LAX

NOVEMBER 2019

WITH:

PROJECT ID: 5170-05-61

COUNTY: CRAWFORD

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
~~Section No.~~	~~4~~	~~Right-of-Way Plat~~
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
~~Section No.~~	~~7~~	~~Sign Plates~~
Section No.	8	Structure Plans
~~Section No.~~	~~9~~	~~Computer Earthwork Data~~
Section No.	9	Cross Sections

TOTAL SHEETS = 70

36

N

DESIGN DESIGNATION 5170-05-61

A.A.D.T.	2019	=	2700
A.A.D.T.	2039	=	3200
D.H.V.		=	378
D.D.		=	60/40
T.		=	26.4%
DESIGN SPEED		=	60 MPH
ESALS		=	1,700,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

LANSING - DESOTO

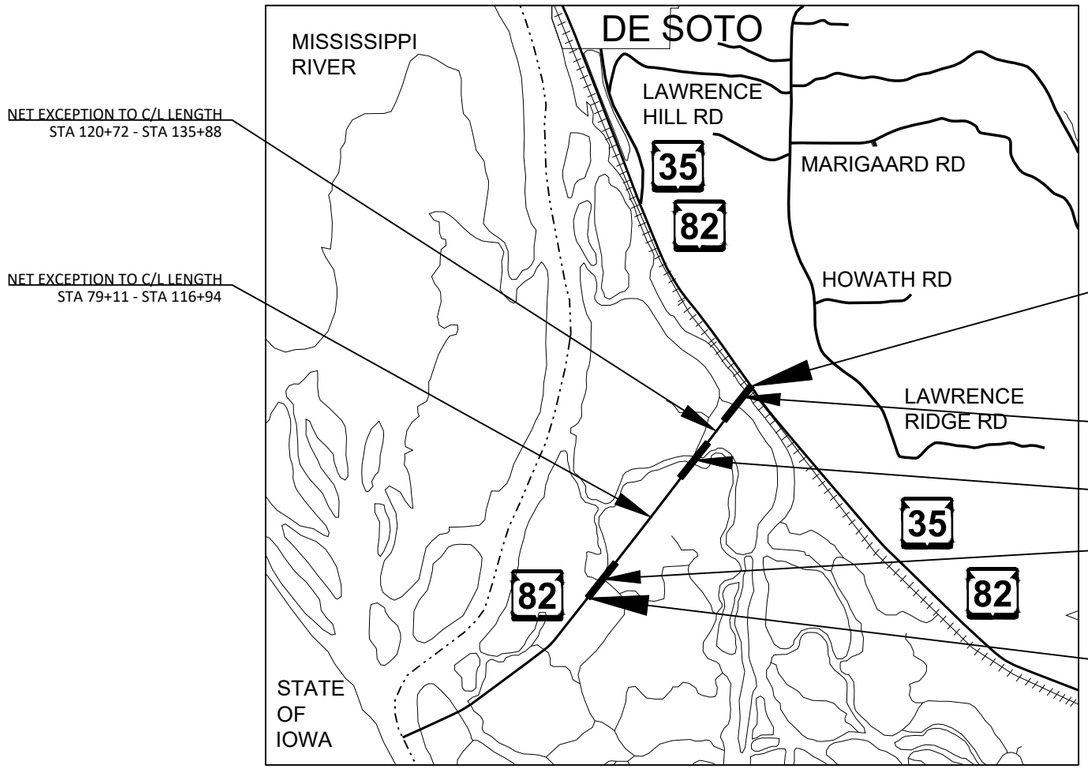
SLOUGH BRIDGES B-12-5,6,7

STH 82

CRAWFORD COUNTY

STATE PROJECT NUMBER
5170-05-61

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5170-05-61	WISC 2019278	1



LAYOUT

SCALE 0 0.5 MI

TOTAL NET LENGTH OF CENTERLINE = 1.300 MILES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SURVEYOR
Designer	JONATHAN DAVIDSON
Project Manager	TIM MAEDKE
Regional Examiner	SW REGION
Regional Supervisor	REINY YAHNKE

APPROVED FOR THE DEPARTMENT

DATE: 1-31-2019 Timothy J Maedke (Signature)

E

FILE NAME : N:\PDS\C3D\51700501\SHEETSPLAN\010101-TI.DWG

PLOT DATE : 1/15/2019 8:59 AM

PLOT BY : DAVIDSON, JONATHAN B

PLOT NAME :

GENERAL NOTES

- THERE ARE NO KNOWN UTILITY FACILITIES WITHIN THE PROJECT AREA. HOWEVER, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THIS.
- PRIOR TO THE PLACEMENT OF STEEL PLATE BEAM GUARD OR MGS GUARDRAIL, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE.
- THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT ASPHALTIC SURFACE LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, BIKE OR PARKING LANE.
- APPLY TACK COAT TO MILLED SURFACE AT RATE 0.07 GAL/S.Y.
- PAVE ASPHALTIC SURFACE IN ONE 2-INCH LAYER
- ASPHALTIC SURFACE WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.
- CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.
- (SALVAGED) TOPSOIL AND E-MAT HAS BEEN COMPUTED BY DIRECT MEASUREMENTS ON THE CROSS SECTIONS PLUS 5 FT BEYOND THE TOE OF SLOPE. SEEDING AND FERTILIZER HAS BEEN ESTIMATED BY DIRECT MEASUREMENTS ON THE CROSS SECTIONS PLUS 10 FT.

DESIGN CONTACTS

TIM MAEDKE	*JONATHAN DAVIDSON*
PROJECT MANAGER	PROJECT DESIGNER
WISDOT SW REGION	WISDOT SW REGION
3550 MORMON COULEE RD	*3550 MORMON COULEE RD*
LA CROSSE, WI 54601	*LA CROSSE, WI 54601*
608/789-6317	*608/785-9036*

DNR LIAISON

KAREN KALVELAGE
ENVIRONMENTAL ANALYSIS & REVIEW SPECIALIST
WISCONSIN DEPT. OF NATURAL RESOURCES
WEST CENTRAL REGION
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
608-785-9115

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

UTILITY CONTACTS

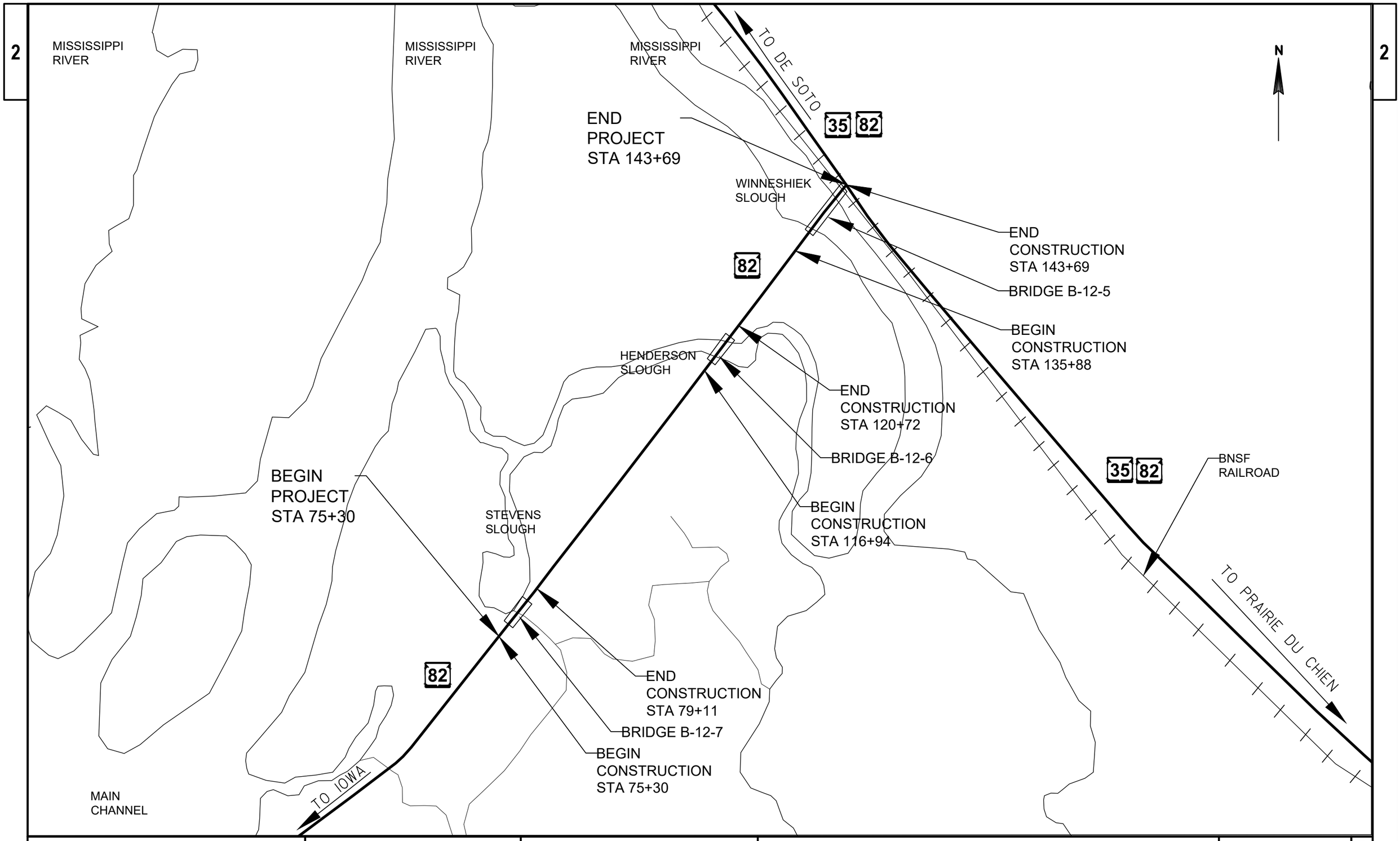
NONE

STANDARD ABBREVIATIONS

AC	ACRE
AGG	AGGREGATE
<	ANGLE
AE, AEW	APRON ENDWALL
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC
B.F.	BACK FACE
BM	BENCHMARK
BTWN	BETWEEN
CTR.	CENTER
C/L	CENTER LINE
Δ	CENTRAL ANGLE OR DELTA
C.E.	COMMERCIAL ENTRANCE
CONST.	CONSTRUCTION
CMCP	CORRUGATED METAL CULVERT PIPE
CMP	CORRUGATED METAL PIPE
CO.	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CR.	CREEK
CABC	CRUSHED AGGREGATE BASE COURSE
CY	CUBIC YARD
CP	CONTROL POINT OR CULVERT PIPE
C&G	CURB AND GUTTER
D	DEGREE OF CURVE
D.H.V.	DESIGN HOURLY VOLUME
DIA.	DIAMETER
D.D.	DIRECTIONAL DISTRIBUTION
DISCH.	DISCHARGE
DMS	DYNAMIC MESSAGE SIGN
EA	EACH
E	EAST
EB	EASTBOUND
ELEC.	ELECTRIC(AL), ELEC. CABLE
EL., ELEV.	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC.	EXCAVATION
EXIST	EXISTING
F.F.	FACE TO FACE
FERT.	FERTILIZER
F.E.	FIELD ENTRANCE
F/L, F.L.	FLOW LINE
GALV.	GALVANIZE
H.S.	HIGH STRENGTH
CWT	HUNDRED WEIGHT
INL	INLET
INTER.	INTERSECTION
IH	INTERSTATE HIGHWAY
JT.	JOINT
LT	LEFT
L.H.F.	LEFT HAND FORWARD
L.	LENGTH OF CURVE
L.F.	LINEAR FOOT(FEET)
LC.	LONG CHORD
LS	LUMP SUM
M.P.	MARKER POST
MGAL	1000 GALLONS
N.C.	NORMAL CROWN
N	NORTH
NB	NORTHBOUND
NOR	NORMAL
NO.	NUMBER
PAV'T	PAVEMENT
P.L.E.	PERMANENT LIMITED EASEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
PCC	PORTLAND CEMENT CONCRETE
P.E.	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
P.L.	PROPERTY LINE
R	RADIUS OR RANGE
R/L	REFERENCE LINE
R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
REQ'D	REQUIRED
RT	RIGHT
R.H.F.	RIGHT HAND FORWARD
R/W	RIGHT OF WAY
RD.	ROAD
SHLD.	SHOULDER(S)
SHR.	SHRINKAGE
S	SOUTH
SB	SOUTHBOUND
S.F.	SQUARE FOOT (FEET)
SDD	STANDARD DETAIL DRAWING(S)
STH	STATE TRUNK HIGHWAY
STA.	STATION
S.E.	SUPERELEVATION
S/L	SURVEY LINE
SYM	SYMMETRICAL
T.	PERCENT TRUCKS
TEL.	TELEPHONE
TEMP.	TEMPORARY
T.L.E.	TEMPORARY LIMITED EASEMENT
T.O.C.	TOP OF CURB
TYP	TYPICAL
UNCL.	UNCLASSIFIED
U.G.	UNDERGROUND (CABLE)
VAR	VARIABLE
V.C.	VERTICAL CURVE
V.P.C.	VERTICAL POINT OF CURVATURE
V.P.I.	VERTICAL POINT OF INTERSECTION
V.P.T.	VERTICAL POINT OF TANGENCY
Wt.	WEIGHT
W	WEST
WB	WESTBOUND

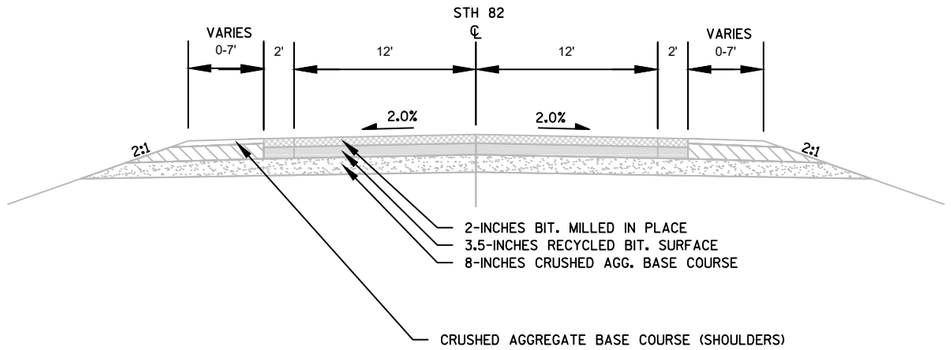
ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL
TRAFFIC CONTROL DETOUR
TRAFFIC CONTROL PCMS
TRAFFIC CONTROL SIGNING



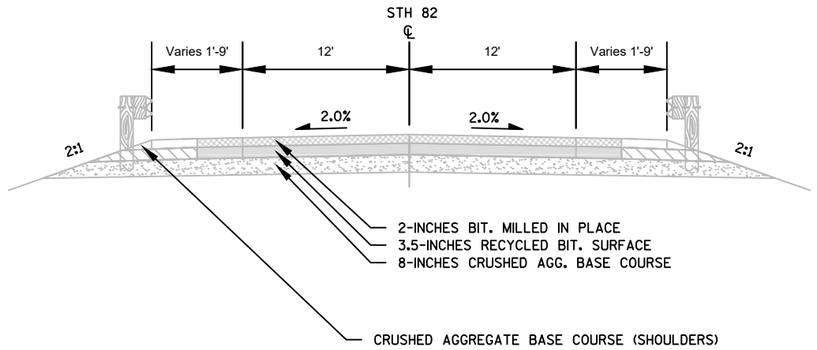
PROJECT NO: 5170-05-61	HWY: STH 82	COUNTY: CRAWFORD	PROJECT OVERVIEW	SHEET	E

FILE NAME : N:\PDS\C3D\51700501\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 1
PLOT DATE : 1/15/2019 9:40 AM
PLOT BY : DAVIDSON, JONATHAN B
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42



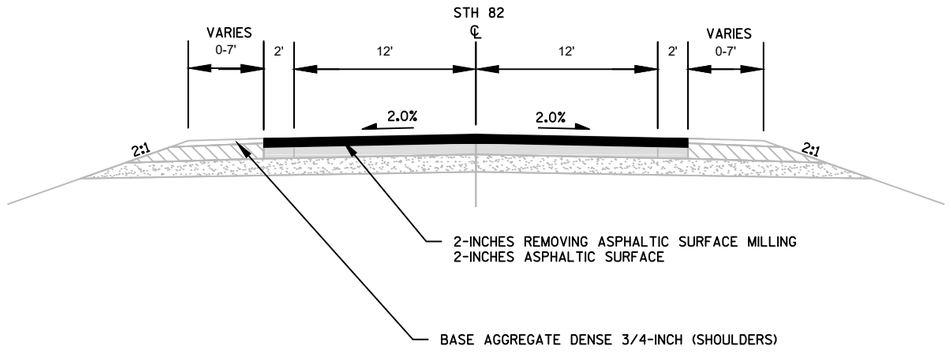
EXISTING TYPICAL SECTION

STA VARIES



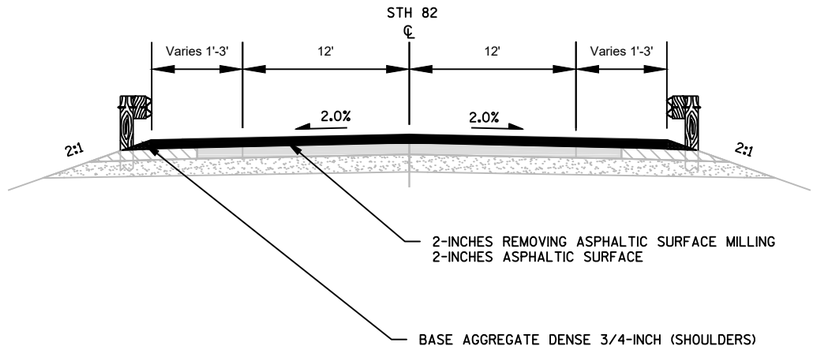
EXISTING TYPICAL SECTION

STA 75+36 TO 76+56
STA 77+82 TO 79+02
STA 117+02 TO 118+22
STA 119+46 TO 120+52
STA 135+97 TO 137+17



PROPOSED TYPICAL SECTION

STA VARIES

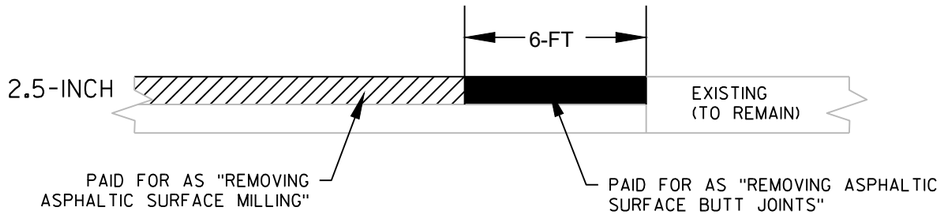


PROPOSED TYPICAL SECTION

STA 75+32 TO 76+59
STA 77+82 TO 79+09
STA 116+96 TO 118+23
STA 119+47 TO 120+53
STA 120+07 TO 120+70
STA 135+90 TO 137+17

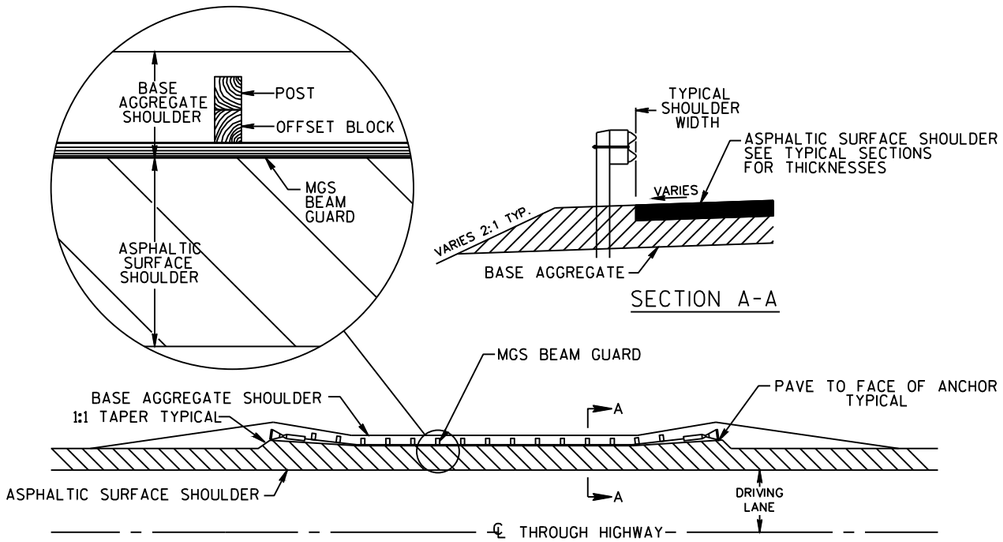
PROJECT NO: 5170-05-61	HWY: STH 82	COUNTY: CRAWFORD	TYPICAL SECTIONS	SHEET 4	E

NOT TO SCALE



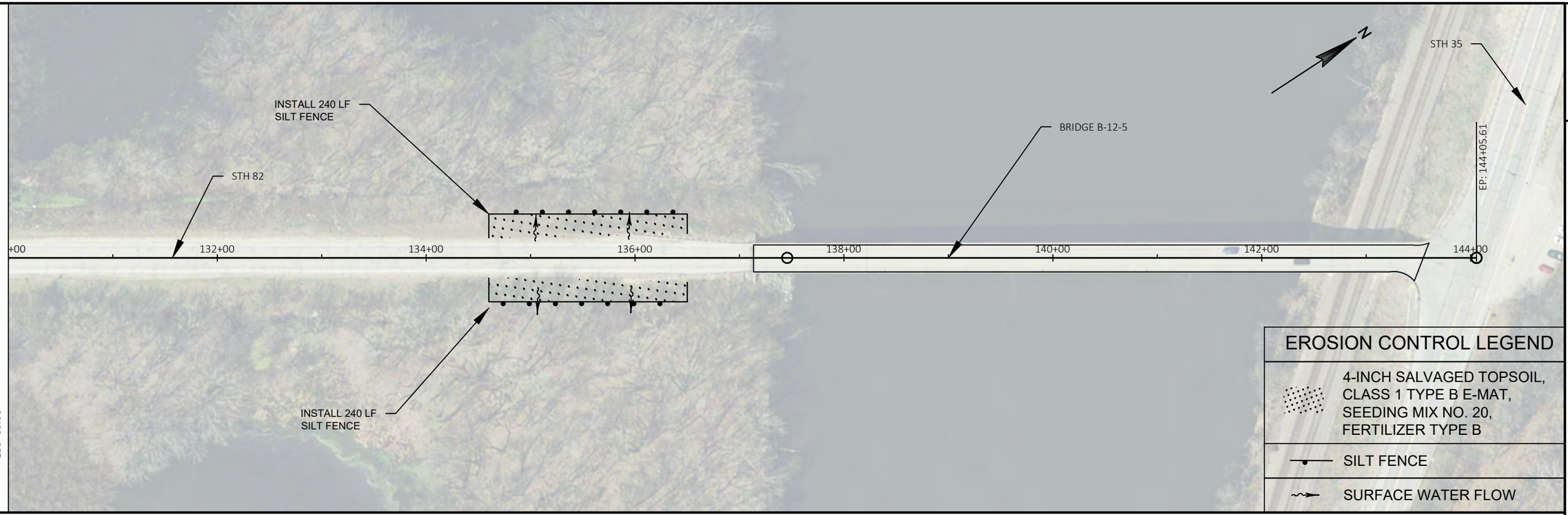
REMOVING ASPHALTIC SURFACE BUTT JOINTS DETAIL
STA VARIES

NOT TO SCALE



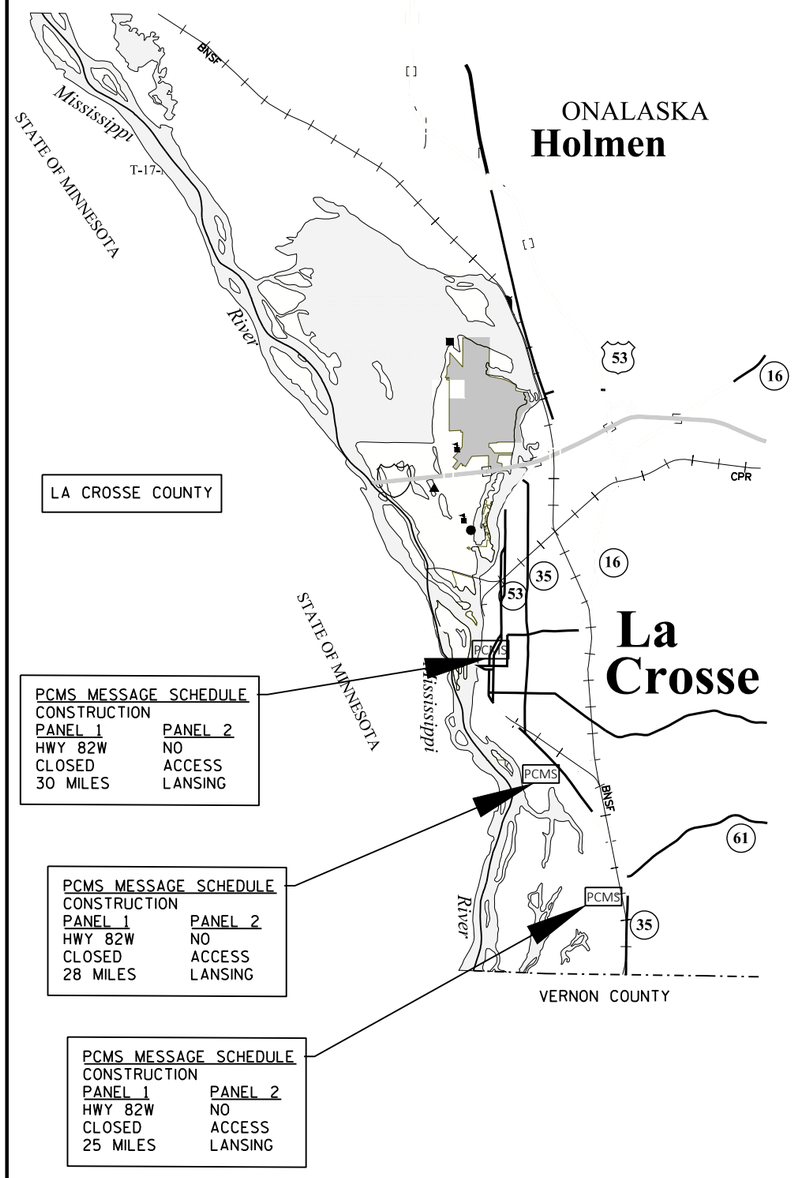
ASPHALTIC PAVED SHOULDER ALONG BEAM GUARD
STA VARIES

2



PROJECT NO: 5170-05-61	HWY: STH 82	COUNTY: CRAWFORD	EROSION CONTROL	SHEET 6	E

NOTES:
- PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE OPERATIONAL FOR A MINIMUM OF ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
- PCMS MESSAGE SCHEDULE MAY REQUIRE ADJUSTMENT TO ACCOMMODATE CONSTRUCTION SCHEDULE. MESSAGES MUST BE APPROVED BY THE ENGINEER.
- ALL PCMS BOARDS SHALL REMAIN OPERATIONAL UNTIL PROJECT BEGINS, AS APPROVED BY THE ENGINEER.



PCMS MESSAGE SCHEDULE
CONSTRUCTION

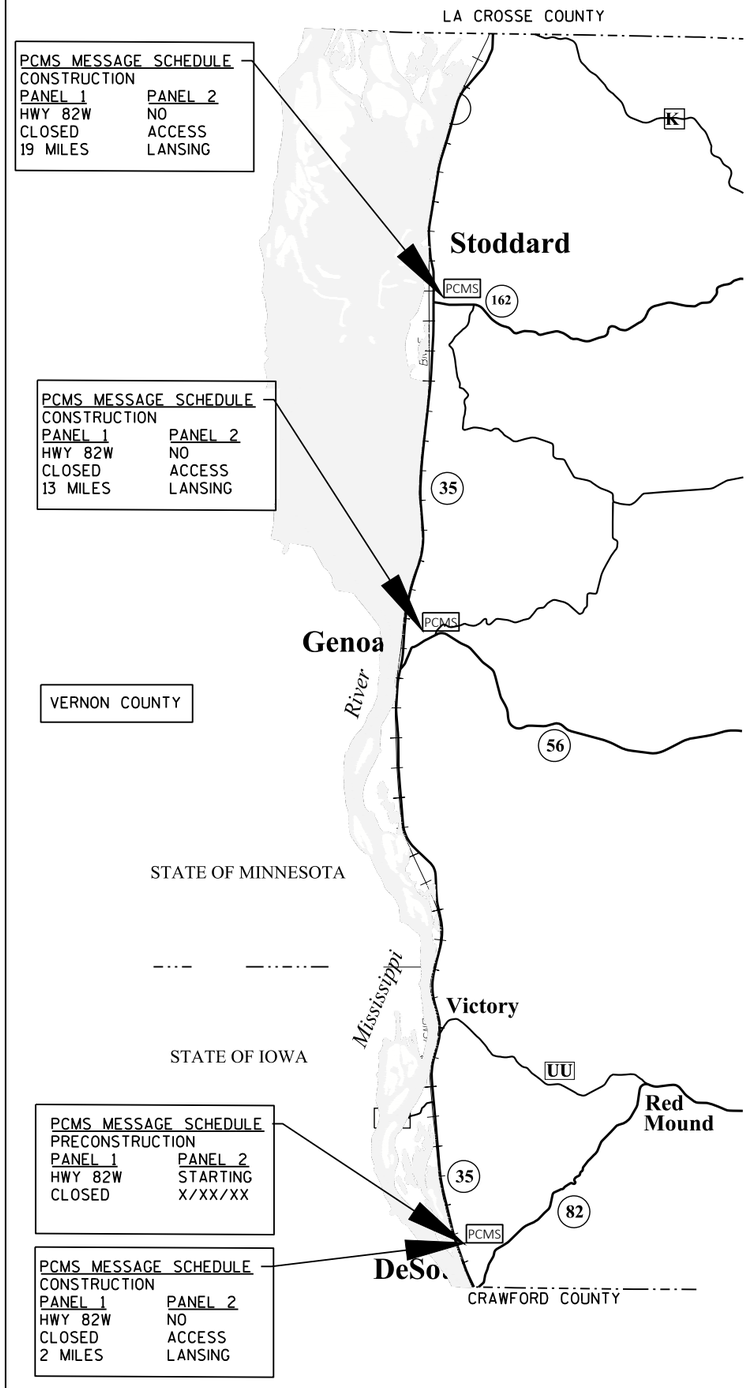
PANEL 1	PANEL 2
HWY 82W	NO
CLOSED	ACCESS
30 MILES	LANSING

PCMS MESSAGE SCHEDULE
CONSTRUCTION

PANEL 1	PANEL 2
HWY 82W	NO
CLOSED	ACCESS
28 MILES	LANSING

PCMS MESSAGE SCHEDULE
CONSTRUCTION

PANEL 1	PANEL 2
HWY 82W	NO
CLOSED	ACCESS
25 MILES	LANSING



PCMS MESSAGE SCHEDULE
CONSTRUCTION

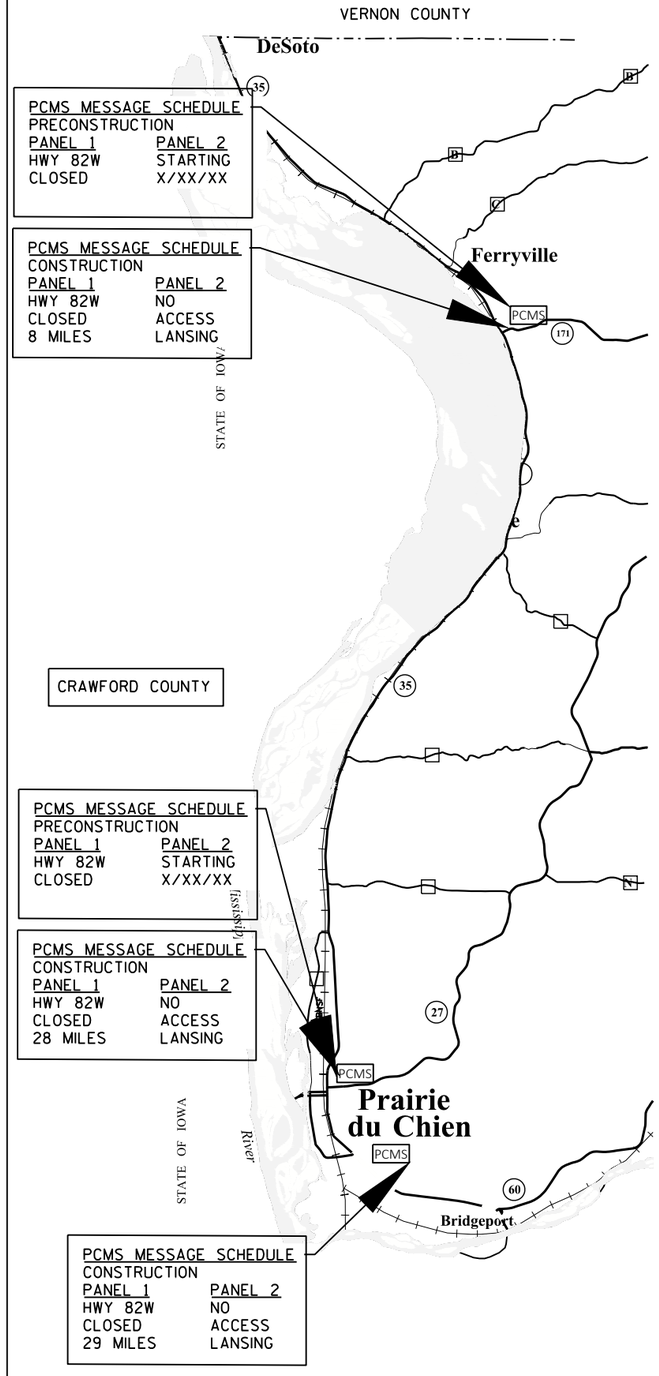
PANEL 1	PANEL 2
HWY 82W	NO
CLOSED	ACCESS
13 MILES	LANSING

PCMS MESSAGE SCHEDULE
PRECONSTRUCTION

PANEL 1	PANEL 2
HWY 82W	STARTING
CLOSED	X/XX/XX

PCMS MESSAGE SCHEDULE
CONSTRUCTION

PANEL 1	PANEL 2
HWY 82W	NO
CLOSED	ACCESS
2 MILES	LANSING



PCMS MESSAGE SCHEDULE
PRECONSTRUCTION

PANEL 1	PANEL 2
HWY 82W	STARTING
CLOSED	X/XX/XX

PCMS MESSAGE SCHEDULE
CONSTRUCTION

PANEL 1	PANEL 2
HWY 82W	NO
CLOSED	ACCESS
8 MILES	LANSING

PCMS MESSAGE SCHEDULE
CONSTRUCTION

PANEL 1	PANEL 2
HWY 82W	NO
CLOSED	ACCESS
29 MILES	LANSING

PROJECT NO: 5170-05-61	HWY: STH 82	COUNTY: CRAWFORD	TRAFFIC CONTROL - PCMS	SHEET 7	E

2

MISSISSIPPI RIVER

MISSISSIPPI RIVER

MISSISSIPPI RIVER

TO DE SOTO

END PROJECT STA 143+69

WINNESHIEK SLOUGH

35 82

82

HENDERSON SLOUGH

BEGIN PROJECT STA 75+30

STEVENS SLOUGH

82

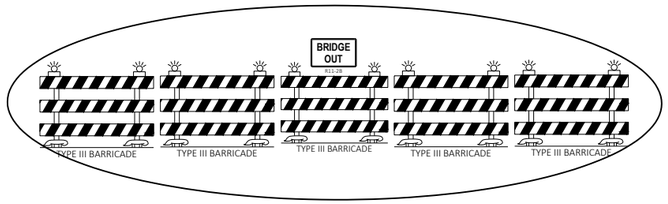
TO IOWA

BIG SLOUGH

MAIN CHANNEL

N

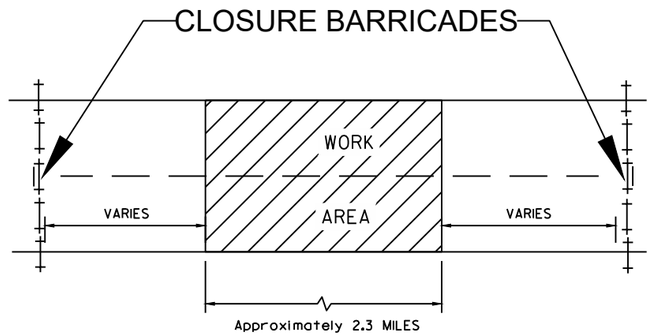
2



CLOSURE BARRICADES

BNSF RAILROAD

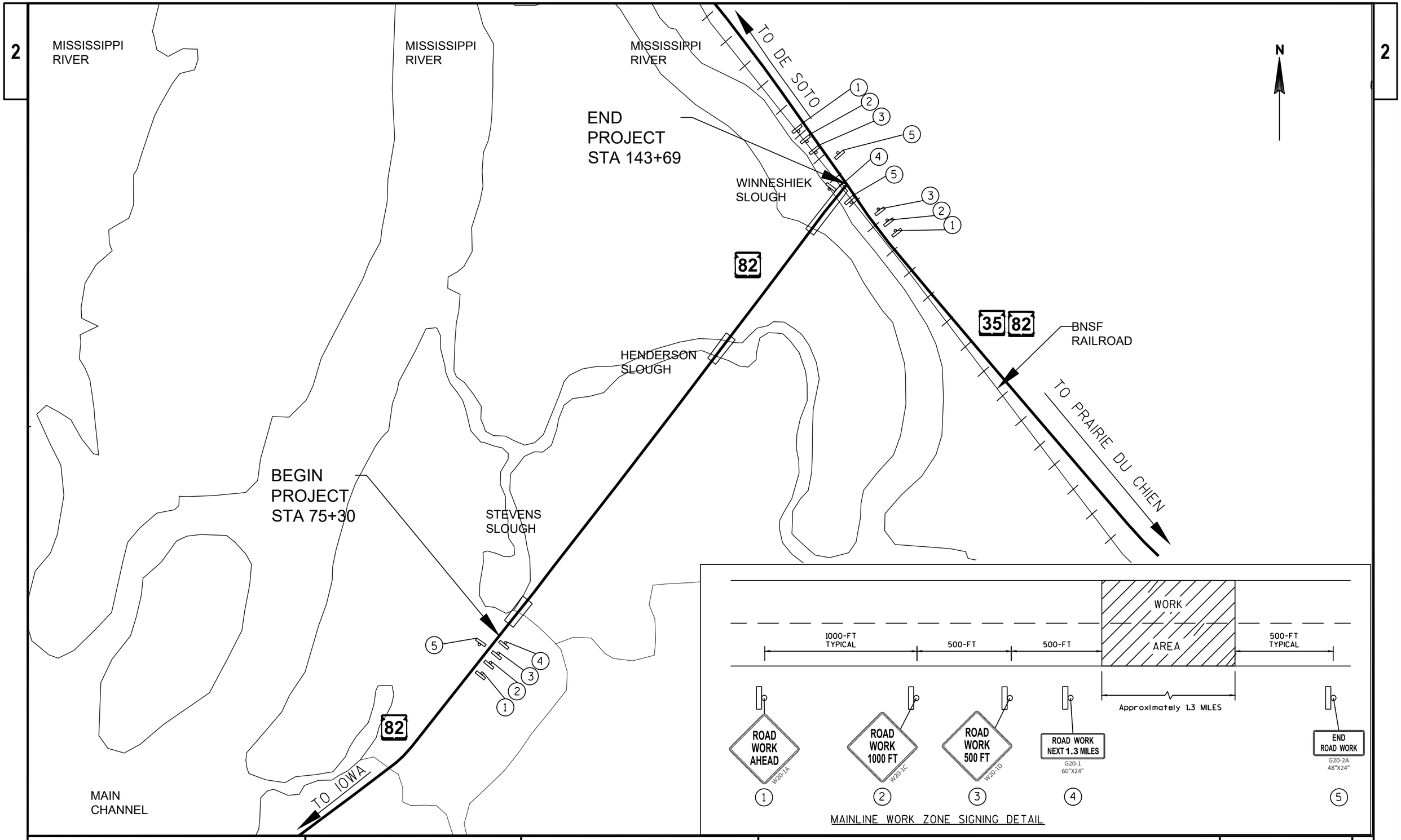
TO PRAIRIE DU CHIEN



MAINLINE WORK ZONE SIGNING DETAIL

PROJECT NO: 5170-05-61	HWY: STH 82	COUNTY: CRAWFORD	TRAFFIC CONTROL - ROADWAY CLOSED	SHEET 8	E

FILE NAME : N:\PDS\C3D\51700501\SHEETSPLAN\025001-TC-SIGNING(CLOSURE).DWG
LAYOUT NAME - TC-CLOSURE
PLOT DATE : 1/15/2019 9:56 AM
PLOT BY : DAVIDSON, JONATHAN B
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

