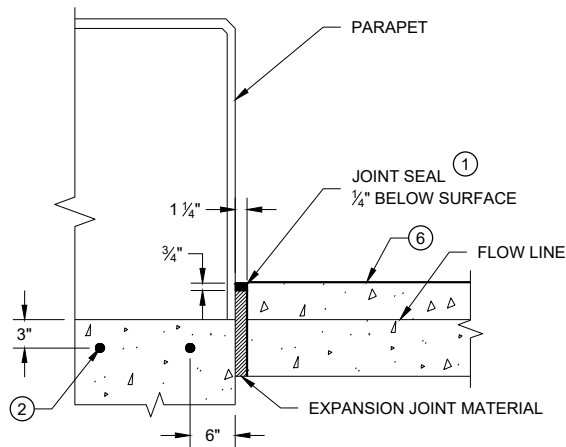
SECTION B-B



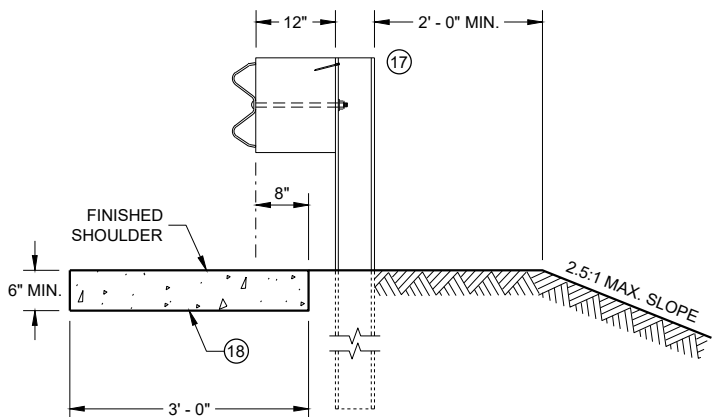
**SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL
APPROACH SLAB AND CONCRETE APPROACH SLAB**



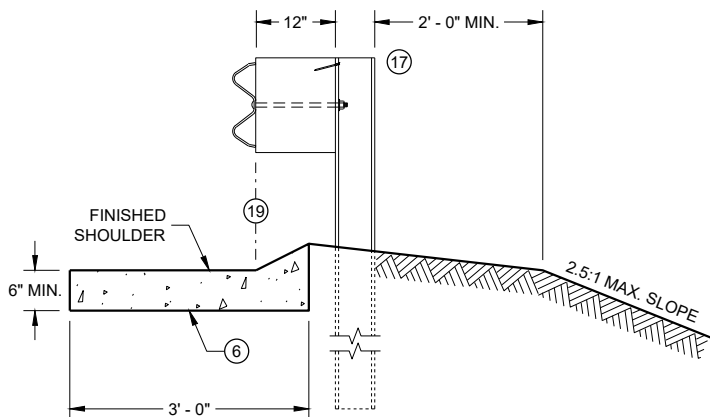
**SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH
WITH CONCRETE SHOULDERS**



SECTION D - D



SECTION E - E



SECTION F - F

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.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- ⑮ GEOTEXTILE TYPE HR.
- ⑯ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.
- ⑰ MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.
- ⑱ MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.
- ⑲ ALIGN FACE OF POST BLOCK WITH FLOW LINE.
- ⑳ MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.
- ㉑ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023

DATE

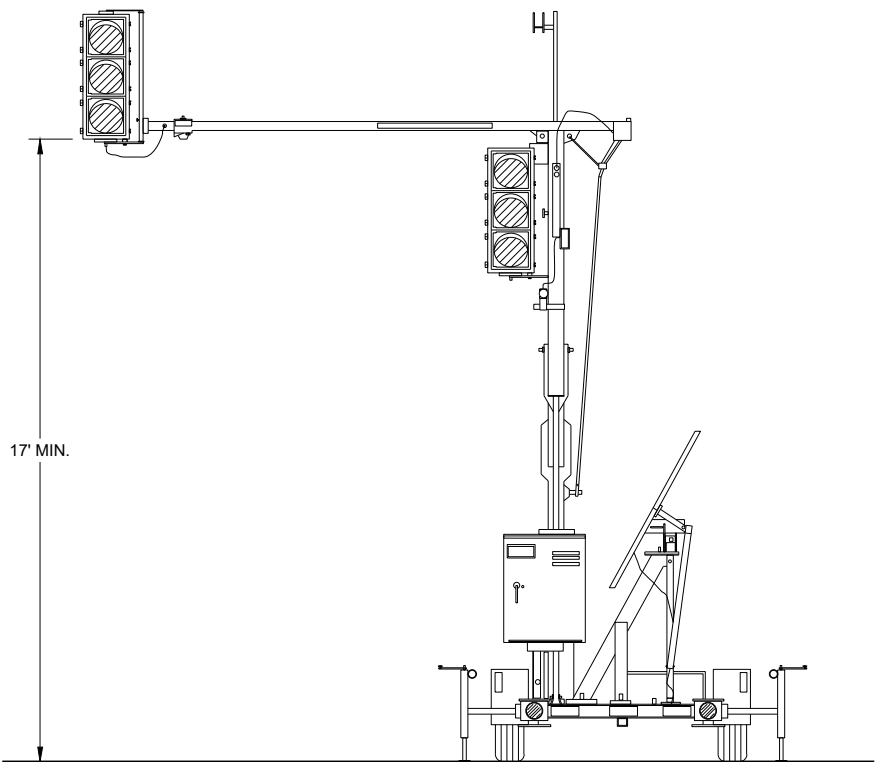
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



A cross-sectional diagram of a tieback system. A vertical line represents the 'SILT FENCE'. A diagonal line, labeled 'TIEBACK BETWEEN FENCE POST AND ANCHOR', connects the fence to an 'ANCHOR STAKE MIN. 18" LONG' driven into the ground. An arrow labeled 'FLOW DIRECTION' points from left to right, indicating the direction of water flow towards the fence.

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

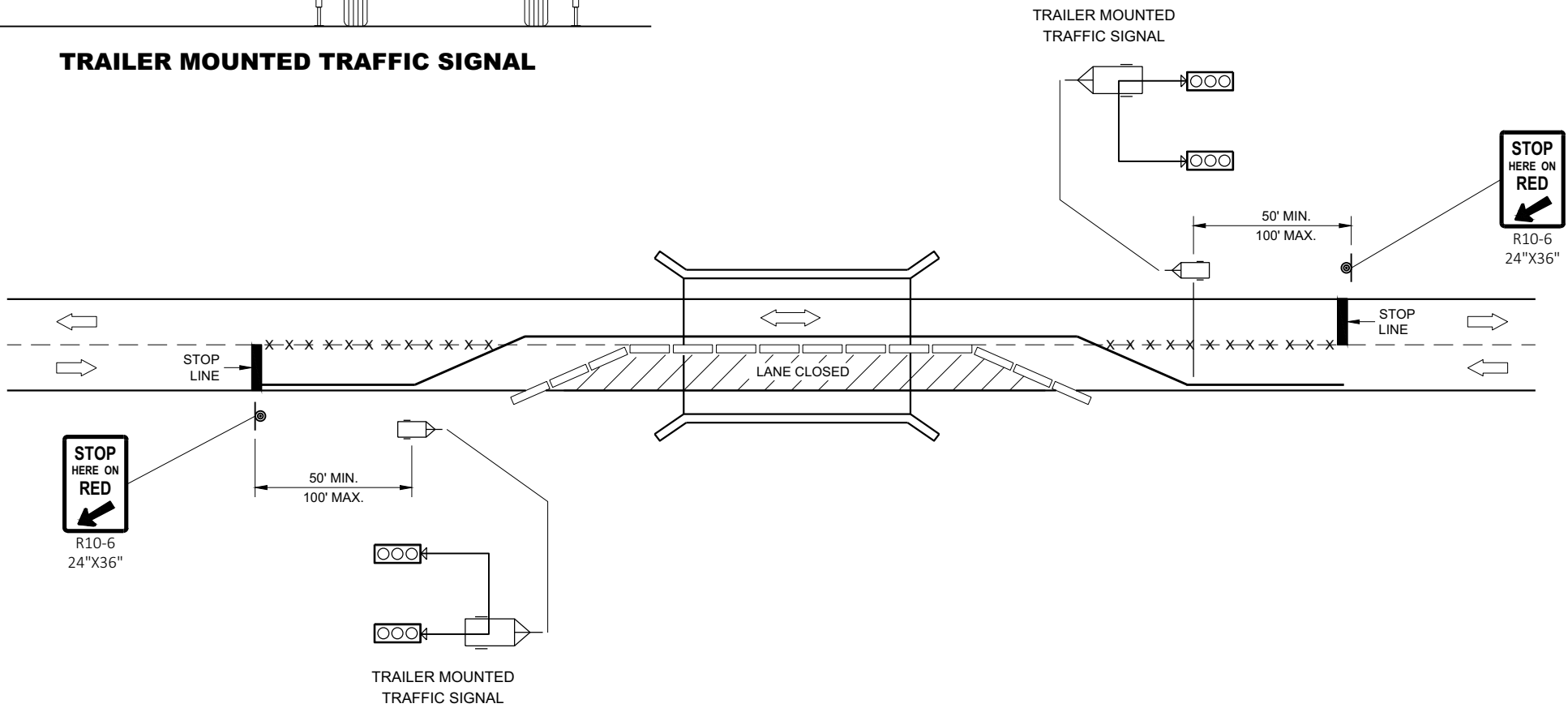


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

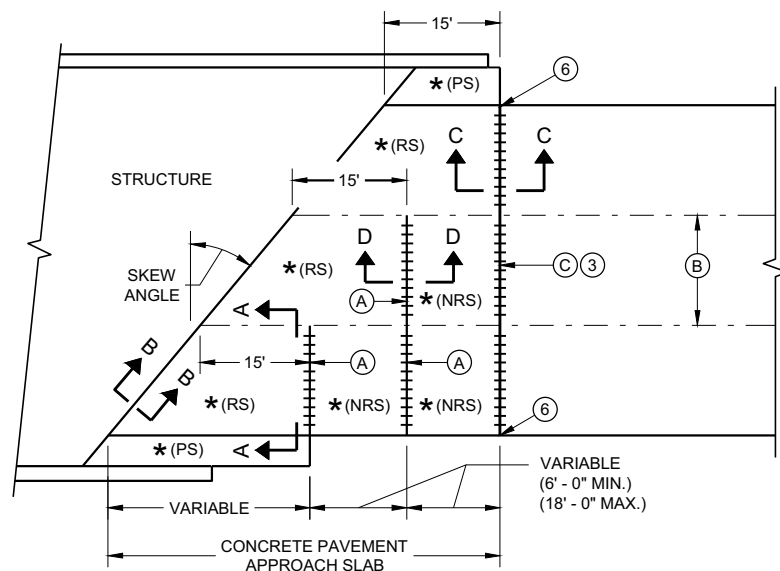
LEGEND

- POST MOUNTED SIGN
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC

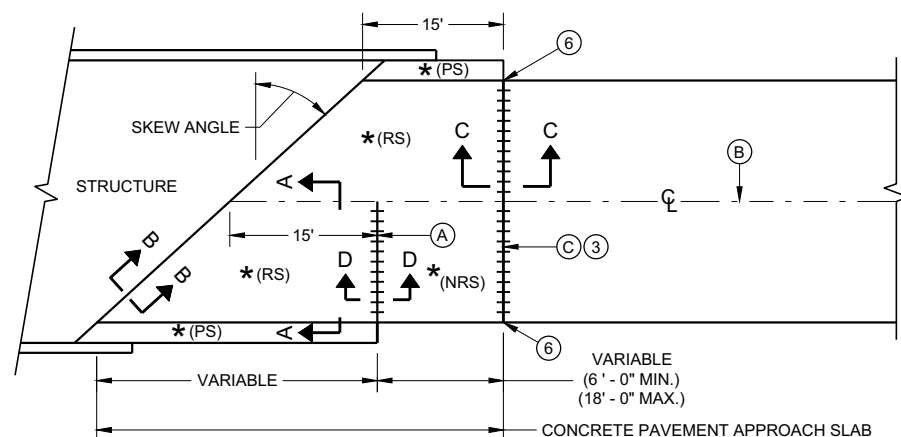
BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

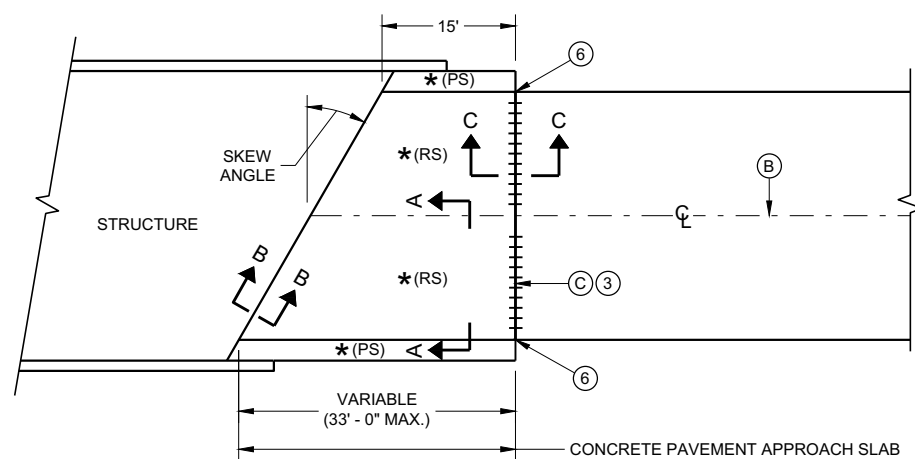
APPROVED
June 2015
DATE /S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



**SKewed APPROACH
(PAVEMENT MORE THAN TWO LANES)**



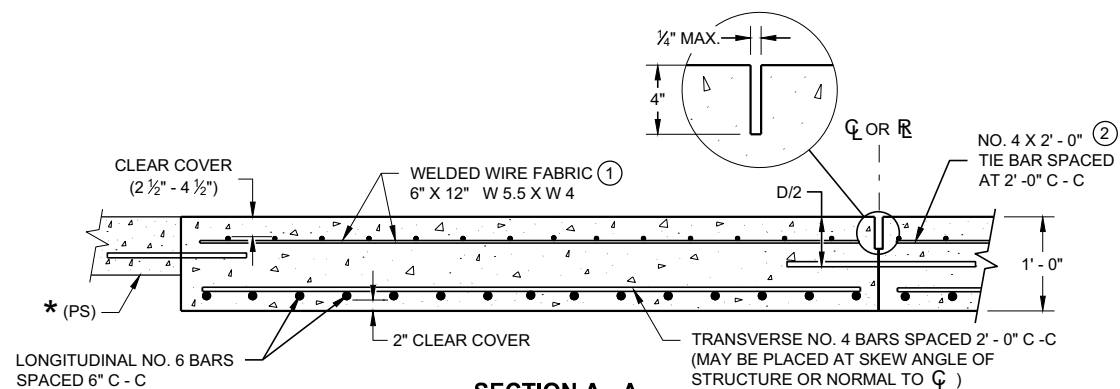
**SKews > 20°
(PAVEMENT WIDTH ≤ 30')**



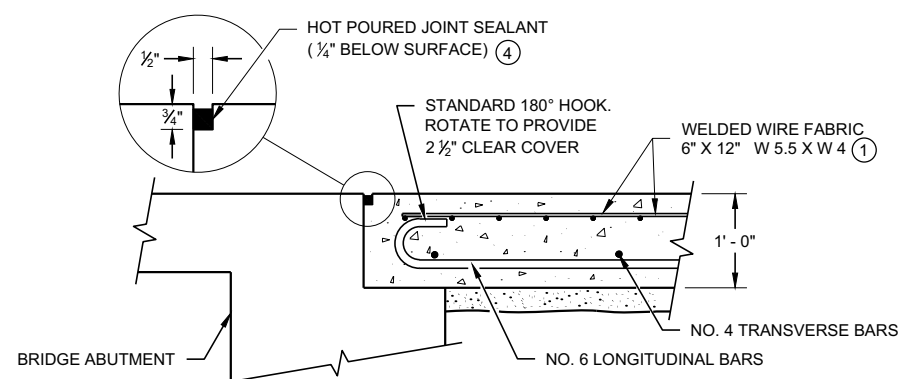
**SKews ≤ 20°
(PAVEMENT WIDTH ≤ 30')**

APPROACH SLAB AND ADJACENT PAVEMENT

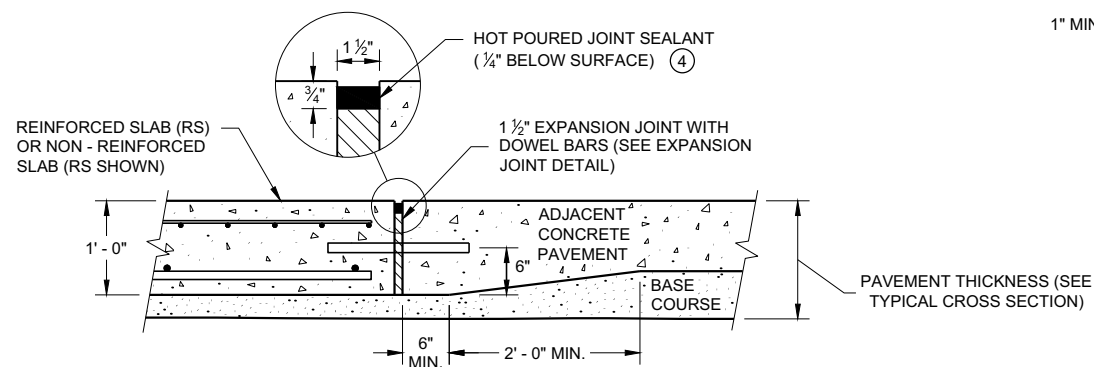
- * (RS) = REINFORCED CONCRETE SLAB
- * (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
- * (NRS) = NON - REINFORCED CONCRETE SLAB
- *** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



**SECTION A - A
REINFORCEMENT POSITIONING DETAIL**



**SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT**



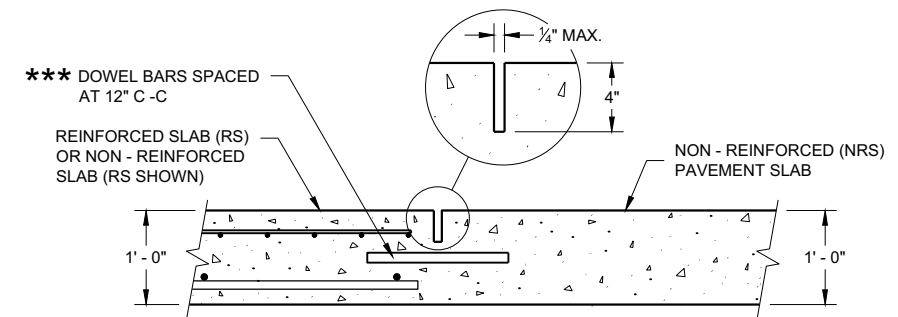
**SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT**

GENERAL NOTES

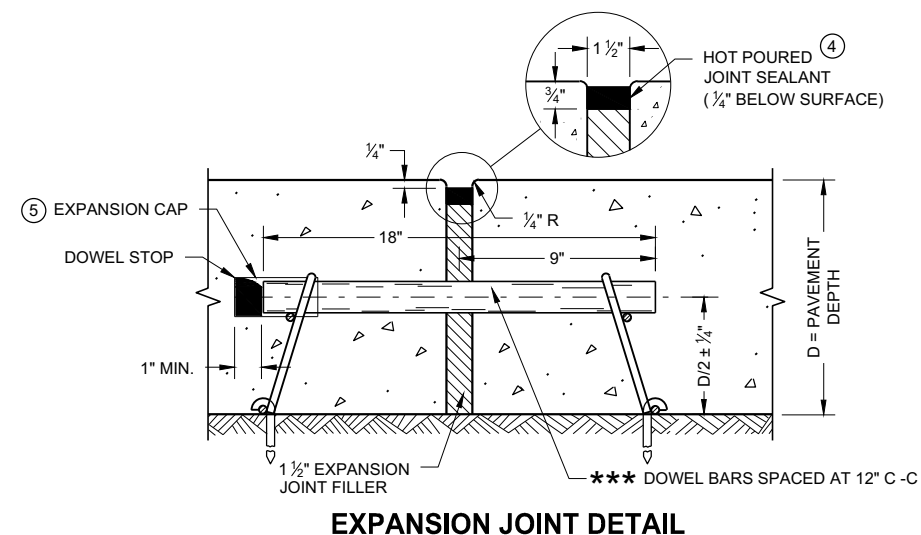
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

- ① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0" C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
- ② THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
- ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
- ④ USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.
- ⑥ EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
- A STANDARD CONTRACTION JOINT NORMAL TO $\mathcal{C}$ OR $\mathcal{R}$.
- B STANDARD LONGITUDINAL JOINT WITH TIE BARS.
- C 1 1/2" EXPANSION JOINT WITH DOWEL BARS NORMAL TO $\mathcal{C}$ OR $\mathcal{R}$.



**SECTION D - D
CONTRACTION JOINT**



EXPANSION JOINT DETAIL

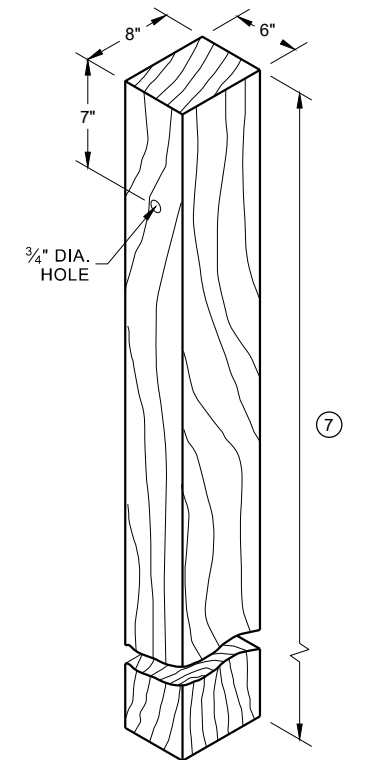
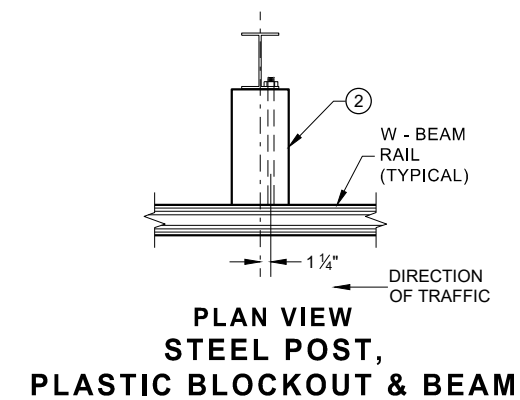
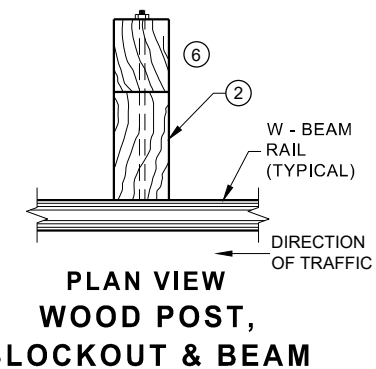
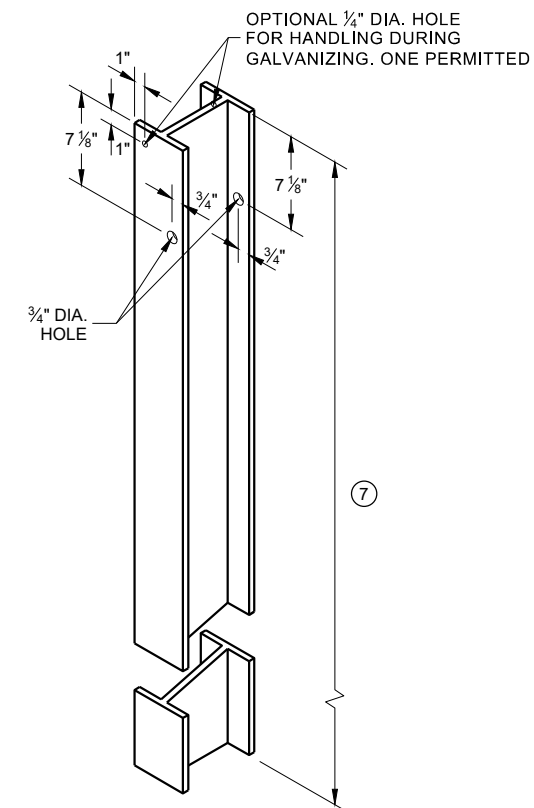
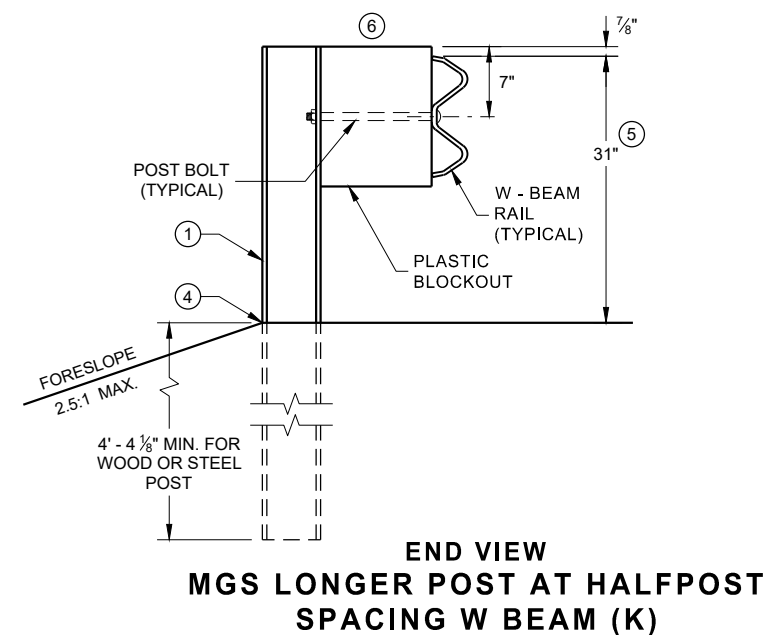
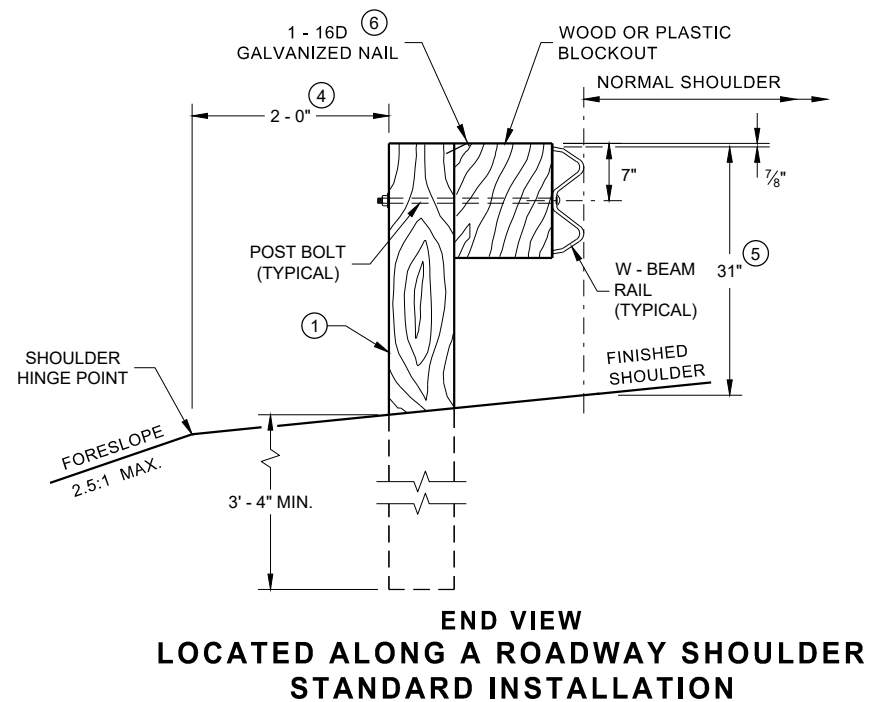
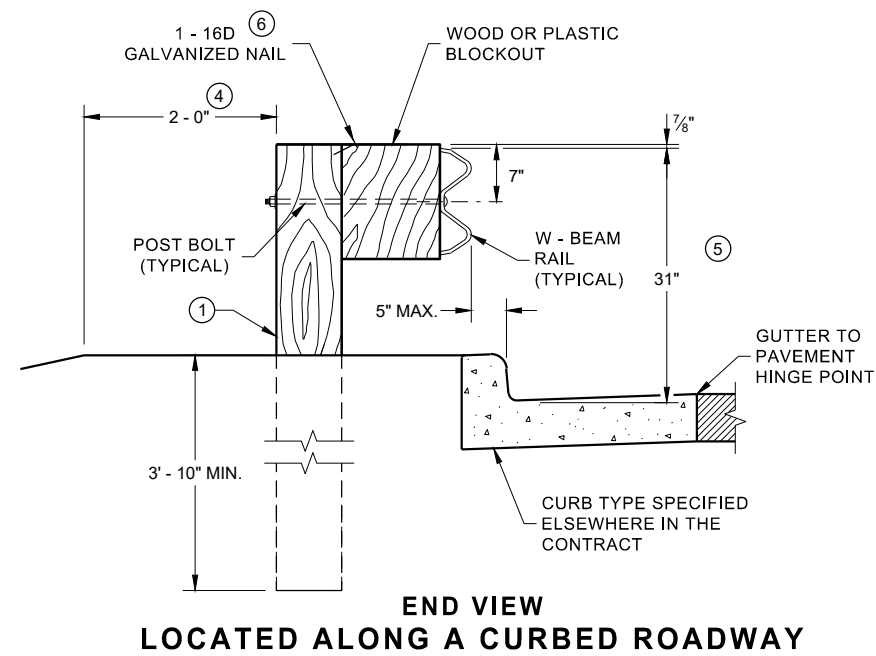
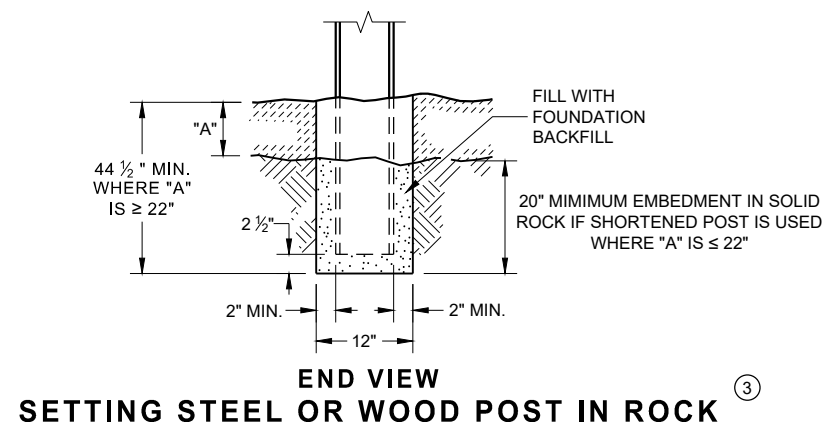
CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

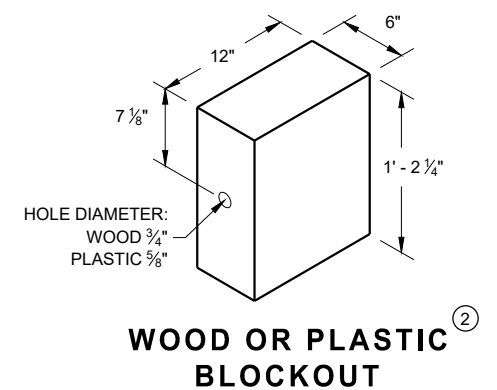
APPROVED
November 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR

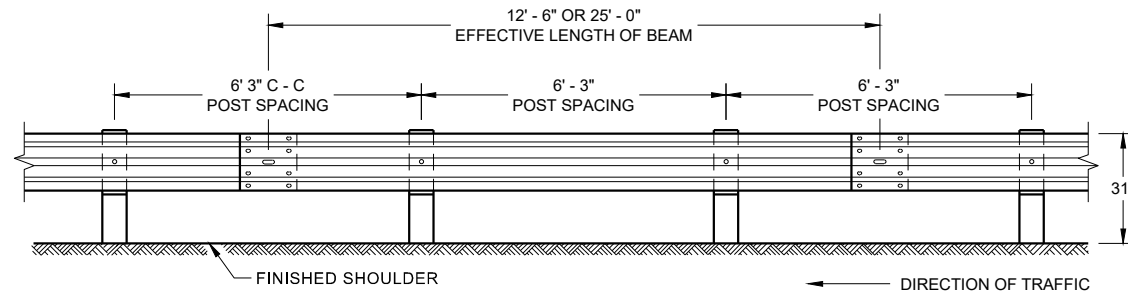
FHWA

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

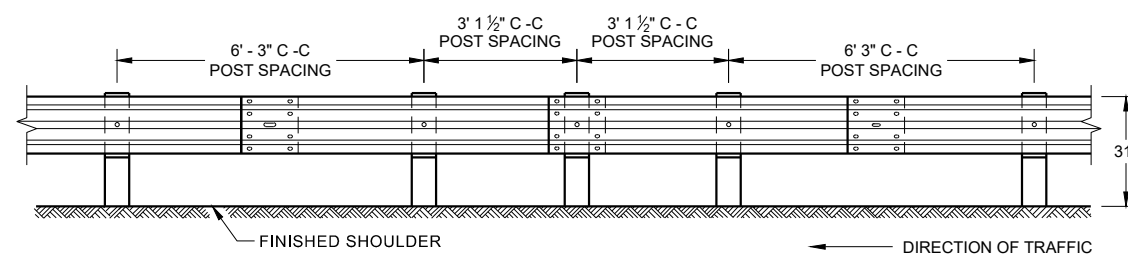


WOOD POST ^①
(6" X 8") NOMINAL

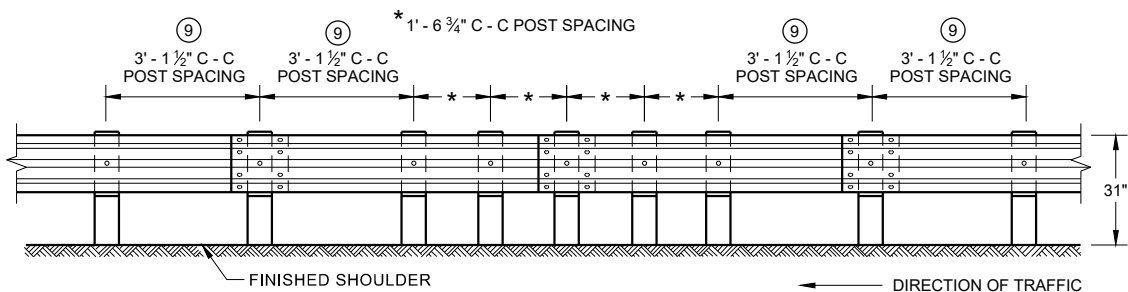




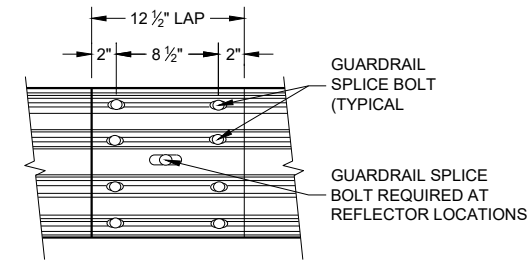
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



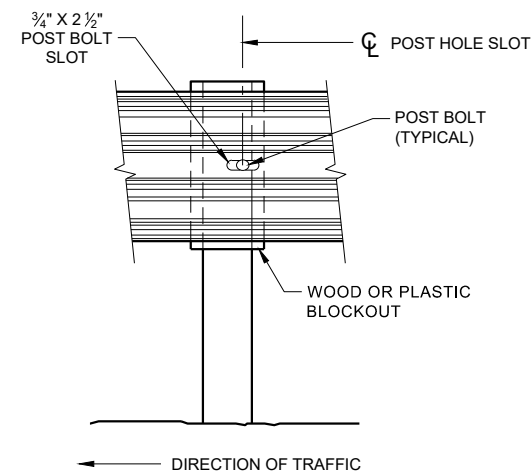
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



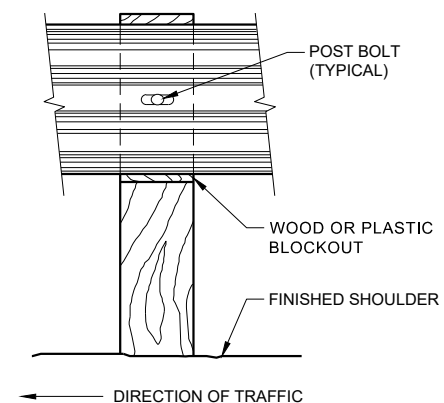
**FRONT VIEW
QUARTER POST SPACING (QS)**



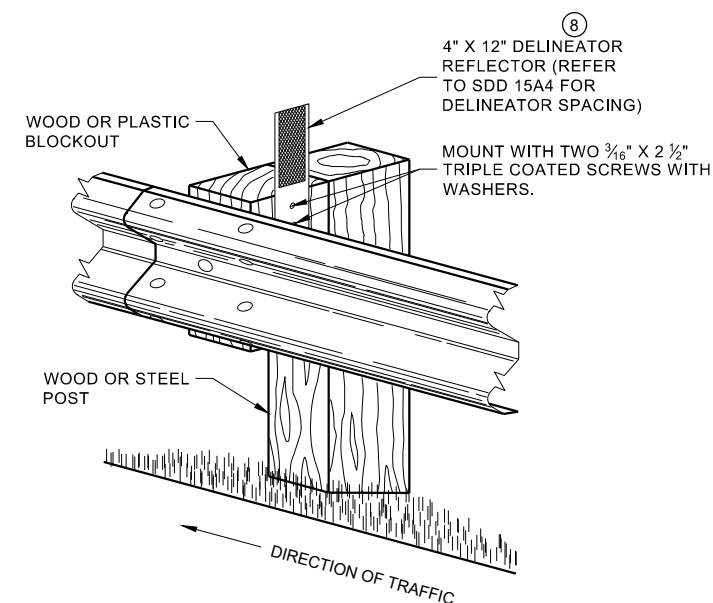
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



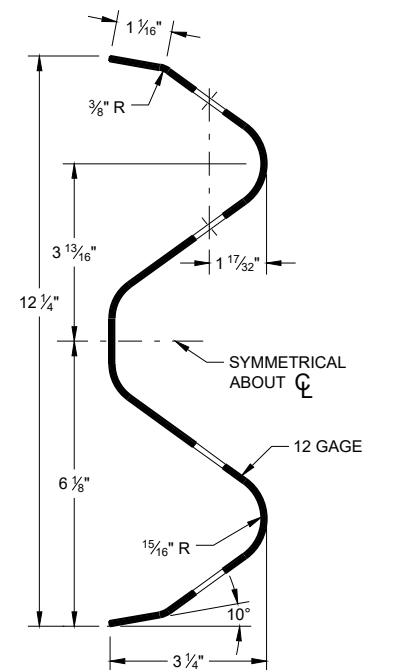
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

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

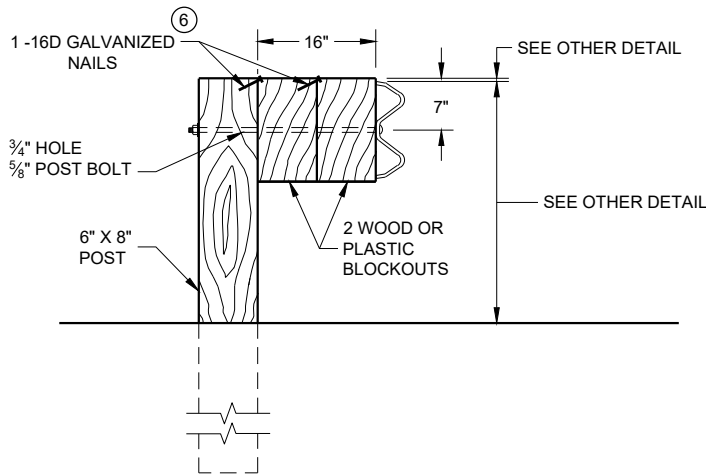
GUARD RAIL SPLICE BOLTS ARE A $\frac{3}{8}$ " DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES $\frac{3}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

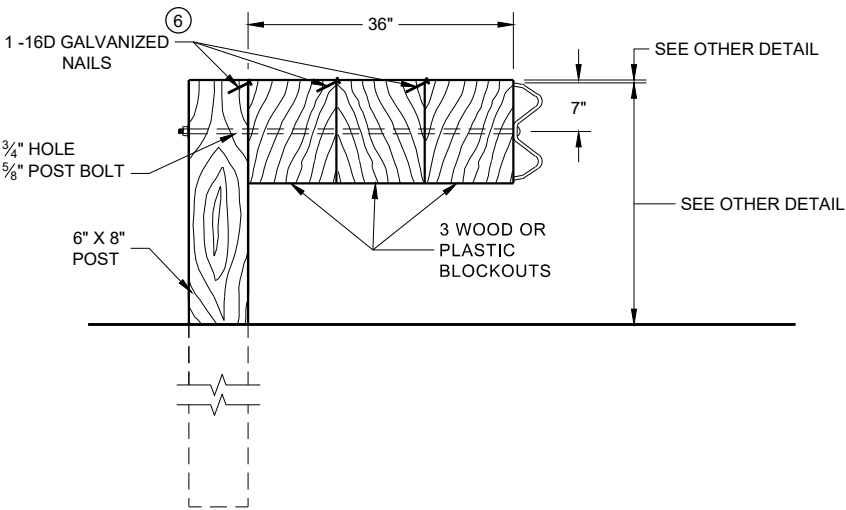
**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

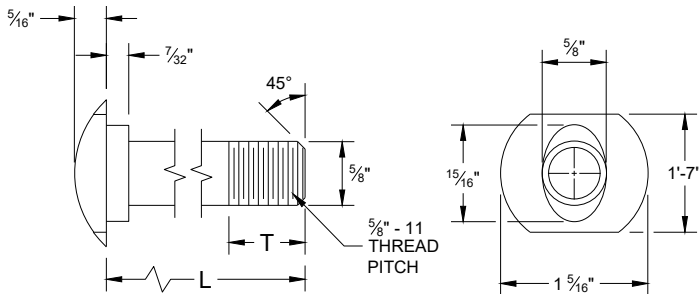
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



DETAIL FOR 36" BLOCKOUT DEPTH

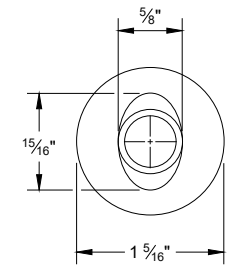
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT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

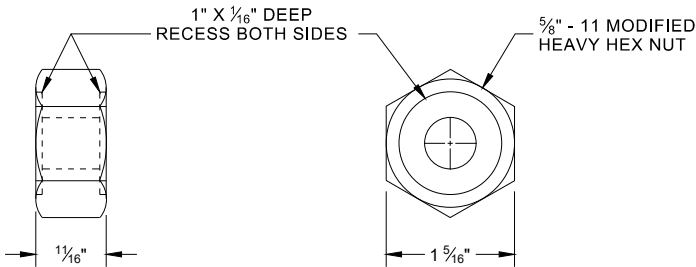


POST BOLT TABLE

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"

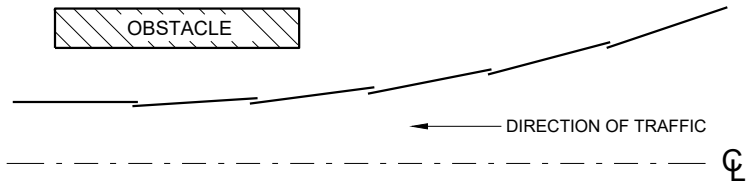


ALTERNATE BOLT HEAD

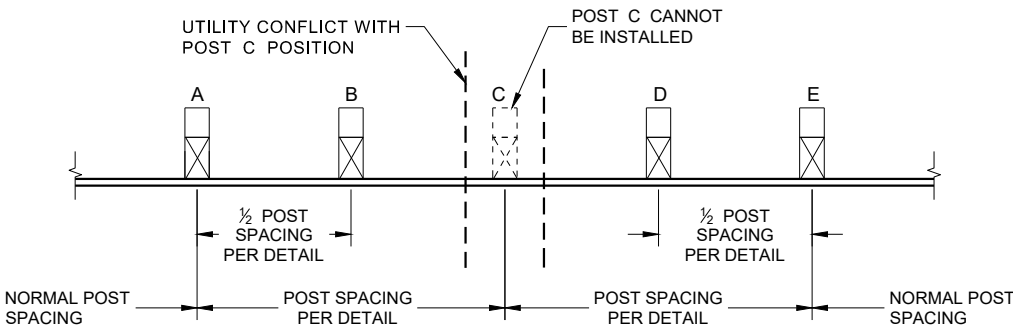


POST BOLT, SPLICE BOLT
AND RECESS NUT

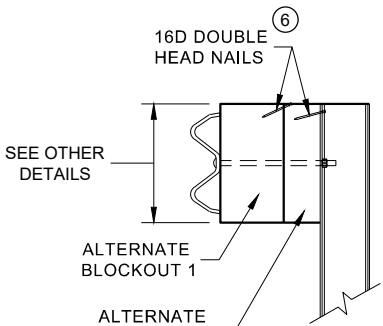
- 6 WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



