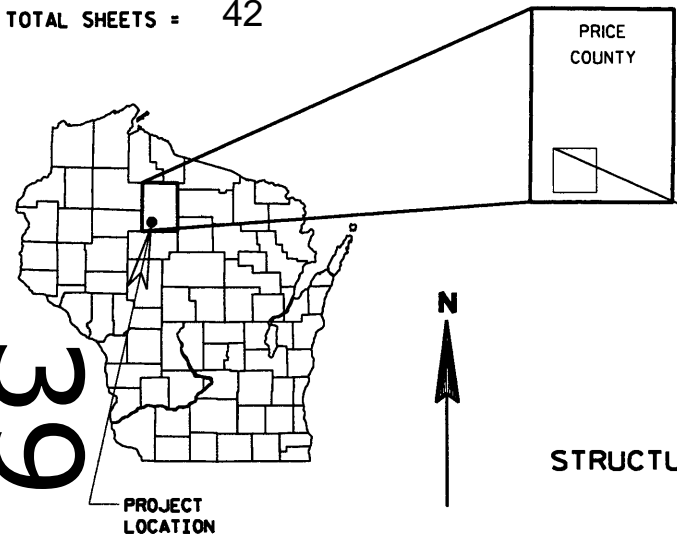


ORDER OF SHEETS

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

TOTAL SHEETS = 42



DESIGN DESIGNATION

A.D.T. (2014)	=	<100
A.D.T. (2034)	=	<100
D.H.V.	=	10
D.	=	50/50
T.	=	5
DESIGN SPEED	=	35 MPH
ESALS	=	N/A

CONVENTIONAL SYMBOLS

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

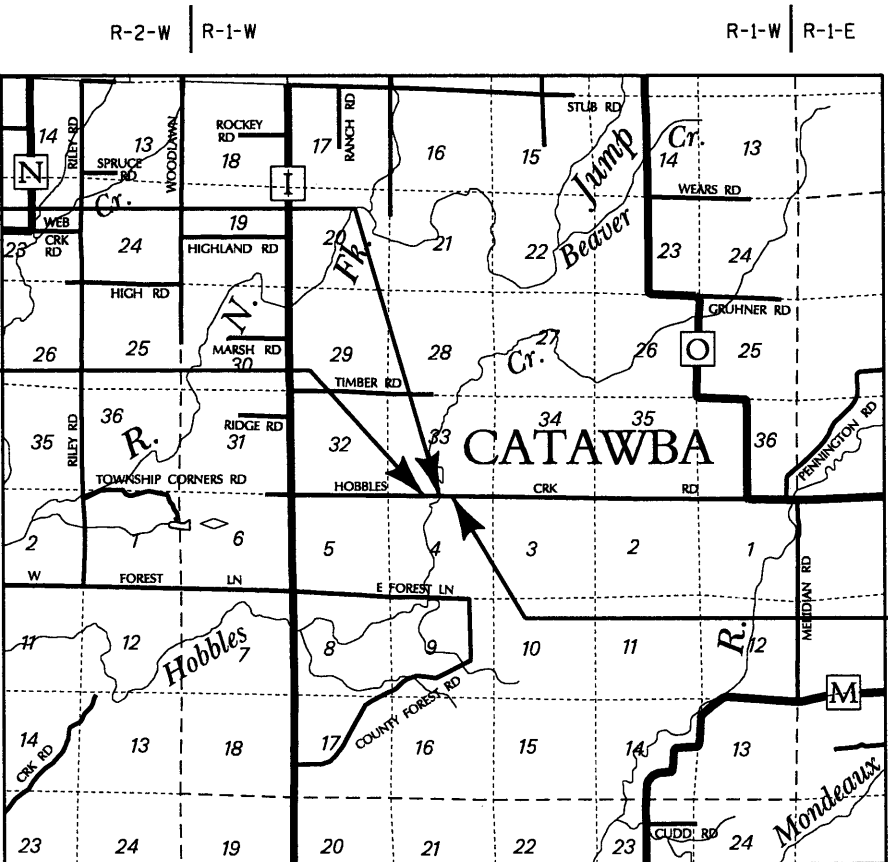
T CATAWBA, HOBBLER CREEK ROAD

HOBBLER CREEK BRIDGE B-50-0086

TOWN ROAD

PRICE COUNTY

STATE PROJECT NUMBER
8717-00-70



STRUCTURE B-50-86

BEGIN PROJECT

STA. 8+50
Y = 330951.18
X = 744131.90

T-35-N
T-34-N

END PROJECT

STA. 11+50
Y = 330949.51
X = 744431.90

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.057 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO
THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS),
PRICE COUNTY

STATE PROJECT

8717-00-70

FEDERAL PROJECT

PROJECT

WISC 2014203

CONTRACT

1

ACCEPTED FOR

Town of Catawba

Jan 15, 2014
Date
Tosh Chakran

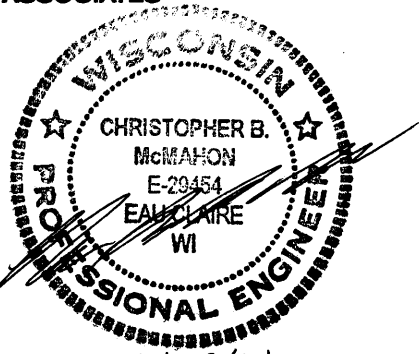
ACCEPTED FOR

County of Price

Jan 23, 2014
Date
County Highway Commissioner

ORIGINAL PLANS PREPARED BY

AYRES ASSOCIATES 3433 Oakwood Hills Parkway
Eau Claire, WI 54601
www.AyresAssociates.com



DATE 1/27/14

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

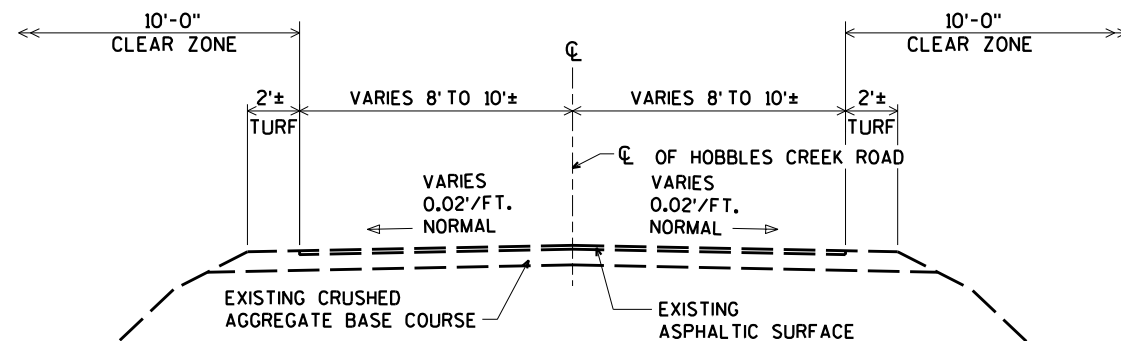
Surveyor AYRES ASSOCIATES INC
Designer AYRES ASSOCIATES INC

Management Consultant CEDAR CORPORATION

APPROVED FOR THE DEPARTMENT

DATE: 1-29-2014
Management Consultant Signature

E



TYPICAL EXISTING SECTION

ABBREVIATIONS

AC	ACRES
CHIS	CHISELED
CL	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	VARIES
WL	WELL

GENERAL NOTES

EROSION CONTROL ITEMS TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

NO TREES (AND/OR SHRUBS) ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

EXCAVATION FOR STRUCTURES SHALL INCLUDE FURNISHING, PLACEMENT AND COMPACTION OF ANY FILL MATERIAL REQUIRED TO PROVIDE A SUITABLE FOUNDATION FOR SUBSTRUCTURE UNITS.

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCLUSIVE OF THE ROADBED, SHALL BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER.

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

ASPHALTIC REMOVAL IS INCLUDED IN THE ITEM EXCAVATION COMMON.

SALVAGE TOPSOIL SHALL BE PLACED ON THE SLOPES, TO THE POINT OF INTERCEPT WITH THE ORIGINAL GROUND SHOWN ON THE CROSS SECTIONS.

THE DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR WITH A MONUMENT TO BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD 88).

ASPHALT SURFACE SHALL USE 1/2" NOMINAL AGGREGATE SIZE.

WETLANDS EXIST IN THE PROJECT AREA. NO DISTURBANCE IS ALLOWED OUTSIDE THE SLOPE INTERCEPT.

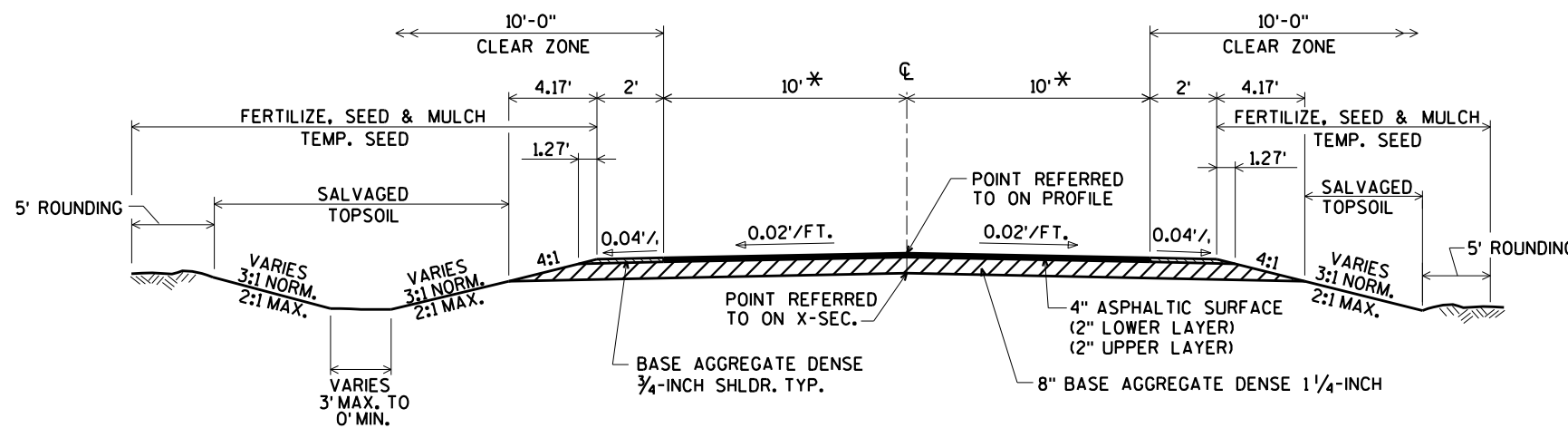
THE LOCATION AND WIDTH OF THE EXISTING RIGHT OF WAY WAS DETERMINED BY THE MUNICIPALITY FOR THIS PROJECT. AYRES ASSOCIATES DOES NOT WARRANT IT'S ACCURACY.

UTILITIES

CENTURYLINK
400 W. 9TH ST. N.
SUITE 5
LADYSMITH, WI 54848
ATTN: BRIAN HUHN
715-532-0023
715-563-8294 (CELL)
brian.huhn@centurylink.com

PRICE ELECTRIC COOPERATIVE
508 N. LAKE AVE.
P.O. BOX 110
PHILLIPS, WI 54555
ATTN: JASON WEIK
715-339-2155
jweik@price-electric.com

* * DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS



TYPICAL FINISHED SECTION

* THE ASPHALT SURFACE SHALL BE PLACED 26.5 FEET WIDE AT THE ENDS OF THE BRIDGE TO 20 FEET WIDE AT 50 FEET FROM THE END OF BRIDGE.

DIGGERS HOTLINE

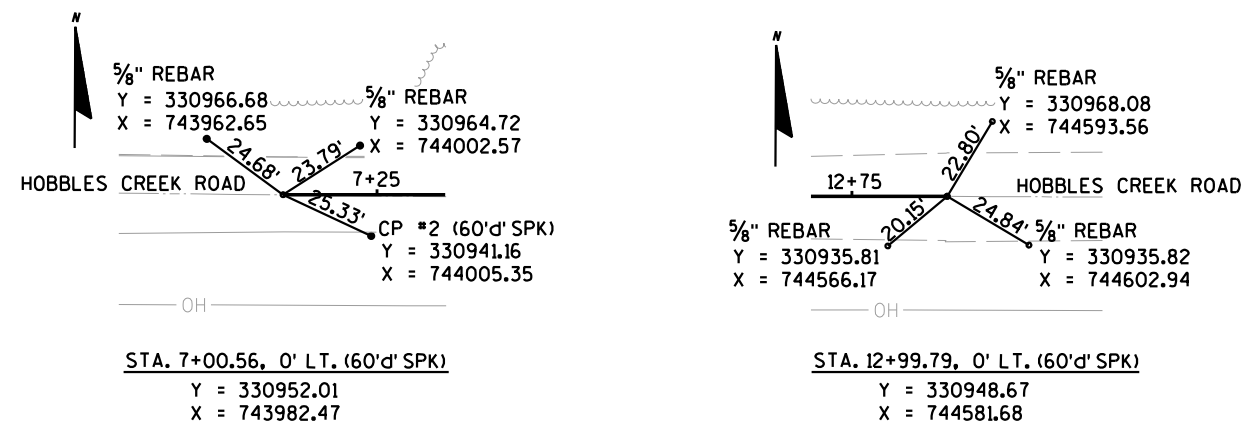
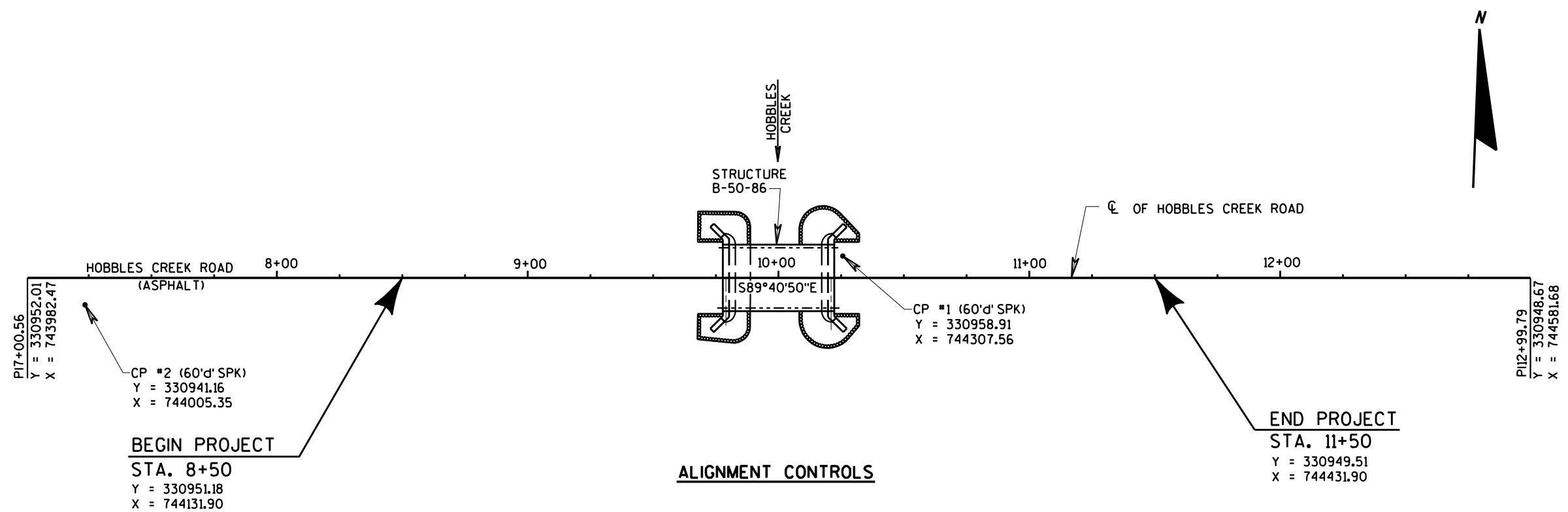
Dial **811** or (800) 242-8511
www.DiggersHotline.com

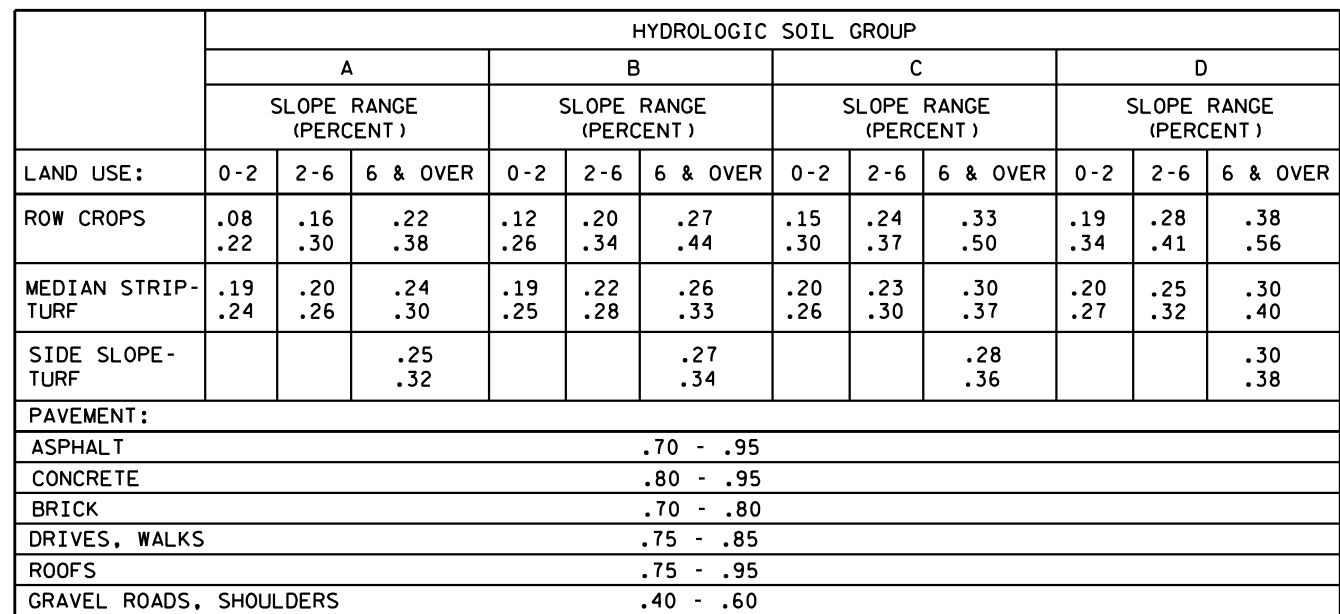
DESIGNER

AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
ATTN: CHRIS MCMAHON, PE
715-834-3161
mcmahonc@ayresassociates.com







**WISCONSIN DEPARTMENT OF
NATURAL RESOURCES CONTACT:**

SHAWN HASELEU
810 W. MAPLE STREET
SPOONER, WI 54801
715-635-4228
shawn.haseleu@wisconsin.gov

