

LAX
PROJECT ID:
WITH:

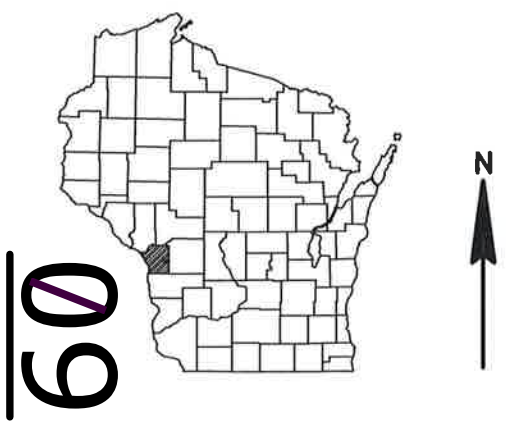
5087-00-70

COUNTY:
LA CROSSE

NOVEMBER 2018
ORDER OF SHEETS

- | | |
|--------------------------|---|
| Section No. 1 | Title |
| Section No. 2 | Typical Sections and Details |
| Section No. 3 | Estimate of Quantities |
| Section No. 3 | Miscellaneous Quantities |
| Section No. 4 | Right of Way Plat |
| Section No. 5 | Plan and Profile (Includes Erosion Control) |
| 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 = 54



DESIGN DESIGNATION

- | | | |
|-----------------|---|--------|
| A.A.D.T. (2019) | = | 340 |
| A.A.D.T. (2039) | = | 400 |
| D.H.V. | = | 96 |
| D.D. | = | 60/40 |
| T. | = | 6.1% |
| DESIGN SPEED | = | 40 MPH |
| ESALS | = | 44,000 |

CONVENTIONAL SYMBOLS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

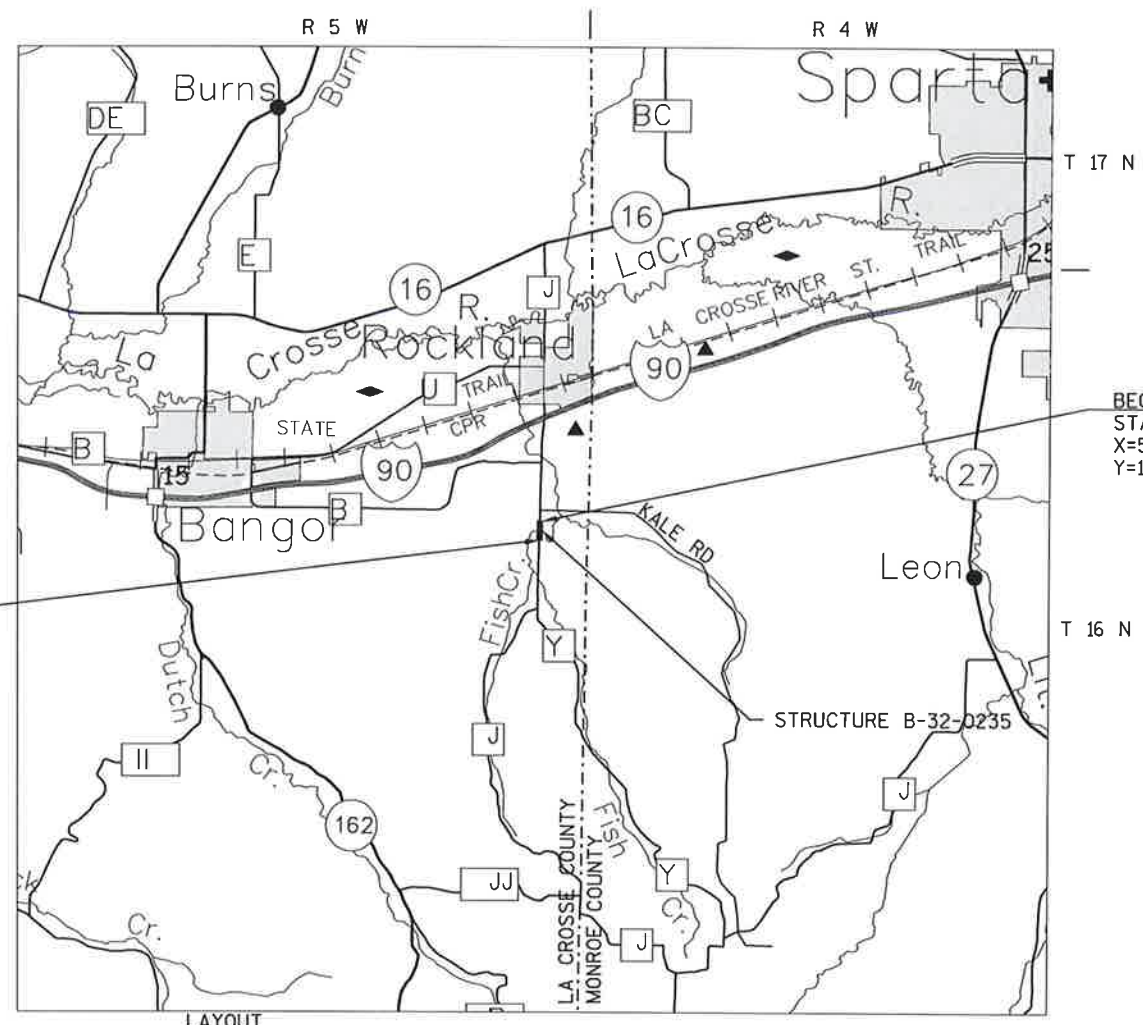
CTH Y - CTH B

(FISH CREEK BRIDGE B-32-0235)

CTH J

LA CROSSE COUNTY

STATE PROJECT NUMBER
5087-00-70



BEGIN PROJECT
STA 46+25
X=532,472.872
Y=157,031.153

BEGIN PROJECT
STA 50+00
X=532,478.320
Y=157,581.126

LAYOUT
SCALE 0 1 MILES
TOTAL NET LENGTH OF CENTERLINE = 0.071 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, LA CROSSE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5087-00-70		

ACCEPTED FOR
LA CROSSE COUNTY HIGHWAY DEPARTMENT
3/15/18
DATE
HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY



3-22-18
(Date)
Christopher Blum
(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor SEH
Designer SEH
Management Consultant KL Engineering

APPROVED FOR THE DEPARTMENT
DATE: 4/20/18
Jeff Melville
Management Consultant Signature
E

STANDARD ABBREVIATIONS:

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

GENERAL NOTES:

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE APPROXIMATE USGS DATUM.

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

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

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

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

UNLESS OTHERWISE SHOWN, DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH SALVAGED TOPSOILED, FERTILIZED, AND SEEDED AND MULCHED.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS AND PAVEMENTS AT REMOVAL LIMITS.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION.

THE 4" ASPHALTIC SURFACE SHALL CONSIST OF A 2" UPPER LAYER WITH 12.5MM NOMINAL SIZE AGGREGATE AND A 2" LOWER LAYER WITH MINIMUM 12.5MM NOMINAL SIZE AGGREGATE.

SILT FENCE IS TO BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, AND IN PLACE PRIOR TO BRIDGE REMOVAL.

WETLANDS ARE PRESENT OUTSIDE OF THE EXISTING TOE OF SLOPES. AREAS OUTSIDE OF THE SLOPE INTERCEPTS SHALL NOT BE DISTURBED.

A CONVERSION FACTOR OF 2.1 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE 3/4-INCH.

A CONVERSION FACTOR OF 2.0 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE 1 1/4-INCH.

A CONVERSION FACTOR OF 112 LBS/IN/SY IS USED TO ESTIMATE QUANTITIES FOR ASPHALTIC SURFACE.

DESIGN CONSULTANT

SEH
6808 ODANA RD, SUITE 200
MADISON, WI 53719
(608) 620-6192
CHRIS BLUM, PE
cblum@sehinc.com

LA CROSSE COUNTY

LA CROSSE CO. HIGHWAY DEPARTMENT
301 CARLSON ROAD
WEST SALEM, WI 54669
(608) 786-3810
RON CHAMBERLAIN, HIGHWAY COMMISSIONER
rchamberlain@lacrossecounty.org

WDNR LIAISON

DNR SERVICE CENTER
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
(608) 785-9115
KAREN KALVELAGE
karen.kalvelage@wisconsin.gov

UTILITY CONTACTS

ELECTRIC

BANGOR MUNICIPAL UTILITY
106 15TH AVENUE NORTH
BANGOR WI, 54614
(608) 317-8618
RYAN PELOWSKI
rpelowski@villageofbangor.com

COMMUNICATIONS

CENTURY LINK
333 FRONT STREET NORTH
LA CROSSE, WI 54601
(608) 796-5142
BRIAN STELPLUGH
brian.stelplugh@centurylink.com

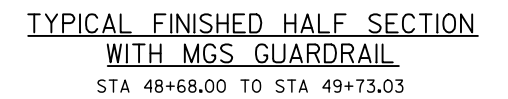
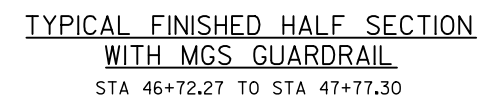
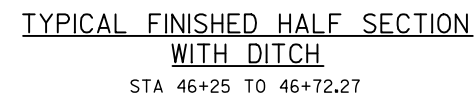
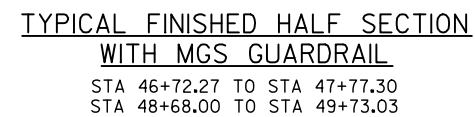
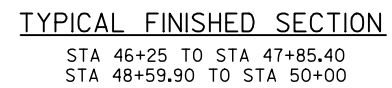
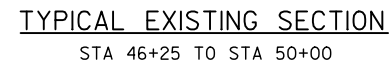


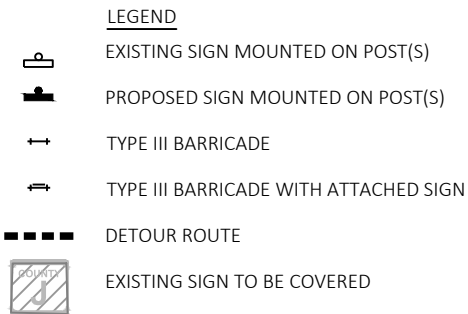
Dial 811 or (800)242-8511

www.DiggersHotline.com

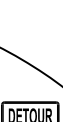
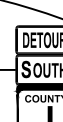
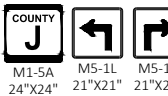
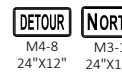
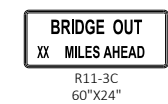
**DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMEBERS.

2



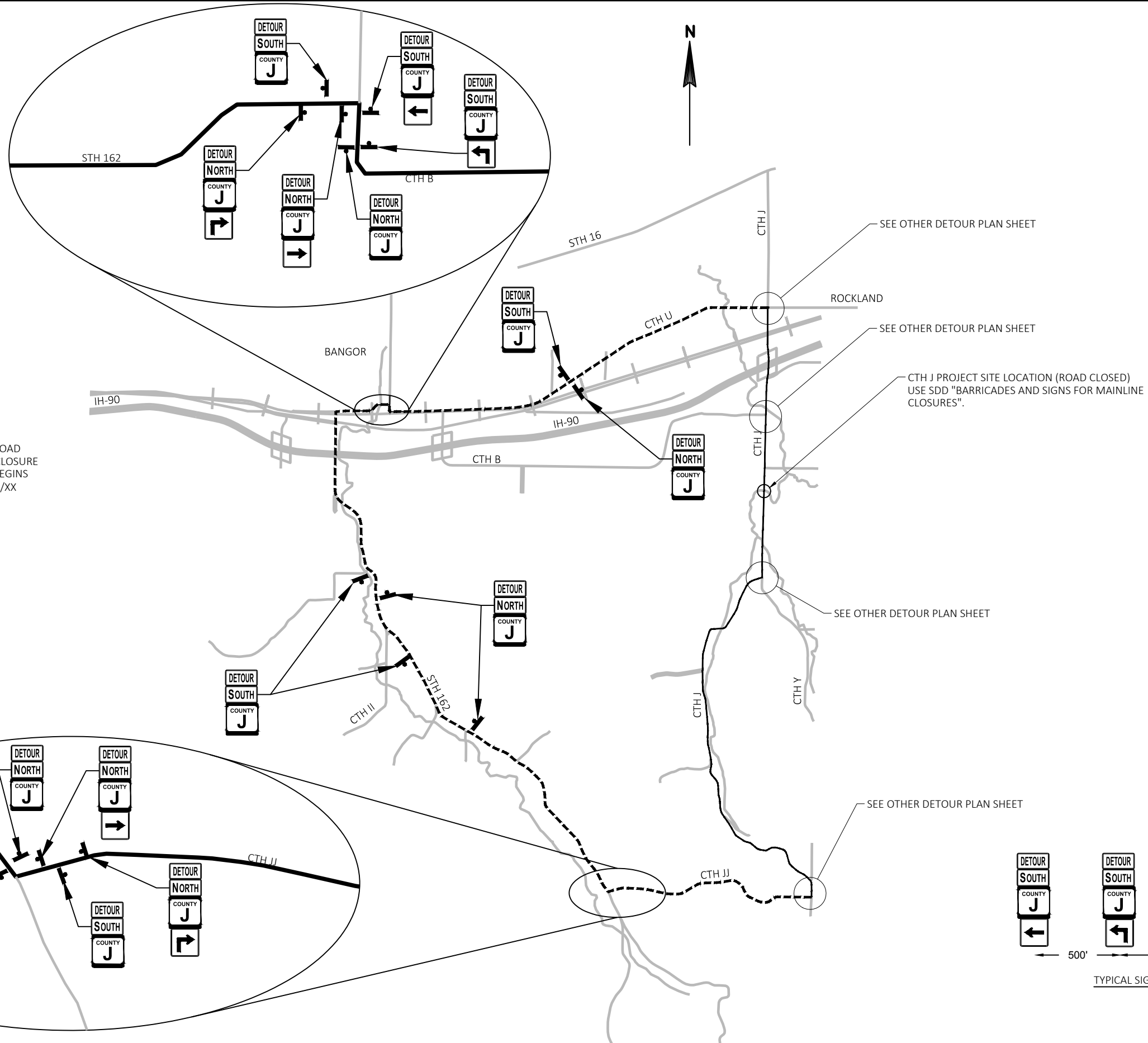
**TRAFFIC CONTROL NOTES**

1. THE EXACT LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.
3. TYPE III BARRICADES SHOWN ON THIS SHEET SHALL BE PLACED AT A 50' OFFSET ALONG ROADWAY.



500' 1000'

TYPICAL SIGN SPACING



PROJECT NO: 5087-00-70

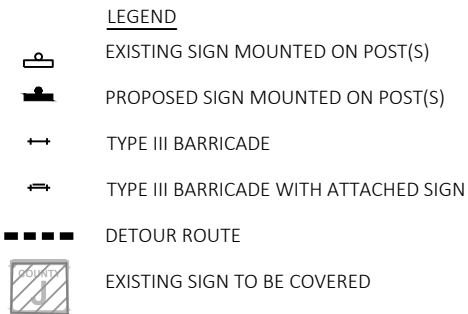
HWY: CTH J

COUNTY: LA CROSSE

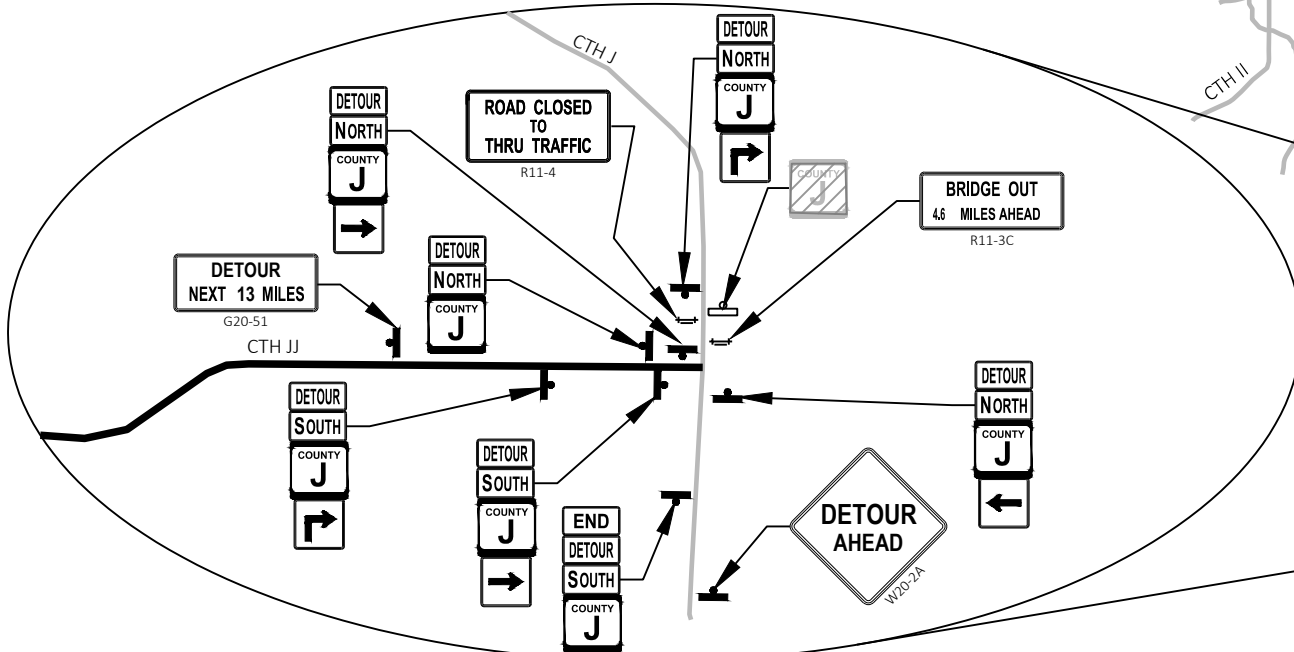
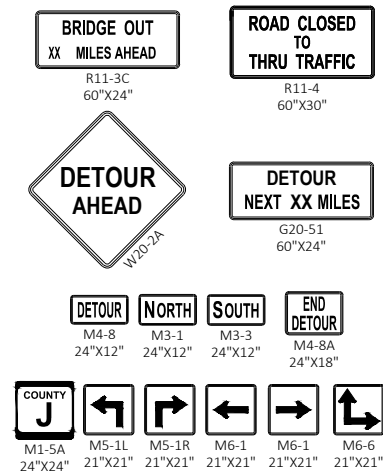
DETOUR PLAN

SHEET

E

**TRAFFIC CONTROL NOTES**

1. THE EXACT LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.
3. TYPE III BARRICADES SHOWN ON THIS SHEET SHALL BE PLACED AT A 50' OFFSET ALONG ROADWAY.



PROJECT NO: 5087-00-70

HWY: CTH J

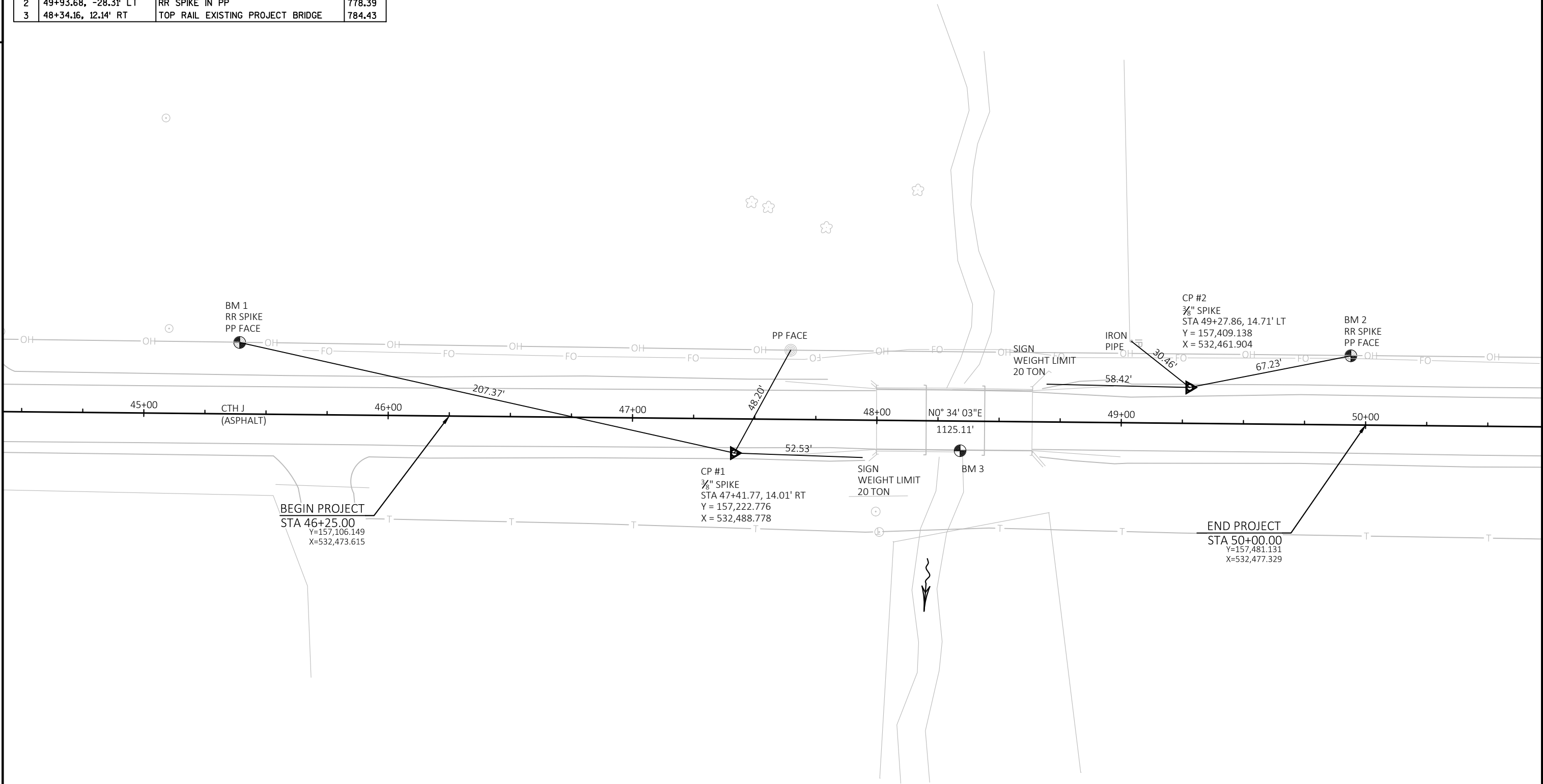
COUNTY: LA CROSSE

DETOUR PLAN

SHEET

E

BENCHMARK TABLE			
NO.	STATION	DESCRIPTION	ELEV.
1	45+38.97, -29.25' LT	RR SPIKE IN PP	781.09
2	49+93.68, -28.3' LT	RR SPIKE IN PP	778.39
3	48+34.16, 12.14' RT	TOP RAIL EXISTING PROJECT BRIDGE	784.43



Estimate Of Quantities

5087-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 48+31.7	LS	1.000	1.000
0004	204.0165	Removing Guardrail	LF	145.000	145.000
0006	205.0100	Excavation Common **P**	CY	483.000	483.000
0008	206.1000	Excavation for Structures Bridges (structure) 01. B-32-0235	LS	1.000	1.000
0010	206.5000	Cofferdams (structure) 01. B-32-0235	LS	1.000	1.000
0012	210.1500	Backfill Structure Type A	TON	290.000	290.000
0014	213.0100	Finishing Roadway (project) 01. 5087-00-70	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	63.000	63.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	619.000	619.000
0020	455.0605	Tack Coat	GAL	49.000	49.000
0022	465.0105	Asphaltic Surface	TON	214.000	214.000
0024	502.0100	Concrete Masonry Bridges	CY	265.000	265.000
0026	502.3200	Protective Surface Treatment	SY	328.000	328.000
0028	505.0400	Bar Steel Reinforcement HS Structures	LB	6,580.000	6,580.000
0030	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	35,730.000	35,730.000
0032	513.4061	Railing Tubular Type M 01. B-32-0235	LF	194.000	194.000
0034	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0036	550.2104	Piling CIP Concrete 10 3/4 X 0.25-Inch	LF	715.000	715.000
0038	550.2124	Piling CIP Concrete 12 3/4 X 0.25-Inch	LF	540.000	540.000
0040	606.0300	Riprap Heavy	CY	290.000	290.000
0042	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	220.000	220.000
0044	614.2300	MGS Guardrail 3	LF	50.000	50.000
0046	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0048	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0050	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5087-00-70	EACH	1.000	1.000
0052	619.1000	Mobilization	EACH	1.000	1.000
0054	624.0100	Water	MGAL	20.500	20.500
0056	625.0500	Salvaged Topsoil **P**	SY	907.000	907.000
0058	627.0200	Mulching **P**	SY	594.000	594.000
0060	628.1504	Silt Fence	LF	1,063.000	1,063.000
0062	628.1520	Silt Fence Maintenance	LF	1,063.000	1,063.000
0064	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0066	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0068	628.2008	Erosion Mat Urban Class I Type B	SY	473.000	473.000
0070	629.0210	Fertilizer Type B **P**	CWT	0.670	0.670
0072	630.0120	Seeding Mixture No. 20 **P**	LB	29.000	29.000
0074	630.0200	Seeding Temporary **P**	LB	29.000	29.000

Estimate Of Quantities

5087-00-70

Line	Item	Item Description	Unit	Total	Qty
0076	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0078	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0080	638.2602	Removing Signs Type II	EACH	6.000	6.000
0082	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0084	642.5001	Field Office Type B	EACH	1.000	1.000
0086	643.0420	Traffic Control Barricades Type III	DAY	1,660.000	1,660.000
0088	643.0705	Traffic Control Warning Lights Type A	DAY	2,988.000	2,988.000
0090	643.0900	Traffic Control Signs	DAY	13,197.000	13,197.000
0092	643.0920	Traffic Control Covering Signs Type II	EACH	4.000	4.000
0094	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0096	643.5000	Traffic Control	EACH	1.000	1.000
0098	645.0111	Geotextile Type DF Schedule A	SY	60.000	60.000
0100	645.0120	Geotextile Type HR	SY	635.000	635.000
0102	646.1020	Marking Line Epoxy 4-Inch	LF	850.000	850.000
0104	650.4500	Construction Staking Subgrade	LF	301.000	301.000
0106	650.5000	Construction Staking Base	LF	301.000	301.000
0108	650.6500	Construction Staking Structure Layout (structure) 01. B-32-0235	LS	1.000	1.000
0110	650.9910	Construction Staking Supplemental Control (project) 01. 5087-00-70	LS	1.000	1.000
0112	650.9920	Construction Staking Slope Stakes	LF	301.000	301.000
0114	690.0150	Sawing Asphalt	LF	47.000	47.000
0116	715.0502	Incentive Strength Concrete Structures	DOL	1,590.000	1,590.000

204.0165 REMOVING GUARDRAIL

			RAIL
STATION	- STATION	LOCATION	LF
47+62	- 48+00	LT	38
47+64	- 48+00	RT	36
48+63	- 48+97	LT	34
48+63	- 49+00	RT	37
TOTAL			145

205.0100 EXCAVATION COMMON **p**

	EXC. COMMON	FILL	EXPANDED FILL	WASTE
LOCATION	CY (3)	CY (1)	CY (2)	CY
SOUTH APPROACH	190	102	133	57
NORTH APPROACH	293	162	211	82
TOTAL	483	264	343	140

- (1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%
(3) - EXISTING ASPHALTIC PAVEMENT IS INCLUDED IN COMMON EXCAVATION TOTALS.

305.0110 BASE AGGREGATE DENSE 3/4-INCH
305.0120 BASE AGGREGATE DENSE 1 1/4-INCH
624.0100 WATER

		BASE 3/4-INCH	BASE 1 1/4-INCH	WATER
STATION	- STATION	TON	TON	MGAL
46+25	- 47+85.40	33	327	10.8
48+59.90	- 50+00	30	292	9.7
TOTAL		63	619	20.5

455.0605 TACK COAT
465.0105 ASPHALTIC SURFACE

		TACK COAT	ASPHALTIC SURFACE
STATION	- STATION	GAL	TON
46+25	- 47+85.40	26	113
48+59.90	- 50+00	23	101
TOTAL		49	214

614.2300 MGS GUARDRAIL 3
614.2500 MGS THRIE BEAM TRANSITION
614.2610 MGS GUARDRAIL TERMINAL EAT

			GUARDRAIL	THRIE BEAM TRANSITION	GUARDRAIL TERMINAL EAT
STATION	- STATION	LOCATION	LF	LF	EACH
46+72.27	- 47+25.40	LT	-	-	1
46+72.27	- 47+25.40	RT	-	-	1
47+25.40	- 47+37.90	LT	12.5	-	-
47+25.40	- 47+37.90	RT	12.5	-	-
47+37.90	- 47+77.30	LT	-	39.4	-
47+37.90	- 47+77.30	RT	-	39.4	-
48+68.00	- 49+07.40	LT	-	39.4	-
48+68.00	- 49+07.40	RT	-	39.4	-
49+07.40	- 49+19.90	LT	12.5	-	-
49+07.40	- 49+19.90	RT	12.5	-	-
49+19.90	- 49+73.03	LT	-	-	1
49+19.90	- 49+73.03	RT	-	-	1
TOTAL			50	157.6	4

618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS 5087-00-70
(CAT 0040)

LOCATION	EACH
PROJECT 5087-00-70	1
TOTAL	1

625.0500 SALVAGED TOPSOIL **p**
627.0200 MULCHING **p**
629.0210 FERTILIZER TYPE B **p**
630.0120 SEEDING MIXTURE NO. 20 **p**
630.0200 SEEDING TEMPORARY **p**

			SALVAGED TOPSOIL	MULCHING	FERTILIZER	SEEDING #20	SEEDING TEMPORARY
STATION	- STATION	LOCATION	SY	SY	CWT	LB	LB
46+25	- 48+20	LT	123	111	0.11	5	5
46+25	- 48+20	RT	343	192	0.24	10	10
48+40	- 50+00	LT	139	88	0.10	4	4
48+40	- 50+00	RT	120	84	0.09	4	4
UNDISTRIBUTED			182	119	0.13	6	6
TOTAL			907	594	0.67	29	29

p - PAY PLAN QUANTITY

NOTE:
ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR
ENGINEERS ESTIMATE CATEGORY 0010 UNLESS OTHERWISE NOTED.

628.1504 SILT FENCE
628.1520 SILT FENCE MAINTENANCE

			FENCE	MAINT.
STATION	- STATION	LOCATION	LF	LF
46+15	- 48+25	LT	235	235
46+15	- 48+25	RT	235	235
48+35	- 50+10	LT	190	190
48+35	- 50+10	RT	190	190
UNDISTRIBUTED			213	213
TOTAL			1063	1063

628.2008 EROSION MAT URBAN CLASS I TYPE B

STATION	- STATION	LOCATION	SY
47+10	- 47+75	LT	57
47+10	- 48+20	RT	183
48+40	- 49+35	LT	76
48+40	- 49+35	RT	62
UNDISTRIBUTED			95
TOTAL			473

628.1905 MOBILIZATIONS EROSION CONTROL
628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL

		MOBILIZATION	EMERGENCY MOB.
DESCRIPTION	EACH	EACH	
PROJECT 5087-00-70	2	2	
TOTAL	2	2	

NOTE:
ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR
ENGINEERS ESTIMATE CATEGORY 0010.