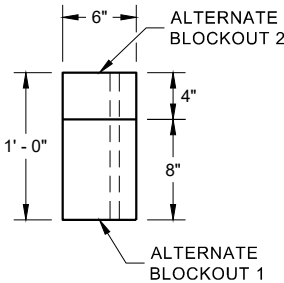
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW

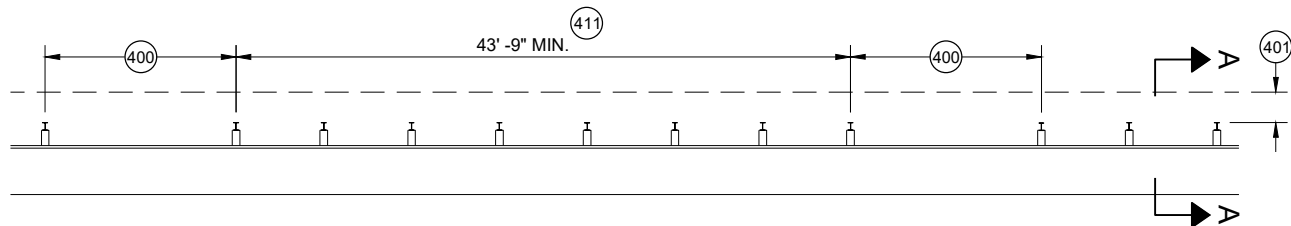


PLAN VIEW

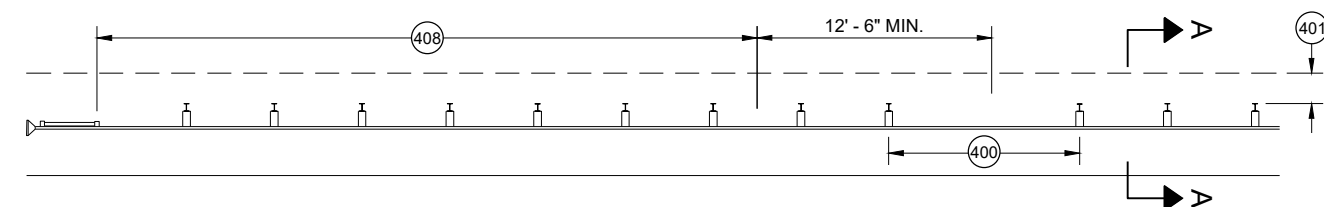
ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

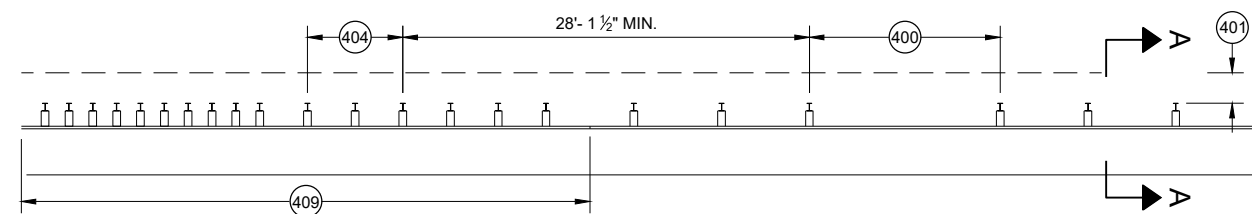
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



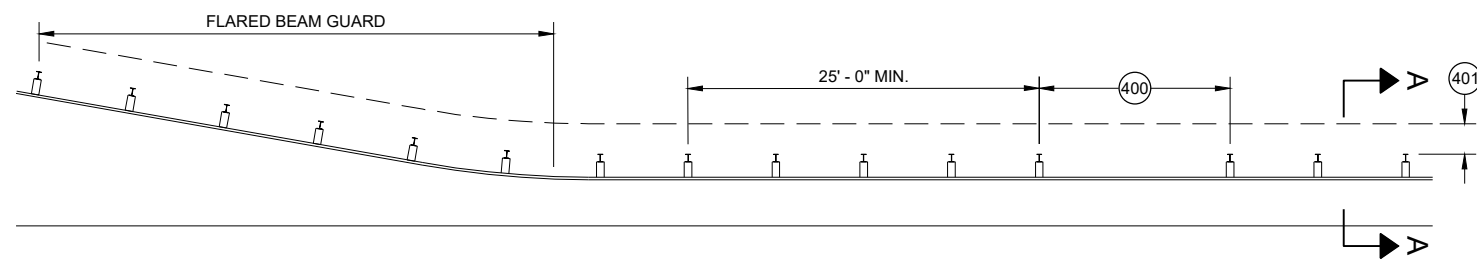
MISSING POST IN MGS GUARDRAIL



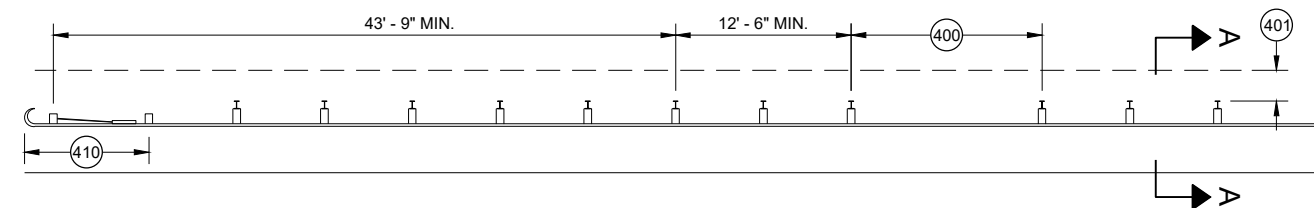
MISSING POST IN MGS GUARDRAIL NEAR EAT



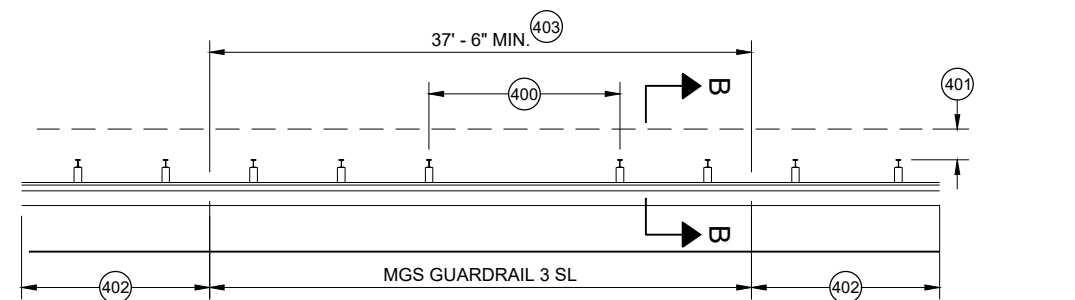
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

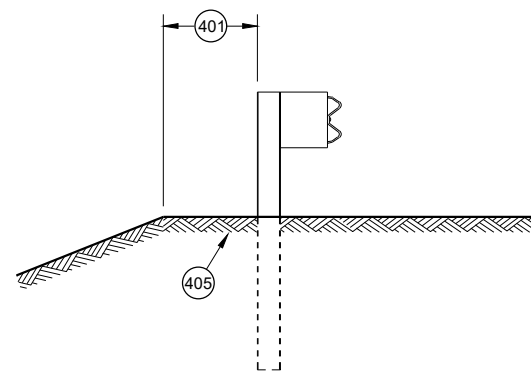


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

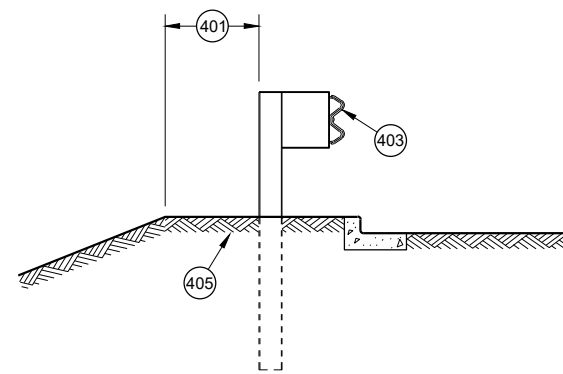


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- (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

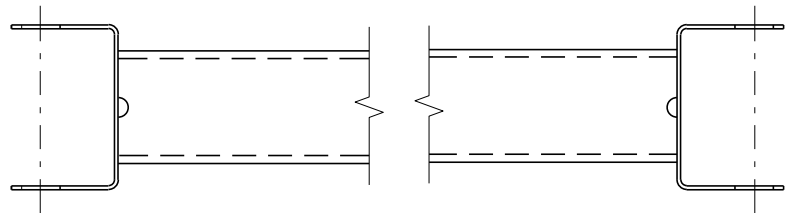
- A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. 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.

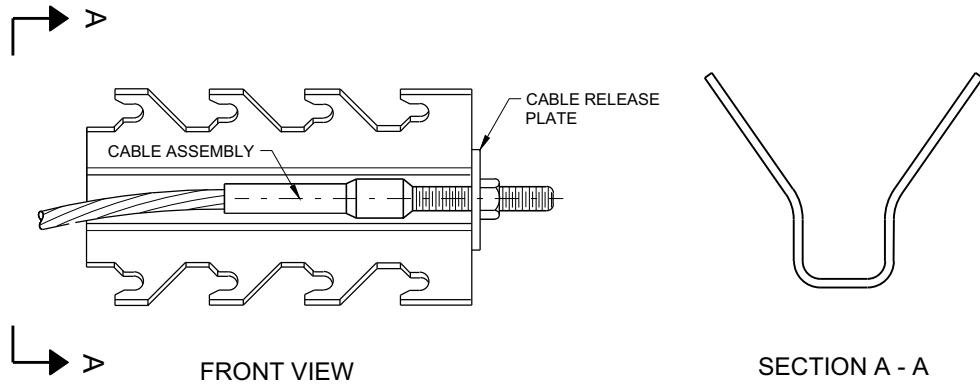


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

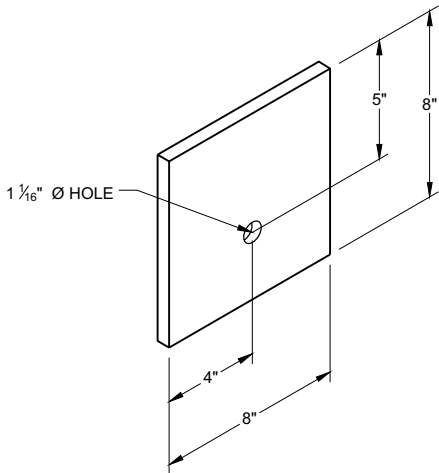


GENERIC GROUND STRUT⁹ ^E

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



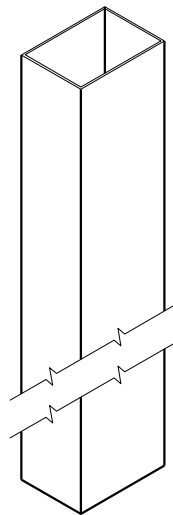
GENERIC ANCHOR CABLE BOX⁹ ^E



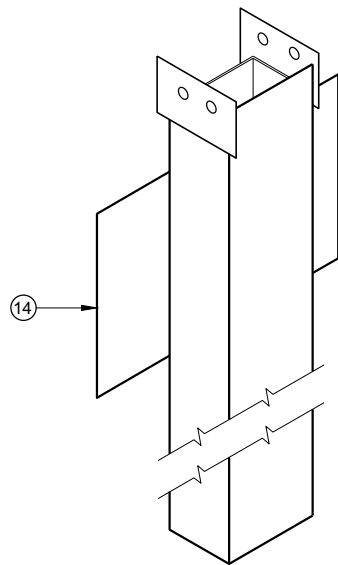
BEARING PLATE⁶ ^E

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

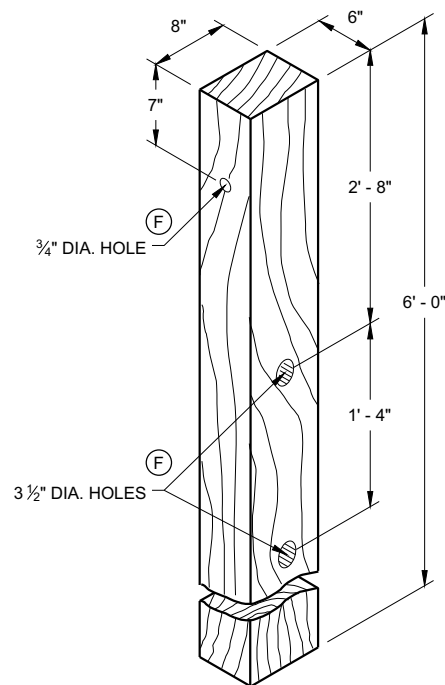
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



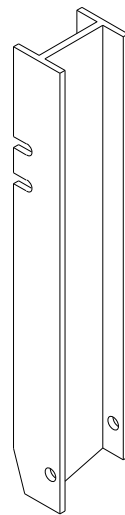
UPPER POST NO. 1 ⁽¹⁾ (E)



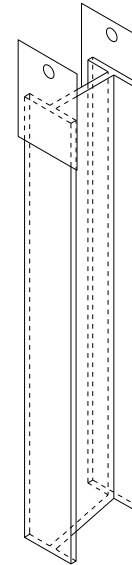
LOWER POST NO. 1 ⁽²⁾ (E)



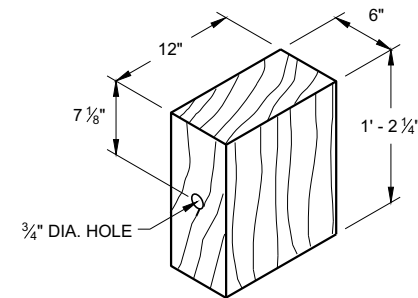
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



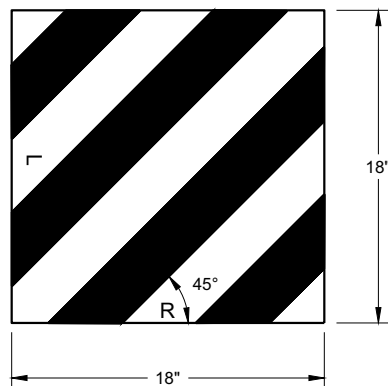
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



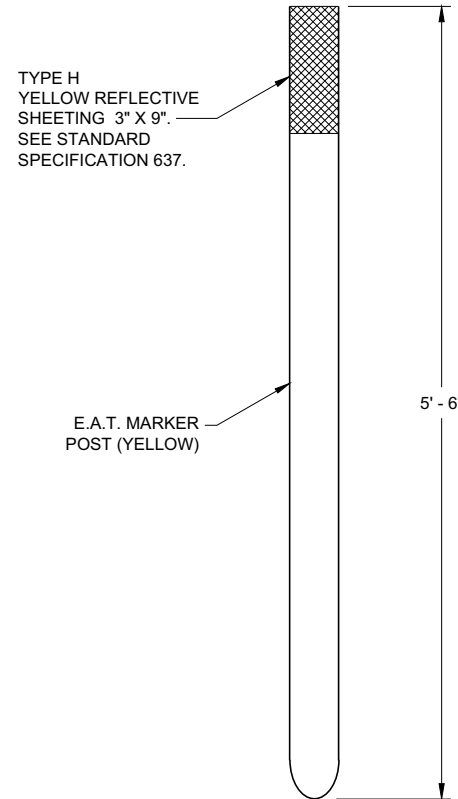
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



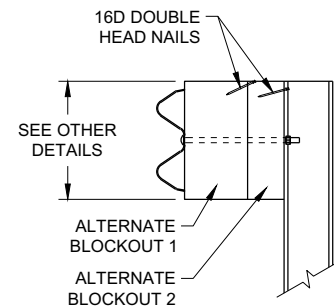
WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



REFLECTIVE SHEETING DETAIL ^(E)

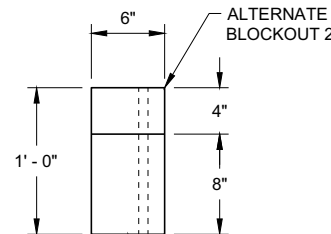


E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

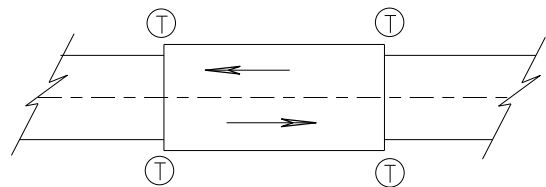


TOP VIEW

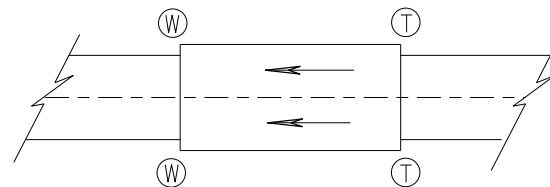
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



TWO WAY TRAFFIC



ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

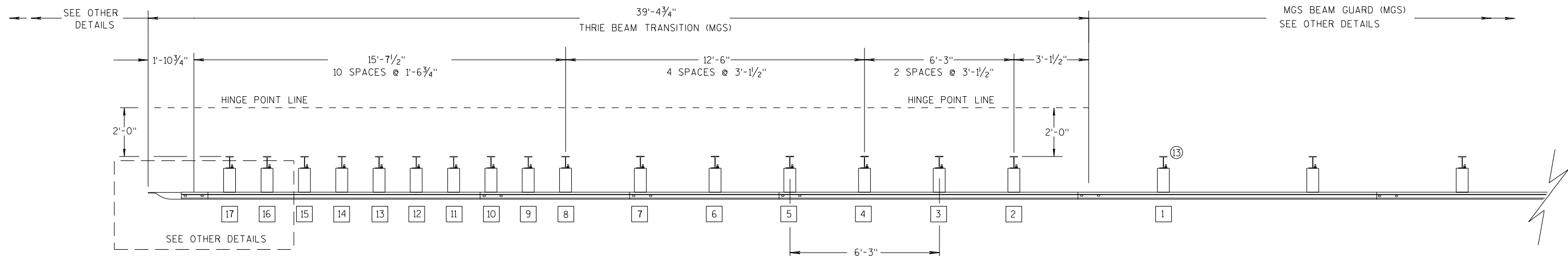
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

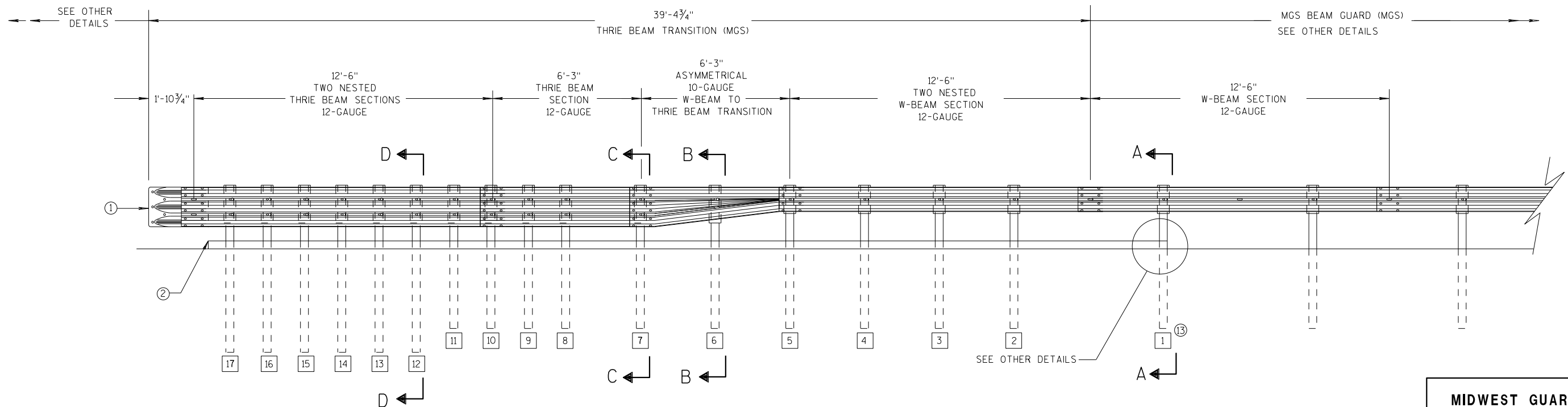
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

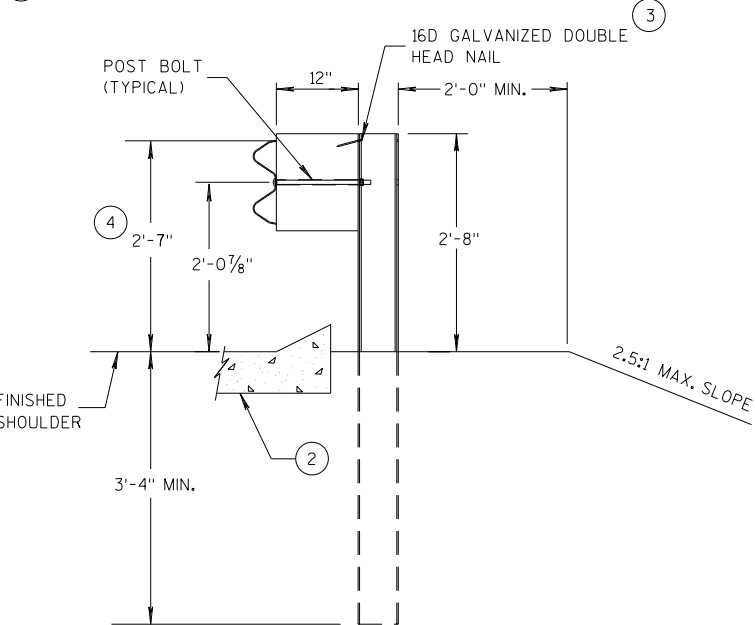
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

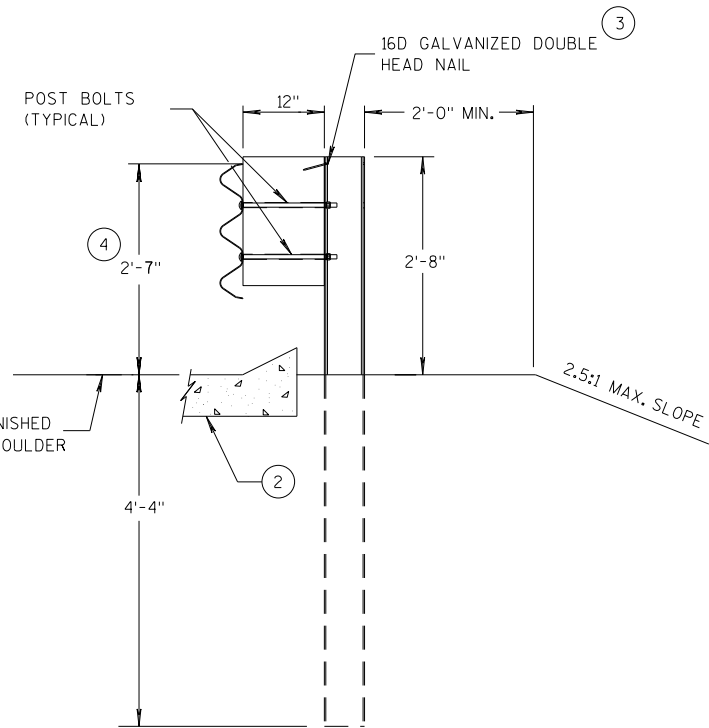
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

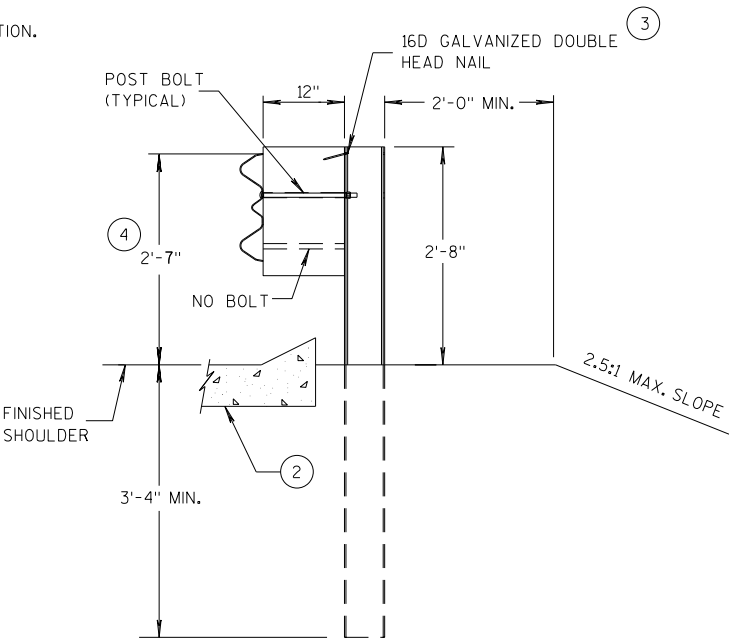
- 2 OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- 3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- 4 TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.
- 13 STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



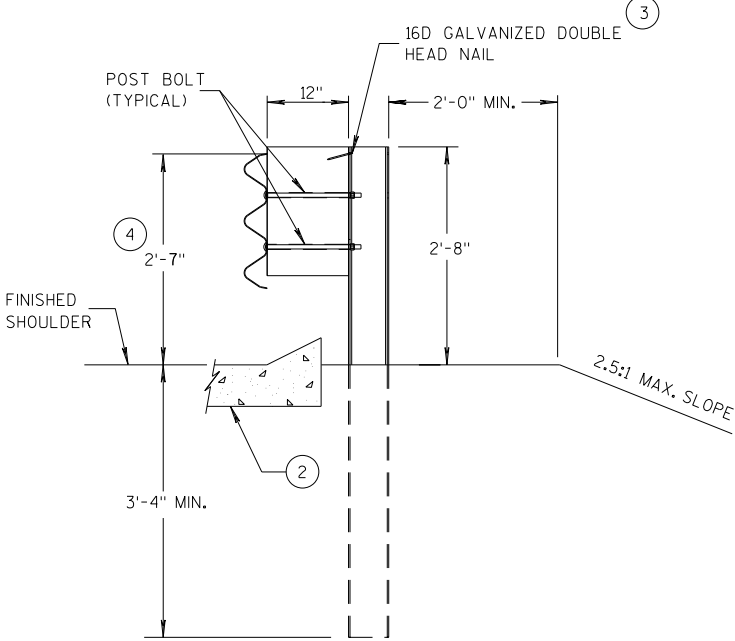
SECTION A-A
POSTS 1-5



SECTION D-D
POSTS 12-17



SECTION B-B
POST 6



SECTION C-C
POSTS 7-11

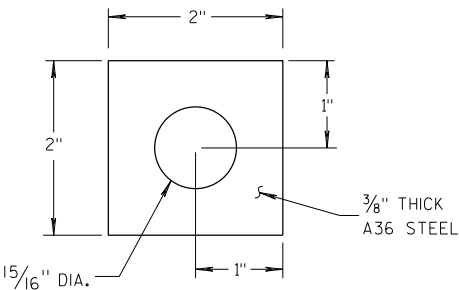
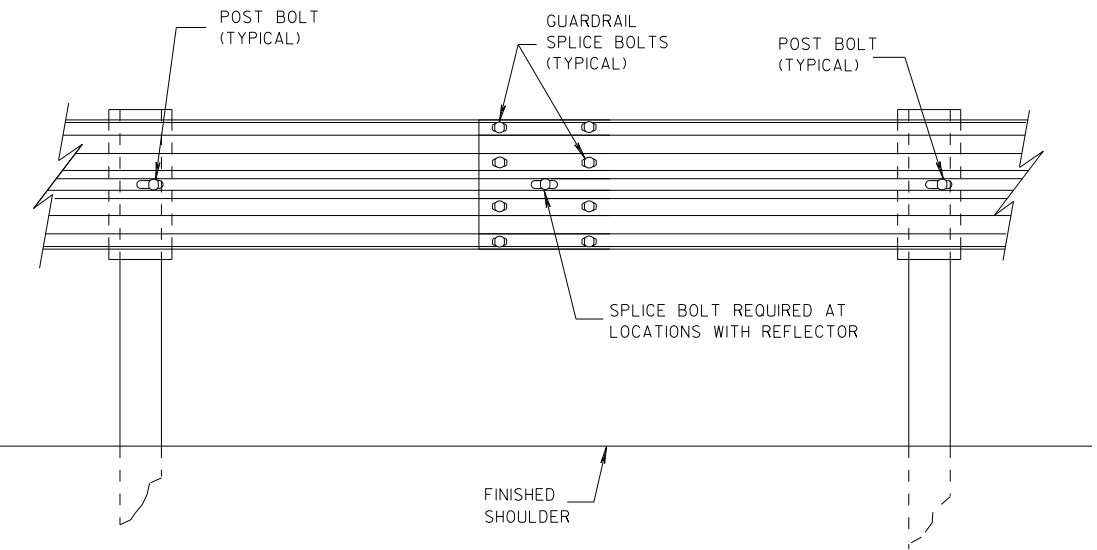
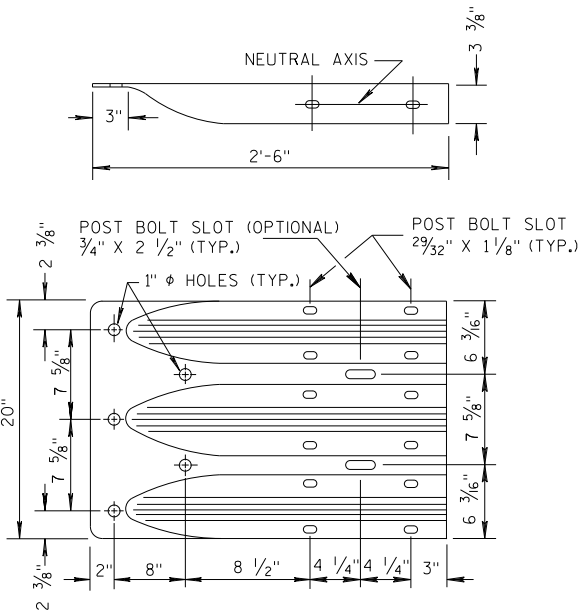


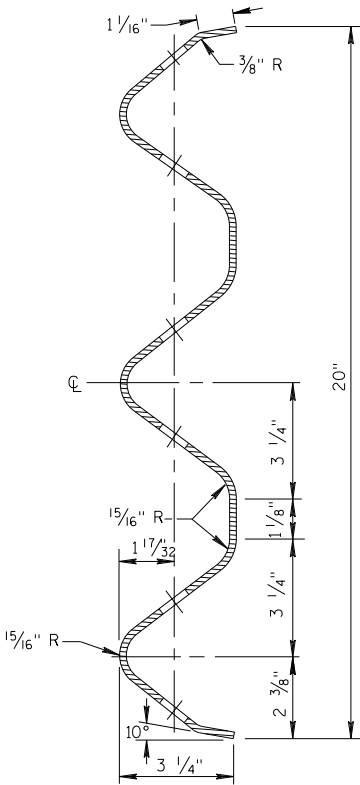
PLATE WASHER DETAIL



SPLICE DETAIL



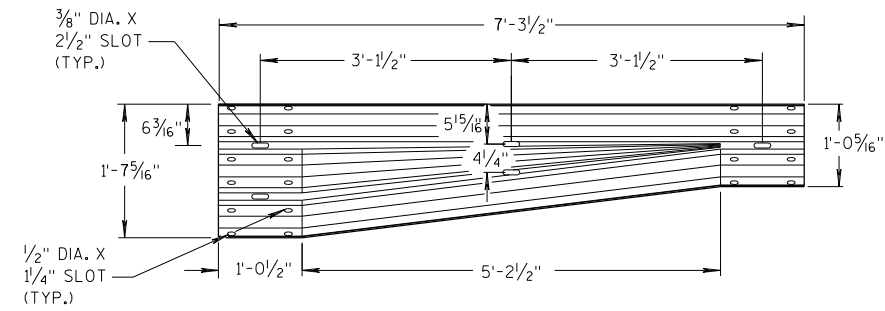
THRIE BEAM
TERMINAL CONNECTOR



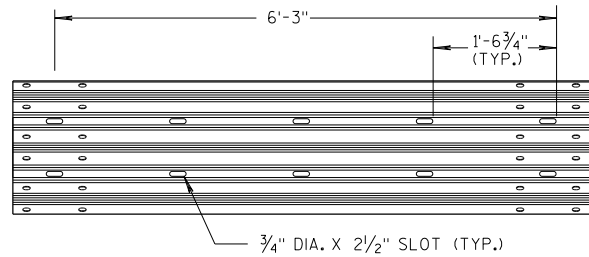
SECTION THRU THRIE
BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

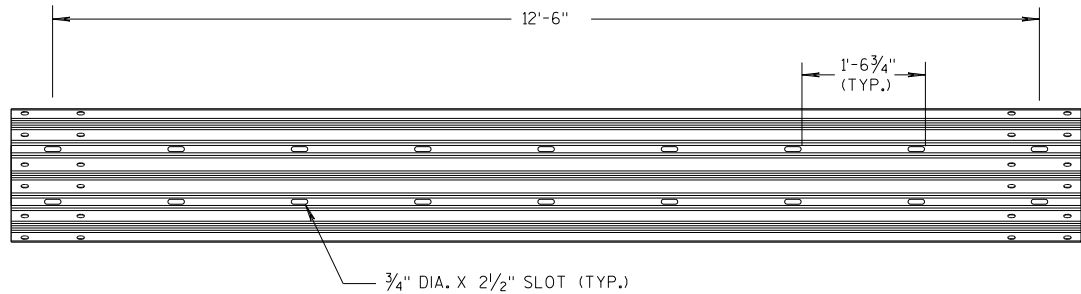
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



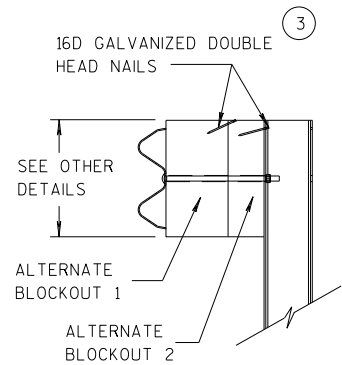
W-BEAM TO THRIE BEAM TRANSITION SECTION



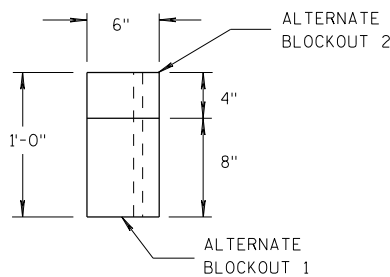
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

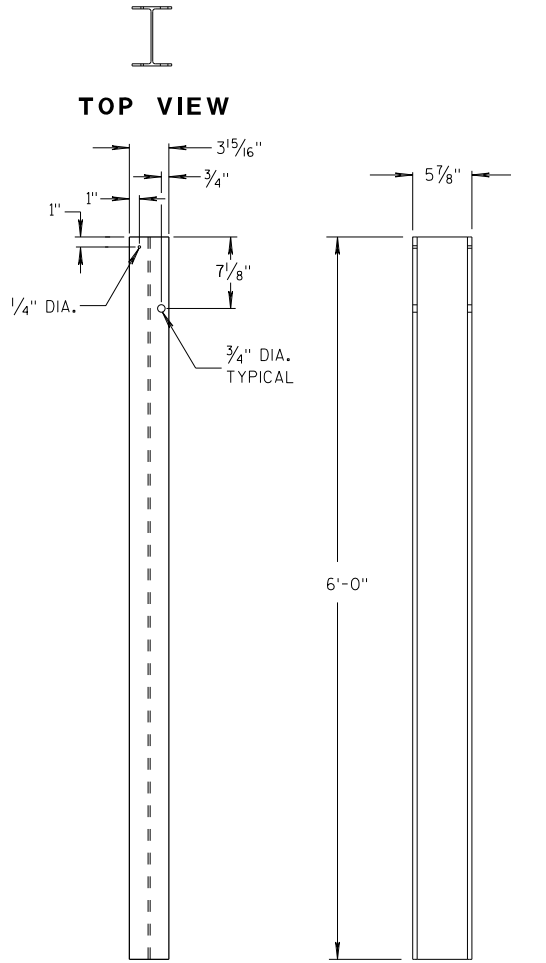


SIDE VIEW



TOP VIEW

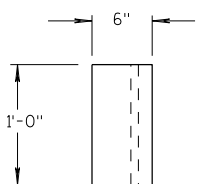
ALTERNATE WOOD BLOCKOUT DETAIL



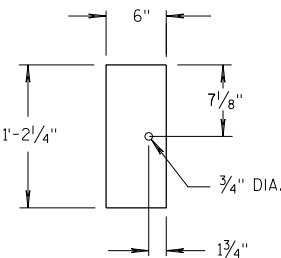
FRONT VIEW

SIDE VIEW

STEEL POSTS 1-5

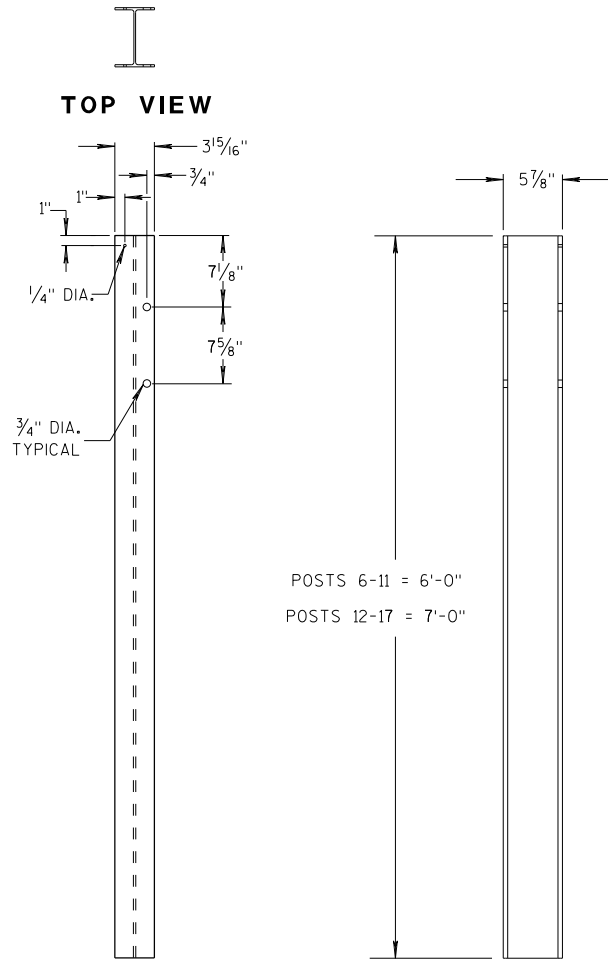


TOP VIEW



FRONT VIEW

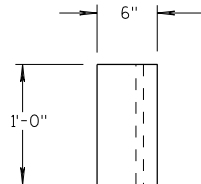
**BLOCKOUT
POSTS 1-5**



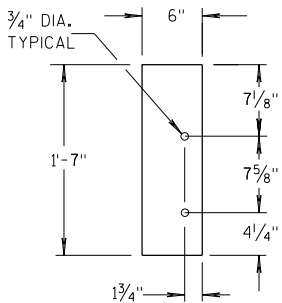
FRONT VIEW

SIDE VIEW

STEEL POSTS 6-17



TOP VIEW



FRONT VIEW

**BLOCKOUT
POSTS 6-17**

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

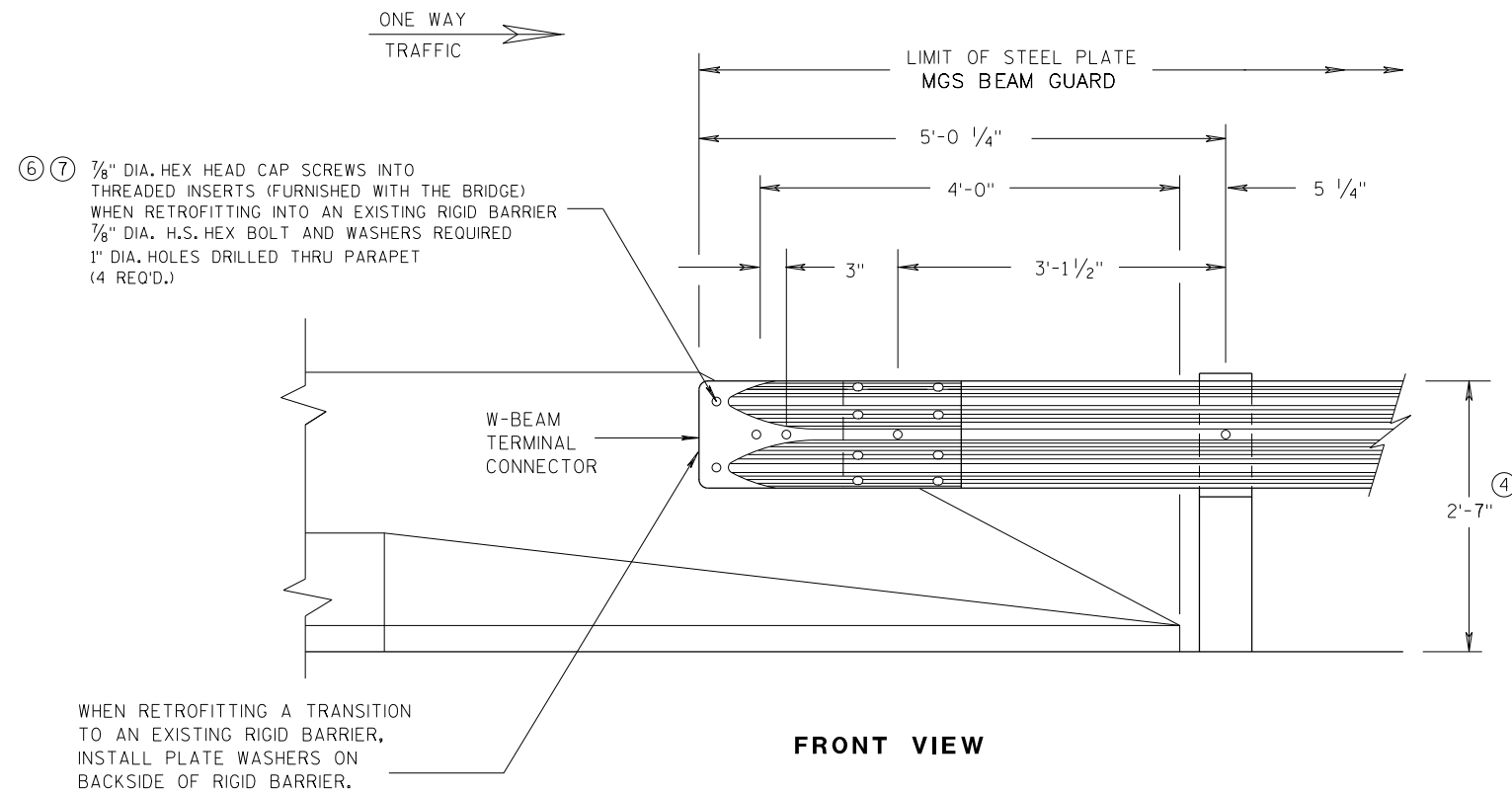
③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

⑤ WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

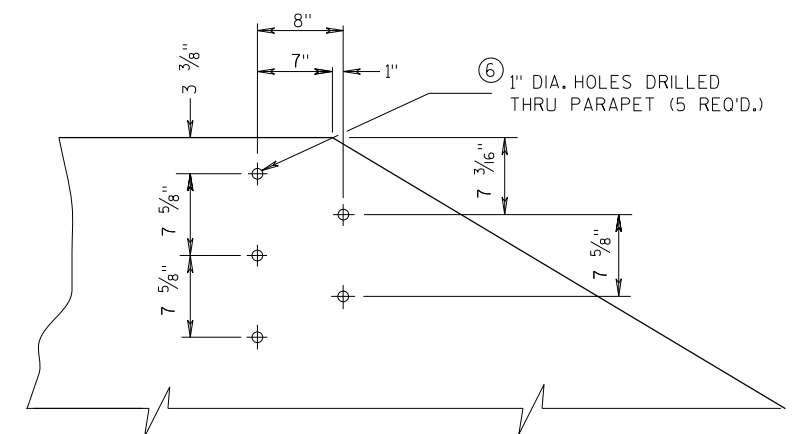
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



