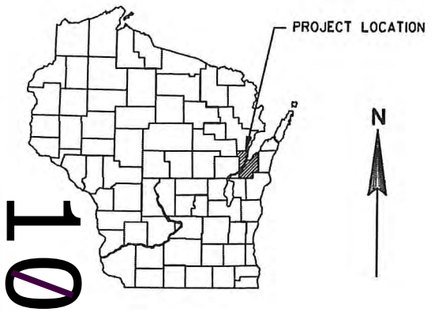
NEL SEP 2015

PROJECT ID: 9265-07-71
WITH: 4609-09-71

COUNTY: BROWN

ORDER OF SHEETS

TOTAL SHEETS = 54



10

DESIGN DESIGNATION

A.A.D.T. 2016	=	2,160
A.A.D.T. 2036	=	2,350
D.H.V.	=	270
D.D.	=	59/41
T.	=	3.3%
DESIGN SPEED	=	60 MPH
ESALS	=	175,200

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE (PL + 58.1)
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- WETLANDS
- 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

V HOBART, CTH GE

DUTCHMANS CREEK BRIDGE B-5-410

CTH GE

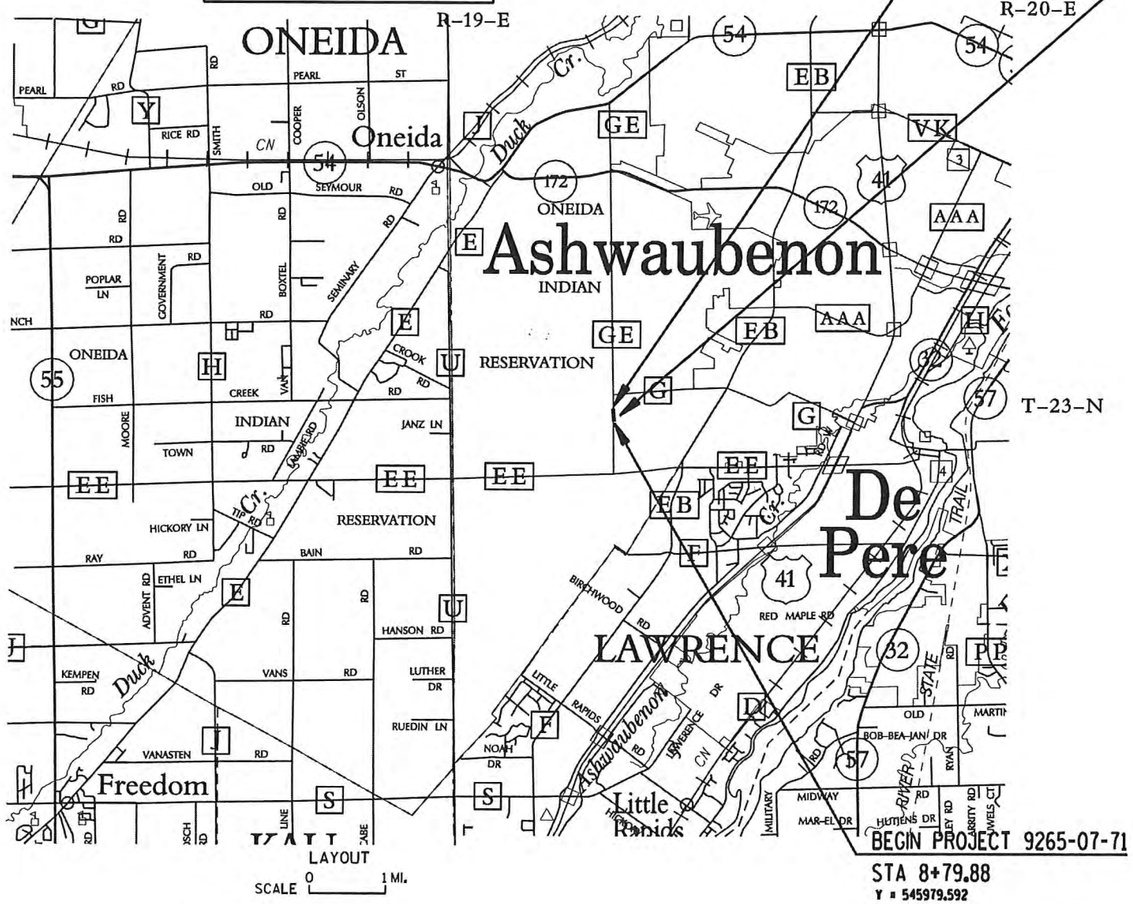
BROWN COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9265-07-71	WISC 2015491	1

END PROJECT 9265-07-71
STA 11+20.47

STRUCTURE B-5-410

STATE PROJECT NUMBER
9265-07-71



LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.046 MI.

BEGIN PROJECT 9265-07-71
STA 8+79.88
Y = 545979.592
X = 64494.551

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS) BROWN COUNTY.

ACCEPTED FOR BROWN COUNTY
DATE: 4/23/15 (Signature)
SENIOR CIVIL ENGR. TITLE

ORIGINAL PLANS PREPARED BY
OMNNI ASSOCIATES

WISCONSIN
JUDITH ANN WILSON
E-22940
NEENAH, WI
PROFESSIONAL ENGINEER
4/22/15

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	OMNNI ASSOCIATES
Designer	OMNNI ASSOCIATES
Management Consultant	SEH INC.

APPROVED FOR THE DEPARTMENT
DATE: 4/23/15 (Management Consultant Signature)

E

GENERAL NOTES

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

FILL AS SHOWN ON THE PLANS PERTAINS TO EMBANKMENTS CONSTRUCTED FROM COMMON EXCAVATION. THE ALLOWANCE USED FOR EXPANDING THE FILLS TO COMPUTE THE VOLUME OF MATERIAL REQUIRED IS 30 PERCENT. ALL FILL VOLUMES SHOWN ARE THE ACTUAL VOLUMES.

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

ALL DISTURBED AREAS, NOT OTHERWISE SURFACED ARE TO BE TOPSOILED, FERTILIZED, SEEDED AND MULCHED.

SEED MIXTURE NO. 20 SHALL BE USED ON ALL DISTURBED AREAS.

FINISHING ITEMS SHALL BE PLACED ON DISTURBED AREAS AND 5 FEET BEYOND THE SLOPE INTERCEPT WITH THE ORIGINAL GROUND AS SHOWN ON THE CROSS SECTIONS.

SILT FENCE AND TEMPORARY DITCH CHECKS SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO STRUCTURE REMOVAL.

THE EXACT LOCATIONS OF ALL EROSION CONTROL ITEMS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

PLAN ELEVATIONS = USGS DATUM (NAVD 88)

SIGNS WHICH ARE TO BE SALVAGED OR MOVED SHALL BE STORED AND PROTECTED BY THE CONTRACTOR TO PREVENT DAMAGE OR THEFT. THE COST FOR PROTECTING SIGNS SHALL BE INCIDENTAL TO MOVING SIGNS.

EROSION CONTROL NOTES

RUNOFF COEFFICIENTS FOR THIS PROJECT: EXISTING PAVEMENT 0.95, EXISTING SLOPES 0.30, NEW PAVEMENT 0.95, NEW SLOPES 0.30.

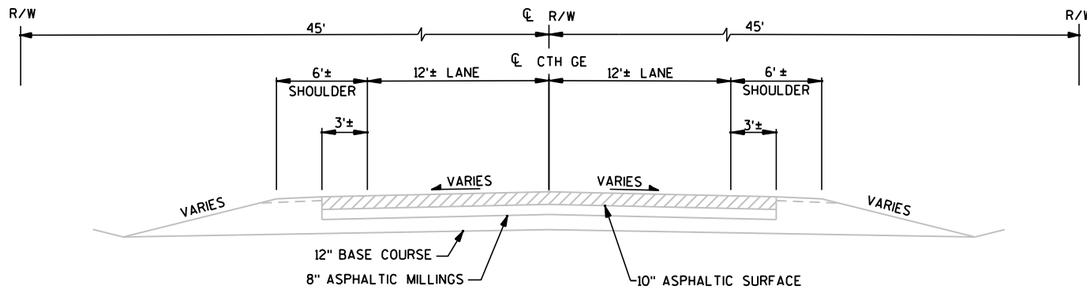
TOTAL PROJECT AREA = 1.00 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.75 ACRES

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

CONTACTS

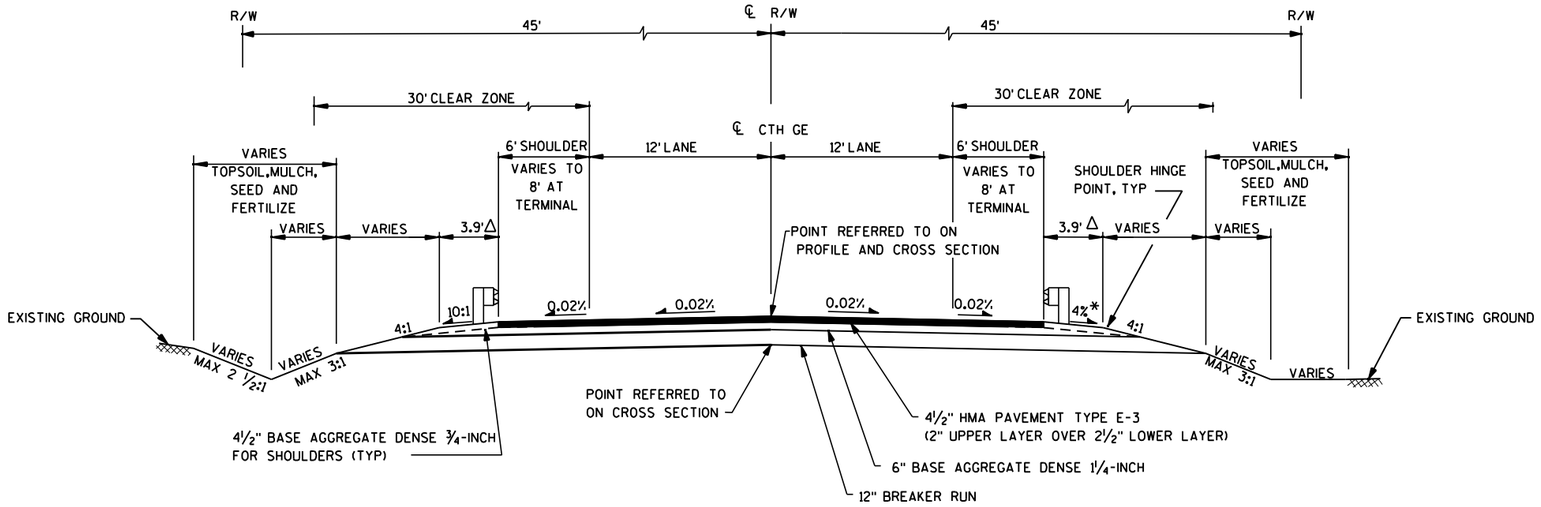
ELECTRIC & GAS	WISCONSIN PUBLIC SERVICE CORPORATION 700 NORTH ADAMS STREET, PO BOX 19001 GREEN BAY, WI 54307-9001 ATTN: LORI BUTRY TELEPHONE: (920) 433-1703 EMAIL: LAButry@integrysgroup.com LOCAL CONTACT (ELECTRIC): RANDY STEIER TELEPHONE: (920) 617-5167 EMAIL: RDSteier@wisconsinpublicservice.com
TELEPHONE	AT & T 221 W. WASHINGTON ST. FLOOR 4 APPLETON, WI 54911 ATTN: JOE KASSAB TELEPHONE: (920) 735-3206 EMAIL: jk572k@att.com
CENTRAL BROWN COUNTY WATER AUTHORITY	ROBERT MICHAELSON, MANITOWOC PUBLIC UTILTIES 1303 SOUTH 8TH STREET MANITOWOC, WI 54220 TELEPHONE: 920-686-4354 EMAIL: rmichaelson@mpu.org
COMMUNICATIONS	NSIGHT; ATTN: RICK VINCENT 450 SECURITY BLVD. GREEN BAY, WI 54313 TELEPHONE: 920-617-7316 EMAIL: rick.vincent@nsight.com ADDITIONAL CONTACT: DENNIS LAFAVE TELEPHONE: 920-619-9774 EMAIL: dlafave@mi-tech.us
BROWN COUNTY	PAUL FONTECCHIO 2198 GLENDALE AVENUE GREEN BAY, WI 54303 TELEPHONE: (920) 662-2170 EMAIL: fontecchio_pa@co.brown.wi.us
VILLAGE OF HOBART	JERRY LANCELLE 2990 S. PINE TREE ROAD HOBART, WI 54155 TELEPHONE: (920) 869-3807 EMAIL: jerry@hobart-wi.org
DNR LIAISON	JIM DOPERALSKI DEPARTMENT OF NATURAL RESOURCES 2984 SHAWANO AVENUE GREEN BAY, WI 54307-0448 TELEPHONE: (920) 662-5119 EMAIL: james.doperalski@wisconsin.gov

2



TYPICAL EXISTING SECTION

STA 8+79.88 TO STA 11+20.47

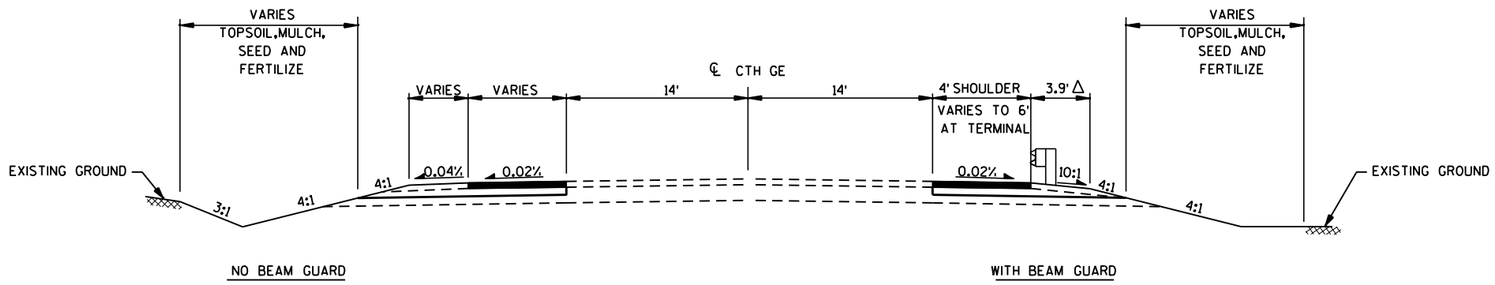


TYPICAL FINISHED SECTION

STA 8+79.88 TO STA 11+20.47

* USE 10:1 SLOPE WITHIN LIMITS OF ENERGY ABSORBING TERMINAL

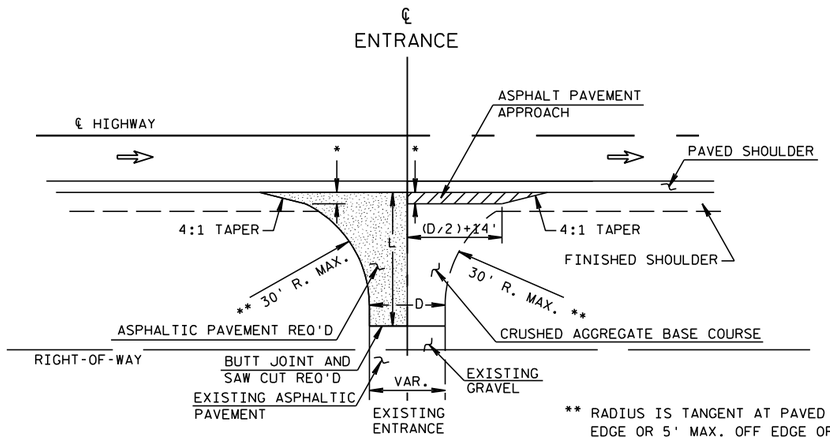
Δ INCREASE TO 6' AT POST NO. 1 OF ENERGY ABSORBING TERMINAL



FINISHED TYPICAL SECTION

STA 7+80 TO STA 8+79.88
STA 11+20.47 TO STA 11+90

PROJECT NO: 9265-07-71	HWY: CTH GE	COUNTY: BROWN	TYPICAL SECTIONS	SHEET 3	E	2.2



L=VARIABLE. EXACT LENGTH TO BE DETERMINED IN THE FIELD BY THE ENGINEER. BLEND BACK ON THE ENTRANCE FAR ENOUGH TO GET A SMOOTH PROFILE.

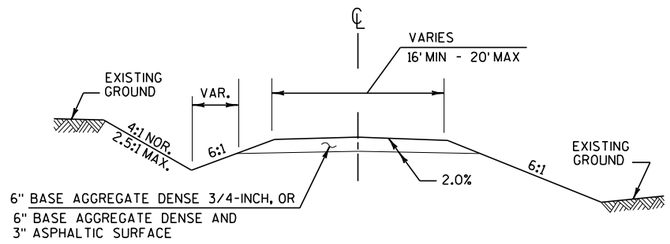
D=DRIVEWAY WIDTH
SEE PLAN AND PROFILE

** RADIUS IS TANGENT AT PAVED SHOULDER EDGE OR 5' MAX. OFF EDGE OF MAIN LINE PAVEMENT WHICH EVER IS LESS.

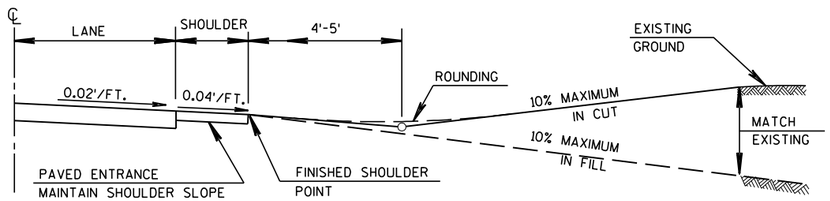
* 3' MAX. OR TO FINISHED SHOULDER WHICH EVER IS LESS.

PLAN VIEW

ONLY THE BASE AGGREGATE DENSE DRIVEWAY USED IN THIS CONTRACT

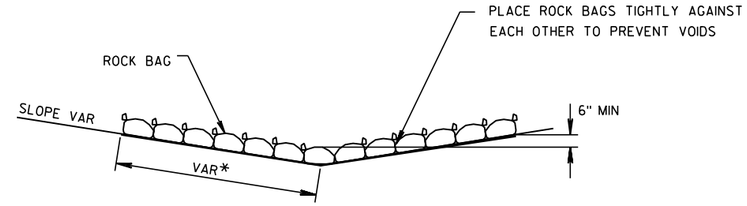


TYPICAL CROSS SECTION

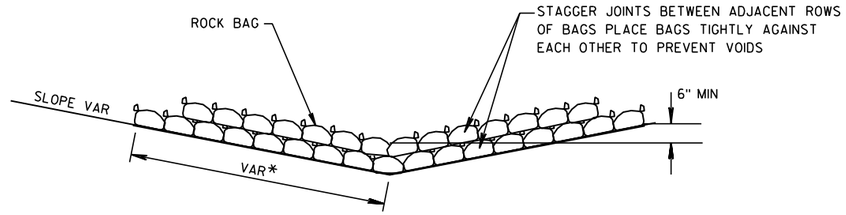


PROFILE VIEW

RURAL DRIVEWAY INTERSECTION DETAIL

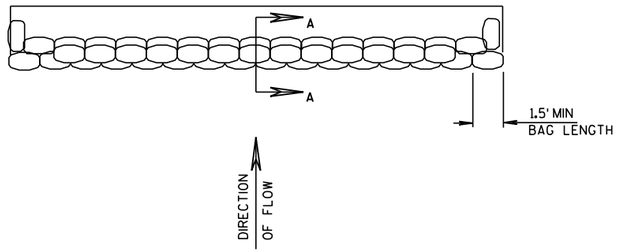


SIDE VIEW (SINGLE LAYER)

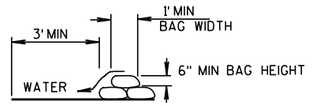


* LENGTH AND NUMBER OF BAGS MAY VARY DEPENDING ON DESIRED DEPTH OF WATER POOL

SIDE VIEW (MULTIPLE LAYER)

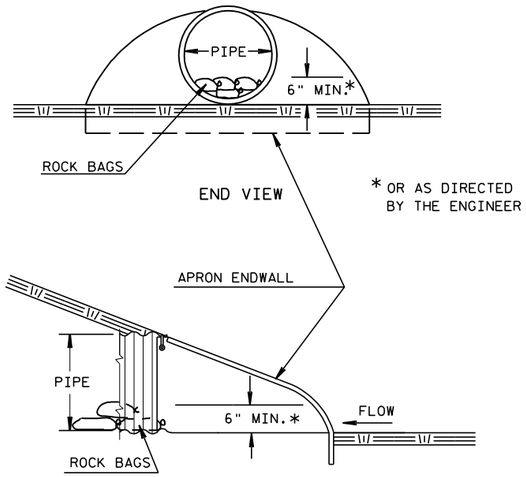


TOP VIEW (MULTIPLE LAYER)



SECTION A-A

ROCK BAGS USED FOR DITCH CHECKS DETAIL



CULVERT PIPE CHECKS

PROJECT NO: 9265-07-71	HWY: CTH GE	COUNTY: BROWN	CONSTRUCTION DETAILS	SHEET 5	E	2.4

FILE NAME : F:\TR\JOBS\E2058A12\Sheets\Plan\021002_cd.dgn PLOT DATE : 2/11/2015 10:12:41 AM PLOT BY : OMNNI - perryd PLOT NAME : PLOT SCALE : 10.0000 sf / IN.
WISDOT/CADDS SHEET 42

2

N

DUTCHMAN'S CREEK

SLOPE INTERCEPT

EXIST R/W

SLOPE INTERCEPT

EXIST R/W

7+00 8+00 CTH GE 9+00 SECTION LINE 10+00 11+00 12+00

CTH GE R/L

ASPH

EXIST R/W

SLOPE INTERCEPT

SLOPE INTERCEPT

EXIST R/W

LEGEND

- CULVERT PIPE CHECK
- ROCK BAGS FOR DITCH CHECK
- SILT FENCE
- TURBIDITY BARRIER

PROJECT NO: 9265-07-71	HWY: CTH GE	COUNTY: BROWN	EROSION CONTROL	SHEET 6	E	2.5

FILE NAME : F:\TR\JOBS\E2058A12\Sheets\Plan\022001_ec.DGN PLOT DATE : 2/11/2015 10:19:07 AM PLOT BY : OMNNI- perryd PLOT NAME : PLOT SCALE : 40.0000 sf / IN.

WISDOT/CADDS SHEET 42

DATE 23JUN15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9265-07-71 QUANTITY
0010	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0020	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000
0030	205.0100	Excavation Common	CY	600.000	600.000
0040	206.1000	Excavation for Structures Bridges (structure) 01. B-5-410	LS	1.000	1.000
0050	208.0100	Borrow	CY	180.000	180.000
0060	210.0100	Backfill Structure	CY	136.000	136.000
0070	213.0100	Finishing Roadway (project) 01. 9265-07-71	EACH	1.000	1.000
0080	305.0110	Base Aggregate Dense 3/4-Inch	TON	170.000	170.000
0090	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	600.000	600.000
0100	311.0110	Breaker Run	TON	800.000	800.000
0110	455.0105	Asphaltic Material PG58-28	TON	12.000	12.000
0120	455.0605	Tack Coat	GAL	60.000	60.000
0130	460.1103	HMA Pavement Type E-3	TON	210.000	210.000
0140	460.2000	Incentive Density HMA Pavement	DOL	150.000	150.000
0150	502.0100	Concrete Masonry Bridges	CY	158.000	158.000
0160	502.3200	Protective Surface Treatment	SY	170.000	170.000
0170	505.0405	Bar Steel Reinforcement HS Bridges	LB	4,240.000	4,240.000
0180	505.0605	Bar Steel Reinforcement HS Coated Bridges	LB	18,000.000	18,000.000
0190	513.4060	Railing Tubular Type M (structure) 01. B-5-410	LS	1.000	1.000
0200	516.0500	Rubberized Membrane Waterproofing	SY	20.000	20.000
0210	520.0118	Culvert Pipe Class III 18-Inch	LF	38.000	38.000
0220	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	2.000	2.000
0230	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	500.000	500.000
0240	606.0300	Riprap Heavy	CY	130.000	130.000
0250	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	140.000	140.000
0260	614.2300	MGS Guardrail 3	LF	125.000	125.000
0270	614.2500	MGS Thrie Beam Transition	LF	158.000	158.000
0280	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0290	619.1000	Mobilization	EACH	1.000	1.000
0300	624.0100	Water	MGAL	5.000	5.000
0310	625.0100	Topsoil **P**	SY	1,750.000	1,750.000
0320	627.0200	Mulching	SY	1,750.000	1,750.000
0330	628.1504	Silt Fence	LF	380.000	380.000
0340	628.1520	Silt Fence Maintenance	LF	380.000	380.000
0350	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0360	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0370	628.6005	Turbidity Barriers	SY	200.000	200.000
0380	628.7555	Culvert Pipe Checks	EACH	4.000	4.000
0390	628.7570	Rock Bags	EACH	80.000	80.000
0400	629.0210	Fertilizer Type B	CWT	1.000	1.000
0410	630.0120	Seeding Mixture No. 20 **P**	LB	46.000	46.000
0420	630.0200	Seeding Temporary	LB	10.000	10.000
0430	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	4.000	4.000
0440	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	1.000	1.000
0450	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0460	638.2102	Moving Signs Type II	EACH	2.000	2.000
0470	638.2602	Removing Signs Type II	EACH	6.000	6.000
0480	638.3000	Removing Small Sign Supports	EACH	2.000	2.000
0490	642.5001	Field Office Type B	EACH	1.000	1.000
0500	643.0100	Traffic Control (project) 01. 9265-07-71	EACH	1.000	1.000

3

DATE 23JUN15 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9265-07-71 QUANTITY
0510	643.0300	Traffic Control Drums	DAY	100.000	100.000
0520	643.0420	Traffic Control Barricades Type III	DAY	1,200.000	1,200.000
0530	643.0705	Traffic Control Warning Lights Type A	DAY	1,680.000	1,680.000
0540	643.0900	Traffic Control Signs	DAY	960.000	960.000
0550	645.0120	Geotextile Fabric Type HR	SY	178.000	178.000
0560	646.0103	Pavement Marking Paint 4-Inch	LF	500.000	500.000
0570	650.4500	Construction Staking Subgrade	LF	430.000	430.000
0580	650.5000	Construction Staking Base	LF	430.000	430.000
0590	650.6500	Construction Staking Structure Layout (structure) 01. B-5-410	LS	1.000	1.000
0600	650.9910	Construction Staking Supplemental Control (project) 01. 9265-07-71	LS	1.000	1.000
0610	650.9920	Construction Staking Slope Stakes	LF	430.000	430.000
0620	690.0150	Sawing Asphalt	LF	335.000	335.000
0630	715.0502	Incentive Strength Concrete Structures	DOL	948.000	948.000
0640	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	150.000	150.000
0650	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

REMOVING SMALL PIPE CULVERTS

STATION	DIR	LOCATION	203.0100 EACH	REMARKS
11+62	LT	CTH GE	1	18" CMP
		TOTAL	**1**	

EARTHWORK SUMMARY

DIVISION	FROM/TO STATION	LOCATION	EXCAVATION COMMON 205.0100 (1)		SALVAGED/ UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL	UNEXPANDED FILL	EXPANDED FILL	MASS ORDINATE +/- (14)	WASTE (15)	BORROW 208.0100
			CUT	EBS EXCAVATION				FACTOR 1.30			
DIVISION 1	7+10 - 9+79	CTH GE SOUTH	290	0	92	198	293	381	-183	92	180
	10+15 - 11+90	CTH GE NORTH	310	0	97	213	107	140	73	170	0
DIVISION 1	**TOTALS**		**600**	0	189	411	400	521	-109	262	**180**

1) CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL

14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

15) THIS QUANTITY INCLUDES ASPHALT FROM THE EXISTING ROADWAY AND WAS NOT UTILIZED IN THE PROPOSED EMBANKMENT. IT IS CONSIDERED WASTE MATERIAL AND WILL NEED TO BE PROPERLY DISPOSED OF BY THE CONTRACTOR.