634.0612 POSTS WOOD 4x6-INCH X 12-FT
637.2230 SIGNS TYPE II REFLECTIVE F
638.2602 REMOVING SIGNS TYPE II
638.3000 REMOVING SMALL SIGN SUPPORTS

LOCATION	SIGN		12' WOOD	SIGNS TYPE II	REMOVING	REMOVING SMALL	COMMENTS
	CODE	SIGN SIZE	POSTS	REFLECTIVE F	SIGNS TYPE II	SIGN SUPPORTS	
			EACH	SF	EACH	EACH	
SW BRIDGE CORNER	W5-52L	12"x36"	1	3.00	1	1	EXISITNG OBJECT MARKER
SE BRIDGE CORNER	W5-52R	12"x36"	1	3.00	2	2	EXISITNG OBJECT MARKER AND WEIGHT LIMIT POSTING
NW BRIDGE CORNER	W5-52R	12"x36"	1	3.00	2	2	EXISITNG OBJECT MARKER AND WEIGHT LIMIT POSTING
NE BRIDGE CORNER	W5-52L	12"x36"	1	3.00	1	1	EXISITNG OBJECT MARKER
TOTAL			4	12.00	6	6	

643.1050 TRAFFIC CONTROL PCMS
643.5000 TRAFFIC CONTROL

DESCRIPTION	DAYS	TRAFFIC					
		CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
		SIGNS	SIGNS	SIGNS TYPE II	PCMS	PCMS	CONTROL
		EACH	DAYS	EACH (1)	EACH	DAYS (2)	EACH
PROJECT 5087-00-70	83	159	13197	4	2	14	1
TOTAL			13197	4		14	1

(1) - EACH LOCATION HAS ONE COVER/UNCOVER CYCLE
(2) - EACH TRAFFIC CONTROL PCMS SHALL BE IN PLACE FOR 7 DAYS PRIOR TO ROAD CLOSURE

643.0420 TRAFFIC CONTROL BARRICADES TYPE III
643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A

DESCRIPTION	DAYS	BARRICADES	BARRICADES	WARNING	WARNING
		TYPE III	TYPE III	LIGHTS TYPE A	LIGHTS TYPE A
		EACH	DAYS	EACH	DAYS
PROJECT 5087-00-70	83	20	1660	36	2988
TOTAL			1660	36	2988

646.1020 MARKING LINE EPOXY 4-INCH

			YELLOW	WHITE	
STATION	-	STATION	LOCATION	LF	LF
46+25	-	50+00	CENTERLINE - 12.5' SKIPS	100	-
46+25	-	50+00	EDGE LINE LT & RT - SOLID	-	750
TOTAL				850	

650.4500 CONSTRUCTION STAKING SUBGRADE
650.5000 CONSTRUCTION STAKING BASE
650.9920 CONSTRUCTION STAKING SLOPE STAKES
650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 5087-00-70

		SUBGRADE	BASE	SLOPE	SUPPLEMENTAL
STATION - STATION		LF	LF	LF	LS
46+25	- 47+85.40	161	161	161	-
48+59.90	- 50+00	140	140	140	-
TOTAL		301	301	301	1

690.0150 SAWING ASPHALT

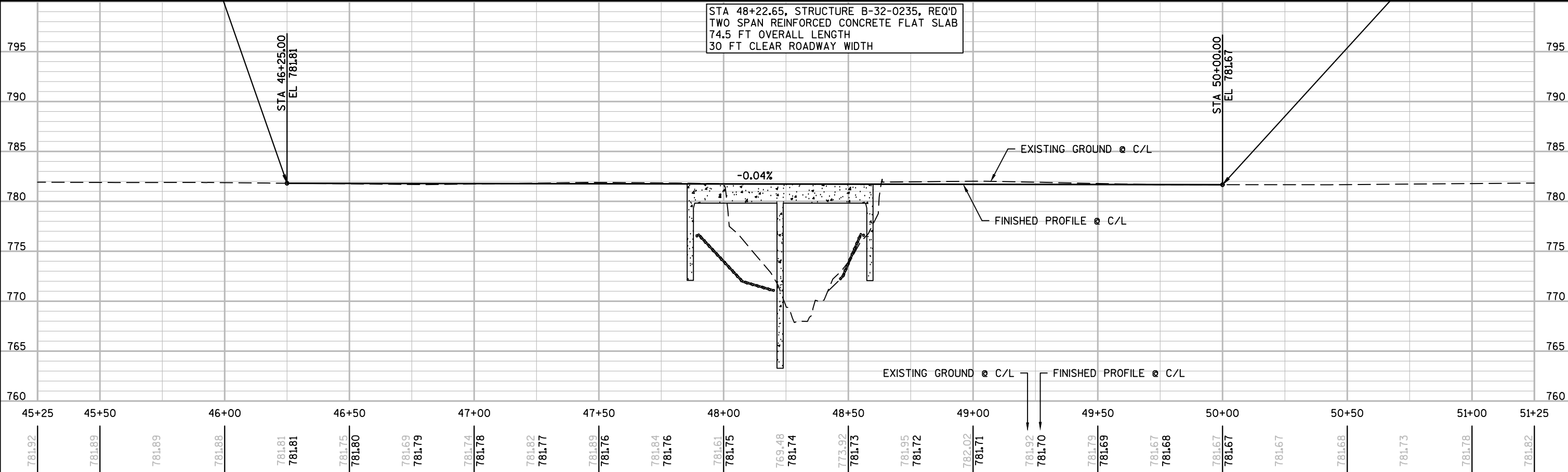
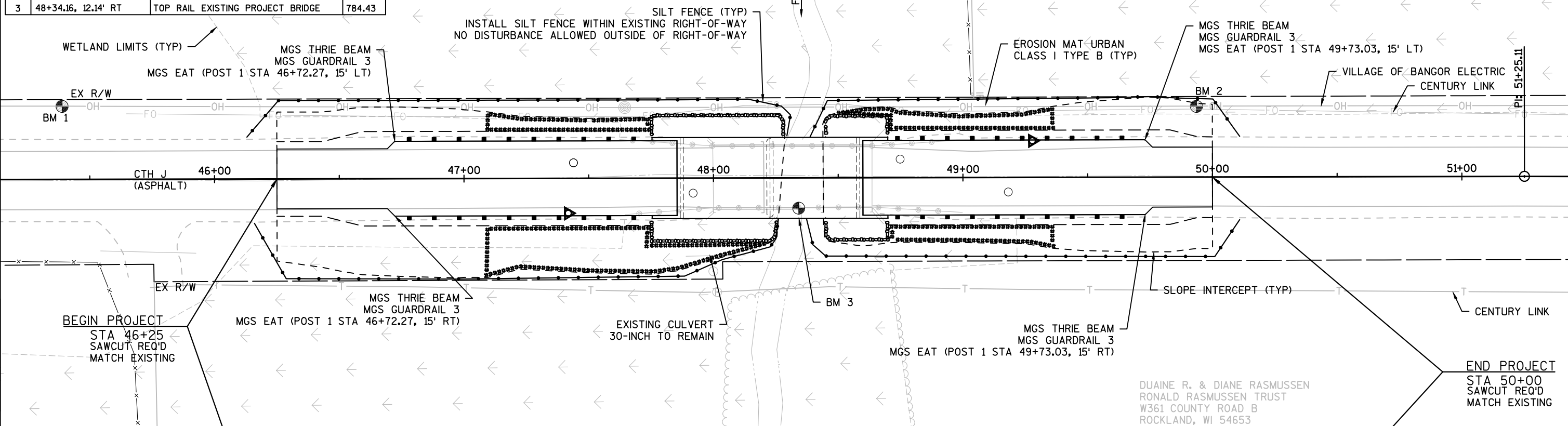
STATION - STATION		LF
46+25	- 46+25	23.5
50+00	- 50+00	23.5
TOTAL		47

BENCHMARK TABLE			
NO.	STATION	DESCRIPTION	ELEV.
1	45+38.97, -29.25' LT	RR SPIKE IN PP	781.09
2	49+93.68, -28.31' LT	RR SPIKE IN PP	778.39
3	48+34.16, 12.14' RT	TOP RAIL EXISTING PROJECT BRIDGE	784.43

MISSISSIPPI VALLEY CONSERVANCY INC
201 MAIN ST, SUITE 1000
LA CROSSE, WI 54601

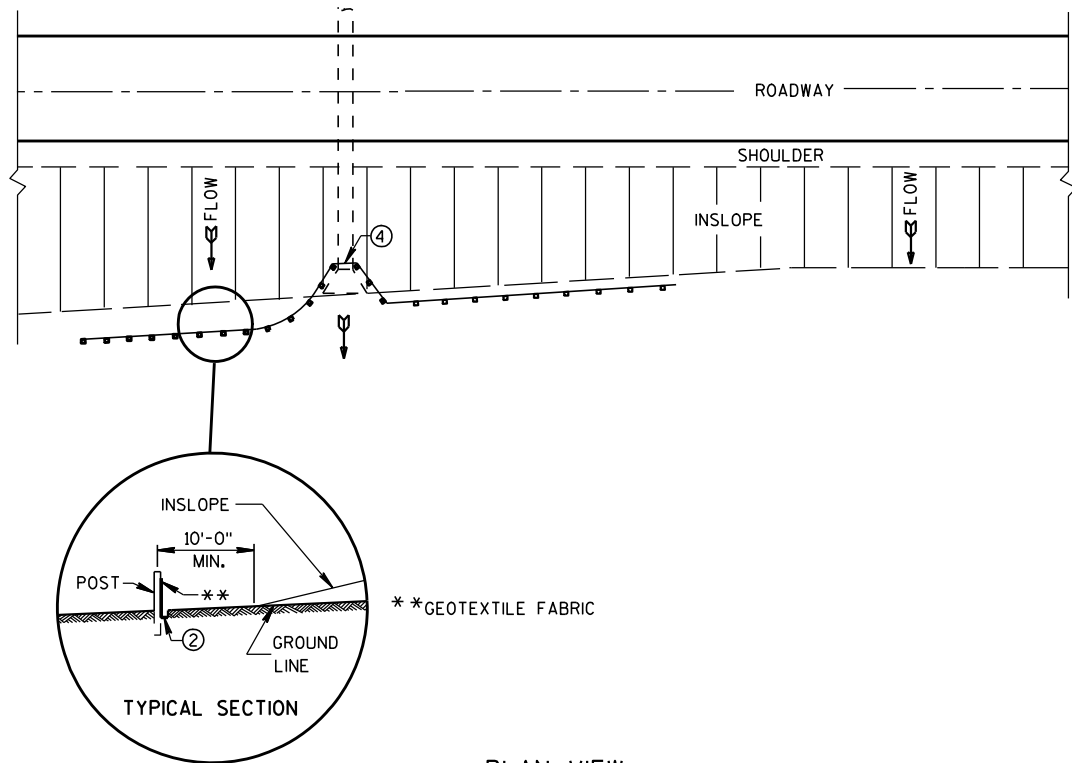
STA 48+31.7, STRUCTURE P-32-0067, REMOVE
THREE SPAN TIMBER BRIDGE
64.3 FT OVERALL LENGTH
25.4 FT OVERALL WIDTH

ROCKLAND VALLEY FARMS LLC
W3763 SCHOMBERG RD
WEST SALEM, WI 54660

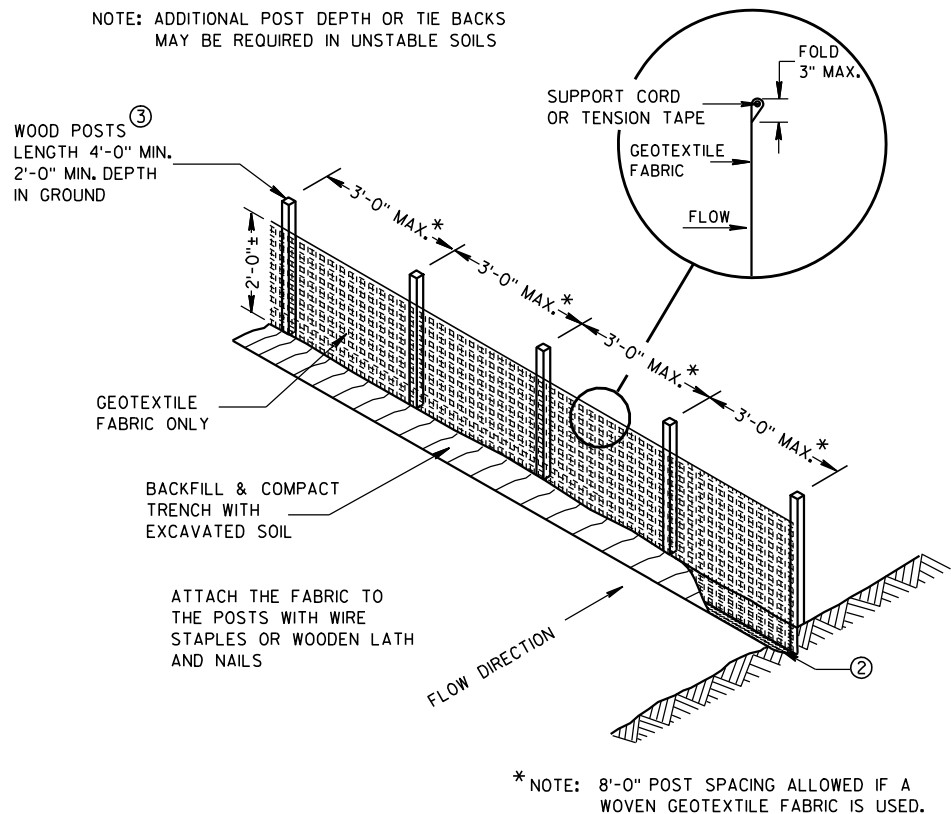


Standard Detail Drawing List

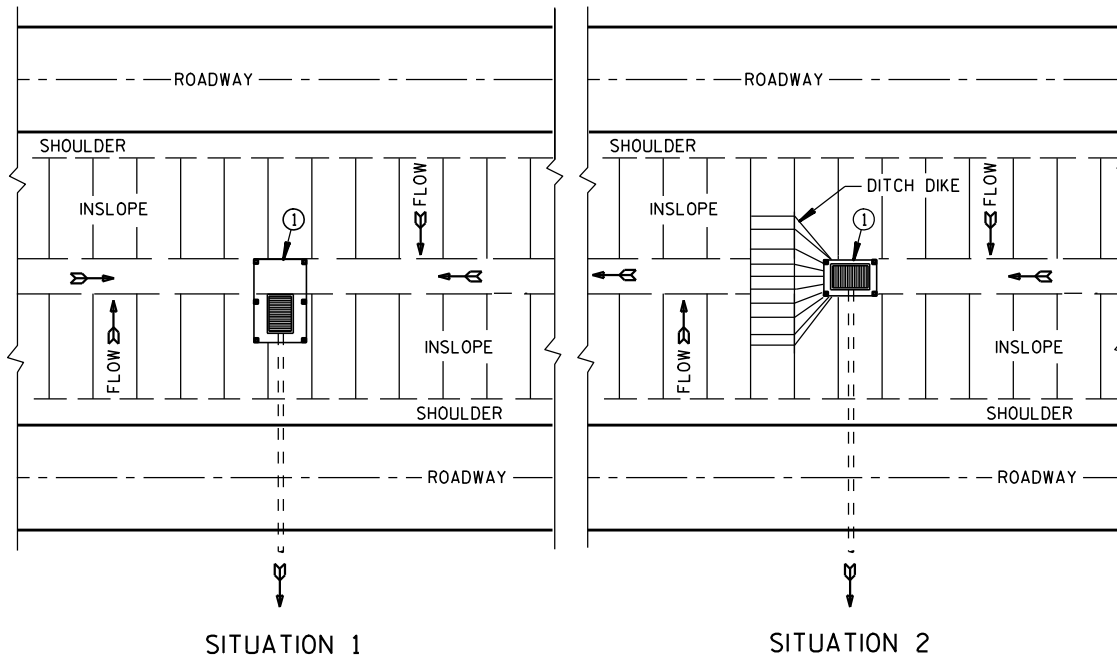
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
14B42-05A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-03A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



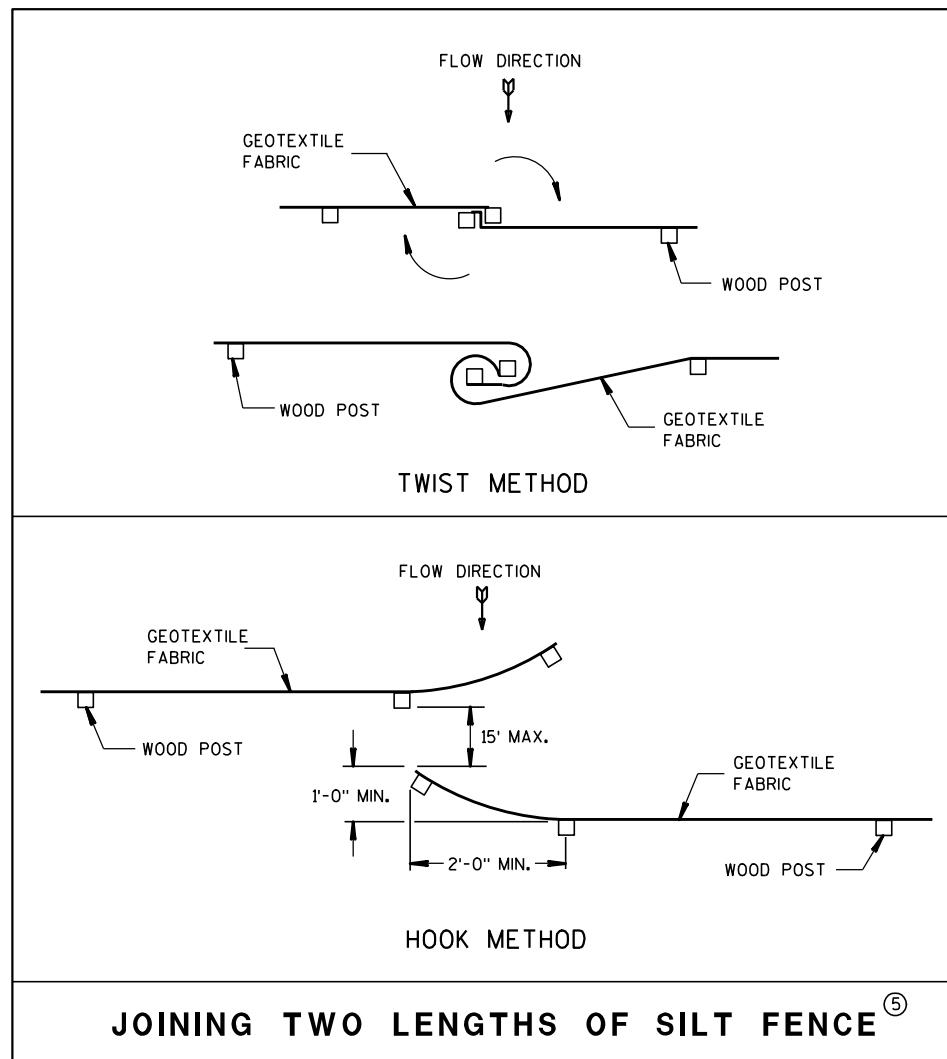
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

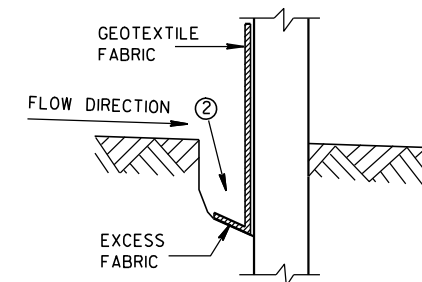


JOINING TWO LENGTHS OF SILT FENCE (5)

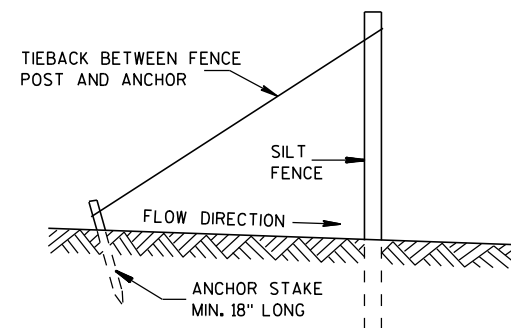
GENERAL NOTES

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

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

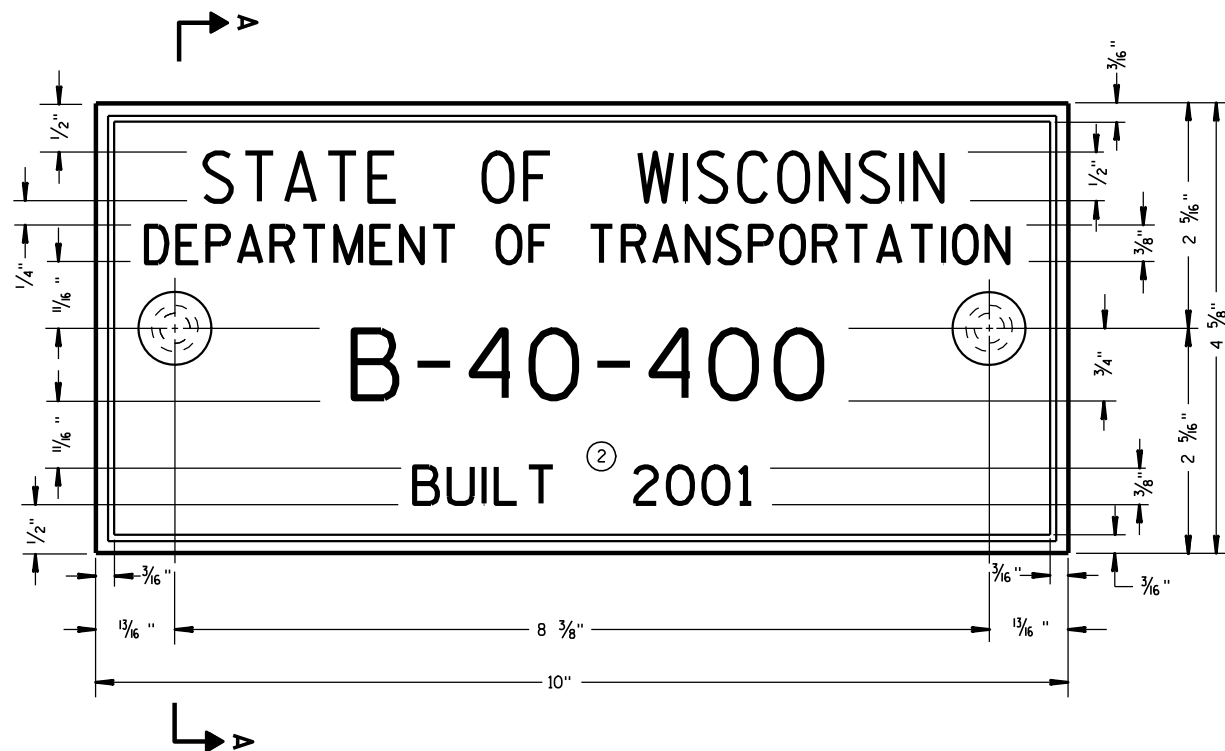


TRENCH DETAIL

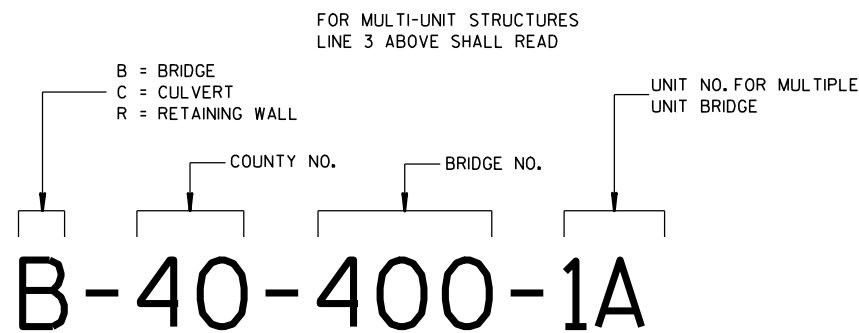


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

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



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



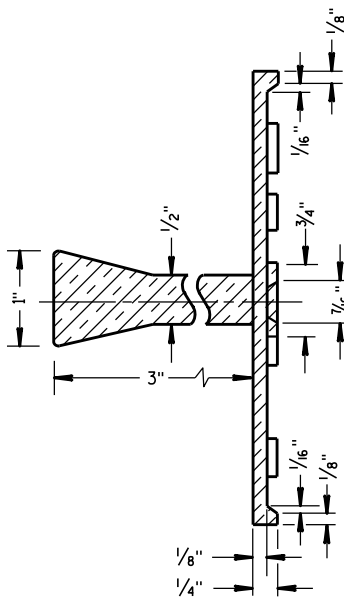
NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

GENERAL NOTES

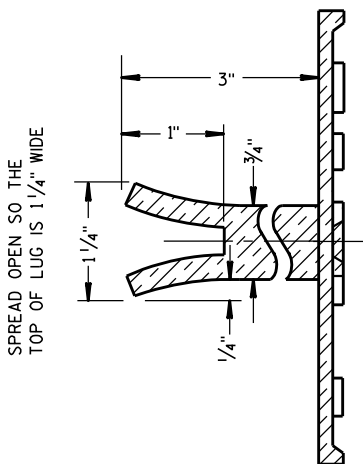
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.

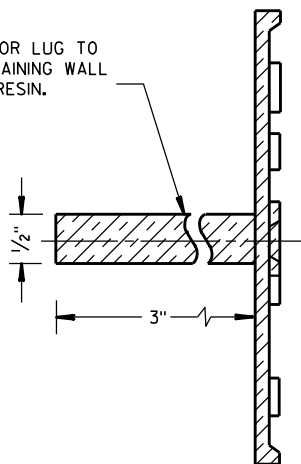


SECTION A-A



ALTERNATE LUG

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



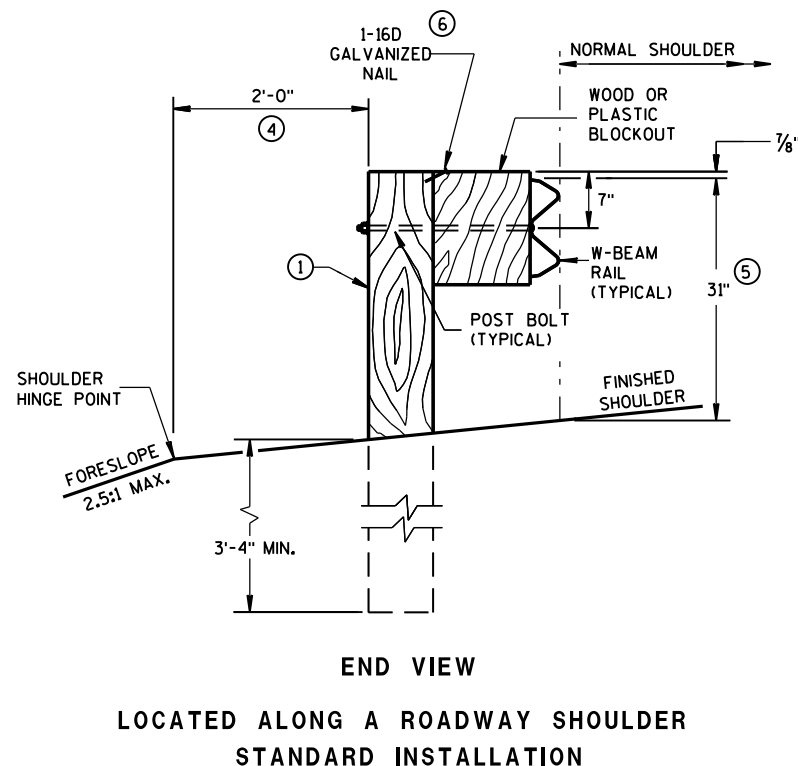
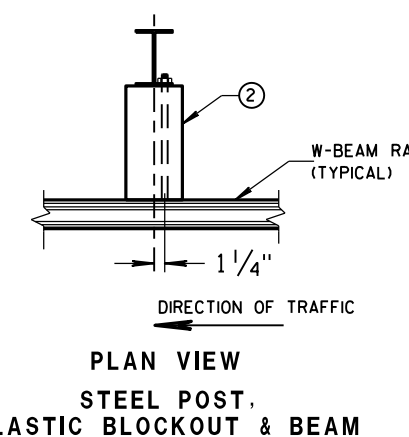
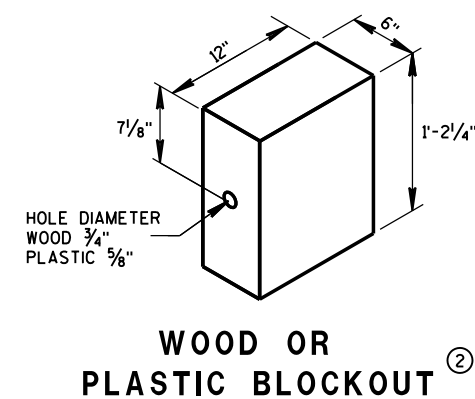
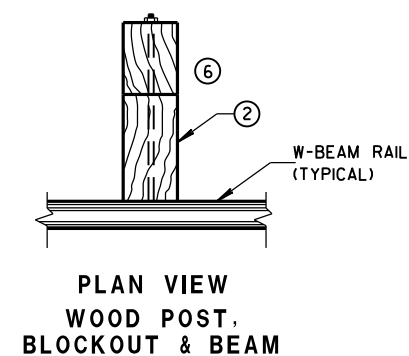
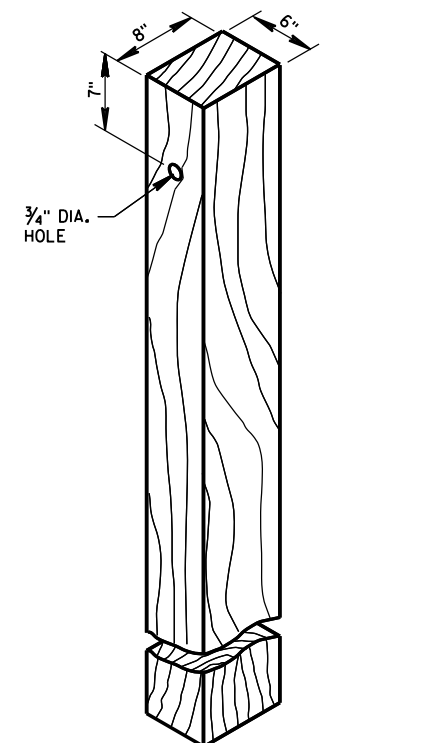
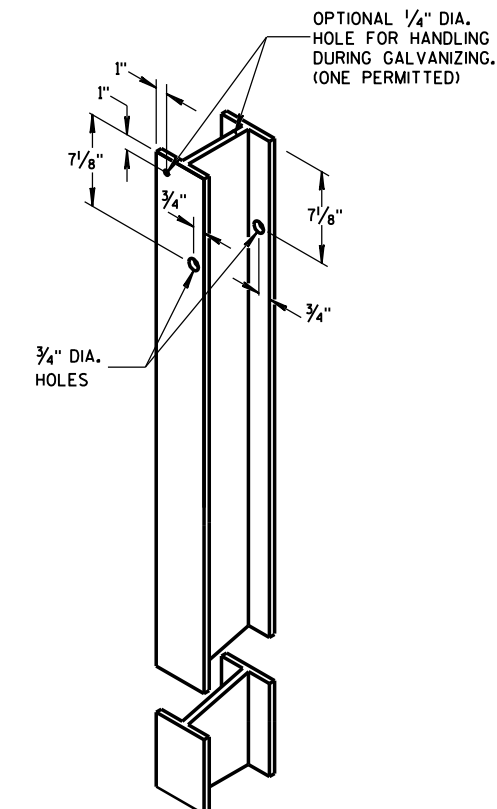
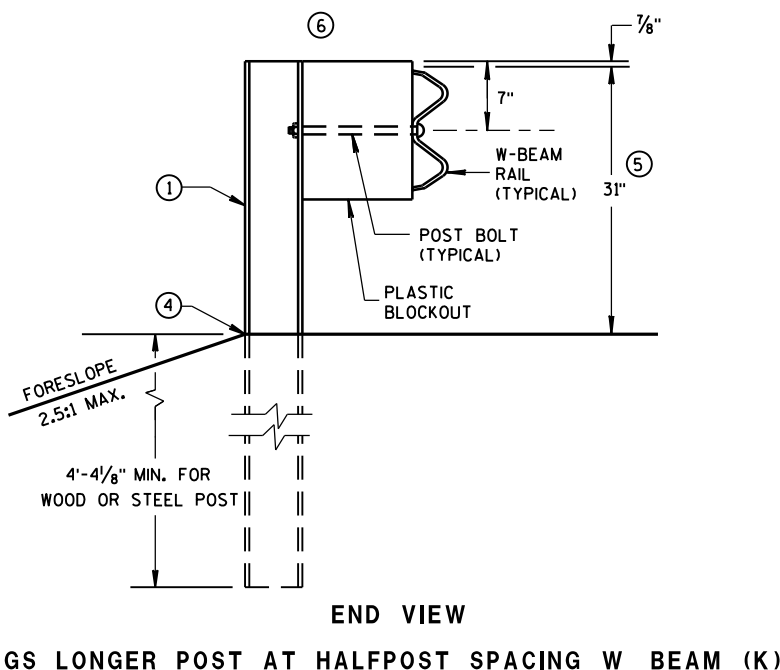
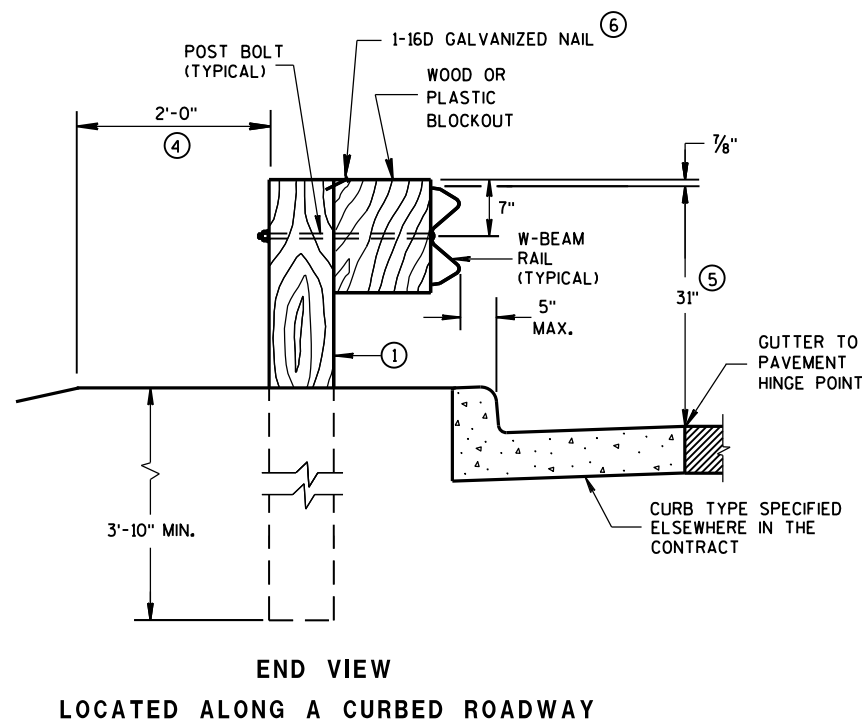
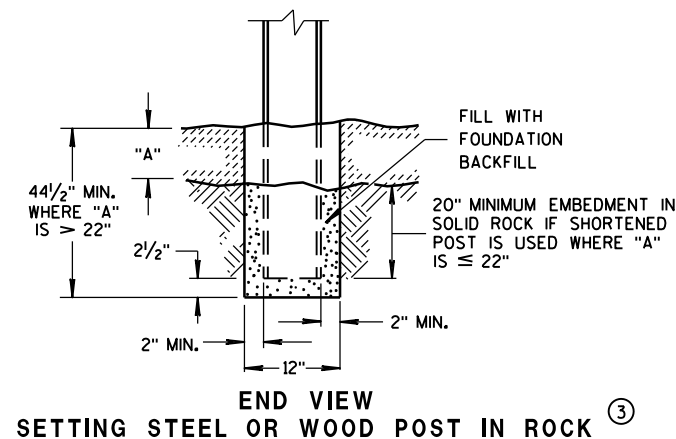
ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE
(STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

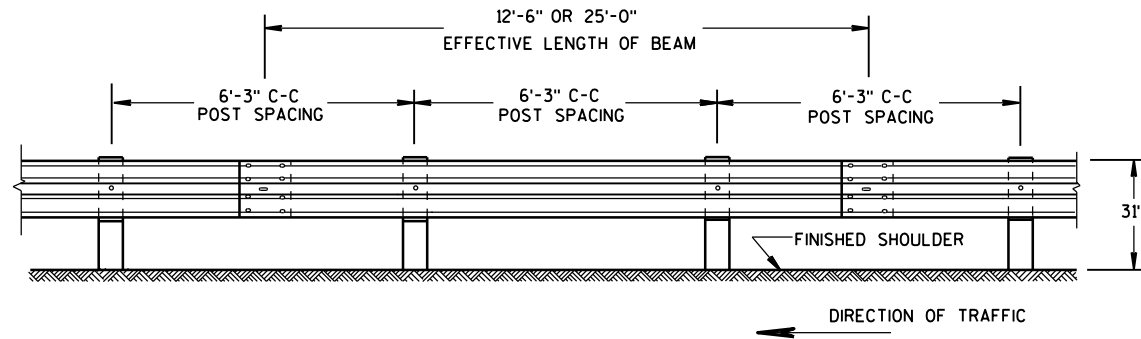
APPROVED
3/26/10
DATE
/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA

- 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 THE TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



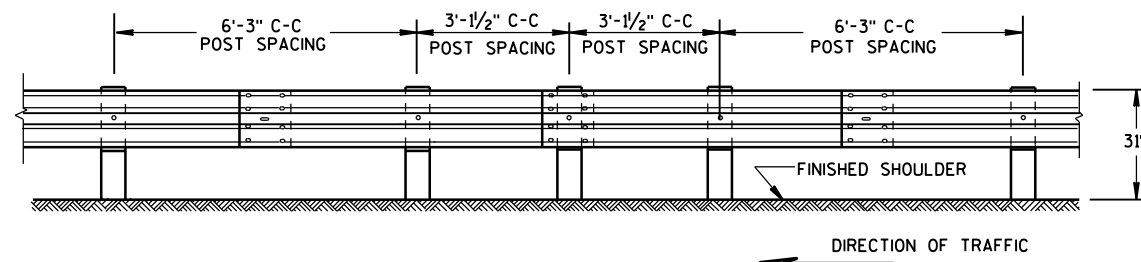
MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



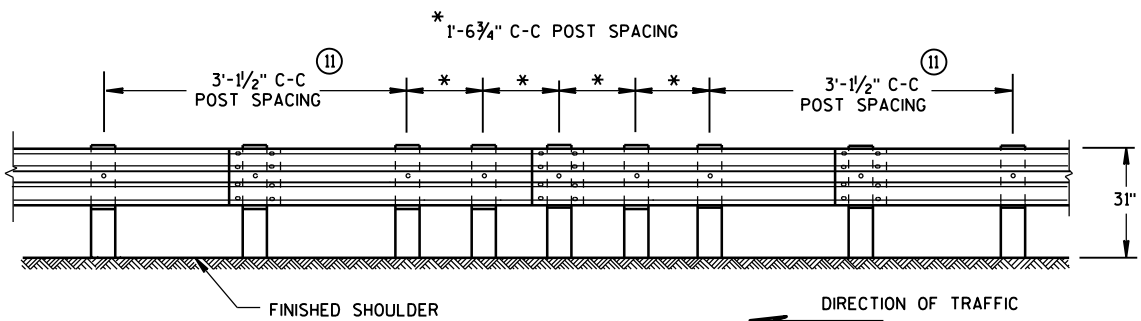
FRONT VIEW

POST SPACING STANDARD INSTALLATION



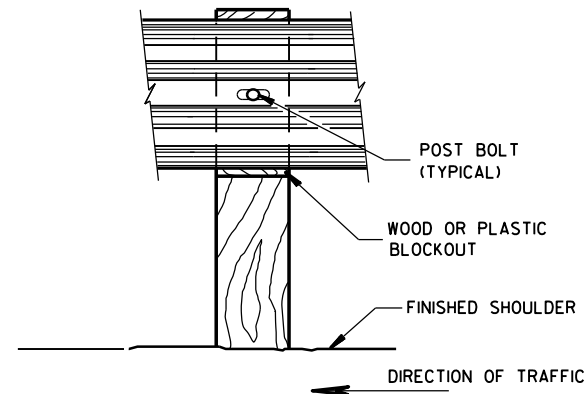
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

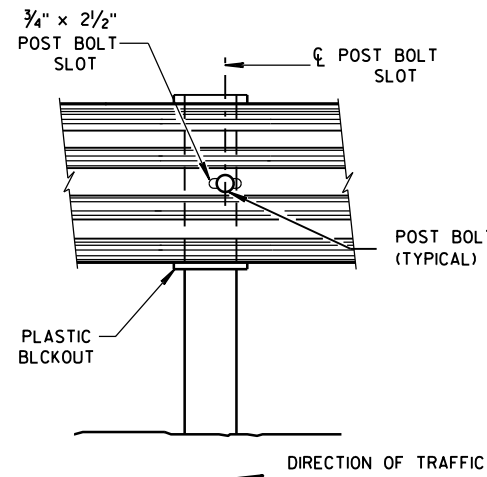


FRONT VIEW

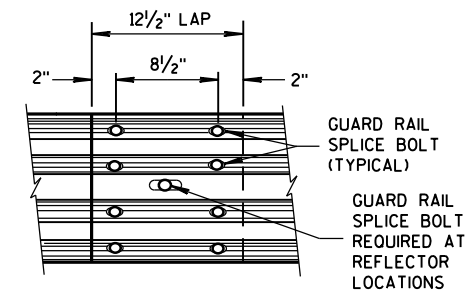
QUARTER POST SPACING (QS)



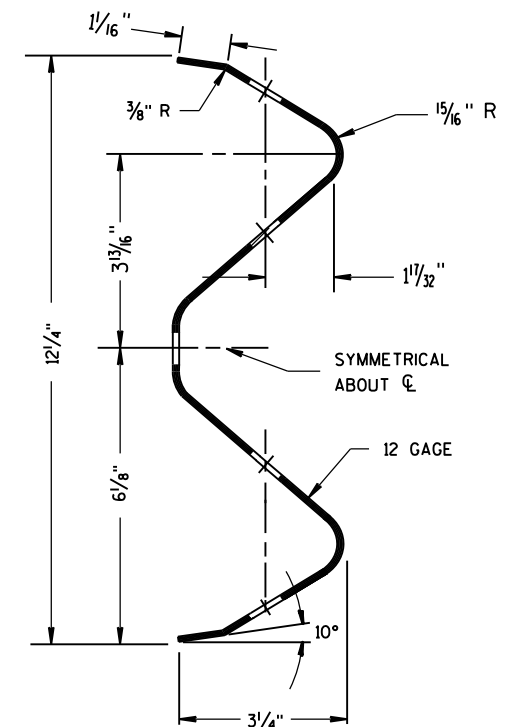
FRONT VIEW AT WOOD POST



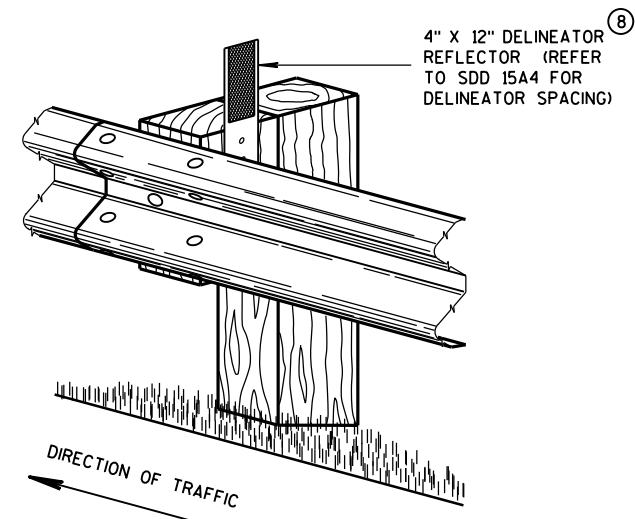
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE



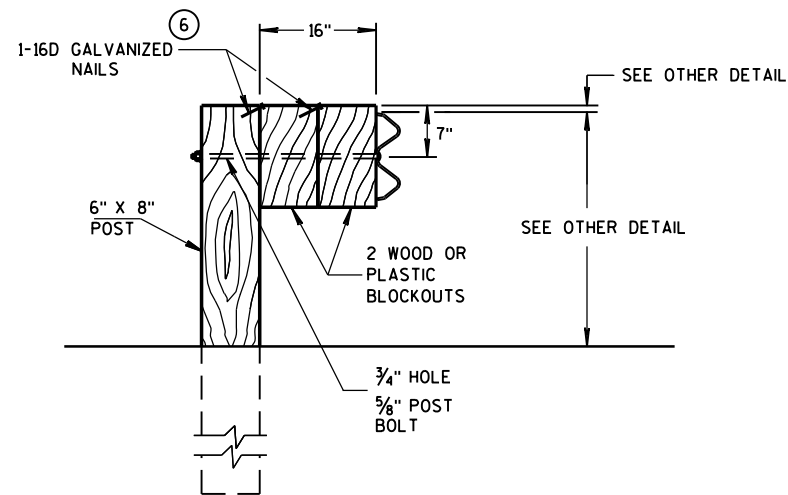
SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

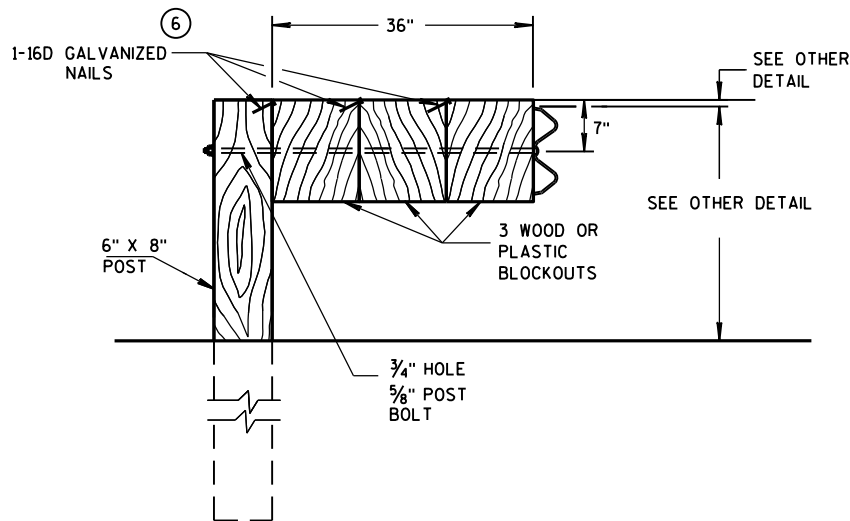
GENERAL NOTES

- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
 - ⑪ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



DETAIL FOR 16" BLOCKOUT DEPTH

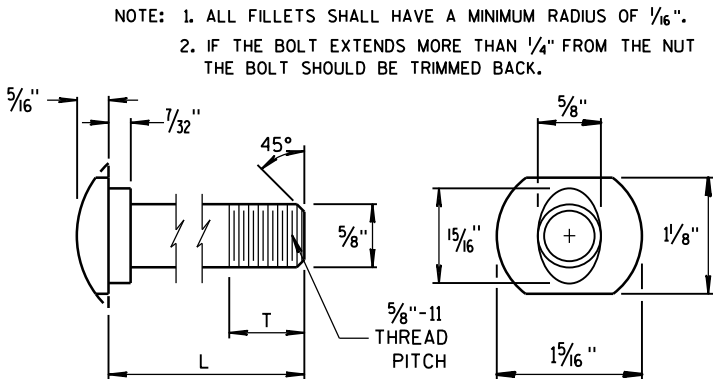
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



DETAIL FOR 36" BLOCKOUT DEPTH

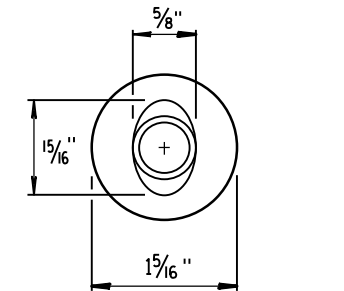
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

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.

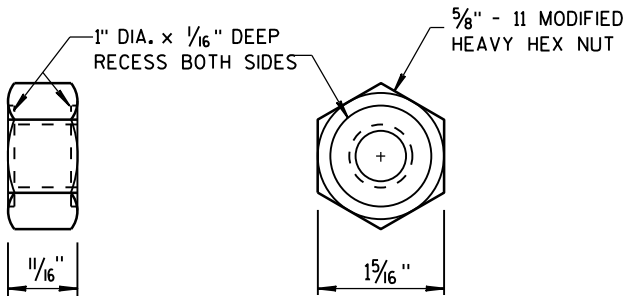


POST BOLT TABLE

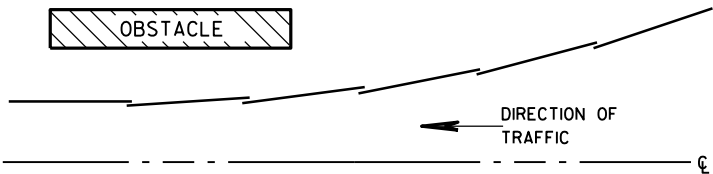
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



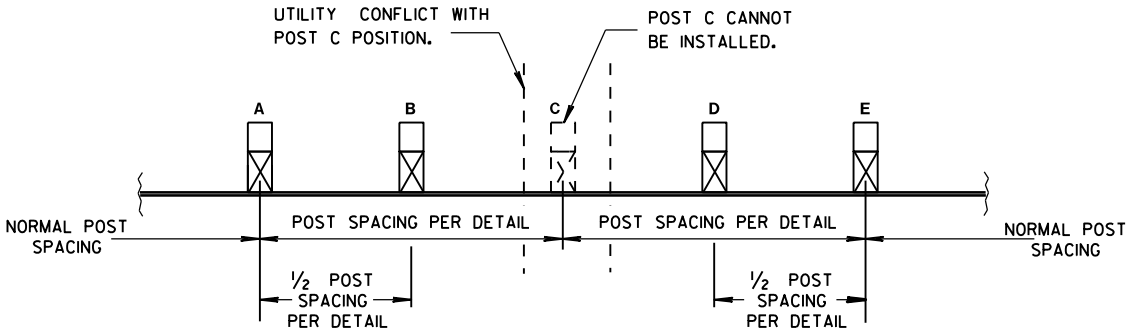
ALTERNATE BOLT HEAD



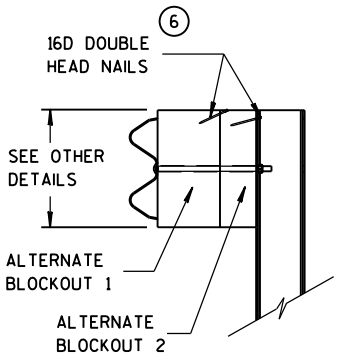
POST BOLT, SPLICE BOLT AND RECESS NUT



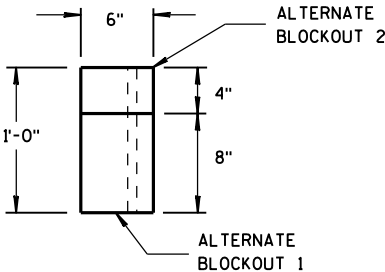
PLAN VIEW BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

- S.D.D. 14 B 44-3a**

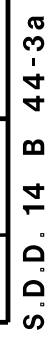
S.D.D. 14 B 44-3a

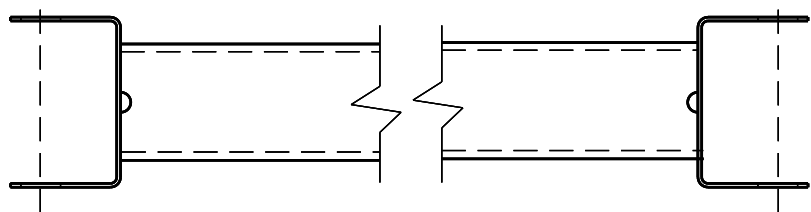
S.D.D. 14 B 44-3a

S.D.D. 14 B 44-3a

S.D.D. 14 B 44-3a

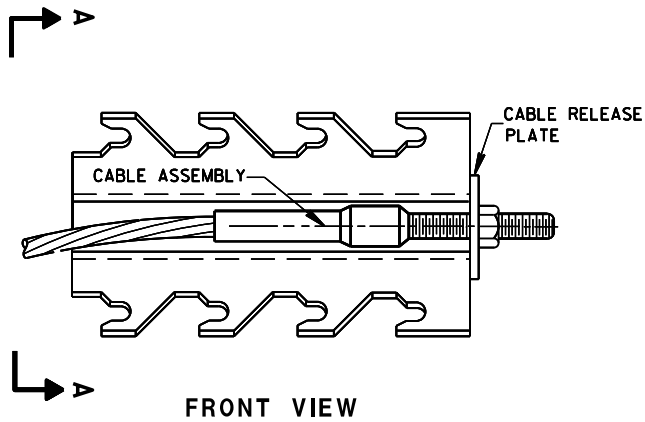
S.D.D. 14 B 44-3a





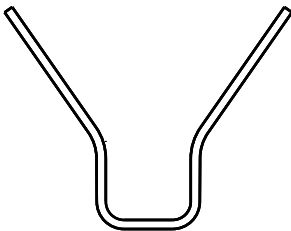
GENERIC GROUND STRUT

9 H

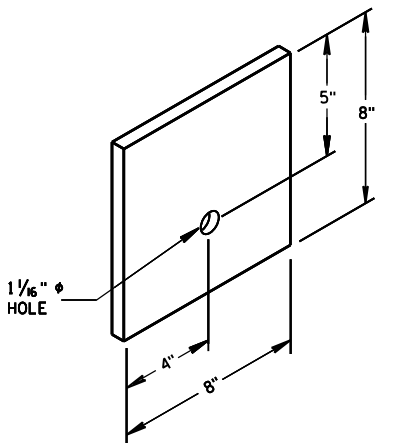


GENERIC ANCHOR CABLE BOX

8 H



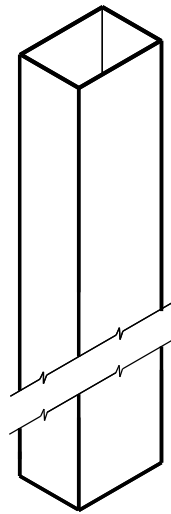
SECTION A-A



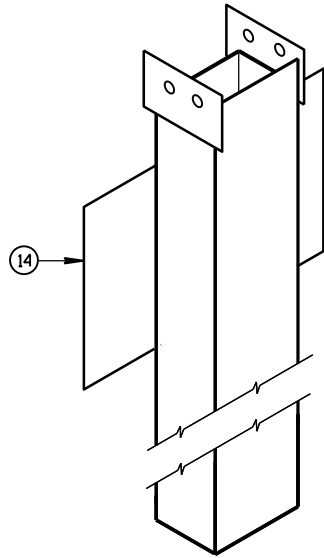
BEARING PLATE

6

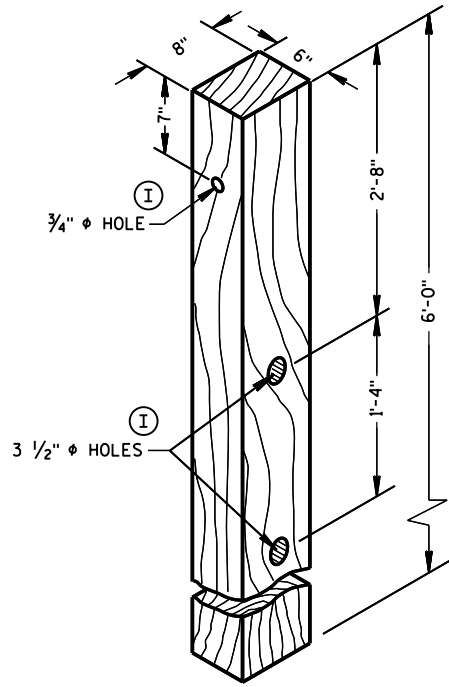
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
①	UPPER POST NO.1 6" X 6" TUBE
②	LOWER POST NO.1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL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



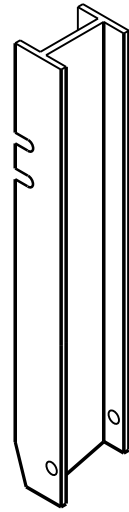
UPPER POST NO. 1⁽¹⁾



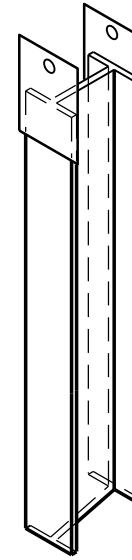
LOWER POST NO. 1⁽²⁾



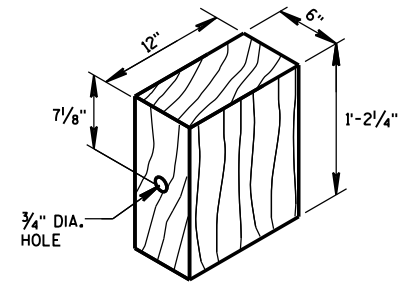
POSTS NUMBER 3-9
WOOD CRT POST⁽³⁾



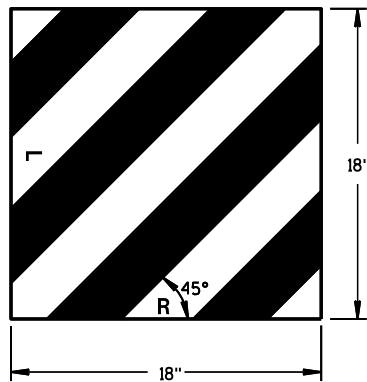
UPPER POST NO. 2⁽¹⁵⁾



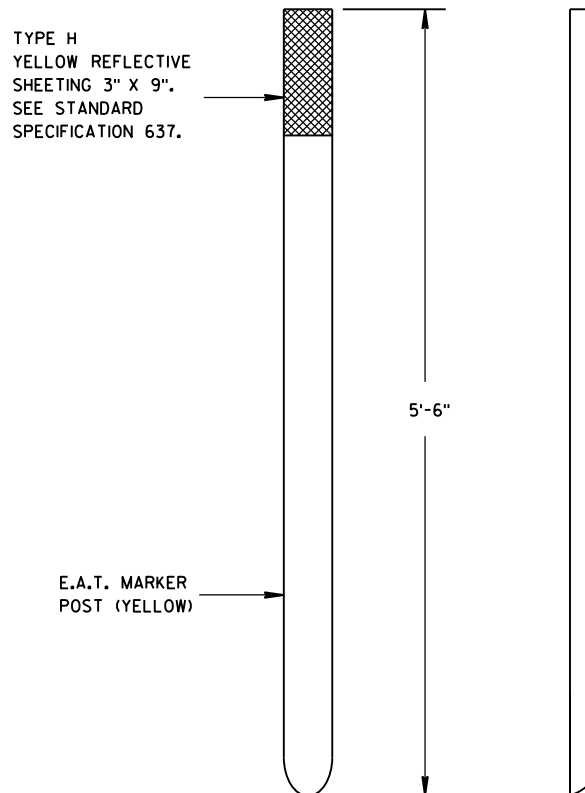
LOWER POST NO. 2⁽¹⁶⁾



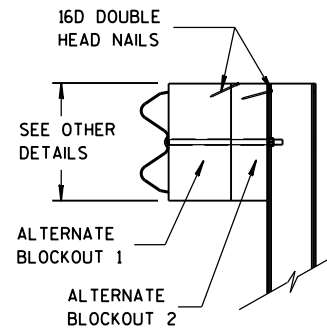
WOOD BLOCKOUT⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



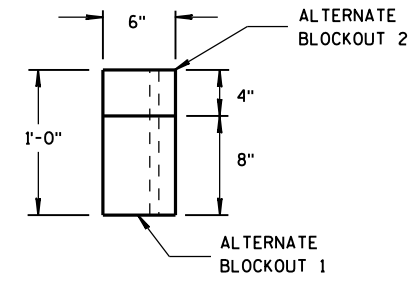
W5-59
REFLECTIVE SHEETING DETAIL^(H)



FRONT VIEW
SIDE VIEW
E.A.T. MARKER POST⁽¹³⁾

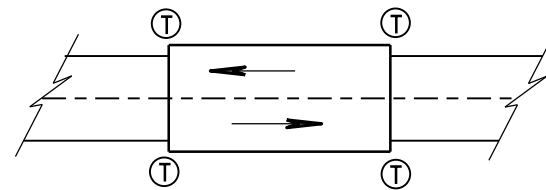


SIDE VIEW
ALTERNATE WOOD
BLOCKOUT DETAIL

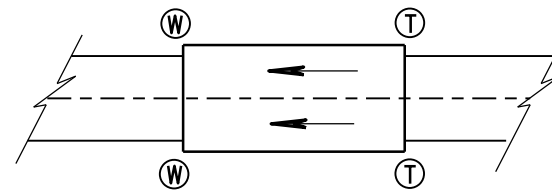


TOP VIEW

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	



TWO WAY TRAFFIC



ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

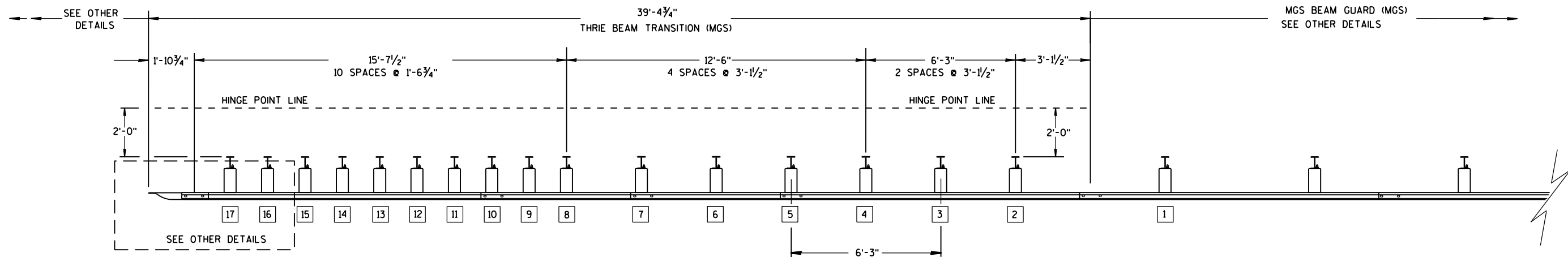
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

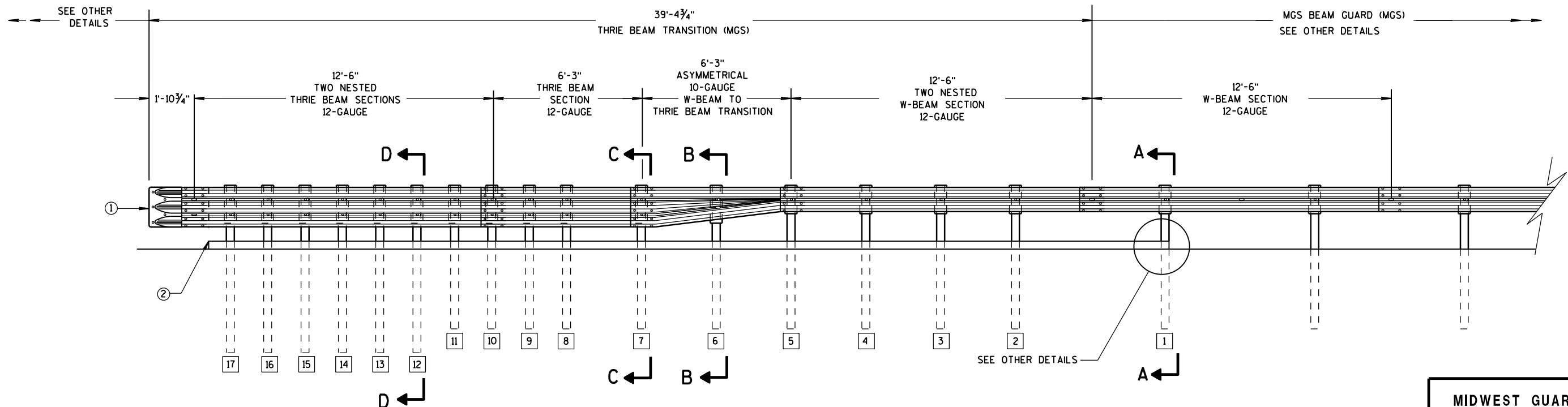
① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

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



PLAN VIEW



ELEVATION VIEW

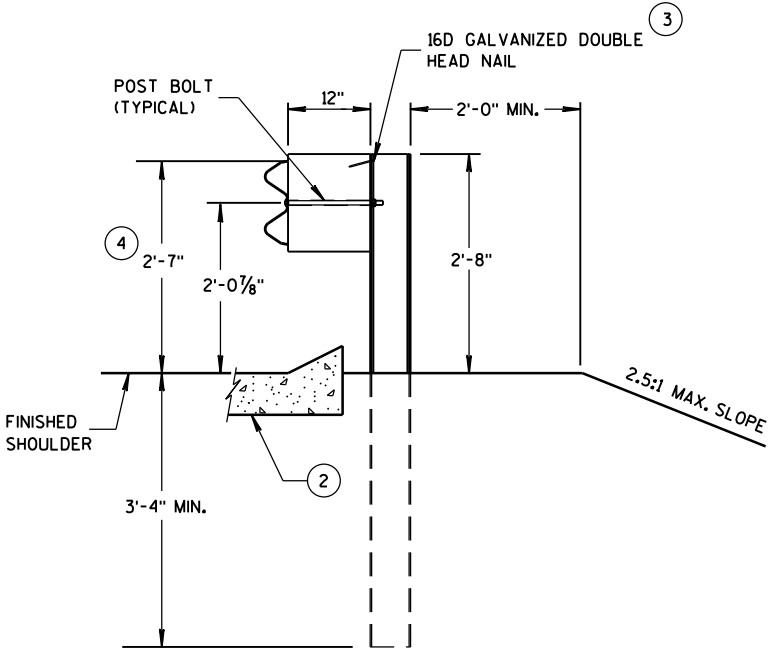
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

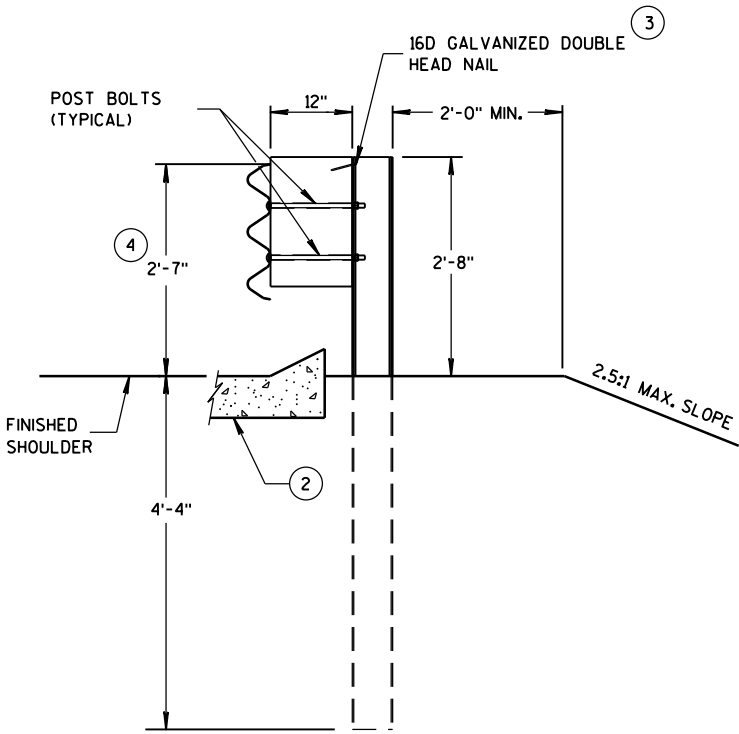
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

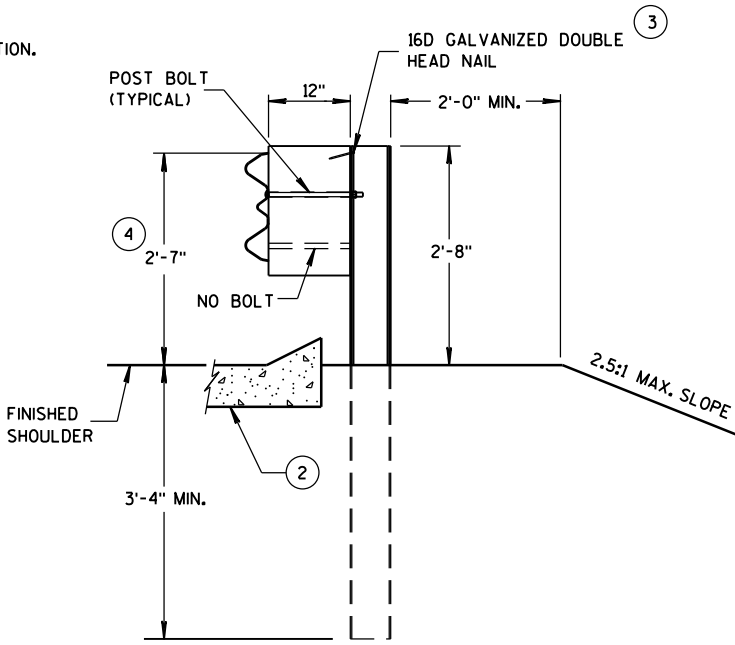
- 2 OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- 3 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- 4 TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm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



