

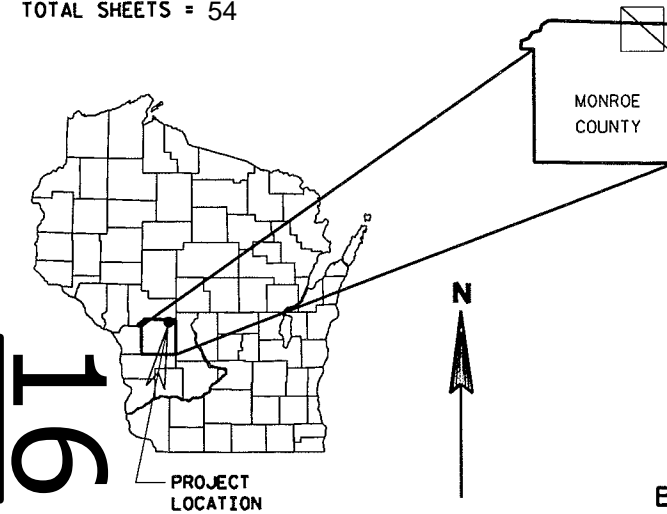
SWL
PROJECT ID: 7373-00-73
WITH: N/A

MAY 2013

ORDER OF SHEETS

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

TOTAL SHEETS = 54



DESIGN DESIGNATION

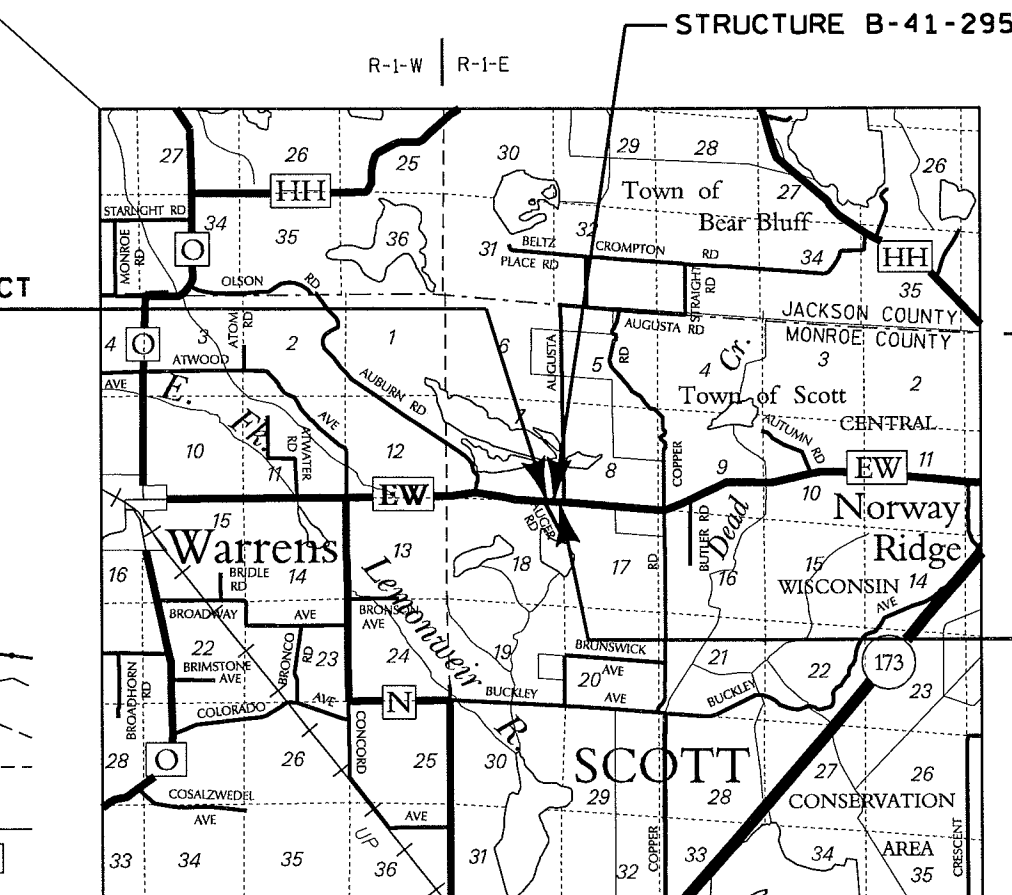
A.D.T. (2013)	=	310
A.D.T. (2033)	=	370
D.H.V.	=	30
D.	=	50/50
T.	=	7.8
DESIGN SPEED	=	60 MPH
ESALS	=	N/A

CONVENTIONAL SYMBOLS
PLAN

CORPORATE LIMITS	PL + 58.1
PROPERTY LINE	PL + 58.1
LOT LINE	PL + 58.1
LIMITED HIGHWAY EASEMENT	PL + 58.1
EXISTING RIGHT OF WAY	PL + 58.1
PROPOSED OR NEW R/W LINE	PL + 58.1
SLOPE INTERCEPT	PL + 58.1
REFERENCE LINE	PL + 58.1
EXISTING CULVERT	PL + 58.1
PROPOSED CULVERT (Box or Pipe)	PL + 58.1
COMBUSTIBLE FLUIDS	CAUTION
HIGH VOLTAGE	CAUTION
MARSH AREA	PL + 58.1
WOODED OR SHRUB AREA	PL + 58.1

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

BEGIN PROJECT
STA. 8+50
Y = 447989.21
X = 730241.44



LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.062 MI.

T-20-N
T-19-N

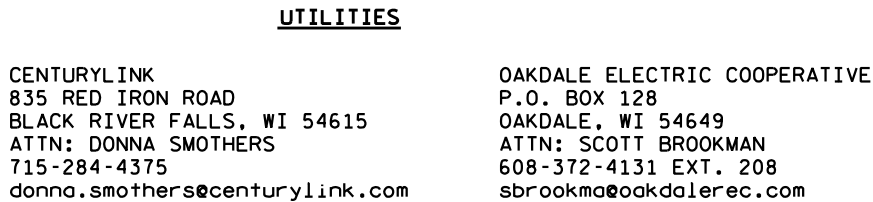
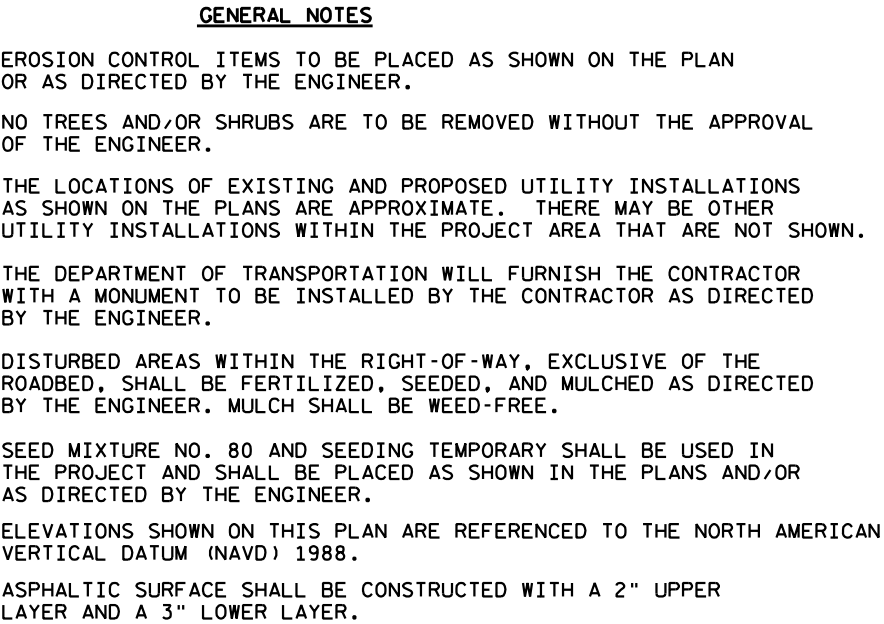
END PROJECT
STA. 11+75
Y = 447976.85
X = 730566.20

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
WARRENS - STH 173
(BRANCH EAST FORK LEMONWEIR RIVER BRIDGE B-41-0295)
CTH EW
MONROE COUNTY

STATE PROJECT NUMBER
7373-00-73

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7373-00-73		

ACCEPTED FOR	
County	Monroe
Date	01/15/2013
County Highway Commissioner	
ORIGINAL PLANS PREPARED BY	
AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com	
WISCONSIN PROFESSIONAL ENGINEER	
DANIEL N. SYDOW E-38363 WI	
DATE 01/28/2013	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	AYRES ASSOCIATES INC
Surveyor	AYRES ASSOCIATES INC
Designer	
Management Consultant	K. JOHNSON ENGINEERS, INC.
C.O. Examiner	
APPROVED FOR THE DEPARTMENT	
DATE: 1/30/13	Kimberly A. Johnson Management Consultant Signature

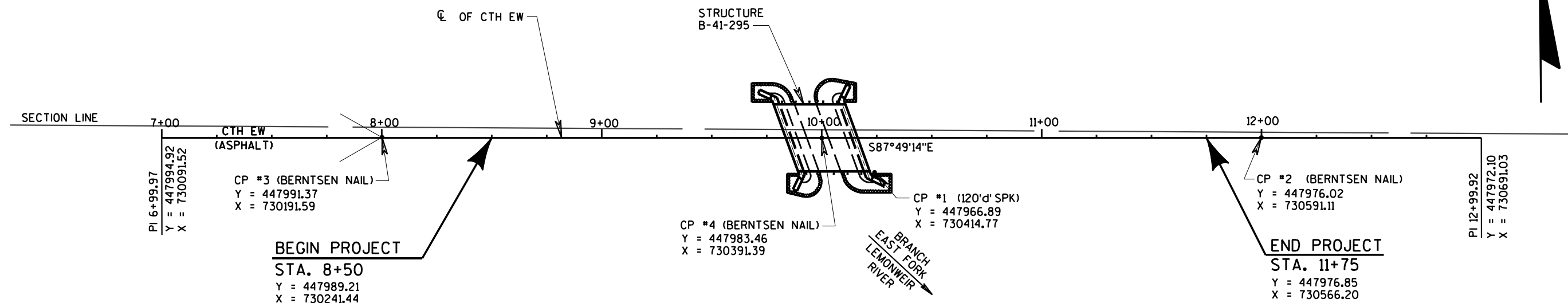
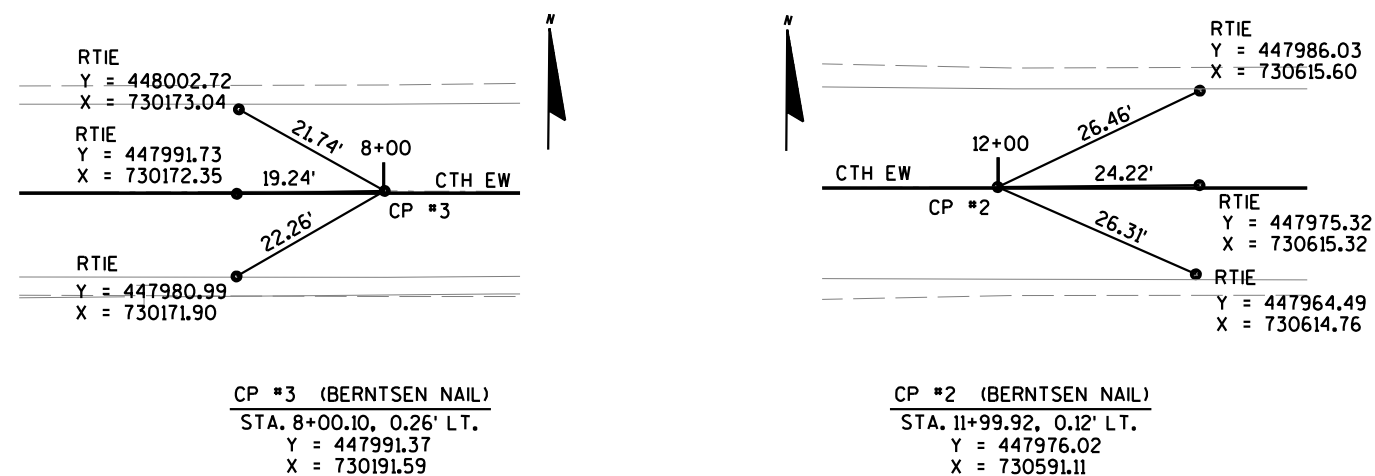
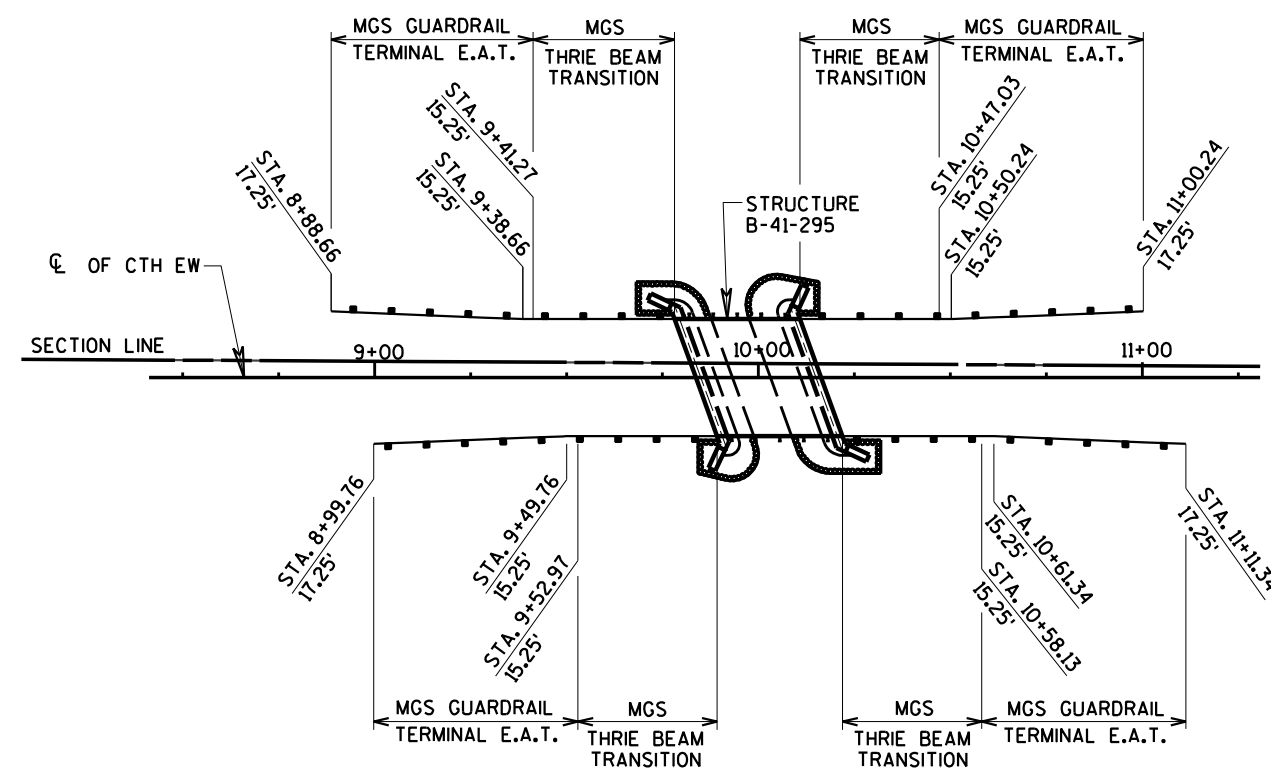


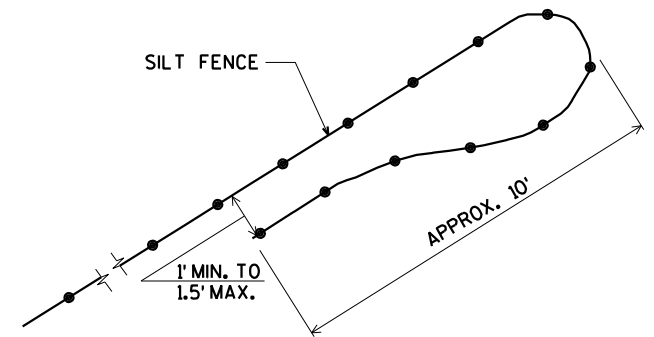
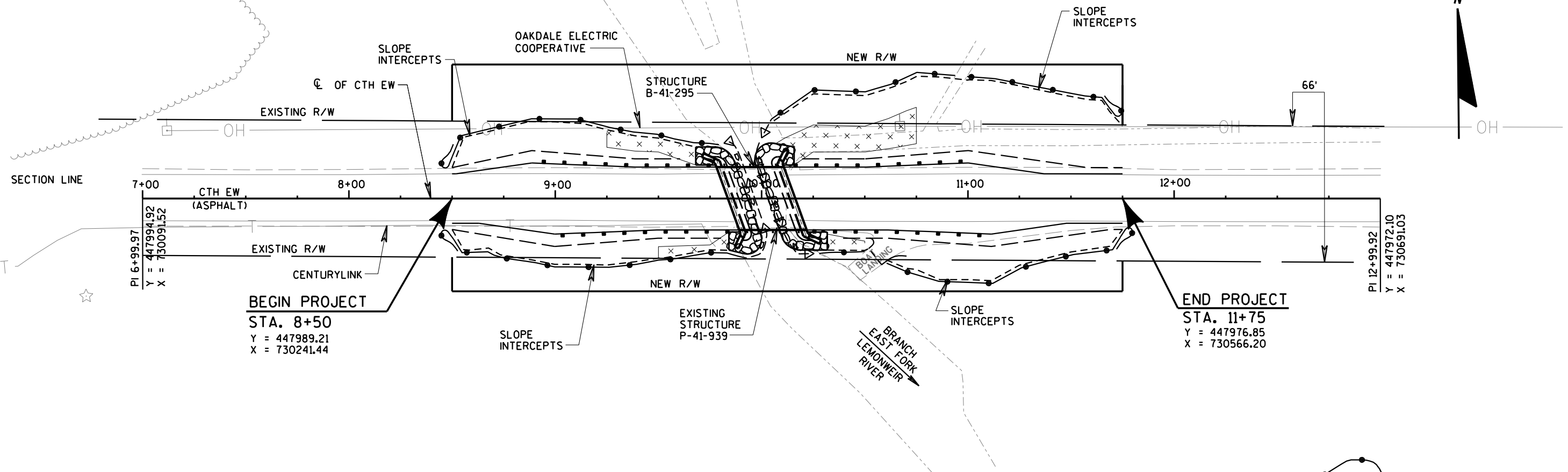
* * DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS



DESIGNER
AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
ATTN: DANIEL N. SYDOW
715-834-3161
sydowd@AyresAssociates.com

AC	ACRES
CHIS	CHISELED
C	CENTERLINE
COR	CORNER
CWT	COUNT
CY	CUBIC YARD
EL	ELEVATION
GAL	GALLON
H	HOUSE
IP	IRON PIPE
LB	POUND
LF	LINEAR FEET
LS	LUMP SUM
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
MON	MONUMENT
NORM	NORMAL
OAL	OVERALL LENGTH
PC	POINT OF CURVATURE
PD	PEDESTAL
PI	POINT OF INTERSECTION
PK	PARKER-KALON
PL	PROPERTY LINE
PLE	PERMANENT LIMITED EASEMENT
PP	POWER POLE
PT	POINT OF TANGENCY
R	RADIUS
REQ'D	REQUIRED
RT	RIGHT
R/W	RIGHT-OF-WAY
SF	SQUARE FEET
SHLDR	SHOULDER
STA	STATION
SY	SQUARE YARD
TLE	TEMPORARY LIMITED EASEMENT
VAR	VARIABLE
WL	WELL

ALIGNMENT CONTROLSCONTROL POINT TIESGUARDRAIL LAYOUT



SILT FENCE END DETAIL
(TURNAROUNDS - TO REDIRECT AMPHIBIANS AND REPTILES AWAY FROM CONSTRUCTION ZONE)

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 0.82 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.52 ACRES

PROJECT NO: 7373-00-73

HWY: CTH EW

COUNTY: MONROE

EROSION CONTROL

SCALE, FEET 0 25 50

SHEET

E

DATE 07MAR13		E S T I M A T E O F Q U A N T I T I E S			
LINE				7373-00-73	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	201.0105	CLEARING	STA	3.000	3.000
0020	201.0205	GRUBBING	STA	3.000	3.000
0030	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. 10+00	LS	1.000	1.000
0040	205.0100	EXCAVATION COMMON	CY	395.000	395.000
0050	205.0400	EXCAVATION MARSH	CY	145.000	145.000
0060	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-41-0295	LS	1.000	1.000
0070	206.5000	COFFERDAMS (STRUCTURE) 01. B-41-0295	LS	1.000	1.000
0080	208.0100	BORROW	CY	235.000	235.000
0090	210.0100	BACKFILL STRUCTURE	CY	150.000	150.000
0100	213.0100	FINISHING ROADWAY (PROJECT) 01. 7373-00-73	EACH	1.000	1.000
0110	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	90.000	90.000
0120	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	920.000	920.000
0130	455.0605	TACK COAT	GAL	25.000	25.000
0140	465.0105	ASPHALTIC SURFACE	TON	280.000	280.000
0150	502.0100	CONCRETE MASONRY BRIDGES	CY	50.000	50.000
0160	502.3200	PROTECTIVE SURFACE TREATMENT	SY	130.000	130.000
0170	503.0200.S	PRESTRESSED GIRDERS BOX (TYPE) 01. 17-INCH	LF	305.000	305.000
0180	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	4,720.000	4,720.000
0190	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	2,330.000	2,330.000
0200	506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	20.000	20.000
0210	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	10.000	10.000
0220	513.7050	RAILING STEEL TYPE W (STRUCTURE) 01. B-41-0295	LS	1.000	1.000
0230	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	18.000	18.000
0240	550.0500	PILE POINTS	EACH	10.000	10.000
0250	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	350.000	350.000
0260	606.0300	RI PRAP HEAVY	CY	115.000	115.000
0270	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	150.000	150.000
0280	614.2500	MGS THRI E BEAM TRANSITION	LF	160.000	160.000
0290	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	4.000	4.000
0300	619.1000	MOBILIZATION	EACH	1.000	1.000
0310	625.0500	SALVAGED TOPSOIL **P**	SY	905.000	905.000
0320	627.0200	MULCHING **P**	SY	1,585.000	1,585.000
0330	628.1504	SILT FENCE	LF	785.000	785.000
0340	628.1520	SILT FENCE MAINTENANCE	LF	1,570.000	1,570.000
0350	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	5.000	5.000
0360	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0370	628.2027	EROSION MAT CLASS II TYPE C	SY	230.000	230.000
0380	628.6005	TURBIDITY BARRIERS	SY	265.000	265.000
0390	628.7504	TEMPORARY DITCH CHECKS	LF	50.000	50.000
0400	629.0210	FERTILIZER TYPE B **P**	CWT	1.100	1.100
0410	630.0180	SEEDING MIXTURE NO. 80 **P**	LB	50.000	50.000
0420	630.0200	SEEDING TEMPORARY **P**	LB	45.000	45.000
0430	634.0612	POSTS WOOD 4X6-INCH X 12-FT	EACH	4.000	4.000
0440	637.0202	SIGNS REFLECTIVE TYPE II	SF	12.000	12.000
0450	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0460	643.0100	TRAFFIC CONTROL (PROJECT) 01. 7373-00-73	EACH	1.000	1.000
0470	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	245.000	245.000
0480	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	293.000	293.000
0490	650.5000	CONSTRUCTION STAKING BASE	LF	293.000	293.000

DATE 07MAR13		E S T I M A T E O F Q U A N T I T I E S			
LINE					7373-00-73
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0500	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-41-0295	LS	1.000	1.000
0510	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 7373-00-73	LS	1.000	1.000
0520	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	293.000	293.000
0530	690.0150	SAWING ASPHALT	LF	46.000	46.000
0540	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	300.000	300.000

CLEARING AND GRUBBING (CATEGORY 0010)

STATION TO STATION	201.0105	201.0205
	CLEARING STA	GRUBBING STA
Sta. 8+50 to Sta. 11+50	3	3

*EARTHWORK SUMMARY (CATEGORY 0010)

STAGE	STATION TO	LOCATION	205.0100	205.0400	FILL CY	EXPANDED	208.0100	WASTE CY
			EXCAVATION COMMON CY	EXCAVATION MARSH CY		FILL CY	BORROW CY	
1 / CTH EW	8+50 - 9+81	CTH EW	193	0	82	107	0	86
	10+16.33 -	CTH EW	202	143	225	293	234	143
TOTALS			395	143	307	400	234	229
				SAY 145			SAY 235	

* NOTE: SHRINKAGE = 30%
EXCAVATION MARSH - TO BE BACKFILLED WITH BORROW. ITEM NUMBER 205.0400

213.0100 FINISHING ROADWAY (CATEGORY 0010)

LOCATION	EACH
PROJECT 7373-00-73	1

BASE AGGREGATE DENSE (CATEGORY 0010)

STATION TO STATION	LOCATION	305.0110	305.0120
		3/4-INCH TON	1 1/4-INCH TON
Sta. 8+50 to Sta. 9+83.67	Mainline	---	425
Sta. 10+16.33 to Sta. 11+75	Mainline	---	495
Sta. 8+50 to Sta. 9+83.67	Shoulders	40	---
Sta. 10+16.33 to Sta. 11+75	Shoulders	50	---
TOTALS		90	920

455.0605 TACK COAT (CATEGORY 0010)

STATION TO STATION	LOCATION	GAL
Sta. 8+50 to Sta. 9+83.67	Mainline	12
Sta. 10+16.33 to Sta. 11+75	Mainline	13
TOTAL		25

465.0105 ASPHALTIC SURFACE (CATEGORY 0010)

STATION TO STATION	LOCATION	TON
Sta. 8+50 to Sta. 9+83.67	Mainline	130
Sta. 10+16.33 to Sta. 11+75	Mainline	150
TOTAL		280

614.2500 MGS THRIE BEAM TRANSITION (CATEGORY 0010)

STATION TO STATION	LOCATION	LF
Sta. 9+41.27 to Sta. 9+78.12	LT	40
Sta. 9+52.97 to Sta. 9+89.22	RT	40
Sta. 10+10.78 to Sta. 10+47.03	LT	40
Sta. 10+21.88 to Sta. 10+58.13	RT	40
TOTAL		160

614.2610 MGS GUARDRAIL TERMINAL EAT (CATEGORY 0010)

STATION TO STATION	LOCATION	EACH
Sta. 8+88.66 to Sta. 9+41.27	LT	1
Sta. 8+99.76 to Sta. 9+52.97	RT	1
Sta. 10+47.03 to Sta. 11+00.24	LT	1
Sta. 10+58.13 to Sta. 11+11.34	RT	1
TOTAL		4

619.1000 MOBILIZATION

LOCATION	EACH
PROJECT 7373-00-73 (CATEGORY 0010)	0.3
PROJECT 7373-00-73 (CATEGORY 0020)	0.7
TOTAL	1

SALVAGED TOPSOIL, MULCHING, FERTILIZER, SEED & TEMPORARY SEED (CATEGORY 0010)

STATION TO STATION	LOCATION	**p** 625.0500 SALVAGED TOPSOIL	**p** 627.0200 MULCHING SY	**p** 629.0210 FERTILIZER TYPE B CWT	**p** 630.0180 SEEDING NO. 80 LB	**p** 630.0200 SEEDING TEMPORARY LB
		SY	SY			
Sta. 8+50 to Sta. 11+75	Mainline	905	1,265	0.9	39	34
Undistributed		---	320	0.2	11	11
TOTALS		905	1,585	1.1	50	45

SILT FENCE & SILT FENCE MAINTENANCE (CATEGORY 0010)

STATION TO STATION	LOCATION	628.1520 628.1504 MAINTENANCE	
		LF	LF
Sta. 8+50 to Sta. 9+79	LT	145	290
Sta. 8+50 to Sta. 9+93	RT	155	310
Sta. 10+05 to Sta. 11+75	LT	175	350
Sta. 10+28 to Sta. 11+75	RT	150	300
Undistributed		160	320
TOTALS		785	1,570

MOBILIZATIONS EROSION CONTROL & EMERGENCY EROSION CONTROL (CATEGORY 0010)

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT 7373-00-73	5	2

628.2027 EROSION MAT CLASS II TYPE C (CATEGORY 0010)

STATION TO STATION	LOCATION	SY
Sta. 9+25 to Sta. 9+68.11	LT	40
Sta. 9+50 to Sta. 9+84.22	RT	20
Sta. 10+15.78 to Sta. 10+75	LT	110
Sta. 10+31.88 to Sta. 10+50	RT	15
Undistributed		45
TOTAL		230

628.6005 TURBIDITY BARRIERS
(CATEGORY 0010)

LOCATION	SY
West Abutment	90
East Abutment	120
Undistributed	55
TOTAL	265

628.7504 TEMPORARY DITCH CHECKS (CATEGORY 0010)

LOCATION	LF
UNDISTRIBUTED	50

634.0612 WOOD POSTS 4X6 INCH X 12 FT (CATEGORY 0010)

STATION	LOCATION	EACH
Sta. 9+77	LT (Object Marker)	1
Sta. 9+88	RT (Object Marker)	1
Sta. 10+11	LT (Object Marker)	1
Sta. 10+22	RT (Object Marker)	1
TOTAL		4

637.0202 SIGNS REFLECTIVE TYPE II (CATEGORY 0010)			
STATION			SF
Sta. 9+77	LT (Object Marker)	W5-52L	3
Sta. 9+88	RT (Object Marker)	W5-52R	3
Sta. 10+11	LT (Object Marker)	W5-52R	3
Sta. 10+22	RT (Object Marker)	W5-52L	3
TOTAL			12

642.5001 FIELD OFFICE TYPE B (CATEGORY 0010)	
LOCATION	EACH
PROJECT 7373-00-73	1

643.0100 TRAFFIC CONTROL (CATEGORY 0010)	
LOCATION	EACH
PROJECT 7373-00-73	1

CONSTRUCTION STAKING						
CATEGORY	LOCATION	650.4500	650.5000	650.6500	650.9910	650.9920
		SUBGRADE	BASE	STRUCTURE	SUPPLEMENTARY	SLOPE
		LF	LF	LAYOUT	CONTROL	STAKES
0010	Sta. 8+50 to Sta. 11+75	293	293	---	1	293
0020	B-41-295	---	---	1	---	---
TOTALS		293	293	1	1	293

690.0150 SAWING ASPHALT (CATEGORY 0010)		
STATION	LOCATION	LF
Sta. 8+50	Mainline	23
Sta. 11+75	Mainline	23
TOTAL		46

R/W PROJECT NUMBER 7373-00-03	SHEET NUMBER 4.01	TOTAL SHEETS 1
FEDERAL PROJECT NUMBER		
PLAT OF RIGHT-OF-WAY REQUIRED FOR WARRENS - STH 173 (BRANCH EAST FORK LEMONWEIR RIVER BRIDGE B-41-0295)		
CTH EW	MONROE COUNTY	
CONSTRUCTION PROJECT NUMBER 7373-00-73		

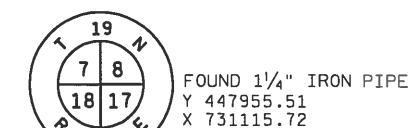
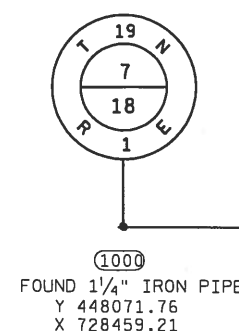
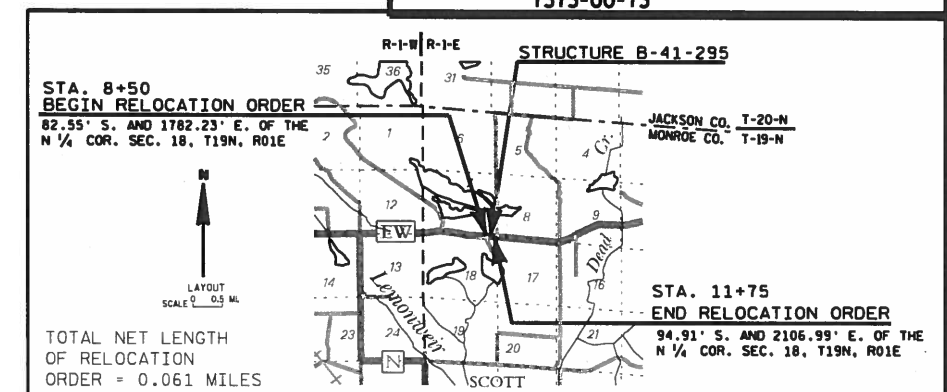
CONVENTIONAL SYMBOLS AND ABBREVIATIONS

ALUMINUM ACRES CENTERLINE CERTIFIED SURVEY MAP CORNER DOCUMENT IDENTIFICATION LEFT MONUMENT PAGE HIGHWAY EASEMENT	ALUM. AC. C/L CSM COR. DOC. ID. LT. MON. P. H.E.	POINT OF BEGINNING PROPERTY LINE REFERENCE LINE REMAINING RIGHT RIGHT OF WAY SECTION POINT OF CURVATURE POINT OF INTERSECTION POINT OF TANGENCY POINT OF ENDING SQUARE FEET VOLUME	P.O.B. P.L. R/L REM. RT. R/W SEC. P.C. P.I. P.T. P.O.E. S.F. V.
STATE LINE COUNTY LINE TOWN OR RANGE LINE SECTION LINE QUARTER LINE SIXTEENTH LINE PROPOSED R/W LINE EXISTING R/W LINE LOT LINE PROPERTY LINE RIGHT OF WAY POINT RIGHT OF WAY MONUMENT IRON PROPERTY PIN PROPERTY HOOK NEW REFERENCE LINE	ENCROACHING SIGN NO ACCESS (By Previous Acquisition) NO ACCESS (By Acquisition) NO ACCESS (By Statutory Authority) CORPORATE LIMITS FEE TEMPORARY LIMITED EASEMENT HIGHWAY EASEMENT TRANSMISSION STRUCTURE (LINE OPTIONAL) UNDERGROUND FACILITY (ELECTRIC, GAS, ETC.)	COMPENSABLE NON-COMPENSABLE	
ELECTRIC POLE TELEPHONE POLE PEDESTAL (LABEL TYPE - COMMUNICATIONS, ELECTRIC)			

SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NUMBER	OWNER(S)	INTERESTS REQUIRED	NEW R/W	EXIST R/W	TOTAL R/W
1	POTTER CRANBERRY CO.	FEE	0.21	0.25	0.46
2	WETHERBY CRANBERRY CO.	FEE	0.12	0.25	0.37
3	OAKDALE ELECTRIC COOPERATIVE	RELEASE OF RIGHTS	---	---	---

TOWN OF SCOTT



BEGIN RELOCATION ORDER
STA. 8+50

Y = 447989.21
X = 730241.44

END RELOCATION ORDER
STA. 11+75

Y = 447976.85
X = 730566.20

NOTES:

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTEREST TO THE COUNTY.