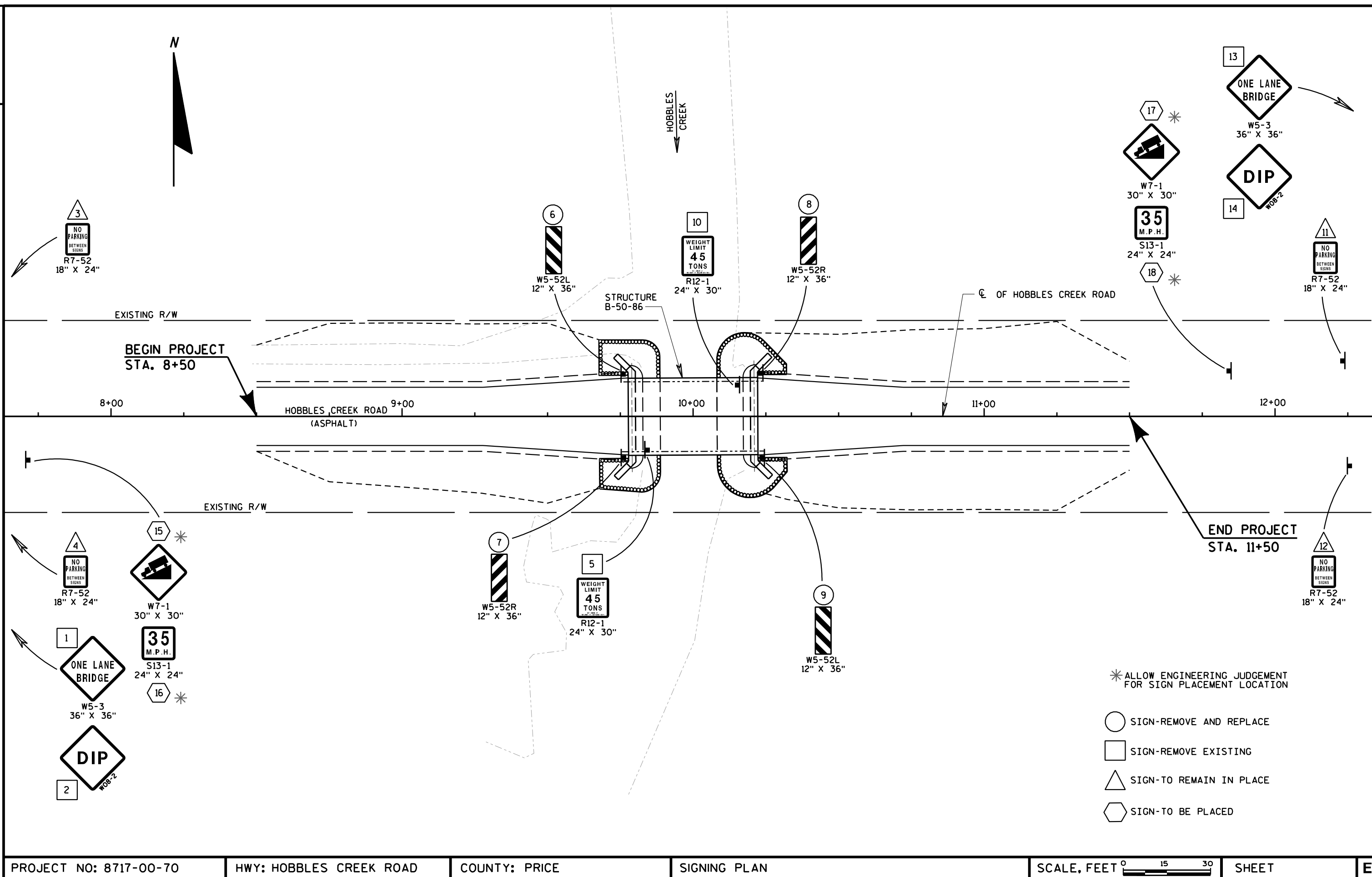




LEGEND

	EROSION MAT CLASS II TYPE C
	TEMPORARY DITCH CHECKS
	SILT FENCE
	RIPRAP HEAVY
	RIPRAP MEDIUM (WITH GEOTEXTILE FABRIC TYPE HR)
	TURBIDITY BARRIER

PROJECT NO: 8717-00-70	HWY: HOBBLES CREEK ROAD	COUNTY: PRICE	EROSION CONTROL	SCALE, FEET 	SHEET	E
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DATE 12MAR14		E S T I M A T E O F Q U A N T I T I E S			
LINE		8717-00-70			
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	375. 000	375. 000
0050	206. 1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-50-0086	LS	1. 000	1. 000
0060	208. 0100	BORROW	CY	178. 000	178. 000
0070	210. 0100	BACKFILL STRUCTURE	CY	150. 000	150. 000
0080	213. 0100	FINISHING ROADWAY (PROJECT) 01. 8717-00-70	EACH	1. 000	1. 000
0090	305. 0110	BASE AGGREGATE DENSE 3/4-INCH	TON	30. 000	30. 000
0100	305. 0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	390. 000	390. 000
0110	455. 0605	TACK COAT	GAL	16. 000	16. 000
0120	465. 0105	ASPHALTIC SURFACE	TON	140. 000	140. 000
0130	502. 0100	CONCRETE MASONRY BRIDGES	CY	136. 000	136. 000
0140	502. 3200	PROTECTIVE SURFACE TREATMENT	SY	160. 000	160. 000
0150	505. 0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	4, 040. 000	4, 040. 000
0160	505. 0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	15, 410. 000	15, 410. 000
0170	513. 4060	RAILING TUBULAR TYPE M (STRUCTURE) 01. B-50-0086	LS	1. 000	1. 000
0180	516. 0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	18. 000	18. 000
0190	550. 1100	PILING STEEL HP 10-INCH X 42 LB	LF	500. 000	500. 000
0200	606. 0200	RIPRAP MEDIUM	CY	25. 000	25. 000
0210	606. 0300	RIPRAP HEAVY	CY	140. 000	140. 000
0220	612. 0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	140. 000	140. 000
0230	619. 1000	MOBILIZATION	EACH	1. 000	1. 000
0240	625. 0500	SALVAGED TOPSOIL	SY	740. 000	740. 000
0250	627. 0200	MULCHING	SY	750. 000	750. 000
0260	628. 1504	SILT FENCE	LF	660. 000	660. 000
0270	628. 1520	SILT FENCE MAINTENANCE	LF	1, 320. 000	1, 320. 000
0280	628. 1905	MOBILIZATIONS EROSION CONTROL	EACH	5. 000	5. 000
0290	628. 1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2. 000	2. 000
0300	628. 2027	EROSION MAT CLASS II TYPE C	SY	415. 000	415. 000
0310	628. 6005	TURBIDITY BARRIERS	SY	245. 000	245. 000
0320	628. 7504	TEMPORARY DITCH CHECKS	LF	50. 000	50. 000
0330	629. 0210	FERTILIZER TYPE B	CWT	0. 800	0. 800
0340	630. 0120	SEEDING MIXTURE NO. 20	LB	32. 000	32. 000
0350	630. 0200	SEEDING TEMPORARY	LB	20. 000	20. 000
0360	634. 0612	POSTS WOOD 4X6-INCH X 12-FT	EACH	6. 000	6. 000
0370	637. 2230	SIGNS TYPE II REFLECTIVE F	SF	32. 500	32. 500
0380	638. 2602	REMOVING SIGNS TYPE II	EACH	10. 000	10. 000
0390	642. 5001	FIELD OFFICE TYPE B	EACH	1. 000	1. 000
0400	643. 0100	TRAFFIC CONTROL (PROJECT) 01. 8717-00-70	EACH	1. 000	1. 000
0410	643. 0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	812. 000	812. 000
0420	643. 0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	1, 392. 000	1, 392. 000
0430	643. 0900	TRAFFIC CONTROL SIGNS	DAY	812. 000	812. 000
0440	645. 0120	GEOTEXTILE FABRIC TYPE HR	SY	355. 000	355. 000
0450	650. 4500	CONSTRUCTION STAKING SUBGRADE	LF	256. 000	256. 000
0460	650. 5000	CONSTRUCTION STAKING BASE	LF	256. 000	256. 000
0470	650. 6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-50-0086	LS	1. 000	1. 000
0480	650. 9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 8717-00-70	LS	1. 000	1. 000

DATE 12MAR14		E S T I M A T E O F Q U A N T I T I E S				
LINE					8717-00-70	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	
0490	650. 9920	CONSTRUCTION STAKING SLOPE STAKES	LF	256. 000	256. 000	
0500	690. 0150	SAWING ASPHALT	LF	36. 000	36. 000	
0510	715. 0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	816. 000	816. 000	
0520	ASP. 1T0A	ON-THE-JOB TRAINING APPRENTICE AT \$5.	HRS	600. 000	600. 000	
		00/HR				
0530	ASP. 1T0G	ON-THE-JOB TRAINING GRADUATE AT \$5. 00/HR	HRS	300. 000	300. 000	

EARTHWORK SUMMARY (CATEGORY 0020)												
CLEARING AND GRUBBING (CATEGORY 0010)												
STATION TO STATION	201.0105	201.0205	**P**		SALVAGED/		205.0100		PAVEMENT	AVAILABLE	MASS	
	CLEARING	GRUBBING	EXCAVATION COMMON		UNUSEABLE		CUT (2)	EBS (3)	MATERIAL	MATERIAL	UNEXPANDED	EXPANDED
STA	STA		CY	CY	(4)	(5)	FILL	FILL (6)	±(7)	WASTE	BORROW	COMMENTS:
Sta. 8+50 to Sta. 11+50	3	3										
213.0100 FINISHING ROADWAY (CATEGORY 0010)												
LOCATION	EACH											
PROJECT 8717-00-70	1											
BASE AGGREGATE DENSE (CATEGORY 0010)												
STATION TO STATION	LOCATION	305.0110	305.0120									
		3/4-INCH	1 1/4-INCH									
Sta. 8+50 to Sta. 9+77.75	Mainline	15	195									
Sta. 10+22.25 to Sta. 11+50	Mainline	15	195									
TOTALS		30	390									
455.0605 TACK COAT (CATEGORY 0010)												
STATION TO STATION	LOCATION	GAL										
Sta. 8+50 to Sta. 9+77.75	Mainline	8										
Sta. 10+22.25 to Sta. 11+50	Mainline	8										
TOTAL		16										
465.0105 ASPHALTIC SURFACE (CATEGORY 0010)												
STATION TO STATION	LOCATION	TON										
Sta. 8+50 to Sta. 9+77.75	Mainline	70										
Sta. 10+22.25 to Sta. 11+50	Mainline	70										
TOTAL		140										
606.0200 RIPRAP MEDIUM (CATEGORY 0010)												
STATION TO STATION	LOCATION	CY										
Sta. 10+18 to Sta. 10+50	LT	15										
Sta. 10+20 to Sta. 10+50	RT	10										
TOTAL		25										
619.1000 MOBILIZATION												
LOCATION	CATEGORY	EACH										
PROJECT 8717-00-70	0010	0.2										
PROJECT 8717-00-70	0020	0.8										
TOTAL		1										
SALVAGED TOPSOIL, MULCHING, FERTILIZER, SEED & TEMPORARY SEED (CATEGORY 0010)												
STATION TO STATION	LOCATION	625.0500	627.0200	629.0210	630.0120	630.0200						
		SALVAGED	FERTILIZER	SEEDING	SEEDING							
		TOPSOIL	MULCHING	TYPE B	NO. 20	TEMPORARY						
		SY	SY	CWT	LB	LB						
Sta. 8+50 to Sta. 11+50	Mainline	740	600	0.6	25	16						
Undistributed		---	150	0.2	7	4						
TOTALS		740	750	0.8	32	20						
PROJECT NO: 8717-00-70			HWY: HOBBLES CREEK ROAD			COUNTY: PRICE			MISCELLANEOUS QUANTITIES			SHEET
									E			

SILT FENCE & SILT FENCE MAINTENANCE (CATEGORY 0010)

STATION TO STATION	LOCATION	628.1504	628.1520
		LF	MAINTENANCE LF
Sta. 8+50 to Sta. 9+56	LT	110	220
Sta. 8+50 to Sta. 9+81	RT	135	270
Sta. 10+15 to Sta. 11+50	LT	135	270
Sta. 10+10 to Sta. 11+70	RT	145	290
Undistributed		135	270
TOTALS		660	1,320

MOBILIZATIONS EROSION CONTROL & EMERGENCY EROSION CONTROL (CATEGORY 0010)

LOCATION	628.1905	628.1910
	MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
PROJECT 8717-00-70	5	2

628.2027 EROSION MAT CLASS II TYPE C (CATEGORY 0010)

STATION TO STATION	LOCATION	SY
Sta. 8+50 to Sta. 9+67.73	LT	160
Sta. 9+48 to Sta. 9+67.73	RT	30
Sta. 10+50 to Sta. 11+43.76	LT	70
Sta. 10+50 to Sta. 11+50	RT	70
Undistributed		85
TOTAL		415

628.6005 TURBIDITY BARRIER (CATEGORY 0010)

LOCATION	LF
West Abutment	115
East Abutment	80
Undistributed	50
TOTALS	245

628.7504 TEMPORARY DITCH CHECKS (CATEGORY 0010)

STATION	LOCATION	LF
Sta. 10+56	LT	7
Sta. 10+75	RT	7
Sta. 11+05	LT	7
Sta. 11+18	RT	7
Sta. 11+36	RT	7
Undistributed		15
TOTALS		50

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

STATION	LOCATION	EACH
Sta. 7+65	RT	1
Sta. 9+77	LT	1
Sta. 9+77	RT	1
Sta. 10+23	LT	1
Sta. 10+23	RT	1
Sta. 11+85	LT	1
TOTAL		6

637.2230 SIGNS TYPE II REFLECTIVE F (CATEGORY 0010)

STATION	LOCATION	DESCRIPTION	SF
Sta. 7+65	RT	W7-1	6.25
Sta. 7+65	RT	S13-1	4
Sta. 9+77	LT	W5-52L	3
Sta. 9+77	RT	W5-52R	3
Sta. 10+23	LT	W5-52R	3
Sta. 10+23	RT	W5-52L	3
Sta. 11+85	LT	W7-1	6.25
Sta. 11+85	LT	S13-1	4
TOTAL			32.5

638.2602 REMOVING SIGNS TYPE II (CATEGORY 0010)

STATION	LOCATION	DESCRIPTION	SF
Prior to 6+50	RT	W5-3	1
Prior to 6+50	RT	W8-2	1
Sta. 9+85	RT	R12-1	1
Sta. 9+85	LT, RT	W5-52L	2
Sta. 10+15	LT, RT	W5-52L	2
Sta. 10+15	LT	R12-1	1
After 12+50	LT	W8-2	1
After 12+50	LT	W5-3	1
TOTAL			10

642.5001 FIELD OFFICE TYPE B (CATEGORY 0010)

LOCATION	EACH
PROJECT 8717-00-70	1

643.0100 TRAFFIC CONTROL (CATEGORY 0010)

LOCATION	EACH
PROJECT 8717-00-70	1

TRAFFIC CONTROL (CATEGORY 0010)

LOCATION	CALENDAR DAYS	643.0420	643.0705		643.0900	
		BARRICADES TYPE III EACH	TYPE III DAY	WARNING LIGHTS EACH	TYPE A DAY	SIGNS EACH
PROJECT 8717-00-70	58	14	812	24	1,392	14
					812	

645.0120 GEOTEXTILE FABRIC TYPE HR (CATEGORY 0010)

STATION TO STATION	LOCATION	SY
Sta. 10+18 to Sta. 10+50	LT	35
Sta. 10+20 to Sta. 10+50	RT	30
TOTAL		65

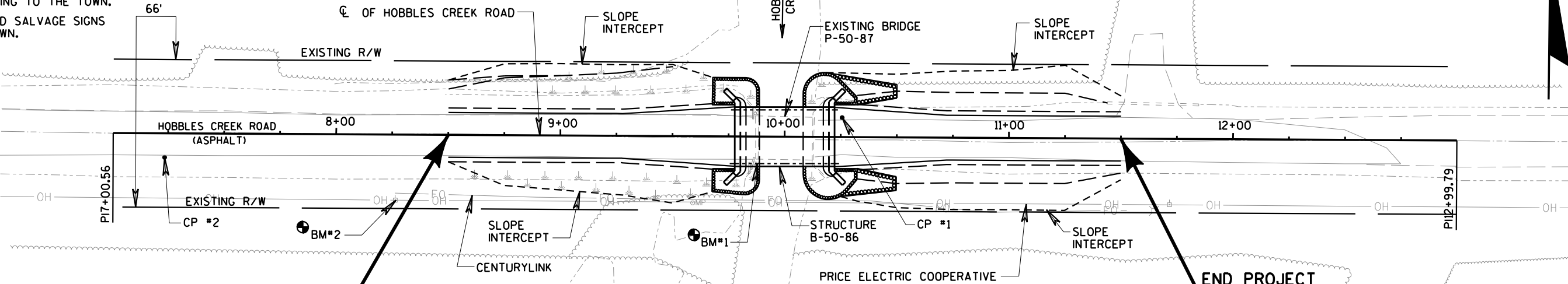
CONSTRUCTION STAKING

CATEGORY	LOCATION	650.4500	650.5000	650.6500	650.9910	650.9920
		SUBGRADE LF	BASE LF	STRUCTURE LAYOUT LS	SUPPLEMENTARY CONTROL LS	SLOPE STAKES LF
0010	Sta. 8+50 to Sta. 11+50	256	256	---	1	256
0020	B-50-86	---	---	1	---	---
TOTALS		256	256	1	1	256

690.0150 SAWING ASPHALT (CATEGORY 0010)

STATION	LOCATION	LF
Sta. 8+50	Mainline	16
Sta. 11+50	Mainline	20
TOTAL		36

NOTES:
FOR ALIGNMENT CONTROLS AND TIES,
SEE ALIGNMENT CONTROLS & TIES SHEET.
SALVAGE ALL STEEL BEAMS AND
STEEL RAILING TO THE TOWN.
REMOVE AND SALVAGE SIGNS
TO THE TOWN.



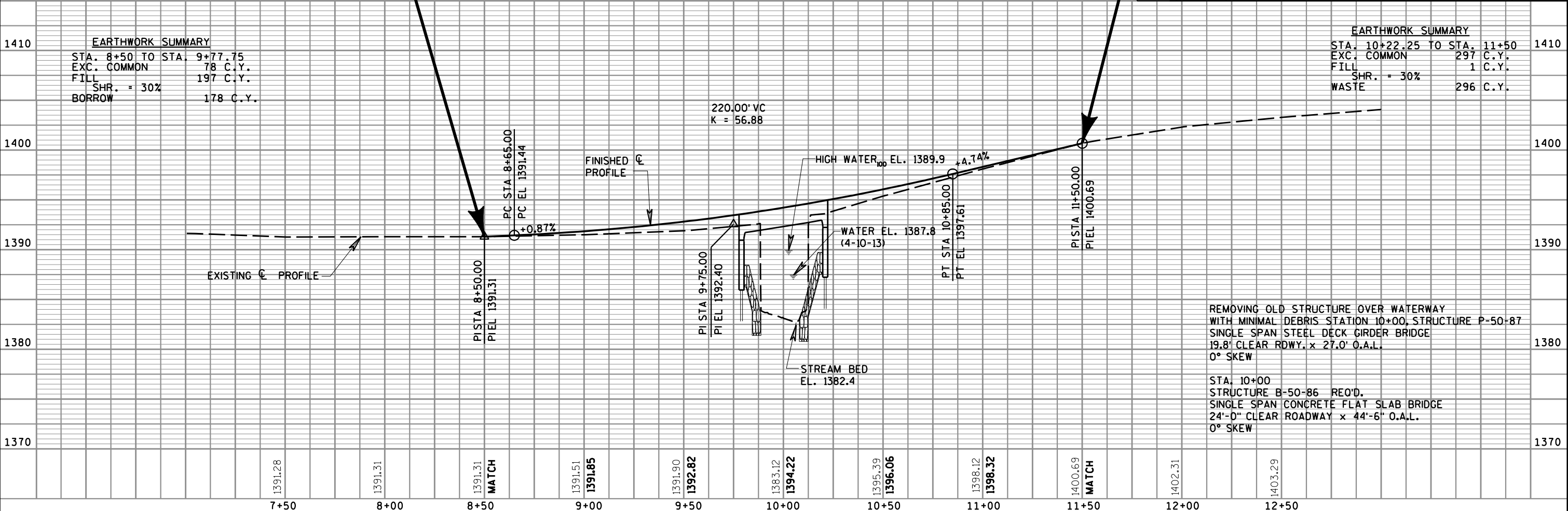
ORIGIN OF LEVELS
USGS DISK
DESCRIPTION: BM 35 SAN 1966
EL. 1392.35 (NAVD 88)

BEGIN PROJECT
STA. 8+50
(SAWCUT REQ'D)
Y = 330951.18
X = 744131.90

END PROJECT
STA. 11+50
(SAWCUT REQ'D)
Y = 330949.51
X = 744431.90

BENCH MARKS			
NO.	STA.	DESCRIPTION	ELEV.
1	9+88	USGS DISK IN SW CORNER OF BRIDGE, 12' RT	1392.35
2	8+27	RR SPIKE IN P.P. WEST OF BRIDGE, 29' RT	1389.74

NET LENGTH OF CENTERLINE STA. 8+50 TO 11+50 = 300 LIN. FT.