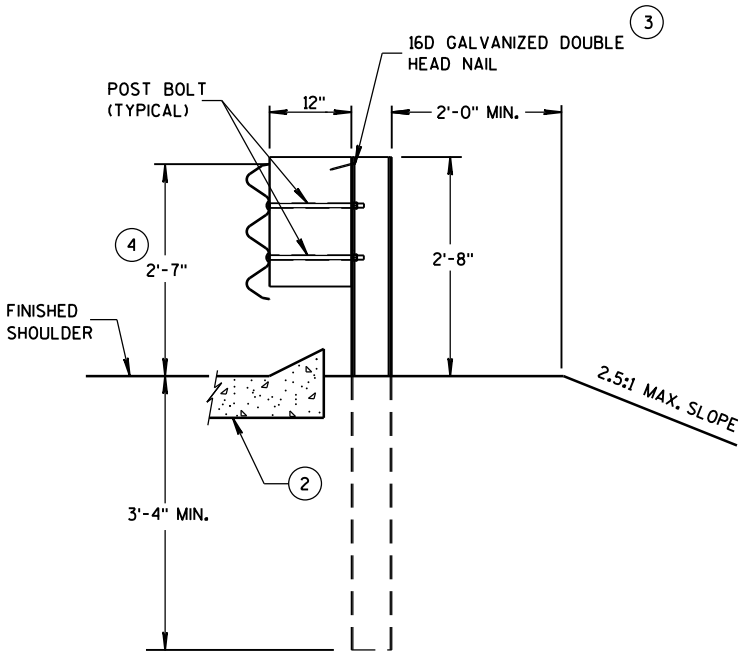
SECTION A-A
POSTS 1-5



SECTION D-D
POSTS 12-17



SECTION B-B
POST 6



SECTION C-C
POSTS 7-11

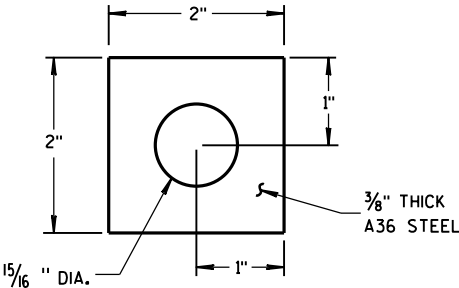
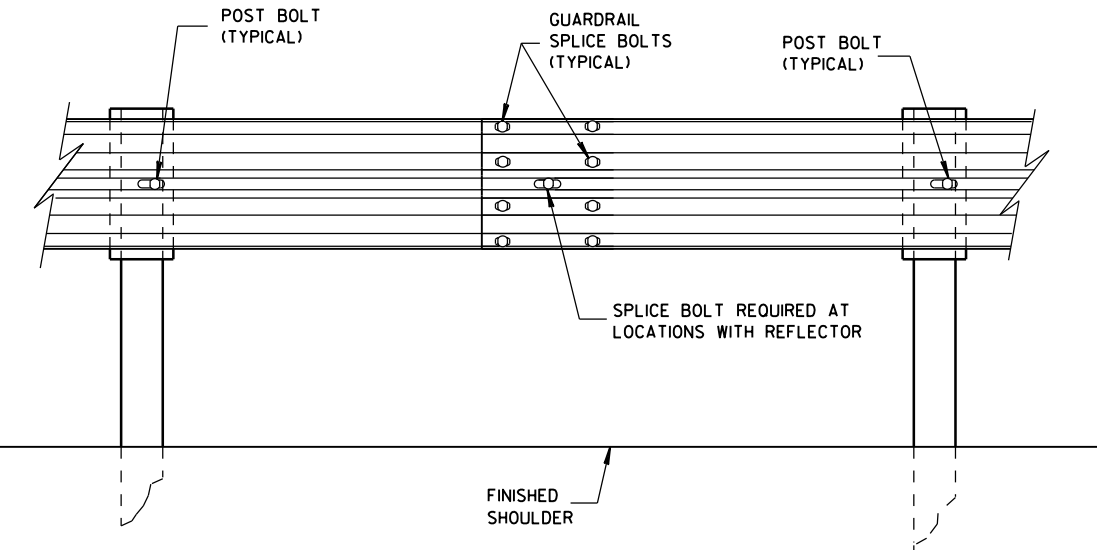
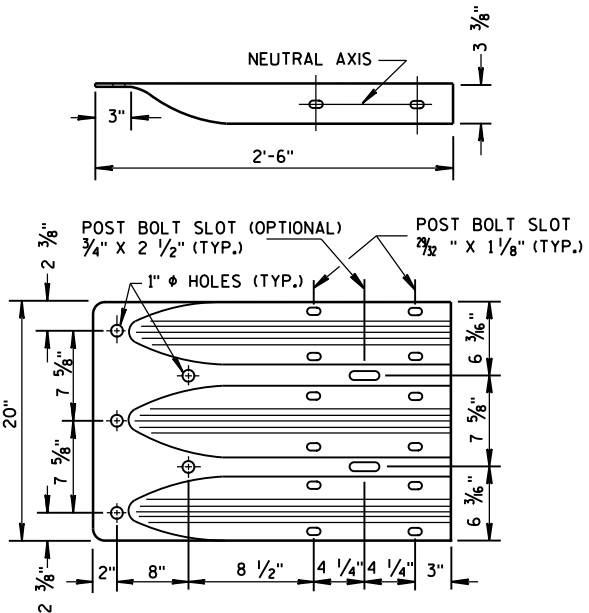


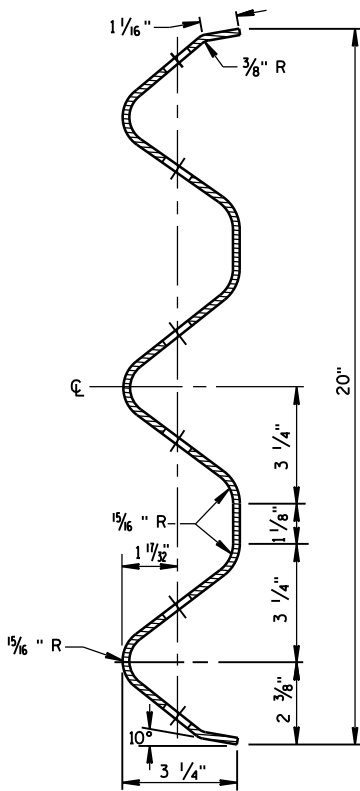
PLATE WASHER DETAIL



SPlice DETAIL



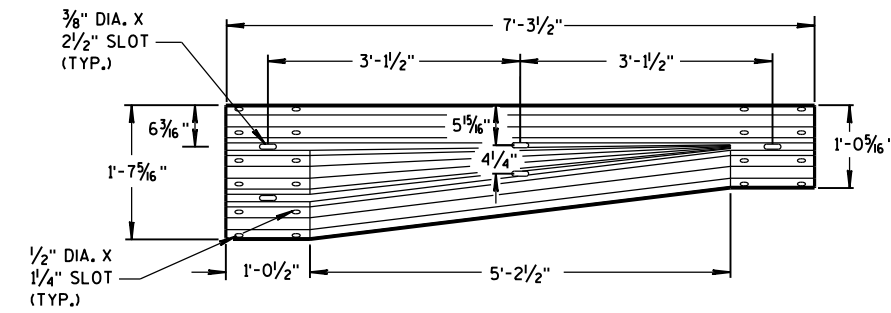
THRIE BEAM
TERMINAL CONNECTOR



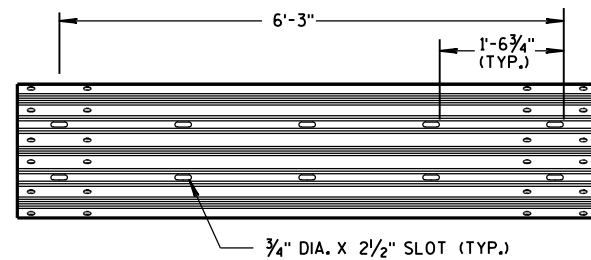
SECTION THRU THRIE
BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

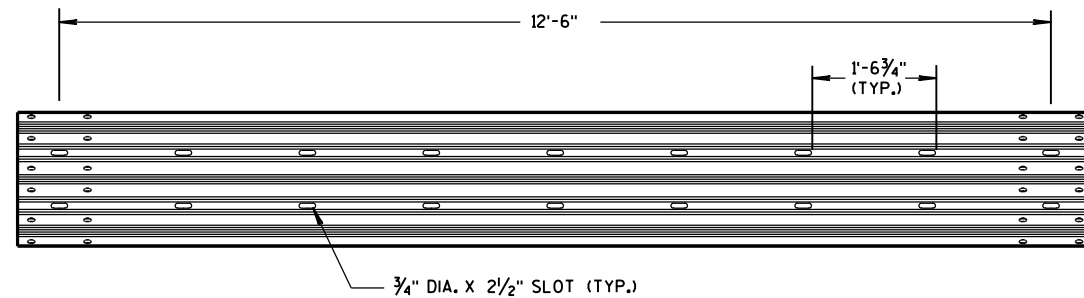
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



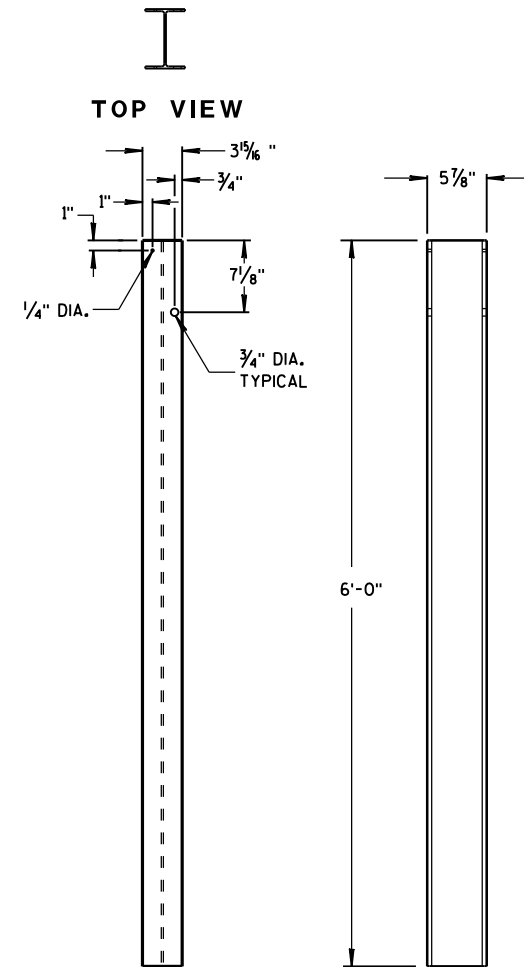
W-BEAM TO THRIE BEAM TRANSITION SECTION



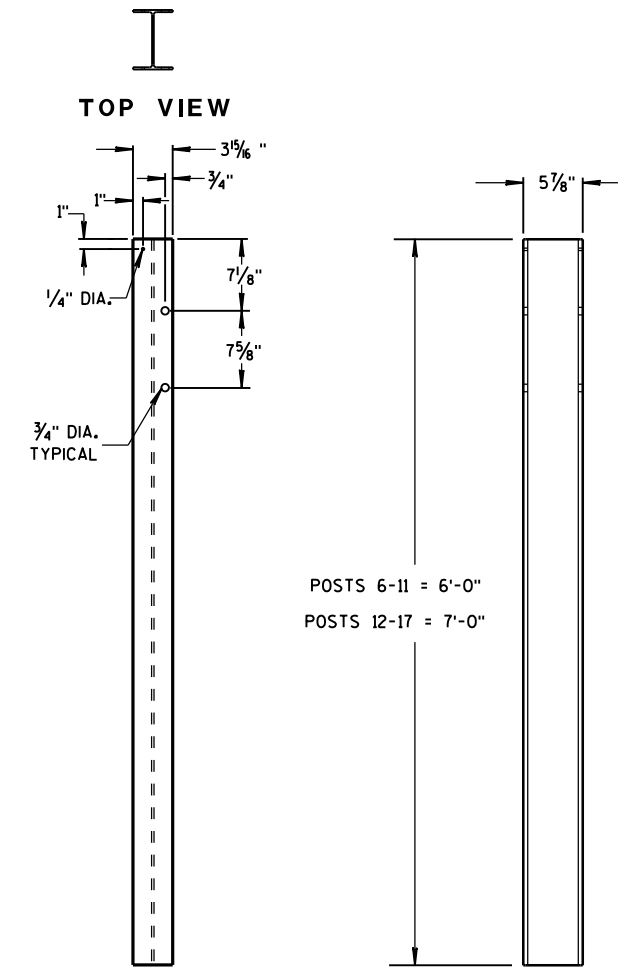
6'-3" THRIE BEAM SECTION



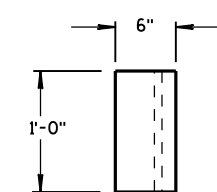
12'-6" THRIE BEAM SECTION



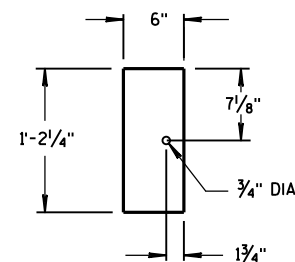
FRONT VIEW SIDE VIEW
STEEL POSTS 1-5



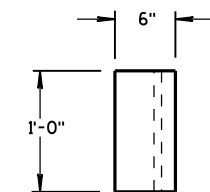
FRONT VIEW SIDE VIEW
STEEL POSTS 6-17



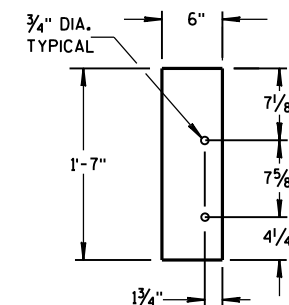
TOP VIEW



FRONT VIEW
BLOCKOUT
POSTS 1-5



TOP VIEW



FRONT VIEW
BLOCKOUT
POSTS 6-17

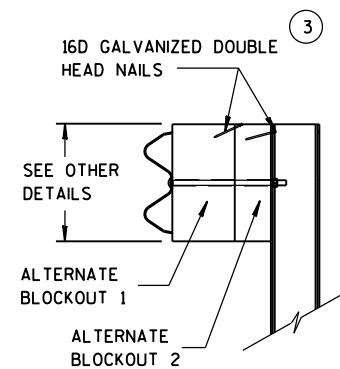
GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

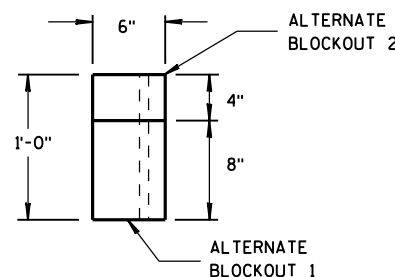
BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(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.



SIDE VIEW

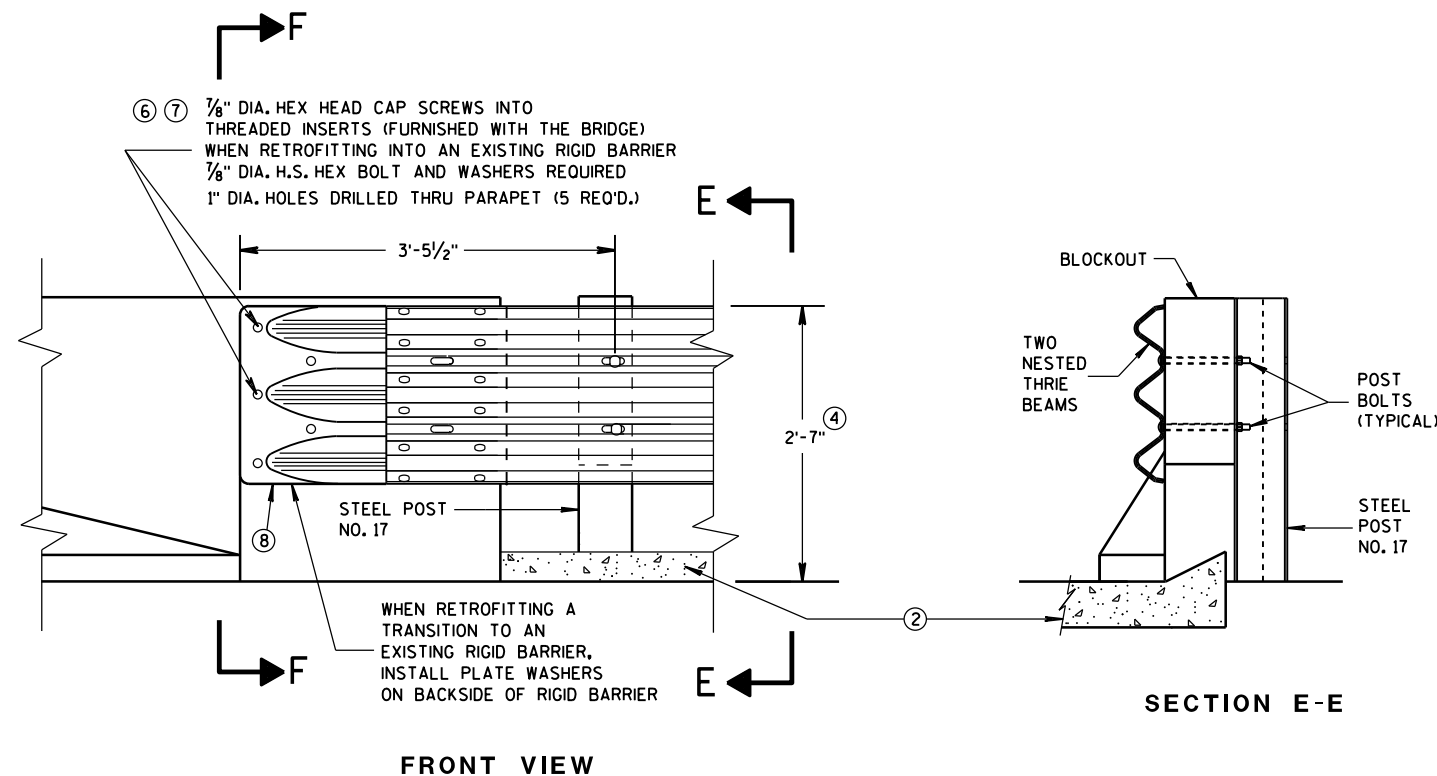


TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

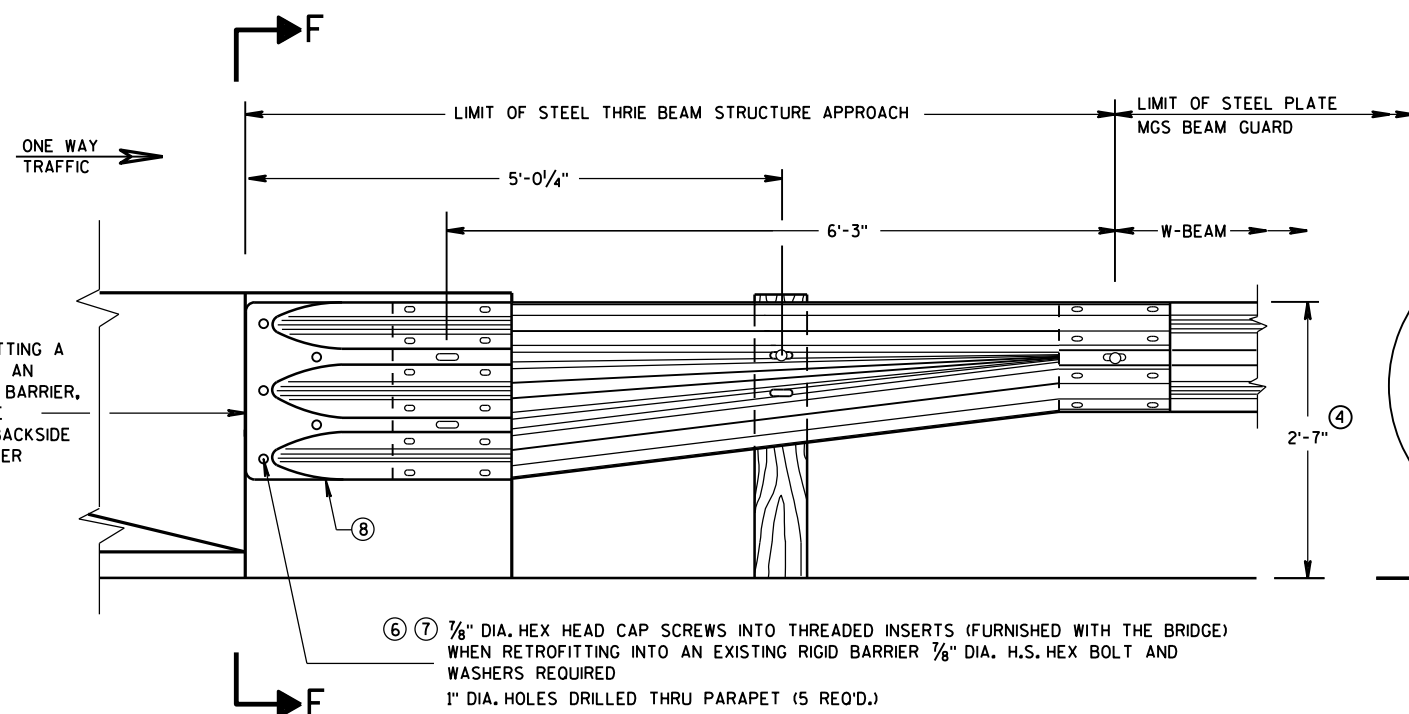
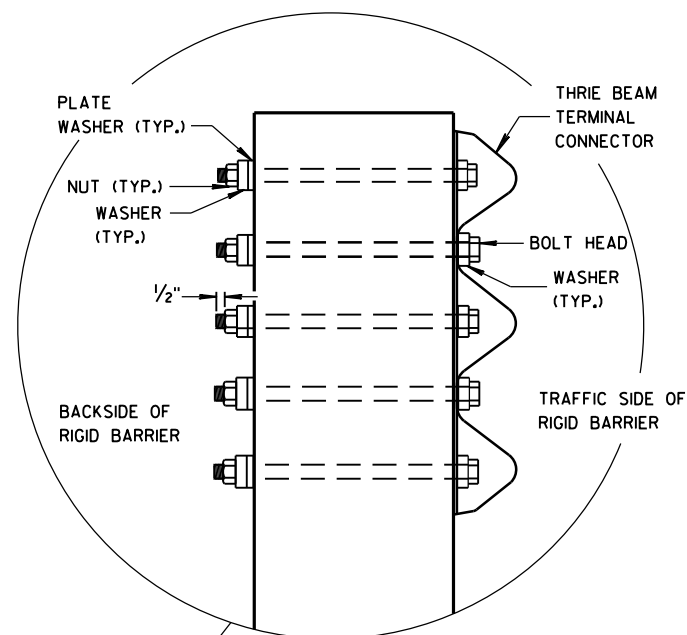


THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

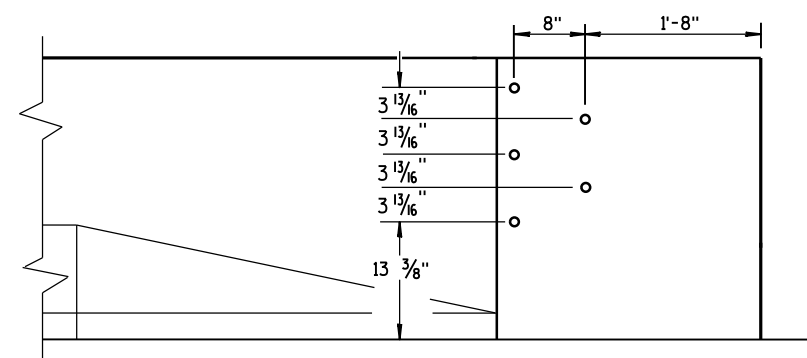
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

- 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 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".



W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

SECTION F-F



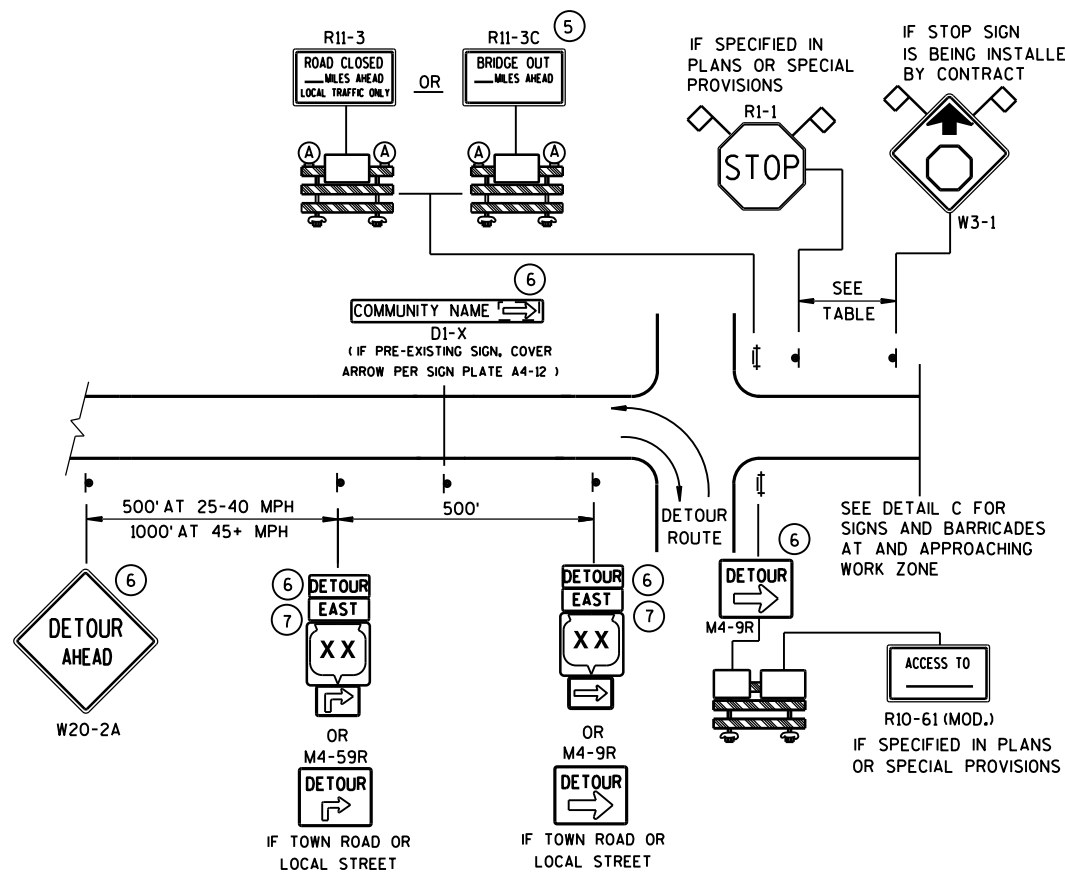
DRILL HOLE LOCATION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

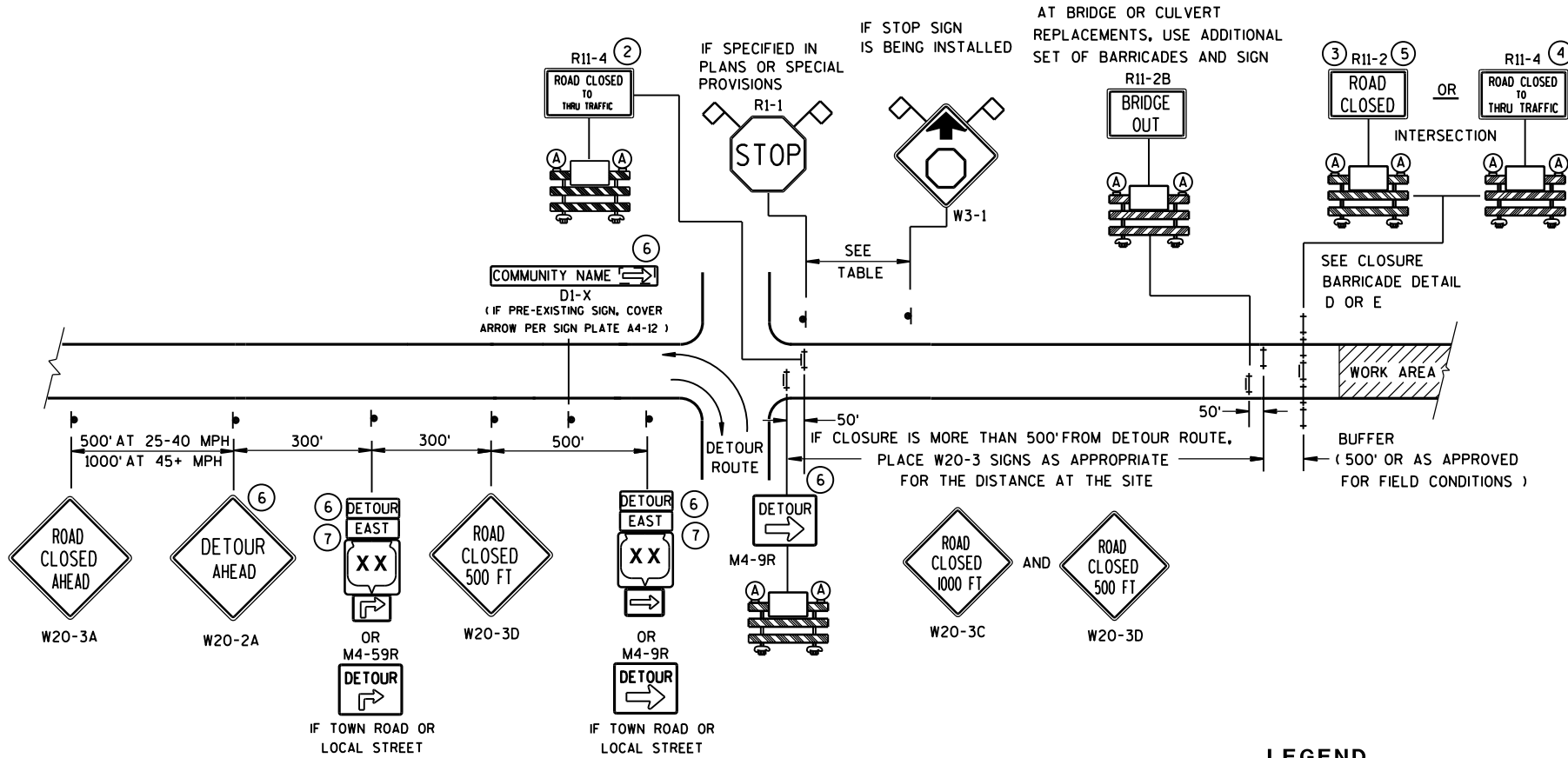
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
FHWA

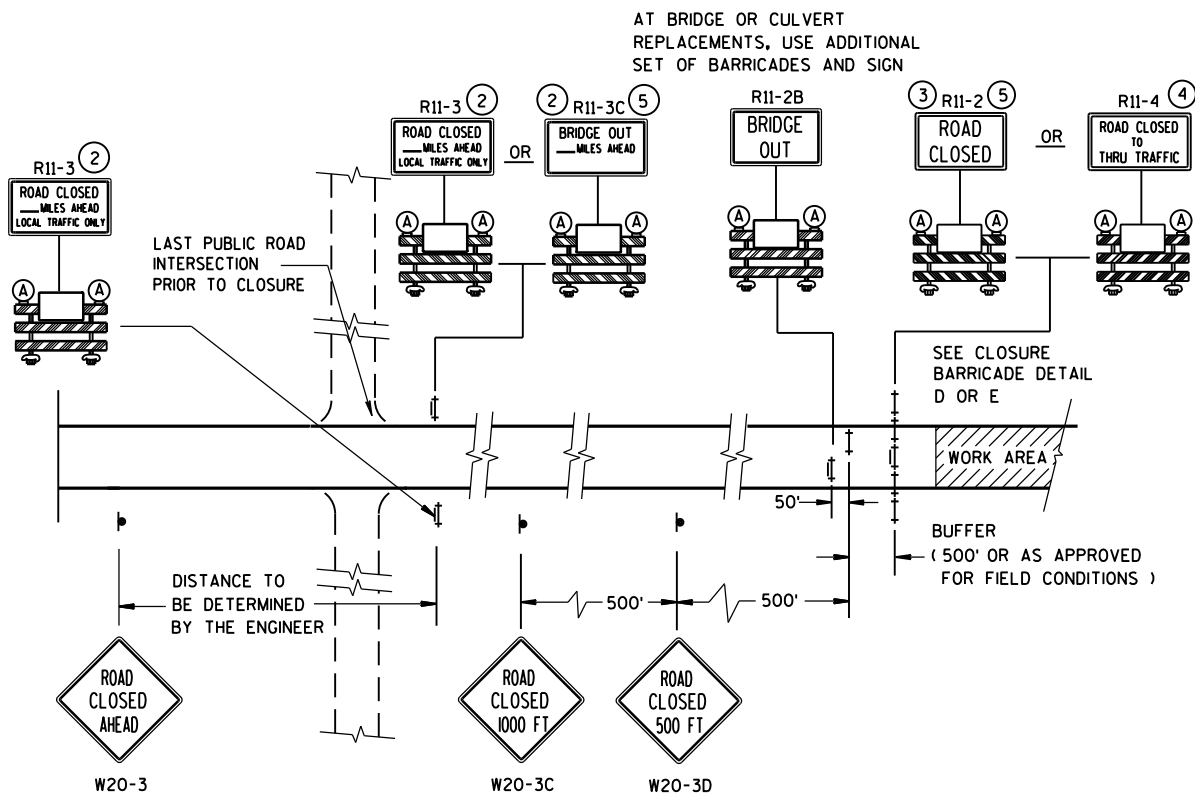
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

LEGEND

- SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- Ⓐ TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

DETOUR EAST M4-8 M3-X
XX OR COUNTY XX OR XX
M1-4 M1-5A M1-6

M05-1 OR M06-1

FLAGS, 16" X 16" MIN., (ORANGE)

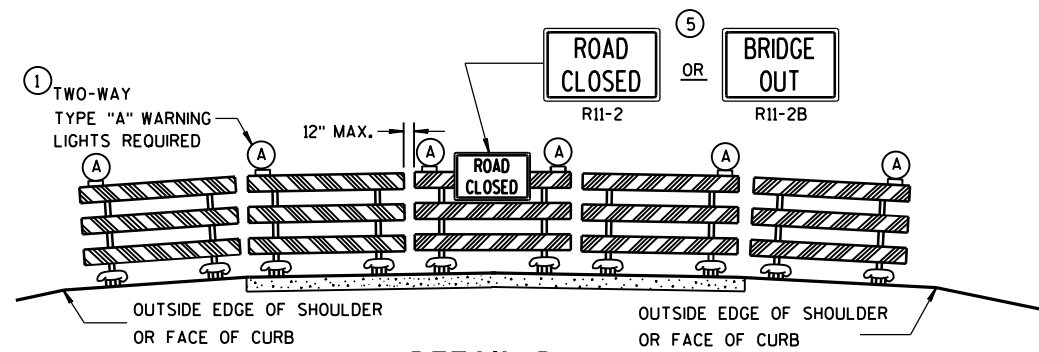
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

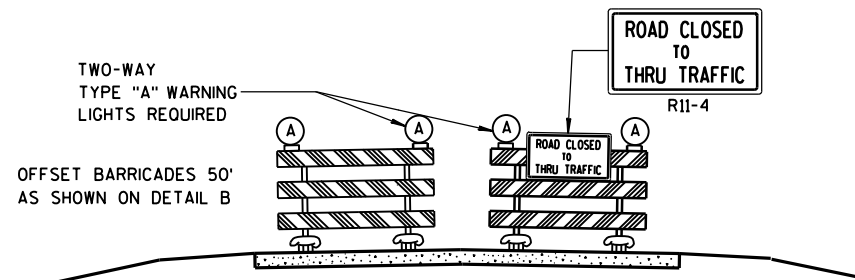
BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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.

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)

M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

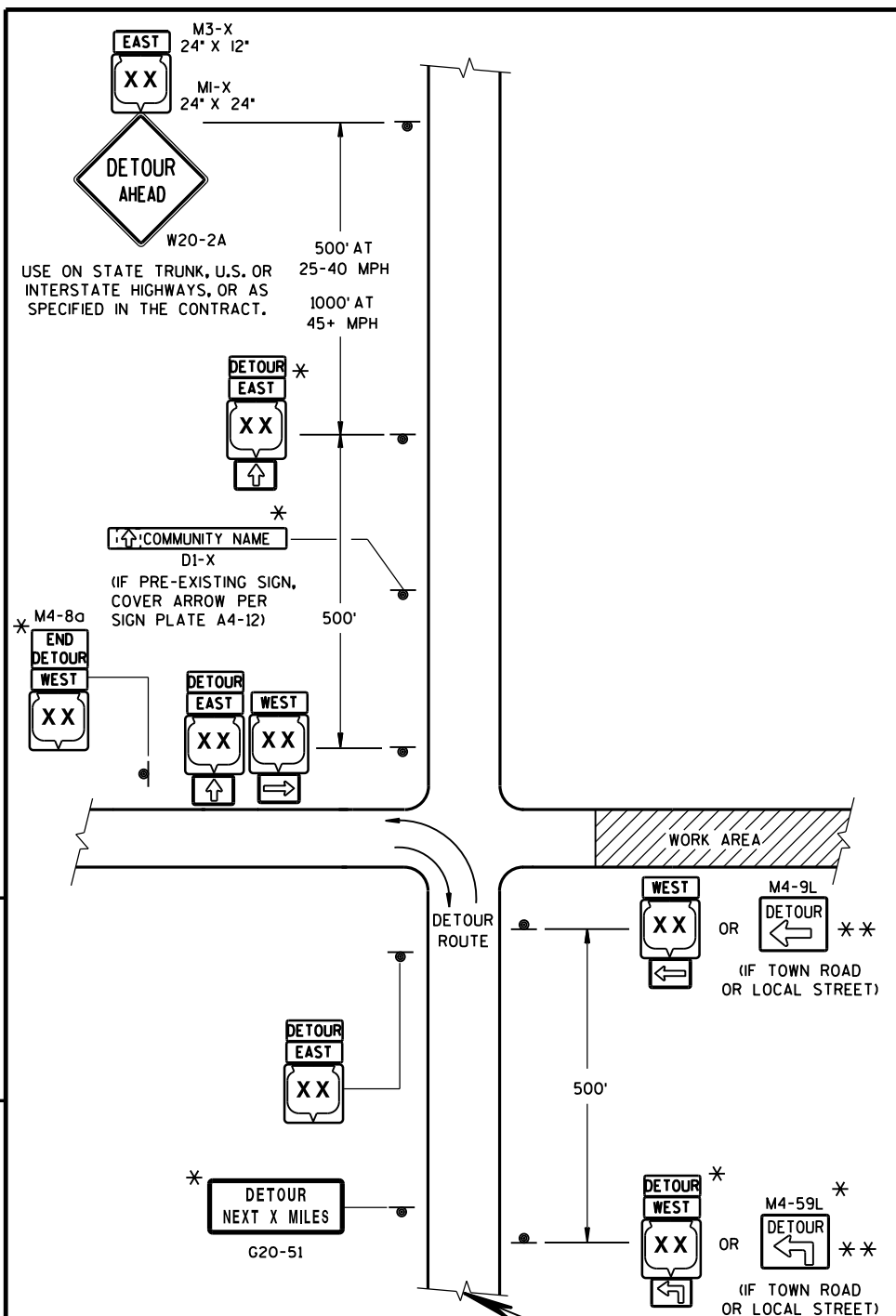
R1-1 SHALL BE 36" X 36".

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT

DETAIL F
DETOUR SIGNING

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS, MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR 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.

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

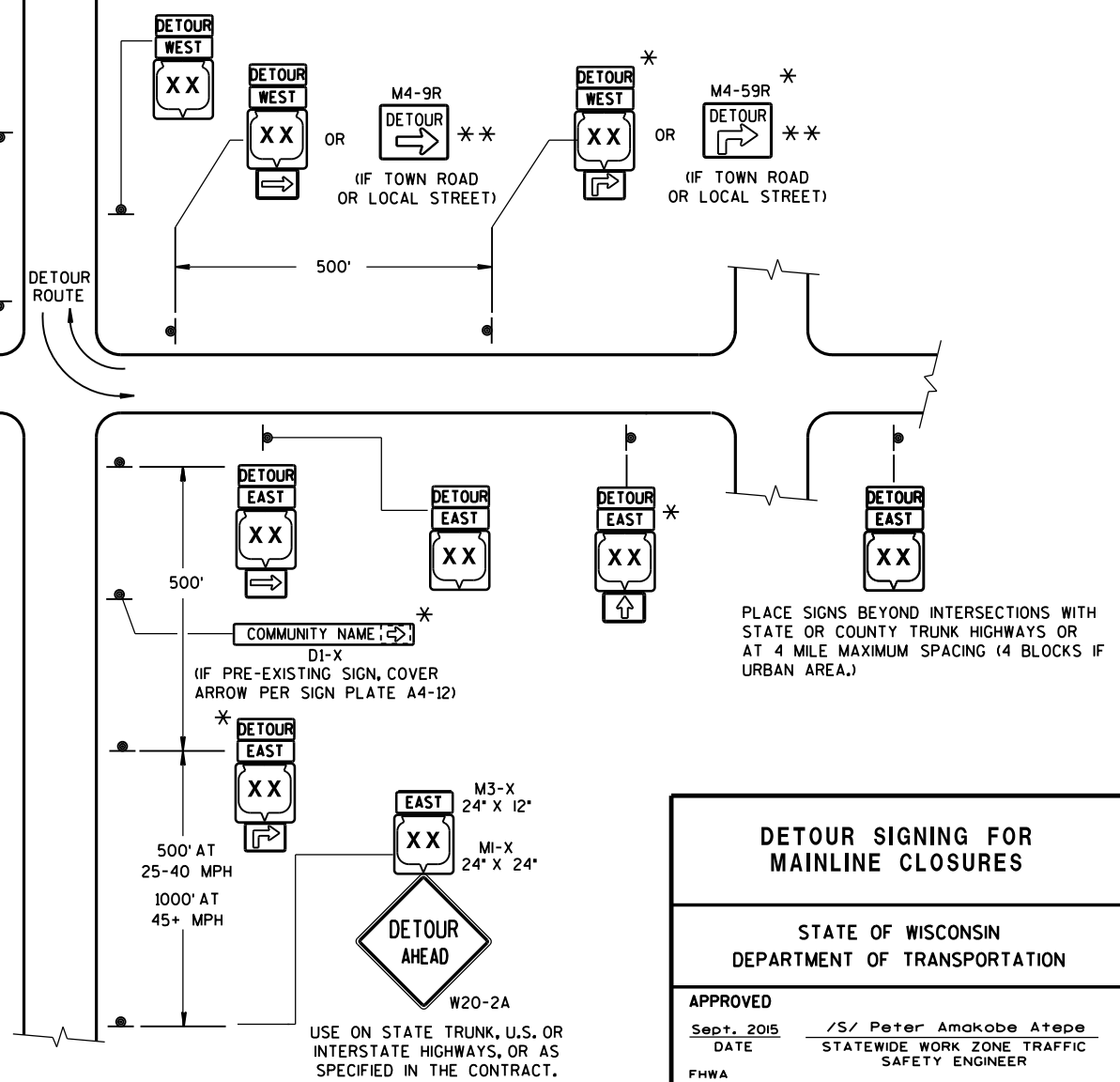
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

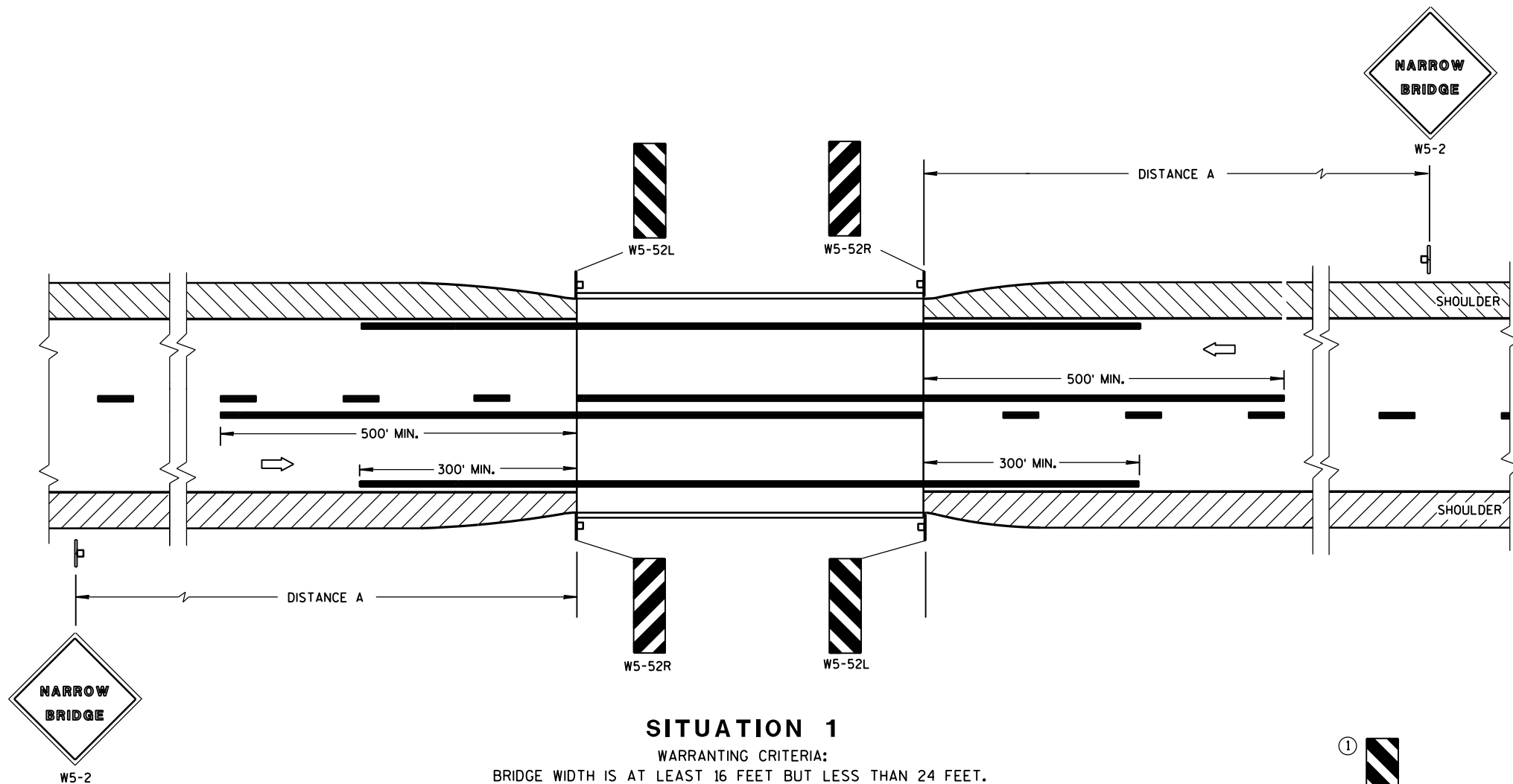
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE FWHA	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER



SITUATION 1

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

DISTANCE TABLE

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

GENERAL NOTES

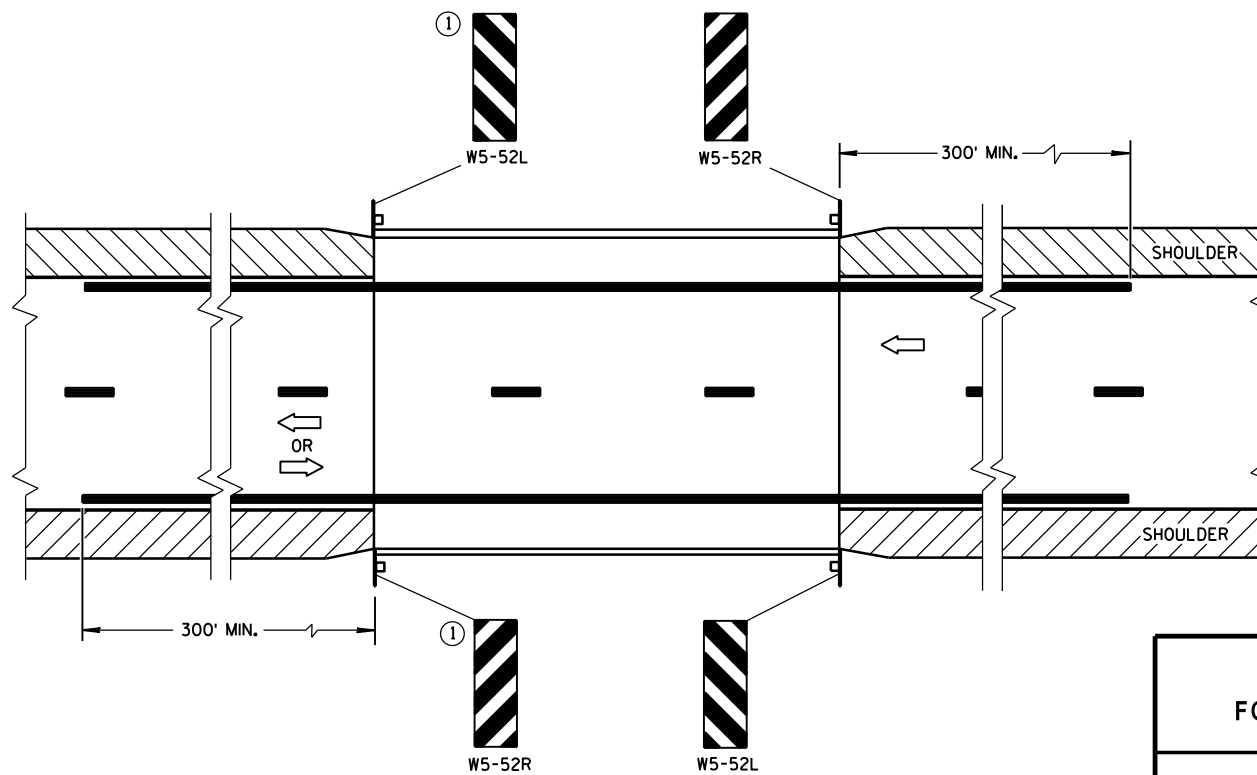
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

① OMIT ON ONE-WAY TRAVELLED WAYS.

➡ DIRECTION OF TRAFFIC



SITUATION 2

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

SIGNING & MARKING FOR TWO LANE BRIDGES

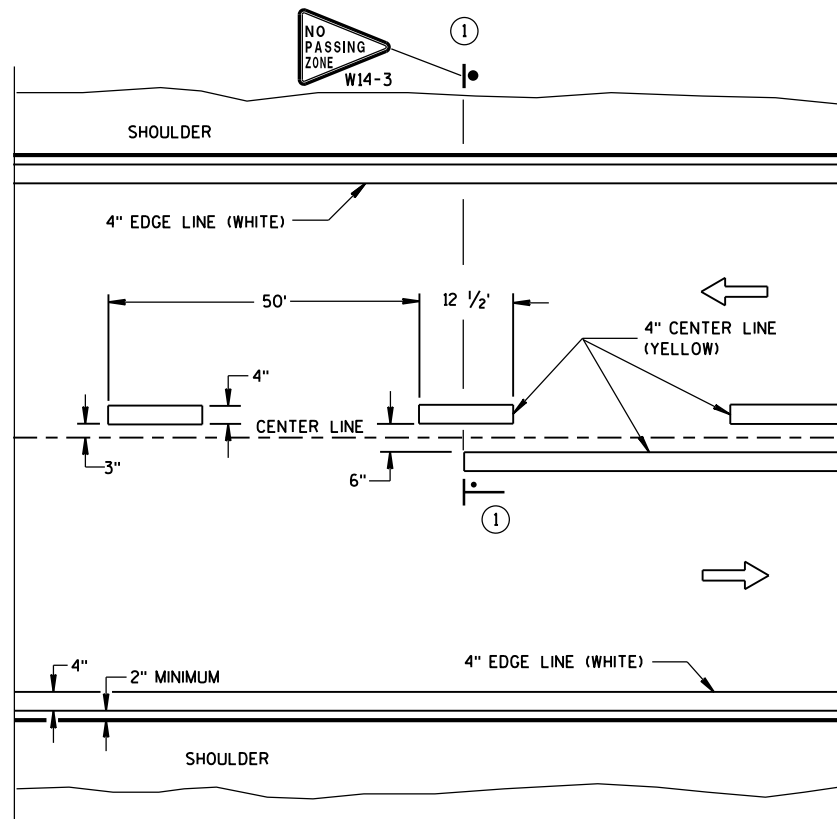
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

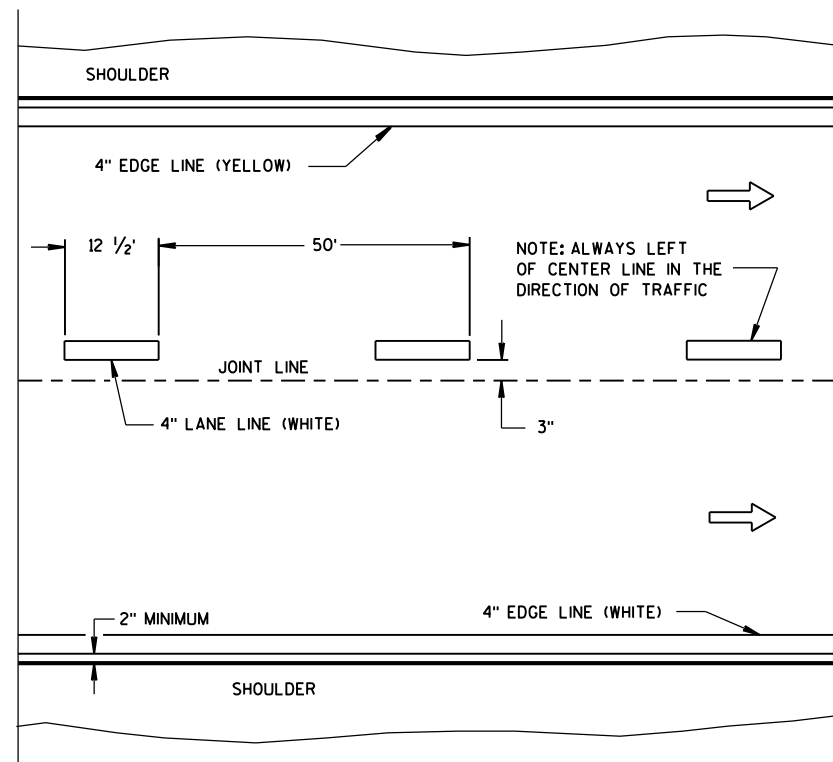
June 2017
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

FHWA

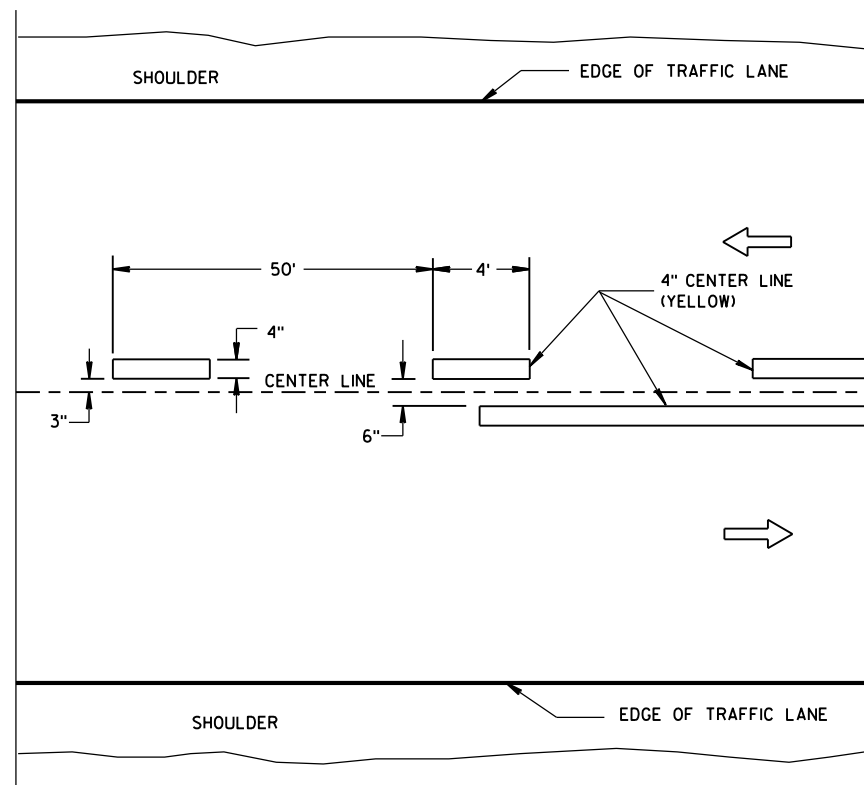


TWO WAY TRAFFIC

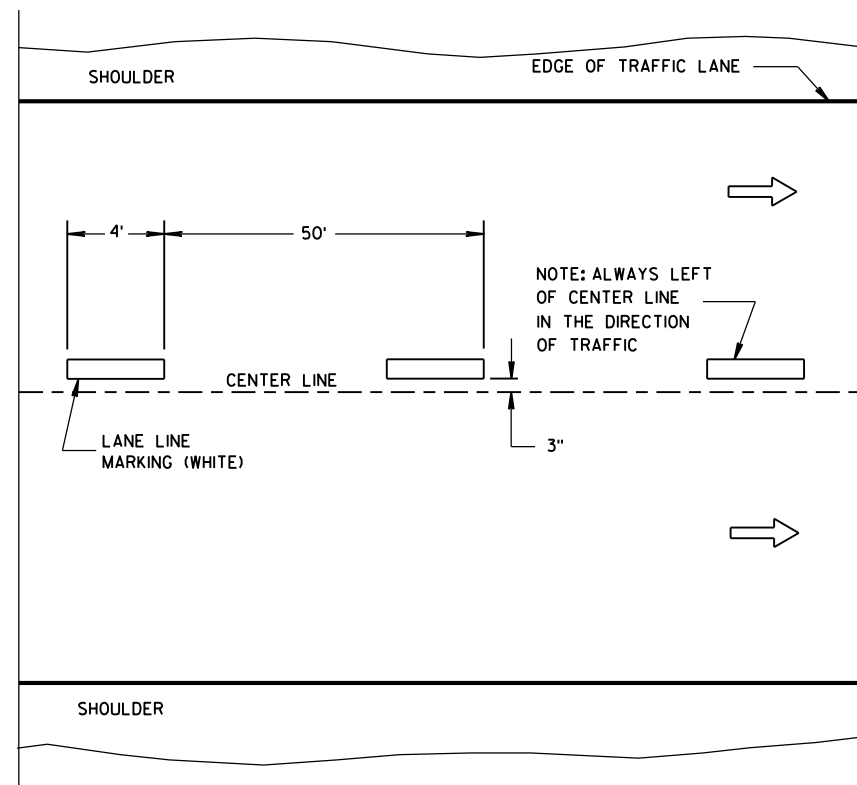


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

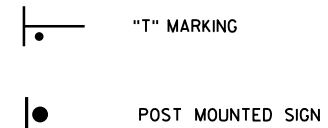
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

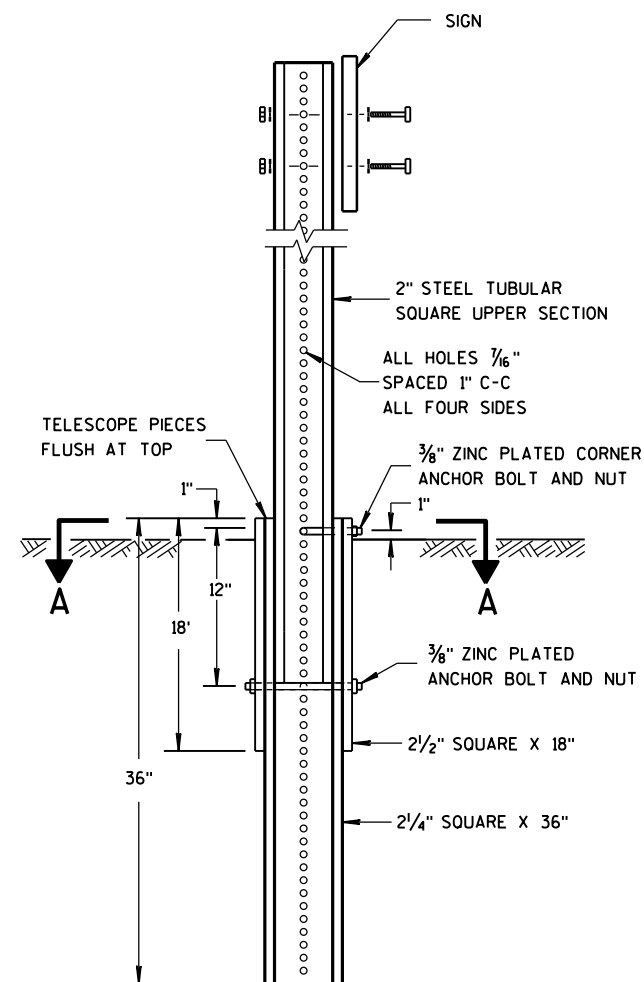
LEGEND



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

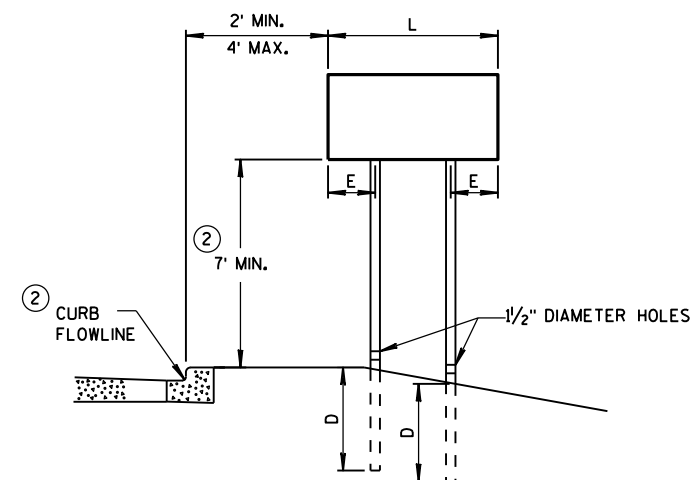
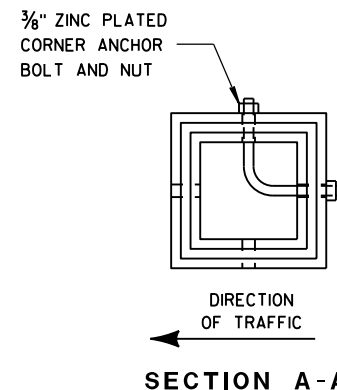


DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

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

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

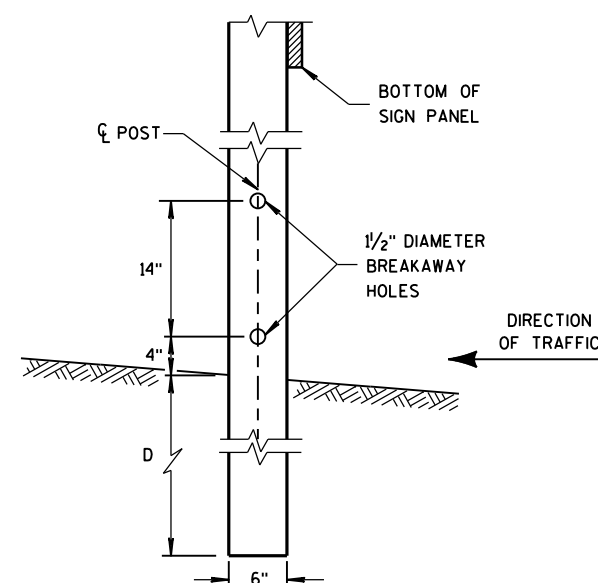


URBAN AREA

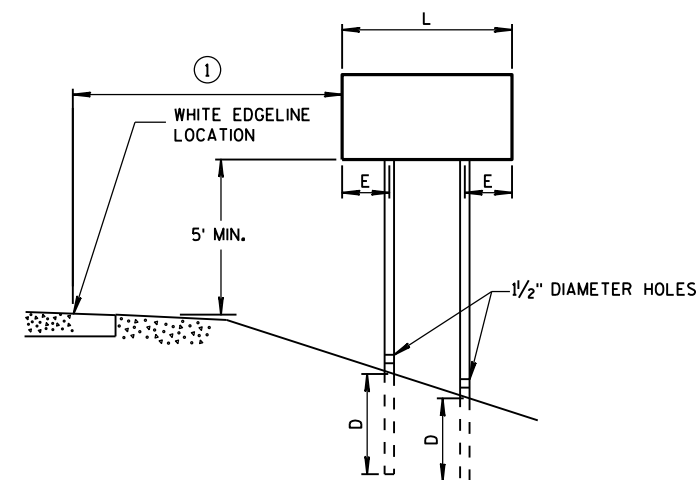
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH

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



4 "x6 " WOOD POST MODIFICATION



RURAL AREA

4 " X 6 " WOOD POST

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

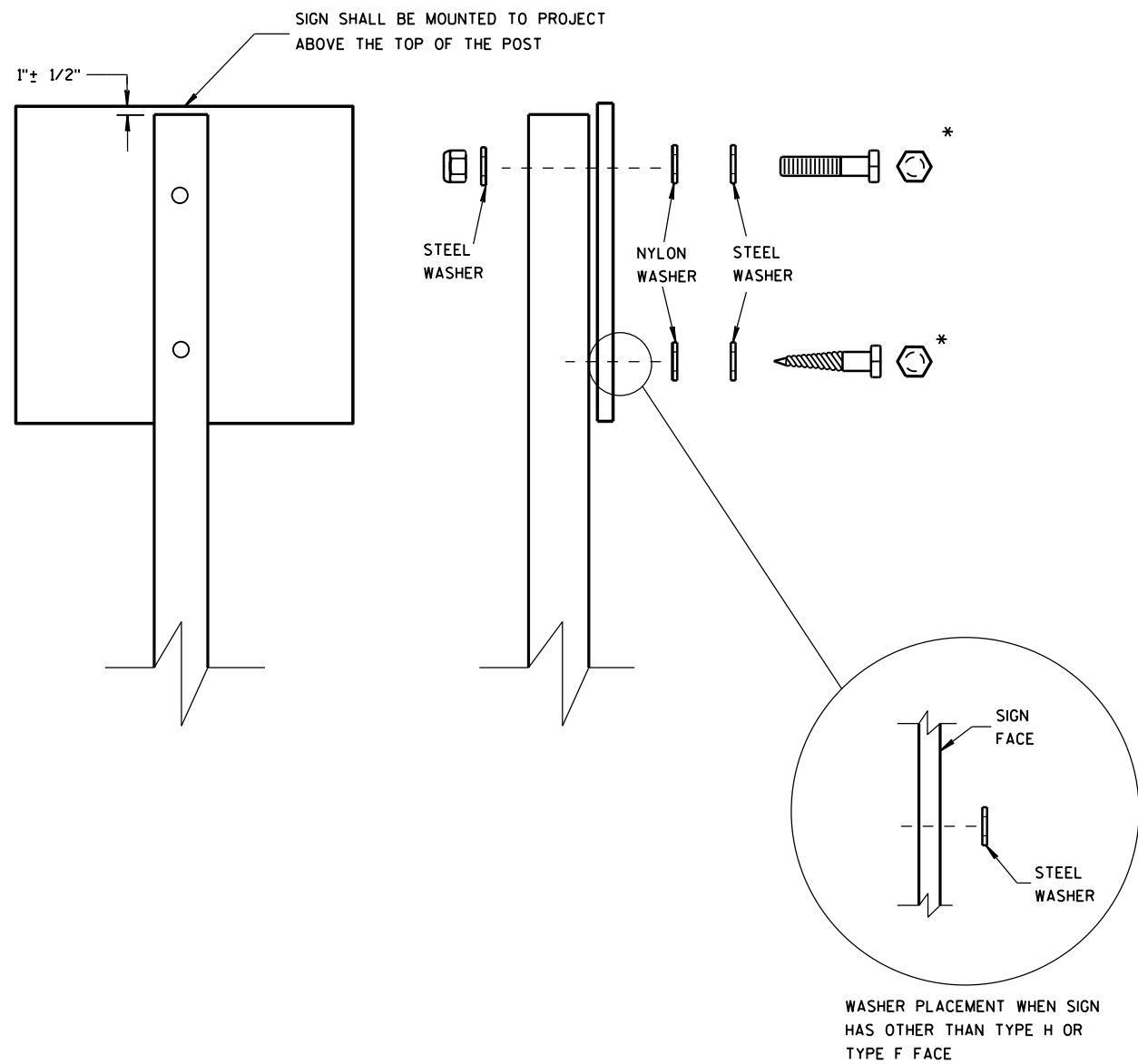
SEE NOTE ③

GENERAL NOTES

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

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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

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

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

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

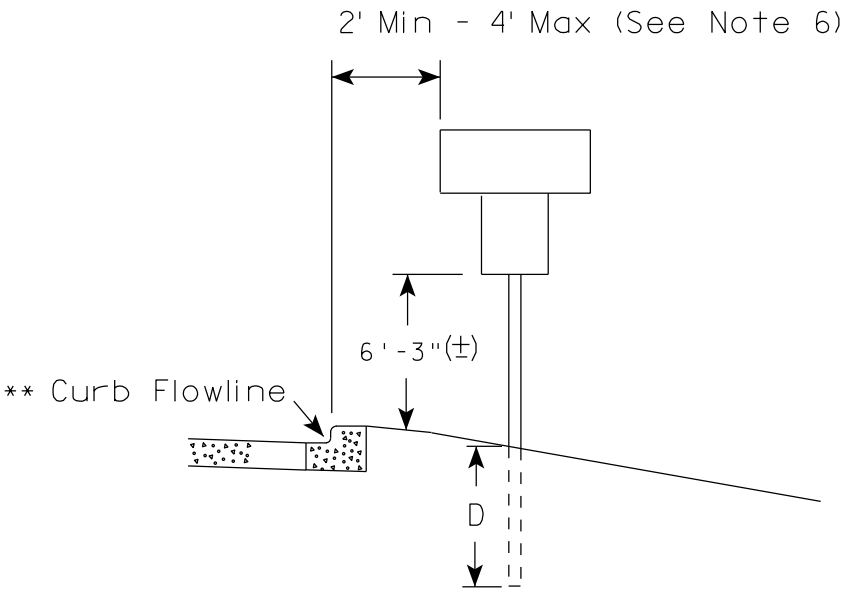
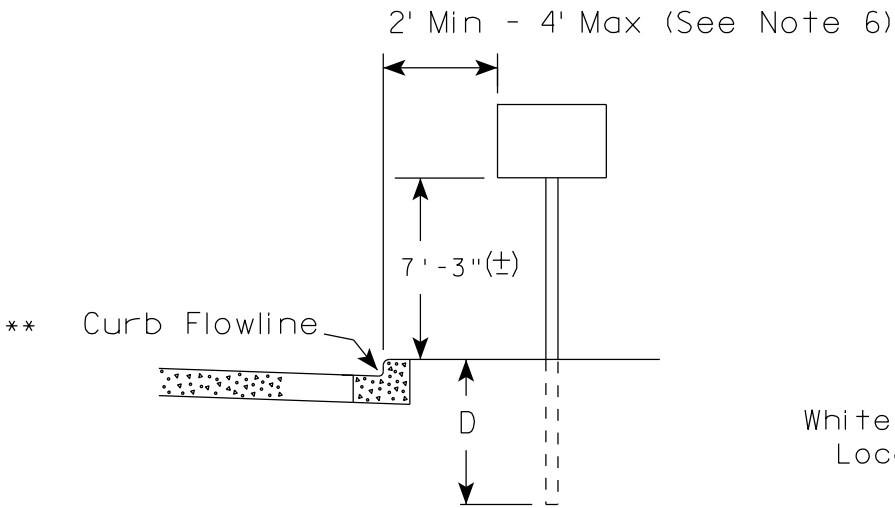
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

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

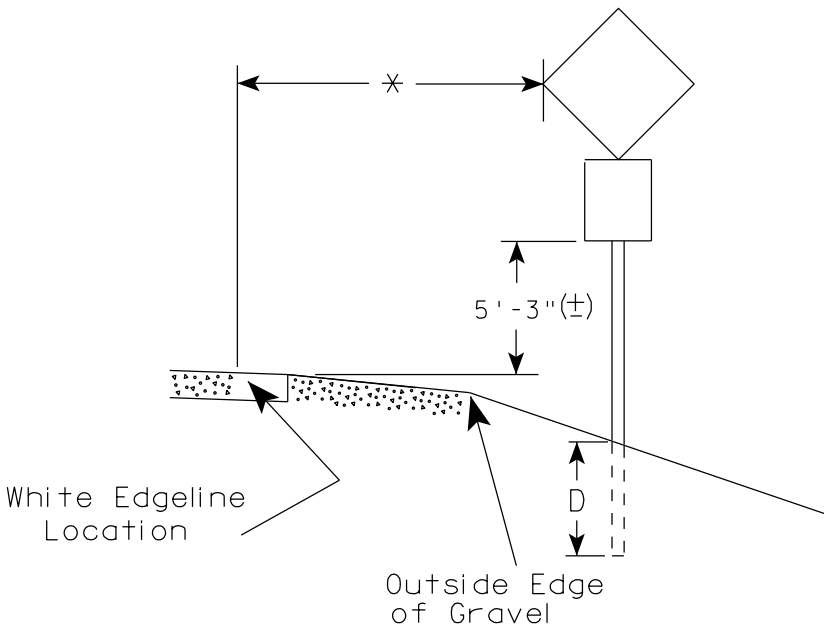
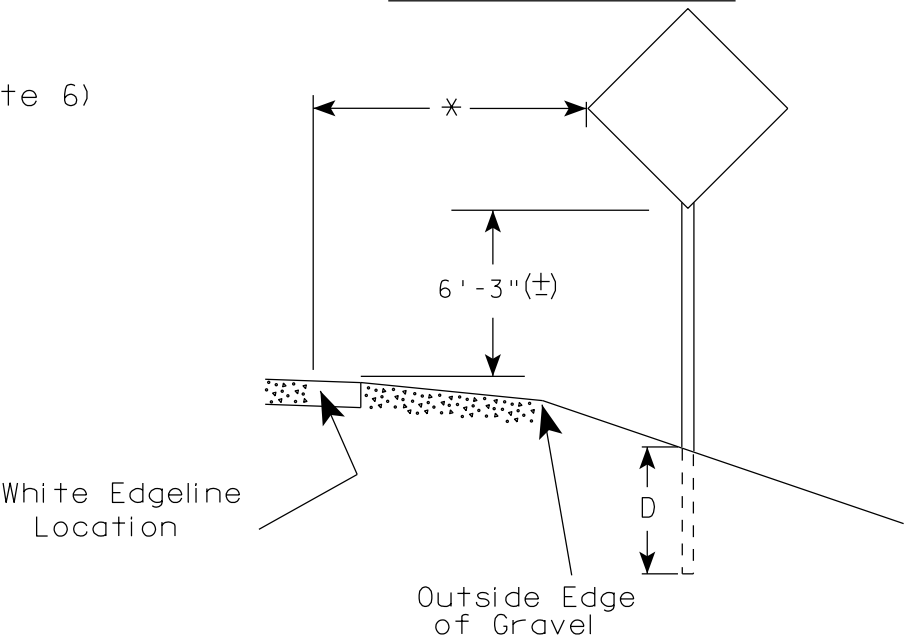
* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

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

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

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

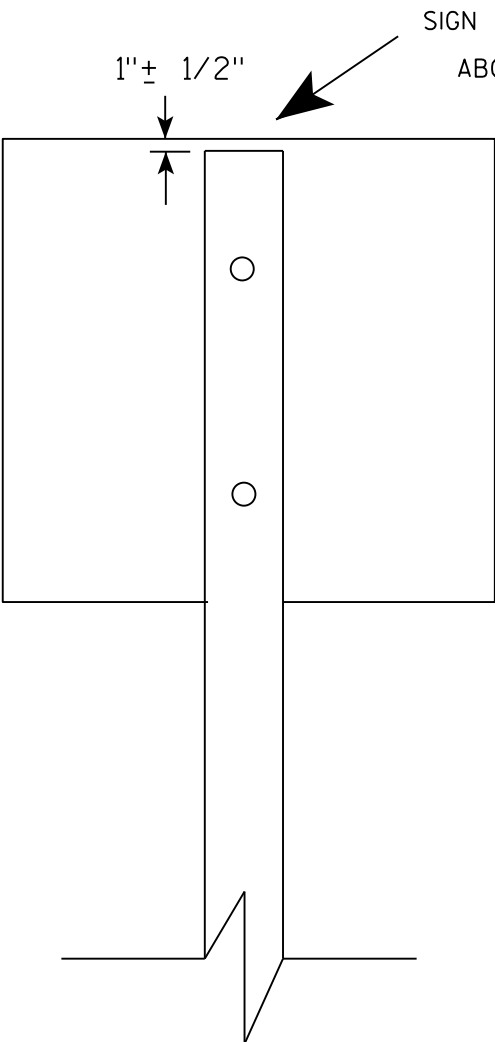
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

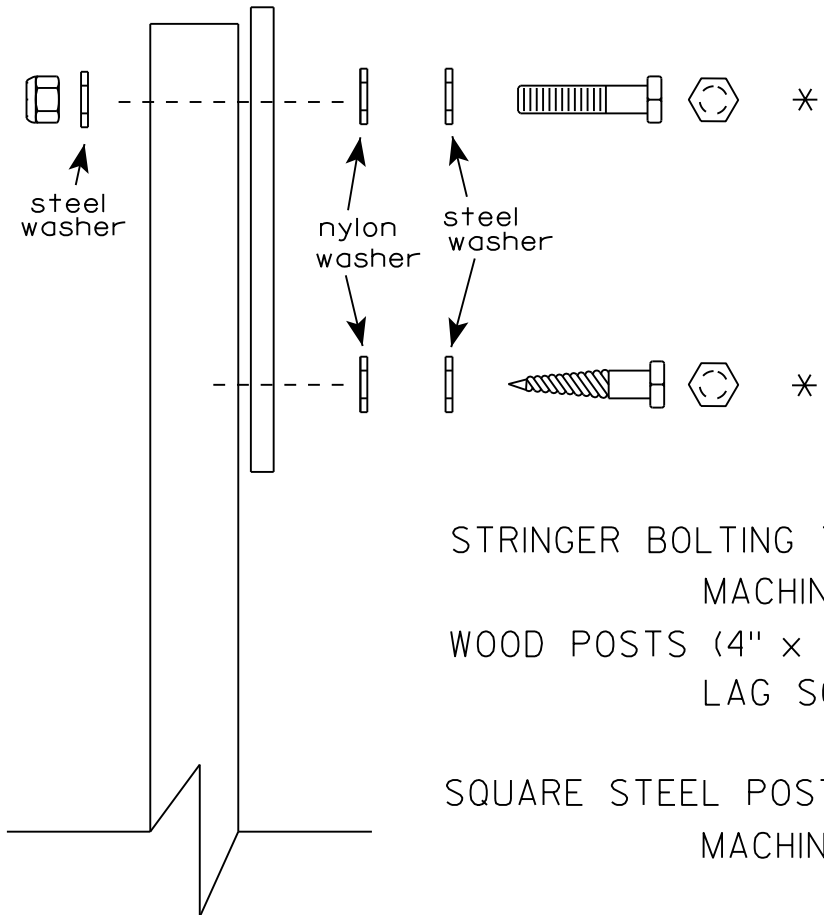
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

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



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



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

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

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

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

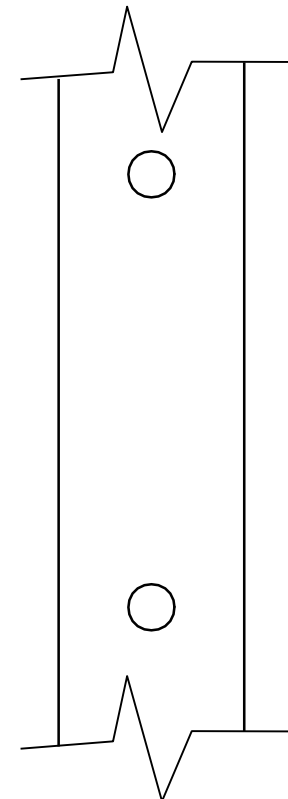
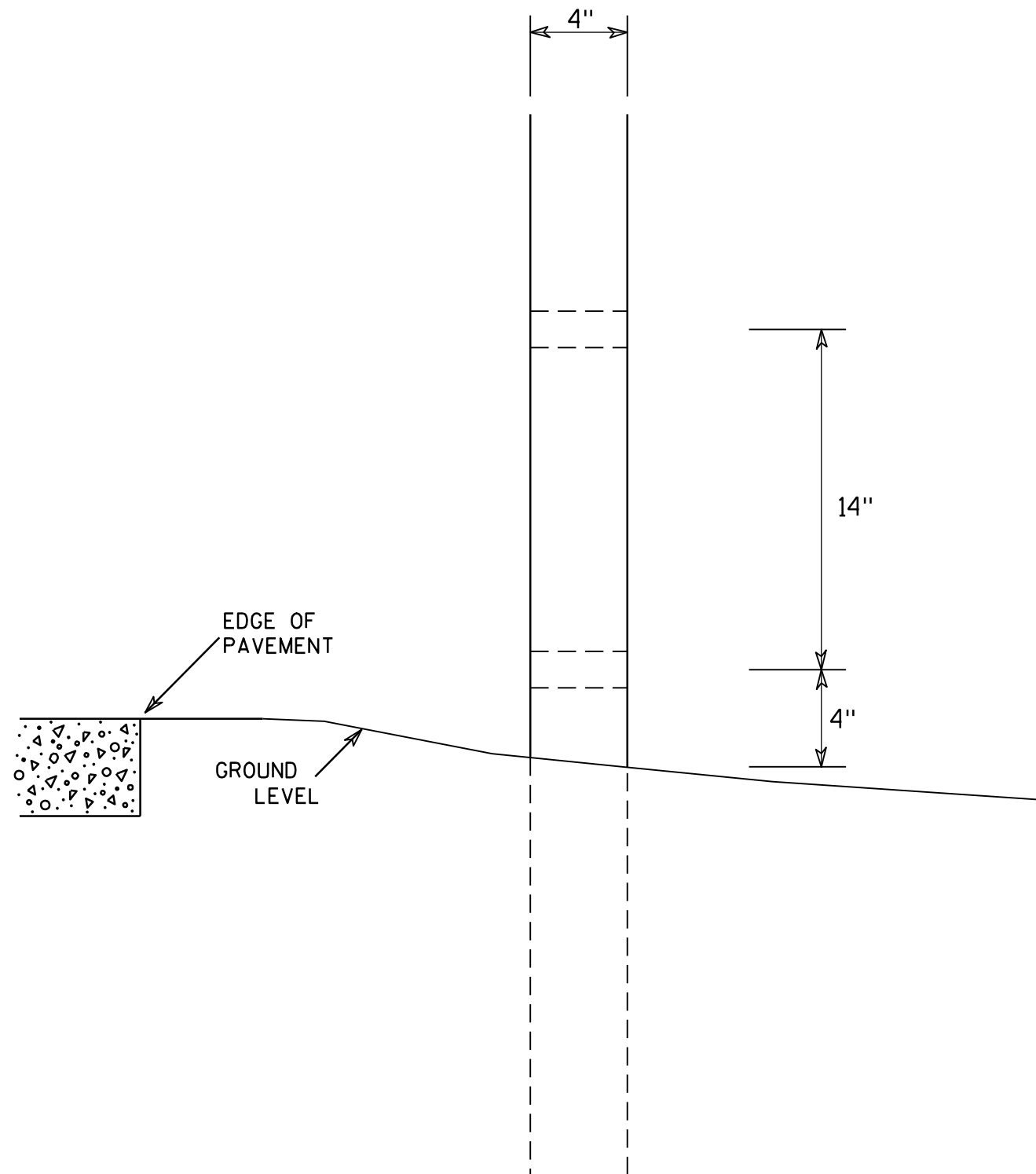
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS
TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8



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

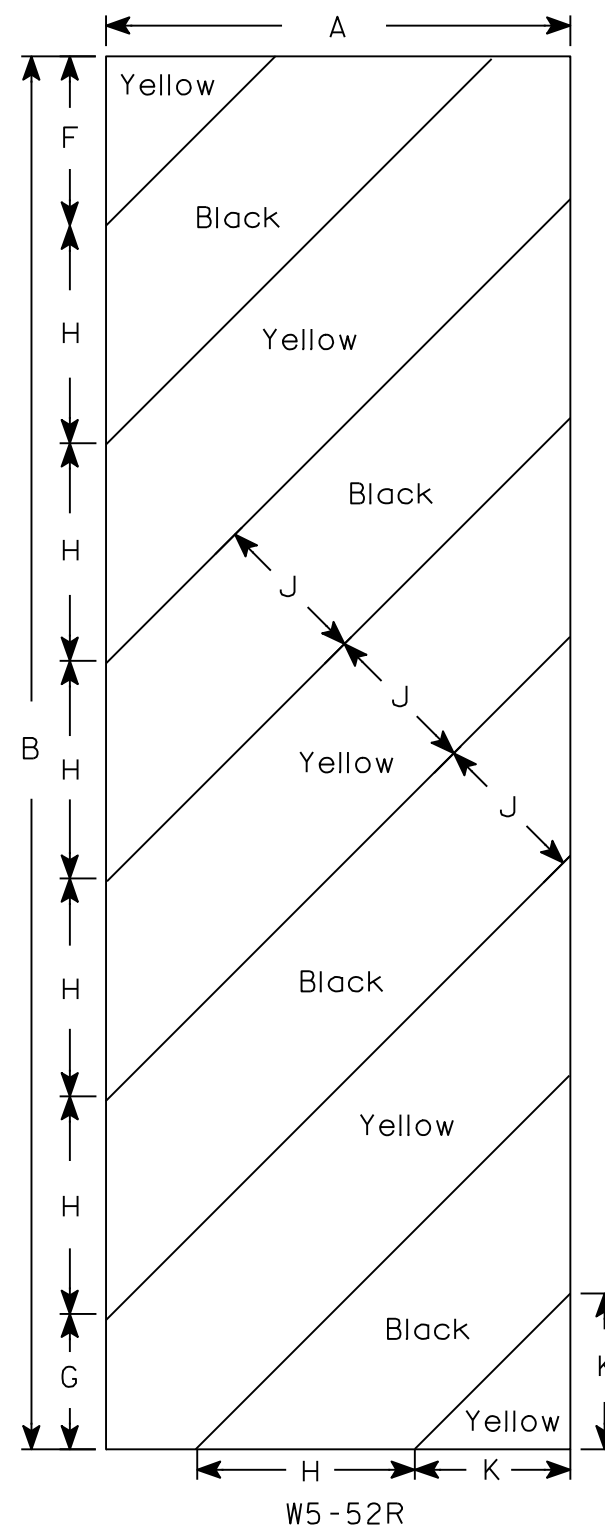
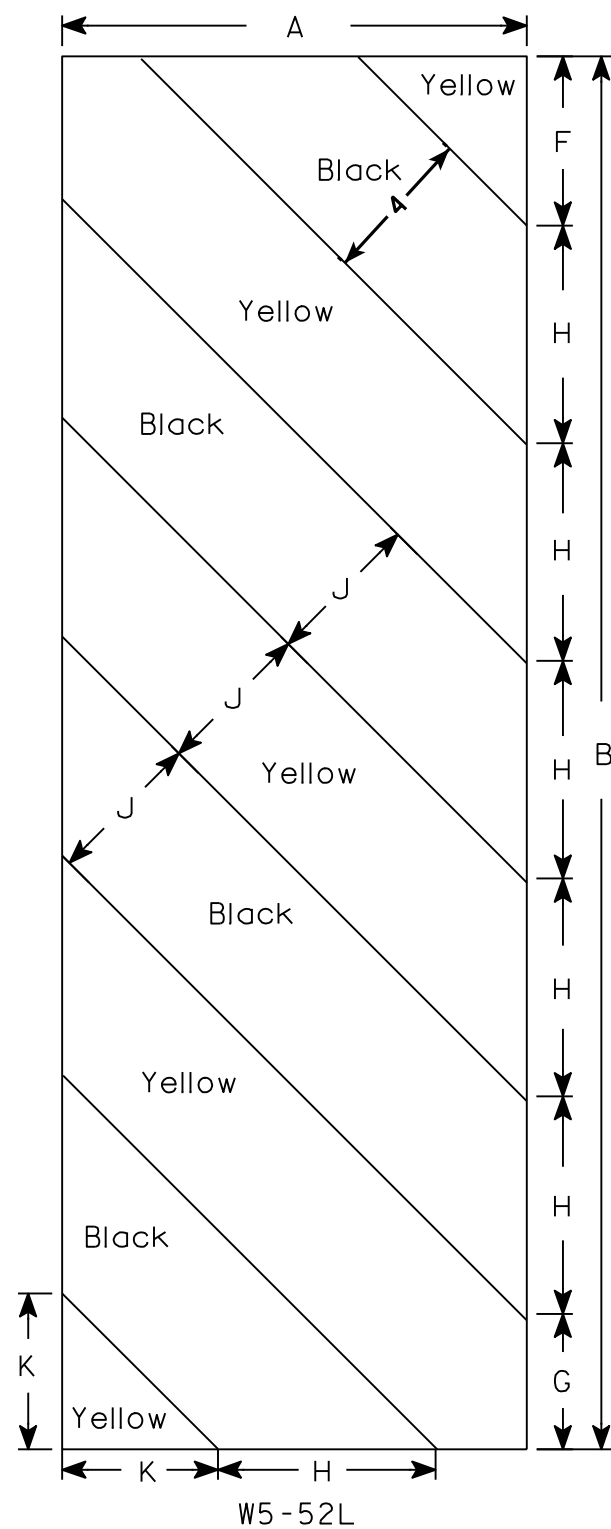
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

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

[illegible]

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

LIVE LOAD:

MATERIAL PROPERTIES:

FOUNDATION DATA

SOUTH ABUTMENT TO BE SUPPORTED ON 10 $\frac{3}{4}$ " DIA CIP PILES
(0.25" SHELL THICKNESS) WITH A REQUIRED DRIVING RESISTANCE
OF 80 TONS* PER PILE AS DETERMINED BY THE MODIFIED GATES
DYNAMIC EQUATION. ESTIMATED 55'-LONG.

NORTH ABUTMENT TO BE SUPPORTED ON 10 3/4" DIA CIP PILES
(0.25" SHELL THICKNESS) WITH A REQUIRED DRIVING RESISTANCE
OF 130 TONS* PER PILE AS DETERMINED BY THE MODIFIED GATES
DYNAMIC EQUATION. ESTIMATED 55'-LONG.

PIER TO BE SUPPORTED ON 12 $\frac{3}{4}$ " DIA CIP PILES
(0.25" SHELL THICKNESS) WITH A REQUIRED DRIVING RESISTANCE
OF 160 TONS* PER PILE AS DETERMINED BY THE MODIFIED GATES
DYNAMIC EQUATION. ESTIMATED 60'-LONG.

*THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA

<u>100 YEAR FREQUENCY</u>		
Q ₁₀₀	2200	CFS
Q ₁₀₀ THRU STRUCTURE	2200	CFS
VELOCITY	5.12	FPS
HIGH WATER EL	778.04	FT
WATERWAY AREA	429	SQ FT
DRAINAGE AREA	10	SQ MI

TRAFFIC DATA

ADT (2019)	=	340
ADT (2039)	=	400
DHV	=	96
DD	=	60/40%
T	=	6.1%
DESIGN SPEED	=	40 MPH

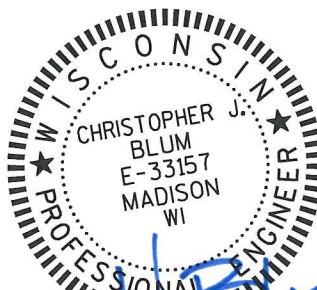
2 YEAR FREQUENCY

Q ₂	300	CFS
HIGH WATER EL	773.29	FT
VELOCITY	2.5	FPS
SCOUR CODE	5	

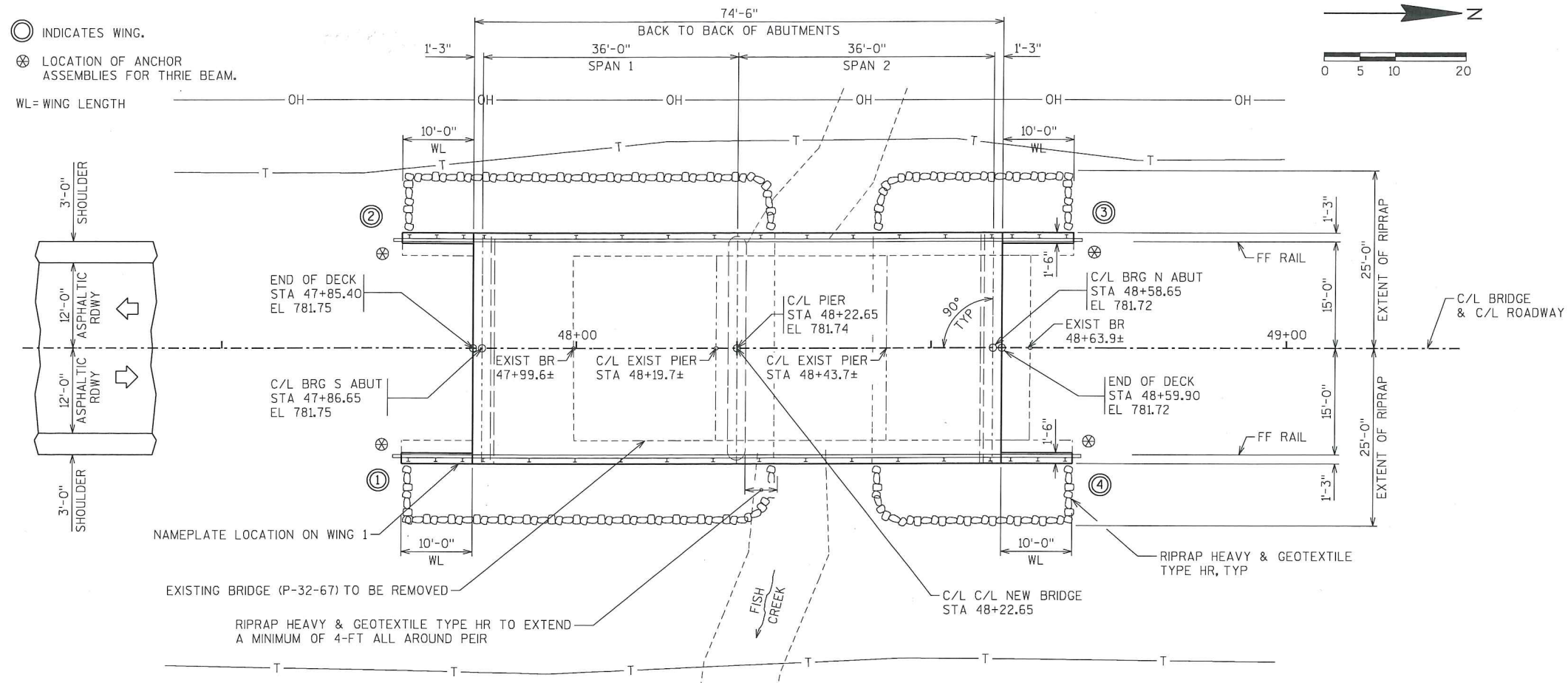
LIST OF DRAWINGS

- 1 GENERAL PLAN
2 CROSS SECTION AND QUANTITIES
3 SUBSURFACE EXPLORATION
4 SOUTH & NORTH ABUTMENT DETAILS
5 SOUTH & NORTH ABUTMENT DETAILS
6 PIER DETAILS
7 SUPERSTRUCTURE DETAILS
8 SUPERSTRUCTURE DETAILS
9 TUBULAR STEEL RAILING TYPE M

NO.	DATE	REVISION	BY
 SHORT ELLIOTT HENDRICKSON INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	 CHIEF STRUCTURES DESIGN ENGINEER		^{SDR} 05/08/18 DATE
STRUCTURE B-32-235			
CTH J OVER FISH CREEK			
COUNTY	LA CROSSE	TOWN/CITY/VILLAGE	BANGOR
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	CJB	DESIGN CK'D.	NCK
DRAWN BY	DLF	PLANS CK'D.	CJB
GENERAL PLAN			SHEET 1 OF 9

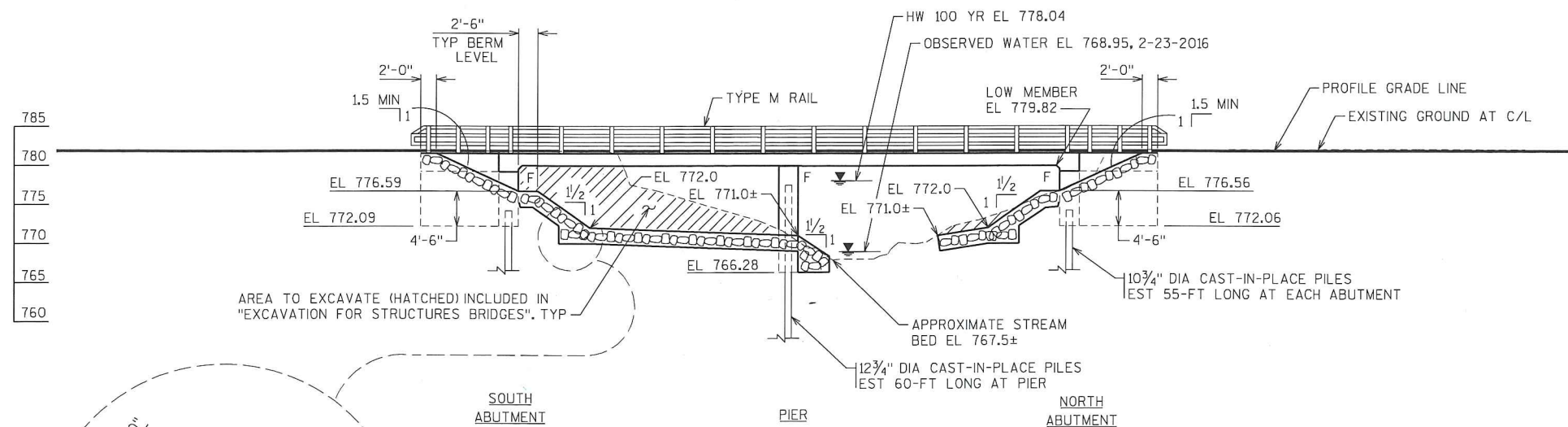


SEH CONTACT: CHRIS BLUM, PE, 608.620.6192
WISDOT BRIDGE OFFICE CONTACT: BILL DREHER, PE, 608.266.8489

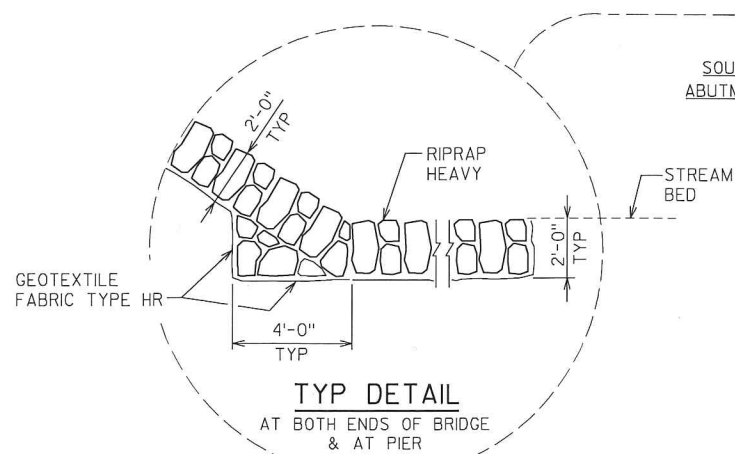


PLAN

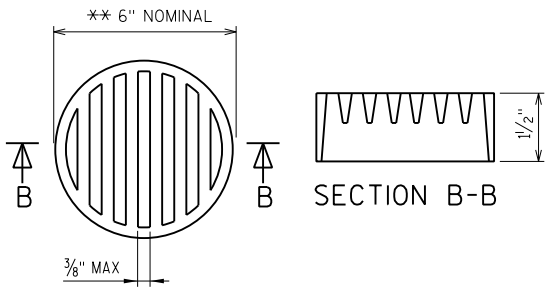
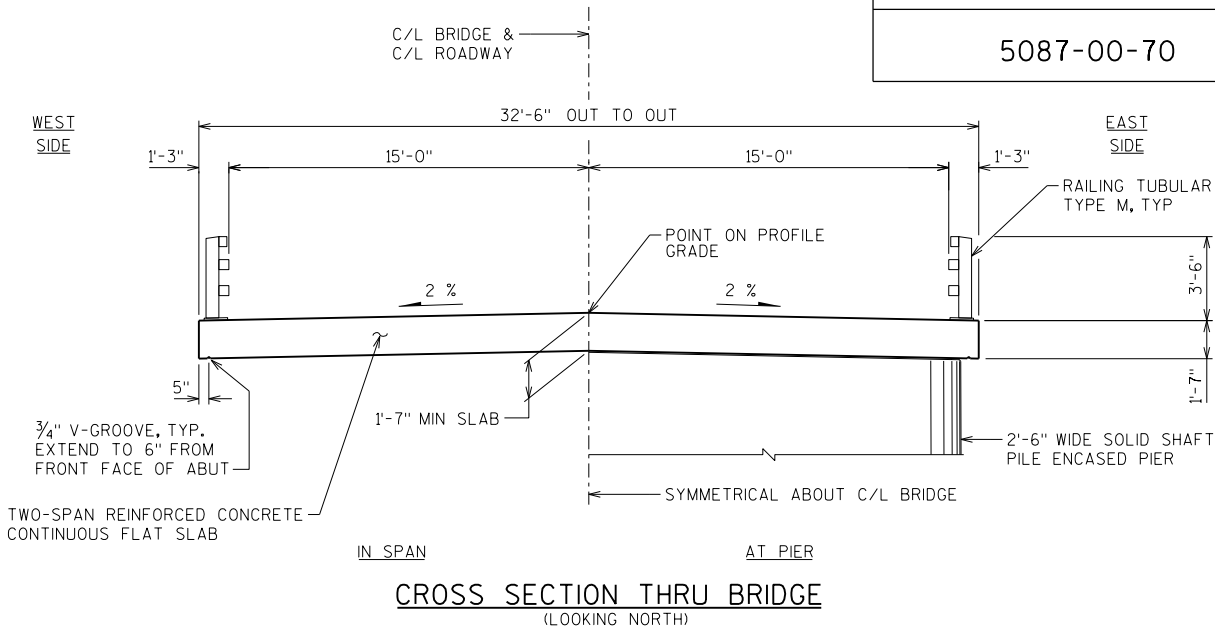
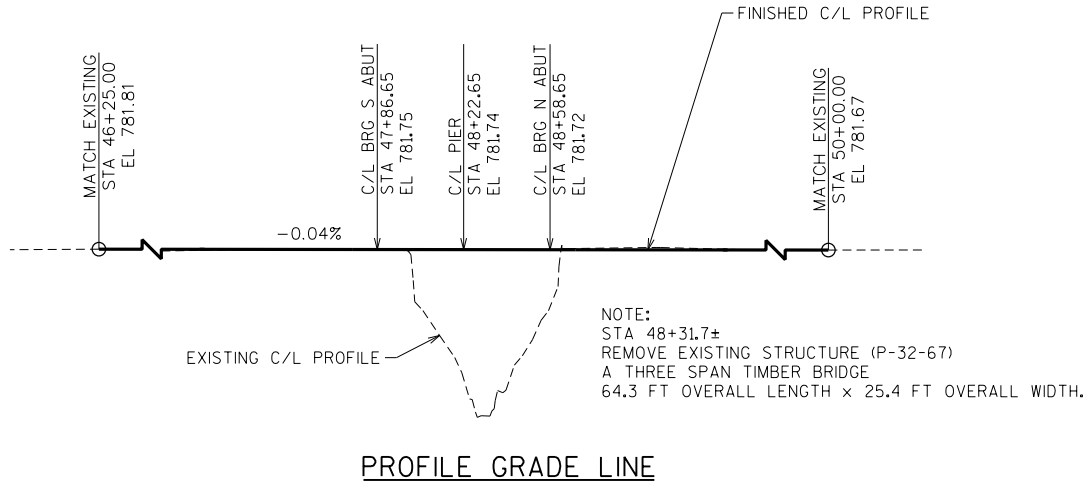
TWO-SPAN REINFORCED CONCRETE CONTINUOUS FLAT SLAB BRIDGE



ELEVATION
LOOKING WEST



BENCHMARK			
NO	STATION	DESCRIPTION	ELEV
1	45+38.97, 29.25' LT	RR SPIKE IN PP	781.09
2	49+93.68, 28.31' LT	RR SPIKE IN PP	778.39
3	48+34.16, 12.14' RT	TOP RAIL EXISTING PROJECT BRIDGE	784.43

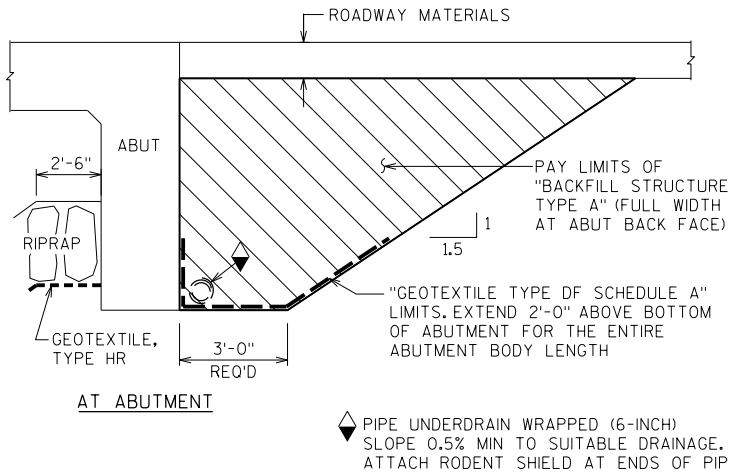


RODENT SHIELD

**NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SHIELD SO SLOTS ARE VERTICAL.

RODENT SHIELD, PIPE COUPLING, AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

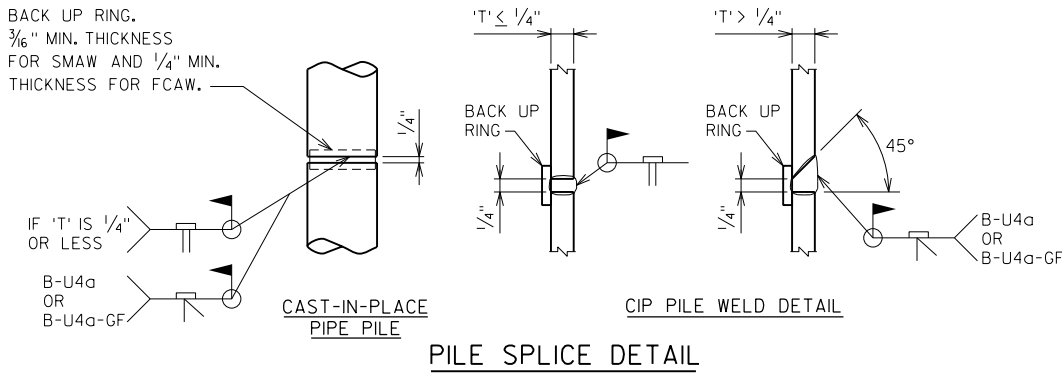


BACKFILL STRUCTURE LIMITS

A FACTOR OF 2.0 WAS USED TO CONVERT CU YDS TO TONS

TOTAL ESTIMATED QUANTITIES - B-32-235							
BID ITEM NUMBER	BID ITEMS	UNIT	SOUTH ABUT	NORTH ABUT	PIER	SUPER	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 48+31.7	LS	-	-	-	-	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-32-235	LS	-	-	-	-	1
206.5000	COFFERDAM B-32-235	LS	-	-	-	-	1
① 210.1500	BACKFILL STRUCTURE TYPE A	TON	145	145	-	-	290
502.0100	CONCRETE MASONRY BRIDGES	CY	41	41	36.0	147.0	265
502.3200	PROTECTIVE SURFACE TREATMENT	SY	8	8	-	312	328
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,390	2,310	1,880	-	6,580
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,580	1,580	60	32,510	35,730
513.4061	RAILING TUBULAR TYPE M B-32-235	LF	-	-	-	194	194
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	-	-	18
550.2104	PILING CIP CONCRETE 10 3/4 X 0.25-INCH	LF	440	275	-	-	715
550.2124	PILING CIP CONCRETE 12 3/4 X 0.25-INCH	LF	-	-	540	-	540
606.0300	RIPRAP HEAVY	CY	150	100	40	-	290
② 612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	110	110	-	-	220
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	30	30	-	-	60
645.0120	GEOTEXTILE TYPE HR	SY	320	200	115	-	635
NON-BID ITEMS							
	FILLER	SIZE	—	—	—	—	1/2 & 3/4

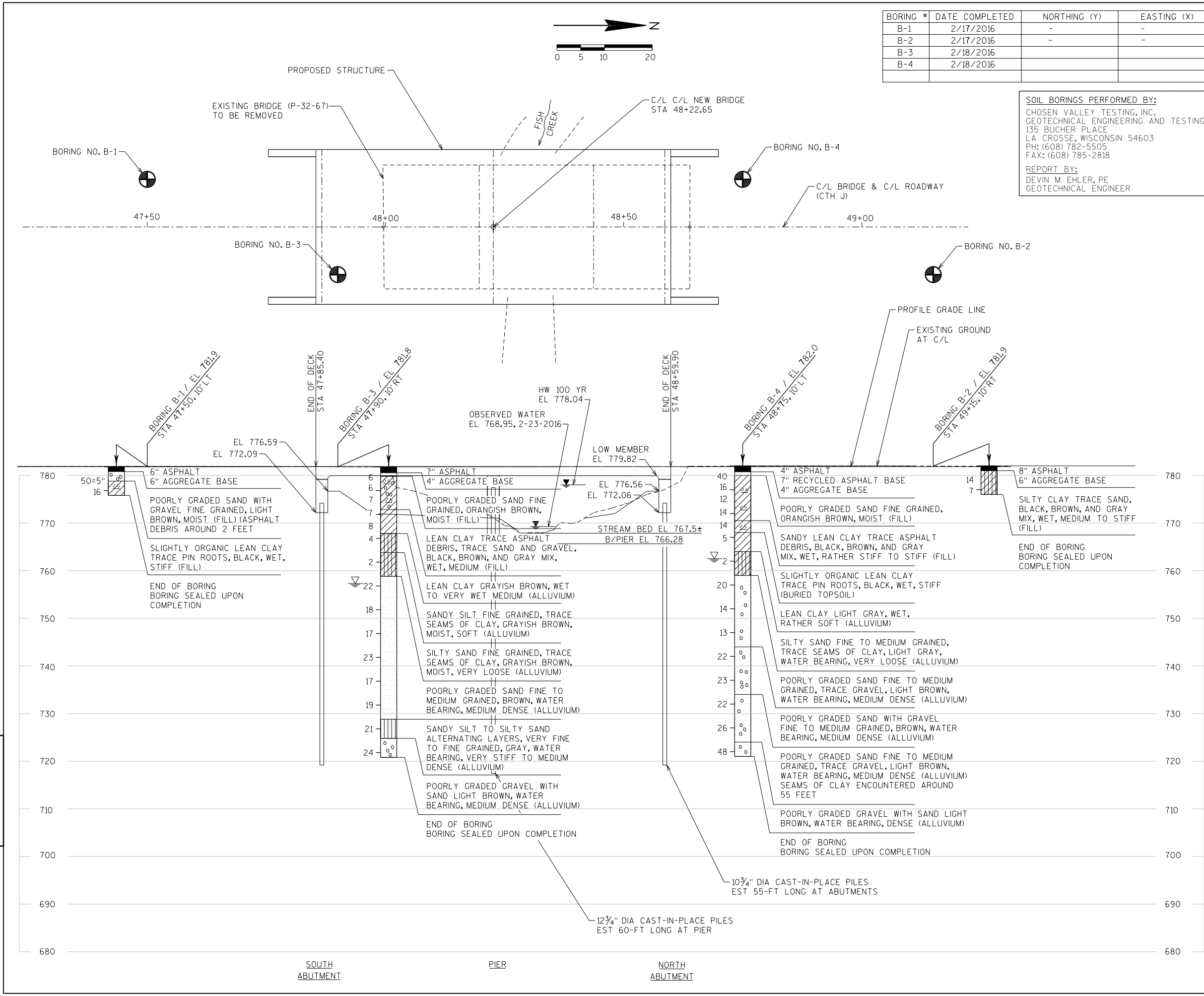
- ① A FACTOR OF 2.0 WAS USED TO CONVERT CU YDS TO TONS.
- ② INCLUDES RODENT SHIELD FOR PIPE UNDERDRAIN PER SDD 8F6-4.



GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- FOR EXISTING STRUCTURE SEE PROFILE GRADE LINE THIS SHEET.
- REFER TO ROADWAY DRAWINGS FOR EXISTING UTILITY LOCATIONS.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.
- SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.
- THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENTS DETAILS.
- SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-ASPHALTIC JOINT SEALER (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).
- THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES BRIDGES B-32-235 SHALL BE THE EXISTING GROUNDLINE.
- EXCAVATION BELOW THE ABUTMENTS AND ABUTMENTS BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.
- THE QUANTITY FOR BACKFILL STRUCTURE TYPE A IS CALCULATED BASED ON THE BACKFILL STRUCTURE LIMITS DETAILS SHOWN ON THIS SHEET.
- BACKFILL STRUCTURE BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- AT THE BACKFACE OF ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.
- JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153 TYPE 1, 2, OR 3 OR AASHTO DESIGNATION M213.
- APPLY A PROTECTIVE SURFACE TREATMENT PER THE STANDARD SPECIFICATIONS AND THE SUPERSTRUCTURE DETAILS SHEET.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-32-235			
DRAWN BY		DLF	PLANS CK'D. CJB
CROSS SECTION AND QUANTITIES		SHEET 2 OF 9	



BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-1	2/17/2016	-	-
B-2	2/17/2016	-	-
B-3	2/18/2016		
B-4	2/18/2016		

SOIL BORINGS PERFORMED BY:
CHOSEN VALLEY TESTING, INC.
GEOTECHNICAL ENGINEERING AND TESTING
135 BUCHER PLACE
LA CROSSE, WISCONSIN 54603
PH: (608) 782-5505
FAX: (608) 785-2818
REPORT BY:
DEVIN M. EHRLER, PE
GEOTECHNICAL ENGINEER

STATE PROJECT NUMBER
5087-00-70

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING

⊙ = APPROXIMATE BORING LOCATION

BORING STA. OFFSET

ST (1) 0.25 (2) 17

▽ F-C COBBLE OR BOULDER

WEATHERED LIMESTONE

CORE RUN #1 - 24'-29' REC=80%, ROD=72%

(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION
▽ AT TIME OF DRILLING
▼ END OF DRILLING
▽ AFTER DRILLING

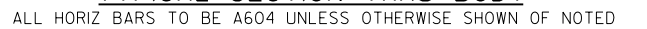
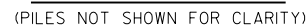
ABBREVIATIONS
F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

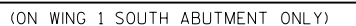
BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-32-235			
DRAWN BY DLF		PLANS CK'D. CJB	
SUBSURFACE EXPLORATION		SHEET 3 OF 9	

8



FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE



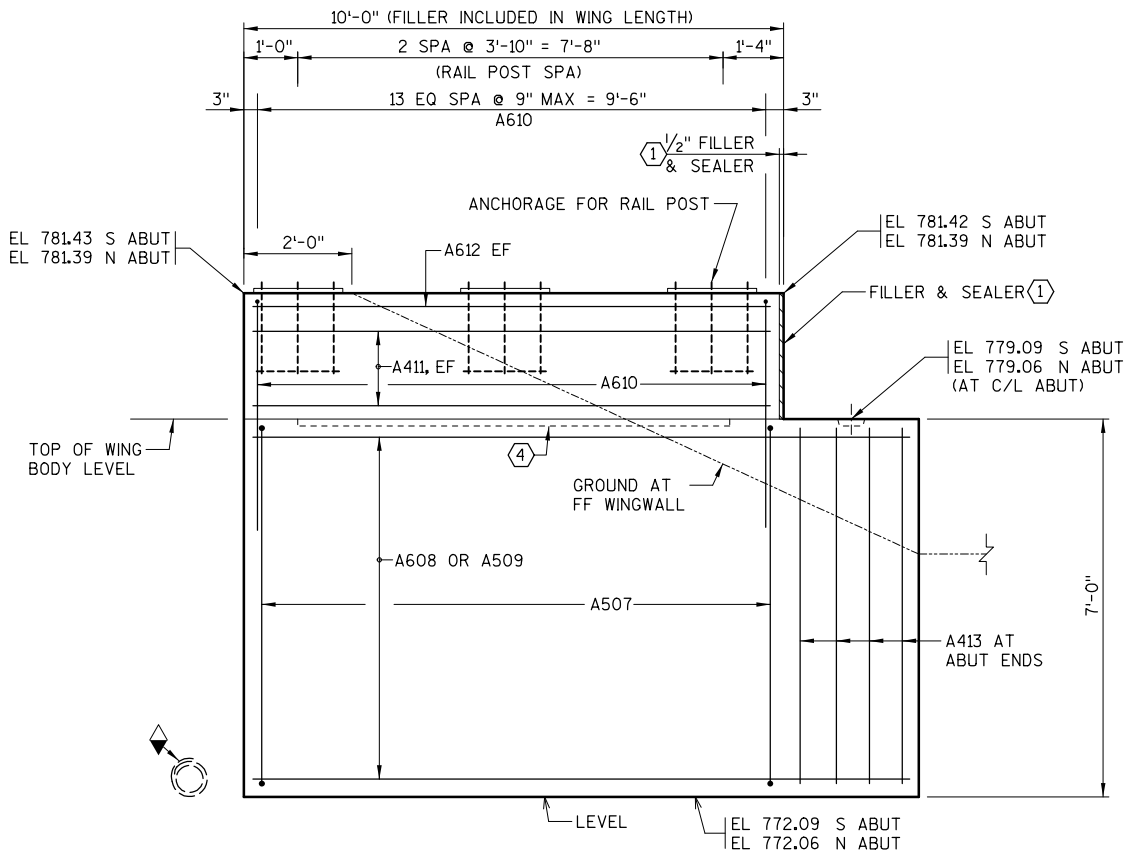
NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
STRUCTURE B-32-235					
DRAWN BY			DLF	PLANS CK'D.	CJB
SOUTH AND NORTH ABUTMENT DETAILS				SHEET 4 OF 9	

PLOT TIME: 9/6/11 AM

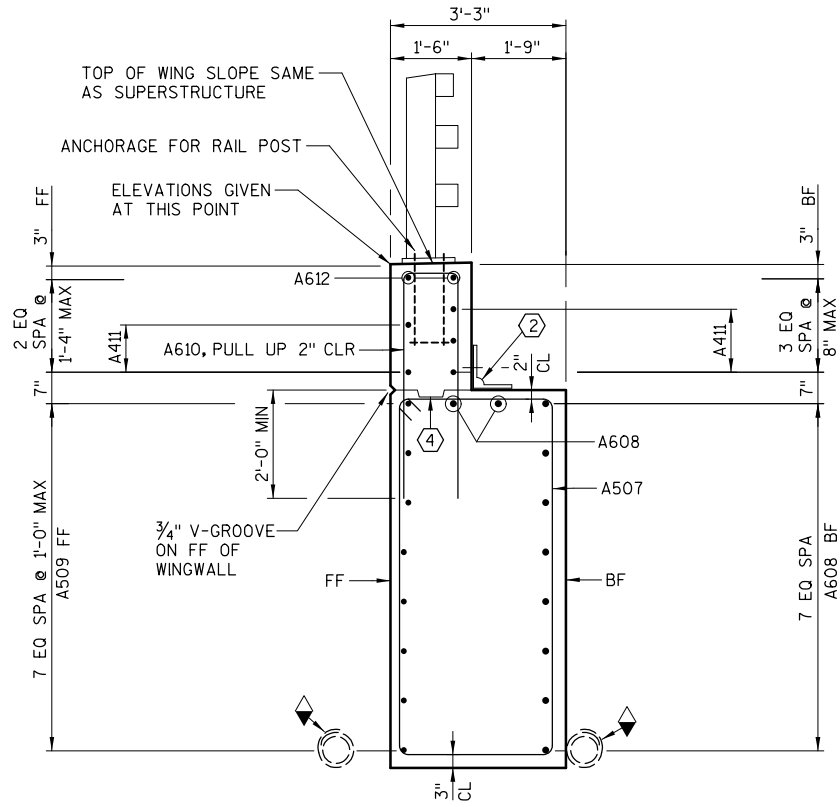
PLOT DATE: 4/9/2018

FILE NAME : \\sp3020-1\Projects\K0\1\Coehd\35923\5-final-dsgn\51-drawings\20-Struct\bridge\b32235a2.dgn

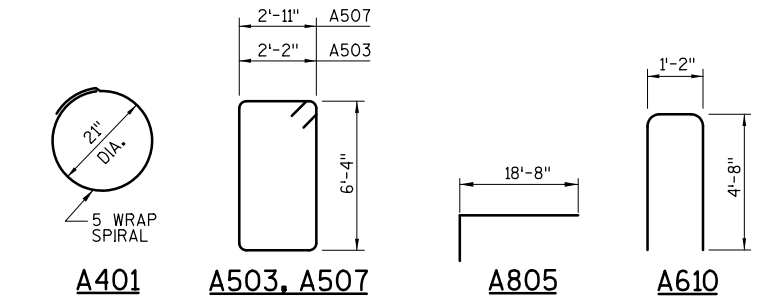
8



TYP WING ELEVATION



TYP SECTION THRU WINGWALLS



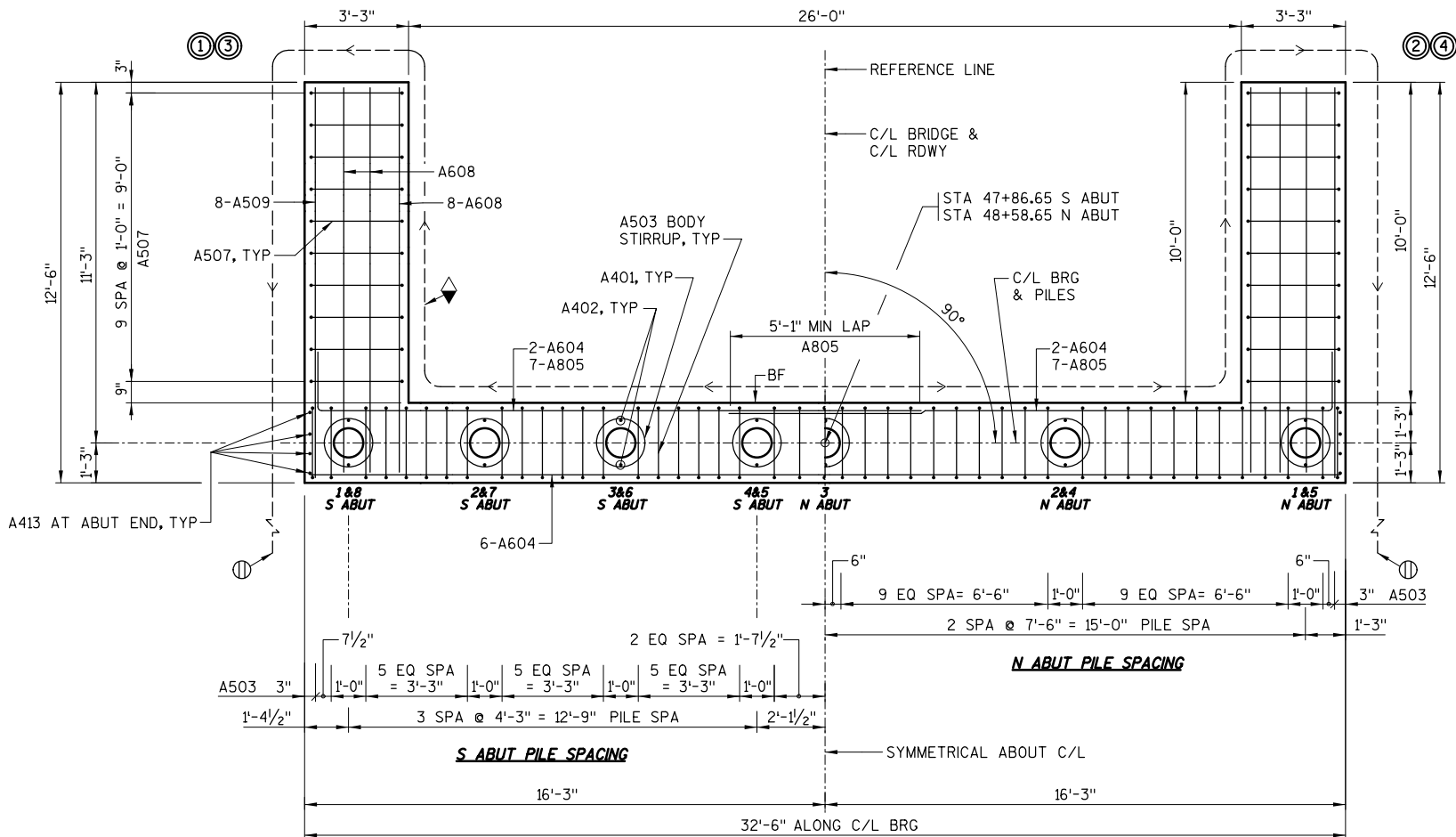
NOTE

SEE ABUTMENT NOTES ON SHEET 4 ((1)2(4)11).

S ABUT = SOUTH ABUTMENT
N ABUT = NORTH ABUTMENT

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

BILL OF BARS							BOTH ABUTMENTS	
BAR MARK	COMT	SOUTH ABUT NO. REQ'D.	NORTH ABUT NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION	
A401		9	6	28 - 0		X	BODY AT PILES	
A402		18	12	2 - 3			BODY AT PILES	
A503		45	44	17 - 7		X	BODY STIRRUPS	
A604		12	12	32 - 1			BODY HORIZ	
A805		14	14	20 - 3		X	BODY HORIZ BF	
A506	X	31	31	2 - 0			BODY DOWELS	
A507	X	20	20	19 - 1		X	WING STIRRUPS	
A608	X	20	20	12 - 0			WING HORIZ BF	
A509	X	16	16	12 - 2			WING HORIZ FF	
A610	X	28	28	10 - 2		X	WING VERT	
A411	X	10	10	9 - 7			WING HORIZ EF	
A612	X	4	4	9 - 7			WING HORIZ EF TOP	
A413		8	8	6 - 7			BODY AT ENDS	



FOOTING LAYOUT

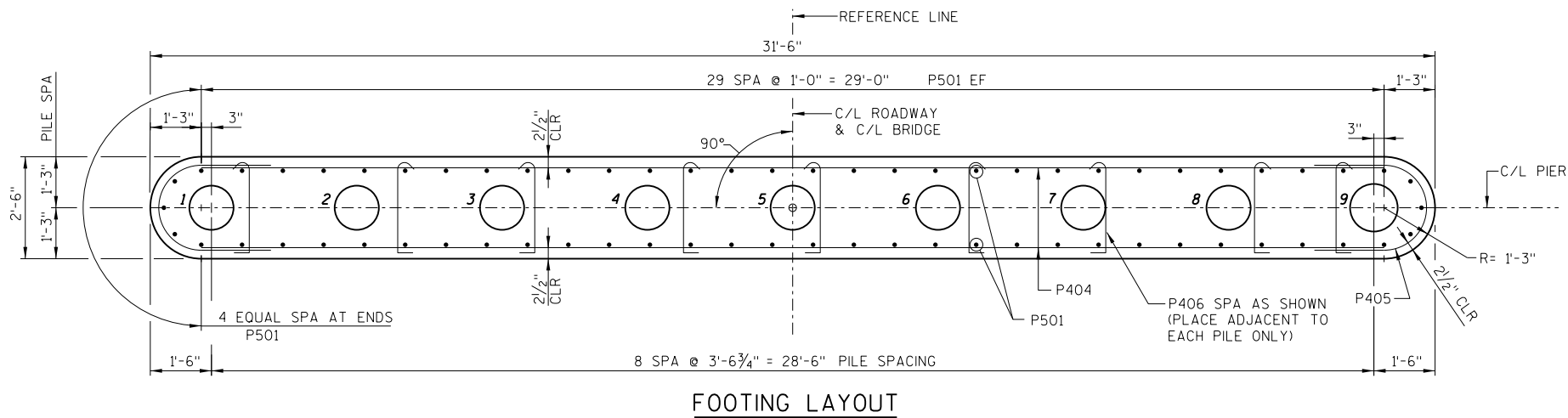
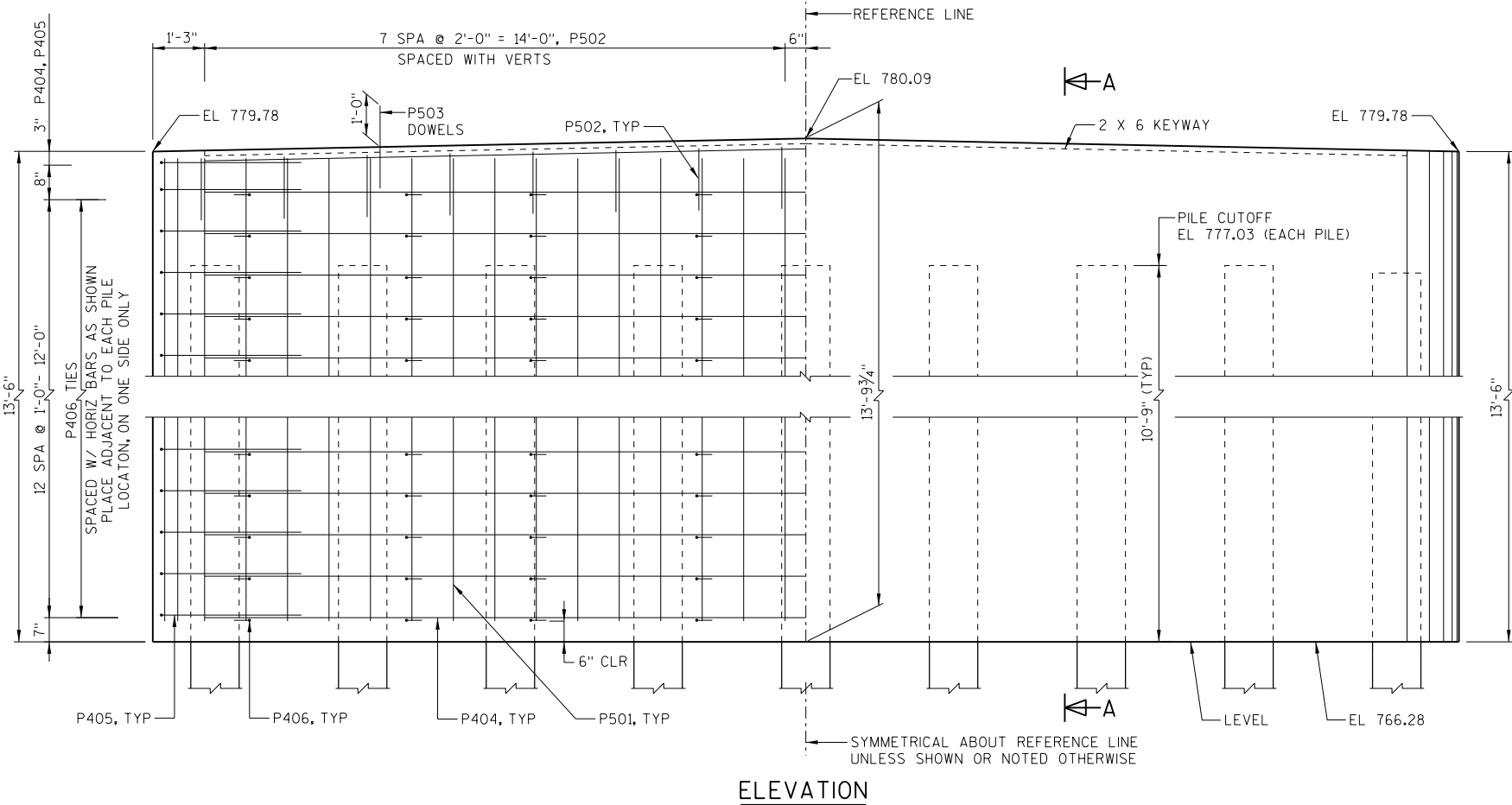
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-32-235			
		DRAWN BY DLF	PLANS CK'D. CJB
SOUTH AND NORTH ABUTMENT DETAILS		SHEET 5 OF 9	

8

NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE ENGLISH BAR DIAMETER SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

BILL OF BARS						PIER
BAR MARK	COAT	NO. REQ'D.	LENGTH (FT - IN)	BAR SERIES	BENT	LOCATION
P501		66	12 - 10			SHAFT VERT
P502		16	4 - 9		X	CAP TIE
P503	X	30	2 - 0			DOWEL
P404		28	29 - 0			SHAFT HORIZ
P405		28	7 - 4		X	SHAFT TIE
P406		117	3 - 0		X	SHAFT TIE



ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

PRIOR TO RELEASING SLAB FLASEWORK, TAKE TOP OF
SLAB ELEVATIONS AT C/L ABUTMENTS, THE C/L PIER,
AND 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS
ALONG EDGE LINE AND CROWN OR C/L.

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE C/L OF SUBSTRUCTURE UNITS.

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED ON CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

- ⊗ 3/4" V-GROOVE, EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT.

- ☒ COAT WITH PROTECTIVE SURFACE TREATMENT PER THE STANDARD SPECIFICATIONS. PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND THE END OF THE ABUT, AND THE END 1'-0" OF THE FRONT FACE OF ABUTMENTS.

———— INDICATES TOP BAR STEEL REINFORCEMENT

— — — - INDICATES BOTTOM BAR STEEL REINFORCEMENT

○ INDICATES WING.

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

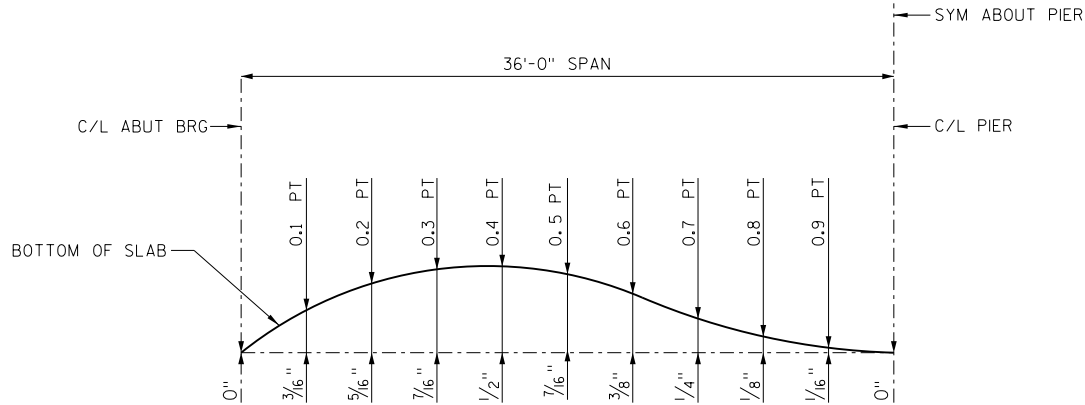
* MEASURED ALONG EDGE OF DECK
TYPICAL EACH SIDE OF DECK.



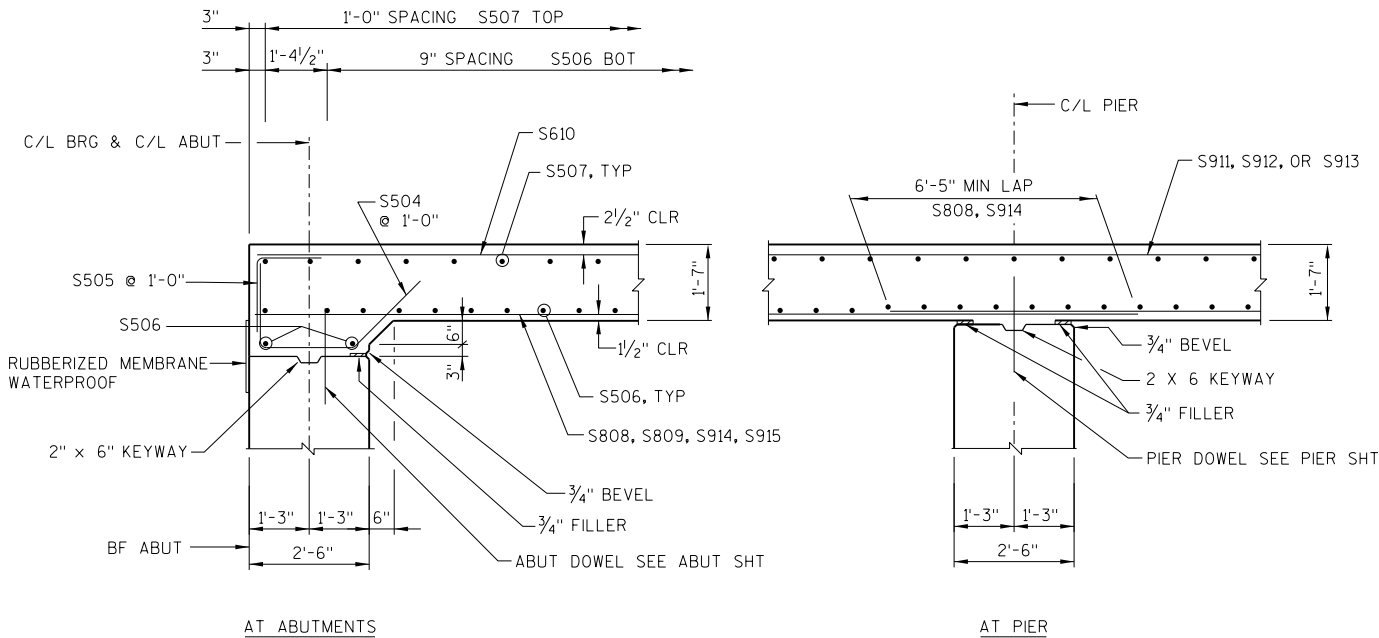
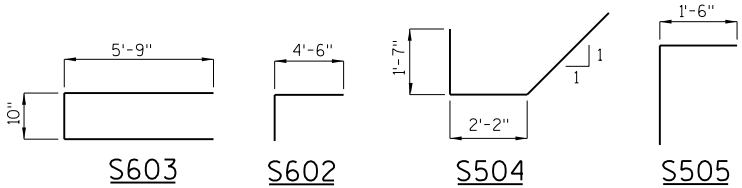
FINAL TOP OF DECK ELEVATIONS																					
	SPAN 1										SPAN 2										
	S ABUT	.1	.2	.3	.4	.5	.6	.7	.8	.9	PIER	.1	.2	.3	.4	.5	.6	.7	.8	.9	N ABUT
WEST EDGE OF DECK	781.42	781.42	781.42	781.42	781.42	781.42	781.42	781.42	781.41	781.41	781.41	781.41	781.41	781.41	781.41	781.40	781.40	781.40	781.40	781.40	781.40
C/L	781.75	781.75	781.75	781.75	781.74	781.74	781.74	781.74	781.74	781.74	781.74	781.73	781.73	781.73	781.73	781.73	781.73	781.73	781.73	781.72	781.72
EAST EDGE OF DECK	781.42	781.42	781.42	781.42	781.42	781.42	781.42	781.42	781.41	781.41	781.41	781.41	781.41	781.41	781.41	781.40	781.40	781.40	781.40	781.40	781.40

D.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-32-235			
DRAWN BY		DLF	PLANS CK'D. CJB
SUPERSTRUCTURE DETAILS		SHEET 7 OF 9	

BILL OF BARS				SUPERSTRUCTURE		
BAR MARK	COAT	NO. REQ'D.	LENGTH (F T - IN)	BAR SERIES	BENT	LOCATION
S601	X	80	6 - 0			RAIL POST
S602	X	16	6 - 0		X	RAIL POST
S603	X	48	12 - 0		X	RAIL POST
S504	X	66	5 - 10		X	END OF DECK
S505	X	66	3 - 1		X	END OF DECK
S506	X	102	32 - 2			BOT TRANS
S507	X	75	32 - 2			TOP TRANS
S808	X	46	40 - 4			BOT LONG
S809	X	48	27 - 8			BOT LONG
S610	X	66	20 - 7			TOP LONG
S911	X	19	40 - 0			TOP LONG
S912	X	32	20 - 0			TOP LONG
S913	X	14	40 - 0			TOP LONG
S914	X	32	40 - 4			BOT LONG
S915	X	28	27 - 8			BOT LONG



CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE VERTICAL ROADWAY PROFILE OR ALLOWANCE FOR FORM SETTLEMENT. DEAD LOAD DEFLECTION ONLY EQUALS APPROXIMATELY 1/3 OF CAMBER VALUES SHOWN.



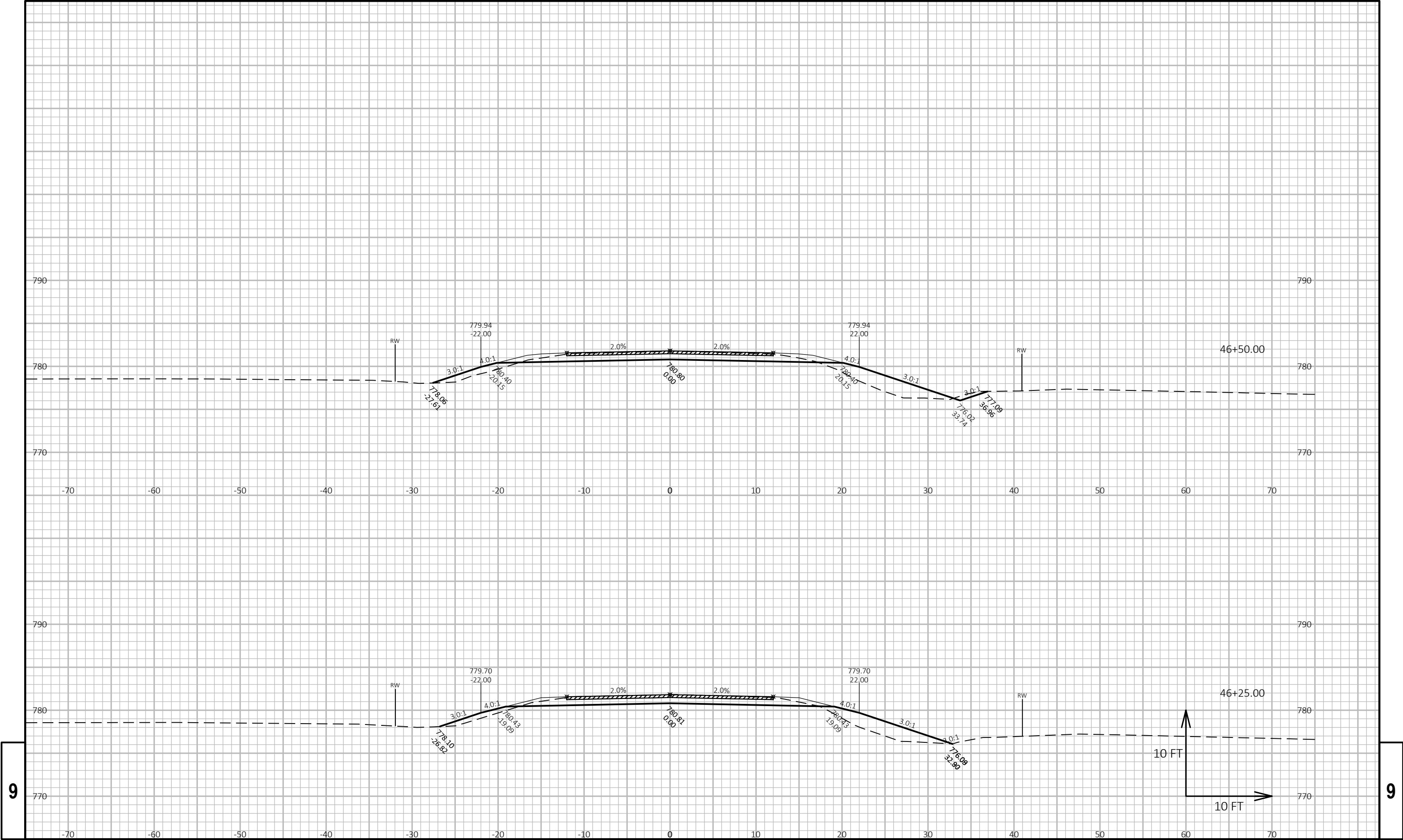
PARTIAL LONGITUDINAL SECTION

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-32-235			
DRAWN BY		DLF	PLANS CK'D. CJB
SUPERSTRUCTURE DETAILS		SHEET 8 OF 9	

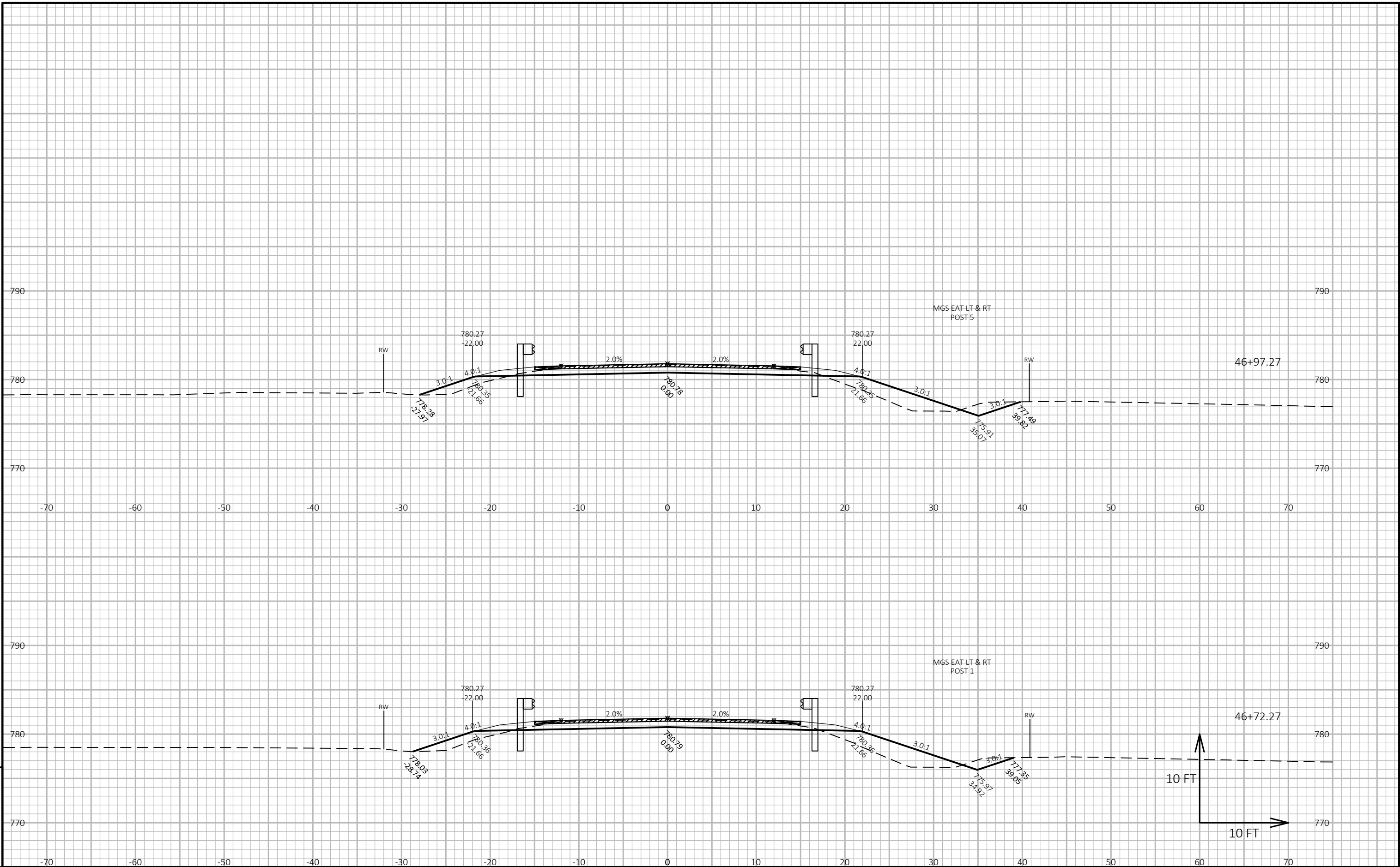
EARTHWORK SUMMARY									
STATION	Real Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
			Cut	Fill	Cut	Fill	Cut 1.00	Expanded	
								Fill 1.30	Mass Ordinate
					(1)			(2)	
46+25	4625.00	0.00	29.18	21.92	0	0	0	0	0
46+50	4650.00	25.00	28.88	25.08	27	22	27	28	-1
46+72.27	4672.27	22.27	29.53	29.97	24	23	51	58	-7
46+97.27	4697.27	25.00	32.45	25.60	29	26	80	91	-12
47+00	4700.00	2.73	32.72	23.57	3	2	83	94	-12
47+22.27	4722.27	22.27	34.54	9.93	28	14	111	112	-2
47+50	4750.00	27.73	41.80	6.36	39	8	150	123	27
47+75.4	4775.40	25.40	43.17	9.17	40	7	190	133	57
STRUCTURE B-32-0235									
48+69.9	4869.90	94.50	33.85	28.56	135	66	325	219	106
49+00	4900.00	30.10	39.34	7.22	41	20	365	245	121
49+23.03	4923.03	23.03	35.61	10.04	32	7	397	254	143
49+48.03	4948.03	25.00	31.25	23.70	31	16	428	274	154
49+50	4950.00	1.97	30.94	24.24	2	2	431	277	154
49+73.03	4973.03	23.03	27.74	31.75	25	24	456	308	148
50+00	5000.00	26.97	27.66	22.42	28	27	483	343	140
SOUTH APPROACH SUBTOTAL					190	102			
NORTH APPROACH SUBTOTAL					293	162			
TOTALS					483	264			

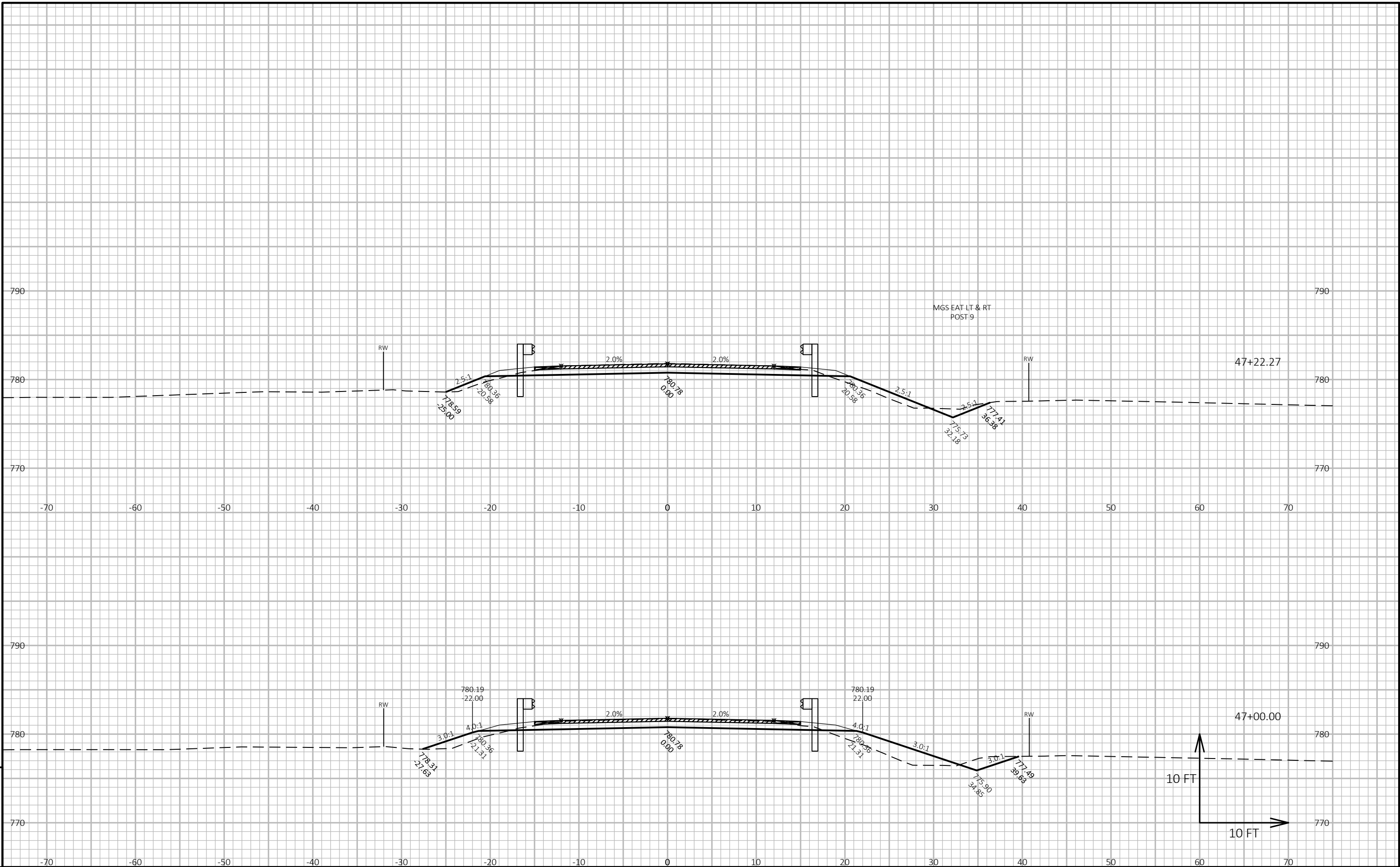
(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY
(2) - FILL EXPANSION 30%
(3) - EXISTING ASPHALTIC PAVEMENT IS INCLUDED IN COMMON EXCAVATION TOTALS



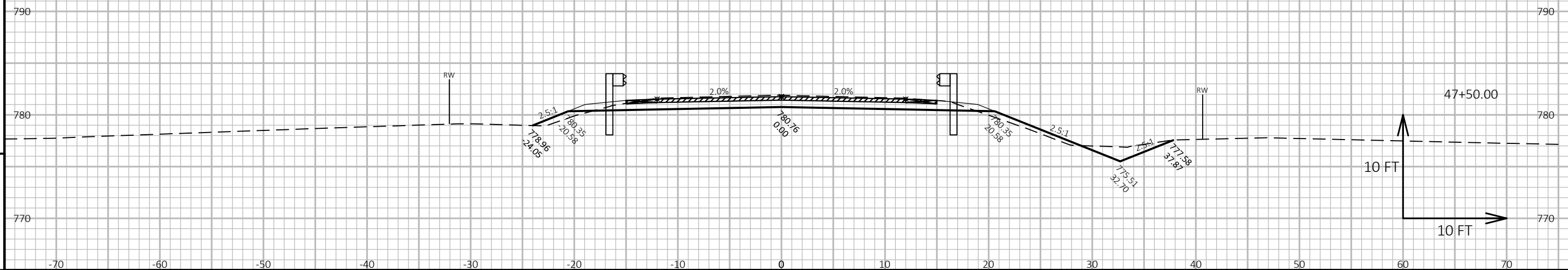
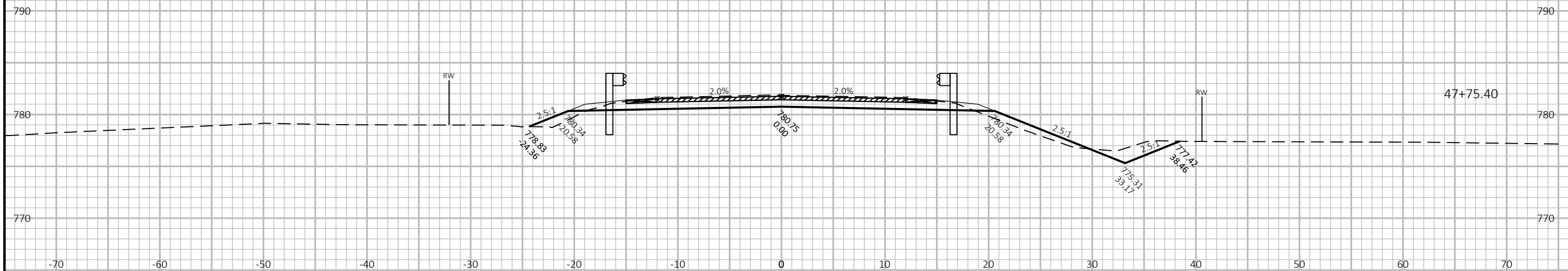
9

9





STRUCTURE B-32-0235



PROJECT NO: 5087-00-70

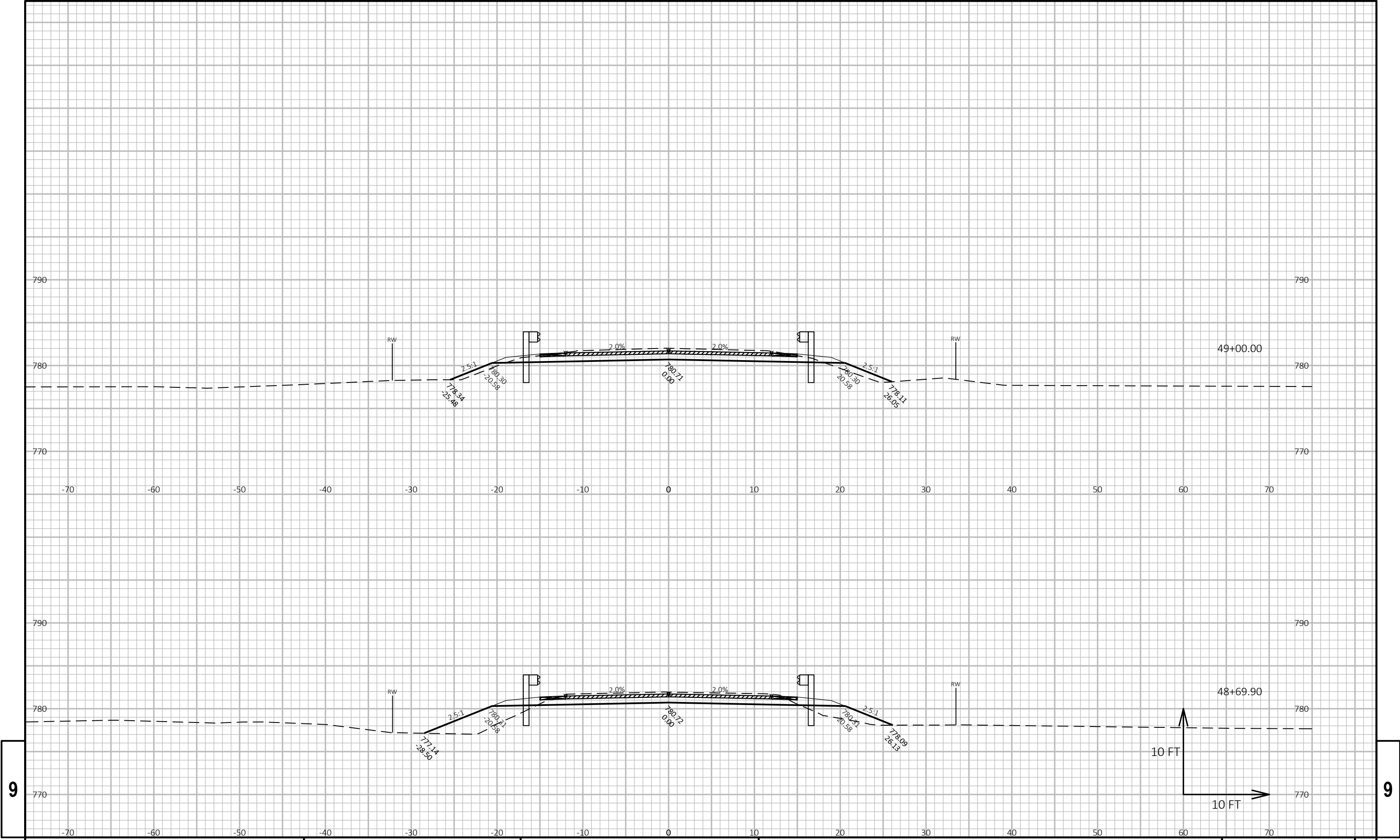
HWY: CTH J

COUNTY: LA CROSSE

CROSS SECTIONS: CTH J

SHEET

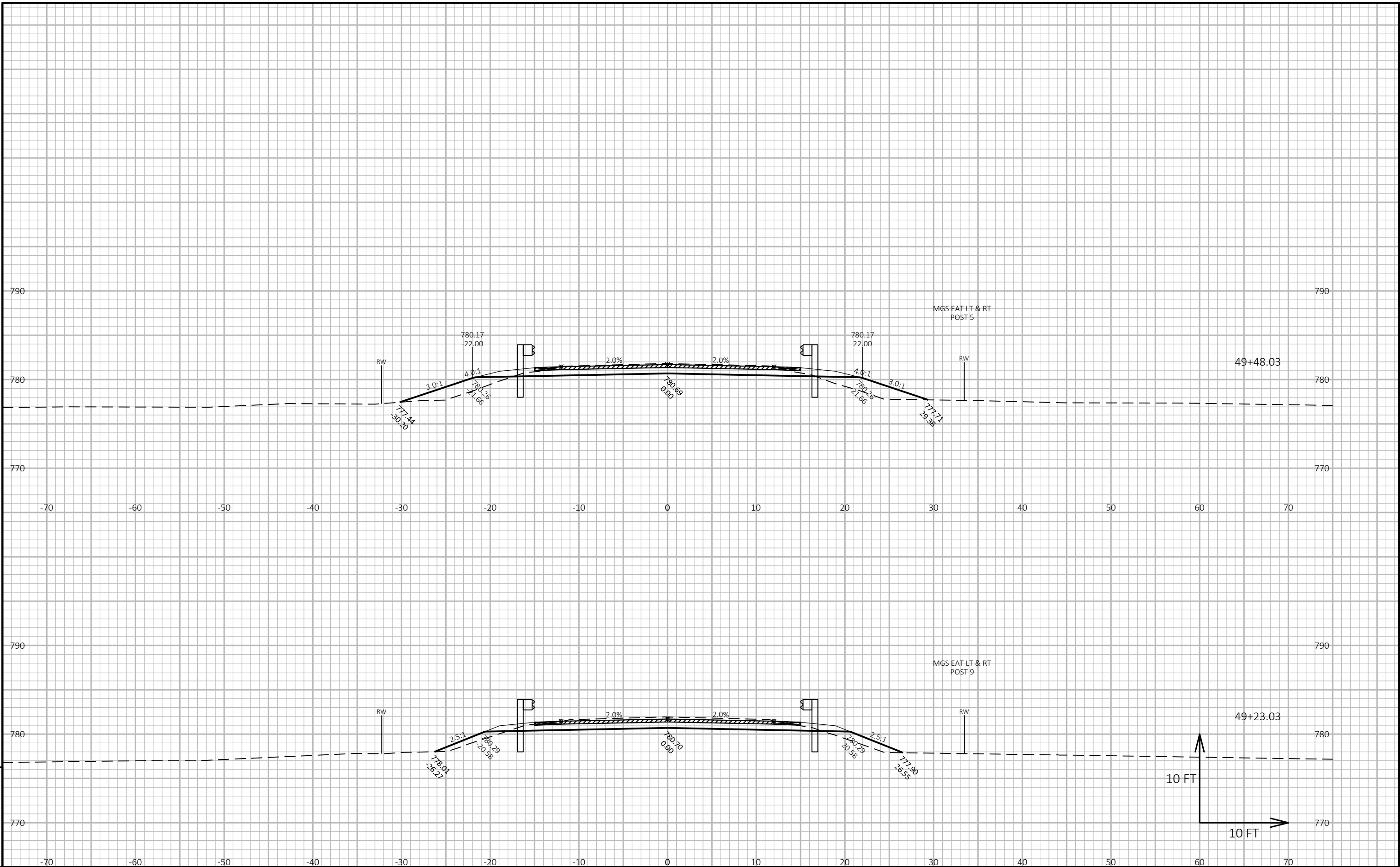
E

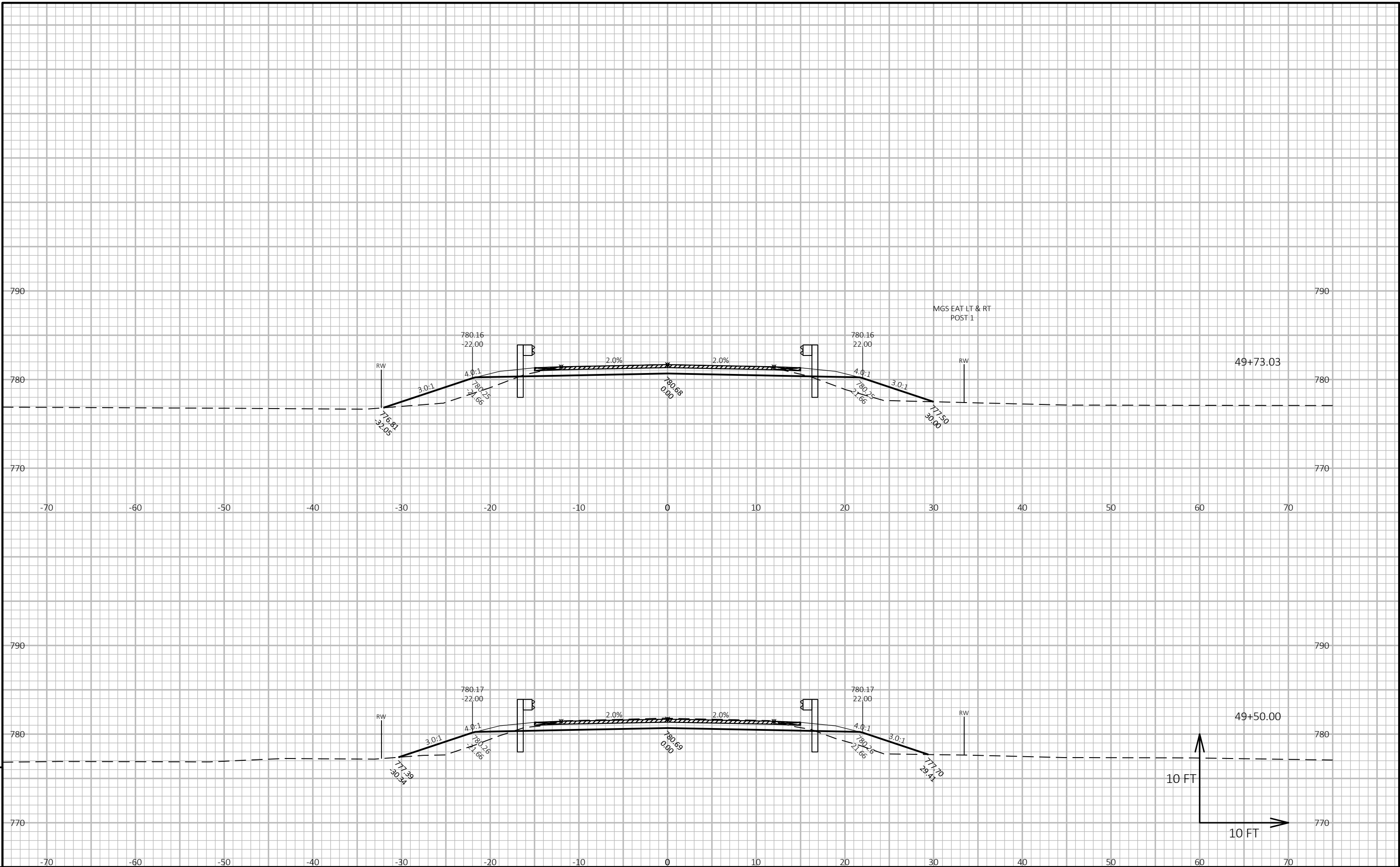


9

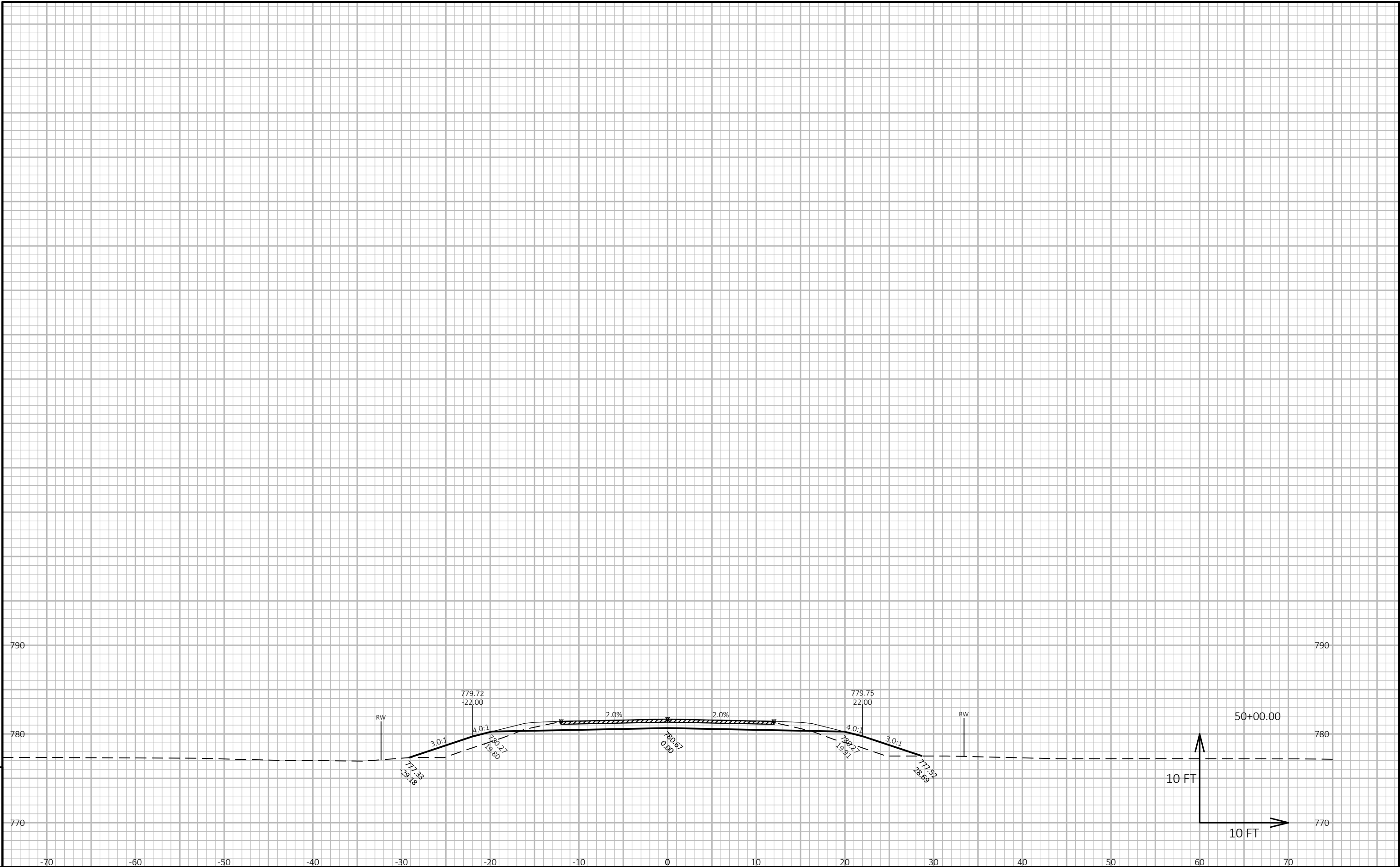
9

PROJECT NO: 5087-00-70	HWY: CTH J	COUNTY: LA CROSSE	CROSS SECTIONS: CTH J	SHEET E
------------------------	------------	-------------------	-----------------------	---------



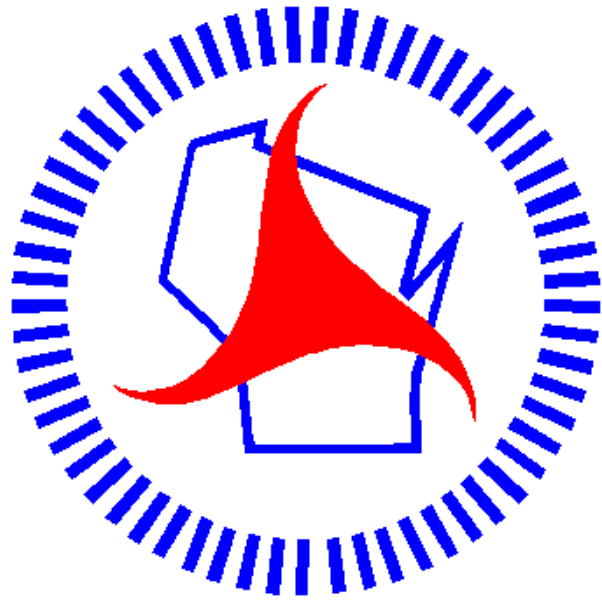


9



9

PROJECT NO: 5087-00-70	HWY: CTH J	COUNTY: LA CROSSE	CROSS SECTIONS: CTH J	SHEET E
------------------------	------------	-------------------	-----------------------	---------



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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