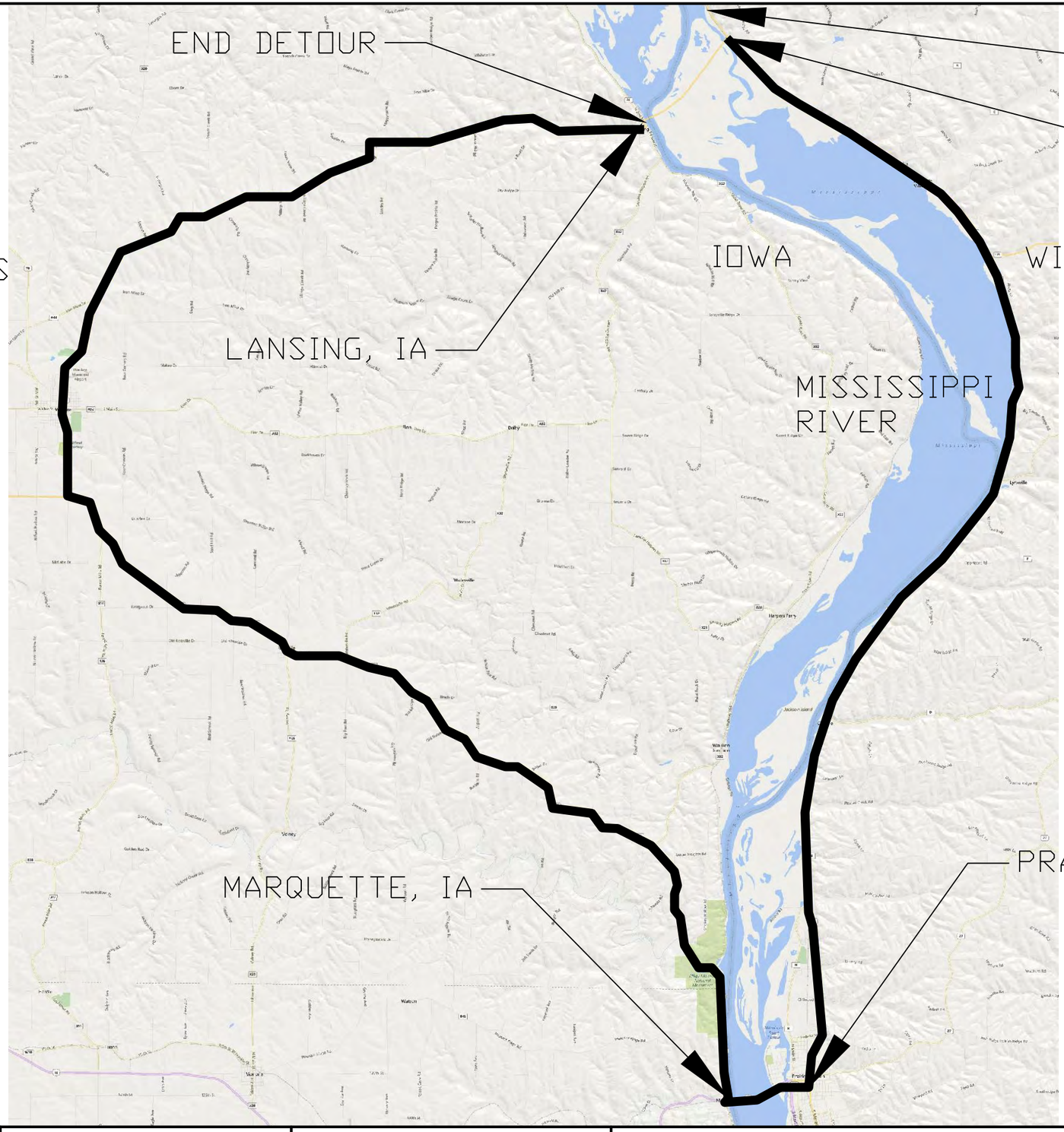


PROJECT NO: 5170-05-61	HWY: STH 82	COUNTY: CRAWFORD	TRAFFIC CONTROL - FLAGGING OPERATIONS	SHEET 9	E

FILE NAME : N:\PDS\C3D\51700501\SHEETSPLAN\025001-TC-SIGNING.DWG
LAYOUT NAME - 1
PLOT DATE : 1/15/2019 9:56 AM
PLOT BY : DAVIDSON, JONATHAN B
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

SEE TRAFFIC CONTROL - DETOUR SIGNING SHEETS (x2) - FOR ADD'L DETAILS



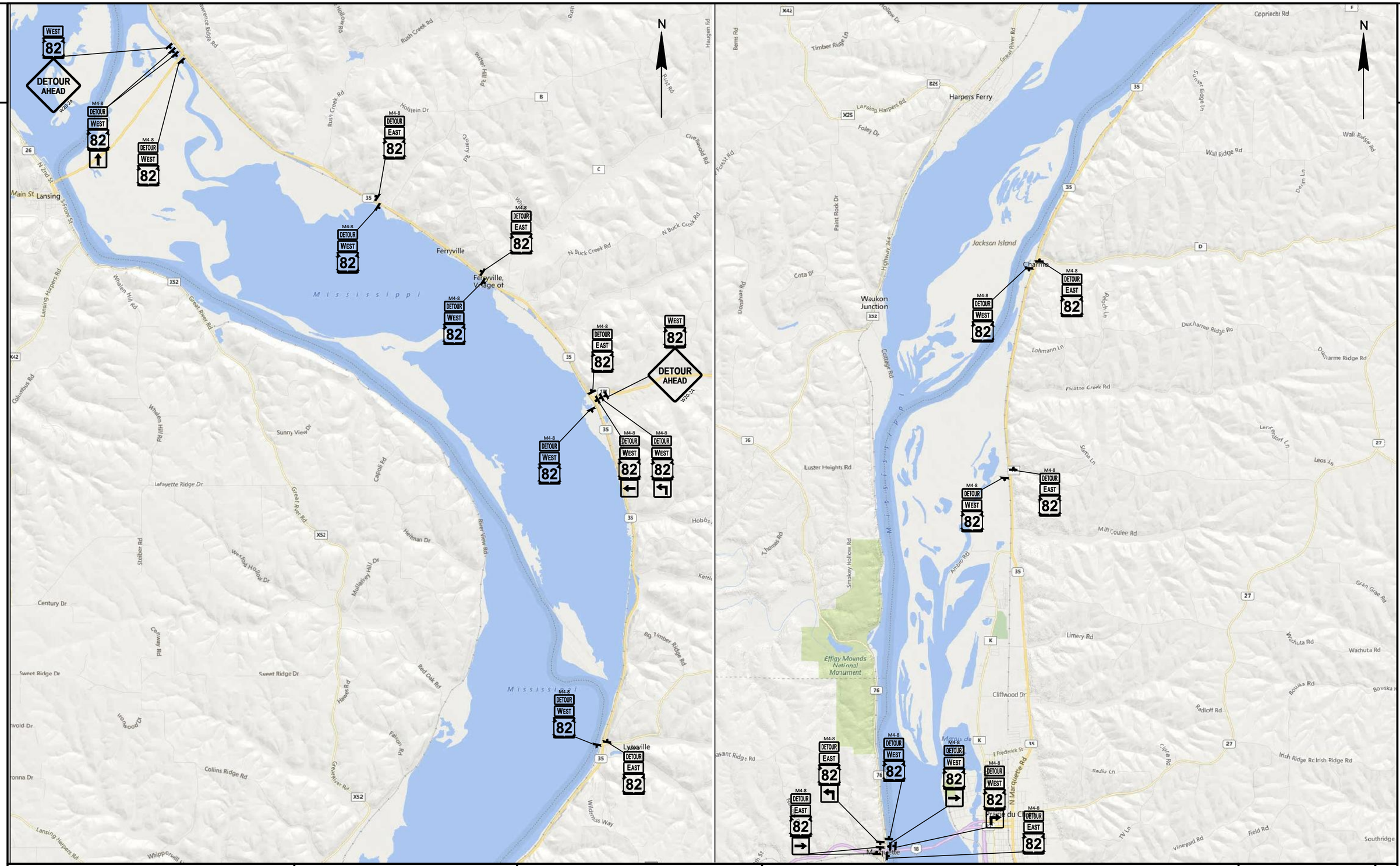
2

PROJECT NO: 5170-05-61	HWY: STH 82	COUNTY: CRAWFORD	TRAFFIC CONTROL - DETOUR ROUTE OVERVIEW	SHEET	E

FILE NAME : N:\PDS\C3D\51700501\SHEETSPLAN\027001-DT4 (OVERVIEW).DWG
LAYOUT NAME - Overview 1

PLOT DATE : 1/15/2019 9:54 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : 1in:2.6miles

WISDOT/CADDS SHEET 42



PROJECT NO: 5170-05-61	HWY: STH 82	COUNTY: CRAWFORD	TRAFFIC CONTROL - DETOUR SIGNING	SHEET	E

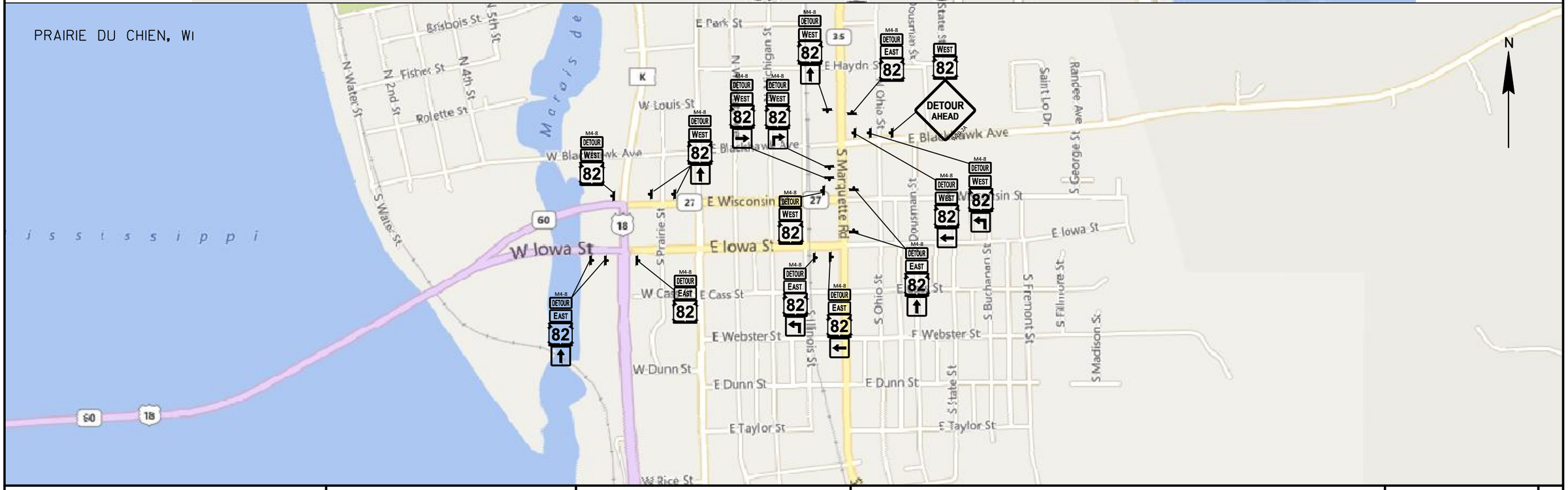
FILE NAME : N:\PDS\C3D\51700501\SHEETSPLAN\027001-DT1.DWG
LAYOUT NAME - Overview 1

PLOT DATE : 2/14/2019 8:51 AM PLOT BY : DAVIDSON, JONATHAN B PLOT NAME : PLOT SCALE : Custom

2

LANSING, IA

PRAIRIE DU CHIEN, WI



PROJECT NO: 5170-05-61	HWY: STH 82	COUNTY: CRAWFORD	TRAFFIC CONTROL - DETOUR SIGNING	SHEET 12	E

5170-05-61

Line	Item	Item Description	Unit	Total	Qty
0002	203.0225.S	Debris Containment (structure) 01. B-12-5	LS	1.000	1.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	85.000	85.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	1,779.000	1,779.000
0008	204.0165	Removing Guardrail	LF	1,155.000	1,155.000
0010	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	12.280	12.280
0012	213.0100	Finishing Roadway (project) 01. 5170-05-61	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	165.000	165.000
0016	455.0605	Tack Coat	GAL	125.000	125.000
0018	465.0105	Asphaltic Surface	TON	200.000	200.000
0020	475.0100	Seal Coat	CY	0.800	0.800
0022	502.3200	Protective Surface Treatment	SY	216.000	216.000
0024	502.4106	Adhesive Anchors 3/4-inch	EACH	54.000	54.000
0026	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	1,410.000	1,410.000
0028	509.0301	Preparation Decks Type 1	SY	156.000	156.000
0030	509.0302	Preparation Decks Type 2	SY	39.000	39.000
0032	509.0310.S	Sawing Pavement Deck Preparation Areas	LF	2,020.000	2,020.000
0034	509.1000	Joint Repair	SY	19.000	19.000
0036	509.1200	Curb Repair	LF	145.000	145.000
0038	509.1500	Concrete Surface Repair	SF	917.000	917.000
0040	509.2000	Full-Depth Deck Repair	SY	14.000	14.000
0042	509.2100.S	Concrete Masonry Deck Repair	CY	34.000	34.000
0044	509.9025.S	Epoxy Injection Crack Repair	LF	34.000	34.000
0046	509.9026.S	Cored Holes 2-Inch Diameter	EACH	8.000	8.000
0048	517.3000.S	Structure Overcoating Cleaning and Priming (structure) 01. B-12-5	LS	1.000	1.000
0050	517.3000.S	Structure Overcoating Cleaning and Priming (structure) 02. B-12-6	LS	1.000	1.000
0052	517.3000.S	Structure Overcoating Cleaning and Priming (structure) 03. B-12-7	LS	1.000	1.000
0054	517.4000.S	Containment and Collection of Waste Materials (structure) 01. B-12-5	LS	1.000	1.000
0056	517.4000.S	Containment and Collection of Waste Materials (structure) 02. B-12-6	LS	1.000	1.000
0058	517.4000.S	Containment and Collection of Waste Materials (structure) 03. B-12-7	LS	1.000	1.000
0060	517.6001.S	Portable Decontamination Facility	EACH	3.000	3.000
0062	606.0300	Riprap Heavy	CY	30.000	30.000
0064	614.0010	Barrier System Grading Shaping Finishing	EACH	3.000	3.000
0066	614.0230	Steel Thrie Beam	LF	411.000	411.000
0068	614.0305	Steel Plate Beam Guard Class A	LF	13.000	13.000
0070	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	1.000	1.000

5170-05-61

Line	Item	Item Description	Unit	Total	Qty
0072	614.0920	Salvaged Rail	LF	1,662.000	1,662.000
0074	614.0950	Replacing Guardrail Posts and Blocks	EACH	303.000	303.000
0076	614.2300	MGS Guardrail 3	LF	371.000	371.000
0078	614.2500	MGS Thrie Beam Transition	LF	333.000	333.000
0080	614.2610	MGS Guardrail Terminal EAT	EACH	8.000	8.000
0082	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5170-05-61	EACH	1.000	1.000
0084	619.1000	Mobilization	EACH	1.000	1.000
0086	624.0100	Water	MGAL	0.720	0.720
0088	628.1504	Silt Fence	LF	625.000	625.000
0090	628.1520	Silt Fence Maintenance	LF	625.000	625.000
0092	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0094	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0096	628.2004	Erosion Mat Class I Type B	SY	1,067.000	1,067.000
0098	642.5001	Field Office Type B	EACH	1.000	1.000
0100	643.0310.S	Temporary Portable Rumble Strips	LS	1.000	1.000
0102	643.0420	Traffic Control Barricades Type III	DAY	110.000	110.000
0104	643.0705	Traffic Control Warning Lights Type A	DAY	220.000	220.000
0106	643.0900	Traffic Control Signs	DAY	2,100.000	2,100.000
0108	643.1050	Traffic Control Signs PCMS	DAY	120.000	120.000
0110	643.5000	Traffic Control	EACH	1.000	1.000
0112	646.1020	Marking Line Epoxy 4-Inch	LF	1,386.000	1,386.000
0114	690.0150	Sawing Asphalt	LF	130.000	130.000
0116	801.0117	Railroad Flagging Reimbursement	DOL	10,000.000	10,000.000
0118	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	600.000	600.000
0120	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	400.000	400.000
0122	SPV.0060	Special 02. Embedded Galvanic Anodes	EACH	34.000	34.000
0124	SPV.0060	Special 01. Bearing Repair	EACH	14.000	14.000
0126	SPV.0060	Special 03. Strip Seal Gland Replacement	EACH	4.000	4.000
0128	SPV.0105	Special 01. Cleaning And Painting Girder Ends	LS	1.000	1.000
0130	SPV.0165	Special 01. Fiber Wrap Reinforcing Non-structural - Dry	SF	400.000	400.000
0132	SPV.0165	Special 02. Fiber Wrap Reinforcing Non-structural - Wet	SF	270.000	270.000
0134	SPV.0165	Special 03. Pile Rehabilitation	SF	1,930.000	1,930.000

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REMOVING ASPHALTIC SURFACE BUTT JOINTS

CATEGORY	STATION TO	STATION	LOCATION	204.0115 SY	REMARKS
0010	76+52		C/L	17	26-FT x 6-FT
	77+87		C/L	17	26-FT x 6-FT
	118+17		C/L	17	26-FT x 6-FT
	119+52		C/L	17	26-FT x 6-FT
	137+15		C/L	17	26-FT x 6-FT
			TOTAL 0010	85	

REMOVING GUARDRAIL

CATEGORY	STATION TO		STATION	LOCATION	204.0165 LF	REMARKS
0010	75+36	-	76+56	LT	120	B-12-7
	77+82	-	79+02	LT	120	B-12-7
	117+02	-	118+22	LT	120	B-12-6
	119+46	-	120+52	LT	106	B-12-6
	135+97	-	137+17	LT	120	B-12-5
	143+60	-	143+69	LT	13	B-12-5 (1-12.5ft radius piece)
	75+36	-	76+56	RT	120	B-12-7
	77+82	-	79+02	RT	120	B-12-7
	117+02	-	118+22	RT	120	B-12-6
	120+07	-	120+70	RT	63	B-12-6
	135+97	-	137+17	RT	120	B-12-5
	143+47	-	143+51	RT	13	B-12-5 (1-12.5ft radius piece)
				TOTAL 0010	1,155	

REMOVING ASPHALTIC SURFACE MILLING

CATEGORY	STATION TO		STATION	LOCATION	204.0120 SY	REMARKS
0010	75+36	-	76+46	C/L	355	B-12-7
	77+93	-	79+05	C/L	355	B-12-7
	117+00	-	118+11	C/L	355	B-12-6
	119+58	-	120+66	C/L	347	B-12-6
	135+94	-	137+09	C/L	367	B-12-5
				TOTAL 0010	1,779	

BASE AGGREGATE DENSE 3/4-INCH

CATEGORY	STATION TO	STATION	LOCATION	305.0110 TON	REMARKS
0010			B-12-7	60	15 ton/bridge quadrant
			B-12-6	60	15 ton/bridge quadrant
			B-12-5	30	15 ton/bridge quadrant
	Undistributed		Varies	15	---
			TOTAL 0010	165	

WATER

CATEGORY	STATION TO	STATION	LOCATION	624.0100 MGAL	REMARKS
0010			B-12-7	0.240	4 BRIDGE QUADRANTS
			B-12-6	0.240	4 BRIDGE QUADRANTS
			B-12-5	0.120	2 BRIDGE QUADRANTS
	UNDISTRIBUTED		VARIES	0.120	---
			TOTAL 0010	0.720	

SAWING ASPHALT

CATEGORY	STATION TO	STATION	LOCATION	690.0150 LF	REMARKS
0010	75+30		C/L	26	B-12-7
	79+11		C/L	26	B-12-7
	116+94		C/L	26	B-12-6
	120+72		C/L	26	B-12-6
	135+88		C/L	26	B-12-5
			TOTAL 0010	130	

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EROSION CONTROL

CATEGORY	STATION TO	STATION	LOCATION	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF	MOBILIZATIONS EROSION CONTROL 628.1905 EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL 628.1910 EACH	REMARKS
0010	134+60 -	136+50	LT	250	250	---	---	B-12-5
	134+60 -	136+50	RT	250	250	---	---	B-12-5
	UNDISTRIBUTED		LT/RT	125	125	---	---	UNDISTRIBUTED
	VARIES		---	---	---	1	1	PROJECT LIMITS
			TOTAL 0010	625	625	1	1	

GUARDRAIL

CATEGORY	STATION TO	STATION	LOCATION	BARRIER SYSTEM GRADING SHAPING FINISHING 614.0010 EACH	STEEL THRIE BEAM 614.0230 LF	STEEL PLATE BEAM GUARD CLASS A 614.0305 LF	STEEL PLATE BEAM GUARD EAT 614.0370 EACH	SALVAGED RAIL 614.0920 LF	REPLACING GUARDRAIL POSTS & BLOCKS 614.0950 EACH	MGS GUARDRAIL 3 614.2300 LF	MGS THRIE BEAM TRANSITION 614.2500 LF	MGS GUARDRAIL TERMINAL EAT 614.2610 EACH	CLASS 1 TYPE B E-MAT 628.2004 SY	REMARKS
0010	75+32 -	76+59	LT	---	---	---	---	---	---	37	37	1	---	B-12-7
	77+82 -	79+09	LT	---	---	---	---	---	---	37	37	1	---	B-12-7
	116+96 -	118+23	LT	---	---	---	---	---	---	37	37	1	---	B-12-6
	119+47 -	120+53	LT	---	---	---	---	---	---	75	37	---	---	B-12-6
	135+90 -	137+17	LT	1	---	---	---	---	---	37	37	1	510	B-12-5
	143+60 -	143+69	LT	---	13	---	---	---	---	---	---	---	---	B-12-5
	75+32 -	76+59	RT	1	---	---	---	---	---	37	37	1	---	B-12-7
	77+82 -	79+09	RT	---	---	---	---	---	---	37	37	1	---	B-12-7
	116+96 -	118+23	RT	---	---	---	---	---	---	37	37	1	---	B-12-6
	120+07 -	120+70	RT	---	---	13	1	---	---	---	---	---	---	B-12-6
	135+90 -	137+17	RT	1	---	---	---	---	---	37	37	1	557	B-12-5
	143+47 -	143+51	RT	---	13	---	---	---	---	---	---	---	---	B-12-5
			TOTAL 0010	3	26	13	1	0	0	371	333	8	8	
0020				---	135	---	---	1,162	219	---	---	---	---	B-12-5
			TOTAL 0020	---	135	---	---	1,162	219	---	---	---	---	
0030				---	---	---	---	250	42	---	---	---	---	B-12-6
			TOTAL 0030	---	---	---	---	250	42	---	---	---	---	
0040				---	250	---	---	250	42	---	---	---	---	B-12-7
			TOTAL 0040	---	250	---	---	250	42	---	---	---	---	

FOR INFORMATION ONLY

CATEGORY	STATION TO	STATION	LOCATION	SALVAGED TOPSOIL CY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 20 LB	SEEDING TEMPORARY LB	REMARKS
0010	75+32 -	76+59	LT	---	---	---	---	
	77+82 -	79+09	LT	---	---	---	---	
	116+96 -	118+23	LT	---	---	---	---	
	119+47 -	120+53	LT	---	---	---	---	
	135+90 -	137+17	LT	57	0.2	16.3	16.3	
	143+60 -	143+69	LT	---	---	---	---	
	75+32 -	76+59	RT	shape existing aggregates foreslope only				
	77+82 -	79+09	RT	---	---	---	---	
	116+96 -	118+23	RT	---	---	---	---	
	120+07 -	120+70	RT	---	---	---	---	
	135+90 -	137+17	RT	62	0.2	17.6	17.6	
	143+47 -	143+51	RT	---	---	---	---	

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PAVING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	TACK COAT 455.0605 GAL	ASPHALTIC SURFACE 465.0105 TON	REMARKS
0010	75+26	-	76+52	C/L	25	40	B-12-7
	77+86	-	79+12	C/L	25	40	B-12-7
	116+92	-	118+18	C/L	25	40	B-12-6
	119+50	-	120+76	C/L	25	40	B-12-6
	135+87	-	137+13	C/L	25	40	B-12-5
TOTAL 0010					125	200	

MARKING LINE EPOXY 4-INCH

CATEGORY	STATION	LOCATION	MARKING LINE EPOXY 4-INCH 646.1020 LF	REMARKS
0010	PROJECT LIMITS	LT/RT	1,260	WHITE EDGELINES
	PROJECT LIMITS	C/L	126	YELLOW SKIPS (12.5-FT)
			1,386	

TRAFFIC CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	TEMP. PORTABLE RUMBLE STRIPS 643.0310.S LS	TYPE III BARRICADES 643.0420 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643.0705 DAY	TRAFFIC CONTROL SIGNS - PCMS 643.1050 DAY	TRAFFIC CONTROL PROJECT 643.5000 EACH	REMARKS
0010	PROJECT LIMITS			---	---	---	---	---	1	---
	70+00	-	143+75	C/L	---	110	220	---	---	11 DAYS, 10 BARRICADES (CLOSURE ONLY)
	DETOUR ROUTE			N/A	---	---	---	21	---	PRE-CONSTRUCTION (DETOUR ONLY)
	DETOUR ROUTE			N/A	---	---	---	99	---	CONSTRUCTION (CLOSURE ONLY)
	PROJECT LIMITS			---	1	---	---	---	---	STH 82 - (FLAGGING OPERATIONS ONLY)
TOTAL 0010					1	110	220	120	1	

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

CATEGORY	STATION	TO	STATION	LOCATION	211.0400 STA	REMARKS
0010	75+30	-	76+52	LT	1.2	B-12-7
	77+87	-	79+11	LT	1.2	B-12-7
	116+94	-	118+17	LT	1.2	B-12-6
	119+52	-	120+72	LT	1.2	B-12-6
	135+90	-	137+15	LT	1.3	B-12-5
	75+30	-	76+52	RT	1.2	B-12-7
	77+87	-	79+11	RT	1.2	B-12-7
	116+94	-	118+17	RT	1.2	B-12-6
	119+52	-	120+72	RT	1.2	B-12-6
	135+90	-	137+15	RT	1.3	B-12-5
TOTAL 0010					12.28	

TRAFFIC CONTROL SIGNS

643.0900

CATEGORY	STATION	LOCATION	LT/RT	QUANTITY OF SIGNS	SIGN NUMBER	SIGN	SIZE	DAY	STAGE	REMARKS
0010	56+00	MAINLINE	RT	1	W20-1A	ROAD WORK AHEAD	---	25	FLAGGING OPERATIONS ONLY	
	66+00	MAINLINE	RT	1	W20-1C	ROAD WORK 1000 FT	---	25	FLAGGING OPERATIONS ONLY	
	71+00	MAINLINE	RT	1	W20-1D	ROAD WORK 500 FT	---	25	FLAGGING OPERATIONS ONLY	
	71+00	MAINLINE	LT	1	G20-2A	END ROAD WORK	48"x24"	25	FLAGGING OPERATIONS ONLY	
	73+00	MAINLINE	RT	1	G20-1	ROAD WORK NEXT 1.3 MILES	60"x24"	25	FLAGGING OPERATIONS ONLY	
	N/A	STH 35	---	2	W20-1A	ROAD WORK AHEAD	---	25	FLAGGING OPERATIONS ONLY	
	N/A	STH 35	---	2	W20-1C	ROAD WORK 1000 FT	---	25	FLAGGING OPERATIONS ONLY	
	N/A	STH 35	---	2	W20-1D	ROAD WORK 500 FT	---	25	FLAGGING OPERATIONS ONLY	
	N/A	STH 35	---	2	G20-2A	END ROAD WORK	48"x24"	25	FLAGGING OPERATIONS ONLY	
	143+50	MAINLINE	RT	1	G20-1	ROAD WORK NEXT 1.3 MILES	60"x24"	25	FLAGGING OPERATIONS ONLY	
	75+00	MAINLINE	C/L	1	R11-2B	BRIDGE OUT	---	10	CLOSURE ONLY	
	143+75	MAINLINE	C/L	1	R11-2B	BRIDGE OUT	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 82	---	1	M3-3	WEST	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 82	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 82	---	1	W20-2A	DETOUR AHEAD	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 82	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 82	---	1	M3-3	WEST	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 82	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 82	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 82	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 82	---	1	M3-3	WEST	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 82	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY B	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY B	---	1	M3-3	WEST	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY B	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY B	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY B	---	1	M3-3	EAST	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY B	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY C	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY C	---	1	M3-3	WEST	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY C	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY C	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY C	---	1	M3-3	EAST	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY C	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 171	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 171	---	1	M3-3	WEST	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 171	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 171	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 171	---	1	M3-3	EAST	---	10	CLOSURE ONLY	
	N/A	STH 35/STH 171	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 171	---	1	M3-3	WEST	---	10	CLOSURE ONLY	
	N/A	STH 171	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 171	---	1	W20-2A	DETOUR AHEAD	---	10	CLOSURE ONLY	
	N/A	STH 171	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 171	---	1	M3-3	WEST	---	10	CLOSURE ONLY	
	N/A	STH 171	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 171	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	
Subtotal Page 1 (of 4)								**620**		

TRAFFIC CONTROL SIGNS

643.0900

CATEGORY	STATION	LOCATION	LT/RT	QUANTITY OF SIGNS	SIGN NUMBER	SIGN	SIZE	DAY	STAGE	REMARKS
0010	N/A	STH 171	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 171	---	1	M3-3	WEST	---	10	CLOSURE ONLY	
	N/A	STH 171	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 171	---	1	M1-5L	ARROW	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY E	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY E	---	1	M3-3	WEST	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY E	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY E	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY E	---	1	M3-3	EAST	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY E	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY D	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY D	---	1	M3-3	WEST	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY D	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY D	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY D	---	1	M3-3	EAST	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY D	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY N	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY N	---	1	M3-3	WEST	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY N	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY N	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY N	---	1	M3-3	EAST	---	10	CLOSURE ONLY	
	N/A	STH 35/CTY N	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	
	N/A	STH 35/E HAYDEN ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	STH 35/E HAYDEN ST	---	1	M3-3	WEST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	STH 35/E HAYDEN ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	STH 35/E HAYDEN ST	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	STH 35/E BLACKHAWK AVE	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	STH 35/E BLACKHAWK AVE	---	1	M3-3	WEST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	STH 35/E BLACKHAWK AVE	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	STH 35/E BLACKHAWK AVE	---	1	M5-1R	ARROW	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	STH 35/E BLACKHAWK AVE	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	STH 35/E BLACKHAWK AVE	---	1	M3-3	WEST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	STH 35/E BLACKHAWK AVE	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	STH 35/E BLACKHAWK AVE	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E WISCONSIN/MARQUETTE RD	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E WISCONSIN/MARQUETTE RD	---	1	M3-3	WEST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E WISCONSIN/MARQUETTE RD	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E WISCONSIN/S BEAUMONT	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E WISCONSIN/S BEAUMONT	---	1	M3-3	WEST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E WISCONSIN/S BEAUMONT	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E WISCONSIN/S BEAUMONT	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E WISCONSIN/S PRAIRIE	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E WISCONSIN/S PRAIRIE	---	1	M3-3	WEST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E WISCONSIN/S PRAIRIE	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E WISCONSIN/S PRAIRIE	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	USH 18/S MAIN ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	USH 18/S MAIN ST	---	1	M3-3	WEST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	USH 18/S MAIN ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
Subtotal Page 2 (of 4)								**480**		

TRAFFIC CONTROL SIGNS

643.0900

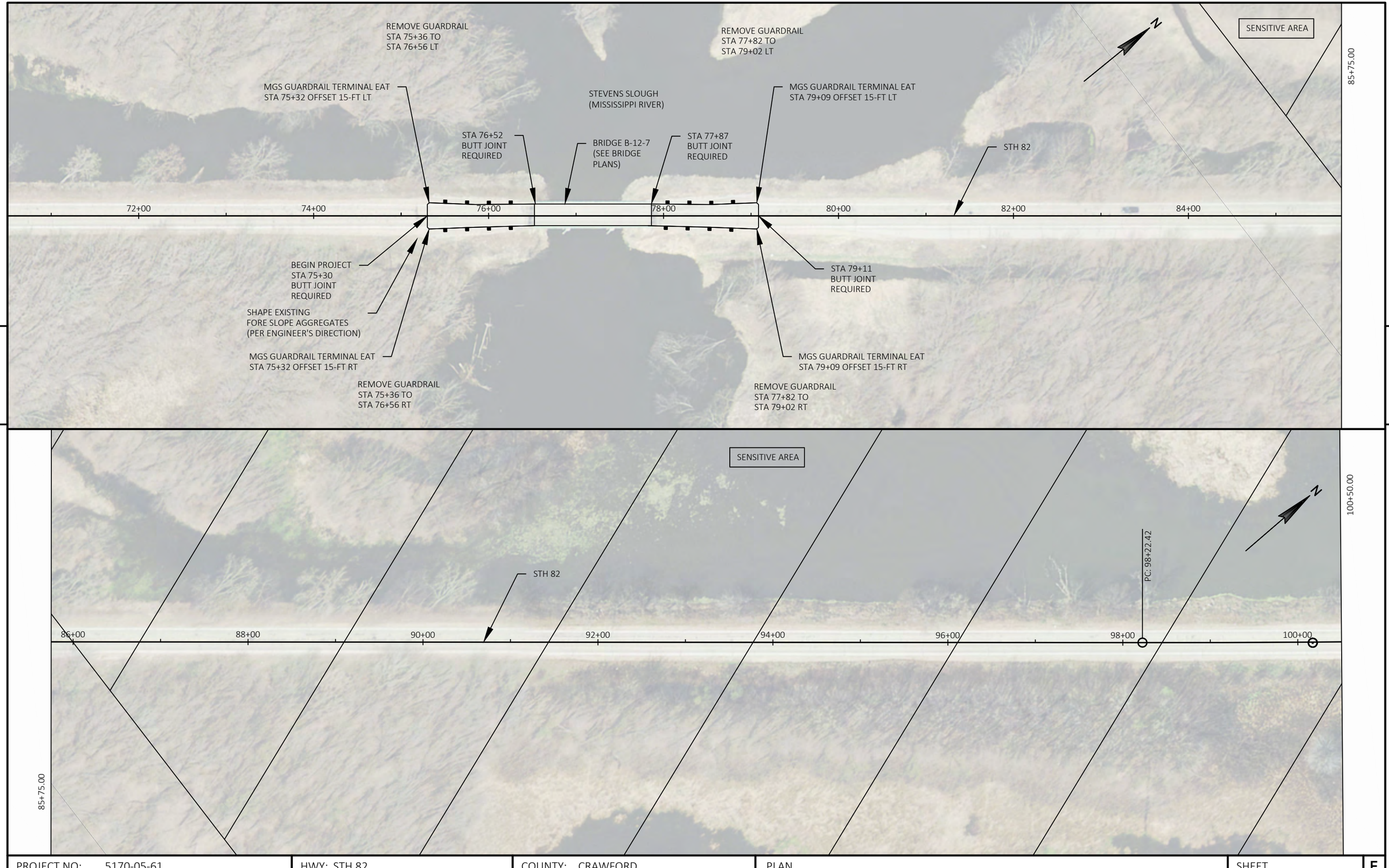
CATEGORY	STATION	LOCATION	LT/RT	QUANTITY OF SIGNS	SIGN NUMBER	SIGN	SIZE	DAY	STAGE	REMARKS
0010	N/A	E BLACKHAWK AVE/N OHIO ST	---	1	M3-3	WEST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E BLACKHAWK AVE/N OHIO ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E BLACKHAWK AVE/N OHIO ST	---	1	W20-2A	DETOUR AHEAD	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E BLACKHAWK AVE/N OHIO ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E BLACKHAWK AVE/N OHIO ST	---	1	M3-3	WEST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E BLACKHAWK AVE/N OHIO ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E BLACKHAWK AVE/N OHIO ST	---	1	M5-1L	ARROW	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E BLACKHAWK AVE/N OHIO ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E BLACKHAWK AVE/N OHIO ST	---	1	M3-3	WEST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E BLACKHAWK AVE/N OHIO ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E BLACKHAWK AVE/N OHIO ST	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	STH 35/E HAYDEN ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	STH 35/E HAYDEN ST	---	1	M3-3	EAST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	STH 35/E HAYDEN ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	S MARQUETTE/WISCONSIN ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	S MARQUETTE/WISCONSIN ST	---	1	M3-3	EAST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	S MARQUETTE/WISCONSIN ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	S MARQUETTE/WISCONSIN ST	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	S MARQUETTE/E IOWA ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	S MARQUETTE/E IOWA ST	---	1	M3-3	EAST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	S MARQUETTE/E IOWA ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	S MARQUETTE/E IOWA ST	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E IOWA ST/S MARQUETTE RD	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E IOWA ST/S MARQUETTE RD	---	1	M3-3	EAST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E IOWA ST/S MARQUETTE RD	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E IOWA ST/S MARQUETTE RD	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E IOWA ST/S MARQUETTE RD	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E IOWA ST/S MARQUETTE RD	---	1	M3-3	WEST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E IOWA ST/S MARQUETTE RD	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E IOWA ST/S MARQUETTE RD	---	1	M5-1L	ARROW	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E IOWA ST/S MAIN ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E IOWA ST/S MAIN ST	---	1	M3-3	EAST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	E IOWA ST/S MAIN ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	W IOWA ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	W IOWA ST	---	1	M3-3	EAST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	W IOWA ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	W IOWA ST	---	1	M5-1L	ARROW	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	W IOWA ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	W IOWA ST	---	1	M3-3	EAST	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	W IOWA ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	W IOWA ST	---	1	M5-1L	ARROW	---	10	CLOSURE ONLY	PRAIRIE DU CHIEN, WI
	N/A	WI 18 (B-12-27)	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	WI 18 (B-12-27)	---	1	M3-3	WEST	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	WI 18 (B-12-27)	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	WI 18 (B-12-27)	---	1	M5-1R	ARROW	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	WI 18 (B-12-27)	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	WI 18 (B-12-27)	---	1	M3-3	WEST	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	WI 18 (B-12-27)	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	WI 18 (B-12-27)	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	MARQUETTE, IA
Subtotal Page 3 (of 4)								**490**		

TRAFFIC CONTROL SIGNS

643.0900

CATEGORY	STATION	LOCATION	LT/RT	QUANTITY OF SIGNS	SIGN NUMBER	SIGN	SIZE	DAY	STAGE	REMARKS
0010	N/A	IA 18 (B-12-27)	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 18 (B-12-27)	---	1	M3-3	EAST	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 18 (B-12-27)	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76/BUS 18	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76/BUS 18	---	1	M3-3	EAST	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76/BUS 18	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76/BUS 18	---	1	M5-1L	ARROW	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76/BUS 18	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76/BUS 18	---	1	M3-3	EAST	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76/BUS 18	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76/BUS 18	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76/BUS 18	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76/BUS 18	---	1	M3-3	EAST	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76/BUS 18	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76/BUS 18	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76 (NORTH ST)	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76 (NORTH ST)	---	1	M3-3	WEST	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 76 (NORTH ST)	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	MARQUETTE, IA
	N/A	IA 26/HENRY ST	---	1	M3-3	EAST	---	10	CLOSURE ONLY	LANSING, IA
	N/A	IA 26/HENRY ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	LANSING, IA
	N/A	IA 26/HENRY ST	---	1	W20-2A	DETOUR AHEAD	---	10	CLOSURE ONLY	LANSING, IA
	N/A	IA 26/WI 82	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	LANSING, IA
	N/A	IA 26/WI 82	---	1	M3-3	EAST	---	10	CLOSURE ONLY	LANSING, IA
	N/A	IA 26/WI 82	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	LANSING, IA
	N/A	IA 26/WI 82	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	LANSING, IA
	N/A	IA 26/WI 82	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	LANSING, IA
	N/A	IA 26/WI 82	---	1	M3-3	EAST	---	10	CLOSURE ONLY	LANSING, IA
	N/A	IA 26/WI 82	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	LANSING, IA
	N/A	IA 26/WI 82	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	LANSING, IA
	N/A	2ND ST/MAIN ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	LANSING, IA
	N/A	2ND ST/MAIN ST	---	1	M3-3	EAST	---	10	CLOSURE ONLY	LANSING, IA
	N/A	2ND ST/MAIN ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	LANSING, IA
	N/A	2ND ST/MAIN ST	---	1	M5-1R	ARROW	---	10	CLOSURE ONLY	LANSING, IA
	N/A	2ND ST/MAIN ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	LANSING, IA
	N/A	2ND ST/MAIN ST	---	1	M3-3	EAST	---	10	CLOSURE ONLY	LANSING, IA
	N/A	2ND ST/MAIN ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	LANSING, IA
	N/A	2ND ST/MAIN ST	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	LANSING, IA
	N/A	2ND ST/MAIN ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	LANSING, IA
	N/A	2ND ST/MAIN ST	---	1	M3-3	WEST	---	10	CLOSURE ONLY	LANSING, IA
	N/A	2ND ST/MAIN ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	LANSING, IA
	N/A	MAIN ST/2ND ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	LANSING, IA
	N/A	MAIN ST/2ND ST	---	1	M3-3	EAST	---	10	CLOSURE ONLY	LANSING, IA
	N/A	MAIN ST/2ND ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	LANSING, IA
	N/A	MAIN ST/2ND ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	LANSING, IA
	N/A	MAIN ST/2ND ST	---	1	M3-3	WEST	---	10	CLOSURE ONLY	LANSING, IA
	N/A	MAIN ST/2ND ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	LANSING, IA
	N/A	MAIN ST/2ND ST	---	1	M5-1L	ARROW	---	10	CLOSURE ONLY	LANSING, IA
	N/A	MAIN ST/2ND ST	---	1	M4-8	DETOUR	---	10	CLOSURE ONLY	LANSING, IA
	N/A	MAIN ST/2ND ST	---	1	M3-3	WEST	---	10	CLOSURE ONLY	LANSING, IA
	N/A	MAIN ST/2ND ST	---	1	M1-6	STH 82	---	10	CLOSURE ONLY	LANSING, IA
	N/A	MAIN ST/2ND ST	---	1	M6-1	ARROW	---	10	CLOSURE ONLY	LANSING, IA