REMOVING OLD STRUCTURE OVER WATERWAY
WITH MINIMAL DEBRIS STATION 10+00, STRUCTURE P-50-87
SINGLE SPAN STEEL DECK GIRDER BRIDGE
19.8' CLEAR RDWY. x 27.0' O.A.L.
0° SKEW
STA. 10+00
STRUCTURE B-50-86 REQ'D.
SINGLE SPAN CONCRETE FLAT SLAB BRIDGE
24'-0" CLEAR ROADWAY x 44'-6" O.A.L.
0° SKEW

PROJECT NO: 8717-00-70

HWY: HOBBLER CREEK ROAD

COUNTY: PRICE

PLAN AND PROFILE

SCALE, FEET 0 25 50

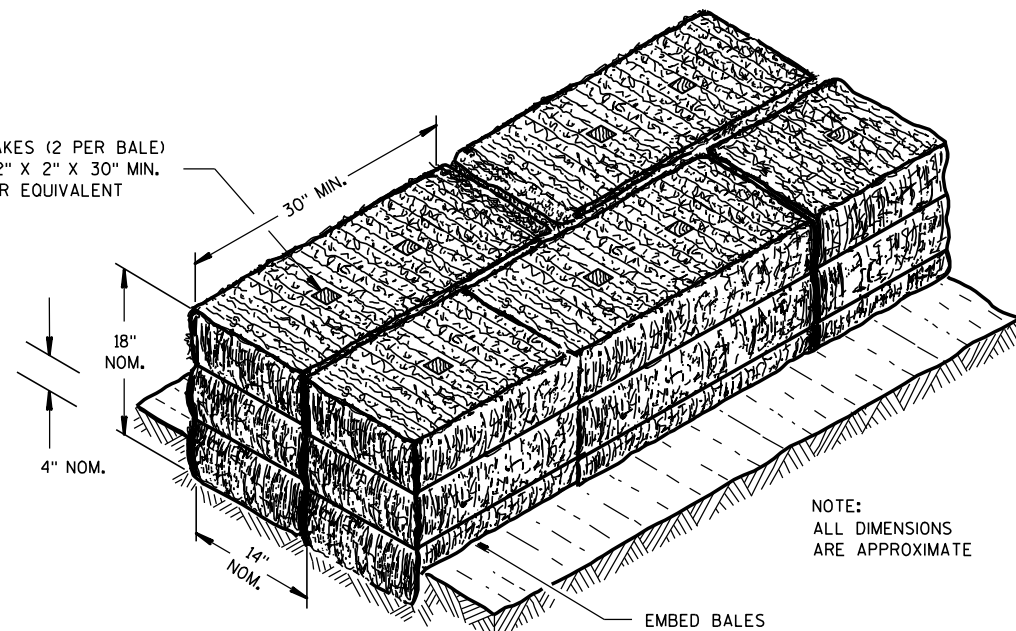
SHEET

E

Standard Detail Drawing List

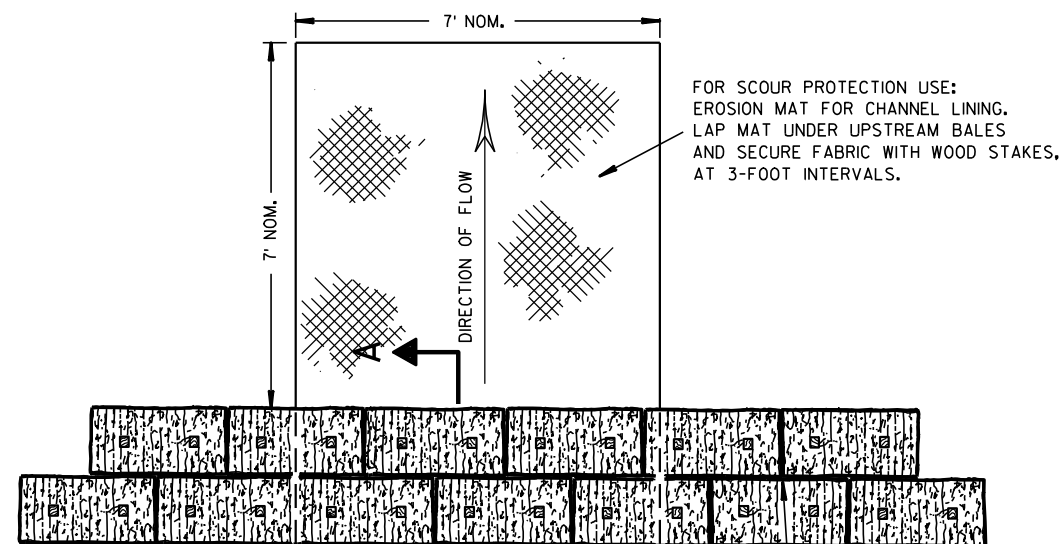
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-06	SIGNING & MARKING FOR TWO LANE BRIDGES

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



NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

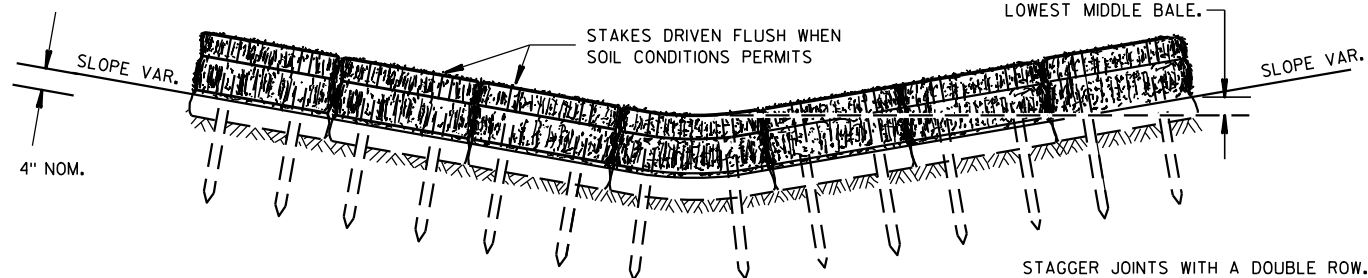
SECTION A-A



PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT
ROWS OF BALES.

BOTTOM ELEVATION OF END BALE SHALL
BE EQUAL TO OR GREATER THAN TOP OF
LOWEST MIDDLE BALE.



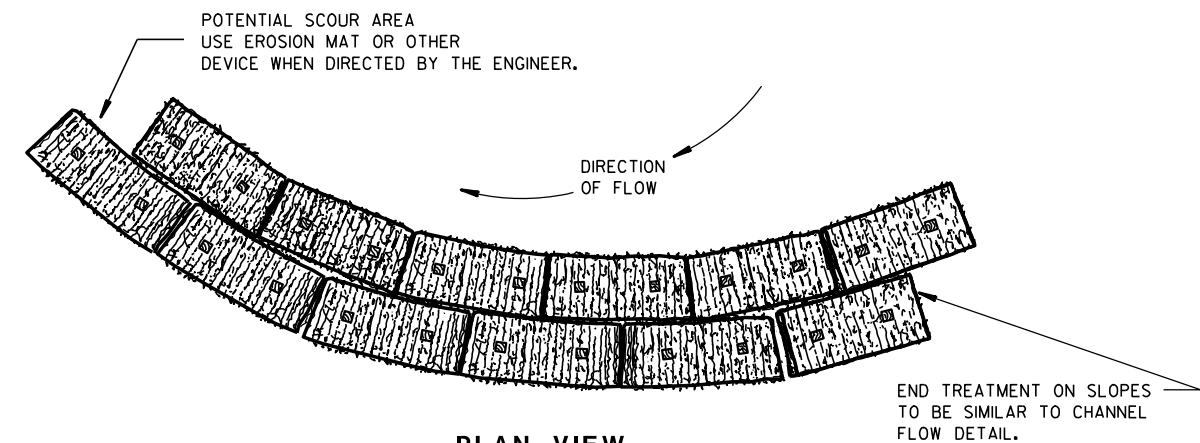
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

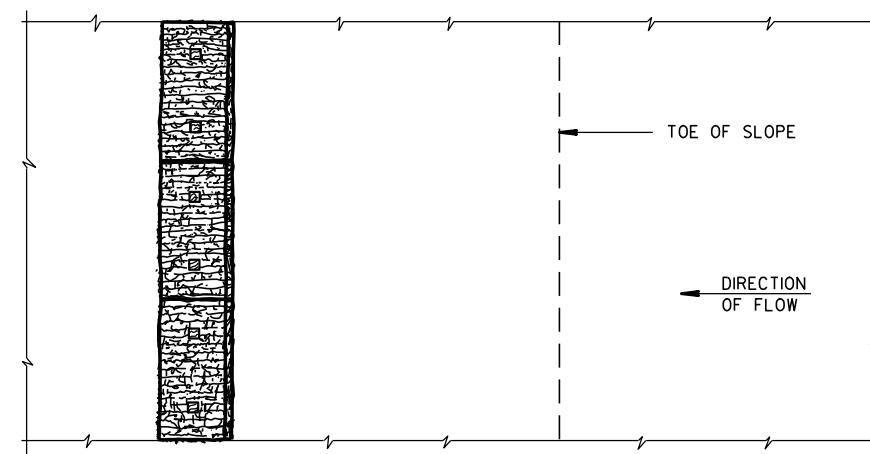
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- 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.

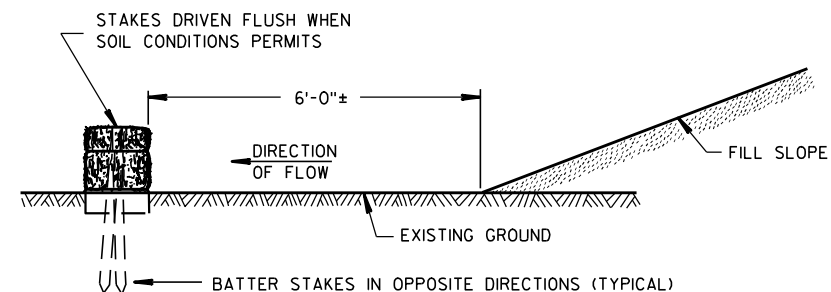


PLAN VIEW

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

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

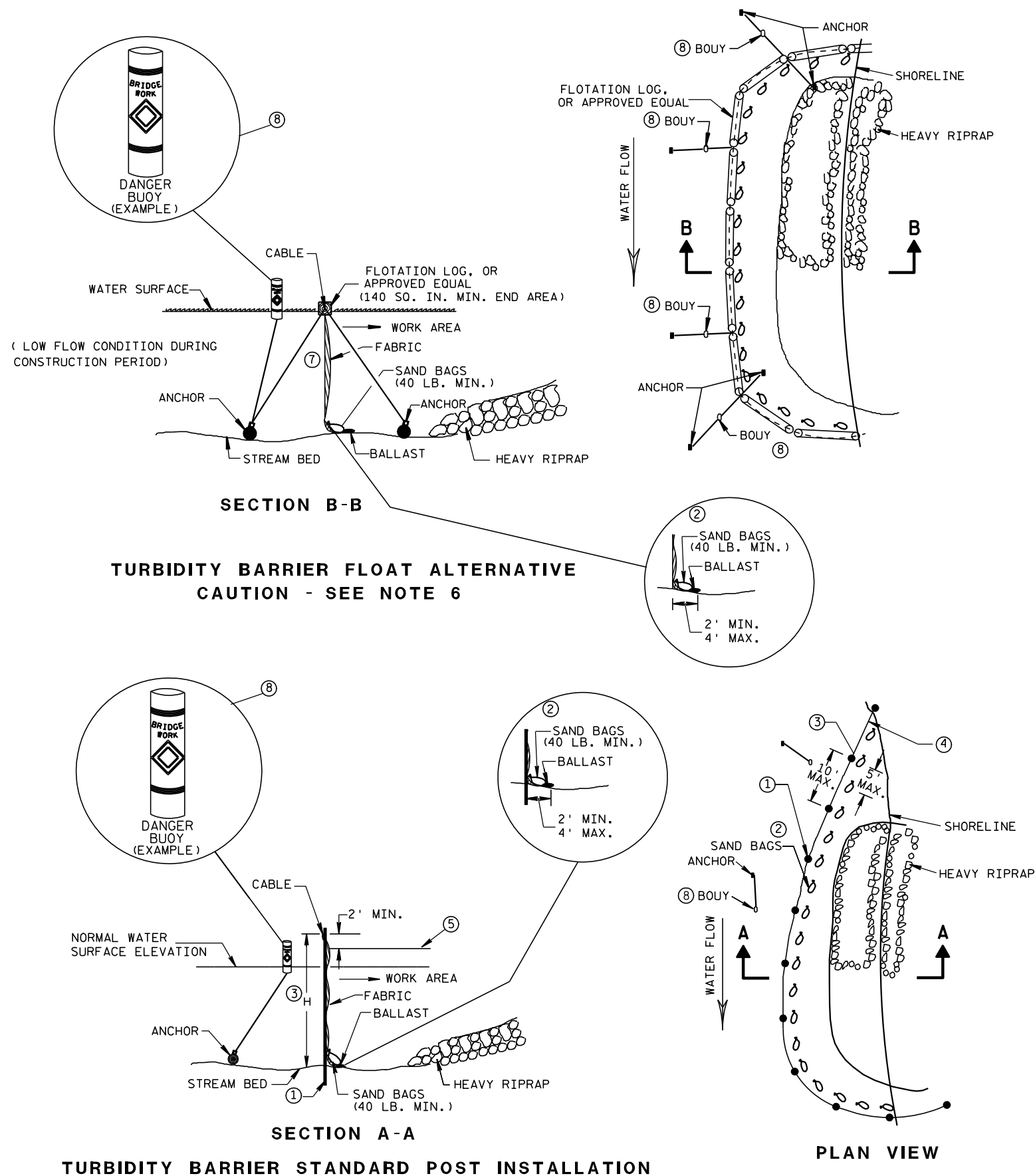
FHWA



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



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

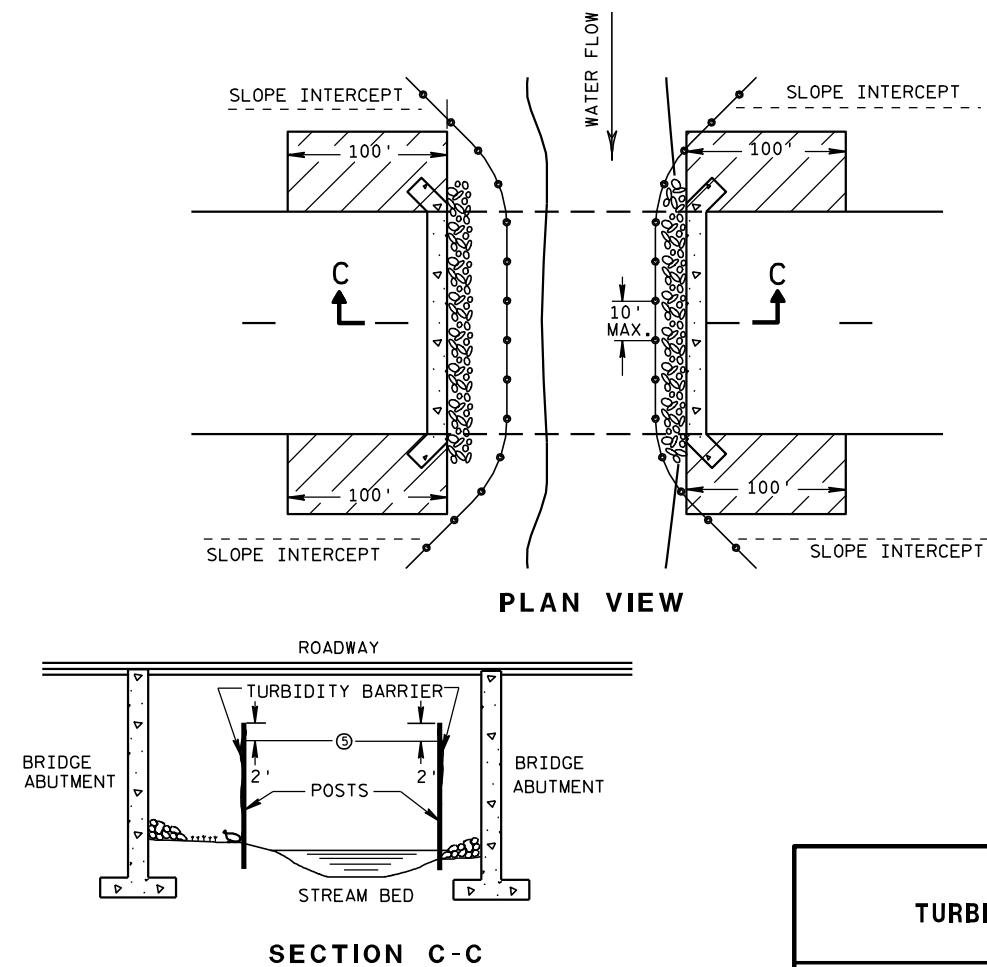


GENERAL NOTES

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

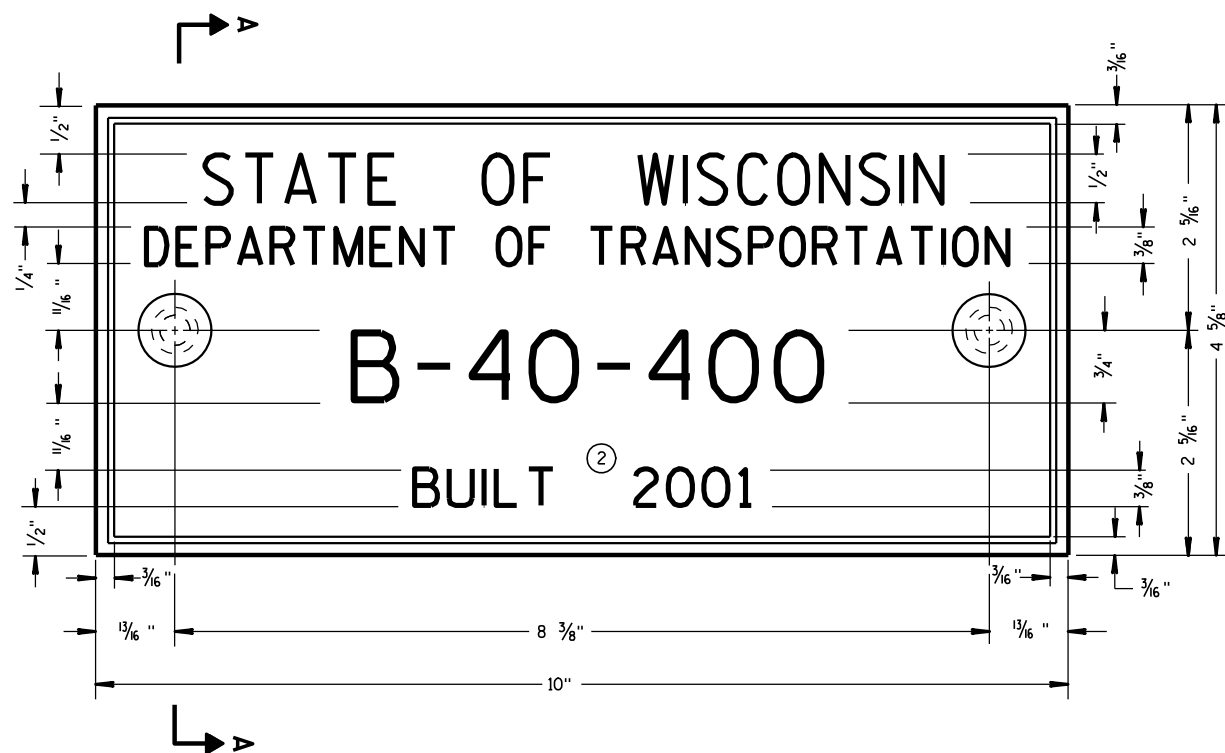
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

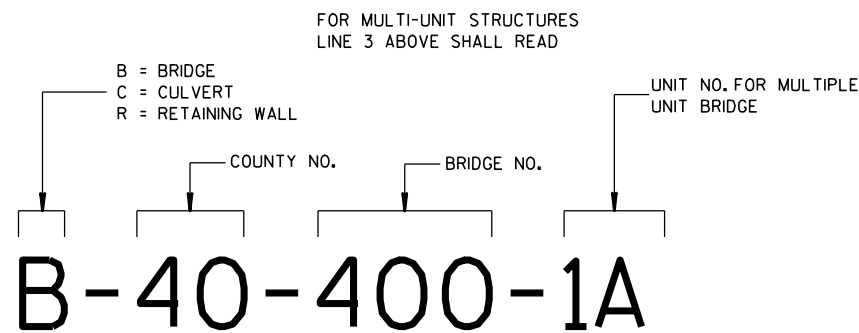
6/04/02
DATE

FHWA

/S/ Beth Connestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



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



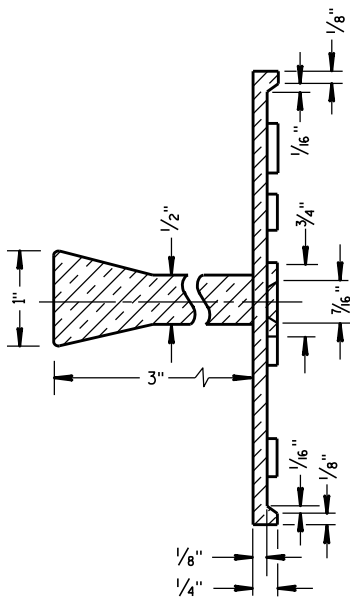
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

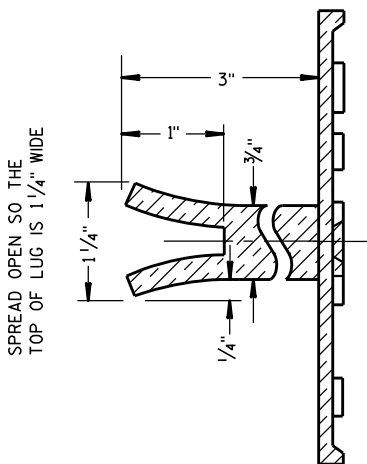
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.