ASPHALTIC ITEMS

STATION TO STATION	LOCATION	455.0105 ASPHALTIC MATERIAL PG 58-28 TON	455.0605 TACK COAT GAL	460.1103 HMA PAVEMENT E-3 TON
7+80 - STRUCTURE *	CTH GE	6	30	100
STRUCTURE - 11+90	CTH GE	6	30	110
	TOTALS	**12**	**60**	**210**

BASE AGGREGATE DENSE AND WATER

STATION TO STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	311.0110 BREAKER RUN TON	624.0100 WATER MGAL
7+80 - STRUCTURE	CTH GE	90	315	390	2.5
STRUCTURE - 11+90**	CTH GE	80	285	410	2.5
	TOTALS	**170**	**600**	**800**	**5**

** INCLUDES DRIVEWAY

CULVERT PIPE AND APRON ENDWALLS

STATION	LOCATION	520.0118 CULVERT PIPE CLASS III 18-INCH LF	THICKNESS STEEL INCHES	THICKNESS ALUMINUM INCHES	INLET ELEVATION	DISCHARGE ELEVATION	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH
11+62, LT	CTH GE	38	0.064	0.060	681.20	679.80	2
	TOTALS	**38**					**2**

STEEL PLATE BEAM GUARD

STATION TO STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
8+29.9 - STRUCTURE, RT	CTH GE	50	39.4	1
8+48.9 - STRUCTURE, LT	CTH GE	25	39.4	1
STRUCTURE - 11+45.5, RT	CTH GE	25	39.4	1
STRUCTURE - 11+39.1, LT	CTH GE	25	39.4	1
	TOTALS	125	157.6	4
	ROUNDED TOTALS	**125**	**158**	**4**

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

EROSION CONTROL ITEMS

STATION TO STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
7+10 - STRUCTURE, RT	CTH GE	40	40	---	---	---	20
7+30 - STRUCTURE, LT	CTH GE	180	180	---	---	---	---
STRUCTURE - 12+00, RT	CTH GE	40	40	---	---	---	20
STRUCTURE - 12+00, LT	CTH GE	40	40	---	---	4	20
UNDISTRIBUTED	CTH GE	80	80	4	2	---	20
	TOTALS	**380**	**380**	**4**	**2**	**4**	**80**

TURBIDITY BARRIER

STATION	LOCATION	628.6005 SY
9+95, S. ABUT	CTH GE	100
10+05, N. ABUT	CTH GE	100
	TOTAL	**200**

LANDSCAPING

STATION TO STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	630.0200 SEEDING TEMPORARY LB	630.0120 SEEDING NO 20 LB	629.0210 FERTILIZER TYPE B CWT
7+10 - STRUCTURE, RT	CTH GE	410	410	---	11	0.3
7+25 - STRUCTURE, LT	CTH GE	490	490	---	13	0.3
STRUCTURE - 12+00, RT	CTH GE	210	210	---	6	0.1
STRUCTURE - 12+00, LT	CTH GE	270	270	---	7	0.2
UNDISTRIBUTED	CTH GE	370	370	10	9	0.1
	TOTALS	**1,750**	**1750**	**10**	**46**	**1.0**

SIGNS REFLECTIVE TYPE II & POSTS WOOD

STATION	LOCATION	CODE	SIGN SIZE HORIZ X VERT IN X IN	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	637.2230 SIGNS TYPE II RELFECTIVE F SF
9+60, LT	CTH GE	W5-52R	12 X 36	1	3
9+65, RT	CTH GE	W5-52L	12 X 36	1	3
10+28, LT	CTH GE	W5-52L	12 X 36	1	3
10+33, RT	CTH GE	W5-52R	12 X 36	1	3
			TOTALS	**4**	**12**

REMOVING SIGNS TYPE II AND REMOVING SMALL SIGN SUPPORTS

STATION	LOCATION	DESCRIPTION	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
9+30, RT	CTH GE	WEIGHT LIMIT	1	1
9+88, LT	CTH GE	OBJECT MARKER	1	---
9+88, RT	CTH GE	OBJECT MARKER	1	---
10+10, LT	CTH GE	OBJECT MARKER	1	---
10+10, RT	CTH GE	OBJECT MARKER	1	---
10+25, LT	CTH GE	WEIGHT LIMIT	1	1
		TOTALS	**6**	**2**

MOVING SIGNS

FROM STATION	LOCATION	TO STATION	FACE DIR.	DESCRIPTION	638.2102 MOVING SIGNS TYPE II EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	REMARKS
20+30 , RT	CTH GE	20+30 , RT	SB	JCT	1	1	---
20+30 , RT	CTH GE	20+30 , RT	SB	COUNTY G	1	---	ON POST WITH JCT
				TOTALS	**2**	**1**	

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

TRAFFIC CONTROL

STAGE / LOCATION	SERVICE PERIOD DAYS	643.0300 DRUMS NO	643.0300 DRUMS DAYS	643.0420 BARRICADES TYPE III NO	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A NO	643.0705 WARNING LIGHTS TYPE A DAYS	643.0900 SIGNS NO	643.0900 SIGNS DAYS
CTH GE BRIDGE CLOSURE	60		0	20	1,200	28	1,680	16	960
UNDISTRIBUTED			100						
PROJECT TOTALS			**100**		**1,200**		**1,680**		**960**

PAVEMENT MARKING PAINT

STATION	LOCATION	646.0103 4-INCH DASHED YELLOW LF	646.0103 4-INCH WHITE EDGE LINE LF
8+00 - 12+00	CTH GE	100	400
	TOTAL	**500**	

CONSTRUCTION STAKING

STATION TO STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	CATEGORY 0020 650.6500 STRUCTURE LAYOUT LS	650.9910 SUPPLEMENTAL CONTROL LS	650.9920 SLOPE STAKES LF
7+10 - STRUCTURE	CTH GE	260	260	---	---	260
STRUCTURE B-5-410	CTH GE	---	---	1	---	---
STRUCTURE - 12+00	CTH GE	170	170	---	---	170
	TOTALS	**430**	**430**	**1**	**1**	**430**

SAWING ASPHALT

STATION	LOCATION	690.0150 SAWING ASPHALT LF
7+80 - 8+80	CTH GE	210
11+20 - 11+90	CTH GE	125
	TOTAL	**335**

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
BM 2		60d NAIL IN PP*2319-24W4, 150' SOUTH OF BRIDGE ON EAST SIDE OF CTH GE	680.76
BM 3	12+21, 43' RT	60d NAIL IN PP*2319-24W3, 225' NORTH OF BRIDGE ON EAST SIDE OF CTH GE	683.64

LEGEND

△ MGS THRIE BEAM TRANSITION
MGS MGS GUARDRAIL 3
EAT MGS GUARDRAIL TERMINAL EAT

BEGIN CONSTRUCTION
STA 7+09.90

BEGIN PROJECT
STA 8+79.88
N = 545979.592
E = 64494.551

END CONSTRUCTION
STA 11+90.00

END PROJECT
STA 11+20.47

EDGE OF WATER
HENDRICKS HOMESTEAD LLC
NSIGHT
REMOVING OLD STRUCTURE P-5-120
CENTRAL BROWN COUNTY WATER AUTHORITY
STA 11+62, 31' LT
38'-18" CMP
2 ENDWALLS REOD
REMOVE EXIST 30' - 18" CMP
SLOPE INTERCEPT
WETLANDS, TYP
EXIST R/W
SECTION LINE
C/L CTH GE
SAWCUT AND MATCH EXIST
ASPH
CTH GE
N 00°41'59" E
1020.00'
53.125' EAT
12.5' MGS
39.40'
25' MGS
AT&T
WPS
BM 2
SLOPE INTERCEPT
DUTCHMANS CREEK
STRUCTURE B-5-410
SHOULDER HINGE POINT, TYP
BM 3
EDGE OF WATER
DEAN J. & SHARON L. PIERRE
BERNARD LINSSEN

YARDAGE SUMMARY
EXCAVATION COMMON = 290 CY
FILL = 290 CY
BORROW = 180 CY

YARDAGE SUMMARY
EXCAVATION COMMON = 310 CY
FILL = 110 CY
WASTE = 170 CY

FINISHED PROFILE ON C/L
EXISTING GROUND
HW 100 EL 682.73
0.43%
0.66%
P-5-120
B-5-410
VPI STA = 8+79.88
VPI EL = 682.20
VPI STA = 10+20.00
VPI EL = 682.80
VPI STA = 11+20.47
VPI EL = 683.46

STRUCTURE B-5-410
SINGLE SPAN CONCRETE SLAB
36.5' BACK TO BACK ABUTMENTS
34' CLEAR ROADWAY
SEE BRIDGE DRAWINGS 1-10

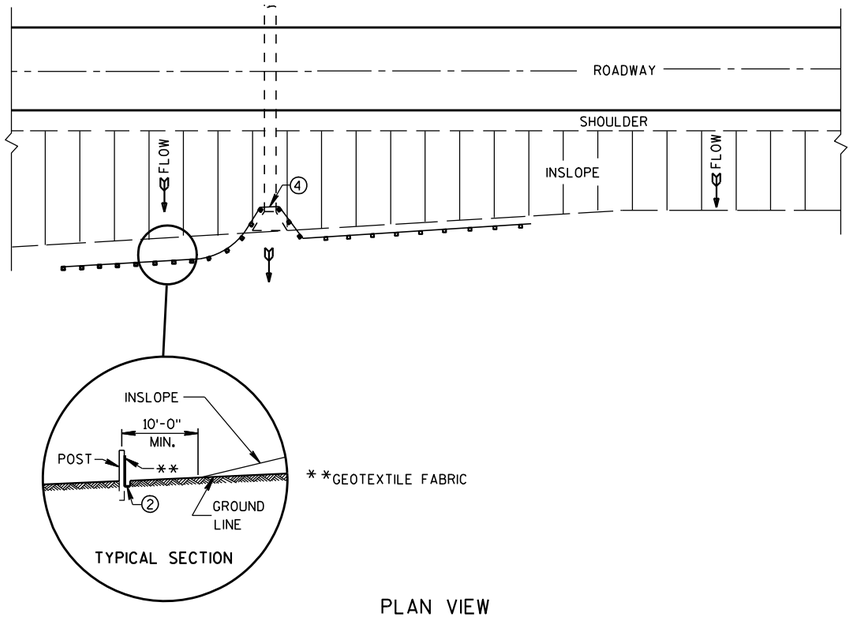
REMOVE STRUCTURE P-5-120
SINGLE SPAN CONCRETE SLAB BRIDGE
26' LONG 36.6' WIDE

PROJECT NO: 9265-07-71	HWY: CTH GE	COUNTY: BROWN	CTH GE	SHEET 12	E

FILE NAME : F:\TR\JOBS\E2058A12\Sheets\Plan\050101_pp.dgn
PLOT DATE : 2/11/2015 10:28:15 AM PLOT BY : OMNNI - perryd PLOT NAME : PLOT SCALE : 2.0000 ft / IN.
WISDOT/CADDS SHEET 40

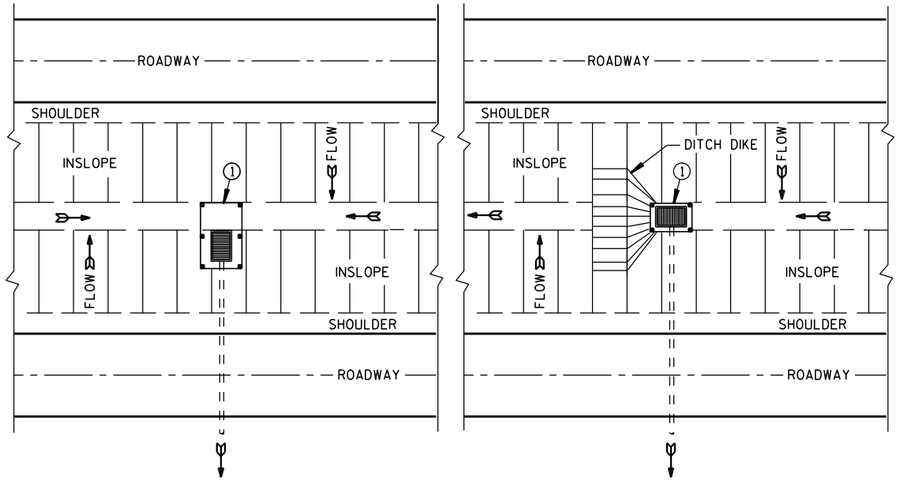
Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-07	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-16A	PAVEMENT MARKING (MAINLINE)



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.

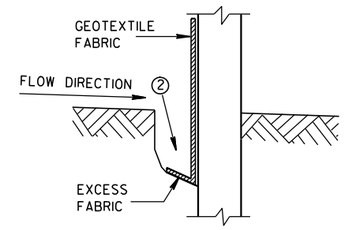
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

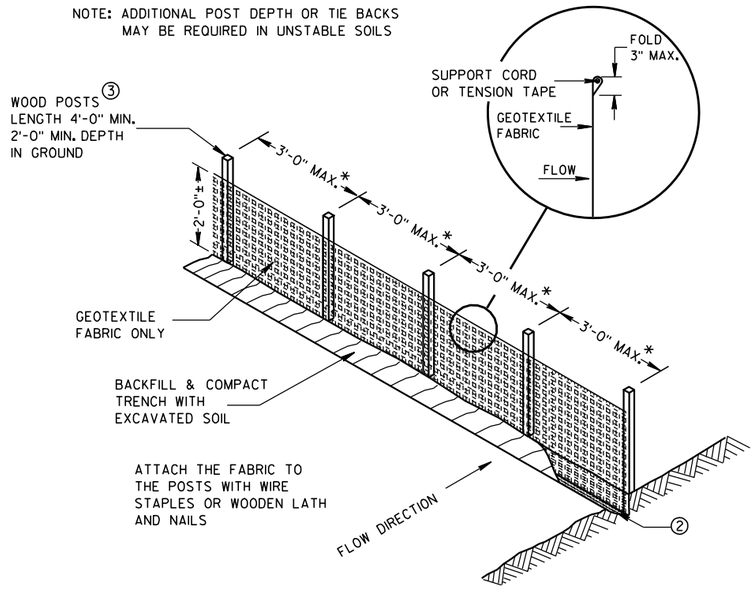
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

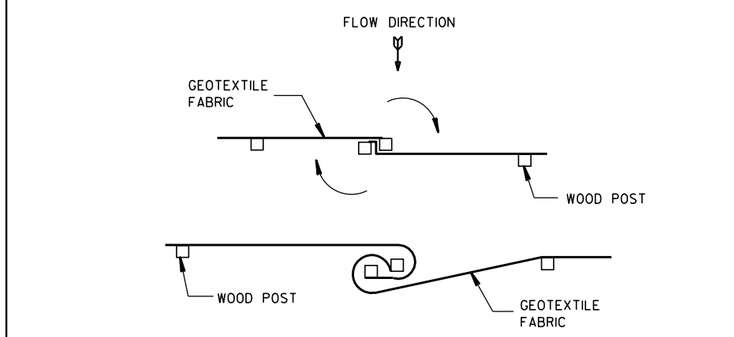
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



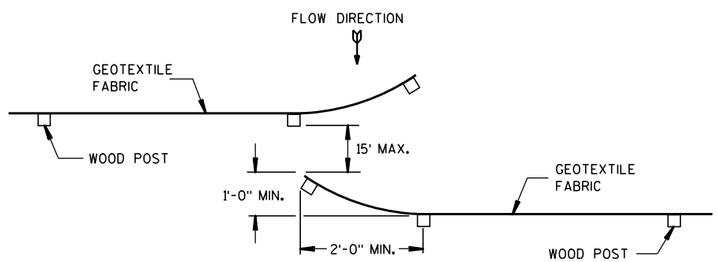
TRENCH DETAIL



SILT FENCE

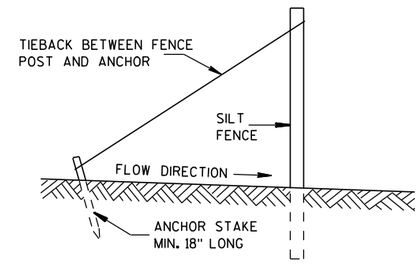


TWIST METHOD



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

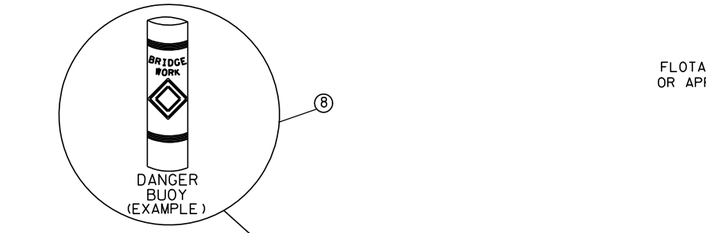
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

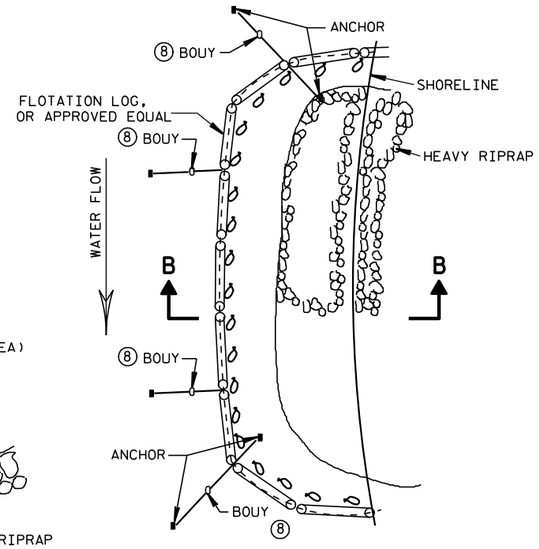
S.D.D. 8 E 9-6

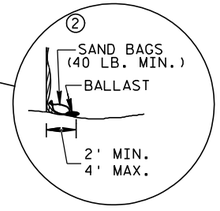
6

S.D.D. 8 E 9-6

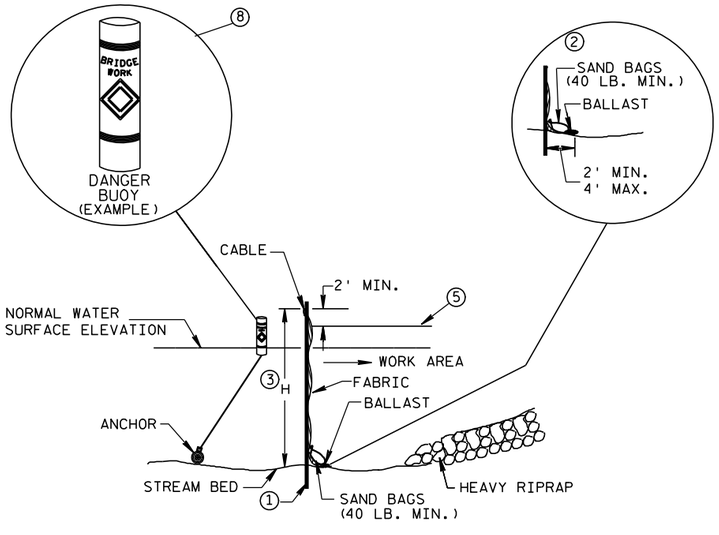


SECTION B-B

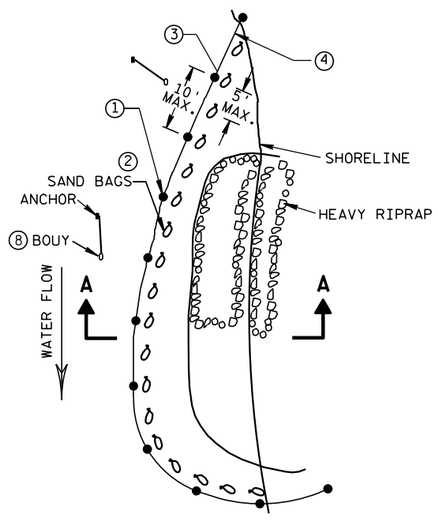




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.

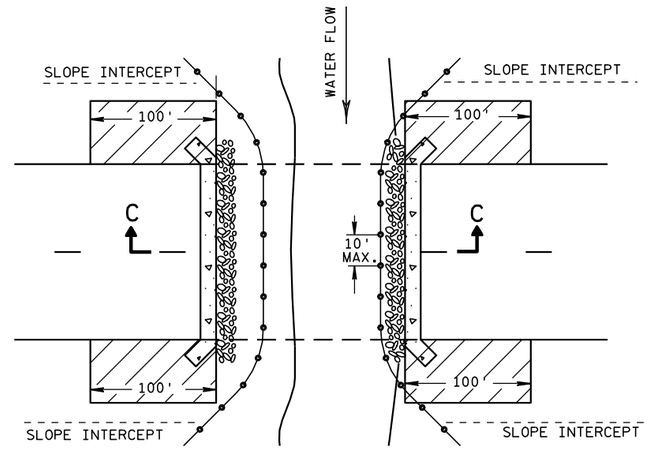
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

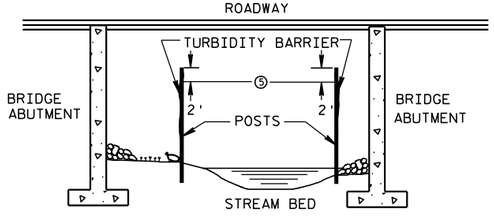
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 11-2

6

S.D.D. 8 E 11-2

METAL APRON ENDWALLS

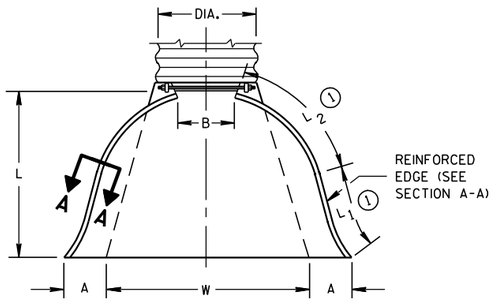
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

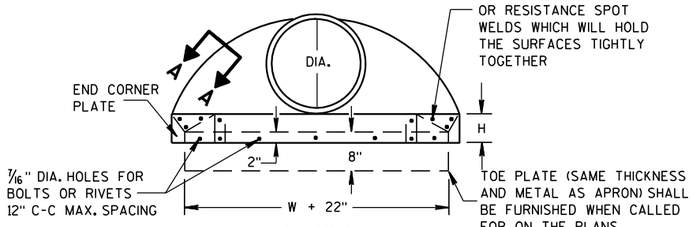
REINFORCED CONCRETE APRON ENDWALLS

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

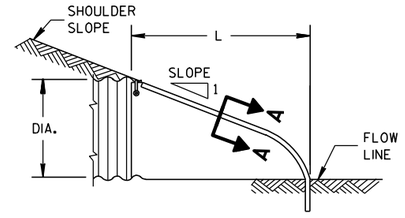
*MINIMUM
**MAXIMUM



PLAN VIEW

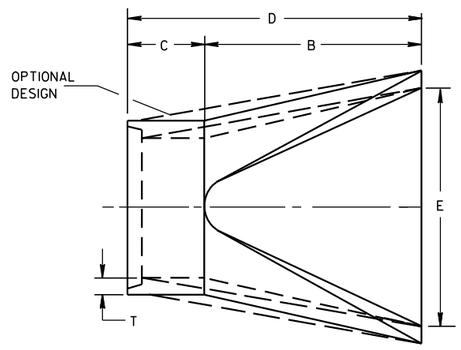


END VIEW

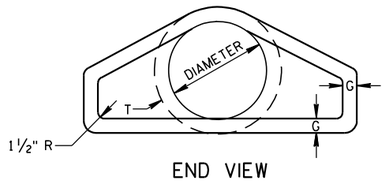


SIDE ELEVATION

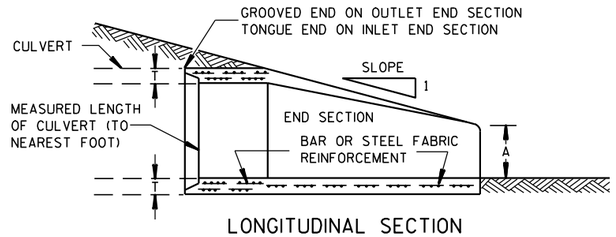
METAL ENDWALLS



PLAN

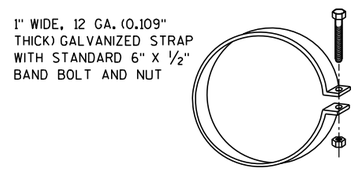


END VIEW



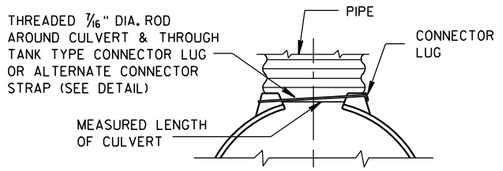
LONGITUDINAL SECTION

CONCRETE ENDWALLS

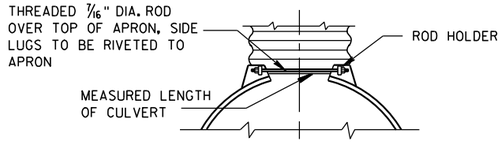


ALTERNATE FOR TYPE 1 CONNECTION

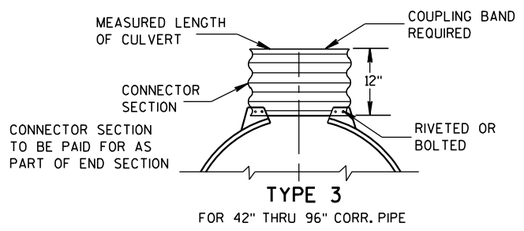
END SECTION CONNECTOR STRAP



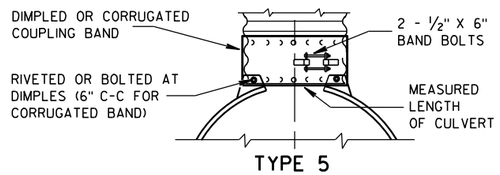
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

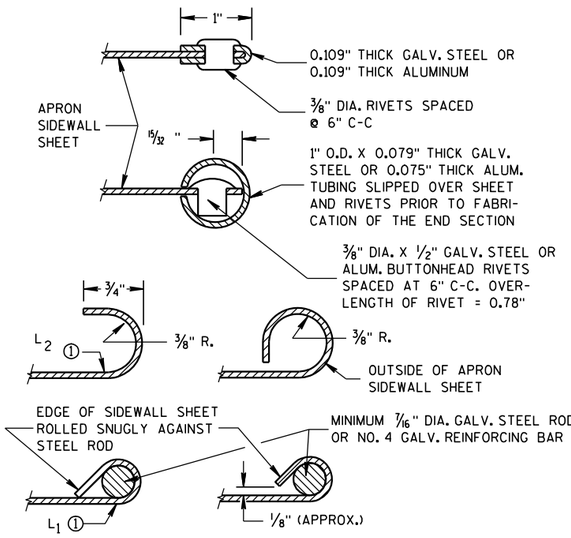
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

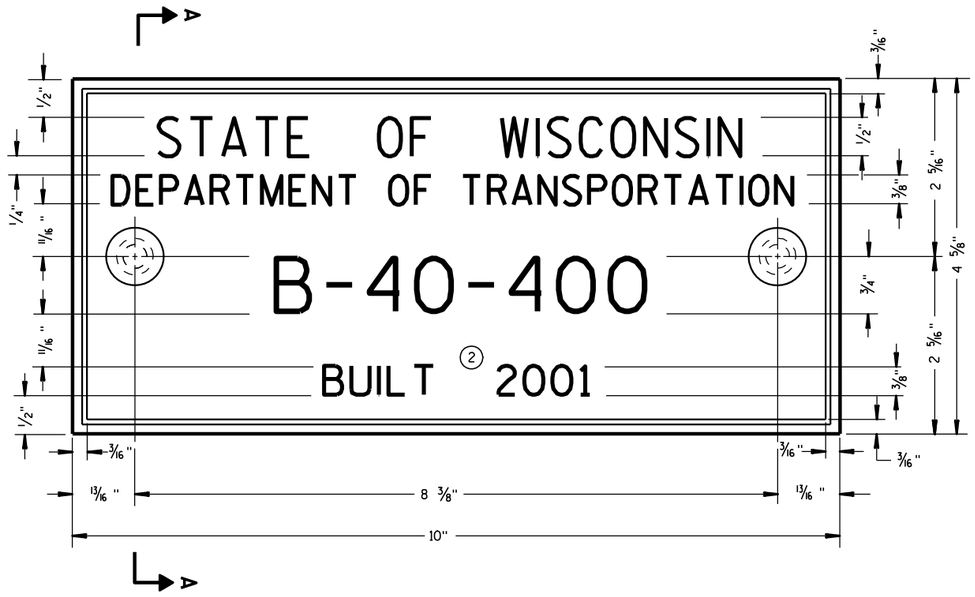
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 8 F 1-11



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

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

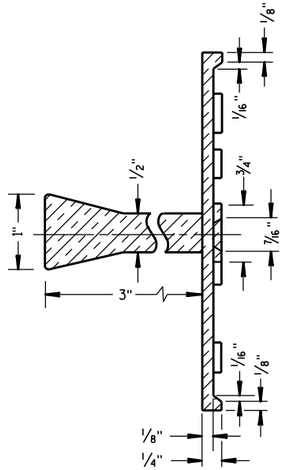
GENERAL NOTES

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

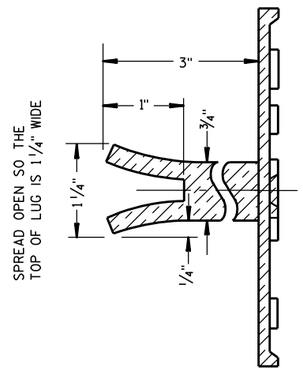
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

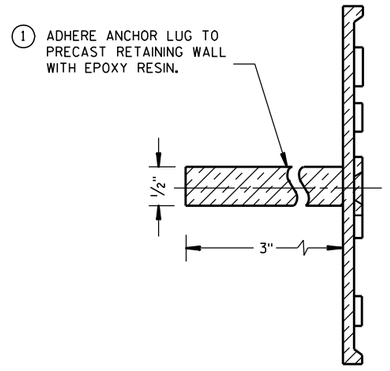
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

6

S.D.D. 12 A 3-10

GENERAL NOTES

(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.

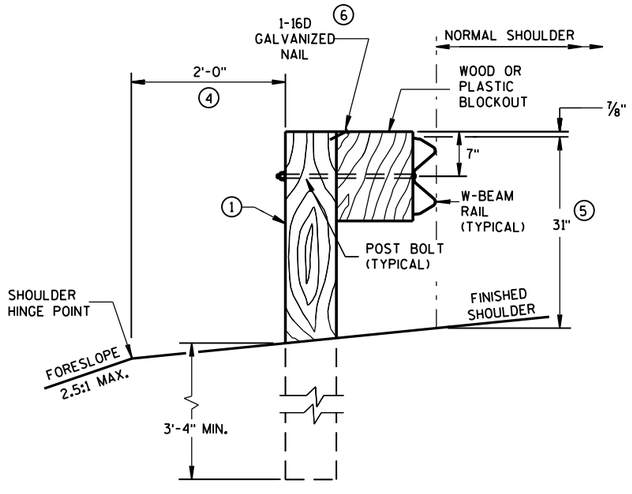
(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ 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).

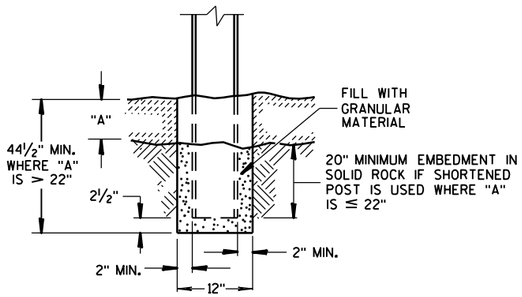
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

(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.