Subtotal Page 1 (of 4)	620
Subtotal Page 2 (of 4)	480
Subtotal Page 3 (of 4)	490
Subtotal Page 4 (of 4)	510
TOTAL 0010	2,100



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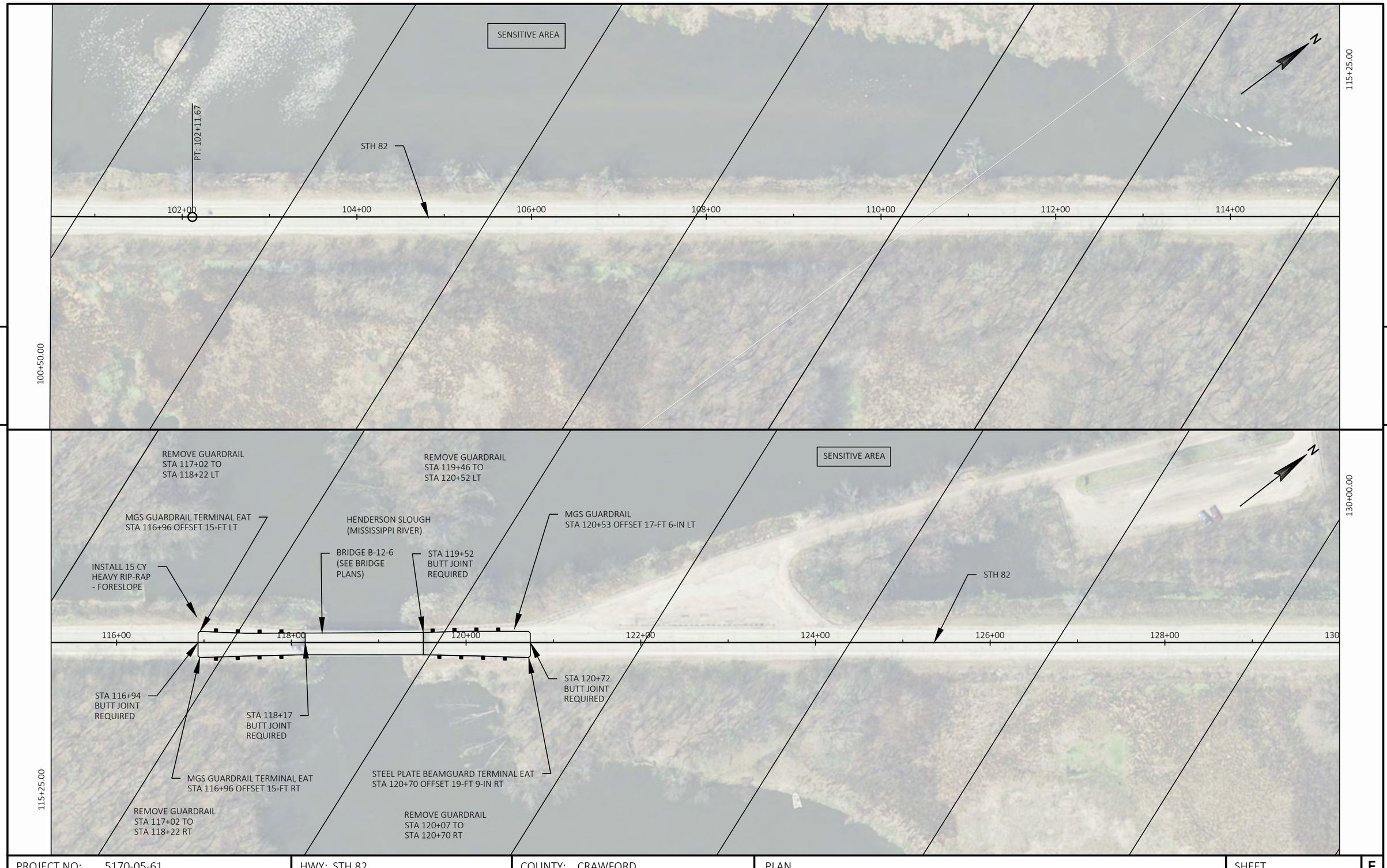

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PROJECT NO: 5170-05-61	HWY: STH 82	COUNTY: CRAWFORD	PLAN	SHEET 23	E

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LAYOUT NAME - 3
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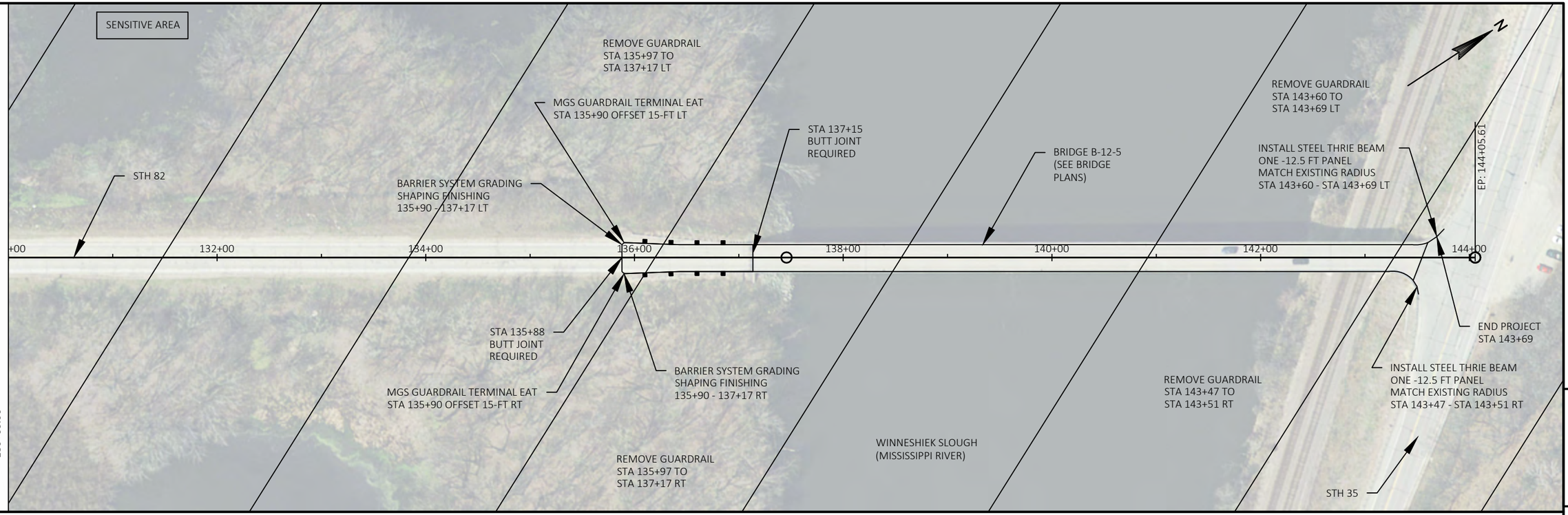
PLOT BY : DAVIDSON, JONATHAN B
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 44



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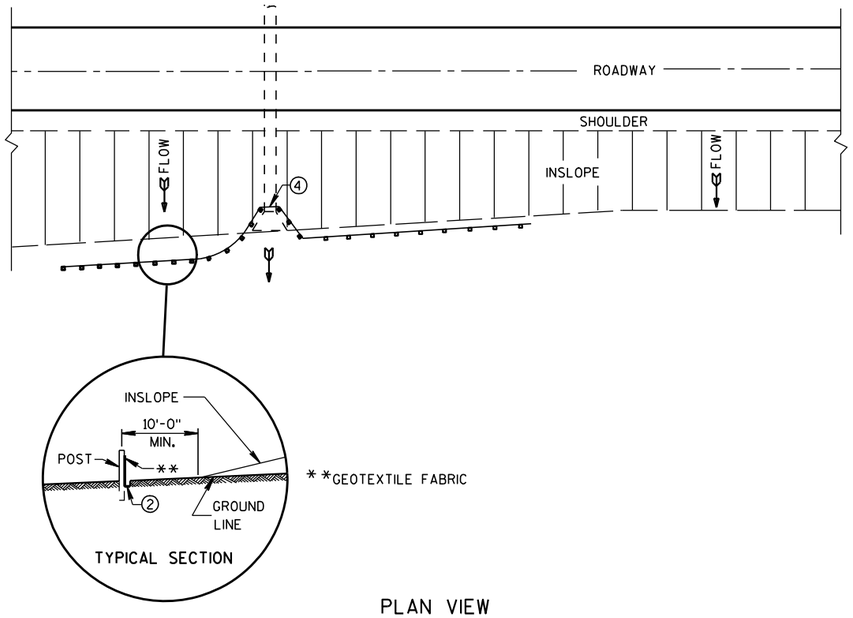
LAYOUT NAME - 5
PLOT DATE : 1/15/2019 9:59 AM
PLOT BY : DAVIDSON, JONATHAN B
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 44

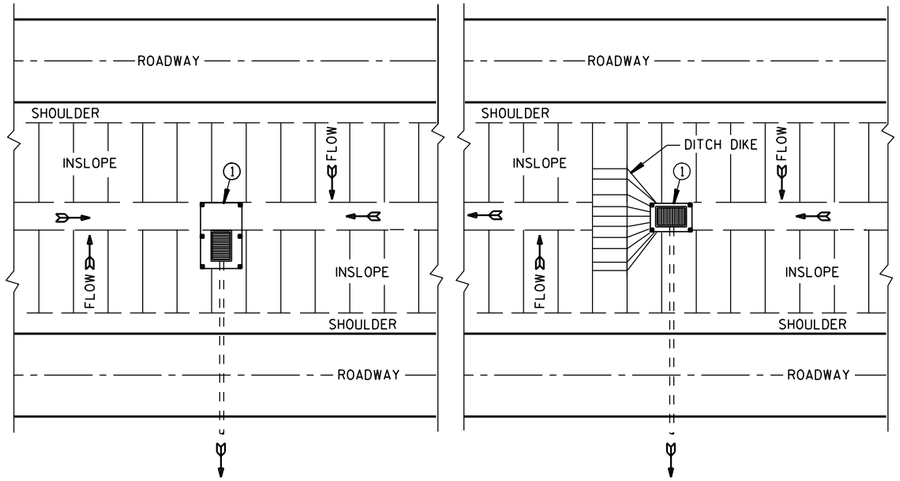
Standard Detail Drawing List

08E09-06	SILT FENCE
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B24-09A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	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)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-07C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

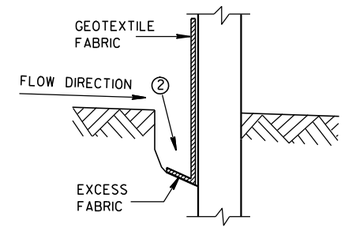
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

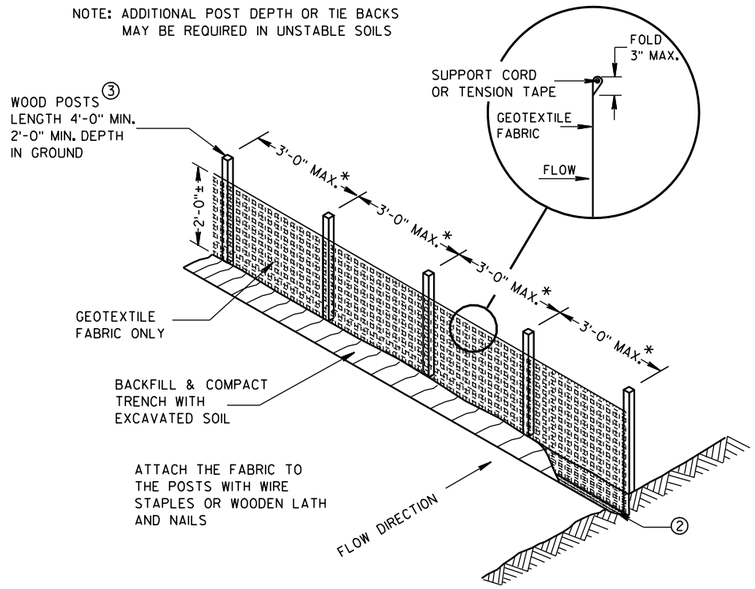
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

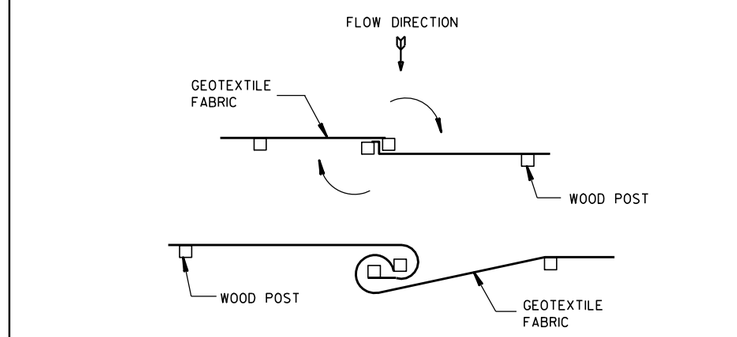


TRENCH DETAIL

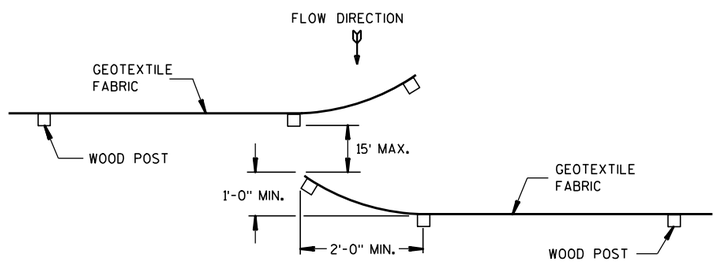


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

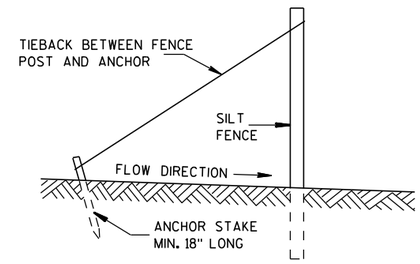


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

GENERAL NOTES

(1) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.

DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.

(2) USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

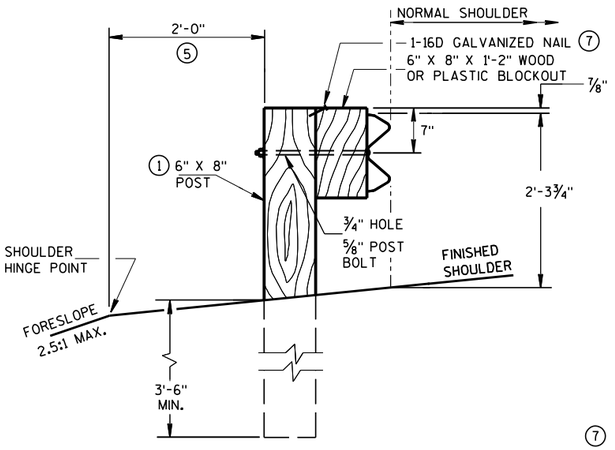
(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

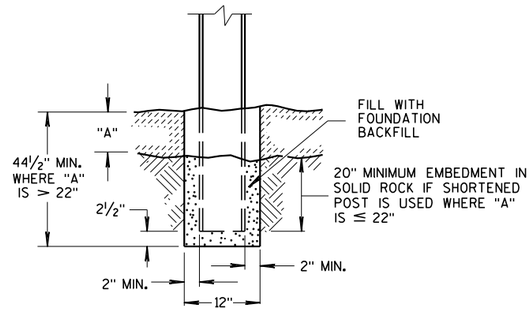
(7) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

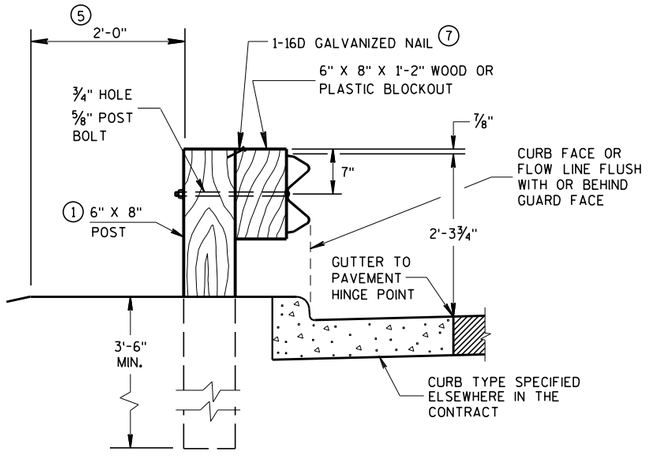
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



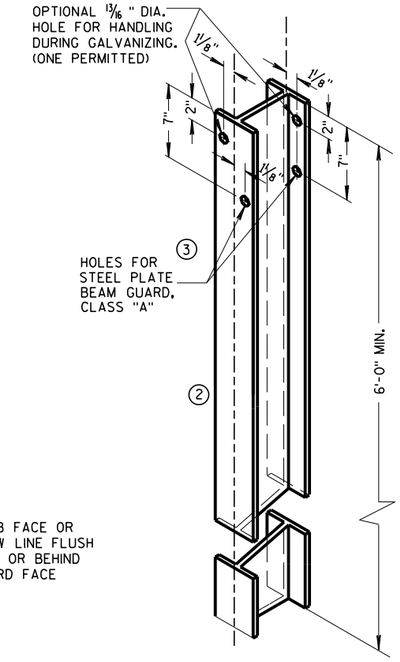
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)

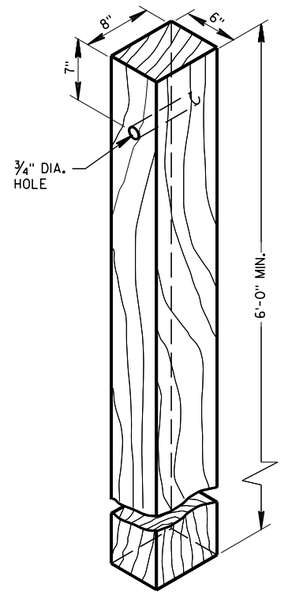


END VIEW
LOCATED ALONG A CURBED ROADWAY

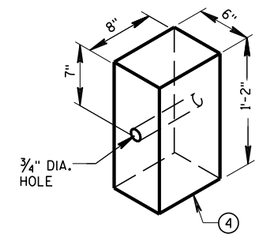


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

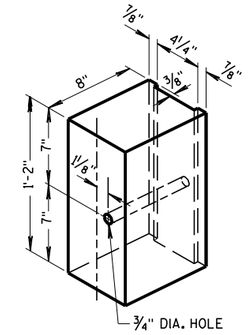
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



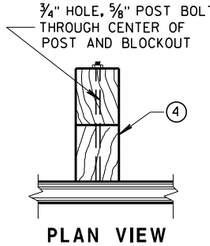
WOOD POST
(6"X8") NOMINAL



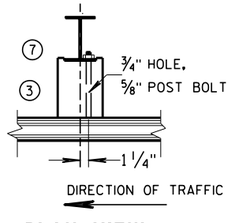
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



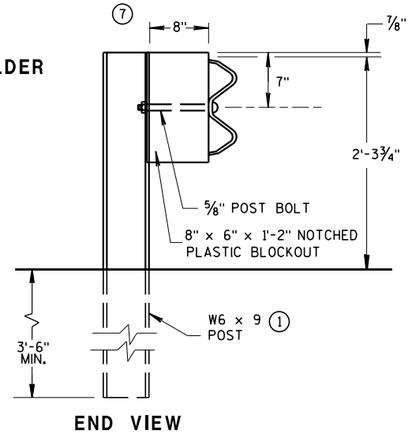
TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS (1)



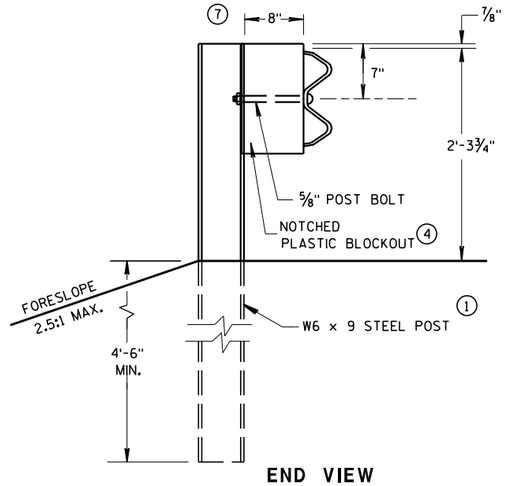
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



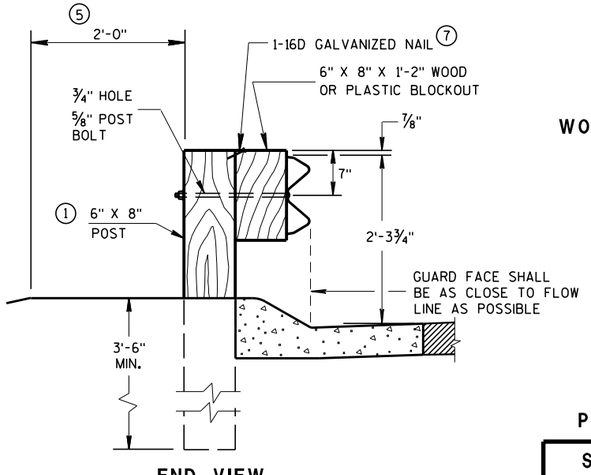
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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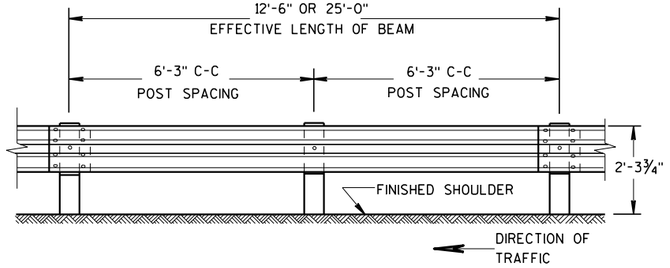
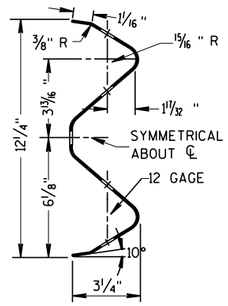
S.D.D. 14 B 15-11a

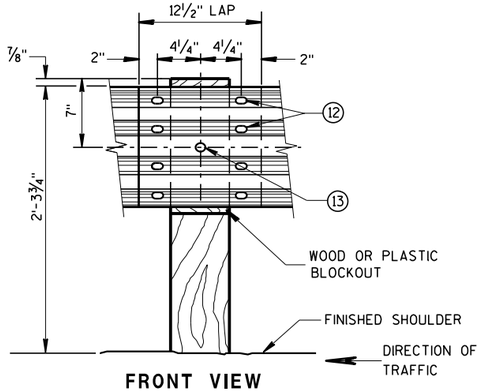


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

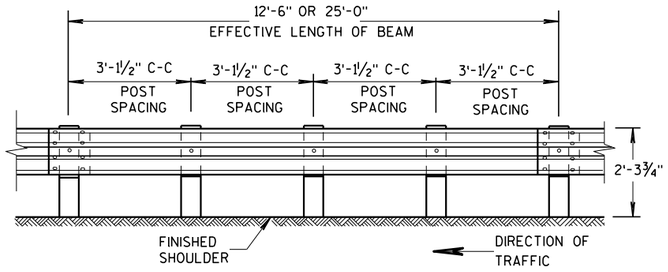
GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.

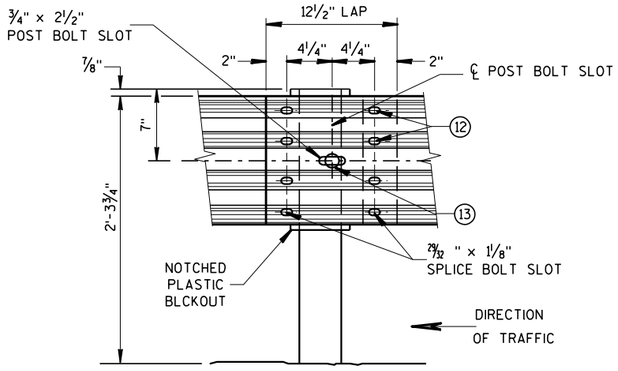
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



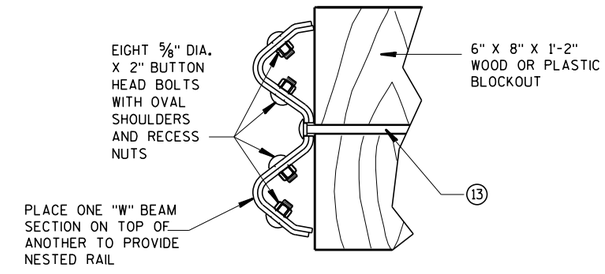
FRONT VIEW

POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

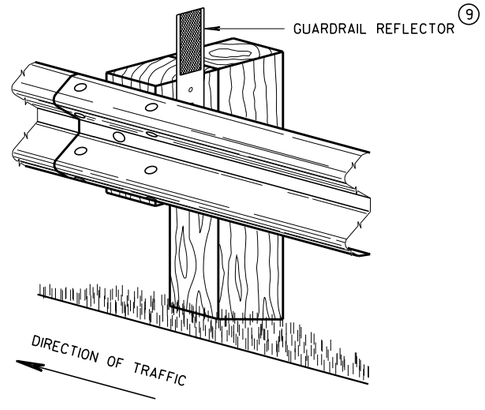


NESTED W BEAM (NW)

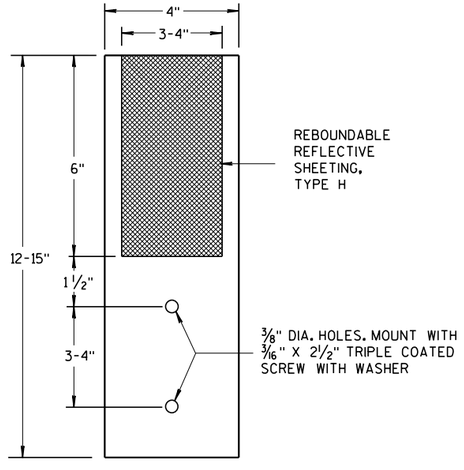
USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

* USE DOUBLE SIDED WHITE GUADRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



4" X 12" GUARDRAIL REFLECTOR DETAIL AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCO 28
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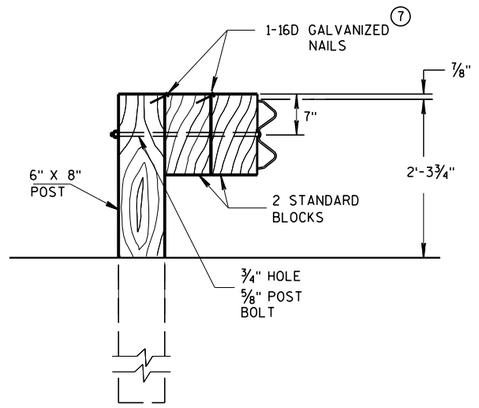
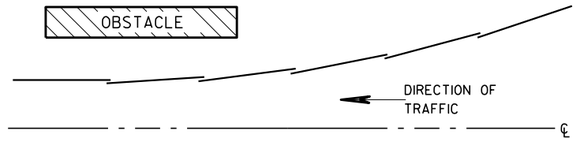
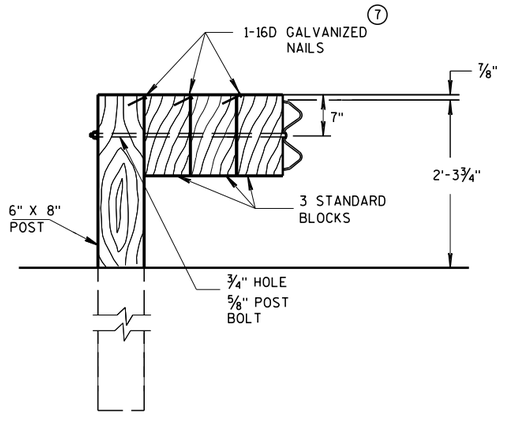


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

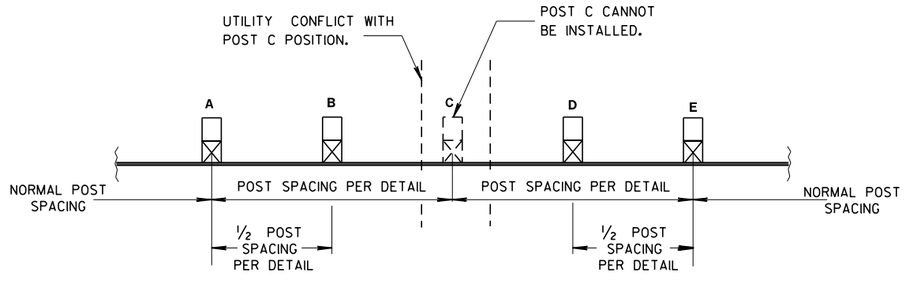


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

6
S.D.D. 14 B 15-11c

BILL OF MATERIALS

NOTE NO.	DESCRIPTION
①	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
②	STEEL TUBE TS 8" X 6" X 0.188", 6'-0"
④	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
⑦	BEARING PLATE
⑧	BCT CABLE ASSEMBLY
⑨	CABLE ANCHOR BOX
⑩	STRUT & YOKE
⑪	STEEL PLATE BEAM, END PANEL 12 GA.
⑫	STEEL PLATE BEAM: 12 GA. 13'-6½"
⑬	IMPACT HEAD
⑭	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

(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.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 AND 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

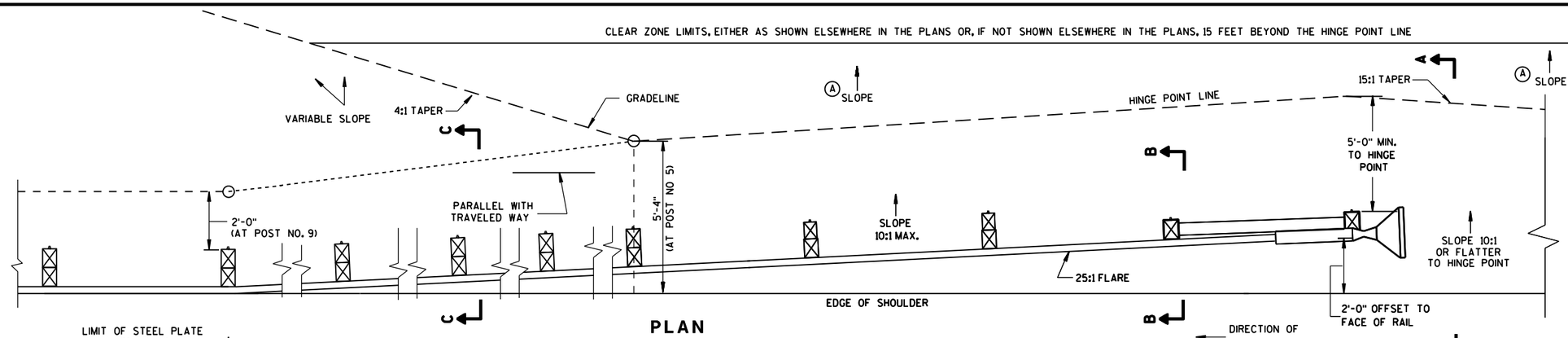
(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

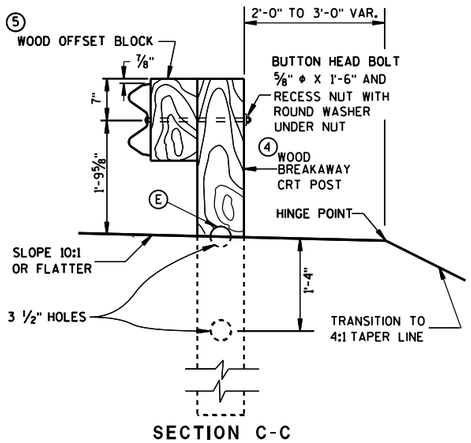
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

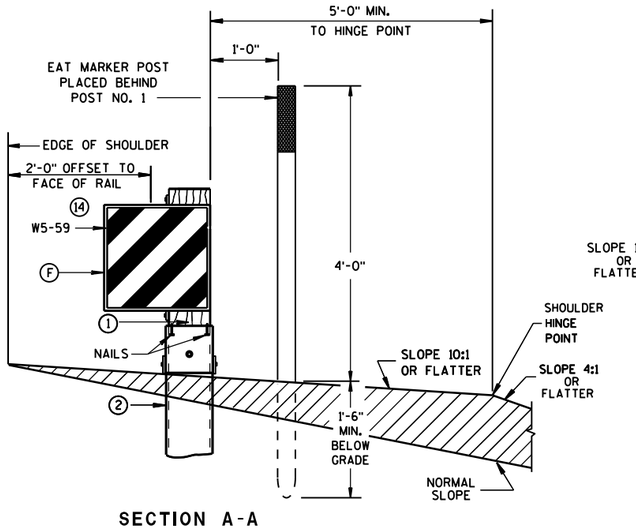
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

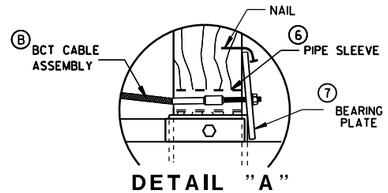




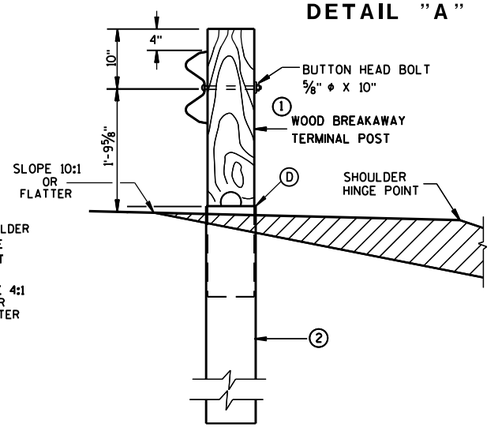
SECTION C-C
TYPICAL AT POST NOS. 6, 8



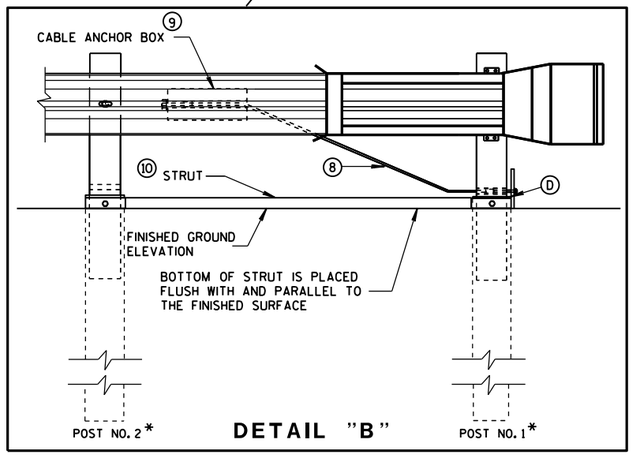
SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



SECTION B-B
TYPICAL AT POST NO. 2*



DETAIL "B"

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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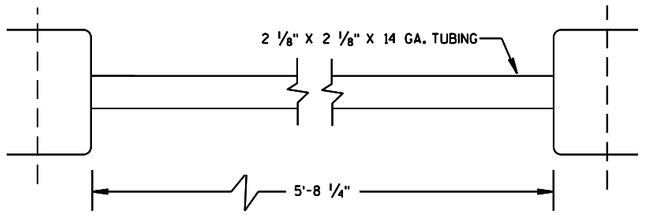
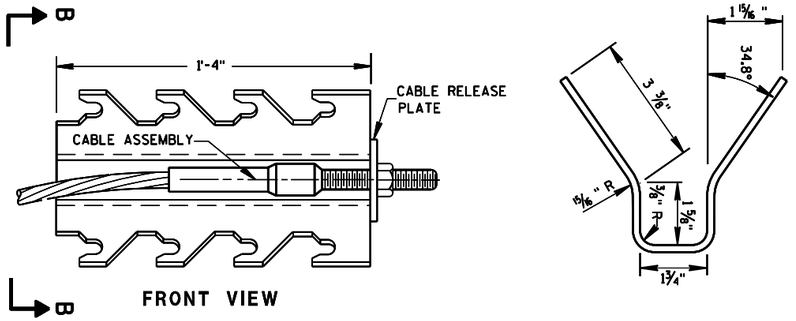
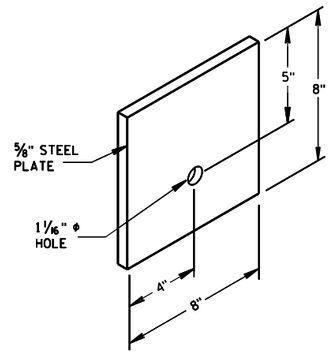


⑩ STRUT DETAIL



⑨ CABLE ANCHOR BOX



⑦ STEEL BEARING PLATE

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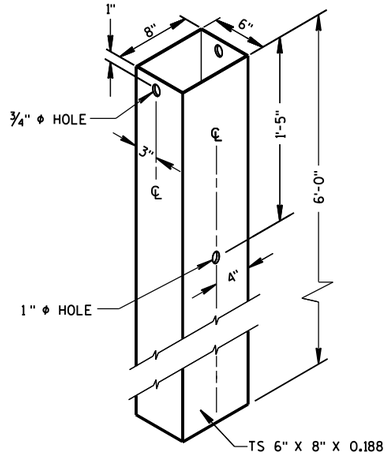
S.D.D. 14 B 24-9b

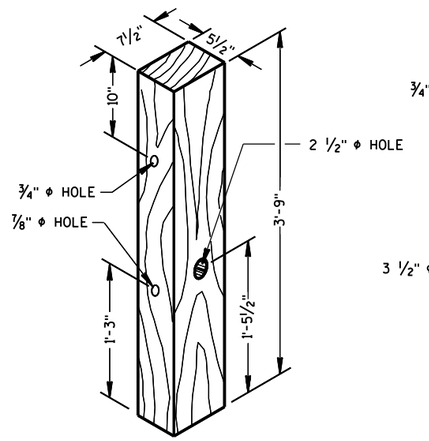
S.D.D. 14 B 24-9b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

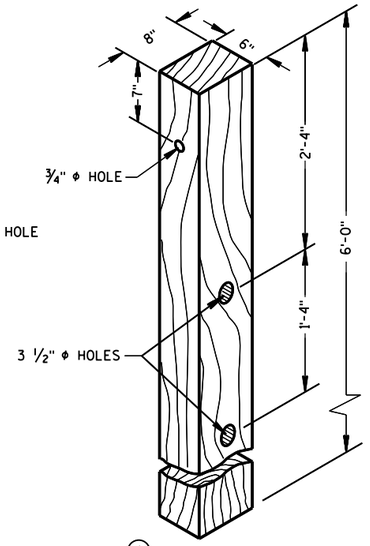
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



② 72" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST

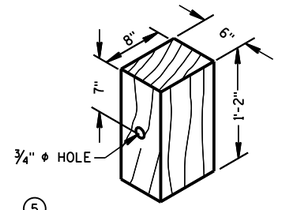


④ CRT POST
(POSTS NO'S 5-8)

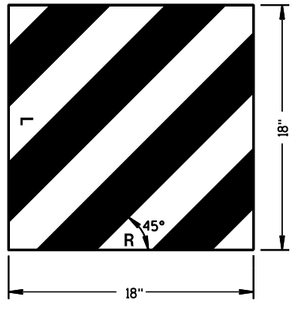
WOOD BREAKAWAY POSTS

GENERAL NOTES

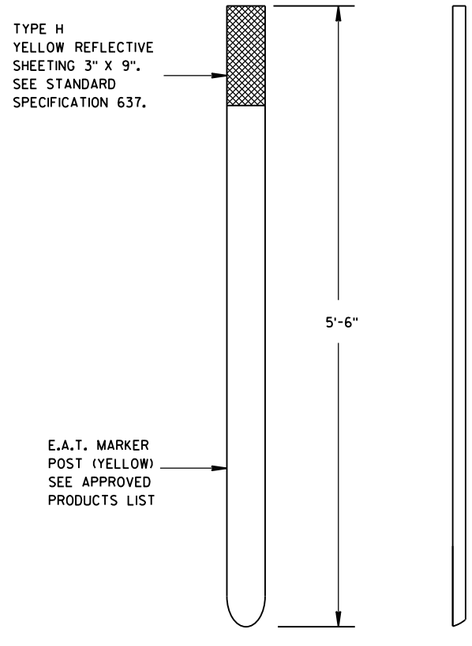
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



⑭ REFLECTIVE SHEETING DETAILS



E.A.T. MARKER POST

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERV...

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S.D.D. 14 B 24-9c

6

S.D.D. 14 B 24-9c

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.

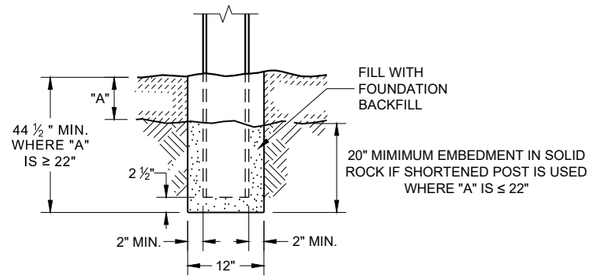
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS 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).