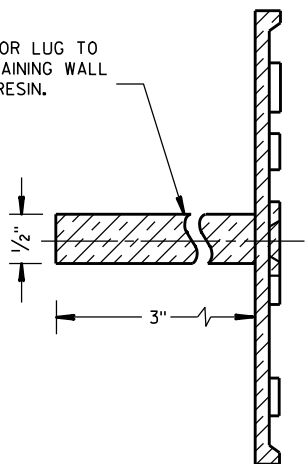


SECTION A-A



ALTERNATE LUG

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

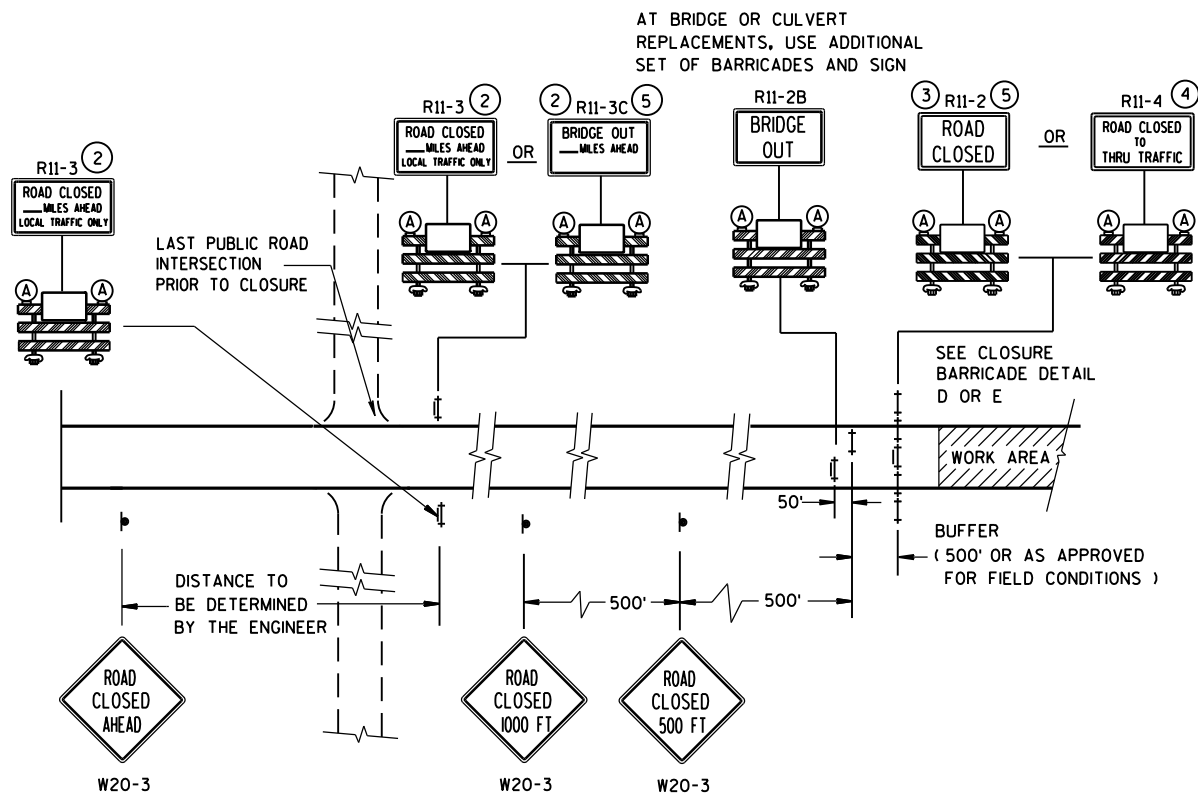
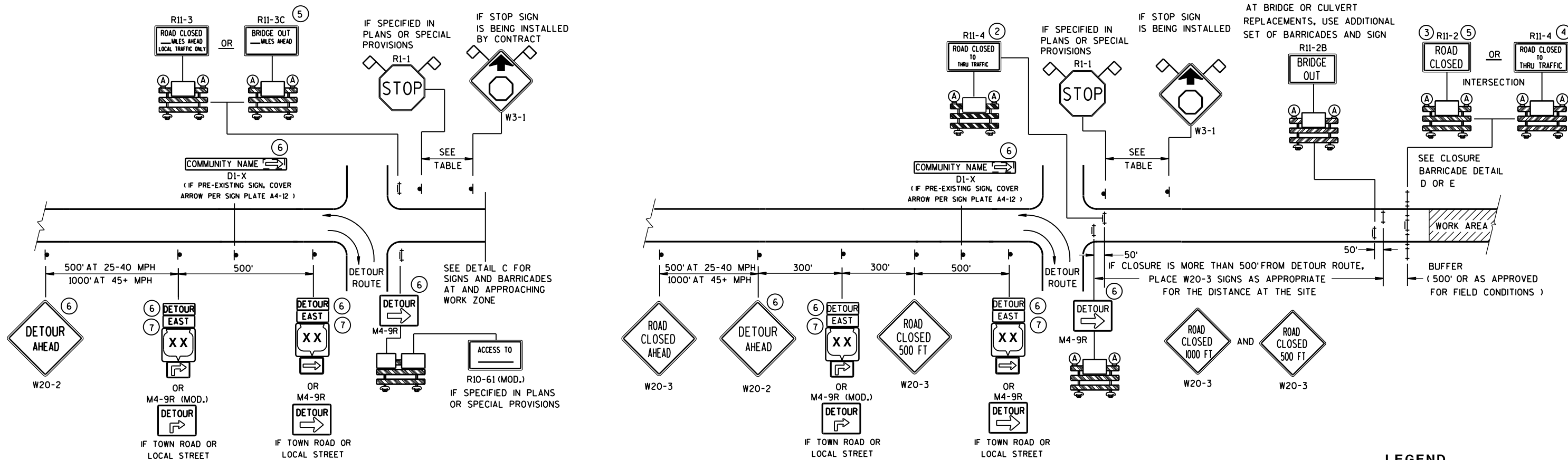


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

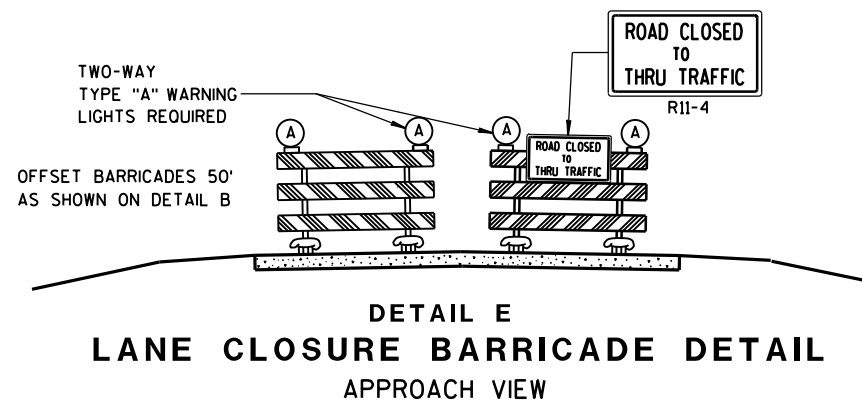
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

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

M4-9 SHALL BE 30" X 24".

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

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

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

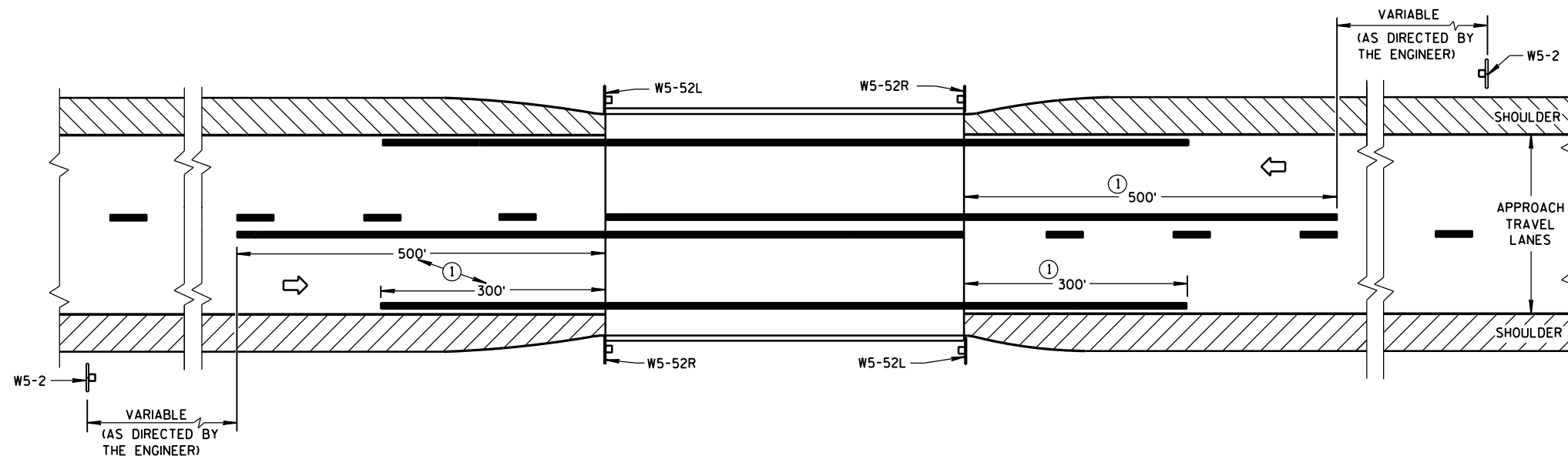
M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

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

R1-1 SHALL BE 36" X 36".

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

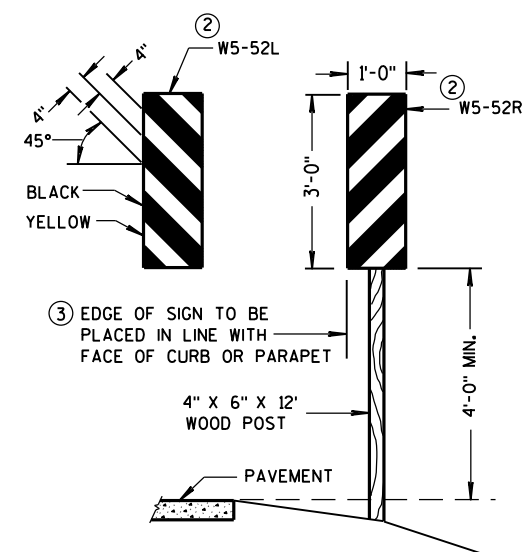
BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



SITUATION 1

WARRANTING CRITERIA:

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



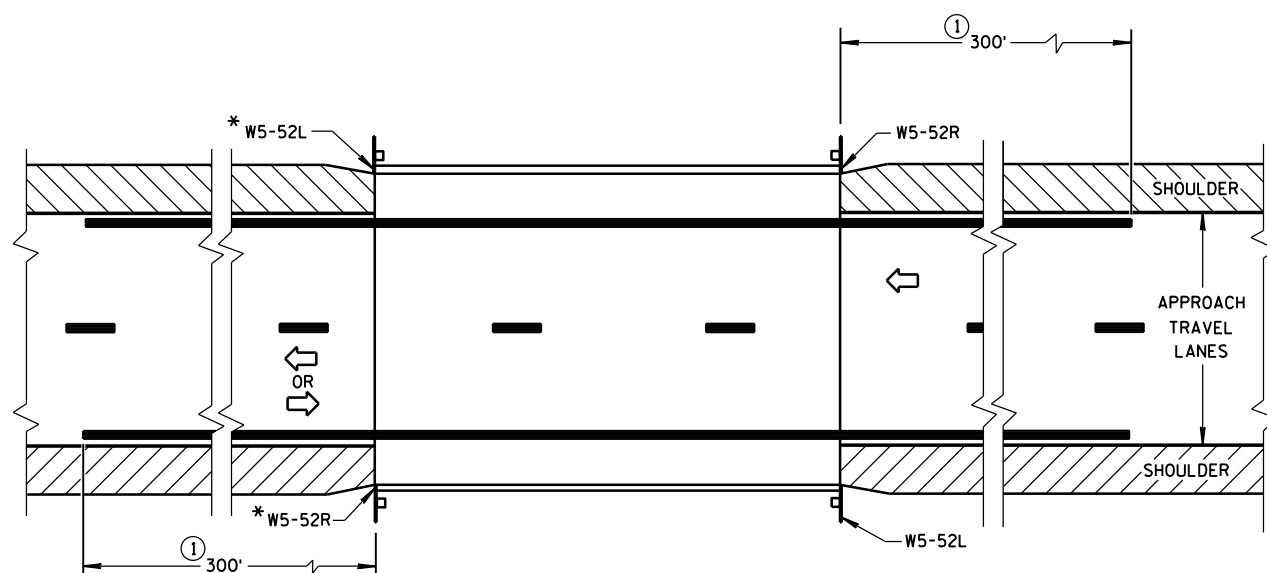
OBJECT MARKER PLACEMENT

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 F REFLECTIVE SHEETING.
- ③ LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.

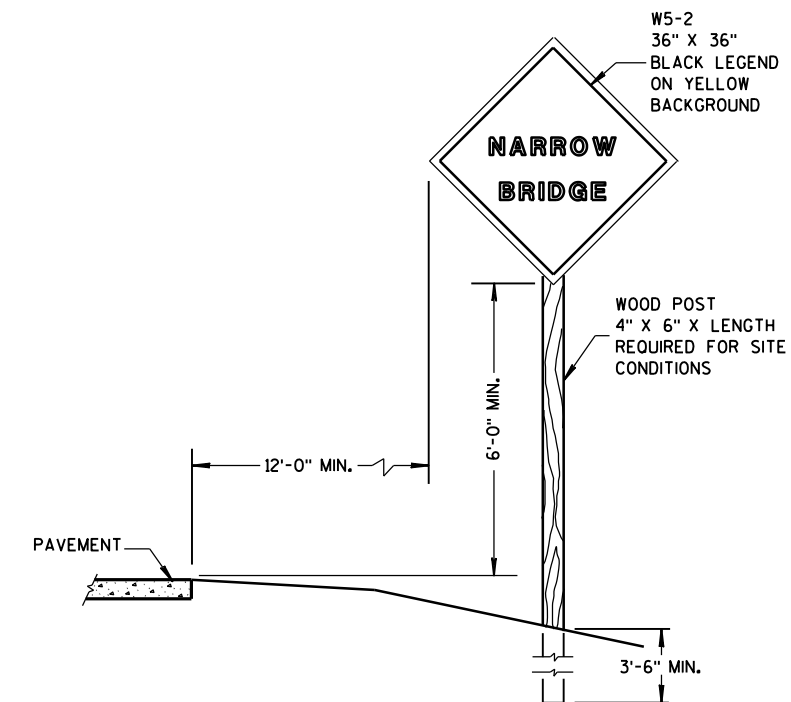


*OMIT ON ONE-WAY TRAVELLED WAYS

SITUATION 2

WARRANTING CRITERIA:

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



SIGN PLACEMENT

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

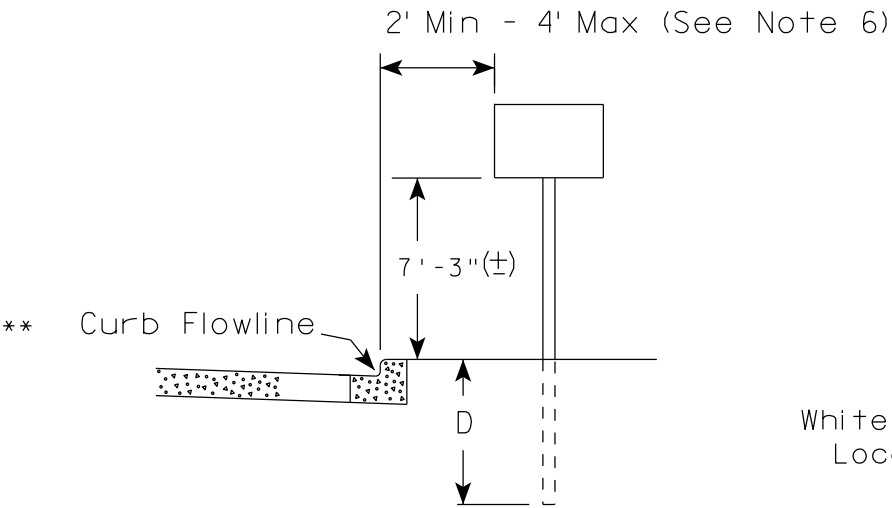
3/4/2013
DATE

FHWA

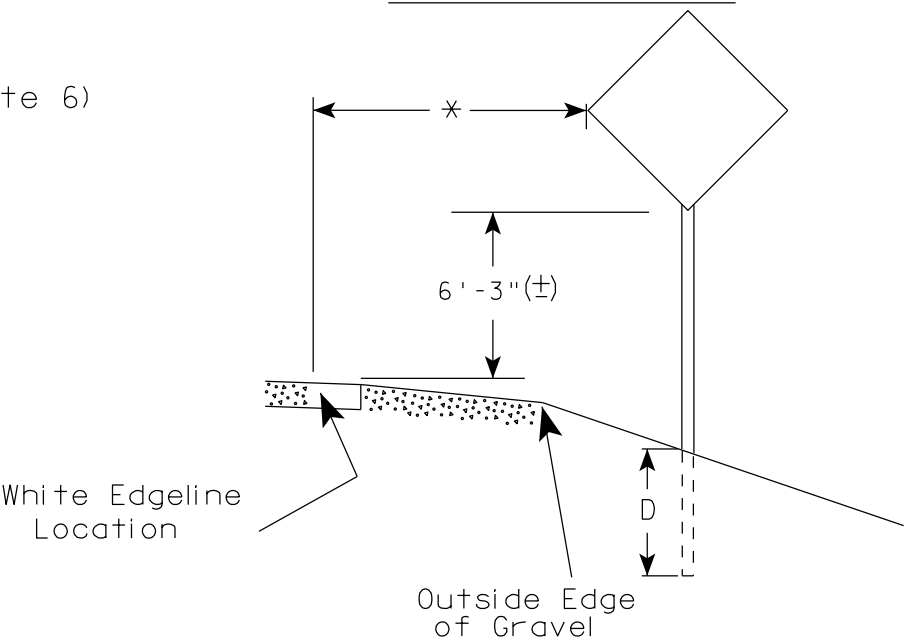
/S/ Travis Feltes

STATE TRAFFIC ENGINEER OF DESIGN

URBAN AREA



RURAL AREA (See Note 2)



- GENERAL NOTES
1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
 2. If signs are mounted on barrier wall, see A4-10 sign plate.
 3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
 4. Minimum mounting height for J assemblies (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), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