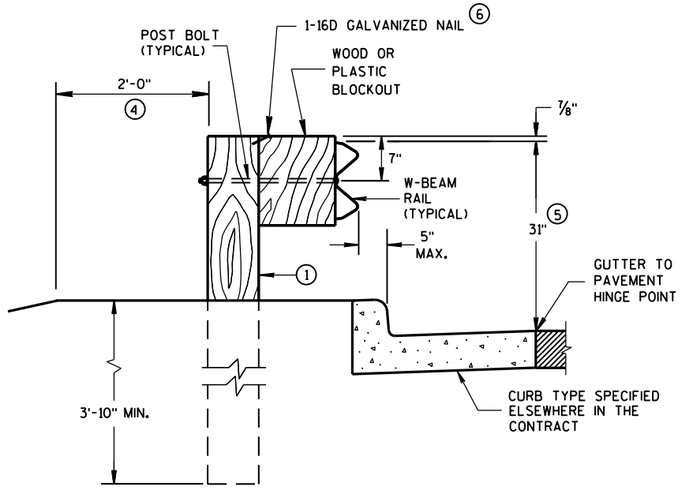
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



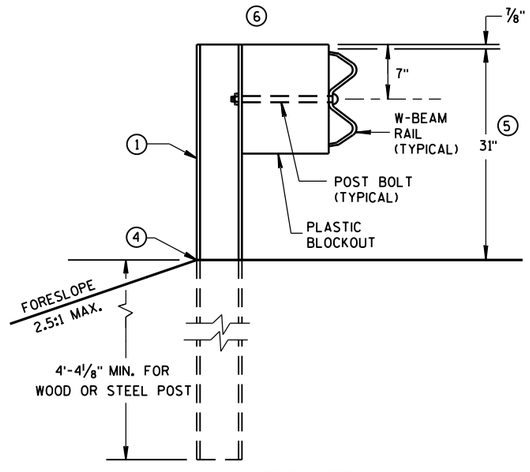
END VIEW

SETTING STEEL OR WOOD POST IN ROCK (3)



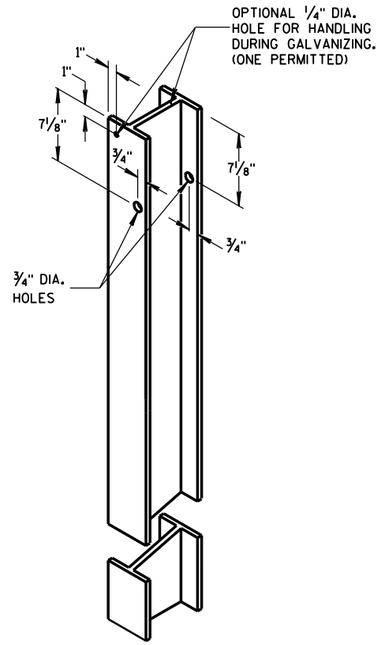
END VIEW

LOCATED ALONG A CURBED ROADWAY

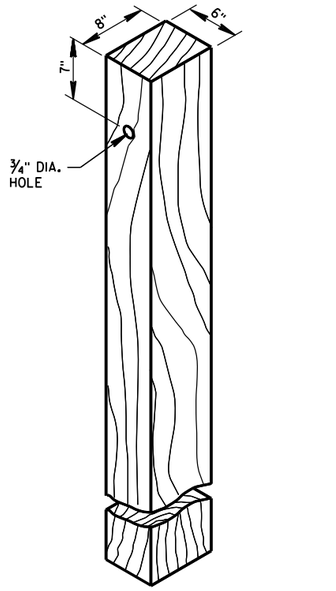


END VIEW

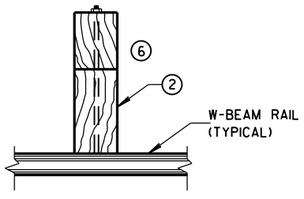
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



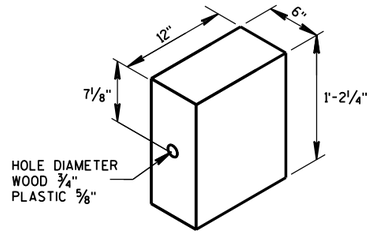
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



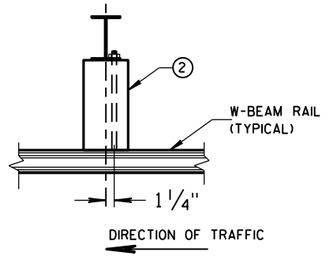
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)



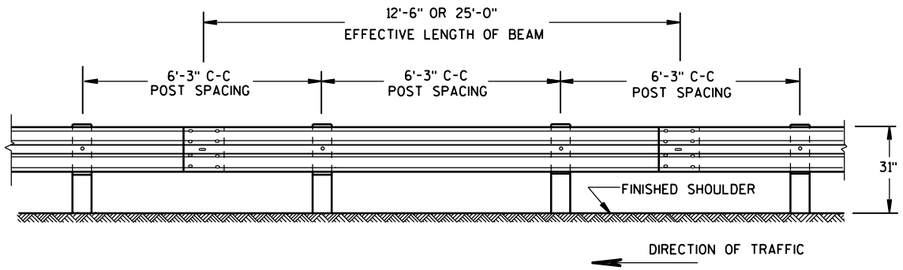
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

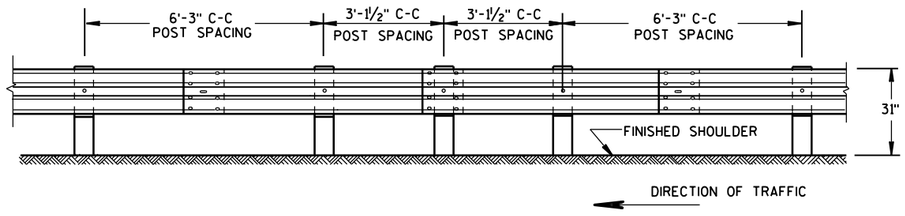
6

S.D.D. 14 B 42-3a



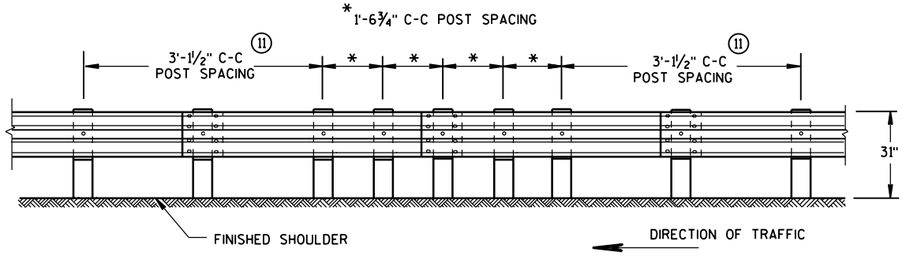
FRONT VIEW

POST SPACING STANDARD INSTALLATION



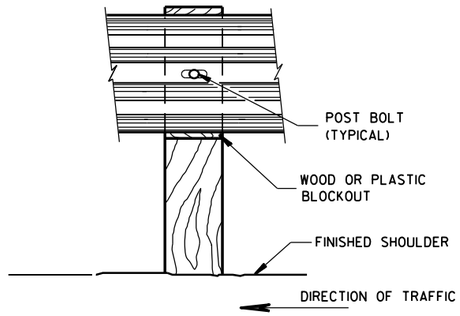
FRONT VIEW

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

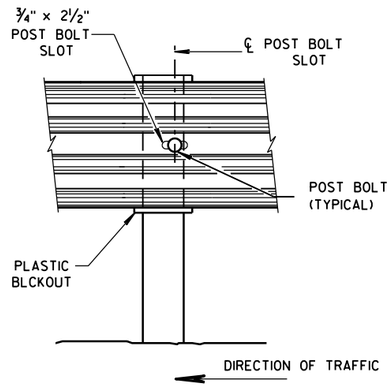


FRONT VIEW

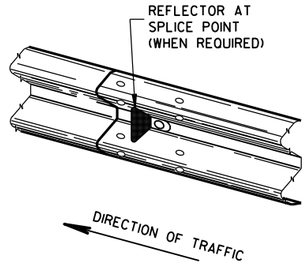
QUARTER POST SPACING (QS)

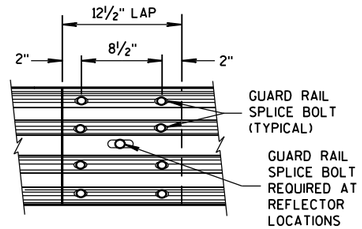


FRONT VIEW AT WOOD POST



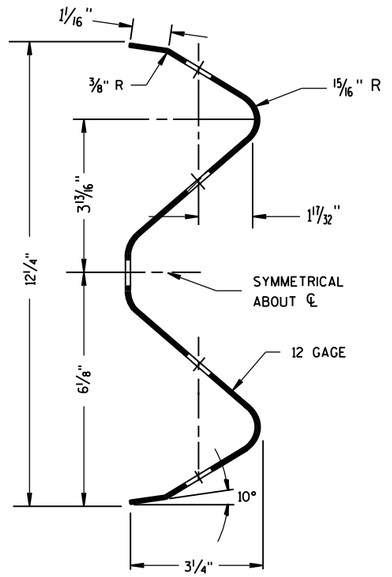
FRONT VIEW AT STEEL POST



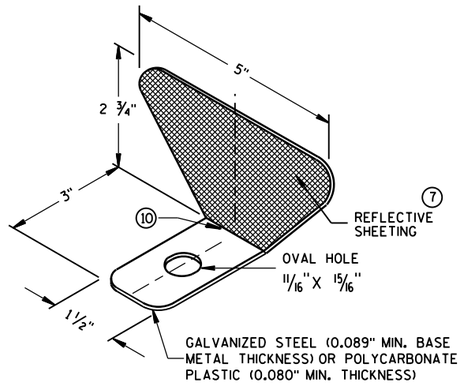


FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ⑦

GENERAL NOTES

⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

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 REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

⑩ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

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

POST BOLTS ARE A ⅝" 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.

REFLECTOR SPACING ⑧

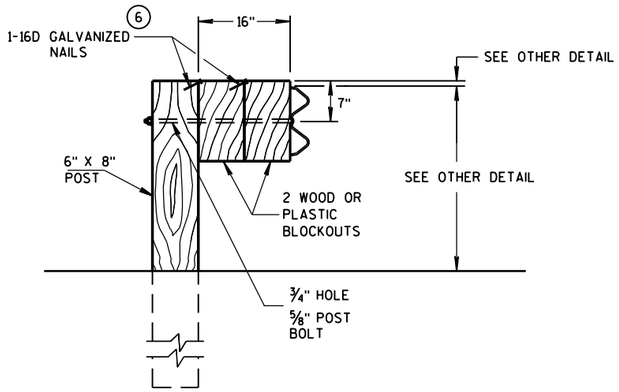
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ⑨	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 ⑩	

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

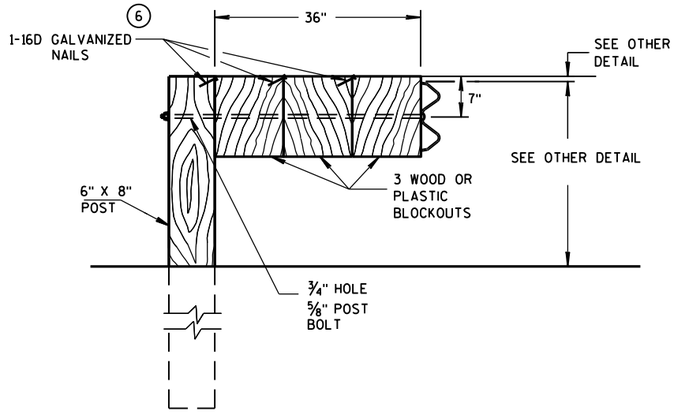
6

S.D.D. 14 B 42-3b



DETAIL FOR 16" BLOCKOUT DEPTH

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

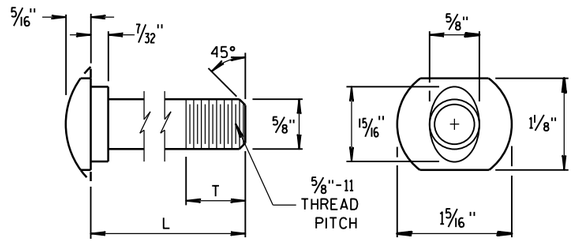


DETAIL FOR 36" BLOCKOUT DEPTH

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

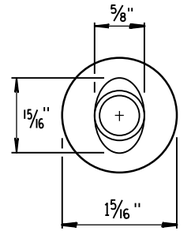
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

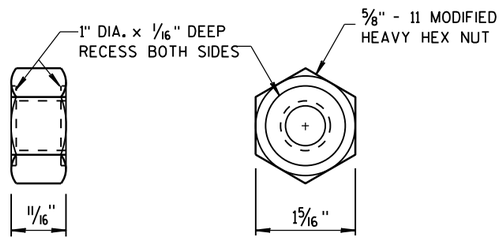


POST BOLT TABLE

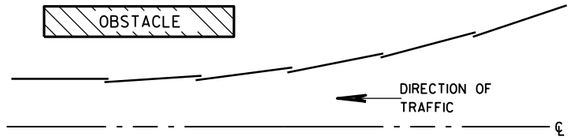
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

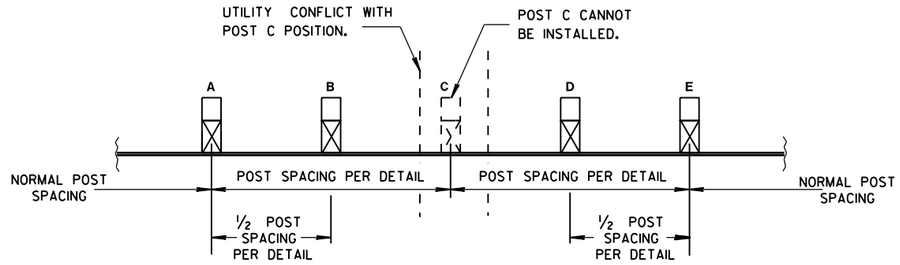


POST BOLT AND RECESS NUT

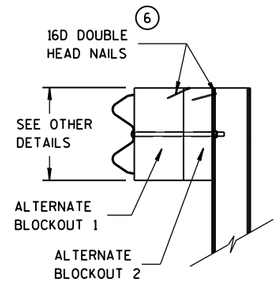


PLAN VIEW

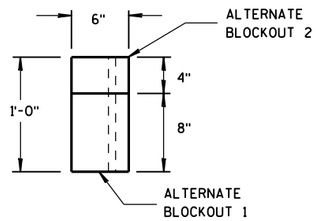
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS (20 ENT
ENGINEER
FHWA

6

S.D.D. 14 B 42-3c

6

S.D.D. 14 B 42-3c

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 MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

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

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

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

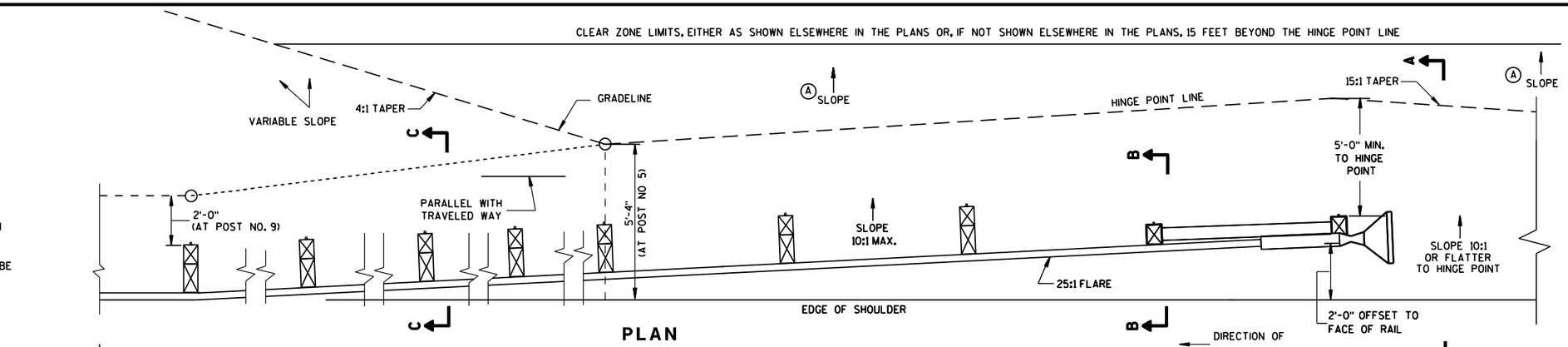
SEE SDD 14B42 FOR MORE INFORMATION.

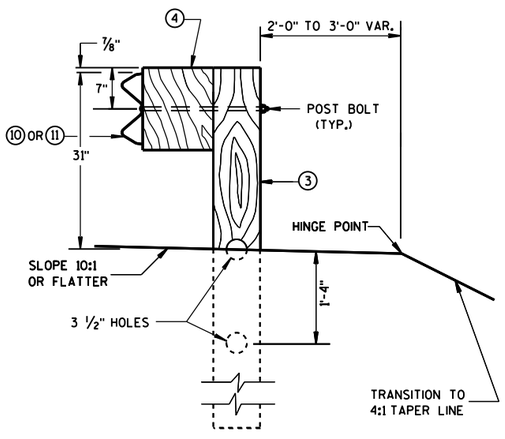
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

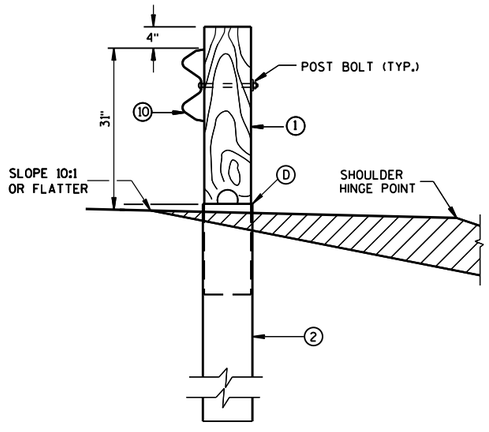
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" 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.

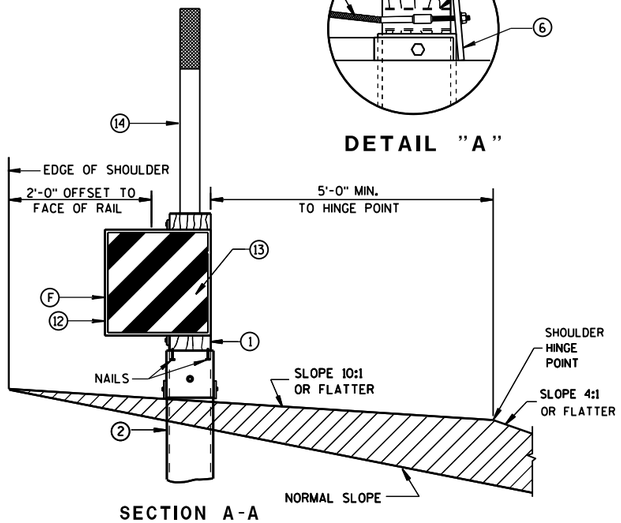




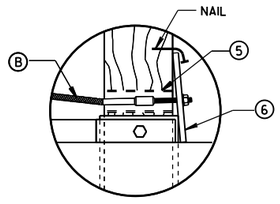
SECTION C-C
TYPICAL AT POST NOS. 3-9



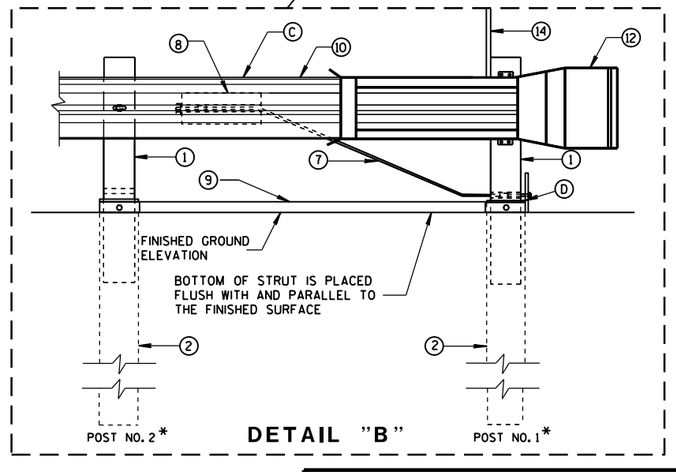
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



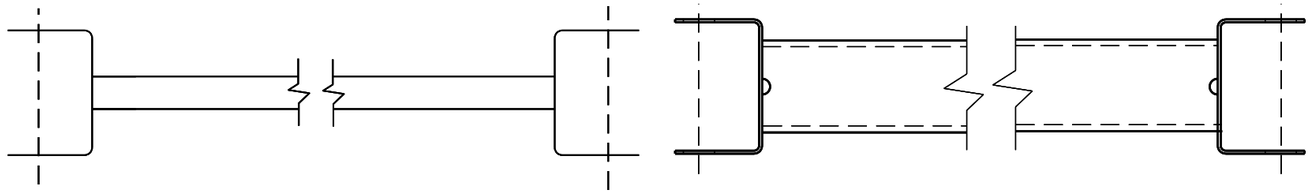
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

S.D.D. 14 B 44-2a

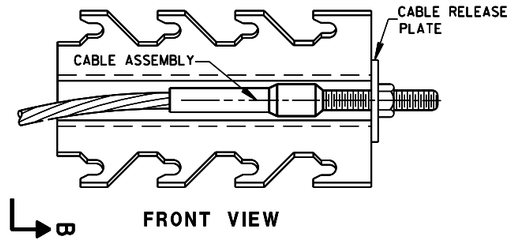
S.D.D. 14 B 44-2a



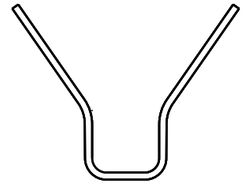
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

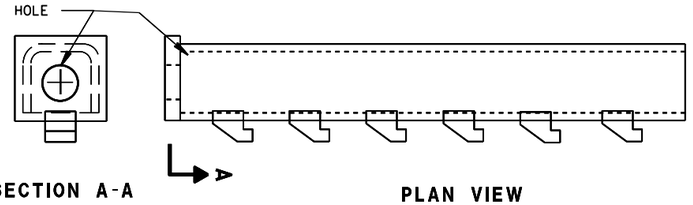
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR 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)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



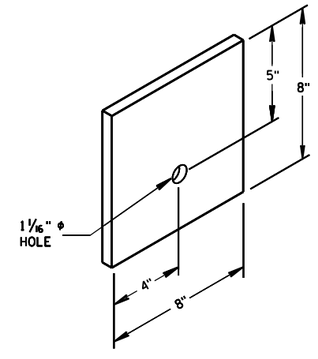
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



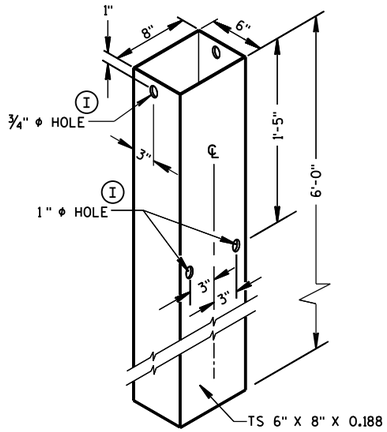
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

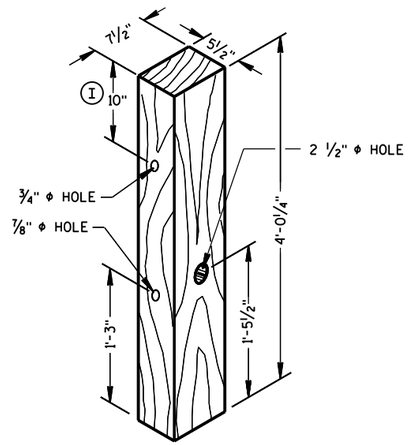
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 44-2b

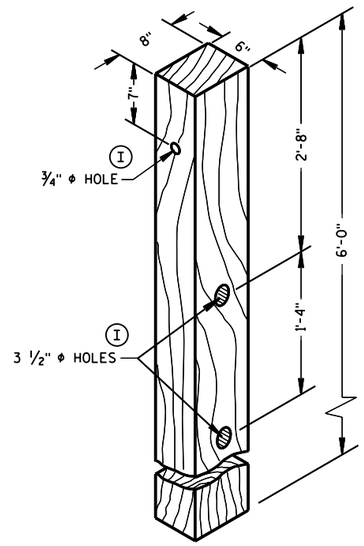


FOUNDATION TUBE (2)



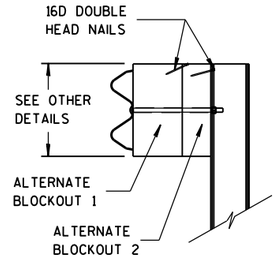
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

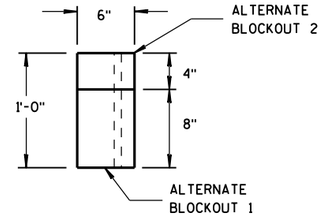


POSTS NUMBER 3-9

WOOD CRT POST (3)

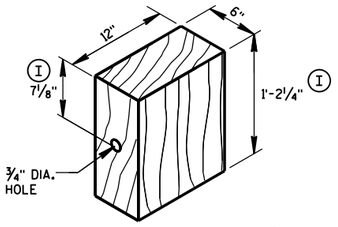


SIDE VIEW



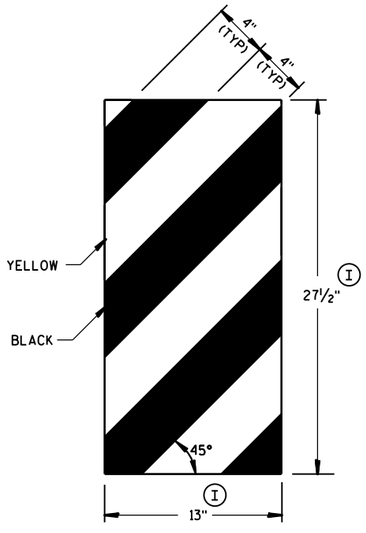
TOP VIEW

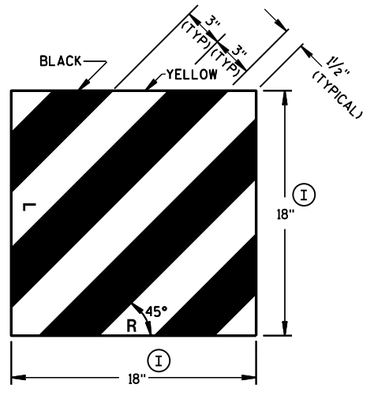
ALTERNATE WOOD BLOCKOUT DETAIL



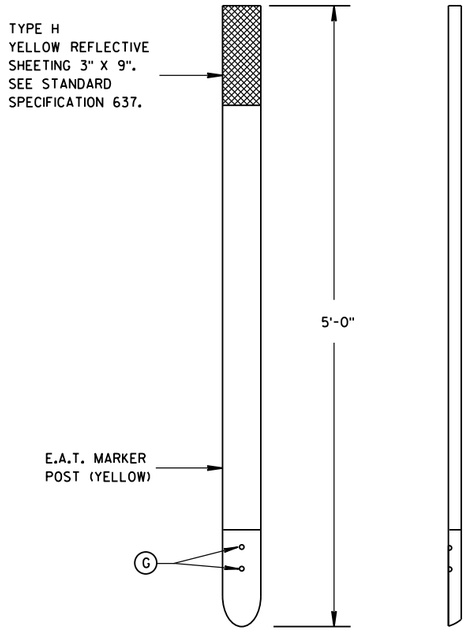
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





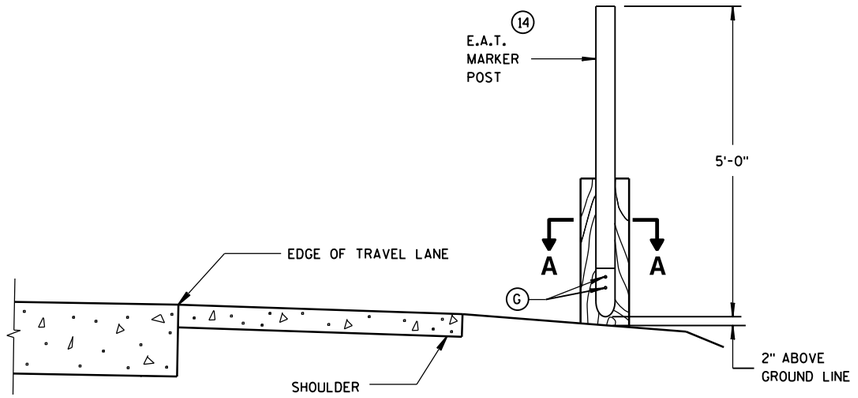
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

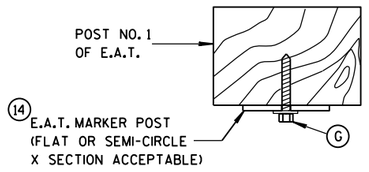
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



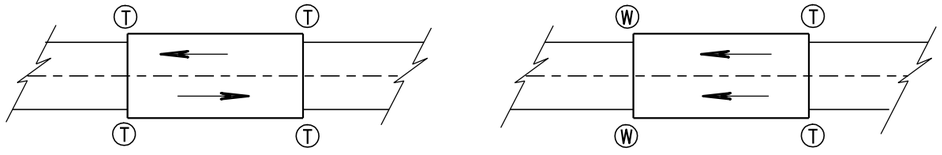
SECTION A-A

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 14 B 44-2c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

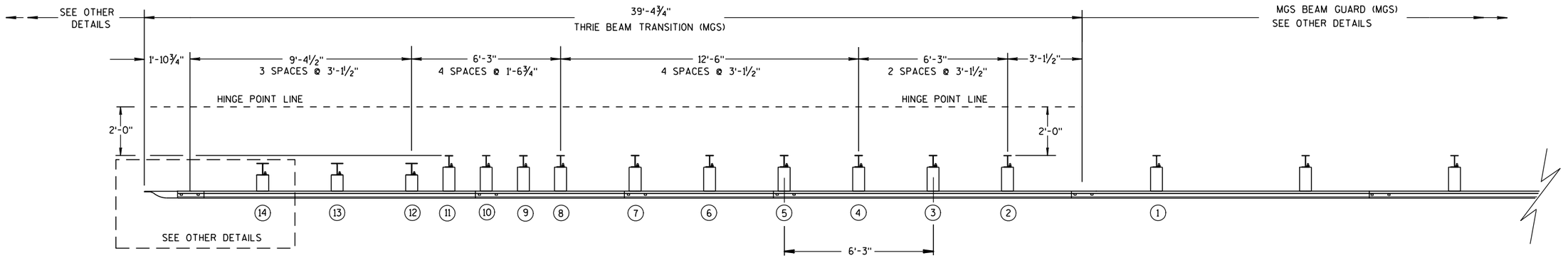
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

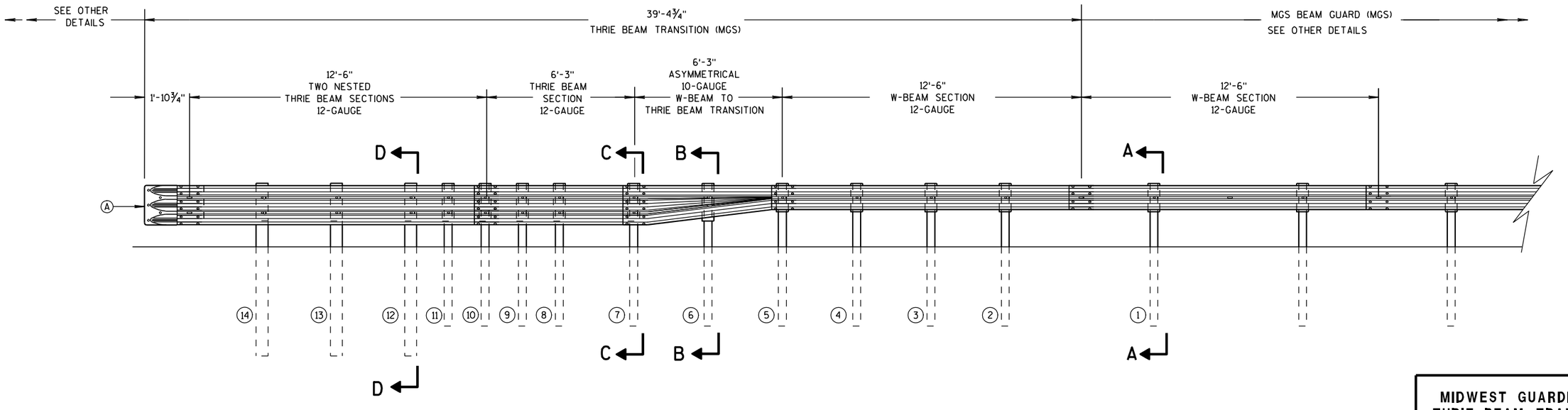
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