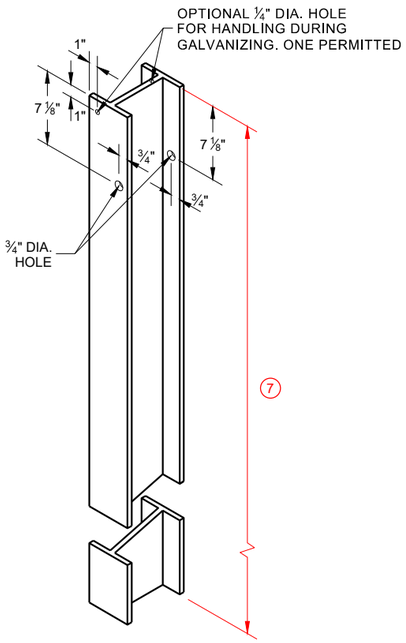
5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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.

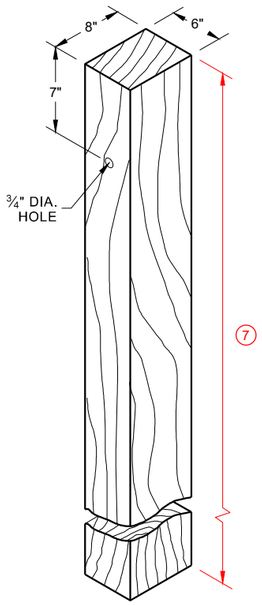
7. TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



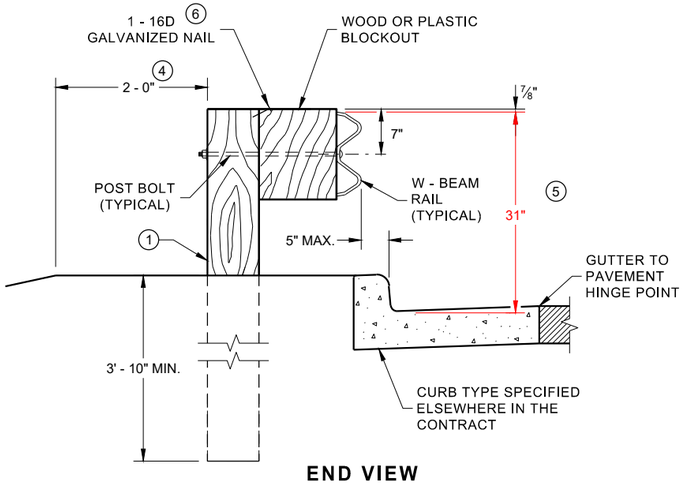
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



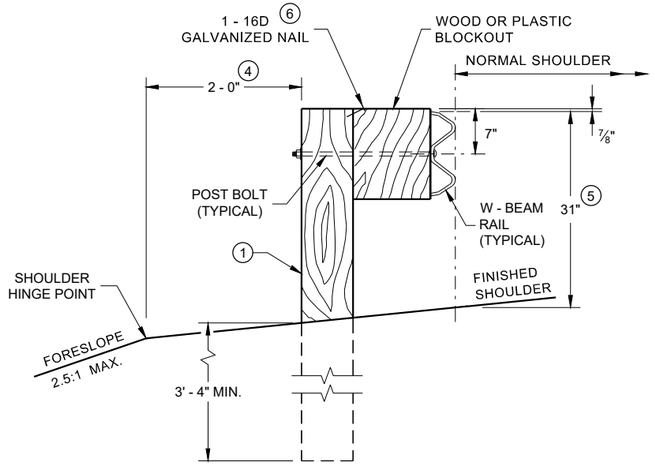
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



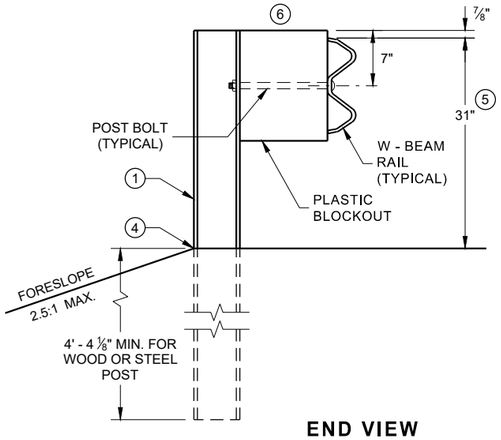
WOOD POST (6" X 8") NOMINAL (1)



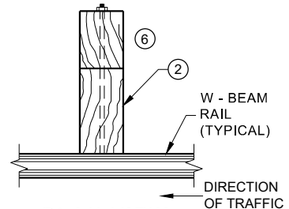
END VIEW
LOCATED ALONG A CURBED ROADWAY



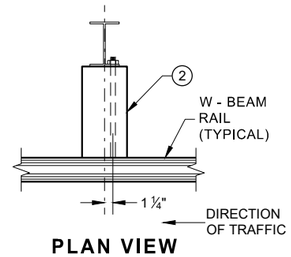
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



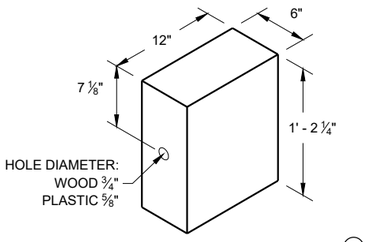
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



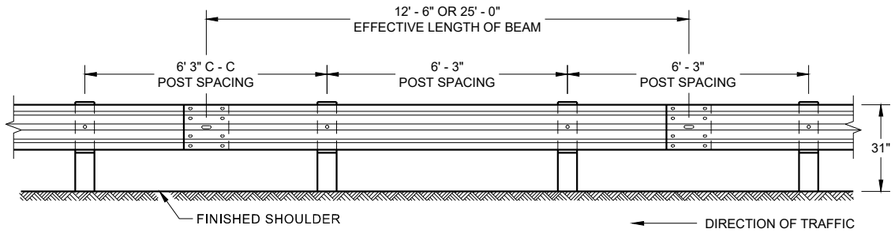
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

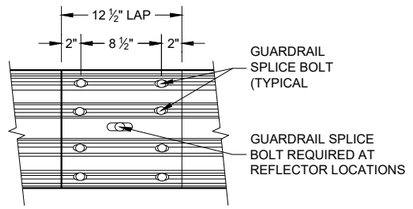
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 06a

SDD 14B42 - 06a



FRONT VIEW
POST SPACING STANDARD INSTALLATION



FRONT VIEW
MID-SPAN BEAM SPLICE

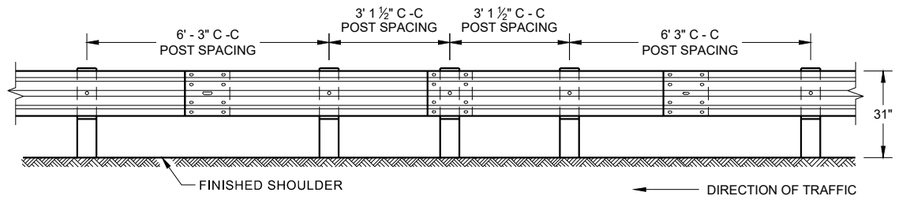
GENERAL NOTES

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.

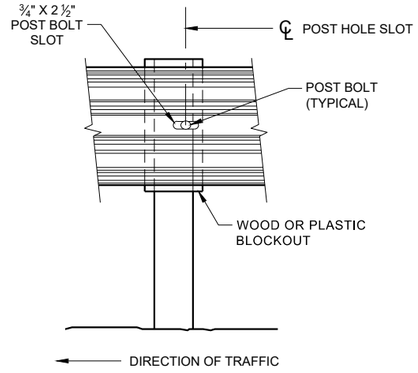
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ¾" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

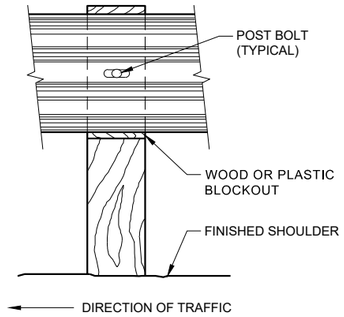
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



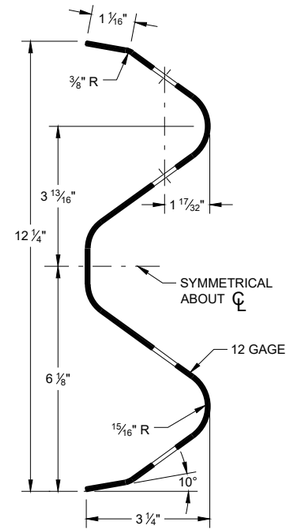
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



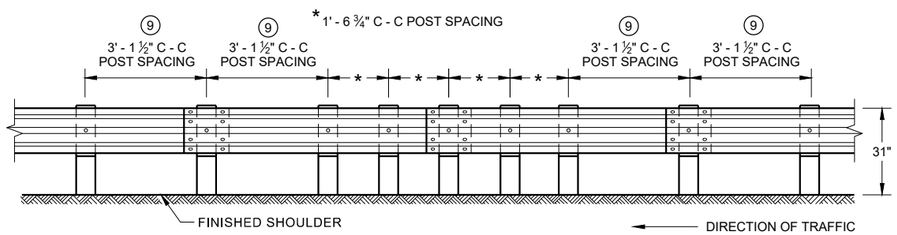
FRONT VIEW AT STEEL POST



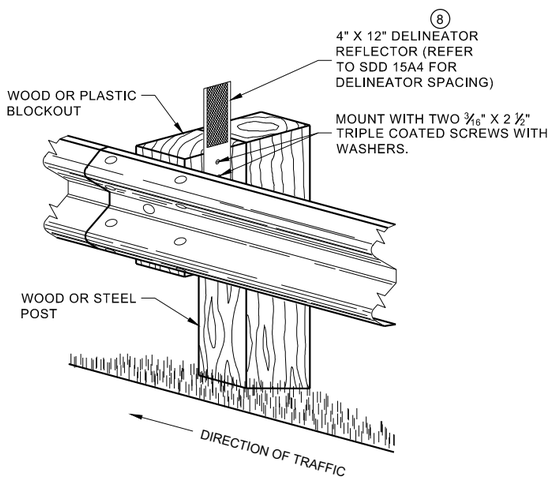
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



FRONT VIEW
QUARTER POST SPACING (QS)

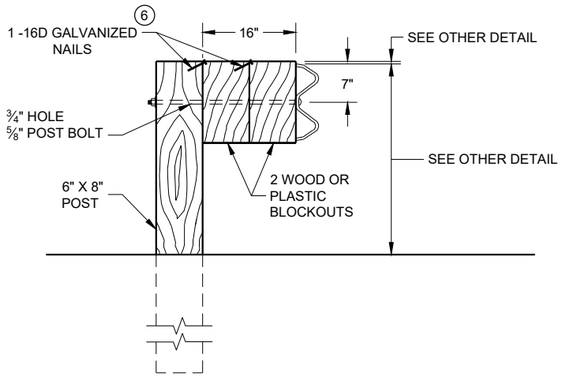


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 06b

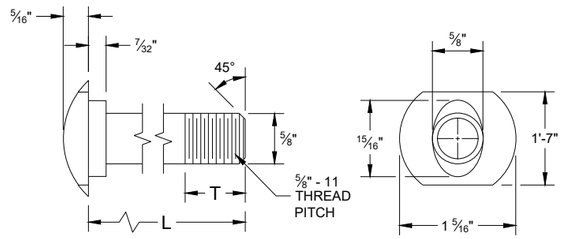


DETAIL FOR 16" BLOCKOUT DEPTH

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.

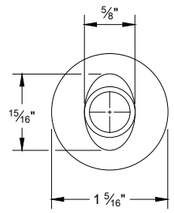
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

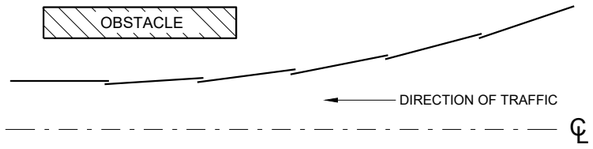


POST BOLT TABLE

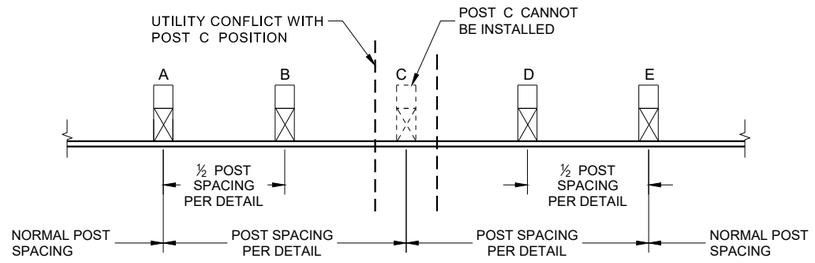
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



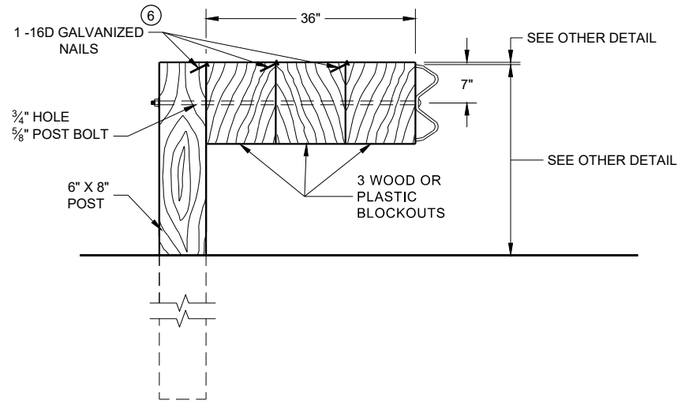
ALTERNATE BOLT HEAD



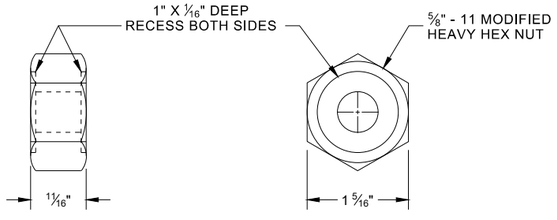
PLAN VIEW
BEAM LAPPING DETAIL



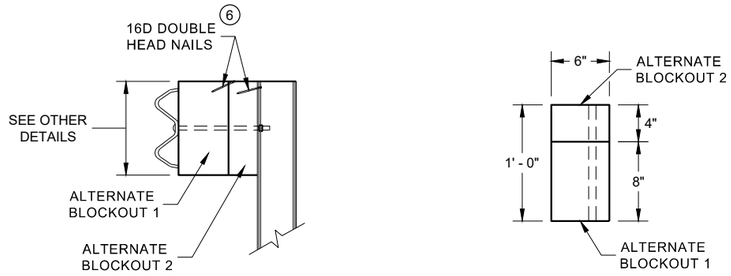
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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.

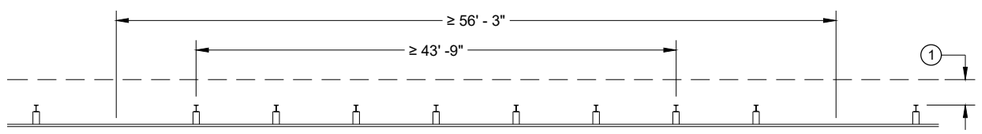
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

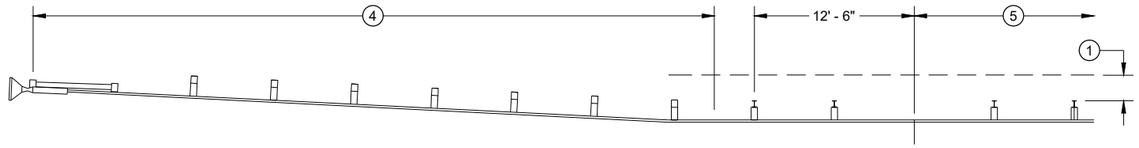
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

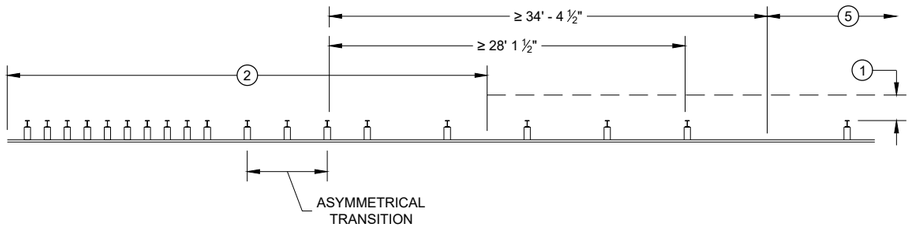
SDD 14B42 - 06c



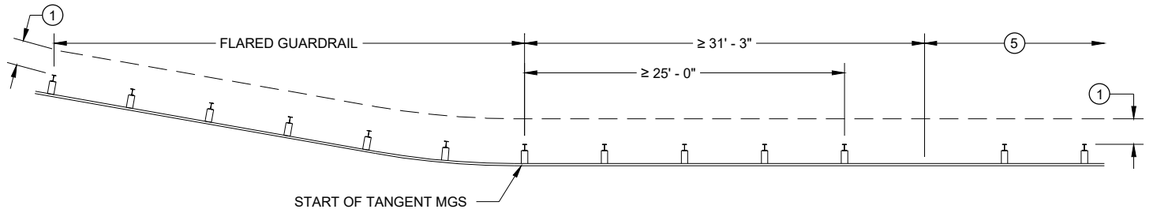
MISSING POST IN NORMAL BEAM GUARD RUN



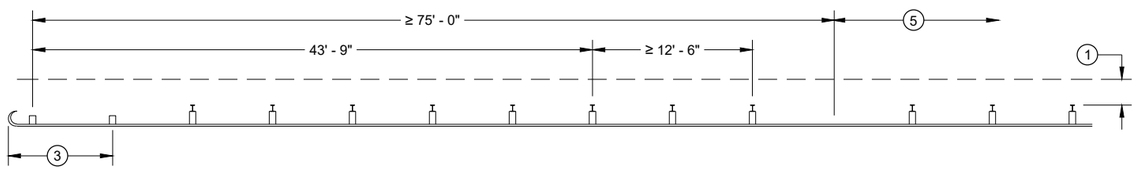
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



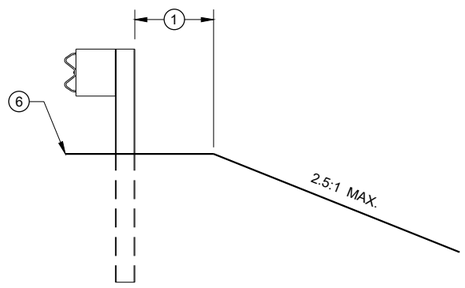
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 14B42 - 06d

GENERAL NOTES

(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.

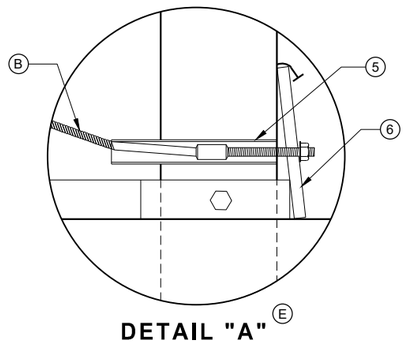
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

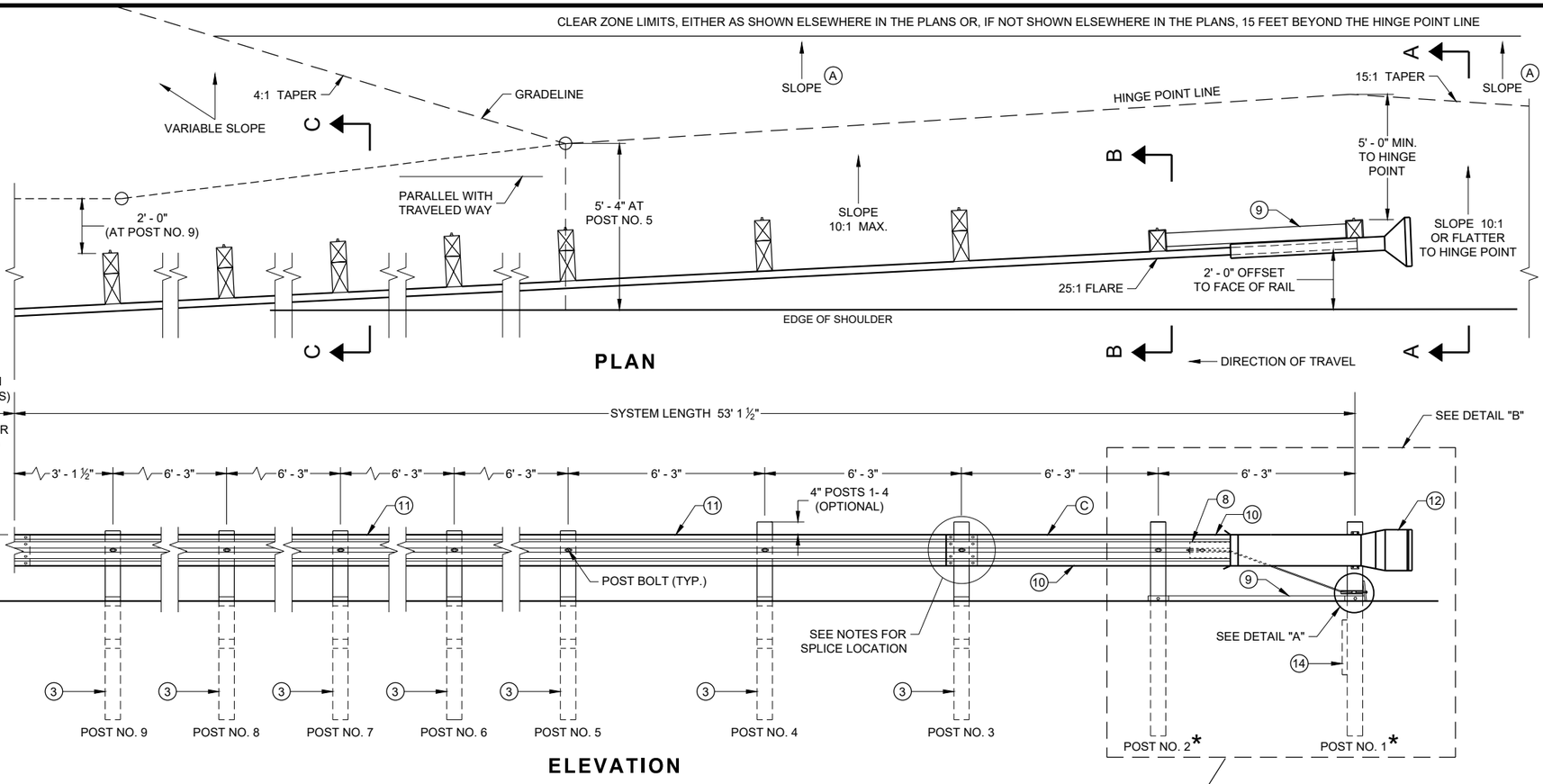
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

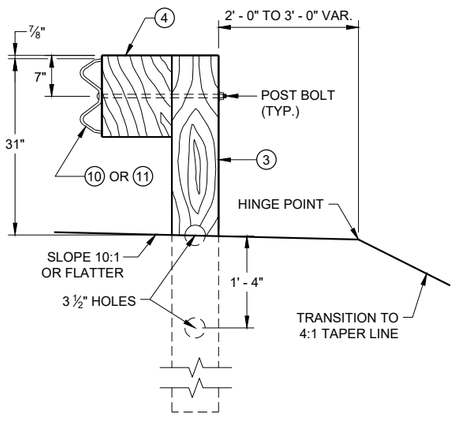
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

THE CENTER OF THE UPPER 3 ½" 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.

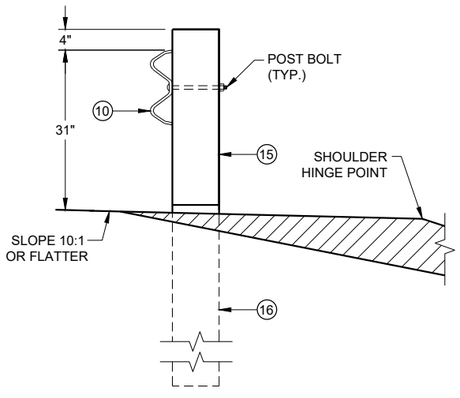


DETAIL "A" (E)

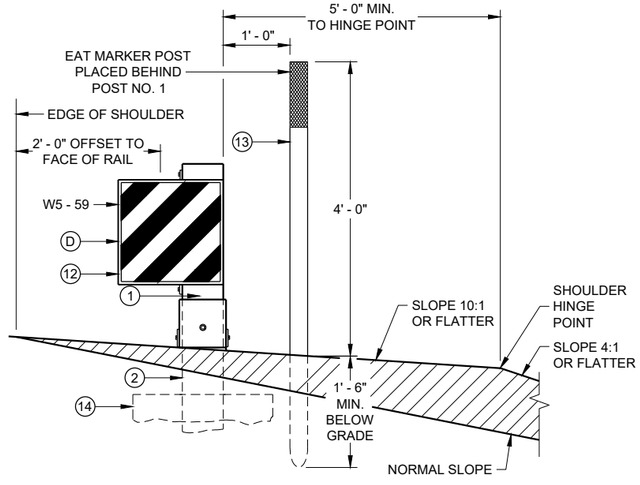




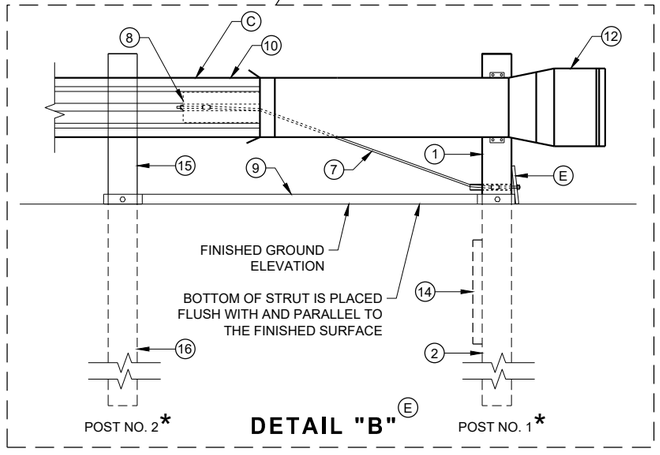
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

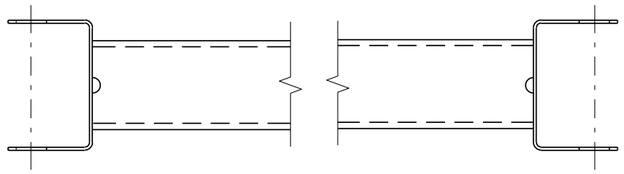
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

SDD 14B44 - 04a

6

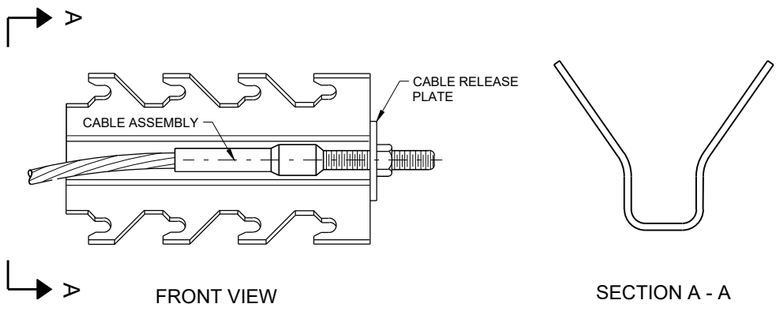
6



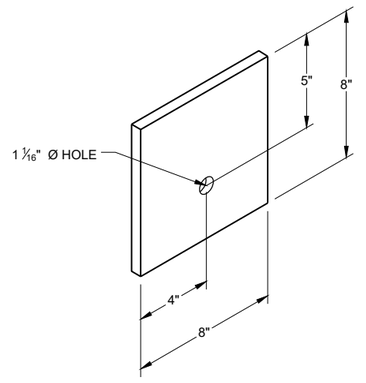
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'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 BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

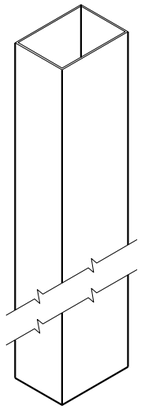
6

SDD 14B45 - 04b

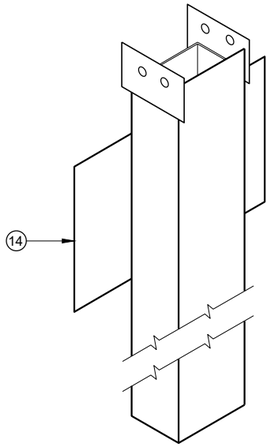
SDD 14B45 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



UPPER POST NO. 1 (1) (E)



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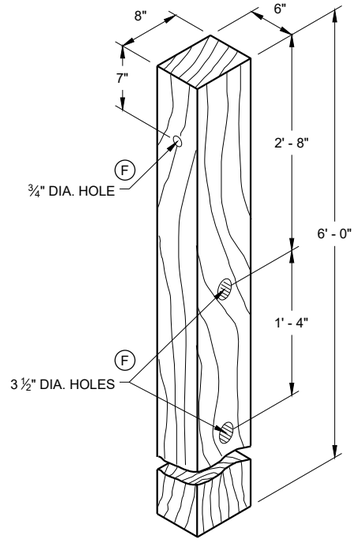
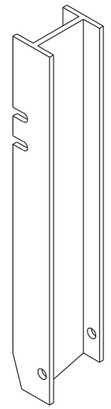


WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



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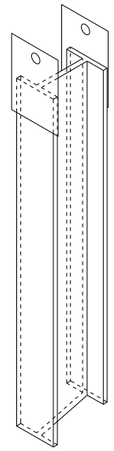

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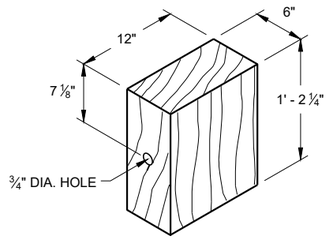
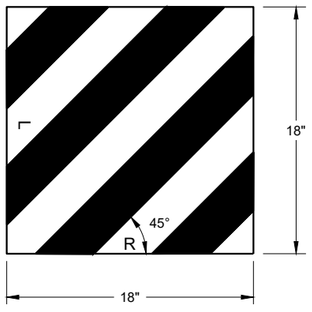
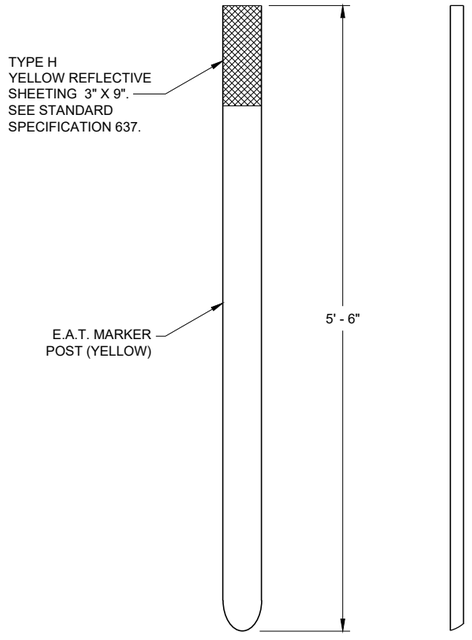


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



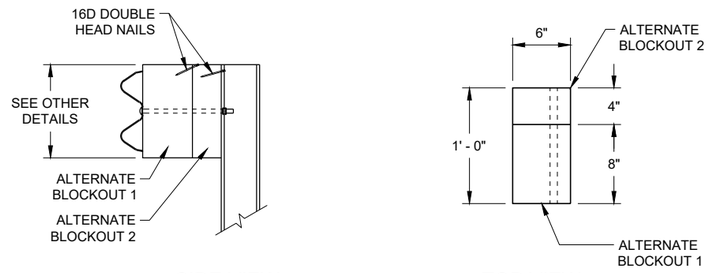
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR
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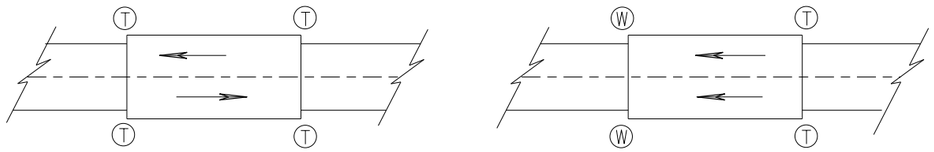
SDD 14B44 - 04c



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 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

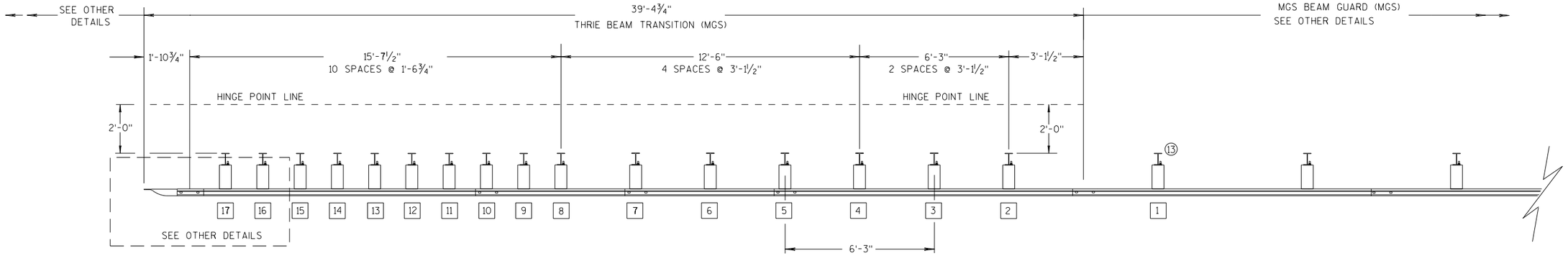
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

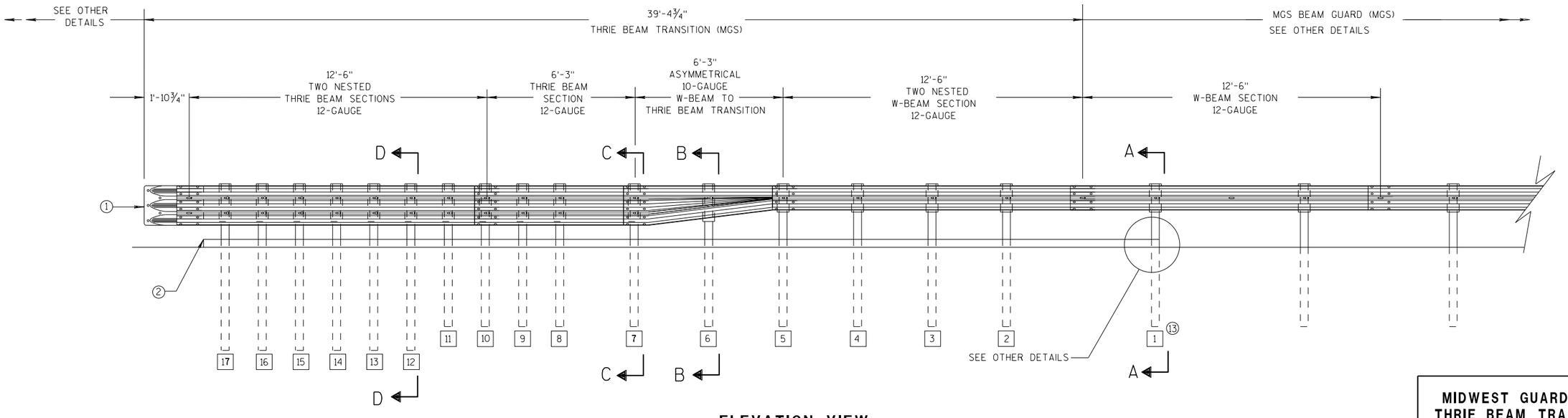
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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 TRANSPOR

6

S.D.D. 14 B 45-5a

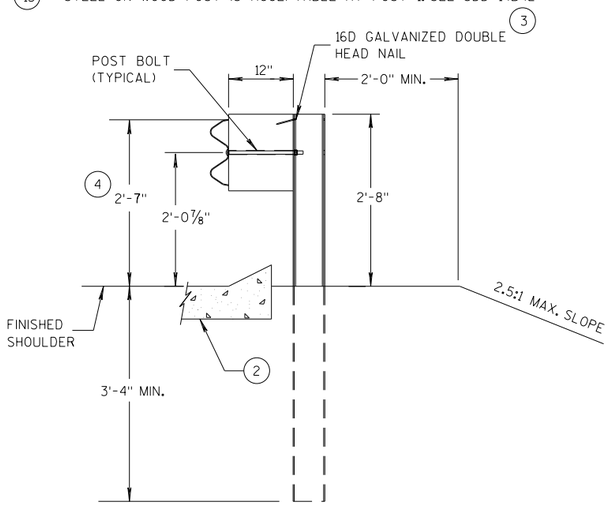
GENERAL NOTES

(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.