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

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

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

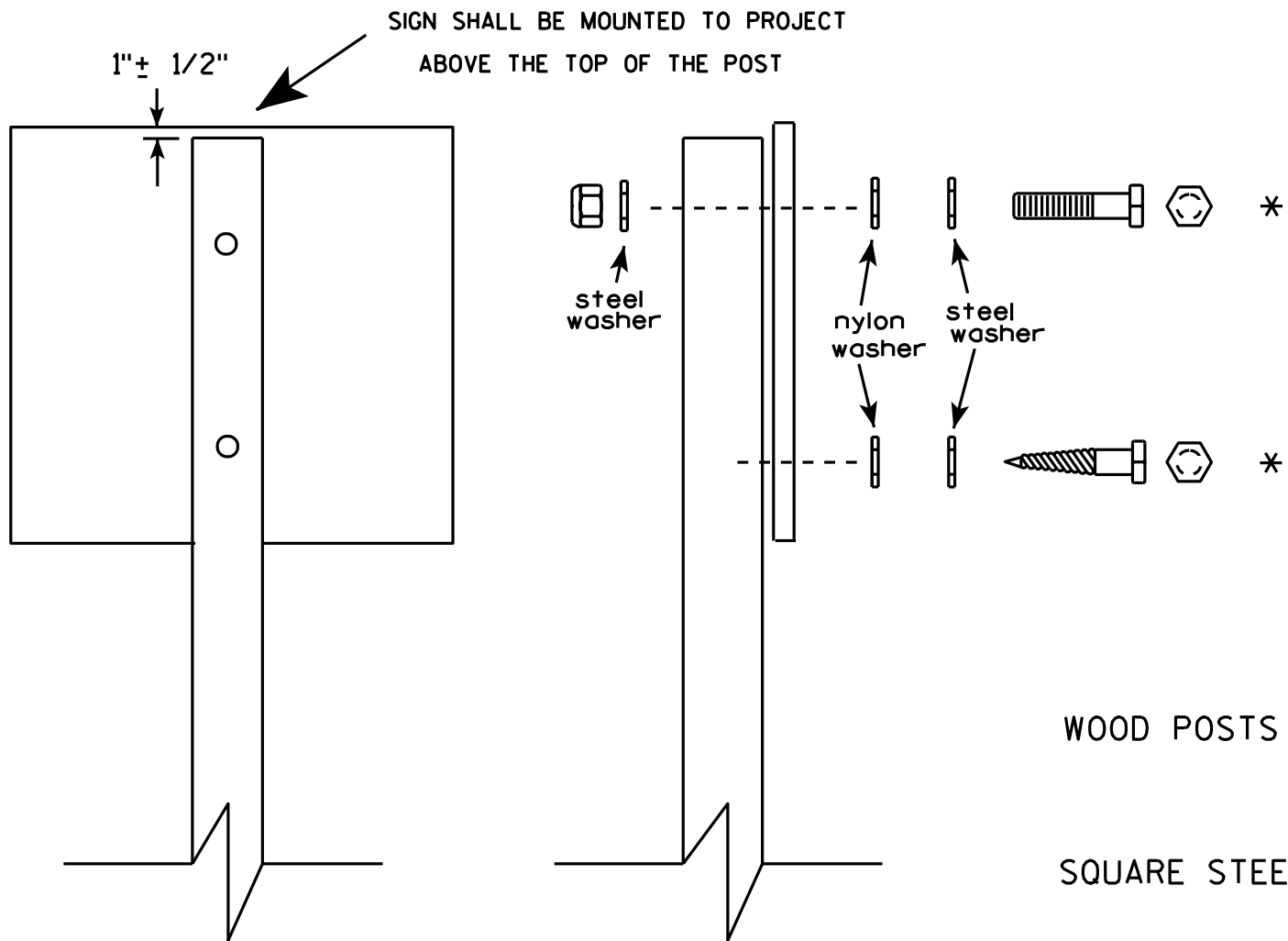
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

7

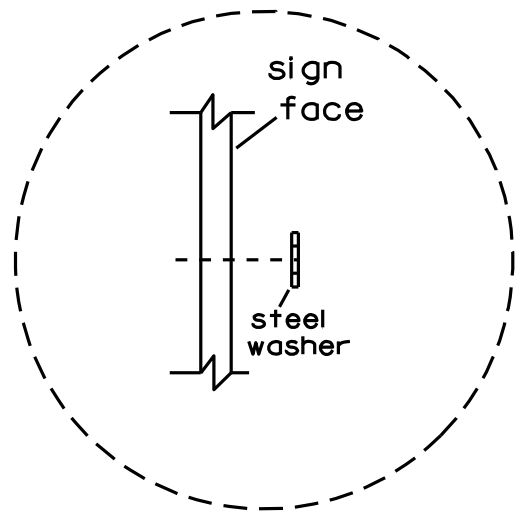


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- 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 - $\frac{3}{8}$ " X 3"
MACHINE BOLTS - $\frac{5}{16}$ " X 6-1/2" or 7" Length w/ nuts
- SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts
RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON for all Type H signs.

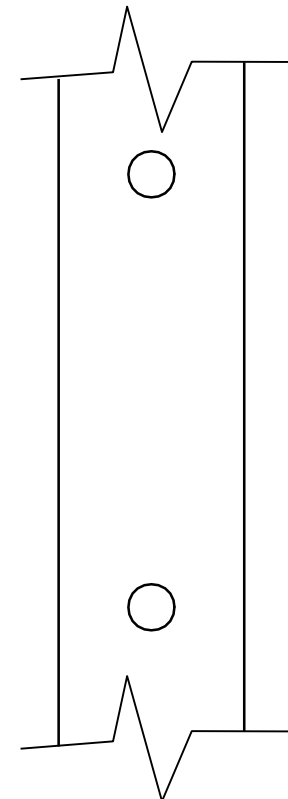
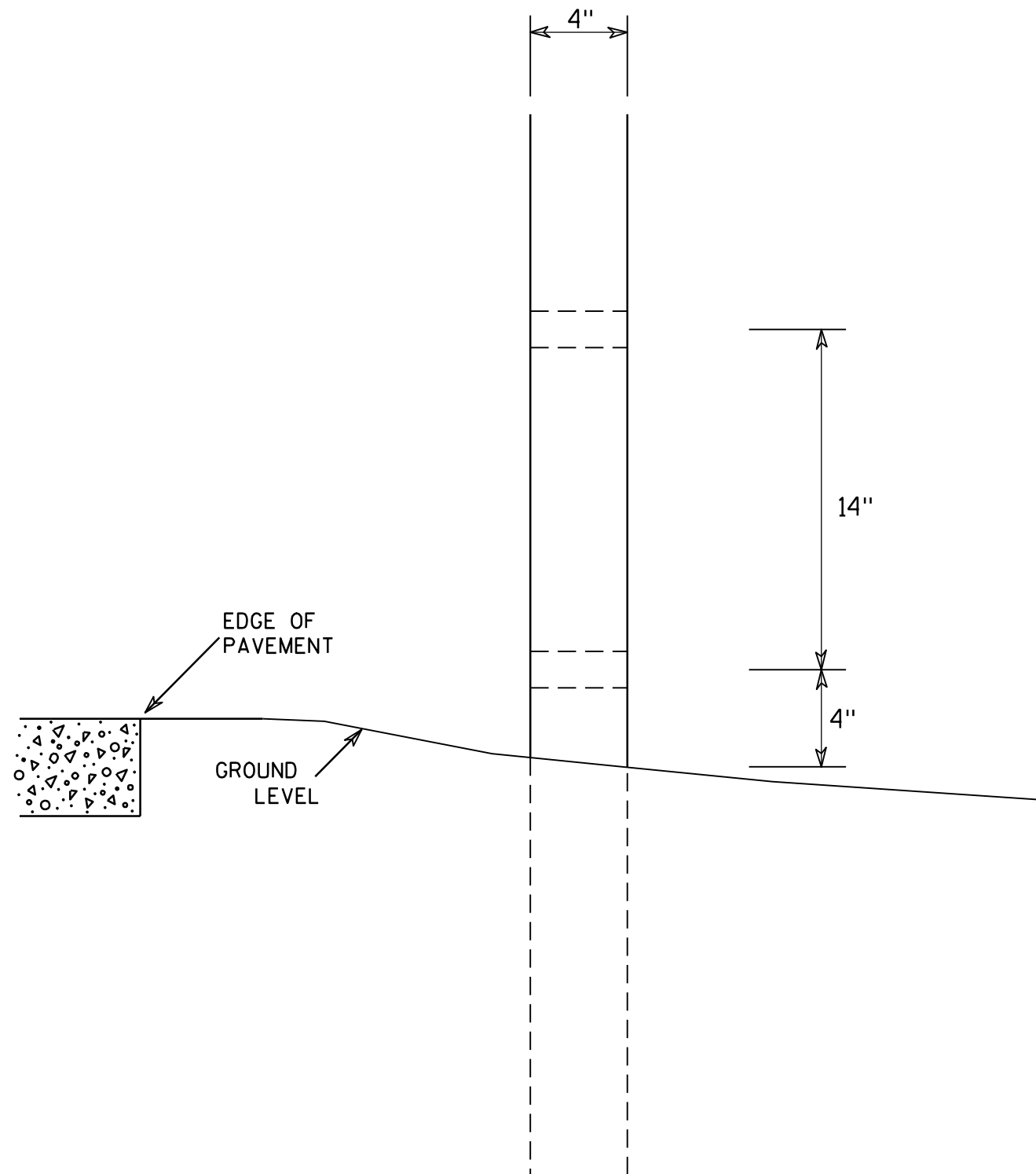


Washer Placement when Sign Has Other Than Type H or Type F Face

* 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

7



SIDE VIEW

GENERAL NOTES

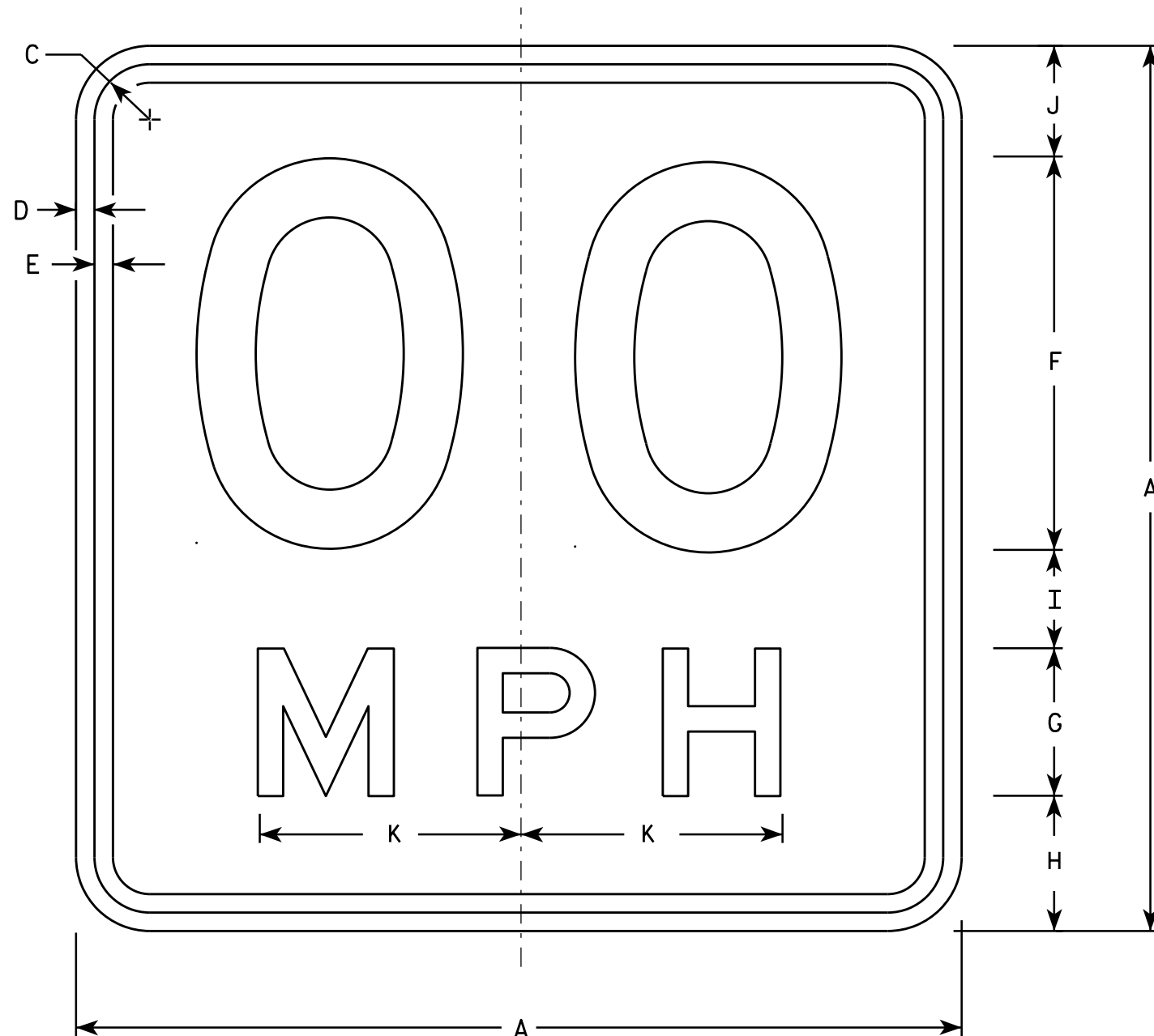
1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

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



S13-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow-Green
Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
Line 2 is Series E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
2S	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
2M	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
4																											
5																											

STANDARD SIGN S13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 10/3/2013 PLATE NO. S13-1.1

PROJECT NO: 8717-00-70

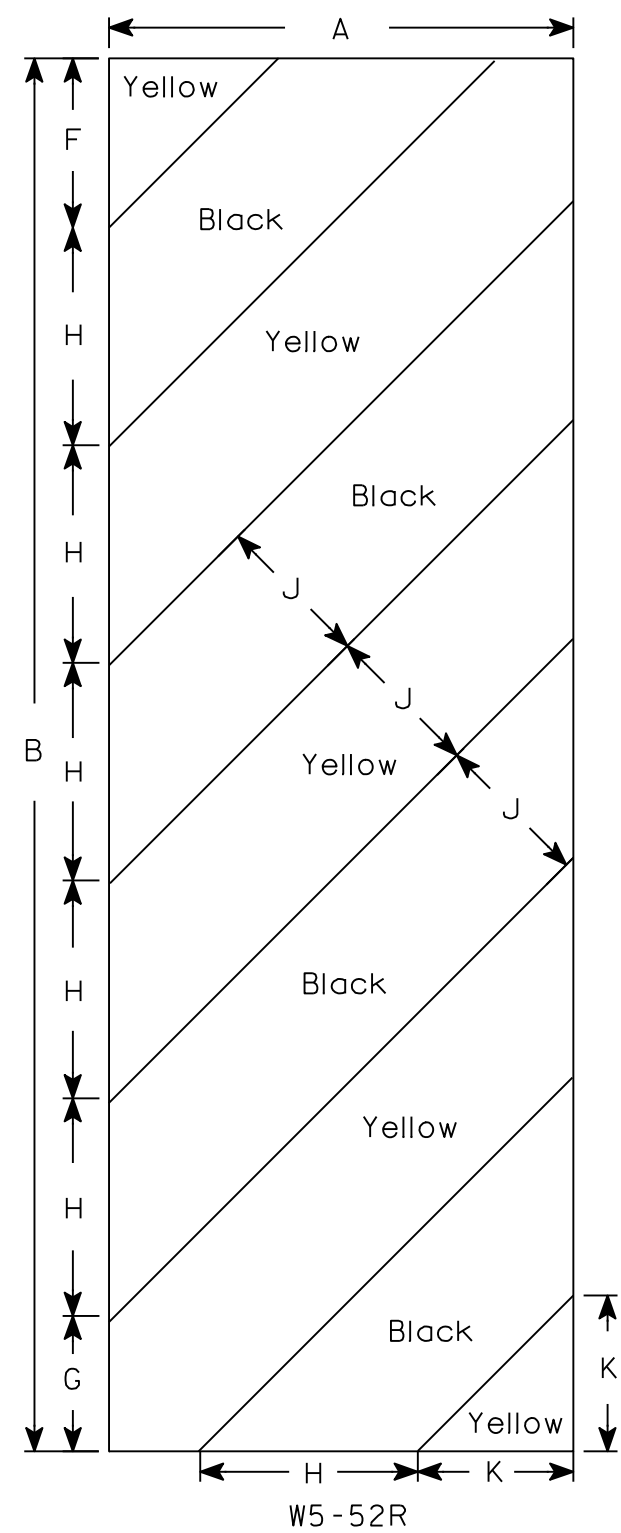
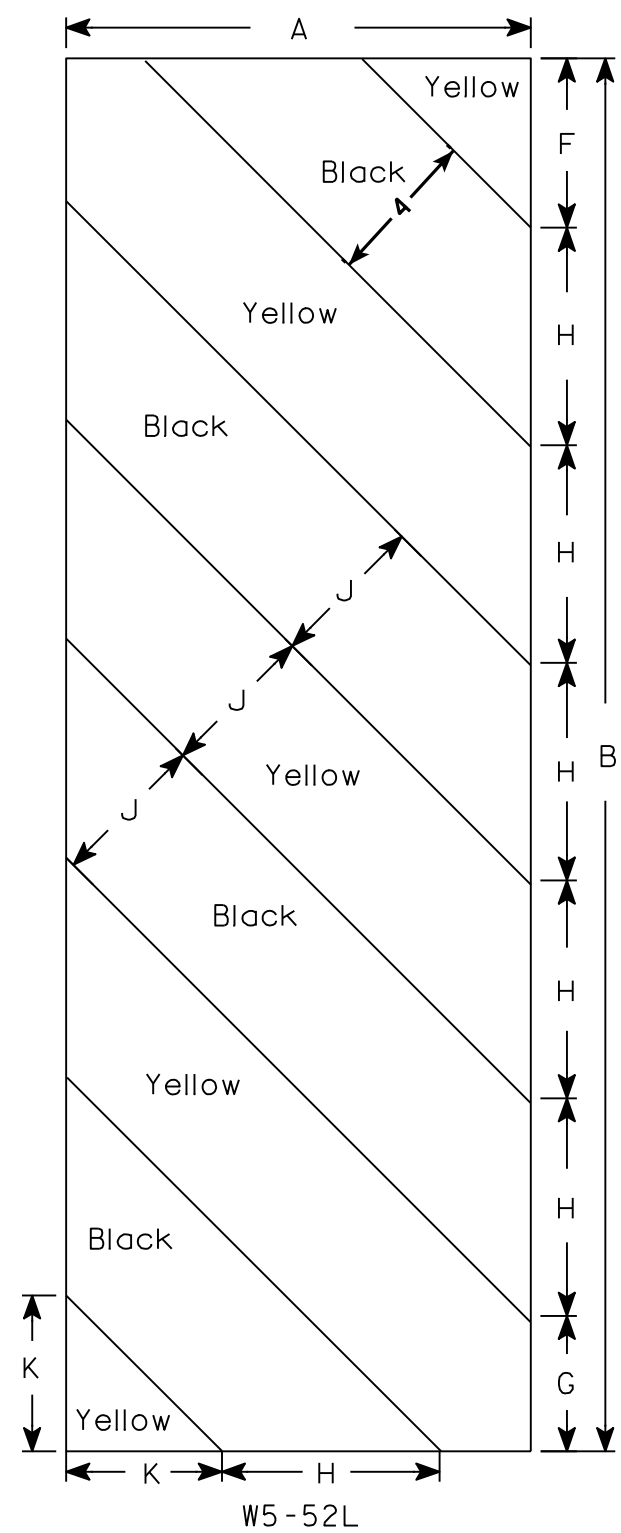
HWY: HOBBLES CREEK ROAD

COUNTY: PRICE

SHEET NO:

E

7



NOTES

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

7

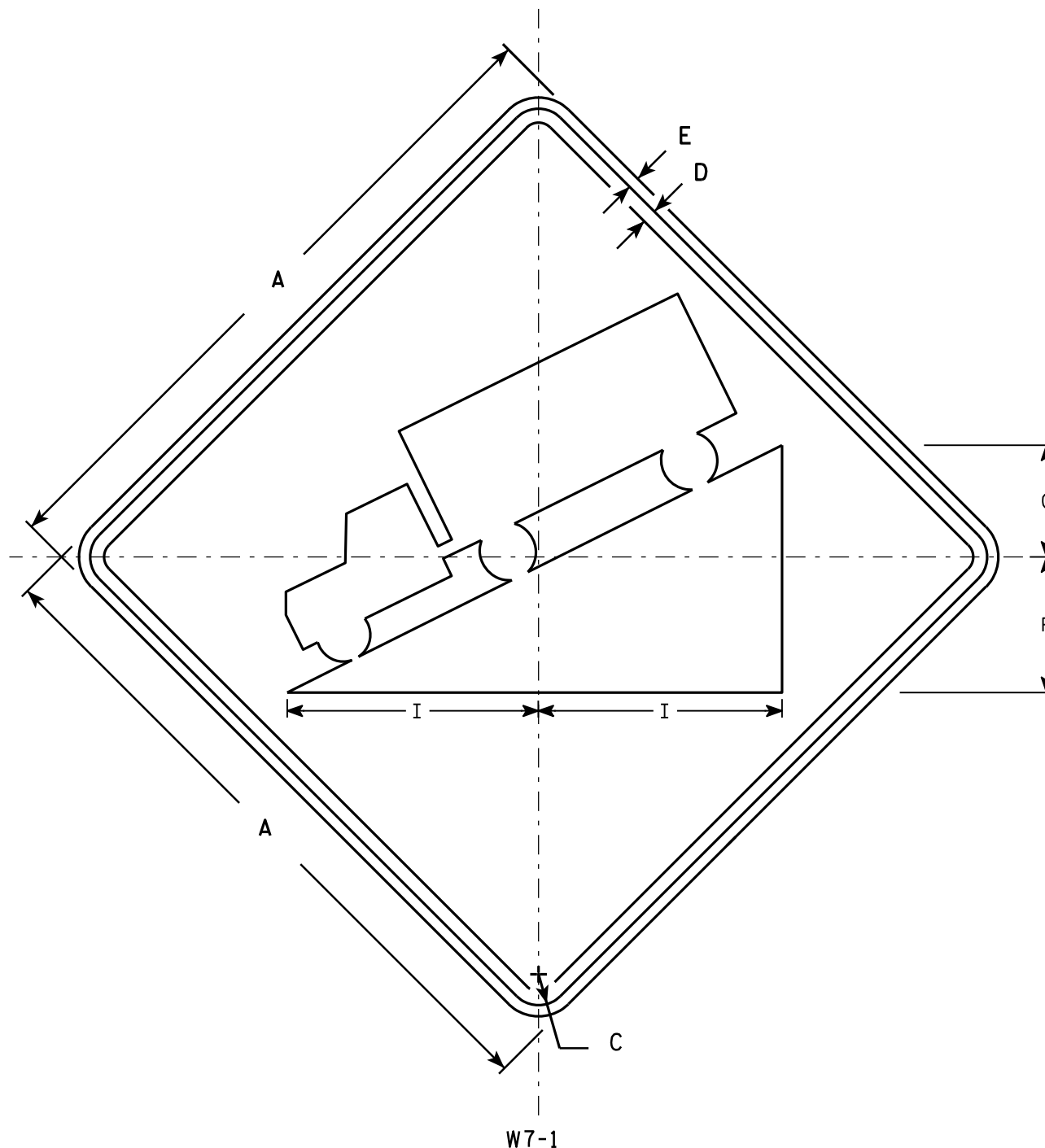
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0
2M	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0
3	18	54				6	5 1⁄2	8 1⁄2	45°	6	6 9⁄16																6.75
4																											
5																											