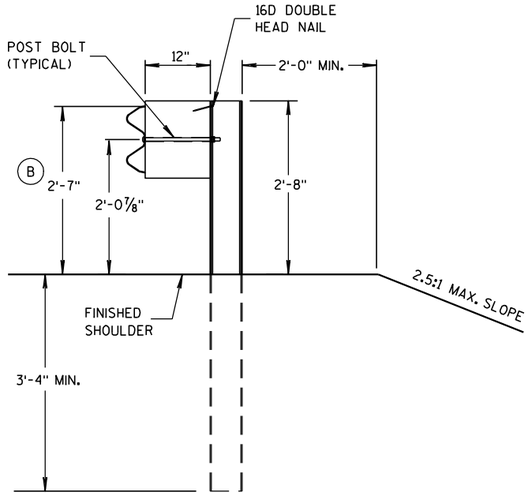
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 45-3a

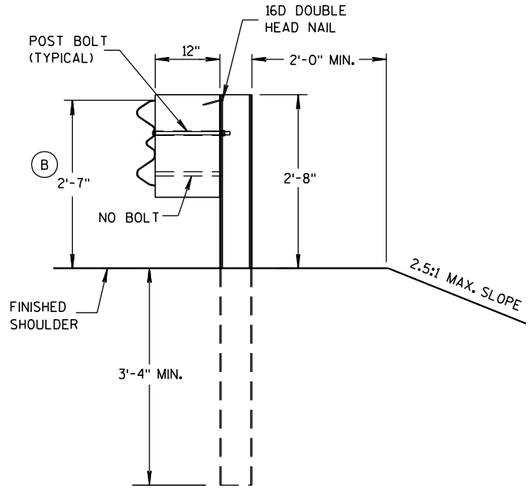
GENERAL NOTES

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



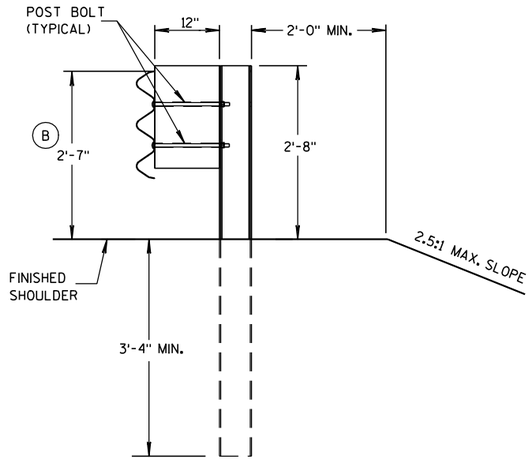
SECTION A-A

POSTS 1-5



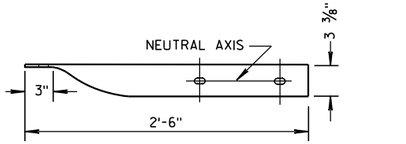
SECTION B-B

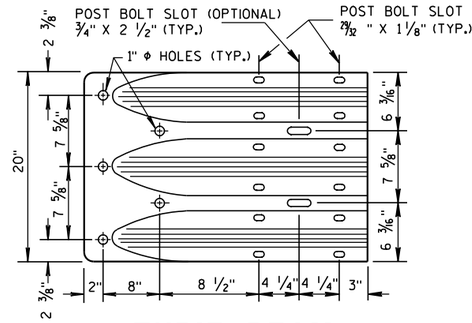
POST 6



SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR

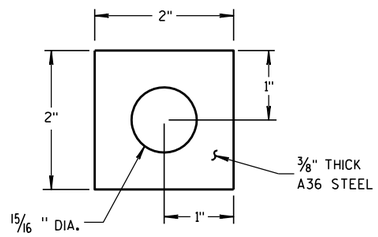
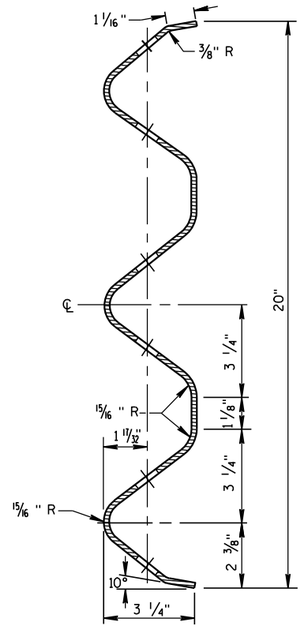
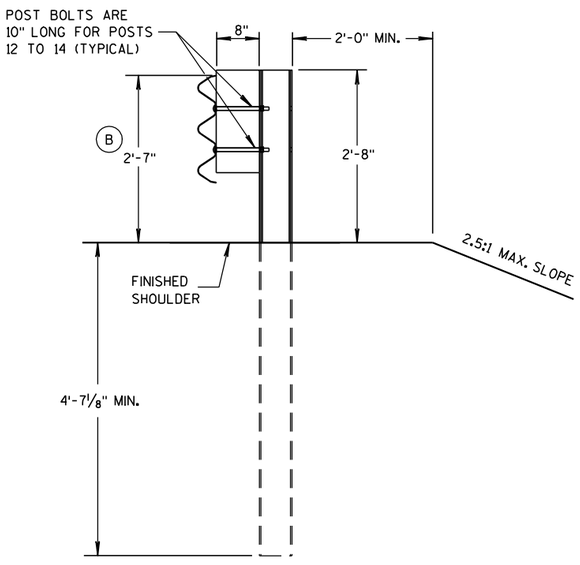


PLATE WASHER DETAIL

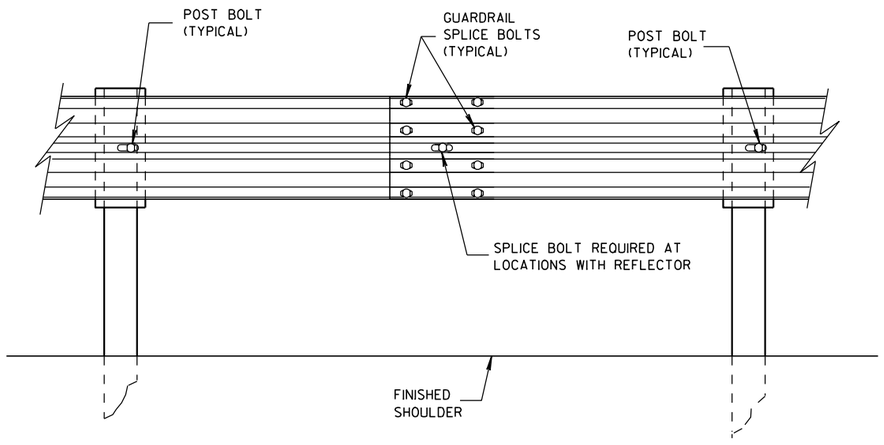


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-14



SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

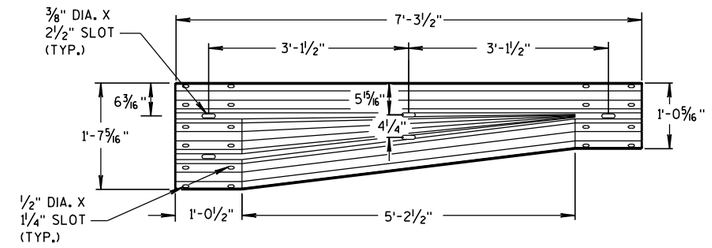
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

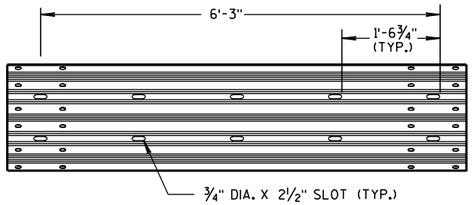
S.D.D. 14 B 45-3b

6

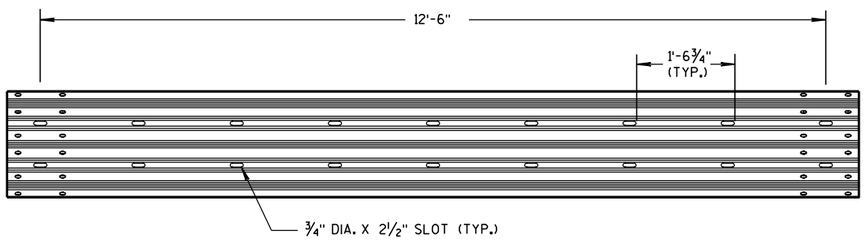
S.D.D. 14 B 45-3b



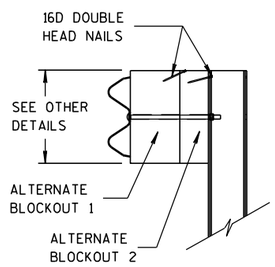
W-BEAM TO THRIE BEAM TRANSITION SECTION



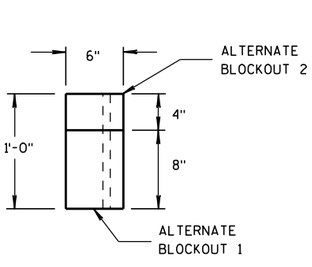
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

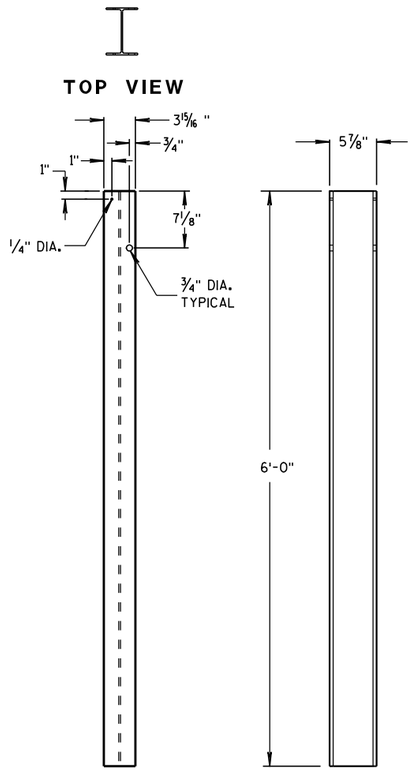


SIDE VIEW

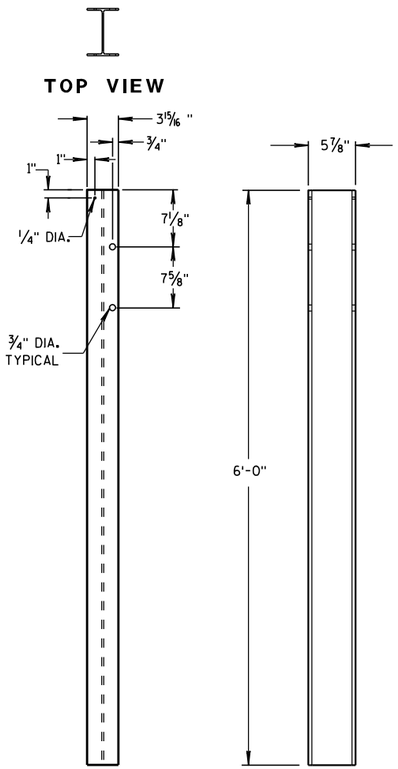


TOP VIEW

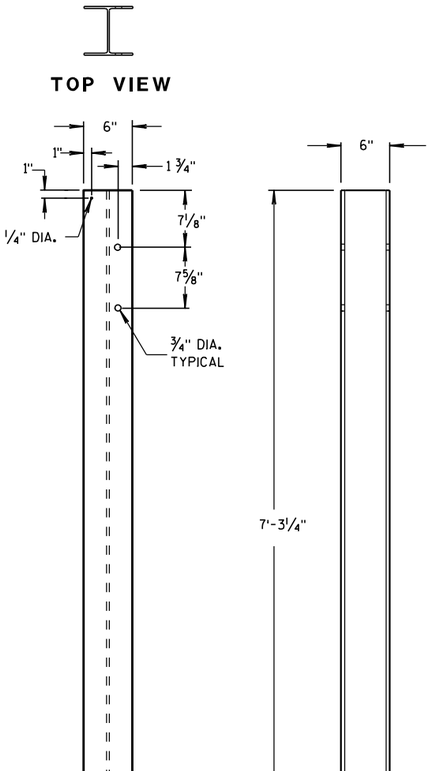
ALTERNATE WOOD BLOCKOUT DETAIL



STEEL POSTS 1-5

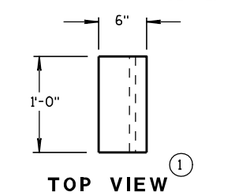


STEEL POSTS 6-11

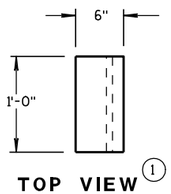


STEEL POSTS 12-14

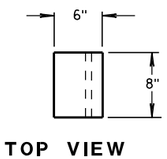
① WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



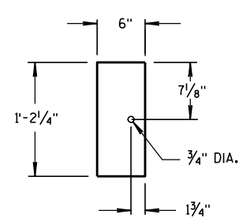
TOP VIEW ①



TOP VIEW ①

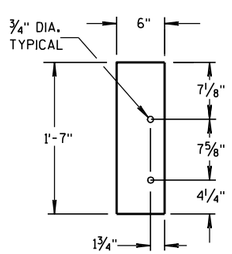


TOP VIEW



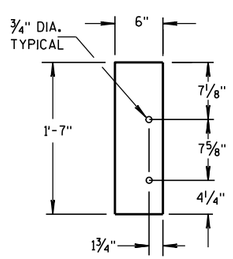
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

STEEL POST SIZES

POST NUMBER	SECTION TYPE	LENGTH
①	W6x9	72"
②	W6x9	72"
③	W6x9	72"
④	W6x9	72"
⑤	W6x9	72"
⑥	W6x9	72"
⑦	W6x9	72"
⑧	W6x9	72"
⑨	W6x9	72"
⑩	W6x9	72"
⑪	W6x9	72"
⑫	W6x15	87 1/8"
⑬	W6x15	87 1/8"
⑭	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

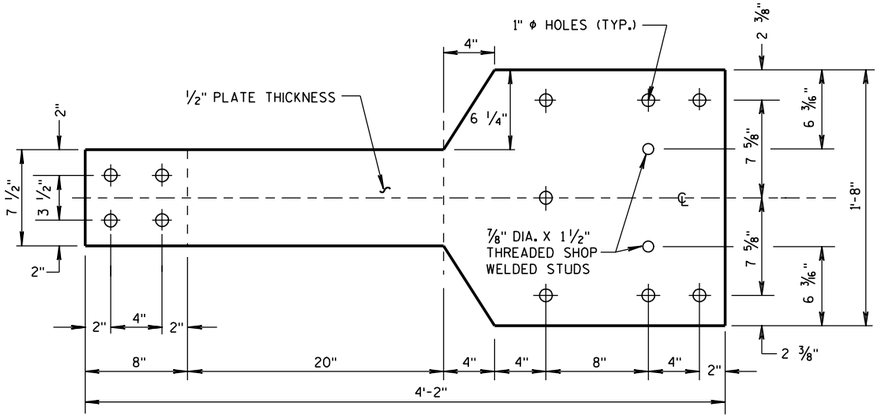
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

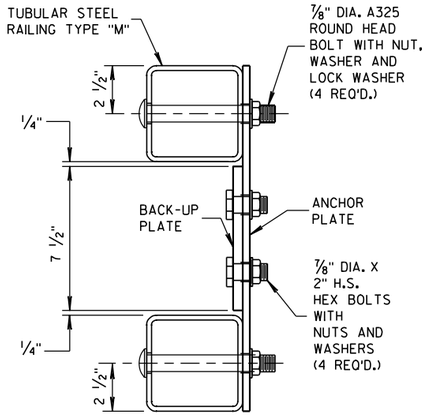
S.D.D. 14 B 45-3c

GENERAL NOTES

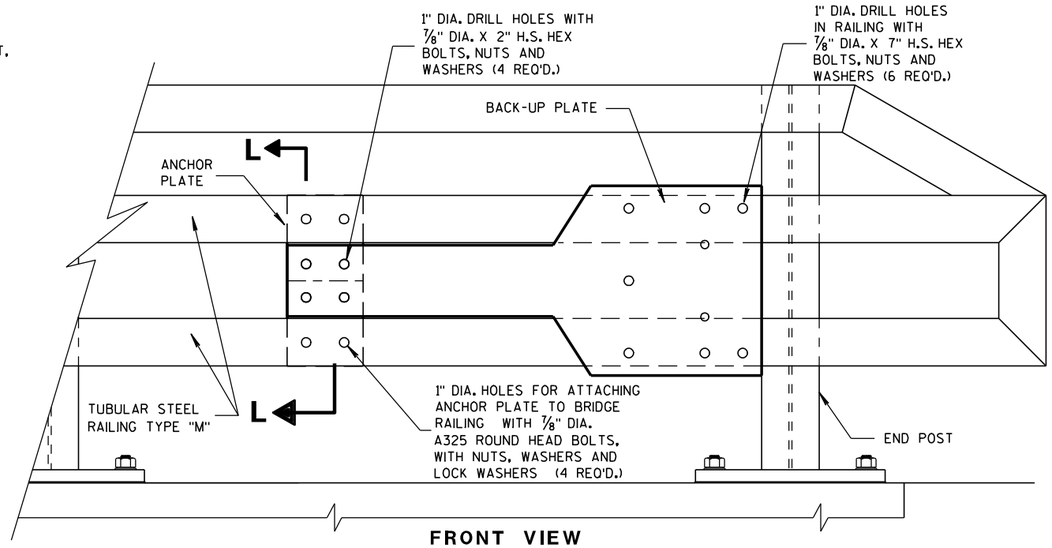
(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



FRONT VIEW

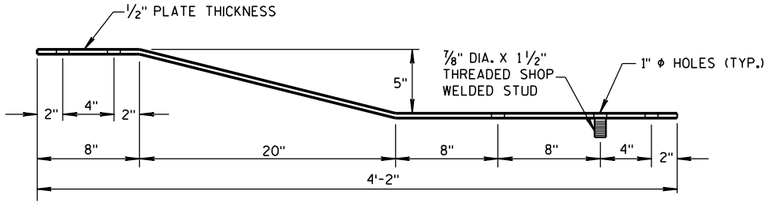


SECTION L-L



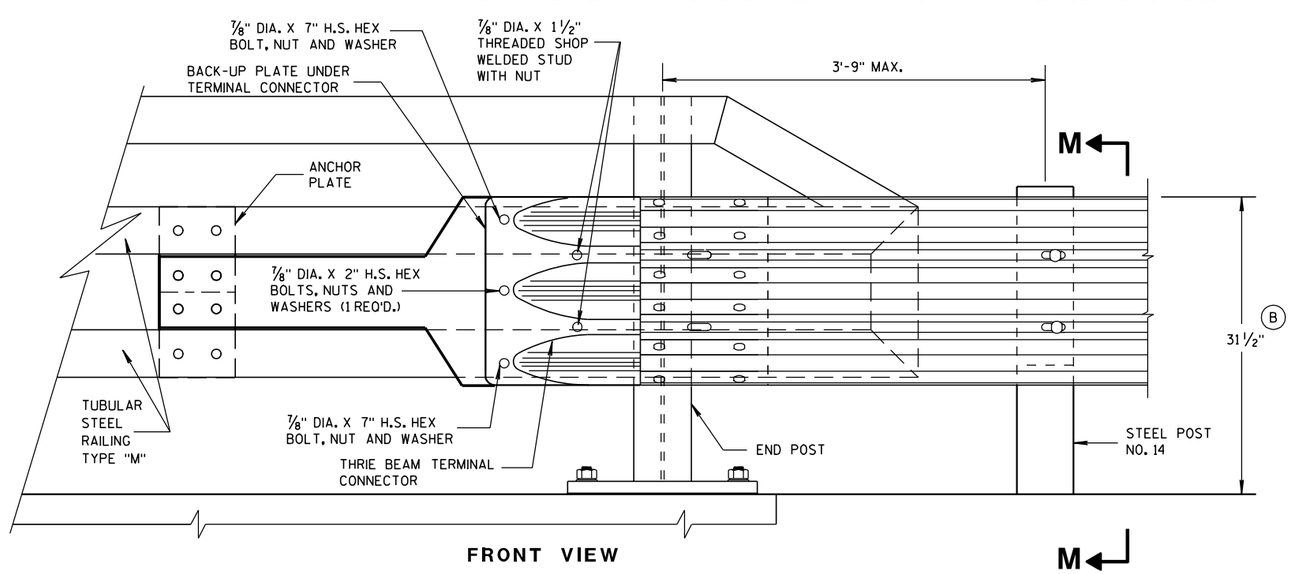
FRONT VIEW

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

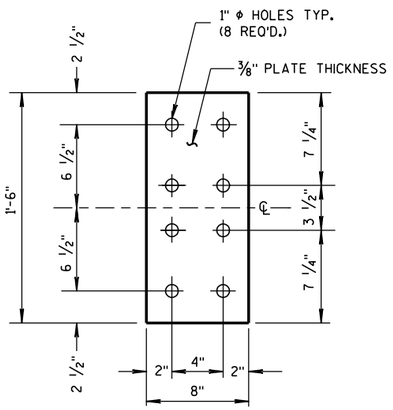


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

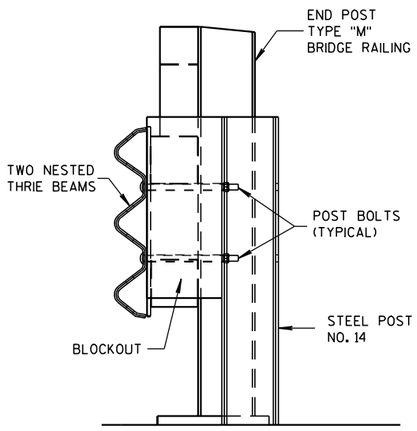


FRONT VIEW

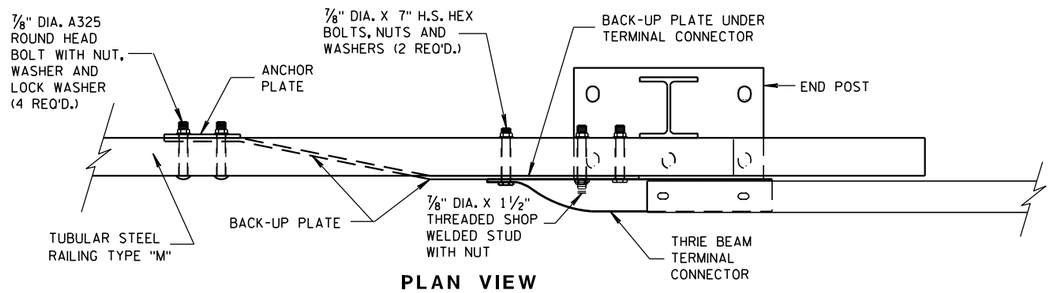


FRONT VIEW

ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



PLAN VIEW

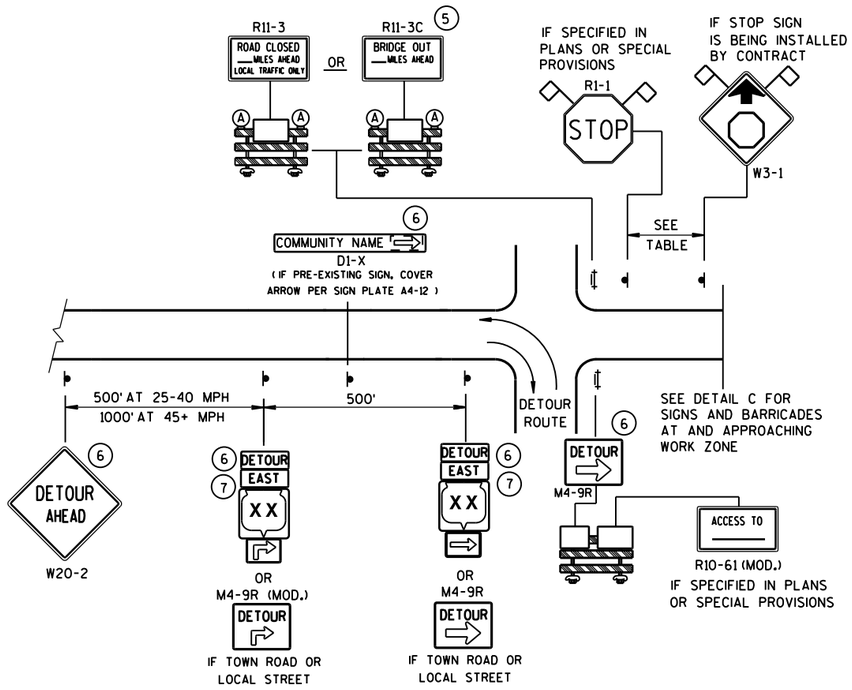
THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

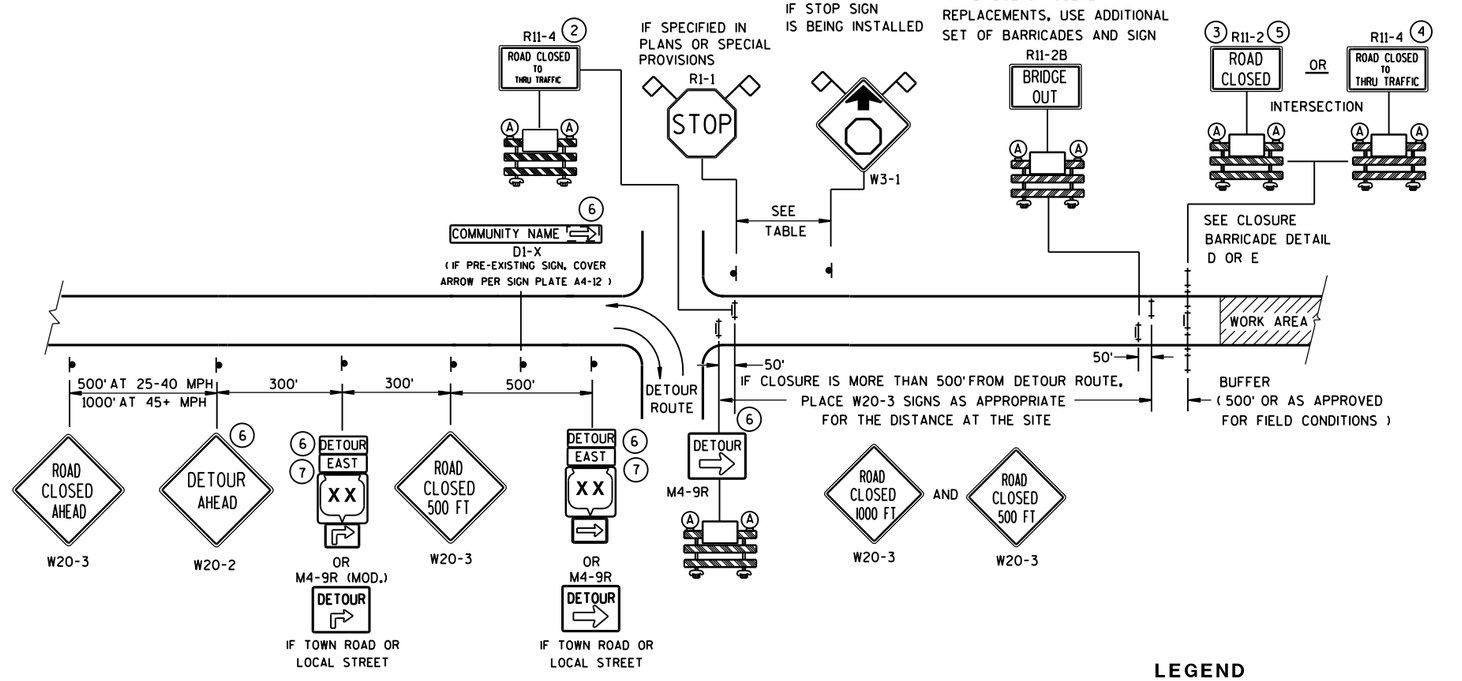
APPROVED
8-31-2012 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
ENT
FHWA

6
S.D. 14 B 45-3h



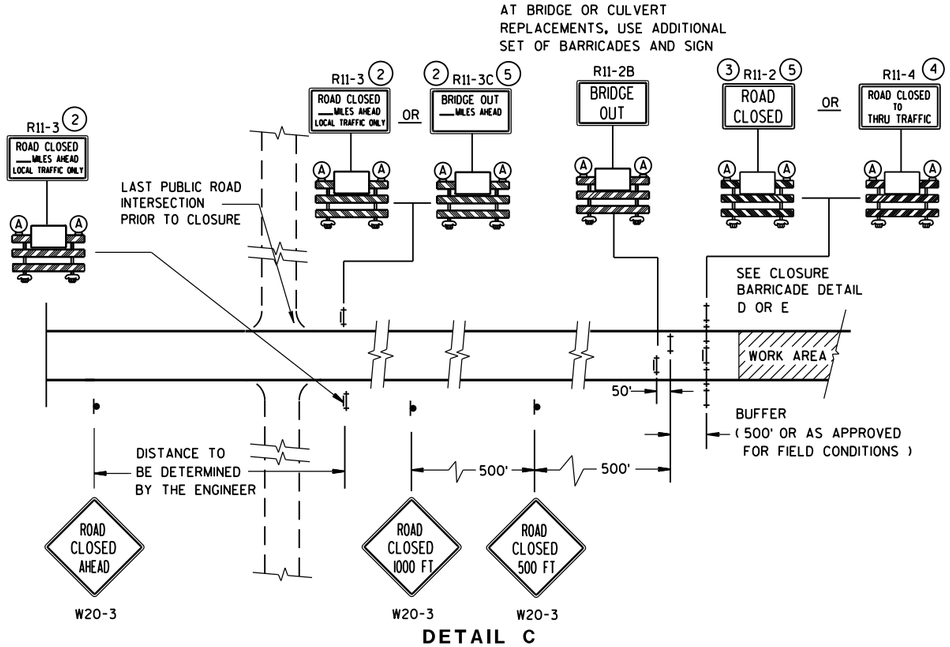
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER 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
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

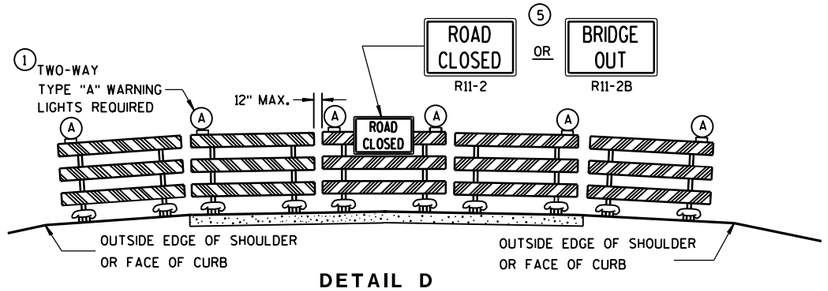
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 DATE — /S/ Travis Feltes STATE TRAFFIC ENGINEER — DESIGN

FHWA

6

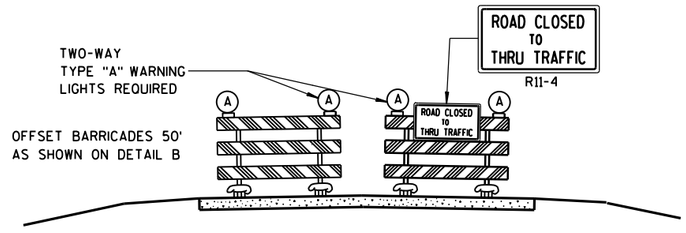
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

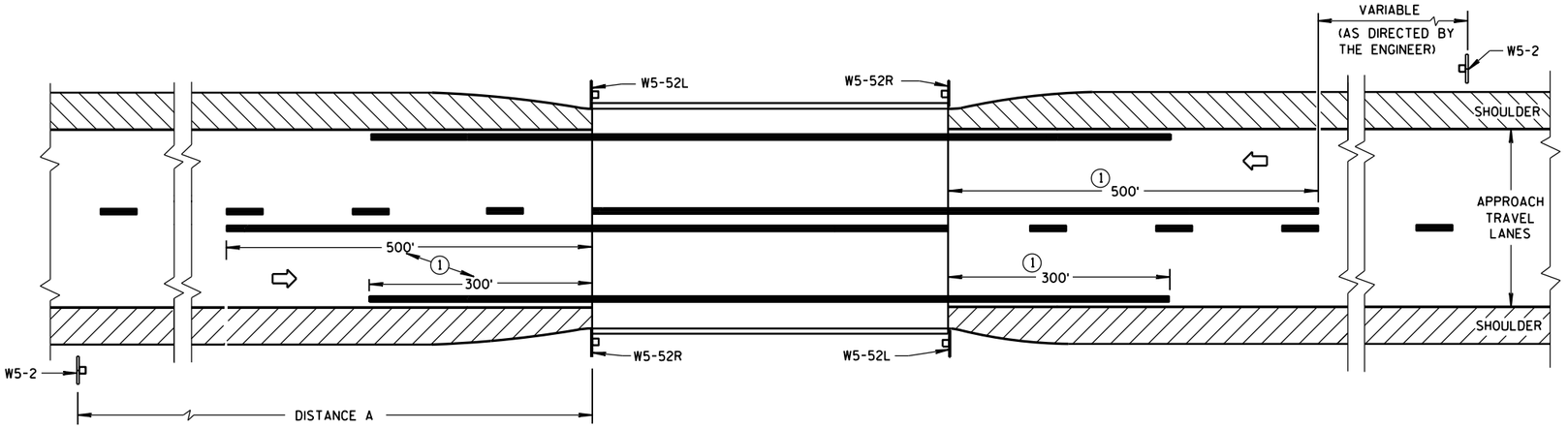
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 C 2-5b



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.