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MONROE COUNTY ZONE, NAD 83 (1991). THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING RIGHT-OF-WAY ESTABLISHED BASED ON TOWN OF SCOTT RECORDS.

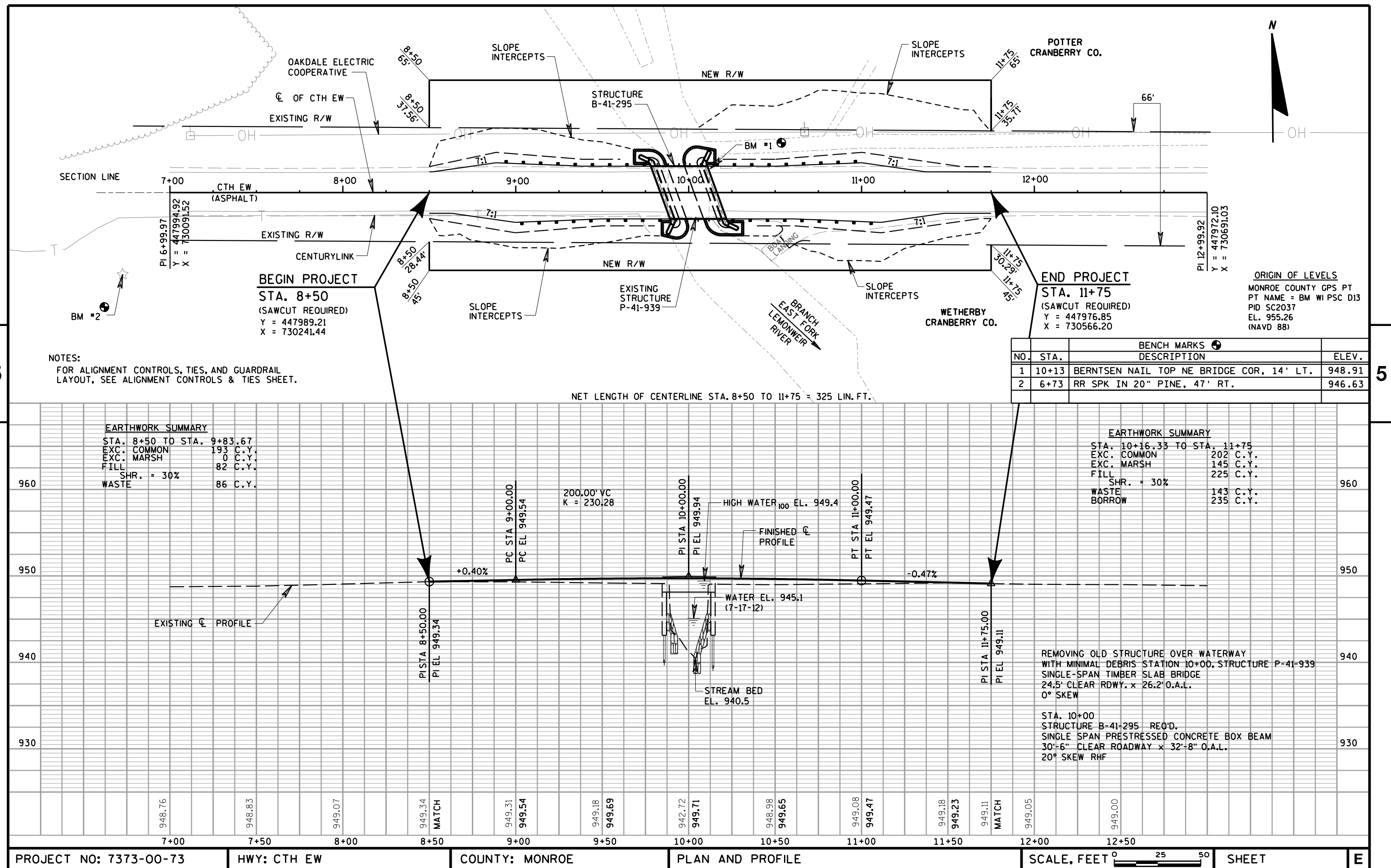
COURSE TABLE		
COURSE	BEARING	DISTANCE
1000-100	S 87°20'53"E	1784.14'
100-101	N 02°10'46"E	37.56'
101-102	N 02°10'46"E	27.44'
102-103	S 87°49'14"E	325.00'
103-104	S 02°10'46"W	29.29'
104-105	S 02°10'46"W	35.71'
105-106	S 02°10'46"W	30.29'
106-107	S 02°10'46"W	14.71'
107-108	N 87°49'14"W	325.00'
108-109	N 02°10'46"E	16.56'
109-100	N 02°10'46"E	28.44'

COORDINATES		
POINT	Y	X
1000	448071.76	728459.21
100	447989.21	730241.44
101	448026.74	730242.87
102	448054.16	730243.91
103	448041.81	730568.68
104	448012.53	730567.56
105	447976.85	730566.20
106	447946.58	730565.05
107	447931.88	730564.49
108	447944.24	730239.73
109	447960.79	730240.36

THIS SURVEY IS PREPARED AT THE REQUEST OF MONROE COUNTY.
THIS SURVEY IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

John C. Favorite, RLS
S-1890
DATE: 1/28/13

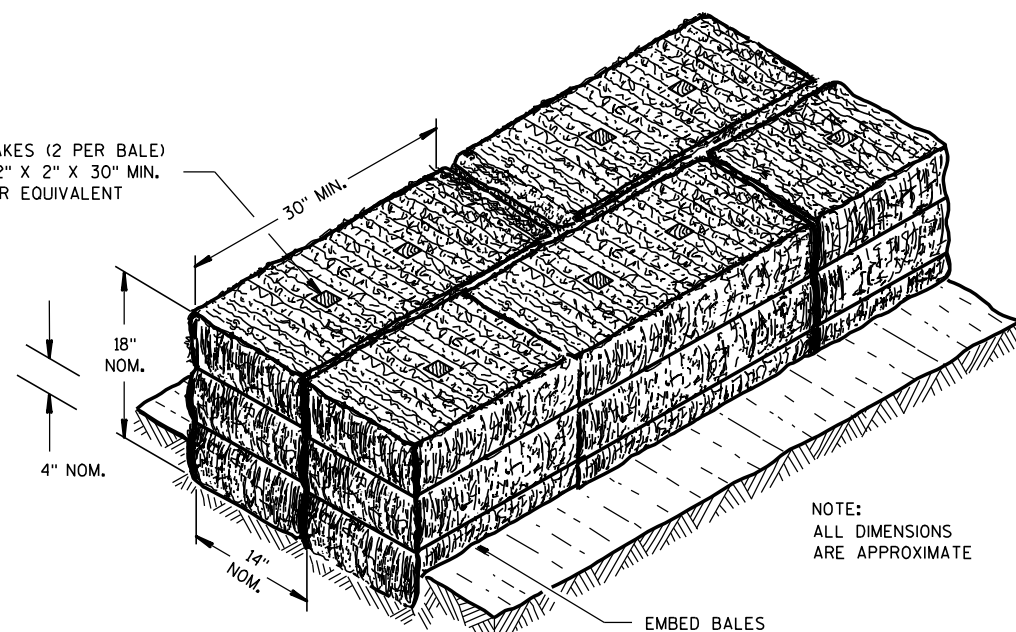
REVISION DATE	MONROE COUNTY
ACCEPTED FOR MONROE COUNTY	DATE: 01/29/13
(Signature)	Co. Hwy. Commissioner



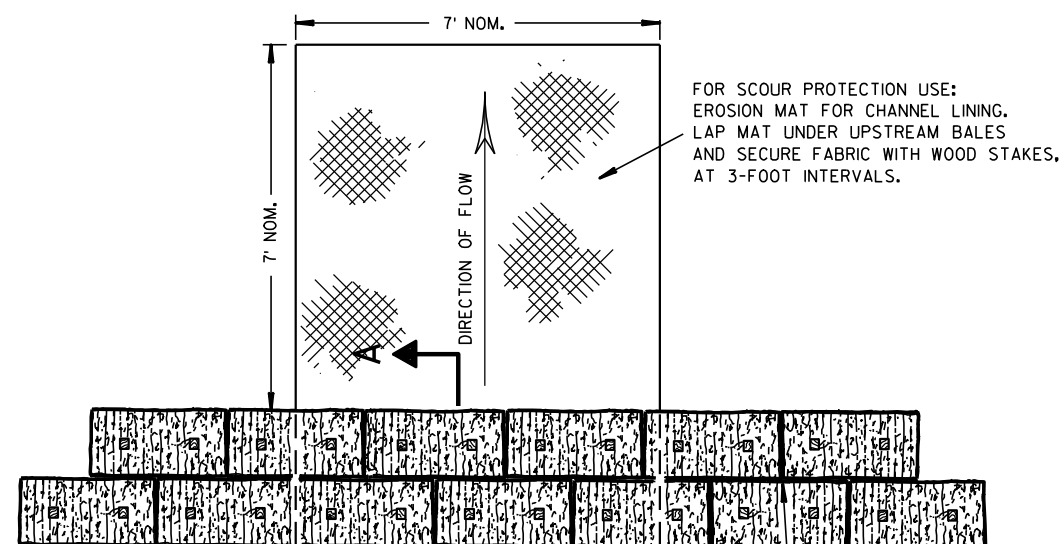
Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	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)
14B45-03G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-05	SIGNING & MARKING FOR TWO LANE BRIDGES

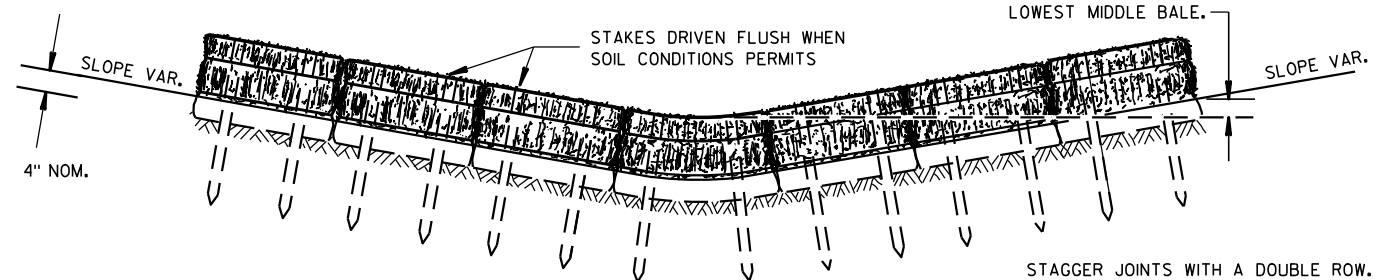
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



SECTION A-A



PLAN VIEW



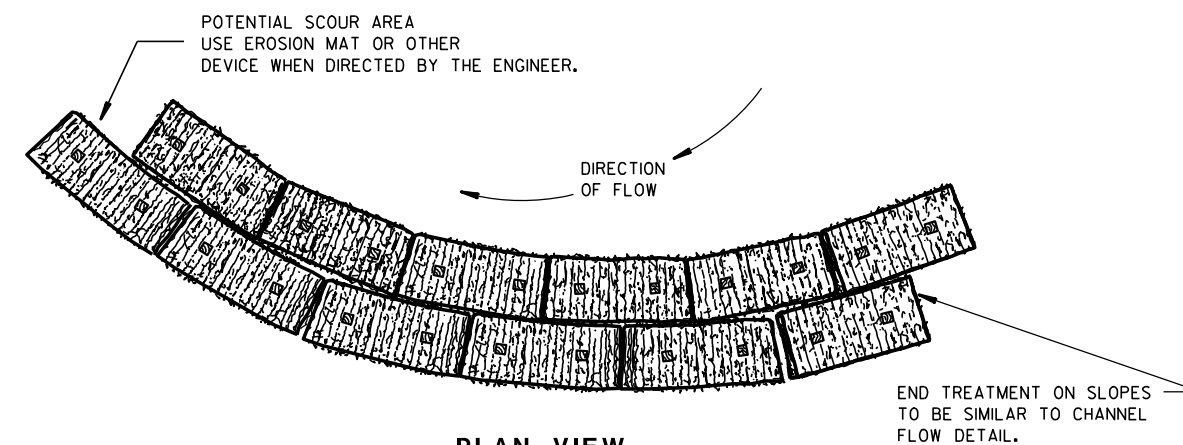
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

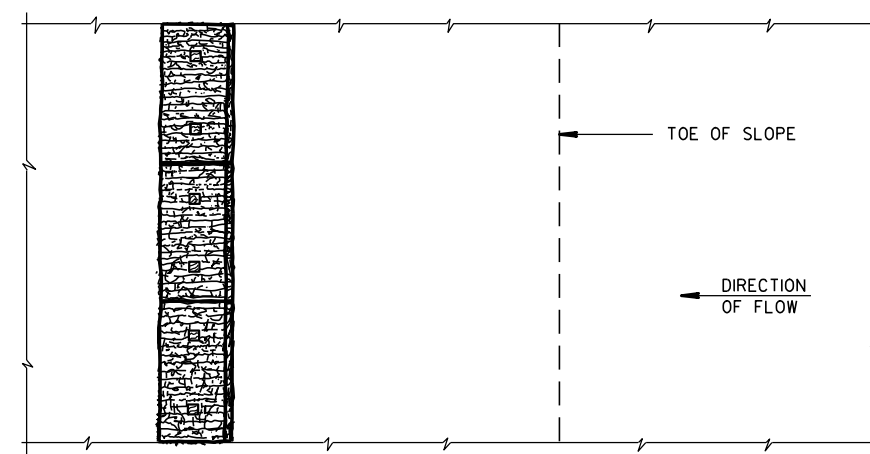
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

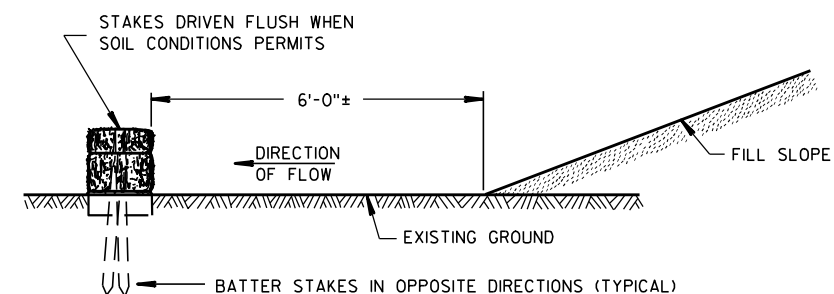


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

FHWA

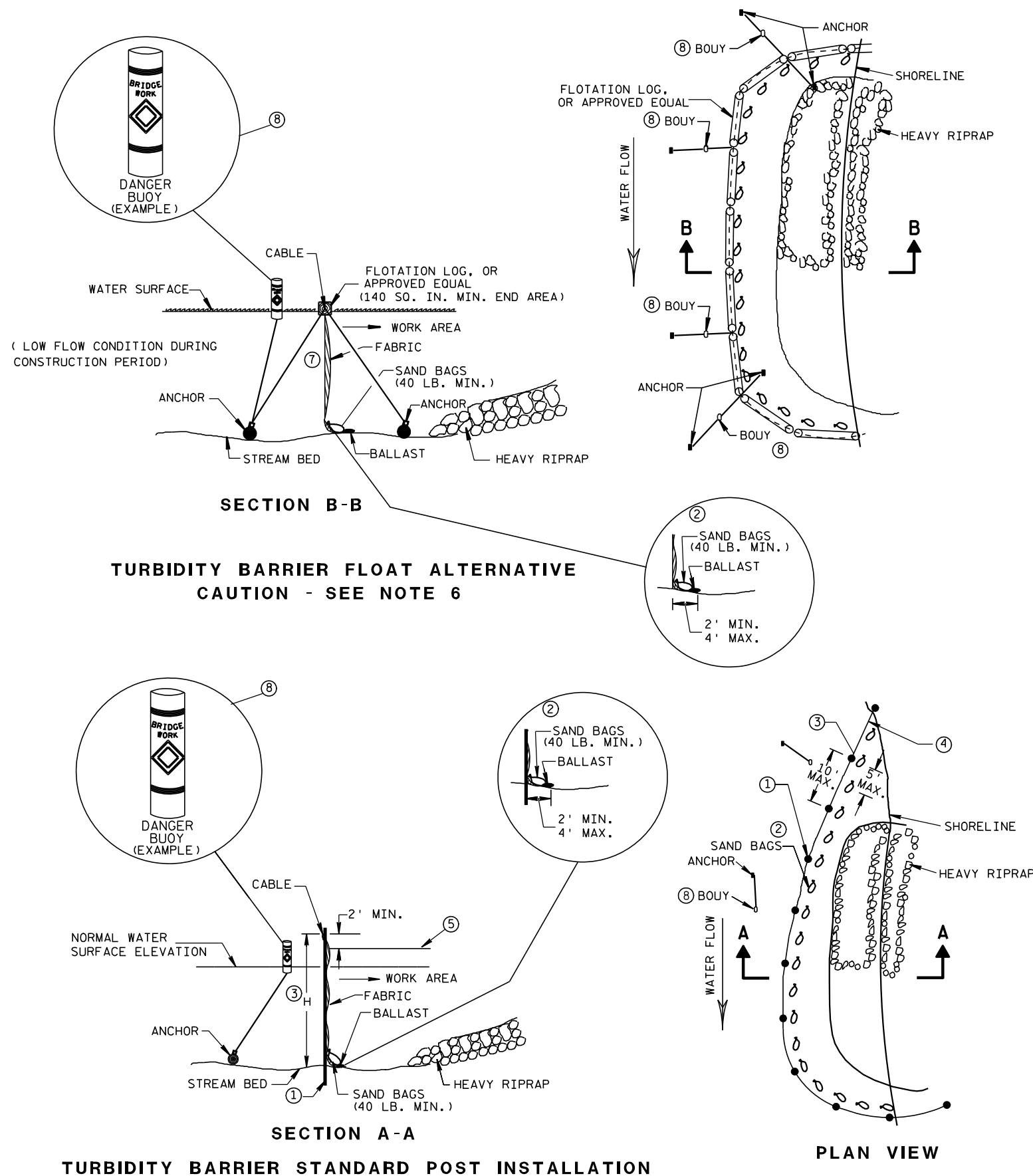
/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



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

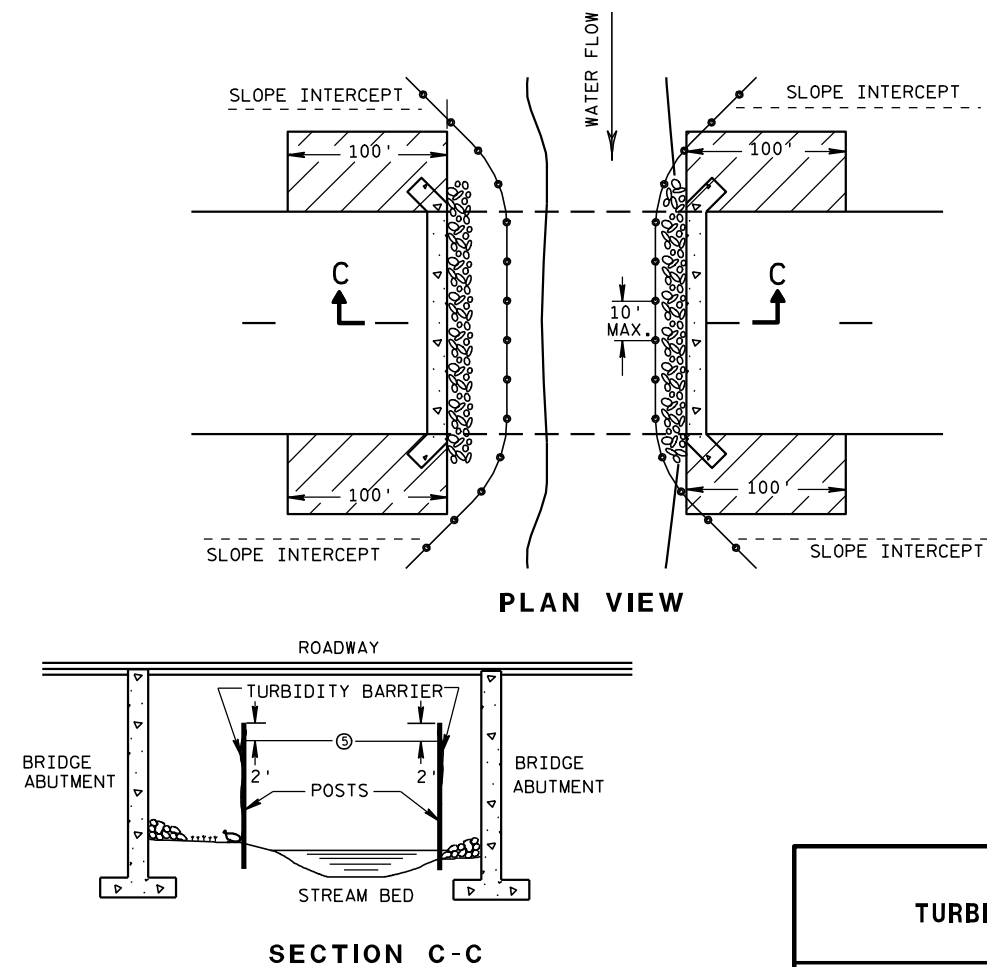


GENERAL NOTES

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. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER 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.



TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

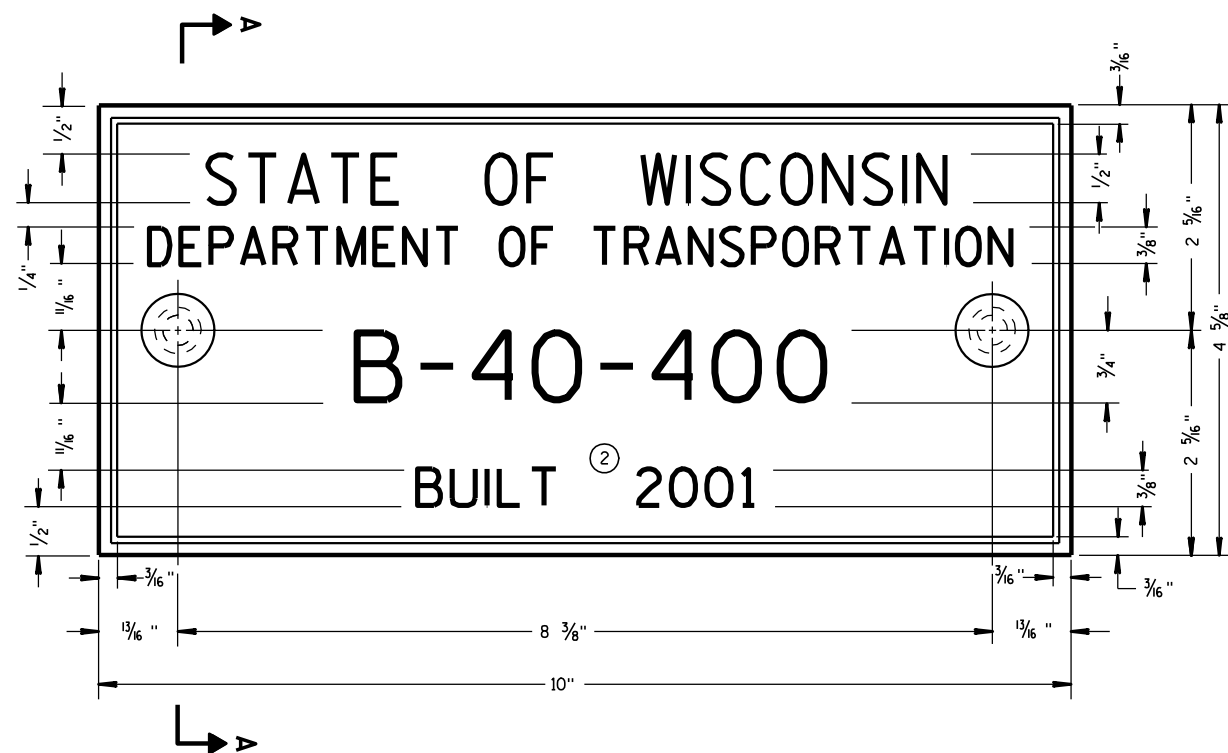
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

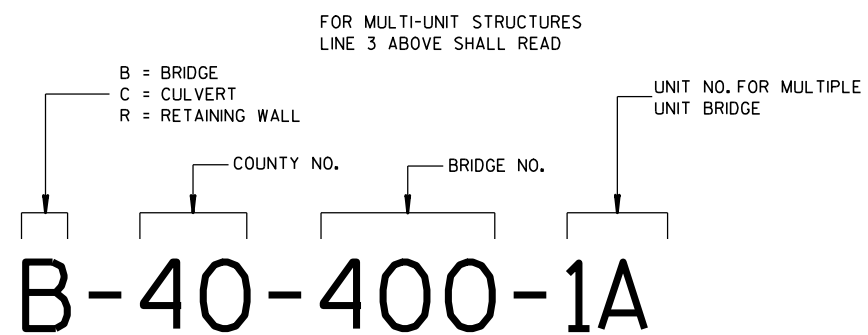
6/04/02
DATE

FWHA

/S/ Beth Connestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



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



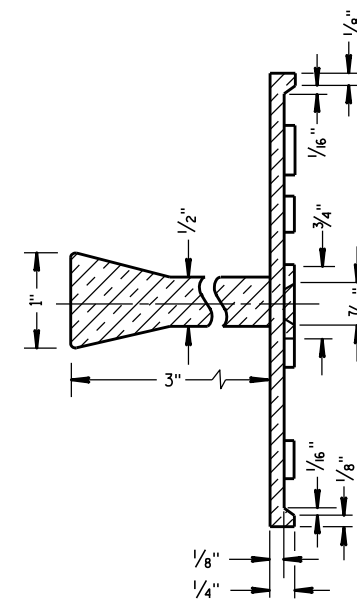
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

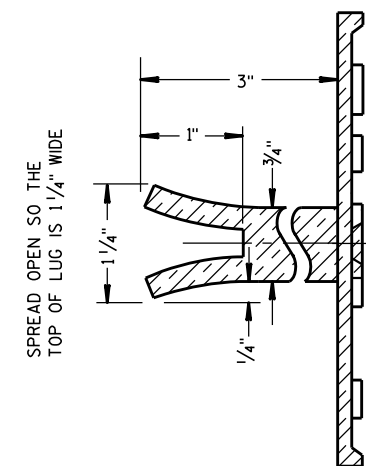
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.