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	3/8	5	4		8 3/4																		4.0
2S	30		1 3/8	1/2	5/8	6	5		11																		6.25
2M	36		1 5/8	5/8	3/4	7 1/4	6		13 1/4																		9.0
3	36		1 5/8	5/8	3/4	7 1/4	6		13 1/4																		9.0
4	36		1 5/8	5/8	3/4	7 1/4	6		13 1/4																		9.0
5	48		2 1/4	3/4	1	9 3/4	8		17 1/2																		16.0

STANDARD SIGN W7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 03/12/13 PLATE NO. W7-1.13

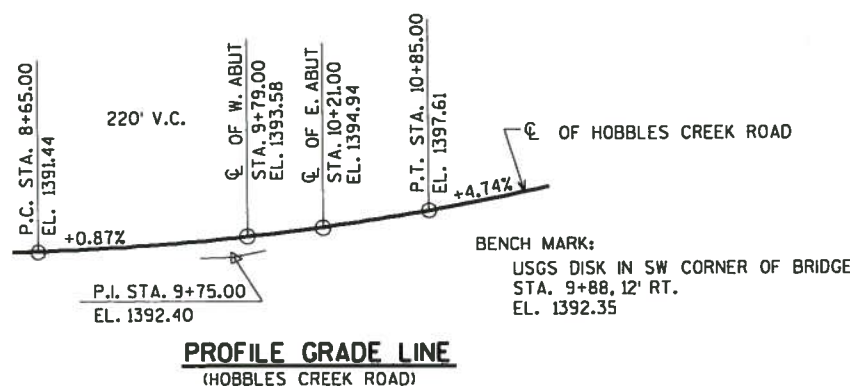
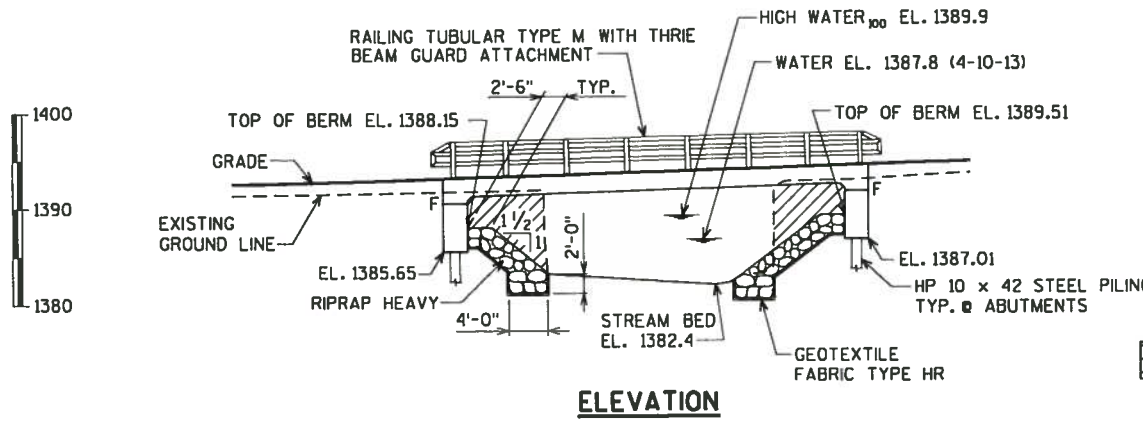
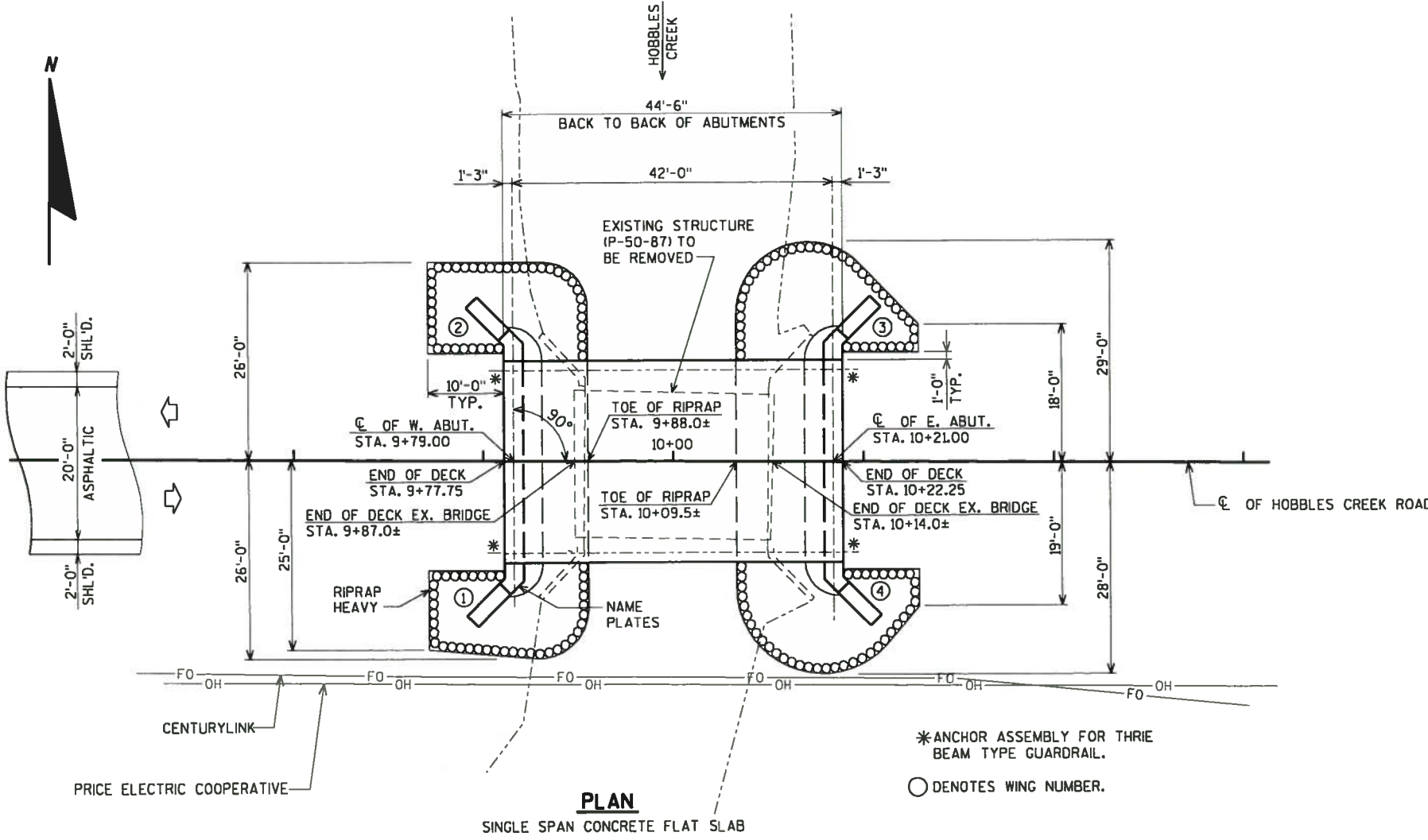
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DATE: 7-30-13

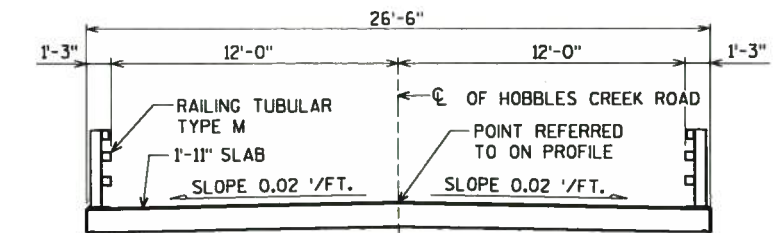
DATE:

CHECKED BY: KLV
BACK CHECKED BY:
CORRECTED BY:

8



- LIST OF DRAWINGS**
1. GENERAL PLAN
 2. QUANTITIES AND NOTES
 3. SUBSURFACE EXPLORATION
 4. WEST ABUTMENT
 5. WEST ABUTMENT WING DETAILS
 6. EAST ABUTMENT
 7. EAST ABUTMENT WING DETAILS
 8. ABUTMENT BILL OF BARS
 9. SUPERSTRUCTURE
 10. SUPERSTRUCTURE DETAILS
 11. RAILING TUBULAR TYPE M



DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.06
OPERATING RATING FACTOR: 1.38
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20" S.F.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY { SLAB $f'_c = 4,000$ p.s.i.
ALL OTHER $f'_c = 3,500$ p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) $f_y = 60,000$ p.s.i.

HYDRAULIC DATA:

100 YEAR FLOOD
DRAINAGE AREA = 13.8 sq. mi.
WATERWAY AREA = 161 sq. ft.
V = 5.6 f.p.s.
Q₁₀₀ = 900 c.f.s.
HIGH WATER₁₀₀ EL. 1389.9
HIGH WATER₂ EL. 1387.8
RDWY. OVERFLOW = N/A
SCOUR CRITICAL CODE = 8

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS ± PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 50'-0".

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

TRAFFIC DATA:

A.D.T. = <100 (2014)
A.D.T. = <100 (2034)
R.D.S. = 35 M.P.H.



BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

STATE PROJECT NUMBER			
8717-00-70			
NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54601 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	William C. Dreher	KAR	02/19/14
CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-50-86			
HOBBLER CREEK ROAD OVER HOBBLER CREEK			
COUNTY	PRICE	TOWN/CITY/VILLAGE	CATAWBA
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPEC.			
DESIGNED BY	JWZ	DESIGN CKD.	JCK
DRAWN BY	KAZ	PLANS CKD.	CBM
GENERAL PLAN			SHEET 1 OF 11

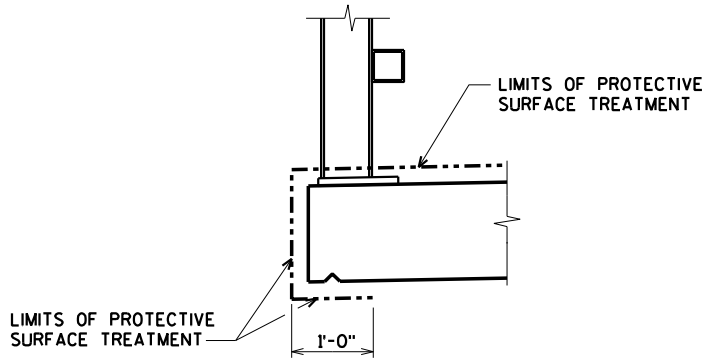
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STATE PROJECT NUMBER

8717-00-70

TOTAL ESTIMATED QUANTITIES

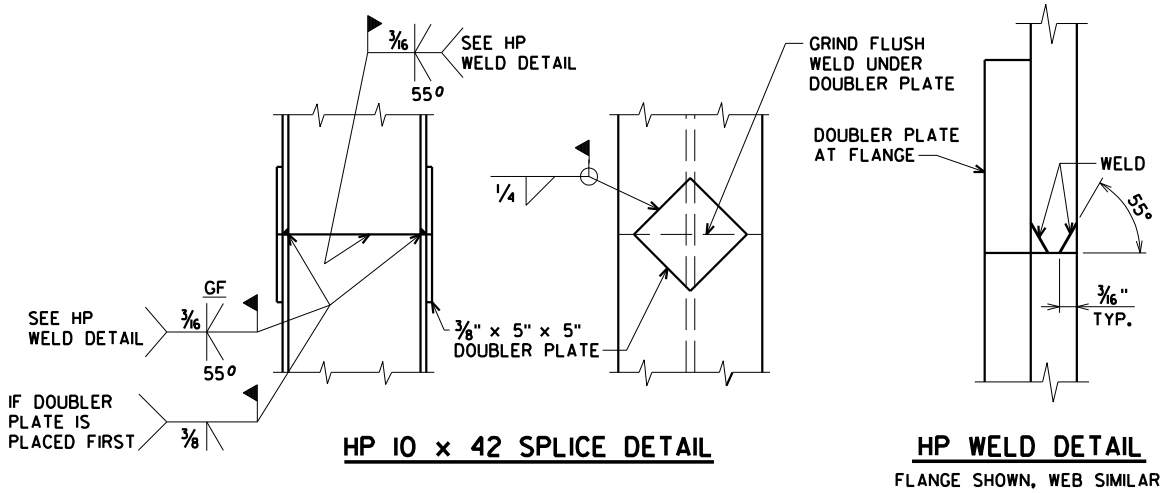
BID ITEM NUMBER	BID ITEMS	UNIT	W. ABUT.	E. ABUT.	SUPER.	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-50-86	LS	-----	-----	-----	1
210.0100	BACKFILL STRUCTURE	CY	75	75	-----	150
502.0100	CONCRETE MASONRY BRIDGES	CY	24	24	88	136
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----	160	160
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	2,020	2,020	-----	4,040
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	720	720	13,970	15,410
513.4060	RAILING TUBULAR TYPE M B-50-86	LS	-----	-----	-----	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	-----	18
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	250	250	-----	500
606.0300	RIPRAP HEAVY	CY	65	75	-----	140
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	70	70	-----	140
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	135	155	-----	290
	NON-BID ITEMS					
	FILLER	SIZE	-----	-----	-----	1/2" & 3/4"



PROTECTIVE SURFACE TREATMENT DETAIL

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 TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.
SLAB FALSEWORK SHALL BE SUPPORTED ON PILES UNLESS OTHERWISE APPROVED BY THE ENGINEER.
THE EXISTING GROUND LINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.
THE EXISTING STRUCTURE, P-50-87, TO BE REMOVED, IS A SINGLE SPAN STEEL DECK GIRDER BRIDGE, 27.0 FT. LONG WITH A 19.8 FT. CLEAR ROADWAY WIDTH.
AT BACKFACE OF ABUTMENTS ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.
PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.

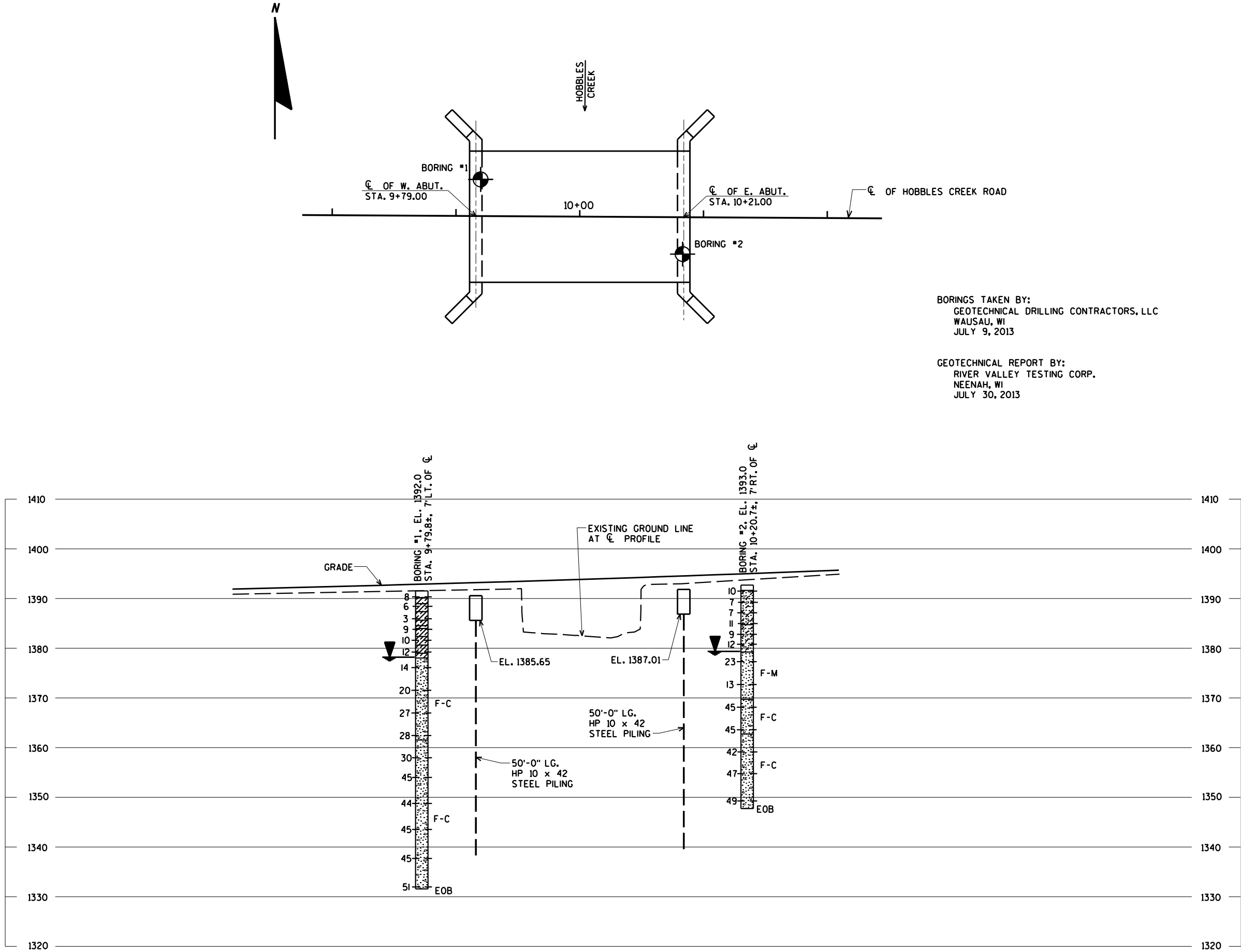


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-50-86			
DRAWN BY KAZ		PLANS CK'D. JWZ	
QUANTITIES AND NOTES			SHEET 2 OF 11

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

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8



STATE PROJECT NUMBER

8717-00-70

ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6
95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING

ELEV. BORING NO. STA.
UNCONFINED STRENGTH 7.7
BLOWS PER FT. USING 140# WT. FALLING 30"
WASH SAMPLE
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO
LIMESTONE

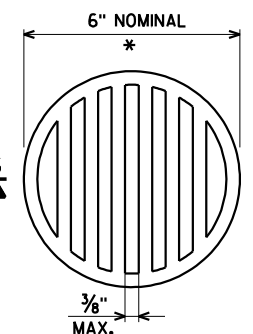
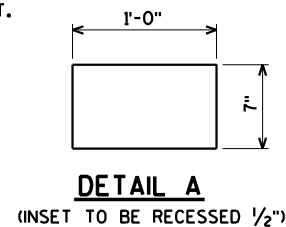
UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-50-86			
DRAWN BY KAZ		PLANS CK'D. JWZ	
SUBSURFACE EXPLORATION			SHEET 3 OF 11



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 SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH SHEET METAL SCREWS.

RODENT SHIELD DETAIL



- F.F. DENOTES FRONT FACE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-50-86			
DRAWN BY		CLS	PLANS CK'D. JWZ
WEST ABUTMENT WING DETAILS		SHEET 5 OF 1	

\$PRFNAME\$
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8717-00-70



- 8

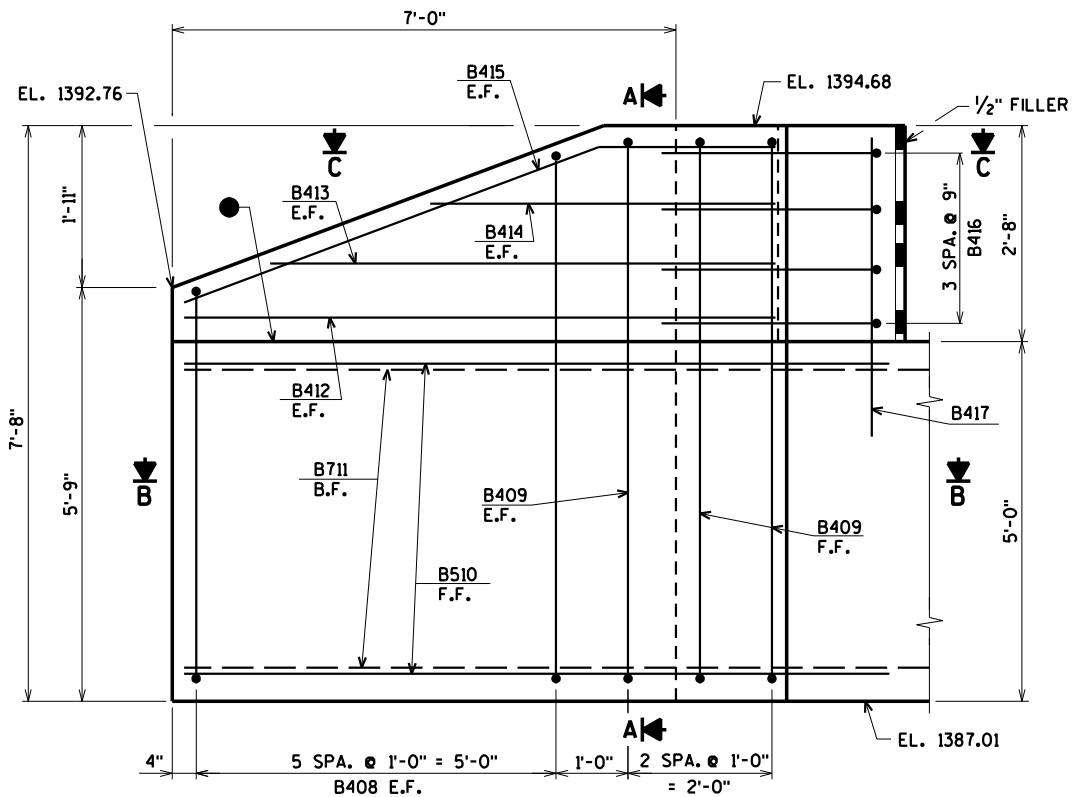
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\$PRNAME\$
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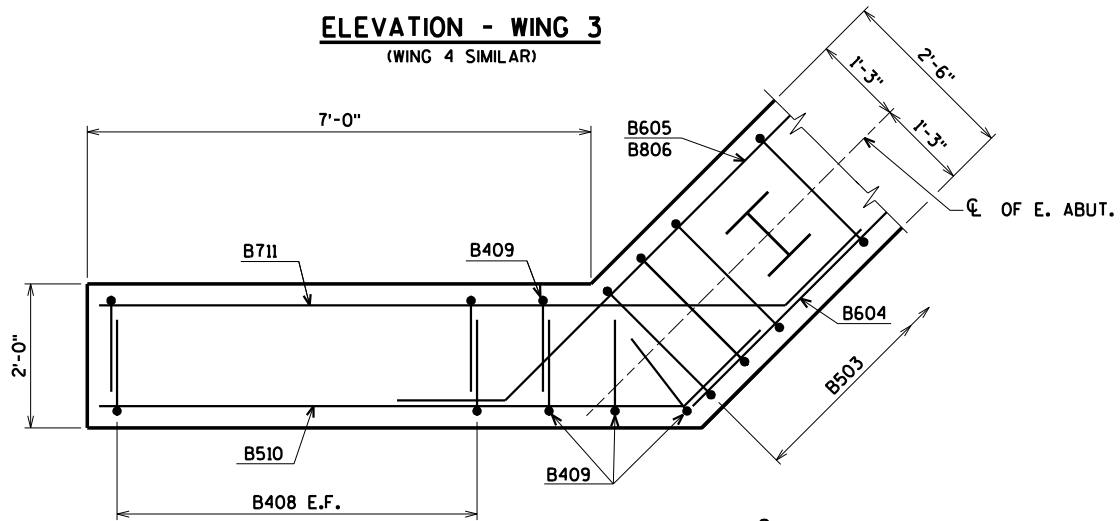
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STATE PROJECT NUMBER

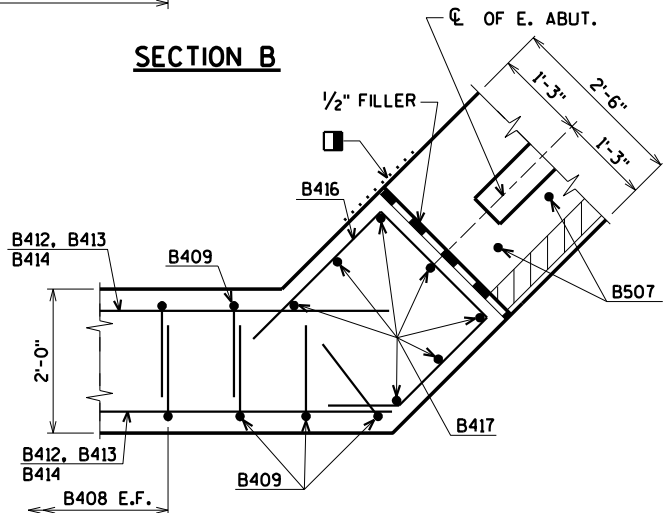
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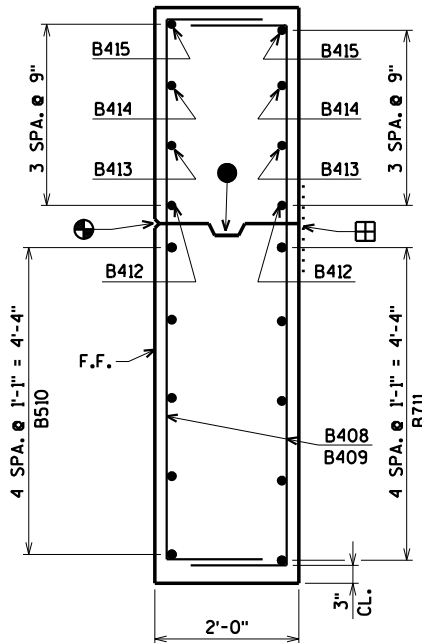
ELEVATION - WING 3
(WING 4 SIMILAR)



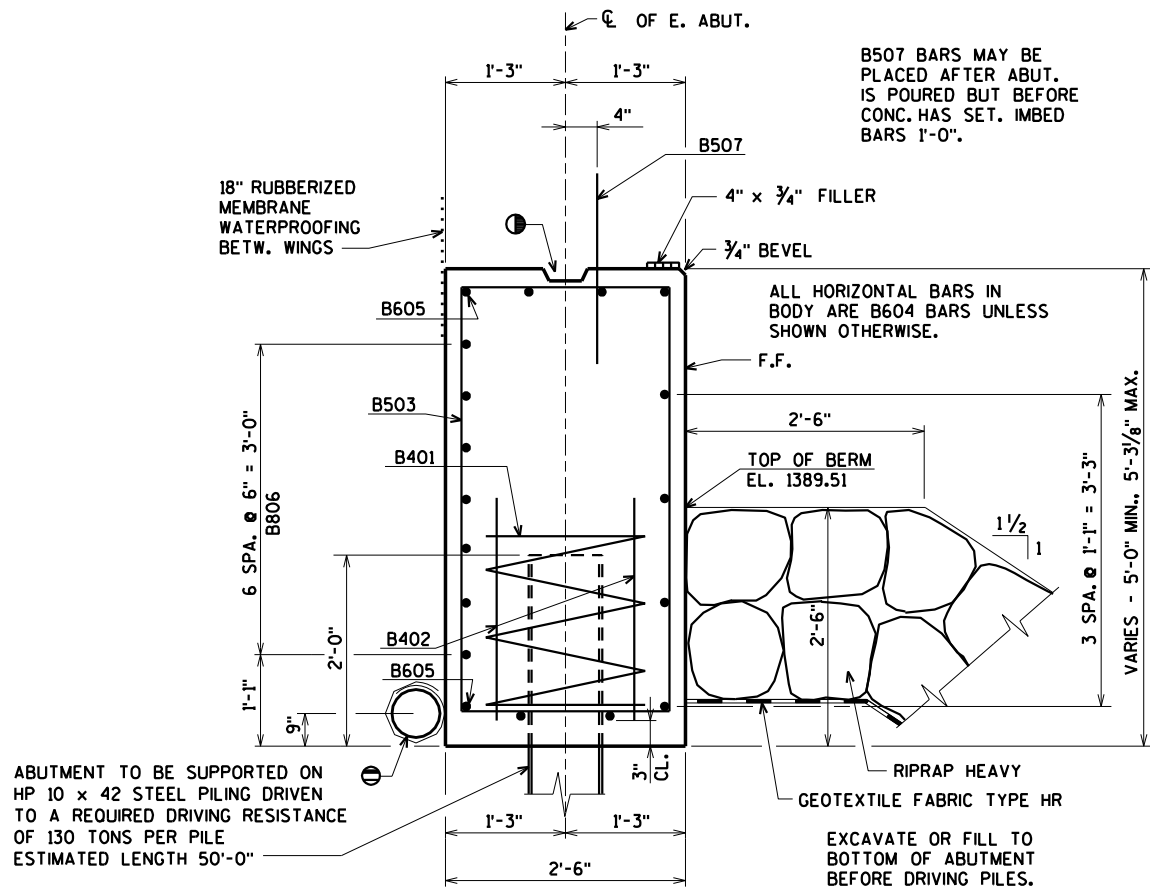
SECTION B



SECTION C



SECTION A



TYPICAL SECTION THRU BODY

PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

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

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.

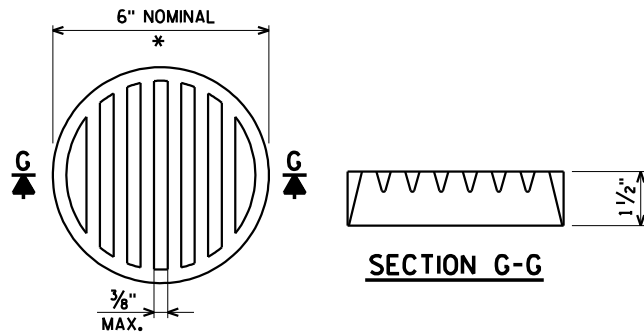
VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING WALL.

FOR PILE SPlice DETAIL SEE SHEET 2.

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE



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

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

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 SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO.10 x 1-INCH SHEET METAL SCREWS.

RODENT SHIELD DETAIL

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-50-86			
DRAWN BY		CLS	PLANS CK'D. JWZ
EAST ABUTMENT WING DETAILS			SHEET 7 OF 11

8

\$PRNAME\$
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8

BILL OF BARS - WEST ABUTMENT

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	2,020# UNCOATED 720# COATED
							LOCATION
A401		5	28-0	X			BODY @ PILES
A402		10	2-3				BODY @ PILES
A503		39	13-10	X			BODY VERT.
A604		9	30-11				BODY HORIZ. F.F.
A605		4	20-6	X			BODY HORIZ. B.F.
A806		14	21-7	X			BODY HORIZ. B.F.
A507	X	26	2-0				BODY DOWELS
A408	X	24	8-7	X		⊗	WINGS 1 & 2 VERT. E.F.
A409	X	8	9-9	X			WINGS 1 & 2 VERT. E.F.
A510	X	10	9-6	X			WINGS 1 & 2 HORIZ. F.F.
A711	X	10	11-2	X			WINGS 1 & 2 HORIZ. B.F.
A412	X	4	8-3				WINGS 1 & 2 HORIZ. E.F.
A413	X	4	6-2				WINGS 1 & 2 HORIZ. E.F.
A414	X	4	4-1				WINGS 1 & 2 HORIZ. E.F.
A415	X	4	8-6	X			WINGS 1 & 2 DIAG. E.F.
A416	X	8	8-5	X			WINGS 1 & 2 HORIZ.
A417	X	14	3-10				WINGS 1 & 2 VERT.

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.

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

F.F. DENOTES FRONT FACE

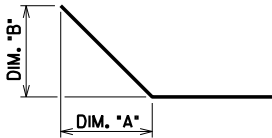
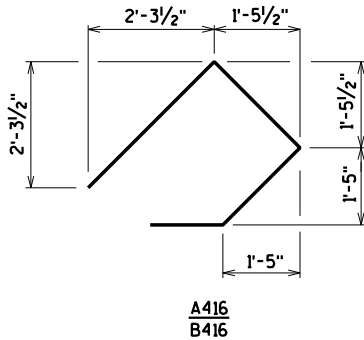
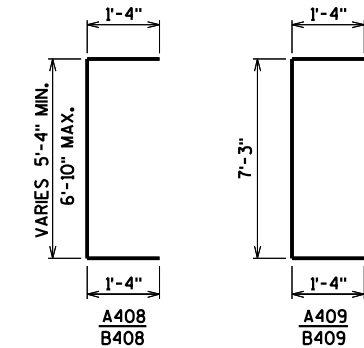
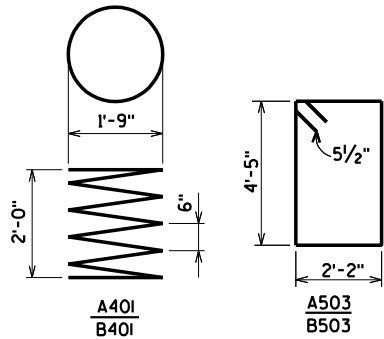
BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
A408	4 SERIES OF 6	7'-10" TO 9'-4"
B408	4 SERIES OF 6	7'-10" TO 9'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.

BILL OF BARS - EAST ABUTMENT

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	2,020# UNCOATED 720# COATED
							LOCATION
B401		5	28-0	X			BODY @ PILES
B402		10	2-3				BODY @ PILES
B503		39	13-10	X			BODY VERT.
B604		9	30-11				BODY HORIZ. F.F.
B605		4	20-6	X			BODY HORIZ. B.F.
B806		14	21-7	X			BODY HORIZ. B.F.
B507	X	26	2-0				BODY DOWELS
B408	X	24	8-7	X		⊗	WINGS 3 & 4 VERT. E.F.
B409	X	8	9-9	X			WINGS 3 & 4 VERT. E.F.
B510	X	10	9-6	X			WINGS 3 & 4 HORIZ. F.F.
B711	X	10	11-2	X			WINGS 3 & 4 HORIZ. B.F.
B412	X	4	8-3				WINGS 3 & 4 HORIZ. E.F.
B413	X	4	6-2				WINGS 3 & 4 HORIZ. E.F.
B414	X	4	4-1				WINGS 3 & 4 HORIZ. E.F.
B415	X	4	8-6	X			WINGS 3 & 4 DIAG. E.F.
B416	X	8	8-5	X			WINGS 3 & 4 HORIZ.
B417	X	14	3-10				WINGS 3 & 4 VERT.



BAR NO.	DIM. "A"	DIM. "B"
A605	1'-0 3/4"	1'-0 3/4"
A806	1'-0 3/4"	1'-0 3/4"
A510	1'-0 3/4"	1'-0 3/4"
A711	1'-0 3/4"	1'-0 3/4"
A415	5'-9"	1'-11"
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"
B415	5'-9"	1'-11"

STATE PROJECT NUMBER

8717-00-70

8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-50-86			
DRAWN BY		CLS	PLANS CK'D. JWZ
ABUTMENT BILL OF BARS			SHEET 8 OF 11

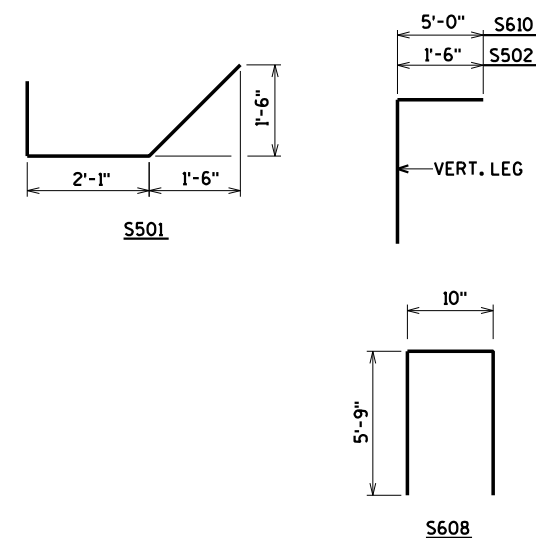
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
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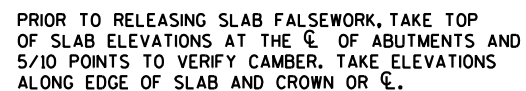


CROSS SECTION THRU ROADWAY

[illegible]

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.





ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES OF DEAD LOAD DEFLECTION AND FUTURE CREEP.

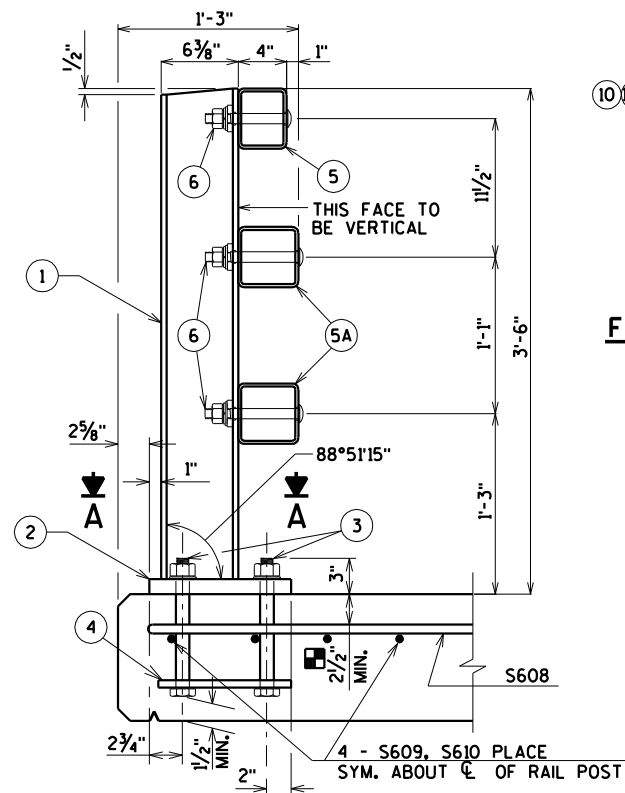
ORIGINAL PLANS PREPARED BY

AYRES
ASSOCIATES

3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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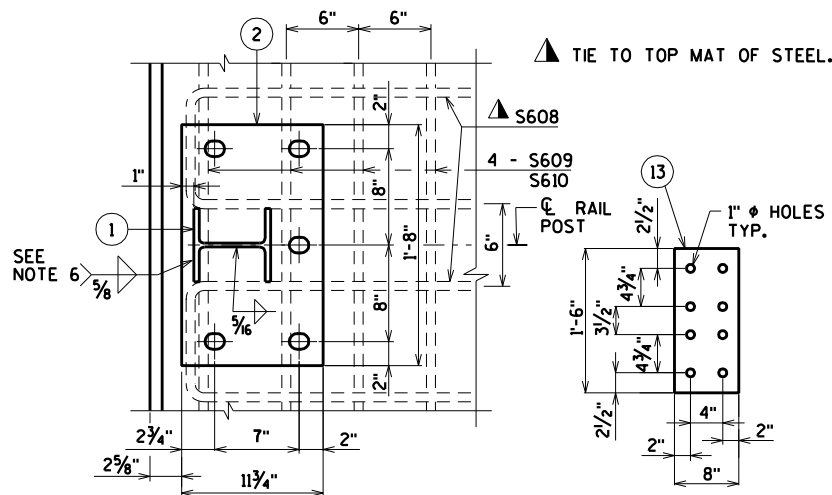
LEGEND

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

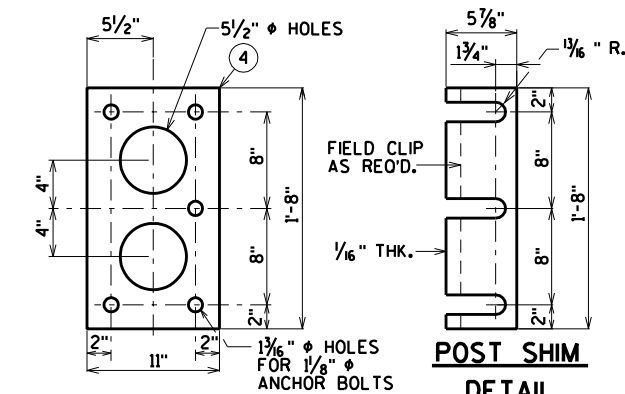


SECTION THRU RAILING ON DECK

PLACE BELOW TOP MAT SLAB REINFORCEMENT.