PAVEMENT MARKING SHOWN ON THIS DRAWING IS NOT REQUIRED UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. WHEN SPECIFIED, PAVEMENT MARKING SHALL CONFORM TO THIS DRAWING AND OTHER CONTRACT REQUIREMENTS.

(1) MINIMUM DISTANCE UNLESS OTHERWISE SHOWN ON THE PLAN.

(2) FACE OF OBJECT MARKERS W5-52R, AND W5-52L SHALL BE COVERED WITH TYPE F REFLECTIVE SHEETING.

(3) LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.

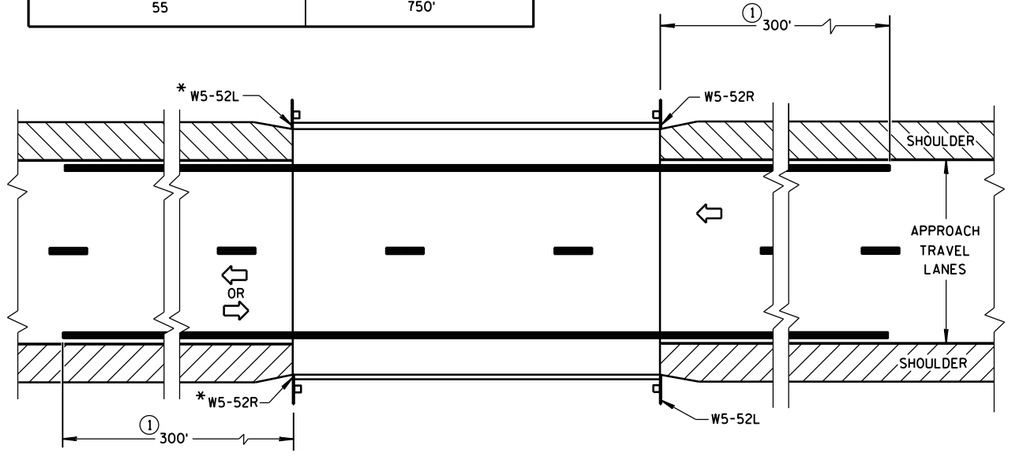
DISTANCE TABLE

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

SITUATION 1

WARRANTING CRITERIA:

BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET

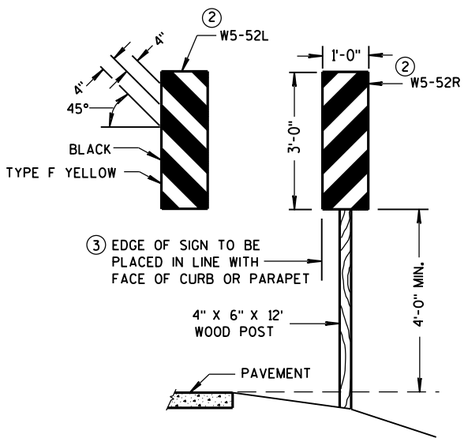


*OMIT ON ONE-WAY TRAVELLED WAYS

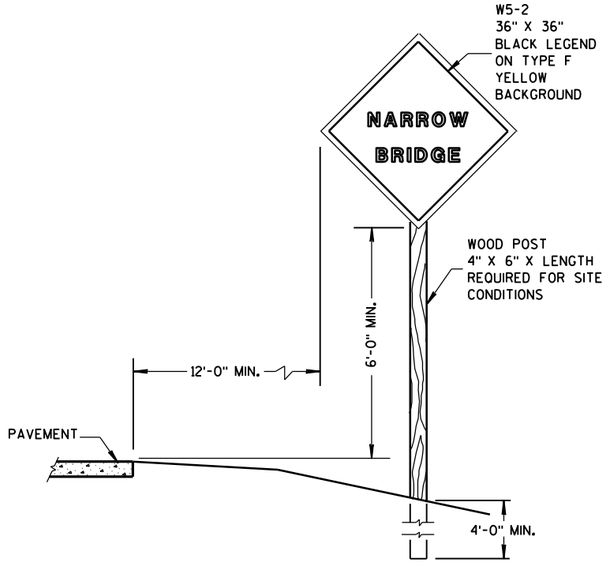
SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE IS LESS THAN 6 FEET WIDER (ON EACH SIDE) THAN APPROACH TRAVEL LANES.



OBJECT MARKER PLACEMENT



SIGN PLACEMENT

SIGNING & MARKING
FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

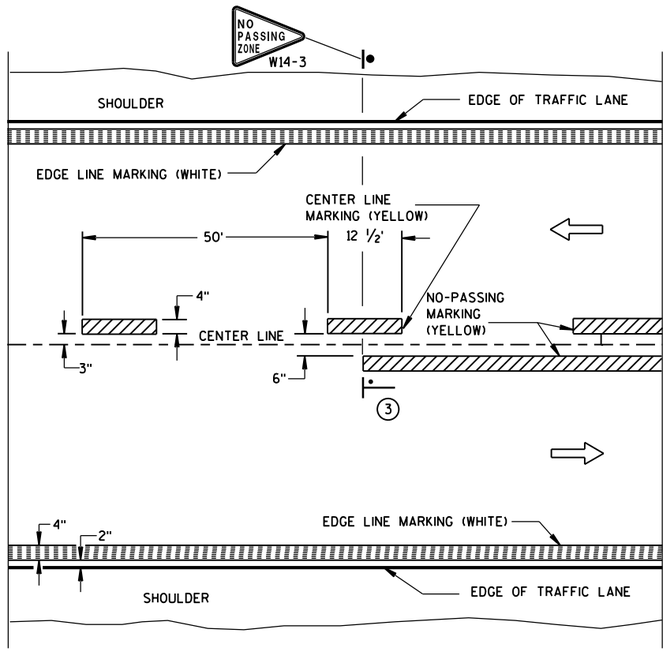
3-2014 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

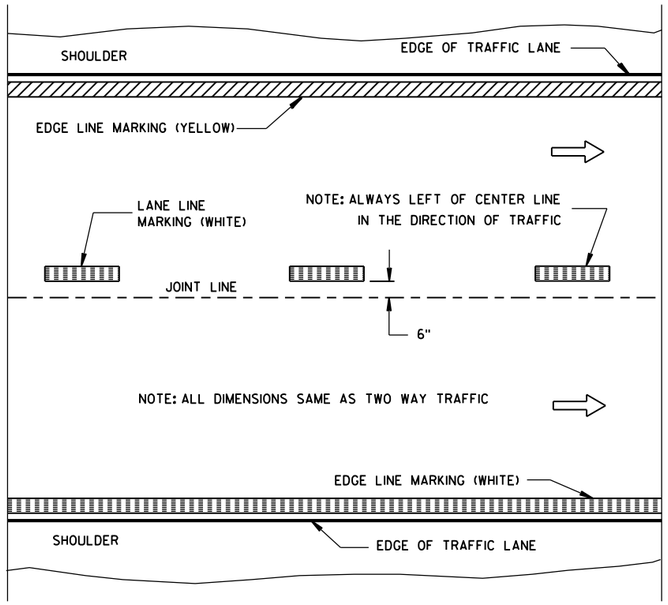
FHWA

6

S.D.D. 15 C 6-7

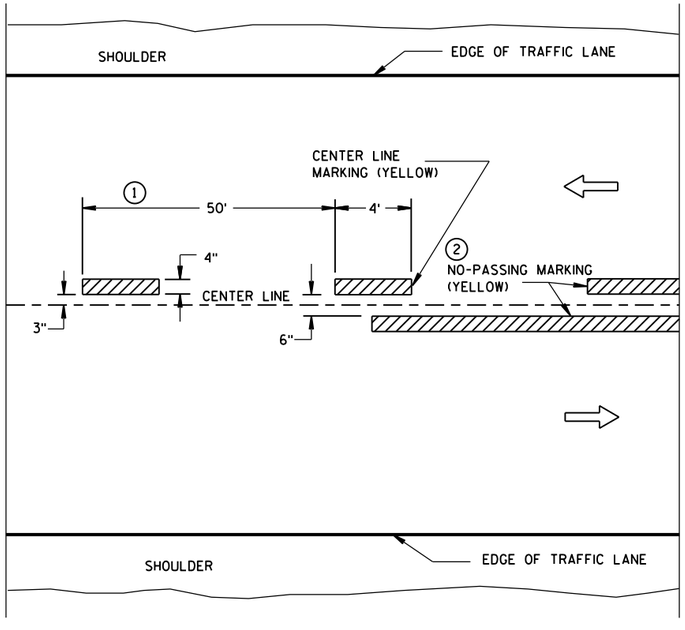


TWO WAY TRAFFIC

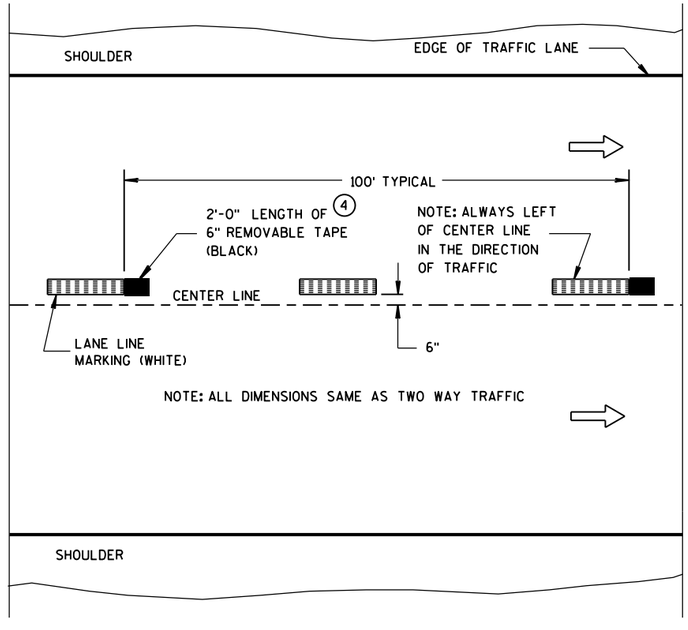


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

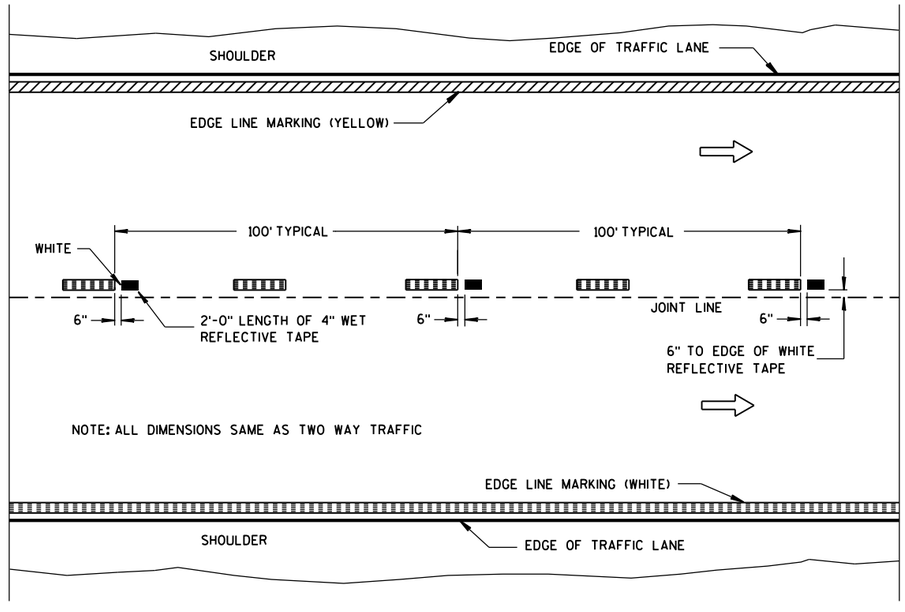
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

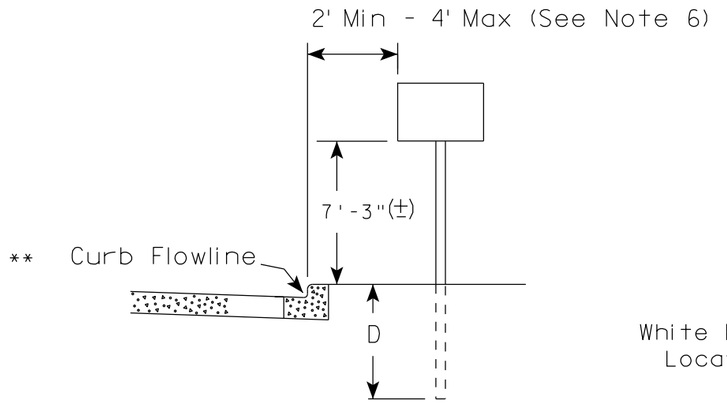
6

S.D.D. 15 C 8-16a

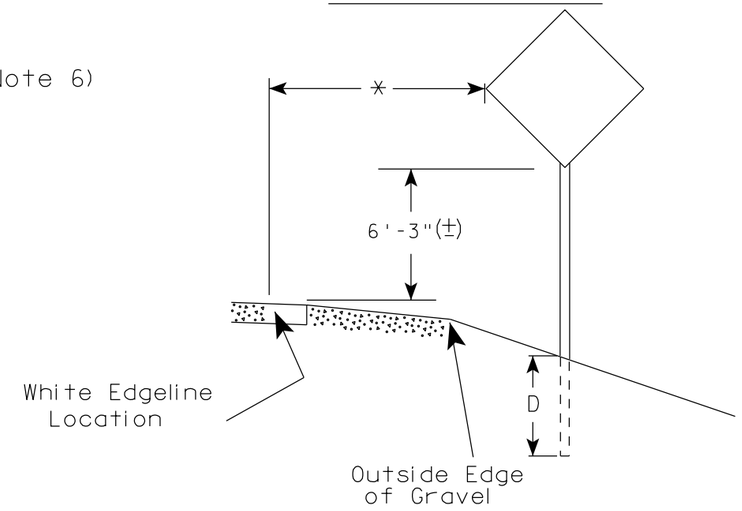
6

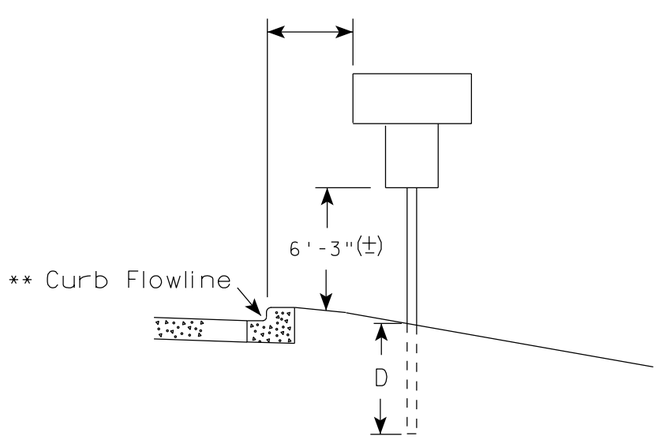
S.D.D. 15 C 8-16a

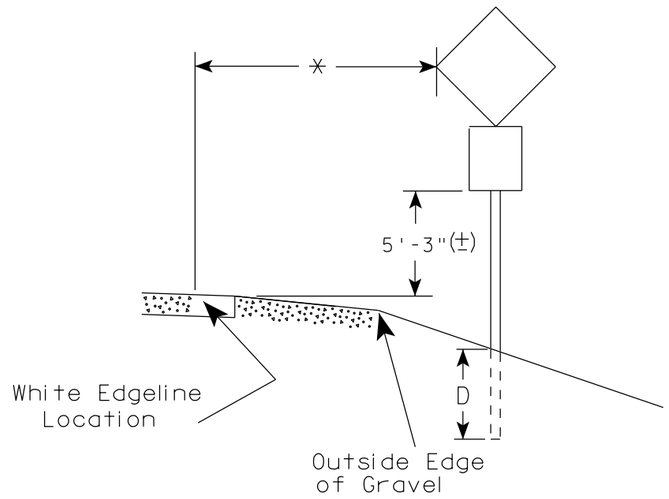
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

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

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

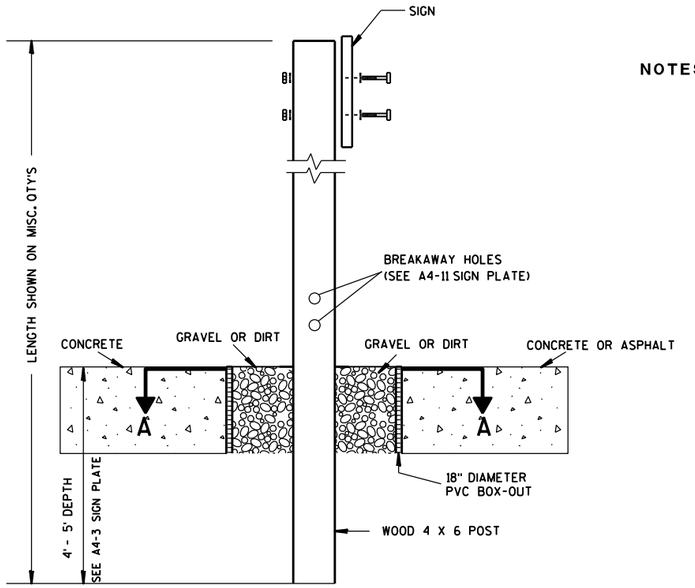
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-3.19

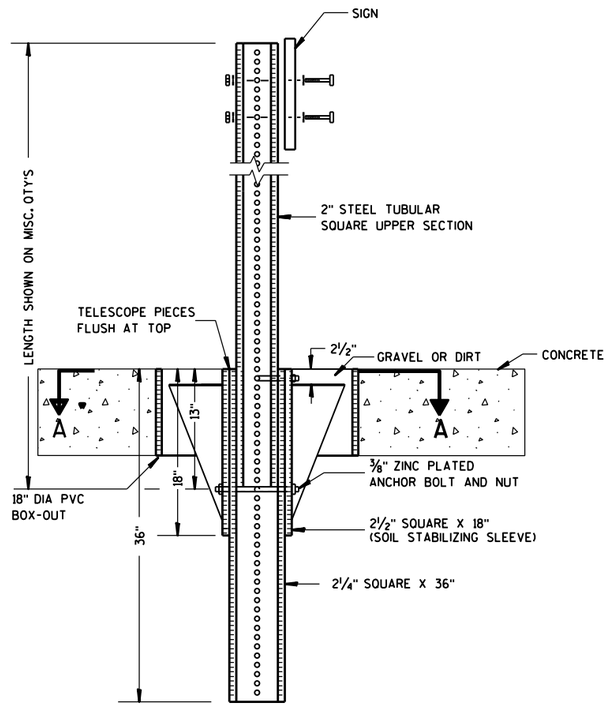
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

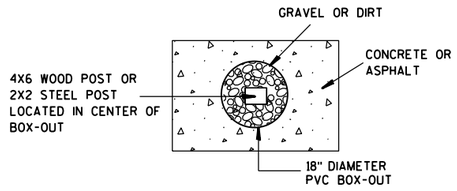
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

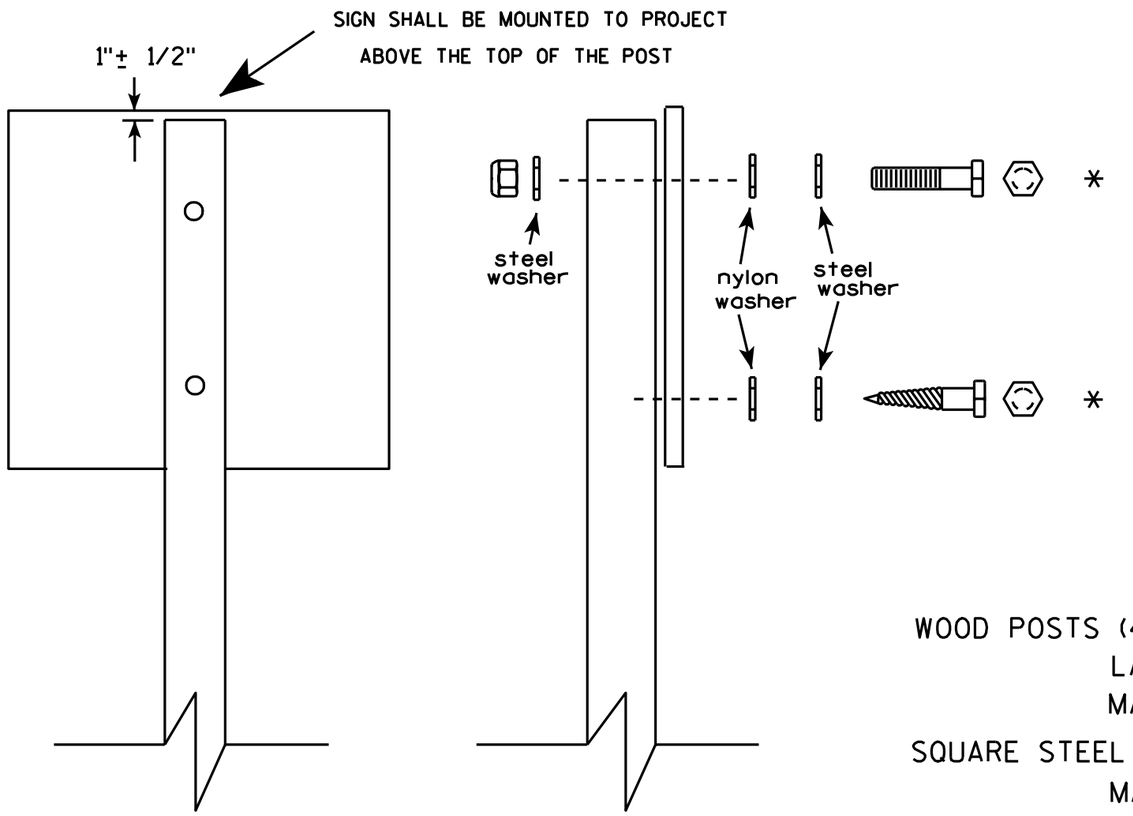
SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

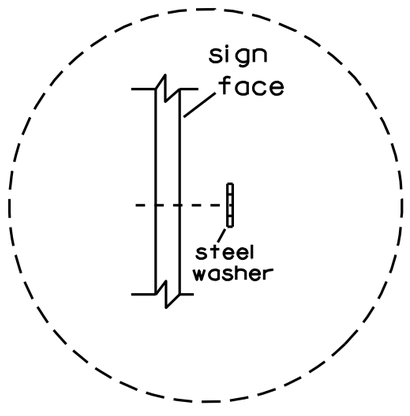
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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.



Washer Placement when Sign Has Other Than Type H or Type F Face

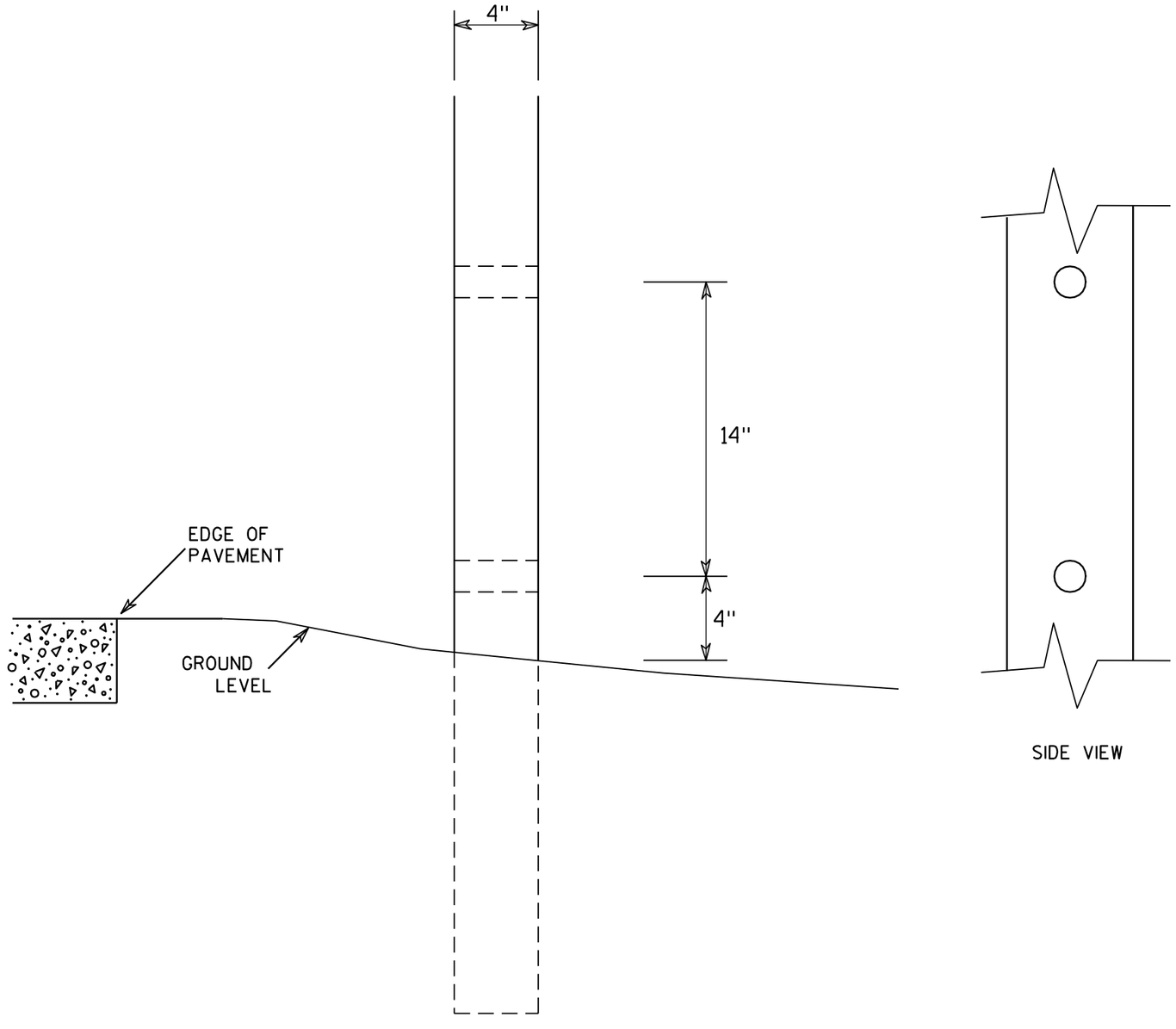
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/10 PLATE NO. A4-8.7



SIDE VIEW

GENERAL NOTES

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

7

7

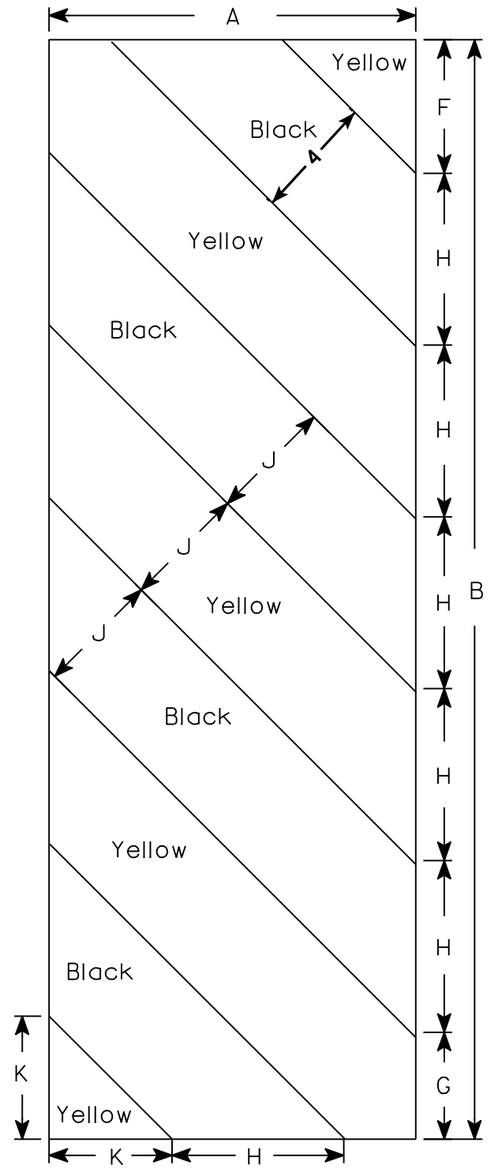
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