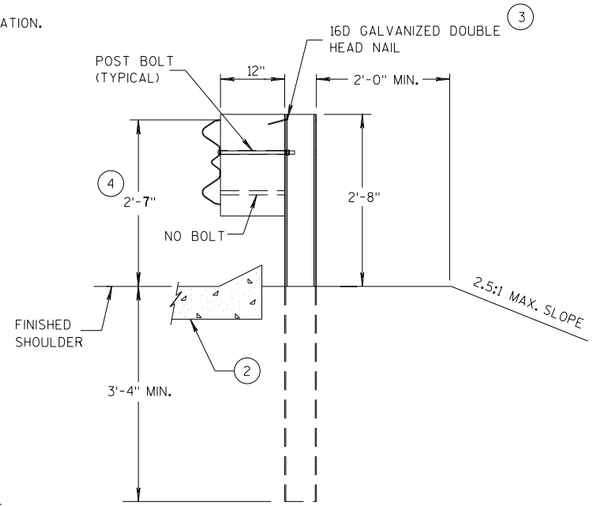
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



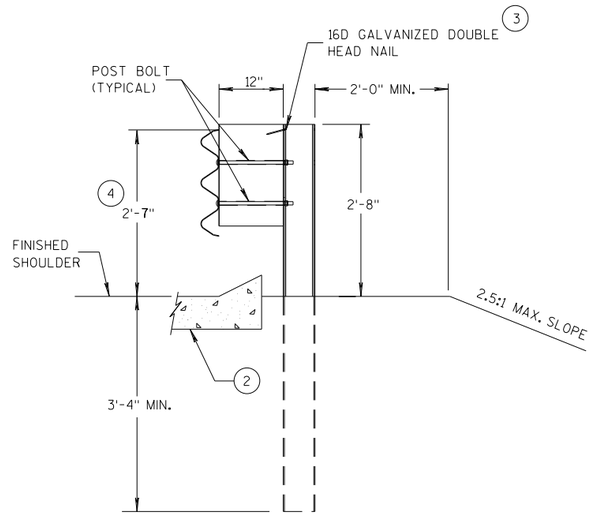
SECTION A-A (13)

POSTS 1-5



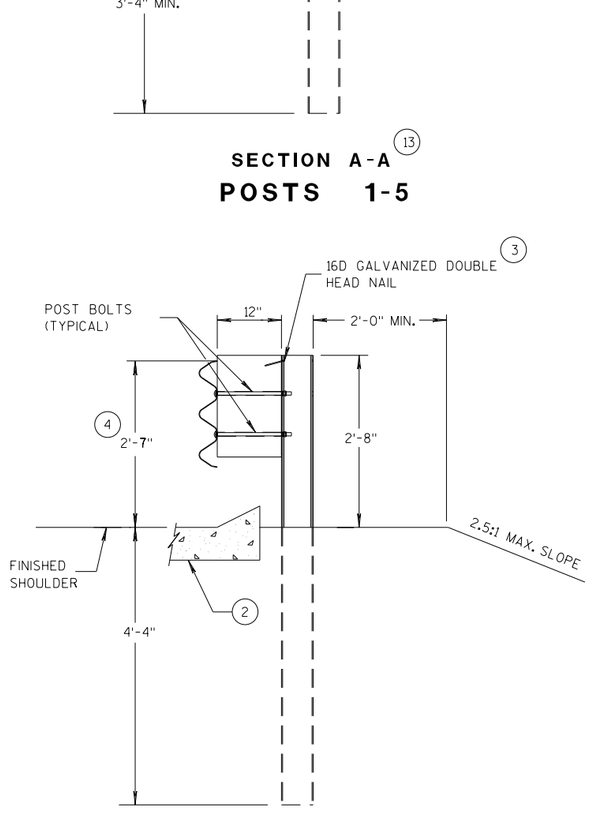
SECTION B-B

POST 6



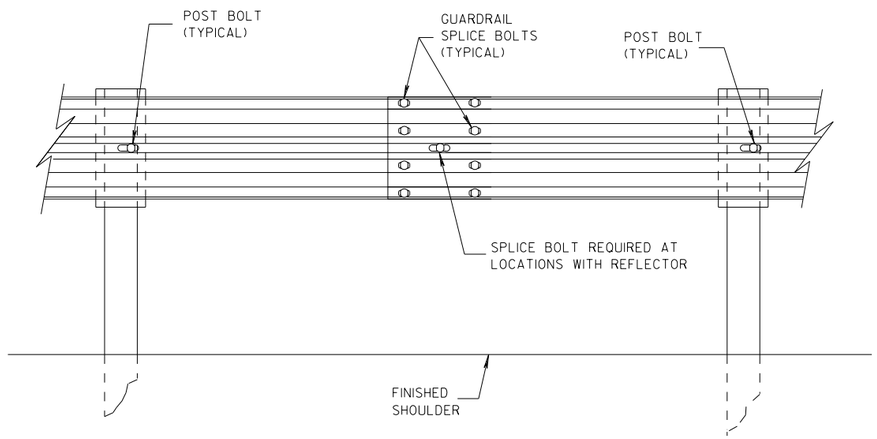
SECTION C-C

POSTS 7-11



SECTION D-D

POSTS 12-17



SPLICE DETAIL

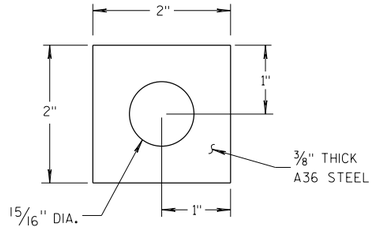
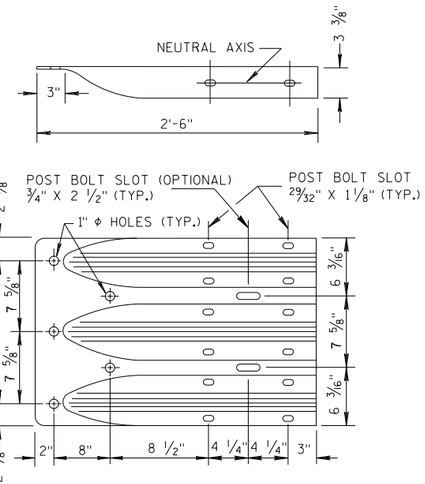
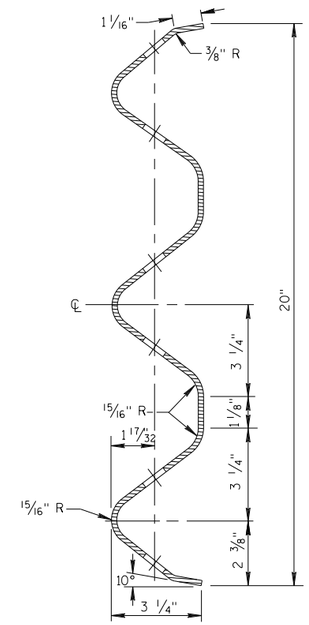


PLATE WASHER DETAIL



THRIE BEAM TERMINAL CONNECTOR



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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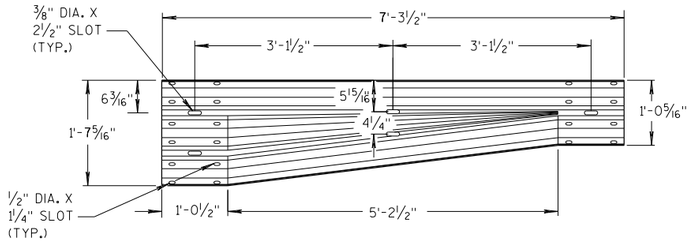
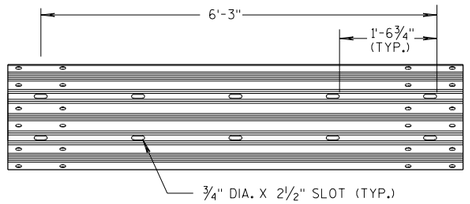
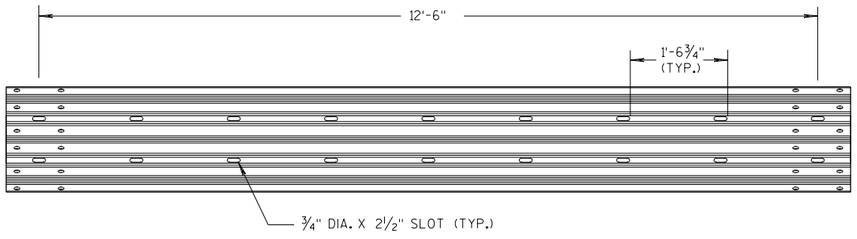
S.D.D. 14 B 45-5b



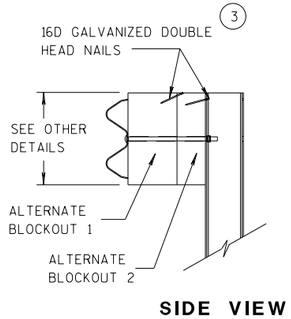
W-BEAM TO THRIE BEAM TRANSITION SECTION



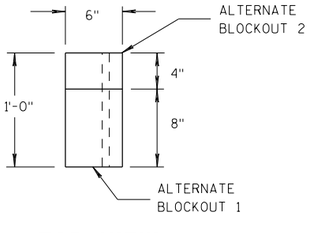
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

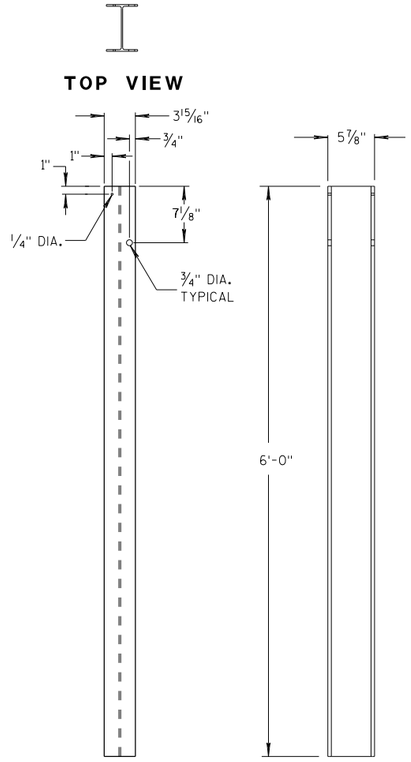


SIDE VIEW



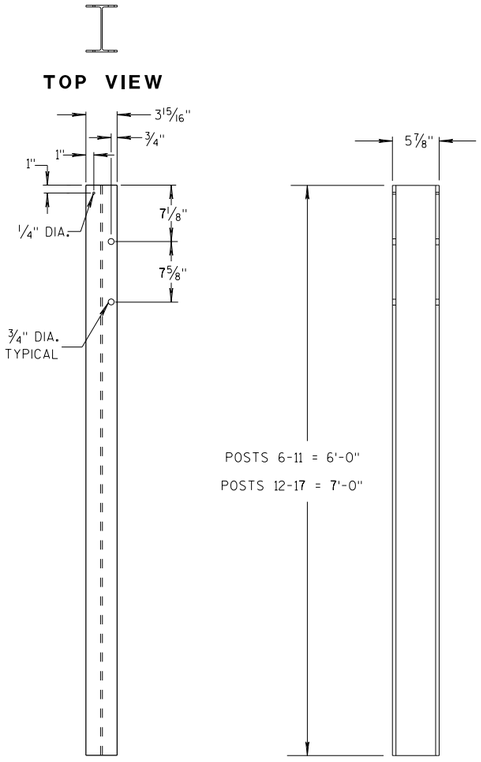
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



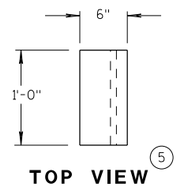
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

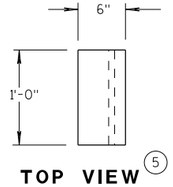


FRONT VIEW SIDE VIEW

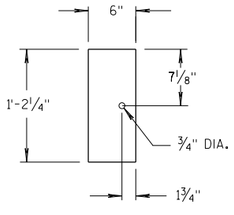
STEEL POSTS 6-17



TOP VIEW (5)

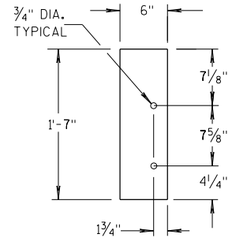


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



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.

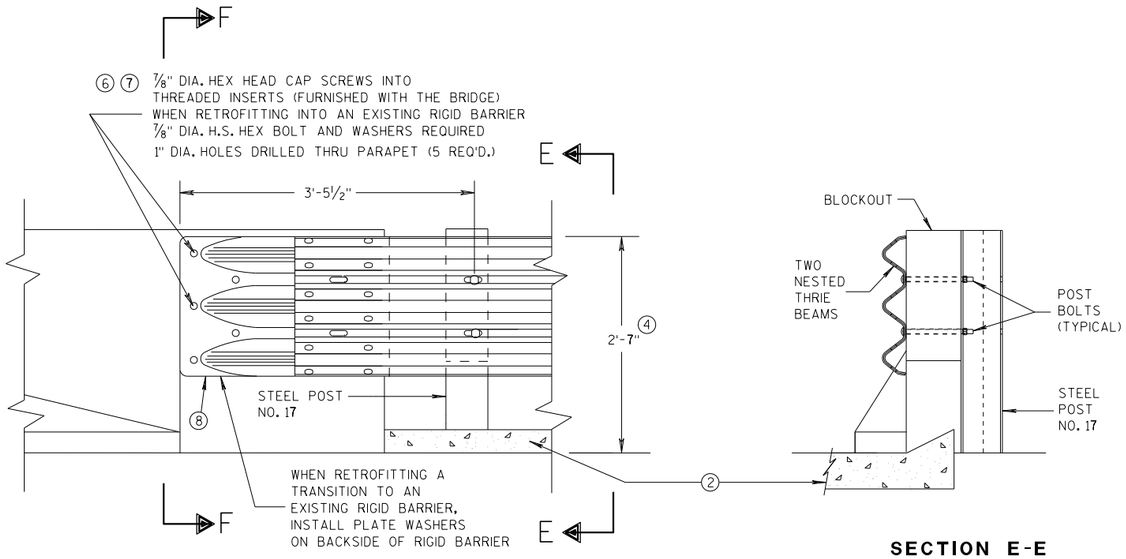
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-5c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

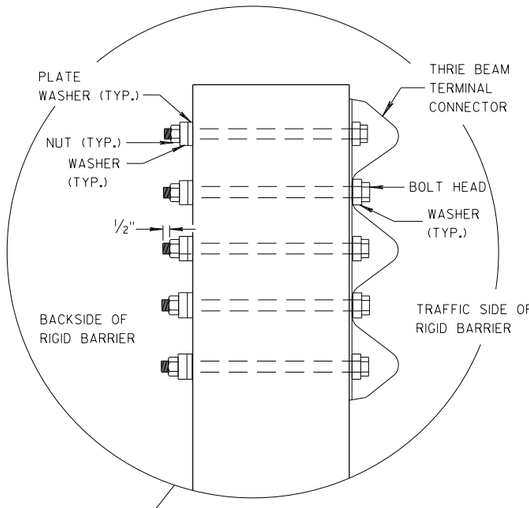
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

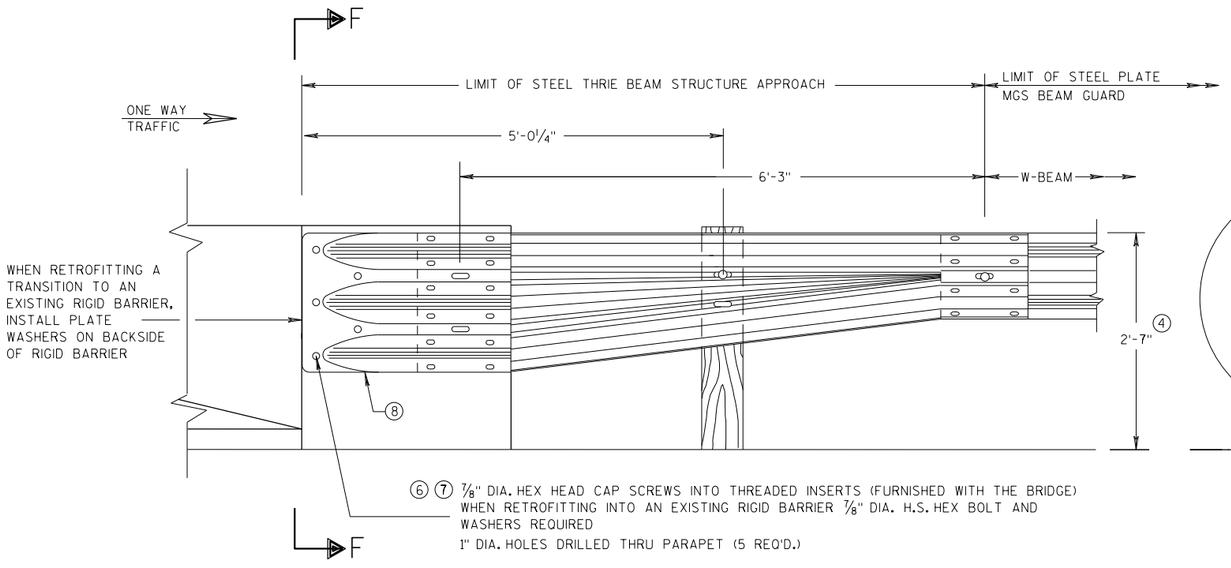
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

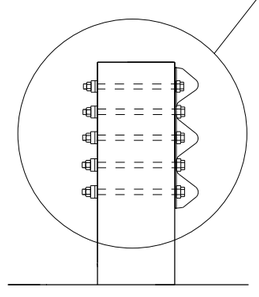
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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".

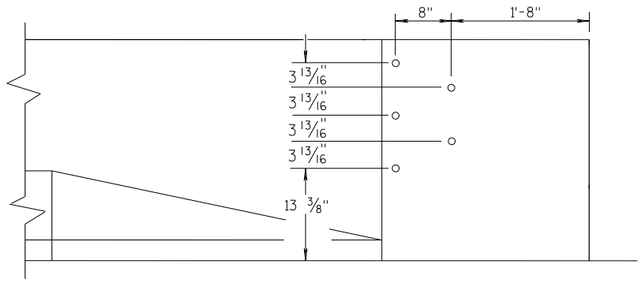




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVIS
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GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION 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.

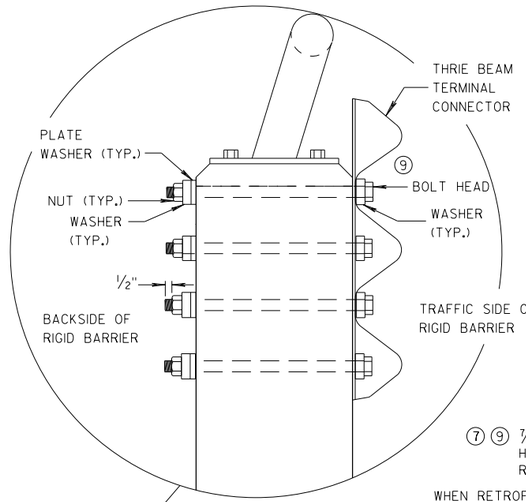
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

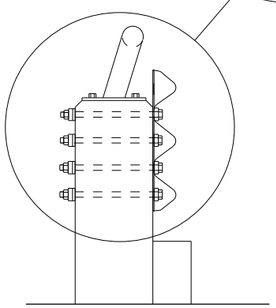
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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.

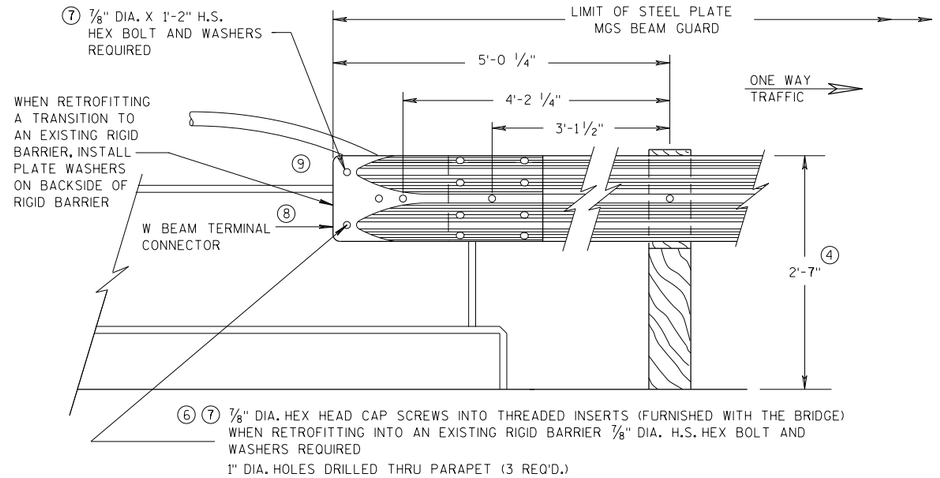
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





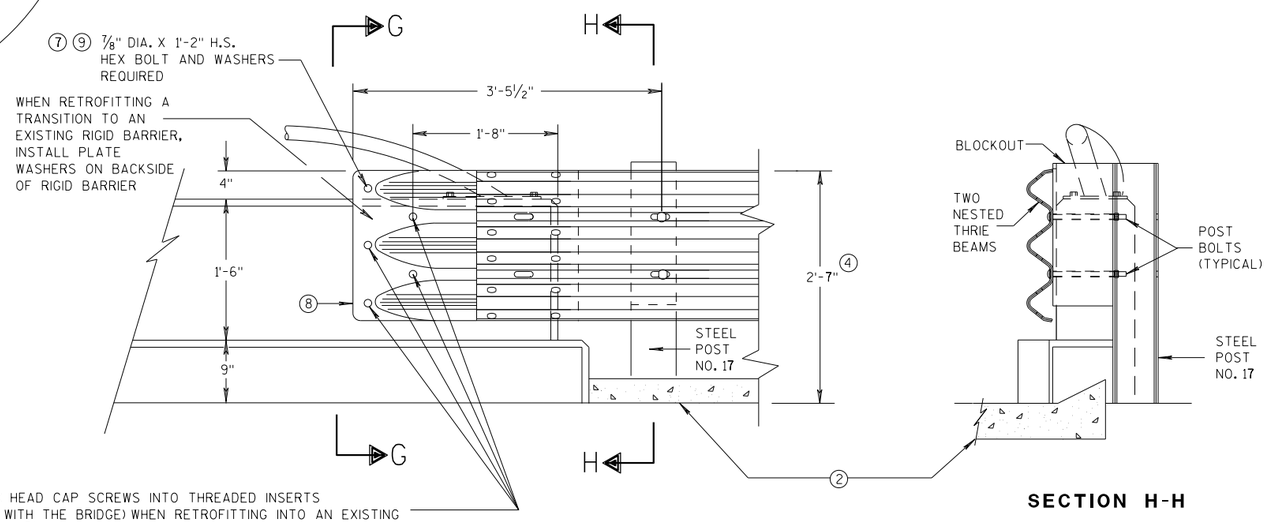
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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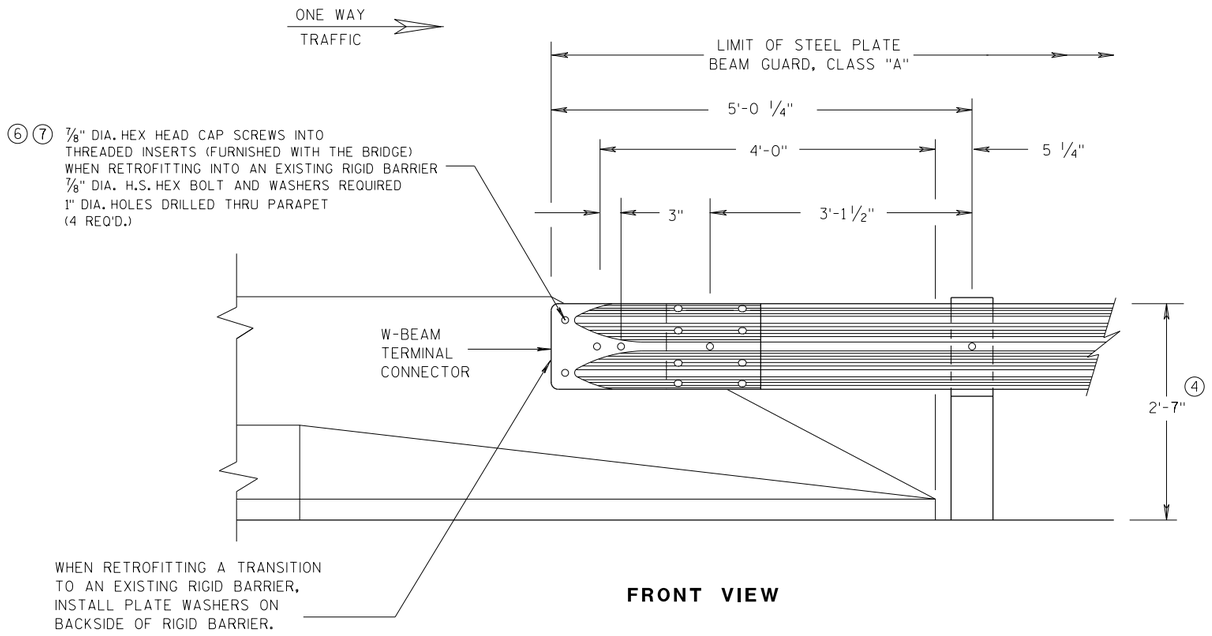
S.D.D. 14 B 45-5e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

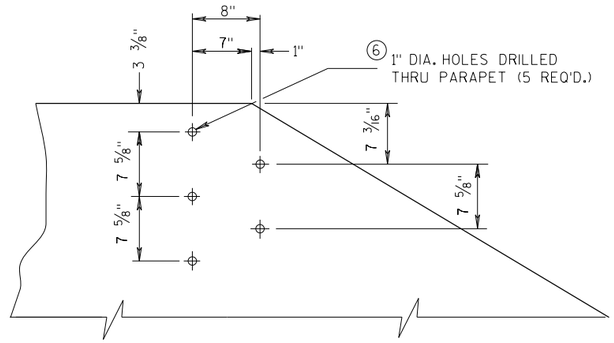
GENERAL NOTES

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

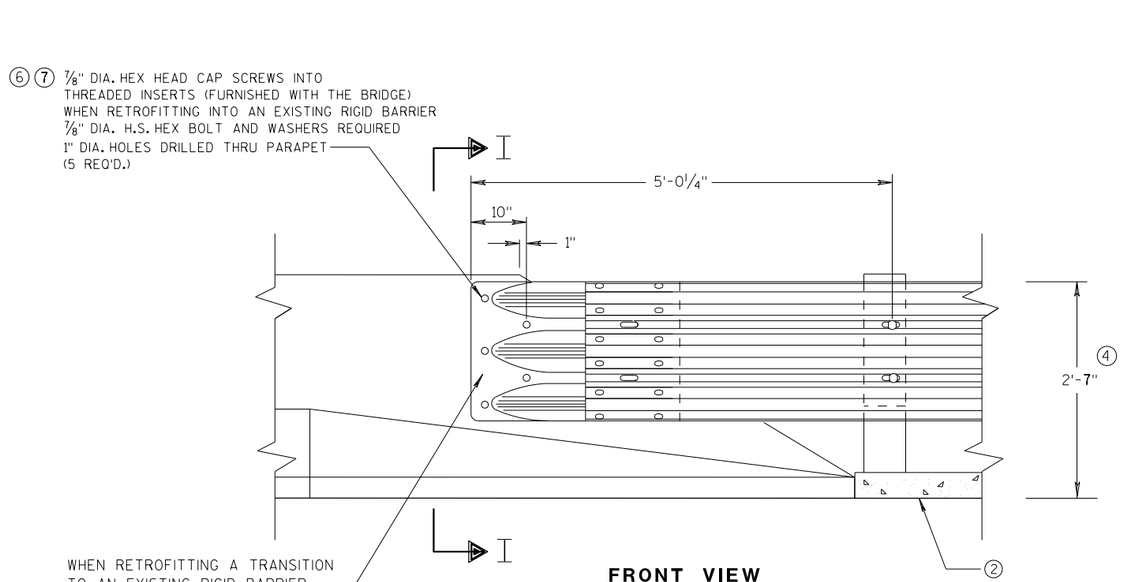
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

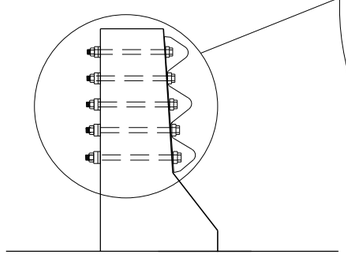
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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.



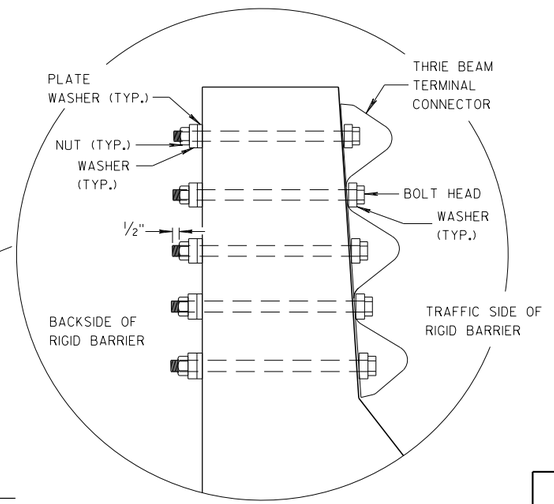
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



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 [illegible] UNIT SUPERVI[illegible]ENT
FHWA

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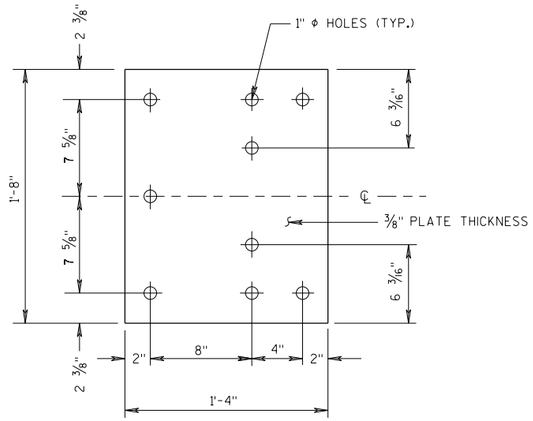
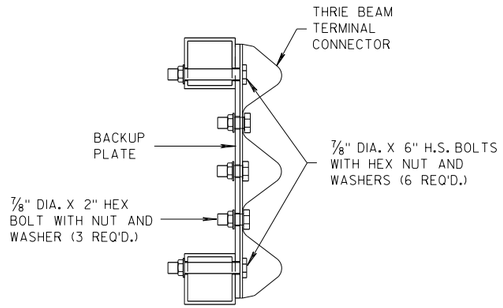
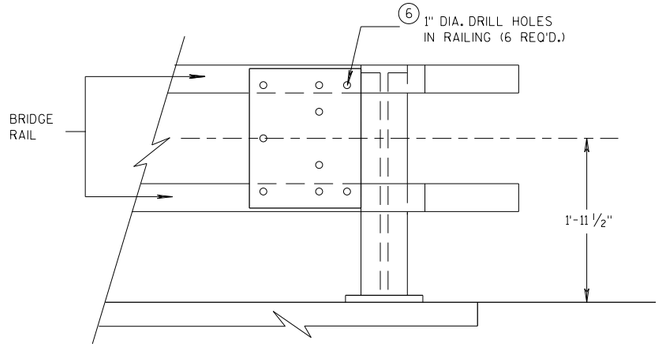


BACK-UP PLATE DETAIL



SECTION J-J

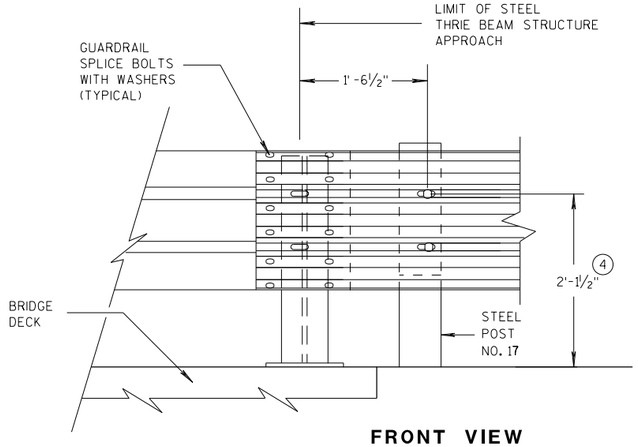


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

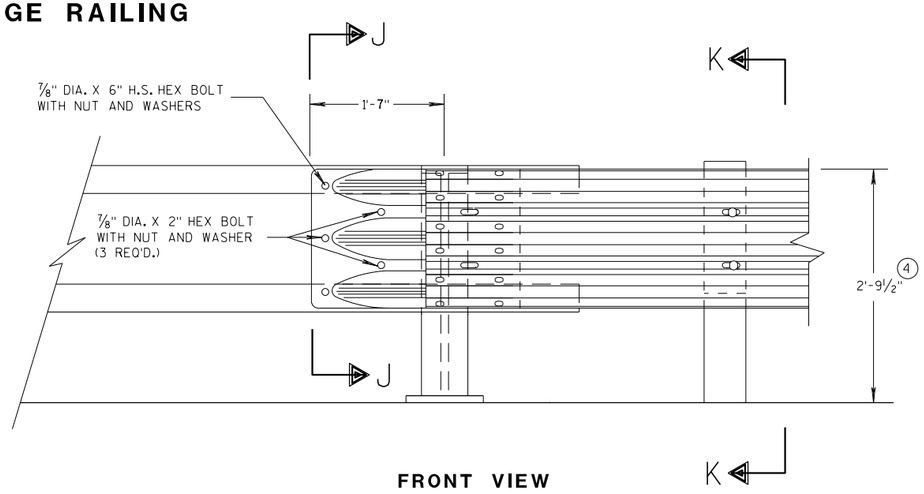
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

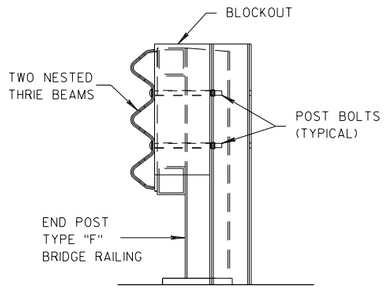


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE — FHWA

/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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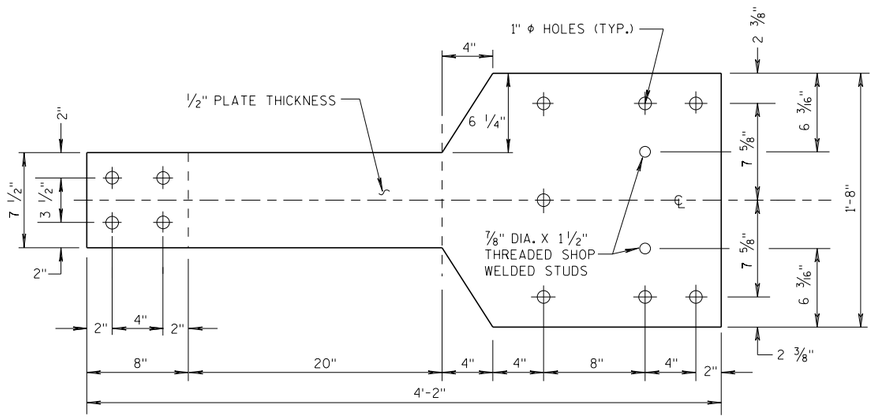
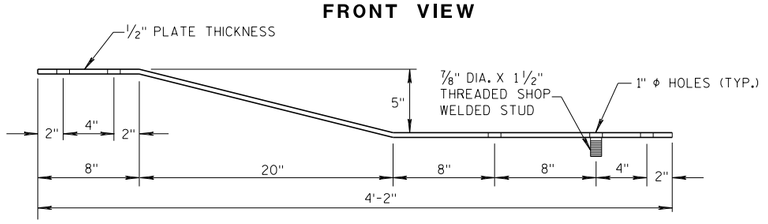
GENERAL NOTES

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

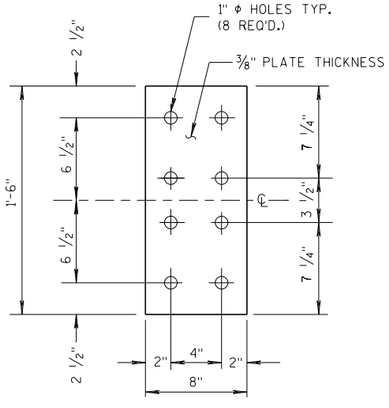


FRONT VIEW



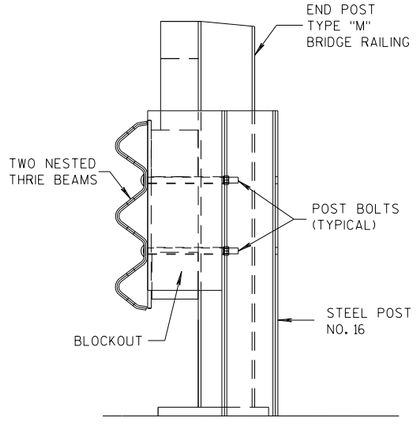
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

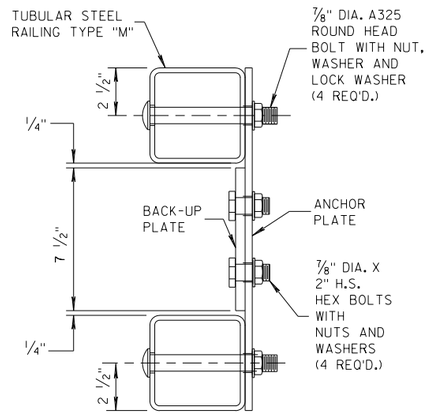


FRONT VIEW

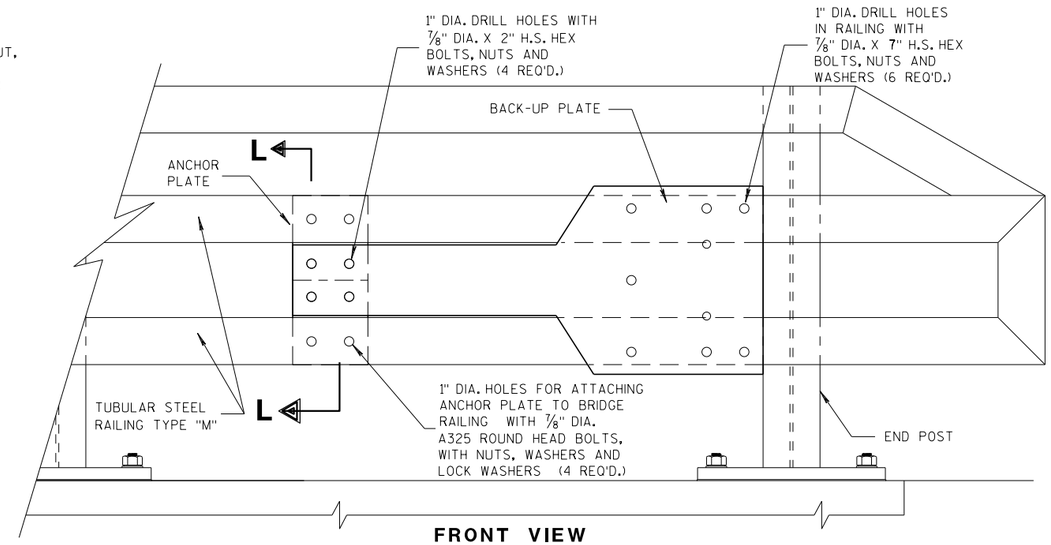
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

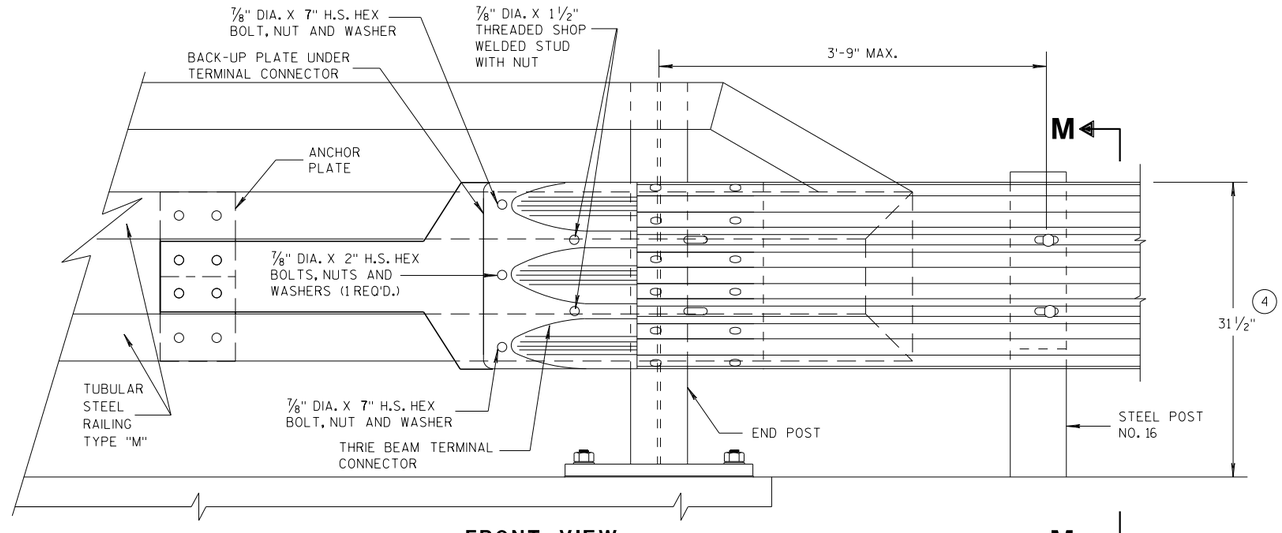


SECTION L-L

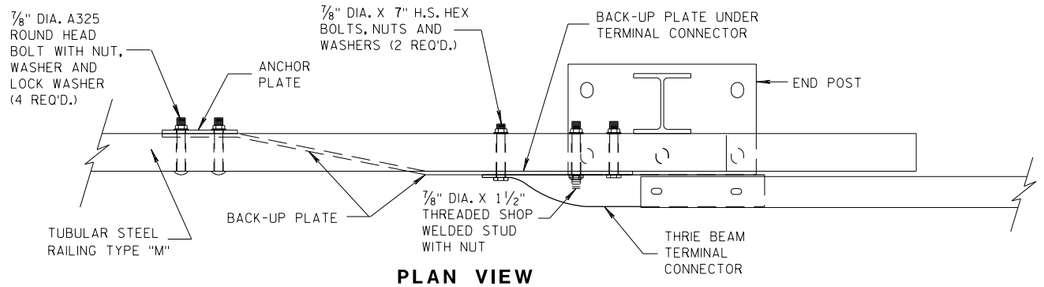


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
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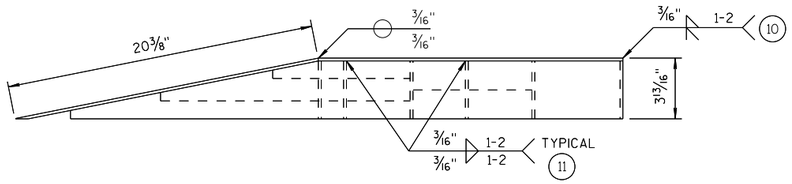