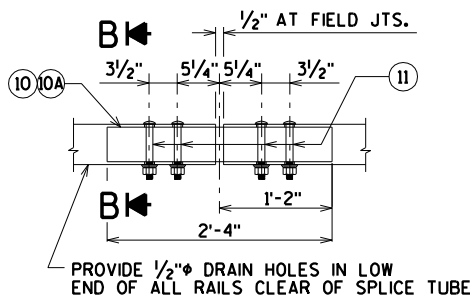


SECTION A

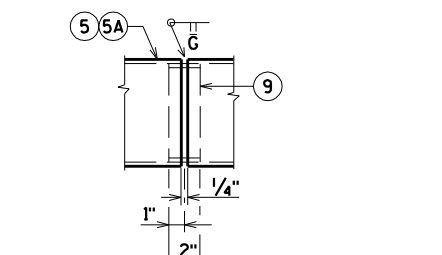


ANCHOR PLATE

(AT RAIL TO DECK CONNECTION)

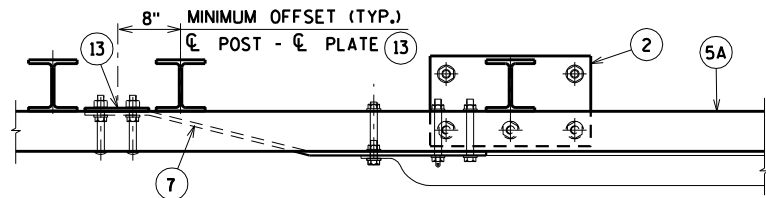


FIELD ERECTION JOINT DETAIL



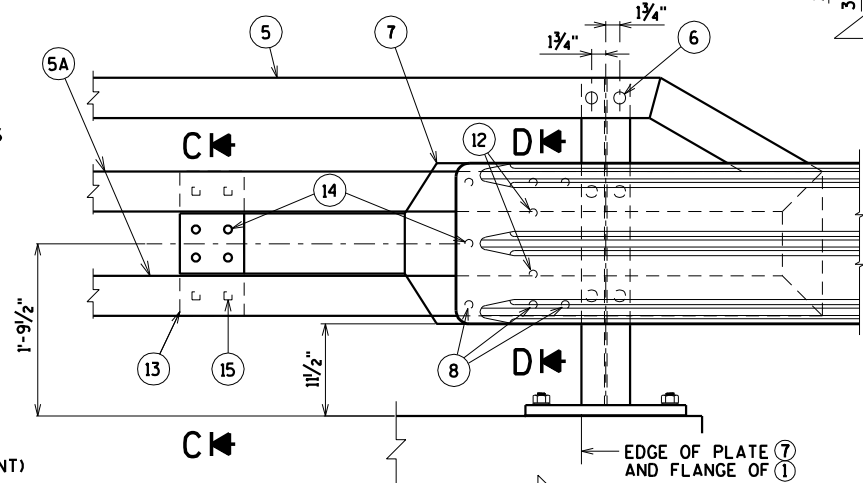
SHOP RAIL SPICE DETAIL

(LOCATION MUST BE SHOWN ON THE SHOP DRAWINGS)



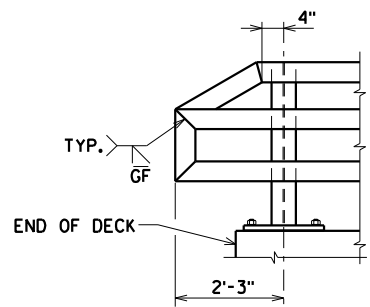
TOP VIEW AT END POST

(THRIE BEAM RAIL ATTACHMENT)

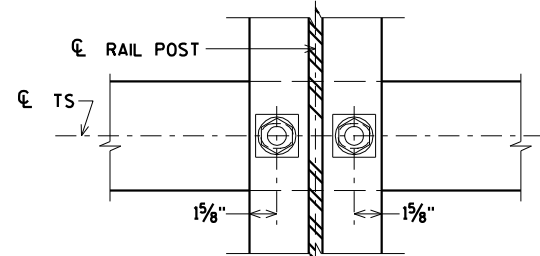


DETAIL AT END POST

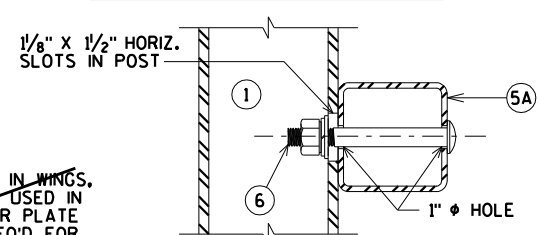
(THRIE BEAM RAIL ATTACHMENT)



PART VIEW OF RAILING



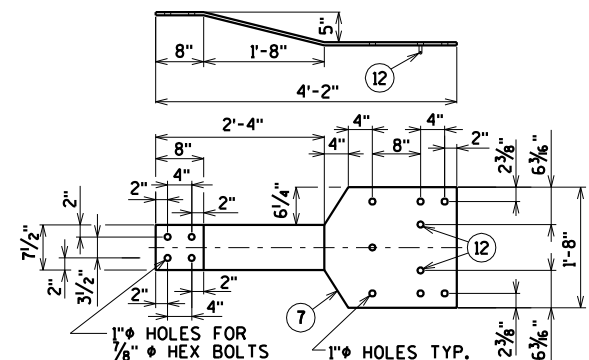
SECTION THRU POST WEB



SECTION THRU RAIL

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

TYPICAL RAIL TO POST CONNECTIONS

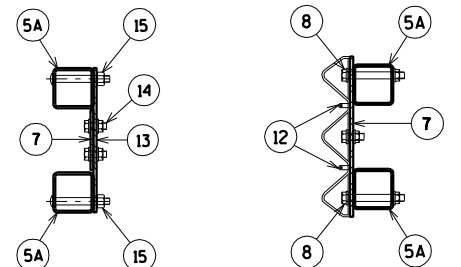


BACK-UP PLATE DETAIL

(AT BEAM GUARD ATTACHMENT)

GENERAL NOTES

- BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-50-86" WHICH INCLUDES ALL ITEMS SHOWN.
- RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
- THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
- RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
- ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
- WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
- FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
- POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
- ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.
- WHEN PAINTING IS REQUIRED, ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 3 & 4) SHALL BE PAINTED OVER GALVANIZING WITH APPROVED TIE COAT AND TOP COAT.
- THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).
- PLACE FIRST BOTTOM LONGITUDINAL BAR CLEAR OF DRIP GROOVE.



SECTION C

SECTION D

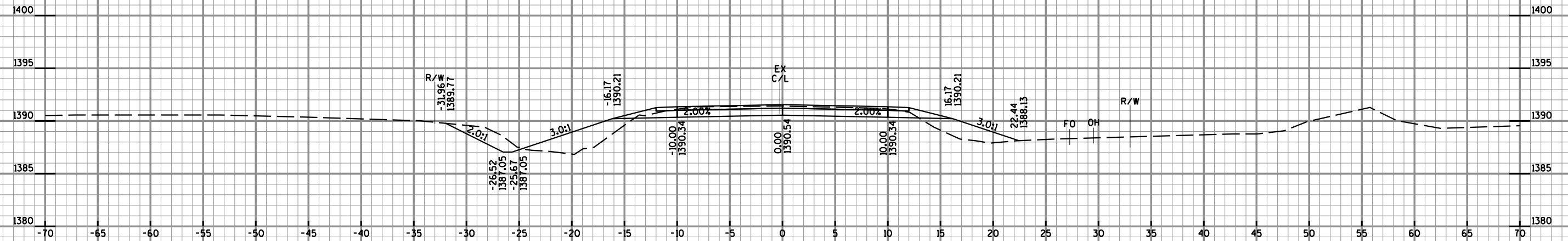
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-50-86			
DRAWN BY CLS		PLANS CK'D. JWZ	
RAILING TUBULAR TYPE M			SHEET 11 OF 11

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

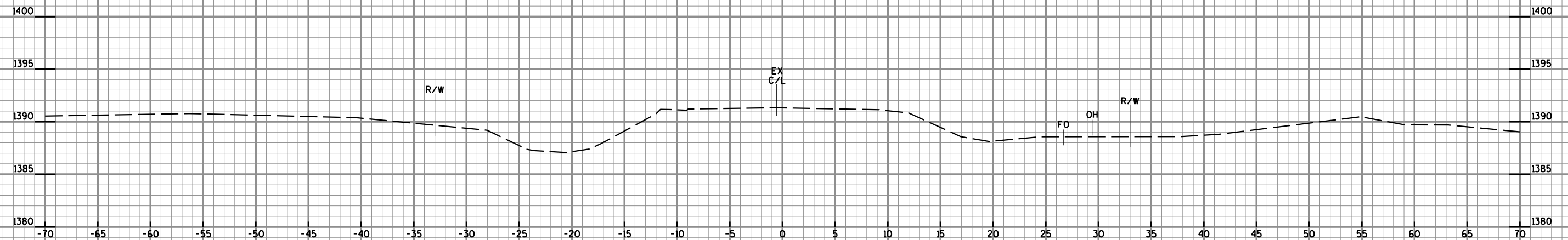
*EARTHWORK SUMMARY (CATEGORY 0010)										
DIVISION	STATION	AREA			INCREMENTAL VOLUME			CUMULATIVE VOLUME		
		CUT	SALVAGED/ UNUSEABLE PAVEMENT MATERIAL SF	FILL SF	CUT (1) CY	SALVAGED/ UNUSEABLE PAVEMENT MATERIAL (2) CY	FILL (3) CY	CUT (1) 1.00 CY	EXPANDED FILL (4) 1.30 CY	MASS ORDINATE ±(5) CY
1	8+50	30	0	0						
Hobbles Creek Road	8+75	28	0	23	27	0	11	27	14	13
	9+00	22	0	34	23	0	27	50	49	1
	9+25	15	0	43	17	0	36	67	96	-29
	9+50	3	0	69	8	0	52	75	164	-89
	9+77.75	3	0	70	3	0	71	78	256	-178
	STRUCTURE (B-50-86)									
	10+22.25	45	0	1	46	0	1	124	257	-133
	10+50	45	0	1	52	0	0	176	257	-81
	10+75	68	0	0	68	0	0	244	257	-13
	11+00	78	0	0	76	0	0	320	257	63
	11+25	86	0	0	55	0	0	375	257	118
	11+50	34	0	0						
TOTALS					375	0	198	208.0100 BORROW =		
					205.0100 EXCAVATION COMMON =	SAY 375		SAY 178		

NOTES:
1) EXCAVATION COMMON IS THE SUM OF THE CUT COLUMN. ITEM NUMBER 205.0100
2) SALVAGED/UNUSEABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
3) DOES NOT INCLUDE UNUSABLE PAVEMENT EXCAVATION VOLUME.
4) EXPANDED FILL FACTOR = 1.30 EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR
5) THE MASS ORDINATE ± QTY CALCULATED FOR THE DIVISION.

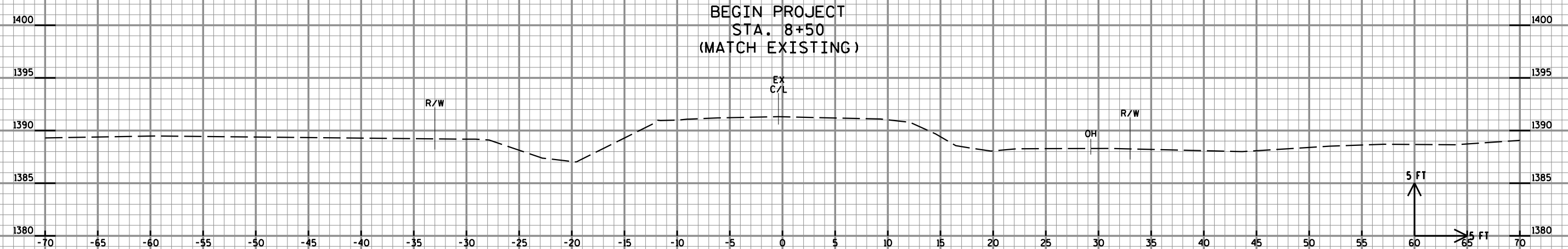
PLUS (+) QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION.
MINUS (-) QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.



8+75



8+50



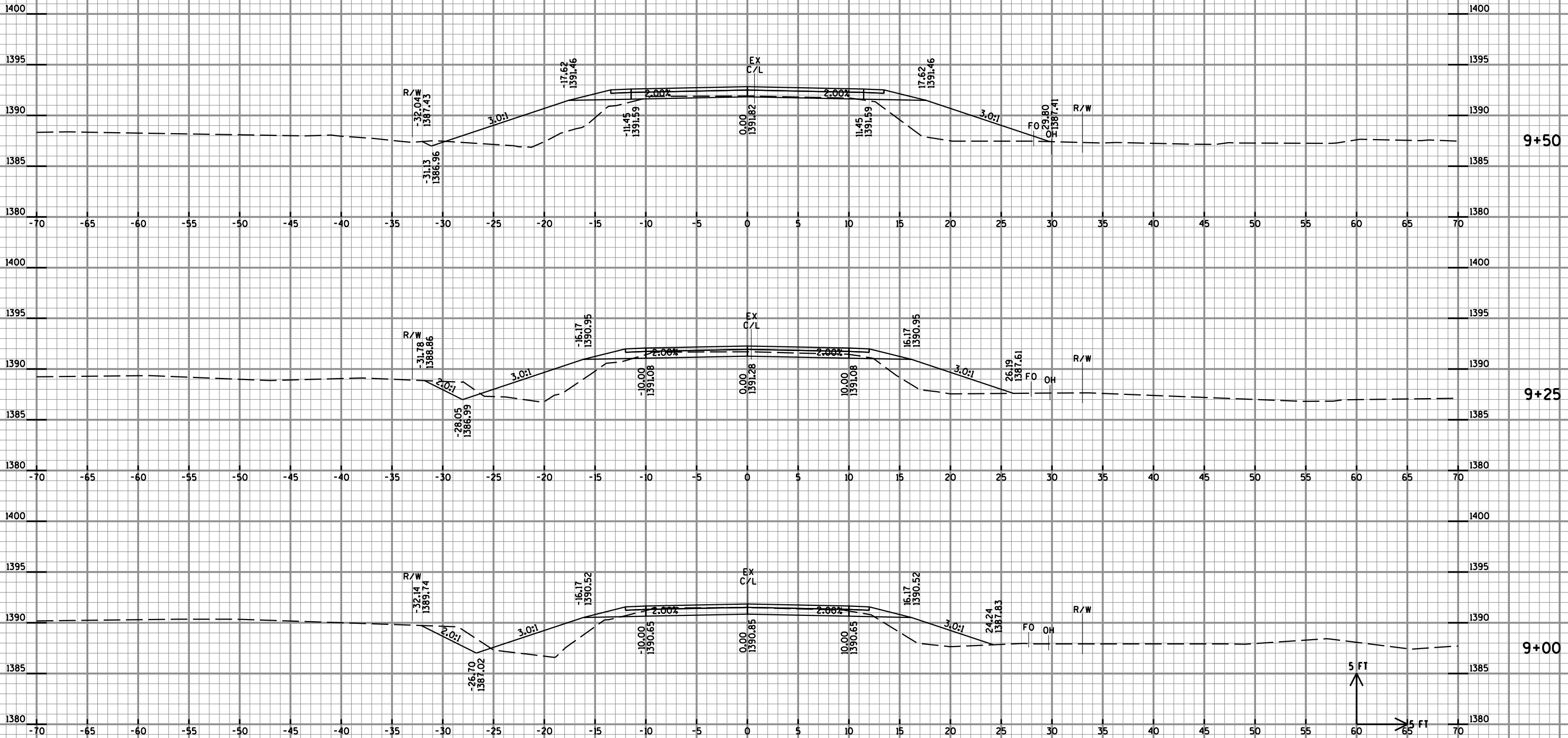
8+25

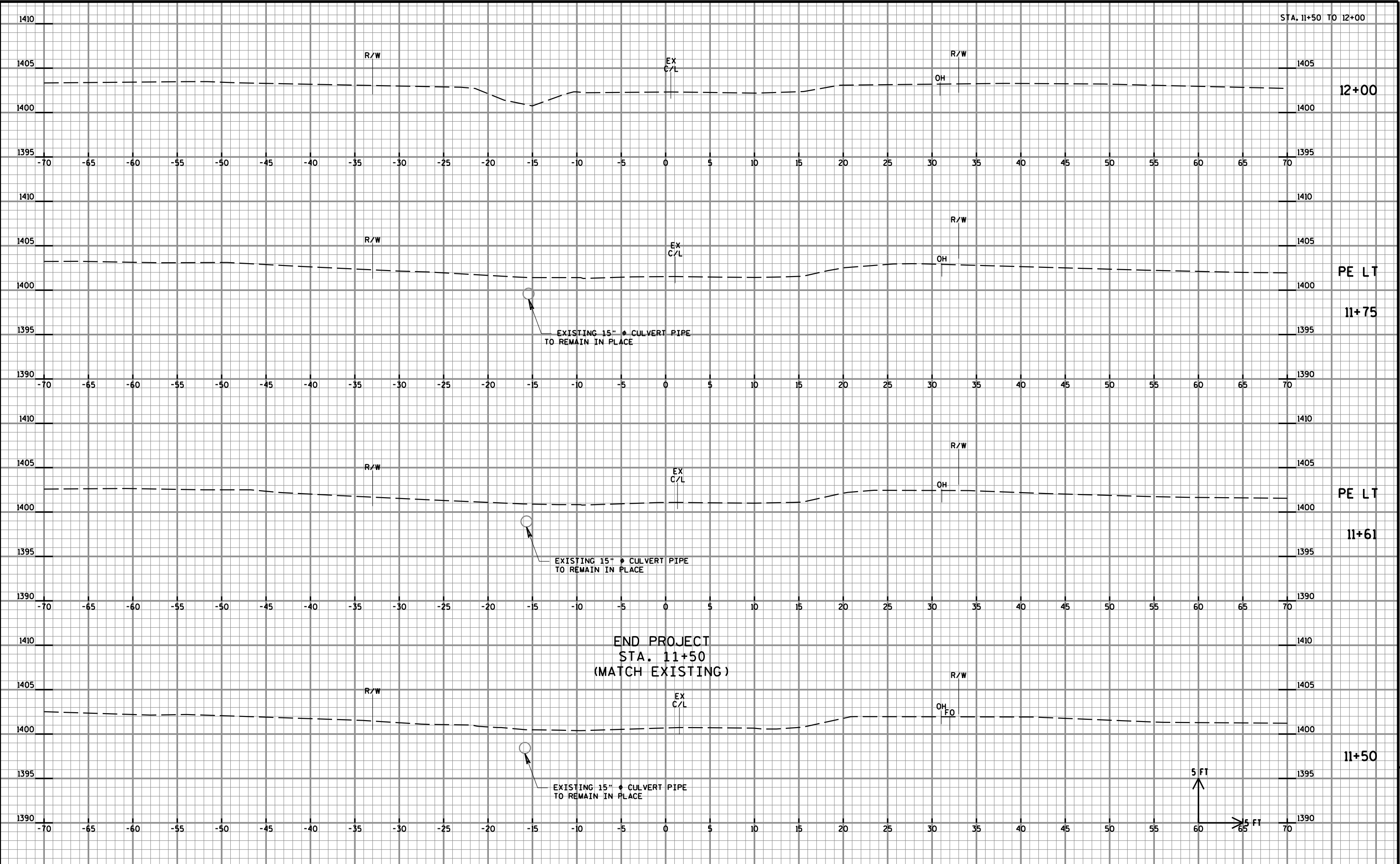
BEGIN PROJECT
STA. 8+50
(MATCH EXISTING)

5 FT

5 FT

STRUCTURE B-50-86





9

9



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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