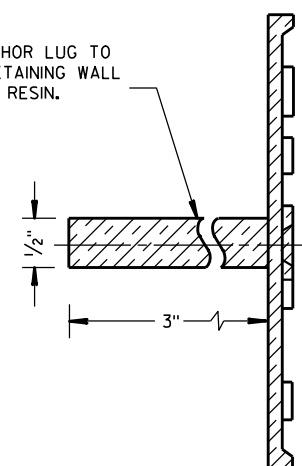
SECTION A-A



SPREAD OPEN SO THE
TOP OF LUG IS 1 1/4" WIDE

ALTERNATE LUG

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



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

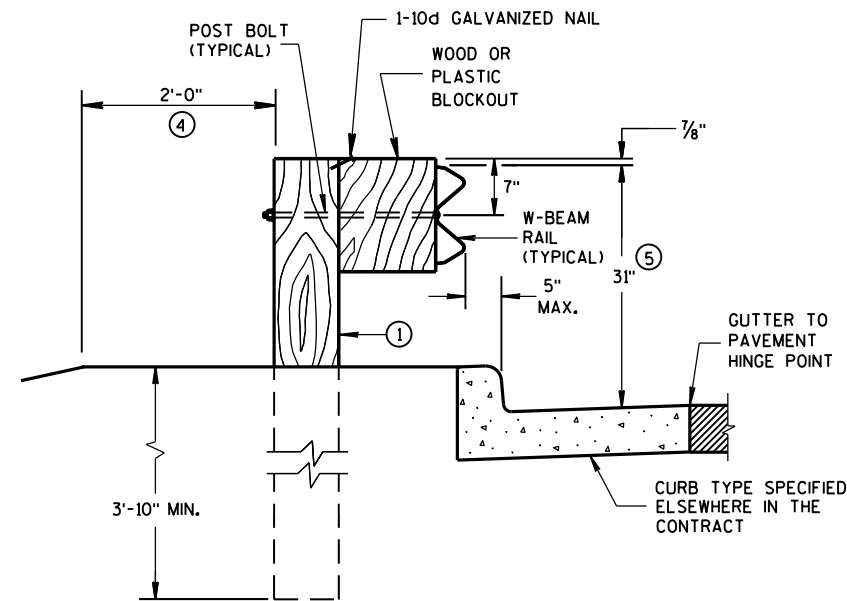
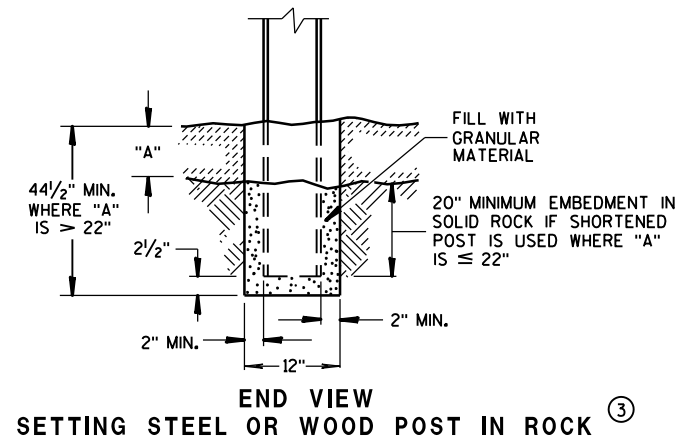
3/26/10
DATE

FHWA

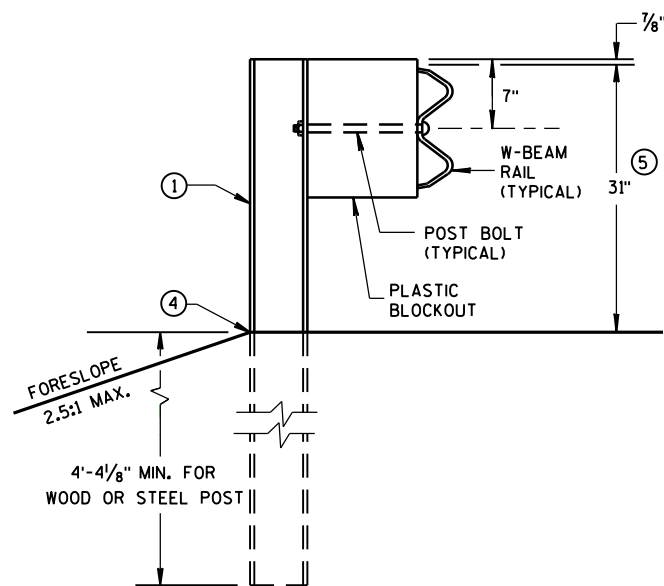
/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER

S.D.D. 14 B 42-2a

- S.D.D. 14 B 42-2a**

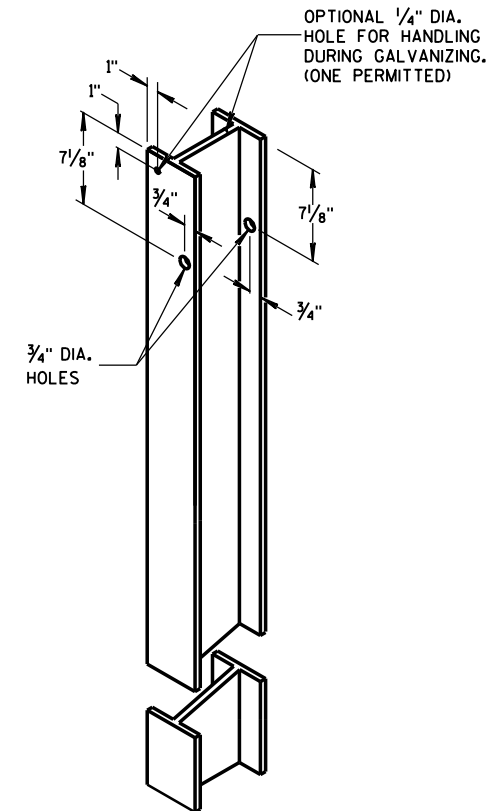


END VIEW
LOCATED ALONG A CURBED ROADWAY

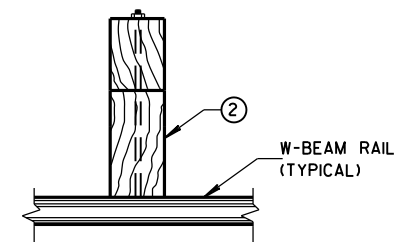


END VIEW

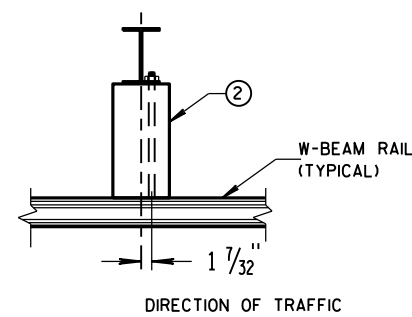
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



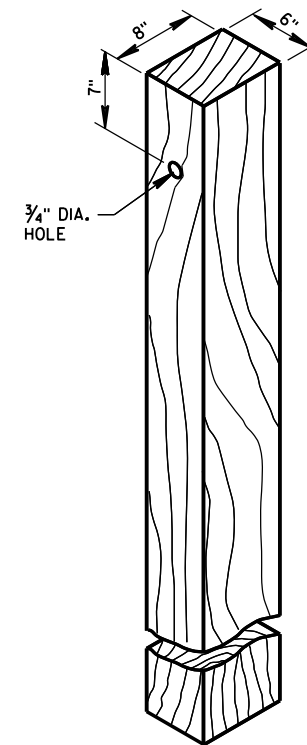
**STEEL POST &
HOLE PUNCHING DETAIL
(w6X9)^①**



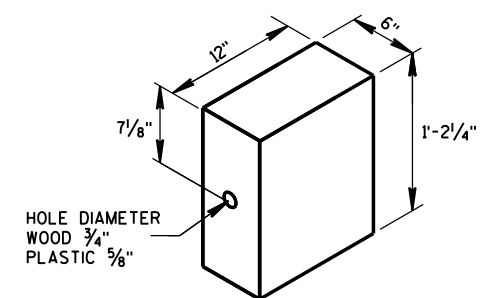
PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



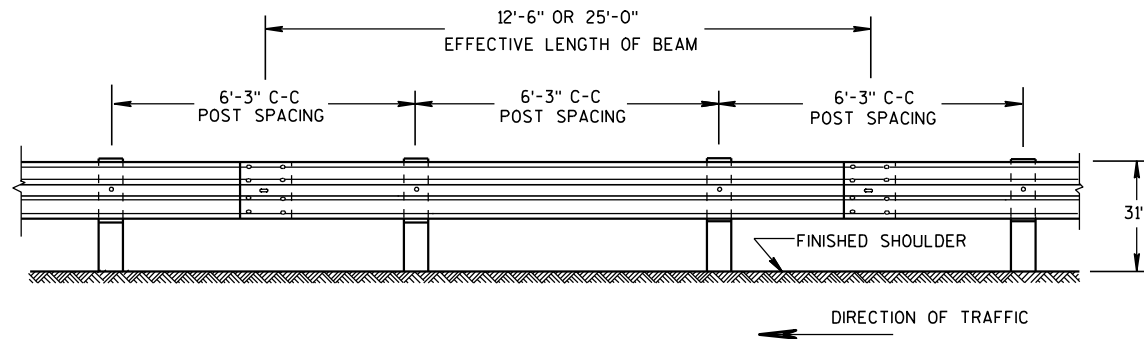
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM



WOOD POST
(6" X 8") NOMINAL ①

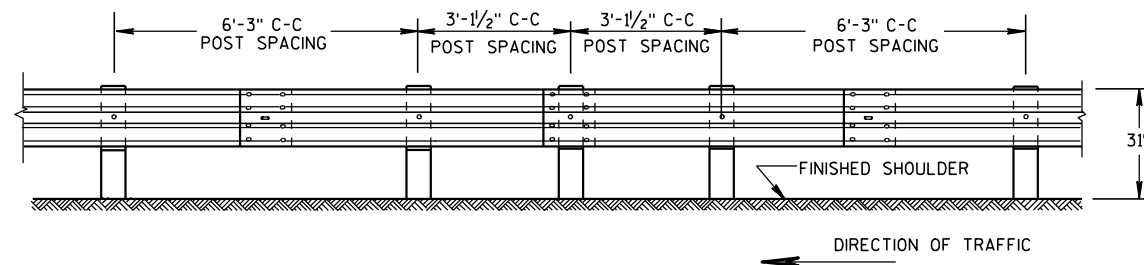


**WOOD OR
PLASTIC BLOCKOUT** ②



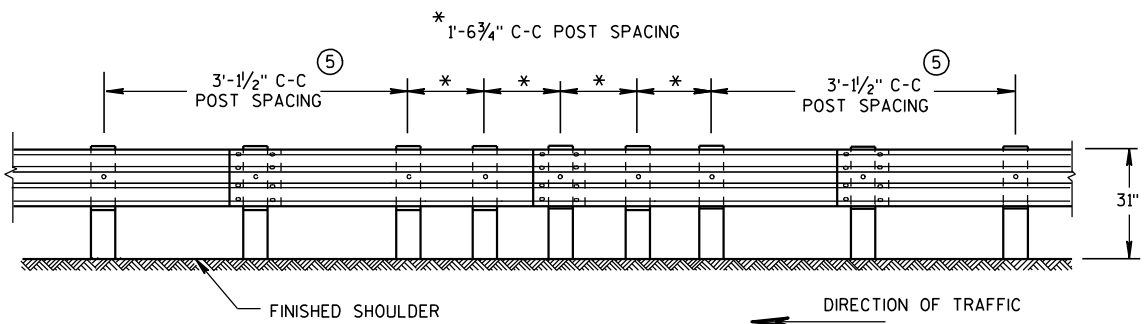
FRONT VIEW

POST SPACING STANDARD INSTALLATION



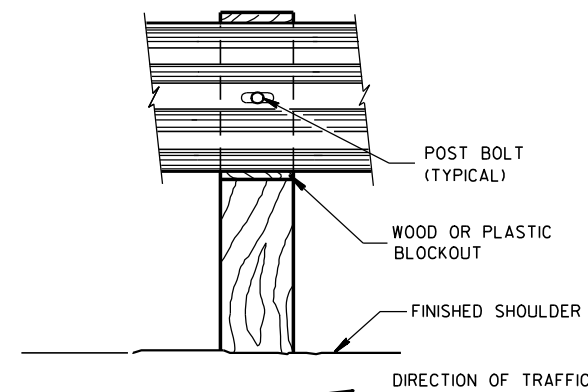
FRONT VIEW

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

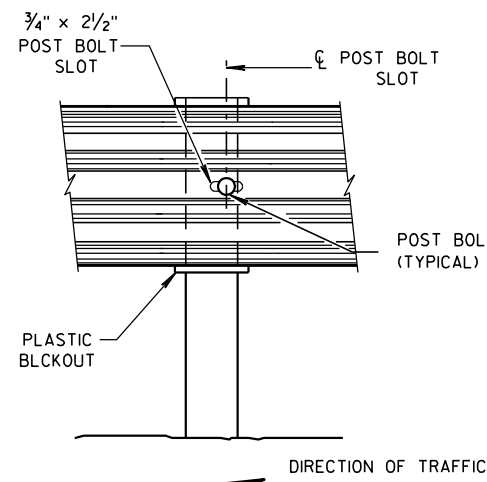


FRONT VIEW

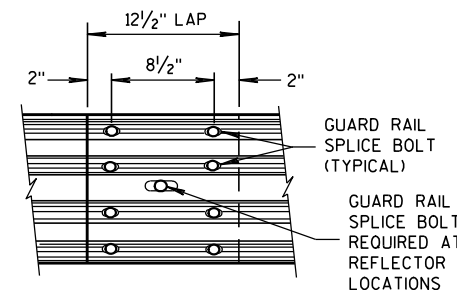
QUARTER POST SPACING (QS)



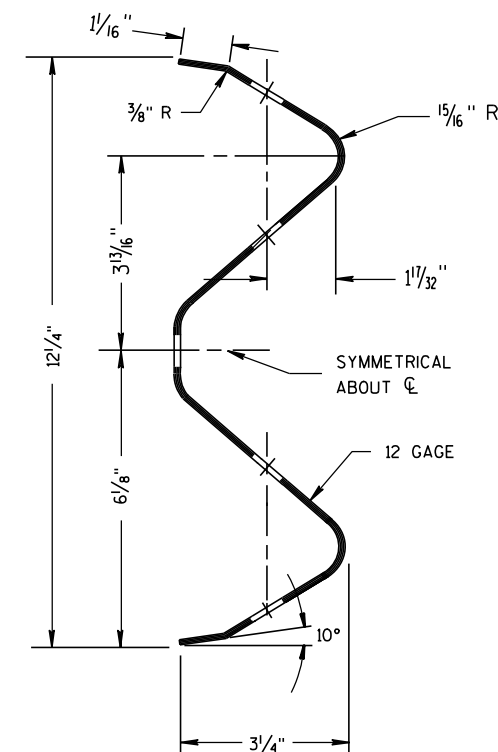
FRONT VIEW AT WOOD POST



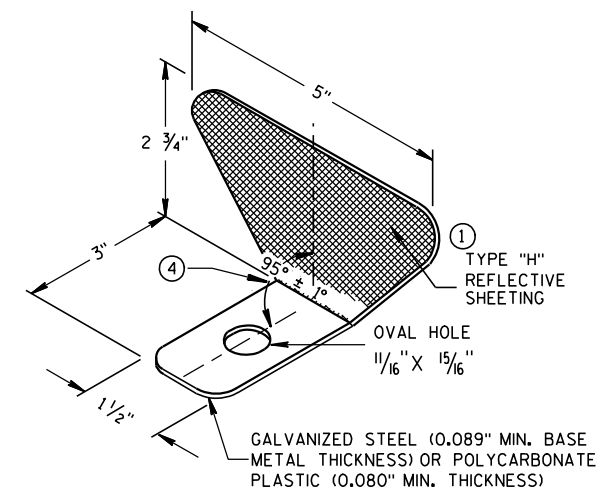
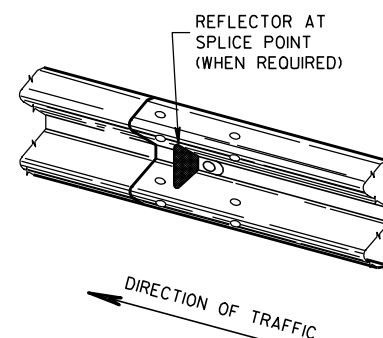
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

- 1 PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
- 2 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.
- 3 REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
- 4 PROVIDE AN ANGLE OF BEND OF $90^\circ \pm 1^\circ$ FOR TWO-SIDED REFLECTORS.
- 5 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND $\frac{5}{8}$ " DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

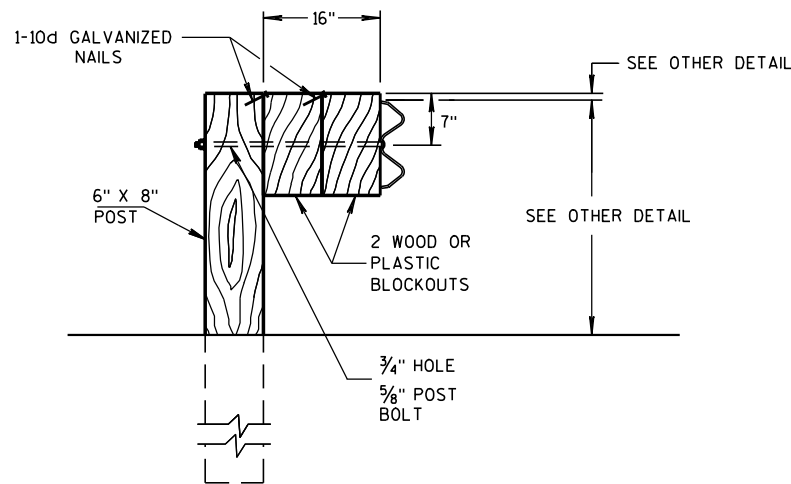
GUARD RAIL SPLICE BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

REFLECTOR SPACING

	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	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2	

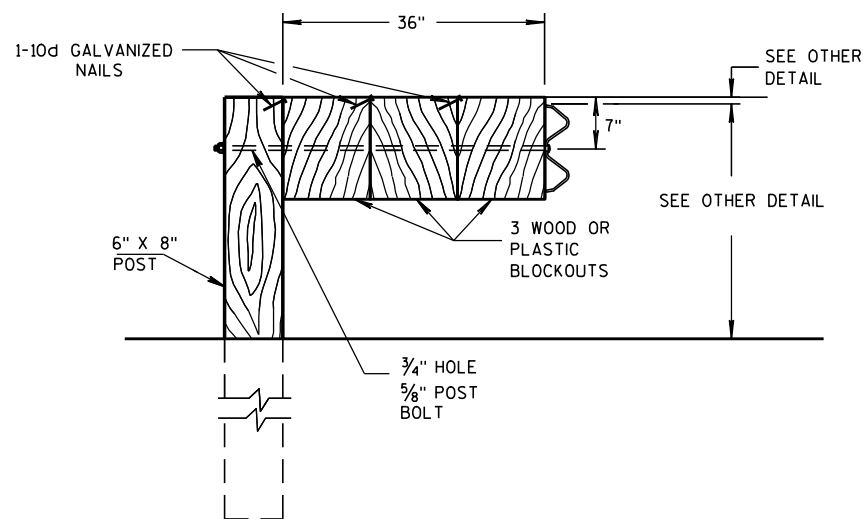
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

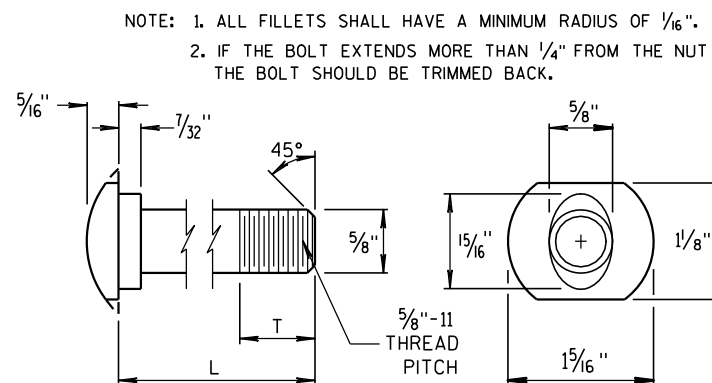
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



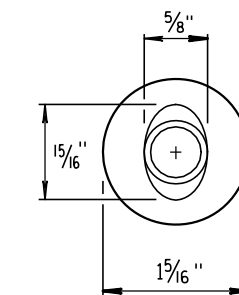
DETAIL FOR 36" BLOCKOUT DEPTH

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

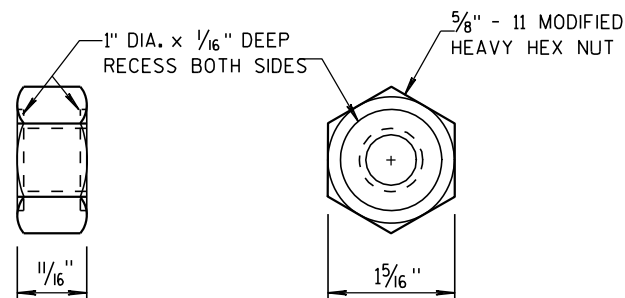
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



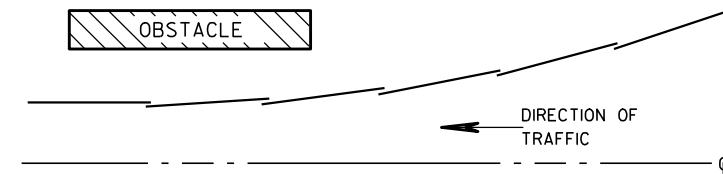
POST BOLT TABLE



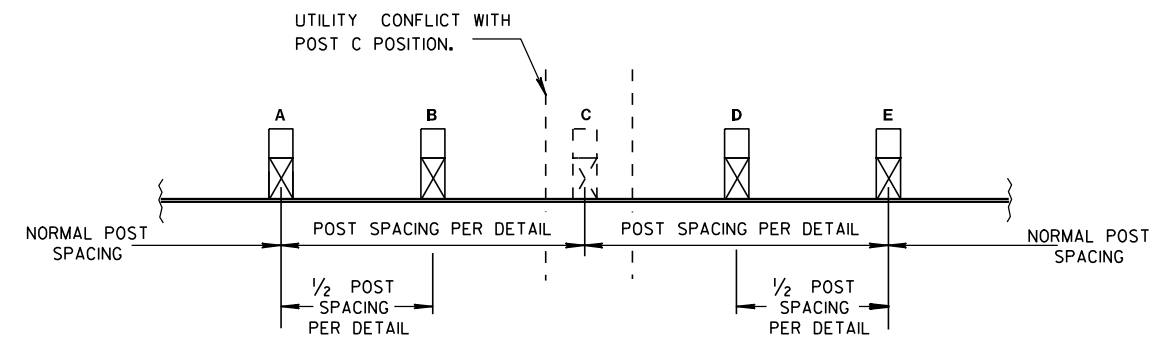
ALTERNATE BOLT HEAD



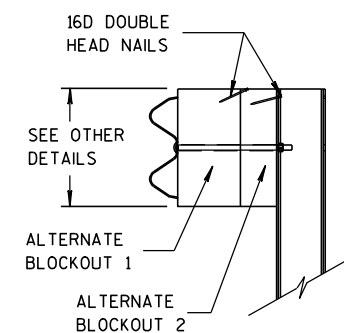
POST BOLT AND RECESS NUT



PLAN VIEW
BEAM LAPPING DETAIL

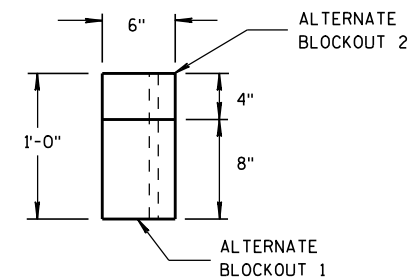


POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL



TOP VIEW

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), 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.
- (E) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.
- (F) 1/2" 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.

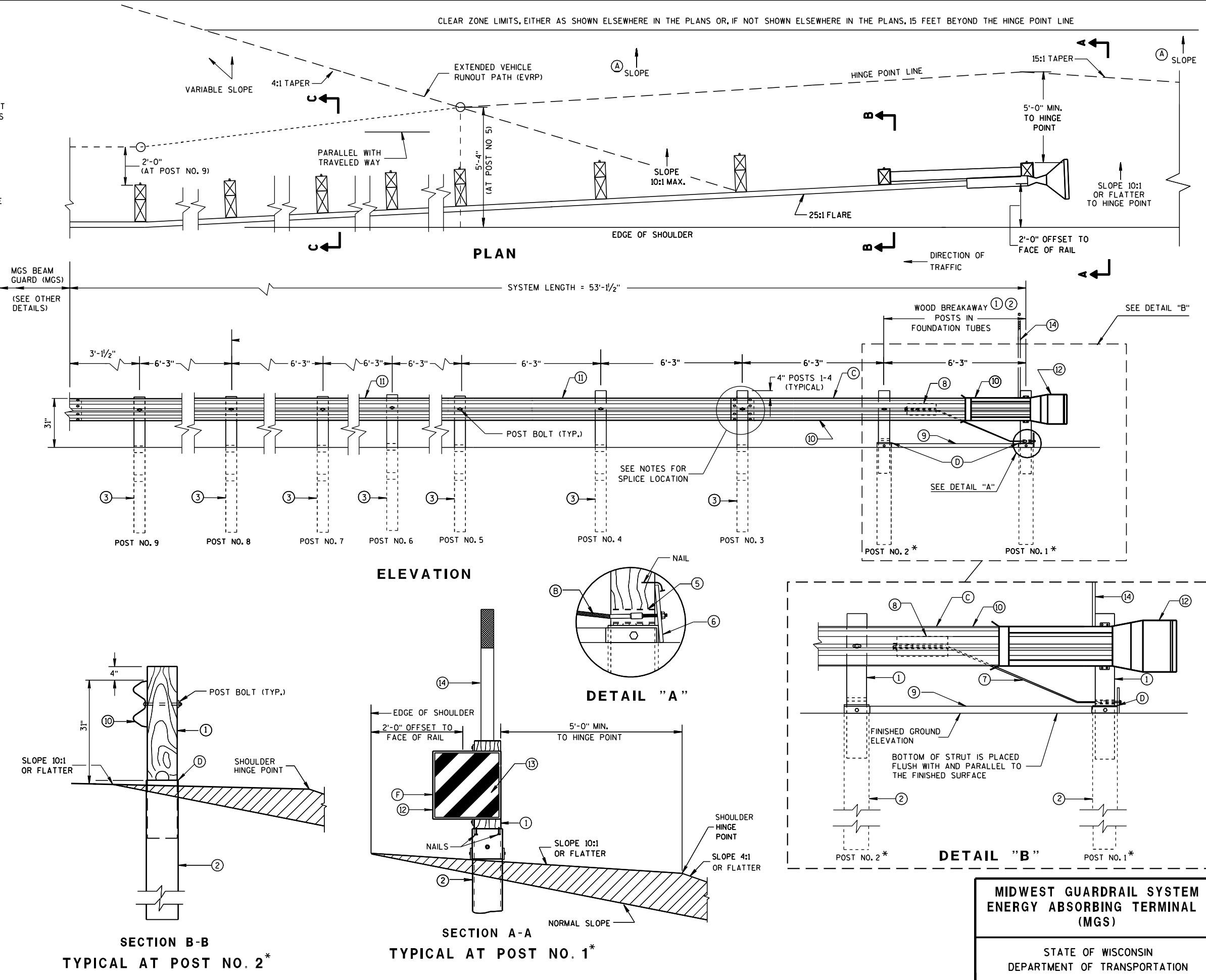
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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.

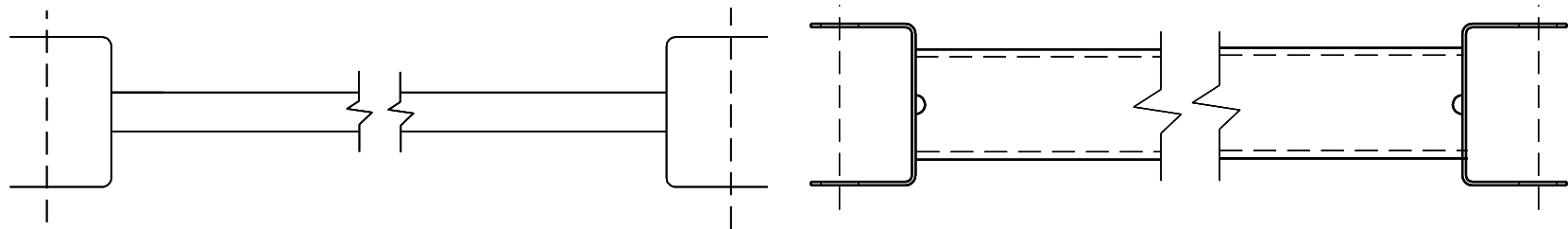
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE ($\pm \frac{3}{4}$ ")

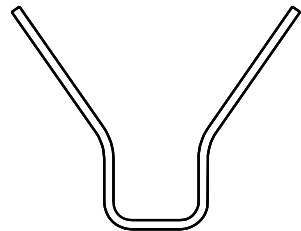
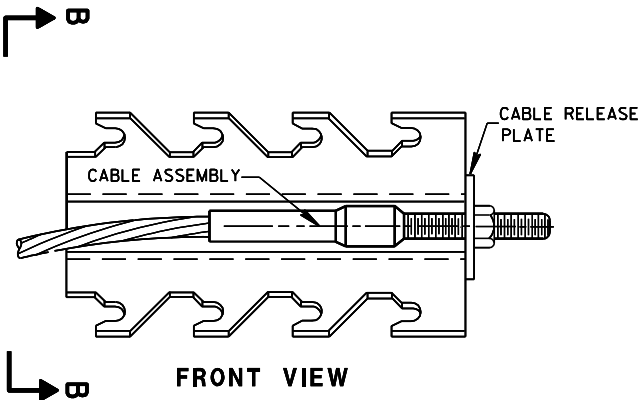


MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

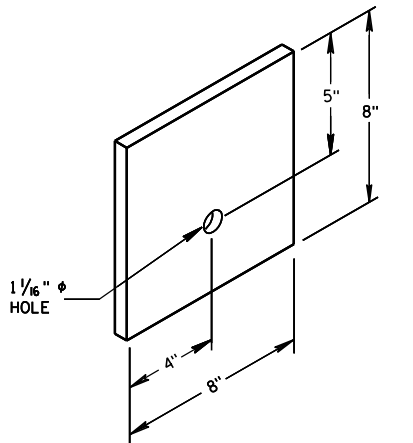
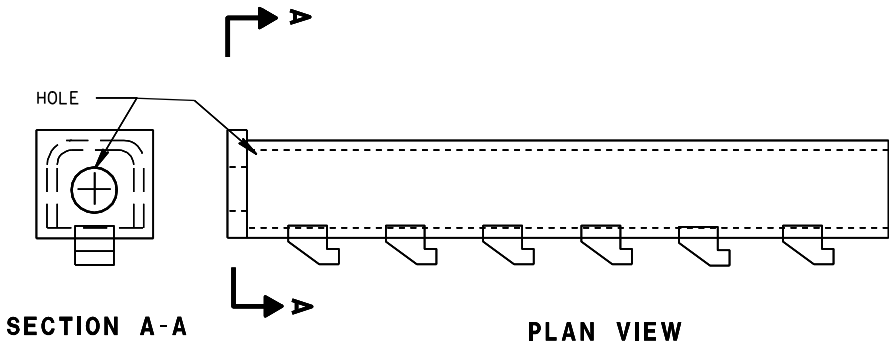
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



9 H
GENERIC GROUND STRUT

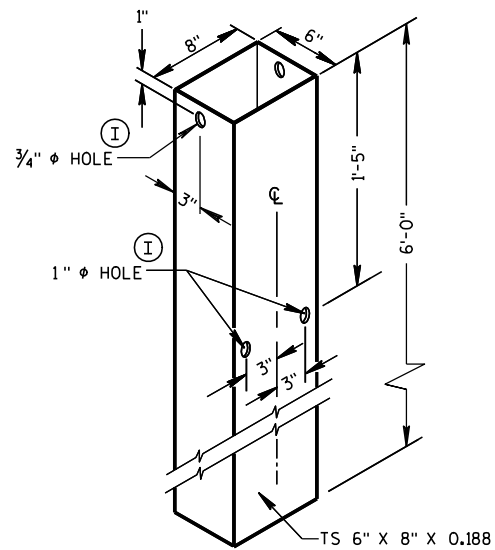


SECTION B-B
8 H
GENERIC ANCHOR CABLE BOX

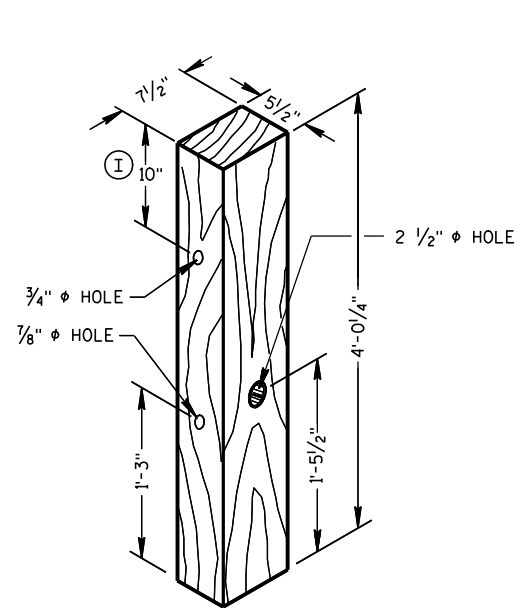


6
BEARING PLATE

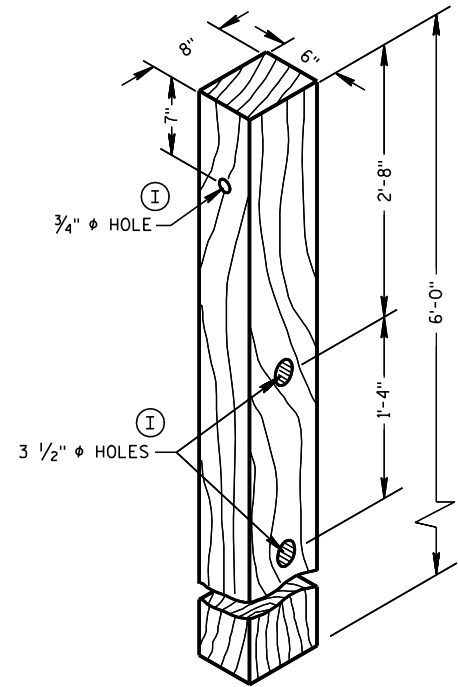
BILL OF MATERIALS	
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR 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 H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
⑭	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