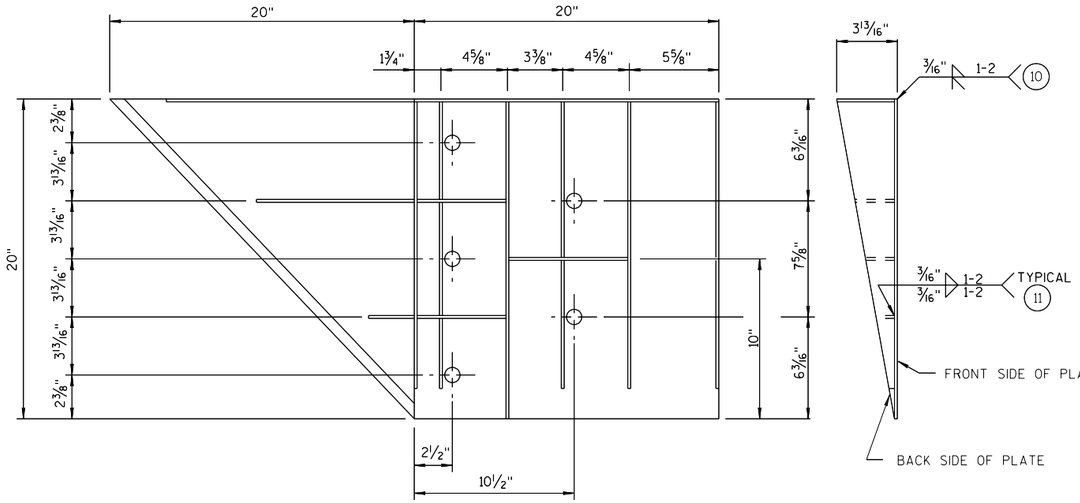

WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

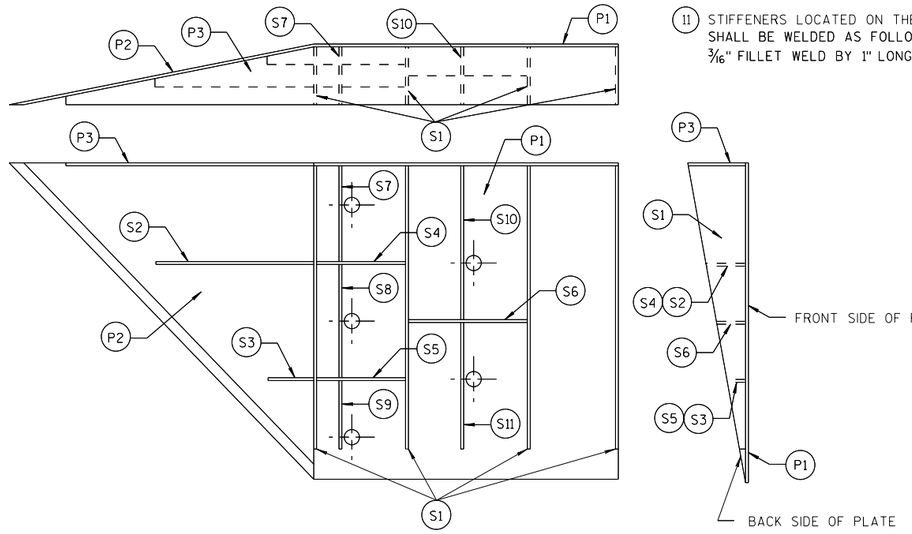

PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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7/2018
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ROADWAY STANDARDS I
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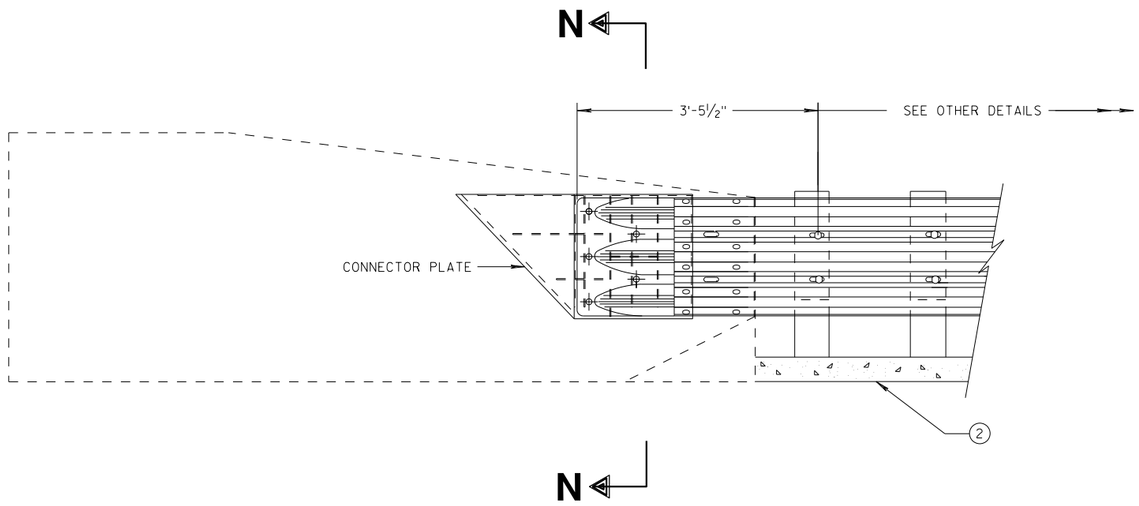
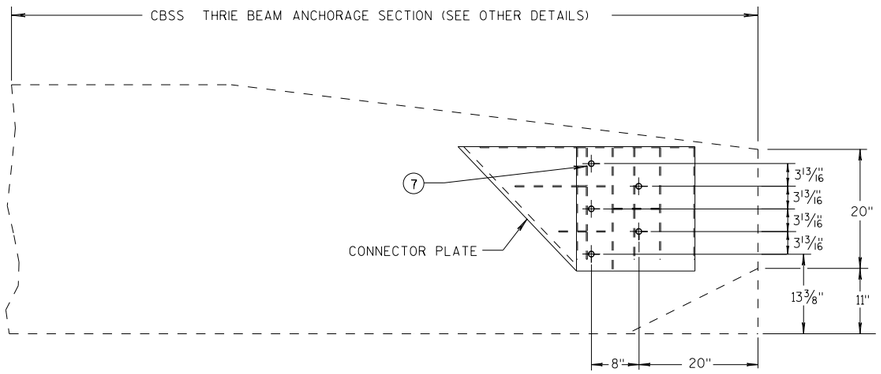


THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



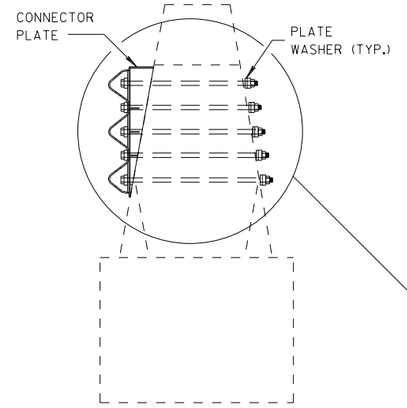
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

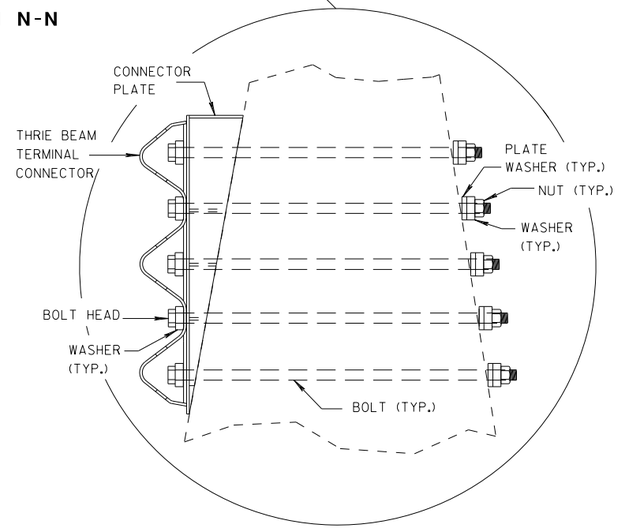
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(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 ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
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DATE
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ROADWAY STANDARDS DI
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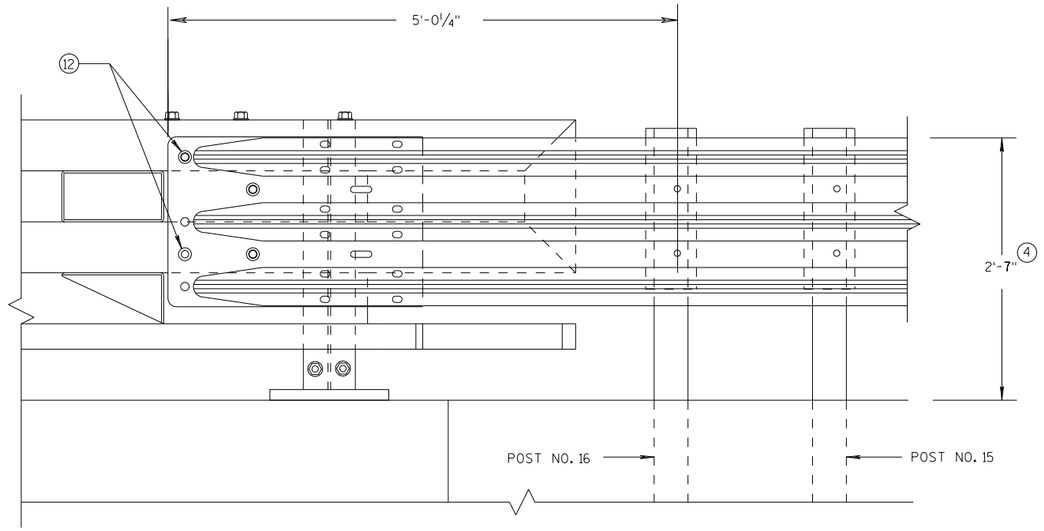
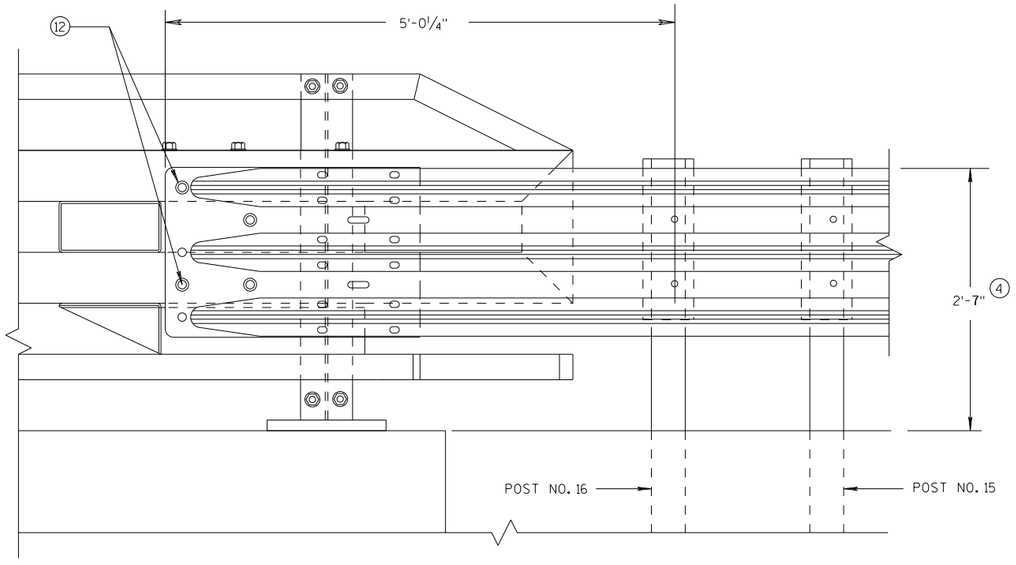


ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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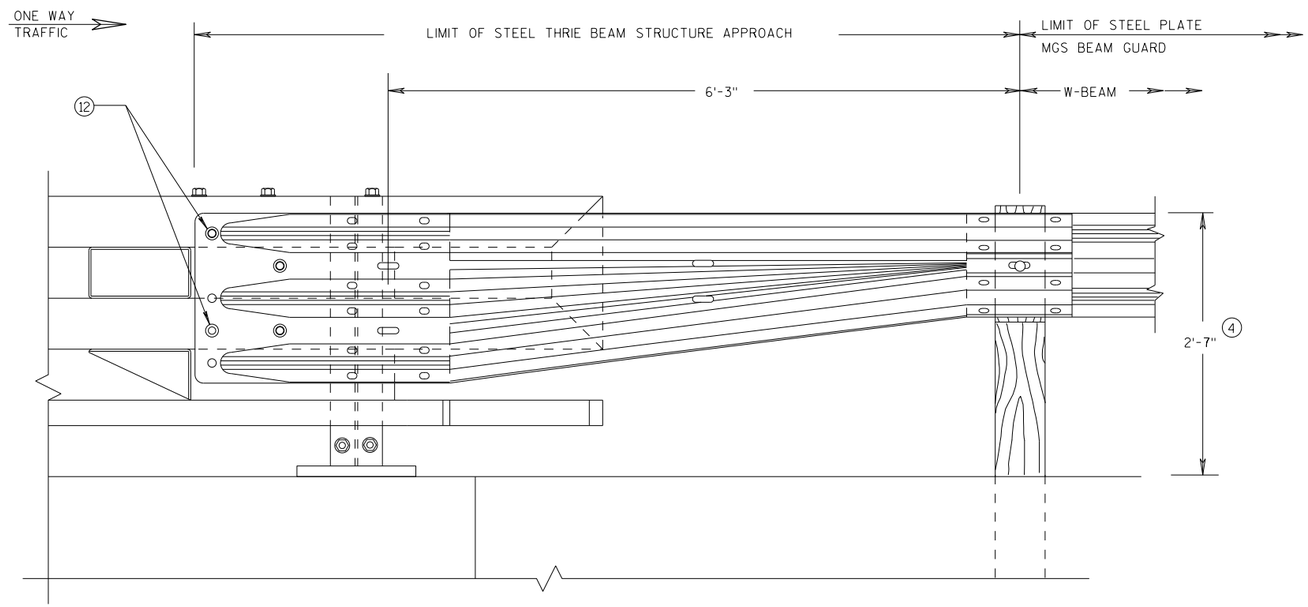
S.D.D. 14 B 45-5k



FRONT VIEW

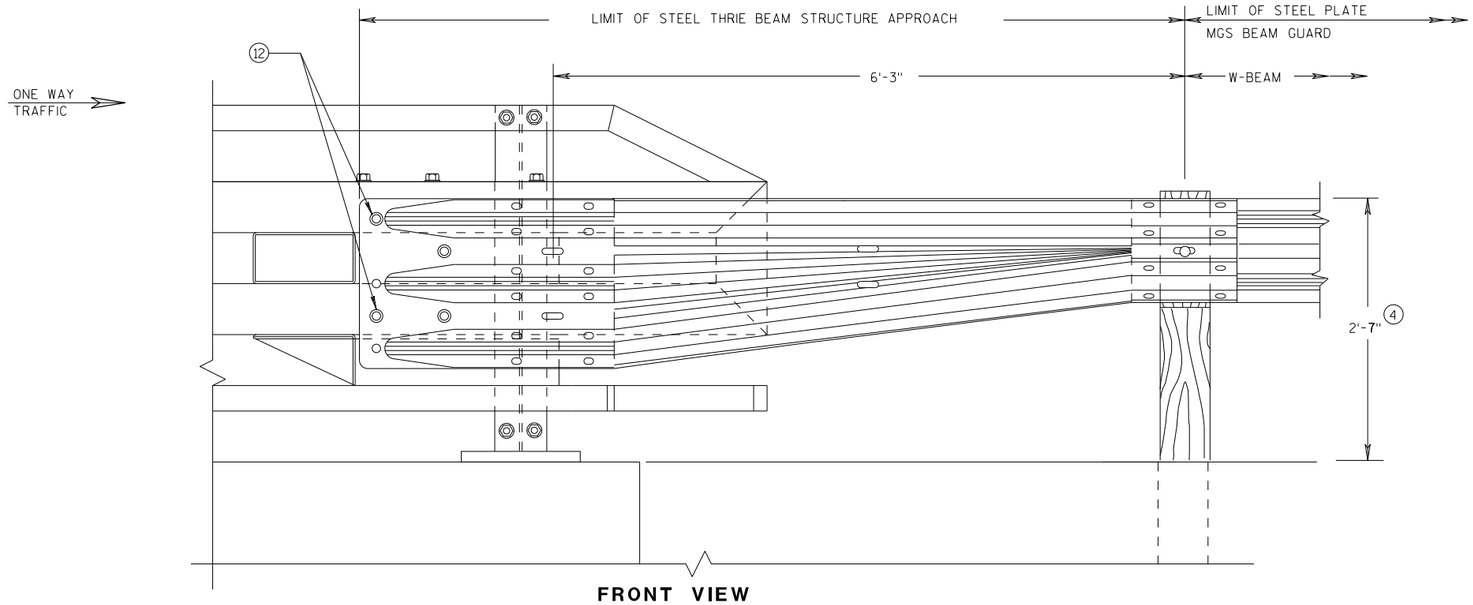
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D
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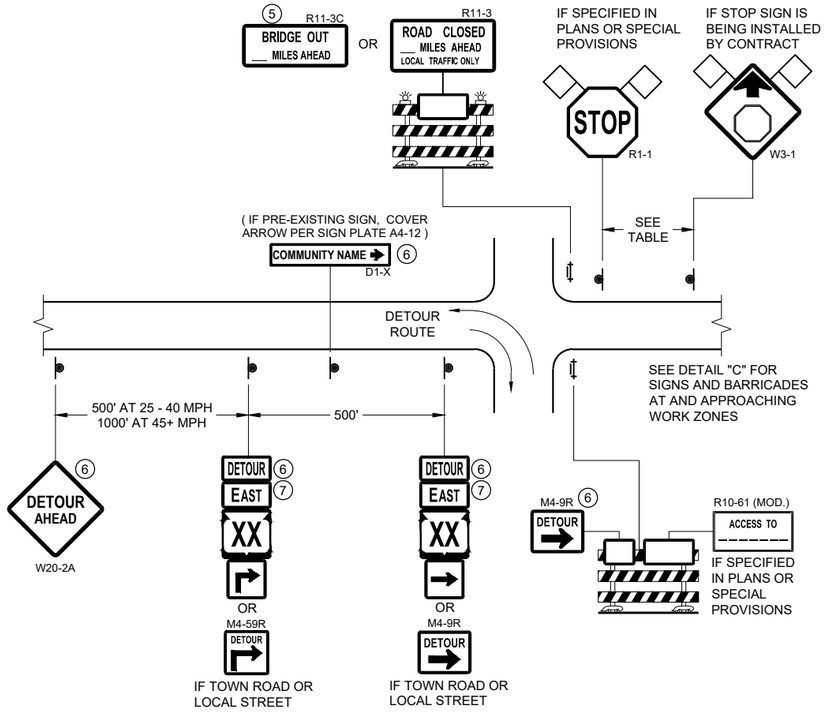
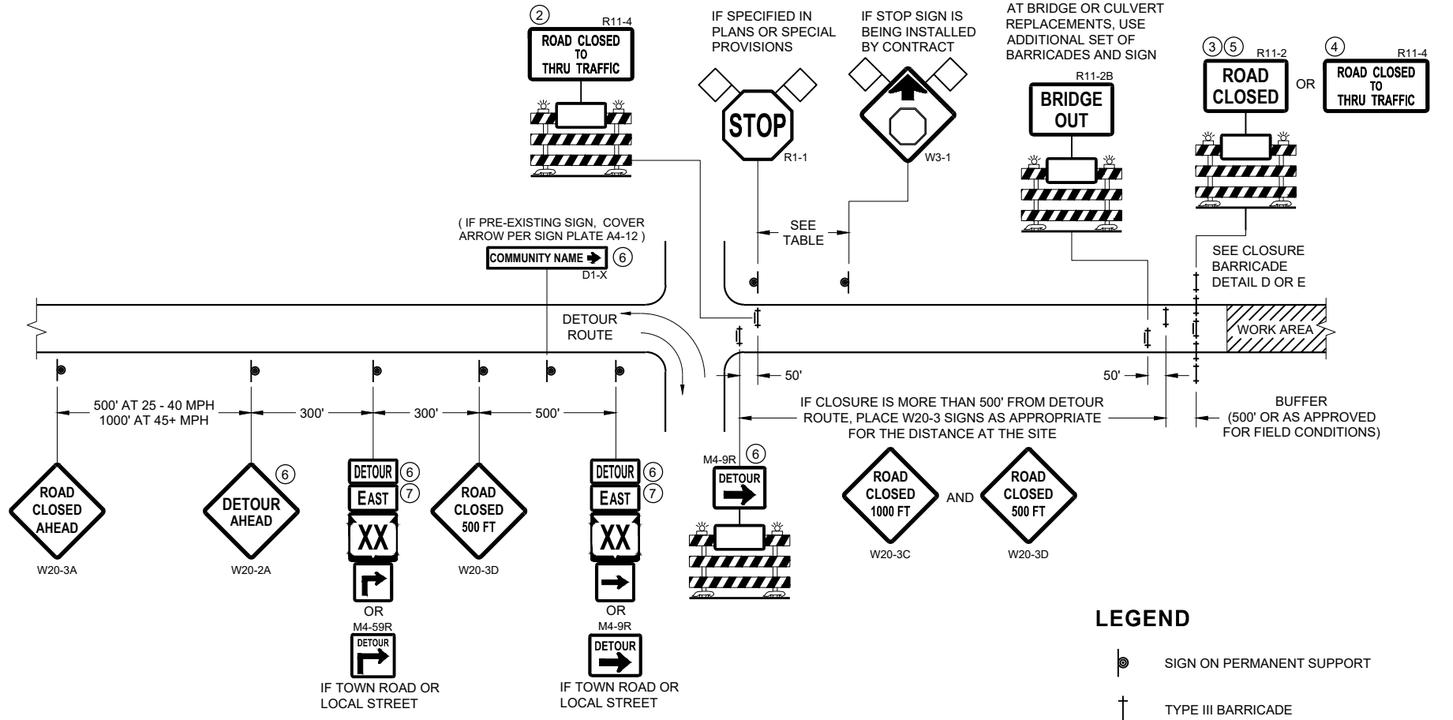
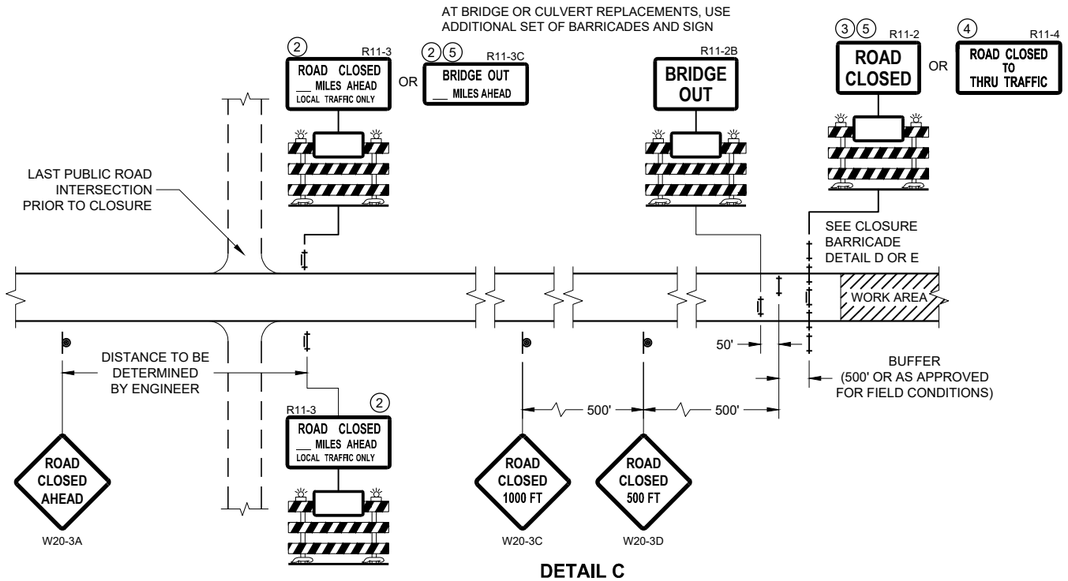




DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

SDD 15C02 - 07a

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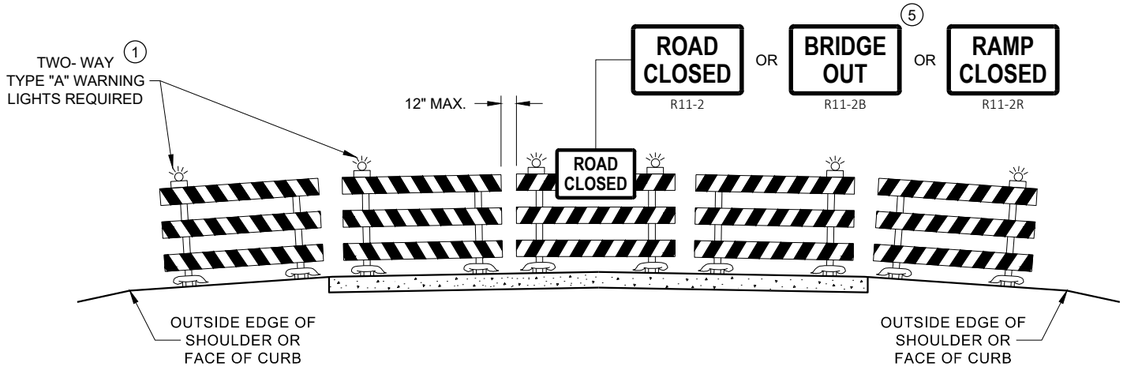
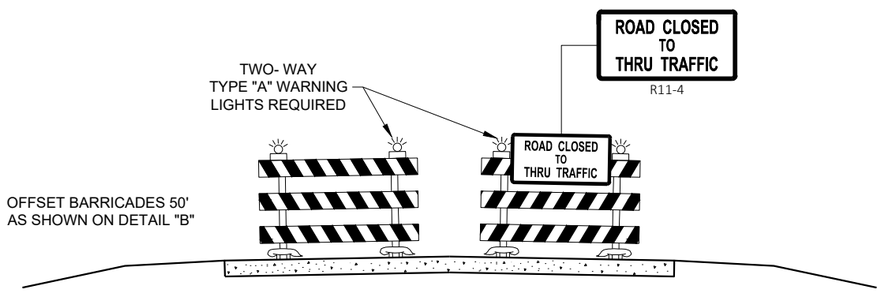
SDD 15C02 - 07a



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 PORTABLBLE 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 THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL 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 SHALL, 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" (36" 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)
- MO5 - 1 AND MO6 - 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 AN 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 ROAD 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 CARDIANAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD 15C02 - 07b

6

SDD 15C02 - 07b

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1 OR M06 - 1

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.

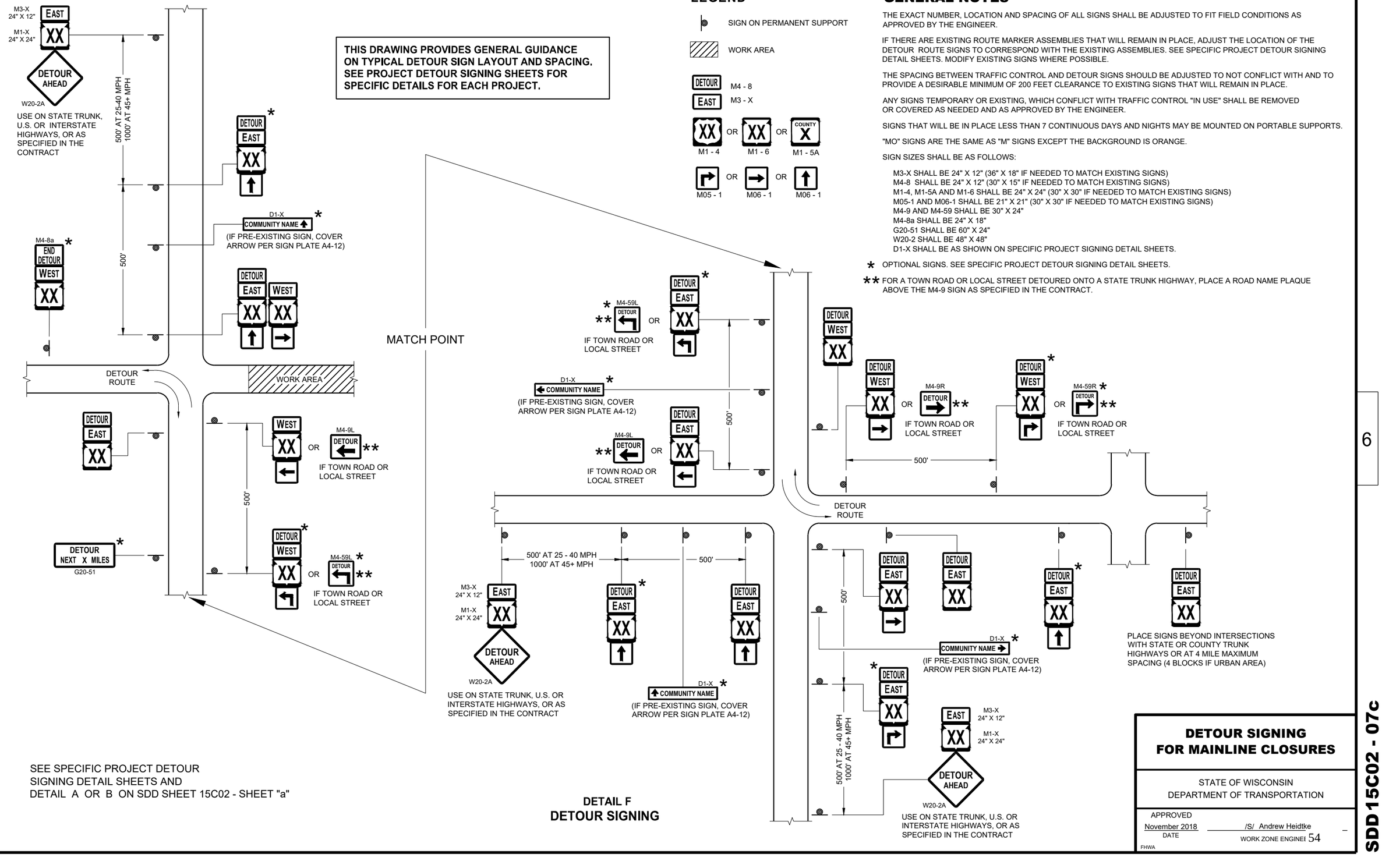
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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" (30" X 30" 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 AND M4-59 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.



SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 07c

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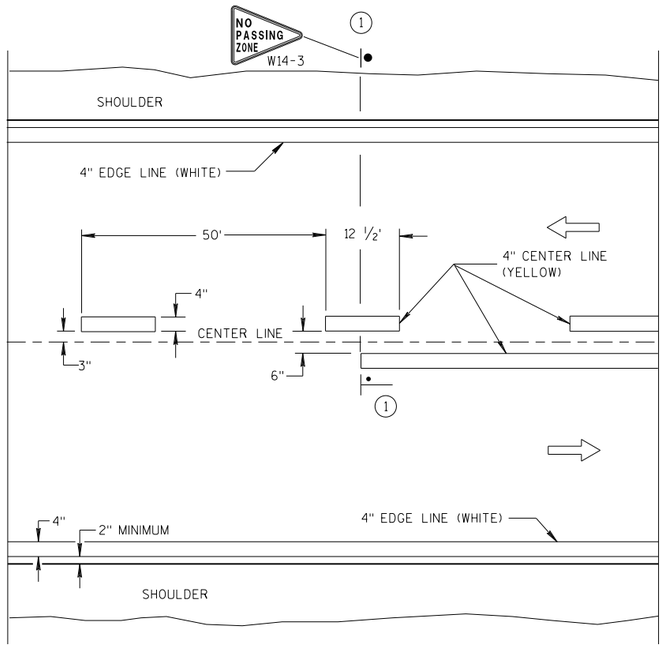
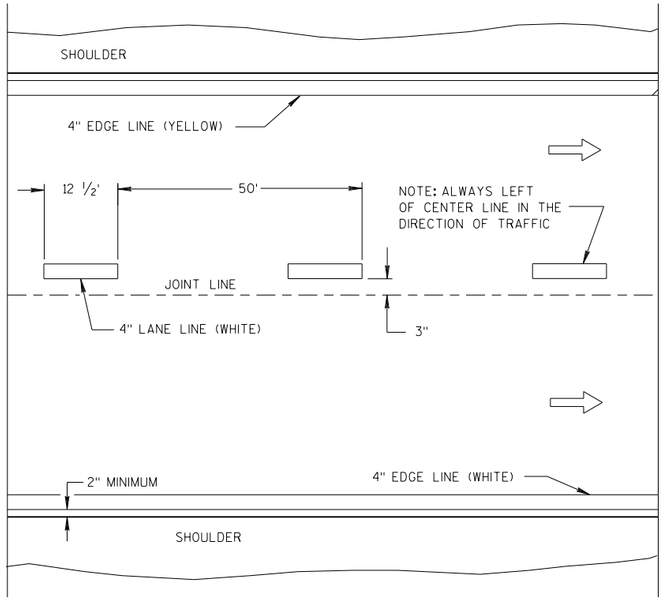
SDD 15C02 - 07c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT 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.

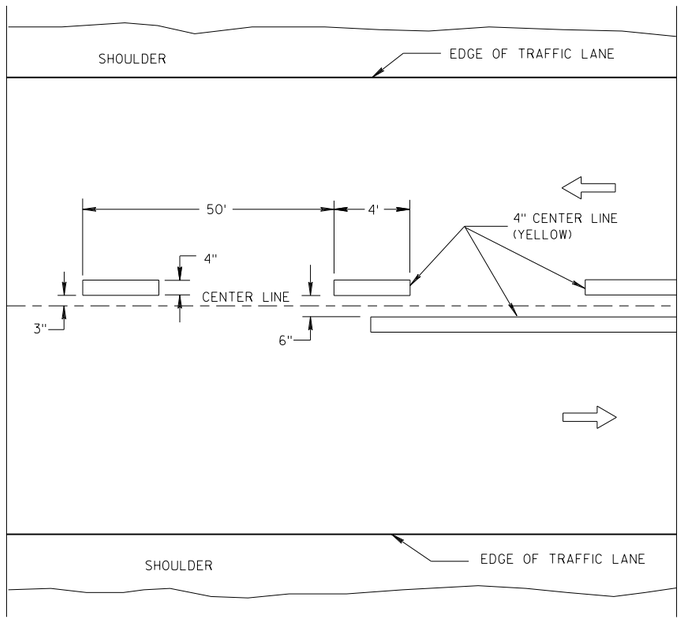
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

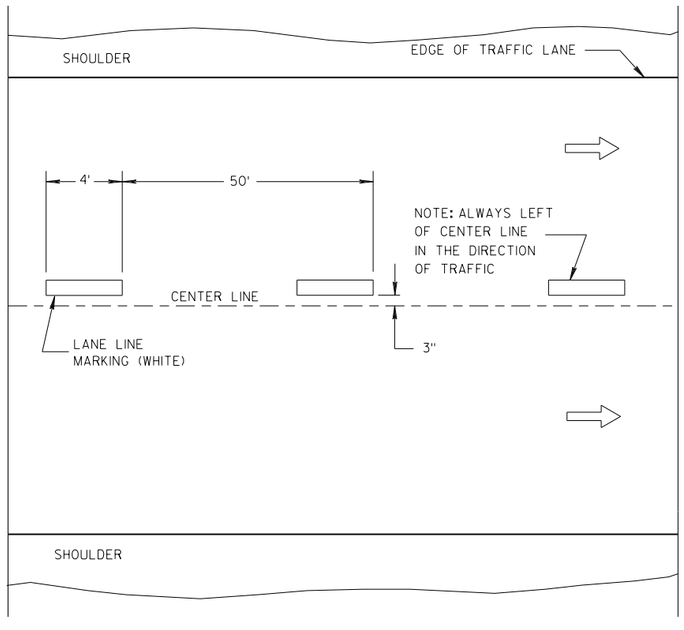
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 DATE

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

FHWA

6

S.D.D. 15 C 8-19a

6

S.D.D. 15 C 8-19a

LEGEND

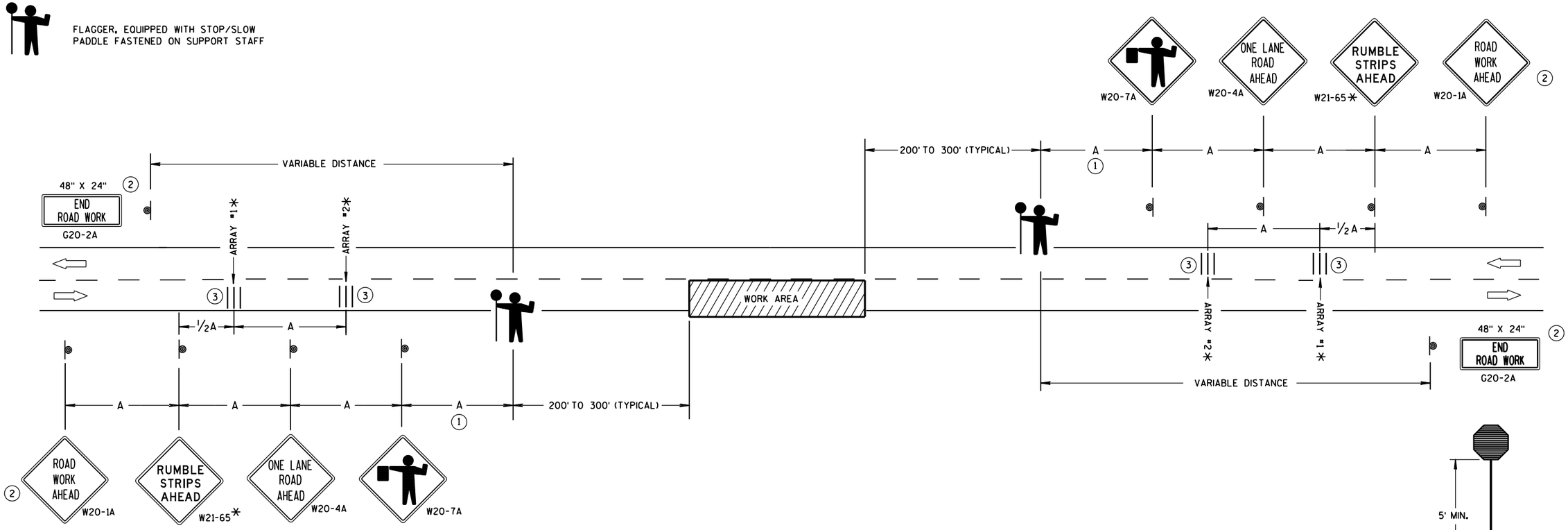
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

W03-4

USE OF THE "BE PREPARED TO STOP" 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

STOP/SLOW PADDLE 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.

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

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

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

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.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

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 RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

(1) FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

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

(3) EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

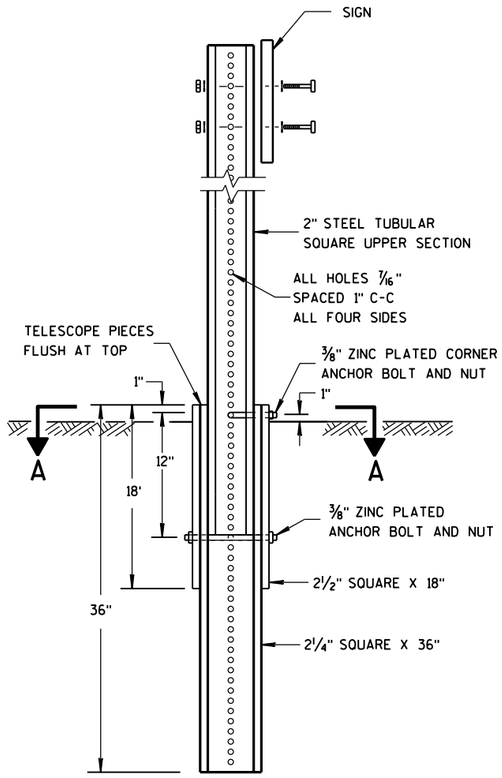
TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

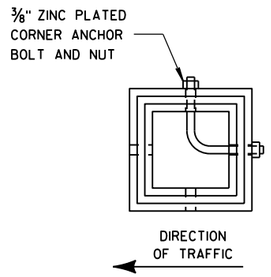
APPROVED
June 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

6

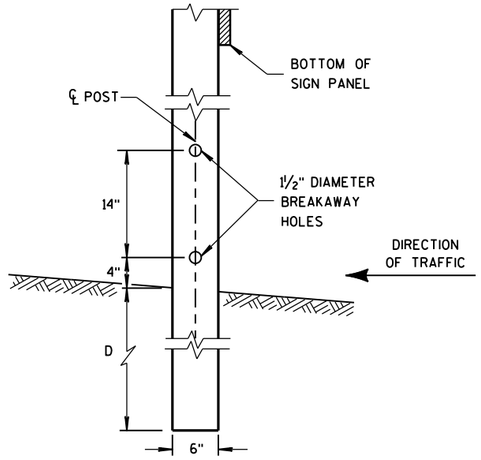
S.D.D. 15 C 12-6



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



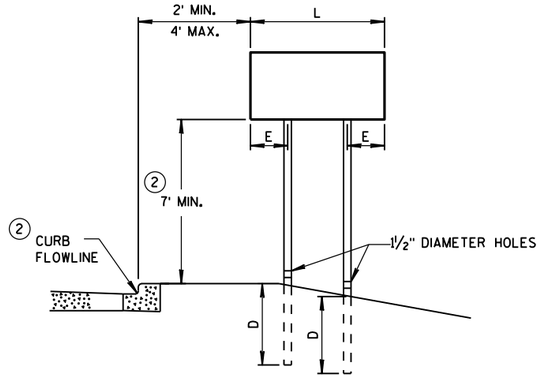
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

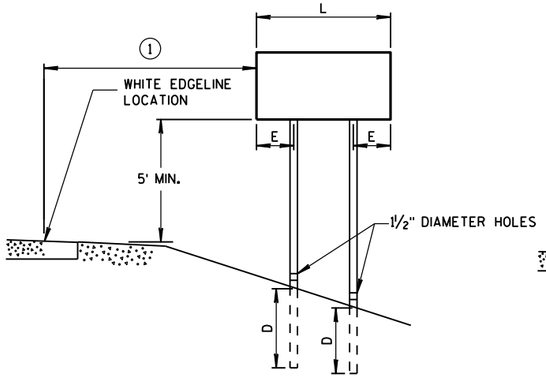
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

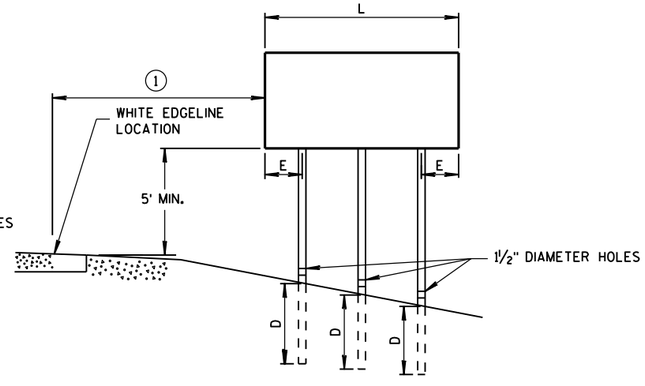
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK 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.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

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.