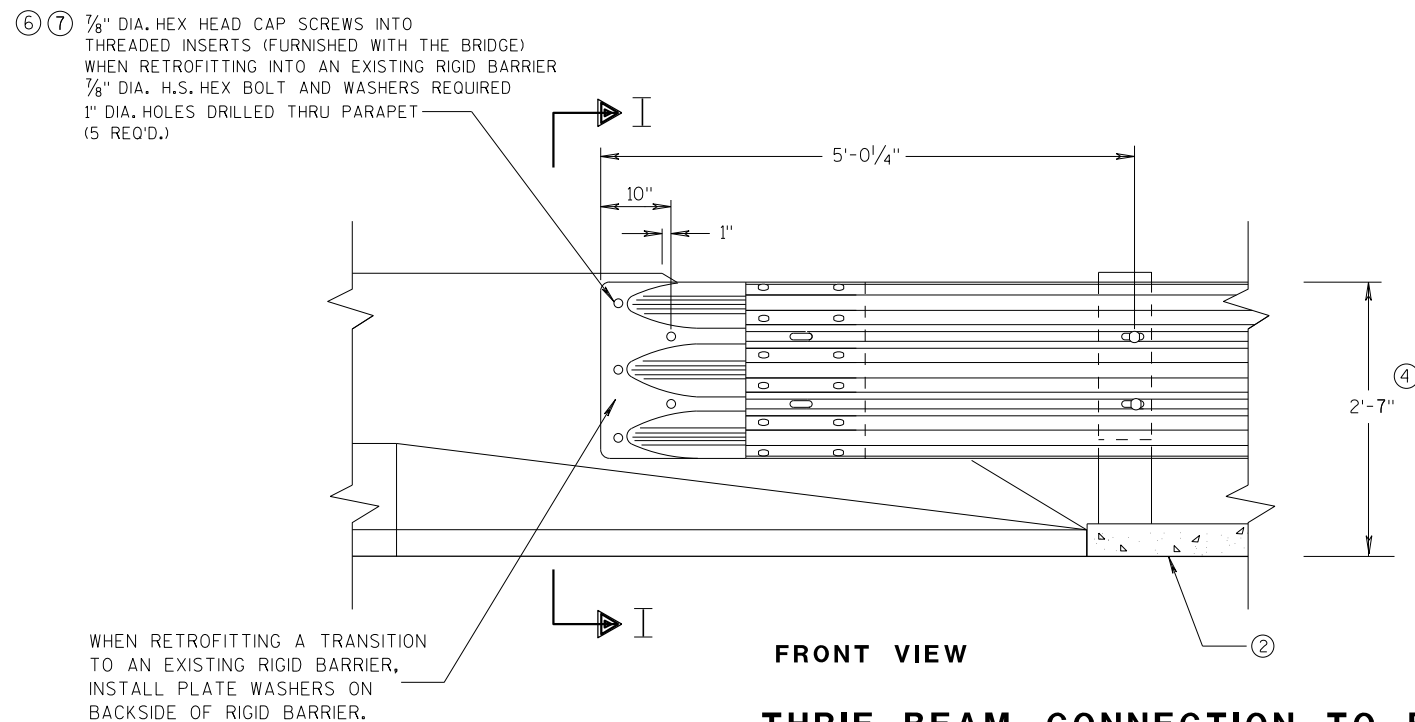
**W BEAM CONNECTION TO
PARAPETS WITH SLOPED ENDS
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)**

GENERAL NOTES

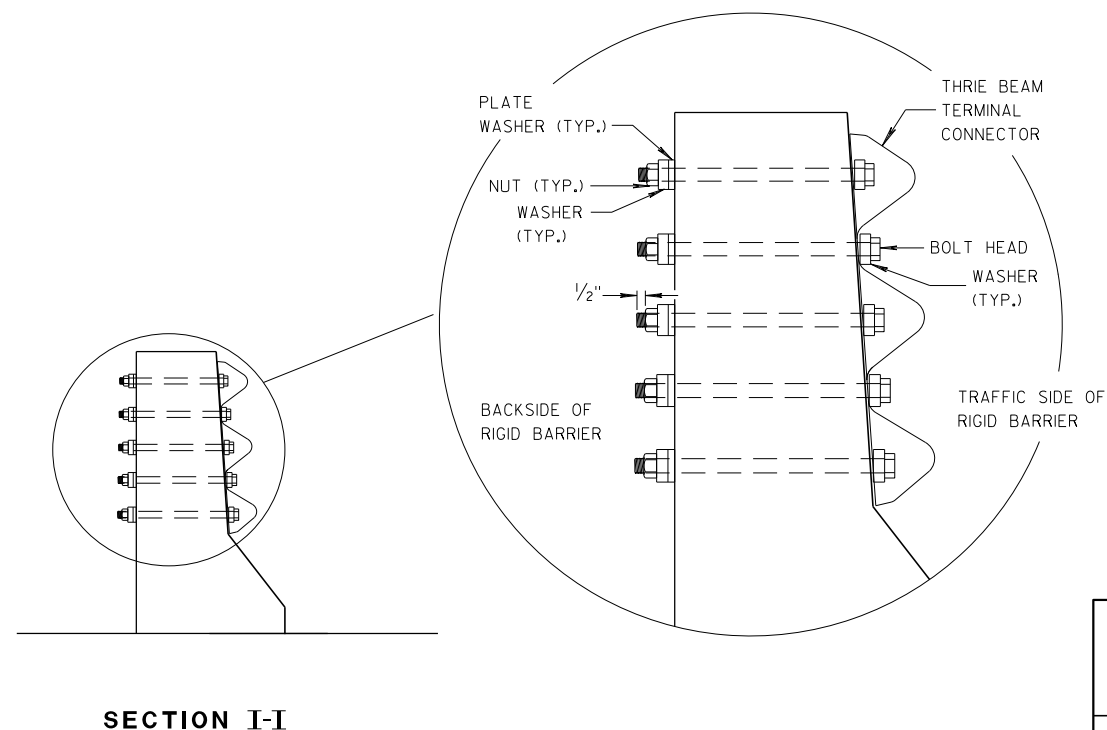
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



**DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION**



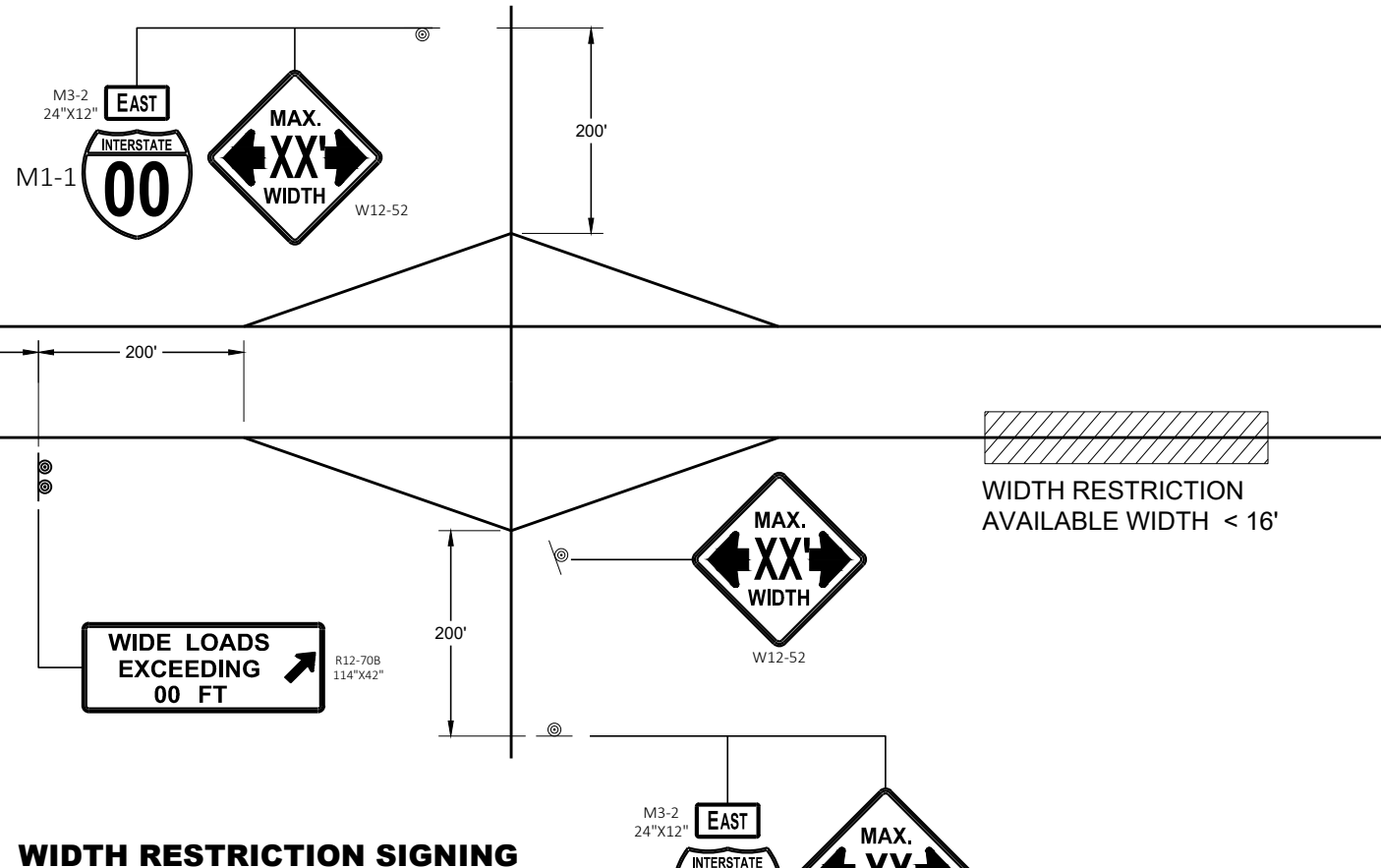
**THRIE BEAM CONNECTION TO BRIDGE
PARAPETS WITH SLOPED ENDS**



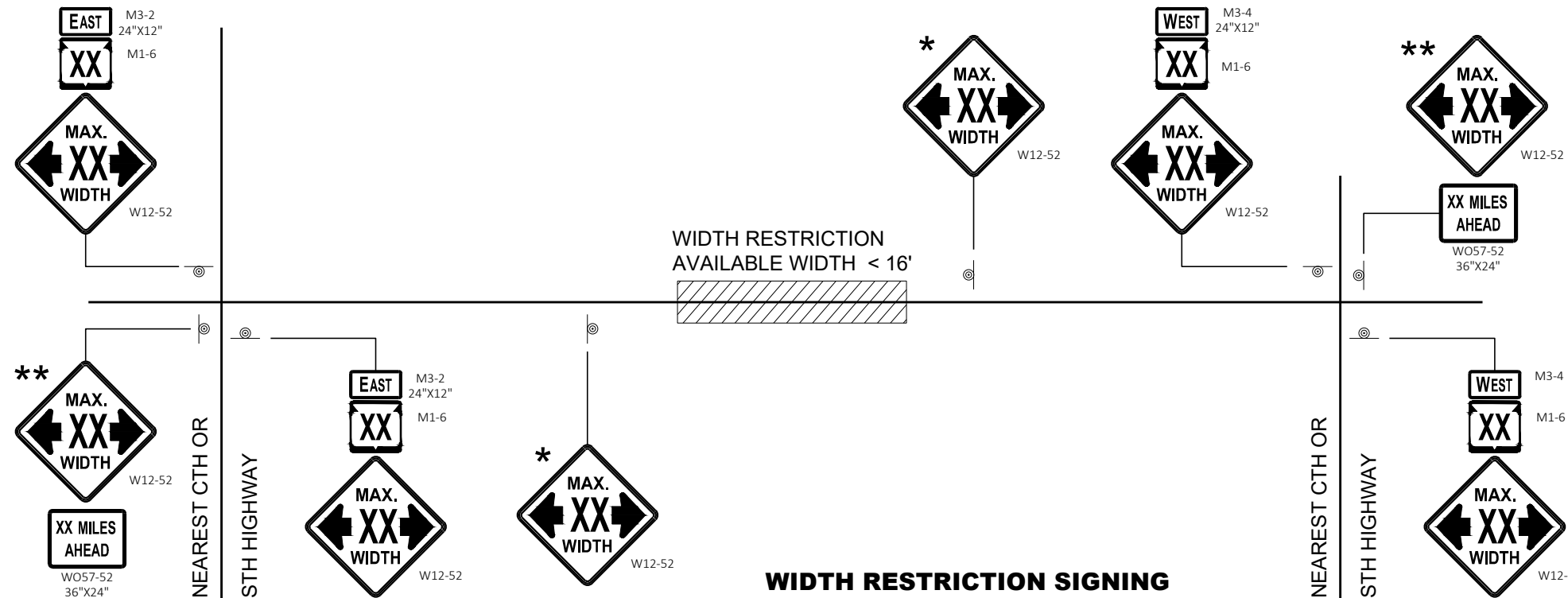
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



WIDTH RESTRICTION SIGNING



WIDTH RESTRICTION SIGNING
2 LANE HIGHWAY

LEGEND

⊙ SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

- * PLACE 500 FEET AFTER THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.
- ** SIGN SHALL BE VISIBLE FROM ROADWAY.
- *** ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.



WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

ADVANCED WIDTH
RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

GENERAL NOTES

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

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

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

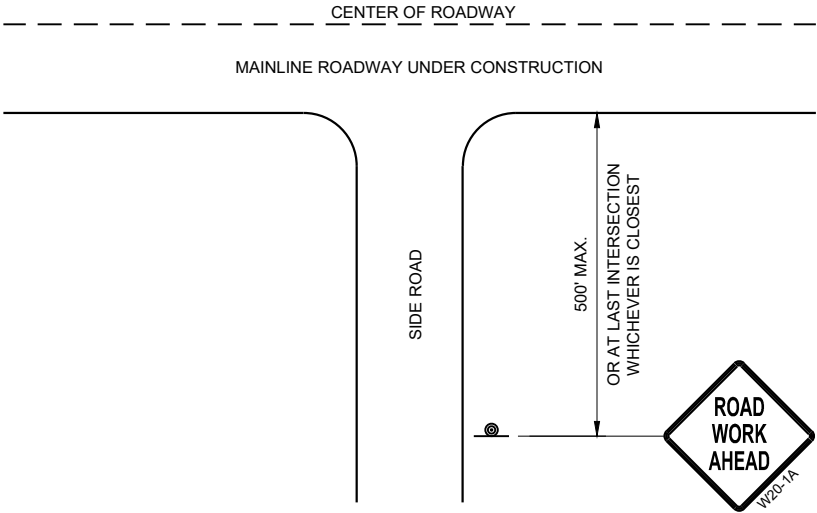
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

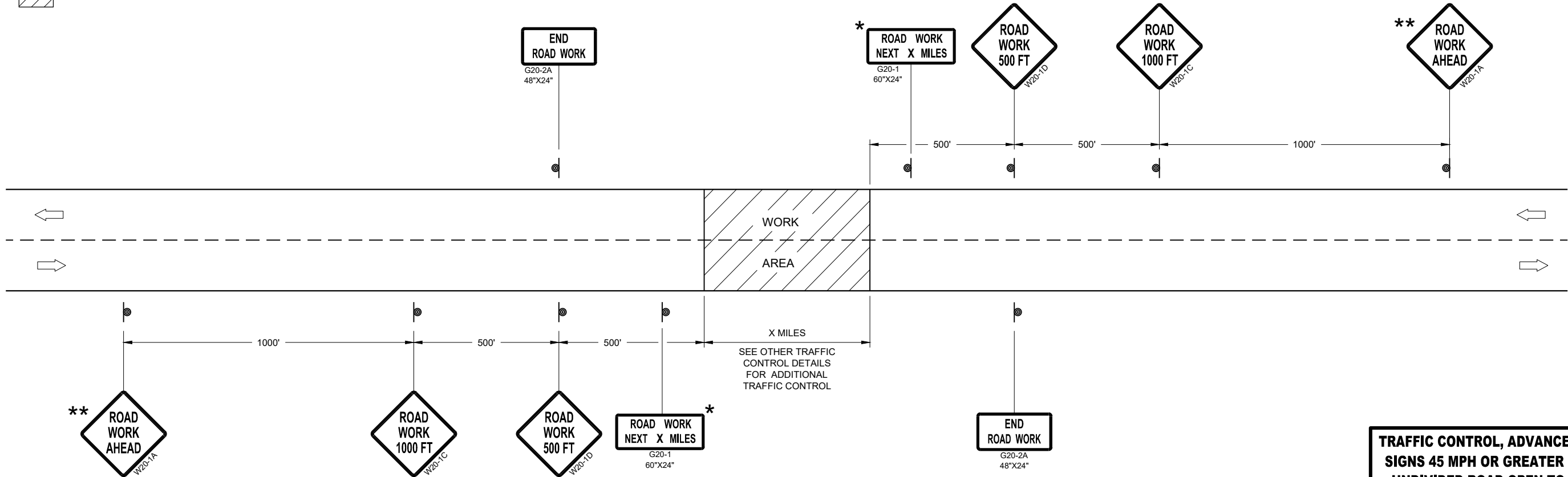
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

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

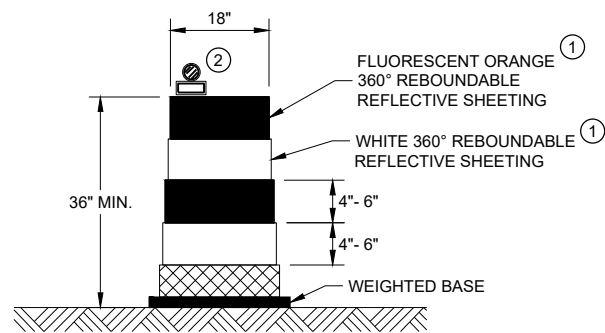
TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

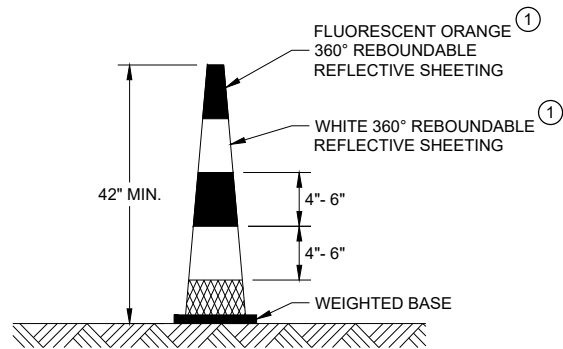
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



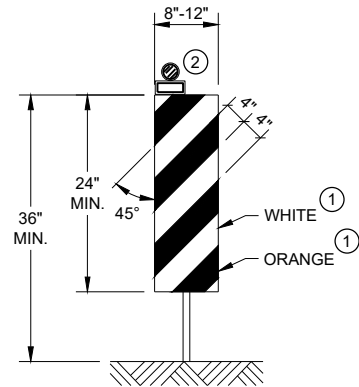
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



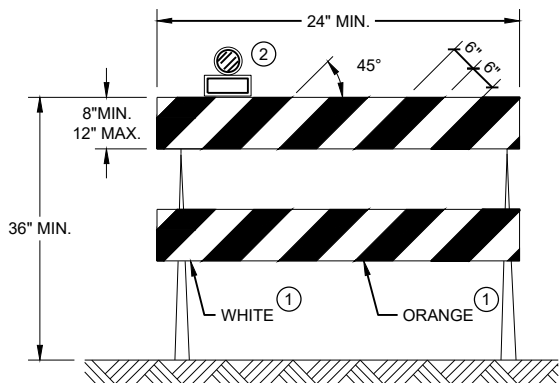
42" CONE

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



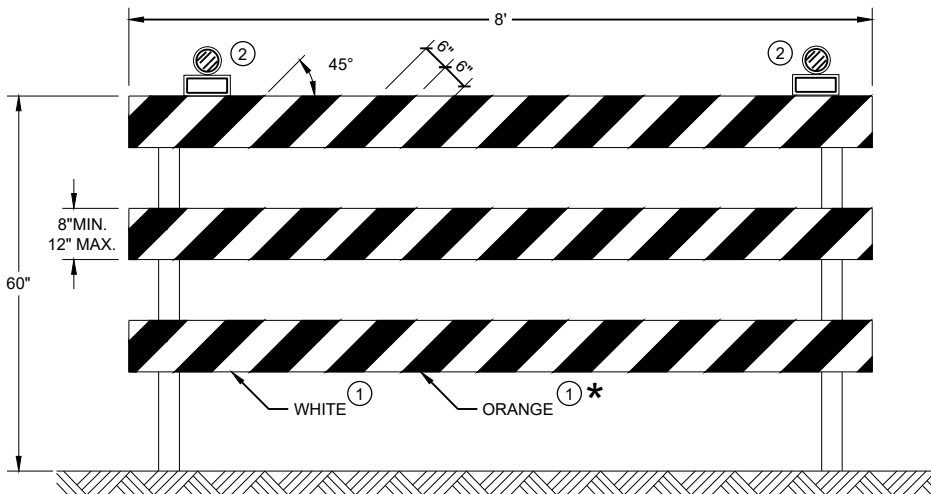
VERTICAL PANEL

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

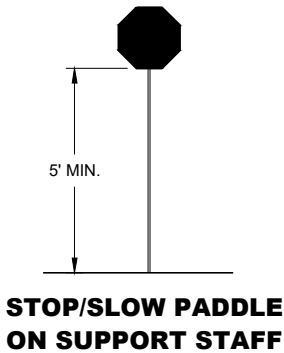
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- 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.

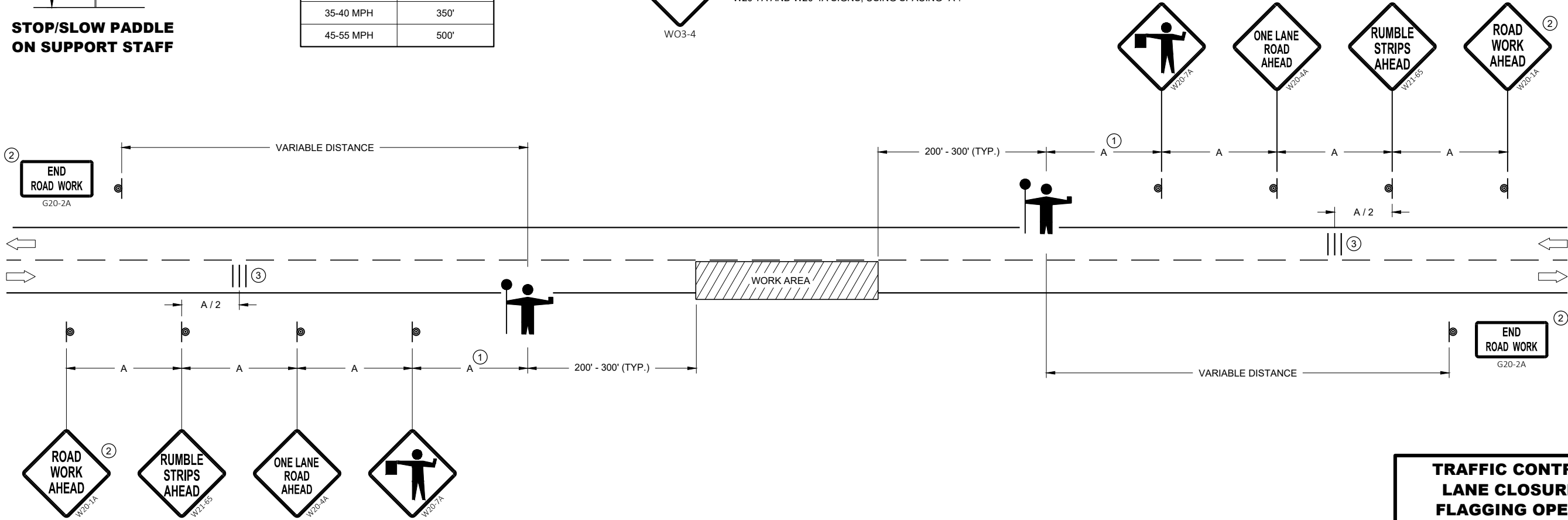


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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	

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

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

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

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

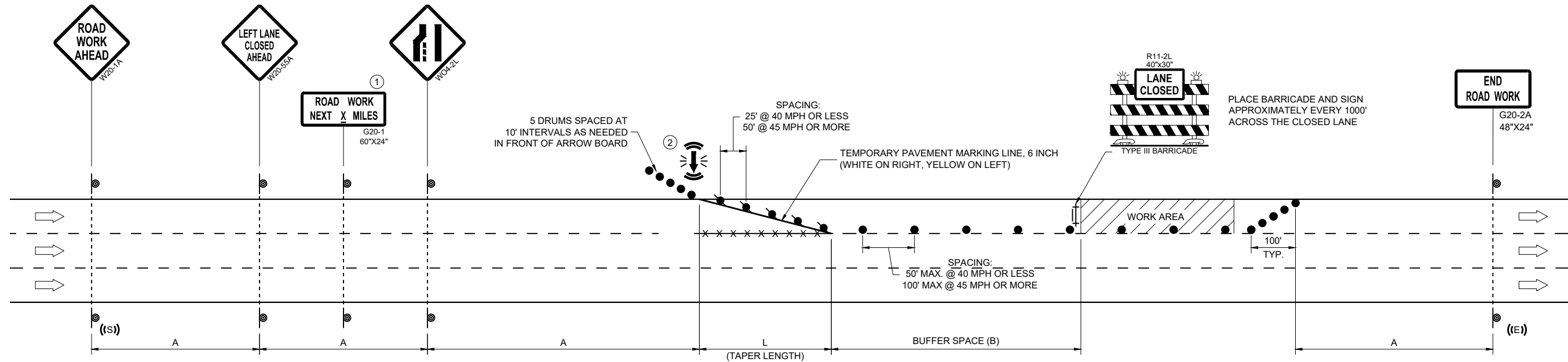
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

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

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

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

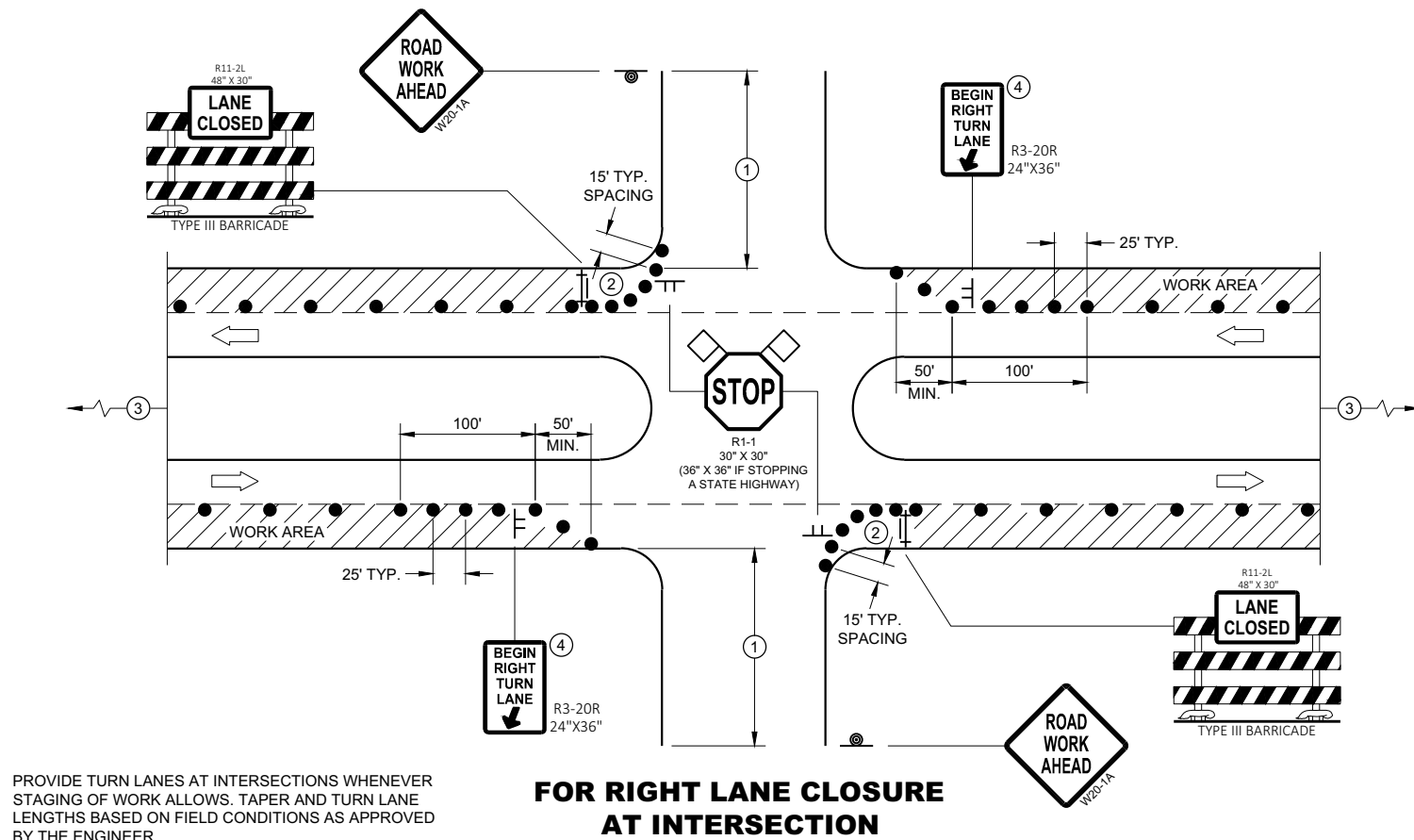
- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



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

APPROVED
November 2024
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER



GENERAL NOTES

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

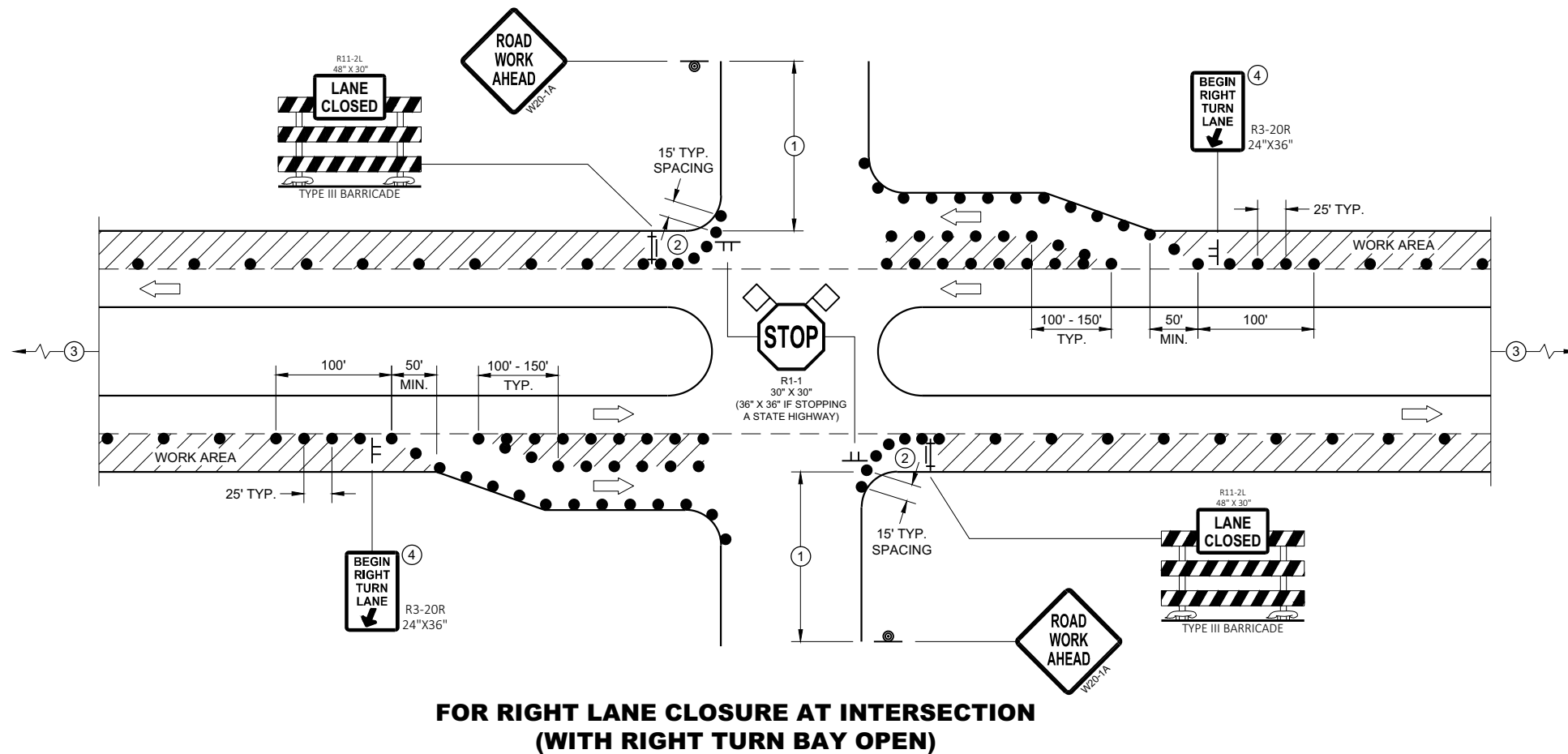
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

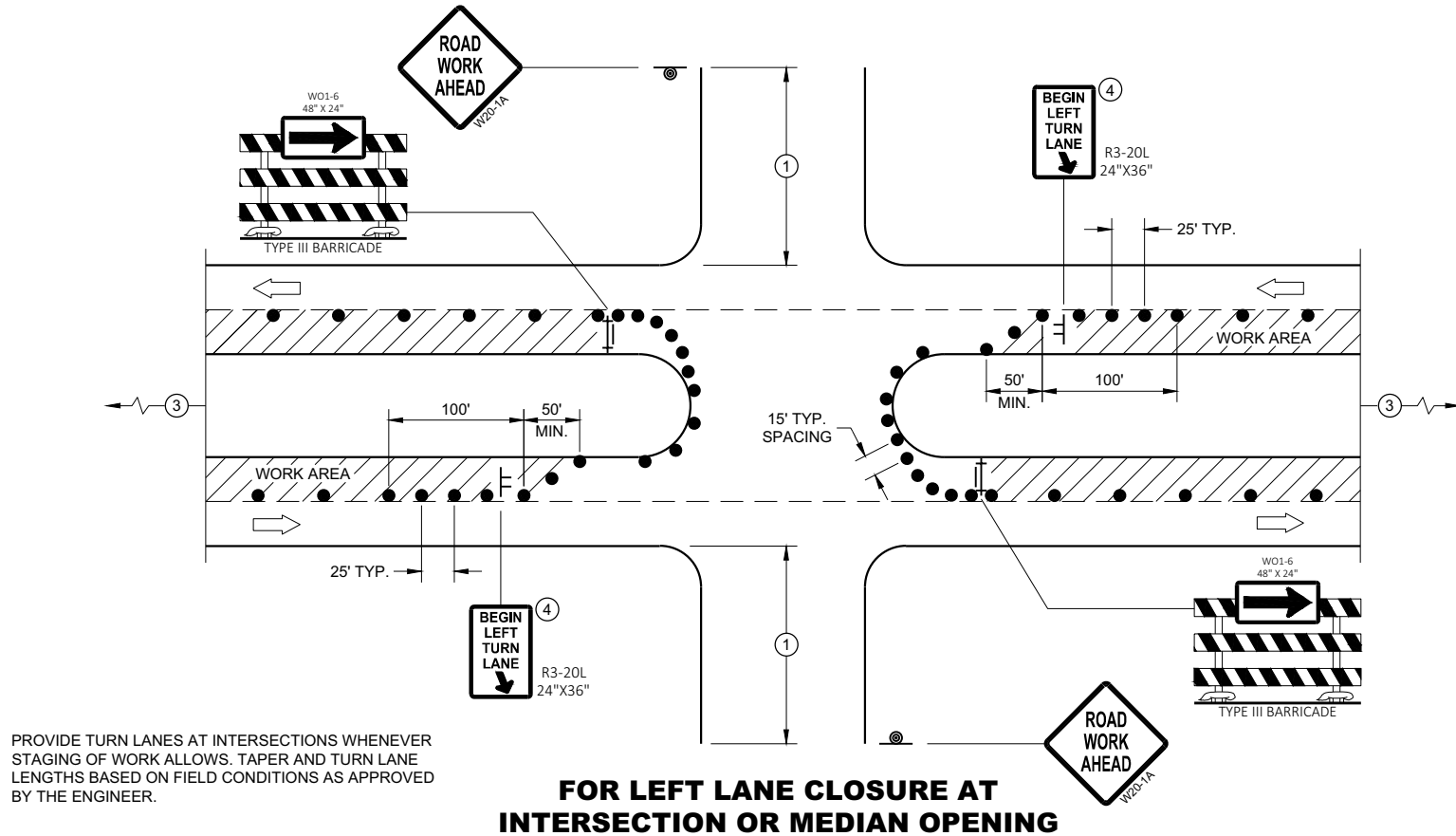


LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- ◇ ◇ FLAGS, 16" X 16" MIN., ORANGE
- ▨ WORK AREA

**TRAFFIC CONTROL,
INTERSECTION WITHIN SINGLE
RIGHT LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

- 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.
- ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡➡ FLASHING ARROW BOARD
- ▨ WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

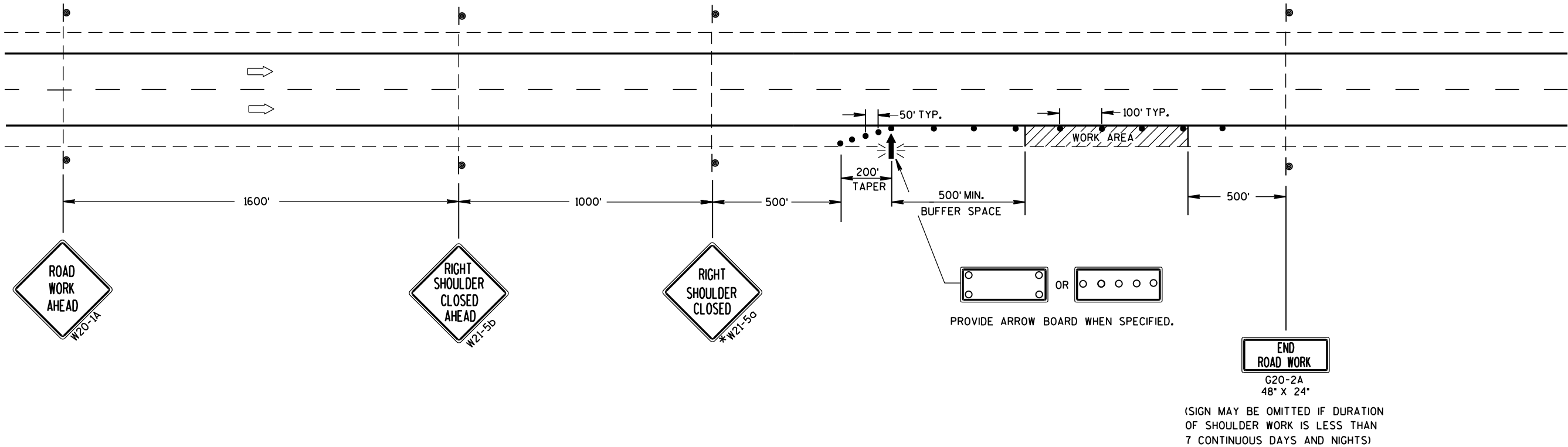
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A 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.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL
SHOULDER CLOSURE ON DIVIDED
ROADWAY, SPEEDS GREATER
THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

LEGEND

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

GENERAL NOTES

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

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

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

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

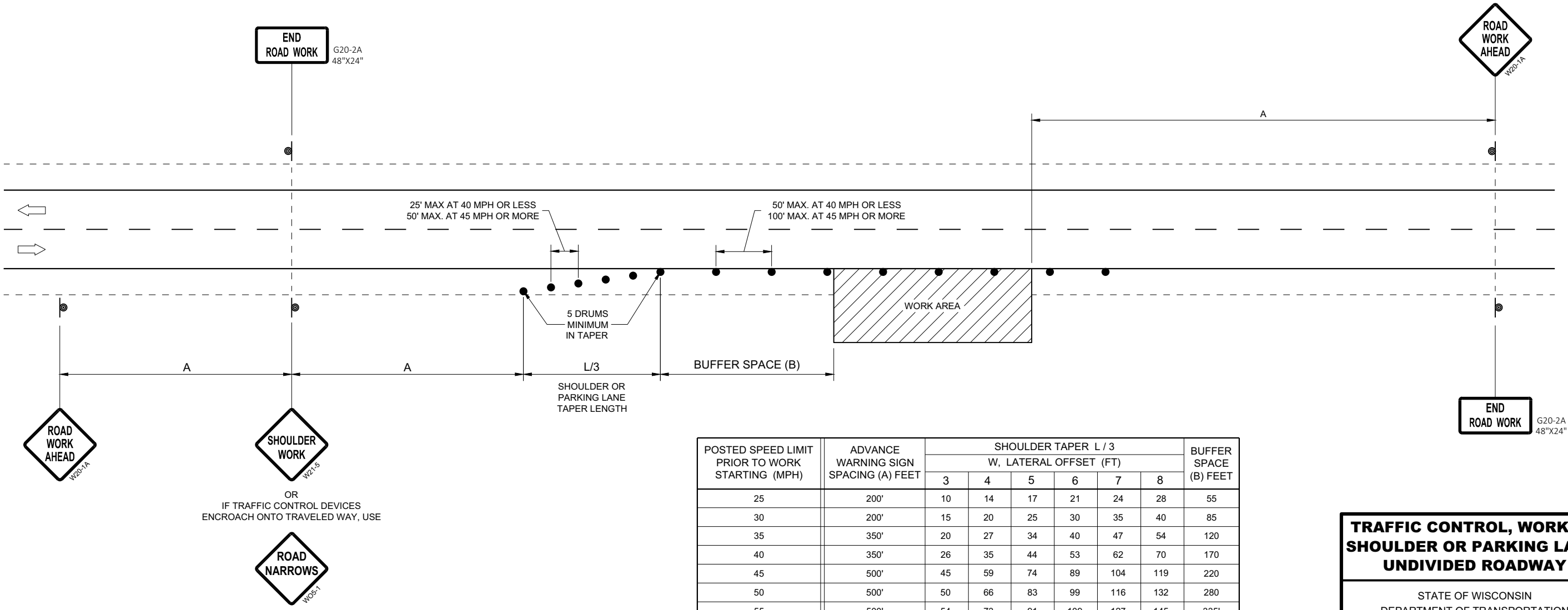
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

6

SDD 15D28 - 04



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
		10	14	17	21	24	28	
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

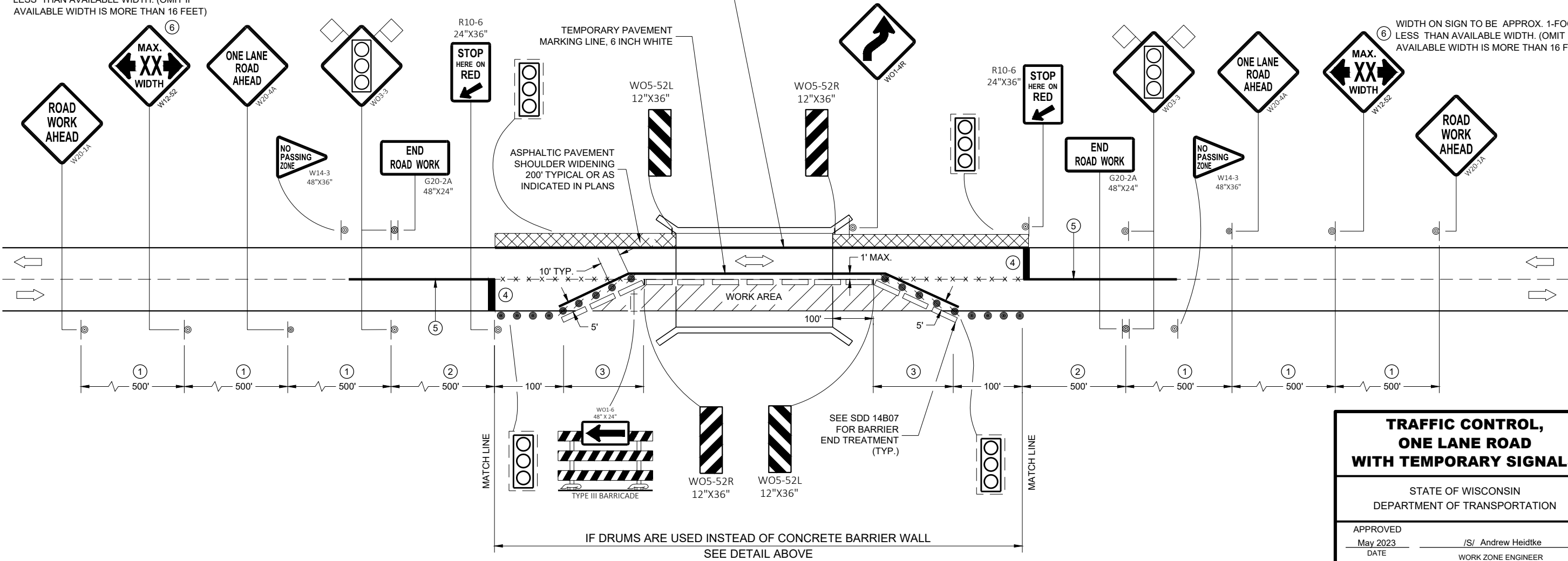
6

SDD 15D28 - 04

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLAGS, 16" X 16" MIN. (ORANGE)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- ASPHALTIC PAVEMENT WIDENING
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT

WIDTH ON SIGN TO BE APPROX. 1-FOOT LESS THAN AVAILABLE WIDTH. (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET)



GENERAL NOTES

- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE..
- THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.
- ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.
- "WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
- ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.
- REMOVE PAVEMENT MARKING AND PLACE TEMPORARY PAVEMENT MARKING LINES IF THE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.
- INSTALL OVERHEAD TEMPORARY SIGNAL HEADS ABOVE THE MIDDLE OF THE TRAVEL LANE THEY ARE CONTROLLING.
- 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.
 - USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.
 - DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.
 - TEMPORARY PAVEMENT MARKING LINE, 18 INCH WHITE STOP LINE.
 - 700 FOOT TEMPORARY PAVEMENT MARKING LINE, 6 INCH DOUBLE YELLOW . WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.
 - SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.