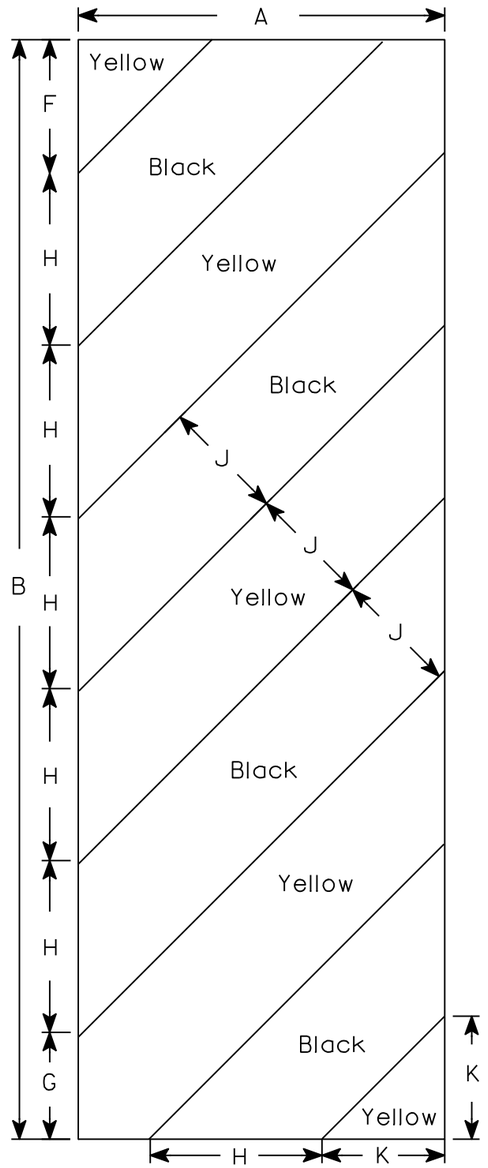
APPROVED Chester J Spang
for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 35	E



W5-52L



W5-52R

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

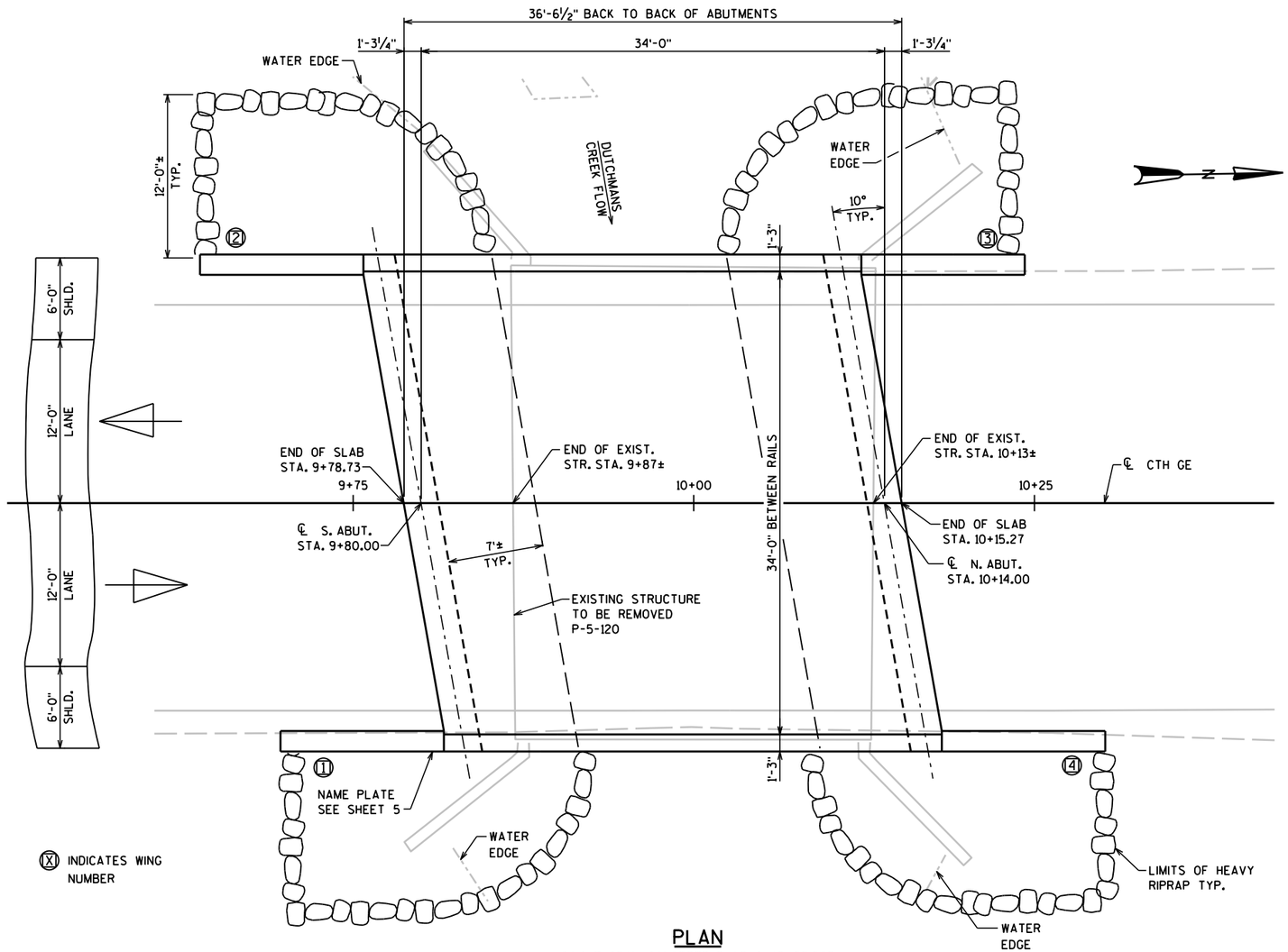
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 36 | E

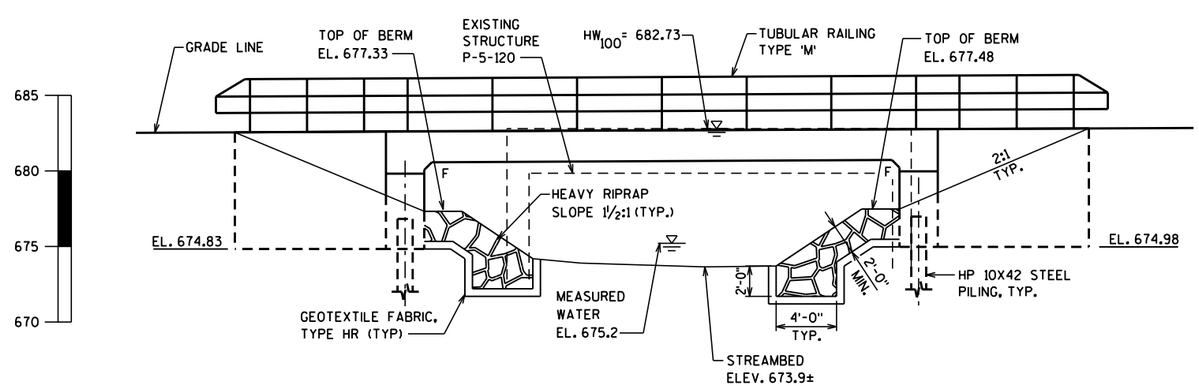
7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W552.DGN PLOT DATE : 29-MAY-2012 13:03 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.961899:1.000000
WISDOT/CADDS SHEET 42



PLAN

SINGLE SPAN CONCRETE FLAT SLAB BRIDGE



ELEVATION

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION, QUANTITIES, & PROFILE
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. SUPERSTRUCTURE
9. SUPERSTRUCTURE DETAILS
10. RAILING TUBULAR TYPE 'M'

TRAFFIC DATA

ADT = 2,160 (2016)
2,350 (2036)
RDS = 60 M.P.H.

DESIGN DATA

STRUCTURE IS DESIGNED FOR FUTURE WEARING SURFACE OF 20#/SQ. FT.

LIVE LOAD:

DESIGN LOADING	HL-93
INVENTORY RATING FACTOR	RF = 1.06
OPERATING RATING FACTOR	RF = 1.39
MAX. STD. PERMIT VEHICLE LOAD	250 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY	
SUPERSTRUCTURE	f'c = 4,000 PSI
ALL OTHER	f'c = 3,500 PSI
HIGH STRENGTH BAR STEEL	
REINFORCEMENT, GRADE 60	fy = 60,000 PSI

HYDRAULIC DATA

Q_{100}	1350 C.F.S.
VELOCITY	8.0 F.P.S.
HIGH WATER	EL. 682.73 (100 YEAR)
HIGH WATER	EL. 678.77 (2 YEAR)
WATERWAY AREA	169 S.F.
DRAINAGE AREA	11.1 SQ. MILES

OVERTOPPING FREQUENCY = N/A
SCOUR CRITICAL CODE = 8

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS ** PER PILE. ESTIMATED LENGTH = 50' AT EACH ABUTMENT.

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

2/11/2015

CONSULTANT CONTACT

KRISTOFER OLSON
OMNNI ASSOCIATES, INC.
(920) 735-6900

BRIDGE OFFICE CONTACT

WILLIAM DREHER
(608) 266-8489

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY OMNNI ASSOCIATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher NK 06/23/15
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STATE PROJECT NUMBER
9265-07-71

STRUCTURE B-5-410

CTH GE OVER DUTCHMANS CREEK

COUNTY	BROWN
VILLAGE	HOBART
DESIGN SPEC.	AASHTO LRFD BRIDGE DESIGN SPECIFICATION
LOAD	HL-93
DESIGNED BY	BRE
DESIGN CK'D.	KRO
DRAWN BY	BRE
PLANS CK'D.	KRO

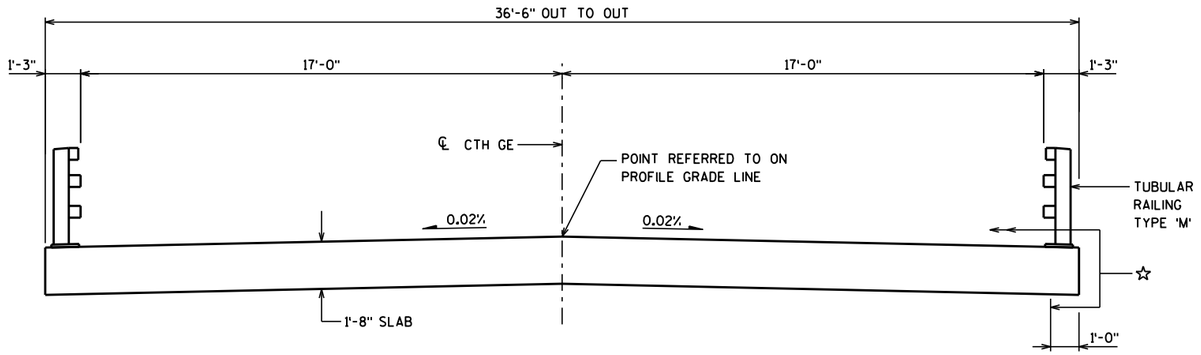
GENERAL PLAN

SHEET 1 OF 10

37

8

FILE NAME : F:±TR±JOBS±E2058A12±Sheets±Bridge±B-5-410 01 gp.dgn
PLOT BY : epleyb PLOT DATE: 2/11/2015 10:27:21 AM



CROSS SECT. THRU RDWY.

LOOKING UPSTATION

☆ APPLY PROTECTIVE
SURFACE TREATMENT

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR SUBSTRUCTURE, UNLESS ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

THE CHANNEL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE FABRIC TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

THIS BRIDGE WILL REPLACE THE EXISTING CONCRETE SLAB BRIDGE SUPPORTED ON CONCRETE RETAINING ABUTMENTS. THE STRUCTURE WAS BUILT IN 1929.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BENDING DIMENSIONS FOR REINFORCING ARE OUT TO OUT.

AT THE BACKFACE OF ABUTMENTS, ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE EXISTING GROUND LINE SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP, SIDES, AND 1'-0" OF THE UNDERSIDE OF THE DECK.

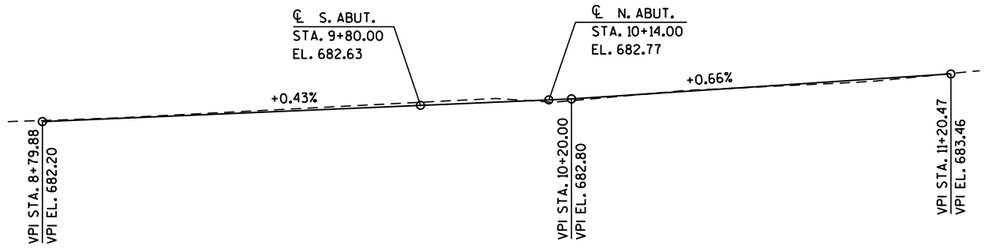
AT ABUTMENTS CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

BENCH MARKS (NAVD 88)

NO.	STATION	DESCRIPTION	ELEV.
1	5+18, 45' RT.	RR SPIKE IN POWER POLE #2319-24W5	683.35
2	8+43, 50' RT.	60D NAIL IN POWER POLE #2319-24W4	680.76
3	12+20, 45' RT.	60D NAIL IN POWER POLE #2319-24W3	683.64

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STA 10+00)	LS	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES (B-5-410)	LS	-----	-----	-----	1
210.0100	BACKFILL STRUCTURE	CY	-----	68	68	136
502.0100	CONCRETE MASONRY BRIDGES	CY	88	35	35	158
502.3200	PROTECTIVE SURFACE TREATMENT	SY	170	-----	-----	170
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	-----	2,120	2,120	4,240
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	14,720	1,640	1,640	18,000
513.4060	RAILING TUBULAR TYPE M (B-5-410)	LS	1	-----	-----	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-----	10	10	20
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	-----	250	250	500
606.0300	RIPRAP HEAVY	CY	-----	65	65	130
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-----	70	70	140
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	-----	89	89	178
	NON-BID ITEMS					
	FILLER	SIZE	——	——	——	1/2"&3/4"



PROFILE GRADE LINE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-5-410

DRAWN BY BRE | PLANS CK'D. KRO

CROSS SECTION, QUANTITIES, & PROFILE

SHEET 2 OF 10

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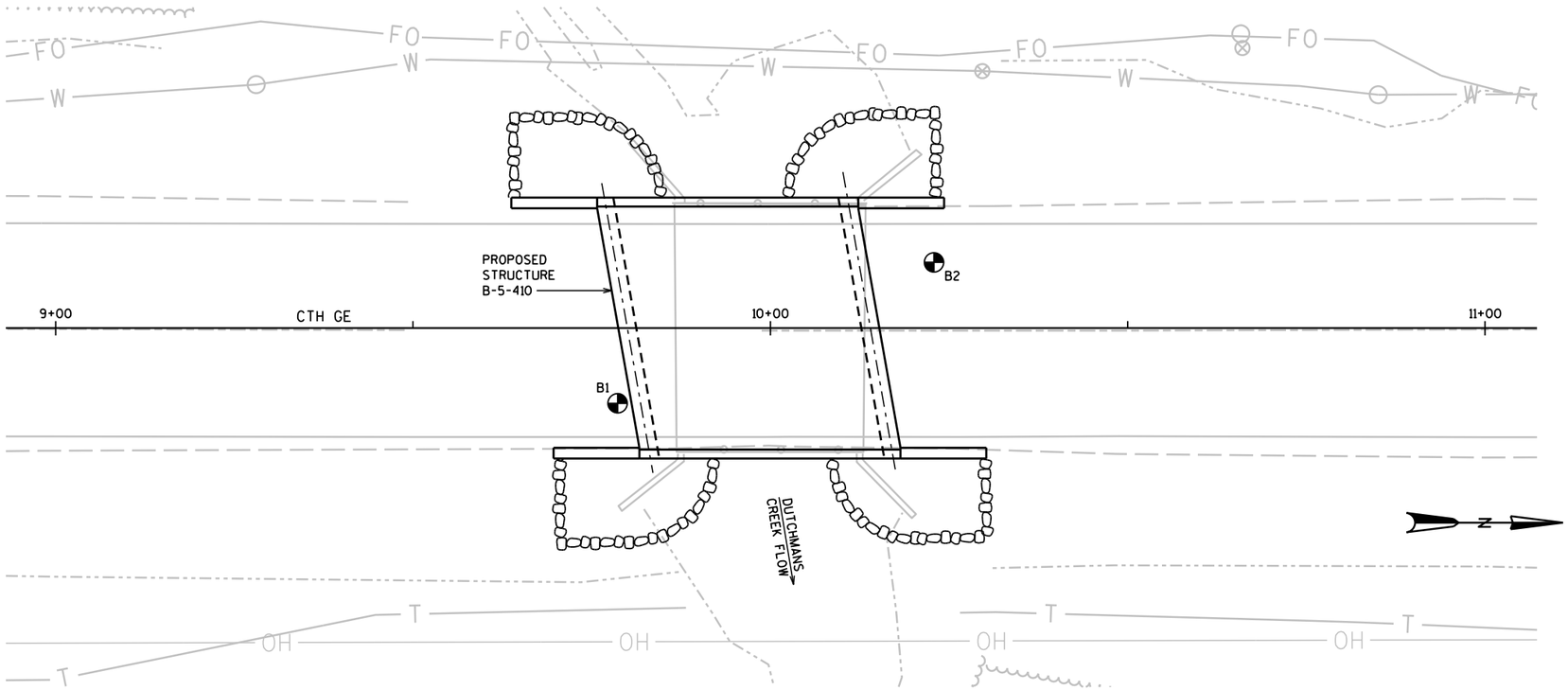
8

8

STATE PROJECT NUMBER
9265-07-71



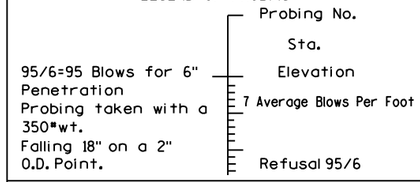
ABBREVIATIONS

F — Fine M — Medium C — Coarse
Ws — Weathered So — Sound

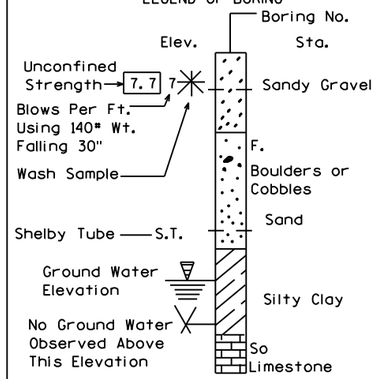
MATERIAL SYMBOLS

Topsoil, Silt, Sandstone
Sand, Peat, Limestone
Gravel, Clay, Igneous Rock

LEGEND OF PROBING



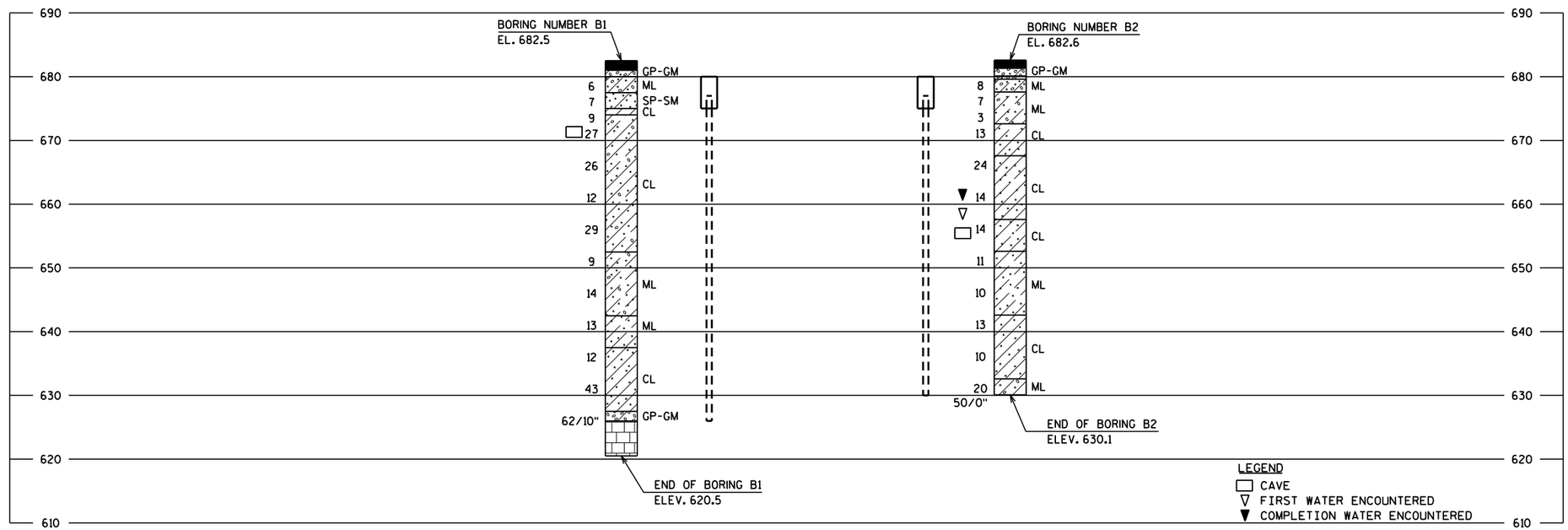
LEGEND OF BORING



Unless otherwise specified, the blows per foot at the locations indicated are based on driving a O.D. x 1. 4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-5-410

DRAWN BY BRE PLANS CK'D. KRO

SUBSURFACE EXPLORATION

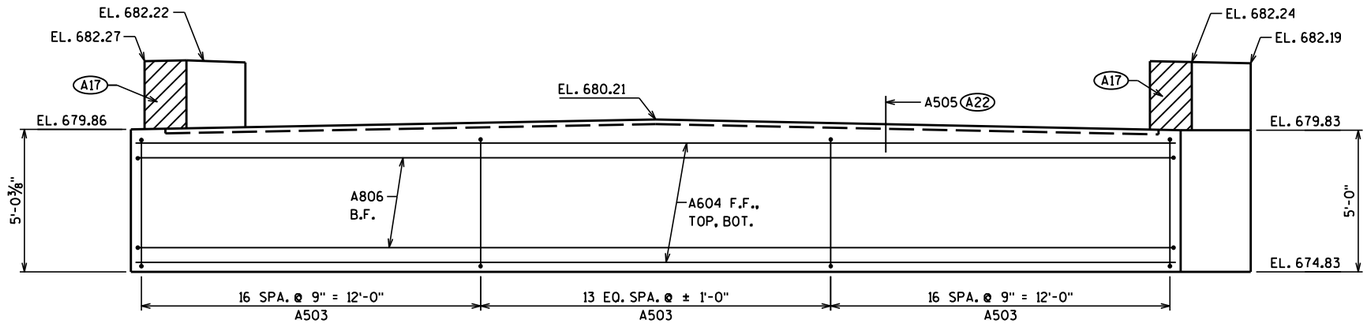
SHEET 3 OF 10

39

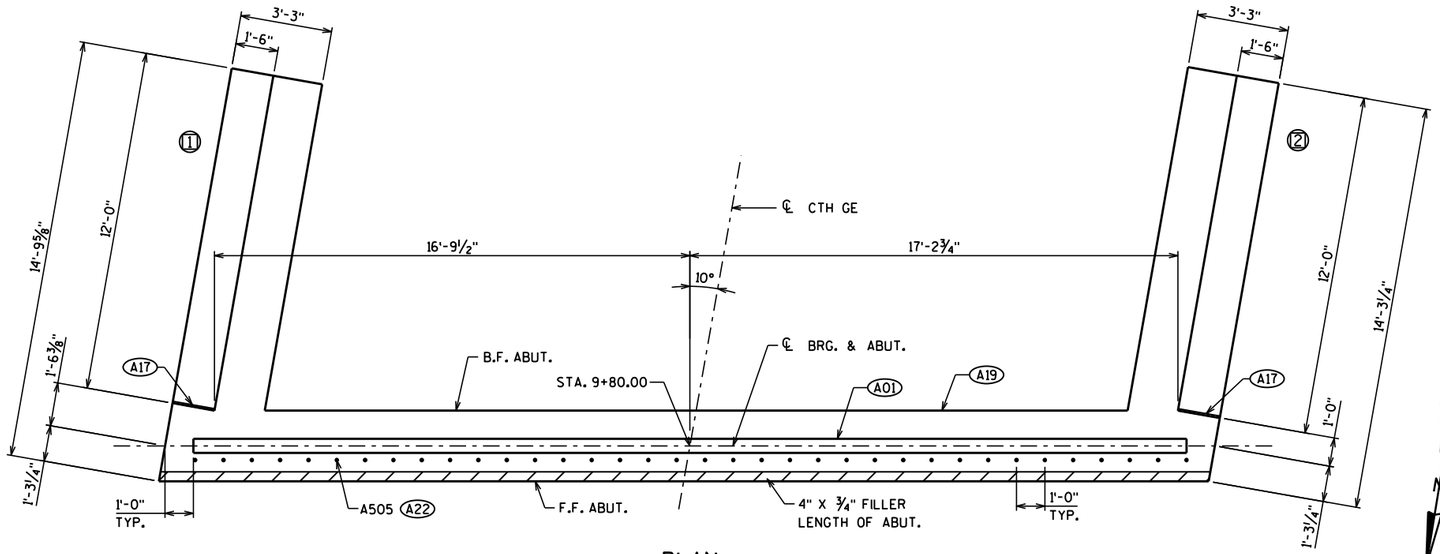
8

8

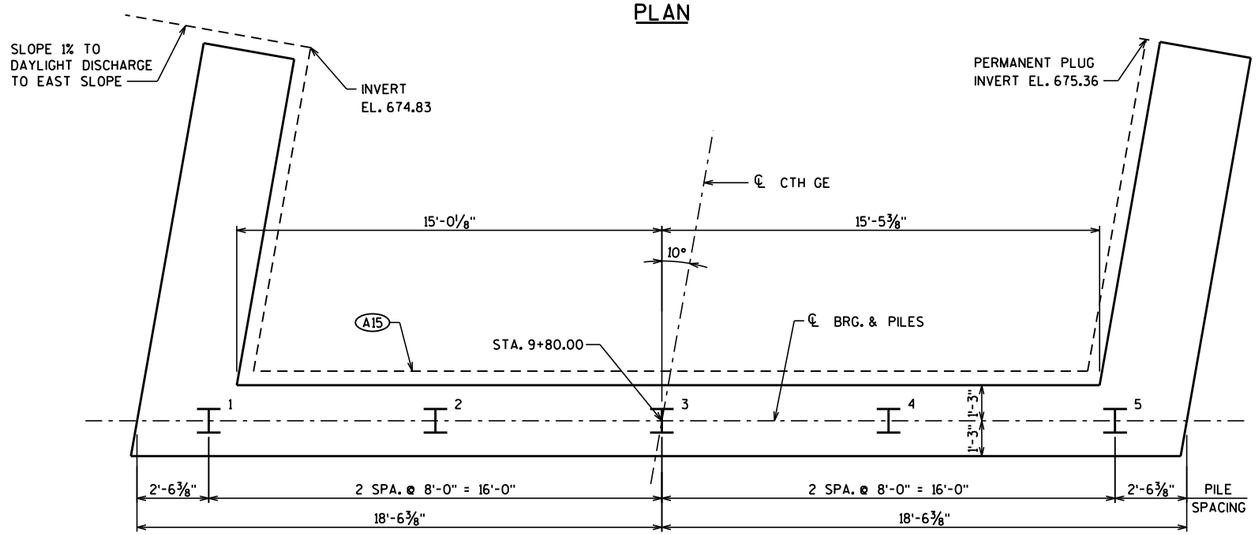
STATE PROJECT NUMBER
9265-07-71



ELEVATION



PLAN



PILE PLAN

LEGEND

(A01) KEYED CONST. JOINT FORMED BY BEVELED 2" x 6".

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN, SEE SHEET 5 FOR DETAILS.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

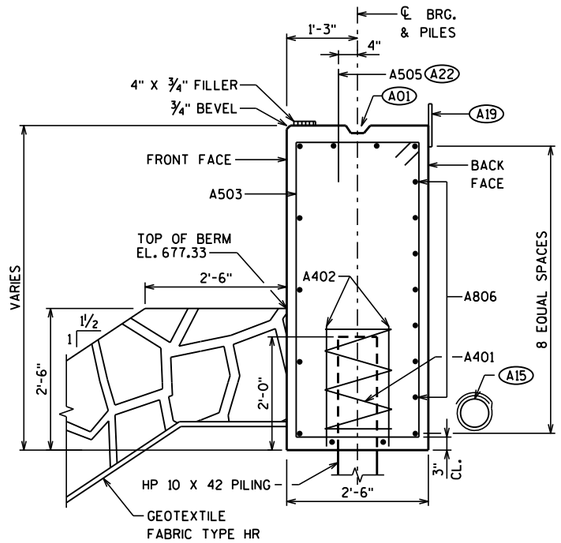
(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

(A22) A505 BARS AT 1'-0". THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

SEE SHEET 5 FOR BILL OF BARS, BAR BENDING DIAGRAMS AND PILE SPLICE DETAILS.

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE.