WOOD POST EMBEDMENT DEPTH

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

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)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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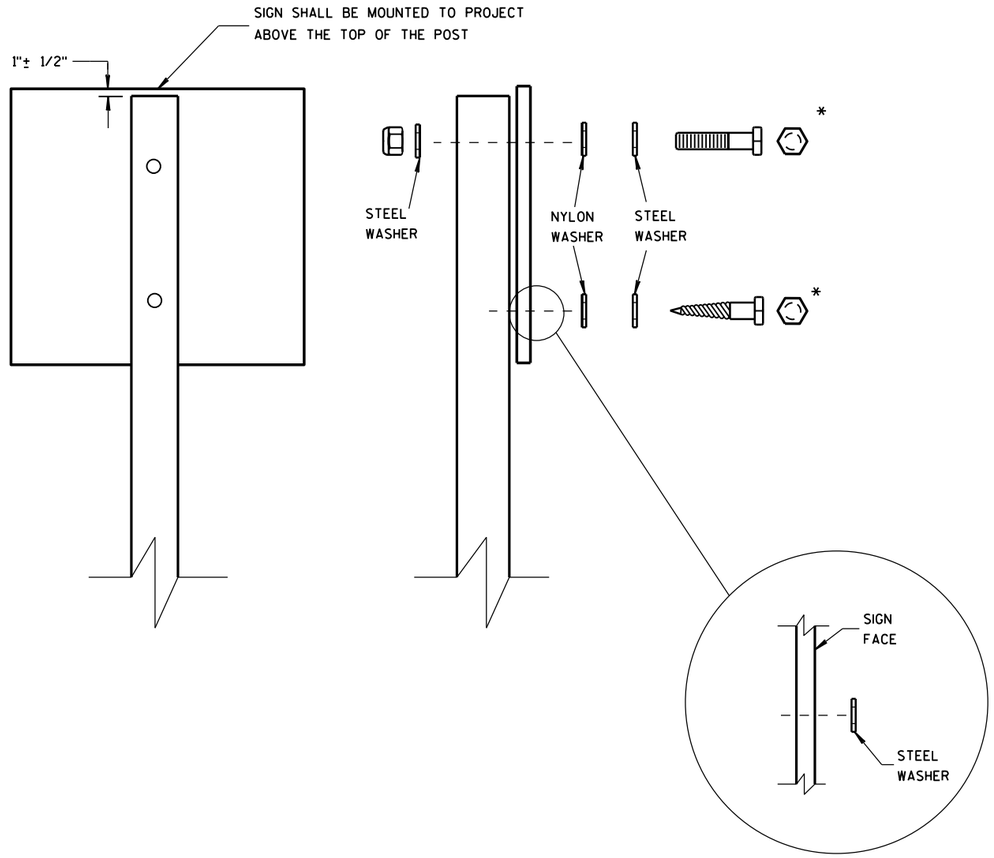
S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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.

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6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

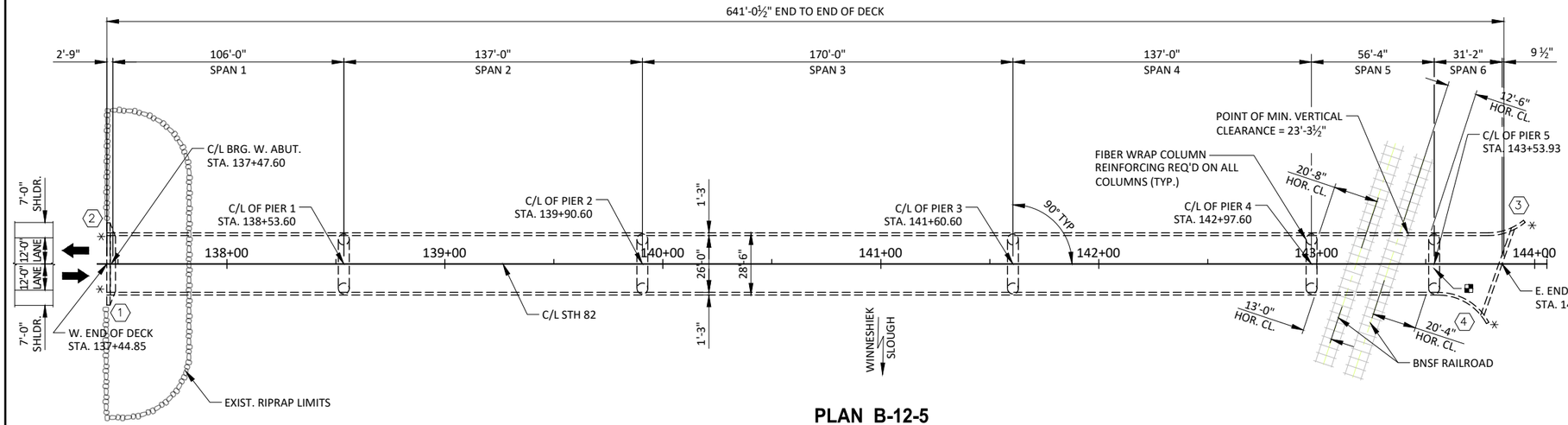
June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

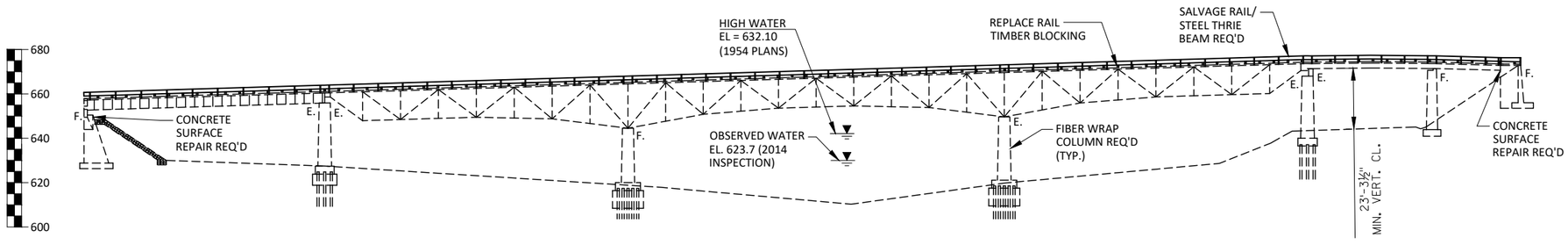
STATE PROJECT NUMBER

5170-05-61



PLAN B-12-5

(SIX-SPAN VARIOUS)



ELEVATION

(NORMAL TO WINNESHIEK SLOUGH)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING	H20
INVENTORY RATING	HS 14
OPERATING RATING	HS 26
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	170 KIPS

RATINGS TAKEN FROM HSI 6/18/2018.

MATERIAL PROPERTIES:

CONCRETE MASONRY, DECK PATCHING	f'c = 4,000 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 P.S.I.

TRAFFIC DATA

A.D.T. (2019)	2,990
A.D.T. (2039)	3,200
DESIGN SPEED	60 M.P.H.

LIST OF DRAWINGS

GENERAL PLAN	1.
CROSS SECTIONS	2.
REHABILITATION DETAILS & QUANTITIES	3.
PIER DIAPHRAGM DETAILS	4.

LEGEND

- PIER DIAPHRAGM REPAIR REQUIRED - SEE SHEET 4 FOR DETAILS.
- ✳ THRIE BEAM TRANSITION - SEE ROADWAY PLANS
- (X) INDICATES WING NUMBER

WISCONSIN
THOMAS J. ROMENESKO
E-26318
MADISON
WI
PROFESSIONAL ENGINEER

1/31/2019

NO.	DATE	REVISION	BY

JEWELL associates engineers, Inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
OFFICE: (608) 588-7484
www.jewellassoc.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR — CHIEF STRUCTURES DESIGN ENGINEER — 02/06/19 DATE

STRUCTURE B-12-5

STH 82 OVER WINNESHIEK SLOUGH

COUNTY	TOWN ~~CITY/VILLAGE~~
CRAWFORD	FREEMAN

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
TR	PTB	JZ	TR

GENERAL PLAN

SHEET 1 OF 4

59

DESIGN CONSULTANT
TOM ROMENESKO, PE
(608) 588-7484

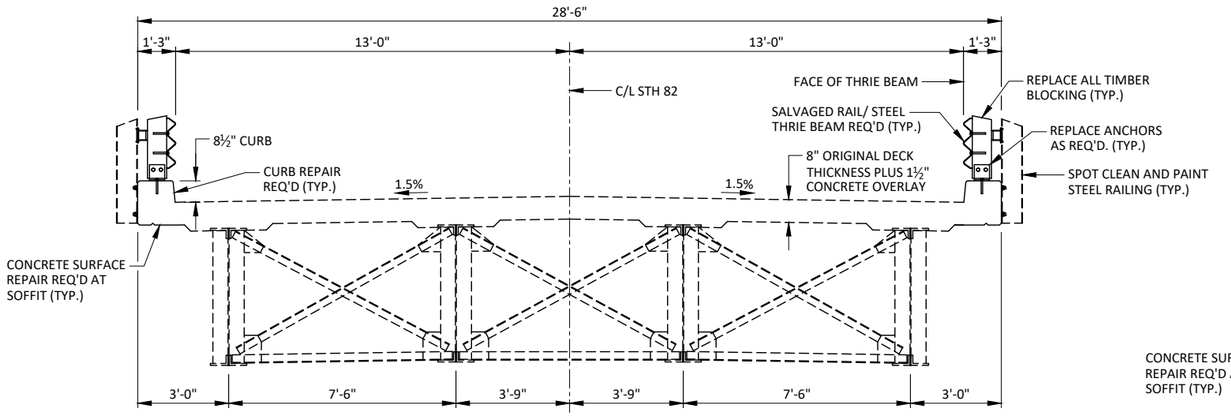
BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

8

8

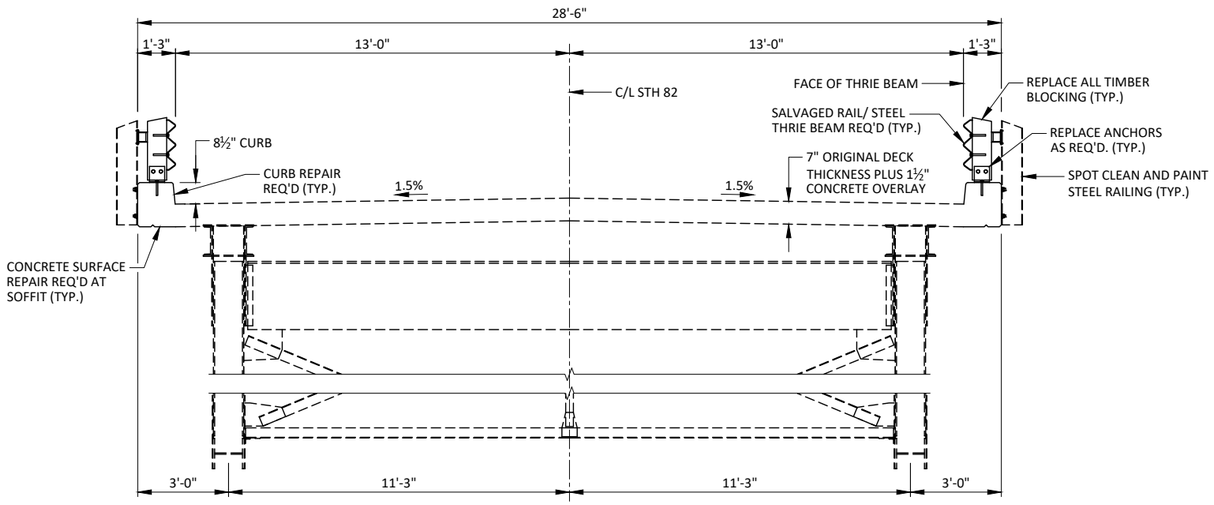
STATE PROJECT NUMBER

5170-05-61



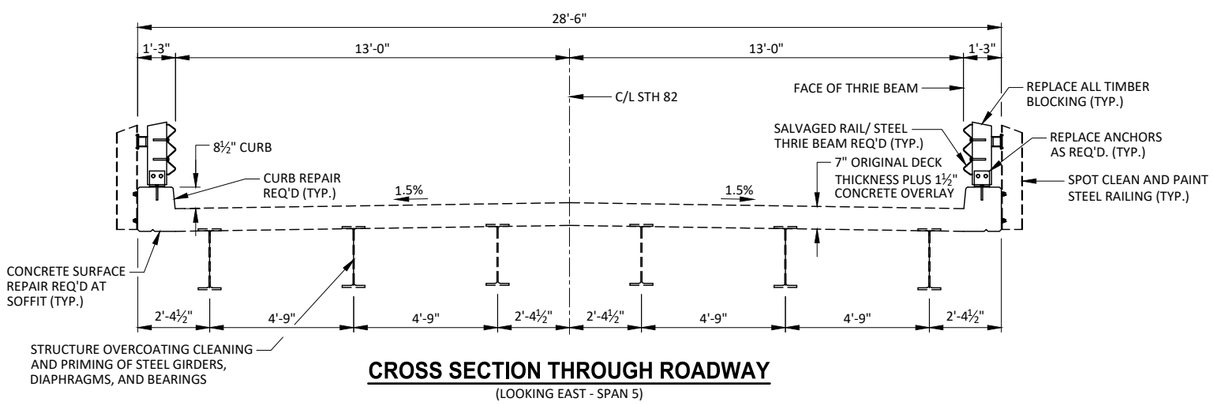
CROSS SECTION THROUGH ROADWAY

(LOOKING EAST - SPAN 1)



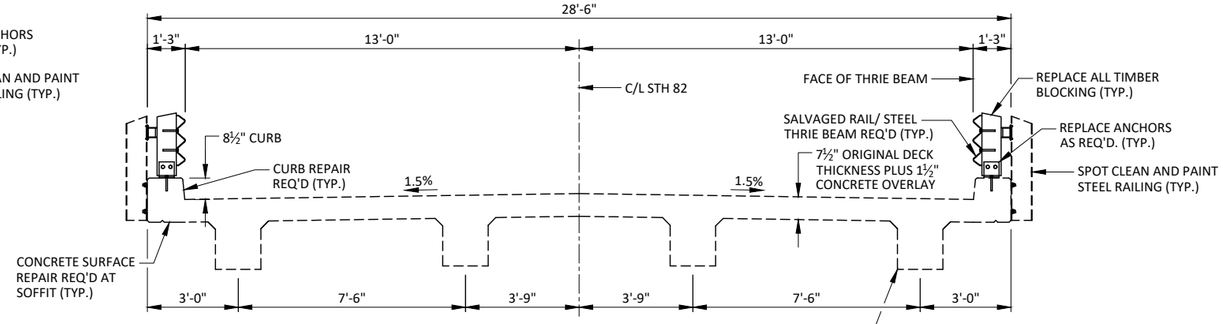
CROSS SECTION THROUGH ROADWAY

(LOOKING EAST - SPANS 2, 3, & 4)



CROSS SECTION THROUGH ROADWAY

(LOOKING EAST - SPAN 5)



CROSS SECTION THROUGH ROADWAY

(LOOKING EAST - SPAN 6)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO A.A.S.H.T.O. DESIGNATION M153, TYPE I, II, OR III OR A.A.S.H.T.O. DESIGNATION M213.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS, INSPECTION REPORTS, AND FIELD SURVEY.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

BEARING REPAIR IS REQUIRED AT ALL 4 BEARINGS AT WEST ABUTMENT; AT ALL 6 BEARINGS AT PIER 5; AT BEARINGS 1, 2, AND 4 AT PIER 1; AND THE SOUTH TRUSS BEARING AT PIER 4.

CONCRETE SURFACE REPAIR IS LOCATED AT ABUTMENTS, PIERS AND DECK OVERHANG. AREAS PROVIDED ARE APPROXIMATE. LOCATIONS AND EXTENTS SHALL BE DETERMINED BY THE FIELD ENGINEER.

AT "CURB REPAIR", EXPOSE EXISTING REINFORCEMENT A MINIMUM OF 1" CLEAR.

STEEL THRIE BEAM TO BE SALVAGED UNLESS DAMAGED OR MODERATELY TO SEVERELY CORRODED. IT IS ANTICIPATED THAT ALL CURVED SECTIONS AT THE EAST END OF THE BRIDGE AND SIX STRAIGHT SECTIONS ALONG THE BRIDGE WILL REQUIRE REPLACEMENT. LOCATIONS AND EXTENTS OF STEEL THRIE BEAM REPLACEMENT SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. REMAINING STEEL THRIE BEAM SHALL BE SALVAGED AND RE-INSTALLED. ALL STEEL THRIE BEAM SHALL BE INSTALLED ON NEW TREATED TIMBER BLOCKING. PAYMENT FOR SALVAGING STEEL THRIE BEAM AND ALL TIMBER POST ATTACHMENT HARDWARE, AND REINSTALLING THRIE BEAM ON NEW TIMBER BLOCKING WILL BE PAID FOR AS "SALVAGED RAIL". PROVIDING AND INSTALLING NEW TIMBER BLOCKING WILL BE PAID FOR UNDER THE ITEM "REPLACING GUARD RAIL POSTS AND BLOCKS". REPLACEMENT OF DEFECTIVE ANCHORS WITH ADHESIVE ANCHORS WILL BE PAID FOR UNDER THE ITEM "ADHESIVE ANCHORS 3/4-INCH".

THE COLOR OF THE FINAL COAT OF PAINT ON BEARINGS, STEEL RAILING, TRUSSES (SPOT PAINTING), AND STEEL GIRDERS (SPOT PAINTING AND INCLUDING COAL TAR PAINT AREAS) SHALL BE FEDERAL STANDARD COLOR NO. 26293 (LIGHT GRAY).

PROPOSED REPAIR AREAS

FIELD OBSERVATION SUMMARY	STRUCTURE NO. B-12-5		
ITEM	UNIT	QUANTITY	%
TOTAL AREA	SY	1857	100
DELAMINATED AREA	SY	100	5.4
PREPARATION DECKS TYPE 1	SY	100	5.4
PREPARATION DECKS TYPE 2	SY	25	1.3
FULL DEPTH DECK REPAIR	SY	12	0.6

NOTES:

AREAS OF DECK PREPARATION TYPE 1 AND TYPE 2 ARE ESTIMATED.

DECK DELAMINATION AREAS AND DECK PREPARATION AREAS SHOWN IN TABLE ARE FOR REFERENCE ONLY. ENGINEER TO VERIFY REPAIR AREAS. DECK REPAIRS SHALL BE MADE ONLY AS DIRECTED BY ENGINEER IN THE FIELD.

FULL DEPTH DECK REPAIR AREAS ARE LOCATED OVER CONCRETE GIRDERS AT WEST END OF SPAN 6. DECK REMOVAL IS LIMITED TO AREAS DIRECTLY ADJACENT TO GIRDERS AS REQUIRED FOR GIRDER ACCESS.

MATCH TOP OF EXISTING CONCRETE OVERLAY WITH CONCRETE PATCH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-5

DRAWN BY PTB | PLANS CK'D. TJR

CROSS SECTIONS

SHEET 2 OF 4

60

8

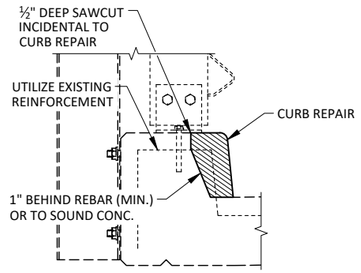
8

STATE PROJECT NUMBER

5170-05-61

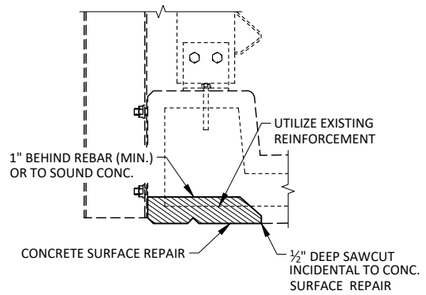
TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	W. ABUT.	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	E. ABUT.	SUPER.	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-12-5	LS	--	--	--	--	--	--	--	--	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	--	--	--	--	--	--	130	130
502.4106	ADHESIVE ANCHORS ¾-INCH	EACH	--	--	--	--	--	--	--	30	30
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	--	--	--	--	--	--	--	1,410	1,410
509.0301	PREPARATION DECKS TYPE 1	SY	--	--	--	--	--	--	--	100	100
509.0302	PREPARATION DECKS TYPE 2	SY	--	--	--	--	--	--	--	25	25
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	--	--	--	--	--	--	--	1,400	1,400
509.1000	JOINT REPAIR	SY	--	--	--	--	--	--	--	19	19
509.1200	CURB REPAIR	LF	--	--	--	--	--	--	--	130	130
509.1500	CONCRETE SURFACE REPAIR	SF	--	80	--	20	50	75	25	595	845
509.2000	FULL DEPTH DECK REPAIR	SY	--	--	--	--	--	--	--	12	12
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	--	--	--	--	--	--	--	27	27
509.9025.S	EPOXY INJECTION CRACK REPAIR	LF	--	--	--	--	--	--	--	34	34
509.9026.S	CORED HOLES 2-INCH DIAMETER	EACH	--	--	--	--	--	--	--	8	8
517.3000.S	STRUCTURE OVERCOATING CLEANING AND PRIMING B-12-5	LS	--	--	--	--	--	--	--	--	1
517.4000.S	CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-12-5	LS	--	--	--	--	--	--	--	--	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	--	--	--	--	--	--	--	--	1
614.0230	STEEL THRIE BEAM	LF	--	--	--	--	--	--	--	135	135
614.0920	SALVAGED RAIL	LF	--	--	--	--	--	--	--	1,162	1,162
614.0950	REPLACING GUARD RAIL POSTS AND BLOCKS	EACH	--	--	--	--	--	--	--	219	219
SPV.0060.01	BEARING REPAIR	EACH	--	--	--	--	--	--	--	--	14
SPV.0060.02	EMBEDDED GALVANIC ANODES	EACH	--	--	--	--	--	--	--	34	34
SPV.0105.01	CLEANING AND PAINTING GIRDER ENDS	LS	--	--	--	--	--	--	--	--	1
SPV.0165.01	FIBER WRAP REINFORCING NON-STRUCTURAL (DRY)	SF	--	--	--	--	200	200	--	--	400
SPV.0165.02	FIBER WRAP REINFORCING NON-STRUCTURAL (WET)	SF	--	170	--	100	--	--	--	--	270
	NON-BID ITEMS										
	FILLER	SIZE									½"



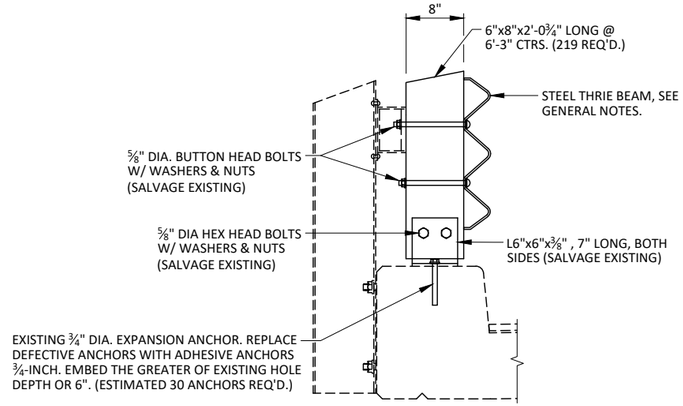
CURB REPAIR DETAIL

AS DIRECTED BY ENGINEER IN THE FIELD

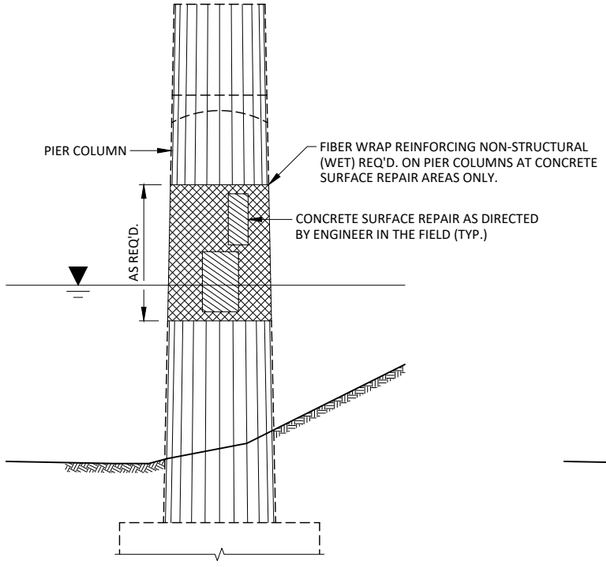


CONCRETE SURFACE REPAIR DETAIL - AT SOFFIT

AS DIRECTED BY ENGINEER IN THE FIELD

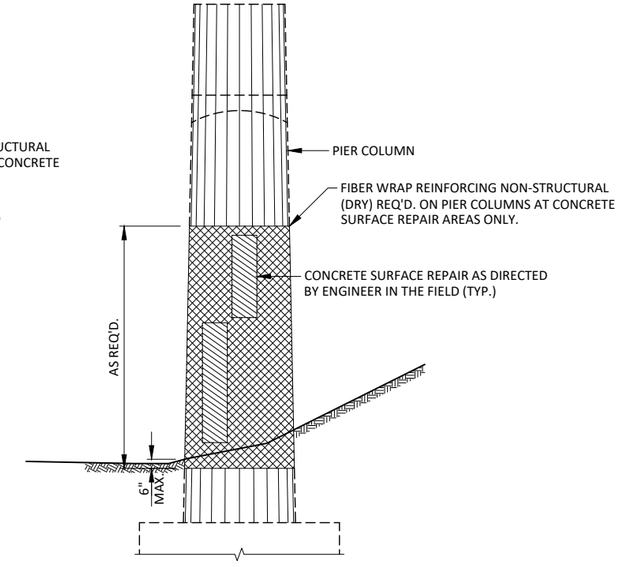


RAIL DETAIL



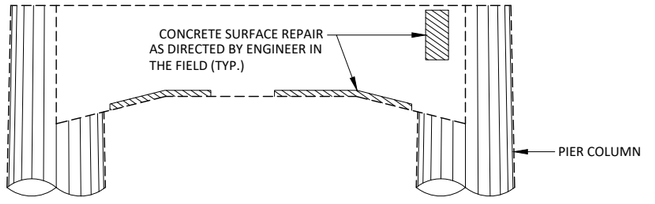
PIER COLUMN REPAIR DETAIL (TYP.)

(IN WATER)



PIER COLUMN REPAIR DETAIL (TYP.)

(AT DRY GROUND)



PIER REPAIR DETAIL (TYP.)

(AT PIER CAP)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-5

DRAWN BY PTB | PLANS CK'D. TJR

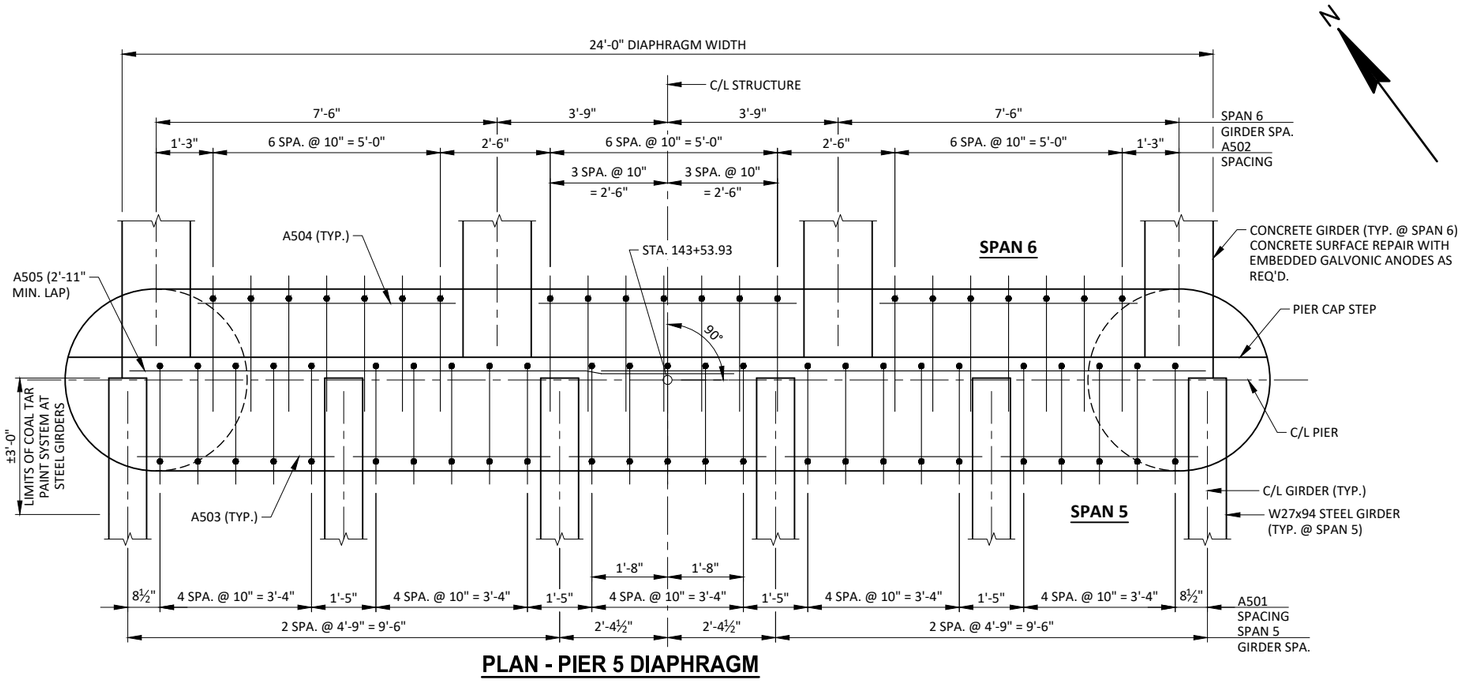
REHABILITATION DETAILS & QUANTITIES

SHEET 3 OF 4

61

STATE PROJECT NUMBER

5170-05-61



PLAN - PIER 5 DIAPHRAGM

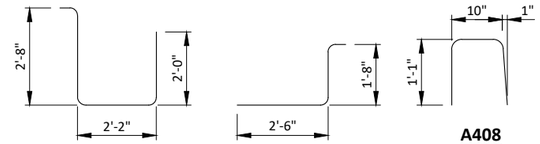
BILL OF BARS
PIER 5

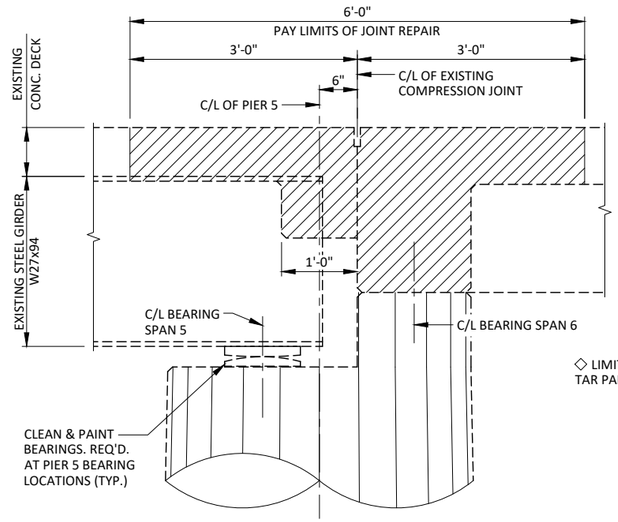
1,410 LB (COATED)

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
A501	25	7-0	X	X	DIAPHRAGM - VERT. - SPAN 5
A502	21	4-6	X	X	DIAPHRAGM - VERT. - SPAN 6
A503	15	4-3		X	DIAPHRAGM - HORIZ. - SPAN 5
A504	6	5-8		X	DIAPHRAGM - HORIZ. - SPAN 6
A505	4	13-4		X	DIAPHRAGM - HORIZ. - CENTER
A506	36	15-7		X	DECK - TOP AND BOT. - TRANS.
A507	62	5-8		X	DECK - TOP AND BOT. AND CURB - LONG.
A408	10	2-10	X	X	CURB - STIRRUPS

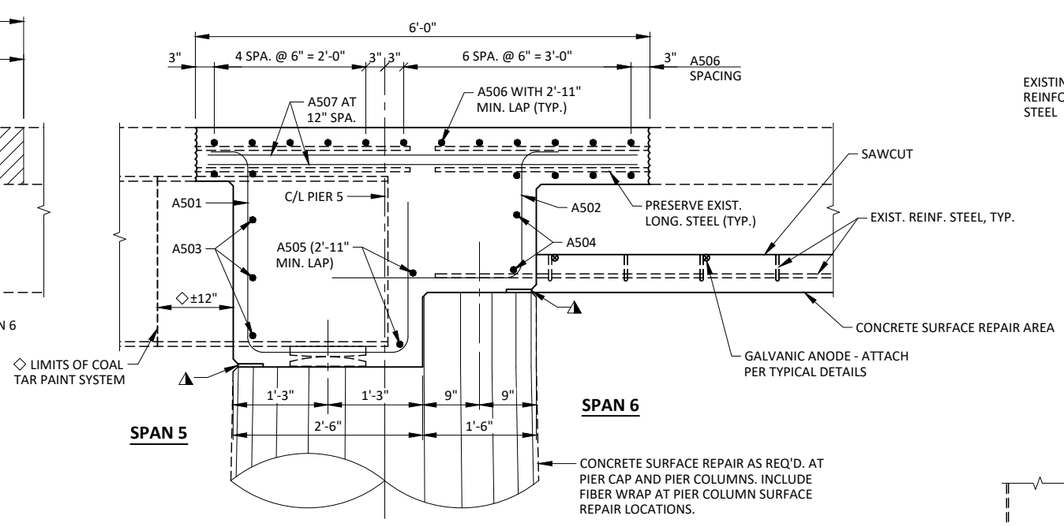
NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



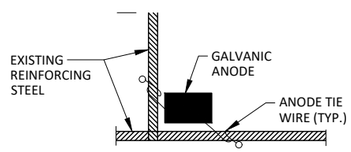


REMOVAL

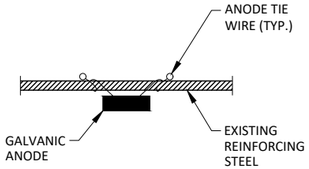


CONSTRUCTION

TYPICAL SECTION THROUGH PIER 5 DIAPHRAGM



TYPICAL INSTALLATION FOR BAR STEEL



TYPICAL INSTALLATION FOR BAR STEEL

CATHODIC PROTECTION DETAILS

SEE SPECIAL PROVISION "EMBEDDED GALVANIC ANODES" FOR DESCRIPTION, MATERIALS, CONSTRUCTION, MEASUREMENT, AND PAYMENT INFORMATION.

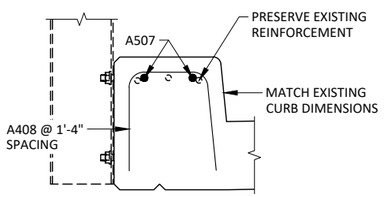
ANODES NEAREST TO EDGE OF REPAIR TO BE WITHIN 6" OF EDGE.

AFTER PLACEMENT, GALVONIC ANODES SHOULD MAINTAIN A MINIMUM TOP COVER OF 1½" AND A MINIMUM BOTTOM COVER OF ¾".

EXISTING REINFORCING STEEL TO BE COMPLETELY CLEANED OF CORRODED MATERIAL PRIOR TO INSTALLATION OF GALVANIC ANODES.

LEGEND

- EXISTING CONCRETE REMOVAL AT DIAPHRAGM, DECK AND CURBS.
- ▲ ½"x4" PREFORMED FILLER, EXTEND ALONG LENGTH OF PIER BETWEEN ENDS OF DIAPHRAGM.
- ◇ APPLY A 3-COAT COAL TAR PAINT SYSTEM DIRECTLY TO BARE METAL AT THE END 36 INCHES OF ALL STEEL GIRDERS AT PIER 5 AS SPECIFIED UNDER BID ITEM "CLEANING AND PAINTING GIRDER ENDS".



CURB SECTION AT JOINT REPAIR AREAS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-5

DRAWN BY: PTB | PLANS CK'D.: TJR

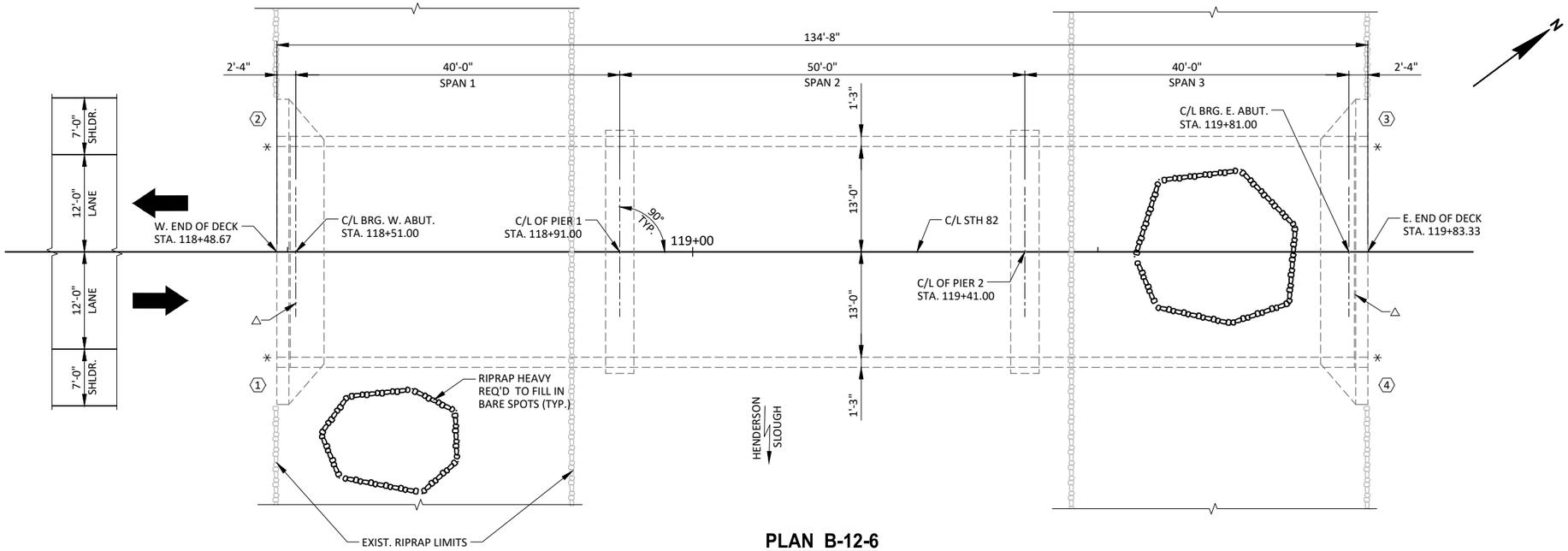
PIER DIAPHRAGM DETAILS

SHEET 4 OF 4

62

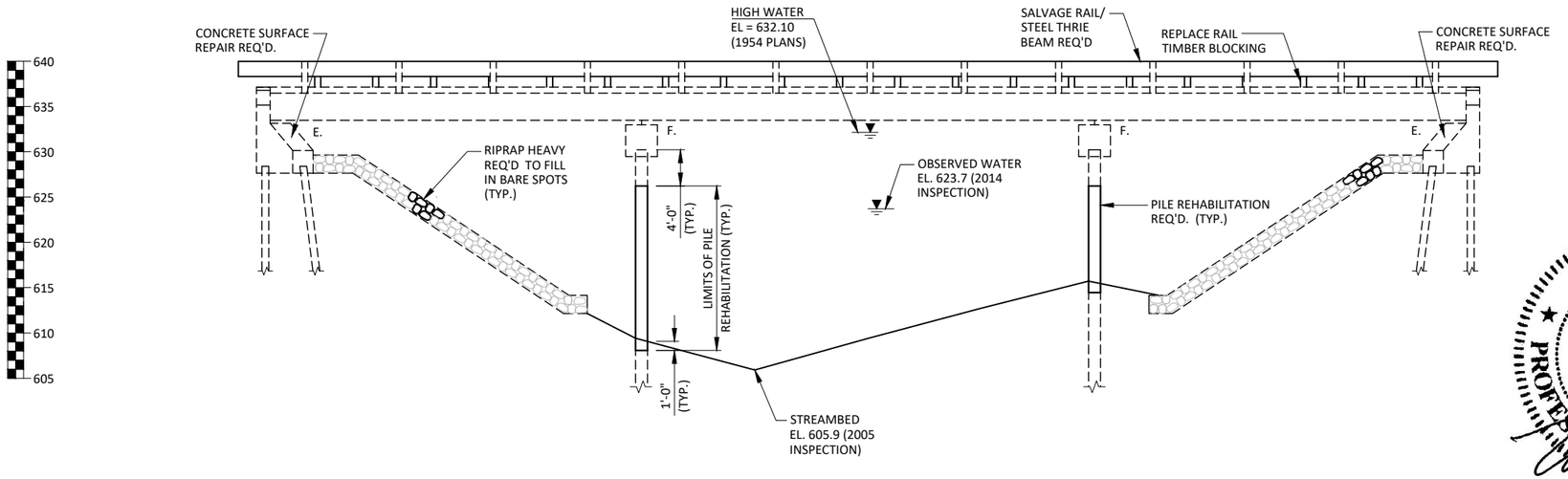
8

8



PLAN B-12-6

(THREE-SPAN STEEL DECK GIRDER STRUCTURE)



ELEVATION

(NORMAL TO HENDERSON SLOUGH)

STATE PROJECT NUMBER

5170-05-61

DESIGN DATA

LIVE LOAD:

DESIGN LOADING	H20
INVENTORY RATING	HS 16
OPERATING RATING	HS 28
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	210 KIPS

RATINGS TAKEN FROM HSI 6/18/2018.

MATERIAL PROPERTIES:

CONCRETE MASONRY, DECK PATCHING	f'c = 4,000 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 P.S.I.

TRAFFIC DATA

A.D.T. (2019)	2,990
A.D.T. (2039)	3,200
DESIGN SPEED	60 M.P.H.

LIST OF DRAWINGS

GENERAL PLAN	1.
CROSS SECTION AND QUANTITIES	2.
DECK REPAIR	3.

LEGEND

△ REMOVE AND REPLACE STRIP SEAL GLAND WITH A NEW 4-INCH GLAND.