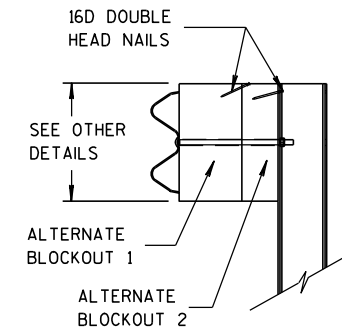
FOUNDATION TUBE ②



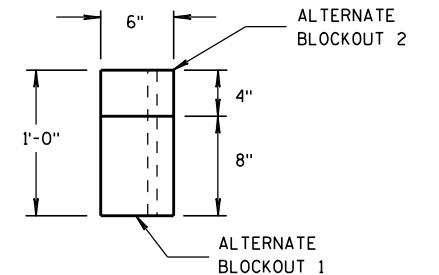
WOOD BREAKAWAY POST ①



WOOD CRT POST ③

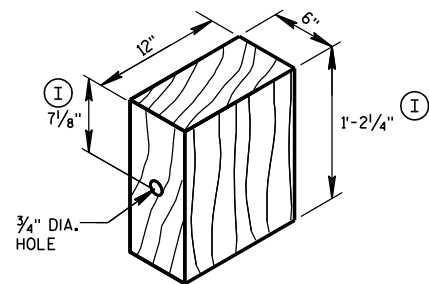


SIDE VIEW



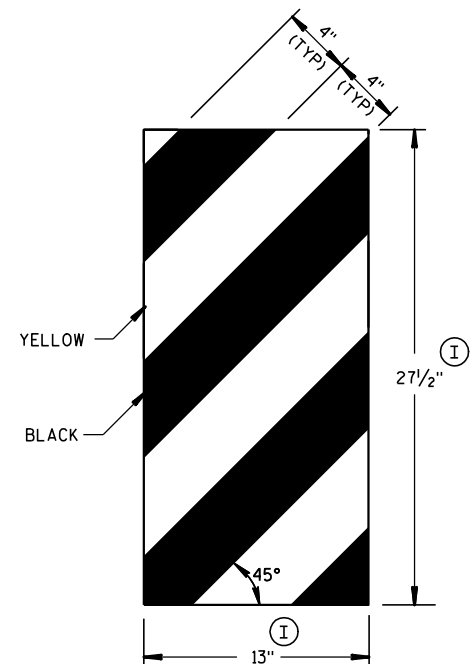
TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

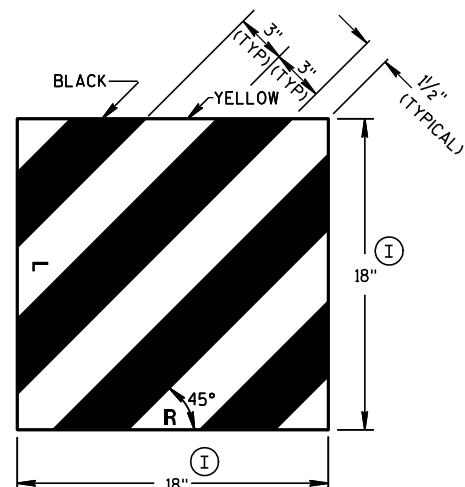


WOOD BLOCKOUT ④

YELLOW REFLECTIVE TAPE
3" X 9" TYPE H
REFLECTIVE SHEETING



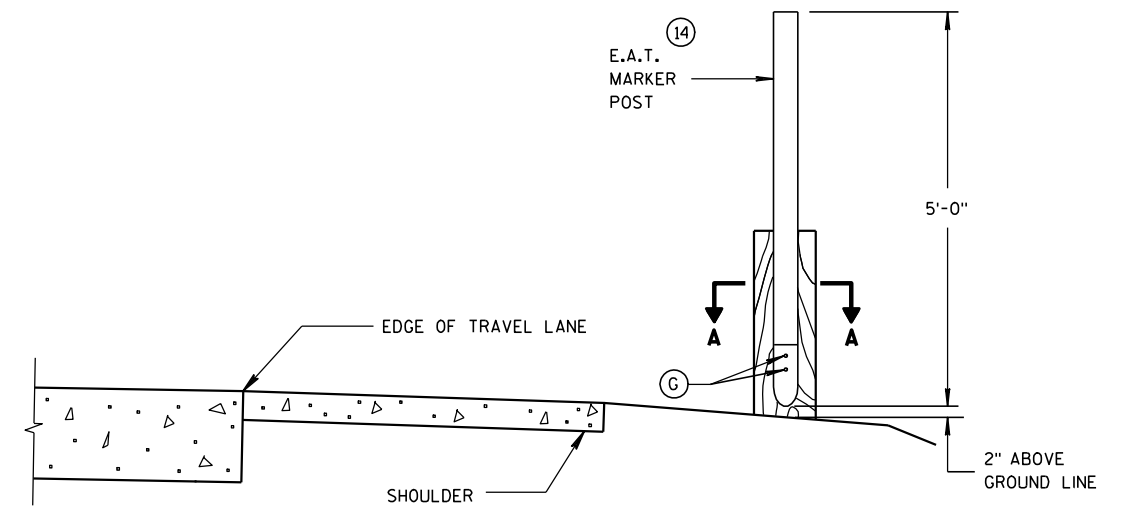
GENERIC REFLECTIVE SHEETING ⑬ ④



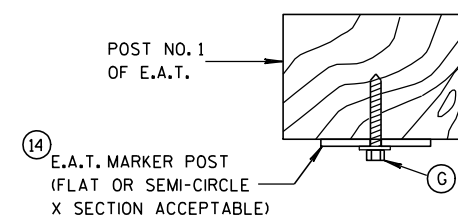
FRONT VIEW

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

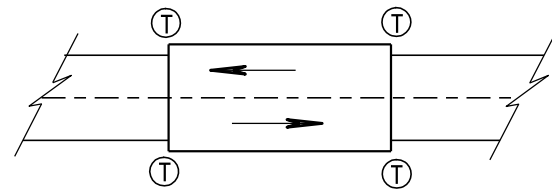
APPROVED

5/23/2011

DATE

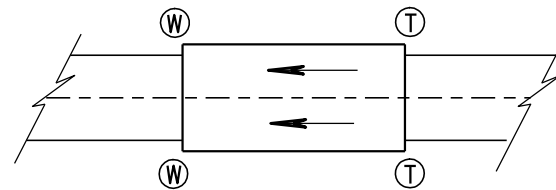
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



TWO WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION



ONE WAY TRAFFIC

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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".

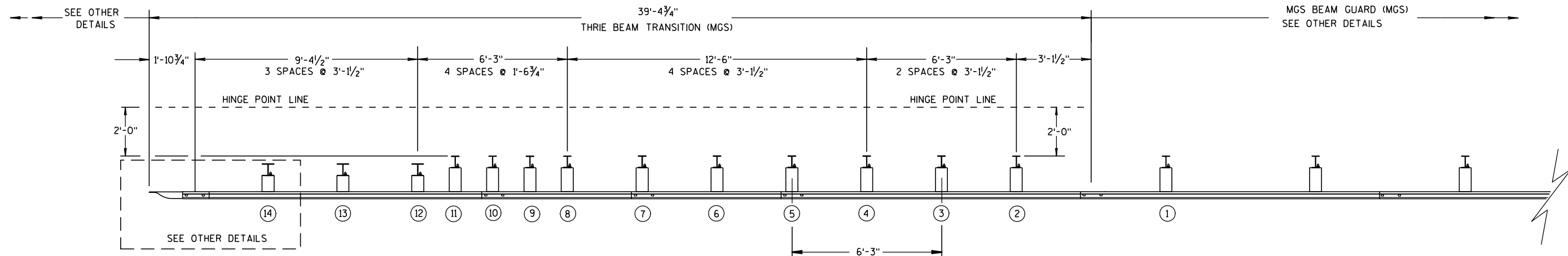
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

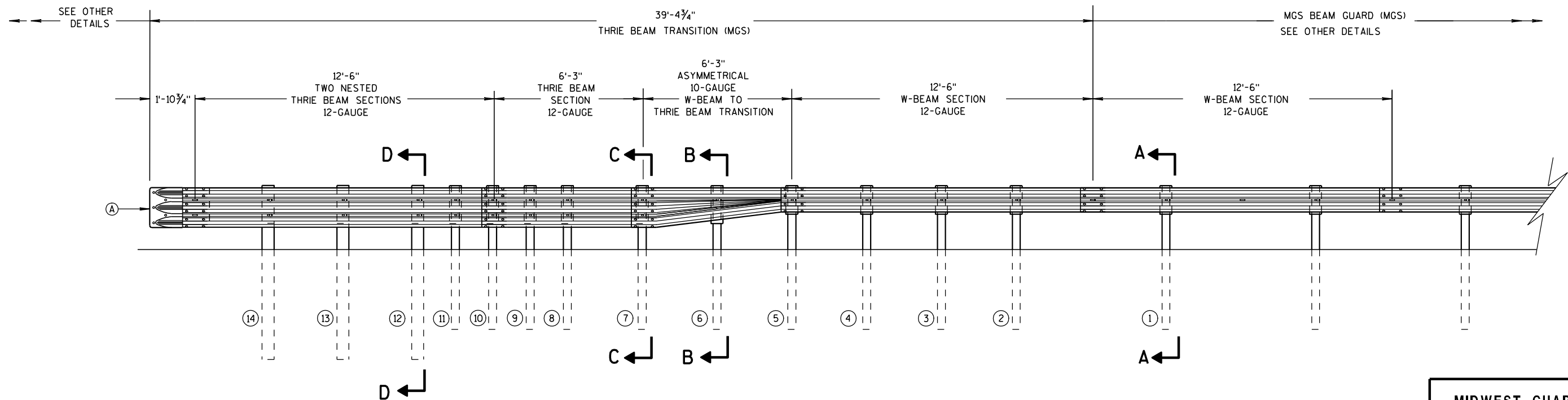
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

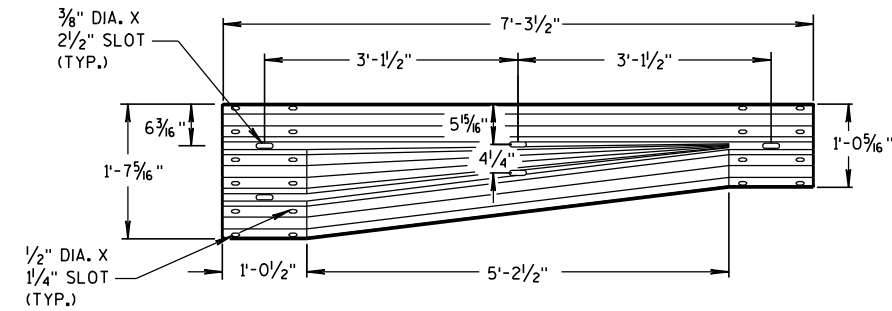
6

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

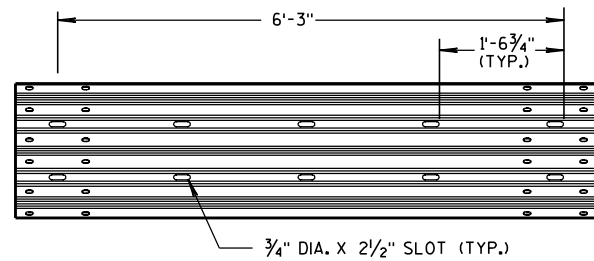


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

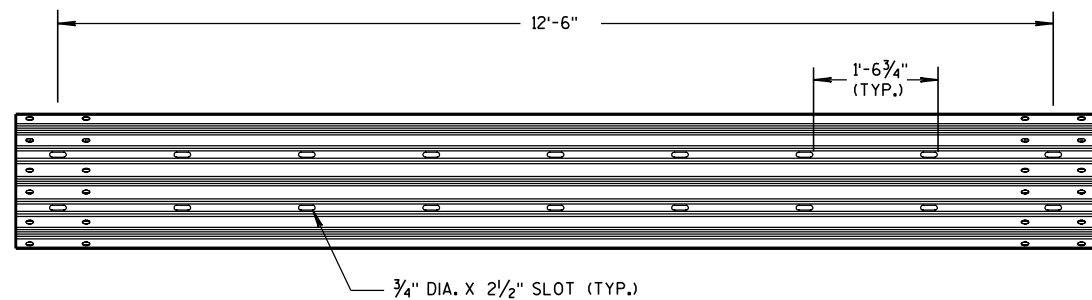
S.D.D. 14 B 45-3b



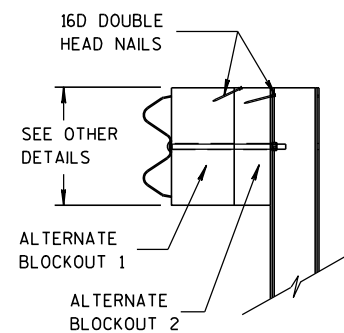
W-BEAM TO THRIE BEAM TRANSITION SECTION



6'-3" THRIE BEAM SECTION

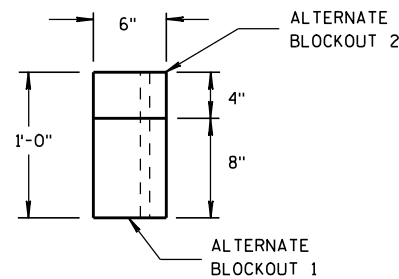


12'-6" THRIE BEAM SECTION

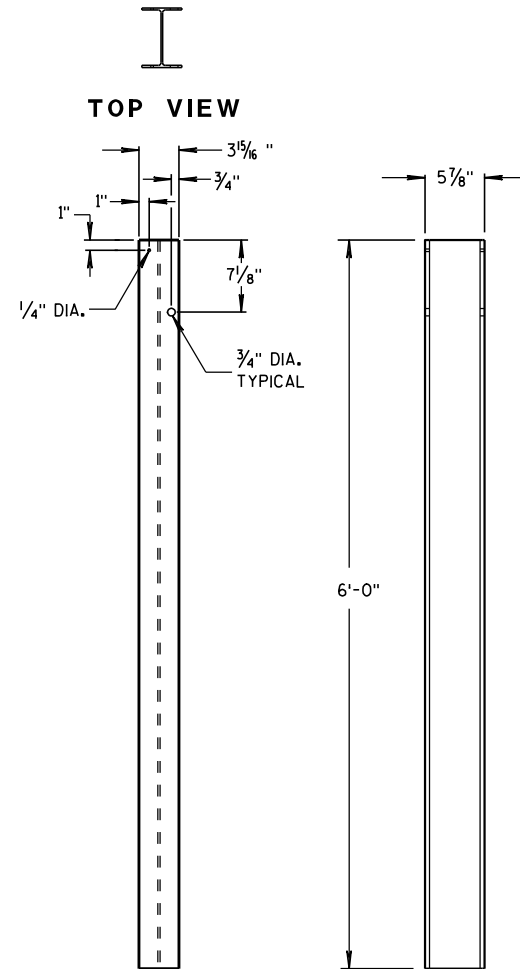


SIDE VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL



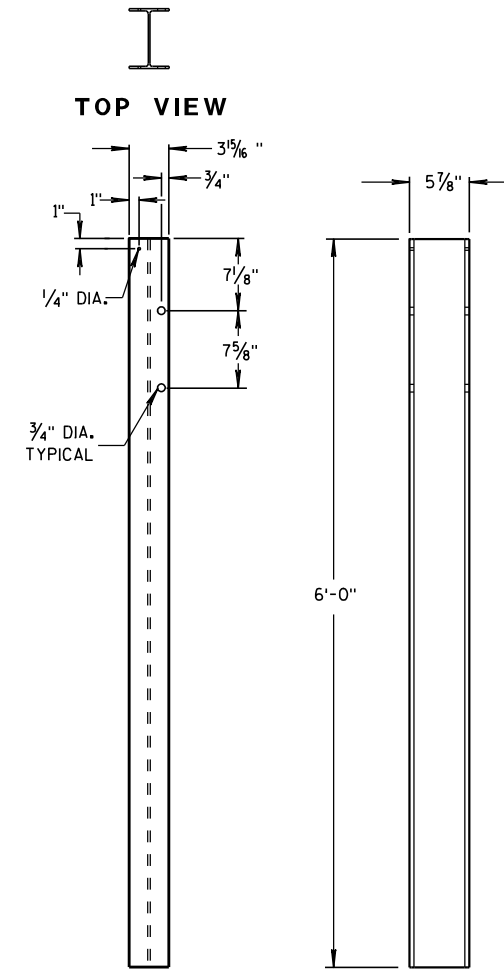
TOP VIEW



FRONT VIEW

SIDE VIEW

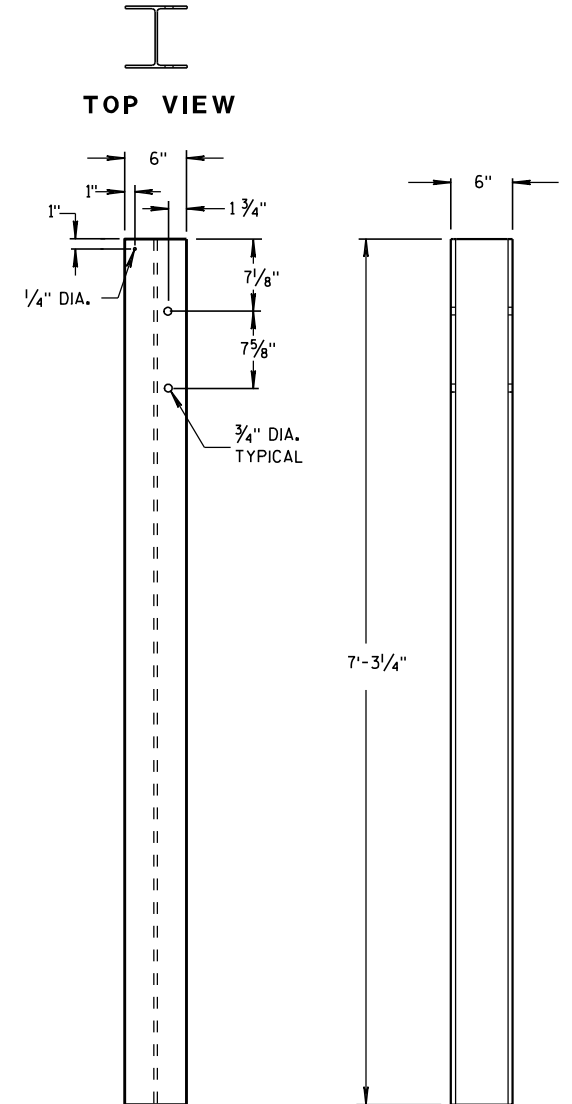
STEEL POSTS 1-5



FRONT VIEW

SIDE VIEW

STEEL POSTS 6-11



FRONT VIEW

SIDE VIEW

STEEL POSTS 12-14

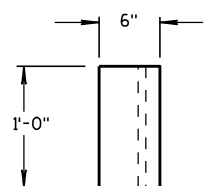
STEEL POST SIZES

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 7/8"
⑬	W6x15	87 7/8"
⑭	W6x15	87 7/8"

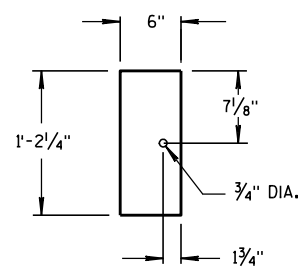
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

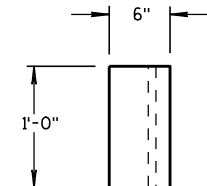


TOP VIEW

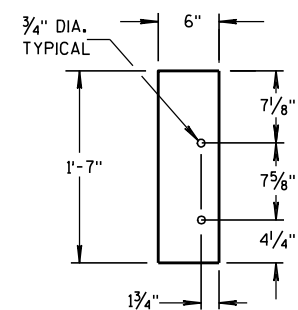


FRONT VIEW

BLOCKOUT
POSTS 1-5

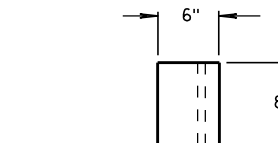


TOP VIEW

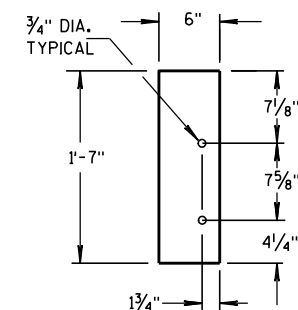


FRONT VIEW

BLOCKOUT
POSTS 6-11

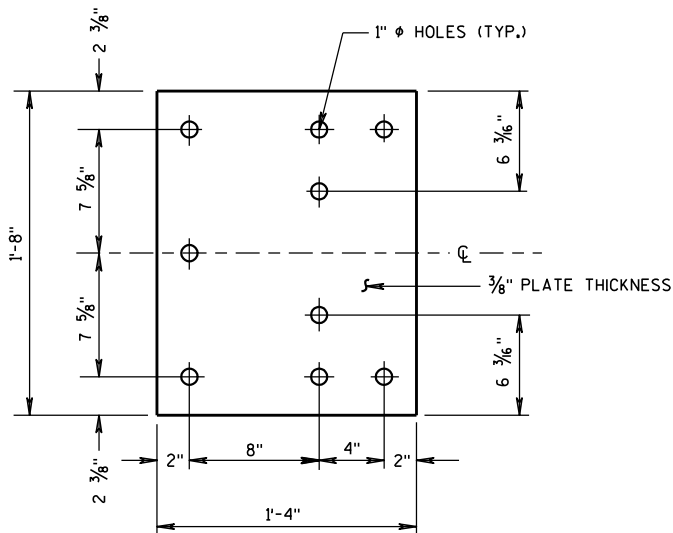


TOP VIEW

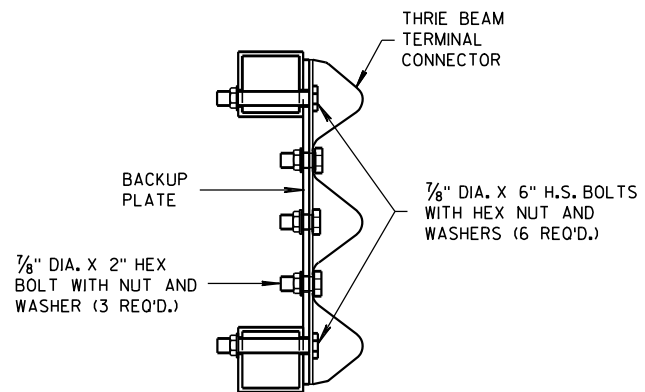


FRONT VIEW

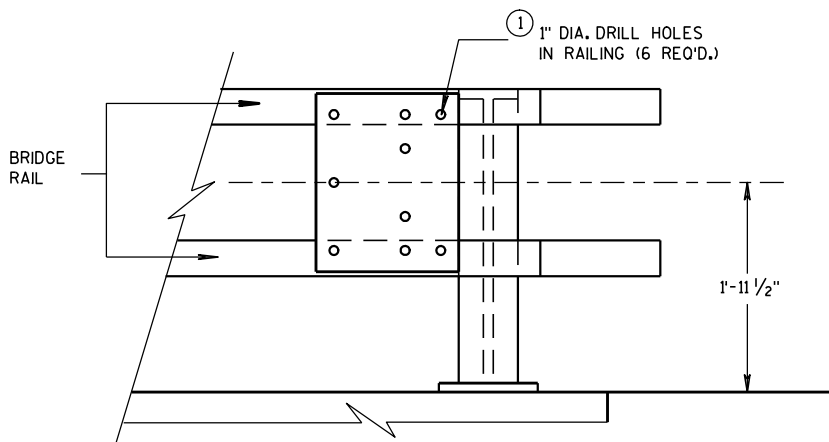
BLOCKOUT
POSTS 12-14



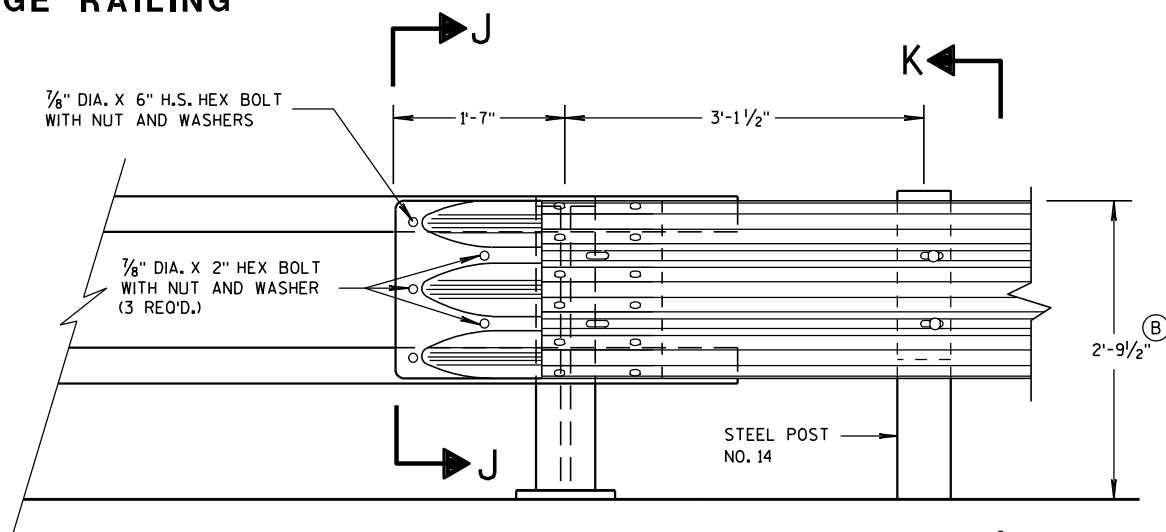
BACK-UP PLATE DETAIL



SECTION J-J

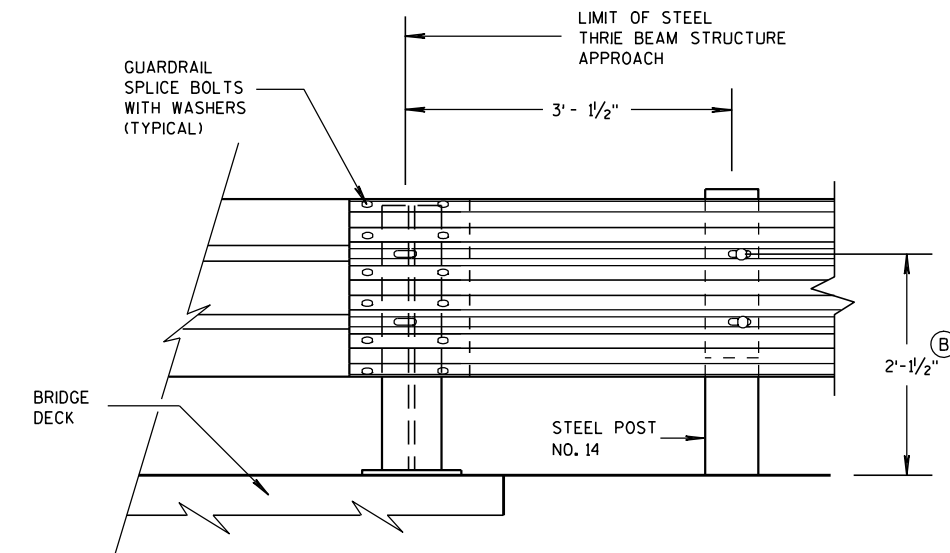


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



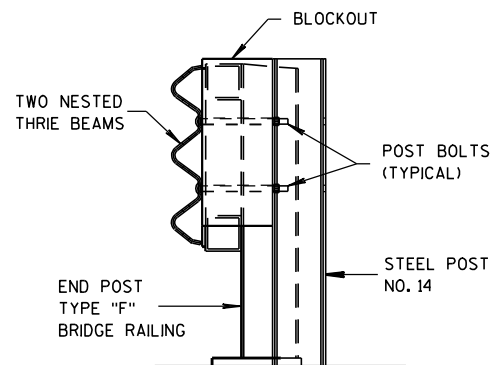
FRONT VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"



FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



SECTION K-K

GENERAL NOTES

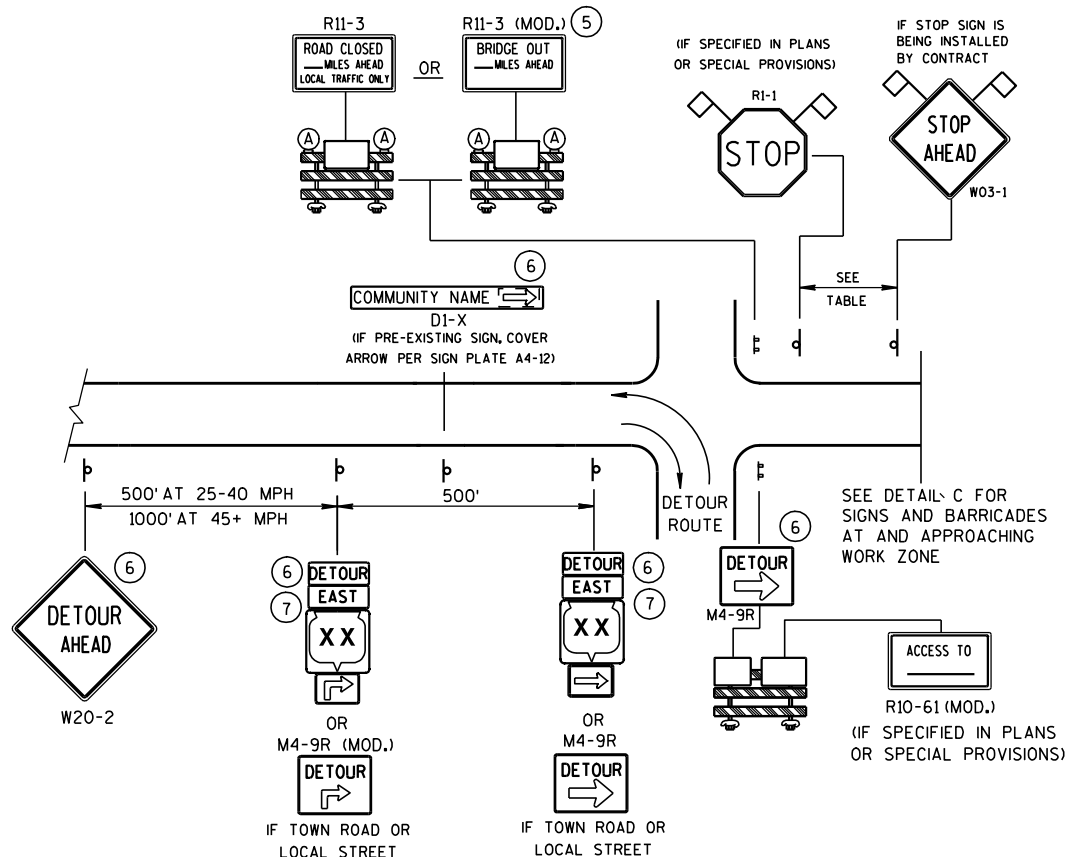
- ① DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

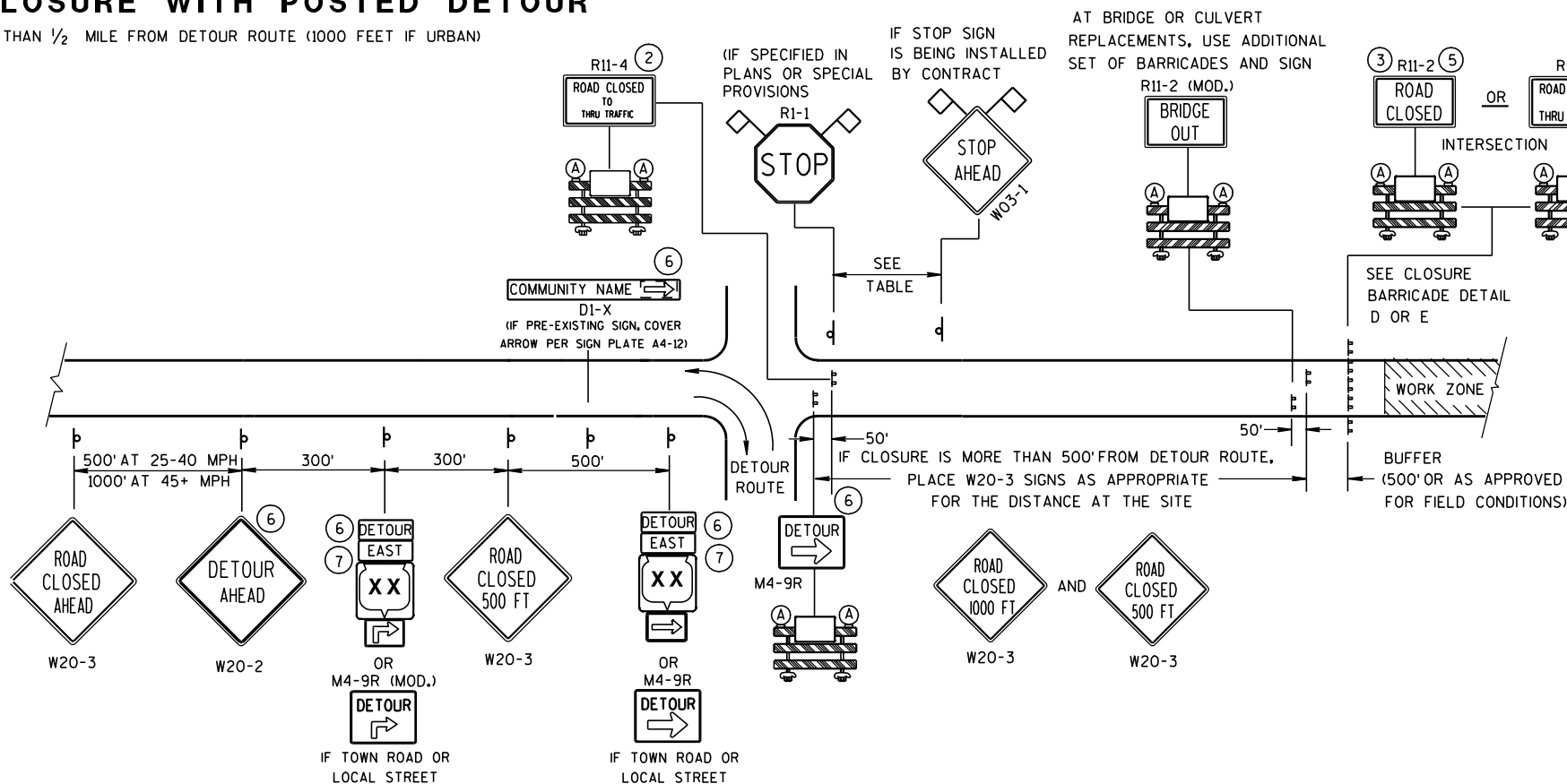
APPROVED
8/31/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

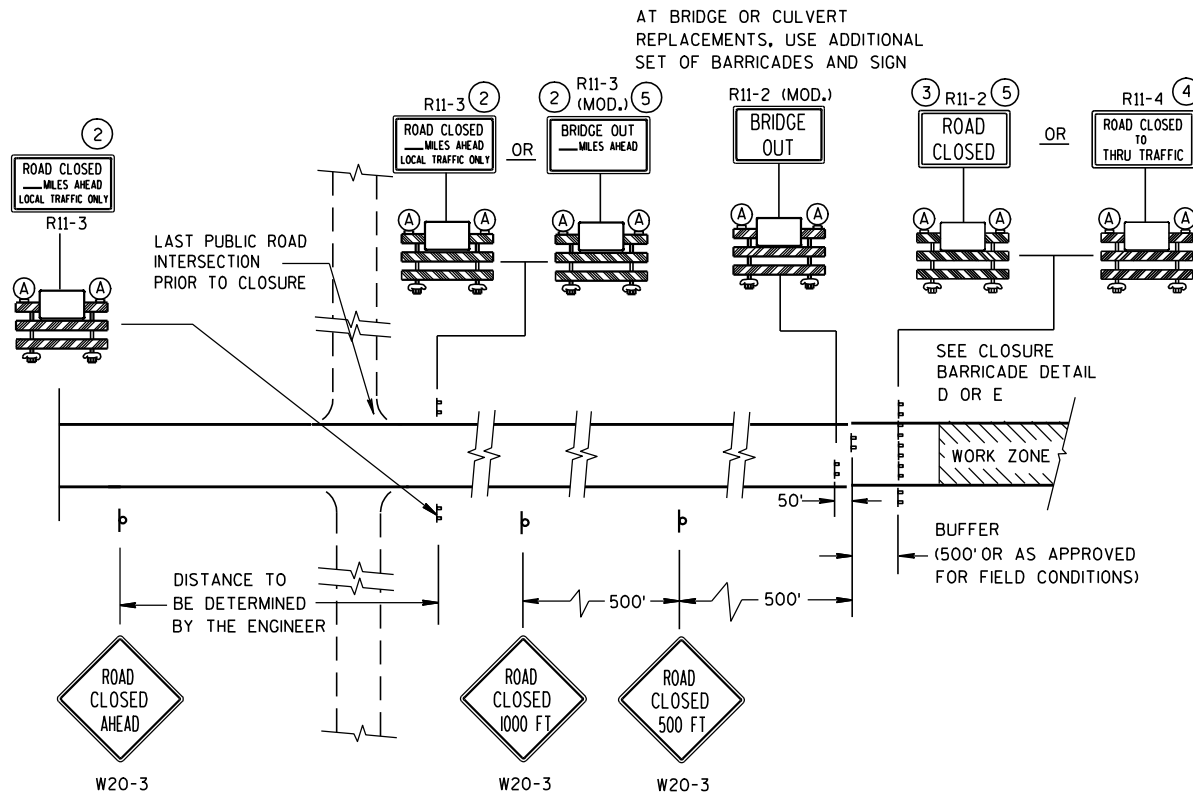
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR



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

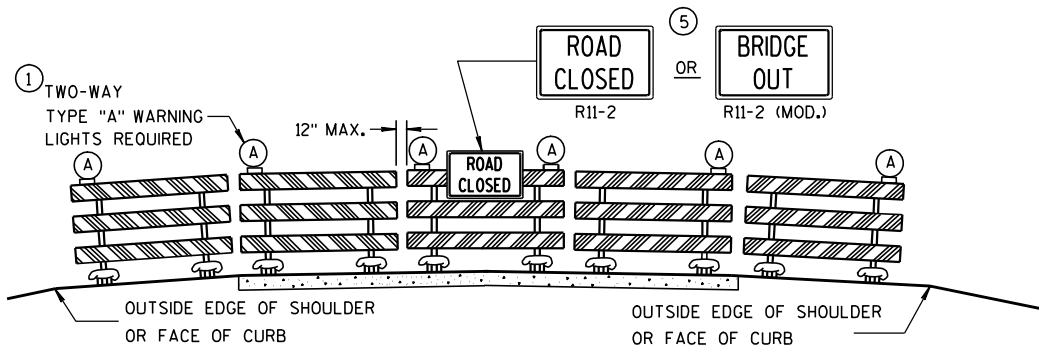
SEE SDD 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

LEGEND

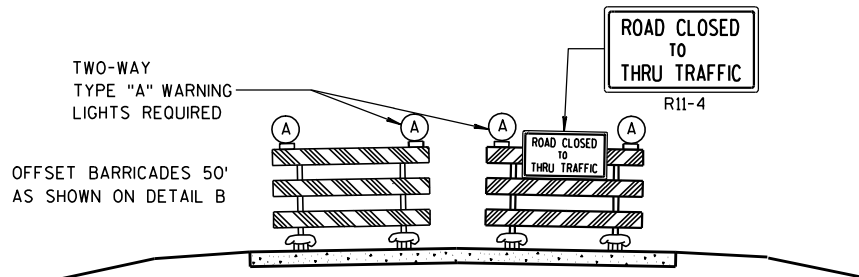
- POST MOUNTED SIGN
- TYPE III BARRICADES
- TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR EAST M4-8 M3-X
- MI-4 OR MI-5A OR MI-6
- MO5-1 OR MO6-1
- FLAGS, 16" X 16" MIN., (ORANGE)

**BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-4a 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.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

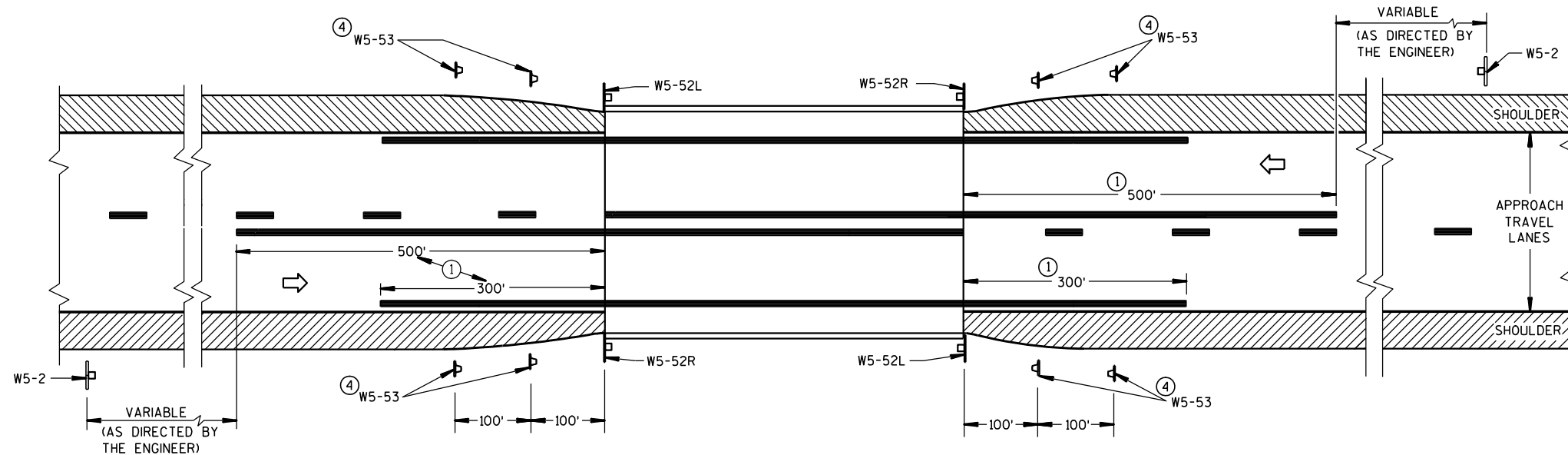
"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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 AND 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.

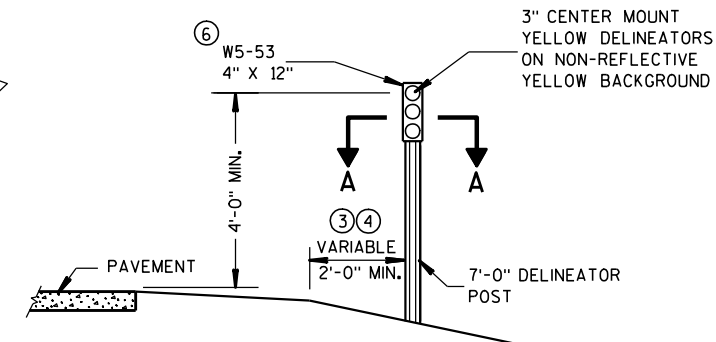
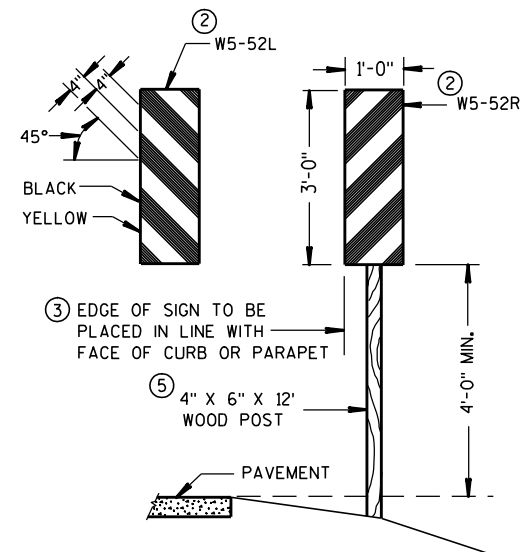
BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
9/16/03 DATE	/S/ Thomas N. Notbohm CHIEF SIGNS AND MARKING ENGINEER
FHWA	



SITUATION 1

WARRANTING CRITERION:

BRIDGE WIDTH IS AT LEAST 18 FEET BUT LESS THAN 24 FEET



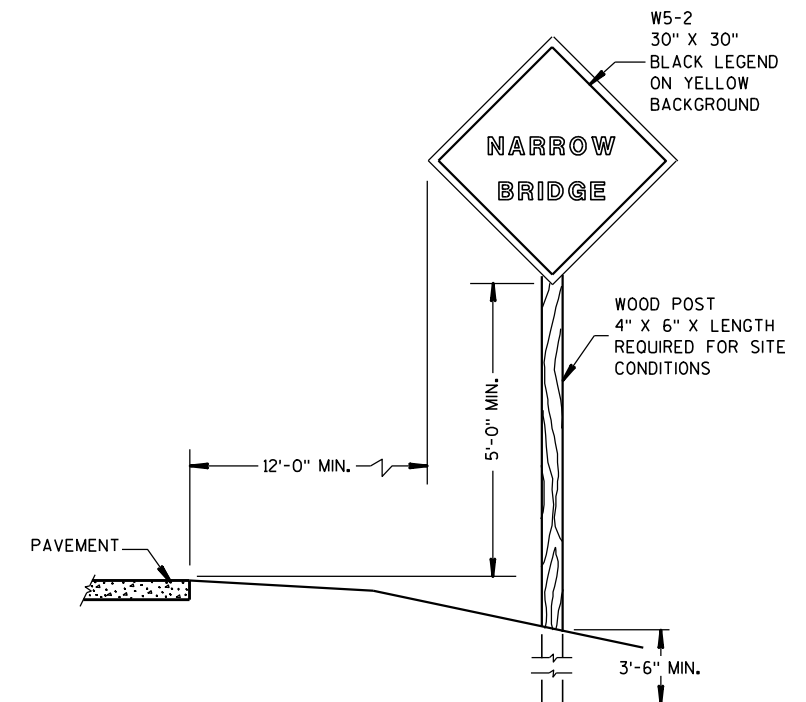
OBJECT MARKER PLACEMENT

GENERAL NOTES

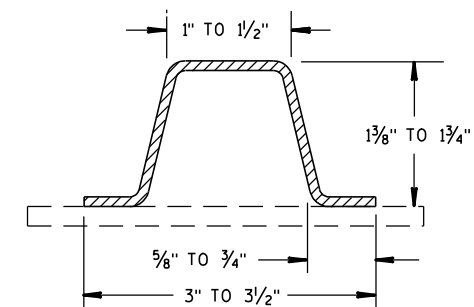
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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 H REFLECTIVE SHEETING.
- ③ LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.
- ④ OBJECT MARKERS (W5-53) SHALL BE LOCATED ALONG A LINE FLARED AWAY FROM THE BRIDGE CORNER TO DELINEATE THE NARROWING OF THE SHOULDER OR BERM.
- ⑤ A 12 FOOT DELINEATOR POST MAY BE USED INSTEAD OF A WOOD POST.
- ⑥ NON-BID ITEM. INCIDENTAL TO OTHER ITEMS.

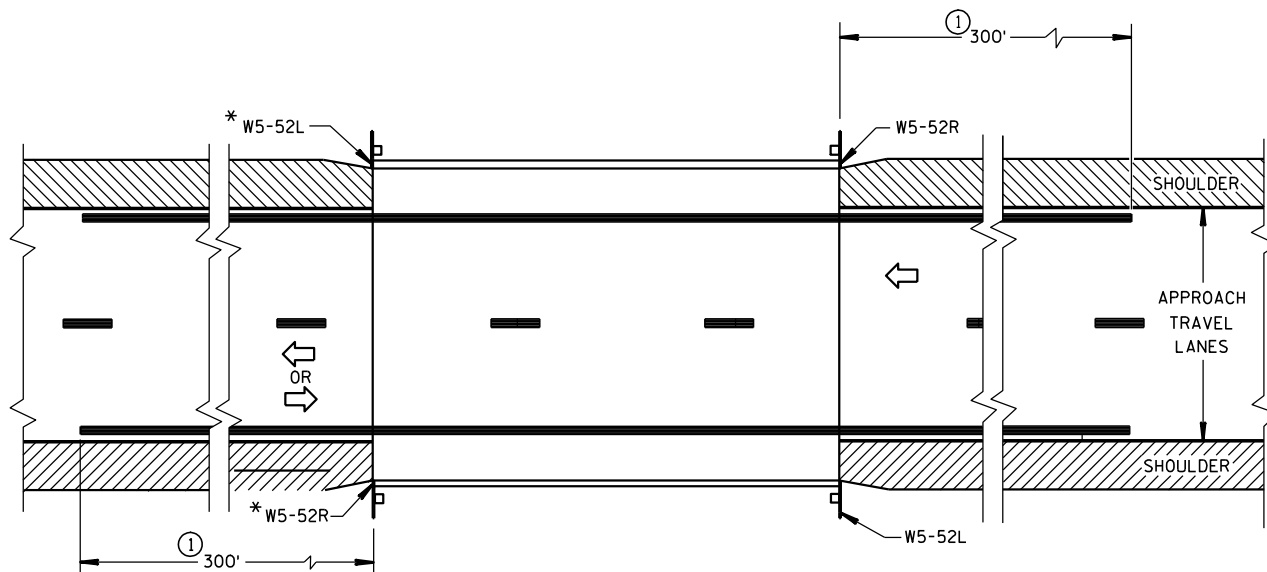


SIGN PLACEMENT



SECTION A-A

(MINIMUM WEIGHT 1.9 LBS. PER FT. AFTER GALVANIZING)



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.

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

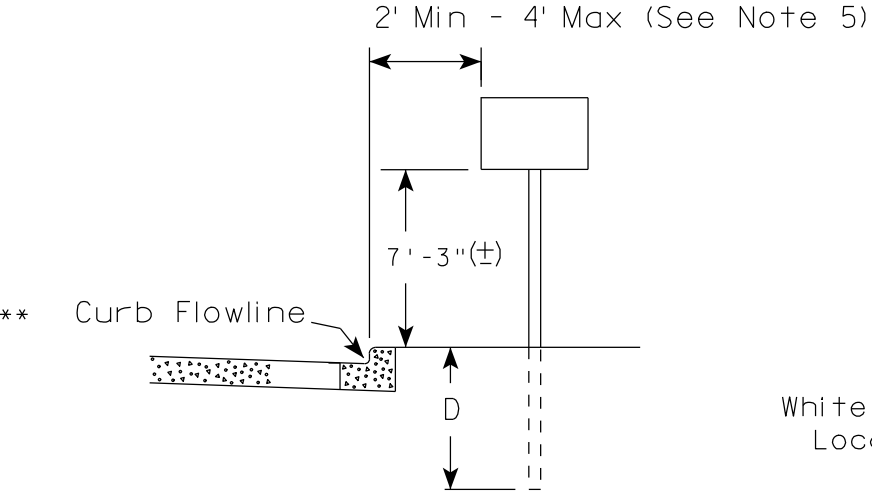
APPROVED

9/5/06
DATE

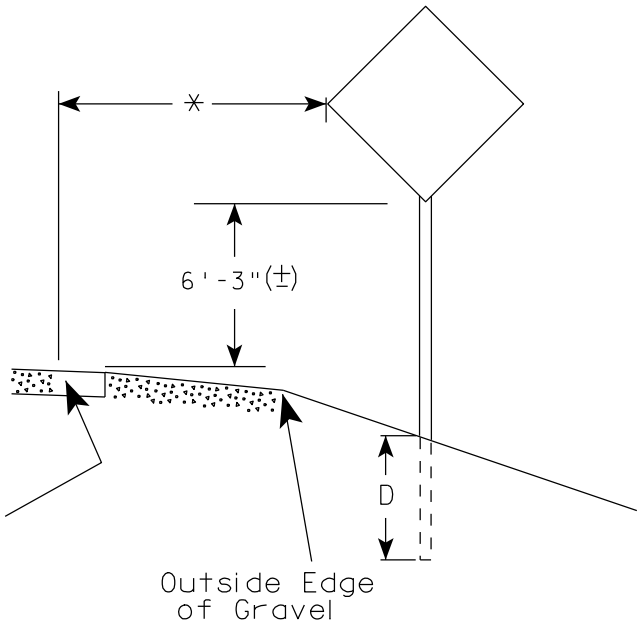
FHWA

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

URBAN AREA



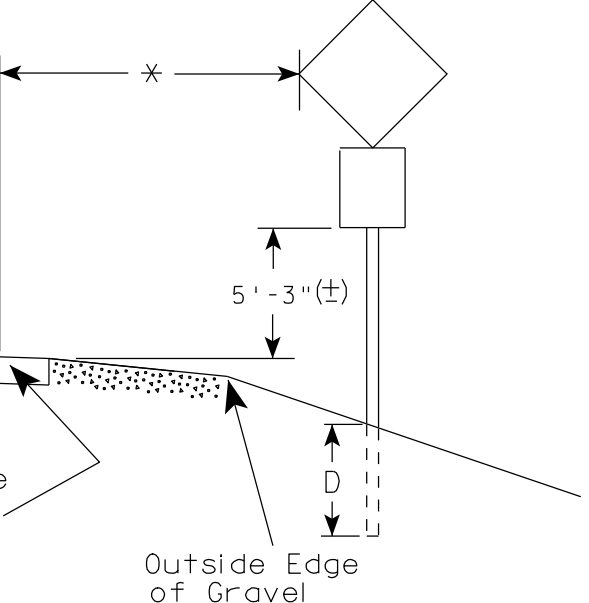
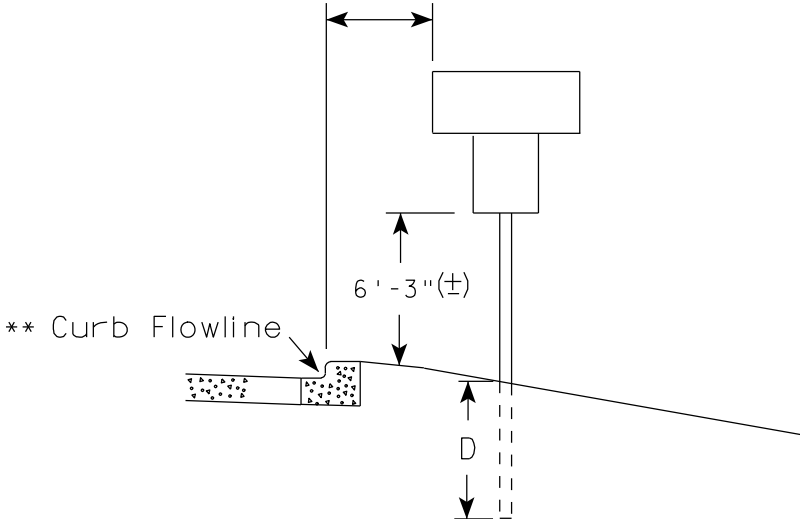
RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. 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 (A4-5) 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 stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

2' Min - 4' Max (See Note 5)



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.

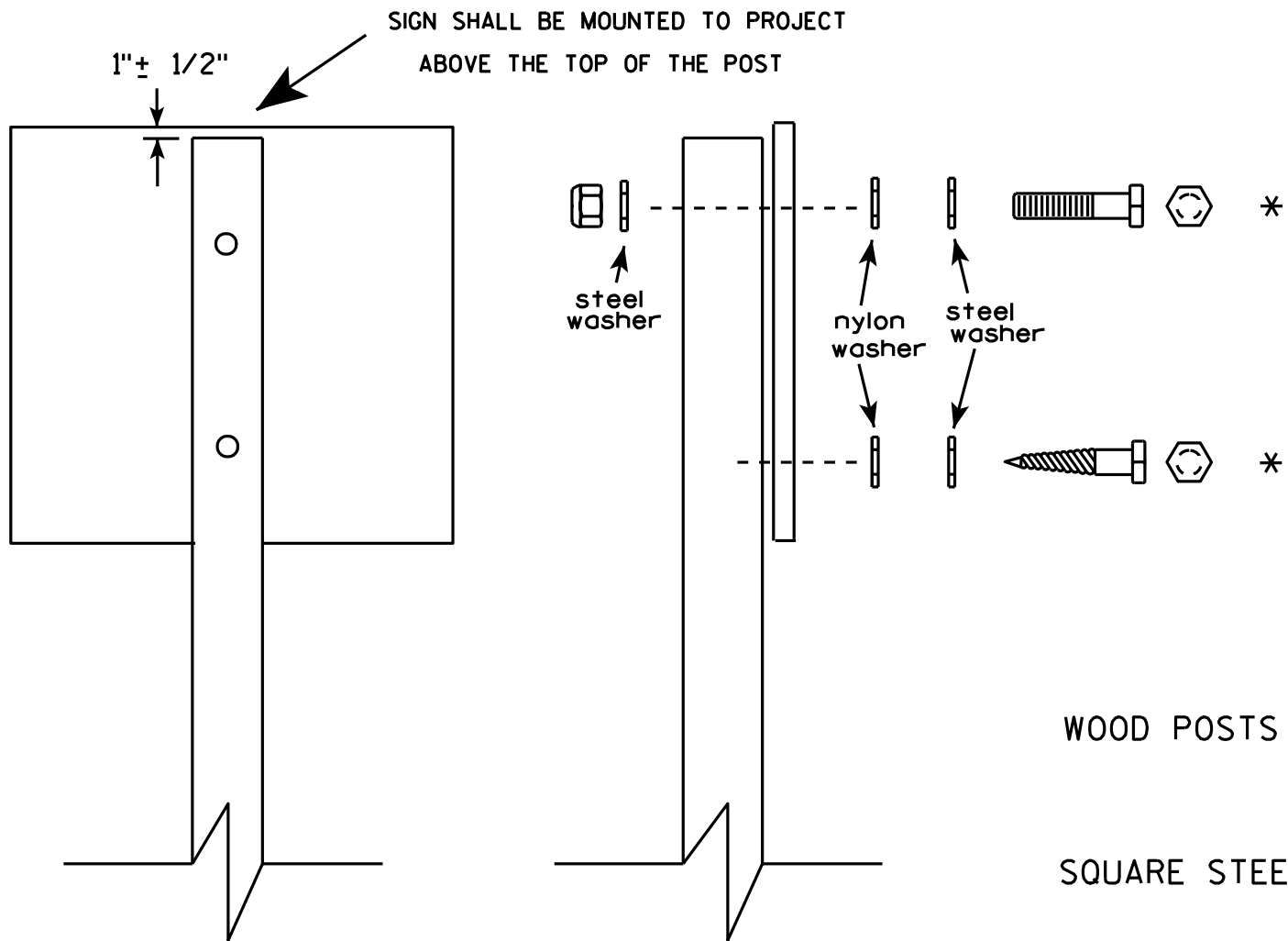
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-3.16

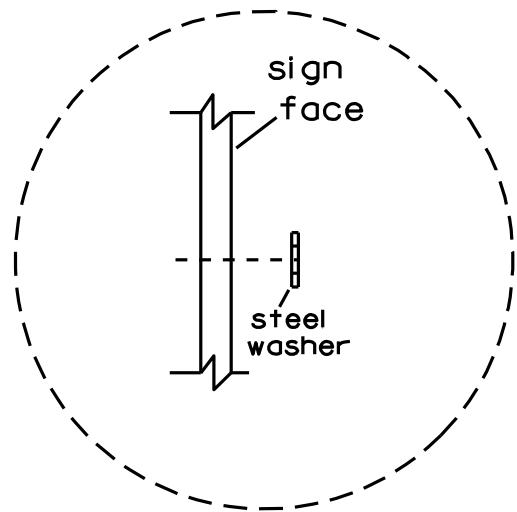


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

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

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

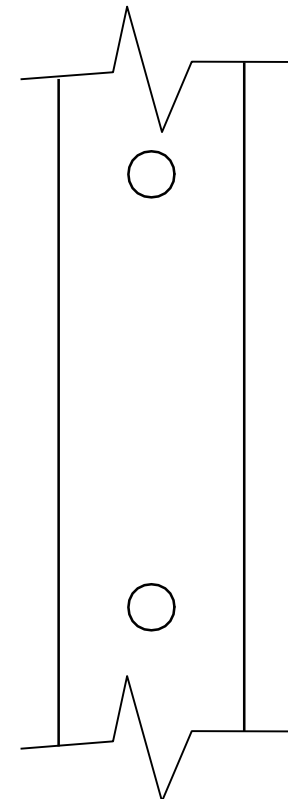
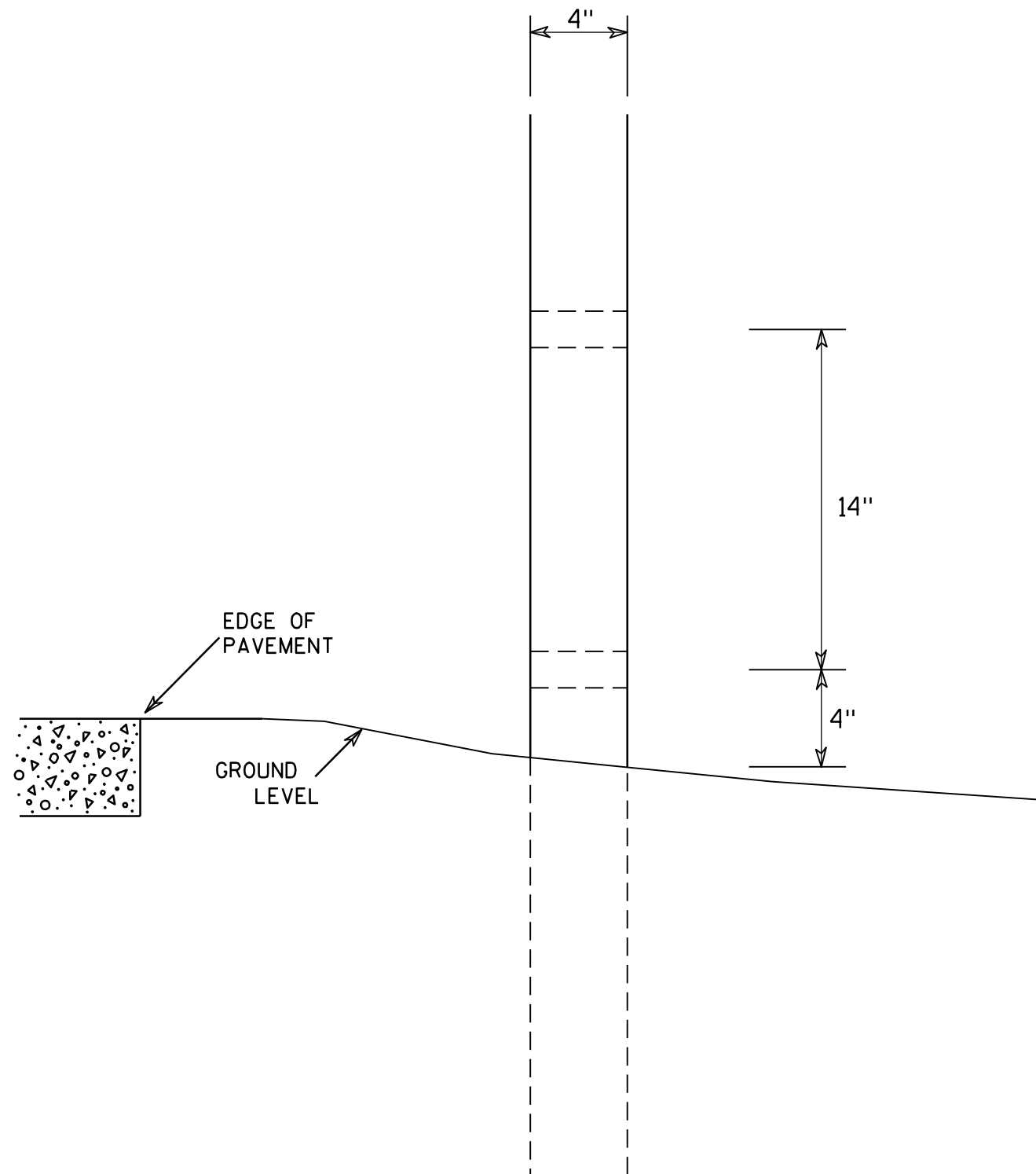
- WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts
- SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 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	<i>Matthew R. Rauch</i> 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.

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

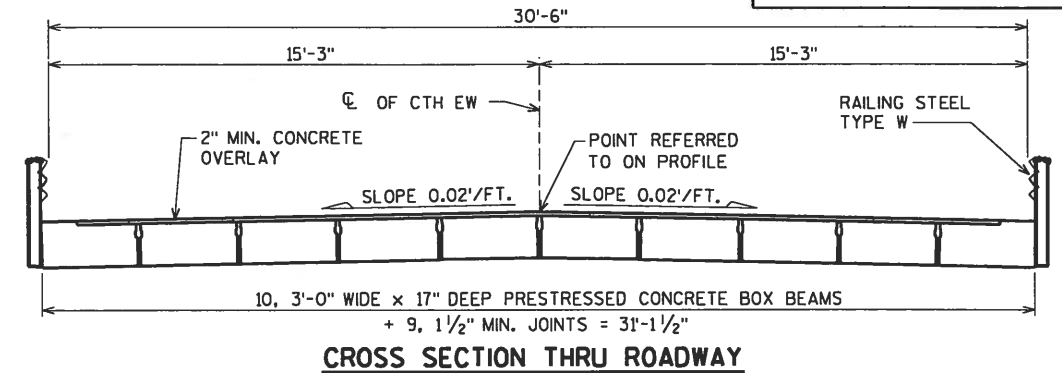
PROJECT NO: 7373-00-73

HWY: CTW EW

COUNTY: MONROE



SHEET NO:

E



A.D.T. = 310 (2013)
A.D.T. = 370 (2033)
R.D.S. = 65 M.P.H.



NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY  3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	 CHIEF STRUCTURES DESIGN ENGINEER		KAR 02/08/13 DATE
STRUCTURE B-41-295			
CTH EW OVER BRANCH E. FORK LEMONWEIR RIVER			
COUNTY	MONROE	TOWN/CITY/VILLAGE	SCOTT
DESIGN SPEC.			
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	CJM	DESIGN CK'D.	AEB
DRAWN BY	CLS	PLANS CK'D.	BNS
GENERAL PLAN			SHEET 1 OF 12

\$PRNAME\$
U:\42-0869.00 - Monroe County, CTH EW+BRIDGE#420869 gpFINAL.dgn

STATE PROJECT NUMBER

7373-00-73

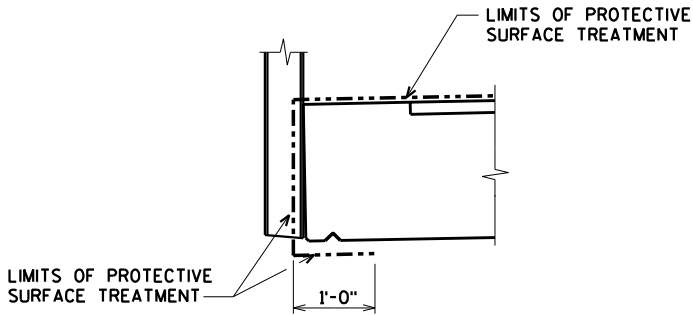
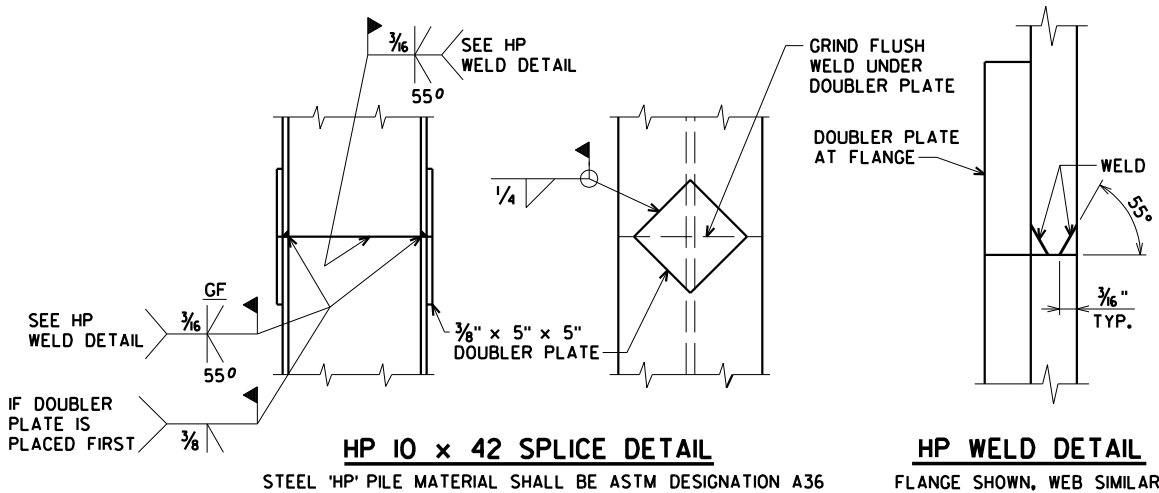
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	W. ABUT.	E. ABUT.	SUPER.	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-41-295	LS	-----	-----	-----	1
206.5000	COFFERDAMS B-41-295	LS	-----	-----	-----	1
210.0100	BACKFILL STRUCTURE	CY	75	75	-----	150
502.0100	CONCRETE MASONRY BRIDGES	CY	25	25	-----	50
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----	130	130
⊗ 503.0200.S	PRESTRESSED GIRDERS BOX 17-INCH	LF	-----	-----	305	305
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	2,360	2,360	-----	4,720
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	700	700	930	2,330
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	10	10	-----	20
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	-----	-----	10	10
513.7050	RAILING STEEL TYPE W B-41-295	LS	-----	-----	-----	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	-----	18
550.0500	PILE POINTS	EACH	5	5	-----	10
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	175	175	-----	350
606.0300	RIPRAP HEAVY	CY	50	65	-----	115
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	75	75	-----	150
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	110	135	-----	245
	NON-BID ITEMS					
	FILLER	SIZE	-----	-----	-----	1/2" & 3/4"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.
JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.
THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE FABRIC TYPE HR TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.
PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.
ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.
THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.
THE EXISTING STRUCTURE, P-41-939, TO BE REMOVED, IS A SINGLE SPAN TIMBER DECK BRIDGE, 26.2 FT. OVERALL LENGTH WITH A 24.5 FT. CLEAR ROADWAY WIDTH.
AT BACKFACE OF ABUTMENTS ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

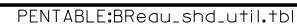
⊗ 3'-0" WIDE BOX SECTIONS



PROTECTIVE SURFACE TREATMENT DETAIL

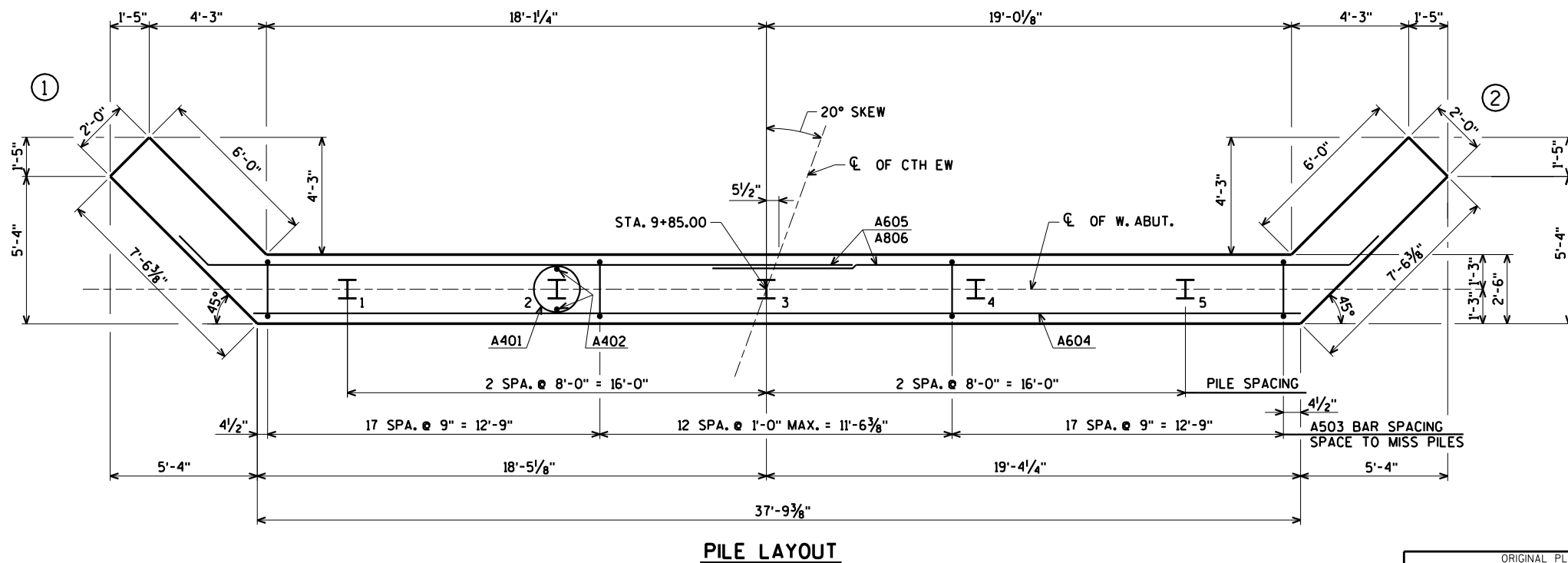
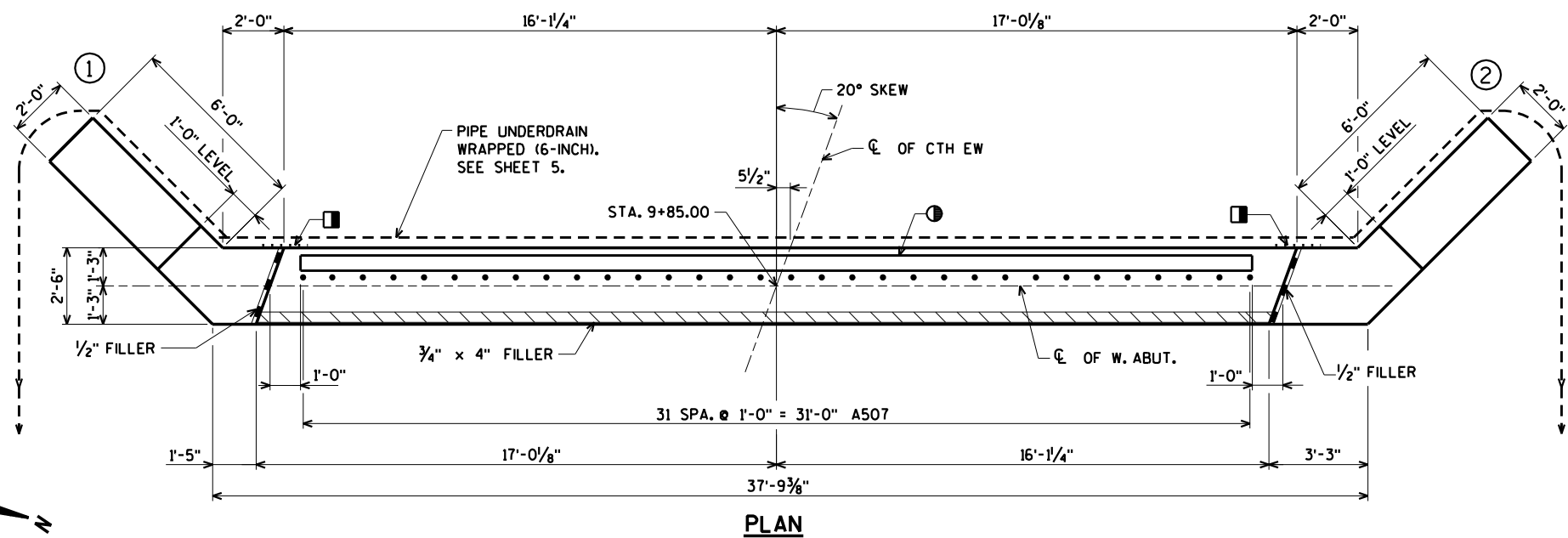
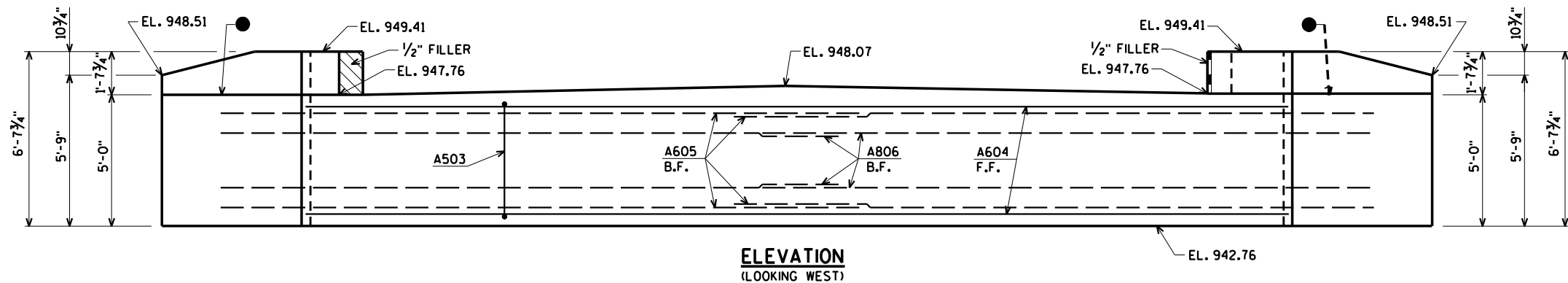
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-41-295			
DRAWN BY	CLS	PLANS CK'D.	CJM
QUANTITIES AND NOTES			SHEET 2 OF 12

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com



8

NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER, (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE)



● OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.

① KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6".

■ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WALL.

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

WORK THIS SHEET WITH SHEETS 5 & 6

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-41-295			
DRAWN BY		CLS	PLANS CK'D. C.J.M.
WEST ABUTMENT		SHEET 4 OF 12	

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com



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

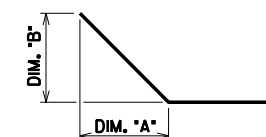
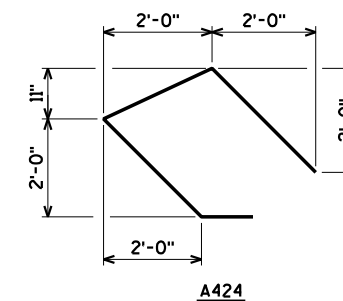
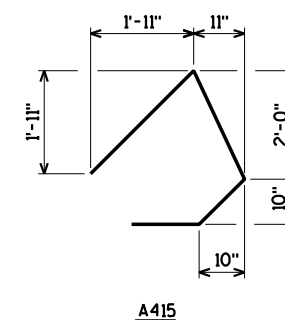
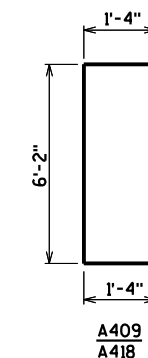
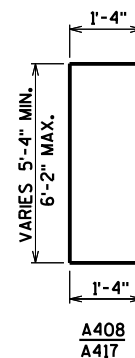
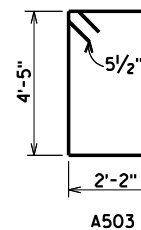
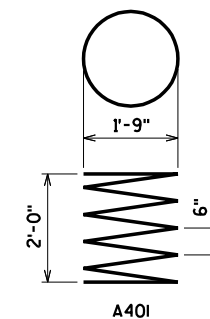
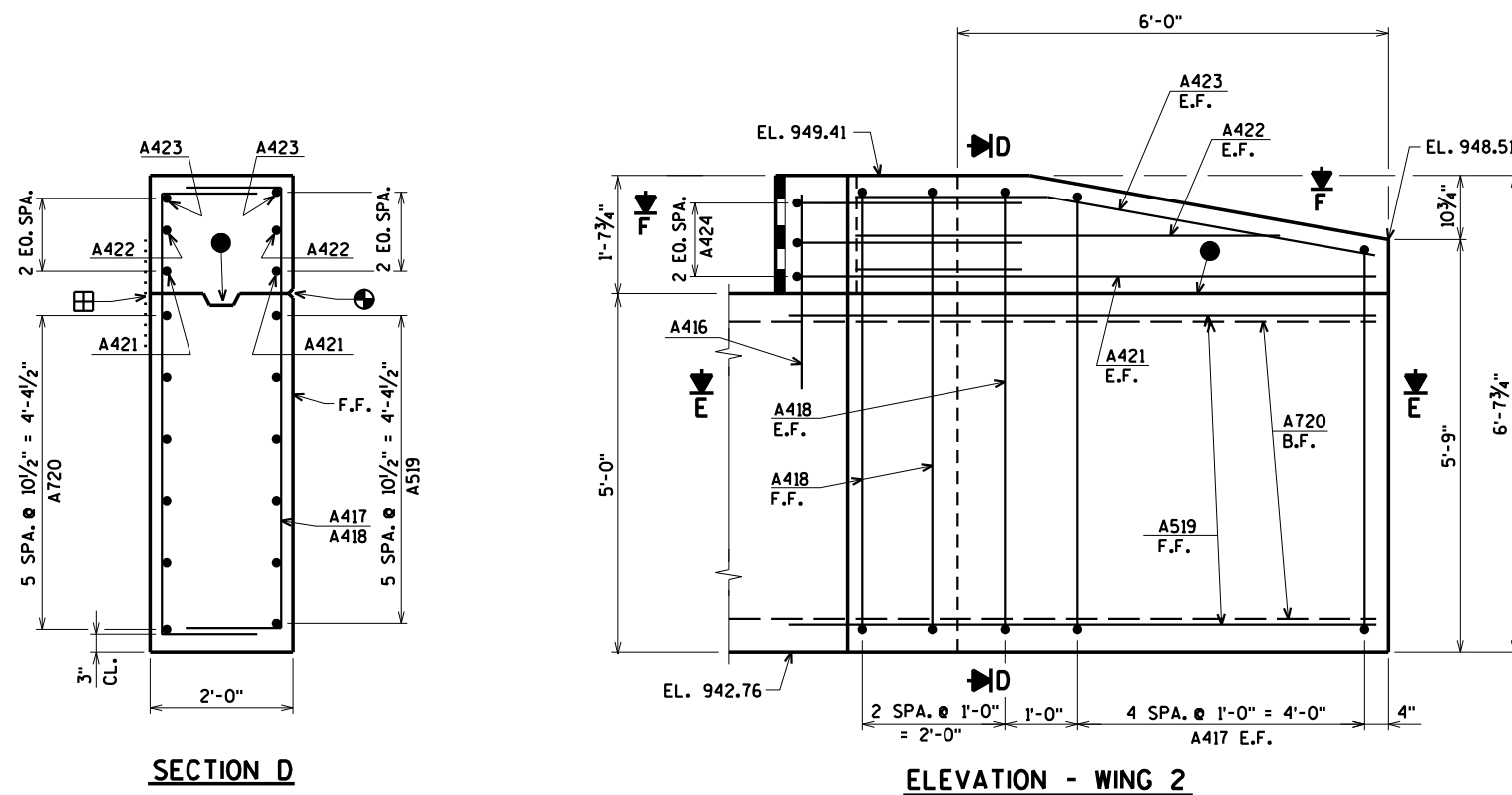
RODENT SHIELD DETAIL

- F.F. DENOTES FRONT FACE

EXCAVATE OR FILL TO
BOTTOM OF ABUTMENT
BEFORE DRIVING PILES.

SHEET 5 OF 12

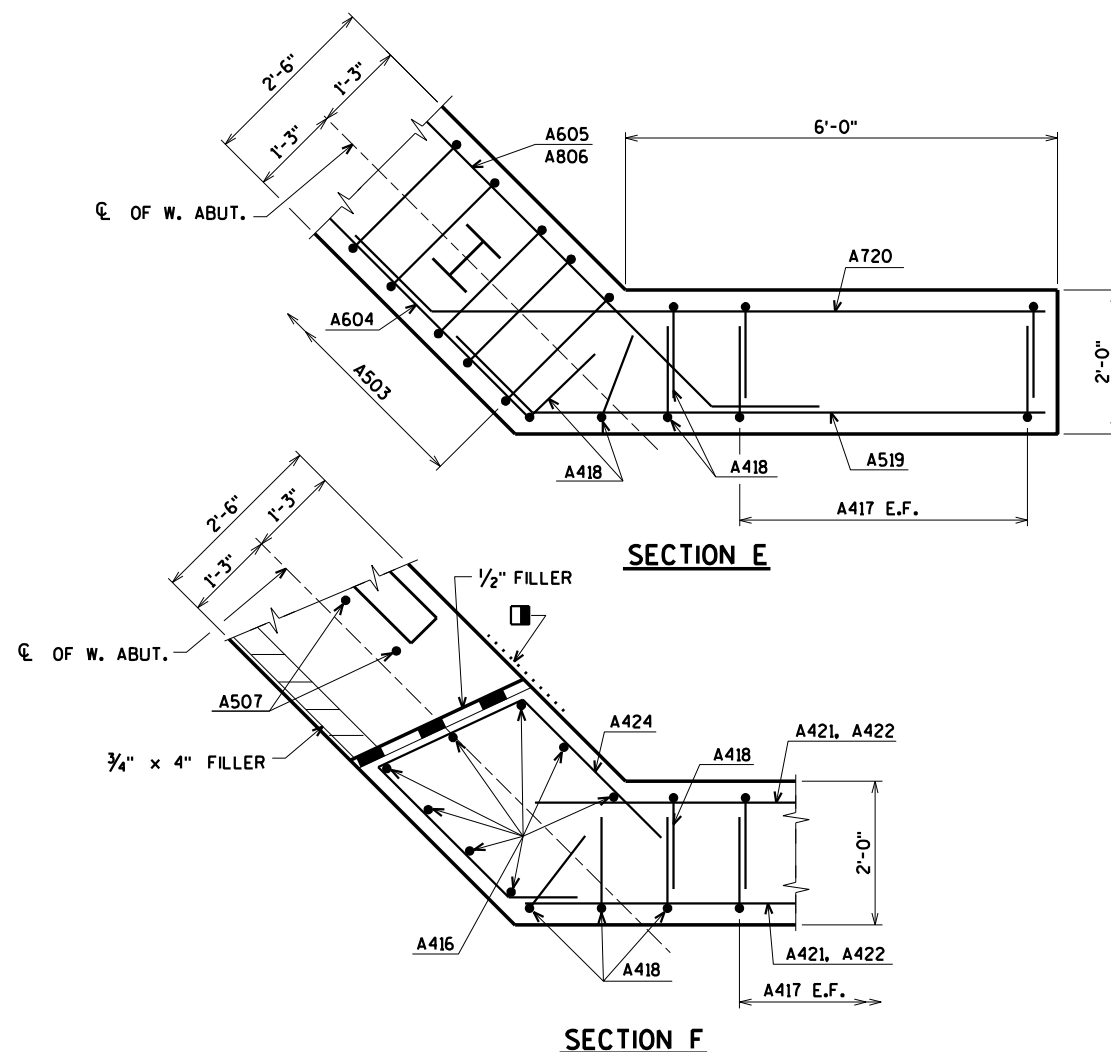
3433 Oakwood Hills Parkway
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BAR MARK	DIM."A"	DIM."B"
A605	1'-0 $\frac{3}{4}$ "	1'-0 $\frac{3}{4}$ "
A806	1'-0 $\frac{3}{4}$ "	1'-0 $\frac{3}{4}$ "
A510	1'-0 $\frac{3}{4}$ "	1'-0 $\frac{3}{4}$ "
A711	1'-0 $\frac{3}{4}$ "	1'-0 $\frac{3}{4}$ "
A414	4'-9"	10"
A519	1'-0 $\frac{3}{4}$ "	1'-0 $\frac{3}{4}$ "
A720	1'-0 $\frac{3}{4}$ "	1'-0 $\frac{3}{4}$ "
A423	4'-9"	10"

BILL OF BARS							
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	2,360# UNCOATED 700# COATED
							LOCATION
A401		5	28-0	X			BODY @ PILES
A402		10	2-3				BODY @ PILES
A503		47	13-9	X			BODY VERT.
A604		9	37-5				BODY HORIZ. F.F.
A605		4	23-10	X			BODY HORIZ. B.F.
A806		14	24-11	X			BODY HORIZ. B.F.
A507	X	32	2-0				BODY DOWELS
A408	X	10	8-3	X		⊗	WING 1 VERT. E.F.
A409	X	4	8-8	X			WING 1 VERT. E.F.
A510	X	6	8-9	X			WING 1 HORIZ. F.F.
A711	X	6	10-4	X			WING 1 HORIZ. B.F.
A412	X	2	7-3				WING 1 HORIZ. E.F.
A413	X	2	6-1				WING 1 HORIZ. E.F.
A414	X	2	7-3	X			WING 1 DIAG. E.F.
A415	X	3	7-1	X			WING 1 HORIZ.
A416	X	14	3-0				WINGS 1 & 2 VERT.
A417	X	10	8-3	X		⊗	WING 2 VERT. E.F.
A418	X	4	8-8	X			WING 2 VERT. E.F.
A519	X	6	8-9	X			WING 2 HORIZ. F.F.
A720	X	6	10-4	X			WING 2 HORIZ. B.F.
A421	X	2	7-3				WING 2 HORIZ. E.F.
A422	X	2	6-1				WING 2 HORIZ. E.F.
A423	X	2	7-3	X			WING 2 DIAG. E.F.
A424	X	3	8-10	X			WING 2 HORIZ.

⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



- ☐ 18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE. NOT REQUIRED IF CONST. JT. IS NOT USED.
- OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.
- ⊕ ¾" 'V' GROOVE ON F.F. OF WING WALL NOT REQUIRED IF CONST. JT. IS NOT USED.
- ☐ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WALL.

FOR PILE SPLICE DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

BAR MARK	NO REQ'D.	LENGTH
A408	2 SERIES OF 5	7'-10" TO 8'-8
A417	2 SERIES OF 5	7'-10" TO 8'-8

BUNDLE AND TAG EACH SERIES SEPARATELY.

WORK THIS SHEET WITH SHEETS 4 & 5

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-295

DRAWN BY	CLS	PLANS CK'D	CJM
----------	-----	------------	-----

WEST ABUTMENT
WING 2 DETAILS
& BILL OF BARS

SHEET 6 OF 12

F.F. DENOTES FRONT FACE





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

RODENT SHIELD DETAIL

- F.F. DENOTES FRONT FACE

SHEET 8 OF 12

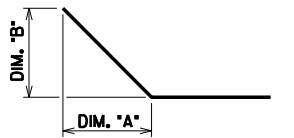
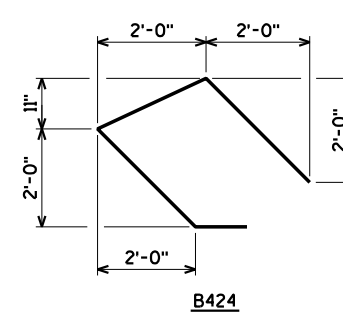
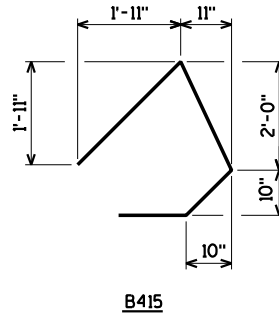
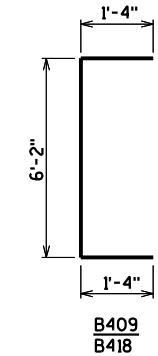
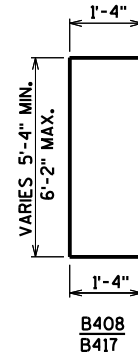
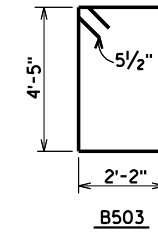
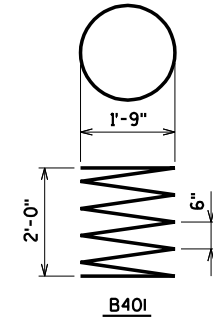
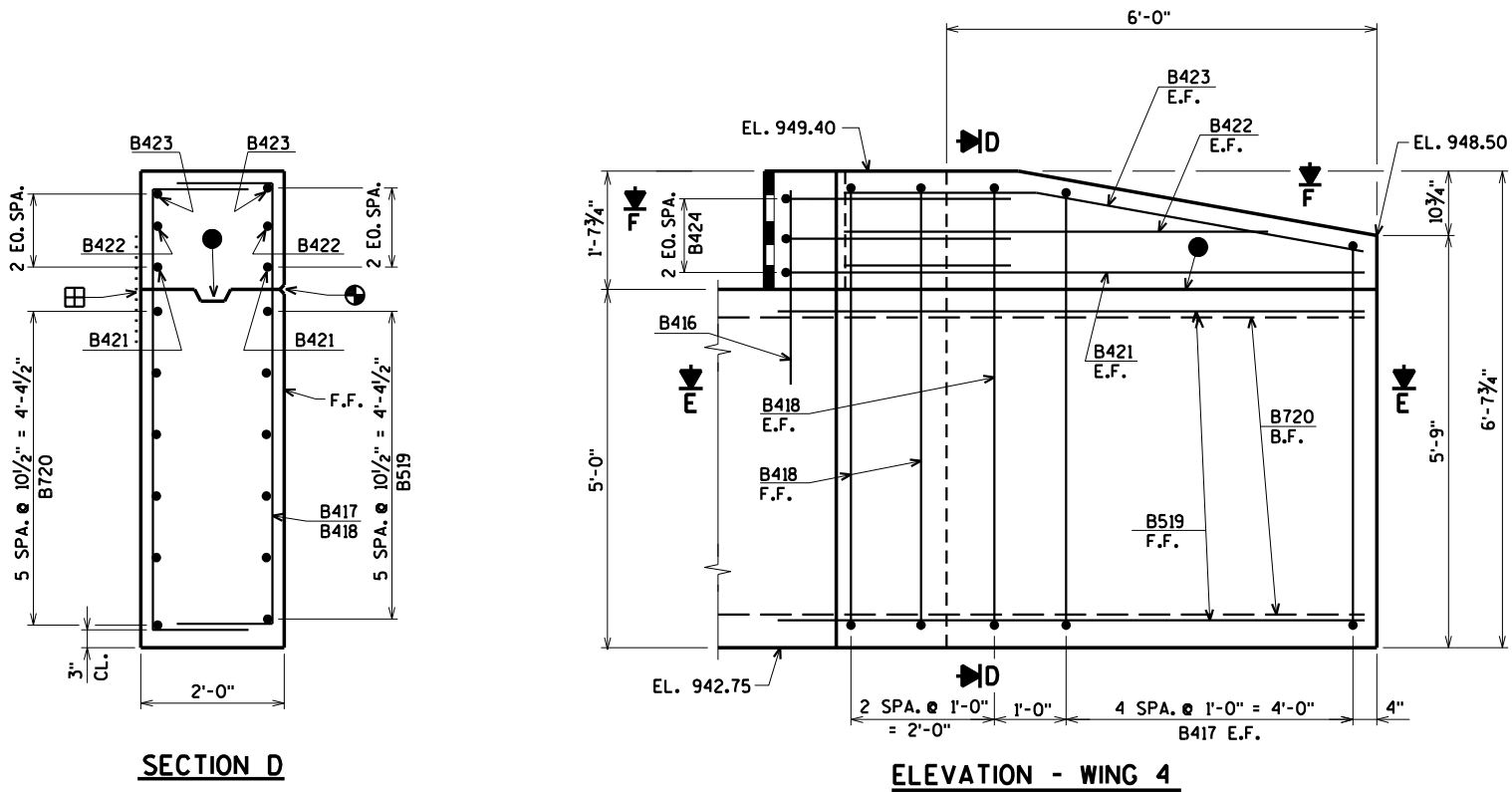
AVRES
ASSOCIATES

3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

\$PRNAME\$
U:\42-0869,00 - Monroe County, CTH EW+BRIDGE\420869 ea.dgn

STATE PROJECT NUMBER

7373-00-73

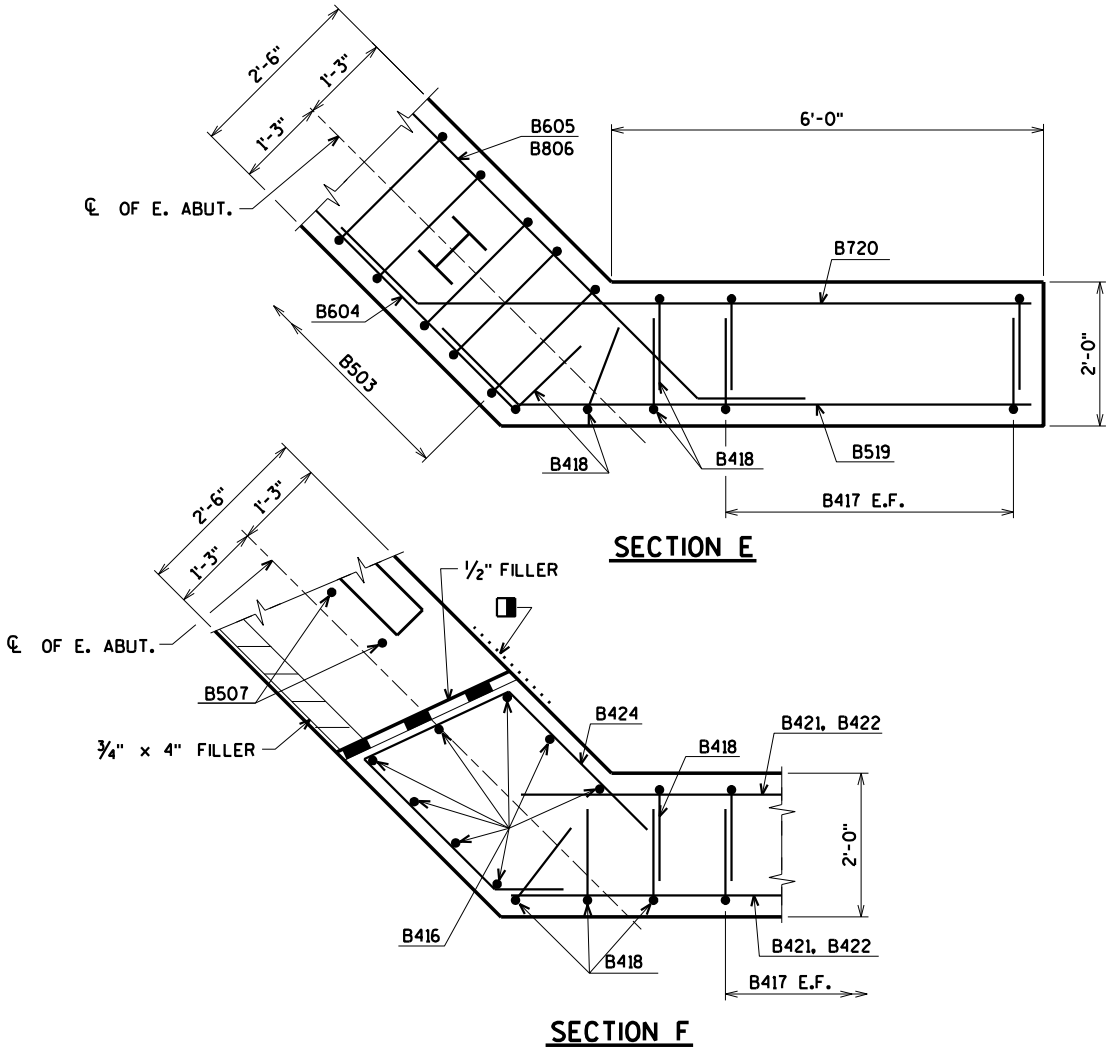


BAR MARK	DIM. "A"	DIM. "B"
B605	1'-0 3/4"	1'-0 3/4"
B806	1'-0 3/4"	1'-0 3/4"
B510	1'-0 3/4"	1'-0 3/4"
B711	1'-0 3/4"	1'-0 3/4"
B414	4'-9"	10"
B519	1'-0 3/4"	1'-0 3/4"
B720	1'-0 3/4"	1'-0 3/4"
B423	4'-9"	10"

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	2,360* UNCOATED 700* COATED
							LOCATION
B401		5	28-0	X			BODY PILES
B402		10	2-3				BODY PILES
B503		47	13-9	X			BODY VERT.
B604		9	37-5				BODY HORIZ. F.F.
B605		4	23-10	X			BODY HORIZ. B.F.
B806		14	24-11	X			BODY HORIZ. B.F.
B507	X	32	2-0				BODY DOWELS
B408	X	10	8-3	X			WING 3 VERT. E.F.
B409	X	4	8-8	X			WING 3 VERT. E.F.
B510	X	6	8-9	X			WING 3 HORIZ. F.F.
B711	X	6	10-4	X			WING 3 HORIZ. B.F.
B412	X	2	7-3				WING 3 HORIZ. E.F.
B413	X	2	6-1				WING 3 HORIZ. E.F.
B414	X	2	7-3	X			WING 3 DIAG. E.F.
B415	X	3	7-1	X			WING 3 HORIZ.
B416	X	14	3-0				WINGS 3 & 4 VERT.
B417	X	10	8-3	X			WING 4 VERT. E.F.
B418	X	4	8-8	X			WING 4 VERT. E.F.
B519	X	6	8-9	X			WING 4 HORIZ. F.F.
B720	X	6	10-4	X			WING 4 HORIZ. B.F.
B421	X	2	7-3				WING 4 HORIZ. E.F.
B422	X	2	6-1				WING 4 HORIZ. E.F.
B423	X	2	7-3	X			WING 4 DIAG. E.F.
B424	X	3	8-10	X			WING 4 HORIZ.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.
⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



- 18" RUBBERIZED MEMBRANE WATERPROOFING ON BACK FACE. NOT REQUIRED IF CONST. JT. IS NOT USED.
 - OPT. KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.
 - 3/4" 'V' GROOVE ON F.F. OF WING WALL NOT REQUIRED IF CONST. JT. IS NOT USED.
 - VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WALL.
- FOR PILE SPlice DETAIL SEE SHEET 2.
- B.F. DENOTES BACK FACE
E.F. DENOTES EACH FACE
F.F. DENOTES FRONT FACE

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
B408	2 SERIES OF 5	7'-10" TO 8'-8"
B417	2 SERIES OF 5	7'-10" TO 8'-8"

BUNDLE AND TAG EACH SERIES SEPARATELY.

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

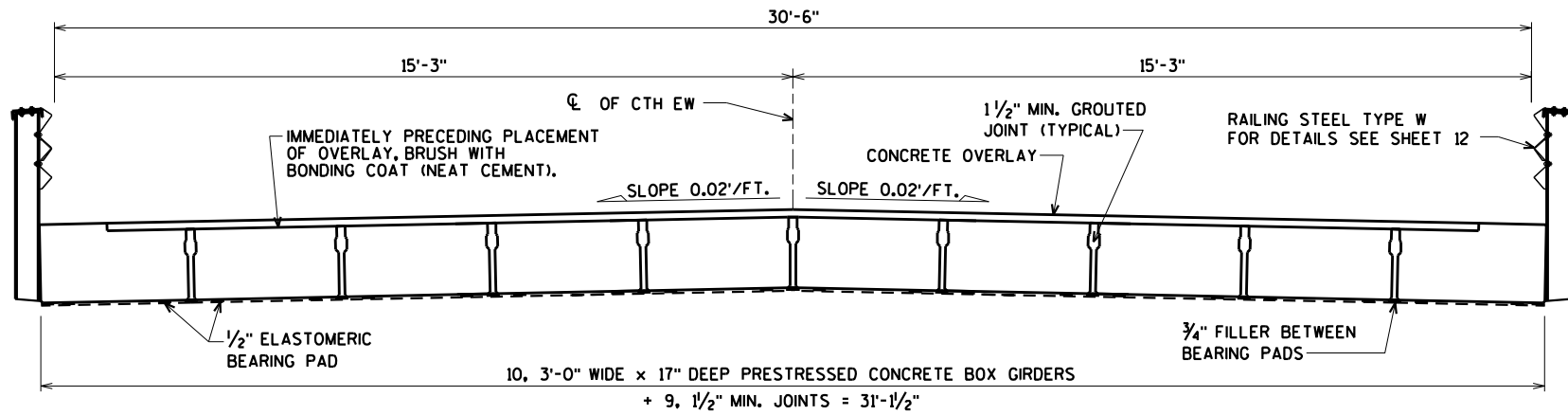
WORK THIS SHEET WITH SHEETS 7 & 8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-41-295			
DRAWN BY		CLS	PLANS CK'D. CJM
EAST ABUTMENT WING 4 DETAILS & BILL OF BARS			
SHEET 9 OF 12			

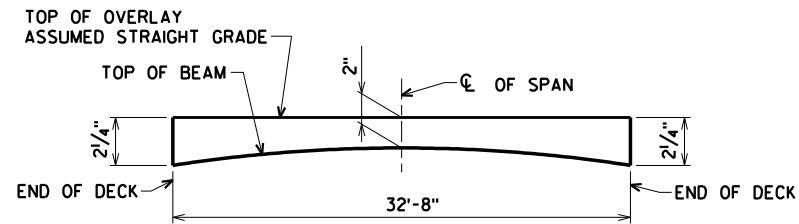
\$PRNAME\$
U:\42-0869,00 - Monroe County, CTH EW\BRIDGE\420869 sub.dgn

STATE PROJECT NUMBER

7373-00-73



CROSS SECTION THRU ROADWAY



OVERLAY THICKNESS DIAGRAM

NOTES

4 WAY SLING MUST BE USED TO ENGAGE ALL 4 LIFTING DEVICES ON BOTH ENDS OF GIRDERS.

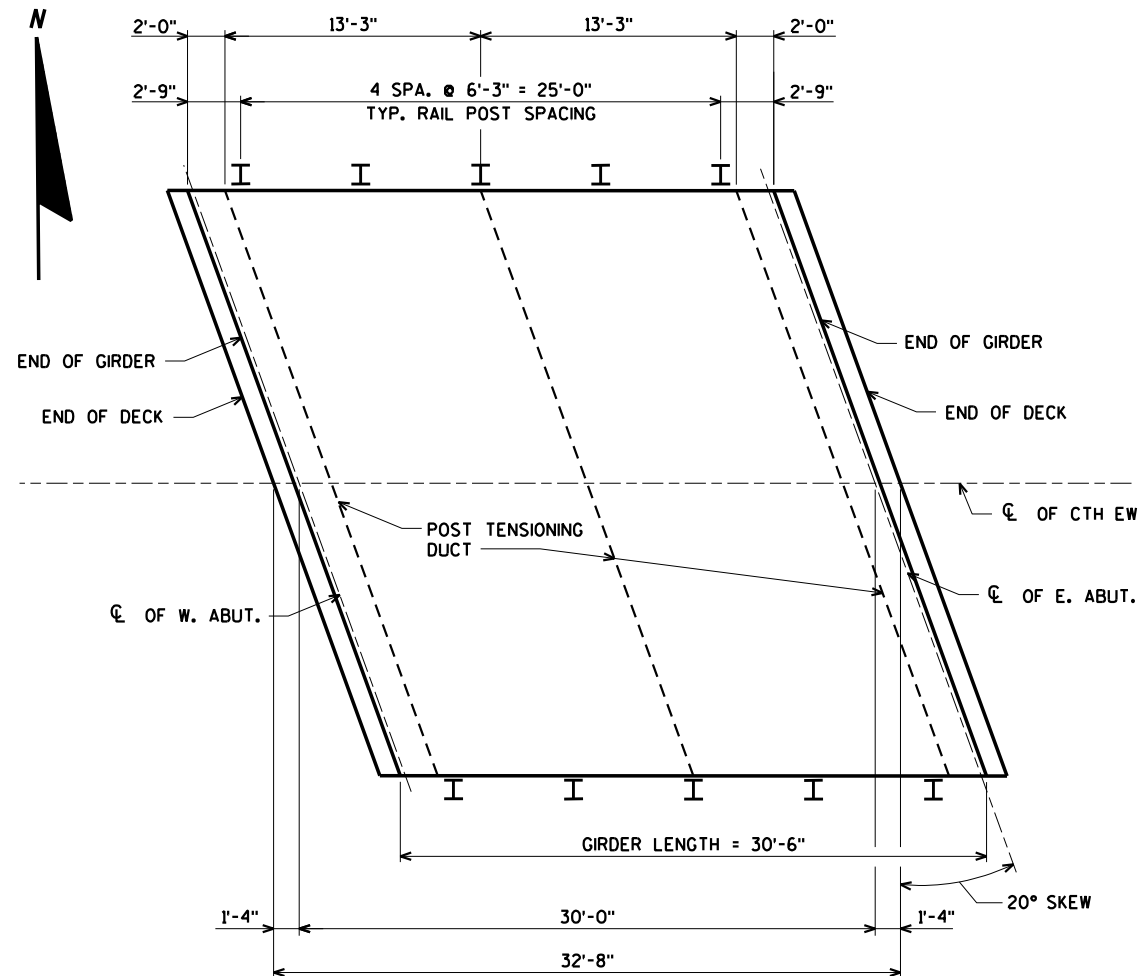
POST TENSIONING OF THE TRANSVERSE TENDONS SHALL NOT BEGIN UNTIL THE GROUT BETWEEN THE PRECAST BEAMS HAS BEEN ALLOWED TO CURE FOR 48 HOURS.

THE CEMENT AND FINE AGGREGATE FOR THE GROUT BETWEEN THE POST-TENSIONED BEAMS SHALL BE PROPORTIONED BY WEIGHT AS INDICATED IN THE SPECIAL PROVISIONS.

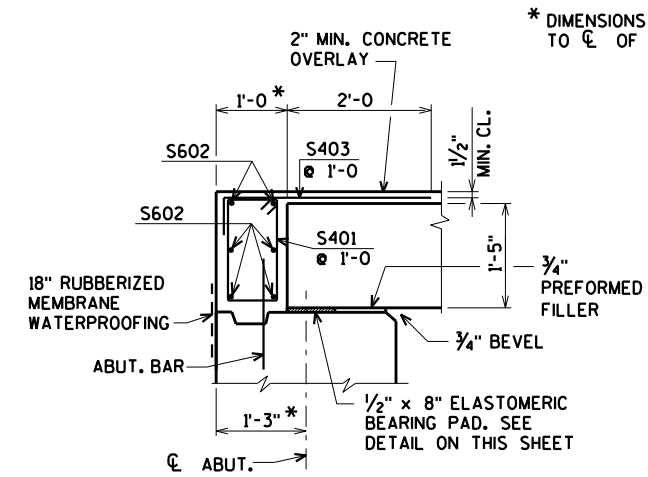
POST-TENSIONING DUCTS SHALL BE PRESSURE GROUTED FROM ONE GROUT PIPE UNTIL ALL ENTRAPPED AIR IS EXPELLED AND GROUT BEGINS TO FLOW FROM THE OPEN GROUT PIPE. THE OPEN GROUT PIPE SHALL BE CLOSED AND A PRESSURE OF 50 psi MAINTAINED FOR 15 SEC. THE GROUT COMPOSITION SHALL BE IN ACCORDANCE WITH THE CONTRACT SPECIAL PROVISIONS.

ABUTMENT BACKWALLS AND CONCRETE OVERLAY SHALL NOT BE POURED UNTIL AFTER POST-TENSIONING HAS BEEN COMPLETED.

ABUTMENT BACKWALL CONCRETE SHALL BE GRADE 'A', 'D', OR 'E'.



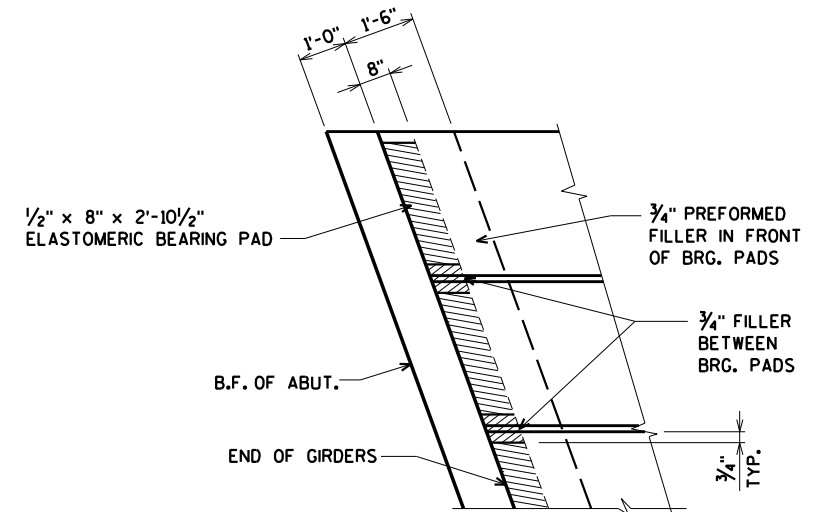
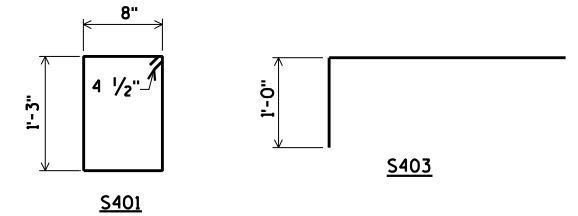
PLAN



LONG. SECTION THRU ROADWAY

BILL OF BARS						
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES
S401	X	64	4-4	X		930" COATED
S602	X	12	32-7			LOCATION
S403	X	64	3-9	X		AT END OF DECK
						AT END OF DECK
						AT END OF DECK

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



BEARING PAD PLAN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-41-295			
DRAWN BY		CLS	PLANS CK'D. CJM
SUPERSTRUCTURE			SHEET 10 OF 12

ORIGINAL PLANS PREPARED BY
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Eau Claire, WI 54701
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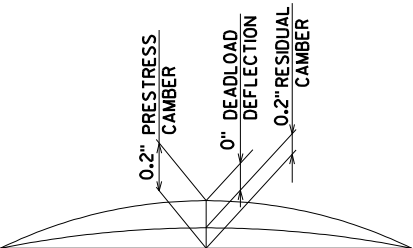
PENTABLE:BRau_shd_util.tbl

NOTES

STRANDS SHALL BE FLUSH WITH END OF UNIT.
BAR STEEL REINFORCEMENT SHALL BE GRADE 60 (fy = 60 ksi).
PRESTRESSING STEEL ULTIMATE STRENGTH = 270 ksi.
PRESTRESSED CONCRETE STRENGTH @ 28 DAYS = 5.0 ksi.
MINIMUM CYLINDER STRENGTH OF CONCRETE AT TIME OF TRANSFER OF PRESTRESS FORCE = 4.0 K.S.I.
VOIDS SHALL BE CAST SOLID WITH CONCRETE.
TRANSITION BETWEEN CHANGING SLOPES OF POST-TENSIONING DUCTS SHALL BE PROVIDED BY EITHER A CIRCULAR OR PARABOLIC CURVE WITH A MINIMUM LENGTH OF 3'-0".
STRANDS ARE LOW RELAXATION TYPE TOTAL INITIAL PRESTRESS FORCE = 248 KIPS.
SEAL WASHER SHALL BE SPONGE NEOPRENE GASKET, 2 1/2" MIN. THICK. STRESS POCKETS SHALL BE FILLED WITH CHLORIDE FREE NON-SHRINK GROUT AFTER POST-TENSIONING. (REFER TO SPECIAL PROVISION FOR NON-SHRINK GROUT SPECIFICATIONS).
SPACING SHOWN FOR TOP STIRRUPS ARE MAXIMUMS. THE CONTRACTOR MAY ELECT (AT NO ADJUSTMENT IN BID PRICE) TO REDUCE THE SPACING OF THESE BARS OR TO ADD ADDITIONAL REINFORCEMENT TO FACILITATE TYING OF THE REINFORCEMENT.

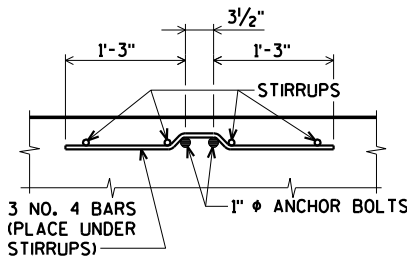
SEAL WASHER
(MAY ALSO BE ROUND)

SHEAR KEY
OMIT SHEAR KEY ON EXTERIOR FACE OF EXTERIOR GIRDERS.



CAMBER DIAGRAM

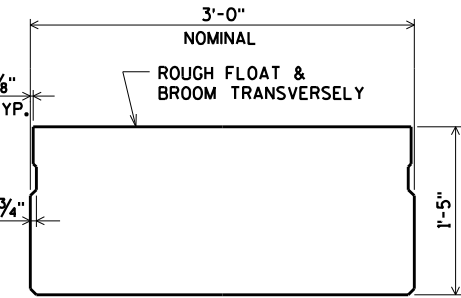
PRESTRESS CAMBER & DEADLOAD DEFLECTION DATA ARE THEORETICAL AND MAY VARY WITH CONCRETE STRENGTH, VARIABLE PRESTRESSING CONDITIONS AND PRESTRESS LOSSES.



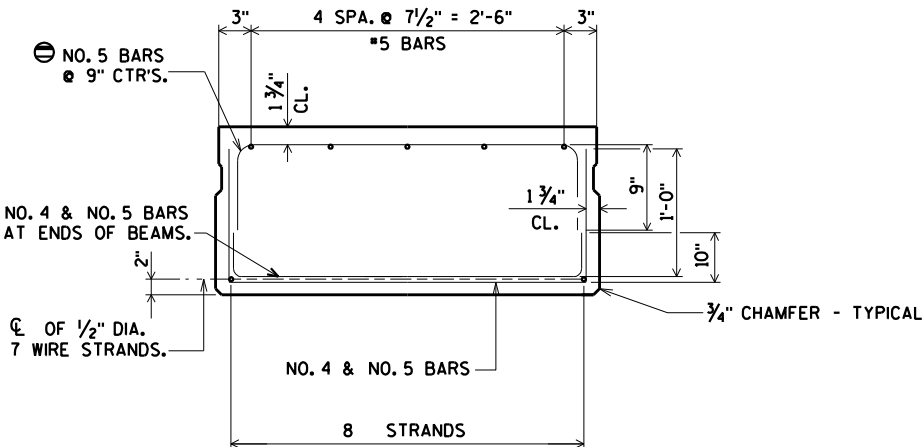
SECTION A
(TOP ANCHOR)

⊗ DIMENSIONS TAKEN PARALLEL TO ϕ OF CTH EW

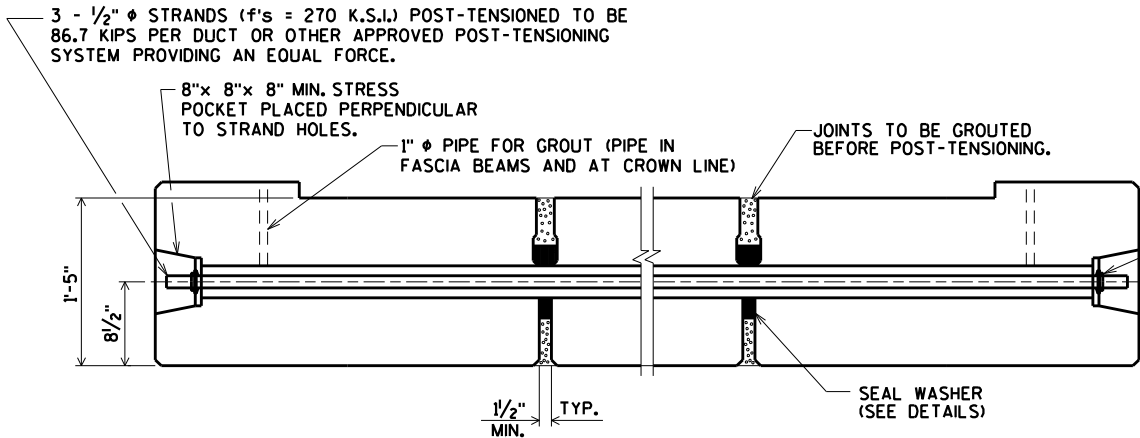
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-41-295			
DRAWN BY		CLS	PLANS CK'D. CJM
PRESTRESSED BOX GIRDER DETAILS		SHEET 11 OF 12	



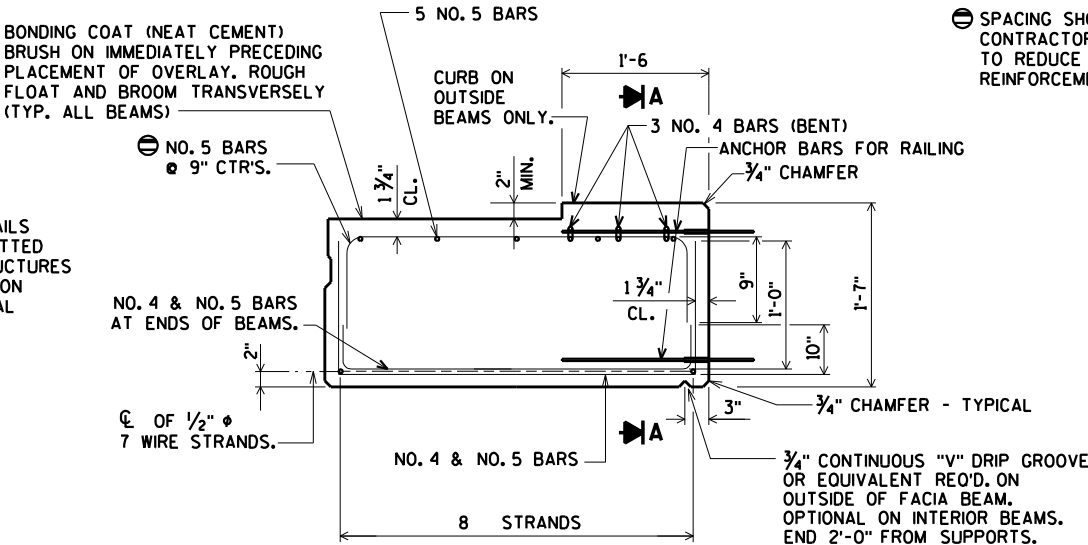
SECTION THRU GIRDER



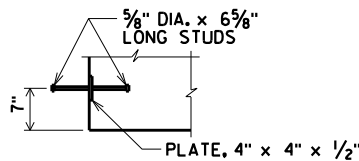
SECTION THRU INTERIOR GIRDER



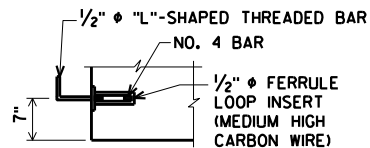
POST TENSIONING DETAILS



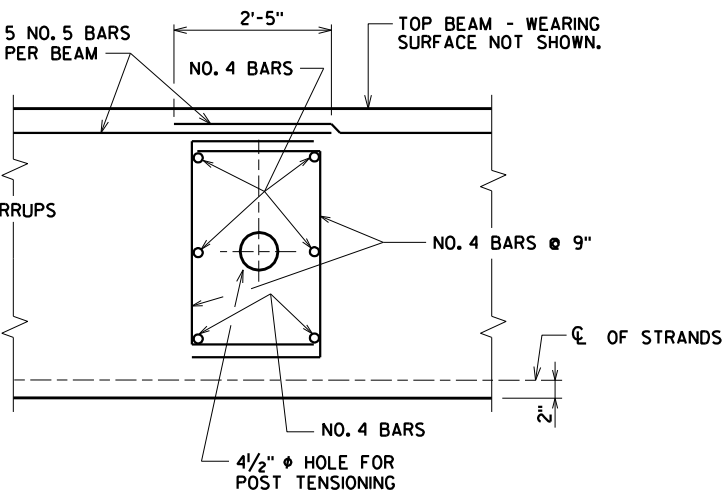
SECTION THRU EXTERIOR GIRDER



WELD PLATE DETAIL
(EQUIVALENT TO ONE NO. 4 BAR)



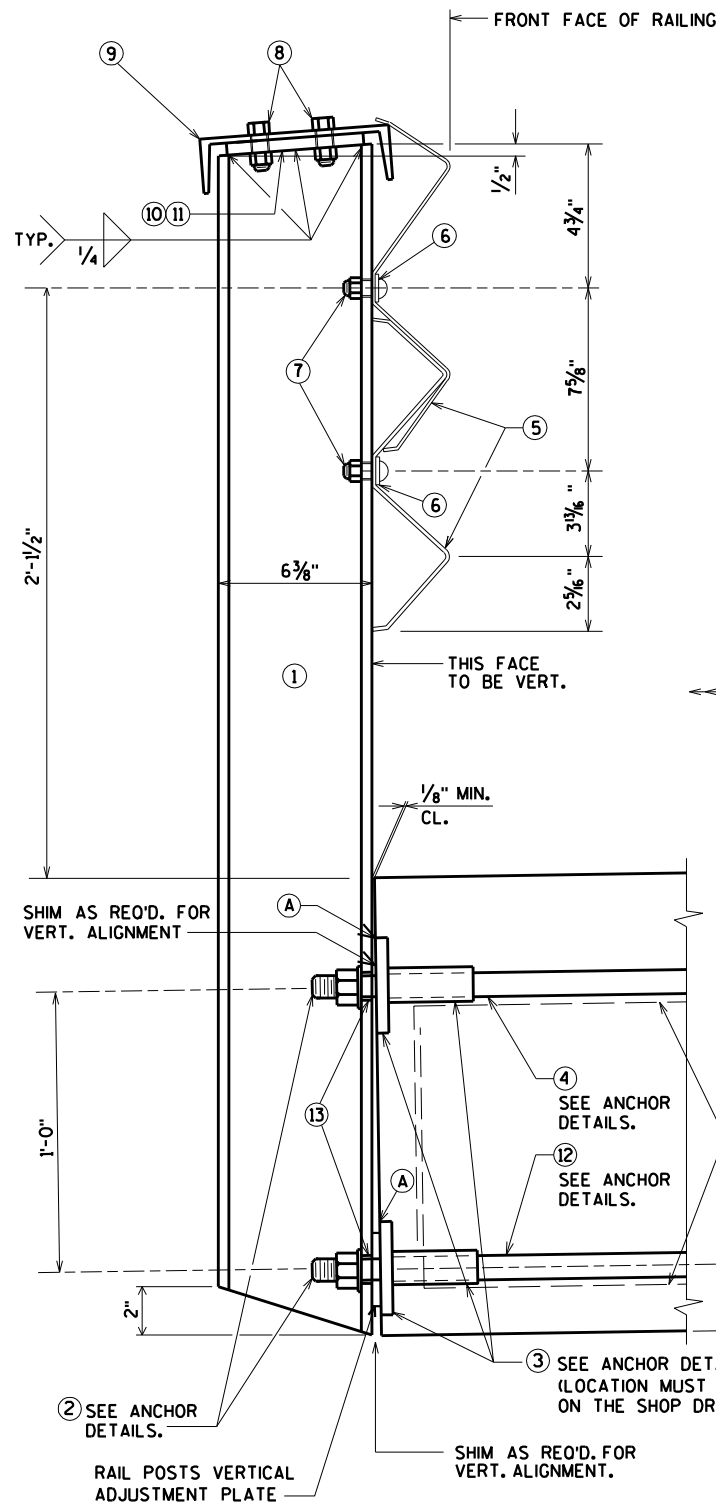
LOOP INSERT DETAIL



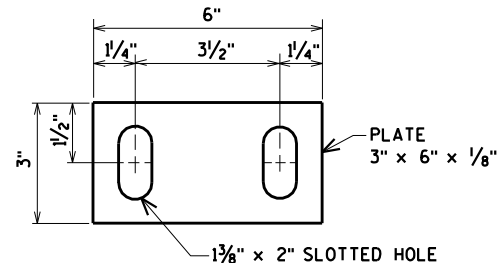
AT MID-SPAN

AT ABUTMENTS

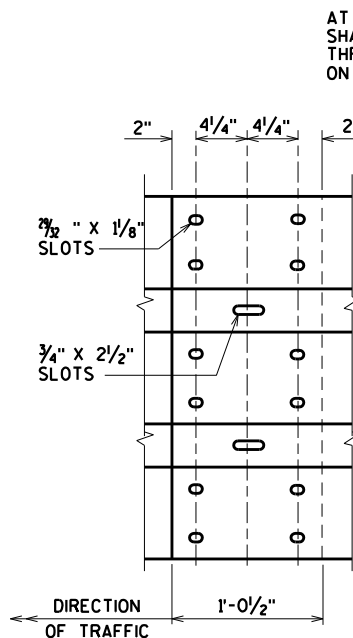
LONG. SECTION THRU ROADWAY
(TRANSVERSE BARS NOT LABELED ARE #4 BARS)



SECTION THRU RAILING



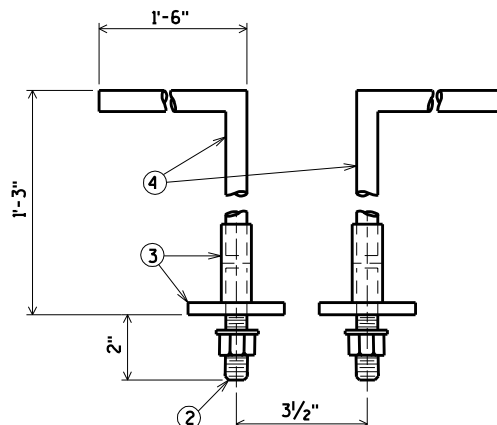
RAIL POST VERTICAL ADJUSTMENT PLATE
(1 PER POST)



RAIL MEMBER SPLICE

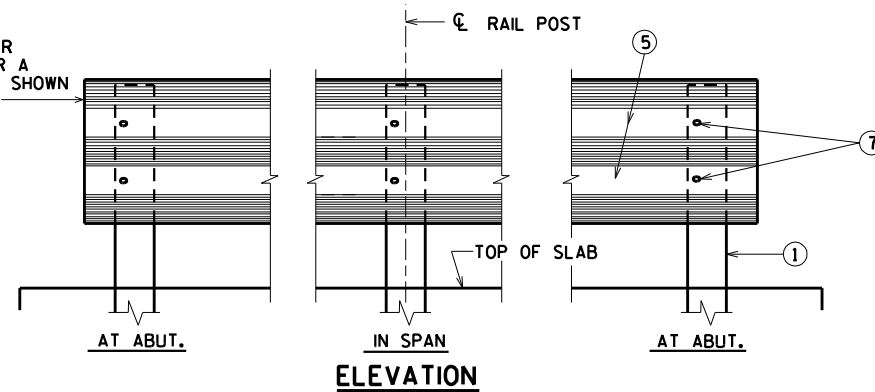
5/8" DIA. BUTTON HEAD OVAL SHOULDER BOLTS WITH HEX. NUTS AT ALL SLOTS.

(A) SEAL TOP & VERT. EDGES OF SHIMS, VERT. ADJUSTMENT PLATES, AND POST TO GIRDER CONTACT AREAS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

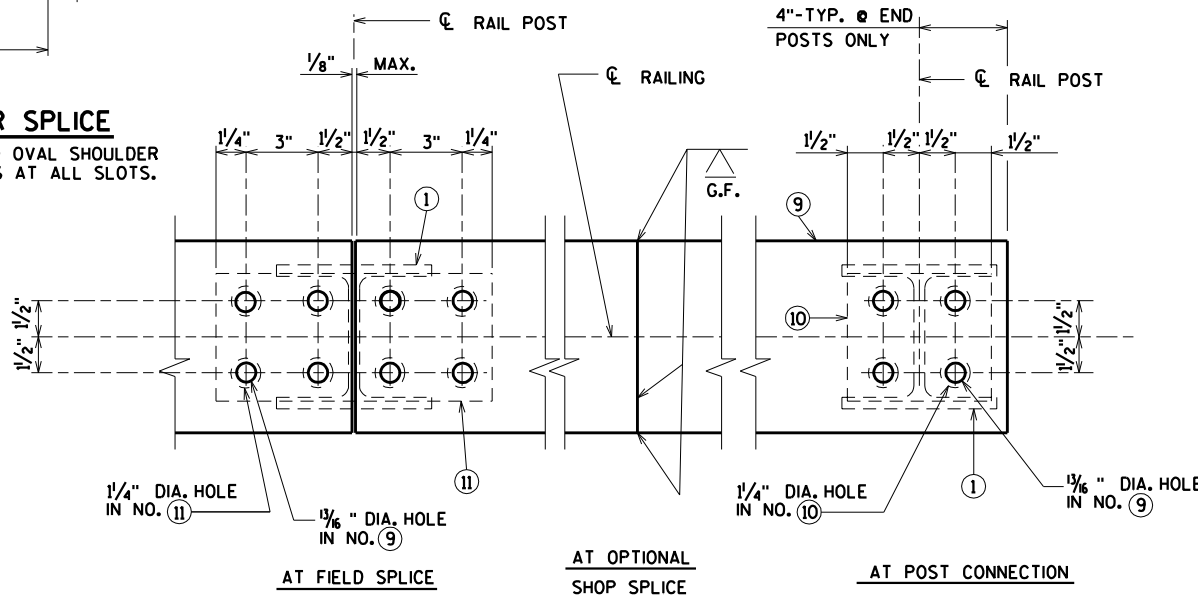


PLAN

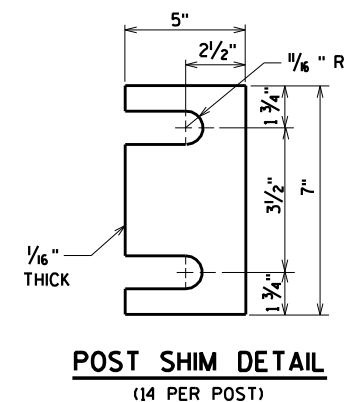
ANCHORAGE DETAILS
ANCHORS MAY BE FABRICATED IN A CAGE IF OPTED BY THE MFG'R.



ELEVATION



CHANNEL MEMBER DETAILS



POST SHIM DETAIL
(14 PER POST)

LEGEND

- ① W6 x 25 WITH 2 - 3/4" x 2 1/2" VERTICAL SLOTS IN FLANGE (SLOT ON OTHER SIDE OF WEB OPTIONAL) FOR NO. 7. CUT BOTTOM OF POST AS SHOWN. PLACE POSTS VERTICAL AND NORMAL TO GRADE LINE.
- ② 1" DIA. STUD WITH NUT & WASHER. FOUR REQ'D. PER POST, A325.*
- ③ THREADED BAR COUPLER FOR 1" STUD. ACCEPTABLE PRODUCTS ARE WILLIAMS REBAR FLANGE COUPLERS BY WILLIAMS FORM ENGINEERING CORP. OR DOWEL BAR REPLACEMENTS BY DAYTON SUPERIOR. FOUR REQ'D. PER POST. EXPOSED FLANGE TO BE GALVANIZED*.
- ④ ANCHOR BAR, 1" φ THREADED REINF. BAR BENT AS SHOWN IN ANCHOR DETAILS, GRADE 60 TWO REQ'D. PER POST. (TOP)**
- ⑤ SEE STANDARD SPECIFICATIONS FOR RAIL TYPE.
- ⑥ 1 3/4" x 3" MOUNTING BOLT WASHER. (GALVANIZED).
- ⑦ 5/8" DIA. BUTTON HEAD RAIL MOUNTING BOLT WITH ROUND WASHER AND NUT. 2 PER POST REQ'D.
- ⑧ 5/8" DIA. x 2" LONG HEX BOLTS WITH NUT AND TWO WASHERS EACH. 4 REQ'D. PER POST CONNECTION, 8 REQ'D. PER SPLICE.
- ⑨ C8 x 11.5, WITH 1/8" DIA. HOLES, ATTACH TO NO. 10 & 11 WITH BOLTS NO. 8. ATTACH CONTINUOUSLY TO A MIN. OF FOUR POSTS AND A MAX. OF EIGHT POSTS.
- ⑩ PLATE 1/2" x 5 3/4" x 6", WITH 1/4" DIA. HOLE FOR BOLTS NO. 8. WELD TO NO. 1 AS SHOWN.
- ⑪ PLATE, 1/2" x 5 3/4" x 11 1/2" WITH 1/4" DIA. HOLES FOR BOLTS NO. 8. WELD THE SAME AS NO. 10.
- ⑫ ANCHOR BAR 1" φ THREADED REINFORCEMENT BAR (STRAIGHT), GRADE 60 TWO PER POST. (BOTTOM)**
- ⑬ 1 1/4" φ x 1 3/4" SLOTTED HOLES IN POST FOR STUD #2. LONG DIM. OF SLOTTED HOLE TO BE VERTICAL.

* SHALL BE MECHANICALLY GALVANIZED OR ELECTRO-PLATED.
** NOT GALVANIZED OR ELECTO-PLATED.

GENERAL NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE W B-41-295" WHICH INCLUDES ALL ITEMS SHOWN.

ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 4 & 12) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS AND STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.

FILL BOLT SLOT OPENINGS IN POST SHIMS AND POSTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

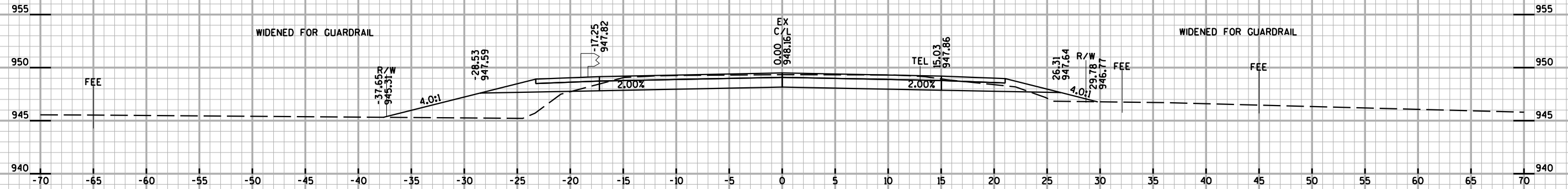
ALL MATERIALS USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO A.S.T.M. DESIGNATION A709 GRADE 36 UNLESS NOTED OTHERWISE.

STEEL POST SHIMS MAY BE USED AT POSTS WHERE REQ'D. FOR ALIGNMENT.

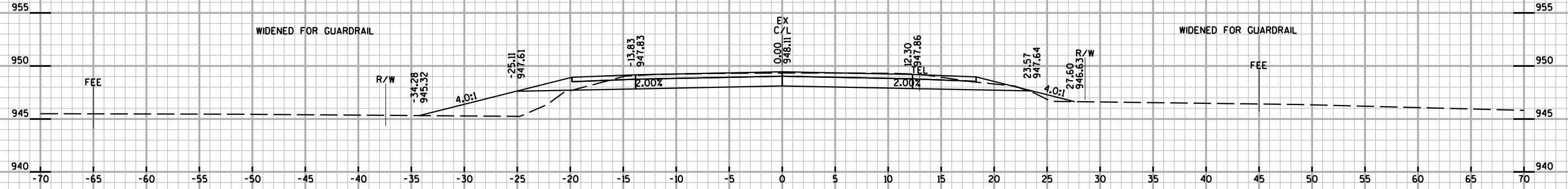
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-41-295			
DRAWN BY		CLS	PLANS CK'D. CJM
RAILING STEEL TYPE "W"			SHEET 12 OF 12

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

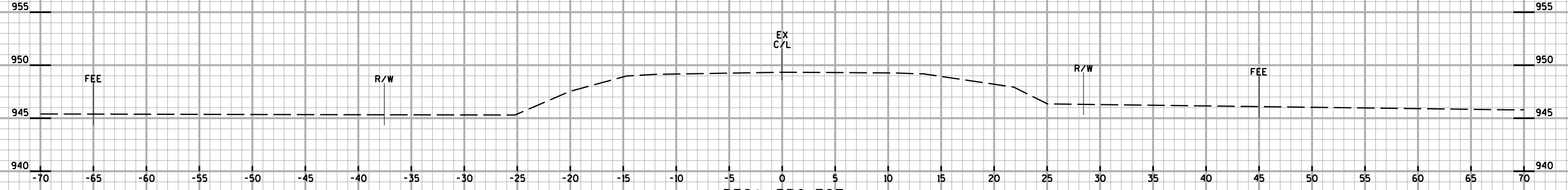
*EARTHWORK SUMMARY (CATEGORY 0010)						
STAGE	STATION	**P** 205.0100 EXCAVATION COMMON CY	**P** 205.0400 EXCAVATION MARSH CY	FILL CY	208.0100	WASTE
					BORROW CY	CY
1	8+50					
CTH EW	8+75	43	0	9		
	8+89	24	0	12		
	9+00	18	0	12		
	9+14	22	0	15		
	9+25	16	0	10	0	86
	9+39	18	0	9		
	9+50	13	0	4		
	9+75	29	0	8		
	9+83.67	10	0	3		
	STRUCTURE (B-41-295)					
	10+16.33					
	10+25	8	11	13		
	10+50	23	30	31		
	10+61	10	13	13		
	10+75	14	17	23		
	10+86	12	9	25	234	143
	11+00	17	10	34		
	11+11	15	11	25		
	11+25	20	13	25		
	11+50	40	20	27		
	11+75	43	9	9		
SUBTOTALS		395	143 SAY 145	307	234 SAY 235	229
* NOTE: FOR BORROW EXCAVATION QUANTITY AND SHRINKAGE FACTOR, SEE PLAN SHEET BALANCE POINTS. EXCAVATION MARSH - TO BE BACKFILLED WITH BORROW.						



8+89

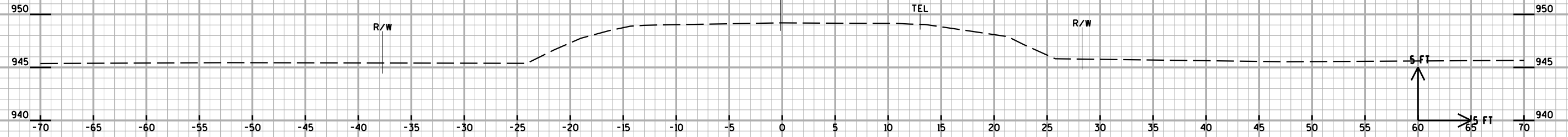


8+75

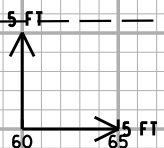


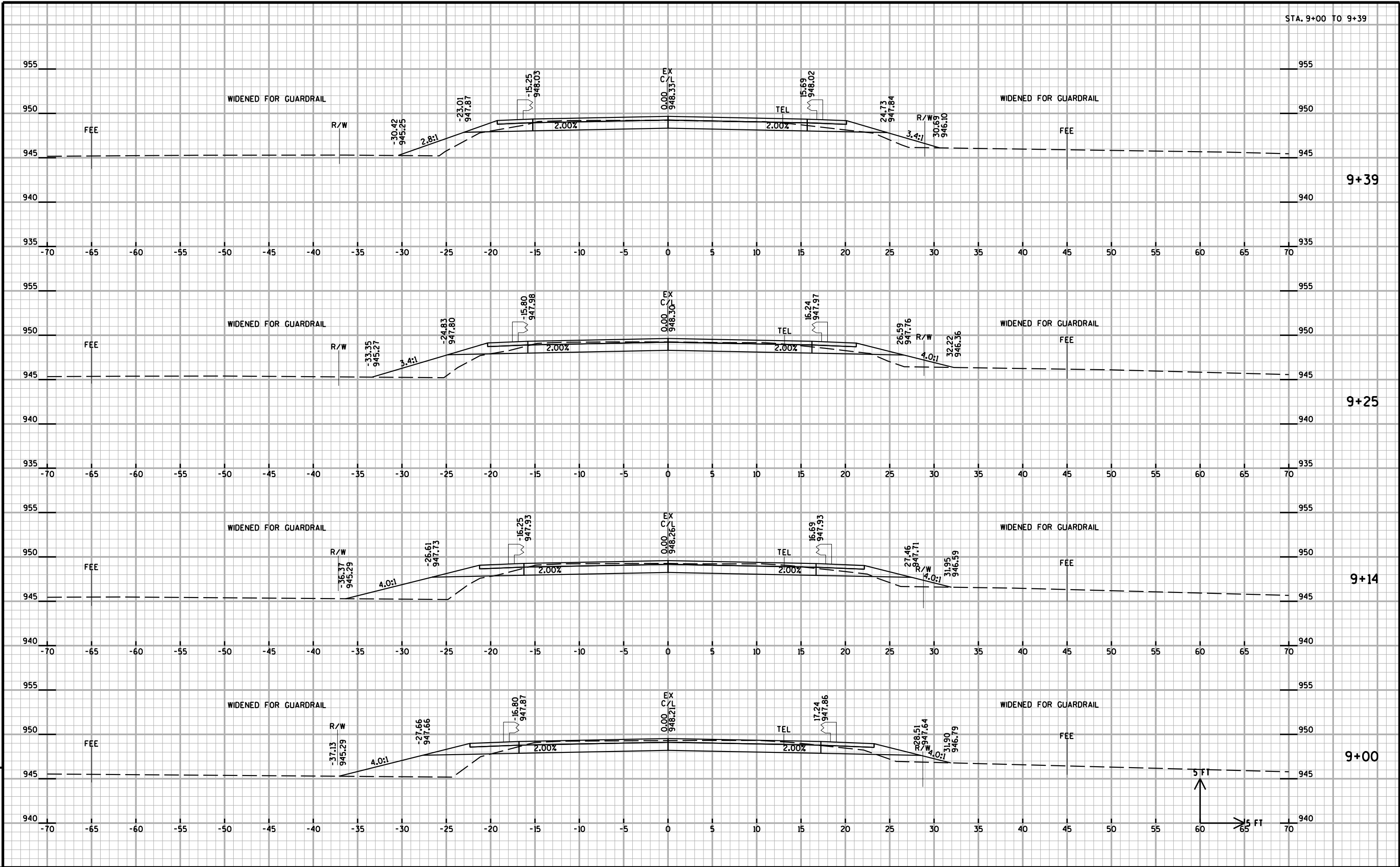
8+50

BEGIN PROJECT
STA. 8+50
(MATCH EXISTING)



8+25





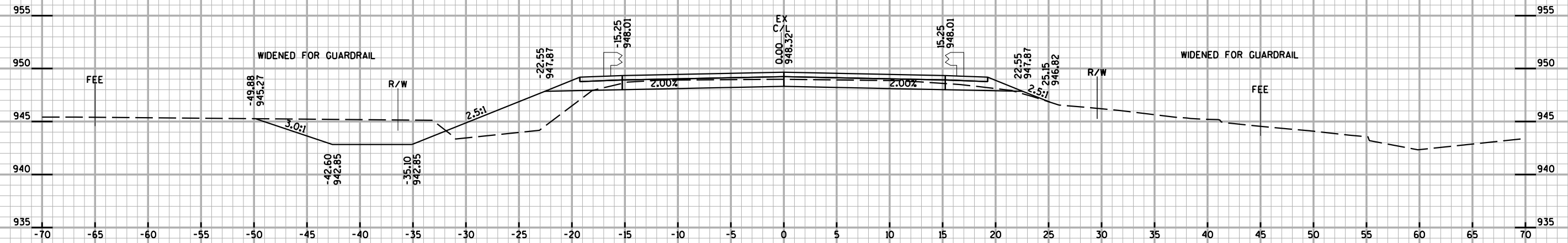
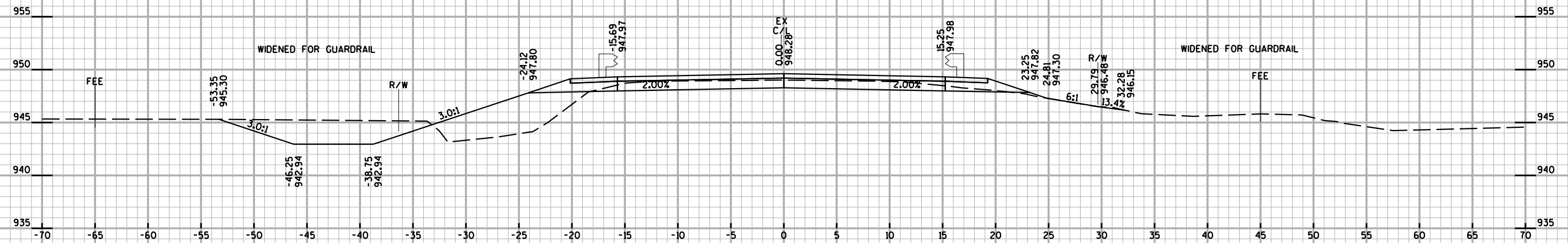
STRUCTURE B-41-295

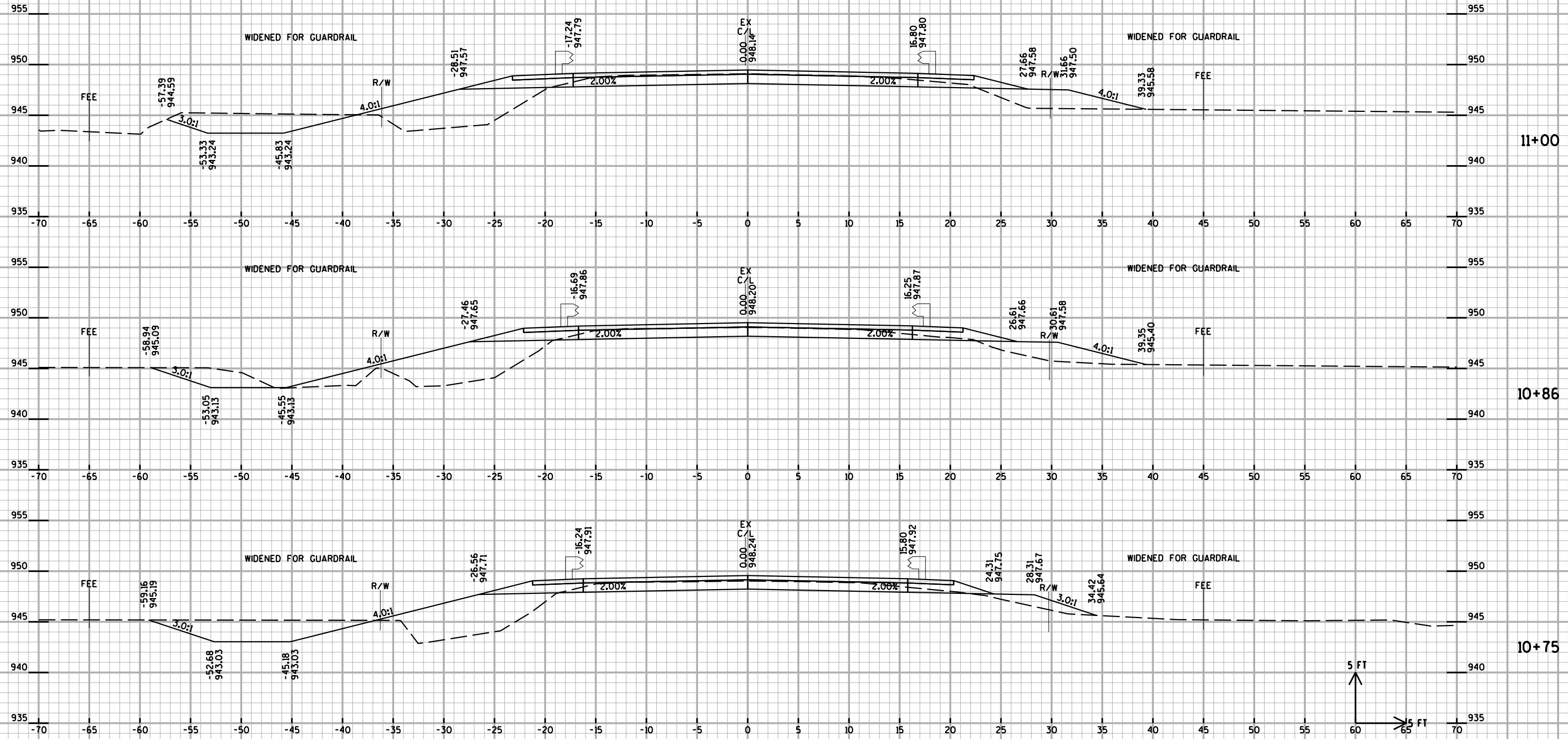
STRUCTURE B-41-295

9+75

9+50

5 FT
5 FT



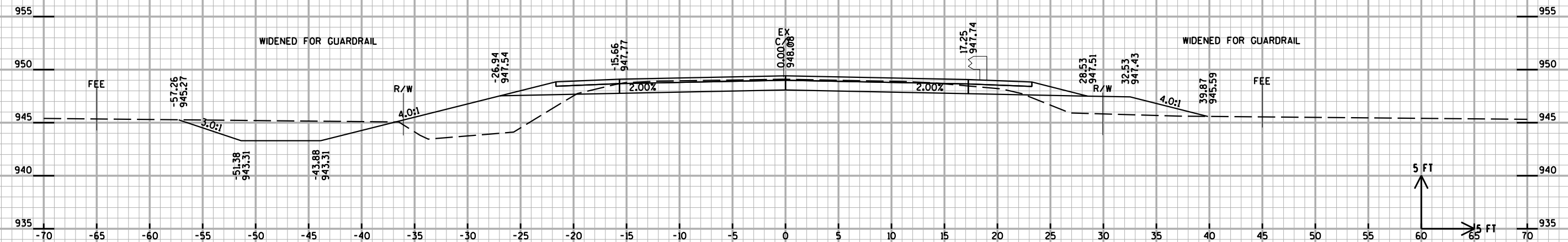




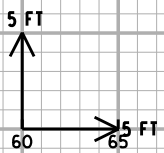
11+50

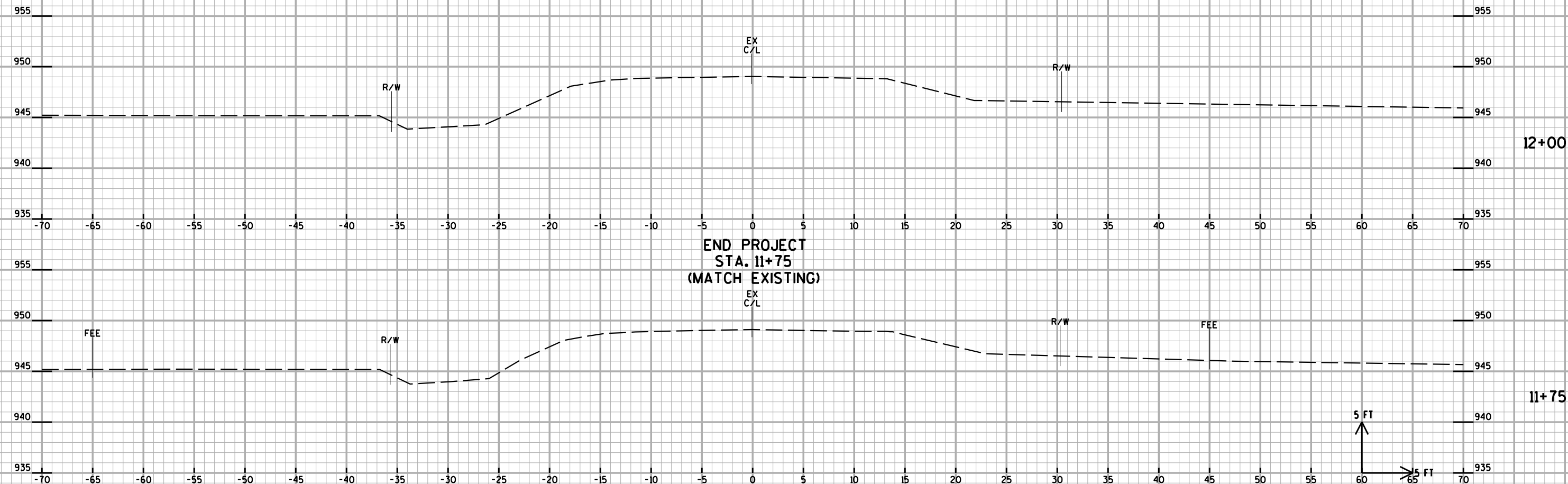


11+25



11+11







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