(X) INDICATES WING NUMBER



SECTION THRU BODY

HORIZ. BARS NOT OTHERWISE IDENTIFIED ARE A604 BARS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-5-410

DRAWN BY BRE | PLANS CK'D. KRO

SOUTH ABUTMENT

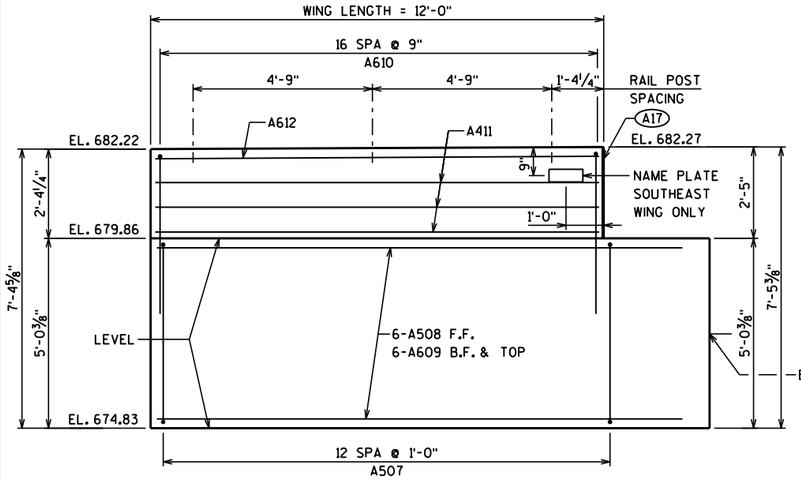
SHEET 4 OF 10

40

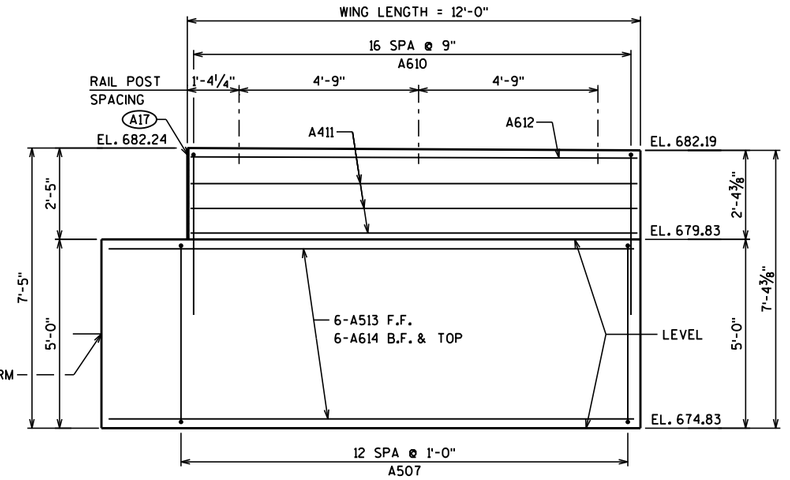
8

8

STATE PROJECT NUMBER
9265-07-71



WING 1 ELEVATION



WING 2 ELEVATION

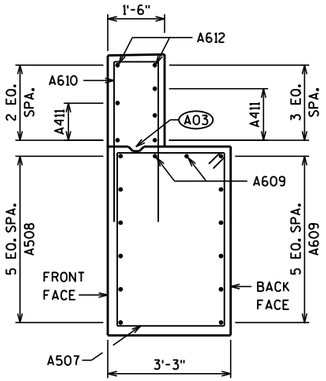
LEGEND

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" R.M.W. @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

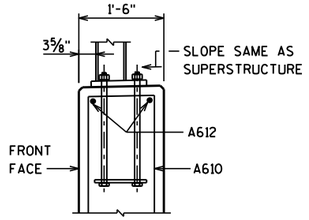
(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

BILL OF BARS

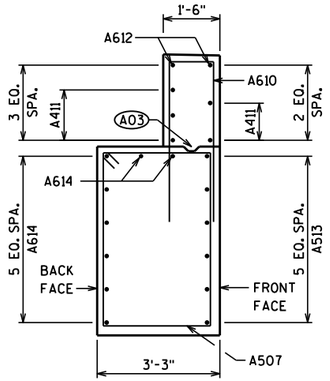
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A401		5	28'-0"	X	BODY - ONE PER PILE
A402		10	2'-3"		BODY - TWO PER PILE
A503		46	14'-2"	X	BODY - STIRRUPS
A604		11	36'-8"		BODY - HORIZONTAL
A505	X	36	2'-0"		BODY - VERTICAL, DOWEL
A806		7	38'-11"	X	BODY - HORIZONTAL B.F.
A507	X	26	15'-8"	X	WINGS - STIRRUPS
A508	X	6	14'-5"		WING 1 - HORIZONTAL, F.F.
A609	X	8	13'-8"		WING 1 - HORIZONTAL, B.F. & TOP
A610	X	34	9'-6"	X	WINGS - VERTICAL
A411	X	10	11'-7"		WINGS - HORIZONTAL
A612	X	4	11'-7"		WINGS - HORIZONTAL, TOP
A513	X	6	13'-11"		WING 2 - HORIZONTAL, F.F.
A614	X	8	14'-3"		WING 2 - HORIZONTAL, B.F. & TOP



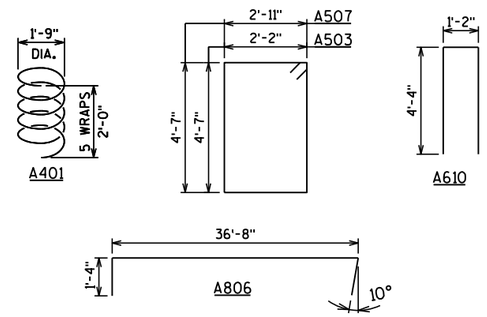
WING 1 SECTION



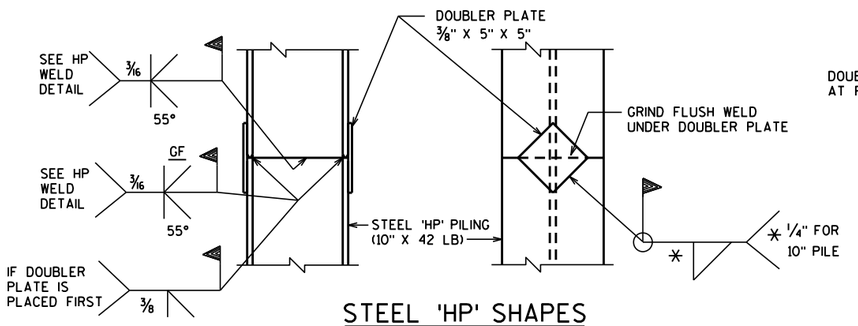
TYPE 'M' RAIL AT TOP OF WING



WING 2 SECTION

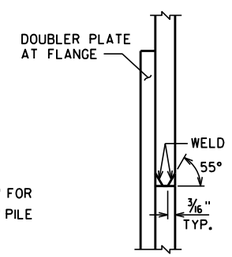


BAR BENDING DIAGRAMS



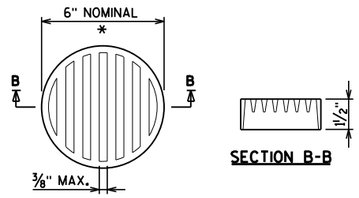
STEEL 'HP' SHAPES

STEEL 'HP' PILE MATERIAL SHALL BE A.S.T.M. DESIGNATION A36.



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR



RODENT SCREEN DETAIL

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

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-5-410

DRAWN BY BRE | PLANS CK'D. KRO

SOUTH ABUTMENT DETAILS

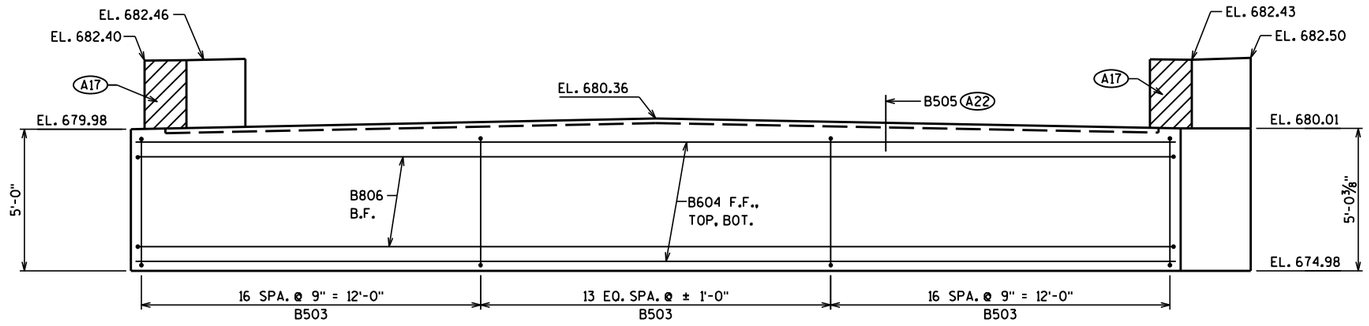
SHEET 5 OF 10

41

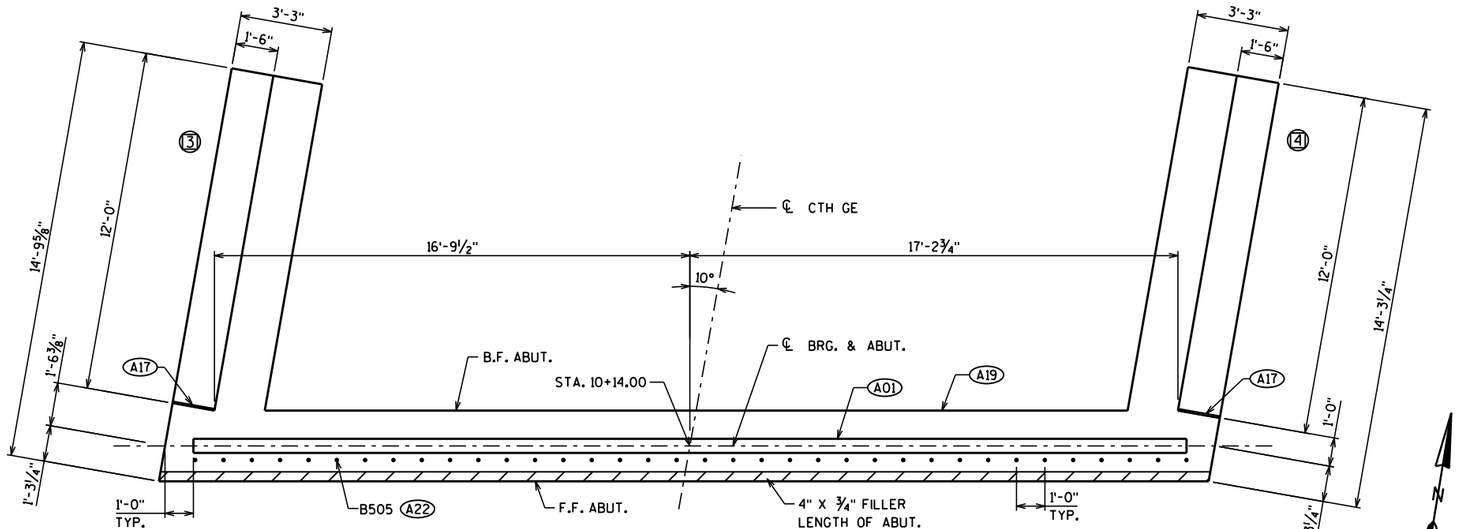
8

8

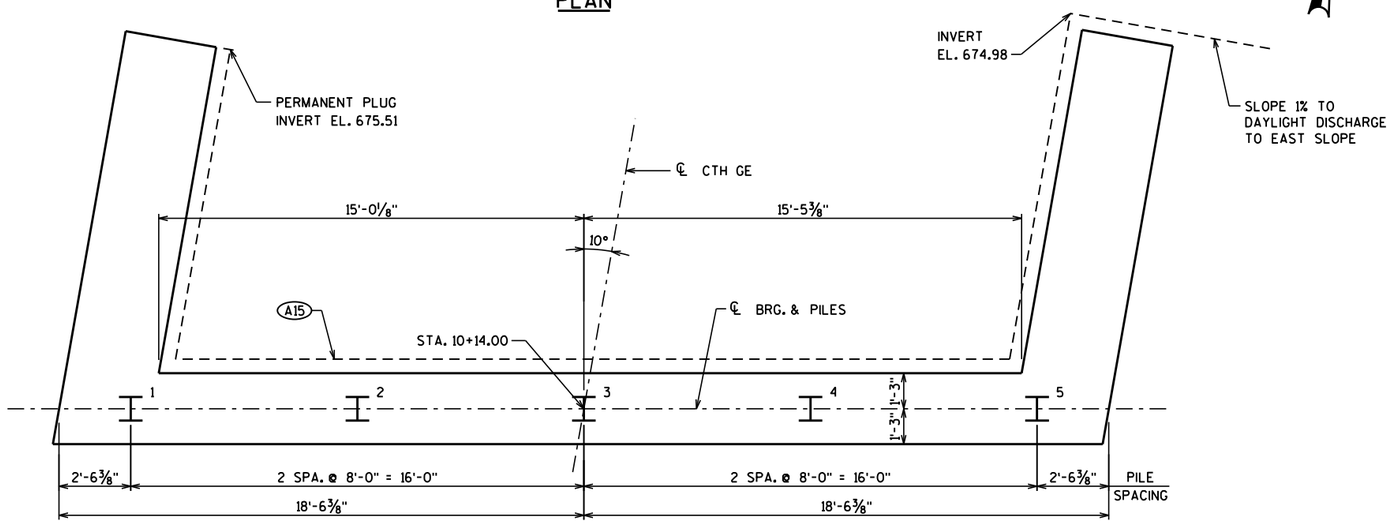
STATE PROJECT NUMBER
9265-07-71



ELEVATION



PLAN



PILE PLAN

LEGEND

(A01) KEYED CONST. JOINT FORMED BY BEVELED 2" x 6".

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN, SEE SHEET 7 FOR DETAILS.

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

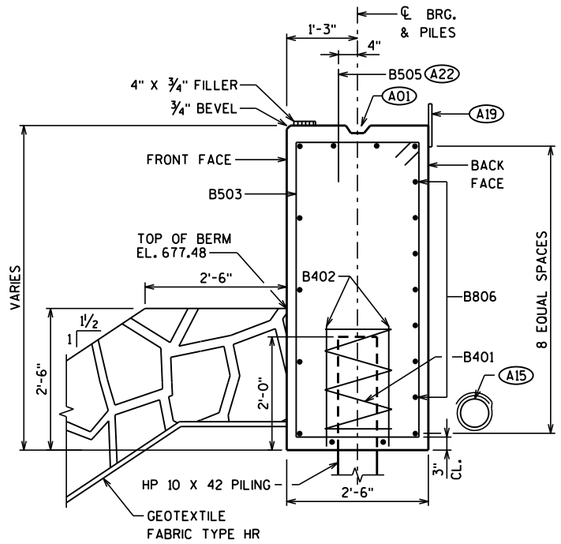
(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

(A22) B505 BARS AT 1'-0". THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

SEE SHEET 7 FOR BILL OF BARS, BAR BENDING DIAGRAMS AND PILE SPLICE DETAILS.

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE.

(X) INDICATES WING NUMBER



SECTION THRU BODY

HORIZ. BARS NOT OTHERWISE IDENTIFIED ARE B604 BARS

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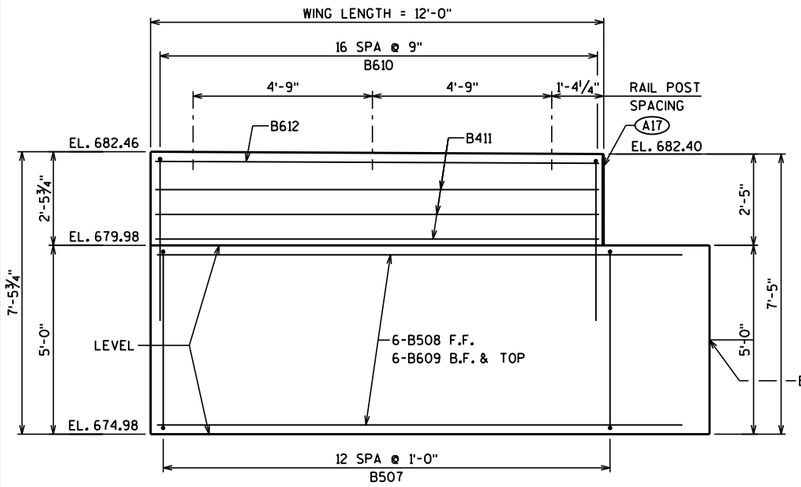
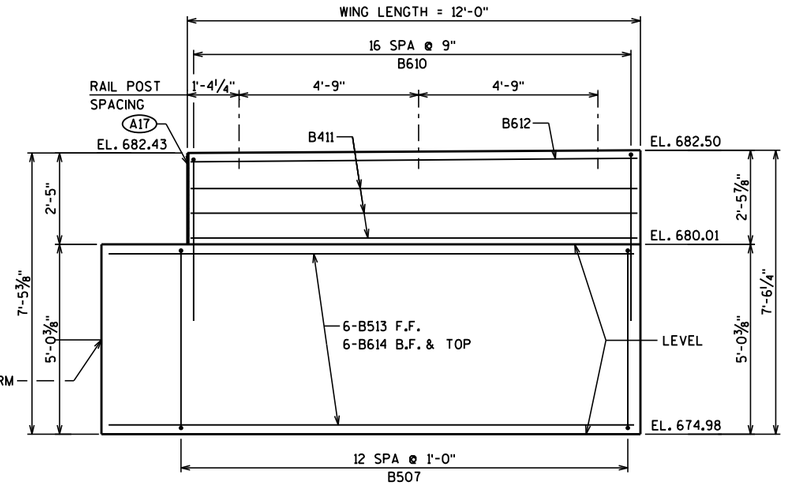
LEGEND

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" R.M.W. @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.) EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.



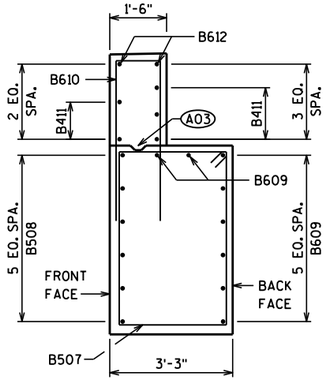
WING 3 ELEVATION



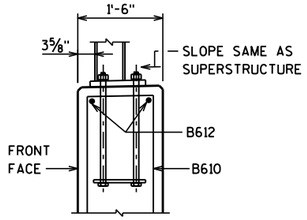
WING 4 ELEVATION

BILL OF BARS

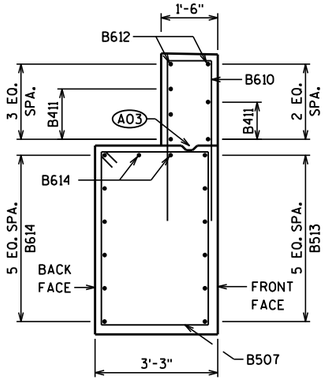
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
B401		5	28'-0"	X	BODY - ONE PER PILE
B402		10	2'-3"		BODY - TWO PER PILE
B503		46	14'-2"	X	BODY - STIRRUPS
B604		11	36'-8"		BODY - HORIZONTAL
B505	X	36	2'-0"		BODY - VERTICAL, DOWEL
B806		7	38'-11"	X	BODY - HORIZONTAL B.F.
B507	X	26	15'-8"	X	WINGS - STIRRUPS
B508	X	6	14'-5"		WING 3 - HORIZONTAL, F.F.
B609	X	8	13'-8"		WING 3 - HORIZONTAL, B.F. & TOP
B610	X	34	9'-6"	X	WINGS - VERTICAL
B411	X	10	11'-7"		WINGS - HORIZONTAL
B612	X	4	11'-7"		WINGS - HORIZONTAL, TOP
B513	X	6	13'-11"		WING 4 - HORIZONTAL, F.F.
B614	X	8	14'-3"		WING 4 - HORIZONTAL, B.F. & TOP



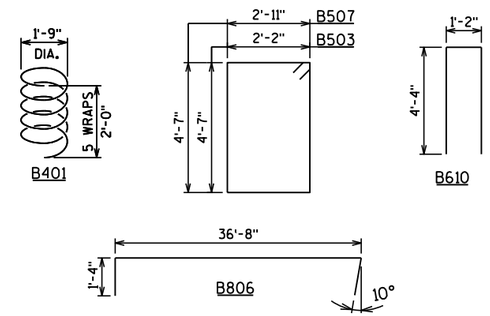
WING 3 SECTION



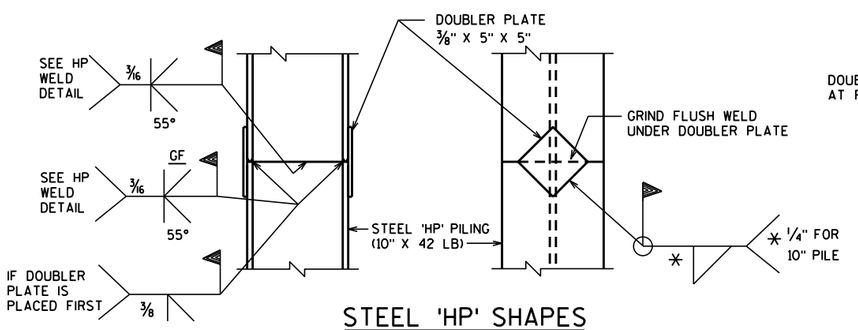
TYPE 'M' RAIL AT TOP OF WING



WING 4 SECTION

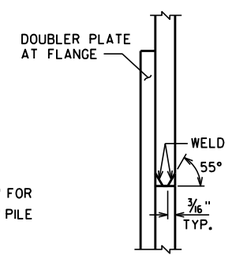


BAR BENDING DIAGRAMS



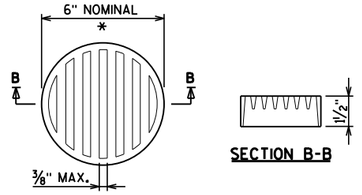
STEEL 'HP' SHAPES

STEEL 'HP' PILE MATERIAL SHALL BE A.S.T.M. DESIGNATION A36.



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR



RODENT SCREEN DETAIL

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

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

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

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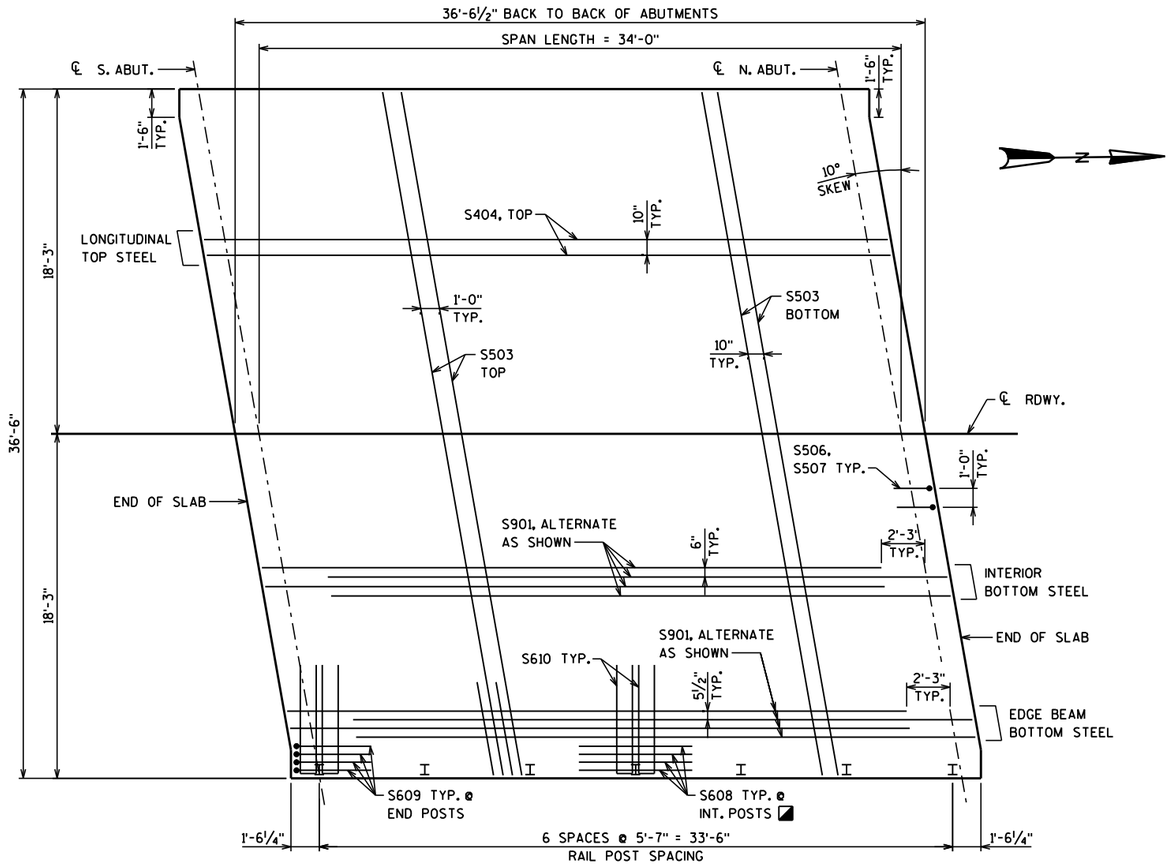
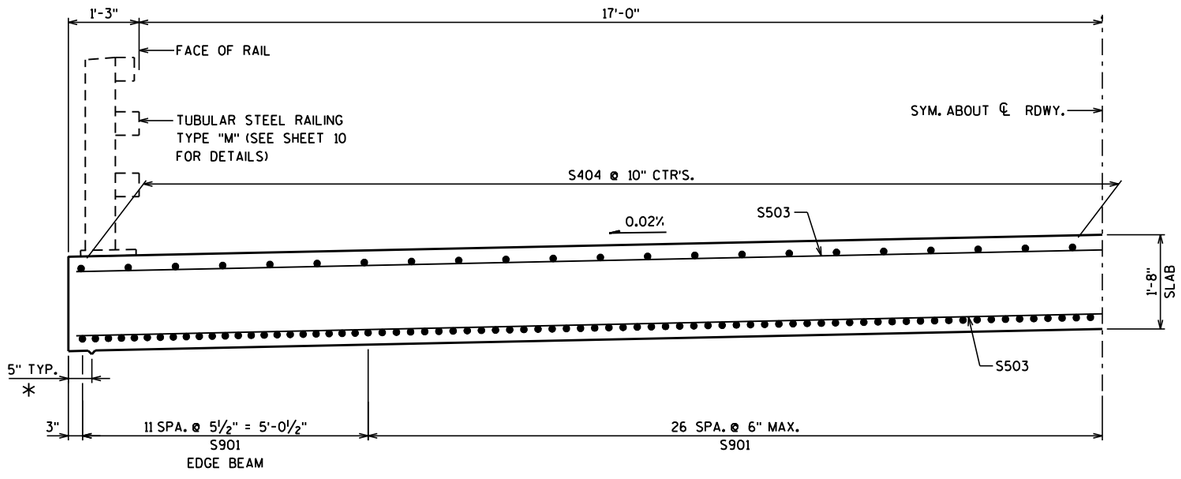


PLAN



CROSS SECTION THRU ROADWAY

NOTES

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

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE ℄ OF SUBSTRUCTURE UNITS.

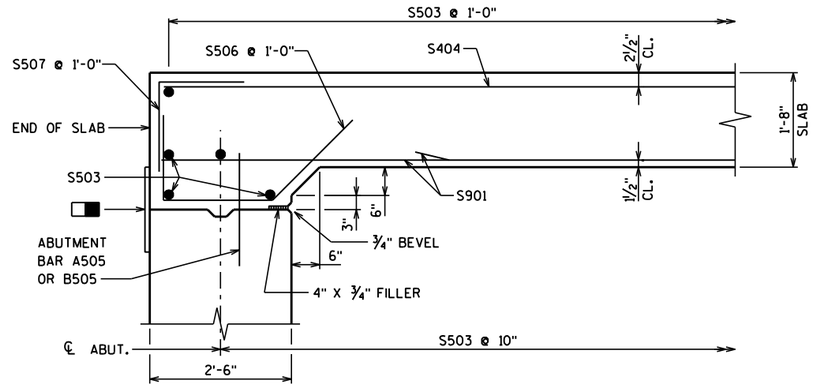
ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

* ¾" V-DRIP EDGE. EXTEND V-DRIP EDGE TO 3" FROM FRONT FACE OF ABUTMENT DIAPHRAGM.

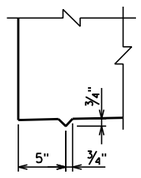
18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

PLACE BELOW AND TIE TO TOP MAT OF STEEL.

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, AND AT 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR ℄.



LONG. SECTION THRU RDWY.



* ¾" V-DRIP EDGE DETAIL

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SUPERSTRUCTURE

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FILE NAME : F:±TR±JOBS±E2058A12±Sheets±Bridge±B-5-410 08 super.dgn PLOT BY : olsonk PLOT DATE: 2/10/2015 2:35:06 PM

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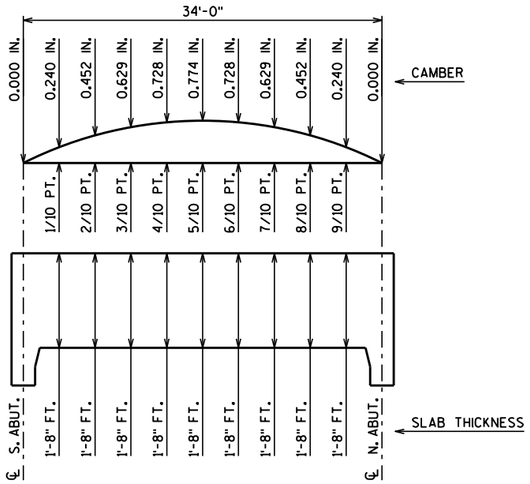
TOP OF DECK ELEVATIONS

LOCATION	S.ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	N.ABUT.
W. EDGE	682.25	682.26	682.28	682.29	682.31	682.32	682.34	682.35	682.37	682.38	682.40
C/L	682.63	682.64	682.66	682.67	682.69	682.70	682.72	682.73	682.74	682.76	682.77
E. EDGE	682.28	682.29	682.31	682.32	682.34	682.35	682.36	682.38	682.39	682.41	682.42

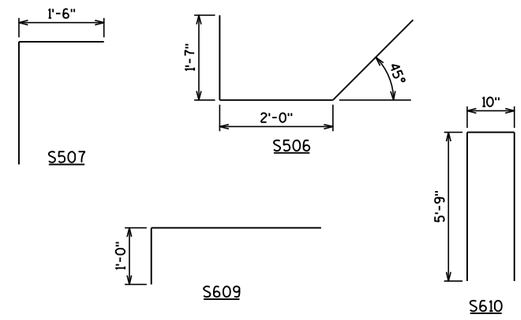


CAMBER DIAGRAM

CAMBER IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S901	X	75	32'-10"		LONGITUDINAL BOTTOM
S503	X	85	36'-8"		TRANSVERSE TOP
S404	X	45	36'-2"		LONGITUDINAL TOP
S506	X	74	5'-7"	X	AT END OF SLAB
S507	X	74	3'-0"	X	AT END OF SLAB
S608	X	80	6'-0"		AT INTERIOR RAIL POSTS
S609	X	16	5'-0"	X	AT END RAIL POSTS
S610	X	28	12'-0"	X	AT RAIL POSTS



BAR BEND DIAGRAMS

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SUPERSTRUCTURE DETAILS

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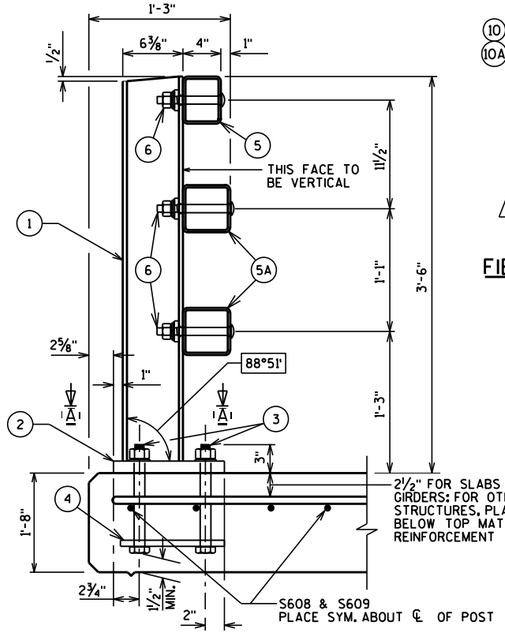
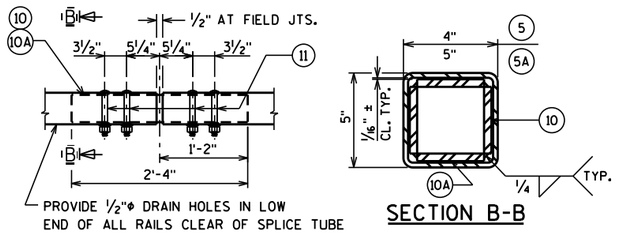
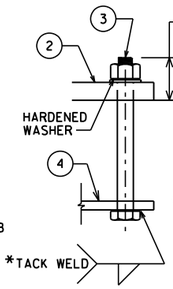


SECTION THRU RAILING ON DECK



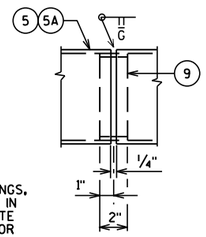
FIELD ERECTION JOINT DETAIL

SECTION B-B



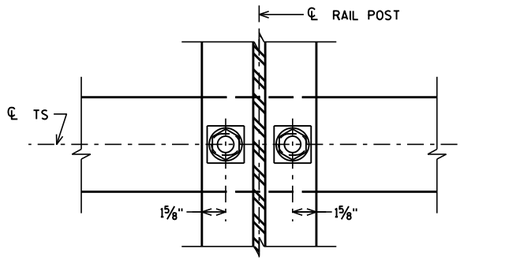
*FOR ANCHOR BOLTS IN WINGS, TACK WELD MAY BE USED IN FIELD AFTER ANCHOR PLATE IS IN POSITION IF REQ'D. FOR CONSTRUCTIBILITY.