**TRAFFIC CONTROL,
ONE LANE ROAD
WITH TEMPORARY SIGNALS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /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.

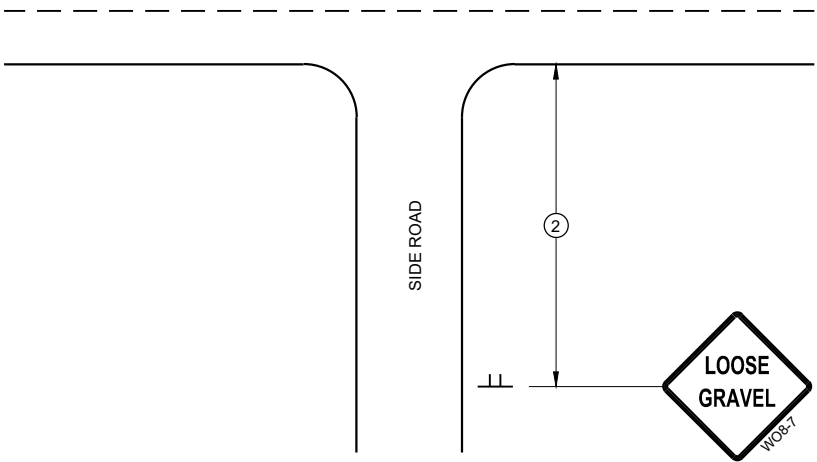
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

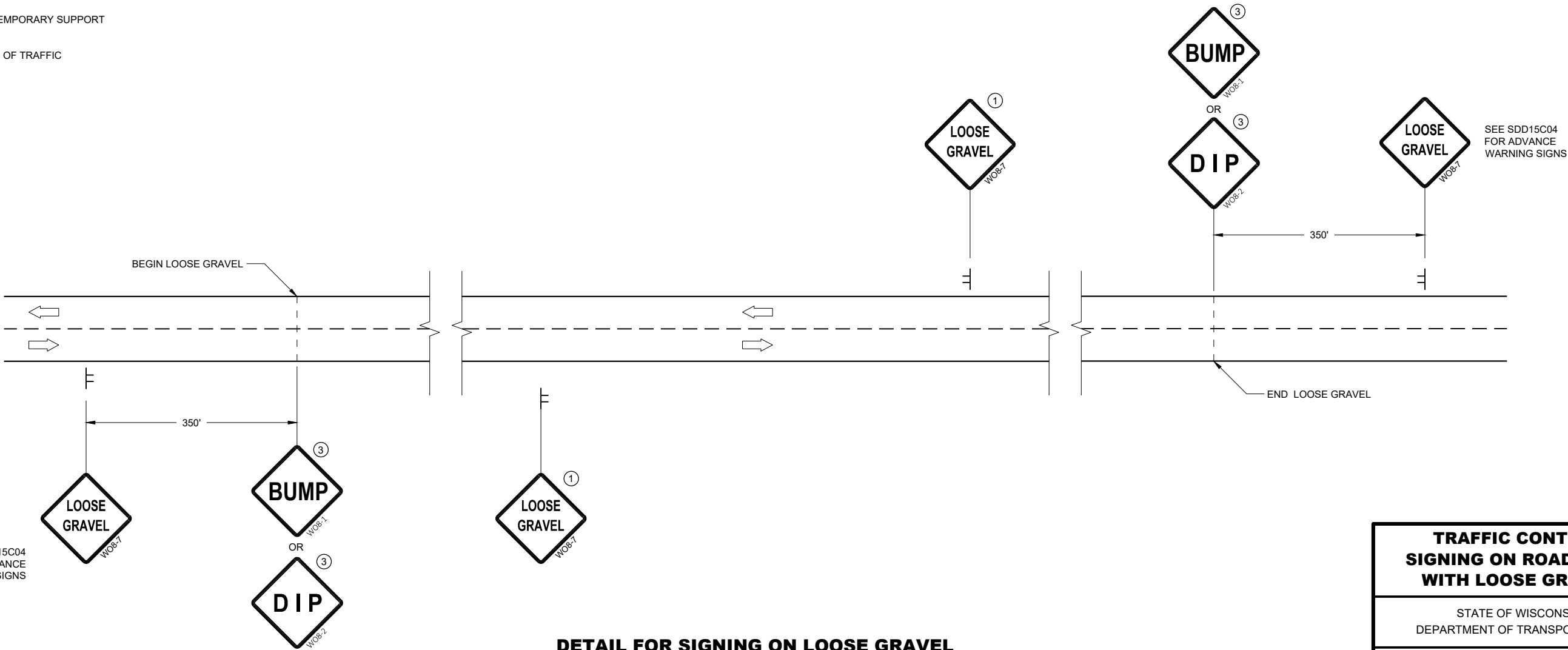
- 1 PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- 2 PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.
- 3 ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

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

LEGEND

- 
- TYPE III BARRICADE WITH ATTACHED SIGN
- 
- SIGN ON PERMANENT SUPPORT
- 
- TRAFFIC CONTROL DRUM
- 
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- 
- TYPE "A" WARNING LIGHT (FLASHING)
- 
- DIRECTION OF TRAFFIC
- 
- WORK AREA

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER (L/2) FEET
25	200	60
30	200	90
35	350	120
40	350	160
45	500	270
50	500	300
55	500	330

GENERAL NOTES

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

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

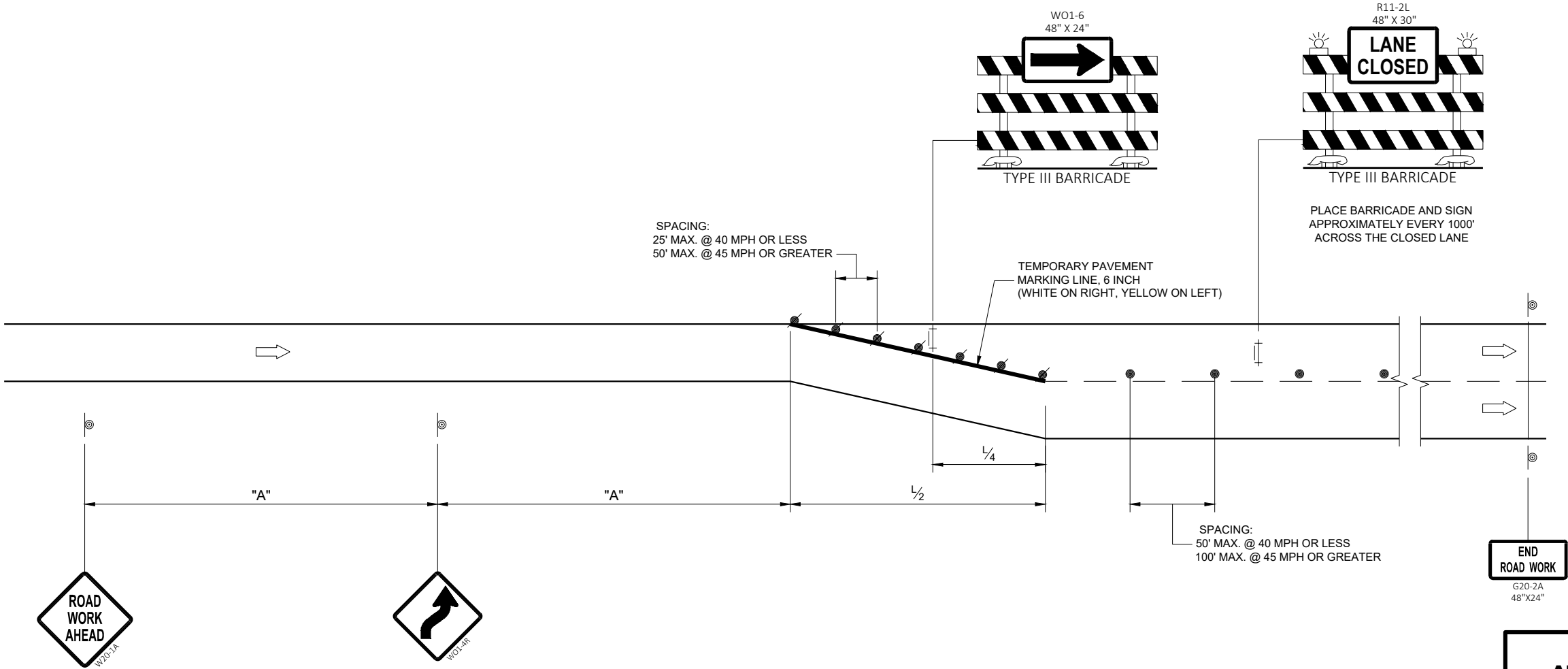
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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 SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

W20-1 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 WORK IS LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS.

PLACE TEMPORARY PAVEMENT MARKING AND PLACE TEMPORARY PAVEMENT LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.



TRAFFIC CONTROL,
ADDED LANE CLOSURE
WITH LANE SHIFT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

LEGEND

- V1

WORK VEHICLE
- V2

SHADOW VEHICLE
- 

TRUCK MOUNTED ATTENUATOR (TMA)
- 

FLASHING ARROW PANEL (CAUTION)
- 

WORK AREA
- 

DIRECTION OF TRAFFIC

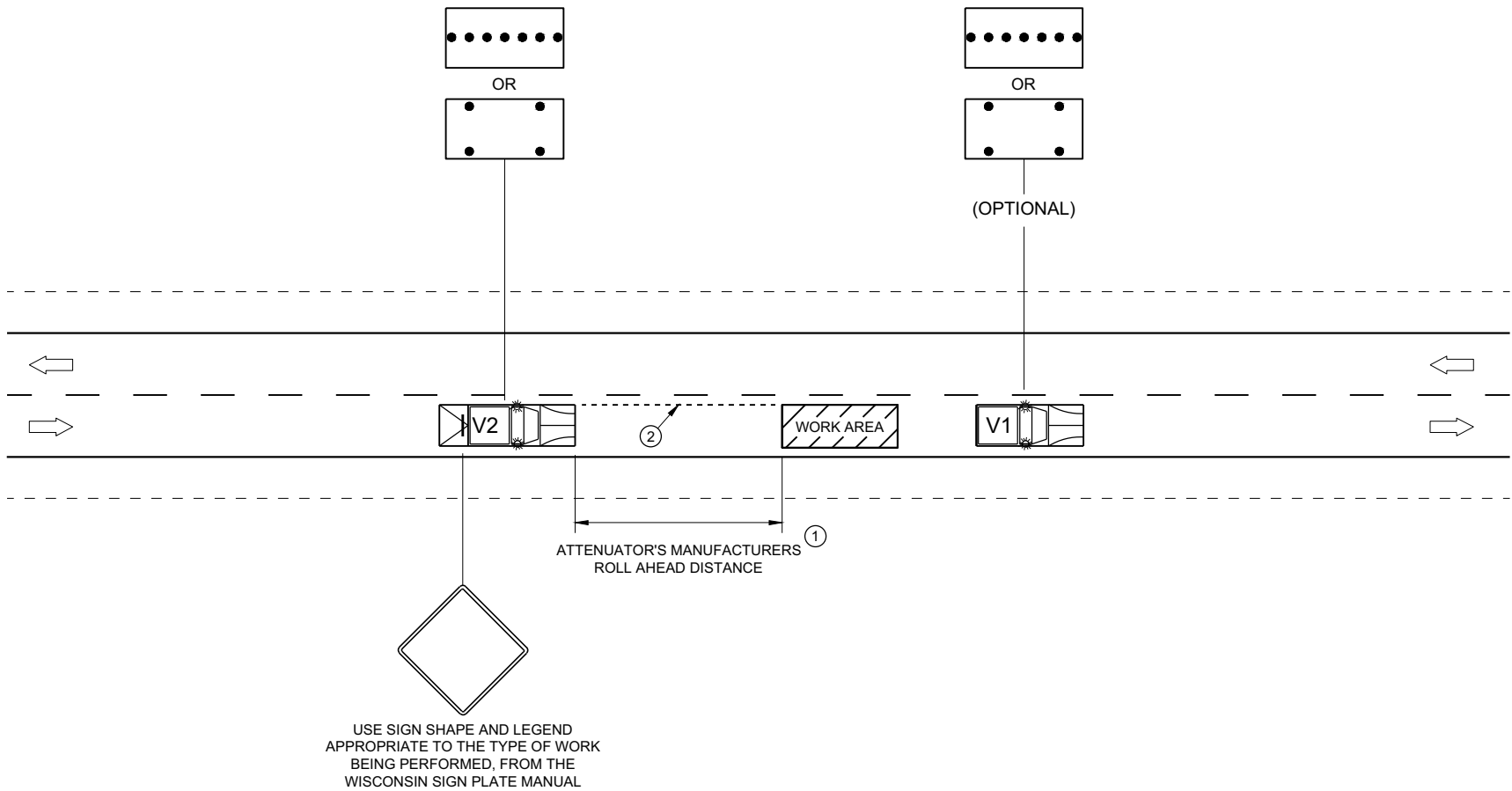
POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

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

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

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



TRAFFIC CONTROL,
MOBILE OPERATIONS ON
AN UNDIVIDED ROADWAY

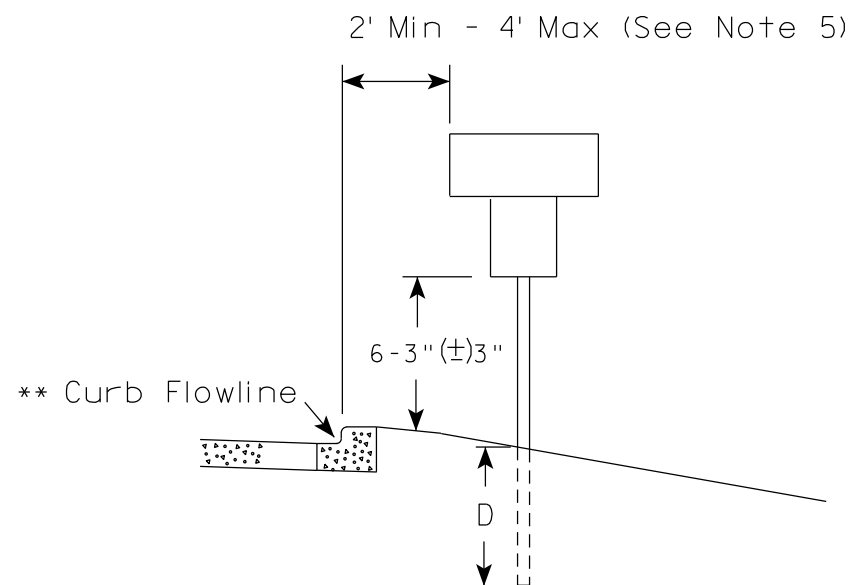
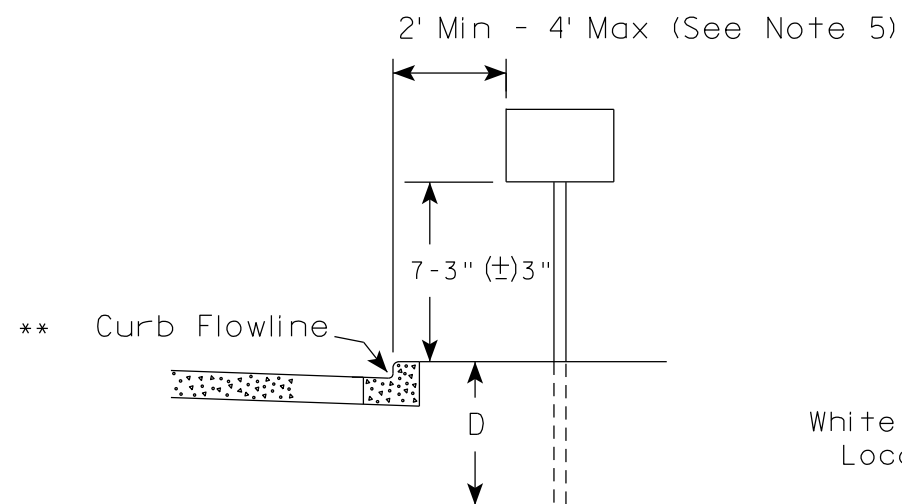
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

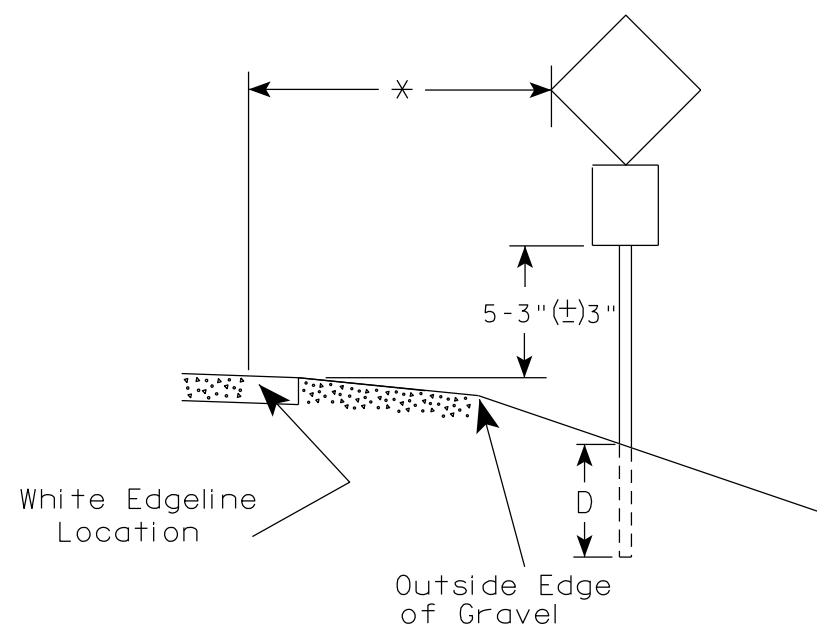
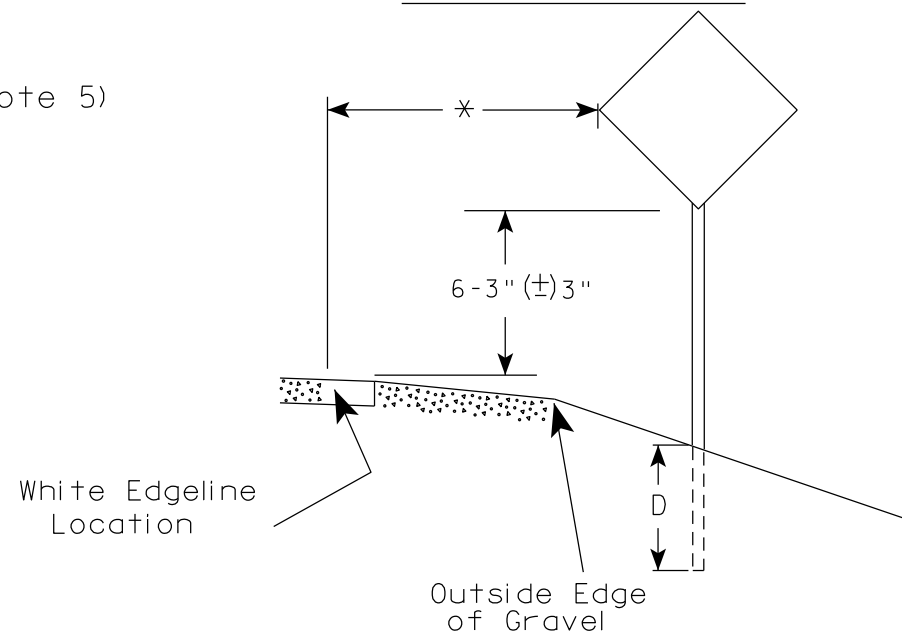
FHWA

URBAN AREA



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

RURAL AREA (See Note 2)



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

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.

POST EMBEDMENT DEPTH

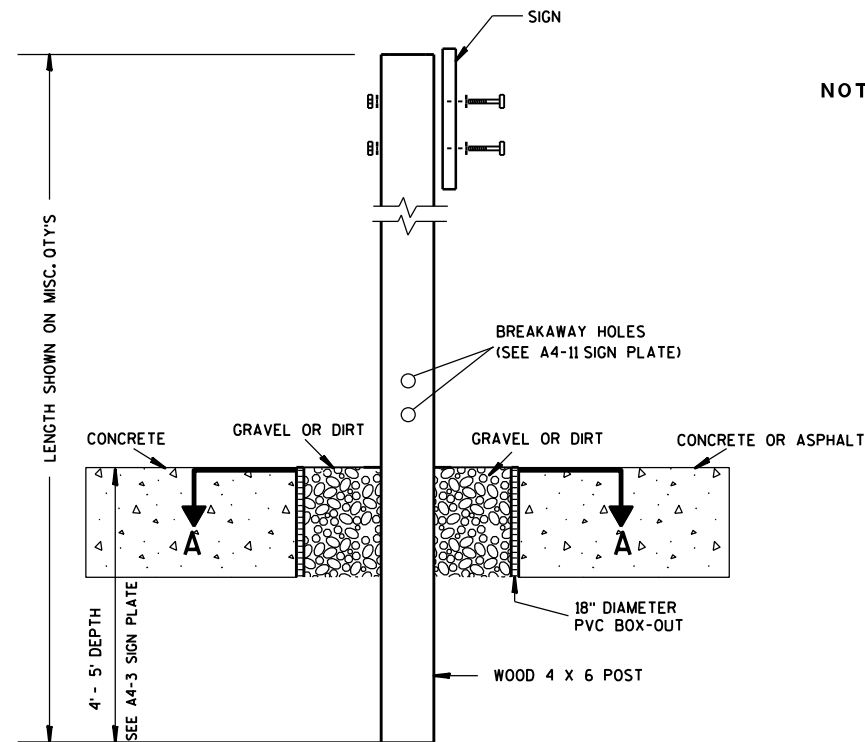
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

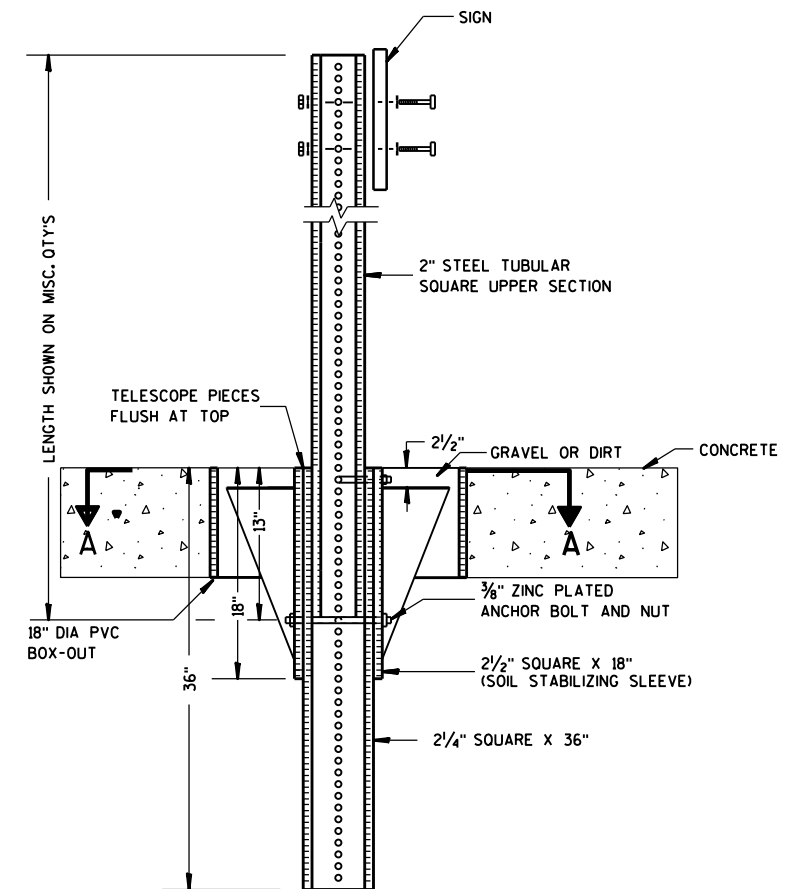
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

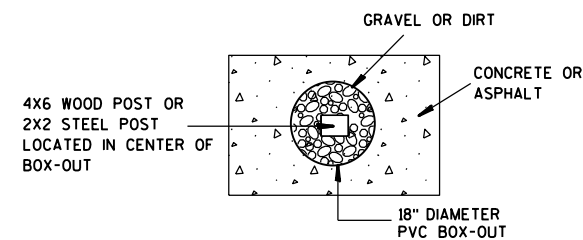
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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:

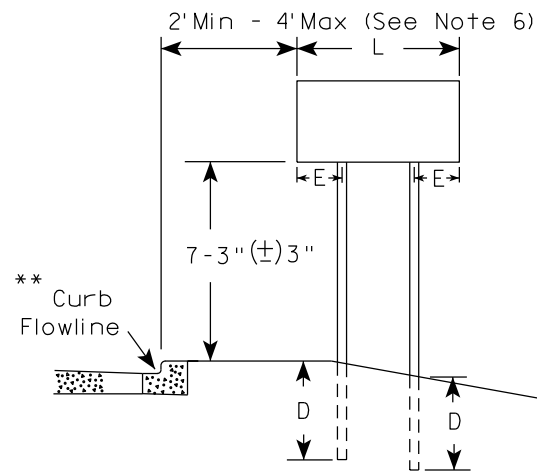
HWY:

COUNTY:

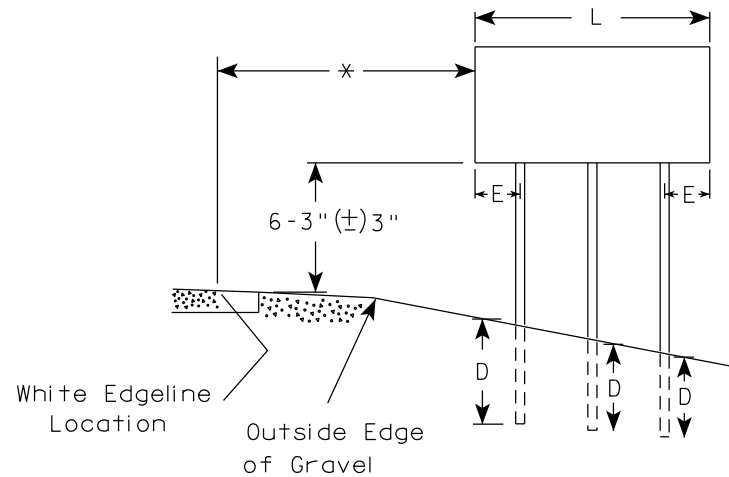
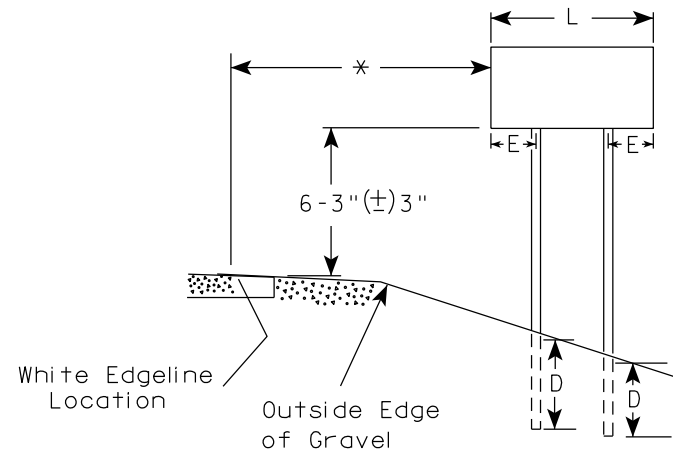
SHEET NO:

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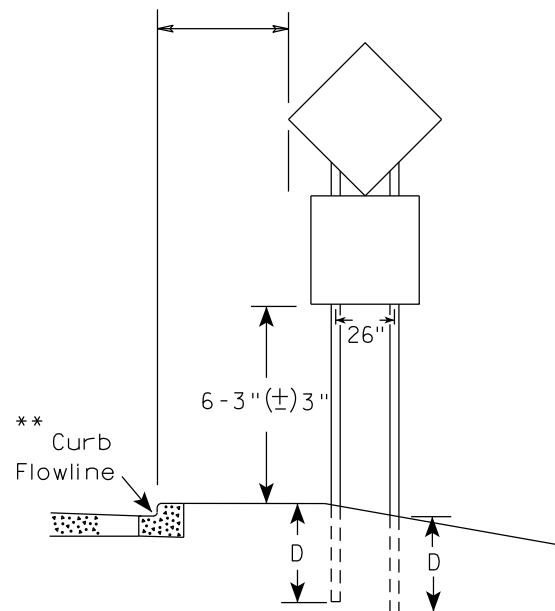
URBAN AREA



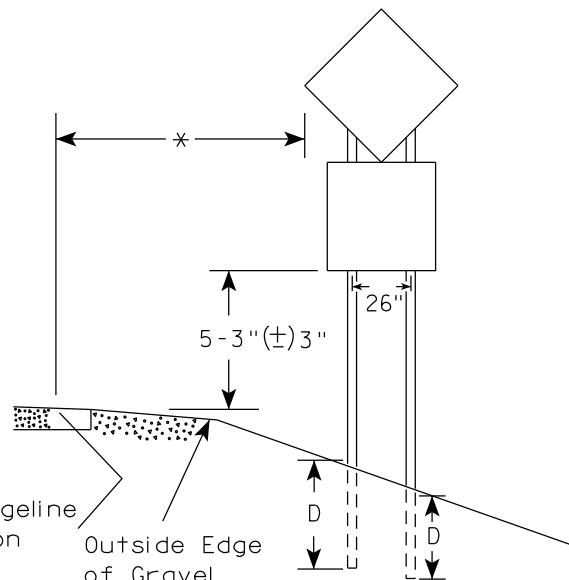
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

GENERAL NOTES

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

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

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

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

SIGN 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

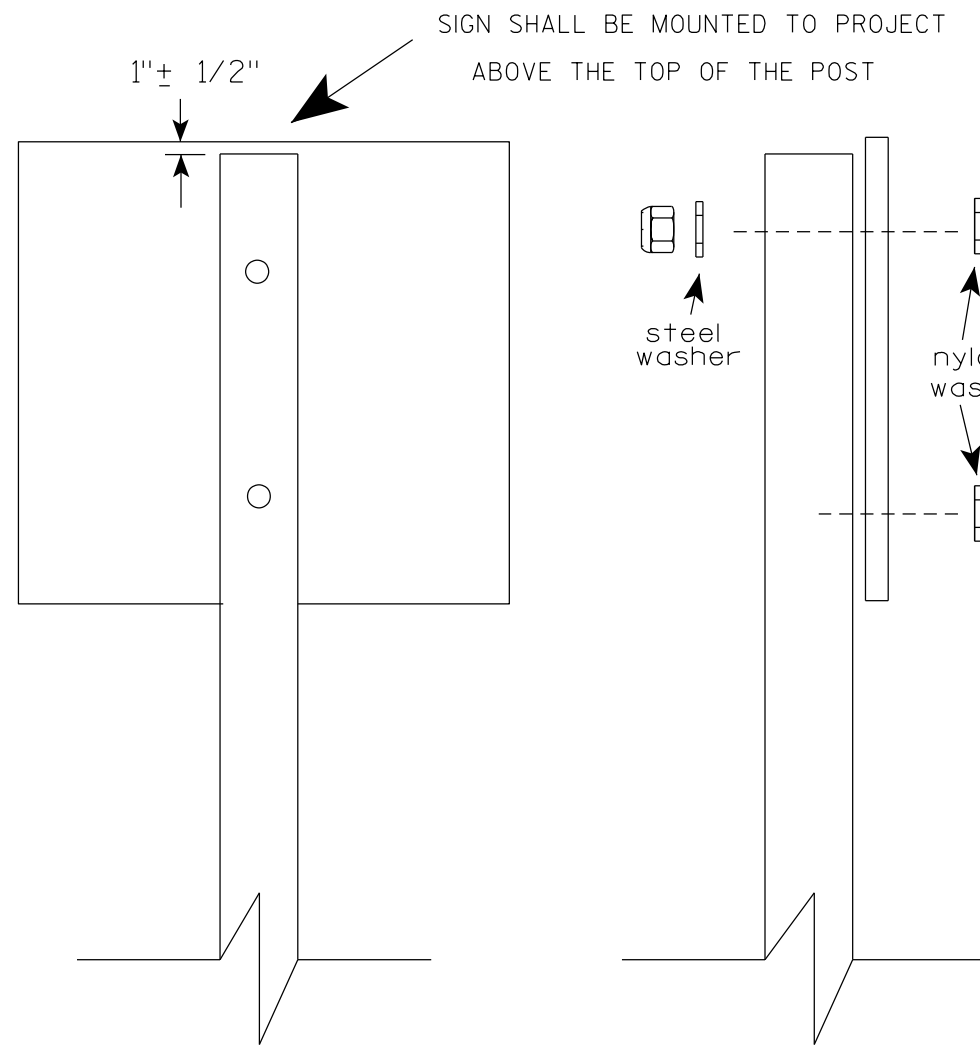
Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

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.

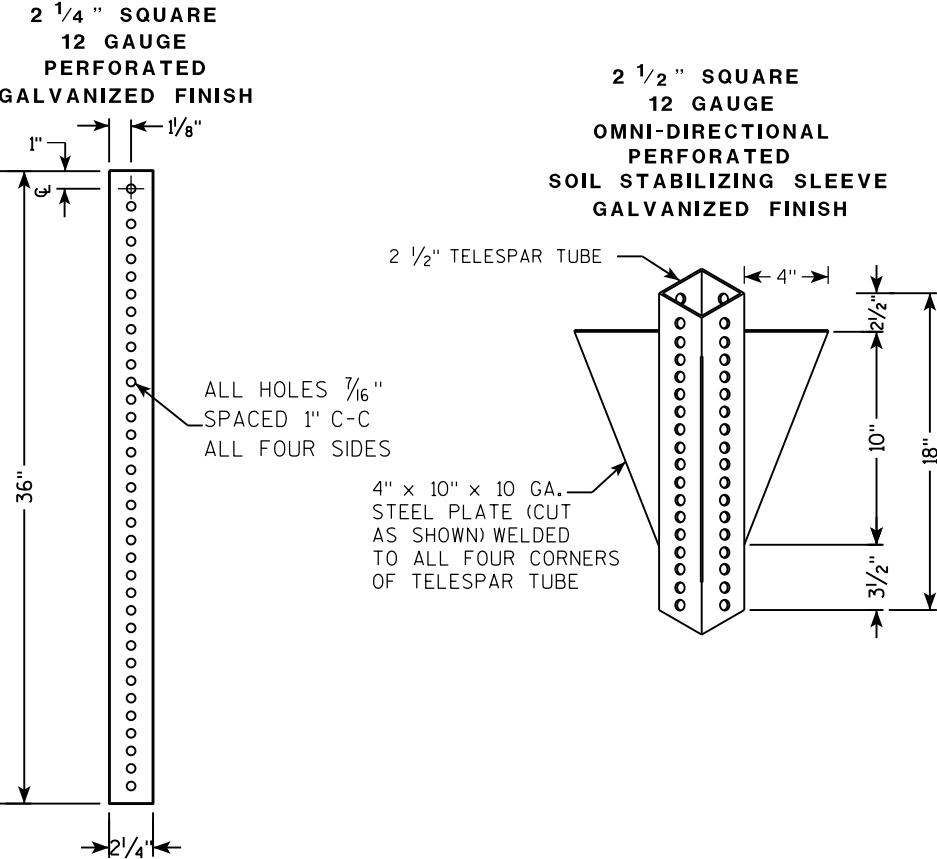
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- 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

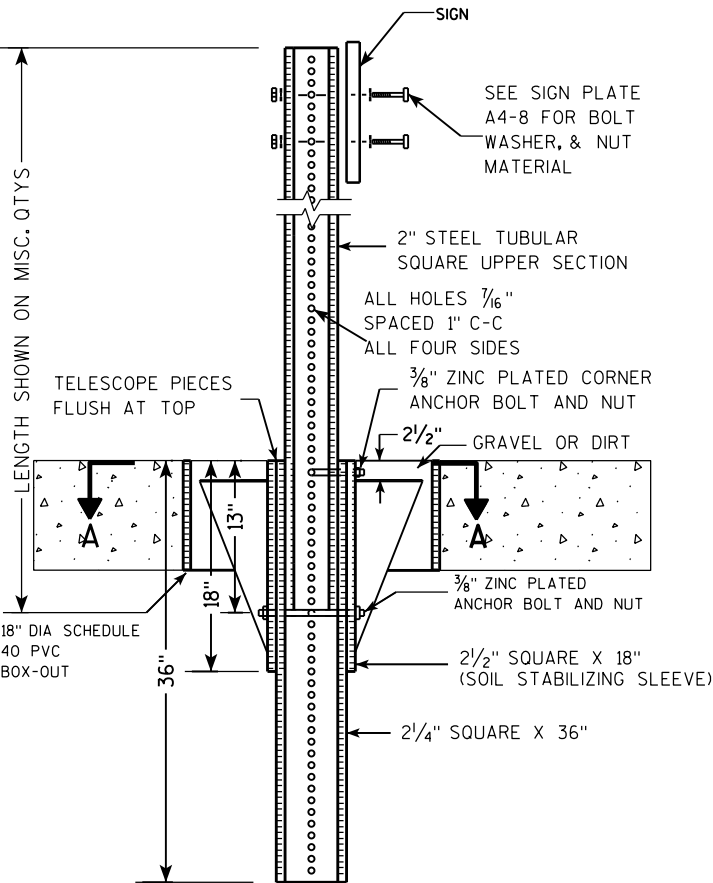
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

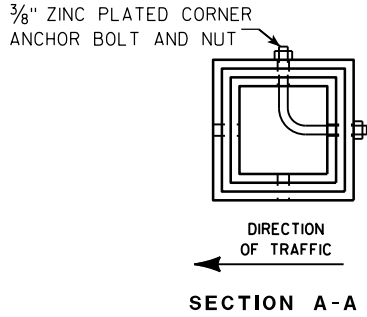
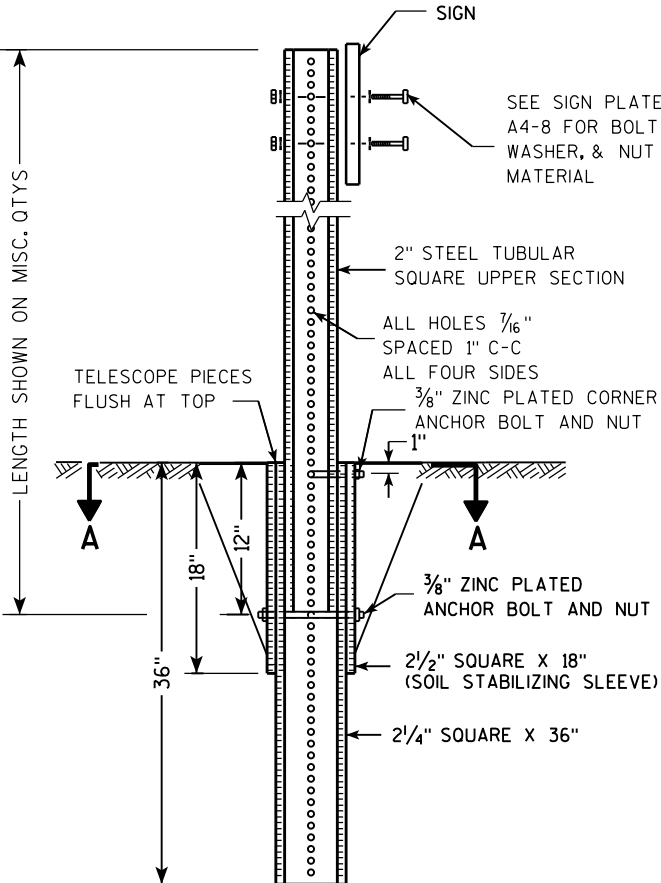
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)



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

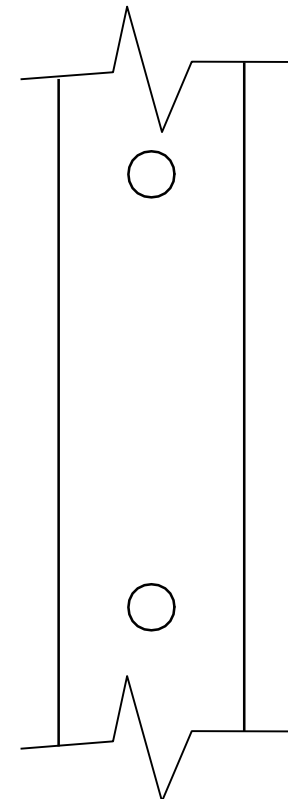
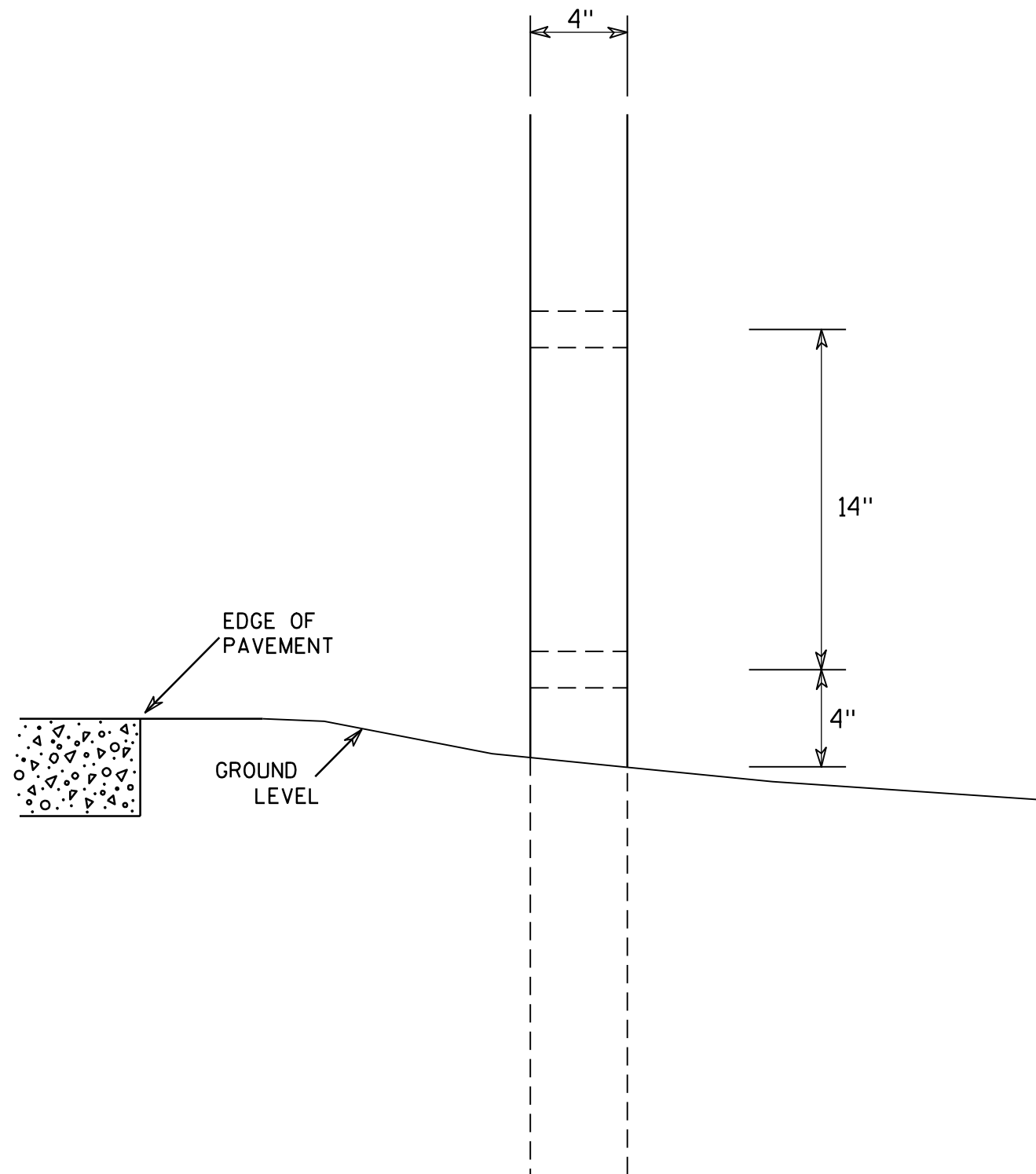
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

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



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1 1/2" diameter holes drilled perpendicular to the roadway centerline.

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:

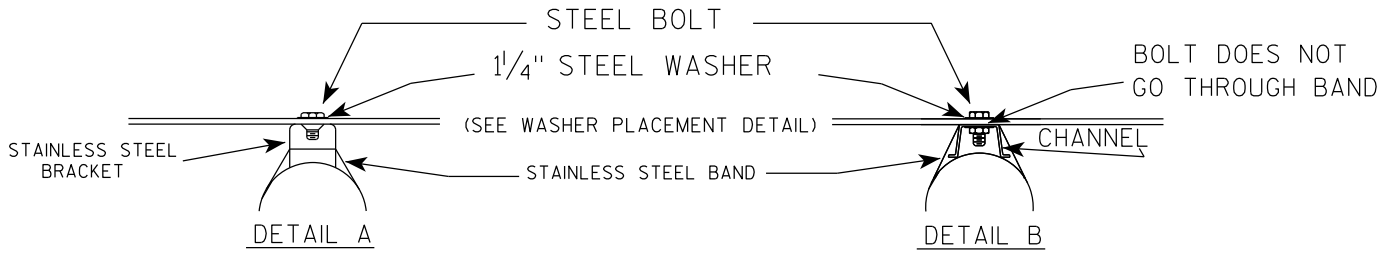
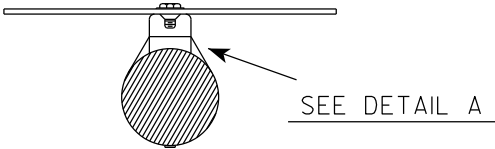
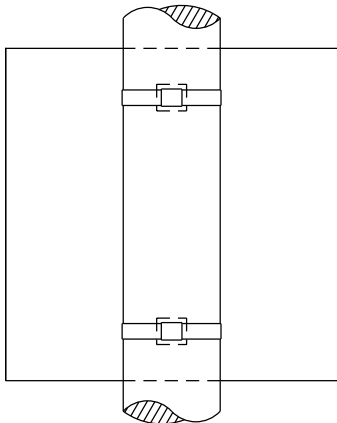
COUNTY:

SHEET NO:

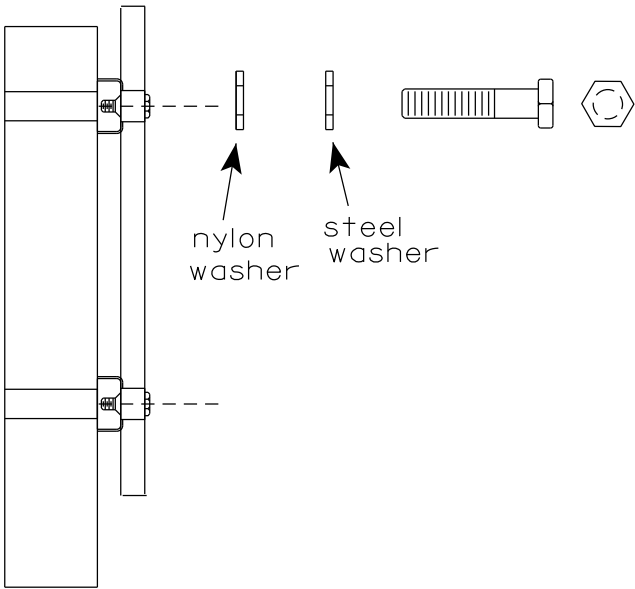
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

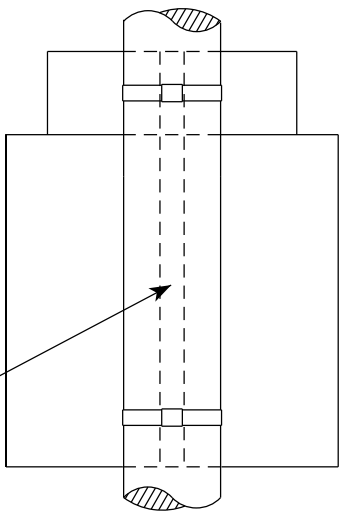


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

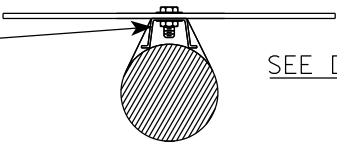
GENERAL NOTES

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

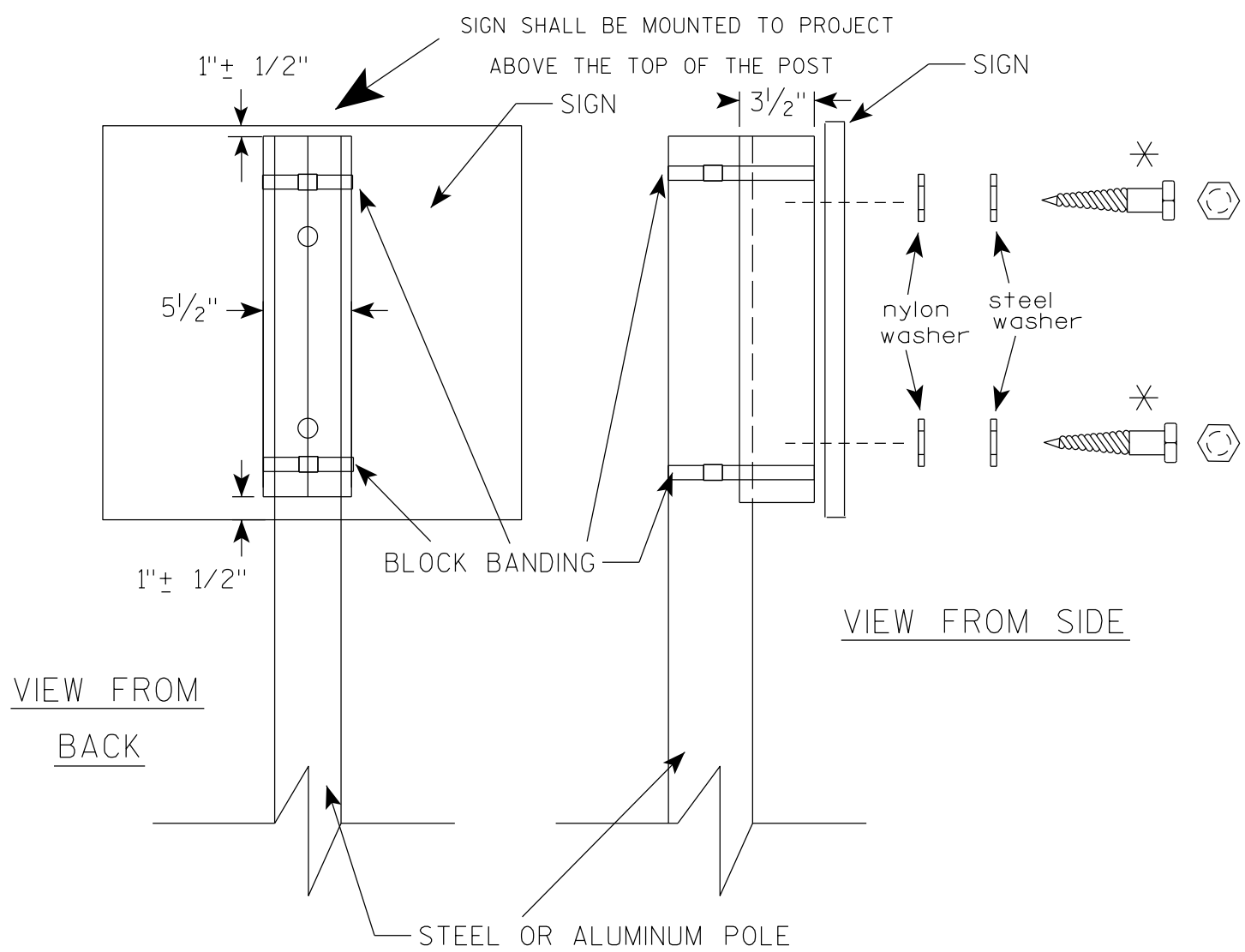


STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

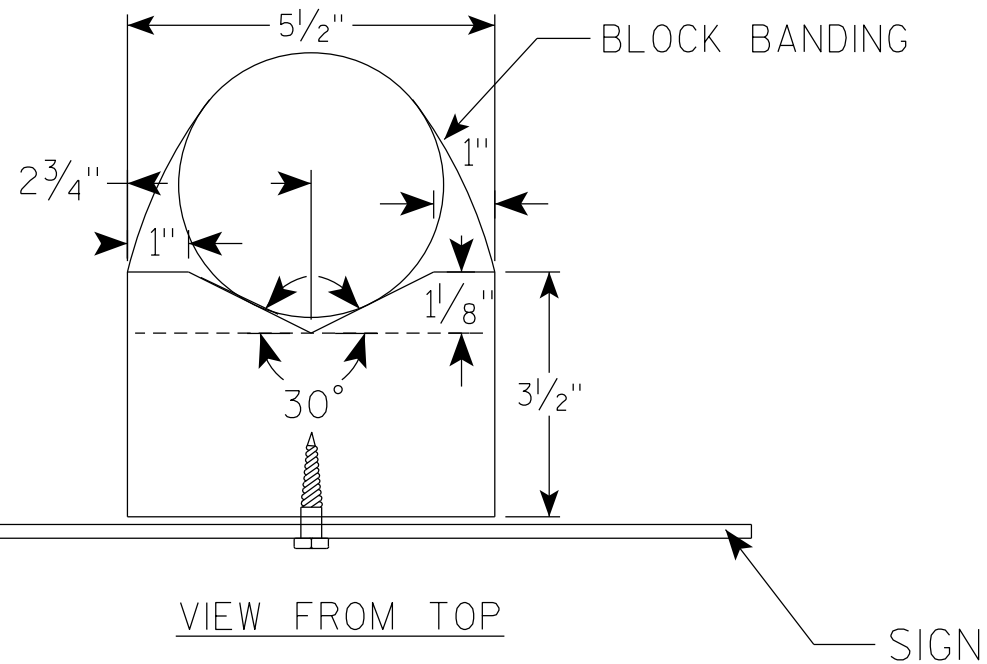
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

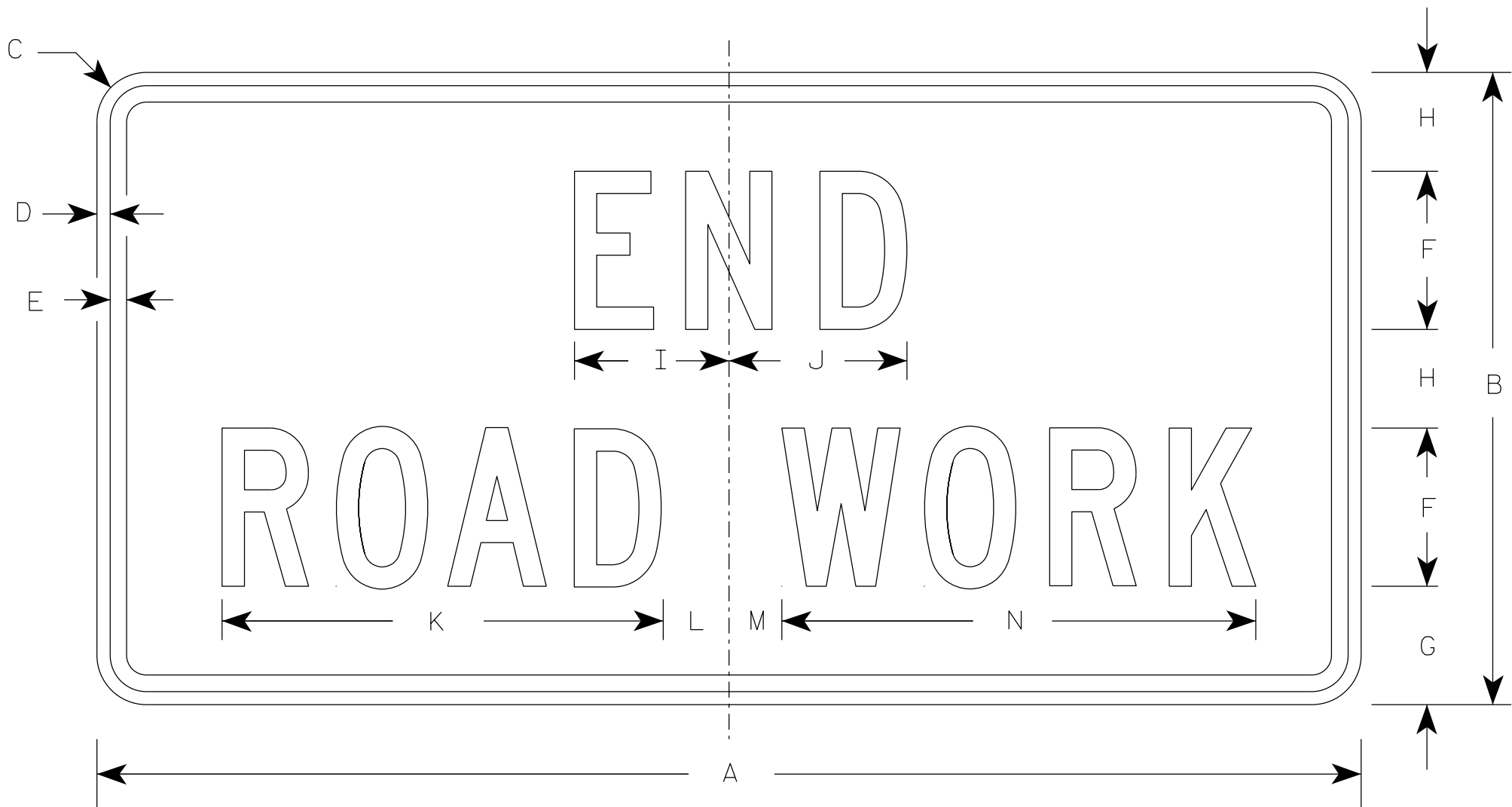
PROJECT NO:

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

PROJECT NO:

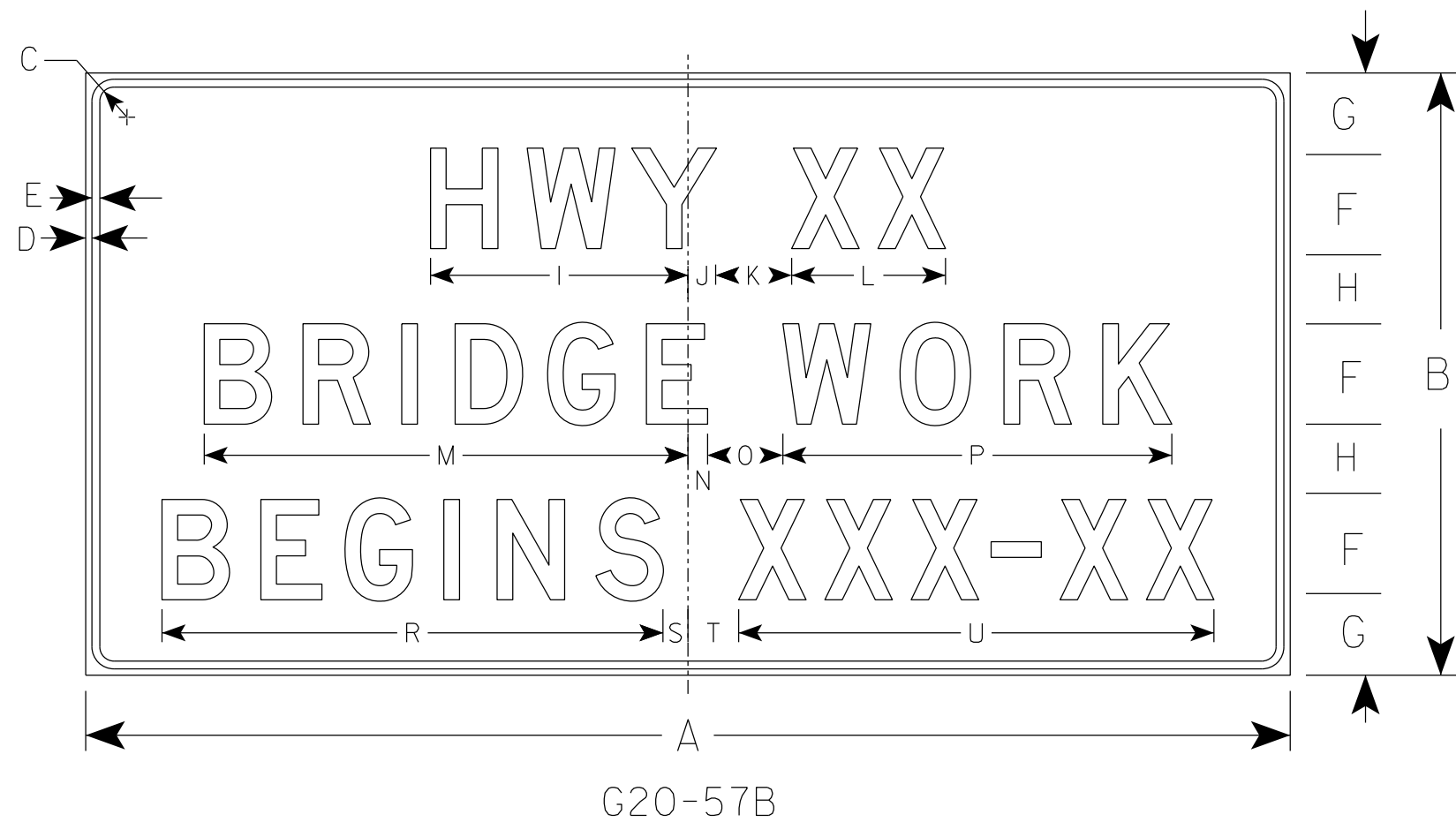
HWY:

COUNTY:

SHEET NO:

E

7



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.

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																											
2																											
3	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	29 1/8	7/8	5	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	38 1/2	1 1/2	6	31		39 1/4	2	4	37 7/8					32.0	
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

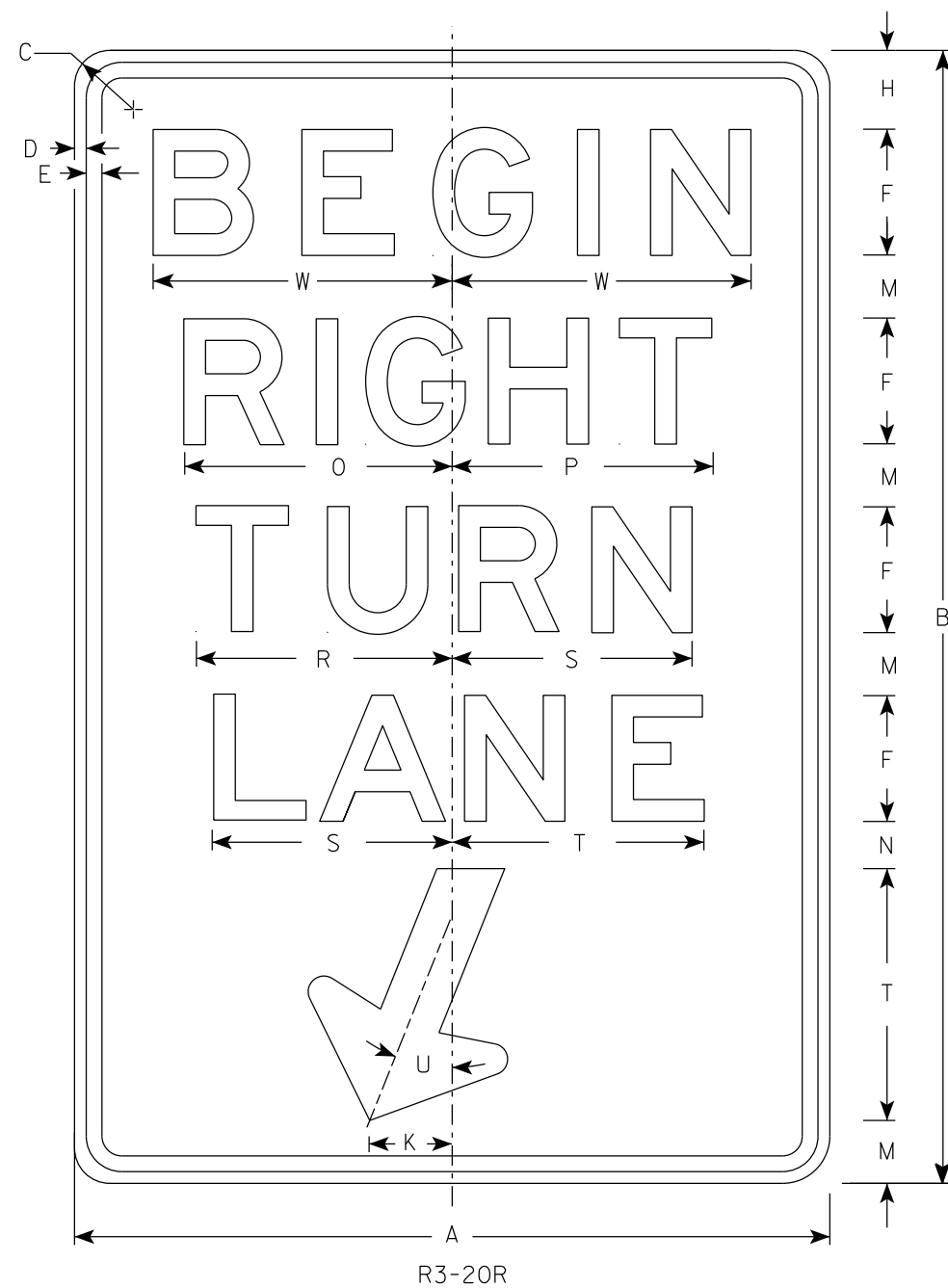
STANDARD SIGN
G20-57B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/22/19 PLATE NO. G20-57B.1

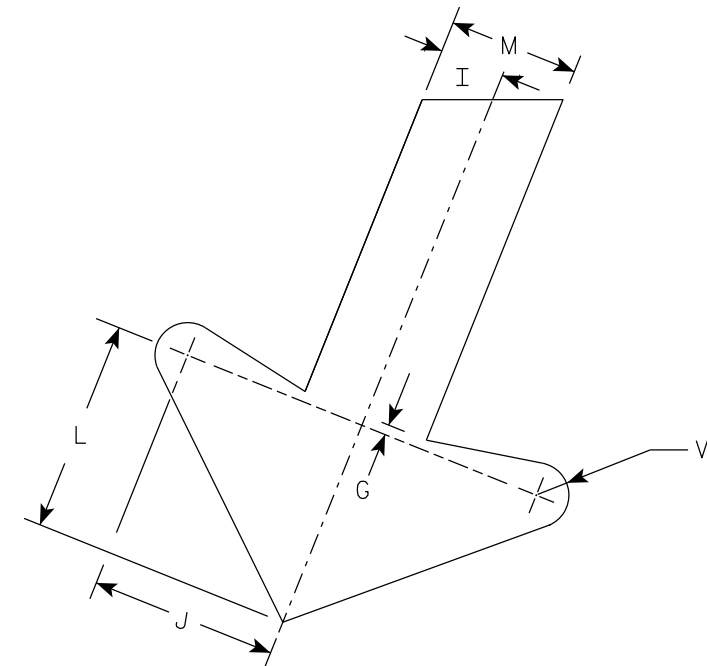
7



R3-20R

NOTES

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



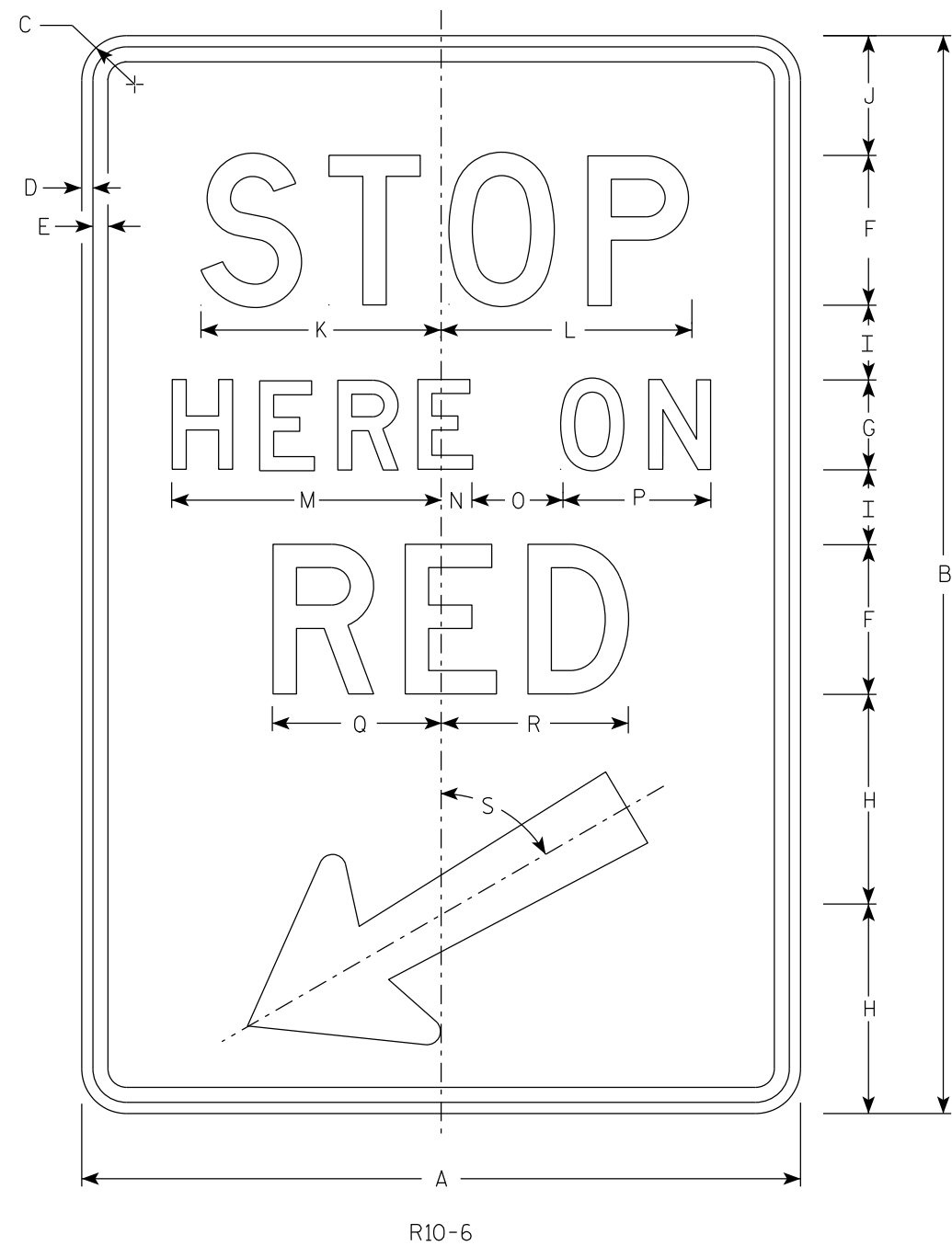
ARROW DETAIL

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	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	8 1/2	8 1/4		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	8 1/2	8 1/4		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	12 3/4	12 1/2		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

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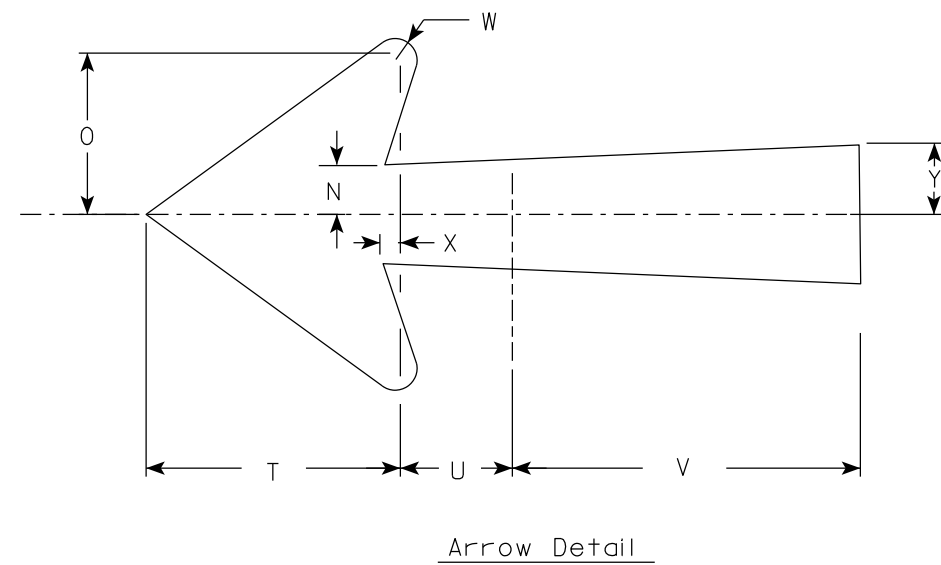
7

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	Areq sq. ft.
1																											
2S	24	36	1 1/2	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
2M	24	36	1 1/2	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
3																											
4																											
5																											

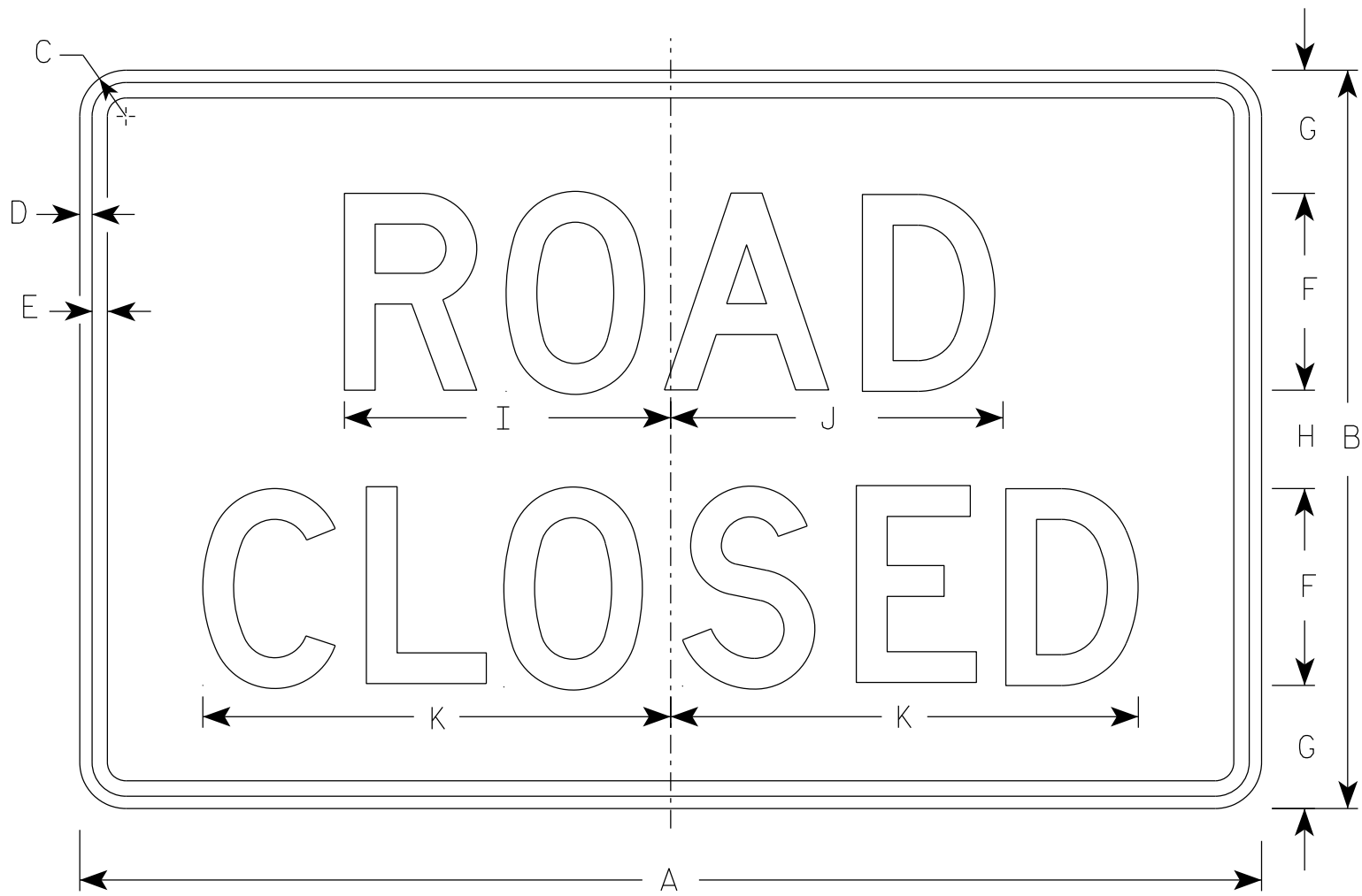
PROJECT NO:

HWY:

COUNTY:

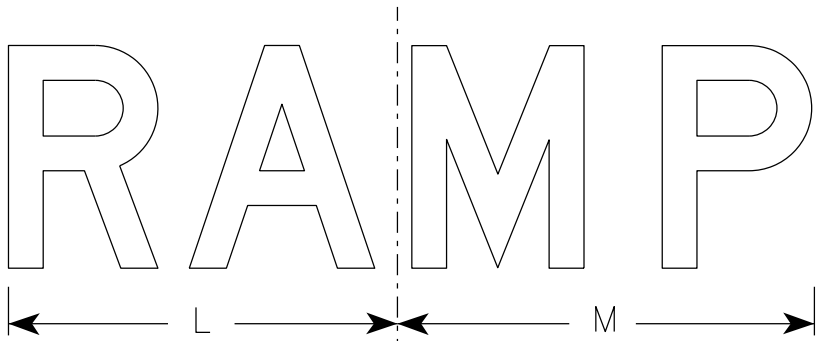
SHEET NO:

E

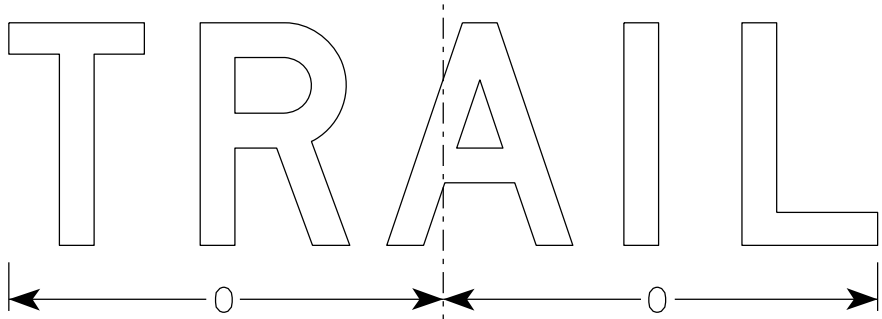


R11-2

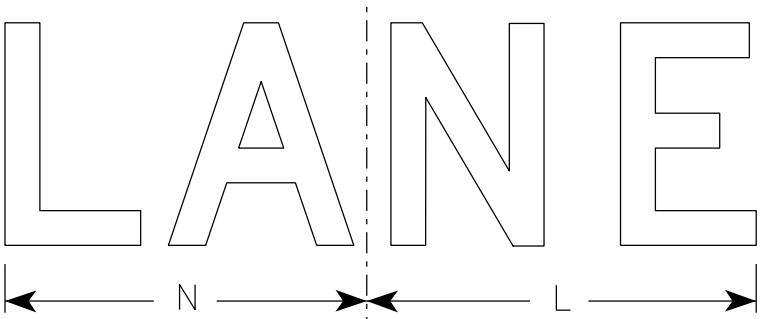
- NOTES
1. Sign is Type II - Type H Reflective
 2. Color:
Background - White
Message - Black
 3. Message Series - D
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 5. Modify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



R11-2R



R11-2T

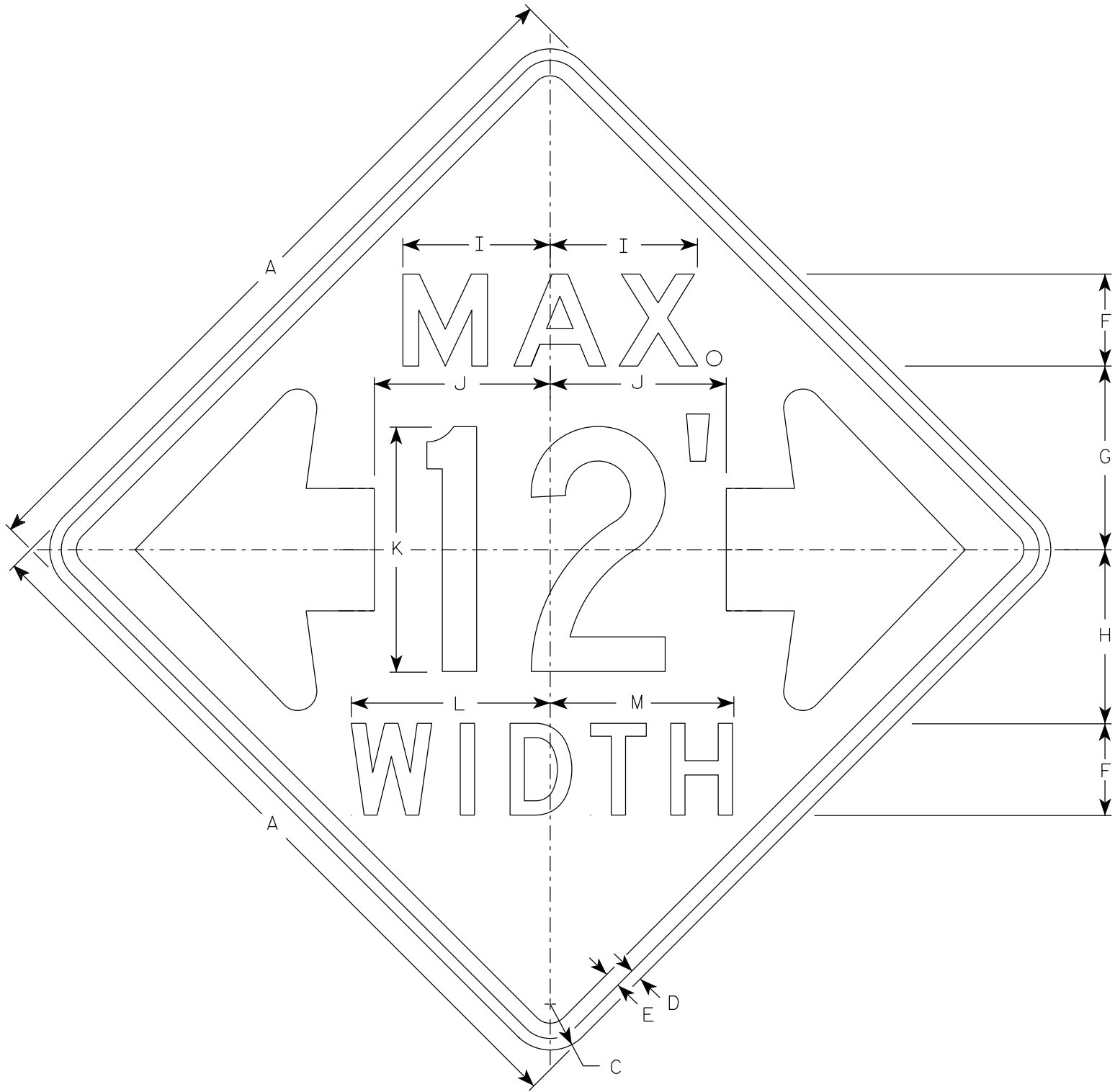


R11-2L

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

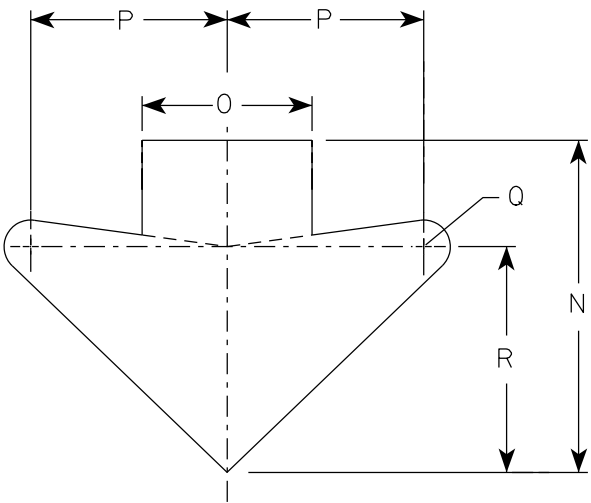
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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W12-52

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

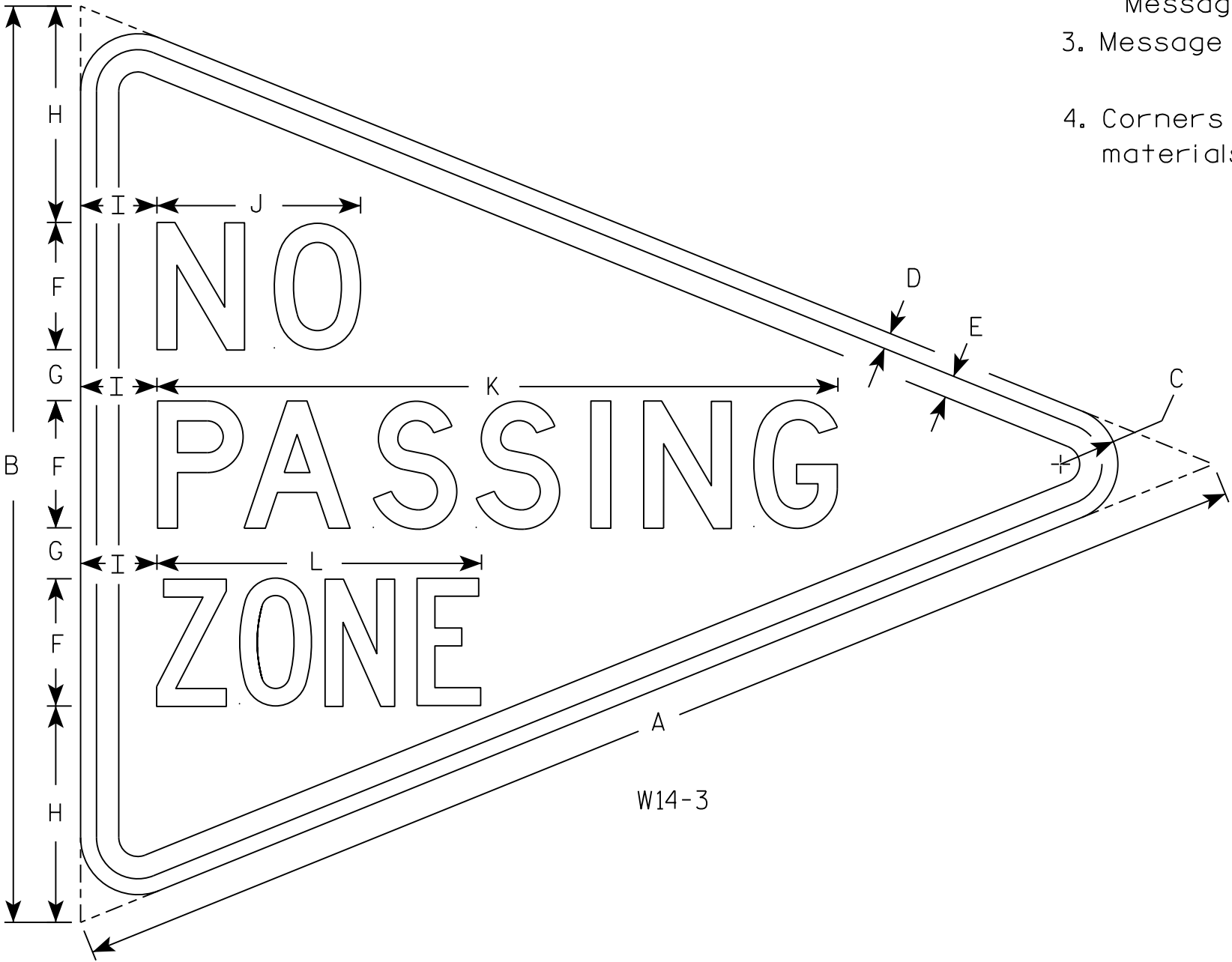
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - Lines 1 and 2 are Series D.
Line 3 is series C.
- 4. Corners and borders shall be rounded on all base materials for this sign.



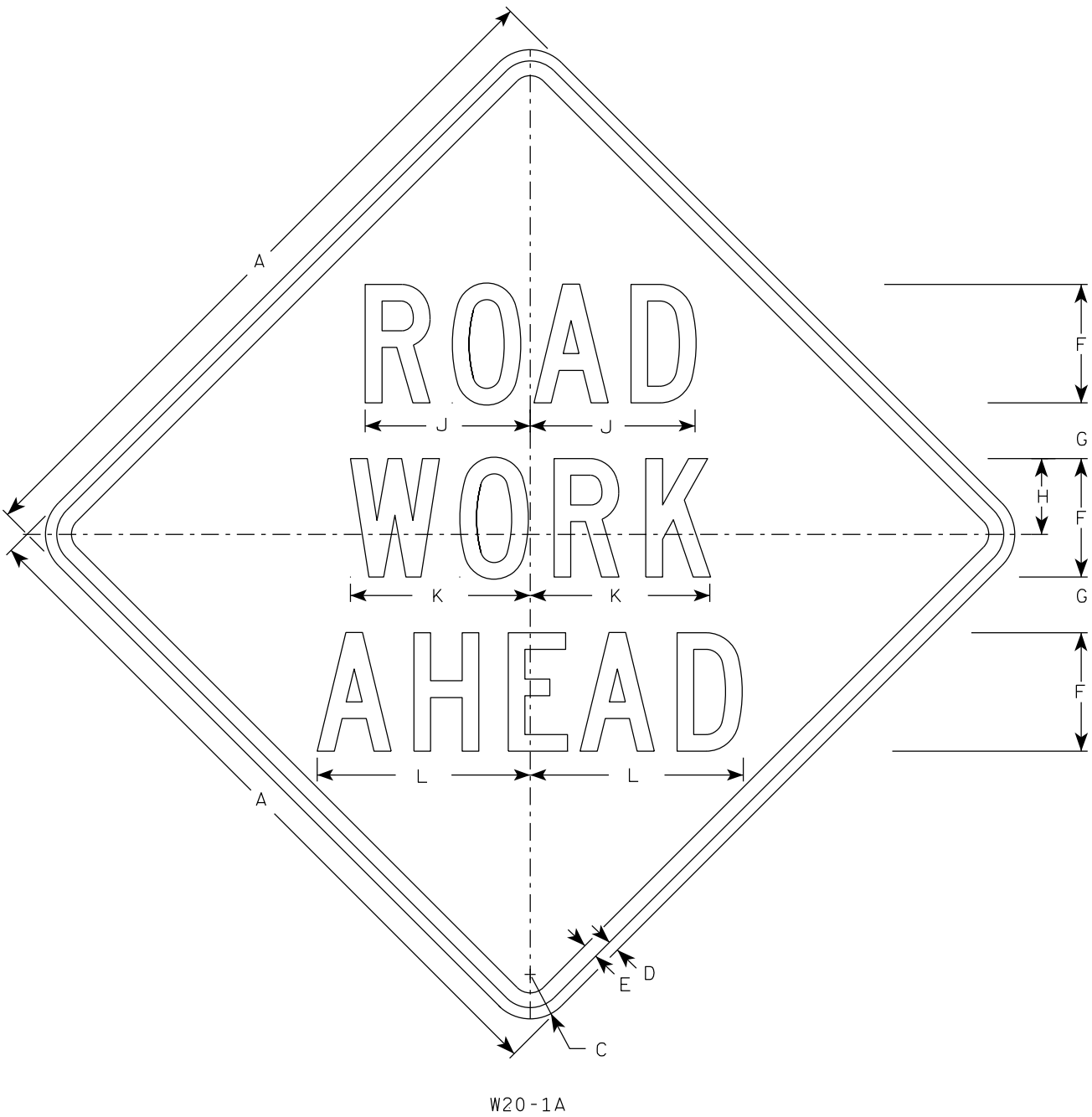
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

STANDARD SIGN
W14-3

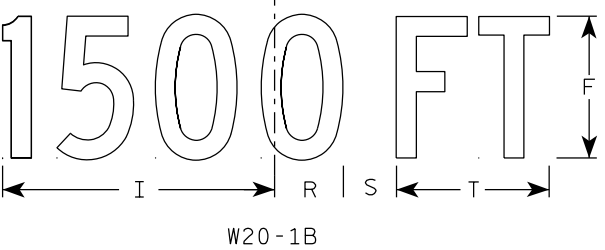
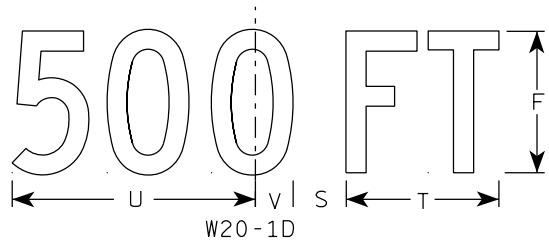
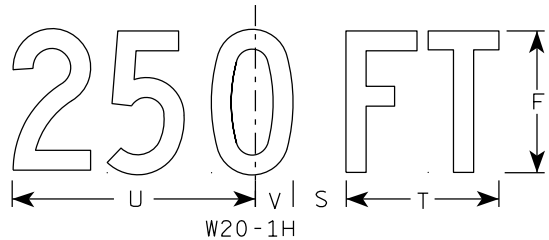
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W14-3.10

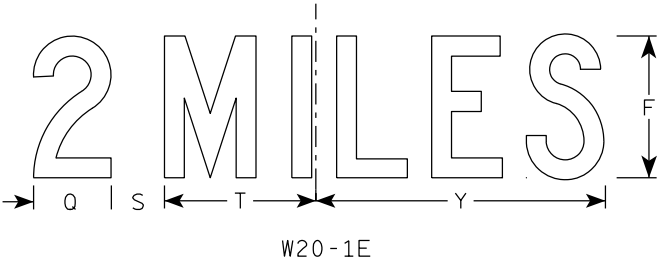
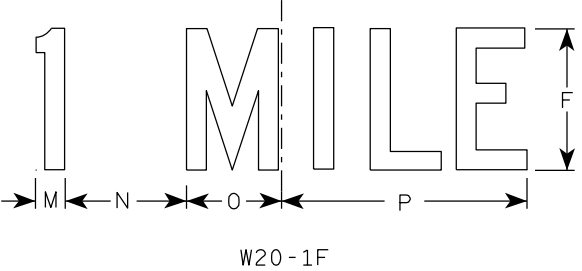
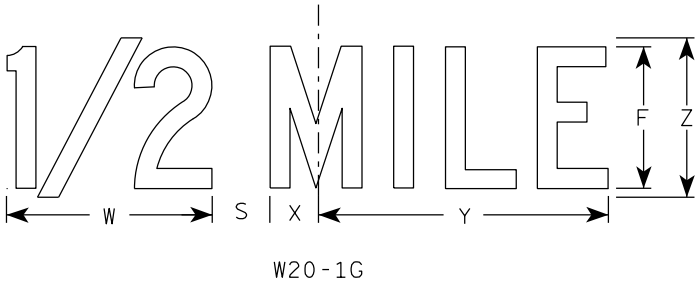


W20-1A



NOTES

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



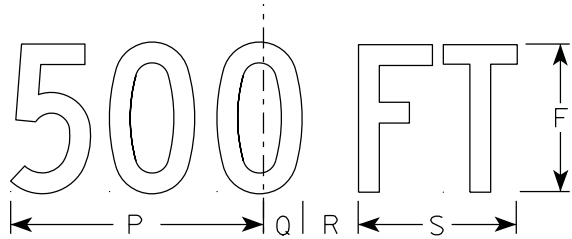
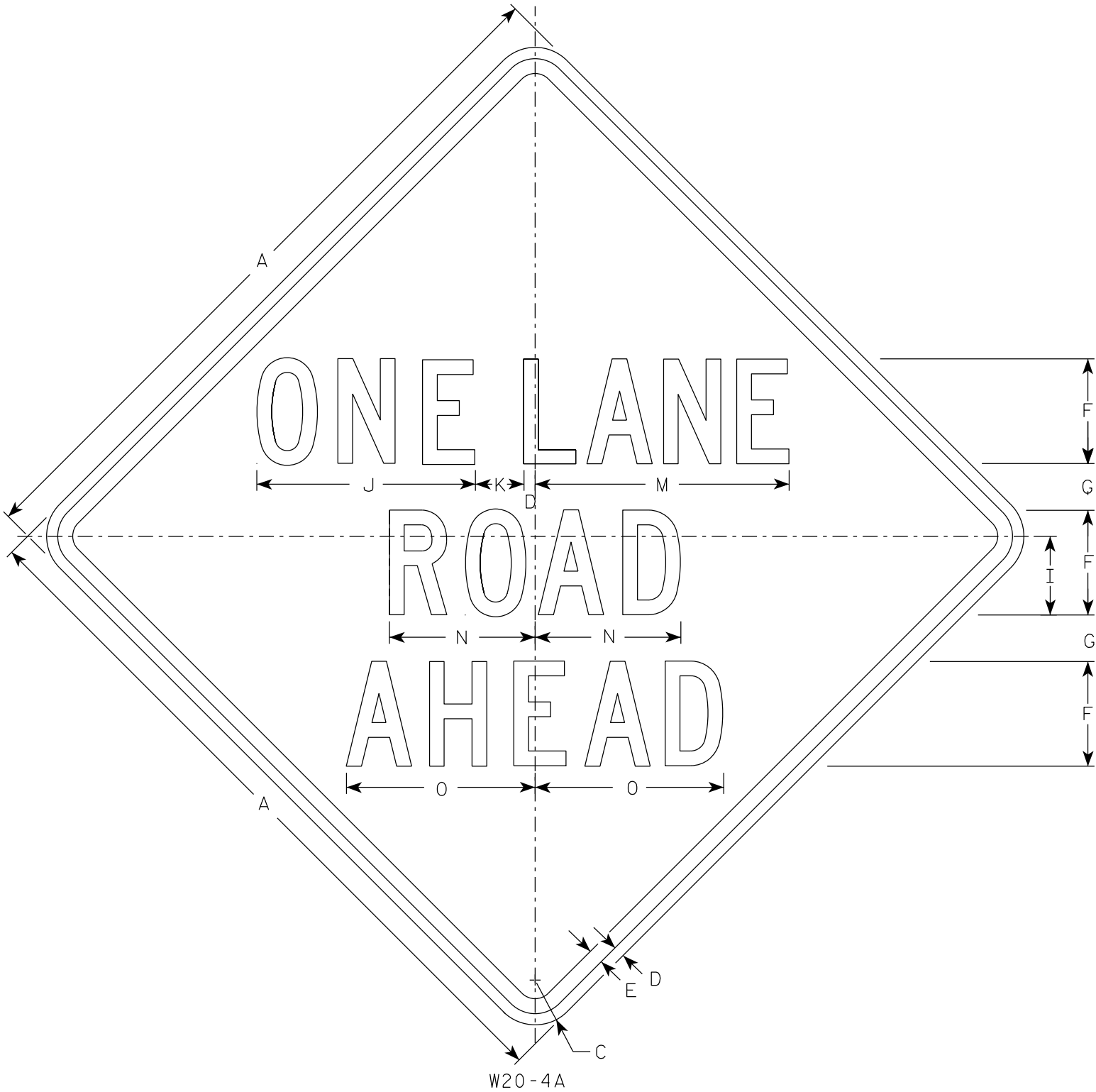
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13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

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

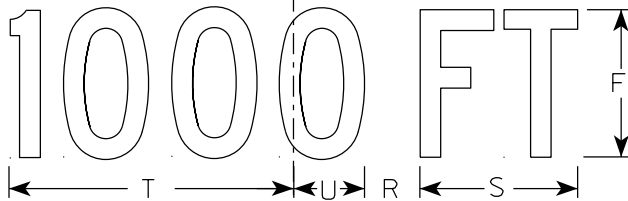
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

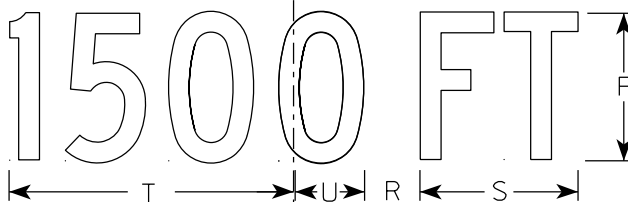
DATE 1/10/2024 PLATE NO. W20-1.12



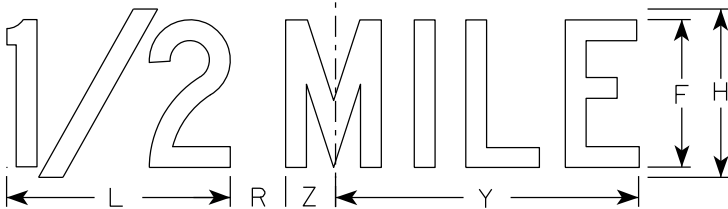
W20-4D



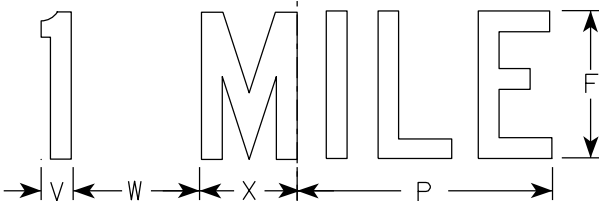
W20-4C



W20-4B



W20-4G



W20-4F

NOTES

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

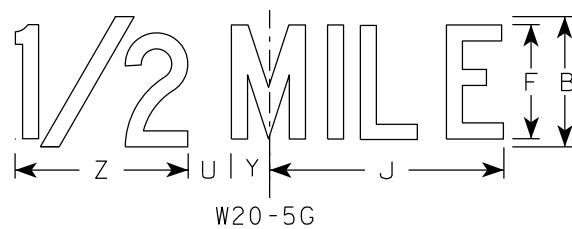
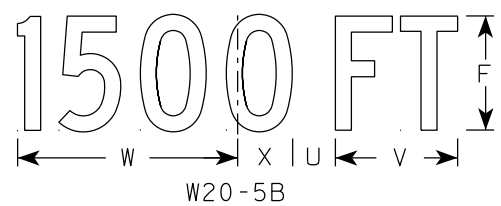
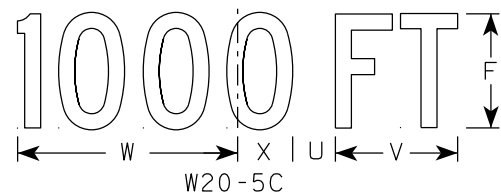
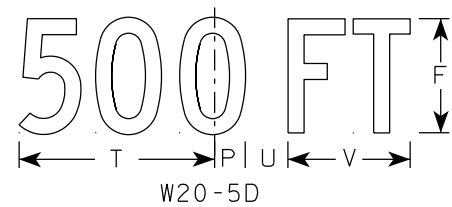
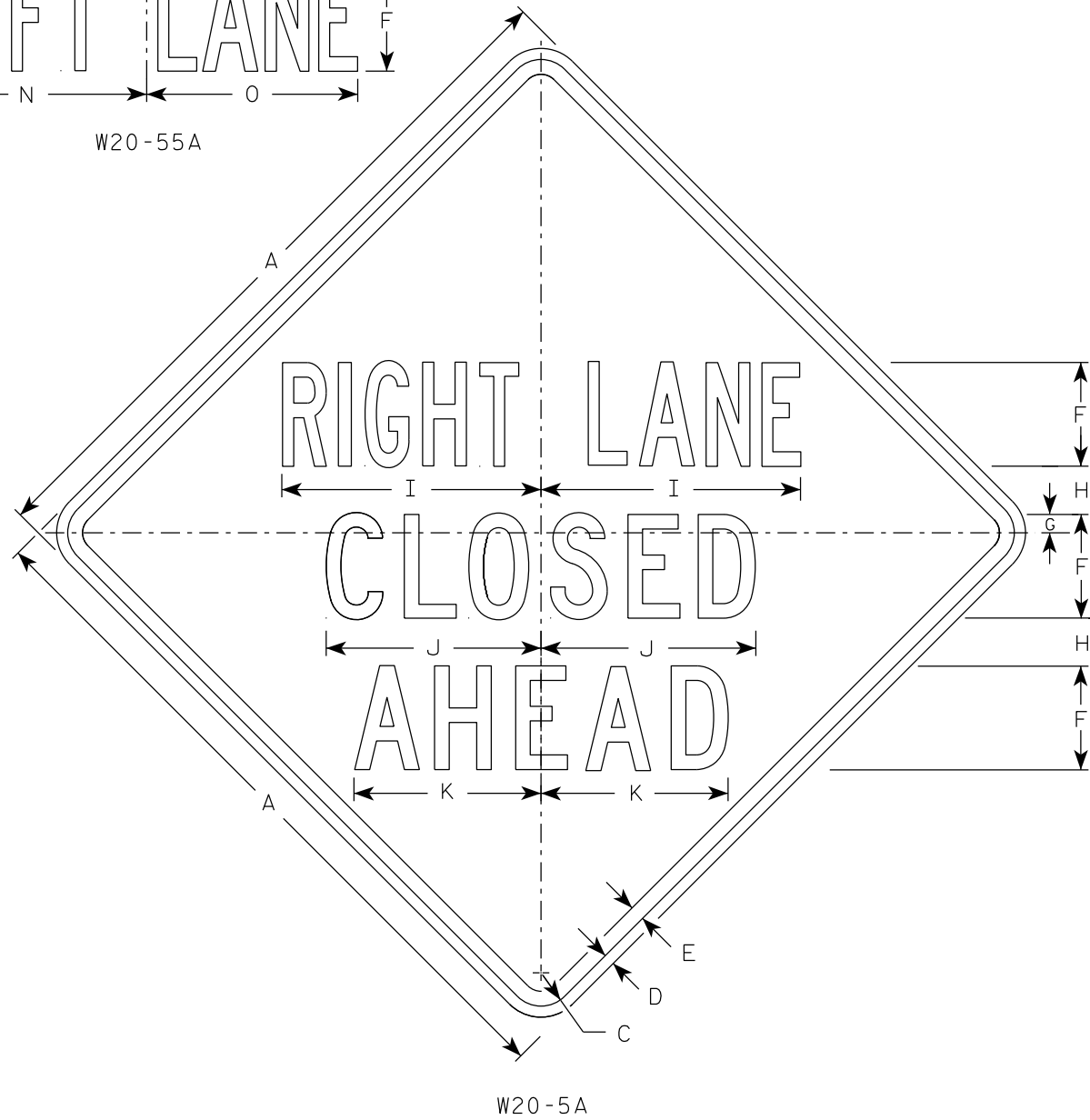
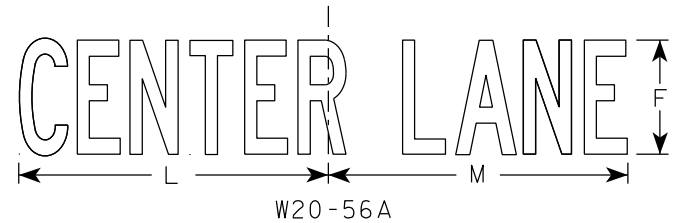
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 3/8	6	3 3/4	10 3/8	2 3/8	8	13 1/2	7	8 7/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2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

STANDARD SIGN
W20-4A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-4.10



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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

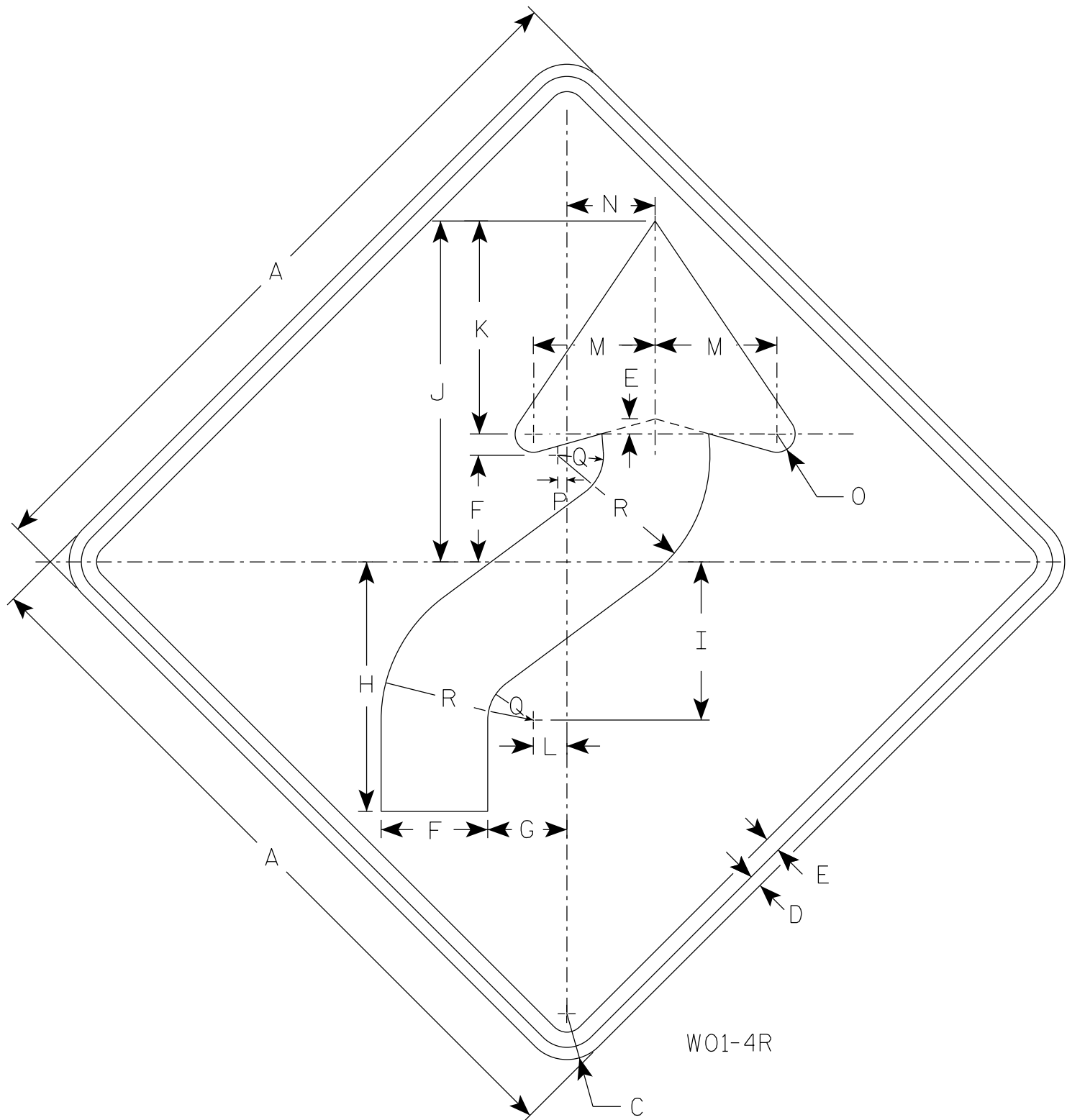
E

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

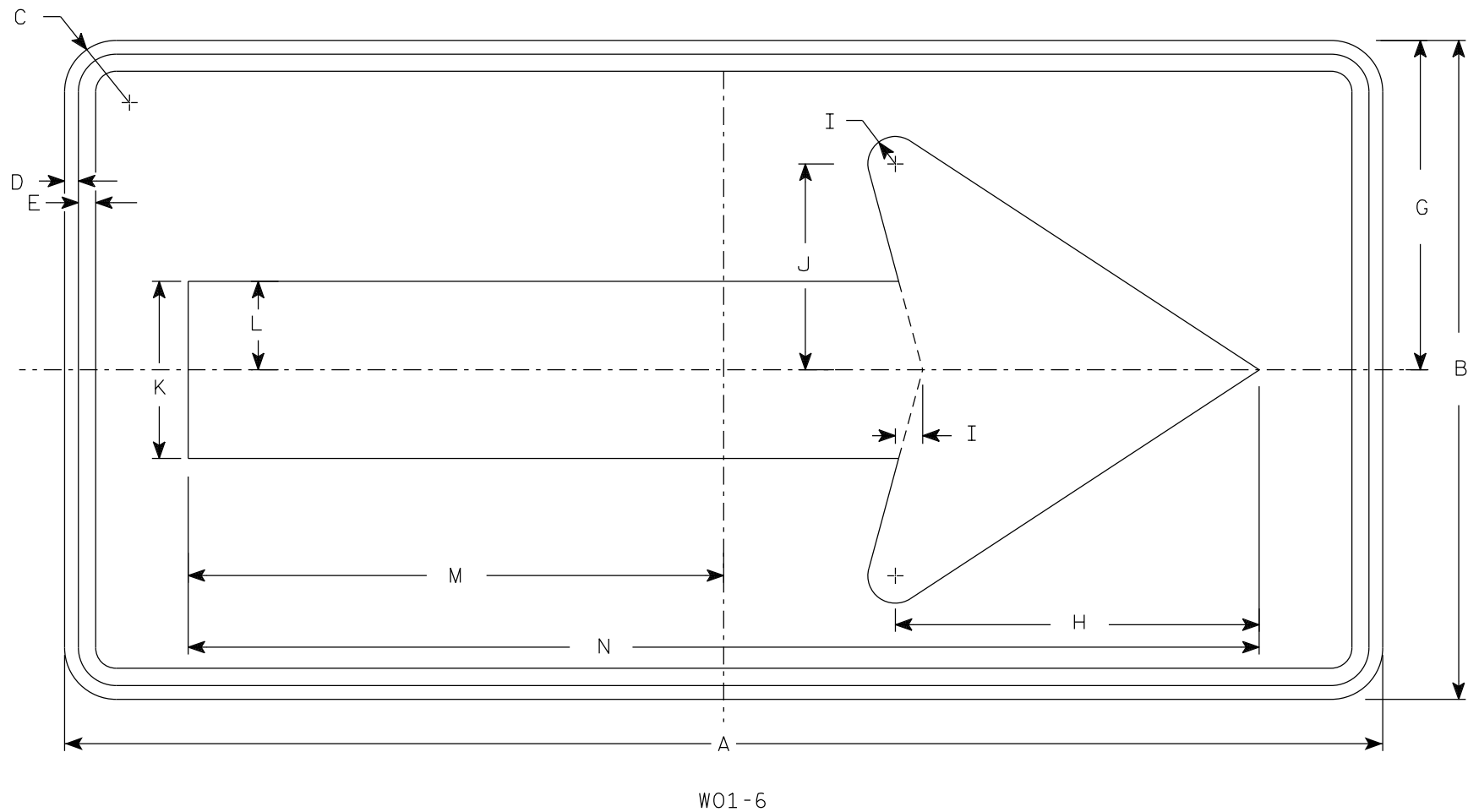
STANDARD SIGN
W01-4

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

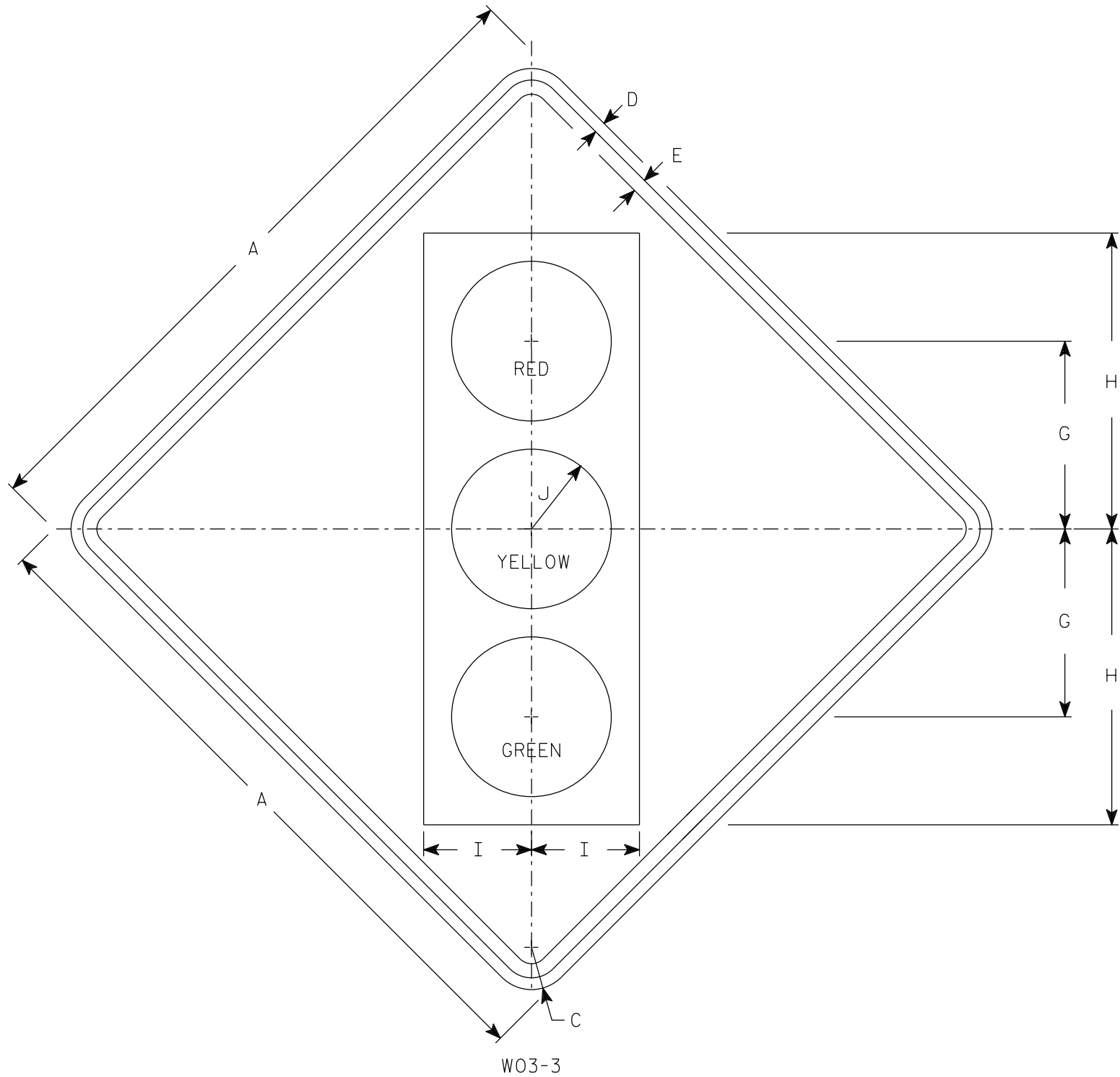
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4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



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - See Note 4
- 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. Symbol and border are non-reflective black.
 - Top circle - Type H Reflectorized Red
 - Center circle - Same as background
 - Bottom circle - Type H Reflectorized Green

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		10	15 3/4	5 3/4	4 1/4																	9.0
2S	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0
2M	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0
3	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0
4	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		3	3/4	1		12 1/2	20	7 1/2	5																	16.0

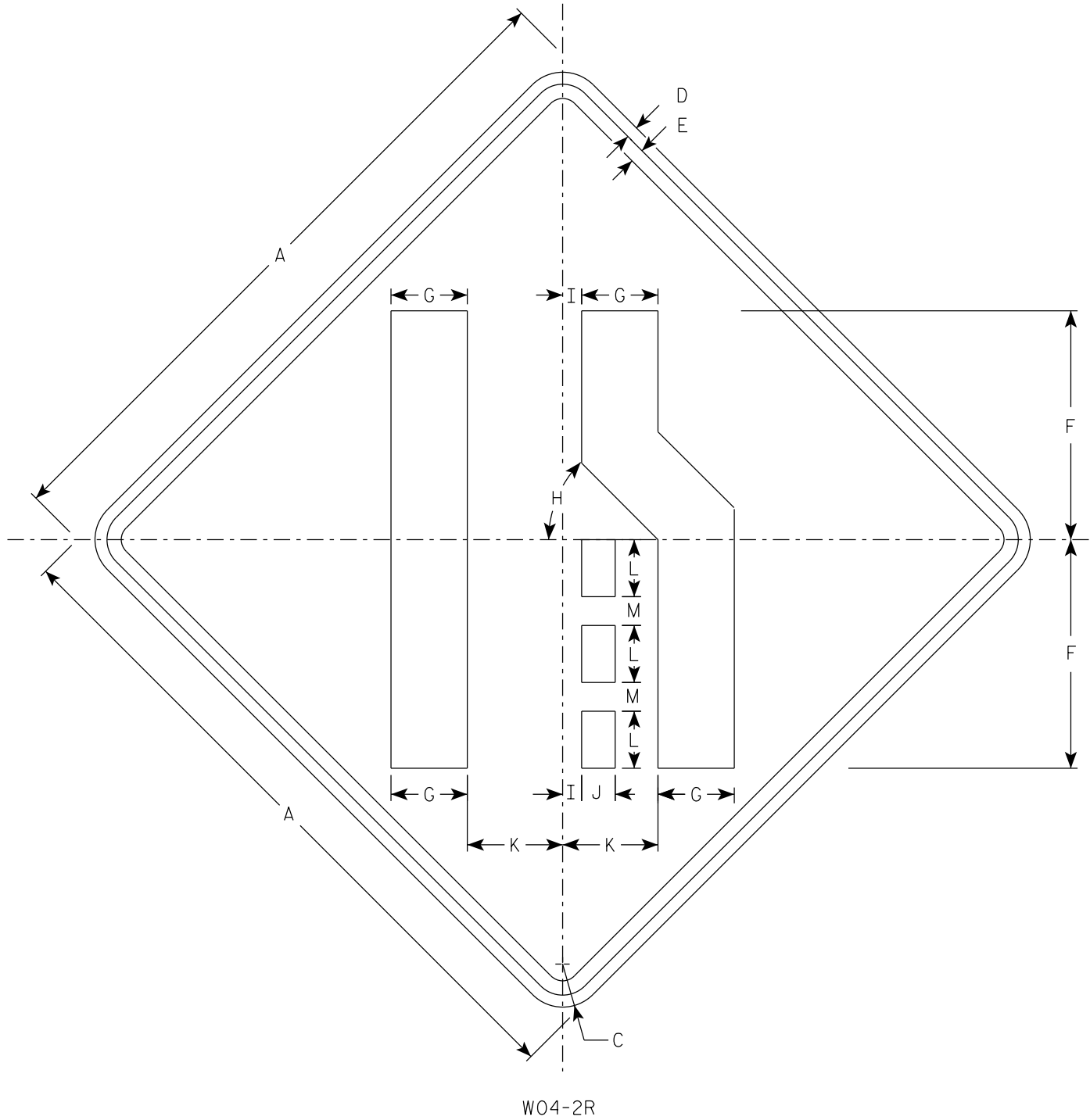
STANDARD SIGN
W03-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 1/24/2024 PLATE NO. W03-3.2

7

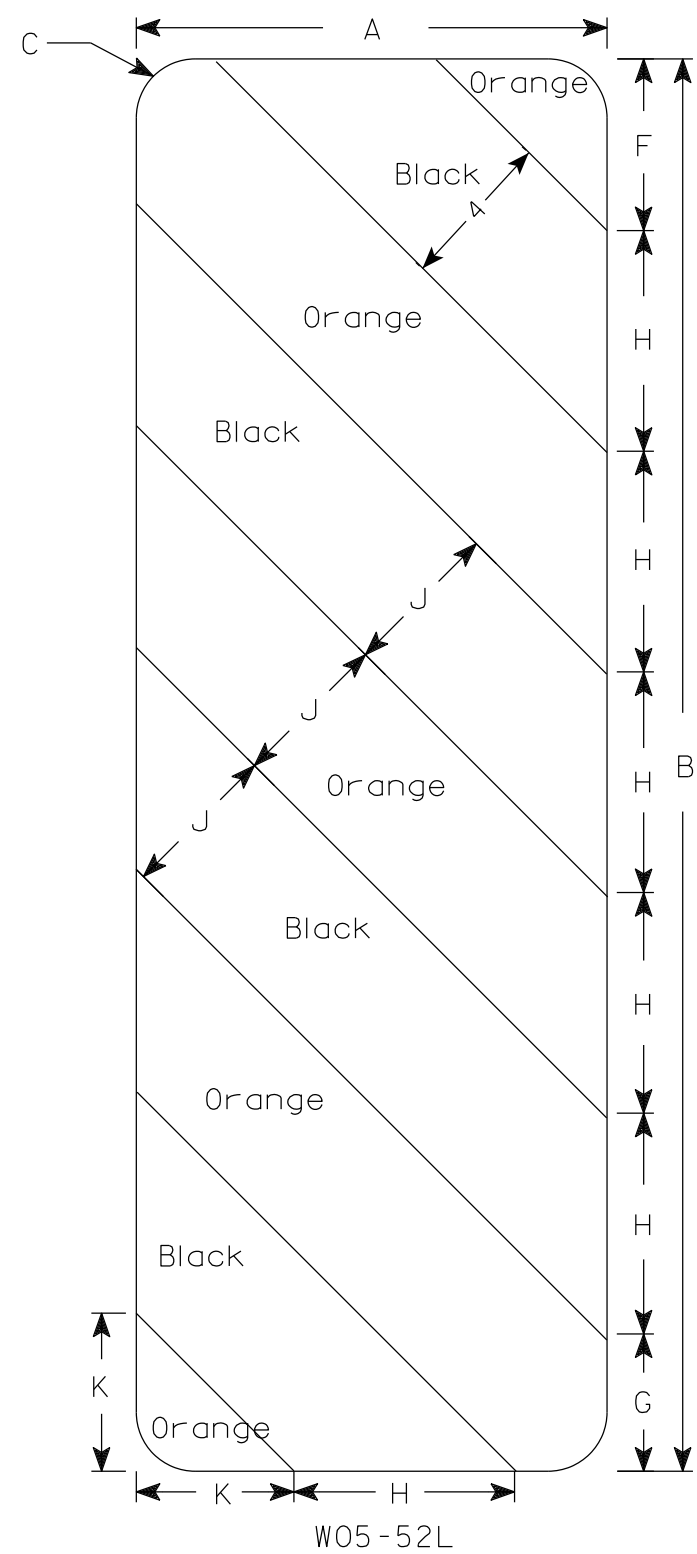


NOTES

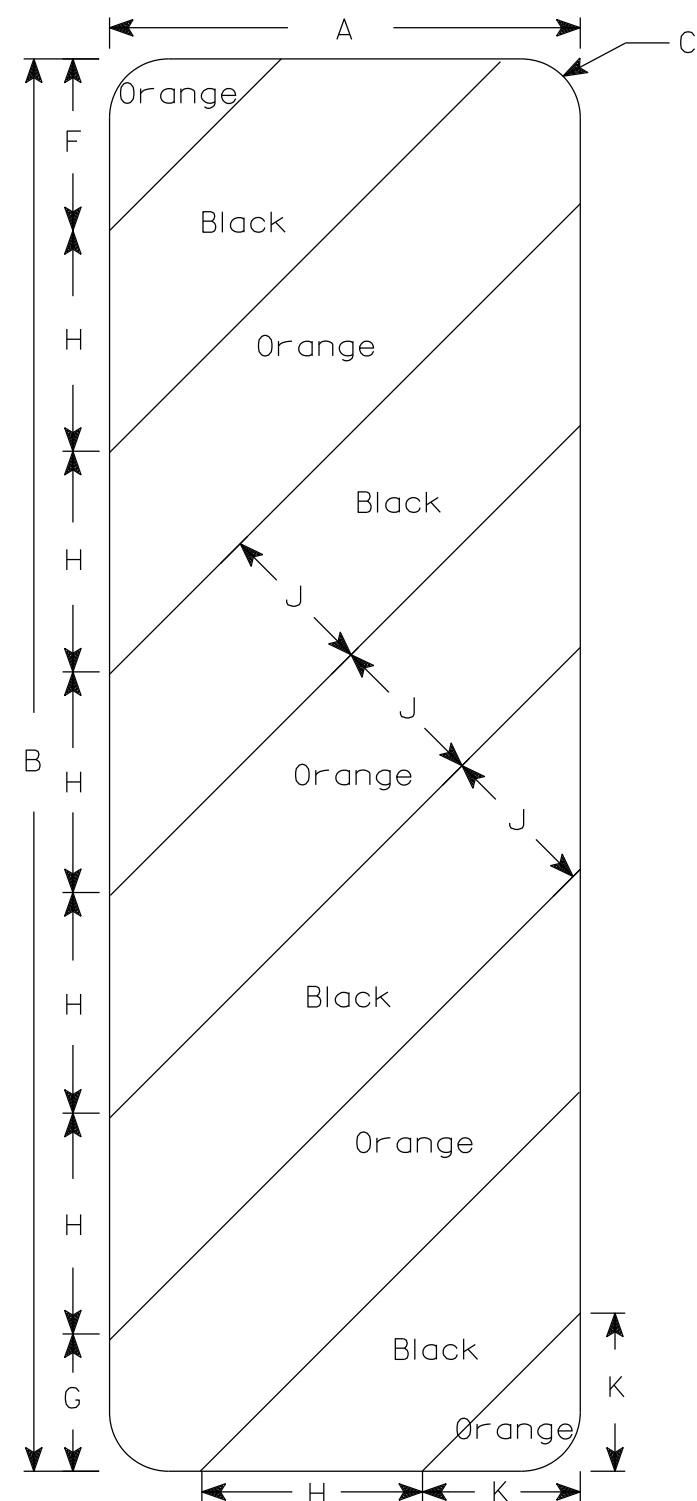
- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. W04-2L is the same as W04-2R 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



W05-52L



W05-52R

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	Area 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:

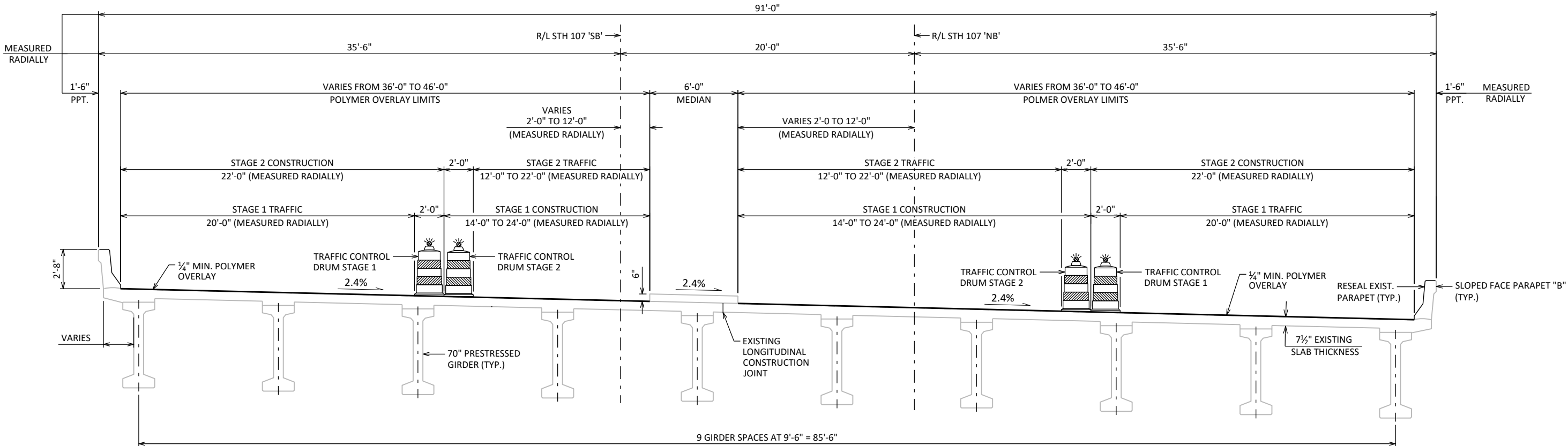
HWY:

COUNTY:

SHEET NO:

E





TYPICAL SECTION
(LOOKING NORTH)

GENERAL NOTES:

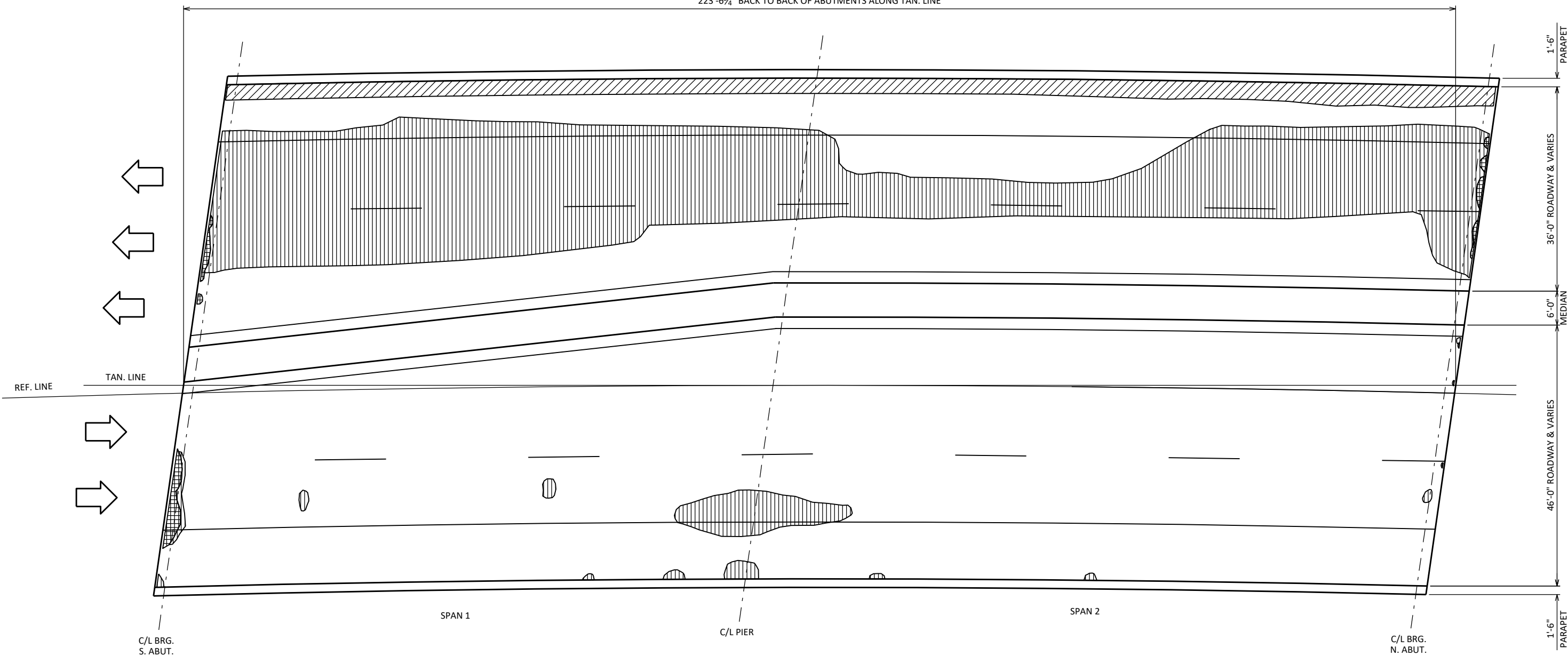
- DRAWINGS SHALL NOT BE SCALED.
- DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
- ALL CONCRETE REMOVAL SHALL BE DEFINED BY A SAW CUT.
- PREPARATION DECKS TYPE 1 AND PREPARATION DECKS TYPE 2 AREAS ARE AS DETERMINED BY THE ENGINEER. DECK PREPARATION SHALL BE FILLED WITH "RAPID SET DECK REPAIR". "RAPID SET DECK REPAIR" SHALL NOT BE USED FOR ANY FULL-DEPTH DECK REPAIR AREAS.
- PREPARATION DECKS TYPE 2 IS AN UNDISTRIBUTED AMOUNT.
- SHOT BLASTING, DECK SURFACE PREPARATIONS, AND TRANSITIONAL AREAS ARE INCLUDED IN THE BID ITEM "POLYMER OVERLAY".
- THE EXISTING POLYMER OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER BID ITEM "REMOVING POLYMER OVERLAY B-37-0116"
- TRAFFIC TO BE MAINTAINED DURING CONSTRUCTION.
- ASBESTOS-CONTAINING MATERIAL (ACM) IS PRESENT IN B-37-0116. CATEGORY II NON-FRIABLE ACM WAS DETECTED IN THE GRAY CAULK MATERIAL ON THE PARAPET WALL AND ABUTMENT JOINTS. THIS MATERIAL IS TO BE REMOVED, AS NEEDED, AND PAID FOR UNDER BID ITEM "ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-37-0116". PLACEMENT OF NEW SEALANT TO BE INCLUDED IN BID ITEM "POLYMER OVERLAY".
- "PIGMENTED SURFACE SEALER RESEAL" SHALL BE APPLIED TO THE TOP AND INSIDE SURFACES OF THE EXISTING PARAPETS.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0211.S.01	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-37-0116	EACH	1
502.3205	PIGMENTED SURFACE SEALER RESEAL	SY	215
509.0301	PREPARATION DECKS TYPE 1	SY	22
509.0302	PREPARATION DECKS TYPE 2	SY	9
509.0310.S.01	SAWING PAVEMENT DECK PREPARATION AREAS B-37-0116	LF	220
509.5100.S.01	POLYMER OVERLAY B-37-0116	SY	2,030
509.9015.S.01	REMOVING POLYMER OVERLAY B-37-0116	SY	2,030
SPV.0035.01	RAPID SET DECK REPAIR	CY	2

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-116			
DRAWN BY		DCH	PLANS CK'D JRD
CROSS SECTION & QUANTITIES		SHEET 2 OF 3	

223'-6¼" BACK TO BACK OF ABUTMENTS ALONG TAN. LINE

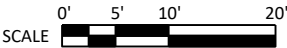


PLAN

INFRARED THERMOGRAPHIC SURVEY RESULTS

STRUCTURE NO. B-37-116

FIELD OBSERVATIONS SUMMARY		ROADWAY		MEDIAN		LEGEND	
ITEM	UNIT	QUANT.	%	QUANT.	%		
TOTAL AREA	ft²	18319		1353		DELAMINATION	
SHADE/DEBRIS	ft²	657		0		SPALL	
DELAMINATION	ft²	0	0	0	0	DEBONDED/MISSING TPO	
SPALL	ft²	0	0	0	0	ASPHALT PATCH	
DEBONDED/MISSING TPO	ft²	3914	22.2	N/A	N/A	PCC PATCH	
ASPHALT PATCH	ft²	45	0.3	0	0	SHADE/DEBRIS	
PCC PATCH	ft²	0	0	0	0		



SURFACE TYPE: THIN POLYMER OVERLAY
INFRARED INSPECTION DATE: 6/16/23, 4:55 PM

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-116			
DRAWN BY		DCH	PLANS CK'D JRD
INFRARED INSPECTION RESULTS		SHEET 3 OF 3	

SCALE =

LIVE LOAD:

INVENTORY RATING: HS21
OPERATING RATING: HS49
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY:
RAPID SET DECK REPAIR ————— $f'_c = 3,000$ PSI (AT 3 HOURS)

LIST OF DRAWINGS:

STH 97:

ADT (2025) = 3,570
ADT (2045) = 3,840
R.D.S. = 60 MPH

1. GENERAL PLAN, CROSS SECTION & QUANTITIES
2. INFRARED INSPECTION RESULTS

GENERAL NOTES:

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS AND WERE CONVERTED FROM METRIC.

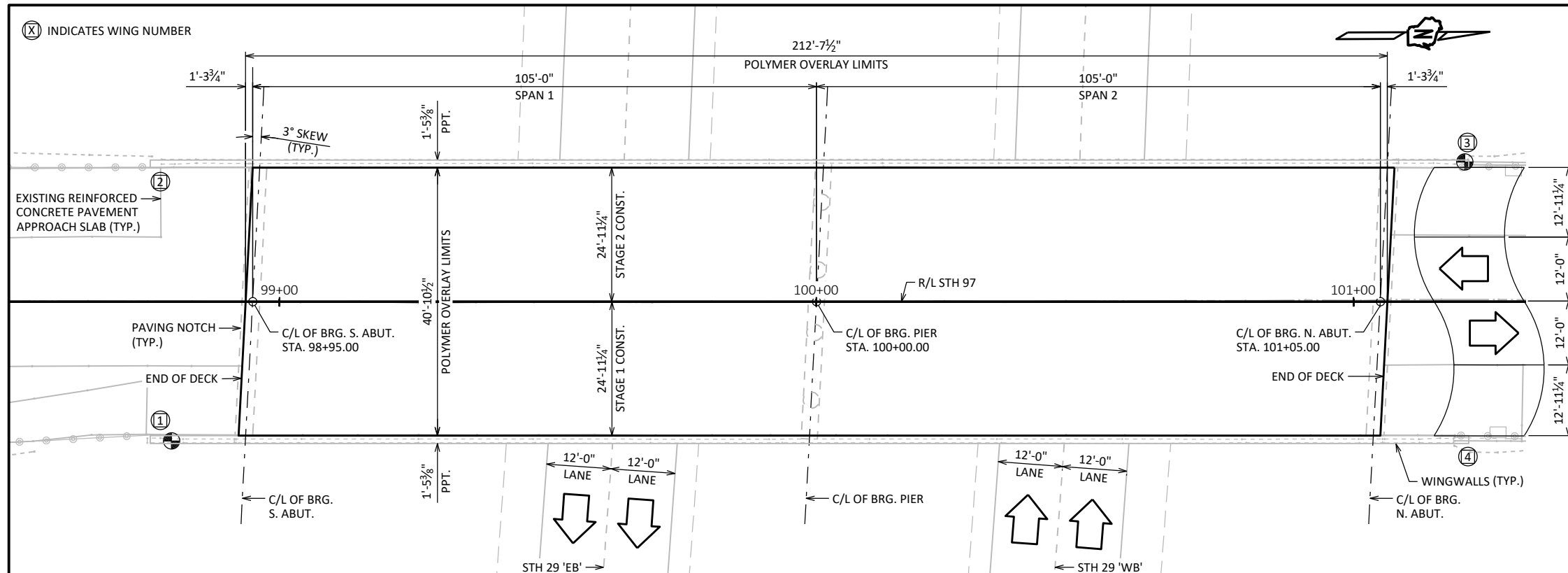
SHOT BLASTING, DECK SURFACE PREPARATIONS, AND TRANSITIONAL AREAS ARE INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

TRAFFIC TO BE MAINTAINED DURING CONSTRUCTION.

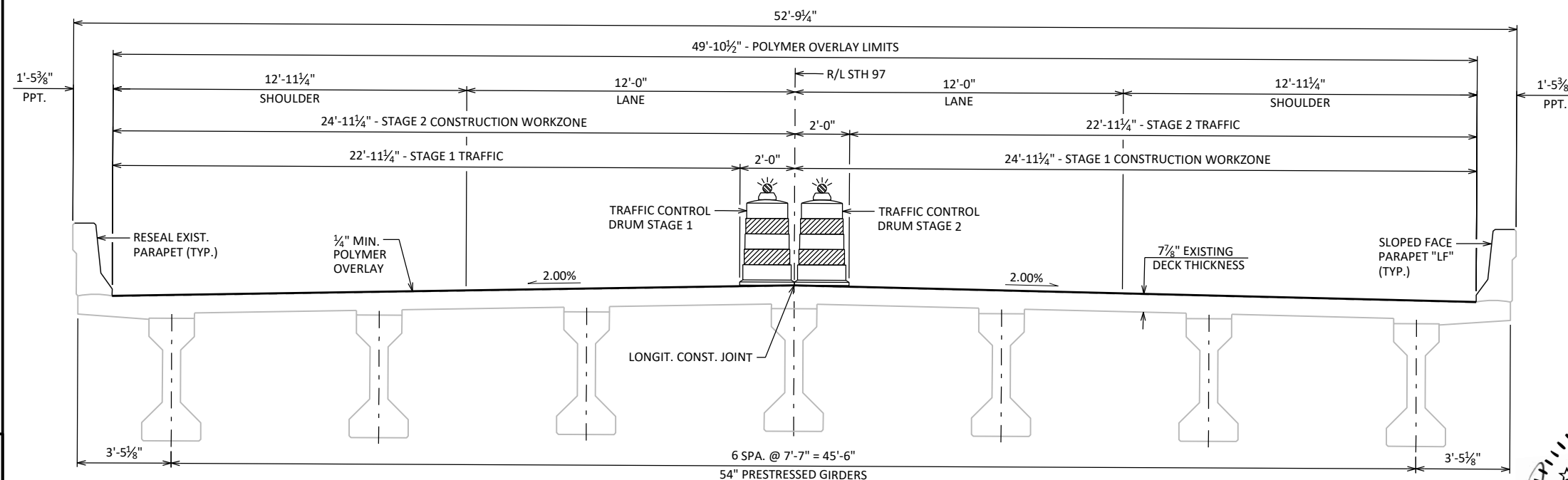
PREPARATION DECKS TYPE 1 IS DETERMINED BY THE ENGINEER. DECK PREPARATION SHALL BE FILLED WITH "RAPID SET DECK REPAIR". "RAPID SET DECK REPAIR" SHALL NOT BE USED FOR ANY FULL-DEPTH DECK REPAIR AREAS.

THE EXISTING POLYMER OVERLAY SHALL BE REMOVED FROM THE BRIDGE DECK UNDER
BID ITEM "REMOVING POLYMER OVERLAY B-37-0287".

"PIGMENTED SURFACE SEALER RESEAL" SHALL BE APPLIED TO THE TOP AND INSIDE SURFACES OF THE EXISTING PARAPETS.

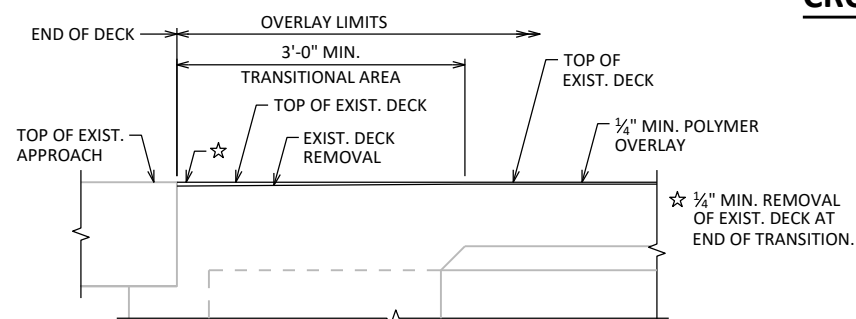


PLAN



CROSS SECTION THRU. BRIDGE

(LOOKING NORTH)

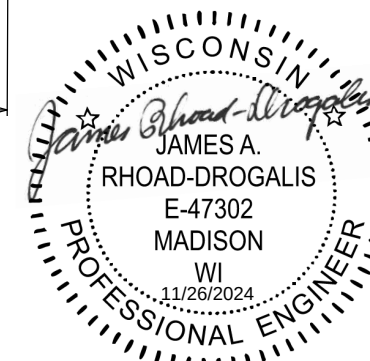


SECTION THRU ABUTMENT TRANSITIONAL AREA ON DECK

(REMOVAL AND OVERLAY THICKNESS NOT TO SCALE)
(TYP. BOTH SIDES)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
502.3205	PIGMENTED SURFACE SEALER RESEAL	SY	205
509.0301	PREPARATION DECKS TYPE 1	SY	5
509.0310.S.02	SAWING PAVEMENT DECK PREPARATION AREAS B-37-0287	LF	50
509.5100.S.02	POLYMER OVERLAY B-37-0287	SY	1,180
509.9015.S.02	REMOVING POLYMER OVERLAY B-37-0287	SY	1,180
SPV.0035.01	RAPID SET DECK REPAIR	CY	1



STRUCTURE DESIGN CONTACTS:

BUREAU OF STRUCTURES:
AARON BONK (608) 261-0261

CONSULTANT:
JAMES RHOAD-DROGALIS (608) 828-8166

NO.	DATE	REVISION	B

AECOM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED  SDR 02/04/25
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-37-287

STH 97 OVER STH 29

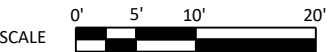
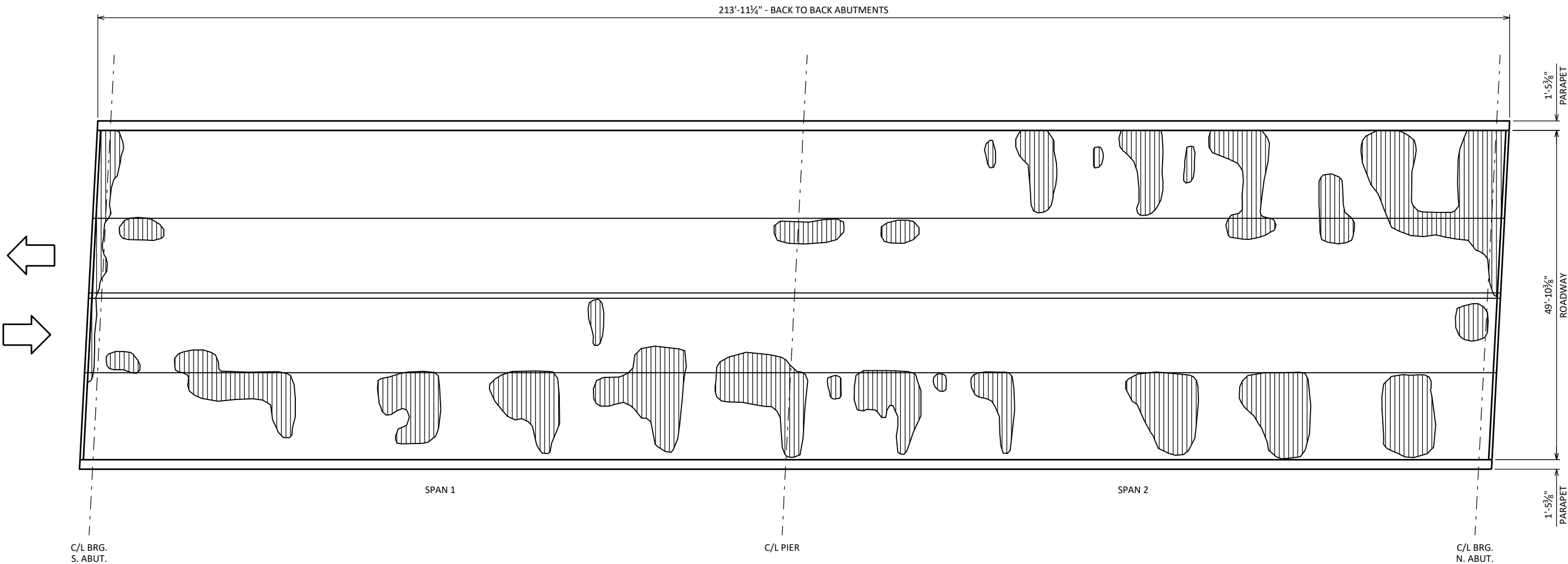
COUNTY	TOWN/CITY/VILLAGE
MARATHON	JOHNSON

DESIGN SPEC.		REHABILITATION N/A	
DESIGNED BY	DCH	DESIGNED BY	JRD
CK'D		CK'D	
DRAWN BY	DCH	DRAWN BY	JRD
CK'D		CK'D	

GENERAL PLAN, CROSS SECTION & QUANTITIES	SHEET 1 OF 2

I.D.

DATE: NOV. 2024



INFRARED THERMOGRAPHIC SURVEY RESULTS

SURFACE TYPE: THIN POLYMER OVERLAY

INFRARED INSPECTION DATE: 6/16/23, 3:10 PM

FIELD OBSERVATIONS SUMMARY		STRUCTURE NO. B-37-287		LEGEND	
ITEM	UNIT	QUANT.	%	DELAMINATION	
TOTAL AREA	ft ²	10674		SPALL	
SHADE/DEBRIS	ft ²	0		DEBONDED/MISSING TPO	
DELAMINATION	ft ²	0	0	ASPHALT PATCH	
SPALL	ft ²	0	0	PCC PATCH	
DEBONDED/MISSING TPO	ft ²	1609	15.1	SHADE/DEBRIS	
ASPHALT PATCH	ft ²	0	0		
PCC PATCH	ft ²	0	0		

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-287			
DRAWN BY DCH		PLANS CK'D JRD	
INFRARED INSPECTION RESULTS		SHEET 2 OF 2	

SCALE =

SE QUADRANT

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
		CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
				NOTE 1	NOTE 3	NOTE 1		NOTE 8
102+91.00	0.00	14.07	0.10	0	0	0	0	0
103+00.00	9.00	15.14	0.01	5	0	5	0	5
103+25.00	25.00	17.62	0.00	15	0	20	0	20
103+50.00	25.00	27.71	0.00	21	0	41	0	41
103+59.88	9.88	33.35	0.18	11	0	52	0	52
103+85.01	25.13	34.57	2.12	32	1	84	1	83
104+00.00	14.99	37.63	0.76	20	1	104	3	102
104+10.19	10.19	37.67	0.69	14	0	118	3	116
104+50.00	39.81	39.73	0.29	57	1	175	4	171
104+65.65	15.65	7.18	0.00	14	0	189	4	185

NE QUADRANT

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
		CUT	FILL	CUT	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
				NOTE 1	NOTE 3	NOTE 1		NOTE 8
107+21.78	0.00	37.75	7.92	0	0	0	0	0
107+50.00	28.22	41.87	0.00	42	4	42	5	37
107+64.41	14.41	40.22	0.00	22	0	64	5	59
107+91.80	27.39	41.02	0.00	41	0	105	5	100
108+00.00	8.20	41.85	0.00	13	0	118	5	113
108+14.77	14.77	38.06	0.69	22	0	140	5	135
108+50.00	35.23	23.37	0.12	40	1	180	6	174
108+75.00	25.00	16.86	0.00	19	0	199	6	193
109+00.00	25.00	20.87	0.00	17	0	216	6	210
109+13.28	13.28	0.00	0.00	5	0	221	6	215

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - EXPANDED MARSH BACKFILL	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
5 - EXPANDED EBS	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
6 - REDUCED MARSH IN FILL	REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL
7 - REDUCED EBS IN FILL	REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL
8 - MASS ORDINATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

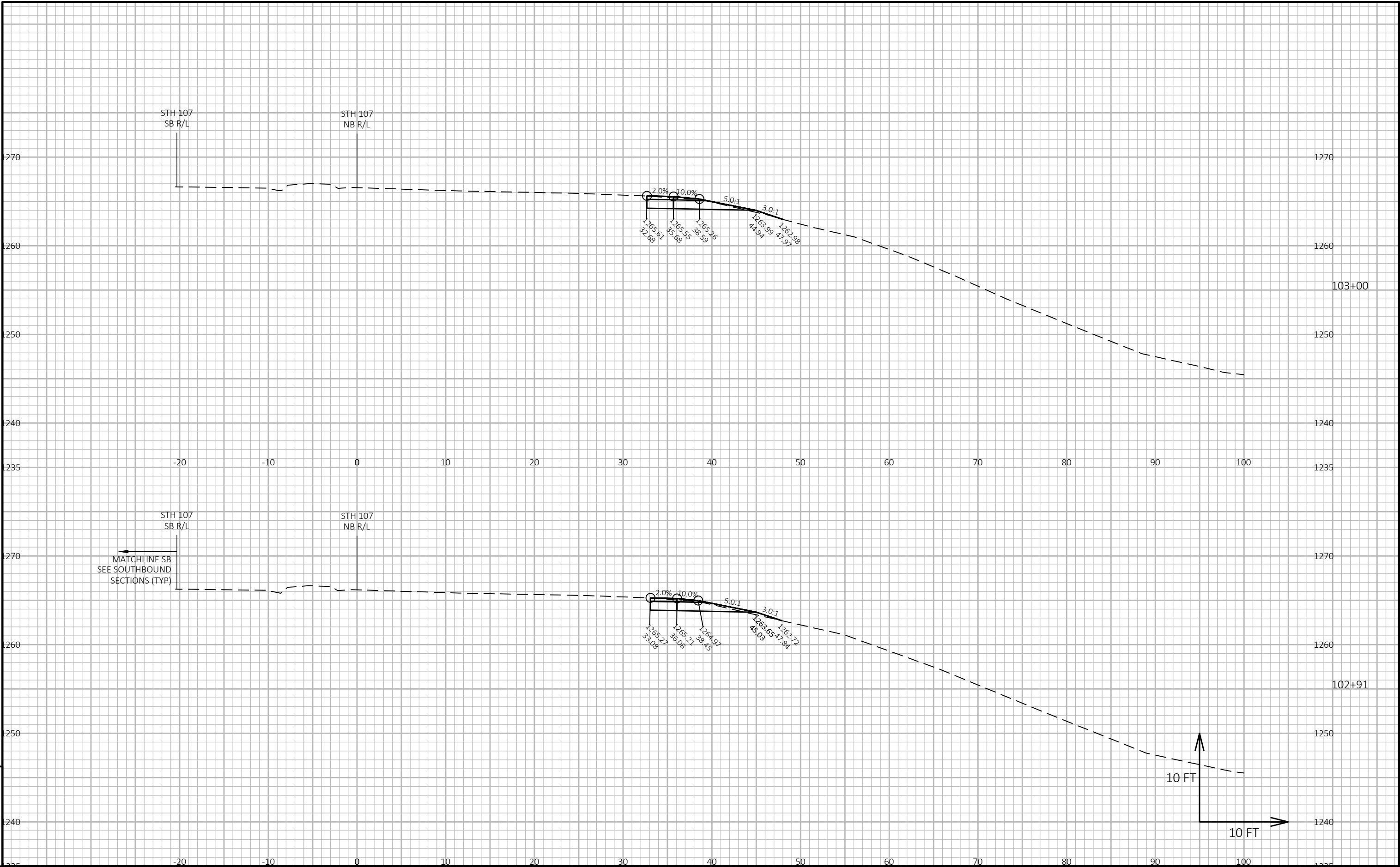
SW QUADRANT

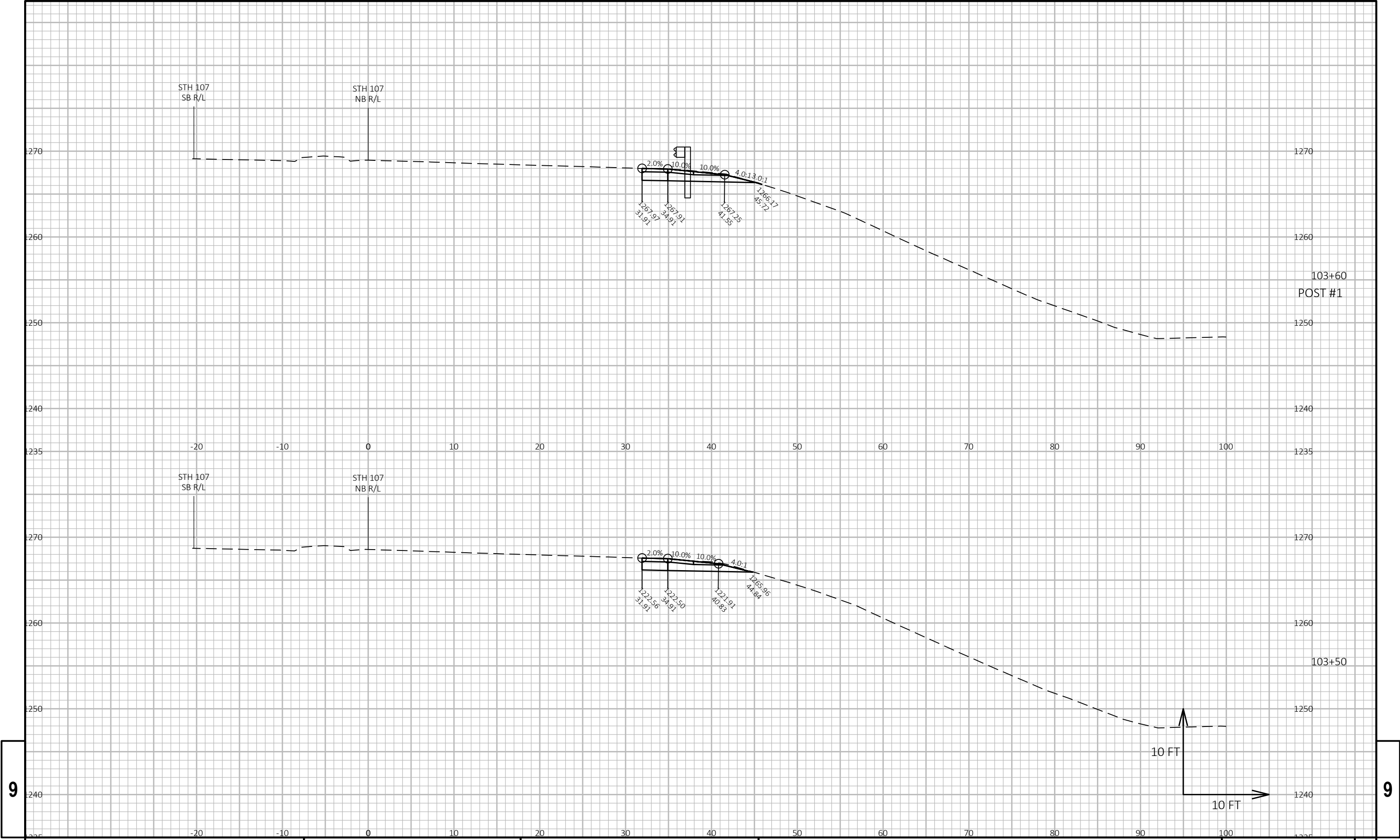
STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
		CUT	FILL	CUT	FILL	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE NOTE 8
102+65.41	0.00	13.09	0.00	0	0	0	0	0
103+00.00	34.59	12.70	0.12	17	0	17	0	17
103+50.00	50.00	25.36	0.00	35	0	52	0	52
103+83.61	33.61	42.50	0.00	42	0	94	0	94
104+00.00	16.39	43.14	0.53	26	0	120	0	120
104+08.40	8.40	42.45	1.06	13	0	133	0	133
104+33.21	24.81	41.51	0.02	39	0	172	0	172
104+50.00	16.79	40.72	0.47	26	0	198	0	198
104+75.00	25.00	39.22	20.09	37	10	235	13	223

NW QUADRANT

STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
		CUT	FILL	CUT	FILL	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE NOTE 8
107+38.22	0.00	7.00	0.00	0	0	0	0	0
107+50.00	11.78	43.31	1.16	11	0	11	0	11
107+92.37	42.37	42.53	0.00	67	1	78	1	77
108+00.00	7.63	41.24	0.26	12	0	90	1	89
108+17.25	17.25	38.02	0.11	25	0	115	1	114
108+42.00	24.75	25.97	1.73	29	1	144	3	142
108+50.00	8.00	16.68	1.96	6	1	150	4	146
108+87.43	37.43	15.69	2.45	22	3	172	8	165

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - EXPANDED MARSH BACKFILL	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
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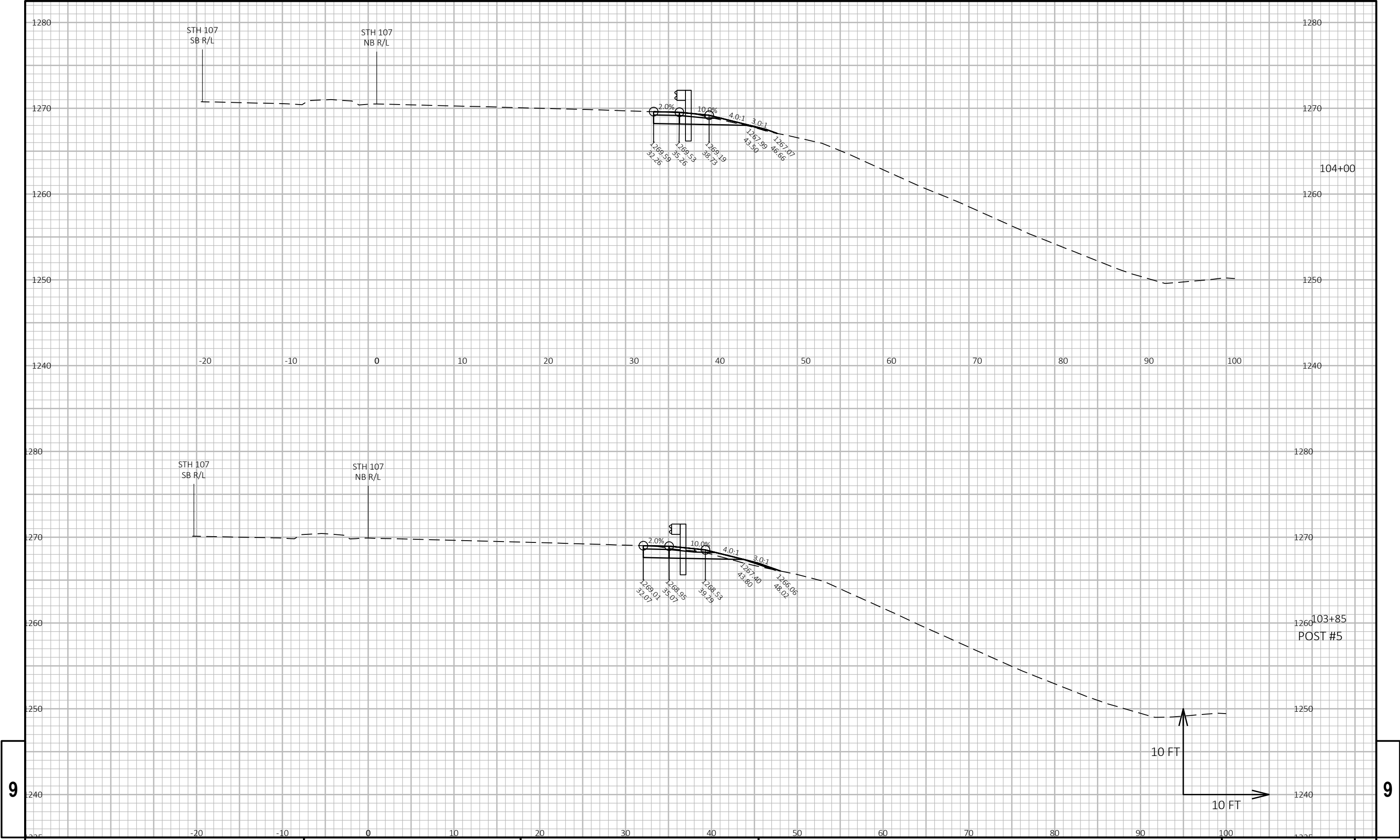




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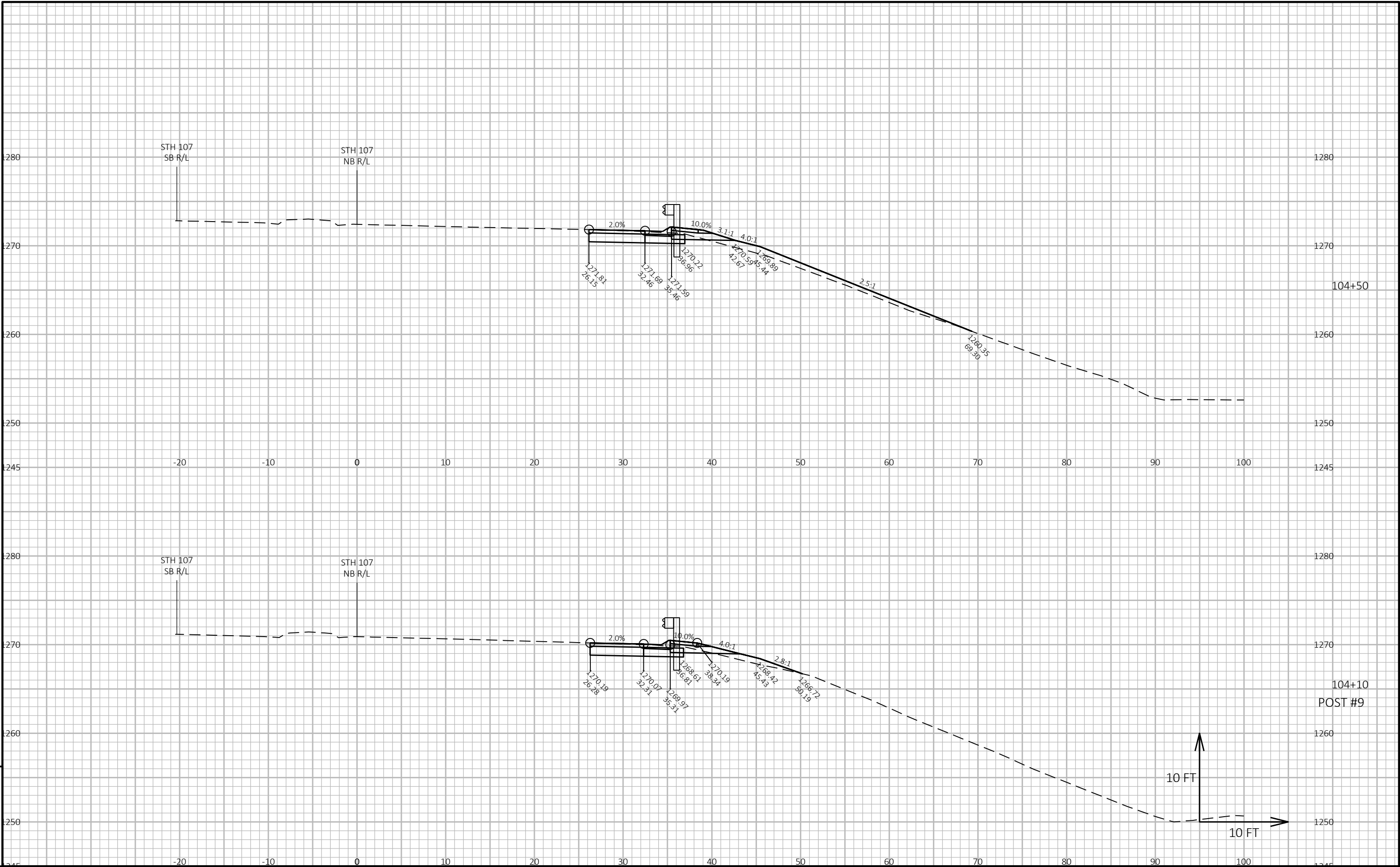
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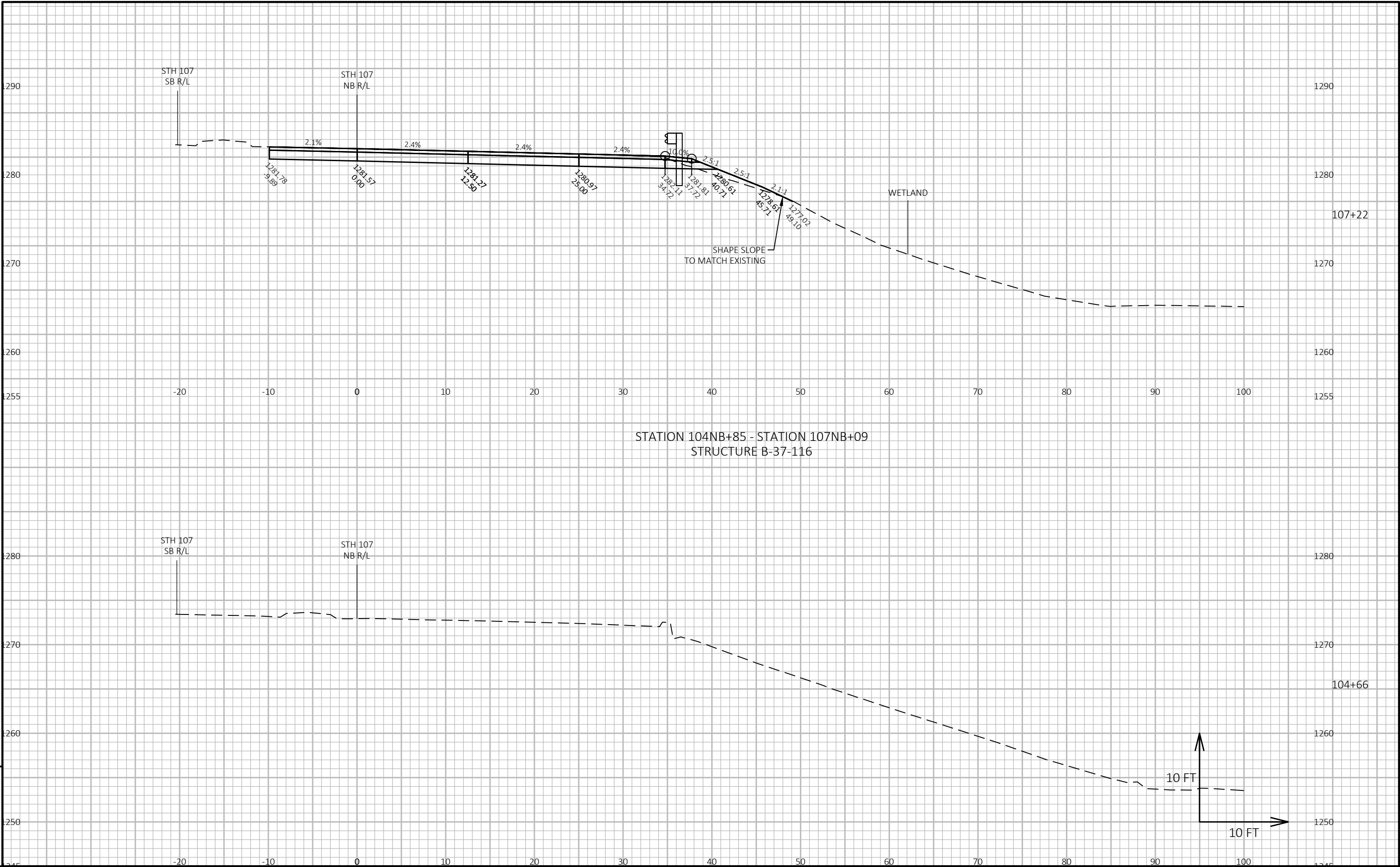
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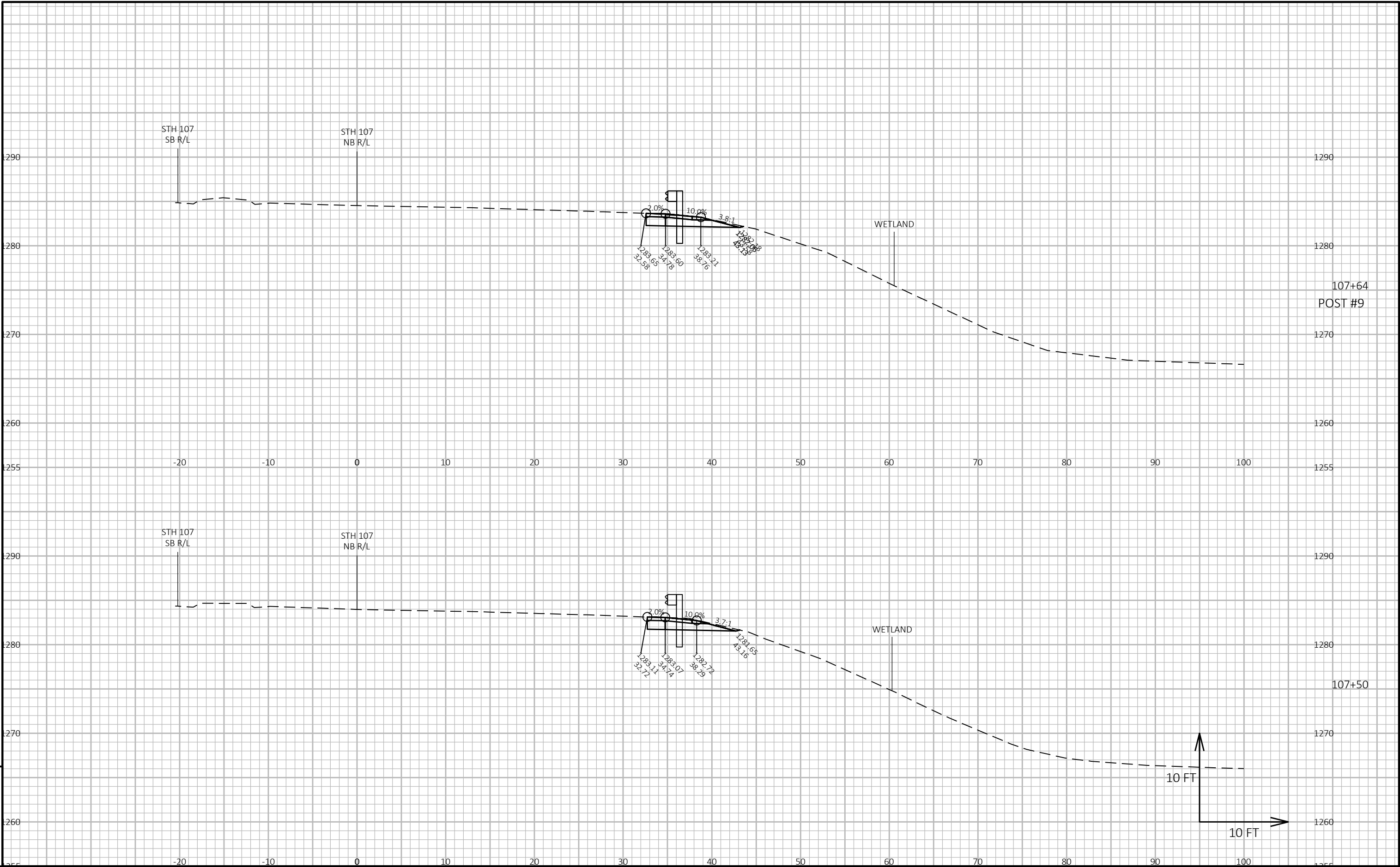


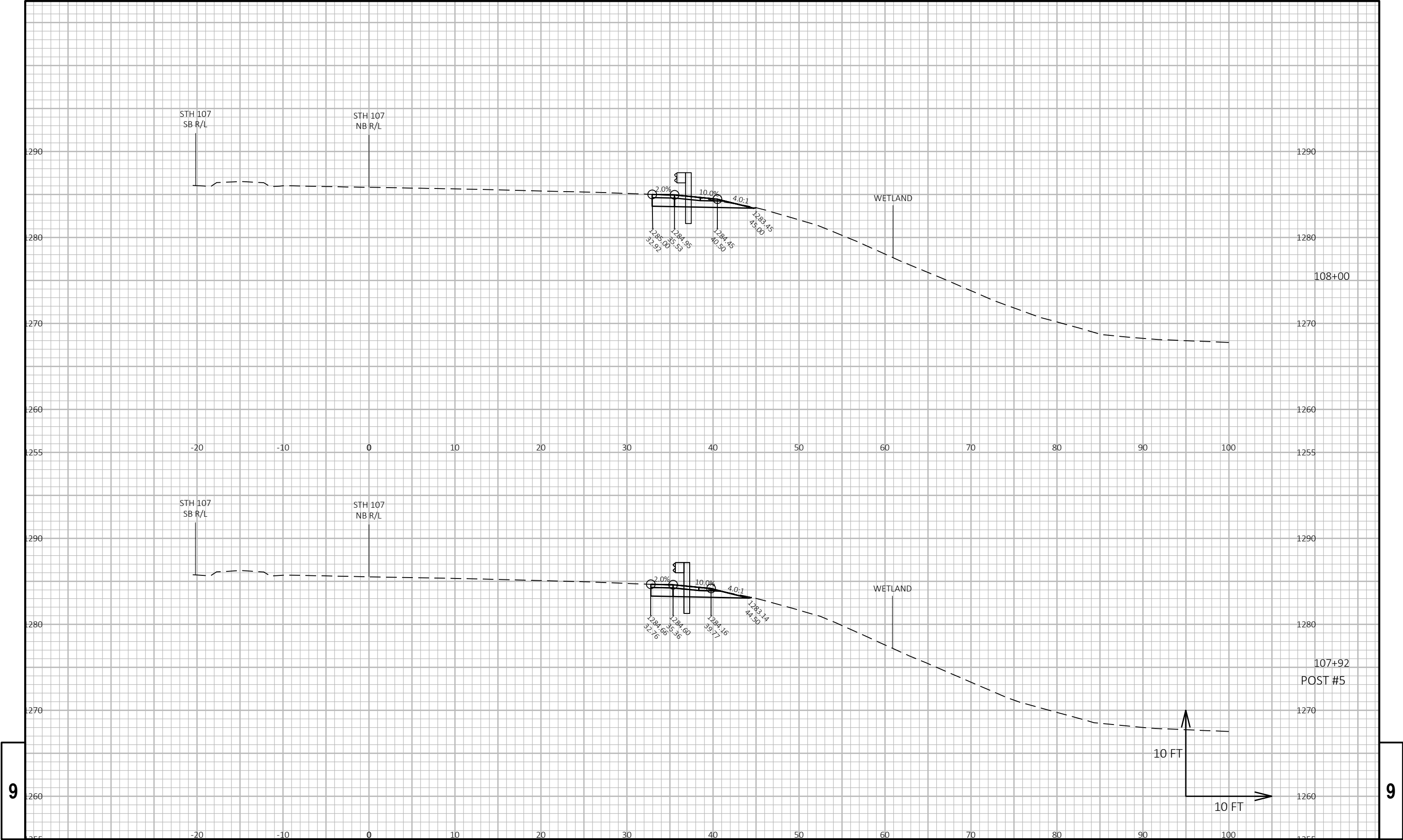
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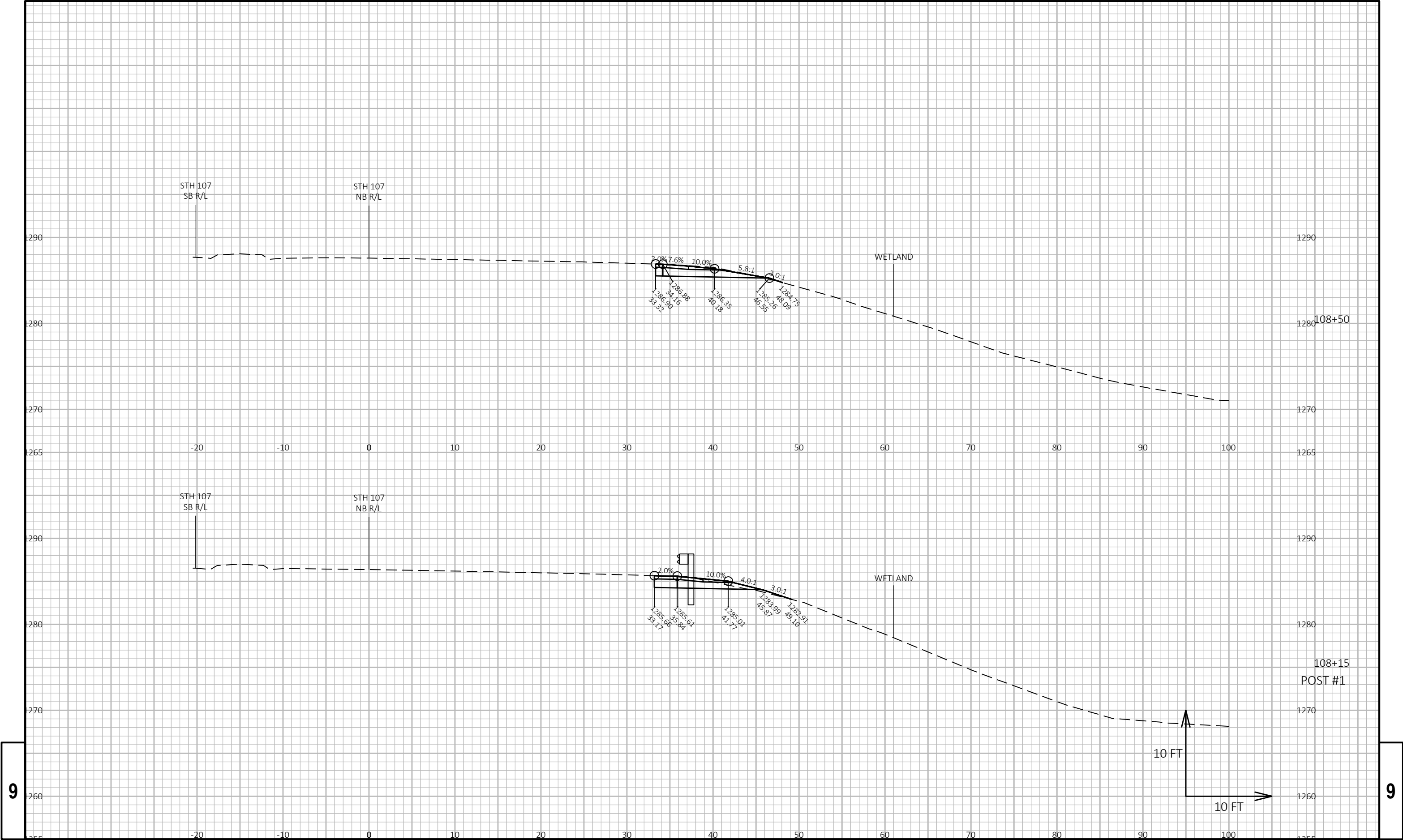




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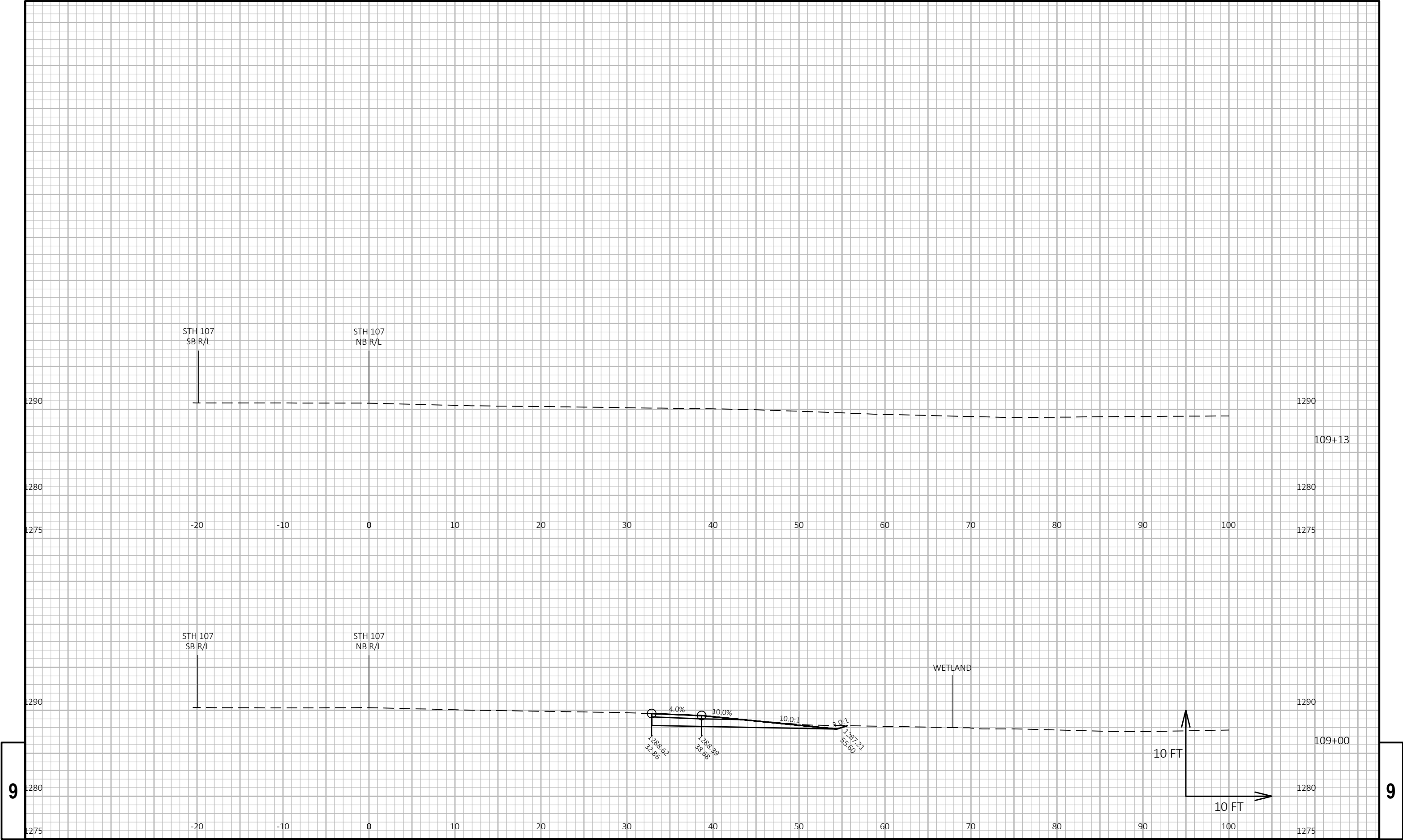
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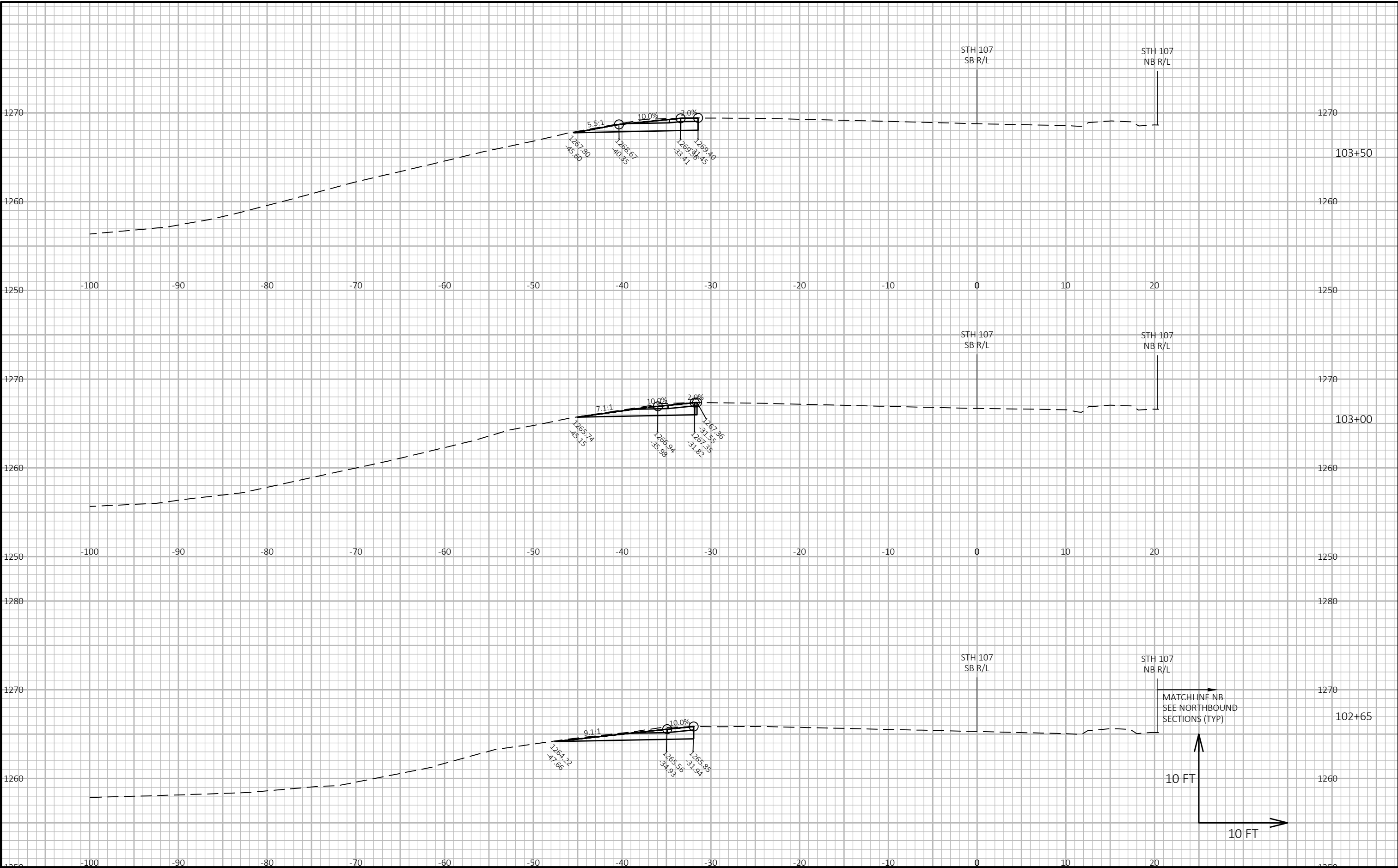
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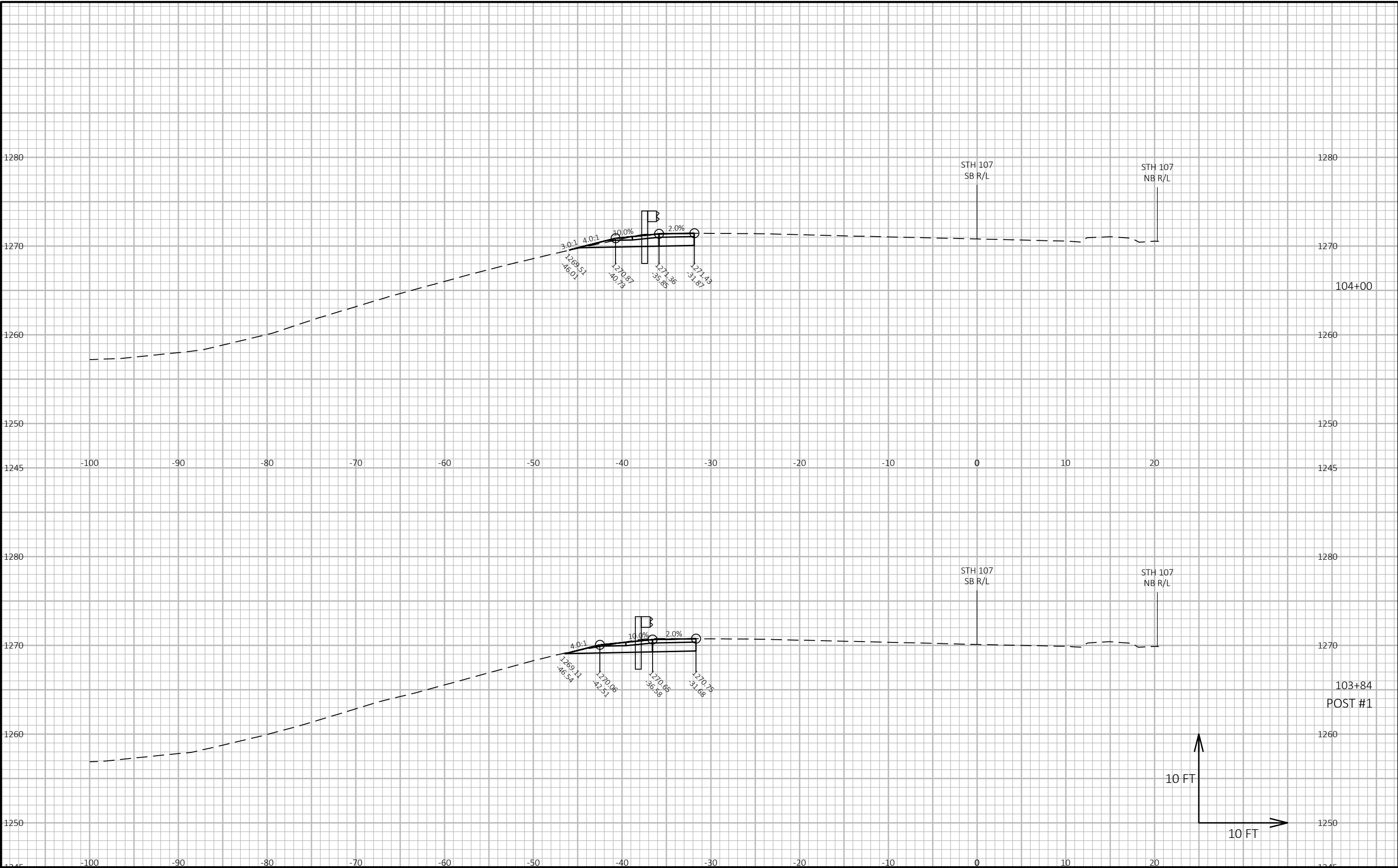


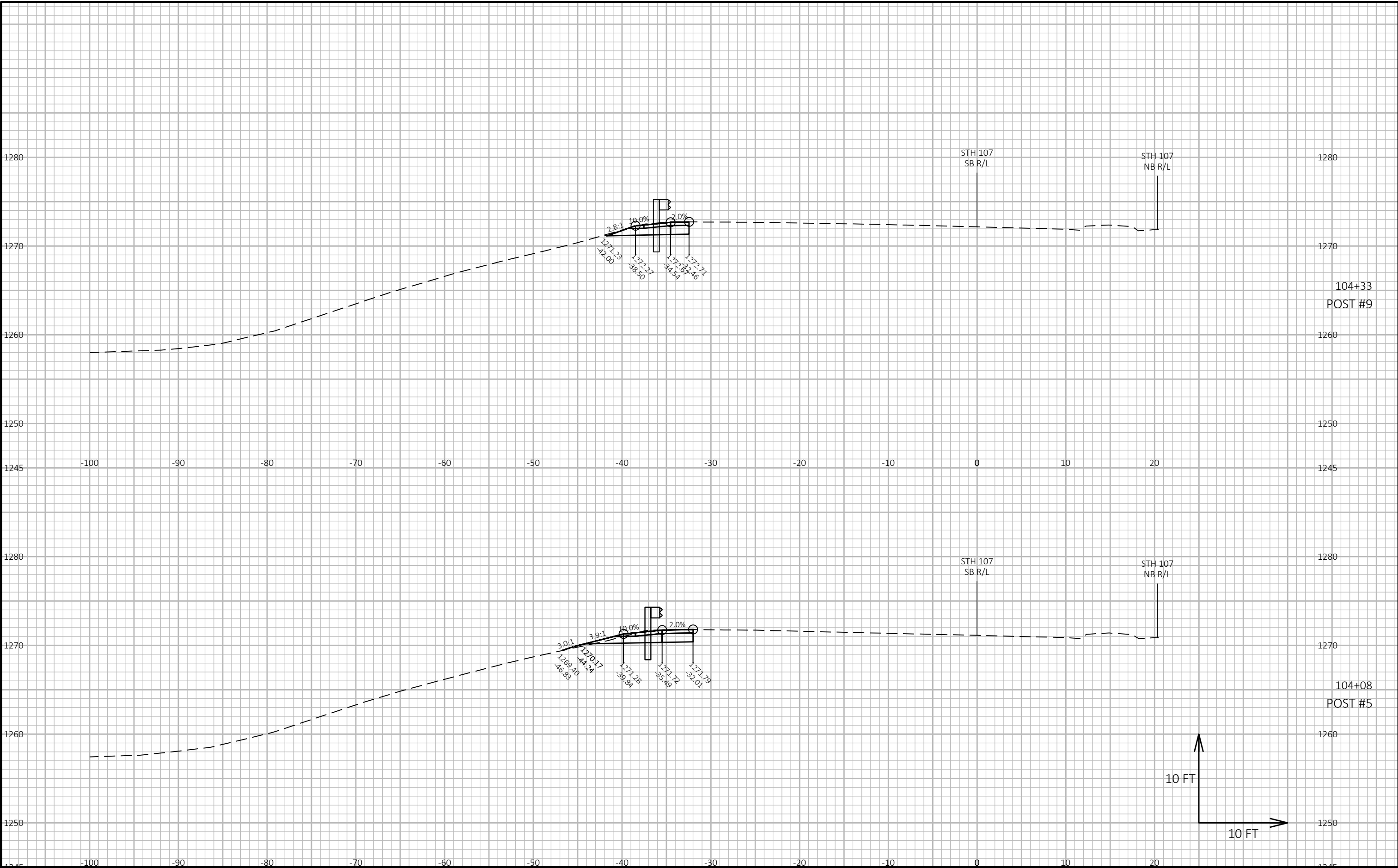
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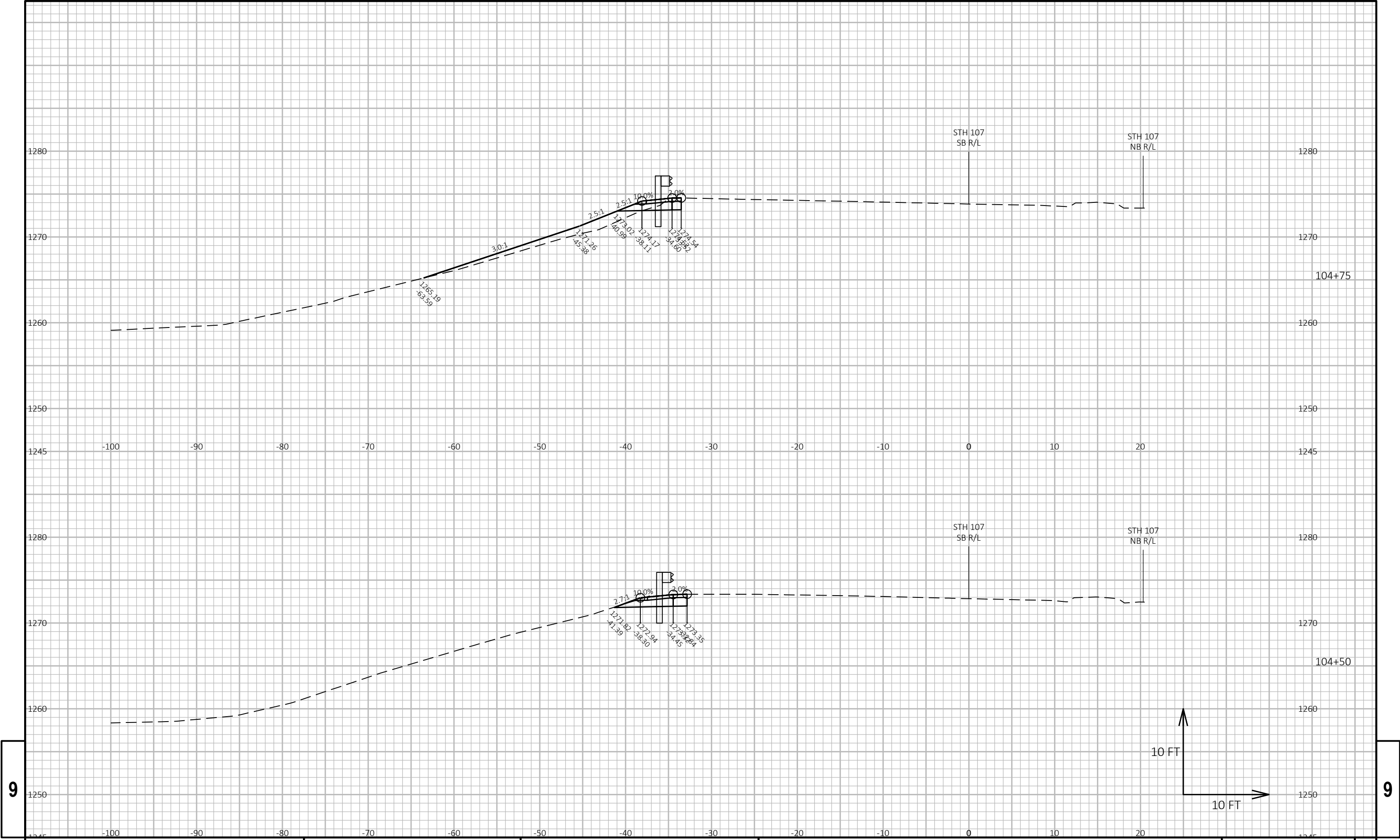




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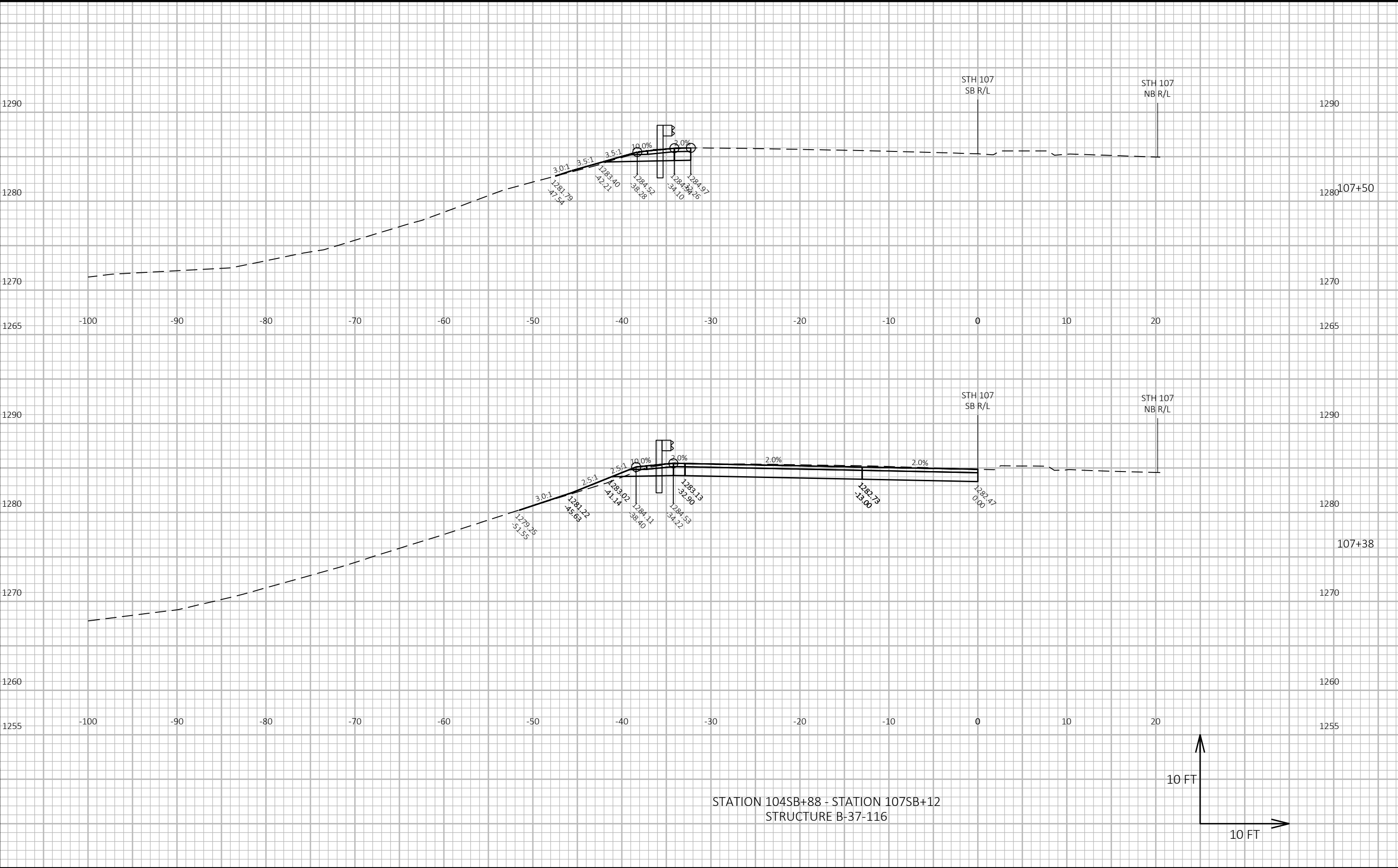
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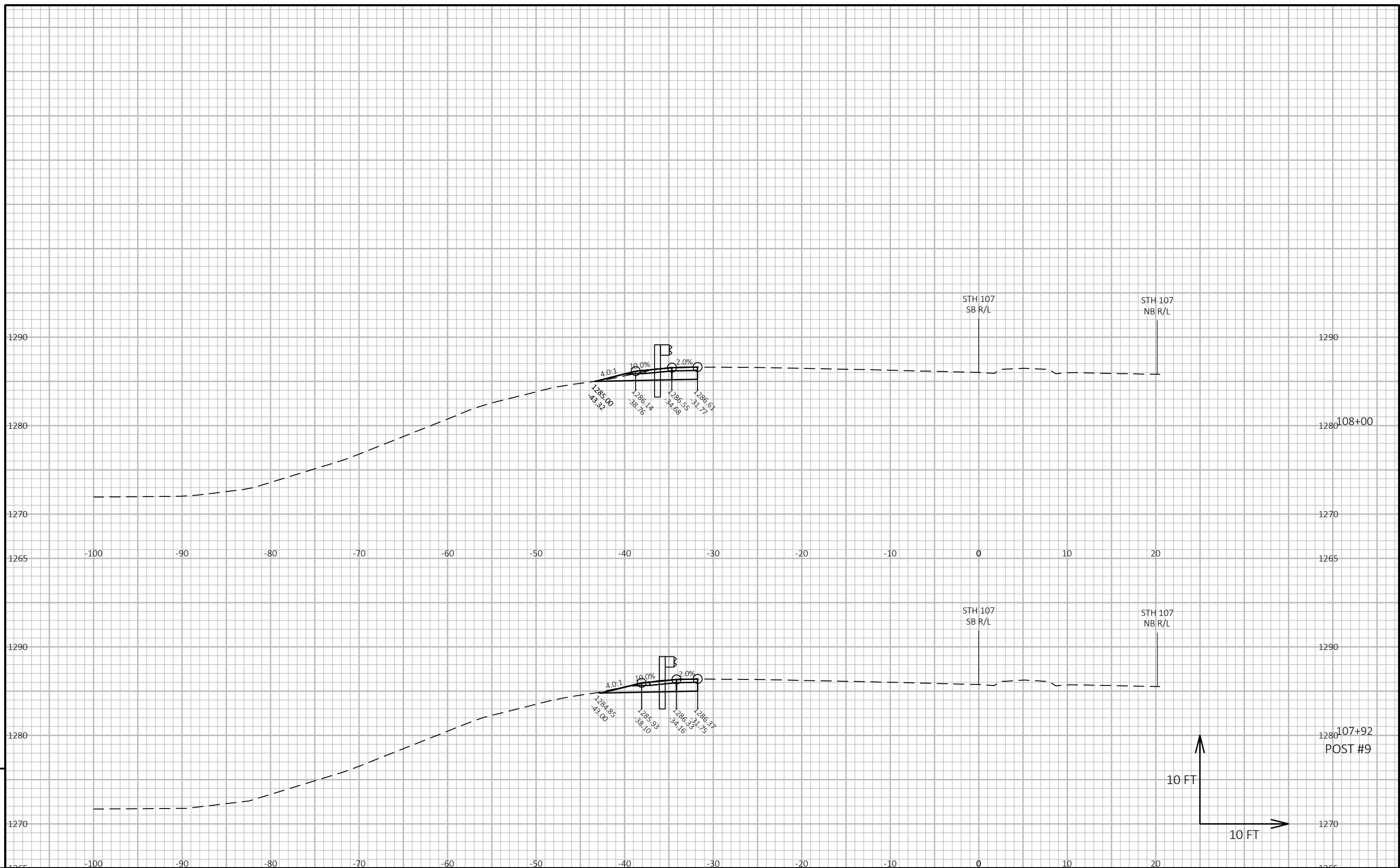
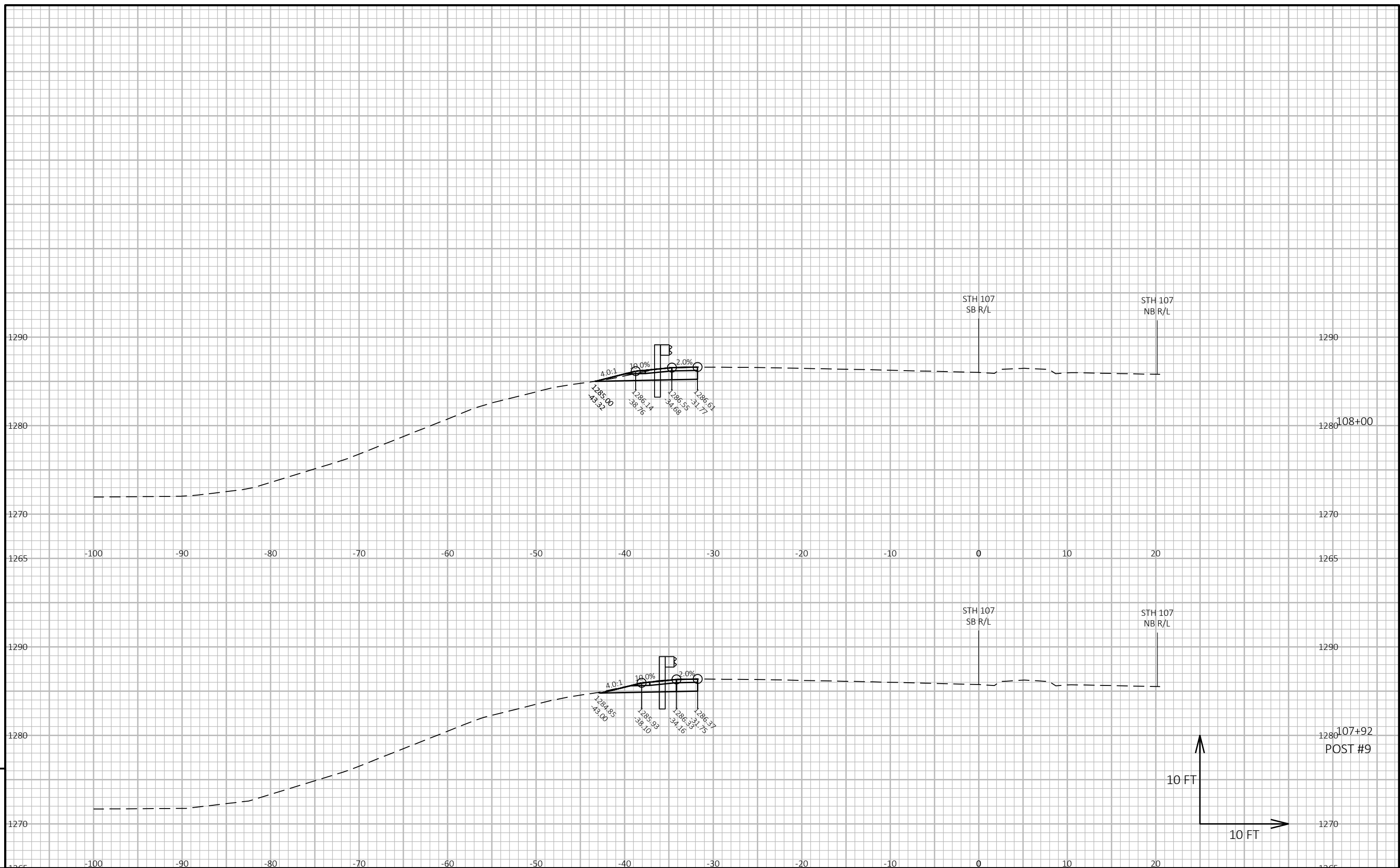
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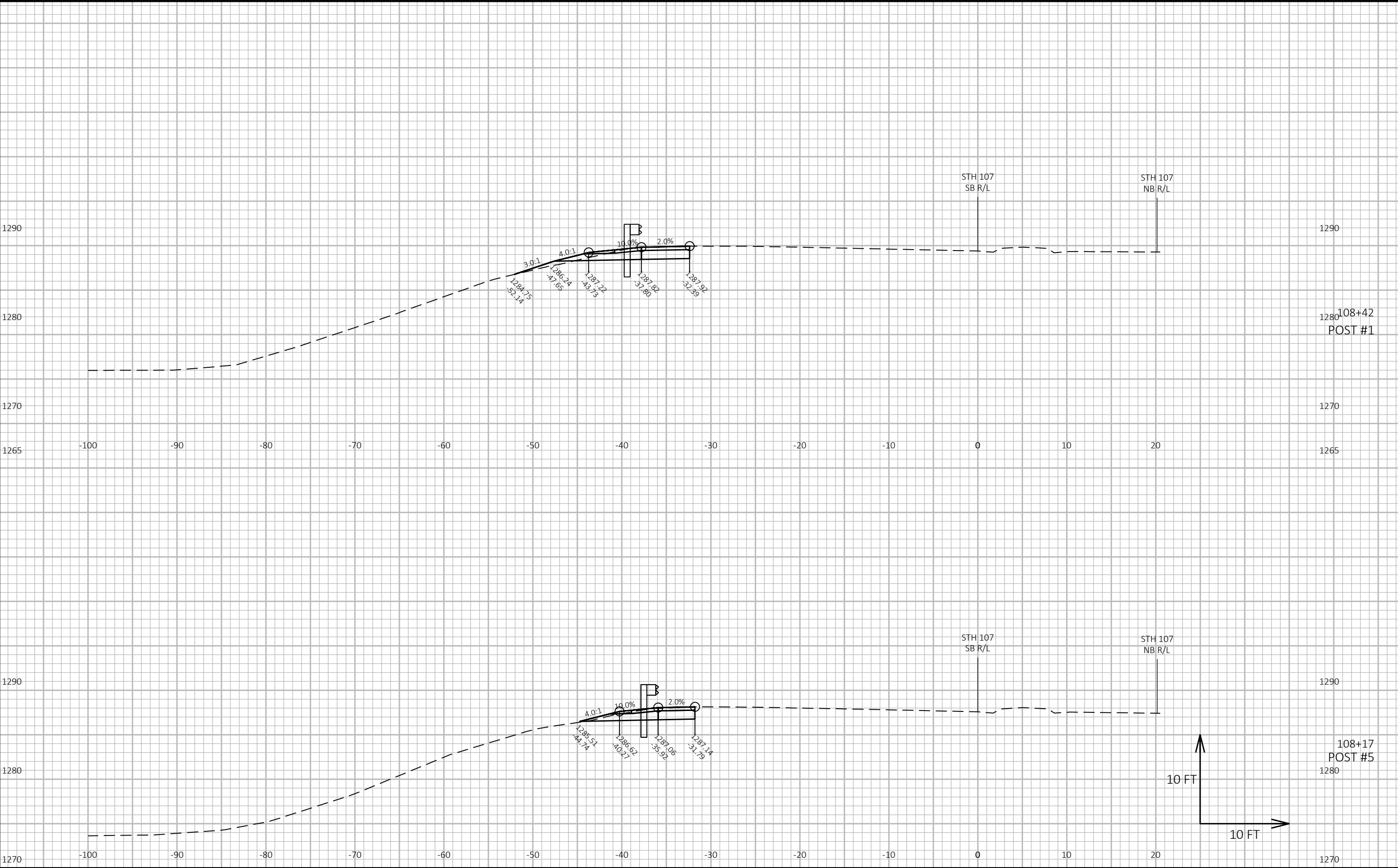
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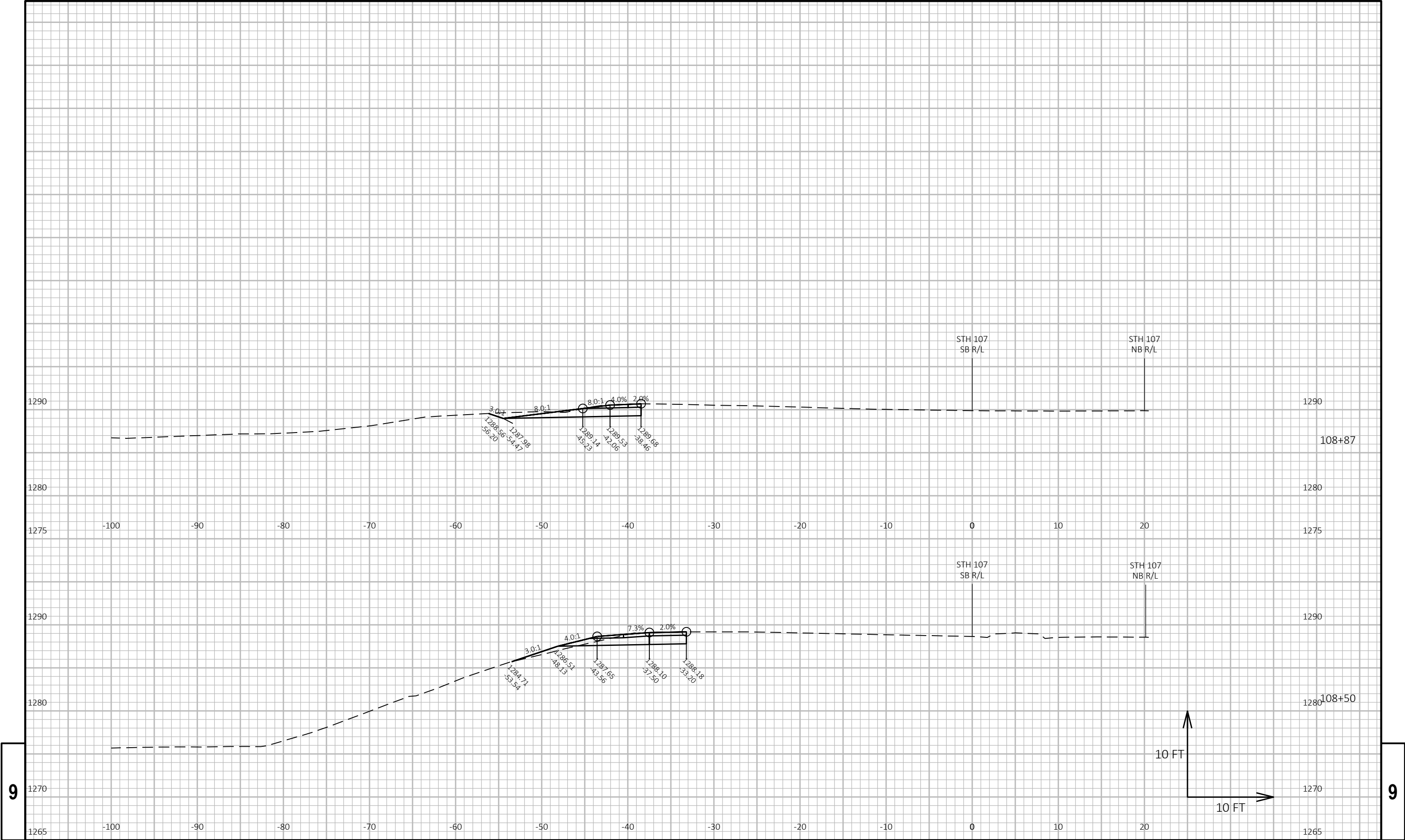


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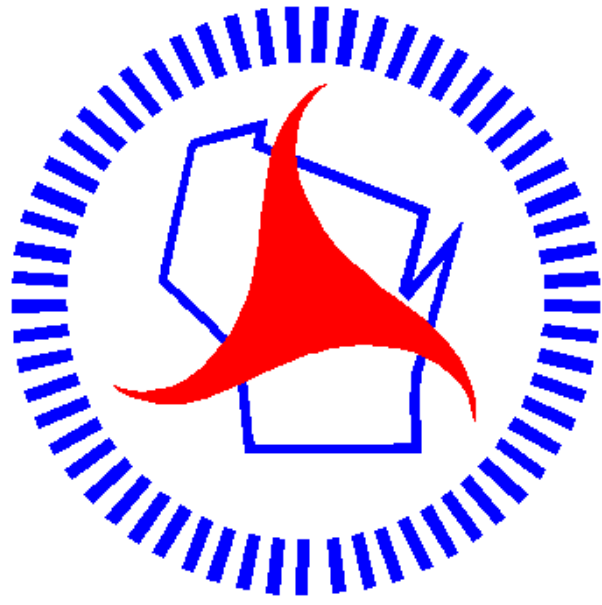
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Notes



Wisconsin Department of Transportation

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