✳ THRIE BEAM TRANSITION - SEE ROADWAY PLANS

⬡ INDICATES WING NUMBER

WISCONSIN
THOMAS J. ROMENESKO
E-26318
MADISON
WI
PROFESSIONAL ENGINEER
3/4/2019

DESIGN CONSULTANT
TOM ROMENESKO, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
OFFICE: (608) 588-7484
www.jewellassoc.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 03/05/19
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-12-6

STH 82 OVER HENDERSON SLOUGH

COUNTY	TOWN/~~CITY/VILLAGE~~
CRAWFORD	FREEMAN

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
TJR	PTB	TJR	PTB

GENERAL PLAN

SHEET 1 OF 3

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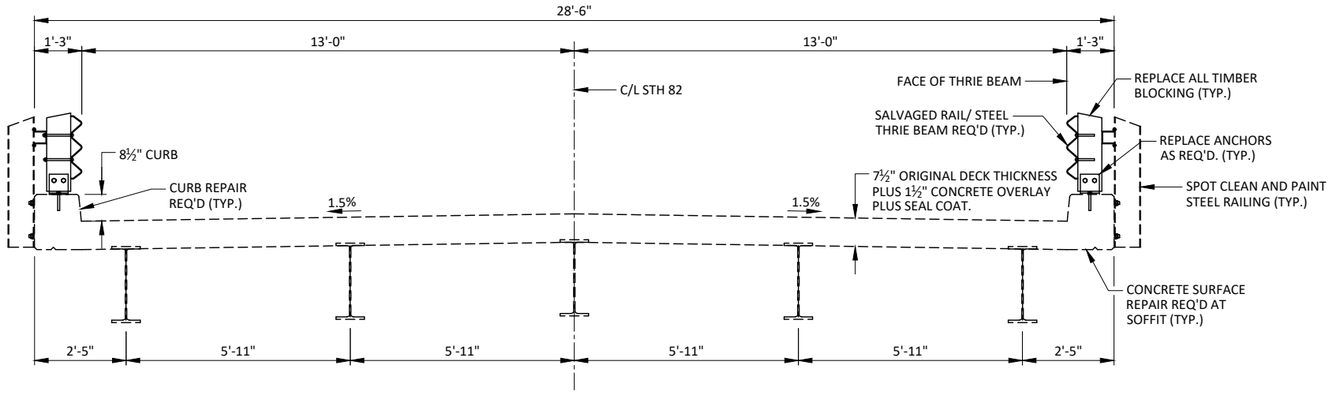
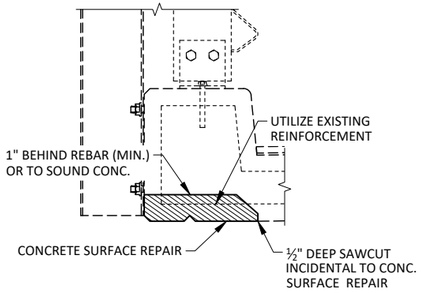
STATE PROJECT NUMBER

5170-05-61



CROSS SECTION THROUGH ROADWAY

(LOOKING EAST)



CONCRETE SURFACE REPAIR DETAIL - AT SOFFIT

AS DIRECTED BY ENGINEER IN THE FIELD

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS, INSPECTION REPORTS, AND FIELD SURVEY.

PROJECT ID 5170-05-61 INCLUDES REHABILITATION OF DETERIORATED 16" DIA. CAST -IN-PLACE PILING IN THE PILE BENTS AND MISCELLANEOUS CONCRETE SURFACE REPAIRS. SEE ROADWAY PLANS FOR EROSION CONTROL REQUIREMENTS AROUND PILE EXCAVATION.

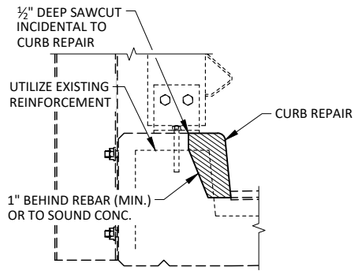
UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

CONCRETE SURFACE REPAIR IS LOCATED AT ABUTMENTS AND DECK OVERHANG. AREAS PROVIDED ARE APPROXIMATE. LOCATIONS AND EXTENTS SHALL BE DETERMINED BY THE FIELD ENGINEER.

THE COLOR OF THE FINAL COAT OF PAINT ON BEARINGS, STEEL RAILING, GIRDERS, AND EXPOSED TOP OF PILE BENTS SHALL BE FEDERAL STANDARD COLOR NO. 26293 (LIGHT GRAY).

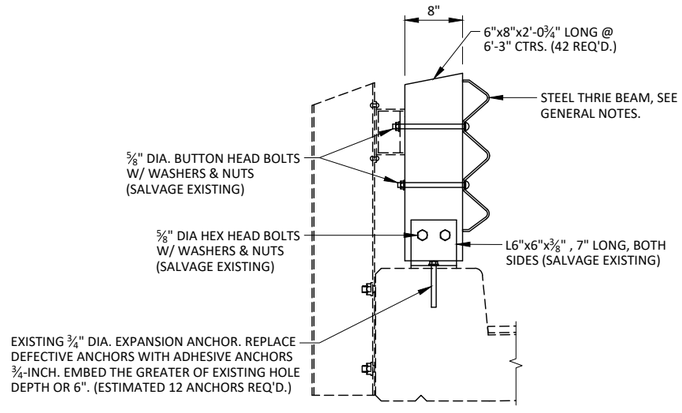
STEEL THRIE BEAM SHALL BE SALVAGED AND RE-INSTALLED ON NEW TREATED TIMBER BLOCKING. APPROXIMATELY 5 PIECES SHALL BE SALVAGED FROM STRUCTURE B-12-7 TO REPLACE DAMAGED PIECES ON B-12-6. PAYMENT FOR SALVAGING STEEL THRIE BEAM AND ALL TIMBER POST ATTACHMENT HARDWARE, AND REINSTALLING THRIE BEAM ON NEW TIMBER BLOCKING WILL BE PAID FOR AS "SALVAGED RAIL". PROVIDING AND INSTALLING NEW TIMBER BLOCKING WILL BE PAID FOR UNDER THE ITEM "REPLACING GUARDRAIL POSTS AND BLOCKS". REPLACEMENT OF DEFECTIVE ANCHORS WITH ADHESIVE ANCHORS WILL BE PAID FOR UNDER THE ITEM "ADHESIVE ANCHORS 3/4-INCH".

RIPRAP HEAVY SHALL BE ADDED TO THE EXISTING RIPRAP AS DIRECTED BY THE ENGINEER. INTENT IS FILL IN ALL GAPS IN EXISTING RIPRAP. RIPRAP TO BE ADDED ABOVE WATER LINE ONLY.



CURB REPAIR DETAIL

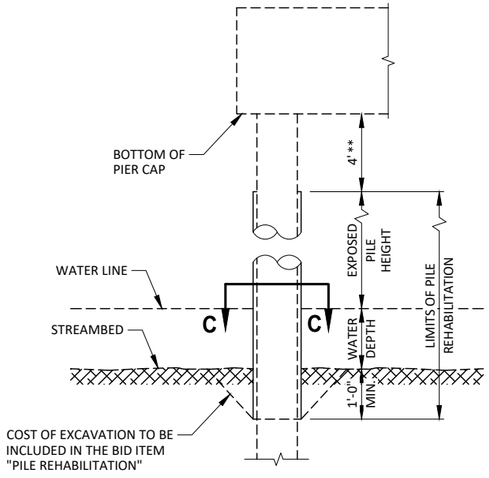
AS DIRECTED BY ENGINEER IN THE FIELD



RAIL DETAIL

PIER DETAIL TABLE

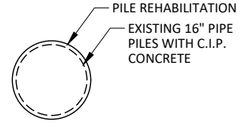
LOCATION	APPROX. VERT. CLEARANCE (FT)	APPROX. WATER DEPTH TO STREAMBED (FT)	EXCAVATION DEPTH (FT)	APPROX. REHABILITATION HEIGHT (FT)	NUMBER OF PILES	APPROX. TOTAL HEIGHT (FT)	APPROX. REPAIR AREA (SF)
PIER 1	10.5	13.5	1	17.9	8	139.2	590
PIER 2	10.5	7.1	1	11.0	8	88.0	370



**SPOT CLEAN AND PAINT PILES IN THIS ZONE.

PILE REHABILITATION DETAILS

SEE SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.
EXTERIOR PILES ON EACH BENT ARE BATTERED.



SECTION C-C

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	W. ABUT.	PIER 1	PIER 2	E. ABUT.	SUPER	TOTALS
475.0100	SEAL COAT	CY	--	--	--	--	0.3	0.3
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	--	--	--	21	21
502.4106	ADHESIVE ANCHORS ¾-INCH	EA	--	--	--	--	12	12
509.0301	PREPARATION DECKS TYPE 1	SY	--	--	--	--	21	21
509.0302	PREPARATION DECKS TYPE 2	SY	--	--	--	--	5	5
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	--	--	--	--	313	313
509.1500	CONCRETE SURFACE REPAIR	SF	39	--	--	6	18	63
509.2000	FULL DEPTH DECK REPAIR	CY	--	--	--	--	--	1
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	--	--	--	--	2.5	2.5
517.3000.S	STRUCTURE OVERCOATING CLEANING & PRIMING B-12-6	LS	--	--	--	--	--	1
517.4000.S	CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-12-6	LS	--	--	--	--	--	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EA	--	--	--	--	--	1
606.0300	RIPRAP HEAVY	CY	10	--	--	--	--	10
614.0920	SALVAGED RAIL	LF	--	--	--	--	250	250
614.0950	REPLACING GUARDRAIL POSTS AND BLOCKS	EACH	--	--	--	--	42	42
SPV.0060.03	STRIP SEAL GLAND REPLACEMENT	EACH	--	--	--	--	--	2
SPV.0165.03	PILE REHABILITATION	SF	--	590	370	--	--	960

NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-6

DRAWN BY TJR | PLANS CK'D. PTB

CROSS SECTION AND QUANTITIES

SHEET 2 OF 3

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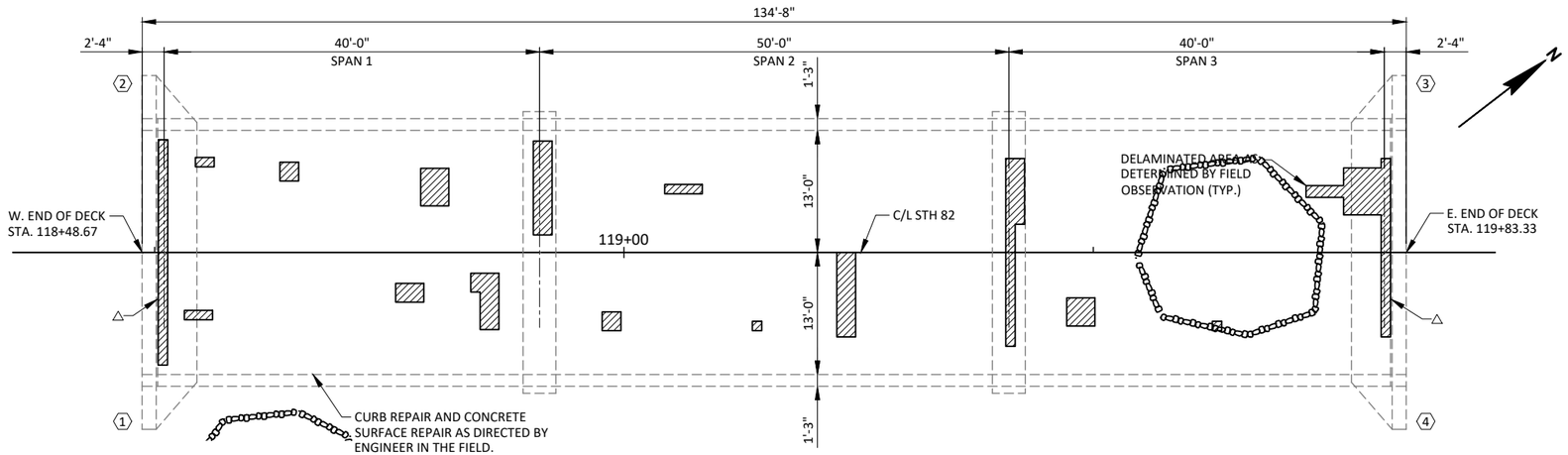
8

STATE PROJECT NUMBER
5170-05-61



LEGEND

△ REMOVE AND REPLACE NEOPRENE STRIP SEAL (GLAND ONLY).

DECK REPAIR OUTLINE

PROPOSED REPAIR AREAS

FIELD OBSERVATION SUMMARY	STRUCTURE NO. B-12-6			LEGEND
ITEM	UNIT	QUANTITY	%	▨ DECK PREPARATION AREA
TOTAL AREA	SY	389	100	
DELAMINATED AREA	SY	21	5.4	
PREPARATION DECKS TYPE 1	SY	21	5.4	
PREPARATION DECKS TYPE 2	SY	5	1.4	

NOTES:

AREAS OF DECK PREPARATION TYPE 2 ARE ESTIMATED.

DECK DELAMINATION AREAS AND DECK PREPARATION AREAS SHOWN ARE FOR REFERENCE ONLY. ENGINEER TO VERIFY REPAIR AREAS. DECK REPAIRS SHALL BE MADE ONLY AS DIRECTED BY ENGINEER IN THE FIELD.

MATCH TOP OF EXISTING CONCRETE OVERLAY WITH CONCRETE PATCH. PLACE SEAL COAT OVER PATCH TO MATCH EXISTING SURFACE.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-6

DRAWN BY TJR | PLANS CK'D. PTB

DECK REPAIR

SHEET 3 OF 3

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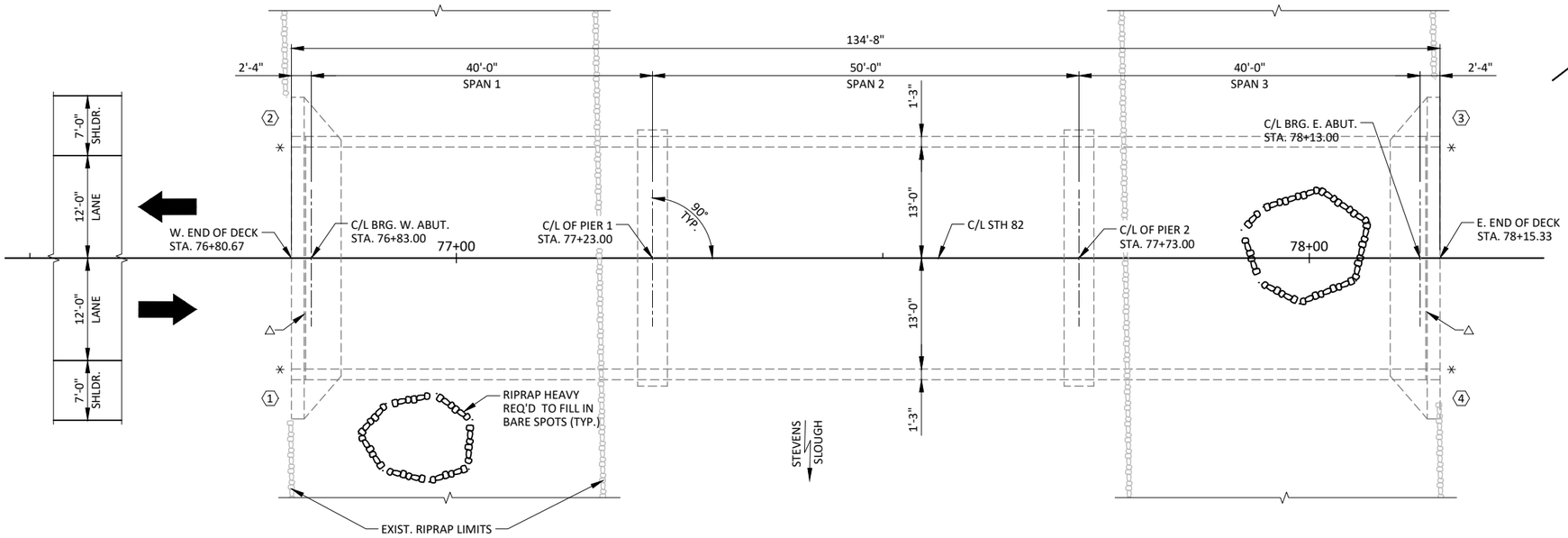
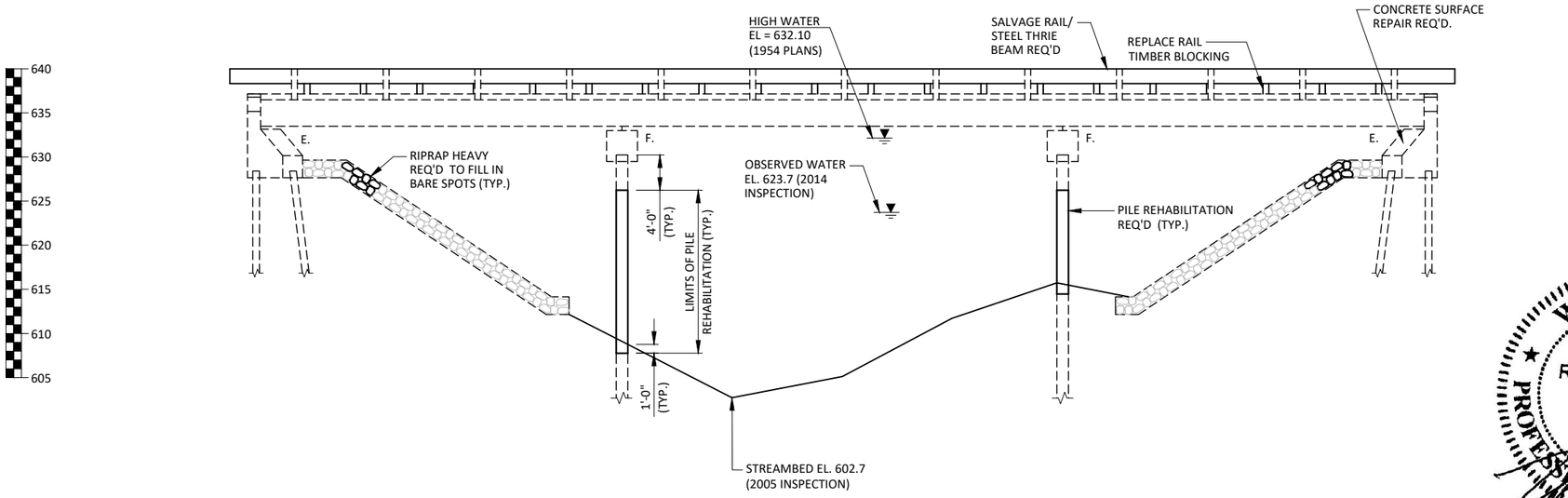


PLAN B-12-7

(THREE-SPAN STEEL DECK GIRDER STRUCTURE)



ELEVATION

(NORMAL TO STEVENS SLOUGH)

STATE PROJECT NUMBER

5170-05-61

DESIGN DATA

LIVE LOAD:

DESIGN LOADING	H20
INVENTORY RATING	HS 16
OPERATING RATING	HS 28
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	210 KIPS

RATINGS TAKEN FROM HSI 6/18/2018.

MATERIAL PROPERTIES:

CONCRETE MASONRY, DECK PATCHING	f'c = 4,000 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 P.S.I.

TRAFFIC DATA

A.D.T. (2019)	2,990
A.D.T. (2039)	3,200
DESIGN SPEED	60 M.P.H.

LIST OF DRAWINGS

GENERAL PLAN	1.
CROSS SECTION AND QUANTITIES	2.
DECK REPAIR	3.

LEGEND

△ REMOVE AND REPLACE STRIP SEAL GLAND WITH A NEW 4-INCH GLAND.

✳ THRIE BEAM TRANSITION - SEE ROADWAY PLANS

(X) INDICATES WING NUMBER

WISCONSIN
THOMAS J. ROMENESKO
E-26318
MADISON
WI
PROFESSIONAL ENGINEER
3/4/2019

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
OFFICE: (608) 588-7484
www.JewellAssoc.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 03/05/19
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-12-7

STH 82 OVER STEVENS SLOUGH

COUNTY	TOWN/~~CITY/VILLAGE~~
CRAWFORD	FREEMAN

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
TJR	PTB	TJR	PTB

DESIGN CONSULTANT
TOM ROMENESKO, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

GENERAL PLAN

SHEET 1 OF 3

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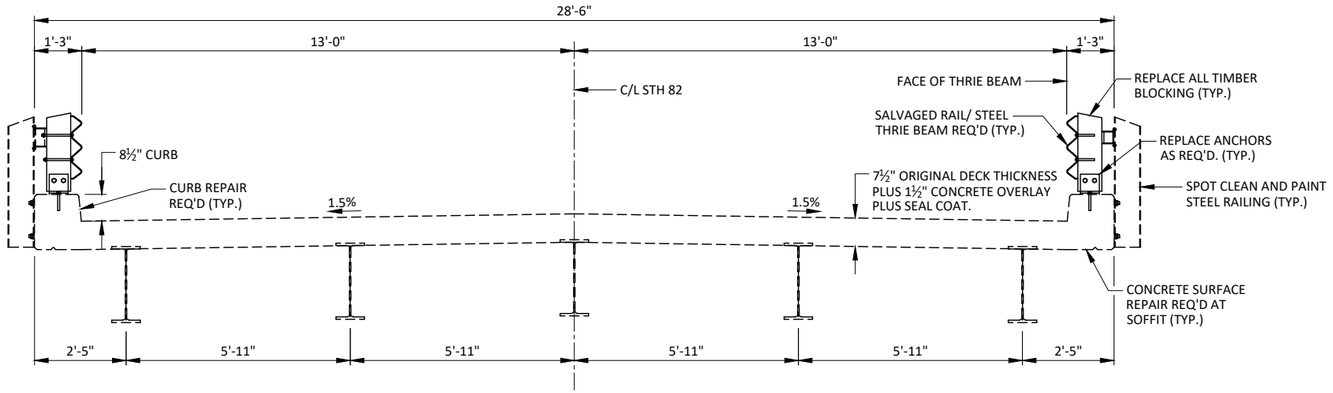
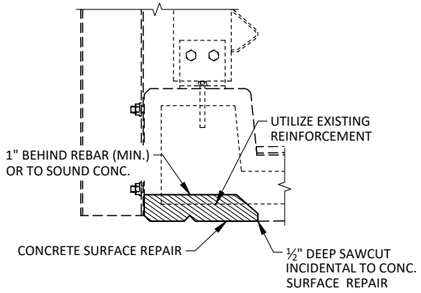
STATE PROJECT NUMBER

5170-05-61



CROSS SECTION THROUGH ROADWAY

(LOOKING EAST)



CONCRETE SURFACE REPAIR DETAIL - AT SOFFIT

AS DIRECTED BY ENGINEER IN THE FIELD

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS, INSPECTION REPORTS, AND FIELD SURVEY.

PROJECT ID 5170-05-61 INCLUDES REHABILITATION OF DETERIORATED 16" DIA. CAST -IN-PLACE PILING IN THE PILE BENTS AND MISCELLANEOUS CONCRETE SURFACE REPAIRS. SEE ROADWAY PLANS FOR EROSION CONTROL REQUIREMENTS AROUND PILE EXCAVATION.

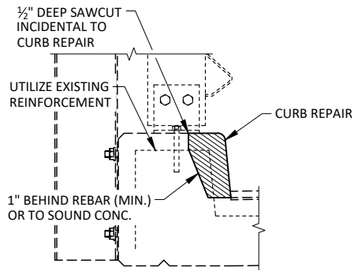
UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

CONCRETE SURFACE REPAIR IS LOCATED AT ABUTMENTS AND DECK OVERHANG. AREAS PROVIDED ARE APPROXIMATE. LOCATIONS AND EXTENTS SHALL BE DETERMINED BY THE FIELD ENGINEER.

THE COLOR OF THE FINAL COAT OF PAINT ON BEARINGS, STEEL RAILING, GIRDERS, AND EXPOSED TOP OF PILE BENTS SHALL BE FEDERAL STANDARD COLOR NO. 26293 (LIGHT GRAY).

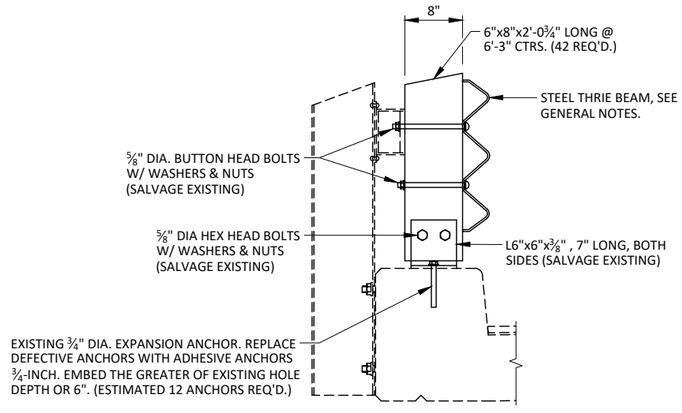
REMOVE AND REPLACE ALL STEEL THRIE BEAM AND INSTALL ON NEW TREATED TIMBER BLOCKING. SALVAGE BEST PIECES TO RE-USE ON STRUCTURE B-12-6 (ESTIMATED 5 PIECES REQUIRED).

RIPRAP HEAVY SHALL BE ADDED TO THE EXISTING RIPRAP AS DIRECTED BY THE ENGINEER. INTENT IS FILL IN ALL GAPS IN EXISTING RIPRAP. RIPRAP TO BE ADDED ABOVE WATER LINE ONLY.



CURB REPAIR DETAIL

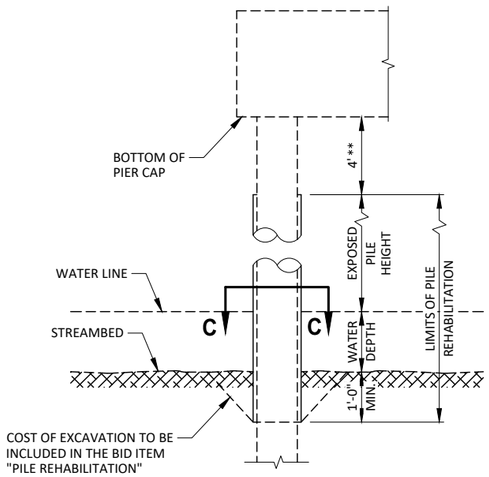
AS DIRECTED BY ENGINEER IN THE FIELD



RAIL DETAIL

PIER DETAIL TABLE

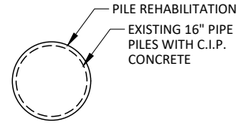
LOCATION	APPROX. VERT. CLEARANCE (FT)	APPROX. WATER DEPTH TO STREAMBED (FT)	EXCAVATION DEPTH (FT)	APPROX. REHABILITATION HEIGHT (FT)	NUMBER OF PILES	APPROX. TOTAL HEIGHT (FT)	APPROX. REPAIR AREA (SF)
PIER 1	10.5	13.8	1	17.7	8	141.6	600
PIER 2	10.5	7.1	1	11.0	8	88.0	370



**SPOT CLEAN AND PAINT PILES IN THIS ZONE.

PILE REHABILITATION DETAILS

SEE SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.
EXTERIOR PILES ON EACH BENT ARE BATTERED.



SECTION C-C

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	W. ABUT.	PIER 1	PIER 2	E. ABUT.	SUPER	TOTALS
475.0100	SEAL COAT	C.Y.	--	--	--	--	0.5	0.5
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	--	--	--	65	65
502.4106	ADHESIVE ANCHORS ¾-INCH	EACH	--	--	--	--	12	12
509.0301	PREPARATION DECKS TYPE 1	SY	--	--	--	--	35	35
509.0302	PREPARATION DECKS TYPE 2	SY	--	--	--	--	9	9
509.0310.S	SAWING PAVEMENT DECK PREPARATION AREAS	LF	--	--	--	--	307	307
509.1200	CURB REPAIR	LF	--	--	--	--	15	15
509.1500	CONCRETE SURFACE REPAIR	SF	--	--	--	--	6	9
509.2000	FULL DEPTH DECK REPAIR	SY	--	--	--	3	--	1
509.2100.S	CONCRETE MASONRY DECK REPAIR	CY	--	--	--	--	4.5	4.5
517.3000.S	STRUCTURE OVERCOATING CLEANING AND PRIMING B-12-7	LS	--	--	--	--	--	1
517.4000.S	CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-12-7	LS	--	--	--	--	--	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	--	--	--	--	--	1
606.0300	RIPRAP HEAVY	CY	10	--	--	10	--	20
614.0230	STEEL THRIE BEAM	LF	--	--	--	--	250	250
614.0920	SALVAGED RAIL	LF	--	--	--	--	250	250
614.0950	REPLACING GUARDRAIL POSTS AND BLOCKS	EACH	--	--	--	--	42	42
SPV.0060.03	STRIP SEAL GLAND REPLACEMENT	EACH	--	--	--	--	2	2
SPV.0165.03	PILE REHABILITATION	SF	--	600	370	--	--	970

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-7

DRAWN BY TJR | PLANS CK'D. PTB

CROSS SECTION AND QUANTITIES

SHEET 2 OF 3

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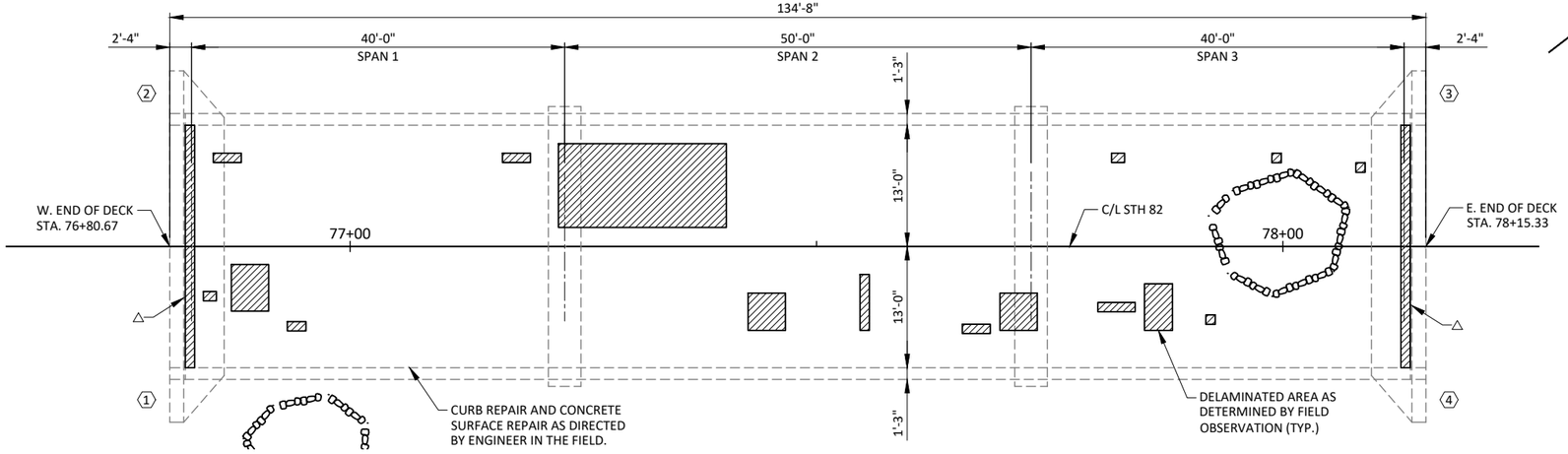
STATE PROJECT NUMBER
5170-05-61



DECK REPAIR OUTLINE

LEGEND

△ REMOVE AND REPLACE NEOPRENE STRIP SEAL (GLAND ONLY).

PROPOSED REPAIR AREAS

FIELD OBSERVATION SUMMARY	STRUCTURE NO. B-12-7			LEGEND
ITEM	UNIT	QUANTITY	%	DECK PREPARATION AREA
TOTAL AREA	SY	389	100	
DELAMINATED AREA	SY	35	9.0	
PREPARATION DECKS TYPE 1	SY	35	9.0	
PREPARATION DECKS TYPE 2	SY	9	2.3	

NOTES:

AREAS OF DECK PREPARATION TYPE 2 ARE ESTIMATED.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-7

DRAWN BY TJR | PLANS CK'D. PTB

DECK REPAIR

SHEET 3 OF 3

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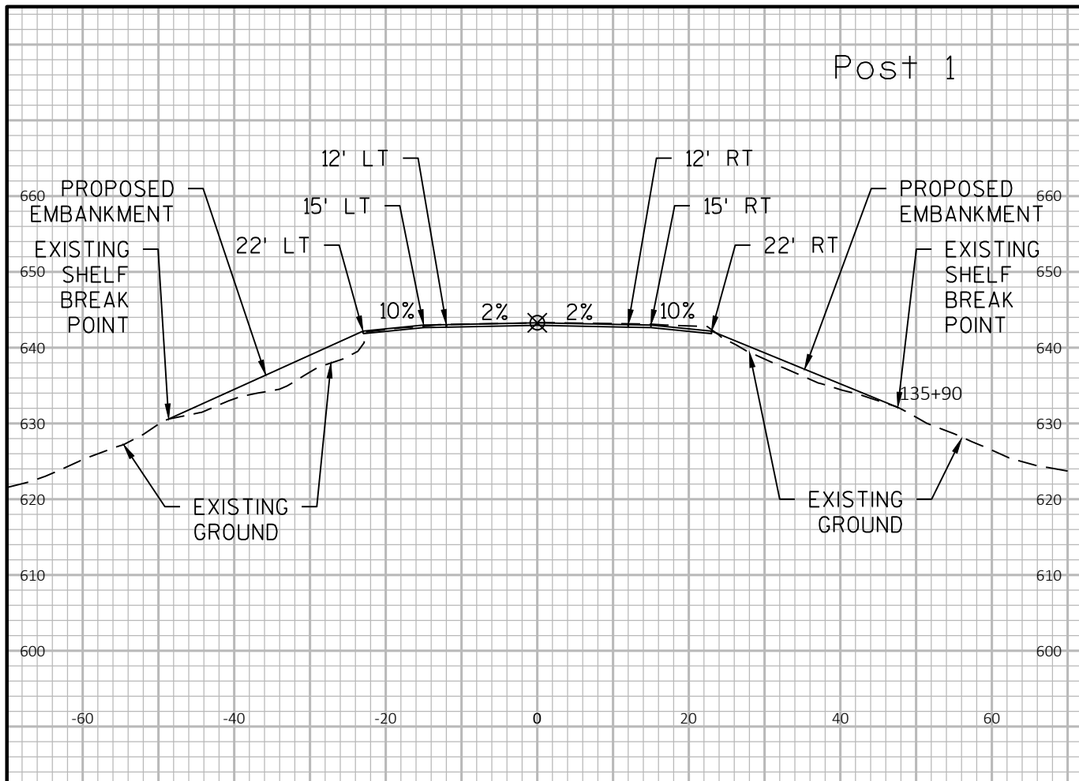

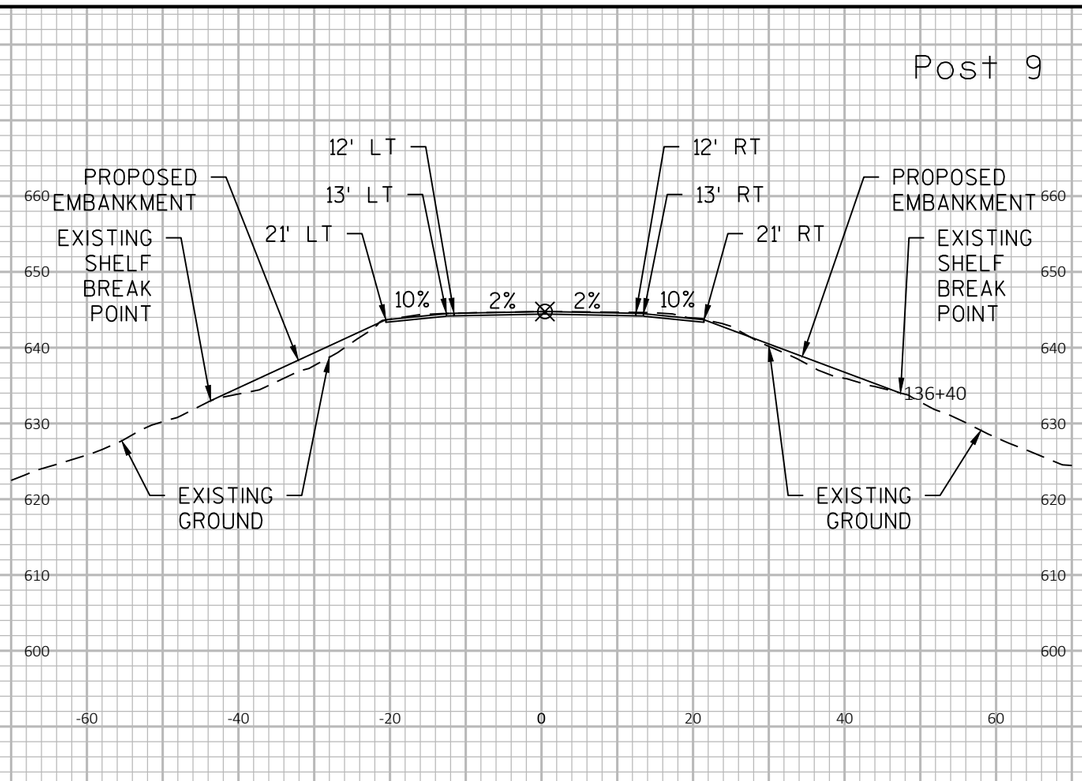

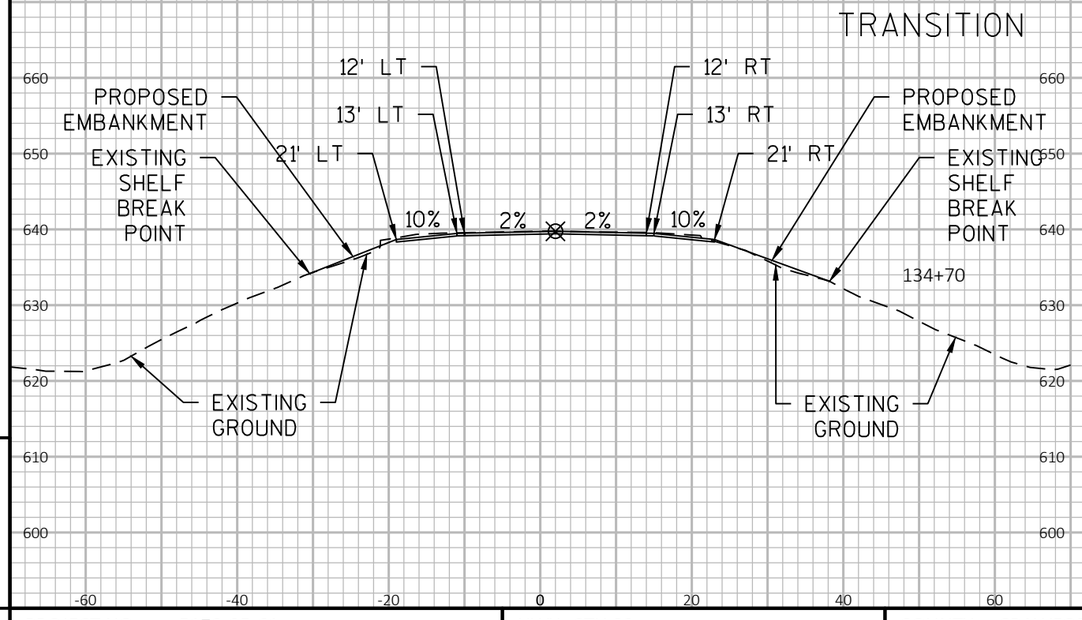

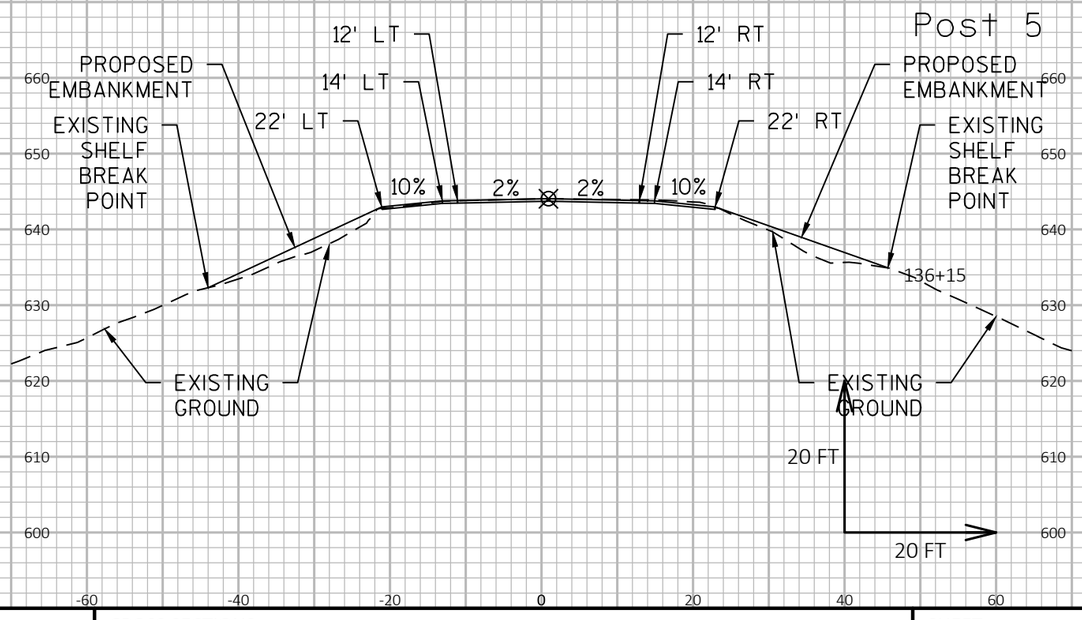

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PROJECT NO: 5170-05-61	HWY: STH 82	COUNTY: CRAWFORD	CROSS SECTIONS:	SHEET 69	E

Wisconsin Department of Transportation

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through innovation and exceptional service.

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