ANCHOR BOLTS

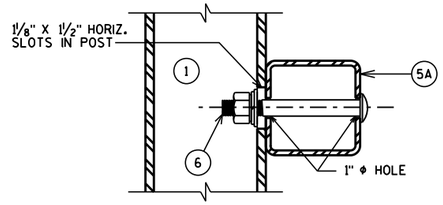


SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



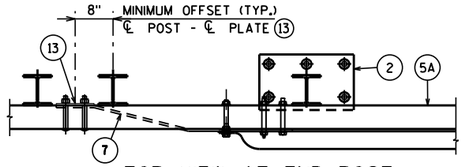
SECTION THRU POST WEB



SECTION THRU RAIL

NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



TOP VIEW AT END POST

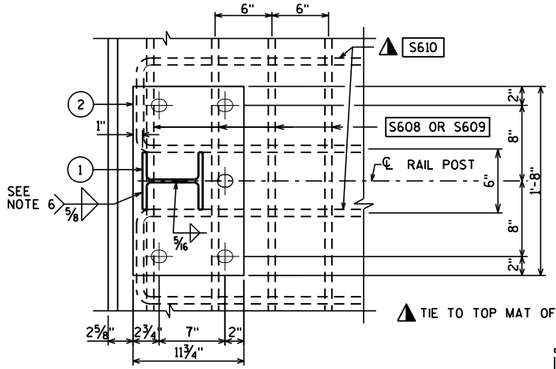
(THRIE BEAM RAIL ATTACHMENT)

LEGEND

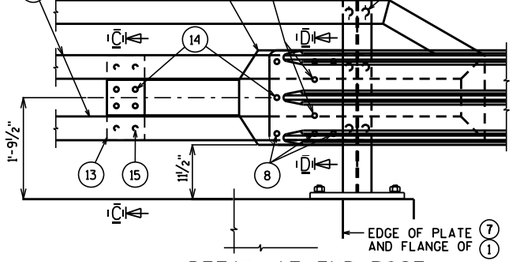
1. W6 x 25 WITH 1⅛" X 1½" HORIZONTAL SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1¼" x 11¾" x 1'-8" WITH 1⅝" X 1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE
3. ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)
4. ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1¾" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1⅝" X 1⅝" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
7. ½" THK. BACK-UP PLATE WITH 2 - ⅞" X 1½" THREADED SHOP WELDED STUDS (ITEM 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
8. 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜" X 3⅝" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. ¾" X 2⅝" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3⅝" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. ⅞" ϕ A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16" X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15/16" X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.
12. ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
13. ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
14. ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER.
15. 1" ϕ HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. 4 HOLES IN TUBES.

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M (B-5-410)" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.
10. WHEN PAINTING IS REQUIRED, ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 3 & 4) SHALL BE PAINTED OVER GALVANIZING WITH APPROVED TIE COAT AND TOP COAT.
11. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).

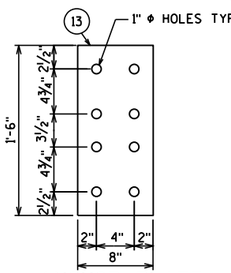


SECTION A-A



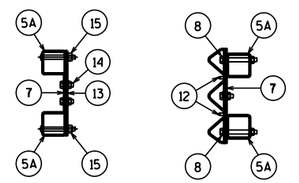
DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)



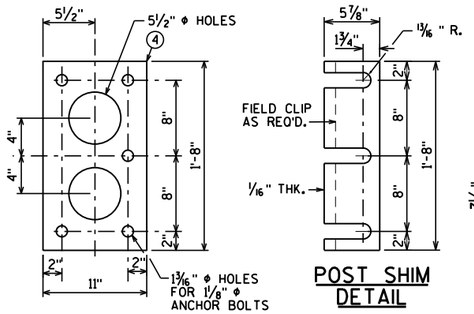
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT



SECTION C-C

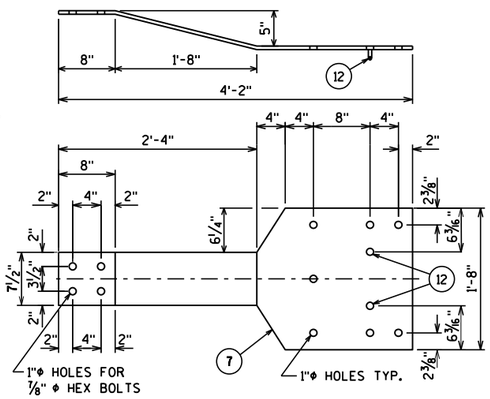
SECTION D-D



ANCHOR PLATE

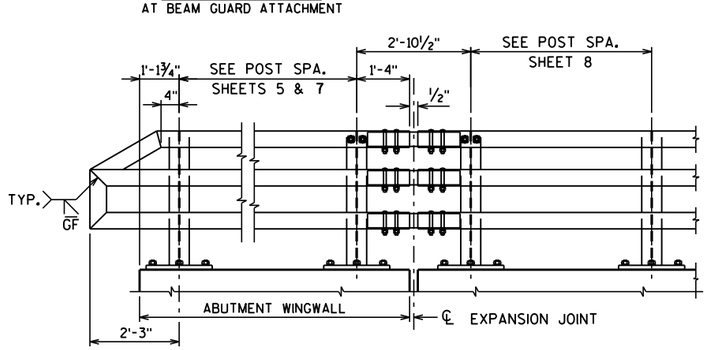
AT RAIL TO DECK CONNECTION

POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-5-410

DRAWN BY BRE | PLANS CK'D. KRO

RAILING TUBULAR TYPE 'M'

SHEET 10 OF 10

46

8

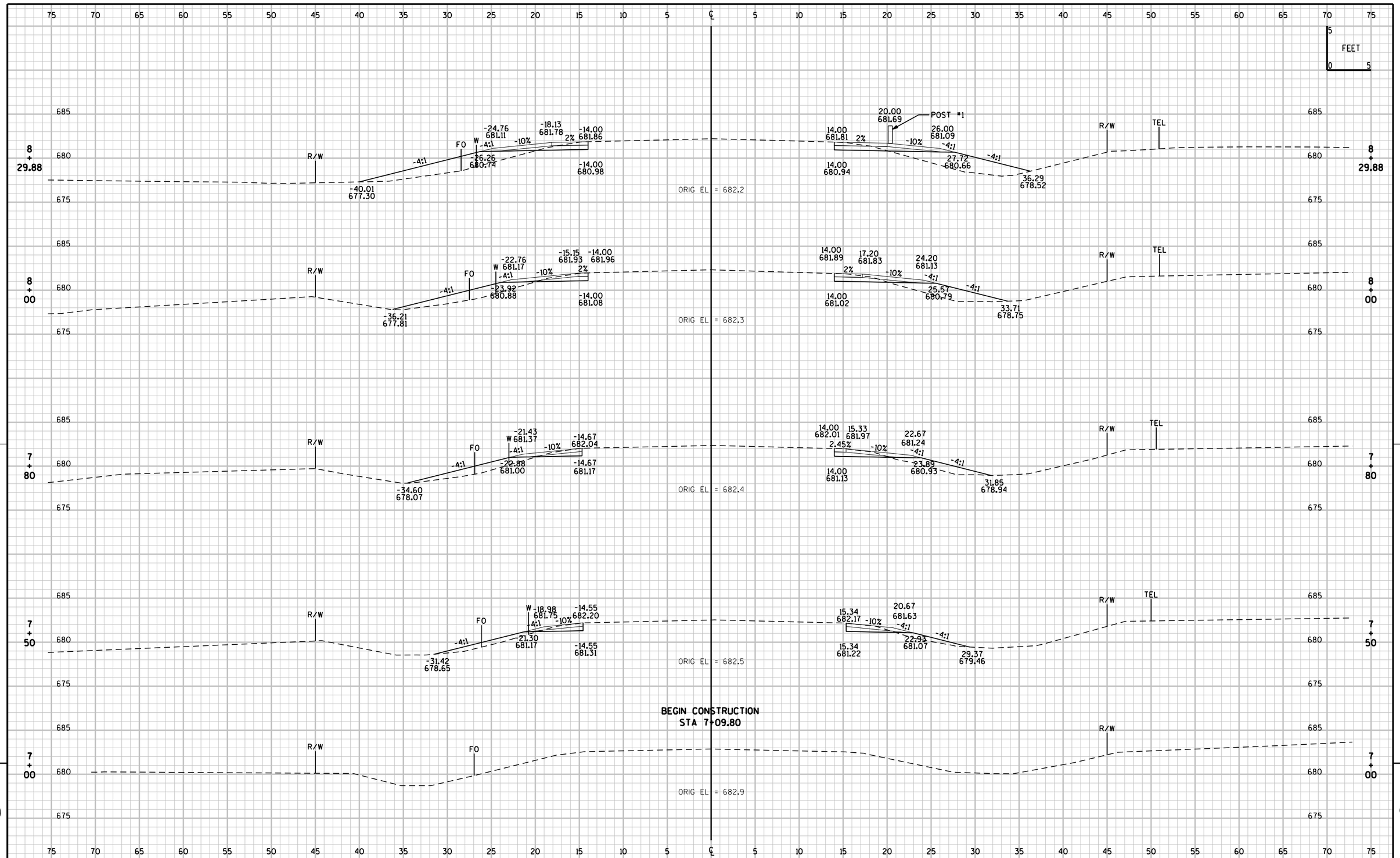
8

CTH GE - SOUTH

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
	Cut	Salvaged/ Unusable Pavement Material	Fill	Cut	Salvaged/ Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.3	
7+10.00	0	0	0	0	0	0	0	0	0
7+50.00	6	0	8	4	0	6	4	8	-3
7+80.00	7	0	16	7	0	13	12	25	-13
8+00.00	7	0	24	5	0	15	17	44	-27
8+48.00	6	0	46	12	0	62	28	125	-97
8+80.00	4	0	27	6	0	43	34	181	-147
8+80.00	73	25	27	0	0	0	34	181	-147
9+00.00	72	25	32	54	19	22	88	210	-140
9+50.00	70	25	55	131	46	81	220	315	-160
9+79.00	70	25	40	75	27	51	295	381	-178
STRUCTURE	0	0	0	0	0	0	295	381	-178
ENDS ABRUPTLY	0	0	0	0	0	0	295	381	-178

CTH GE - NORTH

STATION	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		Mass Ordinate
	Cut	Salvaged/ Unusable Pavement Material	Fill	Cut	Salvaged/ Unusable Pavement Material	Fill	Cut 1.00	Expanded Fill 1.3	
STRUCTURE	0	0	0	0	0	0	0	0	0
BEGINS ABRUPTLY	0	0	0	0	0	0	0	0	0
10+15.00	72	25	21	0	0	0	0	0	0
10+50.00	72	25	21	93	32	27	93	35	26
11+00.00	71	25	11	132	46	30	226	74	73
11+20.00	74	25	13	54	19	9	279	85	97
11+20.00	16	0	13	0	0	0	279	85	97
11+39.00	16	0	25	11	0	13	291	103	91
11+45.00	8	0	46	3	0	8	293	113	83
11+50.00	9	0	28	2	0	7	295	122	76
11+62.00	14	0	10	5	0	8	300	133	70
11+90.00	10	0	0	12	0	5	313	140	76



9

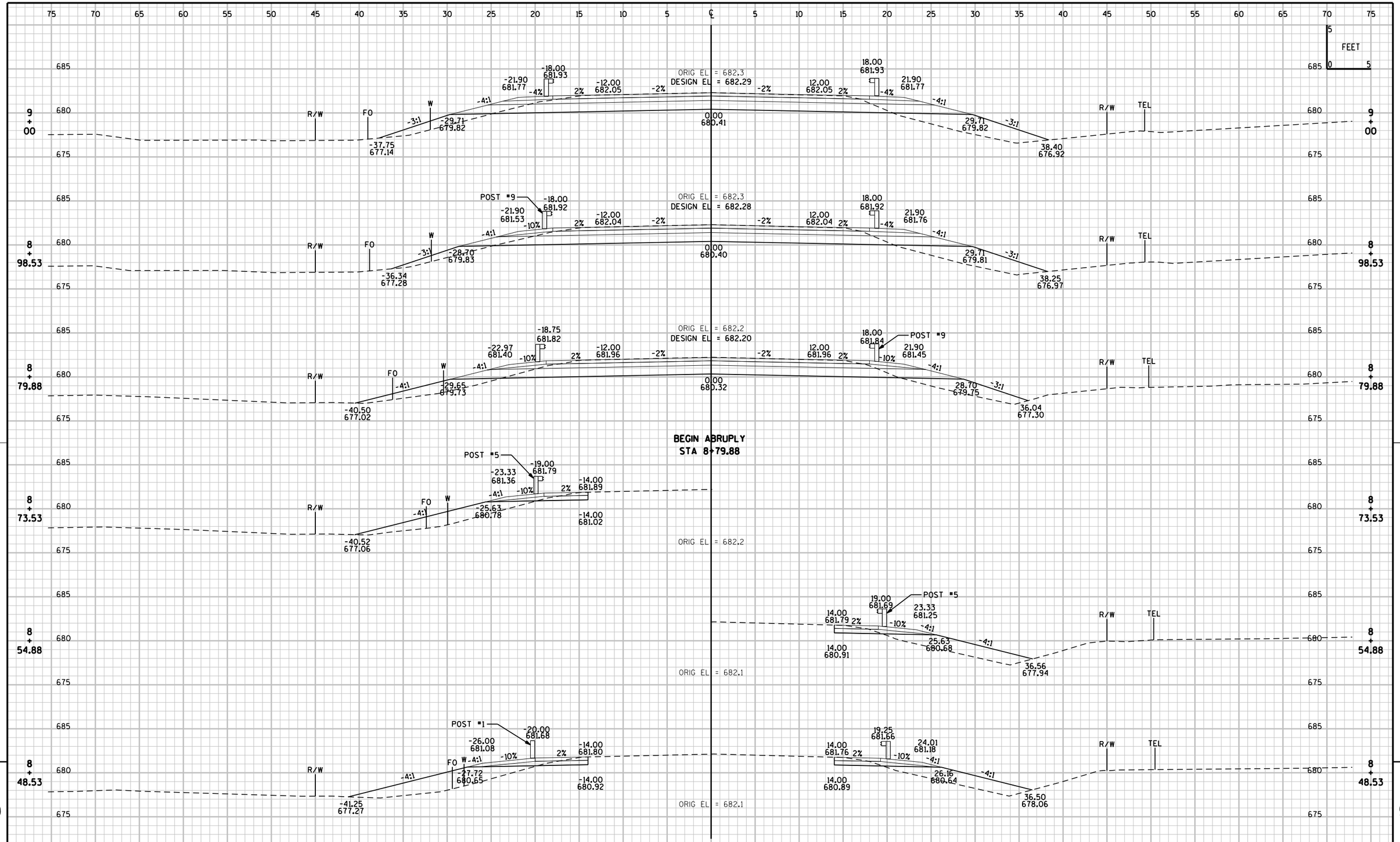
9

PROJECT NO: 9265-07-71	HWY: CTH GE	COUNTY: BROWN	CROSS SECTIONS: CTH GE	SHEET 48	E

9.2

FILE NAME : F:\TR\JOBS\E2058A12\Sheets\Plan\090201_xs.dgn PLOT DATE : 2/11/2015 10:30:25 AM PLOT BY : OMNNI - perryd PLOT NAME : PLOT SCALE : 2.00 " / IN.

WISDOT/CADDS SHEET 21



PROJECT NO: 9265-07-71	HWY: CTH GE	COUNTY: BROWN	CROSS SECTIONS: CTH GE	SHEET 49	E	9.3

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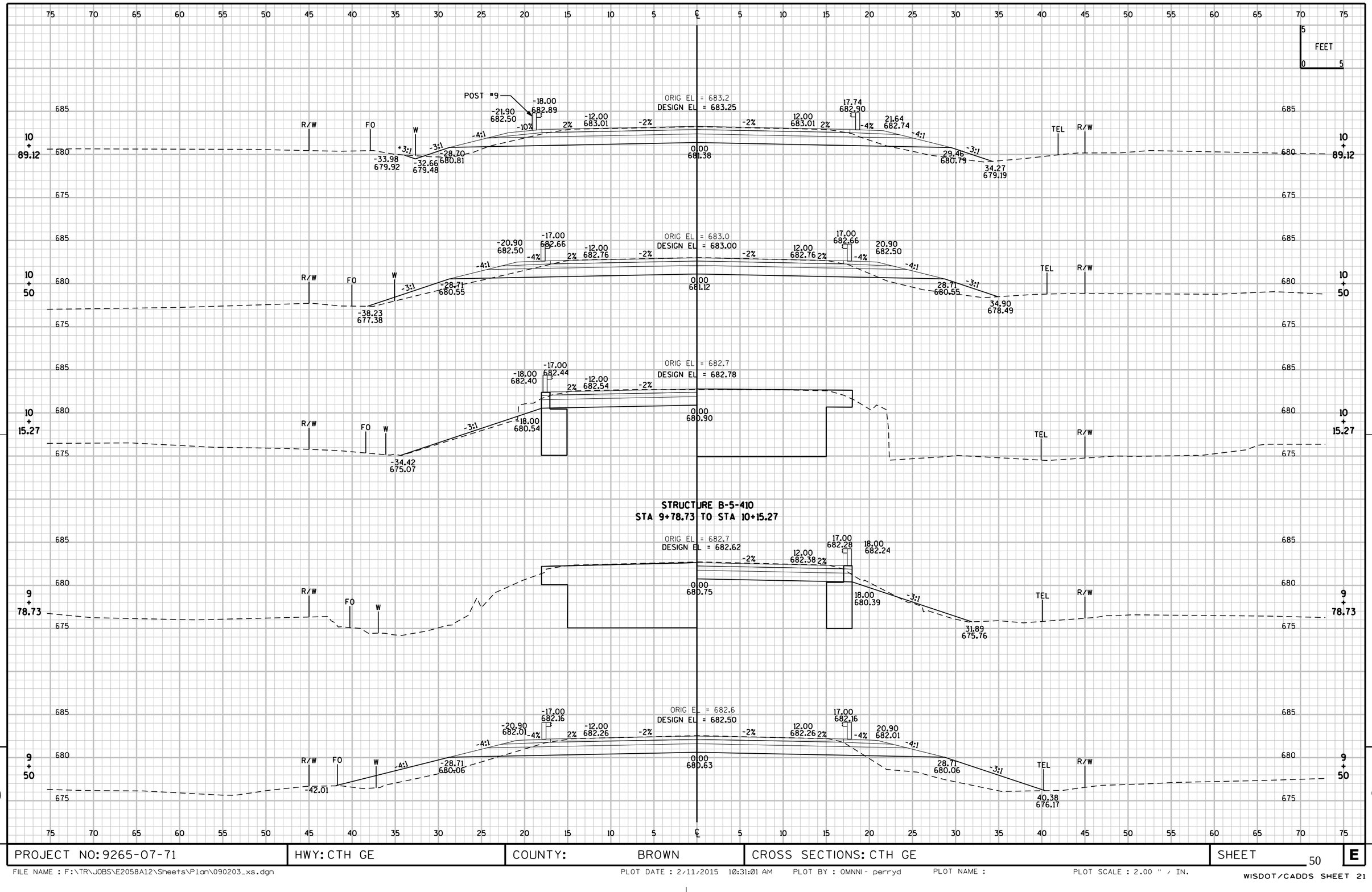
WISDOT/CADDS SHEET 21



9

PROJECT NO: 9265-07-71	HWY: CTH GE	COUNTY: BROWN	CROSS SECTIONS: CTH GE	SHEET 50	E	9.4

FILE NAME : F:\TR\JOBS\E2058A12\Sheets\Plan\090203_xs.dgn
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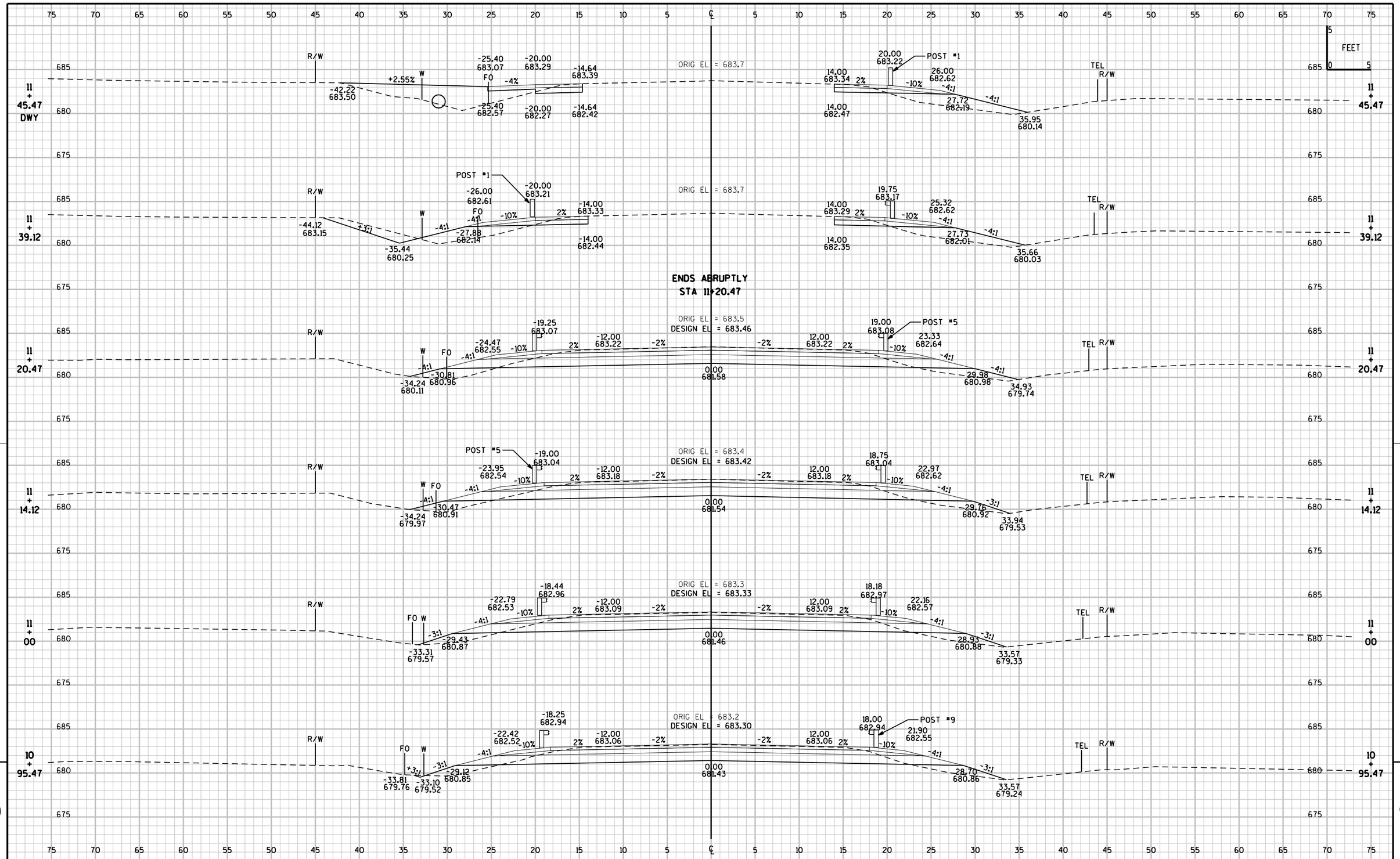
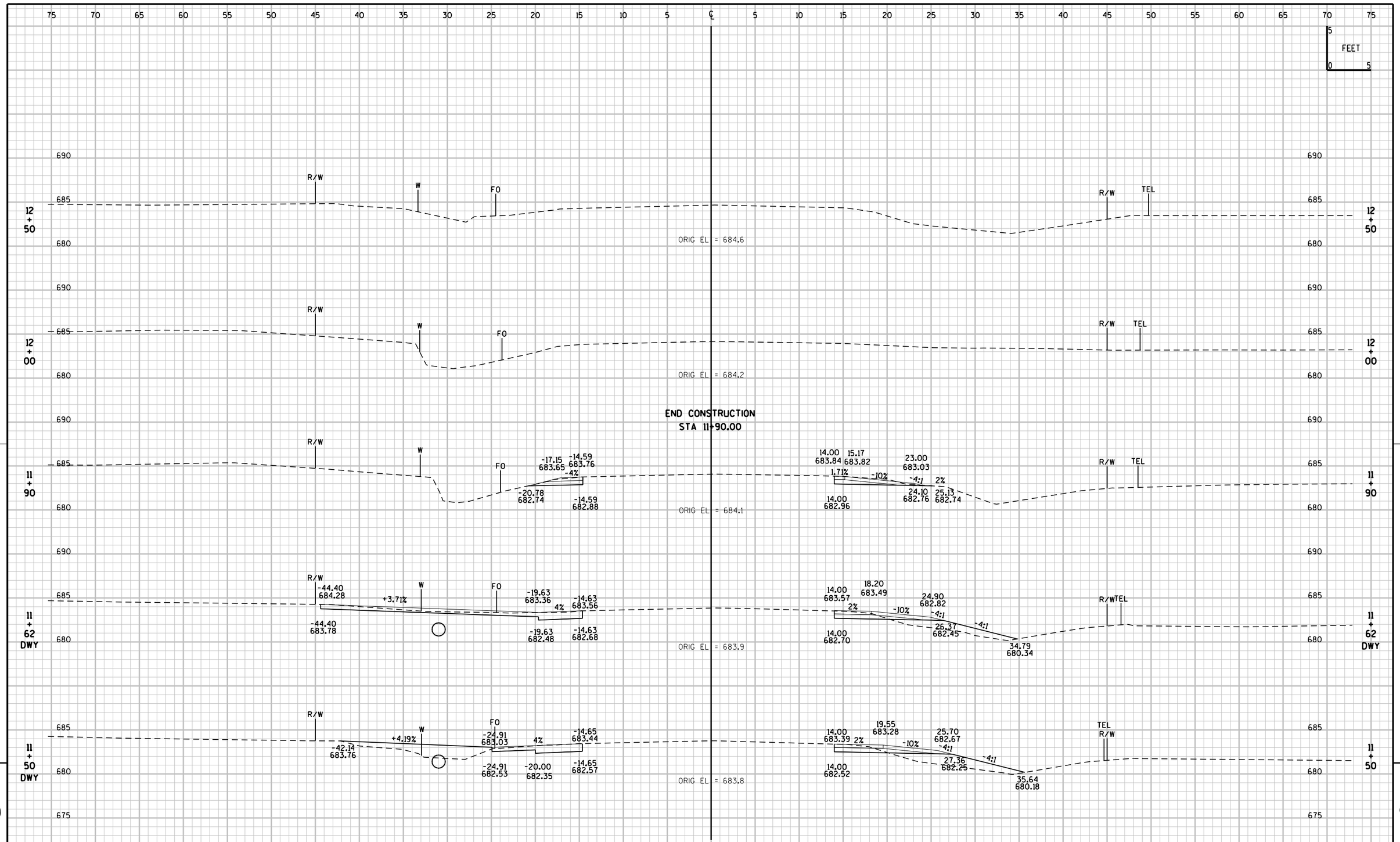
WISDOT/CADDS SHEET 21



PROJECT NO: 9265-07-71	HWY: CTH GE	COUNTY: BROWN	CROSS SECTIONS: CTH GE	SHEET 51	E	9.5

FILE NAME : F:\TR\JOBS\E2058A12\Sheets\Plan\090204_xs.dgn PLOT DATE : 2/11/2015 10:31:41 AM PLOT BY : OMNNI - perryd PLOT NAME : PLOT SCALE : 2.00 " / IN.

WISDOT/CADDS SHEET 21



9

9

PROJECT NO: 9265-07-71	HWY: CTH GE	COUNTY: BROWN	CROSS SECTIONS: CTH GE	SHEET 52	E	9.6

FILE NAME : F:\TR\JOBS\E2058A12\Sheets\Plan\090205_xs.dgn PLOT DATE : 2/11/2015 10:32:15 AM PLOT BY : OMNNI- perryd PLOT NAME : PLOT SCALE : 2.00 " / IN.
WISDOT/CADDS SHEET 21

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov